MICROFILMED
FEB 21 1969

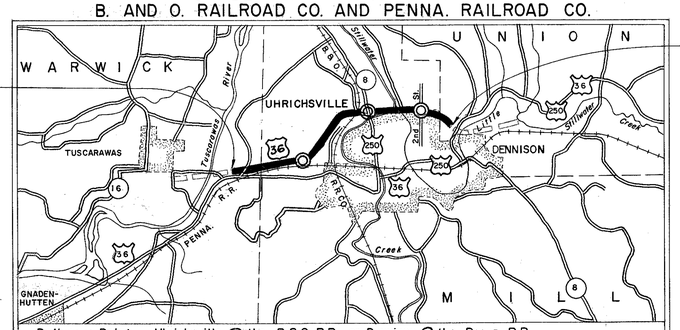
MICROFILMED
JUN 1 1969

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
TUS-36-16.63
WARWICK, MILL & UNION TOWNSHIPS
IN
THE CITY OF UHRICHSVILLE
AND
THE VILLAGE OF DENNISON
TUSCARAWAS COUNTY

GRADE SEPARATIONS WITH THE
B. AND O. RAILROAD CO. AND PENNA. RAILROAD CO.

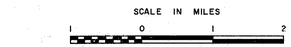
BEGIN PROJECT STA. 200+00

END PROJECT STA. 381+50



Delivery Point Uhrichsville @ the B.&O. R.R. or Dennison @ the Penna. R.R.
Average haul from Siding 1.5 ± Miles

LOCATION MAP



CALCULATION OF PROJECT LENGTH
BEGIN PROJECT STA. 200+00
END PROJECT STA. 381+50
NET LENGTH OF PROJECT 18,150 L.F. OR 3.437 MI.

CALCULATION OF LENGTH OF WORK
BEGIN WORK STA. 190+30
END WORK STA. 389+95
NET LENGTH OF WORK 19,965 L.F.
ADD FOR APPROACHES 17,626.06 L.F.
(SEE SHEET 22)
NET LENGTH OF WORK 37,591.06 L.F. OR 7.119 MI.

CONVENTIONAL SIGNS

Right of Way	
Existing	
New	R/W
Limited Access & Right of Way Line	L. A. R/W
Limited Access Line	L. A.
Temporary	T
Easements Channel	X
Sewer	SE
Slope	SL
Work Agreement	W A
Center Line	
Corporation Line	
Fence Line	
Property Line	
Guard Rail (existing)	
Guard Rail (proposed)	
Railroad	
Power Poles	
Telephone Poles	
Trees or Stumps (existing)	
Limit of Construction	

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Sheet No. 34A Revised 2/24/66 C.E.H.
Sheet No. 489 Revised 4/15/66 C.E.H.
Sheets No. 528, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539 and 542 revised 9-26-66, CPD
Sheet No. 542 A added 9-26-66, CPD
Sheet Nos. 511, 512 & 514 revised 1-26-67

File No.	
	TUSCARAWAS COUNTY.....TUS-36-16.63
	Date of Letting.....19
	Contract No.....

LIMITED ACCESS

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

The Correct project section designation is TUS-36-16.63, as shown on this sheet. On other sheets in this plan where the number is indicated as TUS-36-15.93 it shall be understood to be TUS-36-16.63

F-405(10)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-405 (10)	

1 / 662

TUSCARAWAS COUNTY
TUS-36-16.63

PLAN INCLUDES ADDITIONAL SUPPLEMENTAL SHEETS, MAKING THE TOTAL GREATER THAN 662, SEE INDEX OF SHEETS.

Can 565

1965 SPECIFICATIONS

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

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

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

Approved Earl W. Nelson
Date 9-14-64 Division Deputy Director

Approved C. H. Altwater
Date 11-3-65 Engineer of Bridges

Approved R. M. Ricketts
Date 11-24-65 Engineer of Location & Design

Approved R. E. Shultz
Date 11-24-65 Deputy Director of Design & Construction

Approved T. H. Bovard
Date 11-17-64 Deputy Director of Right of Way

Approved J. W. Wilson
Date 12-10-65 Deputy Director, Planning & Programming

Approved
Date First Assistant Director

Approved P. E. Mashuta
Date 12/11/65 Director of Highways

SEE SHEET 2 FOR REFERENCE TO 1963 STANDARD CONSTRUCTION DRAWINGS

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	
BP-1	6-1-65	MH-2	6-1-65	MC-2	6-1-65	801	9-2-65
BP-2	6-1-65	BP-7	6-1-65	SD-1.63 (4 shts.)	11-12-63	806	9-2-65
BP-6	6-1-65	MC-5	6-1-65	FSB-1-62	1-15-63	808	7-14-65
F-1	6-1-65	GR-1	6-1-65	BR-1-65. (sht 1)	2-1-65	811	3-29-65
F-3	6-1-65	GR-2	6-1-65	RB-1-55	2-2-59	814	8-24-65
MC-3	6-1-65	GR-2A	9-1-65	AS-1-54	8-10-65	816	8-6-65
HW-E	6-1-65	GR-5B	6-1-65			815	8-6-65
HW-3	6-1-65	GR-6	6-1-65				
MC-4	6-1-65	MC-6	6-1-65	F-2	6-1-65	REFERENCE	
CB 2-2-A & B	6-1-65	I-2A	6-1-65			1965	1963
CB 2-3 & 2-4	6-1-65	FACI-2	6-1-65			801	CE-101.04
CB 2-5 & 2-6	6-1-65	L-1	6-1-65			806	B-335
CB-3	6-1-65	FACI-1	6-1-65			808	S-101
CB-3A	6-1-65	BP-3	6-1-65			811	S-307
I-2	6-1-65	MC-1	6-1-65			814	I-124
CB-6	6-1-65	BP-53	6-30-61			816	I-129
MH-1	6-1-65	BP-5	6-1-65			815	I-128
MH-1A	6-1-65	BP-4	6-1-65				



Prepared and Recommended By
Capitol Engineering Associates
Consulting Engineers,
Painesville, Ohio

J. Chadwick Wagner 8/14/64
Project Engineer for the Consultant

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED

DIVISION ENGINEER DATE

SCHEMATIC LAYOUT PLAN

MICROFILMED
FEB 21 1989

Current ADT	0
Design year (1977) ADT	9825
DHV	1280
D	67%
T	15%
V	60 MPH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-405 (10)	

2 / 662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

BEGIN PROJECT STA. 200 + 00
TUS-36-1663
F-405 (10)

S.L.M. 16.63

Match Line

U.S. 36

P.C. Sta. 207 + 74.84

CURVE DATA
P.I. Sta. 216+10.66
Δ = 16° 35' 58" Lt.
D = 1° 00'
R = 5729.58'
L = 1659.93'
T = 835.82'

BEGIN WORK STA. 30 + 64.69
END WORK STA. 29 + 76.39
STRUCTURE NO. TUS-36-1629
Co. Rd. 62
LIMIT OF WORK STA. 10 + 00.00
STA. 13 + 98.36
CUL-DE-SAC 'A'

END WORK STA. 32 + 50
BEGIN WORK STA. 19 + 47.07
WARWICK TOWNSHIP
MILL TOWNSHIP
P.T. Sta. 224 + 34.77
STRUCTURE NO. TUS-36-1637
FRONTAGE RD. 'A'
STRUCTURE NO. TUS-36-1644
END WORK STA. 31 + 40
CULVERT STA. 28 + 75
RECONSTR. CO. RD. 62
STRUCTURE NO. TUS-36-1659
℄ RELOC. 240 U.S. 36
BEGIN WORK STA. 26 + 50
T.R. 279

Penna. R.R.

TO NEW PHILADELPHIA

15,835
1,815
7,640
2,450
1,260
8,830
1977 ADT

BEGIN WORK STA. 1 + 45
END WORK STA. 1102 + 94
Sta. 1103 + 98.70 Ahd.
Sta. 125 + 00.00 Bk.
END WORK STA. 9 + 55.90
Twp Rd.
BEGIN WORK STA. 10 + 44.26
ACCESS RD.
END WORK STA. 0 + 50
ACCESS RD. SPUR A
CONN. TO EXIST. U.S. 250
CULVERT STA. 9 + 11
CULVERT STA. 14 + 80
RECONSTR. GARDNER AVE.
Gardner Ave.
CULVERT STA. 0 + 30
CULVERT STA. 0 + 25
END WORK STA. 0 + 50
END WORK STA. 10 + 50
RECONSTR. MORRIS ST.
Morris St.
BEGIN WORK STA. 9 + 50
CULVERT STA. 22 + 50
END WORK STA. 3 + 15
END WORK STA. 1 + 65
CULVERT STA. 0 + 11
Davis St.
DAVIS ST. SPUR B
DAVIS ST. SPUR A
CULVERT STA. 30 + 75
Pond
STRUCTURE NO. TUS-36-1816
ACCESS RD. SPUR B
END WORK STA. 0 + 48
RAMP F SPUR
RAMP F
CULVERT STA. 39 + 92
END WORK STA. 40 + 80
CULVERT STA. 5 + 50
END WORK STA. 33 + 60
RAMP K
RAMP L
END WORK STA. 13 + 28
RELOC. T.R. 278
Roanoke Ave.
T.R. 278
BEGIN WORK STA. 8 + 80
STRUCTURE NO. TUS-36-1829
BEGIN WORK STA. 23 + 05
Browns Lane
RAMP H
EXPRESSWAY OVER TUS-36-1880
EXPRESSWAY OVER TUS-36-1859
STRUCTURE NO. TUS-36-1797
CULVERT STA. 32 + 09
CULVERT STA. 27 + 44
RAMP J
RAMP J OVER
CHANNEL CHANGE 'A'
RAMP J OVER
BEGIN WORK STA. 29 + 70
S.C. Sta. 301 + 19.54
T.S. Sta. 298 + 19.54
B.&O. R.R.
Match Line
CORP LINE
C.S. Sta. 316 + 60.56
S.T. Sta. 319 + 60.56
RECONSTR. U.S. 250 OVER
END WORK STA. 35 + 00
CITY OF UHRICHSVILLE
E. 12th St.
END WORK STA. 0 + 43
RECONSTR. 12TH. ST.
BEGIN WORK STA. 86 + 65
CURVE DATA
P.I. Sta. 309 + 69.64
Δ = 55° 13' 50" Rt.
D = 3° 00'
R = 1909.86'
L_c = 1541.02'
L_s = 300.00'
T_s = 1150.10'
11th St.
Main St.

Current ADT	0
Design year (1977) ADT	14,465
DHV	1,890
D	67%
T	20%
V	60 M.P.H.

BEGIN WORK STA. 190 + 30
Co. Rd. 62
P.C. Sta. 192 + 92.02
TEMPORARY CONNECTOR
CO. RD. 62 CONNECTION
END WORK STA. 1 + 01.20
TEMPORARY CONNECTOR
CURVE DATA
P.I. Sta. 195 + 68.77
Δ = 27° 27' 41" Rt.
D = 5° 00'
R = 1145.92'
L = 549.23'
T = 280.00'
TO GNADENHUTTEN
Co. Rd. 63
Co. Rd. 64
P.C. Sta. 198 + 43.00
Notch Line
12,730
1977 ADT
6,250
1,265
7,515
1977 ADT
RECONSTR.
END WORK STA. 38 + 50
ST. STILLWATER CREEK
RECONSTR. CROSS ST.
2nd St.
END WORK STA. 36 + 00
END WORK STA. 0 + 80
Cross St.
BEGIN WORK STA. 0 + 23.22
RELOC. TR 287
RECONSTR. 4TH ST.
Morgan St.
14th St. Ext.
END WORK STA. 14 + 50
END WORK STA. 1 + 30
EXPRESSWAY OVER TUS-36-1957
RAMP R
RAMP N
RAMP P
RAMP Q
CORP LINE
MILL TOWNSHIP
UNION TOWNSHIP
EXPRESSWAY OVER TUS-36-1919
CULVERT STA. 31 + 16
RELOC. CO. RD. 64
CULVERT STA. 28 + 55
END WORK STA. 1 + 90
STRUCTURE NO. TUS-36-1884
340 ℄ RELOC. 345 U.S. 36
McKee Rd.
CORP LINE
℄ CHANNEL CHANGE 'B'
℄ CHANNEL CHANGE LITTLE STILLWATER CREEK
BEGIN WORK STA. 12 + 95
12th St.
Eastport Ave.
RECONSTR. EASTPORT
LITTLE STILLWATER CREEK
CORP LINE
STILLWATER CREEK
VILLAGE OF DENNISON
RECONSTR. McKEE RD.
BEGIN WORK STA. 19 + 00
END WORK STA. 2 + 00
UHRICHSVILLE
Court St.
1st St.
2nd St.
3rd St.
Sta. 351 + 83.33
S.C. Sta. 354 + 33.33
BEGIN WORK STA. 23 + 23
S.T. Sta. 354 + 23.33
C.S. Sta. 364 + 90.80
S.T. Sta. 367 + 40.80
Sumner St.
Fuhr St.
LIMIT OF WORK STA. 10 + 00.00
STA. 14 + 14.16
℄ CUL-DE-SAC 'B'
SECOND STREET AREA STORM DRAIN
CURVE DATA
P.I. Sta. 359 + 80.72
Δ = 32° 41' 13" Rt.
D = 2° 30'
R = 2291.83'
L_c = 1057.47'
L_s = 250.00'
T_s = 797.39'
High St.
Blain St.
10
15
20

4,620
1,715
6,335
1977 ADT
END WORK STA. 19 + 80.5
END WORK STA. 2 + 20
CULVERT STA. 32 + 63
PRIVATE DRIVE 'A'
END WORK STA. 33 + 89.52
BEGIN WORK STA. 9 + 45
FRONTAGE RD.
CULVERT STA. 14 + 25
P.C. Sta. 254 + 07.09
END WORK STA. 1 + 50
PRIVATE DRIVE 'B'
SIDEROAD OVER TUS-36-1783
RAMP A
RAMP B
RAMP C
RAMP D
RIZE CONN.
STRUCTURE NO. TUS-36-1688
STRUCTURE NO. TUS-36-1705
CULVERT STA. 11 + 75
STRUCTURE NO. TUS-36-1716
CULVERT STA. 23 + 65
CULVERT STA. 21 + 05
Warden St.
STRUCTURE NO. TUS-36-1723
TRENTON AVE. CONNECTOR OVER
END WORK STA. 30 + 68.06
MILL TOWNSHIP
CITY OF UHRICHSVILLE
BEGIN WORK STA. 28 + 00
BEGIN WORK STA. 9 + 50
RECONSTR. TRENTON AVE.
CORP LINE
Trenton Ave.
U.S. 36
MILL TOWNSHIP
UHRICHSVILLE
Worden St.
P.T. Sta. 287 + 09.11
Match Line
STRUCTURE NO. TUS-36-1723
B.&O. R.R.
STILLWATER CREEK

Current ADT	0
Design year (1977) ADT	8775
DHV	1140
D	67%
T	15%
V	60 M.P.H.

STANDARD DRAWING REFERENCE			
1965	1963	1965	1963
BP-1	B-T-70-71	MH-2	I-8 M.H. No. 2
BP-2	B-T-71-R	BP-7	I-12
BP-6	DR-1	MC-5	I-14 G
F-1	F-1	GR-1	I-15 No. 1
F-3	F-3	GR-2	I-15 No. 2
MC-3	G-7.07	GR-2A	I-15 No. 2-A
HW-E	HW-E	GR-5B	I-15 No. 5-B
HW-3	HW No. 3	GR-6	I-15 No. 6
MC-4	I-1	I-2A	I-8 I. No. 2-A
CB-2-2-A & B	I-8 C.B. 2-2-A & B	FACI-1	FACI-1
CB-2-3 & 2-4	I-8 C.B. 2-3 & 2-4	FACI-2	FACI-2
CB-2-5 & 2-6	I-8 C.B. 2-5 & 2-6	L-1	L-1
CB-3	I-8 C.B. No. 3	BP-3	L.J. No. 1
CB-3A	I-8 C.B No. 3A	MC-1	RI-1
I-2	I-8 I. No. 2	SP-53	SP-53
CB-6	I-8 C.B No. 6	BP-4	T. J.
MH-1	I-8 M.H. No. 1	BP-5	T-35
MH-1A	I 8 M.H. No. 1-A	MC-2	RI-2

END WORK STA. 389 + 95
CURVE DATA
P.I. Sta. 381 + 85.44
Δ = 27° 53' 45" Lt.
D = 2° 00'
R = 2864.79'
L_c = 1194.79'
L_s = 200.00'
T_s = 811.65'
END PROJECT STA. 381 + 50
TUS-36-16.63
F-405 (10)
S.L.M. 20.07
T.S. Sta. 373 + 73.79
S.C. Sta. 375 + 73.79
C.S. Sta. 387 + 68.58
S.T. Sta. 389 + 68.58
6,005
1977 ADT
TO CADIZ
Fuhr St.
Stillwater St.
CHANNEL ℄
END WORK STA. 15 + 02.21
U.S. 36 & 250

Current ADT	0
Design year (1977) ADT	9,480
DHV	1,230
D	67%
T	20%
V	60 M.P.H.

UTILITIES

OHIO POWER CO.
301 - 315 CLEVELAND AVE., SW
CANTON, OHIO

OHIO BELL TELEPHONE CO.
111 N. FOURTH ST.
COLUMBUS, OHIO

EAST OHIO GAS CO.
1717 E. NORTH ST.
CLEVELAND 14, OHIO

TWIN CITY WATER AND SEWER DEPT.
DENNISON, OHIO

T-V ANTENNA SYSTEM, INC.
617 TUSCARAWAS AVE.
NEW PHILADELPHIA, OHIO

BALTIMORE AND OHIO RAILROAD CO.

PENNSYLVANIA RAILROAD CO.

LEGEND

- EXISTING
- NEW CONSTRUCTION
- CORPORATION &/OR TOWNSHIP LINE
- FACI SIGN
- T TYPE TURNAROUND
- PERMANENT BARRICADE, GUARD RAIL, TYPE 4

SCALE IN FEET
200 0 400 800

TYPICAL SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

3
662

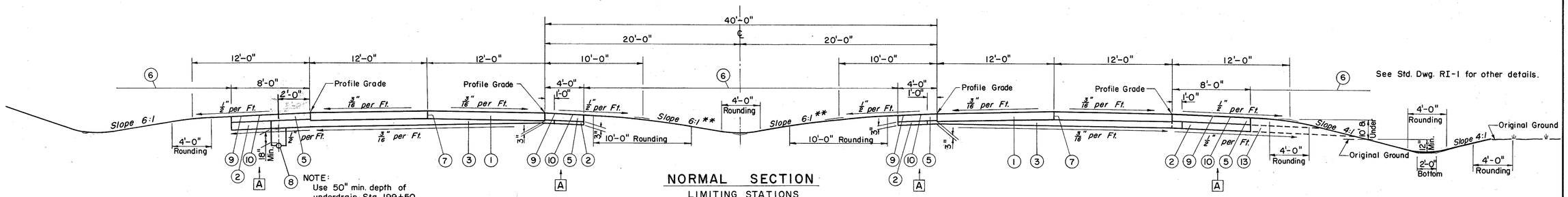
TUSCARAWAS COUNTY
TUS – 36 – 15.93

SHOULDER BUILD-UP

[A] Designates *Stab.* Shoulder Build-up to Sta. 290 + 00

[B] Designates Paved Shoulder Build-up Sta. 290 + 00 Ahead

TYPE T-71



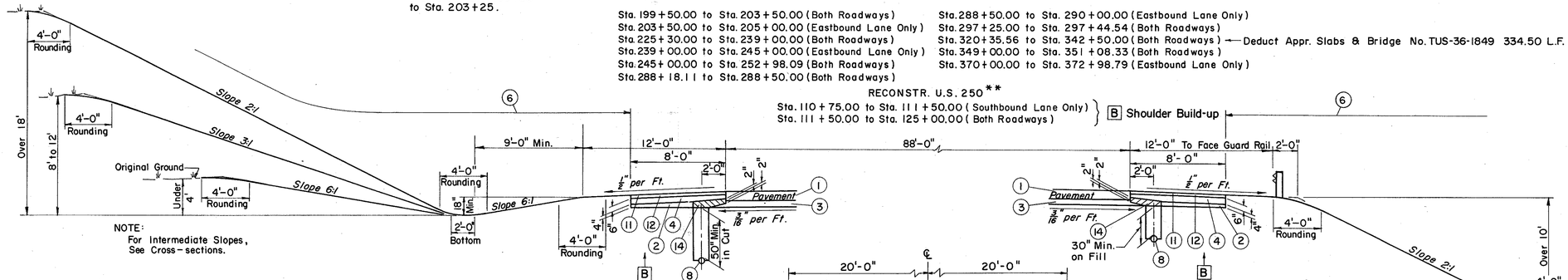
NOTE:
Use 50" min. depth of underdrain Sta. 199+50 to Sta. 203+25.

NORMAL SECTION

LIMITING STATIONS

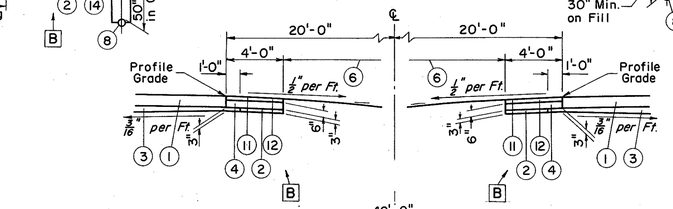
Sta. 199 + 50.00 to Sta. 203 + 50.00 (Both Roadways)
Sta. 203 + 50.00 to Sta. 205 + 00.00 (Eastbound Lane Only)
Sta. 225 + 30.00 to Sta. 239 + 00.00 (Both Roadways)
Sta. 239 + 00.00 to Sta. 245 + 00.00 (Eastbound Lane Only)
Sta. 245 + 00.00 to Sta. 252 + 98.09 (Both Roadways)
Sta. 288 + 18.11 to Sta. 288 + 50.00 (Both Roadways)
Sta. 288 + 50.00 to Sta. 290 + 00.00 (Eastbound Lane Only)
Sta. 297 + 25.00 to Sta. 297 + 44.54 (Both Roadways)
Sta. 320 + 35.56 to Sta. 342 + 50.00 (Both Roadways) ← Deduct Appr. Slabs & Bridge No. TUS-36-1849 334.50 L.F.
Sta. 349 + 00.00 to Sta. 351 + 08.33 (Both Roadways)
Sta. 370 + 00.00 to Sta. 372 + 98.79 (Eastbound Lane Only)

RECONSTR. U.S. 250 **
Sta. 110 + 75.00 to Sta. 111 + 50.00 (Southbound Lane Only)
Sta. 111 + 50.00 to Sta. 125 + 00.00 (Both Roadways)
} [B] Shoulder Build-up



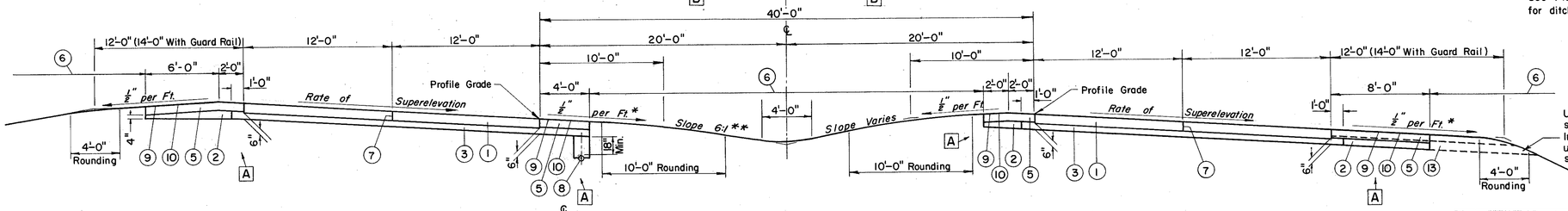
NOTE:
For Intermediate Slopes, See Cross-sections.

SECTION – CUT



SECTION WITH GUARD RAIL

See Plan & Cross-sections for ditches other than typical.

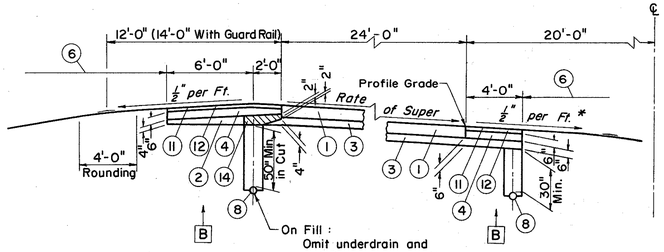


NOTE:
ϕ Thickness as shown is designed thickness as described in Section B-21.01.

* Use Superelevation Slope if greater than ½" per Ft.

** Reconstr. U.S. 250 median slopes 4:1 unless otherwise shown on Cross Section.

Use I-9 on low side of superelevated fills. In cuts, use 18" min. depth underdrain, details as shown on normal sections.



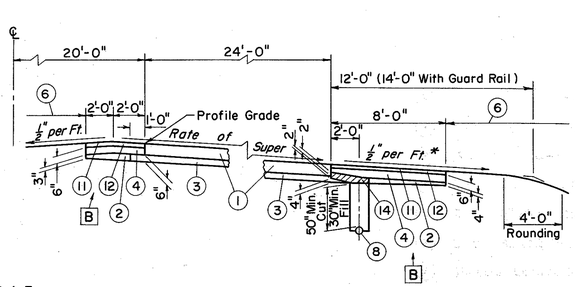
SUPERELEVATED SECTION

LIMITING STATIONS

Sta. 207 + 50.00 to Sta. 209 + 00.00 (Eastbound Lane Only)
Sta. 209 + 00.00 to Sta. 211 + 00.00 (Both Roadways)
Sta. 211 + 00.00 to Sta. 218 + 00.00 (Eastbound Lane Only)
Sta. 218 + 00.00 to Sta. 225 + 30.00 (Both Roadways)
Sta. 252 + 98.09 to Sta. 274 + 50.00 (Both Roadways)
Sta. 281 + 00.00 to Sta. 284 + 00.00 (Eastbound Lane Only)
Sta. 284 + 00.00 to Sta. 288 + 18.11 (Both Roadways)
(1) Sta. 297 + 44.54 to Sta. 320 + 35.56 (Both Roadways)
(2) Sta. 351 + 08.33 to Sta. 367 + 00.00 (Both Roadways)
Sta. 372 + 98.79 to Sta. 373 + 50.00 (Eastbound Lane Only)
Sta. 377 + 00.00 to Sta. 381 + 50.00 (Both Roadways)

RECONSTR. U.S. 250 **
Sta. 110 + 75.00 to Sta. 111 + 50.00 (Northbound Lane Only)

(1) Deduct Approach Slabs & Bridge No. TUS-36-1789 278.38 L.F.
" " " " " TUS-36-1810 273.02 L.F.
(2) Deduct Approach Slabs & Bridge No. TUS-36-1887 218.61 L.F.



LEGEND

(1)	T-71	9" Reinforced Portland Cement Concrete Pavement
(2)	I-22	Subbase, *Regular* Grading
(3)	I-22	Subbase, Grading "A" or "B" as per Plan. (See General Note)
(4)	B-19	Aggregate Base Course
(5)	B-19	8" Aggregate Base Course
(6)	L-9	Seeding and Protecting
(7)		Standard Longitudinal Joint
(8)	I-1	6" Pipe, Class I-3 (See Sequence Note on Sheet 4)
(9)	T-30	Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3, applied at rate of 0.4 Gal. per Sq. Yd.
(10)	T-31	Bituminous Surface Treatment, using 0.008 Cu. Yds. No. 6 Aggregate per Sq. Yd. and 0.30 Gal. Sec. M-5.7, RT-8 or 9, or Sec. M-5.2, RC-3 per Sq. Yd.

LEGEND (cont'd.)

(11)	T-31	Bituminous Surface Treatment, using 0.008 Cu. Yds. No. 6 Aggregate per Sq. Yd. and 0.25 Gal. Bituminous Material per Sq. Yd. (See Note in Proposal)
ϕ (12)	B-21	3" Waterproofed Aggregate Base Course See Note in Proposal
(13)	I-9	Stone Underdrains No. 2 (*Mod.* Sec. I-9.03, See General Notes)
(14)		Special Drainage Connection using No. 6. Aggregate (See Note in Proposal)

TYPICAL SECTION
RELOC. U.S. 36 & RECONSTR. U.S. 250

TYPICAL SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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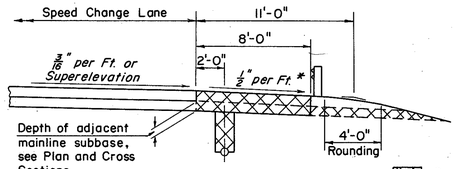
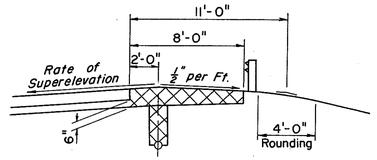
TUSCARAWAS COUNTY
TUS - 36 - 15.93

TYPE T-71

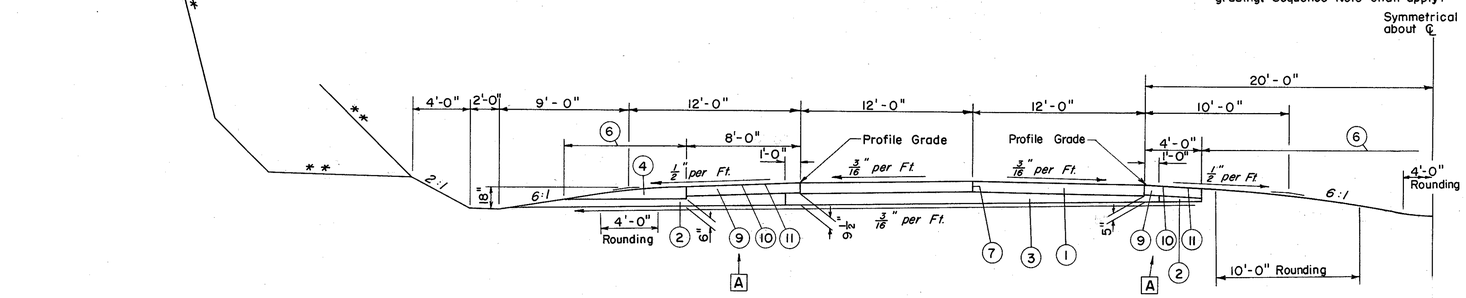




Design as per mainline Typical Section, see note

NOTE: Where Shoulder Build-up [B] is used, increase B-21 to 6" depth. The #6 Aggr. over the underdrain shall meet the 6" B-21 as on Ramps. Place a 3" course of B-19 beyond the #6 Aggr. underlaid with I-22, regular grading. Sequence Note shall apply.

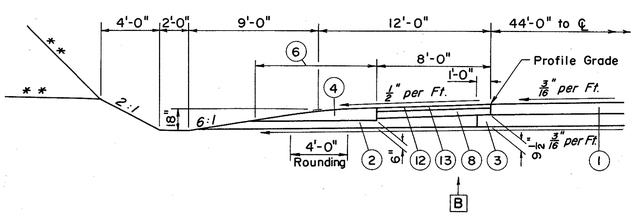
SPEED CHANGE LANE

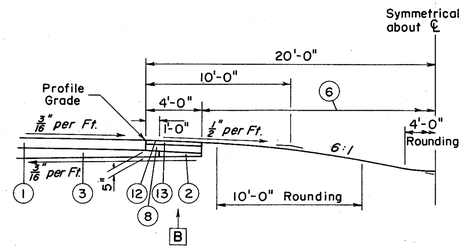


NORMAL SECTION ROCK CUT

LIMITING STATIONS

Sta. 203+50.00 to Sta. 205+00.00 (Westbound Lane Only)
Sta. 205+00.00 to Sta. 206+80.00 (Both Roadways)
Sta. 239+00.00 to Sta. 245+00.00 (Westbound Lane Only)
Sta. 288+50.00 to Sta. 290+00.00 (Westbound Lane Only)
Sta. 290+00.00 to Sta. 297+25.00 (Both Roadways)
Sta. 342+50.00 to Sta. 349+00.00 (Both Roadways)
Sta. 368+15.80 to Sta. 370+00.00 (Both Roadways)
Sta. 370+00.00 to Sta. 372+98.79 (Westbound Lane Only)

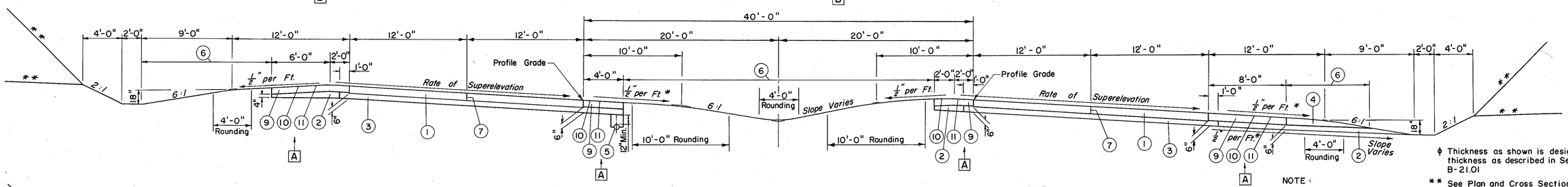


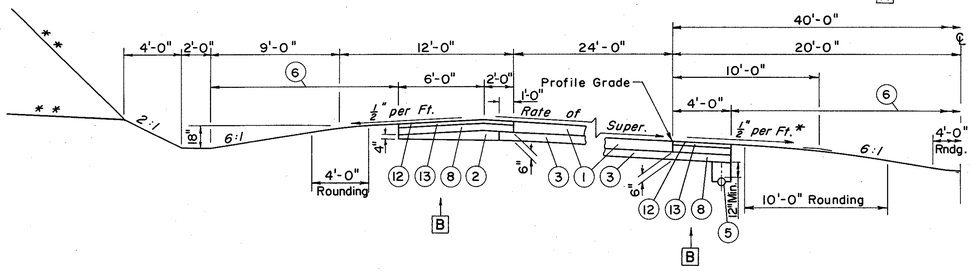


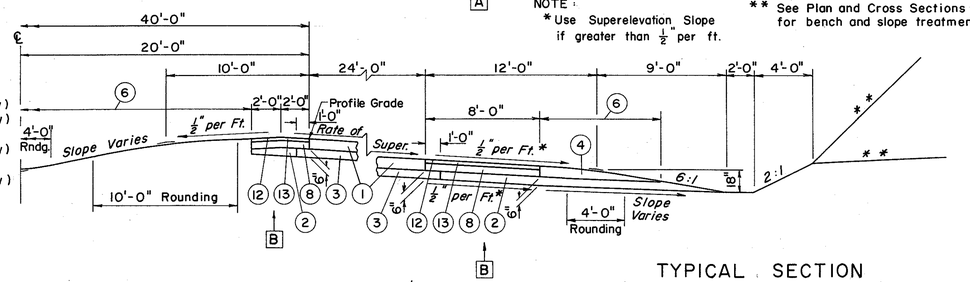
SUPERELEVATED SECTION ROCK CUT

LIMITING STATIONS

Sta. 206+80.00 to Sta. 207+50.00 (Both Roadways)
Sta. 207+50.00 to Sta. 209+00.00 (Westbound Lane Only)
Sta. 211+00.00 to Sta. 218+00.00 (Westbound Lane Only)
Sta. 274+50.00 to Sta. 281+00.00 (Both Roadways)
Sta. 281+00.00 to Sta. 284+00.00 (Westbound Lane Only)
Sta. 367+00.00 to Sta. 368+15.80 (Both Roadways)
Sta. 372+98.79 to Sta. 373+50.00 (Westbound Lane Only)
Sta. 373+50.00 to Sta. 377+00.00 (Both Roadways)







SHOULDER BUILD-UP

[A] Designates Stab. Shoulder Build-up to Sta. 290+00

[B] Designates Paved Shoulder Build-up Sta. 290+00 Ahead

SEQUENCE OF OPERATIONS

For Shoulder Build-up [B]:

(1) Install pipe underdrain on outside shoulder. Installation of shallow underdrain in median may be deferred until T-71 is placed.
(2) Place subbase to outside edge of underdrain or to one foot beyond edge of pavement where no underdrain is present.
(3) Construct T-71
(4) Remove subbase and any contaminated backfill over drain and replace with No. 6 aggregate as shown.
(5) Complete shoulder construction.

LEGEND

(1) T-71 9" Reinforced Portland Cement Concrete Pavement
(2) I-22 Subbase, Regular Grading
(3) I-22 Subbase, Grading "A" or "B" as per Plan (See General Note)
(4) Soil as defined in Sec. E-1.02
(5) I-1 6" Pipe, Class I-3, Sec. M-6.4 (h) (See Sequence Note this Sheet)
(6) L-9 Seeding and Protecting
(7) Standard Longitudinal Joint
(8) B-19 6" Aggregate Base Course
(9) B-19 8" Aggregate Base Course
(10) T-30 Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3, applied at rate of 0.4 Gal. per Sq. Yd.
(11) T-31 Bituminous Surface Treatment, using 0.008 Cu. Yds. No. 6 Aggregate per Sq. Yd. and 0.30 Gal. Sec. M-5.7, RT-8 or 9 or Sec. M-5.2, RC-3 per Sq. Yd.
(12) T-31 Bituminous Surface Treatment using 0.008 Cu. Yds. No. 6 Aggregate per Sq. Yd. and 0.25 Gal. Bituminous Material per Sq. Yd. (See Note in Proposal)
ϕ (13) B-21 3" Waterproofed Aggregate Base Course

See Note in Proposal

ϕ Thickness as shown is designed thickness as described in Section B-21.01

** See Plan and Cross Sections for bench and slope treatments

NOTE:
* Use Superelevation Slope if greater than 1/2" per ft.

TYPICAL SECTION SPEED CHANGE LANES & RELOC. U.S. 36

TYPICAL SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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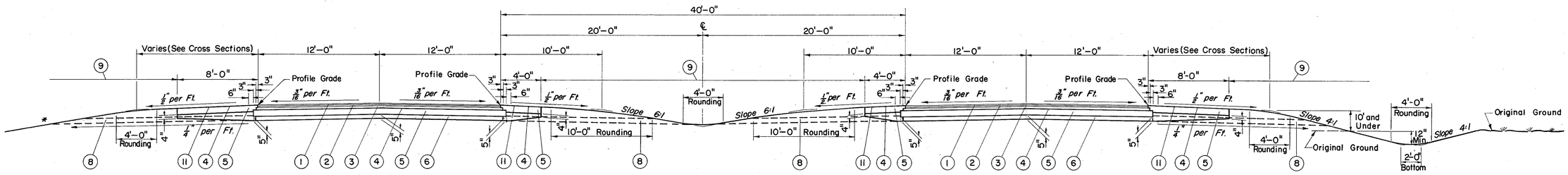
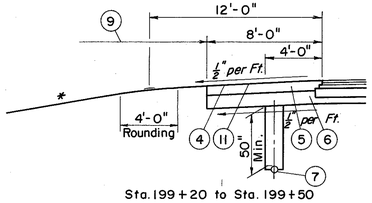
TUSCARAWAS COUNTY
TUS – 36 – 15.93

TYPE T–35

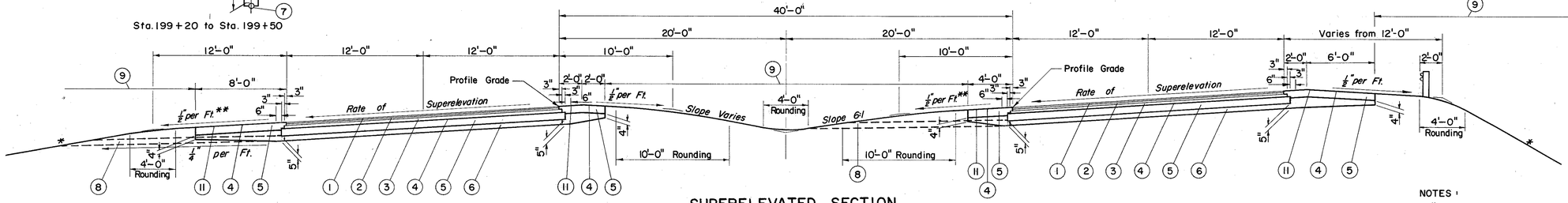


NORMAL SECTION

LIMITING STATIONS
Sta. 383 + 47.75 to Sta. 384 + 52.21

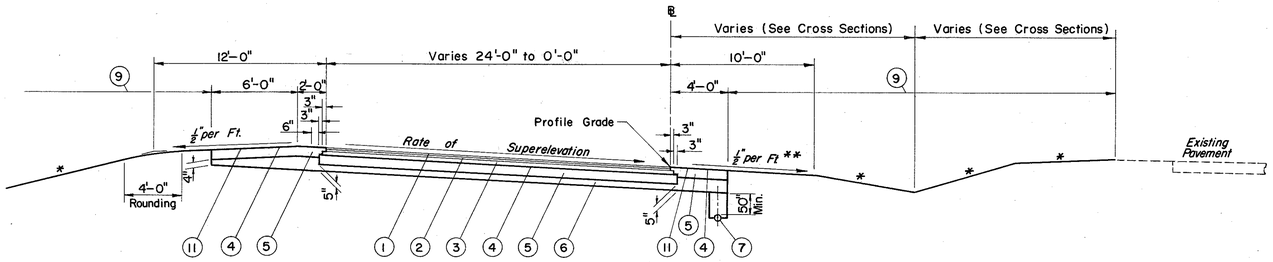


Sta. 199 + 20 to Sta. 199 + 50



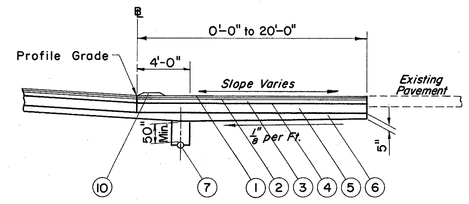
SUPERELEVATED SECTION

LIMITING SECTIONS
Sta. 381 + 50.00 to Sta. 383 + 47.75



SUPERELEVATED SECTION

LIMITING STATIONS
Sta. 192 ± to Sta. 199 + 50.00



Sta. 193 + 30 ± to Sta. 195 + 00 ±

NOTES :

* See Cross Sections for Slope Treatment

** Use Superelevation Slope if greater than 1/2" per Ft.

ϕ Thicknesses as shown are designed thicknesses as described in Sections B-21.01, B-35.01 and T-35.01.

LEGEND

ϕ (1) T – 35 1 1/4" Asphaltic Concrete Surface Course, Type C (70–85)

ϕ (2) B – 35 1 1/2" Asphaltic Concrete Leveling Course (70–85)

ϕ (3) B – 35 3" Asphaltic Concrete Base Course (70 – 85)

(4) T – 30 Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3 applied at rate of 0.4 gal. per Sq. Yd.

(5) B – 19 8" Aggregate Base Course

(6) I – 22 Subbase, *Regular Grading*

(7) I – 1 6" Pipe, Class I-3 (See Sequence Note on Sheet 4)

(8) I – 9 Stone Underdrains No. 2 (*Mod.* Sec. I-9.03, See General Notes)

(9) L – 9 Seeding and Protecting

(10) I – 23 Precast White PCC Traffic Dividers

(11) T – 31 Bituminous Surface Treatment, using 0.008 Cu. Yds. No. 6 Aggregate per Sq. Yd. and 0.30 gal. Sec. M-5.7, RT-8 or 9 or Sec. M-5.2, RC-3 per Sq. Yd.

TYPICAL SECTIONS
RELOC. U.S. 36 – TEMPORARY CONNECTIONS

TYPICAL SECTIONS

TYPE T-71

SHOULDER BUILD-UP

[A] Designates 5 Slab Shoulder Build-up on Ramps A, B, C & D

[B] Designates Paved Shoulder Build-up on all Ramps except A, B, C & D

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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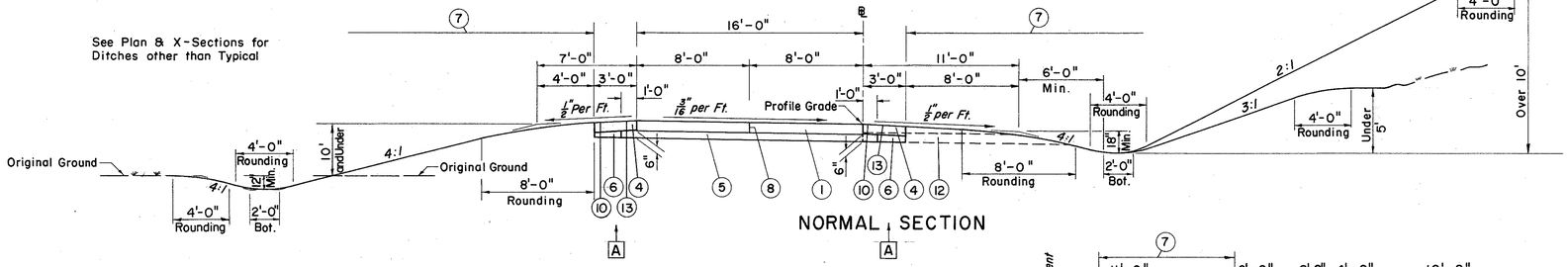
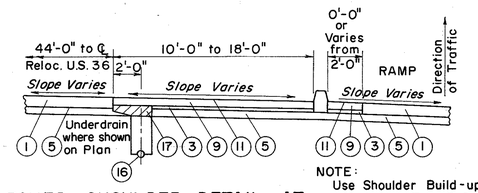
TUSCARAWAS COUNTY
TUS-36-15.93

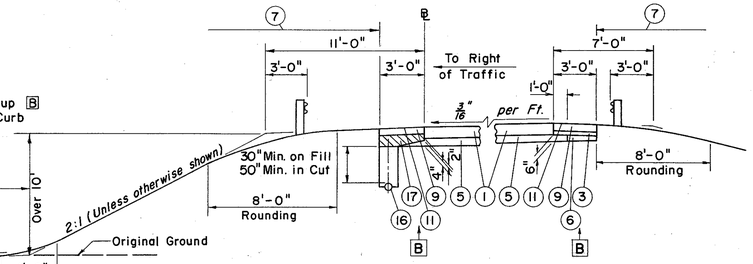


NORMAL SECTION

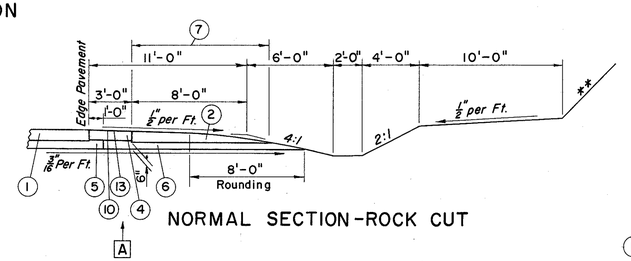


PAVED SHOULDER DETAIL AT ENTRANCE RAMPS

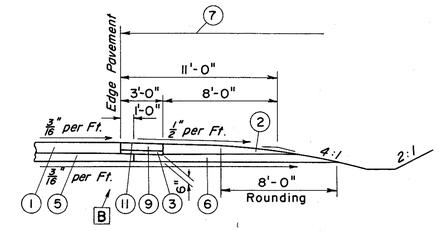
NOTE: Use Shoulder Build-up [B] adjacent to Type 7 Curb



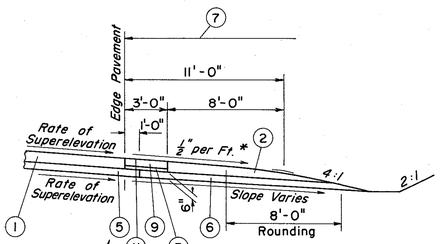
SECTION WITH GUARD RAIL



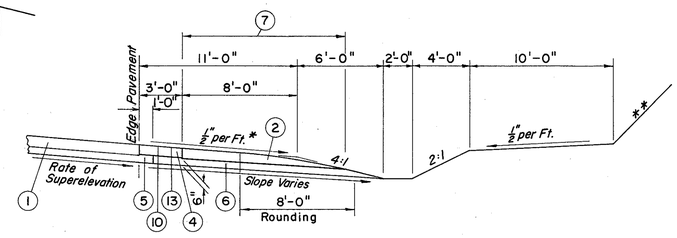
NORMAL SECTION-ROCK CUT



NORMAL SECTION - ROCK CUT



SUPERELEVATED SECTION - ROCK CUT

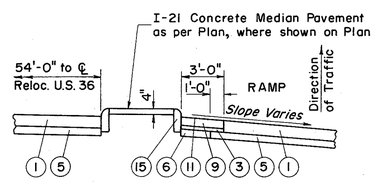


SUPERELEVATED SECTION - ROCK CUT

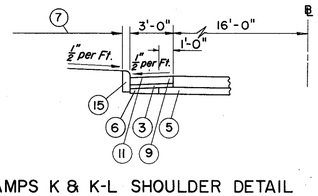
NOTE:
* Use superelevation slope if greater then 1/2" per Ft.
** See cross sections for slope treatment
ϕ Thickness as shown is designed thickness as described in Section B-21.01

LEGEND

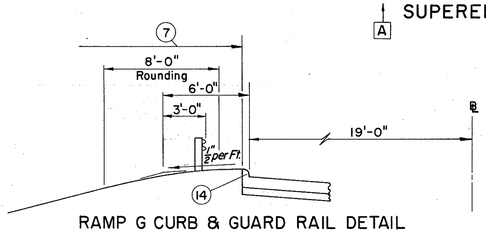
(1)	T-71	9" Reinforced Portland Cement Concrete Pavement
(2)		*Soil as defined in Sec. E-1.02*
(3)	B-19	3" Aggregate Base Course
(4)	B-19	8" Aggregate Base Course
(5)	I-22	Subbase, Grading "A" or "B" as per Plan (See General Note)
(6)	I-22	Subbase, *Regular Grading*
(7)	L-9	Seeding and Protecting
(8)		Standard Longitudinal Joint
ϕ (9)	B-21	6" Waterproofed Aggregate Base Course Laid in Two 3" Courses See Note in Proposal
(10)	T-31	Bituminous Surface Treatment, using 0.008 Cu. Yds. No. 6 Aggregate per Sq. Yd. and 0.30 Gal. Sec. M-5.7, RT-8 or 9 or Sec. M-5.2, RC-3 per Sq. Yd.
(11)	T-31	Bituminous Surface Treatment, using 0.008 Cu. Yds. No. 6 Aggregate per Sq. Yd. and 0.25 Gal. Bituminous Material per Sq. Yd. (See Note in Proposal)
(12)	I-9	Stone Underdrains No. 2 (*Mod.* Sec. I-9.03, See General Notes)
(13)	T-30	Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3, applied at rate of 0.4 Gal. per Sq. Yd.
(14)	I-12	Concrete Curb, Type 2-A
(15)	I-12	Concrete Curb, Type 6
(16)	I-1	6" Pipe, Class I-3 (See Sequence Note on Sheet 4)
(17)		Special Drainage Connection using No. 6 Aggregate (See Note in Proposal)



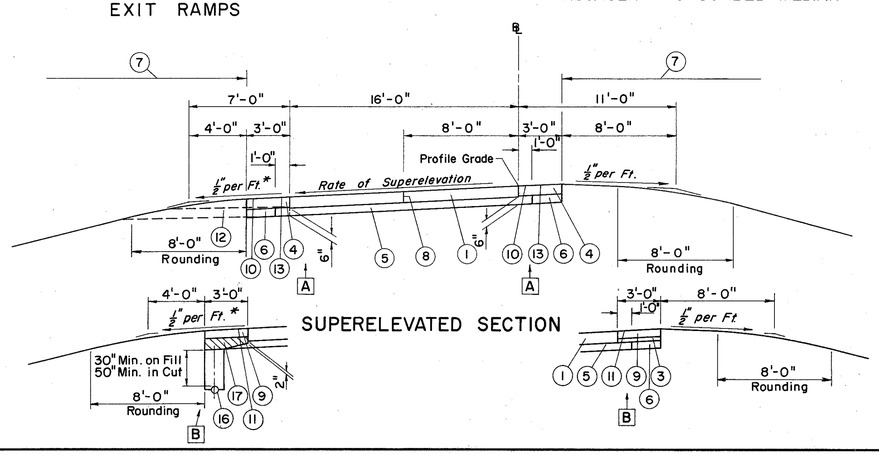
PAVED SHOULDER DETAIL AT EXIT RAMPS



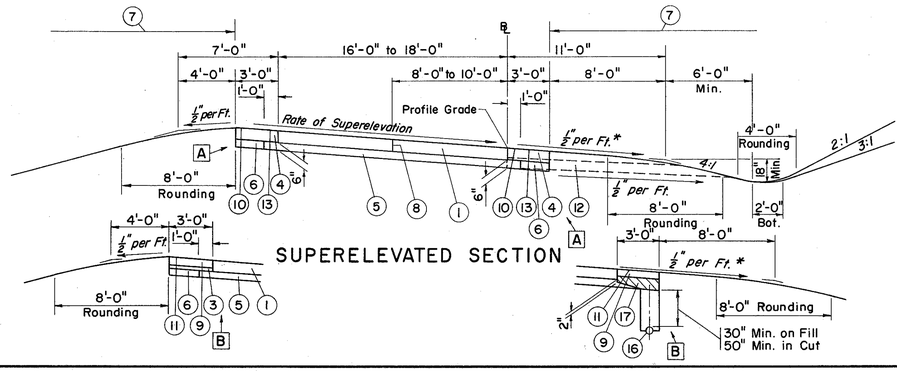
RAMPS K & K-L SHOULDER DETAIL ADJACENT TO CURBED MEDIAN



RAMP G CURB & GUARD RAIL DETAIL



SUPERELEVATED SECTION



SUPERELEVATED SECTION

TYPICAL SECTIONS – RAMPS

TYPICAL SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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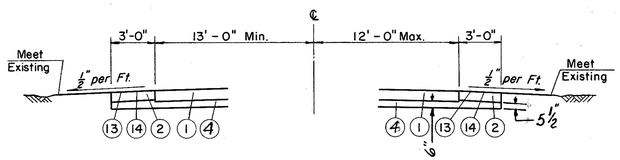
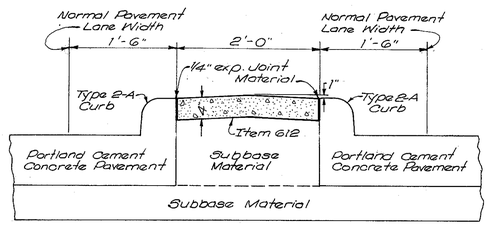
TUSCARAWAS COUNTY
TUS - 36 - 15.93



Sta. 28 + 00.00 to Sta. 28 + 14.9

Sta. 28 + 00.00 to Sta. 28 + 18

RECONSTR. TRENTON AVENUE



CONCRETE MEDIAN PAVEMENT

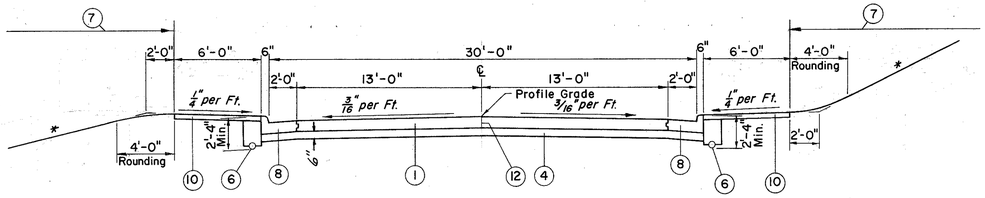
Joints : 1/4 inch Expansion Joints shall be constructed at 20 ft. intervals. Metal separator plates or templets shall be used if necessary to hold the joint material in accurate position during the placing of the concrete.

Separator plates or templates, if used, shall be removed as soon as the concrete is in place to insure the accurate retention of the joint material.

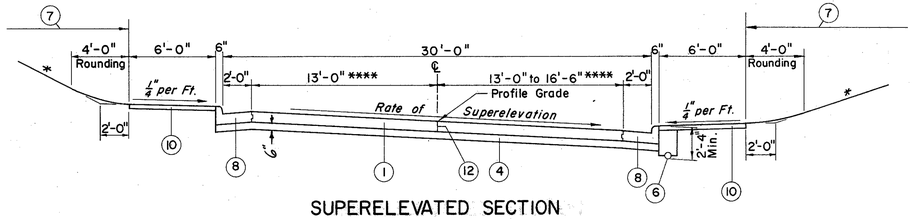
Expansion joint material shall meet the requirements of 705.03.

In addition to the 1/4 inch expansion joints, contraction joints, consisting of 1 1/2 inch minimum depth impressed joint formed and sealed as per standard drawing BP-3, shall be placed in concrete median at intervals not to exceed 10 feet.

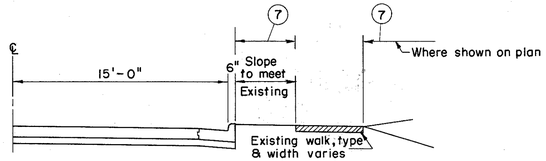
TYPE T - 71



NORMAL SECTION
LIMITING STATIONS
TRENTON AVENUE CONNECTOR
Sta. 9 + 88.00 to Sta. 10 + 50.85
RECONSTR. TRENTON AVENUE
Sta. 28 + 00.00 to Sta. 29 + 71.85



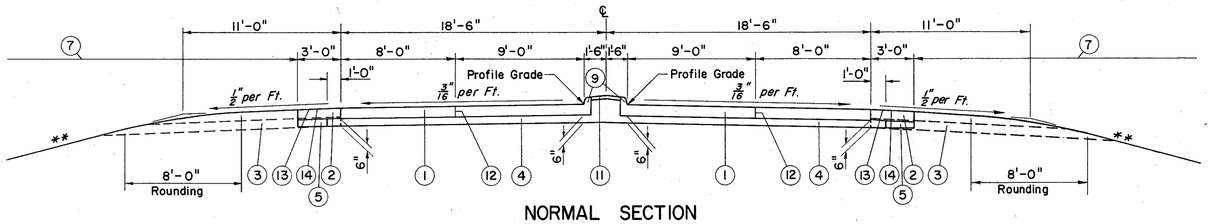
SUPERELEVATED SECTION
LIMITING STATIONS
TRENTON AVENUE CONNECTOR
Sta. 10 + 50.85 to Sta. 15 + 00.00
RECONSTR. TRENTON AVENUE
Sta. 29 + 71.85 to Sta. 30 + 68.06 ****13'-0" Min.



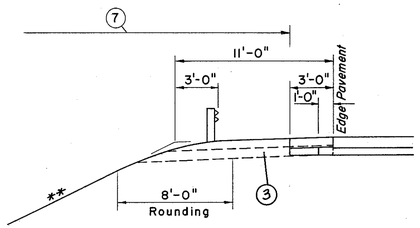
TYPICAL GRADING ADJACENT TO EXISTING SIDEWALK RT. OR LT.

NOTES:

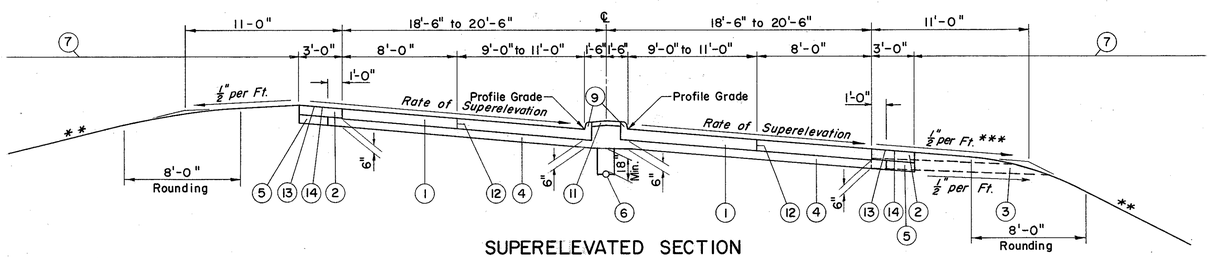
*See Cross Section for Slope Treatment
**See Ramp Typical Sections for Slope Treatment
***Use Superelevation Slope if greater then 1/2" per Ft.



NORMAL SECTION
LIMITING STATIONS
TRENTON AVENUE CONNECTOR
Sta. 19 + 36.98 to Sta. 23 + 07.50



TYPICAL SECTION WITH GUARD RAIL



SUPERELEVATED SECTION
LIMITING STATIONS
TRENTON AVENUE CONNECTOR
Sta. 15 + 00.00 to Sta. 15 + 33.68 ← BRIDGE & APPROACH SLABS
Sta. 17 + 65.05 to Sta. 19 + 36.98
Sta. 23 + 07.50 to Sta. 23 + 71.50 ← BRIDGE NO. TUS-36-1712 & APPROACH SLABS
Sta. 26 + 63.25 to Sta. 33 + 89.52

LEGEND

(1) T - 71 9" Reinforced Portland Cement Concrete Pavement
(2) B - 19 8" Aggregate Base Course
(3) I - 9 Stone Underdrains No.2 (Mod. Sec. I-9.03, See General Notes)
(4) I - 22 Subbase, Grading "A" or "B" as per Plan (See General Note)
(5) I - 22 Subbase, Regular Grading
(6) I - 1 6" Pipe Class I-3
(7) L - 9 Seeding and Protecting
(8) I - 12 Combination Curb & Gutter, Type 2
(9) I - 12 Concrete Curb, Type 2-A
(10) I - 13 4" Concrete Sidewalk (where shown on Plan)
(11) I - 21 Concrete Median Pavement - 4". (See Detail on this Sheet)
(12) Standard Longitudinal Joint
(13) T - 30 Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3, applied at a rate of 0.4 Gal. per Sq. Yd.
(14) T - 31 Bituminous Surface Treatment, using 0.008 Cu. Yds. No. 6 Aggregate per Sq. Yd. and 0.30 Gal. Sec. M-5.7, RT-8 or 9 or Sec. M-5.2, RC-3 per Sq. Yd.
(15) I - 22 Subbase, Grading "A" or "B" as per Plan (See General Note)

TYPICAL SECTIONS
TRENTON AVENUE CONNECTOR & RECONSTR. TRENTON AVENUE

TYPICAL SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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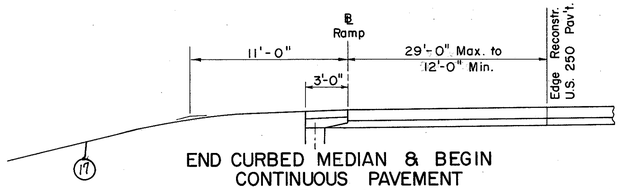
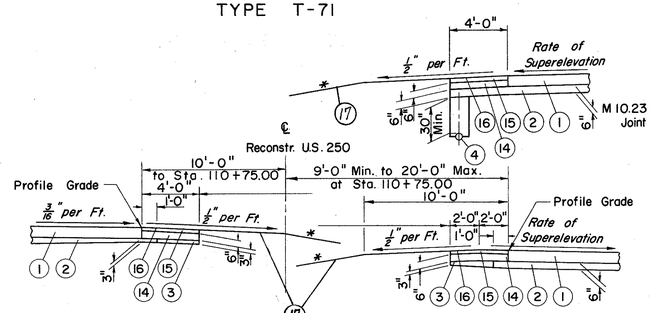
TUSCARAWAS COUNTY
TUS-36-15.93

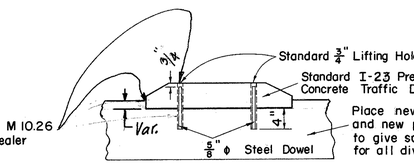
TYPE T-71



END CURBED MEDIAN & BEGIN CONTINUOUS PAVEMENT
STA. 109 + 00.00
SEE RAMP TYPICAL SECTION

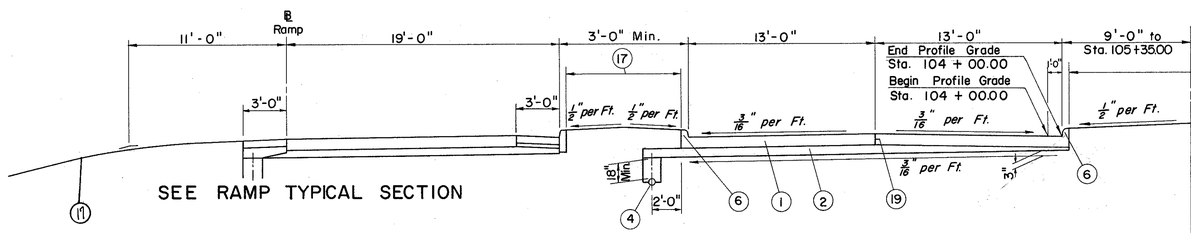


END CURB & BEGIN STABILIZED SHOULDERS
STA. 105 + 35.00



DETAILING FOR PLACING TRAFFIC DIVIDERS ON RECONSTR. U.S. 250

Place new dividers on existing and new pavement per this detail, to give same height above pavement for all dividers. Dowel Holes shall meet the requirements of Item 513, and Dowel Bars the requirements of Item 514. Payment for Dowel Holes and Dowel Bars shall be included in the price bid for Item I-23 Precast White P.C.C. Traffic Dividers, as per plan.

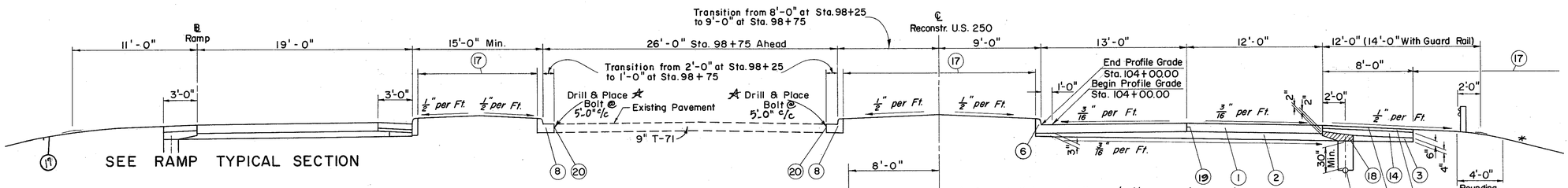


SEE RAMP TYPICAL SECTION

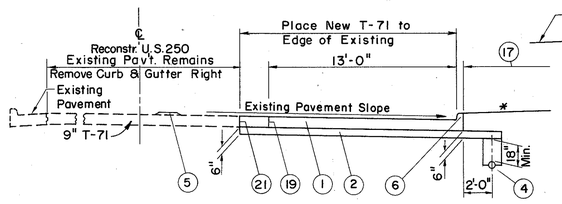
LIMITING STATIONS - LT.
STA. 101+05.00 TO STA. 110+75.00

LIMITING STATIONS - RT.
CURVE RT. - STA. 104+47.56 TO STA. 107+98.78
CURVE LT. - STA. 107+98.78 TO STA. 110+75.00

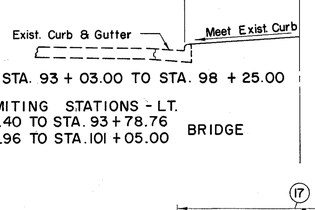
FROM STA. 110+75.00 AHEAD SEE TYPICAL SECTION RELOC. U.S. 36 (SHEET 3)



SEE RAMP TYPICAL SECTION



TO STA. 98 + 25.00



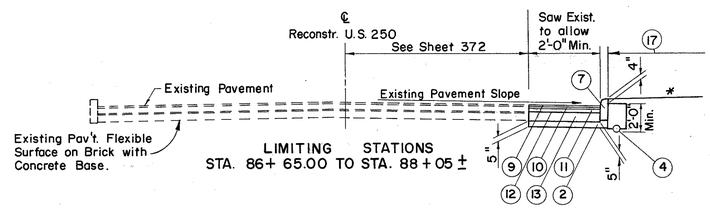
STA. 93 + 03.00 TO STA. 98 + 25.00

LIMITING STATIONS - LT.
STA. 92 + 87.40 TO STA. 93 + 78.76
STA. 96 + 41.96 TO STA. 101 + 05.00 BRIDGE

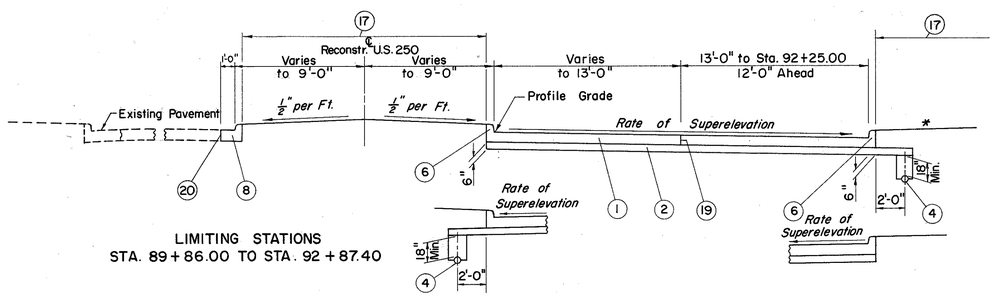
★ Dowel Holes shall meet the requirements of Item 513. Dowel Holes and Expansion Anchor Bolts shall be included for payment in the price bid for Item I-12 Std. Type 2 Combination Curb & Gutter, Modified as per plan.

LIMITING STATIONS - RT.
STA. 92 + 87.40 TO STA. 93 + 78.76
STA. 96 + 41.96 TO STA. 104 + 47.56 BRIDGE

LIMITING STATIONS
STA. 88 + 05 ± TO STA. 89 + 86.00



LIMITING STATIONS
STA. 86+ 65.00 TO STA. 88 + 05 ±



LIMITING STATIONS
STA. 89 + 86.00 TO STA. 92 + 87.40

LEGEND

(1) T-71 9" Reinforced Portland Cement Concrete
(2) I-22 Subbase, Grading "A" or "B" as per Plan (See General Note)
(3) I-22 Subbase, Regular Grading
(4) I-1 6" Pipe, Class I-3
(5) I-23 Precast White P.C.C. Traffic Dividers (See Detail)
(6) I-12 Concrete Curb, Type 2-A
(7) I-12 Concrete Curb, Type 6
(8) I-12 Concrete Curb, Type 2, Modified as per plan
ϕ (9) T-35 1¼" Asphaltic Concrete Surface Course, Type C (70-85)
ϕ (10) B-35 1¼" Asphaltic Concrete Leveling Course (70-85)
ϕ (11) B-35 3" Asphaltic Concrete Base Course (70-85)
(12) T-30 Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3 applied at rate of 0.4 Gal. per Sq. Yd.
(13) B-19 8" Aggregate Base Course
(14) B-19 Aggregate Base Course
ϕ (15) B-21 3" Waterproofed Aggregate Base Course
See Note in Proposal
(16) T-31 Bituminous Surface Treatment using 0.008 Cu. Yds. No. 6 Aggregate per Sq. Yd. and 0.25 Gal. Bituminous Material per Sq. Yd. (See Note in Proposal)
(17) L-9 Seeding and Protecting
(18) Special Drainage Connection using No. 6 Aggregate (See Note in Proposal)
(19) Standard Longitudinal Joint
(20) Standard Longitudinal Expansion Bolt Joint
(21) Standard Key Joint Without Tiebars

NOTE:
* See Cross Sections for Slope Treatment
ϕ Thicknesses as shown are designed thicknesses as described in Section B-21.01, B-35.01 and T-35.01

TYPICAL SECTIONS
RECONSTRUCTION U.S. 250
TO STA. 110 + 75.00

TYPICAL SECTIONS

TYPE T-35 & T-71

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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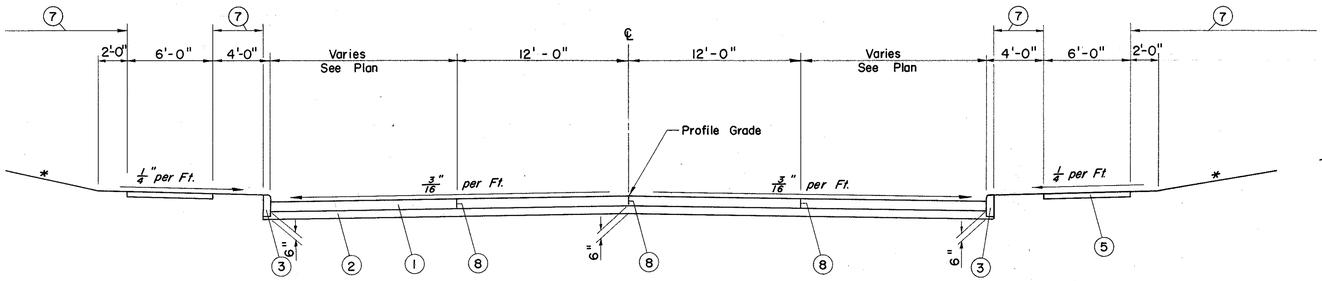
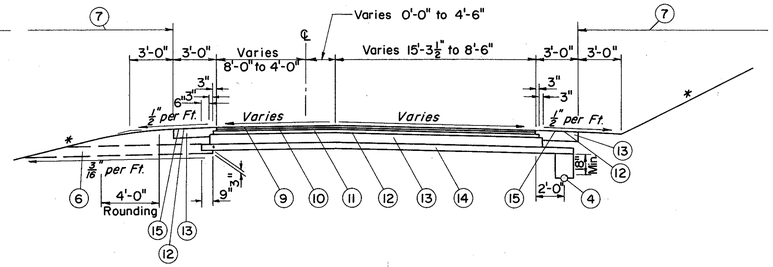
662

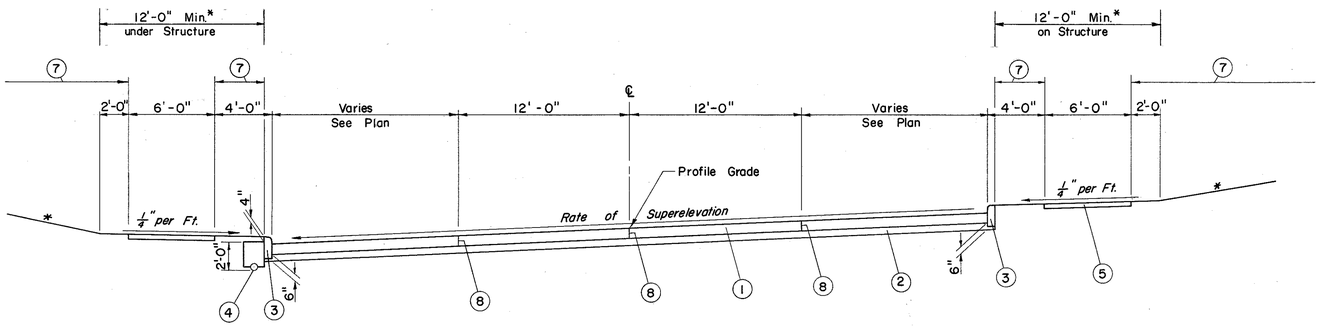
TUSCARAWAS COUNTY
TUS-36-15.93



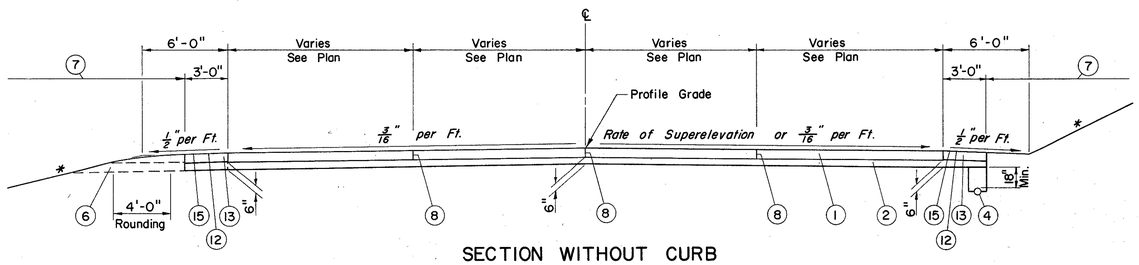
NORMAL SECTION
LIMITING STATIONS
STA. 25+23.00 TO STA. 26+24.32



LIMITING STATIONS
STA. 34+69.57 TO STA. 35+17.57



SUPERELEVATED SECTION
LIMITING STATIONS
STA. 26+24.32 TO STA. 32+65.57



SECTION WITHOUT CURB
LIMITING STATIONS
STA. 32+65.57 TO STA. 34+69.57

NOTE:
- ϕ Thicknesses as shown are designed thicknesses as described in Section B-35.01 and T-35.01.
- * See Cross Sections for Slope Treatment

LEGEND

(1) T-71 9" Reinforced Portland Cement Concrete Pavement
(2) I-22 Subbase, Grading "A" or "B" as per Plan (See General Note)
(3) I-12 Concrete Curb, Type 6
(4) I-1 6" Pipe, Class I-3
(5) I-13 4" Concrete Sidewalk (Where shown on Plan)
(6) I-9 Stone Underdrains No. 2 (*Mod.* Sec. I-9.03, See General Note)
(7) L-9 Seeding & Protecting
(8) Standard Longitudinal Joint
ϕ (9) T-35 1 1/4" Asphaltic Concrete Surface Course, Type C (70-85)
ϕ (10) B-35 1 1/4" Asphaltic Concrete Leveling Course (70-85)
ϕ (11) B-35 3" Asphaltic Concrete Base Course (70-85)
(12) T-30 Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3 applied at rate of 0.4 Gal. per Sq. Yd.
(13) B-19 8" Aggregate Base Course
(14) I-22 5" Subbase, *Regular Grading*
(15) T-31 Bituminous Surface Treatment, using 0.008 Cu. Yds. No. 6 Aggregate per Sq. Yd. and 0.30 Gal. Sec. M-5.7, RT-8 or 9 or Sec. M-5.2, RC-3 per Sq. Yd.

TYPICAL SECTIONS
RECONSTRUCTION SECOND STREET

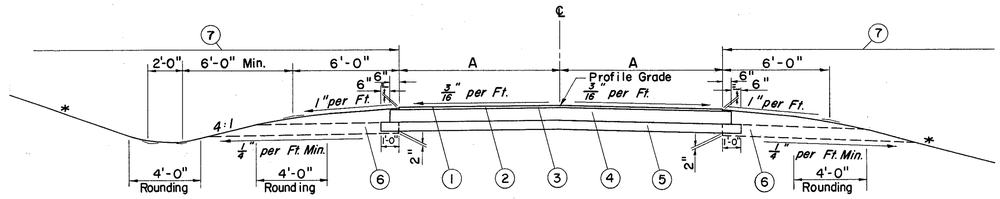
TYPICAL SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

10 / 662

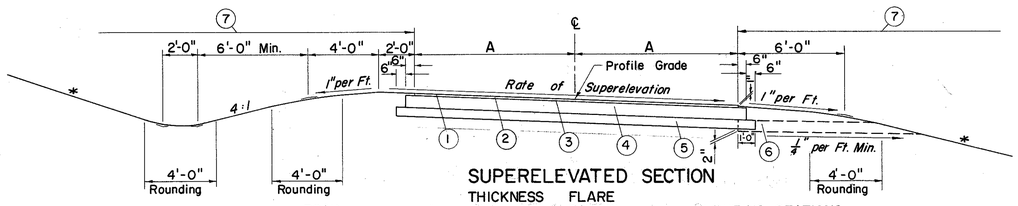
TUSCARAWAS COUNTY
TUS - 36 - 15.93

TYPE T-35



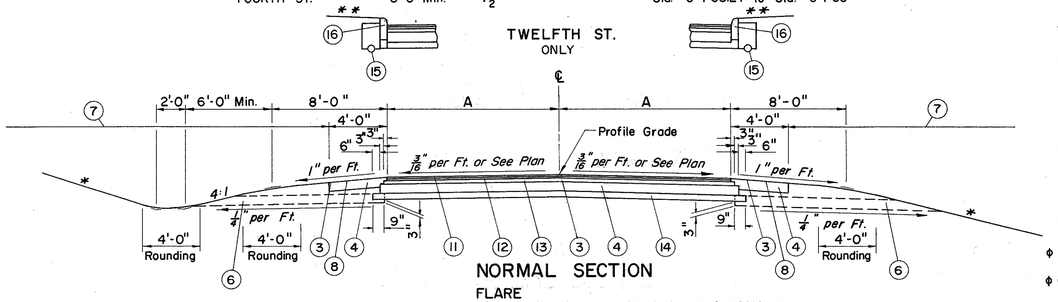
NORMAL SECTION

ROAD	A	THICKNESS OF T-35	LIMITING STATIONS
RECONSTR. CO. RD. 62	9'-0"	1½"	Sta. 26 + 50.00 to Sta. 27 + 12.22
CO. RD. 64	10'-0"	2"	Sta. 36 + 35.00 to Sta. 38 + 25.00
	10'-0" Max.	2"	Sta. 38 + 25.00 to Sta. 38 + 50.00
EASTPORT AVE.	10'-0"	2"	Sta. 0 + 85.52 to Sta. 1 + 52.8
	℄ to Face Bridge Wall	2"	Sta. 1 + 52.8 to Sta. 2 + 00.00
T.R. 287	8'-0"	1½"	Sta. 2 + 81.84 to Sta. 4 + 14.03
FOURTH ST.	8'-0"	1½"	Sta. 0 + 60 to Sta. 1 + 00.00
	8'-0" Max.	1½"	Sta. 1 + 00.00 to Sta. 1 + 30.00



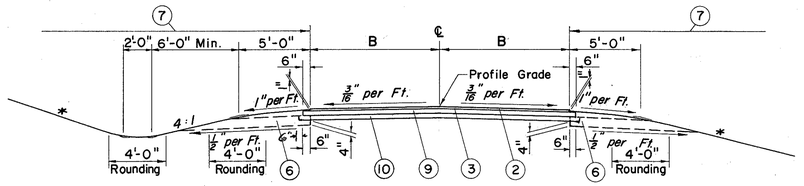
SUPERELEVATED SECTION

ROAD	A	THICKNESS OF T-35	FLARE PAVING	LIMITING STATIONS
RECONSTR. CO. RD. 62	9'-0"	1½"	—	Sta. 27 + 12.22 to Sta. 29+16.99
	9'-0" Min.	1¼"	⑰&⑤	Sta. 29 + 16.99 to Sta. 29+76.39
	9'-0" Min.	1"	⑰&⑤	Sta. 30 + 64.69 to Sta. 31+09.88
	9'-0"	1½"	—	Sta. 31 + 09.88 to Sta. 32+50.00
CO. RD. 64	10'-0" Max.	2"	—	Sta. 19 + 00.00 to Sta. 19+25.00
	10'-0"	2"	—	Sta. 19 + 25.00 to Sta. 36+35.00
EASTPORT AVE.	10'-0" Min.	2"	—	Sta. 0 + 10.56 to Sta. 0+85.52
T.R. 287	8'-0" Min.	1"	⑰ ⑤	Sta. 0 + 23.21 to Sta. 0+62.93
	8'-0"	1½"	—	Sta. 0 +62.93 to Sta. 2+81.84
	8'-0"	1½"	—	Sta. 4 +14.03 to Sta. 14+00.00
	8'-0" Max.	1½"	—	Sta. 14 + 00.00 to Sta. 14+50.00
FOURTH ST.	8'-0" Min.	1½"	—	Sta. 0 +08.24 to Sta. 0+60



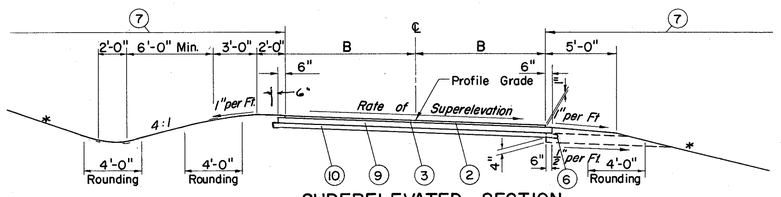
NORMAL SECTION

ROAD	A	FLARE PAVING	LIMITING STATIONS
CONN. TO EXIST. U.S.250	12'-0" Min.	—	Sta. 1 + 86 to Sta. 2 + 82
	12'-0"	—	Sta. 2 + 82 to Sta. 9 + 01.50
	12'-0" Min.	⑰&⑤	Sta. 9 +01.50 to Sta. 9 + 55.90
CO. RD. 62 CONN.	10'-0" Min.	—	Sta. 0 + 14 to Sta. 0 + 79
	10'-0"	—	Sta. 0 + 79 to Sta. 1 +01.20
TWELFTH ST.	15'-0" Min.	—	Sta. 0 + 19 to Sta. 0 +43 (Curbed)



NORMAL SECTION

ROAD	B	LIMITING STATIONS
FRONTAGE RD. 'A'	10'-0"	Sta. 20 + 17.15 to Sta. 20 + 85.05
	10'-0"	Sta. 24 + 00.66 to Sta. 31 + 32.00
FRONTAGE RD. 'B'	10'-0" Max.	Sta. 9 + 45.00 to Sta. 9 + 70.00
	10'-0"	Sta. 9 + 70.00 to Sta. 12 + 20.45
	10'-0"	Sta. 15 + 01.64 to Sta. 17 + 13.77
ACCESS RD.	10'-0"	Sta. 11 + 01.07 to Sta. 34 + 64.27
	8'-0"	Sta. 34 + 64.27 to Sta. 38 + 90.77
MCKEE RD.	9'-0"	Sta. 0 + 88.5 to Sta. 1 + 25.00
	9'-0" Max.	Sta. 1 + 25.00 to Sta. 1 + 50.00



SUPERELEVATED SECTION

ROAD	B	FLARE PAVING	LIMITING STATIONS
FRONTAGE RD. 'A'	10'-0" Min.	—	Sta. 19 + 47.04 to Sta. 20 + 17.15
	10'-0"	—	Sta. 20 + 85.05 to Sta. 24 + 00.66
FRONTAGE RD. 'B'	10'-0"	—	Sta. 12 + 20.45 to Sta. 15 + 01.64
	10'-0"	—	Sta. 17 + 13.77 to Sta. 19 + 35.5
	10'-0" Min.	⑰&⑤	Sta. 19 + 35.5 to Sta. 19 + 80.5
ACCESS RD.	10'-0" Min.	⑰&⑤	Sta. 10 + 44.26 to Sta. 11 + 01.07
	8'-0"	—	Sta. 38 + 90.77 to Sta. 40 + 12
	Varies	—	Sta. 40 + 12 to Sta. 40 + 80
MCKEE RD.	9'-0" Min.	—	Sta. 0 + 14.84 to Sta. 0 + 88.5
T.R. 278	9'-0" Max.	—	Sta. 8 + 80.00 to Sta. 9 + 25.00
	9'-0"	—	Sta. 9 + 25.00 to Sta. 12 + 75.00
	9'-0" Min.	—	Sta. 12 + 75.00 to Sta. 13 + 28.00
SPUR OFF FRONTAGE RD.'A' STA. 30 + 87.0 LT.	10'-0" Min.	—	Sta. 0 + 45.00

LEGEND

- ϕ (1) T-35 2" Asphaltic Concrete Surface Course, placed in two 1" Courses, Type C (70-85) See List
- ϕ (2) T-35 1½" Asphaltic Concrete Surface Course, Type A (70-85) See List
- (3) T-30 Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3 applied at rate of 0.4 Gal. per Sq. Yd.
- (4) B-19 8" Aggregate Base Course
- (5) I-22 6" Subbase, *Regular Grading*
- (6) I-9 Stone Underdrains No. 2 (*Mod.* Sec. I-9.03, See General Notes)
- (7) L-9 Seeding and Protecting
- (8) T-31 Bituminous Surface Treatment, using 0.008 Cu. Yds. No. 6 Aggregate per Sq. Yd. and 0.30 Gal. Sec. M-5.7, RT-8 or 9 or Sec. M-5.2, RC-3 per Sq. Yd.
- (9) B-19 5" Aggregate Base Course
- (10) I-22 4" Subbase, *Regular Grading*
- ϕ (11) T-35 1¼" Asphaltic Concrete Surface Course, Type C (70-85)
- ϕ (12) B-35 1¼" Asphaltic Concrete Leveling Course (70-85)
- ϕ (13) B-35 3" Asphaltic Concrete Base Course (70-85)
- (14) I-22 5" Subbase, *Regular Grading*
- (15) I-1 6" Pipe, Class I-3
- (16) I-12 Concrete Curb, Type 6
- (17) T-71 9" Reinforced Portland Cement Concrete Pavement

NOTE:
* See Standard Construction Drawing No. RI-1, Roadway Items for Normal Slopes, Guard Rail and Ditch Design. Also see Cross Sections for Ditches.
** See Cross Sections for Slope Treatment
ϕ Thicknesses as shown are designed thicknesses as described in Sections B-35.01 and T-35.01

TYPICAL SECTIONS

RECONSTR. CO. RD. 62, RELOC. CO. RD. 64, RECONSTR. EASTPORT AVE., RELOC. T. R. 287, CONN. TO EXIST. U.S. 250, FRONTAGE RD'S, ACCESS RD., RECONSTR. McKEE RD., RELOC. T.R. 278, RECONSTR. FOURTH ST., CO. RD. 62 CONN. & RECONSTR. TWELFTH ST.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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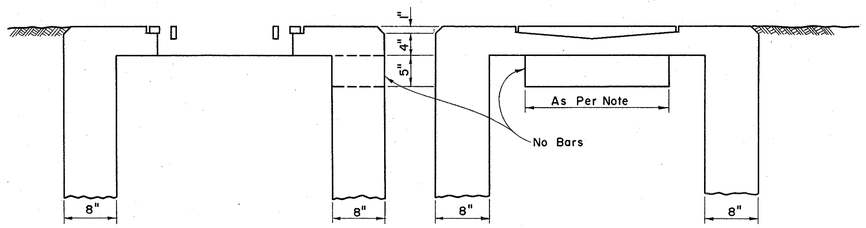
TUSCARAWAS COUNTY
TUS-36-15.93

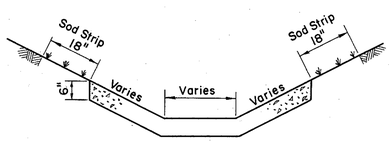


DETAIL OF WINDOW OPENING

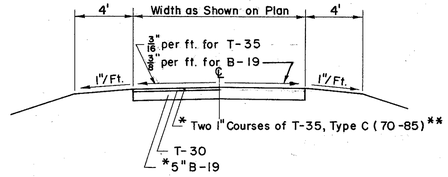
STD. NO. 2-3, 2-4, 2-6 CATCH BASINS AS PER PLAN

NOTE: Window opening will be 2'-0" Wide and 0'-5" high on all catch basins except No. 2-4 which will be 3'-0" wide and 0'-5" high

QUANTITY	TYPE
5	Std. No. 2-3
1	Std. No. 2-4
2	Std. No. 2-6



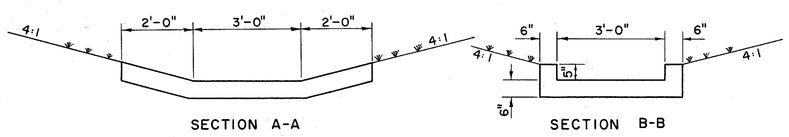
SECTION SHOWING PLACEMENT OF SOD STRIPS WITH STD. PAVED GUTTER AS PER GENERAL NOTE



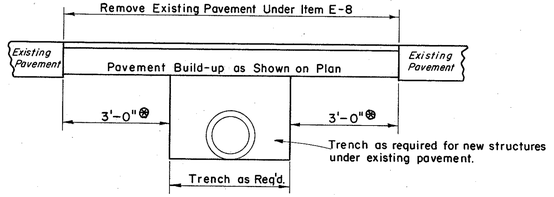
* Unless otherwise shown on plan
** Thicknesses as shown are designed thicknesses as described in Section T-35.01

TYPICAL SECTION

STANDARD DRIVEWAY & CROSS STREET



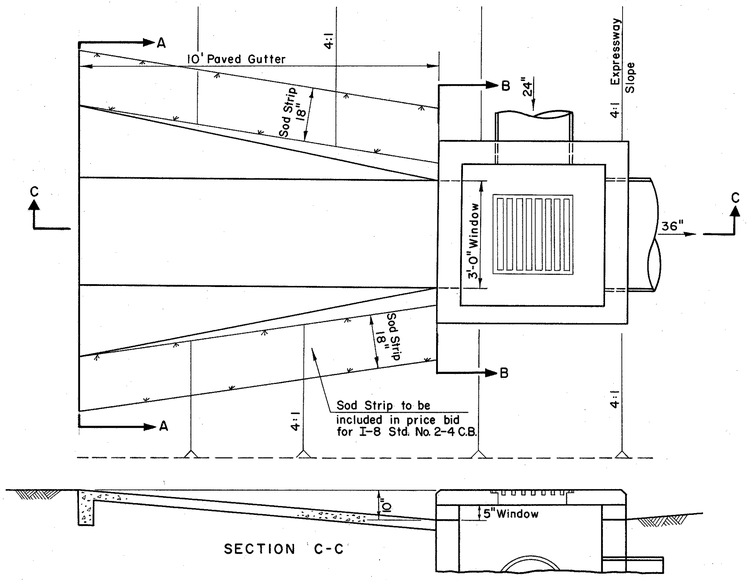
SECTION A-A SECTION B-B



TYPICAL SECTION

PAVEMENT REPLACEMENT AT PATCHED AREAS

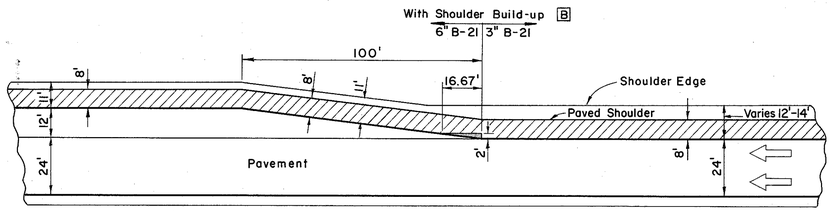
Outside pipe trench or other drainage structures, unless otherwise shown.



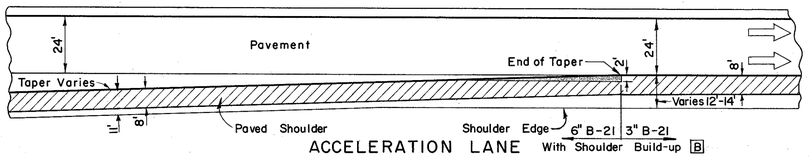
SECTION C-C

DETAIL OF WINDOW OPENING AND PAVED GUTTER AT 2-4 C.B.

STA. 384+22, 109' RT. U.S. 36



DECELERATION LANE

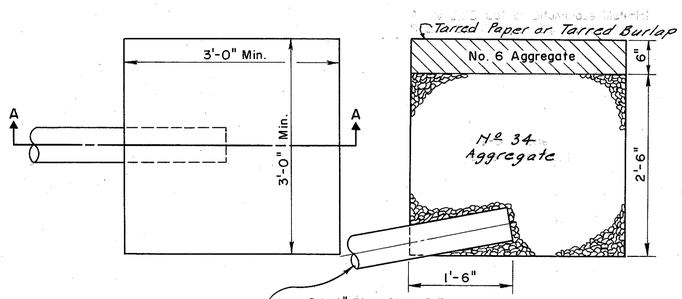


ACCELERATION LANE

Shaded area shall be constructed to an elevation 1½" lower then the adjacent pavement and surfaced with T-31 and No.8 aggregate.
The shaded area shall be paid for as full depth T-71 and the surface treatment shall be paid for as T-31.

SHOULDER & GRADING LINE TREATMENT AT END OF SPEED CHANGE LANES AND MEDIAN CROSS OVERS

These details apply throughout plans even though otherwise shown.



See Note, Sheet 22

NOTE:
No. 34 Aggregate shall be used with a 6" layer of No. 6 Aggregate over the top and sealed with *Tarred Paper or Tarred Burlap.*

Payment for Aggregates, *Tarred Paper or Tarred Burlap & necessary Excavation for Spring* Drains shall be included in the unit price bid per Lin. Ft. of Item I-9, Stone Underdrains, No. 1, as per plan. Spring Drains are to be placed at locations designated by the Engineer.

Estimated Quantities of I-9, Stone Underdrains, No. 1, as per plan and of I-1 Pipe, are carried in the General Notes (Sheet No. 22) for Draining Springs. This item shall be non-performed in the event that none are encountered.

The size of Spring Drains shall be determined by the Engineer.

DETAIL SECTION SPRING DRAIN

Scale in Feet 0 1 2 3

MISCELLANEOUS DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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1662

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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" x 1" x 8" wood stakes and shall be perpendicular to the ground and flush with the finished grade.

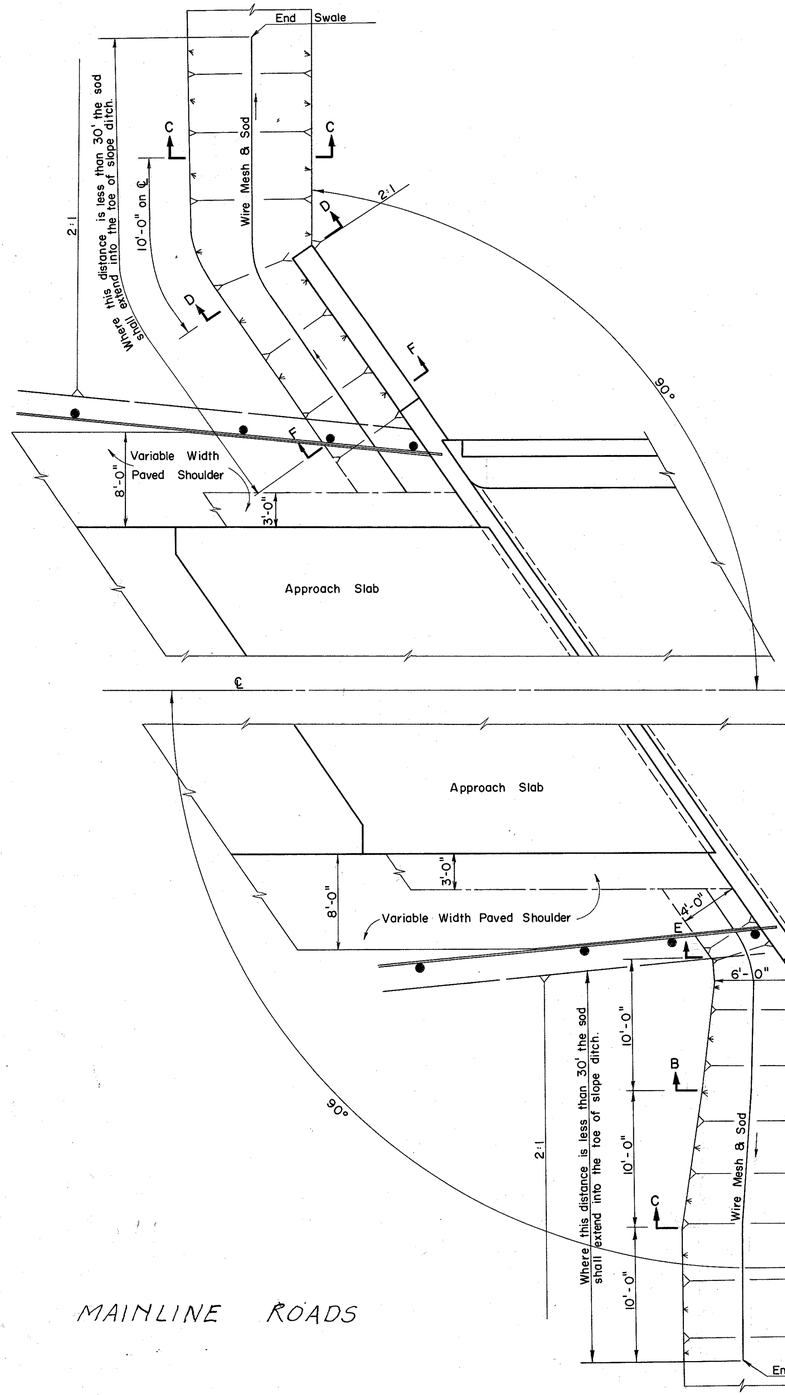
The fence shall be Straight Line Poultry Fence or equivalent with strand width of four feet, having a two inch mesh and all wires No. 20 Gauge.

The strands of fencing shall be fastened together at twelve inch intervals by means of hog rings.

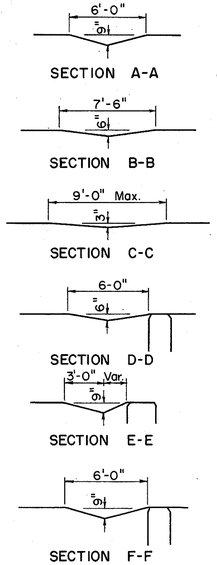
The fence shall be secured to the wood stakes by metal staples.

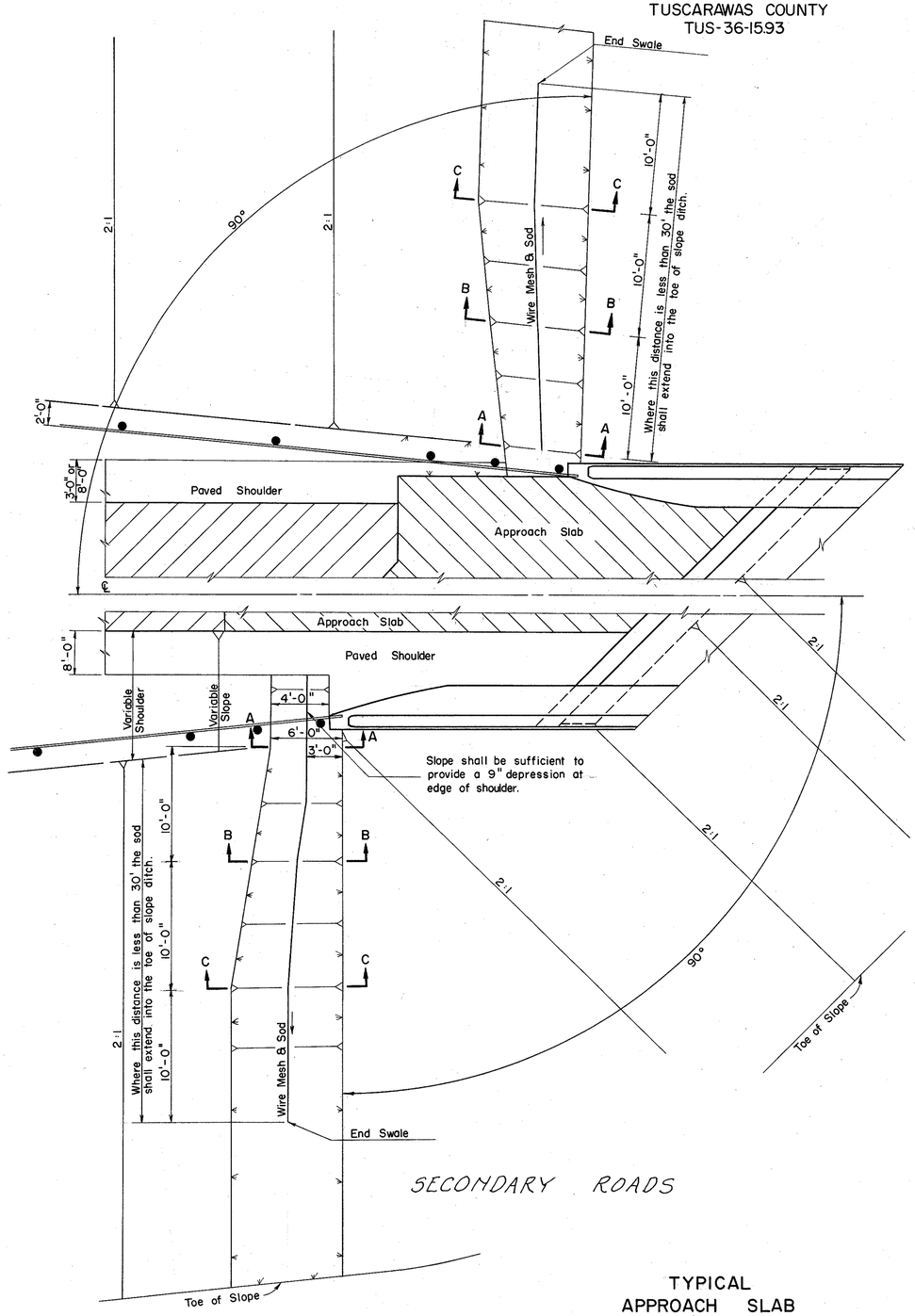
Sod shall be laid in accordance with Construction and Materials Specifications Section L-10.07.

Payment for all of the above shall be included in the price bid for Item L-10, Sodding for Special Berm and Slope Protection



MAINLINE ROADS





SECONDARY ROADS

TYPICAL APPROACH SLAB EROSION CONTROL

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

13
662

TUSCARAWAS COUNTY
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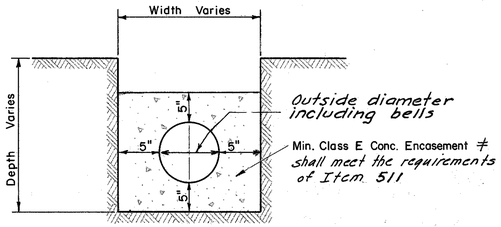
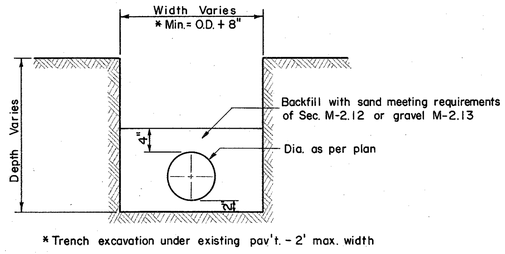


DETAIL OF CONCRETE ENCASED PIPE
ITEM 603

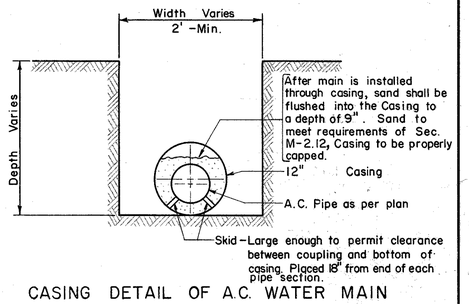
Payment for furnishing and placing the concrete, and for all excavation required, shall be included in the price bid per linear foot for the pertinent 603 Item, or in the price bid per linear foot for the 603 Item, existing pipe encased.

Pipe under pavement to have minimum cover of 48". All other pipe 40" minimum cover.



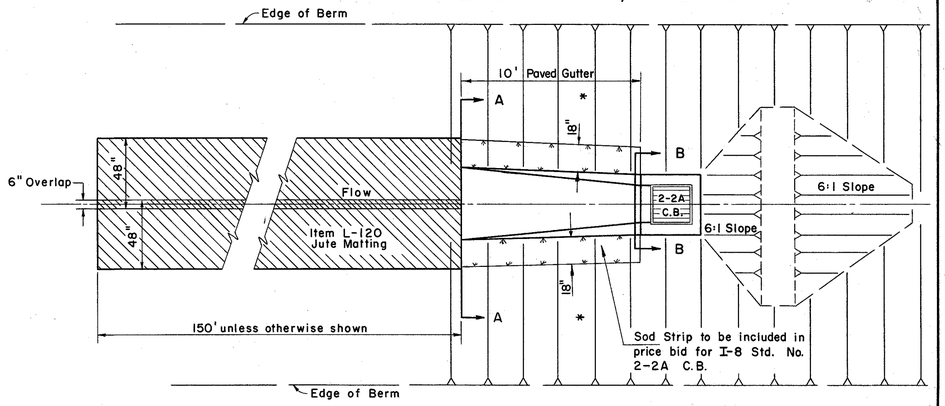
* Trench excavation under existing pav't. - 2' max. width

TRENCH DETAIL OF A.C. WATER MAIN

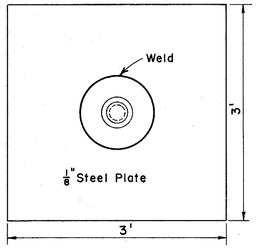


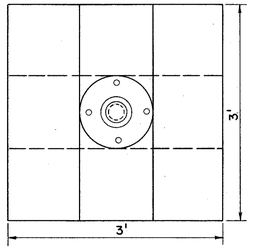
CASING DETAIL OF A.C. WATER MAIN

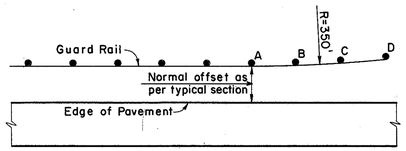
STANDARD NO. 2-2A CATCH BASIN, AS PER PLAN



PLAN

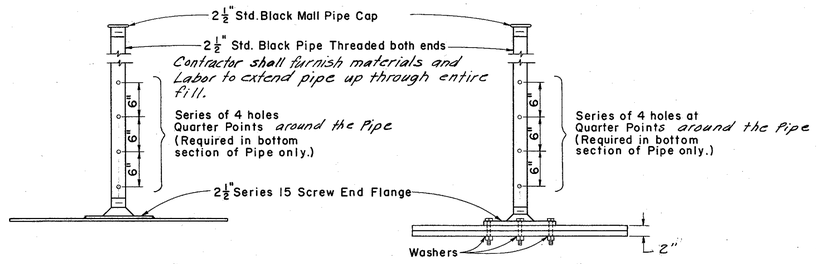






DETAIL OF GUARD RAIL FLARE

POST	OFFSET FROM NORMAL
A	0.00'
B	0.22'
C	0.89'
D	2.00'

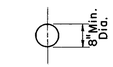


STEEL BASE * WOOD BASE *

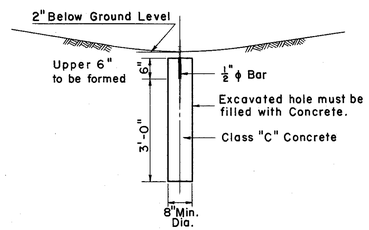
DETAILS OF SETTLEMENT PLATFORMS ☆
Sta. 335+17, 10' Lt.

* Contractor has option of using either Steel or Wood Platform Base
Settlement Platforms shall be anchored by stakes driven at each corner to prevent overturning.

☆ See note in proposal.

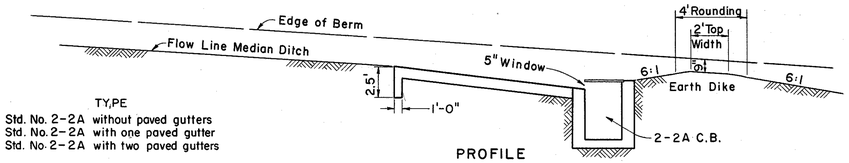


PLAN



SECTION

DETAIL OF CENTERLINE REFERENCE MONUMENTS

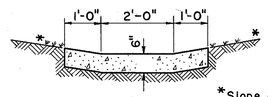


PROFILE

MEDIAN GRADING AT CATCH BASINS

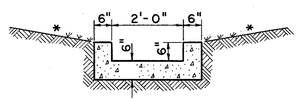
QUANTITY	TYPE
11**	Std. No. 2-2A without paved gutters
45	Std. No. 2-2A with one paved gutter
3	Std. No. 2-2A with two paved gutters

** Used at locations other than median and roadway ditch.



SECTION A-A

* Slope as shown on Cross Sections



SECTION B-B

NOTE:
The paved gutter and earth dike shall be provided at all Std. No. 2-2A Catch Basins in the median and roadway ditch, or other locations as shown on the plan, where the ditch has a continuous grade past the catch basin. When the catch basin is placed in a sag, the dike will be omitted and the paved gutter shall be placed on each side of the basin. The cost of the paved gutter and earth dike shall be included in the unit price bid for each Std. No. 2-2A Catch Basin, as per plan. See list of total number of each on this sheet. Unless otherwise shown, details shall conform to Std. Dwg. No. I-8, 2-2A & B & Std. Dwg. No. I-14 G.

MISCELLANEOUS DETAILS

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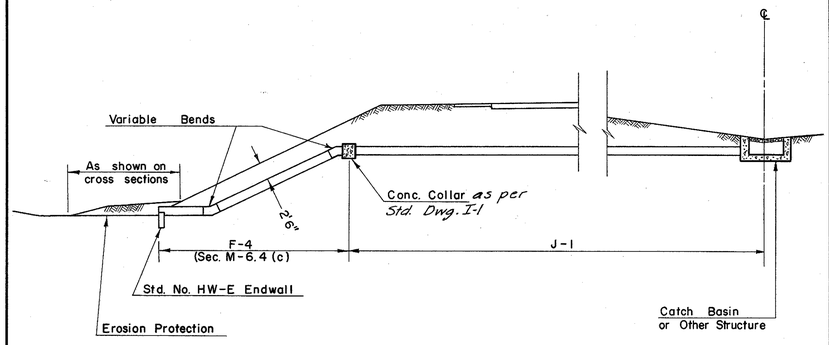
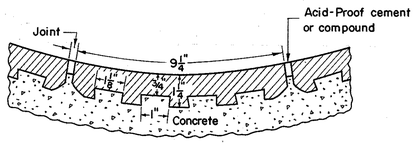
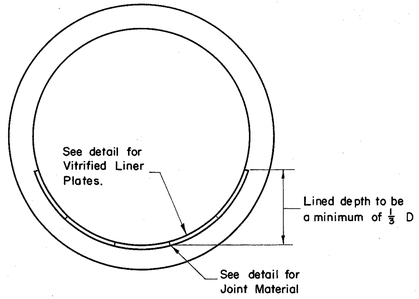


Note: Concrete collar to be included in bid price for I-1 pipe.

MEDIAN OUTLET DETAIL IN HIGH FILL

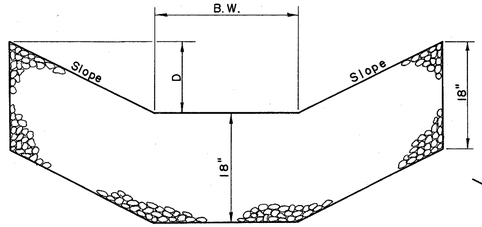


DETAIL OF PLACING VITRIFIED LINERS

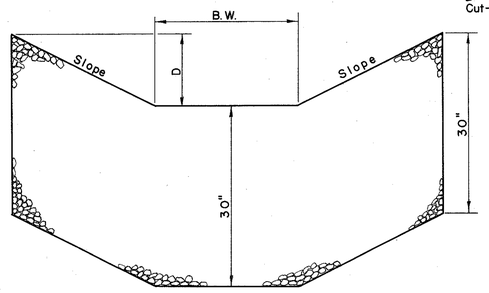


~~For additional details see note in proposal~~

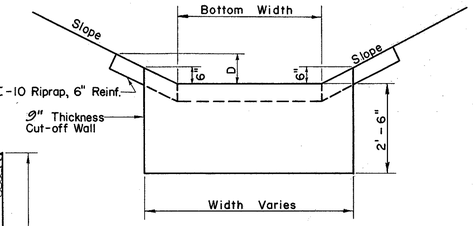
DETAIL OF 1/3 VITRIFIED LINED REINFORCED CONCRETE PIPE



SECTION A-A
Thru Dumped Rock



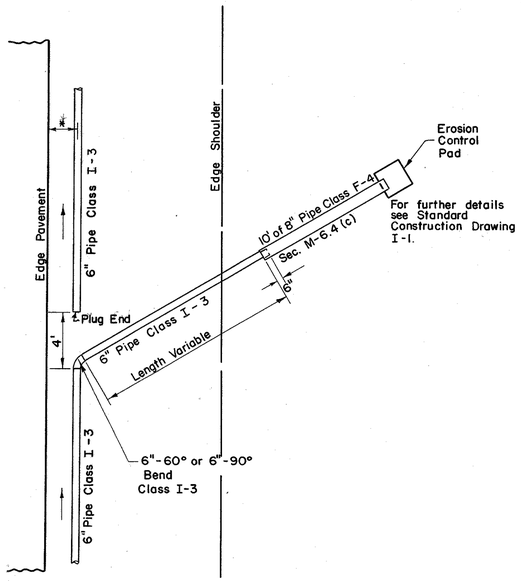
SECTION B-B
Thru Dumped Rock



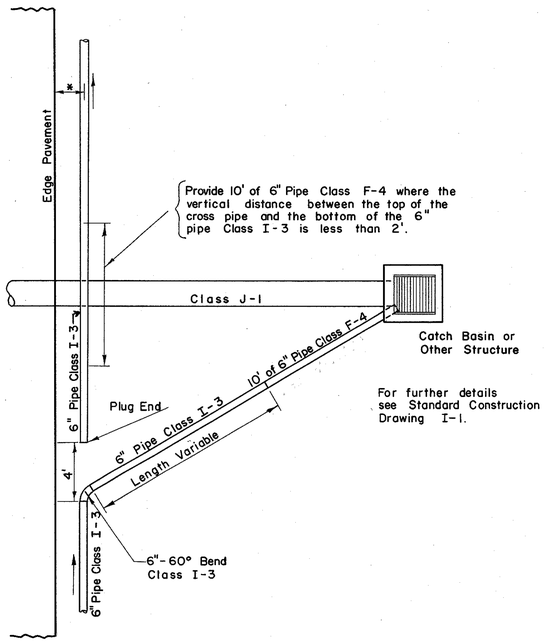
SECTION R-R

DETAIL OF I-10, DUMPED ROCK CHANNEL PROTECTION AND RIPRAP, 6" REINFORCED

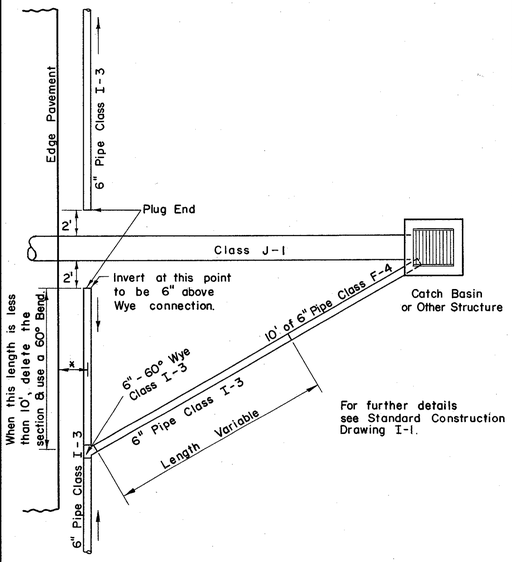
NOTE: At those locations where Section A-A, B-B or R-R are called for, the above sections shall apply. The Slope – S, Bottom Width – B.W., and Depth – D is noted at each location.



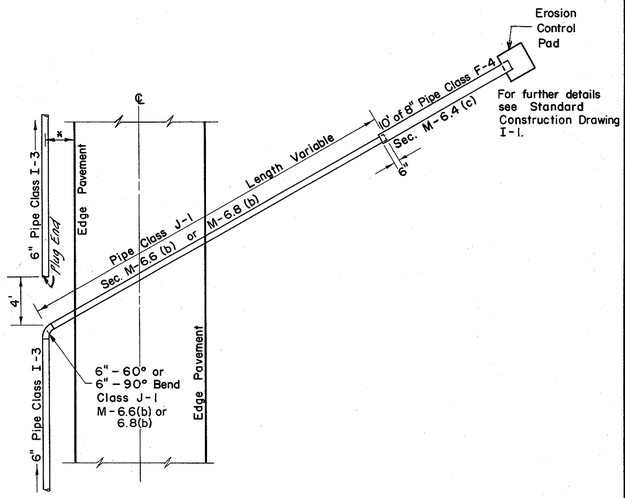
UNDERDRAIN OUTLET DETAIL A



UNDERDRAIN OUTLET DETAIL B



UNDERDRAIN OUTLET DETAIL C



OUTLET DETAIL D

* See Typical Section or as per Plan

MISCELLANEOUS DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
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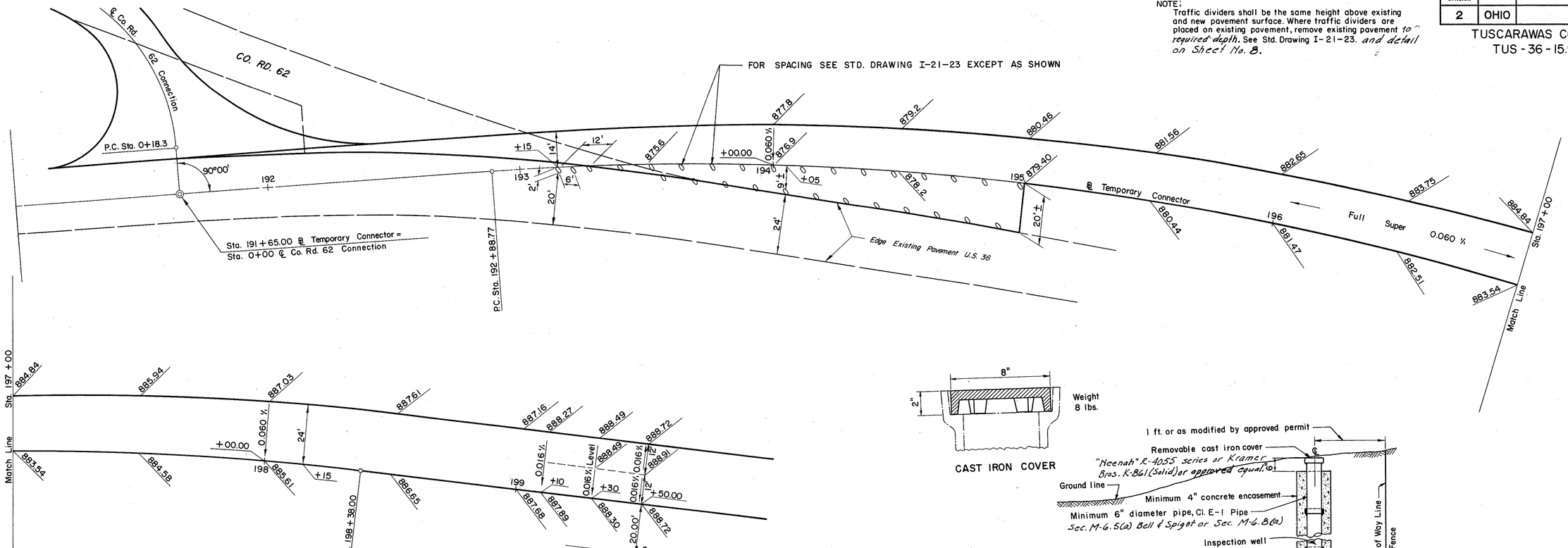
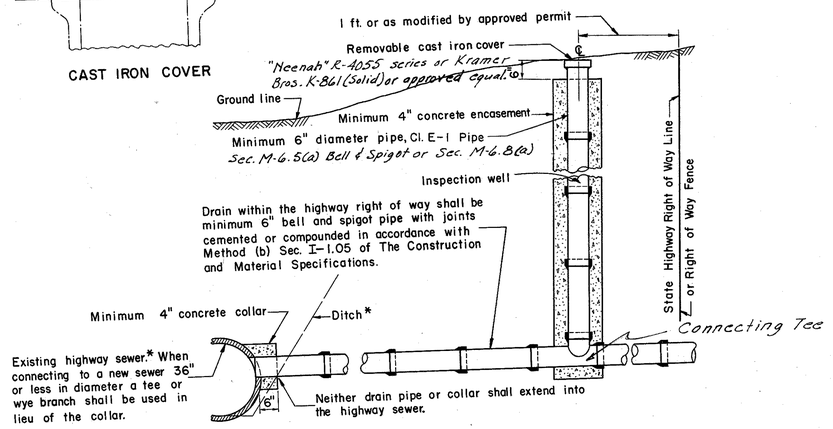
NOTE:
Traffic dividers shall be the same height above existing and new pavement surface. Where traffic dividers are placed on existing pavement, remove existing pavement to required depth. See Std. Drawing I-21-23. and detail on Sheet No. 8.



CAST IRON COVER



INSPECTION WELL FOR SANITARY TAPS

Inspection Wells as shown shall be provided on all existing drains carrying an effluent originating from a domestic source, when these drains are connected to or outlet into any Ditch, Culvert, or Sewer whose construction is provided for in these Plans. Inspection Well shall be placed where directed by the Engineer. The unit price bid per each for "Item I-8 Inspection Wells as per Plan" shall include furnishing and placing Riser Pipe, Concrete Encasement, Cast Iron Cover and Connecting Tee (for I-1, Class E-1). Estimated Quantities of Pipe Specials Item I-5 of the Carrying Line Type Pipe and the I-1, 6" Class E-1 Pipe to be furnished and installed with the Inspection Wells are listed in the General Notes, Sheet 22.

The cost of the Tap into the Carrying Line and the Concrete Collar shall be included in the unit price bid per Lin. Ft. for the I-1, Class E-1 Pipe.

* As shown on plans or as directed.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
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TABULATION BENCH MARKS

B.M.-12 SITUATED 120' RT. STA. 204+30, STEEL ROD SET IN CONCRETE LOCATED IN N. E. CORNER, N. ABUTMENT OF BRIDGE OVER P.R.R. EASTERLY SIDE U.S. 36.
ELEV. 903.488

B.M.-13 LOCATED 242' RT. STA. 219+10, TOP P.R.R. MILE POST NO. 93.
ELEV. 881.009

B.M.-14 LOCATED 306' RT. STA. 229+74, TOP CONCRETE FENCE POST.
ELEV. 871.895

B.M.-15 LOCATED 253' RT. STA. 241+51, S.W. CORNER CONCRETE PLATFORM, TOP OF IRON STEPS, H. K. PORTER CO.
ELEV. 870.530

B.M.-16 439' LT. STA. 251+31, SPIKE IN 8" WILD CHERRY.
ELEV. 876.197

B.M.-17 238' LT. STA. 257+00, SPIKE IN 6" TRIPLE CHERRY.
ELEV. 867.366

B.M.-W179 SITUATED APPROXIMATELY 700' RT. CENTERLINE STA. 258+25, A STANDARD U.S.C. & G.S. BRONZE DISK SET IN CONCRETE AND STAMPED W179, 1954. LOCATED ON THE SOUTHERLY SIDE OF P.R.R. ON THE EASTERLY SIDE OF A PRIVATE ROAD.
ELEV. 861.701

B.M.-18 149' RT. STA. 273+31, SPIKE IN 9" ELM.
ELEV. 878.723

B.M.-19 88' RT. STA. 284+87, SPIKE IN 12" OAK.
ELEV. 891.680

B.M.-20 213' RT. STA. 302+40, SPIKE IN 12" SPLIT ELM.
ELEV. 870.970

B.M-21 (U.S.C. & G.S. MONUMENT L-180) SITUATED APPROXIMATELY 271'± LT. STA. 307+07, DISK SET IN CONCRETE AND STAMPED L180, 1954. LOCATED ON W. END OF N. BRIDGE ABUTMENT OF THE B & O R.R. STRUCTURE ON THE NORTH SIDE OF TOWNSHIP ROAD 278.
ELEV. 859.893

B.M.-22 LOCATED 389' RT. STA. 314+91, PAINTED WEST CORNER OF THE N. ABUTMENT OF U.S. 250 BRIDGE.
ELEV. 856.796

B.M.-22A ¾" BOLT ON N.W. CORNER OF ANCHOR PLATE FOR FLEETWING SIGN. LOCATED ON THE N. E. CORNER OF ELEVENTH AND WATER STREETS.
ELEV. 851.505

B.M.-22B SITUATED APPROXIMATELY 70' LT. OF CENTERLINE STA. 20+75 ON EXISTING U.S. 250, AT THE WESTERLY END OF THE CONN. TO EXISTING U.S. 250. CHISEL MARK ON N.E. CORNER OF CONCRETE ANCHOR FOR SOHIO SIGN. LOCATED ON THE WESTERLY SIDE OF HIGHWAY.
ELEV. 853.560

B.M.-23 188' LT. STA. 322+43, SPIKE IN 12" APPLE.
ELEV. 849.184

B.M.-24 LOCATED 256' LT. STA. 329+87, IRON PIN IN 12" CONCRETE MONUMENT.
ELEV. 847.702

B.M.-25 LOCATED 18'± LT. STA. 21+40, RELOC. CO. ROAD 64, SPIKE IN 14" STUMP.
ELEV. 869.454

B.M.-26 FIRE HYDRANT BOLT BETWEEN HOSE CONNECTIONS N. E. CORNER SECOND AND SUMNER STREETS.
ELEV. 868.622

B.M.-27 FIRE HYDRANT BOLT BETWEEN HOSE CONNECTIONS LOCATED 465'± RT. STA. 368+83.
ELEV. 884.402

B.M.-28 355' LT. STA. 378+82, SPIKE IN 20" MAPLE.
ELEV. 884.839

B.M.-29 LOCATED 172' RT. STA. 385+78, N. CORNER CONCRETE FOUNDATION FOR SIGNS.
ELEV. 858.776

LEGEND

△ REFERENCE POINTS

■ BENCH MARKS

P.O.T. Sta. 189+59.67

P.I. Sta. 216+10.66

P.T. Sta. 224+34.77

P.C. Sta. 254+07.09

P.O.S.T., P.I. Sta. 271+33.41 +600.66'

P.O.T. Sta. 241+62.77

P.O.S.T. Sta. 263+99.54

P.T. Sta. 287+09.11

P.I. Sta. 271+33.41

P.O.T. Sta. 207+72.63

T.S. Sta. 298+19.54

S.T. Sta. 319+60.56

T.S. Sta. 351+83.33

S.T. Sta. 367+40.80

P.O.T. Sta. 375+92.07

P.O.S.T., P.I. Sta. 309+69.64 +771.76'

P.O.T. Sta. 345+42.07

P.O.S.T. Sta. 359+28.79

T.S. Sta. 373+73.79

P.I. Sta. 381+85.44

S.T. Sta. 389+68.58

P.O.T. Sta. 189+59.67

P.O.T. Sta. 207+72.63

P.C. Sta. 207+74.84

Record Rd. 62 SEE SHEET 234

P.T. Sta. 224+34.77

Reloc. U.S. 36

P.O.T. Sta. 241+62.77

P.C. Sta. 254+07.09

SEE SHEET 244 Frontage Rd. 'B'

P.O.S.T., P.I. Sta. 271+33.41 +600.66'

P.T. Sta. 287+09.11

Conn. to Exist. U.S. 250

Access Rd.

Elm St.

Davis St.

Access Rd.

Access Rd.

SEE SHEETS 308-315

SURVEY @ U.S. 250

P.O.S.T., P.I. Sta. 309+69.64 +771.76' Survey Control Line

B.&O. R.R.

Reloc. T.R. 278

Reconst. U.S. 250

C.S. Sta. 316+60.56

S.T. Sta. 319+60.56

S.C. Sta. 301+19.54

T.S. Sta. 298+19.54

P.O.T. Sta. 294+81.28

11th. St.

Reloc. Co. Rd. 64

SEE SHEET 401

P.O.S.T., P.I. Sta. 15+04.86 +195.55'= Sta. 7+18.24 @ Wardell St.

Wardell St.

Transco Ave. Conn.

P.O.T. Sta. 11+00.28

WARDELL ST. TRAVERSE

P.O.T. Sta. 11+00.28

P.T.

P.C.

McKee Rd.

T.S. Sta. 351+83.33

S.C. Sta. 354+33.33

Reconst. 2nd St.

Sumner St.

SEE SHEET 419

P.O.S.T. Sta. 359+28.79

Reloc. T.R. 287

C.S. Sta. 364+99.80

S.T. Sta. 367+40.80

T.S. Sta. 373+73.79

S.C. Sta. 375+73.79

C.S. Sta. 387+68.58

S.T. Sta. 389+68.58

PLAN OF SURVEY BASE LINES, BENCH MARKS & REFERENCES

SUPERELEVATION TABLES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

P.I. STA. 216 + 10.66 CURVE LEFT RELOC. U.S. 36 SUPER. = 0.024'/FT.

STATION	44' LEFT	32' LEFT	20' LEFT & RIGHT (PROFILE GRADE)	32' RIGHT	44' RIGHT
206+80	902.85	903.04	902.85	903.04	902.85
207+00	903.04	903.23	903.09	903.28	903.14
207+25	903.25	903.44	903.36	903.55	903.47
207+50	903.44	903.63	903.62	903.81	903.80
207+55	903.47	903.66	903.66	903.85	903.85
207+74.84	903.55	903.74	903.84	904.03	904.13
207+75	903.56	903.75	903.85	904.04	904.14
207+93	903.62	903.81	904.00	904.19	904.38
208+00	903.64	903.84	904.05	904.26	904.46
208+25	903.69	903.96	904.23	904.50	904.77
208+34	903.72	904.01	904.30	904.59	904.88
208+50	903.82	904.11	904.40	904.69	904.98
208+75	903.95	904.24	904.53	904.82	905.11
209+00	904.07	904.36	904.65	904.94	905.23
209+25	904.16	904.45	904.74	905.03	905.32
209+50	904.23	904.52	904.81	905.10	905.39
209+75	904.27	904.56	904.85	905.14	905.43
210+00	904.29	904.58	904.87	905.16	905.45
210+25	904.29	904.58	904.87	905.16	905.45
210+50	904.26	904.55	904.84	905.13	905.42
210+75	904.21	904.50	904.79	905.08	905.37
211+00	904.14	904.43	904.72	905.01	905.30
211+25	904.05	904.34	904.63	904.92	905.21
211+50	903.94	904.23	904.52	904.81	905.10
211+75	903.80	904.09	904.38	904.67	904.96
212+00	903.63	903.92	904.21	904.50	904.79
212+25	903.45	903.74	904.03	904.32	904.61
212+50	903.23	903.52	903.81	904.10	904.39
212+75	903.01	903.30	903.59	903.88	904.17
213+00	902.79	903.08	903.37	903.66	903.95
213+25	902.57	902.86	903.15	903.44	903.73
213+50	902.35	902.64	902.93	903.22	903.51
213+75	902.13	902.42	902.71	903.00	903.29
214+00	901.91	902.20	902.49	902.78	903.07
214+25	901.69	901.98	902.27	902.56	902.85
214+50	901.47	901.76	902.05	902.34	902.63
214+75	901.25	901.54	901.83	902.12	902.41
215+00	901.02	901.31	901.60	901.89	902.18
215+25	900.80	901.09	901.38	901.67	901.96
215+50	900.58	900.87	901.16	901.45	901.74
215+75	900.36	900.65	900.94	901.23	901.52
216+00	900.14	900.43	900.72	901.01	901.30
216+25	899.92	900.21	900.50	900.79	901.08
216+50	899.70	899.99	900.28	900.57	900.86
216+75	899.48	899.77	900.06	900.35	900.64
217+00	899.26	899.55	899.84	900.13	900.42
217+25	899.04	899.33	899.62	899.91	900.20
217+50	898.81	899.10	899.39	899.68	899.97
217+75	898.59	898.88	899.17	899.46	899.75
218+00	898.37	898.66	898.95	899.24	899.53
218+25	898.15	898.44	898.73	899.02	899.31
218+50	897.93	898.22	898.51	898.80	899.09
218+75	897.71	898.00	898.29	898.58	898.87
219+00	897.49	897.78	898.07	898.36	898.65
219+25	897.27	897.56	897.85	898.14	898.43
219+50	897.05	897.34	897.63	897.92	898.21

TRANSITION

FULL SUPER

STATION	44' LEFT	32' LEFT	20' LEFT & RIGHT (PROFILE GRADE)	32' RIGHT	44' RIGHT
219+75	896.83	897.12	897.41	897.70	897.99
220+00	896.60	896.89	897.18	897.47	897.76
220+25	896.38	896.67	896.96	897.25	897.54
220+50	896.16	896.45	896.74	897.03	897.32
220+75	895.94	896.23	896.52	896.81	897.10
221+00	895.72	896.01	896.30	896.59	896.88
221+25	895.50	895.79	896.08	896.37	896.66
221+50	895.28	895.57	895.86	896.15	896.44
221+75	895.06	895.35	895.64	895.93	896.22
222+00	894.84	895.13	895.42	895.71	896.00
222+25	894.62	894.91	895.20	895.49	895.78
222+50	894.39	894.68	894.97	895.26	895.55
222+75	894.17	894.46	894.75	895.04	895.33
223+00	893.95	894.24	894.53	894.82	895.11
223+25	893.73	894.02	894.31	894.60	894.89
223+50	893.51	893.80	894.09	894.38	894.67
223+75	893.29	893.58	893.87	894.16	894.45
223+76	893.28	893.57	893.86	894.15	894.44
224+00	893.19	893.42	893.65	893.88	894.11
224+17	893.12	893.31	893.50	893.69	893.88
224+25	893.09	893.28	893.43	893.62	893.77
224+34.77	893.05	893.24	893.34	893.53	893.63
224+50	893.00	893.19	893.21	893.40	893.42
224+55	892.97	893.16	893.16	893.35	893.35
224+75	892.85	893.04	892.99	893.18	893.13
225+00	892.68	892.87	892.76	892.95	892.84
225+25	892.53	892.72	892.54	892.73	892.55
225+30	892.50	892.69	892.50	892.69	892.50

TRANSITION

FULL SUPER

P.I. STA. 271 + 33.41 CURVE LEFT RELOC. U.S. 36 SUPER. = 0.030'/FT.

STATION	44' LEFT	32' LEFT	20' LEFT & RIGHT (PROFILE GRADE)	32' RIGHT	44' RIGHT
252+98.09	868.03	868.22	868.03	868.22	868.03
253+00	868.00	868.19	868.01	868.20	868.01
253+25	867.72	867.91	867.79	867.98	867.86
253+50	867.44	867.63	867.57	867.76	867.70
253+73.09	867.18	867.37	867.37	867.56	867.56
253+75	867.15	867.34	867.35	867.54	867.55
254+00	866.81	867.00	867.13	867.32	867.45
254+07.09	866.71	866.90	867.07	867.26	867.43
254+11.09	866.65	866.84	867.03	867.22	867.41
254+25	866.46	866.69	866.91	867.13	867.36
254+50	866.12	866.40	866.69	866.98	867.26
254+75	865.77	866.12	866.47	866.82	867.17
254+79.09	865.71	866.07	866.43	866.79	867.15
255+00	865.52	865.88	866.24	866.60	866.96
255+25	865.30	865.66	866.02	866.38	866.74
255+50	865.08	865.44	865.80	866.16	866.52
255+75	864.86	865.22	865.58	865.94	866.30
256+00	864.64	865.00	865.36	865.72	866.08
256+25	864.42	864.78	865.14	865.50	865.86
256+50	864.20	864.56	864.92	865.28	865.64
256+75	863.98	864.34	864.70	865.06	865.42
257+00	863.76	864.12	864.48	864.84	865.20
257+25	863.54	863.90	864.26	864.62	864.98

FULL SUPER

STATION	44' LEFT	32' LEFT	20' LEFT & RIGHT (PROFILE GRADE)	32' RIGHT	44' RIGHT
257+50	863.31	863.67	864.03	864.39	864.75
257+75	863.09	863.45	863.81	864.17	864.53
258+00	862.87	863.23	863.59	863.95	864.31
258+25	862.66	863.02	863.38	863.74	864.10
258+50	862.47	862.83	863.19	863.55	863.91
258+75	862.30	862.66	863.02	863.38	863.74
259+00	862.14	862.50	862.86	863.22	863.58
259+25	862.01	862.37	862.73	863.09	863.45
259+50	861.89	862.25	862.61	862.97	863.33
259+75	861.80	862.16	862.52	862.88	863.24
260+00	861.71	862.07	862.43	862.79	863.15
260+25	861.66	862.02	862.38	862.74	863.10
260+50	861.62	861.98	862.34	862.70	863.06
260+75	861.60	861.96	862.32	862.88	863.04
261+00	861.60	861.96	862.32	862.68	863.04
261+25	861.62	861.98	862.34	862.70	863.06
261+50	861.66	862.02	862.38	862.74	863.10
261+75	861.72	862.08	862.44	862.80	863.16
262+00	861.79	862.15	862.51	862.87	863.23
262+25	861.89	862.25	862.61	862.97	863.33
262+50	862.00	862.36	862.72	863.08	863.44
26 2+75	862.14	862.50	862.86	863.22	863.58
263+00	862.29	862.65	863.01	863.37	863.73
263+25	862.46	862.82	863.18	863.54	863.90
263+50	862.65	863.01	863.37	863.73	864.09
263+75	862.86	863.22	863.58	863.94	864.30
264+00	863.09	863.45	863.81	864.17	864.53
264+25	863.34	863.70	864.06	864.42	864.78
264+50	863.60	863.96	864.32	864.68	865.04
264+75	863.89	864.25	864.61	864.97	865.33
265+00	864.19	864.55	864.91	865.27	865.63
265+25	864.53	864.89	865.25	865.61	865.97
265+50	864.87	865.23	865.59	865.95	866.31
265+75	865.23	865.59	865.95	866.31	866.67
266+00	865.61	865.97	866.33	866.69	867.05
266+25	866.00	866.36	866.72	867.08	867.44
266+50	866.40	866.76	867.12	867.48	867.84
266+75	866.79	867.15	867.51	867.87	868.23
267+00	867.18	867.54	867.90	868.26	868.62
267+25	867.57	867.93	868.29	868.65	869.01
267+50	867.96	868.32	868.68	869.04	869.40
267+75	868.36	868.72	869.08	869.44	869.80
268+00	868.75	869.11	869.47	869.83	870.19
268+25	869.14	869.50	869.86	870.22	870.58
268+50	869.53	869.89	870.25	870.61	870.97
268+75	869.92	870.28	870.64	871.00	871.36
269+00	870.32	870.68	871.04	871.40	871.76
269+25	870.71	871.07	871.43	871.79	872.15
269+50	871.10	871.46	871.82	872.18	872.54
269+75	871.49	871.85	872.21	872.57	872.93
270+00	871.88	872.24	872.60	872.96	873.32
270+25	872.28	872.64	873.00	873.36	873.72
270+50	872.67	873.03	873.39	873.75	874.11
270+75	873.06	873.42	873.78	874.14	874.50
271+00	873.45	873.81	874.17	874.53	874.89

SUPERELEVATION TABLES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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662

TUSCARAWAS COUNTY
TUS-36-15.93

FULL SUPER

STATION	44' LEFT	32' LEFT	20' LEFT & RIGHT (PROFILE GRADE)	32' RIGHT	44' RIGHT
271+25	873.84	874.20	874.56	874.92	875.28
271+50	874.24	874.60	874.96	875.32	875.68
271+75	874.63	874.99	875.35	875.71	876.07
272+00	875.02	875.38	875.74	876.10	876.46
272+25	875.41	875.77	876.13	876.49	876.85
272+50	875.80	876.16	876.52	876.88	877.24
272+75	876.20	876.56	876.92	877.28	877.64
273+00	876.59	876.95	877.31	877.67	878.03
273+25	876.98	877.34	877.70	878.06	878.42
273+50	877.37	877.73	878.09	878.45	878.81
273+75	877.76	878.12	878.48	878.84	879.20
274+00	878.16	878.52	878.88	879.24	879.60
274+25	878.55	878.91	879.27	879.63	879.99
274+50	878.94	879.30	879.66	880.02	880.38
274+75	879.33	879.69	880.05	880.41	880.77
275+00	879.72	880.08	880.44	880.80	881.16
275+25	880.12	880.48	880.84	881.20	881.56
275+50	880.51	880.87	881.23	881.59	881.95
275+75	880.90	881.26	881.62	881.98	882.34
276+00	881.29	881.65	882.01	882.37	882.73
276+25	881.68	882.04	882.40	882.76	883.12
276+50	882.08	882.44	882.80	883.16	883.52
276+75	882.47	882.83	883.19	883.55	883.91
277+00	882.86	883.22	883.58	883.94	884.30
277+25	883.25	883.61	883.97	884.33	884.69
277+50	883.64	884.00	884.36	884.72	885.08
277+75	884.04	884.40	884.76	885.12	885.48
278+00	884.43	884.79	885.15	885.51	885.87
278+25	884.82	885.18	885.54	885.90	886.26
278+50	885.21	885.57	885.93	886.29	886.65
278+75	885.60	885.96	886.32	886.68	887.04
279+00	886.00	886.36	886.72	887.08	887.44
279+25	886.39	886.75	887.11	887.47	887.83
279+50	886.78	887.14	887.50	887.86	888.22
279+75	887.17	887.53	887.89	888.25	888.61
280+00	887.56	887.92	888.28	888.64	889.00
280+25	887.96	888.32	888.68	889.04	889.40
280+50	888.35	888.71	889.07	889.43	889.79
280+75	888.74	889.10	889.46	889.82	890.18
281+00	889.13	889.49	889.85	890.21	890.57
281+25	889.52	889.88	890.24	890.60	890.96
281+50	889.92	890.28	890.64	891.00	891.36
281+75	890.31	890.67	891.03	891.39	891.75
282+00	890.70	891.06	891.42	891.78	892.14
282+25	891.09	891.45	891.81	892.17	892.53
282+50	891.48	891.84	892.20	892.56	892.92
282+75	891.88	892.24	892.60	892.96	893.32
283+00	892.27	892.63	892.99	893.35	893.71
283+25	892.66	893.02	893.38	893.74	894.10
283+50	893.05	893.41	893.77	894.13	894.49
283+75	893.44	893.80	894.16	894.52	894.88
284+00	893.84	894.20	894.56	894.92	895.28
284+25	894.23	894.59	894.95	895.31	895.67
284+50	894.62	894.98	895.34	895.70	896.06
284+75	895.01	895.37	895.73	896.09	896.45

FULL SUPER
TRANSITION

STATION	44' LEFT	32' LEFT	20' LEFT & RIGHT (PROFILE GRADE)	32' RIGHT	44' RIGHT
285+00	895.40	895.76	896.12	896.48	896.84
285+25	895.80	896.16	896.52	896.88	897.24
285+50	896.19	896.55	896.91	897.27	897.63
285+75	896.58	896.94	897.30	897.66	898.02
286+00	896.97	897.33	897.69	898.05	898.41
286+25	897.36	897.72	898.08	898.44	898.80
286+37.11	897.55	897.91	898.27	898.63	898.99
286+50	897.83	898.15	898.48	898.81	899.13
286+75	898.34	898.61	898.87	899.13	899.40
287+00	898.86	899.06	899.26	899.46	899.66
287+05.11	898.96	899.15	899.34	899.53	899.72
287+09.11	899.04	899.23	899.40	899.59	899.76
287+25	899.36	899.55	899.64	899.83	899.92
287+43.11	899.72	899.91	899.91	900.10	900.10
287+50	899.83	900.02	900.00	900.19	900.17
287+75	900.25	900.44	900.36	900.55	900.47
288+00	900.63	900.82	900.68	900.87	900.73
288+18.11	900.90	901.09	900.90	901.09	900.90

P.I. STA. 309 + 69.64 CURVE RIGHT RELOC. U.S. 36 SUPER = 0.071'/FT.

FULL SUPER
TRANSITION
FULL SUPER

STATION	44' LEFT	32' LEFT	20' LEFT & RIGHT (PROFILE GRADE)	32' RIGHT	44' RIGHT
297+44.54	900.12	900.31	900.12	900.31	900.12
297+50	900.08	900.26	900.07	900.24	900.06
297+75	899.94	900.05	899.86	899.97	899.78
298+00	899.79	899.84	899.65	899.70	899.51
298+19.54	899.68	899.68	899.49	899.49	899.30
298+25	899.66	899.63	899.44	899.41	899.22
298+50	899.57	899.42	899.23	899.08	898.89
298+57.29	899.55	899.36	899.17	898.98	898.79
298+75	899.49	899.26	899.02	898.79	898.55
299+00	899.40	899.11	898.81	898.51	898.22
299+25	899.32	898.96	898.60	898.24	897.88
299+50	899.24	898.82	898.39	897.97	897.54
299+75	899.15	898.67	898.18	897.69	897.21
300+00	899.07	898.52	897.97	897.42	896.87
300+25	898.98	898.37	897.76	897.15	896.54
300+50	898.90	898.23	897.55	896.87	896.20
300+75	898.82	898.08	897.34	896.60	895.86
301+00	898.73	897.93	897.13	896.33	895.53
301+19.54	898.67	897.82	896.97	896.12	895.27
301+25	898.62	897.77	896.92	896.07	895.22
301+50	898.41	897.56	896.71	895.86	895.01
301+75	898.20	897.35	896.50	895.65	894.80
302+00	897.99	897.14	896.29	895.44	894.59
302+25	897.78	896.93	896.08	895.23	894.38
302+50	897.57	896.72	895.87	895.02	894.17
302+75	897.36	896.51	895.66	894.81	893.96
303+00	897.15	896.30	895.45	894.60	893.75
303+25	896.94	896.09	895.24	894.39	893.54
303+50	896.73	895.88	895.03	894.18	893.33
303+75	896.52	895.67	894.82	893.97	893.12
304+00	896.31	895.46	894.61	893.76	892.91
304+25	896.10	895.25	894.40	893.55	892.70

FULL SUPER
TRANSITION

STATION	44' LEFT	32' LEFT	20' LEFT & RIGHT (PROFILE GRADE)	32' RIGHT	44' RIGHT
304+50	895.89	895.04	894.19	893.34	892.49
304+75	895.68	894.83	893.98	893.13	892.28
305+00	895.47	894.62	893.77	892.92	892.07
305+25	895.26	894.41	893.56	892.71	891.86
305+50	895.05	894.20	893.35	892.50	891.65
305+75	894.84	893.99	893.14	892.29	891.44
306+00	894.63	893.78	892.93	892.08	891.23
306+25	894.42	893.57	892.72	891.87	891.02
306+50	894.21	893.36	892.51	891.66	890.81
306+75	894.00	893.15	892.30	891.45	890.60
307+00	893.79	892.94	892.09	891.24	890.39
307+25	893.58	892.73	891.88	891.03	890.18
307+50	893.36	892.51	891.66	890.81	889.96
307+75	893.13	892.28	891.43	890.58	889.73
308+00	892.89	892.04	891.19	890.34	889.49
308+25	892.64	891.79	890.94	890.09	889.24
308+50	892.37	891.52	890.67	889.82	888.97
308+75	892.08	891.23	890.38	889.53	888.68
309+00	891.79	890.94	890.09	889.24	888.39
309+25	891.48	890.63	889.78	888.93	888.08
309+50	891.16	890.31	889.46	888.61	887.76
309+75	890.82	889.97	889.12	888.27	887.42
310+00	890.48	889.63	888.78	887.93	887.08
310+25	890.12	889.27	888.42	887.57	886.72
310+50	889.74	888.89	888.04	887.19	886.34
310+75	889.35	888.50	887.65	886.80	885.95
311+00	888.95	888.10	887.25	886.40	885.55
311+25	888.54	887.69	886.84	885.99	885.14
311+50	888.12	887.27	886.42	885.57	884.72
311+75	887.70	886.85	886.00	885.15	884.30
312+00	887.28	886.43	885.58	884.73	883.88
312+25	886.86	886.01	885.16	884.31	883.46
312+50	886.44	885.59	884.74	883.89	883.04
312+75	886.02	885.17	884.32	883.47	882.62
313+00	885.60	884.75	883.90	883.05	882.20
313+25	885.18	884.33	883.48	882.63	881.78
313+50	884.76	883.91	883.06	882.21	881.36
313+75	884.34	883.49	882.64	881.79	880.94
314+00	883.92	883.07	882.22	881.37	880.52
314+25	883.50	882.65	881.80	880.95	880.10
314+50	883.08	882.23	881.38	880.53	879.68
314+75	882.66	881.81	880.96	880.11	879.26
315+00	882.24	881.39	880.54	879.69	878.84
315+25	881.82	880.97	880.12	879.27	878.42
315+50	881.40	880.55	879.70	878.85	878.00
315+75	880.98	880.13	879.28	878.43	877.58
316+00	880.56	879.71	878.86	878.01	877.16
316+25	880.14	879.29	878.44	877.59	876.74
316+50	879.72	878.87	878.02	877.17	876.32
316+60.56	879.54	878.69	877.84	876.99	876.14
316+75	879.23	878.42	877.60	876.78	875.97
317+00	878.68	877.93	877.18	876.43	875.68
317+25	878.14	877.45	876.76	876.07	875.38
317+50	877.59	876.97	876.34	875.71	875.09
317+75	877.04	876.48	875.92	875.36	874.80

SUPERELEVATION TABLES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

TRANSITION

STATION	44' LEFT	32' LEFT	20' LEFT & RIGHT (PROFILE GRADE)	32' RIGHT	44' RIGHT
318+00	876.50	876.00	875.50	875.00	874.50
318+25	875.95	875.52	875.08	874.64	874.21
318+50	875.41	875.04	874.66	874.28	873.91
318+75	874.86	874.55	874.24	873.93	873.62
319+00	874.31	874.07	873.82	873.57	873.33
319+22.81	873.82	873.63	873.44	873.25	873.06
319+25	873.77	873.59	873.40	873.22	873.03
319+50	873.22	873.17	872.98	872.93	872.74
319+60.56	872.99	872.99	872.80	872.80	872.61
319+75	872.71	872.75	872.56	872.60	872.41
320+00	872.23	872.33	872.14	872.24	872.05
320+25	871.75	871.91	871.72	871.88	871.69
320+35.56	871.54	871.73	871.54	871.73	871.54

P.I. STA. 359 + 80.72 CURVE RIGHT RELOC. U.S. 36 SUPER. = 0.059'/FT.

TRANSITION

STATION	44' LEFT	32' LEFT	20' LEFT & RIGHT (PROFILE GRADE)	32' RIGHT	44' RIGHT
351+08.33	889.90	890.09	889.90	890.09	889.90
351+25	890.23	890.38	890.19	890.34	890.15
351+42	890.56	890.67	890.48	890.58	890.39
351+50	890.72	890.81	890.62	890.70	890.51
351+70	891.11	891.15	890.96	890.99	890.80
351+75	891.22	891.24	891.05	891.07	890.88
351+80	891.32	891.33	891.14	891.15	890.96
351+83.33	891.38	891.38	891.19	891.19	891.00
352+00	891.75	891.67	891.48	891.40	891.21
352+21.95	892.24	892.05	891.86	891.67	891.48
352+25	892.31	892.11	891.91	891.71	891.51
352+50	892.86	892.60	892.34	892.08	891.82
352+75	893.41	893.09	892.77	892.45	892.13
353+00	893.96	893.58	893.20	892.82	892.44
353+25	894.52	894.08	893.63	893.18	892.74
353+30	894.63	894.18	893.72	893.26	892.81
353+50	895.07	894.57	894.06	893.55	893.05
353+75	895.62	895.06	894.49	893.92	893.36
354+00	896.18	895.55	894.92	894.29	893.66
354+25	896.73	896.04	895.35	894.66	893.97
354+33.33	896.91	896.20	895.49	894.78	894.07
354+50	897.20	896.49	895.78	895.07	894.36
354+75	897.63	896.92	896.21	895.50	894.79
355+00	898.06	897.35	896.64	895.93	895.22
355+25	898.49	897.78	897.07	896.36	895.65
355+50	898.92	898.21	897.50	896.79	896.08
355+75	899.35	898.64	897.93	897.22	896.51
356+00	899.78	899.07	898.36	897.65	896.94
356+25	900.21	899.50	898.79	898.08	897.37
356+50	900.64	899.93	899.22	898.51	897.80
356+75	901.07	900.36	899.65	898.94	898.23
357+00	901.50	900.79	900.08	899.37	898.66
357+25	901.98	901.22	900.51	899.80	899.09
357+50	902.36	901.65	900.94	900.23	899.52
357+75	902.79	902.08	901.37	900.66	899.95
358+00	903.22	902.51	901.80	901.09	900.38

FULL SUPER

STATION	44' LEFT	32' LEFT	20' LEFT & RIGHT (PROFILE GRADE)	32' RIGHT	44' RIGHT
358+25	903.65	902.94	902.23	901.52	900.81
358+50	904.08	903.37	902.66	901.95	901.24
358+75	904.50	903.79	903.08	902.37	901.66
359+00	904.90	904.19	903.48	902.77	902.06
359+25	905.29	904.58	903.87	903.16	902.45
359+50	905.65	904.94	904.23	903.52	902.81
359+72.03	905.96	905.25	904.54	903.83	903.12
359+75	906.00	905.29	904.58	903.87	903.16
360+00	906.33	905.62	904.91	904.20	903.49
360+25	906.64	905.93	905.22	904.51	903.80
360+50	906.93	906.22	905.51	904.80	904.09
360+72.03	907.17	906.46	905.75	905.04	904.33
360+75	907.20	906.49	905.78	905.07	904.36
361+00	907.46	906.75	906.04	905.33	904.62
361+25	907.69	906.98	906.27	905.56	904.85
361+41.20	907.84	907.13	906.42	905.71	905.00
361+50	907.91	907.20	906.49	905.78	905.07
361+75	908.11	907.40	906.69	905.98	905.27
362+00	908.29	907.58	906.87	906.16	905.45
362+25	908.46	907.75	907.04	906.33	905.62
362+44.10	908.57	907.86	907.15	906.44	905.73
362+50	908.60	907.89	907.18	906.47	905.76
362+75	908.73	908.02	907.31	906.60	905.89
363+00	908.83	908.12	907.41	906.70	905.99
363+25	908.92	908.21	907.50	906.79	906.08
363+50	908.99	908.28	907.57	906.86	906.15
363+60	909.01	908.30	907.59	906.88	906.17
363+75	909.04	908.33	907.62	906.91	906.20
363+96	909.07	908.36	907.65	906.94	906.23
364+00	909.08	908.37	907.66	906.95	906.24
364+21	909.09	908.38	907.67	906.96	906.25
364+25	909.09	908.38	907.67	906.96	906.25
364+50	909.09	908.38	907.67	906.96	906.25
364+75	909.07	908.36	907.65	906.94	906.23
364+90.80	909.04	908.33	907.62	906.91	906.20
365+00	908.98	908.29	907.61	906.93	906.24
365+25	908.80	908.17	907.55	906.93	906.30
365+50	908.60	908.03	907.47	906.91	906.34
365+75	908.39	907.88	907.38	906.88	906.37
366+00	908.14	907.70	907.26	906.82	906.38
366+25	907.89	907.51	907.13	906.75	906.37
366+32	907.82	907.45	907.09	906.73	906.36
366+43	907.69	907.35	907.02	906.69	906.35
366+46	907.66	907.33	907.00	906.67	906.34
366+50	907.62	907.30	906.98	906.66	906.34
366+54	907.57	907.26	906.95	906.64	906.33
366+75	907.32	907.06	906.81	906.56	906.30
367+00	907.01	906.81	906.62	906.43	906.23
367+02.18	906.98	906.79	906.60	906.41	906.22
367+25	906.69	906.61	906.42	906.34	906.15
367+40.80	906.47	906.47	906.28	906.28	906.09
367+50	906.35	906.38	906.19	906.21	906.02
367+75	906.05	906.14	905.95	906.04	905.85
368+00	905.73	905.88	905.69	905.84	905.65
368+15.80	905.52	905.71	905.52	905.71	905.52

TRANSITION

P.I. STA. 381 + 85.44 CURVE LEFT
RELOC. U.S. 36 SUPER. = 0.047'/FT.

TRANSITION

STATION	44' LEFT	32' LEFT	20' LEFT & RIGHT (PROFILE GRADE)	32' RIGHT	44' RIGHT
372+98.79	896.62	896.81	896.62	896.81	896.62
373+00	896.58	896.77	896.59	896.78	896.59
373+24	895.91	896.10	895.97	896.16	896.03
373+25	895.87	896.06	895.94	896.13	896.01
373+50	895.14	895.33	895.27	895.46	895.40
373+73.79	894.43	894.62	894.62	894.81	894.81
373+75	894.40	894.59	894.59	894.78	894.78
374+00	893.57	893.76	893.88	894.07	894.19
374+13.66	893.11	893.30	893.49	893.68	893.87
374+25	892.73	892.95	893.16	893.38	893.59
374+50	891.87	892.14	892.42	892.69	892.97
374+75	891.01	891.34	891.67	892.00	892.33
375+00	890.14	890.53	890.92	891.31	891.70
375+25	889.27	889.72	890.17	890.62	891.07
375+50	888.40	888.91	889.42	889.93	890.44
375+73.79	887.58	888.15	888.71	889.28	889.84
375+75	887.54	888.11	888.67	889.23	889.80
376+00	886.79	887.36	887.92	888.48	889.05
376+25	886.04	886.61	887.17	887.73	888.30
376+50	885.29	885.86	886.42	886.98	887.55
376+75	884.54	885.11	885.67	886.23	886.80
377+00	883.79	884.36	884.92	885.48	886.05
377+25	883.04	883.61	884.17	884.73	885.30
377+50	882.29	882.86	883.42	883.98	884.55
377+75	881.54	882.11	882.67	883.23	883.80
378+00	880.79	881.36	881.92	882.48	883.05
378+25	880.04	880.61	881.17	881.73	882.30
378+50	879.29	879.86	880.42	880.98	881.55
378+75	878.54	879.11	879.67	880.23	880.80
379+00	877.79	878.36	878.92	879.48	880.05
379+25	877.04	877.61	878.17	878.73	879.30
379+50	876.29	876.86	877.42	877.98	878.55
379+75	875.54	876.11	876.67	877.23	877.80
380+00	874.79	875.36	875.92	876.48	877.05
380+25	874.04	874.61	875.17	875.73	876.30
380+50	873.29	873.86	874.42	874.98	875.55
380+75	872.54	873.11	873.67	874.23	874.80
381+00	871.79	872.36	872.92	873.48	874.05
381+25	871.04	871.61	872.17	872.73	873.30
381+50	870.29	870.85	871.42	871.99	872.55
381+75	869.62	870.11	870.61	871.11	871.60
382+00	868.96	869.38	869.80	870.22	870.64
382+25	868.29	868.64	868.99	869.34	869.69
382+50	867.62	867.90	868.18	868.46	868.74
382+75	866.95	867.16	867.37	867.58	867.79
382+81.25	866.79	866.98	867.17	867.36	867.55
383+00	866.29	866.48	866.56	866.75	866.83
383+14.50	865.90	866.09	866.09	866.28	866.28
383+25	865.62	865.81	865.75	865.94	865.88
383+47.75	865.01	865.20	865.01	865.20	865.01

FULL SUPER

TRANSITION

GENERAL NOTES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

FIELD OFFICE

THE CONTRACTOR SHALL IN ADDITION TO REQUIREMENTS OF 105.152 PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 500 SQUARE FEET OF FLOOR SPACE. THE CONTRACTOR SHALL HAVE A TELEPHONE INSTALLED AND MAINTAINED IN THE FIELD OFFICE DURING THE CONSTRUCTION OF THIS PROJECT. CONTRACTOR SHALL ALSO INSTALL WIRING AND OUTLETS SUITABLE FOR CONNECTING TO OFFICE EQUIPMENT, AND PROVIDE 110 VOLT ALTERNATING CURRENT DURING THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL ALSO PROVIDE AND MAINTAIN SANITARY PROVISIONS AS PER 107.06. ALL THE ABOVE IS INCLUDED IN THE LUMP SUM PRICE BID FOR FIELD OFFICE.

DESIGN SPEED

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

SPECIFICATIONS

ALL ITEMS APPEARING THROUGHOUT THE PLANS REFERRING TO THE 1963 STATE OF OHIO DEPARTMENT OF HIGHWAYS CONSTRUCTION AND MATERIAL SPECIFICATIONS ARE TO BE USED FOR REFERENCE PURPOSES ONLY. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 1965 STATE OF OHIO DEPARTMENT OF HIGHWAYS CONSTRUCTION AND MATERIAL SPECIFICATIONS. THE CROSS REFERENCES TO THE 1965 SPECIFICATIONS ARE SHOWN ON THE GENERAL SUMMARY SHEETS NO. 34A, 34B, & 34C.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

LOCATION AND SIZE OF PIPES

THE LOCATION, TYPE, DEPTH AND SIZE OF ALL EXISTING PIPES ARE SHOWN AS NEAR EXACT AS AVAILABLE INFORMATION WILL PERMIT. THE STATE WILL NOT BE RESPONSIBLE FOR ANY VARIATIONS FOUND DURING CONSTRUCTION.

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.

GUARD RAIL POST ANCHORS

AT LOCATIONS WHERE PIER FOOTINGS OR OTHER SIMILAR STRUCTURES INTERFERE WITH INSTALLATION OF FULL LENGTH GUARD RAIL POSTS, SHORT POSTS SHALL BE PROVIDED AND SHALL BE ANCHORED IN ACCORDANCE WITH THE DETAIL SHOWN ON STANDARD DRAWING NO. GR-6 COST OF PROVIDING AND INSTALLING NECESSARY ANCHORS SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT FOR GUARD RAIL, ITEM 606

ESTIMATED QUANTITIES

SPECIFIC LOCATIONS AND USAGE OF ESTIMATED QUANTITIES SET UP ON THIS PLAN TO BE USED "AS DIRECTED BY THE ENGINEER" SHALL BE MADE AS A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT. NONE OF THESE ITEMS SHALL BE ORDERED UNTIL SO DIRECTED BY THE ENGINEER.

AGGREGATE BASE COURSE

THE COMPLETED 304 AGGREGATE BASE MAY BE USED FOR MAINTAINING LOCAL TRAFFIC ON THIS PROJECT. ANY DAMAGE DONE TO THE BASE, SUBBASE OR SUBGRADE BY LOCAL TRAFFIC SHALL BE REPAIRED BY RESHAPING, RECOMPACTING AND BY ADDITION OF EXTRA 304 MATERIAL AT NO ADDITIONAL COST TO THE STATE.

REMOVAL OF TREES AND STUMPS

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

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

SIZES	NO. TREES	NO. STUMPS
12" - 18"	815	10
18" - 24"	248	10
24" - 30"	32	5
30" - 36"	5	5
48" - 54"	5	0

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 201, CLEARING & GRUBBING.

SPECIAL DITCHES

FOR SPECIAL DITCH GRADES, SEE CROSS SECTIONS AND/OR PLANS.

EROSION CONTROL AT HEADWALLS

AN 18" WIDE STRIP OF SOD SHALL BE PLACED ALONG THE BACK AND BOTH ENDS OF EACH STANDARD HEADWALL OR ENDWALL AT PIPE AND BOX CULVERTS TO PREVENT EROSION. THE QUANTITY OF SODDING REQUIRED TO PREVENT EROSION AT THE HEADWALLS OR ENDWALLS IS CARRIED IN THE CULVERT ESTIMATED QUANTITIES.

PART WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY OF BUILDING PORTIONS OF THIS PROJECT UNDER TRAFFIC AND CONSTRUCTING THE PAVEMENT PART AT A TIME, EXTREME CARE SHALL BE TAKEN TO PREVENT THE CONSTRUCTION OF A BUTT JOINT ON CENTERLINE IN THE 304 AND 310 COURSES.

THIS SHALL BE ACCOMPLISHED BY BUILDING THE 304 AND 310 COURSES, PLACED WITH THE FIRST PORTION OF THE PAVEMENT BUILT, AT LEAST EIGHTEEN (18) INCHES BEYOND THE CENTERLINE AND BY SURFACING NO CLOSER THAN EIGHTEEN (18) INCHES TO THIS EDGE OF THE ABOVE COURSES. WHEN THE SECOND PORTION OF THE PAVEMENT IS BUILT, AT LEAST TWELVE (12) INCHES OF THESE PROJECTING COURSES SHALL BE BROKEN DOWN AND THOROUGHLY KEYED IN WITH THE NEWLY PLACED CORRESPONDING COURSES IN THE SECOND PORTION OF THE PAVEMENT BUILT. PAYMENT FOR THIS OPERATION SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE PERTINENT PAVEMENT ITEMS.

EXISTING FLEXIBLE PAVEMENT REMOVAL

OUTSIDE THE LIMITS OF CONSTRUCTION, WHERE INDICATED ON THE PLAN OR DIRECTED BY THE ENGINEER, THE EXISTING FLEXIBLE PAVEMENT SHALL BE THOROUGHLY SCARIFIED, MIXED WITH SUFFICIENT SOIL AND SHAPED TO FIT THE SURROUNDING TERRAIN IN SUCH A MANNER AS TO INSURE THE GROWTH OF SEED PLANTED THEREON. PAYMENT FOR THE REMOVAL OF FLEXIBLE PAVEMENT, WHERE INDICATED ON THE PLANS, SHALL BE MEASURED AND PAID FOR AS ITEM 202, PAVEMENT REMOVED THE AREA DISTURBED BY THE REMOVAL OF THE PAVEMENT SHALL BE MEASURED FOR SEEDING. PAYMENT FOR SEEDING SHALL BE MADE UNDER ITEM 659 SEEDING AND MULCHING.

CONSTRUCTION LAYOUT STAKES

SEE NOTE IN PROPOSAL DESCRIBING THE WORK INCLUDED IN THIS LUMP SUM PAY ITEM.

605 AGGREGATE DRAINS

PORTLAND CEMENT CONCRETE PAVEMENT:

AGGREGATE DRAINS SHALL BE PLACED AT ALL TRANSVERSE JOINTS, EXCEPT WHERE UNDERDRAINS ARE PROVIDED, OR IN ROCK CUT SECTIONS AS NOTED ON THE TYPICAL SECTION. THE LOCATION AND NUMBER ARE SUBJECT TO CHANGE OR REVISION DURING CONSTRUCTION TO FIT GROUND CONDITIONS AT THE DIRECTION OF THE ENGINEER.

THROUGH SUPERELEVATED CURVES, AN ADDITIONAL AGGREGATE DRAIN SHALL BE ADDED MIDWAY BETWEEN TRANSVERSE JOINTS ON THE LOW SIDE.

ASPHALTIC CONCRETE PAVEMENT:

AGGREGATE DRAINS SHALL BE PLACED AT FIFTY (50) FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS AND AT TWENTY-FIVE (25) FOOT INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS, EXCEPT WHERE PIPE UNDERDRAINS ARE PROVIDED OR IN AREAS OF ROCK CUT, OR IN AREAS OF WIDENING AND RESURFACING. THE LOCATION AND NUMBER ARE SUBJECT TO CHANGE OR REVISION DURING CONSTRUCTION TO FIT GROUND CONDITIONS AT THE DIRECTION OF THE ENGINEER.

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 603 CONDUIT ITEM.

SEEDING AND MULCHING

THE SEEDING QUANTITIES ON EACH SIDE OF THE RELOCATION OF U.S. 36, RAMPS AND RECONSTR. U.S. 250, 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; OR TO WORK LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR TEMPORARY EASEMENTS.

THE SEEDING QUANTITIES FOR INTERSECTING SIDE ROADS, FRONTAGE ROADS, CUL-DE-SACS, TURNAROUNDS, DITCHES AND PRIVATE DRIVES AS INDICATED ARE CALCULATED TO THE WORK LIMITS, EDGES OF EXISTING SIDEWALKS OR TEN (10) FEET BEYOND THE WORK LIMITS AS INDICATED ON THE CROSS SECTIONS FOR EACH PARTICULAR FACILITY.

CENTERLINE REFERENCE MONUMENTS, AS PER PLAN

MONUMENTS SHALL BE CONSTRUCTED OF CLASS "C" CONCRETE, CAST-IN-PLACE IN A CIRCULAR HOLE EIGHT (8) INCHES IN DIAMETER AND FORTY-FOUR (44) INCHES IN DEPTH. TOP OF CONCRETE SHALL BE FINISHED AT A DEPTH OF TWO (2) INCHES BELOW GROUND LEVEL AND THE UPPER SIX (6) INCH PORTION OF THE CONCRETE SHALL BE FORMED. A ONE-HALF (½) INCH STEEL ROD SIX (6) INCHES LONG SHALL BE EMBEDDED IN THE WET CONCRETE AS DIRECTED BY THE ENGINEER TO MARK THE CENTERLINE AND STATION. A DETAIL OF THIS ITEM IS SHOWN ON SHEET 13.

CONTRACTION AND EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN EXPANSION AND CONTRACTION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES AND THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS SHALL IN ALL CASES BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWINGS AND THE SPECIFICATIONS.

SEPTIC TANKS

WHERE SEPTIC TANKS, CESSPOOLS OR LEACHING BASINS ARE ENCOUNTERED, ALL MATERIAL CONTAINED IN THEM SHALL BE REMOVED FROM THE RIGHT-OF-WAY LIMIT.

EACH STRUCTURE SHALL THEN BE PROPERLY BACKFILLED, OR REMOVED IF DIRECTED BY THE ENGINEER, IN ACCORDANCE WITH SEC 202.02 AND PAYMENT FOR SAME SHALL BE INCLUDED UNDER ITEM 203. REMOVAL OF THE TILE FIELDS ADJOINING THESE FEATURES IS NOT REQUIRED UNLESS THEY WOULD ALLOW FLOW OF WATER UNDER THE EMBANKMENT.

DITCH SODDING

THE SOD WIDTH "W" WHERE NOTED ON THE PLANS IS THE PLAN WIDTH REQUIRED. PLACEMENT SHALL BE AS DEFINED IN ITEM L-10 SODDING.

PAYMENT OF ITEMS AT PLAN SHEET END

THROUGHOUT THIS PLAN WHERE A LENGTH OF GUARD RAIL CONTINUES FROM ONE SHEET TO ANOTHER, THE LENGTH OF GUARD RAIL INDICATED TO BE PAID ON EACH PLAN SHEET IS THE CLOSEST EVEN PANEL LENGTH. THE PLAN SHOULD NOT BE CONSTRUED IN SUCH MANNER THAT A GUARD RAIL WHICH CONTINUES FROM ONE SHEET TO ANOTHER WOULD TERMINATE AT THE STATION CALL IN THE QUANTITY BLOCK.

THE PAVING QUANTITIES FOR THE MAIN LINE ARE TABULATED ON SHEETS 24 AND 25, AND THE PAVING QUANTITY FOR EACH RAMP (INCLUDING THE ENTIRE SPEED CHANGE LANE) OR SIDE ROAD IS TABULATED IN ITS TOTAL AMOUNT ON THE FIRST PLAN SHEET FOR THE RESPECTIVE SIDE ROAD, UNLESS OTHERWISE INDICATED IN THE PLAN.

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SANITARY FLOW INTO HIGHWAY DRAINAGE SYSTEM

THIS PLAN MAKES NO PROVISION FOR CONNECTING, NOR SHALL THE ENGINEER OR CONTRACTOR CONNECT, ANY EXISTING OR NEW DRAINAGE INTO THE L/A HIGHWAY DRAINAGE SYSTEM WHEN SUCH DRAINS CARRY FLOW FROM ANY PLUMBING FIXTURES INCLUDING FLOOR DRAINS AND SINK DRAINS OR DRAINS FROM LIVESTOCK LOTS OR BARNS OR POLLUTED WATER OF ANY KIND.

EXISTING PIPE CARRYING FLOW WHICH COMES WITHIN THE CATEGORY OUTLINED ABOVE SHALL BE PLUGGED WITH CLASS E CONCRETE AT THE RIGHT-OF-WAY LINE. PAYMENT FOR SAID PLUGGING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "ITEM 203 EXCAVATION.

ITEM 601, CUT-OFF WALLS FOR RIPRAP

PAYMENT FOR PROVIDING CUT-OFF WALLS FOR RIP RAP, AS SPECIFIED IN THESE PLANS OR AS DIRECTED BY THE ENGINEER, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 601 RIP RAP, 6" REINFORCED, AS PER PLAN. USING A Conc. Slab

66" PAVED BIT. COATED CORRUGATED METAL STRUCTURE

THE METAL PLATES THAT ARE INCORPORATED INTO THE LOWER ¼ OF THIS SECTIONAL PLATE STRUCTURE SHALL BE SHOP COATED IN ACCORDANCE WITH SEC. 707.04 AND FIELD PAVED WITH A BITUMINOUS MATERIAL. THE REMAINDER OF THE PLATES NEED NOT BE BITUMINOUS COATED.

THE PAVING SHALL CONSIST OF A MIXTURE OF HOT SAND AND SEC. 702.01 ASPHALT CEMENT OR OTHER BITUMINOUS MIXTURE ACCEPTABLE TO THE ENGINEER AND SHALL BE SPREAD AND COMPACTED TO THE SATISFACTION OF THE ENGINEER. THE COMPLETED PAVEMENT SHALL BE SMOOTH AND DURABLE AND SHALL HAVE A MINIMUM AVERAGE THICKNESS OF APPROXIMATELY ONE INCH OVER THE INSIDE CRESTS OF THE CORRUGATIONS. AFTER INSTALLATION OF THE STRUCTURE, DAMAGED OR WORN SPOTS IN THE BITUMINOUS COATING ON THE INSIDE AND OUTSIDE OF THE STRUCTURE SHALL BE RECOATED USING MATERIALS AND METHODS RECOMMENDED BY THE MANUFACTURER AND AS DIRECTED BY THE ENGINEER.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM 603 CONDUIT

CURBS ON APPROACH SLABS

THE HEIGHT AND FACE OF CURBS ON APPROACH SLABS SHALL BE TRANSITIONED FROM THE STANDARD SECTION USED ON THE APPROACH PAVEMENT TO THE SECTION USED ON THE BRIDGE CURBING WITHIN THE LIMITS OF THE APPROACH SLAB.

202 REMOVAL OF EXISTING PAVEMENT (RIGID)

AFTER THE EXISTING PAVEMENT, AS INDICATED ON THE PLANS, HAS BEEN REMOVED, THE OLD ROADWAY SHALL BE PLOWED, HARROWED, AND DRAGGED TO A SMOOTH GRADE, THE OLD DITCHES FILLED, AND THE ENTIRE AREA SLOPED TO DRAIN AND LEFT IN A NEAT CONDITION READY FOR SEEDING. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR EXISTING PAVEMENT REMOVED AND DISPOSED OF, ITEM 202, SEEDING SHALL BE MEASURED AND PAID FOR IN ACCORDANCE WITH ITEM 659.

FLARED APPROACH SLABS

PLACE ADDITIONAL A-BARS IN FLARED AREAS BY MAINTAINING THE STANDARD SPACING ALONG THE WIDE END OF THE SLAB AND FANNING THE BARS IN TOWARD THE BRIDGE AS DIRECTED BY THE ENGINEER.

FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS

THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND SUBSEQUENTLY REMOVE FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS AS APPROXIMATELY SHOWN ON SHEET 2, AT EACH OF THE FOLLOWING LOCATIONS:

1. ON THE SOUTH SIDE OF EXISTING U.S. 36 APPROXIMATELY 400 FEET WEST OF "CO. RD. 62 CONNECTOR".

2. ON THE WEST SIDE OF U.S. 250 - S.R. 8 APPROXIMATELY 500 FEET NORTH OF THE "CONNECTION TO EXISTING U.S. 250".

3. ON THE EAST SIDE OF U.S. 250 - S.R. 8 AT THE INTERSECTION WITH ELEVENTH STREET.

4. ON EXISTING U.S. 36-250.

   a. NORTH OF THE INTERSECTION WITH RELOC. U.S. 36 APPROXIMATELY 850 FEET ON THE WESTERLY SIDE.

   b. SOUTH OF THE INTERSECTION WITH RELOC. U.S. 36 APPROXIMATELY 400 FEET ON THE EASTERLY SIDE.

5. ON THE NORTH SIDE OF TRENTON AVENUE APPROXIMATELY 500 FEET EAST OF WARDELL STREET.

6. THE SPECIFIC LOCATION OF EACH SIGN SHALL BE DIRECTED BY THE ENGINEER.

SIGN DETAILS SHALL BE AS SPECIFIED ON STANDARD DRAWING FACI-1, "CODE N-54(2) - 96(2)", AND THE SIGNS SHALL BE ERECTED IN ACCORDANCE WITH STANDARD DRAWING FACI-2. ADDITIONAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH NOTES IN THE PROPOSAL.

SPECIAL SEEDING PREPARATION AREAS

THE REFERENCES IN THE FIRST PARAGRAPH OF SEC. 659.09 TO PREPARATION OF THE SEED BED IN FRONT OF RESIDENCES, ETC., SHALL, ON THIS PROJECT, BE CONSIDERED TO BE PARTICULARLY APPLICABLE IN THE FOLLOWING AREAS:

TRENTON AVE. CONN.	STA. 9+88	TO 13+00
RECONSTR. TRENTON AVE.	STA. 28+00	TO 29+50
FRONTAGE RD. 'B'	STA. 10+50	TO 12+00
RECONSTR. U.S. 250	STA. 86+65	TO 90+25
RAMP L	STA. 22+50	TO 25+00 RT.
T. R. 278	STA. 11+25	TO 13+28 LT.
CONNECTOR TO U.S. 250	STA. 1+45	TO 4+25 LT.
ACCESS ROAD	STA. 16+00	TO 32+00
RECONSTR. SECOND ST.	STA. 25+23	TO 28+00
	STA. 33+00	TO 35+17
RAMP P	STA. 9+00	TO 10+90 RT.
NORTH THIRD STREET	@ THE T-TYPE	TURNAROUND
RELOC. T.R. 287	STA. 5+70	TO 7+00 LT.
	STA. 12+00	TO 14+00 LT.
RECONSTR. FOURTH ST.	STA. 0+25	TO 1+30 LT.
SECOND ST. AREA STORM DRAIN	STA. 15+65	TO 20+60 LT.

PLACEMENT OF ROCK EMBANKMENT

THE INITIAL TWO (2) FEET OF THE EMBANKMENT BETWEEN U.S. 36 STATION 221+00 AND 236+00 AND ALL EMBANKMENT AREA ON THE RELOC. COUNTY ROAD 64 SHALL BE CONSTRUCTED OF ROCK FROM THE ROADWAY EXCAVATION. THE FOUNDATION AREA SHALL BE CLEARED AND GRUBBED; HOWEVER, THE PROVISIONS OF SECTION 201.04 AS REGARDS SCALPING ARE WAIVED.

ON THE RELOCATION OF COUNTY ROAD 64 NO ROCK EMBANKMENT SHALL BE PLACED WHERE IT WOULD INTERFERE WITH THE STRUCTURE FOOTINGS OR PILE DRIVING. ON U.S. 36 AND COUNTY ROAD 64 IN THE VICINITY OUTLINED ABOVE, NO ROCK EMBANKMENT SHALL BE PLACED IN THE VICINITY OF PIPE CULVERTS WHERE IT WOULD CONFLICT WITH THE INSTALLATION OF ITEM 603 Conduit

MINE OPENINGS

A KNOWN MINE CAVITY EXISTS BETWEEN STATIONS 372± AND 379±. THE METHOD OF EXCAVATING IN THIS AREA IS SHOWN ON THE PLAN. THE CONTRACTOR SHALL IN THIS AREA EXCAVATE TO ROUGH GRADE, THEN MAKE SUFFICIENT EXPLORATORY BORINGS TO DETERMINE THE EXTENT TO WHICH THE VOID MAY ENDANGER THE ROADWAY. THE BORINGS SHALL BE MADE ON A GRID PATTERN SPACING NOT TO EXCEED FIFTY (50) FEET AND SHOULD EXTEND AT LEAST TO ELEVATION 850. BORINGS SHALL BE TAKEN WITH POWER DRILLS OR OTHER EQUIPMENT CAPABLE OF PENETRATING ROCK. PAYMENT FOR THE EXPLORATORY BORINGS SHALL BE INCLUDED IN THE PRICE BID FOR 203 EXCAVATION.

AT THIS LOCATION AND ANY OTHER LOCATIONS WHERE MINES OR OTHER VOIDS ARE REVEALED IN THE SLOPE, THE CONTRACTOR SHALL FILL THE VOIDS WITH SUITABLE MATERIAL AS DIRECTED BY THE ENGINEER. THE FILLING OF THESE VOIDS SHALL BE MEASURED AND PAID FOR AT THE UNIT PRICE BID FOR 203 ROADWAY EXCAVATION IF NOT OTHERWISE PROVIDED FOR IN THE PLAN. IF IT IS NECESSARY TO EXCAVATE IN MINE VOID AREAS IN ORDER TO PROPERLY TREAT THEM, THE VOLUME ACTUALLY REMOVED SHALL BE MEASURED AND PAID FOR AT THE UNIT PRICE BID FOR 203 EXCAVATION INCLUDING EMBANKMENT CONSTRUCTION.

MAINTENANCE OF SEWER FLOWS

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO AS TO MAINTAIN AT ALL TIMES SEWER FLOWS THROUGH EXISTING FACILITIES TO REMAIN IN PLACE AND THROUGH EXISTING FACILITIES TO BE REPLACED UNTIL NEW FACILITIES ARE COMPLETED AND PLACED INTO USE.

PAYMENT FOR ANY ADDITIONAL COSTS INVOLVED IN MAINTAINING THESE FLOWS BY PUMPING OR BY ANY OTHER MEANS APPROVED BY THE ENGINEER SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE RESPECTIVE PIPE ITEMS.

ITEM 604, MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN

THIS ITEM SHALL CONSIST OF THE CAREFUL REMOVAL OF THE EXISTING MANHOLE DOWN TO THE SPRING LINE AND RECONSTRUCTION OF THE MANHOLE TO THE NEW GRADE, CONFORMING AS NEARLY AS PRACTICABLE TO THE EXISTING DIMENSIONS AND TYPE OF CONSTRUCTION AND USING THE SALVAGED MANHOLE FRAME AND COVER.

ITEM SPECIAL - SETTLEMENT PLATFORMS,

A SETTLEMENT PLATFORM SHALL BE PROVIDED WHERE CALLED FOR ON THE PLANS AND AT ADDITIONAL LOCATIONS AS DIRECTED BY THE ENGINEER. FABRICATION SHALL CONFORM TO THE DETAILS AS SHOWN ON SHEET 13. PAYMENT FOR THIS ITEM SHALL BE AS CALLED FOR IN THE PROPOSAL NOTE COVERING THE ITEM.

CONCRETE ENCASEMENT OF PIPES

THROUGHOUT THIS PLAN WHERE PIPES ARE TO BE CONCRETE ENCASED AS INDICATED BY "CONC. ENC." THE ENCASEMENT SHALL HAVE A MINIMUM THICKNESS OF FIVE (5) INCHES UNLESS OTHERWISE NOTED. THE ENCASEMENT CONCRETE SHALL BE CLASS E. SEE DETAIL ON SHEET 13.

PLACEMENT OF EMBANKMENT AT SEWAGE DIGESTOR

THE CONTRACTOR SHALL TAKE SPECIAL CARE IN PLACING THE EMBANKMENT ON THE EXISTING EMBANKMENT OF THE DIGESTOR LOCATED LEFT OF STATION 329+15. COMPACTION EQUIPMENT USED SHALL BE OF SUCH WEIGHT THAT PROPER COMPACTION WILL RESULT WITHOUT DAMAGE TO THE DIGESTOR. ANY RESULTANT DAMAGE TO THIS FACILITY SHALL BE THE DIRECT RESPONSIBILITY OF THE CONTRACTOR, ALL BURDEN BEING ASSUMED BY HIM AND NONE BY THE STATE OF OHIO.

EARTHWORK FOR MINOR APPROACHES

THE AMOUNT OF EARTHWORK REQUIRED TO COMPLETE DRIVEWAYS AND TURNAROUNDS IS INCLUDED WITH THE TOTAL SHOWN FOR THE MAJOR ROAD ADJACENT TO THE ITEM UNLESS OTHERWISE INDICATED ON THE PLAN.

ITEM 203 BORROW, USING GRANULAR MATERIAL, AS PER PLAN

A GRANULAR LAYER, 18 INCHES IN DEPTH, SHALL BE PLACED AS SHOWN ON THE PLANS BY THE METHOD OF END-DUMPING BETWEEN STATION 333+00 AND THE WESTERLY SPILL-THROUGH SLOPE OF THE STRUCTURE CARRYING U.S. 36 OVER THE STILLWATER CREEK. THE GRANULAR LAYER SHALL ALSO BE PLACED FROM THE TOE OF THE SPILL-THROUGH SLOPE, ON THE EASTERLY SIDE, TO STATION 338+85. THE MATERIAL SHALL MEET ONE OF THE FOLLOWING REQUIREMENTS:

A. BROKEN SANDSTONE OR LIMESTONE WHICH CAN BE INCORPORATED IN A 9-INCH LIFT AND WHICH CONTAINS NOT MORE THAN 5% OF MATERIAL PASSING A NO. 200 SIEVE.

B. SAND MEETING THE FOLLOWING GRADATION REQUIREMENTS:

SIEVE SIZE	PERCENT PASSING
¼"	80-100
NO. 10	35-100
NO. 40	10-50
NO. 100	0-5

COMPLIANCE WITH THE ABOVE GRADINGS SHALL BE DETERMINED BY STANDARD TESTS INCLUDING WASHING.

RATE OF EMBANKMENT FILLING BETWEEN THE PREVIOUSLY MENTIONED LIMITING STATIONS SHALL NOT EXCEED 2.5 FEET IN 7 CALENDAR DAYS FOR THE FULL HEIGHT OF FILL.

TO OBSERVE THE RATE AND AMOUNT OF FOUNDATION SETTLEMENT, A SETTLEMENT PLATFORM SHALL BE PLACED ON THE ORIGINAL GROUND TO THE REAR OF THE REAR ABUTMENT LOCATION, ADJACENT TO THE MEDIAN SHOULDER AS SHOWN ON THE PLAN.

NO PAVEMENT ITEM SHALL BE PLACED IN THIS AREA FOR AT LEAST THREE (3) MONTHS AFTER THE COMPLETION OF THE EMBANKMENT.

ITEM 603 EXISTING 21" VCP CONDUIT CONCRETE ENCASED

THIS ITEM INCLUDES ENCASING THE EXISTING PIPE WITH A FIVE (5) INCH MINIMUM CLASS E CONCRETE. SINCE THIS ITEM IS LOCATED ON THE MAIN SANITARY SEWER OUTFALL FOR THE CITY OF UHRICHSVILLE, NO INTERRUPTION OF FLOW WILL BE ALLOWED AND THE PRICE BID PER LINEAR FOOT OF PIPE SHALL INCLUDE THE CONTRACTORS ALLOWANCE FOR UNINTERRUPTED CONTINUATION OF FLOW ON THE FACILITY.
FOR DETAILS SEE SHEET 13

CLEANING EXISTING PAVEMENT KEY JOINTS

AT THOSE LOCATIONS ON THE PLAN WHERE CLEANING OF THE EXISTING KEY JOINT IS INDICATED, IN ORDER TO RECEIVE A NEW PAVEMENT, THE EXISTING PAVEMENT OR CURB AND GUTTER SHALL BE CAREFULLY REMOVED IN ORDER TO PRESERVE THE JOINTS. ANY DAMAGED JOINTS SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER. THE COST OF CLEANING AND REPAIRING JOINTS SHALL BE INCLUDED IN THE PRICE BID FOR 452 OR 451 PAVEMENT.

ITEM SPECIAL, DRILLED WELL ABANDONED

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

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

PLAN COORDINATE SYSTEM

THROUGHOUT THIS PLAN WHERE COORDINATES ARE GIVEN, THEY ARE BASED ON THE NORTH ZONE OF THE OHIO STATE PLANE COORDINATE SYSTEM. ALL BEARINGS SHOWN ARE GRID NORTH AS A RESULT OF TYING THE CENTERLINE AND RESULTANT SURVEYS TO MONUMENTS ON THE ABOVE NOTED SYSTEM.

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DRIVE PAVEMENT IN SIDEWALK AREA

AT THOSE LOCATIONS WHERE DRIVEWAYS CROSS SIDEWALK AREAS, THE PORTION WITHIN THE DRIVE AREA SHALL BE CONSTRUCTED OF THE PAVEMENT TYPE AND THICKNESS SHOWN ON THE PLAN. IF ITEM 608 SIDEWALK IS TO BE CONSTRUCTED ADJACENT TO THE DRIVE, IT SHALL BUTT INTO THE DRIVE PAVEMENT. PROPER EXPANSION OR CONTRACTION JOINT MATERIAL SHALL BE PLACED AS DIRECTED BY THE ENGINEER OR SHOWN IN THE SPECIFICATIONS OR PLANS

MANHOLE CASTING

MANHOLE CASTINGS LOCATED IN SLOPES SHALL BE SET SO THAT THE COVER WILL CONFORM WITH THE PLANE OF THE SLOPED SURFACE, WHERE THE SLOPE RATE IS 5 : 1 OR LESS.

CONTRACTOR'S MAINTENANCE RESPONSIBILITY

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

STANDARD NO. 2 MANHOLE AT FUHR ST.

THE PRICE BID FOR ITEM 604 STANDARD NO. 2 MANHOLE, WITHOUT DROP PIPE, SHALL INCLUDE THE PROVISION FOR CONTINUATION OF AN EXISTING 10" SANITARY SEWER AS DETAILED ON SHEET 461, AND LOCATED AT STA. 9+09 ON THE BASELINE FOR THE STORM DRAIN.

LINE DATA CALCULATIONS FOR APPROACHES

RECONSTR. CO. RD. 62
STA. 26+50.00 TO STA. 29+76.39 = 326.39
STA. 30+64.69 TO STA. 32+50.00 = 185.31
NET LENGTH OF WORK 511.70 L.F.

TRENTON AVE. CONN.
STA. 9+50 TO STA. 33+89.52
NET LENGTH OF WORK 2,439.52 L.F.

FRONTAGE RD. B
STA. 9+45 TO STA. 19+80.5
NET LENGTH OF WORK 1,035.50 L.F.

RECONSTR. U.S. 250
STA. 86+65.00 TO STA. 125+00 = 3,835.00
EQUATION: STA. 125+00.00 BK. = STA. 1103+38.70 AHD.
STA. 1103+38.70 TO STA. 1102+94 = 44.70
NET LENGTH OF WORK 3,879.70 L.F.

CONN. TO EXIST. U.S. 250
STA. 1+45 TO STA. 9+55.90
NET LENGTH OF WORK 810.90 L.F.

ACCESS RD.
STA. 10+44.26 TO STA. 40+80.00
NET LENGTH OF WORK 3,035.74 L.F.

RELOC. CO. RD. 64
STA. 19+00.00 TO STA. 38+50.00
NET LENGTH OF WORK 1,950.00 L.F.

RECONSTR. SECOND ST.
STA. 25+23 TO STA. 36+00
NET LENGTH OF WORK 1,077.00 L.F.

SECOND STREET STORM DRAIN
STA. 2+82 TO STA. 20+62
NET LENGTH OF WORK 1,780.00 L.F.

WATER LINE RIGHT STA. 329+96
NET LENGTH OF WORK 1,106.00 L.F.

TOTAL LENGTH OF APPROACHES 17,626.06 L.F.

SPRING DRAINS

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED FOR SPRING DRAINS TO BE USED AS DIRECTED BY THE ENGINEER. (SEE DETAIL ON SHEET NO. 11).

ITEM 605	6" UNCLASSIFIED PIPE UNDERDRAIN, 707.06, 707.12, AS PER PLAN	1000 Lin. Ft.
605	8" CONDUIT, TYPE F, 707.01	100 Lin. Ft.
605	AGGREGATE DRAINS FOR SPRINGS, AS PER PLAN	100 Lin. Ft.
601	DUMPED ROCK CHANNEL PROTECTION	10 Cu. Yds

ITEM 605 6" UNCLASSIFIED PIPE UNDERDRAIN AS PER PLAN

THE UNDERDRAIN PIPE FOR SPRING DRAINAGE SHALL BE COVERED WITH GRANULAR FILTER MATERIAL [605.03(c)] TO A HEIGHT OF ONE (1) FOOT ABOVE THE TOP OF THE PIPE. THE REMAINDER OF THE BACKFILL FOR THIS ITEM SHALL BE SOIL OR GRANULAR FILTER BACKFILL PLACED IN ACCORDANCE WITH 603.08.

TREATED SANITARY FLOW INTO HIGHWAY DRAINAGE SYSTEM

TREATED SANITARY FLOW MAY BE DISCHARGED INTO THE HIGHWAY DRAINAGE SYSTEM PROVIDED THE OWNER HAS SECURED THE APPROVAL OF THE LOCAL HEALTH AUTHORITIES AND HAS ACQUIRED FROM THE STATE HIGHWAY DEPARTMENT, THE OFFICIAL PERMIT TO HAVE THE CONNECTION MADE ON ALL EXCEPT LIMITED ACCESS HIGHWAYS ON THIS PROJECT.
IN EACH CASE WHERE A PERMIT HAS BEEN ISSUED FOR A SANITARY CONNECTION TO BE MADE, IT SHALL BE PROVIDED WITH AN INSPECTION WELL, IN ACCORDANCE WITH THE DETAIL SHOWN ON SHEET NO. 15, LOCATED APPROXIMATELY ONE FOOT INSIDE THE RIGHT-OF-WAY LINE.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY, FOR USE AS DIRECTED BY THE ENGINEER, IN MAKING THE ABOVE DESCRIBED CONNECTIONS:

ITEM I-1 :	6" PIPE, CLASS E-1	=	800 LIN. FT.
	8" PIPE, CLASS E-1	=	700 LIN. FT.
	10" PIPE, CLASS E-1	=	300 LIN. FT.
	12" PIPE, CLASS E-1	=	200 LIN. FT.
ITEM I-5:	6" PIPE SPECIAL, CLASS E-1	12	EA.
	8" PIPE SPECIAL, CLASS E-1	2	EA.
	10" PIPE SPECIALS, CLASS E-1	2	EA.
	12" PIPE SPECIALS, CLASS E-1	2	EA.
ITEM I-8	INSPECTION WELLS	20	EA.

UNKNOWN STORM OR SANITARY SEWER LINES

THE FOLLOWING QUANTITIES ARE PROVIDED TO USE, AS DIRECTED BY THE ENGINEER, TO ADJUST OR MAINTAIN STORM DRAINS AND SANITARY SEWER CONNECTIONS OR LINES WHICH ARE NOT PRESENTLY EVIDENT. NONE OF THIS ITEM WILL BE USED ON LINES WHICH HAVE BEEN BROKEN BY NEGLIGENCE OF THE CONTRACTOR.

I-1	6" PIPE CLASS J-1 SEC. M-6.8(b)	300 L.F.
	8" PIPE CLASS J-1 SEC. M-6.8(b)	4,000 L.F.
	12" PIPE CLASS J-1	500 L.F.
	18" PIPE CLASS J-1	200 L.F.
	24" PIPE CLASS J-1	200 L.F.
I-5	6" PIPE SPECIALS CLASS J-1 SEC. M-6.8(b)	15 EA.
	8" PIPE SPECIALS CLASS J-1 SEC. M-6.8(b)	15 EA.
	12" PIPE SPECIALS J-1	10 EA.
	18" PIPE SPECIALS J-1	10 EA.
	24" PIPE SPECIALS J-1	10 EA.

UNDERDRAINS

THE FOLLOWING QUANTITIES ARE INCLUDED FOR USE, AS DIRECTED BY THE ENGINEER, IN CUT AREAS AND OTHER LOCATIONS WHERE THE NEED FOR UNDERDRAINS MAY BE REVEALED:

I-1	6" PIPE CLASS I-3	2,000 L.F.
	6" PIPE CLASS I-3 SEC. M-6.4(h)	600 L.F.
	6" PIPE CLASS J-1	300 L.F.
	8" PIPE CLASS F-4 SEC. M-6.4(c)	150 L.F.
I-5	6" CLASS I-3 PIPE SPECIALS	10 EA.
	6" CLASS I-3 PIPE SPECIALS SEC. M-6.4(h)	5 EA.
	6" CLASS J-1 PIPE SPECIALS	10 EA.

PAVEMENT QUANTITIES ON RAMPS

THE PAVEMENT QUANTITIES SHOWN FOR EACH PARTICULAR RAMP INCLUDE THE SPEED CHANGE LANE AND PAVED SHOULDER (EITHER BITUMINOUS OR PORTLAND CEMENT) ADJACENT TO THE MAINLINE.

ITEM 603 15" ENCASEMENT CONDUIT TYPE F AS PER PLAN

THIS ITEM SHALL CONSIST OF ENCASING WITH CORRUGATED METAL PIPE, THE EXISTING FOUR (4) INCH WATER LINE CROSSING THE RECONSTR. U. S. 250 AT STA. 118+83. MATERIAL FURNISHED FOR THIS ITEM SHALL BE BITUMINOUS COATED GALVANIZED CORRUGATED METAL NESTABLE PIPE AS MANUFACTURED BY ARMCO DRAINAGE AND METAL PRODUCTS, INC., OR CULVERT DIVISION OF THE REPUBLIC STEEL CORP. OR AN APPROVED EQUAL. THE PIPE AND COATING SHALL MEET THE APPROPRIATE MATERIAL REQUIREMENTS OF 707 EXCEPT THAT THE PIPE SECTIONS SHALL BE HELD TOGETHER BY STITCHES, BOLTS, OR OTHER METAL FASTENERS IN ACCORDANCE WITH RECOMMENDATIONS AND DETAILS OF THE MANUFACTURER. LENGTH OF PIPE SECTIONS AND BASE METAL COMPOSITION OF THE FASTENING DEVICES SHALL ALSO BE IN ACCORDANCE WITH DETAILS OF THE MANUFACTURER. THE WORK OF INSTALLING THE ENCASEMENT SHALL BE SO PROSECUTED THAT A MINIMUM LENGTH OF THE EXISTING WATER LINE SHALL BE UNSUPPORTED AT ANY ONE TIME. THE WATER MAIN SHALL BE SUPPORTED IN THE ENCASEMENT PIPE BY BLOCKS AND SAND BEDDED AS SHOWN ON SHEET 13, EXCEPT IF THE CONTRACTOR SO DESIRES, HE MAY PLACE THE SAND BEDDING PRIOR TO APPLYING THE BOLTS OR STITCHES. BEDDING MATERIAL SHALL OCCUPY AT LEAST 85 PER CENT OF THE CROSS-SECTIONAL AREA OF THE ENCASEMENT PIPE OUTSIDE THE MAIN. PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ENCASEMENT PIPE.

GRATE ELEVATION OF 604 CATCH BASIN, NO. 6

AT ALL LOCATIONS WHERE A NO. 6 CATCH BASIN IS TO BE PLACED, THE GRATE SHALL BE DEPRESSED TWO (2) INCHES AT THE PAVEMENT EDGE RATHER THAN THE ONE (1) INCH INDICATED ON THE STANDARD DRAWING.

ESTABLISHMENT OF PROJECT STRUCTURE NUMBERS

ALL PIPE CULVERT STRUCTURE NUMBERS SHOWN ON THE PLAN HAVE BEEN DETERMINED BY USING THE PROJECT NUMBER AS TUS-36-15.93. THESE SHOULD BE CONVERTED TO ALLOW FOR THE FINAL DIFFERENCE IN PROJECT NUMBER, PRIOR TO SHOWING THE NUMBER ON THE COMPLETED STRUCTURE. SEE NOTE ON SHEET ONE (1) PERTAINING TO PROJECT DESIGNATION.

UNDERDRAIN DEPTH DESIGNATION

THE DEPTH OF UNDERDRAIN INDICATED IN THE QUANTITY BLOCKS ON EACH ROADWAY SHEET INDICATES THE MINIMUM DEPTH BELOW SUBGRADE AS NOTED ON THE TYPICAL SECTIONS. THESE ARE NOTED AS d = 12" FOR ROCK CUT, d = 18" OR 50" IN EARTH CUTS AND d = 30" IN FILLS. THERE IS NO SPECIAL DEPTH NOTED FOR UNDERDRAINS LOCATED BACK OF CURBS, WHERE THE DEPTH IS DETERMINED FROM THE FINISHED SURFACE. ON THE GENERAL SUMMARY SHEETS, THE UNDERDRAIN IS TABULATED FOR ALL LENGTHS WITHOUT INDICATING DEPTH.

ITEM 604 - SIPHON CHAMBER NO. 1 & NO. 2

CONTRACTOR SHALL FURNISH AND PROPERLY INSTALL ALL CASTINGS, SPECIAL FITTINGS, GATES, PLUGS AND OTHER ITEMS SHOWN ON THE DETAIL DRAWINGS OF THESE STRUCTURES AS WELL AS CONCRETE, STEEL, EXCAVATION, LABOR, REMOVAL OF EXCESS MATERIAL AND ALL OTHER WORK REQUIRED TO COMPLETE THESE STRUCTURES IN PLACE, FOR THE LUMP SUM PRICE BID FOR ITEM 604 SIPHON CHAMBER NO. 1 OR FOR ITEM 604 SIPHON CHAMBER NO. 2.

ITEM 203 PROOF ROLLING
An estimated quantity for this item has been provided in the general summary for use in proof rolling of subgrade for the mainline and ramp pavements, and for paved shoulders, in accordance with Supplemental Specification 801.

ITEM 310 SUBBASE, GRADING "A" or "B" AS PER PLAN
Material for this item shall meet the requirements of grading "A" or "B" of Sec. 310.02 except that for either grading, no more than 10% of the material shall pass a No. 200 sieve after all operations of placing and compacting have been completed.

EARTH SHOULDERS
In addition to the requirements of Standard Drawing MC-1, earth shoulders shall be finished 1 inch below edges of Paved, or Bituminous Treated Aggregate Shoulders, except on the high side of superelevated curves.

GENERAL NOTES

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2	OHIO			662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

SCHEDULE OF WORK AND MAINTENANCE OF TRAFFIC

MAINTAINING TRAFFIC: THE CONTRACTOR SHALL MAINTAIN TWO-WAY TRAFFIC AT ALL TIMES ON U.S.R. 36 AND U.S.R. 250. AT LEAST ONE-WAY TRAFFIC SHALL BE MAINTAINED ON ALL COUNTY AND TOWNSHIP ROADS AND CITY STREETS. TRAFFIC SHALL BE MAINTAINED BY USE OF EITHER THE EXISTING PAVEMENT, THE PROPOSED PAVEMENT, OR TEMPORARY ROADWAYS SURFACED WITH 410 AGGREGATE AND STABILIZED WITH ITEM 616 CALCIUM CHLORIDE.

THE LIMITS AND DURATION OF USE OF TEMPORARY ROADWAYS SHALL BE HELD TO AN ABSOLUTE MINIMUM, AND IN ALL CASES SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. TWO-WAY TRAFFIC LANES SHALL BE SURFACED WITH AGGREGATE AT LEAST (20) FEET WIDE AND ONE-WAY TRAFFIC LANES SHALL HAVE THE SURFACING AGGREGATE NOT LESS THAN (12) FEET WIDE.

DURING OVERHEAD BRIDGE CONSTRUCTION, THE CONTRACTOR SHALL SAFEGUARD THE TRAVELING PUBLIC ON RELOC. CO. RD. 64, SECOND STREET, TRENTON AVE. CONNECTOR, *RECONST. U.S.R.250 & PENNA. & B.&O. RAILROADS* BY PROVIDING PLATFORMS, NETS OR OTHER SUITABLE PROTECTION ABOVE THE TRAVELED LANES.

PAYMENT FOR ALL OF THE ABOVE EXCEPT FOR 410 AGGREGATE AND 616 CALCIUM CHLORIDE, SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

ITEM 616 CALCIUM CHLORIDE AND 410 AGGREGATE REQUIRED FOR MAINTENANCE OF TRAFFIC IS PROVIDED IN THE SUMMARY OF QUANTITIES IN THE FOLLOWING AMOUNTS.

1,500 CU. YDS., ITEM 410 TRAFFIC COMPACTED SURFACE COURSE, FOR MAINTAINING TRAFFIC, *TYPE C.*

500 CU. YDS. ITEM 410 TRAFFIC COMPACTED SURFACE COURSE, FOR MAINTAINING TRAFFIC, *TYPE A OR B.*

40 TONS, ITEM 616 CALCIUM CHLORIDE FOR DUST CONTROL.

SUGGESTED SEQUENCE OF CONSTRUCTION OPERATIONS: THE FOLLOWING SEQUENCE OF CONSTRUCTION OPERATIONS IS SUGGESTED. IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE PROVISIONS OUTLINED HEREIN ARE FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED IN WRITING BY THE "DIRECTOR".

U.S.R. 250:

1. CONSTRUCT RAMPS K & K-L TO A SUFFICIENT LENGTH THAT WILL ADEQUATELY CARRY TWO-WAY TRAFFIC BEYOND THE STRUCTURE LIMITS.

2. TRANSFER TWO-WAY TRAFFIC TO THAT PORTION OF (1) ABOVE AND THEN COMPLETE THE EASTERLY PORTION OF THE STRUCTURE CARRYING RECONSTR. U.S. 36 OVER RECONSTR. U.S. 250, BEYOND PIER NO. 2 AS DETAILED ON THE STRUCTURE DRAWINGS.

3. AFTER COMPLETION OF (2) ABOVE, CONSTRUCT THE NORTHBOUND LANES OF RECONSTR. U.S. 250 TO A SUFFICIENT LENGTH THAT WILL ADEQUATELY CARRY TWO-WAY TRAFFIC BEYOND THE STRUCTURE LIMITS. TRANSFER TWO-WAY TRAFFIC TO THESE NORTHBOUND LANES SO THAT THE REMAINDER OF THE STRUCTURE AND THE SOUTHBOUND LANES CAN BE COMPLETED.

U.S.R. 36:

UNLESS THE CONTRACTOR ELECTS TO MAINTAIN TWO-WAY TRAFFIC ON EXISTING U.S. 36 WHERE TRENTON AVE. CONN. AND RECONSTR. TRENTON AVE. CONNECT INTO EXISTING U.S. 36, THAT PORTION OF THE WORK LYING SOUTH OF THE PROPOSED BRIDGE OVER THE PENNSYLVANIA RAILROAD SHALL BE DELAYED UNTIL TWO-WAY TRAFFIC CAN BE MAINTAINED OVER THE PROPOSED PAVEMENT ON RELOC. U.S. 36 BETWEEN THE WESTERLY AND EASTERLY PROJECT TERMINI.

IN EITHER CASE THE BRIDGE OVER THE PENNSYLVANIA RAILROAD ON EXISTING U.S. 36 SHALL NOT BE REMOVED UNTIL THROUGH TRAFFIC IS MAINTAINED ON RELOC. U.S. 36 AND THE LOCAL TRAFFIC SOUTH OF THE PENNSYLVANIA RAILROAD HAS FULL USE OF THE TRENTON AVE. INTERCHANGE.

CONNECTION TO EXISTING U.S. 250 AND ACCESS ROAD: CONSTRUCT BOTH OF THESE ROADS PRIOR TO COMPLETING ANY PORTION OF RECONSTR. U.S. 250. THIS WOULD GIVE INGRESS AND EGRESS TO THESE RESIDENTS SERVED BY THE ACCESS ROAD.

FUHR ST.: FUHR STREET, BETWEEN CUL-DE-SAC "B" AND THE PERMANENT BARRICADE ON THE EAST SIDE OF THE MAINLINE, MAY BE CLOSED TO TRAFFIC AFTER CONSTRUCTION OF THIS CUL-DE-SAC AND BARRICADE, WHEN THE MAINLINE EXCAVATION PROGRESSES THROUGH FUHR STREET.

CONSTRUCTION OF ASBESTOS CEMENT AND CAST IRON WATER LINES

SPECIFICATIONS

THE PROVISIONS OF SUPPLEMENTAL SPECIFICATION 814 SHALL APPLY TO THE LAYING AND CONSTRUCTING OF ALL WATER LINES UNLESS OTHERWISE INDICATED IN THIS PLAN AND AS SUPPLEMENTED BELOW:

TYPE OF PIPE

ALL ASBESTOS CEMENT PIPE SHALL BE JOHNS-MANVILLE, CERTAIN-TEED "K & M", OR APPROVED EQUAL, MANUFACTURED IN THE CONTINENTAL LIMITS OF THE UNITED STATES OF AMERICA.

COVER

ALL WATER MAINS SHALL HAVE A MINIMUM COVER OF 40" FROM THE EXISTING GROUND OR FINISHED GRADE EXCEPT THOSE PLACED IN CASING PIPE. THOSE IN CASING PIPE SHALL HAVE A MINIMUM COVER OF 48" FROM FINISHED PAVEMENT SURFACE.

BEDDING

ALL ASBESTOS CEMENT WATER MAINS SHALL BE LAID IN A TRENCH USING A 2-INCH BEDDING UNDER THE PIPE AND BACKFILLING WITH SAND TO THE DEPTH SHOWN ON THE DETAIL ON SHEET 13.

THE SAND BACKFILL SHALL BE COMPACTED BY USE OF WATERING THE TRENCH TO INSURE COMPACTION OR OTHER METHODS APPROVED BY THE ENGINEER.

MISCELLANEOUS

CONTRACTOR SHALL PROVIDE DOUBLE STRAP SERVICE SADDLES OR HEAVY TAPPED COUPLINGS - DIRECT THREADED FOR A SERVICE CONNECTION. THESE SHALL BE INCLUDED IN THE PRICE BID FOR PLACING THE APPROPRIATE SERVICE LINE.

BLOW-OFF VALVES SHALL BE PROVIDED AT ALL HIGH POINTS IN THE WATER MAIN WHICH SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT FOR THE PARTICULAR WATER MAIN CONSTRUCTION ITEM.

WHERE EXISTING LINES ARE TERMINATED AND PLUGGING IS INDICATED ON THE PLAN, A SUITABLE PLUG OR CAP SHALL BE PROVIDED. THE COST SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF WATER LINE.

AT THOSE LOCATIONS WHERE "NEW SERVICE BRANCHES" OR "SERVICE STOPS AND BOXES REMOVED AND RESET" ARE INDICATED ON THE PLANS AND NEW SIDEWALK IS TO BE PROVIDED, THE SERVICE STOP AND BOX SHALL BE PLACED TWO FEET BACK OF THE NEW EDGE OF SIDEWALK UNLESS THERE IS A GRASS STRIP BETWEEN THE CURB AND SIDEWALK. IF THE LATTER IS THE CASE, THESE SHALL BE PLACED TWO FEET BACK OF THE BACK FACE OF CURB.

ALL NEW SERVICE BRANCHES OR SERVICE BRANCHES LOWERED OR RAISED SHALL HAVE A MINIMUM COVER OF THIRTY-SIX (36) INCHES.

TRENCH WIDTH UNDER EXISTING PAVEMENT

WHERE SERVICE BRANCHES OR WATER MAINS ARE PLACED UNDER EXISTING PAVEMENTS, THE PAVEMENT WILL BE REPLACED AND PAID FOR AS INDICATED ON THE PLAN. THE TRENCH WIDTH SHALL NOT BE WIDER THAN 24 INCHES AND THE NEW PAVEMENT SHALL BE SIX FEET WIDER THAN THE TRENCH (THREE FEET EACH SIDE OF TRENCH). IF THE TRENCH IS MADE WIDER BY THE CONTRACTOR, HE SHALL PLACE THE ADDITIONAL REQUIRED WIDTH OF REPLACEMENT PAVEMENT AT NO EXPENSE TO THE STATE.

INTERRUPTION OF SERVICE

CONTRACTOR SHALL SCHEDULE HIS WORK IN ORDER TO CONTINUE WATER SERVICE, BY USE OF NEW MAINS, EXISTING MAINS OR TEMPORARY MAINS TO INSURE THAT SERVICE SHALL NOT BE INTERRUPTED MORE THAN SIX HOURS IN ANY TWENTY-FOUR HOURS. THE CONTRACTOR SHALL NOTIFY, AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE, THOSE WHOSE SERVICE SHALL BE INTERRUPTED UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

REACTION BACKING

REACTION BACKING SHALL BE PLACED AT ALL FITTINGS WHERE ASBESTOS CEMENT WATER LINE IS CONSTRUCTED OR RELAID.

RELAYING ASBESTOS CEMENT WATER MAIN

AT THOSE LOCATIONS WHERE ASBESTOS CEMENT PIPE IS REMOVED AND RE-LAID, THE EXISTING COUPLING SHALL BE CAREFULLY BROKEN, AS RECOMMENDED BY THE MANUFACTURER, AND A NEW COUPLING *SHALL* BE SUPPLIED AND INSTALLED. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT FOR RELAYING WATER MAIN.

ITEM 814 - NEW SERVICE BRANCHES, TYPE A, 3/4" TO 1-1/2", AS PER PLAN

THIS ITEM SHALL CONSIST OF, AND BE CONSTRUCTED IN COMPLIANCE WITH, S. S. 814. NEW SERVICE BRANCHES, HOWEVER, THE FURNISHING AND PLACING OF NEW SERVICE STOPS AND SERVICE BOXES SHALL NOT BE REQUIRED WITH A 'TYPE A' SERVICE.

UNKNOWN WATER LINES

DURING CONSTRUCTION UNKNOWN OR UNACCOUNTED FOR WATER FACILITIES MAY BE REVEALED. IN ORDER TO PROVIDE FOR THIS CONDITION AND, IN SOME CASES, LEGITIMATE BREAKAGE OF LINES, THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED IN THE GENERAL SUMMARY, FOR USE AS DIRECTED BY THE ENGINEER, IN RESOLVING THE ABOVE CONDITIONS. THESE QUANTITIES ARE NOT INTENDED FOR USE WHERE IT IS OBVIOUS THE BREAKAGE WAS A DIRECT RESULT OF NEGLIGENCE:

ITEM 814	NEW WATER MAIN, 4" CAST IRON	500 L. F.
	NEW WATER MAIN, 6" CAST IRON	200 L. F.
	NEW WATER MAIN, 4" ASBESTOS CEMENT	500 L. F.
	NEW WATER MAIN, 6" ASBESTOS CEMENT	300 L. F.
ITEM 814	NEW SERVICE BRANCHES, TYPE A, 3/4" TO 1-1/2"	100 L. F.

ITEM 814 WATER MAIN

Item 814 is hereby amended to include the 4" & 6" Class 150 Asbestos Cement Pressure Pipe and Fittings. Materials and installation shall be in accordance with the Manufacturers recommendations. Payment shall be made on the basis per lineal foot of 4" or 6" Class 150 C.I. Pipe or 4" or 6" Class 150 Asbestos Cement Pressure Pipe.

Pipe fittings shall be furnished and installed where needed even though not specifically called for on the plans and included for payment in the price bid for the pertinent pipe items.

EMBANKMENT REQUIRED FOR OHIO POWER CO.

An estimated quantity of 1200 cu.yds. of compacted embankment is required adjacent to and parallel with the sanitary sewer located right of centerline and between approximate Sta. 336+25 to Sta. 339+20. The center of the fill shall be located 25' to the left of the sanitary sewer with a 20' wide top and 1:1 side slopes. The limits and height of fill are to be as shown on Sheet No. 458.

Areas where embankments are to be placed shall be cleared of weeds and brush but need not be scalped.

The requirements for moisture, density control, benching, and suitable materials shall be waived.

The depth of layers in which the embankments are placed and their compaction shall, in lieu of the requirements of Item 203, conform with acceptable construction practices as determined by the Engineer.

The cost of all work required shall be included in the price bid for Item 203, Excavation Including Embankment Construction.

COMPUTATIONS & SUB-SUMMARIES

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I-22 SUBBASE GRADING A OR B & REGULAR

COLUMN NUMBER		1	2	3	4	5	6		
CONDITION	SHOULDER BUILD-UP	NET LENGTH FOR PAV'T. AND MEDIAN SHOULDERS AS PER TYPICAL SECTION	NET LENGTH FOR OUTSIDE SHOULDERS WITH DEDUCTIONS FOR SPEED CHANGE LANES AS PER GENERAL NOTE	END AREAS REGULAR MEDIAN	END AREAS GRADING A OR B PAVEMENT AREA *	END AREAS GRADING A OR B OUTSIDE SHOULDER	END AREAS REGULAR OUTSIDE SHOULDER	I-22 REGULAR COL. X COL.(÷27) = C.Y.	I-22 GRADING A OR B COL. X COL.(÷27) = C.Y.
		LENGTH IN FEET		SQUARE FEET				CUBIC YARDS	
EASTBOUND LANE									
NORMAL EARTH	A	3,499.98	3,059.31	0.844		13.781	4.958	1 X 3 = 109.41 2 X 6 = 567.78	1 X 5 = 1,786.42
NORMAL ROCK	A	180.00	180.00	1.070		18.114	10.623	1 X 3 = 7.13 2 X 6 = 70.82	1 X 5 = 120.76
SUPER 1° 00' LT.	A	E - 1,780.00 R - 70.00	E - 1,780.00 R - 70.00		1.750	13.167	3.250	2 X 6 = 222.68	1 X 4 = 114.91 1 X 5 = 902.18
SUPER 1° 15' LT.	A	E - 2,870.02 R - 650.00	E - 1,885.69 R - 50.00		1.750	13.167	3.250	2 X 6 = 233.00	1 X 4 = 228.15 1 X 5 = 1,716.60
NORMAL EARTH	B	2,456.60	811.83	0.750		14.669	2.360	1 X 3 = 68.24 2 X 6 = 70.96	1 X 5 = 1,334.66
NORMAL ROCK	B	1,559.20	64.04	0.820		19.002	10.039	1 X 3 = 47.35 2 X 6 = 45.07	1 X 5 = 1,097.33
SUPER 3° 00' RT.	B	1,839.62	957.58	1.250		13.835	2.200	1 X 3 = 85.17 2 X 6 = 78.03	1 X 5 = 942.63
SUPER 2° 30' RT. EARTH	B	1,423.06	1,315.06	1.250		13.835	2.200	1 X 3 = 65.88 2 X 6 = 107.15	1 X 5 = 729.19
SUPER 2° 30' RT. ROCK	B	115.80	——	1.302		13.000	——	2 X 6 = 5.58	1 X 5 = 55.76
SUPER 2° 00' LT.	B	E - 501.21 R - 350.00	400.00		1.500	13.000	3.000	2 X 6 = 44.44	1 X 4 = 47.29 1 X 5 = 409.84
WESTBOUND LANE									
NORMAL EARTH	A	2,599.98	2,599.98	0.844		13.781	4.958	1 X 3 = 81.27 2 X 6 = 477.43	1 X 5 = 1,327.05
NORMAL ROCK	A	1,080.00	1,080.00	1.070		18.114	10.623	1 X 3 = 42.80 2 X 6 = 424.92	1 X 5 = 724.56
SUPER 1° 00' LT. EARTH	A	930.00	930.00	1.618		13.167	4.083	1 X 3 = 55.73 2 X 6 = 140.64	1 X 5 = 453.53
SUPER 1° 00' LT. ROCK	A	920.00	920.00	1.618		13.167	9.833	1 X 3 = 55.13 2 X 6 = 335.05	1 X 5 = 448.65
SUPER 1° 15' LT. EARTH	A	2,570.02	1,304.40	1.606		13.167	4.083	1 X 3 = 152.87 2 X 6 = 197.25	1 X 5 = 1,253.31
SUPER 1° 15' LT. ROCK	A	950.00	115.62	1.606		13.167	9.833	1 X 3 = 56.51 2 X 6 = 42.11	1 X 5 = 463.28
NORMAL EARTH	B	2,157.81	958.27	0.750		14.669	2.360	1 X 3 = 59.94 2 X 6 = 83.76	1 X 5 = 1,172.33
NORMAL ROCK	B	1,857.99	1,026.76	0.820		19.002	10.039	1 X 3 = 56.43 2 X 6 = 381.76	1 X 5 = 307.61
SUPER 3° 00' RT	B	1,839.62	227.56		1.500	13.000	3.000	2 X 6 = 25.28	1 X 4 = 102.20 1 X 5 = 885.74
SUPER 2° 30' RT.	B	E - 1,423.06 R - 115.80	695.09		1.500	13.000	3.000	2 X 6 = 77.23	1 X 4 = 85.49 1 X 5 = 740.93
SUPER 2° 00' LT. EARTH	B	450.00	450.00	1.250		13.835	2.200	1 X 3 = 20.83 2 X 6 = 36.67	1 X 5 = 230.58
SUPER 2° 00' LT. ROCK	B	401.21	401.21	1.302		13.000	9.250	1 X 3 = 19.35 2 X 6 = 137.45	1 X 5 = 193.18
NET LENGTH		34,590.98	21,282.40			SUB TOTAL		4,789.10	18,879.16
+ BRIDGE LENGTHS		1,809.02	1,134.60			LESS CO. RD. 62 CROSSOVER & APPROACHES		49.91	23.23
+ SPEED CHANGE LANES			13,983.00			ADJUSTMENT FOR UNDERDRAIN ALONG OUTSIDE SHOULDER OF BUILD-UP [A]		208.25	208.25
TOTAL LENGTH CHECK		36,400.00	36,400.00			TOTAL		4,530.94	19,064.18

*PAVEMENT AREA EXTENDS 1 FOOT BEYOND PAVEMENT EDGE OR TO BACK OF UNDERDRAIN ON SHOULDER BUILD-UP [B] ONLY

E = EARTH SECTION
R = ROCK SECTION

T-71 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

TOTAL NET LENGTH AS PER RELOC.
U.S. 36 TYPICAL SECTION = 17,095.49 L.F.
WIDTH OF 4 LANES @ 12' = 48.00 FT.
TOTAL = 17,095.49 X 48 ÷ 9 = 91,176.95 S.Y.

E-1 COMPACTED SUBGRADE

AREA AS T-71 EARTH SUBGRADE 70,243 S.Y.
AREA AS I-7 1,408 S.Y.
AREA AS PAVED SHOULDER 33,573 S.Y.
TOTAL = 105,224 S.Y.

S.S. CE-101.04 COMPACTION, USING HEAVY PNEUMATIC TIRED ROLLER

RELOC. U.S. 36	105,224 S.Y.
RAMP A	4,709
RAMP B	3,995
RAMP C	4,749
RAMP D	4,667
RECONSTR. U.S. 250	20,015
RAMP F	8,072
RAMP F SPUR	806
RAMP G	4,248
RAMP H	4,298
RAMP J	5,277
RAMP K	5,892
RAMP K-L	2,825
RAMP L	4,679
RAMP N	3,501
RAMP P	3,719
RAMP Q	5,171
RAMP R	3,657 S.Y.
TOTAL =	195,504 S.Y.

TOTAL = 195,504 S.Y. ÷ 2,000 S.Y./HR = 97.8 HOURS

L-9 COMMERCIAL FERTILIZER TONS = S.F. X 20 / 1,000 X 2,000

TOTAL = $\frac{654,660 \times 9 \times 20}{1,000 \times 2,000}$ = 58.92 TONS

L-9 AGRICULTURAL LIMING MATERIAL TONS = S.F. X 100 / 1,000 X 2,000

TOTAL = $\frac{654,660 \times 9 \times 100}{1,000 \times 2,000}$ = 294.60 TONS

E-4 BORROW USING GRANULAR MATERIAL, AS PER PLAN

STA. 333+00 TO STA. 338+85 (SEE SHEETS 174-177)
TOTAL E-4, BORROW (GRANULAR MATERIAL) = 5,499 C.Y.

B-19 AGGREGATE BASE COURSE

SHOULDER BUILD-UP [A]
MEDIAN SHOULDER
NET LENGTH AS PER I-22 COMPUTATION = 18,100.00 L.F.
LESS CO. RD. 62 MEDIAN OPENING = - 716.80 L.F.
17,383.20 L.F.
17,383.20 X 4 ÷ 9 = 7,725.87 S.Y. X 8 ÷ 36 = 1,716.89 C.Y.

OUTSIDE SHOULDER
NET LENGTH AS PER I-22 COMPUTATION = 13,975.00 L.F.
LESS CO. RD. 62 APPROACHES = - 209.78 L.F.
13,765.22 L.F.
13,765.22 X 8 ÷ 9 = 12,235.75 S.Y. X 8 ÷ 36 = 2,719.06 C.Y.

SHOULDER BUILD-UP [B]
MEDIAN SHOULDER
NET LENGTH AS PER I-22 COMPUTATION = 16,490.98 L.F.
16,490.98 X 4 ÷ 9 = 7,329.32 S.Y. X 6 ÷ 36 = 1,221.55 C.Y.
OUTSIDE SHOULDER
NET LENGTH AS PER I-22 COMPUTATION = 7,307.40 L.F.
7,307.40 X 8 ÷ 9 = 6,495.47 S.Y. X 6 ÷ 36 = 1,082.58 C.Y.
TOTAL = 6,741 C.Y.

T-30 BITUMINOUS PRIME COAT

ONE COAT @ 0.40 GAL/S.Y. SHOULDER
TOTAL S.Y. SHOULDER BUILD-UP [A] AS PER B-19
COMPUTATION = 19,961.62 S.Y.
TOTAL = 19,961.62 X 0.40 = 7,985 GAL.

T-31 BITUMINOUS SURFACE TREATMENT

SEAL COAT
SHOULDER BUILD-UP [A]
ONE OPERATION @ 0.30 GAL./S.Y.
SHOULDER AS PER B-19
COMPUTATION = 19,961.62 S.Y.
19,961.62 X 0.30 = 5,989 GAL.

SHOULDER BUILD-UP [B]
ONE OPERATION @ 0.25 GAL./SY.
SHOULDER AS PER B-19
COMPUTATION = 13,824.79 S.Y.
13,824.79 X 0.25 = 3,456 GAL.
TOTAL = 9,445

NO. 6 AGGREGATE
ONE OPERATION @ 0.008 C.Y./S.Y.
SHOULDER AS PER B-19
COMPUTATION = 33,573.07 S.Y.
TOTAL = 33,786.41 X 0.008 = 271 C.Y.

E-11 WATER M-GAL. = C.Y. X 5 / 1,000

EMBANKMENT + 6% =	1,990,499 C.Y.
B-19 =	17,403 C.Y.
I-22 REGULAR & GRADING A OR B =	47,370 C.Y.
	2,055,272 C.Y.

TOTAL = $\frac{2,055,272 \times 5}{1,000}$ = 10,277 M-GAL.

Less B-19 87 M. Gal.-(1965 Specs.)
To General Summary 10,190 M. Gal.

I-9 STONE UNDERDRAIN NO. 2

NORMAL SECTION
NET SHOULDER LENGTH = 3,300 L.F.
WEIGHTED AVERAGE I-9 LENGTH = 17.0 L.F.
SPACING = 1 I-9/60 L.F. SHOULDER
(3,300 X 17.0 ÷ 60) + 17.0 = 952 L.F.

SUPERELEVATED SECTION
NET SHOULDER LENGTH = 1,750 L.F.
WEIGHTED AVERAGE I-9 LENGTH = 18.7 L.F.
SPACING = 1 I-9/30 L.F. SHOULDER
(1,750 X 18.7 ÷ 30) + 18.7 = 1,091 L.F.
TOTAL = 2,043 L.F.

B-21, 3" WATERPROOFED AGGREGATE BASE COURSE

NET LENGTH AS PER I-22 COMPUTION-BUILD-UP [B]
MEDIAN SHOULDER = 16,490.98 L.F.
16,490.98 X 4 X 3 ÷ 324 = 610.78 C.Y.
OUTSIDE SHOULDER = 7,307.40 L.F.
7,307.40 X 8 X 3 ÷ 324 = 541.29 C.Y.
TOTAL = 1,152 C.Y.

I-4 DUST CONTROL

800 M-GAL. WATER
30 TONS CALCIUM CHLORIDE

COMPUTATIONS & SUB-SUMMARIES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-15.93

EARTHWORK

SHEET NO.	STATION FROM	STATION TO	E-1 ROADWAY EXCAVATION CU. YDS.	EMBANKMENT PLUS 6 % CU. YDS.
35	191+85	200+00	35,194	107
	CO. RD. 62 CONNECTION		202	5
36	200+00	210+00	141,285	356
	CUL-DE-SAC 'A'		2,464	7
38	210+00	220+00	60,654	10,266
39	220+00	230+00	686	115,958
	FRONTAGE RD. 'A'		2,293	24,575
40	230+00	240+00	23,127	49,380
41	240+00	250+00	85,451	1,415
42	250+00	260+00	1,284	30,442
43	260+00	270+00	1,340	55,440
44	270+00	280+00	307,768	4,952
46	280+00	290+00	261,237	1,887
48	290+00	300+00	280,113	17,191
50	300+00	310+00	2,055	249,965
	RAMP J		1,371	27,840
	B. & O. R.R. @ RAMP J		77	17
52	310+00	320+00	762	206,259
54	320+00	330+00	207	108,559
55	330+00	340+00	1,036	64,475
	CHANNEL CHANGE B		SEE SHEET 578	7,129
57	340+00	350+00	469,589	624
59	350+00	360+00	15,212	109,828
60	360+00	370+00	80,938	159,170
62	370+00	380+00	267,038	109,323
	CUL-DE-SAC 'B'		5	4,293
64	380+00	385+90	1,087	15,106
234	RECONSTR. CO. RD. 62		904	6,541
240	TRENTON AVE. CONN.		160	0
241	TRENTON AVE. CONN.		4,111	2
242	TRENTON AVE. CONN.		183	26,655
244	TRENTON AVE. CONN.		931	108,128
245	TRENTON AVE. CONN.		1,563	13,112
	RAMP A		827	16,004
	RAMP B		34,473	567
	PRIVATE DRIVE A		850	259
277	RAMP C		301	45,750
282	RAMP D		493	40,664
286	RECONSTR. TRENTON AVE.		1,549	219
289	FRONTAGE RD. 'B'		23,165	1,920
	PRIVATE DRIVE B		9	235
308	RECONSTR. U.S. 250		362	7
	RECONSTR. 12TH STREET		60	0
310	RECONSTR. U.S. 250		214	1,466
312	RECONSTR. U.S. 250		1,679	26,313
	CHANNEL CHANGE A	SEE SHEETS 525 & 576		1,453
313	RECONSTR. U.S. 250		2,825	27,951
	RAMP F		38	6,431
314	RECONSTR. U.S. 250		266	31,607
315	RECONSTR. U.S. 250		24	5,801
331	RAMP F		594	30,115
	RAMP F SPUR		0	5,814
	RAMP G		22	33,960
	RAMP H		0	18,220
349	RAMP J		4,246	17,707
	RAMP K		2,661	62,816
	RAMP L		607	38,489
	RELOC. T.R. 278		190	605
386	CONN. TO EXIST. U.S. 250		448	2,383
389	ACCESS ROAD		391	4,457
390	ACCESS ROAD		777	657
391	ACCESS ROAD		200	921
392	ACCESS ROAD		30	863
401	RELOC. CO. RD. 64		3,839	4,172
	RECONSTR. McKEE RD.		786	3
	RECONSTR. EASTPORT AVE.		150	418
402	RELOC. CO. RD. 64		12,643	17,973
	LITTLE STILLWATER CR.	SEE SHEET 578		159
403	RELOC. CO. RD. 64		10,378	0
419	RECONSTR. SECOND ST.		2,329	31
421	RECONSTR. SECOND ST.		10,226	164
	RECONSTR. CROSS ST.		1	170
440	RELOC. T.R. 287		43,248	9,164
	RECONSTR. FOURTH ST.		10	194
441	RELOC. T.R. 287		1,083	5,390
	TOTAL		2,212,321	1,990,499

L-9 SEEDING & PROTECTING

STA. 191+85	TO STA. 200+00	10,062 S.Y.
200+00	210+00	17,224
210+00	220+00	15,542
220+00	230+00	17,410
230+00	240+00	18,372
240+00	250+00	18,936
250+00	260+00	14,915
260+00	270+00	16,230
270+00	280+00	29,081
280+00	290+00	26,794
290+00	300+00	26,101
300+00	310+00	20,181
310+00	320+00	17,772
320+00	330+00	15,078
330+00	340+00	10,890
340+00	350+00	25,396
350+00	360+00	25,654
360+00	370+00	20,591
370+00	380+00	21,215
STA. 380+00	TO STA. 385+43	8,619
CHANNEL RIGHT STA. 385+20± TO 389+75±		1,957
CO. RD. 62 CONNECTION		118
CUL-DE-SAC 'A'		1,800
FRONTAGE RD. 'A'		9,560
RAMP J		7,282
CHANNEL CHANGE B		2,806
CUL-DE-SAC 'B'		1,600
RECONSTR. CO. RD. 62		3,110
TRENTON AVE. CONN.		21,453
RAMP A		20,083
RAMP B		8,371
PRIVATE DRIVE A		784
RAMP C		9,254
RAMP D		8,668
RECONSTR. TRENTON AVE.		917
FRONTAGE RD. 'B'		8,420
PRIVATE DRIVE B		224
RECONSTR. U.S. 250		40,982
CHANNEL CHANGE A		623
RAMP F		13,958
RAMP F SPUR		2,020
RAMP G		10,151
RAMP H		4,917
RAMP J		13,010
RAMP K		13,775
RAMP L		8,148
RELOC. T.R. 278		1,297
CONN. TO EXIST. U.S. 250		3,450
ACCESS ROAD		10,960
RELOC. CO. RD. 64		15,171
RECONSTR. McKEE ROAD		423
RECONSTR. EASTPORT AVE.		577
RECONSTR. SECOND ST.		4,876
RECONSTR. CROSS ST.		115
RELOC. T.R. 287		12,779
RECONSTR. FOURTH ST.		235 S.Y.
AREAS OF PAVEMENT REMOVAL BEYOND LIMIT OF CONSTRUCTION		4,535
TOTAL		644,472

EXCESS E-1 ROADWAY EXCAVATION

EMBANKMENT +6%		1,990,499 C.Y.
E-1 ROADWAY EXCAVATION	2,212,321 C.Y.	
E-2 STRUCTURE EXCAVATION (ROADWAY ONLY, SEE SHEET 28)	410 C.Y.	
E-3 CHANNEL EXCAVATION (ROADWAY, SEE SHEET 28)	3,845 C.Y.	
TOTAL EXCAVATION	2,216,576 C.Y.	
EXCESS EXCAVATION		226,077 C.Y.

I-127 DELINEATORS STATION TABULATION

RELOC. U.S. 36

STATION		SIDE	INTERVAL	A-1 POST	A-1 BRACKET	C-2 POST	C-2 BRACKET	C-3 POST	C-3 BRACKET
245+00	247+00	R	200'	2					
246+00	252+00	L	200'	4					
258+00	268+00	R	200'	6					
266+00	274+00	L	200'	5					
281+50	289+50	R	200'	5					
284+50	294+50	L	200'	6					
300+50	310+50	R	200'	5	1				
319+25	323+25	L	200'	3					
333+25		R		1					
335+25	339+25	L & R	200'	2	4				
341+00		R		1					
350+00	360+00	L & R	200'	10	2				
362+00	366+00	R	200'	3					
370+00	384+00	L	200'	8					
379+50	383+50	R	200'	3					

RECONSTR. U.S. 250

92+75	94+75	R	200'	1	1				
97+75	99+75	R	200'	2					

SUBTOTAL I — 67 | 8 | — | — | —

RAMP D

STATION		SIDE	INTERVAL	C-2 POST	C-2 BRACKET	C-3 POST	C-3 BRACKET
248+55	9+55	R	100'	12			
10+55		L & R		2			
11+25		L		1			
11+65	14+45	L	40'	8			
14+45	15+15	R	70'	2			
19+20	16+00	L	80'	3	2		
15+50		L				1	

TRENTON AVE. CONN.

16+00	19+20	R	80'	3	2		
21+00		L		1			
21+50	26+50	L & R	100'	8	4		
26+90	30+10	L	40'	9			
30+90	33+60	L	30'	10			

RAMP A

34+60	36+70	L	30'	8			
37+10	37+90	L	40'	3			
38+50		L		1			
39+40		L & R		2			
40+40	41+40	R	100'	2			
262+75	254+75	L	100'	9			
253+75		L				1	

RAMP B

33+90	34+90	L	100'	2			
35+90		L & R		2			
36+60		R		1			
37+00	41+00	R	40'	11			
41+00	43+40	L	80'	4			
44+40		L		1			
278+75	281+75	L	100'	4			
282+85		L		1			

SUBTOTAL II — 110 | 8 | 2 | —

RAMP C

STATION		SIDE	INTERVAL	C-2 POST	C-2 BRACKET	C-3 POST	C-3 BRACKET
19+60	21+60	R	40'	6			
21+60	22+80	L	40'	4			
23+60	27+60	L	80'	6			
27+60	28+40	R	80'	2			
270+50	279+50	R	100'	10			
280+50		R				1	

RAMP F

333+50	328+50	L	100'	6			
0+30	2+70	R	80'	4			
3+20		L & R		2			
3+70	5+20	L	50'	4			
6+00		L & R		2			
7+00	10+00	R	100'	4			
10+80	11+80	R	50'	3			
11+80	15+30	L	50'	8			
16+10		L & R		2			
16+70	17+50	R	80'	2			
111+75	119+75	R	100'	9			
120+25		R				1	

RAMP F SPUR

2+10	3+70	L	40'	5			

RAMP G

0+00	2+00	R	40'	6			
2+00	2+80	L	40'	3			
3+10	8+80	L	30'	20			
9+20	9+60	L	40'	2			
9+60	10+00	R	40'	2			
10+70		R		1			
317+00	309+00	L	100'	7	2		
308+10		L				1	

RAMP H

0+10	1+30	R	30'	5			
1+30	2+20	L	30'	4			
2+80		L & R		2			
3+80	4+80	R	100'	2			
5+80		L & R		2			
6+60	7+40	L	80'	2			
7+40	9+00	R	80'	3			
325+25	331+25			7			
332+25						1	

RAMP J

290+65		R		1			
291+75	3+75	R	100'	8			
4+75		L & R		2			
5+55	11+55	L	50'	10	3		
12+35		L & R		2			
13+35	17+35	R	100'	3	2		

RAMP K-L

116+90	109+90	L	100'	8			
14+10	17+10	R	100'	4			

SUBTOTAL III — 185 | 7 | 4 | —

RAMP K

STATION		SIDE	INTERVAL	C-2 POST	C-2 BRACKET	C-3 POST	C-3 BRACKET
20+30	24+30	R	100'	5			
24+30	24+90	L	60'	2			
25+20	33+90	L	30'	30			
33+90	34+80	R	30'	4			
312+75	321+75	R	100'	8	2		
322+75		R				1	

RAMP L

18+10	19+10	R	100'	2			
19+70	20+30	R	30'	3			
20+30	21+50	L	30'	5			
21+50	22+10	R	60'	2			
23+10	30+10	R	100'	7	1		
305+00	297+00	L	100'	8	1		
296+00		L				1	

RAMP P

342+20	10+20	R	100'	14			

RAMP Q

1+20	9+20	L	80'	11			
9+20	10+00	R	80'	3			
367+50	376+50	R	100'	10			
377+50		R				1	

RAMP R

341+00		L				1	
342+00	349+00	L	100'	8			
0+08	1+60	L	80'	2			
1+60	3+20	R	80'	3			
3+20	5+20	L	100'	3			

RAMP N

0+80	2+00	L	30'	5			
2+00	8+00	L	100'	7			
363+75	368+75	L	100'	6			

SUBTOTAL IV — 148 | 4 | 4 | —

I-127 DELINEATORS PROJECT TOTAL

SUBTOTAL	A-1 POST	A-1 BRACKET	C-2 POST	C-2 BRACKET	C-3 POST	C-3 BRACKET
I	67	8	—	—	—	—
II	—	—	110	8	2	—
III	—	—	185	7	4	—
IV	—	—	148	4	4	—
TOTAL	67	8	443	19	10	—

SUB - SUMMARY

1963 SPECIFICATIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-15.93

ITEM NO.	SUB-SUMMARY & GENERAL NOTES 22	24	SHEET NUMBER 35	36	38	39	40	41	42	43	44	46	48	50	52	54	55	57	59	60	62	64	234	240	241	242	244	245	ITEM NO.	TOTAL THIS SHEET	UNIT	DESCRIPTIONS (CODE TYPE 7221)
																																DRAINAGE
E-2																											410		E-2	410	C.Y.	EXCAVATION FOR STRUCTURES
E-3															100	303						2,559					582	46	E-3	3,590	C.Y.	CHANNEL EXCAVATION
E-12			148	40	55	100			54						220			30				56							E-12	703	L.F.	PIPE REMOVED 15" AND UNDER
E-12			232			60			250					138	312					200		193							E-12	1,385	L.F.	PIPE REMOVED OVER 15"
I-1																													I-1	0	L.F.	12" PIPE CLASS A-1 SEC. M-6.4(d)
I-1																													I-1	0	L.F.	15" PIPE CLASS A-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
I-1																													I-1	0	L.F.	15" PIPE CLASS A-1 SEC. M-6.6(c)
I-1														284															I-1	284	L.F.	15" PIPE CLASS A-1 SEC. M-6.8(a) WITH 5" MINIMUM CLASS E CONCRETE ENCASEMENT, AS PER PLAN
I-1																													I-1	0	L.F.	15" PIPE CLASS A-1 SEC. M-6.8(b)
I-1																268													I-1	268	L.F.	18" PIPE CLASS A-1 SEC. M-6.6(c)
I-1																													I-1	0	L.F.	18" PIPE CLASS A-1 SEC. M-6.6(d)
I-1																													I-1	0	L.F.	18" PIPE CLASS A-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
I-1															270														I-1	270	L.F.	24" PIPE CLASS A-1 SEC. M-6.4(d)
I-1																													I-1	0	L.F.	24" PIPE CLASS A-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
I-1						193				226																			I-1	419	L.F.	24" PIPE CLASS A-1 SEC. M-6.8(a) WITH 5" MINIMUM CLASS E CONCRETE ENCASEMENT, AS PER PLAN
I-1															112														I-1	112	L.F.	24" PIPE CLASS A-1 SEC. M-6.6(b) OR SEC. M-6.8(b)
I-1						87																							I-1	87	L.F.	24" PIPE CLASS A-1 SEC. M-6.8(b)
I-1					128																								I-1	128	L.F.	30" PIPE CLASS A-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
I-1																							96						I-1	96	L.F.	30" PIPE CLASS A-1 SEC. M-6.6(b) OR SEC. M-6.8(b)
I-1												146																	I-1	146	L.F.	30" PIPE CLASS A-1 SEC. M-6.8(b)
I-1									268																				I-1	268	L.F.	36" PIPE CLASS A-1 SEC. M-6.8(b)
I-1																			300										I-1	300	L.F.	42" PIPE CLASS A-1 SEC. M-6.6(d)
I-1							174																						I-1	174	L.F.	42" PIPE CLASS A-1 1/3 VITRIFIED LINED PIPE SEC. M-6.6(b), AS PER PLAN
I-1																			566										I-1	566	L.F.	48" PIPE CLASS A-1 SEC. M-6.4(d) 8 GAGE, ELONGATED AS PER PLAN
I-1									162																		120		I-1	282	L.F.	48" PIPE CLASS A-1 1/3 VITRIFIED LINED PIPE SEC. M-6.6(a), AS PER PLAN
I-1										212																			I-1	212	L.F.	48" PIPE CLASS A-1 1/3 VITRIFIED LINED PIPE SEC. M-6.6(b), AS PER PLAN
I-1						286																							I-1	286	L.F.	48" PIPE CLASS A-1 SEC. M-6.6(d)
I-1																													I-1	0	L.F.	48" PIPE CLASS A-1 1/3 VITRIFIED LINED PIPE SEC. M-6.6(d), AS PER PLAN
I-1																													I-1	0	L.F.	66" PIPE CLASS A-1 SEC. M-6.4(g) 10 - 8 GAGE, AS PER PLAN
I-1																													I-1	0	L.F.	66" PIPE CLASS A-1 SEC. M-6.4(g) 10 - 10 GAGE, AS PER PLAN
I-1					38																								I-1	38	L.F.	30" PIPE CLASS A-4 SEC. M-6.4(d)
I-1			66																										I-1	66	L.F.	12" PIPE CLASS B-1
I-1																											38		I-1	38	L.F.	12" PIPE CLASS B-1 SEC. M-6.8(b)
I-1																													I-1	0	L.F.	15" PIPE CLASS B-1
I-1	800																												I-1	800	L.F.	6" PIPE CLASS E-1
I-1	700																												I-1	700	L.F.	8" PIPE CLASS E-1
I-1	300																												I-1	300	L.F.	10" PIPE CLASS E-1
I-1	200				14	10	10					22		124	136				308		10	80							I-1	912	L.F.	12" PIPE CLASS E-1
I-1														188															I-1	188	L.F.	12" PIPE CLASS E-1 SEC. M-6.8(a)
I-1																			190										I-1	190	L.F.	15" PIPE CLASS E-1
I-1																											172		I-1	172	L.F.	15" PIPE CLASS E-1 SEC. M-6.8(a)
I-1																													I-1	0	L.F.	15" PIPE CLASS E-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
I-1											300											14							I-1	314	L.F.	18" PIPE CLASS E-1 SEC. M-6.8(a)
I-1									36																				I-1	36	L.F.	21" Pipe Class E-1 Sec. M-6.5(a) of Sec. M-6.6(a)
I-1								600			225																		I-1	825	L.F.	21" PIPE CLASS E-1 SEC. M-6.8(a)
I-1																					700								I-1	700	L.F.	24" PIPE CLASS E-1
I-1											54																		I-1	54	L.F.	24" PIPE CLASS E-1 SEC. M-6.8(b)
I-1																													I-1	0	L.F.	27" PIPE CLASS E-1
I-1				268																									I-1	268	L.F.	27" PIPE CLASS E-1 SEC. M-6.8(a)
I-1																													I-1	0	L.F.	30" PIPE CLASS E-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
I-1			20	10	10			10	10	20	30	10		10	20	20			30	10	10			20		10	10		I-1	260	L.F.	6" PIPE CLASS F-4
I-1													20																I-1	20	L.F.	8" PIPE CLASS F-4
I-1	250				10	10	10	20			10	10		10	10	30	30	20	20	10	10	10				10	10	10	I-1	500	L.F.	8" PIPE CLASS F-4 SEC. M-6.4(c)
I-1						50	24							89	60	25	78		44							77			I-1	447	L.F.	12" PIPE CLASS F-4 SEC. M-6.4(c)
I-1																													I-1	0	L.F.	15" PIPE CLASS F-4
I-1																													I-1	0	L.F.	18" PIPE CLASS F-4
I-1																					30								I-1	30	L.F.	24" PIPE CLASS F-4 SEC. M-6.4(c)
I-1																													I-1	0	L.F.	18" x 11" PIPE CLASS G-1 SEC. M-6.4(j)(d)
I-1																													I-1	0	L.F.	22" x 13" PIPE CLASS G-1 SEC. M-6.4(j)(d)
I-1																													I-1	0	L.F.	23" x 14" PIPE CLASS G-1 SEC. M-6.7(a)
I-1																													I-1	0	L.F.	38" x 24" PIPE CLASS G-1 SEC. M-6.7(b)
I-1																													I-1	0	L.F.	91" x 58" PIPE CLASS G-1 SEC. M-6.7(a)
I-1	2,000		611	603	210	448	467	1,284	630	1,012	907	768	757	1,552	1,494	2,407	671	867	1,461	1,425	1,311	201		126	394	177	406	508	I-1	22,717	L.F.	6" PIPE CLASS I-3
I-1	600			250	884						612	398								93	351								I-1	3,188	L.F.	6" PIPE CLASS I-3 SEC. M-6.4(h)
I-1	1,000																107												I-1	1,107	L.F.	6" PIPE CLASS I-3 SEC. M-6.4(h), AS PER PLAN
I-1	300		64		126	48						116			56				55	60	70	55				36	28		I-1	1,010	L.F.	6" PIPE CLASS J-1
I-1	300																												I-1	300	L.F.	6" PIPE CLASS J-1 SEC. M-6.8(b)
I-1	4,000																												I-1	4000	L.F.	8" PIPE CLASS J-1 SEC. M-6.8(b)
I-1																													I-1	0	L.F.	10" PIPE CLASS J-1
I-1	500					62	60		80	272				82	137	119	111	188	74					300		29		66	I-1	2,088	L.F.	12" PIPE CLASS J-1
I-1								66																					I-1	66	L.F.	12" PIPE CLASS J-1 SEC. M-6.8(b)
I-1																					66								I-1	66	L.F.	15" PIPE CLASS J-1
I-1								66																					I-1	66	L.F.	15" PIPE CLASS J-1 SEC. M-6.8(b)
I-1	200																												I-1	200	L.F.	18" PIPE CLASS J-1

SUB - SUMMARY

1963 SPECIFICATIONS

FED. RD. DIVISION	STATE	PROJECT	
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TUSCARAWAS COUNTY
TUS-36-15.93

ITEM NO.	SUB-SUMMARY & GENERAL NOTES 22	24	SHEET NUMBER 35	36	38	39	40	41	42	43	44	46	48	50	52	54	55	57	59	60	62	64	234	240	241	242	244	245	ITEM NO.	TOTAL THIS SHEET	UNIT	DESCRIPTIONS (CODE TYPE 7221)
																																DRAINAGE (CONTINUED)
I-4											150																		I-4	150	L.F.	18" PIPE CLASS J-1 SEC. M-6.8(b)
I-1											76																		I-1	76	L.F.	21" PIPE CLASS J-1 SEC. M-6.8(b)
I-1	200																				84								I-1	284	L.F.	24" PIPE CLASS J-1
I-1																						192							I-1	192	L.F.	24" PIPE CLASS J-1 SEC. M-6.6(b) OR SEC. M-6.8(b)
I-1			502																								60		I-1	562	L.F.	24" PIPE CLASS J-1 SEC. M-6.8(b)
I-1				142																									I-1	142	L.F.	27" PIPE CLASS J-1 SEC. M-6.8(b)
I-1																					94								I-1	94	L.F.	30" PIPE CLASS J-1
I-1			560																										I-1	560	L.F.	30" PIPE CLASS J-1 SEC. M-6.8(b)
I-1																													I-1	0	L.F.	30" PIPE CLASS J-1 SEC. M-6.6(b) OR SEC. M-6.8(b)
I-1																													I-1	0	L.F.	33" PIPE CLASS J-1 SEC. M-6.6(a)
I-1																													I-1	0	L.F.	33" PIPE CLASS J-1 SEC. M-6.6(d)
I-1																													I-1	0	L.F.	36" PIPE CLASS J-1 SEC. M-6.6(a)
I-1																						154							I-1	154	L.F.	36" PIPE CLASS J-1 SEC. M-6.6(b) OR SEC. M-6.8(b)
I-1																			399										I-1	399	L.F.	42" PIPE CLASS J-1
I-1																													I-1	0	L.F.	54" PIPE CLASS J-1 SEC. M-6.6(a)
I-1																													I-1	0	L.F.	54" PIPE CLASS J-1 SEC. M-6.6(b)
I-2			0.41	0.47	1.02	2.77	1.75		3.13	3.23	0.41	1.95		0.49	1.05	0.83	0.46	0.23	11.59		0.92	0.59	1.02			0.23		2.82	I-2	35.37	C.Y.	MASONRY
I-5						1																							I-5	1	EA.	24" CLASS A-1 PIPE SPECIALS SEC. M-6.8(a)
I-5					1																								I-5	1	EA.	30" CLASS A-1 PIPE SPECIALS SEC. M-6.6(a) OR SEC. M-6.8(b)
I-5												1																	I-5	1	EA.	30" CLASS A-1 PIPE SPECIALS SEC. M-6.8(b)
I-5																			1										I-5	1	EA.	42" CLASS A-1 PIPE SPECIALS SEC. M-6.6(d)
I-5																			1										I-5	1	EA.	48" CLASS A-1 PIPE SPECIALS SEC. M-6.4(d) 8 GAGE ELONGATED AS PER PLAN
I-5									1																				I-5	1	EA.	48" CLASS A-1 PIPE SPECIALS 1/3 VITRIFIED LINED SEC. M-6.6(a), AS PER PLAN
I-5					2																								I-5	2	EA.	30" CLASS A-4 PIPE SPECIALS SEC. M-6.4(d)
I-5	12																												I-5	12	EA.	6" CLASS E-1 PIPE SPECIALS
I-5	2																												I-5	2	EA.	8" CLASS E-1 PIPE SPECIALS
I-5	2																												I-5	2	EA.	10" CLASS E-1 PIPE SPECIALS
I-5	2																												I-5	2	EA.	12" CLASS E-1 PIPE SPECIALS
I-5						2	2							2	2	2	4		2							2			I-5	18	EA.	12" CLASS F-4 PIPE SPECIALS SEC. M-6.4(c)
I-5																													I-5	0	EA.	91" x 58" CLASS G-1 PIPE SPECIALS SEC. M-6.7(a)
I-5	10			1	1	1	1	3	1	2	3	2	2	2	3	5	2	2	4		1						1		I-5	47	EA.	6" CLASS I-3 PIPE SPECIALS
I-5	5										1																		I-5	6	EA.	6" CLASS I-3 PIPE SPECIALS SEC. M-6.4(b)
I-5	15																												I-5	15	EA.	6" CLASS J-1 PIPE SPECIALS SEC. M-6.8(b)
I-5	10		3		3	1						2			3				1	2	4	1			1	1			I-5	32	EA.	6" CLASS J-1 PIPE SPECIALS
I-5	15																												I-5	15	EA.	8" CLASS J-1 PIPE SPECIALS SEC. M-6.8(b)
I-5	10																												I-5	10	EA.	12" CLASS J-1 PIPE SPECIALS
I-5	10																												I-5	10	EA.	18" CLASS J-1 PIPE SPECIALS
I-5	10																				1								I-5	11	EA.	24" CLASS J-1 PIPE SPECIALS
I-5																						1							I-5	1	EA.	24" CLASS J-1 PIPE SPECIALS SEC. M-6.6(b) OR SEC. M-6.8(b)
I-5				1																									I-5	1	EA.	27" CLASS J-1 PIPE SPECIALS
I-5																													I-5	0	EA.	33" CLASS J-1 PIPE SPECIALS SEC. M-6.6(a)
I-5																			3										I-5	3	EA.	42" CLASS J-1 PIPE SPECIALS
I-5																													I-5	0	EA.	54" CLASS J-1 PIPE SPECIALS SEC. M-6.6(a)
I-5																													I-5	0	EA.	54" CLASS J-1 PIPE SPECIALS SEC. M-6.6(b)
I-8			1	1	1	2	1	4	1	3	6	1		4	3	2	2	2	5		2	2					2		I-8	45	EA.	STANDARD NO. 2-2A CATCH BASIN, AS PER PLAN
I-8																													I-8	0	EA.	STANDARD NO. 2-2B CATCH BASIN
I-8			1	1																	2								I-8	4	EA.	STANDARD NO. 2-3 CATCH BASIN, AS PER PLAN
I-8																						1							I-8	1	EA.	STANDARD NO. 2-4 CATCH BASIN, AS PER PLAN
I-8																			1					3					I-8	0	EA.	STANDARD NO. 2-6 CATCH BASIN, AS PER PLAN
I-8																													I-8	4	EA.	STANDARD NO. 3 CATCH BASIN
I-8										1					1			2											I-8	0	EA.	STANDARD NO. 3-A CATCH BASIN
I-8																											1		I-8	4	EA.	STANDARD NO. 6 CATCH BASIN, MODIFIED, AS PER PLAN
I-8																										1			I-8	1	EA.	STANDARD NO. 2-6 Median Inlet
I-8																									1				I-8	1	EA.	STANDARD NO. 2-8 Median Inlet
I-8			2																1		2								I-8	0	EA.	STANDARD NO. 2-A-8 Paved Shoulder Inlet
I-8																													I-8	5	EA.	STANDARD NO. 1 MANHOLE
I-8																													I-8	0	EA.	STANDARD NO. 1-A MANHOLE
I-8																													I-8	0	EA.	STANDARD NO. 2 MANHOLE, WITHOUT DROP PIPE
I-8																									1				I-8	1	EA.	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN
I-9	100																10												I-9	110	L.F.	STONE UNDERDRAINS NO. 1, AS PER PLAN
I-9		2,043	59			480															55	595	221				1,204		I-9	4657	L.F.	STONE UNDERDRAINS NO. 2, AS PER PLAN
I-10	10		20	48	16	109	39		44	120	6	54	125		14	2	117	61	16		60	14	6			4		121	I-10	1006	C.Y.	DUMPED ROCK CHANNEL PROTECTION
I-10					16	14									7	11			30		25								I-10	103	S.Y.	RIPRAP, USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN
I-14																													I-14	0	L.F.	STANDARD TYPE I PAVED GUTTER
I-16														3								1							I-16	4	EA.	MANHOLES ABANDONED
I-16															4		1			1									I-16	6	EA.	CATCH BASINS ABANDONED
S-1																										437			S-1	437	C.Y.	CONCRETE FOR STRUCTURES
S-4																										82,596			S-4	82,596	LBS.	REINFORCING STEEL
S-22																													S-22	0	C.Y.	REMOVAL OF PORTIONS OF EXISTING STRUCTURES
SPECIAL																										1,980			SPECIAL	1980	S.F.	VITRIFIED LINER PLATES AS PER PLAN
S-24														Lump															S-24	Lump	L.S.	REMOVAL OF EXISTING STRUCTURES
SPECIAL													35.0	37.0	24.0	142.5	35.5	44.5	37.5	34.5	50.5								SPECIAL	491.0	C.Y.	DRAINAGE CONNECTION USING NO. 6 AGGREGATE, AS PER PLAN

GENERAL SUMMARY

1963 SPECIFICATIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TUSCARAWAS COUNTY
TUS-36-15.93

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ITEM NO.	SHEET NUMBER																												LINE NO.	TOTAL THIS SHEET	TOTAL FROM SHEET 26	ITEM NO.	PROJECT TOTAL	UNIT	DESCRIPTIONS (CODE TYPE 7221)
	277	282	286	289	308	310	312	313	314	315	332	386	389	390	391	392	401	402	419	421	429	430	432	433	440	441	460	462							
																													1						
																													2						DRAINAGE
																													3						
E-2																													4	0	410	E-2	410	C.Y.	EXCAVATION FOR STRUCTURES
E-3	57													64	118	16													5	255	3590	E-3	3845	C.Y.	CHANNEL EXCAVATION
E-12							12										96		127			363							6	598	703	E-12	1301	L.F.	PIPE REMOVED 15" AND UNDER
E-12				150																		55							7	205	1385	E-12	1590	L.F.	PIPE REMOVED OVER 15"
I-1															80														8	80	0	I-1	80	L.F.	12" PIPE CLASS A-1 SEC. M-6.4(d)
I-1																50													9	50	0	I-1	50	L.F.	15" PIPE CLASS A-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
I-1											96																		10	96	0	I-1	96	L.F.	15" PIPE CLASS A-1 SEC. M-6.6(c)
I-1																													11	0	284	I-1	284	L.F.	15" PIPE CLASS A-1 SEC. M-6.8(a) WITH 5" MINIMUM CLASS E CONCRETE
																													12						ENCASEMENT, AS PER PLAN
I-1				62																									13	62	0	I-1	62	L.F.	15" PIPE CLASS A-1 SEC. M-6.8(b)
																													14						
I-1																													15	0	268	I-1	268	L.F.	18" PIPE CLASS A-1 SEC. M-6.6(c)
I-1		140																											16	140	0	I-1	140	L.F.	18" PIPE CLASS A-1 SEC. M-6.6(d)
I-1															72														17	72	0	I-1	72	L.F.	18" PIPE CLASS A-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
I-1													52					168											18	220	270	I-1	490	L.F.	24" PIPE CLASS A-1 SEC. M-6.4(d)
I-1												80																	19	80	0	I-1	80	L.F.	24" PIPE CLASS A-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
I-1																													20	0	419	I-1	419	L.F.	24" PIPE CLASS A-1 SEC. M-6.8(c) WITH 5" MINIMUM CLASS E CONCRETE
																													21						ENCASEMENT, AS PER PLAN
I-1																													22	0	112	I-1	112	L.F.	24" PIPE CLASS A-1 SEC. M-6.6(b) OR SEC. M-6.8(b)
I-1																													23	0	87	I-1	87	L.F.	24" PIPE CLASS A-1 SEC. M-6.8(b)
I-1																													24	0	128	I-1	128	L.F.	30" PIPE CLASS A-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
																													25						
I-1																													26	0	96	I-1	96	L.F.	30" PIPE CLASS A-1 SEC. M-6.6(b) OR SEC. M-6.8(b)
I-1																													27	0	146	I-1	146	L.F.	30" PIPE CLASS A-1 SEC. M-6.8(b)
I-1																													28	0	268	I-1	268	L.F.	36" PIPE CLASS A-1 SEC. M-6.8(b)
																													29						
I-1																													30	0	300	I-1	300	L.F.	42" PIPE CLASS A-1 SEC. M-6.6(d)
I-1																													31	0	172	I-1	172	L.F.	42" PIPE CLASS A-1 1/3 VITRIFIED LINED PIPE SEC. M-6.6(b),
																													32						AS PER PLAN
I-1																													33	0	566	I-1	566	L.F.	48" PIPE CLASS A-1 SEC. M-6.4(d) 8 GAGE, ELONGATED AS PER PLAN
I-1																													34	0	282	I-1	282	L.F.	48" PIPE CLASS A-1 1/3 VITRIFIED LINED PIPE SEC. M-6.6(a),
																													35						As Per Plan.
																													36						
I-1																													37	0	212	I-1	212	L.F.	48" PIPE CLASS A-1 1/3 VITRIFIED LINED PIPE SEC. M-6.6(b),
																													38						AS PER PLAN
I-1																													39	0	286	I-1	286	L.F.	48" PIPE CLASS A-1 SEC. M-6.6(d)
I-1	146																												40	146	0	I-1	146	L.F.	48" PIPE CLASS A-1 1/3 VITRIFIED LINED PIPE SEC. M-6.6(d),
																													41						AS PER PLAN
I-1											556																		42	556	0	I-1	556	L.F.	66" PIPE CLASS A-1 SEC. M-6.4(g) 10 - 8 GAGE, AS PER PLAN
I-1											110																		43	110	0	I-1	110	L.F.	66" PIPE CLASS A-1 SEC. M-6.4(g) 10 - 10 GAGE, AS PER PLAN
I-1																													44	0	38	I-1	38	L.F.	30" PIPE CLASS A-4 SEC. M-6.4(d)
I-1														204															45	204	66	I-1	270	L.F.	12" PIPE CLASS B-1
I-1				80																									46	80	38	I-1	118	L.F.	12" PIPE CLASS B-1 SEC. M-6.8(b)
																													47						
I-1														152	104										118				48	374	0	I-1	374	L.F.	15" PIPE CLASS B-1
I-1																													49	0	800	I-1	800	L.F.	6" PIPE CLASS E-1
I-1																													50	0	700	I-1	700	L.F.	8" PIPE CLASS E-1
I-1																													51	0	300	I-1	300	L.F.	10" PIPE CLASS E-1
I-1						66	30												6										52	102	914	I-1	1,016	L.F.	12" PIPE CLASS E-1
I-1																													53	0	188	I-1	188	L.F.	12" PIPE CLASS E-1 SEC. M-6.8(a)
I-1							4				22																		54	26	190	I-1	216	L.F.	15" PIPE CLASS E-1
I-1				118																									55	118	172	I-1	290	L.F.	15" PIPE CLASS E-1 SEC. M-6.8(a)
I-1																						130							56	190	0	I-1	190	L.F.	15" PIPE CLASS E-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
I-1																													57	0	314	I-1	314	L.F.	18" PIPE CLASS E-1 SEC. M-6.8(a)
I-1																													58	0	36	I-1	36	L.F.	21" Pipe Class E-1 Sec. M6.5(a) or Sec. M-6.6(a)
I-1																													59	0	825	I-1	825	L.F.	21" PIPE CLASS E-1 SEC. M-6.8(a)
I-1																													60	0	700	I-1	700	L.F.	24" PIPE CLASS E-1
I-1																													61	0	54	I-1	54	L.F.	24" PIPE CLASS E-1 SEC. M-6.8(b)
I-1							252																						62	252	0	I-1	252	L.F.	27" PIPE CLASS E-1
I-1																													63	0	268	I-1	268	L.F.	27" PIPE CLASS E-1 SEC. M-6.8(a)
I-1						73																							64	73	0	I-1	73	L.F.	30" PIPE CLASS E-1 SEC. M-6.6(a) OR SEC. M-6.8(b)
I-1			30		40	10	20	10	10										10	20	10	10							65	170	260	I-1	430	L.F.	6" PIPE CLASS F-4
																													66						
I-1																													67	0	80	I-1	80	L.F.	8" PIPE CLASS F-4
I-1							10	50	40		180													10	10				68	240	500	I-1	740	L.F.	8" PIPE CLASS F-4 SEC. M-6.4(c)
																													69						
																													70			I-1			
I-1		64				10	29				67	134	38													52			71	394	447	I-1	841	L.F.	12" PIPE CLASS F-4 SEC. M-6.4(c)
I-1																									38				72	38	0	I-1	38	L.F.	15" PIPE CLASS F-4
I-1															26														73	26	0	I-1	26	L.F.	18" PIPE CLASS F-4
I-1																													74	0	30	I-1	30	L.F.	24" PIPE CLASS F-4 SEC. M-6.4(c)
I-1													118																75	118	0	I-1	118	L.F.	18" x 11" PIPE CLASS G-1 SEC. M-6.4(j)(d)
I-1											92		50																76	142	0	I-1	142	L.F.	22" x 13" PIPE CLASS G-1 SEC. M-6.4(j)(d)
I-1														60															77	60	0	I-1	60	L.F.	23" x 14" PIPE CLASS G-1 SEC. M-6.7(a)
I-1																						146							78	146	0	I-1	146	L.F.	38" x 24" PIPE CLASS G-1 SEC. M-6.7(b)
I-1																											160	458	79	618	0	I-1	618	L.F.	91" x 58" PIPE CLASS G-1 SEC. M-6.7(a)
																													80						
I-1			433		344	345	1011	3,168	2,249		7,022								85	646	766	631	990	600					81	18,296	22,717	I-1	41,013	L.F.	6" PIPE CLASS I-3
I-1																													82	0	3,188	I-1	3,188	L.F.	6" PIPE CLASS I-3 SEC. M-6.4(h)
I-1																													83	0	1,107	I-1	1,107	L.F.	6" PIPE CLASS I-3 SEC. M-6.4(h), AS PER PLAN
I-1					30	30	37	84	36		66										22	32	52	24					84	413	1,014	I-1	1,427	L.F.	6" PIPE CLASS J-1
I-1																											6		85	6	300	I-1	306	L.F.	6" PIPE CLASS J-1 SEC. M-6.8(b)
I-1									190																				86	190	4,000	I-1	4,190	L.F.	8" PIPE CLASS J-1 SEC. M-6.8(b)
I-1																											42	18	87	60	0	I-1	60	L.F.	10" PIPE CLASS J-1
I-1			162		24		254	168	82	82	203			78					142			60	86					13	88	1,349	2,088	I-1	3,436	L.F.	12" PIPE CLASS J-1
I-1																													89	0	66	I-1	66	L.F.	12" PIPE CLASS J-1 SEC. M-6.8(b)
I-1											162						38			118					216				90	534	66	I-1	600	L.F.	15" PIPE CLASS J-1
I-1				56																									91	56	66	I-1	122	L.F.	15" PIPE CLASS J-1 SEC. M-6.8(b)
I-1											122																		92	122	200	I-1	322	L.F.	18" PIPE CLASS J-1
																													93						
																													94						

GENERAL SUMMARY

1963 SPECIFICATIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

29/662

TUSCARAWAS COUNTY
TUS-36-15.93

ITEM NO.	SHEET NUMBER 659	277	282	286	289	308	310	312	313	314	315	332	386	389	390	391	392	401	402	419	421	429	430	432	433	440	441	460	462	LINE NO.	TOTAL THIS SHEET	TOTAL FROM SHEET 27	ITEM NO.	PROJECT TOTAL	UNIT	DESCRIPTIONS (CODE TYPE 7221)
																														1						
																														2						DRAINAGE (CONTINUED)
																														3						
I-1																														4	0	150	I-1	150	L.F.	18" PIPE CLASS J-1 SEC. M-6.8(b)
I-1																														5	0	76	I-1	76	L.F.	21" PIPE CLASS J-1 SEC. M-6.8(b)
I-1																					122									6	122	284	I-1	406	L.F.	24" PIPE CLASS J-1
I-1																														7	0	192	I-1	192	L.F.	24" PIPE CLASS J-1 SEC. M-6.6(b) OR SEC. M-6.8(b)
I-1																														8	0	562	I-1	562	L.F.	24" PIPE CLASS J-1 SEC. M-6.8(b)
I-1																														9	0	142	I-1	142	L.F.	27" PIPE CLASS J-1 SEC. M-6.8(b)
I-1																														10	0	94	I-1	94	L.F.	30" PIPE CLASS J-1
I-1																														11	0	560	I-1	560	L.F.	30" PIPE CLASS J-1 SEC. M-6.8(b)
I-1								256																						12	256	0	I-1	256	L.F.	30" PIPE CLASS J-1 SEC. M-6.6(b) OR SEC. M-6.8(b)
I-1																											26			13	26	0	I-1	26	L.F.	33" PIPE CLASS J-1 SEC. M-6.6(a)
																														14						
I-1								272																						15	272	0	I-1	272	L.F.	33" PIPE CLASS J-1 SEC. M-6.6(b)
I-1																													16	16	16	0	I-1	16	L.F.	36" PIPE CLASS J-1 SEC. M-6.6(a)
I-1																														17	0	154	I-1	154	L.F.	36" PIPE CLASS J-1 SEC. M-6.6(b) OR SEC. M-6.8(b)
I-1																														18	0	399	I-1	399	L.F.	42" PIPE CLASS J-1
I-1																											375	535		19	910	0	I-1	910	L.F.	54" PIPE CLASS J-1 SEC. M-6.6(a)
I-1																											368			20	368	0	I-1	368	L.F.	54" PIPE CLASS J-1 SEC. M-6.6(b)
I-2		1.72	0.60	0.23	0.78			1.97	0.46	0.23	0.23	10.81	0.82	2.24	0.82	1.61	0.52		0.82		0.41		0.64	0.64		0.30				21	25.85	35.37	I-2	61.22	C.Y.	MASONRY
I-5																														22	0	1	I-5	1	EA.	24" CLASS A-1 PIPE SPECIALS SEC. M-6.8(b)
I-5																														23	0	1	I-5	1	EA.	30" CLASS A-1 PIPE SPECIALS SEC. M-6.6(a) OR SEC. M-6.8(b)
I-5																														24	0	1	I-5	1	EA.	30" CLASS A-1 PIPE SPECIALS SEC. M-6.8(b)
I-5																														25	0	1	I-5	1	EA.	42" CLASS A-1 PIPE SPECIALS SEC. M-6.6(d)
I-5																														26	0	1	I-5	1	EA.	48" CLASS A-1 PIPE SPECIALS SEC. M-6.4(d) 8 GAGE ELONGATED
																														27						AS PER PLAN
I-5																														28	0	1	I-5	1	EA.	48" CLASS A-1 PIPE SPECIALS 1/3 VITRIFIED LINED SEC. M-6.6(a),
																														29						AS PER PLAN
I-5																														30	0	2	I-5	2	EA.	30" CLASS A-4 PIPE SPECIALS SEC. M-6.4(d)
I-5																														31	0	12	I-5	12	EA.	6" CLASS E-1 PIPE SPECIALS
I-5																														32	0	2	I-5	2	EA.	8" CLASS E-1 PIPE SPECIALS
I-5																														33	0	2	I-5	2	EA.	10" CLASS E-1 PIPE SPECIALS
I-5								2				4																		34	0	2	I-5	2	EA.	12" CLASS E-1 PIPE SPECIALS
I-5																														35	6	18	I-5	24	EA.	12" CLASS F-4 PIPE SPECIALS SEC. M-6.4(c)
																														36						
I-5																											1	2		37	3	0	I-5	3	EA.	91" x 58" CLASS G-1 PIPE SPECIALS SEC. M-6.7(a)
I-5							1	1	3	4		10									1	1			1					38	22	47	I-5	69	EA.	6" CLASS I-3 PIPE SPECIALS
I-5																														39	0	6	I-5	6	EA.	6" CLASS I-3 PIPE SPECIALS SEC. M-6.4(b)
I-5																											1			40	1	15	I-5	16	EA.	6" CLASS J-1 PIPE SPECIALS SEC. M-6.8(b)
I-5						2	2	1	4	2		8										2	1	1	2					41	25	32	I-5	57	EA.	6" CLASS J-1 PIPE SPECIALS
I-5																														42	0	15	I-5	15	EA.	8" CLASS J-1 PIPE SPECIALS SEC. M-6.8(b)
I-5																														43	0	10	I-5	10	EA.	12" CLASS J-1 PIPE SPECIALS
I-5																														44	0	10	I-5	10	EA.	18" CLASS J-1 PIPE SPECIALS
I-5																														45	0	11	I-5	11	EA.	24" CLASS J-1 PIPE SPECIALS
I-5																														46	0	1	I-5	1	EA.	24" CLASS J-1 PIPE SPECIALS SEC. M-6.6(b) OR SEC. M-6.8(b)
																														47						
I-5																														48	0	1	I-5	1	EA.	27" CLASS J-1 PIPE SPECIALS SEC. M-6.8(b)
I-5																												2		49	2	0	I-5	2	EA.	33" CLASS J-1 PIPE SPECIALS SEC. M-6.6(a)
I-5																														50	0	3	I-5	3	EA.	42" CLASS J-1 PIPE SPECIALS
I-5																												2		51	2	0	I-5	2	EA.	54" CLASS J-1 PIPE SPECIALS SEC. M-6.6(a)
I-5																												1		52	1	0	I-5	1	EA.	54" CLASS J-1 PIPE SPECIALS SEC. M-6.6(b)
I-8									1	1	1	3							1				1			5				53	14	45	I-8	59	EA.	STANDARD NO. 2-2A CATCH BASIN, AS PER PLAN
I-8								3							5				1		1							1		54	10	0	I-8	10	EA.	STANDARD NO. 2-2B CATCH BASIN
I-8									1																					55	1	4	I-8	5	EA.	STANDARD NO. 2-3 CATCH BASIN, AS PER PLAN
I-8																														56	0	1	I-8	1	EA.	STANDARD NO. 2-4 CATCH BASIN, AS PER PLAN
																														57						
																														58						
I-8												1											1							59	2	0	I-8	2	EA.	STANDARD NO. 2-6 CATCH BASIN, AS PER PLAN
I-8				1		2	2													1										60	6	4	I-8	10	EA.	STANDARD NO. 3 CATCH BASIN
I-8				1			1					2																		61	4	0	I-8	4	EA.	STANDARD NO. 3-A CATCH BASIN
I-8								2	1			2												1						62	7	4	I-8	11	EA.	STANDARD NO. 2-6 CATCH BASIN, MODIFIED, AS PER PLAN
I-8								4																						63	4	1	I-8	5	EA.	STANDARD NO. 2-6 Median Inlets
I-8																														64	0	1	I-8	1	EA.	STANDARD NO. 2-8 Median Inlet
I-8																				1										65	1	0	I-8	1	EA.	STANDARD NO. 2-A-8 Paved Shoulder Inlet
I-8								1																						66	1	5	I-8	6	EA.	STANDARD NO. 1 MANHOLE
I-8																											1	4		67	5	0	I-8	5	EA.	STANDARD NO. 1-A MANHOLE
I-8												1															2	2		68	5	0	I-8	5	EA.	STANDARD NO. 2 MANHOLE, WITHOUT DROP PIPE
																											1			69	1	0	I-8	1	EA.	STANDARD NO. 2 MANHOLE WITHOUT DROP PIPE, AS PER PLAN
I-8																				1										70	1	1	I-8	2	EA.	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN
I-9																														71	0	110	I-9	110	L.F.	STONE UNDERDRAINS NO. 1, AS PER PLAN
I-9		448	742		300	270						140	364	1,210					345		41				625					72	5,085	4,657	I-9	9,742	L.F.	STONE UNDERDRAINS NO. 2, AS PER PLAN
I-10	95	17						4	7	4	8	32							48	32			114	45		100				73	506	1,006	I-10	1,512	C.Y.	DUMPED ROCK CHANNEL PROTECTION
I-10					9				7											13										74	29	103	I-10	132	S.Y.	RIPRAP, USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN
I-14																			157											75	157	0	I-14	157	L.F.	STANDARD TYPE I PAVED GUTTER
I-16					2				1			1											1							76	5	4	I-16	9	EA.	MANHOLES ABANDONED
I-16						2	1	1				1															1			77	6	6	I-16	12	EA.	CATCH BASINS ABANDONED
S-1																														78	0	437	S-1	437	C.Y.	CONCRETE FOR STRUCTURES
S-4																														79	0	82,596	S-4	82,596	LBS.	REINFORCING STEEL
																														80						
S-22																												7		81	7	0	S-22	7	C.Y.	REMOVAL OF PORTIONS OF EXISTING STRUCTURES
SPECIAL																														82	0	1,980	SPECIAL	1,980	S.F.	VITRIFIED LINER PLATES AS PER PLAN
S-24																														83	0	Lump	S-24	Lump	L.S.	REMOVAL OF EXISTING STRUCTURES
SPECIAL							9.0	34.0	148.2	88.8		467.6										49.2	43.5	62.0	39.5					84	941.8	441.0	SPECIAL	1,382.8	C.Y.	DRAINAGE CONNECTION USING NO. 6 AGGREGATE, AS PER PLAN
																														85						
																														86						
																														87						
																														88						
																														89						
																														90						
																														91						
																														92						
																														93						
																														94						

UNDER 1965 SPECIFICATIONS PIPE SPECIALS ARE INCLUDED IN THE PERTINENT CONDUIT ITEM

SUB - SUMMARY

1963 SPECIFICATIONS

FED. RD. DIVISION	STATE	PROJECT	
.2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-15.93

ITEM NO.	SUB-SUMMARY & GENERAL NOTES 22	23	24	25	SHEET NUMBER 35	36	38	39	40	41	42	43	44	46	48	50	52	54	55	57	59	60	62	64	234	240	241	242	244	245	277	282	ITEM NO.	TOTAL THIS SHEET	UNIT	DESCRIPTIONS (CODE TYPE 7221)
																																				ROADWAY
E-1				2,212,321																													E-1	2,212,321	C.Y.	ROADWAY EXCAVATION, METHOD B, AS PER PLAN
E-1			105,224		3,104	1,190	875	2,817					77										606	3,938	1,222	8,675	60			8,704	4,749	4,744	E-1	145,985	S.Y.	COMPACTED SUBGRADE
E-4			5,499																														E-4	5,499	C.Y.	BORROW, USING GRANULAR MATERIAL, AS PER PLAN
E-8					153	2,098																		36		362	881						E-8	3,530	S.Y.	REMOVAL AND DISPOSAL OF EXISTING PAVEMENT (RIGID)
E-8					54	766																	253	80									E-8	1,153	S.Y.	REMOVAL AND DISPOSAL OF EXISTING PAVEMENT (FLEXIBLE)
E-8																											679						E-8	679	S.F.	REMOVAL AND DISPOSAL OF EXISTING SIDEWALK
E-8																							100			223	368						E-8	691	L.F.	REMOVAL AND DISPOSAL OF EXISTING CURB
E-8																																	E-8	0	L.F.	REMOVAL AND DISPOSAL OF EXISTING CURB AND GUTTER
E-9																																	E-9	0	L.S.	REMOVAL OF TREES AND STUMPS
E-11			10,190																														E-11	10,190	M-GAL	WATER
I-4		40	30																														I-4	70	TONS	CALCIUM CHLORIDE FOR DUST CONTROL
I-4			800																														I-4	800	M-GAL	WATER FOR DUST CONTROL
I-8																																	I-8	0	EA.	CENTERLINE REFERENCE MONUMENTS, AS PER PLAN
I-8																																	I-8	0	EA.	STANDARD MONUMENT ASSEMBLY
I-8	20																																I-8	20	EA.	INSPECTION WELLS, AS PER PLAN
I-13																										72	3,843						I-13	3,915	S.F.	4" CONCRETE SIDEWALKS
I-13																											68						I-13	68	L.F.	CONCRETE STEPS, TYPE A
I-15					50.0	475.0	700.0	1,587.5	1,375.0		50.0	787.5	162.5	525.0	325.0	1,987.5	1,037.5	537.5	1,575.0		1,125.0	687.5	62.5	50.0	537.5			412.5	900.0	112.5	1,437.5	1,362.5	I-15	17,862.5	L.F.	GUARD RAIL, STEEL BEAM, STANDARD TYPE (DEEP)
I-15																125.0	125.0		125.0		125.0												I-15	500.0	L.F.	GUARD RAIL, STEEL BEAM, BARRIER TYPE (DEEP)
I-15								560															192										I-15	752	L.F.	GUARD RAIL, WIRE CABLE TYPE, 3 CABLES
I-15						584																											I-15	584	L.F.	GUARD RAIL REMOVED AND DISPOSED OF
I-25																																	I-25	0	L.F.	WOVEN WIRE FENCE TYPE 39
I-26																																	I-26	0	L.F.	CHAIN LINK FENCE
I-127				67																													I-127	67	EA.	DELINEATORS, TYPE A-1, POST MOUNTED
I-127				443																													I-127	443	EA.	DELINEATORS, TYPE C-2, POST MOUNTED
I-127				10																													I-127	10	EA.	DELINEATORS, TYPE C-3, POST MOUNTED
L-6																														32			L-6	32	UNITS	ROADSIDE CLEANUP
L-9				644,472																													L-9	644,472	S.Y.	SEEDING AND PROTECTING,
L-9			58.92																														L-9	58.92	TONS	COMMERCIAL FERTILIZER (12-12-12)
L-9			294.60																														L-9	294.60	TONS	AGRICULTURAL LIMING MATERIAL, AS PER PLAN
L-10					66	119	93	105	178	107	587	715	97	6		1,129	15	88	18		3	183	410	592	3			117	346	449	322	233	L-10	5,975	S.Y.	SODDING
L-10																215	70		93		87							194	40				L-10	619	S.Y.	SODDING FOR SPECIAL BERM AND SLOPE PROTECTION, AS PER PLAN
L-120					125	125	125	125	125	250	125	125	125	250		125	125	250	125	250	125		250	125									L-120	2,875	S.Y.	JUTE MATTING
S-24						Lump																	Lump										S-24	Lump	L.S.	REMOVAL OF EXISTING STRUCTURES
T-10		500																															T-10	500	C.Y.	TRAFFIC COMPACTED SURFACE COURSE FOR MAINTAINING TRAFFIC
T-10		1,500																															T-10	1500	C.Y.	TRAFFIC COMPACTED SURFACE COURSE FOR MAINTAINING TRAFFIC, USING NO. 3, OR NO. 34 SIZE AGGREGATE, AS PER PLAN
SPECIAL																			1														SPECIAL	1	EA.	SETTLEMENT PLATFORMS, AS PER PLAN
I-124													Lump											Lump									I-124	Lump	L.S.	REMOVE SECTION OF EXISTING WATER LINE AND PLUG
SS-CE 101.04			98																														SS-CE 101.04	98	HRS.	COMPACTION USING HEAVY PNEUMATIC-TIRED ROLLER
					1	1																											SPECIAL	2	EA.	DRILLED WELL ABANDONED
																																				PAVEMENT
B-19			9,741		672	255	29	412					17										141	928	192	190	12			684	328	307	B-19	10,908	C.Y.	AGGREGATE BASE COURSE
B-21			1,152																											58	43	18	B-21	1,271	C.Y.	WATERPROOFED AGGREGATE BASE COURSE
B-35					71																			87									B-35	158	C.Y.	ASPHALTIC CONCRETE LEVELING COURSE (70-85)
B-35					172																			211									B-35	383	C.Y.	ASPHALTIC CONCRETE BASE COURSE (70-85)
B-70					153																			36			5						B-70	191	S.Y.	9" PORTLAND CEMENT CONCRETE BASE COURSE
I-7																413	549		268		268							232	250			1	I-7	1,980	S.Y.	REINFORCED CONCRETE APPROACH SLABS (T = 13")
I-12																												1,923		809			I-12	2,732	L.F.	STANDARD TYPE 2-A CONCRETE CURB
I-12																										10				235	212	208	I-12	665	L.F.	STANDARD TYPE 6 CONCRETE CURB
I-12																														60	126	212	I-12	398	L.F.	STANDARD TYPE 7 CONCRETE CURB
I-12																														197	129	40	I-12	366	L.F.	STANDARD TYPE 8 CONCRETE CURB
I-12																										950							I-12	950	L.F.	STANDARD TYPE 2 COMBINATION CURB AND GUTTER
I-12																																	I-12	0	L.F.	MODIFIED STANDARD TYPE 2 COMBINATION CURB AND GUTTER, AS PER PLAN
I-21																												213		159	16	30	I-21	418	S.Y.	PORTLAND CEMENT CONCRETE MEDIAN PAVEMENT, STANDARD
I-22			4,531		459		158	330																580	222	84				506	192	205	I-22	7,267	C.Y.	SUBBASE
I-22			19,065																							1,513				1,024	587	592	I-22	22,781	C.Y.	SUBBASE, GRADING A OR B, AS PER PLAN
I-23					31																												I-23	31	EA.	PRECAST WHITE PORTLAND CEMENT CONCRETE TRAFFIC DIVIDERS, AS PER PLAN
T-30			7,985		1,202	477	52	1,127					31										243	1,957	327	342				1,086	552	553	T-30	15,934	GAL.	BITUMINOUS PRIME COAT, SEC. M-5.7, RT-2 OR RT-3
T-30																																	T-30	0	GAL.	BITUMINOUS TACK COAT, Sec. M-5.5, M5-2 or RS-1 or Sec. M-5.2, RC-1 or RC-2 as per Sec. T-30.02
T-31			9,445		279		89																	944		257				900	478	418	T-31	18,160	GAL.	BITUMINOUS SURFACE TREATMENT, BITUMINOUS MATERIAL, AS PER PLAN
T-31			271		8		2																	10		7				25	14	12	T-31	349	C.Y.	BITUMINOUS SURFACE TREATMENT, NO. 6 AGGREGATE
T-35								3,098																									T-35	3,098	C.Y.	ASPHALTIC CONCRETE SURFACE COURSE TYPE A (70-85)
T-35					84	69							5										34	98	35	1						5	T-35	326	C.Y.	ASPHALTIC CONCRETE SURFACE COURSE TYPE C (70-85)
T-70																						52											T-70	52	S.Y.	7" PORTLAND CEMENT CONCRETE PAVEMENT
T-70																																	T-70	0	S.Y.	8" PORTLAND CEMENT CONCRETE PAVEMENT
T-71			91,176				747																		407	6,956				5,596	3,096	3,258	T-71	111,236	S.Y.	9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

GENERAL SUMMARY — 1963 SPECIFICATIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-15.93

ITEM NO.	SHEET NUMBER																											LINE NO.	TOTAL THIS SHEET	TOTAL FROM SHEET 30	ITEM NO.	PROJECT TOTAL	UNIT	DESCRIPTIONS (CODE TYPE 7221)
	286	289	30A	310	312	313	314	315	332	386	389	390	391	392	401	402	403	419	421	429	430	432	433	440	441	460	462	604	659						
																													1						
																													2						ROADWAY
E-1																													3						
E-1	1,240	2,829	20,245			128	962		37,068	3,435	7,496	600	123		5,330			4,832	240	3,501	3,719	5,248	3,657	3,045	183	172	1,385			4	0	2,212,321	E-1	2,212,321	C.Y.	ROADWAY EXCAVATION, METHOD B, AS PER PLAN
E-4																													5	105,438	145,985	E-1	251,423	S.Y.	COMPACTED SUBGRADE
E-8	787		148	200	1,919	3,950			959									939				33				172	1,065			6	0	5,499	E-4	5,499	C.Y.	BORROW, USING GRANULAR MATERIAL, AS PER PLAN
E-8			22												442	498					75								7	10,172	3,530	E-8	13,702	S.Y.	REMOVAL AND DISPOSAL OF EXISTING PAVEMENT (RIGID)
E-8	988		922	3,575	3,315				718									2,360	51							136	69			8	1,037	1,153	E-8	2,190	S.Y.	REMOVAL AND DISPOSAL OF EXISTING PAVEMENT (FLEXIBLE)
E-8			143															557									468			9	12,134	679	E-8	12,813	S.F.	REMOVAL AND DISPOSAL OF EXISTING SIDEWALK
E-8			117	301	234																									10	1,168	691	E-8	1,859	L.F.	REMOVAL AND DISPOSAL OF EXISTING CURB
E-9																														11	652	0	E-8	652	L.F.	REMOVAL AND DISPOSAL OF EXISTING CURB AND GUTTER
E-11																														12	Lump	0	E-9	Lump	L.S.	REMOVAL OF TREES AND STUMPS
I-4																														13	0	10,190	E-11	10,190	M-GAL	WATER
I-4																														14	0	70	I-4	70	TONS	CALCIUM CHLORIDE FOR DUST CONTROL
I-8																												52		15	0	800	I-4	800	M-GAL	WATER FOR DUST CONTROL
I-8																												58		16	52	0	I-8	52	EA.	CENTERLINE REFERENCE MONUMENTS, AS PER PLAN
I-8																														17	38	0	I-8	38	EA.	STANDARD MONUMENT ASSEMBLIES
I-13	1,806		168									27						2,238								136	69			18	0	20	I-8	20	EA.	INSPECTION WELLS, AS PER PLAN
I-13																														19	4,444	3,919	I-13	8,363	S.F.	4" CONCRETE SIDEWALKS
I-13																		EA												20	0	68	I-13	98	L.F.	CONCRETE STEPS, TYPE A
																														21	24	0	I-13	24	L.F.	CONCRETE STEPS, TYPE B
																														22						
I-15				62.5	62.5	137.5	50.0		7,975.0									25.0		475.0	250.0	825.0	250.0							23	10,112.5	17,362.5	I-15	27,975.0	L.F.	GUARD RAIL, STEEL BEAM, STANDARD TYPE (DEEP)
I-15																														24	0	500.0	I-15	500.0	L.F.	GUARD RAIL, STEEL BEAM, BARRIER TYPE (DEEP)
I-15															760	920								432	192					25	2,304	752	I-15	3,056	L.F.	GUARD RAIL, WIRE CABLE TYPE, 3 CABLES
																														26						
I-15				53	100				25						342															27	320	584	I-15	1104	L.F.	GUARD RAIL REMOVED AND DISPOSED OF
I-25																												10,584		28	10,584	0	I-25	10,584	L.F.	WOVEN WIRE FENCE TYPE 39
I-26																												8,549		29	8,549	0	I-26	8,549	L.F.	CHAIN LINK FENCE
I-127																														30	0	67	I-127	67	EA.	DELINEATORS, TYPE A-1, POST MOUNTED
I-127																														31	0	443	I-127	443	EA.	DELINEATORS, TYPE C-2, POST MOUNTED
I-127																														32	0	10	I-127	10	EA.	DELINEATORS, TYPE C-3, POST MOUNTED
																														33						
L-6																														34	0	30	L-6	30	UNITS	ROADSIDE CLEANUP
L-9																														35	0	644,472	L-9	644,472	S.Y.	SEEDING AND PROTECTING,
L-9																														36	0	58.92	L-9	58.92	TONS	COMMERCIAL FERTILIZER (12-12-12)
L-9																														37	0	294.60	L-9	294.60	TONS	AGRICULTURAL LIMING MATERIAL, AS PER PLAN
L-10		3							1,135	5	14	5	8	4	275	298	272			449	174	562	120	279						38	3603	5,975	L-10	9,578	S.Y.	SODDING
L-10																														39	0	619	L-10	619	S.Y.	SODDING FOR SPECIAL BERM AND SLOPE PROTECTION, AS PER PLAN
L-120						125	166	83																						40	374	2,875	L-120	3,249	S.Y.	JUTE MATTING
S-24																														41	0	Lump	S-24	Lump	L.S.	REMOVAL OF EXISTING STRUCTURES
T-10																														42	0	500	T-10	500	C.Y.	TRAFFIC COMPACTED SURFACE COURSE FOR MAINTAINING TRAFFIC
T-10																														43	0	1500	T-10	1,500	C.Y.	TRAFFIC COMPACTED SURFACE COURSE FOR MAINTAINING TRAFFIC, USING NO. 3, OR NO. 34 SIZE AGGREGATE, AS PER PLAN
																														44						
																														45						
SPECIAL																														46	0	1	SPECIAL	1	EA.	SETTLEMENT PLATFORM, AS PER PLAN
I-124															Lump															48	Lump	Lump	I-124	Lump	L.S.	REMOVE SECTION OF EXISTING WATER LINE AND PLUG
SS-CE 101.04																														49	0	98	SS-CE 101.04	98	HRS.	COMPACTION USING HEAVY PNEUMATIC-TIRED ROLLER
SPECIAL																														50					---	
																														51	0	2	SPECIAL	2	EA.	DRILLED WELL ABANDONED
																														52						
																														53						
																														54						
																														55						
																														56						
																														57						
																														58						PAVEMENT
																														59						
B-19	17	390	719			30	37		744	730	1,077	86	18		1,210			4	70	61	118	123	89	694	35	104	139			60	6,495	10,908	B-19	17,403	C.Y.	AGGREGATE BASE COURSE
B-21			337				19		1,903											171	178	302	218							61	3,128	1,271	B-21	4,399	C.Y.	WATERPROOFED AGGREGATE BASE COURSE
B-35			7							98									4								21		62	130	158	B-35	288	C.Y.	ASPHALTIC CONCRETE LEVELING COURSE (70-85)
B-35			16							177									9										63	202	383	B-35	585	C.Y.	ASPHALTIC CONCRETE BASE COURSE (70-85)
B-70																										172	1,065			64	1,237	194	B-70	1,431	S.Y.	9" PORTLAND CEMENT CONCRETE BASE COURSE
I-7				71	73				182																					65	526	1,980	I-7	2,506	S.Y.	REINFORCED CONCRETE APPROACH SLABS (T = 13")
I-12			165	604	1,589	478			678																					66	9,514	2,732	I-12	6,246	L.F.	STANDARD TYPE 2-A CONCRETE CURB
I-12			198						2,389									1,066		336	335	122	133	52			468			67	5,099	665	I-12	5,764	L.F.	STANDARD TYPE 6 CONCRETE CURB
I-12									568													93	124							68	785	398	I-12	1,183	L.F.	STANDARD TYPE 7 CONCRETE CURB
I-12									649													160	129							69	938	366	I-12	1,304	L.F.	STANDARD TYPE 8 CONCRETE CURB
																														70						
I-12	477																													71	477	950	I-12	1,427	L.F.	STANDARD TYPE 2 COMBINATION CURB AND GUTTER
I-12	27		21	256	560																									72	864	0	I-12	864	L.F.	MODIFIED STANDARD TYPE 2 COMBINATION CURB AND GUTTER, AS PER PLAN
																														73						
I-21						38			147											30	45									74	260	418	I-21	678	S.Y.	PORTLAND CEMENT CONCRETE MEDIAN PAVEMENT, STANDARD
I-22		288	361				37		1,110	354	878	37			948				18	102	263	260	279	543						75	5,478	7,267	I-22	12,745	C.Y.	SUBBASE
I-22	197		3,133				119		5,152									798		440	635	724	586							76	11,844	22,781	I-22	34,625	C.Y.	SUBBASE, GRADING A OR B, AS PER PLAN
I-23			22																											77	22	31	I-23	53	EA.	PRECAST WHITE PORTLAND CEMENT CONCRETE TRAFFIC DIVIDERS, AS PER PLAN
																														78						
T-30	50	1,060	82			52			389	984	2,907	241	50		2,133			36	116			31		1,136	28		126			79	9,421	15,934	T-30	25,355	GAL.	BITUMINOUS PRIME COAT, SEC. M-5.7, RT-2 OR RT-3
T-30																											62			80	62	0	T-30	62	GAL.	BITUMINOUS TACK COAT, Sec. M-5.5, M-5.2 or RS-1 or Sec. M-5.2, RC-1 or RC-2 as per Sec. T-30.02
																														81						
T-31	8		1,011				55		2,847	218								27	5	257	267	454	327							82	5,476	12,160	T-31	17,636	GAL.	BITUMINOUS SURFACE TREATMENT, BITUMINOUS MATERIAL, AS PER PLAN
T-31	1		33				2		94	6								1	1	9	9	15	11							83	182	349	T-31	531	C.Y.	BITUMINOUS SURFACE TREATMENT, NO. 6 AGGREGATE
T-35		92							38		300	14			16									116						84	576	3,038	T-35	3,614	C.Y.	ASPHALTIC CONCRETE SURFACE COURSE TYPE A (70-85)
T-35	4	27	9			8			4	95	5	15	8		276				14			5		4	4	10	99			85	587	326	T-35	913	C.Y.	ASPHALTIC CONCRETE SURFACE COURSE TYPE C (70-85)
T-70																		67	73											86	140	52	T-70	192	S.Y.	7" PORTLAND CEMENT CONCRETE PAVEMENT
T-70	42																													87	42	0	T-70	42	S.Y.	8" PORTLAND CEMENT CONCRETE PAVEMENT
T-71	980	182	15,938				745		24,453	253	232							4,658		2,475	2,654	3,360	2,351	145						88	58,426	111,236	T-71	169,662	S.Y.	9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
																														89						
																														90						PROJECT SIGNING QUANTITIES & PLAN, SEE SHEET 296
																														91						
																														92						
																														93						PROJECT LIGHTING QUANTITIES & PLAN, SEE SHEET 489
																														94						

GENERAL SUMMARY

1963 SPECIFICATIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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662

TUSCARAWAS COUNTY
TUS-36-15.93

| ITEM NO. | GENERAL NOTES | SHEET NUMBER | | |

GENERAL SUMMARY

TYPE CODE 7221

1963 SPECIFICATIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

ITEM NO.	DESCRIPTION	LINE NO.	SHEET NO.	PARCEL NO.	QUANTITIES	UNIT
		1				
	BUILDING REMOVAL	2				
		3				
E-10	REMOVAL OF	4				
	1- STORY FRAME HOUSE	5	619	33LA		
	FRAME SHED	6				
	PRIVY	7				
	1- STORY FRAME HOUSE AND GARAGE	8		34LA		
	PRIVY	9				
		10				
	FRAME SHED	11	620	32ALA		
	1½- STORY FRAME HOUSE	12		36LA		
	FRAME SHED	13				
	PRIVY	14				
		15				
	BRICK AND FRAME HOUSE	16		4LA		
	FRAME SHED	17				
	FRAME GARAGE	18				
	FRAME CHICKEN HOUSE	19				
		20				
	2- STORY ASBESTOS SHINGLED HOUSE	21		6LA		
	FRAME SHED	22	621			
	CONCRETE BLOCK GARAGE	23	620			
	FRAME CHICKEN HOUSE	24	621			
	PRIVY	25				
		26				
	FRAME HOUSE	27		7LA		
	FRAME SHED	28				
	CONCRETE BLOCK SHED	29				
	PRIVY	30				
		31				
	FRAME HOUSE	32		8LA		
	FRAME SHED	33				
	CONCRETE BLOCK GARAGE	34				
	BRICK TILE SHED	35				
	DOG KENNEL	36				
	FRAME CHICKEN COOP	37				
		38				
	2- STORY FRAME HOUSE	39	622	14LA		
	FRAME SHEDS	40	623			
	PRIVY	41				
		42				
	PRIVY	43	624	19LA		
	SHED	44				
	PRIVY	45	625	20LA		
	1- STORY FRAME HOUSE	46	626	23LA		
	CINDER BLOCK GARAGE	47				
	1½- STORY FRAME HOUSE AND GARAGE	48		26LA		
	1½- STORY FRAME HOUSE	49	627	27LA		
		50				
	FRAME SHED	51	628	20LA		
	FRAME TOOL SHED	52				
	CHICKEN HOUSES	53				
	TILE CHICKEN COOP	54				
	FRAME SHACK DWELLING	55		35LA		
	BRICK AND FRAME SHED	56				
	PRIVY	57				
		58				
	FRAME SHED	59		37LA		
	FRAME GARAGE	60				
	FRAME PEN	61				
	KENNEL	62				
	PRIVY	63				
		64				
	FRAME GARAGE	65	631	45A		
	2- STORY FRAME HOUSE	66		45LA		
	2- STORY FRAME HOUSE	67		48LA		
	FRAME GARAGE	68		48		
	1½- STORY FRAME HOUSE	69		49LA		
	STORE AND FRAME HOUSE	70				
		71				
	BRICK AND CONCRETE BLOCK BUILDING	72	632	44LA		
	STEEL WAREHOUSE	73				
	TANKS	74				
	NORTH HALF OF TWO STORY BRICK HOUSE	75		60LA		
	SOUTH HALF OF TWO STORY BRICK HOUSE	76		61LA		
	CONCRETE BLOCK GARAGE	77				
		78				
	1½- STORY FRAME HOUSE	79		62LA		
E-10	1 STORY FRAME HOUSE	80		63LA		

ITEM NO.	DESCRIPTION	LINE NO.	SHEET NO.	PARCEL NO.	QUANTITIES	UNIT
		81				
	BUILDING REMOVAL CONT'D.	82				
		83				
E-10	REMOVAL OF	84				
	2- STORY BRICK HOUSE	85	632	63LA		
	FRAME GARAGE	86				
	2- STORY FRAME HOUSE	87		65LA		
		88				
	BRICK AND TILE OFFICE BUILDING	89	634	47ALA		
	TILE GARAGE	90				
	CONCRETE BLOCK GARAGE	91				
	HOUSE TRAILER	92		55LA		
		93				
	2- STORY BRICK HOUSE	94		56LA		
	TILE GARAGE AND PEN	95				
	1- STORY FRAME HOUSE	96		57LA		
	FRAME SHED	97				
	TILE RABBIT HUTCH	98				
	TILE PRIVY	99				
		100				
	1- STORY FRAME HOUSE	101	635	58LA		
	FRAME SHED	102				
	2- STORY FRAME HOUSE	103		59LA		
	FRAME GARAGE	104				
	TILE AND FRAME SHED	105		96LA		
		106				
	1- STORY MASONRY HOUSE AND CARPORT	107	636	82LA		
	2- STORY FRAME HOUSE	108		84LA		
	1- STORY FRAME HOUSE	109		85LA		
	CONCRETE BLOCK GARAGE	110				
	2- STORY FRAME HOUSE	111		86LA		
	TILE GARAGE	112				
		113				
	1- STORY FRAME HOUSE	114		92LA		
	METAL GARAGE	115				
	2- STORY CONCRETE BLOCK HOUSE	116	638	80LA		
	2- STORY FRAME HOUSE	117		81LA		
		118				
	1½- STORY FRAME HOUSE	119	639	97LA		
	TILE GARAGE AND FRAME BREEZEWAY	120				
	FRAME SHED	121				
	1- STORY FRAME HOUSE	122		98LA		
	CONCRETE BLOCK GARAGE	123				
		124				
	1½- STORY FRAME HOUSE	125		99LA		
	TILE GARAGE	126				
	2- STORY FRAME HOUSE	127		100LA		
	BRICK SHED	128				
	PRIVY	129				
		130				
	1½- STORY FRAME HOUSE	131		101LA		
	1- STORY TILE HOUSE	132				
	TILE SHED	133				
	FRAME SHED	134				
	FRAME PRIVY	135				
		136				
	1- STORY FRAME HOUSE	137	640	111LA		
	FRAME GARAGE	138				
	TILE SHED	139				
	TILE GARAGE	140		112LA		
		141				
	2- STORY FRAME HOUSE	142	641	119LA		
	FRAME SHED	143				
	DOG KENNEL	144				
	1- STORY BRICK HOUSE AND GARAGE	145		130LA		
	CONCRETE BLOCK GARAGE WITH FRAME APARTMENT OVER	146		126ALA		
		147				
	1- STORY FRAME HOUSE	148	642	126BLA		
	1- STORY FRAME HOUSE	149		157LA		
	FRAME GARAGE	150				
	1½- STORY FRAME HOUSE	151		160LA		
	1- STORY FRAME HOUSE	152		162LA		
	CONCRETE BLOCK GARAGE	153				
		154				
	1- STORY FRAME HOUSE	155	646	105ALA		
	FRAME SHED	156				
	FRAME SHEDS	157		105		
	1- STORY TILE HOUSE	158		107LA		
	1- STORY FRAME HOUSE	159	647	66LA		
E-10		160				

GENERAL SUMMARY

TYPE CODE 7221

1963 SPECIFICATIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS - 36 - 15.93

ITEM NO.	DESCRIPTION	LINE NO.	SHEET NO.	PARCEL NO.	QUANTITIES	UNIT
		1				
	BUILDING REMOVAL CONT'D.	2				
		3				
E-10	REMOVAL OF A	4				
	1 - STORY FRAME HOUSE	5	647	93LA		
	2 - STORY FRAME HOUSE	6		95LA		
	BRICK GARAGE	7				
	PRIVY	8				
		9				
	2 - STORY FRAME HOUSE	10	648	177LA		
	FRAME GARAGE	11				
	PRIVY	12				
	1½ - STORY FRAME HOUSE	13		178LA		
	FRAME GARAGE	14				
	FRAME SHED	15				
		16				
	1 - STORY FRAME HOUSE	17		180LA		
	FRAME GARAGE	18				
	FRAME SHEDS	19				
	PRIVY	20				
	1 - STORY FRAME HOUSE	21		181		
		22				
	1 - STORY FRAME HOUSE	23	652	148LA		
	2 - STORY BRICK HOUSE AND CARPORT	24		198LA		
	1½ - STORY BRICK HOUSE	25				
	FRAME SHED	26				
	FRAME GARAGE	27		208LA		
		28				
	1 - STORY BRICK HOUSE	29	653	199LA		
	1 - STORY FRAME HOUSE	30		200LA		
	CONCRETE BLOCK GARAGE	31				
	FRAME SHEDS	32				
	2 - STORY FRAME HOUSE	33		145LA		
	FRAME GARAGE	34				
		35				
	1 - STORY CONCRETE BLOCK HOUSE	36		146LA		
	1½ - STORY BRICK HOUSE	37		147LA		
	FRAME GARAGE	38				
	CONCRETE BLOCK SHED	39				
	1 - STORY CONCRETE BLOCK HOUSE	40		151LA		
	FRAME SHED	41				
		42				
	1 - STORY CONCRETE BLOCK HOUSE	43	654	201LA		
	FRAME GARAGE	44				
	BASEMENT HOUSE	45		143LA		
	TILE SHED	46				
	1 - STORY FRAME HOUSE	47	655	214		
		48				
	1 - STORY FRAME HOUSE	49	656	138LA		
	TILE SHED	50				
	1 - STORY FRAME HOUSE	51		152LA		
	FRAME GARAGE	52				
	FRAME SHED	53				
		54				
	1 - STORY FRAME HOUSE AND GARAGE	55		153LA		
	1 - STORY FRAME HOUSE	56		209LA		
	FRAME GARAGE	57				
	FRAME SHED	58	657	217		
		59				
	1½ - STORY FRAME HOUSE	60		218LA		
	FRAME GARAGE	61				
	CONCRETE BLOCK GARAGE	62		223LA		
	2 - STORY FRAME HOUSE	63		227LA		
	FRAME BARN	64				
		65				
	FRAME GARAGE	66		228LA		
	FRAME SHED	67				
	TILE SHED	68				
	1½ - STORY BRICK HOUSE	69	658	229LA		
	BRICK GARAGE	70				
		71				
	2 - STORY BRICK HOUSE	72		230LA		
	1 - STORY FRAME HOUSE	73		234LA		
	TILE AND FRAME GARAGE	74				
	FRAME SHED	75				
		76				
	2 - STORY FRAME HOUSE	77		239LA		
	TILE GARAGE	78				
	FRAME SHED	79		240LA		
E-10		80				

ITEM NO.	DESCRIPTION	LINE NO.	SHEET NO.	PARCEL NO.	QUANTITIES	UNIT
		81				
	BUILDING REMOVAL CONT'D	82				
		83				
		84				
E-10	REMOVAL OF A:	85	648	177		
	FRAME SHED	86				
	TILE SHED					
E-10						

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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GENERAL SUMMARY

1965 SPECIFICATIONS

TUSCARAWAS COUNTY
TUS - 36 - 15.93

Construction Type Code 7221 (Except as Noted)

* Construction Type Code Y005

FROM SH. 28 Line No	FROM SH. 29 Line No.	ITEM	QUANT	UNIT	DESCRIPTION
					DRAINAGE
Sheet 31 Line 41	83	202	Lump	Lump	Existing Structures Removed
2	81	202	7	Cu.Yds.	Portions of Existing Structures Removed
6		202	1,301	Lin.Ft.	Pipe Removed, 15" and Under
		202	1,590	Lin.Ft.	Pipe Removed, Over 15"
	76	202	9	Each	Manholes Removed
	77	202	12	Each	Catch Basins Removed
4		503	410	Cu.Yds.	Excavation for Structures
	79	509	82,596	Lbs.	Reinforcing Steel
	78	511	437	Cu.Yds.	Concrete for Structures, Class C
	73	601	*1,512	Cu.Yds.	Dumped Rock Channel Protection
	74	601	* 132	Sq.Yds.	Riprap Using 6" Reinforced Concrete Slab as per plan
	75	601	* 157	Lin.Ft.	Standard Type 1 Paved Gutter
	21	602	G1.2	Cu.Yds.	Concrete Masonry
8		603	80	Lin.Ft.	12" Conduit, Type A, 707.05 with Class B Bedding
9		603	50	Lin.Ft.	15" Conduit, Type A, 706.02 or 706.08 with Class B Bedding
10		603	96	Lin.Ft.	15" Conduit, Type A, 706.02 Class IV with Class B Bedding
11, 12		603	284	Lin.Ft.	15" Conduit, Type A, 706.08 Standard Strength
					Encased, as per plan
13		603	62	Lin.Ft.	15" Conduit, Type A, 706.08 with Class B Bedding
15		603	268	Lin.Ft.	18" Conduit, Type A, 706.02 Class IV with Class B Bedding
16		603	140	Lin.Ft.	18" Conduit, Type A, 706.02 Class V with Class B Bedding
17		603	72	Lin.Ft.	18" Conduit, Type A, 706.02 or 706.08 with Class B Bedding
18		603	490	Lin.Ft.	24" Conduit, Type A, 707.05 with Class B Bedding
19		603	80	Lin.Ft.	24" Conduit, Type A, 706.02 or 706.08 with Class B Bedding
20,21		603	419	Lin.Ft.	24" Conduit, Type A, 706.08 Standard Strength
					Encased, as per plan
22		603	112	Lin.Ft.	24" Conduit, Type A, 706.02 Class III or 706.08 with Class B Bedding
23	22	603	87	Lin.Ft.	24" Conduit, Type A, 706.08 with Class B Bedding
24	23	603	128	Lin.Ft.	30" Conduit, Type A, 706.02 or 706.08 with Class B Bedding
26		603	96	Lin.Ft.	30" Conduit, Type A, 706.02 Class III or 706.08 with Class B Bedding
27	24	603	146	Lin.Ft.	30" Conduit, Type A, 706.08 with Class B Bedding
28		603	268	Lin.Ft.	36" Conduit, Type A, 706.08 with Class B Bedding
30	25	603	300	Lin.Ft.	42" Conduit, Type A, 706.02 Class V with Class B Bedding
31,32		603	174	Lin.Ft.	42" Conduit, Type A, 706.02 Class III, one-third Vitrified Liner ~~706.05~~ As per 706.05
					with Class B Bedding
33	26,27	603	566	Lin.Ft.	48" Conduit, Type A, 707.05, 8 Gage, with Class B Bedding, Elongated
34,35	28,29	603	282	Lin.Ft.	48" Conduit, Type A, 706.02, one-third Vitrified Liner ~~706.05~~ As per 706.05
					Class B Bedding
37,38		603	212	Lin.Ft.	48" Conduit, Type A, 706.02 Class III, one-third Vitrified Liner ~~706.05~~ As per 706.05
					with Class B Bedding
39		603	286	Lin.Ft.	48" Conduit, Type A, 706.02 Class V with Class B Bedding
40,41		603	146	Lin.Ft.	48" Conduit, Type A, 706.02 Class V, one-third Vitrified Liner ~~706.05~~ As per 706.05
					with Class B Bedding
42		603	556	Lin.Ft.	66" Conduit, Type A, 707.03, 10-8 Gage, as per plan, with Class B Bedding
43		603	110	Lin.Ft.	66" Conduit, Type A, 707.03, 10-10 Gage, as per plan, with Class B Bedding
44	30	603	38	Lin.Ft.	30" Conduit, Type A, 707.05
75		603	118	Lin.Ft.	18"x11" Conduit, Type A, 707.05 with Class B Bedding
76		603	142	Lin.Ft.	22"x13" Conduit, Type A, 707.05 with Class B Bedding
77		603	60	Lin.Ft.	23"x14" Conduit, Type A, 706.04 Class HE II with Class B Bedding
78		603	146	Lin.Ft.	38"x24" Conduit, Type A, 706.04 Class HE III with Class B Bedding
79	37	603	618	Lin.Ft.	91"x58" Conduit, Type A, 706.04 Class HE II with Class B Bedding
84	41	603	1427	Lin.Ft.	6" Conduit, Type B, with Class B Bedding
85	40	603	306	Lin.Ft.	6" Conduit, Type B, 706.08 with Class B Bedding
86	42	603	4190	Lin.Ft.	8" Conduit, Type B, 706.08 with Class B Bedding
87		603	60	Lin.Ft.	10" Conduit, Type B, with Class B Bedding
45,88	43	603	3706	Lin.Ft.	12" Conduit, Type B, with Class B Bedding
46,89		603	184	Lin.Ft.	12" Conduit, Type B, 706.08 with Class B Bedding
48,90		603	974	Lin.Ft.	15" Conduit, Type B, with Class B Bedding
91		603	122	Lin.Ft.	15" Conduit, Type B, 706.08 with Class B Bedding
92	44	603	322	Lin.Ft.	18" Conduit, Type B, with Class B Bedding
	4	603	150	Lin.Ft.	18" Conduit, Type B, 706.08 with Class B Bedding
	5	603	76	Lin.Ft.	21" Conduit, Type B, 706.08 with Class B Bedding
	6,45	603	406	Lin.Ft.	24" Conduit, Type B, with Class B Bedding

FROM SH. 28 Line No.	FROM SH. 29 Line No.	ITEM	QUANT.	UNIT	DESCRIPTION
					DRAINAGE (Cont'd.)
	7,46	603	192	Lin.Ft.	24" Conduit, Type B, 706.02 Class III or 706.08 with Class B Bedding
	8	603	562	Lin.Ft.	24" Conduit, Type B, 706.08 with Class B Bedding
	9,48	603	142	Lin.Ft.	27" Conduit, Type B, 706.08 with Class B Bedding
	10	603	94	Lin.Ft.	30" Conduit, Type B, with Class B Bedding
	11	603	560	Lin.Ft.	30" Conduit, Type B, 706.08 with Class B Bedding
	12	603	256	Lin.Ft.	30" Conduit, Type B, 706.02 Class III or 706.08 with Class B Bedding
	13,49	603	26	Lin.Ft.	33" Conduit, Type B, 706.02 with Class B Bedding
	15	603	272	Lin.Ft.	33" Conduit, Type B, 706.02 Class III with Class B Bedding
	16	603	16	Lin.Ft.	36" Conduit, Type B, 706.02 with Class B Bedding
	17	603	154	Lin.Ft.	36" Conduit, Type B, 706.02 Class III or 706.08 with Class B Bedding
	18,50	603	399	Lin.Ft.	42" Conduit, Type B, with Class B Bedding
	19,51	603	910	Lin.Ft.	54" Conduit, Type B, 706.02 with Class B Bedding
	20,52	603	368	Lin.Ft.	54" Conduit, Type B, 706.02 Class III with Class B Bedding
49	31	603	800	Lin.Ft.	6" Conduit, Type C, with Class B Bedding
50	32	603	700	Lin.Ft.	8" Conduit, Type C, with Class B Bedding
51	33	603	300	Lin.Ft.	10" Conduit, Type C, with Class B Bedding
52	34	603	1016	Lin.Ft.	12" Conduit, Type C, with Class B Bedding
53	35	603	188	Lin.Ft.	12" Conduit, Type C, 706.08 with Class B Bedding
54		603	216	Lin.Ft.	15" Conduit, Type C, with Class B Bedding
55		603	290	Lin.Ft.	15" Conduit, Type C, 706.08 with Class B Bedding
56		603	130	Lin.Ft.	15" Conduit, Type C, 706.02 or 706.08 Extra Strength with Class "B" Bedding
57		603	374	Lin.Ft.	18" Conduit, Type C, 706.08 with Class B Bedding
58		603	36	Lin.Ft.	21" Conduit, Type C, 706.08 or 706.02 with Class B Bedding
59		603	825	Lin.Ft.	21" Conduit, Type C, 706.08 with Class B Bedding
60		603	700	Lin.Ft.	24" Conduit, Type C, with Class B Bedding
61		603	54	Lin.Ft.	24" Conduit, Type C, 706.08 Extra Strength with Class B Bedding
62		603	252	Lin.Ft.	27" Conduit, Type C, with Class B Bedding
63		603	268	Lin.Ft.	27" Conduit, Type C, 706.08 with Class B Bedding
64		603	73	Lin.Ft.	30" Conduit, Type C, 706.02 or 706.08 Extra Strength with Class B Bedding
65		603	430	Lin.Ft.	6" Conduit, Type F
67,68		603	760	Lin.Ft.	8" Conduit, Type F
71		603	841	Lin.Ft.	12" Conduit, Type F
72		603	38	Lin.Ft.	15" Conduit, Type F
73		603	26	Lin.Ft.	18" Conduit, Type F
74		603	30	Lin.Ft.	24" Conduit, Type F
	53	604	59	Each	Standard No. 2-2-A Catch Basins, as per plan
	54	604	10	Each	Standard No. 2-2-B Catch Basins
	55	604	5	Each	Standard No. 2-3 Catch Basins, as per plan
	56	604	1	Each	Standard No. 2-4 Catch Basins, as per plan
	59	604	2	Each	Standard No. 2-6 Catch Basins, as per plan
	60	604	10	Each	Standard No. 3 Catch Basins
	61	604	4	Each	Standard No. 3-A Catch Basins
	62	604	11	Each	Standard No. 6 Catch Basins, Modified as per plan
	63	604	5	Each	Standard No. 2-6 Median Inlets
	64	604	1	Each	Standard No. 2-8 Median Inlets
	65	604	1	Each	Standard No. 2-A-8 Paved Shoulder Inlet
	66	604	6	Each	Standard No. 1 Manhole
	67	604	5	Each	Standard No. 1-A Manhole
	68	604	5	Each	Standard No. 2 Manhole, without Drop Pipe
	70	604	2	Each	Manhole Reconstructed to Grade, as per plan
81	38	605	3,788	Lin.Ft.	6" Deep Pipe Underdrains
81	38	605	37,225	Lin.Ft.	6" Shallow Pipe Underdrains
82	39	605	3,513	Lin.Ft.	6" Shallow Pipe Underdrains, 707.06 or 707.12
83		605	1,107	Lin.Ft.	6" Unclassified Pipe Underdrains as per plan, 707.06 or 707.12
	71	605	110	Lin.Ft.	Aggregate Spring Drains as per plan
	72	605	9,742	Lin.Ft.	Aggregate Drains
	69	604	1	Each	Standard No. 2 Manhole without Drop Pipe, as per plan
	82	Special	1980	Sq.Ft.	Vitrified Liner Plates

Rev. 2/24/66 C.E.H.

GENERAL SUMMARY 1965 SPECIFICATIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

(34,3 / 662)

TUSCARAWAS COUNTY
TUS - 36 - 15.93

SHEET NO. LINE NO.	FROM SH. 31 LINE NO.	ITEM	QUANT.	UNIT.	Construction Type Code 7221 (Except as noted) * Construction Type Code Y005
	2				ROADWAY
	12	201	Lump	Lump	Clearing and Grubbing
	7,8	202	15,892	Sq.Yds	Existing Pavement Removed and Disposed of
	9	202	12,813	Sq.Ft.	Existing Sidewalk Removed and Disposed of
	10	202	1,859	Lin.Ft.	Existing Curb Removed and Disposed of
	11	202	652	Lin.Ft.	Existing Curb and Gutter Removed and Disposed of
Sheet 28 Line 5	4,27	203	2,216,466	Cu.Yds.	Excavation Including Embankment Construction, as per plan
	6	203	5,499	Cu.Yds.	Borrow using Granular Material or Rock, as per plan
	5	203	251,423	Sq.Yds.	Subgrade Preparation
	13	203	10,190	M.Gals.	Water
	49,50	203	98	Hours	Proof Rolling
	42	410	500	Cu.Yds.	Traffic Compacted Surface, Type A or B
	43,44	410	1500	Cu.Yds.	Traffic Compacted Surface, Type C
	16	604	52	Each	Centerline Reference Monuments, as per plan
	17	604	58	Each	Standard Monument Assemblies
	18	604	20	Each	Inspection Wells, as per plan
	23	606	27,975	Lin.Ft.	Guard Rail, Type 4
	24	606	500	Lin.Ft.	Guard Rail, Type 4, Barrier Design
	25	606	3,056	Lin.Ft.	Guard Rail, Type 1, Three Ropes
	28	607	10,584	Lin.Ft.	Fence, Type 39
	29	607	8,549	Lin.Ft.	Fence, Type CL
	19	608	8,359	Sq.Ft.	4" Concrete Walk
	20	608	68	Lin.Ft.	Concrete Steps, Type A
	14	616	70	Tons	Calcium Chloride
	15	616	800	M.Gals.	Water
	30	620	67	Each	Mono-directional Delineators, Type A-1, Post Mounted
	31	620	443	Each	Mono-directional Delineators, Type C-2, Post Mounted
	32	620	10	Each	Mono-directional Delineators, Type C-3, Post Mounted
	34	656	32	M.Sq.Ft.	Roadside Cleanup
	35	659	*644,472	Sq.Yds.	Seeding and Mulching
	36	659	* 58.92	Tons	Commercial Fertilizer (12-12-12)
	37	659	*294.60	Tons	Agricultural Liming
	38	660	* 9,578	Sq.Yds.	Sodding
	39	660	* 619	Sq.Yds.	Sodding for Special Berm and Slope Protection
	40	667	* 3,249	Sq.Yds.	Jute Matting
	46	Special	1	Each	Settlement Platform
	21	608	24	Lin.Ft.	Concrete Steps, Type B
	51	Special	2	Each	Drilled Well Abandoned
Sh. 25		620	8	Each	Mono-directional Delineators, Type A-1, Bracket Mounted
Sh. 25		620	19	Each	Mono-directional Delineators, Type C-2, Bracket Mounted
	58				PAVEMENT
	61	301	4,399	Cu.Yds.	Bituminous Aggregate Base: 702.01 (85-100) or 702.09 RT-12, as per plan
	63	302	585	Cu.Yds.	Asphalt Concrete (70-85)
	60	304	17,403	Cu.Yds.	Aggregate Base
Sh. 24		304	87	M.Gals.	Water
	64	305	1,431	Sq.Yds.	9" Portland Cement Concrete Base
	76	310	34,625	Cu.Yds.	Subbase, Grading A or B, as per plan
	75	310	12,745	Cu.Yds.	Subbase
	62	402	288	Cu.Yds.	Asphalt Concrete (70-85)
	85	404	913	Cu.Yds.	Asphalt Concrete (70-85)
	84	404	3,674	Cu.Yds.	Asphalt Concrete (70-85) Using 402 Composition
	80,81	407	62	Gals.	Tack Coat: 702.04 MS-2 or RS-1; or 702.02 RC-70 or RC-250
	79	408	25,355	Gals.	Bituminous Prime Coat: 702.09 RT-2 or RT-3
—	82	409	17,636	Gals.	Seal Coat Bituminous Material, as per plan
	83	409	531	Cu.Yds.	Seal Coat Cover Aggregate, No.8
	88	451	169,662	Sq.Yds.	9" Reinforced Portland Cement Concrete Pavement
	86	452	192	Sq.Yds.	7" Plain Portland Cement Concrete Pavement
	87	452	42	Sq.Yds.	8" Plain Portland Cement Concrete Pavement
	66	609	6,246	Lin.Ft.	Standard Type 2-A Concrete Curb
	67	609	5,764	Lin.Ft.	Standard Type 6 Concrete Curb
	68	609	1,183	Lin.Ft.	Standard Type 7 Concrete Curb
	69	609	1,304	Lin.Ft.	Standard Type 8 Concrete Curb
	71	609	1,427	Lin.Ft.	Standard Type 2 Combination Curb and Gutter
	72,73	609	364	Lin.Ft.	Standard Type 2 Combination Curb and Gutter, Modified as per plan
	65	611	2,306	Sq.Yds.	Reinforced Concrete Approach Slabs (T=13")
	74	612	678	Sq.Yds.	4" Concrete Median, as per plan
	77,78	613	53	Each	Traffic Dividers, as per plan
Sheet 29 Line 84		Special	1,383	Cu.Yds.	Drainage Connection Using No. 8 Aggregate
					Project Signing Quantities and Plan, See Sheet #296
					Project Lighting Quantities and Plan, See Sheet #489

FROM SH. 32 LINE NO.	ITEM	QUANT.	UNIT.	
2				UTILITIES - WATER CODE TYPE Y060
4	603	160	Lin.Ft.	15" Conduit, Type F Encasement Pipe, as per plan
44,45	603	879	Lin.Ft.	12" Conduit, 706.02, Class III with Class B Bedding, casing Pipe
5	814	722	Lin.Ft.	New Water Main, 4" Asbestos Cement Pipe Class 150
6	814	5,692	Lin.Ft.	New Water Main, 6" Asbestos Cement Pipe Class 150
7	814	302	Lin.Ft.	New WaterMain, 6" Cast Iron River Crossing Pipe, ASA Class 25
8	814	500	Lin.Ft.	New WaterMain, 4" Cast Iron Pipe
9	814	200	Lin.Ft.	New Water Main, 6" Cast Iron Pipe
10	814	6	Each	4" Valves and Boxes
12	814	8	Each	6" Valves and Boxes
13	814	3	Each	6" Mechanical Joint Tapping Sleeves, Valves and Boxes (C.I to A.C)
15	814	1	Each	4" Fittings, 1/16 Bend
16	814	1	Each	4" Fittings, 1/4 Bend
17	814	1	Each	6" Fittings, 1/64 Bend
18	814	3	Each	6" Fittings 1/32 Bend
19	814	4	Each	6" Fittings 1/16 Bend
20	814	22	Each	6" Fittings 1/8 Bend
21	814	2	Each	6" Fittings 1/4 Bend
22	814	1	Each	6" x 2" Fitting, 1/8 Reducing Bend
23	814	1	Each	6" x 4" Fitting, 1/16 Reducing Bend
24	814	1	Each	6" \ Fitting, 45° Wye
26	814	4	Each	6" x 6" x 4" Fitting, Tee
27	814	1	Each	6" Fitting, Tee
28	814	2	Each	4" Fitting, Tee
29	814	1	Each	2" x 2" x 4" Fitting, Tee
30	814	4	Each	6" Fitting, Mechanical Joint Transition Sleeve
31	814	328	Lin.Ft.	Water Main Removed and Reloid, 4" Asbestos Cement Pipe
32	814	214	Lin.Ft.	Water Main Removed and Reloid, 6" Asbestos Cement Pipe
33	814	350	Lin.Ft.	Water Main Lowered, 1 1/4" Cast Iron Pipe
34	814	150	Lin.Ft.	Water Main Lowered, 6" Cast Iron Pipe
35	814	80	Lin.Ft.	Water Main Lowered, 4" Asbestos Cement Pipe
36	814	2	Each	Fire Hydrants Removed and Reset
38	814	522	Lin.Ft.	New Service Branches, 3/4" to 1 1/2"
39	814	245	Lin.Ft.	New Service Branches, Type A, 3/4" to 1 1/2", as per plan
40	814	8	Each	Service Stops and Boxes Removed and Reset
41	814	85	Lin.Ft.	Service Branches Lowered
42	814	1	Each	Water Meters and Boxes Adjusted to Grade
43	814	6	Each	Water Meters and Boxes Removed and Reset
5,31,46	814	Lump	Lump	Remove section of existing waterline and plug
77	603	** 254	LIN.FT.	15" Conduit, 706.02, Class III with Class B Bedding, Casing Pipe
49				UTILITIES - SANITARY CODE TYPE Y060
51,52	603	857	Lin.Ft.	8" Conduit, Type A, 706.08 Standard Strength, encased as per plan
53,54	603	339	Lin.Ft.	21" Conduit, Type A 706.08 Standard Strength, encased, as per plan
55,58	603	80	Lin.Ft.	6" Conduit, Type B 706.08 with Class B Bedding
56,59	603	1,111	Lin.Ft.	8" Conduit, Type B 706.08 with Class B Bedding
57	603	528	Lin.Ft.	21" Conduit, Type B 706.08 with Class B Bedding
61,62	603	256	Lin.Ft.	Existing 21" Vitrified Clay Pipe with 5" Minimum Class E Concrete Encasement as per plan
67	603	185	Lin.Ft.	10" Conduit, Cast Iron M.J. River Crossing Pipe, ASA Class 25
68	603	185	Lin.Ft.	14" Conduit, Cast Iron M.J. River Crossing Pipe, ASA Class 25
63	604	3	Each	Standard No. 1 Manhole
64	604	4	Each	Standard No. 2 Manhole
65	604	3	Each	Standard No. 2 Manhole, without Drop Pipe
69	604	Lump	Lump	Siphon Chamber No. 1
70	604	Lump	Lump	Siphon Chamber No. 2
66	202	4	Each	Manholes Removed
75				** 100% Twin City Water and Sewer Dept. Participation (Village of Dennison)
80				QUANTITIES FOR STRUCTURES OVER 20 FOOT SPAN — Sheet
82				Trenton Ave. Connector Over U.S. 36 — TUS-36-1783 — 491
83				Trenton Ave. Connector Over Pa. R.R. — 508
84				Ramp "J" Over B. & O. R.R. — 517
85				Ramp "U" Over Stillwater Creek — 525
86				U.S. 36 Over B. & O. R.R. — TUS-36-1789 — 542
87				U.S. 36 Over U.S. 250 — TUS-36-1810 — 568
88				U.S. 250 Over Stillwater Creek — TUS-250-2176 — 576
89				U.S. 36 Over Stillwater Creek — TUS-36-1849 — 578
90				U.S. 36 Over Second Street — TUS-36-1887 — 595
91				
92		Lump	Lump	Construction Layout Stakes
93	614	Lump	Lump	Maintaining Traffic
94		Lump	Lump	Field Office

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

34C
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

GENERAL SUMMARY

1965 SPECIFICATIONS

CONSTRUCTION TYPE CODE 7221

SHEET 33 LINE NO.	ITEM	QUANT	UNIT		BUILDING REMOVALS
	202	Lump	Lump	Parcel 6 LA ; Removal of One 2 Story Frame Residence , One Concrete Block Garage ,	
				Two Frame Sheds , One Privy.	
	202	Lump	Lump	Parcel 15 LA ; Removal of One Old Brick Building , Partially Razed	
43,44	202	Lump	Lump	Parcel 19 LA ; Removal of One Frame Shed , One Privy	
45,51,52 53,54	202	Lump	Lump	Parcel 20 LA ; Removal of Four Frame Sheds , One Tile Shed	
49	202	Lump	Lump	Parcel 27 LA ; Removal of One 1½ Story Frame Residence	
11	202	Lump	Lump	Parcel 32 ALA ; Removal of One Frame Shed	
8,9	202	Lump	Lump	Parcel 34 LA ; Removal of One 1 Story Frame Residence with attached Garage , One Privy.	
55,56,57	202	Lump	Lump	Parcel 35 LA ; Removal of One 1 Story Frame Shack , One Brick and Frame Shed, One Privy.	
59,60,61 62,63	202	Lump	Lump	Parcel 37 LA ; Removal of One Tile Garage , One Privy , One Frame Shed , One Dog Kennel.	
69,70	202	Lump	Lump	Parcel 49 LA ; Removal of One 1½ Story Frame Residence , One 2 Story Frame Residence	
				and Store	
94,95	202	Lump	Lump	Parcel 56 LA ; Removal of One 2 Story Brick Residence , One Tile Garage	
103,104	202	Lump	Lump	Parcel 59 LA ; Removal of One 2 Story Frame Residence , One Frame Garage	
80,85,86	202	Lump	Lump	Parcel 63 LA ; Removal of One 2 Story Brick Residence , One 1 Story Frame Residence , One	
				Frame Garage	
159				Parcel 66 LA , Deleted	
116	202	Lump	Lump	Parcel 80 LA ; Removal of One 2 Story Frame Residence	
117				Parcel 81 LA , Deleted	
105	202	Lump	Lump	Parcel 96 LA ; Removal of One Tile and Frame Shed	
157	202	Lump	Lump	Parcel 105 ; Removal of Two Frame Sheds	
155,156	202	Lump	Lump	Parcel 105 ALA ; Removal of One 1 Story Frame Residence , One Frame Shed	
140	202	Lump	Lump	Parcel 112 LA ; Removal of One Tile Block Garage	
146				Parcel 126 ALA ; Deleted	
148				Parcel 126 BLA , Deleted	
5,6,7				Parcel 33 LA , Deleted	
12,13,14				Parcel 36 LA , Deleted	
16,17, 18,19				Parcel 4 LA , Deleted	
27, 28, 29, 32, 33, 34 35, 36, 37				Parcel 7 LA , Deleted	
39,40,41				Parcel 8 LA , Deleted	
46,47				Parcel 14 LA , Deleted	
48				Parcel 25 LA , Deleted	
65				Parcel 26 LA , Deleted	
66				Parcel 45 A , Deleted	
67				Parcel 45 LA , Deleted	
68				Parcel 48 LA , Deleted	
72,73,74				Parcel 48 Deleted	
75				Parcel 44 LA , Deleted	
76,77				Parcel 60 LA , Deleted	
79				Parcel 61 LA , Deleted	
87				Parcel 62 LA , Deleted	
89,90,91				Parcel 65 LA , Deleted	
92				Parcel 47 ALA , Deleted	
96, 97, 98, 99				Parcel 55 LA , Deleted	
101, 102				Parcel 57 LA , Deleted	
107				Parcel 58 LA , Deleted	
108				Parcel 82 LA , Deleted	
109, 110				Parcel 84 LA , Deleted	
111,112				Parcel 85 LA , Deleted	
114,115				Parcel 86 LA , Deleted	
119,120,121				Parcel 92 LA , Deleted	
122,123				Parcel 97 LA , Deleted	
125,126				Parcel 98 LA , Deleted	
127,128,129				Parcel 99 LA , Deleted	
131,132,133 134, 135				Parcel 100 LA , Deleted	
137,138,139				Parcel 101 LA , Deleted	
142,143,144				Parcel 111 LA , Deleted	
145				Parcel 119 LA , Deleted	
149,150				Parcel 130 LA , Deleted	
151				Parcel 157 LA , Deleted	
152,153				Parcel 160 LA , Deleted	
158				Parcel 162 LA , Deleted	
				Parcel 107 LA , Deleted	

SHEET 34 LINE NO.	ITEM	QUANT	UNIT	BUILDING REMOVALS (Continued)
2				
13,14,15	202	Lump	Lump	Parcel 178 LA ; Removal of One 2 Story Frame Residence , One Frame Garage , One Frame Shed.
21,25,26	202	Lump	Lump	Parcel 198 LA ; Removal of One 2 Story Brick Residence , One 1½ Story Brick Residence ,
				One Frame Shed.
43,44	202	Lump	Lump	Parcel 201 LA ; Removal of One 1 Story Concrete Block Residence , One Frame Shed.
27				Parcel 208 LA ; Deleted
56,57				Parcel 209 LA ; Deleted
58	202	Lump	Lump	Parcel 217 ; Removal of One Frame Shed
62				Parcel 223 LA ; Deleted
66,67,68	202	Lump	Lump	Parcel 228 LA ; Removal of One Frame Garage , One Tile Shed , One Frame Shed
69,70	202	Lump	Lump	Parcel 229 LA ; Removal of One 1½ Story Brick Residence , One 1-car Tile Garage.
72	202	Lump	Lump	Parcel 230 LA ; Removal of One 2 Story Brick Residence
73,74,75				Parcel 234 LA ; Deleted
79	202	Lump	Lump	Parcel 240 LA ; Removal of One Frame Shed
5				Parcel 93 LA ; Deleted
6,7,8				Parcel 95 LA ; Deleted
10,11,12				Parcel 177 LA ; Deleted
17,18, 19,20				Parcel 180 LA ; Deleted
21				Parcel 181 Deleted
23				Parcel 148 LA ; Deleted
29				Parcel 199 LA ; Deleted
30,31,32				Parcel 200 LA ; Deleted
33,34				Parcel 145 LA ; Deleted
36				Parcel 146 LA ; Deleted
37,38,39				Parcel 147 LA ; Deleted
40,41				Parcel 151 LA ; Deleted
45,46				Parcel 143 LA ; Deleted
47				Parcel 214 Deleted
49,50				Parcel 138 LA Deleted
51,52,53				Parcel 152 LA Deleted
55				Parcel 153 LA Deleted
60,61				Parcel 218 LA Deleted
63,64				Parcel 227 LA Deleted
77,78				Parcel 239 LA Deleted
85,86				Parcel 177 LA Deleted

CO. RD. 62 CONN.
CURVE DATA
P.I. Sta. 0+64.56
Δ = 63° 20'
R = 75.00'
L = 82.90'
T = 46.26'

DIKE DETAIL
Sta. 193+95, 34' Lt.

BEGIN WORK STA. 190+30
END WORK STA. 1+01.20
BEGIN WORK STA. 0+14
Sta. 191+65.00 ℄ Temp. Conn. = Sta. 0+00.00 Co. Rd. 62 Conn.
Sta. 191+65.00 ℄ Temp. Conn.
Connect to Existing Structure
12,730 1977 ADT
U.S. 36
N 64° 31' 22" E
S 88° 00' 57" E
Limit of Construction
L.A. R/W
Existing R/W
Survey ℄
℄ Constr.
℄ Temp. Conn.
℄ Co. Rd. 62
℄ Track
Area to be Patched
24' Pavement
Gravel Drive 15" V.C.P.
498'-30"
66'-12"
374'-24"
24" V.C.P.
6" H.P. Gas Line
Pipe Line Marker
Dug Well 30" V.C.P. Cased-18 to Water 30 Deep
Dug Well Filled
Drilled Well 110'
Conc. Well Cover
Conc. Walk
Brick Walk
Stone & Brick Walk
Gravel Drive
Asphalt Surface
Gravel Parking Area
The Y Tavern Conc. Blk. & Fr.
Fr. Shed
Fr. Privy
Lawn
Garden
Hedge
Trees & Brush Small Pines
Brush
Small Trees
Weeds
Billboard
Guy
Drive
Feathering Crse.
Limit of Construction
End Sheet
P.C. Sta. 191+88.77
P.T. Sta. 198+38.00
Sta. 200+00
+50.00
Sta. 0+00.00 ℄ Co. Rd. 62 Conn. = Sta. 191+65.00 ℄ Temp. Conn.

FOR ADDITIONAL DETAILS ON TEMPORARY CONNECTION SEE SHEET 15

TEMPORARY CONN.
CURVE DATA
P.I. Sta. 195+68.77
Δ = 27° 27' 41" Rt.
D = 5° 00'
R = 1,145.92'
L = 549.23'
T = 280.00'

E 2,309,500
E 2,310,000
E 2,310,500
N 266,000

TYPICAL SECTION PATCHED AREA
FOR ADDITIONAL DETAILS SEE SHEET 11

2" T-35, Type C
Trench
9" B-70
11'-5 3/4"

EXISTING TYPICAL SECTION U.S. 36
Open Hillside
T-35 Surface Course
Portland Cement Concrete
Widening With Bit. Base Course
3' 9' 24' 9' 3'

Section A-A
See Sheet 14
B.W = 2.0'
S = 2:1
D = 1.0'

END WORK STA. 1+01.20
Meet Existing
℄ Co. Rd. 62 Conn.
P.T. Sta. 1+01.20 R = 65'
P.C. Sta. 0+18.30
R=30' R=85' R=100'
871.00 871.04 871.09 871.20 870.86 870.83 870.50 870.78 869.90 871.62
870.7 191 ℄ Temporary Conn.
90°00'00" 192
Sta. 0+00.00 ℄ Co. Rd. 62 Conn. = Sta. 191+65.00 ℄ Temp. Conn.

INTERSECTION
TEMPORARY CONN. & CO. RD. 62 CONN.
10 0 30 60
SCALE IN FEET

TUSCARAWAS COUNTY
TUS-36-15.93

REF. NO.	STATION FROM	STATION TO		B-19 AGGR. BASE COURSE C.Y.	B-35 ASPHALTIC CONCRETE LEVELING COURSE C.Y.	B-35 ASPHALTIC CONCRETE BASE COURSE C.Y.	B-70 PORT. CEM. CONC. BASE COURSE 9" S.Y.	I-22 SUBBASE C.Y.	I-23 PRECAST CONC. TRAFFIC DIVIDERS EA.	T-30 BIT. PRIME COAT GAL.	T-31 BIT. MAT'L AGGR. #6 C.Y.	T-35 ASPH. CONC. SURF. CRSE TYPE C C.Y.
1-P	191+85	199+50		575	59	143				1020	251	7	59
2-P	Co. Rd. 62 Conn.		Lt.	97	12	29				175	28	1	9
3-P	194+53	196+67	Rt.				153						4
4-P	199+00	199+50	Rt.							7			
5-P	193+15	195+00	Rt.						31				
TOTAL				672	71	172	153	459	31	1,202	279	8	84

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO		I-5 CLASS J-1 MASONRY 6"@60°-90° BEND TEE EA.	I-8 STD. CATCH BASIN #22A #23 EA.	I-10 DUMPED ROCK CHANNEL PROTECT. C.Y.	L-10 SODDING S.Y.	L-120 JUTE MATTING
1-D	190+31	194+00	Lt.		1			
2-D	192+20	194+50	Lt.				66	
3-D	194+13	194+85	Lt.		1			
4-D	194+45	195+10	Rt.					125
5-D	195+23	196+75	Rt.		1			
6-D	194+00	199+55	Lt & Rt			20		
7-D	199+55	199+81	Lt & Rt		1			
8-D	193+50	194+34	Lt & Rt			2		
9-D	194+45	199+02	Rt	1	1	20	66	125
10-D	199+02	200+00	Lt & Rt	1				
11-D	195+45	196+92	Rt	2	1	20	66	125
TOTAL				4	5	62	132	375

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO		E-12 PIPE REMOVED 15" & UNDER S.Y.	E-12 12" PIPE OVER 15" CLASS B-1 L.F.	I-1 6" PIPE CL. F-4 d=50" d=18" L.F.	I-1 6" PIPE CL. T-3 L.F.	I-1 6" PIPE CL. J-1 L.F.	I-1 PIPE CL. I SEC. M-68 (b) 24" 30" L.F.	I-2 MASONRY 6"@60°-90° BEND TEE EA.	I-5 CLASS J-1 EA.	I-8 STD. CATCH BASIN #22A #23 EA.	I-10 DUMPED ROCK CHANNEL PROTECT. C.Y.	L-10 SODDING S.Y.	L-120 JUTE MATTING
1-D	190+31	194+00	Lt.		232				374						
2-D	192+20	194+50	Lt.												
3-D	194+13	194+85	Lt.												
4-D	194+45	195+10	Rt.		66										
5-D	195+23	196+75	Rt.												
6-D	194+00	199+55	Lt & Rt						560			1			
7-D	199+55	199+81	Lt & Rt						128						
8-D	193+50	194+34	Lt & Rt			10	84	28							
9-D	194+45	199+02	Rt			10	447		41			1			
10-D	199+02	200+00	Lt & Rt					36				1			
11-D	195+45	196+92	Rt	148		80	531	64	502	560	2	2	20	66	125
TOTAL				148	232	66	80	531	64	502	560	0.41	2	20	66	125

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO		E-1 COMP. SUB-GRADE S.Y.	E-8 REMOVAL & DISPOSAL OF EXIST. PAVEMENT RIG(D) FLEX. S.Y.	I-9 STONE UNDER-DRAINS NO. 2 L.F.	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP) L.F.	SPECIAL DRILLED WELL ABAN-DONED EA.
2-R	199+50	200+00	Rt.				50.0	
3-R	194+53	196+67	Rt.	153	153			
4-R	191+85	199+50		2,515	436	59		
5-R	Co. Rd. 62 Conn.							
6-R	191+00	192+22	Lt.		54			
7-R	193+25		Lt.					1
TOTAL				3,104	153	59	50.0	1

PROFILE ALONG ℄ OF TEMPORARY

Graphic Grade Line
PVI. 195+00
879.40
No V.C.
℄ Temporary
END T-35 BEGIN T-71
Meet Existing as Req'd.
BEGIN WORK STA. 190+30
Existing inlet
24" V.C.P.
374'-24" @ 1.81%
62'-30" @ 1.80%
66'-12" @ 4.16%
15" V.C.P.
6" I-3
6" H.P. Gas
℄ 6" H.P. Gas
498'-30" @ 2.26%
℄ 90° 872.06 +00, 3' Rt.
℄ 872.18 +50, 3' Rt.
6" Gas
℄ 874.24 +34, 3' Rt.
℄ 875.60 +00, Rt.
℄ 878.71 +50, Lt.
℄ 881.19 +70, Lt.
+2.07%
+0.34%
℄ 60° Bend +02, 17' Lt. 881.45
℄ 60° Bend +20, 47' Lt. 881.51
℄ 6" 883.17
℄ 27" 882.48
128'-24" @ 2.51%
268'-27" @ 2.27%
Sta. 199+50 Horizontal Control Shifts 20.00' Rt. for Westbound
See Cross sections for Drainage Data

CO. RD. 62 CONN.
BEGIN WORK STA. 0+14
END WORK STA. 1+01.20
P.G.C. 0+14 870.7
Meet Existing
+0.34%
870.5 870.7 24" 24" 871.0 870.0
0 +14 +50 +25 +75

EXISTING CO. RD. 62 TYPICAL SECTION
9' 20' 9'
5" T-35
Brick

EXCAVATION	= 202 C.Y.
EMBANKMENT	= 5 C.Y.
EMBANKMENT + 6 %	= 5 C.Y.

CO. RD. 62 CONN.

EXCAVATION	35,194 C.Y.
EMBANKMENT	101 C.Y.
EMBANKMENT + 6 %	107 C.Y.

STA. 191+85 TO STA. 200+00

STA. 190+00 TO STA. 200+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

36
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

BEGIN PROJECT
STA. 200 + 00
F-405 (10)

Section A-A
See Sheet 14
B.W. = 2.0'
S = 2:1
D = 1.0'

SECTION E-E
Thru Dumped Rock

E 2,310,500
N 266,500
E 2,311,000
E 2,311,500
Sta. 200 + 00
Sta. 210 + 00
Begin Sheet
End Sheet
N 266,000
E 2,310,500
E 2,311,000
E 2,311,500

L.A. R/W
Brush & Small Trees
Garden
Fr. Chicken House
Brush & Grass
Limit of Construction
Brush
Small Pines 2 to 4'
Soil Erosion Planting Area
Bench
Brush & Trees 6" to 10"
24"Ø Apple
Fr. Shed
Privy
Conc. Well Fr.
Well 8' Deep
Septic Tank
Hg. Sty.
Fr. House
24" Maple
Brk. Walk
Brk. Landing
20" Maple
10" Locust
6" Maple
Conc. Steps
M.B.
Field
Fr. Gar.
Cinder Pack 24'
Fr. Shed
Well in house 30' Deep
Septic Tank
Fr. Ho.
Drilled Well 224' Deep
Dug Well 30' Deep
FOR PROFILE SEE SHEET 76
Sta. 204 + 00 ℄ Reloc. U.S. 36 =
Sta. 0 + 20 ℄ Temporary Cross-Over
P.C. Sta. 207 + 74.84
Shrub
Well
Fr. Garage
Cinder Drive
Garden
Trees 6" to 10"
10" Decidious & Conif.
10" V.C.P. Outlet Full Mud
15" V.C.P.
12" V.C.P.
24' Pavement
6" H.P. Gas Line
12" Casing
268'-27"
Gas Line Marker
Guard Rail
Sign
R=40'
90°
C.B.
Post
Billboard
Provide 68-12" Temp. Pipe
+74.31
90°00'00"
205 ℄ Reloc. 206 U.S. 36 207 +25 208 209
S 88°00'57" E
Brush & Small Trees 3" to 6"
Conc. Blk. Gar.
8" V.C.P.
Asb. Shingled House
Low Wire
Conc. Walk
Conc. Abut.
Limit of Construction
6" H.P. Gas Line
(Asphalt)
COUNTY RD. 62
Existing R/W Line
Guard Rail
Existing R/W Line
Existing R/W Line
Pennsylvania R.R.
387.12'
Brush
Conc. Abut.
Guard Rail
Sign
Existing R/W Line
Abandoned Haul Road
PAT
Brush
Brush
Brush
Oc Elm
12" Elm
2-16" Elm
15" Locusts
8" Oc
Existing Bridge Data
Type: Main Span - Pony Truss
Appr. Spans - Encased Steel Beams
Spans: Main - 86' & Appr's. - 15'
Roadway: 19' Throughout
Deck: Reinf. Conc. Deck & Curbs. Brick & Bit. Wearing Surf.
Abutments: Conc.
Piers: Conc. with Timber Bents

CURVE DATA
P.I. Sta. 216 + 10.66
Δ = 16°35'58" Lt.
D = 1°00'00"
R = 5729.58'
L = 1659.93'
T = 835.82'
E = 60.64'

FOR PROFILE OF TURNAROUND SEE SHEET 83

R=25'
12'
35'
2-W
R=25'
3-P
12-R
9-R
16-R

157.98'
Move to Rt. Sta. 11 + 64
LIMIT OF WORK
STA. 10 + 00.00 =
STA. 13 + 96.36
1-P
M.B.
R/W
PRC. Sta. 10+37.98
P.C. Sta. 10+70.16
R=50'
P.C. Sta. 10+37.98
Existing R/W Line
M.B.
℄ of Existing U.S. 36
C.B. with 2.5'x2.5' Grate
12" V.C.P.
16" x 24" Grate
8" Maple
Hedge 2 High
36" Maple
30" Maple
2 Sty. Fr. Ho.
Conc. Steps & Walk
Existing Iron Pin
Earth & Cinder Drive
END WORK
STA. 0+40
R=20'
Sign
60'
R=40'
℄
Elev. 899.2
R=10'
30'
12'
Cul-De-Sac 'A'
10'
10'
13'
Blk. Gar.
11-R
+53.0, 90°00'
Tan. to Curve
P.T. Sta. 13+96.36
R=50'
PRC Sta. 13+27.89
P.T. Sta. 13+68.71
Δ = 78°27'47" Rt.
P.I. Sta. 10 + 54.65
Δ = 36°52'12" Rt.
12.5'±
10'
Existing R/W Line
R/W
R/W
R/W
Existing R/W Line
CUL-DE-SAC 'A'
FOR TYPICAL SECTION
SEE SHEET 62
FOR PROFILE
SEE SHEET 37
FOR DRIVEWAY TYPICAL
SEE SHEET 11

4'-0" 9'-0" 9'-0" 4'-0"
6"
1"/Ft.
3"/16"/Ft.
3"/16"/Ft.
6"
1"/Ft.
1 2 3
TYPICAL SECTION TEMPORARY CROSS-OVER

4'-0" 6'-0" Min. 6'-0" Min. 4'-0"
6"
1"/Ft.
3"/16"/Ft.
3"/16"/Ft.
6"
1"/Ft.
1 2 4
TYPICAL SECTION T-TYPE TURNAROUND

LEGEND
≠ (1) T-35 2"Asphaltic Concrete Surface Course Type C (70-85) Placed in 2-1" Courses
(2) T-30 Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3, Applied at a Rate of 0.4 Gal. per S.Y.
(3) B-19 6" Aggregate Base Course
(4) B-19 8"Aggregate Base Course

≠ Thickness shown is "designed" thickness as described in Sec. T-35.01.

(R) ROADWAY

REF. NO.	STATION FROM	TO	SIDE	E-1 COMP. SUB-GRADE S.Y.	E-8 REMOVAL & DISPOSAL OF EXISTING PAVEMENT (RIGID) (FLEX.) S.Y.	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP) L.F.	I-15 GUARD RAIL REMOVED & DISPOSED OF L.F.	S-24 SPECIAL REMOVAL OF EXISTING STRUCT. ABANDONED DRILLED WELL EA.
1-R	200+00	203+50	Rt.			350.0		
3-R	209+13	210+00	Rt.			87.5		
4-R	202+57	203+75	Rt.				130	
5-R	204+34	207+00	Rt.				277	
6-R	205+00	205+27	Rt.				45	
7-R	204+66	205+39	Rt.				132	
8-R	199+50	207+32	Rt.		2,098	25.0	Lump	
9-R	207+70		Rt.					
10-R	Cul-De-Sac 'A'			818				
11-R	Cul-De-Sac 'A'	11+53	Rt.	78				
12-R	208+25		Rt.	77				
13-R	204+69	207+70	Rt.		549			
14-R	202+63		Lt.					1
15-R	204+00		Rt.	217	217	12.5		
16-R	208+25		Rt.					
	TOTAL			1,190	2,098	766	475.0	584 LUMP

(P) PAVEMENT

REF. NO.	STATION FROM	TO	SIDE	B-19 AGGR. BASE COURSE C.Y.	T-30 BIT. PRIME COAT GAL.	T-35 ASPH. CONC. COURSE TYPE C C.Y.
1-P	Cul-De-Sac 'A'			189	328	46
2-P	Cul-De-Sac 'A'	11+53	Rt.	11	31	5
3-P	208+25		Rt.	17	31	5
4-P	204+00			38	87	13
	TOTAL			255	477	69

(D) DRAINAGE

REF. NO.	STATION FROM	TO	SIDE	E-12 PIPE REMOVED 15" AND UNDER 12"	I-1 PIPE CLASS E-1 SEC. M-68(a) 27"	I-1 PIPE CLASS F-4 SEC. M-64(a) d=12" d=50" d=18"	I-2 MASONRY	I-3 CL. I-3 6"–60" BEND	I-5 CL. J-1 27"X12" TEE	I-8 STD. CATCH BASIN #2-2A #2-3 EA.	I-10 DUMPED ROCK CHANNEL PROTECT. C.Y.	L-10 SODDING S.Y.	L-120 JUTE MATTING S.Y.
1-D	200+00	203+25	Lt.			325							
2-D	200+30	200+50	Rt.	20									
3-D	200+70	200+90	Rt.	20									
4-D	202+60	204+10											
5-D	202+23	202+50	Rt&Lt										
6-D	199+55	202+23	Rt.		268		142	0.47		1	15		125
7-D	202+36	202+50											
8-D	202+23	205+00	Rt.	14									
9-D	199+81	201+50	Lt.										
10-D	202+42	202+75	Lt.				278				9	113	
11-D	209+50		Rt.								24		
12-D	207+50	210+00	Rt.		250								
	TOTAL			40	268	250	325	278	142	047	1	48	113	125

CUL-DE-SAC 'A'
SUPERELEVATION TABLE

	STATION	CURVE TO LEFT LT. EDGE	℄	SUPER 0.016 FT./FT. RT. EDGE
Transition	10+00	MEET EXISTING		
	+25	—	897.42	897.31
	+50	—	897.92	897.96
	+55.00	898.02	898.02	898.09
	+70.16	898.23	898.32	898.48
	+81.66	898.39	898.55	898.71
Full Super	11+00	898.76	898.92	899.08
	+25	899.18	899.34	899.50
	+50	899.49	899.65	899.81
	+75	899.68	899.84	900.00
	12+00	899.77	899.93	900.09
	+25	899.74	899.90	900.06
	+50	899.60	899.76	899.92
	+75	899.35	899.51	899.67
	13+00	898.98	899.14	899.30
Transition	+25	898.50	898.66	898.82
	+27.89	898.43	898.59	898.75
	+42.50	898.14	898.26	898.38
	+50	—	898.07	898.17
	+75	—	897.45	897.48
	+96.36	MEET EXISTING		

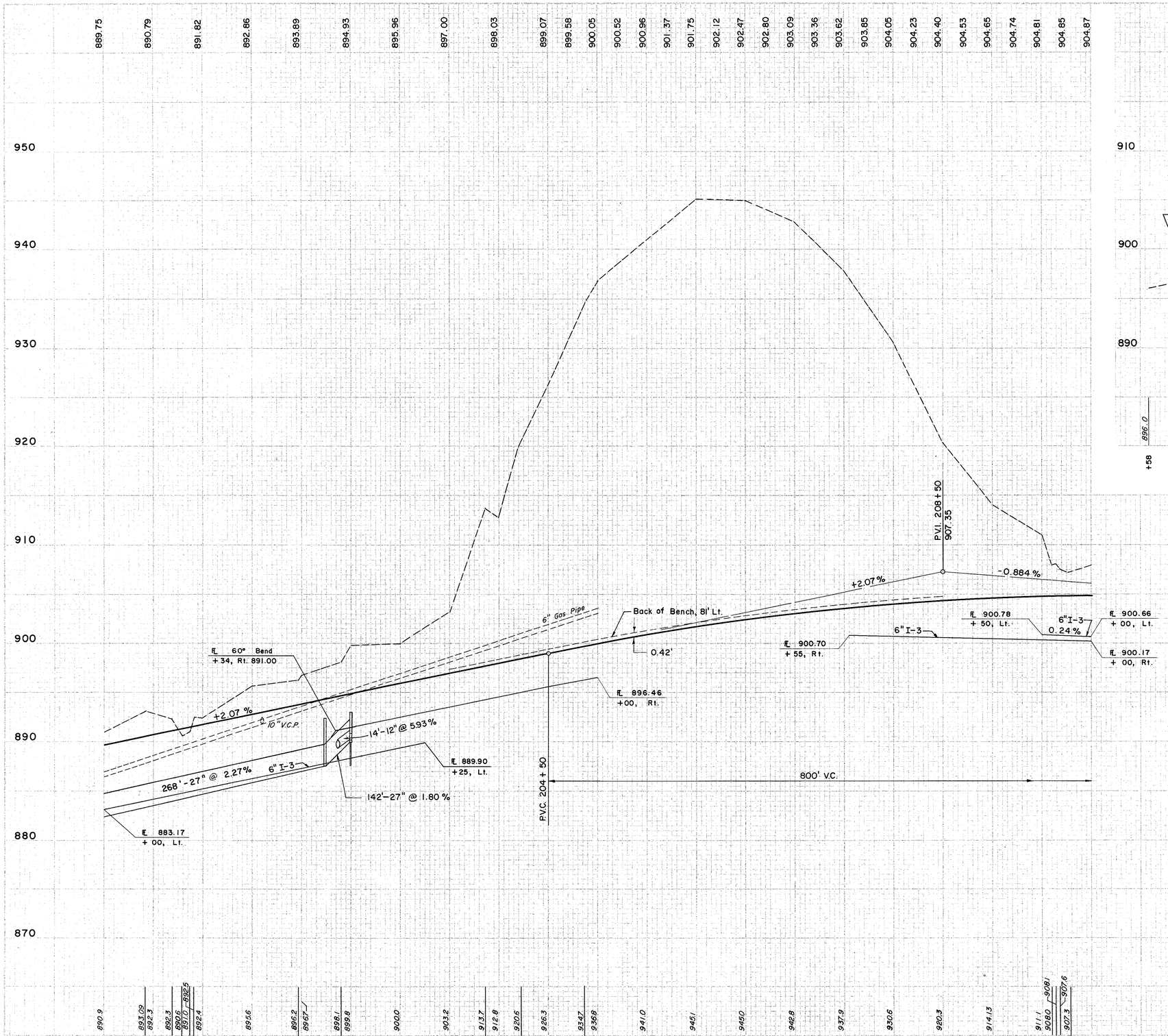
EXCAVATION	= 2,464 C.Y.
EMBANKMENT	= 7 C.Y.
EMBANKMENT + 6 %	= 7 C.Y.

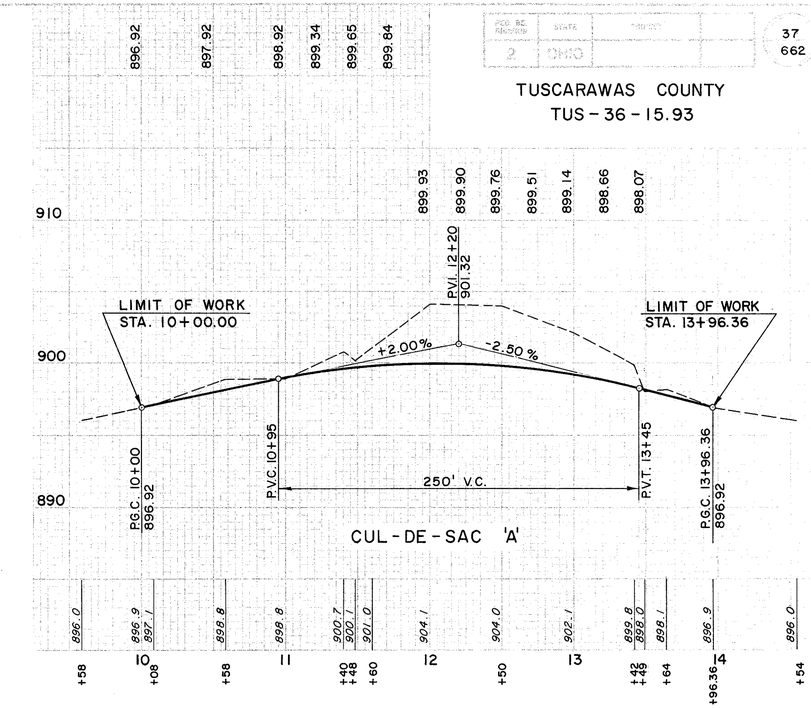
CUL-DE-SAC 'A'

EXCAVATION	= 141,285 C.Y.
EMBANKMENT	= 336 C.Y.
EMBANKMENT + 6 %	= 356 C.Y.

STA. 200+00 TO STA. 210+00

TUSCARAWAS COUNTY
TUS - 36 - 15.93





STA. 200+00 TO STA. 210 + 00

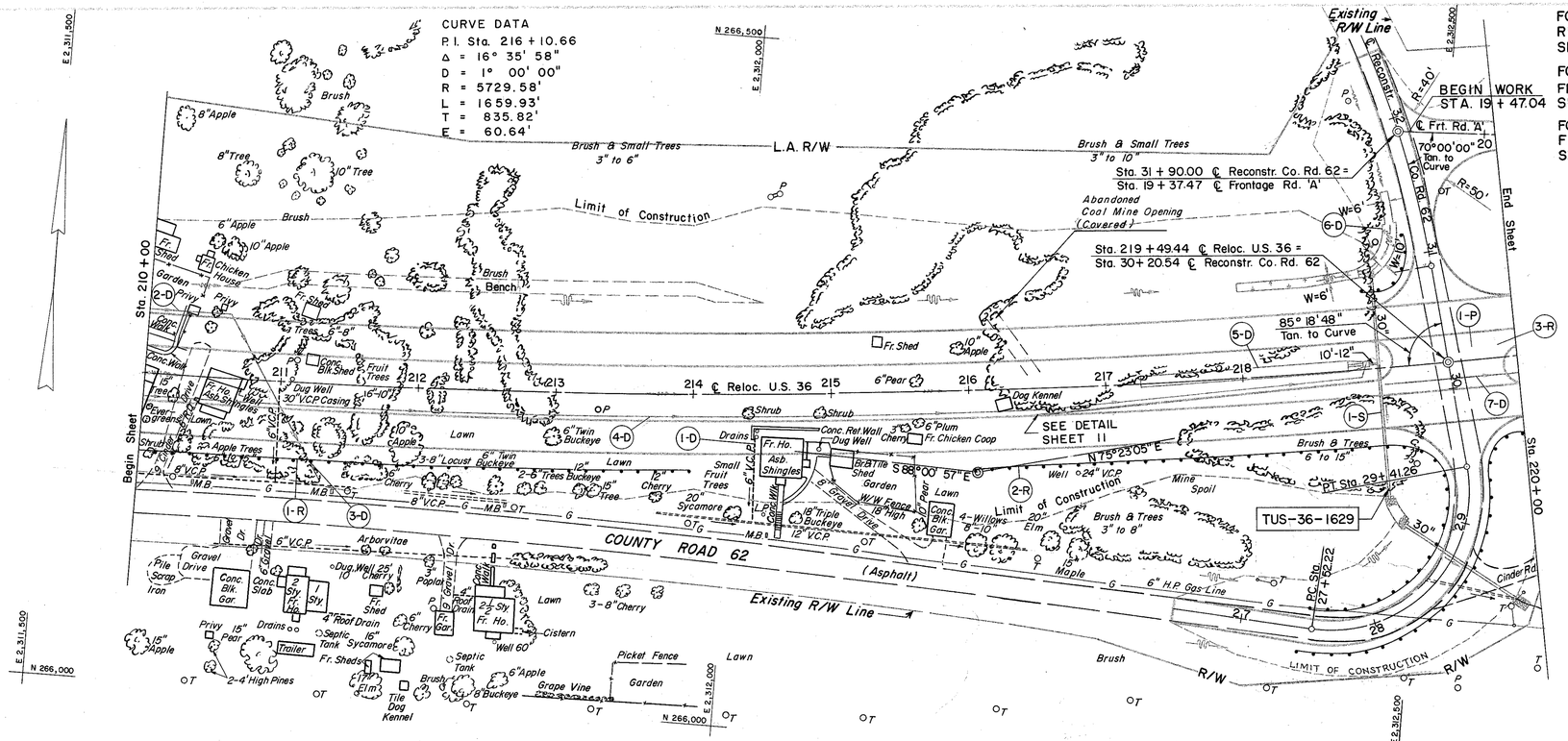
TUSCARAWAS COUNTY
TUS-36-15.93

FOR PLAN & PROFILE OF RECONSTR. CO. RD. 62 SEE SHEET 234

FOR PROFILE OF FRONTAGE RD. 'A' SEE SHEET 237

FOR PAV'T. QUANTITIES OF FRONTAGE RD. 'A' SEE SHEET 39

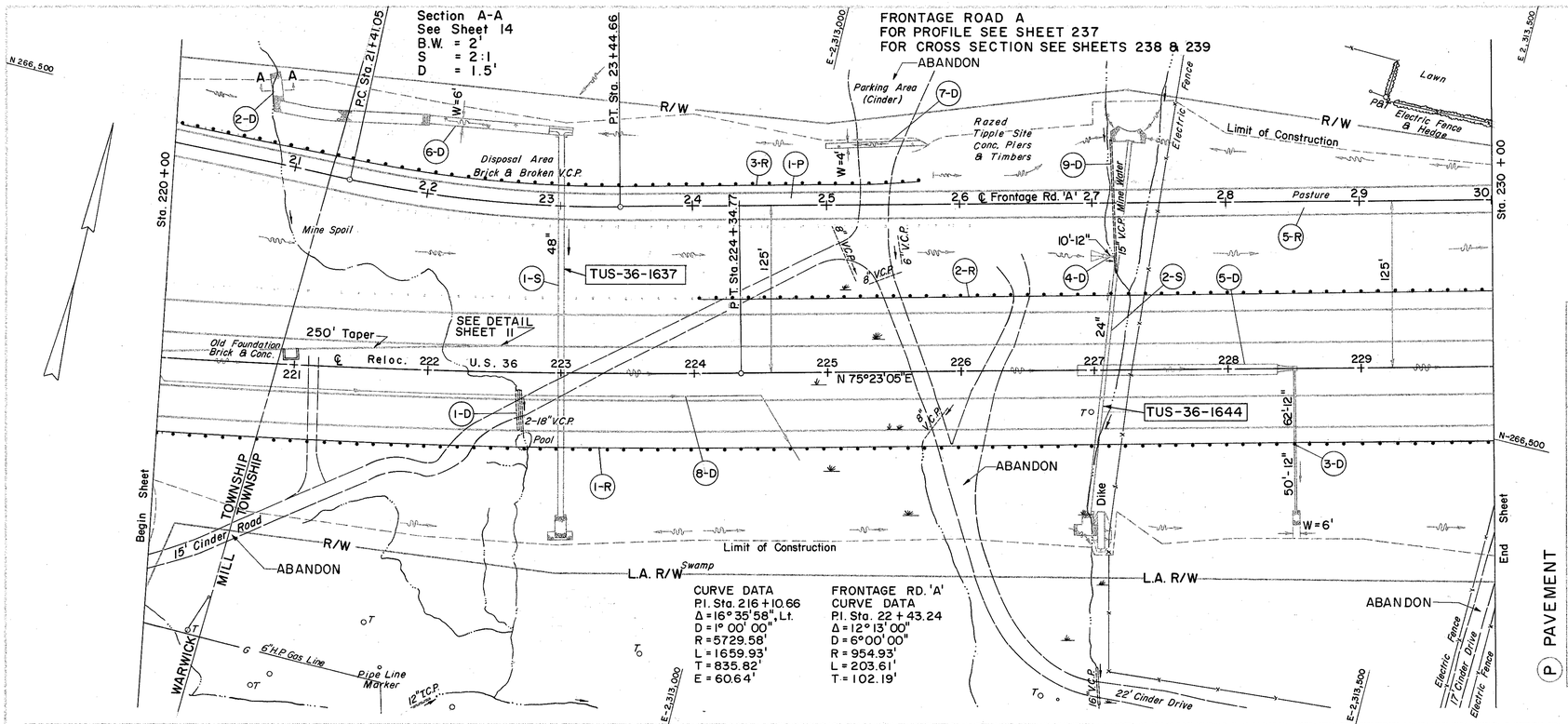
FOR MEDIAN CROSS-OVER DETAILS SEE SHEET 65

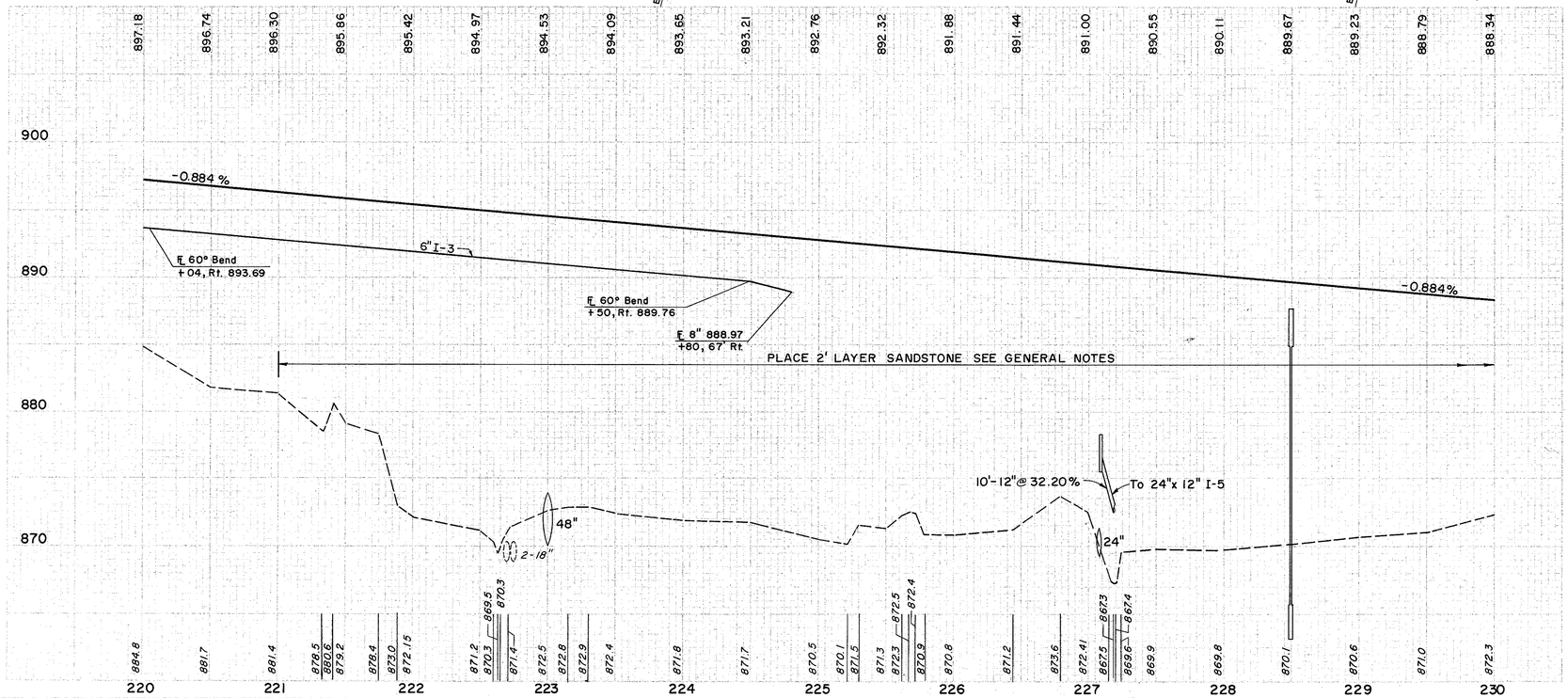

CURVE DATA
P.I. Sta. 216 + 10.66
Δ = 16° 35' 58"
D = 1° 00' 00"
R = 5729.58'
L = 1659.93'
T = 835.82'
E = 60.64'
N 266,500
E 2,311,500
E 2,312,000
E 2,312,500
N 266,000
E 2,311,500
E 2,312,000
N 266,000
Existing R/W Line
BEGIN WORK STA. 19 + 47.04
℄ Frt. Rd. 'A'
70°00'00" Tan. to Curve
R=40'
R=50'
End Sheet
Sta. 31 + 90.00 ℄ Reconstr. Co. Rd. 62 =
Sta. 19 + 37.47 ℄ Frontage Rd. 'A'
Sta. 219 + 49.44 ℄ Reloc. U.S. 36 =
Sta. 30 + 20.54 ℄ Reconstr. Co. Rd. 62
85° 18' 48" Tan. to Curve
10'-12"
W=6'
W=10'
30"
Brush & Small Trees 3" to 6"
Brush & Small Trees 3" to 10"
L.A. R/W
Limit of Construction
Abandoned Coal Mine Opening (Covered)
Sta. 210 + 00
Begin Sheet
214 ℄ Reloc. U.S. 36 215
SEE DETAIL SHEET 11
N 75° 23' 05" E
S 89° 00' 57" E
PT Sta 29 + 41.26
TUS-36-1629
COUNTY ROAD 62
(Asphalt)
Existing R/W Line
LIMIT OF CONSTRUCTION
R/W
Sta. 220 + 00
Fr. Ho.
Asb. Shingles
Fr. Chicken Coop
Dog Kennel
Conc. Ret. Wall
Dug Well
Brick Tile Shed
Garden
Lawn
Well
Mine Spoil
Brush & Trees 6" to 15"
Brush & Trees 3" to 8"
Gravel Drive
W.W. Fence 16" High
Conc. Blk. Gar.
Conc. Blk. Shed
Fruit Trees
Small Fruit Trees
Arborvitae
Gravel Dr.
Conc. Slab
Fr. Shed
Trailer
Septic Tank
Cistern
Well 60'
Chicken House
Privy
Conc. Walk
Apple Trees
Grape Vine
Picket Fence
Garden
Tile Dog Kennel
Brush
Lawn
Drains
Shrub
Bench
Fr. Shed
Dug Well 25'
Dug Well 30" V.C.P. Casing
Maple
Elm
Poplar
Cherry
Pear
Apple
Buckeye
Sycamore
Pine
Locust
Willow
Triple Buckeye
Twin Buckeye
Plum
Privy
Trees
Brush
Lawn
Gravel
Pile Scrap Iron
Conc. Blk. Gar.
Fr. Gar.
Fr. Ho.
Asb. Shingles
Conc. Blk. Shed
Conc. Blk. Gar.
Fr. Shed
Fr. Gar.
Fr. Ho.
Conc. Blk. Gar.
Conc. Blk. Shed
Conc. Blk. Gar.
Fr. Ho.
Asb. Shingles
Fr. Shed
Fr

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

39
662

TUSCARAWAS COUNTY
TUS-36-15.93





(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE	I-22 SUBBASE	T-30 BIT. PRIME COAT	T-35 ASPH. CONC. SURF. COURSE TYPE A
				C.Y.	C.Y.	GAL	C.Y.
1-P	19+47.04	31+32.00		412	330	1,127	3,098

(S) STRUCTURE

REF. NO.	STATION	I-1 PIPE CLASS A-1 SEC. M-6.8(b) CONC. END 24" L.F.	I-1 PIPE CLASS A-1 SEC. M-6.8(a) MASONRY SEC. M-6.6(d) 48" C.Y.	I-2	I-5 CL. A-1 24"x12" SEC. M-6.8(b) EA.	I-10 DUMPED ROCK CHANNEL PROTECT C.Y.	I-10 RIPRAP 6" REINF. S.Y.	I-10 SODDING SEE SHEET	
1-S	223+00	87	193	0.82	1	27	5	466	
2-S	227+08								
	TOTAL	87	193	2.54	1	45	14	12	

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. SUB-GRADE S.Y.	I-9 STONE UNDER-DRAINS NO. 2	I-15 GUARD STEEL BEAM STD. TYPE (DEEP) L.F.	I-15 GUARD RAIL WIRE CABLE
1-R	220+00	229+96	Rt.			1000.0	
2-R	224+04	229+91	Lt.			587.5	
3-R	20+10	25+70	Lt.				560
5-R	19+47.04	31+31.45		2,817	480		
	TOTAL			2,817	480	1587.5	560

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	E-12 PIPE REMOVED 15" AND UNDER	E-12 PIPE REMOVED OVER 15"	I-1 12" PIPE CLASS E-1	I-1 PIPE CLASS F-4 SEC. M 6.4(c) 8" L.F.	I-1 PIPE CLASS F-4 SEC. M 6.4(c) 12" L.F.	I-1 6" PIPE CLASS I-3 d=18"	I-2 PIPE CLASS J-1 MASONRY C.Y.	I-5 CL. F-4 12"-25° BEND SEC. M-6.4(d) EA.	I-5 CL. I-3 CL. J-1 6"-60° BEND EA.	I-8 STD. #2-2A C.B.	I-10 DUMPED ROCK CHANNEL PROTECT C.Y.	L-10 SODDING JUTE MATTING S.Y.	L-120 JUTE MATTING S.Y.
1-D	222+65	222+73	Rt.		60					62	2			6		
2-D	20+75-21+94	Frontage "A" Rdwy.	Lt.							0.23		1		3		
3-D	228+50	—	—													
4-D	227+08	227+18	Lt.													125
5-D	226+87	228+37	—			10										
6-D	21+94-22+90	Frontage "A" Rdwy.	Lt.												60	
7-D	25+00-25+75	Frontage "A" Rdwy.	Lt.												33	
8-D	220+04	224+80	Rt.			10			48			1				
9-D	27+15	Frontage Rd. 'A'	℄	100												
	TOTALS			100	60	10	10	50	448	0.23	2	1	2	64	93	125

EXCAVATION	= 2,293 C.Y.
EMBANKMENT	= 23,184 C.Y.
EMBANKMENT + 6 %	= 24,575 C.Y.

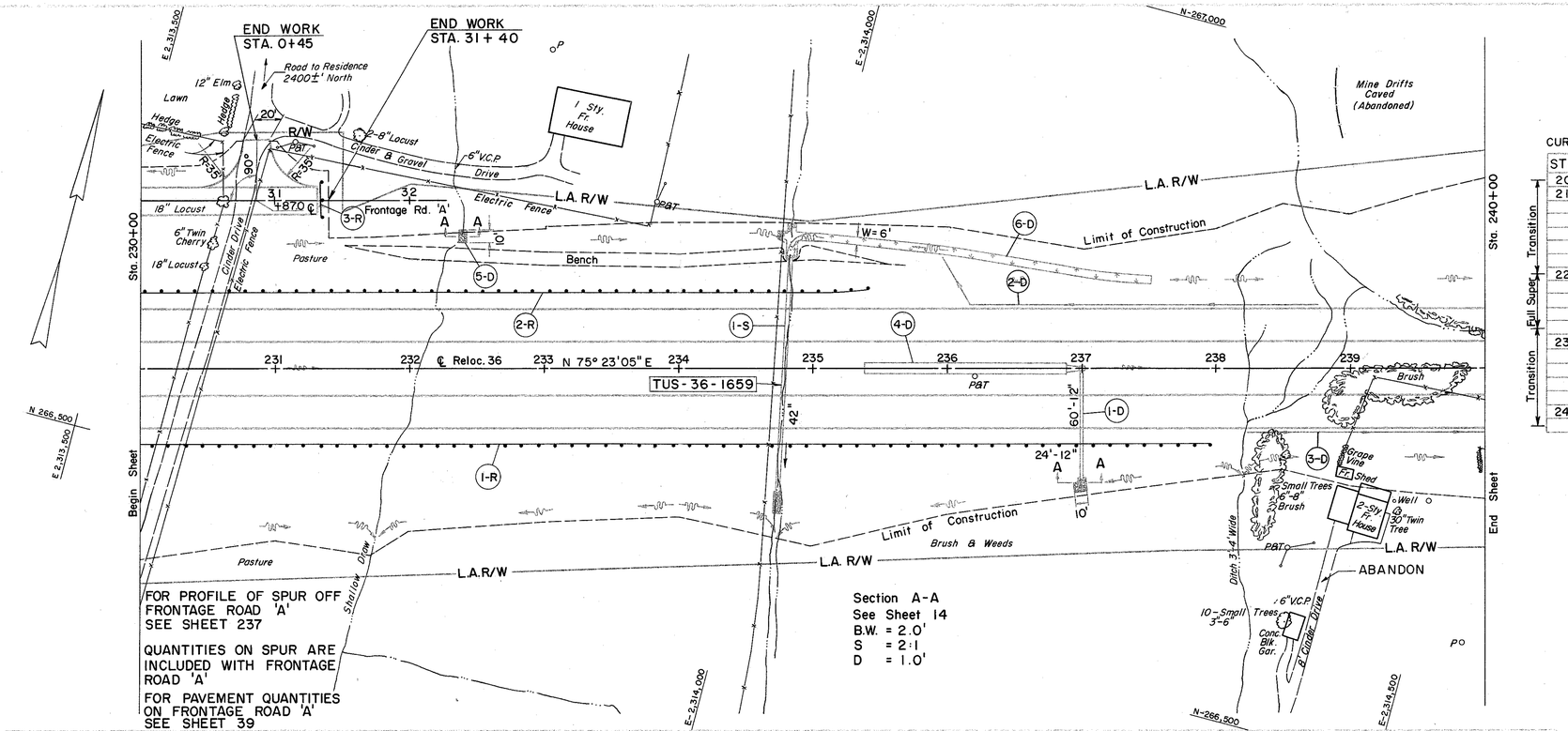
FRONTAGE RD. 'A'
STA. 20+00 TO STA. 31+40

EXCAVATION		686 C.Y.
EMBANKMENT		109,394 C.Y.
EMBANKMENT	6 %	115,958 C.Y.

STA. 220+00 TO STA. 230+00

FED. ROAD DIST. NO.	STATE	PROJECT		40
2	OHIO			662

TUSCARAWAS COUNTY
TUS-36-15.93



FRONTAGE RD. 'A' SUPERELEVATION TABLE

CURVE TO LEFT — SUPER 0.040 FT/FT.

	STATION	LT. EDGE	℄	RT. EDGE
Transition	20+85.05	895.08	895.24	895.08
	21+00	894.82	894.98	894.89
	+25	894.40	894.56	894.60
	+49.05	893.99	894.15	894.31
	+50	893.97	894.13	894.29
	+75	893.41	893.70	893.99
	+97.05	892.92	893.32	893.72
Full Supe	22+00	892.87	893.27	893.67
	+25	892.45	892.85	893.25
	+50	892.02	892.42	892.82
	+75	891.59	891.99	892.39
	+88.66	891.36	891.76	892.16
Transition	23+00	891.22	891.56	891.90
	+25	890.92	891.14	891.36
	+36.66	890.78	890.94	891.10
	+50	890.55	890.71	890.80
	+75	890.12	890.28	890.25
	24+00	889.69	889.85	889.69
	+00.66	889.68	889.84	889.68

(S) STRUCTURE

REF NO.	STATION	I-1 42" PIPE CL. A-I SEC. M-6.6(b) 1/3 VIT. LINED L.F.	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP) L.F.
I-S	234+80	174	1,375.0

(R) ROADWAY

REF NO.	SIDE	FROM STATION	TO STATION		I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP) L.F.
1-R	S	229+96	237+96	Rt.	800.0
2-R	E	229+91	235+41	Lt.	550.0
3-R	E	31+34	Frontage Rd. ℄		25.0
			TOTAL		1,375.0

(D) DRAINAGE

REF NO.	SIDE	FROM STATION	TO STATION		I-1 PIPE CLASS F-4 SEC M-6.4(c) 8" L.F.	I-1 PIPE CLASS F-4 SEC M-6.4(c) 12" L.F.	I-1 6" PIPE CLASS I-3 d=18" L.F.	I-2 12" PIPE CLASS J-1 (MASONRY) C.Y.	I-5 CL. F-4 12"-25° BEND SEC M-6.4(c) EA.	I-5 CL. I-3 6"-60° BEND EA.
1-D	S	237+00			24		60	0.23	2	
2-D	S	235+97	238+75	Lt.		10				1
				Rt.			292			
3-D	E	238+25	240+00	Rt.			175			
4-D	E	235+37	236+87							
5-D	E	232+40		Lt.						
6-D	E	234+95	237+50	Lt.						
			TOTAL			10	24	467	60	0.23	2	1

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REVISIONS	STATE	PROJECT	
2	OHIO		

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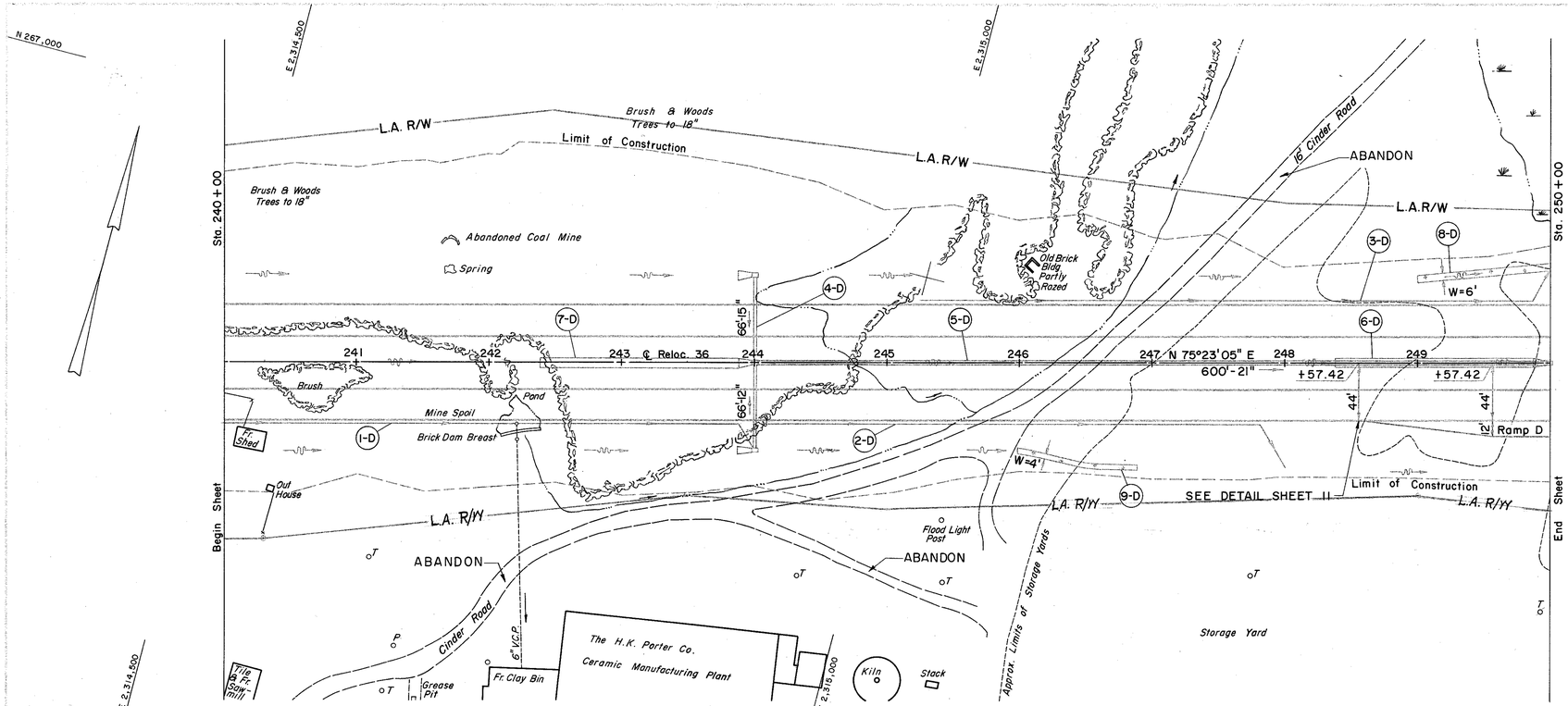
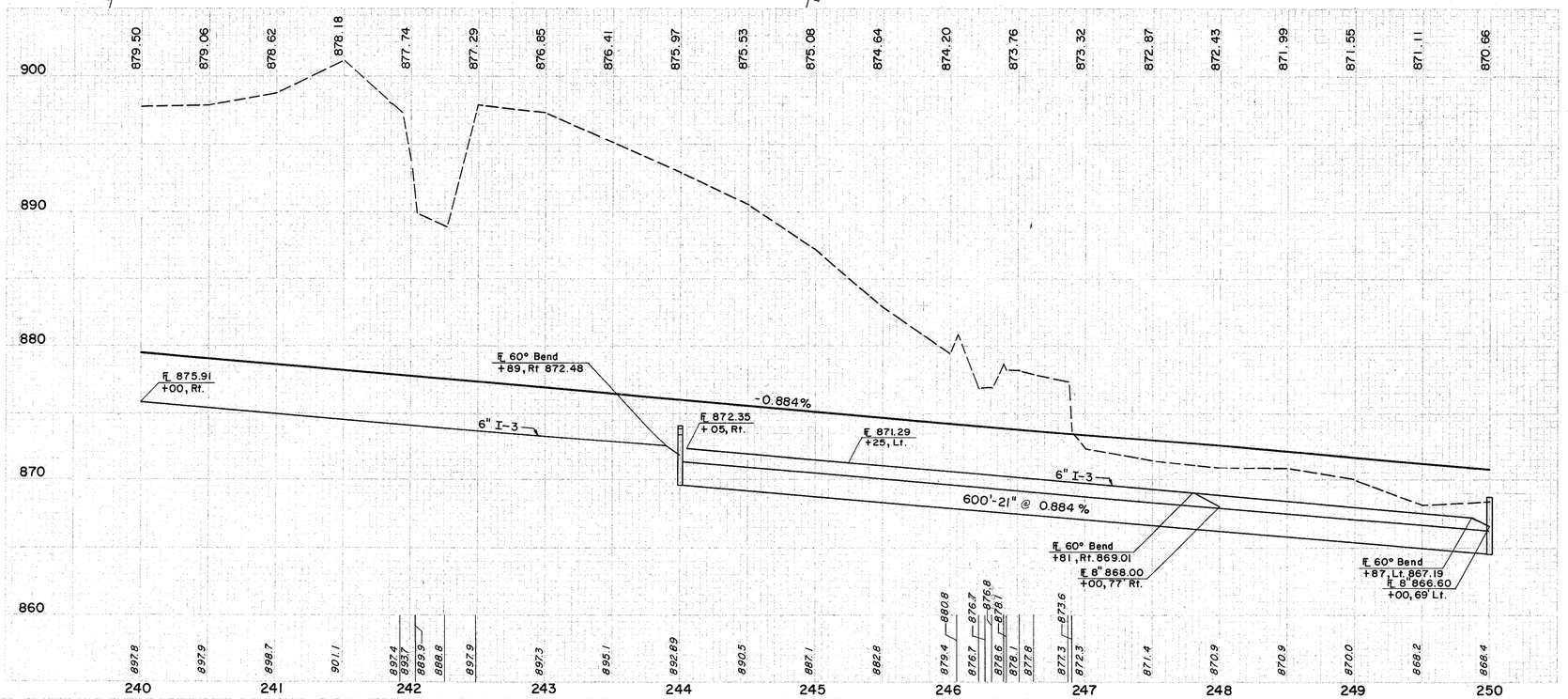
TUSCARAWAS COUNTY
TUS – 36 – 15.93





(D) DRAINAGE

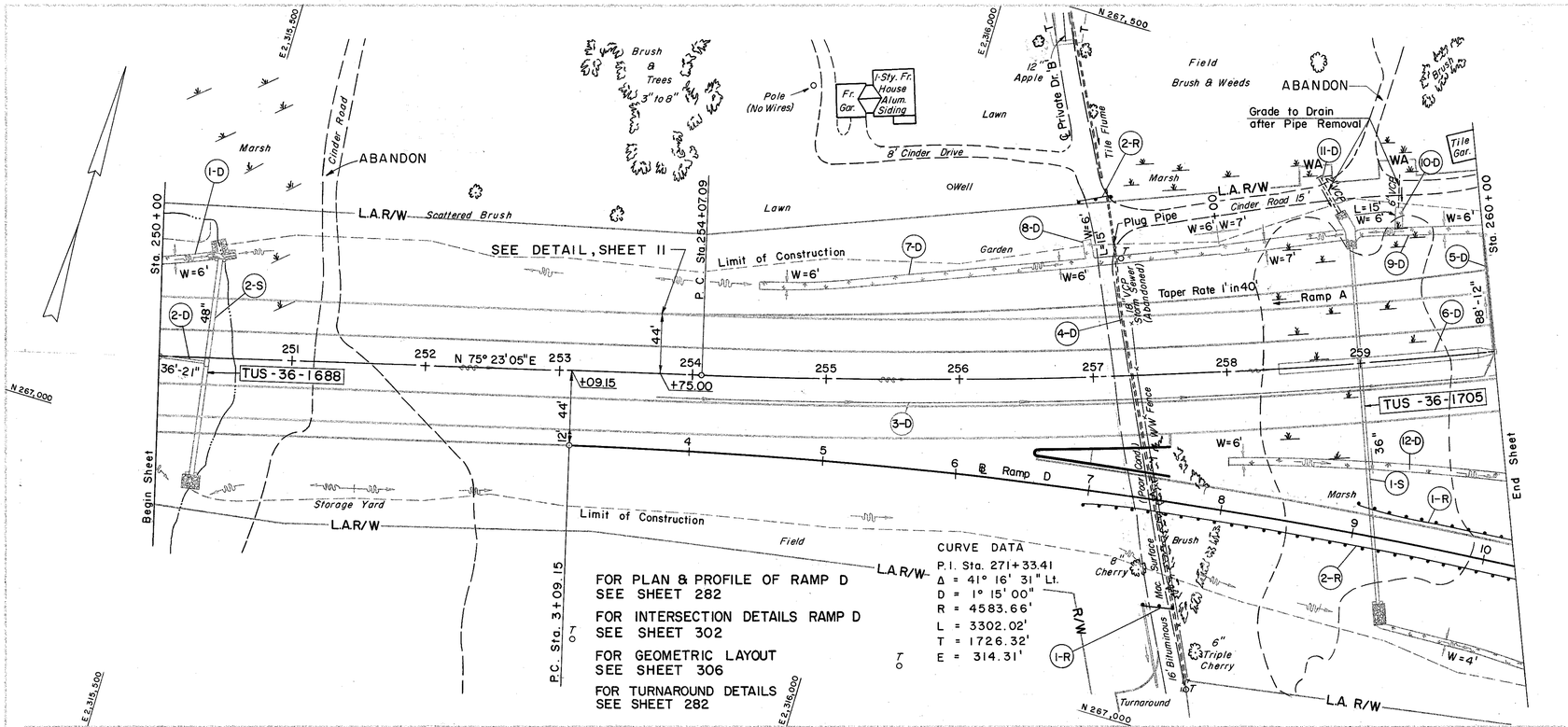
REF. NO.	STATION FROM	STATION TO	S I D E	21" PIPE CL. E-1 SEC. M-6.8(a)	PIPE CLASS F-4 SEC. M-6.4(c) 6"	PIPE CLASS F-4 SEC. M-6.4(c) 8"	6" PIPE CLASS I-3 d = 18"	PIPE CLASS J-1 SEC. M-6.8(b) 12"	PIPE CLASS J-1 SEC. M-6.8(b) 15"	I-5 CL. I-3 6"- 60° BEND EA.	I-8 STD. #2-2A C.B.	L-10 SODDING S.Y.	L-120 JUTE MATTING
1-D	240+00	244+00	Rt.		10					1			
2-D	244+05	248+00	Rt.			10	402			1			
3-D	245+25	250+00	Lt.			10	404			1			
4-D	244+00	-	℄				478	66	66		3		
5-D	244+00	250+00	℄	600							1	67	125
6-D	248+37	249+87	℄								1	40	125
7-D	242+37	243+87	℄										
8-D	249+00	250+00	Lt.										
9-D	246+00	246+90	Rt.										
	TOTAL			600	10	20	1,284	66	66	3	4	107	250

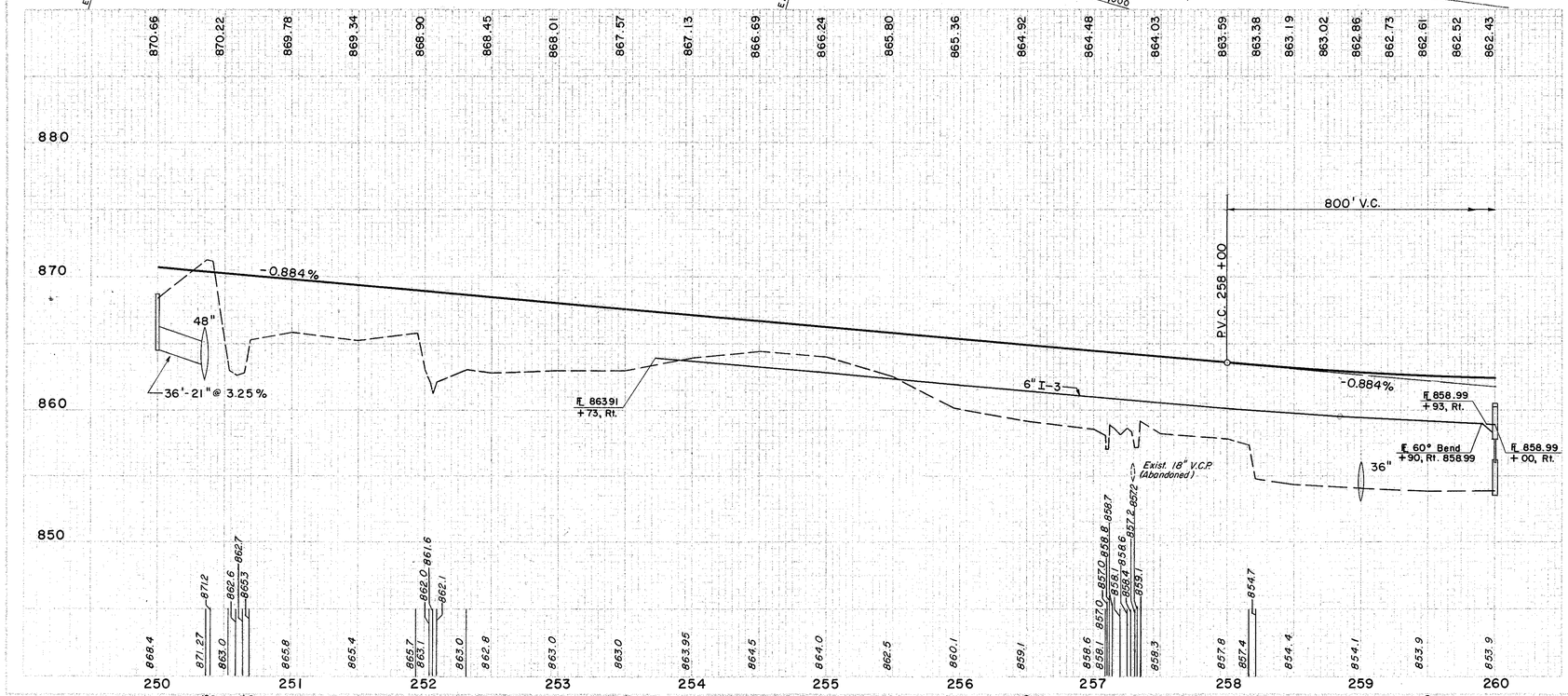
Excavation	85,451 C.Y.
Embankment	1,335 C.Y.
Embankment @ 6	1,415 C.Y.

STA. 240 + 00 TO STA. 250 + 00

SEC. NO.	STATE	PROJECT		42
3	OHIO			662

TUSCARAWAS COUNTY
TUS-36-15.93





* The 21" branch will not be lined with Vitrified Pipes

(S) STRUCTURE

REF. NO.	STATION	I-15 GUARD STEEL BEAM STD. TYPE (DEEP) L.F.
1-S	259+00	25.0
2-S	250+36	25.0
	TOTAL	50.0

(R) ROADWAY

REF. NO.	STATION FROM	TO	SIDE	I-1 PIPE CLASS A-1 48" SEC. M-6.01 (SEC. M-6.06) L.F.	I-2 MASONRY 1/2 Vit. Lined C.Y.	I-5 CL. A-1 48"x21" TEE (SEC. M-6.06) EA.	I-10 DUMPED ROCK CHANNEL PROTECT. C.Y.	L-10 SODDING SEE SHEET S.Y.
1-R	257+42		Rt.	268	1.18	1	2.2	4 469
2-R	257+05		Lt.	162	1.72		2.2	7 468
	TOTAL			268	2.90	1	4.4	11

(D) DRAINAGE

REF. NO.	STATION FROM	TO	SIDE	E-12 PIPE REMOVED 15" AND UNDER	E-12 PIPE REMOVED OVER 15"	I-1 21" PIPE CLASS F-1 Sec. M-4.5(a) or M-4.6(a) L.F.	I-1 6" PIPE CLASS F-4	I-1 12" PIPE CLASS I-3	I-2 MASONRY C.Y.	I-5 CL. I-3 6"-60° BEND EA.	I-8 STD. #2-2A C.B.	L-10 SODDING S.Y.	L-120 JUTE MATTING
1-D	250+00	250+34	Lt.									26	
2-D	250+00	250+36	Rt.			36							
3-D	253+73	260+00	Rt.					10	630				
4-D	257+23		℄										
5-D	260+00		℄		250			88	0.23	1	1		125
6-D	258+37	259+87	Lt.										
7-D	254+50	259+00	Lt.										
8-D	257+00		Lt.										
9-D	259+00	260+00	Lt.									307	10
10-D	259+38		Lt.	24								83	10
11-D	258+87		Rt.	30								160	
12-D	258+00	260+30	Rt.										
	TOTAL			54	250	36		10	630	88	0.23	1	125

Excavation	1,284 C.Y.
Embankment	28,719 C.Y.
Shrinkage 6	30,442 C.Y.

STA. 250+00 TO STA. 260+00

MICROFILMED
FEB 21 1989

TUSCARAWAS COUNTY
TUS-36-15.93

FOR PLAN & PROFILE OF
TRENTON AVE. CONNECTOR
SEE SHEET 244

RAMP A
SEE SHEETS 245 & 246

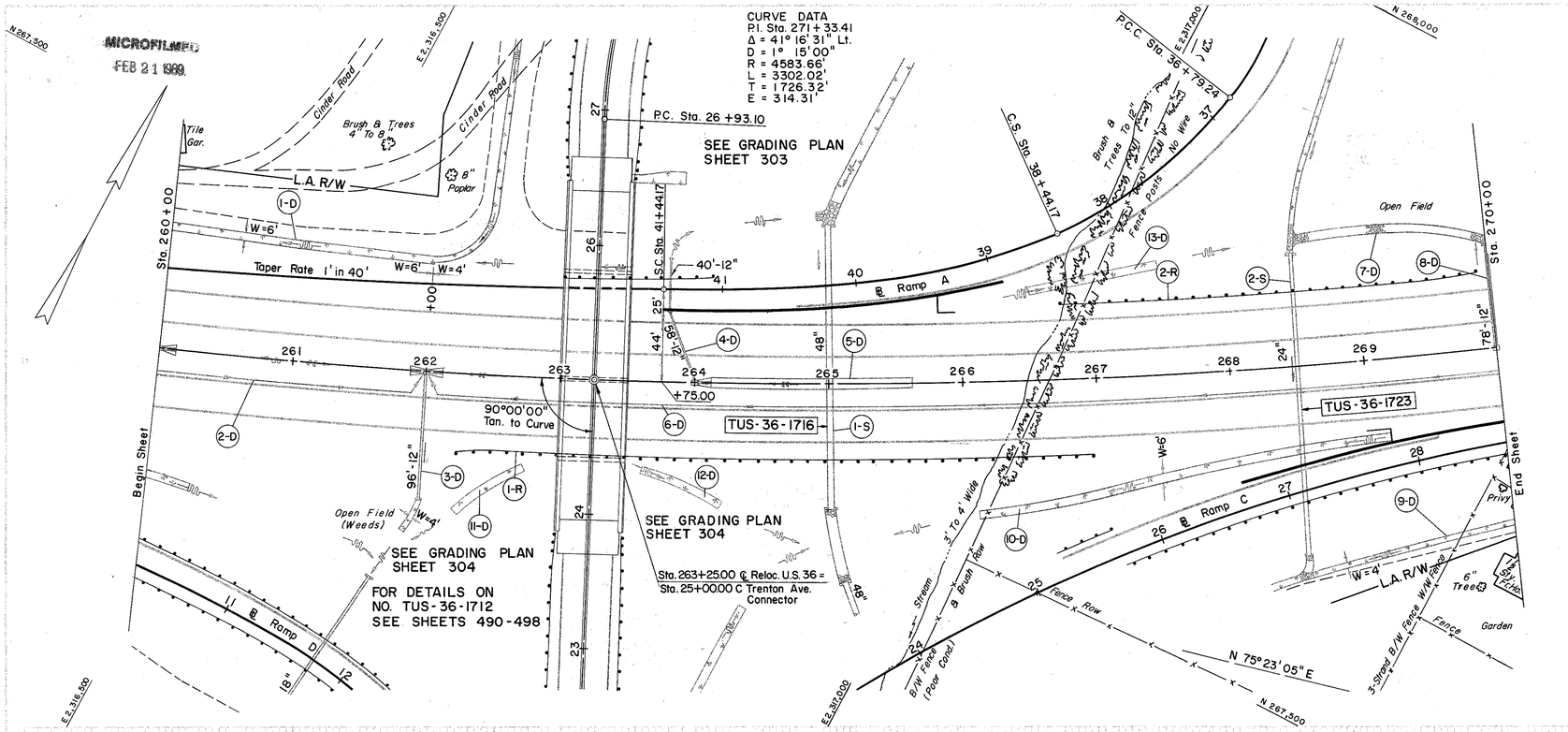
RAMP C
SEE SHEET 277

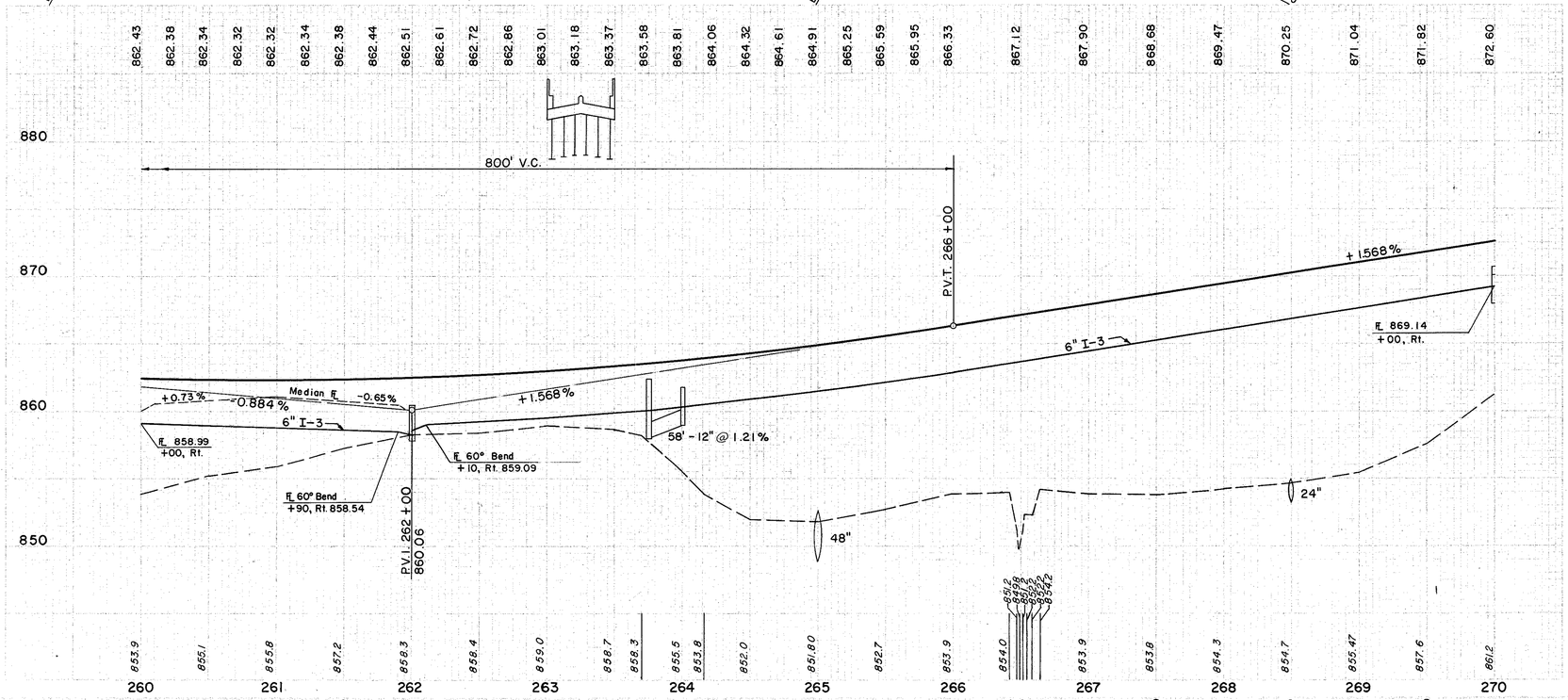
RAMP D
SEE SHEET 282

FOR INTERSECTION DETAILS
RAMP A
SEE SHEET 298

RAMP C
SEE SHEET 301

FOR GEOMETRIC LAYOUT
SEE SHEETS 305 & 306





(S) STRUCTURE

REF. NO.	STATION	I-1 PIPE CLASS A-I SEC. M-66(b) CONC ENC. 48" L.F.	I-2 SEE SHEET
1-S	265+00	212	470
2-S	268+50	226	471
	TOTAL	226	212

(R) ROADWAY

REF. NO.	STATION FROM	TO	S I D E	I-15 GUARD RAIL STEEL BEAM STD TYPE (DEEP) L.F.
1-R	262+27	268+94	Rt.	475.0
2-R	268+75	269+91	Lt.	312.5
	TOTAL			787.5

(D) DRAINAGE

REF. NO.	STATION FROM	TO	S I D E	I-1 6" PIPE CLASS F-4 L.F.	I-1 CLASS I-3 d=18" L.F.	I-2 12" PIPE CLASS J-1 L.F.	I-2 MASONRY C.Y.	I-5 CL. I-3 6"-60° BEND EA.	I-8 STD. CATCH BASIN #2-2A EA.	I-8 #6 EA.	I-10 DUMPED ROCK CHANNEL PROTECT. C.Y.	L-10 SODDING S.Y.	L-120 JUTE MATTING S.Y.
1-D	260+00	262+00	Lt.		208							69	
2-D	259+93	262+00	Rt.	10								209	
3-D	262+00	-	℄ & Rt.			96	0.23	1	1		11	44	
4-D	263+80	264+00	℄ & Lt.			98	0.23		1			48	
5-D	264+13	265+63	℄							1		70	
6-D	262+00	270+00	Rt.	10	804			1			48	584	125
7-D	268+55	270+00	Lt.			78	0.23		1				
8-D	270+00	-	℄ & Lt.										
9-D	27100 Rev	270+00	Rt.										
10-D	266+12	269+15	Rt.										
11-D	262+26	262+75	Rt.										
12-D	263+63	264+22	Rt.										
13-D	266+52	267+50	Lt.	20	1,012	272	0.69	2	3	1	48	584	125
	TOTAL												

EXCAVATION	1,340 C.Y.
EMBANKMENT	52,302 C.Y.
SURFACING	6 55,440 C.Y.

STA. 260+00 TO STA. 270+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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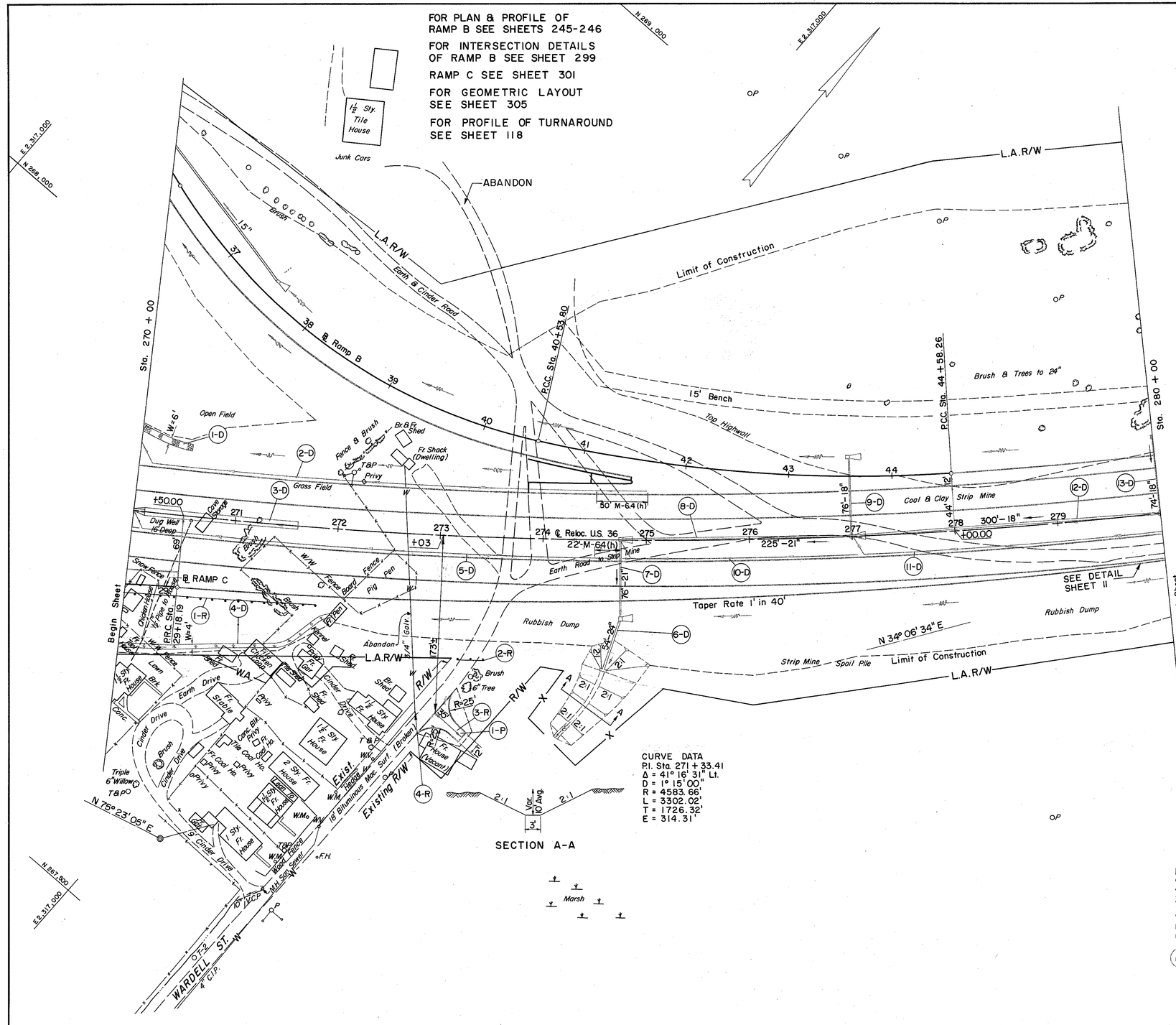
TUSCARAWAS COUNTY
TUS-36-15.93

FOR PLAN & PROFILE OF RAMP B SEE SHEETS 245-246
FOR INTERSECTION DETAILS OF RAMP B SEE SHEET 299
RAMP C SEE SHEET 301
FOR GEOMETRIC LAYOUT SEE SHEET 305
FOR PROFILE OF TURNAROUND SEE SHEET 118



(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 PIPE CLASS E-1 SEC. M-6.8(a) 18" 2"	I-1 PIPE CLASS E-1 SEC. M-6.8(b) 24"	I-1 PIPE CLASS F-4 SEC. M-6.4(c) 8"	I-1 6" PIPE CLASS I-3 SEC. M-6.4(h) d=12"	I-1 PIPE CLASS J-1 SEC. M-6.8 (b) d=18" 18" 2"	I-2 MASONRY C.Y.	I-5 CLASS I-3 6"-60° SEC. M-64 (h) BEND	I-5 CLASS I-3 6"-60° SEC. M-64 (h) WYE	I-5 CLASS I-3 6"-60° SEC. M-64 (h) EA.	I-8 STD. #2-2A C.B.	I-10 DUMPED ROCK CHANNEL PROTECT. C.Y.	I-10 SODDING S.Y.	I-120 JUTE MATTING
				L.F.					C.Y.							
1-D	270+00	270+50	Lt.			10	50	456				1				
2-D	270+00	275+00	Lt.												97	125
3-D	270+13	271+63	℄													
4-D	270+00	272+00	Rt.													
5-D	270+00	274+72	Rt.			10	22	451	0.41			1	2			
6-D	274+60	274+75	Rt.		54											
7-D	274+75	277+00	℄&Rt.	225												
8-D	274+75	277+00	℄													
9-D	277+00	—	℄&Lt.				76									
10-D	274+75	277+07	Rt.			10		240				1	2			
11-D	277+00	280+00	Rt.			10		300								
12-D	277+00	280+00	℄	300												
13-D	280+00	—	℄&Lt.				74									
	TOTAL			300	225	54	30	10	612	907	150	76	0.41	3	1	6	97	125

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. SUB-GRADE S.Y.	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP) L.F.	Z-1124 REMOVE SECTION OF EXIST. WATER LINE & PLUG L.S.
1-R	29+45	271+85	Rt.		137.5	
2-R	273+30	—	Rt.		25.0	
3-R	273+03	—	Rt.	77		
4-R	272+83	—	Rt.			Lump
	TOTAL			77	162.5	Lump

(P) PAVEMENT

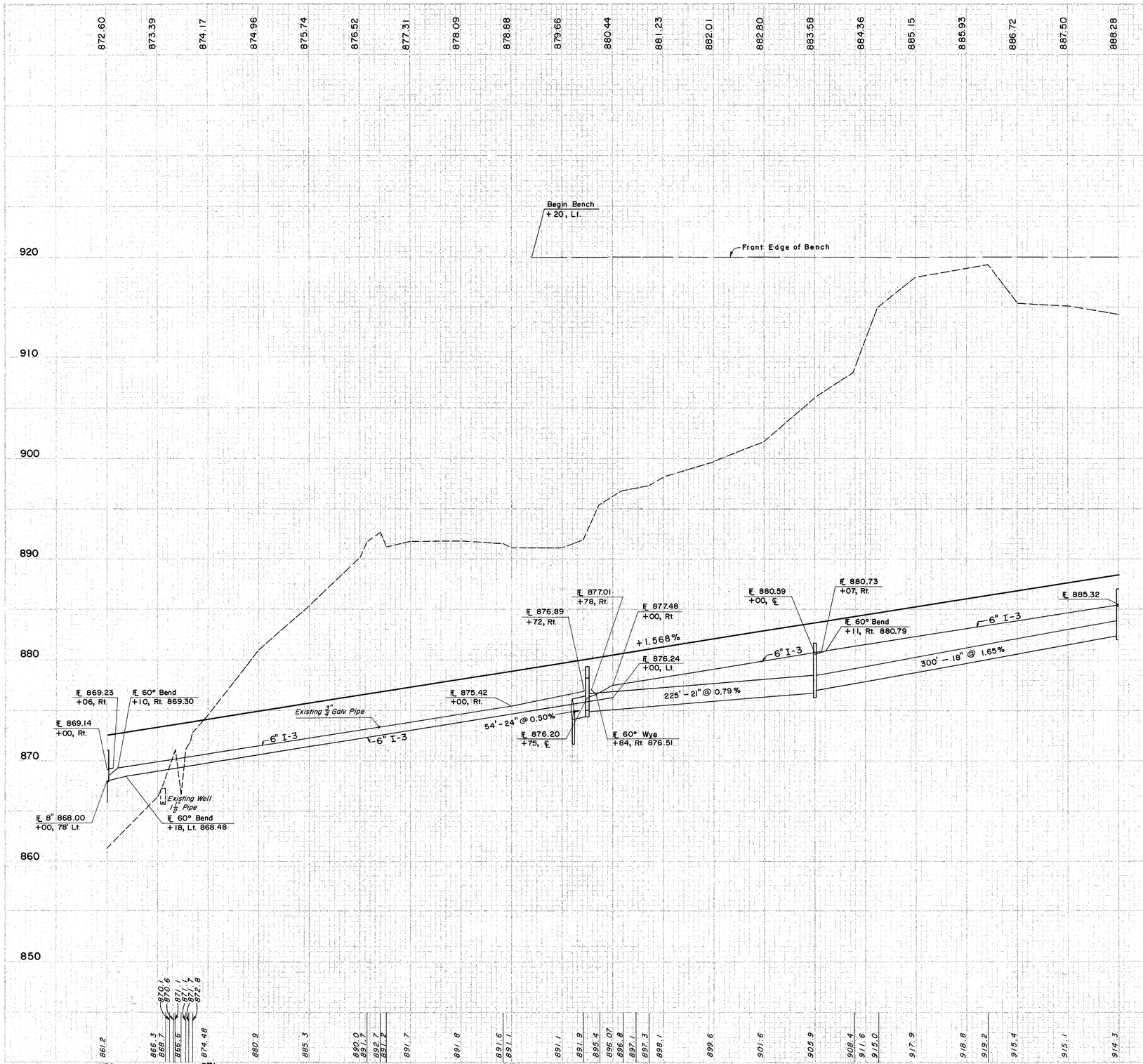
REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE C.Y.	T-30 BIT. PRIME COAT GAL.	T-35 ASPH. CONC. SURF. COURSE TYPE C.Y.
1-P	273+03	—	Rt.	17	31	5

EXCAVATION	=	307,768 C.Y.
EMBANKMENT	=	4,672 C.Y.
EMBANKMENT + 6 %	=	4,952 C.Y.

STA. 270+00 TO STA. 280+00

FED. AID PROJECT	STATE	PROJECT		45
	OHIO			662

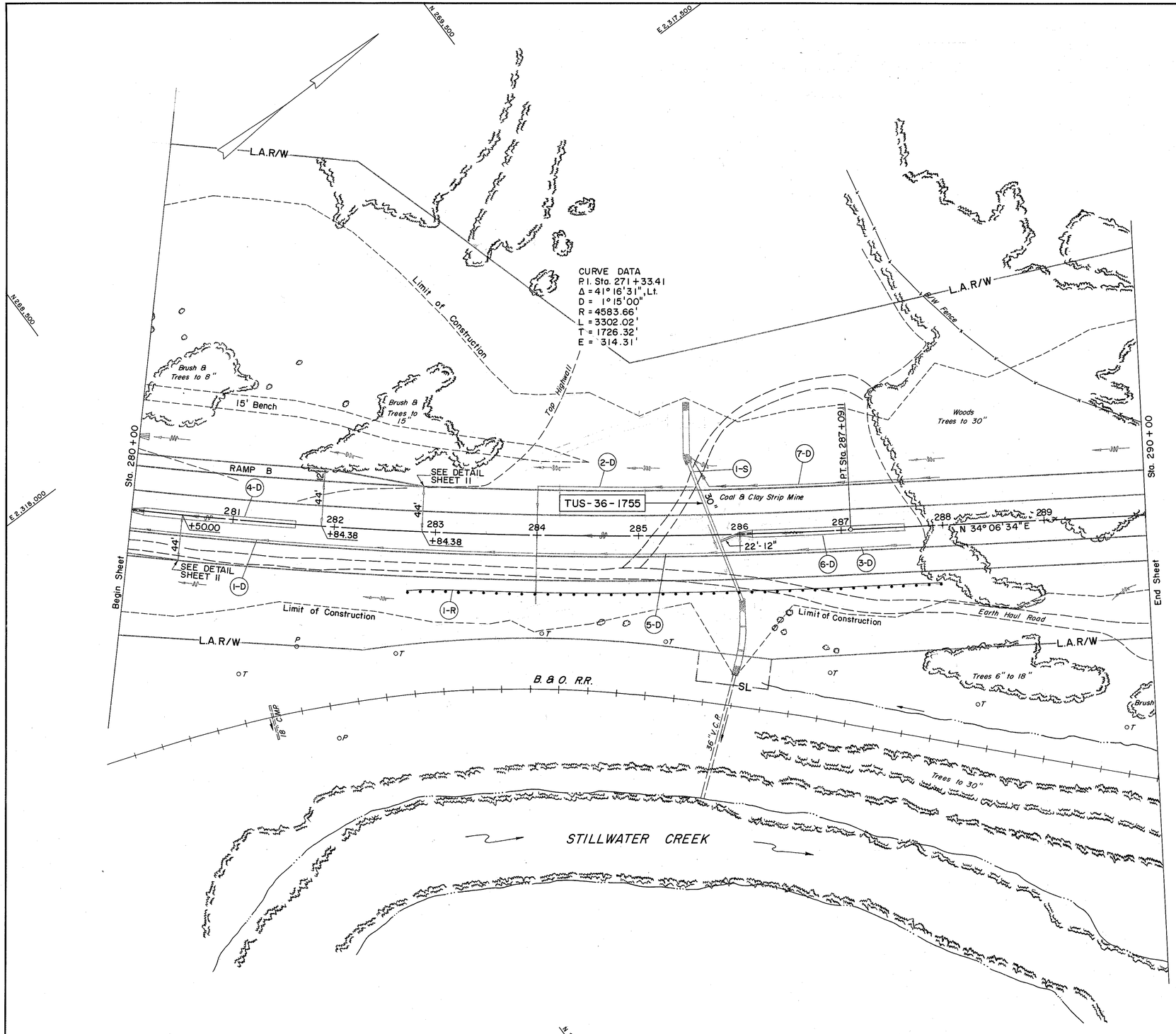
TUSCARAWAS COUNTY
TUS - 36 - 15.93



STA. 270 + 00 TO STA. 280 + 00

FED. RD. DIVISION	STATE	PROJECT		46
2	OHIO			662

TUSCARAWAS COUNTY
TUS - 36 - 15.93



(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	12" PIPE CLASS E-1 L.F.	I-1 6" PIPE CLASS F-4 SEC. M-64(c) 8" L.F.	I-1 6" PIPE CLASS I-3 SEC. M-64.4(h) d=12" L.F.	I-1 6" PIPE CLASS I-3 SEC. M-64.4(h) d=18" L.F.	I-5 CLASS J-1 L.F.	I-5 CLASS I-3 6" 60° BEND TEE EA.	I-5 CLASS I-3 6" 90° BEND TEE EA.	I-5 CLASS J-1 6"-90° BEND EA.	I-8 STD. #2-2A C.B. EA.	I-8 L-120 JUTE MATTING S.Y.
1-D	280+00	285+98	Rt.				398			1			
2-D	284+00	285+56	Lt & Rt.					116					
3-D	285+87	287+67	Rt.		10					1			
4-D	280+13	281+63	℄				188						125
5-D	284+00	285+78	Rt.					178		1			125
6-D	285+80	287+62	℄	22							1		
7-D	285+55	288+00	Lt.		10		248						250
	TOTAL			22	10	398	768	116	1	1	1	1	250

(S) STRUCTURE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 30" PIPE CL. A-1 SEC. M-68.1(b) L.F.	I-2 MASONRY C.Y.	I-5 CL. A-1 30"x12" T.E. SEC. M-68.1(b) EA.	I-10 DUMPED ROCK CHANNEL PROTECT C.Y.	L-10 SODDING SEE SHEET S.Y.
1-S	285+77			146	1.95	1	54	6
								472

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. SUB-GRADE S.Y.	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP) L.F.
1-R	282+75	287+95	Rt.	—	525.0

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE C.Y.	B-21 WATER PROOFED AGGR. BASE COURSE C.Y.	I-22 SUBBASE	T-31 BIT. MAT'L. GAL	T-31 #6 AGGR. C.Y.
	—	—		—	—			

EXCAVATION	= 261,237 C.Y.
EMBANKMENT	= 1,780 C.Y.
EMBANKMENT + 6 %	= 1,887 C.Y.

STA. 280+00 TO STA. 290+00

STA. NO.	STATE	PROJECT
21	OHIO	

47
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

888.28 889.07 889.85 890.64 891.42 892.20 892.99 893.77 894.56 895.34 896.12 896.91 897.69 898.48 899.26 899.64 900.00 900.36 900.68 900.98 901.27 901.54 901.80 902.03 902.24 902.43 902.61

930
920
910
900
890
880
870
860

Front Edge of Bench

End Bench +50, Lt.

℄ 891.75 +50, Rt.

℄ 90° Tee +00, Rt. 893.40

℄ 90° Bend +00, Lt. 890.36

℄ 893.90 +87, Rt.

℄ 894.94 +50, Rt.

℄ 896.76 +66, Rt.

℄ 897.09 +00, Lt.

+1.568%

℄ 8" 893.38 +55.72' Lt.

℄ 893.76 +78, Rt.

℄ 891.54 +96, Rt.

6" I-3

6" I-3

6" I-3

6" I-3

℄ 892.80 +56, Lt.

30"

22'-12" @ 1.60%

P.V.C. 287+00

800' V.C.

℄ 60° Bend +70, Lt. 893.63

℄ 6" 890.00 +00, 67' Rt.

℄ 90° Tee +00, Rt. 890.21

℄ 885.32

914.3 913.8 920.2 920.6 919.4 915.0 915.0 914.5 908.9 902.5 907.4 903.31 889.8 888.4 888.9 898.4 898.2 906.8 920.4 922.7 923.1 923.7 929.3 926.4 930.6 919.1 920.3 927.6 924.9 904.8 904.7 906.6 907.8 910.7 910.5 915.2 915.4 924.8

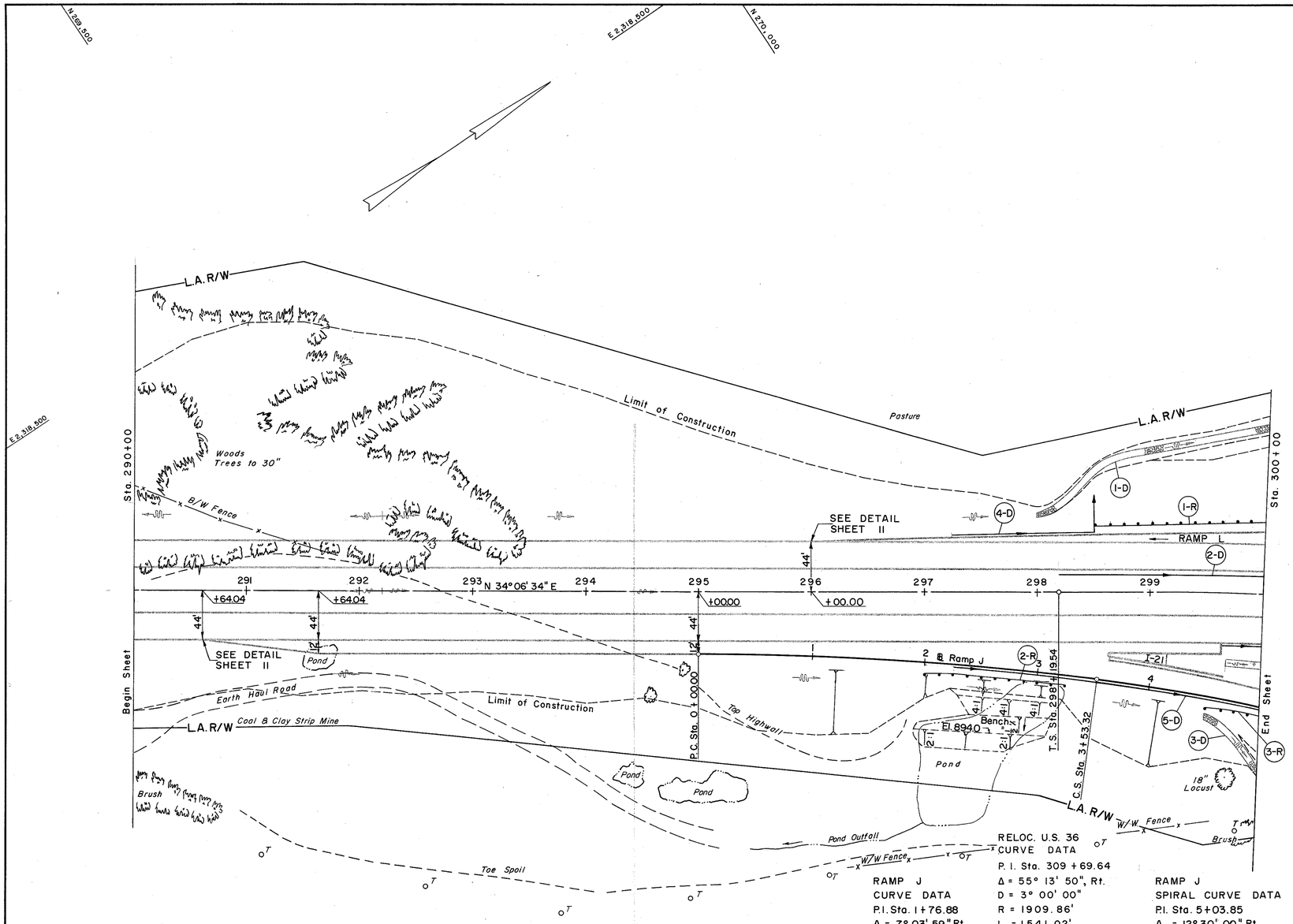
280 +31 +50 +58 281 +22 +35 +50 282 +50 283 +50 284 +41 +50 +76 285 +21 +50 286 +19 +50 +59 +80 91 05 287 +26 +32 +45 +50 +85 +95 288 +40 +50 289 +50 290

STA. 280 + 00 TO STA. 290 + 00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

48
662

TUSCARAWAS COUNTY
TUS-36-15.93



(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP) L.F.
1-R	298+52	300+00	Lt.	150.0
2-R	2+00 Ramp J 3+25		Rt.	125.0
3-R	4+51 Ramp J 5+02		Rt.	50.0
	TOTAL			325.0

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 8" PIPE CLASS F-4 L.F.	I-1 6" PIPE CLASS I-3 d = 30" L.F.	I-5 CL. I-3 6"-90° BEND EA.	I-10 DUMPED ROCK CHANNEL PROTECT C.Y.	SPECIAL DRAIN. CONN. #6 AGGR. C.Y.
1-D	298+00	300+00	Lt.				76	
2-D	298+20	300+00	Lt.		182			
3-D	4+50 Ramp J 5+90		Rt.				49	
4-D	297+25	298+50	Lt.	10	147	1		6.5
5-D	2+25 Ramp J 6+45		Rt.	10	428	1		28.5
	TOTAL			20	757	2	125	35.0

FOR PAV'T. QUANTITIES RAMP J
SEE SHEET 332

FOR INTERSECTION DETAILS ON
RAMP J SEE SHEET 377

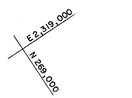
FOR GEOMETRIC LAYOUT
SEE SHEET 382

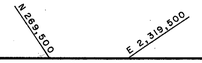
FOR PLAN & PROFILE OF RAMP J
SEE SHEETS 50, 349 - 351

RAMP J
CURVE DATA
P.I. Sta. 1+76.88
Δ = 7° 03' 59", Rt.
D = 2° 00' 00"
R = 2864.79'
L = 353.32'
T = 176.88'

RELOC. U.S. 36
CURVE DATA
P.I. Sta. 309+69.64
Δ = 55° 13' 50", Rt.
D = 3° 00' 00"
R = 1909.86'
L_c = 1541.02'
L_s = 300.00'
T_s = 1150.10'
E_s = 247.76'

RAMP J
SPIRAL CURVE DATA
P.I. Sta. 5+03.85
Δ = 12° 30' 00", Rt.
L = 250.00'
L.T. = 150.53'
S.T. = 100.46'





EXCAVATION	=	280,113 C.Y.
EMBANKMENT	=	16,218 C.Y.
EMBANKMENT + 6 %	=	17,191 C.Y.

STA. 290+00 TO STA. 300+00

SHEET NO.	STATE	PROJECT	
12	OHIO		

49
662

TUSCARAWAS COUNTY
TUS-36-15.93

902.61 902.77 902.91 903.02 903.12 903.20 903.27 903.31 903.34 903.34 903.33 903.30 903.25 903.18 903.09 902.98 902.86 902.72 902.55 902.37 902.17 901.75 901.33 900.91 900.49 900.07 899.65 899.23 898.81 898.39 897.97

980
970
960
950
940
930
920
910
900
890

P.V.I. 291+00
905.53

+1.568 %
−0.84 %

800' V.C.

P.V.T. 295+00

-0.84%

℄ 895.13
+20, Lt.

6" I-3

℄ 893.49
+00, Lt.

6" I-3

℄ 892.48
+00, Rt.

℄ 90° Bend
+50, 52' Lt. 893.59

℄ 893.27
+50, 85' Lt.

℄ 892.97
+64 , Rt.

℄ 894.10
+25, Lt.

6" I-3

900
890
880
870

924.8 923.2 917.0 914.4 917.0 935.2 951.1 952.3 962.4 970.6 974.6 972.2 962.6 950.3 938.8 937.9 923.2 911.5 906.1 903.7 895.0 885.7 882.7 877.8 870.8

290 +50 291 +50 292 +50 293 +94 +50 294 +50 295 +50 296 +50 297 +50 298 +25 +50 299 -18 +50 300

STA. 290+00 TO STA. 300+00

MICROFILMED
FEB 21 1999

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

50
662

TUSCARAWAS COUNTY
TUS-36-15.93

PROPOSED STRUCTURE DATA
RELOC. U.S. 36

Type: Two -3 Span Continuous Steel Beam Bridges

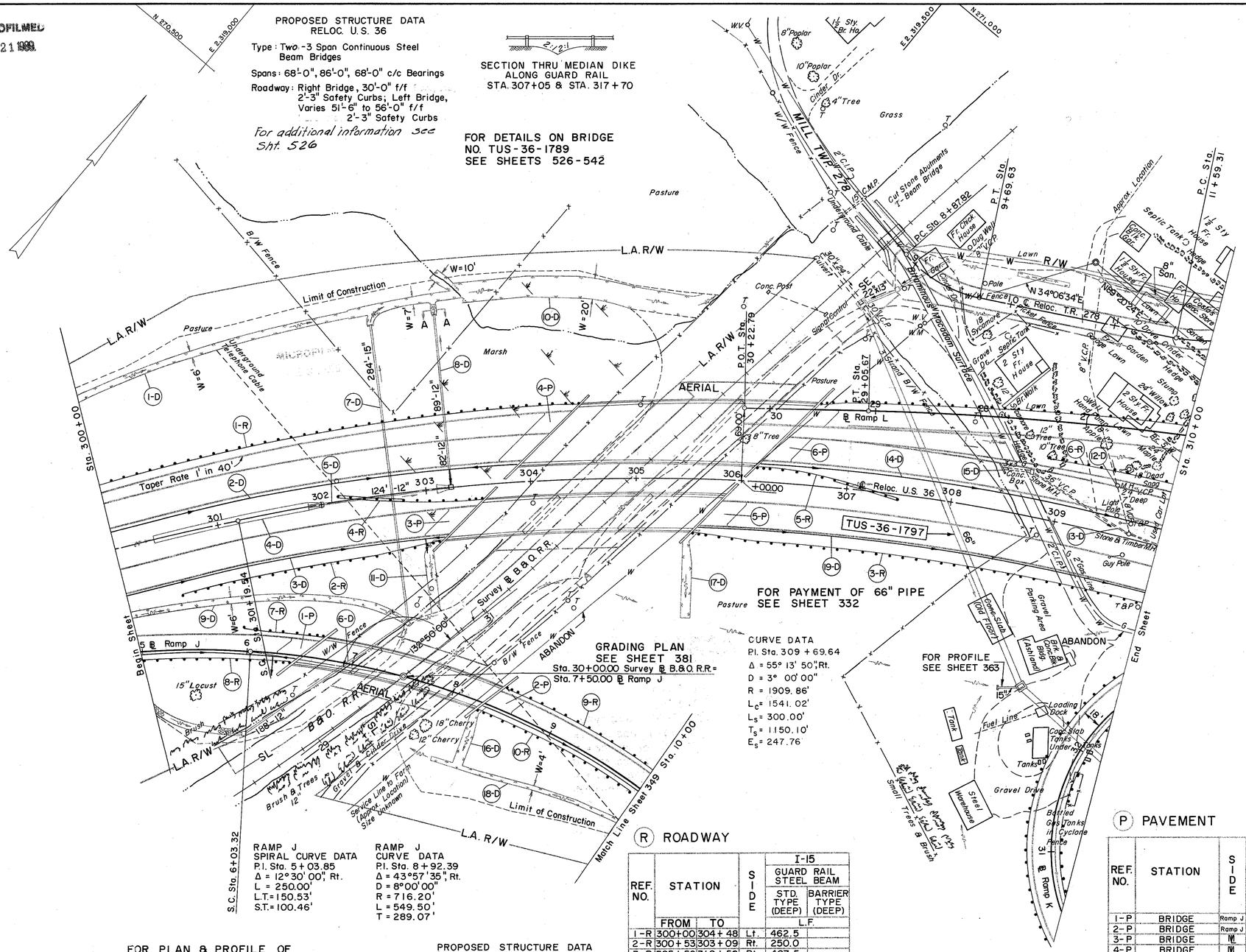
Spans: 68'-0", 86'-0", 68'-0" c/c Bearings

Roadway: Right Bridge, 30'-0" f/f 2'-3" Safety Curbs; Left Bridge, Varies 51'-6" to 56'-0" f/f 2'-3" Safety Curbs

For additional information see Sht. 526

SECTION THRU MEDIAN DIKE ALONG GUARD RAIL
STA. 307+05 & STA. 317+70

FOR DETAILS ON BRIDGE NO. TUS-36-1789 SEE SHEETS 526-542



GRADING PLAN
SEE SHEET 381
Sta. 30+00.00 Survey ℄ B.&O. R.R. = Sta. 7+50.00 ℄ Ramp J

CURVE DATA
P.I. Sta. 309 + 69.64
Δ = 55° 13' 50" Rt.
D = 3° 00' 00"
R = 1909.86'
L_c = 1541.02'
L_s = 300.00'
T_s = 1150.10'
E_s = 247.76

RAMP J
SPIRAL CURVE DATA
P.I. Sta. 5 + 03.85
Δ = 12° 30' 00" Rt.
L = 250.00'
L.T. = 150.53'
S.T. = 100.46'

RAMP J
CURVE DATA
P.I. Sta. 8 + 92.39
Δ = 43° 57' 35" Rt.
D = 8° 00' 00"
R = 716.20'
L = 549.50'
T = 289.07'

FOR PLAN & PROFILE OF
RELOC. T.R. 278 SEE SHEETS 349 & 351
RAMP L SEE SHEETS 349 & 351
RAMP K SEE SHEETS 349 & 352

FOR PROFILE OF RAMP J
SEE SHEETS 350 - 351

FOR GEOMETRIC LAYOUT
SEE SHEET 382

FOR DETAILS ON RAMP J BRIDGE
SEE SHEETS 509 - 517

PROPOSED STRUCTURE DATA
RAMP J

Type: 3 Span Continuous Steel Beam Bridge

Spans: 53'-0", 67'-0", 53'-0" c/c Bearings

Roadway: 28'-0" f/f Parapets

For additional information see Sht. 509

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP) L.F.	I-15 GUARD RAIL STEEL BEAM BARRIER TYPE (DEEP) L.F.
1-R	300+00	304+48	Lt.	462.5	
2-R	300+53	303+09	Rt.	250.0	
3-R	305+56	310+58	Rt.	487.5	
4-R	302+17	303+54	Lt&Rt.	75.0	62.5
5-R	306+15	307+49	Lt&Rt.	75.0	62.5
6-R	308+85	309+93	Lt.	112.5	
7-R	5+96 Ramp J	6+69	Lt.	75.0	
8-R	5+02 Ramp J	6+41	Rt.	137.5	
9-R	8+43 Ramp J	9+89	Lt.	150.0	
10-R	8+27 Ramp J	9+91	Rt.	162.5	
	TOTAL			1,987.5	125.0

(P) PAVEMENT

REF. NO.	STATION	SIDE	I-7 REINF. CONC. APPR. SLABS T=13" S.Y.
1-P	BRIDGE	Ramp J	45
2-P	BRIDGE	Ramp J	45
3-P	BRIDGE	ℳ	67
4-P	BRIDGE	ℳ	122
5-P	BRIDGE	ℳ	67
6-P	BRIDGE	ℳ	67
	TOTAL		413

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	E-12 PIPE REMOVED OVER 15" L.F.	I-1 15" PIPE CL. A-1 SEC. M-6.6(c) CONC. ENC. L.F.	I-1 12" PIPE CLASS E-1 SEC. M-6.8(a) L.F.	I-1 PIPE CLASS F-4 SEC. M-6.4(c) 8" 12" L.F.	I-1 6" PIPE CLASS I-3 d=30" L.F.	I-2 12" PIPE CLASS U-1 L.F.
1-D	300+00	302+56	Lt.						
2-D	300+00	303+86	Lt.					394	
3-D	299+64	303+13	Rt.				10	345	
4-D	300+37	301+87	℄						
5-D	302+00	303+24	℄			124	188		
6-D	6+00 Ramp J	302+67	Rt.						
7-D	302+67	— —	℄						
8-D	303+24	— —	Lt.				89		
9-D	4+65 Ramp J	7+40	Lt.						82
10-D	302+56	305+75	Lt.				10	394	
11-D	302+90	— —	Rt.					345	
12-D	309+50	— —	Lt.						
13-D	308+71	310+00	Lt.	138				384	
14-D	306+20	310+00	Lt.						
15-D	308+43	308+71	Lt.						
16-D	8+30 Ramp J		Rt.						
17-D	305+50		Rt.						
18-D	8+00 Ramp J	10+00	Rt.					429	
19-D	305+60	310+00	Rt.						
	TOTAL			138	284	124	188	1,552	82

REF. NO.	STATION FROM	STATION TO	SIDE	I-8 STD. #2-2A C.B. EA.	I-5 CL. I-3 6"-90° BEND EA.	I-5 CL. F-4 12"-25° BEND SEC. M-6.4(c) EA.	I-16 M.H. ABAN-DONED EA.	L-10 SODDING SODDING S.Y.	L-10 SODDING SPECIAL BERM & SLOPE PROTECT. S.Y.	L-120 JUTE MATTING S.Y.	S-24 REMOVAL OF EXISTING STRUCT. L.S.	SPECIAL DRAIN. CONN. #6 AGGR. C.Y.
1-D	300+00	302+56	Lt.									
2-D	300+00	303+86	Lt.									16.5
3-D	299+64	303+13	Rt.							125		
4-D	300+37	301+87	℄								Lump	
5-D	302+00	303+24	℄					5				
6-D	6+00 Ramp J	302+67	Rt.					197				
7-D	302+67	— —	℄					660	71			
8-D	303+24	— —	Lt.									
9-D	4+65 Ramp J	7+40	Lt.									
10-D	302+56	305+75	Lt.						61			
11-D	302+90	— —	Rt.						83			
12-D	309+50	— —	Lt.									
13-D	308+71	310+00	Lt.				1					
14-D	306+20	310+00	Lt.				1					
15-D	308+43	308+71	Lt.				1					
16-D	8+30 Ramp J		Rt.									
17-D	305+50		Rt.									
18-D	8+00 Ramp J	10+00	Rt.					84				20.5
19-D	305+60	310+00	Rt.									
	TOTAL			4	2	2	3	1,129	215	125	LUMP	37.0

EXCAVATION	= 77 C.Y.
EMBANKMENT	= 16 C.Y.
EMBANKMENT + 6 %	= 17 C.Y.

B. & O. R.R.

EXCAVATION	= 1,371 C.Y.
EMBANKMENT	= 26,264 C.Y.
EMBANKMENT + 6 %	= 27,840 C.Y.

RAMP J
STA. 5+00 TO STA. 10+00

EXCAVATION	= 2,055 C.Y.
EMBANKMENT	= 235,816 C.Y.
EMBANKMENT + 6 %	= 249,965 C.Y.

STA. 300+00 TO STA. 310+00

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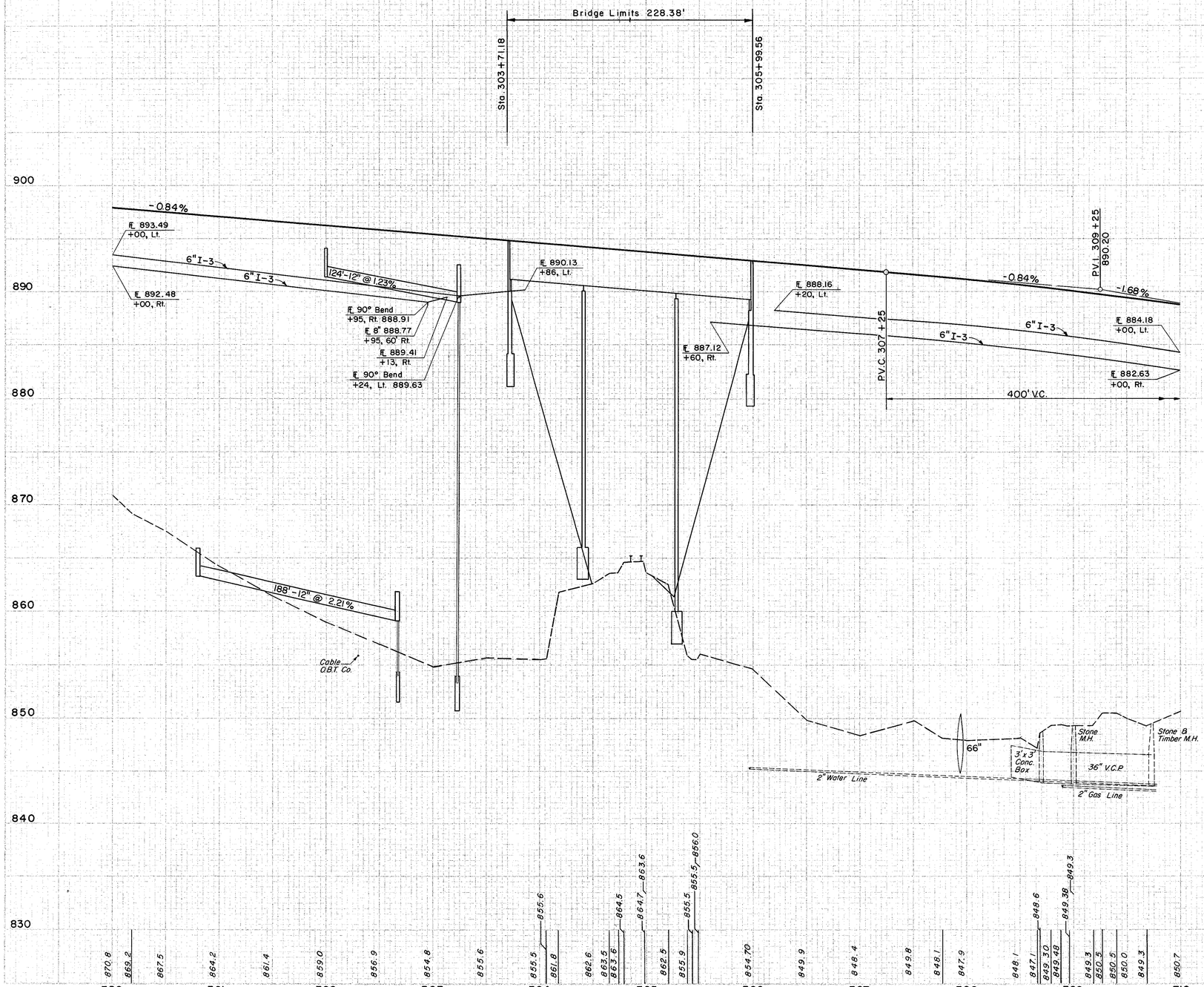
897.97 897.55 897.13 896.71 896.29 895.87 895.45 895.03 894.61 894.19 893.77 893.35 892.93 892.51 892.09 891.88 891.66 891.43 891.19 890.94 890.67 890.38 890.09 889.78 889.46 889.12 888.78



870.8 869.2 867.5 864.2 861.4 859.0 856.9 854.8 855.6 855.5 861.8 862.6 863.5 863.6 864.5 863.6 862.5 855.9 855.5 855.5-856.0 854.70 849.9 848.4 849.8 848.1 847.9 848.1 847.1 849.30 849.48 849.38 849.3 849.3 850.5 850.0 849.3 850.7

300 301 302 303 304 305 306 307 308 309 310

STA.300+00 TO STA. 310+00

MICROFILMED
FEB 21 1999

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

52
662

TUSCARAWAS COUNTY

TUS-36-15.93

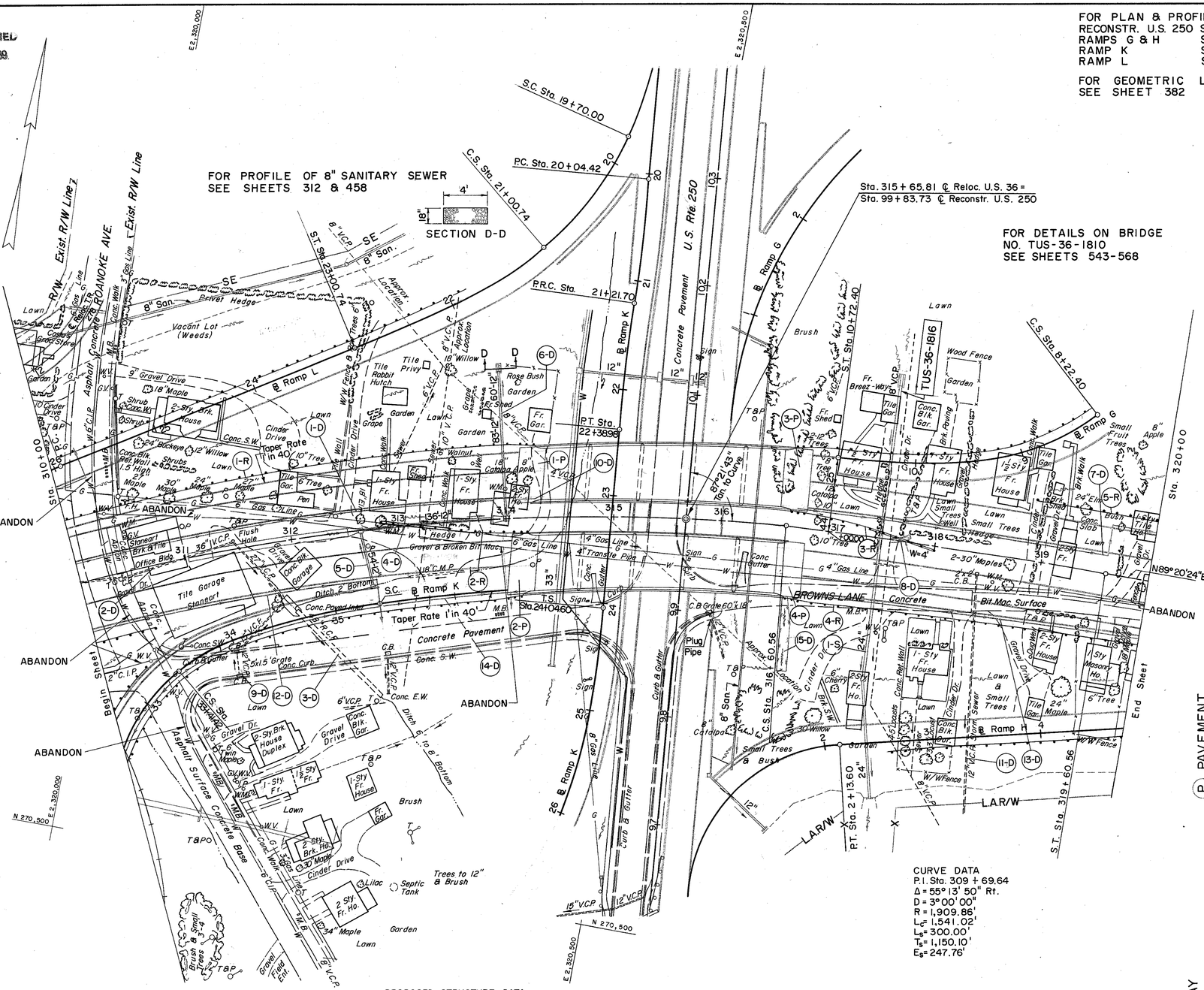
FOR PLAN & PROFILE OF
RECONSTR. U.S. 250 SEE SHEETS 308-315
RAMPS G & H SEE SHEETS 331 & 334
RAMP K SEE SHEETS 349 & 352
RAMP L SEE SHEETS 349 & 351

FOR GEOMETRIC LAYOUT
SEE SHEET 382

FOR PROFILE OF 8" SANITARY SEWER
SEE SHEETS 312 & 458

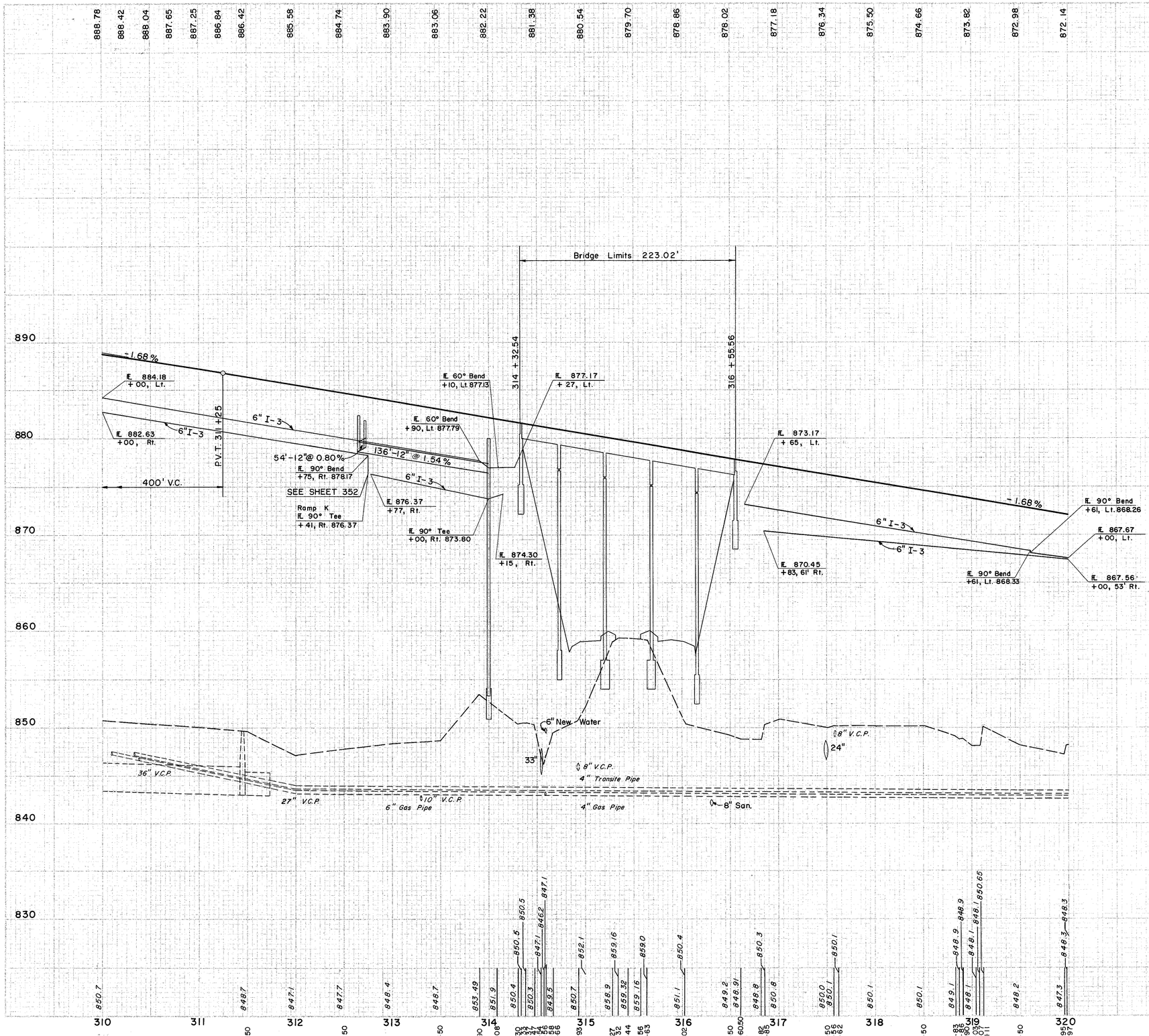
Sta. 315+65.81 ℄ Reloc. U.S. 36 =
Sta. 99+83.73 ℄ Reconstr. U.S. 250

FOR DETAILS ON BRIDGE
NO. TUS-36-1810
SEE SHEETS 543-568


E 2,320,000
N 271,000
Exist. R/W Line
Exist. R/W Line
S.R. 16 ROANOKE AVE.
S.C. Sta. 19+70.00
C.S. Sta. 21+00.74
P.C. Sta. 20+04.42
P.R.C. Sta. 21+21.70
P.T. Sta. 22+38.98
T.S. Sta. 24+04.60
S.T. Sta. 10+72.40
C.S. Sta. 8+22.40
Sta. 320+00
Sta. 310+00
℄ Ramp K
℄ Ramp L
℄ Ramp G
U.S. Rte. 250
Concrete Pavement
BROWNS LANE
Bit. Mac. Surface
TUS-36-1816
ABANDON
Begin Sheet
End Sheet
Asphalt Surface Concrete Base
Taper Rate 1" in 40'
Taper Rate 1" in 60'
Tile Garage
Stanegart
Tile Rabbit Hutch
Tile Privy
Rose Bush Garden
Vacant Lot (Weeds)
Brush
Trees to 12" & Brush
Small Fruit Trees
Wood Fence
Plug Pipe
Septic Tank
Gravel & Broken Bit. Mac.
Ditch 2' Bottom
Ditch 6' to 8' Bottom
Curb & Gutter
Sign
Lawn
Garden
Cinder Drive
Gravel Drive
Concrete Curb
Conc. S.W.
Conc. E.W.
Conc. Paved Inlet
Conc. Flat Well
Gravel Ditch
Conc. Blk. Garage
Conc. Blk. Gar.
Fr. Shed
Fr. Gar.
Tile Gar.
Brk. Walk
Brk. Paving
Small Trees & Brush
2-30" Maples
24" Elm
Lawn
Small Trees
Lawn & Small Trees
Lawn & Brush
Lawn & Small Trees
Lawn & Trees
Lawn & Shrubs
Lawn & Garden
Lawn & Tile Gar.
Lawn & Fr. Shed
Lawn & Fr. House
Lawn & Conc. Blk. Gar.
Lawn & Conc. Slab
Lawn & Tile Gar.
Lawn & Brk. Walk
Lawn & Small Fruit Trees
Lawn & Brk. Paving
Lawn & Conc. Blk. Gar.
Lawn & Gravel Drive
Lawn & Gravel Ditch
Lawn & Small Trees & Brush
Lawn & Small Trees & Garden
Lawn & Small Trees & Bush
Lawn & Small Trees & Hedge

MICROFILMED
FEB 21 1989

TUSCARAWAS COUNTY
TUS-36-15.93



STA. 310+00 TO STA. 320+00

TUSCARAWAS COUNTY
TUS-36-15.93

FOR INTERSECTION DETAILS RAMPS F & H SEE SHEET 375

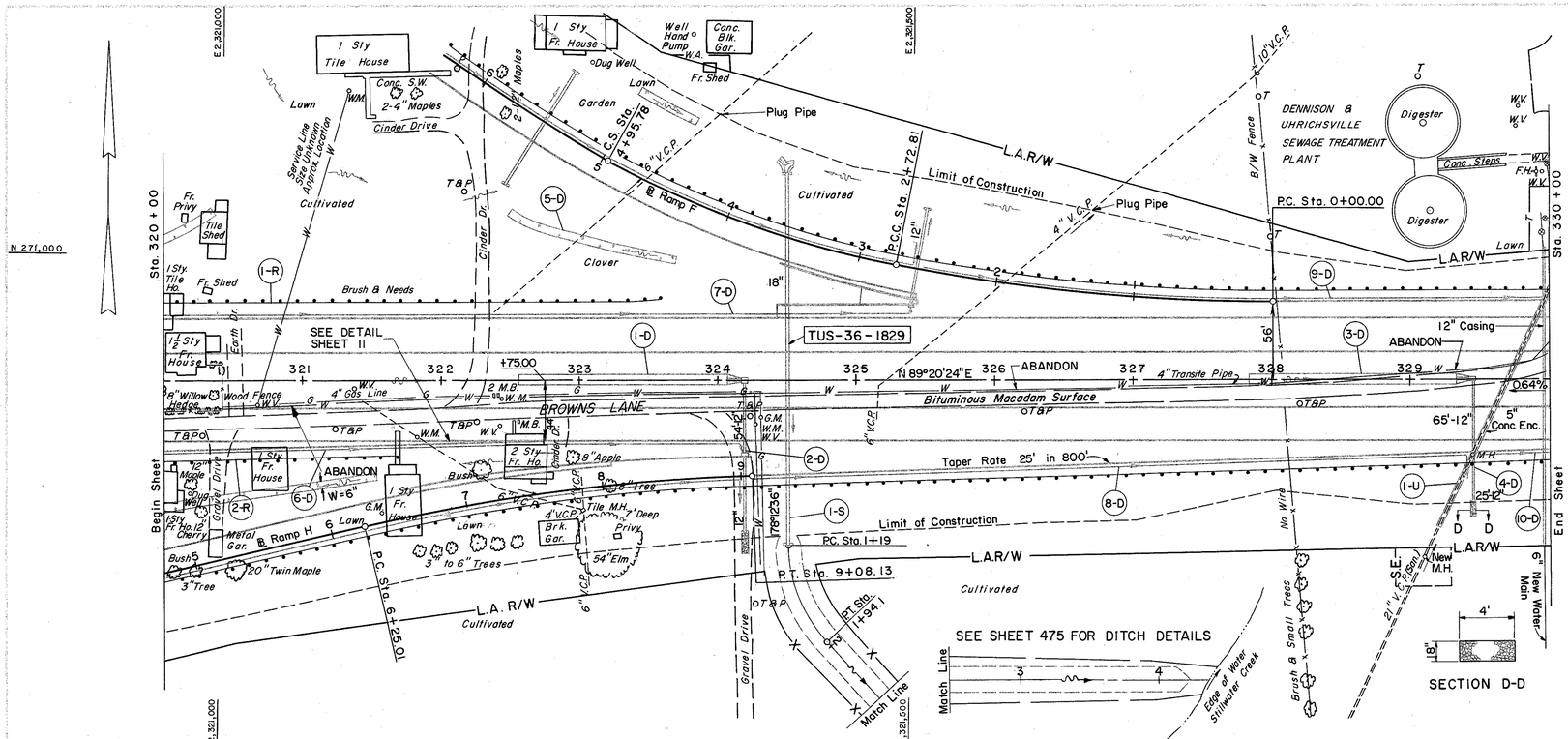
FOR GEOMETRIC LAYOUT SEE SHEET 382

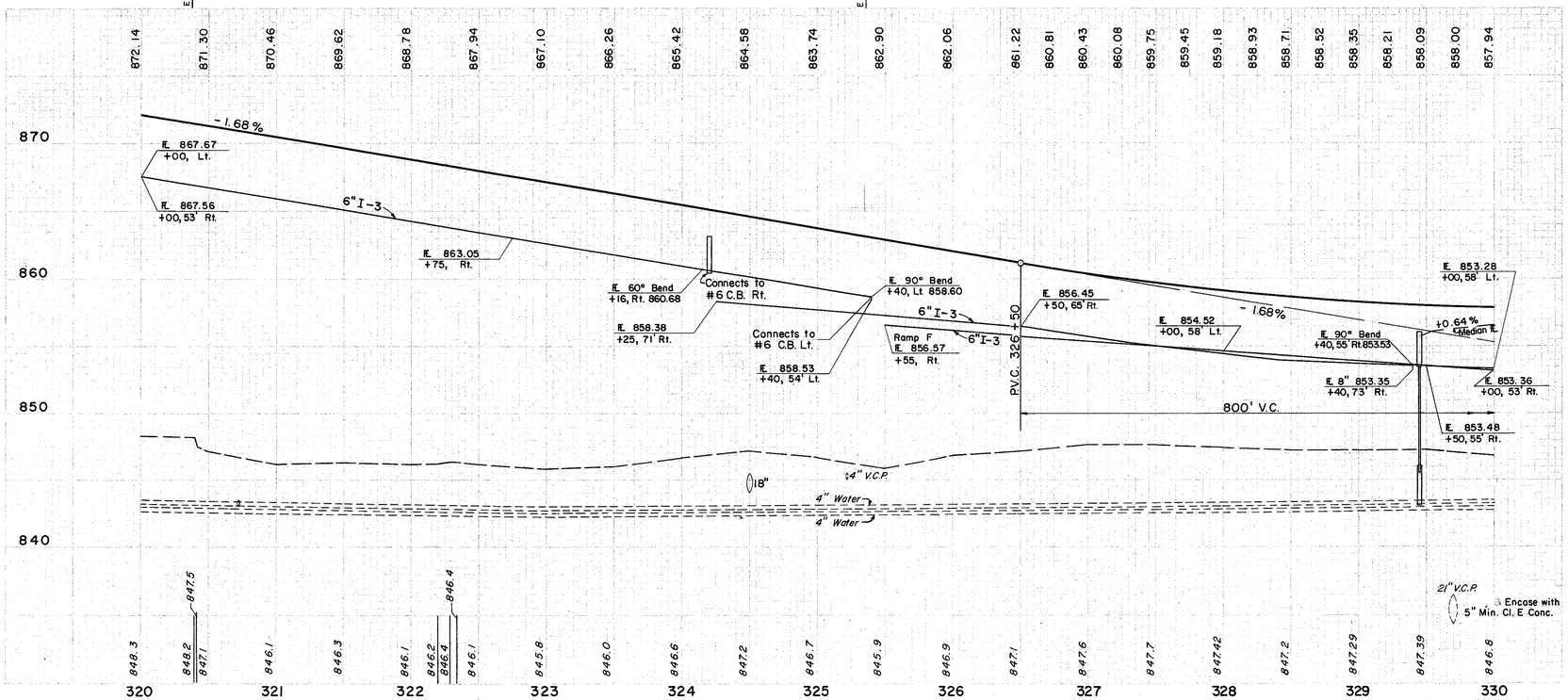
FOR PLAN & PROFILE OF RAMP F SEE SHEETS 331 & 333

FOR PLAN & PROFILE OF RAMP H SEE SHEETS 331 & 334

FOR PROFILE OF 21" SAN. SEWER SEE SHEET 458

FOR PLAN & PROFILE OF NEW 6" WATER LINE SEE SHEET 455





(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 6" PIPE CLASS F-4 SEC. M-6.4(c) 8" 12" L.F.	I-1 6" PIPE CLASS I-3 d=30" L.F.	I-2 MASONRY C.Y.	I-2 12" PIPE CLASS J-1	I-5 6" BEND CLASS I-3 60° 90° EA.	I-5 6" 90° TEE CLASS I-3	I-5 12"-25° BEND CLASS F-4 SEC. M-6.4(c)	I-8 STD. #2-2A C.B.	I-10 DUMPED ROCK CHANNEL PROTECT. C.Y.	L-10 SODDING	L-120 JUTE MATTING S.Y.	SPECIAL DRAIN CONN. #6 AGGR. C.Y.
1-D	322+57	324+07	℄				54				1				
2-D	324+20	329+32	℄												
3-D	327+82	329+32	℄												
4-D	329+45	—	℄		25		65		2		1				
5-D	322+50	323+70	Lt.			0.23						2		125	
6-D	320+00	324+20	Rt.	10	416			1							
7-D	320+00	325+40	Lt.	10	540										
8-D	324+25	329+40	Rt.		523			1							
9-D	328+00	335+18	Lt.	10	728				1						
10-D	329+50	331+42	Rt.	10	200				1						
	TOTAL			30	2,407	0.23	119	1	3	2	2	2	85	125	142.5

(U) UTILITIES

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 I-1/16 PIPE 21" V.C.P. CONC. ENC. L.F.	I-8 STD. #1 M.H. EA.	I-16 M.H. ABAN-DONED EA.
U-1	329+70		℄	256	1	1

(S) STRUCTURE

REF. NO.	STATION	SIDE	E-3 CHANNEL EXCAV. C.Y.	I-1 18" PIPE CL. A-1 SEC. M-6.6(c) L.F.	I-2 MASONRY SODDING SEE SHEET C.Y.	L-10 SODDING SEE SHEET S.Y.	I-10 RIPRAP 6" REINF. S.Y.
S-1	324+50	℄	303	268	060	3	475

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DET.)
1-R	319+98	323+60	Lt.	362.5
2-R	319+95	321+69	Rt.	175.0
	TOTAL			537.5

EXCAVATION	207 C.Y.
EMBANKMENT	102,414 C.Y.
EMBANKMENT 6	108,559 C.Y.

STA 320+00 TO STA 330+00

MICROFILMED
FEB 21 1999

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

55
662

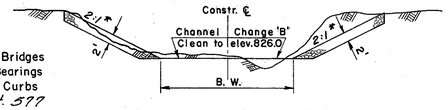
TUSCARAWAS COUNTY
TUS-36-15.93

FOR PLAN & PROFILE OF RELOC. CO. RD. SEE SHEETS 401-403

FOR DETAILS ON BRIDGE NO. TUS-36-1849 SEE SHEETS 577-584

NOTE:
No embankment shall be placed within bottom width as shown on plan and cross sections.

PROPOSED STRUCTURE DATA
Type: Two 4 Span Continuous Steel Beam Bridges
Spans: 64'-0", 80'-0", 80'-0", 56'-0" c/c Bearings
Roadway: 30'-0" f/f 2'-3" Safety Curbs
For additional information see Sht. 577

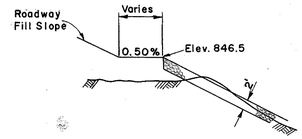


TYPICAL SECTION
CHANNEL CHANGE 'A'
B.W. as shown on plan

CHANNEL CHANGE 'B'
Sta. 23+58 to Sta. 28+13 B.W = 56.0'
Sta. 28+13 to Sta. 29+40 B.W = transition as per plan
Sta. 29+40 to Sta. 31+16 B.W = 80.5'

RELOC. LITTLE STILLWATER CREEK
Sta. 14+38 to Sta. 18+79 B.W = 28.0'

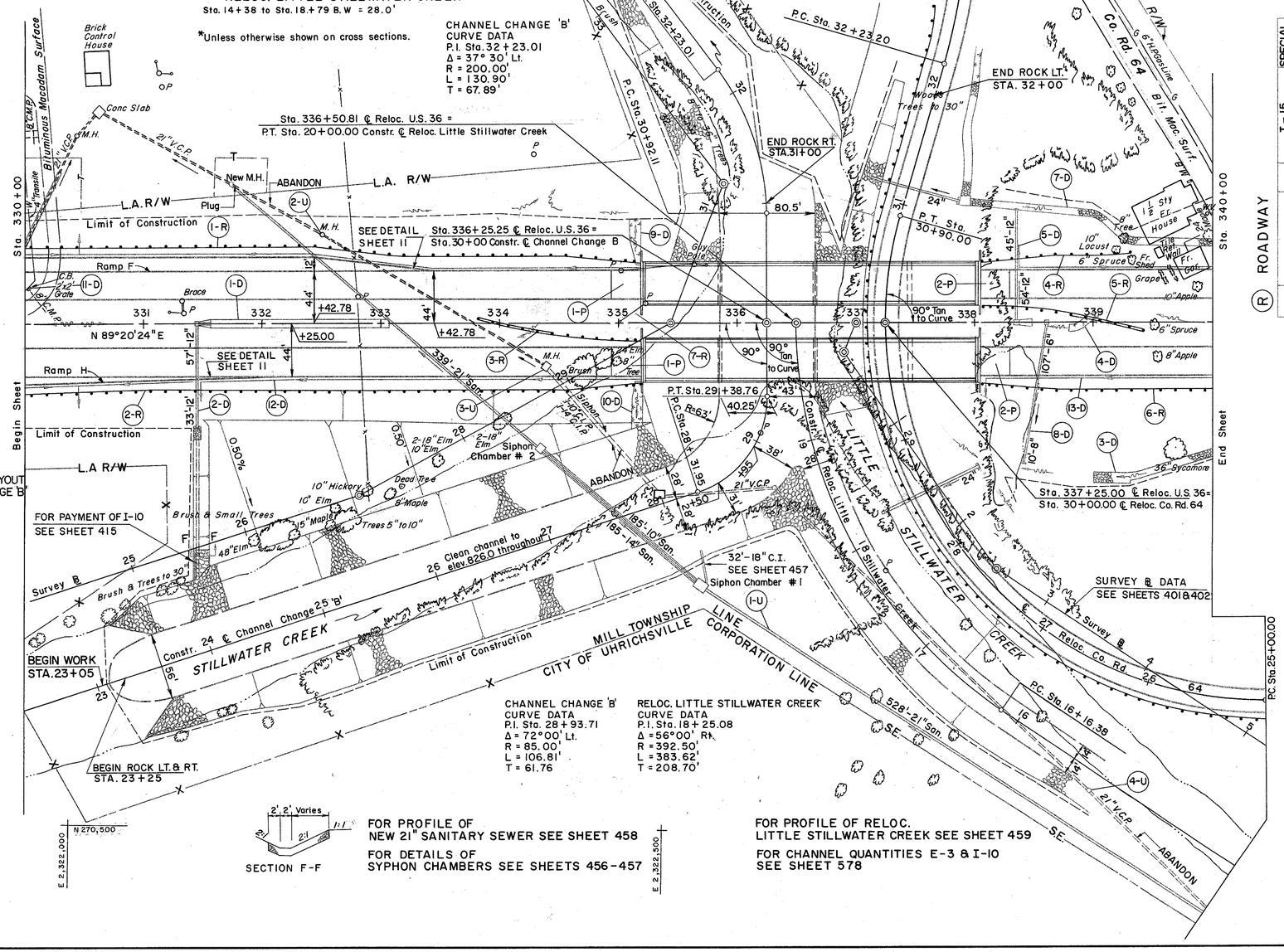
*Unless otherwise shown on cross sections.



LT. SIDE CHANNEL CHANGE 'B'
Sta. 24+55 to Sta. 28+13

RT. SIDE RELOC. LITTLE STILLWATER CREEK
Sta. 14+87 to Sta. 16+16

CHANNEL CHANGE 'B'
CURVE DATA
P.I. Sta. 32+23.01
Δ = 37° 30' Lt.
R = 200.00'
L = 130.90'
T = 67.89'



CHANNEL CHANGE 'B'
CURVE DATA
P.I. Sta. 28+93.71
Δ = 72°00' Lt.
R = 85.00'
L = 106.81'
T = 61.76

RELOC. LITTLE STILLWATER CREEK
CURVE DATA
P.I. Sta. 18+25.08
Δ = 56°00' Rt.
R = 392.50'
L = 383.52'
T = 208.70'

SECTION F-F

FOR PROFILE OF NEW 21" SANITARY SEWER SEE SHEET 458

FOR DETAILS OF SYPHON CHAMBERS SEE SHEETS 456-457

FOR PROFILE OF RELOC. LITTLE STILLWATER CREEK SEE SHEET 459

FOR CHANNEL QUANTITIES E-3 & I-10 SEE SHEET 578

N 270,500
E 2,322,000
E 2,322,500

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	I-7 REINF. CONC. APPR. SLABS T=13" S.Y.
1-P	3344+95	3350+20	03 L&Rt.	134
2-P	3384+04	3384+29	53 L&Rt.	134
		TOTALS		268

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	I-15 GUARD RAIL STEEL STD. TYPE (DEEP)	I-15 GUARD RAIL STEEL (BARRIER TYPE) (DEEP)	I-15 SPECIAL SETTLEMENT PLATFORMS EA.	I-16 C.B. ABANDONED EA.	I-10 DUMPED ROCK CHANNEL PROTECT C.Y.	I-9 STONE UNDER DRAIN NO.1 L.F.	I-8 STD. #2-2A C.B. EA.	L-10 SODDING FOR SPILL BERM & SLOPE PROTECT S.Y.	L-10 SODDING S.Y.	L-120 SPECIAL JUTE MATTING S.Y.	L-120 SPECIAL DRAIN CONN. # 6 AGGR. C.Y.
1-R	329+93	335+19	Lt.	525.0										
2-R	329+93	335+19	Rt.	525.0				5						
3-R	333+82	336+19	Lt&Rt.	75.0	62.5			41				18		
4-R	338+06	339+31	Lt.	125.0					10	1				
5-R	338+06	339+43	Lt&Rt.	75.0	62.5			70						
6-R	338+06	340+56	Rt.	250.0				1						
7-R	335+17		Lt.			1								
		TOTALS		1,575.0	125.0	1		117	10	1	37	36		
							1						20.0	35.5
													15.5	
											18	73	125	
										2				

(U) UTILITIES

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 21" PIPE CLASS A-1 SEC. M-6.8(a) CONC. ENC. L.F.	I-1 21" PIPE CLASS J-1 SEC. M-6.8(b) L.F.	I-8 STD. #2 M.H. W/o DROP PIPE EA.	I-16 M.H. ABANDONED EA.	I-7 C.I.M.J. RIVER CROSSING PIPE 10" 14" L.F.	I-8 SIPHON CHAMBER #1 #2 L.S.
1-U	33+75	23+21	CR 64 Lt.	339	528	2			
2-U	332+50		Lt.				1		
3-U	334+38		Rt.				1		
4-U	26+18		C.R. 64 Lt.				1		
		TOTALS		339	528	2	3	185	185 LUMP LUMP

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 PIPE CLASS I-3 SEC. M 6.4(h) 6"	I-1 6" PIPE CLASS F-4 SEC. M 6.4 (c) 8"	I-1 PIPE CLASS J-1 SEC. M 6.4 (c) 12"	I-2 MASONRY 12" PIPE CLASS J-1 d = 30" L.F.	I-2 MASONRY CLASS I-3 C.Y.	I-5 CLASS 12", 24" RE. ND. SEC. M EA.	I-8 STD. #2-2A C.B. EA.
1-D	33+56	33+08	℄							
2-D	33+45	—	℄ & Rt.			33		0.23	2	
3-D	339+00	340+00	Rt.				57			1
4-D	338+80	339+05	Rt. & Lt.			45		0.23	2	
5-D	338+35	—	℄ Lt.				54			1
7-D	337+96	340+00	Lt.							
8-D	338+40	338+60	Rt.	107	10					
9-D	335+16	—	Lt.							
10-D	335+16	—	Rt.							
11-D	330+05	—	Lt.							
12-D	33+48	335+18	Rt.		10		378			
13-D	336+10	340+97	Rt.		10		293			
		TOTALS			30	78	671	111	0.46	4	2	2

EXCAVATION	(SEE SHEET 578)
EMBANKMENT	= 6,725 C.Y.
EMBANKMENT + 6 %	= 7,129 C.Y.

CHANNEL CHANGE 'B'

EXCAVATION	= 1,036 C.Y.
EMBANKMENT	= 60,825 C.Y.
EMBANKMENT + 6 %	= 64,475 C.Y.

STA. 330+00 TO STA. 340+00

MICROFILMED
FEB 22 1999

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

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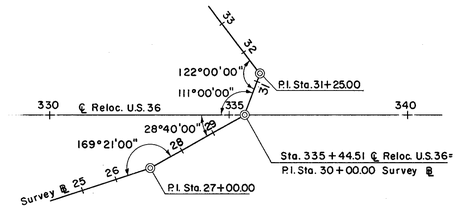
662

TUSCARAWAS COUNTY
TUS-36-15.93



CROSS SECTION SURVEY ℄ LAYOUT
FOR CHANNEL CHANGE 'B'

857.94 857.91 857.90 857.92 857.96 858.03 858.13 858.26 858.41 858.59 858.79 859.02 859.28 859.56 859.87 860.21 860.57 860.96 861.38 862.24 863.10 863.96 864.82 865.68 866.54 867.40 868.26 869.12 869.98 870.84

880
870
860
850
840
830
820

800' V.C.

Bridge Limits 284.50'

P.V.T. 334+50

335+20.03

338+04.53

℄ Co. Rd. 64

+1.72%

-0.62%

-1.68%

+0.64% Median

P.V.I. 330+50
854.50

E 90° Bend
+10, 46' Rt. 863.10

E 8" 862.84
+10, 62' Rt.

E 866.37
+00, Rt.

E 864.71
+00, Lt.

E 90° Bend
+38, Lt. 861.92

E 8" 861.73
+38, 65' Lt.

E 90° Tee
+45, 52' Rt. 853.33

E 853.36
+00, 53' Rt.

E 853.58
+42, 49' Rt.

E 854.12
+25, Rt.

E 90° Bend
+48, 48' Rt. 853.62

E 858.08
+18, Lt., Rt.

E 855.31
+43, Lt.

E 854.07
+43, 58' Lt.

E 8" 853.44
+48, 66' Rt.

E 853.37
+25, 58' Lt.

E 90° Tee
+45, 58' Lt. 853.17

E 853.28
+00, 58' Lt.

E 8" 853.15
+45, 70' Rt.

E 8" 853.00
+45, 76' Lt.

6" I-3

E-4 Borrow, Using Granular Material
See Sheets 174-177

E-4 Borrow, Using Granular Material
See Sheets 174-177

Normal Water
El. 833.0
June 1961

New
21" San.

21" V.C.P.

| | | |

FOR PLAN & PROFILE OF
RELOC. CO. RD. 64 SEE SHEETS 401 & 403
RAMP P SEE SHEETS 430 & 431
RAMP R SEE SHEET 433

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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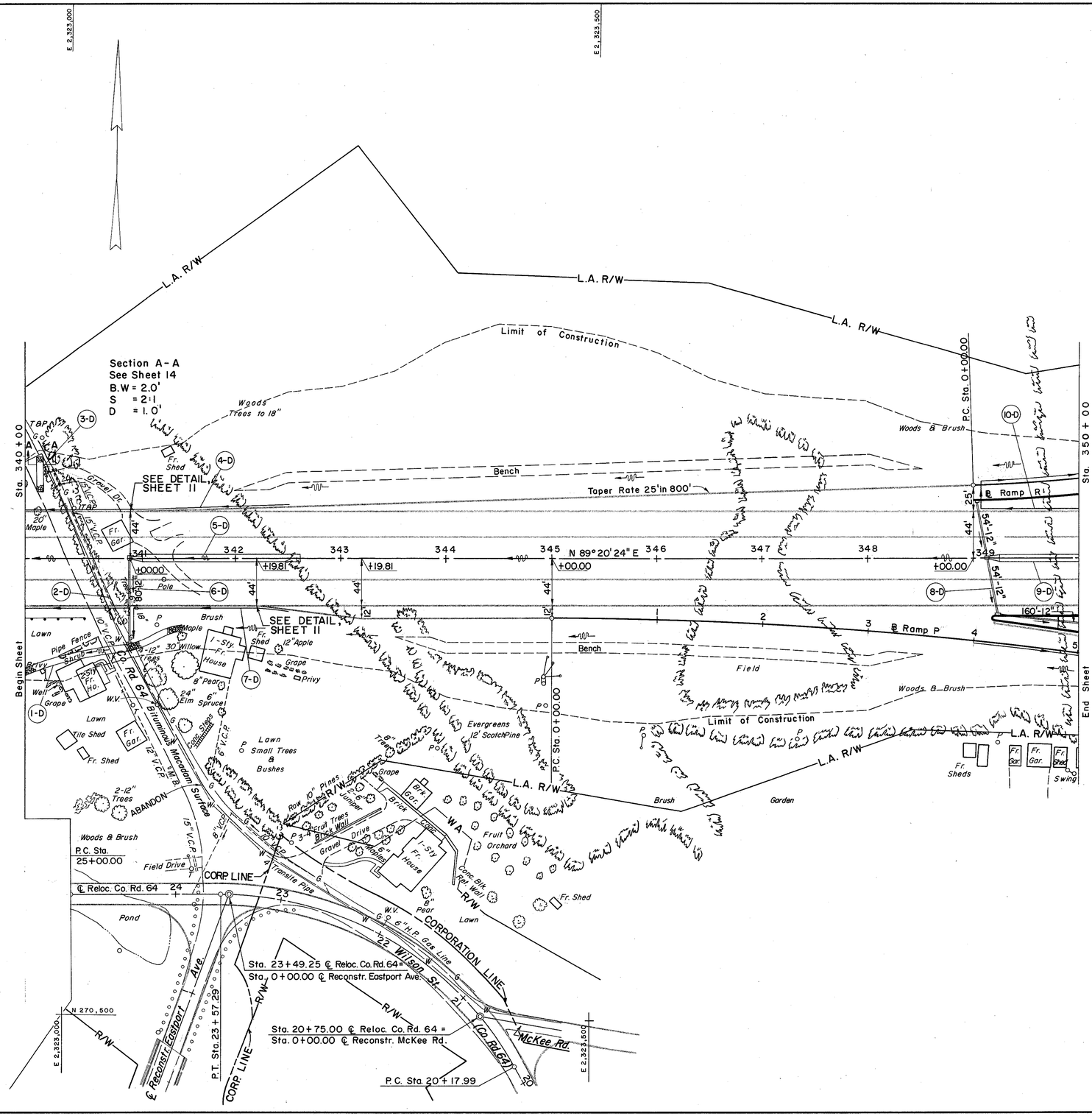
TUSCARAWAS COUNTY
TUS-36-15.93



REF. NO.	STATION FROM	STATION TO	SIDE	E-12 PIPE REMOVED 15" AND UNDER	I-1 PIPE CLASS F-4 SEC. M-64(c) 8"	I-1 6" PIPE CLASS I-3 d=30" d=50" L.F.	I-1 12" PIPE CLASS J-1	I-2 MASONRY	I-5 CL. I-3 6'-90° BEND EA.	I-8 STD. #22A C.B.	I-10 DUMPED ROCK CHANNEL PROTECT C.Y.	L-120 JUTE MATTING S.Y.	SPECIAL DRAIN CONN. #6 AGGR. C.Y.
1-D	340+00	341+50	Rt.										
2-D	340+70	340+85	Rt.	30							50		
3-D	340+15	—	Lt.										
4-D	338+38	342+50	Lt.			422			1	1	11	125	22.0
5-D	341+13	342+63	℄		10								
6-D	341+00	—	℄ & Rt.				80	0.23	1	1			8.0
7-D	341+03	342+50	Rt.				170			2		125	
8-D	349+04	349+24	Lt. & Rt.				108						
9-D	349+26	350+76	℄										14.5
10-D	349+08	351+83	Lt.			275							
	TOTAL			30	20	592	188	0.23	2	2	61	250	44.5

(D) DRAINAGE

EXCAVATION	= 469,589 C.Y.
EMBANKMENT	= 589 C.Y.
EMBANKMENT + 6 %	= 624 C.Y.

STA. 340+00 TO STA. 350+00

FED. ROAD DIST.	STATE	PROJECT	
2	OHIO		

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662

TUSCARAWAS COUNTY
TUS-36-15.93

870.84 871.70 872.56 873.42 874.28 875.14 876.00 876.86 SEE INSERT A 882.88 883.74 884.60 885.46 886.32 887.18 888.04

940 930 920 910 900 890 880 870 860

Back Edge of Bench, Lt. of ℄

Back Edge of Bench, Rt. of ℄

+1.72%

℄ 868.04 +97, Rt.

℄ 866.37 +00, Rt.

5" V.C.P.

4" Transite Pipe

6" H.P. Gas Pipe

6" I-3

6" I-3

℄ 868.93 +50, Lt.

℄ 864.71 +00, Lt.

℄ 866.43 +00, Lt.

℄ 882.99 +00, Lt.

6" I-3

160'-12"@0.45%

℄ 90° Bend +08, Lt. 880.33

℄ 90° Bend Ramp R +08, Lt. 879.80

See Sheet 433

876.86 877.72 878.58 879.44 880.30 881.16 882.02 882.88

1000 990 980 970 960 950

INSERT A

344 345 346 347

868.7 873.4 873.31 872.87 884.6 885.2 886.7 886.8 888.6 890.6 892.8 894.5 897.0 903.2 923.8 940.7 956.8 972.6 988.5 998.4 983.1 969.8 952.84 937.3 924.4 913.9 905.7 897.7 891.86

873.36 872.8 907.2 924.3 997.7

340 341 342 343 344 345 346 347 348 349 350

STA. 340+00 TO STA. 350+00

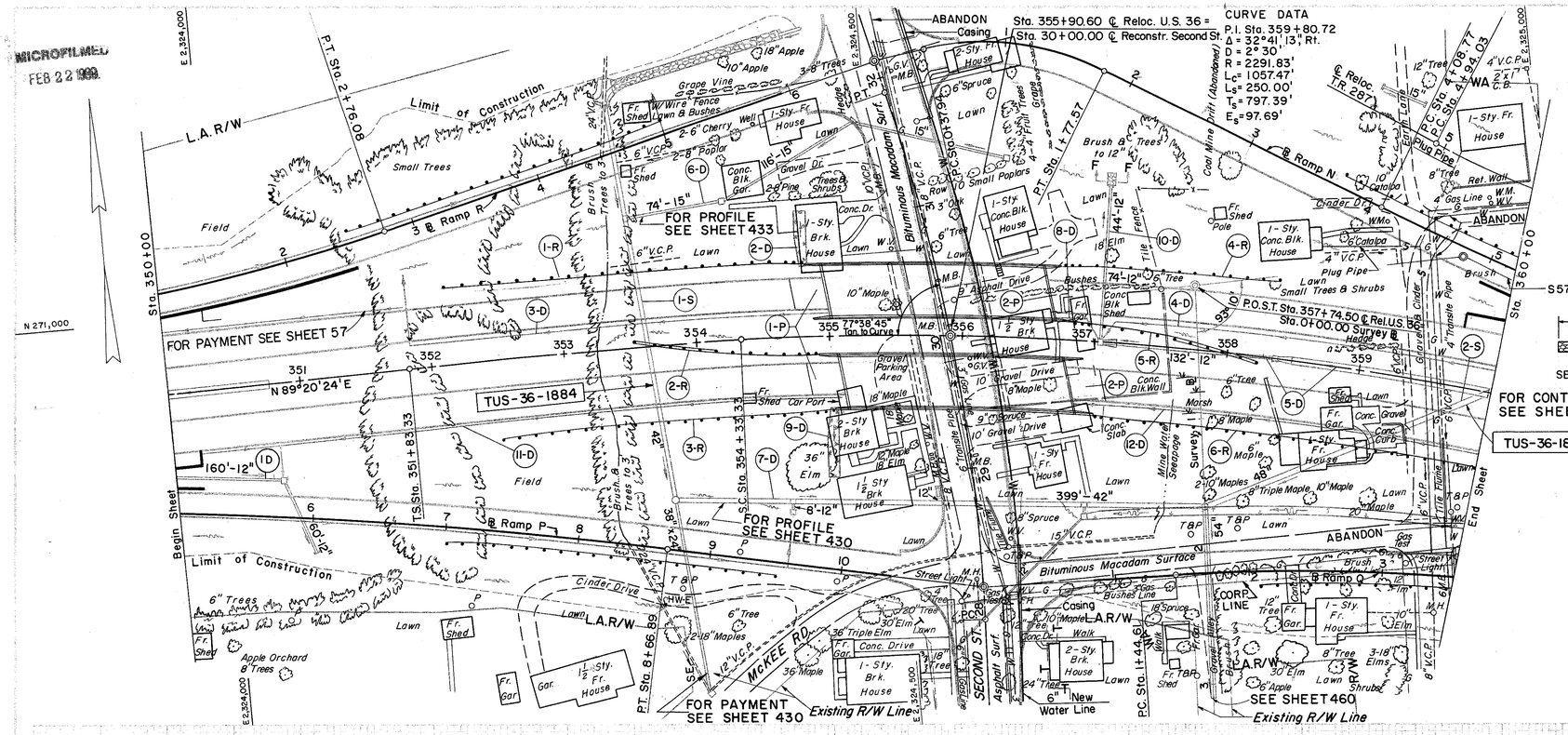
MICROFILMED
FEB 22 1999

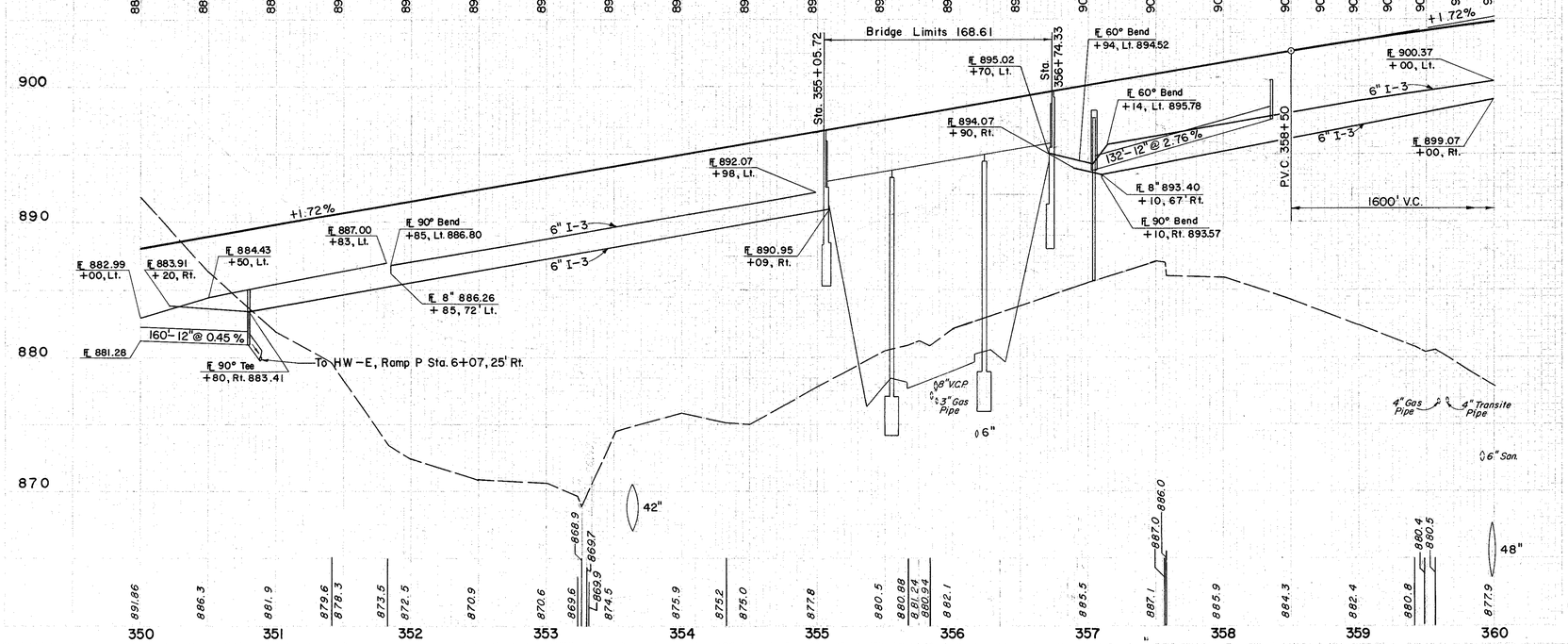
TUSCARAWAS COUNTY
TUS-36-15.93

FOR PLAN & PROFILE OF
RECONSTR. 2ND ST. SEE SHEETS 419-421
RAMP N SEE SHEET 429
RAMP P SEE SHEETS 430-431
RAMP Q SEE SHEET 432
RAMP R SEE SHEET 433
RELOC. T.R. 287 SEE SHEETS 440-441
FOR DETAILS ON BRIDGE NO.
TUS-36-1887 SEE SHEETS 585-595
FOR GRADING PLAN SEE SHEET 438
FOR GEOMETRIC LAYOUT SEE SHEET 439

CURVE DATA
P.I. Sta. 359+80.72
Δ = 32°41'13", Rt.
D = 2°30'
R = 2291.83'
L_c = 1057.47'
L_s = 250.00'
T_s = 797.39'
E_s = 97.69'

PROPOSED STRUCTURE DATA
Type: Two -3 Span Continuous Steel Beam Bridges
Spans: 48'-0", 68'-0", 48'-0" c/c Bearings
Roadway: 40'-0" f/f Parapets
for additional information see Sht. 585





REF. NO.	STATION FROM	STATION TO	S I D E	PIPE CLASS E-1 12" 15"	PIPE CLASS F-4 SEC. M-64(c) 6" 8" 12" L.F.	6" PIPE CL. I-3 @30°	PIPE CLASS J-1 6" 12" 42"	I-2 MASONRY CLASS A	I-5 6" BEND CL. I-3	I-5 CLASS J-1	I-5 42"x12" TEE CLASS J-1
1-D	349+24	350+80	Rt.	160							
2-D	354+80	—	Lt.								
3-D	351+85	354+98	Lt.		10	313	55				
4-D	357+04	360+00	Lt.		10	298			1		
5-D	357+00	359+98	℄								
6-D	353+55	3+75	Sta.	132			399				3
7-D	353+74	357+94	Rt.	16					1		
8-D	356+70	357+04	Lt.		10	34					
9-D	355+05	—	Rt.								
10-D	357+04	—	Lt.		44		74	023		2	
11-D	350+20	355+09	Rt.		10	505					
12-D	356+90	360+00	Rt.		10	311					
	TOTAL			308	190	30	20	44	1,461	55	74	399	023	2	1	2	3

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	S I D E	I-1 GUARD STEEL BEAM STD. TYPE (DEEP) L.F.	I-15 BARRIER TYPE (DEEP)
1-R	352+10	354+81	Lt.	275.0	
2-R	353+53	354+91	Lt&Rt.	75.0	62.5
3-R	352+48	355+03	Rt.	250.0	
4-R	356+74	358+34	Lt.	162.5	
5-R	356+85	358+22	Lt&Rt.	75.0	62.5
6-R	357+04	359+98	Rt.	287.5	
	TOTAL			1,125.0	125.0

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	S I D E	I-7 REINF. CONC. APPR. SLABS T=13" S.Y.
1-P	354+80	72355+05	Lt&Rt.	134
2-P	356+74	33356+99	Lt&Rt.	134
	TOTAL			268

(P) PAVEMENT

REF. NO.	STATION	I-1 48" PIPE CL. A-I SEC. M-64(d) 8 GAGE L.F.	I-2 MASONRY CL. A C.Y.	I-5 42"x18" TEE CL. A-I SEC. M-64(d) EA.
1-S	353+63	566	0.76	1
2-S	359+97		10.60	1
	TOTAL	566	11.36	1

(S) STRUCTURE

	I-1 EXCAVATION	I-2 EMBANKMENT	I-8 DUMPED ROCK CHANNEL PROTECT. C.Y.	I-10 SODDING SPECIAL BERM & SLOPE PROTECT. S.Y.	I-120 JUTE MATTING S.Y.	I-8 STD. #3 C.B. EA.	I-8 STD. #2 A C.B. EA.	I-10 DUMPED ROCK CHANNEL PROTECT. C.Y.	I-10 RIPRAP 6" REINF. C.Y.	I-10 SODDING SEE SHEET S.Y.	I-8 STD. #1 M.H. EA.	I-5 42"x18" TEE CL. A-I SEC. M-64(d) 8 GAGE EA.	I-5 DRAIN. CONN. #6 AGGR.
	15,212 C.Y.			40									
	103,611 C.Y.				125								23.0
6	109,828 C.Y.			47									14.5
				87	125	1	1	3	30	3	1	1	37.5

STA. 350+00 TO STA. 360+00

FOR PLAN & PROFILE OF
RELOC. T. R. 287 SEE SHEETS 440-441
RAMP N SEE SHEET 429
RAMP Q SEE SHEET 432
RECONSTR. 4TH. ST. SEE SHEET 440-441

FOR INTERSECTION DETAILS
RAMP N SEE SHEET 435
RAMP Q SEE SHEET 437

FOR GRADING PLAN SEE SHEET 438

FOR GEOMETRIC LAYOUT SEE SHEET 439

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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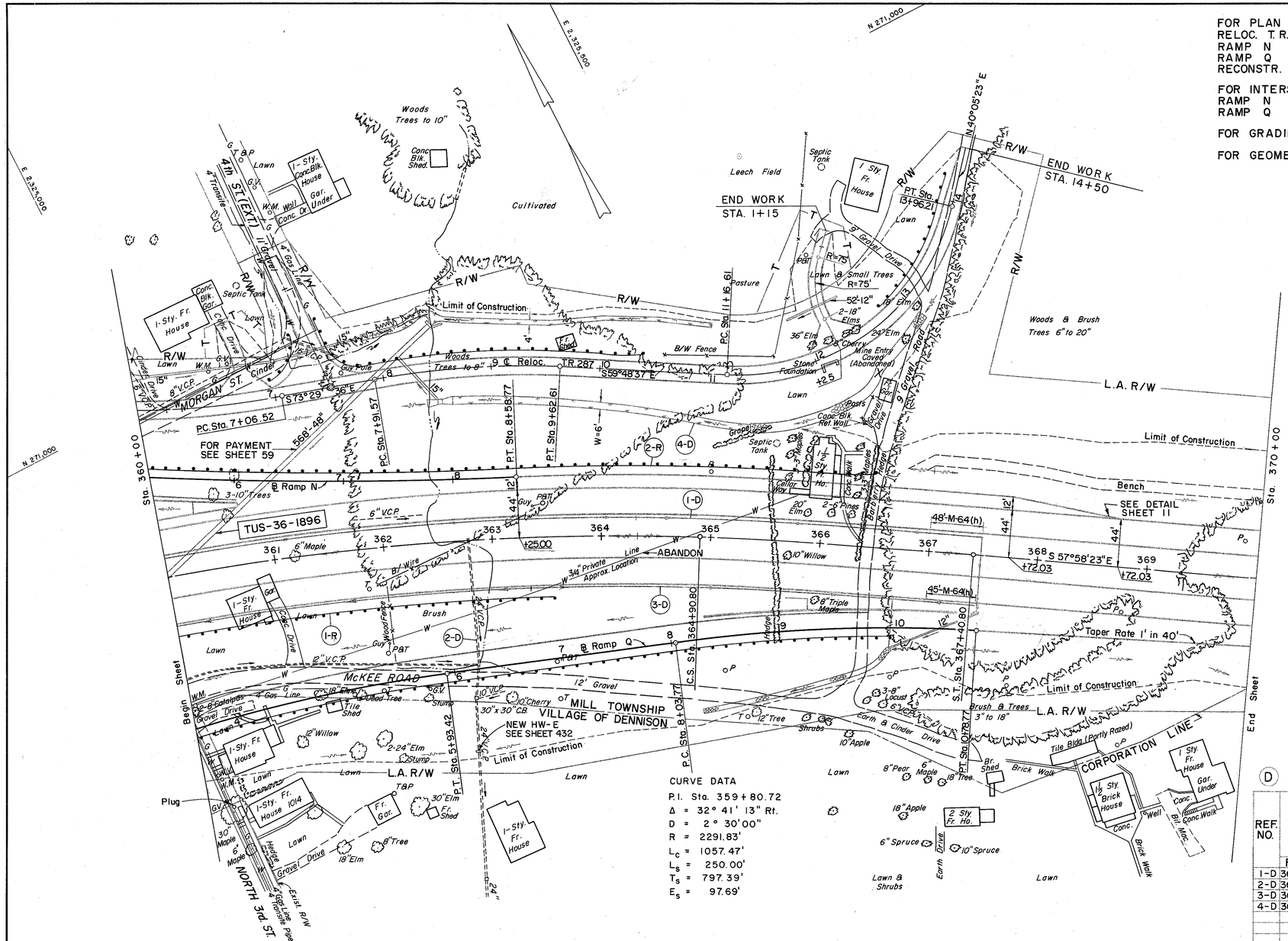
662

TUSCARAWAS COUNTY
TUS-36-15.93



CURVE DATA
P.I. Sta. 359+80.72
Δ = 32° 41' 13" Rt.
D = 2° 30' 00"
R = 2291.83'
L_c = 1057.47'
L_s = 250.00'
T_s = 797.39'
E_s = 97.69'

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	I-15 GUARD RAIL STEEL BEAM STD TYPE (DEEP) (L.F.
1-R	359 + 98	363 + 56	Rt.	350.0
2-R	Ramp N 8+51	366 + 46	Lt.	337.5
	TOTAL			687.5

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	E-12 PIPE REMOVED 15" AND OVER	I-1 PIPE CLASS F-4 SEC.M-64(c) 6"	I-1 PIPE CLASS F-4 SEC.M-64(c) 8"	I-1 6" PIPE CLASS I-3 SEC.M-64(h) d=12"	I-1 6" PIPE CLASS I-3 SEC.M-64(h) d=30"	I-5 6" CL-J-1 PIPE CL J-1	I-5 90° SPECIAL TEE	I-16 C.B. ABAN-DONED	L-10 SODDING	SPECIAL DRAIN CONN. #6 AGGR.
				L.F.						EA.		SY.	C.Y.
1-D	360 + 00	367 + 48	Lt.		10		48	705	60	1			
2-D	362 + 78	—	Rt.	200							1		
3-D	360 + 00	367 + 45	Rt.			10	45	720		1			34.5
4-D	362 + 74	365 + 32	Lt.									183	
	TOTAL			200	10	10	93	1,425	60	1	1	183	34.5

EXCAVATION	=	80,938 C.Y.
EMBANKMENT	=	150,160 C.Y.
EMBANKMENT + 6 %	=	159,170 C.Y.

STA. 360+00 TO STA. 370+00

TUSCARAWAS COUNTY
TUS-36-15.93

950
940
930
920
910
900
890
880
870
860

904.91 905.22 905.51 905.78 906.04 906.27 906.49 906.69 906.87 907.04 907.18 907.31 907.41 907.50 907.57 907.62 907.66 907.67 907.67 907.65 907.61 907.55 907.47 907.38 907.26 907.13 906.98 906.81 906.62 906.42 906.19 905.95 905.69 905.41 905.11 904.79 904.46 904.10 903.73 903.34 902.93

P.V.I. 366+50
916.42

+1.72%

-3.00%

℄ 900.37
+00, Lt.

℄ 899.07
+00, Rt.

6" I-3

6" I-3

℄ 903.13
+33, Lt.

℄ 901.83
+33, Rt.

℄ 903.22
+45, Rt.

℄ 90° Bend
+48, Lt. 902.03

To Outlet Ramp Q Sta. 10+00, 18' Rt.

℄ Tee
+70, Rt. 901.26

℄ 8" 901.14
+70, 90° Rt.

1600' V.C.

1½" Water
Private Line

24" V.C.P.

877.9 875.9 874.61 873.6 873.5 872.1 868.6 868.5 868.2 868.5 863.4 869.3 868.2 867.9 867.8 868.4 869.2 869.8 870.5 875.3 876.97 878.5 881.8 883.8 886.2 887.3 888.4 891.3 891.6 892.5 893.3 898.4 899.8 902.1 902.1 902.8 903.8 904.7 907.1 904.6 923.1 936.5 938.6 952.3 954.4 953.7 945.83 937.3 928.7

360 361 362 363 364 365 366 367 368 369 370

STA. 360+00 TO STA. 370+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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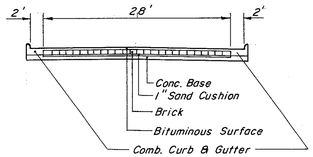
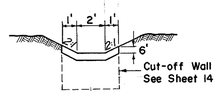
TUSCARAWAS COUNTY
TUS-36-15.93

FOR TYPICAL SECTION OF TURNAROUND
SEE SHEET 36
FOR PROFILE SEE SHEET 229

FOR PROFILE OF CUL-DE-SAC 'B'
SEE SHEET 63

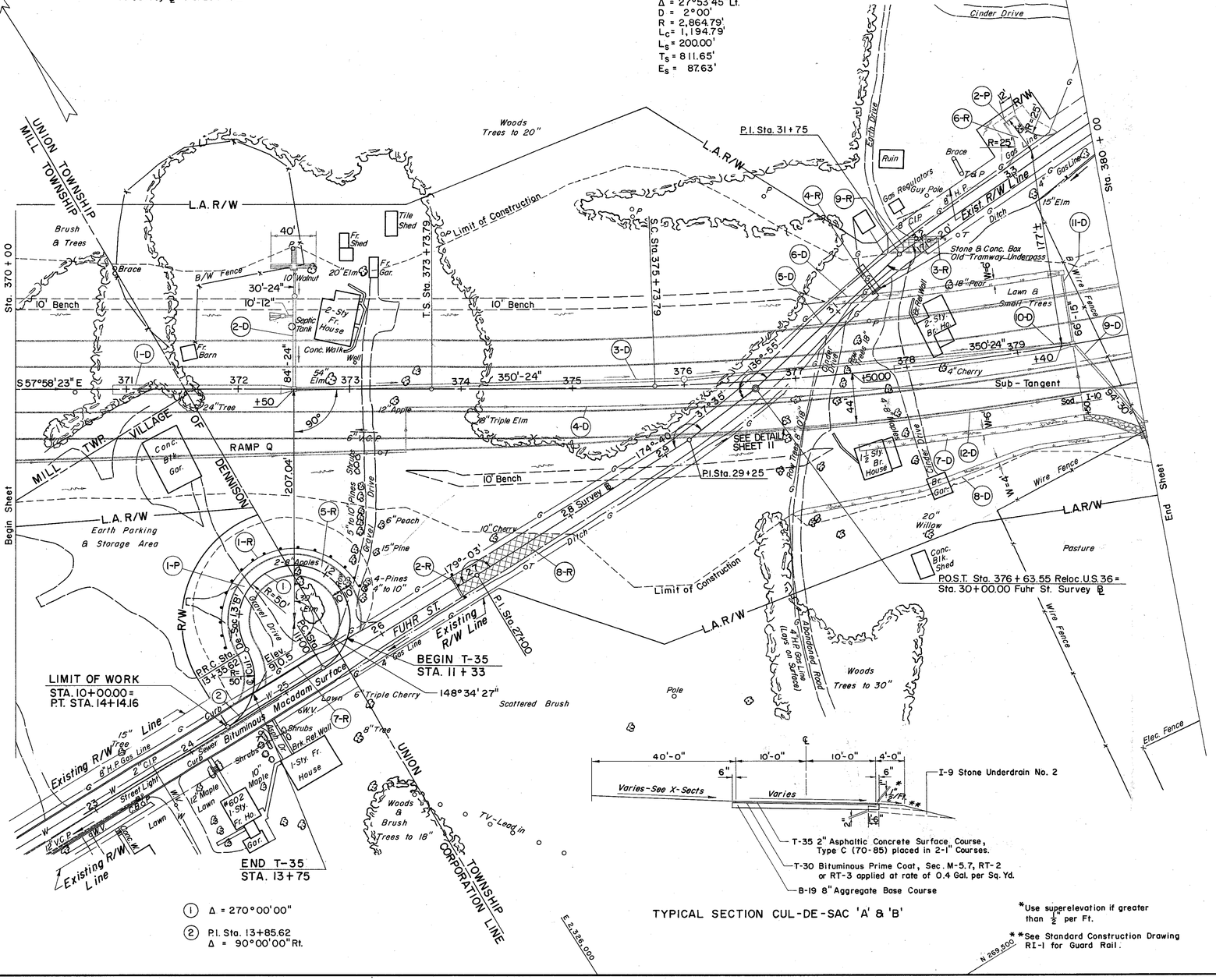


TYPICAL SECTION EXISTING FUHR STREET
To Survey @ Sta. 25+40±



DETAIL OF I-10 RIPRAP, 6" REINF.
Sta. 372+50 Lt.

CURVE DATA
P.I. Sta. 381+85.44
Δ = 27°53'45" Lt.
D = 2°00'
R = 2,864.79'
L_c = 1,194.79'
L_s = 200.00'
T_s = 811.65'
E_s = 87.63'



① Δ = 270°00'00"

② P.I. Sta. 13+85.62
Δ = 90°00'00" Rt.

TYPICAL SECTION CUL-DE-SAC 'A' & 'B'

*Use superelevation if greater than ½" per Ft.

**See Standard Construction Drawing RI-1 for Guard Rail.

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	S I D E	B-19 AGGR. BASE COURSE C.Y.	T-30 BIT. PRIME COAT GAL.	T-35 ASPH. CONC. SURF. COURSE TYPE C C.Y.
1-P	11+33 Cal-De-Sac	13+75	Lt.	124	212	30
2-P	379+40			17	31	4
		TOTAL		141	243	34

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	S I D E	I-1 PIPE CLASS E-1 12" 24" SEC. M-64 (c)	I-1 PIPE CLASS F-4 6" 8" 24"	I-1 6" PIPE CLASS I-3 6" d=30" 12" d=50" L.F.	I-1 PIPE CLASS J-1 6" 15" 24" 30"	E-1 REMOVAL & DISPOSAL OF EXISTING PAVT. (FLEX.) S.Y.	E-8 REMOVAL & DISPOSAL OF EXISTING CURB L.F.	I-9 STONE UNDER-DRAINS NO. 2 L.F.	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP) L.F.	I-15 GUARD RAIL WIRE CABLE L.F.	S-24 REMOVAL OF EXISTING STRUCT. L.S.
1-D	370+87	372+37	℄										
	372+50	—	@Lt.	10	30		84						
2-D	372+50	379+50	Lt.	700				529	77		192		
3-D	372+50	379+50	Rt.		10	351	66		100		250		
4-D	370+00	379+50	Rt.		10	608	40				375		
5-D	377+00	381+50	Lt.			114	335			55		Lump	
6-D	377+35	379+37	Lt.										
7-D	377+50	380+00	Rt.		10	351	254	30	206				
8-D	376+90	380+00	Rt.						47				
9-D	379+50	380+00	Rt.					94	0.51				
10-D	377+87	379+37	℄										
11-D	379+50	—	@Lt.				66						
12-D	377+00	379+50	Rt.										
		TOTAL		10	700	10	10	30	722	589	70	66	84	94	0.92

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	S I D E	I-1 PIPE CLASS E-1 12" 24" SEC. M-64 (c)	I-1 PIPE CLASS F-4 6" 8" 24"	I-1 6" PIPE CLASS I-3 6" d=30" 12" d=50" L.F.	I-1 PIPE CLASS J-1 6" 15" 24" 30"	E-1 COMP. SUB-GRADE S.Y.	E-8 REMOVAL & DISPOSAL OF EXISTING PAVT. (FLEX.) S.Y.	I-9 STONE UNDER-DRAINS NO. 2 L.F.	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP) L.F.	I-15 GUARD RAIL WIRE CABLE L.F.	S-24 REMOVAL OF EXISTING STRUCT. L.S.
1-R	11+75 Cal-De-Sac	13+25	Rt.										
2-R	373+96	—	Rt.										
3-R	378+45	—	Lt.										
4-R	377+74	—	Lt.										
5-R	11+33 Cal-De-Sac	13+75	Lt.										
6-R	379+40												
7-R	10+00 Cal-De-Sac	11+00	Lt.										
8-R	373+90	374+90	Rt.										
9-R	377+95	378+47	Lt.										
		TOTAL		10	700	10	10	606	100	253	55	62.5	192	LUMP

EXCAVATION	= 5 C.Y.
EMBANKMENT	= 4,050 C.Y.
EMBANKMENT + 6 %	= 4,293 C.Y.

CUL-DE-SAC 'B'

EXCAVATION	= 267,038 C.Y.
EMBANKMENT	= 103,135 C.Y.
EMBANKMENT + 6 %	= 109,323 C.Y.

STA. 370 +00 TO STA. 380 +00

TUSCARAWAS COUNTY
TUS-36- 15.93

902.93 902.51 902.06 901.60 901.11 900.61 900.09 899.55 899.00 898.42 897.83 897.22 896.59 895.94 895.27 894.59 893.88 893.16 892.42 890.92 889.42 887.92 886.42 884.92 883.42 881.92 880.42 878.92 877.42 875.92

950 940 930 920 910 900 890 880 870 860

8"H.P. Gas↑
4" Gas↑
4" Gas↑

From Sta. 370+00 to 373+00 Front Edge of Bench 71' Lt. is Same Elev. as P.G.

-3.00 %

6"I-3

E. 898.16 +00, 64.75' Rt.

10'-12" @ 6.80%

2-2A Lt.

E. 90° Bend +50,56' Rt. 890.77

E. 90° Bend +50,16' Rt. 890.67

E. 890.19 +25, Rt.

Abandoned Coal Mine Approx. Loc.

Front Edge of Bench, Rt. of ℄

Front Edge of Bench, 71' Lt. of ℄

R.V.T. 374+50

1600' V.C.

350'-24" @ 3.00%

E. 881.92 +00, Rt.

E. 90° Tee +50,16' Rt. 872.28

E. 90° Bend +50,46' Rt. 872.58

E. 878.92 +50,16' Rt.

E. 874.42 +00,16' Rt.

E. 872.86 +52, Rt.

E. 880.14 +00, 46' Rt.

E. 877.72 +00, Lt.

6"I-3

E. 871.42 +00, Rt.

Excavate in This Area Due to Possible Mine Voids
See Sheets 21, 223-229

Abandoned Clay Mine Approx. Loc.

Main Passageway

Abandoned Clay Mine Approx. Loc.

E. 869.59 +50, Lt.

E. 869.24 +00, Lt.

928.7 920.6 914.0 910.8 907.0 907.4 906.8 904.8 905.8 907.42 909.1 909.6 911.7 912.0 913.0 920.3 929.4 937.8 944.0 944.0 942.0 942.0 916.7 910.6 910.53 910.26 909.11 908.0 904.8 902.9 902.3 903.1 902.4 896.3 902.5 897.3 891.6 891.3 890.6 887.6 884.3 879.1 875.4 871.2

370 371 372 373 374 375 376 377 378 379 380

912.29 912.75 912.76 912.33 911.46 908.80 906.07

920 910 900

P.G.C. 11+33 911.72
P.V.I. 12+00 914.27
+3.80% -5.47%
P.G.C. 13+75 904.70
P.V.C. 11+35
P.V.T. 12+65
130' V.C.
Ends
2" Water
8" Gas
4" Gas

CUL-DE-SAC 'B'
FOR PLAN SEE SHEET 62

902.5 904.5 910.3 911.72 910.7 904.5 901.5 899.3 902.0 904.5 904.70 903.3

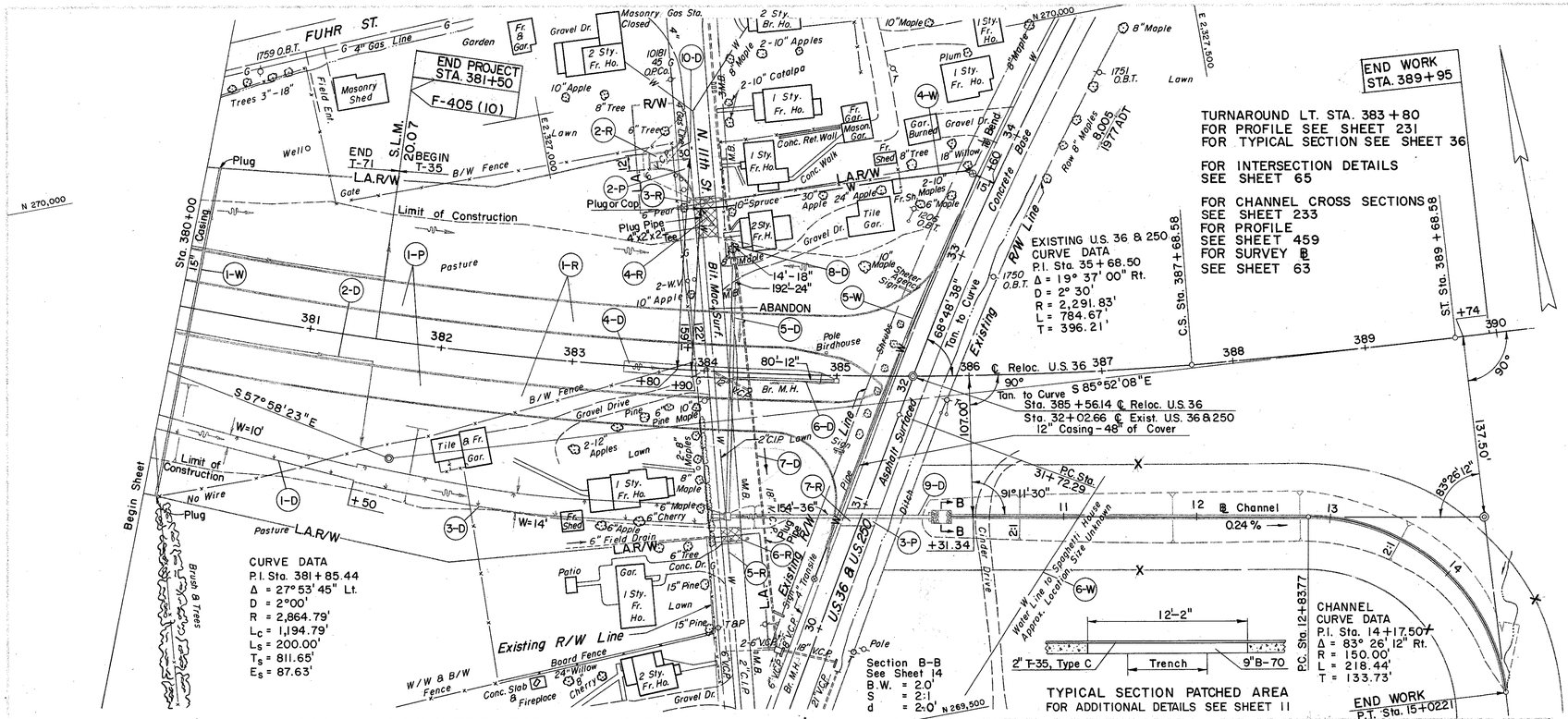
10 +25 11 +33 +52 12 +28 13 +10 +35 +60 +75 14

385 386 ℄ Reloc. U.S. 36 387 388 389 390
C.S. Sta. 387+68.58
S.T. Sta. 389+68.58
70°53'30" (Chord ∆)
115.19'
109°05'15"
107°21'15" (Chord ∆)
131.73'
151°04'30"
82°26'30"
Survey ℄
P.I. Sta. 14+79.55
POT Sta. 16+42.34

CROSS SECTION SURVEY ℄ LAYOUT
FOR CHANNEL RIGHT STA. 385+20± TO 389+75±
FOR PLAN SEE SHEET 64

STA. 370+00 TO STA. 380+00

TUSCARAWAYS COUNTY
TUS-36-15.93



(W) WATER

REF. NO.	STATION FROM	STATION TO	SIDE	I-124 NEW WATER MAIN 4" A.C. L.F.	I-124 4" VALVES & BOXES EA.	I-124 4" BEND 1/16 EA.	I-124 4" TEE EA.	I-124 WATER MAIN REMOVED & RELAID 4" A.C. L.F.	I-124 2"x2"x4" TEE EA.	I-124 SERVICE BRANCH LOWERED EA.	I-1 CASING PIPE H-6.6(b) 12" L.F.	I-1 CASING PIPE H-6.6(b) 15" * L.F.
1-W	380+10	—	Lt. & Rt.									254
4-W	383+90	386+09	Lt.	219	1	1			1			
5-W	385+41	—	Lt. & Rt.		1		1	328			270	
6-W	386+50	—	Rt.							80		
	TOTAL			219	2	1	1	328	1	80	270	254*

* 100% TWIN CITY WATER CO. PARTICIPATION

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	E-3 CHANNEL EXCAV. C.Y.	E-12 PIPE REMOVED 15" AND UNDER	E-12 PIPE REMOVED OVER 15"	I-1 PIPE CLASS E-1 SEC. M-6.8(a) 12" L.F.	I-1 PIPE CLASS E-1 SEC. M-6.8(a) 18" L.F.	I-1 PIPE CLASS F-4 M-64.1(c) 8" L.F.	I-1 6" PVC CL. I-3 d=30" L.F.	I-1 CLASS PIPE J-1 SEC. M-66.1(b) OR M-66.6(b) 6" L.F.	I-1 CLASS PIPE J-1 SEC. M-66.1(b) OR M-66.6(b) 24" L.F.	I-5 CL. J-1 6"-90° BEND EA.	I-5 CL. J-1 24"-1/2 TEE SEC. M-66(b) OR 68(b) EA.	I-8 STD. CATCH BASIN #22A, #24 EA.	I-10 DUMPED ROCK CHANNEL PROTECT. C.Y.	I-16 MH. ABAN-DONED EA.	L-10 SODDING S.Y.	L-120 JUTE MATTING S.Y.	I-2 MASONRY C.Y.
1-D	380+00	381+50	Rt.																	
2-D	379+52	381+50	Rt.																	
3-D	381+50	384+10	Rt.																125	
4-D	383+37	384+87	℄ Lt. & Rt.															420		
5-D	384+20	—	Lt. & Rt.														1			0.59
6-D	384+20	385+00	Rt.																	
7-D	384+23	384+49	Lt. & Rt.			36	193					192		1	1					
8-D	384+17	384+19	Lt.						14											
9-D	384+22	389+75	Rt.	2,559		20				154							14			
10-D	383+80	—	Lt.													2				
	TOTAL			2,559	56	193	80	14	10	201	55	192	154	1	1	2	14	592	125	0.59

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-35 ASPHALTIC CONCRETE BASE COURSE LEVEL-COURSE C.Y.	B-70 PORT. CEM. CONC. BASE COURSE 9" S.Y.	I-22 SUB-BASE C.Y.	T-30 BIT. PRIME COAT GAL.	T-31 BIT. MATL. #6 AGGR. COURSE TYPE C C.Y.	T-35 ASPH. CONC. SURF. COURSE TYPE C C.Y.
1-R	381+50	385+43	Lt. & Rt.	87	211	580	1,929	344	87	93
2-R	383+80	—	Lt.				28	10	4	
3-R	383+94	—	Lt.							
4-R	384+00	—	Lt.							2
5-R	384+23	—	Rt.							
6-R	384+25	—	Rt.		36					
7-R	385+20	—	Rt.							
	TOTAL			87	211	580	1,957	344	10	93

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 REMOVAL & DISPOSAL OF EXISTING PAVEMENT R(RIGID)F(FLEX) S.Y.	E-8 COMP. SUB-GRADE S.Y.	I-9 STONE UNDER-DRAINS NO. 2 L.F.	I-15 GUARD RAIL STEEL BEAM STD.TYPE (DEEP) L.F.	T-124 REMOVE & RESET EXIST. WATER LINE & PLUG L.S.	B-19 AGGR. BASE COURSE C.Y.
1-P			Lt. & Rt.			595			912
2-P			Lt.				25.0		16
								Lump	
3-P			Rt.				25.0		
	TOTAL			3,938	36	80	595	50.0	Lump	928

	1,087 C.Y.
	14,251 C.Y.
6	15,106 C.Y.

STA. 380+00 TO STA. 390+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

65
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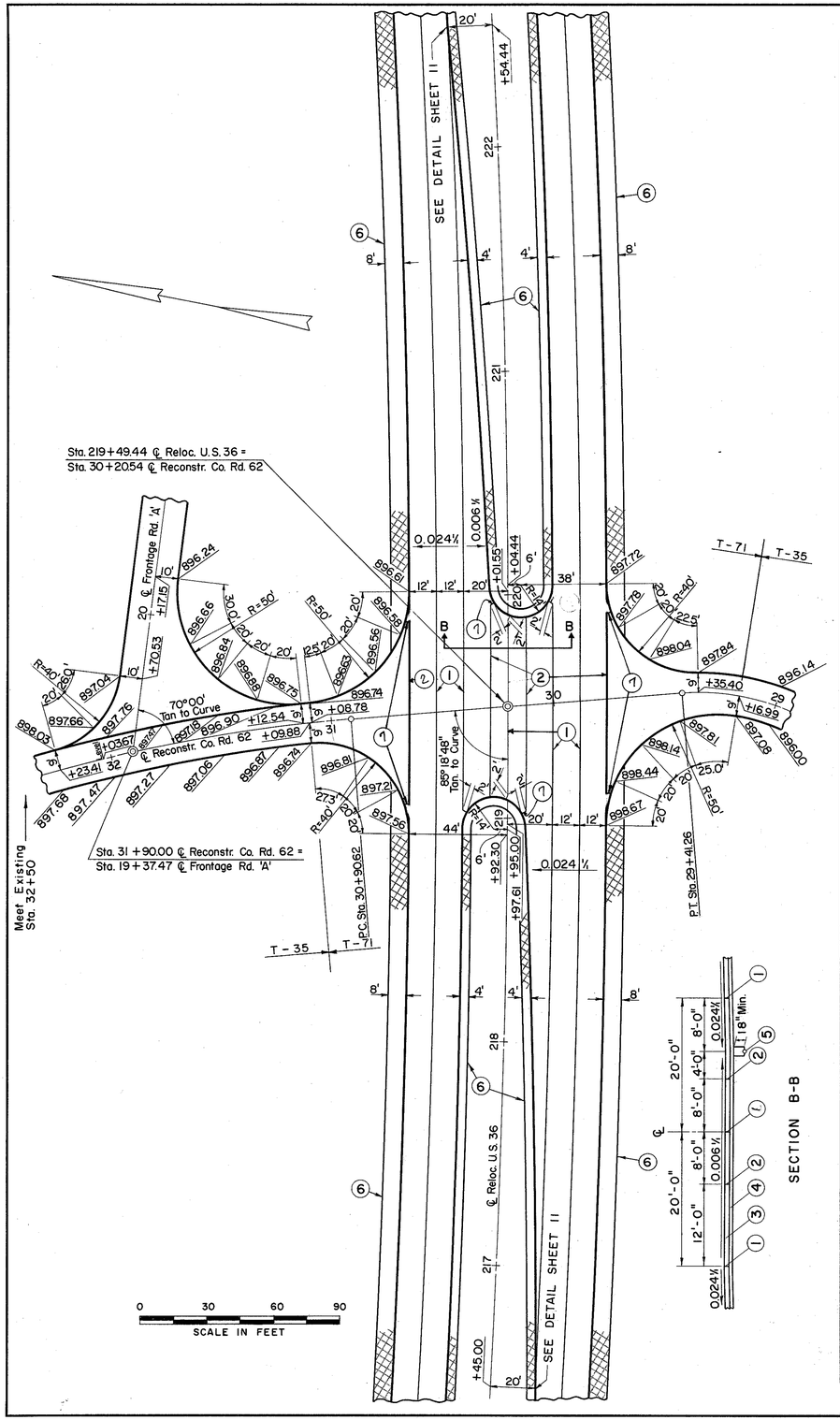
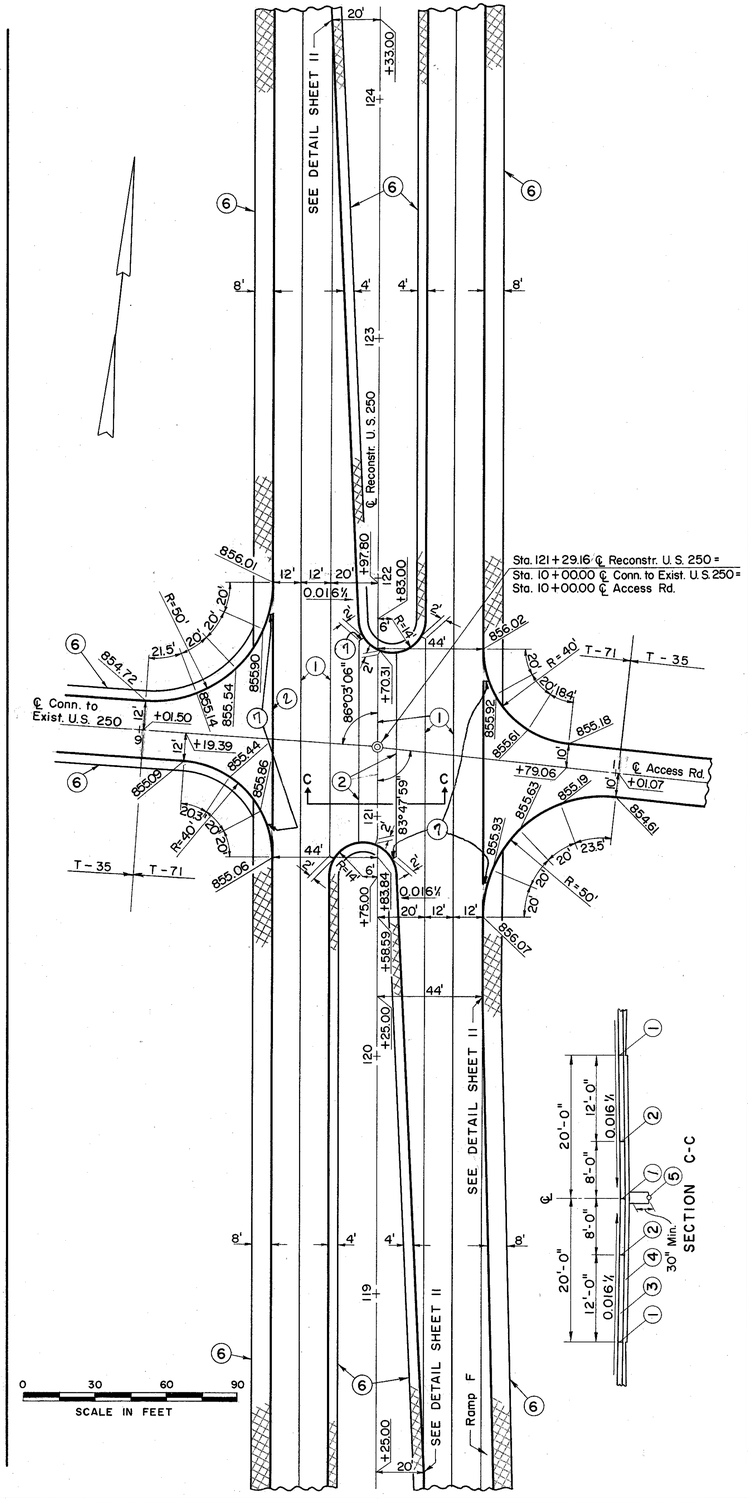
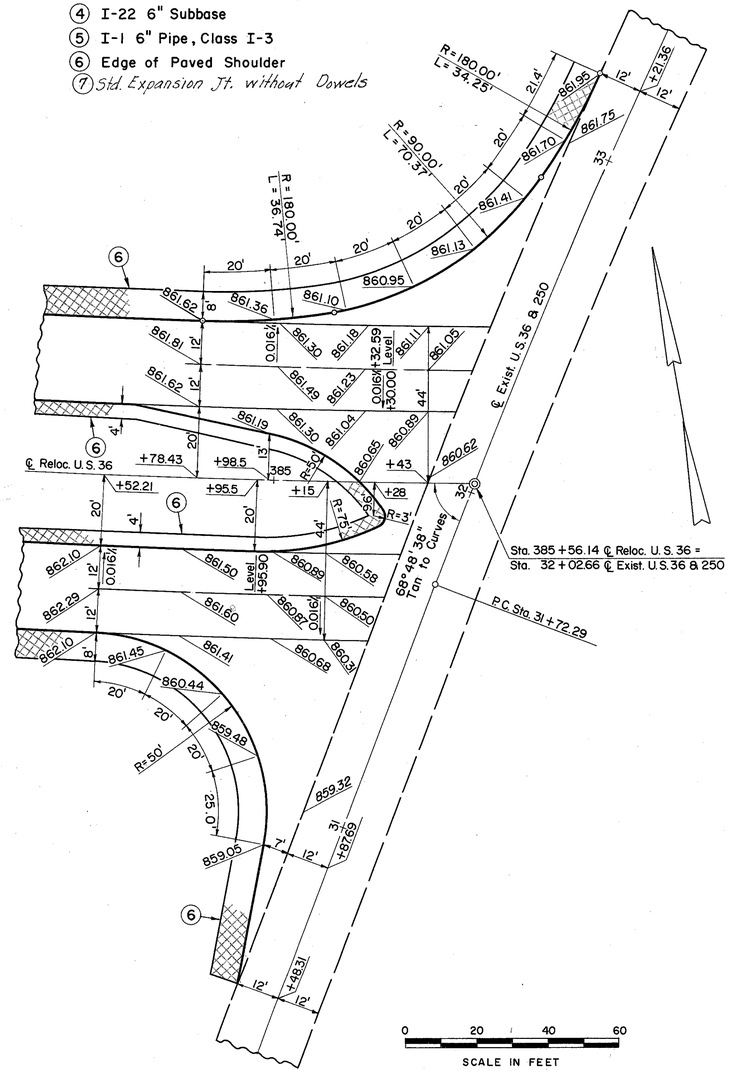
TUSCARAWAS COUNTY
TUS-36-15.93

LEGEND

1. Standard Longitudinal Joint
2. Standard Key Joint Without Tie Bars
3. T-71 9" Reinforced Portland Cement Concrete Pavement
4. I-22 6" Subbase
5. I-1 6" Pipe, Class I-3
6. Edge of Paved Shoulder
7. Std. Expansion Jt. without Dowels







FRONTAGE RD. 'A' AT CO. RD. 62
RECONSTR. CO. RD. 62 AT U.S. 36
CONN. TO EXIST. U.S. 250 AT U.S. 250
ACCESS RD. AT U.S. 250
RELOC. U.S. 36 AT EXIST. U.S. 36 & 250
INTERSECTION AND PAVEMENT DETAILS

SEEDING	
END WIDTH	SQ YDS
37	
	72
0	

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

Sta. 192+20

RIW

Area Temp. Conn. Ahd. Temp. Conn.

Area Temp. Conn. Bk.

1/2 "/'

870.0

24"

192+20

860

192+50
893.8

Sta. 192+00 to Sta. 194+00
Ground lines normal to Survey ℄
Templates normal to Temporary Connector ℄

Construction Stations used in Computing E'work
Sta. 191+85 to Sta. 194+50

Sta. 191+85

Sta. 191+85

Sta. 190+30
Begin Work

Sta 190+31, 20' Lt
Exist. Inlet
IE 24" (New) 861.57
IE 24" (Exist.) 861.57

860

192+00
892.4

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

Sta. 192+00 to 192+50

STATE	PROJECT
OHIO	

66
662

TUSCARAWAS COUNTY
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	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
Sta. 192+20 Ahd.	20	0		
			—	—
Sta. 192+20 Bk.	2			
Sta. 191+85	0			

FED. NO.	STATE	PROJECT		67
2	OHIO			662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING END WIDTH	SEEDING SQ. YDS		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
49		Sta. 193+32				
	314	R/W 168'				
		140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140				
		Temp. Conn. ℄				
		Exist. R/W 145'				
		E.P.				
		872.6 24" 193+32 874.6				
		860				
		193+50 891.8				
		Sta. 193+32	182			
52		Sta. 192+76				
					315	
		Sta. 192+87		0		
	277					1
		R/W				
		Temp. Conn. ℄				
		Exist. R/W 161' From Temp. ℄				
		C-101 C-21				
		Sta. 192+76	122	3		
		870.8 21" 192+76				
		860				
		193+00 893.1			147	3
37		Sta. 192+20	20	0		
		140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140				

Sta. 193+00 to 193+50

F.A. RTE. NO.	STATE	PROJECT		68
2	OHIO			662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING		END AREA		VOLUME	
END WIDTH	SQ YDS	CUT	FILL	CUT	FILL
150	Sta. 194+50				
		2060			
					2799
718					
55	Sta. 193+87				
					531
318					
49	Sta. 193+32				

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

R/W 151'
1½:1
1:1
½:1
875.80
Temp. Conn. ℄
E.P.
24"
To Std. 2-3 C.B.
Exist. R/W
Sta. 194+50
870
G-877.8
194+40
877.4
Sta. 194+45, 7' Rt.
Std. 1 M.H.
Cover El. 877.90
IE 12" 873.50
IE 30" 869.95
IE 30" 869.45
IE 6" 874.30
194+50
889.6
Sta. 194+50
Begin Full Grading
890
194+38
889.5

Sta. 194+50 to Sta. 199+50
Ground lines normal to Survey ℄
Templates normal to Temporary Connector ℄ to ditch line. Beyond ditch line, templates are normal to Survey ℄.

Construction Stations used in Computing E'work
Sta. 191+85 to Sta. 194+50

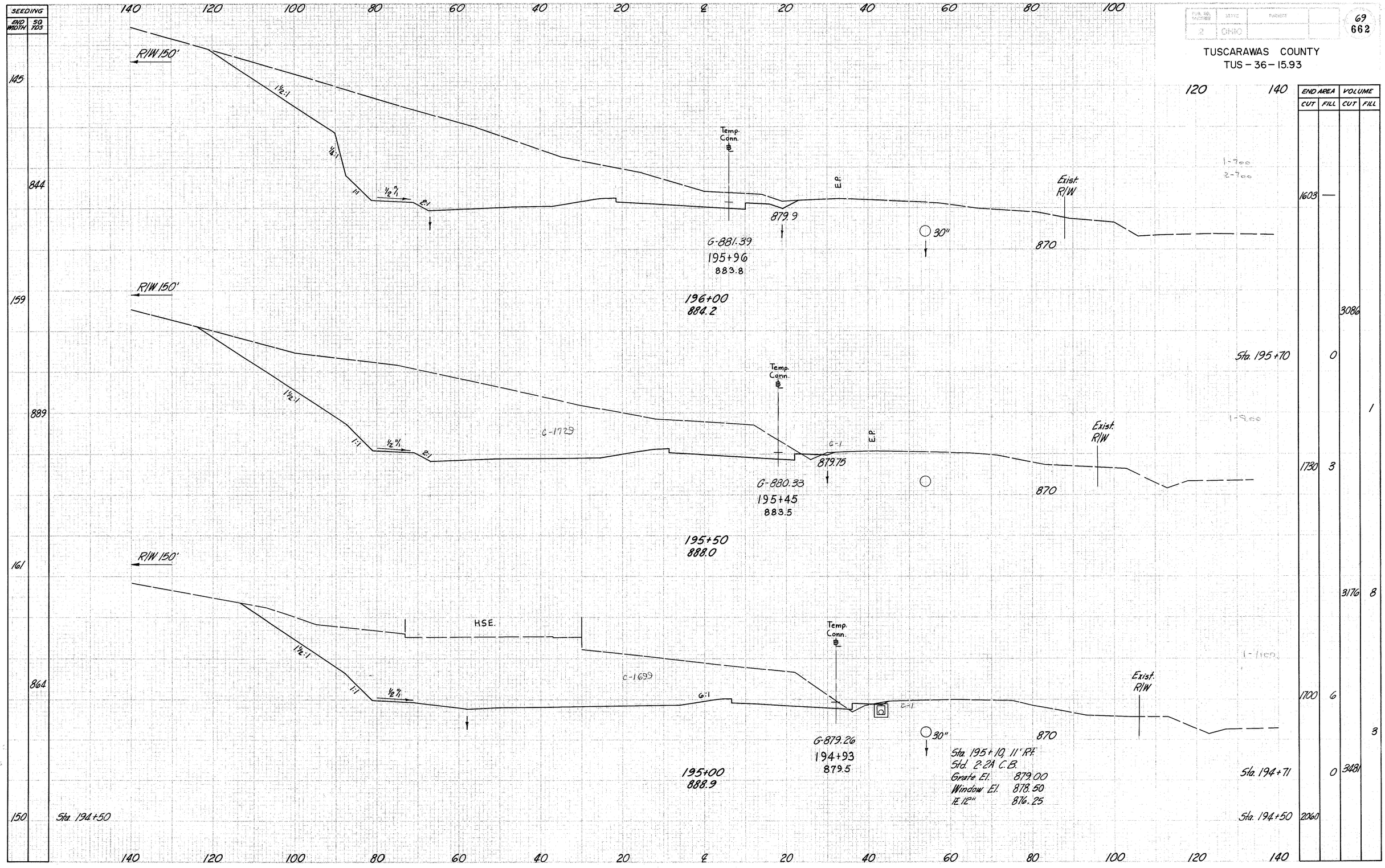
R/W 159'
Ground line normal to Temporary Connector ℄
Temp. Conn. ℄
880
G-876.9
194+00
Sta. 194+00, 35' Lt.
Std. 2-3 C.B.
Grate El. 875.80
Window El. 874.97
IE 30" (In) 868.33
IE 24" (Out) 868.33
IE 6" 871.50
62'-30" @ 1.80%
To Std. 1 M.H. Rt. Sta. 194+75
46
21
875.0
24"
Temp. Conn. ℄
Exist. R/W
870
G-876.6
193+87
876.2
194+00
889.2

Sta. 193+87
Sta. 193+32

Sta. 194+00 to 194+50

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

TUSCARAWAS COUNTY
TUS-36-15.93



Sta. 195+00 to 196+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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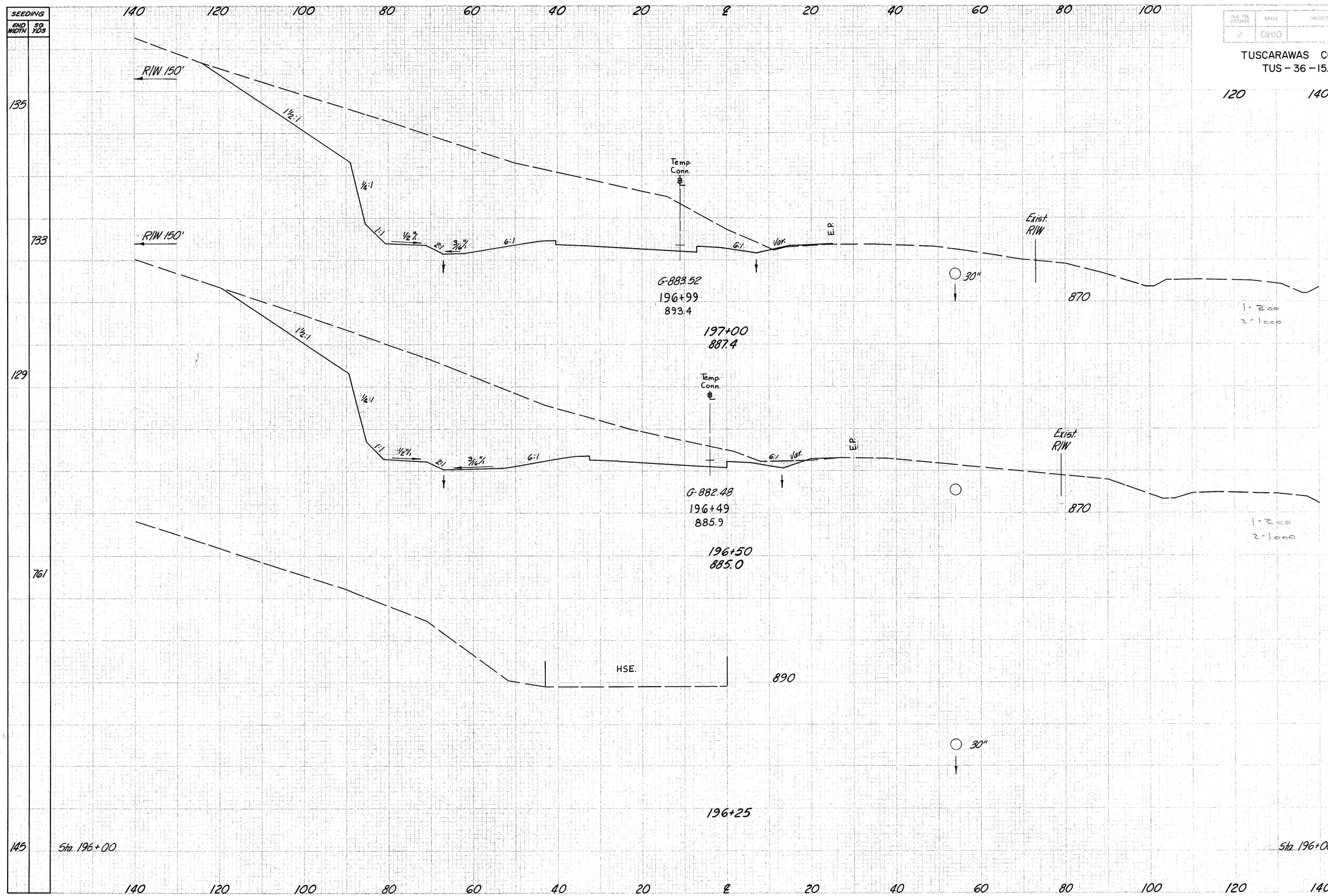
TUSCARAWAS COUNTY
TUS - 36 - 15.93



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1894	1		
		3154	2
1512	1		
		2884	
1603	—		

Sta. 196+25 to 197+00

SEC. NO.	STATE	PROJECT		71
2	OHIO			662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING END WIDTH	SEEDING SQ. YDS
122	
	700
130	
156	
156	
142	
	769
135	

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

R/W 150'

1½:1

½:1

½:1

2:1

Var.

Temp. Conn. ℄

G-886.65
198+50
895.9

198+50
891.0

Exist. R/W

30"

870

Sta. 198+50

2-15aa

R/W 150'

1½:1

½:1

½"/1

2:1

Var.

6:1

Var.

E.P.

Temp. Conn. ℄

G-885.59
197+99
894.7

198+00
889.5

870

2-15aa

R/W 150'

1½:1

½:1

1:1

½"/1

2:1

Var.

Temp. Conn. ℄

6:1

6:1

E.P.

Exist. R/W

30"

G-884.56
197+49
892.9

197+50
887.6

870

Sta. 197+00

Sta. 197+00

1-35a
2-9aa

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1596	8		
		2948	13
1588	6		
		3118	11
1779	6		
		3401	6
1894	1		

Sta 197+50 to 198+50

SEEDING	
END WIDTH	SQ. YDS

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

TUSCARAWAS COUNTY
TUS – 36 – 15.93

120 140

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		115	
960	12		
		1987	15
1186	4		
		2576	11
1596	8		

Sta. 199+81 Lt.
Additional E-1
for I-10

R/W 151'

890

128'-24" @ 2.51%

Sta. 199+81, 72' Lt.
Std. HW-E
IE 24" 884.91

G-889.36
199+81
889.8

R/W 150'

134

2:1 C-938 6:1 6:1 F-8 ℄ C-21 F-4

Exist. R/W
G.R.

694

128'-24" @ 2.51%

G-888.72
199+50
890.4

Sta. 199+55, 54' Rt.
Std. 1 M.H.
Cover El. 887.93
IE 24" 881.71
IE 27" 881.46
IE 30" 881.21

870

End Temporary Pavement And
Begin T-71 Pavement
Sta. 199+50 Lt. & Rt.

R/W 150'

116

Sta 199+00 to Sta. 199+50 Rt.
Build T-35 Feathering Course.

Temp. Conn. ℄

1½:1 6:1 Var. E.P.

Exist. R/W

661

G-887.68

30"

199+00
889.7

870

122 Sta. 198+50

Sta. 198+50

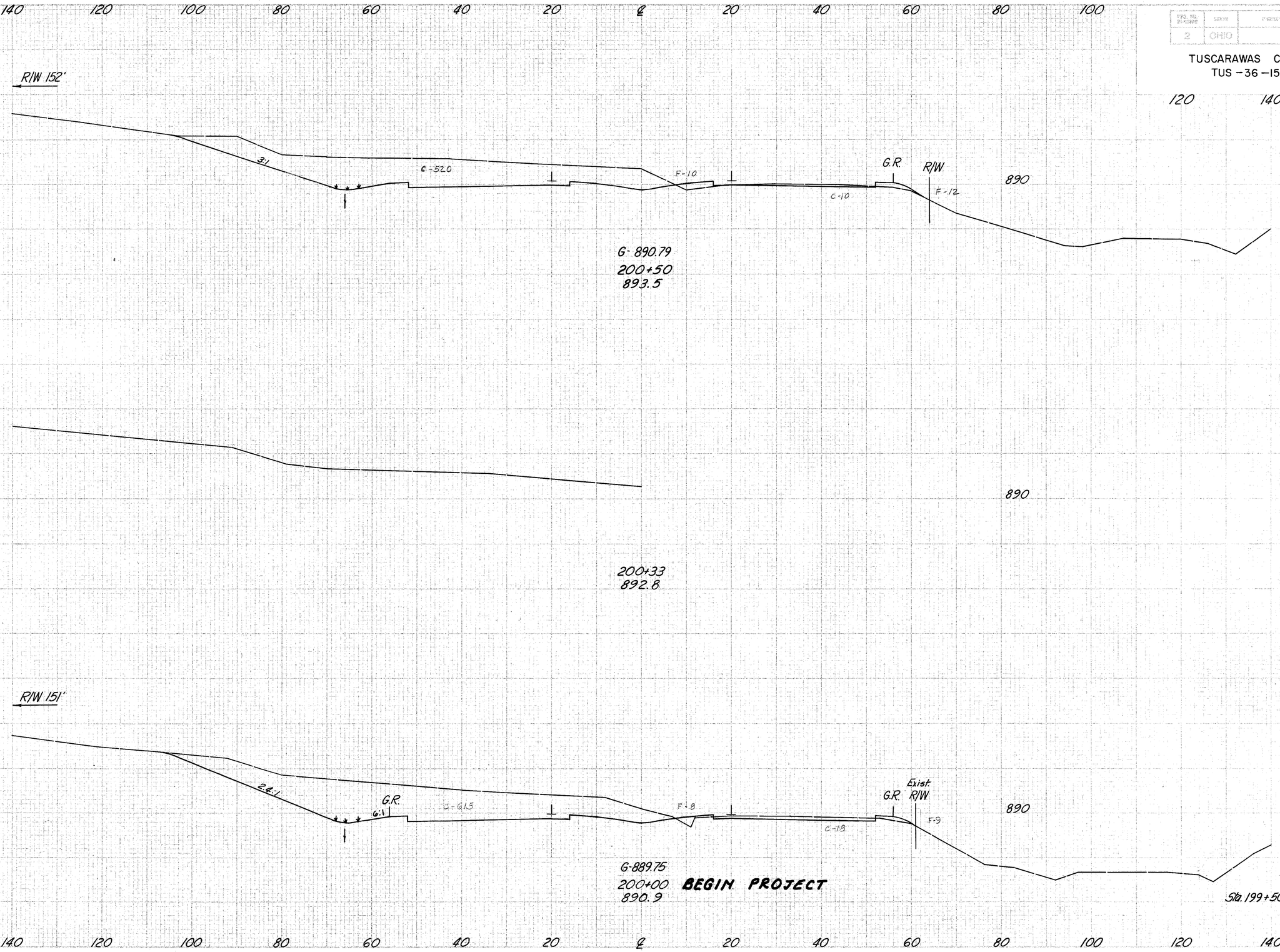
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 199+00 to 199+81

FED. ROAD DIVISION	STATE	PROJECT		73
2	OHIO			662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING	
END WIDTH	SQ. YDS
116	
	642
115	
	692
134	

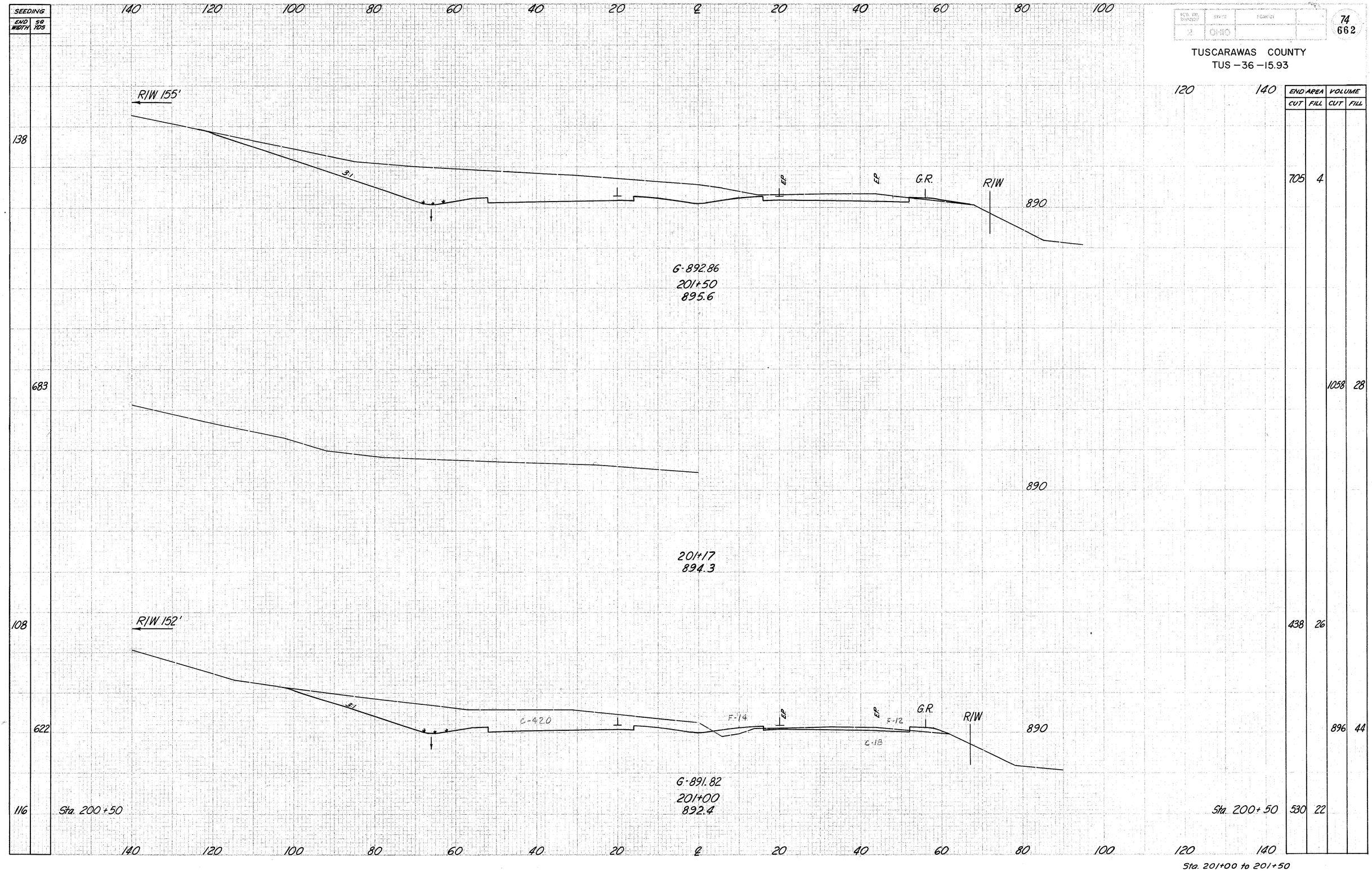


END AREA		VOLUME	
CUT	FILL	CUT	FILL
530	22		
		1077	36
633	17		
		1475	27
960	12		

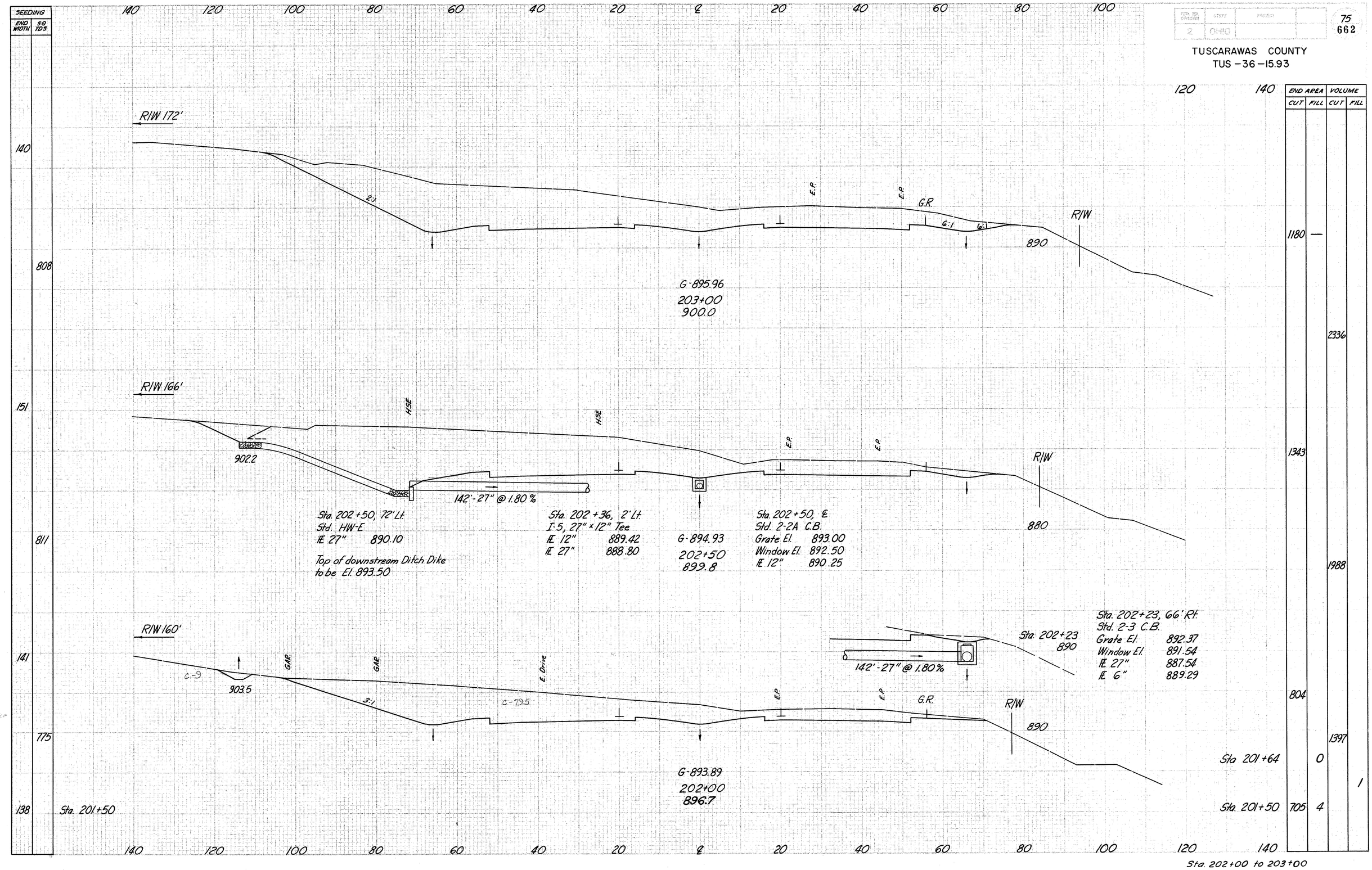
Sta. 200+00 to 200+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TUSCARAWAS COUNTY
TUS -36 -15.93



Sta. 201+00 to 201+50



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

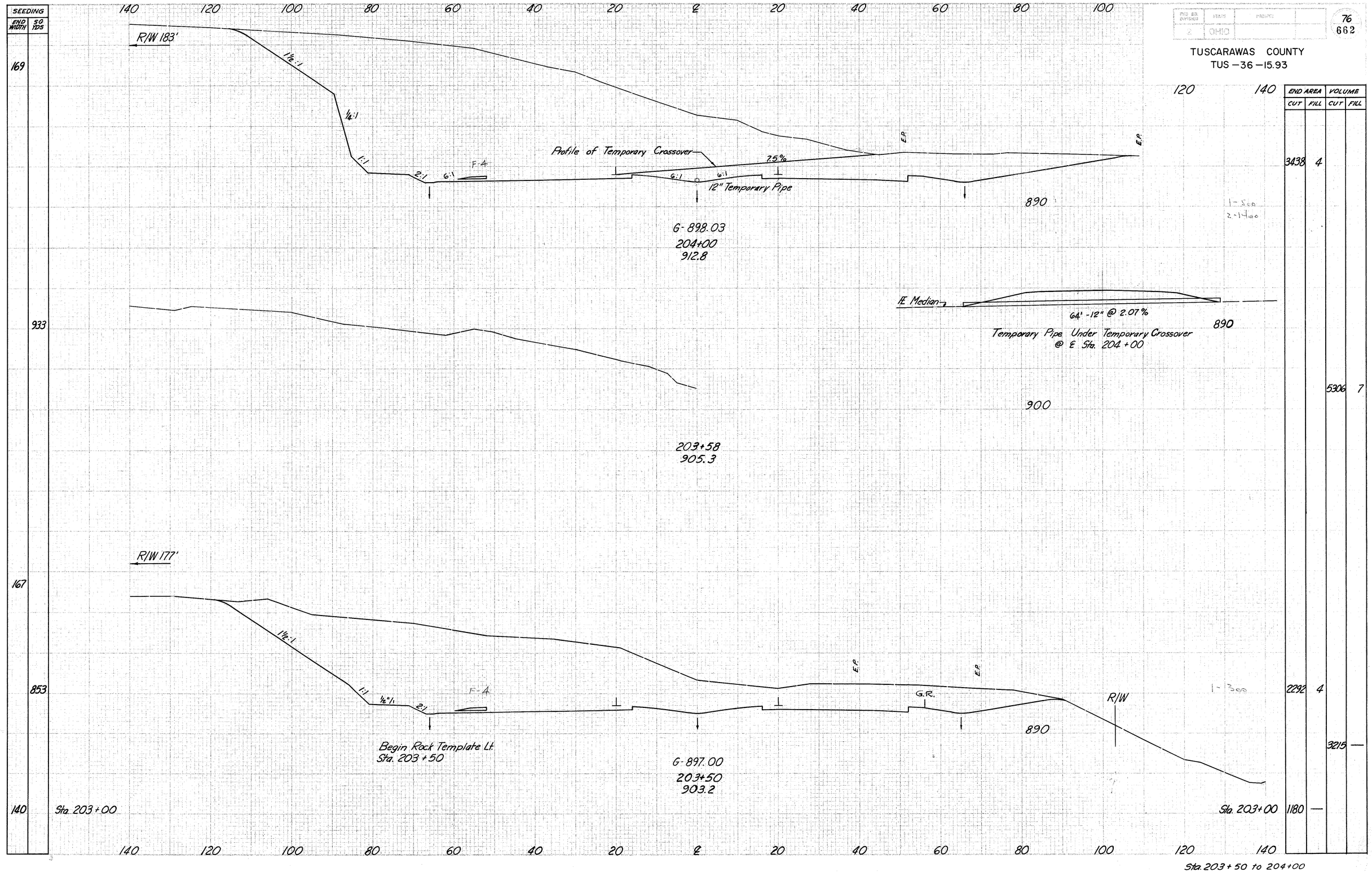
75
662

TUSCARAWAS COUNTY
TUS-36-15.93

Sta. 202+00 to 203+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

TUSCARAWAS COUNTY
TUS-36-15.93



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
3438	4		
		5306	7
2292	4		
		3215	—
1180	—		

Sta. 203+50 to 204+00

SEEDING	
END WIDTH	SQ. YDS.
171	
	944
169	

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

R/W 189'

F-4

E.P. E.P.

G-899.07
204+50
926.3

880

204+28
922.7

880

Sta. 204+00

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

Sta. 204 + 28 to 204 + 50

END AREA		VOLUME	
CUT	FILL	CUT	FILL
5058	4		
		7867	7
3438	4		

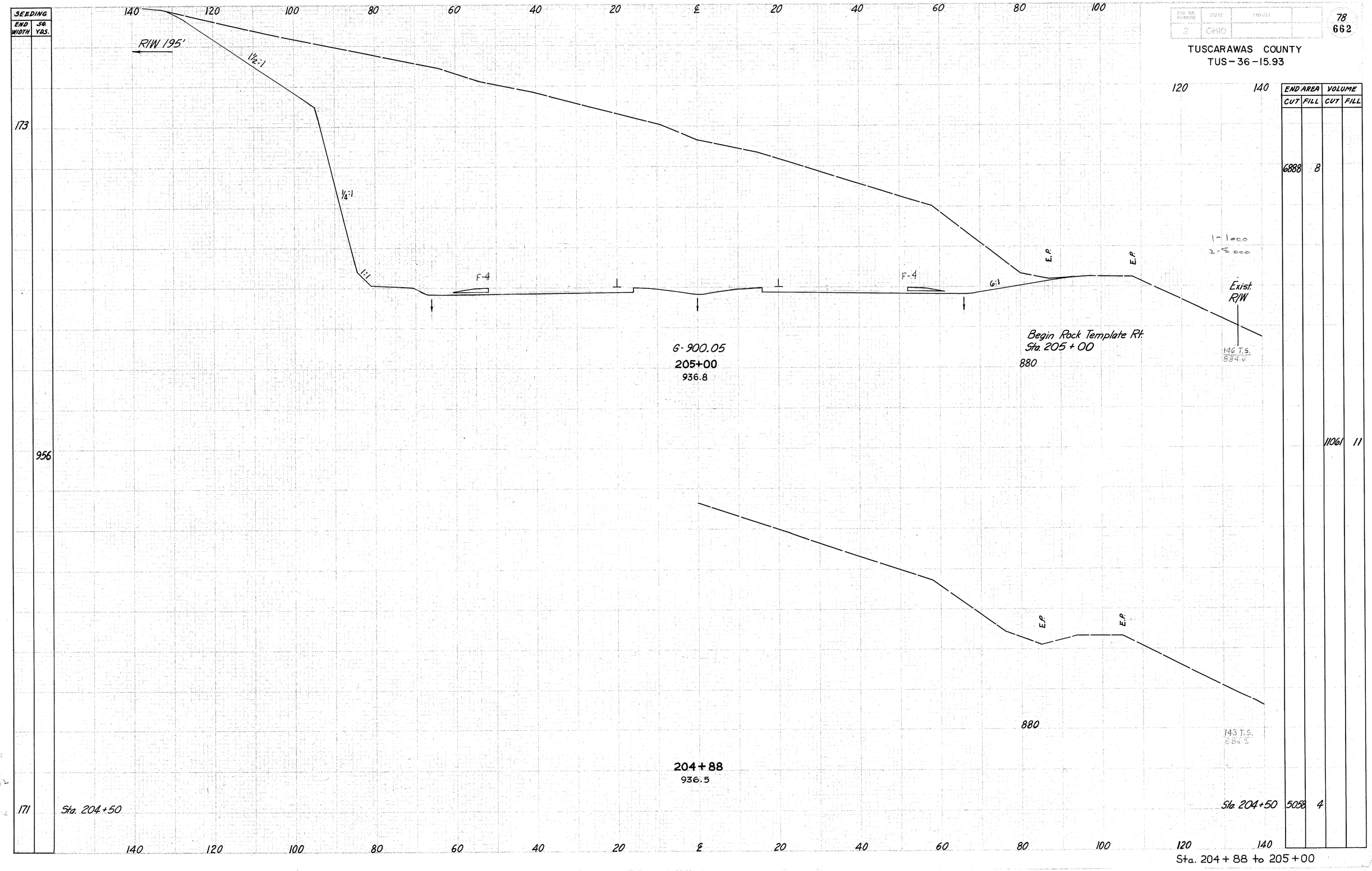
FED. AID PROJECT	STATE	PROJECT	
	OHIO		

77
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

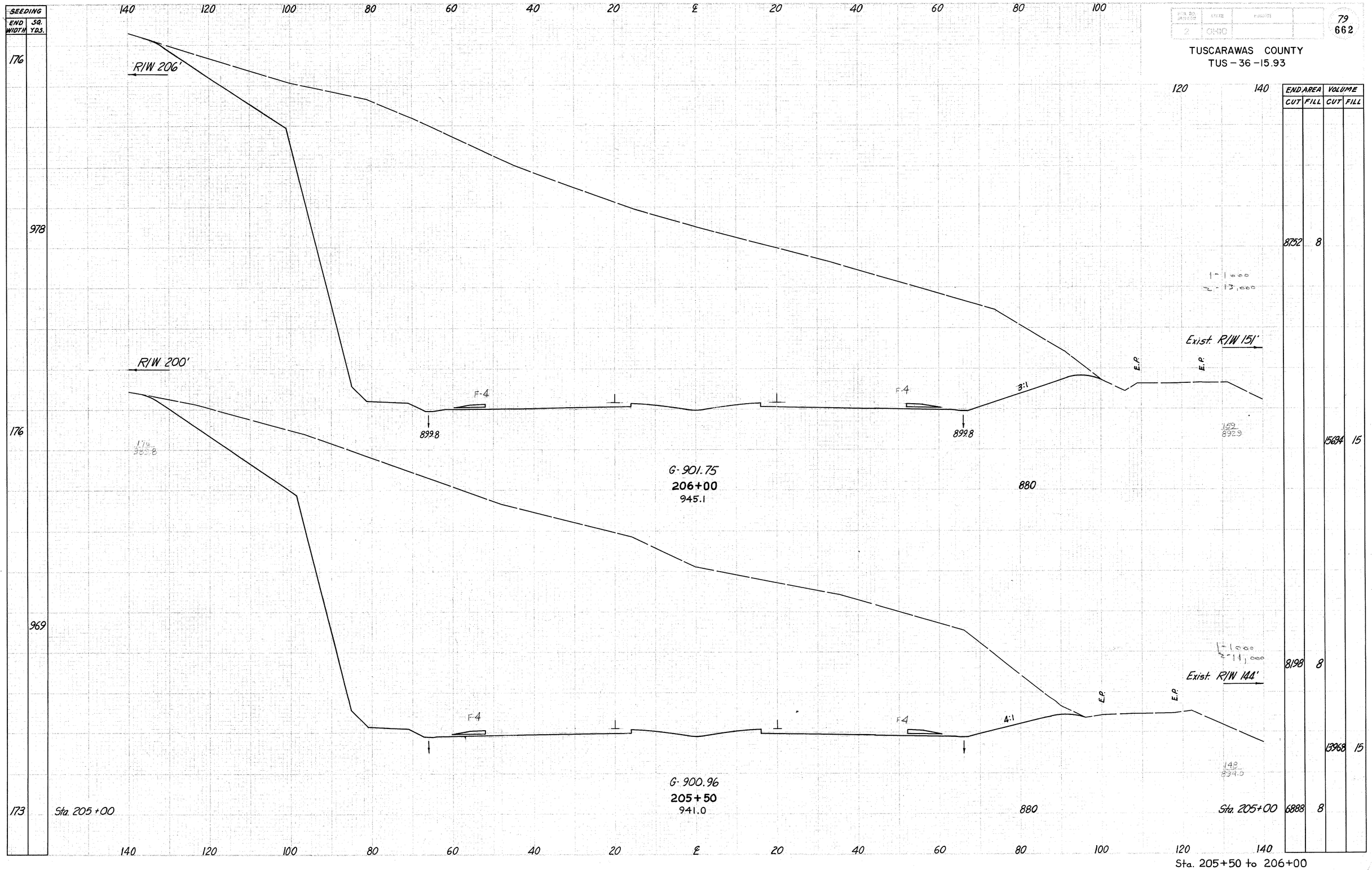
TUSCARAWAS COUNTY
TUS-36-15.93

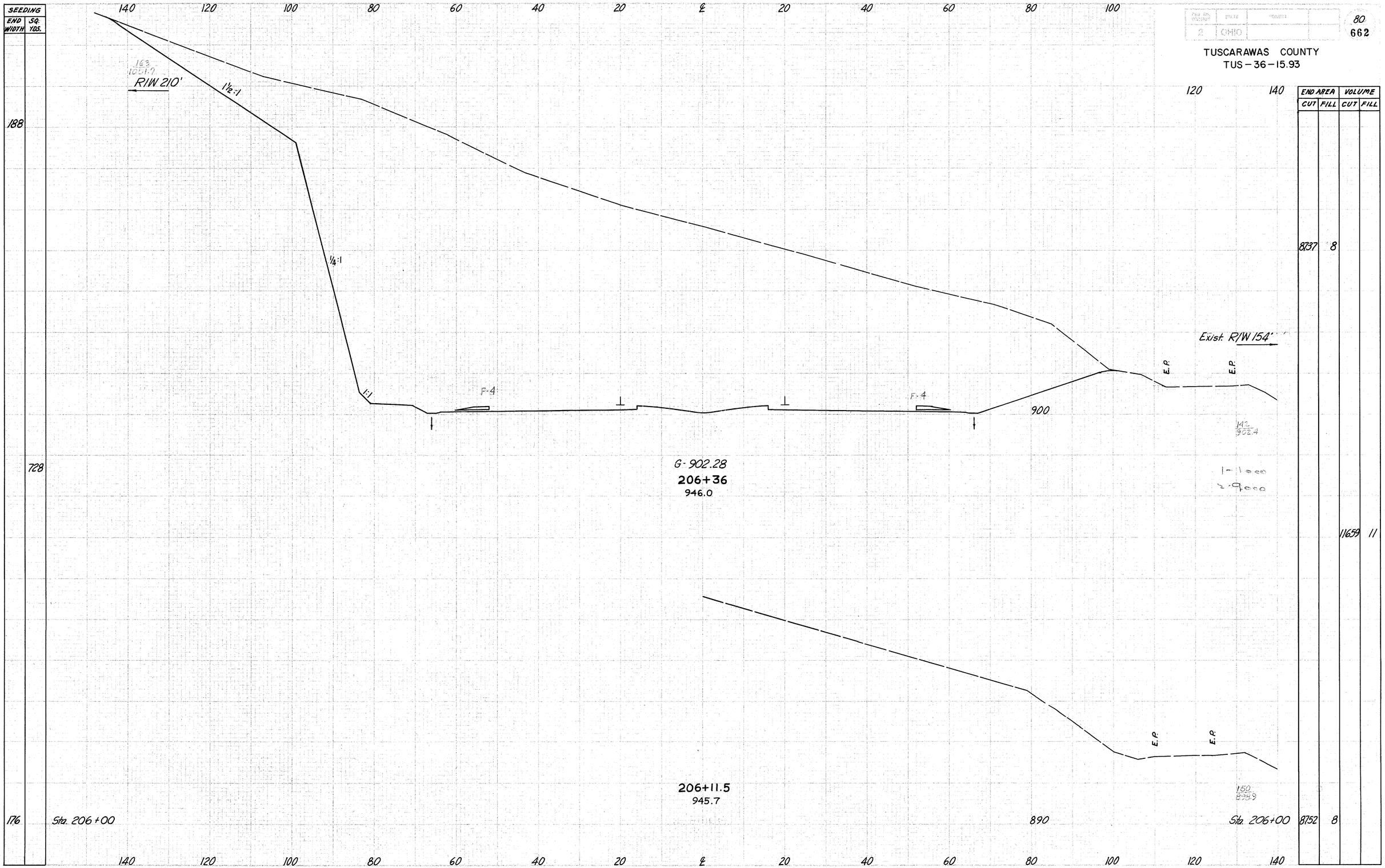


Sta. 204+88 to 205+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

TUSCARAWAS COUNTY
TUS-36-15.93



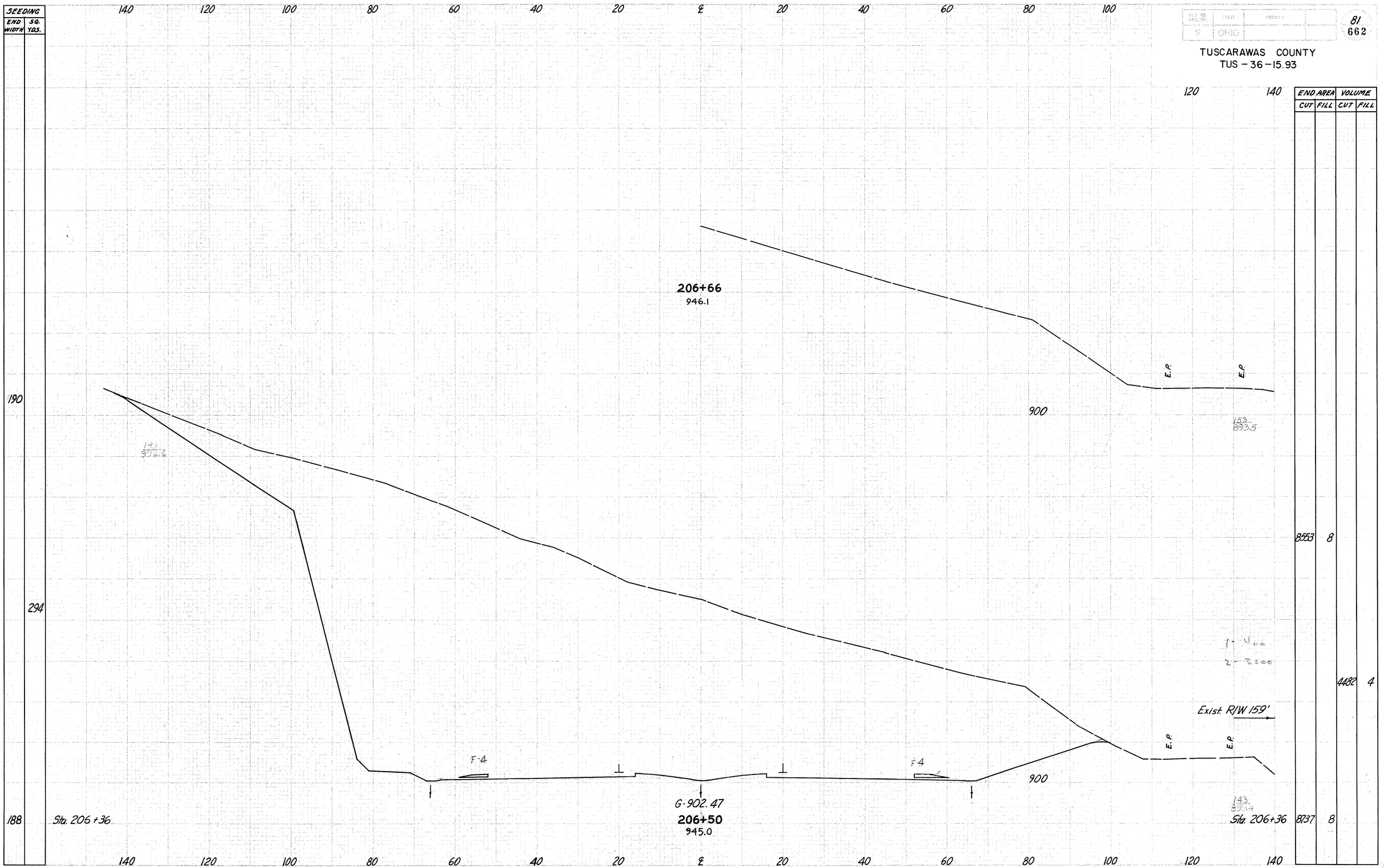


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

80
662

TUSCARAWAS COUNTY
TUS-36-15.93

Sta. 206+11.5 to 206+36



TUSCARAWAS COUNTY
TUS - 36 - 15.93

Sta. 206 + 50 to 206 + 66

SEEDING	
END WIDTH	SQ. YDS.
171	
	967
177	
	1019
190	

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

R/W 210'

149
983.8

R/W 210'

146
992.2

1½:1

¼:1

1:1

F 4

F 4

F 4

3:1

E.P.

E.P.

900

161
903.3

Exist. R/W 151'

1-1 000
2-12 000

G-903.62
207+50
937.9

End Rock Template Rt.
Sta. 207+50

1-1 000
2-13 000

Exist. R/W 155'

900

148
905.4

G-903.09
207+00
942.8

Sta. 206+80
Begin Super Transition
End Normal Section

Sta. 206+50

Sta. 206+50

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

Sta. 207+00 to 207+50

END AREA		VOLUME	
CUT	FILL	CUT	FILL
7017	8		
		14041	15
8147	8		
		15463	15
8553	8		

DIST.	COUNTY	ROUTE	SHEET
2	TUS		82
			662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

PLOTTED
6-3-64
SHEET
FILE
Implemented
Jacket
Rec'd 6/5 3/4/64
SUS 12/26/63
WHS 1/31/64
edit of 3/17/64 for

SEEDING	
END WIDTH	SQ. YDS.
139	
	831
160	
	928
174	
	958
171	

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

FED. AID PROJECT	STATE	PROJECT	
2	OHIO		

83
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

R/W 205'

1½:1 ¼:1 1:1 ½"/1 2:1 6:1 F4

G-904.65
209+00
914.1

End Rock Template Lt.
Sta. 209+00

GARAGE F+22 4:1 GARAGE 910 E.P. E.P.

Exist. R/W

141
902.6

120 140

1-5.0
2-5.0

R/W 206'

R/W 208'

F4 5:1

G-904.40
208+50
920.3

920

R/W 150'

E.P. E.P.

162
902.5

35'

℄ Road E.P. +2.0%

Profile Turnaround 117.5' Rt. Reloc. U.S. 36
Sta. 208+25

930

Sta. 208+34
Begin Full Super 0.024'/Ft.
End Super Transition

1-1.0
2-9.0

R/W 150'

F4 4:1

G-904.05
208+00
930.6

E.P. E.P.

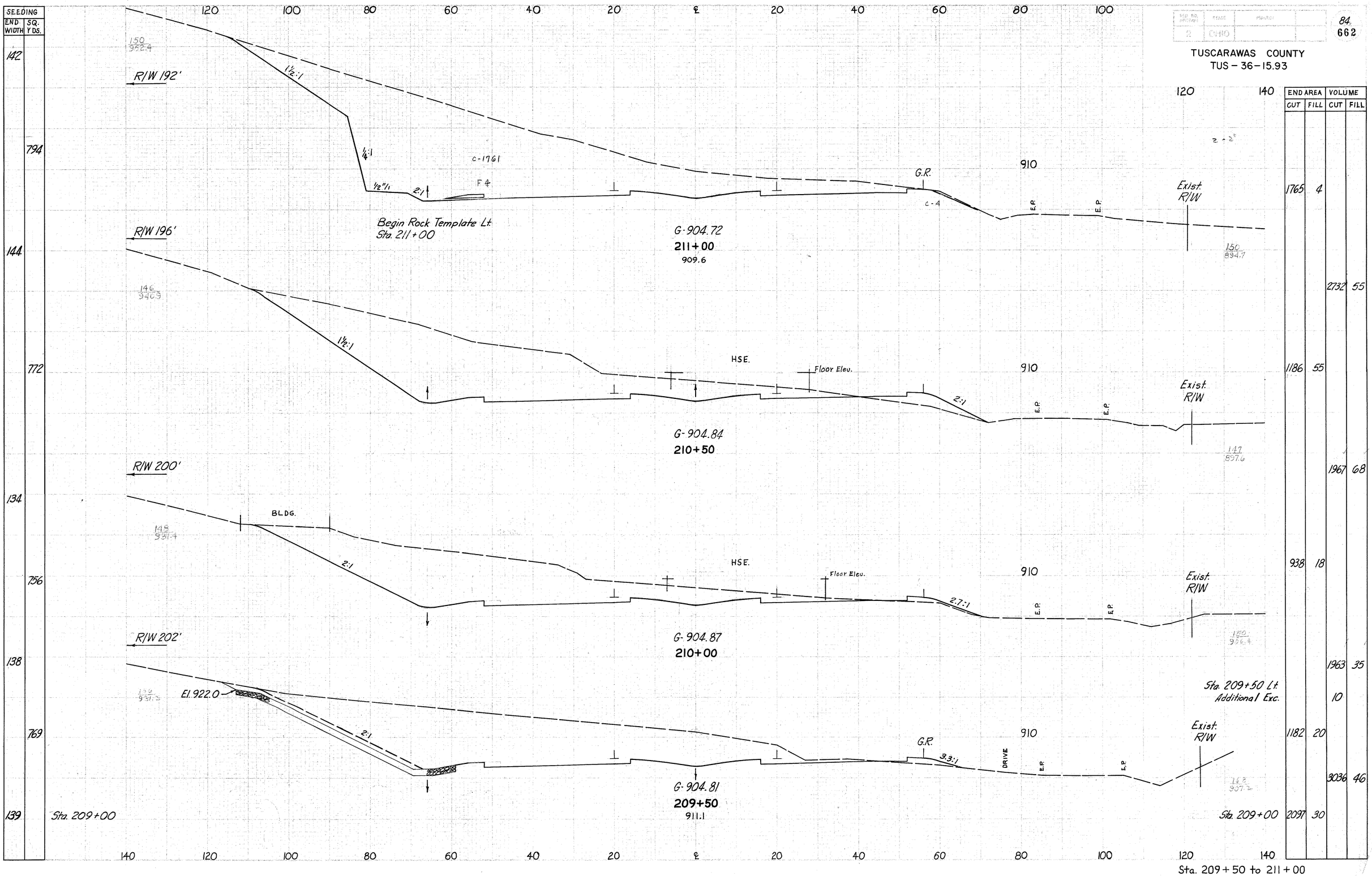
141
904.3

Sta. 207+50 Sta. 207+50

END AREA		VOLUME	
CUT	FILL	CUT	FILL
2097	26		
		5173	28
3490	4		
		8165	7
5328	4		
		11430	11
7017	8		

1-8.2
2-4.3

Sta. 208+00 to 209+00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1765	4		
		2732	55
1186	55		
		1967	68
938	18		
		1963	35
		10	
1182	20		
		3036	46
2097	30		

TUSCARAWAS COUNTY
TUS - 36 - 15.93

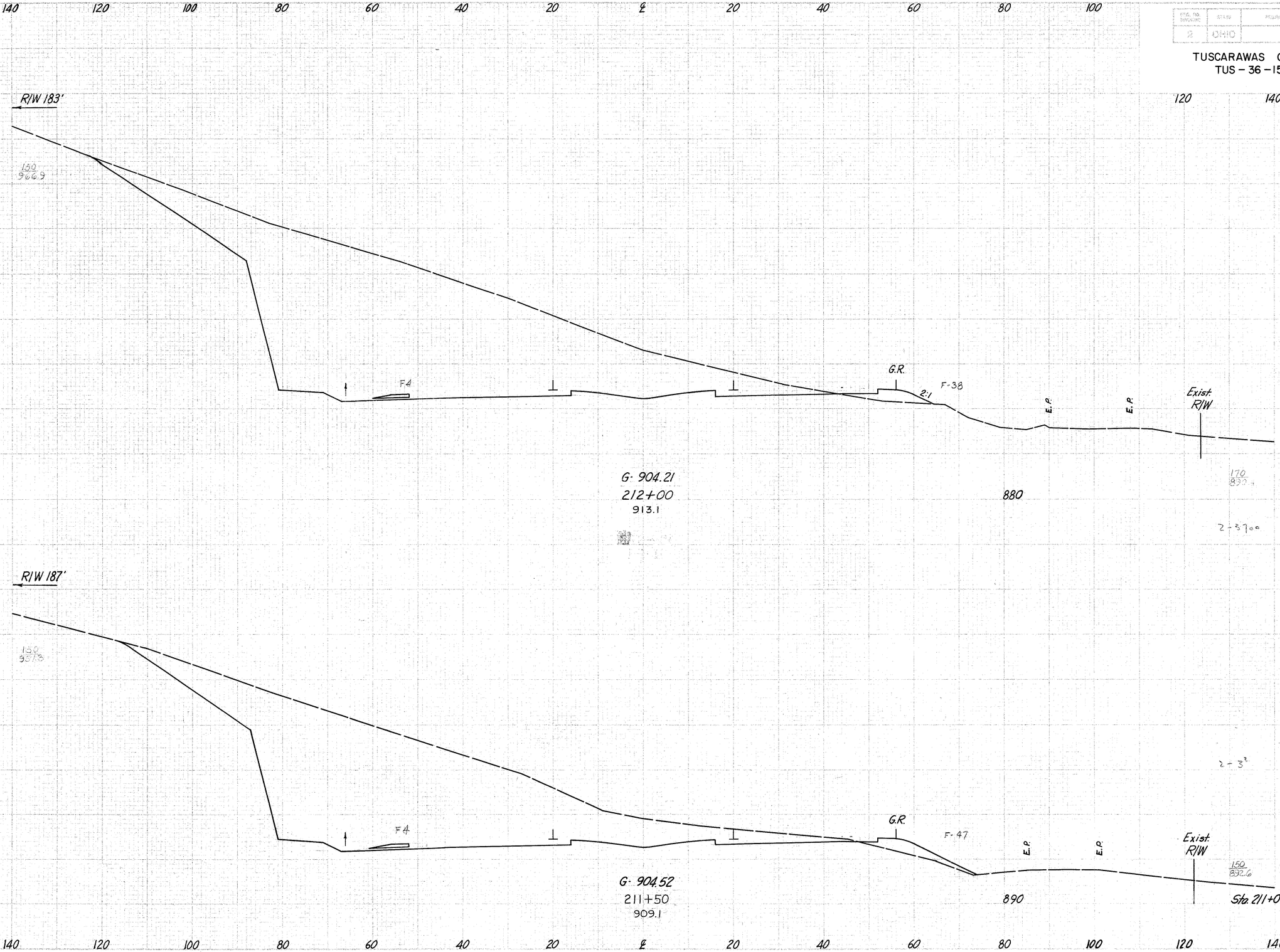
84
662

Sta. 209+50 to 211+00

SEEDING	
END WIDTH	SQ. YDS.
137	
	775
142	
	789
142	

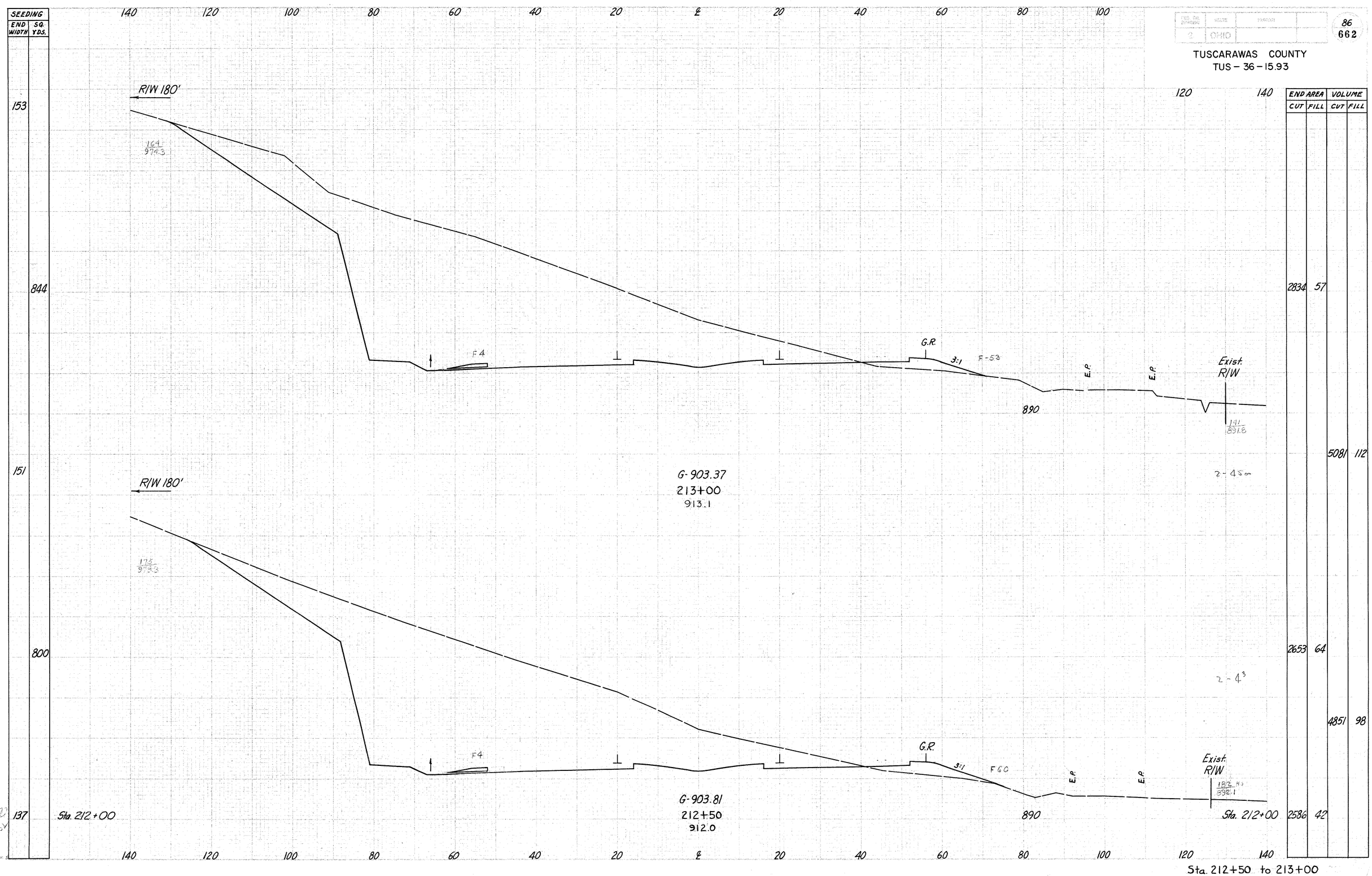
STATE	PROJECT	SHEET NO.	TOTAL SHEETS
OHIO		85	662

TUSCARAWAS COUNTY
TUS – 36 – 15.93



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2586	42		
		4286	86
2043	51		
		3526	51
1765	4		

Sta. 211+50 to 212+00



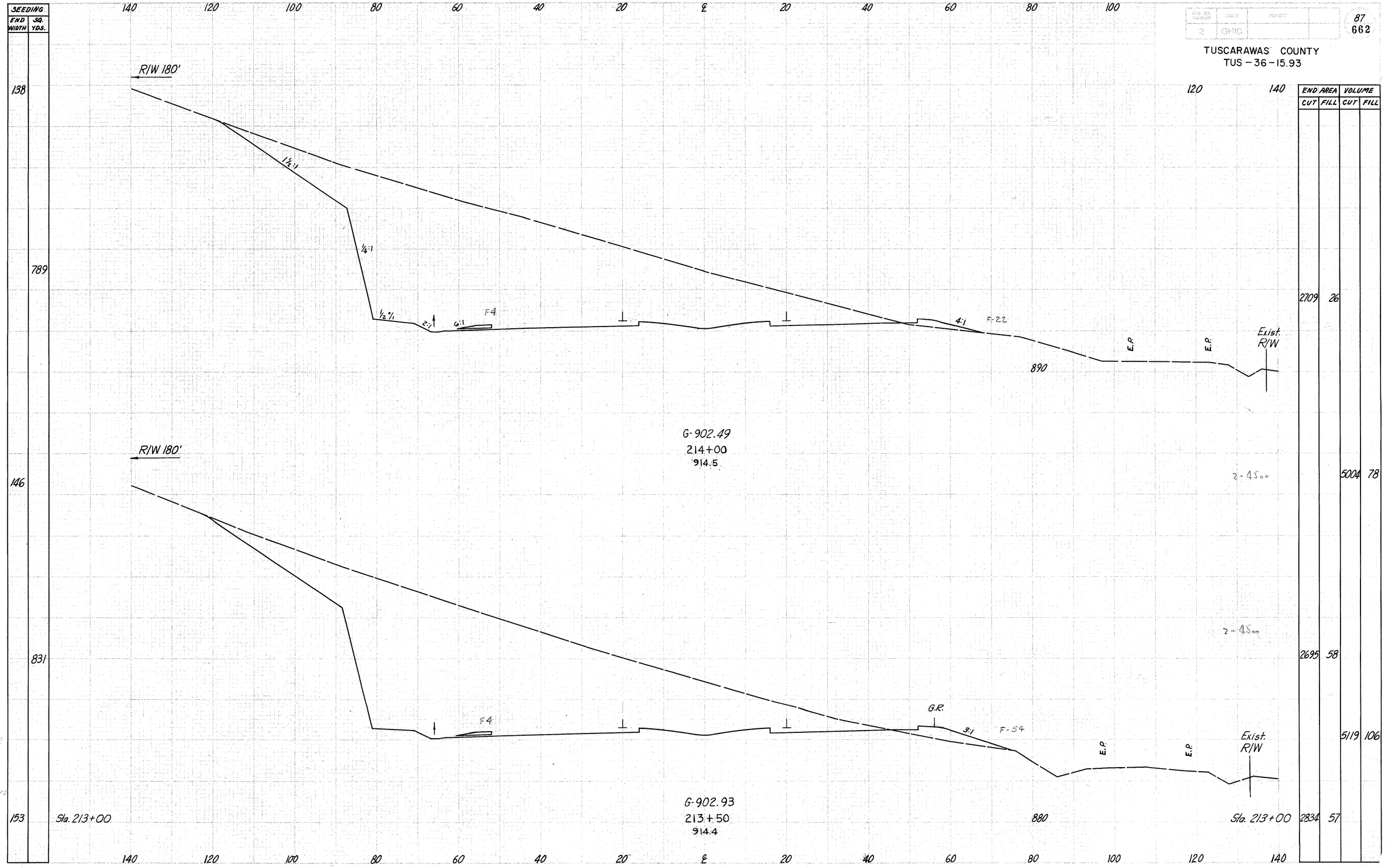
TUSCARAWAS COUNTY
TUS - 36 - 15.93

86
662

Sta. 212+50 to 213+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

TUSCARAWAS COUNTY
TUS-36-15.93



Sta. 213+50 to 214+00

SEED. NO. CONTROL	STATE	PROJECT	
2	OHIO		

88
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING END WIDTH	SEEDING SQ. YDS.
176	
	983
178	
	878
138	

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

R/W 179'

F4

BLDG

E. Drive

F-72

E. Drive

Exist. R/W 149'

E.P.

E.P.

890

G-901.60
215+00
911.3

1-400

R/W 180'

1½:1

1:1

2:1

6:1

F4

HSE.

Floor Elev.

F-69

Exist. R/W 143'

E.P.

E.P.

890

G-902.05
214+50
912.0

1-200
2-150

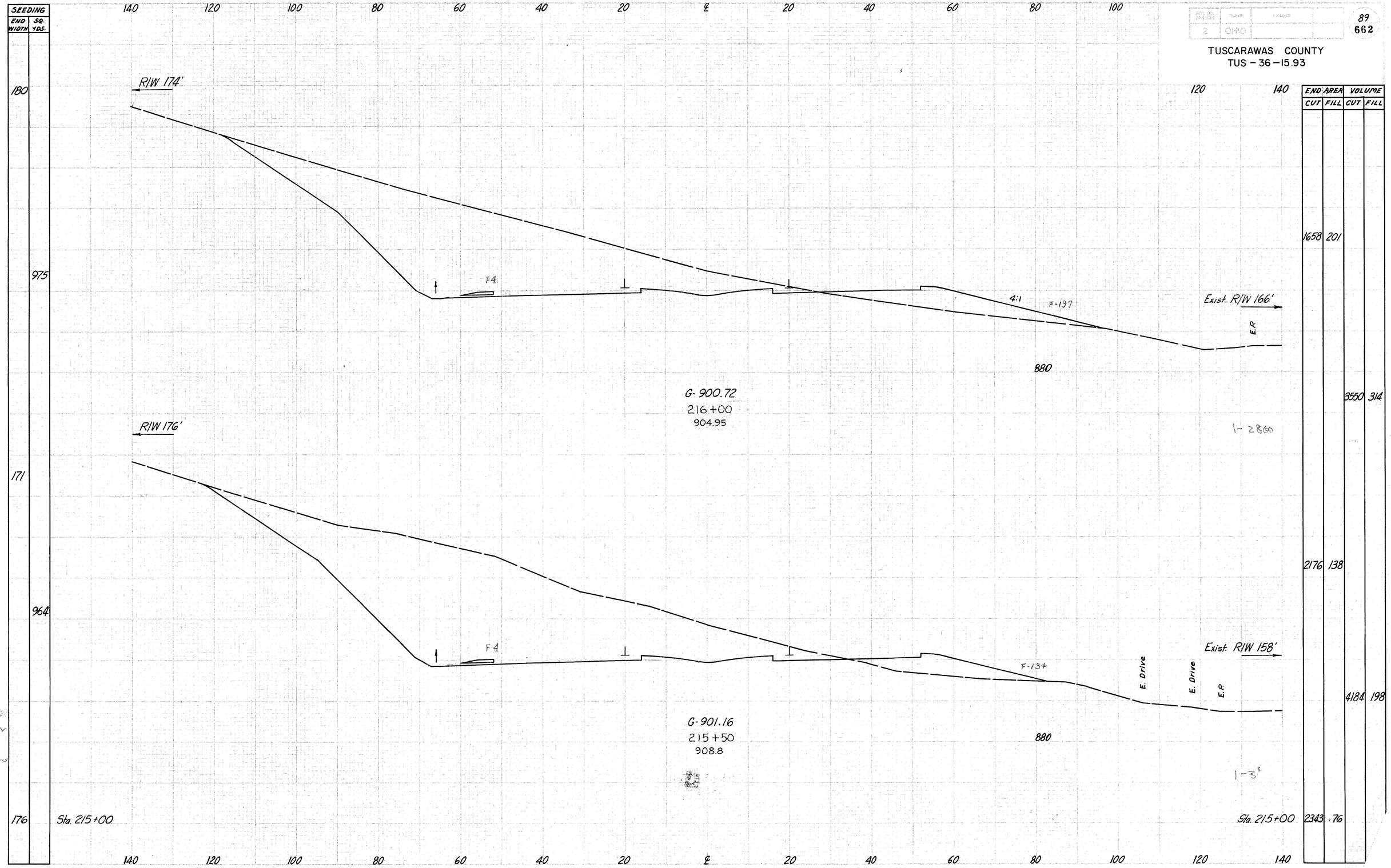
Templated in energy
JAB 3/13/06
SES 12/26/03
MMS 1/31/-
Jan 31 2006

Sta. 214+00

Sta. 214+00

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2343	76		
		4530	138
2549	73		
		4868	92
2709	26		

Sta. 214+50 to 215+00

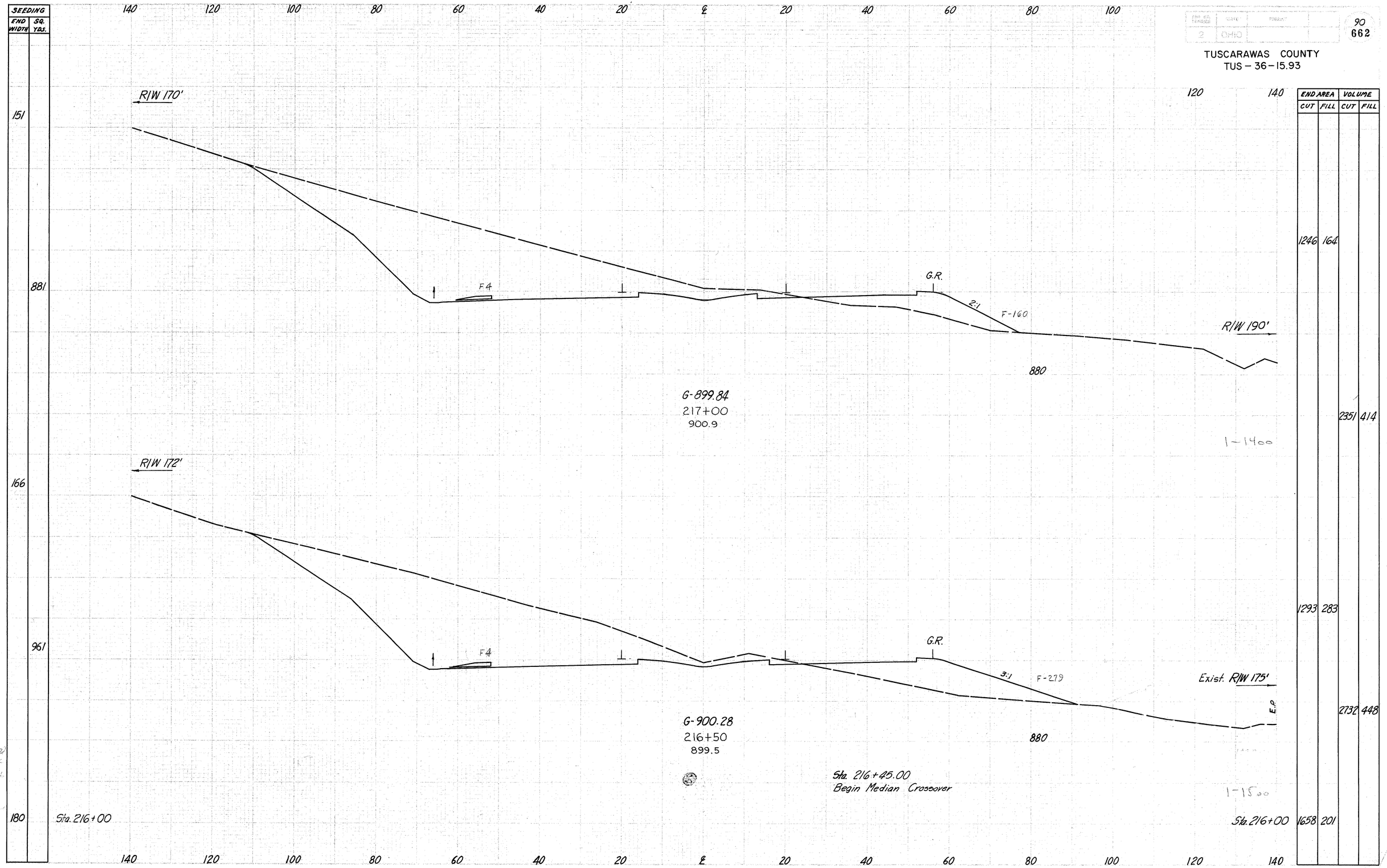


89
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

Sta. 215+50 to 216+00

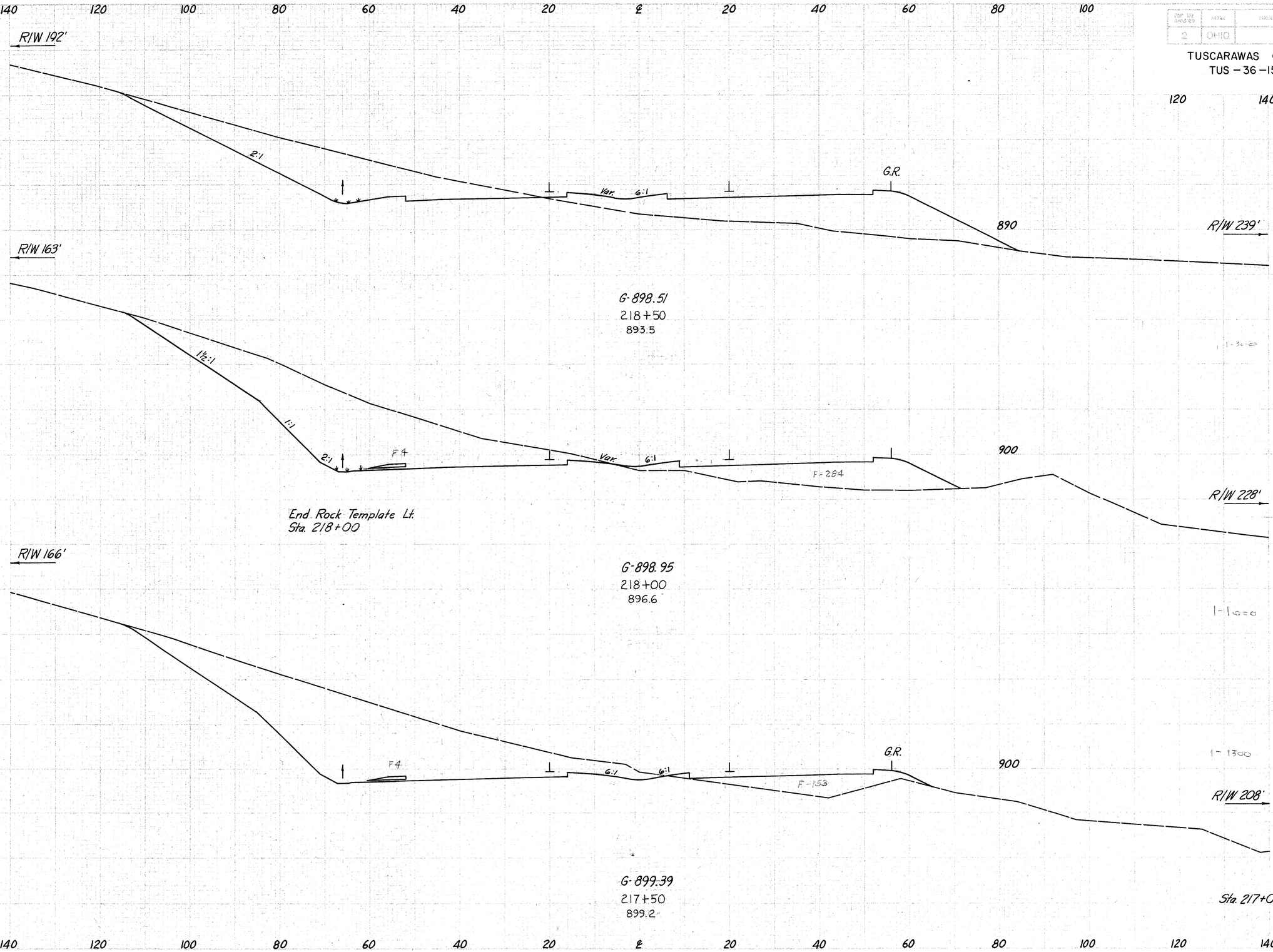
TUSCARAWAS COUNTY
TUS – 36 – 15.93



Templated 11-27-61 [illegible]
Revised 3-14-62 BDK

Sta. 216+50 to 217+00

SEEDING	
END WIDTH	SQ. YDS.
143	
	778
137	
	772
141	
	811
151	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
503	543		
		1284	769
884	288		
		1843	412
1106	157		
		2178	297
1246	164		

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

91
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

Sta. 217+50 to 218+50

CO. NO.	STATE	PROJECT	
2	OHIO		

92
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING END WIDTH	SEEDING SQ. YDS.	
		140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140
		R/W 227' — Reconstr. Co. Rd. 62 — Area Reloc. U.S. 36 — E.P. — Area Reloc. U.S. 36 — Reconstr. Co. Rd. 62 — R/W 204'
0		Sta. 219+38
		870
		G-897.63 219+50 887.8
11		G.R.
		E.P. — R/W 223'
25		G-897.80 219+30 885.5
		870
18		
39		R/W 224'
		G-897.85 219+25 888.7
147		870
		Sta. 218+90, 4' Lt. Std. 2-2A C.B. Grate El. 896.86 Window El. 896.36 IE 12" 894.11 IE 6" 894.61
67	Ahd.	Sta. 219+15
—		Reconstr. Co. Rd. 62 — Area Reloc. U.S. 36 Ahd. — G.R. — 6:1 Var. — Area Reloc. U.S. 36 Ahd. — G.R. — Reconstr. Co. Rd. 62 — Sta. 219+00 Ahd.
122	Bk.	C-39 I-10 2:1 Var. C-55 — 892.2 — 30"@ Sta. 219+00 @ 90° — F-775 2:1 — Sta. 219+00 Bk.
736		890 — R/W 238'
143	Sta. 218+50	Sta. 219+00, 4' Lt. I-5, 30"x12" IE 12" 892.63 IE 30" 891.88 — G-898.07 219+00 890.8 — F-61 — Sta. 218+50
		140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	1253		
			970
	1367		
			233
	1153		
			893
0			
		15	
55	775	—	—
94	836		
		553	1277
503	513		

Sta. 219+00 to 219+50

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING	
END WIDTH	SQ. YDS.
162	
	1761
155	
	1661
144	
	1472
121 Ahd.	—
84 Bk	233
0	—

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

Frontage Rd. 'A' | Area Reloc. U.S. 36

885.8

142 / 873.0

E.R. E.R.

48" @ Sta. 223+00 @ 90°

G-894.53
223+00
872.5

G.R.

880

R/W 150'

868.7 147 / 870.0

Sta. 222+54.44
End Median Crossover

886.6

142 / 874.8

G:1 G:1

2' ROCK EMBANKMENT

STA. 221 + 0 STA 236

E.R. E.R.

R/W 154'

872.8 147 / 871.2

G-895.42
222+00
872.2

860

887.0

143 / 885.3

G-896.30
221+00
881.4

E.R. E.R.

870

875.5

R/W 161'

151 / 875.1

Frontage Rd. 'A' | Area Reloc. U.S. 36

R/W 170'

1¼ 1¼ 4:1

888.0

144 / 882.0

F-1529

Area Reloc U.S. 36 Bk. | Reconstr. Co. Rd. 62

G.R.

2:1

F-120

R/W 171'

147 ER / 876.8

G-897.18
220+00
884.8

870

Sta. 220+00 Ahd.

Sta. 220+00 Bk.

Sta. 219+50

Sta. 219+50

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	8		3414
		30	12941
	8		3574
		19	11435
	2		2601
		4	7870
0	1649	—	—
	1529		
			2576
	1253		

Sta. 220+00 to 223+00

SEEDING	
END WIDTH	SQ. YDS.
162	
	1783
159	
	1778
161	
	1766
157	
	1772
162	

FED. AID PROJECT	STATE	PROJECT
	OHIO	

94
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

Frontage Rd 'A' | Area Reloc. U.S. 36

G.R. G.R.

2:1 1½ 1½ 878.3

Sta. 227+08, 86' Lt.
Std. 2-2A C.B.
Grate El. 878.23
Window El. 877.73
IE 12" 875.48

24" @ Sta. 227+08 @ 7°

G-891.00
227+00
872.4

R/W 155'

3:1 881.0

E. Drive E. Drive

R/W 154'

868.0

G-891.88
226+00
870.8

Sta. 225+30
Begin Normal Section
End Super Transition

E. Drive E. Drive 3.5:1 883.0

R/W 152'

868.5

G-892.76
225+00
871.7

Frontage Rd 'A' | Area Reloc. U.S. 36

G.R. G.R.

4:1 884.6

E.R. E.R.

R/W 150'

869.0

G-893.65
224+00
871.8

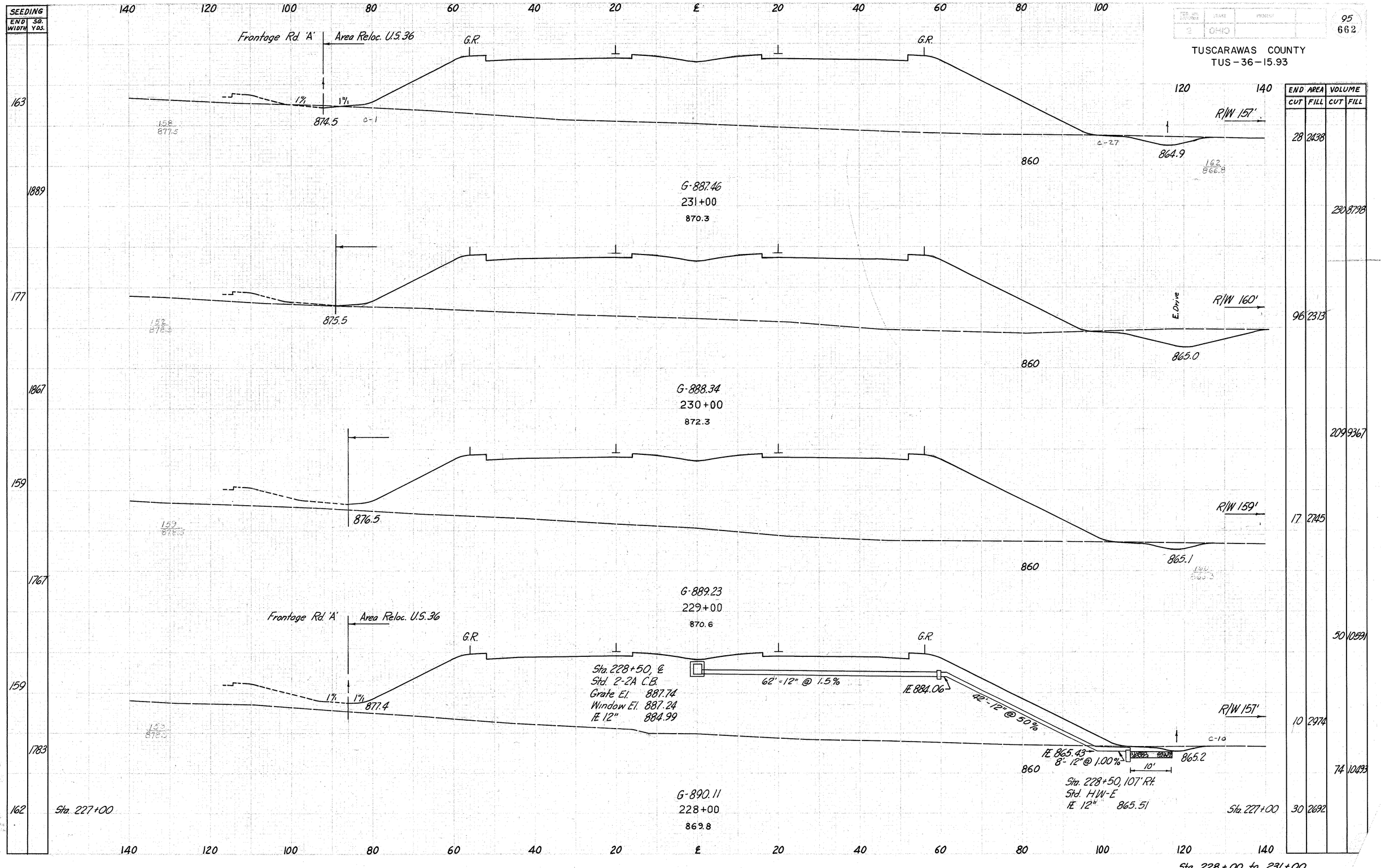
Sta. 223+76
Begin Super Transition
End Full Super

Sta. 223+00

Sta. 224+00 to 227+00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
30	2692		
		89	10613
18	3039		
		93	11567
32	3207		
		81	12067
12	3309		
		37	12450
8	3414		

TUSCARAWAS COUNTY
TUS-36-15.93



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
28	2438		
		230	8798
96	2313		
		209	9367
17	2745		
		50	10591
10	2974		
		74	10493
30	2692		

Sta. 228+00 to 231+00

SEEDING	
END WIDTH	SQ. YDS.
182	
	1967
172	
	1922
174	
	1944
176	
	1883
163	

STATE	PROJECT	SHEET NO.	TOTAL SHEETS
OHIO		96	662

TUSCARAWAS COUNTY
TUS — 36 — 15.93

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

154
874.4

R/W

3:1 3:1 ½"/1

c-20

870.5

G.R.

42" @ Sta. 234+80 @ 2°

G.R.

120 140

R/W 144'

c-96

865.1

146
868.1

860

G-883.92
235+00
870.8

R/W

150
875.7

c-47

2:1

872.0

R/W 147'

c-14

869.0

860

135
863.4

G-884.81
234+00
873.0

E. Drive

R/W

155 E. Drive
875.0

c-37

872.5

R/W 151'

868.0

c-14

860

G-885.69
233+00
872.0

G.R.

G.R.

R/W

c-6

2:1 3:1 ½"/1

873.0

R/W 154'

864.8

c-10

860

149
864.5

G-886.58
232+00
868.7

Sta. 231+00

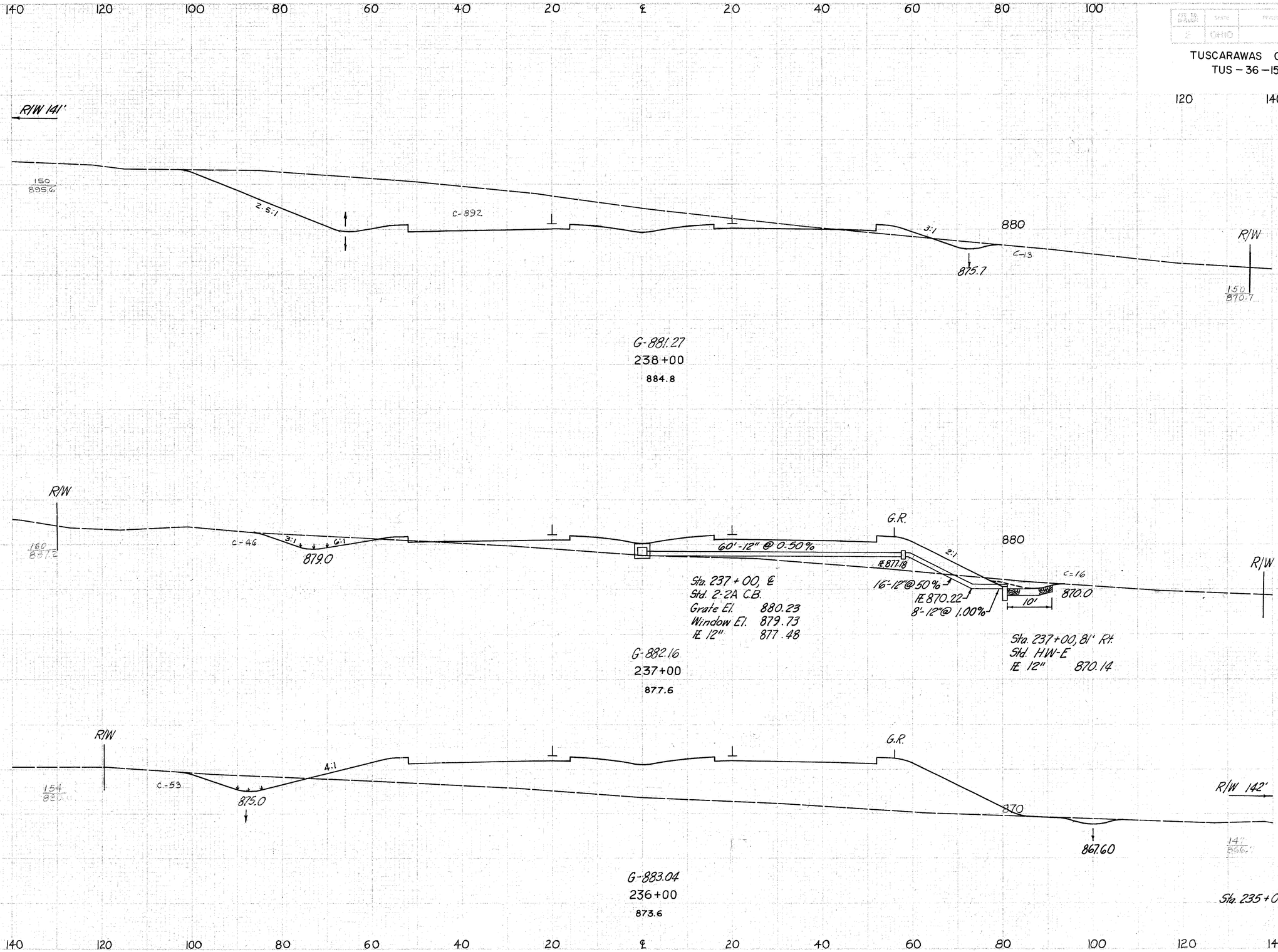
Sta. 231+00

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
116	1665		
			3285726
61	1427		
			207 5880
51	1748		
		124	7928
16	2533		
		81	9206
28	2438		

Sta. 232+00 to 235+00

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

SEEDING	
END WIDTH	SQ. YDS.
135	
	1478
131	
	1639
164	
	1922
182	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
905	24		
		1791	867
62	444		
		231	2946
63	1147		
		331	5207
116	1665		

Sta. 236+00 to 238+00

STATE OF OHIO — SHEET 97 — 662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING	
END WIDTH	SQ. YDS.
188	
	972
162	
	867
150	
	792
135	

STATE	PROJECT
OHIO	

98
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

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

R/W 157'

163
934.6

1½:1

1:1

2:1

F 4

890

R/W

158
876.0

G-879.95
239+50
896.4

R/W 152'

150
916.5

1½:1

2:1

F 4

890

BLDG.

R/W

149
875.5

1-S3

Begin Rock Template Lt.
Sta. 239+00

G-880.39
239+00
893.8

R/W 146'

146
901.7

2:1

C-1927

C-68

880

R/W

164
872.6

Sta. 238+30

G-880.83
238+50
887.4

Sta. 238+00

Sta. 238+00

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

Sta. 238+50 to 239+50

END AREA		VOLUME	
CUT	FILL	CUT	FILL
3502	4		
		5146	7
2704	4		
		4351	—
1995	—		
		2685	
905	24	0	13

ED-6-19-61 JKB
Rev'd 11-24-61 GD
STAGE PO TEMPLATES SHO
10/29/63
ra SLS 12/27/63
NM 2/3/64
ecker 3/13/64

SEEDING	
END WIDTH	SQ. YDS.
217	
	1178
207	
	1097
188	

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

R/W 164'

154
945.1

F 4

4.6:1

890

R/W

141
884.9

1-73

G-879.06
240+50
897.9

R/W 162'

175
947.5

F 4

5:3:1

890

R/W

175
871.3

1+67.00

G-879.50
240+00
897.8

Sta. 239+50

Sta. 239+50

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

Sta. 240+00 to 240+50

99
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

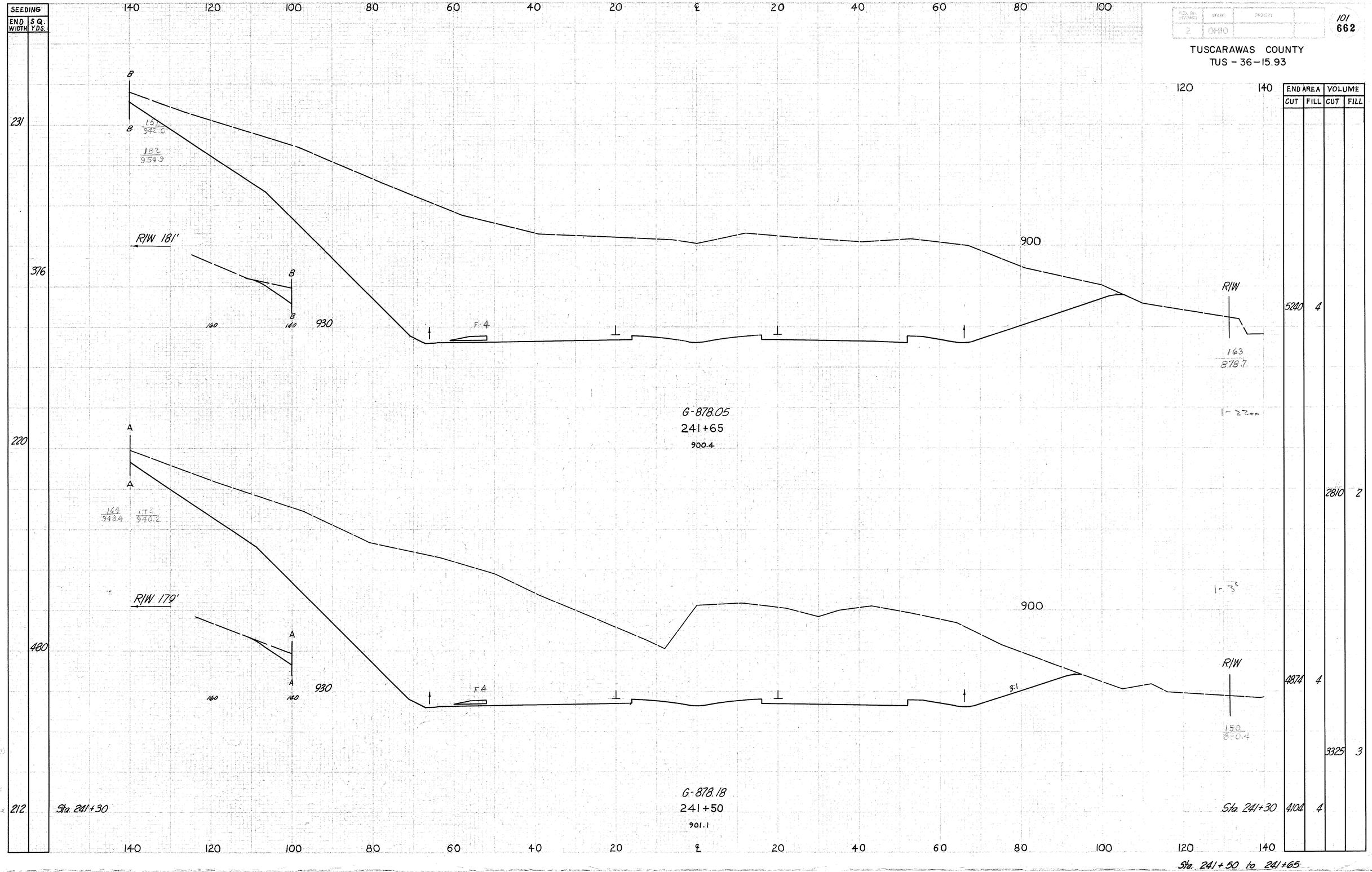
120 140

END AREA		VOLUME	
CUT	FILL	CUT	FILL
4301	4		
		7762	7
4082	4		
		7022	7
3502	4		

SEEDING	
END WIDTH	SQ. YDS.
212	
	687

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

TUSCARAWAS COUNTY
TUS - 36-15.93

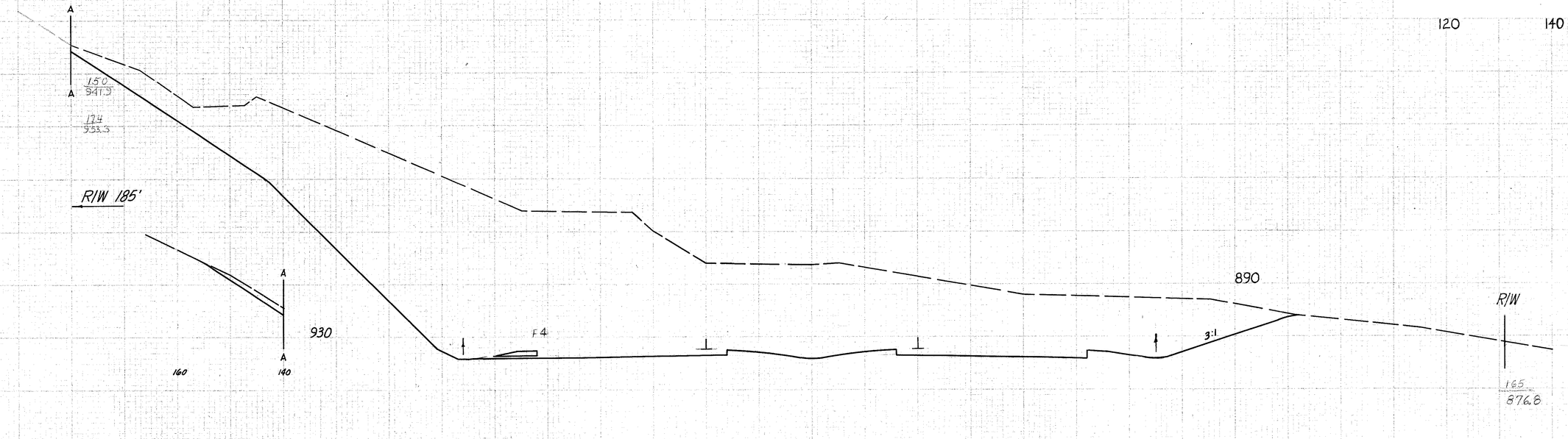


Sta. 241+50 to 241+65

FED. AID PROJECT NO.	STATE	PROJECT		SHEET NO.
2	OHIO			102
				662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

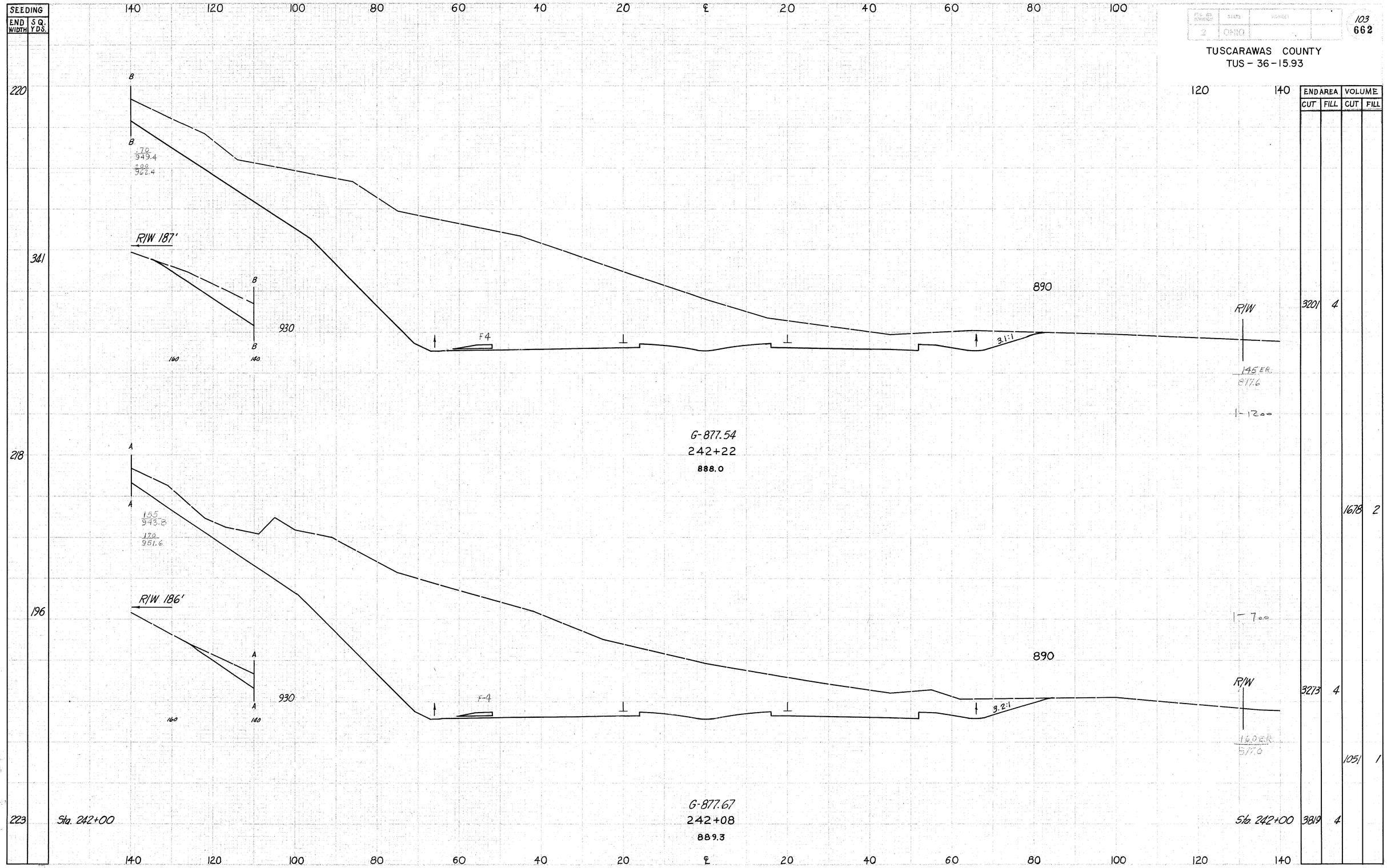
SEEDING	
END WIDTH	SQ. YDS.
223	
883	
231	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
3819	4		
		5872	5
5240	4		

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

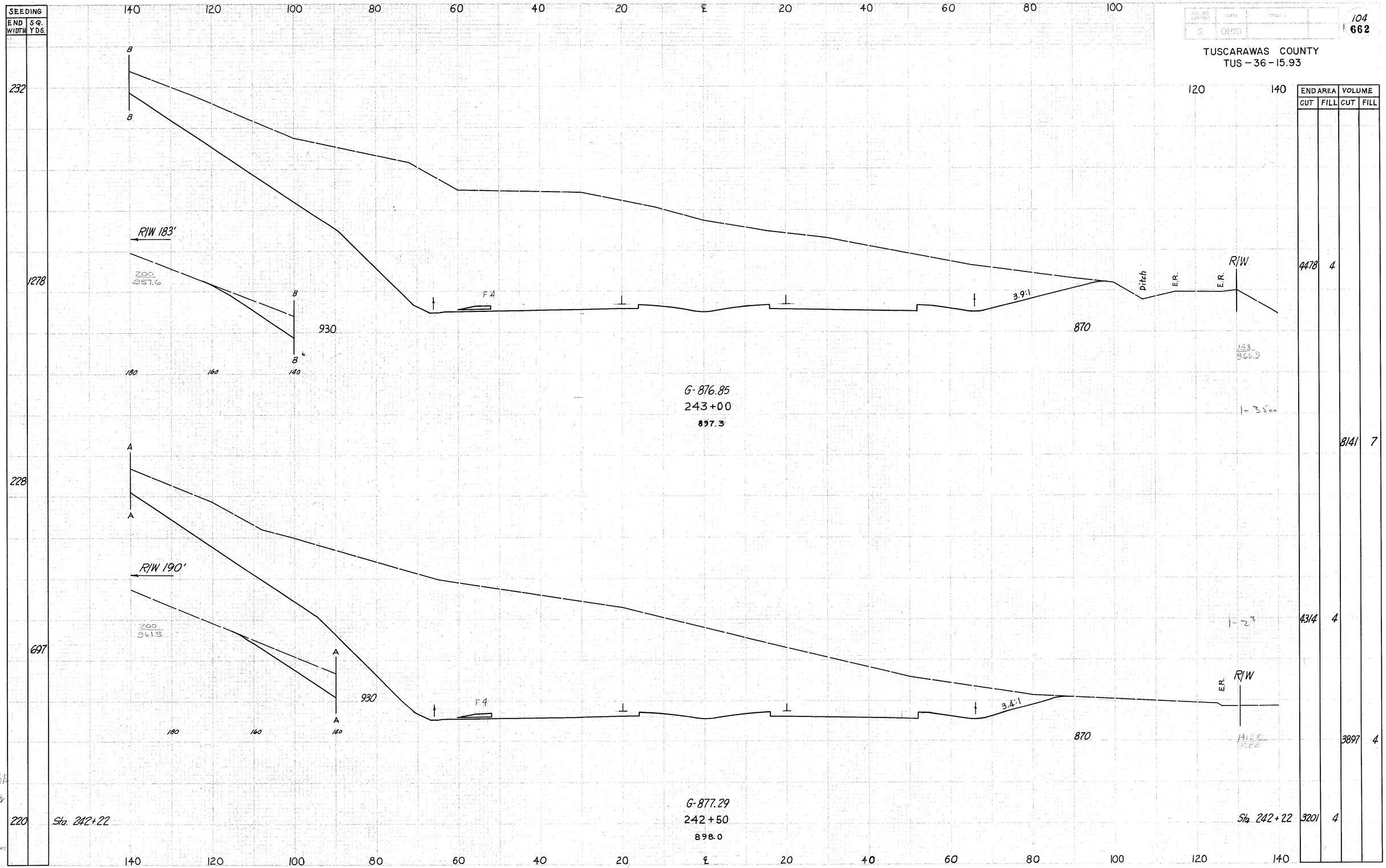
TUSCARAWAS COUNTY
TUS - 36 - 15.93



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
3201	4		
		1678	2
3273	4		
		1051	1
3819	4		

Sta. 242+08 to 242+22

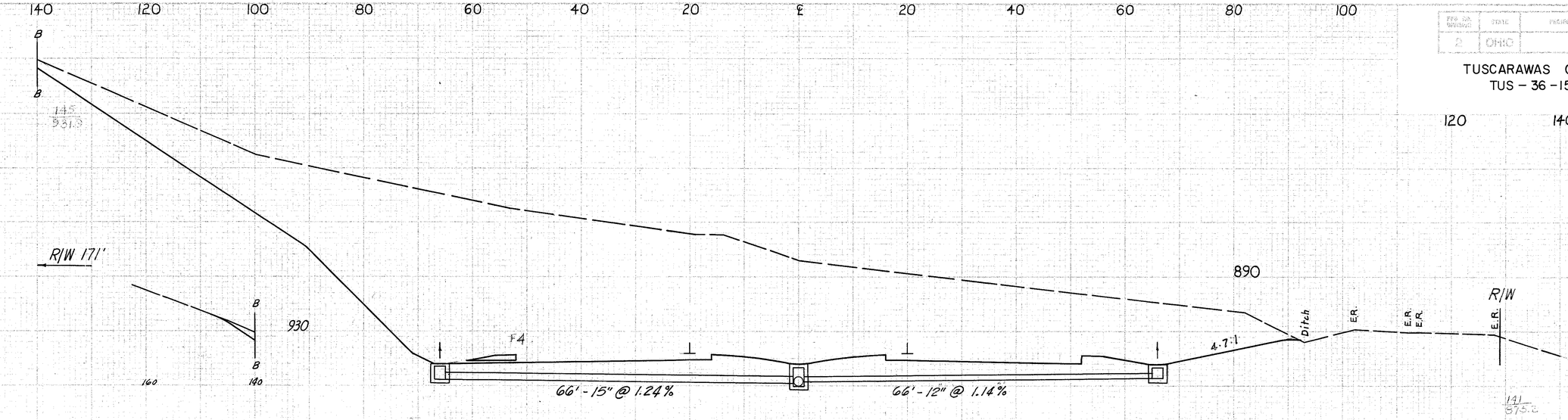
TUSCARAWAS COUNTY
TUS-36-15.93



Sta. 242+50 to 243+00

SEEDING	
END WIDTH	SQ. YDS.
209	
1194	
221	
1258	
232	

TUSCARAWAS COUNTY
TUS – 36 – 15.93



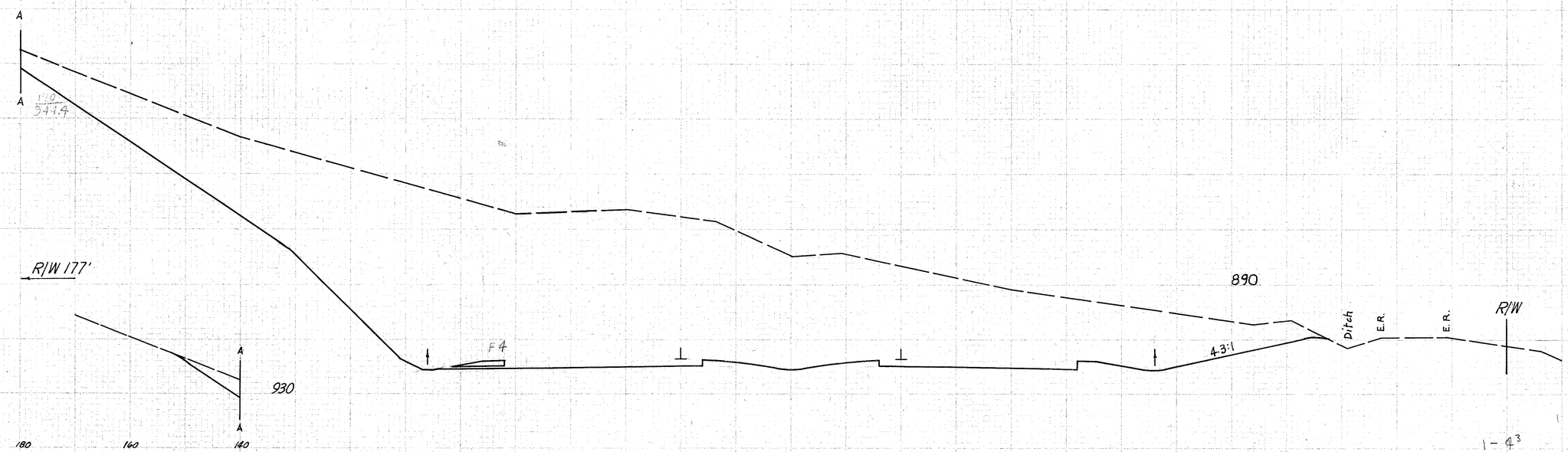
Sta. 244+00, 66' Lt.
Std. 2-2A C.B.
Grate El. 873.97
Window El. 873.47
IE 15" 871.22

G-875.97
244+00
892.9

Sta. 244+00, ℄
Std. 2-2A C.B.
Grate El. 874.04
Window El. 873.54
IE 15" 870.40
IE 12" 870.65
IE 21" 869.90

Sta. 244+00, 66' Rt.
Std. 2-2A C.B.
Grate El. 873.97
Window El. 873.47
IE 12" 871.40
IE 6" 871.90

1-38.0



G-876.41
243+50
895.1

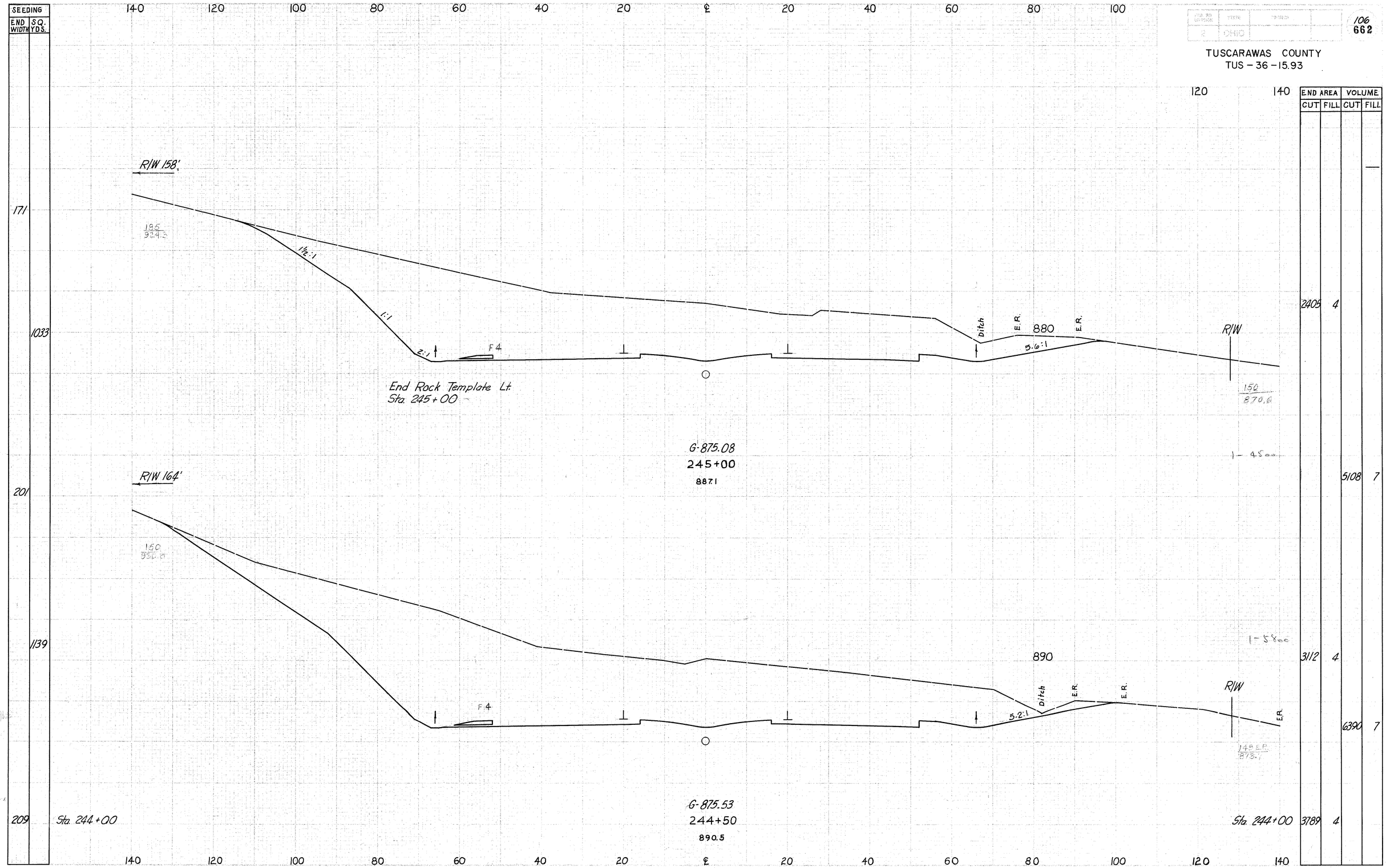
Sta. 243+00

Sta. 243+00

Sta. 243+50 to 244+00

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
3789	4		
		7456	7
4263	4		
		8093	7
4478	4		

TUSCARAWAS COUNTY
TUS - 36 - 15.93



Sta. 244+50 to 245+00

SEEDING	
END WIDTH	SQ. YDS.
140	
	772
138	
	828
160	
	919
171	

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

107
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

R/W

187
855.2

3:1

C-921

Ditch

E.R.

E.R.

870

C-6

868.2

4:1

R/W

157
864.1

G-873.76
246+50
878.1

R/W 145'

165
855

2:1

Ditch

E.R.

E.R.

6:1

E.R.

872.2

870

R/W

150
866.6

G-874.20
246+00
879.4

R/W 151'

152
907.4

2:1

Ditch

E.R.

E.R.

880

6:1

R/W

176 E.R.
864.7

G-874.64
245+50
882.8

Sta. 245+00

Sta. 245+00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
927			
		1961	
1191			
		2878	
1917			
		4002	
2405			

Sta 245+50 to 246+50

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING	
END WIDTH	SQ. YDS.
106	
	1194
109	
	678
135	
	728
127	
	742
140	

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

R/W — C-18 — 4:1 — 869.6 — F-38 — C-10 — Ramp D — F-81 — 870 — 866.8 — C-6 — R/W
153 / 869.6 — 170 / 868.6

G-871.55
249+00
870.0

R/W — E.R. — C-8 — 5:1 — 870.4 — F-6 — C-1 — F-20 — F-64 — 870 — 867.3 — C-13 — R/W
166 F.C. / 877.4 — 188 / 868.3

G-872.43
248+00

R/W — E.R. — E.R. — C-243 — 6:1 — F-3 — C-3 — F-35 — 870 — 867.5 — C-16 — R/W
173 / 873.8 — 146 / 868.1

G-872.87
247+50
871.4

R/W — Ditch — 4:1 — E.R. — E.R. — C-456 — 867.8 — C-17 — 860 — R/W
136 / 868.2 — 155 / 868.3

G-873.32
247+00
872.3

Sta. 246+50 — Sta. 246+62 — Sta. 246+50

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
34	119		
		104	387
22	90		
		264	119
263	38		
		681	75
473	43		
		1296	30
0			
927			

Sta. 247+00 to 249+00

SEEDING	
END WIDTH	SQ. YDS.
136	
	753
135	
	681
110	
	594
104	
	583
106	

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

STATE	PROJECT	SHEET NO.	TOTAL SHEETS
OHIO		109	662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

R/W — c-21 — 862.96 — Ramp D — 860 — 862.0 — c-6 — R/W

155 / 863.8 — 160 / 861.7

G-869.78
251+00
865.8

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	27		523
			32
			1275

R/W — c-4 — 862.82 — 48" @ Sta 250+38 @ 6° — 860 — c-4 — R/W

155 / 862.1 — 146 / 862.4

G-870.22
250+50
863.0

	8		854
			54
			943

R/W — c-40 — 866.6 — 860 — c-10 — R/W

122 / 864.1 — 152 / 863.0

G-870.66
250+00
868.4

Sta. 250+00, ℄
Std. 2-2A C.B.
Grate El. 868.73
Window El. 868.23
IE 21" 864.60

	50		164
			70
			348

R/W — c-16 — 4:1 — F-14G — 868.1 — c-2 — Ramp D — F-6G — 866.5 — 860 — c-8 — R/W

153 / 863.1 — 144 / 865.8

G-871.11
249+50
868.2

Sta. 249+00 — Sta. 249+00

	26		212
			56
			306
	34		119

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

Sta. 249+50 to Sta. 251+00

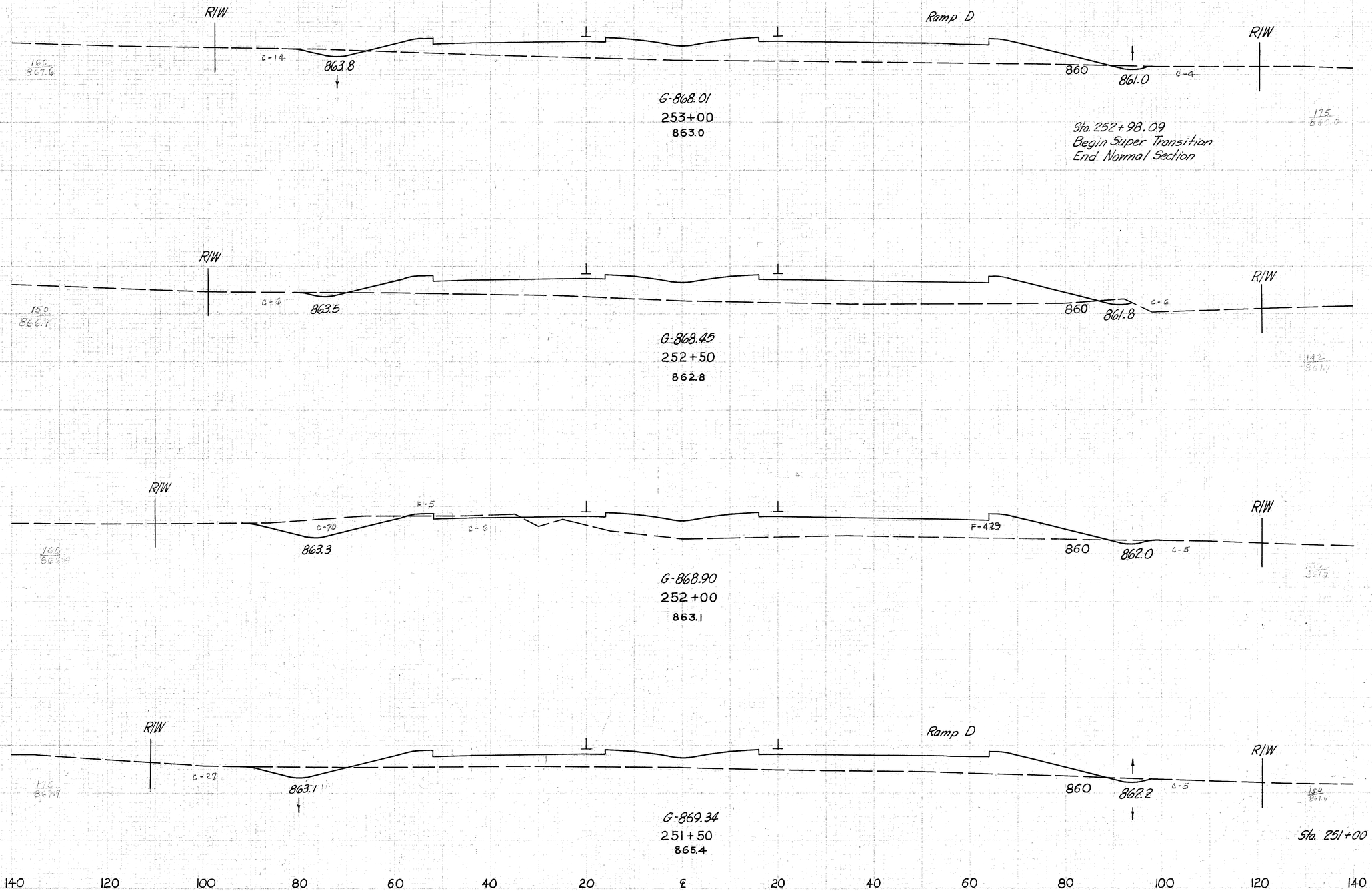
SEEDING	
END WIDTH	SQ. YDS.
119	
	650
115	
	681
130	
	722
130	
	739
136	

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

110
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

Sta 253+09 Depth of subbase is Increased 1½"



Sta. 252+98.09
Begin Super Transition
End Normal Section

END AREA		VOLUME	
CUT	FILL	CUT	FILL
18	532		
		28	1091
12	646		
		86	1000
81	434		
		105	839
32	472		
		55	921
27	523		

Sta. 251+50 to 253+00

SEEDING	
END WIDTH	SQ. YDS.
112	
	1311
124	
	1328
115	
	1300
119	

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

STATE | PROJECT | 111 / 662
GRID

TUSCARAWAS COUNTY
TUS-36-15.93

120 140

R/W

Ramp A

Ramp D

R/W 150'

c-7

860.2

c-12

859.0

142
859.0

G-865.36
256+00
860.1

850

R/W

R/W

c-72

862.5

c-2.5

859.5

G-866.24
255+00
864.0

850

Sta. 254+79.09
Begin Full Super 0.030'/'
End Super Transition

R/W

Ramp A

Ramp D

R/W

c-18

864.5

F-4

c-2

F-357

860.0

c-7

G-867.13
254+00
863.9

850

Sta. 253+75 Depth of subbase increased by 4"
End extra depth of subbase

Sta. 253+00

Sta. 253+00

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

Sta. 254+00 to 256+00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
19	578		
		215	1544
97	256		
		230	1143
27	361		
		83	1654
18	532		

KED 6-14-61 JKB

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING	
END WIDTH	SQ. YDS.
119	
	1294
114 Ahd.	
—	
238 Bk.	
	2344
	1756
132	
	1356
112 Sta. 256+00	

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

R/W E.R. E.R. Ramp A 6:1 6:1 4:1 88'-12"@1.99%

855.9

Sta. 260+00, 88' Lt.
Std. HWE
IE 12" 856.0

Sta. 260+00, ℄
Std. 2 2A C.B.
Grate El. 860.50
Window El. 860.00
IE 12" 857.75
IE 6" 858.25

G-862.43
260+00
853.9

Area Sta. 260+00 Ramp D 4:1
850
B G.R. 2:1 850 B
160 180 850.1 200 c-26
Sta. 259+00 Lt.
Additional Exc.
R/W 257'

Area Reloc. U.S. 36 Bk.
Area Reloc. U.S. 36 Ahd. Ramp D
Sta. 9+15
Var. Var.
G.R. F-936 F-1153
850
B Ahd. B Bk.

R/W E.R. c=31 854.5

36"@ Sta. 259+00 @ 90°

Sta. 259+00, 88.5' Lt.
Std. HW-E
IE 36" 854.50

G-862.86
259+00
854.1

Sta. 9+15
Begin Ramp D E'work using area shown 75' to 205' Rt. ℄ Sta. 259+00

A A 850 c=13 160 850.9 180 R/W 236'

R/W E.R. E.R. c-5 856.4

G-863.59
258+00
857.8

Var. Var. 2.6:1 850 175 857.1

35' +1.0% E.R.
Type 6 6:1 6:1
Profile Turnaround 140'± Rt. Ramp D Sta. 7+80

R/W E.R. Ramp A c-13 858.3 Ramp D G.R. 4:1 R/W 185'

850 c-10 132

G-864.48
257+00
858.6

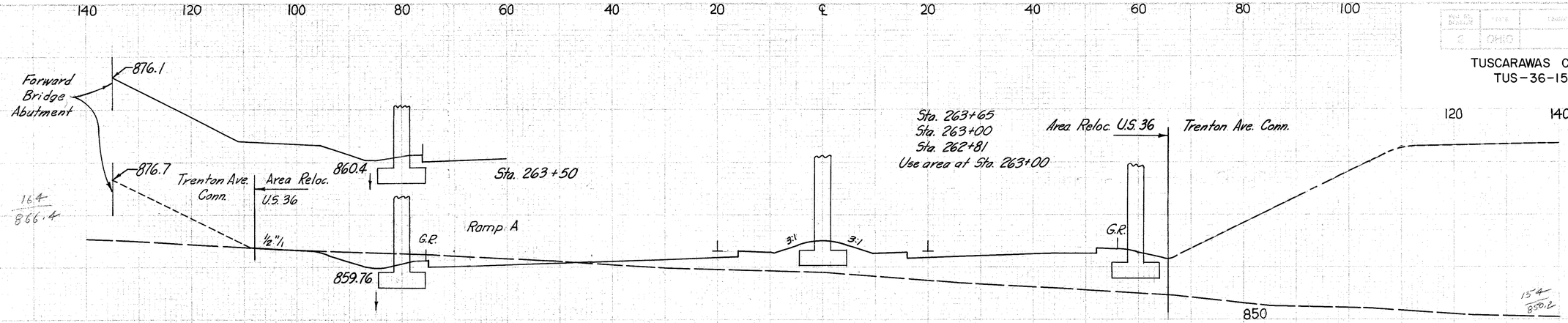
Sta. 256+00 Sta. 256+00

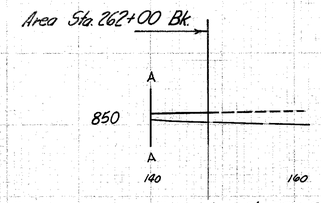
Sta. 257+00 to 260+00

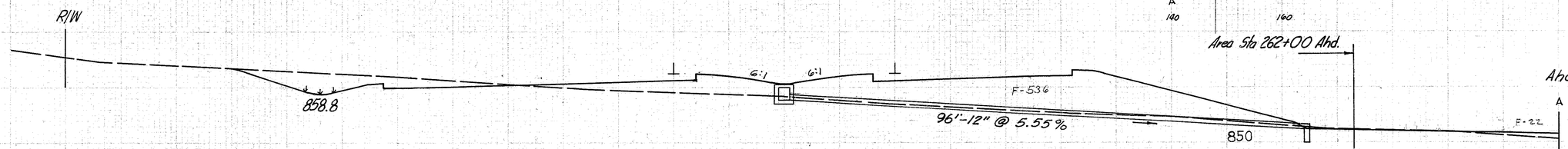
END AREA		VOLUME	
CUT	FILL	CUT	FILL
15	1185		
		8	
		85	4339
31	1158		
		—	—
57	2094		
		144	6735
21	1543		
		81	4511
23	893		
		78	2724
19	578		

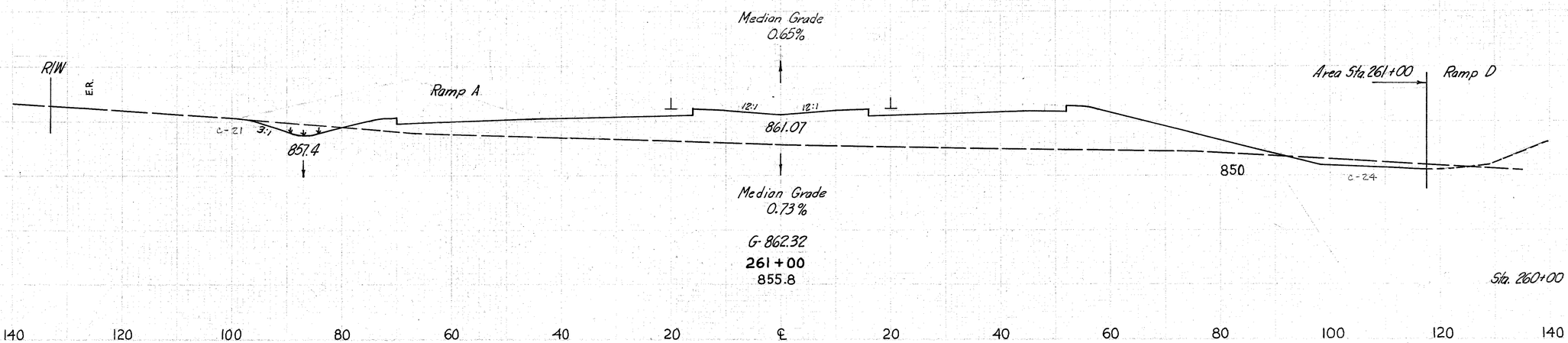
TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING	
END WIDTH	SQ. YDS.
82	
	1117
119	Ahd.
—	
163	Bk.
	1650
134	
	1406
119	Sta. 260+00









END AREA		VOLUME	
CUT	FILL	CUT	FILL
	69		521
		49	367
Sta. 262+81	69		521
		228	1584
Ahd.	83		536
	83		558
		237	2526
	45		806
		111	3687
Sta. 260+00	15		1185

Sta. 261+00 to 263+00

SEEDING	
END WIDTH	SQ. YDS.
95	
	1006
86	Ahd.
—	
146	Bk.
	1622
146	
	443
82	Sta. 263+65
	592
82	Sta. 263+00

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

114
662

TUSCARAWAS COUNTY
TUS-36-15.93

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

Ramp A | Area Reloc. U.S. 36 | G.R. | Area Reloc. U.S. 36 | Ramp C

161 / 849.6

850

G-866.33
266+00
853.9

Area Reloc. U.S. 36 Bk.
End Area Ramp A | Area Reloc. U.S. 36 Ahd.
Sta. 40+21

Type 87

F-428 | F-1620

48" @ Sta. 265+00 @ 90°

Sta. 265+00
Ditch computation Rt.
Av. Area = 24.9 Sq. Ft.
Length = 56'

$\frac{24.9 \times 56}{27}$ = 52 C.Y.

Ramp C

161 / 849.2

850

G-864.91
265+00
851.8

From 2-2A C.B. @ Sta. 264+00, ℄

40'-12" @ 1.21%

Sta. 263+80, 93' Lt.
Std. HW-E
IE 12" 857.96

Sta. 263+80, 54' Lt.
Std. G C.B.
Grate El. 862.45
IE 12" 858.44

Trenton Ave Conn. | Areo Reloc. U.S. 36 | Ramp A | G.R. | Type 87 | G.R. | Area Reloc. U.S. 36 | Trenton Ave Conn.

856.5

58'-12" @ 1.21%

To G.C.B. @ Sta. 263+80, 54' Lt.

161 / 849.1

850

G-863.81
264+00
855.5

Sta. 264+00, ℄
Std. 2-2A C.B.
Grate El. 861.88
Window 861.38
IE 12" 859.13

Sta. 264 + 00 to 266 + 00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	1652		
			6059
		52	
—	1620		
46	2048		
		304	6011
118	1198		
		121	1114
69	521		
		166	1254
69	521		

SEEDING	
END WIDTH	SQ. YDS.
174	—
92	1050
97	1050
92	1039
95	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	13 2665		— —
	6 1837		11
	6 —		7220
			2062
			7537
			2008
			6778
			1652

TUSCARAWAS COUNTY
TUS-36-15.93

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

Area Reloc. U.S. 36 Ahd.
Area Reloc. U.S. 36 Bk. Ramp C
Sta. 27+65

Ahd. G.R. Ramp C G.R. 2:1
Bk. C-6 857.0 F-1837 F 828

Sta. 27+65
End Ramp C E'work using area shown 58' to 150' Rt. ℄ Sta. 269+00

G-877.04
269+00
855.5

840

Bk. RIW
850 850.5 Sta. 268+50
140 160

Ramp A Area Reloc. U.S. 36 2:1
24" @ Sta. 268+50 @ 90°

G-869.47
268+00
854.3

840

Ramp A Area Reloc. U.S. 36 G.R. 3.3:1
Area Reloc. U.S. 36 Ramp C

G-867.90
267+00
853.9

840

Sta. 266+00 Sta. 266+00

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

Sta. 267+00 to 269+00

SEEDING	
END WIDTH	SQ. YDS.
130	
	700
122	
	703
3561	+ Seeding computed by plan area between Reloc. U.S. 36, Ramp A & Ramp B
131	
	1694
174	Sta. 269+00 Ahd.

FED. AID PROJECT	STATE	NUMBER
2	OHIO	

116
662

TUSCARAWAS COUNTY
TUS-36-15.93

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

150 / 482.4

3:1 C-439 G-874.17 271+00 874.5 F-428 2:1 G.R. F.2 C-1 Bldg. 861.4 R/W 1.43 / 860.1

850

150 / 875.7

C-6 870.6 G-873.39 270+50 866.3 F-1071 F-4 C-9 857.1 R/W 13' 857.6

850

Sta. 270+50 to 280+50
Ramp C Acceleration Lane
Taper 25' in 1,000'

150 / 867.7

4:1 C-3 865.5 78'-12" @ 2.84% Ramp C G.R. R/W 140'

Sta. 270+00, 77' Lt.
Std. HW-E
IE 12" 865.70

G-872.60 270+00 861.2

Sta. 270+00, ℄
Std. 2-2A C.B.
Grate El. 870.67
Window 870.17
IE 12" 867.92
IE 6" 868.42

BLDG. BLDG. 146 / 855.1 C-16 854.7

850

Sta. 269+00

Sta. 270+00 to 271+00

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
445	430		
		426	1394
15	1075		
		32	2610
20	1744		
		61	8165
13	2666		

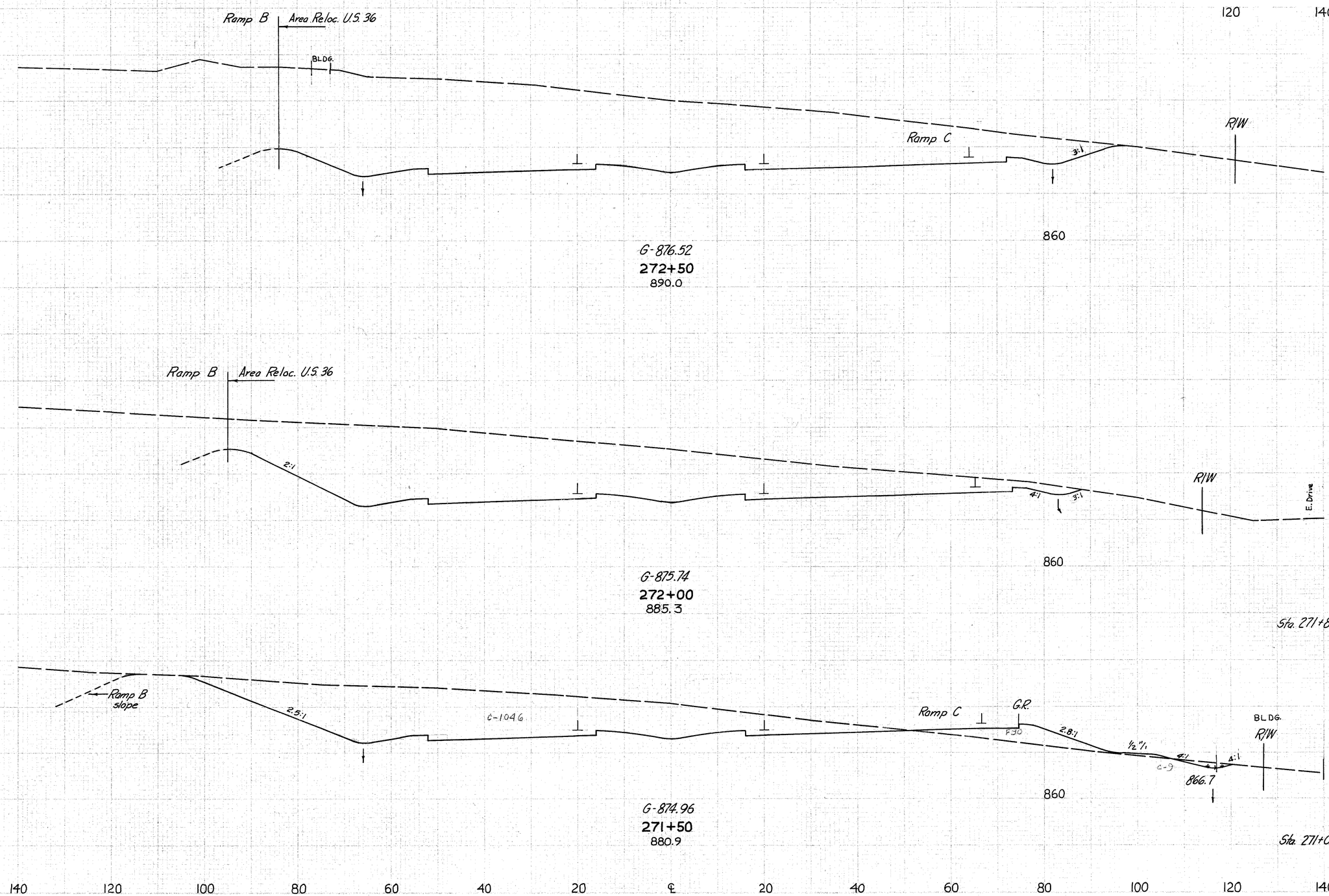
Complete revised 7/1/66 JSR
Revised 11-28-66 JSR
Comp. 8/13/68 WMS

STATE	PROJECT
OHIO	

117
662

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
102					
	569	2431		3859	
103					
	672	1737		2585	
139					
	747	1055	94	1389	485
130		445	430	63	



SEEDING	
END WIDTH	SQ. YDS.
83	
	494
95	
	542
100	
	561
102	

FED. AID PROJECT	STATE	PROJECT	
2	OHIO		

118
662

TUSCARAWAS COUNTY
TUS-36-15.93

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

RIW 273'

Ramp B | Area Reloc. U.S.36

E.R. E.R. E.R. E.R.

R/W

Ramp C

2.2:1

870

Sta. 274+00
End 15' Bench, 203' Lt.

G-878.88
274+00
891.1

E.Drive E.Drive E.P. E.P.

R/W 190'

2.5:1

870

G-878.09
273+50
891.8

Ramp B | Area Reloc. U.S.36

Ramp C

2.8:1

R/W

G-877.31
273+00
891.7

860
35'
E.P.
870
+3.0%
Sta. 272+50

Profile Turnaround 173'± Rt. Reloc. U.S.36
Sta. 273+03

Sta. 272+50

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	2039		
			4007
	2289		
			4517
	2589		
			4648
	2431		

Sta. 273+00 to 274+00

SEEDING	
END WIDTH	SQ. YDS.
307	
1572	
259 Ahd.	
76 Bk.	
442	
83 Sta. 274+00	

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

R/W 229'

260 240 220 200 180 160 140

B B B B

930

R/W 287'

1½:1 1¼:1 1½"/1

A A

910

240 220 200 180 160 140

R/W 141'

Ramp B F-3

Ramp C F-3

Sta. 274+60, 128' Rt.
Std. HWE
IE 24" 873.84

54'-24" @ 0.50%

76'-21" @ 0.80%

870

Sta. 274+75, ℄
Std. 2-2A C.B.
Grate El. 878.22
Window 877.72
IE 21" 874.97

G-880.44
275+00
896.1

Sta. 274+75, 76' Rt.
Std. 2-2A C.B.
Grate El. 879.46
Window 878.96
IE 21" 874.36
IE 24" 874.11

A A

Area Reloc. U.S. 36 Ahd.
End Area Ramp B
Sta. 41+12
Area Reloc. U.S. 36 Bk.

1:1 2:1 6:1 6:1 2:1

C-2727 C-2031

F-2 F-3

Ramp C

R/W Ahd. Bk.

870

Begin Rock Template Lt.
Sta. 274+50

G-879.66
274+50
891.1

Begin Rock Template Rt.
Sta. 274+50

Sta. 274+00

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

Sta. 274+50 to 275+00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
6075	6		
		10030	10
4758	5		
2031			
		3768	
2039			

1-6000
2-1800
1-1200

1-2800
2-350
1-280

	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-15.93

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

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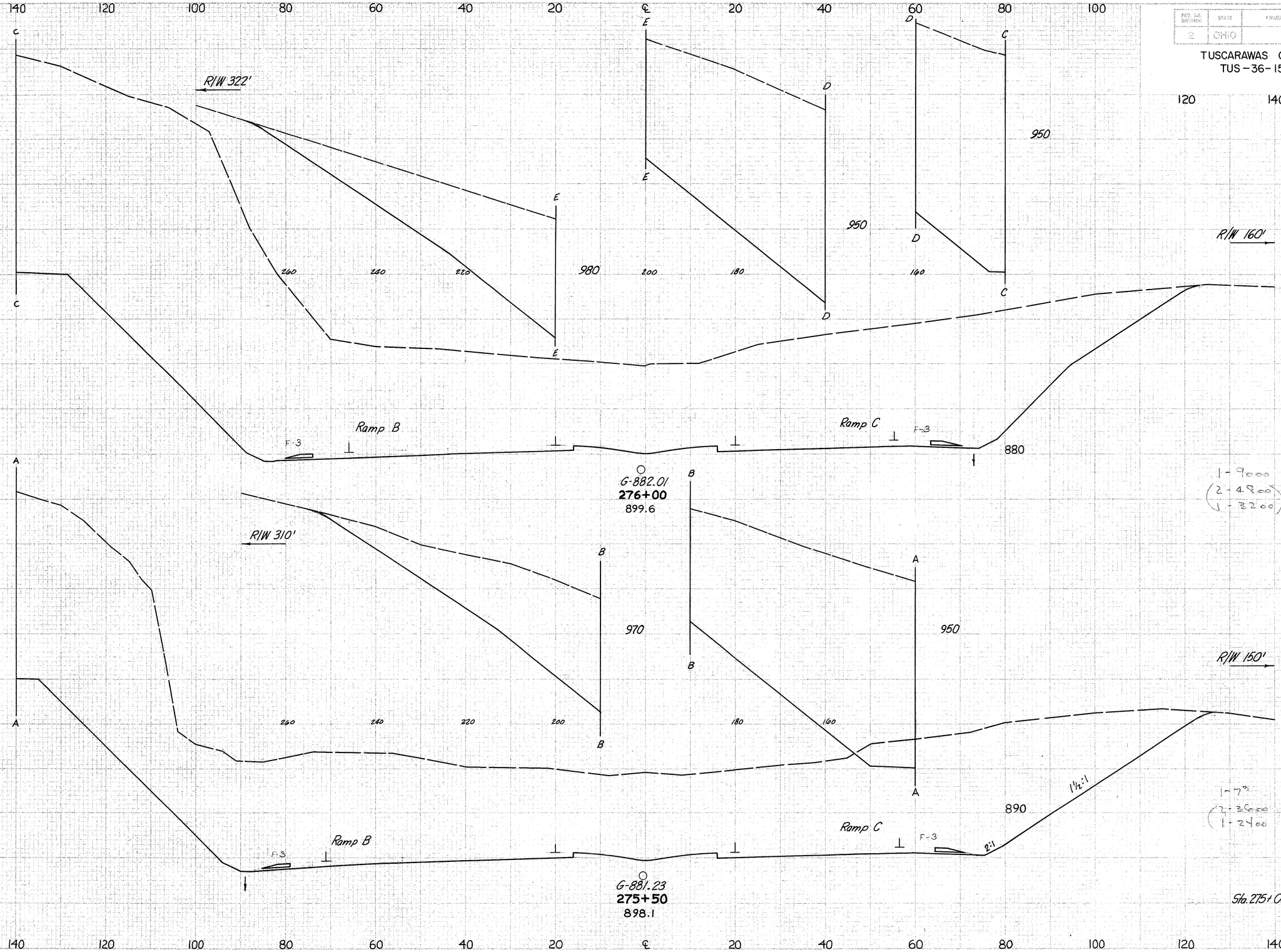
TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING	
END WIDTH	SQ. YDS.
	312
	1997
	347
	1817
	307

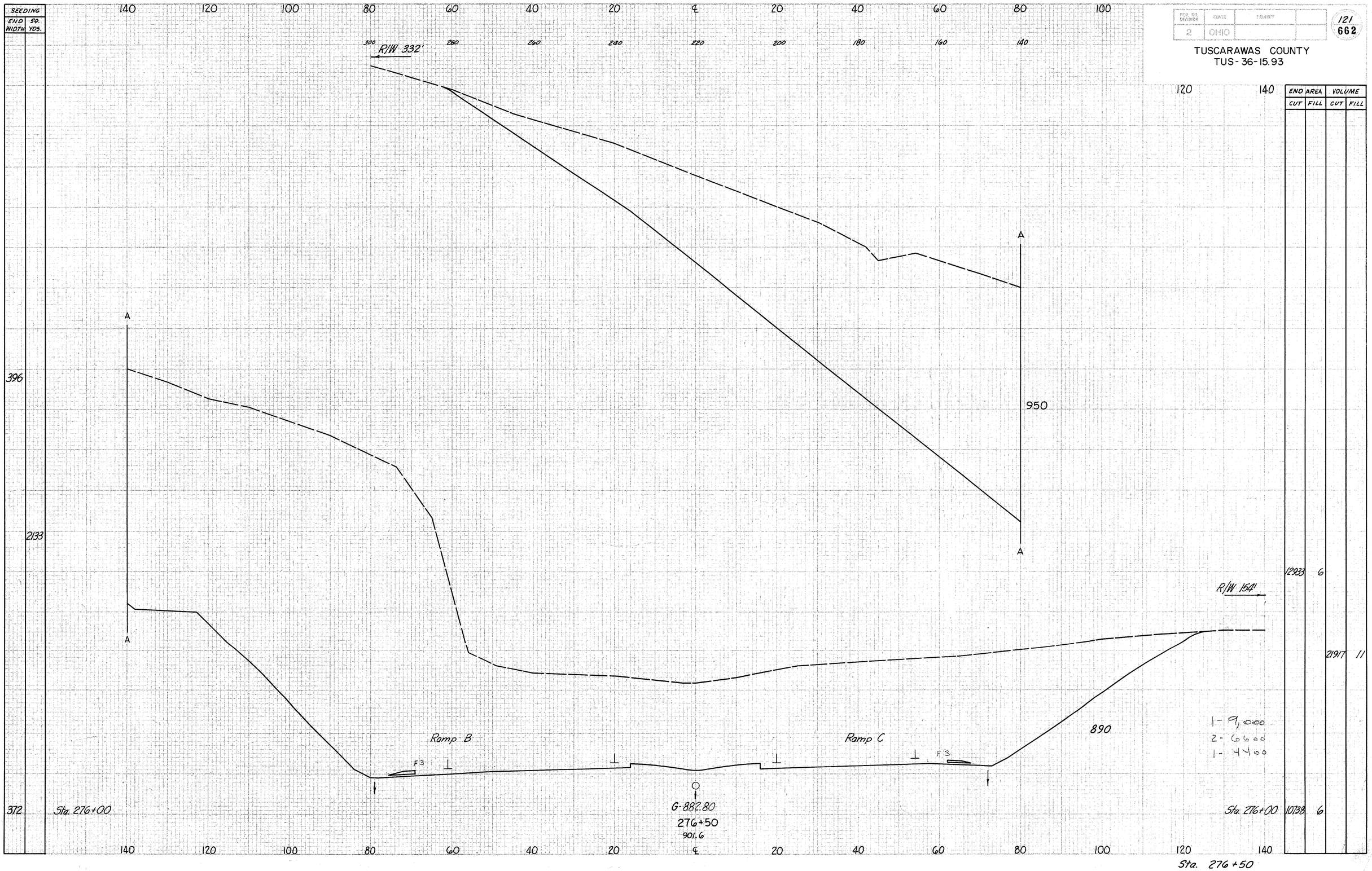


END AREA		VOLUME	
CUT	FILL	CUT	FILL
10738	6		
		18213	11
8932	6		
		13895	11
6075	6		

1-9000
(2-4800
1-3200

1-7?
(2-3600
1-2400

Sta. 275+50 to 276+00



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-15.93

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING	
END WIDTH	SQ. YDS.
403	
2219	
396	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1562A	6		
		2644	11
1293B	6		

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

300 280 260 240 220 200 180 160 140

R/W 342'

A

960

A

R/W 148'

A

Sta. 277+00, 77' Lt.
Std. 2-2A C.B.
Grate El. 880.16
Window El. 879.66
IE 18" 877.22

Sta. 277+00, ℄
Std. 2-2A C.B.
Grate El. 881.65
Window El. 881.15
IE 18" 876.99
IE 21" 876.74

Ramp B

Ramp C

890

76'-18" @ 0.30%

G: 883.58
277+00
905.9

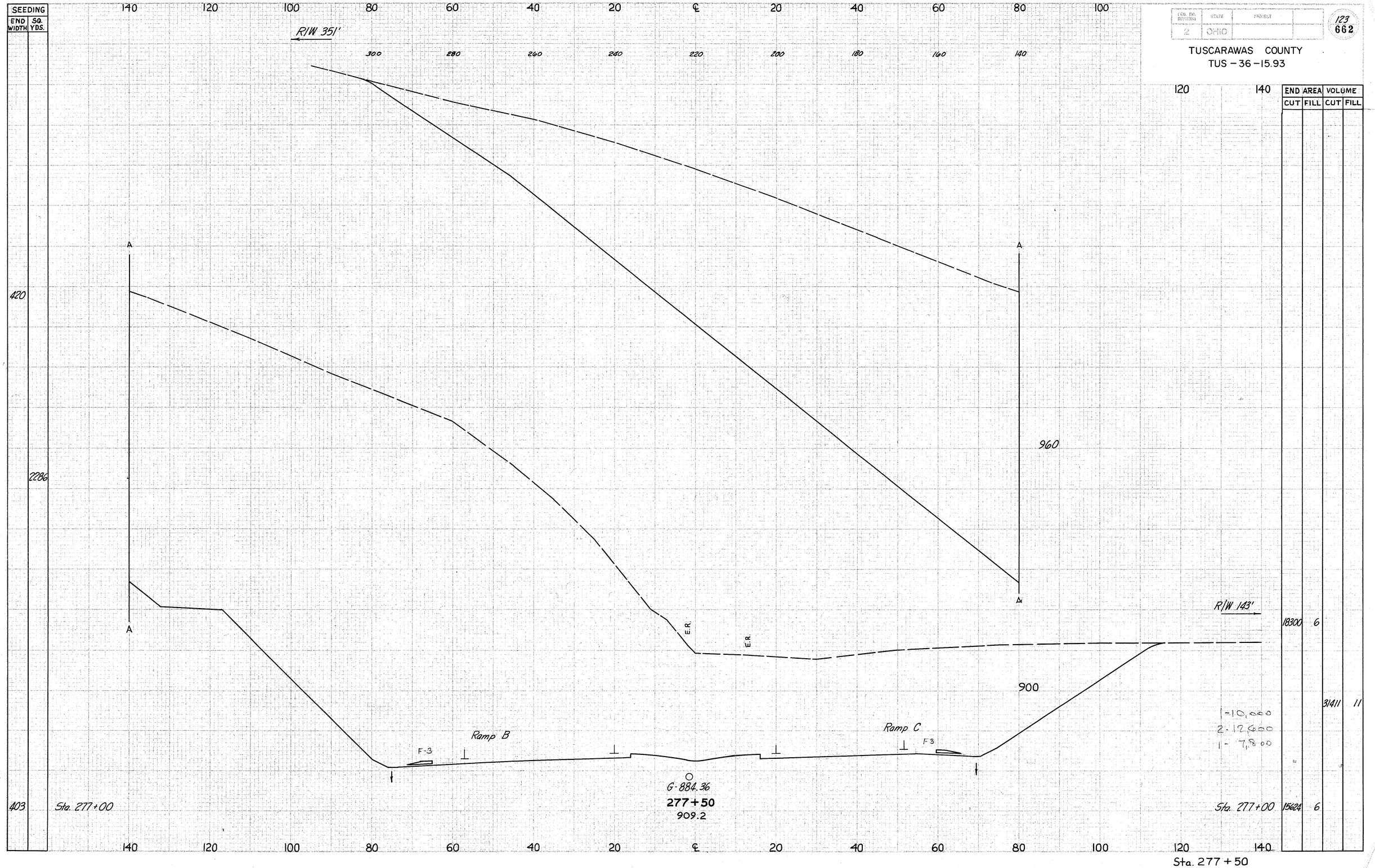
1-9,000
2-10,000
1-6,700

Sta. 276+50

Sta. 276+50

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

Sta. 277+00



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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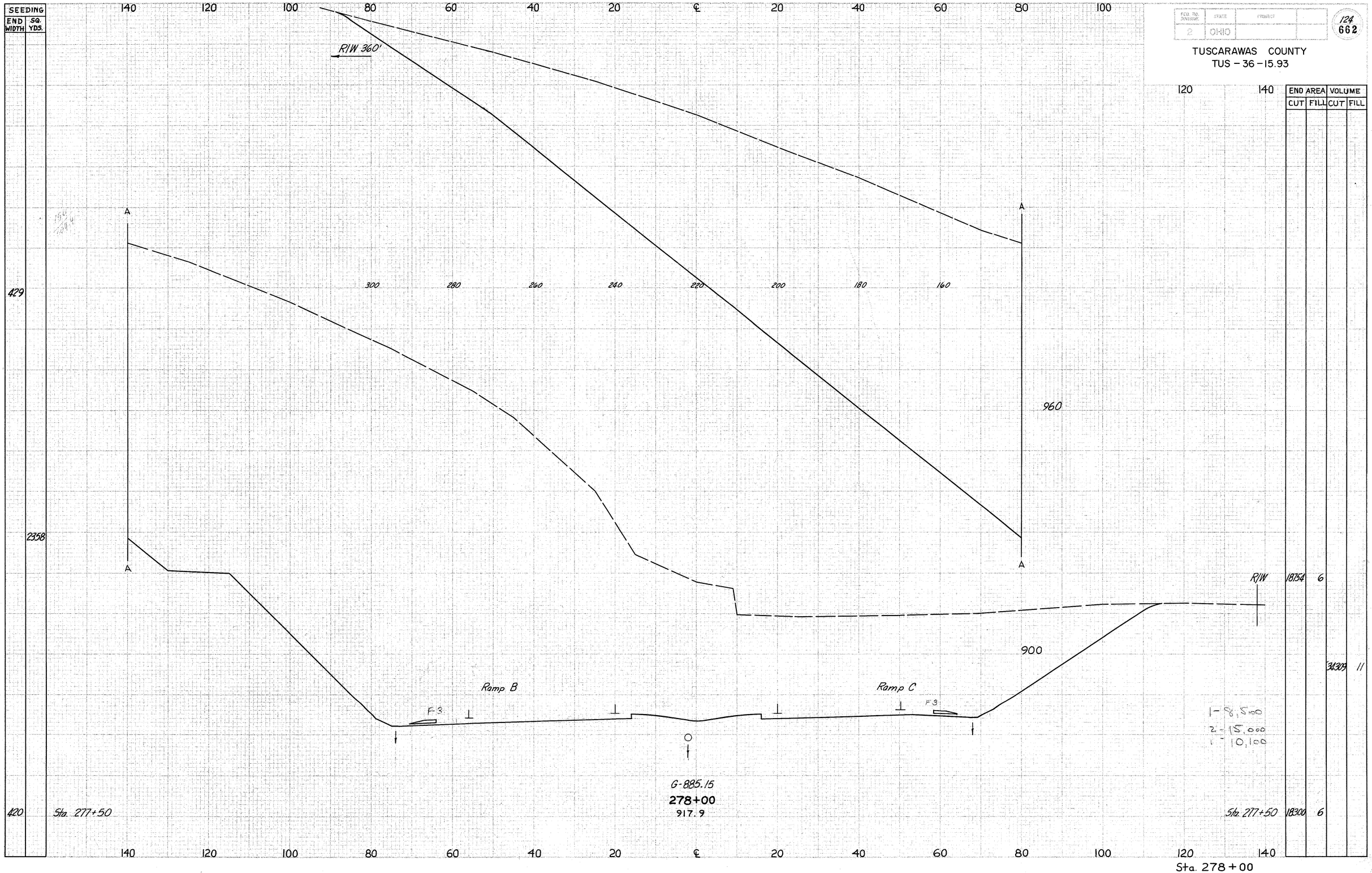
662

TUSCARAWAS COUNTY
TUS-36-15.93



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS - 36 - 15.93

SEEDING	
END WIDTH	SQ. YDS.
420	
2358	
429	

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS -36-15.93

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		18148	6
		34168	11
		18154	6

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

R/W 362'

300 280 260 240 220 200 180 160 140

A

960

A

A

E.R.

E.R.

R/W

Ramp B

F3

Ramp C

F3

890

1-8,000
2-11,500
1-7,700

G-885.93
278+50
918.8

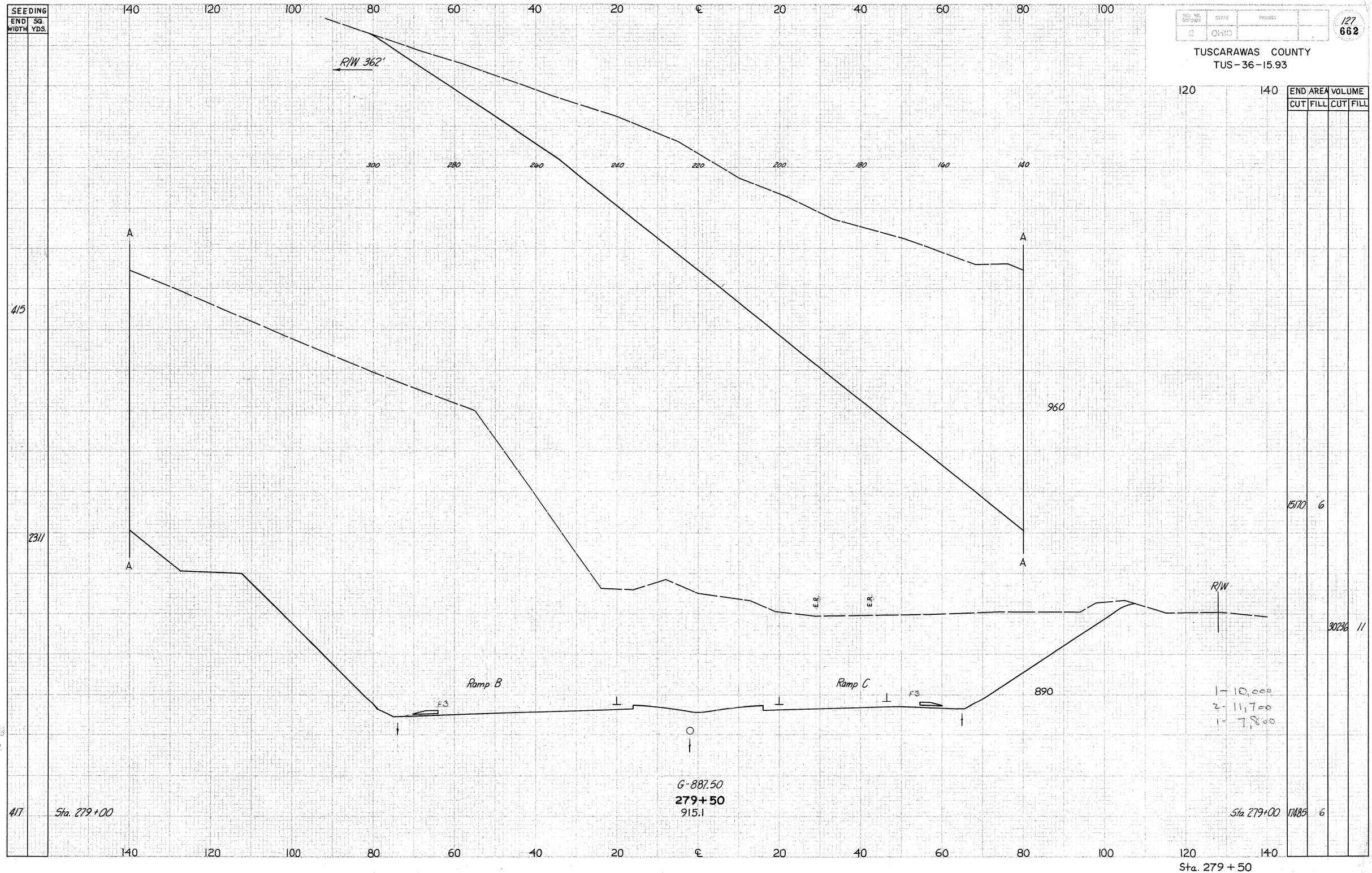
Sta. 278+00

Sta. 278+00

Sta. 278 + 50

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

SEEDING	
END WIDTH	SQ. YDS.



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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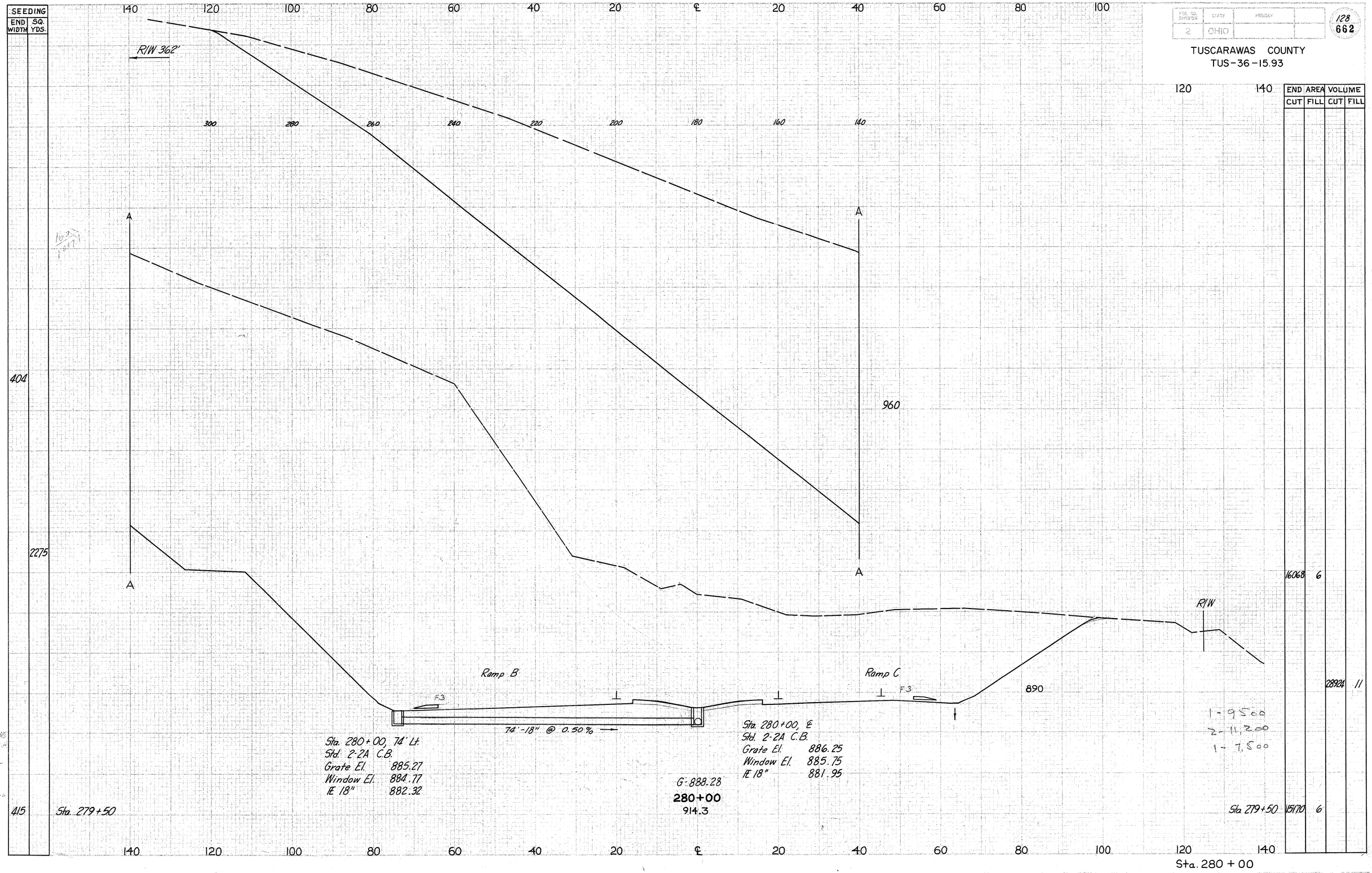
TUSCARAWAS COUNTY
TUS-36-15.93



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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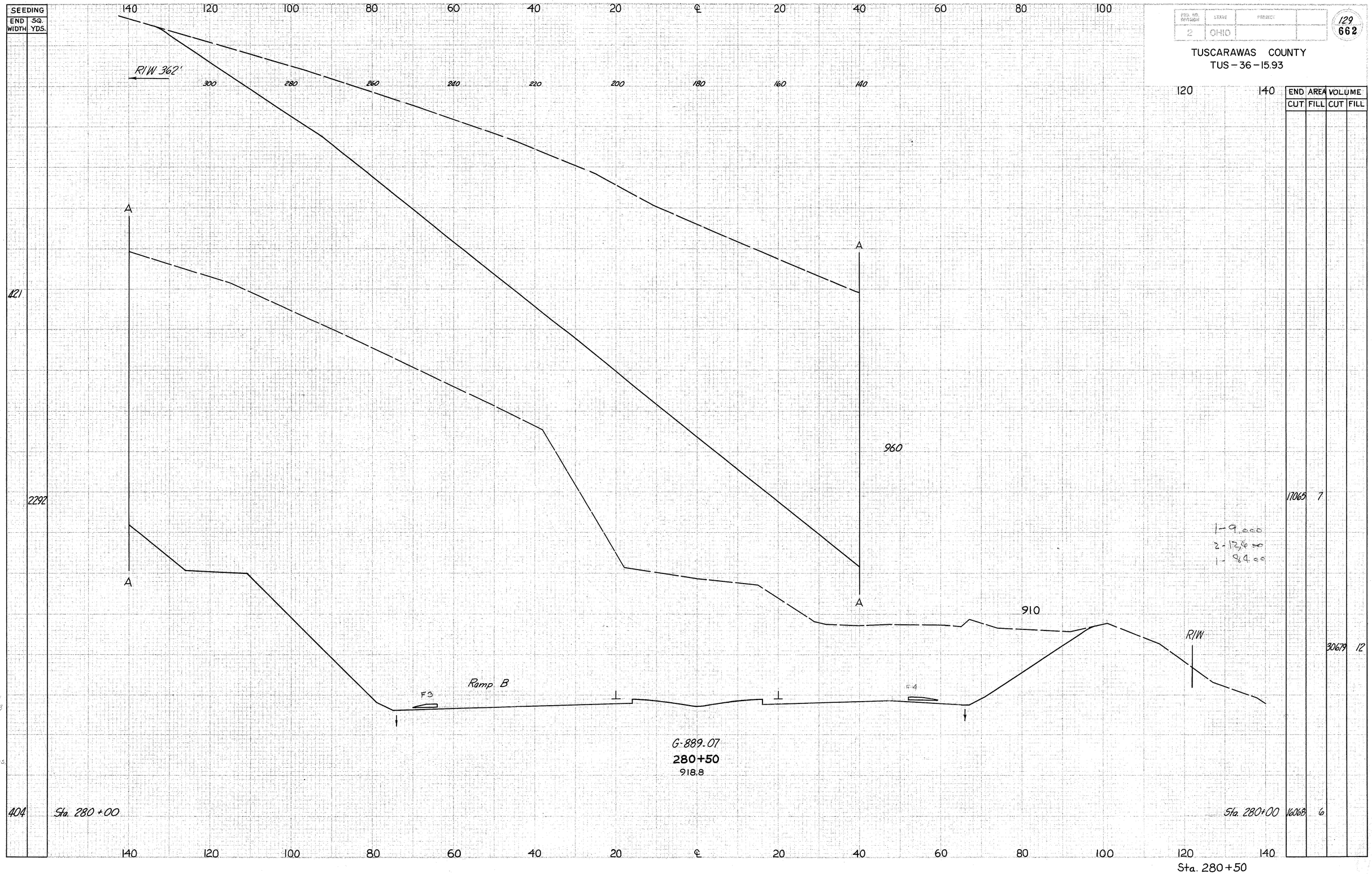
TUSCARAWAS COUNTY
TUS-36-15.93



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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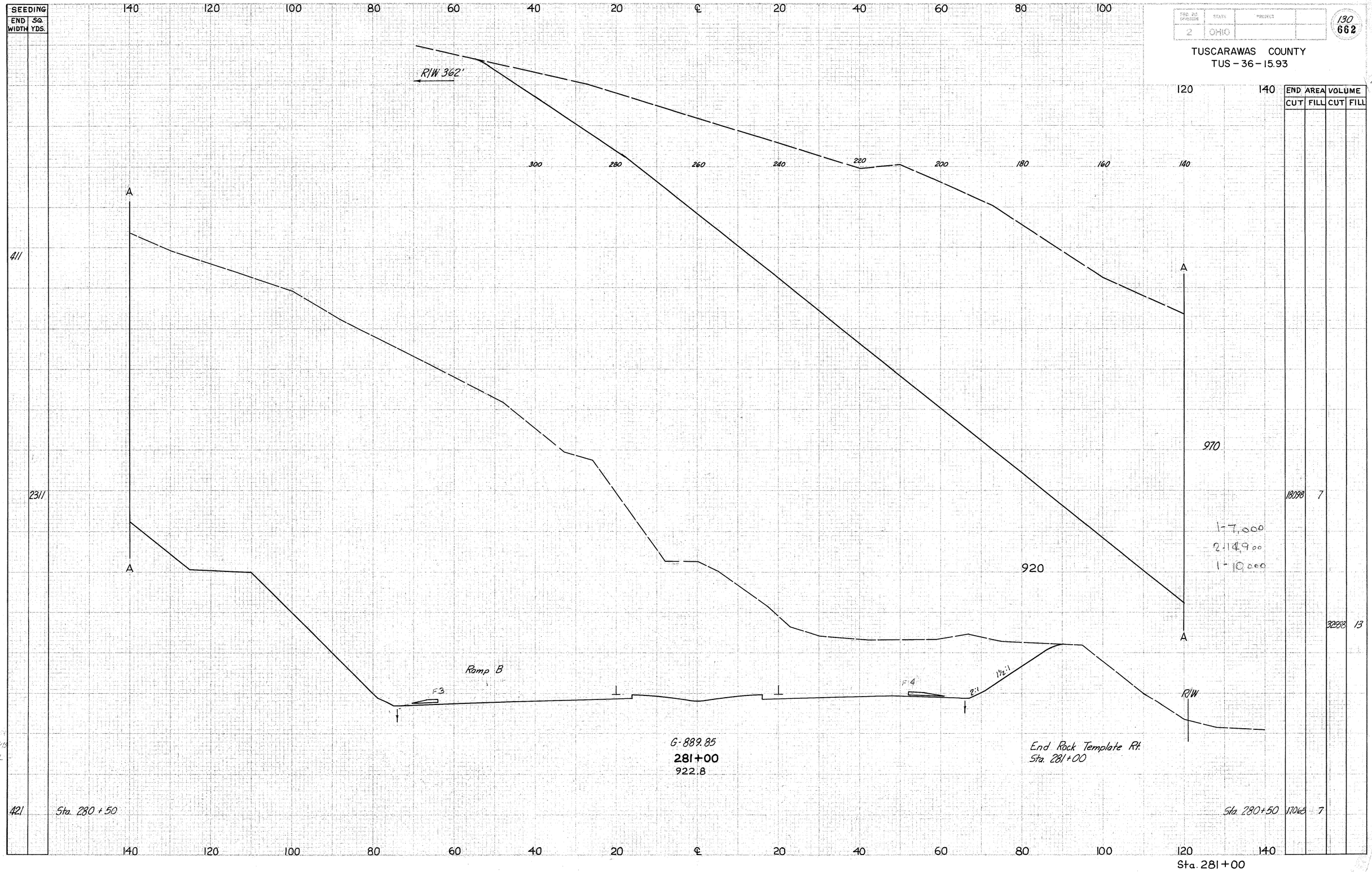
TUSCARAWAS COUNTY
TUS-36-15.93



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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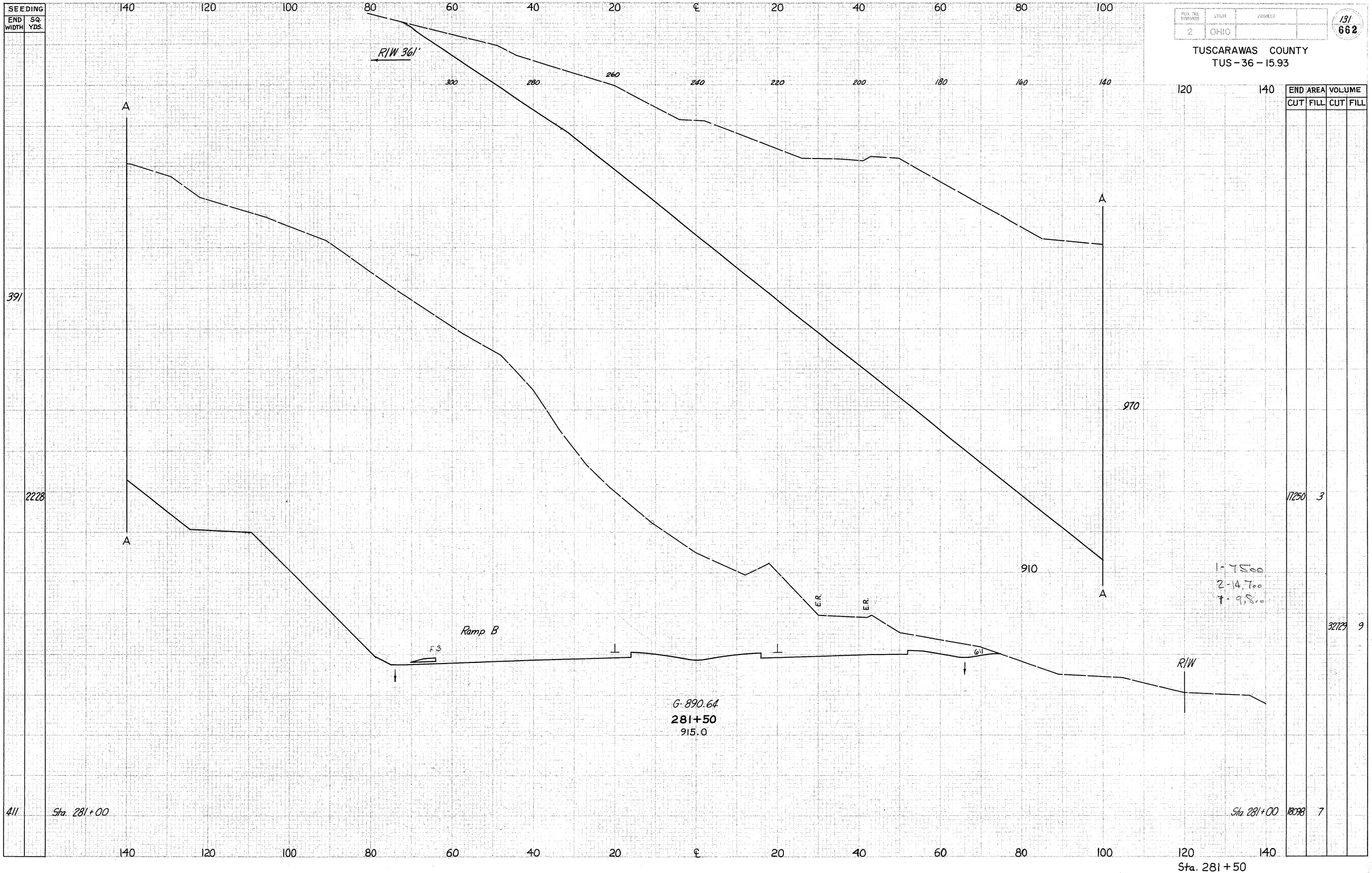
662

TUSCARAWAS COUNTY
TUS-36-15.93



PED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

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662

TUSCARAWAS COUNTY
TUS-36-15.93

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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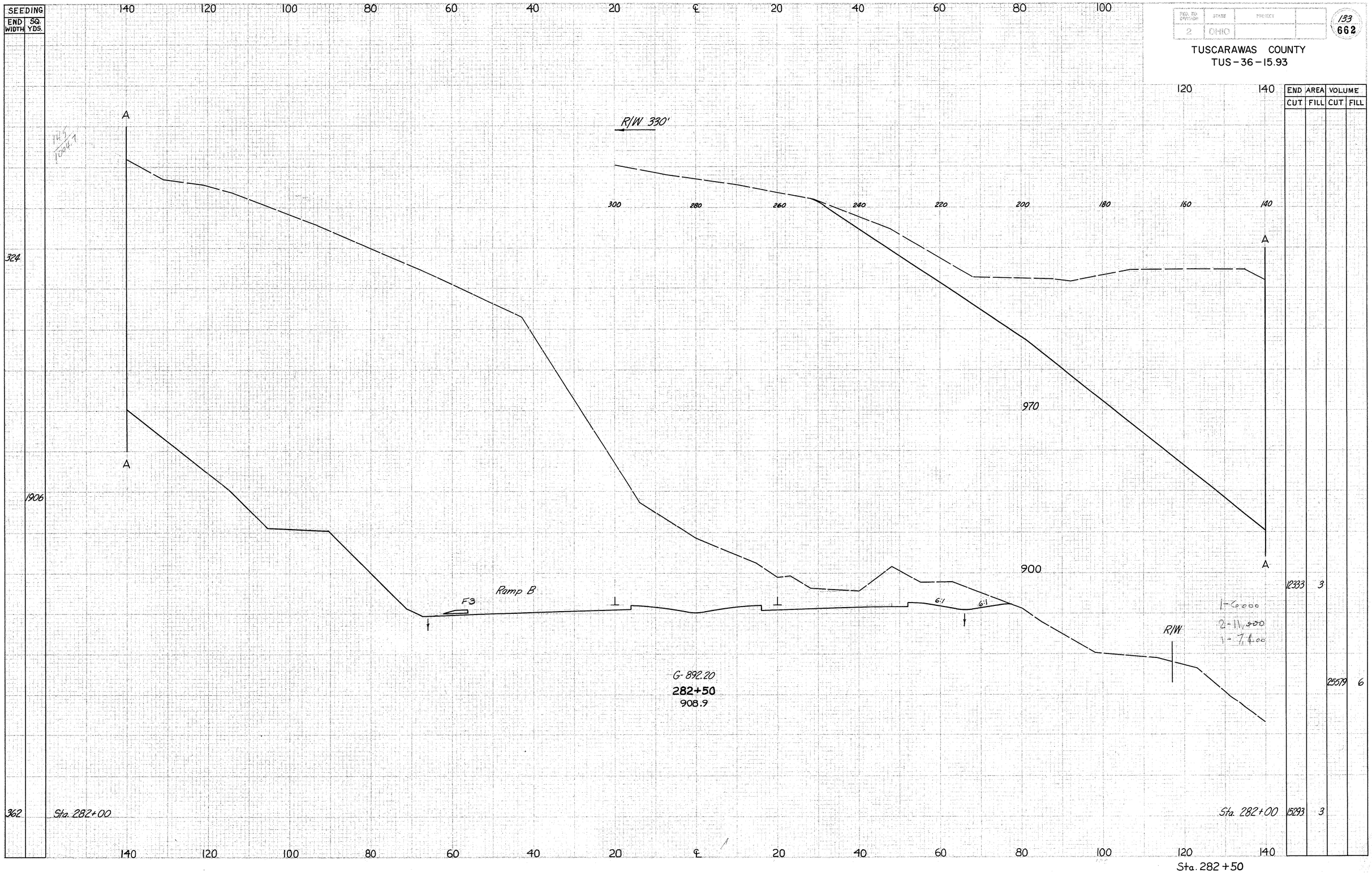
TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING	
END WIDTH	SQ. YDS.



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-15.93

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
12333	3		
		25579	6
15293	3		

SEEDING	
END WIDTH	SQ. YDS.
284	
1689	
324	

STATE NO.	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS - 36 - 15.93

END AREA		VOLUME	
CUT	FILL	CUT	FILL

FED. AID SYSTEM	STATE	PROJECT	
2	OHIO		

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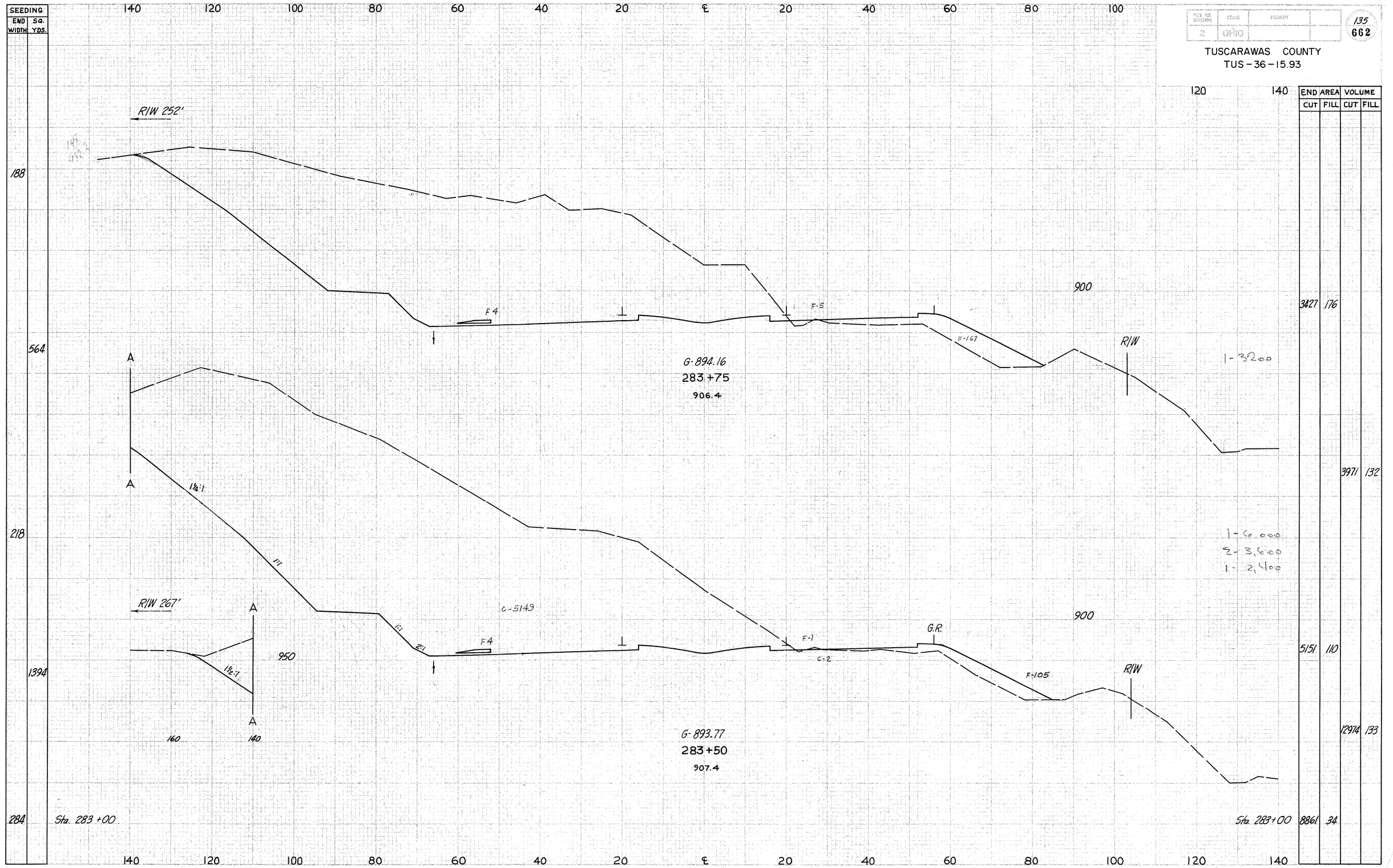
TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING END WIDTH	SEEDING SQ. YDS.
188	
564	
218	
1394	
284	

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
3427	176		
		3971	132
5151	110		
		12914	133
8861	34		



D.S.H.
plate 12-1-67
" 12-7-67
SCS 12/27/63
WMS 2-17-69

FED. HWY. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING END WIDTH	SEEDING SQ. YDS.
183	1028
187	521
188	

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

R/W 199'

2:1

C-17.68

Sta. 284+50
Begin 15' Bench at ditch grade, 66' Lt., to provide access.

900

C-2.0

R/W

Ditch

G-895.34
284+50
888.4

R/W 234'

E.R.

E.R.

1½:1

1:1

1½:1

1:1

2:1

F.4

End Rock Template Lt.
Sta. 284+00

G-894.56
284+00
903.3

G.R.

F-2.53

900

1½%

C-2%

R/W

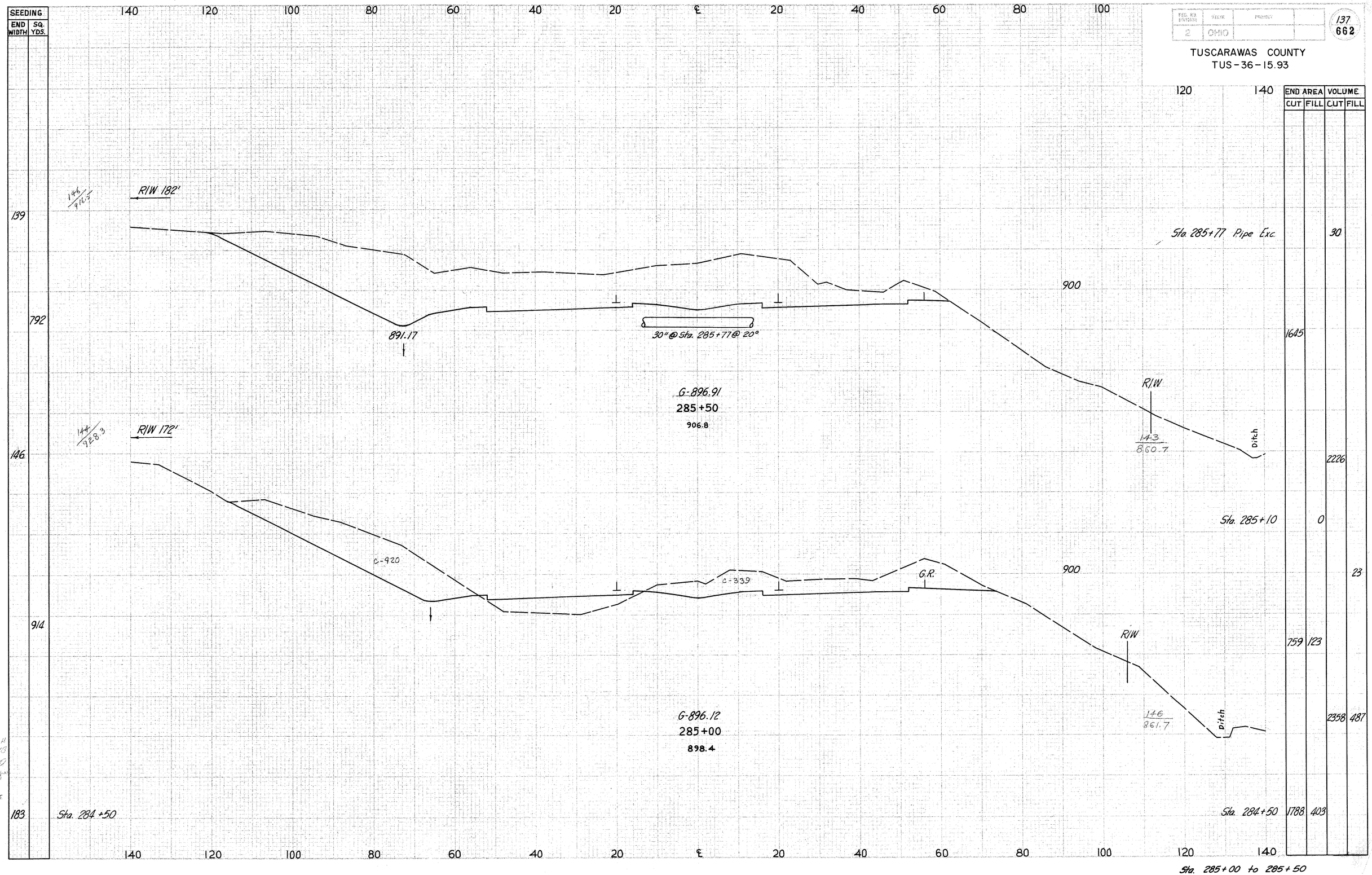
Ditch

Sta. 283+75

Sta. 283+75

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1788	403		
		4494	611
3066	257		
		3006	200
3427	176		

Sta. 284+00 to 284+50



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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662

TUSCARAWAS COUNTY
TUS-36-15.93

Sta. 285+00 to 285+50

SEEDING	
END WIDTH	SQ. YDS.
141	
	731
122	
	725
139	

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

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-15.93

END AREA		VOLUME	
CUT	FILL	CUT	FILL
3830			
		6463	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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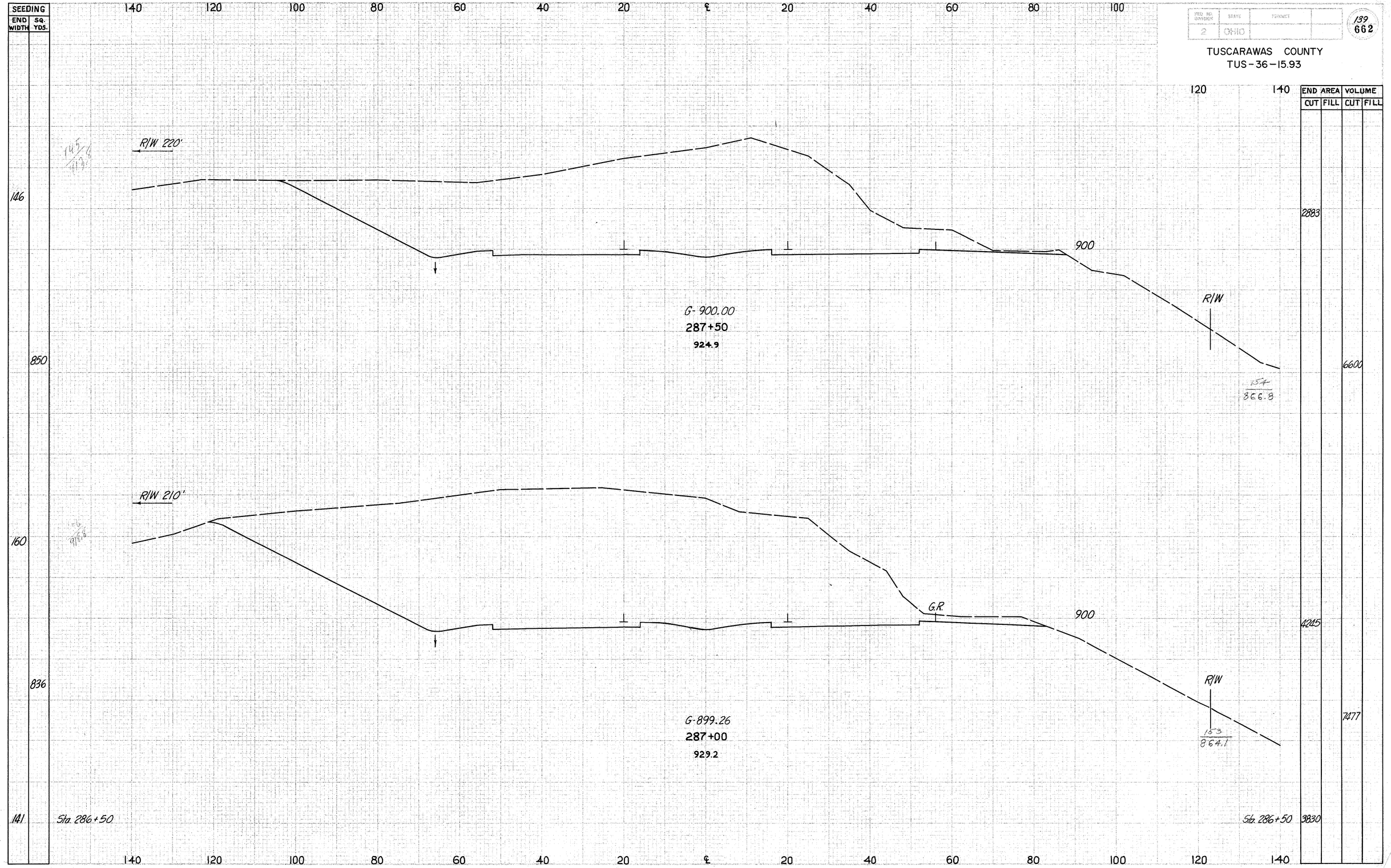
TUSCARAWAS COUNTY
TUS-36-15.93

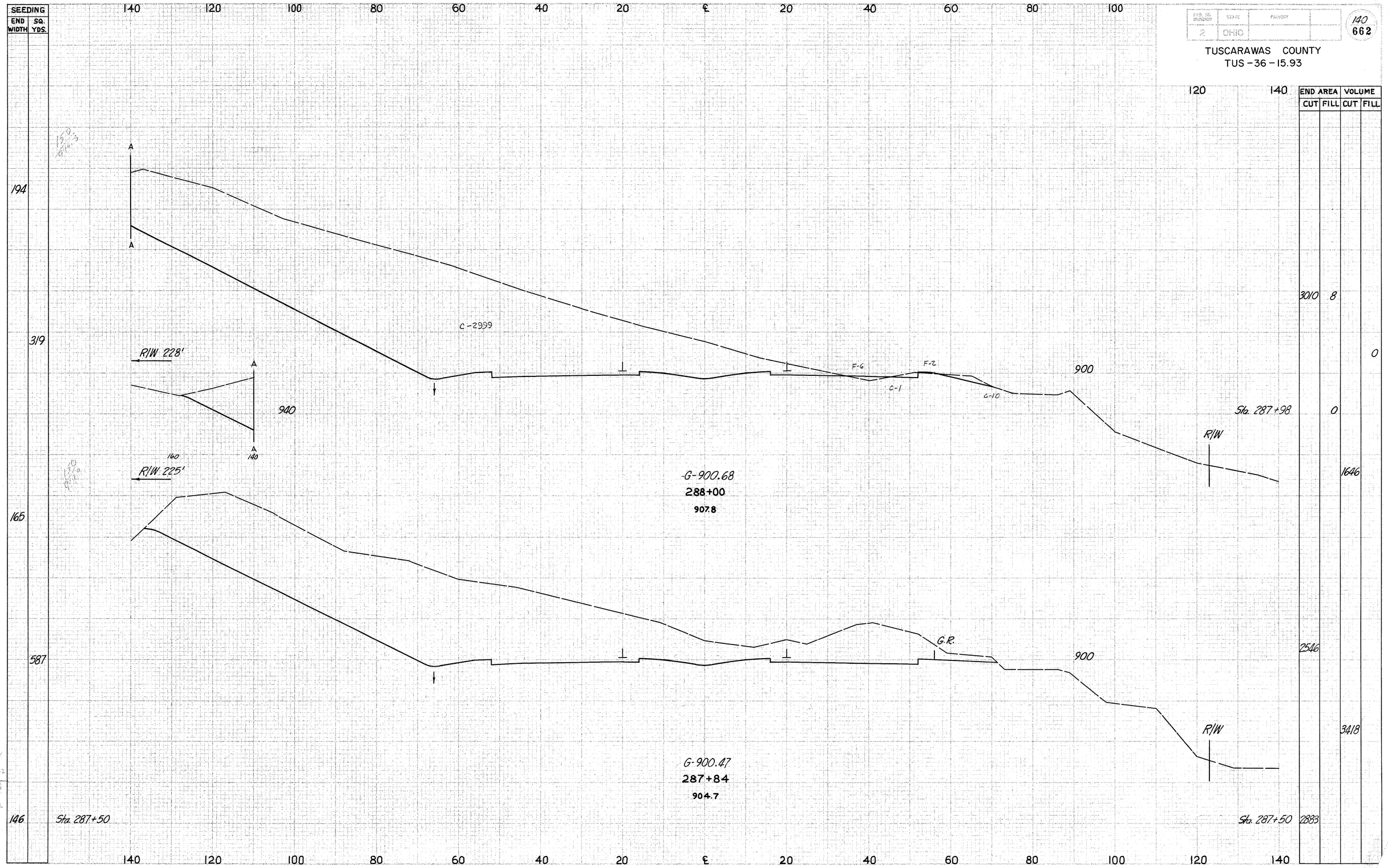


Sta. 287+00 to 287+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

140
662

TUSCARAWAS COUNTY
TUS-36-15.93



Sta. 287+84 to Sta. 288+00

FED. AID PROJECT NUMBER	STATE	PROJECT		SHEET NO.	TOTAL SHEETS
2	OHIO			141	662

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING END WIDTH	SEEDING SQ. YDS.
213	
	1142
198	
	1089
194	

Sta. 288+00

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

A
A

R/W 246'

160 140

A
A

970

R/W 238'

F 4

900

R/W

G-901.80
289+00
915.2

F 4

4:1 F-41

900

R/W

Begin Rock Template Lt.
Sta. 288+50

G-901.27
288+50
910.5

Sta. 288.+18.11
Begin Normal Section
End Super Transition

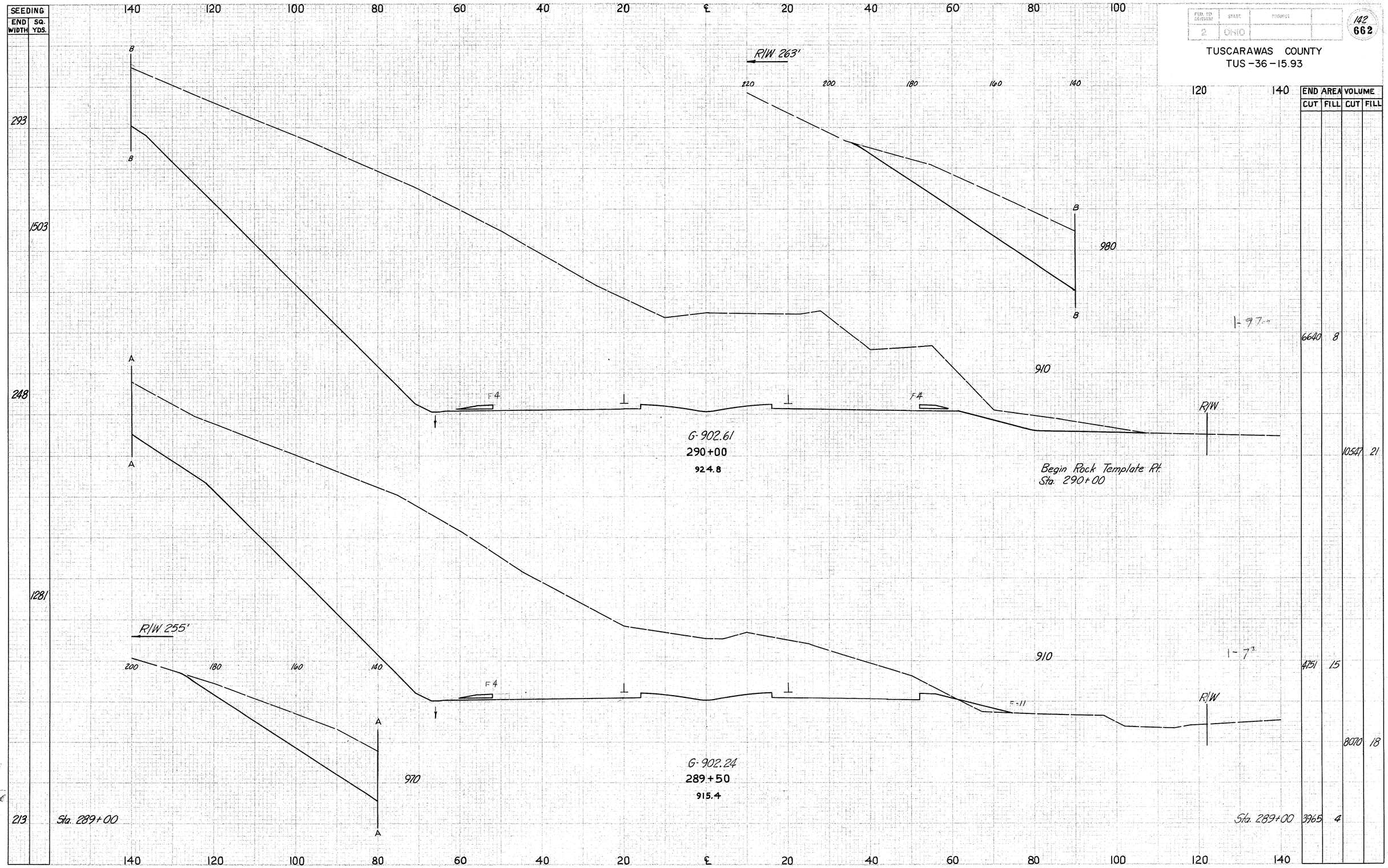
Sta. 288+00

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
3965	4		
		6550	45
3109	45		
		5666	49
3010	8		

1-6³

1-5000

Sta 288+50 to 289+00



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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662

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING	
END WIDTH	SQ. YDS.

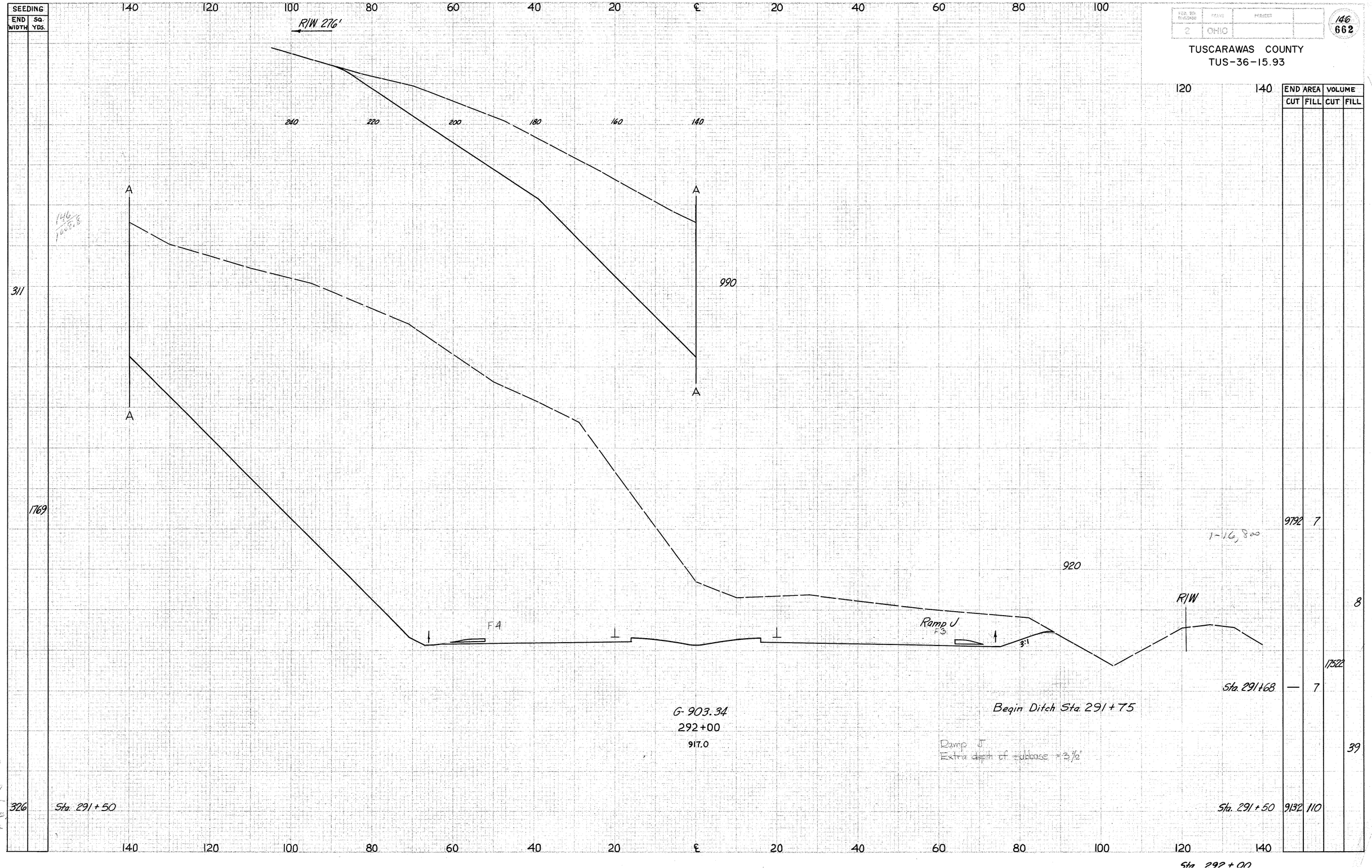
STATE	PROJECT
OHIO	

144
662

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
325					

SEEDING	
END WIDTH	SQ. YDS.
326	



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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662

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING	
END WIDTH	SQ. YDS.
308	
1719	
311	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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662

TUSCARAWAS COUNTY
TUS-36-15.93

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1038	7		
		19028	13
9792	7		

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

R/W 262'

240 220 200 180 160 140

A A

990

A A

920

R/W 126'

Ramp J

F 4 F 3

1-18.200

Ramp J
Extra Depth of subbase = 3½"

G-903.33
292+50
935.2

Sta. 292+00 Sta. 292+00

Sta. 292+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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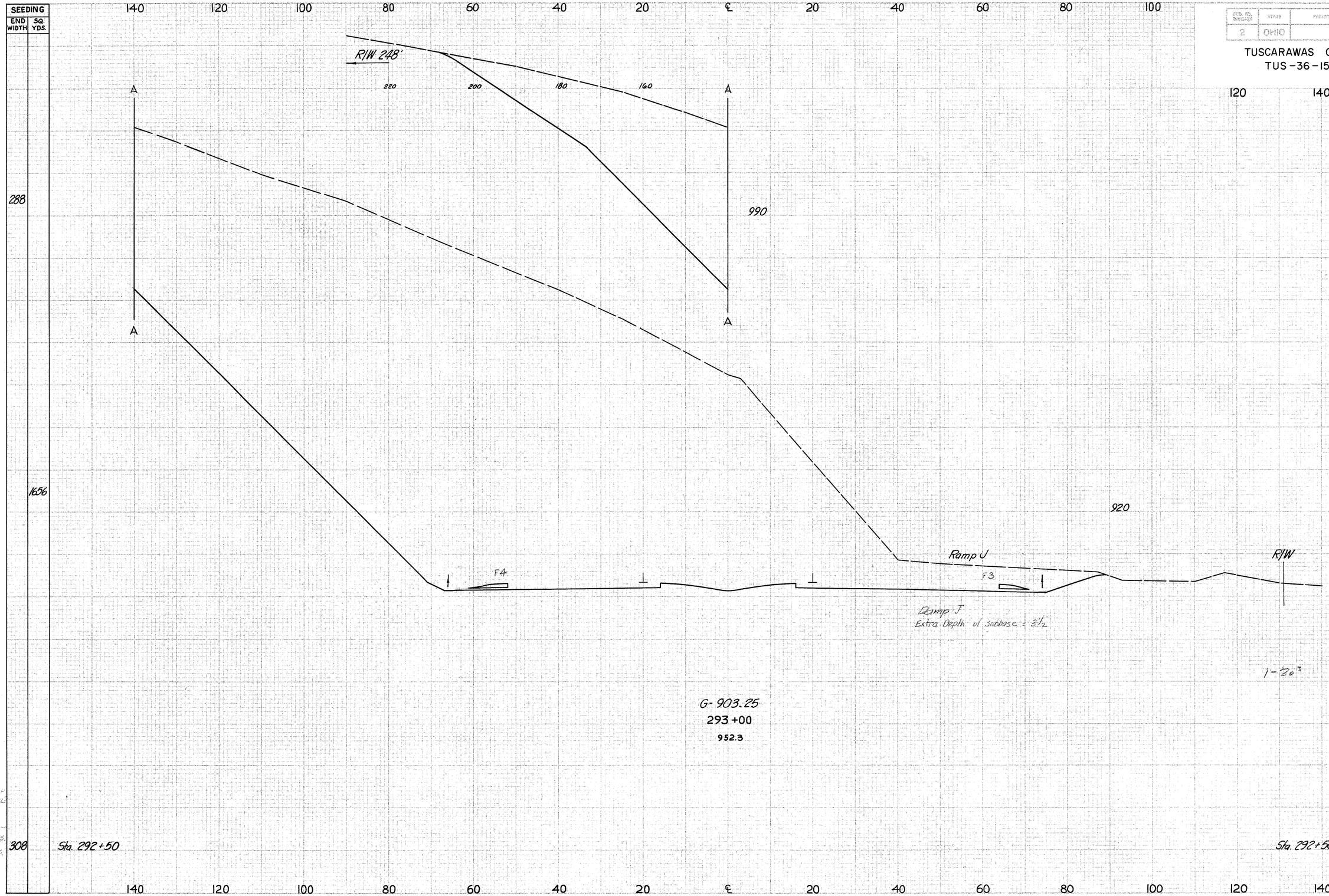
TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING	
END WIDTH	SQ. YDS.
288	
1656	
308	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1160	5		
		20706	13
1015	8		

SEEDING	
END WIDTH	SQ. YDS.
270	1550
288	

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

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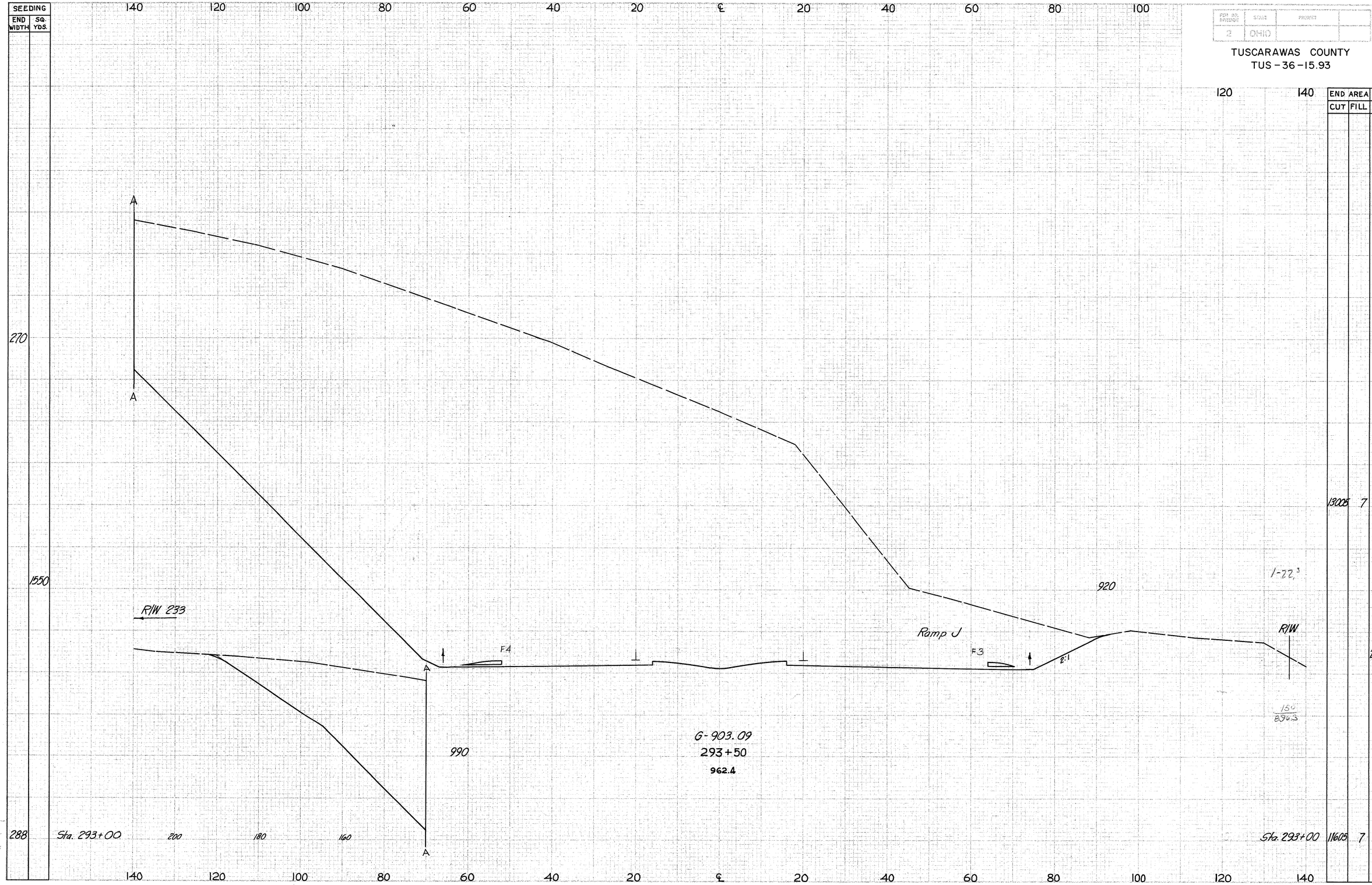
TUSCARAWAS COUNTY
TUS - 36 - 15.93

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		13006	7
		22787	13
		11605	7



FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING	
END WIDTH	Sq. YDS.
260	
1472	
270	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
14089	7		
		25087	13
		13005	7

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

A

A

930

R/W 141'

150
807.11

Ramp J

F4

F3

2:1

1½:1

1-24"

R/W

A

990

A

220 200 180 160 140

G-902.86
294+00
970.6

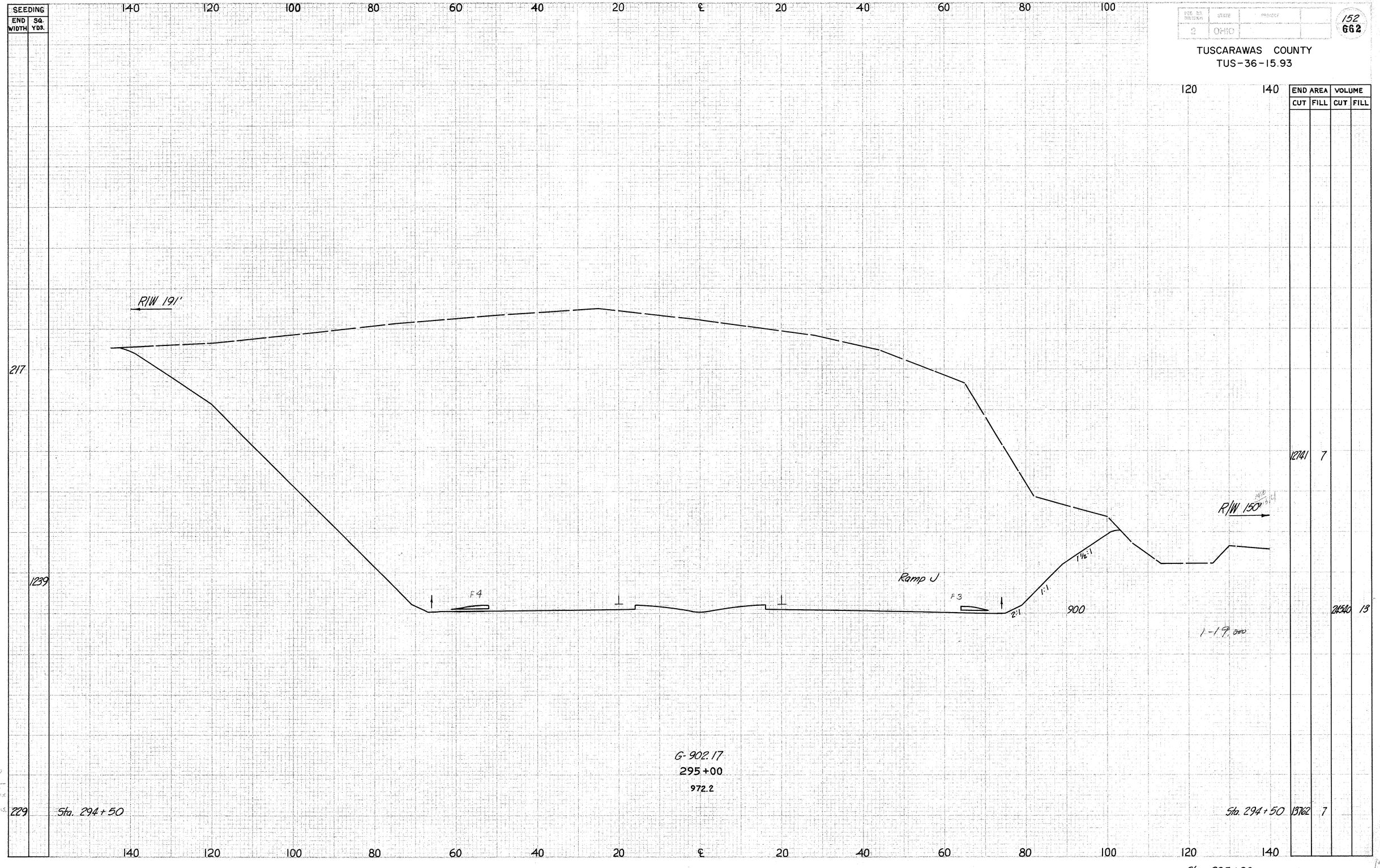
Sta. 293+50

Sta. 293+50

Sta. 294+00

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

SEEDING	
END WIDTH	SQ. YDS.



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-15.93

END AREA		VOLUME	
CUT	FILL	CUT	FILL
12741	7		
		24540	13
13762	7		

SEEDING	
END WIDTH	SQ. YDS.
202	
	1175
221	
	1217
217	

STATE NO.	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
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END AREA		VOLUME	
CUT	FILL	CUT	FILL
9417	7		
		19171	13
11288	7		
		22249	13
12741	7		

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

R/W 163'

R/W 160'

F4 Ramp J F3

900

G-901.33
296+00
950.3

143
914.7

1-10,3

R/W 177'

R/W 155'

F4 Ramp J F3

900

G-901.75
295+50
962.6

144
918.9

1-15,200

Sta. 295+00

Sta. 295+00

Sta. 295+50 to 296+00

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

SEEDING	
END WIDTH	SQ. YDS.
153	
	892
168	
	975
183	
	1069
202	

FED. AID DIVISION	STATE	PROJECT
2	OHIO	

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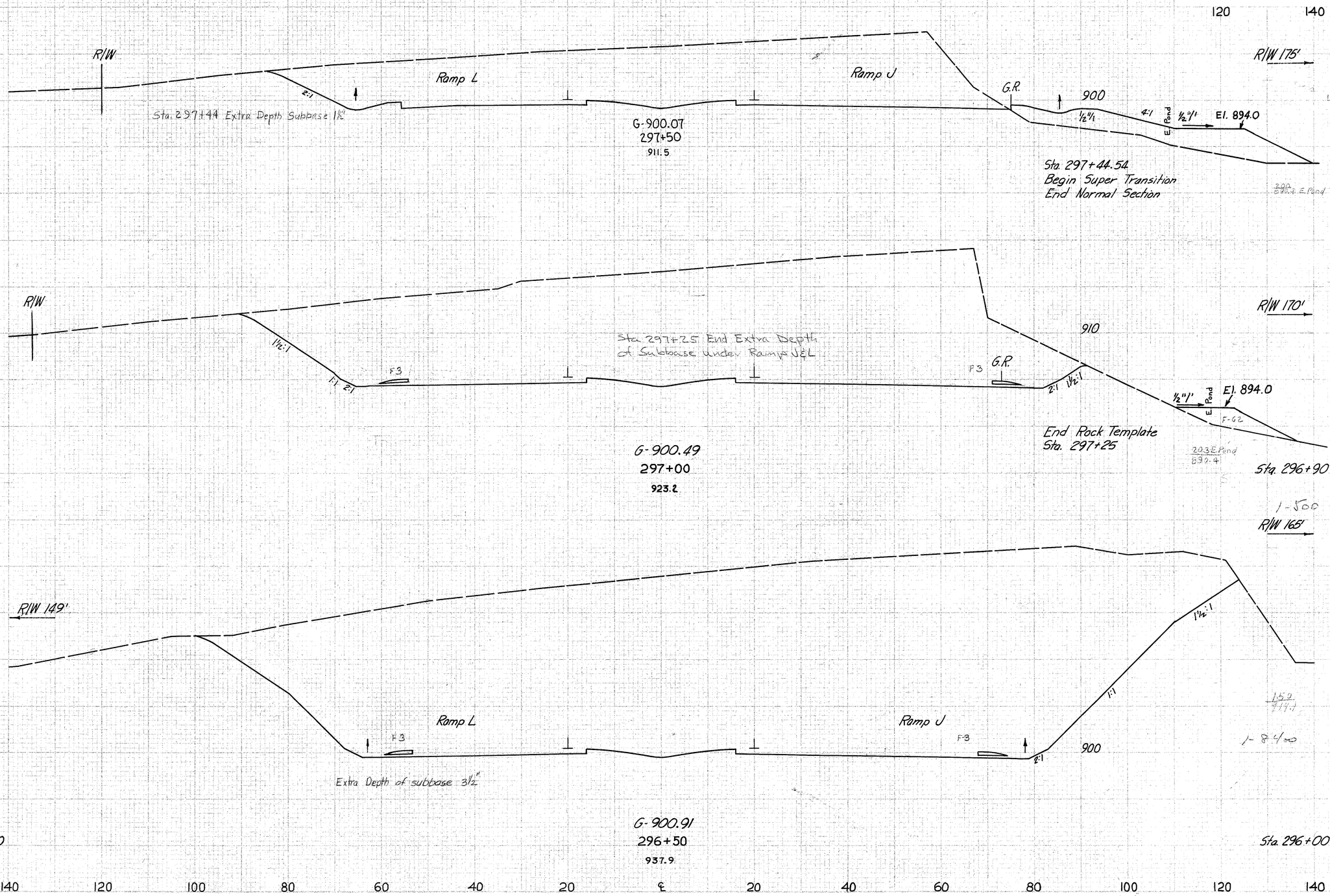
TUSCARAWAS COUNTY
TUS-36-15.93



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1740	250		
		5041	294
3704	68		
			14
—	6	10100	
			9
7204	6		
		15390	12
9417	7		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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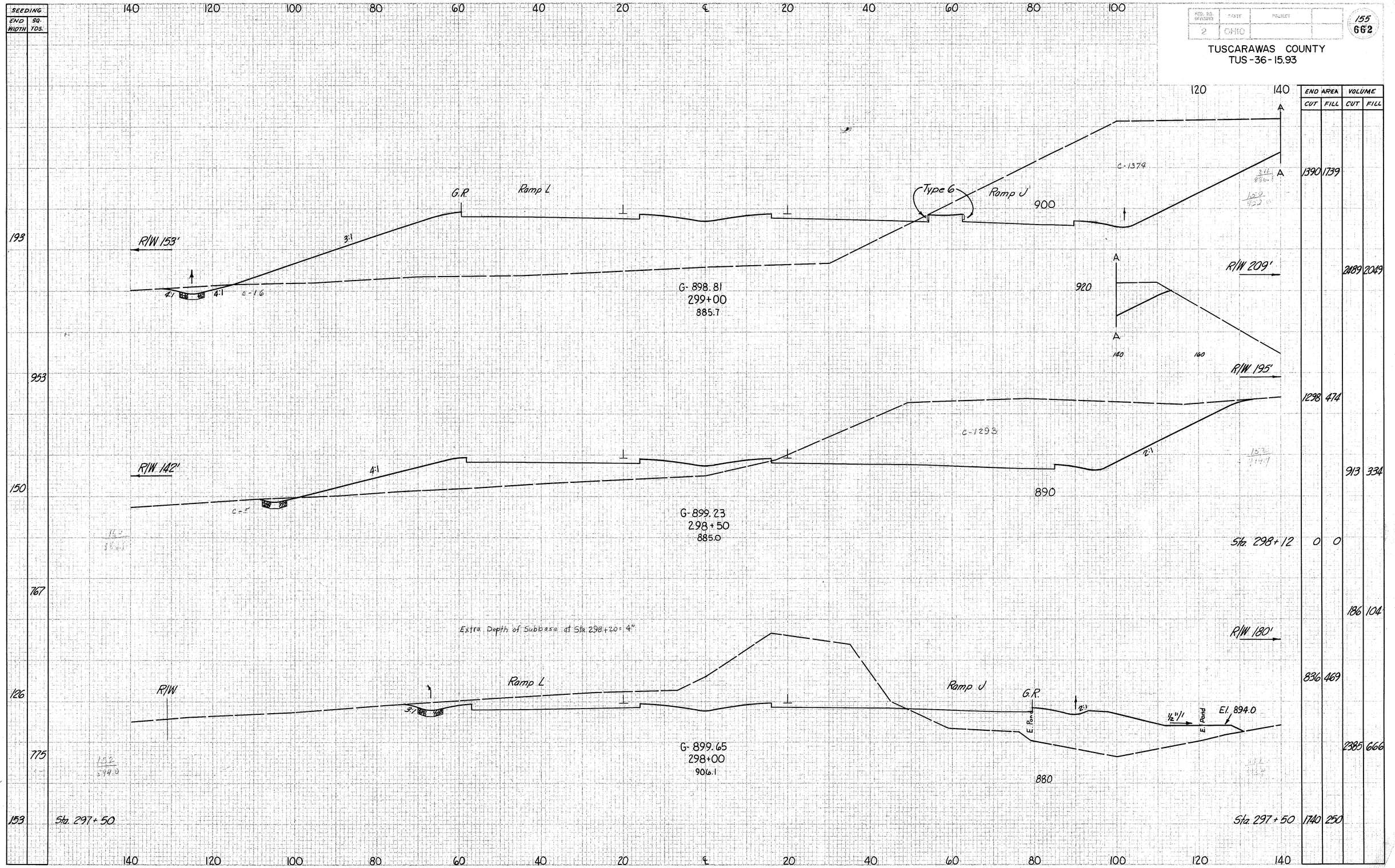
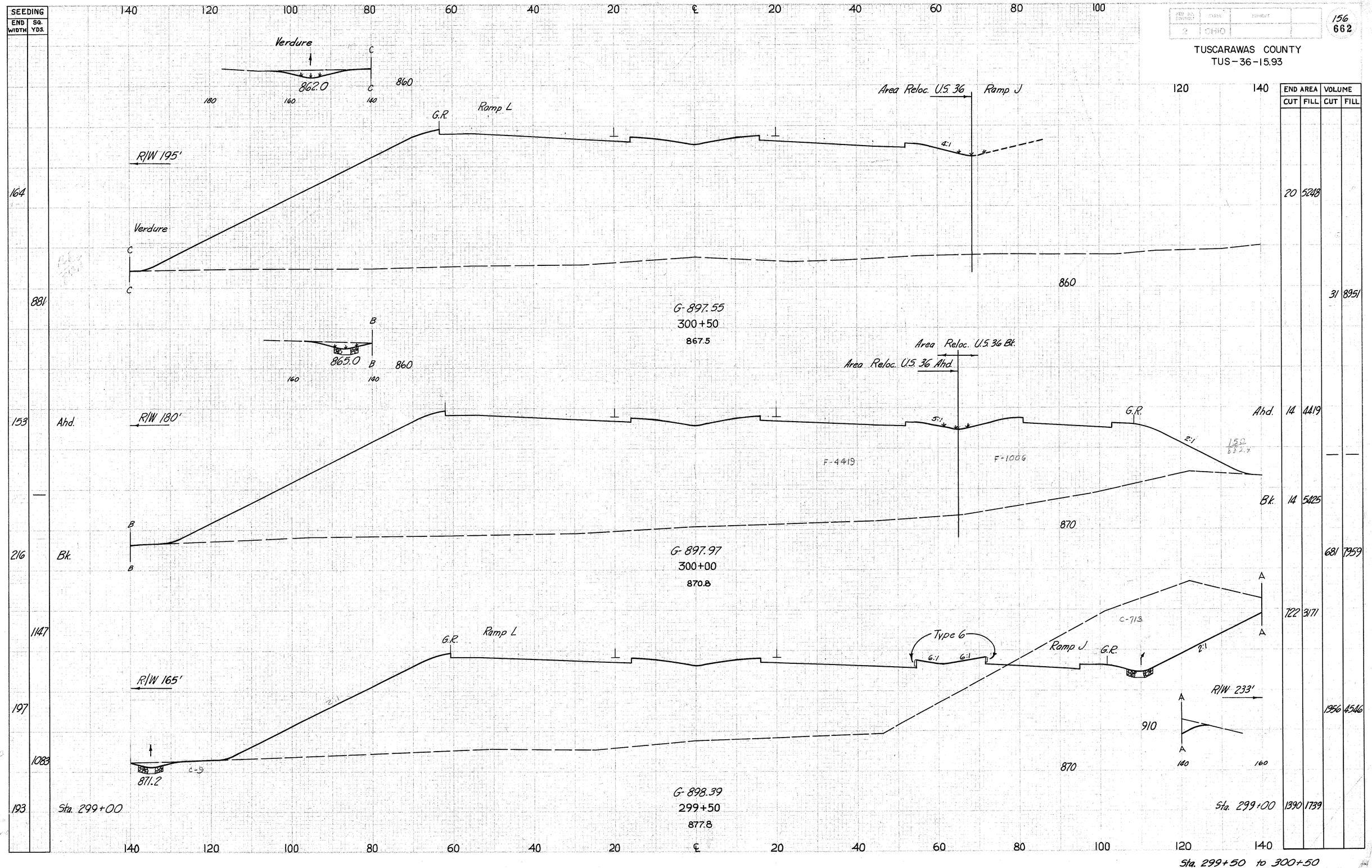
TUSCARAWAS COUNTY
TUS-36-15.93



Sta. 298+00 to 299+00

TUSCARAWAS COUNTY
TUS-36-15.93

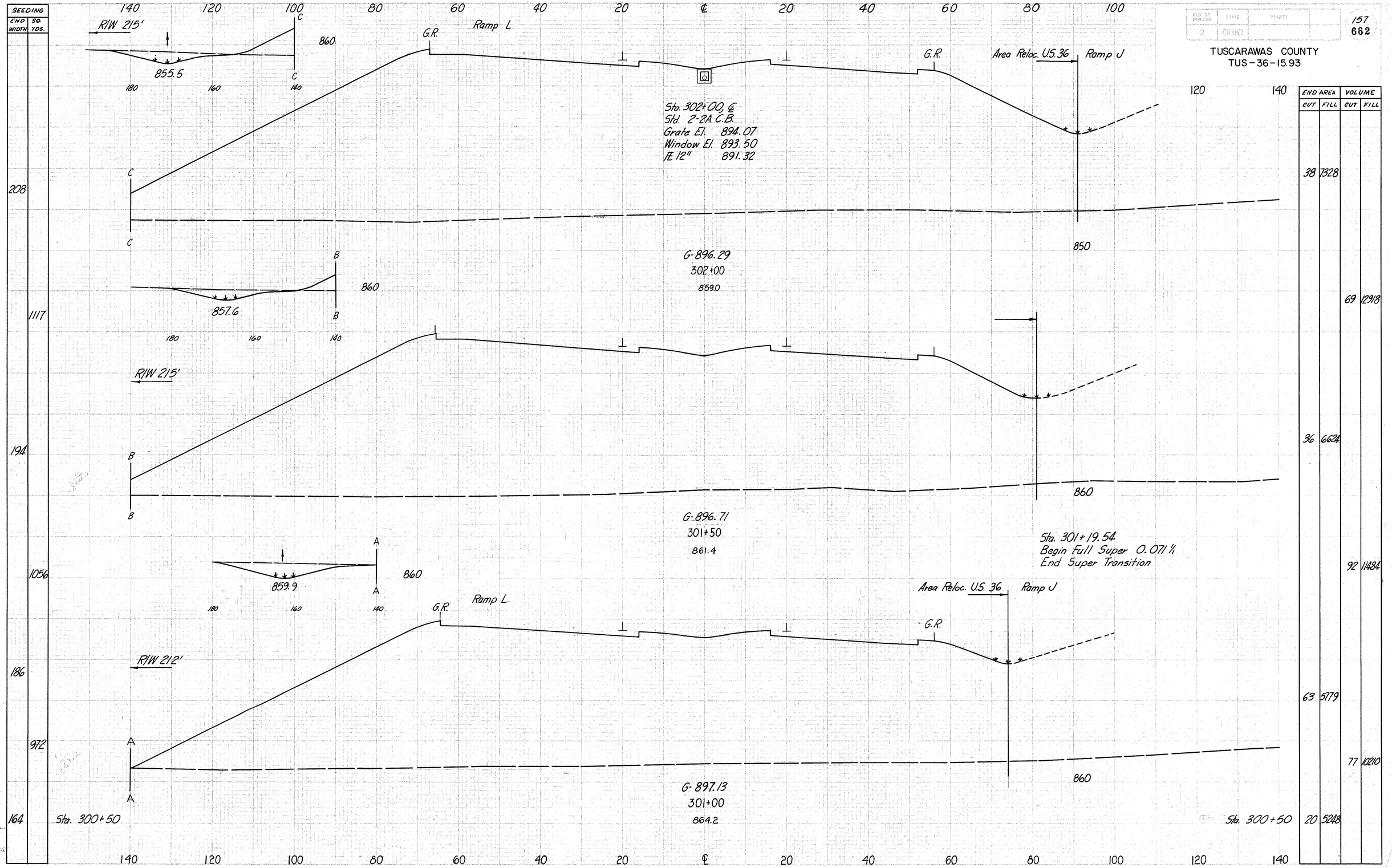


	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	20	5248		
			31	8951
Ahd.	14	4419		
Bk.	14	5425		
			681	7959
	722	3171		
			1956	4546
Sta. 299+00	1390	1739		

Sta. 299+50 to 300+50

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

TUSCARAWAS COUNTY
TUS-36-15.93



Sta. 301+00 to 302+00

FED. AID PROJECT	STATE	PROJECT	
S	OHIO		

158
662

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING	
END WIDTH	SQ. YDS.
243	
1325	
234	
1228	
208	

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

200 180 160 140

R/W 215'

B

860

851.9

10'

IE 852.30

8"-12" @ 1.00% B

Sta. 303+24, 165' Lt.
Std. HW-E
IE 12" - 852.22

G.R.

G.R.

G.R.

IE 888.48

82'-12" @ 0.60%

Sta. 303+24, 2' Lt.
Std. 2-2A C.B.

Grate El.	892.54
Window El.	892.04
IE 12"	888.97
IE 6"	889.47

B

81'-12" @ 50.00%

B

R/W

850

G-895.45
303+00
854.8

180 160 140

R/W 215'

A

860

853.7

A

Sta. 302+67, 161' Lt.
Std. HW-E
IE 15" 854.00

G.R.

B.R.

894.4 894.7

G.R.

Area Reloc. U.S. 36 Ramp J

Ramp J
See Sheet 335

R/W

A

A

284'-15" @ 1.80% 5" Conc. Enc.

G-895.87
302+50
856.9

850

Sta. 302+67, 122' Rt.
Std. 2-2A C.B.

Grate El.	861.85
Window	861.35
IE 15"	859.10
IE 12"	859.10

Sta. 302+00

Sta. 302+00

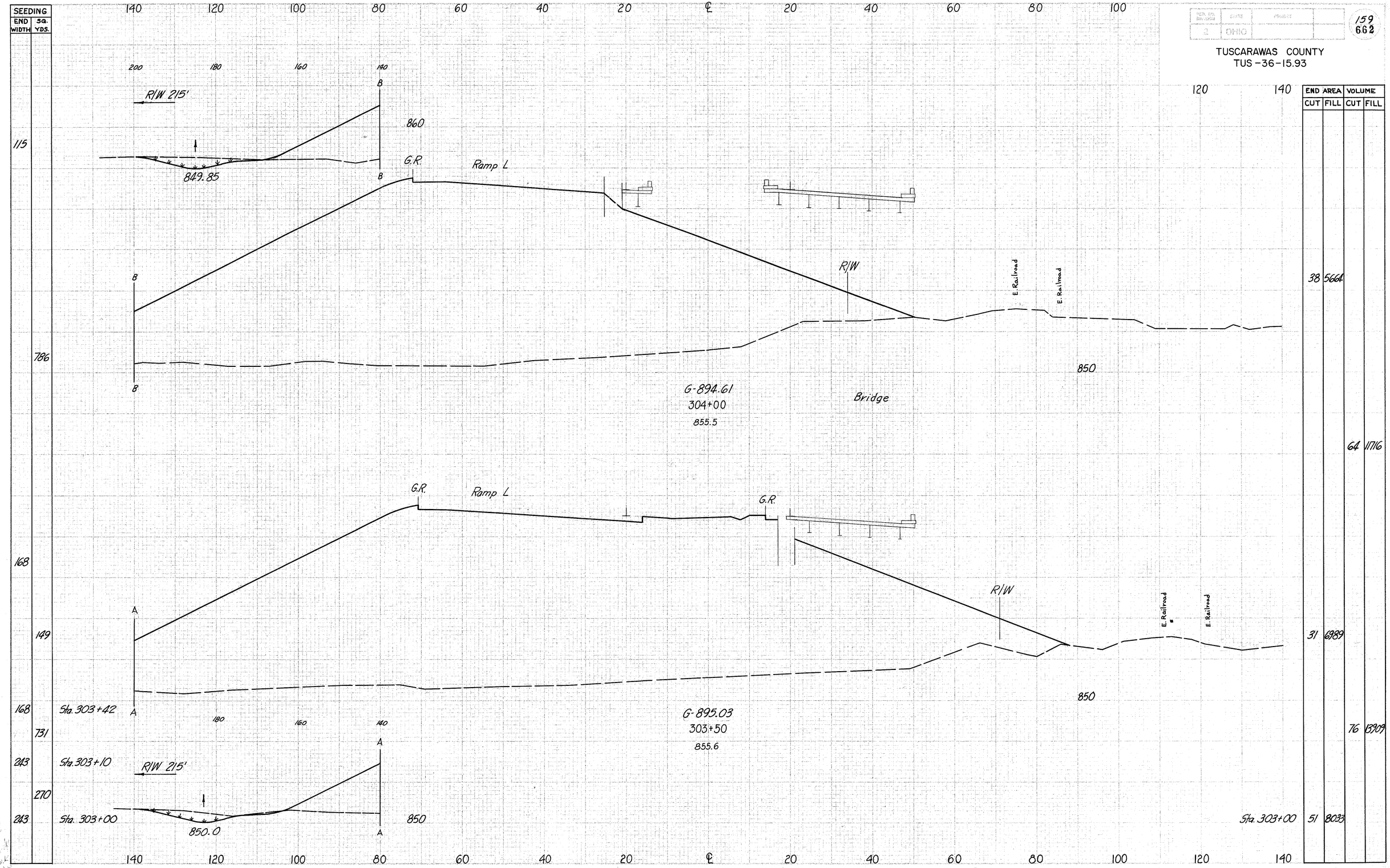
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 302+50 to 303+00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
51	8033		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

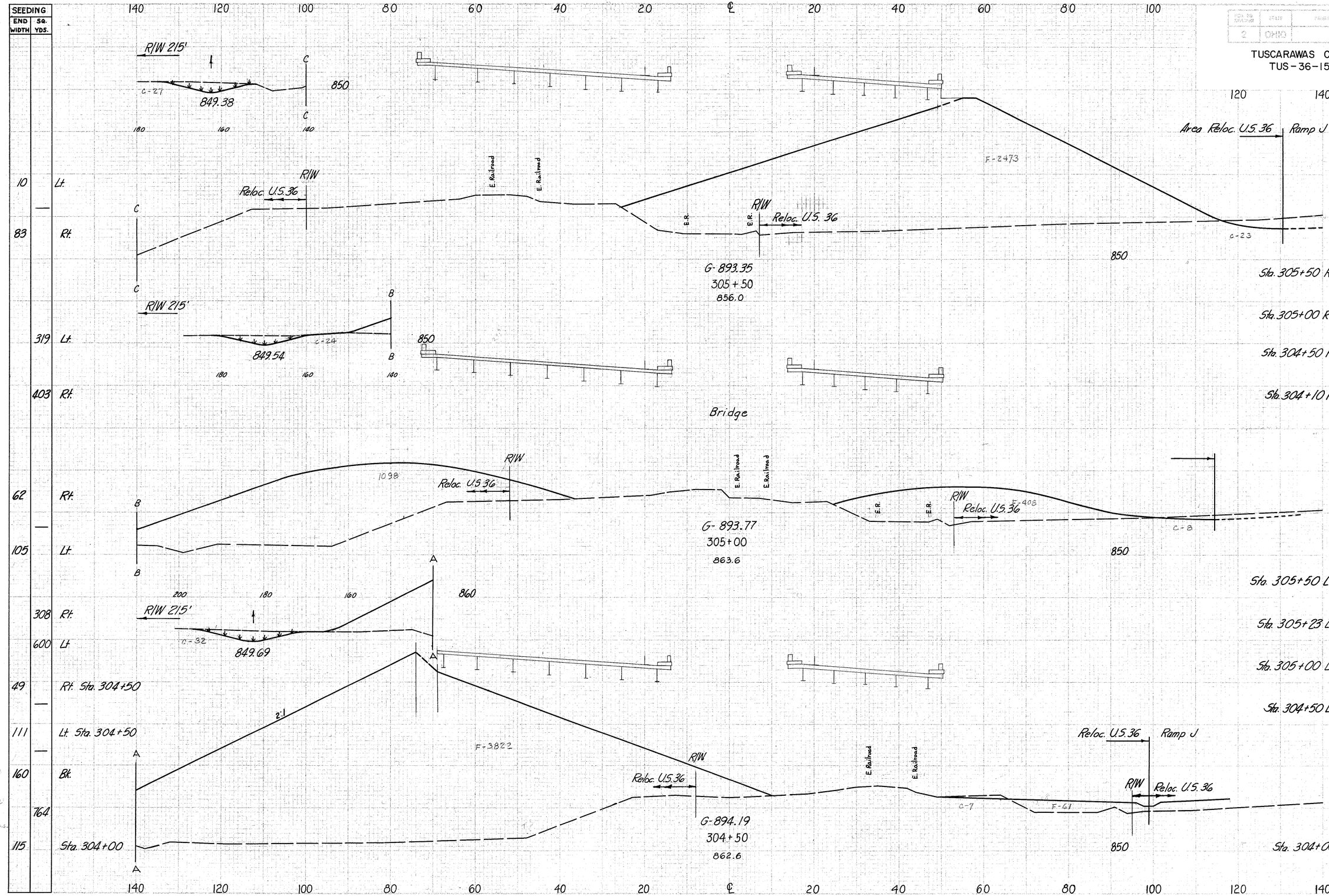
TUSCARAWAS COUNTY
TUS-36-15.93



Sta. 303+50 to 304+00

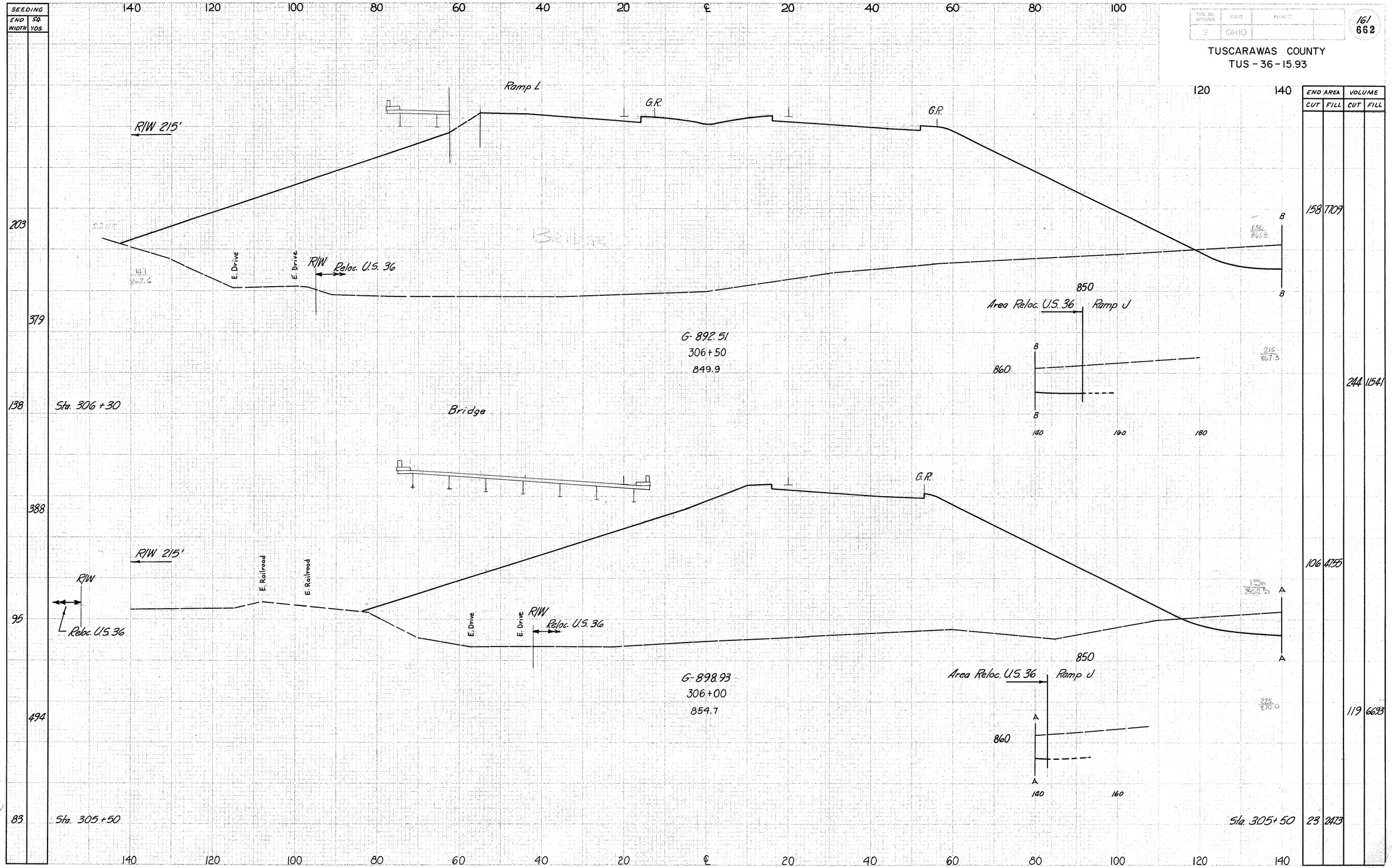
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

TUSCARAWAS COUNTY
TUS-36-15.93



FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

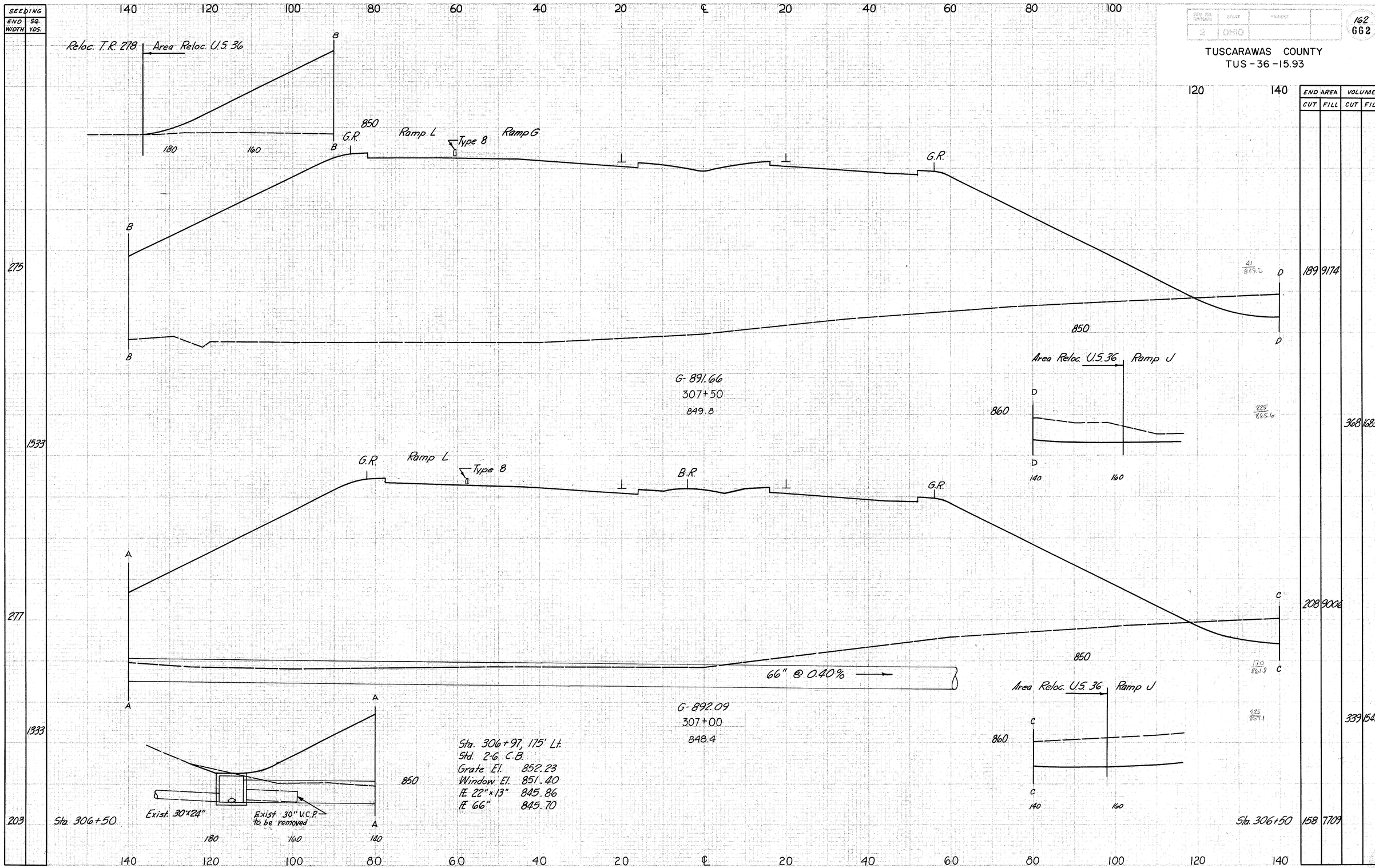
TUSCARAWAS COUNTY
TUS - 36 - 15.93



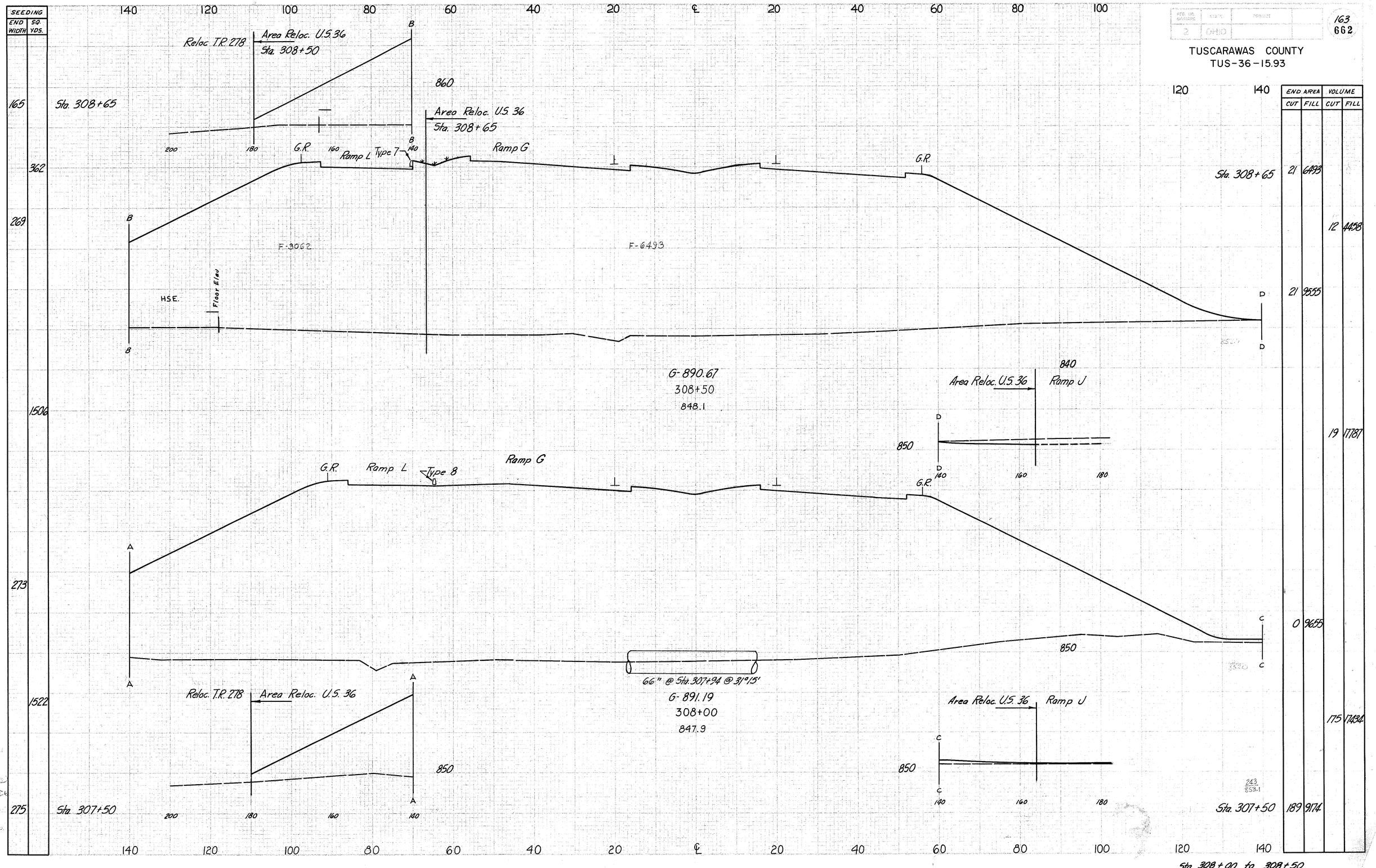
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

162
662

TUSCARAWAS COUNTY
TUS-36-15.93



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
275		189	9174		
	1533			368	16833
277		208	9006		
	1333			339	15477
203		158	7709		



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
21	6493		
		12	4458
21	9555		
		19	17787
0	9655		
		175	17434
189	9174		

163
662

TUSCARAWAS COUNTY
TUS-36-15.93

Sta. 308+00 to 308+50

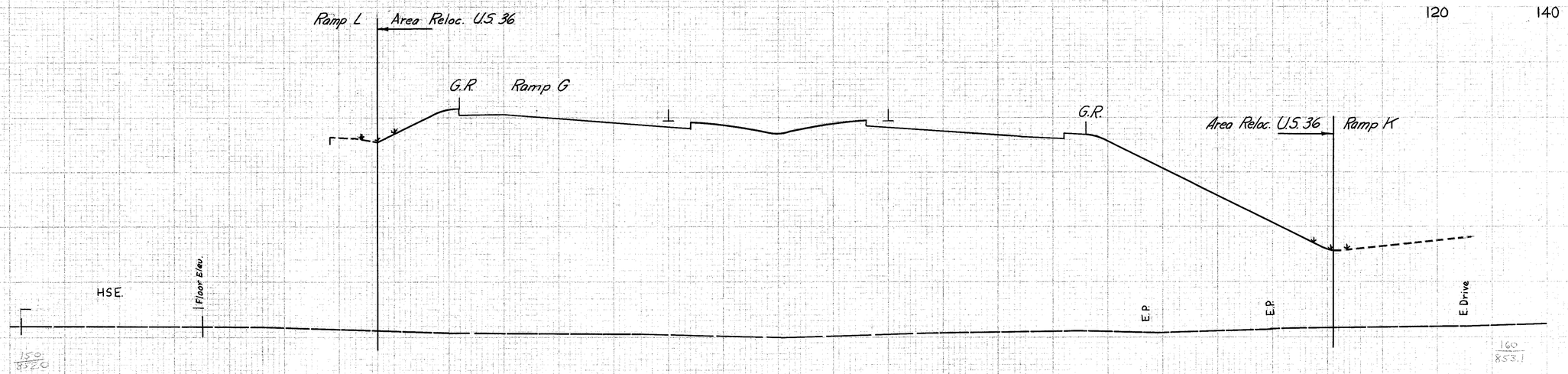
SEEDING	
END WIDTH	SQ. YDS.
107	
647	
126	
566	
165	Sta. 308+65

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

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

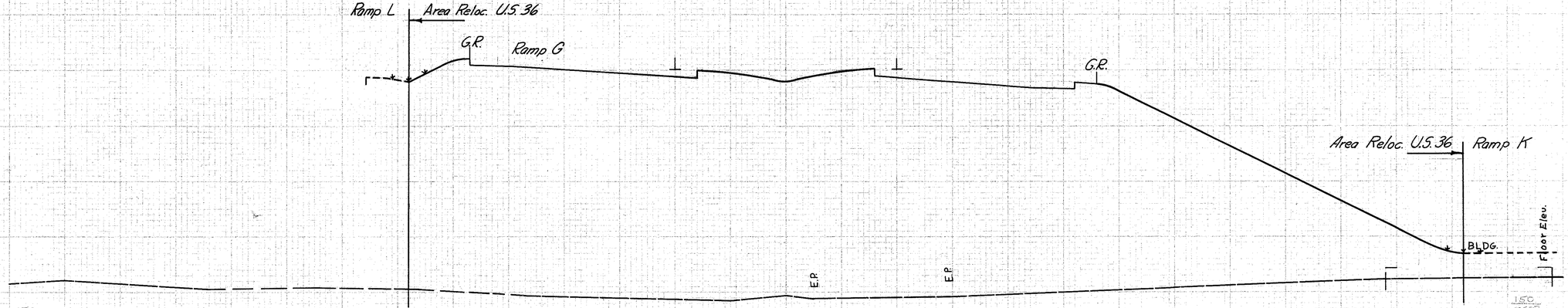
164
662

TUSCARAWAS COUNTY
TUS-36-15.93



G-889.46
309+50
850.0

840



G-890.09
309+00
849.3

840

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	6024		11388
	6275		8275
0			
2	6493		

Sta. 308+70

Sta. 308+65

Sta. 309+00 to 309+50

SEC. OF NUMBERS	STATE	PROJECT	
2	OHIO		

165
662

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING END WIDTH	SEEDING SQ. YDS.
132	
	391
75	
	133
75	
	453
88	
	542
107	

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

Ramp L | Area Reloc. U.S. 36 | G.R. | Ramp G | Type 7 | Ramp K | G.R. | Area Reloc. U.S. 36 | Ramp K

Skewed slope

HSE. 150 857.2

E. Drive | BLDG. | GAR. | E. Sidewalk | E. Sidewalk | E.P. | E.P. | E. Sidewalk | E. Sidewalk

840

G-887.25
311+00

Sta. 310+66

Area. Sta. 310+66 | Area Sta. 310+66 | G.R. | 3:1

E.P. | E.P. | E.P.

150 850.3

G-888.04
310+50
BLDG.

840

Ramp L | Area Reloc. U.S. 36 | G.R. | Ramp G | G.R. | Area Reloc U.S. 36 | Ramp K | 2:1

E. Sidewalk | E. Sidewalk | E.R. | E.R.

G-888.78
310+00
850.7

840

Sta. 309+50 | Sta. 309+50

Sta. 310+00 to 311+00

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	7353		
			8070
	5464		
			3238
	5464		
			10363
	5728		
			1088
	6024		

SEEDING	
END WIDTH	SQ. YDS.
261	
	1453
262	
	1378
	1017
234	
132	

FED. AID DIVISION	STATE	PROJECT	
5	OHIO		

166
662

TUSCARAWAS COUNTY
TUS-36-15.93

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

Ramp L Area Reloc. U.S. 36 G.R. Ramp G

6:1

Type 8 Ramp K G.R.

54-12" @ 0.80%

Sta. 312+65, ℄
Std. 2-2A C.B.
Grate El. 882.44
Window El 881.94
IE 12" 878.60

Sta. 312+71, 54' Rt.
Std. 6 C.B.
Grate El. 881.88
IE 12" 879.03

F-7056

150
855.6

E. Drive E.P. E.P. E.P. E.P.

Area Reloc. U.S. 36 Ramp K

850 GAR. HSE.

C-64 F-2 C-3

140 160 180 200 220 240 260

G-884.74
312+50
847.7
850

840 Area Reloc. U.S. 36 Ramp K

E. Drive

140 160 180 200 220 240 260

E. Drive E. Drive E. Drive GAR. E. Drive E. Drive HSE. E. Curb E.P. E.P.

857.7

G-885.58
312+00
847.1 850

840 Area Reloc. U.S. 36 Ramp K

140 160 180 200 220 240

Ramp L Area Reloc. U.S. 36 G.R. Ramp G

Type 8 Ramp K G.R.

Skewed slope

E. Sidewalk HSE. E. Drive E. Drive GAR. E.P. E.P. E. Sidewalk E.P.

149
854.4

G-886.42
311+50
848.7

840

Sta. 311+00

Sta. 311+50

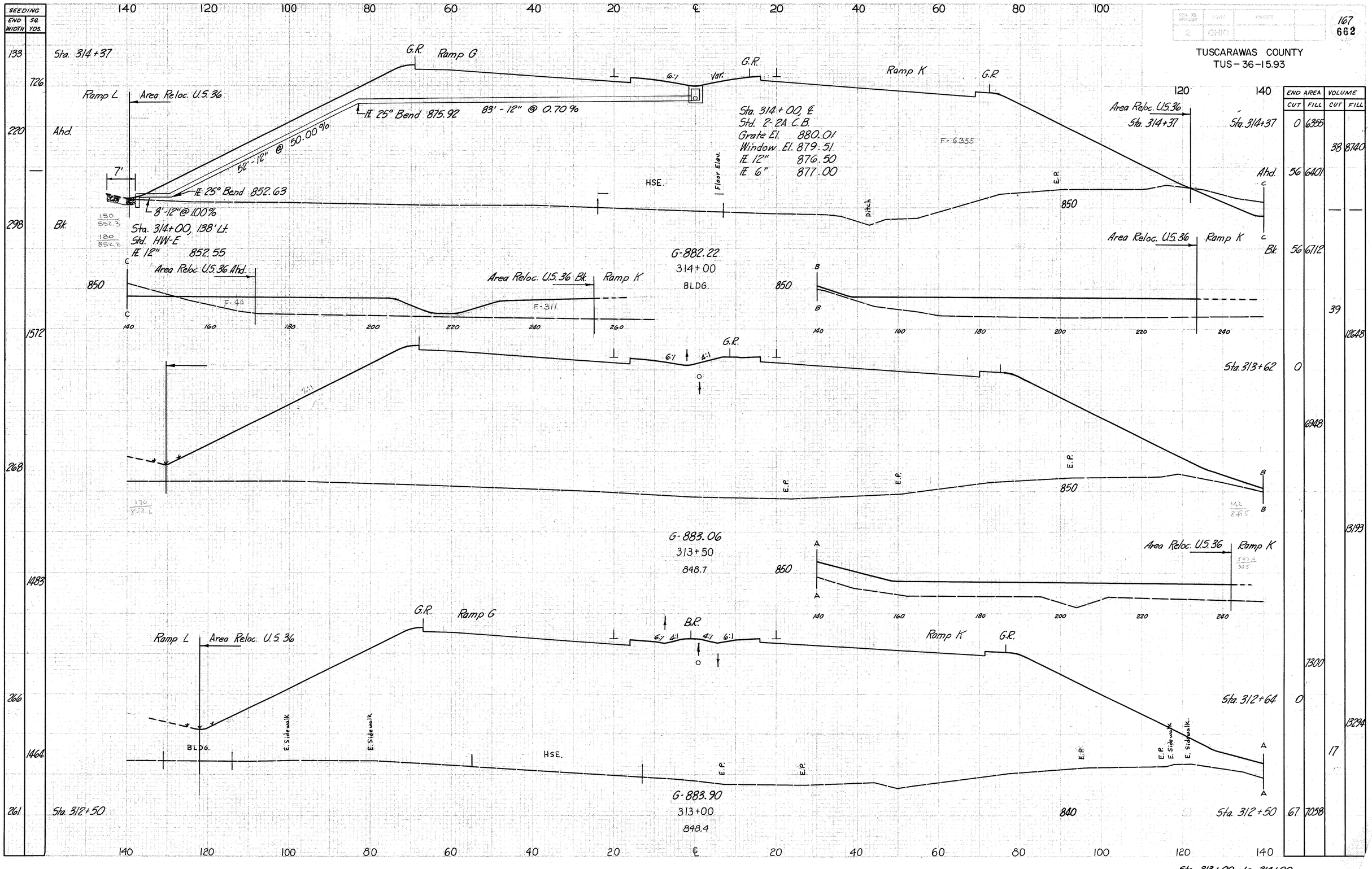
Sta. 311+25

Sta. 311+00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
67	7058		
		257	13263
211	7266		
		339	13604
155	7426		
		72	
0			
			9305
	7353		

Sta. 311+50 to 312+50

TUSCARAWAS COUNTY
TUS-36-15.93



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Sta. 314+37	0	6355		
			38	8740
Ahd.	56	6401		
			—	—
Bk.	56	6712		
			39	
				12648
Sta. 313+62	0			
		6948		
				13193
			7300	
Sta. 312+64	0			
				13294
			17	
Sta. 312+50	67	7058		

SEEDING	
END WIDTH	SQ. YDS.
0	
17	
45	
50	
68	
237	
126	
187	
133	

FED. ROAD DIV. NO.	STATE	PROJECT		168 662
2	OHIO			

TUSCARAWAS COUNTY
TUS-36-15.93

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		1017	
			3514
		4564	
			2629
0		6355	

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

Sta. 316+60.56
Begin Super Transition
End Full Super

E.P. E.P.

150/852.8

850

150/850.4

G-878.86
316+00
851.1

Bridge

E.P. E.P. E. Sidewalk E. Sidewalk

150/850.6

850

160/853.5

G-880.54
315+00
852.1

Sta. 314+84

Sta. 314+87

Sta. 314+80

Sta. 314+72

Ramp L Area Reloc. U.S. 36

200/180/851.3

160 140

850

Sta. 314+84
End E'work using area
shown on Reconstr. U.S. 250
See Sheets. 322 & 323

Area Reloc. U.S. 36 Reconstr. U.S. 250

E.P. E. Sidewalk E. Sidewalk E.P.

Ditch

850

150/851.2

G-881.38
314+50
848.6

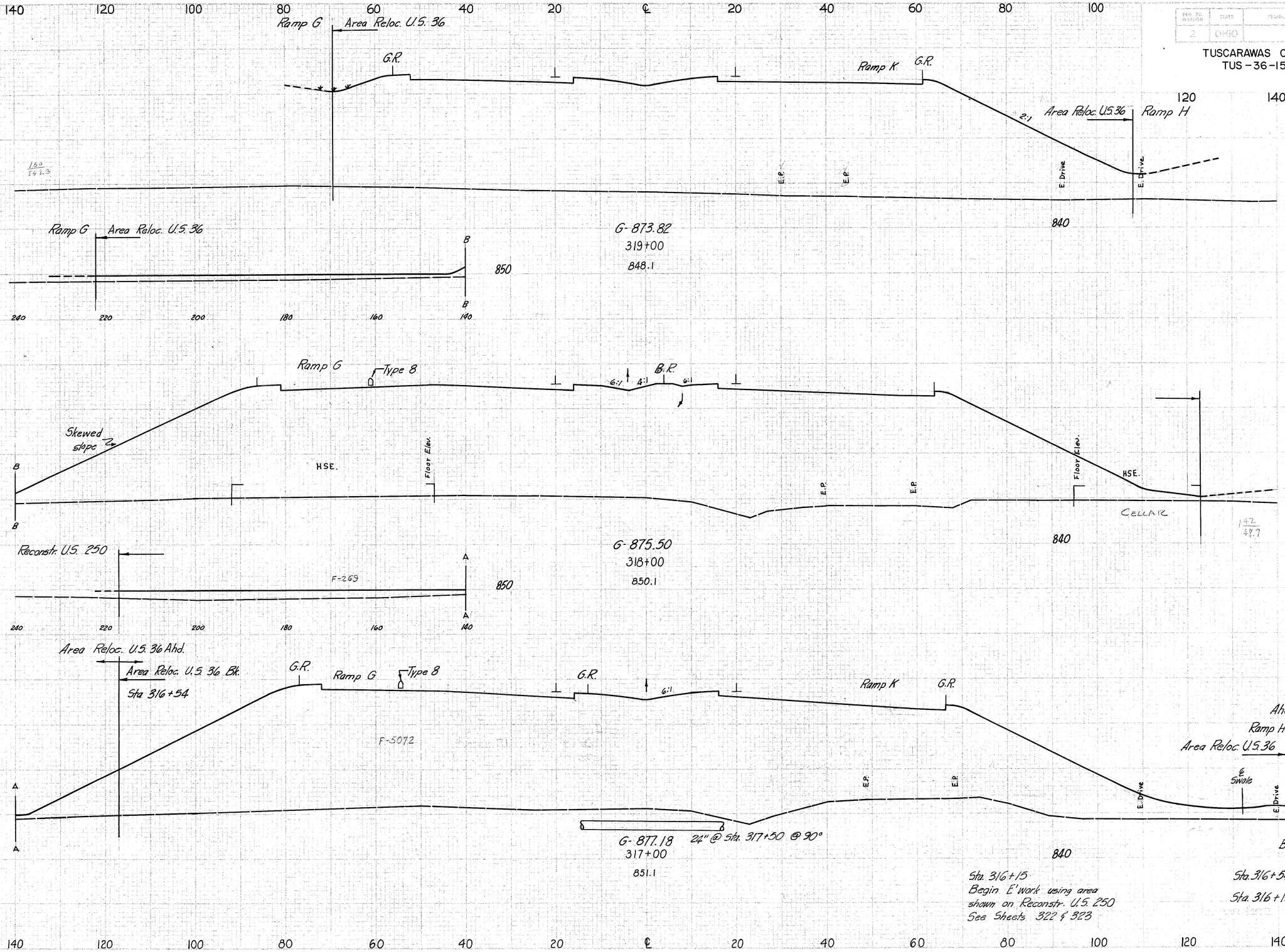
Sta. 314+37

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

Sta. 314+50 to 316+00

SEEDING	
END WIDTH	SQ. YDS.
103	
	1917
242	
	2822
266 Ahd.	
—	
160 Bk.	
160 Sta. 316+54	
	361
64 Sta. 316+25	
	43
0 Sta. 316+13	

TUSCARAWAS COUNTY
TUS-36-15.93



END AREA		VOLUME	
CUT	FILL	CUT	FILL
	3985		11143
	5272		19654
	5341		
	5072		8641
	5072		4489
	1144		

SEEDING END WIDTH	SEEDING SQ. YDS.
195	—
129	201
129	1606
160	1567
122	1250
103	

SEC. NO. OF DIVISION	STATE	FOLDER	SHEET
9	OHIO		170 662

TUSCARAWAS COUNTY
TUS -36-15.93

Sta. 322+14 Ahd.

Sta. 322+14 Bk.

Area Reloc. U.S. 36, Sta. 322+14 Ahd

Area Reloc. U.S. 36, Sta. 322+14 Bk.

Ramp F | Area Reloc. U.S. 36 | G.R. | Ramp K | Type 7 | Ramp H | G.R.

F=3049 | F=1049 | E. Drive | E.P.

150 / 847

840

142 / 847.7

170 / 847.4

G-868.78
322+00
846.1

Ramp G | Area Reloc. U.S. 36 | 2:1 | 2.3:1

E.P. | E.P.

840

152 / 849.2

145 / 849.3

G-870.46
321+00
846.1

Sta. 320+35.56
Begin Normal Section
End Super Transition

Ramp G | Area Reloc. U.S. 36 | G.R. | 3:1 | Ramp K | G.R. | Area Reloc. U.S. 36 | 2.2:1 | Ramp H

HSE. | Floor Elev. | E.P. | E.P. | Floor Elev. | HSE.

840

165 / 848.8

G-872.14
320+00
848.3

Sta. 319+00

Sta. 319+00

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Sta. 322+14 Ahd.	12	4098	—	—
Sta. 322+14 Bk.	12	3049		
			6	1581
	12	3049		
			11	
Sta. 321+50	0			
				1207
		3543		
				13978
		4005		
				14796
		3985		

Sta. 320+00 to 322+00

Templated Qty
21,167
Qty 8/96 Jwh
Board 17,769 with
CP 1130/64 SLS
Qty 9/96 WMS

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING	
END WIDTH	SQ. YDS.
167	
	1021
167	
	—
91	
	508
112	
	1461
151	
	1693
195	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
18	3143		
		37	6402
18	3143		
—	—		
	2562		
			4660
	3030		
			12398
	3665		
			12363
0		8	
12	4090		

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

G.R. ℄ Ramp F
33'-12" @ 2.00%
24"-12" @ 50.00%
℄ E 25° Bend 857.37
℄ E 25° Bend 846.87
9'-12" @ 1.00%
850

Ramp F
Sta. 2+57, 27' Lt.
Std. 6 C.B.
Grate El. 862.55
I.E. 12" 858.03
I.E. 6" 858.53

Ramp F
Sta. 2+57, 40' Rt.
Std. HW-E
I.E. 12" 846.78
G.R.
Ramp F
Type 6
Ramp H
G.R.
R/W 196'
F-581
F-2562
Extra Depth of Subbase 1½"
E.P.
E.P.
R/W
844.73
Area Reloc. U.S. 36, Sta. 324+45 Bk.
Area Reloc. U.S. 36 Sta. 324+45 Ahd.
840
Sta. 324+45 Ahd.
Sta. 324+45 Bk.

G-863.74
325+00
846.7

Sta. 324+20, 54' Rt.
Std. 6 C.B.
Grate El. 864.42
I.E. 12" 860.08
I.E. 6" 860.58

Sta. 324+20, ℄
Std. 2-2A C.B.
Grate El. 863.15
Window El. 862.65
I.E. 12" 860.40

54'-12" @ 0.60%
26'-12" @ 0.60%
℄ E 25° Bend 859.92
25'-12" @ 50.00%
℄ E 25° Bend 848.62
860
15'
Type 8
9'-12" @ 1.00%
R/W 143'
Ramp H
Sta. 9+04, 41' Rt.
Std. HW-E
I.E. 12" 848.53

4.8:1
E.P.
E.P.
E. Drive
18" @ Sta. 324+50 @ 90°
G-865.42
324+00
846.1
840

Ramp F
Area Reloc. U.S. 36
G.R.
3:1
Type 8
Ramp H
G.R.
R/W 156'
E.P.
E.P.
GAR.
G-867.10
323+00
845.8
840

Sta. 322+50
Sta. 322+14

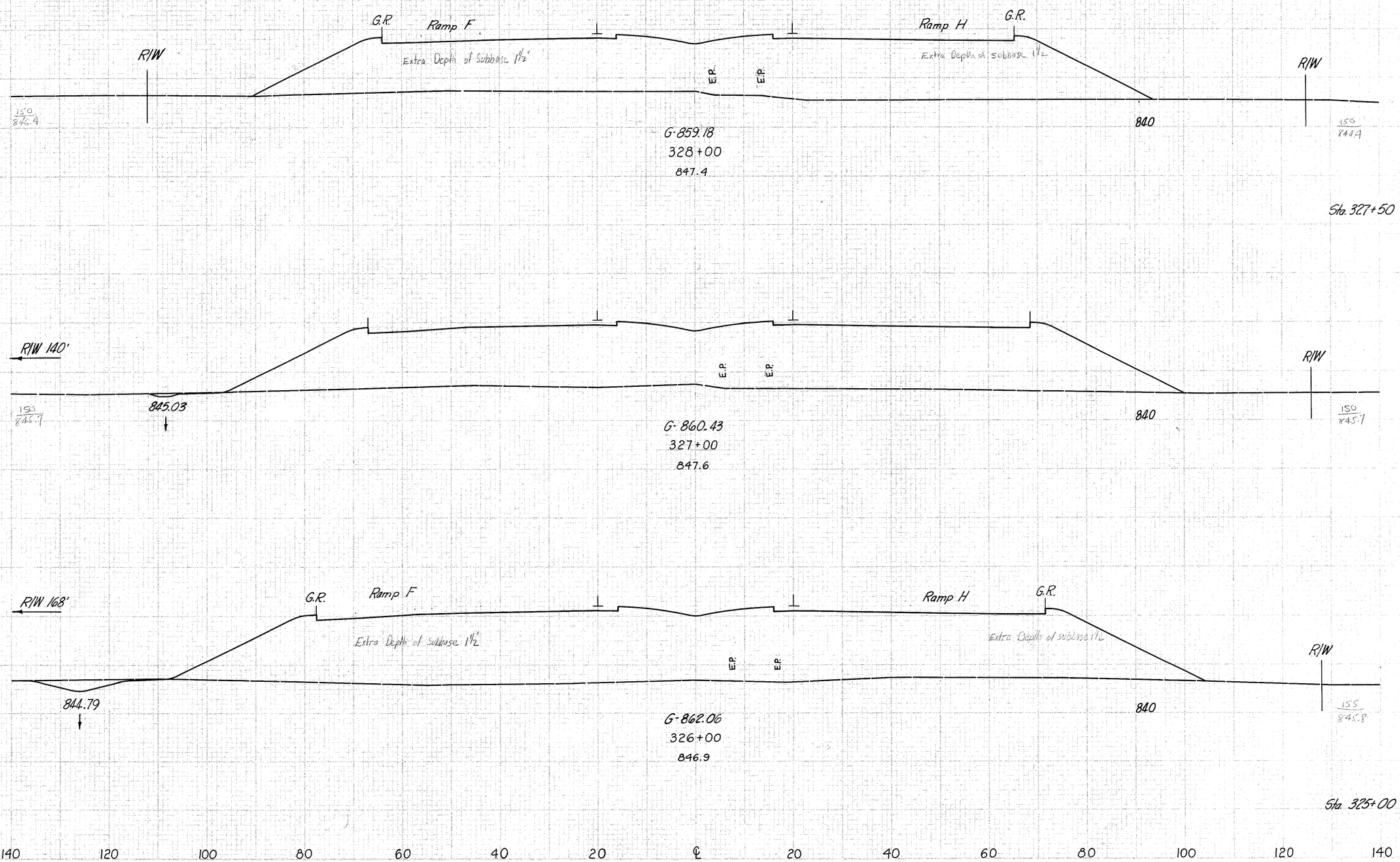
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140
Sta. 323+00 to 325+00

SEEDING	
END WIDTH	SQ. YDS.
114	
	1394
137	
	1600
151	
	1767
167	

FED. AID PROJECT	STATE	PROJECT		172
2	OHIO			662

TUSCARAWAS COUNTY
TUS-36-15.93

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

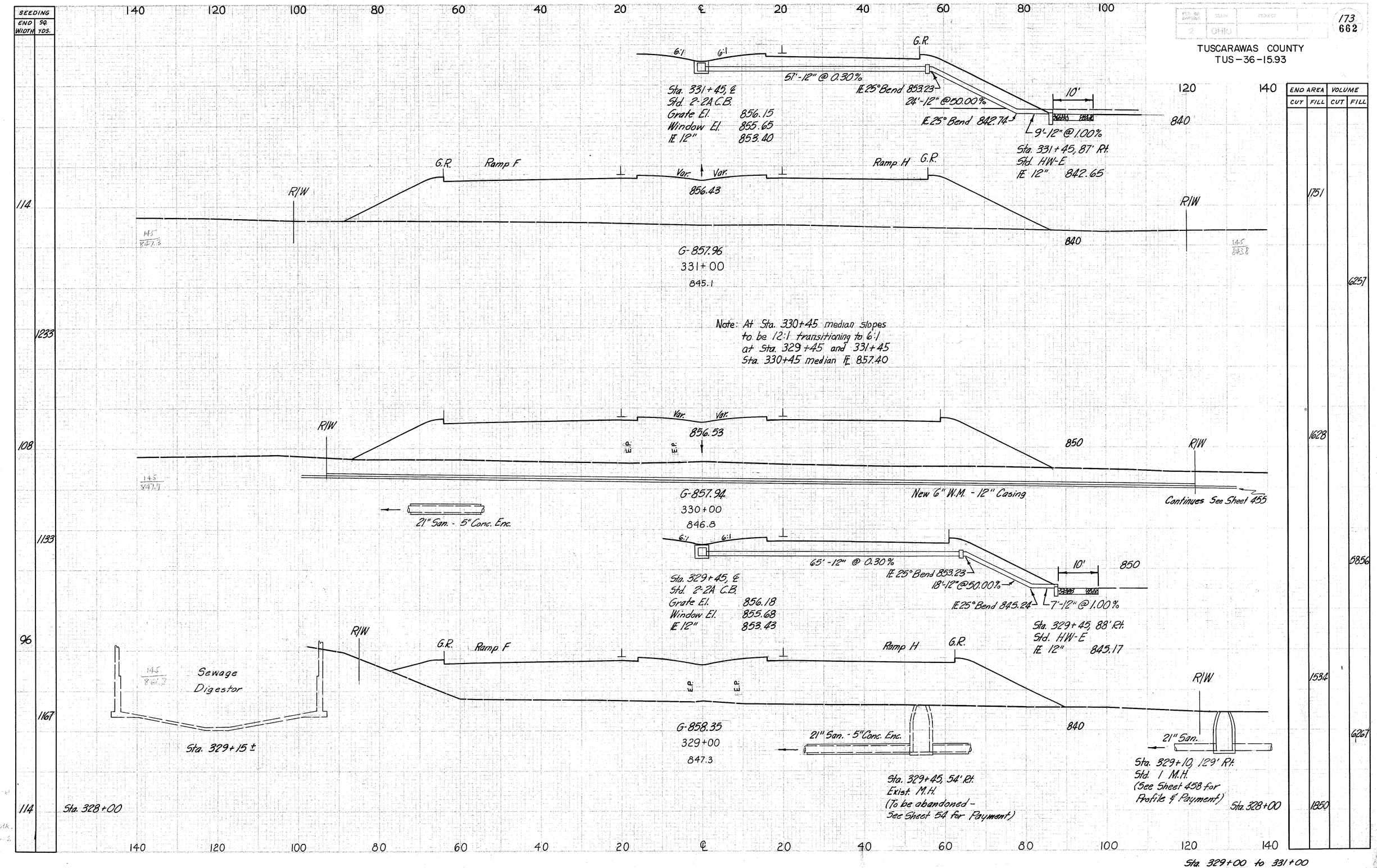


Sta. 325+00 Sta. 325+00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	1850		
Sta. 327+50 0			7367
		3	
3	2128		
		57	8728
28	2585		
		85	10607
18	3143		

Sta. 326+00 to 328+00

TUSCARAWAS COUNTY
TUS-36-15.93



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	1751		
			6257
	1628		
			5856
	1534		
			6267
	1850		

Sta. 329+00 to 331+00

SEEDING	
END WIDTH	SQ. YDS.
108	240
108	1272
121	1306
114	1222
106	1222
114	

Sta. 335+20 use area at 335+00

DIST.	STATE	ROUTE		174
2	OHIO			662

TUSCARAWAS COUNTY
TUS-36-15.93

Sta. 335+20

R/W

E-4 Borrow using granular material

G.R. G.R. G.R.

E. Creek

5:1

G-862.24
335+00
843.9

Granular Layer
357

Area Reloc. U.S. 36 Channel Change 'B'
Sta. 335+20

120 140

830

R/W

152
855.3

Computation of Granular Layer
See Sheet 175

B.R.

859.5 859.8

R/W

1½:1

351

G-860.57
334+00
843.7

21" San. - 5" Conc. Enc.

830

R/W

148
825.5

Ramp F

R/W

E-4 Borrow using granular material

Granular Layer
268

840

R/W

170
844.4

G-859.28
333+00
842.9

21" San. - 5" Conc. Enc.

Sta. 333+00
Begin Granular Layer

Area Reloc. U.S. 36 Channel Change 'B'

G.R. Ramp F Ramp H G.R.

R/W

840

R/W

150
844.3

G-858.41
332+00
844.5

21" San. 21" San. - 5" Conc. Enc.

Sta. 331+75, 117' Lt.
Std. 2 M.H.

Sta. 331+00

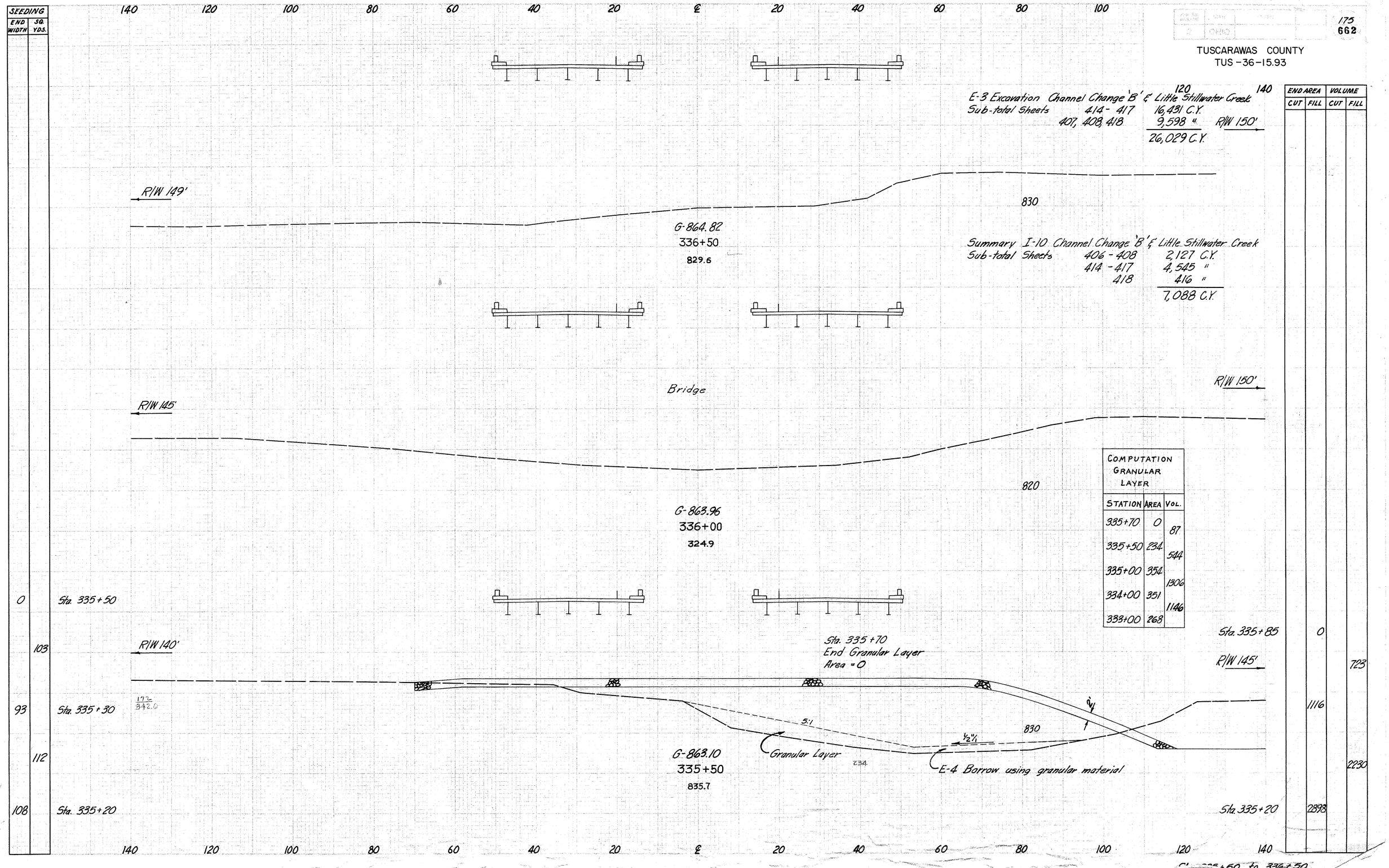
Sta. 331+00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	2898		
			2147
	2898		
			9250
	2097		
			7352
	1873		
			7037
	1927		
			6811
	1751		

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

Sta. 332+00 to 335+00

TUSCARAWAS COUNTY
TUS-36-15.93



COMPUTATION GRANULAR LAYER

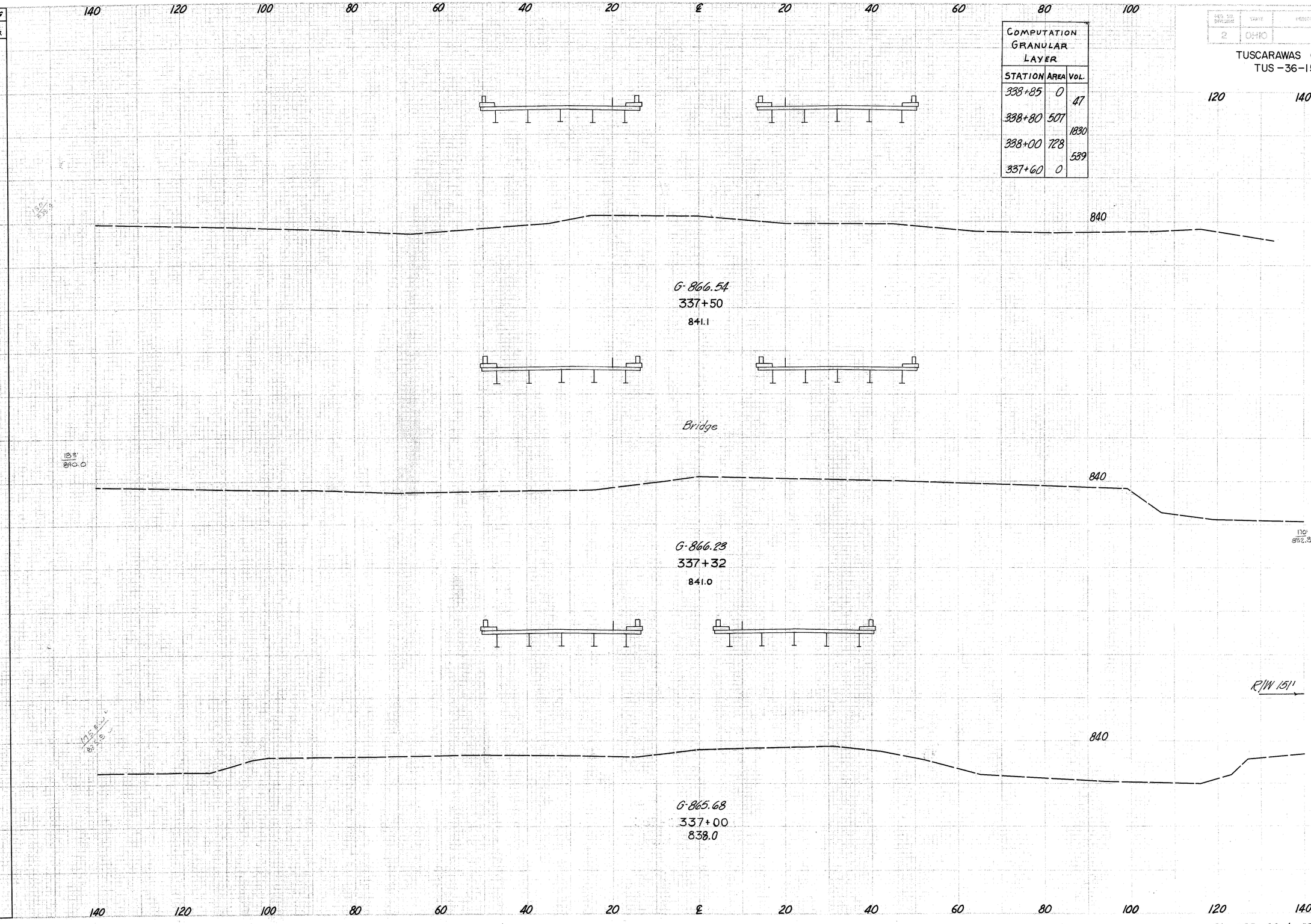
STATION	AREA	VOL.
335+70	0	
		87
335+50	234	
		544
335+00	354	
		1306
334+00	351	
		1146
333+00	268	

Sta. 335+50 to 336+50

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING	
END WIDTH	SQ. YDS.



COMPUTATION GRANULAR LAYER		
STATION	AREA	VOL.
338+85	0	
		47
338+80	507	
		1830
338+00	728	
		539
337+60	0	

END AREA		VOLUME	
CUT	FILL	CUT	FILL

Sta. 337+00 to 337+50

SEEDING	
END WIDTH	SQ. YDS.
180	
	422
200	
	1596
	159
	266
80	
	93
0	

MILEAGE EXCEPTION	STATE	PROJECT	
2	OHIO		

177
662

TUSCARAWAS COUNTY
TUS-36-15.93

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

Sta. 339+00
Breach Barrier to Drain

G.R. 868.4 B.R. G.R.

3:1

C-10

857.5

R/W 155'

850

G-869.12
339+00
852.4

C-16

839.0

Sta. 338+85
End Granular Layer
Area = 0

867.2

2:6:1

1½

C-40

855.0

R/W 155'

860

4.5:1

Granular Layer
50'

Sta. 338+60, ℄
Spring Drain
Top El. 840.8
IE 6" 837.8

Sta. 338+40, 120' Rt.
IE 8" 837.20

E-4 Borrow using granular material

107'-6" @ 0.50%

C-14

L10'-8"
Sec. M-6.4.(c)

838.2

G-868.78
338+80
843.0

G.R. G.R.

860

2:1

54'-12" @ 0.50%

IE 863.04

G-868.00
338+35

Sta. 338+35, ℄
Std. 2-2A C.B.
Grate El. 866.07
Window El. 865.57
IE 12" 863.32

Computation of Granular Layer
See Sheet 176

Sta. 338+35, 95' Lt. 848.4
Std. HW-E
IE 12" 848.45

IE 848.56

11'-12" @ 1.00%

Bridge

850

C-46

844.0

3:1

E-4 Borrow using granular material

Granular Layer
128'

837.0

C-1

Sta. 337+86

G-867.40
338+00
840.3

Sta. 337+60
Begin Granular Layer
Area = 0

Sta. 337+80

Sta. 337+59

Sta. 337+60

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

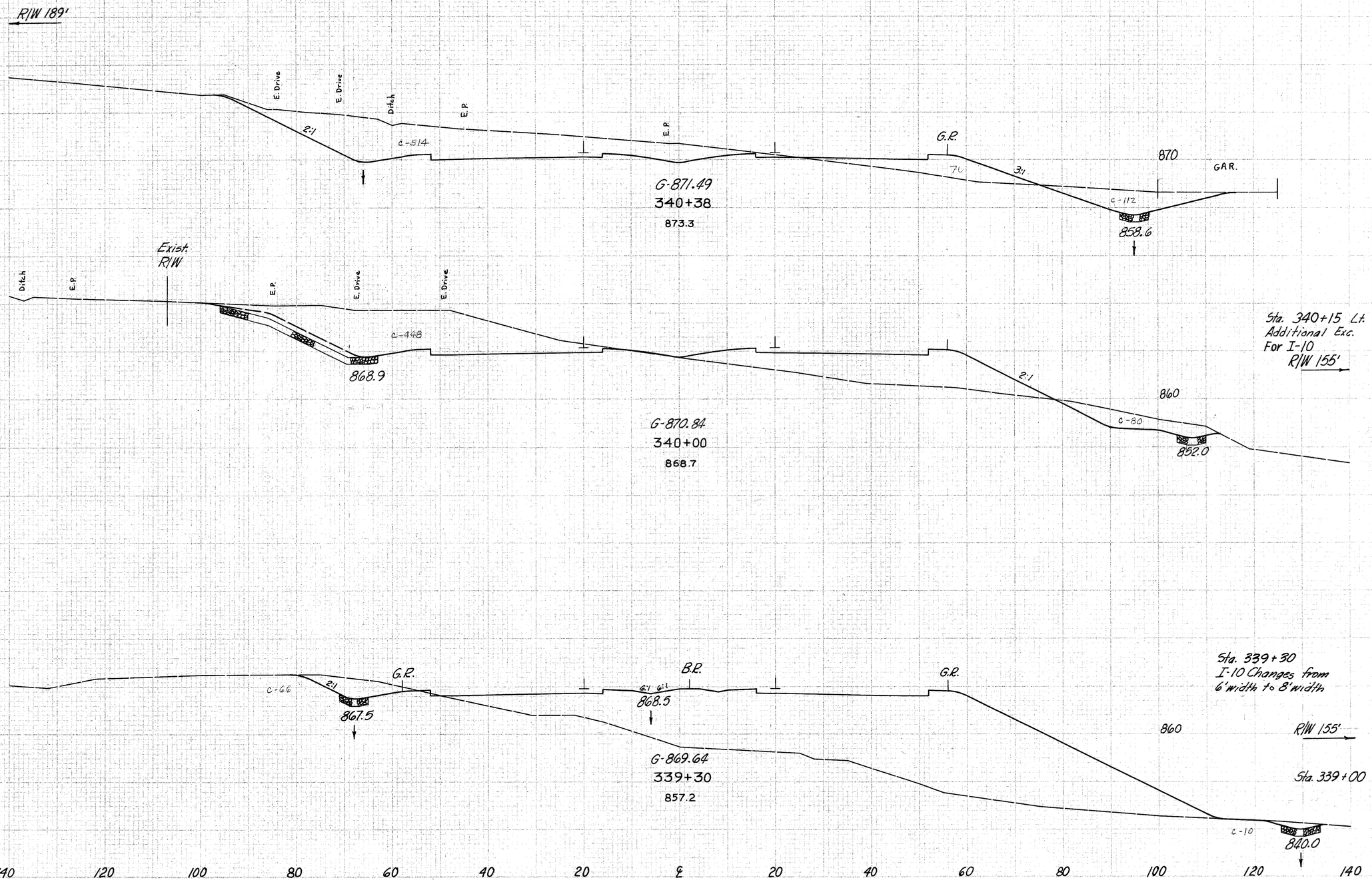
Sta. 338+00 to 339+00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
26	2926		
		30	2225
64	3081		
54	3081		
		150	9138
47	3087		
		12	
0			2287
0			
0			

FED. ROAD DIVISION	STATE	PROJECT		178
2	OHIO			662

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING	
END WIDTH	SQ. YDS.
161	
	682
162	
	1241
157	
	562
180	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
626	109		
		812	331
528	361		
		4	
		783	2760
76	1768		
		57	2608
26	2926		

FED. ROAD DIVISION	STATE	PROJECT	
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TUSCARAWAS COUNTY
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SEEDING	
END WIDTH	SQ. YDS.
157	
	836
144	
	626
145	
	391
161	

R/W 270'

Ramp R

1½:1

2:1

G-873.42
341+50
889.9

860

120 140

341+25
870
868.4

R/W 214'

E. Drive

E. Drive

GAR.

G-872.56
341+00
885.2

80'-12" @ 3.10%

E.P.

E.P.

4:1

865.3 860
Sta. 341+00, 80' Rt.
Std. HW-E
IE 12" 865.40

Sta. 341+00, ℄
Std. 2-2A C.B.
Grate El. 870.63
Window El. 870.13
IE 12" 867.88

R/W 204'

E. Drive

E. Drive

1½:1

1:1 2:1

C-831

E.P.

E.P.

4:1

HSE.

C-63

863.0 860

G-871.89
340+61
872.7

Sta. 340+38

Sta. 340+75

Sta. 340+38

END AREA		VOLUME	
CUT	FILL	CUT	FILL
296			
		451	6
191	2		
		202	7
0			
			6
89	4		
		64	57
62	6		

Sta. 340+61 to 341+50

SEEDING	
END WIDTH	SQ. YDS.
220	
	1164
199	
	622
174	
	368
157	

FED. AID DIVISION	STATE	PROJECT	
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TUSCARAWAS COUNTY
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140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

A A

1½:1 1:1 ¼:1 1:1 ½"/1 2:1 F-4

R/W 305'

Begin Rock Template Lt.
Sta. 342+50

G-875.14
342+50
907.2

Ramp R

Ramp P

F-4

R/W 344'

1040

180 160 A 180 A

R/W 175'

870

1-400
2-150

Begin Rock Template Rt.
Sta. 342+50

Sta. 342+00
Begin 10' Bench at ditch grade, 66' Lt. to provide access.

1½:1 1:1 2:1

R/W 285'

G-874.28
342+00
897.0

1½:1 2:1 1:1

870

R/W 167'

R/W 161'

HSE.

Ramp R

1½:1 2:1

870

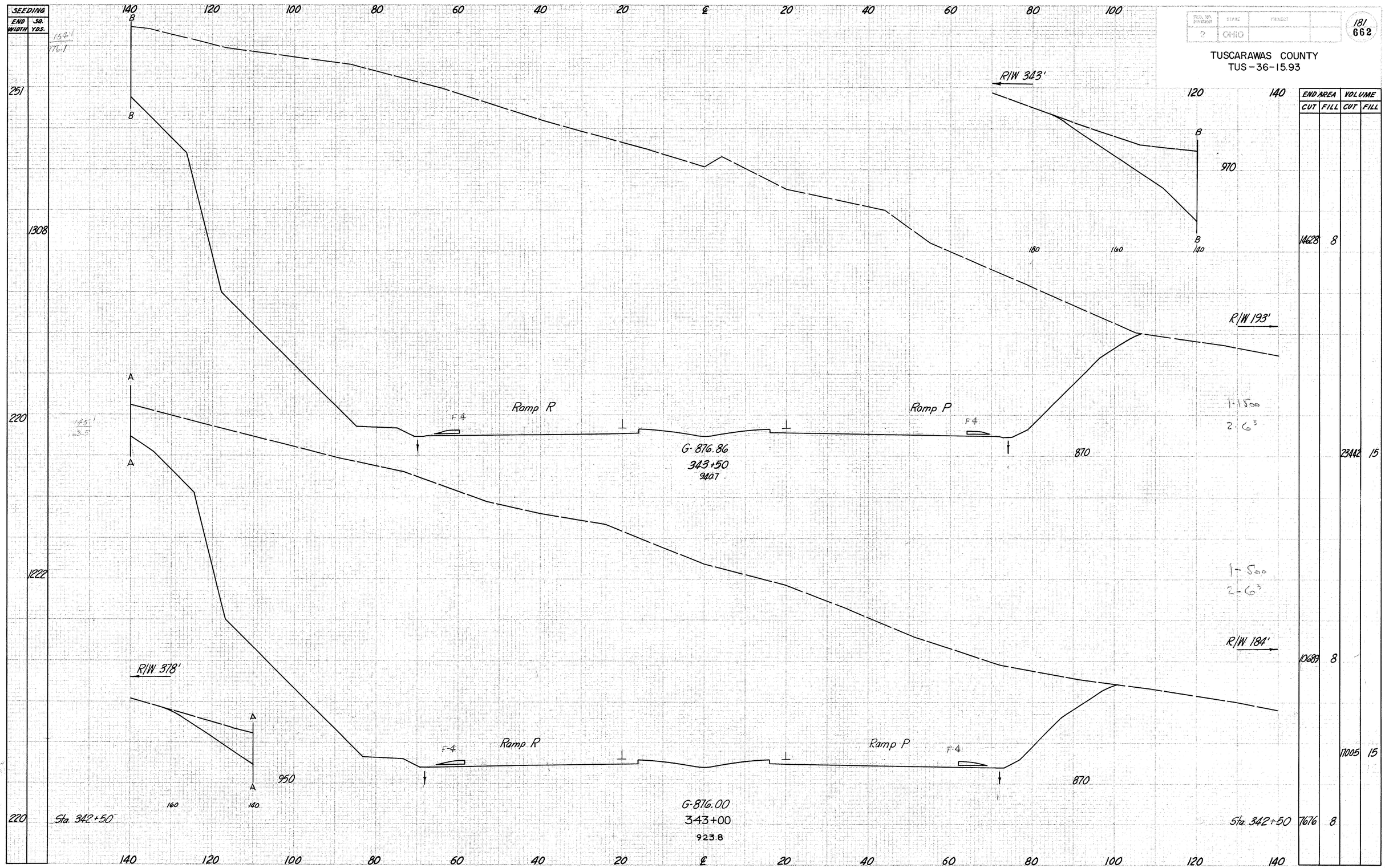
G-873.16
341+70
891.8

Sta. 341+50

Sta. 341+50

END AREA		VOLUME	
CUT	FILL	CUT	FILL
7676	8		
		11536	—
4631	—		
			4512
3490			
			2391
2965			

Sta. 341+70 to 342+50



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-15.93

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
14628	8		
		23442	15
10689	8		
		17005	15
7676	8		

Sta. 343+00 to 343+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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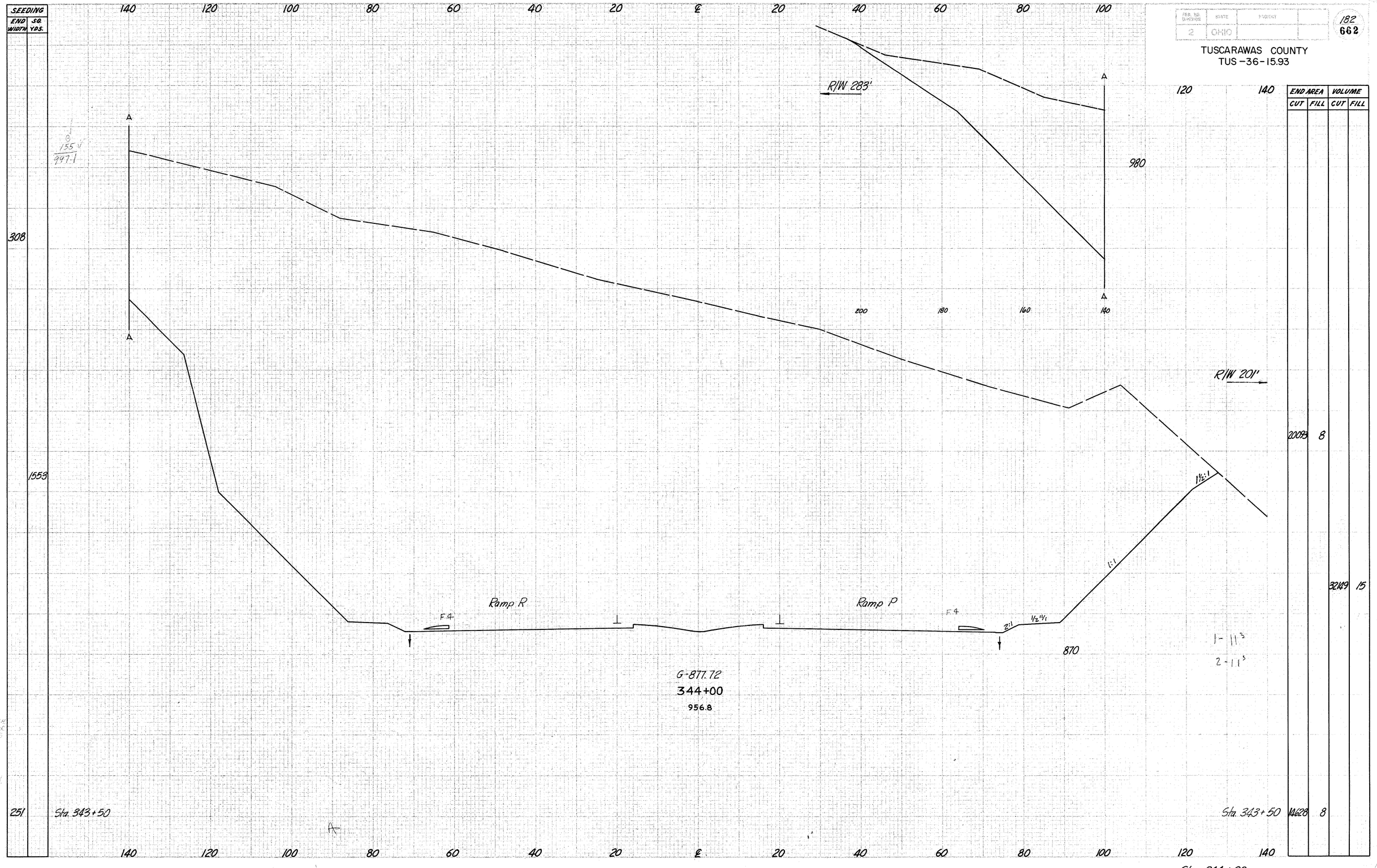
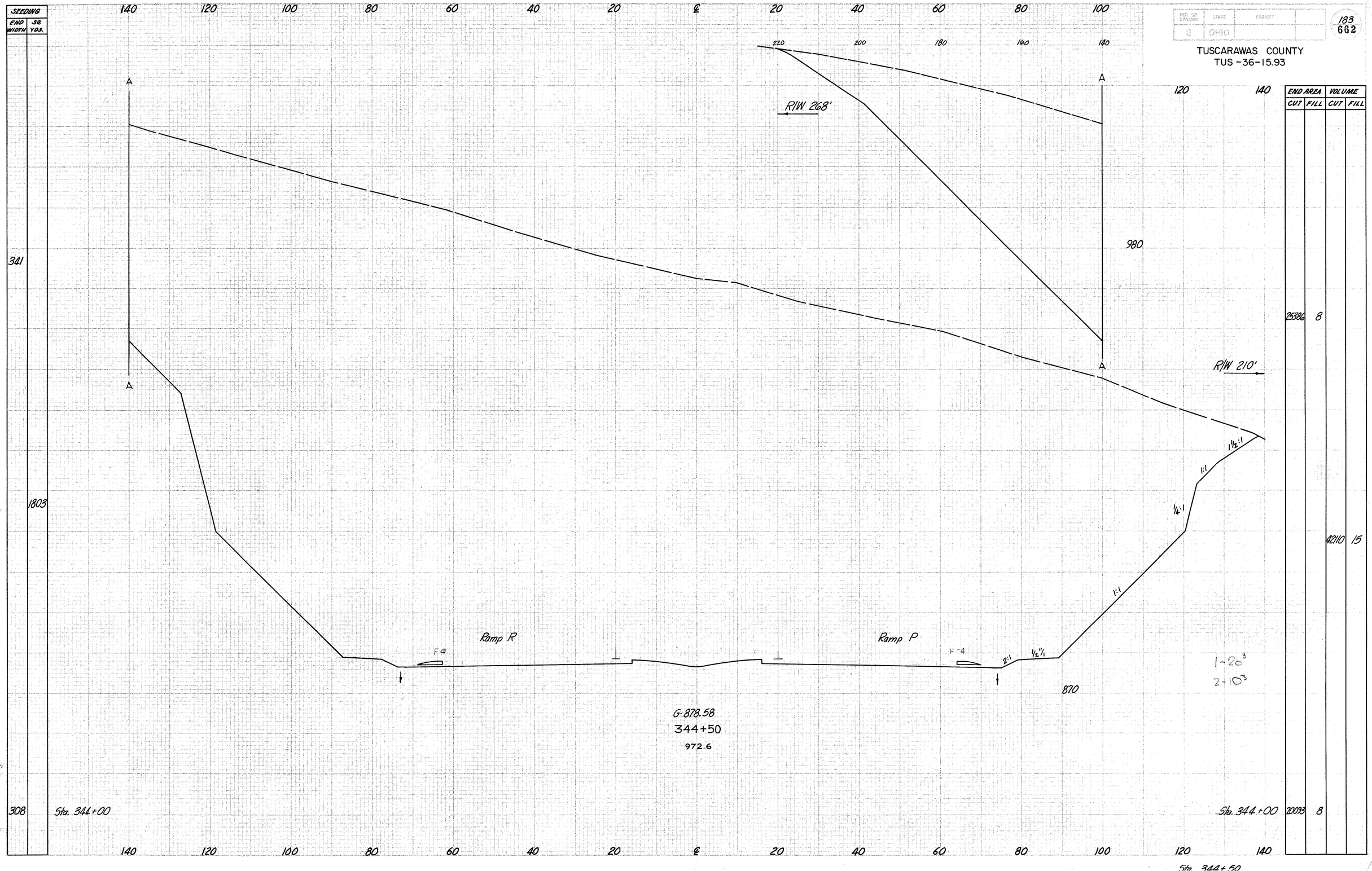
TUSCARAWAS COUNTY
TUS-36-15.93





FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-15.93

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
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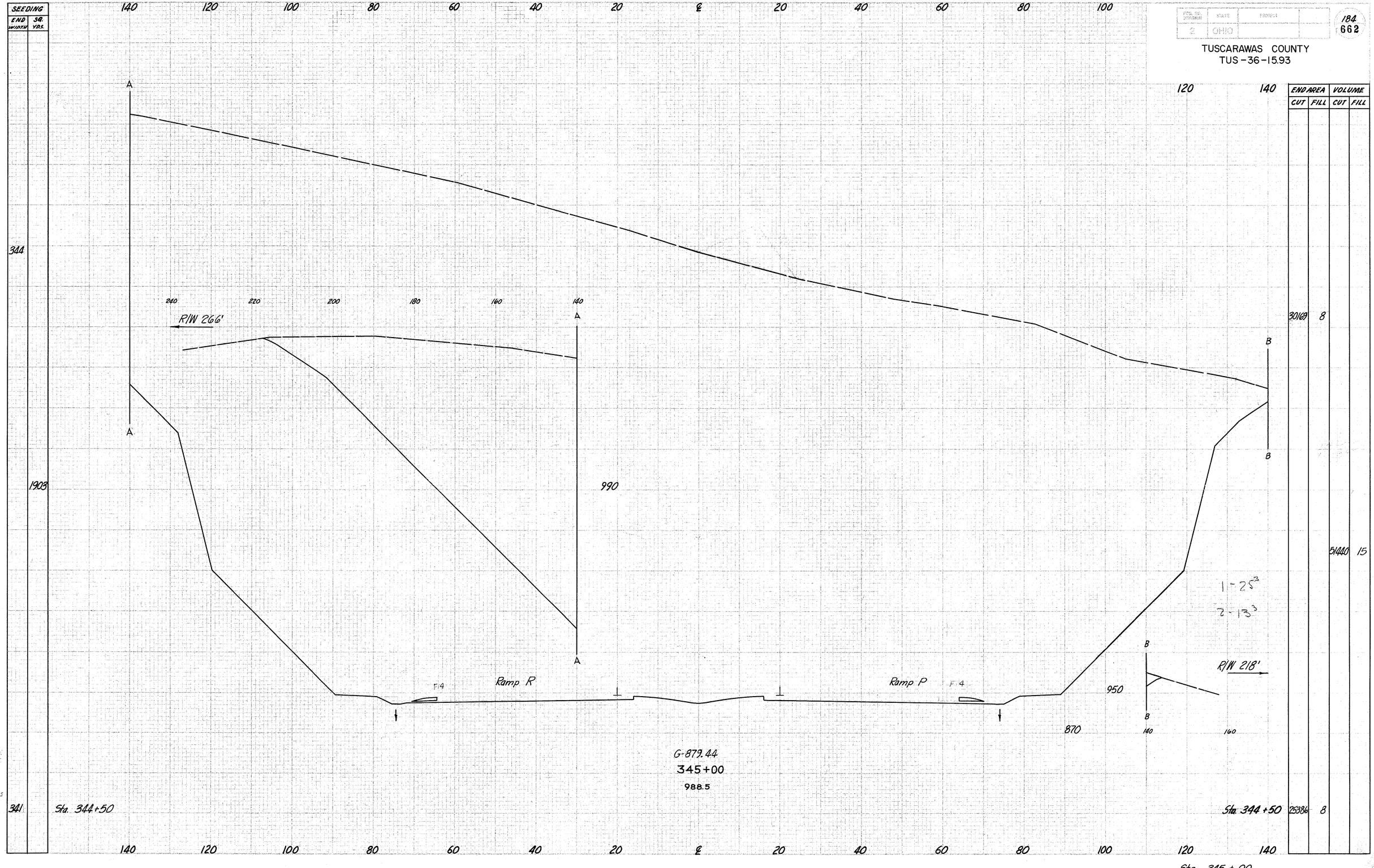

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS -36-15.93

SEEDING	
END WIDTH	SQ. YDS.
339	1897
344	

154'
1016.2

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

A

A

220 200 180 160 140

R/W 264'

980

A

A

B

B

960

140 160 180

R/W 226'

B

B

Ramp R

F4

Ramp P

F-4

G-880.30
345+50
997.7

870

1-28³
2-14³

Sta. 345+00

Sta. 345+00

Sta. 345+50

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

END AREA		VOLUME	
CUT	FILL	CUT	FILL
31155	8		
		56781	15
30169	8		

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

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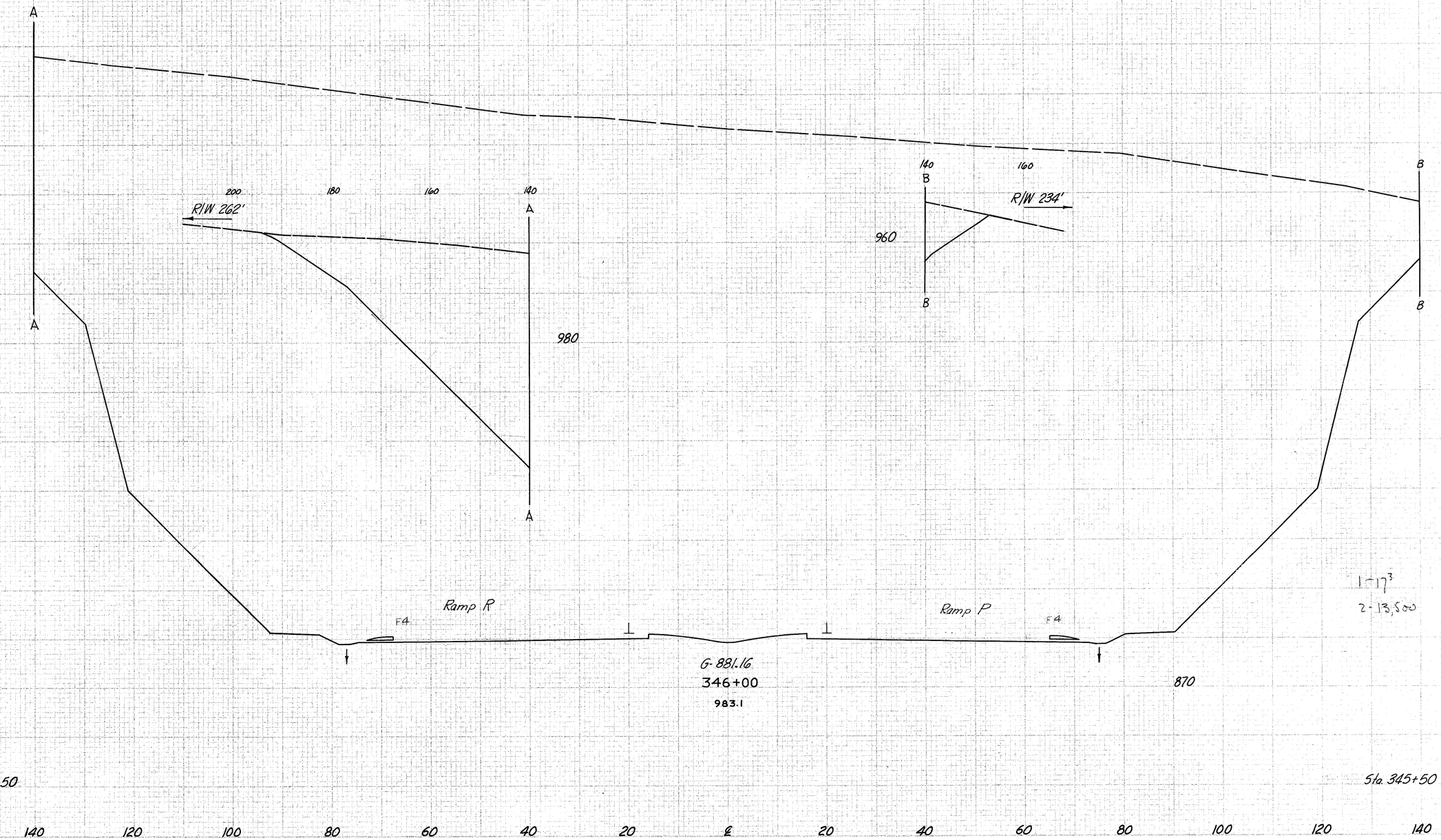
TUSCARAWAS COUNTY
TUS-36-15.93

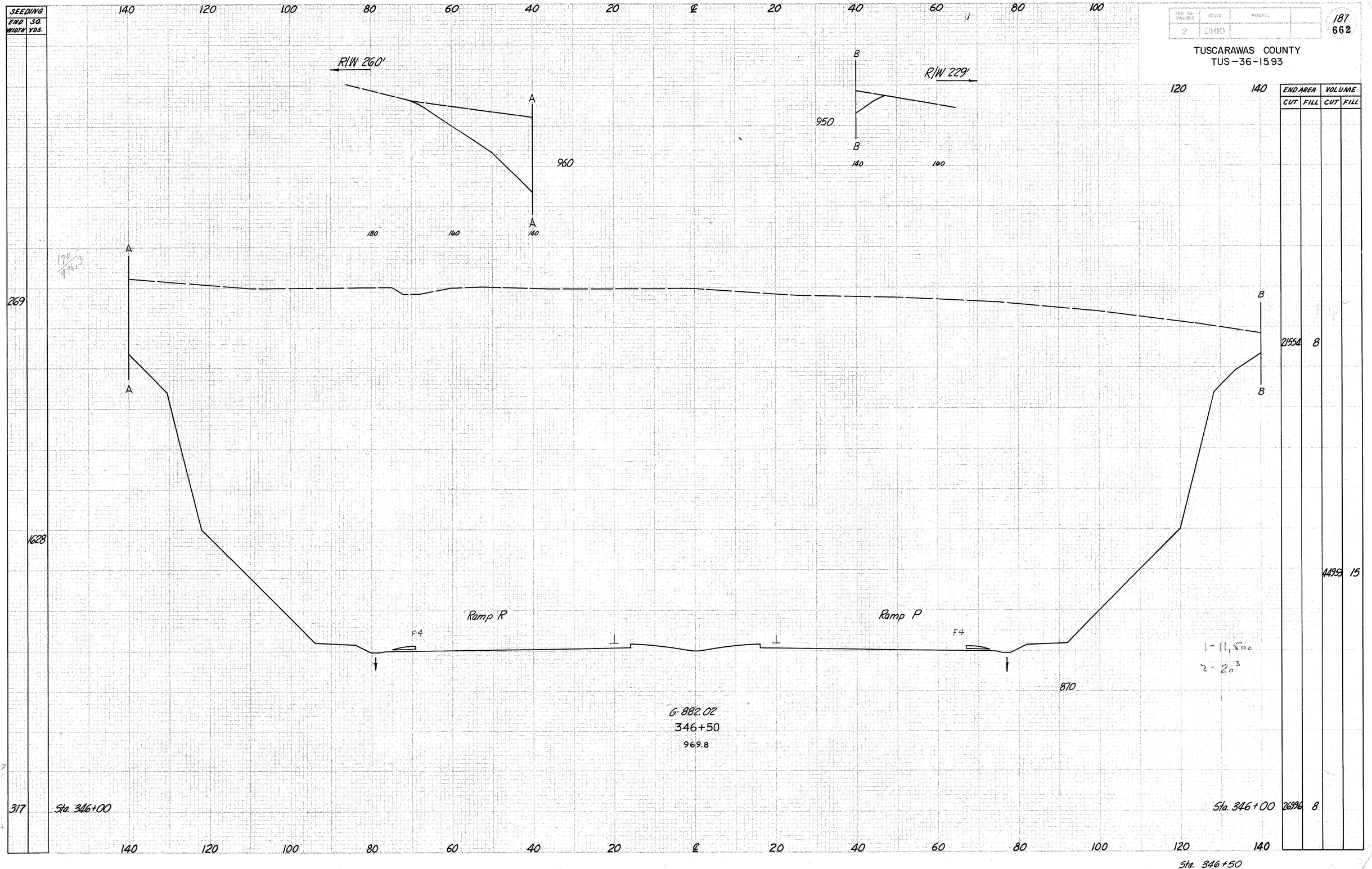
SEEDING	
END WIDTH	SQ. Y.D.S.
317	
1822	
339	

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



END AREA		VOLUME	
CUT	FILL	CUT	FILL
26996	8		
		53843	15
31155	8		

1-17³
2-13,500



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-15.93

STATE	PROJECT
OHIO	

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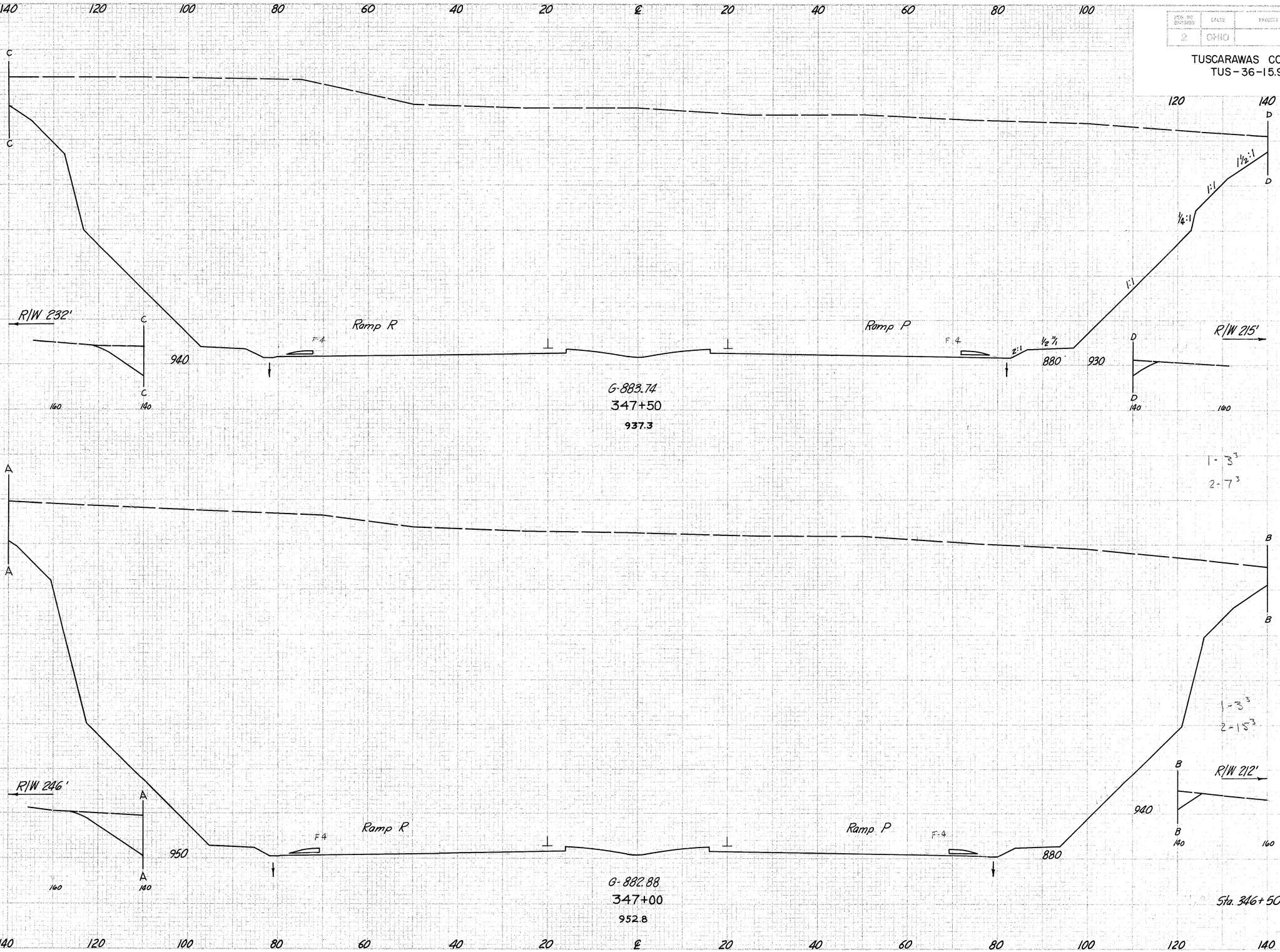
TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING END WIDTH	SEEDING SQ. YDS.
233	
	1308
238	
	1408
269	



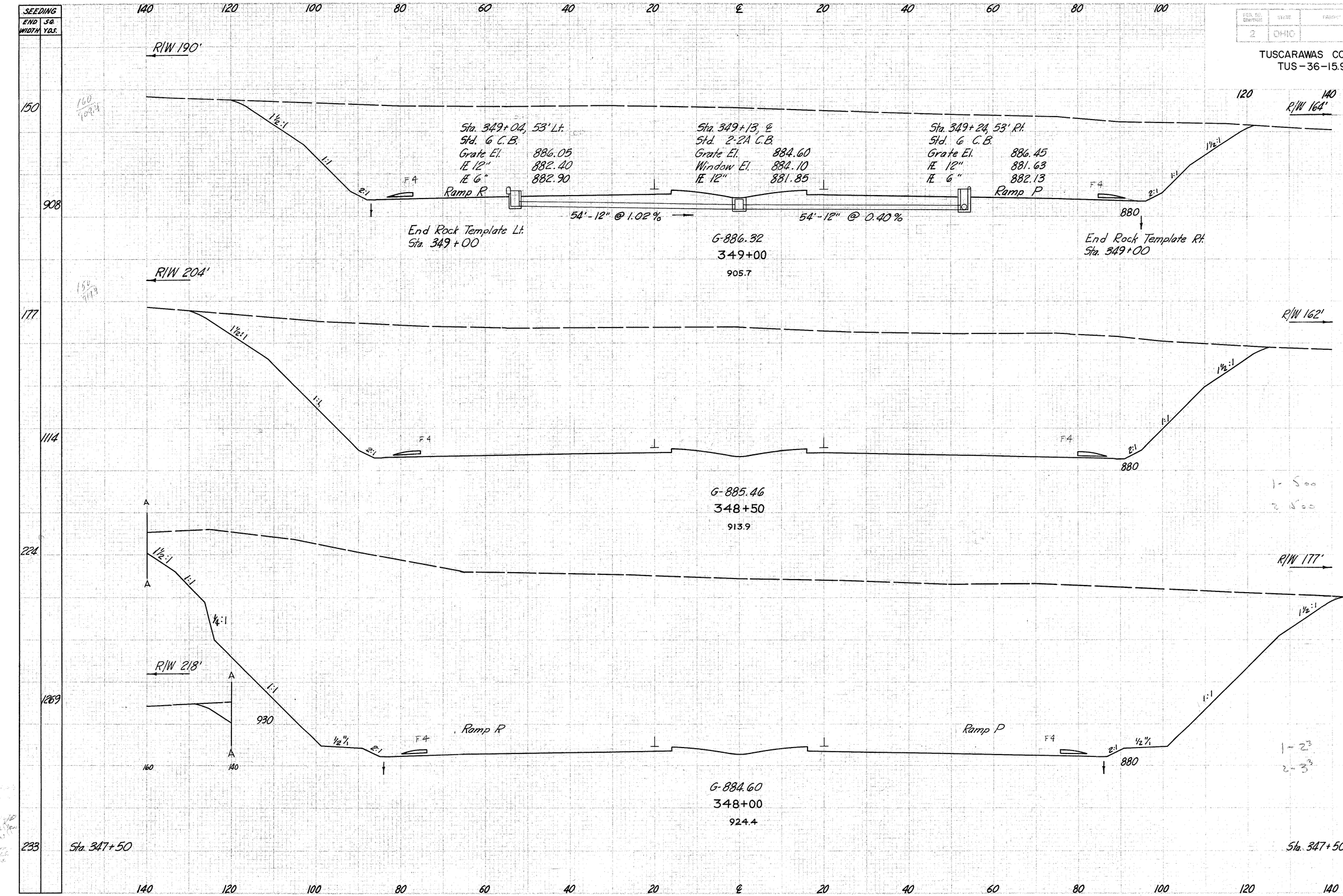
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
13392	8		
		28564	15
17461	8		
		36125	15
21554	8		

1-3³
2-7³

1-3³
2-15³

Sta. 347+00 to 347+50

TUSCARAWAS COUNTY
TUS-36-15.93



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
4337	8		
		9863	15
6315	8		
		15324	15
10235	8		
		21877	15
13392	8		

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		190 662

TUSCARAWAS COUNTY
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SEEDING END WIDTH	SEEDING SQ. YDS.
187	897
136	781
145	775
134	789
150	

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

Sta. 351+08.33
Begin Super Transition
End Normal Section

R/W 200'

Ramp R

Type 7

4:1

C-10

881.0

G-889.76
351+00
881.9

Ramp P
Sta. 5+80, 28' Lt.
Std. 2-2A C.B.
Grate El. 885.10
Window El. 884.60
IE 12" 880.91
IE 6" 881.41

870

Ramp P

4:1

4:1

4:1

C-6

60'-12" @ 0.55%

880.5

Ramp P
Sta. 6+07, 25' Rt.
Std. HW-E
IE 12" 880.58

R/W 176'

R/W 191'

FG

C-5

885.5

C-2

Type 7

F-2.37

C-12

880

884.3

4:1 C-16

R/W 170'

G-888.90
350+50
886.3

Sta. 350+35

R/W 182'

2:1

Type 8

G-888.04
350+00
891.9

Type 6

880

884.5

2:1

R/W 167'

R/W 175'

1½:1

1:1

2:1

Ramp R

Type 8

G-887.18
349+50
897.7

Type 6

Ramp P

880

884.15

2:1

1½:1

R/W 166'

Sta. 349+00

Sta. 349+00

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
16	1282		
		47	1412
35	243		
			67
	0		
		1066	
1116			
		3414	
2571			
		6396	
4337			

Sta. 349+50 to 351+00

FED. RD. DIVISION 2 | STATE OHIO | PROJECT
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TUSCARAWAS COUNTY
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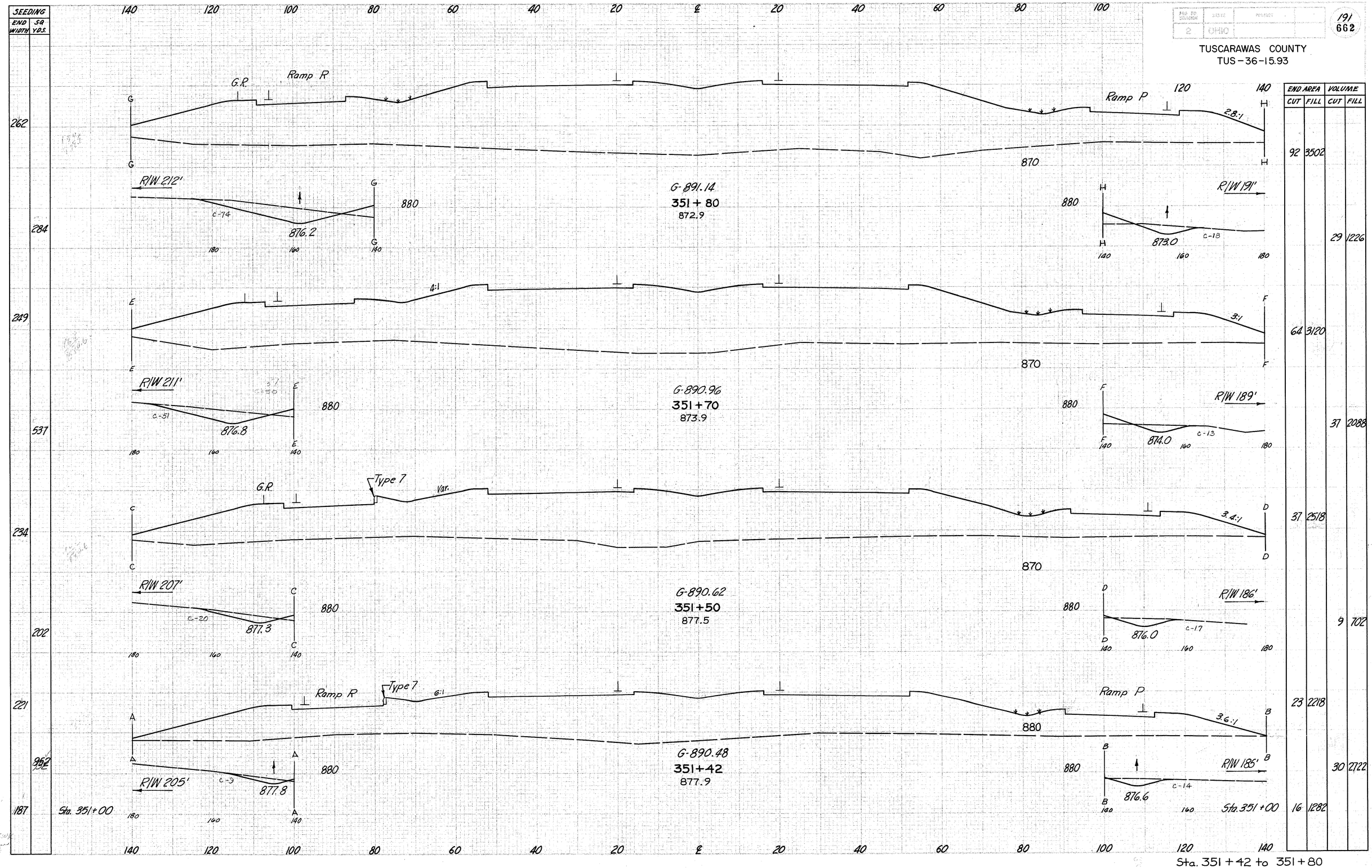

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
92	3502		
		29	1226
64	3120		
		37	2088
37	2518		
		9	702
23	2218		
		30	2722
16	1282		

Sta. 351+42 to 351+80

SEEDING	
END WIDTH	SQ. YDS.

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

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

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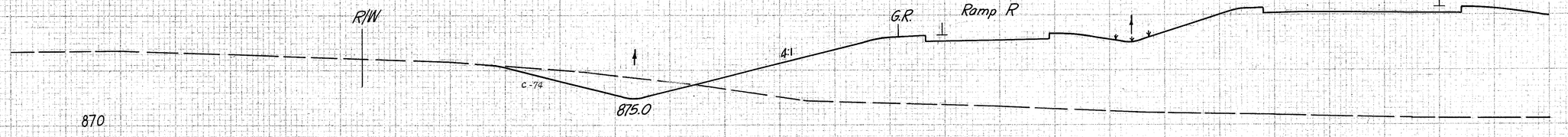
TUSCARAWAS COUNTY
TUS-36-15.93

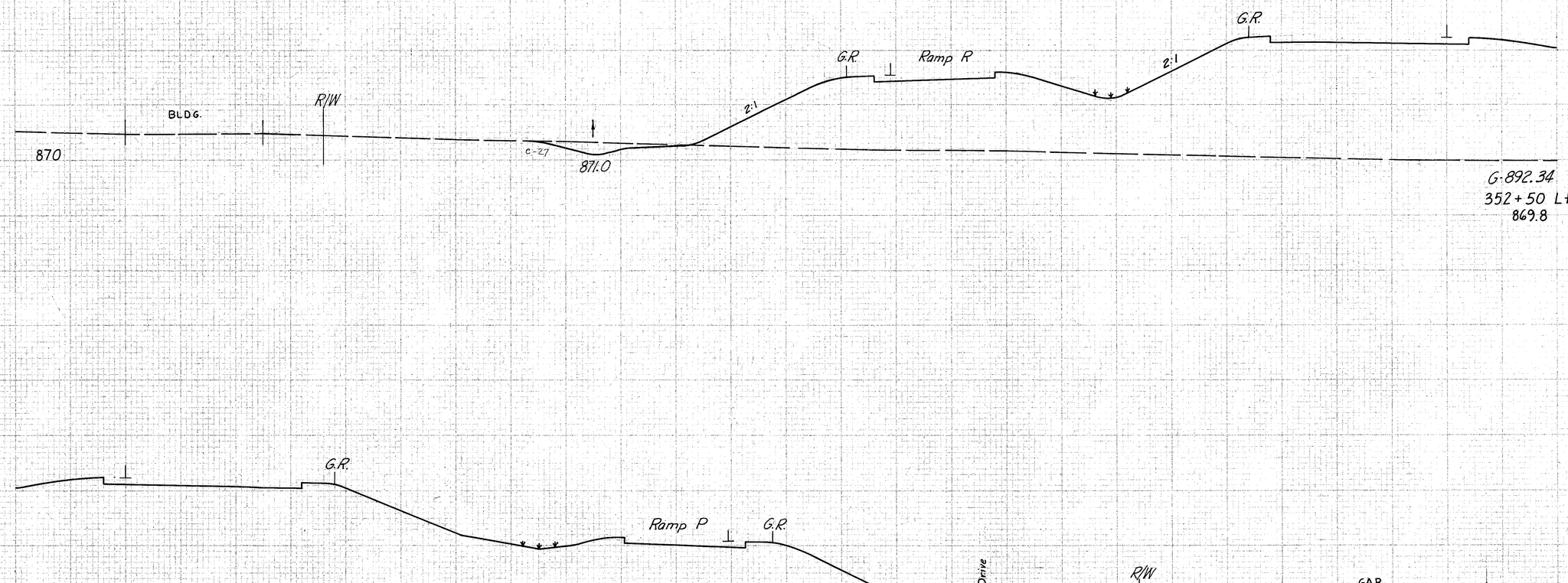


G-891.48
352+00 Lt.
871.1

END AREA		VOLUME	
CUT	FILL	CUT	FILL

SEEDING	
END WIDTH	SQ. YDS.

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



END AREA		VOLUME	
CUT	FILL	CUT	FILL
	39	5007	
			119 8591
	90	4271	

SHEET NO.	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
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1544

273 Sta. 325+00

℄ 20 40 60 80 100 120 140 160 180 200 220 240 260 280 Sta. 352+00

Sta. 352+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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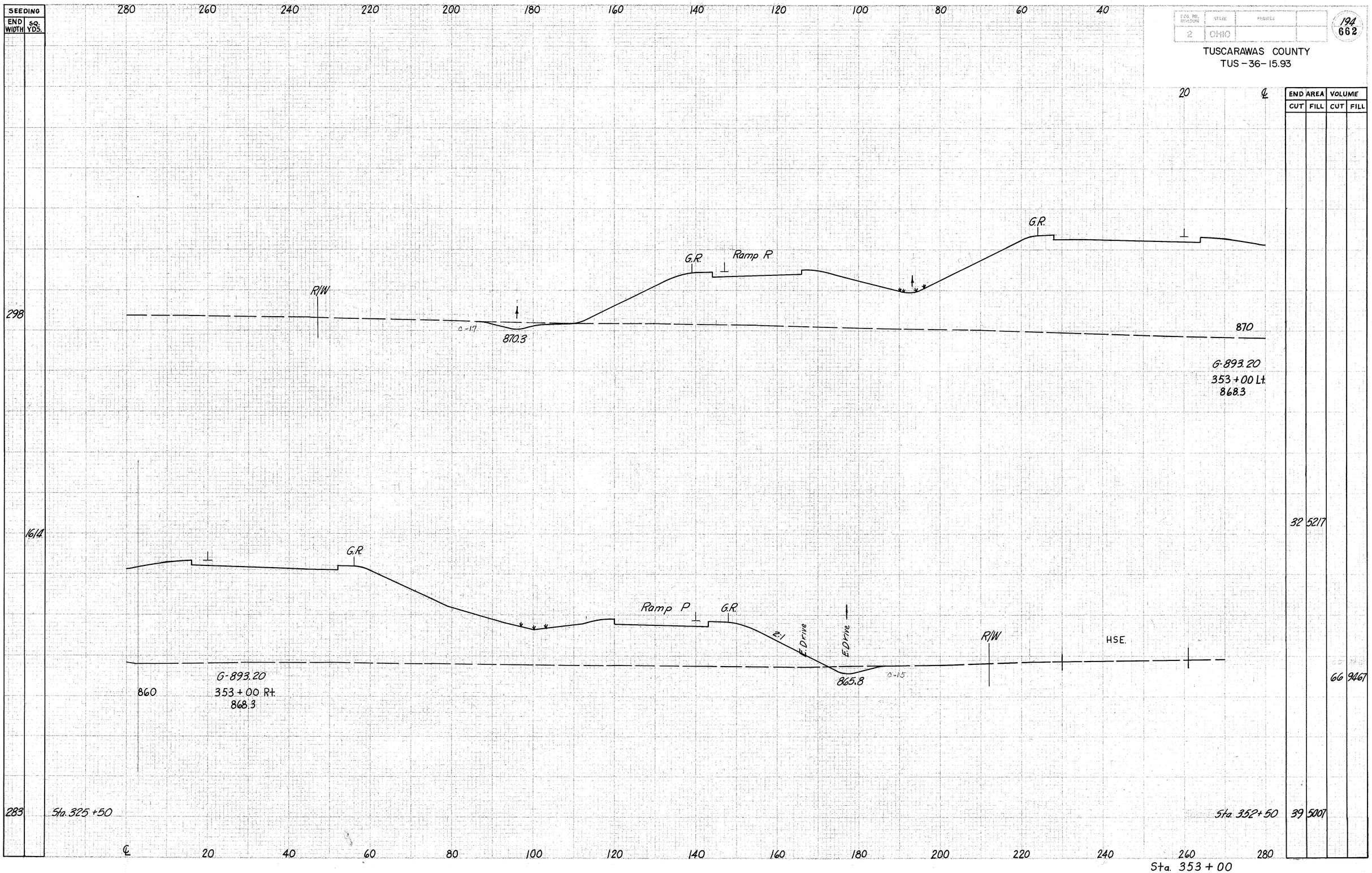

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
32	5217		
		66	9467
39	5007		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
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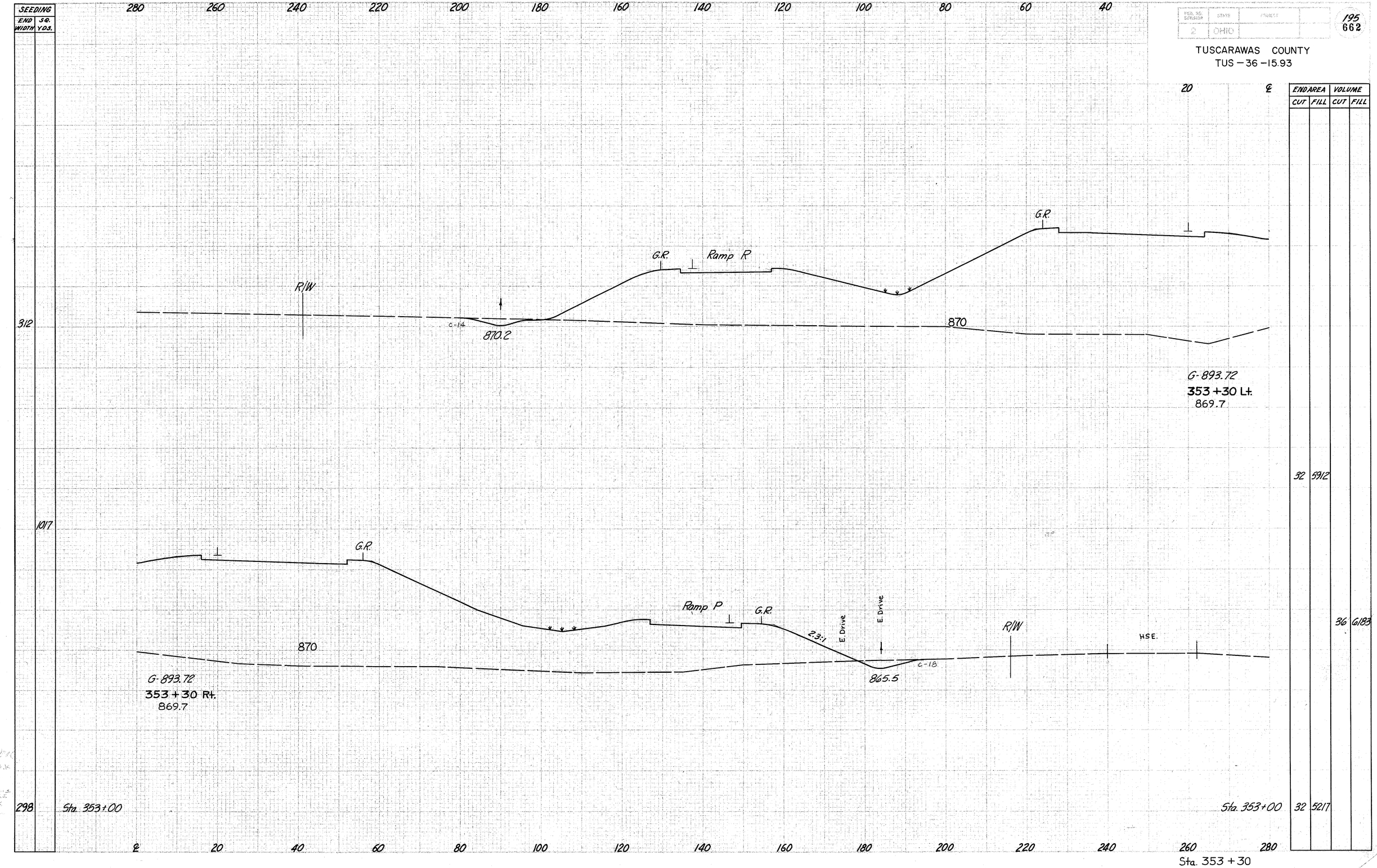
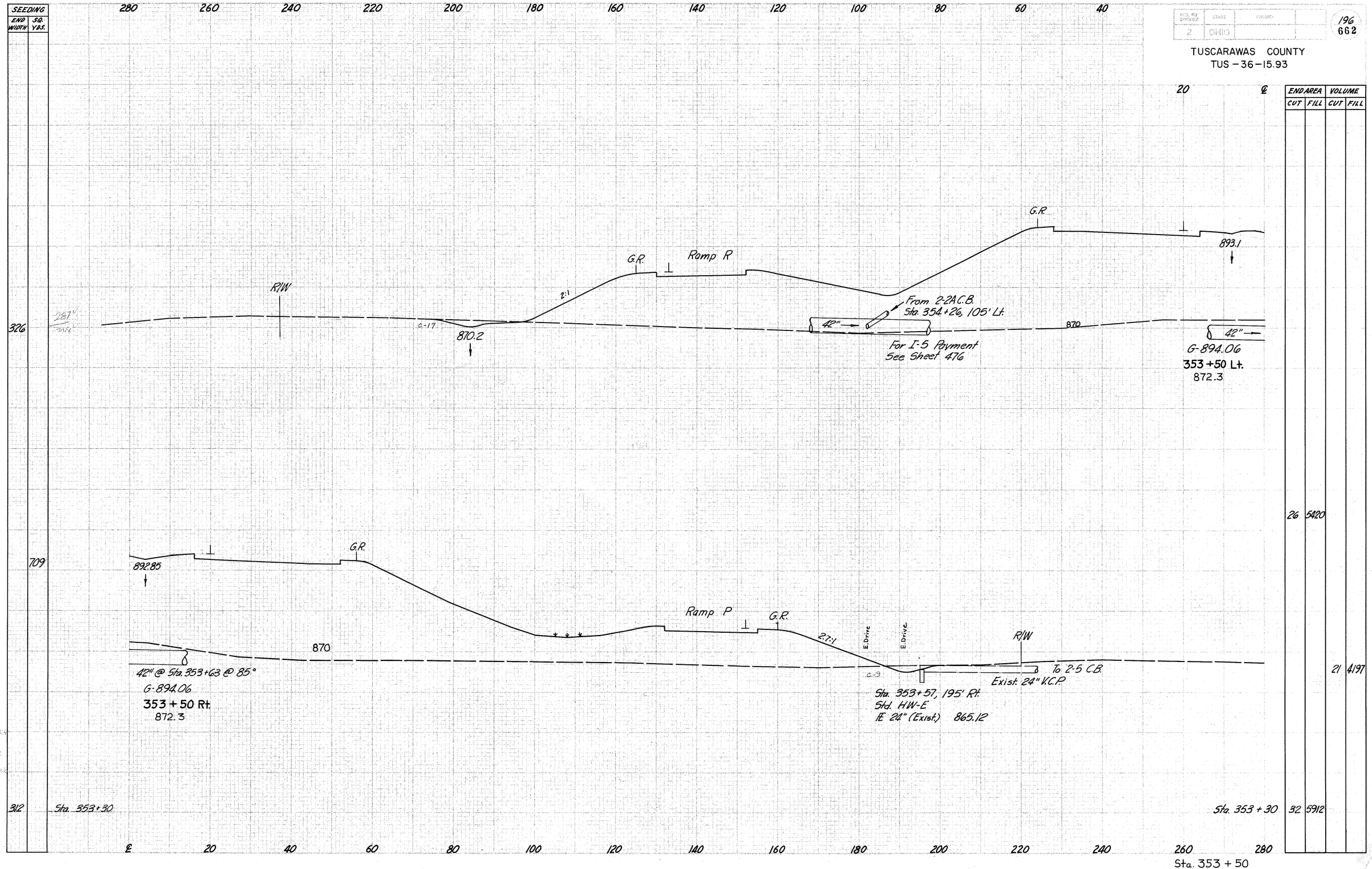


END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
32	5912		
		36	6183
32	5217		

Sta. 353 + 30



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-15.93

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
26	5420		
		21	4197
32	5912		

Sta. 353 + 50

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

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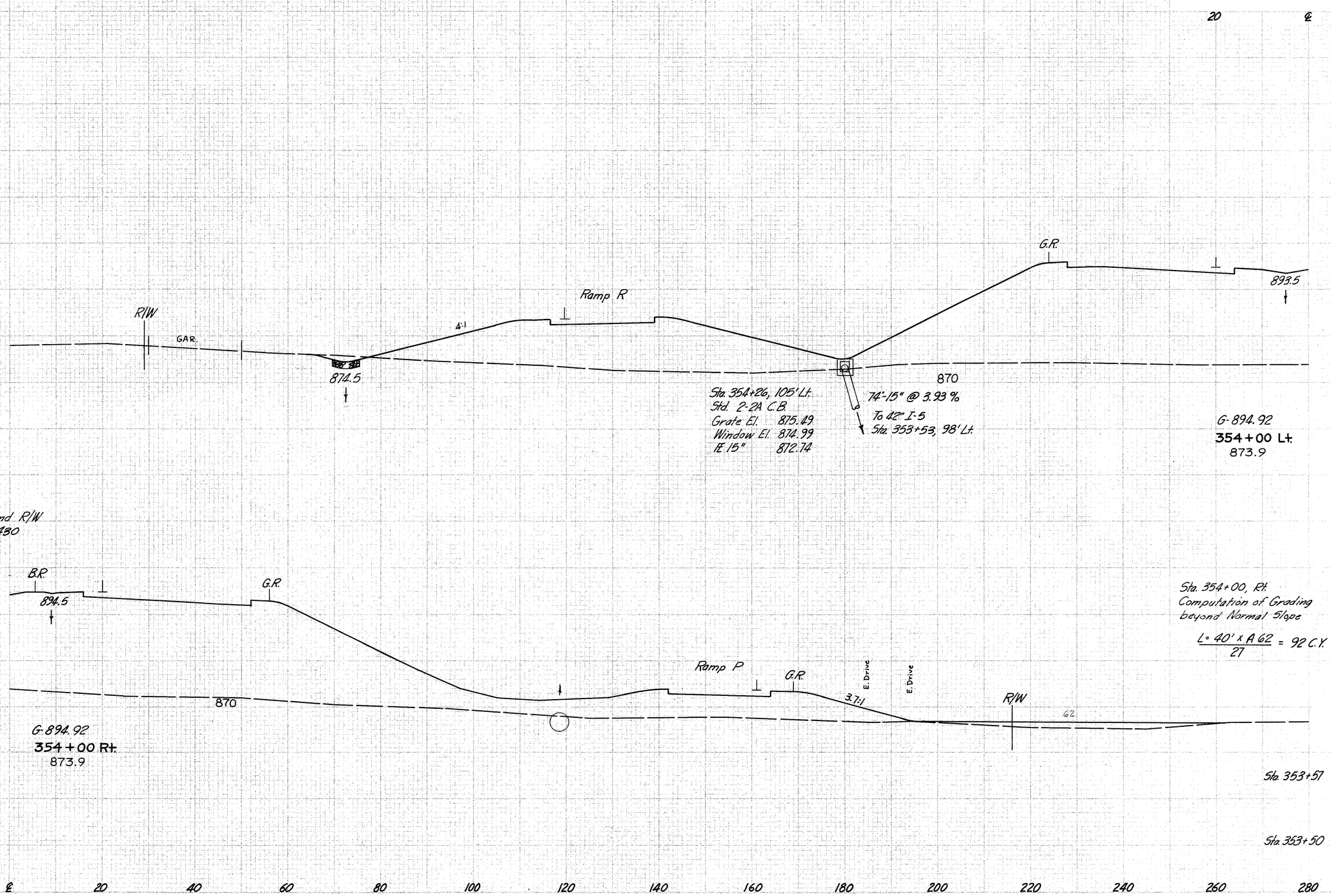
TUSCARAWAS COUNTY
TUS -36-15.93

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
335					
69	Grading beyond R/W See Sheet 430				
1836					
326	Sta. 353+50				
		Sta. 353+57	26	—	
		Sta. 353+50	26	5420	
			8	4565	
				27	92
					9245
				7	



SEEDING	
END WIDTH	SQ. YDS.
332	
1853	
335	

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

REV. NO.	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
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R/W

HSE.

C-55

877.8

Ramp R

F-168

GAR.

E. Sidewalk

E. Sidewalk

C-56

870

G.R.

9:1

F-1386

G-895.78
354+50 Lt.
875.0

354+66
870

Sta. 354+65, 122' Rt.
42"x12" Tee
IE 12" 865.43
IE 42" 864.19

9'-12" @ 2.00%

Sta 354+66, 131' Rt.
Std. 2-2A C.B.
Grate El. 869.00
Window El. 868.50
IE 12" 865.61
IE 6" 866.11

G.R.

G.R.

F-1574

870

C-27

Ramp P

F-62

4:1

E. Drive

E. Drive

Bk. R/W

E.P.

E.P.

G-895.78
354+50 Rt.
875.0

Sta. 354+33.33
Begin Full Super 0.059 ft
End Super Transition

Sta. 354+00

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

Sta. 354+50

END AREA		VOLUME	
CUT	FILL	CUT	FILL
132	3190		
		130	7181
8	4566		

Sta. 354+00

FED. ROAD DIVISION	STATE	PROJECT
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TUSCARAWAS COUNTY
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SEEDING END WIDTH	SEEDING SQ. YDS.
—	
25	
	411
206	Ahd.
—	
273	Bk.
	1681
332	Sta. 354+50

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

Sta. 355+32

Reconst. Second Street — Area Reloc. U.S. 36

Ramp R — Type 6 — C-207

Bridge F-1196 — HSE.

870

Area Reloc. U.S. 36 Bk.

Area Reloc. U.S. 36 Ahd.

G.R. — F-134 — HSE.

C-66 — C-179

Ramp P — F-4 — E.P. E.P. E.P.

Exist. R/W — GAR.

870

G-896.64
355+00 Rt.
877.8

G-896.64
355+00 Lt.
877.8

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

Sta. 355+00

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Sta. 355+32	0	0	
			158
			1508
			—
			—
Ahd.	267	2545	
			—
			—
Bk.	446	2391	
			535
			5168
Sta. 354+50	132	3190	

SEE NO. DIVISION	STATE	PROJECT
2	OHIO	

TUSCARAWAS COUNTY
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SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL



Sta. 355+50 to 356+00

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
311					
				2223	2104
1450					
				3888	2083
211	Ahd.				
—				—	—
85	Bk.				
81				38	24
76	Sta. 356+41				
—					

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

Reloc. T.R 287 — Area Reloc. U.S. 36

Ramp N — C-1881 — 10' — 4:1 — G.R. — G.R. — 6:1

12"-12" @ 1.00% — IE 885.80 — 32'-12" @ 25.00% — IE 893.60 — 74'-12" @ 0.30% — F-892

880

Sta. 357+04, 116' Lt.
Std. HW-E
IE 12" 885.68

Sta. 357+04, ℄
Std. 2-2A C.B.
Grate El. 898.22
Window El. 897.72
IE 12" 893.82
IE 6" 894.32

G-900.08
357+00 Lt.
885.5

Var. — G.R. — F-1209 — 2:1 — GAR.

G-900.08
357+00 Rt.
885.5

880

Ramp Q — F-3 — E.P. — E.P. — Type 6 — R/W — BLDG.

C-326 — 4:1 — C=16

Sta. 356+98, 123' Rt.
42" x 12" Tee
IE 12" 863.21
IE 42" 861.96

8'-12" @ 45.5%

From Reconstr. Second Street
Sta. 27+65, 25' Lt.

Sta. 356+99, 131' Rt.
Std. 2-2A C.B.
Grate El. 869.60
Window El. 869.10
IE 12" 866.85

Reloc. T.R 287 — Area Reloc. U.S. 36 Ahd.

Area Reloc. U.S. 36 Bk.

C-159.7 — Ramp N — C-159 — HSE — E. Drive — F-146 — BLDG.

880

G-899.22
356+50 Lt.

Area Reloc. U.S. 36 Ahd.

Area Reloc. U.S. 36 Bk. — Area Reloc. U.S. 36 Ahd.

BLDG. — E. Drive — E. Drive — C-70 — C-150

880

G-899.22
356+50 Rt.

Ramp Q

Sta. 356+50 Ahd	1976	146	
Sta. 356+50 Bk.	229	146	
Sta. 356+41	0	0	

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

Sta. 356+50 to 357+00

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
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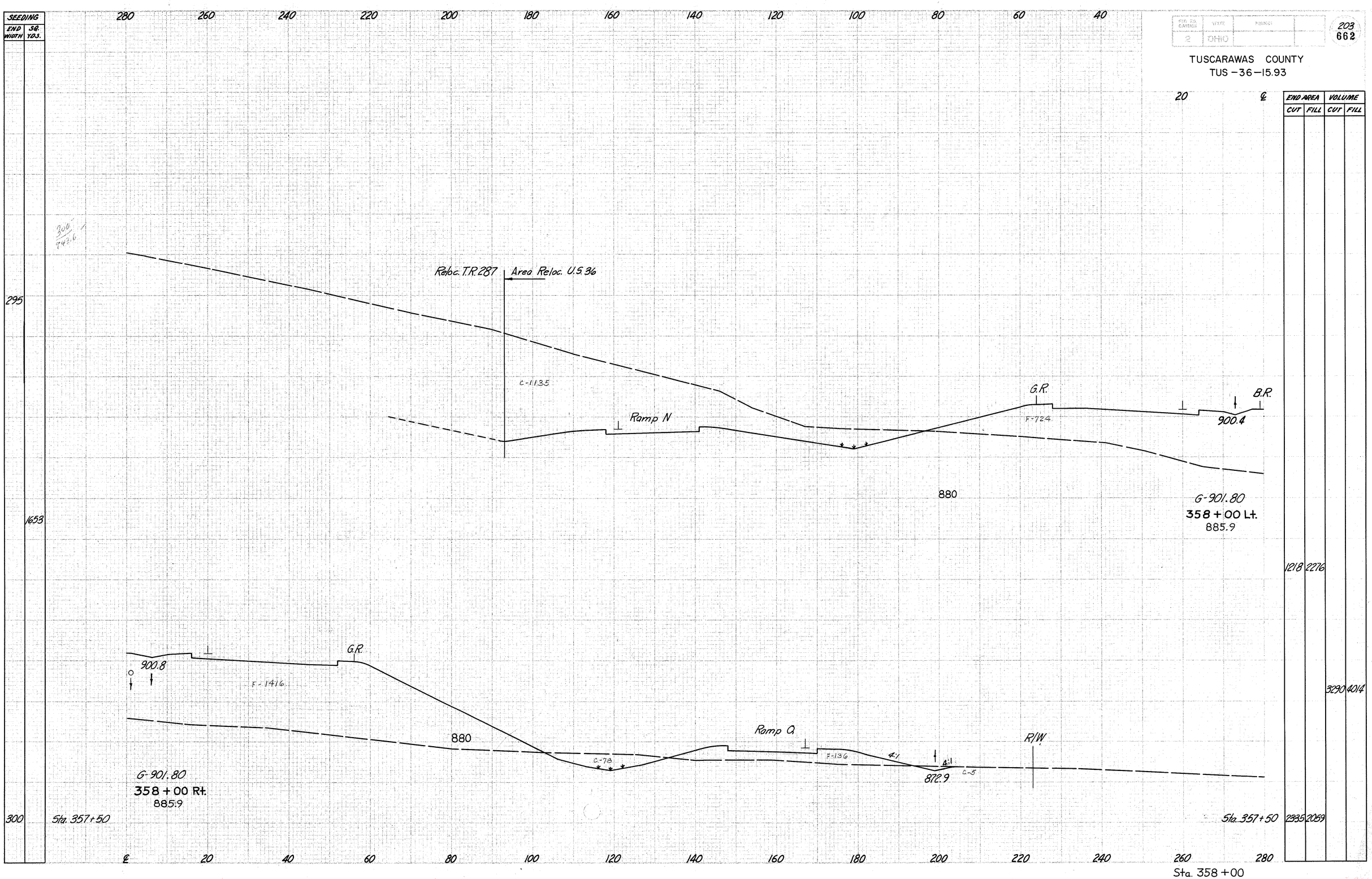
SEEDING	
END WIDTH	SQ. YDS.



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
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SEEDING	
END WIDTH	SQ. YDS.
279	
1594	
295	

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

FED. HWY. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-15.93

20 ℄

Reloc. T.R. 287 | Area Reloc. U.S. 36

Ramp N

C-100 4:1

F-12.8

12"

880

G-902.66
358+50 Lt.
884.3

Sta. 358+36, ℄
Std. 2-2A C.B.
Grate El. 900.16
Window El. 899.66
IE 12" 897.47

G.R.

132'-12"
@ 2.76%

F-1.607

HSE.

880

C-13

C-13

Ramp Q

G.R.

F-3.43

3.6:1

871.5

C-3

R/W

G-902.66
358+50 Rt.
884.3

Sta. 358+00

Sta. 358+00

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

Sta. 358+50

END AREA		VOLUME	
CUT	FILL	CUT	FILL
116	3168		
		1235	5041
1218	2276		

SEEDING END WIDTH	SEEDING SQ. YDS.
243	
1406	
263	
1506	
279	

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

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

205
662

TUSCARAWAS COUNTY
TUS -36-15.93

Reloc. T.R. 287 Area Reloc. U.S. 36 G.R. Ramp N 3:1 F-2524 880

G-904.23
359+50 Lt.
888.6

G.R. F-2662 880 Ramp Q G.R. 2:1 R/W BLDG.

G-904.23
359+50 Rt.
880.6

870.0

Reloc. T.R. 287 Area Reloc. U.S. 36 G.R. Ramp N 3.6:1 C-5 F-1532 880

G-903.48
359+00 Lt.
882.4

G.R. F-2278 Ramp Q G.R. 4:1 2.8:1 R/W BLDG. HSE. 880

G-903.48
359+00 Rt.
882.4

870.7 C-8

Sta. 358+50 Sta. 358+50

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

Sta. 359+00 to 359+50

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
12	5186		
		23	8700
		13	4210
		119	6831
116	3168		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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662

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING	
END WIDTH	SQ. YDS.

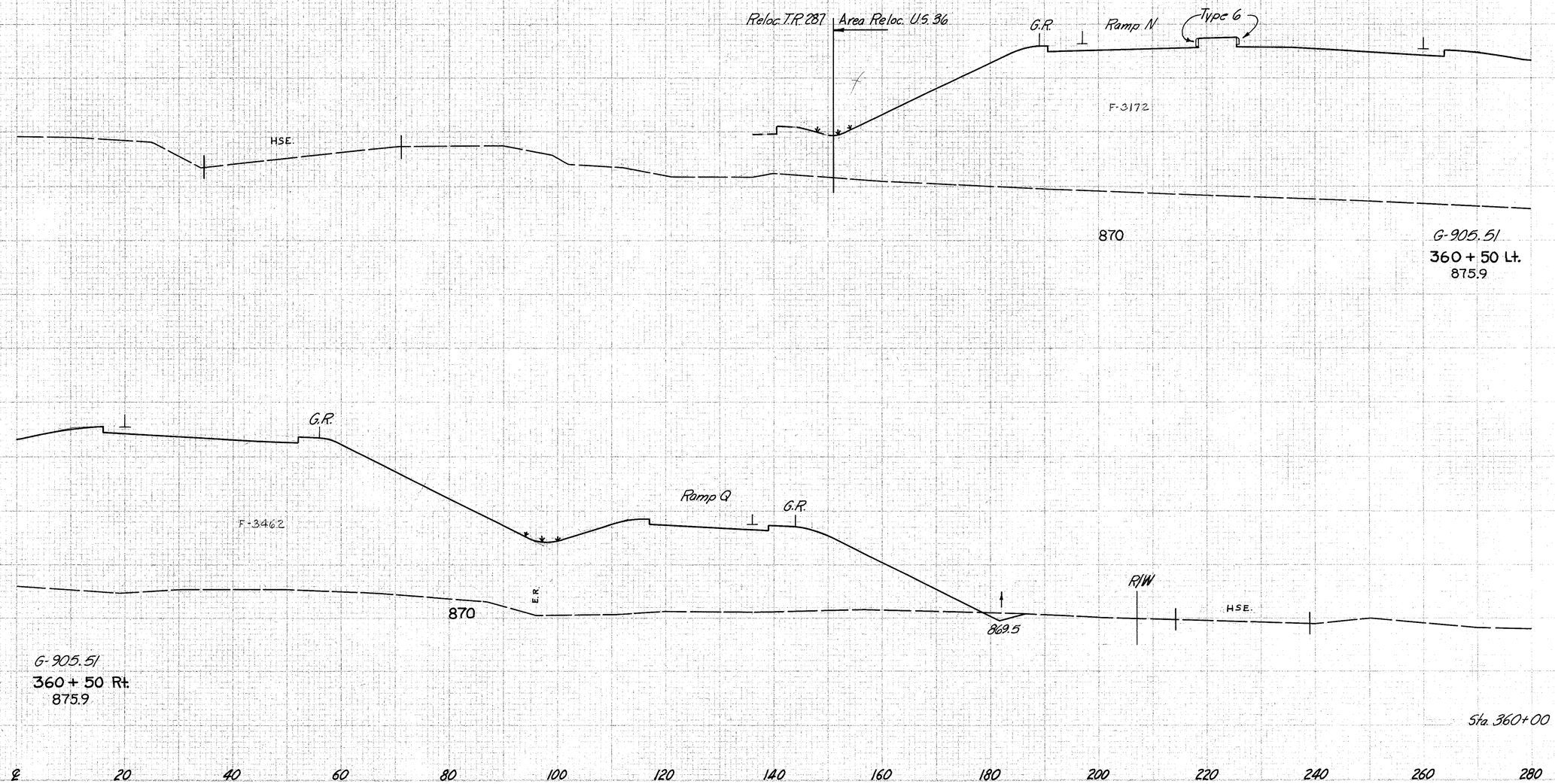
SEEDING	
END WIDTH	SQ. YDS.
208	
1189	
220	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

207
662

TUSCARAWAS COUNTY
TUS-36-15.93

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		10	6634
		13	11676
		4	5576



SEEDING	
END WIDTH	SQ. YDS.

FED. AID PROJECT	STATE	PROJECT	
	OHIO		

208
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

END AREA		VOLUME	
CUT	FILL	CUT	FILL

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

209
662

TUSCARAWAS COUNTY
TUS -36-15.93

SEEDING	
END WIDTH	SQ. YDS.

SEEDING	
END WIDTH	SQ. YDS.

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

211
662

TUSCARAWAS COUNTY
TUS -36-15.93

SEEDING	
END WIDTH	SQ. YDS.

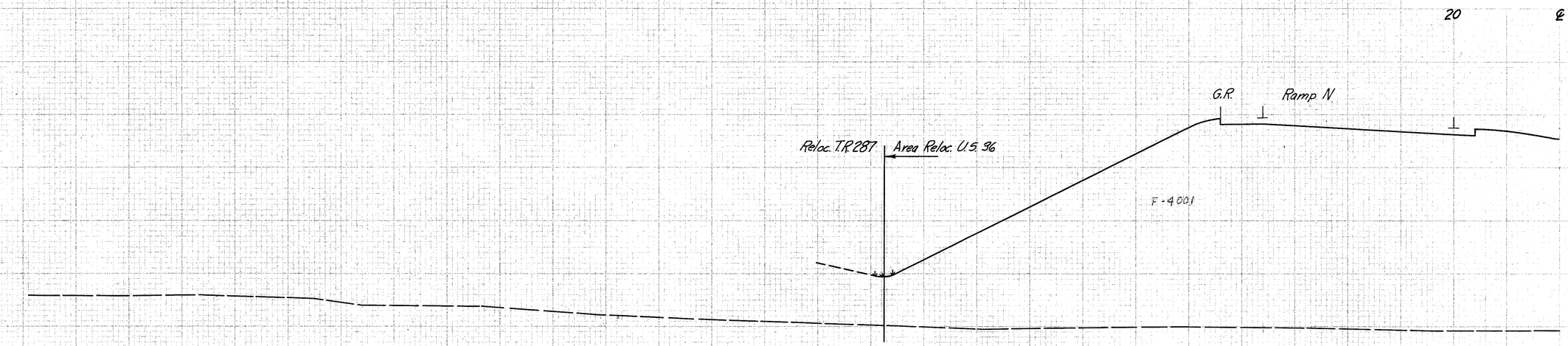
FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

212
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING	
END WIDTH	SQ. YDS.

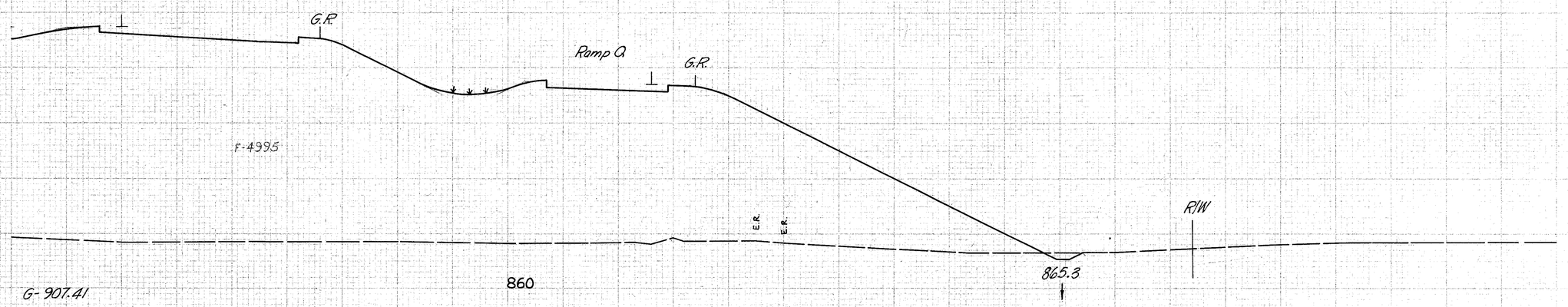
280 260 240 220 200 180 160 140 120 100 80 60 40 20 ℄



G-907.41
363+00 Lt.
869.2

245

1869



G-907.41
363+00 Rt.
869.2

248

Sta. 362+50

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

Sta. 363+00

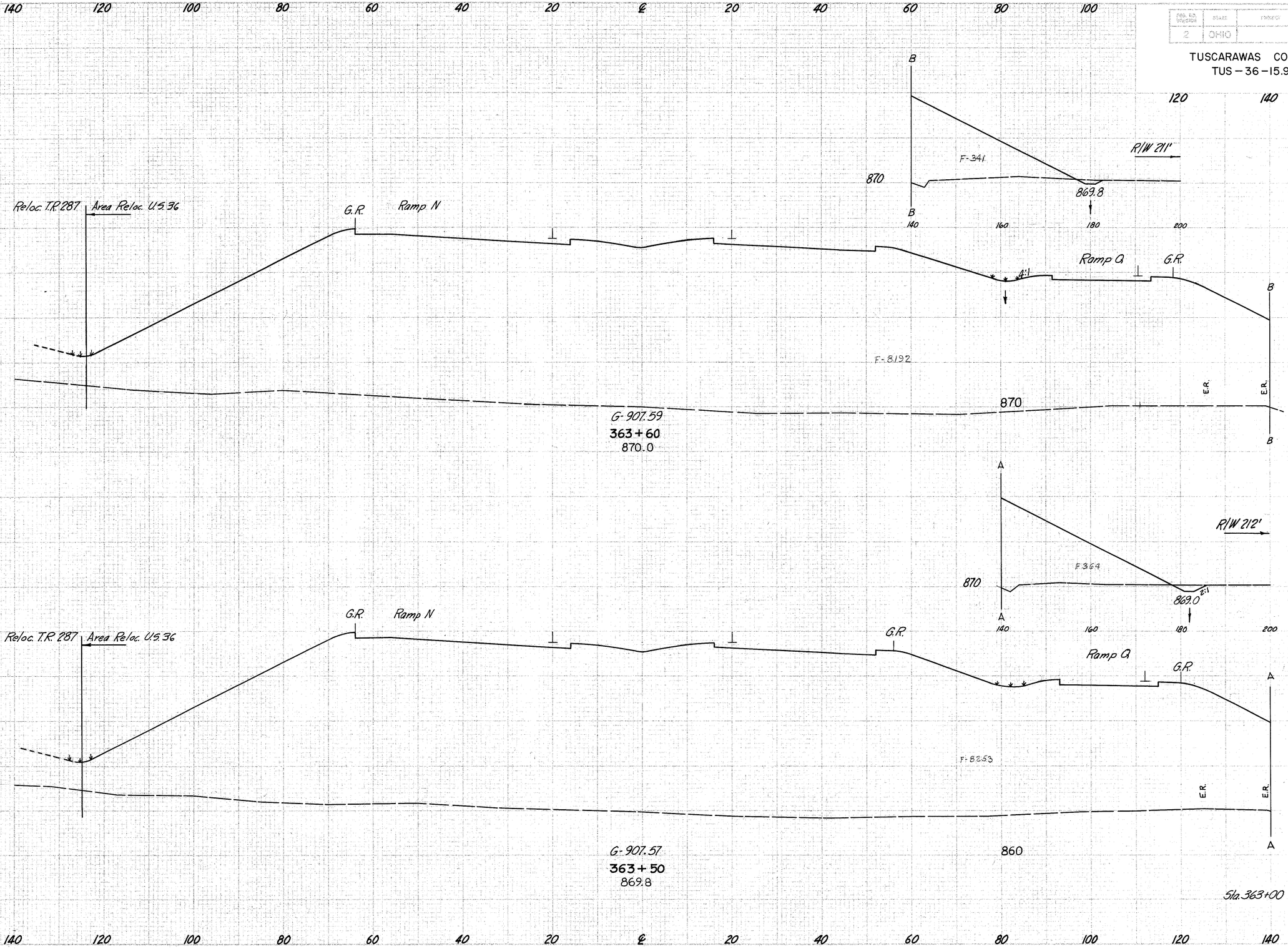
END AREA		VOLUME	
CUT	FILL	CUT	FILL
		6 8996	
			13 16634
		8 8969	

Sta. 362+50

SEEDING	
END WIDTH	SQ. YDS.
227	
254	
231	
1322	
245	

FED. RD. DIVISION	STATE	COUNTY		213 662
2	OHIO			

TUSCARAWAS COUNTY
TUS – 36 – 15.93



END AREA		VOLUME	
CUT	FILL	CUT	FILL
	4 8633		
		2 3176	
	6 8617		
		11 16308	
	6 8996		

Sta. 363+50 to 363+60

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

214
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL

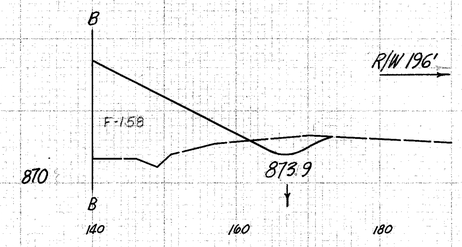
FED. RD. DIVISION	STATE	PROJECT		215
2	OHIO			662

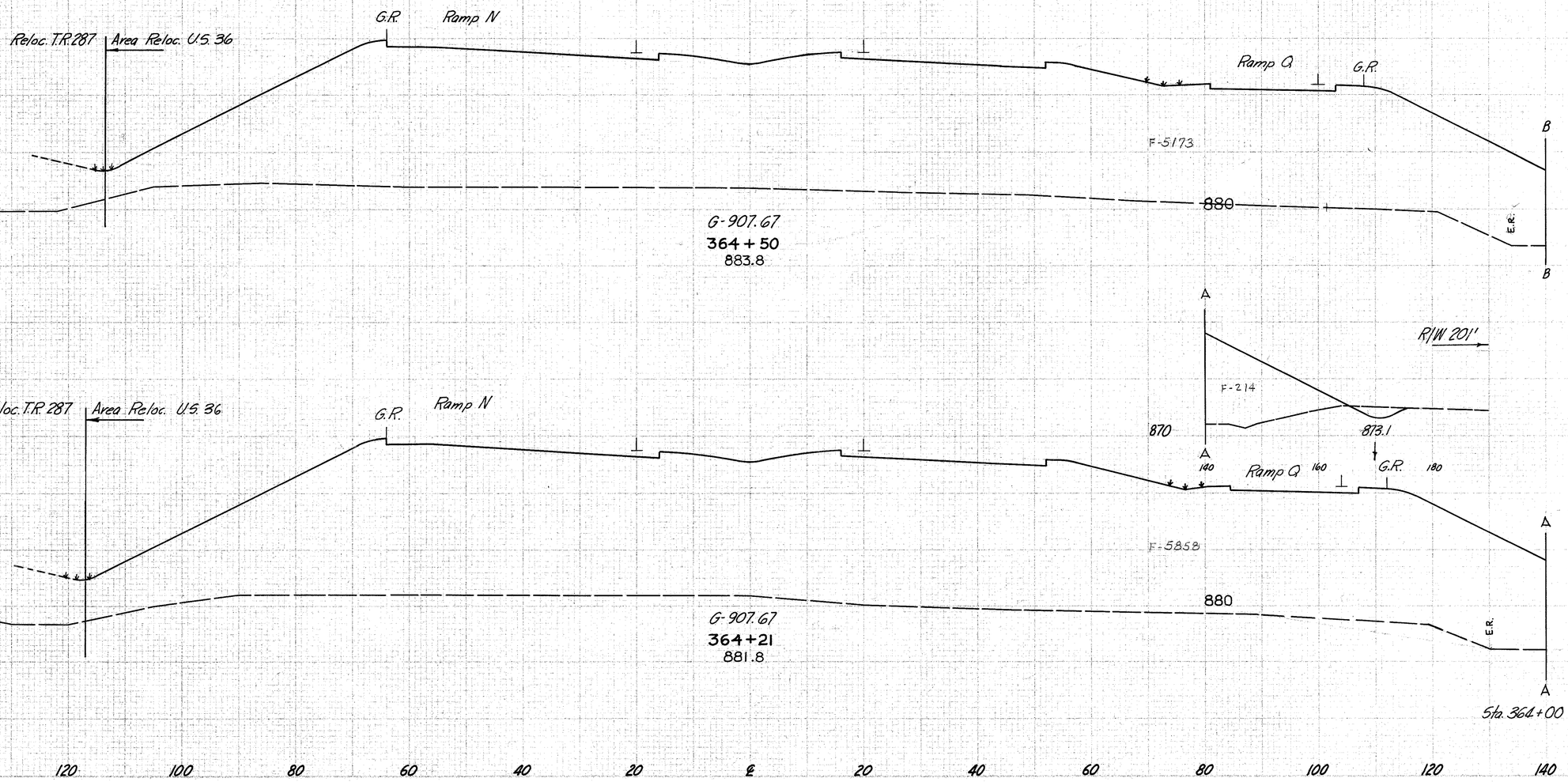
TUSCARAWAS COUNTY
TUS -36-15.93

SEEDING	
END WIDTH	SQ. YDS.
205	
669	
210	
497	
216	

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

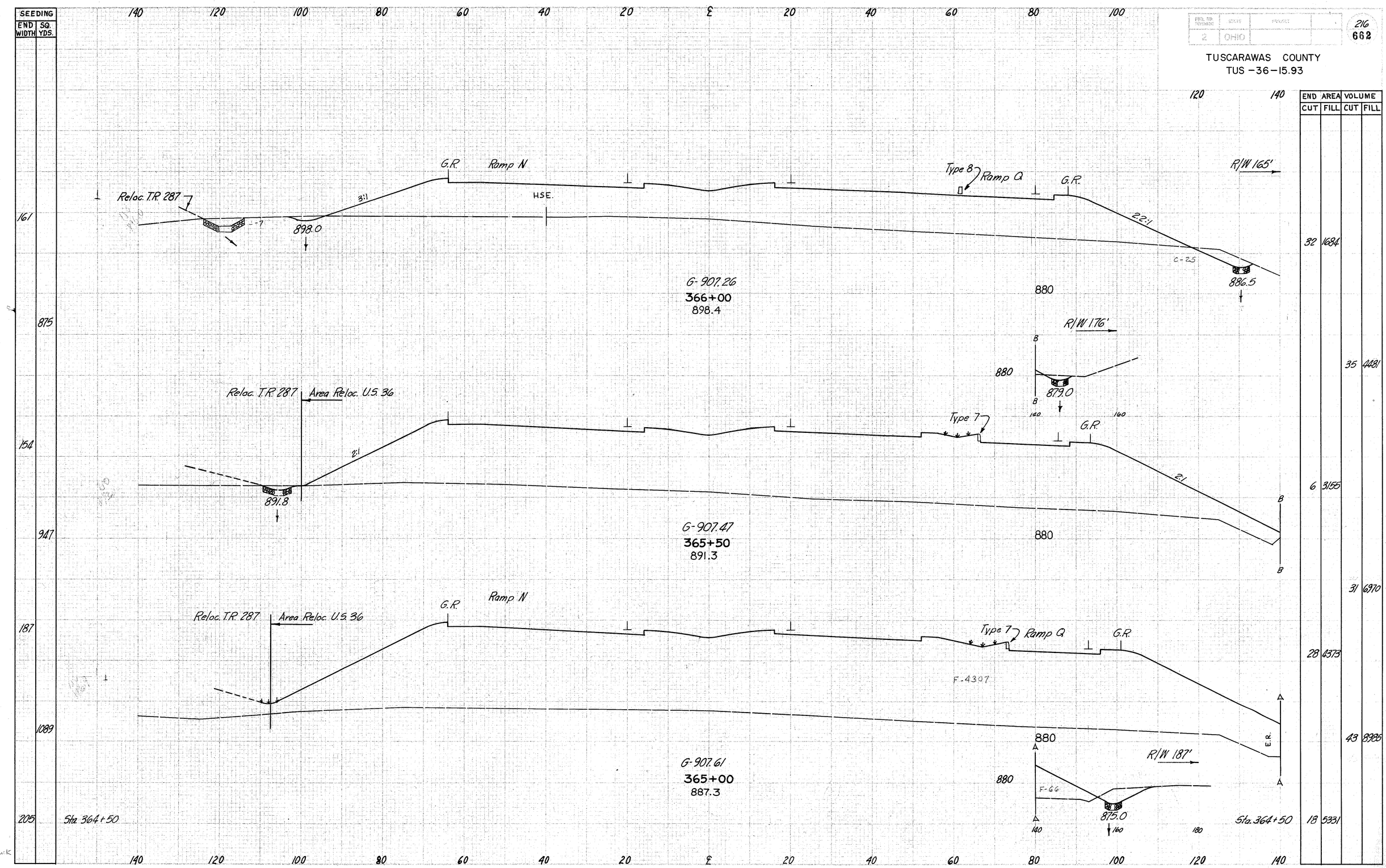
Sta. 364+90.80
Begin Super Transition
End Full Super





END AREA		VOLUME	
CUT	FILL	CUT	FILL
	18		5331
	16		6124
	12		6012
	9		5104
	12		7054

Sta. 364+21 to 364+50



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

216
662

TUSCARAWAS COUNTY
TUS -36-15.93

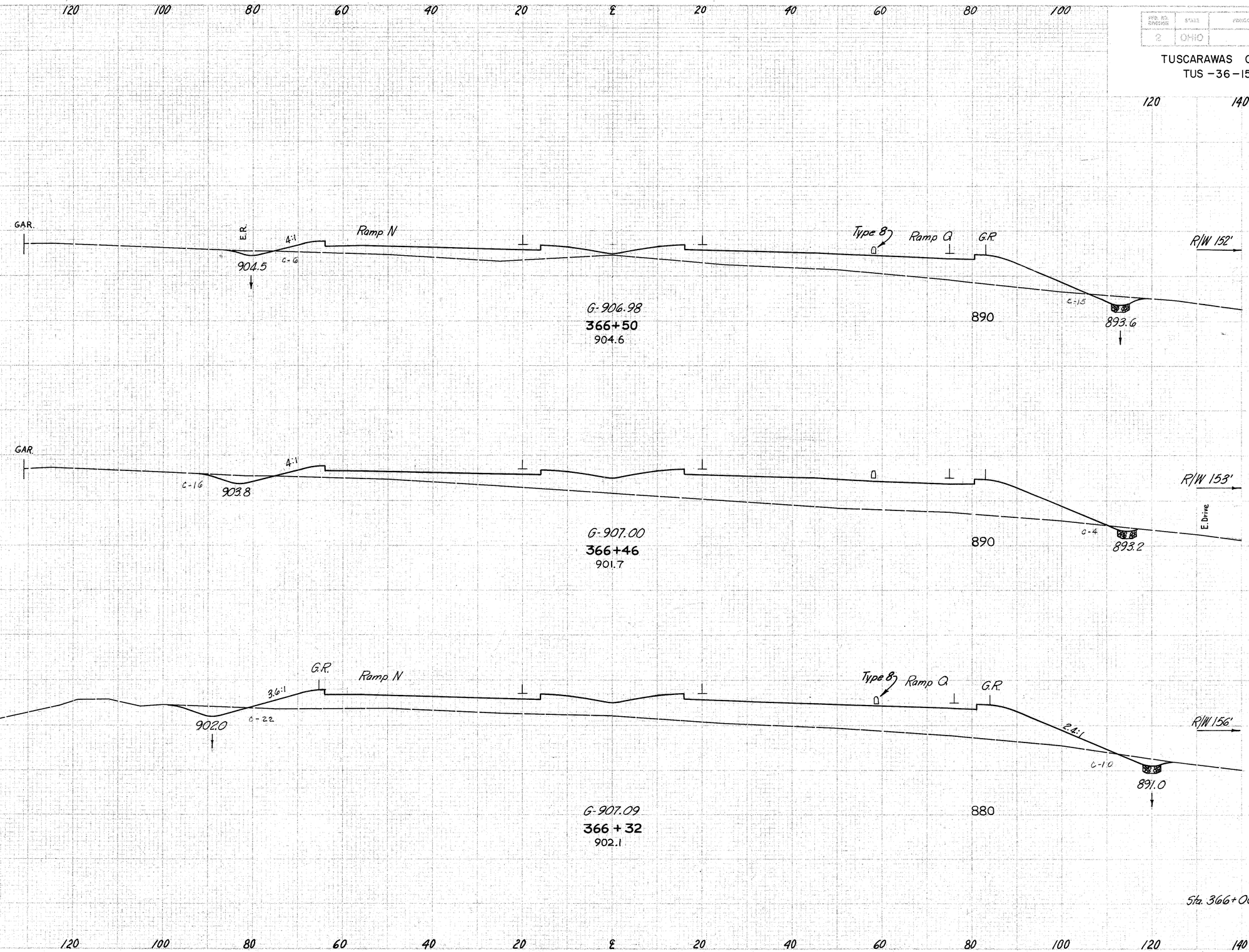
Sta. 365+00 to 366+00

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

217
662

TUSCARAWAS COUNTY
TUS -36-15.93

SEEDING END WIDTH	SEEDING SQ. YDS.
114	52
120	201
139	533
161	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	21	551	
			3
	20	837	
			13
	32	852	
			38
	32	1684	

438
1503

Sta. 366+32 to 366+50

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

218
662

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING	
END WIDTH	SQ. YDS.
151	
	792
134	
	624
110	
	50
114	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
6612	8		
		9109	15
3226	8		
		3048	—
		0	
			56
66	188		
		6	55
21	551		

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

R/W 165'

Ramp N

F4

G-906.19
367+50
938.6

Type B

Ramp Q

910

F4

86'-12" @ 0.33%

(See Sta. 366+70 for outlet)

R/W 141'

2-45°

Ramp Q
Sta. 10+79, 16' Lt.
Std. G C.B.
Grate El. 905.78
IE 12" 901.29
IE 6" 901.79

R/W 145'

1½:1

1:1

½:1

2:1

F4

F4

900

Begin Rock Template Lt.
Sta. 367+00

G-906.62
367+00
923.1

Begin Rock Template Rt.
Sta. 367+00

G.R.

366+70
900

86'-12" @ 0.33%

901.0

Ramp Q
Sta. 10+00, 18' Rt.
Std HW-E
IE 12" 901.01

GAR.

E.R.

Ramp N

3:1

4:1

F-77

C-B

904.7

F-1

C-1

C-2.8

C-6

Type B

Ramp Q

G.R.

F-110

2.4:1

C-2.3

2:1

894.5

890

Sta. 366+70

R/W 152'

G-906.95
366+54
907.1

Sta. 366+50

Sta. 366+50

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

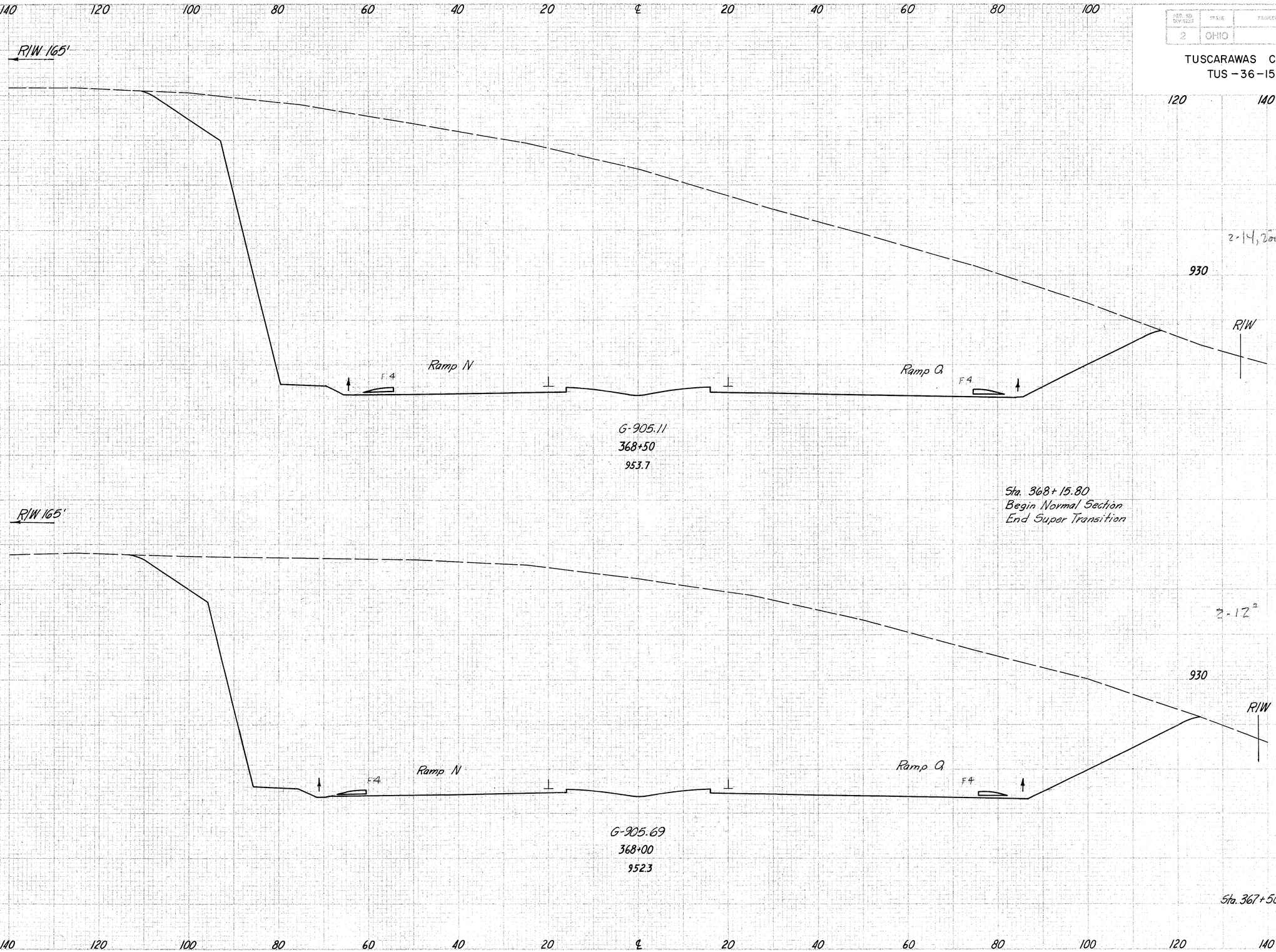
Sta. 366 + 54 to 367 + 50

FED. ROAD DIVISION	STATE	PROJECT
2	OHIO	

2/9
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING END WIDTH	SEEDING SQ. YDS.
149	
842	
154	
847	
151	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
8805	8		
		16340	15
8842	8		
		14309	15
6612	8		

Sta 368+00 to 368+50

ITEM NO. EXPLANATION	STATE	PROJECT	
2	OHIO		

220
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING END WIDTH	SEEDING SQ. YDS.
141	806
149	828
149	

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

R/W 165'

F4 ⊥ ⊥ Ramp Q F4 2:1 R/W

2-12³

930

G-903.73
369+50
937.3

R/W 165'

2-14³

930

G-904.46
369+00
945.8

R/W

Sta. 368+50 Sta. 368+50

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

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
6134	8		
		12648	15
7520	8		
		15116	15
8805	8		

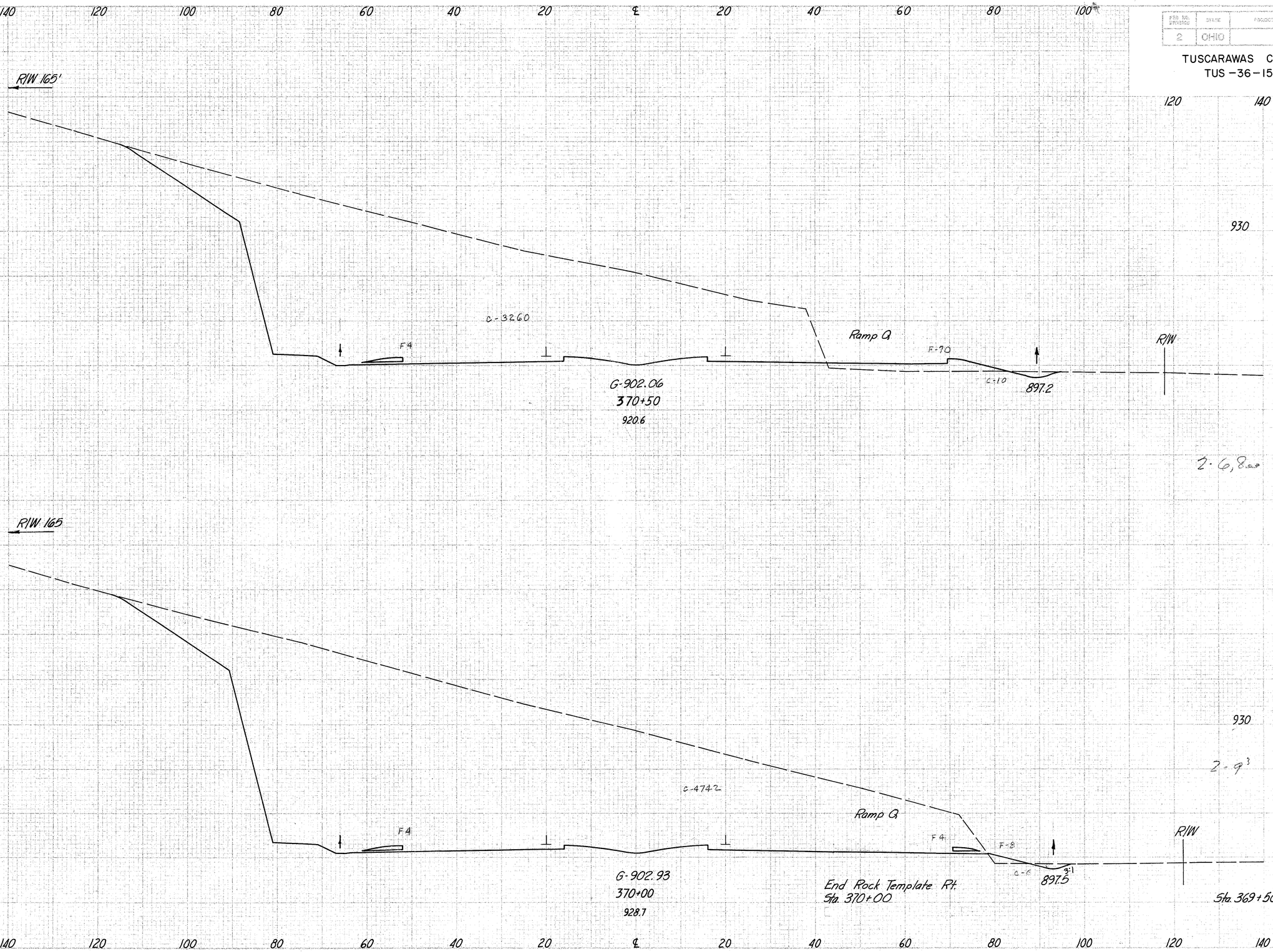
Sta. 369+00 to 369+50

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

221
662

TUSCARAWAS COUNTY
TUS -36-15.93

SEEDING END WIDTH	SEEDING SQ. YDS.
144	794
142	786
141	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
3270	74		
		7424	76
4748	8		
		10076	15
6134	8		

SEC. NO.	STATE	PROJECT		222
2	OHIO			662

TUSCARAWAS COUNTY
TUS -36-15.93

SEEDING	
END WIDTH	SQ. YDS.
138	
	431
139	
	345
143	
	797
144	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1415	4		
		1589	7
1650	9		
		1525	10
2093	15		
		4966	82
3270	74		

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

R/W 165'

1½:1

¼:1

½:1

F-4

BLDG.

GAR.

Ramp Q

900

R/W

896.2

G-900.09
371+50
906.6

2-800

C-1599

F-4

F-1

F-4

900

R/W

C-19

C-32

896.5

G-900.67
371+22
907.0

2-1200

2-1200

C-2069

F-4

Ramp Q

F-11

900

R/W

C-24

896.9

G-901.11
371+00
912.7

Sta. 370+50

Sta. 370+50

Sta. 371+00 to 371+50

DIST.	STATE	PROJECT		
2	OHIO			223 662

SEEDING	
END WIDTH	SQ. YDS.
151	
	800
137	
772	
141	
775	
138	

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

R/W 165'

R/W 270'

Ramp Q

C-2186

F-4

2:1

900

G-896.59

373+00

907.4

5033

120 140

Sta. 372+98.79
Begin Super Transition
End Normal Section

2.1%

R/W 165'

I-10 Riprap

19'

Sta. 372+50, 108' Lt.
Std. HW-E
IE 24" 908.00

30-24" @ 66.67%

C-1568

F-4

18'

84'-24" @ 1.36%

R/W 300'

Slope Cut-de-sac B

3:1

890

Sta. 372+50, 84' Lt.
Std. 1 M.H.
Cover El. 902.70
IE 24" 892.48

Sta. 372+40, 66' Lt.
Std. 2-2A C.B.
Grate El. 896.14
Window El. 895.64
IE 12" 893.39

Sta. 372+50, 66' Lt.
24"x12" Tee
IE 12" 892.71
IE 24" 892.21

5254

G-897.83

372+50

905.8

Sta. 372+50, ℄
Std. 2-3 C.B.
Grate El. 896.23
Window El. 895.40
IE 24" 891.34

Sta. 372+30 - 372+70
Ditch Computation Lt.
$\frac{15 \times 40}{27}$ = 11 C.Y.
$\frac{15 \times 15}{27}$ = 8 C.Y.
19 C.Y.

2 - 500

R/W 165'

1½:1

½"/'

2:1

F-4

C-1297

Ramp Q

R/W

900

G-899.00

372+00

904.8

Excavate & Backfill
as directed

4223

Sta. 372+00
Begin Excavation below subgrade
for Mine Subsidence

2 - 2" = 800
1 - 880

Sta. 371+50

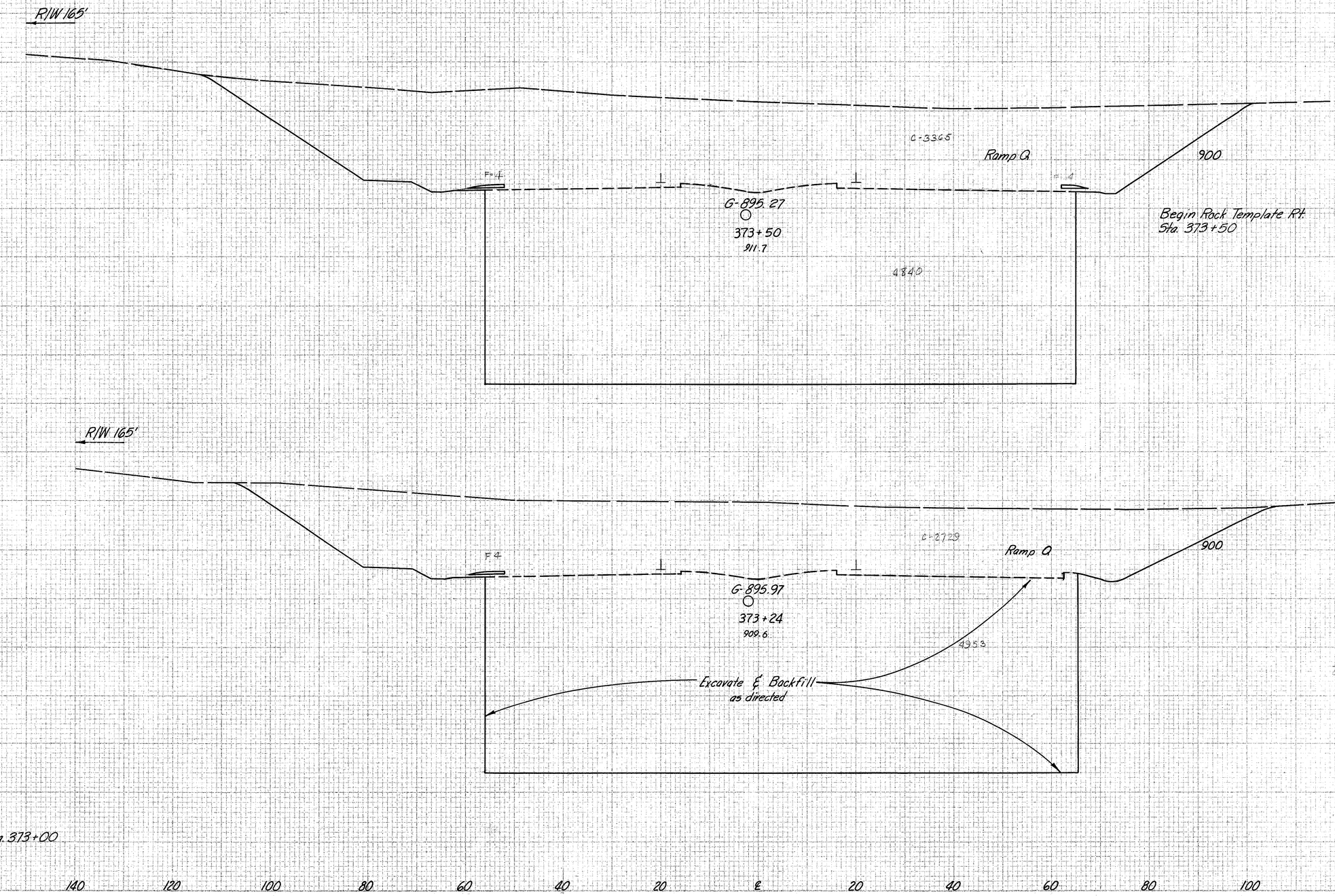
Sta. 372+00 to 373+00

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2186	4		
Mine Subsidence 5033	5033		
		3476	7
		9525	9525
1568	4		
Mine Subsidence 5254	5254		
		19	
		2653	7
		8775	8775
1297	4		
Mine Subsidence 4223	4223		
		2511	7
1415	4		

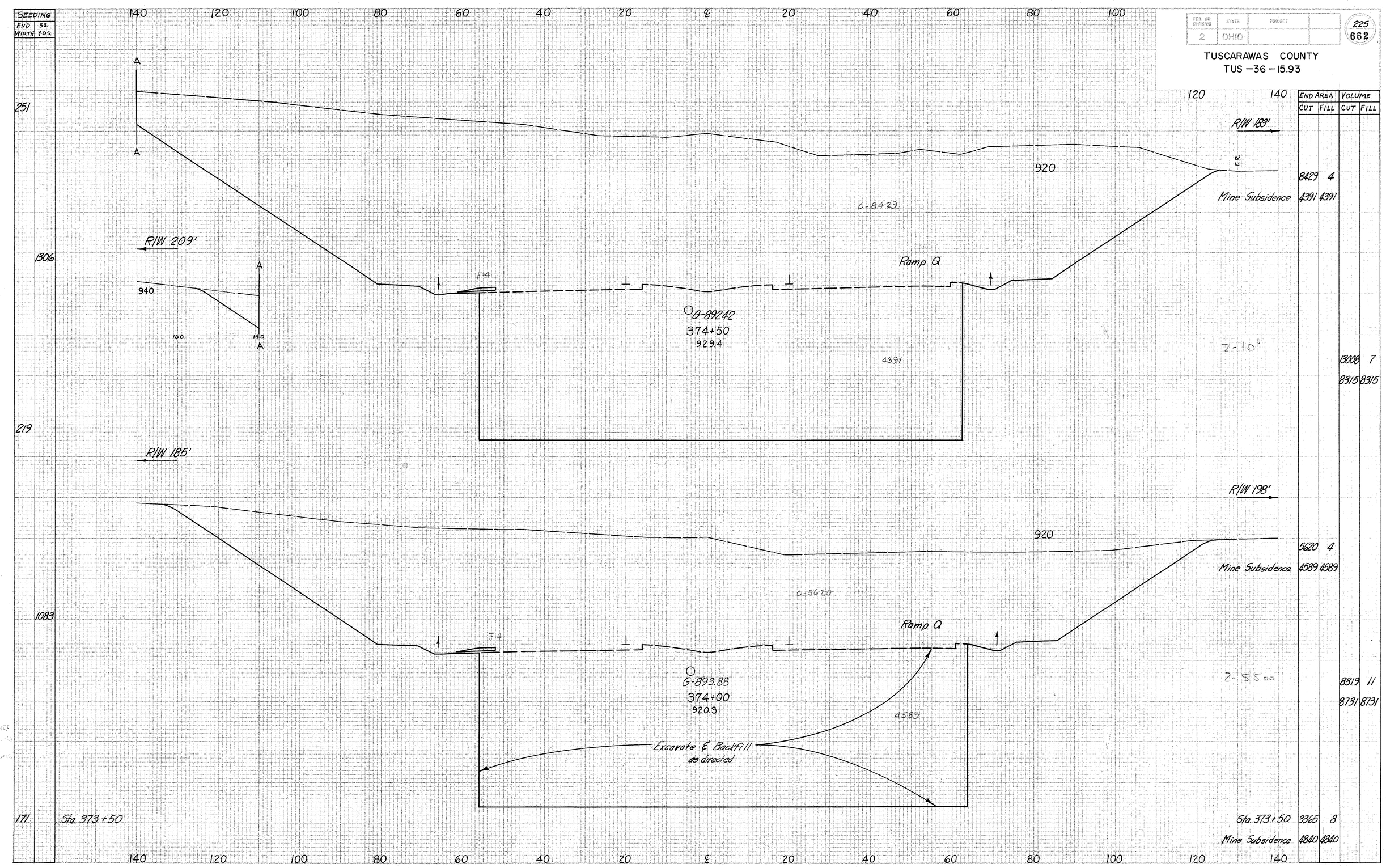
FED. HWY. DIVISION	STATE	PROJECT		224
2	OHIO			662

SEEDING	
END WIDTH	SQ. YDS.
171	
484	
164	
420	
151	

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



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
3365		8		
Mine Subsidence	4840	4840		
			2934	6
			4715	4715
2729		4		
Mine Subsidence	4953	4953		
			2184	4
			4438	4438
Sta. 373+00	2186	4		
Mine Subsidence	5033	5033		



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

225
662

TUSCARAWAS COUNTY
TUS -36 -15.93

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	8429	4		
Mine Subsidence	4391	4391		
			13008	7
			8315	8315
	5620	4		
Mine Subsidence	4589	4589		
			8319	11
			8731	8731
Sta. 373+50	3365	8		
Mine Subsidence	4840	4840		

Sta. 374+00 to 374+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

226
662

TUSCARAWAS COUNTY
TUS -36-15.93

SEEDING END WIDTH	SEEDING SQ. YDS.
357	
	1778
283	
	1483
251	

Sta. 374+50

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

B B — R/W 241' — 960 — B B

A A — R/W 223' — 950 — A A

180 160 140

F4

℄-13628

℄-11065

E.R. E.R.

940

930

C C — R/W 220' — 950 — C C

140 160 180

R/W 201'

Ramp Q

Ramp Q

G-889.42
375+50
943.9

G-890.92
375+00
937.7

3969

4176

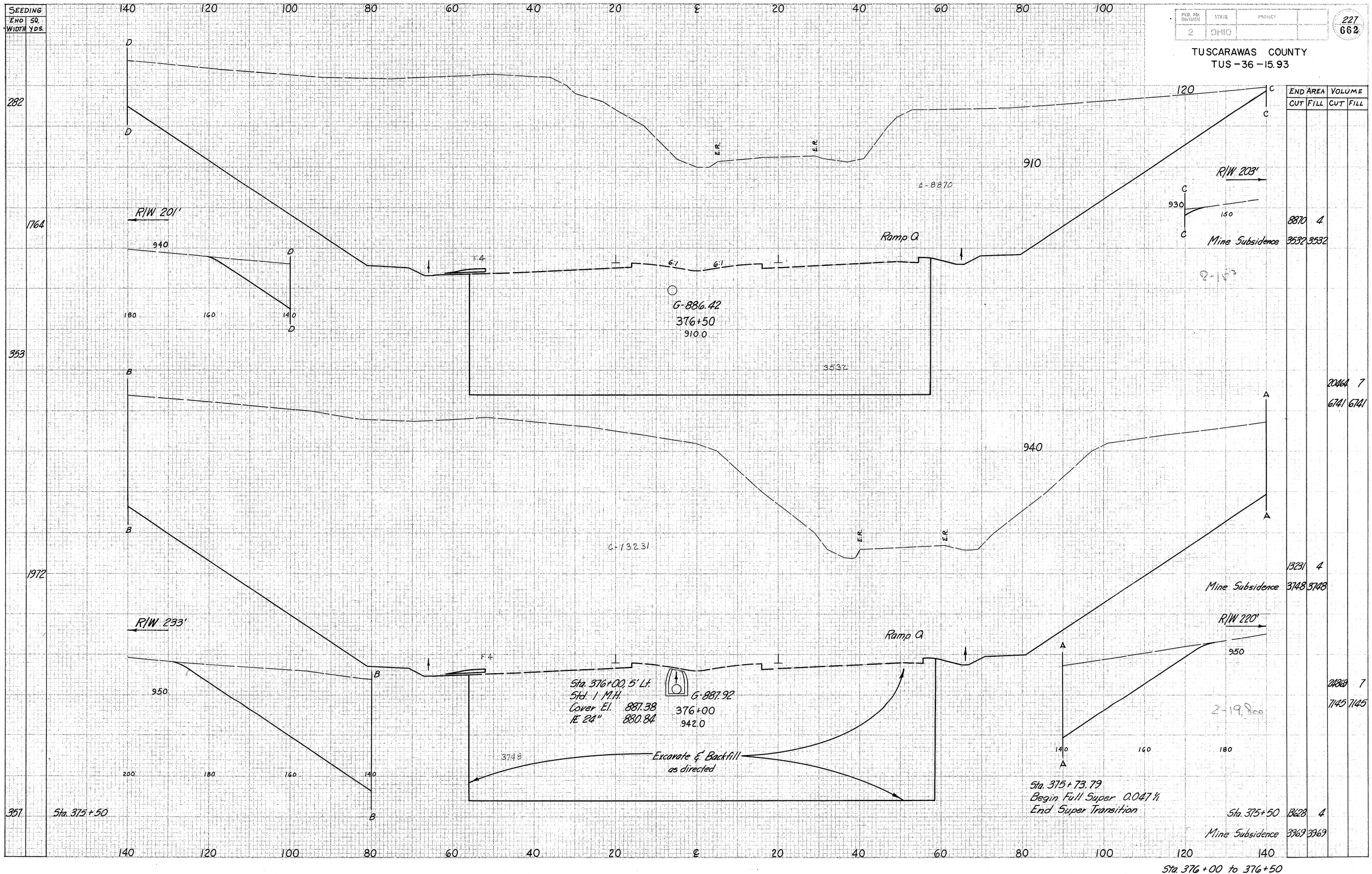
Excavate & Backfill as directed

2-17.5%

2-13%

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
13628	4		
Mine Subsidence	3969	3969	
		22864	7
		7542	7542
11065	4		
Mine Subsidence	4176	4176	
		18050	7
		7932	7932
Sta. 374+50	8429	4	
Mine Subsidence	4391	4391	

Sta. 375+00 to 375+50



FED. RD. DIVISION 2
STATE OHIO
PROJECT
227
662
TUSCARAWAS COUNTY
TUS-36-15.93
SEEDING
END WIDTH
SQ. YDS.
282
1764
353
1972
357
Sta. 375+50
END AREA
CUT
FILL
VOLUME
CUT
FILL
8870 4
Mine Subsidence 3532 3532
20464 7
6741 6741
13231 4
Mine Subsidence 3748 3748
24869 7
7145 7145
Sta. 375+50 13628 4
Mine Subsidence 3969 3969
R/W 201'
R/W 203'
R/W 233'
R/W 220'
Ramp Q
G-886.42
376+50
910.0
G-887.92
376+00
942.0
Sta. 376+00, 5' Lt.
Std. 1 M.H.
Cover El. 887.38
IE 24" 880.84
Excavate & Backfill as directed
Sta. 375+73.79
Begin Full Super 0.047 ft.
End Super Transition
Sta. 376+00 to 376+50

SEEDING END WIDTH	SEEDING SQ. YDS.
157	
	892
164	
	1067
220	
	1394
282	

MTD. NO. DIVISION	STATE	PROJECT	
2	OHIO		

228
662

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

R/W

2:1

C-1827

Var. 6:1

G-881.92
378+00
890.5

2374

C-8

891.0

R/W 156'

880

Mine Subsidence

R/W 152'

2:1

C-7833

G-883.42
377+50
896.9

3159

Excavate & Backfill as directed

C-16

898.6

Mine Subsidence

2:1

890

R/W 170'

R/W 167'

1½:1

C-4708

½:1 2:1 F-4 Var. 6:1

G-884.92
377+00
907.0

3323

Ramp Q

2:1 ½:1

1½:1

890

C-17

906.2

Mine Subsidence

R/W 186'

End Rock Template Lt.
Sta. 377+00

End Rock Template Rt
Sta. 377+00

2-75

Sta. 376+50

Sta. 376+50

Mine Subsidence

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1835			
2974	2974		
		4337	—
5679	5679		
2849	—		
3159	3159		
		7013	—
6002	6002		
4723	4		
3323	3323		
		12588	7
6347	6347		
8870	4		
3532	3532		

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

Sta. 377+00 to 378+00

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

229
662

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		32	120		
				257	113
		246	2		
		2657	2657		
				1010	—
		5076	5076		
		845	—		
		2825	2825		
				2481	
		5369	5369		
		1835			
		2974	2974		

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

R/W
E.R
P-10
F-31
C-3
66'-15" @ 0.59%
F-79
4:1
C-3
C-26
874.5
870
94'-30" @ 0.79%
R/W 144'
35'
-1.0%
890
Profile Turnaround 177' Lt., Reloc. US 36
Sta. 379+40
Sta. 379+50, 66' Lt.
Std. 2-2A C.B.
Grate El. 874.23
Window El. 873.73
IE 15" 871.48
G-877.42
379+50
875.4
Sta. 379+50, ℄
Std. 2-3 C.B.
Grate El. 875.18
Window El. 874.95
IE 15" 871.09
IE 24" 870.34
IE 30" 869.84
IE 6" 871.84
Sta. 379+00
End Excavation below subgrade
for Mine Subsidence

E.R
R/W
C-222
4:1
G-878.92
379+00
879.3
F-2
6:1
C-220
C-4
880.0
880
R/W 144'
Mine Subsidence
Excavate & Backfill
as directed
2657

R/W 150'
E.R
E.R
3:1
C-838
G-880.42
378+50
883.7
2825
880
884.0
C-7
R/W 145'
Mine Subsidence

Sta. 378+00
Mine Subsidence

Sta. 378+50 to 379+50

SEEDING	
END WIDTH	SQ. YDS.
147	
	831
152	
147	
140	
	797
140	
	700
112	

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

PROJ. NO.	STATE	PROJECT	
2	OHIO		230 662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

R/W — C-7 — 862.30 — Future Grade — 860 — 862.2 — C-27 — R/W 153'

G-871.42
381 + 50 **END PROJECT**
863.6

R/W — C-13 — 863.80 — Future Grade — 870 — 864.5 — C-51 — R/W 149'

52' Lt
32' Rt

G-872.92
381 + 00
866.2

R/W — C-6 — 866.80 — C-124 — 870 — 866.8 — R/W 146'

G-874.42
380 + 50
869.1

Sta. 380 + 10
14" Encasing Pipe for
Future Water Service.

R/W — C-6 — 869.80 — G-875.92 — 380 + 00 — 871.7 — C-140 — 870 — 869.0 — R/W 145'

Plug — 254'-15" Casing — 94'-30" @ 0.79% — Plug End

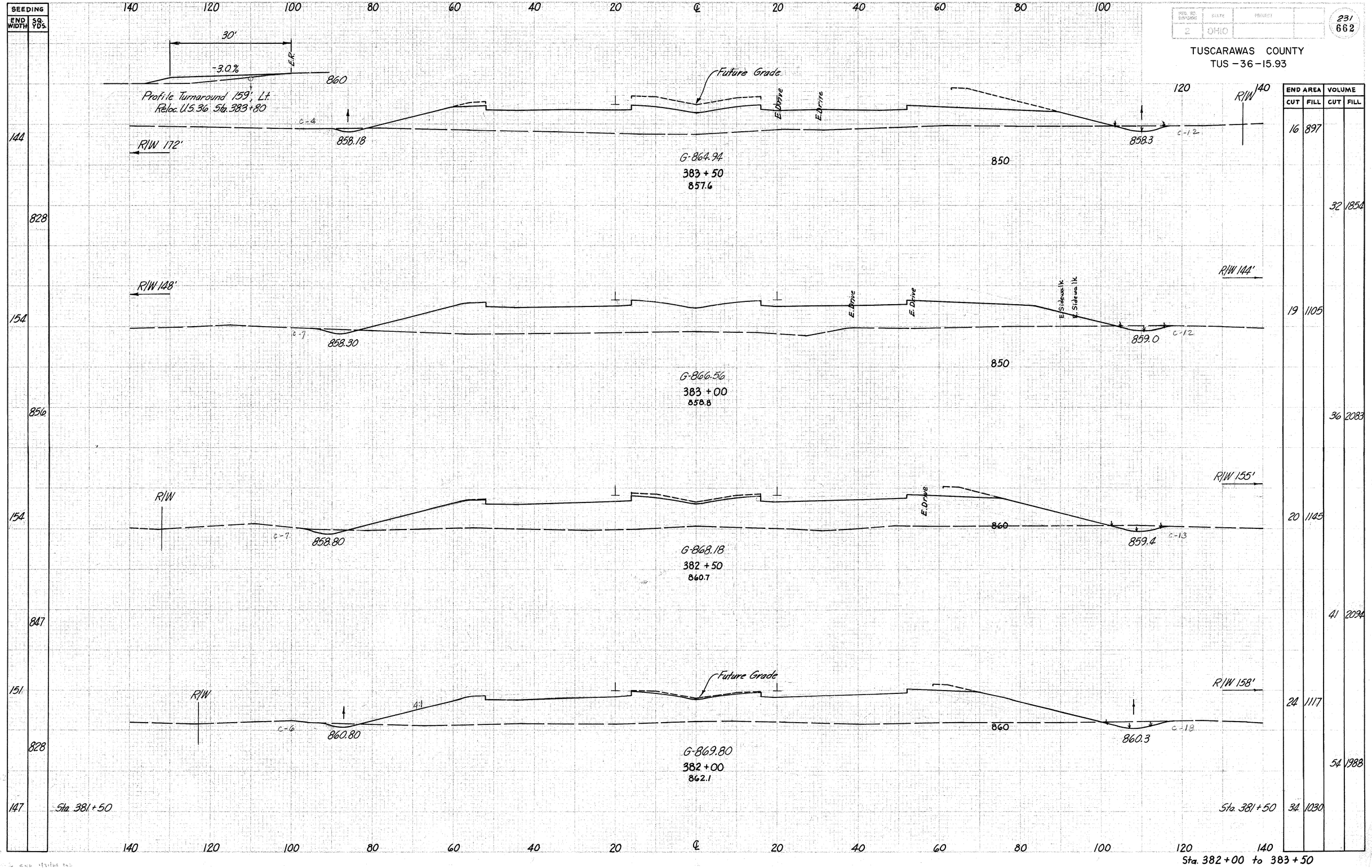
Sta. 379 + 50 — Sta. 380 + 00, 80' Rt. Std. HW-E FE 30" 869.10 — Sta. 379 + 50

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
34	1080		
		91	1725
64	833		
		180	1325
130	598		
		256	874
146	346		
		165	431
32	120		

Sta. 380 + 00 to 381 + 50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TUSCARAWAS COUNTY
TUS-36-15.93



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
16	897		
		32	1854
19	1105		
		36	2083
20	1145		
		41	2094
24	1117		
		54	1988
34	1030		

Sta. 382+00 to 383+50

SEEDING	
END WIDTH	SQ. YDS.
0	
	76
43	
	319
72	
	636
157	
	903
168	
	867
144	

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

Sta. 385+82

R/W 154'

4:1

C-10 858.8 F-23 C-32

E.R. Future Grade E.R. 4:1 860

Sta. 385+41
4" AC W.M. in 12" Casing

385+50
860.6

Sta. 385+90

R/W 145'

E. Drive E. Drive C-8 858.5 F-15 860 C-69

G: 861.30 Lt. G: 860.89 Rt.

385+00
859.5
80'-12"@2.09%
To I-5 Sta. 384+20
4' Rt.

Sta. 385+00, 3' Rt.
Std. 2-2A C.B.
Grate El. 859.47
Window El. 858.97
IE 12" 856.72

4"AC W.M. in 12" Casing

R/W BLDG E. Drive E. Drive C-18 858.2

G-862.15
384+50
859.6

860 857.9 C-12 852.95

E.R. C-60 Future Grade E.R. E. Drive R/W 860 C-12 857.8

Exist. 18" V.C.P.
Concrete Collar El. 857.56
14'-18"@16.08%
858.06

Sta. 384+19, 83' Lt.
Std. 2-2A C.B.
Grate El. 858.06
Window El. 857.56
IE 18" 855.31
IE 24" 854.81

G-863.41
384+00
860.1

Sta. 384+20, 4' Rt.
24" x 12" Tee
IE 12" 855.05
IE 24" 854.55

192'-24" @ 0.30%

Sta. 384+22, 109' Rt.
Std. 2-4 C.B.
Grate El. 858.21
Window El. 857.38
IE 24" 854.23
IE 36" 853.23

Sta. 383+50

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

Sta. 384+00 to 385+50

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
		31	17
42	23		
		101	87
67	71		
		90	363
30	321		
		94	654
72	385		
		81	1187
16	897		

TUSCARAWAS COUNTY
TUS – 36 – 15.93

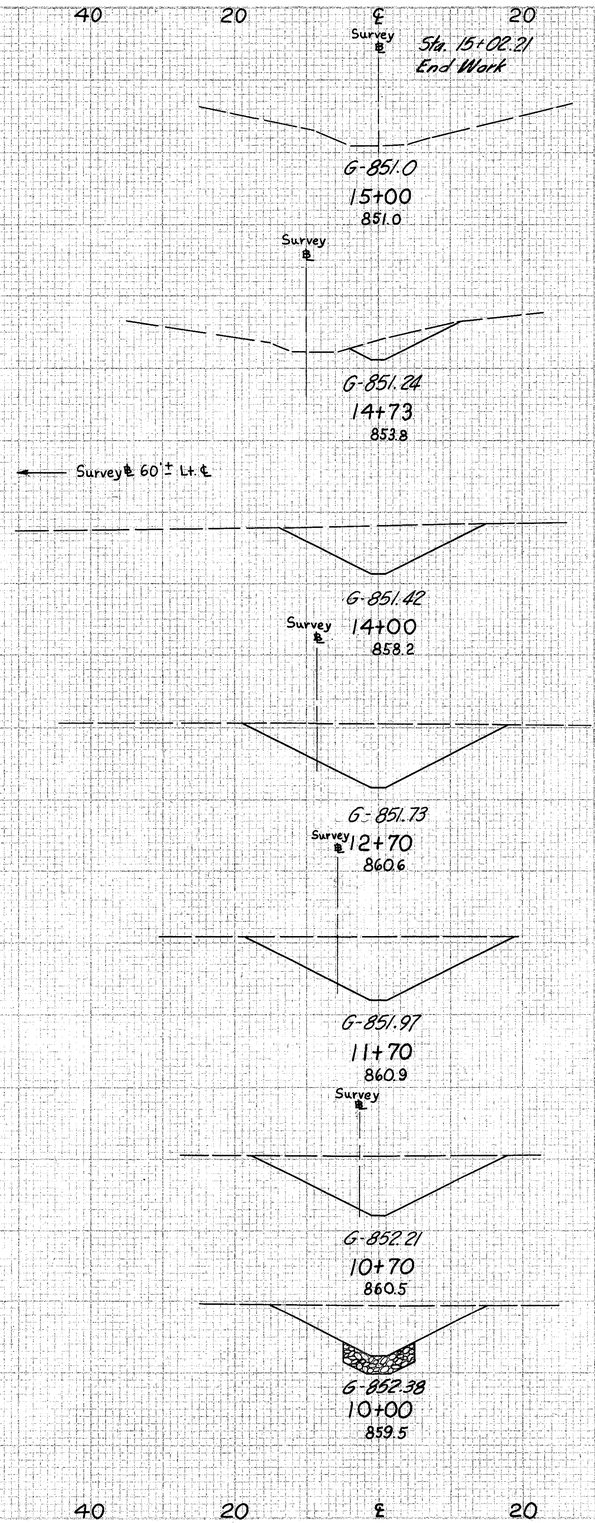
232
662

FED. HWY. DIVISION	STATE	PROJECT	
2	OHIO		

233
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING	
END WIDTH	SQ. YDS.
0	
26	
17	
199	
32	
527	
41	
461	
42	
456	
40	
288	
34	

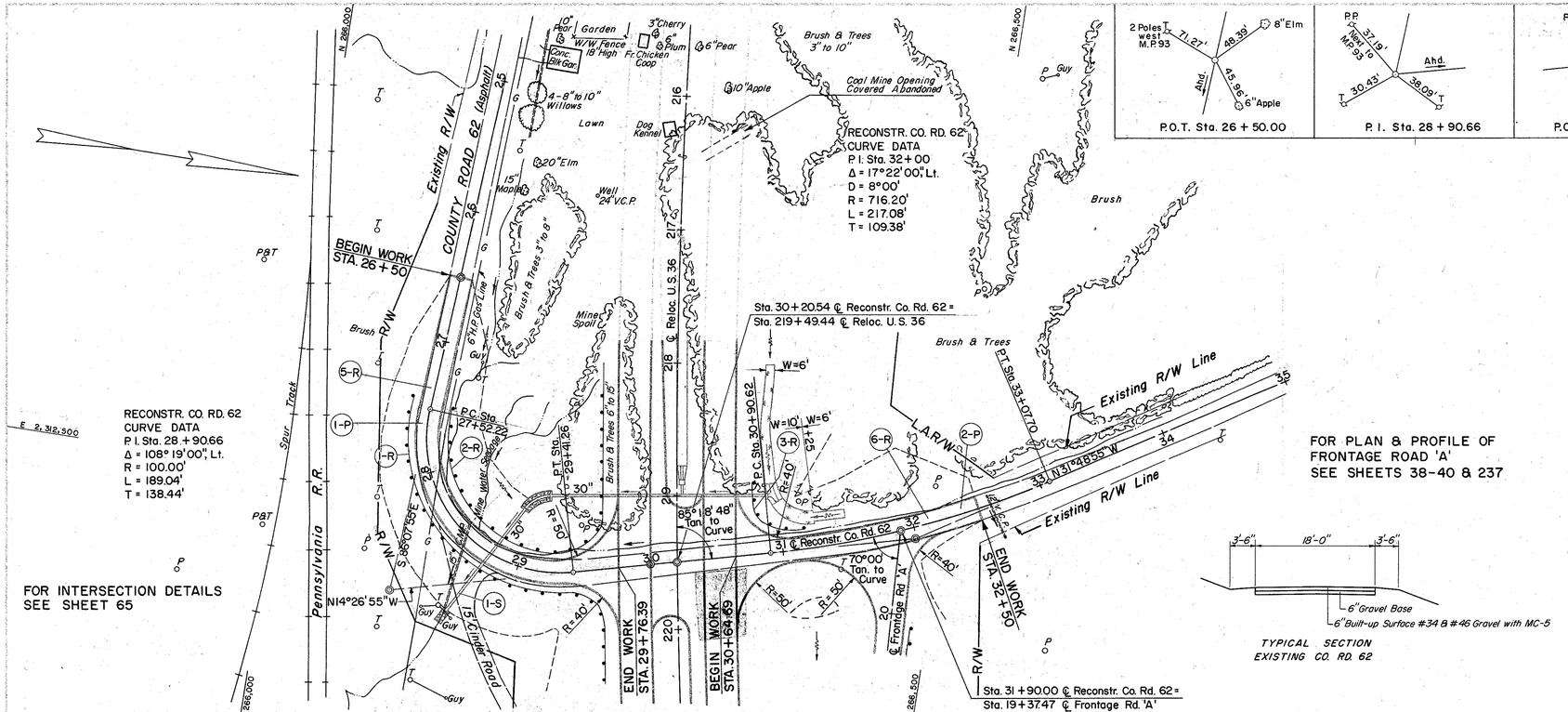


		END AREA		VOLUME	
		CUT	FILL	CUT	FILL
E-3 Exc. Sta. 15+02.21	0				
				16	
850	29				
				184	
860	107				
				686	
860	178				
				663	
860	180				
				626	
860	158				
				356	
860 E-3 Exc.	117				
				28	
Sta. 9+87	0				

Channel Right Sta. 385+20± to 389+75±

FED. RD. DIVISION	STATE	PROJECT		234
2	OHIO			662

TUSCARAWAS COUNTY
TUS-36-15.93



(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. SUB-GRADE	I-9 STONE UNDER-DRAINS NO. 2	I-15 GUARD RAIL STEEL BEAM STD TYPE (DEEP)	
				S.Y.		L.F.	
1-R	27+45	220+00	Rt.			262.5	← 50.0' L.F. with R = 30'
2-R	27+47	219+00	Lt & Rt			212.5	← 50.0' L.F. with R = 40'
3-R	218+90	31+17	Lt.			62.5	← 50.0' L.F. with R = 30'
5-R	26+50	29+76.39		753	133		
6-R	30+64.69	32+50		469	88		
	TOTAL			1,222	221	537.5	

FOR PLAN & PROFILE OF FRONTAGE ROAD 'A' SEE SHEETS 38-40 & 237

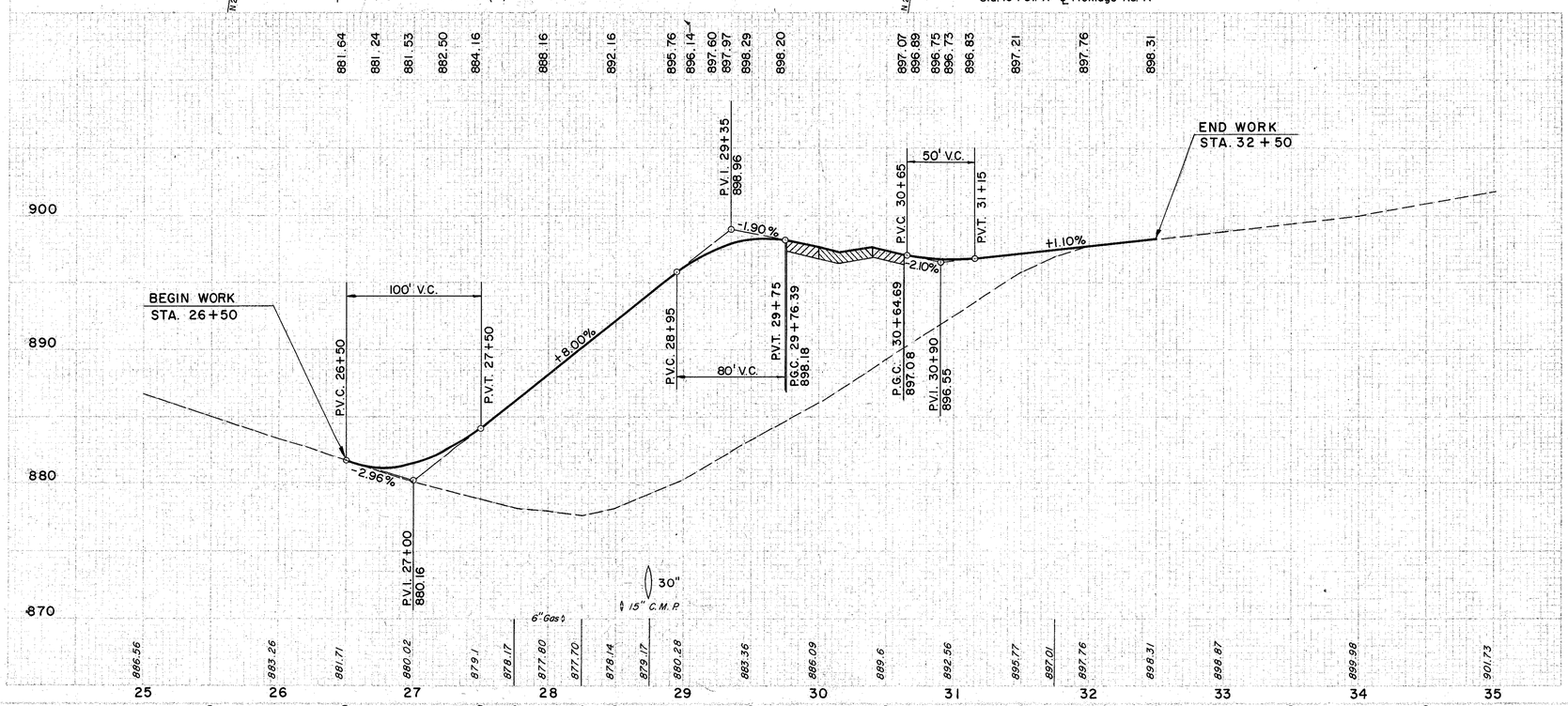
TYPICAL SECTION EXISTING CO. RD. 62

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE	I-22 SUBBASE	T-30 BIT. PRIME COAT	T-35 ASPH. CONC. SURF. COURSE TYPE C	T-71 REINF. PORT. CEM. CONC. PAV'T. S'
				C.Y.		GAL.	C.Y.	S.Y.
1-P	26+50	29+76.39		126	137	214	23	219
2-P	30+64.69	32+50		66	85	113	12	188
	TOTAL			192	222	327	35	407

(S) STRUCTURE

REF. NO.	STATION	I-1 30" PIPE CL. A-1 SEC. M-66(b) OR M-6.8(b)	I-2 MASONRY	I-10 DUMPED ROCK CHANNEL PROTECT.	L-10 SODDING	SEE SHEET
		L.F.	C.Y.		S.Y.	
1-S	28+75	96	1.02	6	3	468



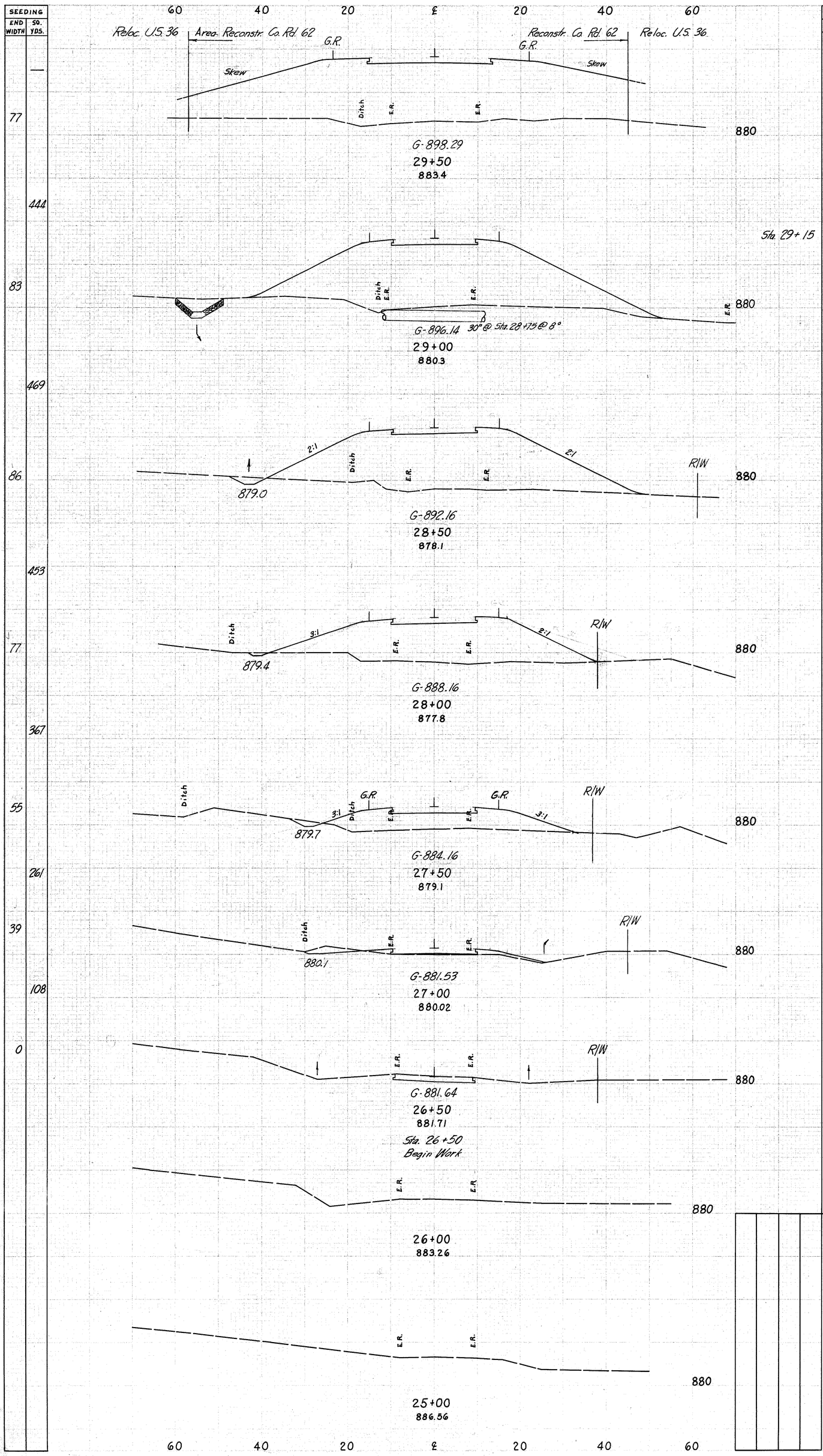
RECONSTR. C.R. 62 SUPERELEVATION TABLE

CURVE TO LEFT SUPER 0.020 FT/FT.

	STATION	LT. EDGE	℄	RT. EDGE
Transition	27+12.22	881.78	881.92	881.78
	+25	881.36	882.50	881.40
	+50	884.02	884.16	884.15
	+75	886.02	886.16	886.30
Full Super.	+75.55	886.06	886.20	886.34
	+82.22	886.56	886.74	886.92
	28+00	887.98	888.16	888.34
	+25	889.98	890.16	890.34
	+50	891.98	892.16	892.34
	+70	893.58	893.76	893.94
Transition	+75	894.01	894.16	894.31
	+76.67	894.15	894.29	894.43
	29+00	896.00	896.14	896.14
		SEE SHEET 65		

EXCAVATION	904 C.Y.
EMBANKMENT	6,171 C.Y.
EMBANKMENT + 6%	6,541 C.Y.

RECONSTRUCTION COUNTY ROAD 62



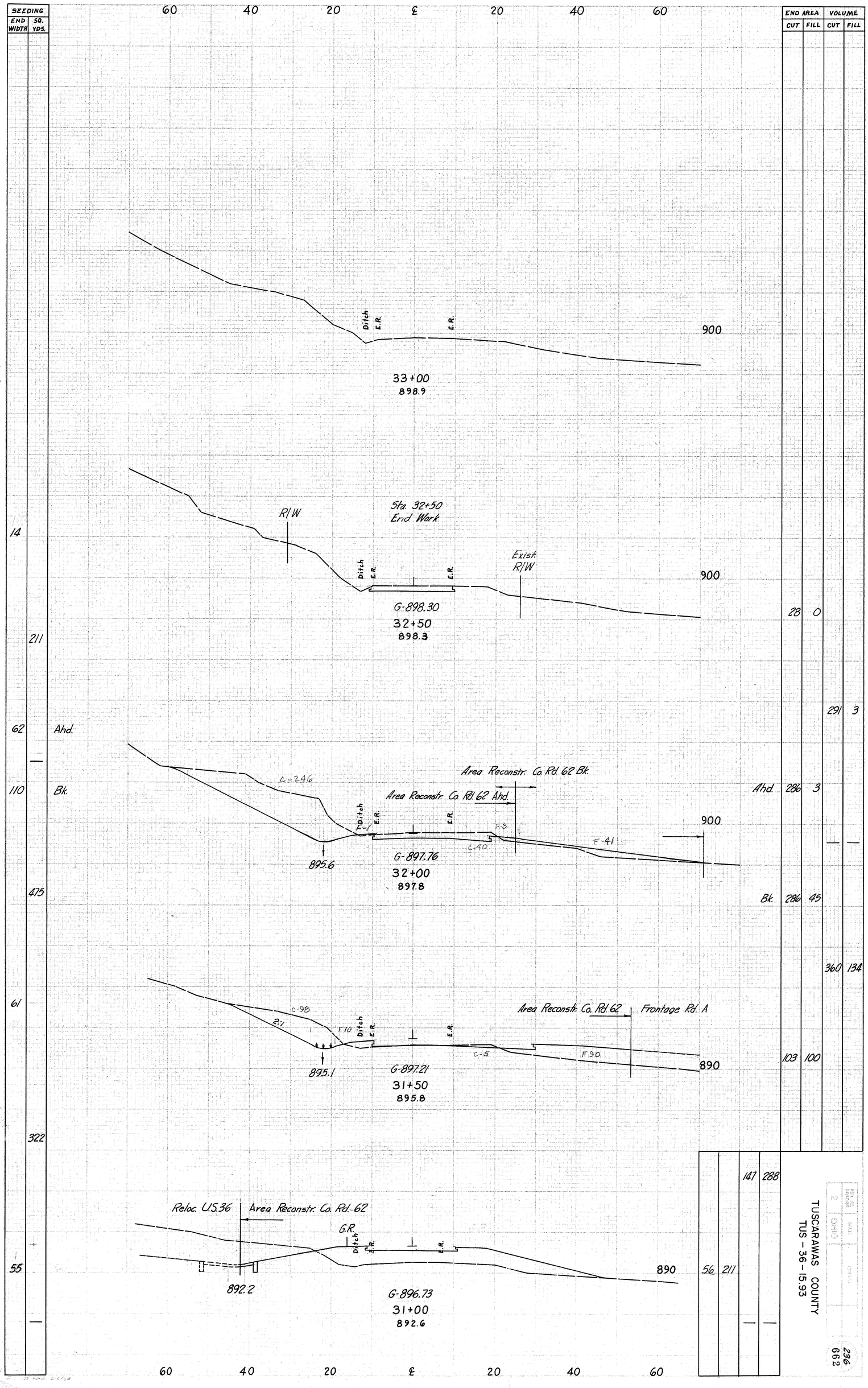
SEEDING END WIDTH	SEEDING SQ. YDS.
—	—
77	444
83	469
86	453
77	367
55	261
39	108
0	

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
—	1219	—	1976
19		11	
19	915	26	1580
9	791	10	1249
2	558	7	711
6	210	18	212
13	19	34	18
24	0		

Reconstr. County Road 62 Sta. 25+00 to 29+50

TUSCARAWAS COUNTY
TUS-36-15.93

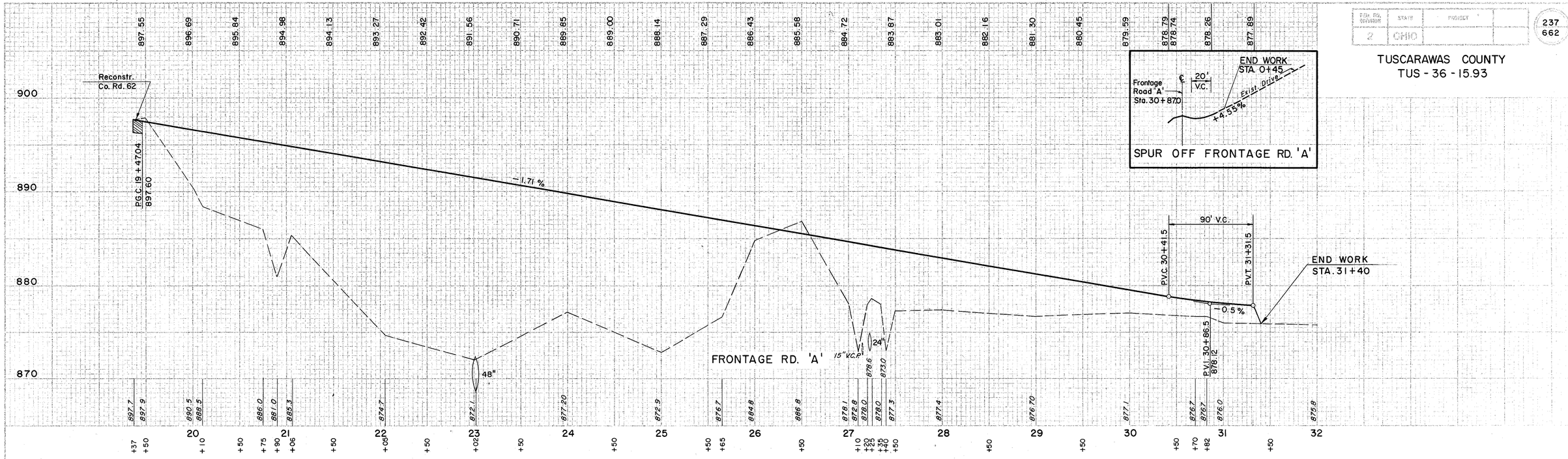
235
662

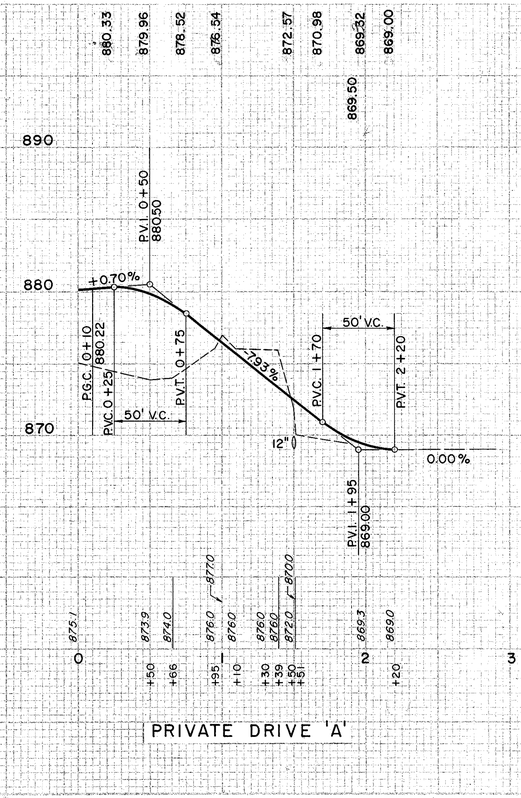


SEEDING
END WIDTH
SQ. YDS.
60 40 20 ℄ 20 40 60
END AREA
CUT FILL
VOLUME
CUT FILL
Ditch
E.R.
E.R.
900
33+00
898.9
R/W
Sta. 32+50
End Work
Exist. R/W
Ditch
E.R.
E.R.
900
G-898.30
32+50
898.3
14
211
28 0
291 3
62
Ahd.
110
Bk.
Area Reconstr. Co. Rd. 62 Bk.
Area Reconstr. Co. Rd. 62 Ahd.
C-246
Ditch
E.R.
E.R.
F-1
F-3
C-40
F-41
900
895.6
G-897.76
32+00
897.8
Ahd. 286 3
475
Bk. 286 45
360 134
61
C-98
2:1
F10
Ditch
E.R.
E.R.
Area Reconstr. Co. Rd. 62
Frontage Rd. A
C-5
F90
895.1
G-897.21
31+50
895.8
890
103 100
322
147 288
Reloc. U.S. 36
Area Reconstr. Co. Rd. 62
G.R.
Ditch
E.R.
E.R.
890
892.2
G-896.73
31+00
892.6
55
56 211
60 40 20 ℄ 20 40 60
TUSCARAWAS COUNTY
TUS-36-15.93
OHIO
2
236
662

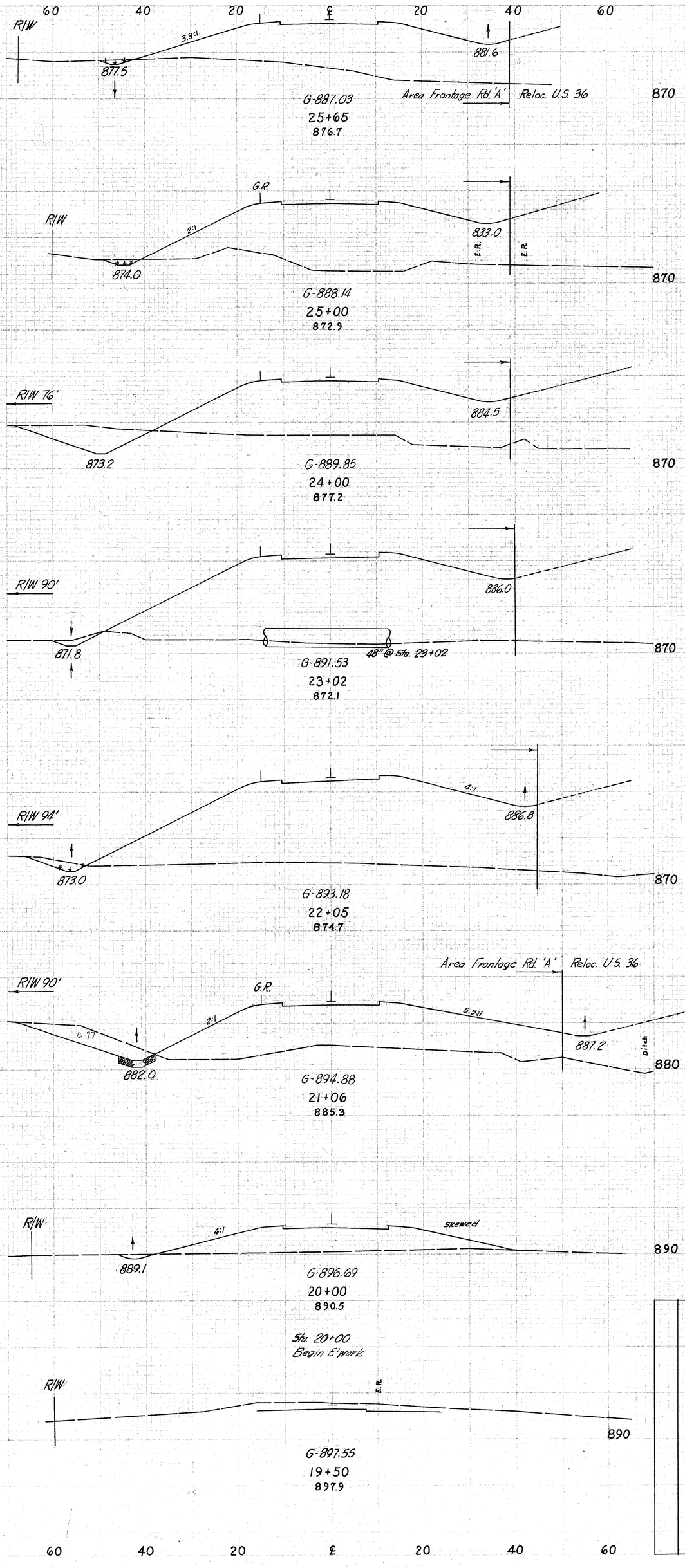
FED. RD. DIVISION	STATE	PROJECT		237 662
2	OHIO			

TUSCARAWAS COUNTY
TUS - 36 - 15.93





PROFILE-FRONTAGE RD. 'A' & PRIVATE DRIVE 'A'



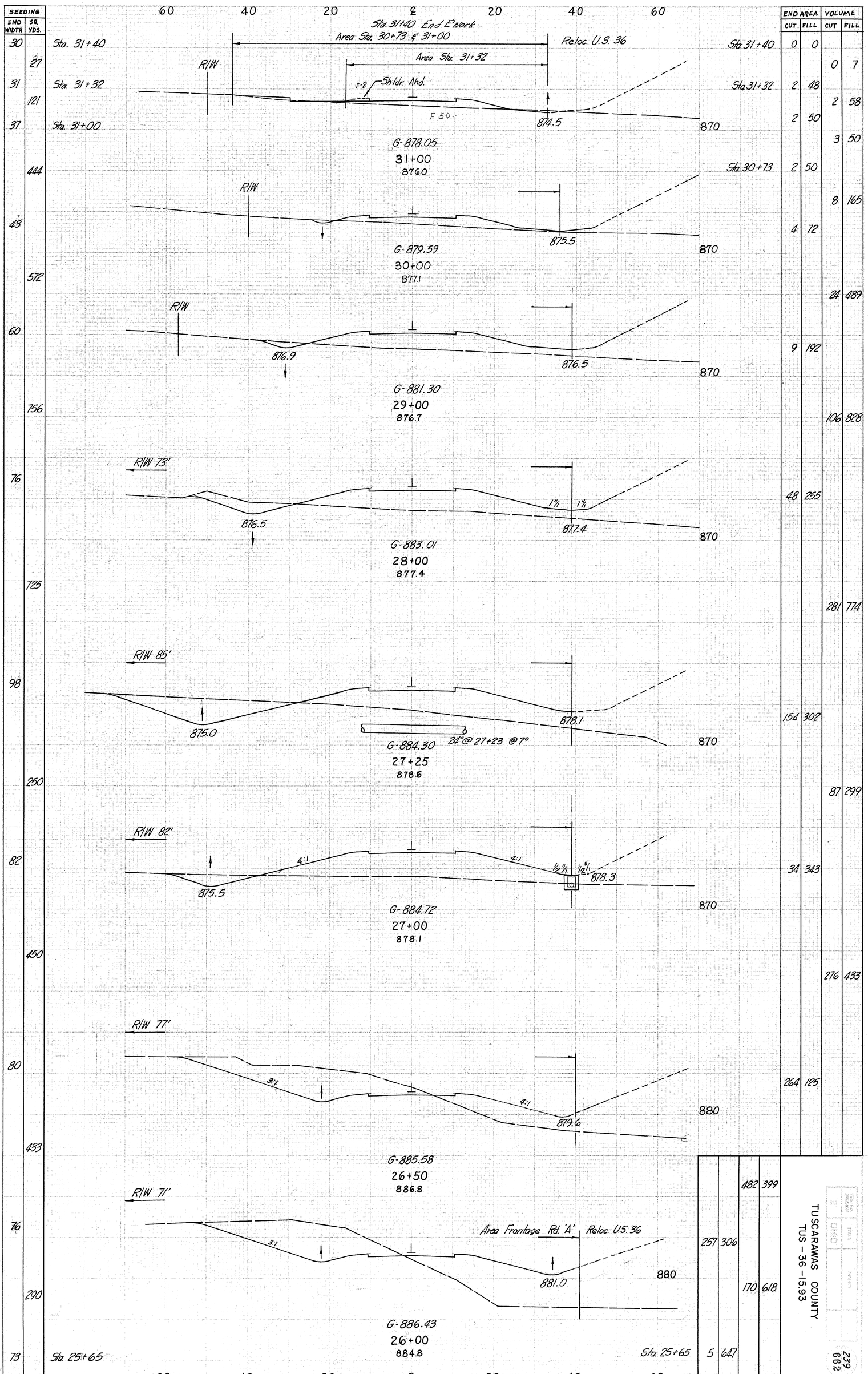
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
73'	520	5	647	14	1759
71	928	7	814	228	2946
96	1013	116	777	229	3778
90	997	10	1305	50	4803
95	1056	18	1369	174	3819
97	978	77	714	159	1959
69		4	284		

Frontage Road 'A'

Sta. 19+50 to 25+65

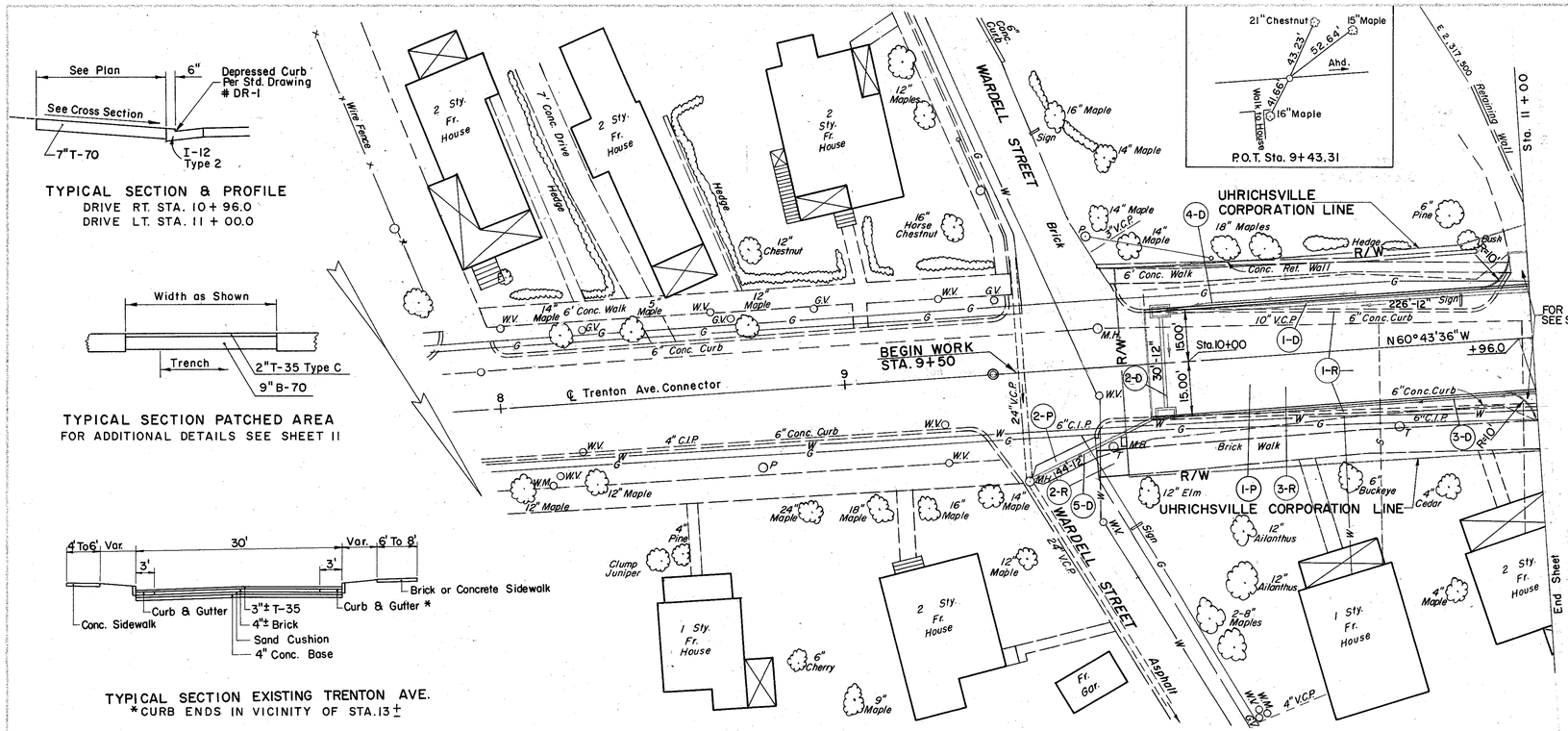
TUSCARAWAS COUNTY
TUS – 36 – 15.93

238
662


SEEDING
END WIDTH
SQ. YDS.
60 40 20 ℄ 20 40 60
Sta. 31+40 End E'work
Area Sta. 30+73 ℄ 31+00
Area Sta. 31+32
Reloc. U.S. 36
Sta. 31+40
Sta. 31+32
Sta. 31+00
R/W
F-8
Shldr. Ahd.
F 50
874.5
870
G-878.05
31+00
876.0
Sta. 30+73
875.5
G-879.59
30+00
877.1
876.9
876.5
G-881.30
29+00
876.7
R/W 73'
1%
876.5
877.4
G-883.01
28+00
877.4
R/W 85'
875.0
878.1
G-884.30
27+25
878.6
24"@ 27+23 @7°
R/W 82'
4:1
1½%
878.3
875.5
G-884.72
27+00
878.1
R/W 77'
3:1
879.6
880
G-885.58
26+50
886.8
R/W 71'
Area Frontage Rd 'A'
Reloc. U.S. 36
881.0
G-886.43
26+00
884.8
Sta. 25+65
END AREA
CUT FILL
VOLUME
CUT FILL
0 0
2 48
2 50
2 50
4 72
9 192
48 255
154 302
34 343
264 125
257 306
5 647
0 7
2 58
3 50
8 165
24 489
106 828
281 774
87 299
276 433
482 399
170 618
Frontage Road 'A'
Sta 25+00 to 34+00
TUSCARAWAS COUNTY
TUS-36-15.93
239
662

FED. AID DIVISION	STATE	PROJECT		240
2	OHIO			662

TUSCARAWAS COUNTY
TUS-36-15.93

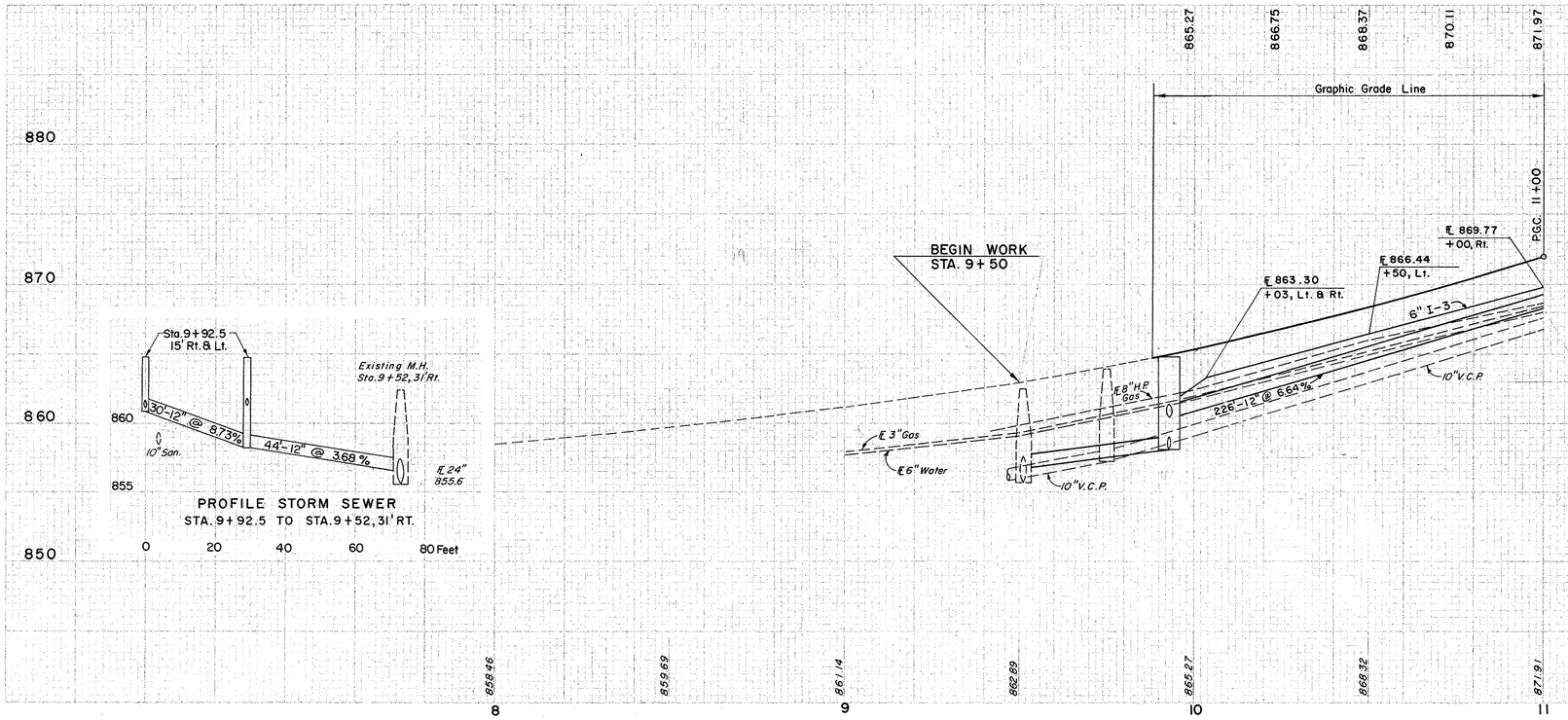


(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP SUB-GRADE	E-8 REMOVAL & DISPOSAL OF EXISTING PAV'T (RIGID)	E-8 REMOVAL & DISPOSAL OF EXISTING CURB	I-13 CONC. SIDE-WALK 4"
				S.Y.		L.F.	S.F.
1-R	9+88	11+00	Lt.&Rt.		362	223	
2-R	9+60	—	Rt.	5			72
3-R	9+88	33+89.52	Lt.	8,670			
	TOTALS			8,675	362	223	72

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE	B-70 PORT CEM. CONC. BASE COURSE 9"	I-12 CONC. CURB TYPE 6	I-12 COMB. CURB & GUTTER TYPE 2	I-22 SUBBASE GRADING A OR B	I-22 SUBBASE	T-30 BIT. PRIME COAT	T-31 BIT. MAT'L	T-35 #6 AGGR.	T-35 ASPH. CONC. SURF COURSE TYPE C	T-71 REINF. PORT. CEMENT CONC. PAV'T. 9"
				C.Y.	S.Y.	L.F.		C.Y.		GAL.		C.Y.		S.Y.
1-P	9+88	33+89.52		190			950	1,513	84	342	257	7		6,956
2-P	9+60	—	Rt.		5	10							1	
	TOTALS			190	5	10	950	1,513	84	342	257	7	1	6,956



(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 6" PIPE CLASS F-4	I-1 6" PIPE CLASS I-3	I-1 12" PIPE CLASS J-1	I-8 STD. #3 C.B.
				L.F.			EA.
1-D	9+92.5	12+17	Lt.			226	2
2-D	9+92.5	—	℄			30	1
3-D	9+92.5	11+00	Rt.	10	98		
4-D	9+92.5	10+50	Lt.	10	48		
5-D	9+51	9+92	Rt.			44	
	TOTAL			20	146	300	3

TRENTON AVE. CONNECTOR SUPERELEVATION TABLE

STATION	LT. EDGE	℄	RT. EDGE
10+50.85	868.22	868.43	868.22
+75	870.04	870.11	869.90
11+00	872.05	871.97	871.76
+23.65	874.01	873.80	873.59
+25	874.13	873.91	873.69
+50	876.15	875.79	875.43
+75	878.07	877.56	877.05
12+00	879.87	879.22	878.57
+07.83	880.42	879.73	879.04
+25	881.47	880.78	880.09
+50	882.92	882.23	881.54
+75	884.26	883.57	882.88
13+00	885.48	884.79	884.10
+25	886.61	885.92	885.23
+50	887.62	886.93	886.24
+75	888.53	887.84	887.15
14+00	889.33	888.64	887.95
	SEE SHEET 299		

Transition
Full Super 0.053'/'

EXCAVATION	=	160 C.Y.
EMBANKMENT	=	0 C.Y.
EMBANKMENT + 6 %	=	0 C.Y.

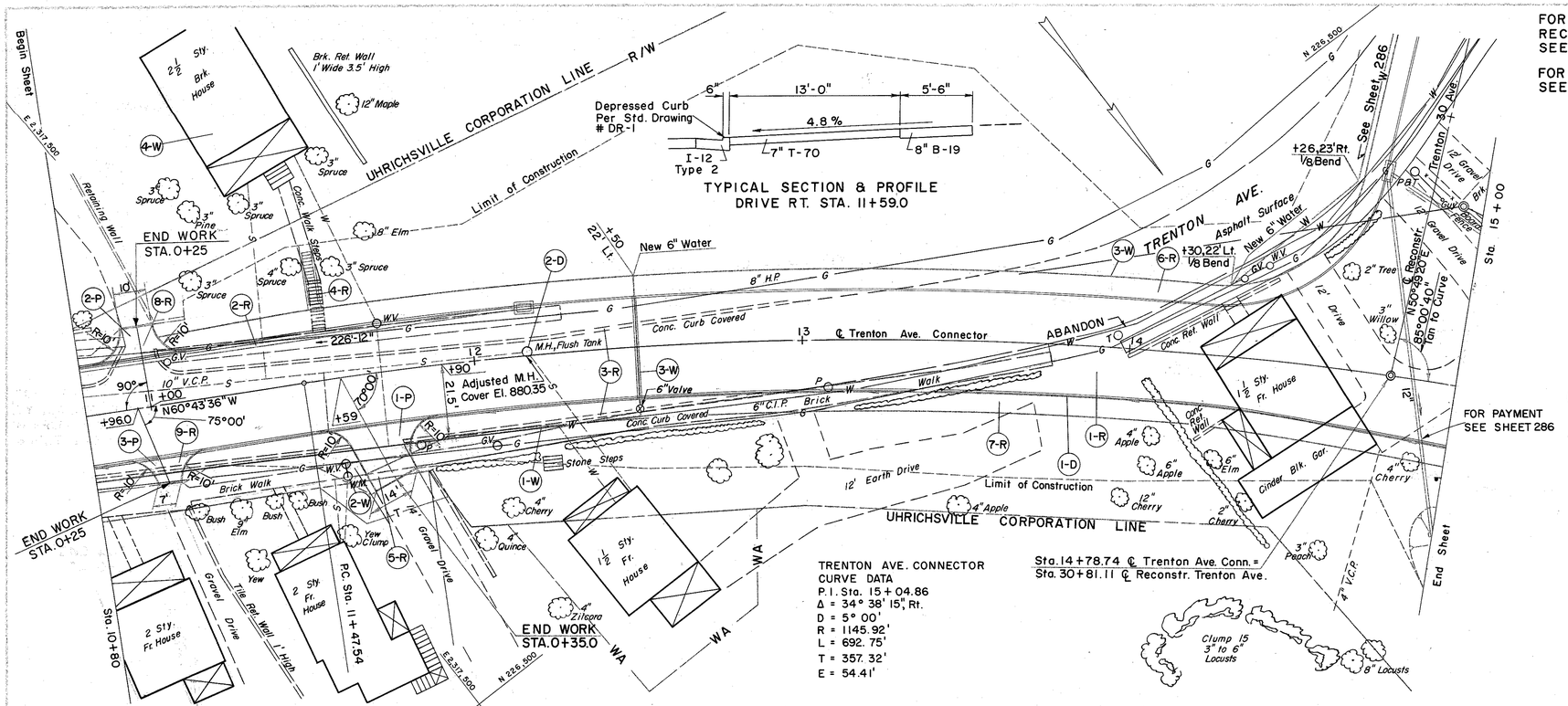
TRENTON AVE. CONNECTOR
STA. 8+00 TO STA. 11+00

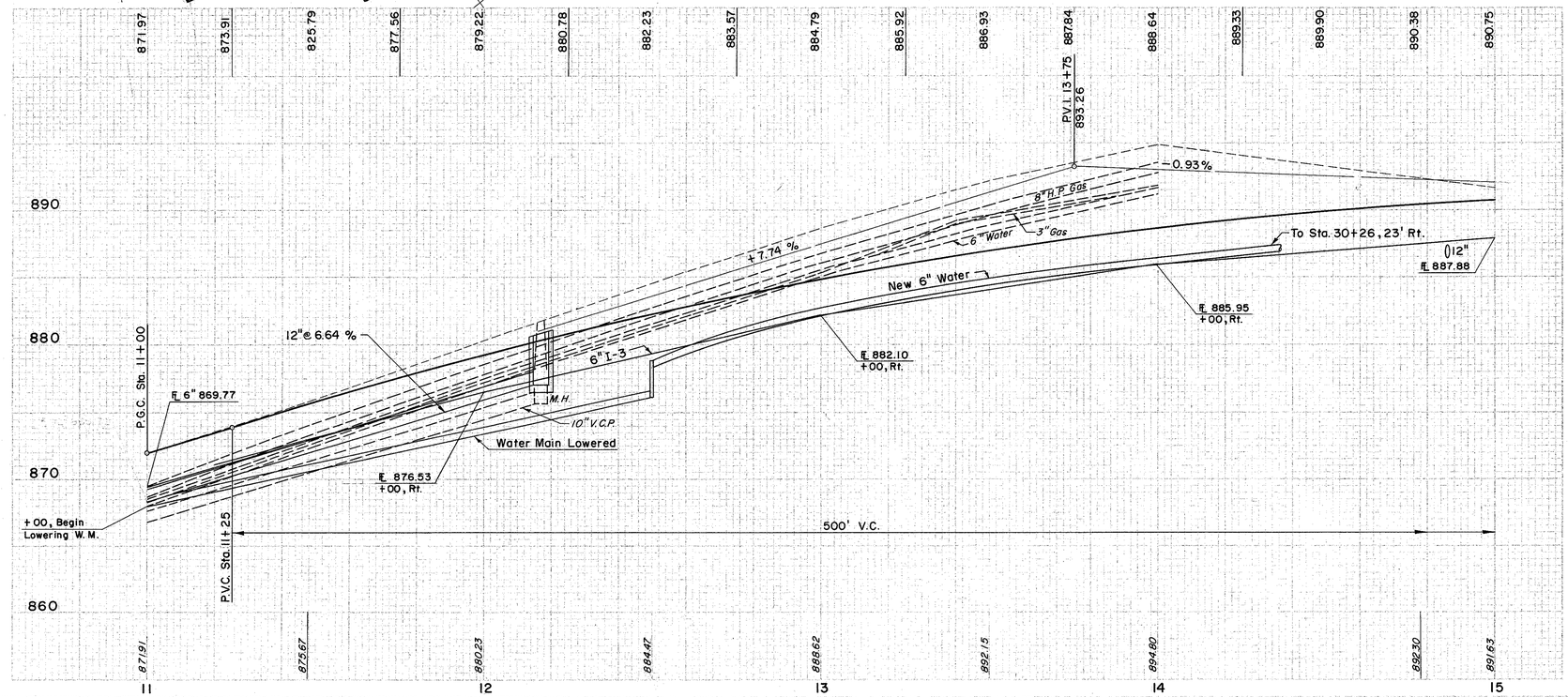
REG. NO.	STATE	PROJECT		241
2	OHIO			662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

FOR PLAN AND PROFILE
RECONSTR. TRENTON AVE.
SEE SHEET 286

FOR INTERSECTION DETAILS
SEE SHEET 300





P.I. Sta. 15+04.86
O.P.C. 124 A3 22 O.B.T. 729
18.59
51.11'
36.25'
8" Catalpa
Sunset 10ft In Conc. Fnd.
And.

CODE TYPE Y-060

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE C.Y.	T-70 PORT. CEM. CONC. PAV'T. 7" S.Y.
1-P	11+59	–	Rt.	6	27
2-P	11+00	–	Lt.	4	16
3-P	10+96	–	Rt.	2	9
		TOTAL		12	52

FOR PAYMENT SEE SHEET 286

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 6" PIPE CLASS I-3 L.F.	I-8 M.H. RECONSTR TO GRADE EA.
1-D	11+00	15+00	Rt.	394	
2-D	12+17	–	Lt.		1
		TOTAL		394	1

(W) WATER

REF. NO.	STATION FROM	STATION TO	SIDE	I-124 NEW WATER MAIN 6" A.C. L.F.	6" VALVES & BOXES EA.	6" BEND ⅛	WATER MAIN LOWERED 6" C.I. L.F.	NEW SERVICE BRANCH L.F.	SERVICE BRANCH LOWERED L.F.	W.M. & BOXES ADJ. TO GRADE EA.	I-124 12" CASING PIPE SEE M-6.61(4) L.F.
1-W	11+00	12+50	Rt.								
2-W	11+57	–	Rt.				150		5	1	31
3-W	12+50	14+30	Rt & Lt.	227	1	2		45			
4-W	11+33	–	Lt.								
		TOTAL		227	1	2	150	45	5	1	31

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. SUB-GRADE S.Y.	E-8 REMOVAL & DISPOSAL OF EXISTING PAV'T. (RIGID) S.Y.	SIDEWALK S.F.	CURB L.F.	I-13 CONC. SIDE-WALKS 4" S.F.	CONC. STEPS L.F.
1-R	11+00	14+00			881				
2-R	11+00	12+28	Lt.			615	368		
3-R	11+00	12+97	Lt & Rt.					8	68
4-R	11+55	–	Lt.			64		16	
5-R	11+59	–	Rt.	35				1,926	
6-R	11+06	14+24	Lt.					1,893	
7-R	11+82	15+00	Rt.						
8-R	11+00	–	Lt.	16					
9-R	10+96	–	Rt.	9					
		TOTAL		60	881	679	368	3,843	68

EXCAVATION	4,111 C.Y.
SHRINKAGE	2 C.Y.
EMBANKMENT 6 %	2 C.Y.

TRENTON AVE. CONNECTOR
STA. 11+00 TO STA. 15+00

MICROFILMED
FEB 22 1999

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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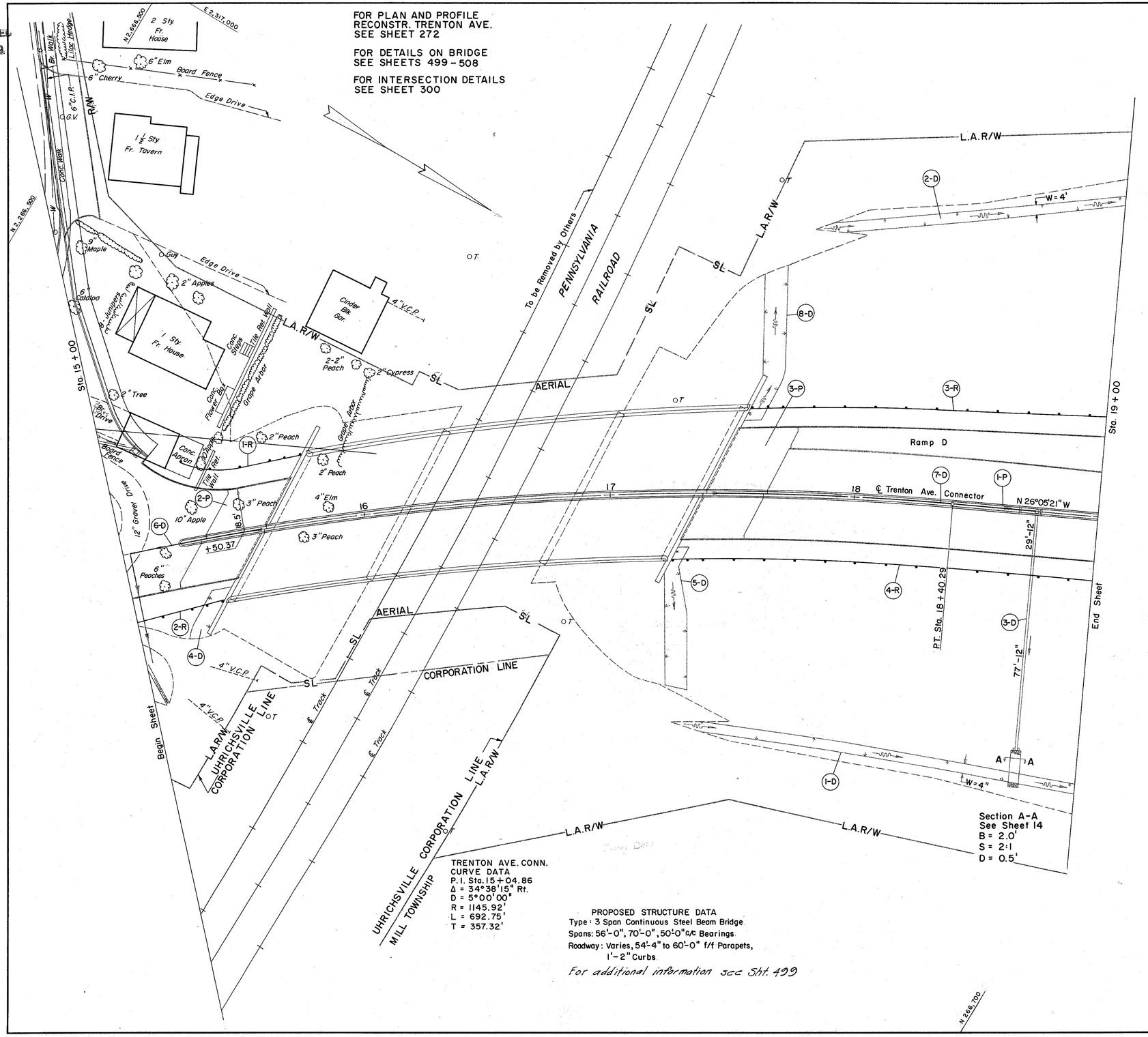
TUSCARAWAS COUNTY
TUS - 36 - 15.93

FOR PLAN AND PROFILE
RECONSTR. TRENTON AVE.
SEE SHEET 272

FOR DETAILS ON BRIDGE
SEE SHEETS 499 - 508

FOR INTERSECTION DETAILS
SEE SHEET 300



TRENTON AVE. CONN.
CURVE DATA
P.I. Sta. 15+04.86
Δ = 34°38'15" Rt.
D = 5°00'00"
R = 1145.92'
L = 692.75'
T = 357.32'

PROPOSED STRUCTURE DATA
Type: 3 Span Continuous Steel Beam Bridge
Spans: 56'-0", 70'-0", 50'-0" ℄ Bearings
Roadway: Varies, 54'-4" to 60'-0" f/f Parapets, 1'-2" Curbs

For additional information see Sht. 499

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	I-7 REINF. CONC. APPR. SLABS T = 13" S.Y.	I-12 CONC. CURB TYPE 2-A L.F.	I-21 PORT. CEM. CONC. MEDIAN S.Y.
L-P	15+25	30+05	℄	105	1,923	213*
2-P	15+33.86	15+38.68		127		
3-P	17+40.05	17+65.05		232	1,923	213
		TOTAL				

*Excluding Bridges & Approach Slabs

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP) L.F.
1-R	15+30	15+77	Lt.	50.0
2-R	14+98	15+36	Rt.	37.5
3-R	17+38	19+06	Lt.	150.0
4-R	17+25	19+02	Rt.	175.0
		TOTAL		412.5

(D) DRAINAGE

REF NO.	STATION FROM	STATION TO	SIDE	I-1 PIPE CLASS 6" I-3 J-1 L.F.	8" F-4 L.F.	12" F-4 SEC. M-64(c) L.F.	I-1 PIPE CLASS 12" F-4 SEC. M-64(c) J-1 L.F.	I-2 MASONRY C.Y.	I-5 CL. F-4 12½"-25° BEND SEC. M-64(c) EA.	I-8 STD. # 2-8 INLET EA.	I-10 DUMPED ROCK CHANNEL PROTECT C.Y.	I-10 SODDING FOR SPECIAL BERM & SLOPE PROTECT S.Y.	I-10 SODDING S.Y.
1-D	17+24	19+00	Rt.									72	
2-D	17+80	19+00	Lt.									45	
3-D	18+75	—	℄ Ent.							1	4		16
4-D	15+40	—	Rt.				77	29	0.23	2			54
5-D	17+25	—	Rt.										
6-D	15+03	15+57	℄	54									64
7-D	17+22	18+75	℄	123			10						
8-D	17+65		Lt.										
		TOTAL		177	36		10	77	0.29	2	4	117	134

EXCAVATION	=	183 C.Y.
EMBANKMENT	=	25,146 C.Y.
EMBANKMENT + 6 %	=	26,655 C.Y.

TRENTON AVE. CONNECTOR
STA. 15 + 00 TO STA. 19 + 00

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
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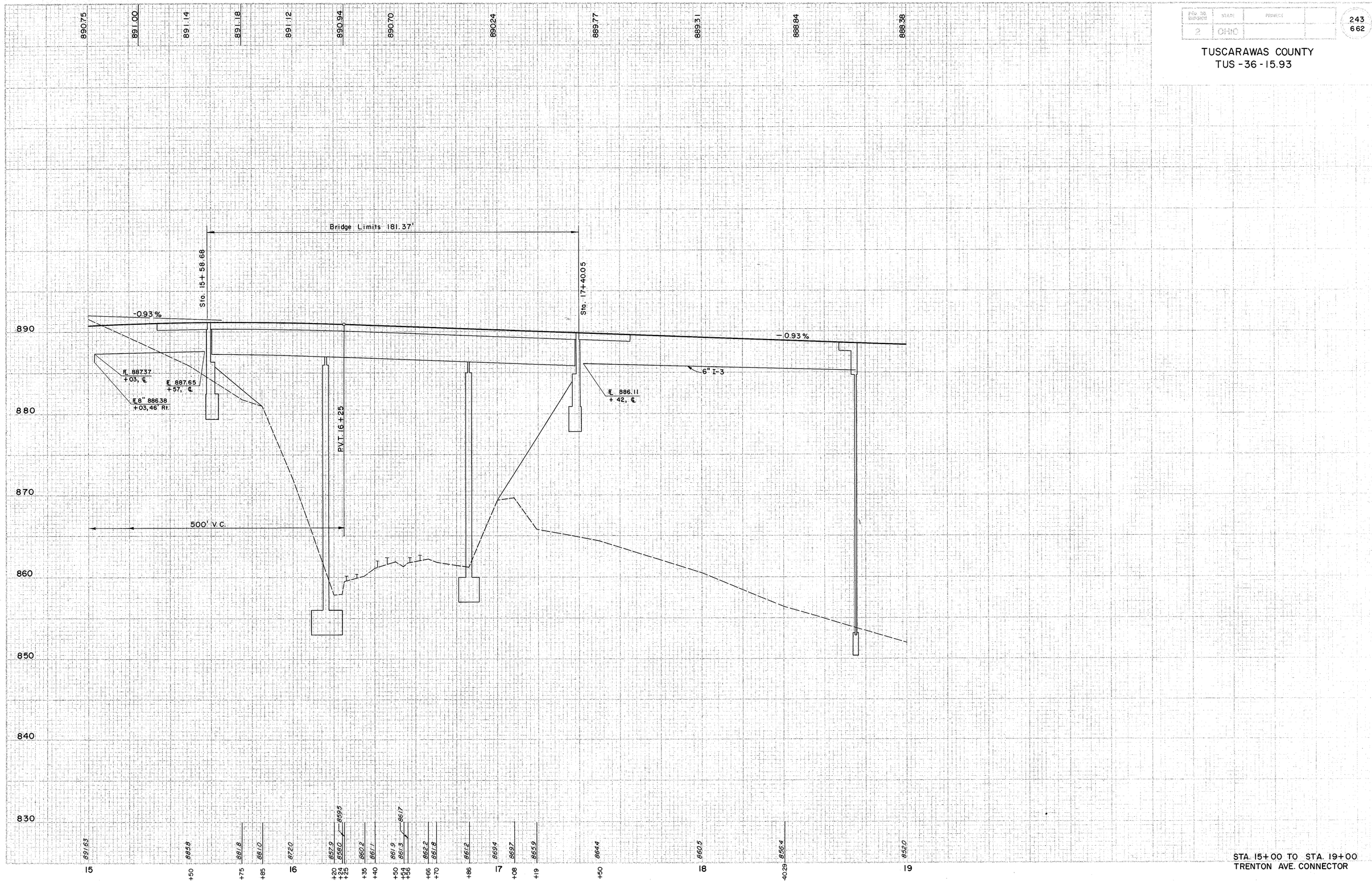
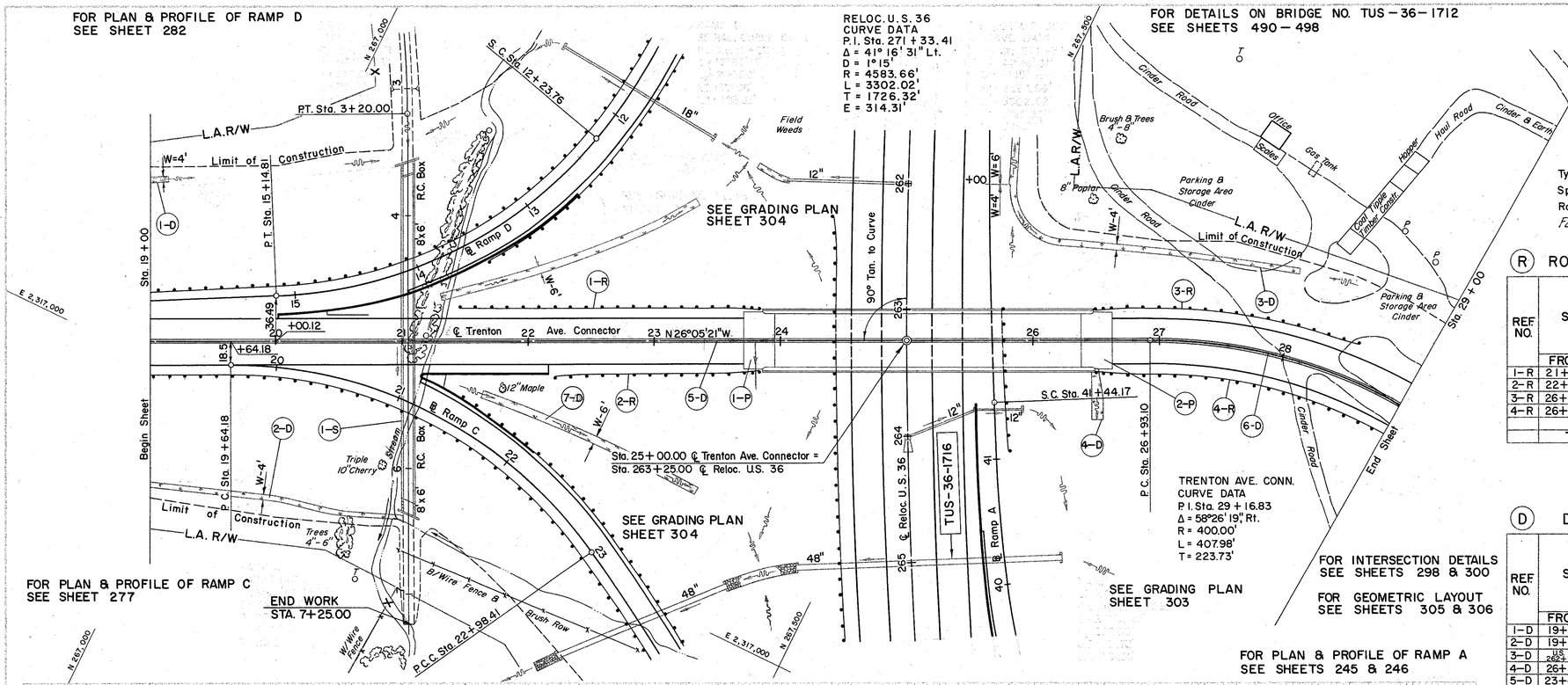


STA. 15+00 TO STA. 19+00
TRENTON AVE. CONNECTOR

FED. AID DIVISION	STATE	PROJECT		244 662
2	OHIO			

TUSCARAWAS COUNTY
TUS-36-15.93



(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP) L.F.
1-R	21+46	23+84	Lt.	237.5
2-R	22+21	23+84	Rt.	162.5
3-R	26+51	28+53	Lt.	212.5
4-R	26+51	29+57	Rt.	287.5
	TOTAL			900.0

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 6" PIPE CLASS F-4	I-1 6" PIPE CLASS I-3	I-1 6" PIPE CLASS J-1	I-1 8" PIPE CLASS F-4 SEC. M-64(c)	I-5 CL. J-1 6"-90° TEE	L-10 SODDING FOR SPECIAL BERM & SLOPE PROTECT	L-10 SODDING
				L.F.				EA.	S.Y.	
1-D	19+00	19+15	Lt.							7
2-D	19+00	21+00	Rt.							89
3-D	US 36 262+00	28+00	Lt.							114
4-D	26+50		Rt.						40	
5-D	23+40	23+96	℄		56	28	10	1		
6-D	26+40	30+00	℄	10	350					
7-D	21+64	23+34	Rt.							124
	TOTAL			10	406	28	10	1	40	334

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	I-7 REINF. CONC. APPR. SLABS T=13" S.Y.
1-P	23+71.50	23+96.50		125
2-P	26+38.25	26+63.25		125
	TOTAL			250

(S) STRUCTURE

REF. NO.	STATION	E-2 EXCAV. FOR STRUCT. C.Y.	E-3 CHANNEL EXCAV. C.Y.	S-1 CONC. FOR STRUCT. C.Y.	S-4 REINF. STEEL LBS.	SPECIAL VITRIFIED LINER PLATES S.F.	L-10 SODDING S.Y.	SEE SHEET
1-S	21+05	410	582	437	82,596	1,980	12	477

EXCAVATION	931 C.Y.
EMBANKMENT	102,008 C.Y.
EMBANKMENT x 6	108,128 C.Y.

TRENTON AVE. CONNECTOR
STA. 19+00 TO STA. 29+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-15.93

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE	B-21 WATER-PROOFED AGGR. BASE COURSE	I-12 CONCRETE CURB TYPE 2-A	I-12 CONCRETE CURB TYPE 6	I-12 CONCRETE CURB TYPE 7	I-12 CONCRETE CURB TYPE 8	I-21 PORT. CEM. CONC. MEDIAN	I-22 SUBBASE	I-22 SUBBASE GRADING A OR B	T-30 BIT. PRIME COAT	T-31 BIT. MAT'L.	T-31 #6 AGGR.	T-71 REINF. PORT. CEM. CONC. PAV'T. 9"
				C.Y.		L.F.				S.Y.	C.Y.		GAL.		C.Y.	S.Y.
1-P	0+10.00 Pvt. Dr.'A'	2+20		52												
2-P	Ramp A 33+89.52	253+75		370	51	99		60	197	30	227	517	620	540	15	2,836
3-P	Ramp B 33+89.52	282+84.38		262	7	86	235			30	279	493	466	360	10	2,760
4-P	30+80 Trenton Ave.	33+89.52				624				99		14				
	TOTAL			684	58	809	235	60	197	159	506	1,024	1,086	900	25	5,596

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 12" PIPE CL. B-1 SEC. M-6.8 (b)	I-1 15" PIPE CL. E-1 SEC. M-6.8 (a)	I-1 8" PIPE CL. F-4 SEC. M-6.4 (c)	I-1 6" PIPE CL. I-3	I-1 12" PIPE CL. J-1	I-1 24" PIPE CL. J-1 SEC. M-6.8 (b)	I-2 MASONRY	I-5 CL. I-3 6"-60° BEND	I-8 STD. # 2-2 A C.B.	I-8 STD. # 2-6 INLET	I-10 DUMPED ROCK CHANNEL PROTECT.	L-10 SODDING
				L.F.						C.Y.		EA.		C.Y.	S.Y.
1-D	30+00 Trenton Ave.	℄ & Rt.						66		0.23			1	2	
2-D	1+50 Private Dr. 'A'	℄		38						0.46				1	
3-D	33+70 Trenton Ave.	Lt.												3	
4-D	35+75 Ramp B 37+50	Lt.			172							1			
5-D	35+75 Ramp B	℄							60	0.41		1			
6-D	Trenton Ave. 30+04	Ramp B 33+10	℄ & Rt.			10	508				1				
8-D	Trenton Ave. 32+63	Ramp A 40+10	Rt.												331
9-D	35+39 Ramp A	37+16 Lt.													110
	TOTAL			38	172	10	508	66	60	1.10	1	2	1	6	441

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. SUB-GRADE	I-9 STONE UNDER-DRAINS NO. 2	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP)	L-6 ROADSIDE CLEANUP
				S.Y.		L.F.	UNITS
1-R	Ramp A 41+07	262+99	Rt. & Lt.			112.5	
5-R	Ramp A 33+89.52	253+75		4,709	826		
6-R	Ramp B 33+89.52	282+84.38		3,995	378		
7-R	268+62	271+71	Lt.				32
	TOTAL			8,704	1,204	112.5	32

(S) STRUCTURE

REF. NO.	STATION	I-1 48" PIPE CL. A-1 SEC. M-6.6(a) 1/3 VIT. LINED	I-2 MASONRY	I-10 DUMPED ROCK CHANNEL PROTECT.	L-10 SODDING	E-3 CHANNEL EXCAV.	SEE SHEET
		L.F.	C.Y.		S.Y.	C.Y.	
1-S	32+63 Trenton Ave.	120	1.72	115	8	46	480

EXCAVATION	=	1,563 C.Y.
EMBANKMENT	=	12,370 C.Y.
EMBANKMENT + 6 %	=	13,112 C.Y.

TRENTON AVE. CONN
STA. 29+00 TO STA. 33+89.52

EXCAVATION	=	827 C.Y.
EMBANKMENT	=	15,098 C.Y.
EMBANKMENT + 6 %	=	16,004 C.Y.

RAMP A

EXCAVATION	=	34,473 C.Y.
EMBANKMENT	=	535 C.Y.
EMBANKMENT + 6 %	=	567 C.Y.

RAMP B

EXCAVATION	=	850 C.Y.
EMBANKMENT	=	244 C.Y.
EMBANKMENT + 6 %	=	259 C.Y.

PRIVATE DRIVE 'A'

PRIVATE DRIVE 'A'
FOR TYPICAL SECTION SEE SHEET 11
Use 8" of B-19 only
Cross Slope 3/8 "/.

PRIVATE DRIVE 'A' CURVE DATA
P.I. Sta. 0+92.00
Δ = 40°44'12" Rt.
R = 150.00'
L = 106.65'
T = 55.69'

PRIVATE DRIVE 'A' CURVE DATA
P.I. Sta. 1+82.96
Δ = 45°00'00" Lt.
R = 75.00'
L = 58.90'
T = 31.07'

Section A-A
See Sheet 14
B.W. = 2.0'
S = 2:1, 4:1
D = 0.5'

FOR PLAN & PROFILE OF
FRONTAGE ROAD 'B' SEE SHEET 289

FOR PROFILE OF
PRIVATE DRIVE 'A' SEE SHEET 237
RAMPS A & B SEE SHEET 246

FOR GEOMETRIC LAYOUT SEE SHEET 305

FOR INTERSECTION DETAILS
TRENTON AVE. CONN. AND RAMP A SEE SHEETS 298-299
RAMP B SEE SHEET 299

GRADING PLAN
SEE SHEET 303

FOR L-9 SEEDING QUANTITY
SEE SHEET 116

FOR DETAILS ON BRIDGE
NO. TUS-36-1712
SEE SHEETS 490-498

FOR PLAN & PROFILE OF
RELOC. U.S. 36
SEE SHEETS 43-46

TRENTON AVE. CONNECTOR
STA. 29+00 TO STA. 33+89.52
TRENTON AVE. INTERCHANGE
RAMPS A & B & PRIVATE DRIVE 'A'

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

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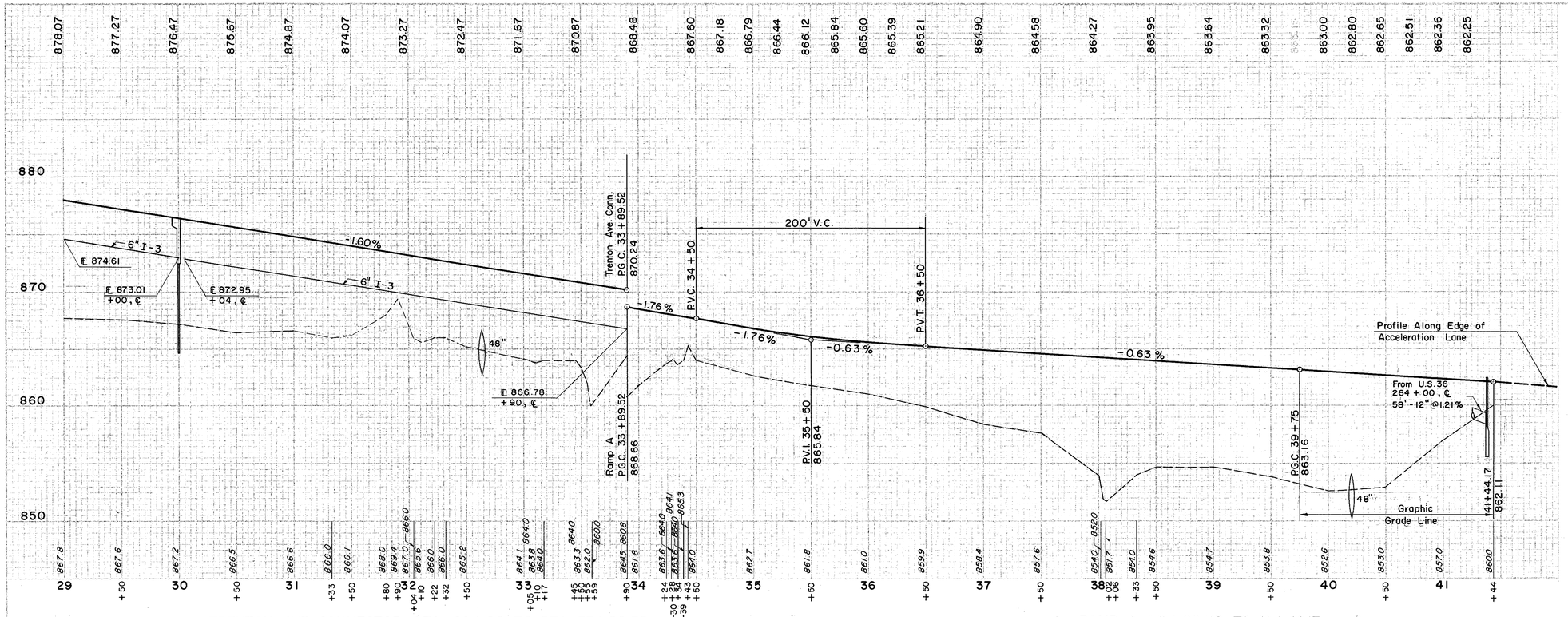
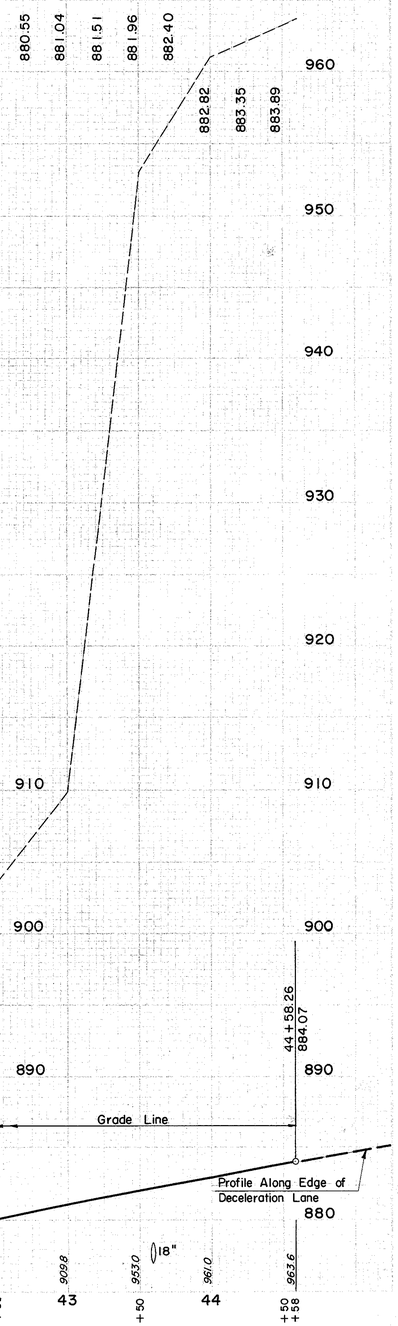
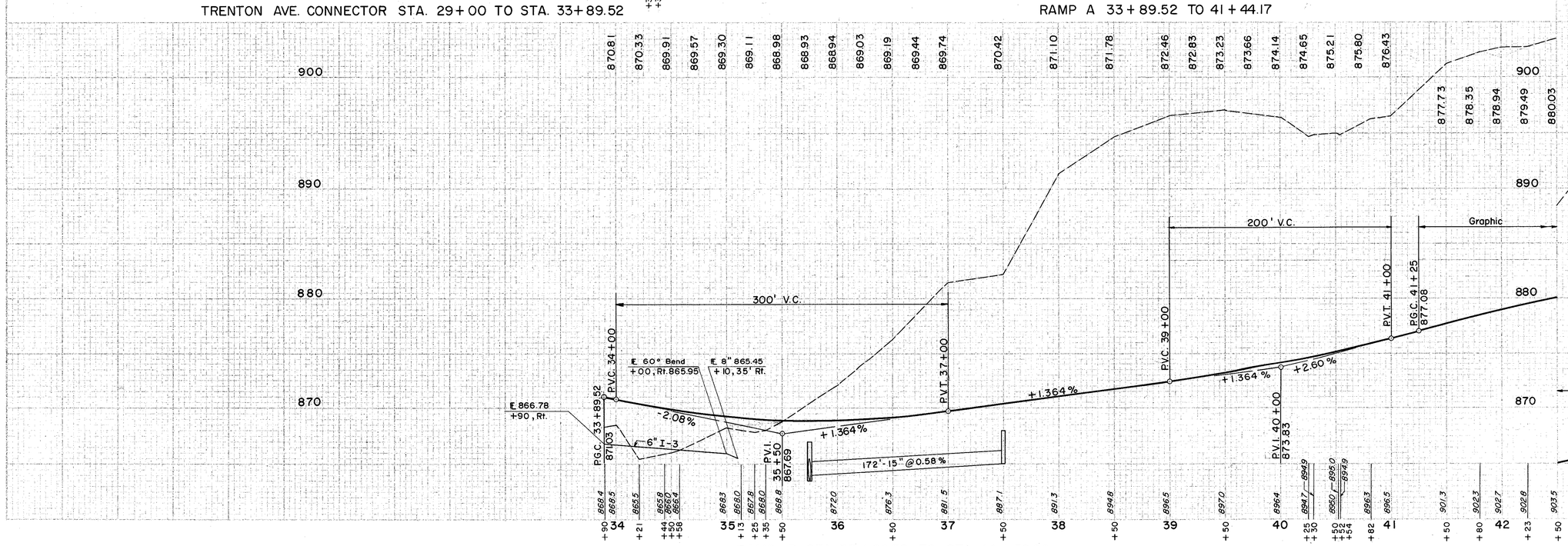
TUSCARAWAS COUNTY
TUS – 36 – 15.93







PROFILES TRENTON AVE. CONN.
AND RAMPS A & B

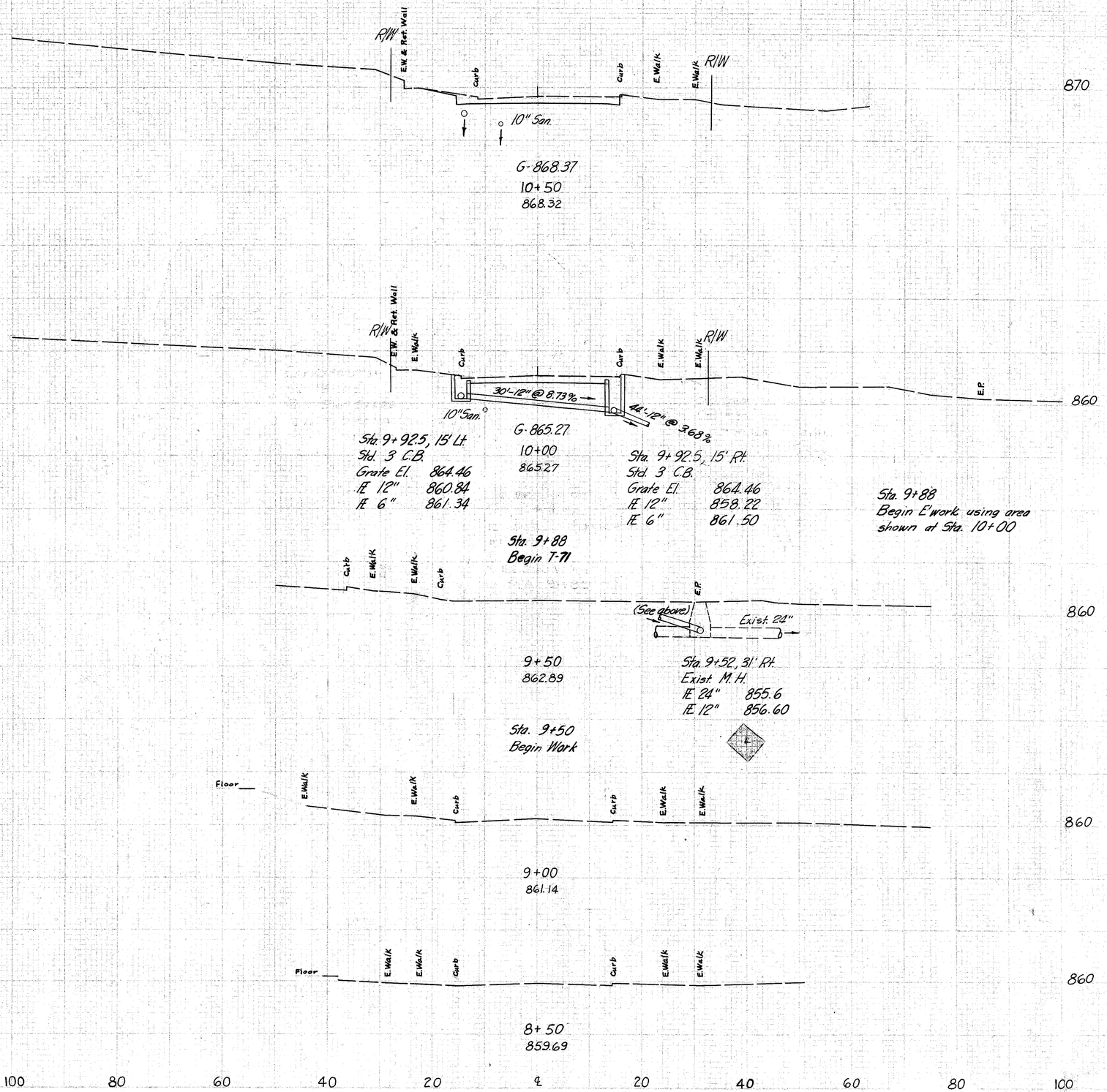
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING	
END WIDTH	SQ. YDS.
13	
	77
15	
	10
0	Sta. 9+88

END AREA		VOLUME	
CUT	FILL	CUT	FILL
42			
		76	
40			
		18	
40			
Sta. 9+88			

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



Trenton Ave. Conn. Sta. 8+50 – 10+50

SEEDING	
END WIDTH	SQ. YDS.
	43
	219
	32
	119
	13
	72
	13

FED. AID PROJECT	STATE	PROJECT	248 662
2	OHIO		

TUSCARAWAS COUNTY
TUS-36-15.93

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

Sta. 12+17, 15' Lt.
Std. 3 C.B.
Grate El. 880.64
IE 12" 875.85

R/W 2:1 E.Walk. E.Walk. Curb Curb E.Walk. E.Walk. R/W Ret. Wall

Lowered 6" W.M.

G-879.22
12+00
880.23

End Work
Sta. 0+35
+4.8%
Profile Drive Rt., Sta. 11+59.0

Ho. Fl. El. 891.76

R/W E.Walk. E.Walk. Curb Curb E.Walk. E.Walk. R/W Floor Elevation

Steps Lt.
Sta. 11+55
Tread = 1'-0"
Rise = 0'-6"

10" San.

Lowered 6" W.M.

G-875.61
11+47.54
875.67

Ret. Wall R/W End Work
Sta. 0+25
+7.0%
Curb E.Walk. E.Walk. R/W

Profile Drive Lt., Sta. 11+00.0

10" San.

6" W.M.

End Work
Sta. 0+25
+0.5%

G-871.97
11+00
871.91

Profile Drive Rt., Sta. 10+96.0

Sta. 10+50

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

END AREA		VOLUME	
CUT	FILL	CUT	FILL
120			
140			
		236	
103	1		
870			
		116	2
870			
29	1		
		66	
42	—		

Sta. 10+50

Trenton Ave. Conn. Sta. 11+00 - 12+00

SEEDING	
END WIDTH	SQ. YDS.
104	492
73	322
43	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	515		763
	309		416
	140		

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

R/W 120'

1¾:1

E.P.

E.P.& Walk

E. Walk

R/W

880

New 6" W.M.

G- 884.79
13+00
888.62

R/W

2:1

Curb

Curb
E. Walk

E. Walk

R/W

Ho. Fl. El. 886.50

3:1

880

31'-12" Casing

New 6" W.M.

G- 882.23
12+50
884.47

Sta. 12+00

Sta. 12+00

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

Trenton Ave. Conn. Sta. 12+50 – 13+00

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

250
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING END WIDTH	SEEDING SQ. YDS.
28	—
56	250
44	400
100	567
104	

Sta. 14+45 Ahd.

Sta. 14+45 Bk.

R/W 174'

E.P.

E.P.

E.Walk

E.Walk

Ret. Wall

R/W

2%

New 6" W.M.

890

G-888.64
14+00
894.80

R/W 158'

1¾:1

E.P.

E.P.

E.Walk

E.Walk

R/W

New 6" W.M.

880

G-886.93
13+50
892.15

Sta. 13+00

Sta. 13+00

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

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
387			754
427			872
515			

Trenton Ave. Conn. Sta. 13+50 – 14+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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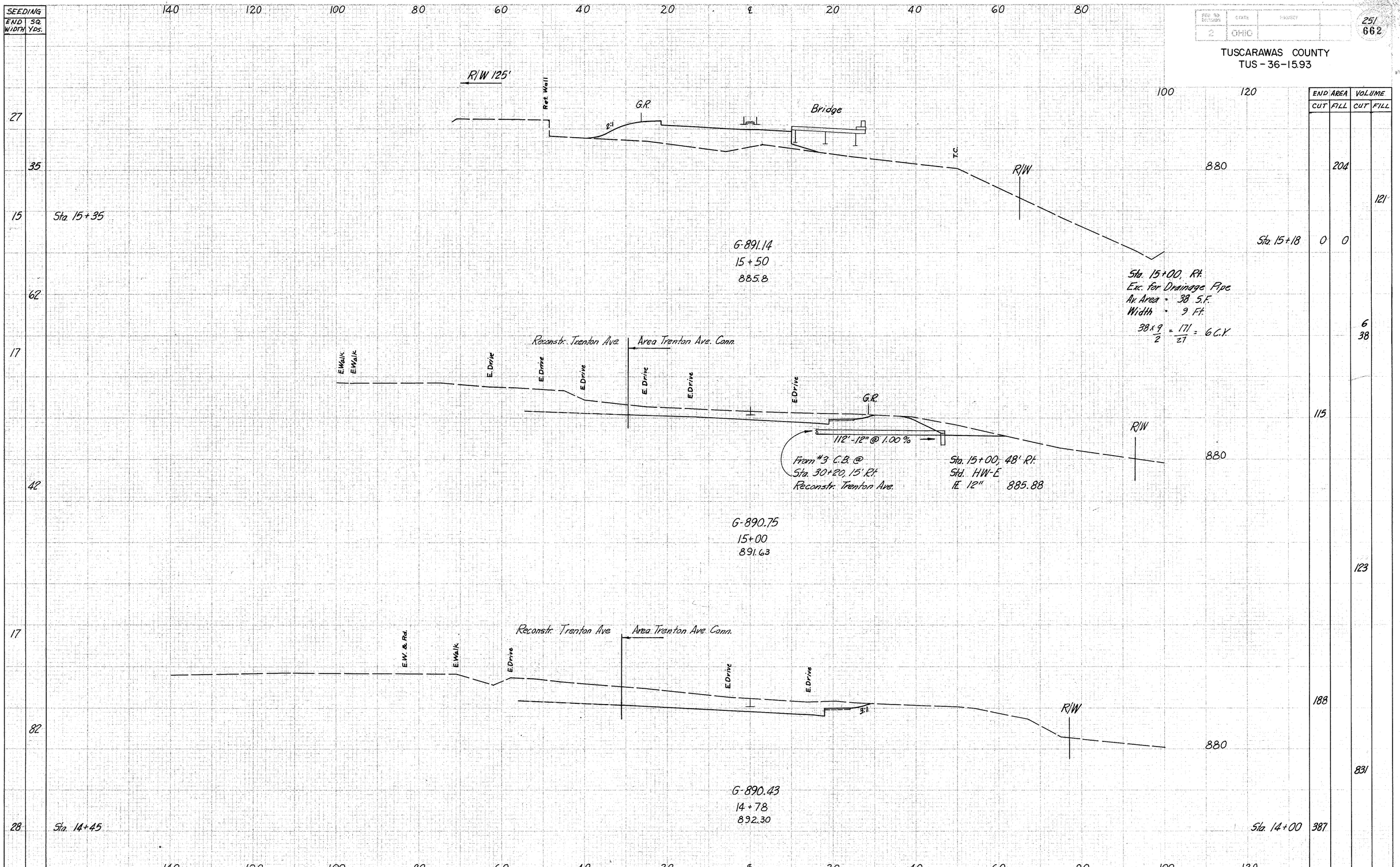
662

TUSCARAWAS COUNTY
TUS-36-15.93



Trenton Ave. Conn. Sta. 14+78 - 15+50

PLOTTED
10/18/61

SEEDING	
END WIDTH	SQ. YDS.
0	Sta. 15+95
38	
34	
85	
27	Sta. 15+50

FED. RD. DIV. NO.	STATE	PROJECT	
2	OHIO		

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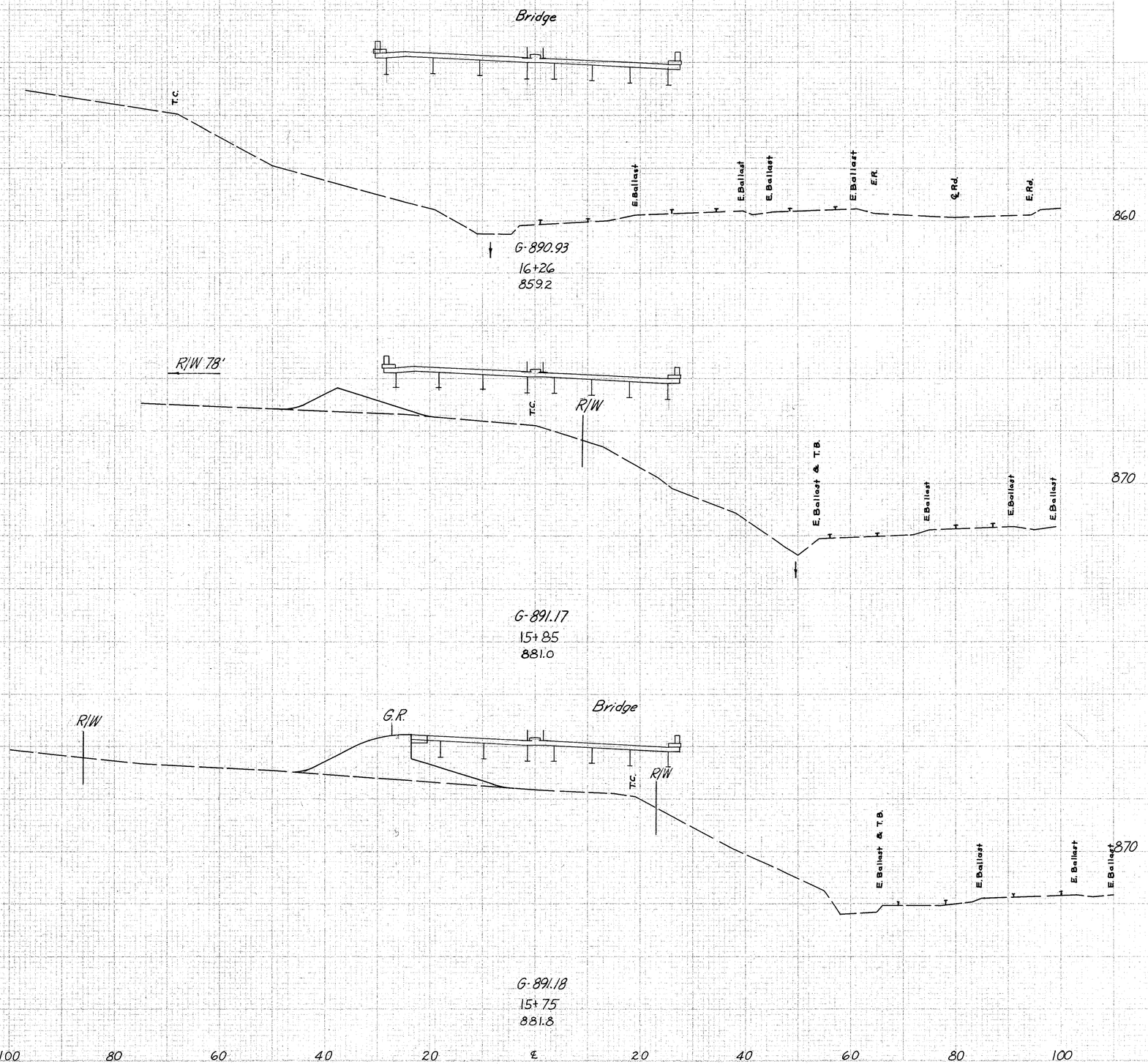
662

TUSCARAWAS COUNTY
TUS-36-15.93



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
120				
860				
Sta. 15+97		0		
				13
		58		
870				
				39
		152		
870				
				165
Sta. 15+50		204		

PLOTTED
10/18/61

Trenton Ave. Conn. Sta. 15+75 – 16+26

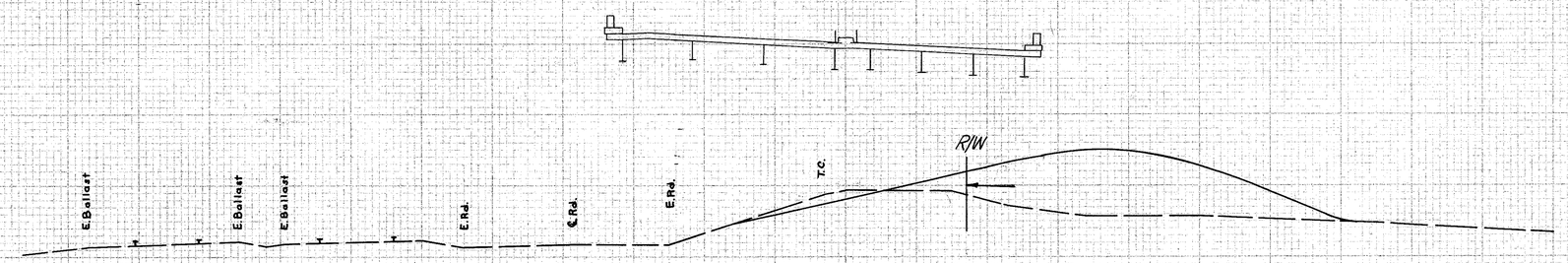
FED. RD. DIV.NO.	STATE	PROJECT		253
2	OHIO			662

TUSCARAWAS COUNTY
TUS-36-15.93

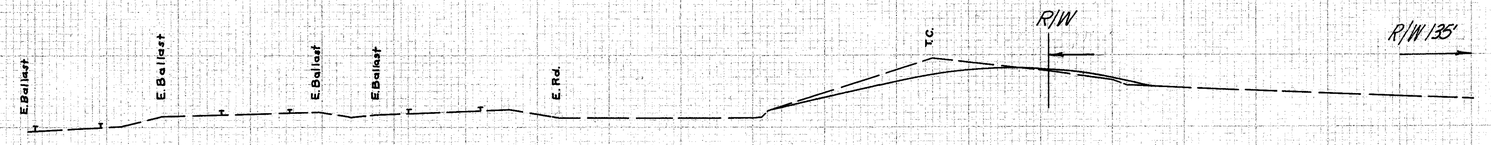
SEEDING	
END WIDTH	SQ. YDS.
50	
	65
34	
	11
0	

Sta. 16+80

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



G-890.24
17+00
869.4



G-890.37
16+86
861.2

Bridge



G-890.70
16+50
861.9

END AREA		VOLUME	
CUT	FILL	CUT	FILL
20	346		
		15	91
38	5		
		10	
0			

Sta 16+72

860 860 860

Trenton Ave. Conn. Sta. 16+50 – 17+00

PLOTTED 9/
10/15/61

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

254
662

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING END WIDTH	SEEDING SQ. YDS.

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

255
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING END WIDTH	SEEDING SQ. YDS.
236	
	1486
212	
	922
200	
	942
139	

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

G.R. Ramp D G.R.

R/W 157'

C-18

851.3

G-888.38
19+00
852.0

Sta. 18+75, ℄
Std. 2-8 Median Inlet
Window El. 888.45
IE 12" 884.78
IE 6" 885.28

IE 25° Bend 883.99

29'-12" @ 2.73%

70'-12" @ 50.00%

7'-12" @ 1.00%
15'

Sta. 18+75, 98' Rt.
Std. HW-E
IE 12" 852.90

R/W 147'

C-24

852.0

850

R/W 150'

C-8

856.7

IE 25° Bend
852.97

R/W

C-10

855.2

850

G-888.93
18+40.29
856.4

G.R. Ramp D G.R.

Sta. 18+00

Sta. 17+88

R/W

R/W 146'

C-11

1/2":1

860.5

C-6

860

857.4

R/W

Sta. 17+50

G-889.31
18+00
860.5

Sta. 17+50

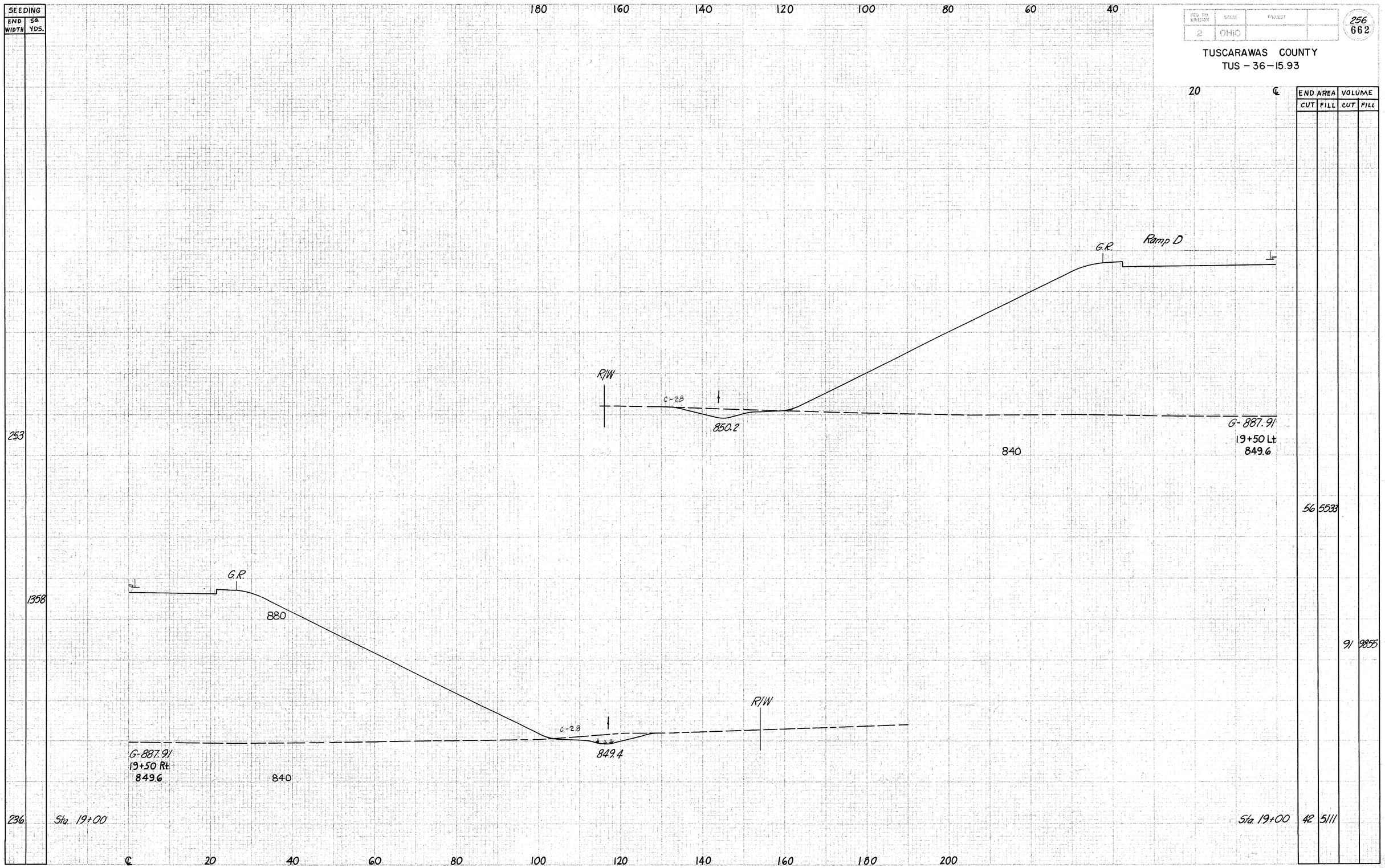
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	42	5111	
			66 10329
18	4230		
			26 5855
17	3618		
		5	
6	—		5853
		8	
5	2703		

Trenton Ave. Conn. Sta. 18+00 – 19+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

256
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93



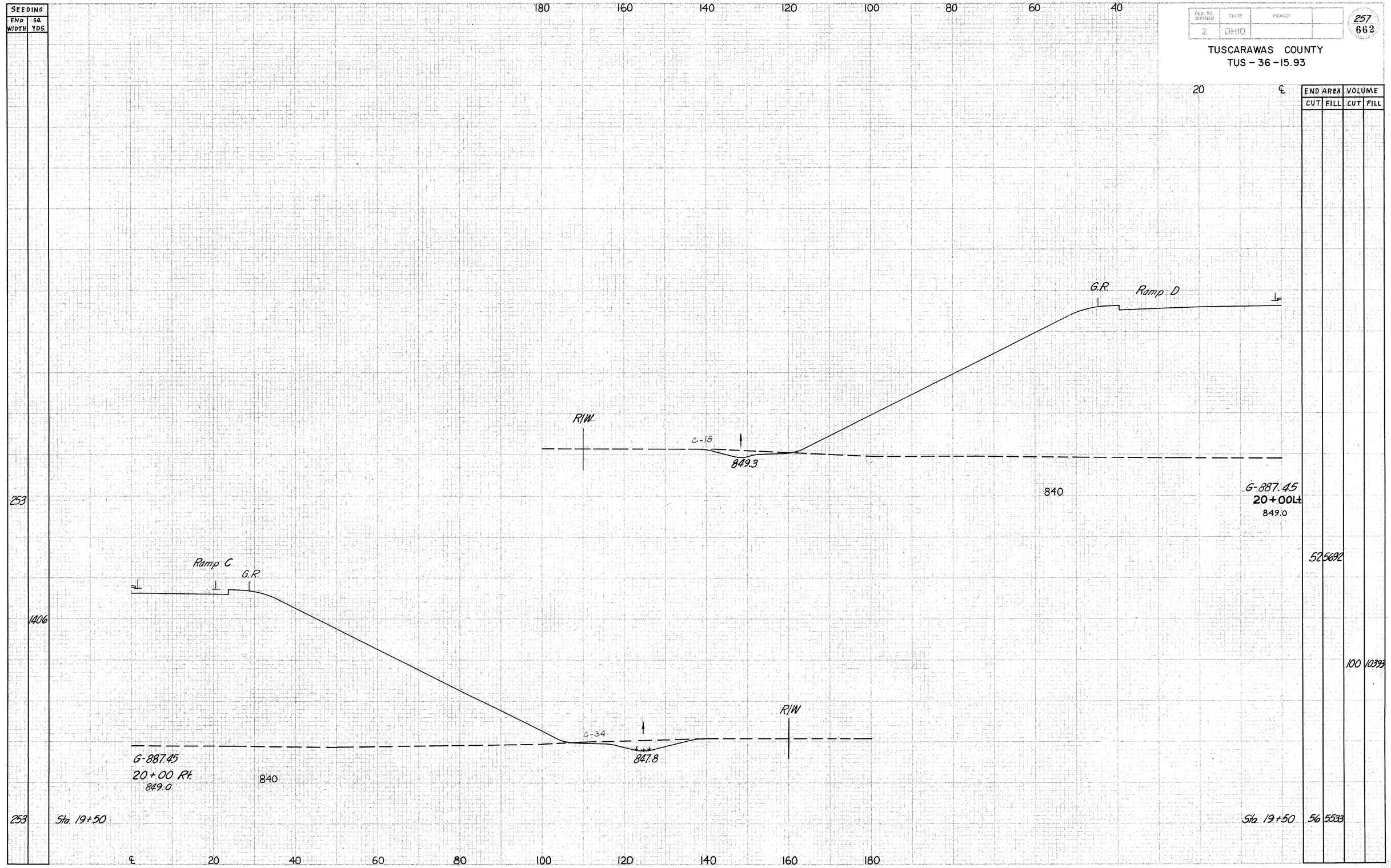
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
56	5533		
		91	9855
42	5111		

Trenton Avenue Connector Sta. 19 + 50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

257
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93



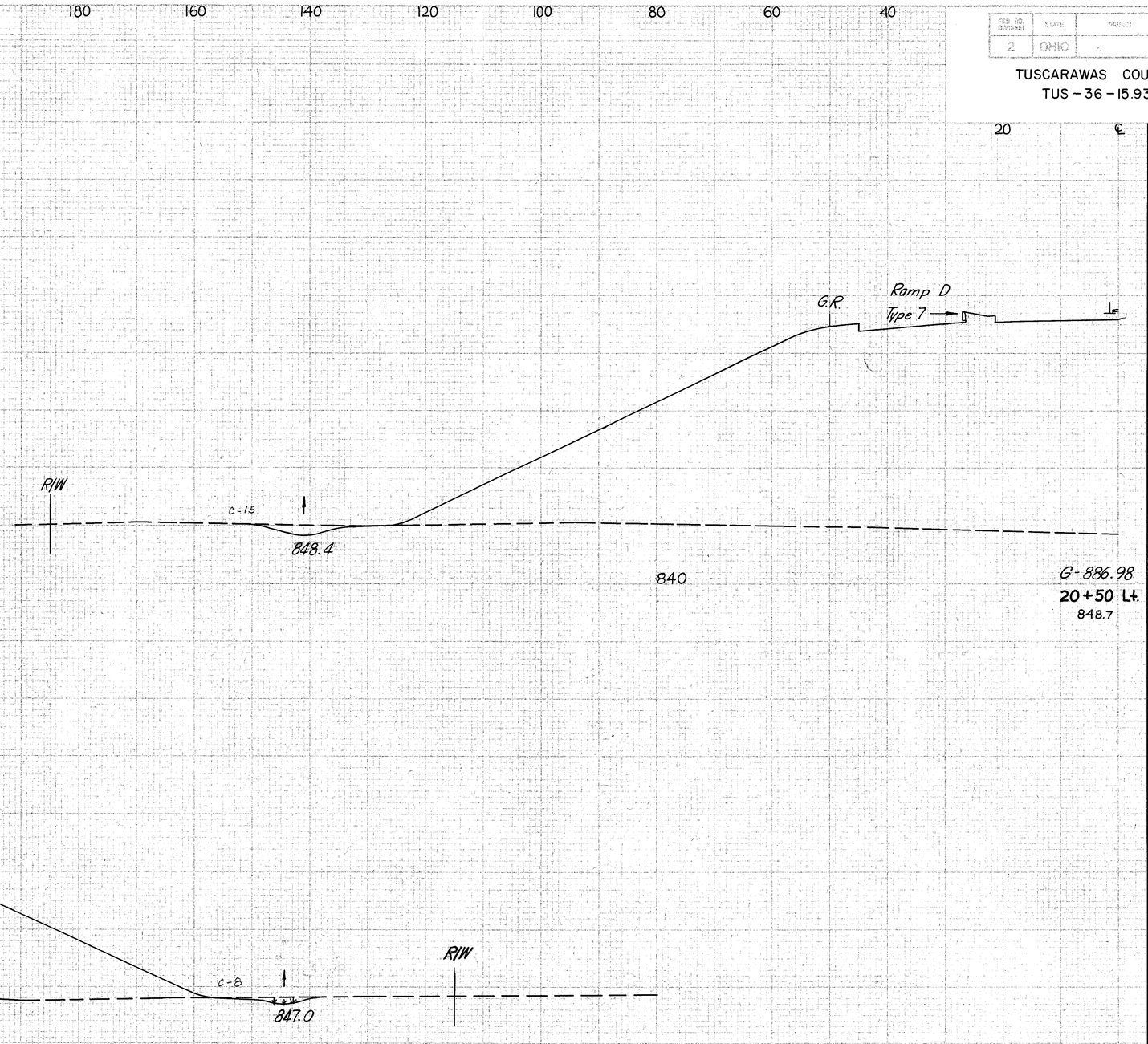
Trenton Ave. Connector Sta. 20+00

FED. AID PROJECT	STATE	PROJECT	
2	OHIO	-	

258
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING	
END WIDTH	SQ. YDS.
253	
	1406
253	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
23	6160		
		69	10974
52	5692		

Sta. 20+00

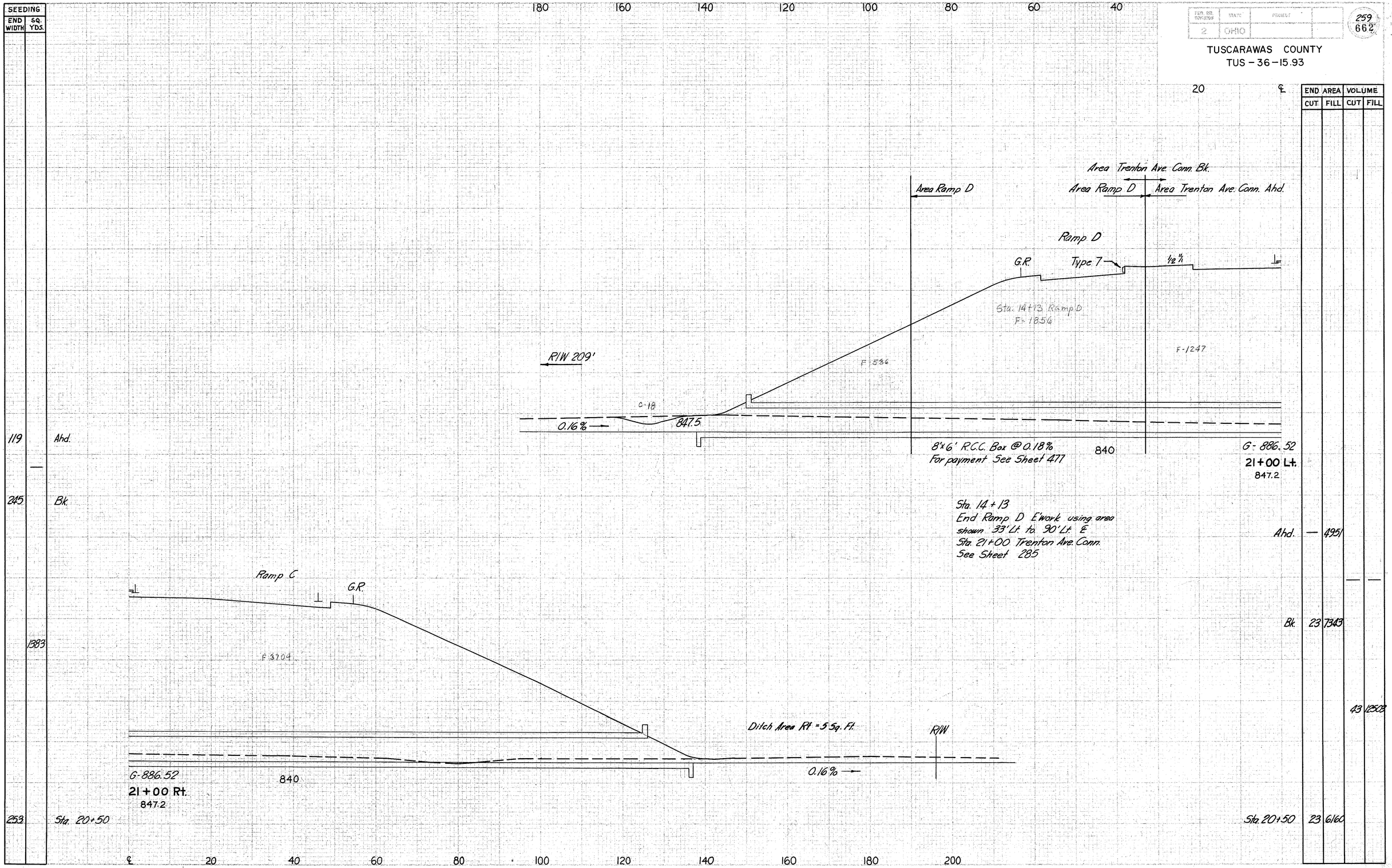
Sta. 20+00

Trenton Ave. Connector Sta. 20 + 50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

259
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Ahd.	—	4951		
Bk.	23	7343		
			43	12503
Sta. 20+50	23	6160		

Trenton Ave. Connector Sta. 21 + 00

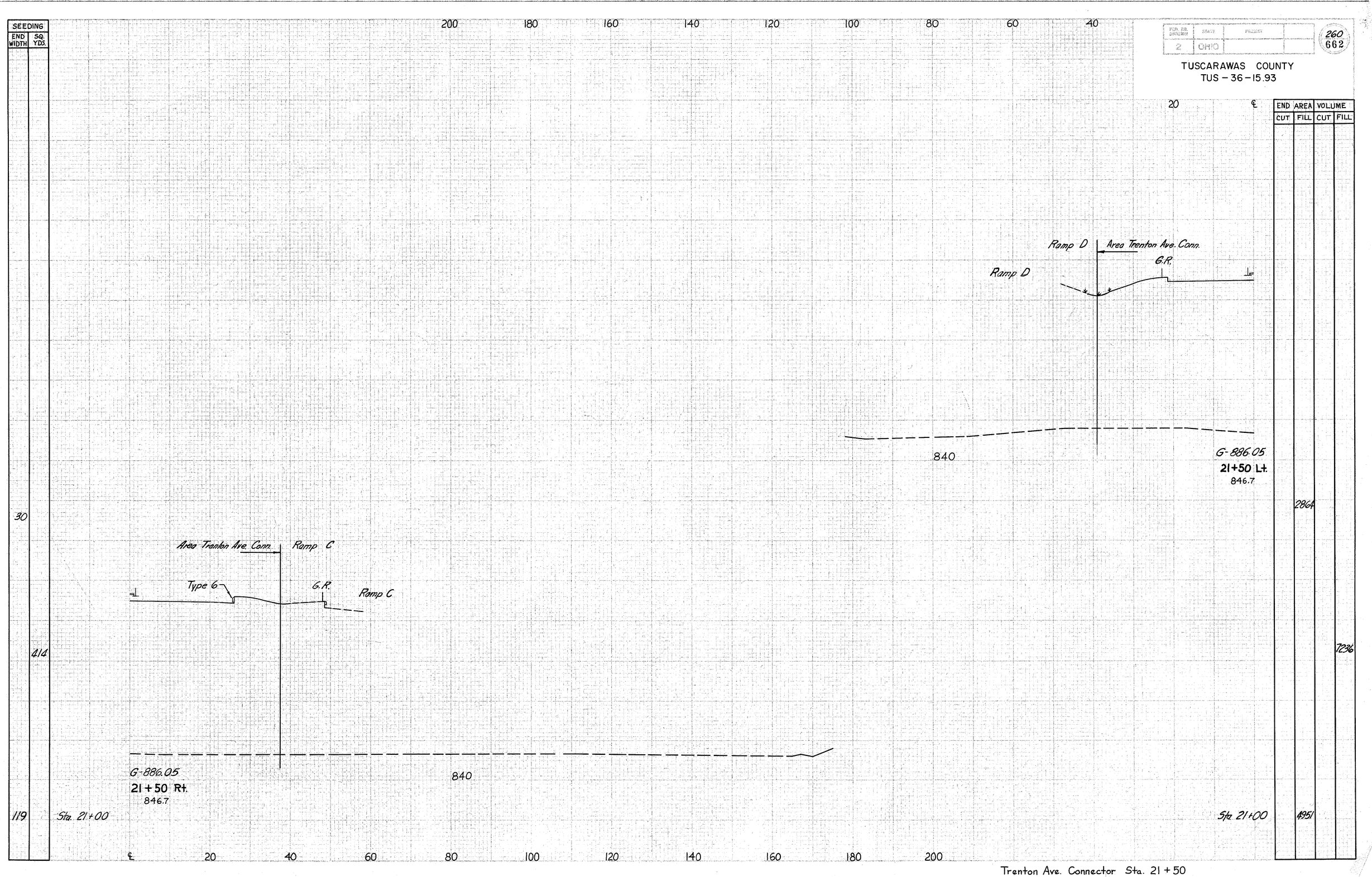
FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

260
662

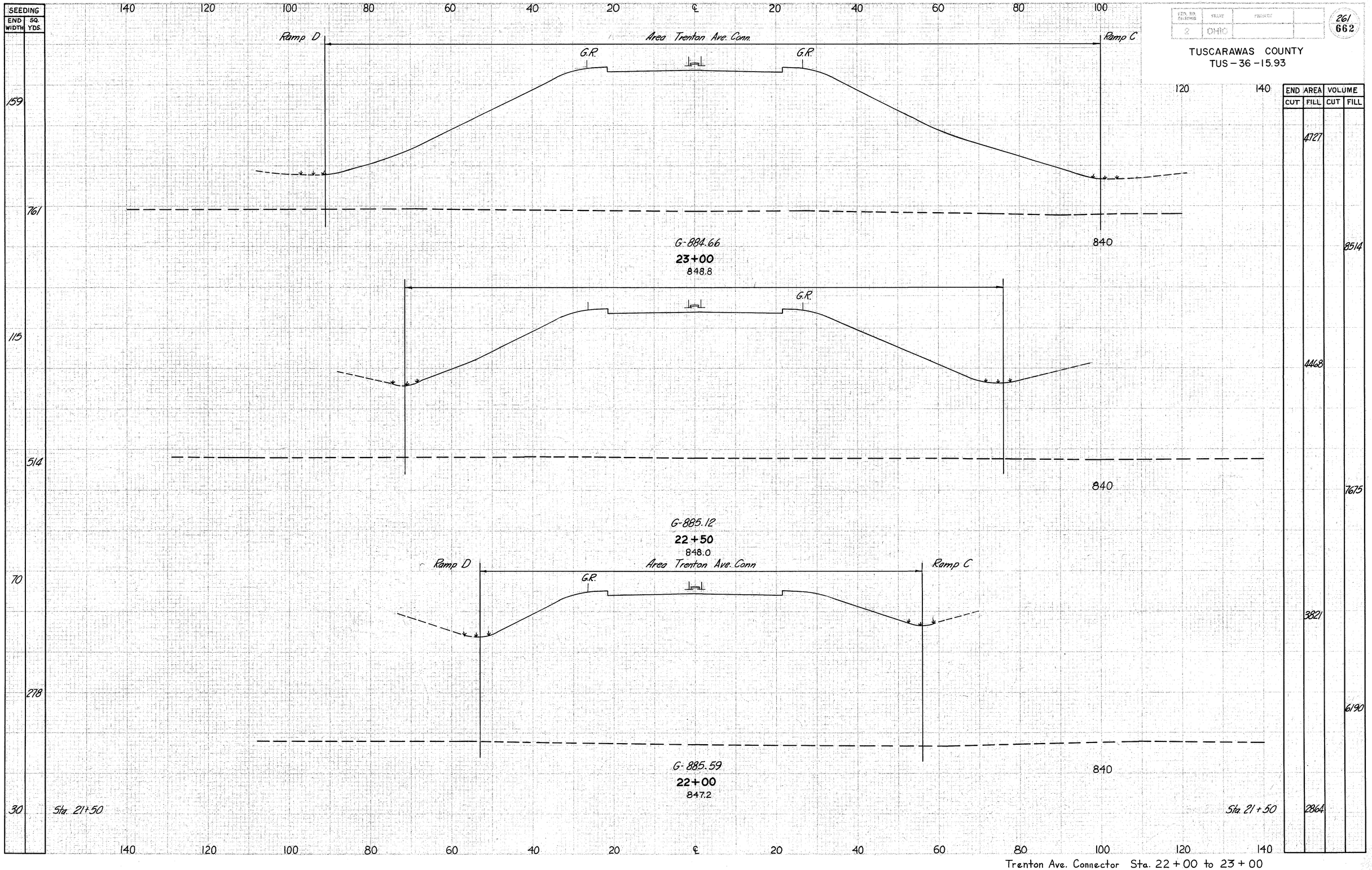
TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING	
END WIDTH	SQ. YDS.
30	414
119	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		2864	7236
		4951	



Trenton Ave. Connector Sta. 21+50



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

261
662

TUSCARAWAS COUNTY
TUS-36-15.93

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	4727		
			8514
	4468		
			7675
	3821		
			6190
	2864		

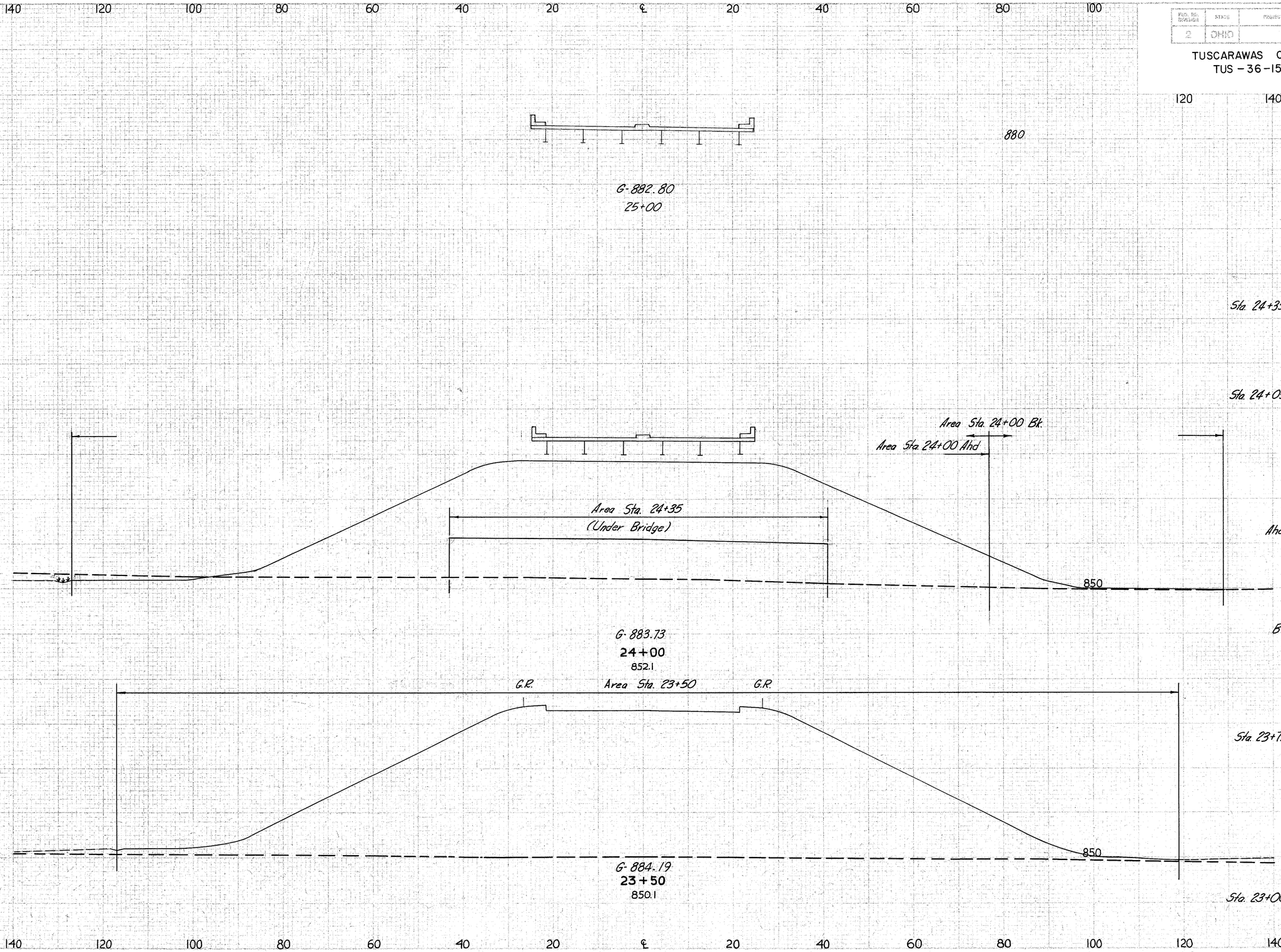
Trenton Ave. Connector Sta. 22+00 to 23+00

FED. REG. DIVISION	STATE	PROJECT	
2	OHIO		

262
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING		
	END WIDTH	SQ. YDS.
	—	
13	Sta. 24+35	
		332
158	Ahd.	
	—	
211	Bk.	
		1164
208		
		1019
159	Sta. 23+00	

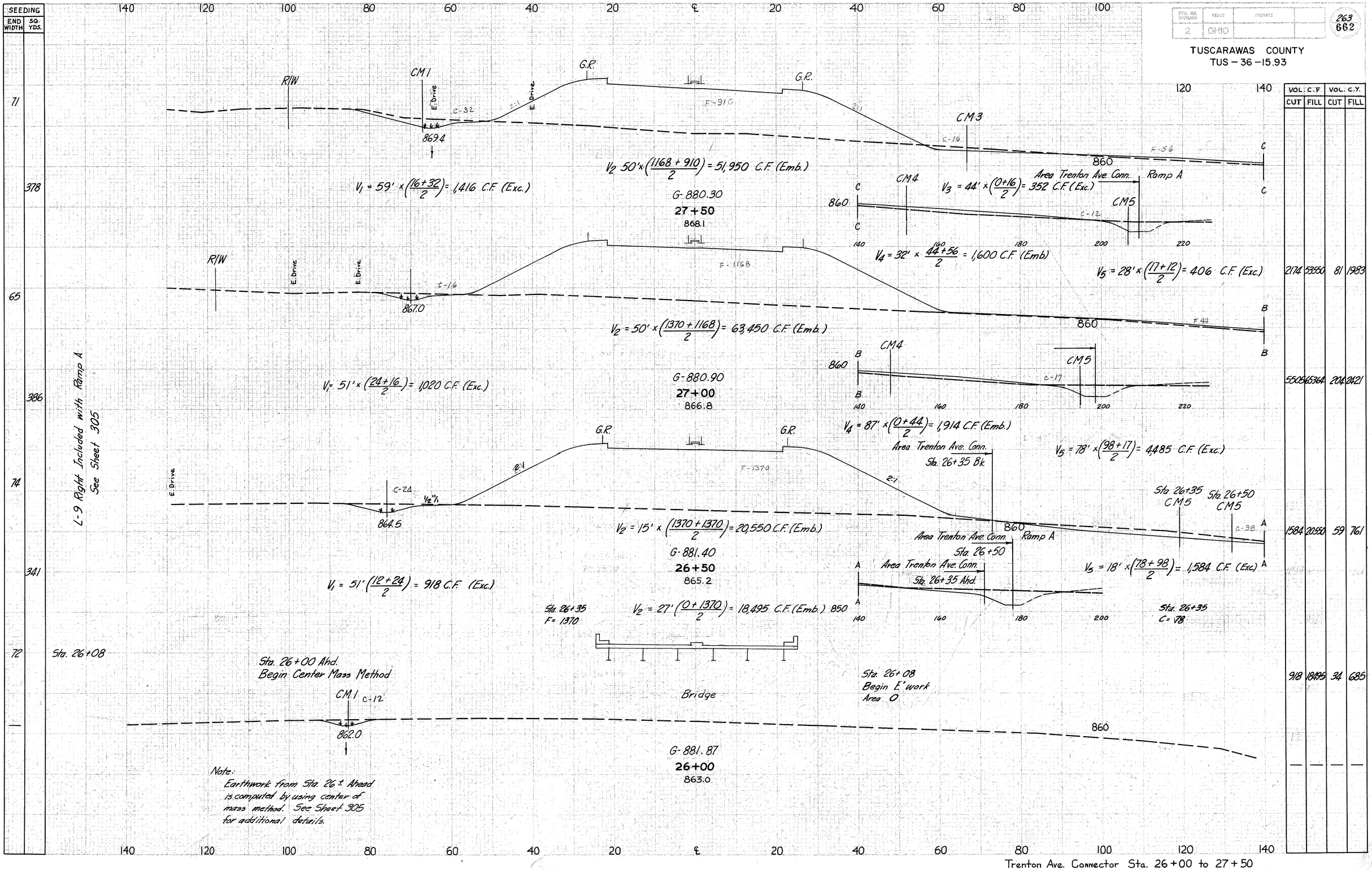


END AREA		VOLUME	
CUT	FILL	CUT	FILL
	—		
Sta. 24+35	727		
Sta. 24+05	0		2541
		3	
Ahd.	29 3193		
Bk.	29 3258		
		13	
Sta. 23+75	0		6958
	4251		
			8318
Sta. 23+00	4727		

Trenton Ave. Connector Sta. 23 + 50 to 24+00

FED. RD. DIVISION 2 | STATE OHIO | PROJECT
263
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93



VOL. C.F. CUT	VOL. C.F. FILL	VOL. C.Y. CUT	VOL. C.Y. FILL
2174	53550	81	1983
5505	65364	204	2421
1584	20550	59	761
918	18495	34	685

Trenton Ave. Connector Sta. 26+00 to 27+50

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

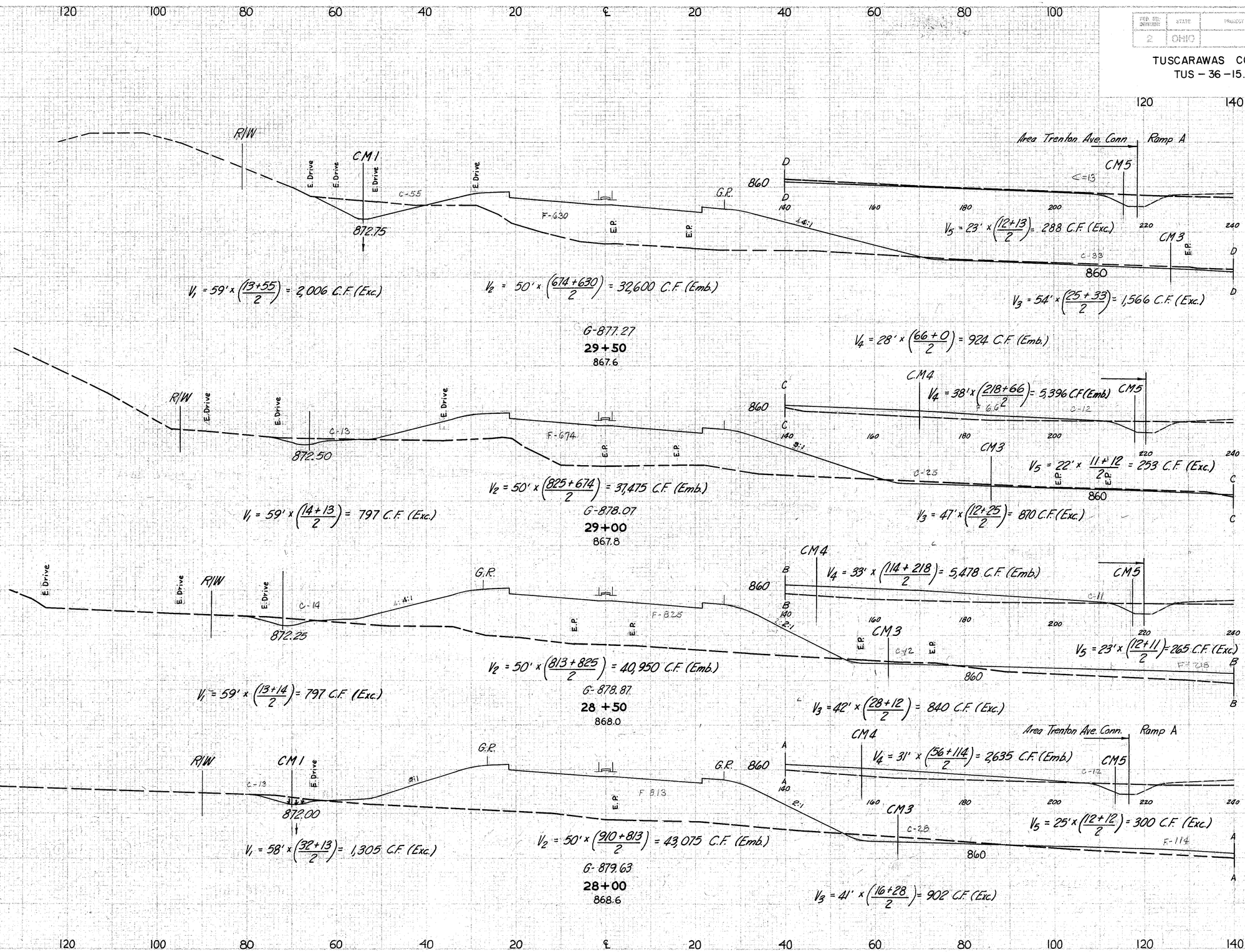
264
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING END WIDTH	SEEDING SQ. YDS.
55	
	328
63	
	364
68	
	369
65	
	378
71	

L-9 Right Included with Ramp A
See Sheet 305

Sta. 27+50



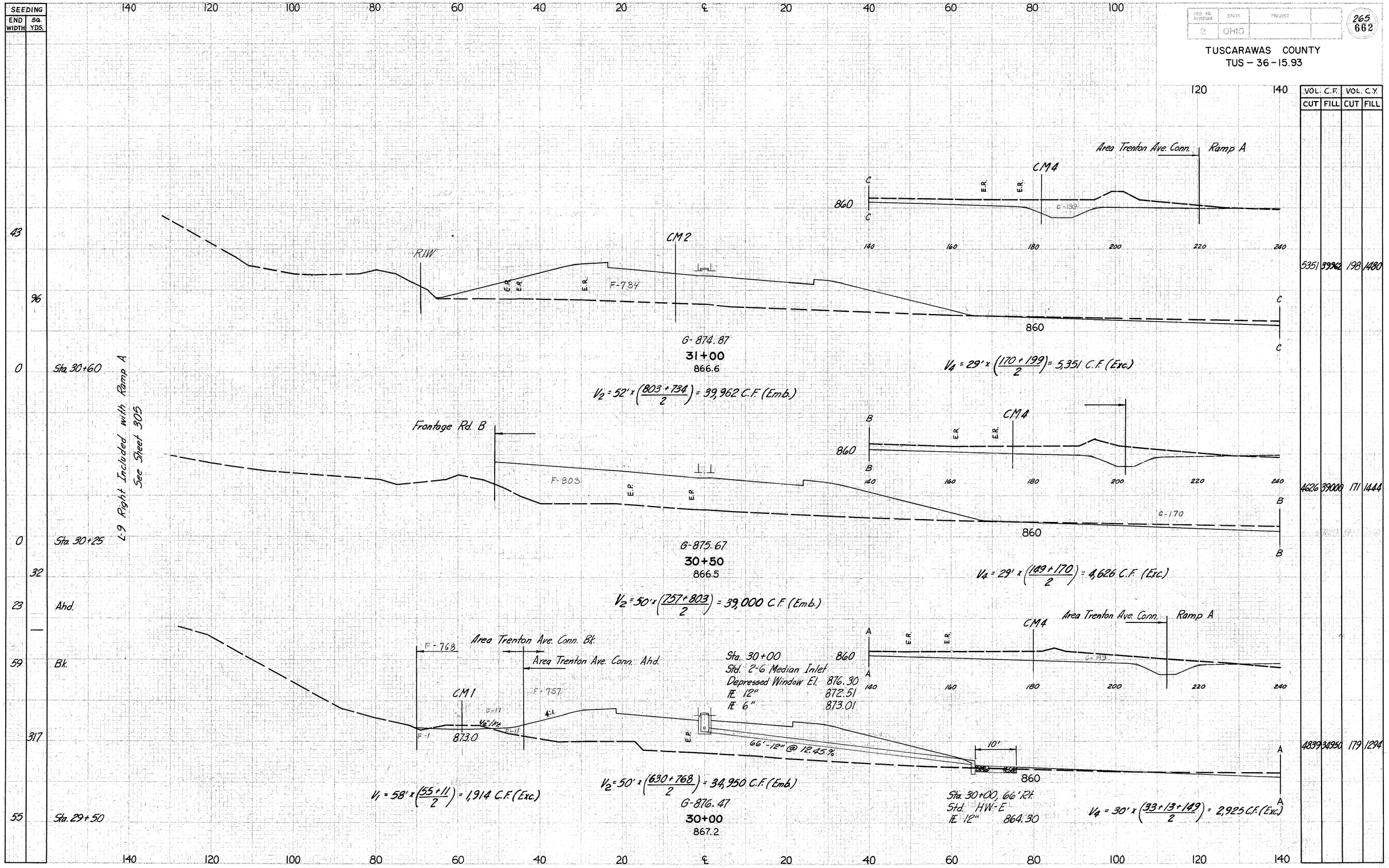
VOL. C.F. CUT	VOL. C.F. FILL	VOL. C.Y. CUT	VOL. C.Y. FILL
3860	33528	143	1242
1920	42871	71	1588
1902	46628	70	1720
2507	45110	93	1693

Trenton Ave. Connector Sta. 28 + 00 to 29 + 50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

265
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

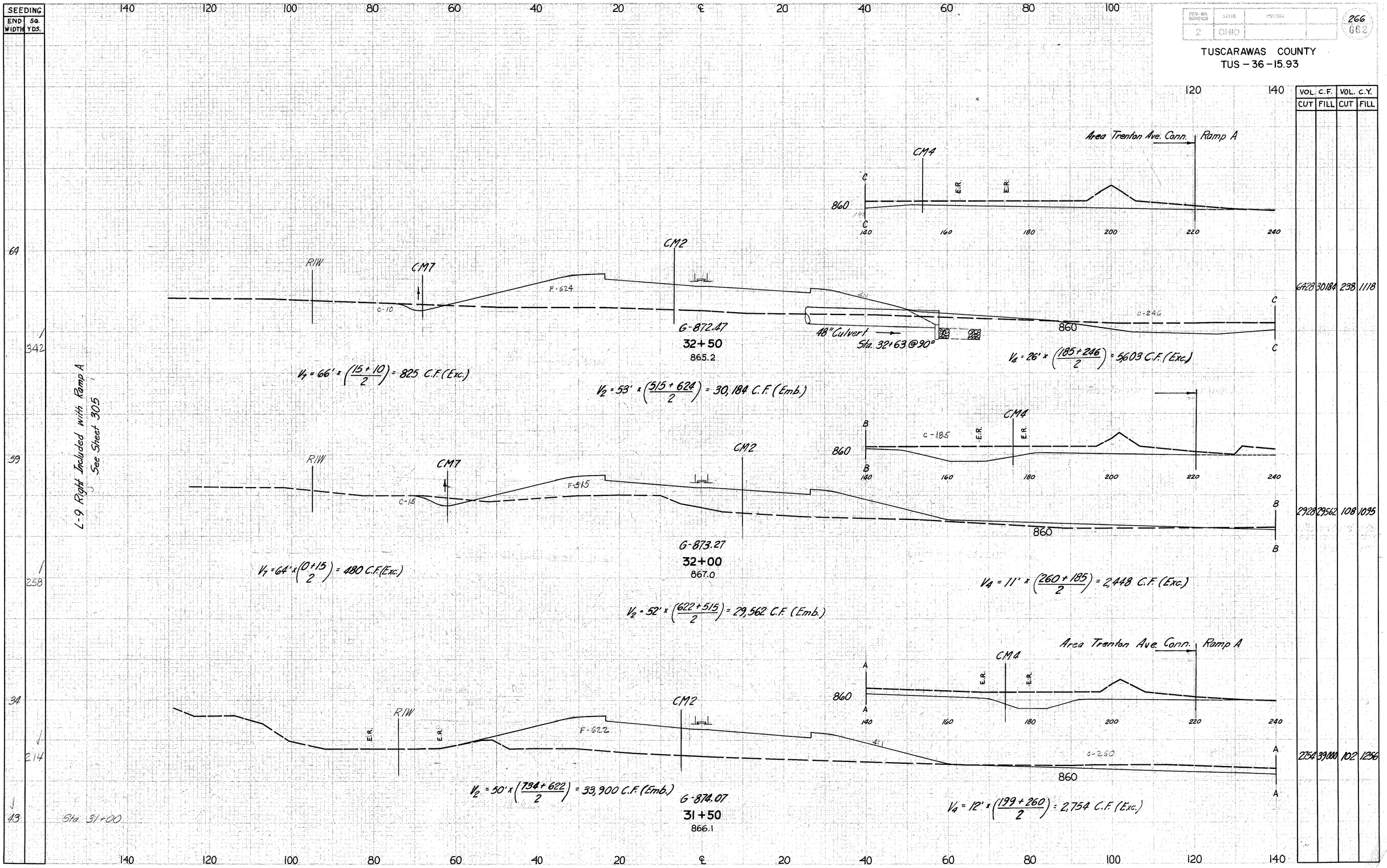


VOL. C.F. CUT	VOL. C.F. FILL	VOL. C.Y. CUT	VOL. C.Y. FILL
5351	39962	198	1480
4626	39000	171	1444
4839	34950	179	1294

Trenton Ave. Connector Sta. 30 + 00 to 31 + 00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

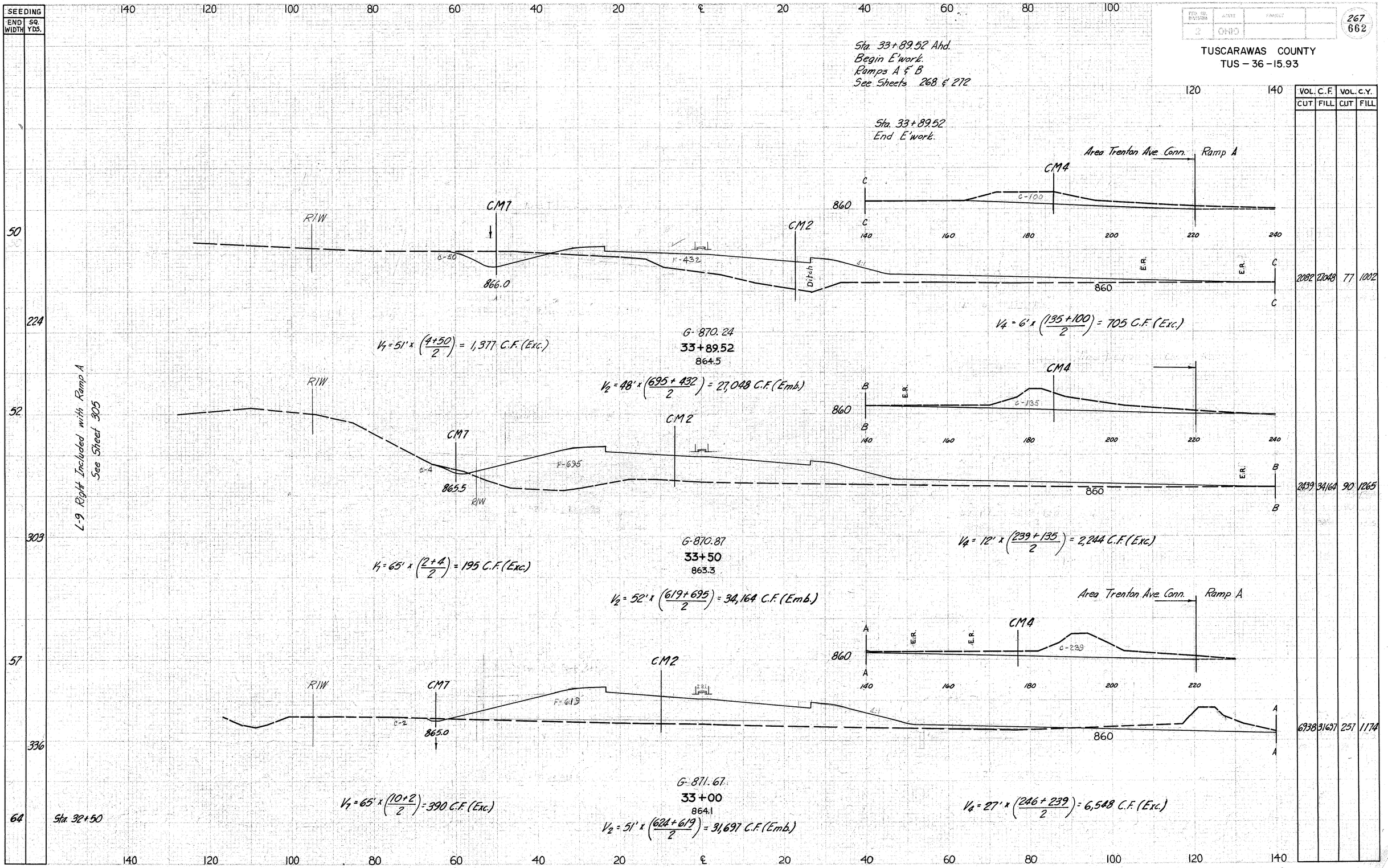
TUSCARAWAS COUNTY
TUS – 36 – 15.93



VOL. C.F. CUT	VOL. C.F. FILL	VOL. C.Y. CUT	VOL. C.Y. FILL
6428	30184	238	1118
2928	29562	108	1095
2754	39000	102	1256

Trenton Ave. Connector Sta. 31 + 50 to 32 + 50

TUSCARAWAS COUNTY
TUS – 36 – 15.93



VOL. C.F. CUT	VOL. C.F. FILL	VOL. C.Y. CUT	VOL. C.Y. FILL
2082	27048	77	1002
2439	34164	90	1265
6938	31697	257	1174

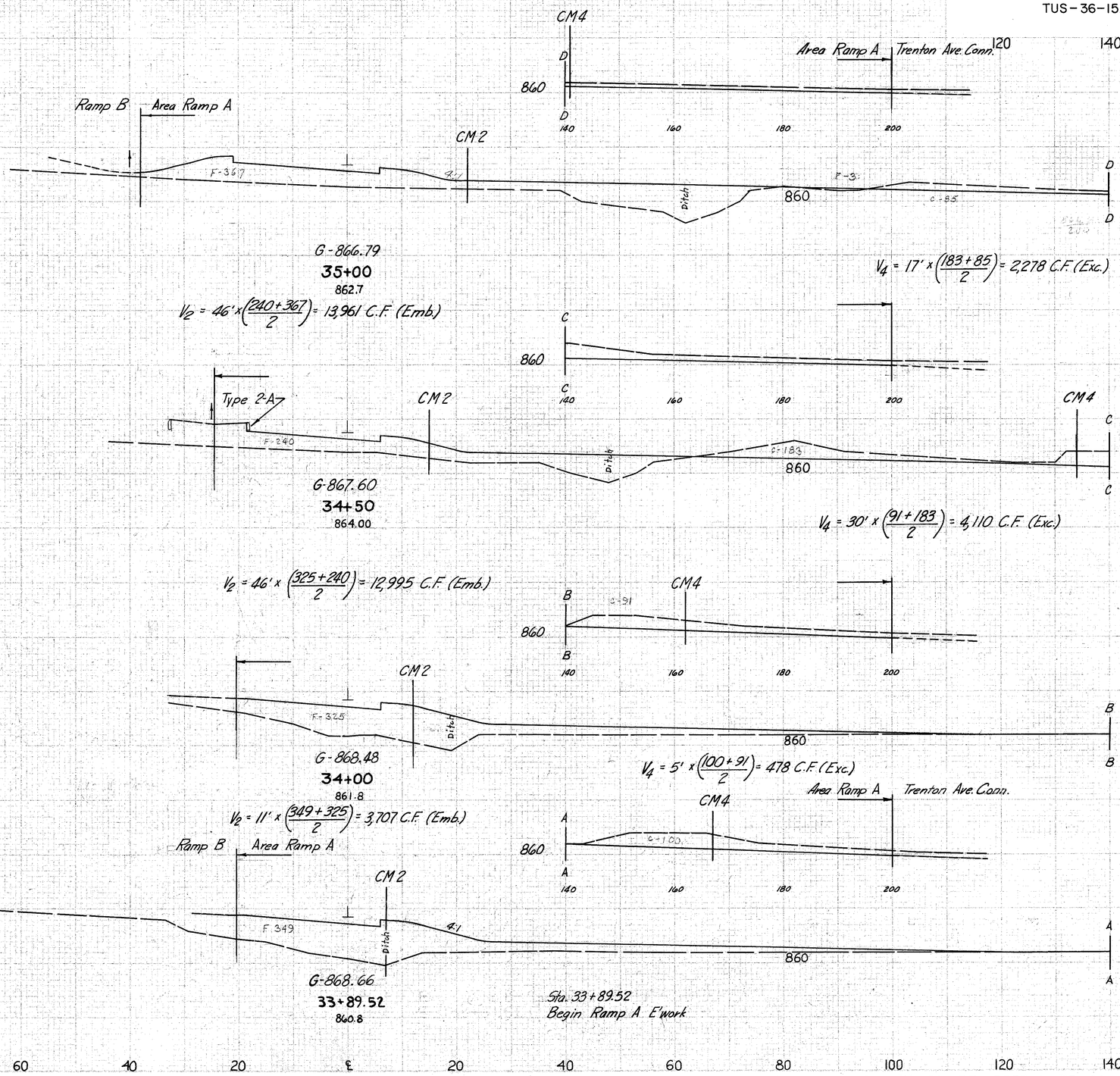
Trenton Ave. Connector Sta. 33+00 to 33+89.52

FED. ROAD DIV. NO.	STATE	PROJECT	
2	OHIO		

268
662

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING	
END WIDTH	SQ YDS.
17	
	64
6	
6	
5	
—	

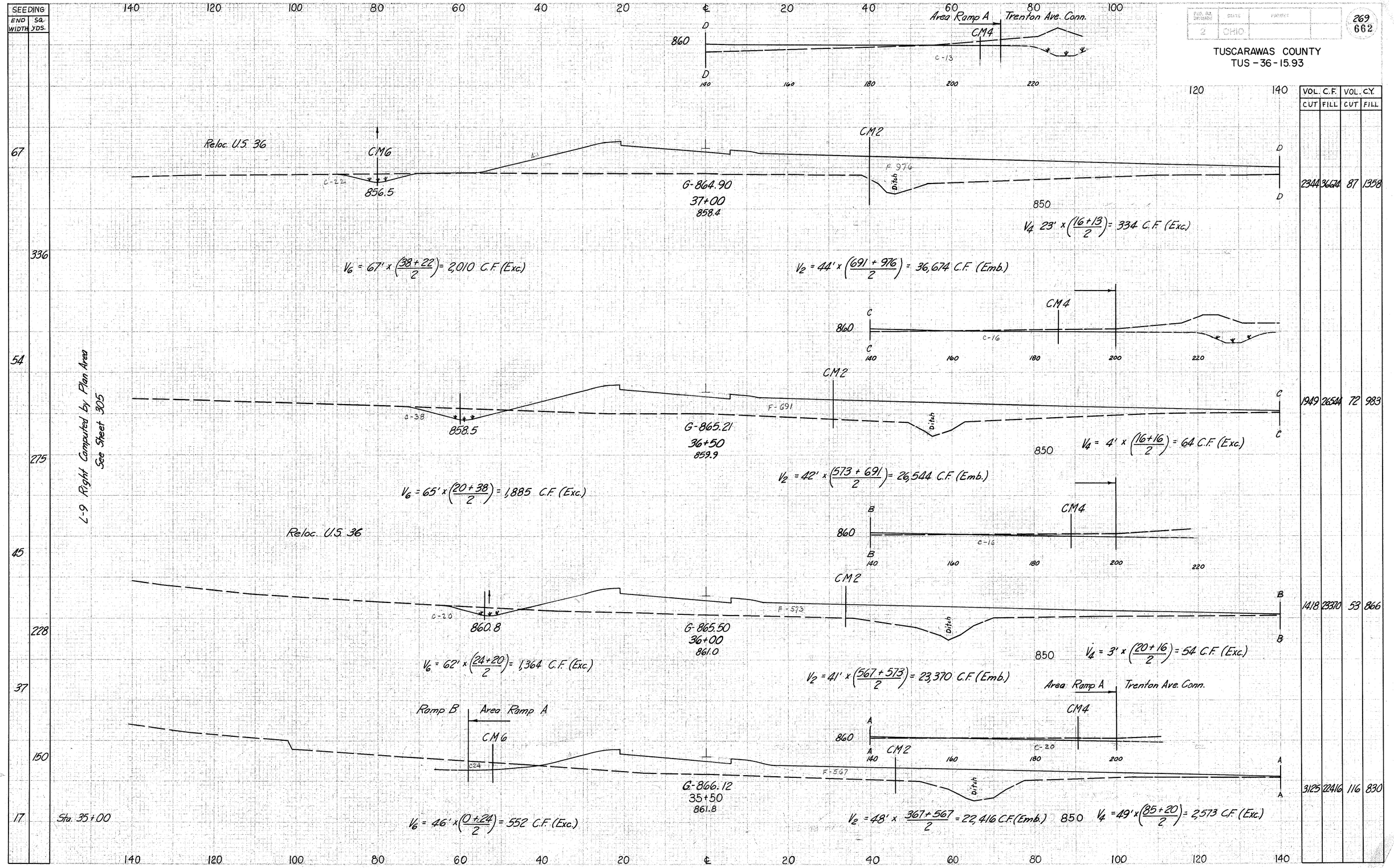


VOL. C.F.		VOL. C.Y.	
CUT	FILL	CUT	FILL
2278	13961	84	517
4110	12995	152	481
478	3707	18	137

Trenton Ave. Interchange Ramp "A" Sta. 33+89.52 to 35+00

FED. RD. DIVISION 2 | STATE OHIO | PROJECT
269
662

TUSCARAWAS COUNTY
TUS-36-15.93



VOL. C.F. CUT	VOL. C.F. FILL	VOL. C.Y. CUT	VOL. C.Y. FILL
2344	36674	87	1358
1949	26544	72	983
1418	23370	53	866
3125	22416	116	830

Trenton Ave. Interchange Ramp "A" Sta. 35+50 to 37+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

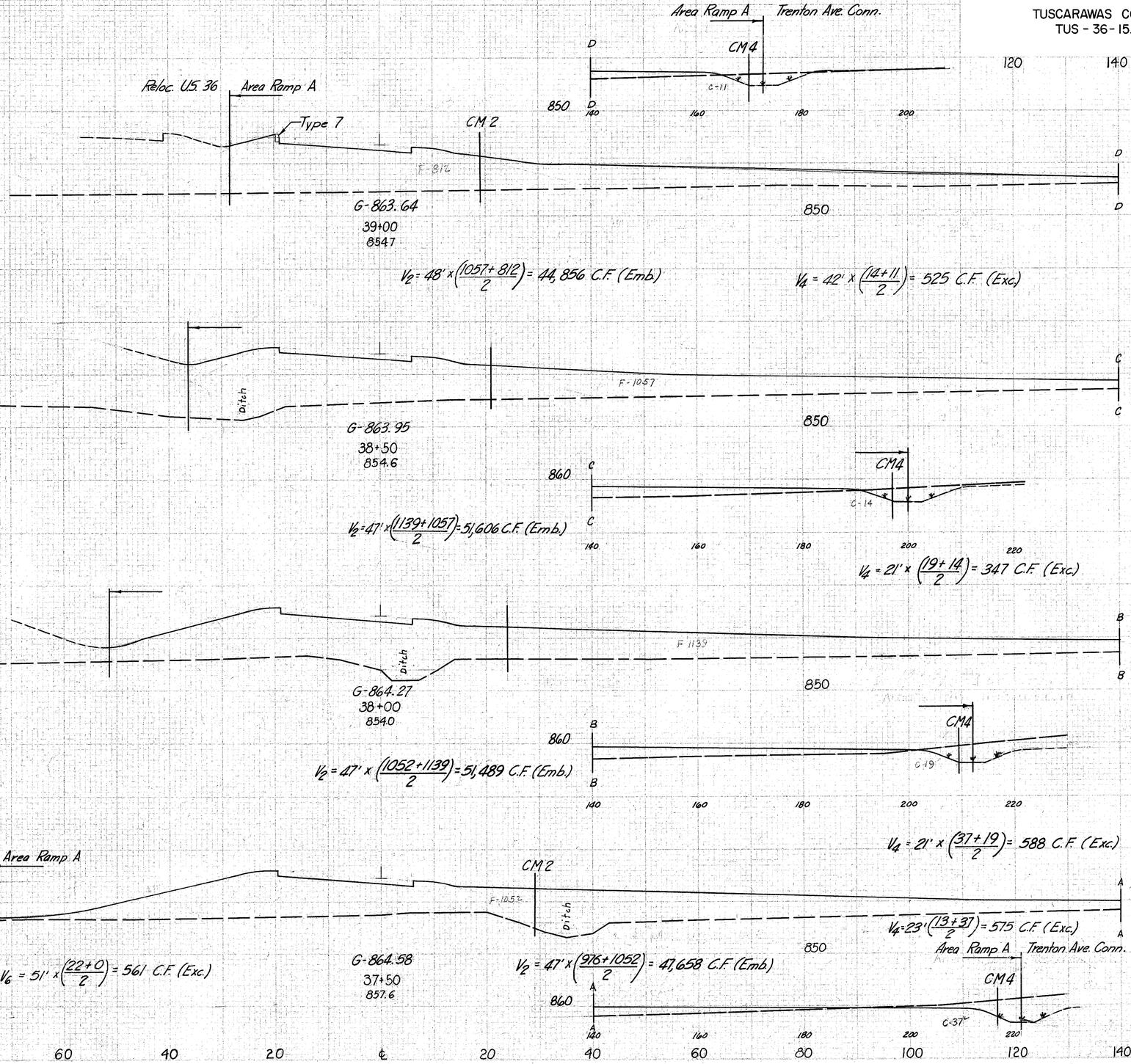
270
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

SEEDING END WIDTH	SEEDING SQ. YDS.
	9
	75
	18
	144
	34
	247
	55
	339
	67

L-9 Right Computed by Plan Area
See Sheet 305

Sta. 37+00



VOL. C.F. CUT	VOL. C.F. FILL	VOL. C.Y. CUT	VOL. C.Y. FILL
525	44856	19	1661
347	51606	13	1911
588	51489	22	1907
1136	47658	42	1765

Trenton Ave. Interchange Ramp "A" Sta. 37+50 to 39+00

FED. RD. DIVISION	STATE	PROJECT		271 / 662
2	OHIO			

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING	
END WIDTH	SQ. YDS.
0	
11	
4	
36	
9	

L-9 Right Comp. Not Computed by Plan Area
See Sheet 305

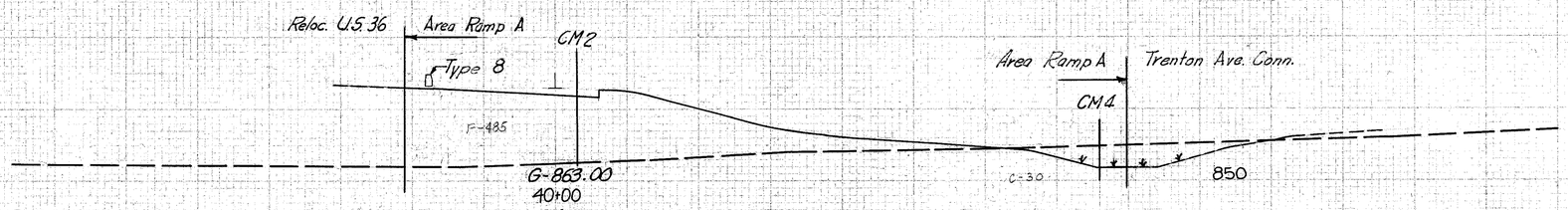
Sta. 39+00

Sta. 40+21
End Ramp A E'work using area
shown 53' to 132' Lt. ℄
Sta. 265+00 Reloc. U.S. 36
See Sheet 114

F-428
C-46

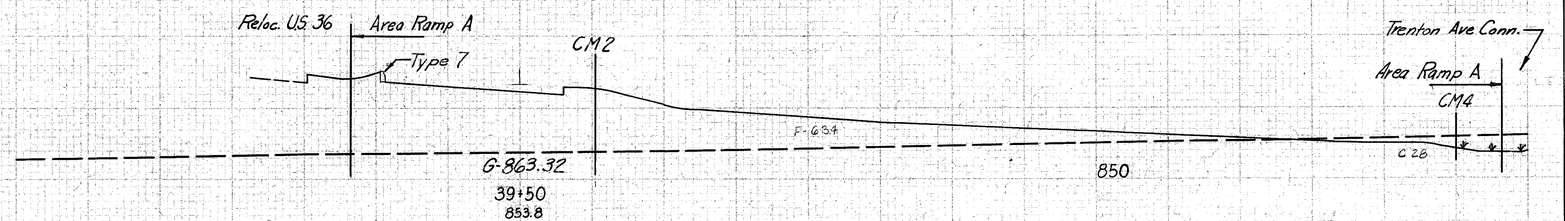
$V_2 = 21' \times \left(\frac{485 + 428}{2}\right) = 9{,}587$ C.F. (Emb.)

$V_4 = 27' \times \frac{30 + 46}{2} = 1{,}026$ C.F. (Exc.)



$V_2 = 49' \times \left(\frac{634 + 485}{2}\right) = 27{,}416$ C.F. (Emb.)

$V_4 = 68' \times \left(\frac{28 + 30}{2}\right) = 1{,}972$ C.F. (Exc.)



$V_2 = 49' \times \left(\frac{812 + 634}{2}\right) = 35{,}427$ C.F. (Emb.)

$V_4 = 52' \times \left(\frac{11 + 28}{2}\right) = 1{,}014$ C.F. (Exc.)

VOL. C.F.		VOL. C.Y.	
CUT	FILL	CUT	FILL
1026	9587	38	355
1972	27416	73	1015
1014	35427	38	1312

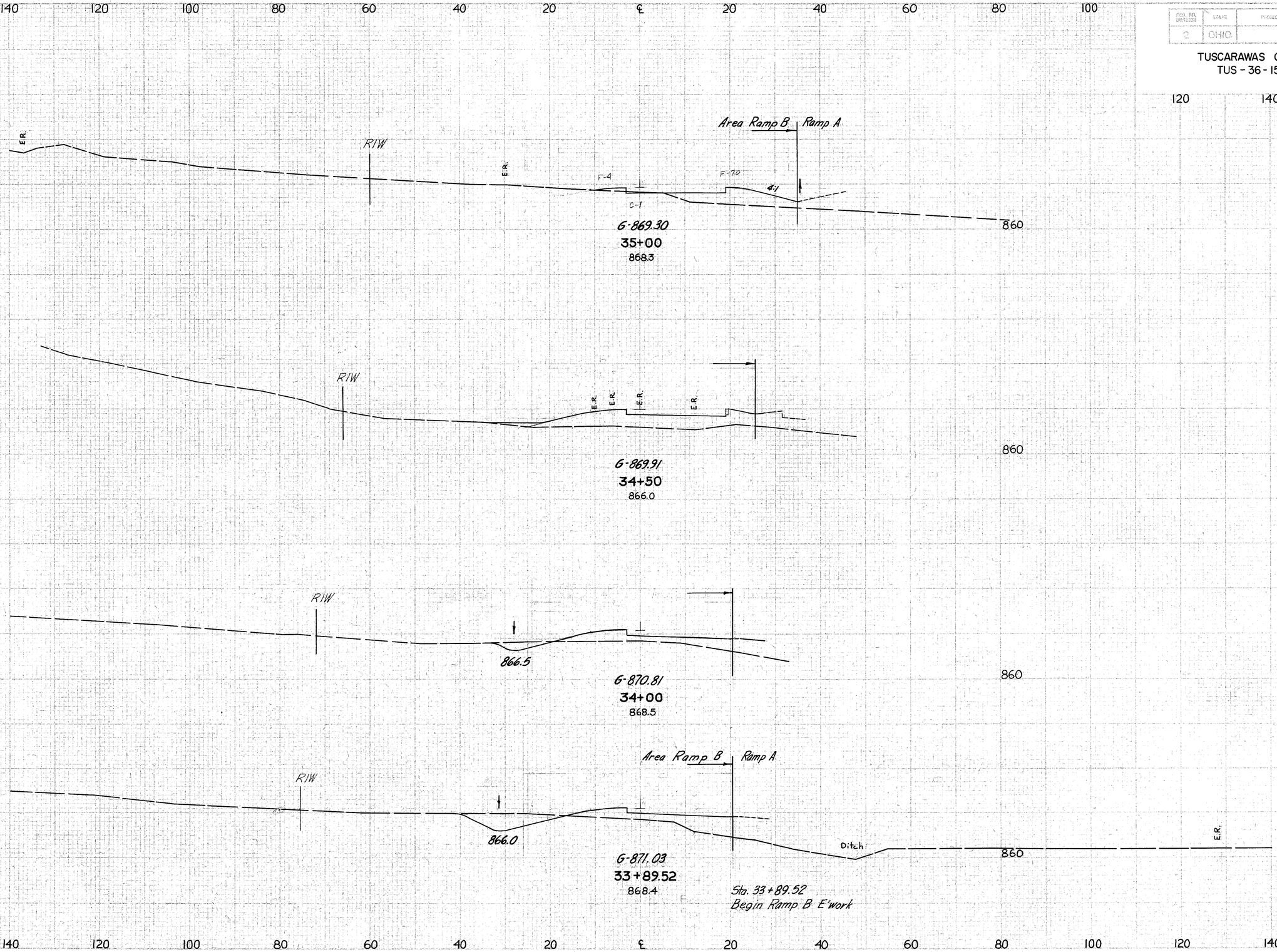
Trenton Ave. Interchange Ramp "A" Sta. 39+50 to 40+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

272
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

SEEDING	
END WIDTH	SQ. YDS.
33	219
46	244
42	54
50	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1	74		
		—	198
0	140		
		13	190
14	65		
		12	29
50	83		

Trenton Ave. Interchange Ramp "B" Sta. 33+89.52 to 35+00

SEEDING	
END WIDTH	SQ. YDS.
104	
	533
88	
	506
94	
	467
74	
	297
33	

PER. NO. DRAWING	STATE	PROJECT	
2	OHIO		

273
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

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

R/W
E.R.
E.R.

880

3:1

G-869.74
37+00
881.5

R/W
E.R.
E.R.

870

3:1

G-869.19
36+50
876.3

R/W

C-265

870

C-40

4:1

Sta. 35+75, 18' Lt.
Std. 2-2A C.B.
Grate El. 867.02
Window El. 866.52
IE 24" 863.52
IE 15" 864.02

G-868.94
36+00
872.0

R/W
E.R.

Sta. 35+75, 41' Rt.
Std. HW-E
IE 24" 863.40

35+75
870

60' - 24" @ 0.20%

870

Area Ramp B
Ramp A

2.5:1
C-58

C-12

G-868.98
35+50
868.8

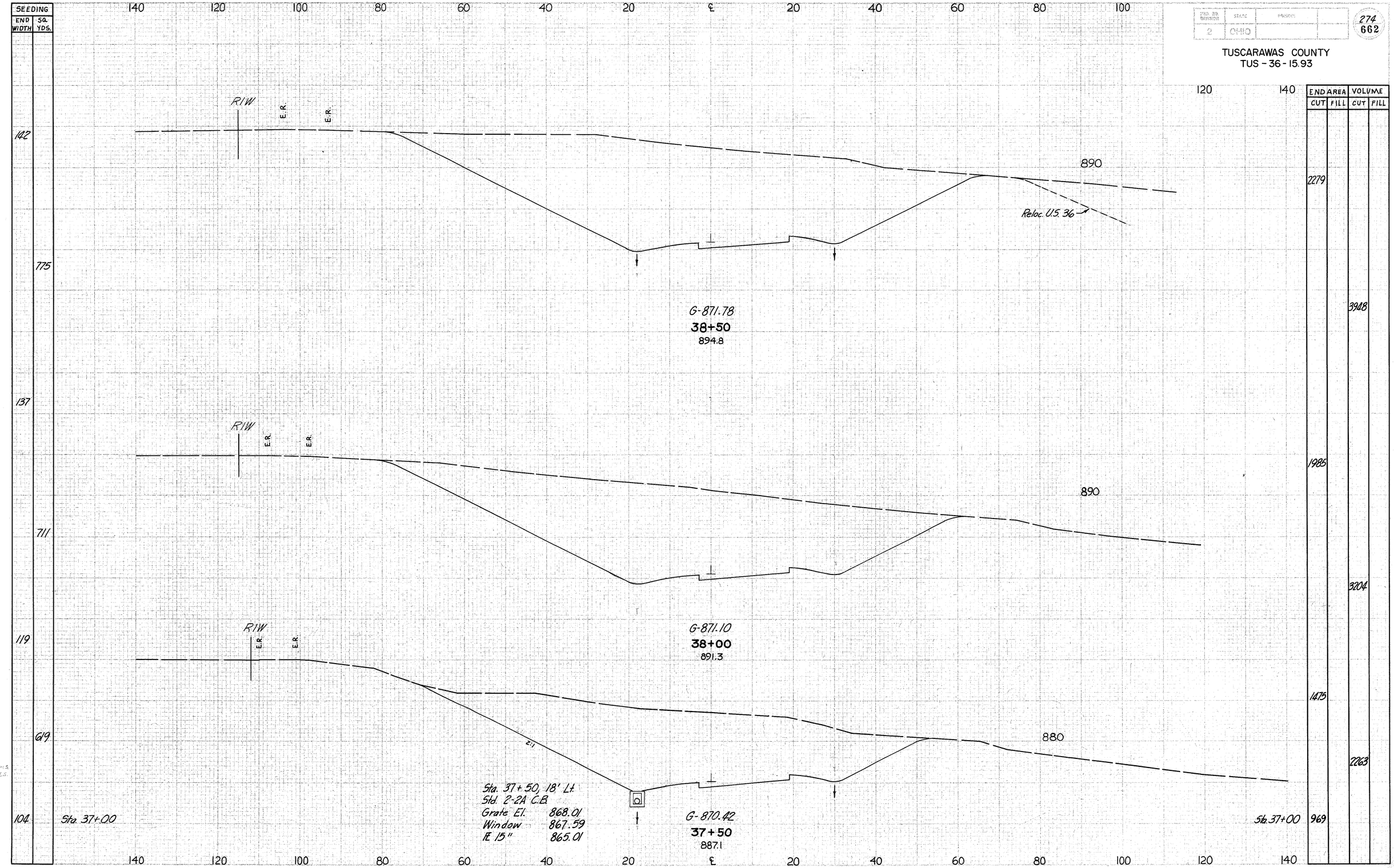
Sta. 35+00

Sta. 35+00

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

END AREA		VOLUME	
CUT	FILL	CUT	FILL
969			
		1428	
573	—		
		813	—
305	1		
		347	25
70	26		
		66	93
1	74		

Trenton Ave. Interchange Ramp "B" Sta. 35+50 to 37+00



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

274
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

Trenton Ave. Interchange Ramp "B" Sta. 37+50 to 38+50

SEEDING	
END WIDTH	SQ. YDS.
102	
	611
118	
	686
129	
	753
142	

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

R/W 170'

E.R. E.R. E.R.

Area Ramp B — Reloc. U.S. 36

890

G-874.14
40+00
896.4

R/W 144'

E.R. E.R.

BLDG.

890

3:1

G-873.23
39+50
897.0

R/W

E.R. E.R.

Area Ramp B — Reloc. U.S. 36

890

2:1 2:1

G-872.46
39+00
896.5

Sta. 38+50

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

Sta. 38+50

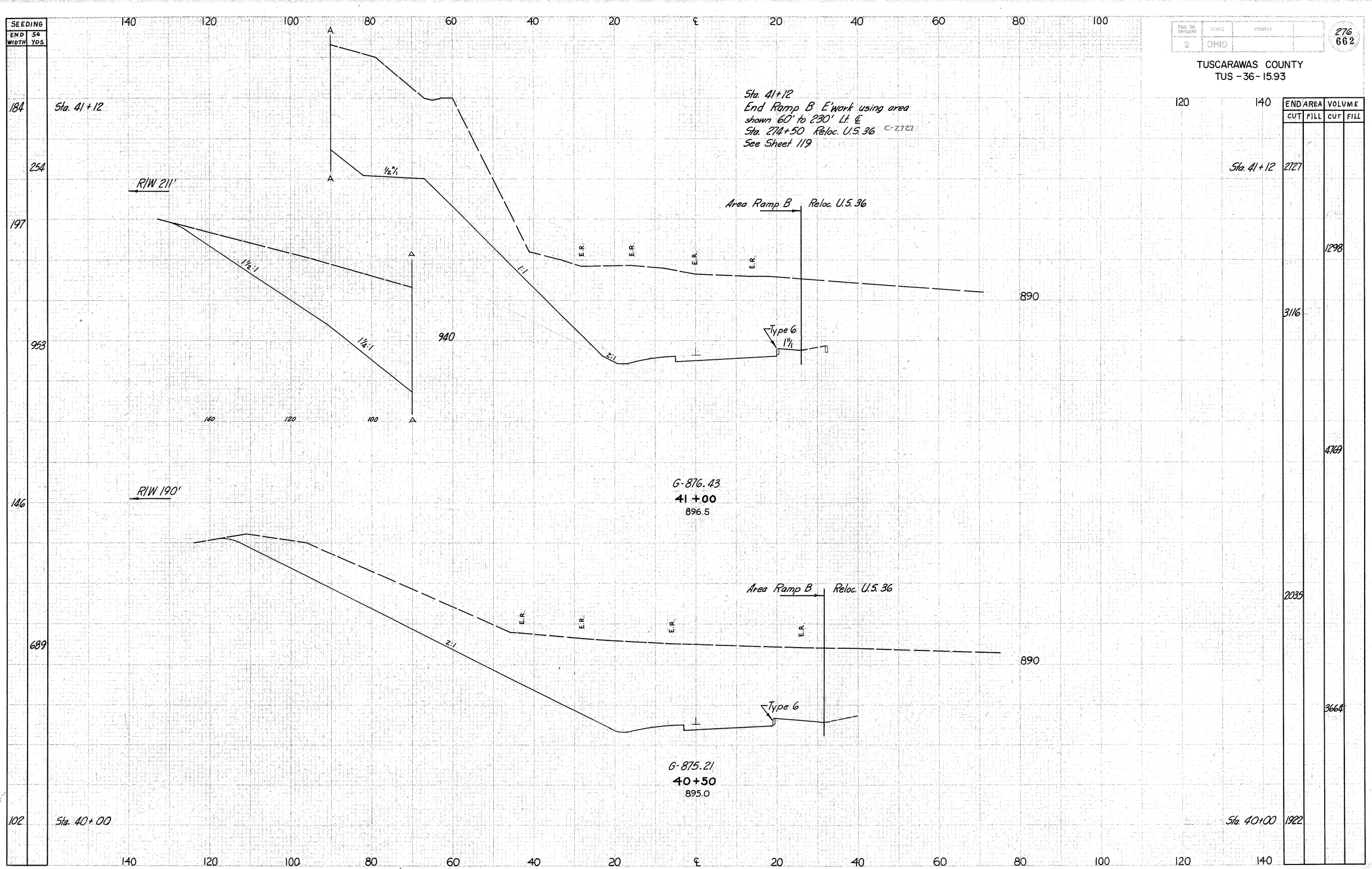
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

275
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	1922		
			3914
	2305		
			4379
	2424		
			4355
	2279		

Trenton Ave. Interchange Ramp "B" Sta. 39+00 to 40+00



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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662

TUSCARAWAS COUNTY
TUS-36-15.93

Trenton Ave. Interchange Ramp "B" Sta. 40+50 to 41+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

277
662

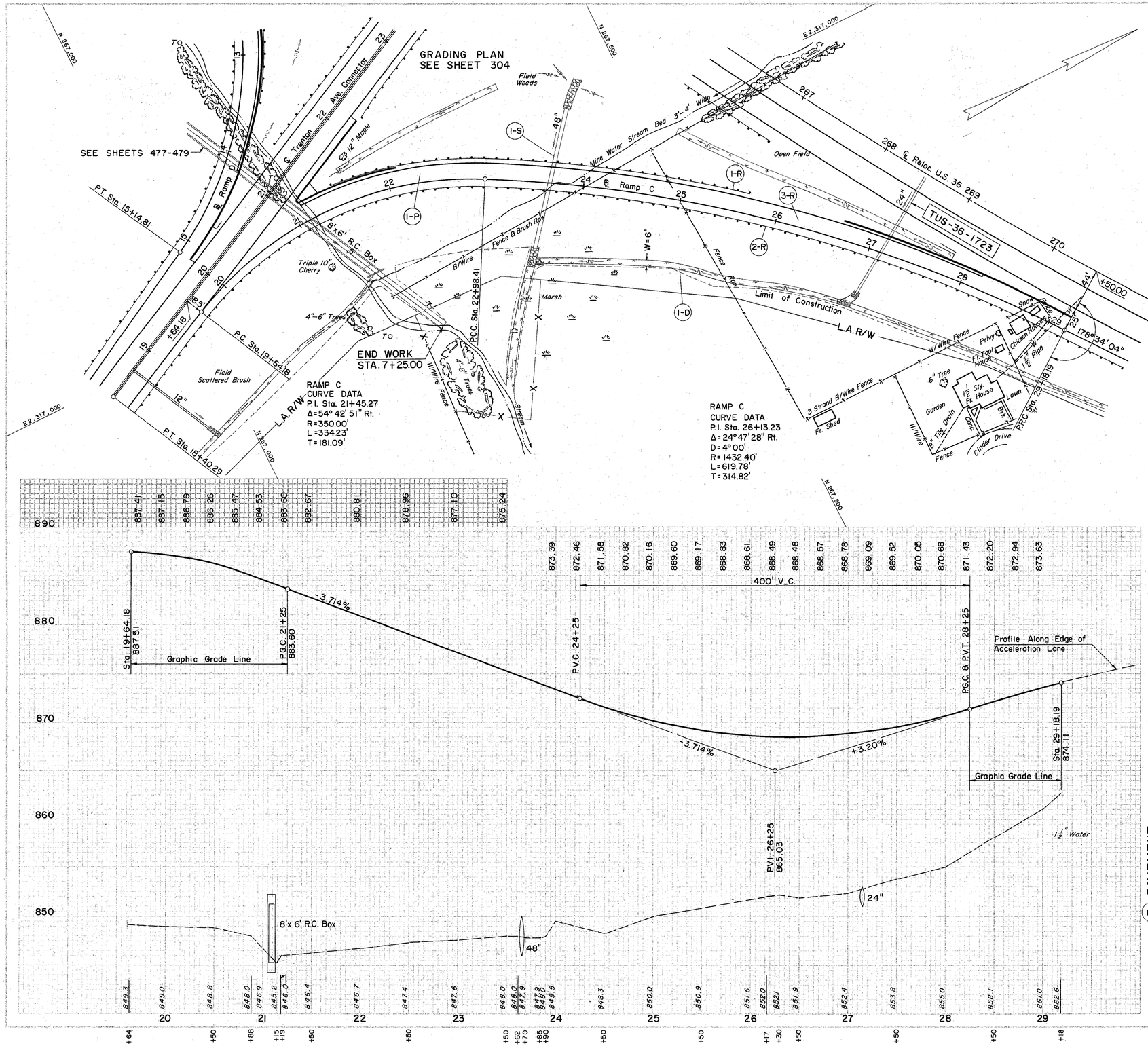
TUSCARAWAS COUNTY

TUS-36-15.93

FOR PLAN & PROFILE OF
TRENTON AVE. CONNECTOR SEE SHEETS 242-244
RAMP D SEE SHEET 282

FOR INTERSECTION DETAILS
SEE SHEETS 300-301

FOR GEOMETRIC LAYOUT
SEE SHEET 306



(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE C.Y.	B-21 WATER-PROOFED AGGR. BASE COURSE C.Y.	I-12 CONC. CURB TYPE 6 L.F.	I-12 CONC. CURB TYPE 7 L.F.	I-12 CONC. CURB TYPE 8 L.F.	I-21 PORT. CEM. CONC. MEDIAN S.Y.	I-22 SUBBASE C.Y.	I-22 SUBBASE GRADING A OR B C.Y.	T-30 BIT. PRIME COAT GAL.	T-31 BIT MAT'L #6 AGGR. C.Y.	T-71 REINF. PORT. CEM. CONC. PAV'T. 9" S.Y.
1-P	19+64.18	280+50	U.S.36	328	43	212	126	129	16	192	587	552	478	14	3,096

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	L-10 SODDING S.Y.
1-D	23+65	26+90	Rt.	207

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. SUB-GRADE S.Y.	I-9 STONE UNDER-DRAINS NO.2 L.F.	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP) L.F.
1-R	21+44	25+67	Lt.			437.5
2-R	19+02 Trenton Ave.	29+15	Rt.			1,000.0
3-R	19+64.18	280+50	U.S.36	4,749	448	
	TOTAL			4,749	448	1,437.5

(S) STRUCTURE

REF. NO.	STATION	E-3 CHANNEL EXCAV. C.Y.	I-1 48" PIPE CL. A-1 SEC. M-6.6(d) 1/3 VIT. LINED L.F.	I-2 MASONRY C.Y.	I-10 DUMPED ROCK CHANNEL PROTECT. C.Y.	L-10 SODDING S.Y.	SEE SHEET
1-S	23+65	57	146	1.72	17	115	481

EXCAVATION	=	301 C.Y.
EMBANKMENT	=	43,160 C.Y.
EMBANKMENT + 6 %	=	45,750 C.Y.

RAMP C, TRENTON AVENUE INTERCHANGE

SEEDING	
END WIDTH	SQ YDS.
137	
	719
122	
	642
109	
	85
109	

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

FED. ROAD DESIGNATION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-15.93

Trenton Ave. Conn. Area Ramp C

G.R. G.R.

R/W

840

G-878.96
22+50
847.4

Type 6

G-880.81
22+00
846.7

Trenton Ave. Conn. Area Ramp C

G.R. Type 6 G.R.

R/W 135'

E. Stream

840

G-882.67
21+50
846.4

Sta. 21+43
Begin Ramp C E'work using area shown at Sta. 21+50

Sta. 21+43 Sta. 21+43

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	2990		
			5501
	2951		
			5281
	2753		
			714
	2753		

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

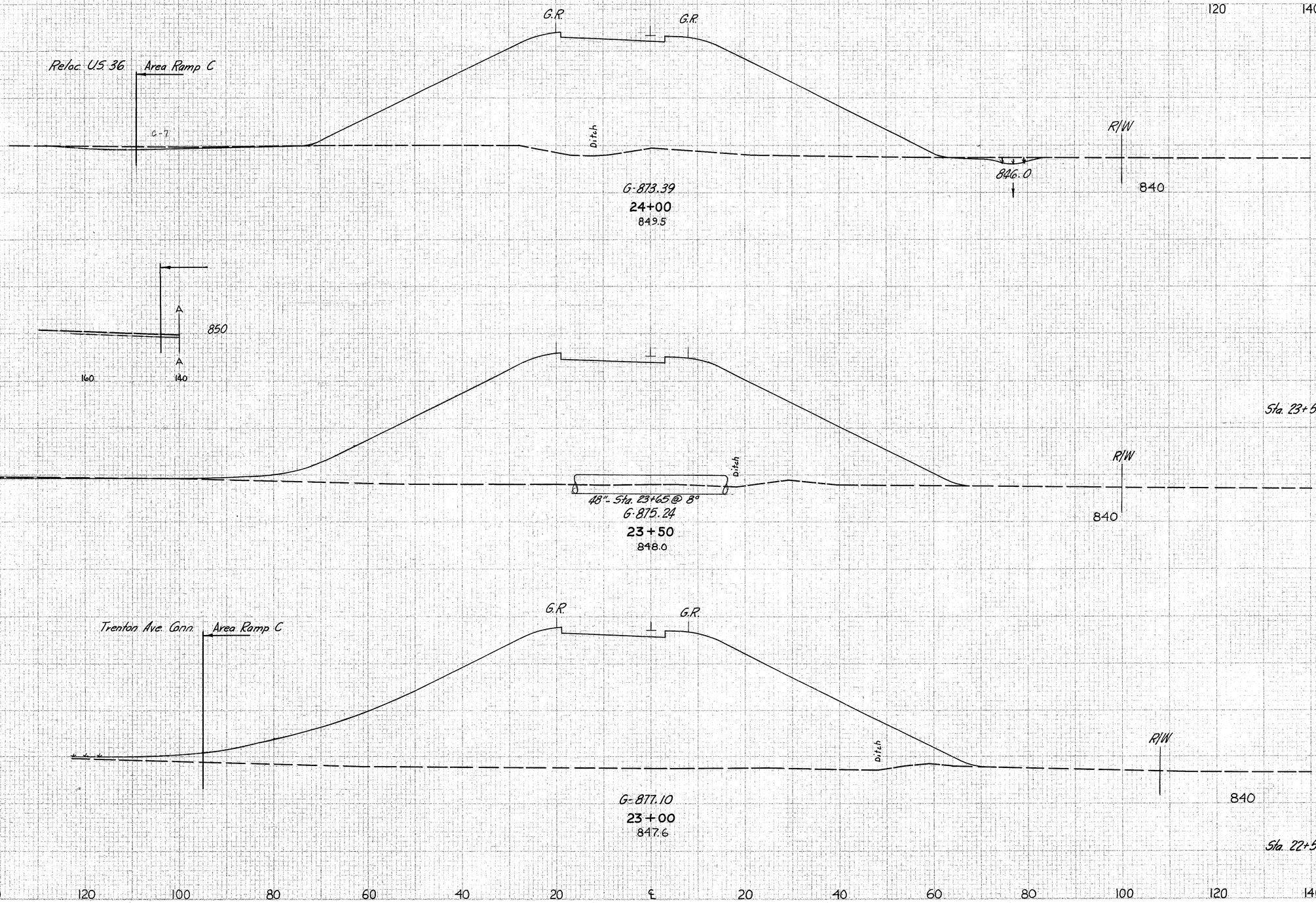
Trenton Ave. Interchange Ramp "C" Sta. 21+50 to 22+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

279
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING	
END WIDTH	SQ. YDS.
189	
	1117
213	
	1053
166	
	842
137	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
19	2039		
		30	4140
Sta. 23+55			
17	—		
			2
5	2432		
			4846
—	2802		
			5363
	2990		

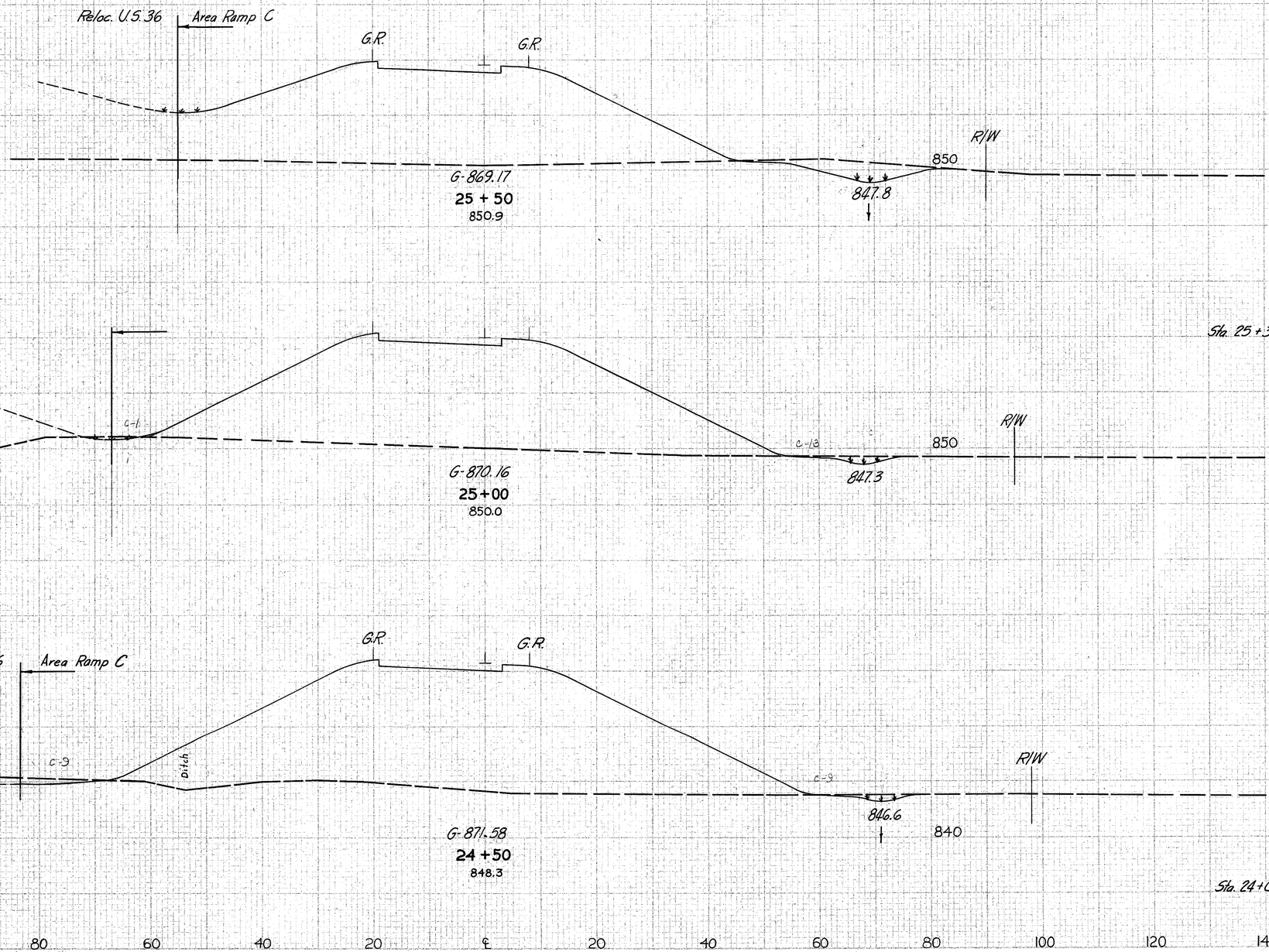
Trenton Ave. Interchange Ramp C Sta. 23+00 to 24+00

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

280
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING	
END WIDTH	SQ YDS.
128	
	728
134	
	808
157	
	961
189	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
	62		1297
		39	
			2535
	42		
		31	
	14		1441
		30	2985
	18		1783
		34	3539
	19		2039

Trenton Ave. Interchange Ramp "C" Sta. 24+50 to 25+50

SEEDING	
END WIDTH	SQ YDS.
80	
	596
85	
	494
93	
	556
107	
	653
128	

Sta. 27+65

Sta. 25+50

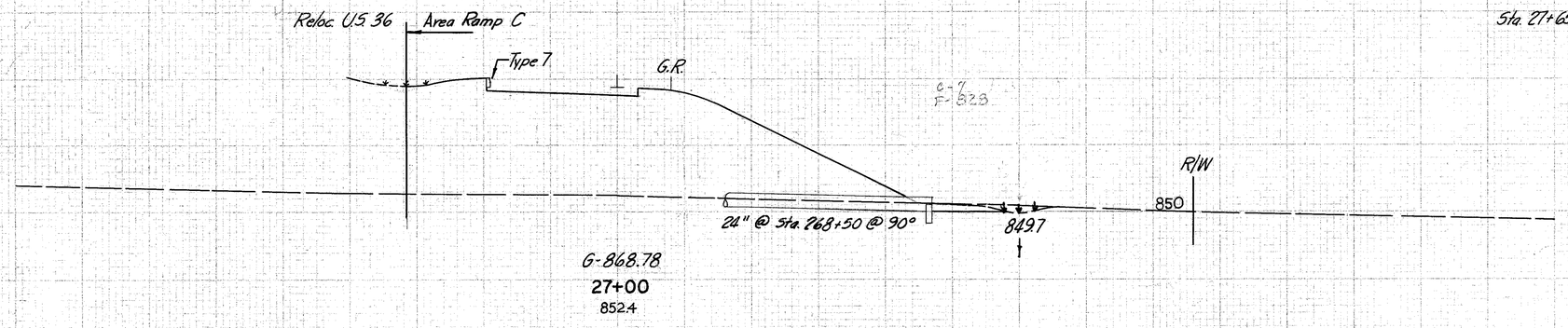
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

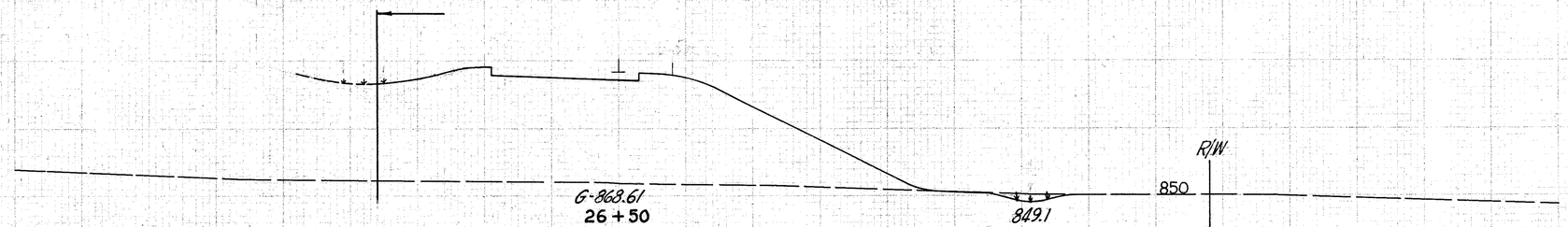
FED. AID PROJECT	STATE	PROJECT	
2	OHIO		

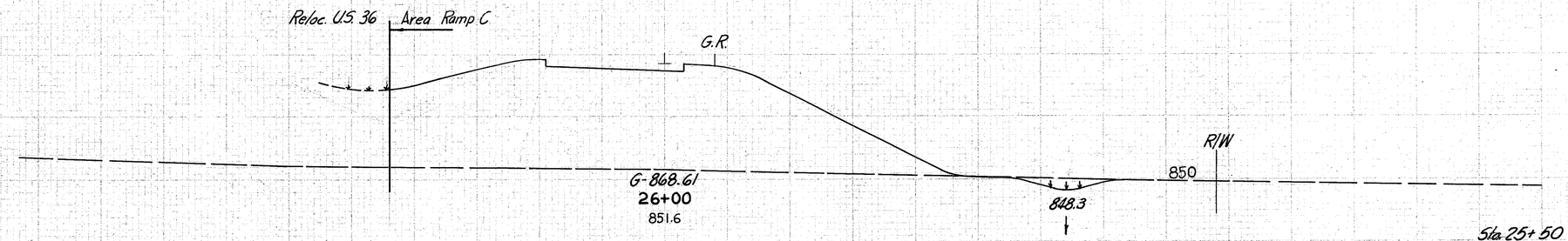
281
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

Sta. 27+65
End Ramp C E'work using area shown 58' to 150' Rt ℄
Sta. 269+00 Reloc. U.S. 36
See Sheet 115







END AREA		VOLUME	
CUT	FILL	CUT	FILL
Sta. 27+65	7	828	
			19 2156
	9	963	
			17 1823
	9	1006	
			25 2004
	18	1158	
			74 2273
Sta. 25+50	62	1297	

Trenton Ave. Interchange Ramp "C" Sta. 26+00 to 27+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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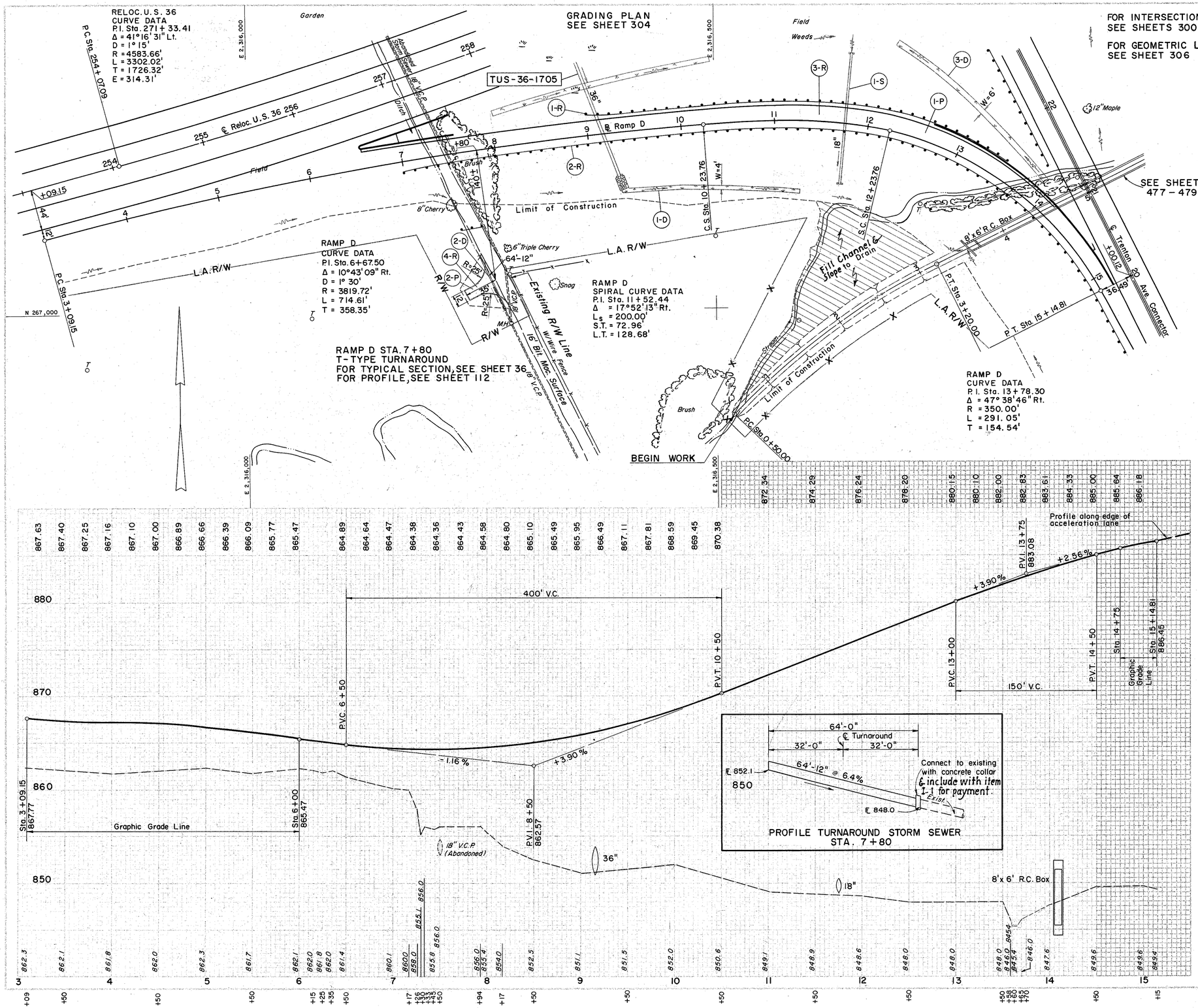
662

TUSCARAWAS COUNTY
TUS-36-15.93



FOR INTERSECTION DETAILS
SEE SHEETS 300 & 302

FOR GEOMETRIC LAYOUT
SEE SHEET 306

(S) STRUCTURE

REF. NO.	STATION	I-1 18" PIPE CLASS A-1 SEC. M-6.6(d)	I-2 MASONRY	L-10 SODDING	SEE SHEET
		L.F.	C.Y.	S.Y.	
1-S	11+75	140	0.60	3	475

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 12" PIPE CLASS F-4	L-10 SODDING
				L.F.	S.Y.
1-D	9+30	11+25	Rt.	85	
2-D	7+80		Rt.	64	145
3-D	12+16	13+93	Lt.	64	230
	TOTALS				

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. SUB-GRADE	I-9 STONE UNDER DRAIN NO. 2	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP)
				S.Y.	L.F.	
1-R	9+00	13+48	Lt.			462.5
2-R	6+99	19+06 Trenton Ave.	Rt.			900.0
3-R	248+57.42 U.S. 36	17+74 Trenton Ave.	(Ramp D)	4,667	742	
4-R	7+80		Rt.	77		
	TOTALS			4,744	742	1,362.5

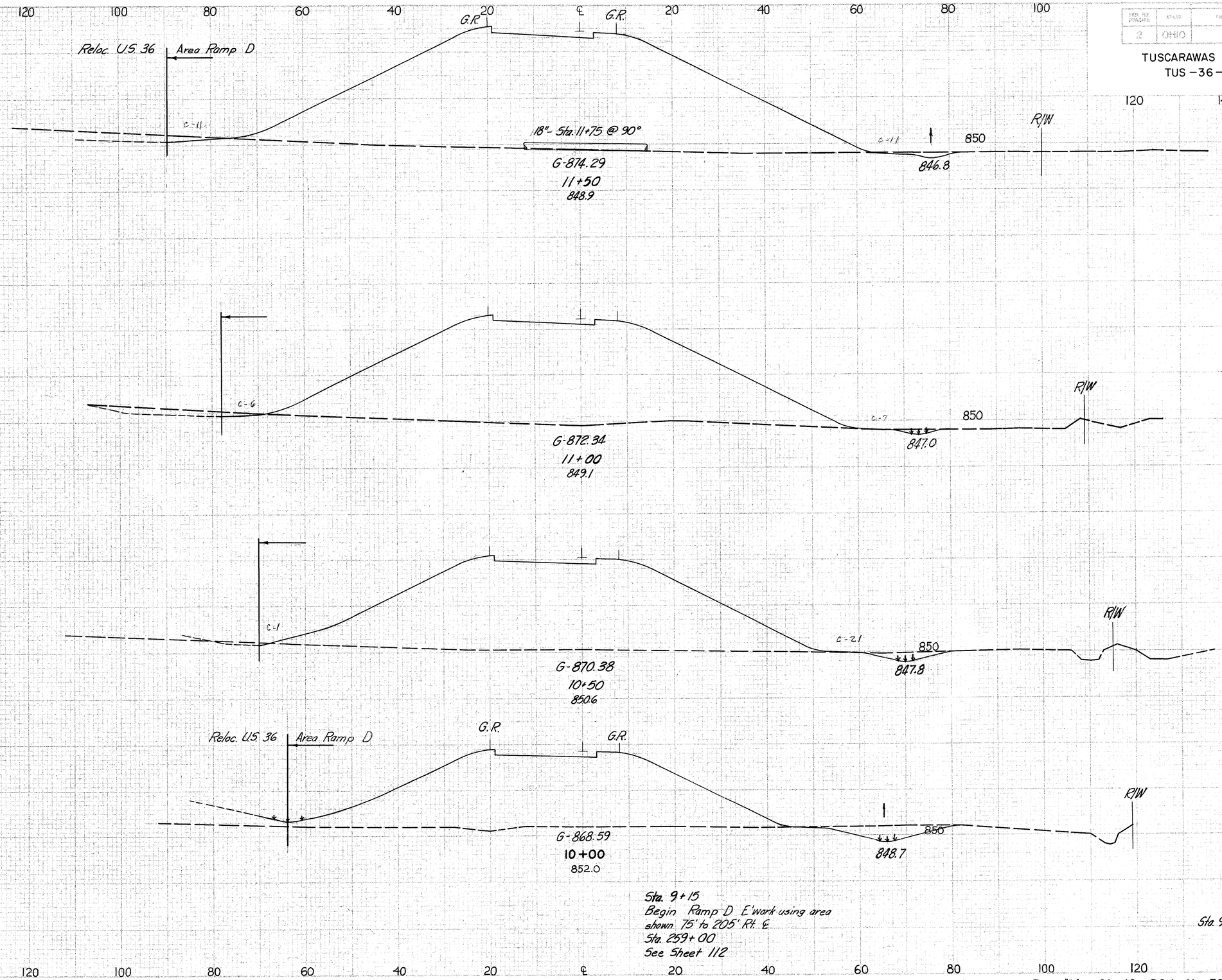
(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE	B-21 WATER-PROOFED AGGR. BASE COURSE	I-12 CONCRETE CURB TYPE 6	7	8	I-21 PORT. CEM. CONC. MEDIAN	I-22 SUBBASE	SUBBASE GRADING A OR B	T-30 BIT. PRIME COAT	T-31 BIT. MAT'L	#6 AGGR.	T-35 ASPH. CONC. SURF. COURSE TYPE C	T-71 REINF. PORT. CEM. CONC. PAVT. 9"
				C.Y.		L.F.			S.Y.	C.Y.		GAL.			C.Y.	S.Y.
1-P	248+57.42 U.S. 36	17+74 Trenton Ave.	(Ramp D)	290	18	208	212	40	30	205	592	522	418	12		3,258
2-P	7+80		Rt.	17								31			5	
	TOTALS			307	18	208	212	40	30	205	592	553	418	12	5	3,258

EXCAVATION	=	493 C.Y.
EMBANKMENT	=	38,362 C.Y.
EMBANKMENT + 6%	=	40,664 C.Y.

RAMP D TRENTON AVENUE INTERCHANGE

SEEDING	
END WIDTH	SQ. YDS.
173	
	903
152	
	819
143	
	783
139	
	1237
123	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
22	2151		
		32	3621
13	1760		
		32	2912
22	1450		
		73	2387
57	1128		
		131	3564
26	1136		

Sta. 9+15
Begin Ramp D E'work using area shown 75' to 205' Rt. ℄
Sta. 259+00
See Sheet 112

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

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662

TUSCARAWAS COUNTY
TUS -36-15.93

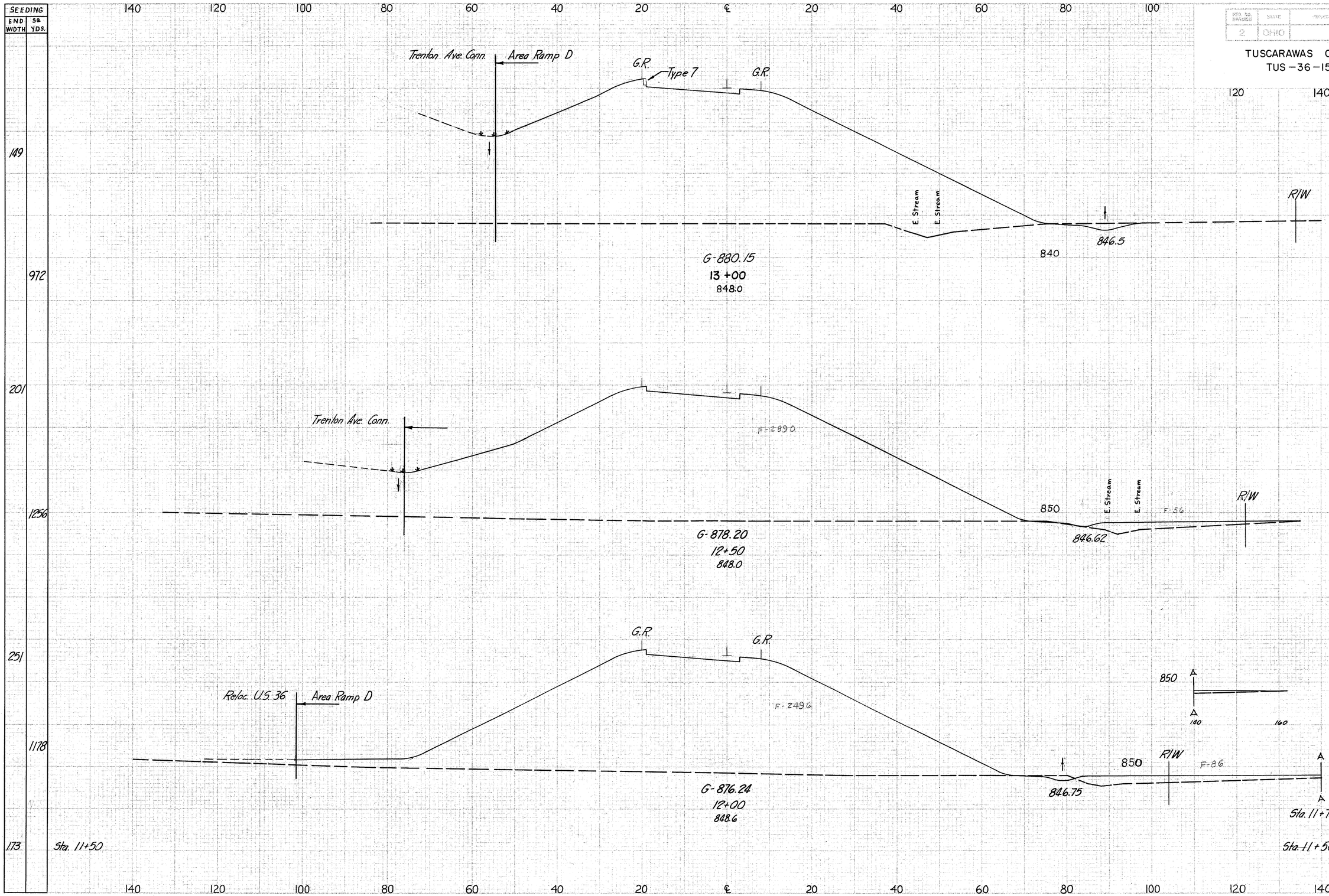
Tranton Ave. Interchange Ramp "D" Sta. 10+00 to 11+50

SEED NO DIVISION	STATE	PROJECT	
2	OHIO		

284
662

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING END WIDTH	SEEDING SQ. YDS.
149	
	972
201	
	1256
251	
	1178
173	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
16	2970		
		16	5478
1	2946		
		6	5119
6	2582		
		6	4382
8		14	
22	2151		

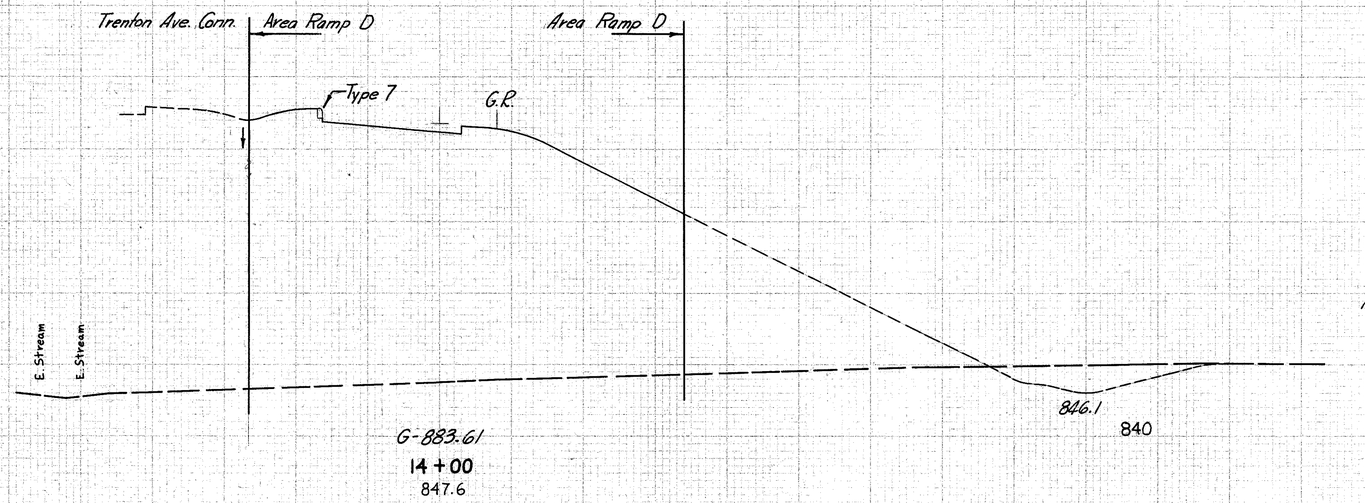
Trenton Ave. Interchange Ramp "D" Sta. 12+00 to 13+00

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

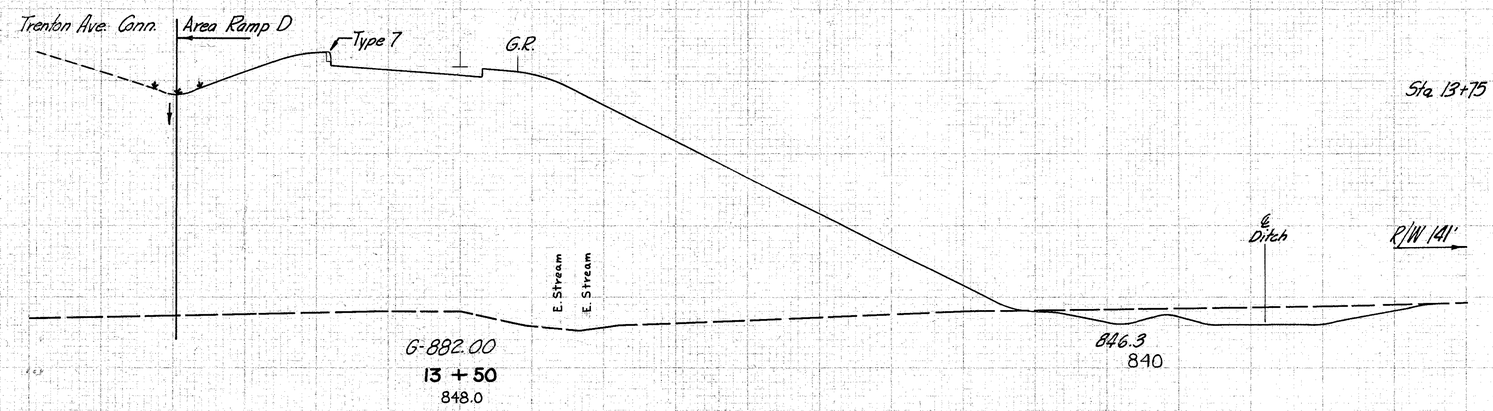
285
662

TUSCARAWAS COUNTY
TUS-36-15.93

Sta. 14+13
End Ramp D E'work using area shown 33' to 90' Lt. ℄ F-1856
Sta. 21+00 Trenton Ave. Conn.
See Sheet 259



G-883.61
14 + 00
847.6



G-882.00
13 + 50
848.0

SEEDING END WIDTH	SEEDING Sq. YDS.		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
39		Sta. 14+13		1856		
	59					926
		R/W 144'		1992		
43						
	583					4504
		Sta. 13+75	91			
						84
167				2872		
	878					5409
			99			
149		Sta. 13+00	16	2970		

Trenton Ave. Interchange "Ramp D" Sta. 13 + 50 to 14 + 00

NOTES: Sta. 28 + 14.9 to Sta. 28 + 25.00 Lt.
Taper Curb Height 0'-2" to 0'-6"

Modification of Combination Curb and Gutter Consists of Widening the Pavement Portion from 2.0 feet to Width shown on Plan in Length as shown on Plan. All other Details shall Conform to Std. Drawing I-12.

FOR EXISTING TYPICAL SECTION SEE SHEET 240

FOR INTERSECTION DETAILS SEE SHEET 300

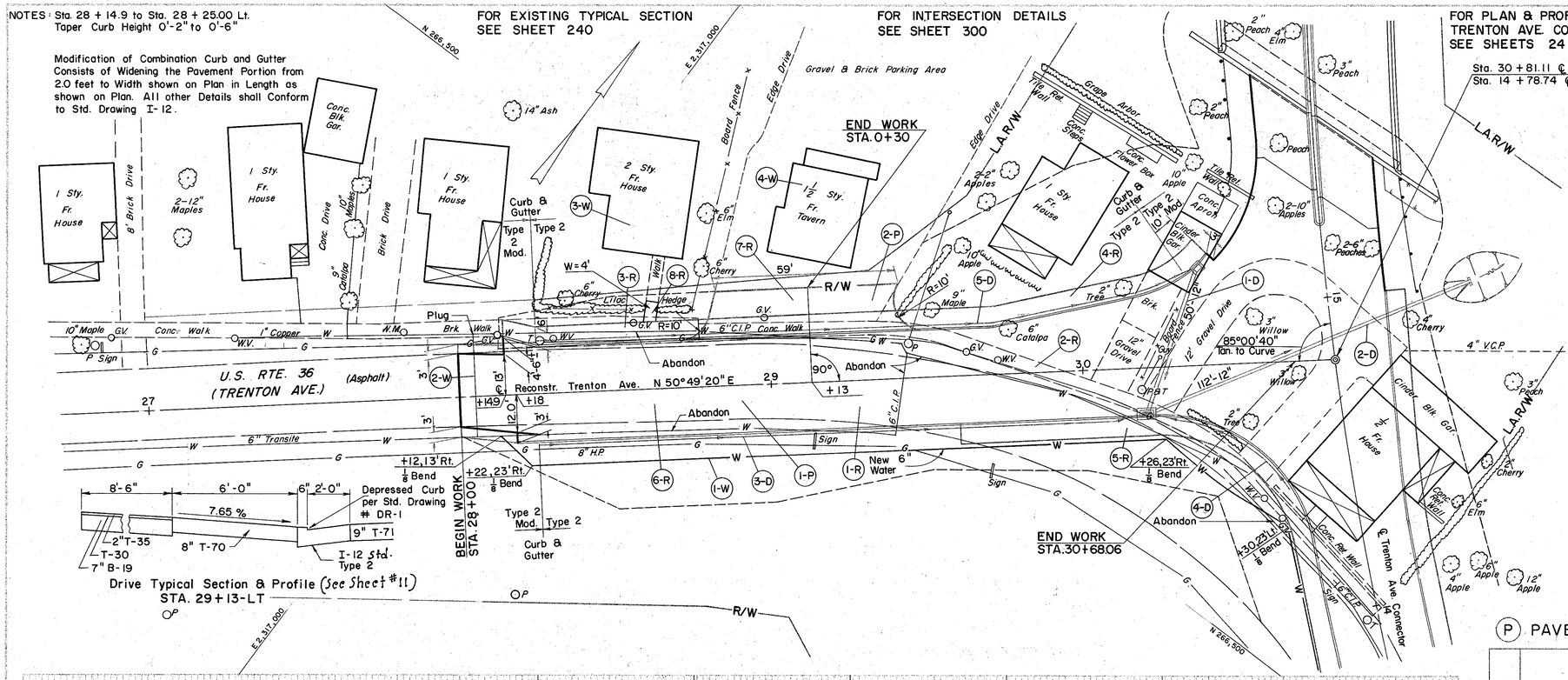
FOR PLAN & PROFILE OF TRENTON AVE. CONNECTOR SEE SHEETS 241-243

Sta. 30 + 81.11 ℄ Reconstr. Trenton Ave. =
Sta. 14 + 78.74 ℄ Trenton Ave. Conn.

FED. ROAD DIVISION	STATE	PROJECT		
2	OHIO			

286
662

TUSCARAWAS COUNTY
TUS-36-15.93



(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. SUB-GRADE	E-8 REMOVAL & DISPOSAL OF EXISTING PAV'T (RIGID)	E-8 SIDEWALK	I-13 CONC. SIDE-WALKS 4"
				S.Y.	S.Y.	S.F.	S.F.
1-R	28+00	4+00 Conn.			787		
2-R	28+77	13+98 Conn.	Lt.			988	
3-R	28+14.9	28+81	Lt.				390
4-R	29+41	30+41	Lt.				600
5-R	29+60	4+24 Conn.	Rt. & Lt.				792
6-R	28+00	30+68.06		1,142			
7-R	29+13	—	Lt.	98			
8-R	28+62	—	Lt.				24
	TOTAL			1,240	787	988	1,806

(D) DRAINAGE

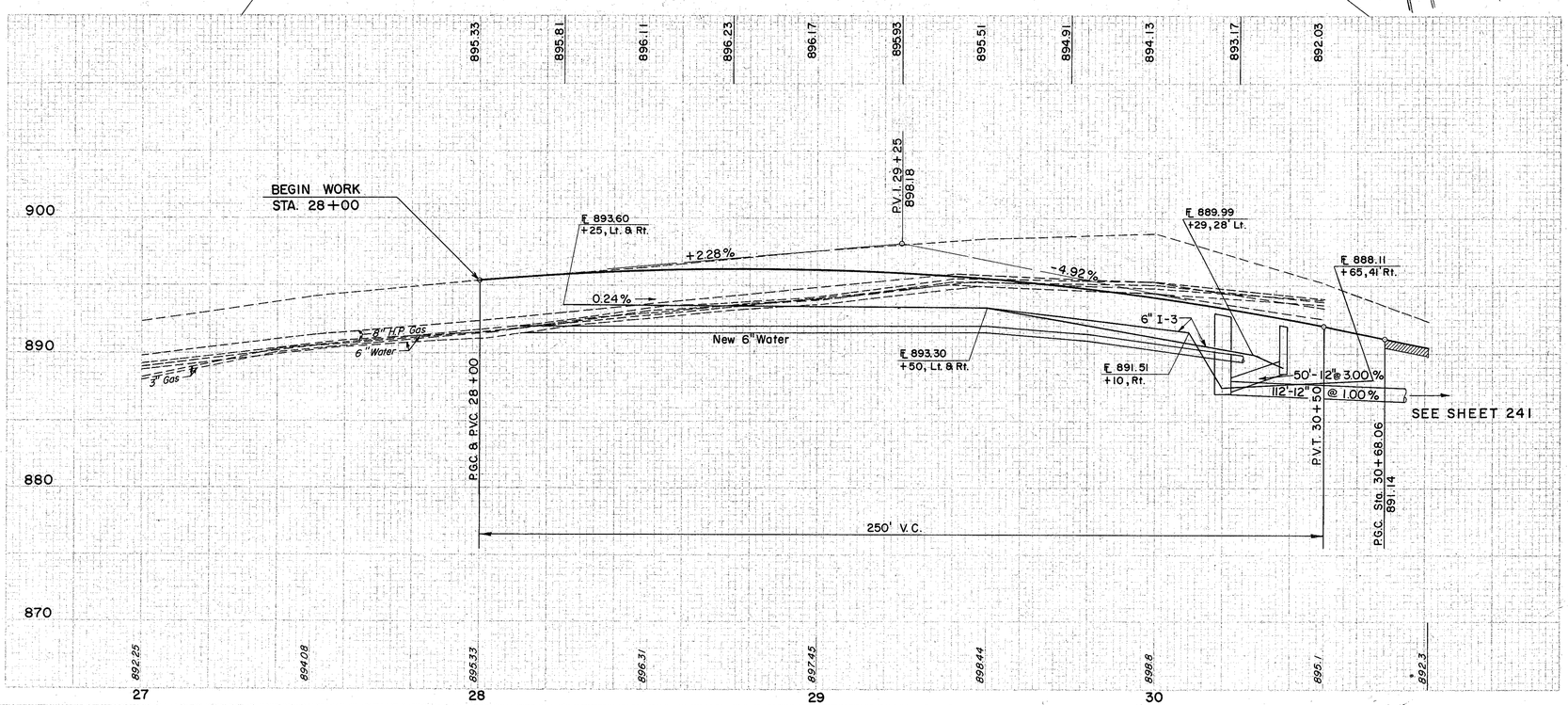
REF. NO.	STATION FROM	STATION TO	SIDE	I-1 6" PIPE CLASS F-4	I-1 6" PIPE CLASS I-3	I-1 12" PIPE CLASS J-1	I-2 MASONRY	I-8 STD. CATCH BASIN # 3	I-8 STD. CATCH BASIN # 3-A
				L.F.			C.Y.	EA.	
1-D	30+20	30+38	Lt. & Rt.			50			1
2-D	30+20	5+00 Conn.	Rt.			112	0.23	1	
3-D	28+25	30+20	Rt.	10	185				
4-D	30+20	30+65	Rt.	10	43				
5-D	28+25	30+38	Lt.	10	205				
	TOTAL			30	433	162	0.23	1	1

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE	I-12 COMB. CURB & GUTTER TYPE 2	I-12 COMB. CURB & GUTTER TYPE 2 MOD	I-22 SUBBASE GRADING A OR B	T-30 BIT. PRIME COAT	T-31 BIT. MAT'L	T-31 #6 AGGR.	T-35 ASPH. CONC. SURF. COURSE TYPE C	T-70 PORT. CEM. CONC. PAV'T. 8"	T-71 REINF. PORT. CEM. CONC. PAV'T. 9"
				C.Y.	L.F.		C.Y.	GAL.			C.Y.	S.Y.	
1-P	28+00	30+68.06		6	477	27	197	10	8	1			980
2-P	29+13	—	Lt.	11				40			4	42	
	TOTAL			17	477	27	197	50	8	1	4	42	980

(W) WATER

REF. NO.	STATION FROM	STATION TO	SIDE	I-124 NEW WATER MAIN 6" A.C.	I-124 6" BEND ⅛	I-124 NEW SERVICE BRANCH	I-124	I-124 SERVICE STOPS & BOXES REMOVED & RESET
				L.F.	EA.	L.F.		EA.
1-W	28+12	14+30 Conn.	Rt. & Lt.	268	4			
2-W	28+05	—	Rt. & Lt.			33		
3-W	28+60	—	Lt.			47		1
4-W	29+13	—	Lt.			47		1
	TOTAL			268	4	127		2



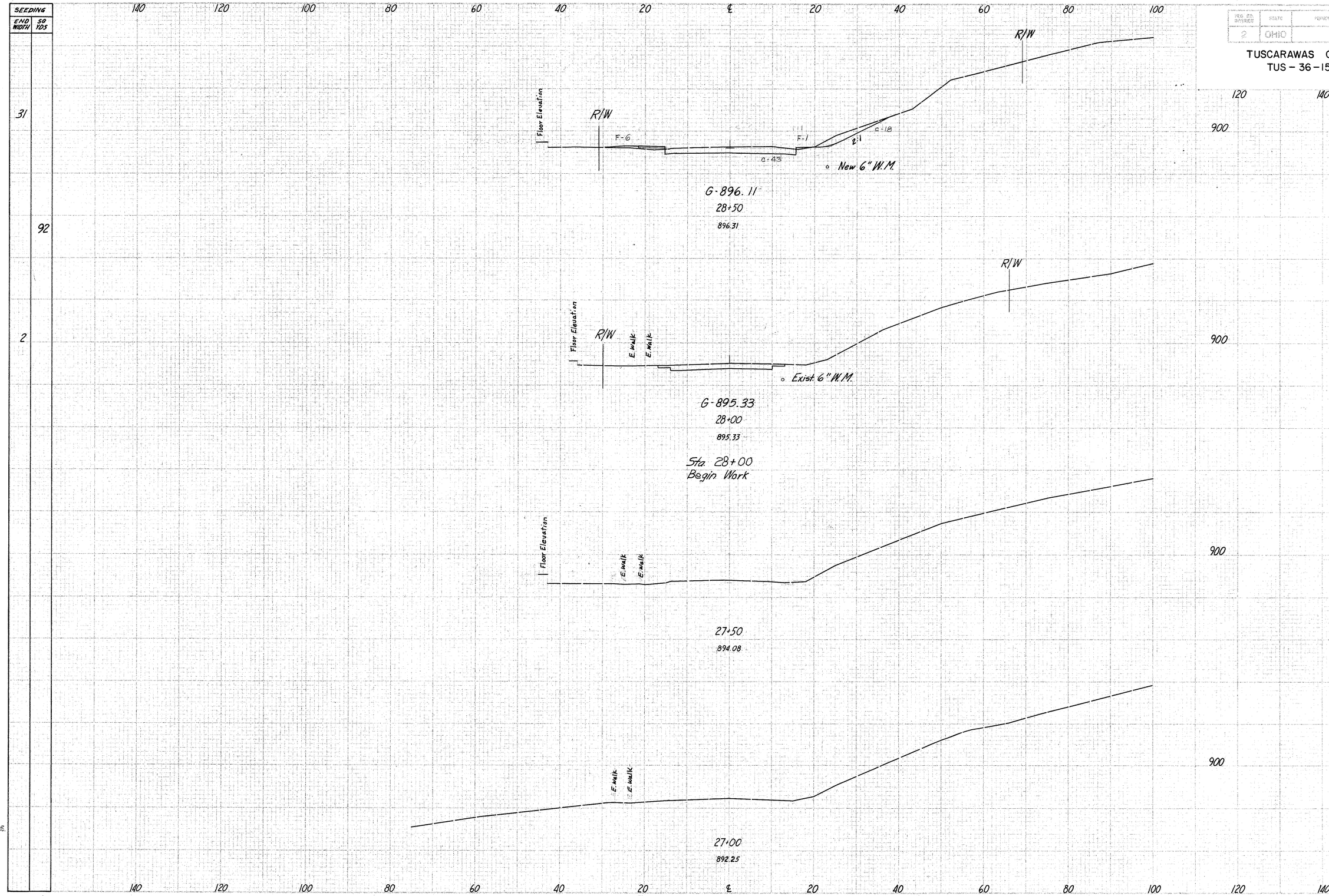
EXCAVATION	1,549 C.Y.
EMBANKMENT	207 C.Y.
EMBANKMENT + 6 %	219 C.Y.

RECONSTR. TRENTON AVE.
STA. 27+00 TO STA. 30+81.11

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

287
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
61	7		
		84	6
30	0		

Reconstr. Trenton Ave. Sta. 27+00 to 28+50

FED. ROAD DIVISION	STATE	PROJECT		288 662
2	OHIO			

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING END WIDTH	SEEDING SQ YDS
40	
	247
49	
	231
34	
	178
30	
	169
31	

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

Trenton Ave. Conn. — Area Reconstr. Trenton Ave.

2:1 (Skewed)

New 6" W.M.

Exist. 6" Transite

890

900

R/W 209'

G-892.03
30+50
895.1

Sta. 30+38, 32' Lt.
Std. 3A C.B.
Depressed Curb El. 892.07
IE 12" 888.50
IE 6" 889.00

Floor Elevation

50'-12" @ 3.00%

To Sta. 30+20, 15' Rt.

E. Walk E. Walk

R/W 107'

2%

112'-12" @ 1.00%
To HWE Sta. 15+00, 48' Rt.
Trenton Ave. Conn.

G-894.13
30+00
898.8

Sta. 30+20, 15' Rt.
Std. 3 C.B.
Depressed Curb El. 892.83
IE 12" 887.00
IE 6" 887.50

R/W 169'

R/W Daylight

E. Walk E. Walk E.P. E.P.

2%

2:1

G-895.51
29+50
898.44

Sta. 29+13
Drive Computation Lt.
T-10 = 42.5 S.Y. × 8"/12" × 1/3 = 9 C.Y. Exc.
B-19 = 11 C.Y. Exc.
T-35 = 4 C.Y. Exc.
E-1 = 24 C.Y. Exc.

R/W

End Work
Sta. 0+30

Floor Elevation

R/W

E. Walk E. Walk

+6.0%

1 3/4:1

Profile Drive Lt. Sta. 29+13

New 6" W.M.

G-896.17
29+00
897.45

Drive Lt. Drive Lt. Sta. 29+13 Exc.

Sta. 28+50

Sta. 28+70

Sta. 28+50

Reconstr. Trenton Ave. Sta. 29+00 to 30+50

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
357	54		
		628	50
321	0		
		509	
229			
		304	
		24	
99		24	
			148
61	7	0	3

FED. ROAD DIV.NUMB.	STATE	PROJECT		289
2	OHIO			662

TUSCARAWAS COUNTY
TUS-36-15.93

SUPERELEVATION NOTE
Sta. 12+20.45 to Sta. 12+68.45 transition from normal typical section to full super of 0.016 ft/ft. Sta. 14+53.64 to Sta. 15+01.64 transition from full super of 0.016 ft/ft to normal typical section. Sta. 17+13.77 to Sta. 17+61.77 transition from normal typical section to full super of 0.016 ft/ft. For transition begining at Sta. 18+97.03 see sheet 301.

FRONTAGE RD. 'B'
CURVE DATA
P.I. Sta. 11+27.29
Δ = 12°00'00" Rt.
R = 500.00'
L = 104.72'
T = 52.55'

FRONTAGE RD. 'B'
CURVE DATA
P.I. Sta. 13+67.29
Δ = 44°32'08" Lt.
R = 300.00'
L = 233.19'
T = 122.84'

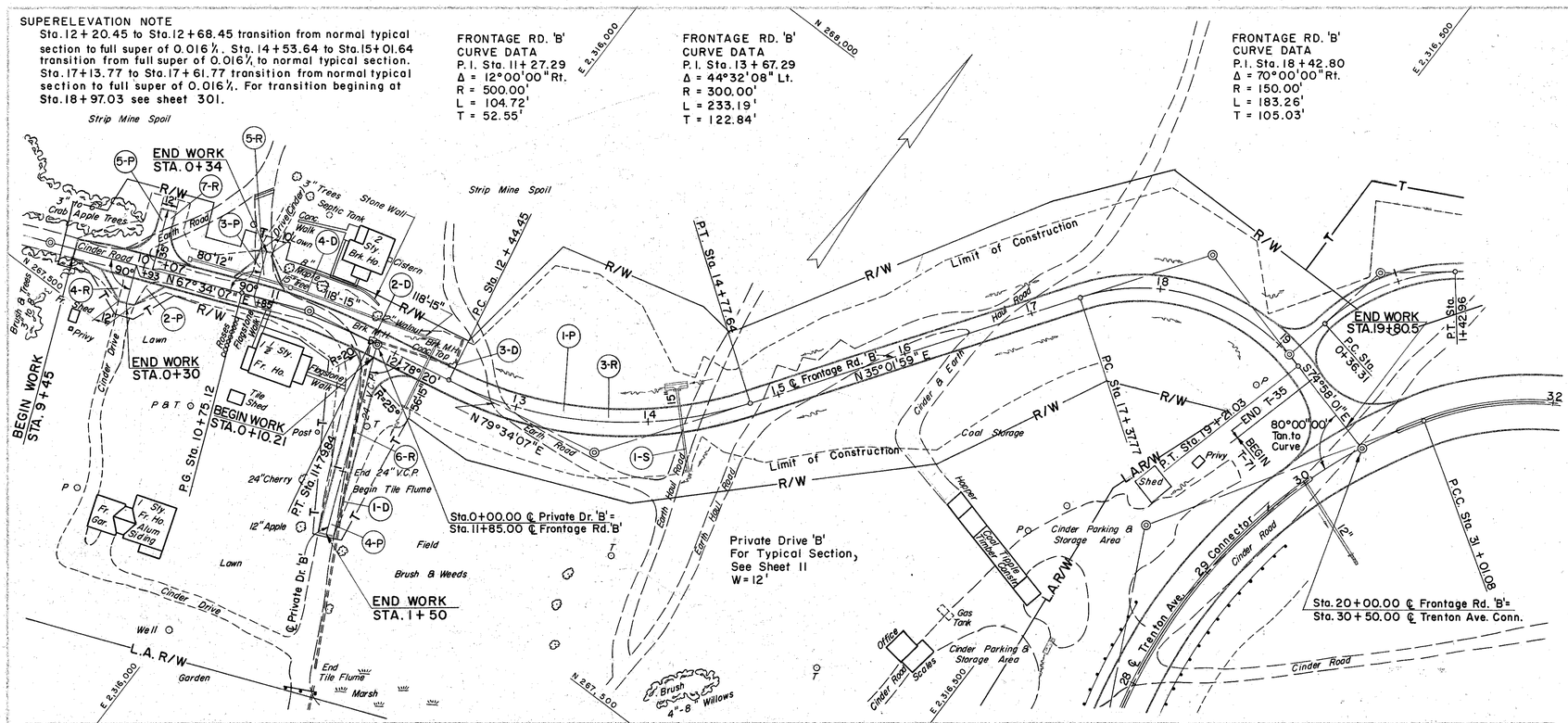
FRONTAGE RD. 'B'
CURVE DATA
P.I. Sta. 18+42.80
Δ = 70°00'00" Rt.
R = 150.00'
L = 183.26'
T = 105.03'

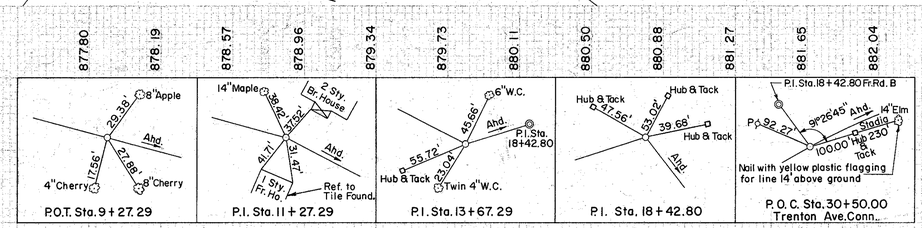
FOR PLAN & PROFILE OF TRENTON AVE. CONN., SEE SHEETS 244 & 246

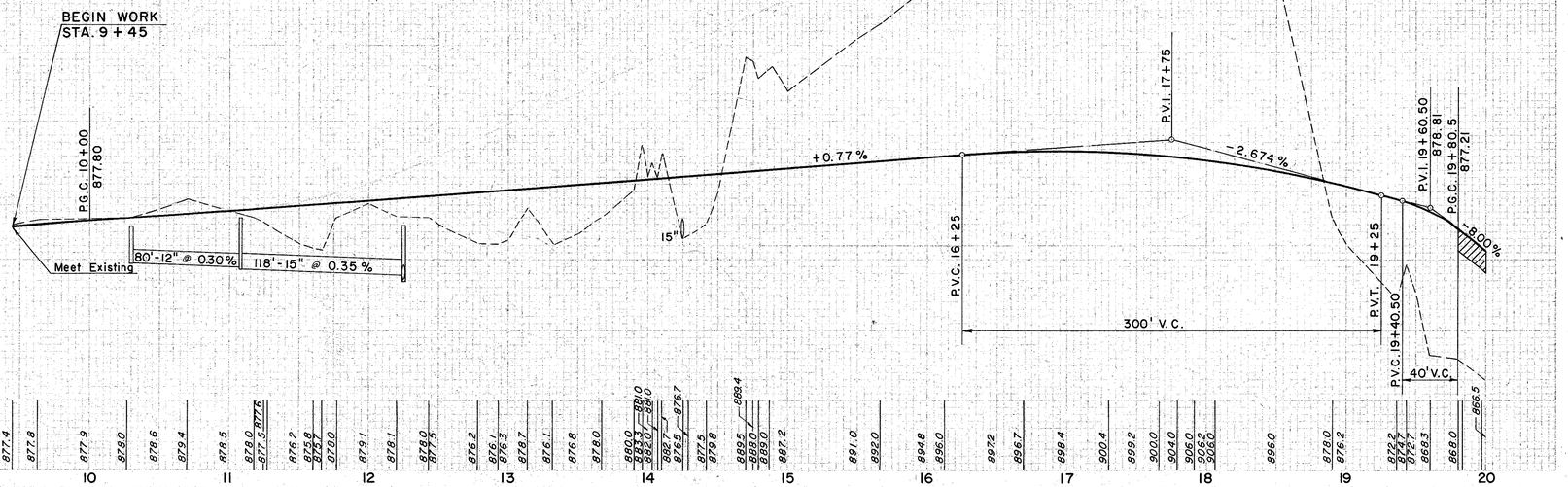
FOR INTERSECTION DETAILS, SEE SHEET 301

FOR GEOMETRIC LAYOUT, SEE SHEET 305

PRIVATE DRIVE 'B' FOR PROFILE, SEE SHEET 459







(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE C.Y.	I-22 SUBBASE	T-30 BIT. PRIME COAT GAL.	T-35 ASPH. CONC. SURF. COURSE TYPE A, C S.Y.	T-71 REINF. PORT. CEM. CONC. PAV'T. S.Y.
1-P	9+45	19+80.5	Rt.	320	288	878	92	182
2-P	9+93		Rt.	10		28	4	
3-P	10+85		Lt.	9		25	4	
4-P	Private Drive 'B'		Lt.	34		98	14	
5-P	10+07 Turnaround		Lt.	17		31	5	
	TOTALS			390	288	1,060	92	182

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. SUB. GRADE S.Y.	I-9 STONE UNDER-DRAINS NO. 2 L.F.
3-R	9+45	19+90.5		2,376	300
4-R	9+93		Rt.	69	
5-R	10+85		Lt.	62	
6-R	Private Drive 'B'			245	
7-R	10+07 Turnaround		Lt.	77	
	TOTALS			2,829	300

(S) STRUCTURE

REF. NO.	STATION FROM	STATION TO	I-1 15" Pipe CLASS A-1 SEC. M-6.8 (b) L.F.	I-2 MASONRY C.Y.	I-10 RIPRAP 6" REINF. S.Y.	L-10 SODDING S.Y.	SEE SHEET
1-S	14+25		62	0.52	9	3	482

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	E-12 PIPE REMOVED OVER 15" L.F.	I-1 15" PIPE CLASS J-III SEC. M-6.8 (b) Class E-1 M-6.8 (a) Class B-1 M-6.8 (b) 15" L.F.	I-2 MASONRY C.Y.	I-8 STD. C.B. EA.	I-16 M.H. ABAN-DONED EA.
1-D	0+00 Drive 'B'	11+50	Rt & Lt.	150				
2-D	11+83		℄				1	
3-D	12+43		Lt.		80	0.26	1	
4-D	10+30	12+25	Lt & Rt.		118	0.26	3	2
	TOTALS			150	80	118	56	3

EXCAVATION	= 9 C.Y.
EMBANKMENT	= 222 C.Y.
EMBANKMENT + 6 %	= 235 C.Y.

PRIVATE DRIVE 'B'

EXCAVATION	= 23,165 C.Y.
EMBANKMENT	= 1,811 C.Y.
EMBANKMENT + 6 %	= 1,920 C.Y.

FRONTAGE ROAD 'B'

FRONTAGE ROAD 'B' & PRIVATE DRIVE 'B'

SEEDING END WIDTH	SEEDING SQ. YDS.
8	74
18	44
7	
0	28
10	117
32	79
25	

60 40 20 ℄ 20 40 60

End Work
Sta. 1+01.20

Exist. RIW

Exist. RIW

E.R. E.R.

G-871.0
1+01.20
871.0

Co. Rd. 62 Connection

RIW

G-870.82
0+50
870.8

Area Sta. 0+14 Exc.

E.R.

To Exist C.B.

℄ Temp. Conn. Sta. 190+31, Lt.

24"

G-870.75
0+18.3
870.7

Begin Work
Sta. 0+14
Co. Rd. 62 Connection

End Work
Sta. 1+50

E.R. E.R.

G-867.09
1+50
866.9

Private Drive B

E.R. E.R.

3:1

G-870.80
1+00
869.6

3:1 E.R. E.R. 3:1

G-876.60
0+50
871.9

Frontage Road B

Area Private Drive

E.R. 3:1 E.R.

Begin Work Sta. 0+25
Private Drive B

G-878.72
0+25
875.0

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL	
34	0			870
		72	1	
42	1			870
		107	4	
140	5			Sta. 0+18.3
			23	870
147	0			Sta. 0+14
8	0			860
		9	5	
2	5			860
0			111	Sta. 0+90
	115			870
			106	
115				870

Co. Rd. 62 Connection
Private Drive B
Sta. 0+18.3 to 1+01.20
Sta. 0+25 to 1+50

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FED. ROAD DIV. NO.	STATE	FED. AID PROJECT
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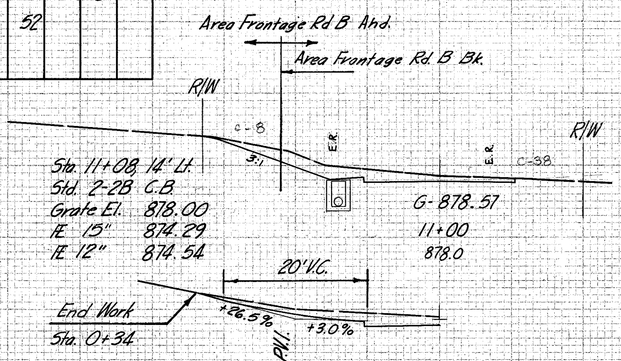
60 40 20 ℄ 20 40 60

SEEDING	
END WIDTH	SQ. YDS.
28	
131	
19	
106	
19	
58	
0	

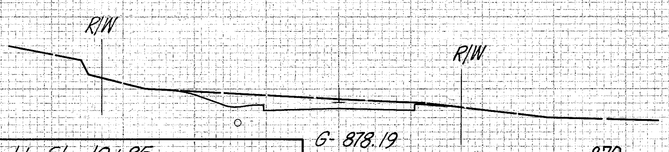
END AREA		VOLUME	
CUT	FILL	CUT	FILL
Ahd. 46	0		
Bk. 38		76	
44		63	
		77	
24		37	
12			

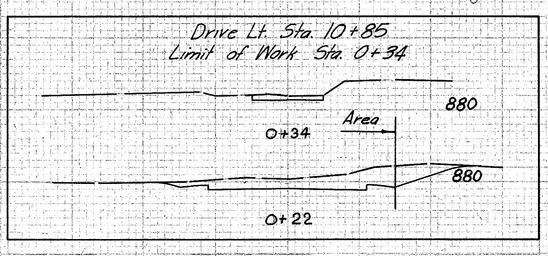
Drive Lt. Sta. 10+85

STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0+34	7		13	
0+22	52			

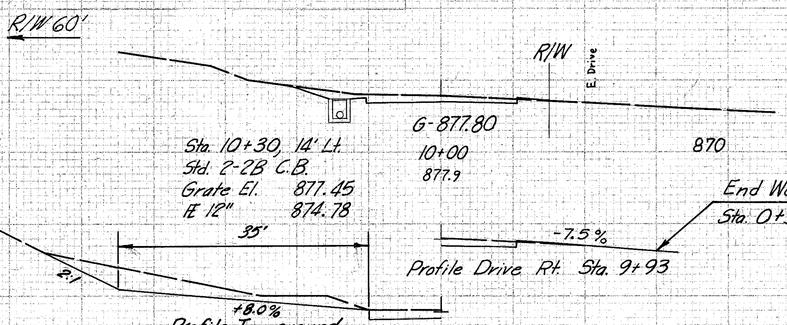


Profile Drive Lt. Sta. 10+85



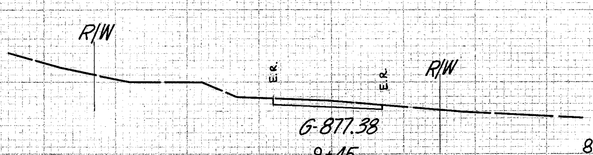


Turnaround Sta. 10+07



Profile Drive Rt. Sta. 9+93

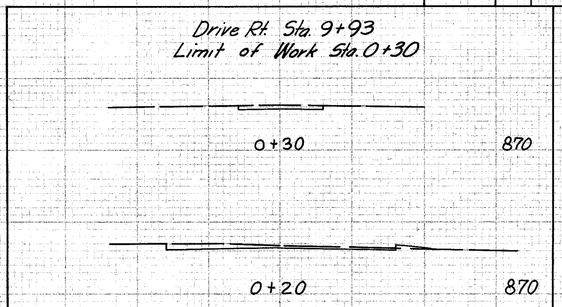
Profile Turnaround Lt. Sta. 10+07



Sta. 9+45 Begin Work

Drive Rt. Sta. 9+93

STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0+30	7	0	4	—
0+20	15	2	3	—
0+10	0	0		



Frontage Road 'B'

Sta. 9+45 to 11+00

TUSCARAWAS COUNTY
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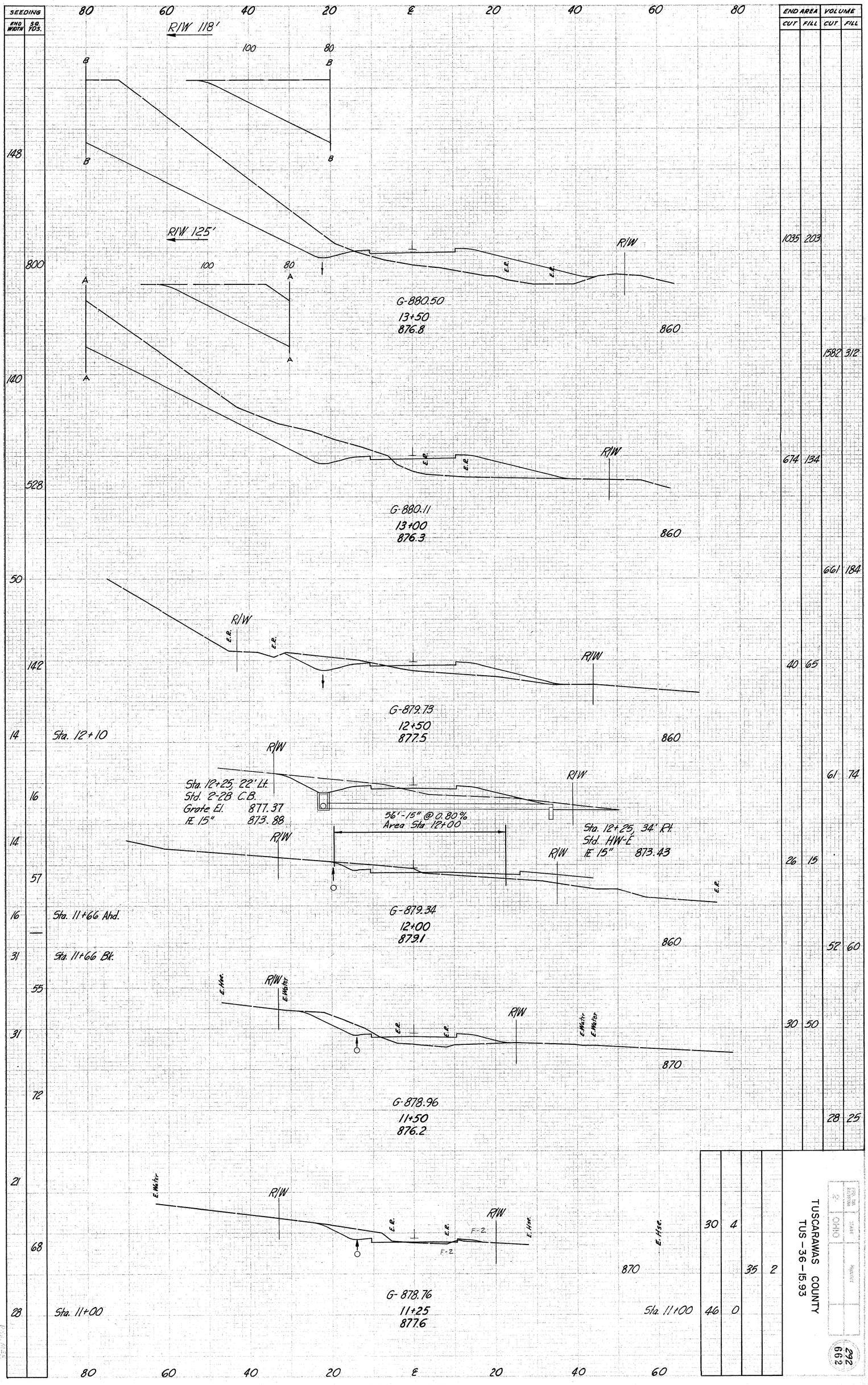
SHEET NO.	STATE	PROJECT
2	OHIO	


SEEDING
END WIDTH
SQ. YDS.
END AREA
CUT
FILL
VOLUME
CUT
FILL
R/W 118'
R/W 125'
G-880.50
13+50
876.8
G-880.11
13+00
876.3
G-879.73
12+50
877.5
Sta. 12+10
Sta. 12+25, 22' Lt.
Std. 2-2B C.B.
Grate El. 877.37
IE 15" 873.88
56'-15" @ 0.80%
Area Sta. 12+00
Sta. 12+25, 34' Rt.
Std. HW-E
IE 15" 873.43
G-879.34
12+00
879.1
Sta. 11+66 Ahd.
Sta. 11+66 Bk.
G-878.96
11+50
876.2
G-878.76
11+25
877.6
Sta. 11+00
Frontage Road "B"
Sta. 11+25 to 13+50
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END AREA VOLUME		
CUT	FILL	
1340		
	2878	
1336		
	2032	
859		
	1208	
554		
	429	
372		
	204	
0		
	5	
68		
	35	114
7		199

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148	115	1247	233
	49		203
	312	1035	

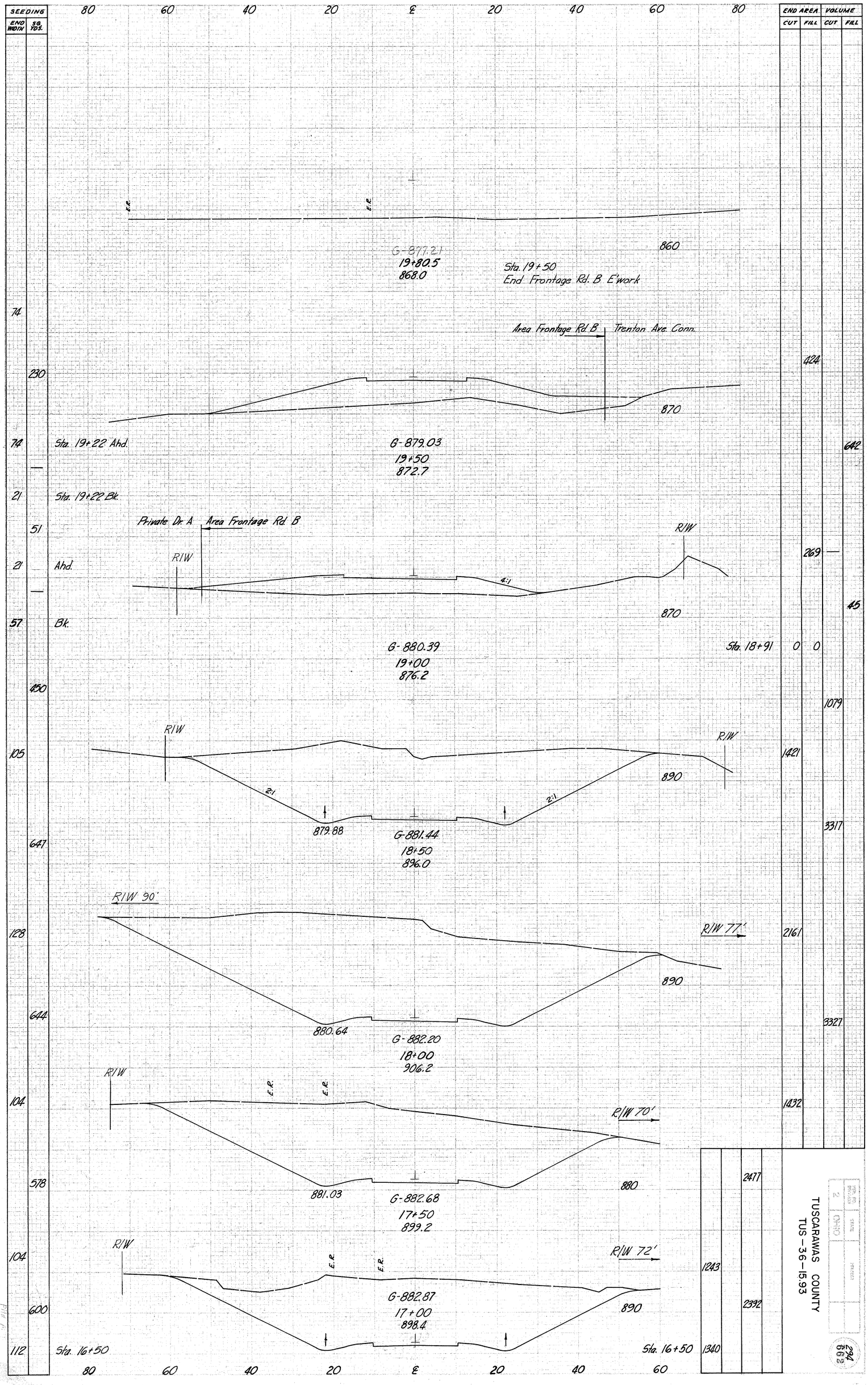
Sta. 14+56

RIW 85'
RIW
E.R.
G-882.77
16+50
897.2
RIW 85'
E.R.
G-882.42
16+00
894.8
RIW
E.R.
G-882.04
15+50
891.0
E.R.
G-881.65
15+00
887.2
RIW
E.R.
G-881.46
14+75
889.4
2:1
RIW 85'
E.R.
G-881.27
14+50
879.8
1:1
RIW 97'
RIW
E.R.
1:1
15" @ Sta. 14+25 @ 30°
RIW 107'
E.R.
G-881.07
14+25
876.5
RIW 59'
E.R.
Sta. 13+50
E.R.
G-880.88
14+00
881.0
Sta. 13+50

SEEDING	
SQ. YDS.	
AND MULCH	
112	633
116	586
95	469
74	187
61	162
56	162
61	249
118	739
148	

Frontage Road 'B'

Sta. 14+00 to 16+50



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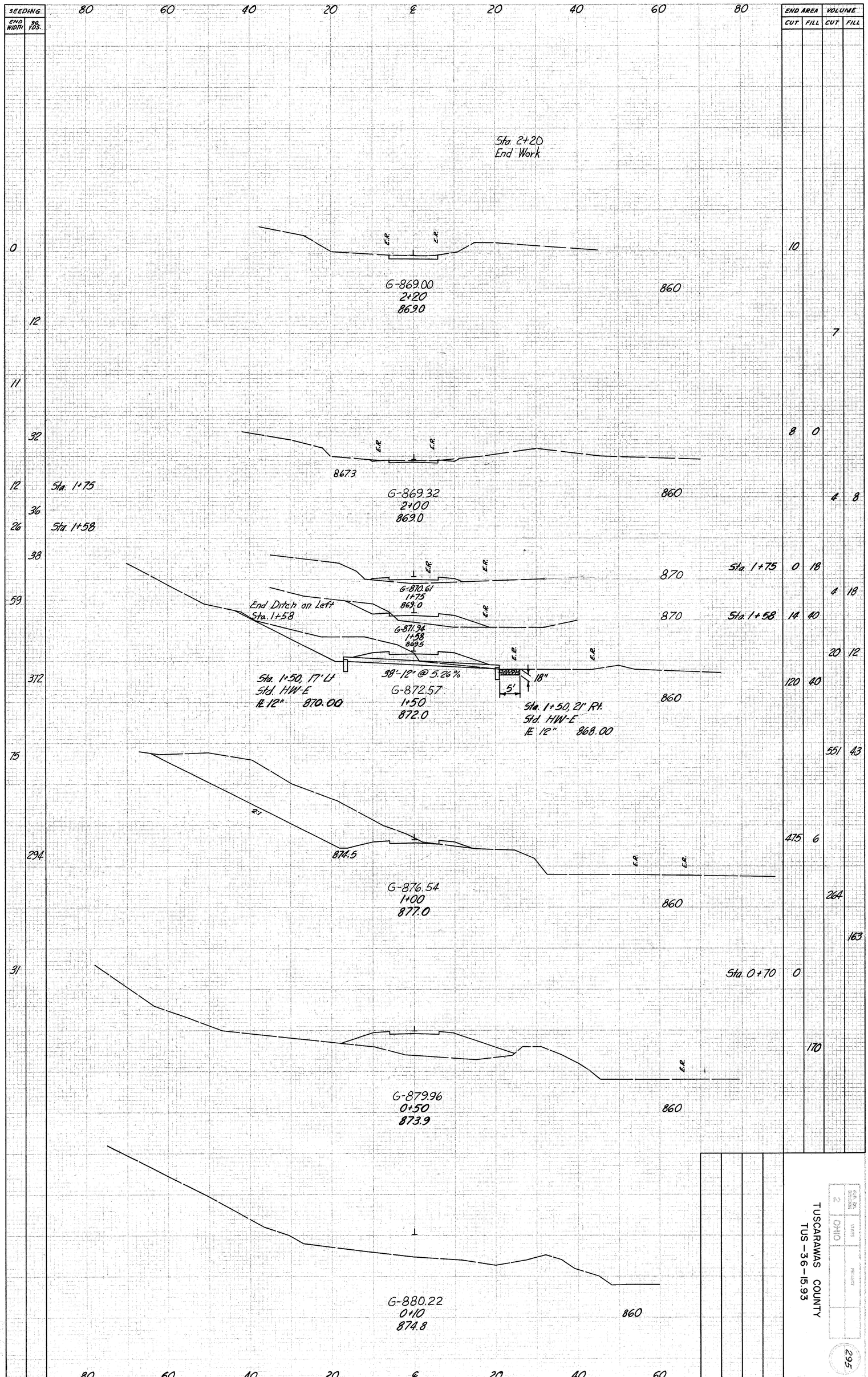
SEEDING
END WIDTH
SQ. YDS.
80 60 40 20 ℄ 20 40 60 80
END AREA
CUT FILL
VOLUME
CUT FILL
Sta. 2+20
End Work
E.R.
G-869.00
2+20
869.0
860
867.3
G-869.32
2+00
869.0
Sta. 1+75
Sta. 1+58
G-870.61
1+75
869.0
870
End Ditch on Left
Sta. 1+58
G-871.94
1+58
869.5
Sta. 1+50, 17' Lt
Std. HW-E
IE 12" 870.00
38'-12" @ 5.26%
G-872.57
1+50
872.0
18"
5'
Sta. 1+50, 21' Rt.
Std. HW-E
IE 12" 868.00
2:1
874.5
G-876.54
1+00
877.0
Sta. 0+70
G-879.96
0+50
873.9
G-880.22
0+10
874.8
Private Drive 'A'
Sta. 0+10 to 2+20
TUSCARAWAS COUNTY
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SIGN SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
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TUSCARAWAS COUNTY
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SIGN & REF. NO.		STATION LOCATION		SIDE	606 GUARD RAIL TYPE 4 AS PER PLAN	815 SIGN ERECTION, AS PER PLAN	816 OVERHEAD SIGN SUPPORTS: 7.3 DES. 2 60' SPAN	7.4 DES. 1 70' SPAN	7.3 DES. 2 58' SPAN	10.48 DES. 5 16' & 20' ARM	10.48 DES. 8 20' ARM	12.24 DES. 3 16' ARM	12.24 DES. 4 20' ARM	12.24 DES. 6 22' ARM	816 STRUCTURAL SUPPORTS: 6B-8.5	10B-11.5	10B-17	816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS: OVER-HEAD	GROUND MOUNTED
					L.F.	S.F.	EA.								L.F.			C.Y.	
1		205+00	U.S. 36	RT.	50	75.0										38			1.9
3		230+00	"	RT.		70.0											46		2.3
4		232+50	"	LT.		75.0											46		2.3
5		250+75	"	LT.	50	48.0										37			2.0
6		248+57	"	RT.	50	84.0							1					3.3	
7	A	257+20	"	RT.	50	189.0					1							3.4	
	B					66.0													
8	A	21+55	TRENTON AVE. CONN.	RT.	50	117.0				1								3.6	
	B					71.5													
9	A	274+17	U.S. 36	LT.	50	82.5				1								3.6	
	B					66.0													
10		282+84	"	LT.	50	84.0							1					3.3	
11		290+64	"	RT.	50	189.0								1				4.0	
12	A	297+58	"	RT.	50	96.0		1										8.9	
	B					72.0													
	C					178.5													
13	A	97+27	U.S. 250	RT.	100	77.0	1											6.2	
	B					60.0													
	C					102.0													
14	A	115+00	"	LT.	100	120.0			1									8.4	
	B					136.0													
15	A	102+57	"	LT.	50	120.0												3.3	
	B					136.0													
16	A	324+85	U.S. 36	LT.	50	70.0												3.5	
	B					178.5													
17		333+43	"	LT.		189.0								1				4.0	
18		342+20	"	RT.	50	60.0						1						2.8	
19	A	349+93	"	RT.	50	96.0												2.9	
	B					78.0													
20	A	360+12	"	LT.	50	189.0												3.2	
	B					78.0													
21		368+72	"	LT.	50	60.0						1						2.8	
22		103+00	RECONSTR. U.S. 250	RT.	50	49.5									32				0.2
TOTALS					1000	3363	1	1	1	2	1	1	3	2	32	75	92	67.2	8.7

SIGN & REF. NO.		625 FIXTURE LAMP: 72" SHO	96" SHO	72" HO	96" HO	BALLAST: RATING WATTS +25%	TYPE A	B	C	D	TRANSFORMER: KVA	TYPE II	III	IV	VI	DISCONNECT SWITCH TRANSFORMER ENCLOSURE TYPE Y	Z	GROUND ROD UNITS	CABLE CONNECTOR KITS TYPE II	III	SIGN WIRING COMPL. AS PER PLAN	816 OVERHEAD SIGN SUPPORTS 10.48: DESIGN 5 20'&18' ARMS	DESIGN 7 22' ARM	DESIGN 2 16' ARM	DESIGN 7 20'&16' ARMS
		EA.					EA.											EA.			LUMP				
1																								
3																								
4																								
5																								
6				2		310		1			0.50	1				1		1	1	1	LUMP				
7	A		2			530				1	1.00			1			1	1	1	1	"				
	B				1	240	1																		
8	A				2	310		1			0.75		1			1		1	1	1	"				
	B				1	240	1																		
9	A			2		310		1			0.75		1			1		1	1	1	"				
	B				1	240	1																		
10				2		310		1			0.50	1				1		1	1	1	"				
11			2			530				1	0.75		1			1		1	1	1	"				
12	A	2				530				1	2.00				1		1	1	1	1	"				
	B			2		310		1																	
	C	3				845			1	1															
13	A		1			310			1		2.00				1	1		1	1	1	"				
	B				1	240	1																		
	C	2				530				1															
14	A	1	1			530				1	2.00			1		1		1	1	1	"				
	B	1	1			530				1															
15	A	2				530		1		1	2.00				1		1	1	1	1	"	1			
	B	1	1			530				1															
16	A			2		310		1			2.00				1		1	1	1	1	"		1		
	B	3				845			1	1															
17			2			530				1	0.75		1			1		1	1	1	"				
18				2		310		1			0.50	1				1		1	1	1	"				
19	A	2				530				1	1.00			1			1	1	1	1	"			1	
	B			2		310		1																	
20	A		2			530				1	1.00			1			1	1	1	1	"				1
	B			2		310		1																	
21					1	240	1				0.50	1				1		1	1	1	"				
22																									
TOTALS		17	12	16	7		5	10	3	13		4	4	3	5	9	7	16	16	16	LUMP	1	1	1	1

GENERAL NOTES

Supplemental Specification 816 is hereby modified to include the cost of providing the switch enclosure mounting bracket including installation, mounting bolts and drilled holes, in the price bid for each Item 816, Overhead Sign Supports, for each type of support.

Section 816 , is modified to place the embedded steel pipe or structural shape supports to within three (3) inches of the bottom of the foundation as shown on the plans.

Section 816 is hereby modified to include the cost of supplying and placing the steel reinforcing bars in the foundations, in the price bid per cubic yard for Item 816, Concrete for Sign Support Foundations.

Item 815, Sign Erection

The contractor shall erect sign panels furnished by others as noted on the Schematic Signing Layout Sheets 297, 297-A, 297-B, 297-C. The panels shall be mounted on the brackets or beam supports provided in the plans.

A schedule for sign erection shall be submitted to the Engineer, Bureau of Traffic, Columbus, Ohio, 60 calendar days prior to the start of any scheduled erection work. The schedule shall include proposed dates, time, sign numbers and delivery point.

The price bid per square foot for, "Item ITEM 815, Sign Erection By Type, As Per Plan", shall include all necessary equipment, manpower, and tools to erect the signs noted. All sign material and accessories will be furnished and transported to a designated delivery point, on or near the subject project, by others.

The contractor shall be responsible for the handling and storage of the sign panels and accessories from the time of arrival at the delivery point.

The 3" Fiber duct in each sign foundation shall meet the requirements of Type I Fiber Conduit (Fed. "General Services" Specs. WC571C). Two 3" ducts shall be placed in each sign foundation unless otherwise directed by the engineer.

All 606, Guard Rail, Type 4, as per plan, shall be placed using a 6'-3" spacing for all posts as shown on Sheet 297G.

Guard rail on this project is located 12'-0" from the edge of U.S. 36 pavement when required by slope design. At those locations where the roadway design does not require guard rail, railing for sign protection shall be located 10'-0" from pavement edge. In curbed areas, see detail at each sign and Sheet 297G.

Paved shoulder width of 8'-0" is used on U.S. 36, Reconstr. U.S. 250 and speed change lanes. On ramps the paved shoulder width is 3'-0".

SIGNING PLAN

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

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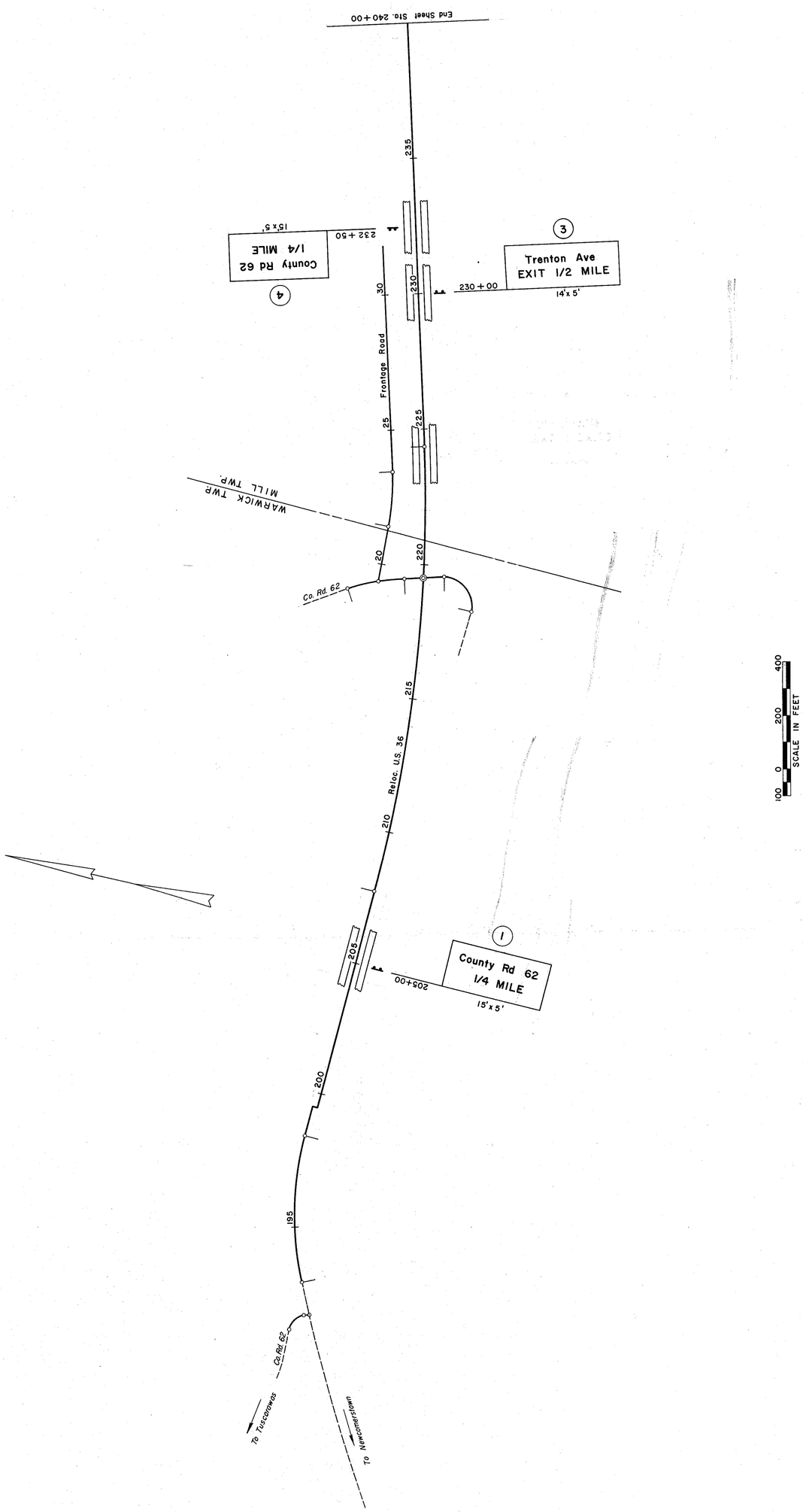
TUSCARAWAS COUNTY
TUS - 36 - 15.93

SIGNING PLAN
STA. 190+00 TO STA. 240+00

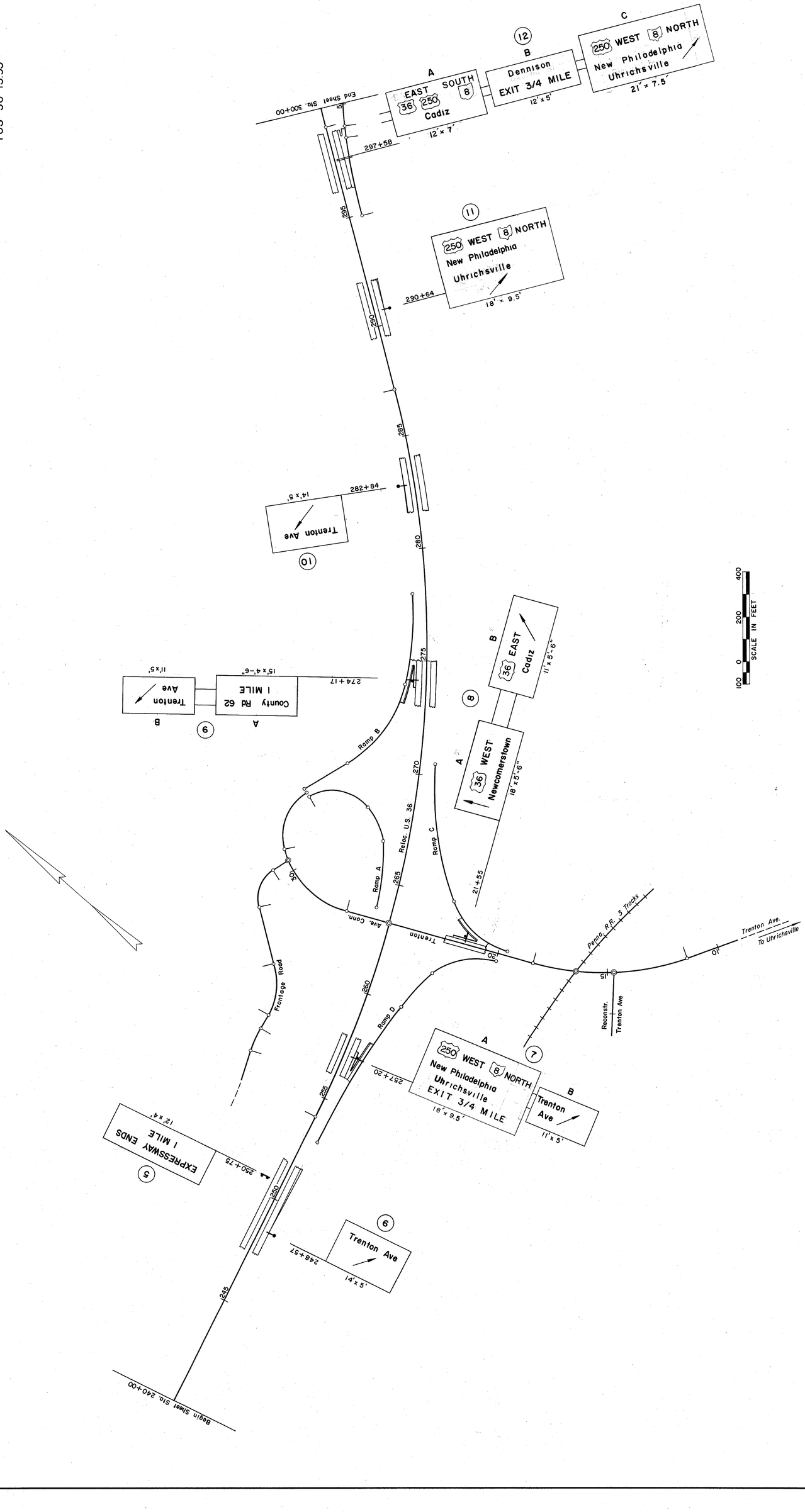


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

297TA 662

TUSCARAWAS COUNTY
TUS-36-15.93

SIGNING PLAN
STA. 240+00 TO STA. 300+00



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

297-B
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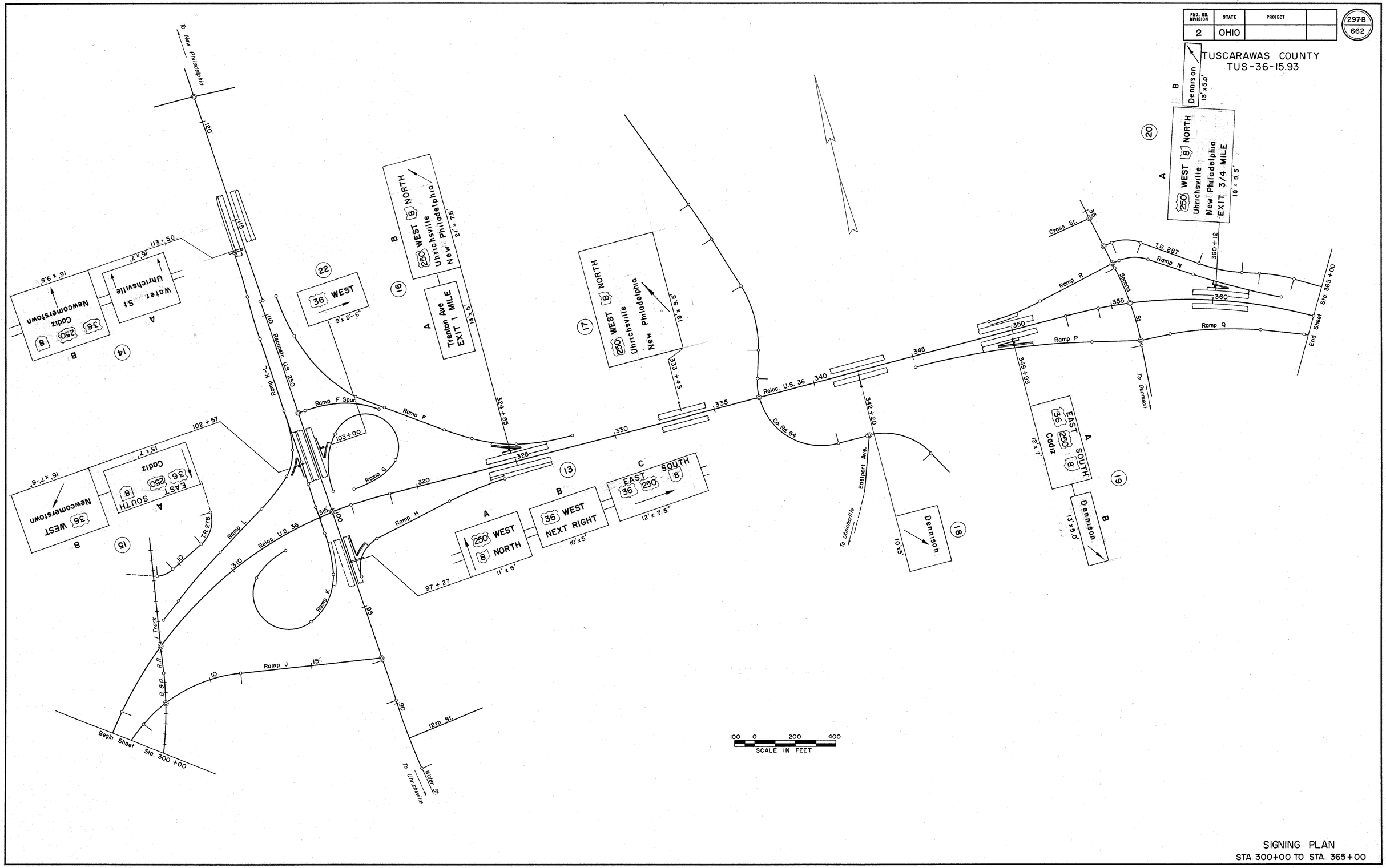
TUSCARAWAS COUNTY
TUS-36-15.93



SIGNING PLAN
STA. 300+00 TO STA. 365+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
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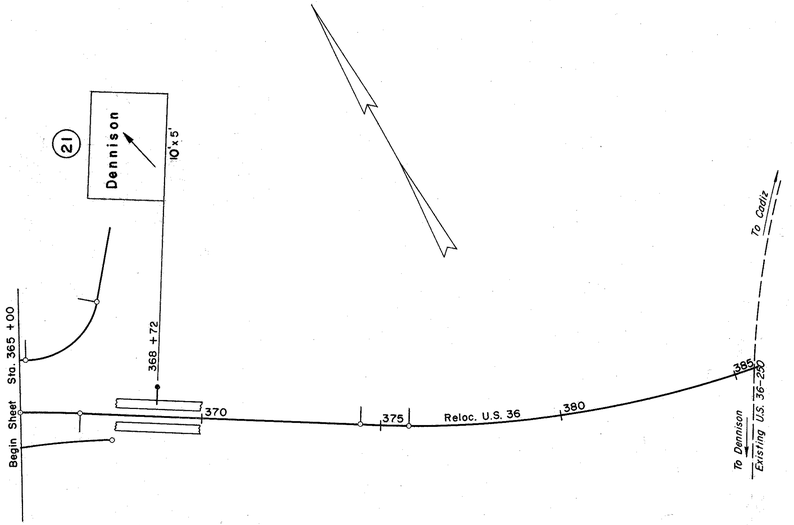
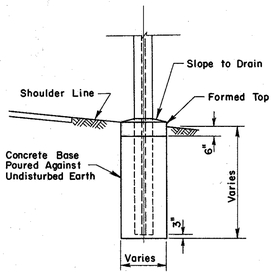
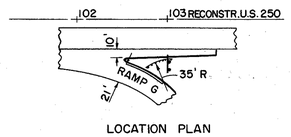


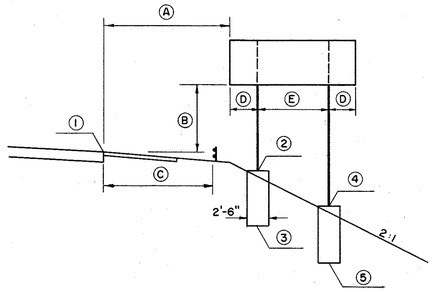
100 0 200 400
SCALE IN FEET



FOUNDATION DETAILS FOR
EMBEDDED POSTS AND BEAMS

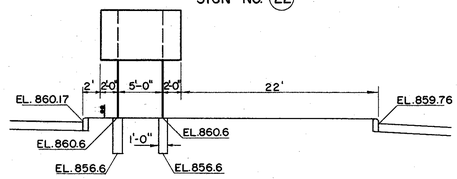


LOCATION PLAN



TYPICAL
GROUND MOUNTED SIGN

SIGN NO. 22



STA. 103+00 RECONSTR. U.S. 250
I-129 G.M.S.

9'x5'-6" = 49.5 SQ.FT.

DETAILS GROUND MOUNTED SIGNS

SIGN & REF. NO.	STATION	SIGN SIZE	DIMENSION, FT.						ELEVATION				
			A	B	C	D	E		1	2	3	4	5
1	205+00 RT.	15'x5'	14'-0"	7'-3 3/8"	10'-0"	3'-3 5/8"	8'-4 3/4"		900.05	898.8	893.3	899.0	893.5
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	230+00 RT.	14'x5'	14'-0"	7'-5 1/2"	12'-0"	3'-1"	7'-10"		888.34	886.7	880.2	882.8	876.3
4	232+50 LT.	15'x5'	14'-0"	7'-1"	12'-0"	3'-3 5/8"	8'-4 3/4"		886.13	884.4	877.9	880.2	873.7
5	250+75 LT.	12'x4'	12'-0"	7'-2"	10'-0"	2'-7 3/4"	6'-8 1/2"		870.00	869.0	863.1	867.4	861.4

SIGNING PLAN
STA. 365+00 TO STA. 381+50

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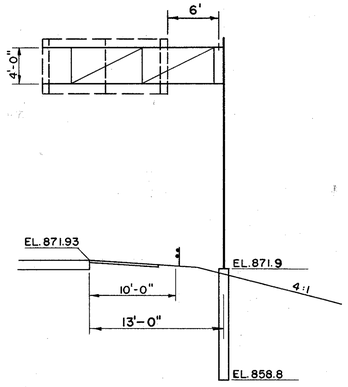
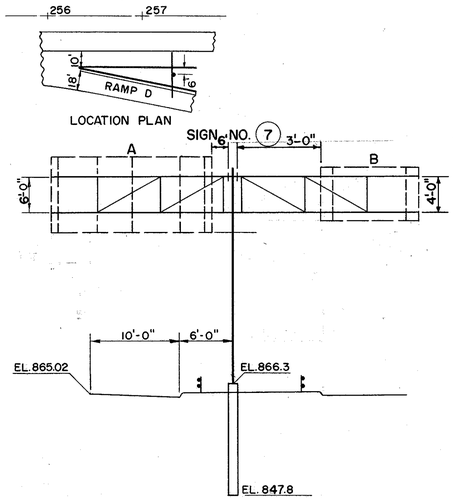
SIGN NO. (6)



STA. 248+57 EASTBOUND
816 NO. 12.24 DESIGN -4, 20' ARM

14'x6'= 84 SQ. FT.
SPACING: 0'-8 5/8", 2@6'-3 3/8", 0'-8 5/8"
NO. OF BR. = 3 HEIGHT 6'
TYPE X

SIGN NO. (7)

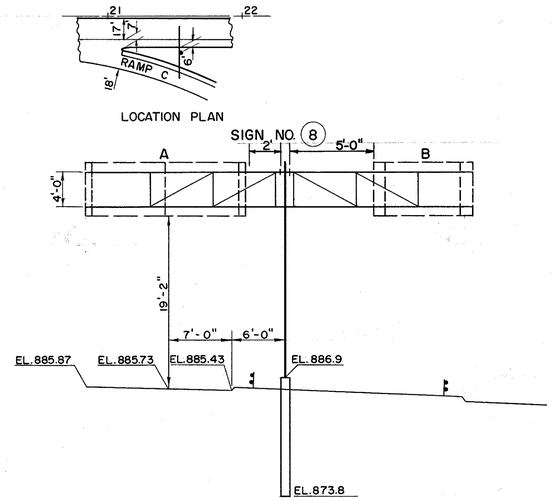


STA. 257+20 EASTBOUND
816 NO. 10.48 DESIGN-8, 24' & 14' ARMS

18'x10'-6"=189 SQ. FT.
SPACING: 8 5/8", 50", 49 3/8", 50", 49 3/8", 8 5/8"
NO. OF BR.= 5 HEIGHT 10'-6"
TYPE Y

11'x 6'= 66. SQ. FT.
SPACING: 1'-4 3/8", 8'-3 3/8", 1'-4 1/4"
NO. OF BR. = 2 HEIGHT 6'
TYPE Y

SIGN NO. (8)

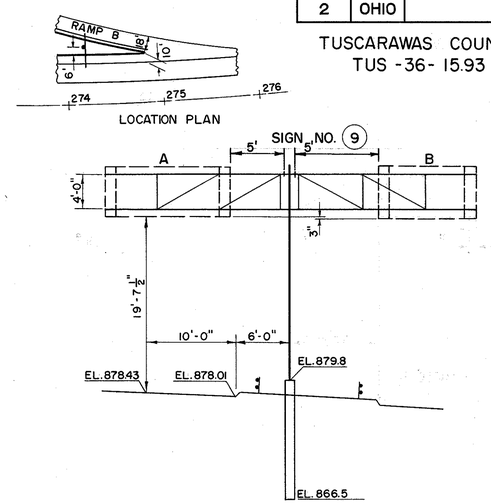


STA. 21+55 TRENTON AVE. CONN.
816 NO. 10.48 DESIGN -5, 20' & 16' ARMS

18'X 6'-6"= 117 SQ. FT.
SPACING: 0'-8 5/8", 2@8'-3 3/8", 0'-8 5/8"
NO. OF BR. = 3 HEIGHT 6'-6"
TYPE Y

11'x 6'-6"= 71.5 SQ.FT.
SPACING: 1'-4 3/8", 8'-3 3/8", 1'-4 1/4"
NO. OF BR.=2 HEIGHT 6'-6"
TYPE Y

SIGN NO. (9)

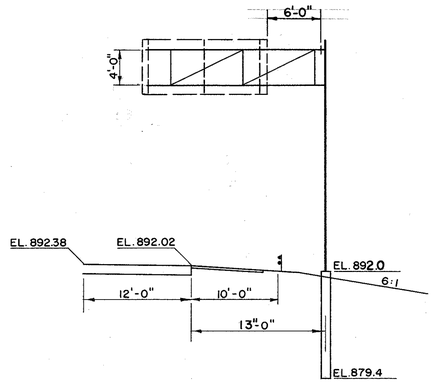


STA. 274 + 17 WESTBOUND
816 NO. 10.48 DESIGN -5, 20' & 16' ARMS

15'x 5'-6" = 82.5 SQ. FT.
SPACING: 1'-2 5/8", 2@6'-3 3/8", 1'-2 5/8"
NO. OF BR. = 3 HEIGHT 5'-6"
TYPE X

11'x 6' = 66 SQ. FT.
SPACING: 1'-4 3/8", 8'-3 3/8", 1'-4 1/4"
NO. OF BR.= 2 HEIGHT 6'
TYPE Y

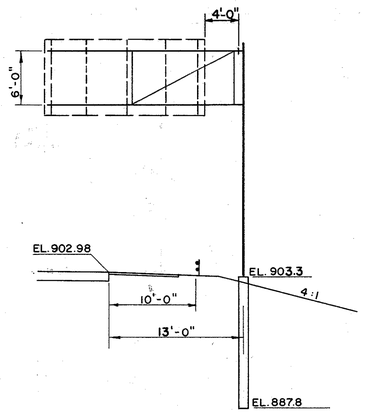
SIGN NO. (10)



STA. 282+84 WESTBOUND
816 NO. 12.24 DESIGN-4, 20' ARM

14'x 6' = 84 SQ. FT.
SPACING: 0'-8 5/8", 2@6'-3 3/8", 0'-8 5/8"
NO. OF BR. = 3 HEIGHT 6'
TYPE X

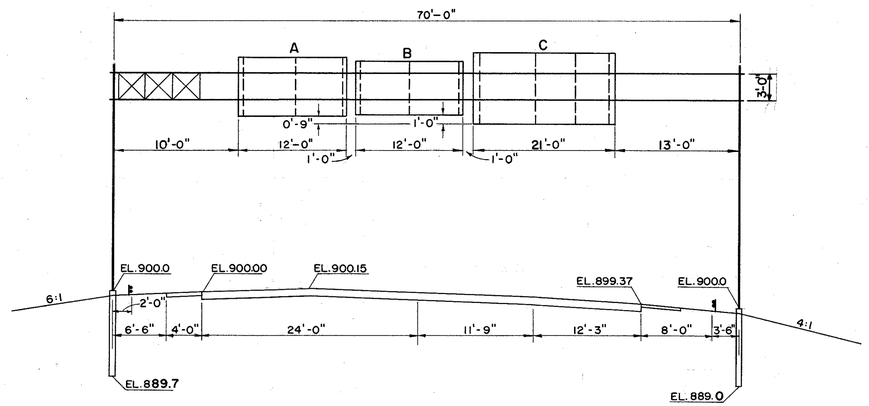
SIGN NO. (11)



STA. 290 + 64 EASTBOUND
816 NO. 12.24 DESIGN-6, 22' ARM

18'x 10'-6"= 189 SQ. FT.
SPACING: 8 5/8", 50", 49 3/8", 50", 49 3/8", 8 5/8"
NO. OF BR. = 5 HEIGHT 8'-6"
TYPE Y

SIGN NO. (12)



STA. 297 + 58 EASTBOUND
816 NO. 7.4 DESIGN- 1

12'x 8'-0"= 96 SQ. FT.
SPACING: 0'-6", 2@ 5'-6", 0'-6"
NO. OF BR. = 3 HEIGHT 8'-0"
TYPE Y

12'x 6'= 72 SQ.FT.
SPACING: 0'-6", 2@ 5'-6", 0'-6"
NO. OF BR. = 3 HEIGHT 6'
TYPE Y

21'x 8'-6"= 178.5 SQ.FT.
SPACING: 13", 3@75 3/8", 12 7/8"
NO. OF BR. = 4 HEIGHT 8'-6"
TYPE Y

OVERHEAD SIGN SUPPORT DETAILS

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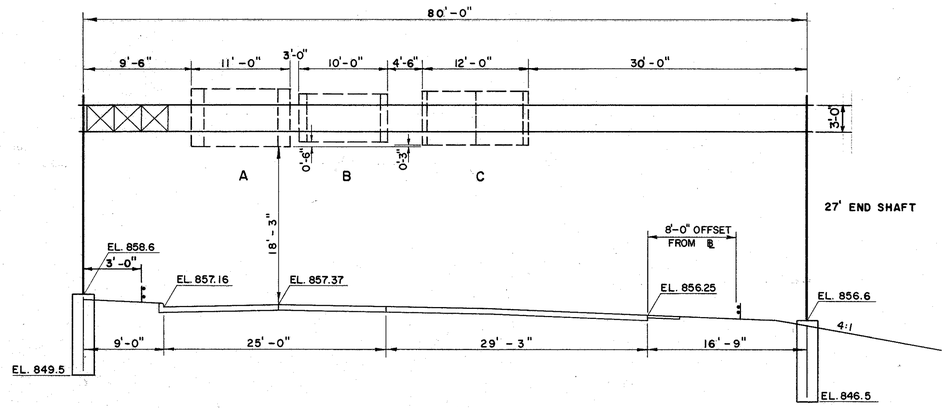
SIGN NO. (13)

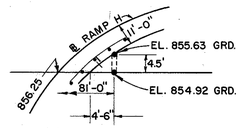


STA. 97+27 RT. RECONSTR. U.S. 250
816 NO. 7.3 DESIGN-2, MODIFIED

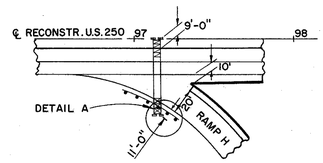
11'x7'-0" = 77 SQ. FT.
SPACING: 16 3/8", 50", 49 3/8", 16 1/4"
NO. OF BR. = 3 HEIGHT 7'-0"
TYPE Y

10'x6'-0" = 60 SQ. FT.
SPACING: 10 3/8", 50", 49 3/8", 10 1/4"
NO. OF BR. = 3 HEIGHT 6'-0"
TYPE Y

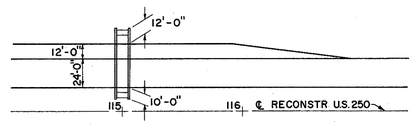
12'x8'-6"=102 SQ. FT.
SPACING: 0'-6", 2@5'-6", 0'-6"
NO. OF BR. = 3 HEIGHT 8'-6"
TYPE Y



DETAIL A

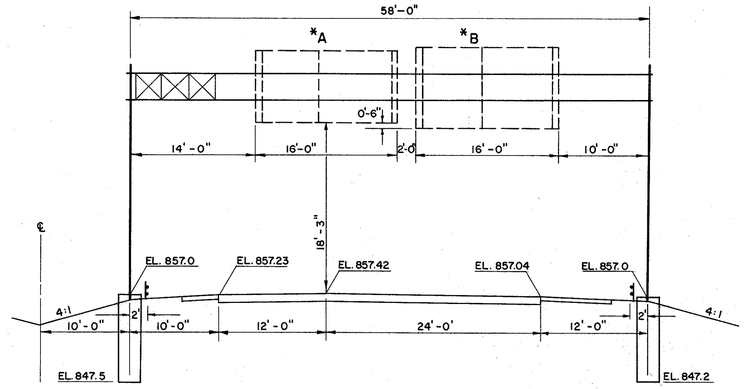


LOCATION PLAN



LOCATION PLAN

SIGN NO. (14)

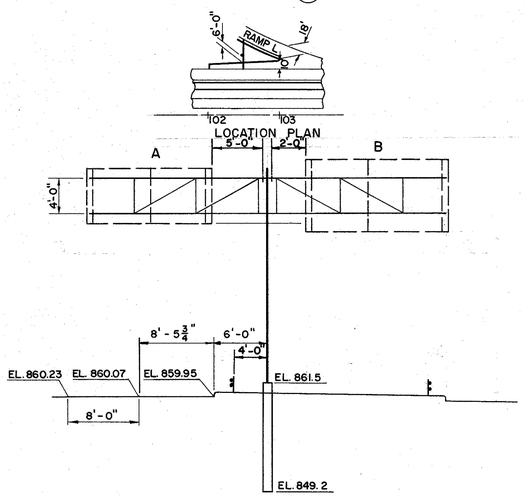


STA. 115+00 RECONSTR. U.S. 250 SOUTHBOUND
I-129 NO.7.3 DESIGN-2

16'x8' = 128 SQ. FT.
SPACING: 0'-8 5/8", 6'-3 3/8", 8'-3 3/8", 0'-8 5/8"
NO. OF BR. = 3 HEIGHT 8'
TYPE Y

16'x9' = 144 SQ. FT.
SPACING: 0'-8 5/8", 6'-3 3/8", 8'-3 3/8", 0'-8 5/8"
NO. OF BR. = 3 HEIGHT 9'
TYPE Y

SIGN NO. (15)

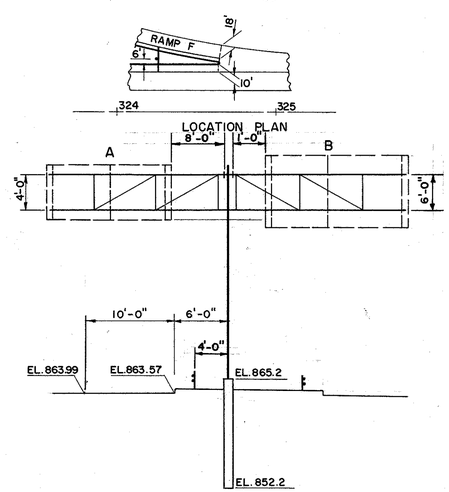


STA. 102+52 RAMPS K & L
816 NO. 10.48 DESIGN-5 MODIFIED, 20' & 18' ARMS

15'x8' = 120 SQ. FT.
SPACING: 14 5/8", 2@75 3/8", 14 5/8"
NO. OF BR. = 3 HEIGHT 8'
TYPE X

16'x8'-6"=136 SQ. FT.
SPACING: 0'-8 5/8", 6'-3 3/8", 50", 49 3/8", 0'-8 5/8"
NO. OF BR. = 3 HEIGHT 8'-6"
TYPE Y

SIGN NO. (16)

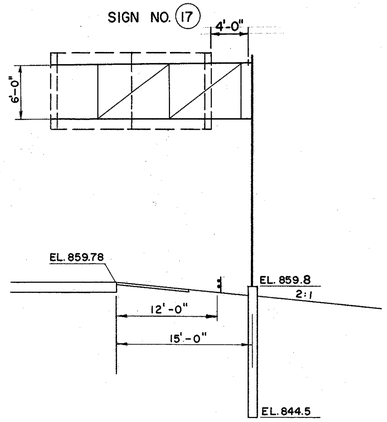


STA. 324+80 WESTBOUND
816 NO. 10.48 DESIGN-7 MODIFIED, 22' ARMS

14'x6' = 84 SQ. FT.
SPACING: 0'-8 5/8", 2@6'-3 3/8", 0'-8 5/8"
NO. OF BR. = 3 HEIGHT 6'
TYPE X

21'x8'-6"=178.5 SQ. FT.
SPACING: 13", 3@75 3/8", 12 7/8"
NO. OF BR. = 4 HEIGHT 8'-6"
TYPE Y

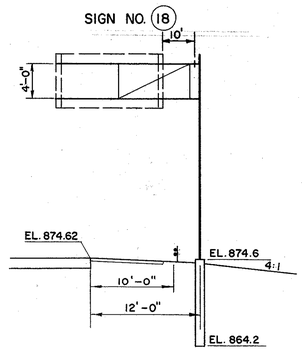
SIGN NO. (17)



STA. 333+43 WESTBOUND
816 NO. 12.24 DESIGN-6 MODIFIED, 22' ARM

18'x10'-6"=189 SQ. FT.
SPACING: 0'-8 5/8", 50", 49 3/8", 50", 49 3/8", 0'-8 5/8"
NO. OF BR. = 5 HEIGHT 10'-6"
TYPE Y

SIGN NO. (18)



STA. 342+20 EASTBOUND
816 NO. 12.24 DESIGN-4, 20' ARM

10'x6' = 60 SQ. FT.
SPACING: 10 3/8", 99 3/8", 10 1/4"
NO. OF BR. = 2 HEIGHT 6'
TYPE Y

OVERHEAD SIGN SUPPORT DETAILS

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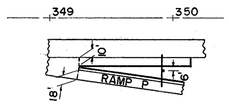
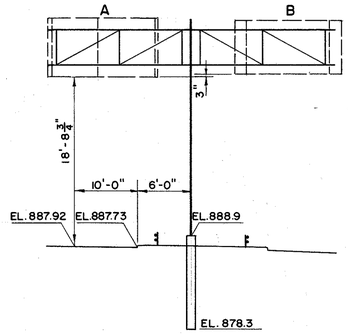
SIGN NO. (19)



LOCATION PLAN

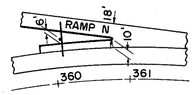


STA. 350+05 EASTBOUND
816 NO. 10.48 DESIGN-2, 16' ARM

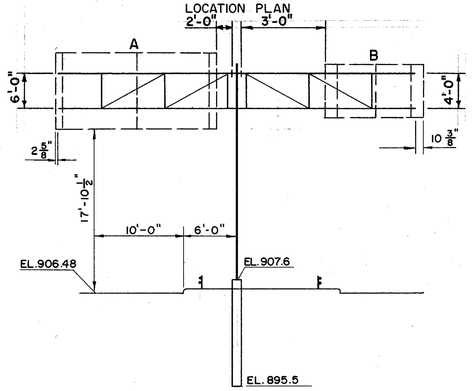
12' x 8'-0" = 96 SQ.FT.
SPACING: 0'-6", 2 @ 5'-6", 0'-6"
NO. OF BR. = 3 HEIGHT 6'-6"
TYPE X

13' x 6' = 78 SQ.FT.
SPACING: 6", 72", 72", 6"
NO. OF BR. = 2 HEIGHT 6'
TYPE Y

SIGN NO. (20)



LOCATION PLAN

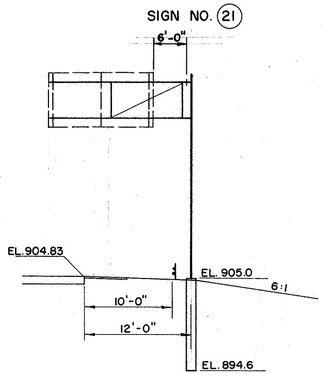


STA. 360+12 WESTBOUND
816 NO. 10.48 DESIGN-7, MODIFIED, 20' & 16' ARMS

18' x 10'-6" = 153 SQ.FT.
SPACING: 0'-8⅝", 2 @ 8'-3⅜", 0'-8⅝"
NO. OF BR. = 3 HEIGHT 8'-6"
TYPE Y

13' x 6' = 78 SQ.FT.
SPACING: 6", 72", 72", 6"
NO. OF BR. = 3 HEIGHT 6'
TYPE Y

SIGN NO. (21)



STA. 368 + 72 WESTBOUND
816 NO. 12.24 DESIGN- 3, 16' ARM

10' x 6' = 60 SQ.FT.
SPACING: 10 3/8", 99 3/8", 10 1/4"
NO. OF BR. = 3 HEIGHT 6'
TYPE Y

OVERHEAD SIGN
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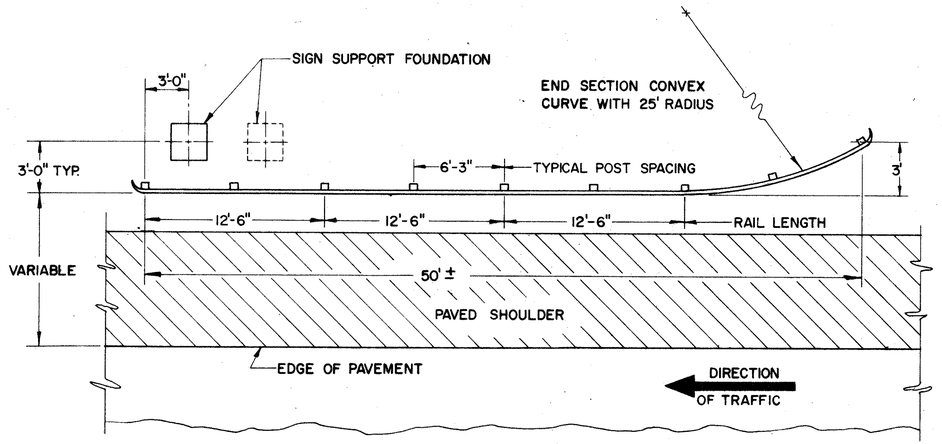
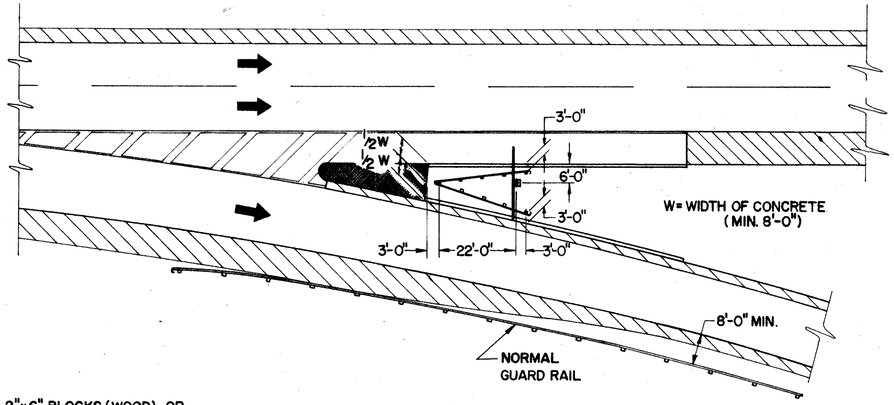
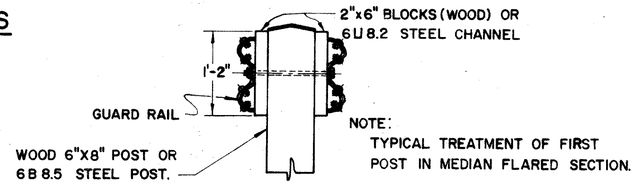


GUARD RAIL DETAILS

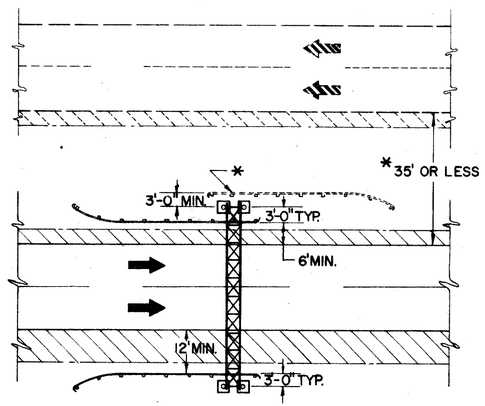


GORE INSTALLATION (TYPICAL)

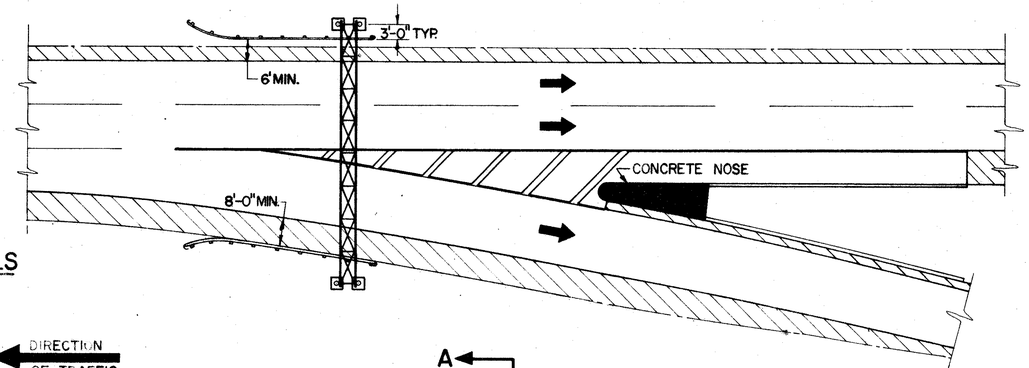


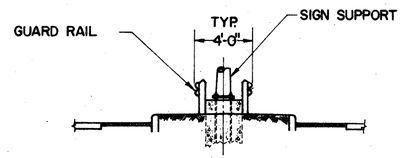
NOTE:
TYPICAL TREATMENT OF FIRST POST IN MEDIAN FLARED SECTION.

SECTION B-B

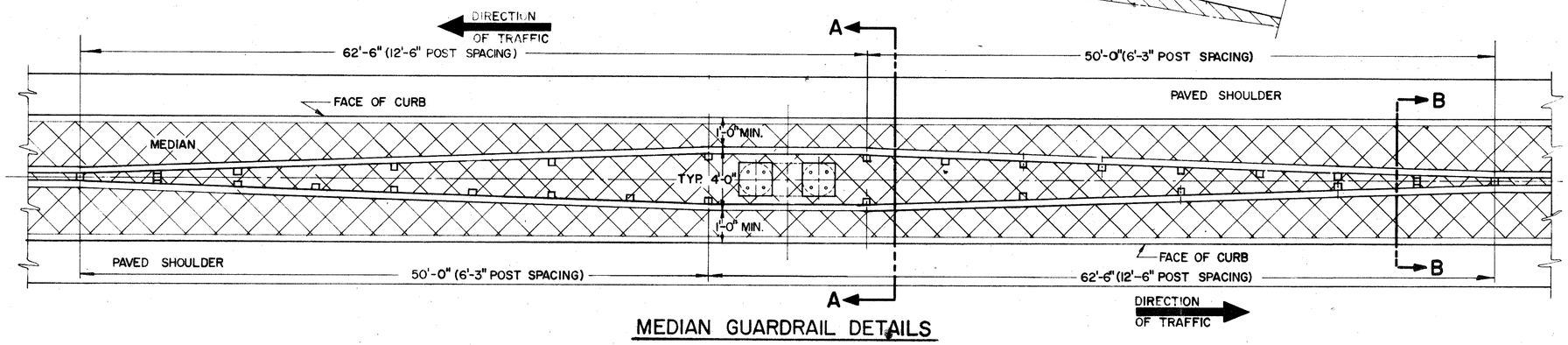


GUARD RAIL DETAILS
(SPAN TYPE)





SECTION A-A



MEDIAN GUARDRAIL DETAILS

NOTES

GENERAL

PROTECTIVE GUARD RAIL FOR OVERHEAD SIGN STRUCTURES SHALL CONFORM TO ITEM 606 AND STANDARD CONSTRUCTION DRAWING GR. 1 AND 2A.

A MIN. OF 50' OF GUARDRAIL IS REQUIRED USING 6'-3" POST SPACING. WHEN 12'-6" POST SPACING IS SPECIFIED, THE MINIMUM GUARD RAIL LENGTH SHALL BE 75'.

WHERE THE PROPOSED GUARD RAIL FLARES, IT SHALL BE CONSTRUCTED OF GUARD RAIL ELEMENTS WHICH HAVE BEEN FABRICATED TO FIT.

ALL GUARD RAIL SHALL HAVE APPROPRIATE TERMINAL SECTIONS. FOR DETAILS SEE GR. 2A THE GORE INSTALLATIONS NOSE SECTION SHALL BE A BARRIER TERMINAL TYPE MOUNTED ON A SINGLE POST.

DESIGN

THE DESIGN OF GUARD RAIL PROTECTION FOR OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

BUREAU OF TRAFFIC OHIO DEPARTMENT OF HIGHWAYS		
GUARD RAIL DETAILS FOR OVERHEAD SIGN SUPPORTS	GR-7	DATE 3-10-65 6-1-65 9-10-65 11-8-65
APPROVED Fred C. Taylor ENGINEER OF TRAFFIC		

GUARD RAIL DETAILS FOR OVERHEAD SIGN SUPPORTS, GR.-7

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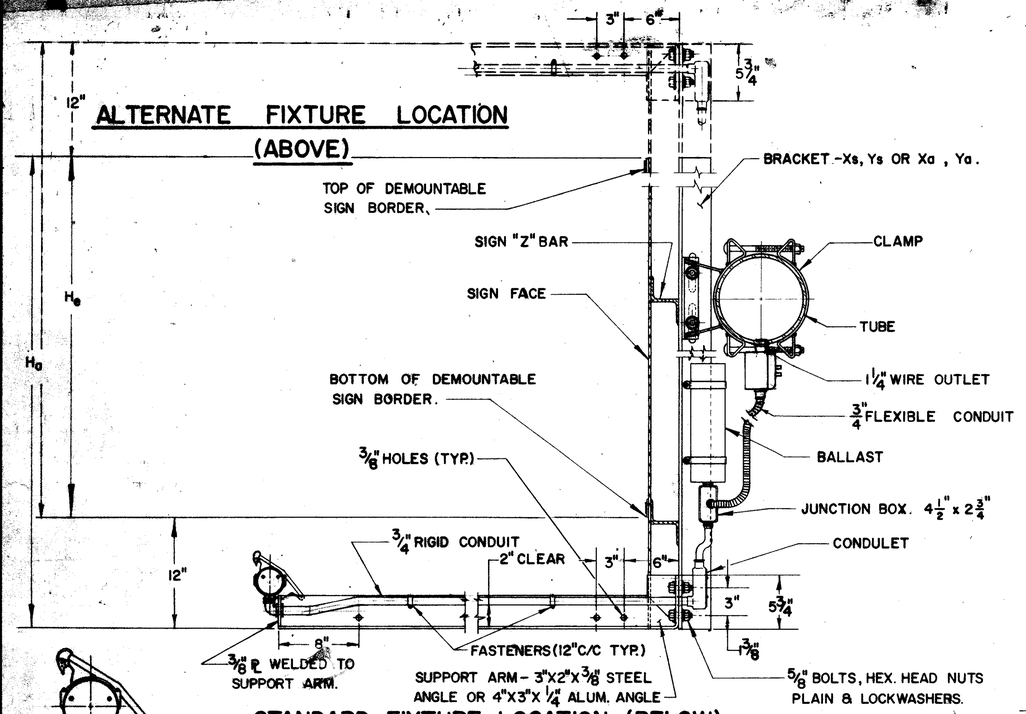
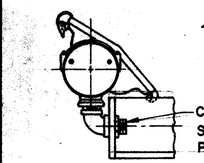
ALTERNATE FIXTURE LOCATION (ABOVE)



STANDARD FIXTURE LOCATION (BELOW)



FIXTURE CONNECTION WHERE WIRING CONDUIT IS NOT NEEDED.

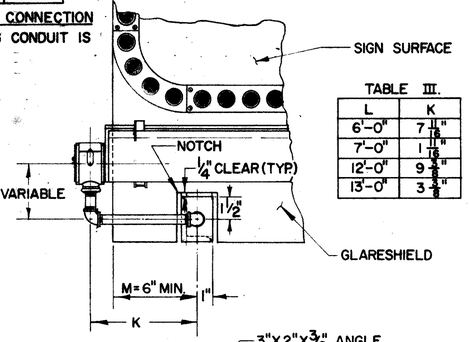
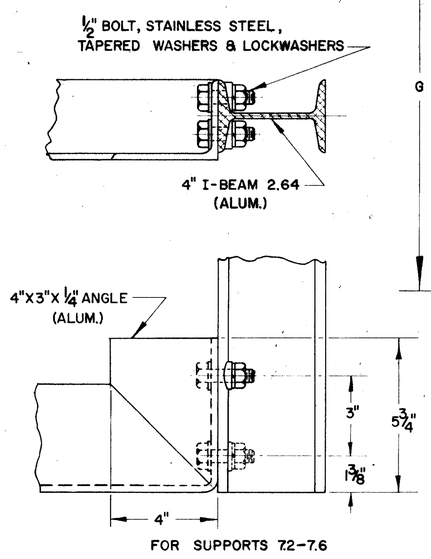


TABLE III.	
L	K
6'-0"	7 11/16"
7'-0"	1 1/16"
12'-0"	9 3/16"
13'-0"	3 5/16"

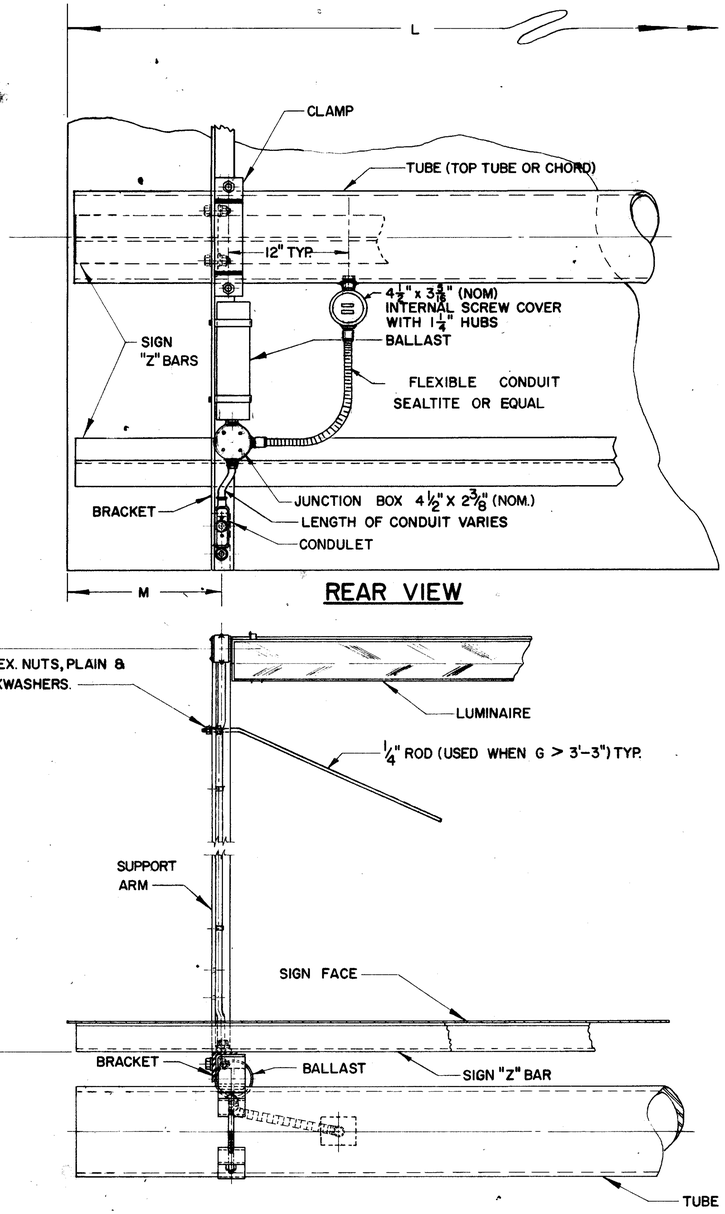
ALTERNATE FIXTURE CONNECTIONS FOR SIGN 6', 7', 12' & 13' IN LENGTH.

DETAIL A.



FOR SUPPORTS 7.2-7.6

DETAIL B.



REAR VIEW

TOP VIEW

FABRICATION — ALL STRUCTURAL COMPONENTS SHOWN ON THIS SHEET SHALL CONFORM TO SUPPLEMENT SPECIFICATIONS 816.

MATERIALS — THE MATERIALS USED IN THE COMPONENTS SHOWN ON THIS SHEET SHALL BE IN CONFORMANCE WITH THE MATERIALS USED IN THE SIGN SUPPORT.

TABLE I.

"L" SIGN LENGTH		FIXTURES	NUMBER OF	"M" EDGE DISTANCE				NO. BALLAST
				A		B		
A	B	75 5/8"	99 3/8"	LT.	RT.	LT.	RT.	
6'-0"	7'-0"	1		6"	6"	6"	6"	1
8'-0"	9'-0"	1		10 3/16"	10 1/4"	16 3/16"	16 1/4"	1
10'-0"	11'-0"		1	10 3/16"	10 1/4"	16 3/16"	16 1/4"	1
12'-0"	13'-0"	2		6"	6	6	6	1
14'-0"	15'-0"	2		8 5/16"	8 3/16"	14 5/16"	14 3/16"	1
16'-0"	17'-0"	1	1	8 5/16"	8 3/16"	14 5/16"	14 3/16"	1
18'-0"	19'-0"		2	8 5/16"	8 3/16"	14 5/16"	14 3/16"	1
20'-0"	21'-0"	3		7"	6 7/8"	13	12 7/8"	2
22'-0"	23'-0"	2	1	7"	6 7/8"	13	12 7/8"	2
24'-0"	25'-0"	1	2	7"	6 7/8"	13	12 7/8"	2
26'-0"	27'-0"		3	7"	6 7/8"	13	12 7/8"	2

Sn= Nominal Fixture Length, 72" & 96" respectively.
Sa= Actual Fixture Length, for mounting purposes, 75 5/8" and 99 3/8" respectively. (Slight variation for different manufacturers.)
M= Distance from edge of sign to ℄ of notch, min. 6". When the length of the sign minus 1'-0" is less than the sum of the actual fixture lengths, an offset "K" is used. For additional details see detail A and table III.

TABLE II

MAX. BRACKET SPACING FOR EXTERNALLY ILLUMINATED SIGNS

ACTUAL SIGN HEIGHT "Ha"	SUPPORT TYPES			
	9.12, 11.08, 13.2, 7.2	9.24, 10.48, 12.24, 14.5, 15.8, 7.2 to 7.6		
	SINGLE TUBE DOUBLE TUBE LESS 36" C/C	DOUBLE TUBE		
		C/C 36"-42"	C/C 48"-54"	C/C 60"-72"
	MAXIMUM BRACKET SPACING			
to 5'-0"	6'-4" with X 8'-4" with Y	8'-4" with X	8'-4" with X	8'-4" with X
5'-6" to 8'-0"	6'-4" with Y	4'-2" with X 6'-4" with Y	6'-4" with X 8'-4" with Y	8'-4" with X
8'-6" to 10'-0"	3'-2" with X 4'-2" with Y	6'-4" with Y	6'-4" with Y	8'-4" with Y
10'-6" to 12'-0"	———	4'-2" with Y	6'-4" with Y	6'-4" with Y
12'-6" to 14'-0"	———	3'-2" with Y	3'-2" with Y	4'-2" with Y

Ha= ACTUAL SIGN HEIGHT
He= EFFECTIVE SIGN HEIGHT
BRACKET SIZE: Xs = 3 1/2" X 2 1/2" X 5/16" — L @ 6.1 LB. STEEL; Ys = 4" X 3 1/16" X 1/4" — Z @ 8.2 LB. STEEL } 9.12, 10.48, 11.08, 12.24, 14.5 & 15.8
Xa = 3" X 2 11/16" X 1/4" — Z @ 2.33 LB. ALUM.; Ya = 4" X 2 25/32" X 3/16" — I @ 2.64 LB. ALUM. } 7.2 Thru 7.6

WHEN MAX. ALLOWABLE SPACING IS LESS THAN ACTUAL FIXTURE LENGTHS, Sa, ADDITIONAL STANDARD BRACKETS MUST BE FURNISHED, EQUAL IN HEIGHT TO "Ha".

SUPPORTS 7.2 THROUGH 7.6 SHALL HAVE AN ALUMINUM FIXTURE ARM, 4"X3"X1/4" ANGLE. SEE DETAIL B. BOLTS AND ACCESSORIES SHALL BE STAINLESS STEEL.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

STRUCTURAL DETAILS FOR EXTERNALLY ILLUMINATED SIGNS

EI-1

DATE 10-15-63, 5-5-64, 10-20-64

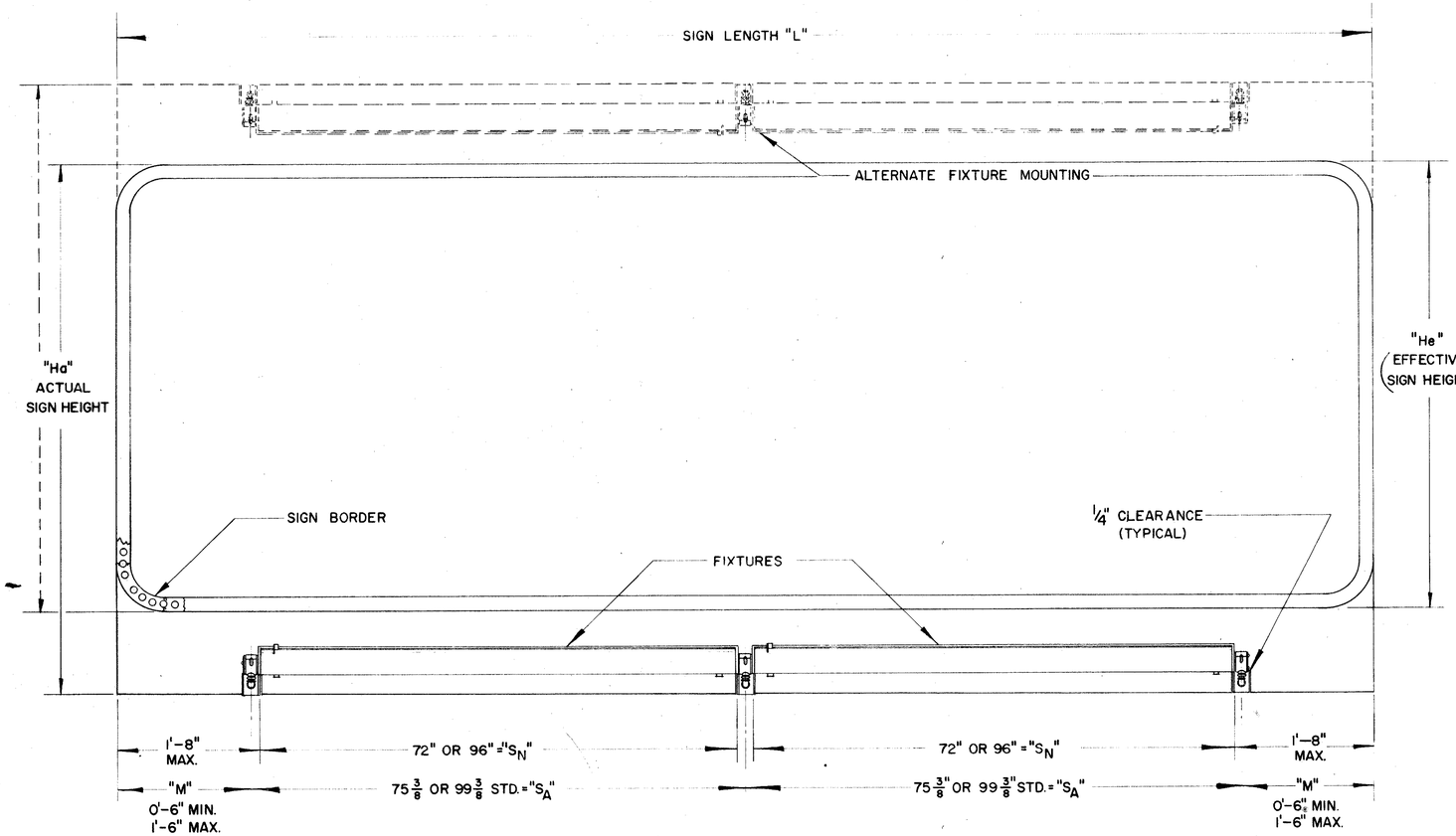
APPROVED Fred C Galbos
ENGINEER OF TRAFFIC

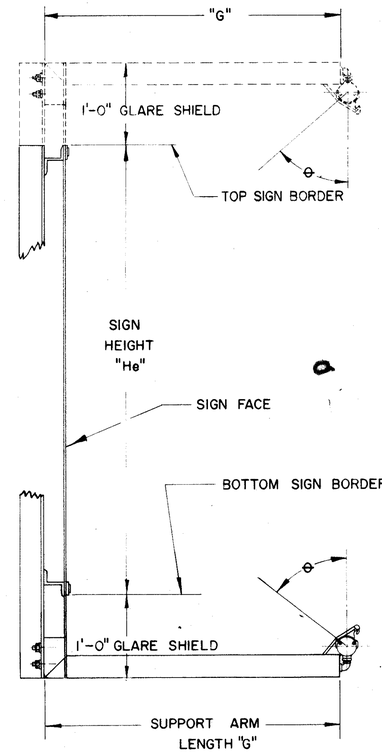
STRUCTURAL DETAILS FOR EXTERNALLY ILLUMINATED SIGNS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

2971
662

TUS-36-15.93





SIGN LIGHTING NOTES

SIGN ILLUMINATION

SIGN ILLUMINATION SHALL BE BY ATTACHED FLUORESCENT FIXTURES AS SHOWN ON ILLUMINATED SIGN DETAIL SHEETS.

LAMPS

LAMPS SHALL BE TYPE F72 OR F96-T12/CW/HO AS MANUFACTURED BY WESTINGHOUSE, GENERAL ELECTRIC OR APPROVED EQUAL FOR SIGNS TO A MAXIMUM HEIGHT OF 6'-6". LAMP TYPE SHALL BE F72 OR F96-T12/CW/SHO AS MANUFACTURED BY WESTINGHOUSE, F72 OR F96-PG17/CW AS MANUFACTURED BY GENERAL ELECTRIC OR APPROVED EQUAL FOR SIGNS THAT ARE 7'-0" OR GREATER IN HEIGHT.

LAMP FIXTURES

LIGHTING FIXTURES SHALL BE CONSTRUCTED OF CORROSION RESISTANT MATERIALS OR WITH HIGH QUALITY CORROSION RESISTANT FINISH. ALL FIXTURES SHALL BE SPECIFICALLY DESIGNED FOR OUTDOOR SIGN LIGHTING SERVICE. MAJOR COMPONENTS SHALL INCLUDE WEATHERPROOF CAST ALUMINUM MOUNTING HUBS DESIGNED TO SECURELY LOCK THE FIXTURES AT ANY ANGLE THROUGH 360 DEGREES. INDICATORS IN 10 DEGREE INCREMENTS SHALL BE STAMPED OR CAST INTO THE HUB TO FACILITATE PROPER AIMING OF THE FIXTURE. FINAL ADJUSTMENT OF FIXTURE SHALL BE DONE AT NIGHT UNDER THE PROJECT ENGINEER'S DIRECTION.

THE BODY DESIGN OF THE FIXTURE SHALL PROVIDE AN ASYMMETRIC SPECULAR ALZAK REFLECTOR TO GIVE A HIGH LEVEL OF UNIFORM ILLUMINATION AND SHALL PROVIDE A WIREWAY FROM END TO END. WHEN ADJACENT FIXTURES ARE WIRED TOGETHER THROUGH THE WIREWAY, WIRE BETWEEN FIXTURES SHALL BE ENTIRELY ENCLOSED.

EXTERIOR FINISH OF THE FIXTURE BODY SHALL BE INTERSTATE GREEN COLOR, HEAT RESISTANT BAKED ENAMEL AS #8950 UNIVERSAL PAINT AND VARNISH INC.* OR APPROVED EQUAL. REFLECTOR, LAMP AND SOCKETS SHALL BE PROTECTED BY A HINGED DOOR OF CLEAR ACRYLIC PLASTIC WITH ALUMINUM OR STAINLESS STEEL FRAME AND NEOPRENE GASKETING.

*OR MIDWESTERN COLOR WORKS

BALLASTS

BALLASTS FOR FIXTURES SHALL BE WEATHER-PROOF OUTDOOR TYPE FOR A 120 VOLT 60 CYCLE SYSTEM AND SHALL PROVIDE LAMP STARTING AT AN AMBIENT TEMPERATURE OF -20°F. BALLASTS SHALL BE MOUNTED ON SIGN BRACKET ONLY. WIRING SHALL BE ACCOMPLISHED IN SUCH A MANNER THAT THE SIGN MAY BE REMOVED WITHOUT DISTURBING THE ELECTRICAL WIRING.

EFFECTIVE SIGN HEIGHT "H"	SUPPORT ARM LENGTH "G"	APPROX. AIMING ANGLE ⊖
3'-0" to 5'-0"	2'-9"	25°
5'-0" to 6'-6"	3'-3"	25°
7'-0" to 10'-0"	4'-3"	17°
10'-6" to 13'-0"	5'-9"	23°

"L" SIGN LENGTH	NO. OF FIXTURES			He=3'-0" to 6'-6" LAMP=T12/cw/ho			He= 7'-0" to 13'-0" LAMP= T12/cw/sho		
		72	96	BALLAST NO.	BALLAST TYPE	WATTAGE PER SIGN	BALLAST NO.	BALLAST TYPE	WATTAGE PER SIGN
6'-0" to 7'-0"		1		1	A	190	1	C	250
8'-0" to 9'-0"		1		1	A	190	1	C	250
10'-0" to 11'-0"			1	1	A	190	1	C	250
12'-0" to 13'-0"		2		1	B	250	1	D	425
14'-0" to 15'-0"		2		1	B	250	1	D	425
16'-0" to 17'-0"		1	1	1	B	250	1	D	425
18'-0" to 19'-0"			2	1	B	250	1	D	425
20'-0" to 21'-0"		3		2	A & B	440	2	C & D	675
22'-0" to 23'-0"		2	1	2	A & B	440	2	C & D	675
24'-0" to 25'-0"		1	2	2	A & B	440	2	C & D	675
26'-0" to 27'-0"			3	2	A & B	440	2	C & D	675

BALLASTS

TYPE	MANUFACTURERS		WATTAGE
	G.E.	JEFFERSON	
A	GG 3583	257-151	190
B	GG 3535	257-171	250
C	GG 3585	257-231	250
D	GG 3588	257-181	425

BALLASTS SHALL BE GENERAL ELECTRIC, JEFFERSON AS SPECIFIED ABOVE OR EQUAL.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

ELECTRICAL DETAILS FOR EXTERNALLY ILLUMINATED SIGNS

EI-2

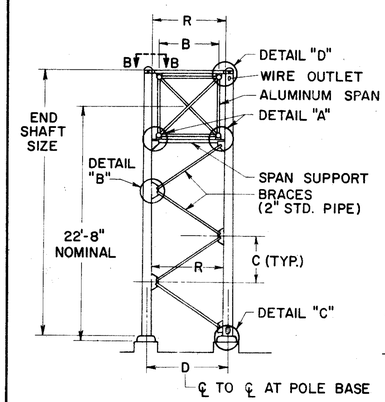
DATE
10-31-63
5-6-64
10-29-64

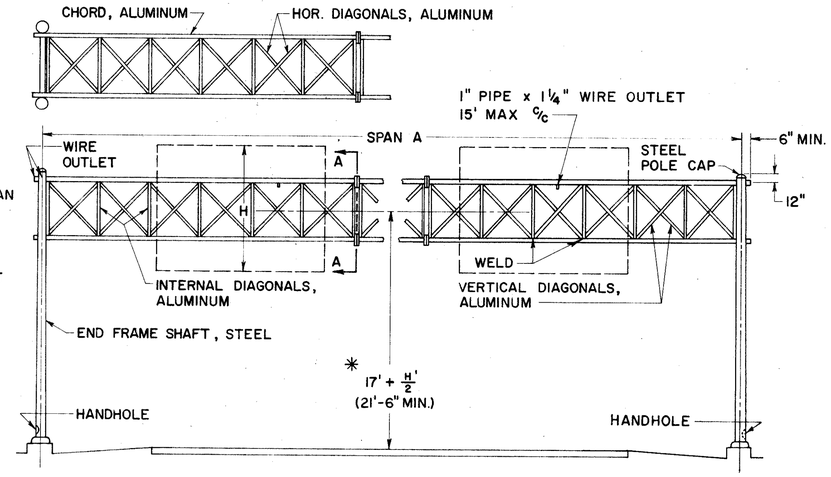
APPROVED Fred C Gabbert
ENGINEER OF TRAFFIC

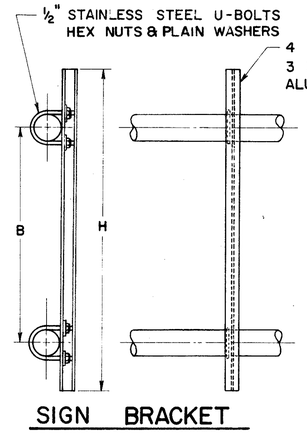
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

297J
662

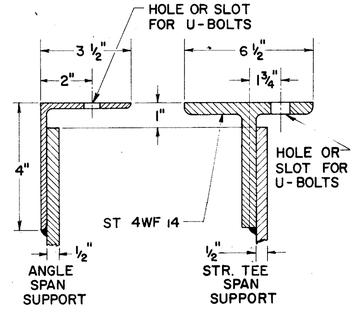
TUSCARAWAS COUNTY
TUS-36-15.93







SIGN BRACKET



SECTION D-D

NOTES

MATERIALS

THE OVERHEAD SPAN TRUSS SHALL BE ALUMINUM AND THE END FRAMES SHALL BE STEEL.

SPAN TRUSS AND END FRAMES, INCLUDING HARDWARE, SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 816 UNLESS OTHERWISE NOTED.

STEEL POLE BASES AND GUSSETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A-373.

AFTER FABRICATION THE TAPERED POLES SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

FABRICATION

THE ENTIRE STEEL END FRAME SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SEC. 711.02

MAXIMUM LENGTH OF SPAN SECTIONS IS 30 FT.

ERECTION

USE A MINIMUM OF 1" CAMBER IN SPAN TRUSS MEMBER FOR A 50' SPAN; ADD ¼" OF CAMBER FOR EACH 5' OF INCREASE IN SPAN OVER 50'.

PAYMENT

PAYMENT FOR THE *3" FIBER* CONDUIT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS.

SOILS

THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY).

FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

REINFORCING STEEL

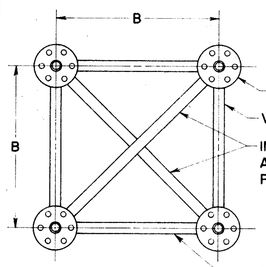
COST OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM 816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS. BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER.

*FOUNDATION ELEVATION

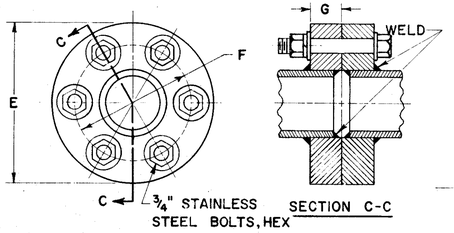
ELEVATION OF TOPS OF FOUNDATIONS SHALL BE BUILT UP SO THAT 17' CLEARANCE IS MAINTAINED OVER THE ENTIRE WIDTH OF THE PAVEMENT AND SHOULDERS.

DESIGN

THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

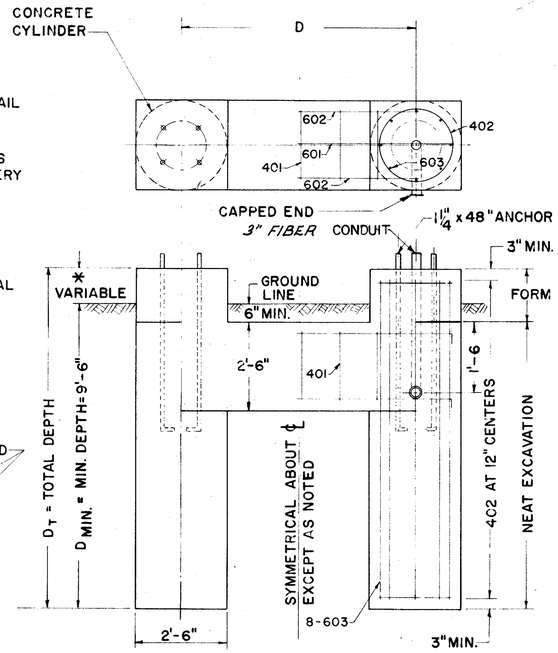


SECTION A-A



CAST FLANGE, B-26 ALLOY SG 70A-T7 (356-T7)

FLANGE DETAIL



FOUNDATION DETAIL

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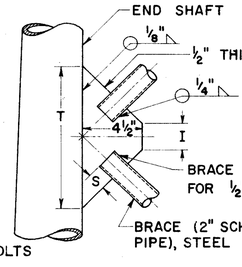
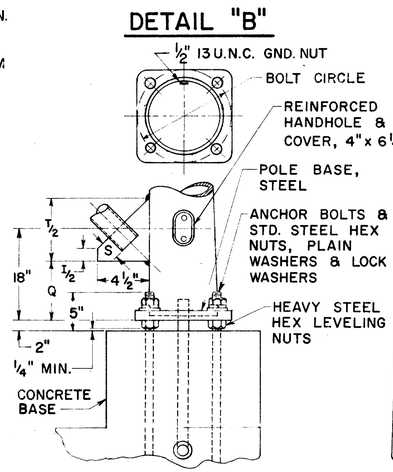
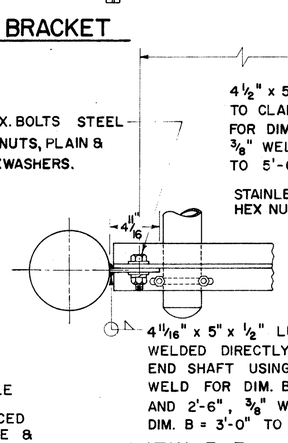


DETAIL "B"

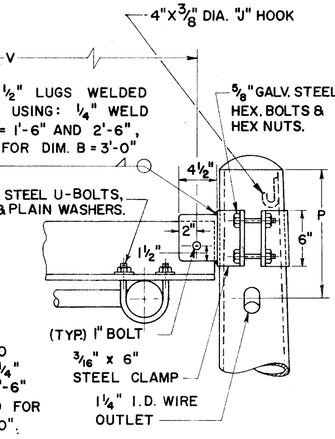


DETAIL "C"

POLE BASE DETAIL

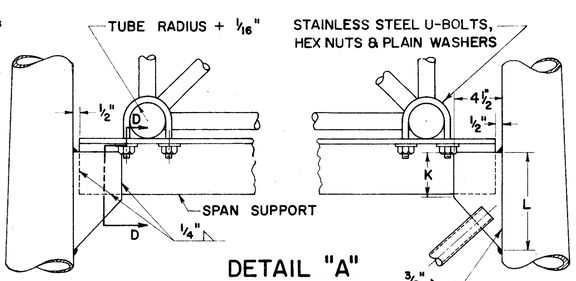


VIEW B-B



DETAIL "D"

UPPER SPAN SUPPORT (ALTERNATE METHODS)



DETAIL "A"

LOWER SPAN SUPPORT

DESIGN NO.	SPAN A	B	C	D	E	END SHAFT	BRACE LENGTH	F	G	I	K	L	P	Q	R	S	T	U BOLTS	V	BOLT CIRCLE	SPAN SUPPORT SECTION D-D	CHORDS	HORIZONTAL AND INTERNAL DIAGONAL	VERTICAL DIAGONAL
1	50' thru 75'	3'-0"	4'-11¾"	4'-5"	9¼"	8"x4.5"x25'-0", 3 GA.	5'-10 13/16"	7 7/16"	1⅜"	3½"	4¾"	8"	12"	6⅝"	3'-9"	1½"	10"	⅝"	3'-3⅝"	11"	SPLIT TEE 3'-8"	4¾ x .188"	1.900" x .145"	1.660" x .140"
2	76' thru 85'	4'-0"	4'-10¼"	5'-7"	9¼"	8"X6.22"x25'-6" 3 GA.	6'-7 1/8"	7 7/16"	1⅜"	⅝"	4⅜"	7¾"	12'	6¼"	4'-10"	1½"	9½"	⅝"	4'-4⅝"	11"	SPLIT TEE 4'-10"	4¾" x .188"	2" x .188"	1.900" x .145"
3	86' thru 90'	4'-0"	4'-10¼"	5'-7"	11"	8"X6.22"x25'-6" 3GA.	6'-7 1/8"	8½"	1½"	⅝"	4⅜"	7¾"	12"	6¼"	4'-10"	1½"	9½"	⅝"	4'-4⅝"	11"	SPLIT TEE 4'-10"	5½" x .250"	2" x .188"	1.900" x .145"
4	91' thru 110'	5'-0"	4'-8½"	6'-7"	11"	8"X6.18"x26'-0", 3GA.	7'-3¼"	8½"	1½"	—	3½"	7¾"	12"	7¼"	5'-10"	1¾"	11¼"	¾"	5'-4⅝"	11"	SPLIT TEE 5'-10"	5½" x .250"	2½" x .188"	2½" x .188"

REINFORCEMENT SCHEDULE			
MARK	NO.	LENGTH	TYPE
401	12"C/C	8'-6"	102
402	12"C/C	7'-6"	103
601	4	D+ 4'-0"	101
602	8	D+ 2'-0"	101
603	32	D_T - 6"	STR.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD SIGN SUPPORTS

816 No. 7.4

DATE 5-2-62 7-25-62 5-6-64

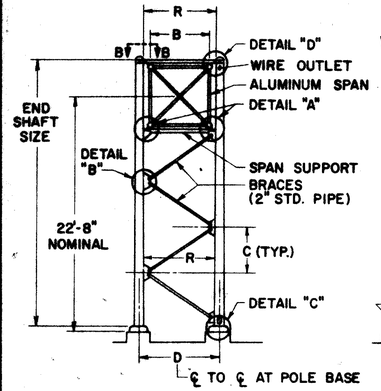
APPROVED Robert E. Comer
ENGINEER OF TRAFFIC

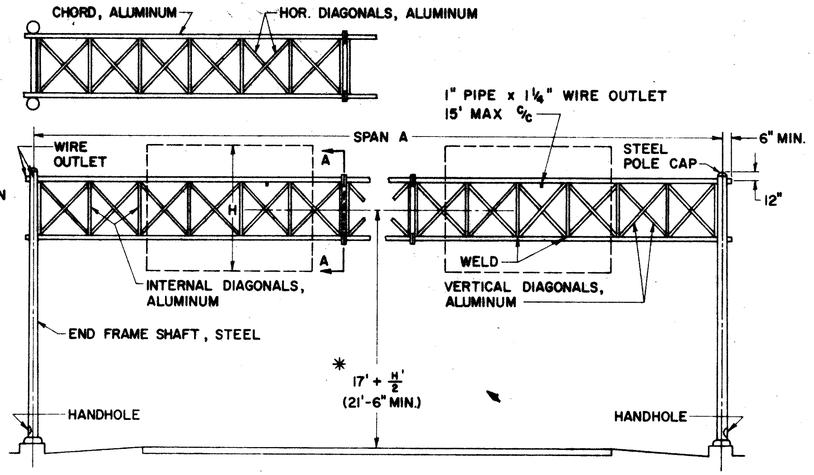
400 SQ. FT. SIGN AREA OVERHEAD SIGN SUPPORT 816 NO 7.4

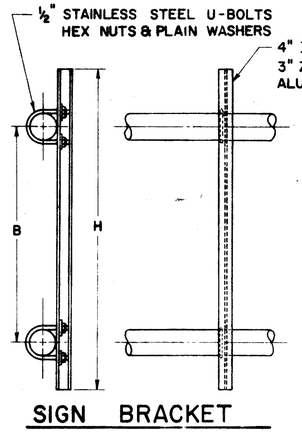
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

297-K 662

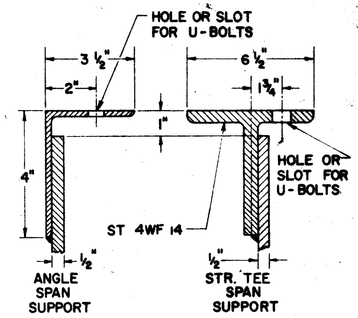
TUSCARAWAS COUNTY
TUS – 36 – 15.93







SIGN BRACKET



SECTION D-D

NOTES

MATERIALS

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SPAN TRUSS AND END FRAMES, INCLUDING HARDWARE, SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 816 UNLESS OTHERWISE NOTED.

STEEL POLE BASES AND GUSSETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A-373.

AFTER FABRICATION THE TAPERED POLES SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

FABRICATION

THE ENTIRE STEEL END FRAME SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SEC. 711.02

MAXIMUM LENGTH OF SPAN SECTIONS IS 30 FT.

ERECTION

USE A MINIMUM OF 1" CAMBER IN SPAN TRUSS MEMBER FOR A 50' SPAN; ADD ⅛" OF CAMBER FOR EACH 5' OF INCREASE IN SPAN OVER 50'.

PAYMENT

PAYMENT FOR THE 3" FIBER CONDUIT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS.

SOILS

THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY).

FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

REINFORCING STEEL

COST OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM 816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS.

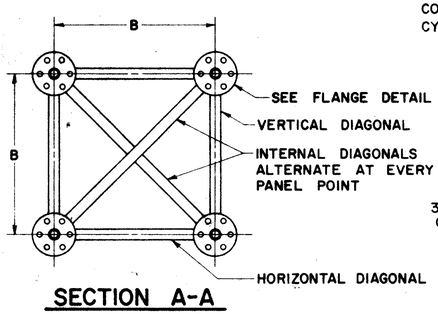
BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER.

***FOUNDATION ELEVATION**

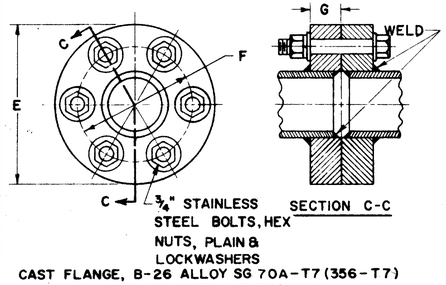
ELEVATION OF TOPS OF FOUNDATIONS SHALL BE BUILT UP SO THAT 17' CLEARANCE IS MAINTAINED OVER THE ENTIRE WIDTH OF THE PAVEMENT AND SHOULDERS.

DESIGN

THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

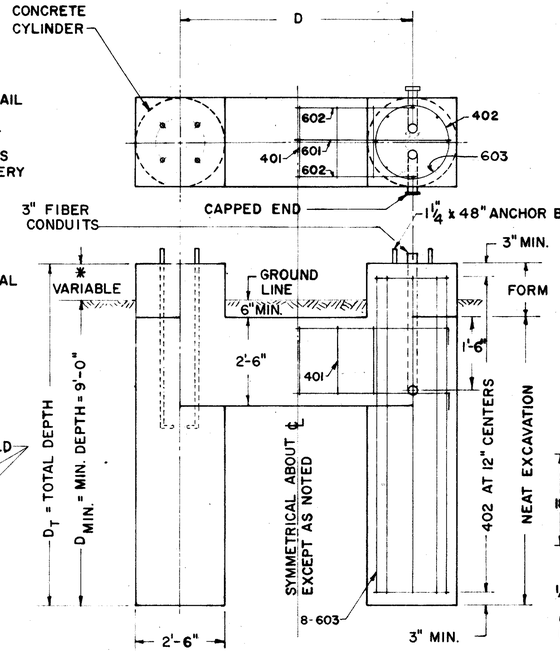


SECTION A-A



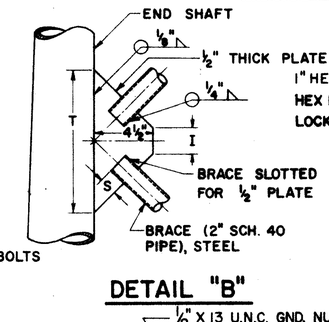
CAST FLANGE, B-26 ALLOY SG 70A-T7 (356-T7)

FLANGE DETAIL

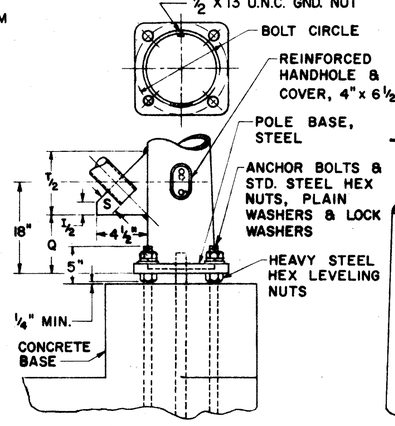


FOUNDATION DETAIL

(RIGHT HAND SHOWN – LEFT HAND OPPOSITE)

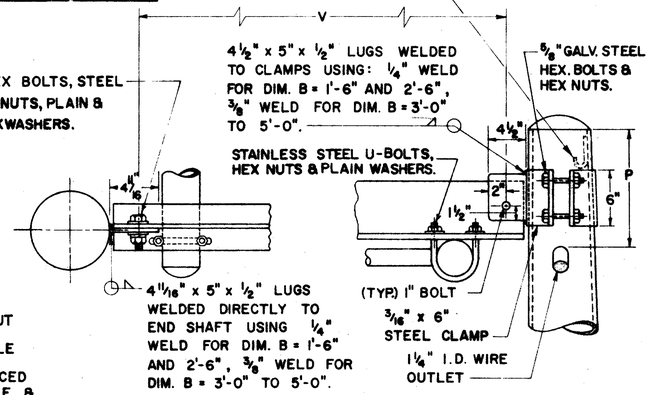


DETAIL "B"



DETAIL "C"

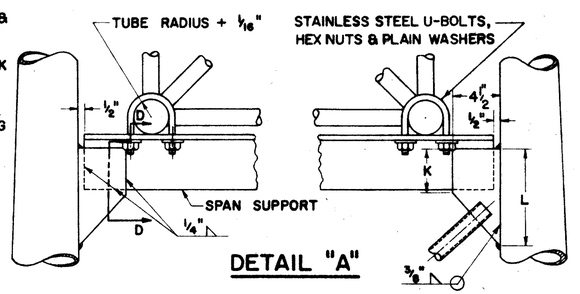
POLE BASE DETAIL



VIEW B-B

DETAIL "D"

UPPER SPAN SUPPORT (ALTERNATE METHODS)

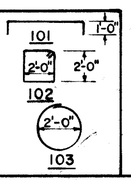


DETAIL "A"

LOWER SPAN SUPPORT

DESIGN NO.	SPAN A	B	C	D	E	END SHAFT	BRACE LENGTH	F	G	I	K	L	P	Q	R	S	T	U BOLTS	V	BOLT CIRCLE	SPAN SUPPORT SECTION D-D	CHORDS	HORIZONTAL AND INTERNAL DIAGONAL	VERTICAL DIAGONAL
1	50'Thru 55'	3'-0"	4'-11¾"	4'-5"	7"	8"x 4.5"x 25'-0", 3GA	5'-10 13/16"	5½"	1¼"	3½"	4¾"	8"	12"	6 5/8"	3'-9"	1½"	10"	⅝"	3'-3 5/8"	11"	SPLIT TEE 3'-8"	3½" x .188"	1.660"x .140"	1.660"x .140"
2	56'Thru 80'	3'-0"	4'-11¾"	4'-5"	9¼"	8"x 4.5"x 25'-0", 3GA	5'-10 13/16"	7 7/16"	1 3/8"	3½"	4¾"	8"	12"	6 5/8"	3'-9"	1½"	10"	⅝"	3'-3 5/8"	11"	SPLIT TEE 3'-8"	4¾" x .188"	1.900"x .145"	1.660"x .140"
3	81'Thru 90'	4'-0"	4'-10¼"	5'-7"	9¼"	8"x6.22"x 25'-6", 3GA	6'-7 1/8"	7 7/16"	1 3/8"	5/8"	4 3/8"	7¾"	12"	6¼"	4'-11"	1½"	9½"	⅝"	4'-5 5/8"	11"	SPLIT TEE 4'-10"	4¾" x .188"	1.900"x .145"	1.900"x .145"
4	91'Thru 105'	4'-0"	4'-10¼"	5'-7"	9¼"	8"x6.22"x 25'-6", 3GA	6'-7 1/8"	7 7/16"	1 3/8"	5/8"	4 3/8"	7¾"	12'	6¼"	4'-11"	1½"	9½"	⅝"	4'-5 5/8"	11"	SPLIT TEE 4'-10"	4¾" x .188"	2" x .188"	1.900"x .145"

REINFORCEMENT SCHEDULE			
MARK	NO.	LENGTH	TYPE
401	12"C/C	8'-6"	102
402	12"C/C	7'-6"	103
601	4	D+ 4'-0"	101
602	8	D+ 2'-0"	101
603	32	D_T – 6"	STR.



BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD SIGN SUPPORTS

816 No. 7.3

DATE 7-25-62 5-5-64

APPROVED Robert E. Comer
ENGINEER OF TRAFFIC

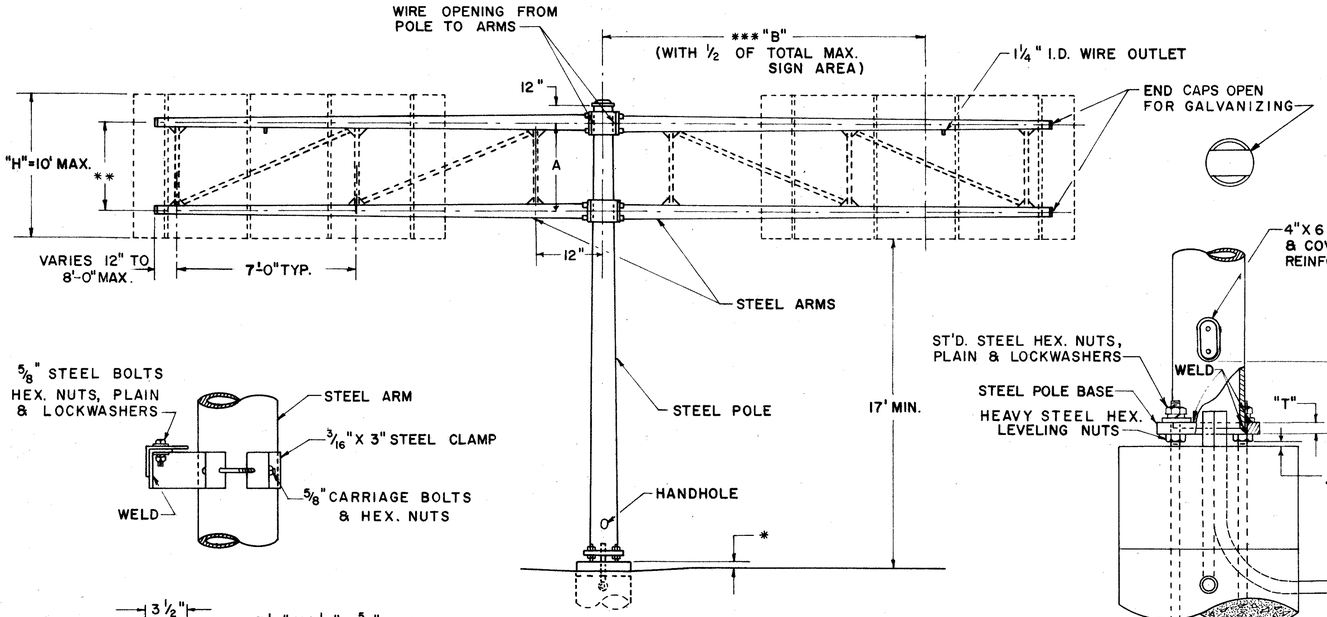
300 SQ. FT. SIGN AREA

OVERHEAD SIGN SUPPORT, 816 NO. 7.3

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

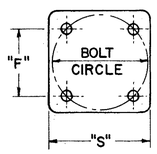
297-L 662

TUSCARAWAS COUNTY
TUS-36-15.93

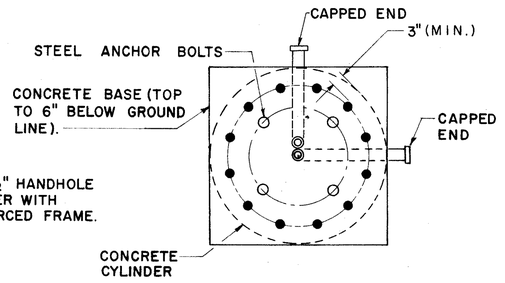


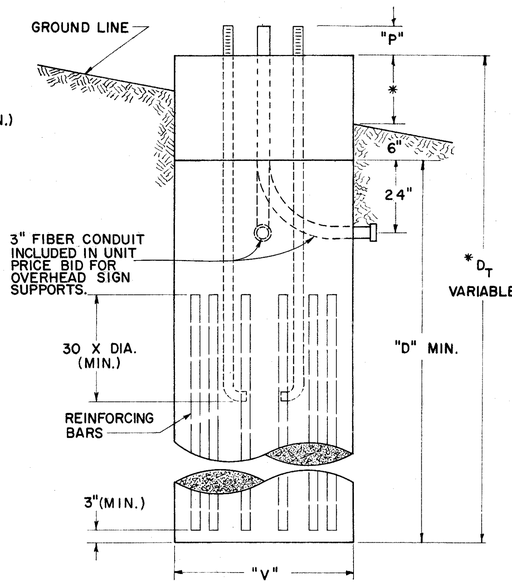
SIGN ATTACHMENT DETAIL

BEAM CONNECTION DETAIL



POLE DETAIL





FOUNDATION DETAIL

NOTES

FABRICATION - ALL PORTIONS OF THE SIGN SUPPORT INCLUDING SIGN ATTACHMENTS, SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. DESIGNATIONS A-123 AND A-153.

*FOUNDATION - THE TOP ELEVATION OF ALL FOUNDATIONS SHALL BE BUILT UP 1'-0" ABOVE THE HIGHWAY CROWN.

**ERECTION - ARMS 20' AND OVER IN LENGTH SHALL BE TRUSS TYPE USING 3"X 3"X ⅜" ANGLES WELDED TO GUSSET PLATES WITH THE INSIDE EDGES OF THE ARMS PARALLEL.

***VALUES OF "B" MAY BE EXCEEDED PROVIDED THE PRODUCT OF ACTUAL SIGN AREA TIMES THE DISTANCE FROM ℄ OF POLE TO ℄ OF SIGN DOES NOT EXCEED THE PRODUCT OF "B" TIMES ½ THE MAX. SIGN AREA.

GENERAL - THE MAX. SIGN AREA ON EACH SIDE OF THE POLE EQUALS ½ THE MAX. TOTAL AREA IN THE CHART.

MATERIAL - STEEL POLE BASES, AND FLANGES SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 30 GRADE B.
HIGH STRENGTH STEEL BOLTS SHALL CONFORM TO ASTM SPECIFICATION A 193 GRADE B 7.
AFTER FABRICATION TAPERED POLES AND ARMS SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

SOILS - THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY). FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

REINFORCING STEEL - REINFORCING STEEL AS SHOWN IN TABLE SHALL BE INSTALLED WHEN "D_T" EXCEEDS THE ANCHOR BOLT LENGTH BY MORE THAN 3 FT. THE COST AND PLACEMENT OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR 816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS.

DESIGN

THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

DESIGN NO.	POLE SIZE	* * ARM SIZE	DIM. A	DIM. *** B	DIM. "D" MIN.	DIM. F	DIM. P	DIM. S	DIM. T	BOLT CIRCLE	ANCHOR BOLT SIZE	DIM. V	MAX SIGN AREA	REINF. BARS SIZE	REINF. BARS NO.
1	3ga. 18"X 14.64"X 24'-0"	7ga., 5.7"X 4.02"X 12'-0"	4'	8'	9'	18"	8⅜"	26½"	2"	25½"	2" X 96"	3'-0"	160	¾"	12
2	3ga. 18"X 14.64"X 24'-0"	7ga., 6.9"X 4.66"X 16'-0"	4'	12'	9'	18"	8⅜"	26½"	2"	25½"	2" X 96"	3'-0"	160	¾"	12
3	0ga., 18"X 14.64"X 24'-0"	7ga., 7.5"X 5.82"X 12'-0"	4'	8'	11'	18"	9⅜"	26½"	2½"	25½"	2¼" X 108"	3'-0"	240	1"	12
4	0ga., 18"X 14.64"X 24'-0"	7ga., 8.3"X 6.06"X 16'-0"	4'	12'	11'	18"	9⅜"	26½"	2½"	25½"	2¼" X 108"	3'-0"	240	1"	12
5	0ga., 18"X 14.64"X 24'-0"	7ga., 10"X 7.2 "X 20'-0	4'	16'	11'	18"	9⅜"	26½"	2½"	25½"	2¼" X 108"	3'-0"	220	1"	12
6	2 ply 3ga., 18"X 14.5"X 25'-0"	7ga., 10"X 7.48"X 18'-0"	6'	10'	14'	18"	11¼"	26½"	3'	25½"	3"X 144"	3'-0"	360	1⅛"	12
7	2 ply 3ga., 18"X 14.5"X 25'-0"	7ga., 11"X 7.92" X 22'-0"	6'	14'	14'	18"	11¼"	26½"	3'	25½"	3"X 144"	3'-0"	360	1⅛"	12
8	2 ply 0ga., 18"X 14.5"X 25'-0"	7ga., 12.5"X 9.14"X 24'-0"	6'	14'	17'	18"	11¼"	26½"	3"	25½"	3"X 168"	3'-0"	480	1¼"	12
9	2 ply 0ga., 18"X 14.5" X 25'-0"	3ga., 12.5"X 8.58"X 28'-0"	6'	18'	17'	18"	11¼"	26½"	3"	25½"	3"X 168"	3'-0"	480	1¼"	12

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD SIGN SUPPORT

816 No. 10.48

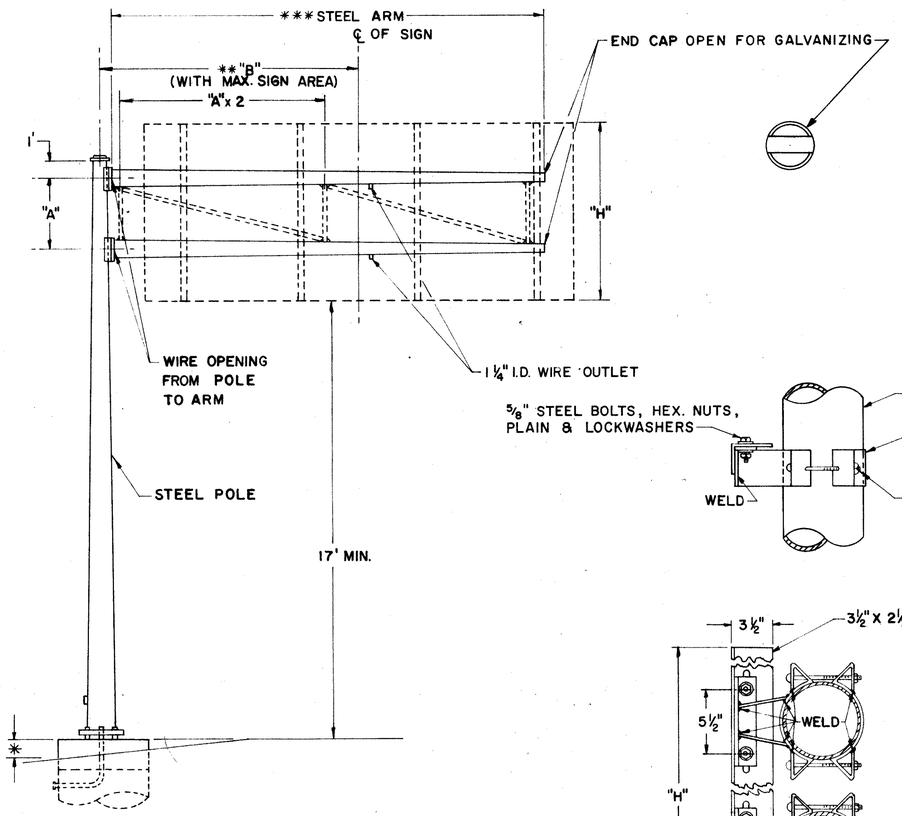
DATE
11-2-61
1-16-62
3-30-62
4-18-62
5-19-64

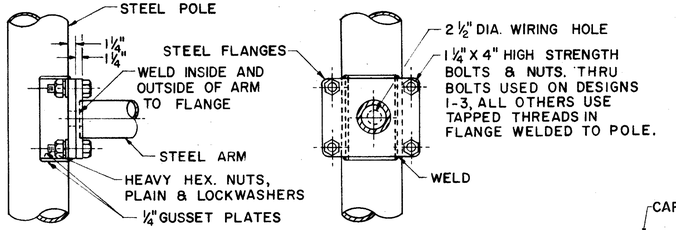
APPROVED Robert E. Bowen
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

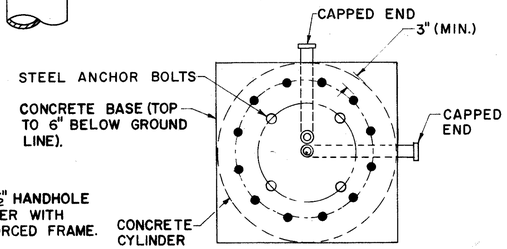
297-M 662

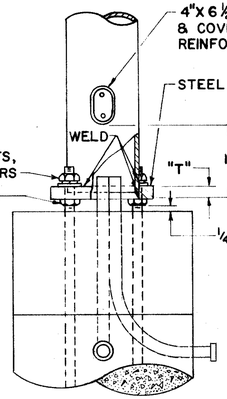
TUSCARAWAS COUNTY
TUS – 36 – 15.93

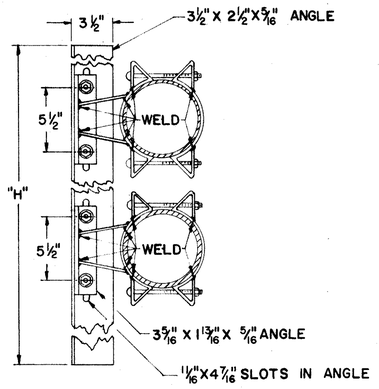


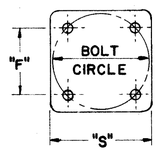


ARM ATTACHMENT





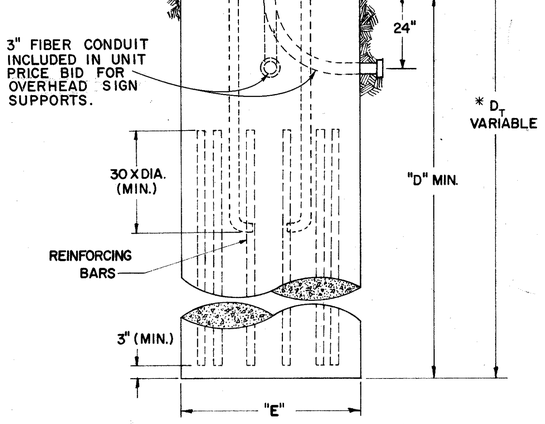




SIGN ATTACHMENT DETAIL

POLE DETAIL

DESIGN NO.	POLE SIZE	*** ARM SIZE	DIM A	DIM ** B	DIM "D" MIN.	DIM E	DIM F	DIM P	DIM S	DIM T	BOLT CIRCLE	ANCHOR BOLT SIZE	MAX SIGN AREA	REINF. BARS SIZE	REINF. BARS NO.
1	3 Ga, 12" X 8.78" X 23'-0"	7Ga, 6.9"X 4.66"X16'-0"	4'	12'	9'	3'-0"	11 5/16"	7¾"	17"	2"	16"	1¾" X 90"	80	¾"	12
2	3 Ga, 12" X 8.78" X 23'-0"	7 Ga, 8" X 5.2" X 20'-0"	4'	16'	9'	3'-0"	11 5/16"	7¾"	17"	2"	16"	1¾"X 90"	80	¾"	12
3	3 Ga, 15" X 11.5" X 25'-0"	7 Ga, 8.3"X 6.06"X16'-0"	4'	12'	11'	3'-0"	15½"	8⅜"	23"	2"	22"	2"X 96"	120	1"	12
4	3 Ga, 16" X 12.5"X 25'-0"	3Ga, 9.2"X6.40"X20'-0"	4'	16'	11'	3'-0"	16 5/8"	8⅜"	24½"	2"	23½"	2"X 96"	120	1"	12
5	0 Ga, 18"X 14.36"X26'-0"	7 Ga, 11"X 7.92"X 22'-0"	6'	14'	13'	3'-0"	18"	9⅜"	26½"	2½"	25½"	2¼"X120"	180	1⅛"	12
6	0 Ga, 18"X 14.36"X26'-0"	7 Ga, 12.5"X 8.86"X26'-0"	6'	18'	13'	3'-0"	18"	9⅜"	26½"	2½"	25½"	2¼"X120"	180	1⅛"	12
7	2 PLY 7 Ga, 18"X14.36"X26'-0"	7 Ga, 12.5"X9.14"X24'-0"	6'	14'	15'	3'-0"	18"	9¾"	26½"	2½"	25½"	2½"X144"	240	1¼"	12
8	2 PLY ¼", 18"X14.36"X26'-0"	3 Ga, 12.5"X8.58"X28'-0"	6'	18'	15'	3'-0"	18"	11¼"	26½"	3"	25½"	3"X 144"	240	1¼"	12



FOUNDATION DETAIL

NOTES

FABRICATION - ALL PORTIONS OF THE SIGN SUPPORT, INCLUDING SIGN ATTACHMENTS, SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. DESIGNATIONS A-123 AND A-153.

* FOUNDATION– THE TOP ELEVATION OF FOUNDATIONS SHALL BE VARIED SO AS TO MAINTAIN A MINIMUM CLEARANCE OF 17' BETWEEN THE BOTTOM OF THE SIGN AND THE HIGHWAY CROWN.

** ERECTION– VALUES OF "B" MAY BE EXCEEDED PROVIDED THE PRODUCT OF ACTUAL SIGN AREA TIMES THE DISTANCE FROM ℄ OF POLE TO ℄ OF SIGN DOES NOT EXCEED THE MAX. SIGN AREA TIMES "B".

*** ARMS 20' LONG OR LONGER ARE TO BE TRUSS TYPE WITH 3"X 3"X ⅜" ANGLES WELDED TO GUSSET PLATES.

MATERIAL– STEEL POLE BASES, FLANGES, AND END CAPS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 30. GRADE B. HIGH STRENGTH STEEL BOLTS SHALL CONFORM TO ASTM SPECIFICATION A 193 GRADE B7. AFTER FABRICATION TAPERED POLES AND ARMS SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

SOILS– THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY). FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

REINFORCING STEEL– REINFORCING STEEL AS SHOWN IN TABLE SHALL BE INSTALLED WHEN "D" EXCEEDS THE ANCHOR BOLT LENGTH BY MORE THAN 3 FT. THE COST AND PLACEMENT OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM 816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS.

DESIGN

THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

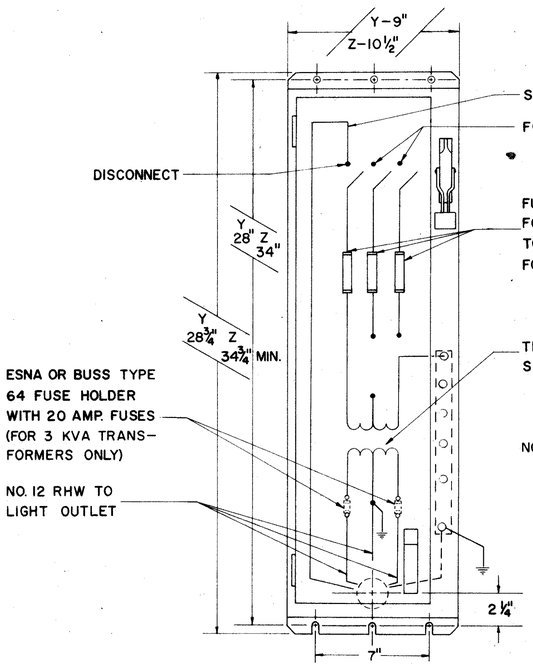
OVERHEAD SIGN SUPPORT | 816 No. 12.24 | DATE 3-17-52, 4-11-52

APPROVED Robert E. Cumbo
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

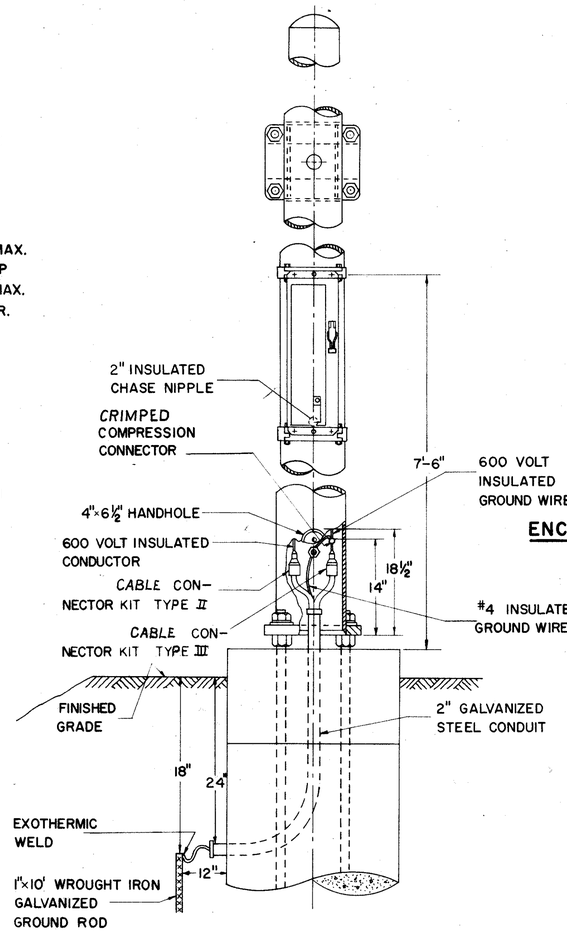
237N 662

TUS-36-15.93

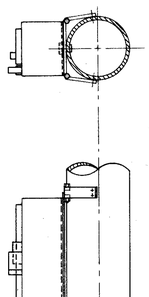


TYPICAL ENCLOSURE DETAIL

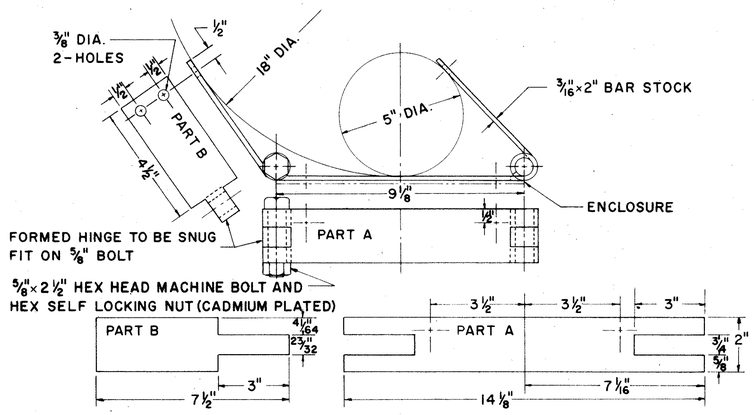
480 VOLT SIGN LIGHTING SERVICE



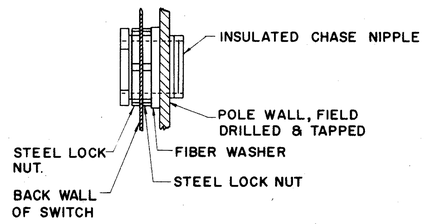
SIGN SUPPORT DETAIL FOR ILLUMINATED SIGNS



ENCLOSURE MOUNTING DETAIL



ENCLOSURE MOUNTING BRACKET



CHASE NIPPLE ASSEMBLY DETAIL

NOTES

GENERAL

DETAILS OF THIS SHEET SHALL APPLY TO EACH OVERHEAD SIGN STRUCTURE TO SUPPORT EXTERNALLY ILLUMINATED SIGNS.

SERVICE

ELECTRIC SERVICE SHALL ENTER THROUGH A 2" GALVANIZED RIGID STEEL CONDUIT INSTALLED IN STRUCTURE FOUNDATION AS PER DETAIL. SIGN SERVICE OR CIRCUITRY SHALL BE CONTROLLED AS REQUIRED BY THE SYSTEM DESIGN AT THE PRIMARY SOURCE.

SERVICE CONDUCTORS SHALL BE THE SIZE AND TYPE AS SPECIFIED.

COMBINATION SWITCH AND TRANSFORMER

(TYPE Y OR Z ENCLOSURE REQUIRED AS PER SCHEDULE ON THIS SHEET)

THIS COMBINATION SHALL BE A 30 OR 60 AMPERE 600 VOLT SWITCH WITH A .25 TO 3.0 KVA TRANSFORMER. THE COMBINATION AND ENCLOSURE SHALL BE AS SQUARE D CLASS 9421, COLUMBUS ELECTRIC WORKS CLASS 101, PANALS INCORPORATED–CLASS 9400, OR APPROVED EQUAL.

TRANSFORMER

THE TRANSFORMER SHALL BE DRY TYPE SINGLE FACE 240/480 VOLT PRIMARY 120/240 VOLT SECONDARY, THE TYPE AND CAPACITY AS SPECIFIED IN DETAILED SCHEDULE ON THIS SHEET.

ENCLOSURE

THE ENCLOSURE SHALL BE NEMA #4 WATER TIGHT .063 GAGE STAINLESS STEEL ASTA 302–303. A DISCONNECT HANDLE SHALL BE FLANGE MOUNTED AND CAPABLE OF BEING LOCKED IN EITHER POSITION. THE ENCLOSURE SHALL BE EQUIPPED WITH A DOOR LOCKING MECHANISM WITH A DEFEATER THAT NECESSITATES TWO HANDS TO OPERATE MECHANISM WITH THE SWITCH IN OFF POSITION. SPACE FOR A 2" INSULATED CHASE NIPPLE* SHALL BE PROVIDED APPROXIMATELY 2¼" ABOVE THE CENTER LINE OF THE LOWER MOUNTING SLOT. THIS ENCLOSURE AND STRUCTURE SHALL BE FIELD DRILLED AND TAPPED FOR THE REQUIRED NIPPLE AS SHOWN ON THE DETAIL ON THIS SHEET.

THIS ENCLOSURE SHALL BE FLANGE MOUNTED ON BRACKETS WITH 5/16"–18×¾" HEX HEAD CADMIUM PLATED MACHINE BOLTS. ENCLOSURES SHALL BE TYPE Y OR Z AS SPECIFIED AND DIMENSIONED ON THIS SHEET.

*As manufactured by Thomas Betts, Appleton Steel City, or approved equal.

ENCLOSURE MOUNTING BRACKET

THE ENCLOSURE MOUNTING BRACKET SHALL BE FABRICATED THEN GALVANIZED BEFORE ASSEMBLY. THE BRACKET SHALL BE FIELD MOUNTED WITH 5/16 HEX HEAD SELF TAPPING CADMIUM PLATED SCREWS. THE SIGN SUPPORT SHALL BE FIELD DRILLED, AS PER DETAIL.

WIRE AND CABLE

ALL WIRE AND CABLE UP TO AND INCLUDING #4 SHALL COMPLY WITH FAA TYPE A SPECIFICATIONS. #2 OR LARGER WIRE OR CABLE SHALL BE G.E. 58006 OR ANACONDA AP–10711, OR EQUAL. ALL WIRE AND CABLE SHALL BE 600 VOLT.

GROUNDING

EACH SIGN SUPPORT OR STRUCTURE SHALL BE GROUNDED WITH A #4 RUBBER INSULATION AND NEOPRENE JACKETED CONDUCTOR. THE GROUNDING CONDUCTOR SHALL BE CONNECTED TO THE SWITCH THEN TO THE COMPRESSION CONNECTOR IN THE SIGN SUPPORT THEN TO A 1"×10' GALVANIZED WROUGHT IRON GROUND ROD. GROUND CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO GROUND ROD AND THEN TAPED WITH PLASTIC ELECTRICAL TAPE AT EACH EXPOSED PORTION OF CONDUCTOR. THE WELDED CONNECTION AND TAPED PORTION SHALL BE PAINTED 2 COATS OF INSULATING ENAMEL.

TRANSFORMERS

TYPE	MANUFACTURERS G.E.	MANUFACTURERS JEFFERSON	OUTPUT K.V.A.	SWITCH TRANSFORMER ENCLOSURE
I	9T51Y7	244–241	.25	Y
II	9T51Y8	244–251	.50	Y
III	9T51Y9	244–261	.75	Y
IV	9T51Y10	244–401	1.00	Z
V	9T51Y11	244–411	1.50	Z
VI	9T51Y12	244–421	2.00	Z
VII	9T51Y13	244–431	3.00	Z

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

ELECTRICAL SIGN SERVICE DETAILS 480 VOLT SYSTEM

ES-3A

DATE 6-18-64

APPROVED _____
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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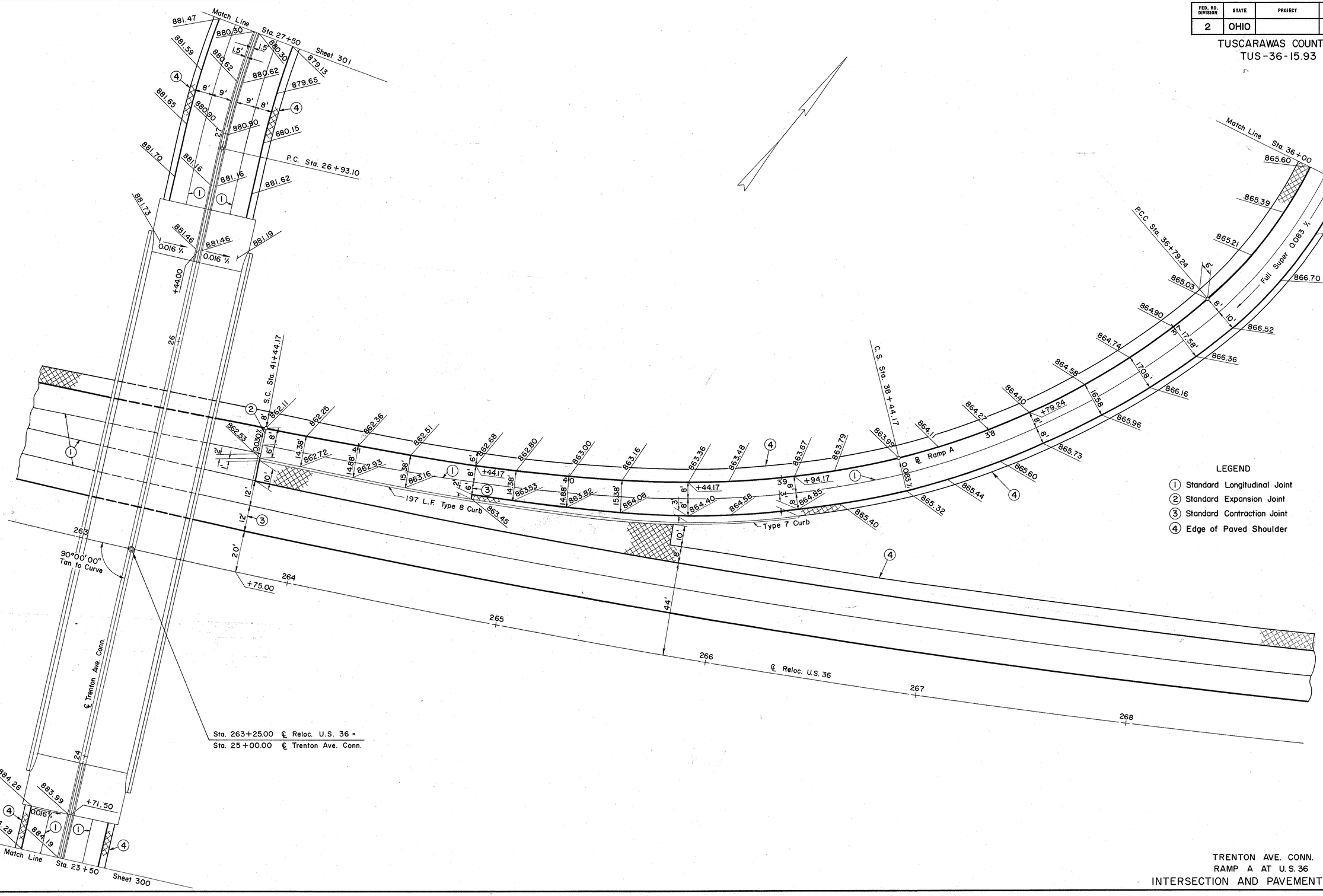
TUSCARAWAS COUNTY
TUS-36-15.93



TRENTON AVE. CONN.
RAMP A AT U.S. 36
INTERSECTION AND PAVEMENT DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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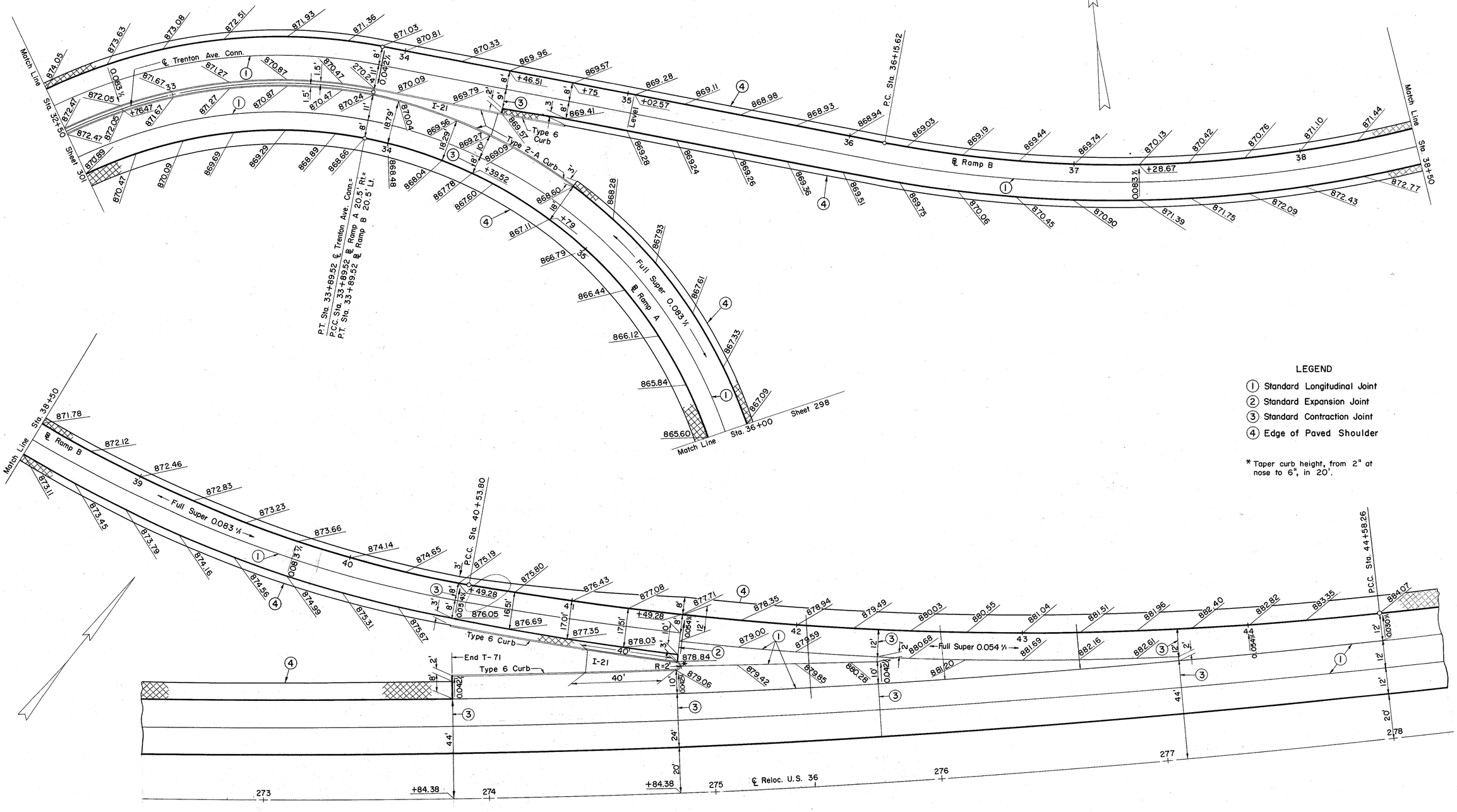
662

TUSCARAWAS COUNTY
TUS-36-15.93



LEGEND

(1) Standard Longitudinal Joint
(2) Standard Expansion Joint
(3) Standard Contraction Joint
(4) Edge of Paved Shoulder

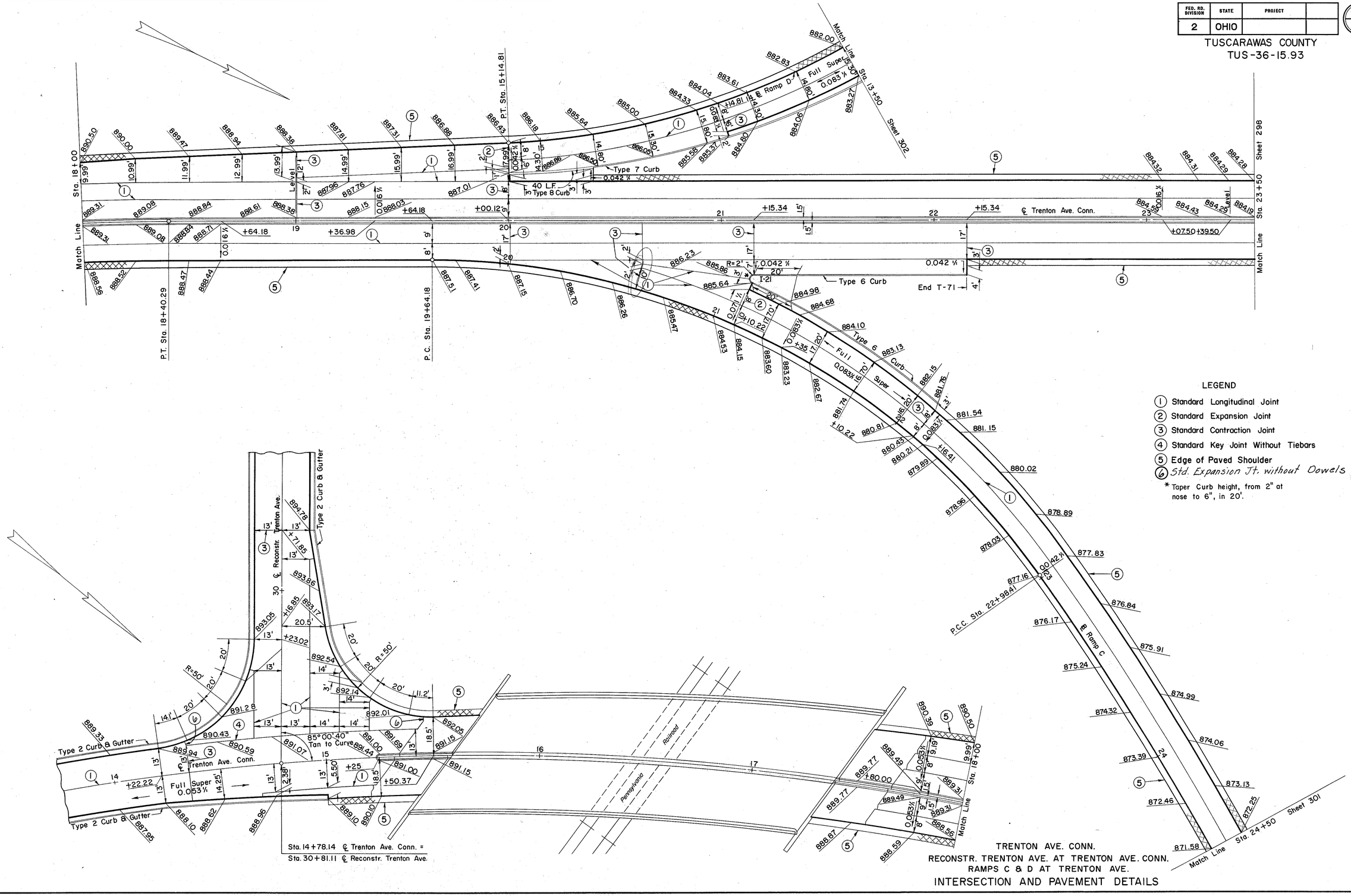
* Taper curb height, from 2" at nose to 6", in 20'.

RAMP B AT U.S. 36
RAMPS A & B WITH TRENTON AVE. CONN.
INTERSECTION AND PAVEMENT DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

300

TUSCARAWAS COUNTY
TUS-36-15.93



LEGEND

1. Standard Longitudinal Joint
2. Standard Expansion Joint
3. Standard Contraction Joint
4. Standard Key Joint Without Tiebars
5. Edge of Paved Shoulder
6. Std. Expansion Jt. without Dowels

* Taper Curb height, from 2" at nose to 6", in 20'.

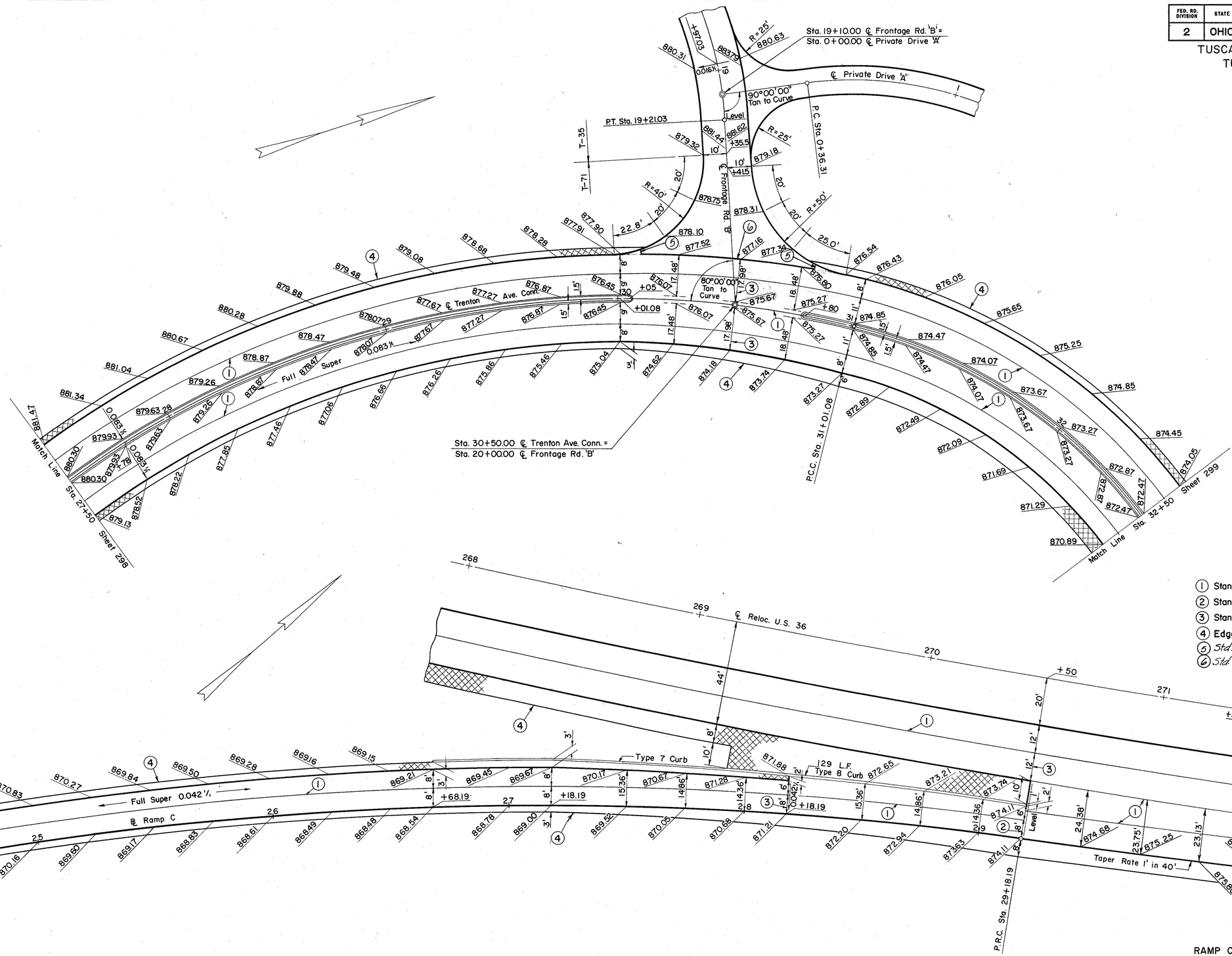
TRENTON AVE. CONN.
RECONSTR. TRENTON AVE. AT TRENTON AVE. CONN.
RAMPS C & D AT TRENTON AVE.

INTERSECTION AND PAVEMENT DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

301

TUSCARAWAS COUNTY
TUS-36-15.93



LEGEND

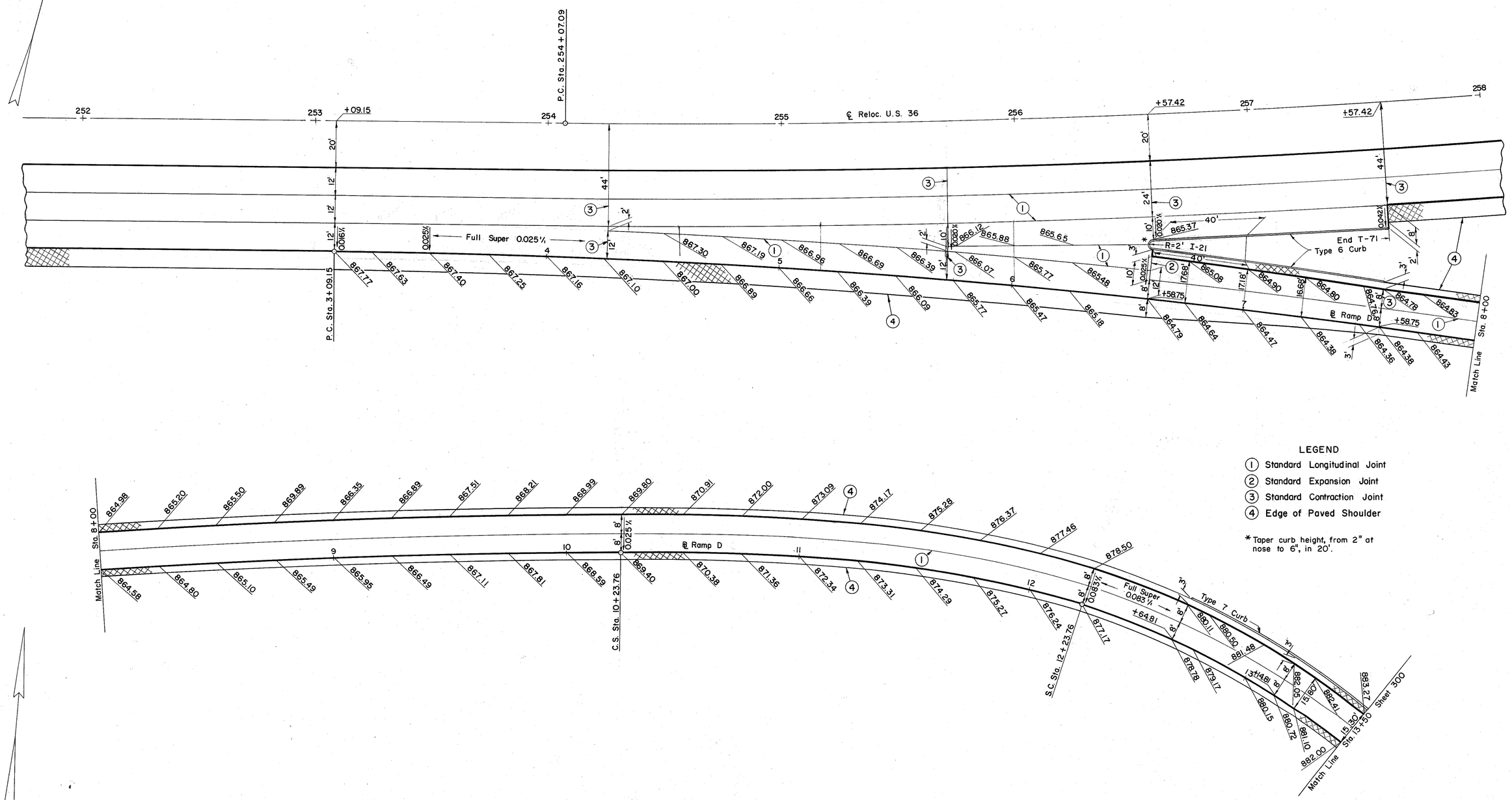
1. Standard Longitudinal Joint
2. Standard Expansion Joint
3. Standard Contraction Joint
4. Edge of Paved Shoulder
5. Std. Expansion Jt. w/o Dowels
6. Std. Key Joint w/o Tiebars

RAMP C AT U.S. 36
FRONTAGE RD. B AT TRENTON AVE. CONN.
INTERSECTION AND PAVEMENT DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

302
662

TUSCARAWAS COUNTY
TUS-36-15.93



LEGEND

1. Standard Longitudinal Joint
2. Standard Expansion Joint
3. Standard Contraction Joint
4. Edge of Paved Shoulder

* Taper curb height, from 2" at nose to 6", in 20'.

RAMP D AT U.S. 36
INTERSECTION AND PAVEMENT DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS - 36 - 15.93

℄ PRIVATE DRIVE

℄ FRONTAGE RD. B

℄ TRENTON - 26 AVE. CONN.

℄ RELOC. U.S. 36

RAMP A ℄

RAMP B ℄

RAMP C ℄

Inv. El. 861.00

Inv. El. 864.30

Inv. El. 851.00

Inv. El. 855.00

Inv. El. 863.40

2-6 Inlet

2-2A C.B.

3-A C.B.

2-2 A C.B.

2-A C.B.

SEE SHEET 304

TRENTON AVE. INTERCHANGE
GRADING PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-15.93

SEE SHEET 303

RAMP A ℄
RAMP C ℄
RAMP D ℄
℄ RELOC. U.S. 36
℄ TRENTON 22 AVE. CONN.
#2-2A C.B.
#2-2A C.B.
#2-2A C.B.
Inv. El 852.50
Inv. El. 850.00
Inv. El 847.00
Inv. El. 846.50
8'x 6' R.C. Box
4:1
4:1

TRENTON AVE. INTERCHANGE
GRADING PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS - 36 - 15.93

RELOC. US 36			
POINT	STATION	COORDINATES N	E
	P.O.T. 241+62.77	266,845.50	2,314,660.16
1	263+25.00= Trenton Ave. Conn. 25+00.00	267,478.19	2,316,723.39
	P.I. 271+33.41	267,595.06	2,317,534.67
	P.O.T. 294+81.28	269,663.74	2,318,935.78
TRENTON AVE. CONNECTOR			
2	P.C. 26+93.10	267,651.61	2,316,638.47
	P.I. 29+16.83	267,852.54	2,316,540.08
3	P.C.C. 31+01.08	268,041.55	2,316,659.79
	P.I. 32+70.12	268,184.35	2,316,750.24
4	P.T. 33+89.52	268,134.09	2,316,911.64
RAMP A			
5	P.C.C. 33+89.52	268,114.51	2,316,905.54
	P.I. 35+66.46	268,061.90	2,317,074.48
6	P.C.C. 36+79.24	267,887.80	2,317,042.85
	P.I. 37+63.27	267,805.13	2,317,027.83
7	C.S. 38+44.17	267,738.29	2,316,976.91
	P.I. 39+45.95	267,657.32	2,316,915.23
8	S.C. 41+44.17	267,562.05	2,316,737.15
RAMP B			
9	P.T. 33+89.52	268,153.66	2,316,917.74
10	P.C. 36+15.62	268,086.43	2,317,133.61
	P.I. 38+47.08	268,017.60	2,317,354.60
11	P.C.C. 40+53.80	268,127.51	2,317,558.31
	P.I. 42+57.38	268,224.18	2,317,737.48
12	P.C.C. 44+58.26	268,366.94	2,317,882.62

EARTHWORK

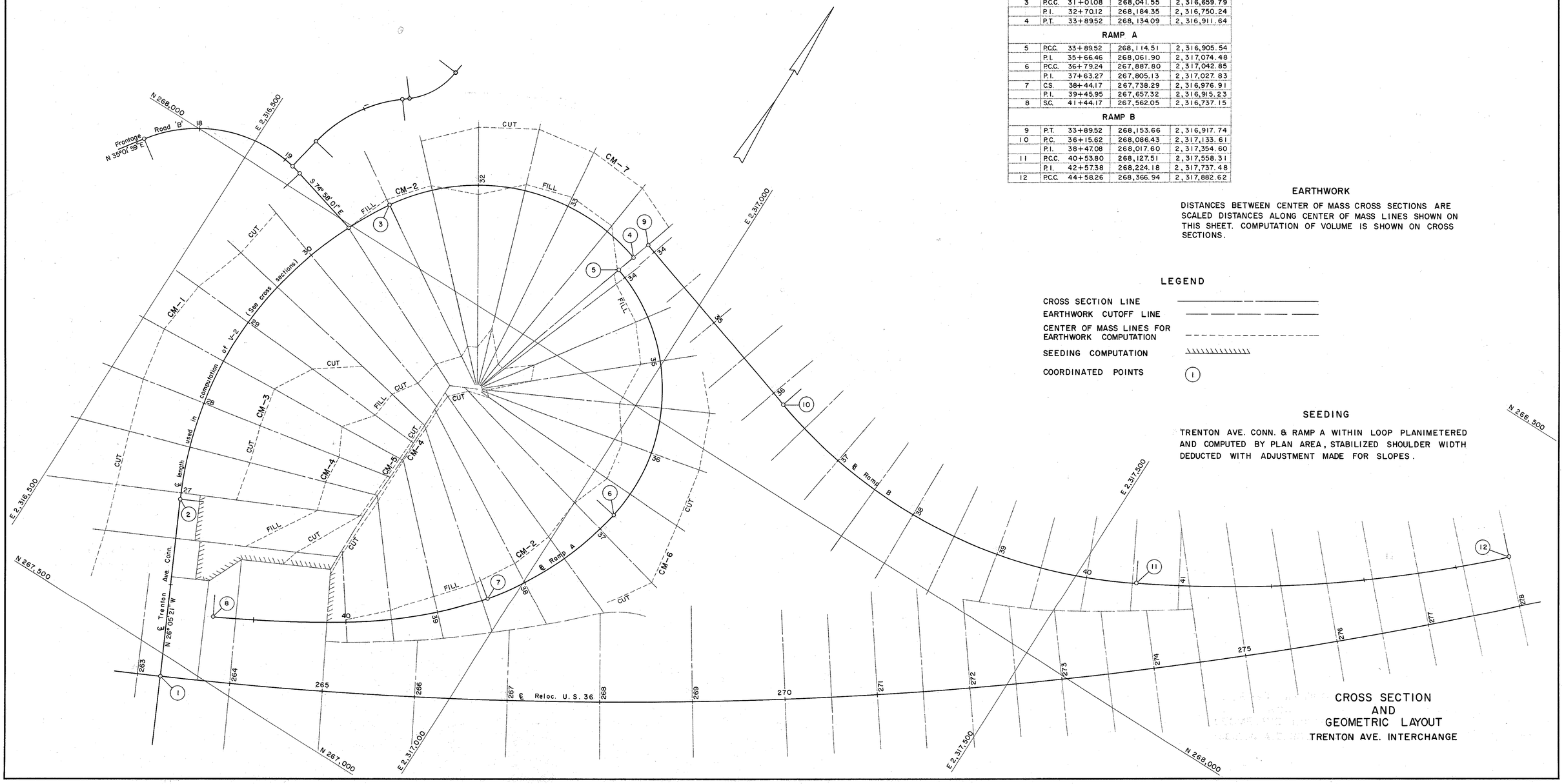
DISTANCES BETWEEN CENTER OF MASS CROSS SECTIONS ARE SCALED DISTANCES ALONG CENTER OF MASS LINES SHOWN ON THIS SHEET. COMPUTATION OF VOLUME IS SHOWN ON CROSS SECTIONS.

LEGEND

CROSS SECTION LINE
EARTHWORK CUTOFF LINE
CENTER OF MASS LINES FOR EARTHWORK COMPUTATION
SEEDING COMPUTATION
COORDINATED POINTS (1)

SEEDING

TRENTON AVE. CONN. & RAMP A WITHIN LOOP PLANIMETERED AND COMPUTED BY PLAN AREA, STABILIZED SHOULDER WIDTH DEDUCTED WITH ADJUSTMENT MADE FOR SLOPES.



CROSS SECTION
AND
GEOMETRIC LAYOUT
TRENTON AVE. INTERCHANGE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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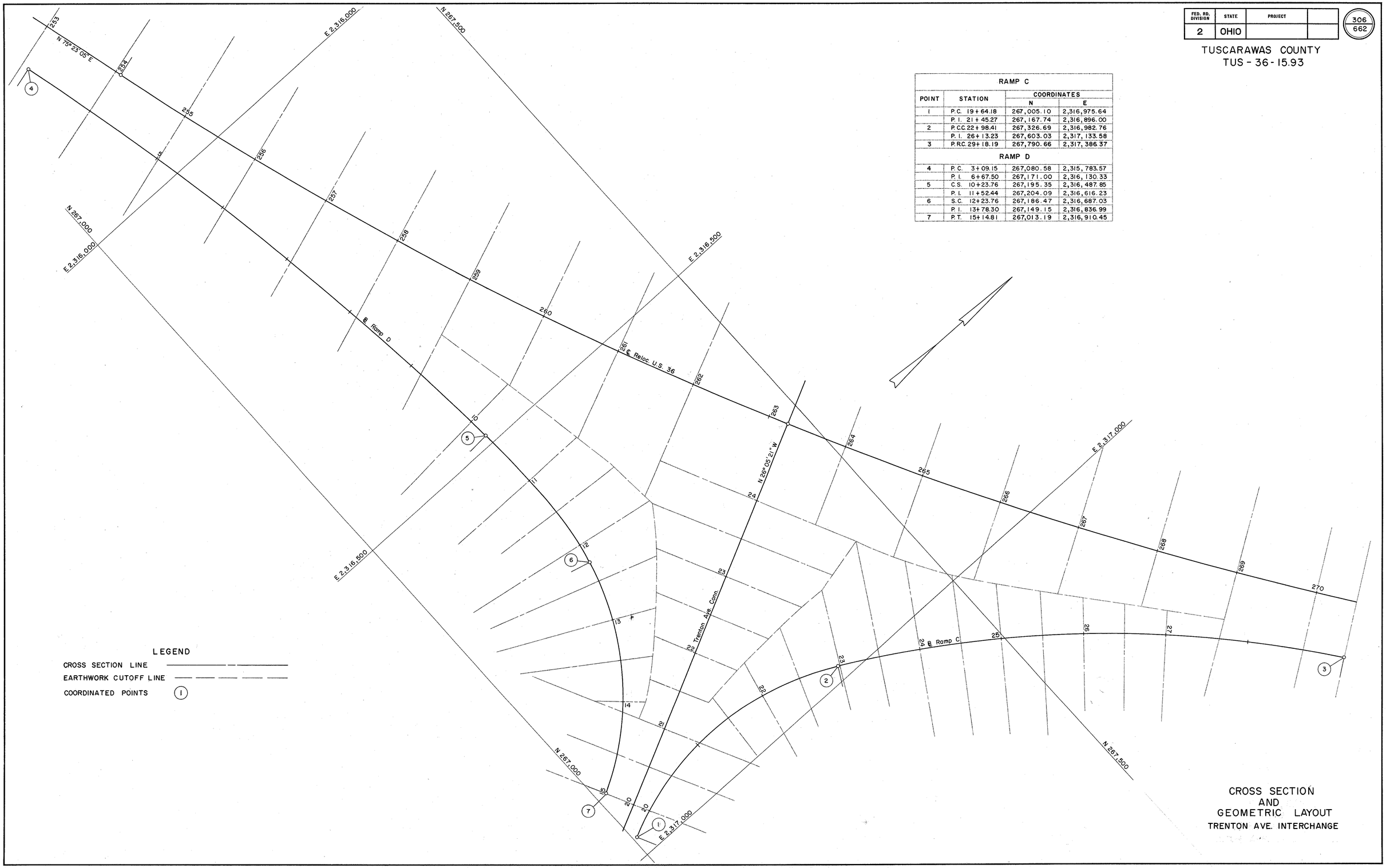
TUSCARAWAS COUNTY
TUS - 36 - 15.93

RAMP C			
POINT	STATION	COORDINATES N	E
1	P.C. 19+64.18	267,005.10	2,316,975.64
	P.I. 21+45.27	267,167.74	2,316,896.00
2	P.C.C. 22+98.41	267,326.69	2,316,982.76
	P.I. 26+13.23	267,603.03	2,317,133.58
3	P.R.C. 29+18.19	267,790.66	2,317,386.37
RAMP D			
4	P.C. 3+09.15	267,080.58	2,315,783.57
	P.I. 6+67.50	267,171.00	2,316,130.33
5	C.S. 10+23.76	267,195.35	2,316,487.85
	P.I. 11+52.44	267,204.09	2,316,616.23
6	S.C. 12+23.76	267,186.47	2,316,687.03
	P.I. 13+78.30	267,149.15	2,316,836.99
7	P.T. 15+14.81	267,013.19	2,316,910.45



LEGEND

CROSS SECTION LINE ———————

EARTHWORK CUTOFF LINE — — — — —

COORDINATED POINTS (1)

CROSS SECTION
AND
GEOMETRIC LAYOUT
TRENTON AVE. INTERCHANGE

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

307
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

L-9 Included with Reloc. U.S. 36

SEEDING END STA.	SEEDING WIDTH YDS.

B&O R.R. @ Ramp J Sta. 29+00 to 31+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

308
662

TUSCARAWAS COUNTY
TUS-36-15.93

FOR INTERSECTION DETAILS
SEE SHEET 372

FOR GRADE ON 12th STREET
SEE SHEET 317

P.O.T. Sta. 88+18.40 Survey ℄

6" Maple, 6" Maple, 10" Maple, 16.95', 18.92', 68.06', Ahd.

Ref. (2-W) includes service adjustment for 5 residences situated on the west side of Reconstr. U.S. 250, work involves connecting existing service to the existing 4" A.C. main along the west curb line. These are presently serviced from the 4" C.I. line along the eastside.

Sta. 88+18.48 ℄ Reconstr. U.S. 250 = Sta. 0+00.00 ℄ Reconstr. 12th Street

BEGIN WORK STA. 86+65

WATER STREET (Asphalt)

Existing R/W Line

MILL TOWNSHIP LINE

UHRICHSVILLE CORPORATION LINE

Sta. 90+00

ABANDON N3°14'48"W

Plug Pipe 86°45'23" Tan. to Curve

Reconstr. 12th Street

Existing R/W Line

END WORK STA. 0+43

Sta. 85+20.53 Reconstr. U.S. 250 = Sta. 85+21.46 Survey ℄

P.C. Sta. 86+54.26

Hatched Area Indicates New Sidewalk

RECONSTR. U.S. 250
CURVE DATA
P.I. Sta. 88+33.97
Δ = 7° 10'45", Rt.
D = 2° 00'
R = 2,864.79'
L = 358.96'
T = 179.71'

NOTE
New Service Branch off of 6" C.I. on 12th. St.

Limit of Construction

MILL TOWNSHIP LINE

UHRICHSVILLE CORP LINE

Existing Fire Hydrant

Gravel Parking Area

Conc. Slab

Gravel Drive

Conc. Blk. Gar.

Conc. Blk. Basement Dwlg.

Fr. Shed

Fr. Gar.

2 Sty. Fr. House

1 Sty. Stone House

1 Sty. Fr. House

2 Sty. Brk. House

2 Sty. Conc. Blk House

1 Sty. Conc. Blk. Store

Lawn

Well

Hedge

Asphalt Drive

20' Asphalt

4' Conc. Walk

20' Gravel Drive

E. 12th STREET

End Sheet

TYPICAL SECTION EXISTING WATER STREET
(South of 12th Street)

Var. 5' to 6', Var. 6' to 9', 30', Var. 6' to 9', Var. 5' to 6'; 4" Conc. Walk, 6" Conc. Curb, Conc. Base, 1" Sand Cushion, Brick, Bituminous Surface, 6" Conc. Curb, 4" Conc. Walk

TYPICAL SECTION PATCHED AREA
(On E. 12th St.)
Ref. (5-P)

8', 2', 8"B-19, Trench, 2"T-35, T-30

TYPICAL SECTION EXISTING WATER STREET
(North of 12th Street to Sta. 99+75±)

5', 6'-6", 2', 12', 12', 2', 6'-6", 5'; 4" Conc. Walk, 6" Subbase, 9" Reinf. Conc. Pav't., Comb. Curb & Gutter, 4" Conc. Walk

For curve data along right pavement edge & right median edge see sheet 372

Ref. (3-W) relocate existing fire hydrant right of Sta. 87+96 to location shown.

Meet Existing, 9" T-71, 6" I-22, Trench for placing 3" Galv. Steel Conduit, See Sheet 489-H

TYPICAL SECTION PATCHED AREA
(Sta. 88±68)
Ref. (7-P)

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. SUB-GRADE S.Y.	E-8 REMOVAL AND DISPOSAL OF EXISTING: PAVEMENT FLEX. S.Y.	PAVEMENT RIGID S.Y.	SIDE-WALK S.F.	CURB L.F.	CURB & GUTTER L.F.	I-9 STONE UNDER DRAINS NO.2 L.F.	I-13 SIDEWALK 4" S.F.
1-R	86+65	90+00	Rt.					143	109		
2-R	88+04	88+43	Rt.			60					
3-R	89+52	90+00	Rt.&Lt.			62					
4-R	86+65	125+00		20,015						270	
5-R	86+65	87+24	Rt.			7					
6-R	Reconstr. 12th St.			99							
7-R	87+64		Rt.				42				28
8-R	87+92		Rt.				135				105
9-R	0+73	12th St.	Lt.&Rt.	22	22						
10-R	88+30	90+00	Rt.				130				
11-R	88+44	88+69	Rt.				580				
12-R	86+65	88+05	Rt.	88							
13-R	88+68		Lt.&Rt.	21		19	35		8		35
	TOTALS			20,245	22	148	922	143	117	270	168

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 6" PIPE CLASS F-4 C.Y.	I-1 6" PIPE CLASS I-3 L.F.	I-1 6" PIPE CLASS J-1 L.F.	I-1 12" PIPE CLASS J-1 L.F.	I-5 CLASS J-1 6" 60° BEND EA.	I-8 STD. #3 C.B. EA.	I-16 C.B. ABAN-DONED EA.
1-D	86+65	87+92	Rt.	10	116					
2-D	87+92	0+43	12th St.	10	14					
3-D	0+43	89+00	Lt.&Rt.	10	62	30		2	1	1
4-D	89+00	90+78	Rt.	10	152		8			
5-D	87+92		Rt.				16		1	1
6-D	89+00		Rt.							
	TOTALS			40	344	30	24	2	2	2

(P) PAVEMENT

REF NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE C.Y.	B-21 WATER-PROOFED AGGR. BASE COURSE C.Y.	B-35 ASPHALTIC CONCRETE LEVELING COURSE C.Y.	B-35 ASPHALTIC CONCRETE BASE COURSE C.Y.	I-12 CONC. CURB TYPE COMB. CURB & GUTTER TYPE 2-A 6 Mod. L.F.	I-22 SUBBASE GRADING A OR B C.Y.	I-22 SUBBASE GRADING A OR B C.Y.	I-22 SUBBASE GRADING A OR B C.Y.	I-22 SUBBASE GRADING A OR B C.Y.
1-P	86+65	125+00		674	337	4	9	21	165	198	21	16
2-P	Reconstr. 12th St.			22								
3-P	86+65	90+00	Rt.&Lt.			3	7					
4-P	88+50	89+74		5								
5-P	0+73	12th St.	Lt.&Rt.	18								
6-P	86+65	88+05	Rt.									
7-P	88+68		Lt.&Rt.	719	337	7	16	21	165	198	8	4
	TOTALS											

(W) WATER

REF. NO.	STATION FROM	STATION TO	SIDE	T-124 NEW SERVICE BRANCH L.F.	NEW SERVICE BRANCH TYPE A L.F.	NEW WATER MAIN 4" A.C. L.F.	4" TEE EA.
1-W	0+73	12th St.	℄	68			
2-W	88+00	90+00	Lt.		25	4	1
3-W	87+82		Rt.				
	TOTALS			68	25	4	1

	T-30 BIT. PRIME COAT GAL.	T-31 BIT. #6 MAT'L. AGGR. COURSE TYPE C C.Y.	T-35 ASPH. CONC. SURF. COURSE PAV't. 9" S.Y.	T-71 REINF. PORT. CEM. CONC. PAV't. 9" S.Y.
	1,011	33	15,917	
		4		
	40			
			2,3	2,3
	9			
	33			
	82	1,011	33	9
				15,938

	I-23 PRECAST CONC. TRAFFIC DIVIDERS EA.
	22
	13
	3,193

EXCAVATION	=	60 C.Y.
EMBANKMENT	=	0 C.Y.
EMBANKMENT + 6 %	=	0 C.Y.

RECONSTR. 12TH. ST.

EXCAVATION	=	362 C.Y.
EMBANKMENT	=	6 C.Y.
EMBANKMENT + 6 %	=	7 C.Y.

RECONSTR. U.S. 250
STA. 85+00 TO STA. 90+00

DIV. NO.	STATE	PROJECT		
2	OHIO			

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TUSCARAWAS COUNTY
TUS - 36 - 15.93

848.84

870

860

850

840

830

820

810

800

Existing Pavement Cross Slope Extended.
For Grades This Area See Sheets 8 & 372

BEGIN WORK
STA. 86 + 65

℄ 845.75
+02, 44' Rt.

℄ 845.75
+37, 41.5' Rt.

P.G.C. Sta 89 +86
848.72

+087%

℄ 845.62

4" Gas
8" Gas
4" C.I.P.
30"

6"I-3

8'-12" @ 0.57%

12" V.C.P.

15" V.S.P

6"I-3

30" V.C.P.

30" R.C.P.

4" C.I.P.
6" Transite
4" Gas
8" Gas

℄ 845.51
+65, Rt.

850.02 | 849.86 | 849.69 | 849.51 | 849.41 | 849.26 | 848.95 | 848.83 | 848.78 | 848.68 | 848.74 | 848.82 | 848.7

85 | +50 | 86 | +50 | 87 | +50 | 88 | +20 | +50 | 89 | +50 | +86 | 90

STA. 85+00 TO STA. 90+00
RECONSTR. U.S. 250

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS – 36 – 15.93

FOR DETAILS ON RAMP J BRIDGE
SEE SHEETS 518 – 525

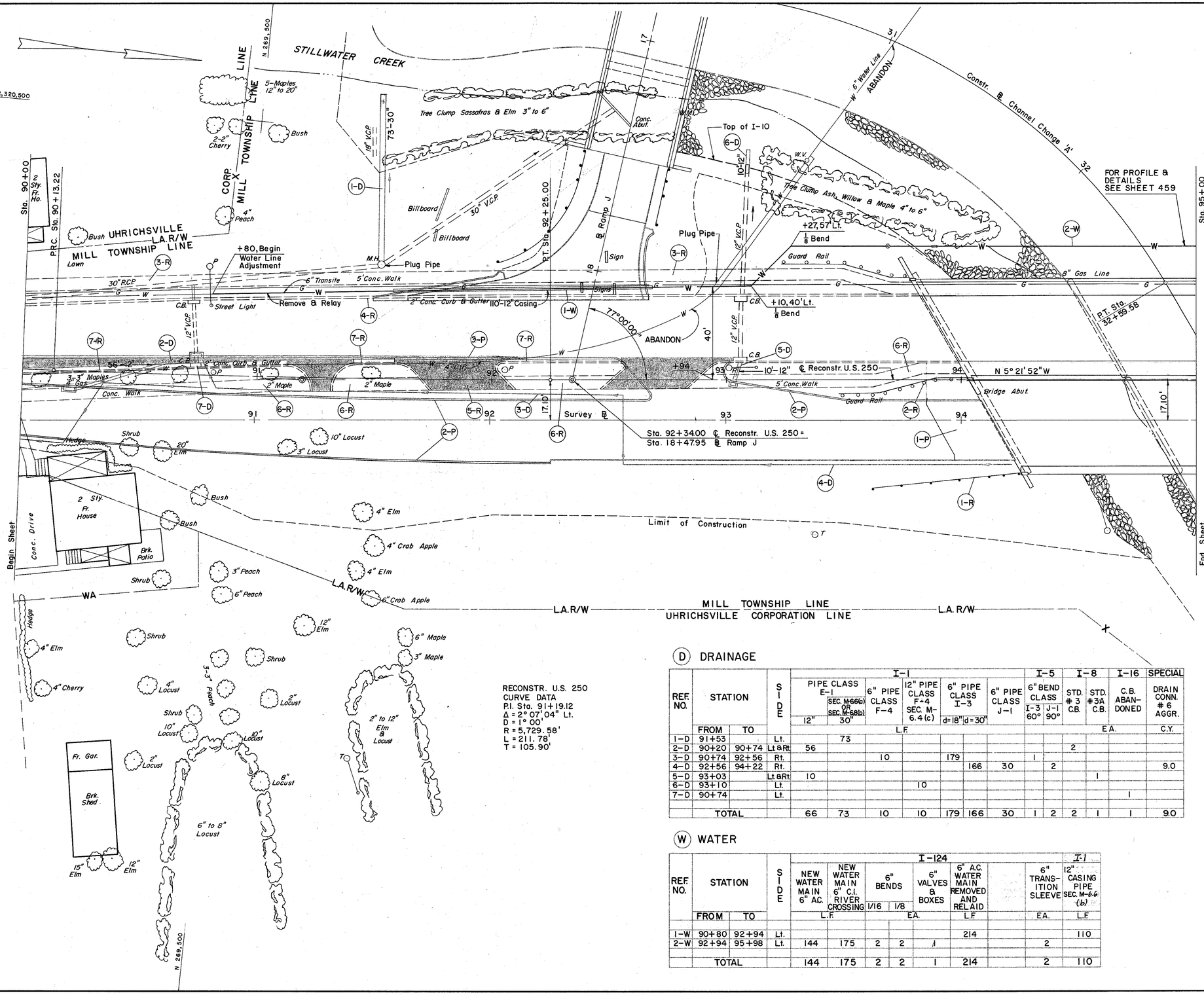
FOR DETAILS ON RECONSTR. U.S. 250 BRIDGE
SEE SHEETS 569 – 576

FOR PLAN AND PROFILE OF RAMP J
SEE SHEETS 349 & 351

FOR INTERSECTION DETAILS
SEE SHEET 372

FOR GEOMETRIC LAYOUT
SEE SHEET 382

FOR ADDITIONAL DETAILS ON
CHANNEL CHANGE 'A'
SEE SHEETS 312 & 349



RECONSTR. U.S. 250
CURVE DATA
P.I. Sta. 91+19.12
Δ = 2° 07' 04" Lt.
D = 1° 00'
R = 5,729.58'
L = 211.78'
T = 105.90'

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 PIPE CLASS E-1 12"	I-1 PIPE CLASS E-1 30"	I-1 6" PIPE CLASS F-4	I-1 12" PIPE CLASS F-4 SEC. M-6.4(c)	I-1 6" PIPE CLASS I-3 d=18"	I-1 6" PIPE CLASS I-3 d=30"	I-1 6" PIPE CLASS J-1	I-5 6" BEND CLASS I-3 60°	I-5 6" BEND CLASS J-1 90°	I-8 STD. #3 C.B.	I-8 STD. #3A C.B.	I-16 C.B. ABANDONED	SPECIAL DRAIN CONN. #6 AGGR.
				L.F									EA.			C.Y.
1-D	91+53		Lt.		73											
2-D	90+20	90+74	Lt. & Rt.	56									2			
3-D	90+74	92+56	Rt.			10		179			1					
4-D	92+56	94+22	Rt.						166	30		2				9.0
5-D	93+03		Lt. & Rt.	10										1		
6-D	93+10		Lt.				10									
7-D	90+74		Lt.												1	
	TOTAL			66	73	10	10	179	166	30	1	2	2	1	1	9.0

(W) WATER

REF. NO.	STATION FROM	STATION TO	SIDE	I-124 NEW WATER MAIN 6" AC.	I-124 NEW WATER MAIN 6" C.I. RIVER CROSSING	I-124 6" BENDS 1/16	I-124 6" BENDS 1/8	I-124 6" VALVES & BOXES	I-124 6" A.C. WATER MAIN REMOVED AND RELAID	I-124 6" TRANSITION SLEEVE	I-1 12" CASING PIPE SEC. M-6.6 (b)
				L.F		EA.			L.F	EA.	L.F
1-W	90+80	92+94	Lt.						214		110
2-W	92+94	95+98	Lt.	144	175	2	2	1		2	
	TOTAL			144	175	2	2	1	214	2	110

PROPOSED STRUCTURE DATA
Type: 3 Span Continuous Steel Beam Bridge
Span: 64'-0", 80'-0", 64'-0" c/c Bearings
Roadway: 28'-0" f/f 9'-8" Median
Left and 2'-3" Safety Curb Right
For additional information see Sht. 569

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	I-7 REINF. CONC. APPR. SLAB. (T=13")	I-12 COMB. CURB & GUTTER TYPE 2 MOD.	I-12 CONC. CURB TYPE 2-A
				S.Y.	L.F	
1-P	93+78.76	94+03.76	Rt.	71		
2-P	90+00.00	93+85	Lt. & Rt.			604
3-P	90+00	92+56	Lt.		256	
	TOTAL			71	256	604

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-8 REMOVAL & DISPOSAL OF EXISTING PAVT (RIGID)	E-8 SIDEWALK	E-8 CURB & GUTTER	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP)	I-15 GUARD RAIL REMOVED & Disposed of
				S.Y.	S.F.	L.F.	L.F	
1-R	93+62	94+24	Rt.				62.5	
2-R	93+49	94+02	Rt. & Lt.					53
3-R	89+82	93+81	Lt.		1,995			
4-R	91+50	92+66	Lt.			117		
5-R	90+00	93+02	Lt. & Rt.	200				
6-R	90+00	94+02	Rt. & Lt.		1,580			
7-R	90+00	92+55	Lt.			184		
	TOTAL			200	3,575	301	62.5	53

EXCAVATION	=	214 C.Y.
EMBANKMENT	=	1,383 C.Y.
EMBANKMENT + 6 %	=	1,466 C.Y.

RECONSTR. U.S. 250
STA. 90+00 TO STA. 95+00

FED. AID SUBDIVISION	STATE	PROJECT	
2	OHIO		

311
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

848.84 849.28 849.71 849.93 850.17 850.44 850.76 851.11 851.49 851.85 852.21 852.55 852.90 853.23 853.56 853.87 854.19 854.49 854.79

870
860
850
840
830
820
810
800

100' V.C.
P.V.C. 91+25
P.V.R.C. 92+25
+0.87%
+1.50%
Bridge Limits 213.20
94+03.76
E. 845.50
6"I-3
4"C.I.P.
6"Transite
4" Gas
8" Gas
56'-12" @ 0.70%
End of 4" Gas
30" R.C.P.
E. 846.11
+78, 55' Rt.
E. 60° Bend
+34, Rt. 845.73
E. 60° Bend
+18, Rt. 845.66
E. 60° Bend
+82, Rt. 846.15
+80, Begin Removal and Relaying 6" Water Main
M.H.
P.V.I. 91+75.91
850.36
110'-12" Casing
30" V.C.P.
E. 90° Bend
+56, Rt. 847.13
E. 90° Bend
+56, Rt. 847.06
4"C.I.P.
6"Transite
10'-12"@0.40%
Existing Outfall
New 6" Water Main
E. 845.00
SEE SHEET 459
6"I-3
8" Gas
E. 849.44
+22, Rt.
1600' V.C.
+94, End Removal and Relaying 6" Water Main
Begin New 6" Water Main
Normal Water Elev 833.0

848.7 849.0 849.5 849.8 850.3 850.5 850.0 850.1 850.6 850.7 851.0 851.0 851.5 851.6 852.0 852.2 852.6 852.7 853.4 853.5 853.5 854.6 847.1 854.6 846.5 844.0 833.0 830.0

90 +25 +50 91 +23 +32 +50 +70 92 +05 +50 +52 +86 93 +50 94 +03 +10.50 +27 +50 +75.50 95

RECONSTR. U.S. 250
STA. 90+00 TO STA. 95+00

TUSCARAWAS COUNTY
TUS-36-15.93

FOR PLAN OF CHANNEL CHANGE 'A' SEE SHEET 349

FOR PLAN AND PROFILE OF
RAMP G & H SEE SHEETS 331 & 334
RAMP K SEE SHEETS 349 & 352
RAMP L SEE SHEETS 349 & 351
RAMP F SPUR SEE SHEETS 331 & 333
FOR GRADING PLAN SEE SHEETS 380 & 381

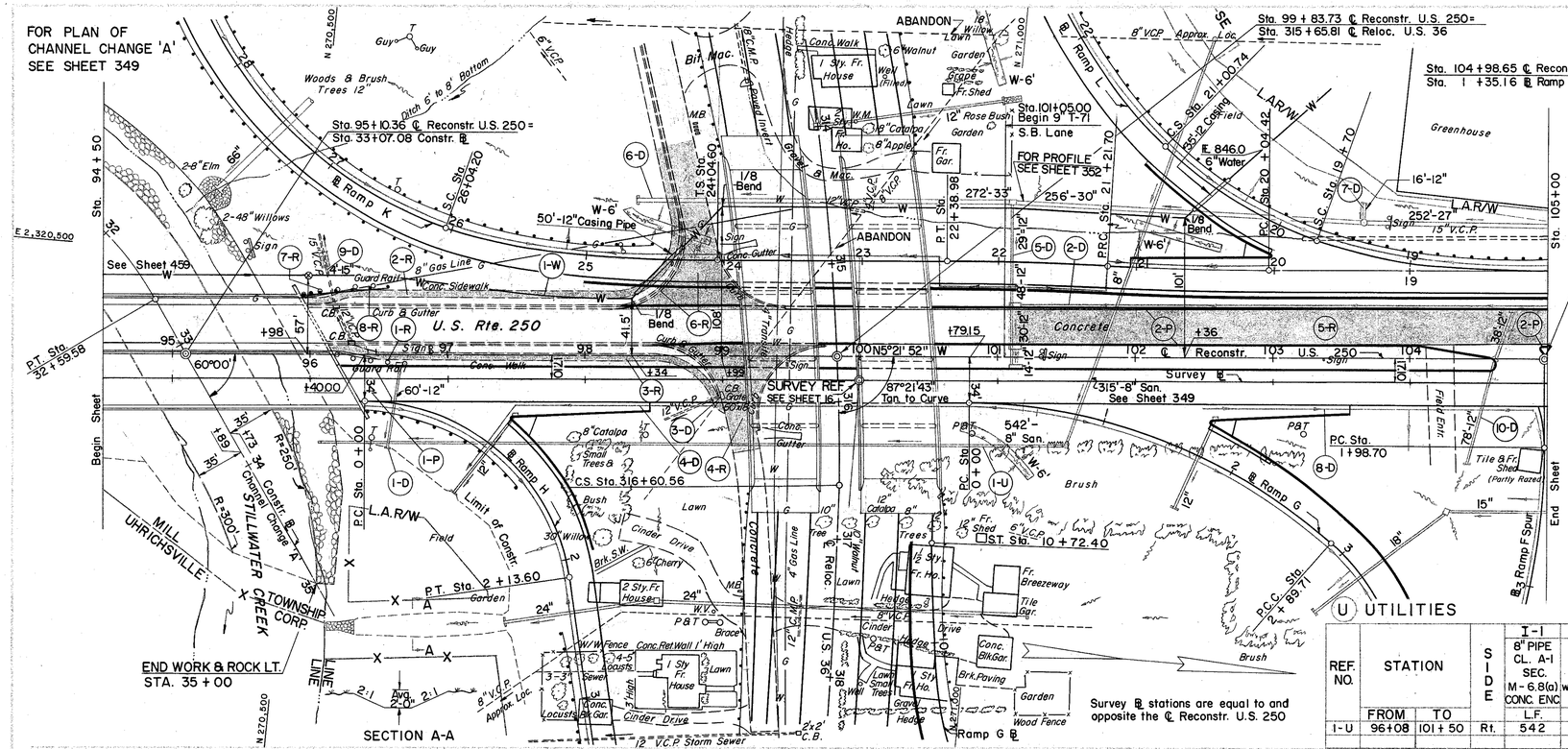
FOR PROFILE OF 8" SANITARY SEWER SEE SHEET 458

FOR INTERSECTION DETAILS SEE SHEETS 372 & 373

FOR GEOMETRIC LAYOUT SEE SHEET 382

FOR DETAILS ON BRIDGE RECONSTR. U.S. 250 SEE SHEETS 569 - 576

FOR DETAILS ON BRIDGE NO. TUS-36-1810 SEE SHEETS 543 - 568


Sta. 95+10.36 ℄ Reconstr. U.S. 250 = Sta. 33+07.08 Constr. ℄
Sta. 99+83.73 ℄ Reconstr. U.S. 250 = Sta. 315+65.81 ℄ Reloc. U.S. 36
Sta. 104+98.65 ℄ Reconstr. U.S. 250 = Sta. 1+35.16 ℄ Ramp F Spur
℄ Ramp K
℄ Ramp L
℄ Ramp H
℄ Ramp G
℄ Ramp F Spur
U.S. Rte. 250
ABANDON
FOR PROFILE SEE SHEET 352
See Sheet 459
See Sheet 349
SURVEY REF. SEE SHEET 16
Survey ℄
End Sheet
Begin Sheet
MILL
UHRICHSVILLE
STILLWATER CREEK TOWNSHIP CORP
Const. ℄ Channel Change 'A'
L.A.R/W
Limit of Constr.
END WORK & ROCK LT. STA. 35+00
SECTION A-A
Survey ℄ stations are equal to and opposite the ℄ Reconstr. U.S. 250
Ramp G ℄
Ramp F Spur
Greenhouse
Brick Shed (Partly Razed)
Tile & Fr. Shed
Concrete
Brush
Lawn
Garden
Woods & Brush
Trees 12"
Ditch 6' to 8' Bottom
Bit. Mac.
Conc. Walk
Conc. Gutter
Conc. Sidewalk
Guard Rail
Curb & Gutter
Field
Cinder Drive
Wood Fence
Conc. Blk. Gar.
Brk. Paving
Brk. S.W.
Tile Gar.
Fr. Breezeway
Fr. Shed
Fr. Gar.
Conc. Ret. Wall 1' High
Survey ℄
Sta. 94+50
Sta. 105+00
E 2,320,500
N 270,500
N 271,000
P.T. Sta. 32+55.58
P.C. Sta. 0+00
P.C. Sta. 1+98.70
P.C.C. Sta. 2+89.71
P.T. Sta. 2+13.60
C.S. Sta. 316+60.56
B.C. Sta. 0+00
P.R.C. Sta. 21+70
S.C. Sta. 19+70
S.C. Sta. 21+00.74
P.C. Sta. 20+04.42
P.R.C. Sta. 21+21.70
P.T. Sta. 22+38.98
P.C. Sta. 25+12.60
S.C. Sta. 26+04.20
T.S. Sta. 24+60.60
Sta. 101+05.00 Begin 9" I-71
Sta. 101+10.00 Begin 9" I-71
R 846.0
6" Water
8" Gas Line G
8" VCP Approx. Loc.
12" V.C.P. Storm Sewer
15" V.C.P.
18" San.
315'-8" San. See Sheet 349
542'-8" San.
Sta. 10+72.40
Sta. 10+80.56
Sta. 10+80.56 Abd.
Sta. 10+81.54 Bk.
Sta. 10+82.54 Ahd.
Sta. 10+83.54 Ahd.
Sta. 10+84.54 Ahd.
Sta. 10+85.54 Ahd.
Sta. 10+86.54 Ahd.
Sta. 10+87.54 Ahd.
Sta. 10+88.54 Ahd.
Sta. 10+89.54 Ahd.
Sta. 10+90.54 Ahd.
Sta. 10+91.54 Ahd.
Sta. 10+92.54 Ahd.
Sta. 10+93.54 Ahd.
Sta. 10+94.54 Ahd.
Sta. 10+95.54 Ahd.
Sta. 10+96.54 Ahd.
Sta. 10+97.54 Ahd.
Sta. 10+98.54 Ahd.
Sta. 10+99.54 Ahd.
Sta. 11+00.54 Ahd.
Sta. 11+01.54 Ahd.
Sta. 11+02.54 Ahd.
Sta. 11+03.54 Ahd.
Sta. 11+04.54 Ahd.
Sta. 11+05.54 Ahd.
Sta. 11+06.54 Ahd.
Sta. 11+07.54 Ahd.
Sta. 11+08.54 Ahd.
Sta. 11+09.54 Ahd.
Sta. 11+10.54 Ahd.
Sta. 11+11.54 Ahd.
Sta. 11+12.54 Ahd.
Sta.

TUSCARAWAS COUNTY
TUS-36-15.93

FOR PLAN & PROFILE OF RAMP F
SEE SHEETS 331 & 333

FOR PROFILE OF RAMP K-L
SEE SHEET 352

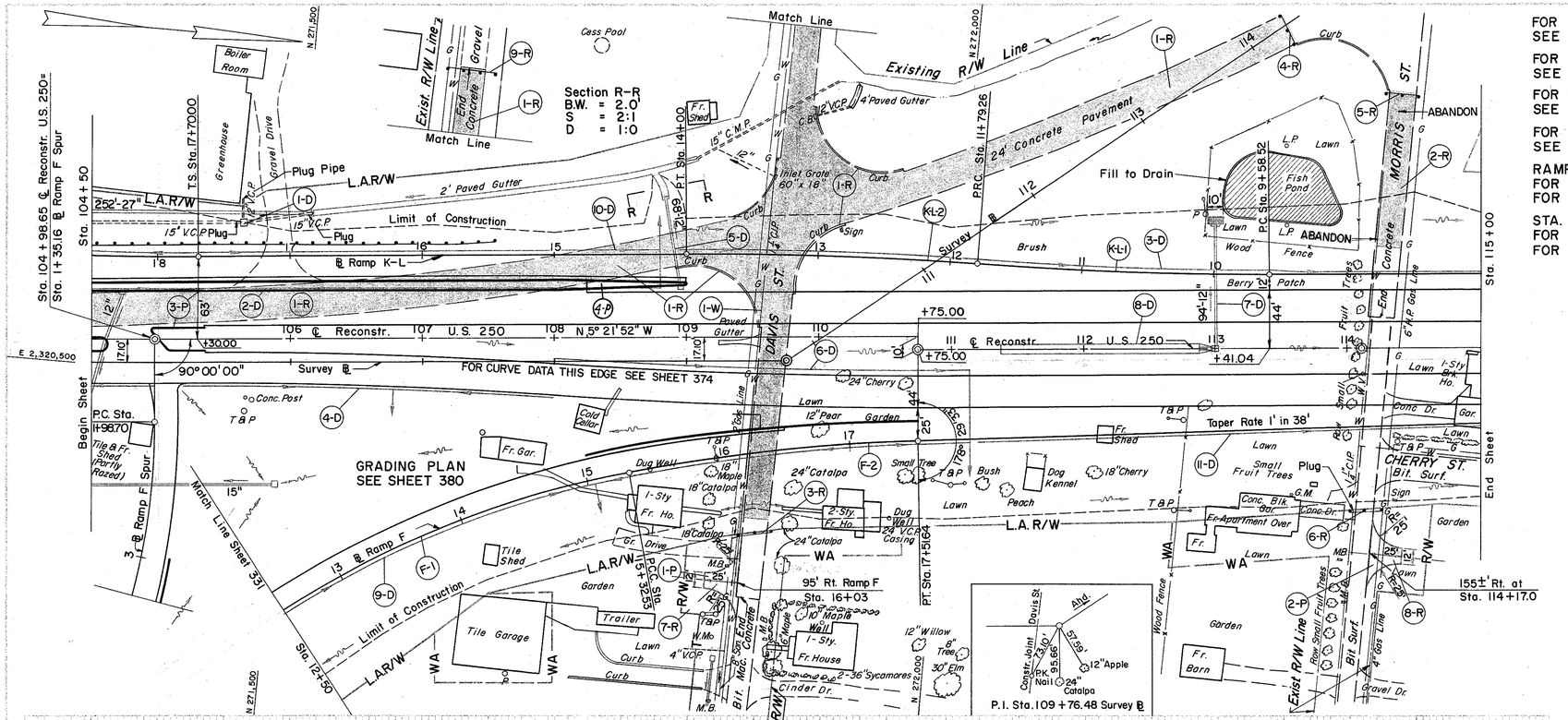
FOR INTERSECTION DETAILS
SEE SHEET 374

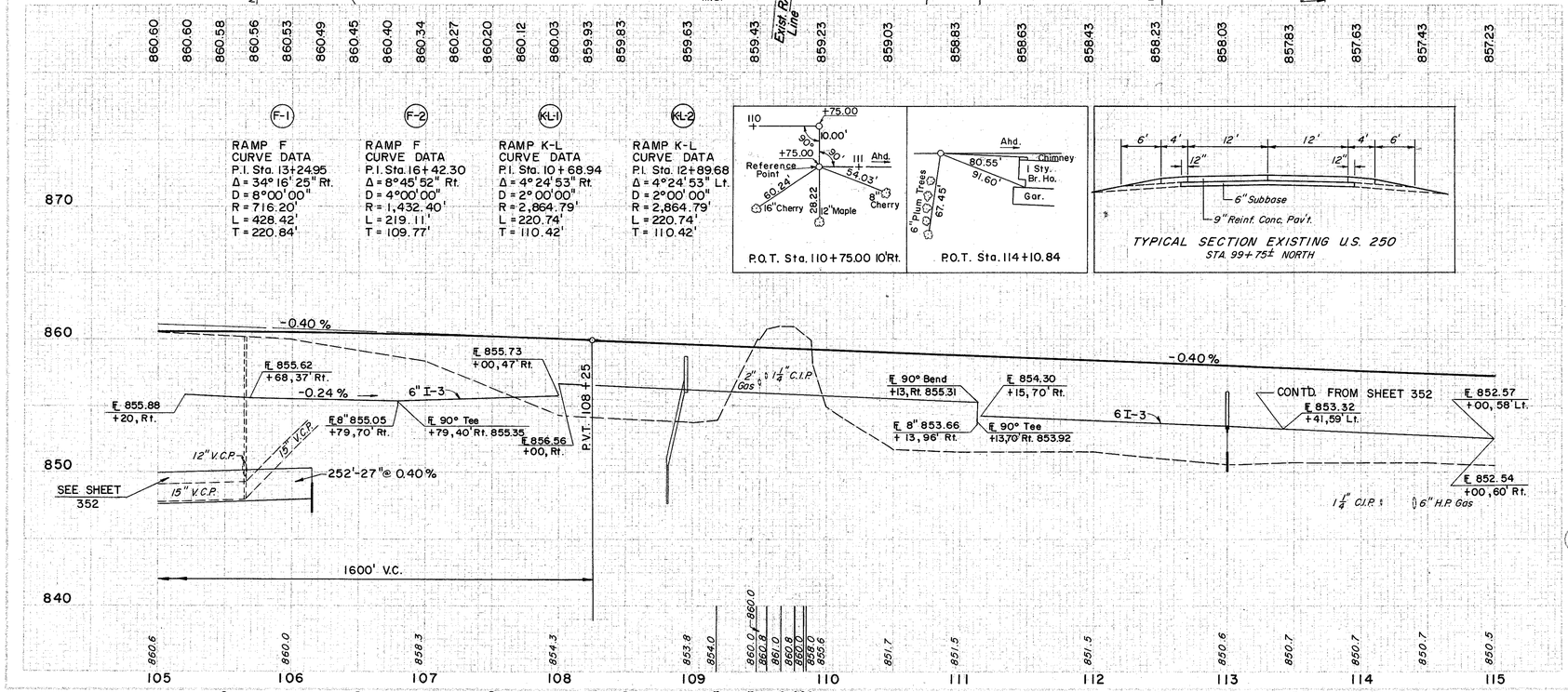
FOR GEOMETRIC LAYOUT
SEE SHEET 382

RAMP F STA. 16+03 T-TYPE TURNAROUND
FOR PROFILE SEE SHEET 325
FOR TYPICAL SEE SHEET 36

STA. 114+17 RT. T-TYPE TURNAROUND
FOR PROFILE SEE SHEET 327
FOR TYPICAL SEE SHEET 36

NOTE:
Survey ℄ Stations are equal to and opposite to the ℄ Reconstr. U.S. 250 where shown parallel.





TYPICAL SECTION EXISTING U.S. 250
STA. 99+75± NORTH

(F-1) RAMP F CURVE DATA
P.I. Sta. 13+24.95
Δ = 34° 16' 25" Rt.
D = 8° 00' 00"
R = 716.20'
L = 428.42'
T = 220.84'

(F-2) RAMP F CURVE DATA
P.I. Sta. 16+42.30
Δ = 8° 45' 52" Rt.
D = 4° 00' 00"
R = 1,432.40'
L = 219.11'
T = 109.77'

(K-L1) RAMP K-L CURVE DATA
P.I. Sta. 10+68.94
Δ = 4° 24' 53" Rt.
D = 2° 00' 00"
R = 2,864.79'
L = 220.74'
T = 110.42'

(K-L2) RAMP K-L CURVE DATA
P.I. Sta. 12+89.68
Δ = 4° 24' 53" Lt.
D = 2° 00' 00"
R = 2,864.79'
L = 220.74'
T = 110.42'

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-5 6" BEND CLASS	I-5 J-1	I-3 J-1	I-2 MASONRY	I-1 CLASS F-4 SEC. M-6.4(c) 6"	I-1 6" PIPE CLASS I-3 d=18"	I-1 6" PIPE CLASS I-3 d=30"	I-8 STD. #2A C.B.	I-8 STD. #6 C.B.	I-10 DUMPED ROCK CHANNEL PROTECT	I-10 RIP-RAP REINF.	I-16 L-120 M.H. & H.A.D.	I-16 L-120 JUTE MATTING	SPECIAL DRAIN CONN. #6 AGGR.	
				EA.	EA.	EA.	C.Y.	L.F.	L.F.	L.F.	C.Y.	C.Y.	C.Y.	S.Y.	EA.	S.Y.	C.Y.	
1-D	105+65	—	Lt.														45.6	
2-D	105+00	108+82	Lt.						382	10							15.0	
3-D	14+07 Rdwy	117+47	Rt. & Lt.							10				7				
4-D	105+20	108+00	Rt.							10								
5-D	108+82	108+95	Lt.				0.23		313			1	7			125		37.3
6-D	108+00	111+13	Rt.							55								24.1
7-D	113+00	—	℄ & Lt.															26.2
8-D	111+37	112+87	℄									1						
9-D	121+50	111+13	Rt.							20								
10-D	177+70	Ramp K-L	14+20 Rt.							10								
11-D	111+15	115+00	Rt.															
	TOTAL			1	2	2	0.46	162	695	84	2	1	7	1	1	125	148.2	

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. SUB-GRADE S.Y.	E-8 REMOVAL & DISPOSAL OF EXISTING PAV'T. (RIGID) S.Y.	I-15 GUARD STEEL BEAM STD. TYPE (DEEP) L.F.	
1-R	105+00	113+63	Lt. & Rt.		3,690		
2-R	114+30	—	Lt.		260		
3-R	109+52	—	Rt.			25.0	
4-R	113+56	—	Lt.			25.0	
5-R	114+43	—	Lt.			25.0	
6-R	114+14	—	Rt.			25.0	
7-R	16+03 Ramp F		Rt.	64			
8-R	114+17	—	Rt.	64			
9-R	13+10 Ramp K-L		Rt.			37.5	
	TOTAL			128	3,950	137.5	

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE	I-12 CONC. CURB TYPE 2-A	T-30 BIT. PRIME COAT	T-35 ASPH. CONC. COURSE TYPE C	I-21 PORTLAND CEMENT CONC. MEDIAN
				C.Y.	L.F.	GAL.	C.Y.	S.Y.
1-P	16+03	Ramp F	Rt.	15		26	4	
2-P	114+17	—	Rt.	15		26	4	
3-P	105+00	109+00	Lt. & Rt.		478			38
4-P	108+25	109+00	Lt.					38
	TOTAL			30	478	52	8	38

(W) WATER

REF. NO.	STATION FROM	STATION TO	SIDE	I-124 WATER MAIN LOWERED 1¼" CI.	
				L.F.	
1-W	109+55	—	Rt. & Lt.	350	

EXCAVATION	= 38 C.Y.
EMBANKMENT	= 6,067 C.Y.
EMBANKMENT + 6 %	= 6,431 C.Y.

RAMP F
STA. 12+50 TO STA. 15+50

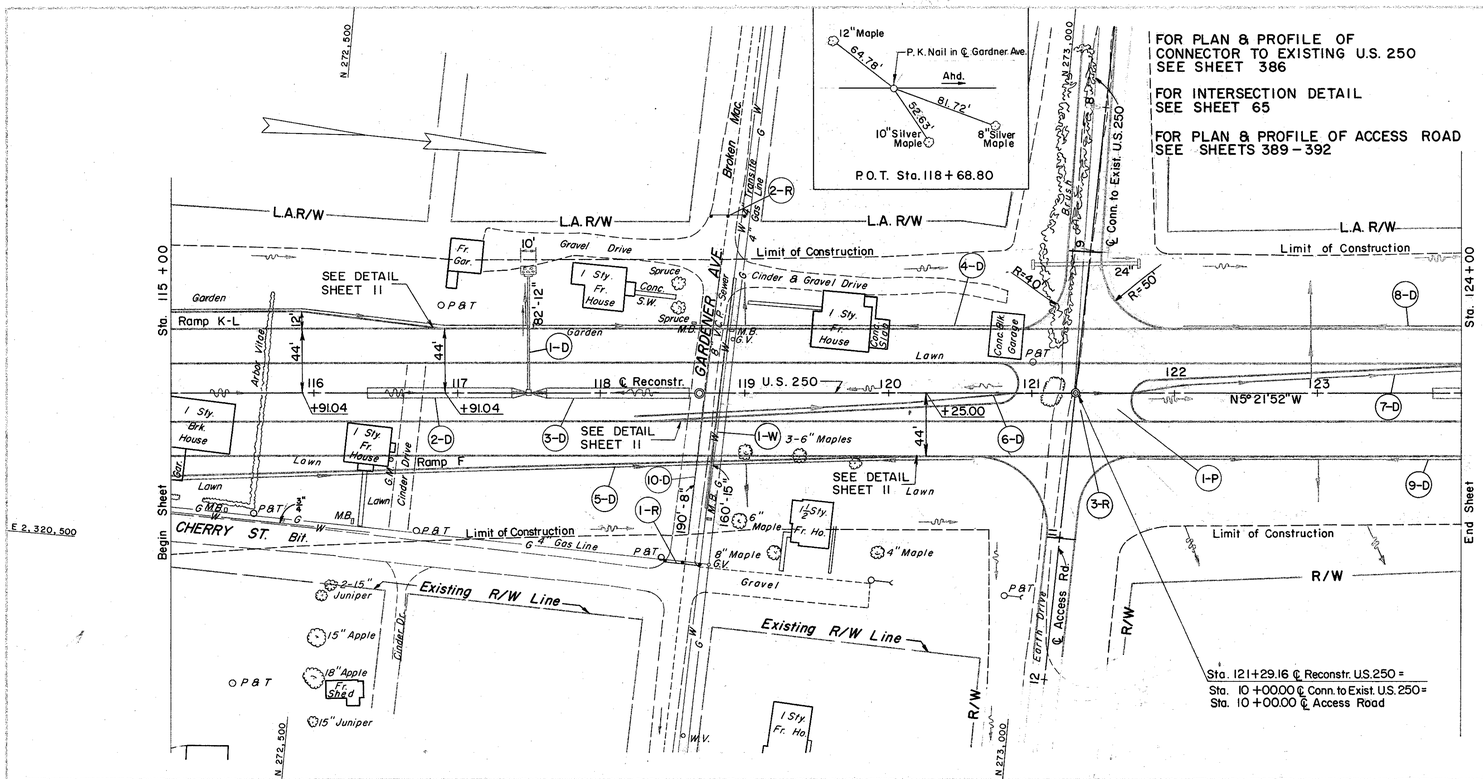
EXCAVATION	2,825 C.Y.
EMBANKMENT	26,369 C.Y.
EMBANKMENT + 6	27,951 C.Y.

RECONSTR. U.S. 250
STA. 105+00 TO STA. 115+00

DIST. OR DIVISION	STATE	PROJECT		
2	OHIO			

314
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

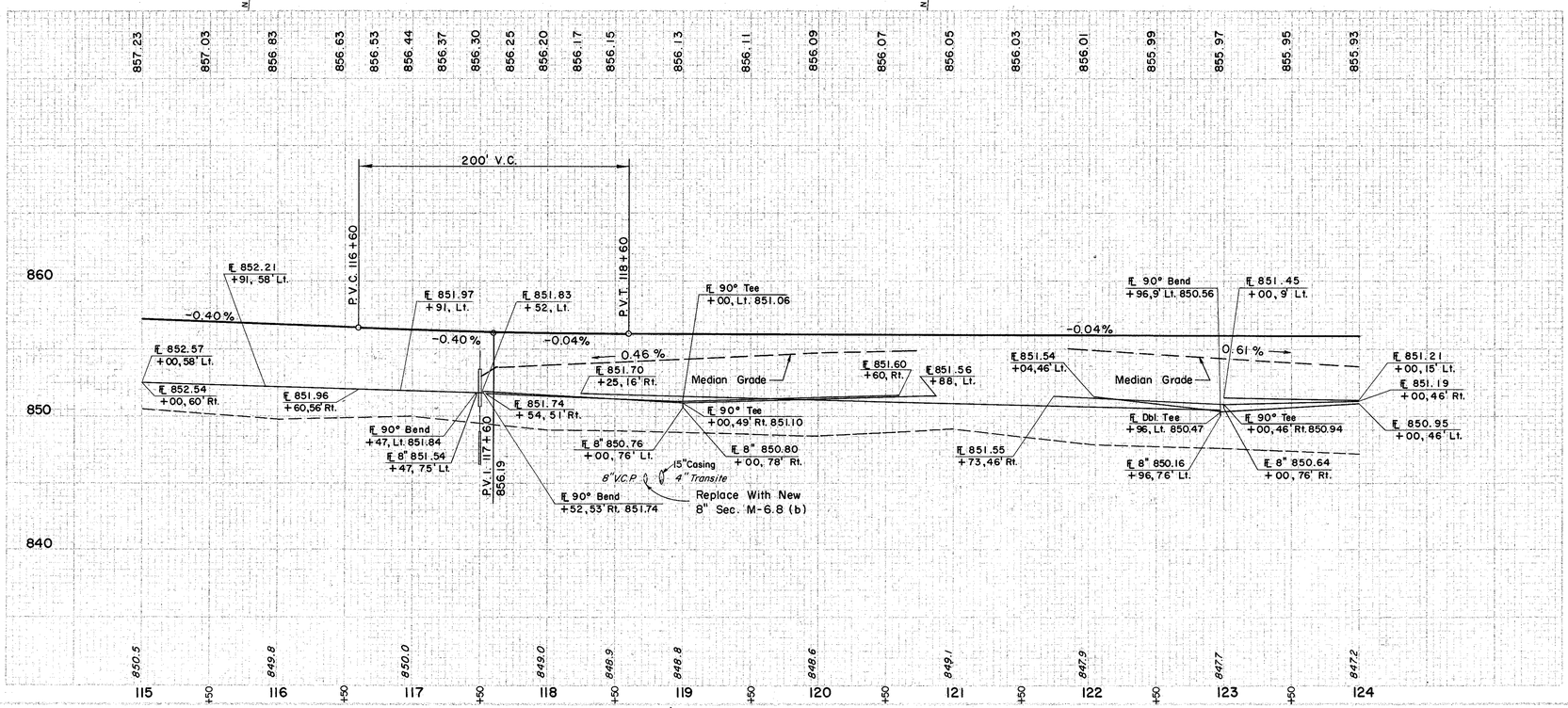


RECONSTR. U.S. 250 SUPERELEVATION TABLE

CURVE TO LEFT — SUPER 0.034 FT./FT.

STATION	44' LEFT	32' LEFT	20' LEFT & RIGHT (PROFILE GRADE)	32' RIGHT	44' RIGHT
122+93.02	855.98	856.17	855.98	856.17	855.98
123+00	855.95	856.14	855.97	856.16	855.99
+25	855.88	856.07	855.96	856.15	856.04
+50	855.81	856.00	855.95	856.14	856.09
+68.02	855.76	855.95	855.95	856.14	856.14
+75	855.72	855.91	855.94	856.13	856.16
124+00	855.58	855.77	855.93	856.12	856.28
+05.52	855.55	855.74	855.93	856.12	856.31
+25	855.45	855.68	855.92	856.16	856.39
+50	855.31	855.61	855.91	856.21	856.51
+75	855.18	855.54	855.90	856.26	856.62
+93.72	855.08	855.49	855.90	856.31	856.72
125+00	855.07	855.48	855.89	856.30	856.71

Full Super — Transition



(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE C.Y.	B-21 WATER-PROOFED AGGR. BASE COURSE C.Y.	I-22 SUBBASE SUBBASE C.Y.	I-22 SUBBASE GRADING A OR B C.Y.	T-31 BIT. MAT'L. #6 AGGR. GAL.	T-31 BIT. MAT'L. #6 AGGR. C.Y.	T-71 REINF. PORT. CEM. CONC. PAVT. 9" S.Y.
1-P	121+29.16	—	Lt&Rt.	37	19	37	119	55	2	745

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. SUB-GRADE S.Y.	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP) L.F.
1-R	118+50	—	Rt.		25.0
2-R	118+90	—	Lt.		25.0
3-R	121+29.16	—	Lt&Rt.	962	50.0
			TOTAL	962	50.0

(W) WATER

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 15" ENCASEMENT PIPE CL. C-1 L.F.
1-W	118+83	—	℄	160

(D) DRAINAGE

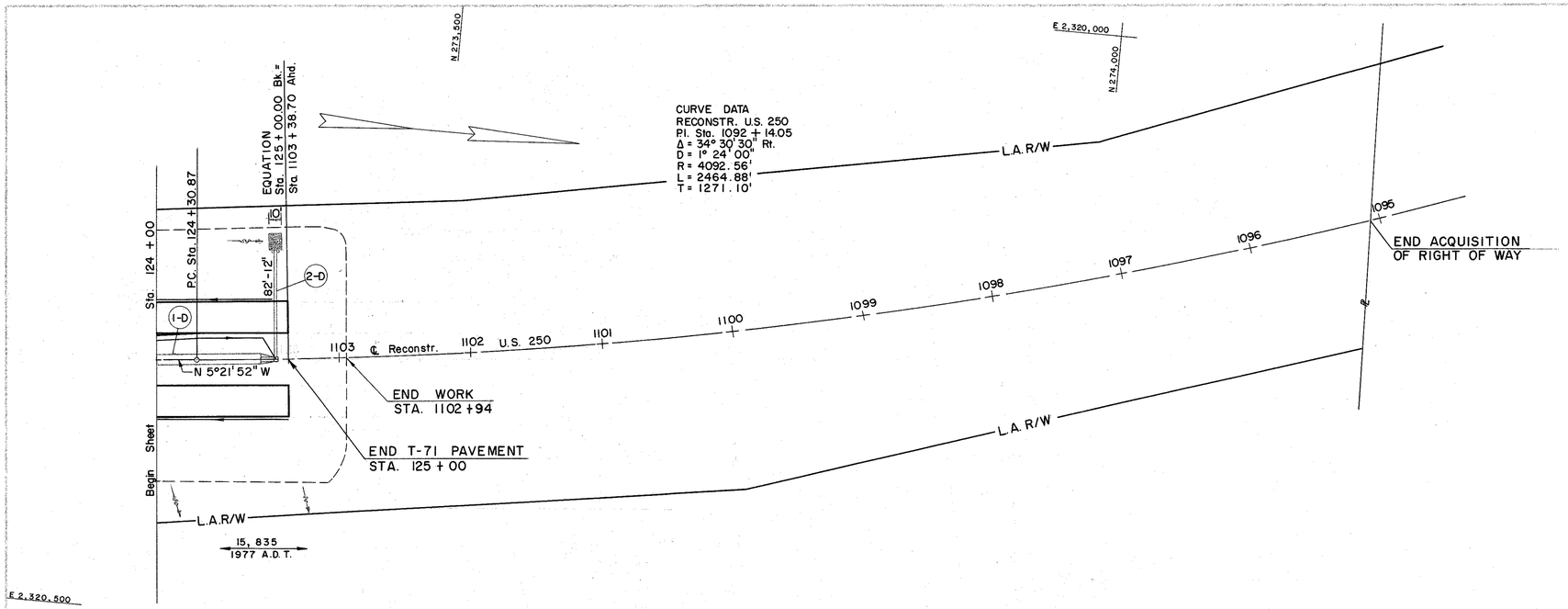
REF. NO.	STATION FROM	STATION TO	SIDE	I-1 PIPE CLASS F-4 SEC. M-6.8 6" 8"	I-1 6" PIPE CLASS J-1 SEC. CLASS I-3 d=30" M-6.8 6" 12" L.F.	I-2 MASONRY 6" CLASS I-3 60° BEND	I-2 MASONRY 6" CLASS I-3 TEE C.Y.	I-5 6" CLASS J-1 90° DOUBLE BEND	I-5 6" CLASS J-1 TEE EA.	I-8 STD. #22A C.B.	I-10 DUMPED ROCK CHANNEL PROTECT. C.Y.	I-120 JUTE MATTING S.Y.	SPECIAL DRAIN CONN. #6 AGGR. C.Y.	SPECIAL 8" PIPE CLASS J-1 SEC. M-6.8(b) L.F.
1-D	117+50	—	℄&Lt.				0.23							
2-D	116+37	117+37	℄								4	83		190
3-D	117+63	118+63	℄									83		190
4-D	117+52	120+88	Lt.		10	356							18.0	
5-D	115+00	120+60	Rt.		10	580							38.3	
6-D	118+25	122+96	Rt&Lt.			472	36		1					
7-D	123+00	124+90	Lt.	10		190			1				15.0	
8-D	122+04	124+88	Lt.		10	304			1				17.5	
9-D	121+73	125+00	Rt&Lt.		10	347			1		4	166		190
10-D	118+73	—	℄	10	40	2,249	36	82	0.23	1	3	1	888	
		TOTAL		10	40	2,249	36	82	0.23	1	3	1	888	190

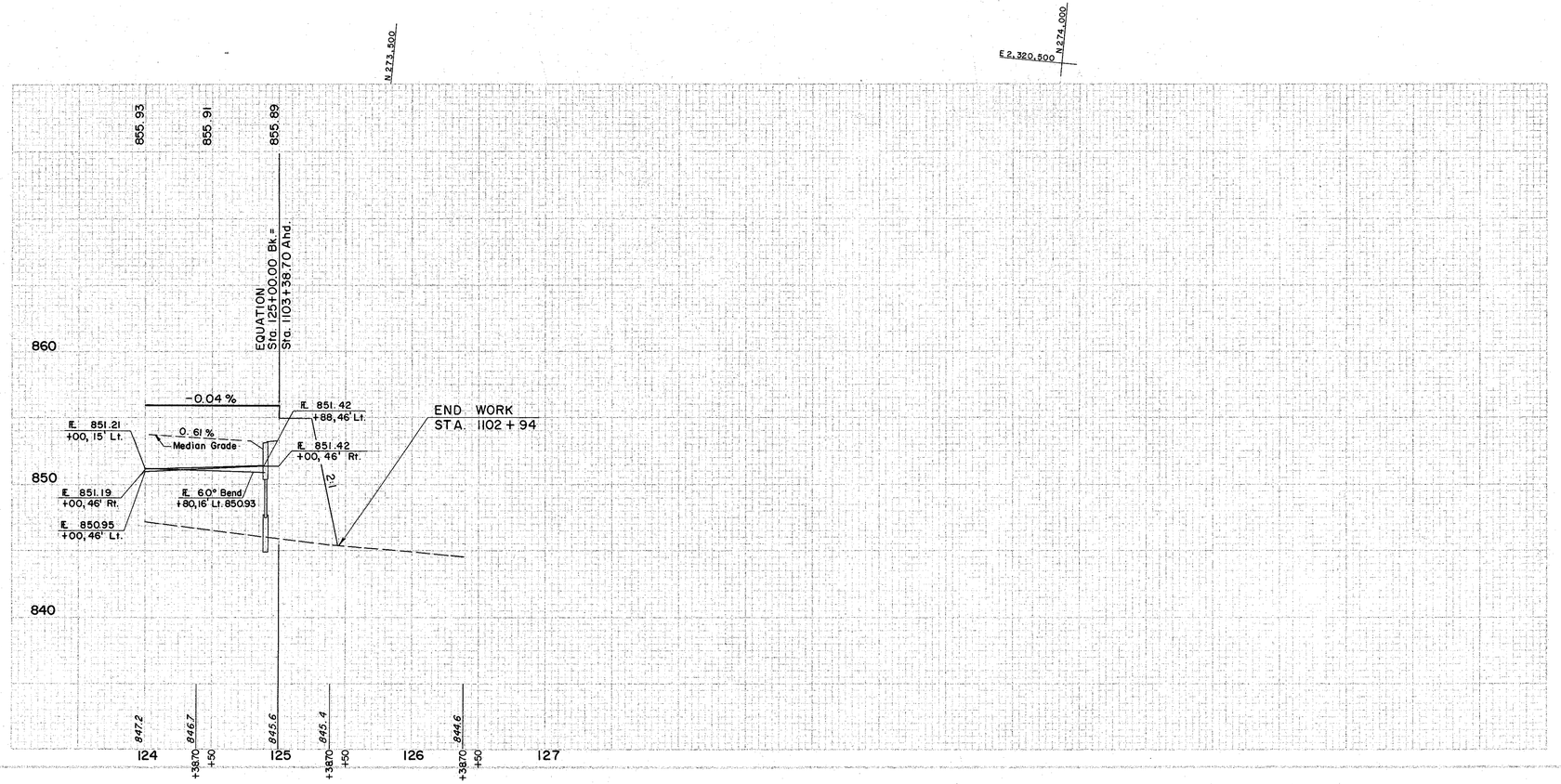
EXCAVATION	266 C.Y.
EMBANKMENT	29,818 C.Y.
ENGINEER'S ESTIMATE 6	31,607 C.Y.

RECONSTR. U.S. 250
STA. 115 + 00 TO STA. 124 + 00

FED. RD. DIVISION	STATE	PROJECT		315
2	OHIO			662

TUSCARAWAS COUNTY
TUS – 36 – 15.93





(D) DRAINAGE

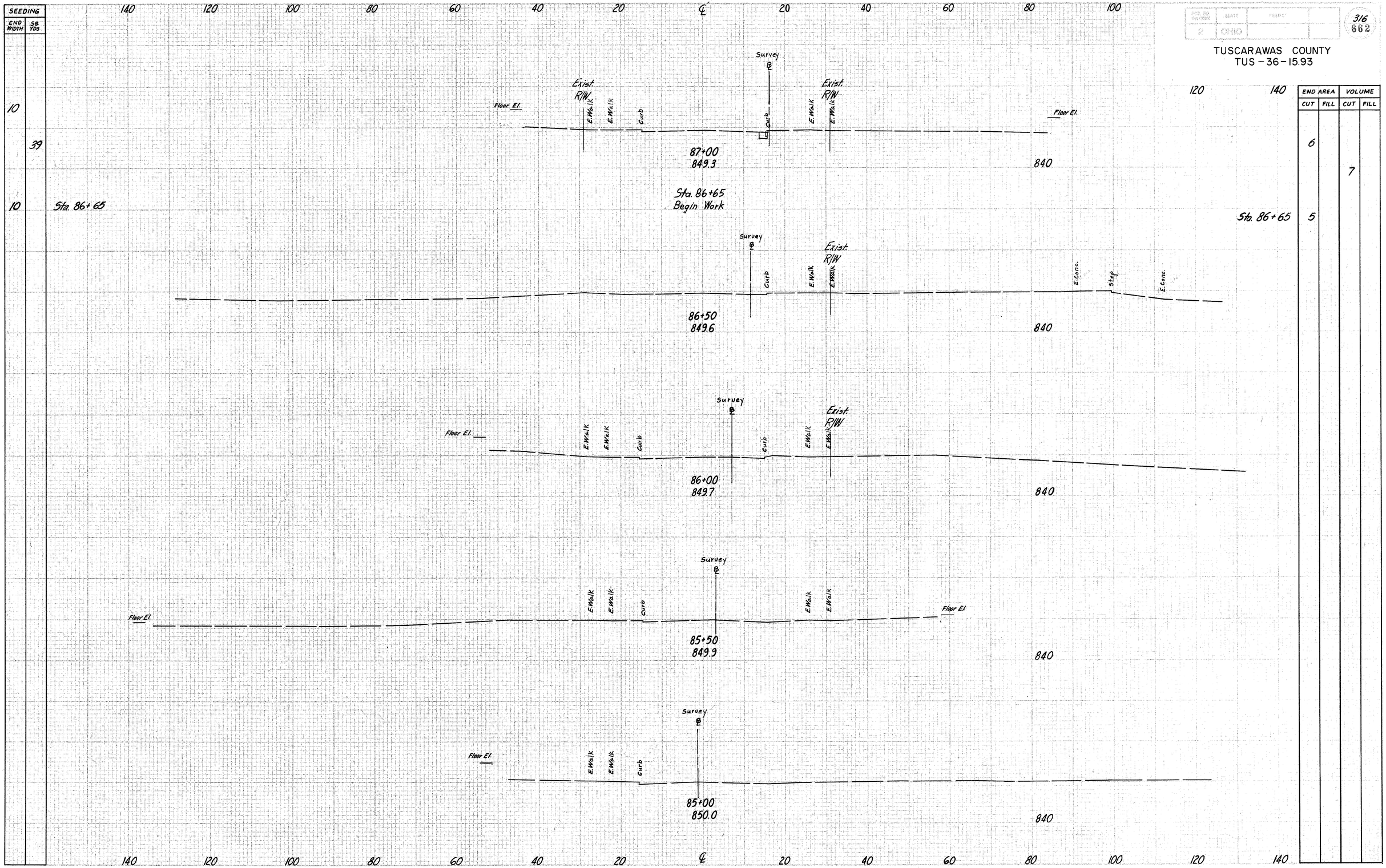
REF. NO.	STATION FROM	STATION TO	SIDE	I-1 12" PIPE CLASS J-I L.F.	I-2 MASONRY C.Y.	I-8 STD #2-2A C.B. EA.	I-10 DUMPED ROCK CHANNEL PROTECT. C.Y.	L-120 JUTE MATTING S.Y.
1-D	123+77	124+77	℄					83
2-D	124+90	–	℄ & Lt	82	0.23	1	8	
	TOTAL			82	0.23	1	8	83

EXCAVATION	=	24 C.Y.
EMBANKMENT	=	5,473 C.Y.
EMBANKMENT - 6 %	=	5,801 C.Y.

RECONSTR. U.S. 250
STA. 124 + 00 TO STA. 1095 + 00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TUSCARAWAS COUNTY
TUS-36-15.93



Reconstr. U.S. 250 Sta. 85+00 to 87+00

STA. NO. INCREASE	STATE	PROJECT	
2	OHIO		

3/17
662

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING	
END WIDTH	SQ. YDS
18	
	81
11	
	44
5	
	36
8	
	50
10	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
38			
		58	
Ahd. 25			
	—	—	
Bk. 22			
		23	
19			
		15	
Ahd. 22			
	—	—	
Bk. 35			
		44	
12			
		17	
6			

Sta. 87+00

Exist. R/W — E.Walk — E.Walk — Curb — Curb — E.Walk — Survey ℄ — R/W — Floor El. — E.Walk — E.Walk

120 — 140

6" Transite — Exist. 12" — 89+00, 848.6 — 16'-12" @ 0.30%

Sta. 89+00, 20' Rt.
Std. 3 C.B.
Grate El. 848.12
IE 12" 845.36 - Connect to existing
IE 6" 845.38 12" @ 4' Rt. IE 845.31

840

Area Reconstr. U.S. 250 Ahd.
Area Reconstr. U.S. 250 Bk. — Survey ℄

E.Gar. — E.Drive — E.Conc. — E.Walk — Curb — E.Walk — E.Walk

C-2.2 — C-3

88+50, 848.9

840

Survey ℄

E.Walk — E.Walk — Curb — End Work, Sta. 0+43 — +3.0% — 12th Street

6" Transite — 88+20, 848.9

840

Area Reconstr. U.S. 250 Bk.
Survey ℄
Area Reconstr. U.S. 250 Ahd. — 12th Street

Floor El. — E.Walk — E.Walk — Curb — Curb — E.Walk — E.Walk — E.Walk

C-2.2 — C-3

88+00, 848.8

840

Exist. 12" — 8'-12" @ 0.57%

Sta. 87+92, 19' Rt.
Std. 3 C.B.
Grate El. 848.47
IE 12" 845.18 - Connect to existing
IE 6" 845.51 12" @ 10' Rt. IE 845.13

Reconstr. 12th Street
Limit of Work Sta. 0+43

R/W — 0+43 — 840 — Area — Area — 0+22 — 840 — 20 — ℄ — 20

END AREA	VOLUME
51	60
104	

Floor El.

Exist. R/W — E.Walk — E.Walk — Curb — Survey ℄ — Curb — E.Walk — E.Walk — Exist. R/W

87+50, 849.3

840

Sta. 87+00

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

Reconstr. U.S. 250 Sta. 87+50 to 89+00

TUSCARAWAS COUNTY
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318
662

SEEDING		END AREA		VOLUME	
END WIDTH	SQ YDS	CUT	FILL	CUT	FILL
63	319	11	90	20	157
52	233	11	80	44	81
32	158	36	7	83	12
25	133	54	6	106	6
23	114	61	0	92	
18		38			

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

Survey ℄

Exist. R/W — E.Walk — E.Walk — Curb — C-2 — Curb — E.Walk — E.Walk — F-5 — C-7 — F-85 — R/W

Aban'd. 15" Pipe

IE 839.98

70'-30" @ 1.00%

E. Creek

Existing 30" (out of scale) Plug

Type 6 Lowered 6" W.M.

Existing M.H. Sta. 91+53
IE 30" 840.71
IE 30" 840.71 (Exist.)

G-850.17
91+50
850.7

840

Survey ℄

E.Walk — E.Walk — Curb — C-2 — Curb — F-4 — E.Walk — E.Walk — C-9 — F-76 — 4:1

E. Creek

Lowered 6" W.M.

G-849.71
91+00
850.3

840

Survey ℄

E.Walk — E.Walk — Curb — C-2 — Curb — F-4 — E.Walk — E.Walk — C-34 — F-3 — Floor El. — E.Walk — E.Walk

E. Creek

12" ○ — 30" ○ C.B.

Sta. 90+74, 8' Lt.
Std. 3 C.B.
Grate El. 849.32
IE 12" 845.51
IE 12" (Exist.) 845.51
IE 6" 846.01

G-849.28
90+50
849.8

56'-12" @ 0.70%
To Std. 3 C.B.
Sta. 90+20, 7' Rt.

840

Survey ℄

E.Walk — E.Walk — Curb — C-2 — Curb — E.Walk — E.Walk — E.Walk — E.Walk — C-52 — G:1

56'-12" @ 0.70%
To Std. 3 C.B.
Sta. 90+74, 18' Lt.

G-849.84
90+00
848.7

Sta. 90+20, 7' Rt.
Std. 3 C.B.
Grate El. 848.85
IE 12" 845.90

840

Survey ℄

Exist. R/W — E.Walk — E.Walk — Curb — Curb — E.Walk — E.Walk — R/W Floor El.

○ Exist. 6" W.M.

89+50
848.7

840

Sta. 89+00 — Sta. 89+00

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

Reconstr. U.S. 250 Sta. 89+50 to 91+50

TUSCARAWAS COUNTY
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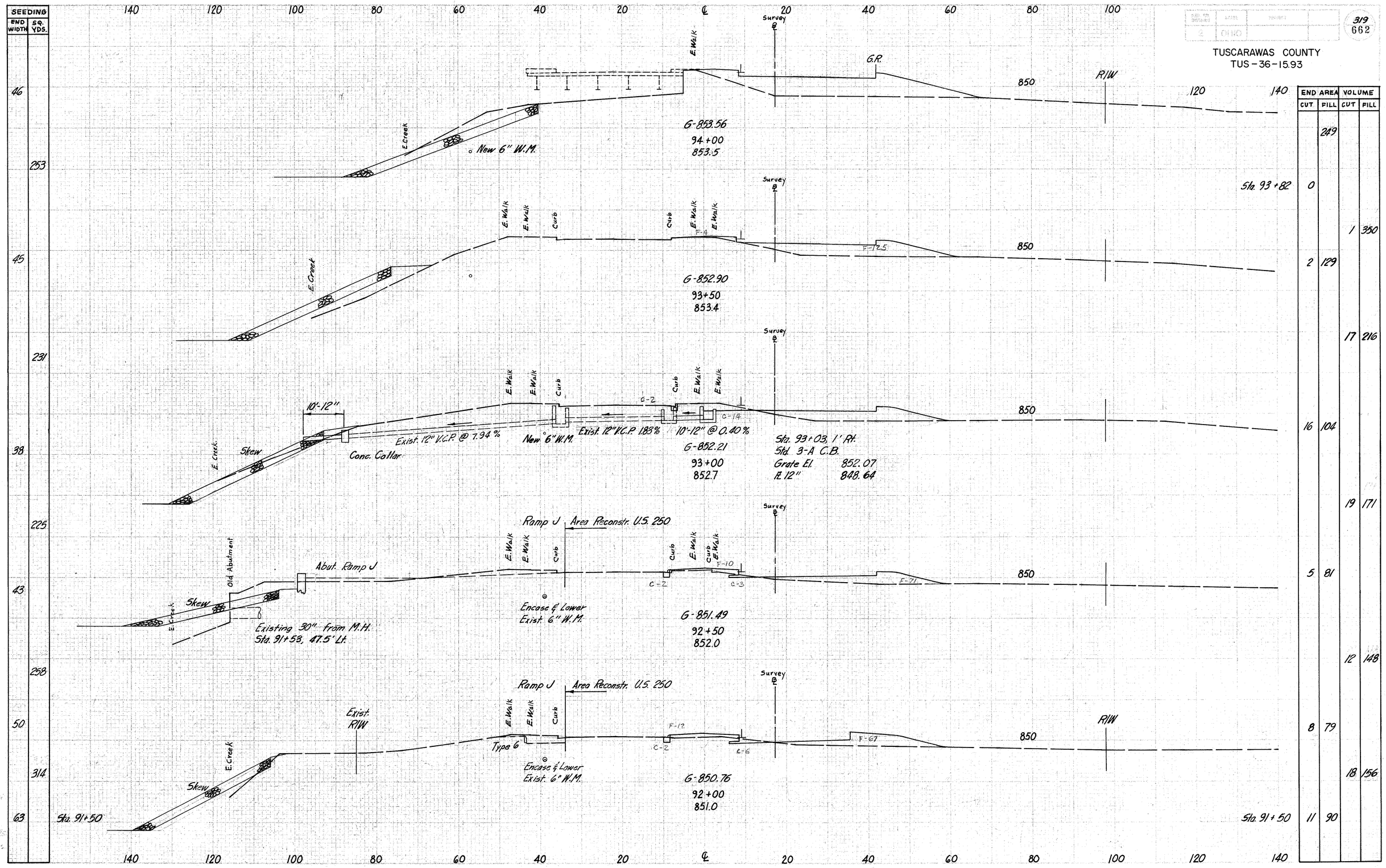

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	249		
0			
		1	350
2	129		
		17	216
16	104		
		19	171
5	81		
		12	148
8	79		
		18	156
11	90		

Reconstr. U.S. 250 Sta. 92+00 to 94+00

SEEDING	
END WIDTH	SQ. YDS.
0	
30	
17	
95	
46	

SHEET NO.	STATE	PROJECT	
2	OHIO		

320
662

TUSCARAWAS COUNTY
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END AREA		VOLUME	
CUT	FILL	CUT	FILL

FED. AID PROJECT	STATE	PROJECT	
0	OHIO		

321
662

TUSCARAWAS COUNTY
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SEEDING	
END WIDTH	SQ. YDS.
144	1611
146	567
24	27
0	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		260	
4	622		
11	622		
		50	2972
16	983		
96		174	
96		1839	
0		57	
0		34	

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

Sta. 98+38, 113' Lt.
Std. HW-E
IE 33" 841.63

214

847.4

98+38
840

Ditch Computation

Station	AREA	VOL.
98+53	160	
		104
98+38	214	
		156
98+00	7	

Reloc. U.S. 36 Area Reconstr. U.S. 250

G.R.

F-128

C-3

Curb E.R.

E.R. Curb

F-3

C-1

F-76

C-7

151
8438

New 6" W.M.

Southbound Lane
Sta. 98+25 to Sta. 98+75
f/f curb width transition
from 28' to 26'

G-857.78
98+00
858.5

Area Reconstr. U.S. 250 Ramp H

F-415

850

Ditch Computation

Abd.

Bk.

New 8" San.

Ramp H
Sta. 0+99, 28' Lt.
Std. 6 C.B.
Grate El. @ Curb 856.84
IE 12" 853.33
IE 6" 853.83

840

72'-12" @ 7.11%

Ramp H
Sta. 0+99, 44' Rt.
Std. HW-E
IE 12" 848.21

RIW

Ramp K Area Reconstr. U.S. 250

G.R.

F-540

E.R. Curb

E.R. Curb

Ramp H G.R.

60'-12" @ 7.75%

F-443

850

G-856.90
97+00
858.0

Sta. 96+65, 9' Rt.
Std. 2-6 Median Inlet
Depressed Gutter El. 856.39
IE 12" 852.65

New 8" San.

Sta. 96+57, 67' Rt.
Std. HW-E
IE 12" 848.0

Ramp K

GD. RAIL

E.Walk

Curb-E.Walk E.R.

E.R. Curb

E.W.

Wing Wall

12"

15"

½"/'

C.B.

C.B.

4-15" @ 1.50%

Sta. 96+40

Sta. 96+20

Sta. 96+11, 63' Lt.
Std. HW-E
IE 15" 847.20

96+16
856.9

850

R/W

New 8" San.

Compute seeding between Sta. 96+00 & 96+16
and add to Ramp K seeding total.

Ramp K

GD. RAIL

E.Walk

G.R.

Curb-E.Walk E.R.

Abutment

½"/'

New 6" W.M.

G-855.91
96+00
848.5

Sta. 96+08, 63' Rt.
Outfall of 8" San.
IE 8" 839.33

850

E.WATER

R/W

Sta. 95+99

Sta. 95+81

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

Reconstr. U.S. 250 Sta. 96+00 to 98+00

SEEDING	
END WIDTH	SQ. YDS.
49	
	210
49	
	338
50	
	441
119	Abd.
—	
163	Bk.
	904
144	Sta. 98+00

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

Sta. 101+00, 84' Lt. 3.2' Fill = 5.1' x 100' = 510 S.F.
Sta. 100+00, 84' Lt. 7.0' " = 7.25' x 38.5' = 279 "
Sta. 99+61.50, 84' Lt. 7.5' " = 3.7' x 61.5' = 228 "
Sta. 99+00, 84' Lt. 0 "

1,017 S.F. (End Area Sta. 314+84 Reloc. U.S. 36) Sheet 168

Sta. 101+00, 48' Rt. 5.6' Fill = 6.8' x 100' = 680 S.F.
Sta. 100+00, 48' Rt. 8.0' " = 7.1' x 38.5' = 273 "
Sta. 99+61.50, 48' Rt. 6.3' " = 3.1' x 61.5' = 191 "
Sta. 99+00, 48' Rt. 0 "

1,144 S.F. (End Area Sta. 316+15 Reloc. U.S. 36 Sheet 169

322
662

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Ramp K
U.S.36 over
Reloc. U.S.36
Area. Reconstr. U.S. 250
E. Drive
E. Drive
New 6" W.M.
Ditch
845.20
F-179
C-2
E.R.
C-2
E.R.
F-250
Area Reconstr. U.S. 250
Reloc. U.S. 36
850
G-859.17
100+00
858.4
New 8" San. Sewer
5 Pier - U.S. 36 - over
Ditch
845.06
F-174
C-2
E.R.
C-2
E.R.
F-3
F-240
850
G-858.94
99+61.50
858.5
Ditch
F-10
F-7
C-28
C-2
C-2
F-16
E.R.
C-17
F-7
New 6" W.M.
844.84
850
G-858.53
99+00
858.2
Reloc. U.S. 36
Area Reconstr. U.S. 250
Ramp K
Type 6
F-1
C-160
C-34
F-3
Type 2 Mod.
C-2
Type 2 Mod.
E.R.
Curb
C-2
F-3
C-2
6" W.M 12" Casing
844.67
G-858.19
98+53
858.9
Area Reconstr. U.S. 250 Bk.
Area Reconstr. U.S. 250 Ahd.
F-410
850
F-157
E. Dr.
E. Dr.
New 8" San. Sewer

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	4	429	
		6	603
	4	417	
		60	520
	49	40	
		77	403
Ahd.	40	423	
—	—	—	—
Bk.	40	580	
		43	1180
Sta. 98+00	4	622	

Reconstr. U.S. 250 Sta. 98+53 to 100+00

SEEDING	
END WIDTH	SQ. YDS.
113	
	293
138	
	325
141	
	2150
246	Ahd.
141	Bk.
	1694
164	Ahd.
88	Bk.
	761
49	Sta. 100+00

FED. ROAD DESIGNATION	STATE	PROJECT	
2	OHIO		

323
662

TUSCARAWAS COUNTY
TUS-36-15.93

Sta. 103+42
R/W 168'
G.R.
Ramp L
Ramp L
F-8
E.R.
E.R.
F-17
Skewed Slope 3
F-404
C-40
Ditch
F-327
F-289
C-16
850.1
846.95
850
G-860.42
103+21
859.9
Area Sta. 103+21
Area Sta 103+42
Ramp G
Ramp G
Sta. 103+42

R/W 184'
Area Reconstr. U.S. 250
Ramp G
G.R.
Ramp L
Ramp K
F-6
E.R.
E.R.
Skewed slope 2
Skewed S Slope
F-536
C-1
C-36
F-860
Ditch
850
Area Reconstr. U.S. 250 Ahd.
846.87
G-860.37
103+00
859.6
Ramp G
Sta. 1+73, 30' Lt.
Std. 6 C.B.
Grate El @ Curb 860.16
IE 12" 855.89
Ramp G
Sta. 1+73, 44' Rt.
Std. HW-E
IE 12" 849.03
Area Reconstr. U.S. 250 Bk.
850
F-13
F-25
F-51
C-1
C-4
A
A
140
160
180
200
220
240
260
860
72'-12" @ 9.53%
Ramp L
Ramp K
F-10
E.R.
E.R.
C-40
F-267
F-586
Ditch
850
Sta. 101+50, Lt.
Begin New T-71 Pavement
G-860.09
102+00
858.9
846.47
6" W.M.
New 8" San. Sewer
Reloc. U.S. 36
Ramp K
E.R.
E.R.
New 6" W.M.
IE 854.99
24'-12" @ 33.33%
Ditch
C-2
C-2
30'-12" @ 1.07%
14'-12" @ 0.25%
43'-12" @ 1.07%
5'-12" @ 1.00%
F-357
F-360
F-691
850
Sta. 101+10, 112' Lt.
Std. 2-3 C.B.
Grate El. 852.50
Window El. 851.67
IE 12" 847.36
IE 30" 845.86
IE 33" 845.61
IE 847.41
Sta. 101+10, 9' Lt.
Std. 2-6 Median Inlet
Depressed Gutter El. 859.56
IE 12" 855.82
Sta. 101+10.37' Lt.
Std. 2-6 Median Inlet
Depressed Gutter El. 859.56
IE 12" 855.50
IE 6" 856.00
G-859.69
101+00
858.6
Sta. 101+10, 9' Rt.
Std. 2-6 Median Inlet
Depressed Gutter El. 859.56
IE 12" 855.86
Area Reconstr. U.S. 250 Bk.
Area Reconstr. U.S 250 Ahd.
4:1
New 8" San. Sewer
Sta. 101+50, 63' Rt.
Std. 2 M.H. (San.)
IE 8" 841.51
New 8" San. Sewer
Sta. 100+00
140
120
100
80
60
40
20
℄
20
40
60
80
100
120
140

END AREA		VOLUME	
CUT	FILL	CUT	FILL
56	756		
		44	700
56	1045		
		36	952
37	1402		
		152	4359
11hd.	45	952	
Bk.	40	863	
		81	4206
Ahd.	4	1408	
Bk.	4	717	
		15	2122
Sta. 100+00	4	429	

Reconstr. U.S. 250 Sta. 101+00 to 103+21

SEEDING	
END WIDTH	SQ. YDS.
97	
	1161
112	Ahd.
—	
68	Bk.
	661
51	
	817
96	Ahd.
—	
127	Bk.
	773
113	Sta. 103+42

STATE	PROJECT	324 662
OHIO		

TUSCARAWAS COUNTY
TUS-36-15.93

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	96		487
		326	1831
Ahd.	80		502
—	—		
Bk.	80		379
		263	1598
	62		484
		211	1891
Ahd.	52		537
—	—		
Bk.	52		621
		116	1479
Sta. 103+42	56		756

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

R/W
Ditch
F-19
G.R.
Ramp K-L
E.R.
E.R.
C-24
C-72
859.33
Reconstr. U.S. 250
Ramp F
860
F-468
G-860.34
107+00
858.3

Area Reconstr. U.S. 250 Ahd.
Area Reconstr. U.S. 250 Bk.
E. Drive
F-32
Ramp K-L
E.R.
F-4
E.R.
C-11
C-69
860.09
860
Ramp F
F-343
F-123
850
106+15
Sta. 106+15, 95' Lt.
Std. HW-E
IE 27" 848.14
G-860.53
106+00
860.0
Ramp F Spur
Sta. 2+46, 72' Lt.
Std. 2-2A C.B.

Ramps K&L
Edge Bldg
F-6
E.R.
E.R.
F-1
C-3
C-56
F-125
38'-12" @ 0.50%
78'-12" @ 6.23%
F-352
Ramp F Spur
860
847.68
Sta. 104+75, 35' Lt.
Std. 6 C.B.
Grate El. 860.27
IE 12" 857.06
G-860.60
105+00
860.6
Sta. 104+62, ℄
Std 6 C.B.
Grate El. 860.06
IE 12" 856.86
Sta. 104+41, 76' Rt.
Std. HW-E
IE 12" 852.00
860
104+76
Finished Grade
Sta. 103+65, 113' Lt.
Std HW-E
IE 12" 849.60
Sta. 103+65, 98' Lt.
Std. 1 M.H.
Cover El. 854.5
IE 12" 848.38
IE 27" 847.13
IE 30" 846.88

Area Reconstr. U.S. 250 Bk.
Area Reconstr. U.S. 250 Ahd.
Ramps K&L
Edge Bldg
R/W
G.R.
F-6
E.R.
E.R.
F-14
C-2
C-50
F-224
F-293
F-84
16'-12" @ 10.17%
Ramp G
860
Ramp G
Sta. 3+27, 79' Lt.
Std. 2-2A C.B.
G-860.56
104+00
860.5

Reconstr. U.S. 250 Sta. 104+00 to 107+00

SEEDING	
END WIDTH	SQ. YDS.
132	
	719
127	
	736
138	
	475
138	Sta. 108+69 Ahd.
77	Sta. 108+69 Bk.
	586
76	
	961
97	Sta. 107+00

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

FED. ROAD DIVISION	STATE	PROJECT
2	OHIO	

325
662

TUSCARAWAS COUNTY
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120 140

R/W 170'

Ramp K-L

Curb

℄-149

856.59

Ramp F

Type 8
860

Skewed S Slope

E. Water

E. Water

849.5

R/W to West of Exist. U.S. 250

G-859.23
110+00
855.6

℄ Exist. Davis Street

25'

E.P.

-4.0%

Profile Turnaround 95'± Rt. Ramp F
Sta. 16+09

Curb

Curb

℄-349

E.P.

E.P.

Type 7
860

856.92

G-859.43
109+50
860.0

851.7

R/W 156'

Sta. 108+82, 106' Lt.
Std. HW-E
IE 12" 849.99

E.P.

Curb

℄-139

Ditch

68'-12" @ 9.08%

19'

Conc. Cut-off Wall

Sta. 108+95, 38' Lt.
Std. 6 C.B.
Grate El. 859.45
IE 12" 856.19

857.37

G-859.63
109+00
853.8

Area Reconstr. U.S. 250 Sta. 108+69 Ahd.

Area Reconstr. U.S. 250 Sta. 108+69 Bk.

Type 7
860

F-488

F-276

E.S.W.

E.S.W.

C-4

849.8

R/W 156'

E.P.

Ramp K-L

E.P.

R/W

Ditch

4:1

4:1

858.52

G-860.03
108+00
854.3

Area Reconstr. U.S. 250 Ramp F

860

E. Water

E. Water

Skewed S Slope

END AREA		VOLUME	
CUT	FILL	CUT	FILL
161	599		
		496	701
375	158		
		480	854
149	764		
		164	877
Sta. 108+69 Ahd.			
143	764		
Sta. 108+69 Bk.			
139	498		
		305	1265
100	502		
		363	1831
Sta. 107+00			
96	487		

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

Reconstr. U.S. 250 Sta. 108+00 to 110+00

SEEDING	
END WIDTH	SQ. YDS.
153	1667
147	1533
129	731
134	739
132	

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

326
662

TUSCARAWAS COUNTY
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END AREA		VOLUME	
CUT	FILL	CUT	FILL
	28		1035
		87	3867
	19		1053
		80	3930
	24		1069
		64	1923
	45		1008
		191	1488
	161		599

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

Ramp K-L

Ramp F

R/W 128'

C-8

849.9

Sta. 113+00, 94' Lt.
Std. HW-E
IE 12" 850.04

94'-12" @ 2.64%

Sta. 113+00, ℄
Std. 2-2A C.B.
Grate El. 855.27
Window El. 854.77
IE 12" 852.52

G-858.03
113+00
850.6

850

C-21

848.7

R/W 131'

860

C-3

851.0

C-16

848.8

G-858.43
112+00
851.5

R/W to West of Exist. U.S. 250

E.R.

E.R.

R/W 133'

4:1

860

855.0

848.9

G-858.83
111+00
851.5

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

Sta. 110+75 Reconstr. & Shifts 10' Rt.

Curb

E.R.

C-31

Ramp K-L

Ramp F

Type 8

860

R/W 143'

3:1

5:1

856.7

856.27

Skewed Slopes

849.1

C-14

G-859.03
110+50
851.7

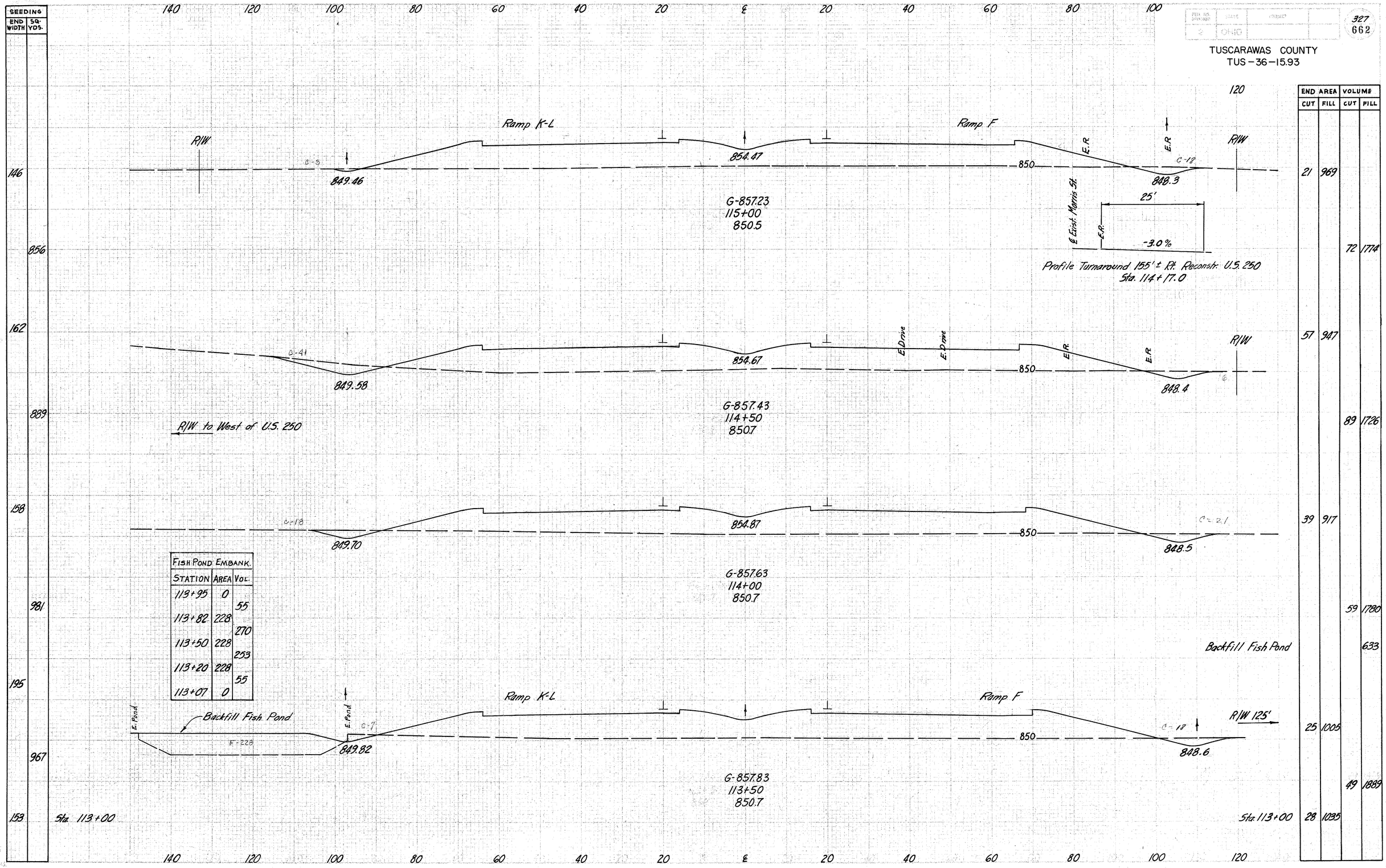
Sta. 110+00

Sta. 110+00

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

Reconstr. U.S. 250 Sta. 110+50 to 113+00

TUSCARAWAS COUNTY
TUS-36-15.93

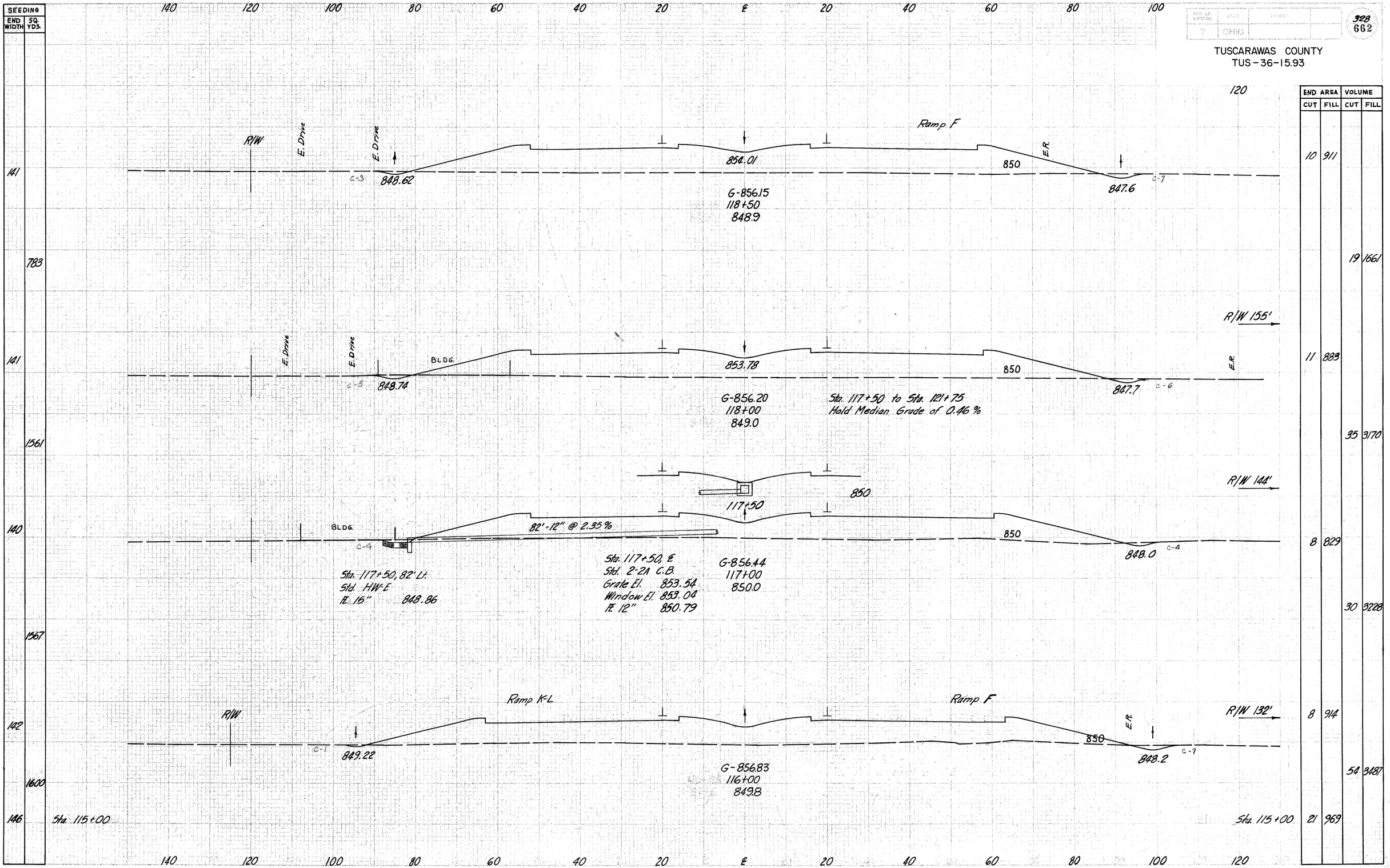


FISH POND EMBANK.		
STATION	AREA	VOL.
113+95	0	
		55
113+82	228	
		270
113+50	228	
		253
113+20	228	
		55
113+07	0	

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
21	969		
		72	1774
57	947		
		89	1726
39	917		
		59	1780
			633
25	1005		
		49	1889
28	1035		

Reconstr. U.S. 250 Sta. 113+50 to 115+00

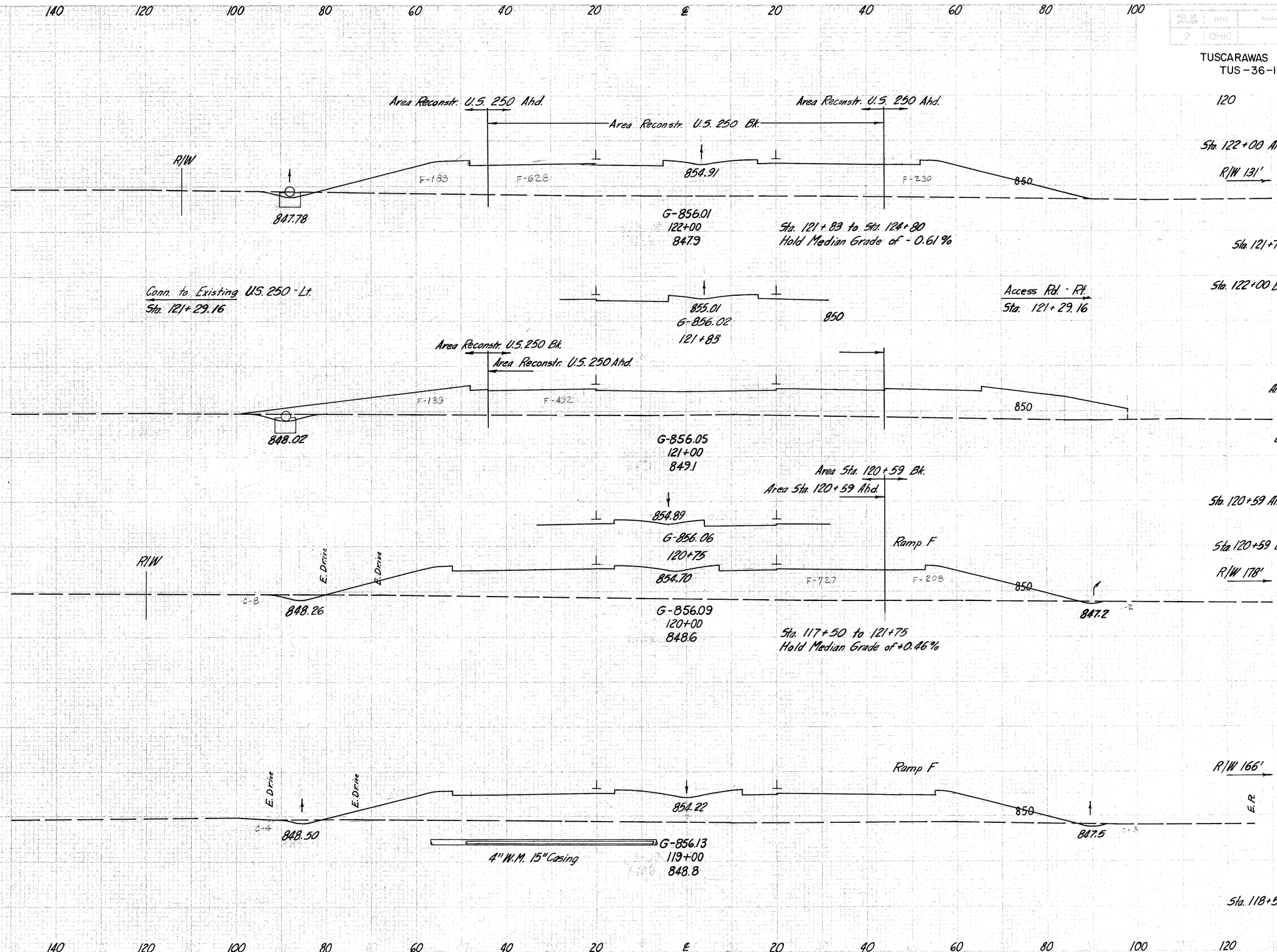
TUSCARAWAS COUNTY
TUS-36-15.93



Reconstr. U.S. 250 Sta. 116+00 to 118+50

TUSCARAWAS COUNTY
TUS-36-15.93

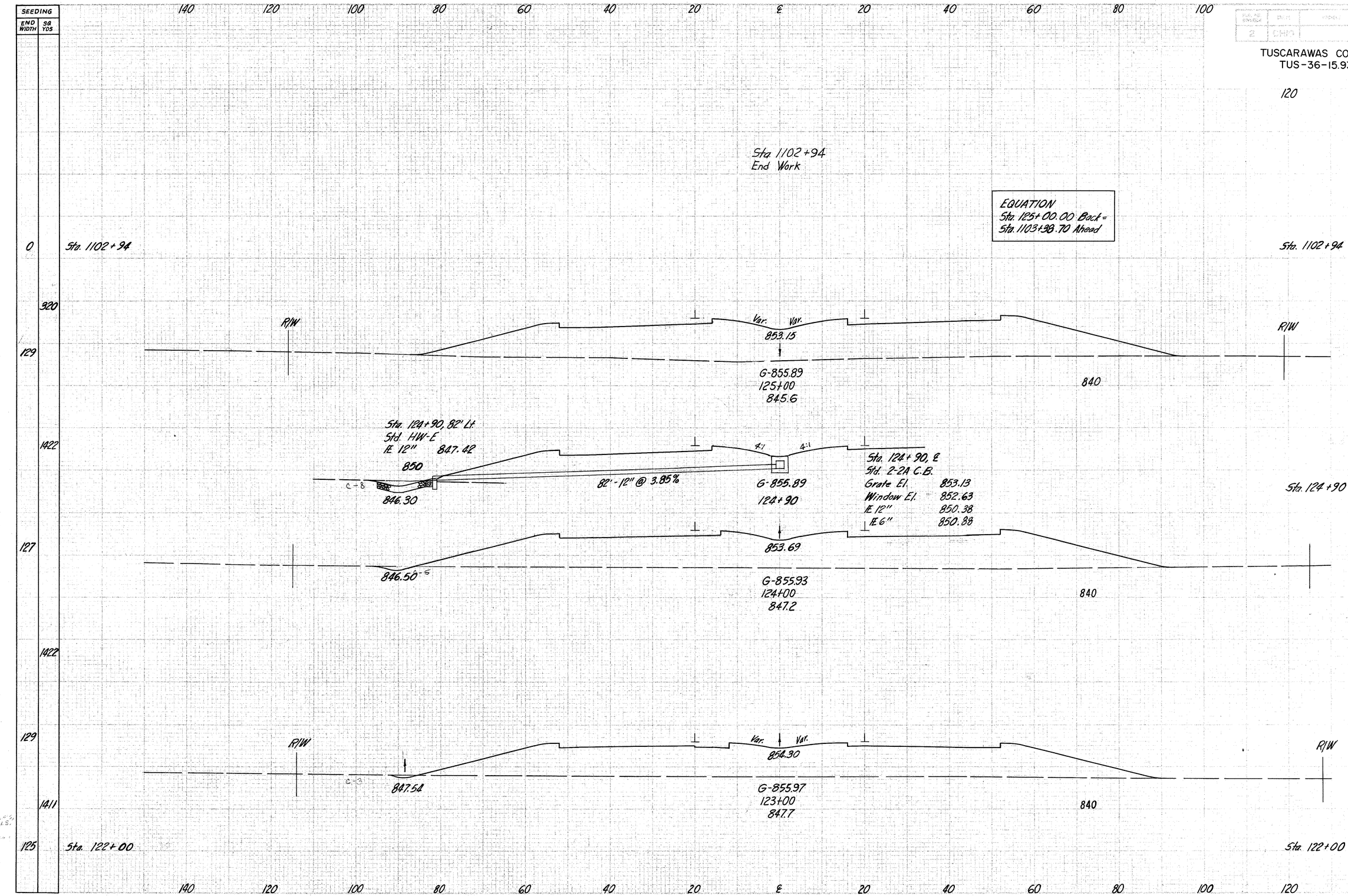
SEEDING END WIDTH	SEEDING SQ. YDS.
125	
	208
45	
	45
0	
—	—
52	
	127
62	
	292
137	
	898
137	
	1611
141	
	783
141	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
9	1041		
		8	—
9	—		
		—	—
—	628		
			2074
—	492		
		—	—
11	681		
		14	1069
8	727		
		—	—
10	935		
		22	2043
10	935		
		31	3404
7	903		
		16	1680
10	911		

Reconstr. U.S. 250 Sta. 119+00 to 122+00

TUSCARAWAS COUNTY
TUS-36-15.93



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	0		
			1034
0	1249		
		2	
			4439
8			
		22	
3	1148		
		6	4100
3	1066		
		22	3902
9	1041		

Reconstr. U.S. 250 Sta. 123+00 to 125+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

331
662

TUSCARAWAS COUNTY
TUS-36-15.93

FOR INTERSECTION DETAILS
SEE SHEETS 372 - 376

FOR PROFILES OF
RAMPS F & F SPUR SEE SHEET 333
RAMPS G & H SEE SHEET 334

FOR QUANTITIES SEE SHEET 332

FOR GEOMETRIC LAYOUT
SEE SHEET 382

EXCAVATION	=	594 C.Y.
EMBANKMENT	=	28,410 C.Y.
EMBANKMENT + 6 %	=	30,115 C.Y.

RAMP F
STA. 3+50 TO STA. 12+50

EXCAVATION	=	0 C.Y.
EMBANKMENT	=	5,485 C.Y.
EMBANKMENT + 6 %	=	5,814 C.Y.

RAMP F SPUR

EXCAVATION	=	22 C.Y.
EMBANKMENT	=	32,038 C.Y.
EMBANKMENT + 6 %	=	33,960 C.Y.

RAMP G

EXCAVATION	=	0 C.Y.
EMBANKMENT	=	17,189 C.Y.
EMBANKMENT + 6 %	=	18,220 C.Y.

RAMP H

G-1
RAMP G
CURVE DATA
P.I. Sta. 1+51.54
Δ = 41° 29' 50" Rt.
R = 400.00'
L = 289.71'
T = 151.54'

G-2
RAMP G
CURVE DATA
Δ = 184° 58' 26" Rt.
R = 165.00'
L = 532.69'

G-3
RAMP G
SPIRAL CURVE DATA
P.I. Sta. 9 + 10.58
Δ = 43° 24' 22" Rt.
L = 250.00'
LT = 171.97'
ST = 88.18'

F-S1
RAMP F SPUR
CURVE DATA
P.I. Sta. 3 + 77.99
Δ = 39° 27' 16" Rt.
R = 500.00'
L = 344.31'
T = 179.29'

RAMP F
CURVE DATA
P.I. Sta. 13 + 24.95
Δ = 34° 16' 25" Rt.
D = 8° 00' 00"
R = 716.20'
L = 428.42'
T = 220.84'

RAMP F
SPIRAL CURVE DATA
P.I. Sta. 10 + 54.17
Δ = 6° 00' 00" Rt.
L = 150.00'
L.T. = 100.06'
S.T. = 50.05'

RAMP F
SPIRAL CURVE DATA
P.I. Sta. 5 + 45.83
Δ = 6° 00' 00" Rt.
L = 150.00'
L.T. = 100.06'
S.T. = 50.05'

RAMP F
CURVE DATA
P.I. Sta. 3 + 85.21
Δ = 17° 50' 16" Rt.
D = 8° 00' 00"
R = 716.20'
L = 222.97'
T = 112.40'

RAMP F
CURVE DATA
P.I. Sta. 1 + 36.82
Δ = 10° 54' 44" Rt.
D = 4° 00' 00"
R = 1,432.40'
L = 272.81'
T = 136.82'

RAMP H
CURVE DATA
P.I. Sta. 1 + 29.45
Δ = 81° 35' 23" Rt.
R = 150.00'
L = 213.60'
T = 129.45'

RAMP H
CURVE DATA
P.I. Sta. 7 + 67.03
Δ = 11° 19' 29" Rt.
D = 4° 00' 00"
R = 1,432.40'
L = 283.12'
T = 142.02'

Section A-A
See Sheet 14
B.W. = 2.0'
S = 2:1
D = 0.5'

GRADING PLAN
SEE SHEET 380

FOR DETAILS ON BRIDGE
NO. TUS-36-1810
SEE SHEETS 543-568

FOR PROFILE OF
8" SANITARY SEWER
SEE SHEET 458

FOR PLAN & PROFILE
OF NEW 6" WATER LINE
SEE SHEET 455

U.S. 250 INTERCHANGE
PLAN-RAMPS F, F SPUR, G & H

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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662

TUSCARAWAS COUNTY
TUS-36-15.93

(D) DRAINAGE

SHEET	REF. NO.	STATION FROM	STATION TO	SIDE	I-1 15" PIPE CLASS E-1	I-1 PIPE CLASS F-4 SEC. M-64(c) 8"	I-1 PIPE CLASS F-4 SEC. M-64(c) 12"	I-1 22"x13" PIPE CL. G-1 SEC. M-64(j)(d)	I-1 6" PIPE CLASS I-3 d=30"	I-1 PIPE CLASS J-1 6"	I-1 PIPE CLASS J-1 12"	I-1 PIPE CLASS J-1 15"	I-1 PIPE CLASS J-1 18"	I-2 MASONRY	I-5 6" CLASS I-3 90° BEND	I-5 6" CLASS I-3 TEE	I-5 6" CLASS J-1 90° BEND	I-5 6" CLASS J-1 TEE	I-5 12"-25° CLASS F-4 BEND SEC. M-64(c)	I-8 STD. C.B. #2-2A	I-8 STD. C.B. #3-A	I-8 STD. C.B. #6	I-10 DUMPED ROCK CHANNEL PROTECT.	I-16 C.B. ABAND.	I-16 M.H. ABAND.	L-10 SODDING	SPECIAL DRAIN CONN. #6 AGGR.
					L.F.									C.Y.	EA.									C.Y.	EA.		S.Y.	C.Y.
331	1-D	2+57	Ramp F	Rt.			33				33			0.23					2			1					605
	2-D	2+46	Ramp F Spur	Rt.								162								1							
	3-D	1+73	Ramp G	Rt.							72			0.23						1	1						
	4-D	3+20	Ramp G	Rt.									122	0.30						1							
	5-D	0+99	Ramp H	Rt.							72			0.23							1						
	6-D	9+04	Ramp H	Rt.			34				26			0.23					2			1	4				
	7-D	4+50 Ramp F	5+00	Rt.																						31	
	8-D	7+80	Ramp H	Rt.																					1		
	9-D	0+00 Ramp F	2+55	Rt.					255																		17.7
	10-D	0+00 Ramp H	0+96	Rt.		10			109									1									6.5
	11-D	1+01 Ramp H	9+00	Rt.		20			825						1	1											54.5
	12-D	2+61 Ramp F	12+50	Rt.		10			994						1												67.0
	13-D	1+70 Ramp F Spur	4+75	Rt.		10			317							1											20.5
	14-D	1+75 Ramp G	10+39	Rt.		10			862							1											57.7
	20-D	0+50 Ramp G	1+70	Rt.		10			139						1												8.2
	31-D	319+00 U.S.36	321+55	Rt.																						170	
	32-D	319+00 U.S.36	320+35	Lt.																						102	
	33-D	100+75 U.S.250	101+75	Rt.																						44	
349	15-D	12+00 Ramp J	14+50	Rt.																						114	
	16-D	32+00 Ramp K	32+15	Lt.	22									0.26													
	17-D	17+70 Ramp L	29+70	Rt.&Lt.		10			1,212		22					1	2										82.0
	18-D	8+96 T.R. 278	9+25	Rt.&Lt.				92						0.41						1							
	19-D	10+00 T.R. 278	10+50	Lt.																						22	
	21-D	35+40 Ramp K		Rt.																					1		
	22-D	308+90 U.S.36	310+75	Rt.																						124	
	23-D	8+30 Ramp J	15+85	Rt.		10			762						1												51.0
	24-D	21+92 Ramp K	35+41	Lt.&Rt.		20			1,346		22					1	2	1									90.0
	25-D	20+00 Ramp K	21+86	Lt.&Rt.		10			201		22					1	2										12.5
	26-D	22+00 Ramp L	28+27	Lt.																						425	
	27-D	98+30 U.S.250	98+90	Lt.																						45	
	28-D	102+00 U.S.250	102+60	Lt.																						44	
		TOTAL			22	120	67	92	7,022	66	203	162	122	1.89	4	6	6	2	4	3	2	2	4	1	1	1,121	467.6

(P) PAVEMENT

SHEET	REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE	B-21 WATER-PROOFED AGGR. BASE COURSE	I-7 REINF. CONC. APPR. SLAB T=13"	I-12 CONCRETE CURB TYPE 2-A	I-12 6	I-12 7	I-12 8	I-21 PORT. CEM. CONC. MEDIAN	I-22 SUBBASE	I-22 SUBBASE GRADING A OR B	T-30 BIT. PRIME COAT	T-31 BIT. MAT'L.	T-31 #6 AGGR.	T-35 ASPH. CONC. SURF. COURSE TYPE A	T-35 C	T-71 REINF. PORT. CEM. CONC. PAV'T. 9"
					C.Y.		S.Y.	L.F.				S.Y.	C.Y.		GAL.	C.Y.				S.Y.
331	1-P	1+69.16 Ramp F	Spur 5+43.01		7	34			210			17	5	129		51	2			605
	2-P	Ramp G 0+00	U.S.36 307+00		55	198		678	148	148	109	18	83	624		296	10			3,066
	3-P	Ramp H 0+00	U.S.36 332+25		77	248			220	117	137	22	92	624		368	12			2,826
	4-P	U.S.36 333+42.78	U.S.250 120+25	(Ramp F)	140	466			206	116	132	34	201	1,079		698	23			5,337
349	5-P	8+80 T.R.278	13+28		132							17	106		362			38		
	6-P	Ramp L 17+70	U.S.36 296+00		104	288			213	61	130	17	148	624		431	14			2,909
	7-P	Ramp L BRIDGE					47													
	8-P	Ramp K 17+70	U.S.36 322+75		93	295			730	126	141		108	817		442	15			4,125
	9-P	Ramp J BRIDGE					67													
	10-P	Ramp J BRIDGE					68													
	11-P	U.S.250 116+91.04	Ramp K-L 17+70		32	125			370				67	418		188	6			2,075
	12-P	U.S.36 290+64.04	Ramp J 18+12		94	249			292			39	300	837		373	12			3,510
	13-P	T.R. 278	13+00	Lt.	10										27				4	
		TOTAL			744	1,903	182	678	2,389	568	649	147	1,110	5,152	389	2,847	94	38	4	24,453

(W) WATER

SHEET	REF. NO.	STATION FROM	STATION TO	SIDE	I-124 NEW WATER MAIN 6" A.C.	I-124 VALVES & BOXES 4"	I-124 VALVES & BOXES 6"	I-124 6" TAPPING SLEEVE VALVE & BOX	I-124 6" x 2" REDUCER WITH 1/8 BEND	I-124 6" BEND 1/16	I-124 6" BEND 1/8	I-124 6" BEND 1/4	I-124 FIRE HYDRANT REMOVED & RESET	T-1 12" CASING PIPE SEC. M-6.6(b)	I-124 6"x6"x4" TEE
					L.F.						EA.			L.F.	EA.
349	1-W	8+80 TR. 278	12+80	Lt.&Rt.	400		1		1	1	1	1			
	2-W	U.S.250 102+36	Roanoke Ave. 311+50		495			1			2			35	
	3-W	310+58	U.S. 36	Lt.		1							1		1
		TOTAL			895	1	1	1	1	1	3	1	1	35	1

(U) UTILITIES

SHEET	REF. NO.	STATION FROM	STATION TO	SIDE	I-1 8" PIPE CLASS A-1 SEC. M-6.6(g) CONC. ENC.	I-1 8" PIPE CLASS J-1 SEC. M-6.6(b)	I-8 STD. M.H. #1	I-8 STD. M.H. #2
					L.F.		EA.	
349	1-U	(TR 278) 10+79	Ramp L 22+85	Rt.		428	1	
	2-U	22+85 Ramp L	21+37	Rt.		143		1
	3-U	Ramp L 21+37	U.S.250 101+50	Rt.	315	10		1
		TOTAL			315	581	1	2

(R) ROADWAY

SHEET	REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. SUB-GRADE	E-8 REMOVAL & DISPOSAL OF EXIST. PAV'T (RIGID)	E-8 REMOVAL & DISPOSAL OF EXIST. SIDE-WALK	I-9 STONE UNDER-DRAINS NO. 2	I-15 GUARD RAIL REMOVED & DISPOSED OF	I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP)	
					S.Y.	S.Y.	S.F.		L.F.		
331	1-R	U.S.36 329+93	Ramp F 11+98	Lt.&Rt.						1,387.5	
	2-R	4+50 Ramp F	7+71	Lt.						325.0	
	3-R	Ramp G 5+55	U.S.36 316+62	Rt.&Lt.						537.5	
	4-R	5+82 Ramp G	8+24	Lt.						275.0	
	5-R	Ramp H 2+49	U.S.36 329+93	Rt.						1,225.0	
	6-R	0+01 Ramp H	1+32	Rt.						125.0	
	7-R	1+69.16 Ramp F Spur	5+43.01		806						
	8-R	Ramp G 0+00	U.S.36 307+00		4,248						
	9-R	Ramp H 0+00	U.S.36 332+25		4,298						
	10-R	U.S.36 333+42.78	U.S.250 120+25	(Ramp F)	8,072						
349	11-R	9+89 Ramp J	10+51	Lt.						62.5	
	12-R	13+00 Ramp J	15+87	Lt.						287.5	
	13-R	13+00 Ramp J	15+87	Rt.						287.5	
	14-R	17+52 Ramp J	17+77	Lt.						25.0	
	15-R	17+52 Ramp J	18+01	Rt.						62.5	R=47'
	16-R	Ramp K 24+52	U.S.36 314+12	Rt.						1,175.0	
	17-R	26+00 Ramp K	33+23	Lt.						800.0	
	18-R	Ramp K-L 15+44	Ramp L 29+52	Rt.						1,400.0	
	19-R	28+88 Ramp K	32+88	Rt.			718				
	20-R	28+67 Ramp K		Lt.					25		
	21-R	8+80 T.R. 278	13+28		904			140			
	22-R	Ramp L 17+70	U.S.36 296+00		4,679						
	23-R	Ramp K 17+70	U.S.36 322+75		5,892						
	24-R	U.S.36 290+64.04	Ramp J 18+12		5,277						
	25-R	29+02	Ramp K 32+73	Rt.		501					
	26-R	28+65 Ramp K	28+82	Lt.		140					
	27-R	U.S.250 116+91.04	Ramp K-L 17+70		2,825						
	28-R	12+15 T.R. 278	13+28	Rt.&Lt.		318					
	29-R	T.R. 278	13+00	Lt.	67						
		TOTAL			37,068	959	718	140	25	7,975.0	

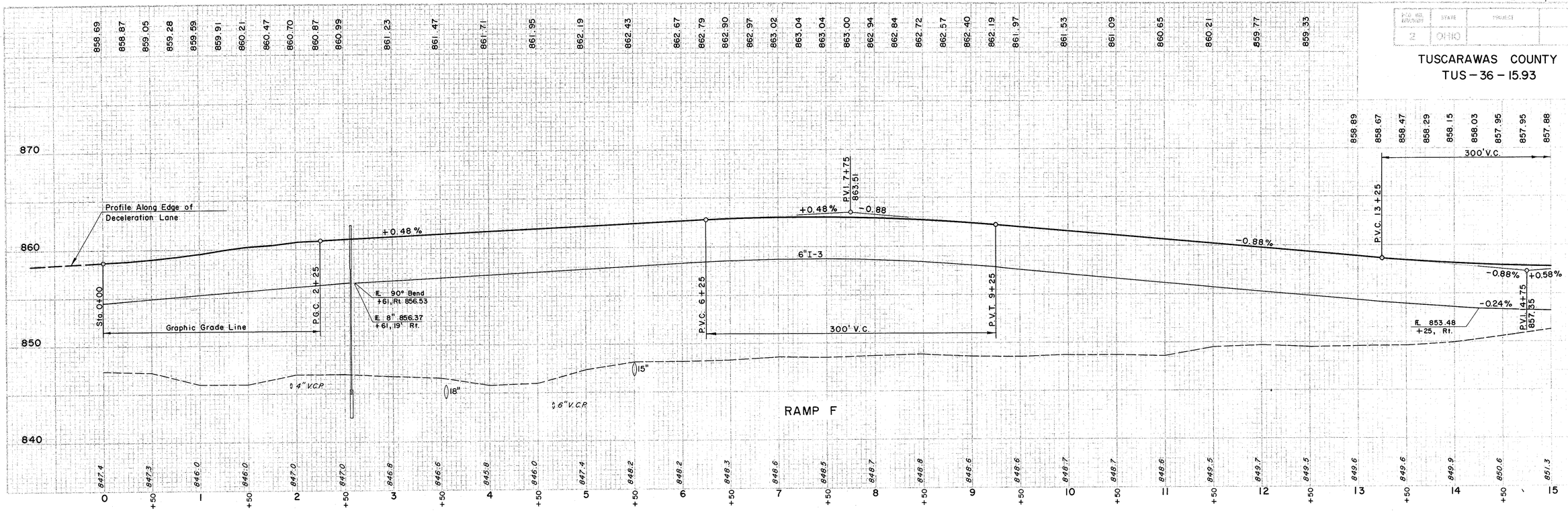
(S) STRUCTURE

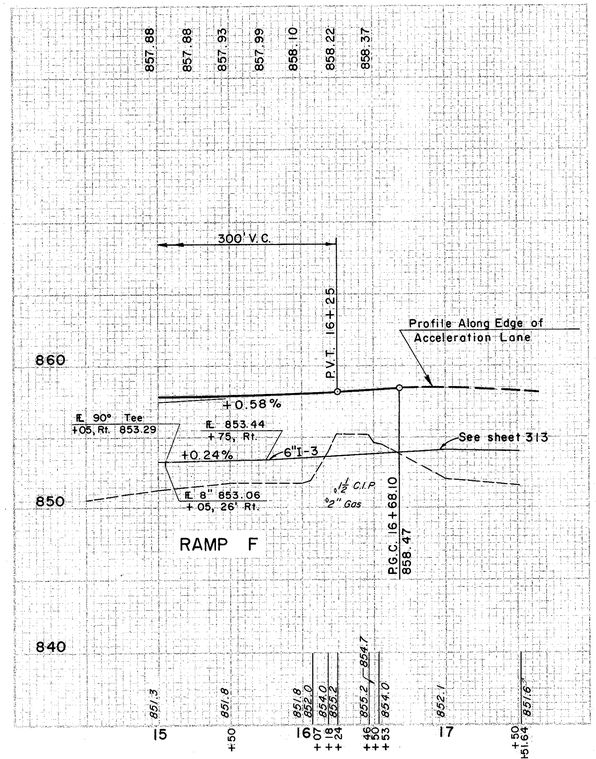
SHEET	REF. NO.	STATION FROM	STATION TO	I-1 15" PIPE CL. A-1 SEC. M-6.6(c)	I-1 66" PIPE CLASS A-1 M-64(g) 10-8 GA.	I-1 66" PIPE CLASS A-1 M-64(g) 10-10 GA.	I-2 MASONRY	I-8 STD. #2-6 C.B.	I-8 STD. #2 M.H. W/O DROP PIPE	I-10 DUMPED ROCK CHANNEL PROTECT.	L-10 SODDING	SEE SHEET
				L.F.			C.Y.	EA.		C.Y.	S.Y.	
331	1-S	5+50 Ramp F		96			0.52				3	487
349	2-S	307+94			392			1				473
	3-S	32+07 Ramp K			164		2.80		1		4	473
	4-S	27+44 Ramp K				110	5.60			28	7	487
		TOTAL		96	556	110	8.92	1	1	28	14	

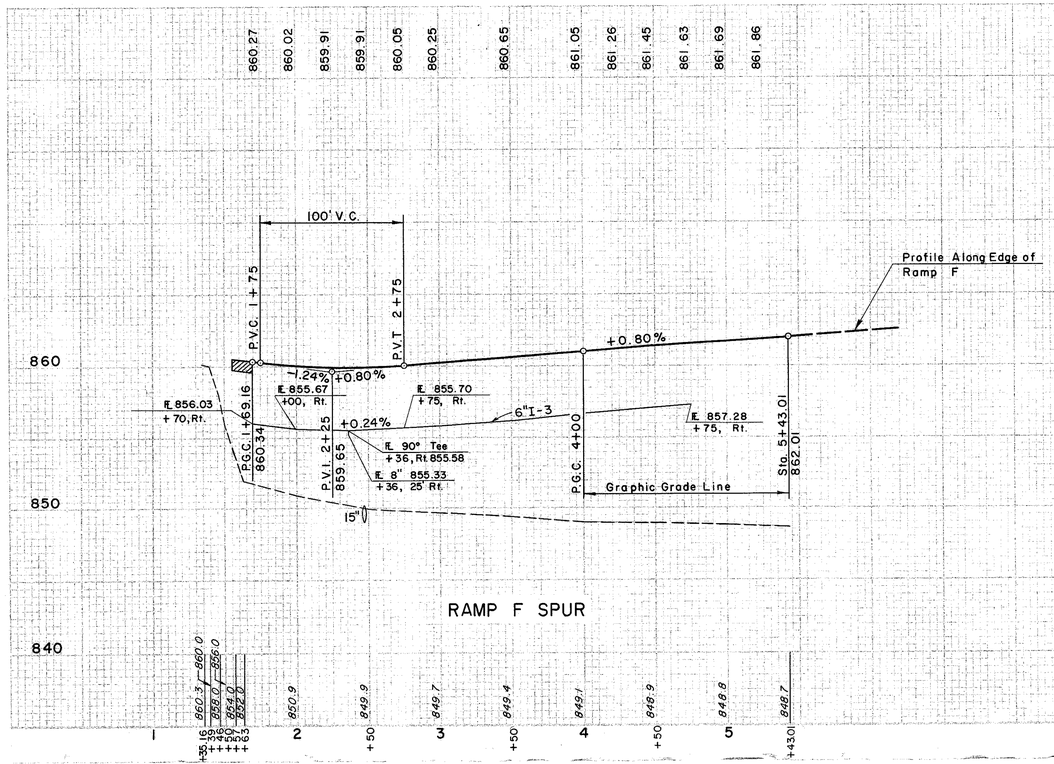
QUANTITY LIST
SHEETS 331 & 349

SHEET NUMBER	STATE	PROJECT	
2	OHIO		333 662

TUSCARAWAS COUNTY
TUS – 36 – 15.93



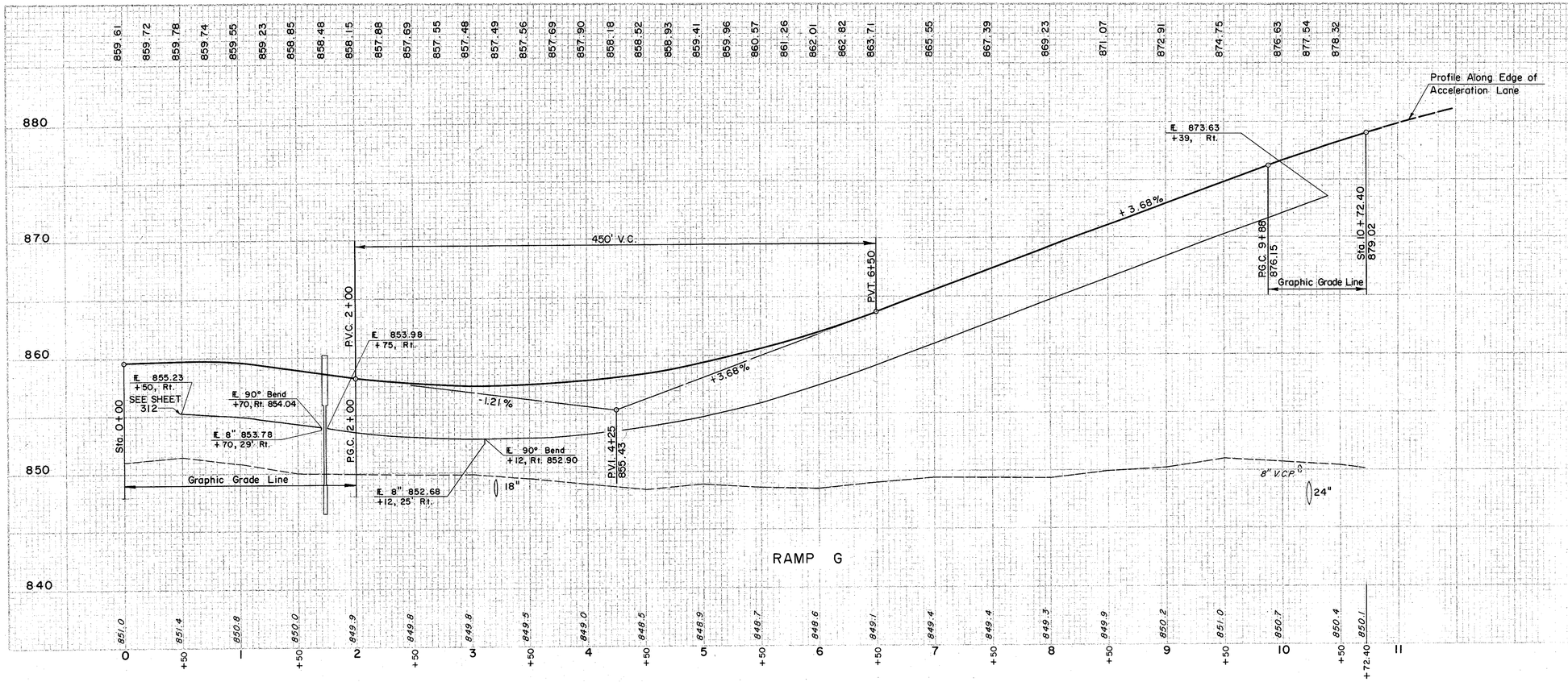


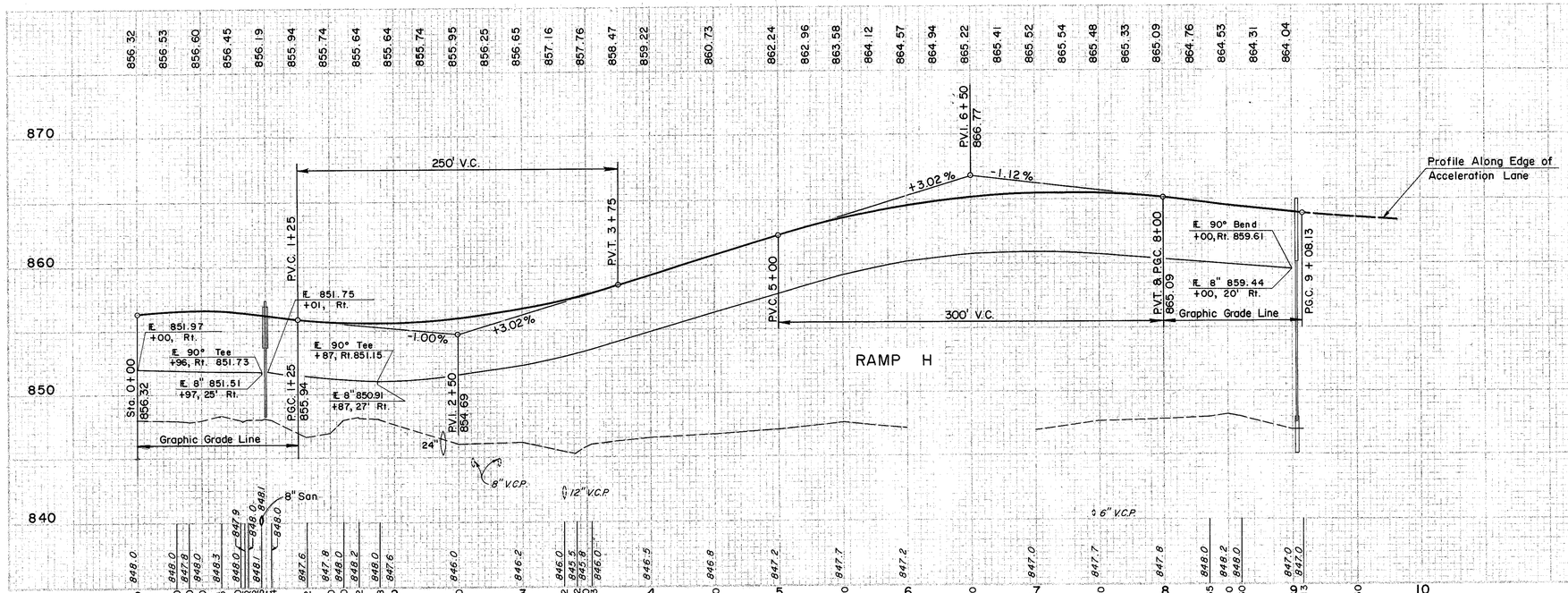


PROFILE – RAMPS F & F SPUR

FED. AID PROJECT	STATE	PROJECT		334 662
2	OHIO			

TUSCARAWAS COUNTY
TUS-36-15.93





PROFILE - RAMPS G & H

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

335
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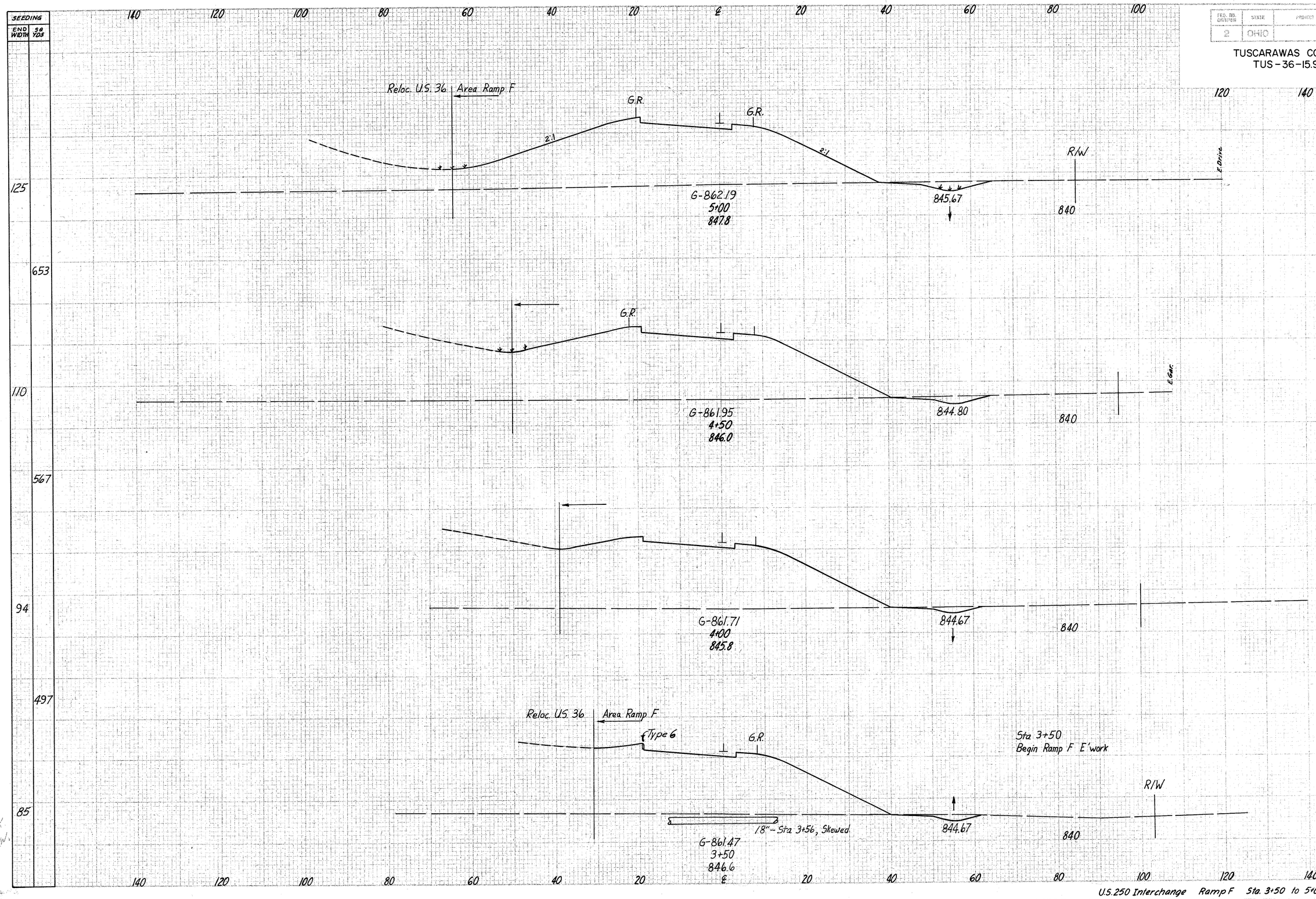
TUSCARAWAS COUNTY
TUS-36-15.93



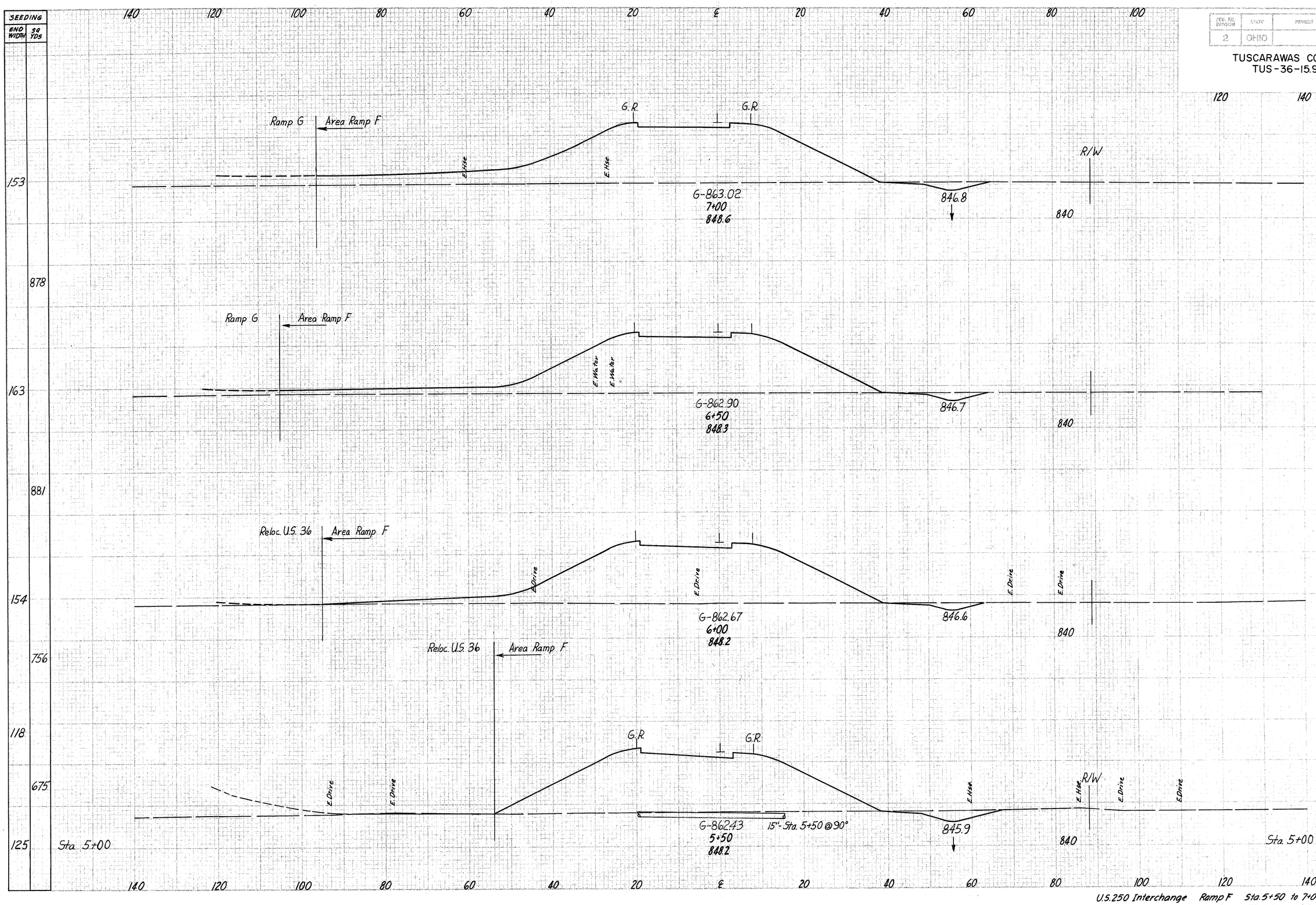
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
28	1078		
		46	2057
22	1144		
		32	1981
13	995		
		23	1694
12	834		

U.S. 250 Interchange Ramp F Sta. 3+50 to 5+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

336
662

TUSCARAWAS COUNTY
TUS-36-15.93



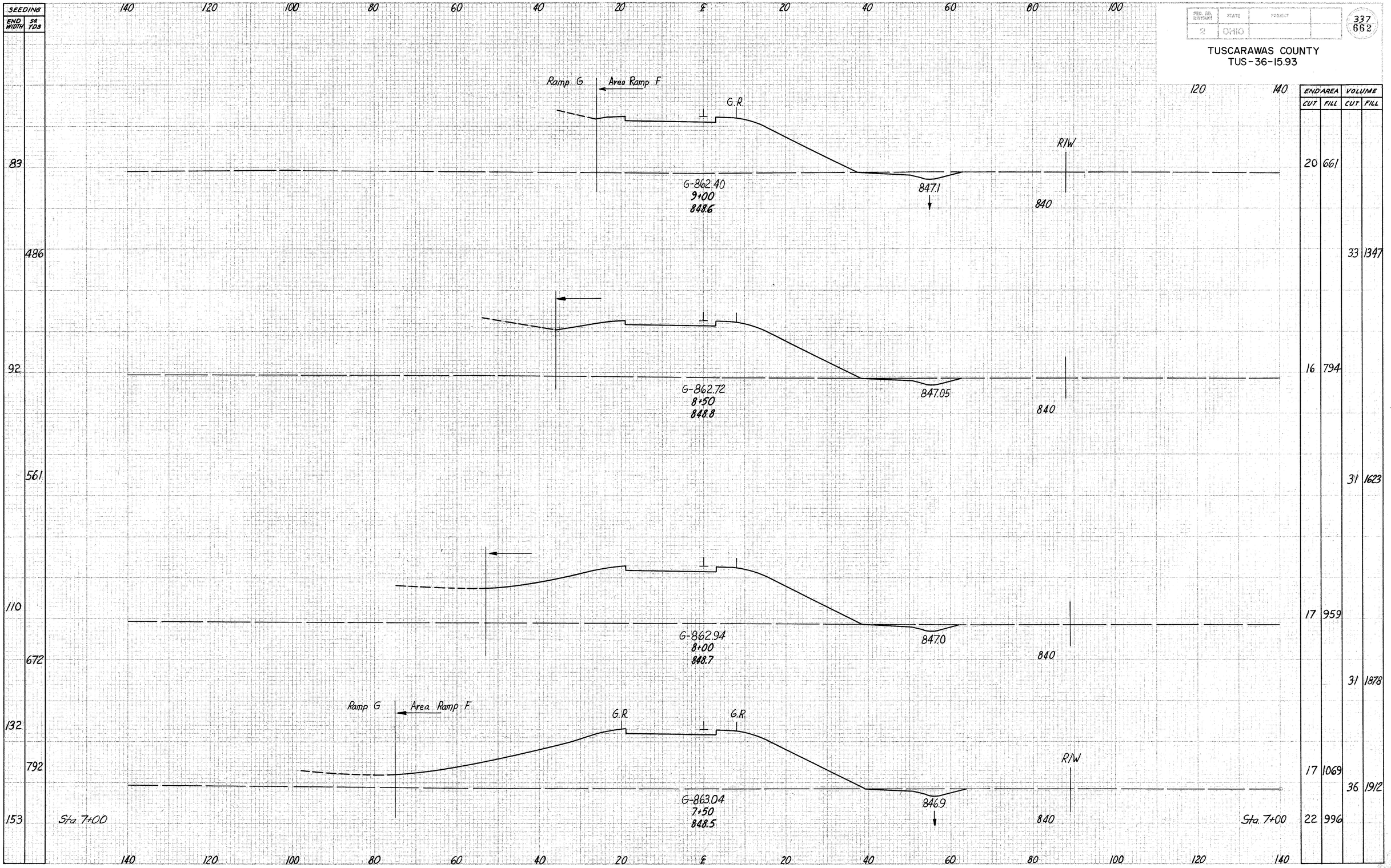
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
22	996		
		38	1805
19	953		
		32	1741
16	927		
		43	1692
30	900		
		54	1831
28	1078		

U.S.250 Interchange Ramp F Sta.5+50 to 7+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

337
662

TUSCARAWAS COUNTY
TUS-36-15.93



Plot - BDK. JEW.
Template 2/4/63 S.L.S.

U.S. 250 Interchange Ramp F Sta. 7+50 to 9+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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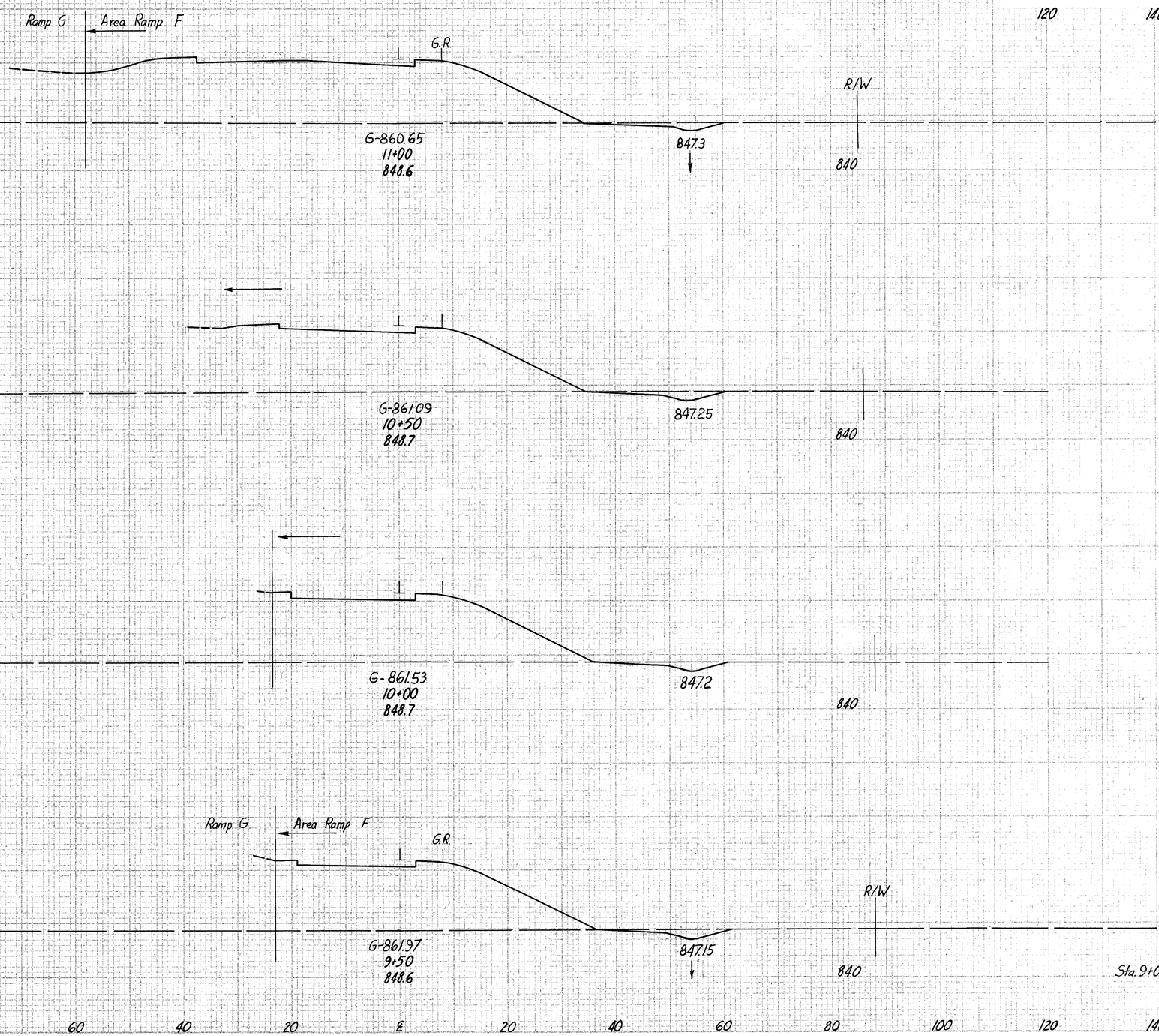
TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING END WIDTH	SEEDING SQ. YDS.
93	489
83	442
76	431
79	450
83	



ENDAREA CUT	ENDAREA FILL	VOLUME CUT	VOLUME FILL
16	922		
		31	1464
17	659		
		31	1132
17	564		
		32	1065
18	586		
		35	1155
20	661		

U.S. 250 Interchange Ramp F Sta. 9+50 to 11+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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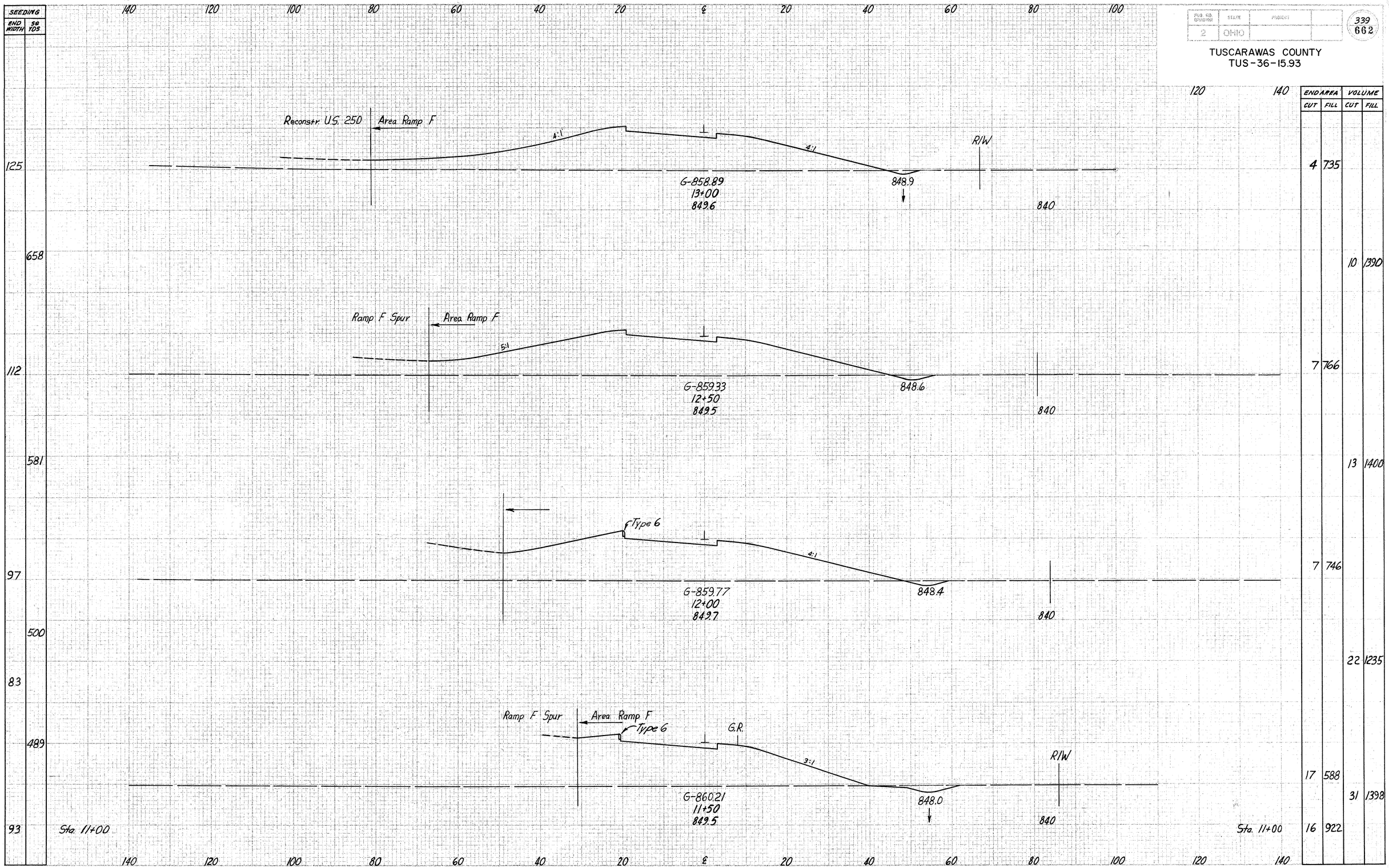
662

TUSCARAWAS COUNTY
TUS-36-15.93



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
4	735		
		10	1390
7	766		
		13	1400
7	746		
		22	1235
17	588		
		31	1398
16	922		

Plot - B.D.K.
✓ J.E.W.
Template 2/4/63
S.L.S.

Sed 12/27/62 W.M.S. Seeding 2-10-63 W.M.S.

U.S. 250 Interchange Ramp F Sta. 11+50 to 13+00

SEEDING	
END WIDTH	SQ YDS
65	381
72	428
82	489
94	558
107	644
125	

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
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Sta. 15+50
End Ramp F E'work

Reconstr. US.250 — Area Ramp F — ½"/1 — Type 7 — E. Bldg. — E. Bldg. — R/W

G-857.93
15+50
851.8

849.8

850

G-857.88
15+00
851.3

849.6

840

E. Gar. — E. Gar.

G-857.95
14+50
850.6

849.4

840

R/W — E. Gar.

G-858.15
14+00
849.9

849.2

840

Reconstr. US. 250 — Area Ramp F

R/W

G-858.47
13+50
849.6

849.0

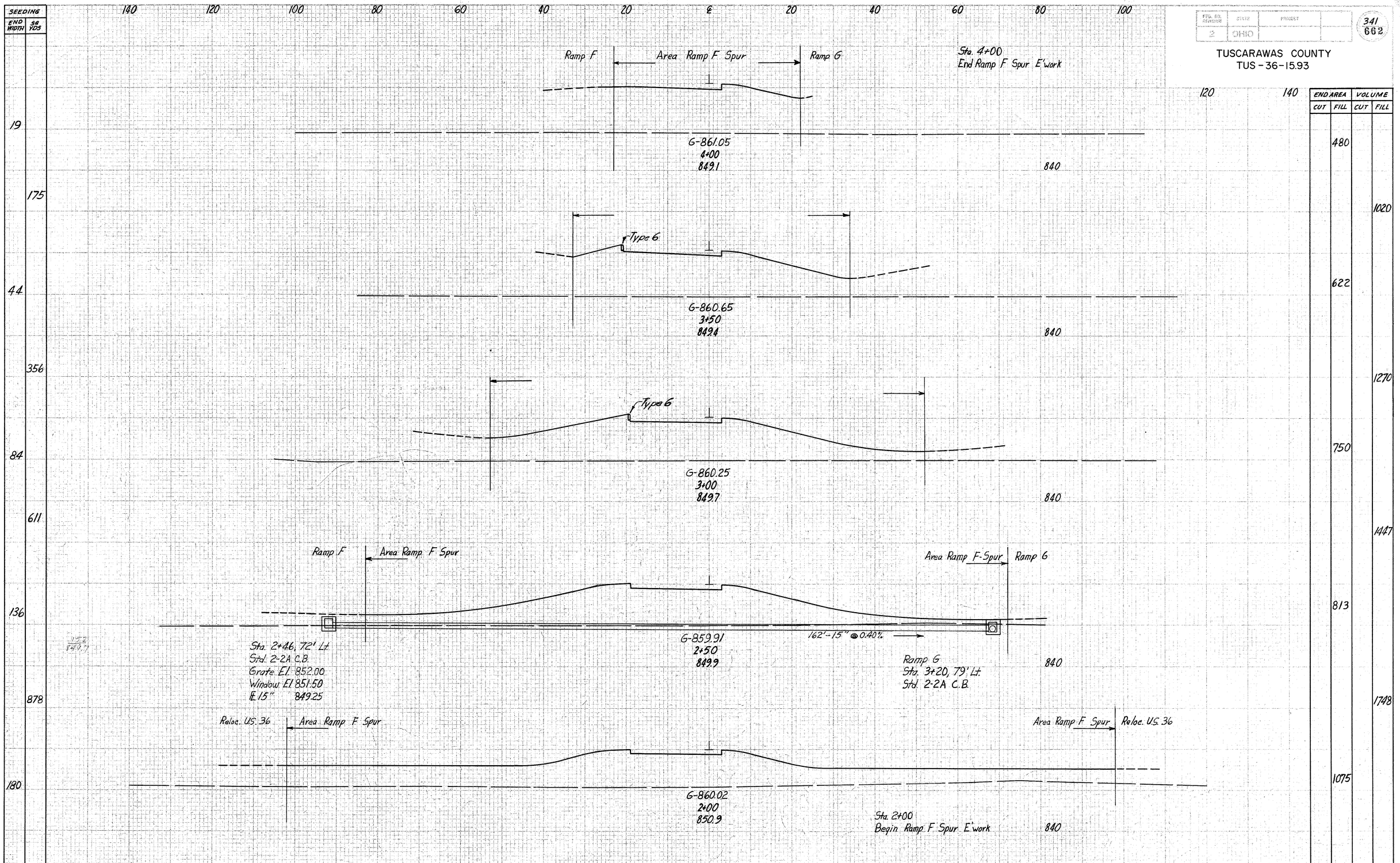
840

Sta. 13+00

Sta. 13+00

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
5	299		
		8	591
4	339		
		6	743
2	463		
		4	931
2	542		
		4	1117
2	664		
		6	1295
4	735		

U.S.250 Interchange Ramp F Sta. 13+50 to 15+50



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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662

TUSCARAWAS COUNTY
TUS-36-15.93

U.S. 250 Interchange Ramp F Spur Sta. 2+00 to 4+00

FED. HWY. DIVISION	STATE	PROJECT	
2	OHIO		

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662

TUSCARAWAS COUNTY
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SEEDING END WIDTH	SEEDING SQ YDS
28	
	208
47	
	269
50	
	222
30	

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

L-9 Right Computed by Plan Area
See Sheet 382

Ramp G
Beyond Radius Pt.

D 850 D
140 160 180

Ramp F Spur — Area Ramp G

CM

F-827

G-857.90
4+00
849.0

840

D D

Ramp G
Beyond Radius Pt.

C 850 C
140 160 180

Ramp F Spur

CM

F-775

G-857.56
3+50
849.5

840

C C

$V_2 = 30' \times \left(\frac{9+9}{2}\right) = \frac{270}{27} = 10$ C.Y. (Exc.)

Ramp G

B 850 B
140 160 180

Reconstr. U.S. 250

CM1

F-578

From Sta. 2-2A C.B. Ramp G
Sta. 2+46, 72' Lt.

122'-18" @ 0.35%

Sta. 3+20.79' Lt.
Std. 2-2A C.B.

Grate El.	851.35
Window El.	850.85
IE 18"	848.35
IE 15"	848.60

G-857.48
3+00
849.8

$V_1 = 52' \times \left(\frac{601+578}{2}\right) = \frac{30,654}{27} = 1,135$ C.Y. (Emb.)

Sta. 3+20.43' Rt.
Std. HW-E
IE 18" 847.92

CM2 CM3

C-9 F-86

840

B B

$V_3 = 47' \times \left(\frac{5+9}{2}\right) = \frac{329}{27} = 12$ C.Y. (Exc.)

CM3 Ramp G

A 850 A
140 160 180 200

F-75

CM2

C-5

Reconstr. U.S. 250 — Area Ramp G

CM1

F-601

G-857.69
2+50
849.8

840

A A

$V_2 = 36' \times \left(\frac{75+86}{2}\right) = \frac{2,898}{27} = 107$ C.Y. (Emb.)

Sta. 2+50
Begin Ramp G E'work

Sta. 3+00

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	827		
51'			1513
	775		
55'		10	1466
		661	
		12	1242

Template 11/24/63
H-323

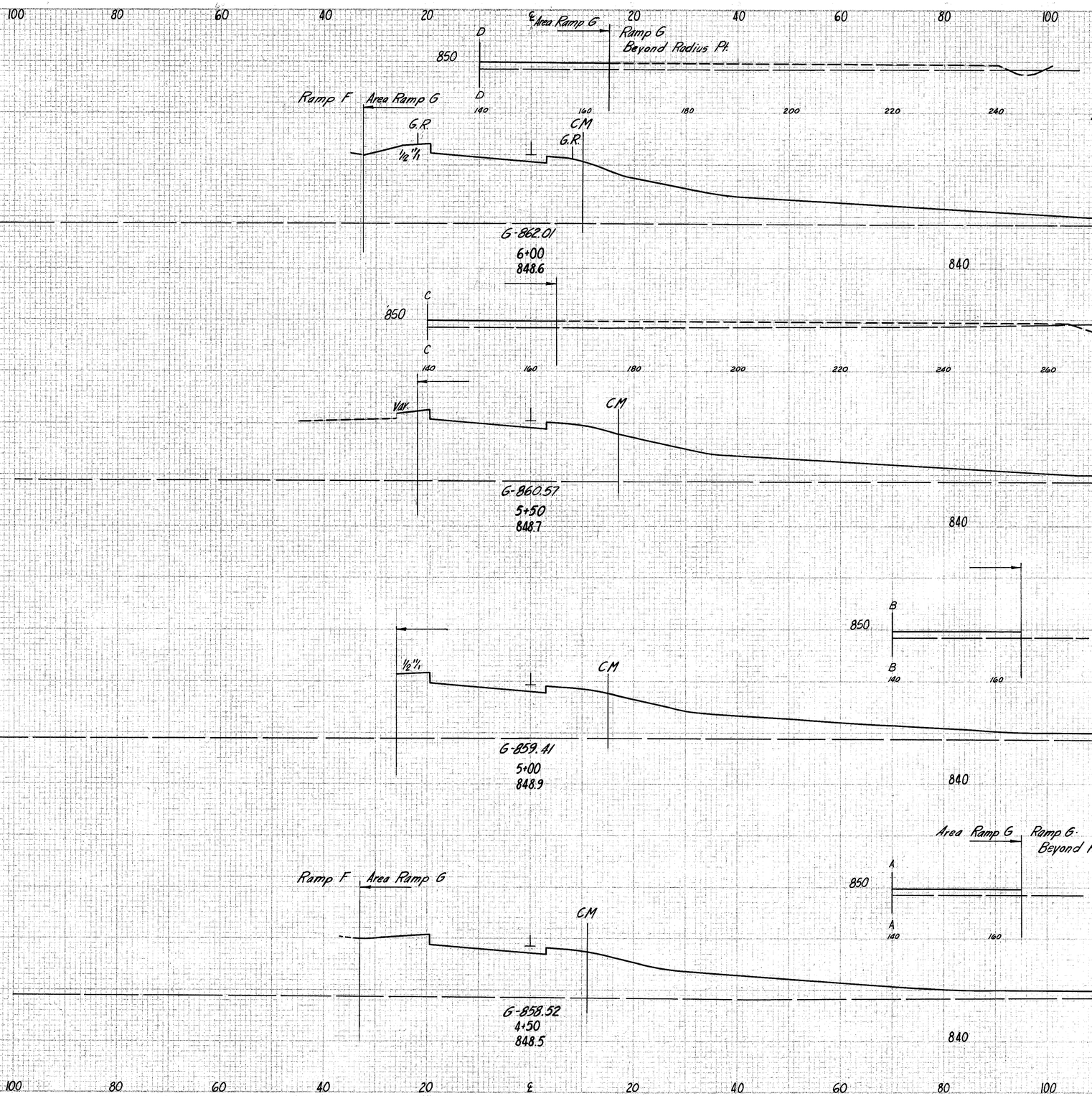
U.S. 250 Interchange Ramp G Sta. 2+50 to 4+00

SEEDING	
END WIDTH	SQ YDS
13	
	44
3	
	25
6	
	53
13	
	114
28	

L-9 Right Computed by Plan Area
See Sheet 382

Sta. 4+00

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



END AREA		VOLUME	
CUT	FILL	CUT	FILL
	1118		
48'			1758
	860		
47'			1474
	833		
46'			1457
	877		
49'			1546
	827		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
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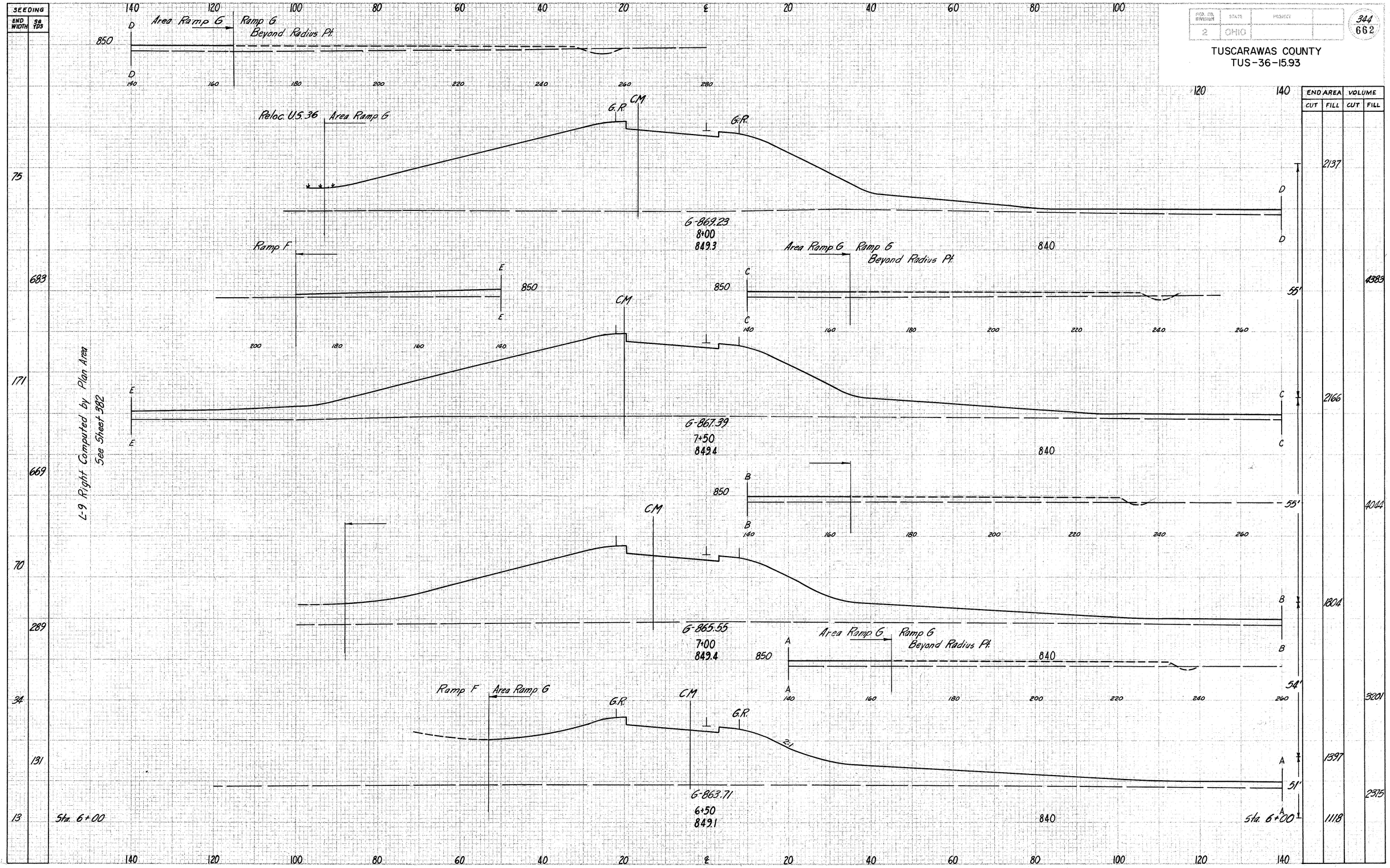
US. 250 Interchange Ramp G Sta. 4+50 to 6+00



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

344
662

TUSCARAWAS COUNTY
TUS-36-15.93

U.S. 250 Interchange Ramp G Sta 6+50 to 8+00

SEEDING	
END WIDTH	SQ YDS
18	
147	
35	
306	
75	

PUB. NO. DIVISION	STATE	PROJECT		345 662
2	OHIO			

TUSCARAWAS COUNTY
TUS-36-15.93

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		1677	
		3421	
		1985	
		4158	
		2137	

L-9 Right Computed by Plan Area
See Sheet 382

Sta. 9+00
End Ramp G E'work

Reloc. U.S. 36 Area Ramp G

CM

G.R.

E.Dr. E.Dr. E.W. E.W. E.Hse E.Hse

G-872.91
9+00
850.2

Area Ramp G Ramp G

850

B B 140 160 180 200

B B

840

51'

Reloc. U.S. 36 Area Ramp G

CM

G.R.

G-871.07
8+50
849.9

Area Ramp G Ramp G

850

A A 140 160 180

A A

55'

840

Sta. 8+00

Sta. 8+00

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

U.S. 250 Interchange Ramp G Sta. 8+50 to 9+00

FED. AID SYSTEM	STATE	PROJECT	
Z	OHIO		

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662

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING		END AREA		VOLUME	
END WIDTH	SQ YDS	CUT	FILL	CUT	FILL
92			654		
	517				1155
94			593		
	503				1040
87			530		
	425				950
66			496		

Reloc. US. 36 — Area Ramp H

E.P. — E.P. — E. Hse. — E. Hse. — G.R. — 3:1 — R/W

G-856.65
3+00
846.2

840

Reloc. U.S. 36 — Area Ramp H

E.P. — E.P. — G.R. — 4:1

G-855.95
2+50
846.0

840

Reloc. U.S. 36 — Area Ramp H

E.P. — E. Drive

24" — Sta 2+38 @ 10°

G-855.64
2+00
847.6

840

Reconstr. U.S. 250 — Area Ramp H — Type 6 — R/W

G-855.74
1+50
847.8

840

Sta 1+50
Begin Ramp H E'work

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

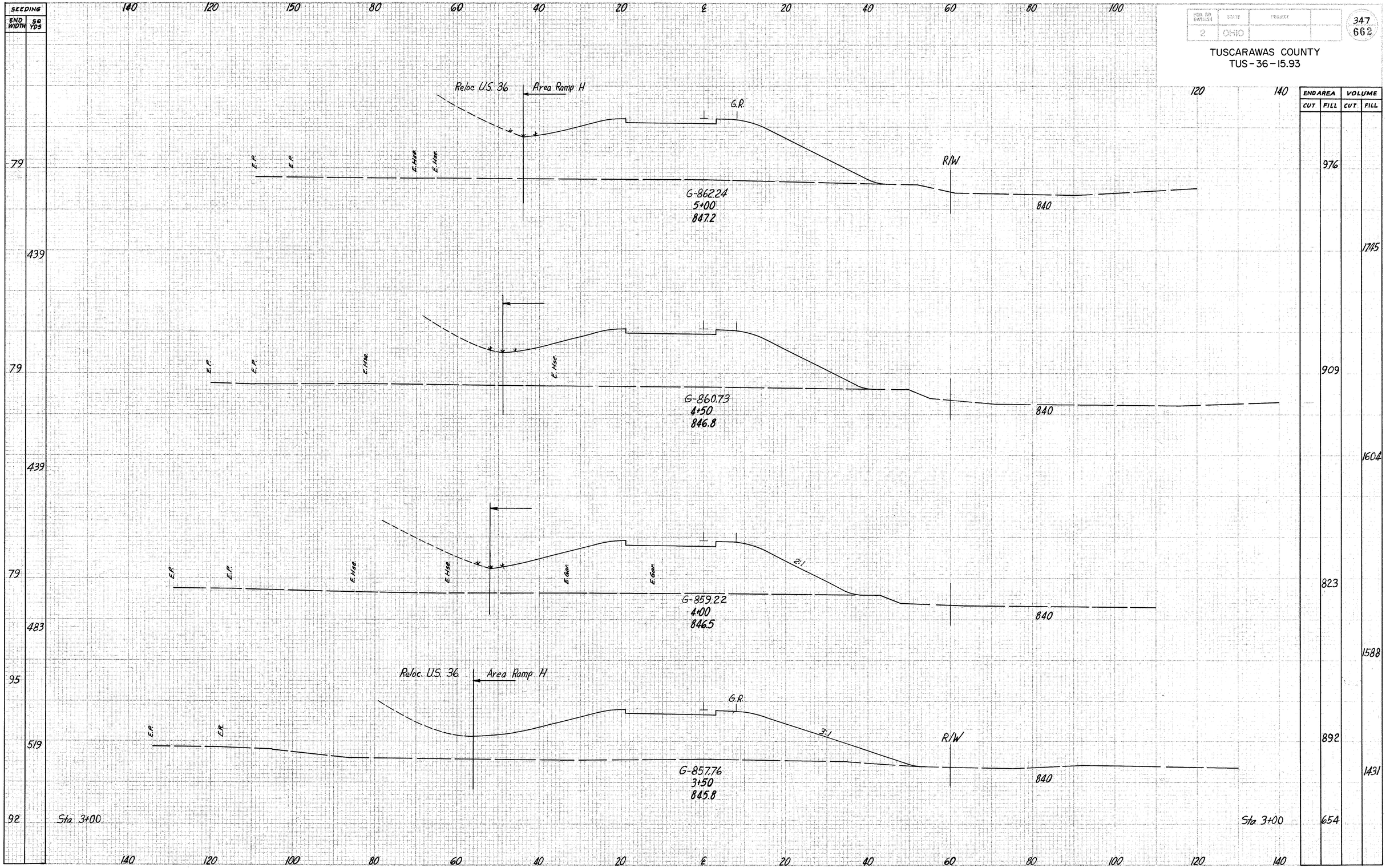
US 250 Interchange — Ramp H — Sta 1+50 to 3+00

NEW RIP DIVISION	STATE	PROJECT	
2	OHIO		

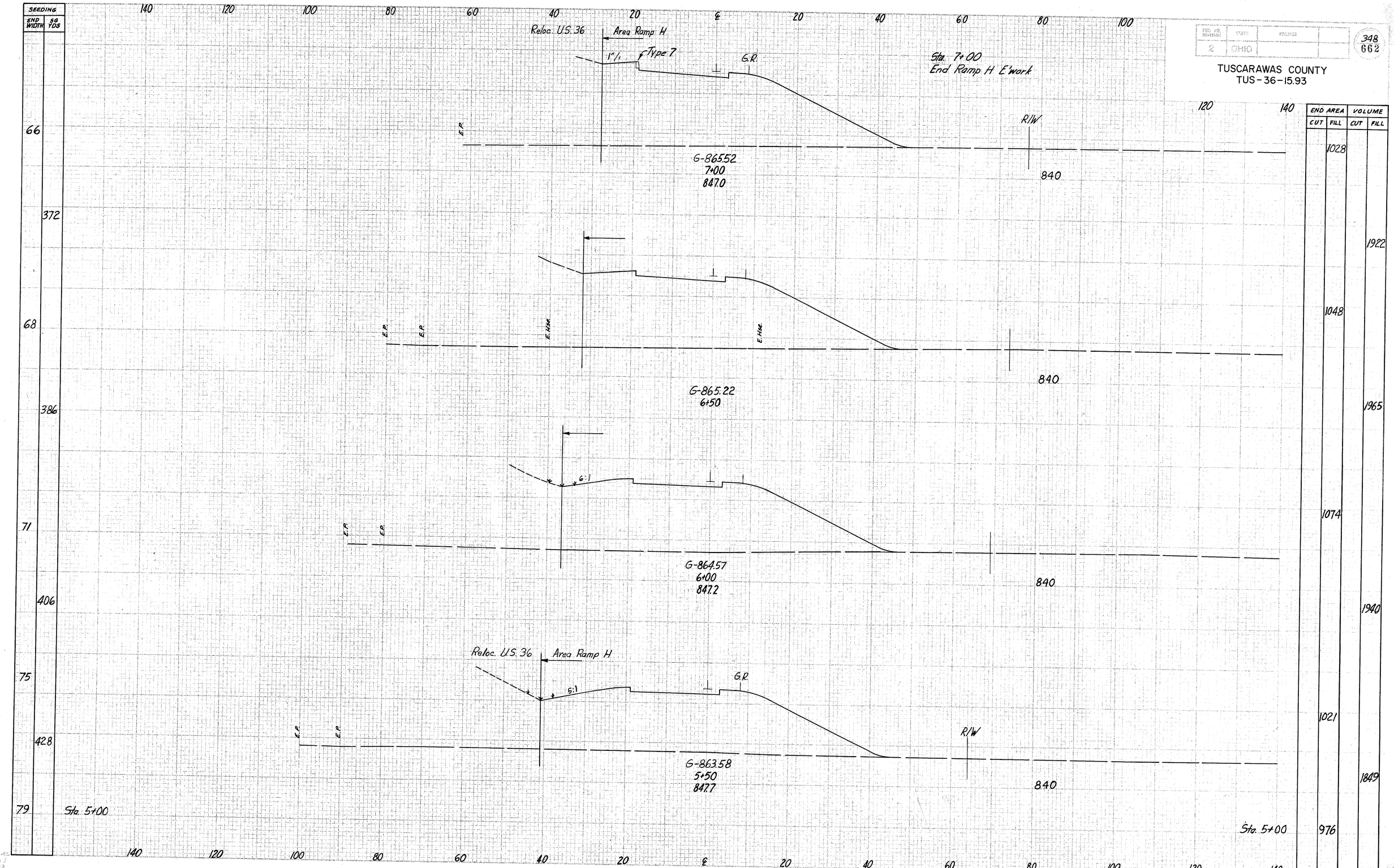
347
662

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING		END AREA		VOLUME	
END WIDTH	SQ YDS	CUT	FILL	CUT	FILL
79			976		
	439				1745
79			909		
	439				1604
79			823		
	483				1588
95					
	519		892		1431
92			654		



U.S. 250 Interchange Ramp H Sta 3+50 to 5+00



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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662

TUSCARAWAS COUNTY
TUS-36-15.93

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	1028		
			1922
	1048		
			1965
	1074		
			1940
	1021		
			1849
	976		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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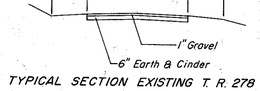
TUSCARAWAS COUNTY
TUS – 36 – 15.93

PROPOSED STRUCTURE DATA

Type: 4 Span Continuous Reinforced Concrete Bridge
Spans: 36'-0", 45'-0", 45'-0", 36'-0" c/c Bearings
Roadway: 36'-0" f/f Parapets
For additional information see Sht. 518

FOR DETAILS ON BRIDGE
NO. TUS-36-1789
SEE SHEETS 526 – 542

FOR DRIVE TYPICAL SECTION
SEE SHEET 11
STA. 13+00 LT. @ 80°
Width = 10'
Type 1 per Std. Drawing -1
End Work Sta. 0+30



TYPICAL SECTION EXISTING T. R. 278

FOR PAYMENT OF QUANTITIES SEE SHEET 332

FOR PROFILES OF
RAMP K SEE SHEET 352
RAMP L SEE SHEET 351
RELOC. T.R. 278 SEE SHEET 351

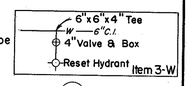
FOR INTERSECTION DETAILS
SEE SHEETS 372 – 374 & 377–379

FOR GEOMETRIC LAYOUT
SEE SHEET 382

FOR PROFILE OF
8" SANITARY SEWER
SEE SHEET 458

RELOC. T.R. 278
SUPERELEVATION NOTE:
Sta. 8+80 to Sta. 9+42.86 transition from existing cross slope to full super of 0.021 ft/ft. Sta. 12+72.14 to Sta. 13+28 transition from full super of 0.021 ft/ft to existing cross slope.

NOTE: EXISTING FIRE HYDRANT
64' Lt. of Sta. 310+58, U.S. 36 to be removed and reset to Sta. 13+06, 20' Rt., T.R. 278.



(K-1) RAMP K CURVE DATA
P.I. Sta. 20+63.07
Δ = 2°55'55" Rt.
D = 2°30'00"
R = 2,291.83'
L = 117.28'
T = 58.65'

(K-2) RAMP K CURVE DATA
P.I. Sta. 21+80.35
Δ = 2° 55' 55" Rt.
D = 2° 30' 00"
R = 2,291.83'
L = 117.28'
T = 58.65'

(K-3) RAMP K SPIRAL CURVE DATA
P.I. Sta. 25+38.72
Δ = 19° 05' 56" Rt.
L = 200.00'
L.T. = 134.12'
S.T. = 67.38'

(K-4) RAMP K CURVE DATA
P.I. Sta. 27+45.20
Δ = 50° 13' 20" Rt.
R = 300.00'
L = 262.96'
T = 140.60'

(K-5) RAMP K CURVE DATA
P.I. Sta. 36+61.67
Δ = 155° 08' 40" Rt.
R = 175.00'
L = 473.86'
T = 794.11'

(K-6) RAMP K SPIRAL CURVE DATA
P.I. Sta. 34+10.23
Δ = 32° 44' 24" Rt.
L = 200.00'
L.T. = 135.69'
S.T. = 68.81'

(L-1) RAMP L SPIRAL CURVE DATA
P.I. Sta. 19+04.12
Δ = 19° 05' 55" Rt.
L = 200.00'
L.T. = 134.12'
S.T. = 67.38'

(L-2) RAMP L CURVE DATA
P.I. Sta. 20+36.42
Δ = 24° 58' 10" Rt.
R = 300.00'
L = 130.74'
T = 66.42'

(L-3) RAMP L SPIRAL CURVE DATA
P.I. Sta. 21+68.12
Δ = 19° 05' 55" Rt.
L = 200.00'
L.T. = 134.12'
S.T. = 67.38'

(L-4) RAMP L CURVE DATA
P.I. Sta. 27+50.54
Δ = 6° 12' 40"
D = 2° 00'
R = 2,864.79'
L = 310.56'
T = 155.43'

(T-1) RELOC. T.R. 278 CURVE DATA
P.I. Sta. 9+30.25
Δ = 37° 30' 00" Lt.
R = 125.00'
L = 81.81'
T = 42.43'

(T-2) RELOC. T.R. 278 CURVE DATA
P.I. Sta. 12+53.50
Δ = 64° 15' 00" Lt.
R = 150.00'
L = 168.21'
T = 94.19'

EXCAVATION	=	4,246 C.Y.
EMBANKMENT	=	16,705 C.Y.
EMBANKMENT + 6 %	=	17,707 C.Y.

RAMP J STA. 10+00 TO STA. 18+00

EXCAVATION	=	607 C.Y.
EMBANKMENT	=	36,310 C.Y.
EMBANKMENT + 6 %	=	38,489 C.Y.

RAMP L

EXCAVATION	=	2,661 C.Y.
EMBANKMENT	=	59,260 C.Y.
EMBANKMENT + 6 %	=	62,816 C.Y.

RAMP K STA. 20+00 TO STA. 28+70

EXCAVATION	=	190 C.Y.
EMBANKMENT	=	571 C.Y.
EMBANKMENT + 6 %	=	605 C.Y.

RELOC. T. R. 278

Can 567

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

350
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

RAMP J

PROFILE–RAMP J

Profile Along Edge of Deceleration Lane

Sta. 0+00
901.87

Graphic Grade Line

E. 896.50
+25, Rt.

E. 891.60
+62, Rt.

E. 890.49
+00, Rt.

6" I-3

-0.92%

P.G. 4+50
896.73

Bridge Limits 178.81'

Sta. 6+50.81

Sta. 8+29.62

E. 890.49
+00, Rt.

E. 890.39
+45, Rt.

E. 90° Bend
+25, Rt. 889.89

E. 8" 889.71
+25, 21' Rt.

-0.92%

P.V.C. 7+75

188'-12" @ 2.21%

To 2-2A C.B.
Sta. 302+67.22 Rt.
Reloc. U.S. 36

P.V.I. 9+25
892.36

-5.84%

E. 888.43
+30, Rt.

P.V.T. 10+75

300' V.C.

E. 878.42
+85, Rt.

6" I-3

E. 870.79
+20, Rt.

-5.84%

E. 865.29
+14, Rt.

300' V.C.

P.V.C. 15+00

E. 851.66
+50, 11' Rt.

| | | |

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

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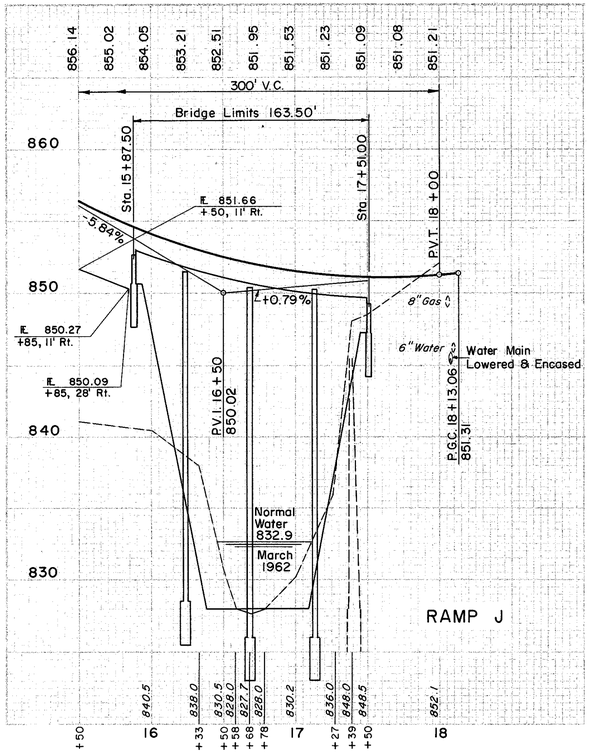
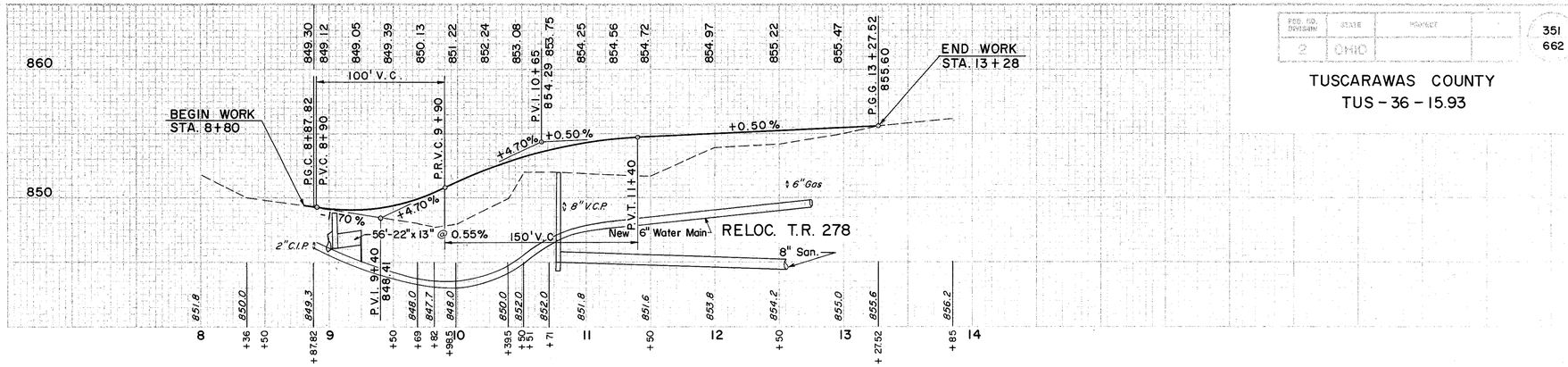
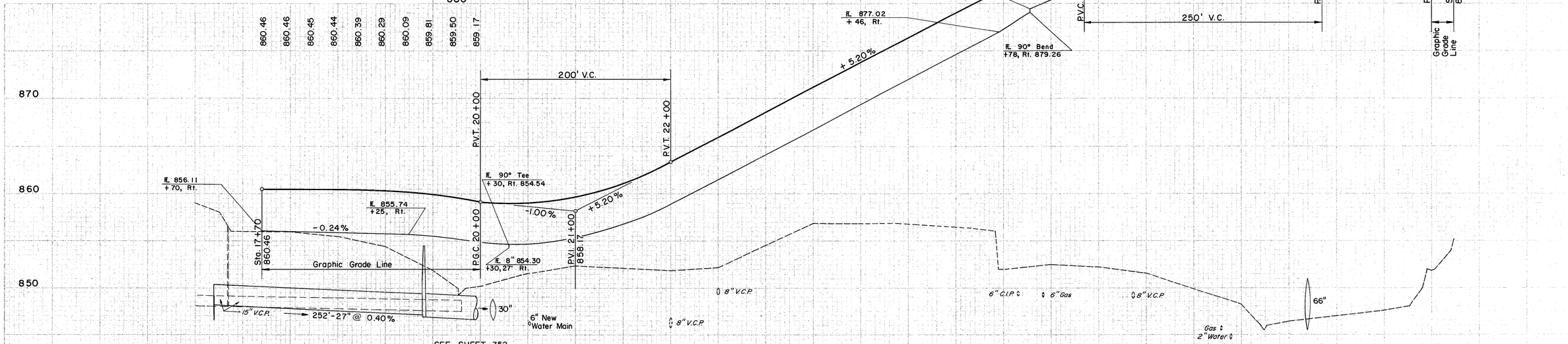
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93







PROFILE - RELOC. T.R. 278 AND RAMPS J & L

SHEET NO.	STATE	PROJECT	
2	OHIO		

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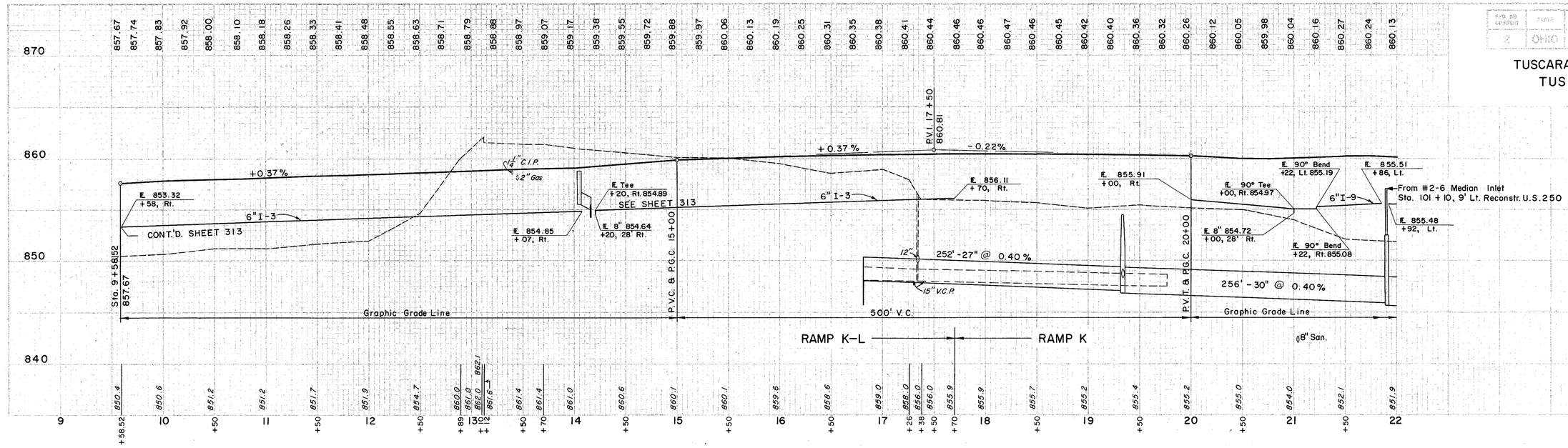
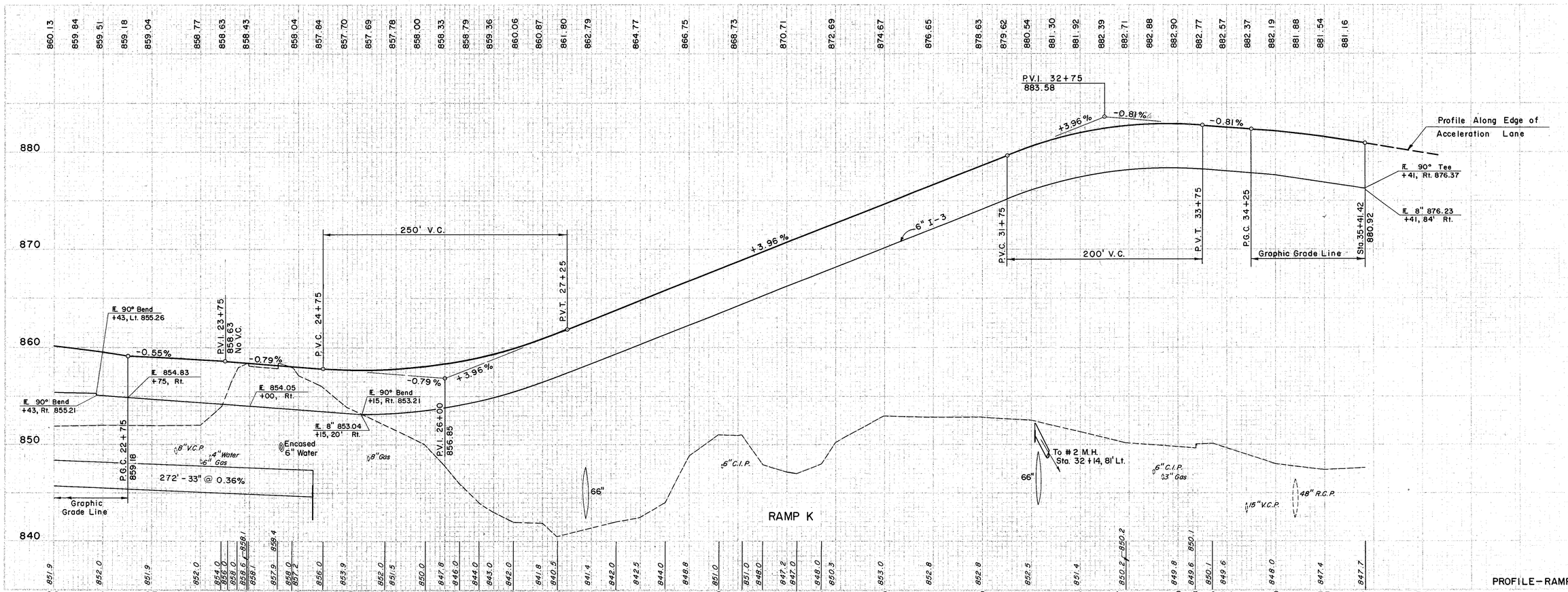
662

TUSCARAWAS COUNTY
TUS-36-15.93





PROFILE-RAMPS K & K-L

FED. ES. SYSTEM	STATE	PROJECT	
	OHIO		

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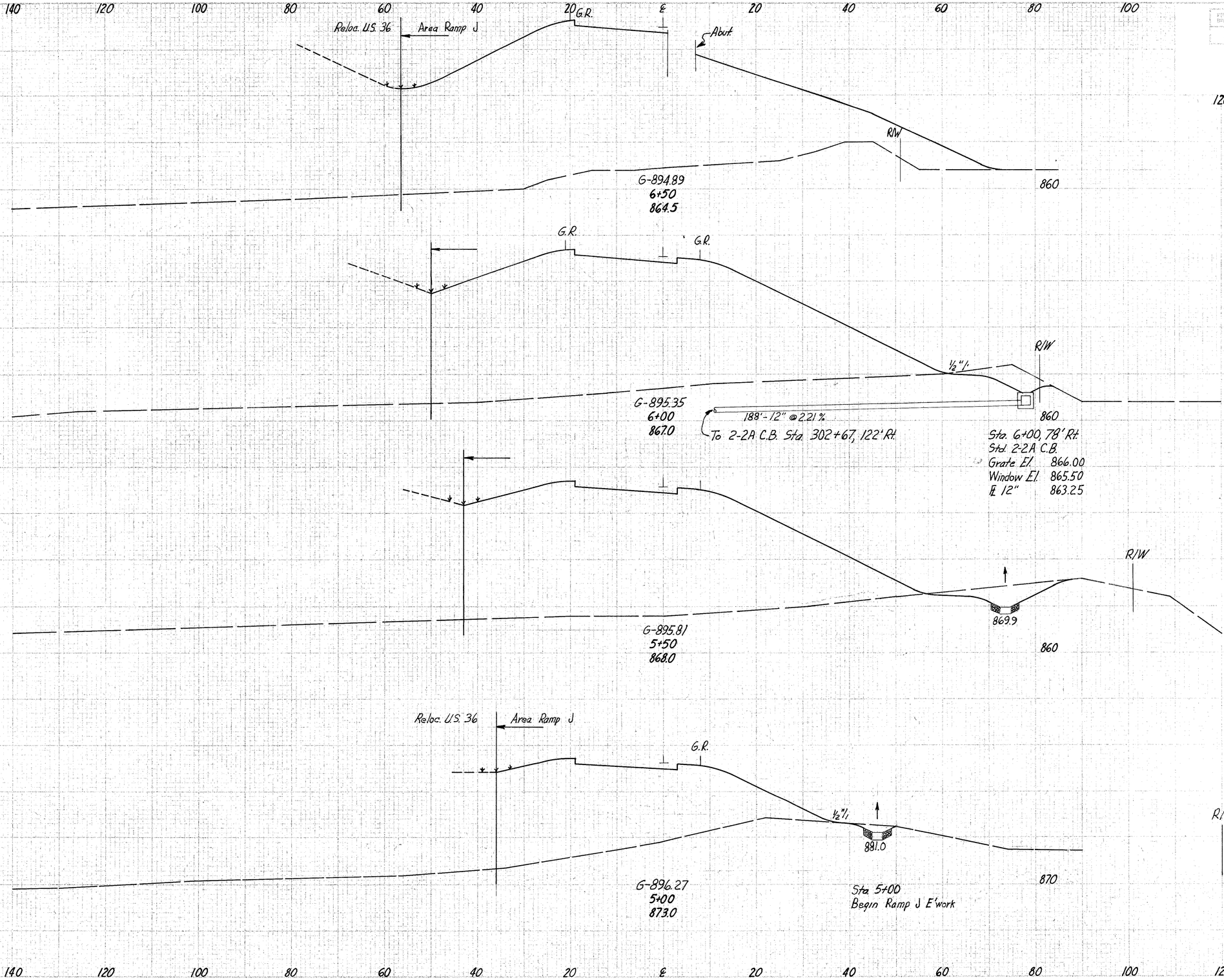
662

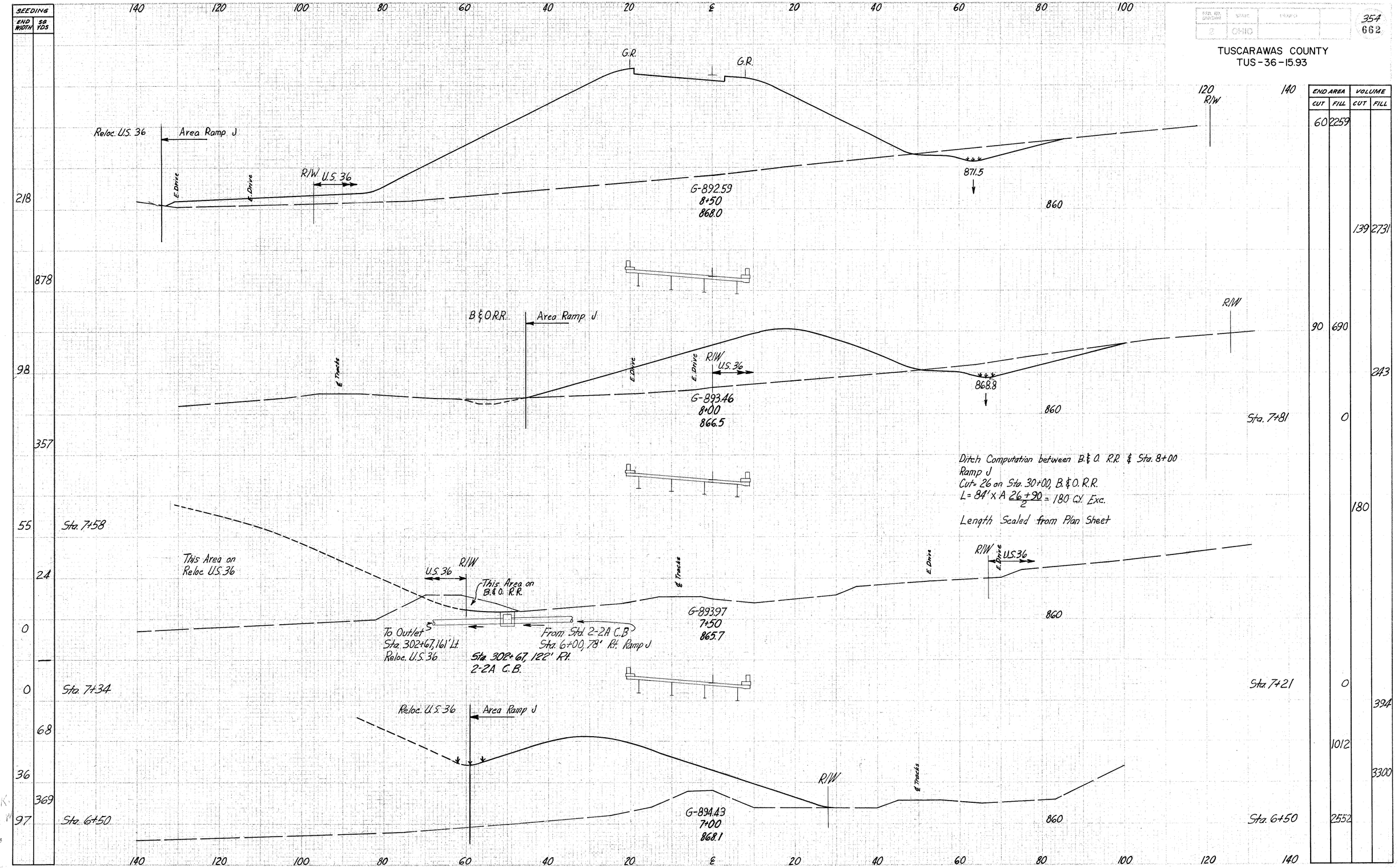
TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING	
END WIDTH	SQ YDS
97	636
132	700
120	539
74	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
—	2552		
			4559
52	2372		
		106	4097
63	2053		
		67	2849
9	1023		

US. 250 Interchange Ramp J Sta. 5+00 to 6+50



TUSCARAWAS COUNTY
TUS-36-15.93

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662

U.S. 250 Interchange Ramp J Sta. 7+00 to 8+50

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

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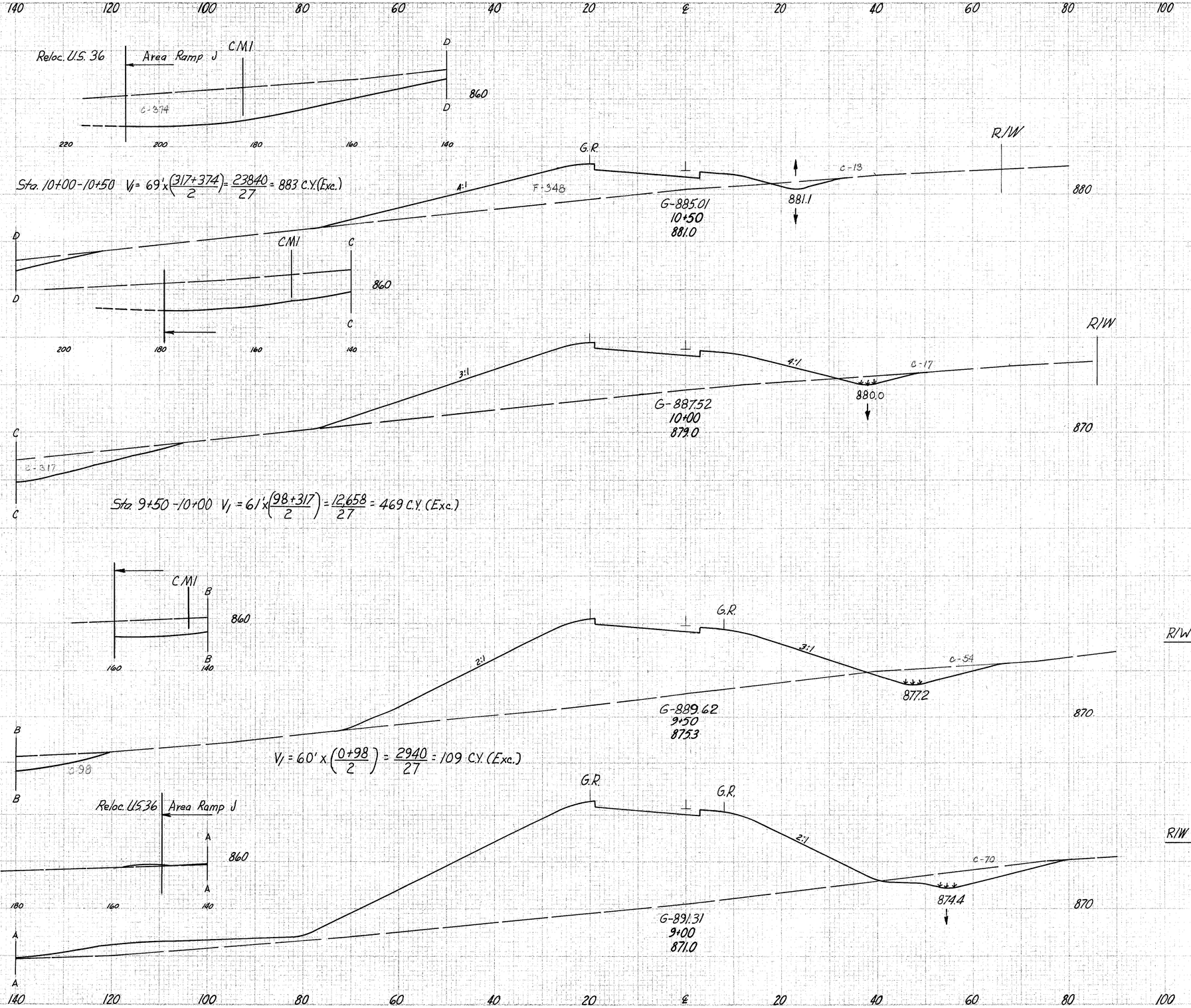
662

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING	
END WIDTH	SQ YDS
237	
	1269
220	
	1228
222	
	1247
227	
	1236
218	Sta. 8+50



END AREA		VOLUME	
CUT	FILL	CUT	FILL
	13		348
+883 C.Y. Exc.		883	
			28 974
	17		704
+469 C.Y. Exc.		469	
			66 1687
	54		1118
+109 C.Y. Exc.		109	
			115 2674
	70		1770
			120 3731
	60		2259

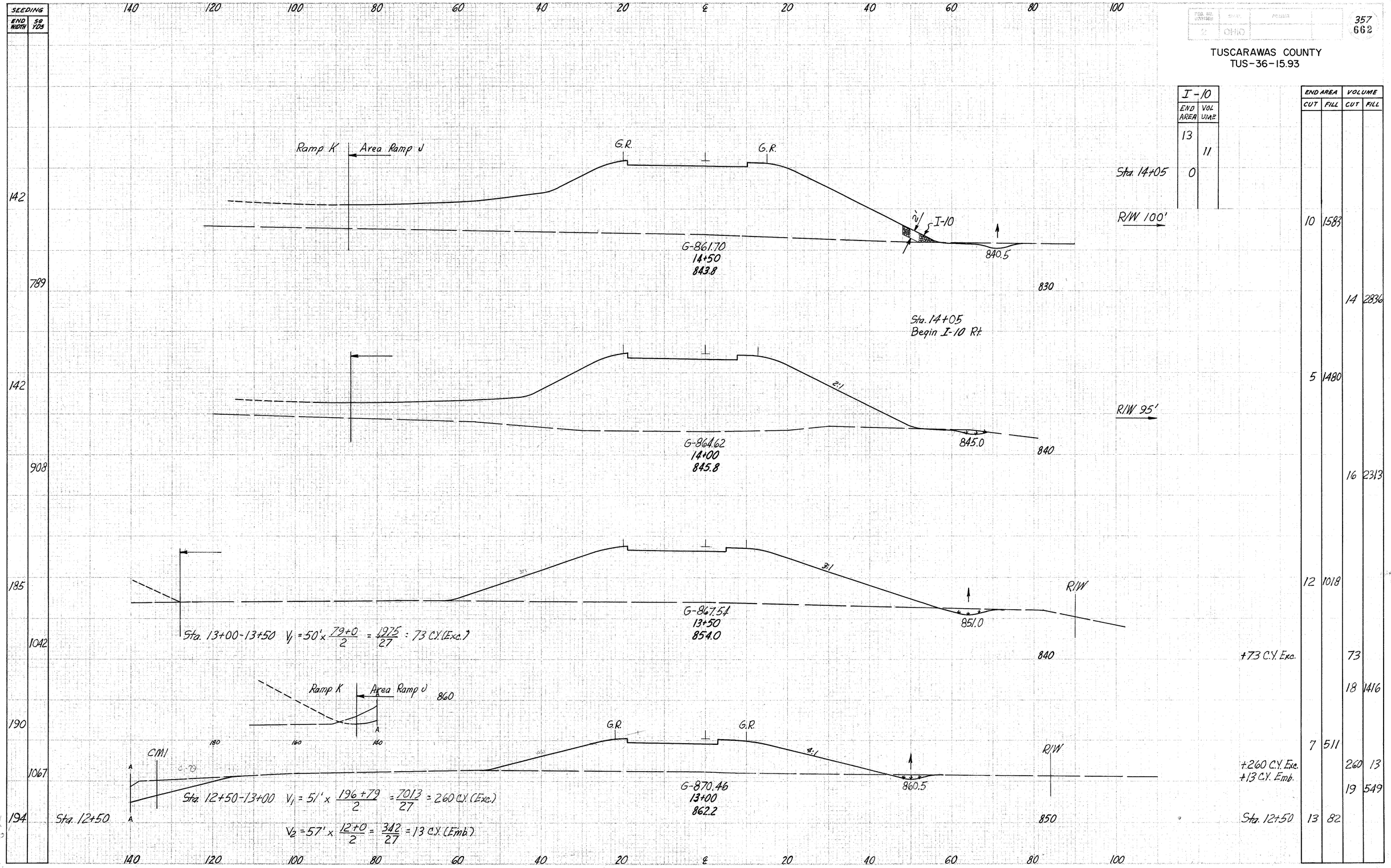
U.S.250 Interchange Ramp J Sta. 9+00 to 10+50

FED. AID PROJECT	STATE	PROJECT		356
2	OHIO			662

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING		END AREA		VOLUME	
END WIDTH	SQ YDS	CUT	FILL	CUT	FILL

TUSCARAWAS COUNTY
TUS-36-15.93

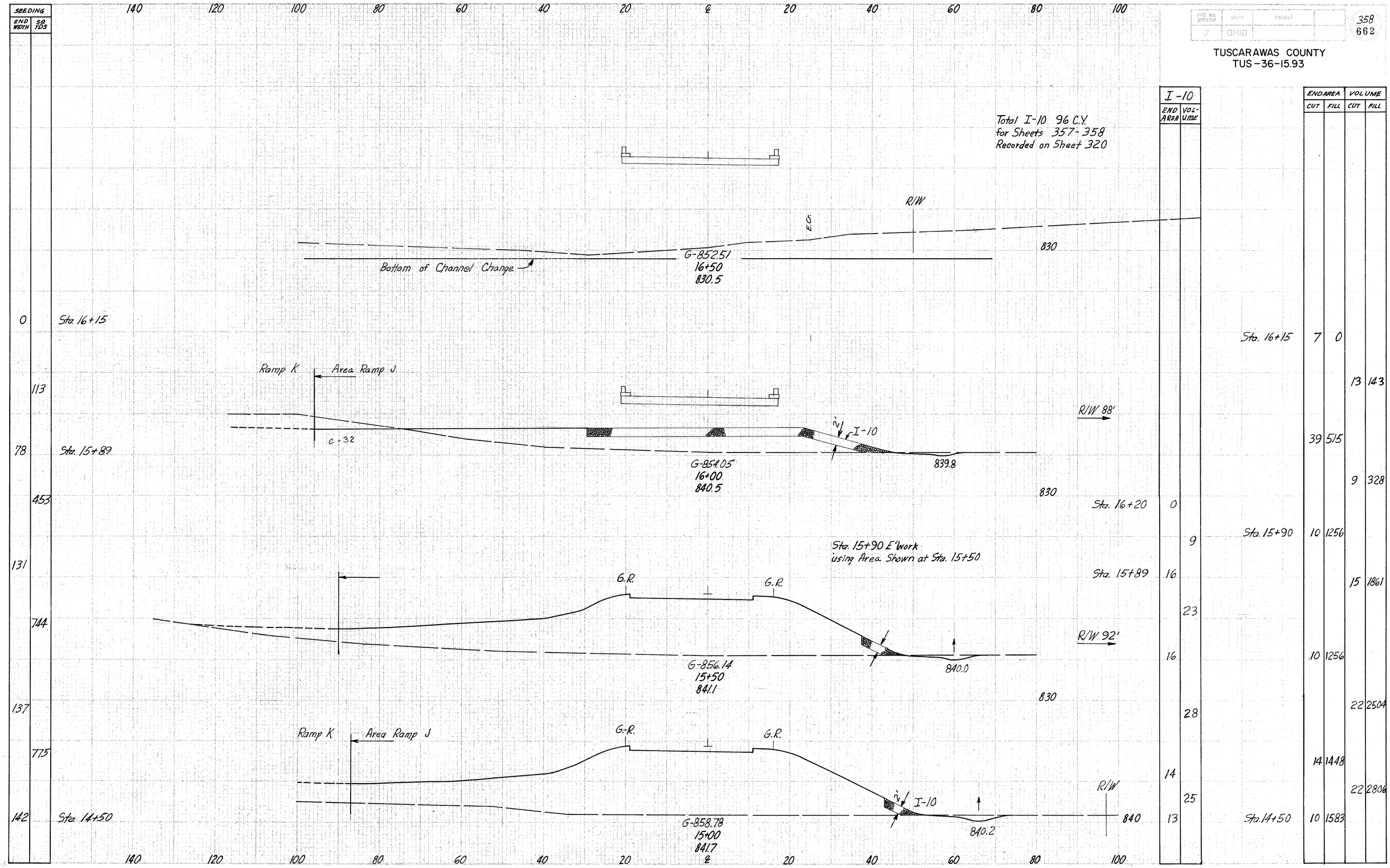


I-10	
END AREA	VOLUME
13	
	11
0	

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
Sta. 14+05				
	10	1583		
			14	2836
	5	1480		
			16	2313
	12	1018		
+73 C.Y. Exc.			73	
			18	1416
	7	511		
+260 C.Y. Exc.			260	13
+13 C.Y. Emb.			19	549
Sta. 12+50	13	82		

U.S. 250 Interchange Ramp J Sta. 13+00 to 14+50

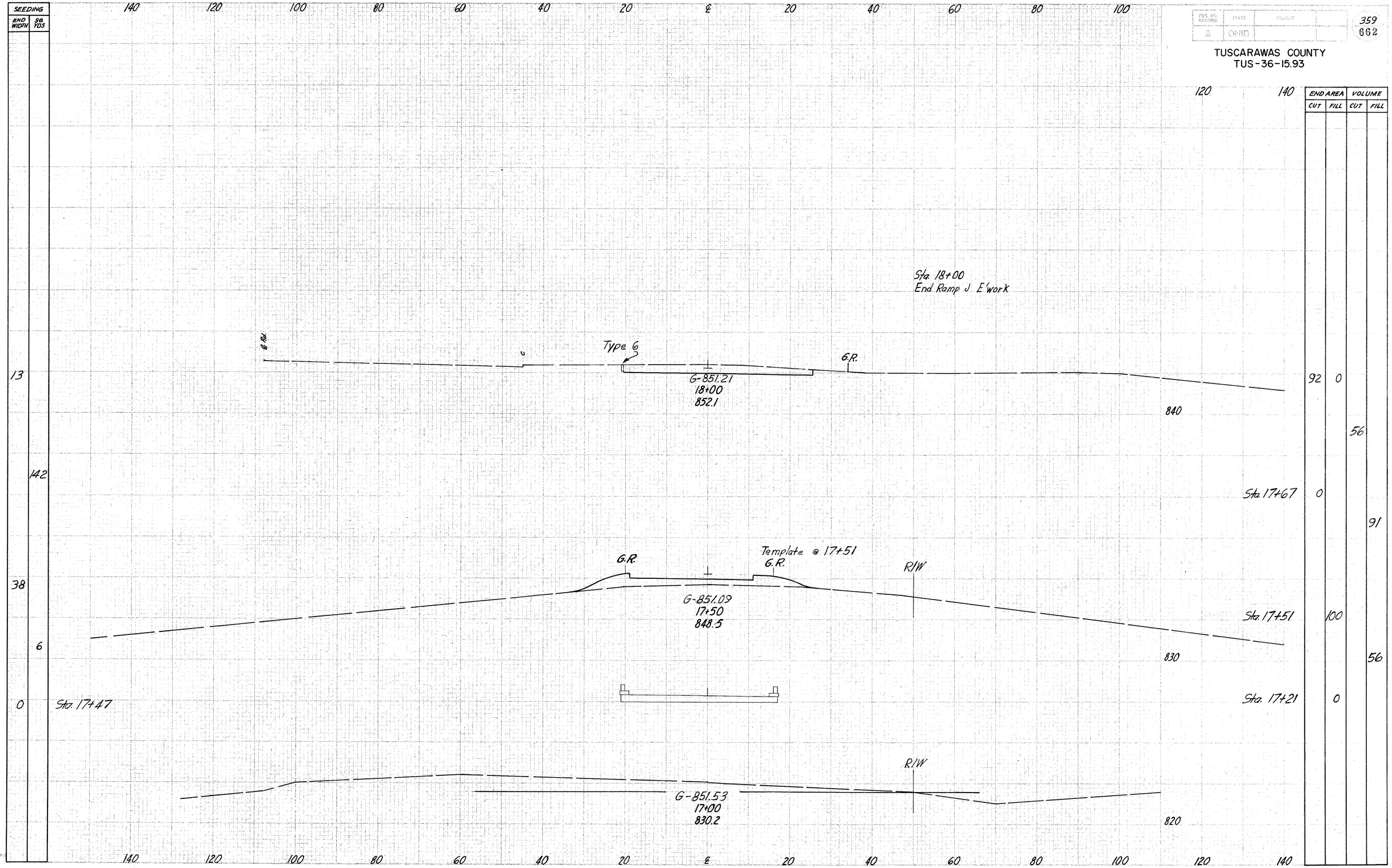
TUSCARAWAS COUNTY
TUS-36-15.93



U.S. 250 Interchange Ramp J Sta. 15+00 to 16+50

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

TUSCARAWAS COUNTY
TUS-36-15.93



Plot - B.D.K.
J.E.W.
Template 1/30/63
S.L.S.
Prepared 1/7/64 [illegible]
[illegible]
Checking 2/10/64 [illegible]

U.S.250 Interchange Ramp J Sta 17+00 to 18+00

FED. FUND. DIVISION	STATE	PROJECT	
2	OHIO		

360
662

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING END WIDTH	SEEDING SQ YDS
	64
	400
	80
	322
	76
	36
	158
	21

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

L-9 Right Computed by Plan Area
See Sheet 382

Add L-9 between Sta. 26+50 & Sta. 27+00
Showing on Reconstr. U.S. 250 Sta. 96+00 & Sta. 96+16
(Sheet 321) to Ramp K total.

$\frac{43+43}{2} \times 16 \div 9 = 76$ S.Y.

CM1 G.R. G.R.
Channel Change A Area Ramp K
F-1631
66"-Sta. 27+44 @ 90°
G-862.79
27+50
841.4
$V_1 = 51' \times \left(\frac{1773+1631}{2}\right) = 86,802$ C.F. (Emb.)

Area Ramp K Reloc. U.S.36
B B 140 160 CM2 180 E. Drive B B
850 842.82 840
C-268
$V_2 = 42' \times \left(\frac{0+268}{2}\right) = 5,628$ C.F. (Exc.)

CM1
Channel Change A
F-1773
ditch
G-860.87
27+00
841.8
$V_3 = 25' \times \left(\frac{24+0}{2}\right) = 300$ C.F. (Exc.)

A E. Hse. A 140 160
840
A A
840

$V_1 = 51' \times \left(\frac{1388+1773}{2}\right) = 80,606$ C.F. (Emb.)

Reconstr. U.S. 250
CM3 CM1
C-24
F-1388
ditch
G-859.36
26+50
843.0
$V_3 = 58' \times \left(\frac{3+24}{2}\right) = 783$ C.F. (Exc.)
830

$V_1 = 48' \times \frac{773+1388}{2} = 51,864$ C.F. (Emb.)

Reconstr. U.S. 250 Area Ramp K
CM3 G.R. G.R. CM1
C-3
F-773
G-858.33
26+00
847.8
Sta. 26+00
Begin Ramp K E'work
Area Ramp K Reloc. U.S. 36
840

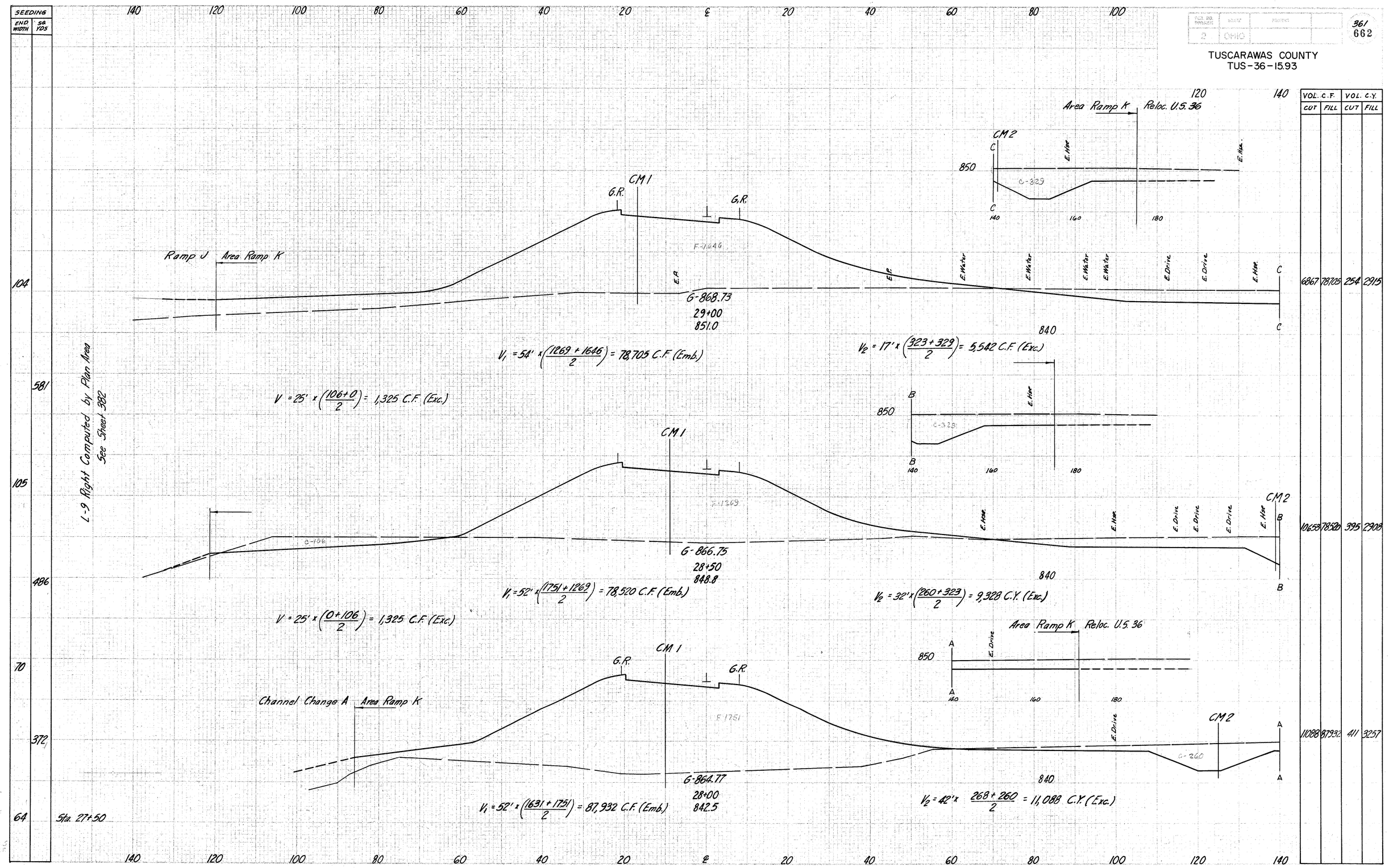
VOL. C.F. CUT	VOL. C.F. FILL	VOL. C.Y. CUT	VOL. C.Y. FILL
5628	86802	208	3215
300	80606	11	2985
783	51846	29	1921

Tied Rev. X-sect. this sheet & 400 TK/KJ DLH
Rev. 12/30/3 Quan. S. 12/31/3 KJ

Template SLS

U.S. 250 Interchange Ramp K Sta. 26+00 to 27+50

TUSCARAWAS COUNTY
TUS-36-15.93



U.S. 250 Interchange Ramp K Sta. 28+00 to 29+00

SEEDING	
END WIDTH	SQ YDS
53	
361	
77	
450	
85	
525	
104	

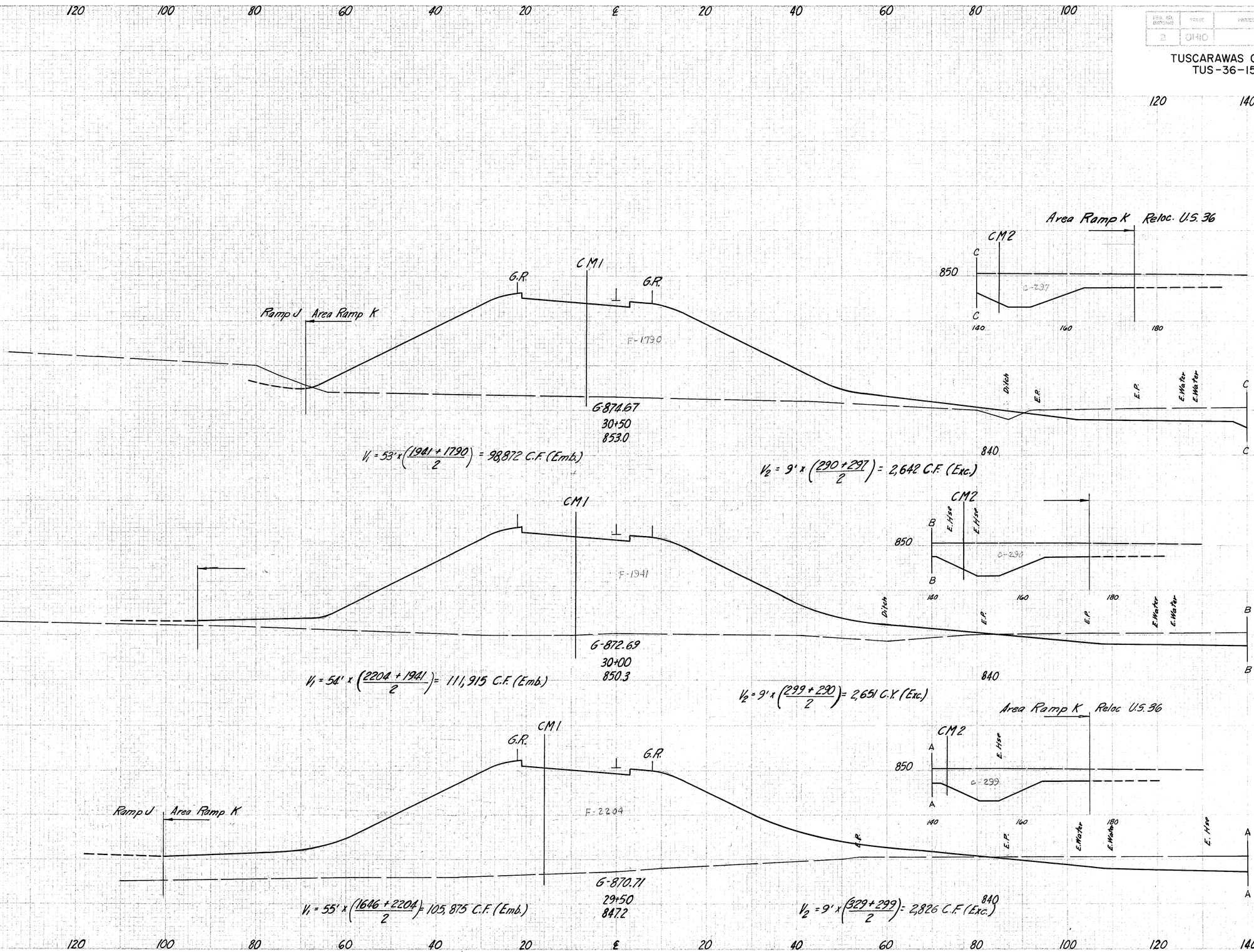
FED. AID PROJECT	STATE	PROJECT	
D	OHIO		

362
662

TUSCARAWAS COUNTY
TUS-36-15.93

VOL. C.F.		VOL. C.Y.	
CUT	FILL	CUT	FILL
2642	98872	98	3662
2651	111915	98	4145
2826	105875	105	3921

L-9 Right Computed by Plan Area
See Sheet 382

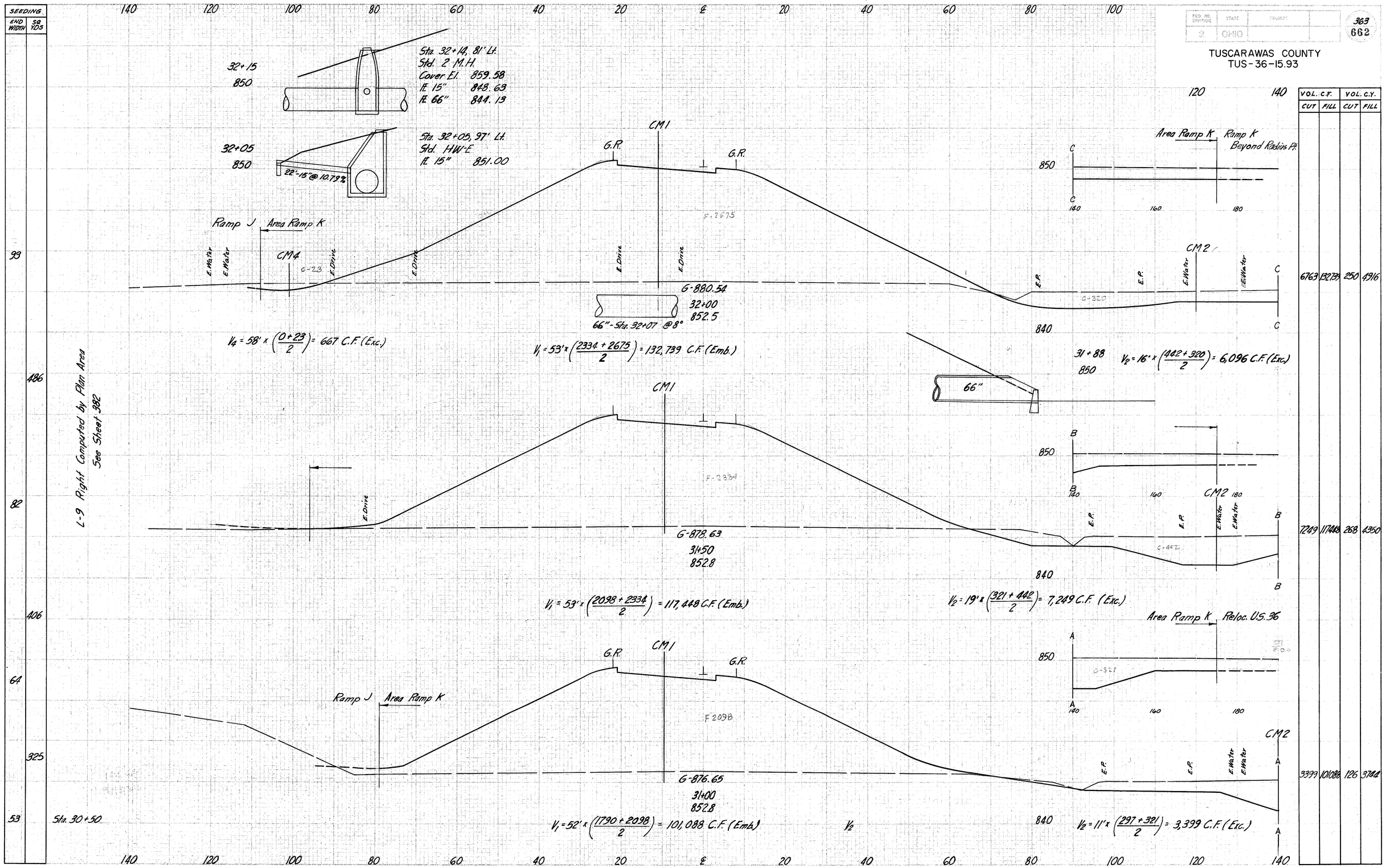


Sta. 29+00

U.S. 250 Interchange Ramp K Sta. 29+50 to 30+50

FED. RD. DIVISION 2 | STATE OHIO | PROJECT
363
662

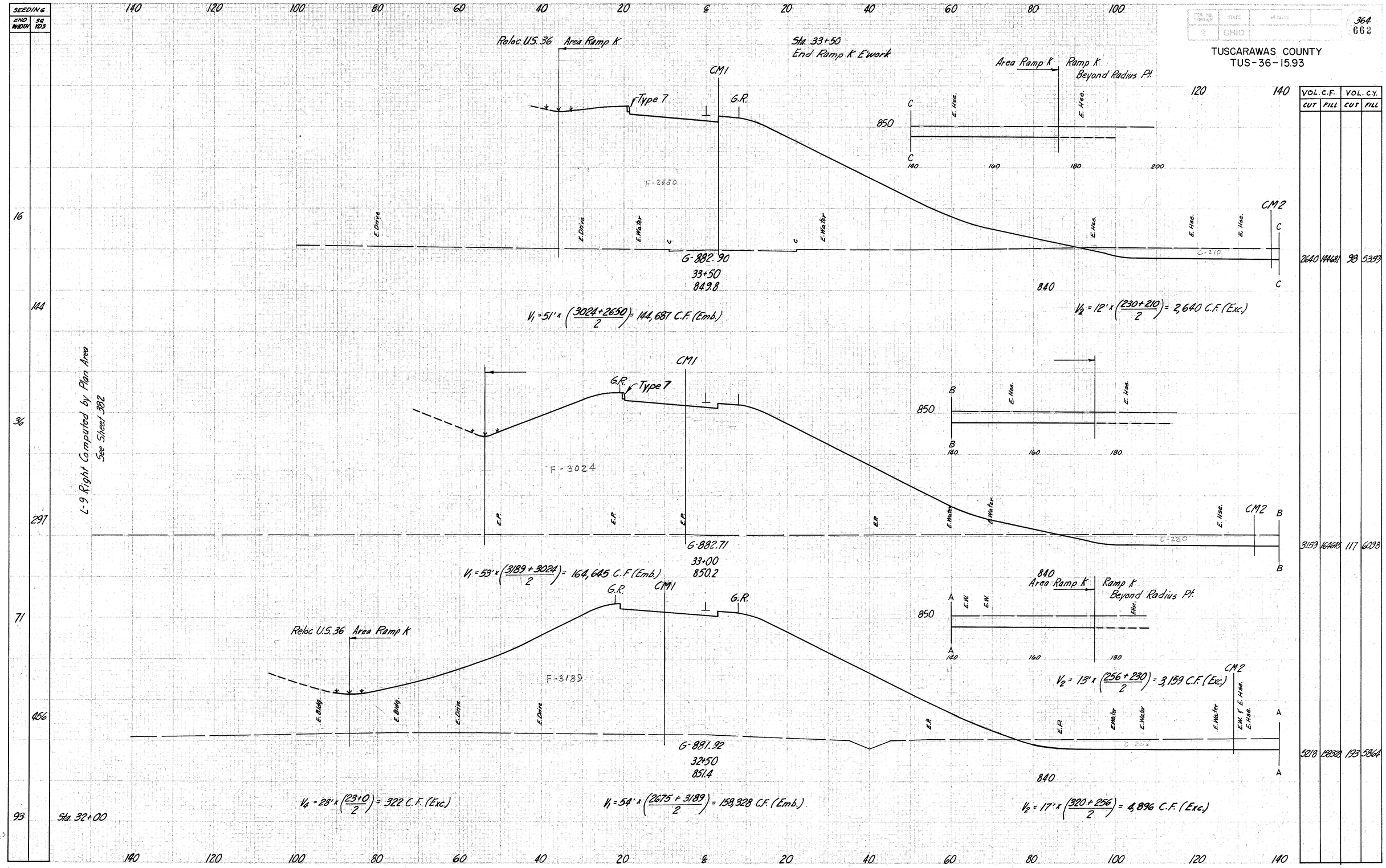
TUSCARAWAS COUNTY
TUS-36-15.93



VOL. C.F. CUT	VOL. C.F. FILL	VOL. C.Y. CUT	VOL. C.Y. FILL
6763	132739	250	4916
7249	117448	268	4350
3399	101088	126	3744

U.S. 250 Interchange Ramp K. Sta. 31+00 to 32+00

TUSCARAWAS COUNTY
TUS-36-15.93



VOL. C.F. CUT	VOL. C.F. FILL	VOL. C.Y. CUT	VOL. C.Y. FILL
2640	144687	98	5359
3159	164645	117	6098
5218	158328	193	5864

U.S. 250 Interchange Ramp K Sta. 32+50 to 33+50

SEEDING	
END WIDTH	SQ YDS
121	686
126	661
112	542
83	

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

365
662

TUSCARAWAS COUNTY
TUS-36-15.93

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	30		787
		46	1364
	20		686
		34	1119
	17		522
		28	981
	13		537

Reloc. U.S. 36 — Area Ramp L — G.R. — 2:1 — R/W — 850

G-863.37
22+00
851.8

850.66

8" San.

Reloc. U.S. 36 — Area Ramp L — 3.5:1 — R/W — 850

G-861.16
21+50
852.1

850.5

8" San.

Sta. 21+37, 79' Rt.
Std. M.H.
IE 8" Exist. 846.0±
IE 8" 842.77

8" San. — 10'-8" — 0.40 % — R/W — 850

Reconstr. U.S. 250 — Area Ramp L — 4:1 — 4:1

G-859.72
21+00
852.3

850.4

8" San.

840

Reconstr. U.S. 250 — Area Ramp L — 6:1 — Type 6 — G.R. — 4:1 — R/W

G-859.06
20+50
851.5

850.3

Sta. 20+60
Encased 6" W.M.

Sta. 20+50
Begin Ramp L E'work

840

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

U.S. 250 Interchange Ramp L Sta. 20+50 to 22+00

FED. RD. DIVISION 2 | STATE OHIO | PROJECT
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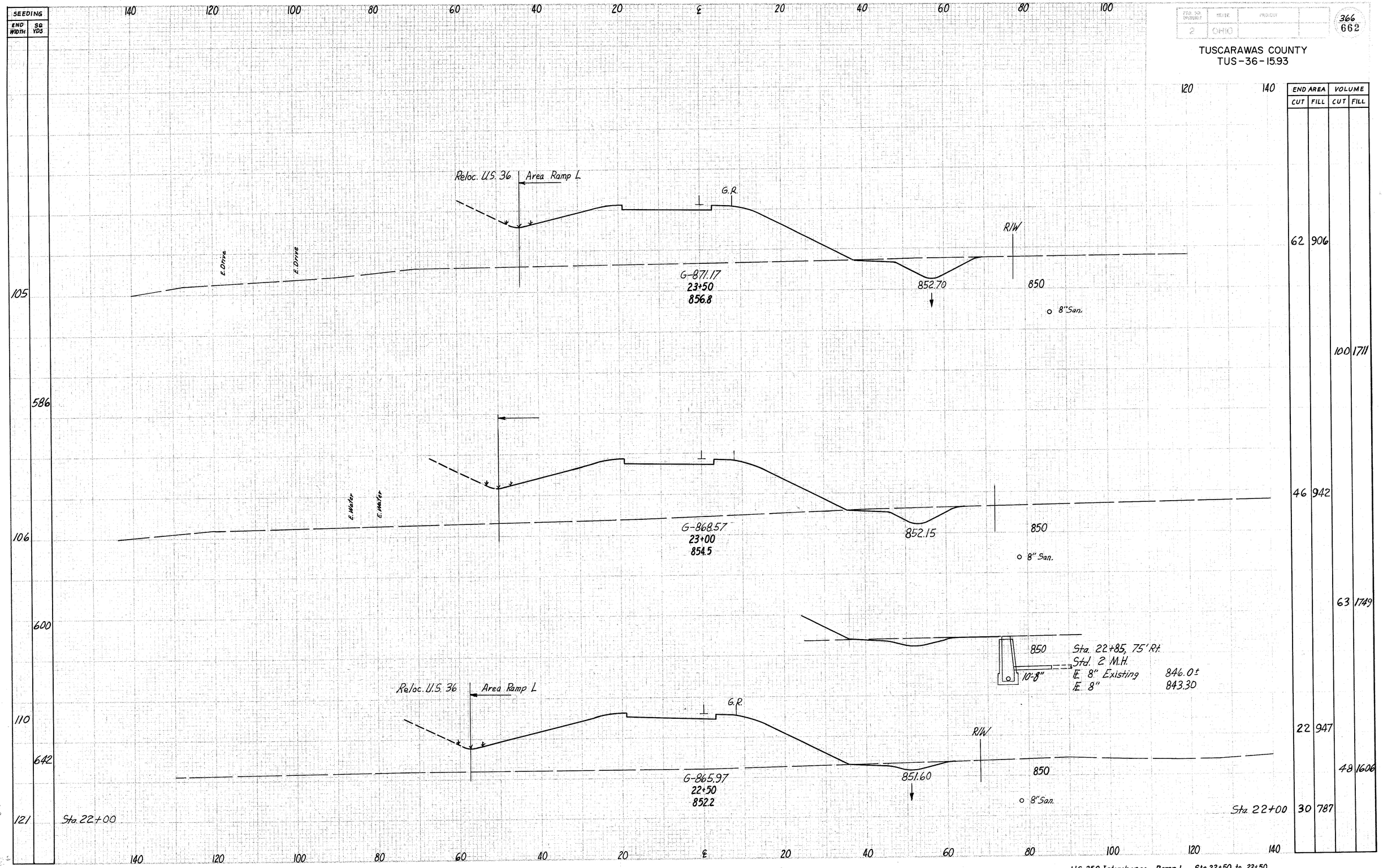
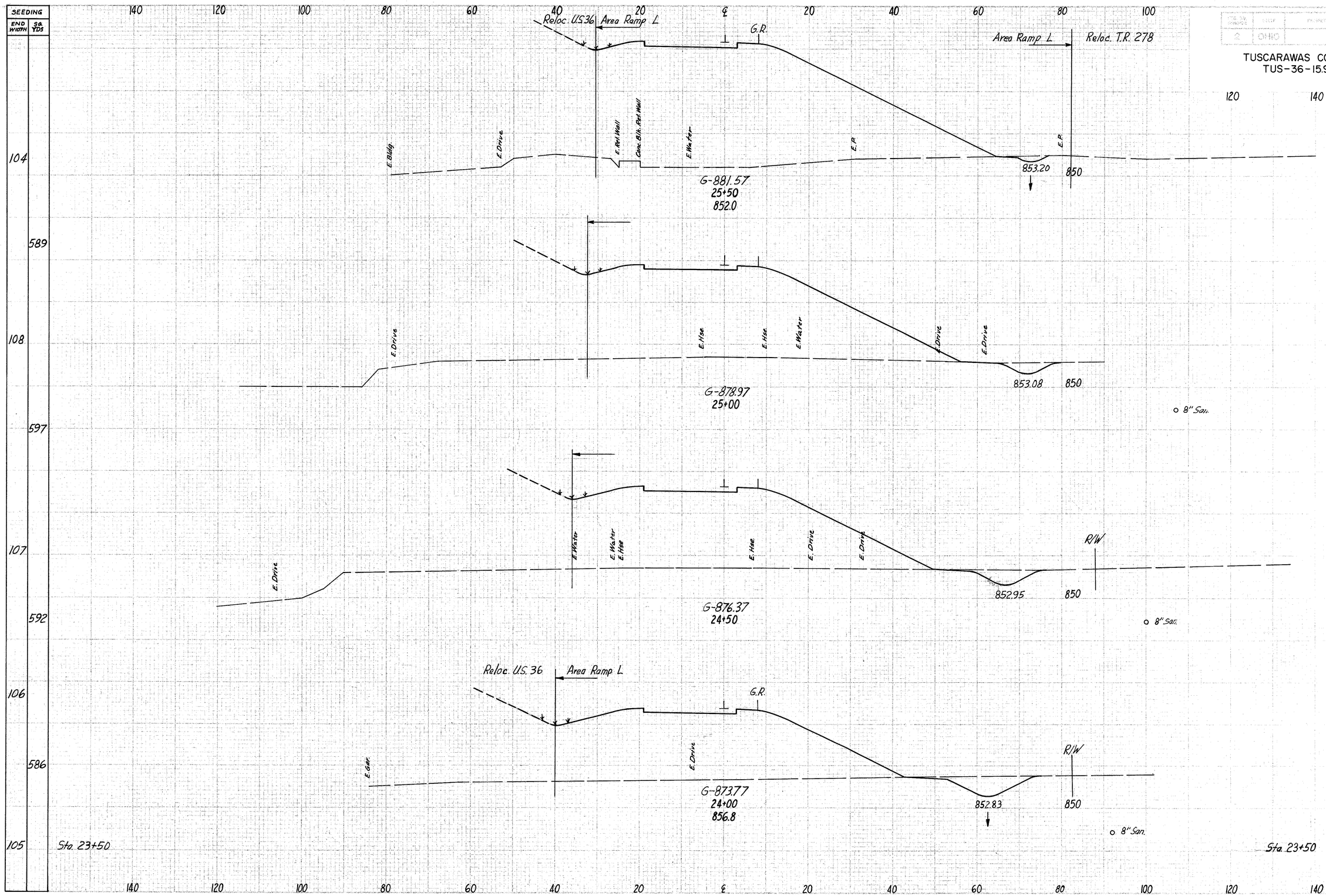
662

TUSCARAWAS COUNTY
TUS-36-15.93



U.S. 250 Interchange Ramp L Sta. 22+50 to 23+50

TUSCARAWAS COUNTY
TUS-36-15.93



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
8	1914		
		27	3088
21	1421		
		53	2451
36	1226		
		89	2127
60	1071		
		113	1831
62	906		

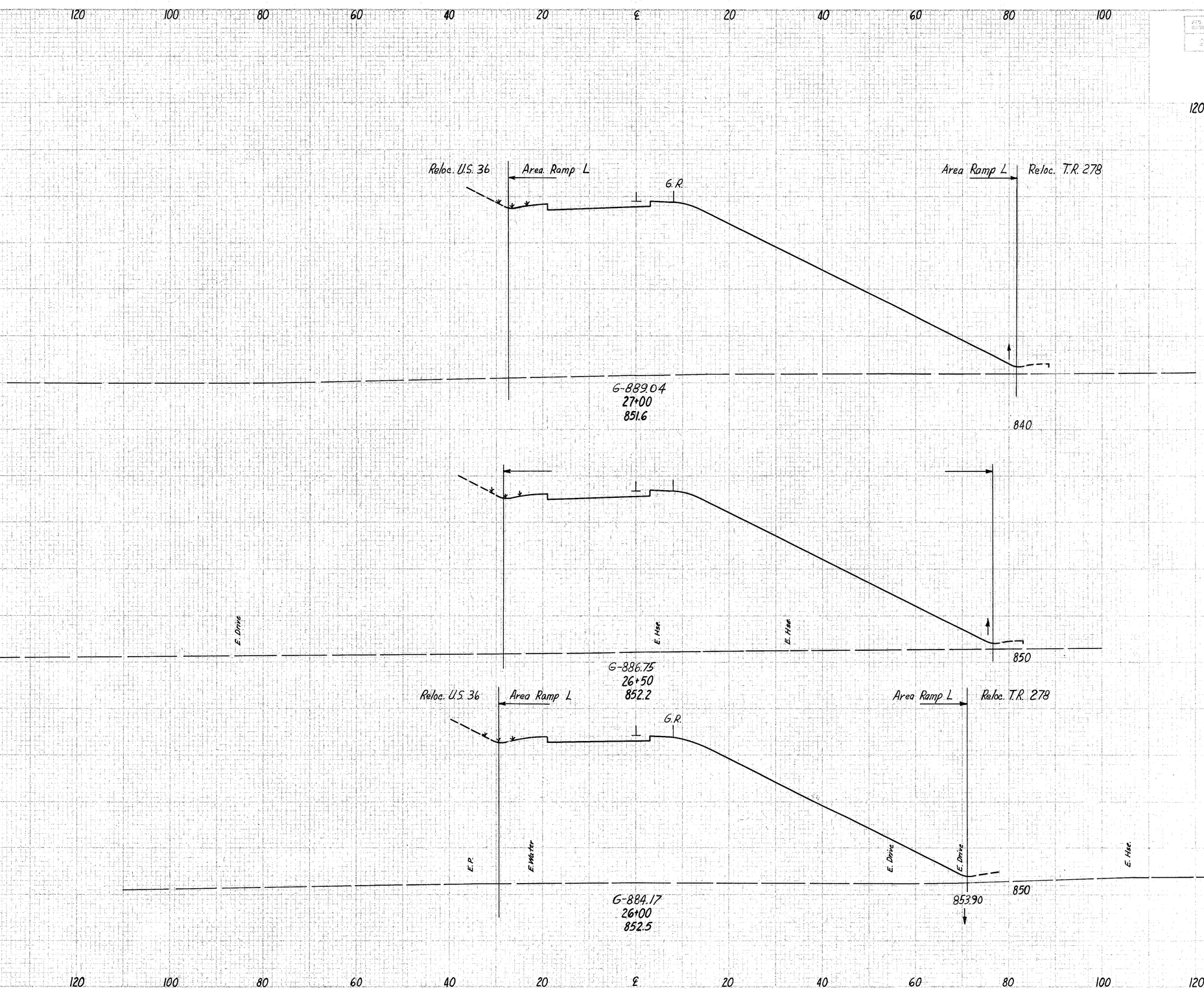
US 250 Interchange Ramp L Sta 24+00 to 25+50

FED. AID PROJ.	STATE	PROJECT		368 662
	OHIO			

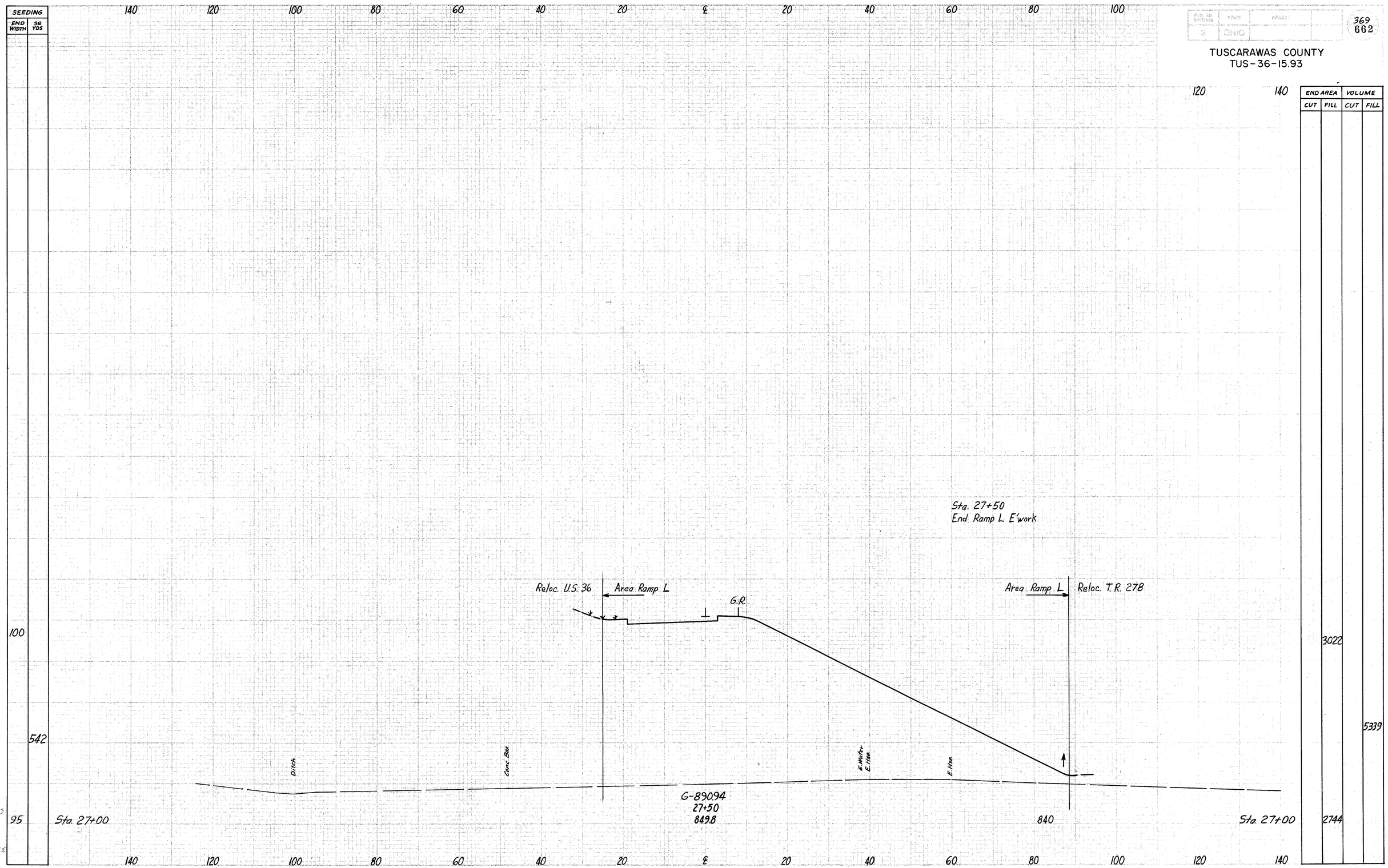
TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING END WIDTH	SEEDING SQ YDS
95	517
91	486
84	522
104	

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	2744		4832
	2475		4316
	2186		3796
0		6	
8	1914		



U.S.250 Interchange Ramp L Sta. 26+00 to 27+00



TUSCARAWAS COUNTY
TUS-36-15.93

369
662

U.S. 250 Interchange Ramp L Sta. 27+50

SEEDING		80	60	40	20	℄	20	40	60	80	END AREA		VOLUME	
LND WIDTH	SQ. YDS.										CUT	FILL	CUT	FILL
33	186	Area Reloc. T.R. 278 Ramp L E. Hse. R/W E. Hse. E. Drive E. Hse. New 6" W.M. 851.2 8" San. 852.0 G-854.72 11+50 851.6 840 852.0 88.5 House									3	93	11	143
34	192	E. Hse. R/W E. Hse. E. Drive E. Gar. E. Gar. E. Hse. E. Hse. New 6" W.M. 850.2 8" San. 852.3 G-854.25 11+00 851.8 840 852.0									9	61	44	75
35	169	850 6" W.M. 8" Sta 10+79, 38.5' Lt. Std. 1 M.H. Cover El. 852.10 IE 8" (out) 845.00 IE 8" (Exist.) 845.0 ± Ramp L R/W New 6" W.M. 849.2 G-853.08 10+50 852.0 840 850.0									38	20	37	99
26	158	Reloc. US 36 R/W E. Drive E. Drive E. Hse. E. Hse. 847.0 G-851.22 10+00 848.0 840									2	87	13	94
31	135	Area Reloc. T.R. 278 Reloc. US 36 Ramp L Skewed Slope R/W E. Drive E. Drive E. R. E. R. E. Drive 56'-22"x13" @ 0.54% 36'-22"x13" @ 0.54% IE 22"x13" 845.86 Sta 9+25, 21' Lt. Std HW-E IE 22" 846.35 G-849.39 9+50 848.2 Sta. 9+04, 28' Rt. Std. 2-2A C.B. Grate El. 848.45 Window El. 847.95 IE 22"x13" 846.05 840									12	15	11	8
8	3	Sta. 9+25 12 — Sta. 9+21 0 12 R/W E. R. E. R. Wall Wall New 6" W.M. 8+87.82 849.3 850 Sta. 8+80 Area = 10 Sq. Ft. (Exc.) 7 3												
0		Sta. 8+80 Sta. 8+80 Begin Work Sta. 8+80 10												

Reloc. T.R 278 Sta 8+87.82 to Sta 11+50

TUSCARAWAS COUNTY
TUS-36-15.93

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662

SEEDING	
END WIDTH	SQ. YDS.
0	
12	
8	
86	
23	
164	
36	
192	
33	

80 60 40 20 ℄ 20 40 60 80

END AREA		VOLUME	
CUT	FILL	CUT	FILL
15	0		
		12	1
8	1		
		11	9
4	9		
		15	32
12	26		
		14	110
3	93		

Sta. 11+50 Sta. 11+50

Relocate T.R. 278 Sta. 12+00 to Sta. 13+27.55

Drive Lt. Sta. 13+00				
STATION	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
0+30	6		5	
0+20	21		7	
0+10	16			

End Work Sta. 0+30

850

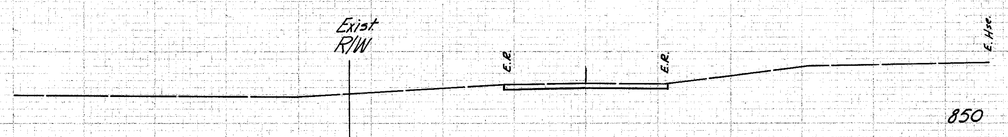
0+30

850

0+20

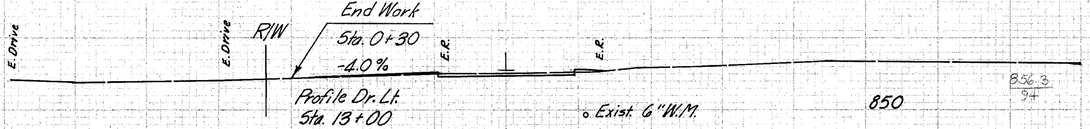
0+10 = 16 S.F. Cut
Drive Lt. Sta. 13+00

Sta. 13+28
End Work



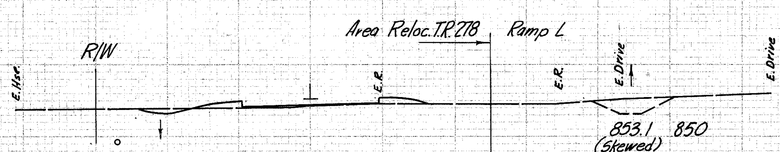
854.0
90

G-855.60
13+27.52
855.6



856.3
94

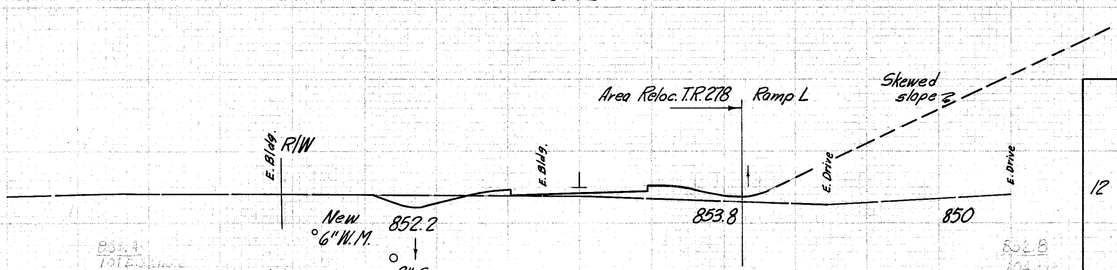
G-855.47
13+00
855.0



853.11
74 House

857.2
720

G-855.22
12+50
854.2



853.8
TOTEM House

852.8
704 Ave.

G-854.97
12+00
853.8

TUSCARAWAS COUNTY
TUS-36-15.93

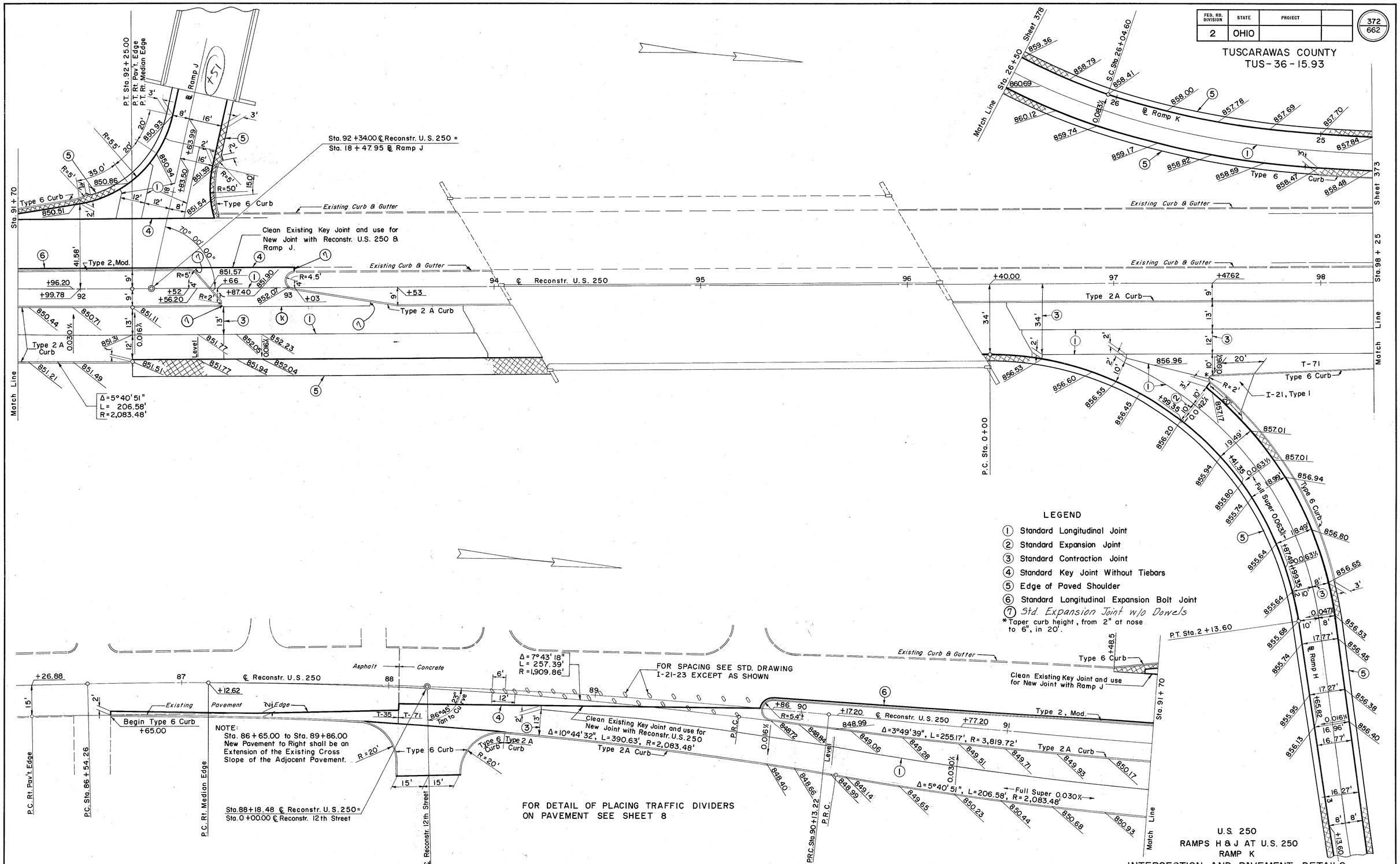
OHIO DEPARTMENT OF TRANSPORTATION

377
693

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

372
662

TUSCARAWAS COUNTY
TUS-36-15.93



LEGEND

1. Standard Longitudinal Joint
2. Standard Expansion Joint
3. Standard Contraction Joint
4. Standard Key Joint Without Tiebars
5. Edge of Paved Shoulder
6. Standard Longitudinal Expansion Bolt Joint
7. Std. Expansion Joint w/o Dowels

*Taper curb height, from 2" at nose to 6", in 20'.

U.S. 250
RAMPS H & J AT U.S. 250
RAMP K
INTERSECTION AND PAVEMENT DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

373
662

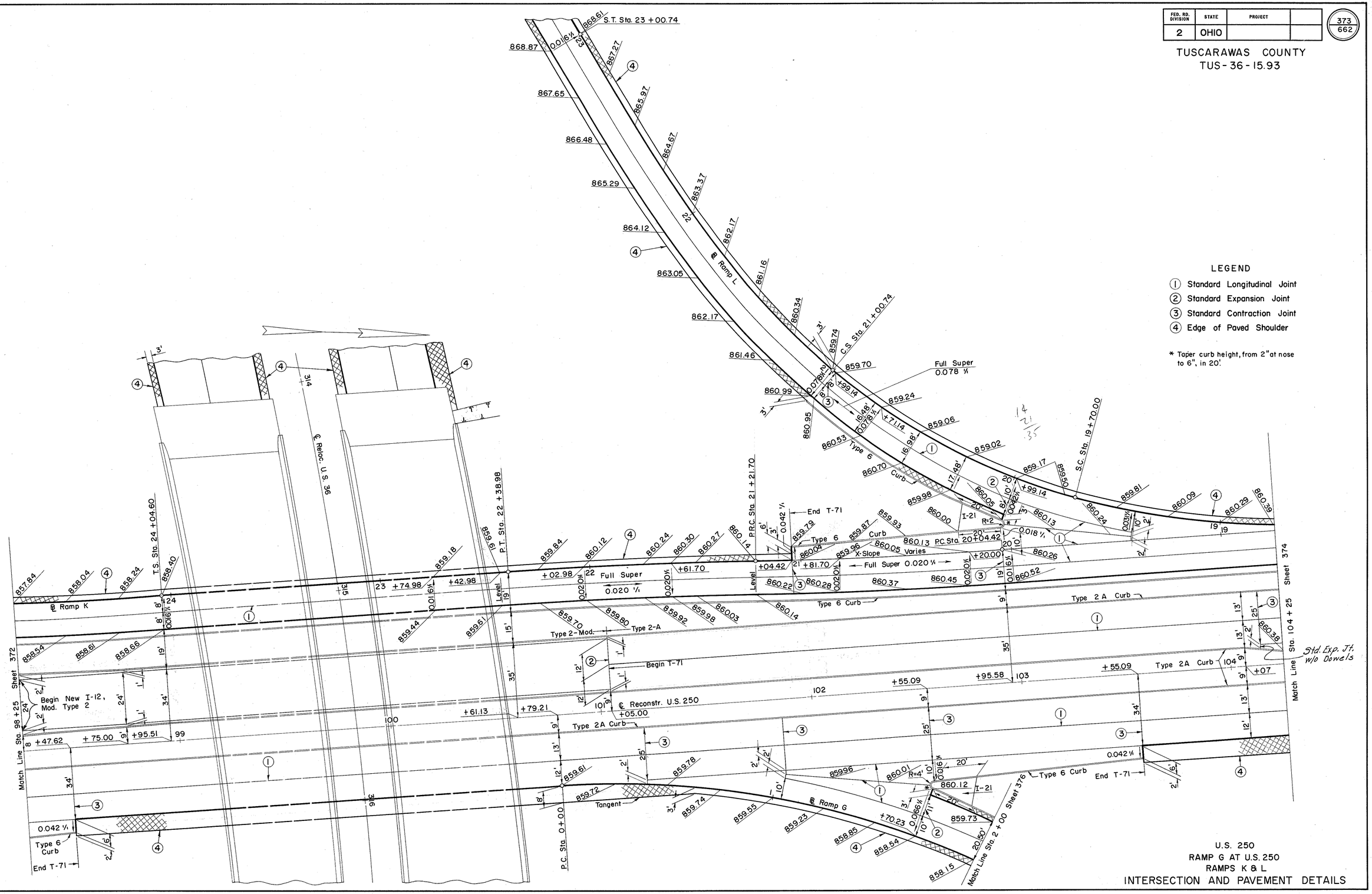
TUSCARAWAS COUNTY
TUS-36-15.93

LEGEND

(1) Standard Longitudinal Joint
(2) Standard Expansion Joint
(3) Standard Contraction Joint
(4) Edge of Paved Shoulder

* Taper curb height, from 2" at nose to 6", in 20'.

14
21
35

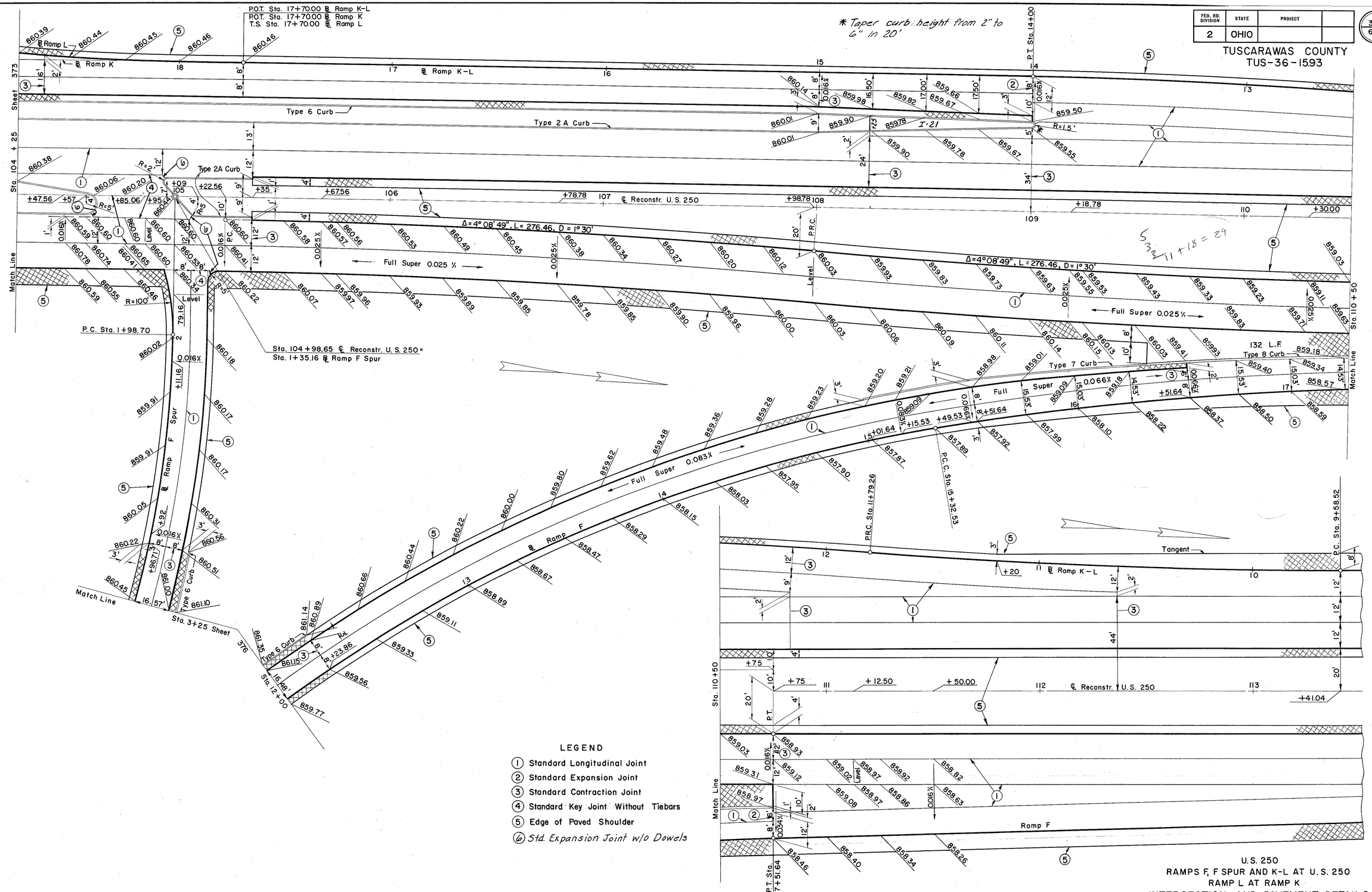


U.S. 250
RAMP G AT U.S. 250
RAMPS K & L
INTERSECTION AND PAVEMENT DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

374
662

TUSCARAWAS COUNTY
TUS-36-15.93



LEGEND

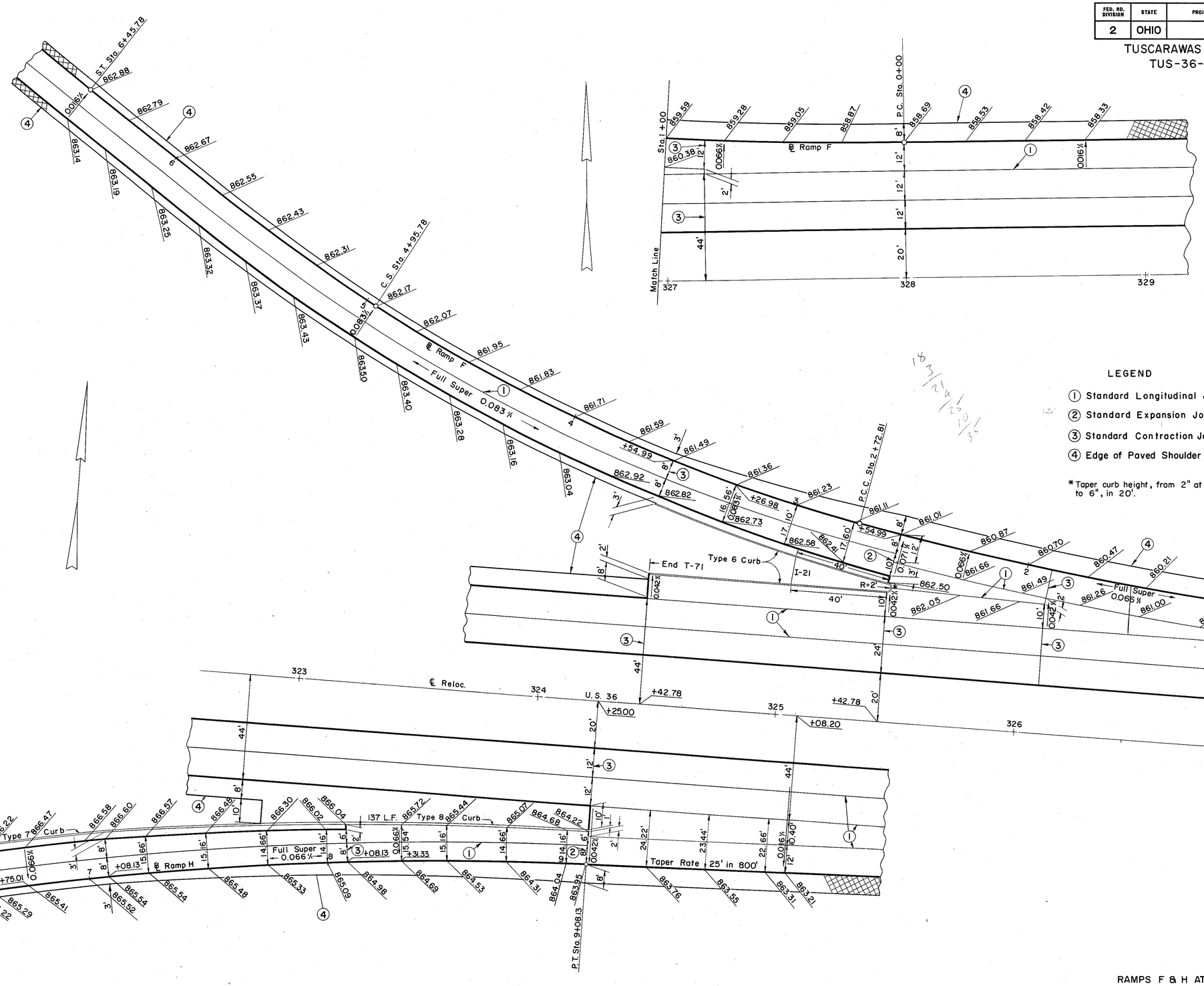
1. Standard Longitudinal Joint
2. Standard Expansion Joint
3. Standard Contraction Joint
4. Standard Key Joint Without Tiebars
5. Edge of Paved Shoulder
6. Std. Expansion Joint w/o Dowels

U.S. 250
RAMPS F, F SPUR AND K-L AT U.S. 250
RAMP L AT RAMP K
INTERSECTION AND PAVEMENT DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

375
662

TUSCARAWAS COUNTY
TUS-36-15.93

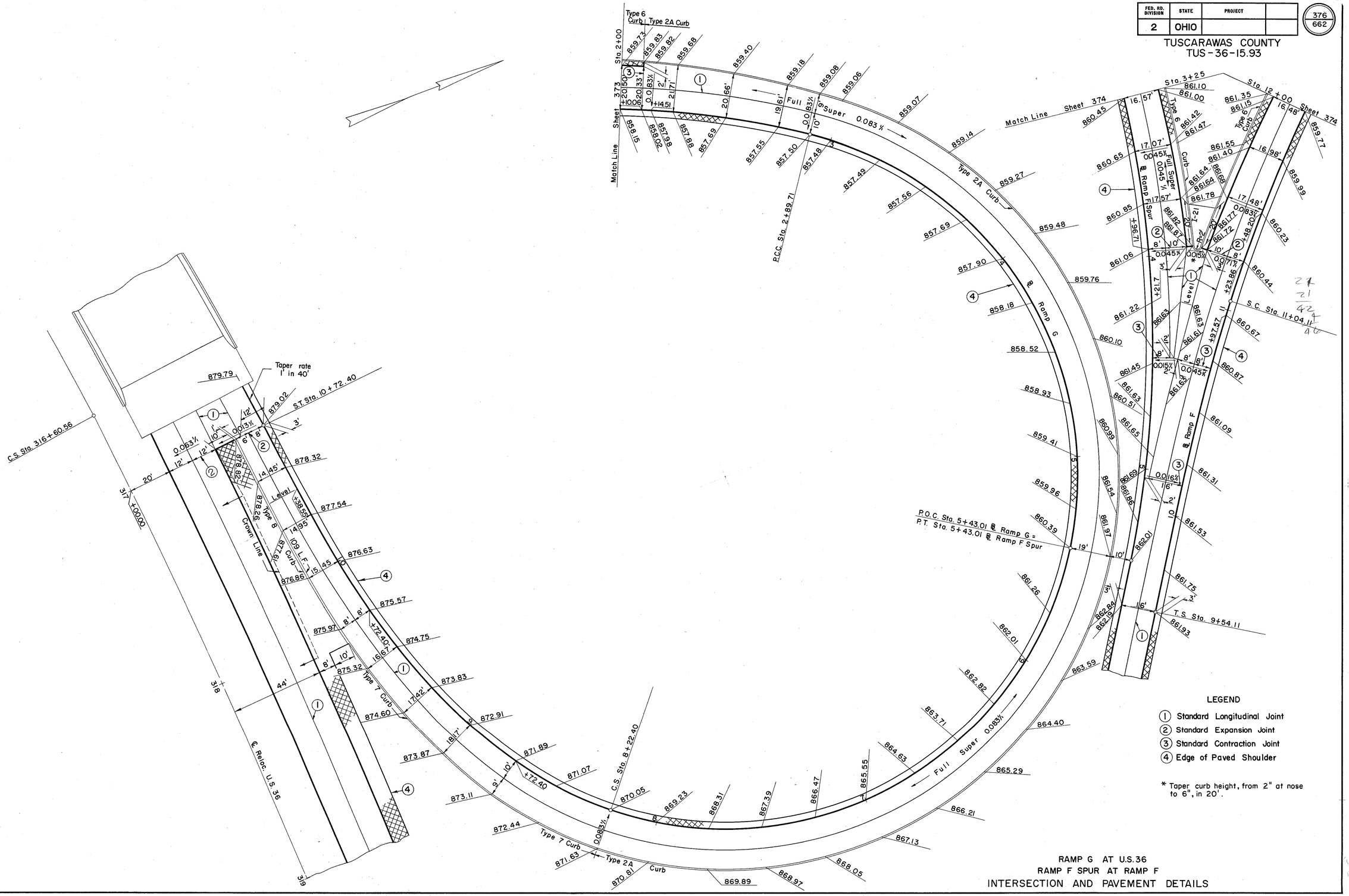


RAMPS F & H AT U.S. 36
INTERSECTION & PAVEMENT DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

376
662

TUSCARAWAS COUNTY
TUS-36-15.93



LEGEND

(1) Standard Longitudinal Joint
(2) Standard Expansion Joint
(3) Standard Contraction Joint
(4) Edge of Paved Shoulder

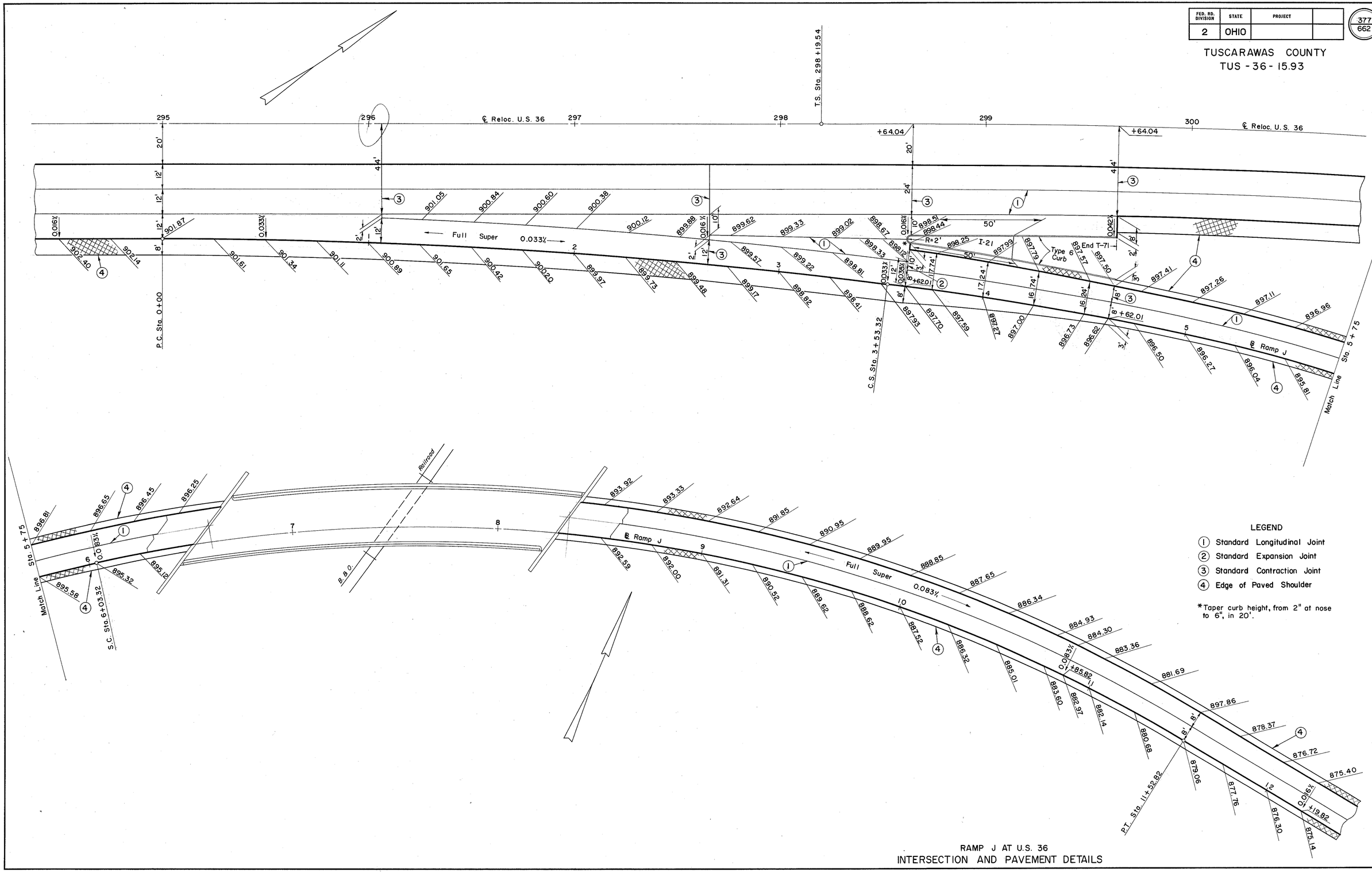
* Taper curb height, from 2" at nose to 6", in 20'.

RAMP G AT U.S. 36
RAMP F SPUR AT RAMP F
INTERSECTION AND PAVEMENT DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

377
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93



LEGEND

(1) Standard Longitudinal Joint
(2) Standard Expansion Joint
(3) Standard Contraction Joint
(4) Edge of Paved Shoulder

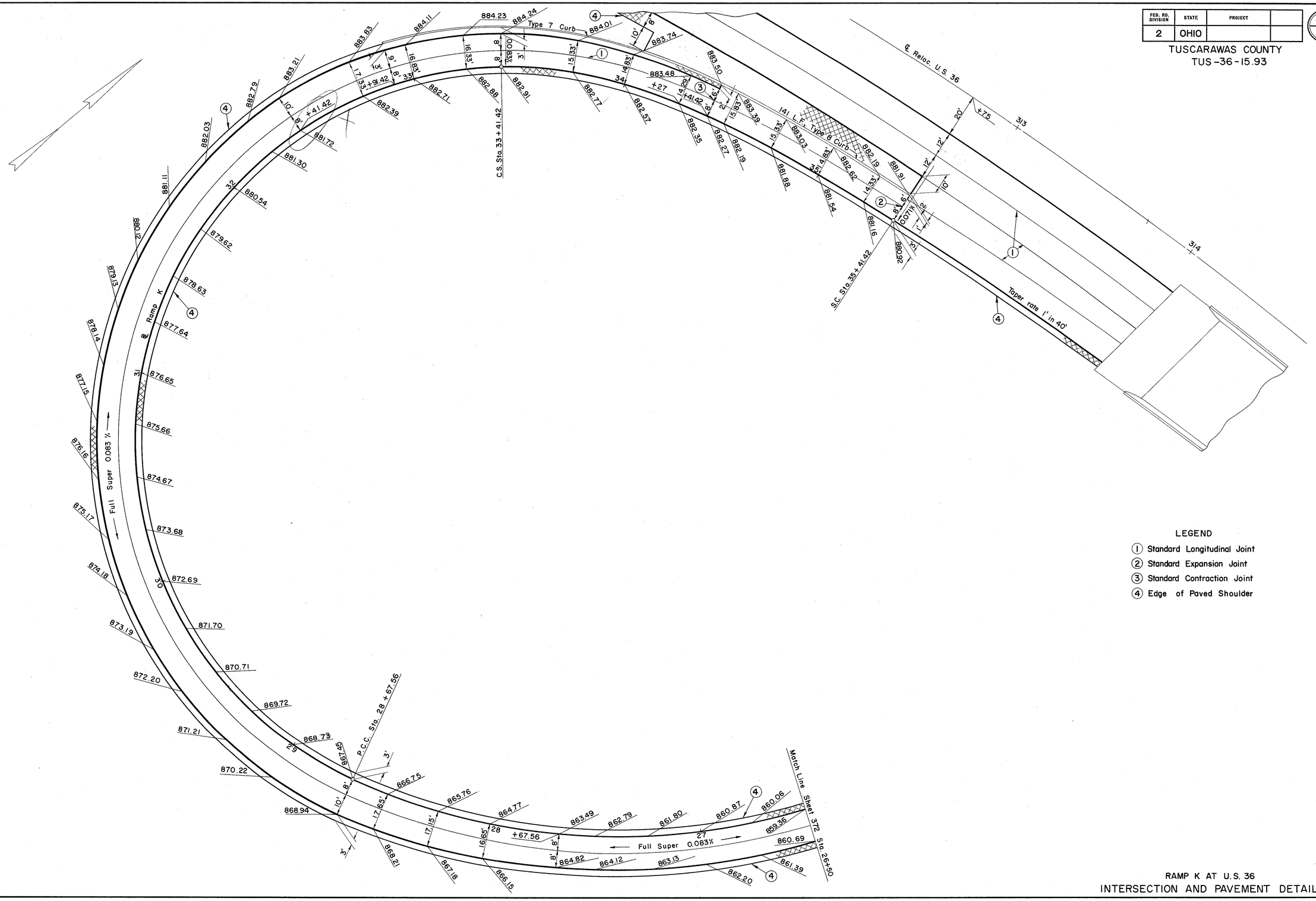
*Taper curb height, from 2" at nose to 6", in 20'.

RAMP J AT U.S. 36
INTERSECTION AND PAVEMENT DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

378
662

TUSCARAWAS COUNTY
TUS-36-15.93



LEGEND

(1) Standard Longitudinal Joint
(2) Standard Expansion Joint
(3) Standard Contraction Joint
(4) Edge of Paved Shoulder

RAMP K AT U.S. 36
INTERSECTION AND PAVEMENT DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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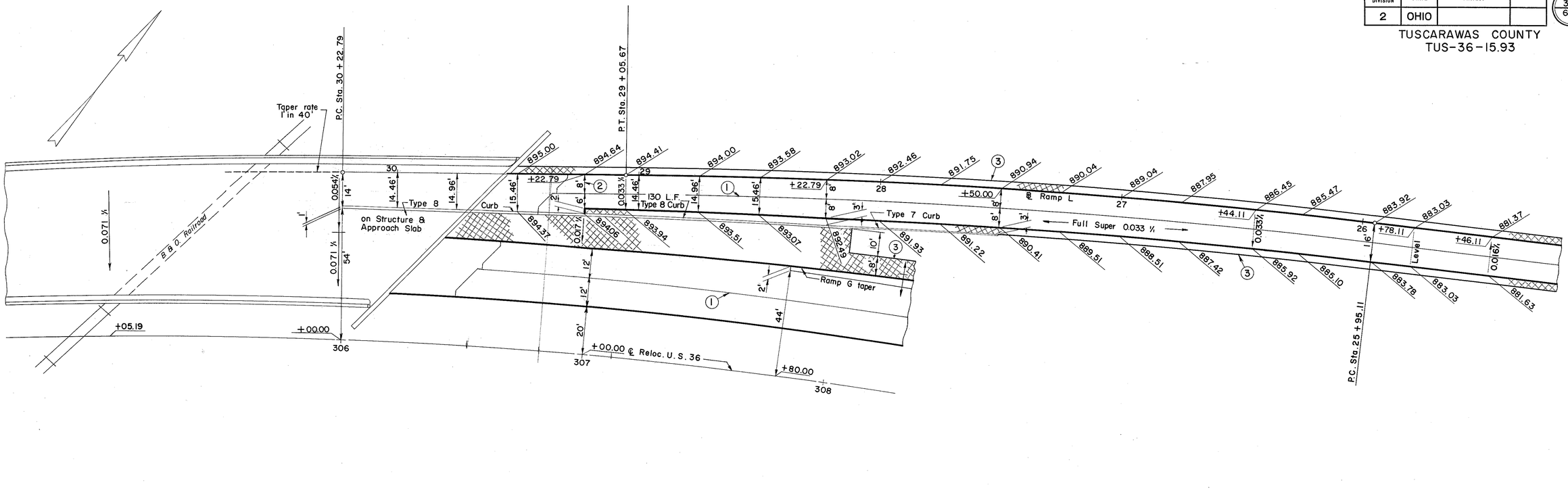
662

TUSCARAWAS COUNTY
TUS-36-15.93



LEGEND

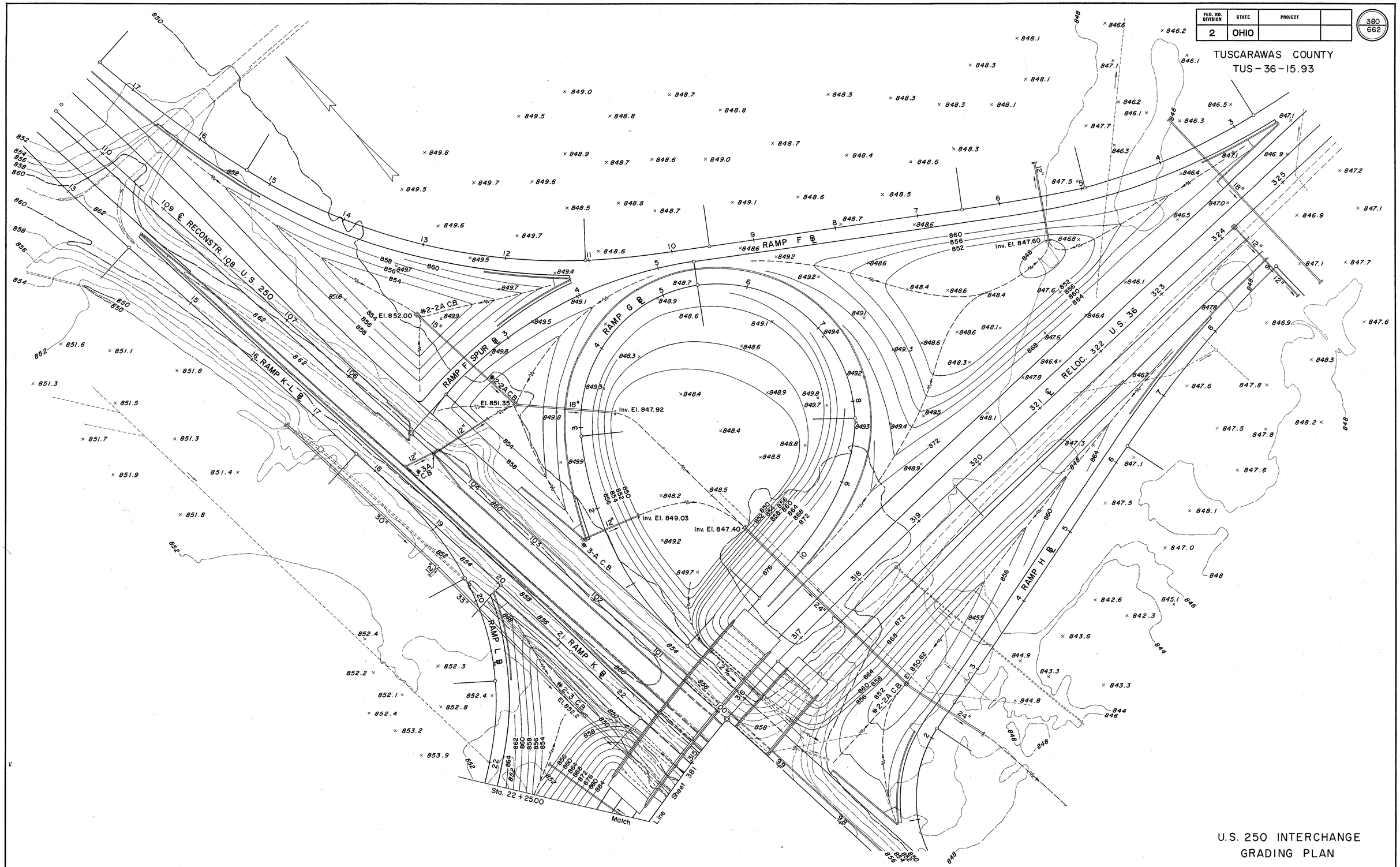
① Standard Longitudinal Joint
② Standard Contraction Joint
③ Edge of Paved Shoulder

RAMP L AT U.S. 36
INTERSECTION AND PAVEMENT DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

380
662

TUSCARAWAS COUNTY
TUS-36-15.93

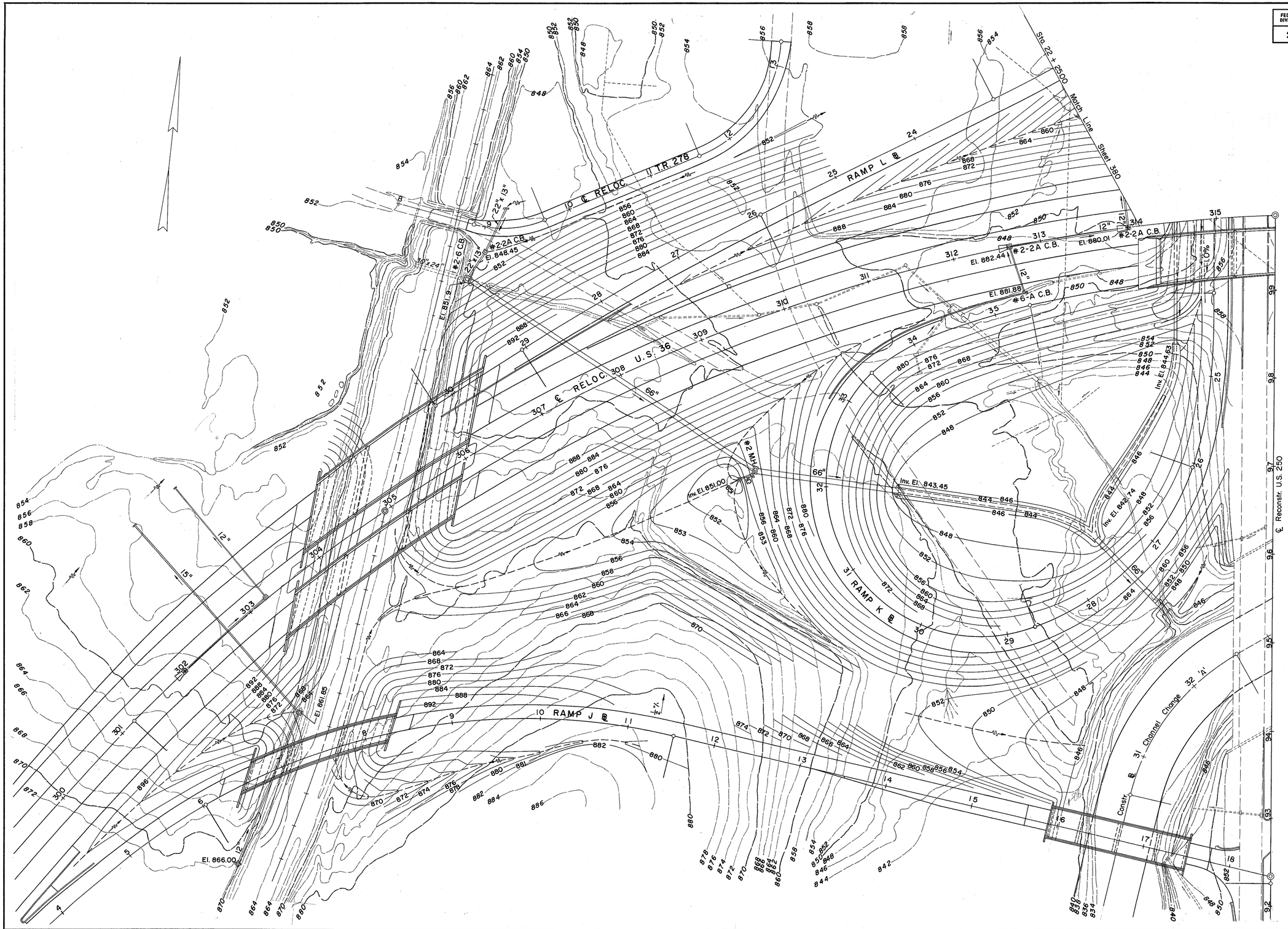


U.S. 250 INTERCHANGE
GRADING PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

381
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93



U.S. 250 INTERCHANGE
GRADING PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

382
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

RELOC. US 36				
POINT	STATION		COORDINATES N	E
	P.O.T.	294 + 81.28	269,663.74	2,318,935.78
	P.I.	309 + 69.64	270,896.05	2,319,770.40
1	315 + 65.81 Reconstr. US. 250 99 + 83.73		270,887.15	2,320,526.62
	P.O.T.	345 + 42.07	270,939.04	2,323,501.76
RAMP F				
2	P.C.	0 + 00.00	270,974.97	2,321,759.17
	P.I.	1 + 36.82	270,973.40	2,321,622.37
3	P.C.C.	2 + 73.81	270,997.75	2,321,487.73
	P.I.	3 + 85.21	270,017.75	2,321,377.13
4	C.S.	4 + 95.78	271,070.68	2,321,277.98
	P.I.	5 + 45.83	271,094.24	2,321,233.82
5	S.T.	6 + 45.78	271,150.33	2,321,150.96
6	T.S.	9 + 54.11	271,323.14	2,320,895.61
	P.I.	10 + 54.17	271,379.23	2,320,812.74
7	S.C.	11 + 04.11	271,411.46	2,320,774.45
	P.I.	13 + 24.95	271,553.68	2,320,605.50
8	P.C.C.	15 + 32.53	271,766.34	2,320,545.98
	P.I.	16 + 42.30	271,872.05	2,320,516.40
9	P.T.	17 + 51.64	271,981.03	2,320,503.26
RAMP F SPUR				
10	1 + 35.16 Reconstr. US. 250 104 + 98.65		271,401.40	2,320,495.49
11	P.C.	1 + 98.70	271,405.74	2,320,541.72
	P.I.	3 + 77.99	271,422.51	2,320,720.23
12	P.T.	5 + 43.01	271,322.01	2,320,868.71
RAMP G				
13	P.C.	0 + 00.00	270,985.39	2,320,551.53
	P.I.	1 + 51.54	271,136.26	2,320,537.36
14	P.C.C.	2 + 89.71	271,258.64	2,320,626.72
15	C.S.	8 + 22.40	271,052.87	2,320,884.30
	P.I.	9 + 10.58	270,986.43	2,320,826.33
16	S.T.	10 + 72.40	270,969.99	2,320,655.15
RAMP H				
17	P.C.	0 + 00.00	270,548.10	2,320,592.59
	P.I.	1 + 29.45	270,676.99	2,320,580.49
18	P.T.	2 + 13.60	270,707.81	2,320,706.22
19	P.C.	6 + 25.01	270,805.77	2,321,105.80
	P.I.	7 + 67.03	270,839.59	2,321,243.73
20	P.T.	9 + 08.13	270,845.66	2,321,385.66

RAMP J				
POINT	STATION		COORDINATES N	E
21	P.C.	0 + 00.00	269,647.84	2,318,992.64
	P.I.	1 + 76.88	269,794.29	2,319,091.84
22	C.S.	3 + 53.32	269,927.43	2,319,208.29
	P.I.	5 + 03.85	270,040.73	2,319,307.40
23	S.C.	6 + 03.32	270,100.24	2,319,388.34
	P.I.	8 + 92.39	270,271.48	2,319,621.24
24	P.T.	11 + 52.82	270,233.07	2,319,907.75
25	18 + 47.95 Reconstr. US. 250 92 + 34.00		270,140.70	2,320,596.71
RAMP K-L				
26	P.C.	9 + 58.52	272,234.21	2,320,353.93
	P.I.	10 + 68.94	272,124.27	2,320,364.25
27	P.R.C.	11 + 79.26	272,013.86	2,320,366.08
	P.I.	12 + 89.68	271,903.46	2,320,367.91
28	P.T.	14 + 00.00	271,793.52	2,320,378.23
29	P.O.T. Ramp K T.S. Ramp L	17 + 70.00	271,425.14	2,320,412.82
RAMP K				
29	P.O.T.	17 + 70.00	271,425.14	2,320,412.82
30	P.C.	20 + 04.42	271,191.75	2,320,434.74
	P.I.	20 + 63.07	271,133.36	2,320,440.22
31	P.R.C.	21 + 21.70	271,074.76	2,320,442.71
	P.I.	21 + 80.35	271,016.16	2,320,445.20
32	P.T.	22 + 38.98	270,957.76	2,320,450.68
33	T.S.	24 + 04.60	270,792.87	2,320,466.17
	P.I.	25 + 38.72	270,659.34	2,320,478.71
34	S.C.	26 + 04.60	270,593.88	2,320,462.71
	P.I.	27 + 45.20	270,457.30	2,320,429.33
35	P.C.C.	28 + 67.56	270,395.57	2,320,303.00
	P.I.	36 + 61.67	270,046.92	2,319,589.52
36	C.S.	33 + 41.42	270,663.17	2,320,090.36
	P.I.	34 + 10.23	270,716.57	2,320,133.76
37	S.T.	35 + 41.42	270,758.86	2,320,262.69

RAMP L				
POINT	STATION		COORDINATES N	E
29	T.S.	17 + 70.00	271,425.14	2,320,412.82
	P.I.	19 + 04.12	271,291.61	2,320,425.36
38	S.C.	19 + 70.00	271,226.15	2,320,409.37
	P.I.	20 + 36.42	271,161.63	2,320,393.60
39	C.S.	21 + 00.74	271,109.79	2,320,352.06
	P.I.	21 + 68.12	271,057.21	2,320,309.93
40	S.T.	23 + 00.74	270,985.75	2,320,196.44
41	P.C.	25 + 95.11	270,828.89	2,319,947.33
	P.I.	27 + 50.54	270,746.07	2,319,815.81
42	P.T.	29 + 05.67	270,649.51	2,319,694.01
43	P.O.T.	30 + 22.79	270,576.74	2,319,602.24

LEGEND

CROSS SECTION LINE

EARTHWORK CUTOFF LINE

CENTER OF MASS LINES FOR EARTHWORK COMPUTATION

SEEDING COMPUTATION

COORDINATED POINTS (1)

EARTHWORK

DISTANCES BETWEEN CENTER OF MASS CROSS SECTIONS ARE SCALED DISTANCES ALONG CENTER OF MASS LINES SHOWN ON THIS SHEET. COMPUTATION OF VOLUME IS SHOWN ON CROSS SECTIONS.

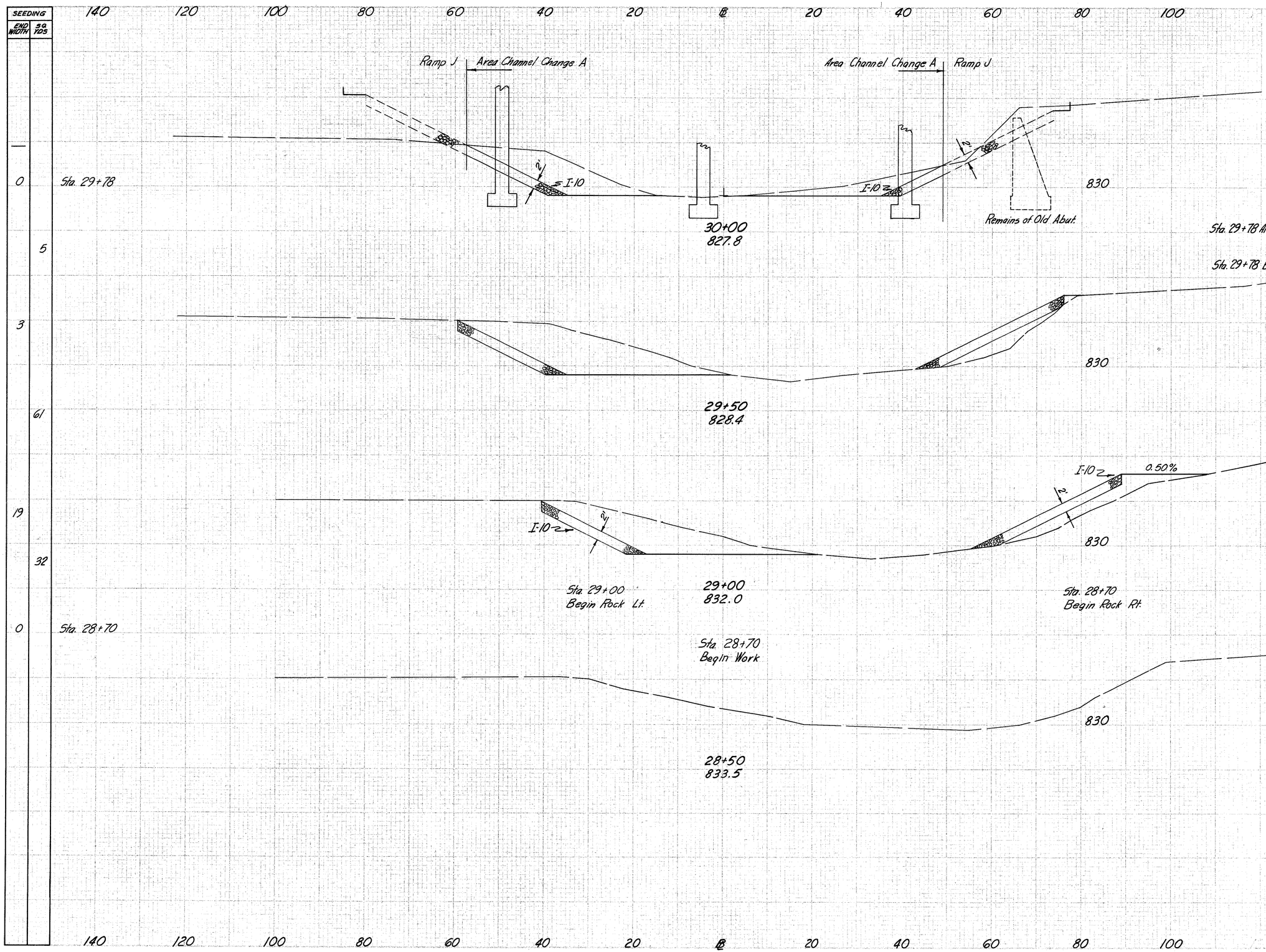
SEEDING

RAMPS G&K WITHIN LOOPS PLANIMETERED AND COMPUTED BY PLAN AREA, STABILIZED SHOULDER WIDTH DEDUCTED WITH ADJUSTMENT MADE FOR SLOPES.

CROSS SECTION AND GEOMETRIC LAYOUT
U.S. 250 INTERCHANGE

FED. ROAD DIVISION	STATE	PROJECT		383
2	OHIO			662

TUSCARAWAS COUNTY
TUS – 36 – 15.93



I-10 END AREA	I-10 VOLUME		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
190		E-3 Exc.	253	0		
	155					
190					540	116
	—					
118						
	122		330	125		
118						
	216				531	270
		E-3 Exc.	244	167		
115					136	93
	64					
0		Sta. 28+70	0	0		

Channel Change 'A'
Sta. 28+50 to 30+00

FED. ROAD DIVISION	STATE	PROJECT	384 662
2	OHIO		

TUSCARAWAS COUNTY
TUS – 36 – 15.93

SEEDING END WIDTH	SEEDING SQ. YDS
1	
	25
8	
	47
9	
	42
6	
	9
0	

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

Ramp K | Area Channel Change A

Sta. 27+75
54' Lt.

C-1 | 2' | S I-10 | C-123 | 2' | I-10 | Backwall

830

32+00
824.3

F-72 | C-18 | F-37 | C-3

830

31+50
826.1

Ramp K

6" W.M.

830

31+00
830.0

Ramp J | Area Channel Change A

2' | I-10 | S I-10 | 6" W.M.

Sta. 30+24 Ahd. 150
Sta. 30+24 Bk. 190

830

Remains of Old Pier

30+50
829.8

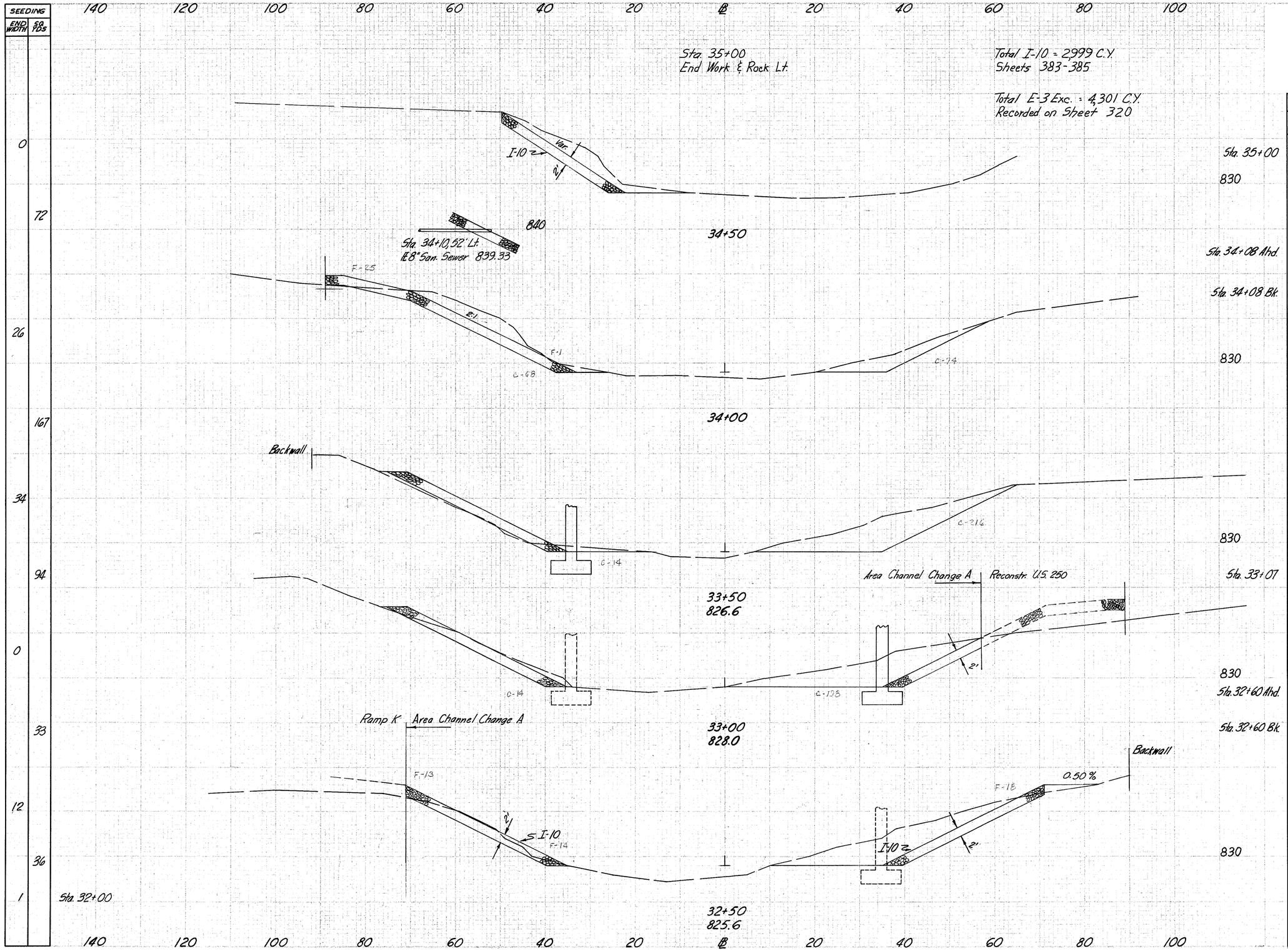
Sta. 30+24

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

Channel Change 'A' Sta. 30+50 to 32+00

I-10 END AREA	I-10 VOLUME		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
162		E-3 Exc.	124	70		
	289				134	166
150		E-3 Exc.	21	109		
	278				272	188
150			273	94		
	278				548	134
150						
	169				530	47
190		Sta. 30+00	253	0		
	144	E-3 Exc.	319	51		

TUSCARAWAS COUNTY
TUS - 36 - 15.93



Channel Change 'A' Sta. 32+50 to 34+50

SHEET NO.	STATE	PROJECT		
2	OHIO			

386
662

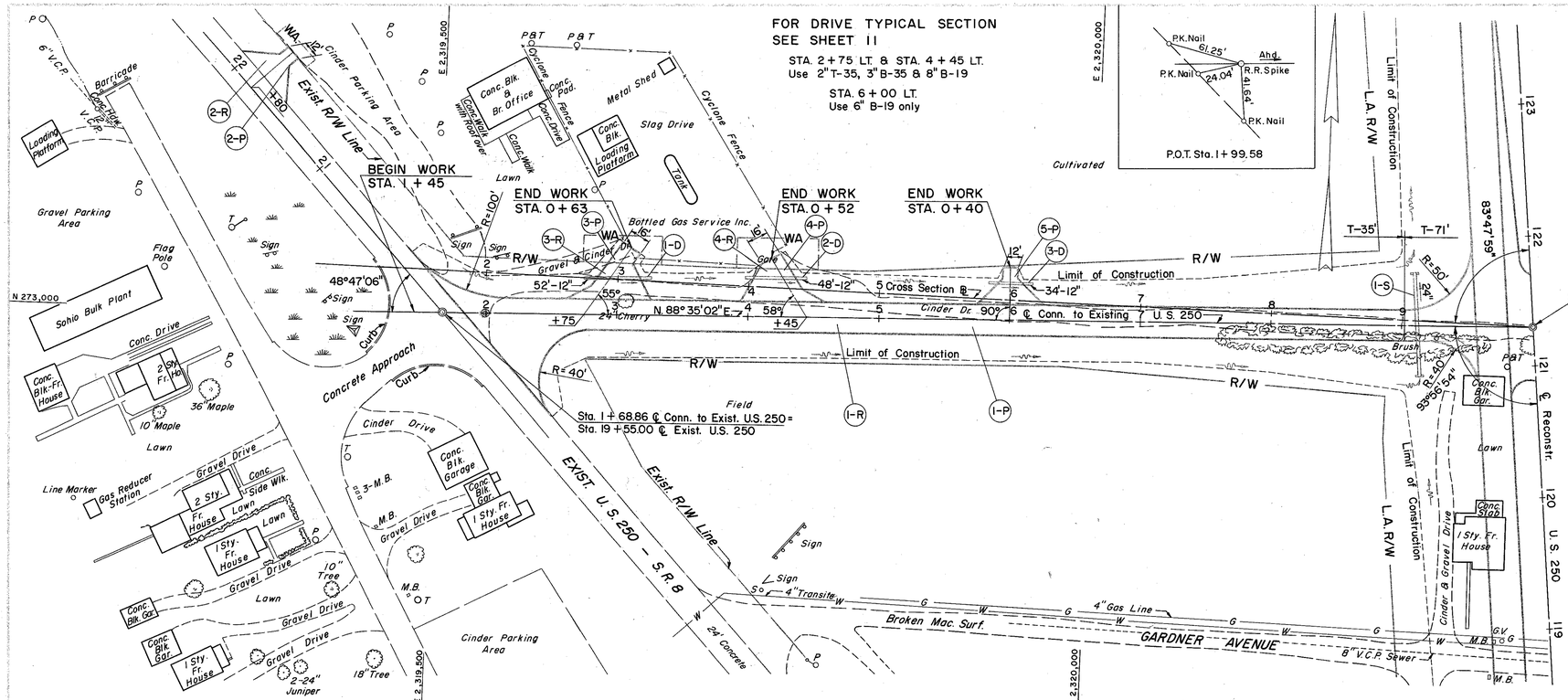
TUSCARAWAS COUNTY
TUS-36-15.93

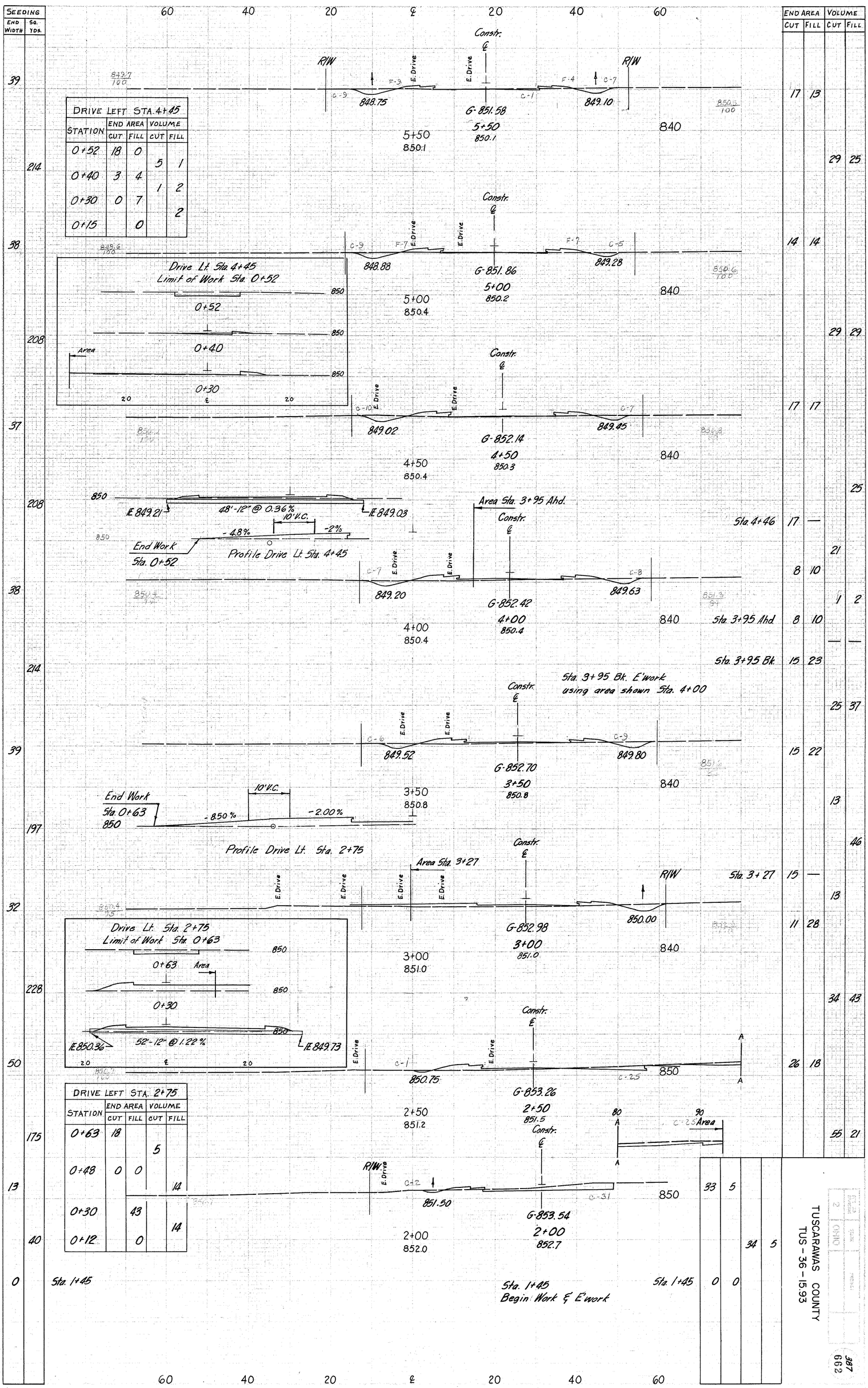
FOR DRIVE TYPICAL SECTION
SEE SHEET 11

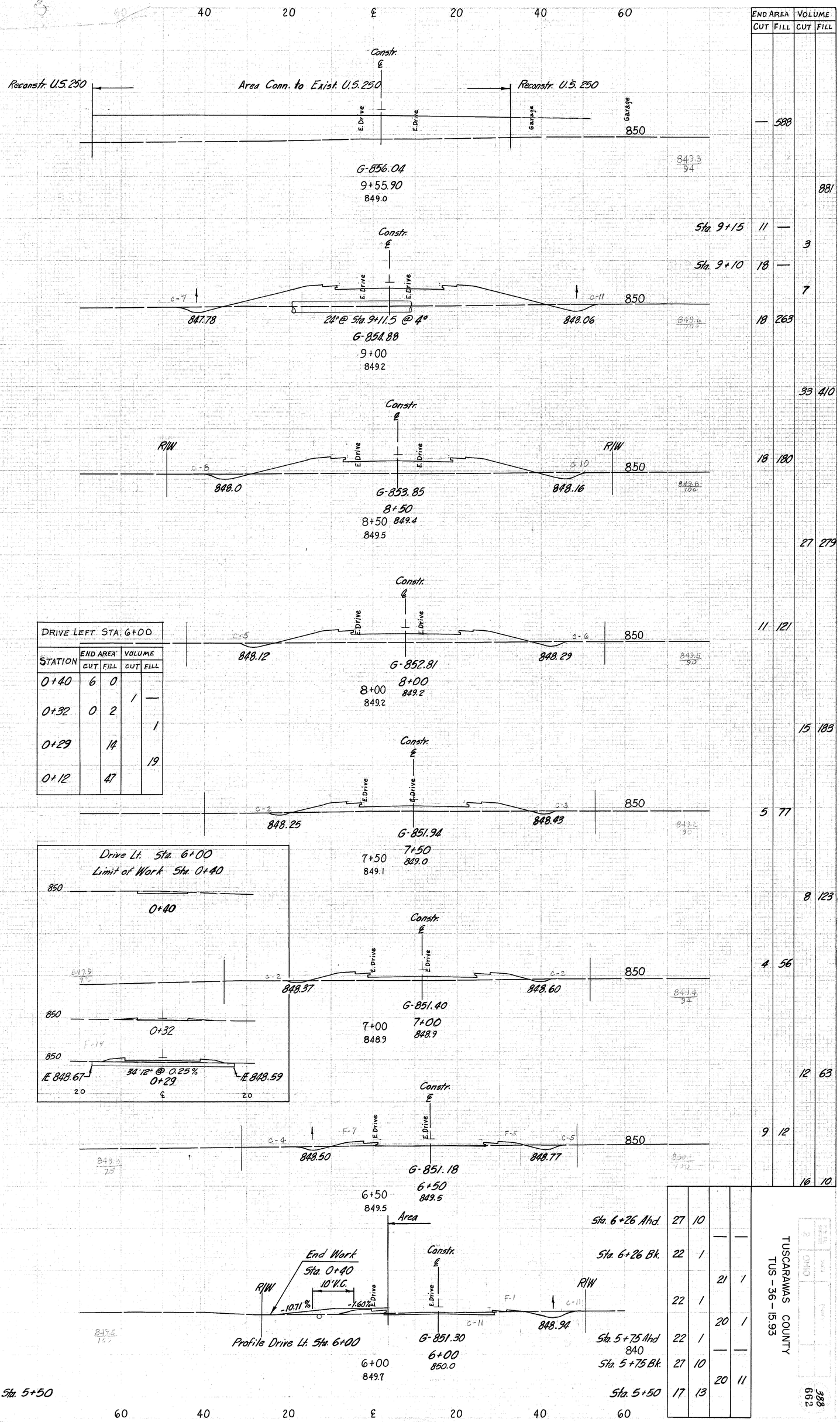
STA. 2+75 LT. & STA. 4+45 LT.
Use 2"T-35, 3"B-35 & 8"B-19

STA. 6+00 LT.
Use 6" B-19 only

FOR INTERSECTION DETAIL
SEE SHEET 65


BEGIN WORK STA. 1+45
END WORK STA. 0+63
END WORK STA. 0+52
END WORK STA. 0+40
Exist. R/W Line
Exist. U.S. 250 - S.R. 8
Limit of Construction
L.A. R/W
Sta. 1+68.86 ℄ Conn. to Exist. U.S. 250 =
Sta. 19+55.00 ℄ Exist. U.S. 250
Sta. 10+00.00 ℄ Conn. to Exist. U.S. 250 =
Sta. 121+29.16 ℄ Reconstr. U.S. 250 =
Sta. 10+00.00 Cross Section ℄
℄ Reconstr. U.S. 250
Broken Mac. Surf.
GARDNER AVENUE
Cinder Drive
Gravel Drive
Concrete Approach
Sohio Bulk Plant
Gravel Parking Area
Cinder Parking Area
Slag Drive
Metal Shed
Cultivated
Field
Lawn
Brush
Gas Reducer Station
Line Marker
Flag Pole
Loading Platform
Barricade
Conc. Blk. Br. Office
Conc. Blk. Loading Platform
Conc. Blk. Garage
Conc. Blk. Gar.
1 Sty. Fr. House
2 Sty. Fr. House
Conc. Slab
Cyclone Fence
Conc. Pad.
Conc. Drive
Gravel Drive
Conc. Side Wk.
Bottled Gas Service Inc.
Gate
Sign
Curb
Tank
Trailer
Cherry
Maple
Tree
Juniper
Transite
Gas Line
B"V.C.P. Sewer
24" Concrete
Cinder Drive
Conc. Blk. Gar.
Conc. Blk. Fr. House
Conc. Blk. with Roof over
Conc. Wall
Cyclone Fence
Conc. Fence
Conc. Drive
Gate
Gate Valve
V.C.P.
Conc. Blk. Gar.
Conc. Slab
Conc. Blk. Gar.
Brush
Conc. Blk. Gar.
1 Sty. Fr. House
Gravel Drive
Cinder Drive
Gravel Drive
Conc. Blk. Gar.
1 Sty. Fr. House
Gravel Drive
Lawn
Gravel Drive
Lawn
Gravel Drive
Lawn


SEEDING
END WIDTH
SQ. YDS.
60 40 20 ℄ 20 40 60
END AREA CUT FILL
VOLUME CUT FILL
Constr. ℄
R/W
E. Drive
F-3
F-4
C-7
C-9
C-1
848.75
849.10
G-851.58
5+50
850.1
840
17 13
29 25
DRIVE LEFT STA. 4+45
STATION | END AREA CUT FILL | VOLUME CUT FILL
0+52 18 0 5 1
0+40 3 4 1 2
0+30 0 7 2
0+15 0
Drive Lt. Sta. 4+45
Limit of Work Sta. 0+52
0+52
0+40
0+30
Area
20 ℄ 20
F-7
C-5
848.88
849.28
G-851.86
5+00
850.2
840
14 14
29 29
C-10
849.02
849.45
G-852.14
4+50
850.3
840
17 17
25
48'-12" @ 0.36%
IE 849.21
IE 849.03
10' V.C.
-4.8%
-2%
End Work
Sta. 0+52
Profile Drive Lt. Sta. 4+45
Area Sta. 3+95 Ahd.
Sta. 4+46 17 —
21
C-8
849.20
849.63
G-852.42
4+00
850.4
840
Sta. 3+95 Ahd. 8 10
1 2
Sta. 3+95 Bk. 15 23
— —
Sta. 3+95 Bk. E'work
using area shown Sta. 4+00
C-6
849.52
849.80
G-852.70
3+50
850.8
840
15 22
25 37
13
End Work
Sta. 0+63
-8.50%
-2.00%
10' V.C.
Profile Drive Lt. Sta. 2+75
46
Area Sta. 3+27
Sta. 3+27 15 —
13
850.00
G-852.98
3+00
851.0
840
11 28
DRIVE LEFT STA. 2+75
STATION | END AREA CUT FILL | VOLUME CUT FILL
0+63 18 5
0+48 0 0 14
0+30 43 14
0+12 0
Drive Lt. Sta. 2+75
Limit of Work Sta. 0+63
0+63 Area
0+30
52'-12" @ 1.22%
IE 850.36
IE 849.73
20 ℄ 20
34 43
C-1
C-25
850.75
G-853.26
2+50
851.2
2+50
851.5
850
26 18
80 90
C-25 Area
55 21
R/W
C-12
C-31
851.50
G-853.54
2+00
852.0
2+00
852.7
850
33 5
34 5
Sta. 1+45
Sta. 1+45
Begin Work & E'work
Sta. 1+45 0 0
Connector to Existing U.S. 250 Sta. 1+58 to 5+50
TUSCARAWAS COUNTY
TUS-36-15.93
337
662



Width	Yds.	End Area Cut	End Area Fill	Volume Cut	Volume Fill
0		—	588		
	224				881
		11	—		
				3	
		18	—		
72				7	
		18	263		
	375				
				33	410
63		18	180		
	317				
				27	279
51		11	121		
	247				
				15	183
38		5	77		
	197				
				8	123
33		4	56		
	189				
				12	63
35		9	12		
				16	10
	203				
38					
	214				
39					

Drive Left Sta. 6+00

Station	End Area Cut	End Area Fill	Volume Cut	Volume Fill
0+40	6	0		
			1	—
0+32	0	2		
				1
0+29		14		
				19
0+12		47		

Sta. 6+26 Ahd.	27	10		
			—	—
Sta. 6+26 Bk.	22	1		
			21	1
	22	1		
			20	1
Sta. 5+75 Ahd	22	1		
840			—	—
Sta. 5+75 Bk.	27	10		
			20	11
Sta. 5+50	17	13		

Connector to Existing U.S. 250 Sta. 6+00 to 9+55.90

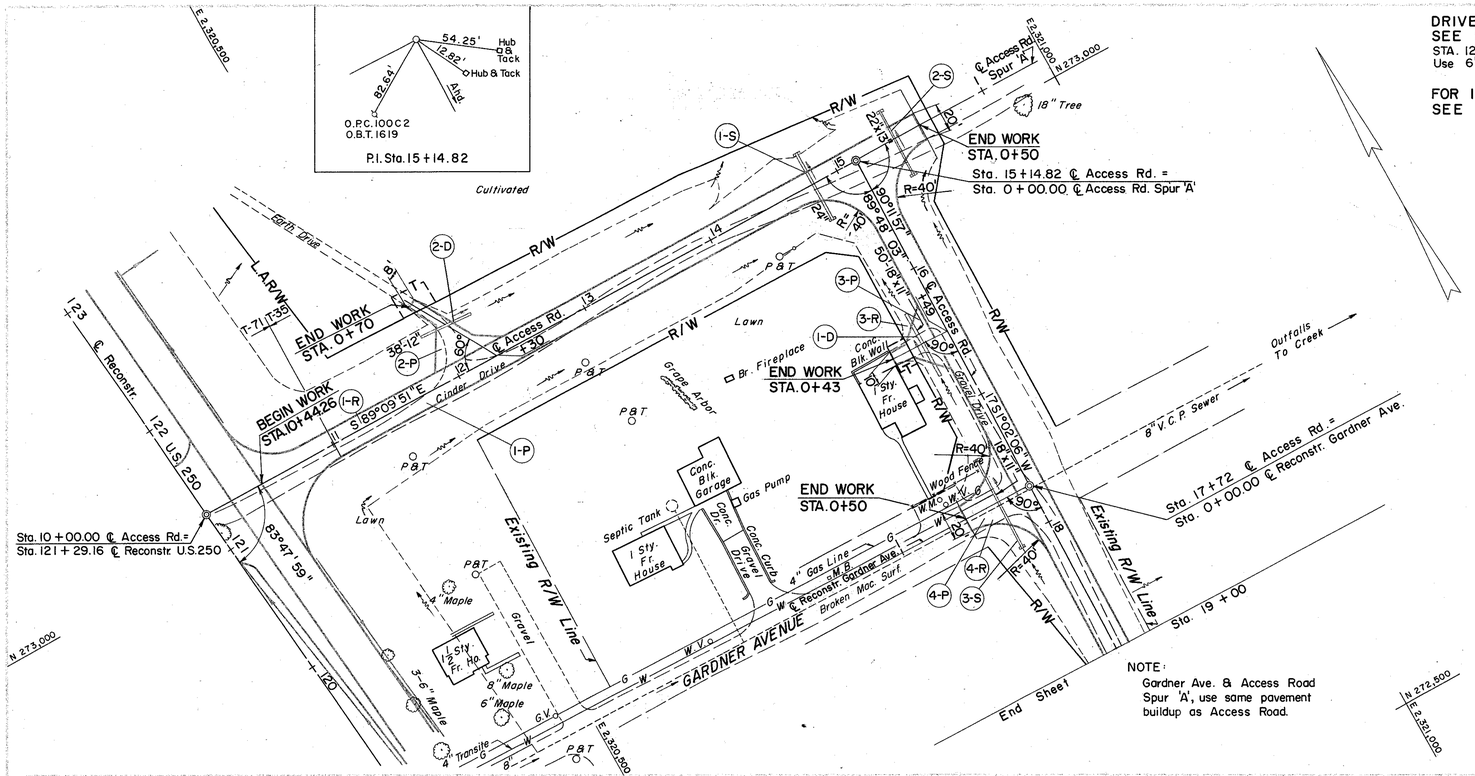
TUSCARAWAS COUNTY
TUS-36-15.93

388
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93

DRIVE TYPICAL SECTION
SEE SHEET II
STA. 12+30, LT.
Use 6" B-19 Only

FOR INTERSECTION DETAILS
SEE SHEET 65



NOTE:
Gardner Ave. & Access Road Spur 'A', use same pavement buildup as Access Road.

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. SUB-GRADE	I-9 STONE UNDER-DRAINS NO. 2
				S.Y.	L.F.
1-R	10+4426	40+80		7,250	1,210
3-R	16+49	—	Rt.	80	
4-R	Reconstr. Gardner Ave.		Rt.	166	
	TOTAL			7,496	1,210

(D) DRAINAGE

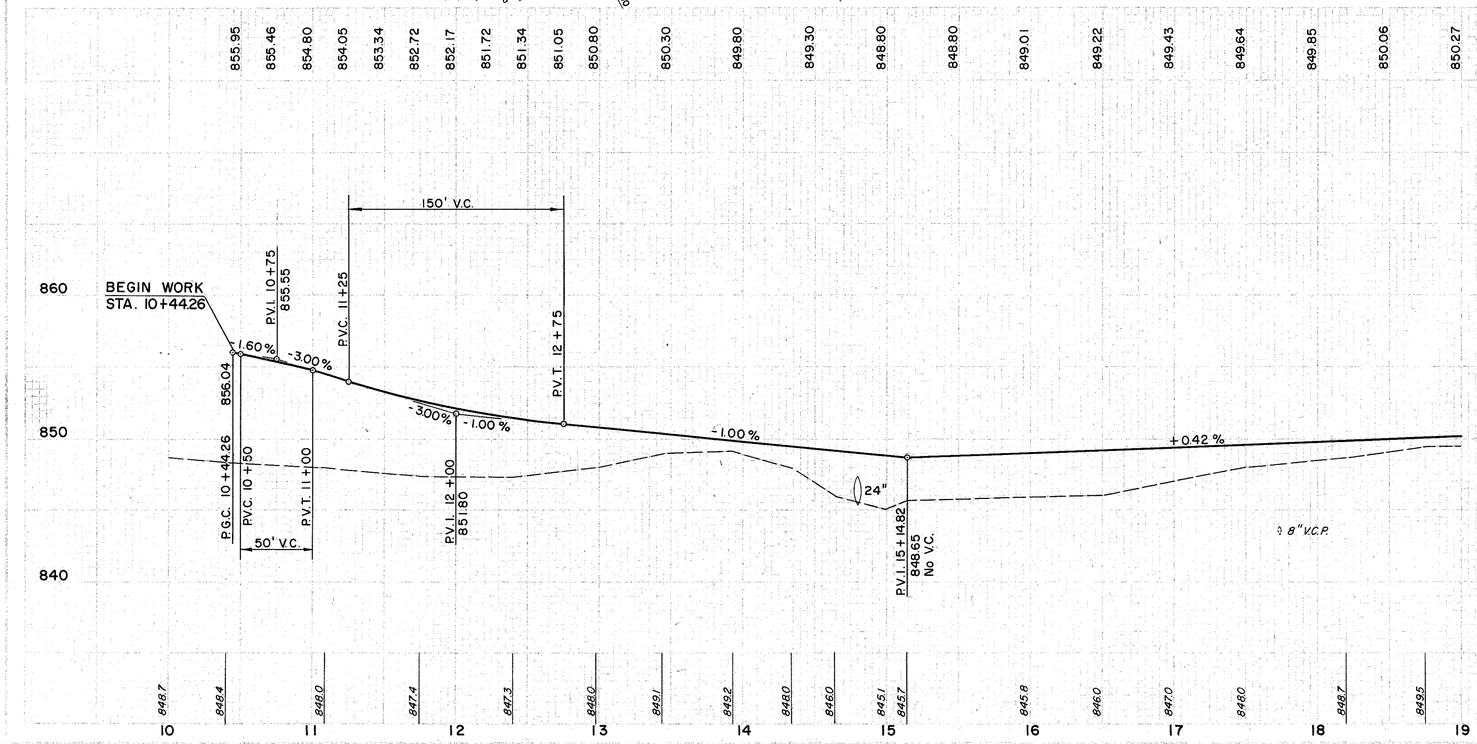
REF. NO.	STATION FROM	STATION TO	SIDE	I-1 18"x11" PIPE CL. G-1 SEC. M-64(j)(d)	I-1 12" PIPE CLASS F-4
				L.F.	
1-D	16+25	16+75	Rt.	50	
2-D	11+96	12+19	Lt.		38
	TOTAL			50	38

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE	I-22 SUBBASE	T-30 BIT. PRIME COAT	T-35 ASPHALTIC CONCRETE SURFACE COURSE TYPE A	T-35 TYPE C	T-71 REINF. PORT. CEM. CONC. PAV'T. 9"
				C.Y.		GAL.	C.Y.		S.Y.
1-P	10+4426	40+80		1,023	859	2,808	293		232
2-P	12+30	—	Lt.	19					
3-P	16+49	—	Rt.	12		32		5	
4-P	Reconstr. Gardner Ave.			23	19	67	7		
	TOTAL			1,077	878	2,907	300	5	232

(S) STRUCTURES

REF. NO.	STATION	I-1 18"x11" PIPE CLASS G-1 SEC. M-64(j)(d)	I-1 22"x13" PIPE CLASS G-1 SEC. M-64(j)(d)	I-1 24" PIPE CLASS A-1 SEC. M-64(d)	I-2 MASONRY	L-10 SODDING	SEE SHEET
		L.F.			C.Y.	S.Y.	
1-S	14+80			52	0.82	5	483
2-S	0+30 Access Rd. Spur 'A'		50		0.82	5	484
3-S	0+25 Reconstr. Gardner Ave.	68			0.60	4	484
	TOTAL	68	50	52	2.24	14	

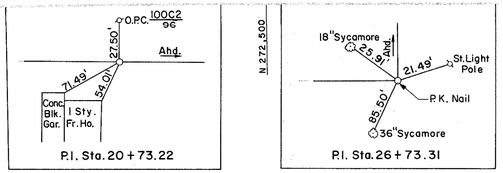


EXCAVATION	391 C.Y.
EMBANKMENT	4,205 C.Y.
EMBANKMENT 6 %	4,457 C.Y.

ACCESS ROAD
STA. 10+00 TO STA. 19+00

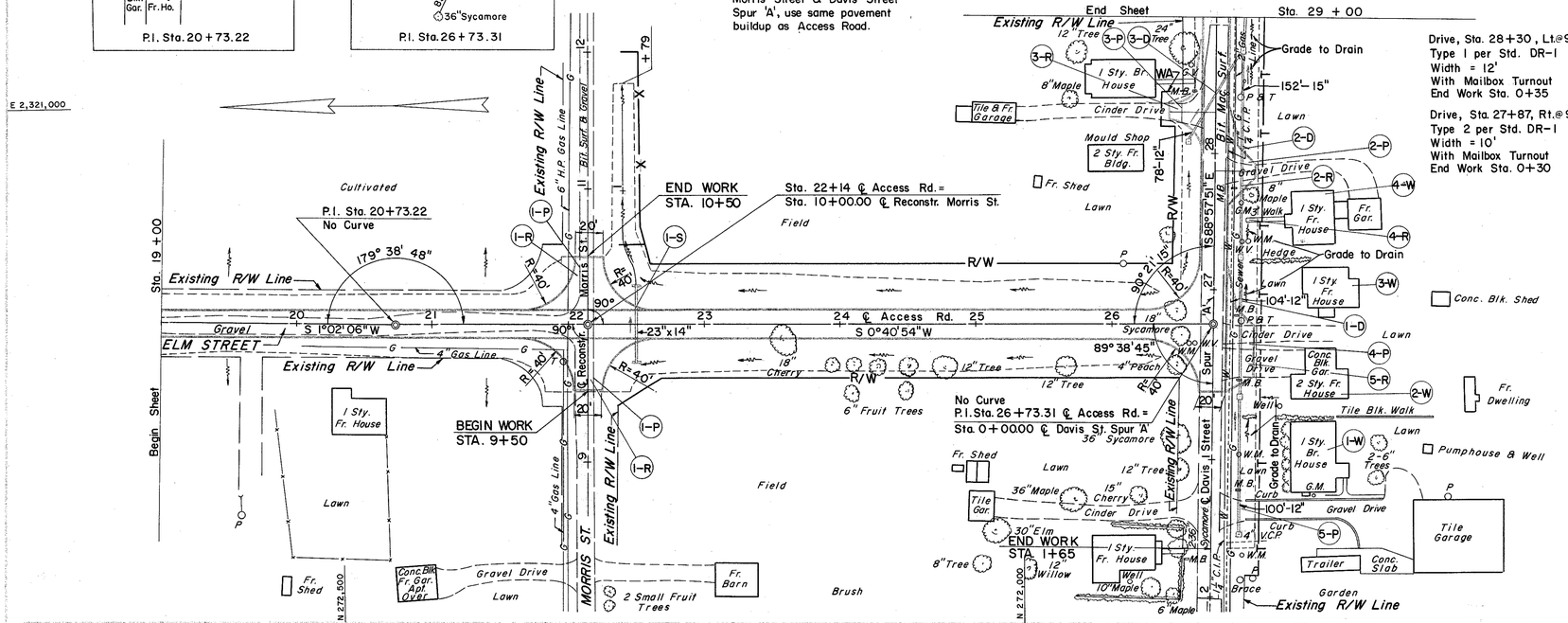
FED. AID PROJECT	STATE	PROJECT		390
2	OHIO			662

TUSCARAWAS COUNTY
TUS – 36 – 15.93



DRIVE TYPICAL SECTION
SEE SHEET 11

NOTE:
Morris Street & Davis Street Spur 'A', use same pavement buildup as Access Road.



Drive, Sta. 28+30, Lt.@90°
Type 1 per Std. DR-1
Width = 12'
With Mailbox Turnout
End Work Sta. 0+35

Drive, Sta. 27+87, Rt.@90°
Type 2 per Std. DR-1
Width = 10'
With Mailbox Turnout
End Work Sta. 0+30

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. SUB-GRADE	I-13 CONC. SIDE-WALKS 4"
				S.Y.	S.F.
1-R	Reconstr. Morris St.		Lt.&Rt.	331	
2-R	27+87	—	Rt.	75	
3-R	28+30	—	Lt.	75	
4-R	27+52	—	Rt.		27
5-R	0+20 Davis St. Spur 'A'		Rt.	119	
	TOTAL			600	27

(W) WATER

REF. NO.	STATION FROM	STATION TO	SIDE	I-124 SERVICE STOPS & BOXES REMOVED & RESET	I-124 W. M. BOXES REMOVED & RESET	I-124 NEW SERVICE BRANCH TYPE A
				EA.		L.F.
1-W	1+00	Davis St. Spur 'A'	Lt.	1	1	5
2-W	0+40		Lt.	1	1	5
3-W	27+00	—	Rt.	1	1	5
4-W	27+50	—	Rt.	1	1	5
	TOTAL			4	4	20

(P) PAVEMENT

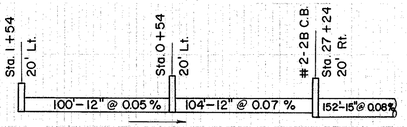
REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE	I-22 SUBBASE	T-30 BIT. PRIME COAT	T-35 ASPHALTIC CONCRETE SURFACE COURSE TYPE A	T-35 TYPE C
				C.Y.		GAL.	C.Y.	
1-P	Reconstr. Morris St.		Lt.&Rt.	46	37	133	14	
2-P	27+87	—	Rt.	11		30		4
3-P	28+30	—	Lt.	11		30		4
4-P	0+20	Davis St. Spur 'A'	Lt.	17		48		7
5-P	1+38		Lt.	1				
	TOTAL			86	37	241	14	15

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 12" PIPE CLASS B-1	I-1 12" PIPE CLASS J-1	I-1 15" PIPE CLASS B-1	I-8 STD. #2-2B C.B.
				L.F.			EA.
1-D	1+54 Davis St. Spur 'A'	27+24	Rt.	204			2
2-D	27+24	28+76	Rt.			152	1
3-D	28+18	28+76	Lt.&Rt.		78		2
	TOTAL			204	78	152	5

(S) STRUCTURE

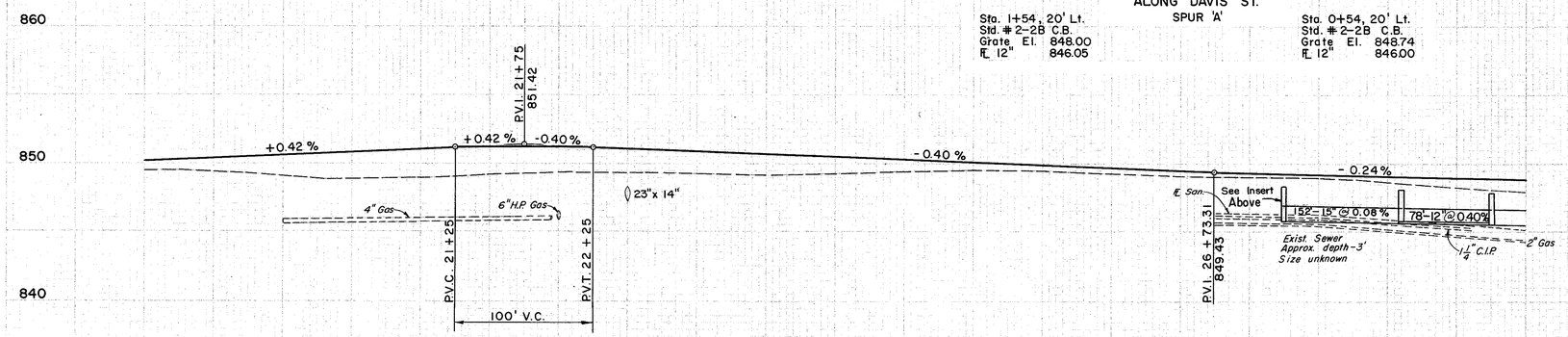
REF. NO.	STATION	E-3 CHANNEL EXCAV.	I-1 23"x14" PIPE CL. G-1 SEC. M-6.7(a)	I-2 MASONRY	L-10 SODDING	SEE SHEET
		C.Y.	L.F.	C.Y.	S.Y.	
1-S	22+50	64	60	0.82	5	485

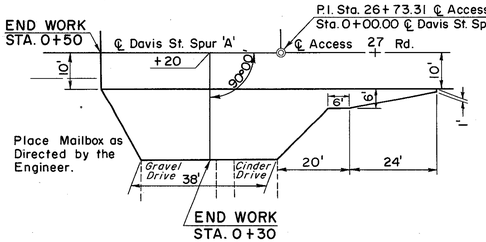


PROFILE STORM SEWER
ALONG DAVIS ST.
SPUR 'A'

Sta. 1+54, 20' Lt.
Std. # 2-2B C.B.
Grate El. 848.00
℄ 12" 846.05

Sta. 0+54, 20' Lt.
Std. # 2-2B C.B.
Grate El. 848.74
℄ 12" 846.00





DRIVE LT. DAVIS ST. SPUR 'A'
STA. 0+20

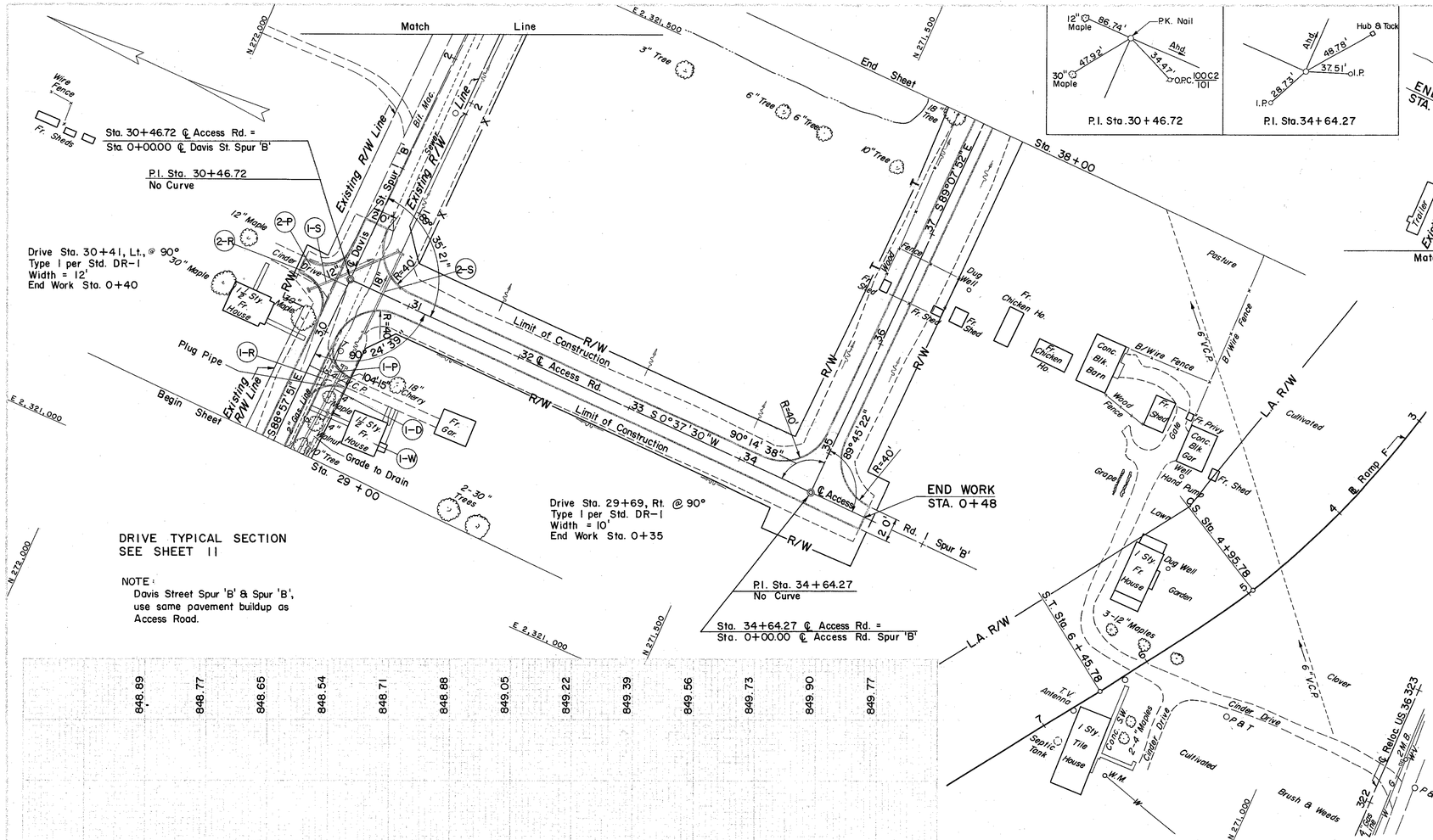
10 0 20 40
SCALE IN FEET

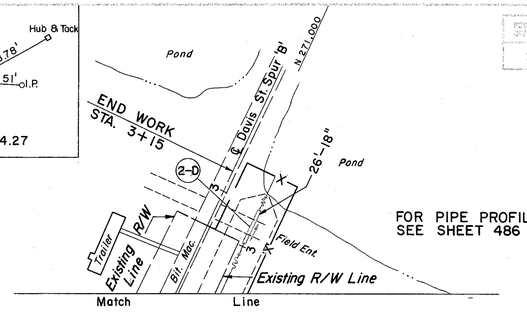
Excavation	777 C.Y.
Embankment	620 C.Y.
Embankment 6	657 C.Y.

ACCESS ROAD
STA. 19+00 TO STA. 29+00

FED. AID PROJECT NO.	STATE	PROJECT	
2	OHIO		

TUSCARAWAS COUNTY
TUS – 36 – 15.93





FOR PIPE PROFILE
SEE SHEET 486

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. SUB-GRADE
				S.Y.
1-R	29+69	—	Rt.	58
2-R	30+41	—	Lt.	65
	TOTAL			123

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	E-3 CHANNEL EXCAV.	I-1 15" PIPE CLASS B-1	I-1 18" PIPE CLASS F-4	I-2 MASONRY
				C.Y.	L.F.		C.Y.
1-D	28+76	29+80	Rt.		104		0.26
2-D	3+13 Outlet Ditch			4		26	
	TOTAL			4	104	26	0.26

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE	T-30 BIT PRIME COAT	T-35 ASPH. CONC. SURF. COURSE TYPE C
				C.Y.	GAL.	C.Y.
1-P	29+69	—	Rt.	9	24	4
2-P	30+41	—	Lt.	9	26	4
	TOTAL			18	50	8

(S) STRUCTURE

REF. NO.	STATION	E-3 CHANNEL EXCAV.	I-1 12" PIPE CLASS A-1 SEC. M-64(d)	I-1 18" PIPE CLASS A-1 SEC. M-66(a) OR M-68(b)	I-2 MASONRY	L-10 SODDING	SEE SHEET
		C.Y.	L.F.		C.Y.	S.Y.	
1-S	0+11 Davis St. Spur 'B'		80		1.05	4	485
2-S	30+75	114		72	0.30	4	486
	TOTAL	114	80	72	1.35	8	

(W) WATER

REF. NO.	STATION FROM	STATION TO	SIDE	I-124 SERVICE STOPS & BOXES REMOVED & RESET	I-124 W.M. & BOXES REMOVED & RESET	I-124 NEW SERVICE BRANCH TYPE A
				EA.		L.F.
1-W	29+40	—	Rt.	1	1	5

DRIVE TYPICAL SECTION
SEE SHEET 11

NOTE:
Davis Street Spur 'B' & Spur 'B', use same pavement buildup as Access Road.

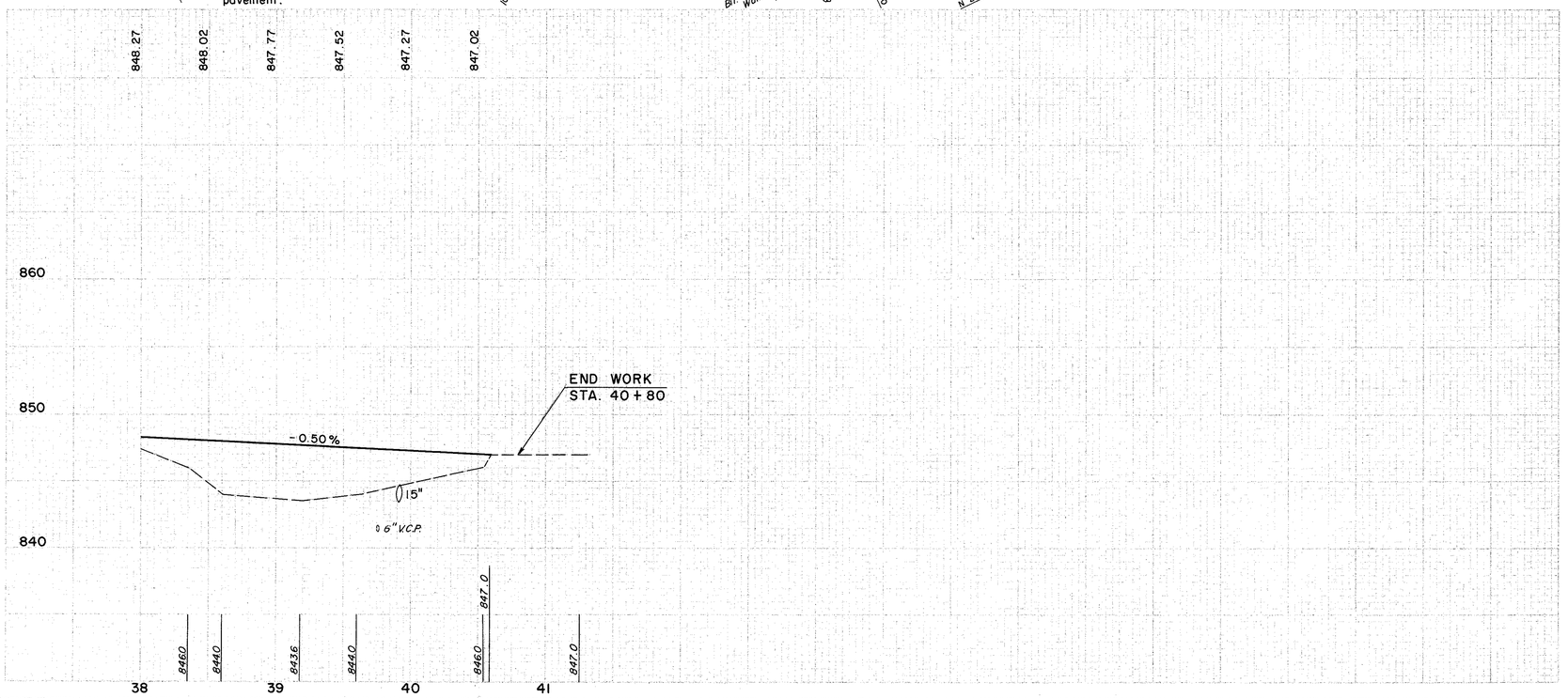
Excavation	200 C.Y.
Embankment	869 C.Y.
Embankment @ 6	921 C.Y.

ACCESS ROAD
STA. 29+00 TO STA. 38+00

FED. NO. DIVISION	STATE	PROJECT		392 662
2	OHIO			

TUSCARAWAS COUNTY
TUS – 36 – 15.93



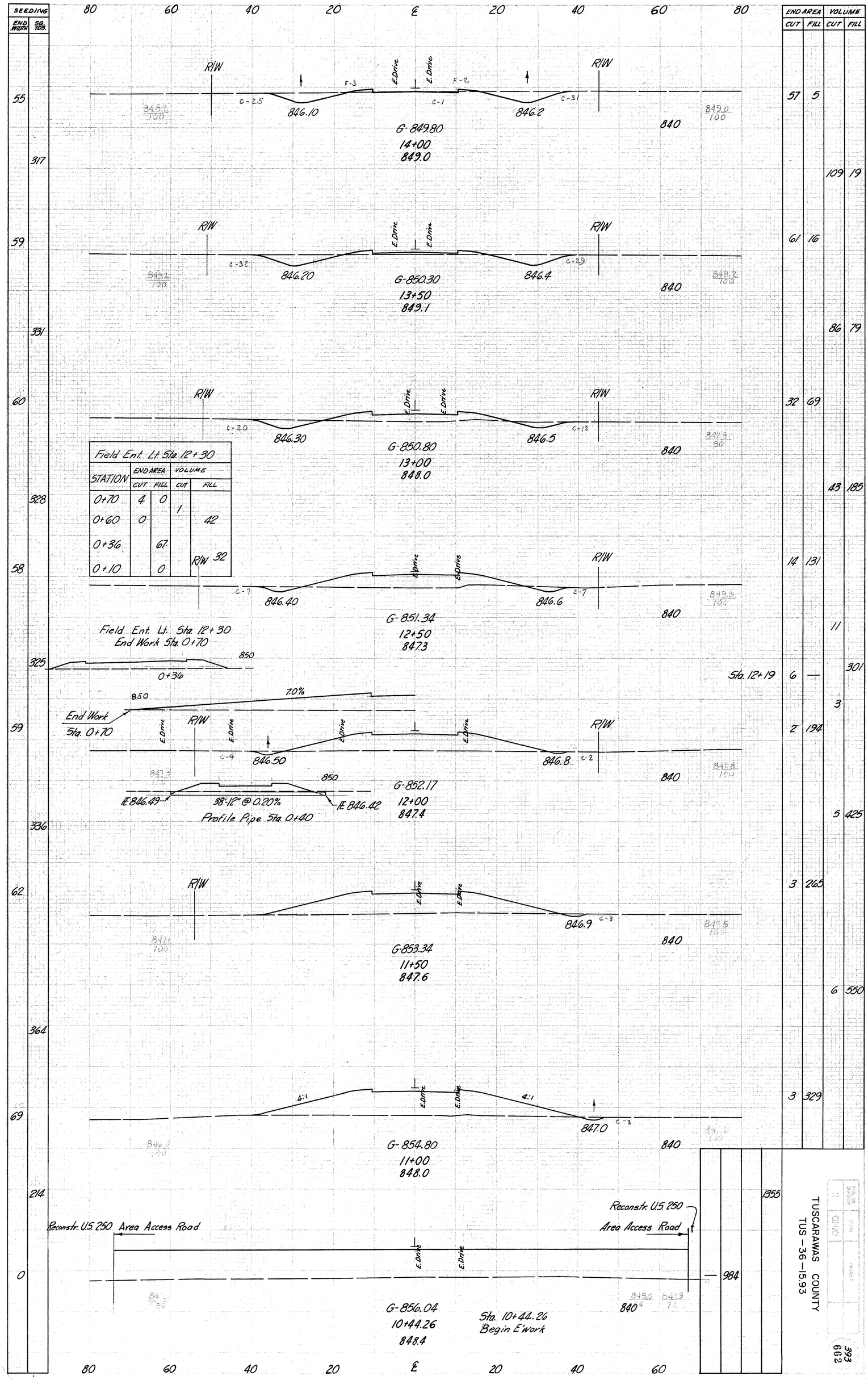


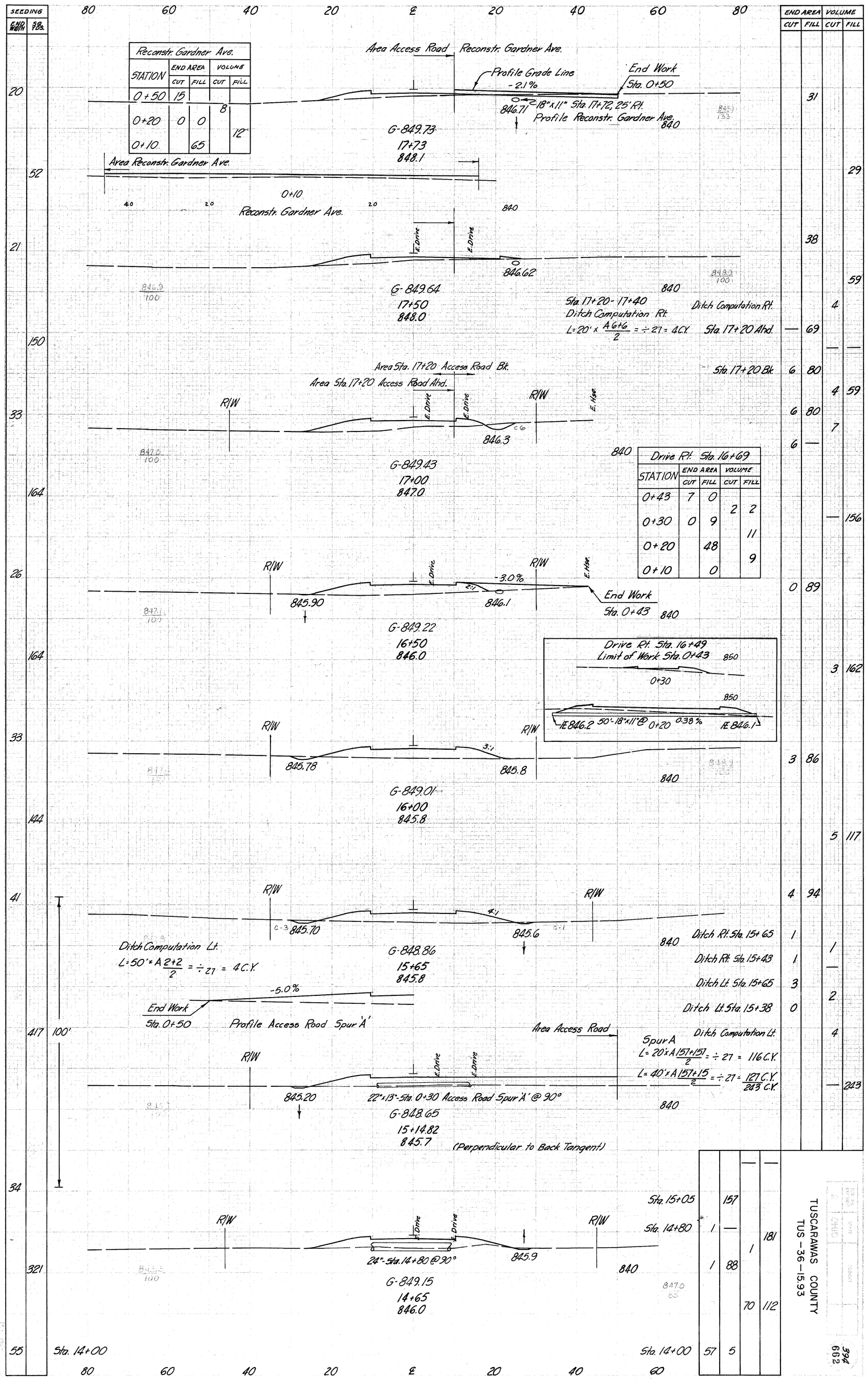
Ⓢ STRUCTURE

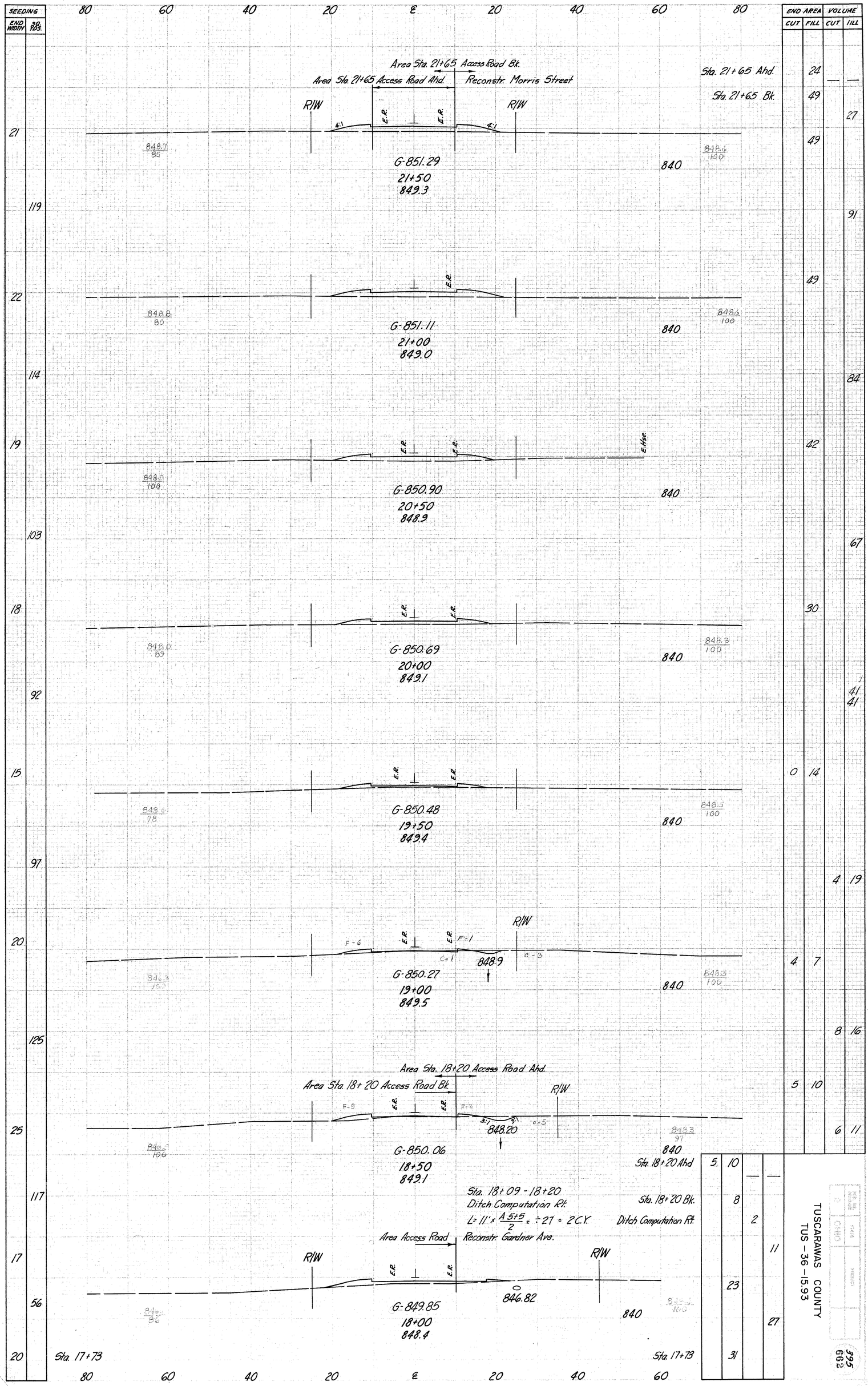
REF NO.	STATION	E-3 CHANNEL EXCAV.	I-1 15" PIPE CL. A-1 SEC. M-66(a) OR M-68(b)	I-2 MASONRY	L-10 SODDING	SEE SHEET
		C.Y.	L.F.	C.Y.	S.Y.	
I-S	39+92	16	50	0.52	4	486

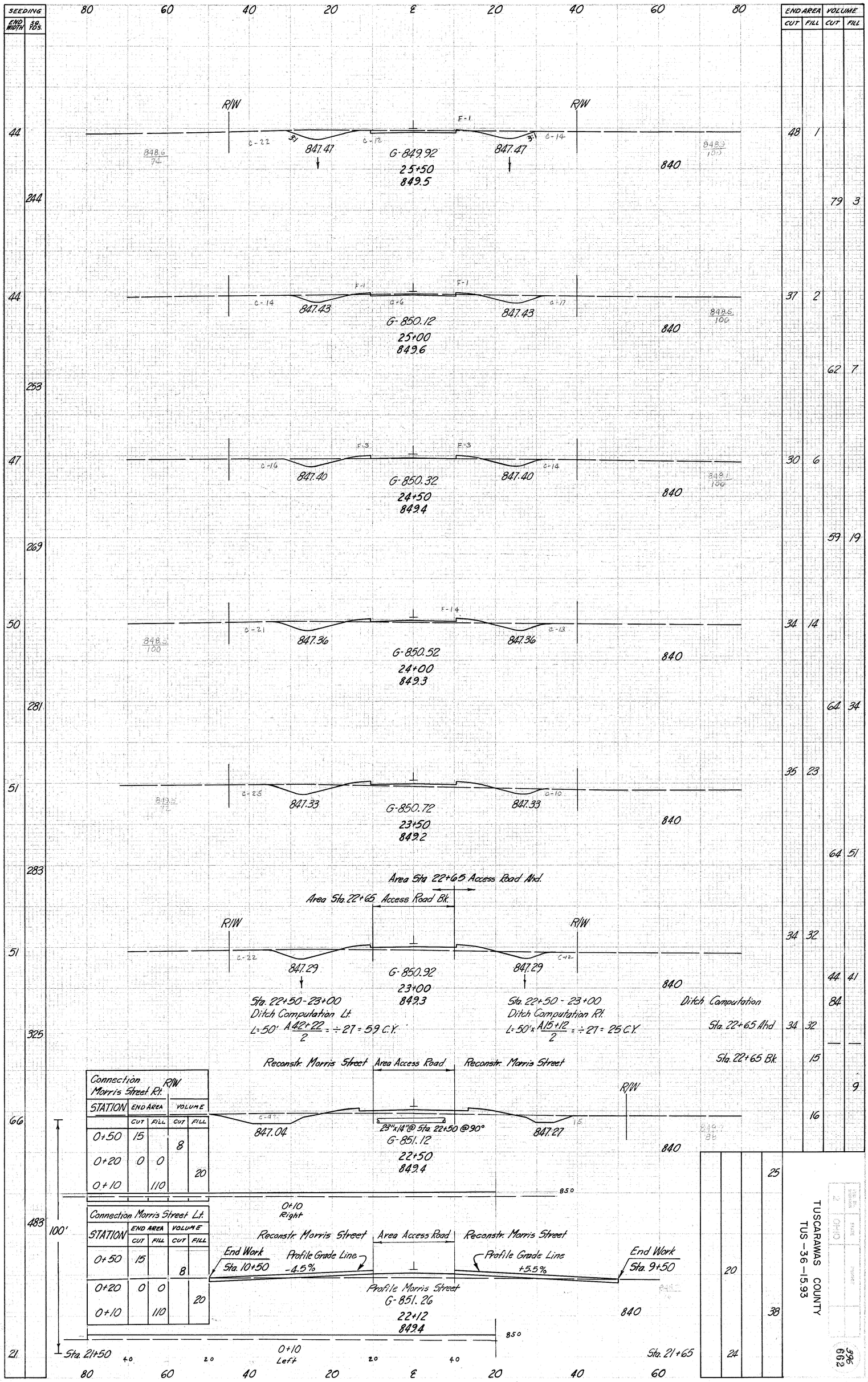
Excavation	30 C.Y.
Embankment	814 C.Y.
Embankment 6 %	863 C.Y.

ACCESS ROAD
STA. 38+00 TO STA. 40+80


SEEDING
END WIDTH
SQ. YDS.
80 60 40 20 ℄ 20 40 60 80
END AREA CUT FILL
VOLUME CUT FILL
R/W
E. Drive
F-3
F-2
C-2.5
C-1
C-3.1
846.10
846.2
G-849.80
14+00
849.0
840
57 5
109 19
317
C-3.2
C-2.9
846.20
846.4
G-850.30
13+50
849.1
61 16
86 79
331
C-2.0
C-1.2
846.30
846.5
G-850.80
13+00
848.0
32 69
43 185
328
Field Ent. Lt. Sta. 12+30
STATION
END AREA CUT FILL
VOLUME CUT FILL
0+70 4 0 1
0+60 0 42
0+36 67
0+10 0 R/W 32
C-.7
846.40
846.6
G-851.34
12+50
847.3
14 131
11
Field Ent. Lt. Sta. 12+30
End Work Sta. 0+70
850
0+36
325
Sta. 12+19 6 — 301
850
7.0%
End Work
Sta. 0+70
59
C-.4
846.50
846.8
C-.2
G-852.17
12+00
847.4
2 194
3
850
IE 846.49
38"-12" @ 0.20%
IE 846.42
Profile Pipe Sta. 0+40
336
5 425
62
846.9
C-.3
G-853.34
11+50
847.6
3 265
6 550
364
4:1
4:1
847.0
G-854.80
11+00
848.0
3 329
69
214
Reconstr. U.S. 250 Area Access Road
Reconstr. U.S. 250
Area Access Road
1355
0
984
G-856.04
10+44.26
848.4
Sta. 10+44.26
Begin E'work
840+
80 60 40 20 ℄ 20 40 60
Access Road Sta. 10+44.26 to Sta. 14+00
TUSCARAWAS COUNTY
TUS-36-15.93
393
682


SEEDING
CONST. WIDTH
SQ. YDS.
80 60 40 20 ℄ 20 40 60 80
END AREA CUT FILL
VOLUME CUT FILL
Reconstr. Gardner Ave.
STATION | END AREA CUT FILL | VOLUME CUT FILL
0+50 15
0+20 0 0 8
0+10 65 12
Area Access Road Reconstr. Gardner Ave.
Profile Grade Line -2.1%
End Work Sta. 0+50
18"x11" Sta. 17+72, 25' Rt.
846.71
Profile Reconstr. Gardner Ave.
G-849.73
17+73
848.1
Area Reconstr. Gardner Ave.
0+10
Reconstr. Gardner Ave.
E. Drive
846.62
G-849.64
17+50
848.0
Sta 17+20 - 17+40 Ditch Computation Rt.
Ditch Computation Rt.
L=20' x A 6+6 / 2 = ÷27 = 4CY
Sta. 17+20 Ahd.
Sta. 17+20 Bk.
Area Sta. 17+20 Access Road Bk.
Area Sta. 17+20 Access Road Ahd.
R/W
E. Drive
E. Hse
846.3
G-849.43
17+00
847.0
Drive Rt. Sta. 16+69
STATION | END AREA CUT FILL | VOLUME CUT FILL
0+43 7 0
0+30 0 9 2 2
0+20 48 11
0+10 0 9
-3.0%
845.90
846.1
End Work
Sta. 0+43
G-849.22
16+50
846.0
Drive Rt. Sta. 16+49
Limit of Work Sta. 0+43
0+30
IE 846.2 50'-18"x11"@ 0+20 0.38% IE 846.1
845.78
845.8
G-849.01
16+00
845.8
845.70
845.6
Ditch Computation Lt.
L=50' x A 2+2 / 2 = ÷27 = 4 C.Y.
G-848.86
15+65
845.8
Ditch Rt. Sta. 15+65
Ditch Rt. Sta. 15+43
Ditch Lt. Sta. 15+65
Ditch Lt. Sta. 15+38
Ditch Computation Lt.
-5.0%
End Work
Sta. 0+50
Profile Access Road Spur 'A'
Area Access Road
Spur A
L=20' x A 15+15 / 2 = ÷27 = 116 C.Y.
L=40' x A 15+15 / 2 = ÷27 = 127 C.Y.
243 C.Y.
100'
845.20
22"x13"-Sta. 0+30 Access Road Spur 'A' @ 90°
G-848.65
15+14.82
845.7
(Perpendicular to Back Tangent)
Sta. 15+05
Sta. 14+80
24"-Sta. 14+80 @ 90°
845.9
G-849.15
14+65
846.0
Sta. 14+00
Sta. 14+00
80 60 40 20 ℄ 20 40 60
Access Road Sta. 14+65 to Sta. 17+73
TUSCARAWAS COUNTY
TUS-36-15.93
394
662


SEEDING
END WIDTH
SQ. YDS.
80 60 40 20 ℄ 20 40 60 80
END AREA
CUT
FILL
VOLUME
CUT
FILL
Area Sta. 21+65 Access Road Bk.
Area Sta. 21+65 Access Road Ahd.
Reconstr. Morris Street
Sta. 21+65 Ahd.
Sta. 21+65 Bk.
R/W
R/W
E.R.
E.R.
4:1
4:1
848.7
85
848.6
100
G-851.29
21+50
849.3
840
21
119
22
114
19
103
18
92
15
97
20
125
25
117
17
56
20
24
49
49
49
42
30
14
7
10
Sta. 21+65 Ahd.
Sta. 21+65 Bk.
848.8
80
848.6
100
G-851.11
21+00
849.0
840
848.0
100
G-850.90
20+50
848.9
840
E. Hse
848.0
89
848.3
100
G-850.69
20+00
849.1
840
849.6
78
848.3
100
G-850.48
19+50
849.4
840
F-6
F-1
E.R.
E.R.
C-1
C-3
R/W
848.9
848.3
100
G-850.27
19+00
849.5
840
Area Sta. 18+20 Access Road Ahd.
Area Sta. 18+20 Access Road Bk.
R/W
F-8
F-2
E.R.
E.R.
3:1
3:1
C=5
848.20
848.3
97
G-850.06
18+50
849.1
840
Sta. 18+20 Ahd
Sta. 18+09 - 18+20
Ditch Computation Rt.
L= 11' x A 5+5 / 2 = ÷27 = 2C.Y.
Sta. 18+20 Bk.
Ditch Computation Rt.
Area Access Road
Reconstr. Gardner Ave.
R/W
R/W
E.R.
E.R.
846.82
G-849.85
18+00
848.4
840
Sta. 17+73
Sta. 17+73
5 10
8
2
23
31
11
27
Access Road Sta. 18+00 to Sta. 21+50
TUSCARAWAS COUNTY
TUS-36-15.93
395
662



Connection Morris Street Rt. R/W

STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0+50	15		8	
0+20	0	0		20
0+10		110		

Connection Morris Street Lt.

STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0+50	15		8	
0+20	0	0		20
0+10		110		

Access Road Sta. 22+12 to Sta. 25+50

TUSCARAWAS COUNTY
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662

SEEDING END WIDTH	SEEDING SQ. YDS.
32	131
17	81
12	64
11	58
10	148
25	359
39	337
44	

80 60 40 20 ℄ 20 40 60 80

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	20		
			36
	16		
	21		
			26
0	7		
		1	10
1	4		
		9	6
9	3		
		32	4
	3		
14	0		
—	—		
	37		
		115	1
		64	6
37	0		
48	1		

Drive Rt. Sta. 29+69

STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0+35	7	0		
			3	1
0+19	4	2		
			1	—
0+10	0	0		

Drive Rt. Sta. 29+69
Limit of Work Sta. 0+35
850
0+19

E. Hse. R/W E.R. E.R. Ditch R/W
4:1 2:1

G-848.65
29+98
847.4

End Work
Sta. 0+35
-2.5%

Drive Rt. Sta. 29+69
840

Sta. 29+80, 27' Rt.
Std. HW-E
IE 15" 845.14

Sta. 29+80 - 30+11
Ditch Computation Rt.
$L = 31' \times \frac{A\ 14+14}{2} = \div 27 = 16\ C.Y.$

Ditch Computation Rt.

E. Hse. 4:1 E.R. E.R.

G-848.77
29+50
847.5

840

Drive Lt. Sta. 28+30

STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0+35	6	0		
			2	2
0+16	0	5		
				1
0+10		0		

Drive Rt. Sta. 27+87

STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0+30	5	0		
			5	—
0+17	16	1		
			2	—
0+10	0	0		

F-2 E.R. E.R. F-3

G-848.89
29+00
847.8

840

Sta. 28+76, 20' Rt.
Std. 2-2B C.B.
Grate El. 847.76
IE 12" 845.81
IE 15" 845.56

Drive Lt. Sta. 28+30
Limit of Work Sta. 0+35
850
0+16

E. Hse. F-2 E.S. E.R. E.R. F-2

G-849.01
28+50
848.3

840

End Work
Sta. 0+35
-3.3%

Drive Lt. Sta. 28+30
840

Drive Rt. Sta. 27+87
Limit of Work Sta. 0+30
850
0+17

E. Bldg. E.R. E.R.

G-849.13
28+00
848.6

840

Sta. 28+09, 20' Lt.
Std. 2-2B C.B.
Grate El. 848.09
IE 12" 846.12

End Work
Sta. 0+30
-3.4%

Drive Rt. Sta. 27+87
840

Ditch Computation Rt.
$L = 39' \times \frac{A\ 4+0}{2} = \div 27 = 3\ C.Y.$

R/W R/W E.R. E.R. 4:1 C-4 C-14

G-849.31
27+24
849.0

840

Sta 27+24, 20' Rt.
Std. 2-2B C.B.
Grate El. 848.36
IE 12" 845.93
IE 15" 845.68

Davis Street Spur A'
Sta. 0+54, 20' Lt.
Std. 2-2B C.B.
Grate El. 848.74
IE 12" 846.00

Davis Street Spur A'
Sta. 1+54, 20' Lt.
Std. 2-2B C.B.
Grate El. 848.00
IE 12" 846.05

End Work
Sta. 0+30
+3.5%

Drive X-sects.
See Sheet 400

Profile Drive Lt. Davis Street Spur 'A' Sta. 0+20

Access Road Area

840

Davis Street Spur A'
$L = 20' \times \frac{A\ 50+50}{2} = \div 27 = 37\ C.Y.$

Profile Grade Line
-0.7%

Davis Street Spur A

101'

Profile Davis Street Spur 'A'

End T-35
Sta. 0+50

G-849.43
26+73.31
849.1

840

(Perpendicular to Back Tangent)

Sta. 26+63

Ditch Computation Lt.
$L = 12' \times \frac{A\ 13+10}{2} = \div 27 = 3\ C.Y.$

Ditch Computation Rt.
$L = 12' \times \frac{A\ 12+0}{2} = \div 27 = 3\ C.Y.$

Ditch Computation

R/W R/W C-13 3:1 C-12 C-12 3:1

G-849.63
26+23
849.3

840

Sta. 25+50 Sta. 25+50

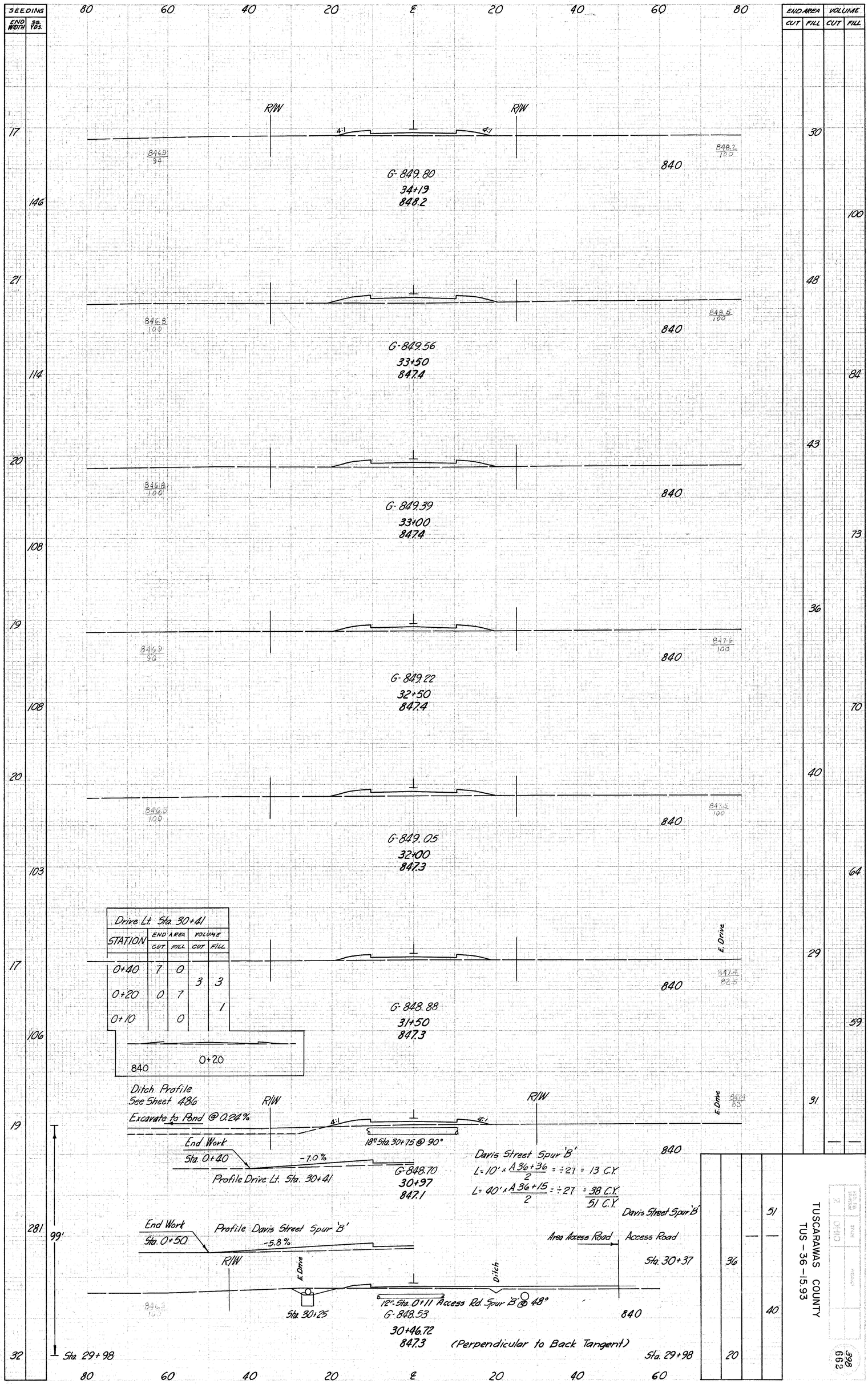
80 60 40 20 ℄ 20 40 60

Access Road Sta 26+23 to Sta 29+98

TUSCARAWAS COUNTY
TUS-36-15.93

OHIO

397
662



TUSCARAWAS COUNTY
TUS – 36 – 15.93

398
662

SEEDING END WIDTH	SEEDING SQ. YDS.
36	183
30	181
35	197
36	200
36	189
32	293
30	251
17	

80 60 40 20 ℄ 20 40 60 80



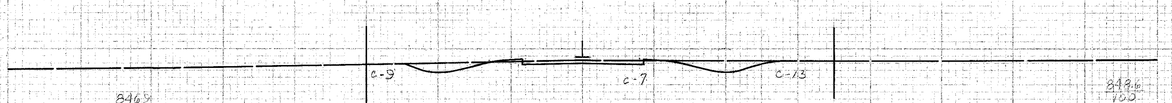
G-848.02
38+50
844.8



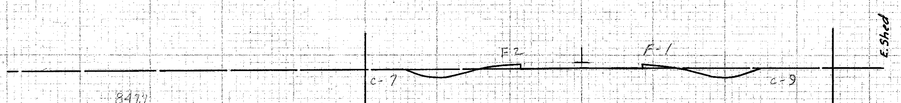
G-848.27
38+00
847.3



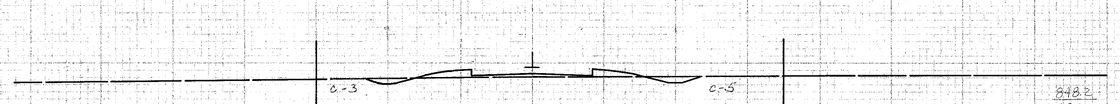
G-848.52
37+50
848.1



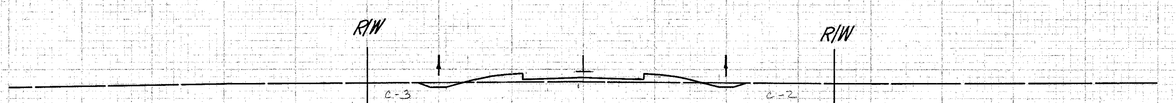
G-848.77
37+00
848.3



G-849.02
36+50
848.2

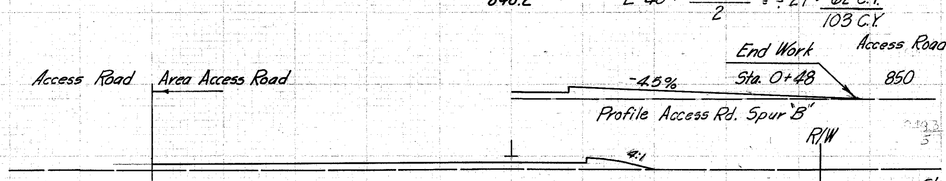


G-849.21
36+00
848.1



G-849.70
35+15
848.2

Access Road Spur 'B'
L = 16' × (A 70+70)/2 = ÷27 = 41 C.Y.
L = 40' × (A 70+14)/2 = ÷27 = 62 C.Y.
103 C.Y.



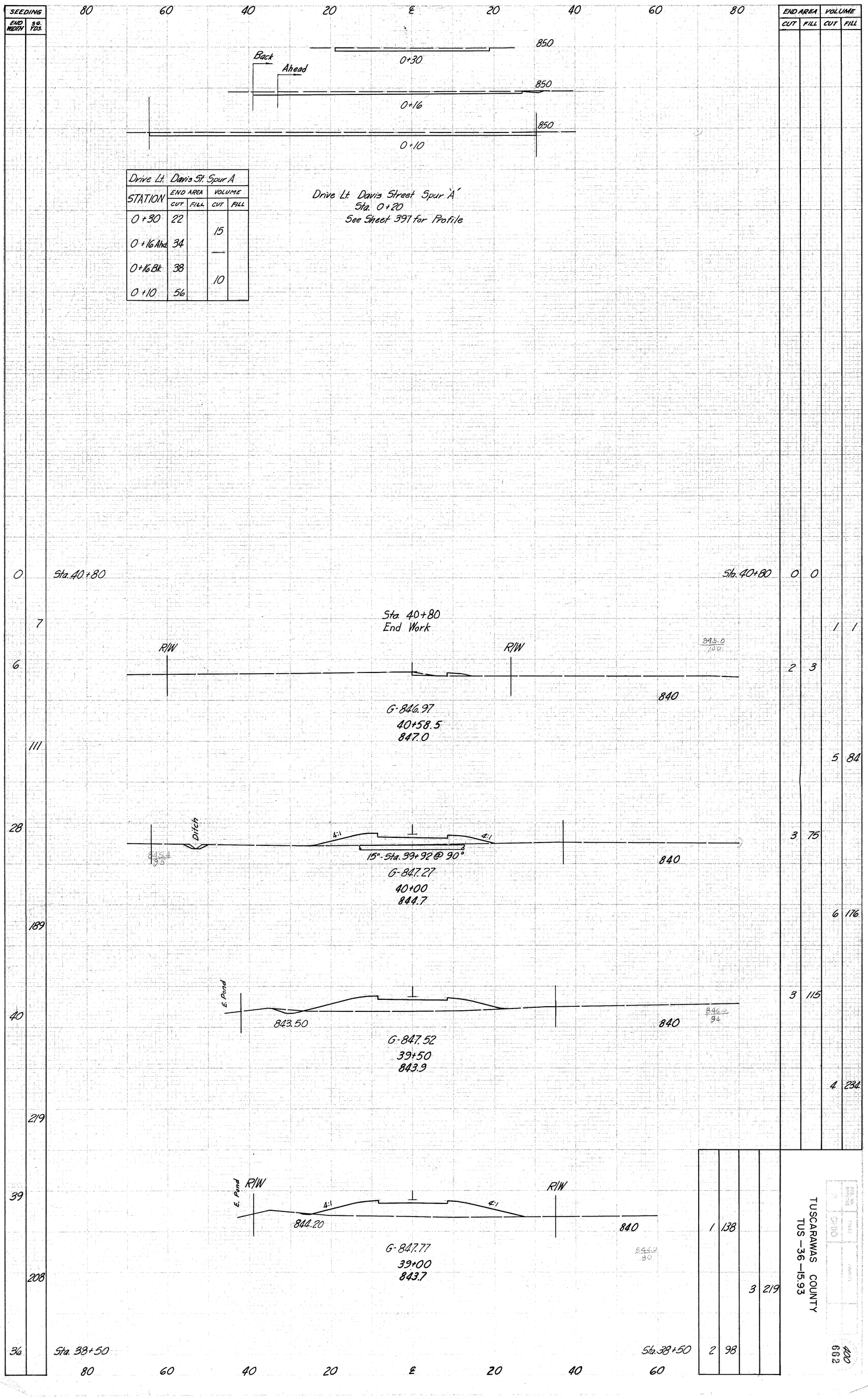
G-849.95
34+64.27
848.2
(Perpendicular to Back Tangent)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2	98		
		11	100
10	10		
		37	9
30	0		
		55	1
29	1		
		42	4
16	3		
		22	18
8	16		
		20	57
5	20		
0		1	
Sta. 35+00		—	—
		103	
		—	—
70			
		69	
30			

Access Road Sta. 34+63.01 to Sta 38+50

TUSCARAWAS COUNTY
TUS-36-15.93

399
662



SEEDING
END WIDTH
SQ. YDS.
80 60 40 20 ℄ 20 40 60 80
END AREA
CUT FILL
VOLUME
CUT FILL
850
0+30
Back
Ahead
850
0+16
850
0+10
Drive Lt. Davis St. Spur A
STATION
END AREA
CUT FILL
VOLUME
CUT FILL
0+30 22
0+16 Aha 34
0+16 Bk 38
0+10 56
15
10
Drive Lt. Davis Street Spur 'A'
Sta. 0+20
See Sheet 397 for Profile
0
Sta. 40+80
Sta. 40+80
0 0
7
Sta. 40+80
End Work
1 1
R/W
R/W
845.0
100
6
2 3
840
G-846.97
40+58.5
847.0
111
5 84
28
Ditch
4:1
4:1
845.4
95
15"-Sta. 39+92 @ 90°
840
3 75
G-847.27
40+00
844.7
189
6 176
E. Pond
843.50
840
846.0
94
40
3 115
G-847.52
39+50
843.9
4 234
219
39
E. Pond
R/W
R/W
4:1
4:1
844.20
840
G-847.77
39+00
843.7
844.0
80
208
36
Sta. 38+50
Sta. 38+50
1 138
3 219
2 98
80 60 40 20 ℄ 20 40 60
Access Road Sta. 39+00 to Sta. 40+58
TUSCARAWAS COUNTY
TUS-36-15.93
400
662

TUSCARAWAS COUNTY
TUS-36-15.93

FOR PROFILE OF RECONSTR. EASTPORT AVE. SEE SHEET 403

INTERSECTION - RELOC. CO. RD. 64 & RECONSTR. EASTPORT AVE.

SCALE IN FEET 10 0 30 60

INTERSECTION - RELOC. CO. RD. 64 & RECONSTR. McKEE RD.

SCALE IN FEET 10 0 30 60

TYPICAL SECTION EXISTING CO. RD. 64

2' 18' 2'

4" Gravel Base
2" Build-up #34 & #46 Gravel with MC-5

RELOC. CO. RD. 64
CURVE DATA
P.I. Sta. 22+05.76
Δ = 61° 04' 30" Lt.
D = 18° 00' 00"
R = 318.31'
L = 339.30'
T = 187.77'

Filled Spandrel Concrete Arch Bridge

UHRICHSVILLE-CORP LINE
MILL TWP-CORP LINE
LITTLE STILLWATER CREEK
UHRICHSVILLE DENNISON

BEGIN ROCK, LT. STA. 13+50

EASTPORT AVE. S 19° 30' 05" W

END WORK STA. 2+00

BEGIN WORK STA. 12+95

Construct Paving and Subbase f/f of Bridge Wall

Sta. 1+16.58 ℄ Reconstr. Eastport Ave. = Sta. 6+52.77 Survey ℄ Little Stillwater Creek

BEGIN WORK STA. 19+00

END WORK STA. 1+90

Sta. 23+49.25 ℄ Reloc. Co. Rd. 64 = Sta. 0+00.00 ℄ Reconstr. Eastport Ave.

Sta. 20+75.00 ℄ Reloc. Co. Rd. 64 = Sta. 0+00.00 ℄ Reconstr. McKee Rd.

Sta. 20+75.00 ℄ Reloc. Co. Rd. 64 = Sta. 0+00.00 ℄ Reconstr. Eastport Ave.

CORPORATION LINE

ABANDON

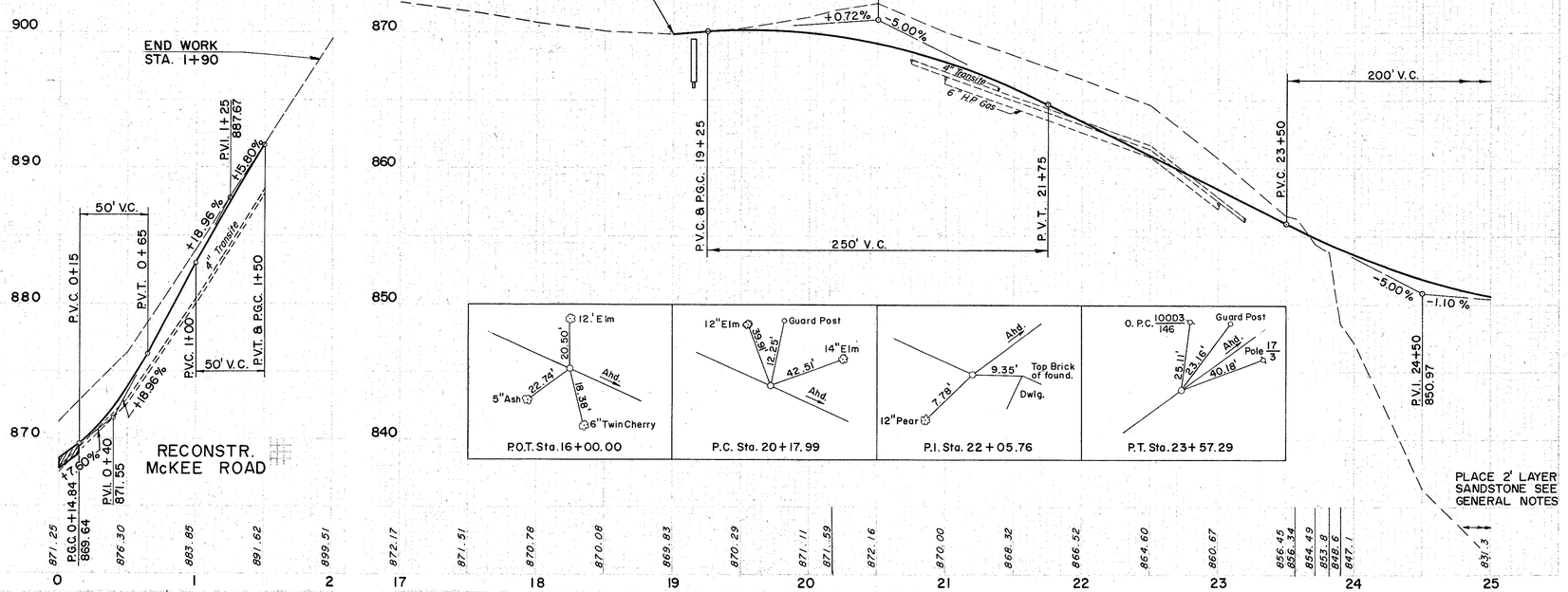
Existing R/W Line

McKEE ROAD

COUNTY ROAD 64

Section A-A
See Sheet 14
B.W. = 2.0'
S = 2:1
D = 1.0'

RECONSTR. McKEE ROAD



(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE	I-22 SUBBASE	T-30 BIT. PRIME COAT	T-35 ASPHALTIC CONCRETE SURFACE COURSE TYPE A	T-35 TYPE C
				C.Y.		GAL.	C.Y.	
1-P	19+00	38+50		1,012	795	1,734		241
2-P	0+14.84 McKee Rd.	1+50		54	43	147	16	
3-P	0+10.56 Eastport Ave.	2+00		144	110	252		35
	TOTAL			1,210	948	2,133	16	276

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	E-12 PIPE REMOVED 15" AND UNDER	I-1 15" PIPE CLASS J-1	I-8 STD. #2-2A C.B.	I-10 DUMPED ROCK CHANNEL PROTECT.	I-14 STD. TYPE I PAVED GUTTER	L-10 SODDING
				L.F.		EA.	C.Y.	L.F.	S.Y.
1-D	19+15	—	℄ a Lt.		38	1		52	17
2-D	1+40 McKee Rd.	23+70	Lt. & Rt.						195
3-D	23+48	23+80	Rt.	78					
4-D	23+48	23+72	Rt.				20		
5-D	23+82	—	Rt.	18					
6-D	23+70	24+50	Rt.				28		
7-D	19+15	0+95 McKee Rd.	Rt.					105	35
8-D	24+50	25+00	Rt.						28
	TOTAL			96	38	1	48	157	275

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. SUB-GRADE	E-8 REMOVAL & DISPOSAL OF EXIST. PAV'T. (FLEX)	I-9 STONE UNDER-DRAINS NO. 2	I-15 GUARD RAIL WIRE CABLE	I-15 GUARD RAIL REMOVED & DISPOSED OF	I-124 REMOVE SECTION OF EXIST. WATER LINE & PLUG
				S.Y.			L.F.		
1-R	19+15	1+59 Eastport Ave.	Lt.				544		
2-R	1+51 Eastport Ave.	25+01	Rt. & Lt.				216		
3-R	22+88	1+60 Eastport Ave.	Lt.					190	
4-R	23+80	1+53 Eastport Ave.	Rt.					152	
5-R	19+00	38+50		4,334		819			
6-R	0+14.84 McKee Rd.	1+50		368		60			
7-R	0+10.56 Eastport Ave.	2+00		628		66			
8-R	23+13	24+57	Rt.		442				
9-R	1+90	McKee Rd.	Lt.						Lump
	TOTAL			5,330	442	945	760	342	LUMP

EXCAVATION	=	786 C.Y.
EMBANKMENT	=	3 C.Y.
EMBANKMENT + 6 %	=	3 C.Y.

RECONSTR. McKEE ROAD

EXCAVATION	=	150 C.Y.
EMBANKMENT	=	394 C.Y.
EMBANKMENT + 6 %	=	418 C.Y.

RECONSTR. EASTPORT AVE.

EXCAVATION	=	3,839 C.Y.
EMBANKMENT	=	3,936 C.Y.
EMBANKMENT + 6	=	4,172 C.Y.

RELOC. CO. RD. 64
STA. 16+00 TO STA. 25+00

TUSCARAWAS COUNTY
TUS-36-15.93

FOR DETAILS ON BRIDGE NO. TUS-36-1849 SEE SHEETS 577-584

RELOC. CO. RD. 64
CURVE DATA
P.I. Sta. 29+23.95
Δ = 106° 12' 00" Rt
D = 18° 00' 00"
R = 318.31'
L = 590.00'
T = 423.95'

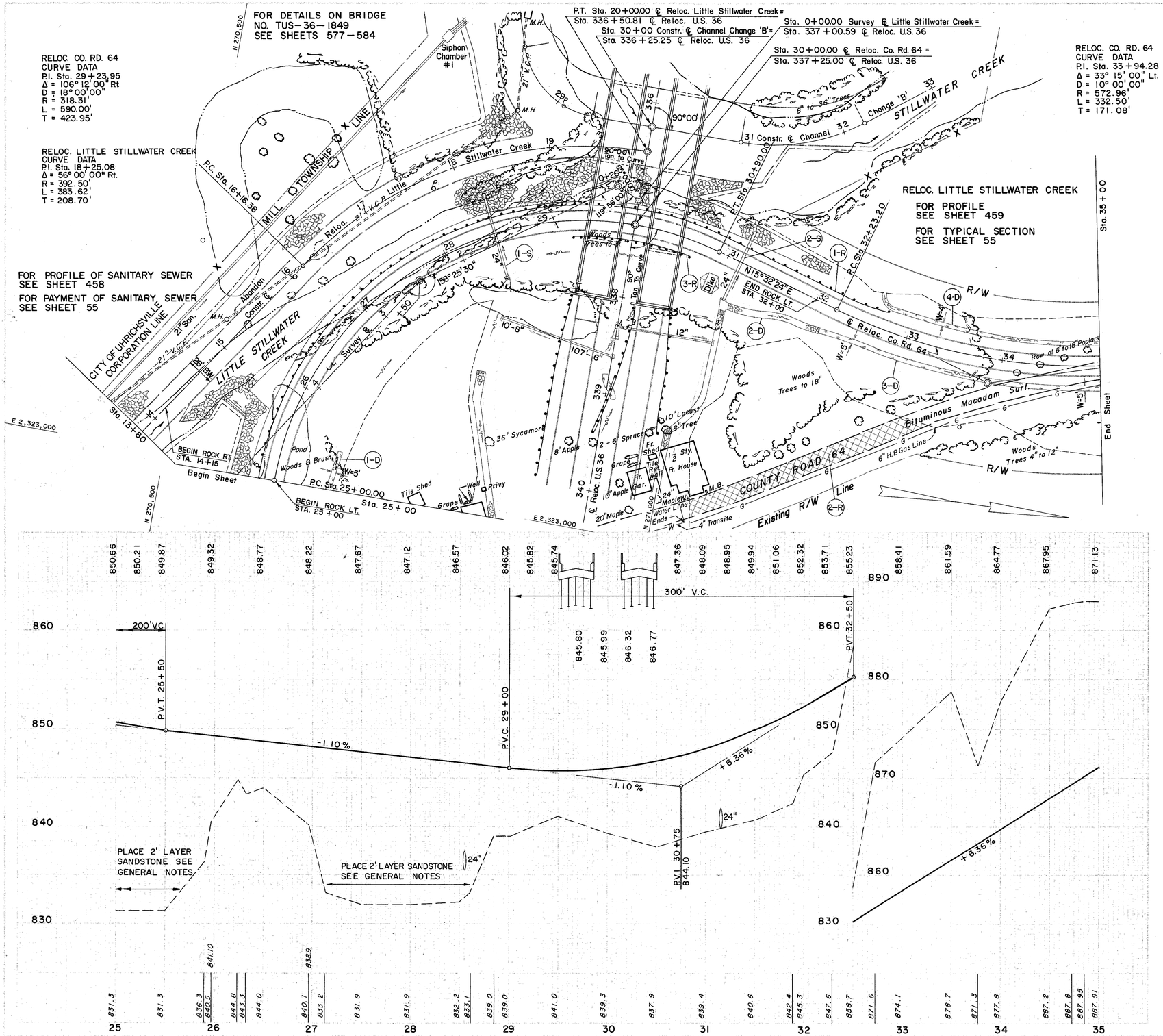
RELOC. LITTLE STILLWATER CREEK
CURVE DATA
P.I. Sta. 18+25.08
Δ = 56° 00' 00" Rt.
R = 392.50'
L = 383.62'
T = 208.70'

P.T. Sta. 20+00.00 ℄ Reloc. Little Stillwater Creek = Sta. 336+50.81 ℄ Reloc. U.S. 36
Sta. 30+00 Constr. ℄ Channel Change 'B' = Sta. 336+25.25 ℄ Reloc. U.S. 36
Sta. 0+00.00 Survey ℄ Little Stillwater Creek = Sta. 337+00.59 ℄ Reloc. U.S. 36
Sta. 30+00.00 ℄ Reloc. Co. Rd. 64 = Sta. 337+25.00 ℄ Reloc. U.S. 36

RELOC. CO. RD. 64
CURVE DATA
P.I. Sta. 33+94.28
Δ = 33° 15' 00" Lt.
D = 10° 00' 00"
R = 572.96'
L = 332.50'
T = 171.08'

RELOC. LITTLE STILLWATER CREEK
FOR PROFILE SEE SHEET 459
FOR TYPICAL SECTION SEE SHEET 55

FOR PROFILE OF SANITARY SEWER SEE SHEET 458
FOR PAYMENT OF SANITARY SEWER SEE SHEET 55



(R) ROADWAY

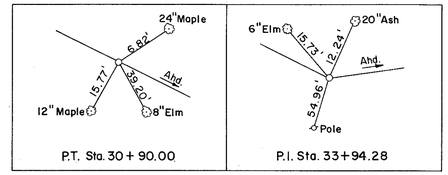
REF. NO.	STATION FROM	STATION TO	SIDE	E-8 REMOVAL & DISPOSAL OF EXIST. PAV'T. (FLEX.) S.Y.	I-15 GUARD RAIL WIRE CABLE L.F.
1-R	25+01	32+73	Lt.		800
2-R	340+12.38	33+44	Lt & Rt.	498	
3-R	29+37	30+63	Rt.		120
	TOTAL			498	920

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-10 DUMPED ROCK CHANNEL PROTECT. C.Y.	L-10 SODDING S.Y.
1-D	25+00	25+50	Rt.		23
2-D	31+22	32+15	Rt.	32	
3-D	32+15	35+00	Rt.		165
4-D	32+60	35+00	Lt.		105
	TOTAL			32	293

(S) STRUCTURE

REF. NO.	STATION	I-1 24" PIPE CL. A-1 SEC. M-6.4(d) L.F.	I-2 MASONRY C.Y.	I-10 RIPRAP 6" REINF. S.Y.	L-10 SODDING S.Y.	SEE SHEET
1-S	28+55	90	0.41	6	2	488
2-S	31+16	78	0.41	7	3	488
	TOTAL	168	0.82	13	5	



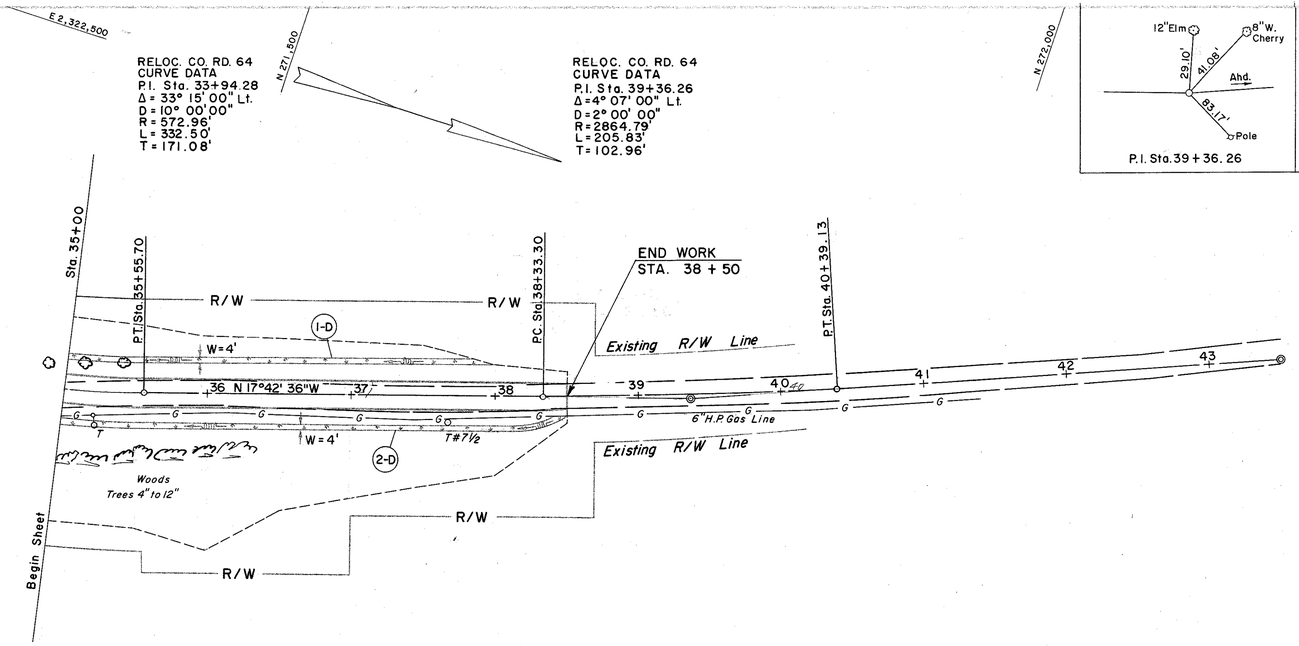
EXCAVATION	(SEE SHEET 578)
EMBANKMENT	= 150 C.Y.
EMBANKMENT + 6 %	= 159 C.Y.

RELOC. LITTLE STILLWATER CREEK

EXCAVATION	12,643 C.Y.
EMBANKMENT	16,956 C.Y.
EMBANKMENT + 6	17,973 C.Y.

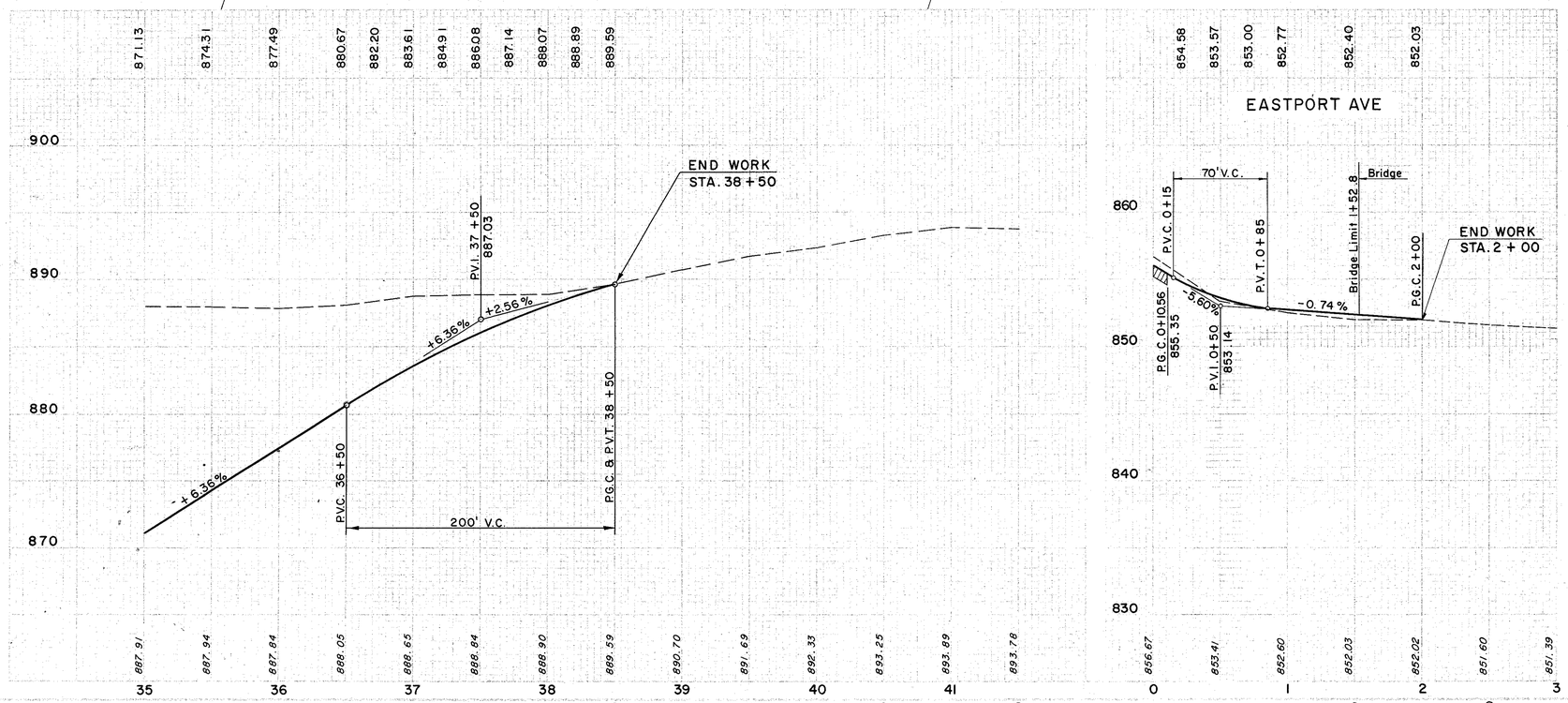
RELOC. CO. RD. 64
STA. 25+00 TO STA. 35+00

TUSCARAWAS COUNTY
TUS-36-15.93



(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	L-10 SODDING S.Y.
1-D	35+00	37+92	Lt.	130
2-D	35+00	38+50	Rt.	142
	TOTAL			272

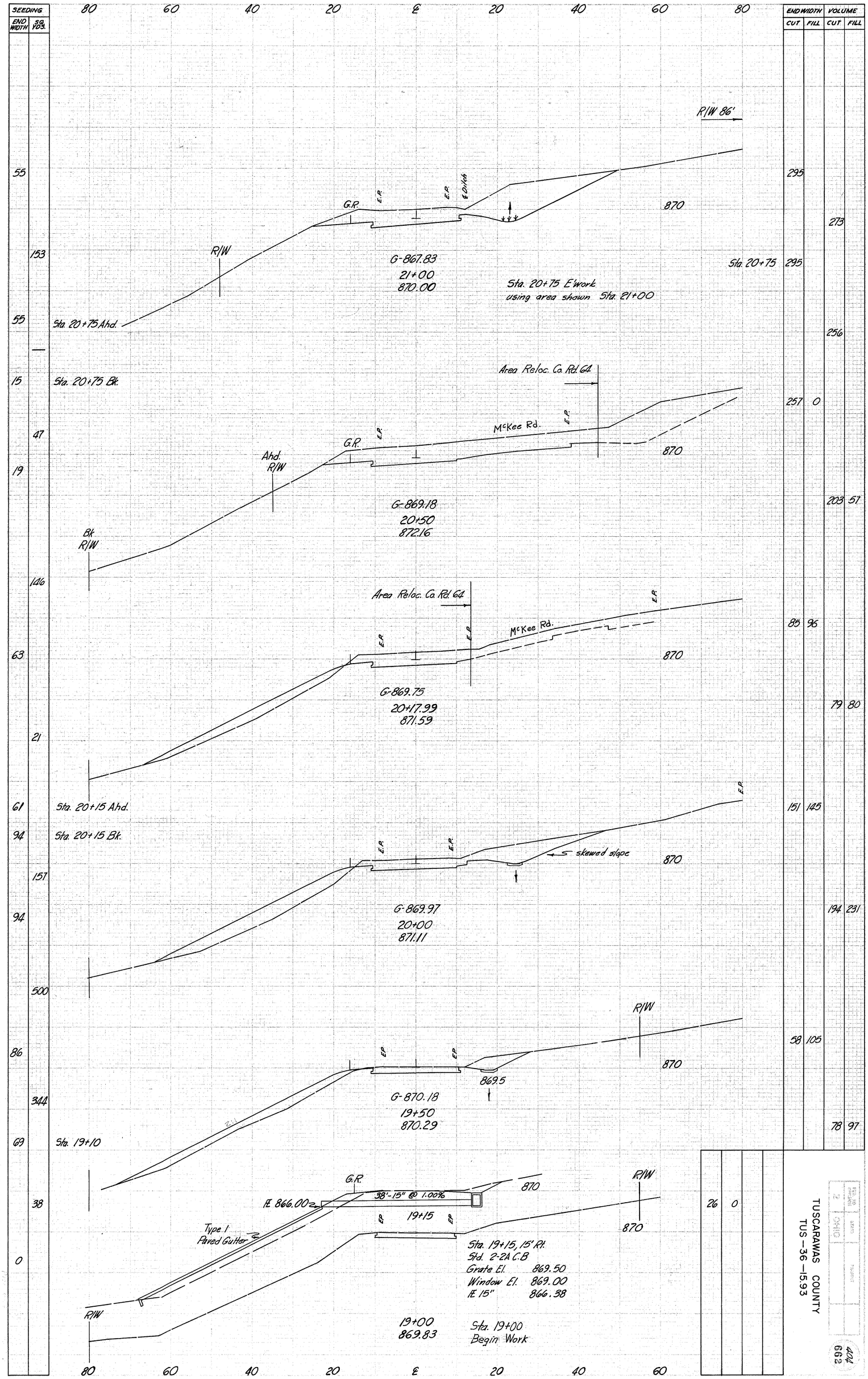


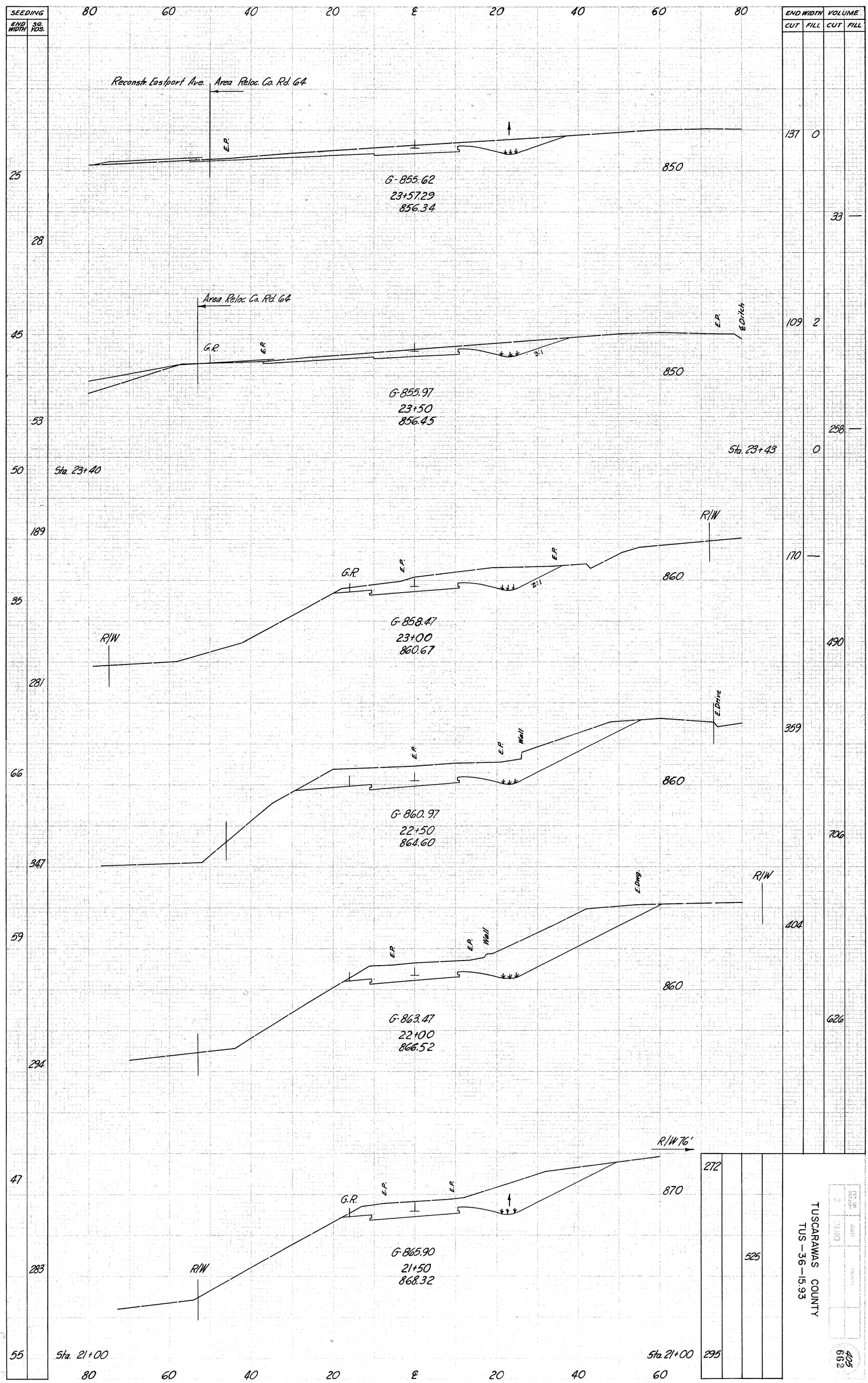
RELOC. CO. RD. 64
SUPERELEVATION TABLE

STATION	LT. EDGE	℄	RT. EDGE	
19+00	MEET EXISTING			
19+20	869.88	870.04	869.88	Transition
+25	869.91	870.07	869.94	
+50	870.02	870.18	870.22	
+68.48	870.00	870.16	870.32	
+75	869.94	870.14	870.34	
20+00	869.60	869.97	870.34	
+25	869.12	869.65	870.18	
+50	868.48	869.18	869.88	
+70	867.88	868.71	869.54	
+75	867.75	868.58	869.41	Full Super 0.083'/Ft.
21+00	867.00	867.83	868.66	
+25	866.10	866.93	867.76	
+50	865.07	865.90	866.73	
+75	863.89	864.72	865.55	
22+00	862.64	863.47	864.30	
+25	861.39	862.22	863.05	
+50	860.14	860.97	861.80	
+75	858.89	859.72	860.55	
23+00	857.64	858.47	859.30	
+25	856.56	857.22	857.88	
+50	855.47	855.97	856.47	
+75	854.45	854.78	855.11	Transition
24+00	853.54	853.71	853.88	
+25	852.77	852.77	852.77	
+50	852.12	851.95	851.78	
+75	851.58	851.25	850.92	
25+00	851.16	850.66	850.16	
+25	850.87	850.21	849.55	
+50	850.70	849.87	849.04	
+75	850.43	849.60	848.77	
26+00	850.15	849.32	848.49	
+25	849.88	849.05	848.22	
+50	849.60	848.77	847.94	
+75	849.33	848.50	847.67	Full Super 0.083'/Ft.
27+00	849.05	848.22	847.39	
+25	848.78	847.95	847.12	
+50	848.50	847.67	846.84	
+75	848.23	847.40	846.57	
28+00	847.95	847.12	846.29	
+25	847.68	846.85	846.02	
+50	847.40	846.57	845.74	
+75	847.13	846.30	845.47	
29+00	846.85	846.02	845.19	
+25	846.65	845.82	844.99	
+50	846.57	845.74	844.91	
+75	846.63	845.80	844.97	
30+00	846.82	845.99	845.16	Transition
+20	847.06	846.23	845.40	
+25	847.12	846.32	845.52	
+50	847.44	846.77	846.10	
+75	847.90	847.36	846.82	
31+00	848.50	848.09	847.68	
+25	849.23	848.95	848.67	
+50	850.09	849.94	849.79	
+75	851.08	851.06	851.04	
32+00	852.21	852.32	852.43	
+25	853.47	853.71	853.95	
+50	854.86	855.23	855.60	
+75	856.32	856.82	857.32	
33+00	857.78	858.41	859.04	Full Super 0.083'/Ft.
+25	859.37	860.00	860.63	
+50	860.96	861.59	862.22	
+75	862.55	863.18	863.81	
34+00	864.14	864.77	865.40	
+25	865.73	866.36	866.99	
+50	867.32	867.95	868.58	
+75	868.91	869.54	870.17	
35+00	870.50	871.13	871.76	Transition
+15	871.45	872.08	872.71	
+25	872.16	872.72	873.28	
+50	873.91	874.31	874.71	
+75	875.66	875.90	876.14	
+86.39	876.46	876.62	876.78	
36+00	877.33	877.49	877.56	
+25	878.92	879.08	878.99	
+35	879.56	879.72	879.56	

Excavation	10,378 C.Y.
Embankment	0 C.Y.
Embankment 6	0 C.Y.

RELOC. CO. RD. 64
STA. 35+00 TO STA. 43+50

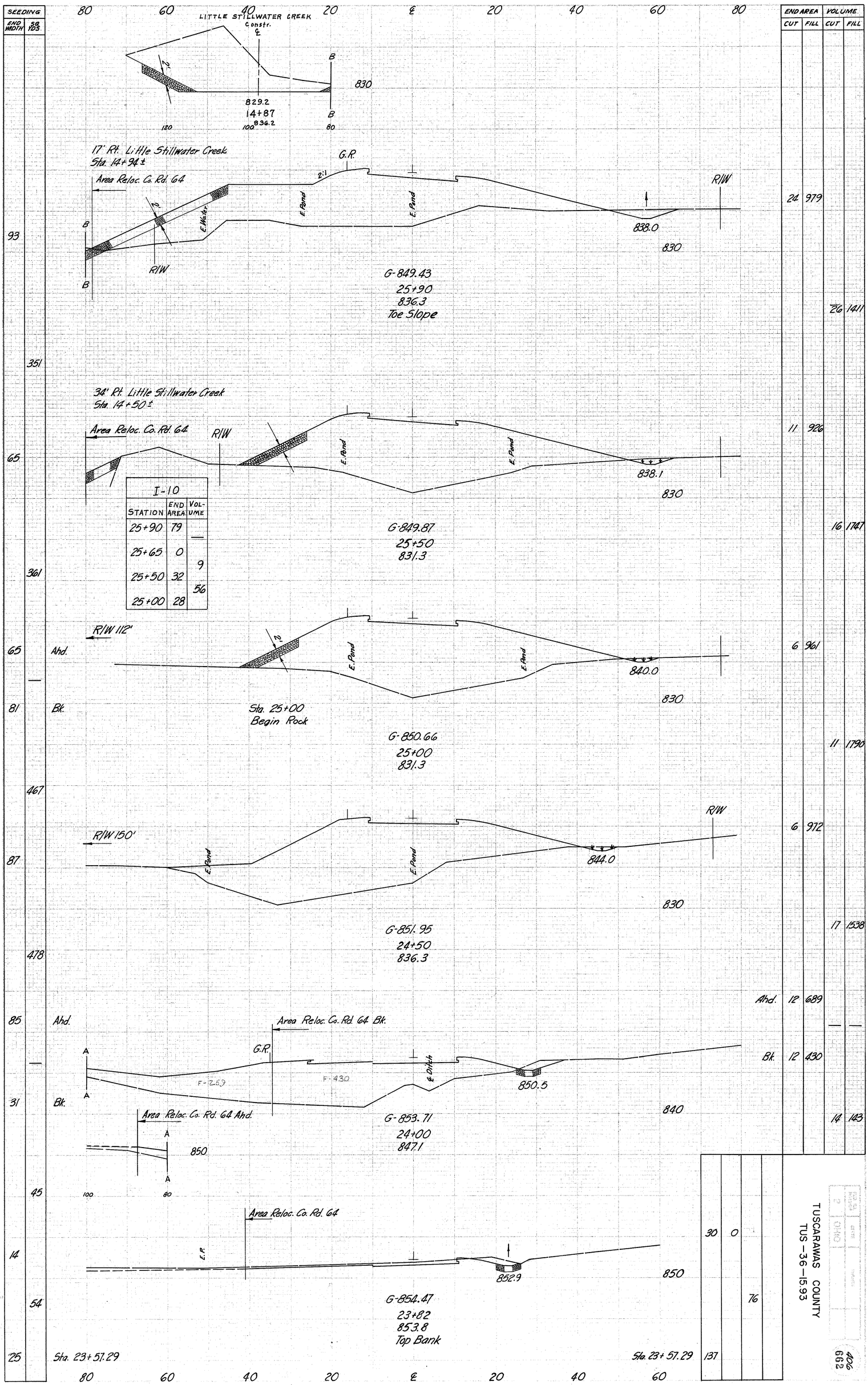

SEEDING
END WIDTH
SQ. YDS.
END WIDTH
CUT
FILL
VOLUME
CUT
FILL
80 60 40 20 ℄ 20 40 60 80
R/W 86'
55
295
G.R.
E.P.
E.P.
℄ Ditch
870
273
153
R/W
G-867.83
21+00
870.00
Sta. 20+75
295
Sta. 20+75 E'work
using area shown Sta. 21+00
55
Sta. 20+75 Ahd.
256
15
Sta. 20+75 Bk.
Area Reloc. Co. Rd. 64
257
0
47
McKee Rd.
E.P.
G.R.
E.P.
Ahd.
R/W
870
19
G-869.18
20+50
872.16
203
57
Bk.
R/W
146
Area Reloc. Co. Rd. 64
E.P.
85
96
McKee Rd.
E.P.
E.P.
63
870
G-869.75
20+17.99
871.59
79
80
21
61
Sta. 20+15 Ahd.
151
145
94
Sta. 20+15 Bk.
E.P.
E.P.
E.P.
skewed slope
870
157
G-869.97
20+00
871.11
194
231
94
500
R/W
86
EP
EP
870
869.5
G-870.18
19+50
870.29
344
78
97
69
Sta. 19+10
G.R.
870
R/W
38
℄ 866.00
38'-15" @ 1.00%
19+15
EP
EP
Type 1
Paved Gutter
870
26
0
0
Sta. 19+15, 15' Rt.
Std. 2-2A C.B
Grate El. 869.50
Window El. 869.00
℄ 15" 866.38
R/W
19+00
869.83
Sta. 19+00
Begin Work
80 60 40 20 ℄ 20 40 60
Reloc. Co. Rd. 64 Sta. 19+00 to 21+00
TUSCARAWAS COUNTY
TUS-36-15.93
2
OHIO
404
662

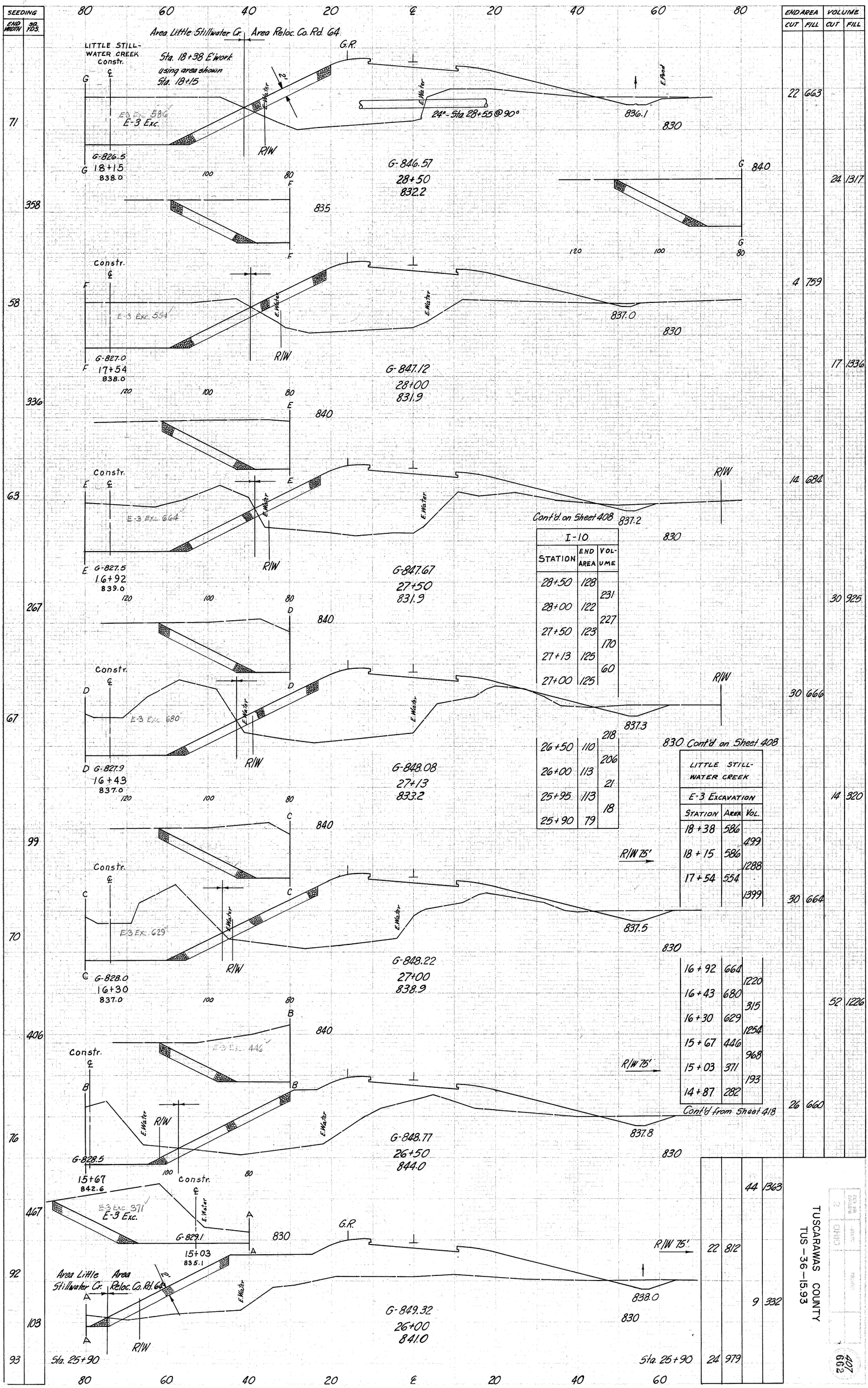


Reloc. Co. Rd. 64 Sta 21+50 to 23+57.29

TUSCARAWAS COUNTY
TUS-36-15.93

405
662


SEEDING
END WIDTH
SQ YDS
80 60 40 20 ℄ 20 40 60 80
END AREA CUT FILL
VOLUME CUT FILL
LITTLE STILLWATER CREEK
Constr. ℄
2'
B B
830
829.2
14+87
836.2
120 100 80
17' Rt. Little Stillwater Creek
Sta. 14+94 ±
Area Reloc. Co. Rd. 64
G.R.
2:1
2'
E. Ditch
E. Pond
E. Pond
R/W
838.0
830
24 979
93
B B
R/W
G-849.43
25+90
836.3
Toe Slope
26 1411
351
34' Rt. Little Stillwater Creek
Sta. 14+50 ±
Area Reloc. Co. Rd. 64
R/W
E. Pond
E. Pond
838.1
830
11 926
65
I-10
STATION | END AREA | VOLUME
25+90 | 79 | —
25+65 | 0 | 9
25+50 | 32 | 56
25+00 | 28 |
G-849.87
25+50
831.3
16 1747
361
R/W 112'
65 Ahd.
2'
E. Pond
E. Pond
840.0
830
6 961
— 81 Bk.
Sta. 25+00
Begin Rock
G-850.66
25+00
831.3
11 1790
467
R/W 150'
R/W
E. Pond
E. Pond
844.0
830
6 972
87
G-851.95
24+50
836.3
17 1538
478
Ahd. 12 689
85 Ahd.
Area Reloc. Co. Rd. 64 Bk.
A A
G.R.
E. Ditch
F-259
F-430
850.5
Bk. 12 430
— 31 Bk.
840
G-853.71
24+00
847.1
14 143
Area Reloc. Co. Rd. 64 Ahd.
A A
850
100 80
45
Area Reloc. Co. Rd. 64
E.P.
852.9
850
14
G-854.47
23+82
853.8
Top Bank
54
Sta. 23+57.29
Sta. 23+57.29
25
80 60 40 20 ℄ 20 40 60
30 0
76
137
Reloc. Co. Rd. 64 Sta. 23+82 to 25+90
TUSCARAWAS COUNTY
TUS-36-15.93
406
662



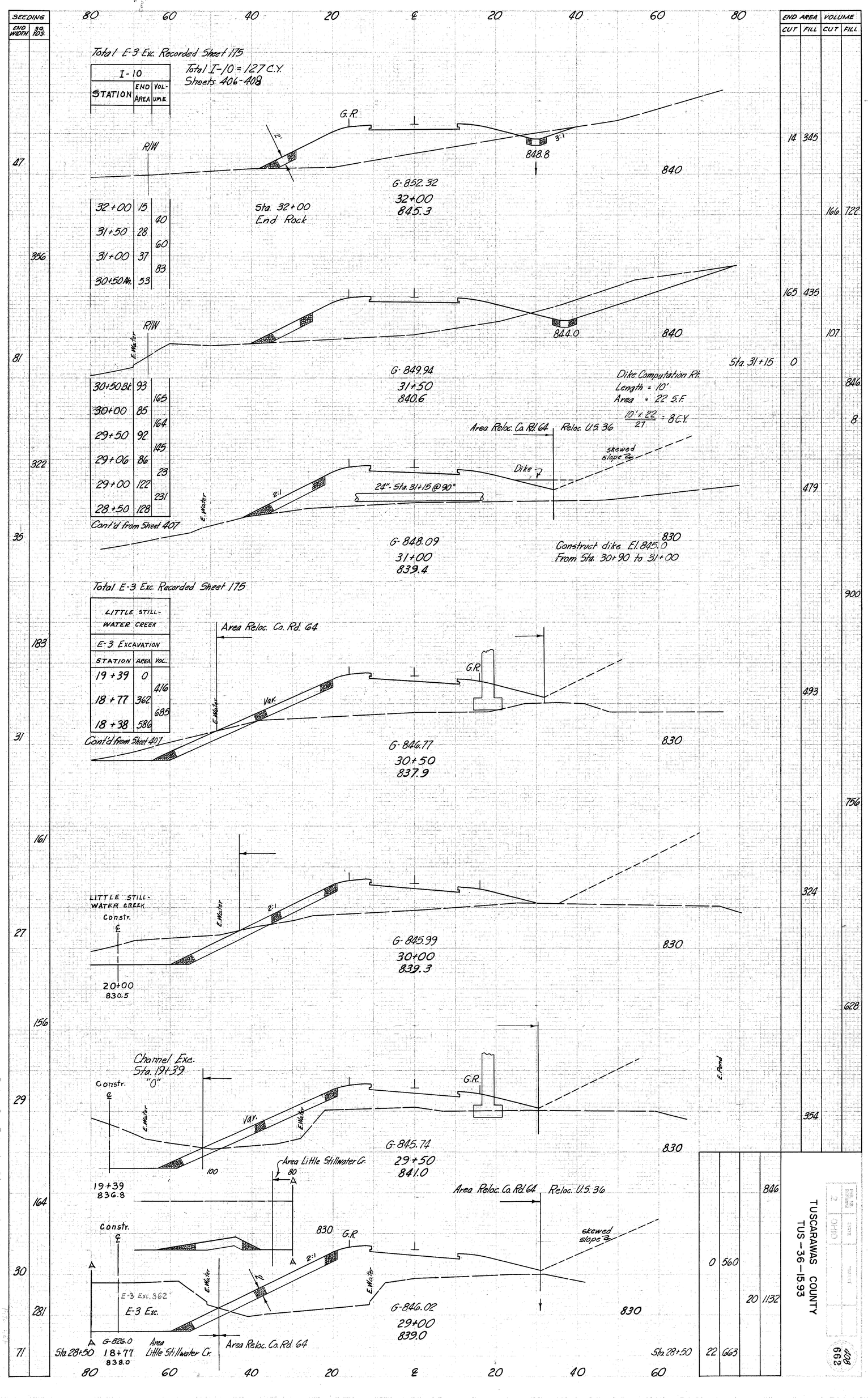
I-10		
STATION	END AREA	VOLUME
28+50	128	
		231
28+00	122	
		227
27+50	123	
		170
27+13	125	
		60
27+00	125	
		218
26+50	110	
		206
26+00	113	
		21
25+95	113	
		18
25+90	79	

LITTLE STILL-WATER CREEK		
E-3 EXCAVATION		
STATION	AREA	VOL.
18+38	586	
		499
18+15	586	
		1288
17+54	554	
		1399
16+92	664	
		1220
16+43	680	
		315
16+30	629	
		1254
15+67	446	
		968
15+03	371	
		193
14+87	282	

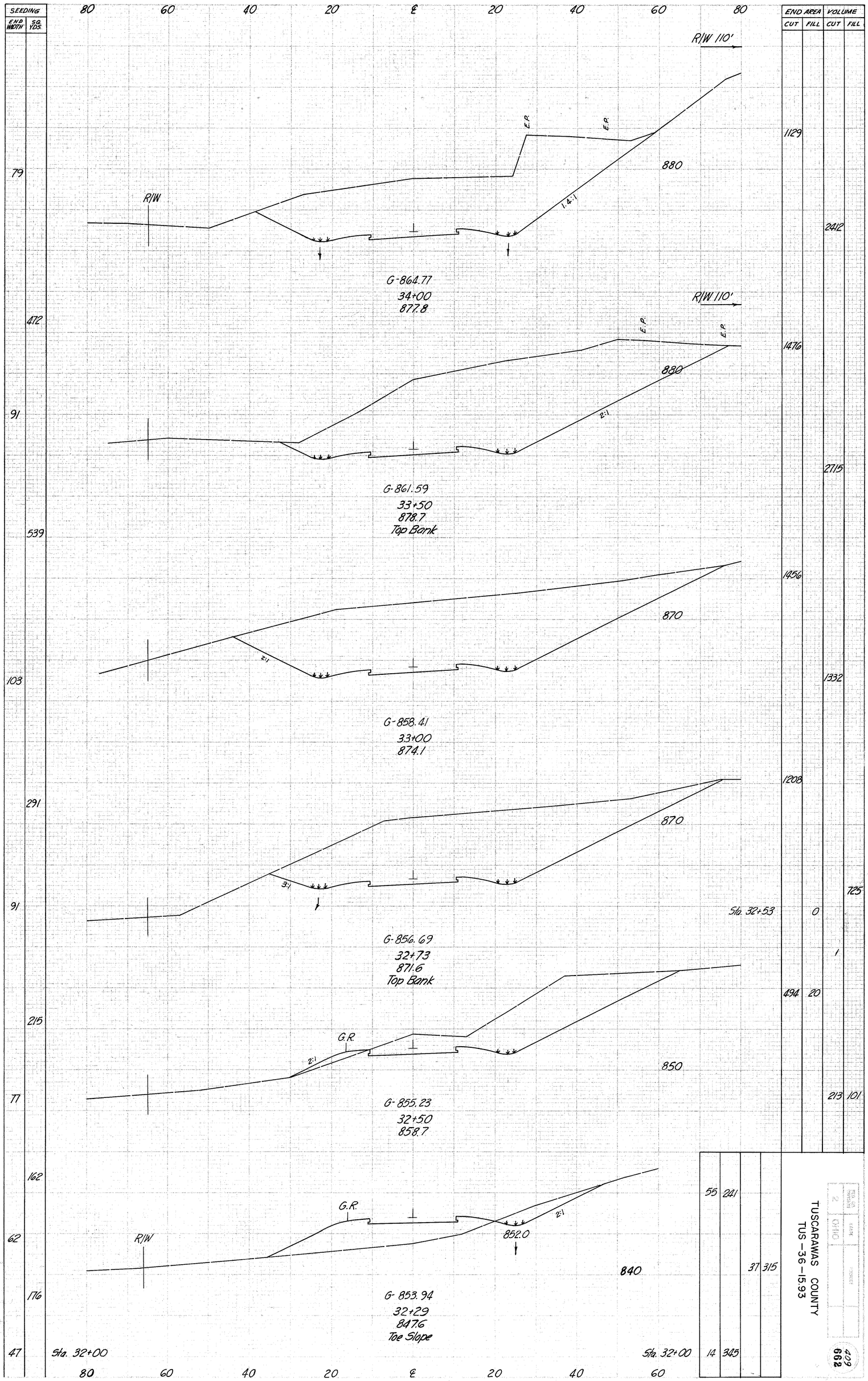
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
22	663		
		24	1317
4	759		
		17	1336
14	684		
		30	925
30	666		
		14	320
30	664		
		52	1226
26	660		
		44	1363
22	812		
		9	332
24	979		

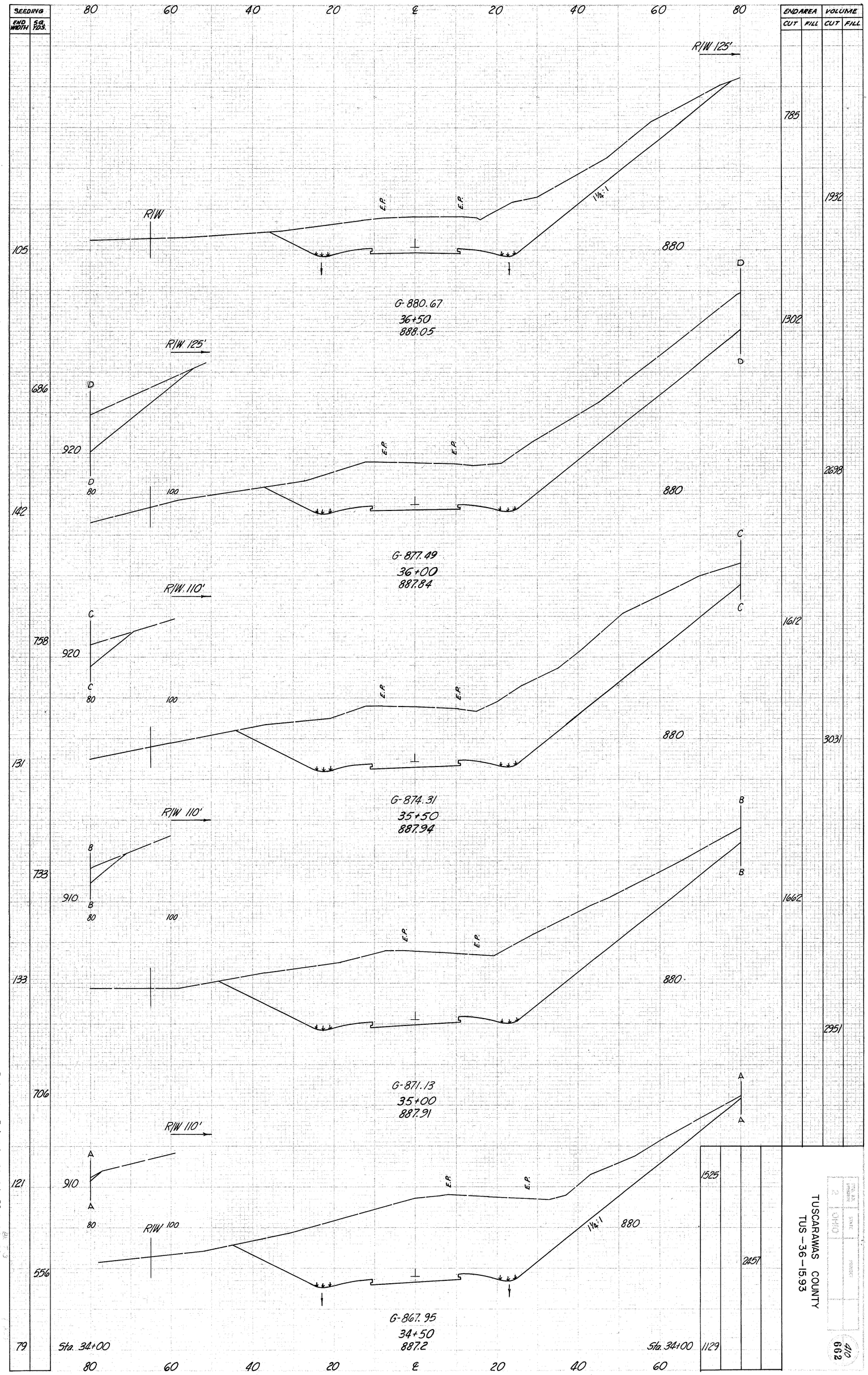
TUSCARAWAS COUNTY
TUS-36-15.93

407
662



SEEDING
END WIDTH
SQ. YDS.
END AREA
CUT
FILL
VOLUME
CUT
FILL
Total E-3 Exc. Recorded Sheet 175
I-10
STATION
END AREA
VOLUME
Total I-10 = 127 C.Y.
Sheets 406-408
G.R.
R/W
848.8
840
G-852.32
32+00
845.3
Sta. 32+00
End Rock
32+00 15
31+50 28
31+00 37
30+50 Ah. 53
40
60
83
844.0
840
G-849.94
31+50
840.6
Sta. 31+15
Dike Computation Rt.
Length = 10'
Area = 22 S.F.
10' x 22 / 27 = 8 C.Y.
30+50 Bk. 93
30+00 85
29+50 92
29+06 86
29+00 122
28+50 128
165
164
145
23
231
Cont'd from Sheet 407
Area Reloc. Co. Rd. 64
Reloc. U.S. 36
skewed slope
Dike
24" - Sta. 31+15 @ 90°
2:1
E. Water
G-848.09
31+00
839.4
830
Construct dike El. 845.0
From Sta. 30+90 to 31+00
Total E-3 Exc. Recorded Sheet 175
LITTLE STILL-WATER CREEK
E-3 EXCAVATION
STATION
AREA
VOL.
19+39 0
18+77 362
18+38 586
416
685
Cont'd from Sheet 407
Area Reloc. Co. Rd. 64
Var.
G-846.77
30+50
837.9
LITTLE STILL-WATER CREEK
Constr.
20+00
830.5
G-845.99
30+00
839.3
Channel Exc.
Sta. 19+39
"0"
Constr.
19+39
836.8
100
G-845.74
29+50
841.0
Area Little Stillwater Cr.
80
Area Reloc. Co. Rd. 64
Reloc. U.S. 36
skewed slope
E-3 Exc. 362
E-3 Exc.
G-846.02
29+00
839.0
G-826.0
18+77
838.0
Area Little Stillwater Cr.
Area Reloc. Co. Rd. 64
Sta. 28+50
Sta. 28+50
47
356
81
322
35
183
31
161
27
156
29
164
30
281
71
14 345
166 722
165 435
107
0
846
8
479
900
493
756
324
628
354
846
0 560
20 1132
22 663
TUSCARAWAS COUNTY
TUS-36-15.93
Reloc. Co. Rd. 64 Sta. 29+00 to 32+00
408
662


SEEDING
END WIDTH
SQ. YDS.
80 60 40 20 ℄ 20 40 60 80
END AREA
CUT FILL
VOLUME
CUT FILL
R/W 110'
E.P.
E.P.
1129
880
79
R/W
1.4:1
2412
G-864.77
34+00
877.8
R/W 110'
472
E.P.
E.P.
1476
880
91
2:1
2715
G-861.59
33+50
878.7
Top Bank
539
1456
870
2:1
103
1332
G-858.41
33+00
874.1
1208
291
870
3:1
725
91
Sta. 32+53
0
G-856.69
32+73
871.6
Top Bank
1
494 20
215
G.R.
2:1
850
77
213 101
G-855.23
32+50
858.7
162
G.R.
2:1
55 241
62
R/W
852.0
840
37 315
176
G-853.94
32+29
847.6
Toe Slope
47
Sta. 32+00
Sta. 32+00
14 345
80 60 40 20 ℄ 20 40 60
TUSCARAWAS COUNTY
TUS-36-15.93
OHIO
662
403
Proj. Co. Rd. 64 Sta. 32+29 to 34+00


SEEDING
END WIDTH
SQ. YDS.
80 60 40 20 ℄ 20 40 60 80
ENDAREA
CUT FILL
VOLUME
CUT FILL
R/W 125'
R/W
E.P.
E.P.
1¼:1
105
880
785
1932
G-880.67
36+50
888.05
D
D
R/W 125'
686
920
D
80
100
880
1302
2638
142
G-877.49
36+00
887.84
C
C
R/W. 110'
758
920
C
80
100
880
1612
3031
131
G-874.31
35+50
887.94
B
B
R/W 110'
733
910
B
80
100
880
1662
2951
133
G-871.13
35+00
887.91
A
A
R/W 110'
706
910
A
80
100
R/W
880
1525
2457
1129
121
556
79
G-867.95
34+50
887.2
Sta. 34+00
Sta. 34+00
80 60 40 20 ℄ 20 40 60
Reloc. Co. Rd. 64 Sta. 34+50 to 36+50
TUSCARAWAS COUNTY
TUS-36-15.93
662
410

FED. ROAD NUMBER	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
2	OHIO		411	662

TUSCARAWAS COUNTY
TUS-36-15.93

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
26		169	
157		424	
301		838	
604	785	1286	

Sta. 36+50

R/W 85'

880

1¼:1

E.P.

E.R.

E.R.

E.R

| | | |

SEEDING END WIDTH	SEEDING SQ YDS
41	
16	
53	
361	
77 Ahead	
51 Back	
200	
21	

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
30			
		26	
26	—		
		22	
28	110		
		3	12
28	110		
		48	226
Ahead 24	134		
Back 24	84		—
		51	156
31	84		

80 60 40 20 ℄ 20 40 60 80

850

2+25
852.16

Sta. 2+00
End Work

Exist. R/W

Exist. R/W

2+00
852.02

R/W

EP EP

R/W

850

G-852.22
1+75
851.94

EP

850

1+60.5
851.95

Sta. 1+53 Same Area as Sta. 1+50

EP

850

Sta. 1+53

1+52.8
852.05

Sta. 1+53

G.R. TS EP EP TS G.R. F-6

F-104

R/W

G-852.40
1+50
852.03

840

E'Work Area Ahead

E'work Area Bk.

F-24

G.R. EP EP TS G.R.

F-80 F-50

Ahead

R/W

G-852.77
1+00
852.60

Back

830

Area Area

TS G.R. EP EP TS G.R.

F-7 F-77

R/W

G-853.57
0+50
853.41

840

Sta. 0+50
Begin E'work

EP EP TS Ditch TS

0+00
856.57

840

80 60 40 20 ℄ 20 40 60

Eastport Ave. Sta 0+00 to 2+25

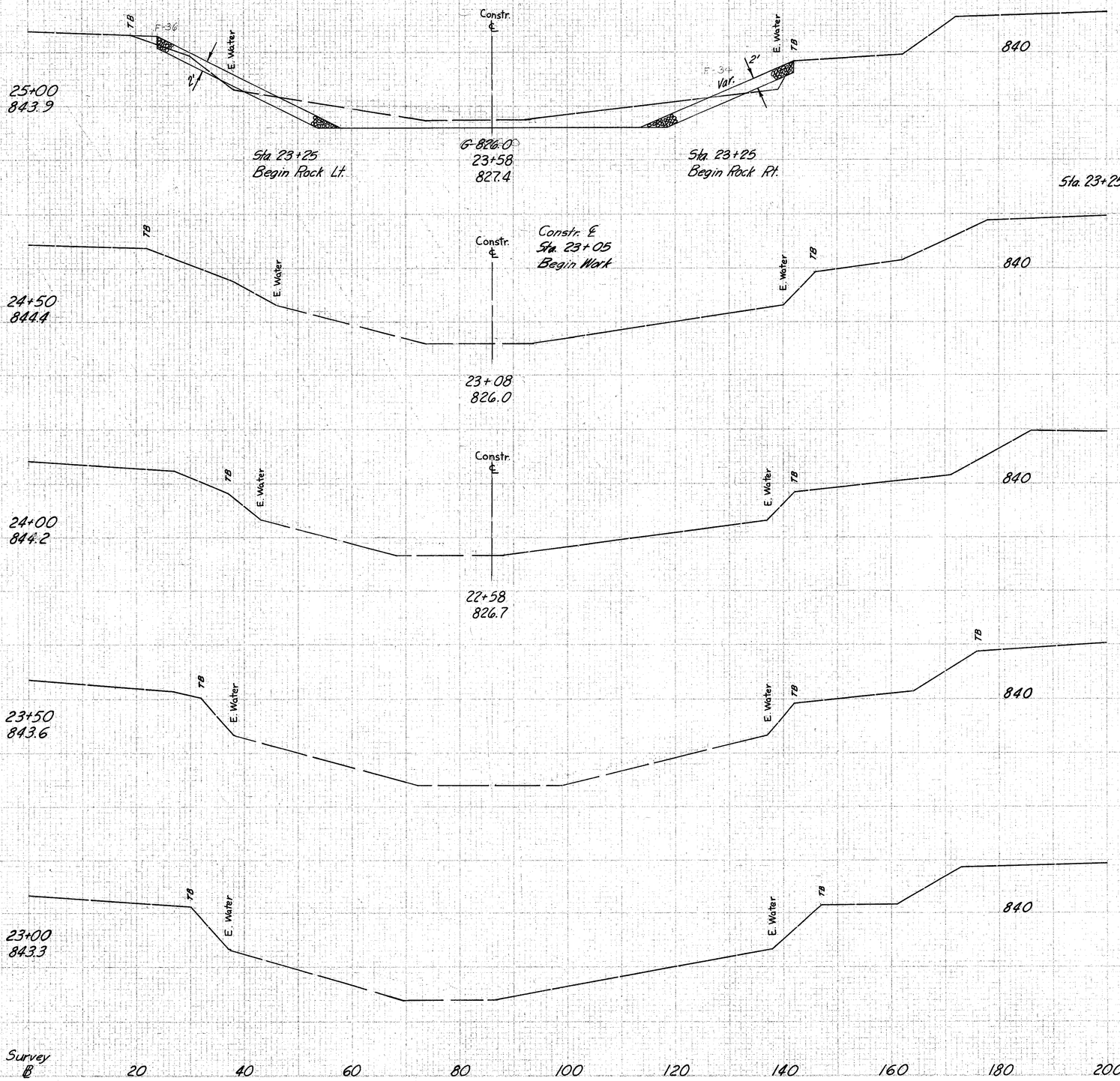
TUSCARAWAS COUNTY
TUS-36-15.93

413
662

SEEDING	
END WIDTH	SQ YDS
5	
	13
0	

Survey ℄

20 40 60 80 100 120 140 160 180 200



I-10	
END AREA	VOLUME
128	
	78
0	

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
E-3 Exc.	172	70		
				153
Sta. 23+10	0	—		

NO.	DATE	PROJECT	
2	OHIO		

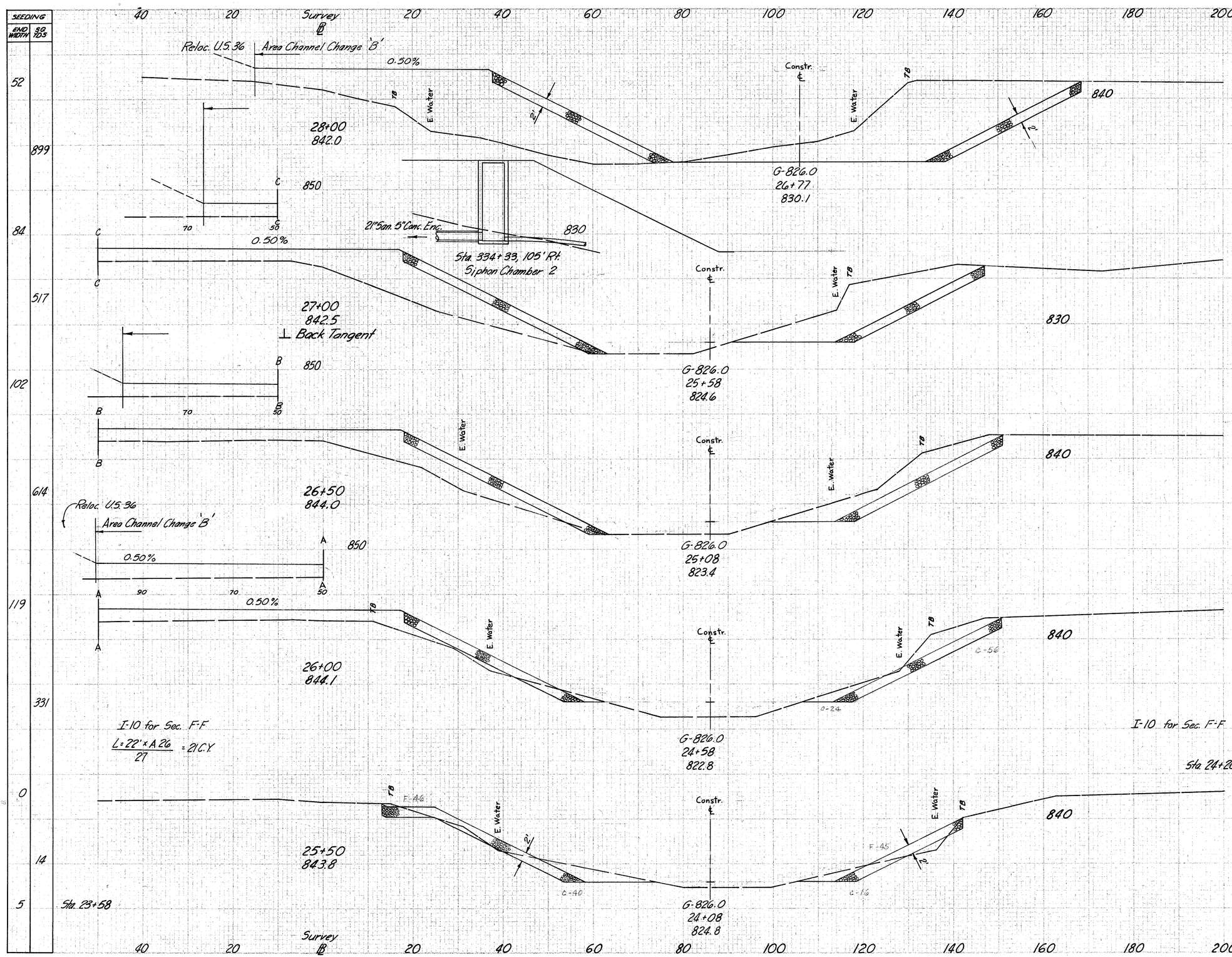
414
662

TUSCARAWAS COUNTY
TUS-36-15.93

Channel Change 'B'

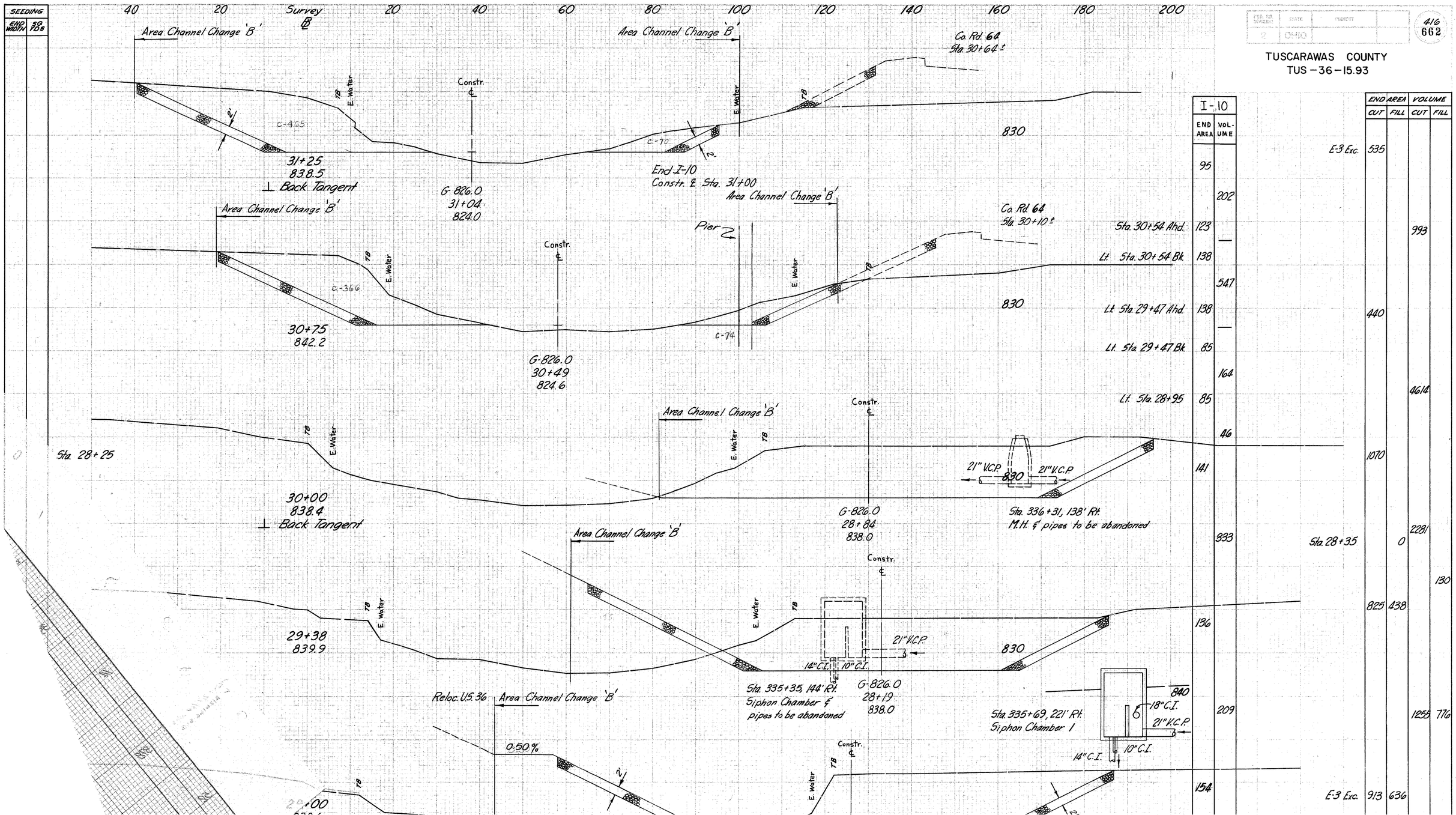
Sta. 22+58 to 23+58

TUSCARAWAS COUNTY
TUS-36-15.93



I-10 END AREA	I-10 VOLUME		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
158		E-3 Exc.	677	816		
	716				342	497
167			294	597		
	318				416	1032
176			155	518		
	313				223	883
162			86	436		
	228					
	21				131	488
162						
	64	E-3 Exc.	56	91		
127						
	236				211	149
128		Sta. 23+58	172	70		

Channel Change 'B' Sta. 24+08 to 26+77



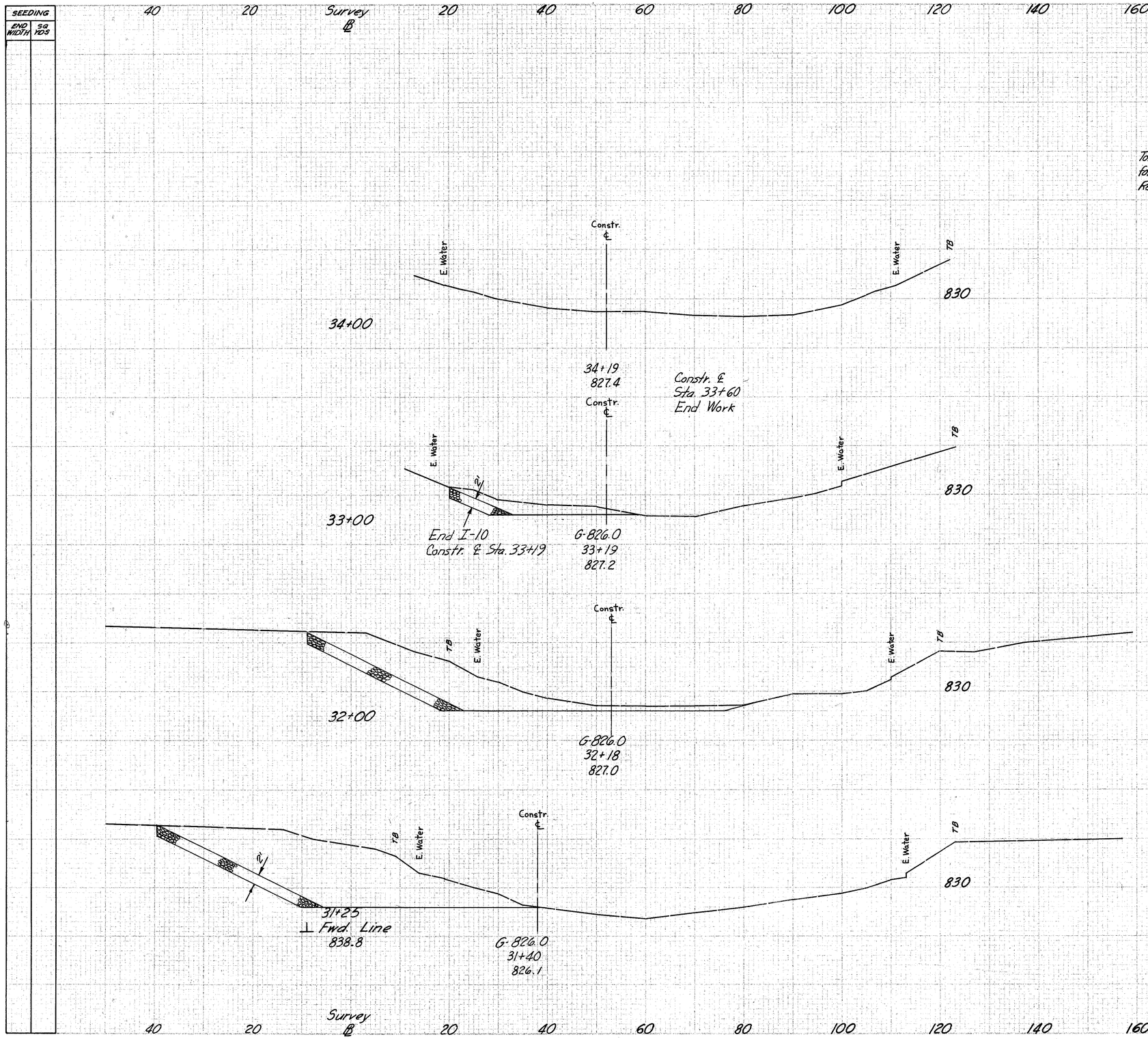
I-10 END AREA	I-10 VOLUME		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
95		E-3 Exc.	535			
	202					
Sta. 30+54 Ahd. 123					993	
Lt. Sta. 30+54 Bk. 138						
	547					
Lt. Sta. 29+47 Ahd. 138			440			
Lt. Sta. 29+47 Bk. 85						
	164					
Lt. Sta. 28+95 85					4614	
	46					
141			1070			
	333	Sta. 28+35		0	2281	
						130
136			825	438		
	209				1255	776
154		E-3 Exc.	913	636		

416
662

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING	
END WIDTH	SQ YDS

TUSCARAWAS COUNTY
TUS-36-15.93



Total I-10 3,943 C.Y.
for Sheets 414-417
Recorded on Sheet 175

Total E-3 16,431 C.Y.
for Sheets 414-417
Recorded on Sheet 175

I-10			END AREA		VOLUME	
END AREA	VOLUME		CUT	FILL	CUT	FILL
		Sta. 33+50	0			
					35	
23		E-3 Exc.	61			
	166				707	
66			317			
	198				1294	
71		E-3 Exc.	579			
	111				743	
95		Sta. 31+04	535			

Channel Change 'B'

Sta. 31+40 to 34+19

SEEDING	
END WIDTH	SB TDS

Survey ℄ 20 40 60 80 100 120 140 160

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

I-10		
STATION	END AREA	VOLUME
13+50	47	
		65
13+87	48	
		45
14+15	38	
		51
14+37	87	
		82
14+65	71	
		71
14+87	104	
		42
14+98	104	
		60
Dike		

Total I-10
Sheet 418 416 C.Y.
Recorded Sheet 175

6+36
851.5

Constr. ℄
T.B.
E. Water
E. Water
T.B.
830

13+01
831.0

Constr. & Sta. 12+95 Begin Work

Sta. 13+00 0
E-3 Exc.

16

Slope Eastport Ave.

6+17
839.9

Constr. ℄
T.B.
E. Water
E. Water
T.B.
830

13+21
830.4

E-3 Exc. 42

24

6+00
839.5

Constr. ℄
T.B.
E. Water
E. Water
T.B.
830

13+37
831.0

Begin Rock Constr. ℄ Sta. 13+50

E-3 Exc. 40

256

5+50
839.6

Constr. ℄
T.B.
E. Water
E. Water
T.B.
2:1
2'
830

G-830.0
13+87
831.5

E-3 Exc. 237

E work Channel

Begin Rock Constr. ℄ Sta. 14+15

516

26' Lt. Co. Rd. 64
Sta. 25+16

Constr. ℄
T.B.
E. Water
Varies
2'
E. Water
T.B.
830

5+00
838.2

G-829.6
14+37
833.0

Sta. 14+14 0

35

E-3 Exc. 320 82

317 75

E work Channel

22' Lt. Co. Rd. 64
Sta. 25+44 ±

Constr. ℄
T.B.
E. Water
T.B.
2:1
830

4+73
836.6

G-829.4
14+65
833.2

E-3 Exc. 291 63

233 36

17' Lt. Co. Rd. 64
Sta. 25+65 ±

0.50 %
E. Water
E. Water
T.B.
2'
2:1
E work Channel
Constr. ℄
T.B.
2:1
2'
830

4+50
835.2

G-829.2
14+87
833.3

E-3 Exc. 282 26

Sta. 14+95 0

4

Channel Continues See Sheets 407 & 408 For Additional Channel E work Comps.

Survey ℄ 20 40 60 80 100 120 140

Little Stillwater Creek Sta. 14+87 to 13+01

TUSCARAWAS COUNTY
TUS-36-15.93

418

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

419
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

54'
6' 7'-4" 27'-4" 7'-4" 6'
4" Conc. Walk
6" Conc. Curb
6" Conc. Curb
4" Conc. Walk
2" T-35 Surface
Concrete Base

TYPICAL SECTION EXISTING SECOND STREET

20'-0" * DRIVE RT. STA. 27+18.0 ONLY 3.0% 6' Sidewalk 3'-6" 6" 1/4" /1' 11.64% Depressed Curb per Std. Drawing #DR-1 Rate of X-Slope or Superelevation
7" T-70 7" T-70 I-12 Type 6

TYPICAL SECTION & PROFILE
DRIVE LT. STA. 26 + 27.0
DRIVE LT. STA. 27 + 01.0
* DRIVE RT. STA. 27 + 18.0

ITEM (7-W): Relocate Fire Hydrant from 19' Rt. of Sta. 27 + 97 to 32' Rt. of Sta. 27 + 36

FOR PROFILE OF RECONST. SECOND ST. SEE SHEET 420

FOR GEOMETRIC LAYOUT SEE SHEET 439

FOR PLAN & PROFILE OF RAMP P SEE SHEETS 430 & 431

Meet Existing Sidewalk
2'-6"
2'-6"

REMOVE PAVEMENT SEE SHEET 430

DETAIL OF SIDEWALK RT. STA. 27+63

2ND STREET CURVE DATA
P.I. Sta. 29 + 88.63
Δ = 16° 05' 16" Lt.
D = 4° 00' 00"
R = 1432.40'
L = 402.20'
T = 202.43'

20" Elm 22.52' 55.67' 24" Elm Ahd. 29.16' 10" Walnut
P.O.T. Sta. 25 + 19.90

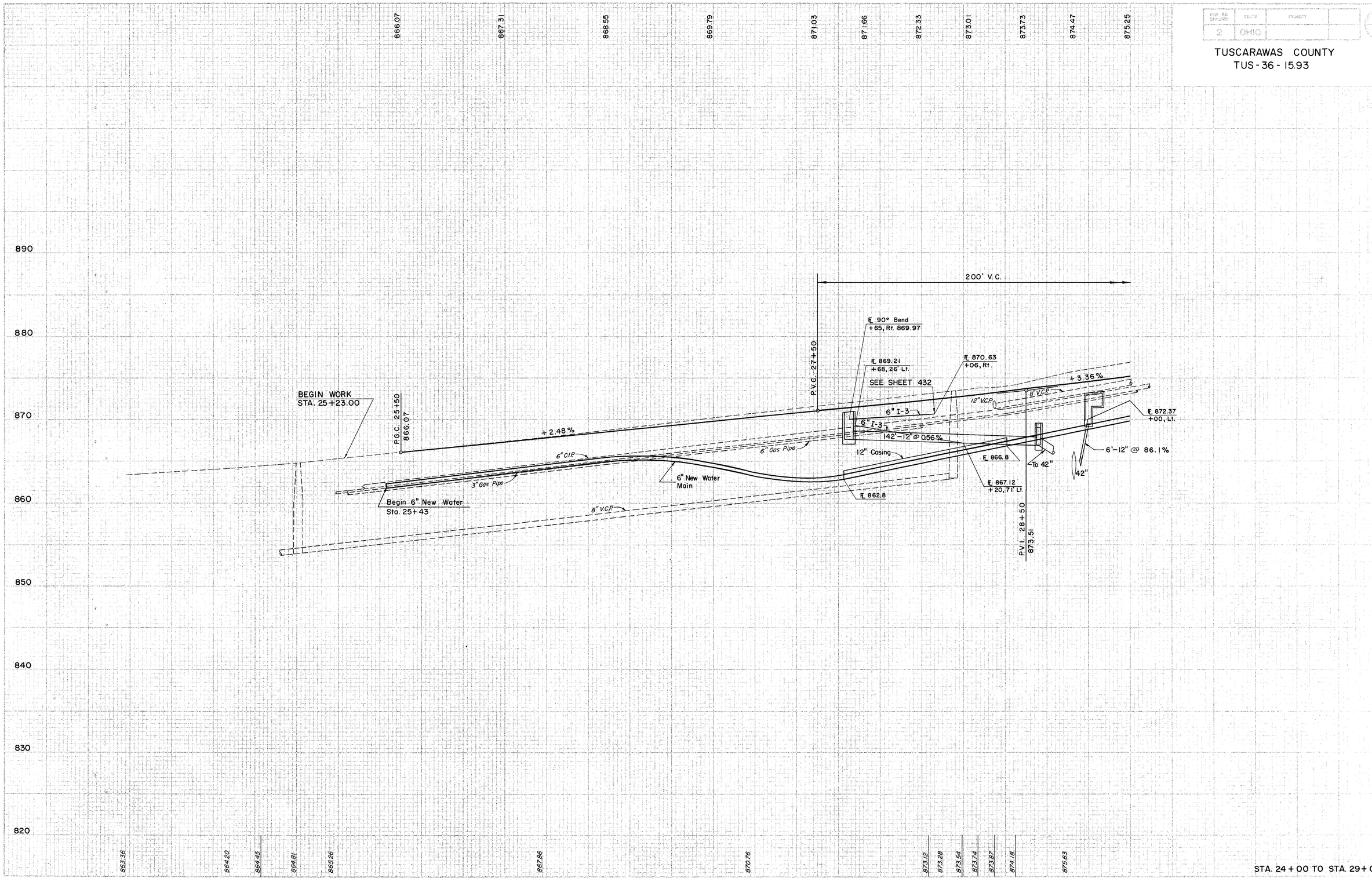
N 270,500
E 2,324,500
N 270,500

Lawn & Shrubs
1-Sty. Fr. House
Conc. Drive
8" Triple Locust
10" Elm
Curb
Sewer
6" Tree
18" Elm
Existing R/W Line
1½-Sty. Fr. House
10" Maple
2-W
36" Elm
1½-Sty. Fr. House
4-W
Lawn
6-W
1-Sty. Brk. House
Fr. Gar.
8-R
36" Maple
36" Triple Elm
McKEE ROAD (81' Mod.)
Cinder Drive
P
10
& Ramp P
End Sheet
1½-Sty. Brk. House
3-D
6-D
8-D
6'-12"
30" Elm
20" Tree
4" Tree
Gravel Drive
Meet Existing Sta. 26+09
END WORK STA. 0+32
Meet Existing Sidewalk
Conc. Drive
Lawn
Shrubs
15-R
19-R
1-D
11-R
3-P
3-R
10-R
2-P
2-R
9-R
6" Gas Line
6" Conc. Walk
BEGIN WORK STA. 25+23
Existing R/W Line
R/W
R.O.W.
7"
9"
P.C. Sta. 27+86.20
T
Curb
Sewer
M.H.
24
25
26
27
Reconstr. 2nd St.
2ND STREET (Asphalt)
6" C.I.P.
Street Light
Plug
F.H.O. +43+8.5' Rt. 1/4 Bend
6" Conc. Walk
8" Lacust
Meet Existing Sta. 25+66
Existing R/W Line
7-R
18-R
1-W
30" Tree
Curb
Sewer (Son.)
N 2° 35' 40" E
+27.0
+01.0
+18.0
+62.5
ABANDON
24" Tree
275'
90°
90°
90°
Gas Vent
12" Tree
7-W
5-D
79°17'57" Tan to Curve
90°00'00" Tan. to Curve
ABANDON +41
8" V.C.P.
3" Gas Line
Tile Flume
Inlet 8" V.C.P.
Street Light
W.V.
6" New Water Main
6" Spruce
Lawn
1-Sty. Fr. House
42"
Casing 142'-12"
6"x6"x4" Tee
24" Hydrant Valve
Stone Rat Wall
R=10
R=10
80'-12"
10" Maple
Conc. Drive
4-R
4-P
5-R
3-W
END WORK STA. 0+53
10'
T
13-R
2-Sty. Brk. House
Wall
Lawn
Bushes
3" Gas Line
6" Ramp Q
Lawn & Trees
Hedge
8-W
5-W
Fr. Gar.
1-Sty. Stone & Brk. House
Gar.
1-Sty. Fr. House
2-Sty. Brk. House
Shrubs
Curb
Gravel Drive
Conc. Drive
Cinder Drive
Existing R/W Line
SUMNER STREET (Asphalt)
Row 10'-5" Spruce
5" Spruce
6" Spruce
6" Spruce
6" Blue Spruce
3-18" Trees
6" Conc. Walk
Lawn & Shrubs
Fr. Gar.
Alley Bit.
10" V.C.P.
10" V.C.P. Inlet
10" V.C.P.
End Curb
P&T
Fr. Gar.
L.A.R/W
8" Spruce
Walk
Fr. Shed
Fr. Gar.
P.C. Sta. 1+44.61
Mine Water
P&T
Alley Gravel
54"
Brush
See Sheet 460
2-10" Maples
48"
P&T
Lawn
Lawn
Lawn

FED. RD. DIV. NO.	STATE	PROJECT	
2	OHIO		

420
662

TUSCARAWAS COUNTY
TUS-36-15.93



STA. 24 + 00 TO STA. 29 + 00
RECONSTR. SECOND ST.

STATE		PROJECT		
OHIO				

421
662

TUSCARAWAS COUNTY
TUS-36-15.93

FOR DETAILS ON BRIDGE NO. TUS-36-1887 SEE SHEETS 585-595

E 2,324,500

Sta. 0+00.00 ℄ Reconstr. 2nd. St. = Sta. 355+90.60 ℄ Reloc. U.S. 36

Begin Sheet

ABANDON

Sta. 29+00

Reloc. U.S. 36

℄ Reconstr.

℄ Reloc. T. R. 287

℄ CROSS ST.

Existing R/W Line

Exist. R/W Line

R/W

Gravel Drive

Grape Vine

Garden

Lawn

Brush & Trees to 30"

Trees to 30"

Fr. Shed

Fr. Gar.

Conc. Blk. Gar.

Conc. Blk. Shed

Tile Shed

Basement House

Fr. Chicken House

Pen

Fr. Chicken Ho.

Blk. & Fr. Gar.

Conc. Ret. Wall

Tile Fence

B/Wire Fence

Woods Trees to 24"

Brush & Trees to 6"

Pole

Fr. Shed

℄ Ramp N

℄ Ramp R

Sta. 0+00.00 ℄ Ramp N

Sta. 6+67.27 ℄ Ramp R =

Sta. 32+12.57 ℄ Reconstr. 2nd St. =

New 6" Water Main

Sta. 33+07.00 ℄ Reconstr. Second St. =
Sta. 0+00.00 ℄ Reloc. T. R. 287

Sta. 34+58.05 ℄ Reconstr. Second St. =
Sta. 0+00.00 ℄ Reconstr. Cross St.

END WORK
STA. 0+80

END WORK
STA. 36+00

ABANDON

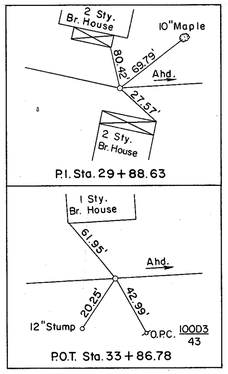
2nd STREET

RECONSTR. 2ND ST.
CURVE DATA
P.I. Sta. 29+88.63
Δ = 16° 05' 16" Lt.
D = 4° 00' 00"
R = 1432.40'
L = 402.20'
T = 202.43

95°00'00"

N13°29'36"W

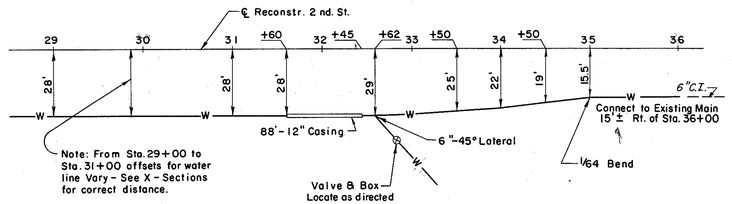
FOR DRIVE TYPICAL SECTION SEE SHEET 11
STA. 34+770 RT. @ 90°
Use 7" T-70 only
Width = 12'
Type 2 per Std. Drawing DR-1
End Work Sta. 0+40



FOR TYPICAL SECTION OF RECONSTR. CROSS STREET SEE SHEET 11

FOR PLAN & PROFILE OF
RAMP N SEE SHEET 429
RAMP R SEE SHEET 433
RELOC. T. R. 287 SEE SHEETS 440 & 441

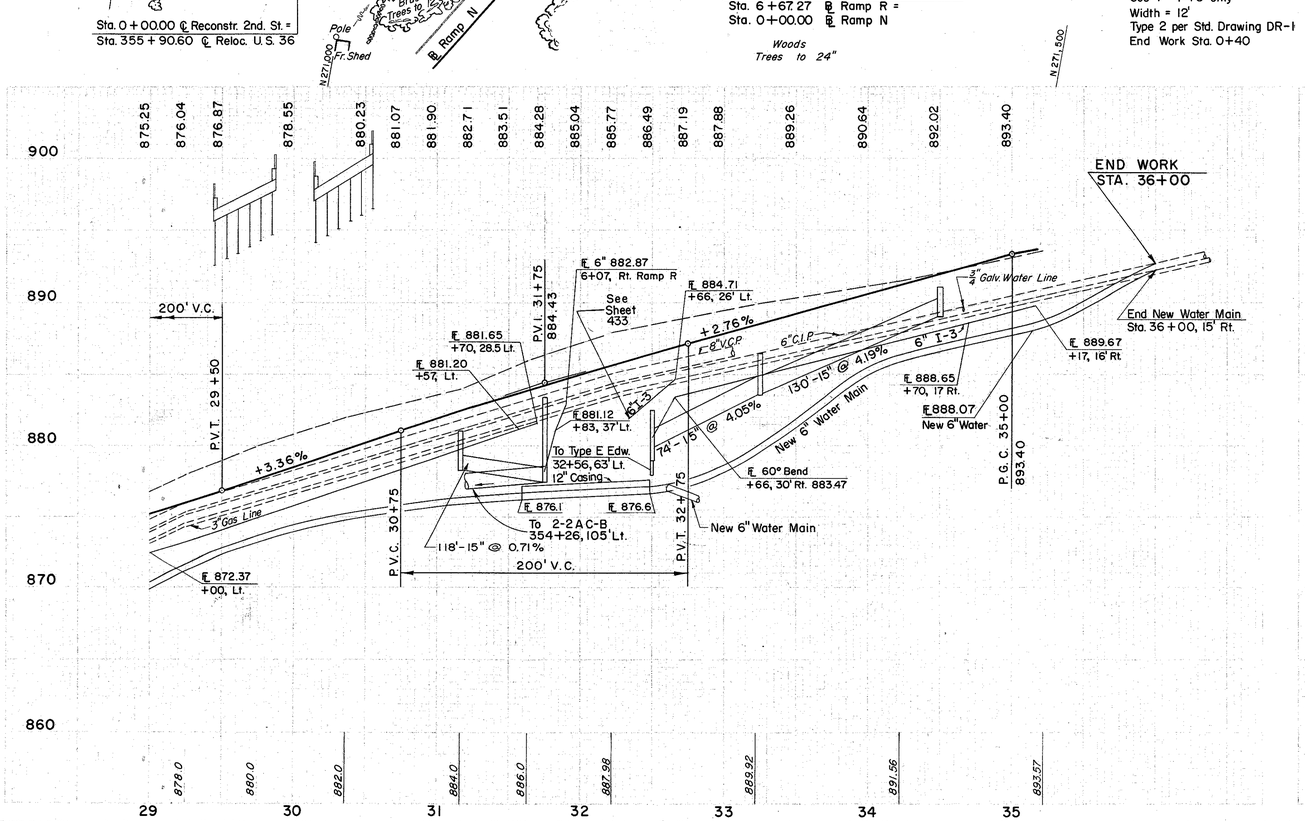
FOR GEOMETRIC LAYOUT SEE SHEET 439

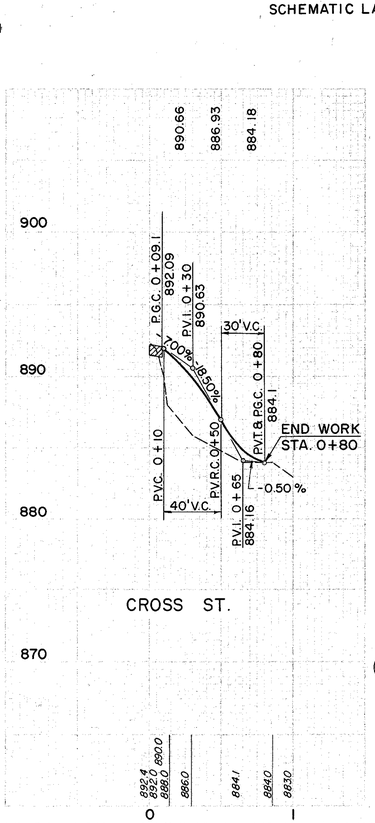


SCHEMATIC LAYOUT FOR NEW 6" WATER MAIN

(W) WATER

REF. NO.	STATION FROM	STATION TO	SIDE	NEW WATER MAIN 6" A.C. L.F.	45° WYE 6" EA.	NEW SERVICE BEND 1-124 EA.	NEW SERVICE BRANCH 1-124 EA.	CASING PIPE 12" SECM-6.6(a) L.F.	NEW SERVICE BRANCH TYPE A 1-124 EA.
1-W	29+00	36+00	Rt.	706	1			88	
3-W	34+00		Lt.			1	60		5
4-W	34+50		Rt.				10		
5-W	34+67		Lt.				25		
6-W	35+40		Lt.						5
7-W	36+00		Lt.						5
8-W	36+00		Rt.						5
	TOTAL			706	1	1	95	88	15





(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 6" PIPE CLASS F-4 C.Y.	I-1 6" PIPE CLASS I-3 (d=18") L.F.	I-1 15" PIPE CLASS J-1 L.F.	I-2 24" PIPE L.F.	I-5 MASONRY CLASS I-3 6"-60° BEND EA.	I-8 STD. #2-2A & #2-2B C.B. EA.
1-D	29+00	31+70	Lt.		268				
2-D	32+50	35+18	Rt.	10	274				
3-D	31+75	36+07	Lt. & Rt.	10	26	118			
4-D	31+17	31+75	Rt. & Lt.						1
6-D	0+50.28	34+50	Lt. & Rt.	130					
7-D	32+53	32+66	Lt.		78		122	0.41	
8-D	5+90 Ramp N	32+66	Lt.						1
	TOTAL			130	372	118	122	0.41	1

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE C.Y.	B-35 ASPHALTIC CONCRETE LEVELING COURSE C.Y.	I-22 SUBBASE	T-30 BIT. PRIME COAT GAL.	T-31 BIT. MAT'L.	T-35 #6 AGGR. ASPH. CONC. COURSE TYPE C C.Y.	T-70 PORT. CEM. CONC. PAV'T. 7" S.Y.
1-P	Cross St.		Lt.	24			67		10	
2-P	34+69.57	35+17.57	Rt.	46	4	9	18	49	5	4	73
3-P	34+77		Rt.								
	TOTAL			70	4	9	18	116	5	1	14	73

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. & SUB-GRADE S.Y.	E-8 REMOVAL & DISPOSAL EXISTING SIDEWALK S.F.
1-R	Cross St.		Lt.	167	
2-R	34+77	—	Rt.	73	
3-R	33+93	—	Lt.		51
	TOTAL			240	51

EXCAVATION	= 1 C.Y.
EMBANKMENT	= 135 C.Y.
EMBANKMENT + 6 %	= 143 C.Y.

CROSS ST.

EXCAVATION	10,226 C.Y.
EMBANKMENT	160 C.Y.
EMBANKMENT + 6	170 C.Y.

RECONSTR. SECOND ST. STA. 29+00 TO 35+17.57

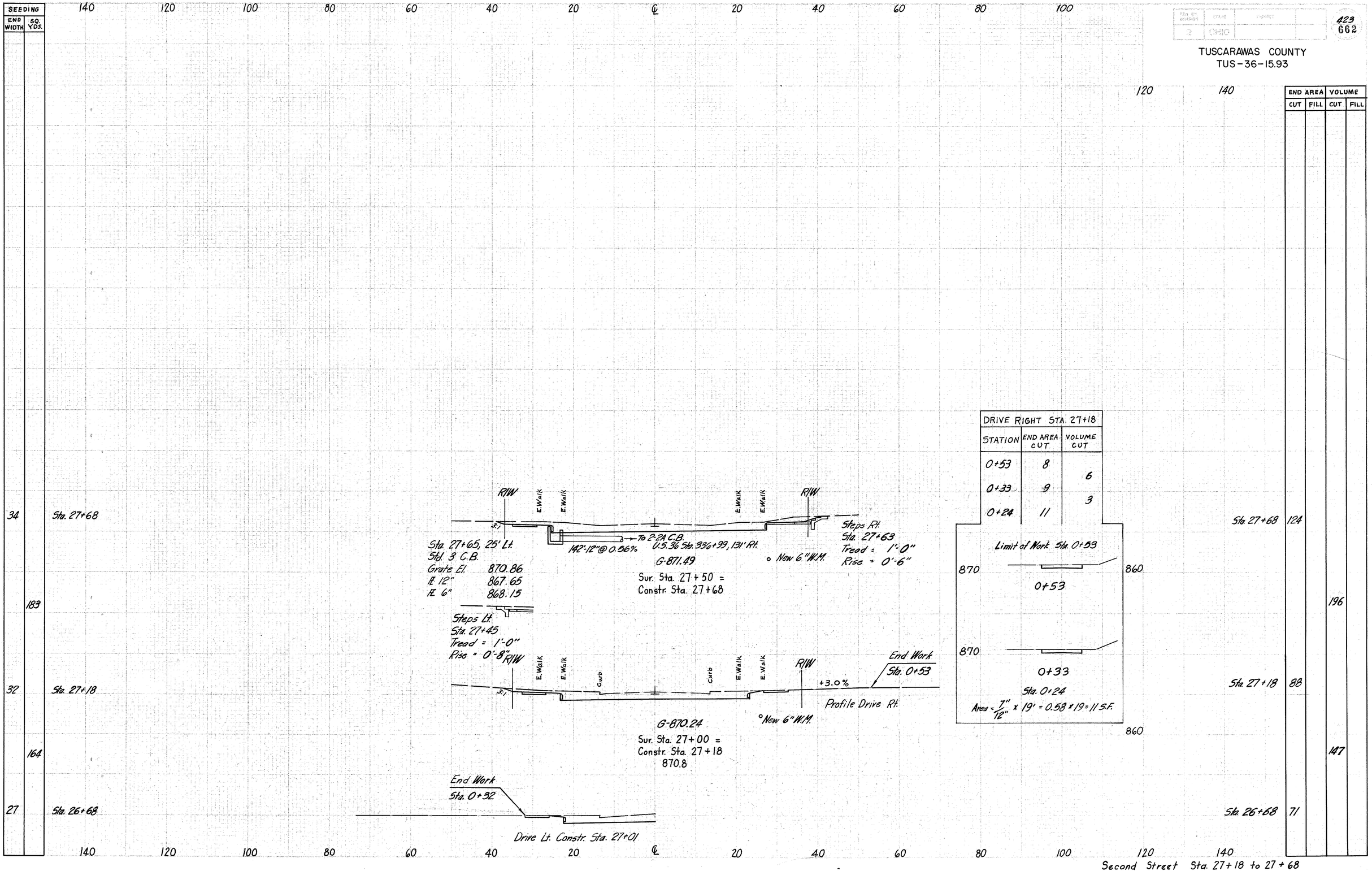
FED. RW. DIVISION	STATE	PROJECT		422
5	OHIO			662

TUSCARAWAS COUNTY
TUS-36-15.93

| SEEDING | | |

TUSCARAWAS COUNTY
TUS-36-15.93

SEEDING	
END WIDTH	SQ. YDS.
34	
	183
32	
	164
27	



DRIVE RIGHT STA. 27+18

STATION	END AREA CUT	VOLUME CUT
0+53	8	
		6
0+33	9	
		3
0+24	11	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
124			
		196	
88			
		147	
71			

Second Street Sta. 27+18 to 27+68

SEEDING	
END WIDTH	SQ. YDS.
94	Ahd.
	—
144	Bk.
761	
130	
	82
54	Sta. 28+42
	—
37	
	126
34	Sta. 27+68

NO. OF ENTRIES	DATE	REMARKS	
2	6/10		

424
662

TUSCARAWAS COUNTY
TUS-36-15.93

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

Reloc. U.S. 36 | Area Second Street

HSE.

E.P. E.P.

C+480

G-875.25
29+00
876.7

Area Second Street Bk.
Area Second Street Ahd.

HSE.

C-68

Area Second Street | Reloc. U.S. 36

870

° New 6" W.M.

Sta. 28+80, 25' Lt.
Std. 2-8 Median Inlet
Depressed Curb El. 873.34
IE 12" 869.50
IE 6" 870.00

6'-12" @ 86.1%

G-874.63
28+80

42"

870

Sta. 28+76, 28' Lt.
42"x12" Tee
IE 12" 862.33
IE 42" 863.08

Ramp P | Area Second Street

E.P. E.P.

G-873.73
28+50
874.5

12"

° New 6" W.M.

870

Area Second Street | Ramp Q

870

Sta. 28+17, 4.5' Lt.
M.H. adjusted to grade
Cover El. 872.6

R/W | Ramp P

E.P. E.P.

Ramp Q

G-872.33
28+00
873.3

◎ New 6" W.M.
12" Casing

870

Sta. 27+68

END AREA		VOLUME	
CUT	FILL	CUT	FILL
Ahd. 480			
	—		
Bk. 548	63		
			29
Sta. 28+75	0		
		925	
451			
		603	
200			
		192	
124			

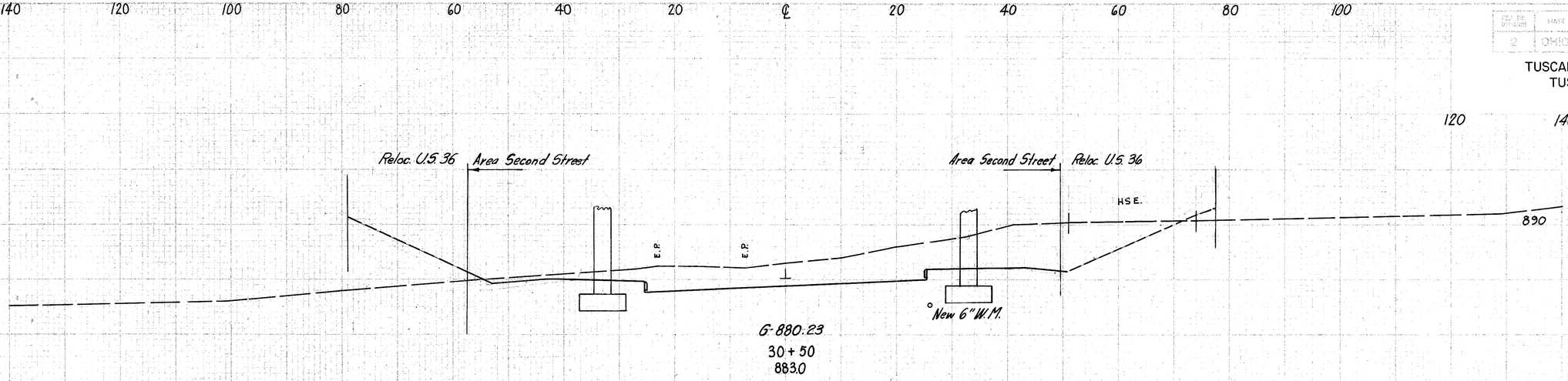
Sta. 27+68

Second Street Sta. 28+00 to 29+00

SEEDING	
END WIDTH	SQ. YDS.
52	
	308
59	
	322
57	
	419
94	

DIV. NO.	STATE	PROJECT	
2	OHIO		425 662

TUSCARAWAS COUNTY
TUS - 36 - 15.93



END AREA		VOLUME	
CUT	FILL	CUT	FILL
	439		701
	318		602
	332		752
	480		

Second Street Sta. 29+50 to 30+50

SEEDING	
END WIDTH	SQ. YDS.
0	
—	—
0	
253	
117	
639	
113	Ahd.
—	
66	Bk.
328	
52	

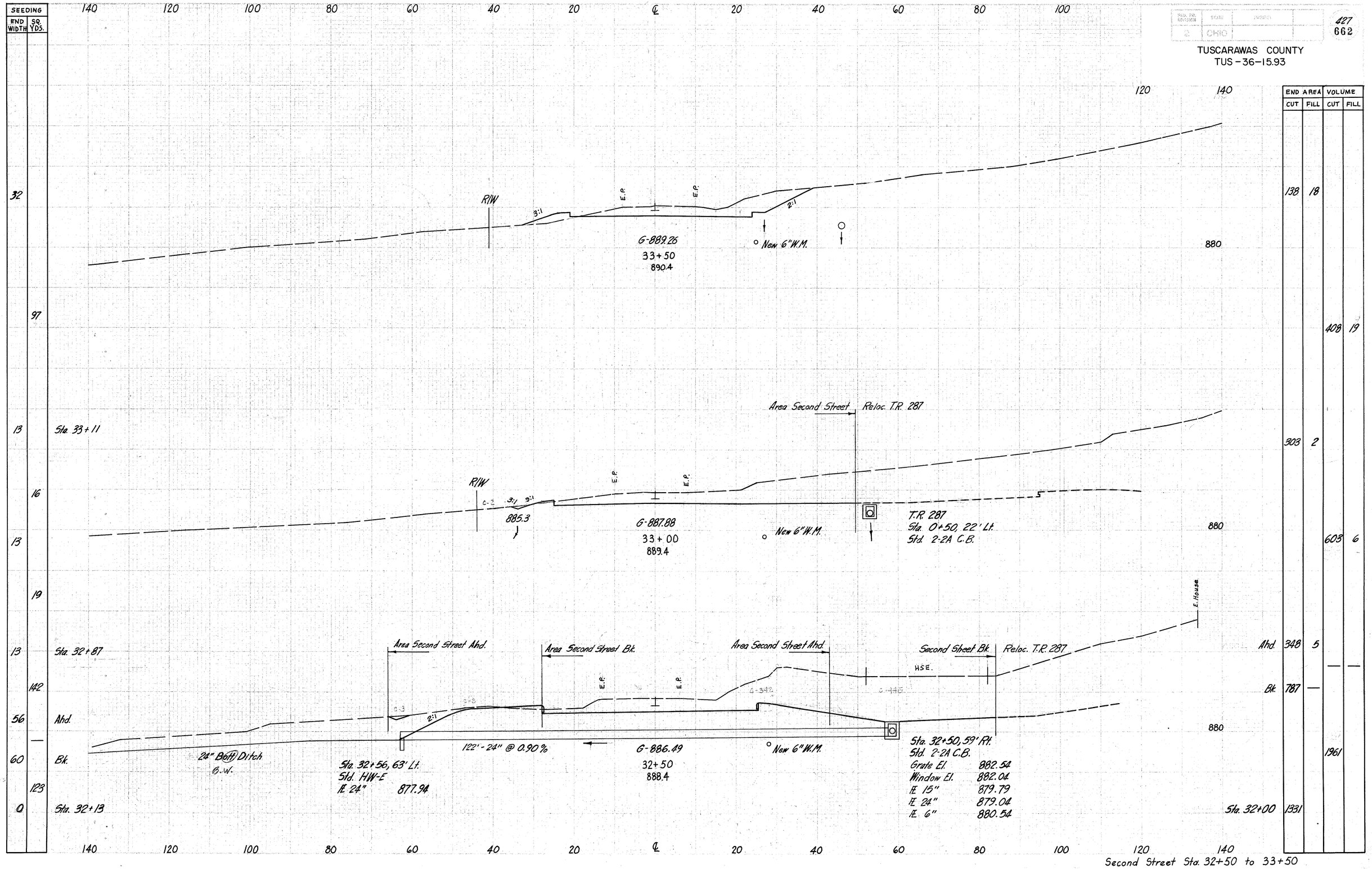
FED. AID PROJECT NO.	STATE	CONTRACT NO.	426
2	OHIO		662

TUSCARAWAS COUNTY
TUS-36-15.93

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	1331		
		2134	
	974		

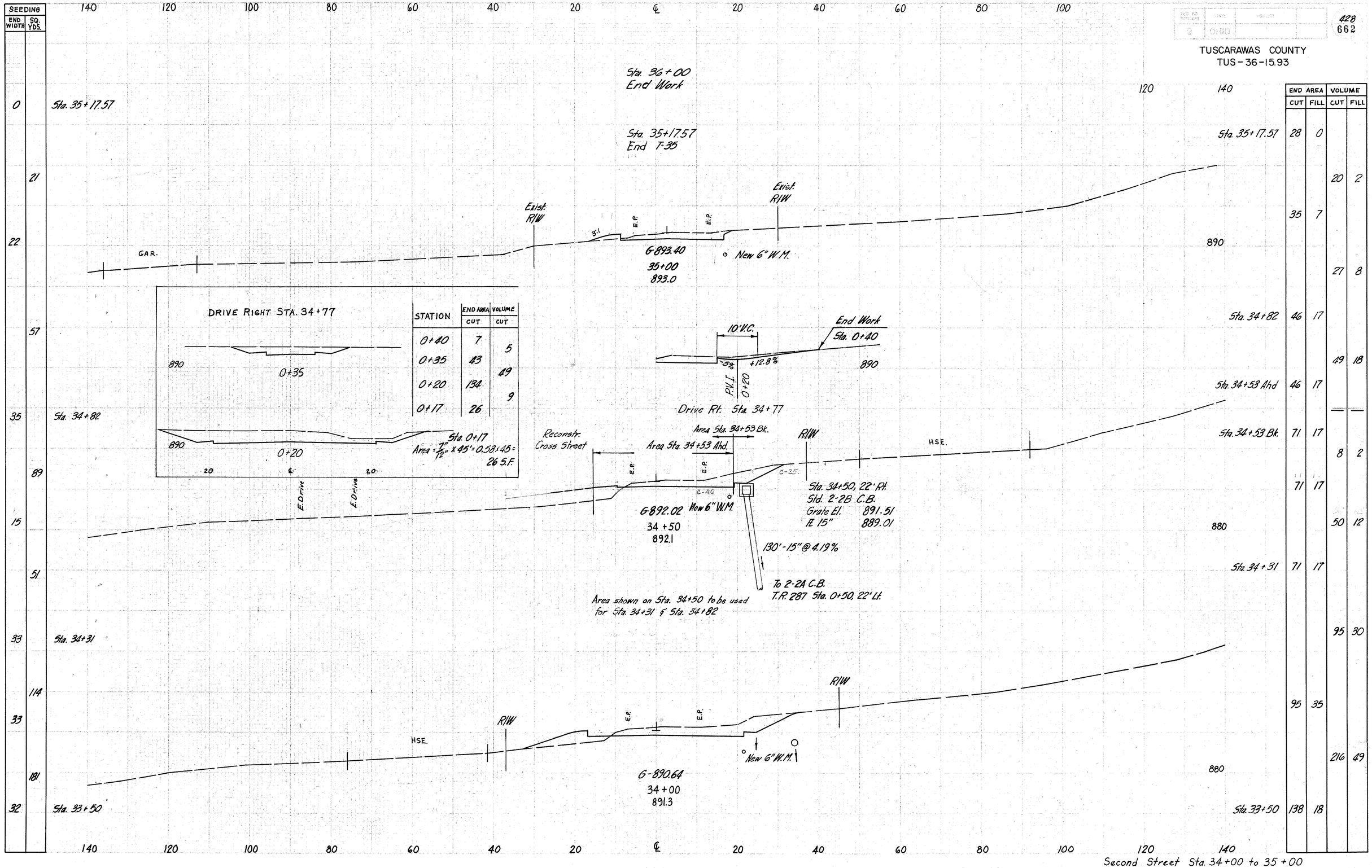
SEED. PR. DIVISION	STATE	PROJECT
2	OHIO	

TUSCARAWAS COUNTY
TUS-36-15.93

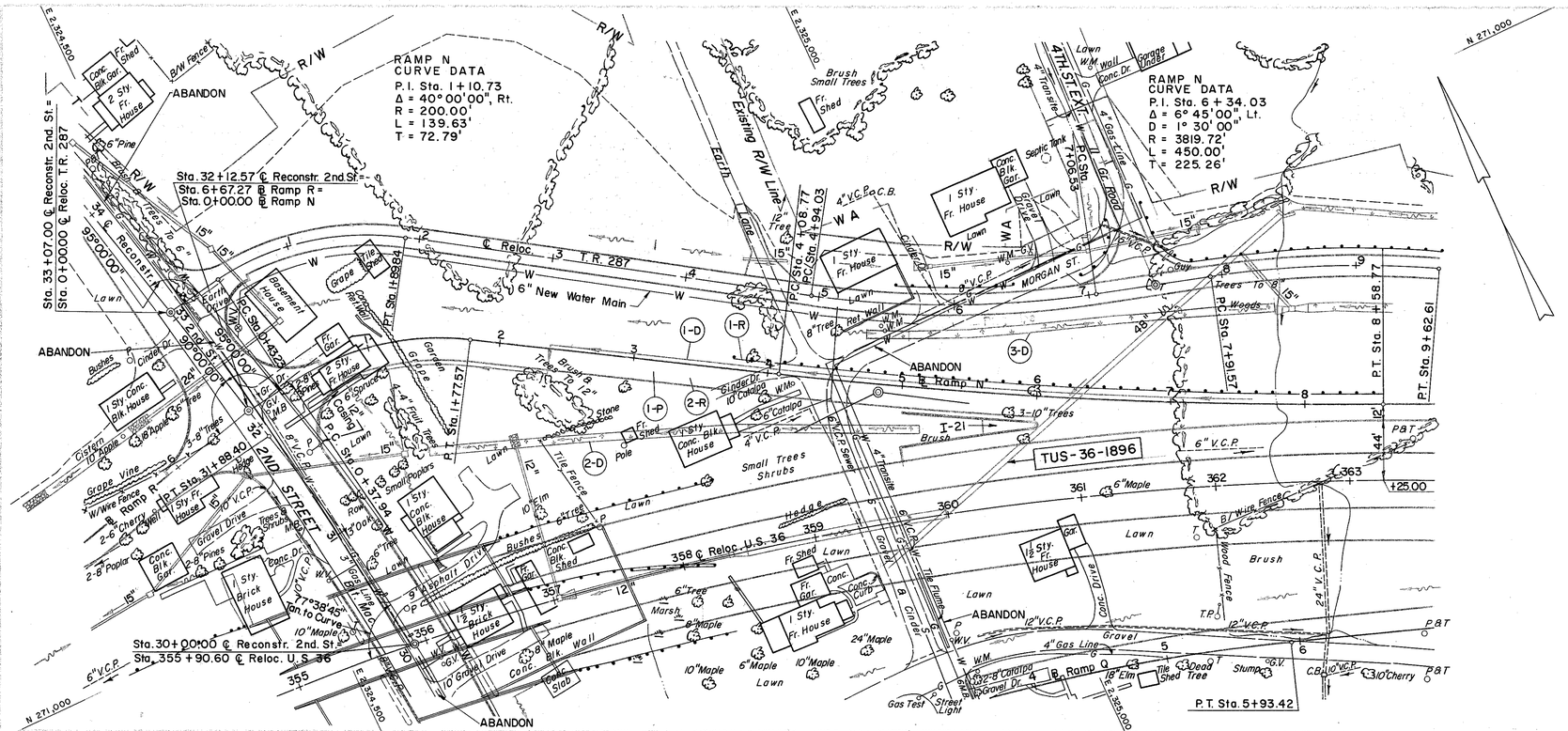


Second Street Sta. 32+50 to 33+50

TUSCARAWAS COUNTY
TUS-36-15.93



Station	End Area Cut	End Area Fill	Volume Cut	Volume Fill
0+40	7			
0+35	43		5	
0+20	134		49	
0+17	26		9	
Sta. 35+17.57	28	0		
			20	2
	35	7		
			27	8
Sta. 34+82	46	17		
			49	18
Sta. 34+53 Ahd	46	17		
Sta. 34+53 Bk.	71	17		
			8	2
	71	17		
			50	12
Sta. 34+31	71	17		
			95	30
	95	35		
			216	49
Sta. 33+50	138	18		


RAMP N
CURVE DATA
P.I. Sta. 1+10.73
Δ = 40° 00' 00", Rt.
R = 200.00'
L = 139.63'
T = 72.79'
Sta. 32+12.57 ℄ Reconstr. 2nd St. =
Sta. 6+67.27 ℄ Ramp R =
Sta. 0+00.00 ℄ Ramp N
Sta. 33+07.00 ℄ Reconstr. 2nd. St. =
Sta. 0+00.00 ℄ Reloc. T.R. 287
℄ Reloc. T.R. 287
℄ Reconstr. 2nd St.
℄ Ramp N
℄ Ramp R
℄ Reloc. U.S. 36
Sta. 30+00.00 ℄ Reconstr. 2nd. St.
Sta. 355+90.60 ℄ Reloc. U.S. 36
Sta. 1+77.57
Sta. 3+19.94
Sta. 7+69.51
P.T. Sta. 8+58.77
P.T. Sta. 9+62.61
P.T. Sta. 5+93.42
P.C. Sta. 4+08.77
P.C. Sta. 4+94.03
P.C. Sta. 7+06.23
P.T. Sta. 1+89.84
P.T. Sta. 31+88.40
RAMP N
CURVE DATA
P.I. Sta. 6+34.03
Δ = 6° 45' 00", Lt.
D = 1° 30' 00"
R = 3819.72'
L = 450.00'
T = 225.26'
2ND STREET
MORGAN ST.
4TH ST. EXT.
ABANDON
TUS-36-1896
I-21
Existing R/W Line
6" New Water Main
Ramp N
Ramp R
Reloc. U.S. 36
Reloc. T.R. 287
Gravel Drive
Tile Fence
Hedge
Brush
Lawn
Gravel
Concrete
Trees To 8"
Small Trees Shrubs
Fr. Shed
Conc. Blk. Gar.
Conc. Blk. Shed
Septic Tank
Gas Test
Street Light
Gas Line
Guy
Guard Rail
Tile Lines
Girder
Wood Fence
B/Wire Fence
Conc. Drive
Conc. Curb
Gravel Dr.
Tile Shed
Dead Tree
Stump
Cistern
Cinder Dr.
Grape Vine
Trees & Shrubs
Marsh
Pole
Guy
Manhole
Inlet
Catch Basin
Conc. Slab
Conc. Blk. Wall
Retaining Wall
Culvert
Ditch
Earth Drive
Basement House
Tile Shed
Fr. Gar.
Conc. Blk. Gar.
Conc. Blk. House
Fr. House
Brick House
Conc. Blk. Bar.
Garage
Lawn
Brush
Trees
Shrubs
Poplars
Pines
Maple
Elm
Cherry
Spruce
Apple
Oak
Willow
Catalpa
Hickory
Pear
Dogwood
Basswood
Ash
Sycamore
Locust
Hackberry
Mulberry
Walnut
Beech
Chestnut
Buckeye
Hemlock
Tulip
Cottonwood
Birch
Sassafras
Persimmon
Redbud
Hawthorn
Crabapple
Peach
Plum
Quince
Mimosa
Juniper
Arborvitae
Boxelder
Basswood
Ironwood
Blackgum
Blackjack
Post Oak
Scrub Oak
Chinkapin
Chestnut Oak
Black Oak
Red Oak
White Oak
Shagbark Hickory
Bitternut Hickory
Pignut Hickory
Shellbark Hickory
Sugar Maple
Red Maple
Silver Maple
Norway Maple
Sycamore
Tulip Poplar
Cottonwood
Black Walnut
Butternut
Black Cherry
Wild Cherry
Flowering Dogwood

REV. NO. REVISION	STATE	PROJECT			430 662
2	OHIO				

TUSCARAWAS COUNTY
TUS-36-15.93

FOR PLAN & PROFILE OF RAMP R SEE SHEET 433

FOR PLAN & PROFILE OF RAMP Q SEE SHEET 432

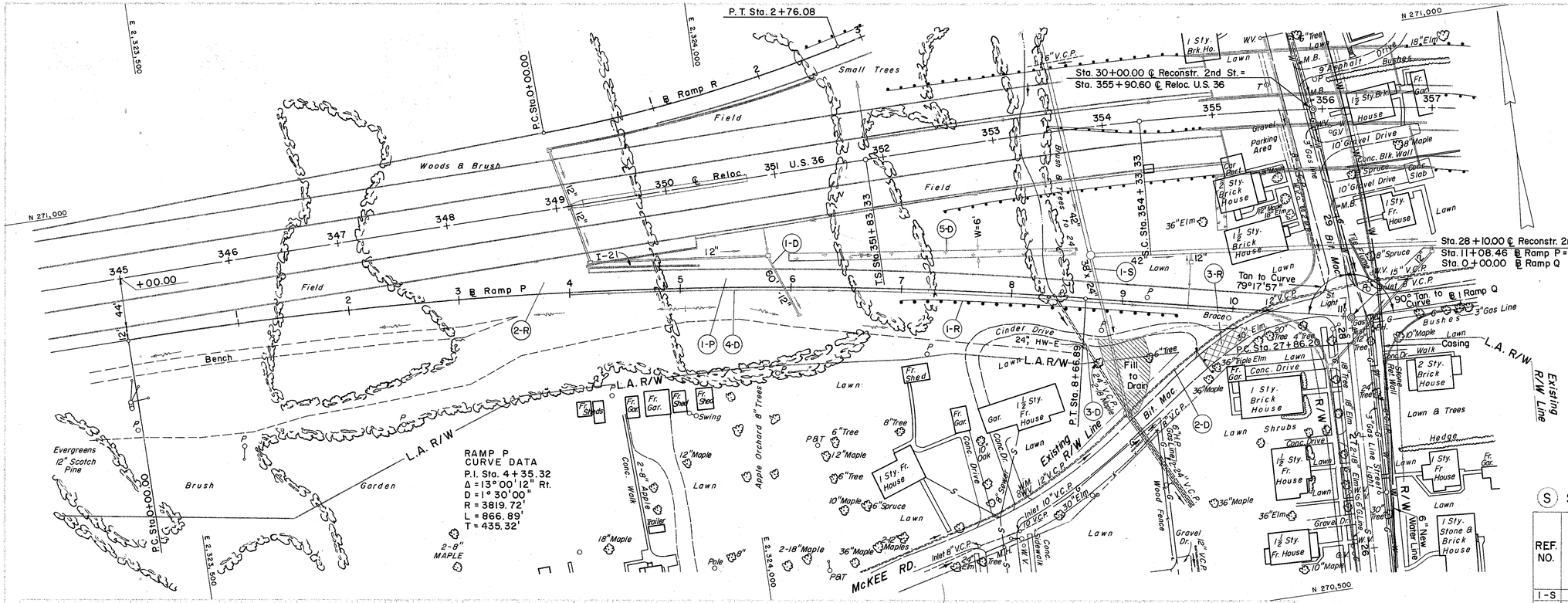
FOR INTERSECTION DETAILS SEE SHEETS 434 & 436

FOR GRADING PLAN SEE SHEET 438

FOR DETAILS ON BRIDGE NO. TUS-36-1887 SEE SHEETS 585-595

FOR GEOMETRIC LAYOUT SEE SHEET 439

FOR PROFILE RAMP P SEE SHEET 431



Ⓢ STRUCTURE

REF. NO.	STATION	I-1 38"x24" PIPE CL.G-1 SEC. M-6.7(b)	I-8 STD. #2-6 C.B.	SEE SHEET
		L.F.	EA.	
1-S	8+81	146	1	476

Ⓡ ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. SUB-GRADE	E-8 REMOVAL & DISPOSAL OF EXIST. PAV'T. (FLEX)		I-15 GUARD RAIL STEEL BEAM STD. TYPE (DEEP)
				S.Y.			L.F.
1-R	7+00	9+50	Rt.				250.0
2-R	US 36 342+19.81	10+83.01		3,719			
3-R	9+73	10+25	Rt.		75		
	TOTAL			3,719	75		2500

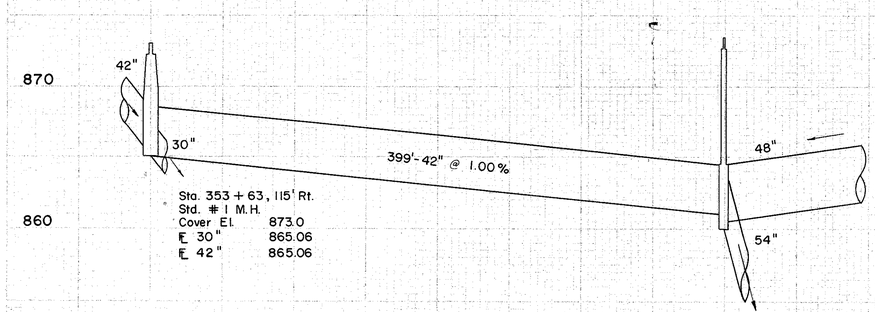
Ⓓ DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	E-12 PIPE REMOVED 15" AND UNDER	E-12 PIPE REMOVED OVER 15"	I-1 6" PIPE CLASS F-4	I-1 6" PIPE CLASS I-3 d=30"	I-1 6" PIPE CLASS I-3 d=50"	I-1 PIPE CLASS J-1 6" 12"	L-10 SODDING	I-2 MASONRY	I-5 CL. J-1 6" TEE	I-8 STD. CATCH BASIN #2-2A	SPECIAL DRAIN CONN. #6 AGGR.
				L.F.						S.Y.	C.Y.	EA.		C.Y.
1-D	5+80	6+07	Lt. & Rt.							60	0.23		1	
2-D	9+10	11+28 Ramp Q	Rt. & Lt.	363										
3-D	8+38	8+70	Rt.		55						0.41			
4-D	4+00	10+37	Lt. & Rt.			10	337	300	32			1		43.5
5-D	6+00	8+55	Lt.							174				
	TOTAL			363	55	10	337	300	32	60	174	0.64	1	1	43.5

Ⓟ PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE	B-21 WATER-PROOFED AGGR. BASE COURSE	I-12 CONC. CURB TYPE 6	I-21 PORT. CEM. CONC. MEDIAN	I-22 SUBBASE	I-22 SUBBASE GRADING A OR B	T-31 BIT. MAT'L	T-31 # 6 AGGR.	T-71 REINF. PORT. CEM. CONC. PAV'T. 9"
				C.Y.		L.F.	S.Y.	C.Y.		GAL.	C.Y.	S.Y.
1-P	US 36 342+19.81	10+83.01		118	178	335	45	263	635	267	9	2,654

EXCAVATION	EARTHWORK Q'TYS.
EMBANKMENT	INCLUDED WITH
EMBANKMENT	RELOC. U.S. 36



PROFILE STORM SEWER 2ND ST. INTERCHANGE
U.S. 36 STA. 353+63, RT. TO RAMP Q STA. 1+66, LT.

FOR PLAN
SEE SHEETS 59, 60 & 432

SECOND ST. INTERCHANGE
RAMP P

DIST. OR DIVISION	STATE	PROJECT	
2	OHIO		

431
662

TUSCARAWAS COUNTY
TUS-36-15.93

879.62 880.01 880.42 880.85 881.27 881.68 882.10 882.51 882.92 883.32 883.72 884.13 884.54 884.90 885.26 885.60 885.96 886.25 886.44 886.51 886.46 886.31 886.04 885.66 885.17 884.57 883.85 883.03 882.09 881.03 879.87 878.65 876.21 874.99 873.87 872.97 872.27 871.78 871.50 871.43 871.56 871.91

990 980 970 960 950 940 930 990 980 970 930 920 910 900 890

P.V.I. 6+00
Elev. 888.41

+1.40 %

-4.88 %

Profile Along Edge of
Deceleration Lane

+1.40 %

E. 879.56
+00, Rt.

160'-12" @ 0.45 %

60'-12"
@ 0.55%

6"I-3

E. 878.65
+00, Rt.

Sta. 0+00
Elev. 879.25

P.G.C. 4+25

P.V.T. 7+15

Graphic Grade Line

350' V.C.

200' V.C.

P.V.C. 8+75

E. 90° Tee
+60, Rt. 866.46

P.V.I. 10+75
P.G.C. 10+83.01
Elev. 872.05

-4.88 %

+1.80 %

12" V.C.P.

E. 868.64
+83, 28' Rt.

E. 869.41
+03, Rt.

38" x 24"
To 2-2A C.B.

P.V.I. 9+75
Elev. 870.11

E. 867.12
+37, Rt.

880 870 860

975.8 966.6 964.0 962.0 959.2 967.0 951.0 935.0 923.2 912.2 903.3 896.3 890.6 886.0 881.8 878.8 876.4 876.0 875.6 872.7 868.0 867.8 867.5 866.6 867.5 868.9 871.6 870.8 871.8 873.4

0+00 +50 +73 +84 1+00 +50 2+00 +50 3+00 +50 4+01 +52 5+02 +53 6+03 +46 +54 +75 +84.5 7+04 +19 +56.5 8+04 +56 9+03 +51 +97 10+10 +43 +90 11+08.46

FOR PLAN RAMP P SEE SHEET 430

PROFILE-RAMP P

SHEET NO.	STATE	PROJECT	
2	OHIO		432 662

TUSCARAWAS COUNTY
TUS-36-15.93

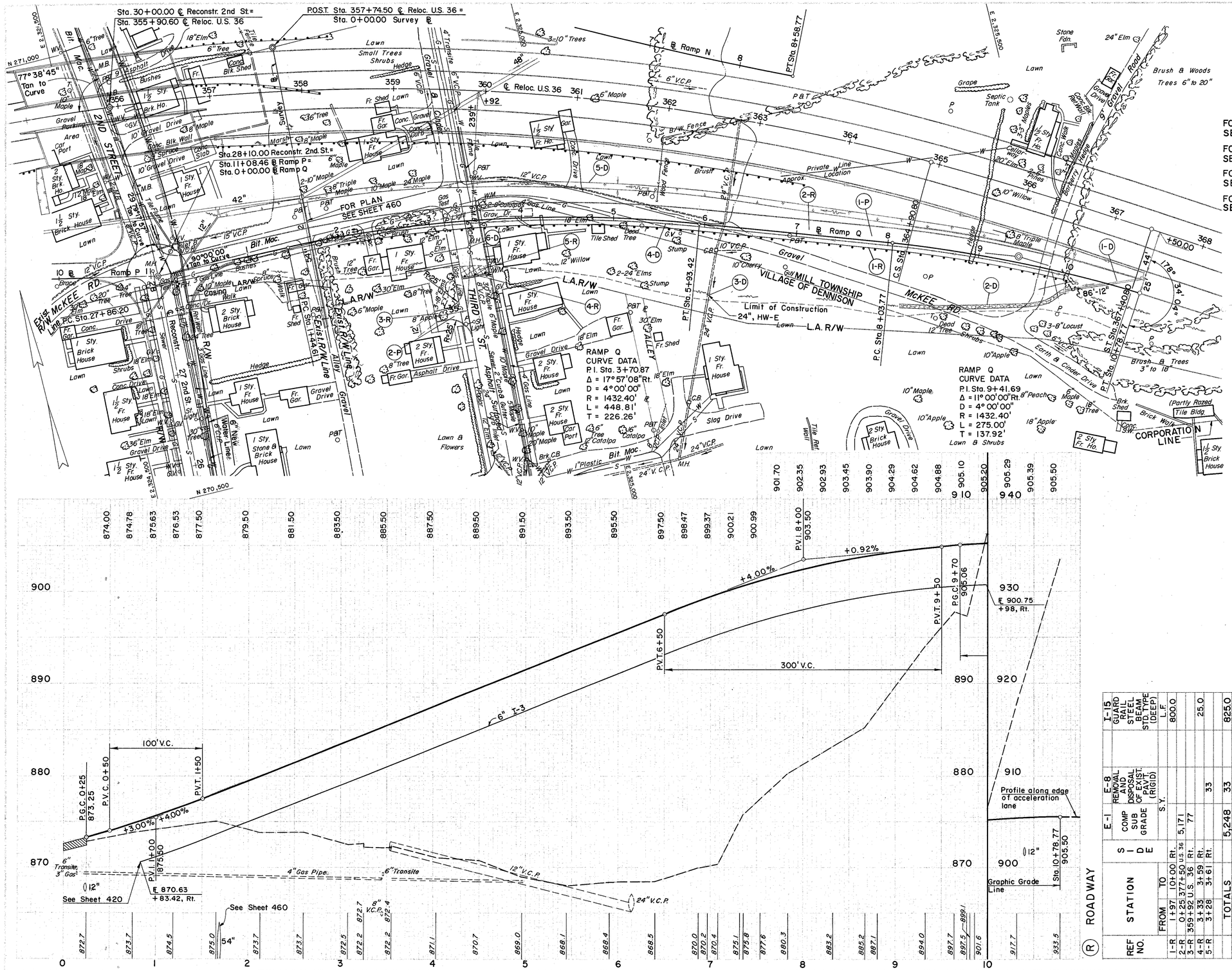
FOR PLAN & PROFILE OF RAMP P
SEE SHEET 430 & 431

FOR INTERSECTION DETAILS
SEE SHEETS 434 & 437

FOR GRADING PLAN
SEE SHEET 438

FOR GEOMETRIC LAYOUT
SEE SHEET 439

T-TYPE TURNAROUND, 239' RT. OF STA. 359+92 RELOC. U.S. 36
FOR PROFILE SEE SHEET 206
FOR TYPICAL SECTION SEE SHEET 36


Sta. 30+00.00 ℄ Reconstr. 2nd St. = Sta. 355+90.60 ℄ Reloc. U.S. 36
P.O.S.T. Sta. 357+74.50 ℄ Reloc. U.S. 36 = Sta. 0+00.00 Survey
℄ Ramp N
P.T. Sta. 8+58.77
℄ Reloc. U.S. 36
Sta. 28+10.00 Reconstr. 2nd St. =
Sta. 11+08.46 ℄ Ramp P =
Sta. 0+00.00 ℄ Ramp Q
FOR PLAN SEE SHEET 460
2nd STREET
McKEE RD.
EXIST. McKEE RD. R/W Line
EXIST. R/W Line
Ramp P
P.C. Sta. 27+86.20
Reconst. 2nd St.
THIRD ST.
Bit. Mac.
L.A.R/W
Limit of Construction 24", HW-E
P.T. Sta. 5+93.42
P.C. Sta. 8+03.77
VILLAGE OF DENNISON
MILL TOWNSHIP
McKEE RD.
CORPORATION LINE
P.T. Sta. 0+78.27
P.T. Sta. 364+40.80
86°-12"
178°
34' 04"
RAMP Q
CURVE DATA
P.I. Sta. 3+70.87
Δ = 17°57'08" Rt.
D = 4°00'00"
R = 1432.40'
L = 448.81'
T = 226.26'
RAMP Q
CURVE DATA
P.I. Sta. 9+41.69
Δ = 11°00'00" Rt.
D = 4°00'00"
R = 1432.40'
L = 275.00'
T = 137.92'
Lawn & Shrubs
Slag Drive
Brick Walk
(Partly Razed Tile Bldg.)
Brush & Trees 3" to 18"
Brush & Woods Trees 6" to 20"
Gravel Road
Stone Fdn.
Septic Tank
Grape
Private W. Line Location
Approx
Fence
Hedge
Tile Shed
Gravel Drive
Asphalt Drive
Concrete Drive
Gravel Parking Area
Car Port
Lawn
Small Trees Shrubs
Brush
Marsh
Stump
Tree
Shrubs
Bush
Fr. Shed
Brk. Shed
Conc. Blk. Shed
Conc. Blk. Wall
Conc. Curb
Conc. Walk
Earth & Cinder Drive
Gravel Drive
Alley
Gravel Alley
Catalpa
Locust
Willow
Cherry
Apple
Peach
Maple
Elm
Spruce
Pine
Hemlock
Beech
Oak
Ash
Basswood
Buckeye
Sycamore
Hickory
Walnut
Chestnut
Birch
Cedar
Poplar
Linden
Hackberry
Mulberry
Dogwood
Redbud
Crabapple
Hawthorn
Honeysuckle
Forsythia
Lilac
Privet
Boxwood
Juniper
Yew
Rhododendron
Azalea
Holly
Ivy
Vine
Grass
Weeds
Flowers
Garden
Orchard
Vineyard
Pasture
Meadow
Field
Woods
Forest
Swamp
Pond
Lake
Stream
Creek
River
Bridge
Culvert
Dam
Levee
Ditch
Drain
Sewer
Manhole
Catch Basin
Inlet
Outlet
Valve
Hydrant
Meter
Pole
Wire
Cable
Fence
Gate
Wall
Steps
Ramp
Curb
Gutter
Sidewalk
Pavement
Shoulder
Median
Island
Guardrail
Signal
Sign
Light
Mailbox
Newspaper
Flag

FED. RD. DIVISION	STATE	PROJECT		433
2	OHIO			662

TUSCARAWAS COUNTY
TUS-36-15.93

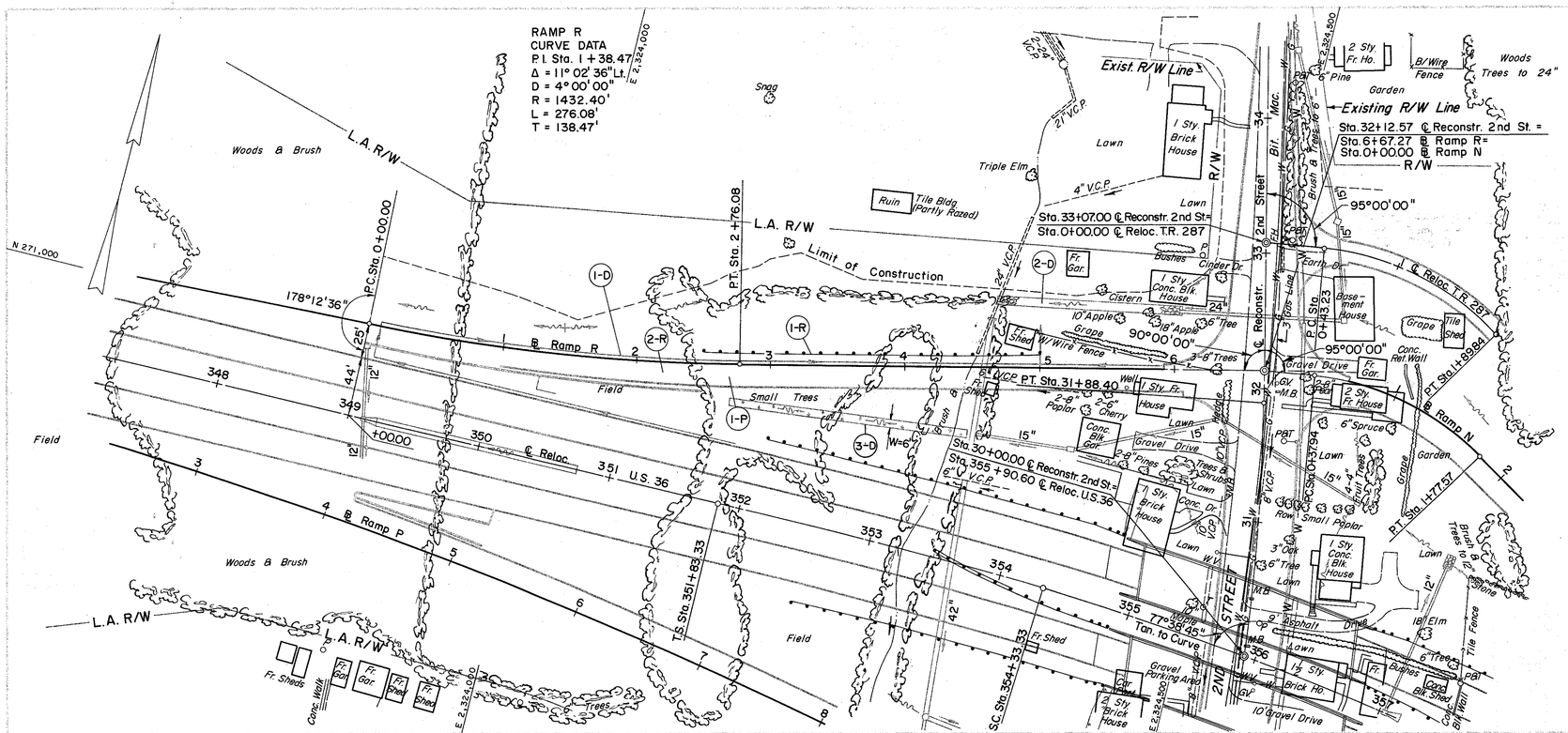
FOR PLAN & PROFILE OF
RELOC. T.R. 287 SEE SHEETS 440-441
RAMP N SEE SHEET 429
RAMP P SEE SHEETS 430-431

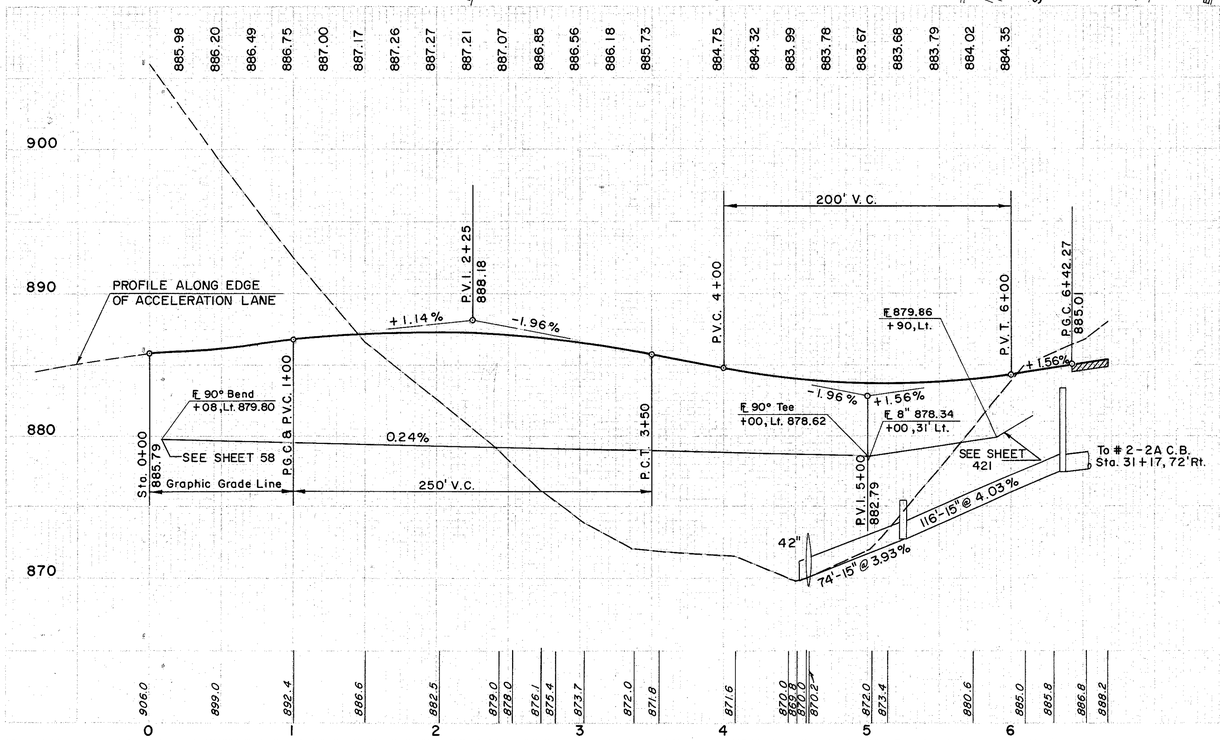
FOR INTERSECTION DETAILS
SEE SHEETS 434-435

FOR GRADING PLAN
SEE SHEET 438

FOR GEOMETRIC LAYOUT
SEE SHEET 439

FOR DETAILS ON BRIDGE NO.
TUS-36-1887 SEE SHEETS 585-595





(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. SUB-GRADE		I-15 GUARD RAIL STEEL BEAM STD TYPE (DEEP)
				S.Y.		L.F.
1-R	2+50	5+00	Lt.			250.0
2-R	341+00 US 36	6+42.27		3,657		
	TOTAL			3,657		250.0

(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 8" PIPE CL. F-4 SEC. M-6.4(c)	I-1 6" PIPE CLASS I-3 d=50"	I-1 6" PIPE CLASS J-1	I-5 6"-90° CLASS I-3 TEE	I-5 6"-90° CLASS J-1 BEND	I-10 DUMPED ROCK CHANNEL PROTECT.	SPECIAL DRAIN CONN. #6 AGGR.	L-10 SODDING
				L.F.			EA.		C.Y.		S.Y.
1-D	0+08	5+90	Lt.	10	600	24	1	2		39.5	
2-D	4+68	6+04	Lt.						45		
3-D	2+70	4+45	Rt.								120
	TOTAL			10	600	24	1	2	45	39.5	120

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE	B-21 WATER-PROOFED AGGR. BASE COURSE	I-12 CONC. CURB. TYPE 6	7	8	I-22 SUBBASE	SUBBASE GRADING A OR B	T-31 BIT. MAT'L	T-31 #6 AGGR.	T-71 REINF. PORT. CEM. CONC. PAV'T. 9"
				C.Y.		L.F.			C.Y.		GAL.	C.Y.	S.Y.
1-P	341+00 US 36	6+42.27		89	218	133	124	129	279	586	327	11	2,351

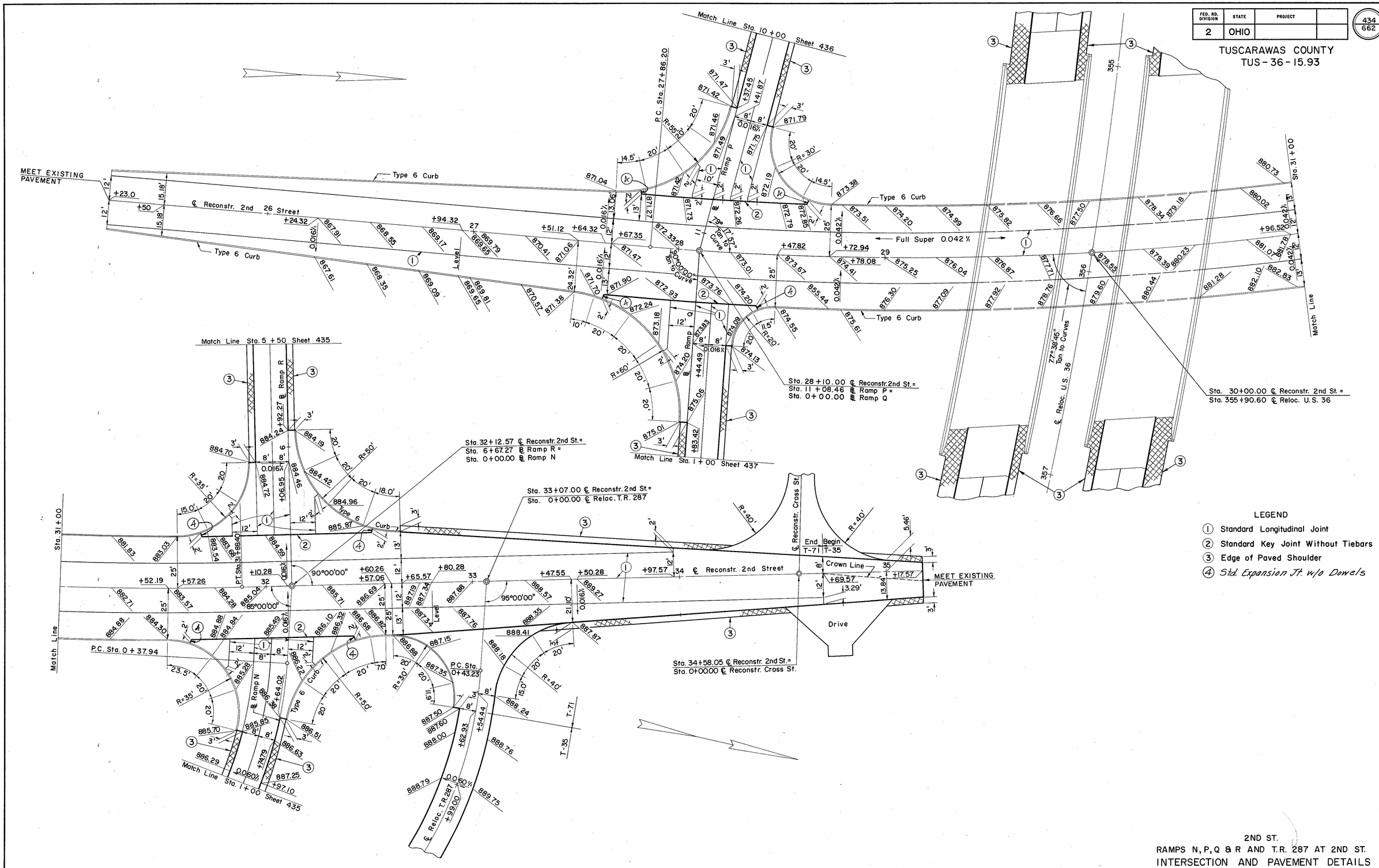
EXCAVATION
EMBANKMENT
EARTHWORK Q'TYS. INCLUDED WITH RELOC. U.S. 36

SECOND ST. INTERCHANGE
RAMP R

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

434
662

TUSCARAWAS COUNTY
TUS-36-15.93



LEGEND

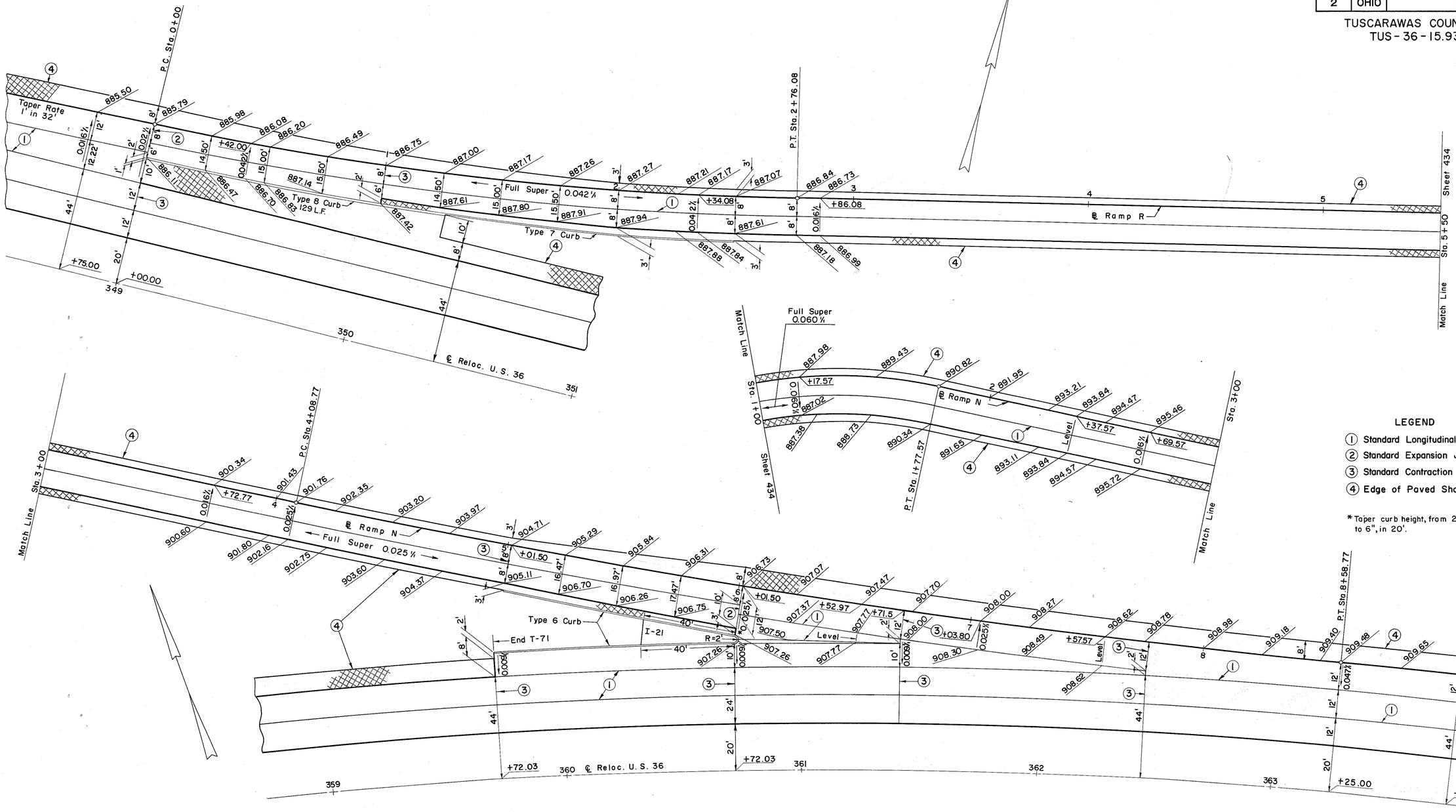
1. Standard Longitudinal Joint
2. Standard Key Joint Without Tiebars
3. Edge of Paved Shoulder
4. Std. Expansion Jt. w/o Dowels

2ND ST.
RAMPS N, P, Q & R AND T.R. 287 AT 2ND ST.
INTERSECTION AND PAVEMENT DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

435
662

TUSCARAWAS COUNTY
TUS-36-15.93



LEGEND

1. Standard Longitudinal Joint
2. Standard Expansion Joint
3. Standard Contraction Joint
4. Edge of Paved Shoulder

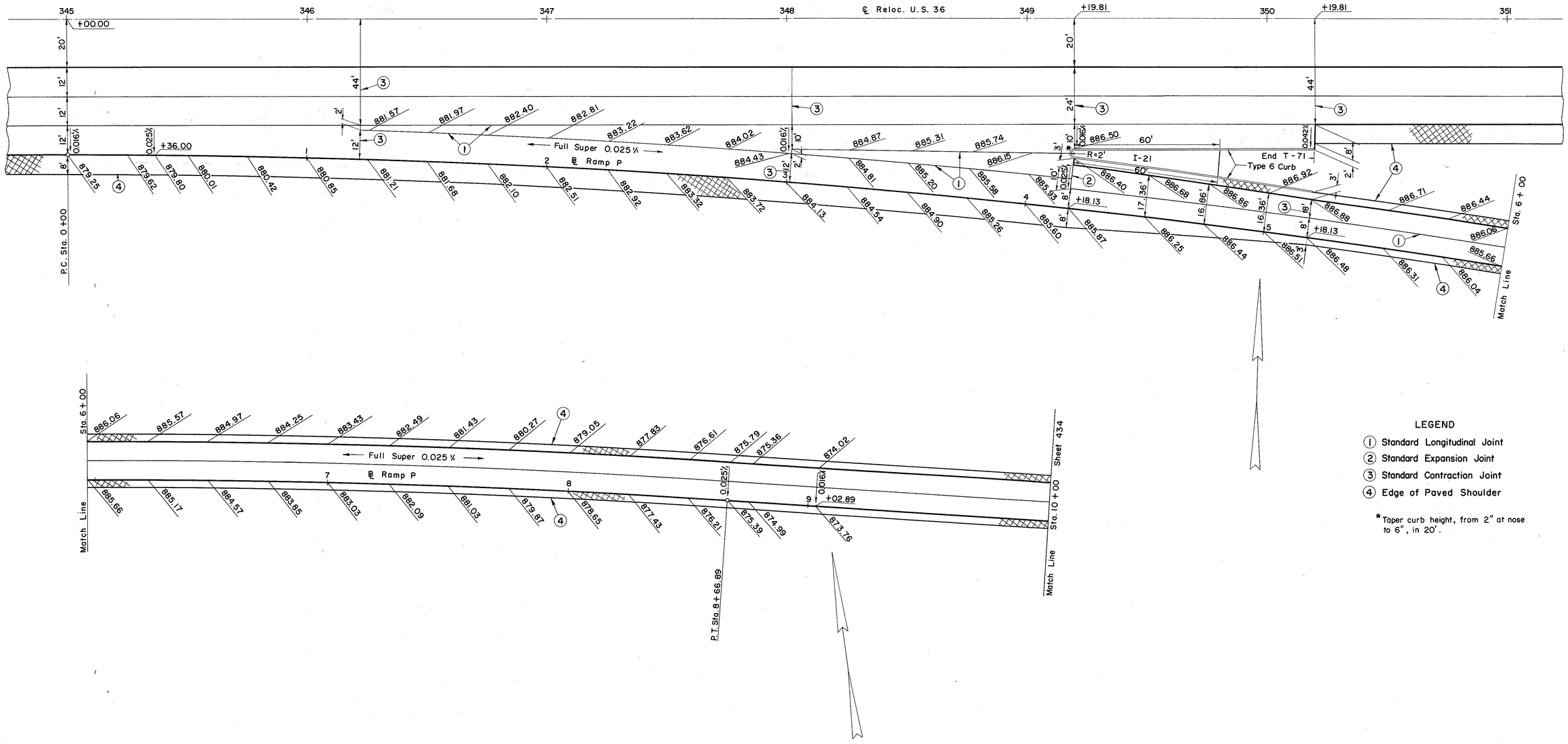
* Taper curb height, from 2" at nose to 6", in 20'.

RAMPS N & R AT U.S. 36
INTERSECTION AND PAVEMENT DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

436
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93



LEGEND

(1) Standard Longitudinal Joint
(2) Standard Expansion Joint
(3) Standard Contraction Joint
(4) Edge of Paved Shoulder

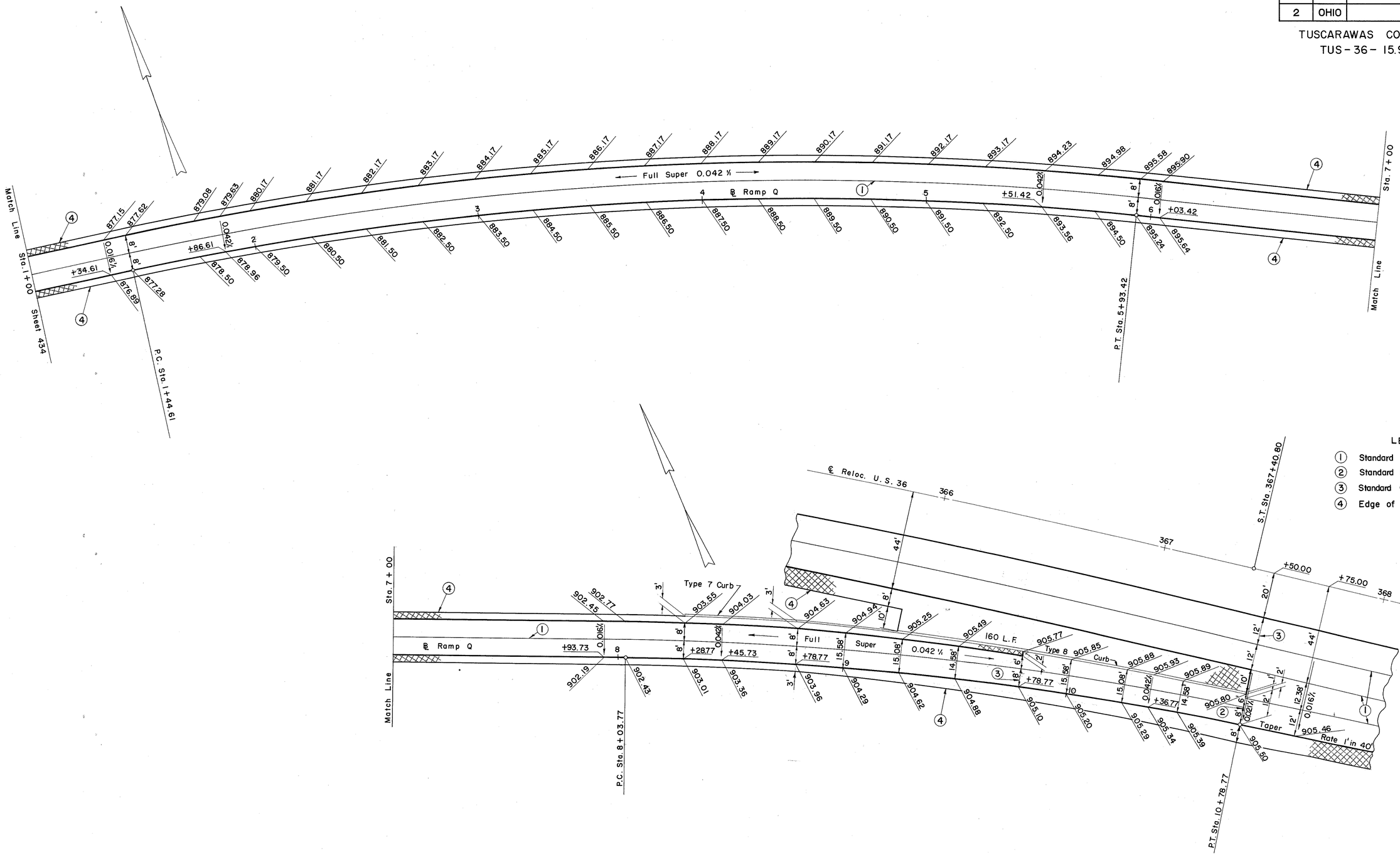
*Taper curb height, from 2" at nose to 6", in 20'.

RAMP P AT U.S. 36
INTERSECTION AND PAVEMENT DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

437
662

TUSCARAWAS COUNTY
TUS-36-15.93



LEGEND

1. Standard Longitudinal Joint
2. Standard Expansion Joint
3. Standard Contraction Joint
4. Edge of Paved Shoulder

RAMP Q AT U.S. 36
INTERSECTION AND PAVEMENT DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

438
662

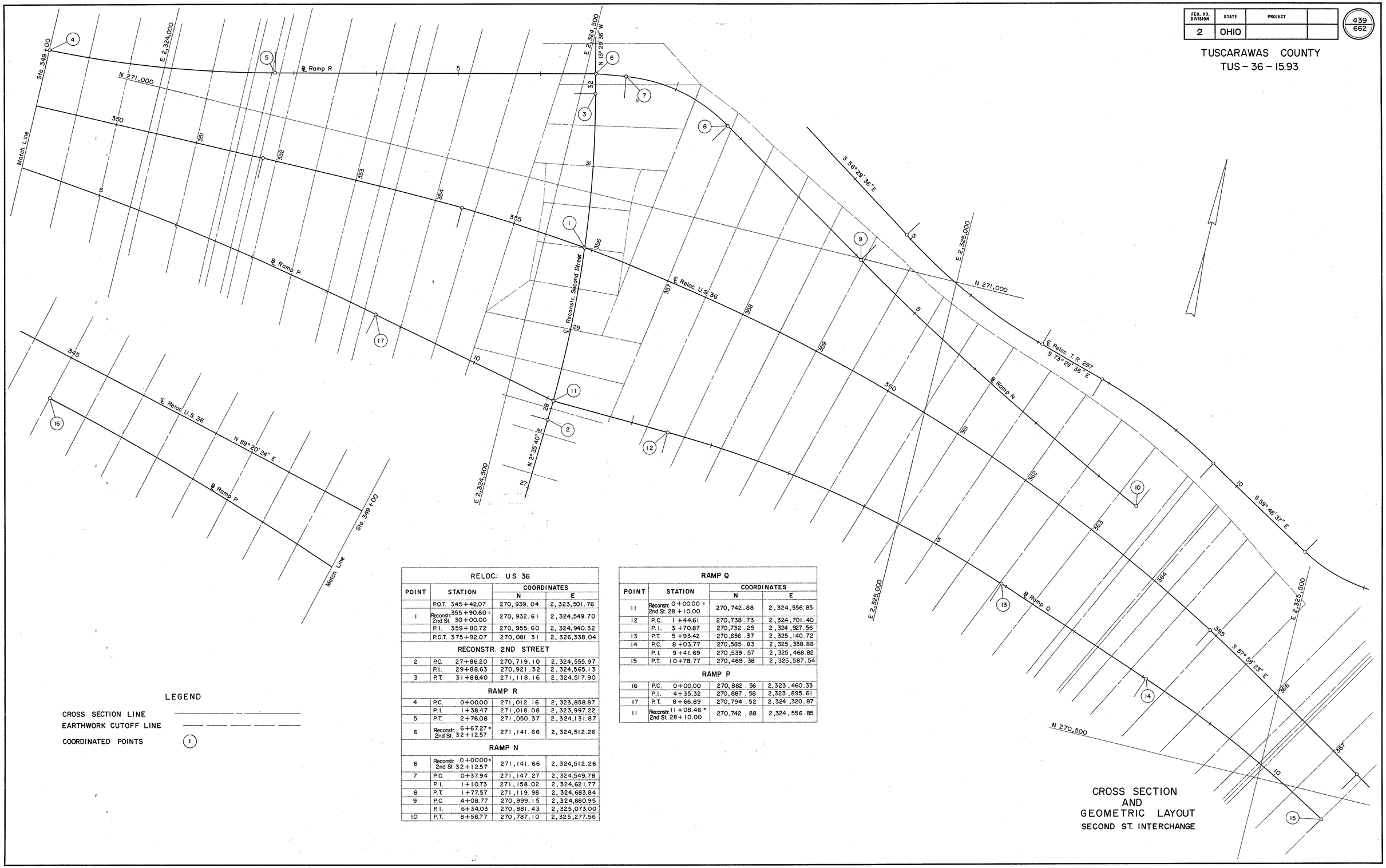
TUSCARAWAS COUNTY
TUS - 36 - 15.93

RAMP R ℄
RAMP P ℄
℄ RELOC. - 358 U.S. 36
℄ RELOC.
TR. 287
RAMP N ℄
RAMP Q ℄
℄ SECOND ST.
#3 C.B.
#2-5 C.B. El. 866.36
#1 M.H. El. 869.00
#2-8 Inlet
#2-2A C.B. El. 882.54
#2-2A C.B. El. 881.00
#2-2A C.B. El. 875.49
#2-2A C.B. El. 878.40
#2-2A C.B. El. 869.60
#2-2A C.B.
#2-2A C.B.
#3 C.B.
#2-2A C.B.
#2-2A C.B.
#2-2A

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

439
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93



LEGEND

CROSS SECTION LINE

EARTHWORK CUTOFF LINE

COORDINATED POINTS (1)

RELOC. US 36			
POINT	STATION	COORDINATES N	E
	P.O.T. 345+42.07	270,939.04	2,323,501.76
1	Reconstr. 355+90.60 = 2nd St. 30+00.00	270,932.61	2,324,549.70
	P.I. 359+80.72	270,955.60	2,324,940.32
	P.O.T. 375+92.07	270,081.31	2,326,338.04
RECONSTR. 2ND STREET			
2	P.C. 27+86.20	270,719.10	2,324,555.97
	P.I. 29+88.63	270,921.32	2,324,565.13
3	P.T. 31+88.40	271,118.16	2,324,517.90
RAMP R			
4	P.C. 0+00.00	271,012.16	2,323,858.87
	P.I. 1+38.47	271,018.08	2,323,997.22
5	P.T. 2+76.08	271,050.37	2,324,131.87
6	Reconstr 2nd St. 6+67.27 = 32+12.57	271,141.66	2,324,512.26
RAMP N			
6	Reconstr 2nd St. 0+00.00 = 32+12.57	271,141.66	2,324,512.26
7	P.C. 0+37.94	271,147.27	2,324,549.78
	P.I. 1+10.73	271,158.02	2,324,621.77
8	P.T. 1+77.57	271,119.98	2,324,683.84
9	P.C. 4+08.77	270,999.15	2,324,880.95
	P.I. 6+34.03	270,881.43	2,325,073.00
10	P.T. 8+58.77	270,787.10	2,325,277.56

RAMP Q			
POINT	STATION	COORDINATES N	E
11	Reconstr 2nd St. 0+00.00 = 28+10.00	270,742.88	2,324,556.85
12	P.C. 1+44.61	270,738.73	2,324,701.40
	P.I. 3+70.87	270,732.25	2,324,927.56
13	P.T. 5+93.42	270,656.37	2,325,140.72
14	P.C. 8+03.77	270,585.83	2,325,338.88
	P.I. 9+41.69	270,539.57	2,325,468.82
15	P.T. 10+78.77	270,469.38	2,325,587.54
RAMP P			
16	P.C. 0+00.00	270,882.56	2,323,460.33
	P.I. 4+35.32	270,887.58	2,323,895.61
17	P.T. 8+66.89	270,794.52	2,324,320.87
11	Reconstr 2nd St. 11+08.46 = 28+10.00	270,742.88	2,324,556.85

CROSS SECTION
AND
GEOMETRIC LAYOUT
SECOND ST. INTERCHANGE

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

440
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

RELOC. T. R. 287
CURVE DATA
P.I. Sta. 1+20.00
Δ = 42° 00' 00" Rt.
R = 200.00'
L = 146.61'
T = 76.77'

RELOC. T. R. 287
CURVE DATA
P.I. Sta. 6+01.07
Δ = 17° 00' 00" Lt.
D = 8° 00' 00"
R = 716.20'
L = 212.50'
T = 107.04'

RELOC. T. R. 287
CURVE DATA
P.I. Sta. 8+77.50
Δ = 13° 40' 59" Rt.
D = 8° 00' 00"
R = 716.20'
L = 171.04'
T = 85.93'

DRIVE LT. STA. 6+72
CURVE DATA
P.I. Sta. 0+40.00
Δ = 18° 00' 00" Lt.
R = 100.00'
L = 31.42'
T = 15.84'

FOR DRIVE TYPICAL SECTION
SEE SHEET 11
STA. 4+67 LT.
Use 6" B-19 only

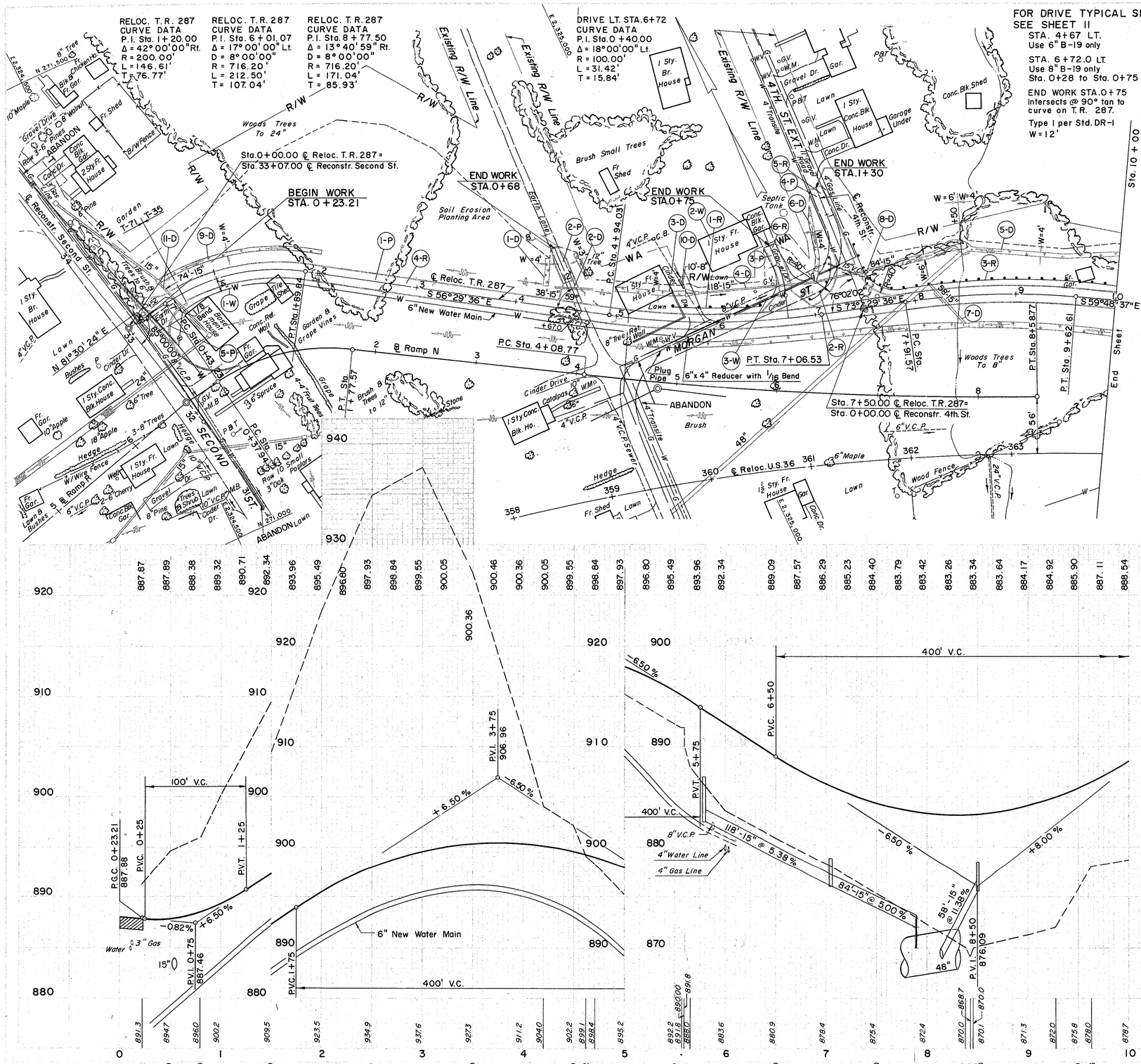
STA. 6+72.0 LT.
Use 8" B-19 only
Sta. 0+28 to Sta. 0+75

END WORK STA. 0+75
Intersects @ 90° to curve on T. R. 287.
Type I per Std. DR-1
W = 12'

FOR PLAN & PROFILE OF RAMP N
SEE SHEET 429

FOR PROFILE OF RECONSTR.
FOURTH ST.
SEE SHEET 441

FOR SURVEY STAKEOUT
OF RELOC. T.R. 287
SEE SHEET 441


BEGIN WORK
STA. 0 + 23.21
END WORK
STA. 0+68
END WORK
STA. 0+75
END WORK
STA. 1+30
Sta. 0+00.00 ℄ Reloc. T. R. 287 = Sta. 33+07.00 ℄ Reconstr. Second St.
℄ Reloc. T. R. 287
S 56°29' 36" E
6" New Water Main
P.C. Sta. 4+08.77
P.T. Sta. 7+06.53
Sta. 7+50.00 ℄ Reloc. T.R. 287 = Sta. 0+00.00 ℄ Reconstr. 4th St.
℄ Reloc. U.S. 36
S 73° 29' 36" E
S 59°48' 37" E
2 ℄ Ramp N
Ramp N
SECOND
MORGAN
4TH. ST. EXT.
Existing R/W Line
Earth Lane
Soil Erosion Planting Area
Brush Small Trees
Woods Trees To 24"
Woods Trees To 8"
Gravel Drive
Lawn
Hedge
Wood Fence
W/Wire Fence
Cinder Drive
Cinder Dr.
Gravel
Grape Vines
Garden
Septic Tank
Gas Line
Water Line
Plug
6" x 4" Reducer with 1/16 Bend
ABANDON
Brush
Stone
Catalpas
Row 10 Small Poplars
3" Dbh
Row 3-6 Pines
Row 5-6 Pines
Row 3-8" Walnut
Row 3-8 Trees
Row 6 Pine
Row 5-6 Cherry
Row 6 Pine Trees
Row 4-4" Fruit Trees
Row 3-6 Pines
Row 3-8" Trees
Row 6 Pine
Row 3-6 Pines
Row 5-6 Pines
Row 3-6 Pines
Row 3-8" Walnut
Row 3-6 Pines
Row 3-6 Pines
Row 3-6 Pines

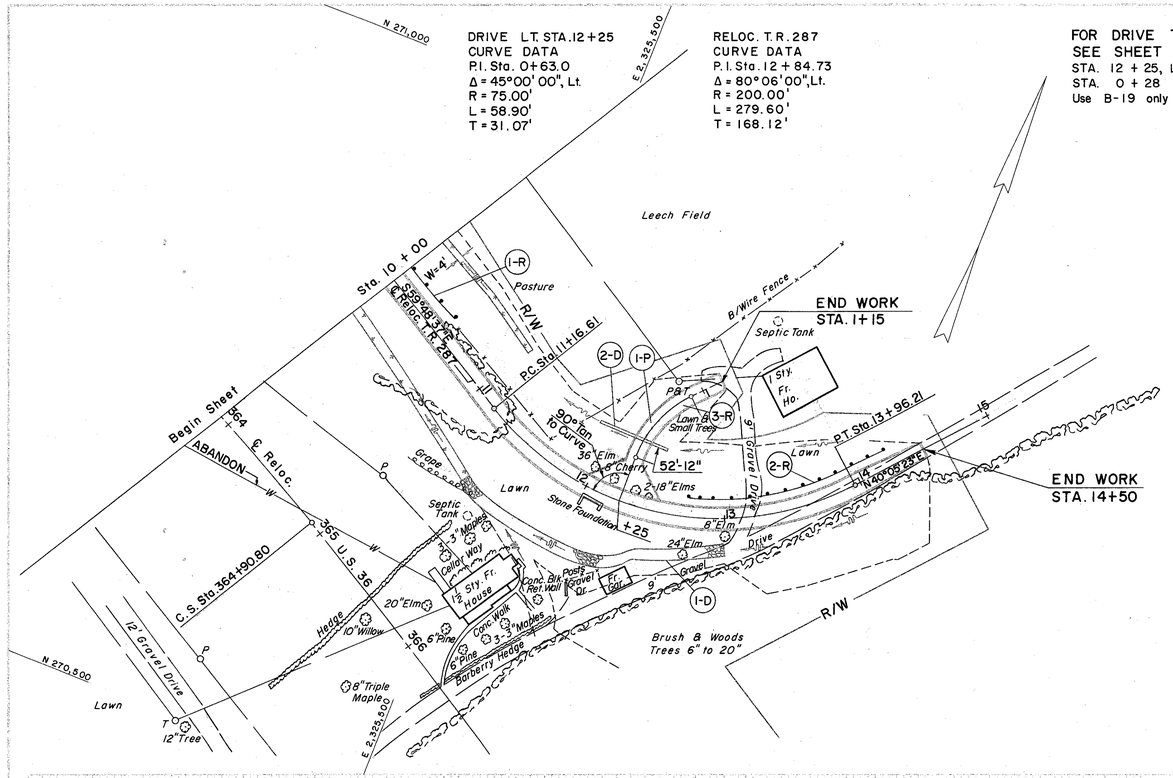
FED. HIGHWAY DIVISION	STATE	PROJECT		441 662
2	OHIO			

TUSCARAWAS COUNTY
TUS-36-15.93

DRIVE LT. STA. 12+25
CURVE DATA
P.I. Sta. 0+63.0
Δ = 45°00' 00", Lt.
R = 75.00'
L = 58.90'
T = 31.07'

RELOC. T.R. 287
CURVE DATA
P.I. Sta. 12+84.73
Δ = 80°06'00", Lt.
R = 200.00'
L = 279.60'
T = 168.12'

FOR DRIVE TYPICAL SECTION
SEE SHEET 11
STA. 12+25, LT.
STA. 0+28 TO 1+15
Use B-19 only



(R) ROADWAY

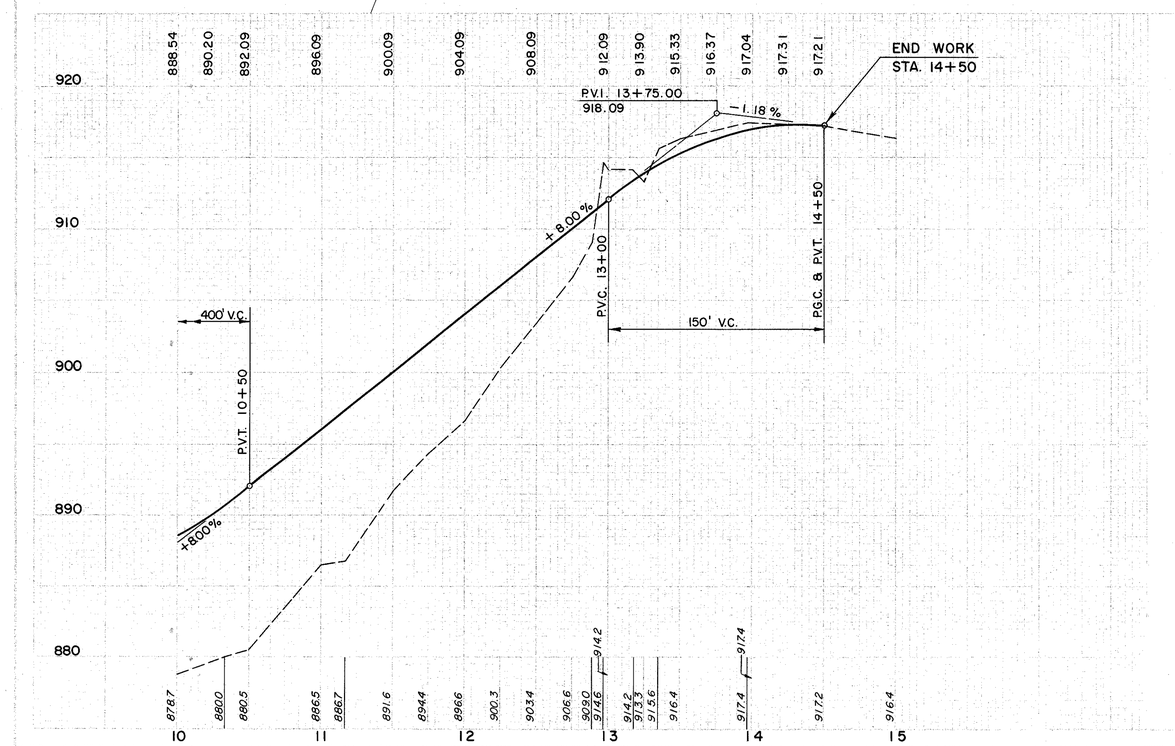
REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. SUB-GRADE S.Y.	I-15 GUARD RAIL WIRE CABLE L.F.
1-R	10+00	10+48	Lt.		48
2-R	12+72	14+25	Lt.		144
3-R	12+25		Lt.	183	
	TOTAL			183	192

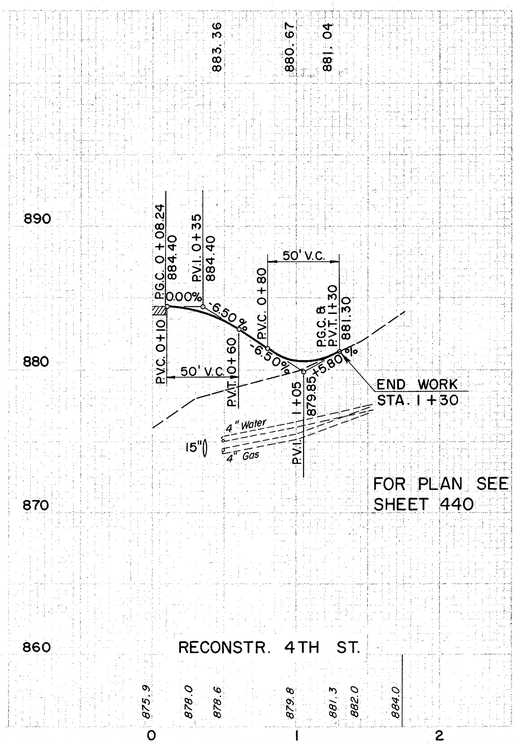
(D) DRAINAGE

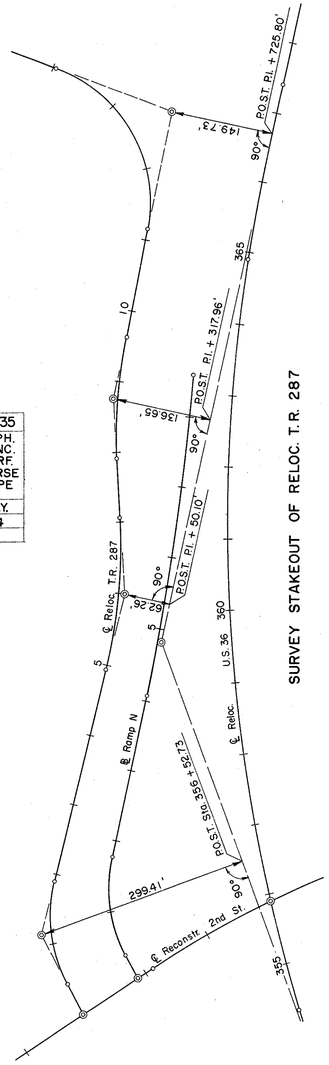
REF. NO.	STATION FROM	STATION TO	SIDE	I-1 12" PIPE CLASS F-4 L.F.	I-10 DUMPED ROCK CHANNEL PROTECT. C.Y.
1-D	11+39	13+00	Rt.		100
2-D	11+85	12+50	Lt.	52	
	TOTAL			52	100

(P) PAVEMENT

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE C.Y.	T-30 BIT. PRIME COAT GAL.	T-35 ASPH. CONC. SURF. COURSE TYPE C C.Y.
1-P	12+25	—	Lt.	35	28	4







SURVEY STAKEOUT OF RELOC. T.R. 287

RELOC. T.R. 287 SUPERELEVATION TABLE

	STATION	LT. EDGE	℄	RT. EDGE
	SEE SHEET 434			
Full Super .006ft/Ft. Transition	0+99	889.75	889.27	888.79
	1+00	889.80	889.32	888.84
	+25	891.19	890.71	890.23
	+29.84	891.50	891.02	890.54
	+50	892.74	892.34	891.94
	+75	894.26	893.96	893.66
	2+00	895.69	895.49	895.29
	+17.84	896.58	896.45	896.32
	+25	896.90	896.80	896.67
	+50	897.93	897.93	897.80
	+75	898.74	898.84	898.71
	+81.84	898.92	899.05	898.92
Full Super .0048ft/Ft. Transition	4+14.03	900.08	900.21	900.08
	+25	899.92	900.05	899.96
	+50	899.42	899.55	899.57
	+75	898.71	898.84	898.95
	+78.03	898.60	898.73	898.86
	5+00	897.71	897.93	898.15
	+25	896.49	896.80	897.11
	+42.03	895.54	895.92	896.30
	+50	895.11	895.49	895.87
	+75	893.58	893.96	894.34
	6+00	891.96	892.34	892.72
	+25	890.33	890.71	891.09
	+50	888.71	889.09	889.47
	+53.05	888.51	888.89	889.27
	+75	887.27	887.57	887.87
	7+00	886.09	886.29	886.49
	+25	885.13	885.23	885.33
	+50	884.40	884.40	884.40
	+75	883.89	883.79	883.69
	8+00	883.62	883.42	883.22
	+25	883.56	883.26	882.96
	+45.05	883.69	883.31	882.93
	+50	883.72	883.34	882.96
	+75	884.02	883.64	883.26
	9+00	884.55	884.17	883.79
	+14.61	884.96	884.58	884.20
	+25	885.26	884.92	884.58
	+50	886.14	885.90	885.66
	+75	887.25	887.11	886.97
	10+00	888.58	888.54	888.50
	+25	890.14	890.20	890.26
	+50	891.93	892.09	892.25
	+75	893.81	894.09	894.37
	11+00	895.69	896.09	896.49
	+25	897.57	898.09	898.61
	+50	899.45	900.09	900.73
	+55.00	899.91	900.57	901.23
Full Super .0083 ft/Ft. Transition	+75	901.43	902.09	902.75
	12+00	903.43	904.09	904.75
	+25	905.43	906.09	906.75
	+50	907.43	908.09	908.75
	+75	909.43	910.09	910.75
	+84.54	910.19	910.85	911.51
	13+00	911.50	912.09	912.68
	+25	913.43	913.90	914.37
	+50	914.98	915.33	915.68
	+75	916.14	916.37	916.60
	+96.21	916.82	916.95	917.08
	14+00	916.91	917.04	917.15
	+50	MEET EXISTING		

EXCAVATION	=	1,083 C.Y.
EMBANKMENT	=	5,085 C.Y.
EMBANKMENT 6	=	5,390 C.Y.

RELOC. T.R. 287
STA. 10+00 TO STA. 15+00

FED. ROAD DIV.	STATE	PROJECT	
2	OHIO		

442
662

TUSCARAWAS COUNTY
TUS-36-15.93

Seeding End Width	Seeding Sq. Yds.
161	
	694
89	
	453
74	

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

R/W 144'

Area Reloc. T.R. 287 Ramp N

E. Shed
E. Shed
Wall
Wall
E. House
910

New 6" W.M.

G-892.34
1+50
909.5

R/W

E. Basement
E. Basement
E. Garage
E. Garage
E. Drive
E. House
900

G-889.32
1+00
900.2

Area Reloc. T.R. 287 Ramp N

R/W

E. Drive
E. Drive
890

From 2-2B C.B.
Sta. 34+50, 22' Rt. Second Street
24"
15"
74'-15" @ 4.05%
To 2-2A C.B.
Sta. 32+50, 59' Rt. Second Street

Sta. 0+50, 22' Lt.
Std. 2-2A C.B.
Grate El. 886.42
Window El. 885.92
IE 15" 883.56

G-887.89
0+50
894.7

New 6" W.M.

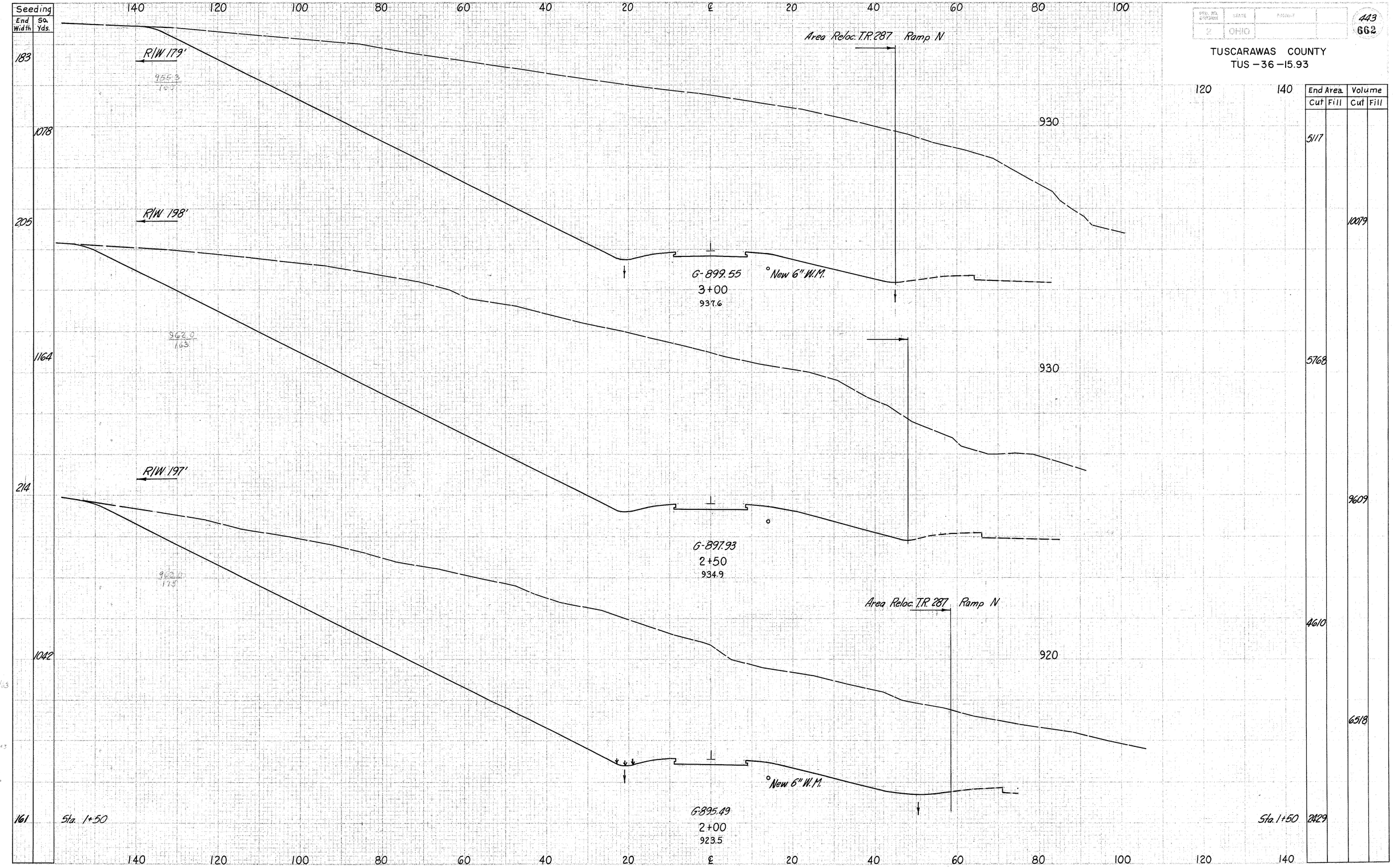
Sta. 0+50
Begin E' work

E. Drive
E. Drive
890

G-887.88
0+23.21
891.3

End Area Cut	End Area Fill	Volume Cut	Volume Fill
2429			
		3205	
1032			
		1627	
725			

Reloc. T.R. 287 Sta. 0+23.21 to 1+50



PROJ. NO.	STATE	PROJECT	
2	OHIO		

443
662

TUSCARAWAS COUNTY
TUS-36-15.93

Reloc. T.R. 287 Sta. 2+00 to 3+00

FED. AID PROJECT	STATE	YEAR	SHEET NO.	TOTAL SHEETS
2	OHIO		444	662

TUSCARAWAS COUNTY
TUS -36 -15.93

Seeding End Width	Seeding Sq. Yds.
41	
	258
52	
	394
90	
	628
136	
	886
183	

Sta. 4+80 Ahd.
Sta. 4+80 Bk.
Ramp N
Sta. 4+80 Ahd. E'work using area shown Sta. 5+00
R/W
E. House
E. House
3.8:1
4:1
F-23
894.0
F-92
E.R.
E.R.
890
New 6" W.M.
End Work
Sta. 0+68
G-897.93
5+00
895.2
+20%
0%
900
Profile Drive Lt. (skewed)
V.P.I. Sta. = 0+26
Elev. = 899.10
L.V.C. = 30'
M = 0.75'
G-899.10
4+67
898.7
Exist. R/W
E.R.
E.R.
C-81
2:1
4:1
Sta. 4+42 Ahd.
C-248
Sta. 4+42 Bk.
G-899.55
4+50
902.2
E. Drive
E. Drive
900
E. Sidewalk
Exist. R/W 144'

Drive Lt. Sta. 4+67		
STATION	AREA CUT	VOL. CUT
0+68	5	11
0+55	41	48
0+32	72	21
0+25	87	31
0+10	23	

E.R.
E.R.
910
G-900.36
4+00
911.2
Area Reloc. T.R. 287
Ramp N
920
New 6" W.M.
G-900.36
3+50
927.3
Sta. 3+00
Sta. 3+00

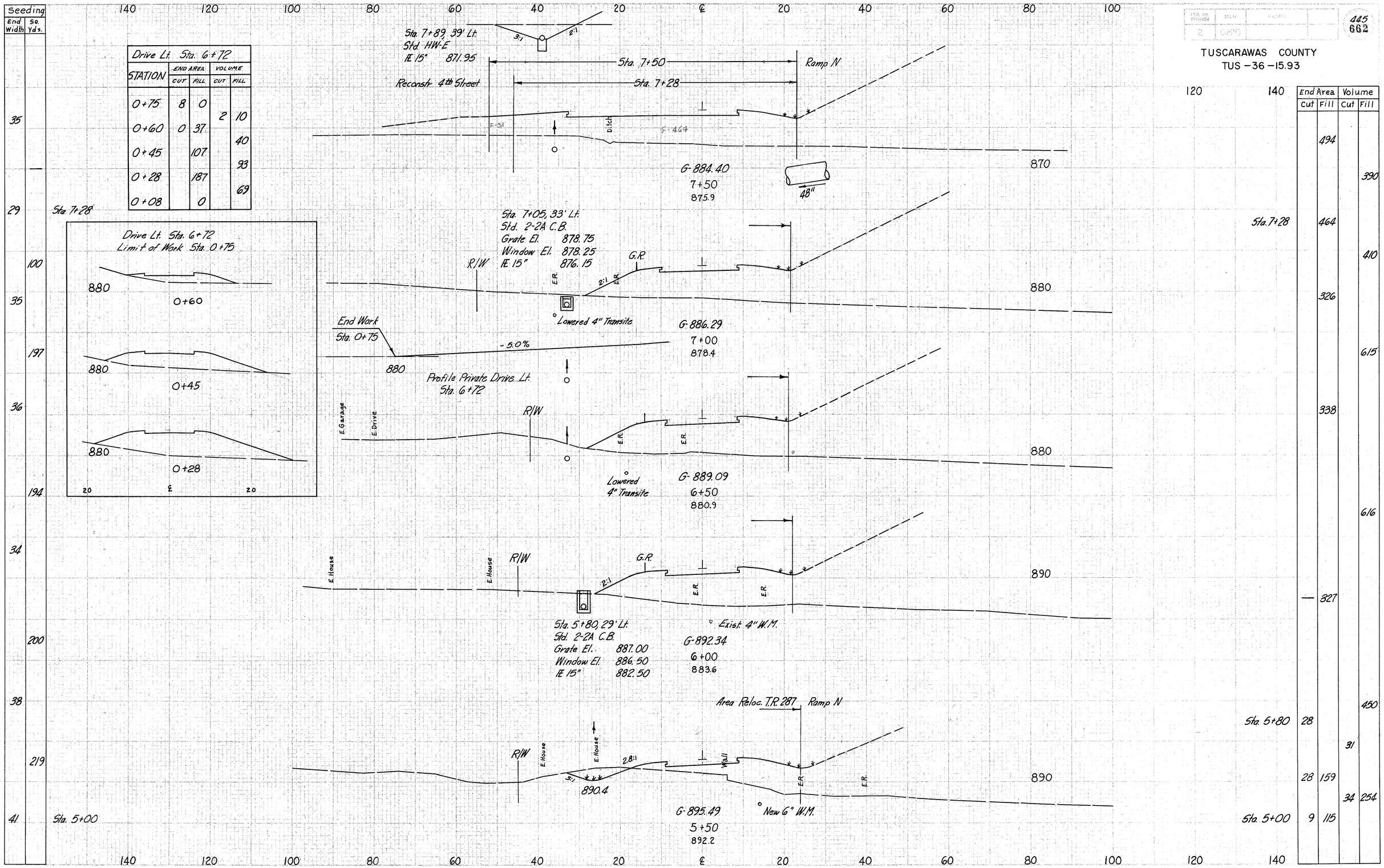
Drive Lt. Sta. 4+67
Exist. R/W 35' Limit of Work Sta. 0+68
910
Exist. R/W 35'
0+68
0+55
900
R/W 35'
Sta. 4+37, 20' Lt.
IE 15" 897.92
38'-15"
0+32
@ 2.52%
Sta. 4+74, 23' Lt.
IE 15" 896.86
900
0+25
900
0+10
20
℄
20

End Area		Volume	
Cut	Fill	Cut	Fill
9	115		
		7	85
Sta. 4+80 Ahd. 9	115		
		—	—
Sta. 4+80 Bk. —	92		
		—	17
Sta. 4+70 0	0		
		62	
Sta. 4+50 167			
		49	
Sta. 4+42 Ahd. 167			
		—	—
Sta. 4+42 Bk. 248			

859
857
3523
2948
7468
5117

Reloc. T.R. 287 Sta. 3+50 to 5+00

TUSCARAWAS COUNTY
TUS -36 -15.93



Drive Lt. Sta. 6+72

STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0+75	8	0		
			2	10
0+60	0	37		
				40
0+45		107		
				93
0+28		187		
				69
0+08		0		

Reloc. T.R. 287 Sta. 5+50 to 7+50

Seeding	
End Width	Sq. Yds.
59	
	331
60	
	342
63	
	333
57	
	256
35	Sta. 7+50

100 80 60 40 20 ℄ 20 40 60 80 100

Reloc. US 36

Area Reloc. T.R. 287 Ramp N

G.R.

R/W

2.2:1

880

881.0

815.4

G-885.90

9+50

875.8

R/W

2:1

880

879.0

871.70

G-884.17

9+00

871.3

R/W

Ditch

Ditch

48"

58'-15" @ 11.38%

870

868.2

Sta. 8+50, 29.5' Rt.
Std. 2-2A C.B.
Grate El. 878.40
Window El. 877.90
IE 15" 875.50

G-883.34

8+50

870.1

Area Reloc. T.R. 287 Ramp N

G.R.

R/W

Ditch

870

871.1

48"

Sta. 8+15, 17' Lt.
48" x 15" Tee
IE 15" 868.93
IE 48" 867.55

G-883.42

8+00

872.4

100 80 60 40 20 ℄ 20 40 60 80 100

End Area		Volume	
Cut	Fill	Cut	Fill
7	539		
			12 1138
6	690		
			11 1317
6	732		
			17 1178
12	540		
			5
Sta. 7+88	12		957
Sta. 7+50	—	494	

SHEET NO.	STATE	PROJECT	
2	OHIO		

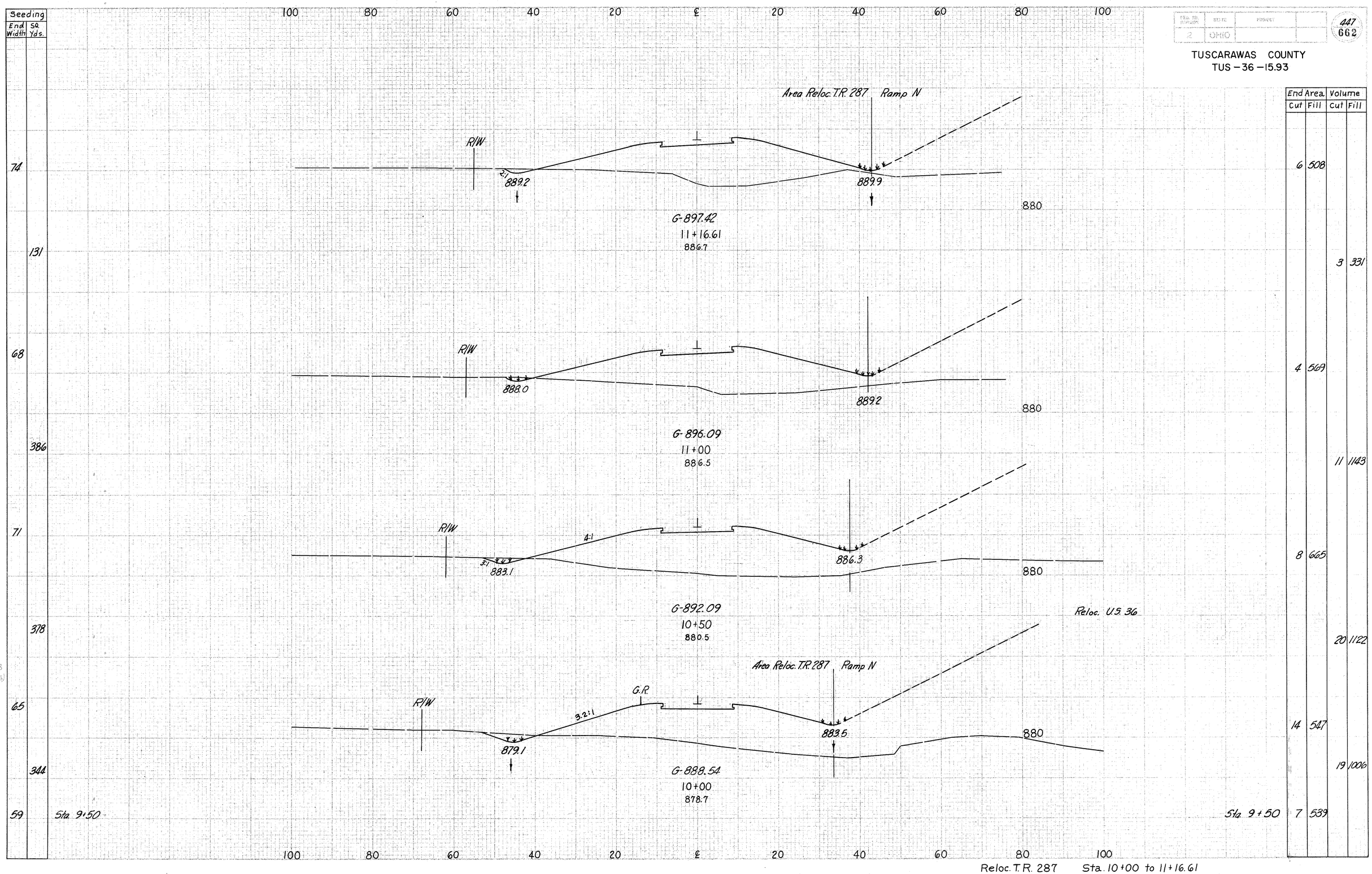
446
662

TUSCARAWAS COUNTY
TUS-36-15.93

Reloc. T.R. 287 Sta. 8+00 to 9+50

FED. RD. DIVISION 2 | STATE OHIO | PROJECT | 447 / 662

TUSCARAWAS COUNTY
TUS – 36 – 15.93



Reloc. T.R. 287 Sta. 10+00 to 11+16.61

FED. ROAD SYSTEM	STATE	PROJECT	
2	OHIO		

448
662

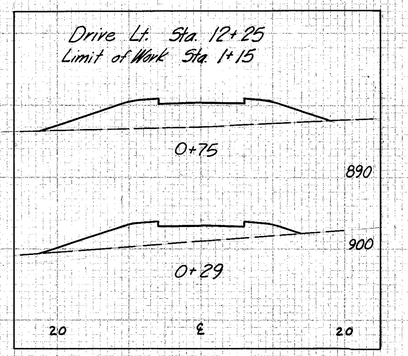
TUSCARAWAS COUNTY
TUS – 36 – 15.93

Seeding End Width	Seeding Sq. Yds.
72	
	217
84	
	244
92	
	244
84	
	231
82	
	289
74	

Sta. 11+16.61

Drive Lt. Sta. 12+25

STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1+15	8	0		
			1	
1+10	0			77
0+75		104		148
0+29		70		27
0+08		0		



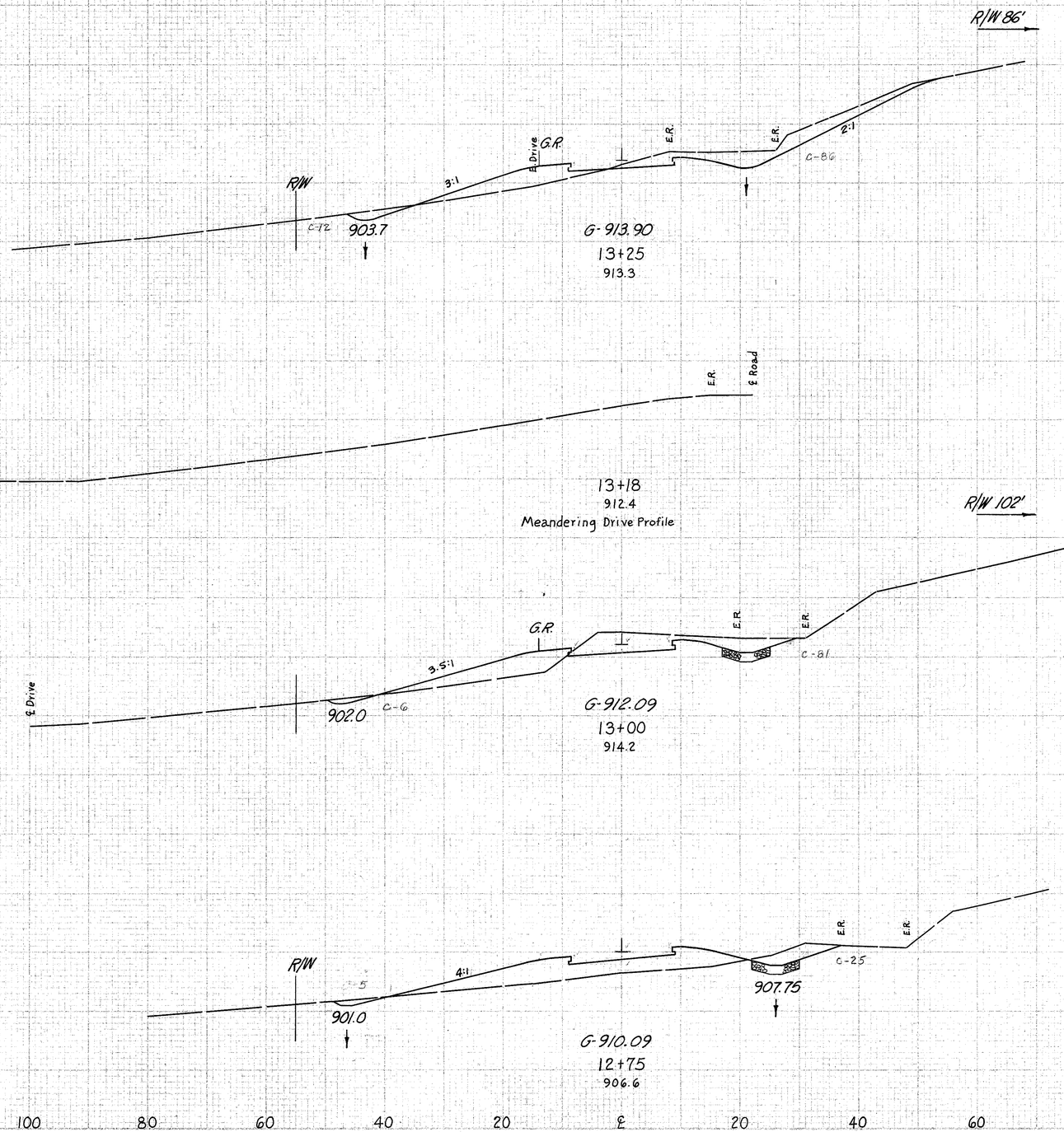
	End Area Cut	End Area Fill	Volume Cut	Volume Fill
Ahd.	44	186		
			—	—
Bk.	40	186		
			48	239
	63	330		
			46	322
Ahd.	36	366		
			—	—
Bk.	44	366		
			31	339
	22	366		
			15	348
	10	385		
			3	
Sta. 11+40	4			552
			4	
Sta. 11+16.61	6	508		

Reloc. T.R. 287 Sta. 11+50 to 12+50

FED. AID PROJECT	STATE	PROJECT		449
2	OHIO			662

TUSCARAWAS COUNTY
TUS -36-15.93

Seeding		End Area		Volume	
End Width	Sq. Yds.	Cut	Fill	Cut	Fill
92		98	58		
212				86	60
61		87	71		
179				54	103
68		30	151		
194				34	156
72	Sta. 12+50	44	186	Sta. 12+50	

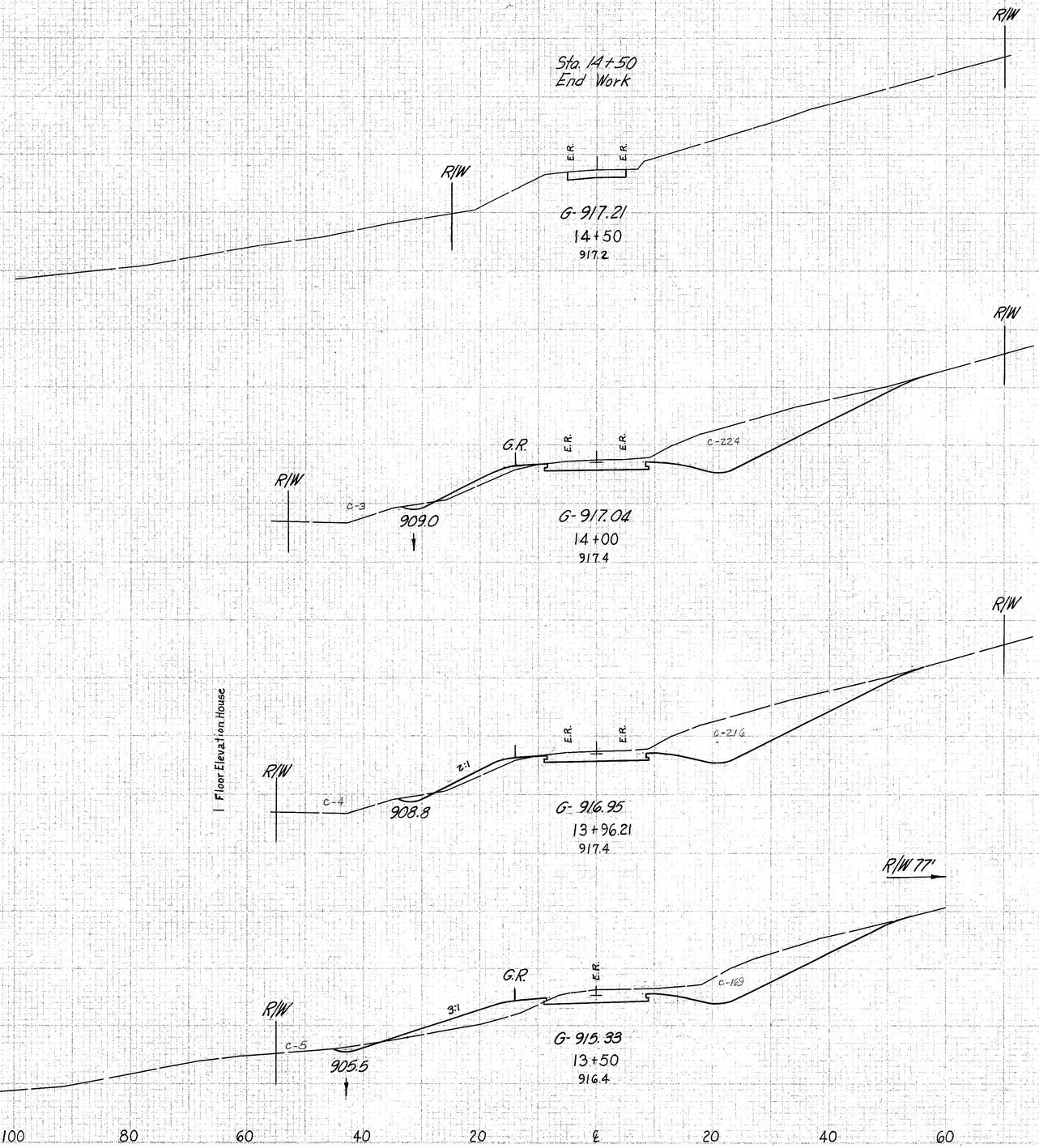


Reloc. T.R. 287 Sta. 12+75 to 13+25

FED. AID PROJECT NO.	STATE	PROJECT		SHEET NO.
2	OHIO			450 662

TUSCARAWAS COUNTY
TUS -36 -15.93

Seeding		End Area		Volume	
End Width	Sq. Yds.	Cut	Fill	Cut	Fill
0		14	0		
	233			223	11
84		227	12		
	35			31	2
83		220	15		
	442			337	55
89		174	49		
	251			126	50
92	Sta. 12+25	Sta. 13+25	98	58	



Reloc. T.R. 287 Sta. 13+50 to 14+50

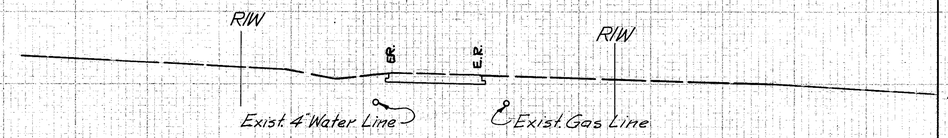
FED. AID SECTION	STATE	PROJECT	
2	OHIO		

451
662

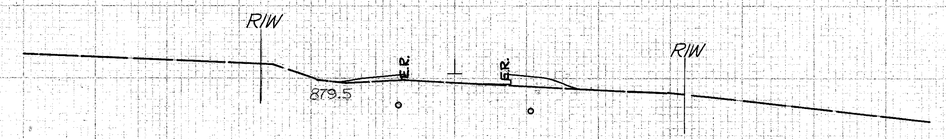
TUSCARAWAS COUNTY
TUS - 36 - 15.93

SEEDING		END AREA		VOLUME		SEEDING	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL	END WIDTH	SQ. YDS.
0		17	0			10	
	38			9	9		43
23		0	16			16	
	197			1	174	28	
48		1	172			0	

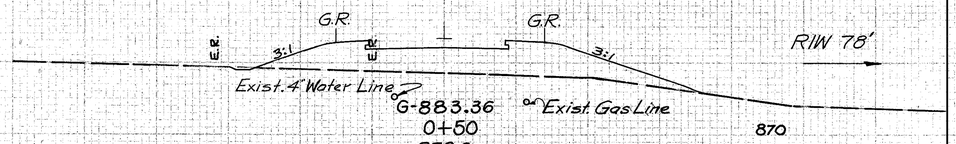
End Work Sta. 1+30



G-881.30
1+30
881.3



G-880.67
1+00
879.1

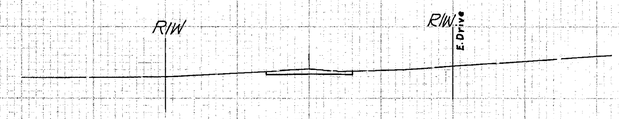


G-883.36
0+50
878.6

Begin E'work Sta. 0+50

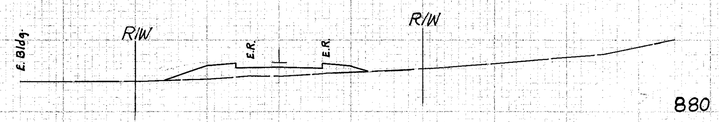
Reconstr. 4th Street

End Work Sta. 0+80



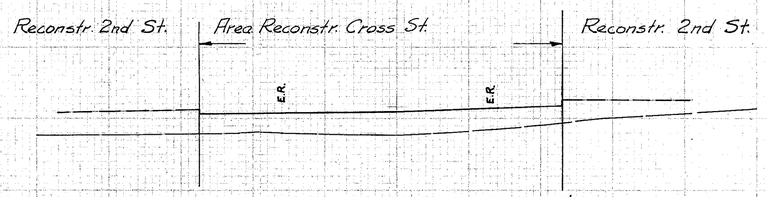
G-884.05
0+80
884.1

Sta. 0+70



G-886.89
0+50
884.9

Sta. 0+30



G-891.60
0+15
887.7

Begin E'work Sta. 0+15

Reconstr. Cross Street

END AREA		VOLUME	
CUT	FILL	CUT	FILL
7	0		
		1	
0			18
		32	
			117
		148	

Reconstr. Cross Street Sta. 0+15 to 0+80
Reconstr. 4th Street Sta. 0+50 to 1+30

SEEDING	
END WIDTH	SQ YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

60 40 20 ℄ 20 40 60

Sta. 13+96.36
End Work

Exist. R/W

R/W

G-896.92
13+96.36
896.9

890

0

38'

39

Area Cul-de-sac.

56

896.6

G-898.07
13+50
898.0

890

337

308

897.8

G-899.14
13+00
902.1

890

644

387

898.0

G-899.76
12+50
904.0

890

685

R/W

353

898.2

G-899.93
12+00
904.1

890

431

Drive Rt. Sta. 11+53		
STATION	AREA CUT	VOL. CUT
0+40	9	13
0+30	63	19
0+14	0	

L-9 Computed by Plan Area with Adjustment made for Slopes

End Work Sta. 0+40

Exist. R/W

112

-1.00%

Profile Drive Rt. Sta. 11+53.0

G-899.65
11+50
900.1

890

157

Cross Section Drive Rt.

Sta. 11+25

0

Exist. R/W

898.3

G-899.7
0+30
900.3

890

2

58

5

G-898.92
11+00
898.8

890

86

5

Area Cul-de-sac

G-897.92
10+50
898.5

890

35

0

53

22

R/W

Exist. R/W

G-896.92
10+00
896.9

890

Sta. 10+00
Begin Work

60 40 20 ℄ 20 40 60

Cul-de-sac 'A' Sta. 10+00 to 13+96.36

TUSCARAWAS COUNTY
TUS - 36 - 15.93

DESIGN	STATE	PROJECT
2	OHIO	

452
662

40 20 ℄ 20 40

Sta. 13+75
End E'work

R/W 60'

40 60

R/W

900

G-904.70
13+75
904.7

Area Cul-de-sac

Sta. 13+68

906.67 Lt. E.P. 905.47 Rt. E.P.

3:1

900

G-906.07
13+50
903.5

909.09 Lt. 908.51 Rt.
G.R.

2:1

900

G-908.80
13+00
899.5

911.41 Lt. 911.49 Rt.

2:1

R/W

900

G-911.46
12+50
900.8

912.41 Lt. E.P. 913.11 Rt. E.P.

G.R.

3:1

910

G-912.76
12+00
904.5

Sta. 11+40

R/W 91'

Area Cul-de-sac Fuhr St.

910

28'

G-911.72
11+33
911.7

Sta. 11+00
Begin E'work

Sta. 11+00

Cul-de-sac 'B'

40 20 ℄ 20 40 60

End Work
Sta. 0+42

850

-7.0%

Profile

Limit of Work Sta. 0+42

0+42

0+32

0+20

Drive Rt. Existing U.S. 250
Sta. 21+80

40 20 ℄ 20 40

L-9 Computed by Area with Adjustment made for Slopes

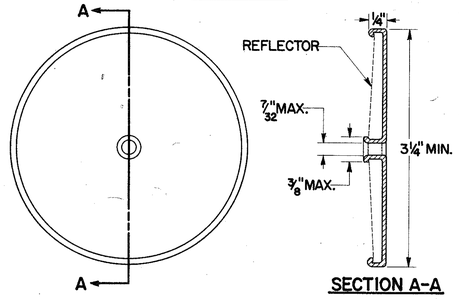
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL	SEEDING END WIDTH	SEEDING SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

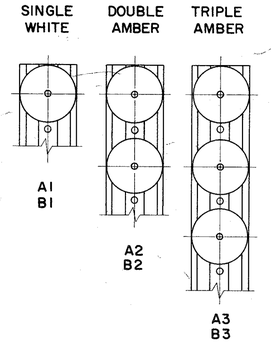
454
662

TUS-36-15.93

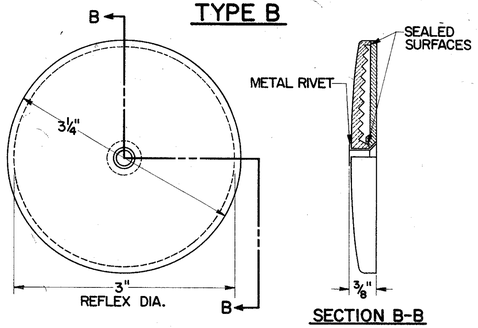
TYPE A



SECTION A-A

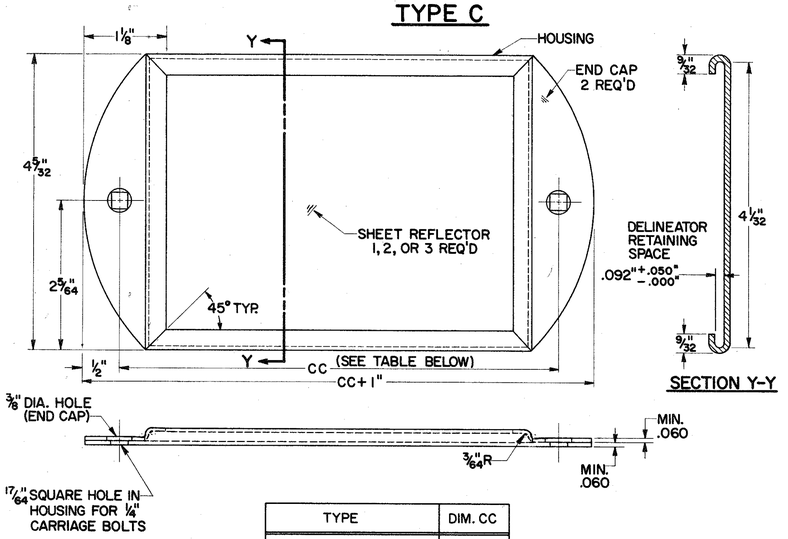


TYPE B



SECTION B-B

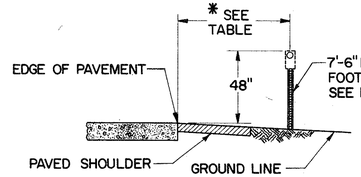
TYPE C



SECTION Y-Y

DELINEATOR RETAINING SPACE .092" +.050" -.000"

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

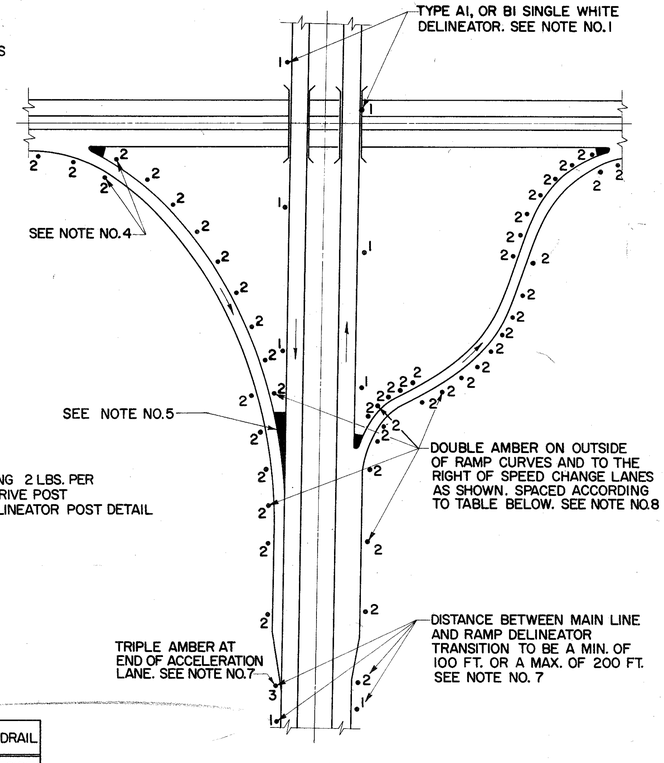


LATERAL PLACEMENT OF DELINEATORS

* 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.



TYPICAL DELINEATOR PLACEMENT

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.

3. PAYMENT FOR SUPPORTS (DRIVEPOST OR BRACKET) SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR "ITEM 620 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.

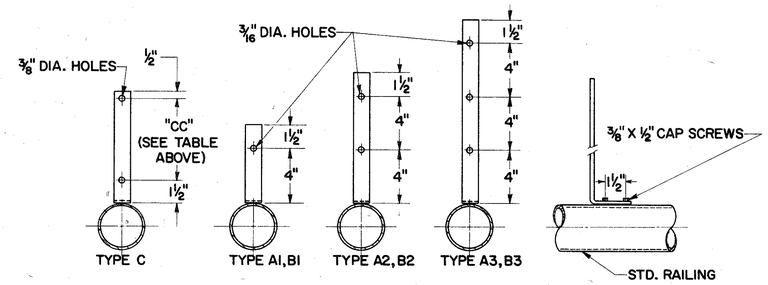
8. ALL RAMP DELINEATORS SHALL BE PLACED TO THE NEAREST 5' INCREMENTS, SUCH AS +05, +10, +15, +20 AND SO ON.

DELINEATOR SPACING ON RAMP HORIZONTAL CURVES

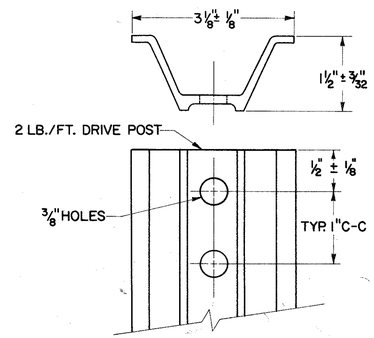
RADII, FT. FROM	RADII, FT. TO	SPACING ON CURVE	* TRANSITION SPACING	
TANGENT	1,801	100'	100'	100'
1,800	1,401	80'	100'	100'
1,400	1,001	70'	100'	100'
1,000	751	60'	100'	100'
750	551	50'	80'	100'
550	326	40'	70'	100'
325	———	30'	60'	100'

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

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



BRIDGE RAIL BRACKET



DELINEATOR POST

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

DELINEATOR DETAILS

620

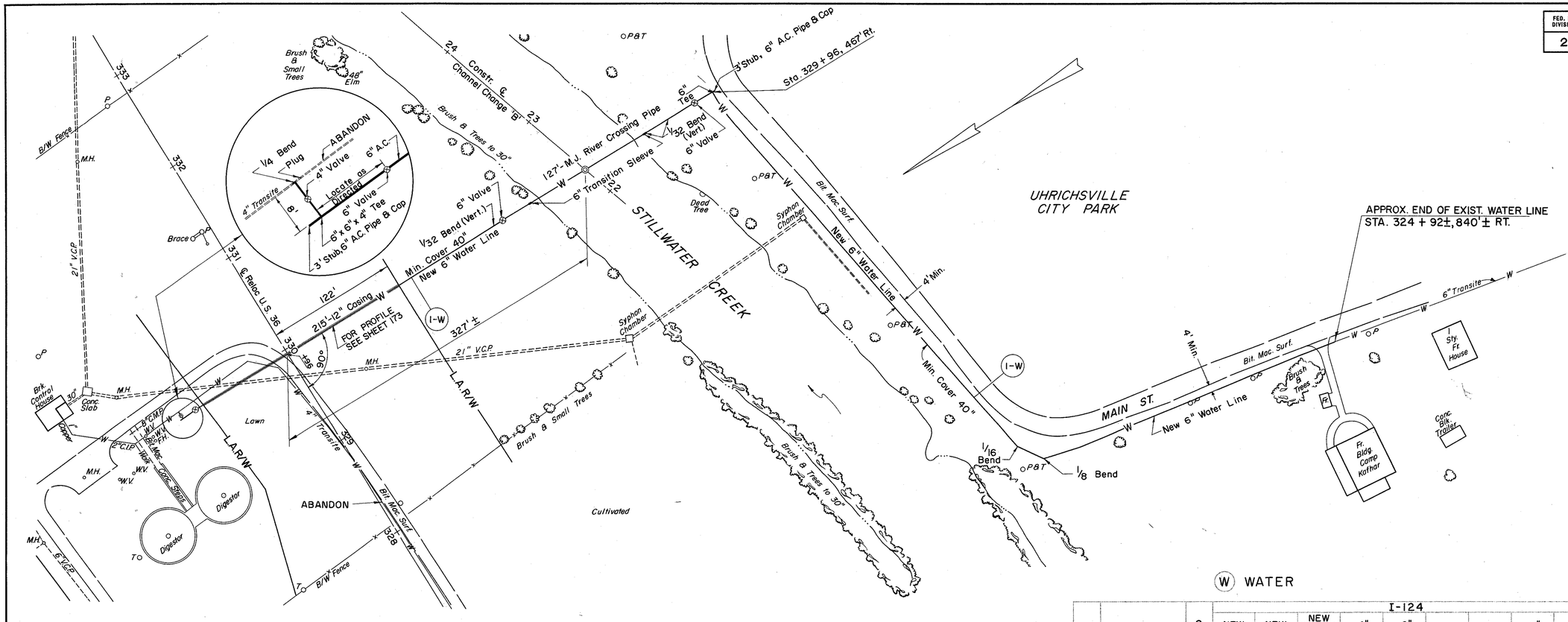
DATE 9-25-62 10-2-63

APPROVED Robert L. Conner
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

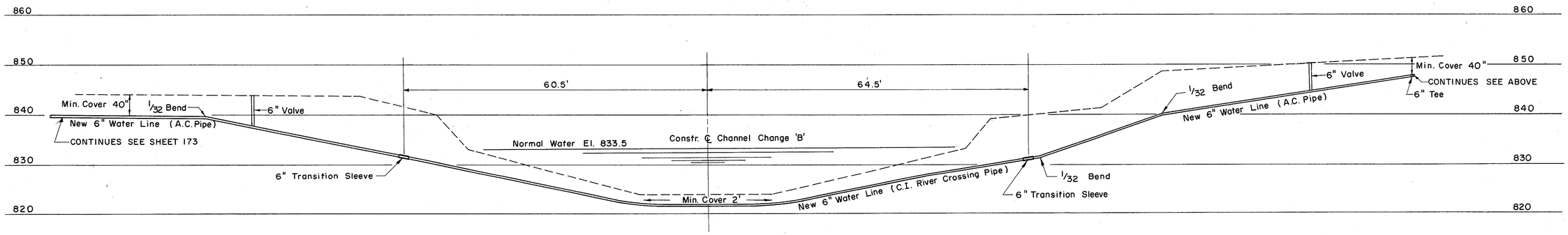
455
662

TUSCARAWAS COUNTY
TUS-36-15.93



Ⓦ WATER

REF. NO.	STATION FROM	STATION TO	SIDE	I-124 NEW WATER MAIN 4" A.C.	NEW WATER MAIN 6" A.C.	NEW WATER MAIN 6" C.I. RIVER CROSSING	4" VALVES & BOXES	6" VALVES & BOXES	6"x6"x4" TEE	6" TEE	6" TRANSITION SLEEVE	4" BEND 1/4	6" BEND 1/32	6" BEND 1/16	6" BEND 1/8	12" CASING PIPE SEC. M-6.6(B)
				L.F.			EA.									L.F.
1-W	329+96		Rt&Lt	8	1,226	127	1	3	1	1	2	1	3	1	1	215



WATER MAIN RIVER CROSSING RT. OF STATION 329+96

5 0 10 20 30
PROFILE SCALE IN FEET

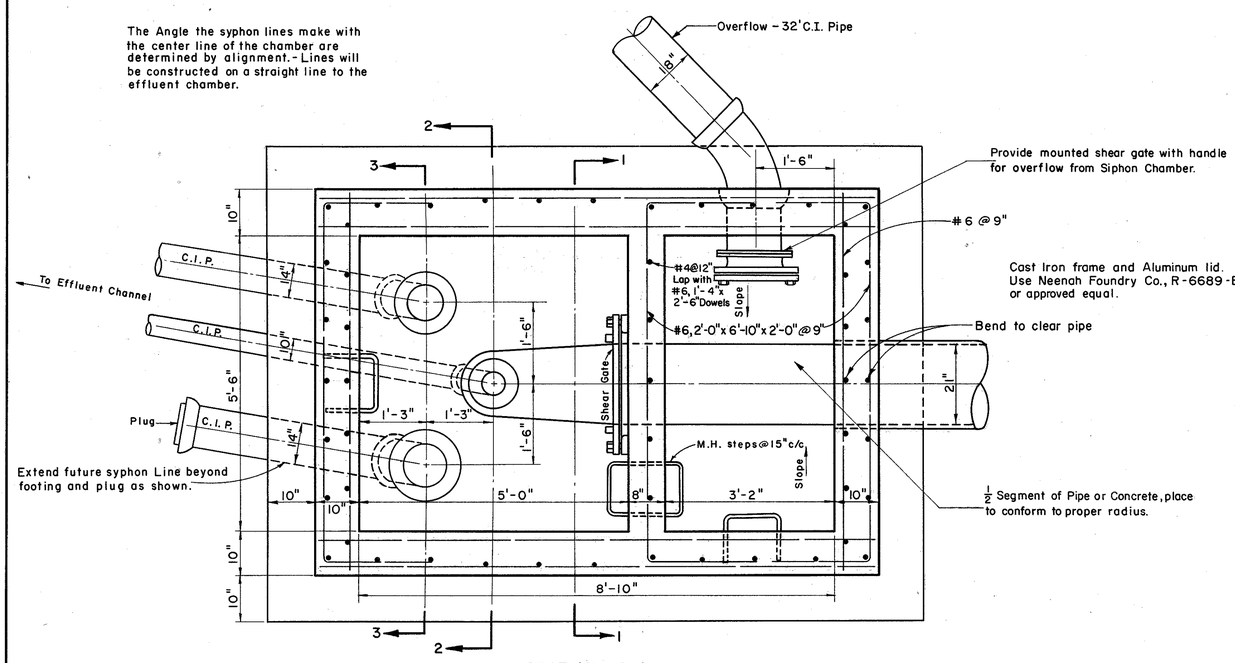
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

456
662

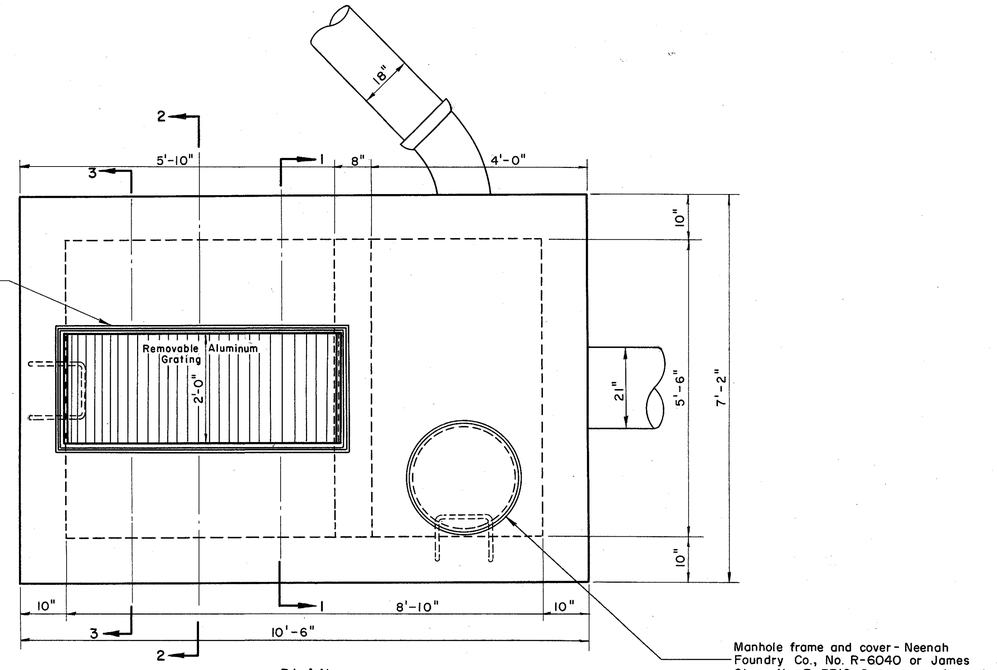
TUSCARAWAS COUNTY
TUS-36-15.93

Note: All materials and construction methods shall conform to Sec. I-8 of the Standard. This structure shall be built with Class C concrete.

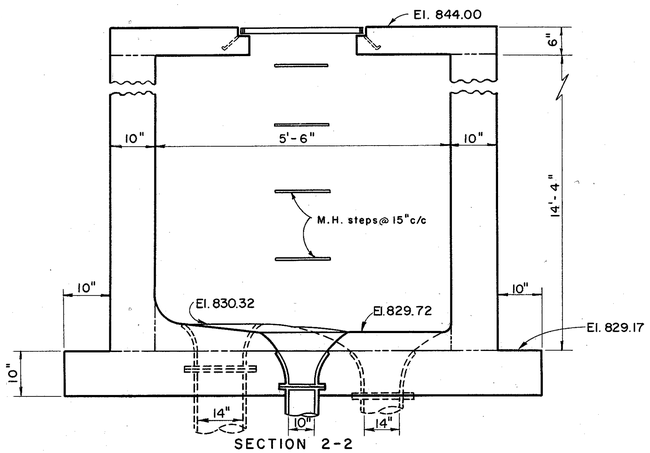
The Angle the syphon lines make with the center line of the chamber are determined by alignment.- Lines will be constructed on a straight line to the effluent chamber.



SECTION 4-4

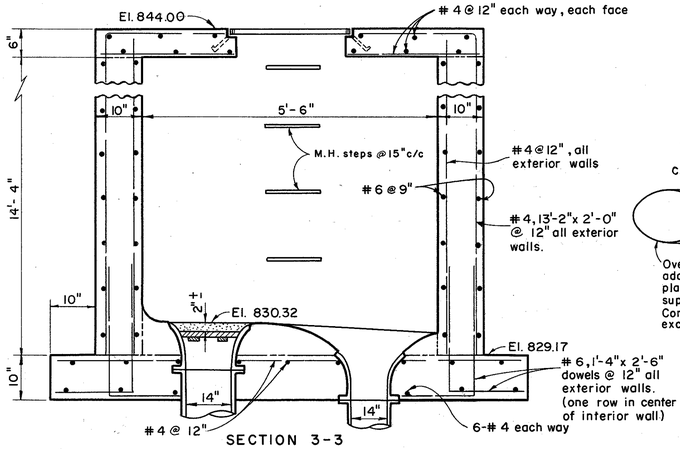


PLAN



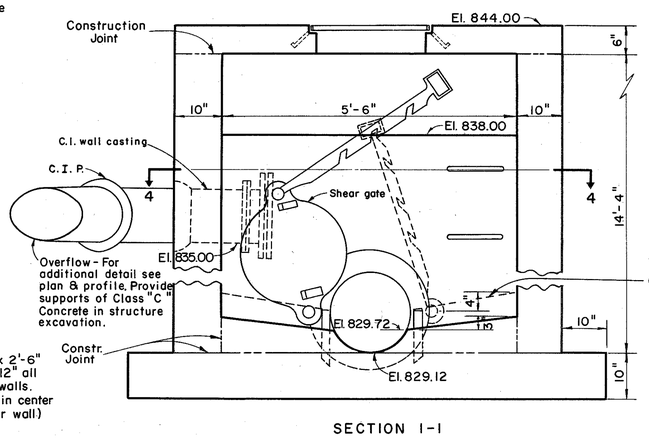
SECTION 2-2

Note: Cast Iron Bends on siphon lines not shown. Contractor shall furnish all bends, not to exceed 45° deflection per bend, required to complete the installation with a minimum loss of head.



SECTION 3-3

Note: Plug future siphon bellmouth with wood plate and fill with mortar as shown. Backfill pipes and excavation under structure with Class E concrete.



SECTION 1-1

SHEAR GATES: Use Neenah Foundry Co., No. R-5005-L3 or Rodney Hunt Shear Gate Valve (Spigot Frame) size 24, and size 18 (Flange Frame) for overflow pipe or approved equals.

Cover of reinforcement, 3" bottom of footing; 2" elsewhere

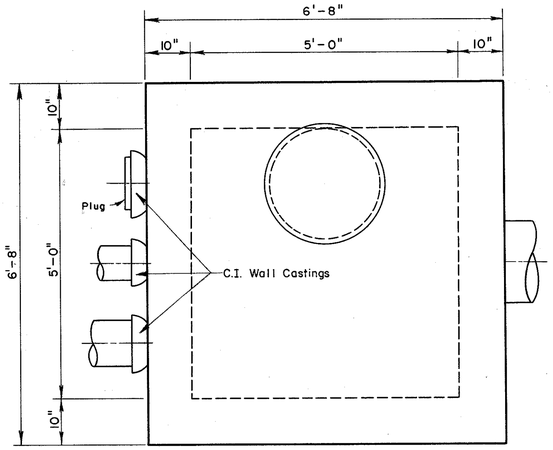
DETAILS OF SIPHON CHAMBER # 1

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

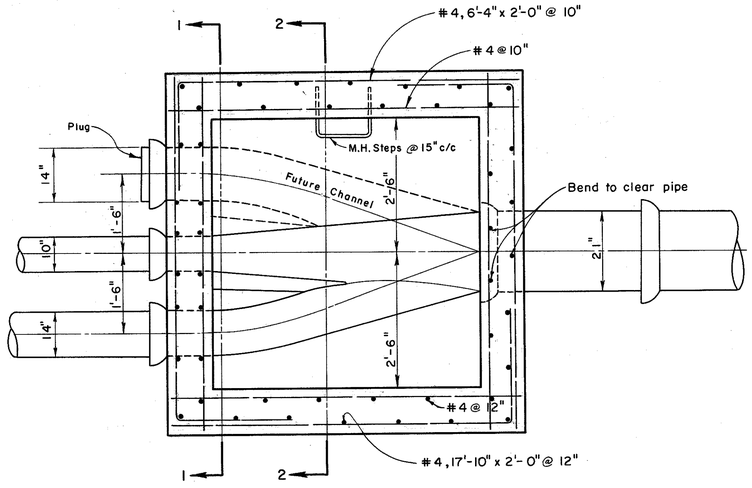
457
662

TUSCARAWAS COUNTY
TUS-36-15.93

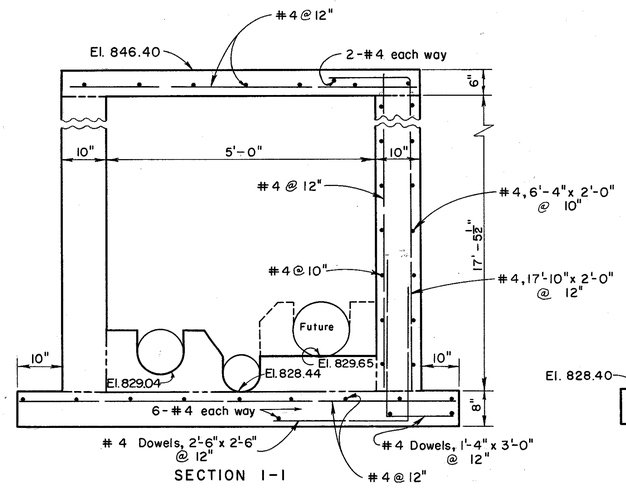
Note: All materials and construction methods shall conform to Sec. I-8 of the Standard Specifications. This structure shall be built with Class C concrete.



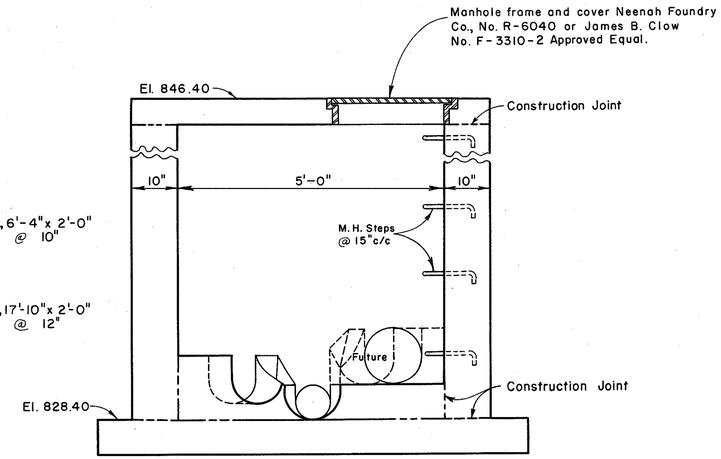
PLAN



PLAN
TOP SLAB REMOVED



SECTION 1-1

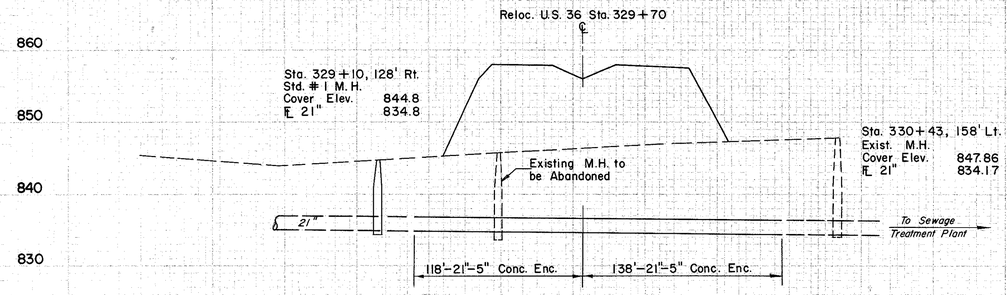


SECTION 2-2

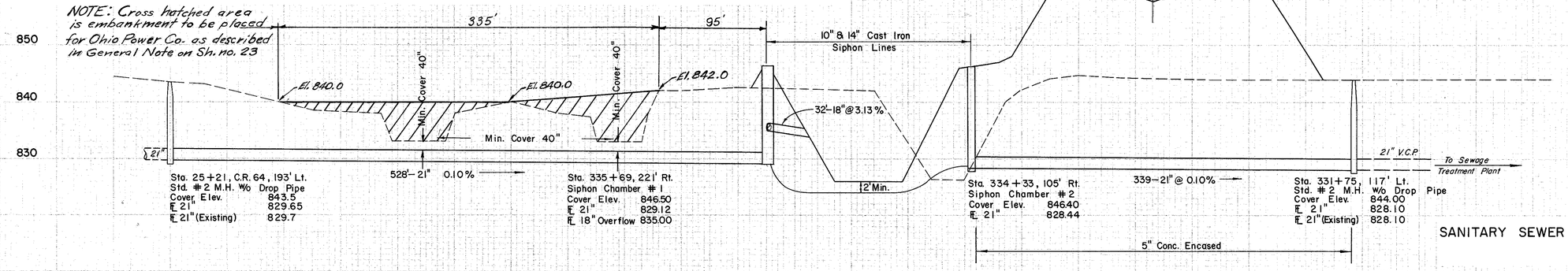
Cover of reinforcement: 3" bottom of footing; 2" elsewhere.

DETAILS OF SIPHON CHAMBER #2

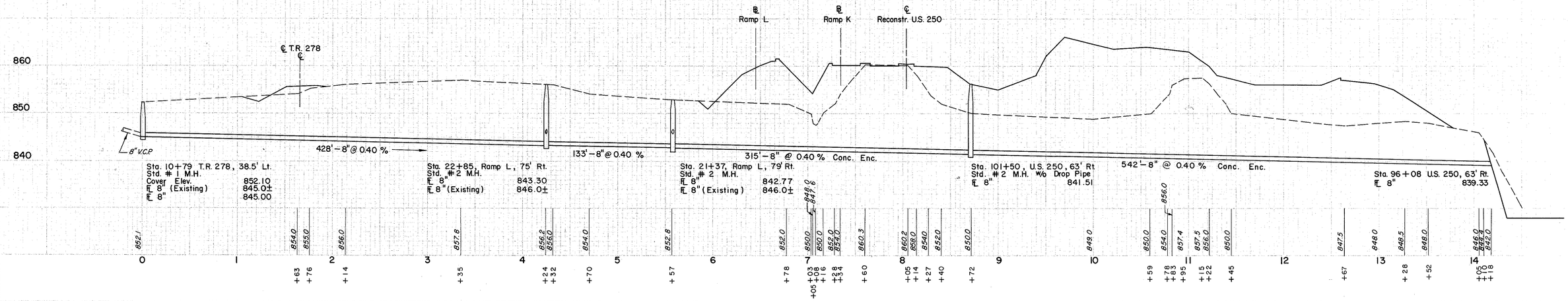
TUSCARAWAS COUNTY
TUS – 36 – 15.93



SANITARY SEWER, STA. 329+70
FOR PLAN SEE SHEET 54



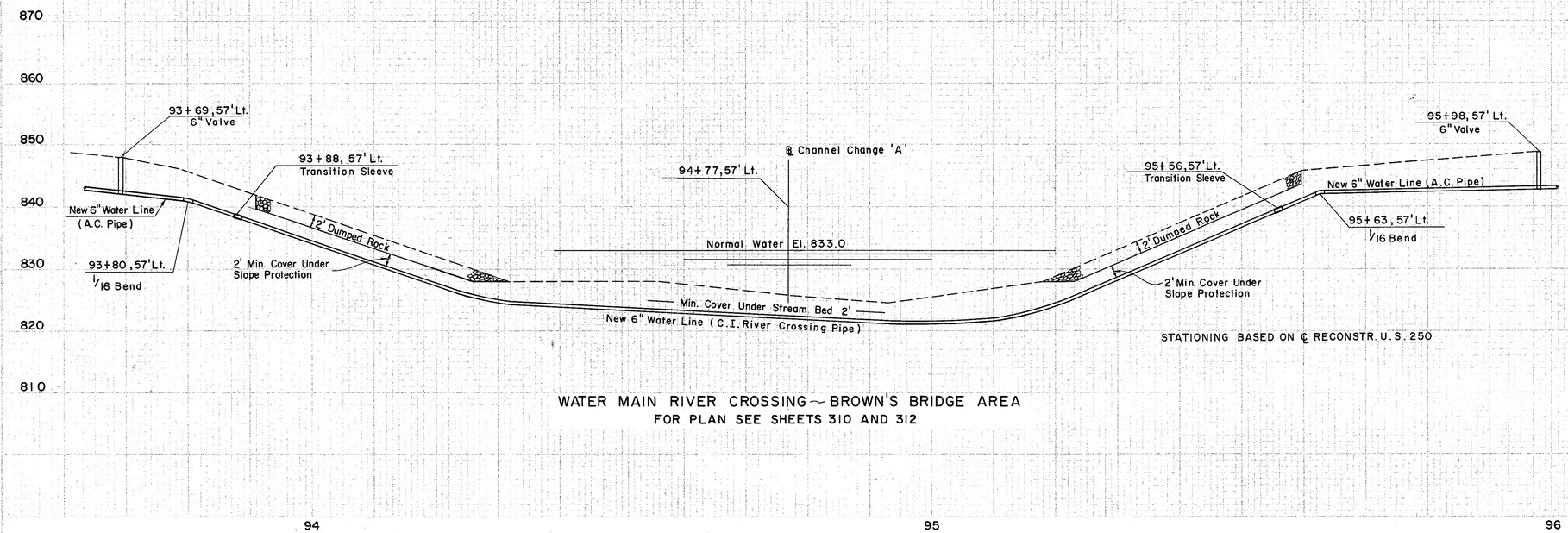
SANITARY SEWER & RELOCATED SIPHON CHAMBERS STA. 333+11
FOR PLAN SEE SHEET 55



SANITARY SEWER U.S. 250 INTERCHANGE AREA
FOR PLAN SEE SHEETS 312 & 349
RELOC. T.R. 278 STA. 10+79-38.5 LT. TO RECONSTR. U.S. 250 STA. 96+08-63' RT.

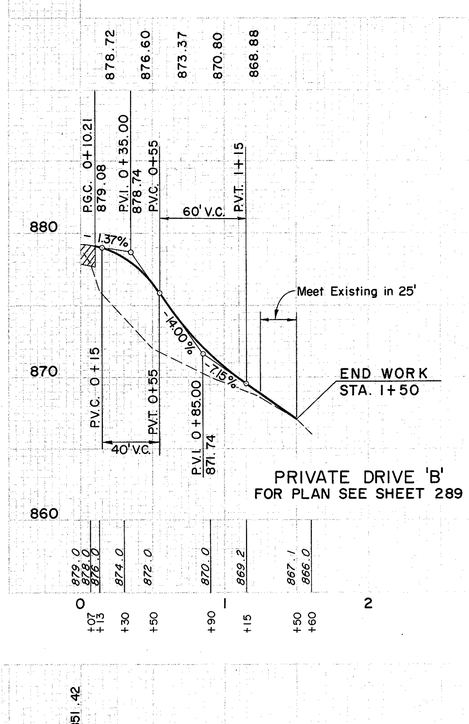
DIST. NO.	STATE	PROJECT	
12	OHIO		459 662

TUSCARAWAS COUNTY
TUS-36-15.93

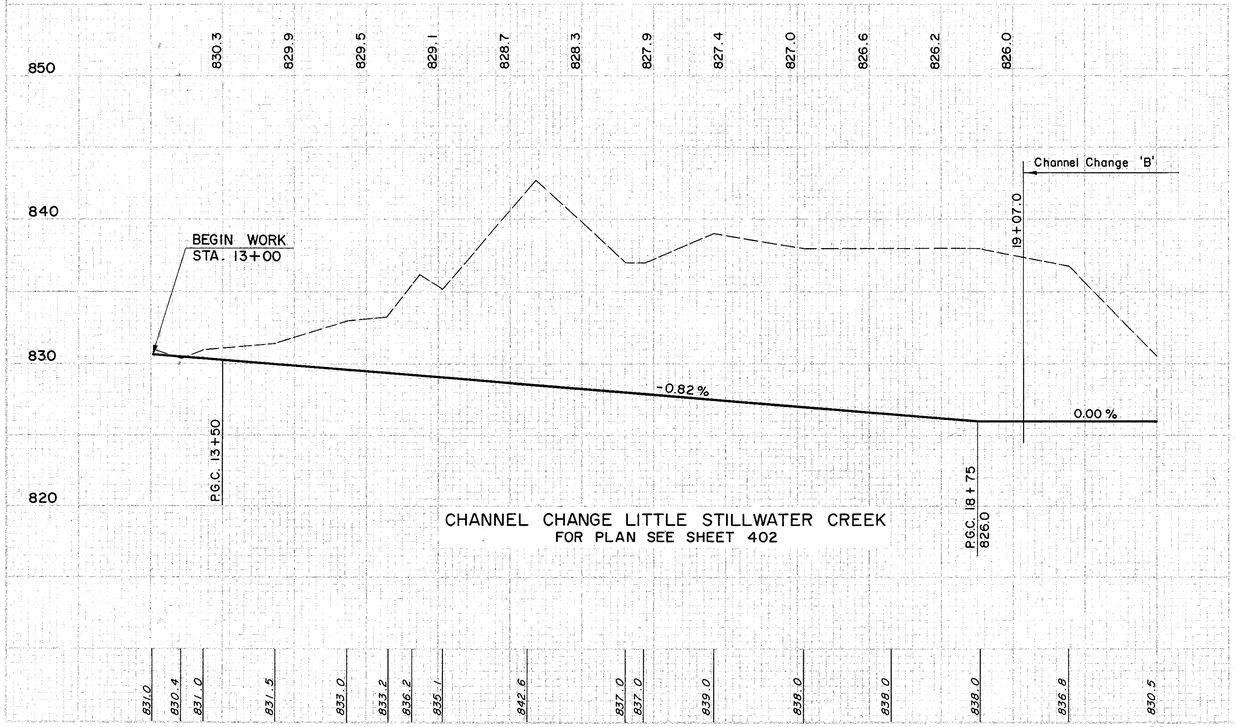


STATIONING BASED ON ℄ RECONSTR. U.S. 250

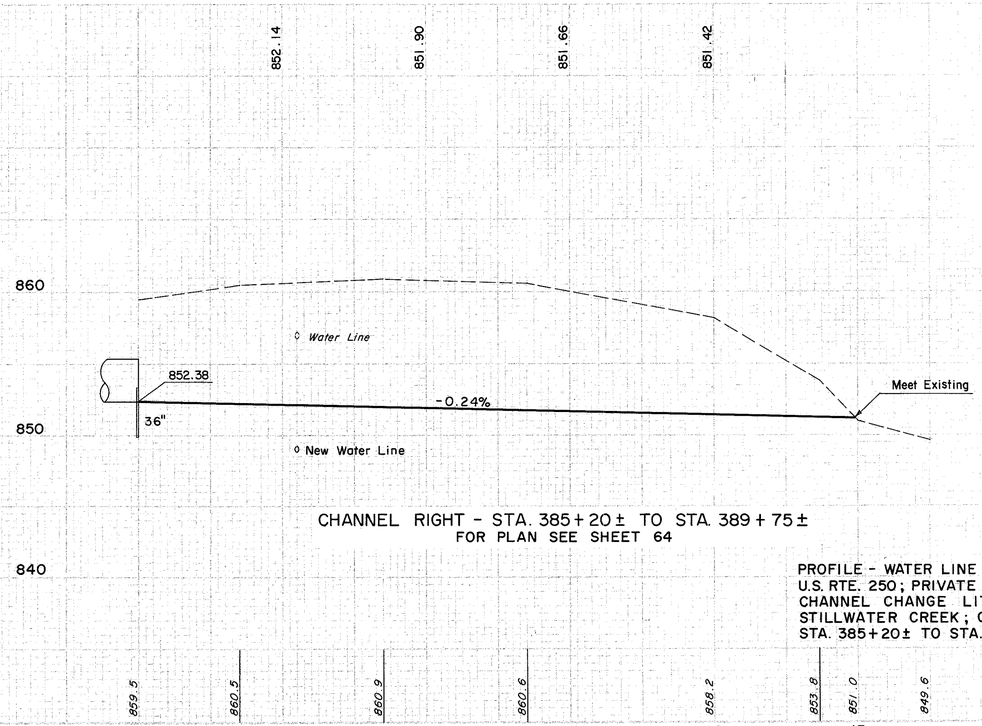
WATER MAIN RIVER CROSSING ~ BROWN'S BRIDGE AREA
FOR PLAN SEE SHEETS 310 AND 312



PRIVATE DRIVE 'B'
FOR PLAN SEE SHEET 289



CHANNEL CHANGE LITTLE STILLWATER CREEK
FOR PLAN SEE SHEET 402



CHANNEL RIGHT - STA. 385+20± TO STA. 389+75±
FOR PLAN SEE SHEET 64

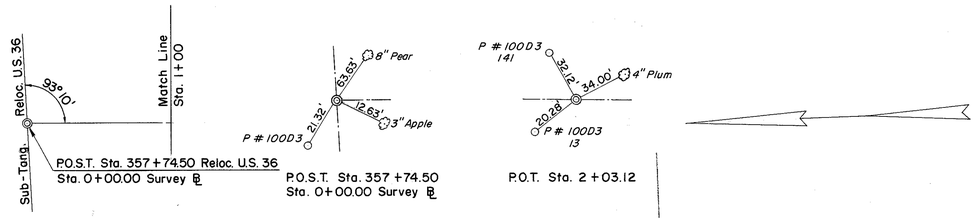
PROFILE - WATER LINE
U.S. RTE. 250; PRIVATE DRIVE 'B';
CHANNEL CHANGE LITTLE
STILLWATER CREEK; CHANNEL RT.
STA. 385+20± TO STA. 389+75±

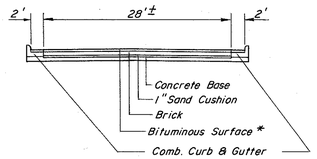
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

460
662

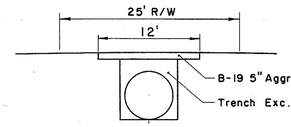
TUSCARAWAS COUNTY
TUS-36-15.93

NOTES: 1. Shading denotes pavement replacement.
2. Cross hatching denotes sidewalk replacement.

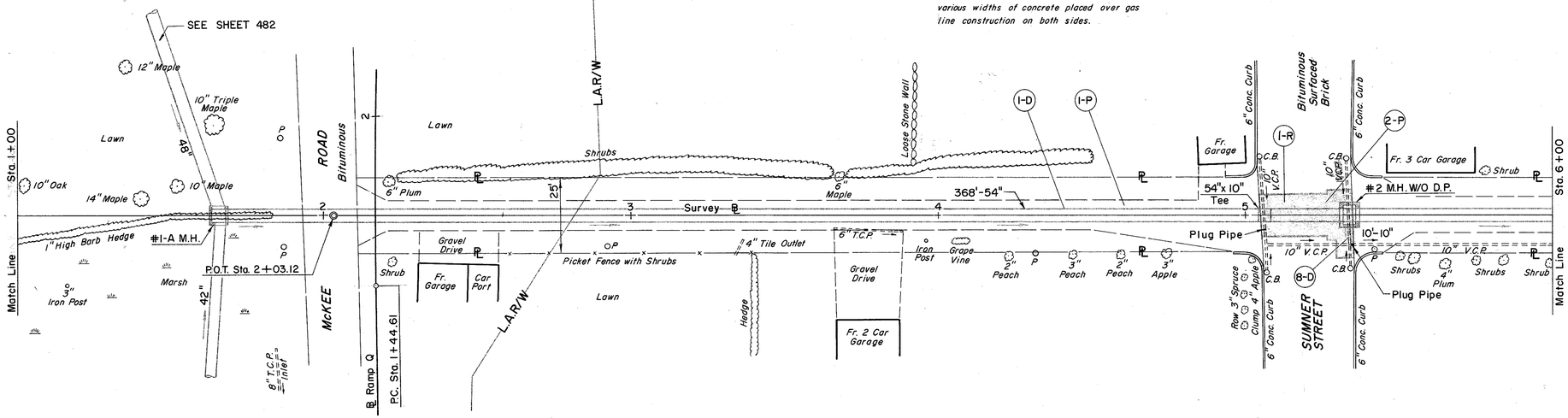


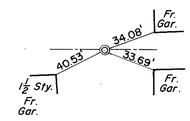


EXISTING TYPICAL SECTION OF SUMNER & FUHR STREETS
SECOND STREET — with the exception of the Bit. Surface, curbs are flanked by various widths of concrete placed over gas line construction on both sides.

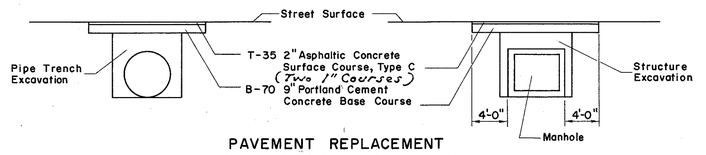


ALLEY PAVEMENT REPLACEMENT
FOR FURTHER DETAILS, SEE SHEET 11

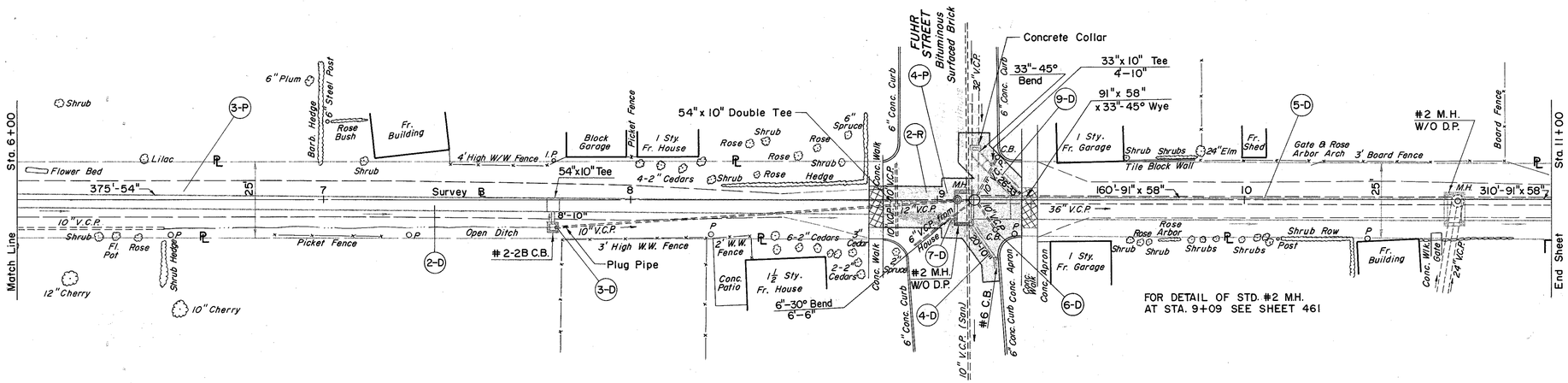




P.O.T. Sta. 9+06.55



PAVEMENT REPLACEMENT
SUMNER AND FUHR STREETS
FOR FURTHER DETAILS SEE SHEET 11



FOR DETAIL OF STD. #2 M.H. AT STA. 9+09 SEE SHEET 461

SECOND ST. AREA STORM DRAIN
STA. 1+00 TO STA. 11+00

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	I-5 CL. J-1 54" x 10" TEE SEC. SEC.M-6.6(a) 6.6(b)	I-5 CL. J-1 33"-45° BEND SEC. M-6.6(a)	I-5 CL. J-1 33" x 10" TEE SEC. M-6.6(a)	I-5 CL. J-1 33"-30° BEND SEC. M-6.8(b)	I-8 CL. G-1 91"x 58" x 33°-45° WYE SEC. M-67(a)	I-8 STD. #1-A M.H. W/O DROP PIPE	I-8 STD. #2-2B C.B.	I-8 STD. STD. #6 C.B.	I-16 C.B. ABAN-DONED	E-1 COMP. SUB-GRADE S.Y.	E-8 REMOVAL & DISPOSAL OF EXIST. PAV'T. SIDE-(RIGID) WALK S.F.	I-13 CONC. SIDE-WALKS 4" S.F.
1-R	5+05	8+78	℄										54	118	136
2-R	8+78	9+33	Rt.												
TOTAL													172	136	136

* as per plan

(D) DRAINAGE

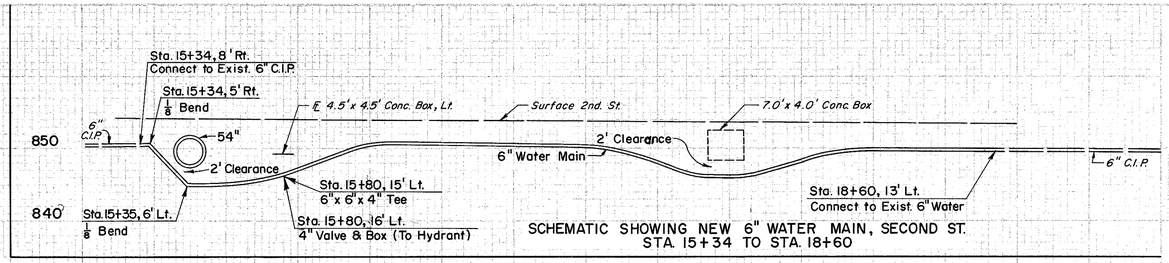
REF. NO.	STATION FROM	STATION TO	SIDE	I-1 PIPE CLASS J-1 SEC. M-6.8(b) 10"	I-1 PIPE CLASS J-1 SEC. M-6.8(b) 33"	I-1 PIPE CLASS J-1 SEC. M-66 (a) 54" L.F.	I-1 PIPE CLASS J-1 SEC. M-66 (b) 54"	I-1 CL. G-1 SEC. M-67(a) 91"x 58"	B-19 AGGR. BASE COURSE C.Y.	B-70 PORT. CEM. CONC. BASE COURSE S.Y.	T-35 ASPH. CONC. SURF. COURSE TYPE C C.Y.
1-D	1+66	5+34	℄			368					
2-D	5+34	9+09	℄			375					
3-D	7+75	9+09	Rt.					8			
4-D	9+09	10+69	℄					20			
5-D	9+09	9+19	Rt.							160	
6-D	9+19	—	Rt.								1
7-D	9+03	9+09	Rt.						6		
8-D	5+34	—	Rt.						10	4	26
9-D	9+12	9+30	Lt.						4	26	
TOTAL						743		28	20	186	27

(P) PAVEMENT

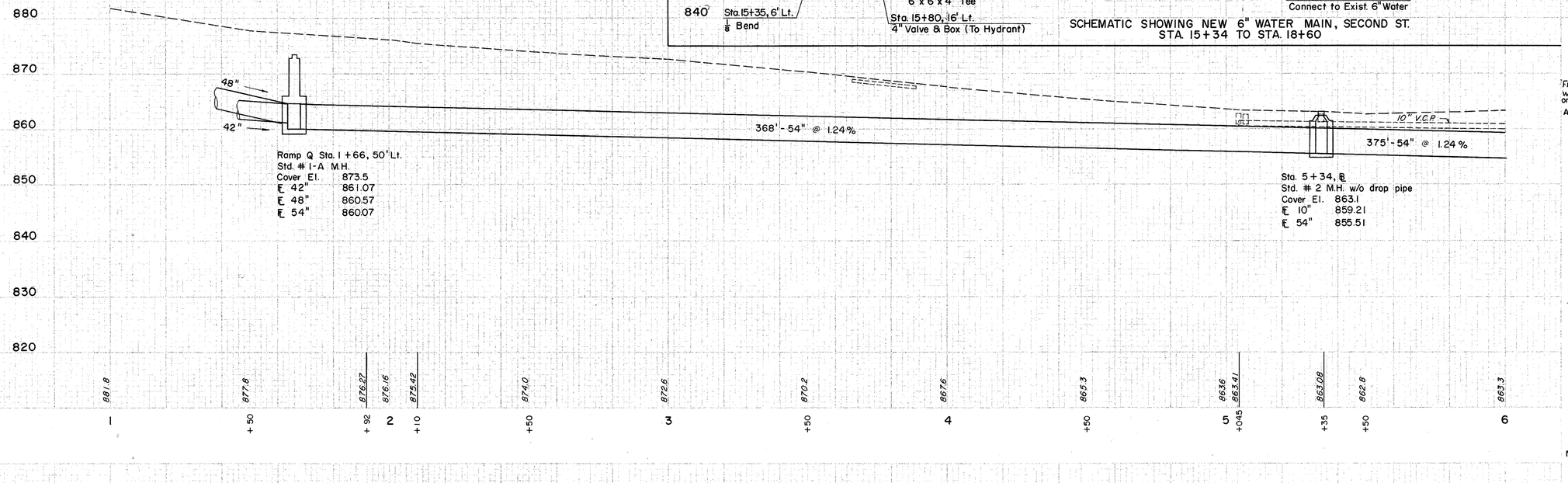
REF. NO.	STATION FROM	STATION TO	SIDE	I-1 PIPE CLASS J-1 SEC. M-6.8(b) 10"	I-1 PIPE CLASS J-1 SEC. M-6.8(b) 33"	I-1 PIPE CLASS J-1 SEC. M-66 (a) 54" L.F.	I-1 PIPE CLASS J-1 SEC. M-66 (b) 54"	I-1 CL. G-1 SEC. M-67(a) 91"x 58"	B-19 AGGR. BASE COURSE C.Y.	B-70 PORT. CEM. CONC. BASE COURSE S.Y.	T-35 ASPH. CONC. SURF. COURSE TYPE C C.Y.
1-P	2+88	5+05	℄			368					
2-P	5+05	5+35	℄			375					
3-P	5+35	8+78	Rt.					8			
4-P	8+78	9+33	Rt.					20			
5-D	9+09	9+19	Rt.							160	
6-D	9+19	—	Rt.								1
7-D	9+03	9+09	Rt.						6		
8-D	5+34	—	Rt.						10	4	26
9-D	9+12	9+30	Lt.						4	26	
TOTAL						743		28	20	186	27

REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE C.Y.	B-70 PORT. CEM. CONC. BASE COURSE S.Y.	T-35 ASPH. CONC. SURF. COURSE TYPE C C.Y.
1-P	2+88	5+05	℄	40		
2-P	5+05	5+35	℄		54	3
3-P	5+35	8+78	Rt.	64		
4-P	8+78	9+33	Rt.		118	7
TOTAL				104	172	10

TUSCARAWAS COUNTY
TUS - 36 - 15.93

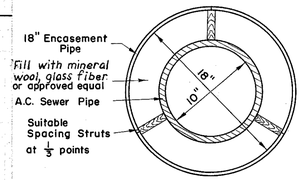


SCHEMATIC SHOWING NEW 6" WATER MAIN, SECOND ST.
STA. 15+34 TO STA. 18+60

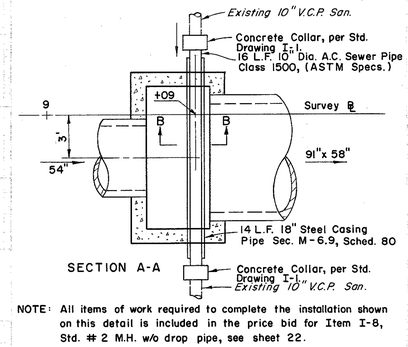


Ramp Q Sta. 1+66, 50' Lt.
Std. # 1-A M.H.
Cover El. 873.5
℄ 42" 861.07
℄ 48" 860.57
℄ 54" 860.07

Sta. 5+34, ℄
Std. # 2 M.H. w/o drop pipe
Cover El. 863.1
℄ 10" 859.21
℄ 54" 855.51

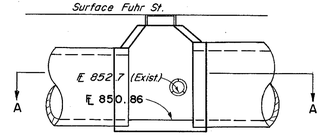


SECTION B-B

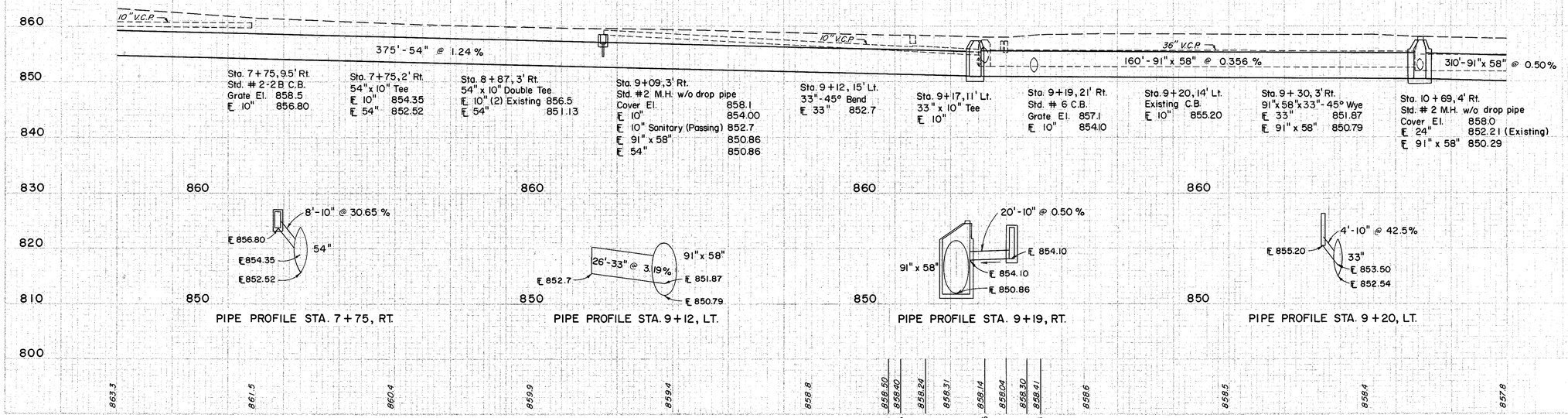


SECTION A-A

NOTE: All items of work required to complete the installation shown on this detail is included in the price bid for Item I-8, Std. # 2 M.H. w/o drop pipe, see sheet 22.



DETAIL # 2 M.H.
STA. 9+09 SURVEY ℄
SEE SHEET 460



PIPE PROFILE STA. 7+75, RT.

PIPE PROFILE STA. 9+12, LT.

PIPE PROFILE STA. 9+19, RT.

PIPE PROFILE STA. 9+20, LT.

SECOND ST. AREA STORM DRAIN
STA. 1+00 TO STA. 11+00

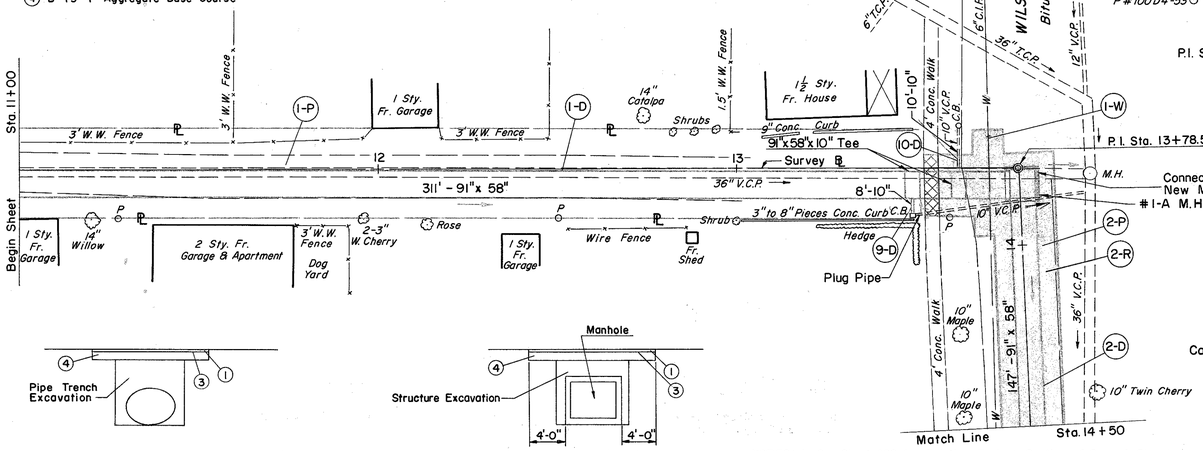
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

462
662

TUSCARAWAS COUNTY
TUS-36-15.93

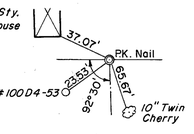
PAVEMENT LEGEND

1. T-35 2" Asphaltic Concrete Surface Course Type C (70-85) placed in 2, 1" layers
2. T-35 1" Asphaltic Concrete Surface Course Type C (70-85)
3. T-30 Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3 applied at a rate of 0.4 Gal. per S.Y.
4. B-19 7" Aggregate Base Course
5. B-35 1¼" Asphaltic Concrete Leveling Course (70-85)
6. B-70 9" Portland Cement Concrete Base Course
7. I-12 Concrete Curb, Type 6 or R5-1
8. T-30 Bituminous Tack Coat, Sec. M-5.5, MS-2 or HFMS-2; or Sec. M-5.2, RC-1 or RC-2 applied at a rate of 0.1 Gal. per S.Y.

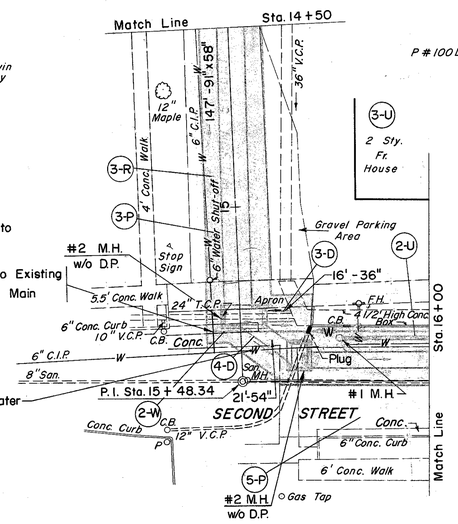


PAVEMENT REPLACEMENT
WILSON ST.
STA. 13+52 TO STA. 15+48
FOR FURTHER DETAILS SEE SHEET 11

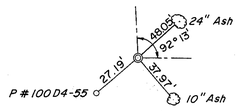
PAVEMENT REPLACEMENT
WILSON & HIGH STS.
FOR FURTHER DETAILS SEE SHEET 11



P.I. Sta. 13+78.55



FOR PROFILE & DETAILS OF NEW 6" WATER MAIN SEE SHEET 463



P.I. Sta. 15+48.34

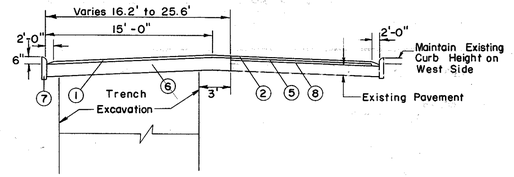
(D) DRAINAGE

REF. NO.	STATION FROM	STATION TO	SIDE	I-1 PIPE CLASS J-1 SEC. M-6.6(a) 10"	12"	36"	54"	91"x58" PIPE CL. G-1 SEC. M-6.7(a)	I-5 CL. G-1 91"x58"x10" TEE SEC. M-6.7(a)	I-8 STD. #1-A M.H.	STD. #2 M.H. w/o DROP PIPE	S-22 REMOVAL OF PORTIONS OF EXISTING STRUCT.
				L.F.					EA.			C.Y.
1-D	10+69	13+83.5	Rt.					311	2	1		
2-D	13+83.5	15+30	-					147			1	
3-D	15+30	-	Lt.			16						0.31
4-D	15+30	15+64	Lt.				21				1	
5-D	15+64	17+91	Lt.				227			1		6.13
6-D	17+91	20+43	Lt.				252			1		
7-D	20+36	20+43	Lt.		13							
8-D	20+43	20+53	Lt.&Rt.				35			1		
9-D	13+49		Rt.	8								
10-D	13+62		Lt.	10								
	TOTAL			18	13	16	535	458	2	4	2	6.44

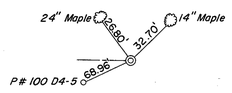
(W) WATER

REF. NO.	STATION FROM	STATION TO	SIDE	I-124 NEW WATER MAIN 6" A.C.	NEW SERVICE BRANCH TYPE A	6" BEND ⅛	6"x6"x4" TEE	4" VALVE & BOX	6" TAPPING SLEEVE, VALVE & BOX
				L.F.		EA.			
1-W	13+70	-	Lt.&Rt.	26		4			
2-W	15+34	18+60	Lt.&Rt.	320	80	2	1	1	1
	TOTAL			346	80	6	1	1	1

NOTES:
1. See Sheet 460 for Existing Typical Section of Second Street.
2. Gas lines are presently located along the roadside face of each curb.
3. Shading denotes pavement replacement.
4. Cross hatching denotes sidewalk replacement.
5. Item (2-W) considers adjustment for residence taps left & right.
6. Existing sanitary sewer remains in place to serve residences on the west side of Second Street.
7. Sta. 20+22, 3' Rt., construct new manhole at this location to grades given in order to clear the new storm sewer.



PAVEMENT OVERLAY & REPLACEMENT
ON SECOND ST.
STA. 15+34 TO STA. 20+63



Sta. 21+00

(P) PAVEMENT

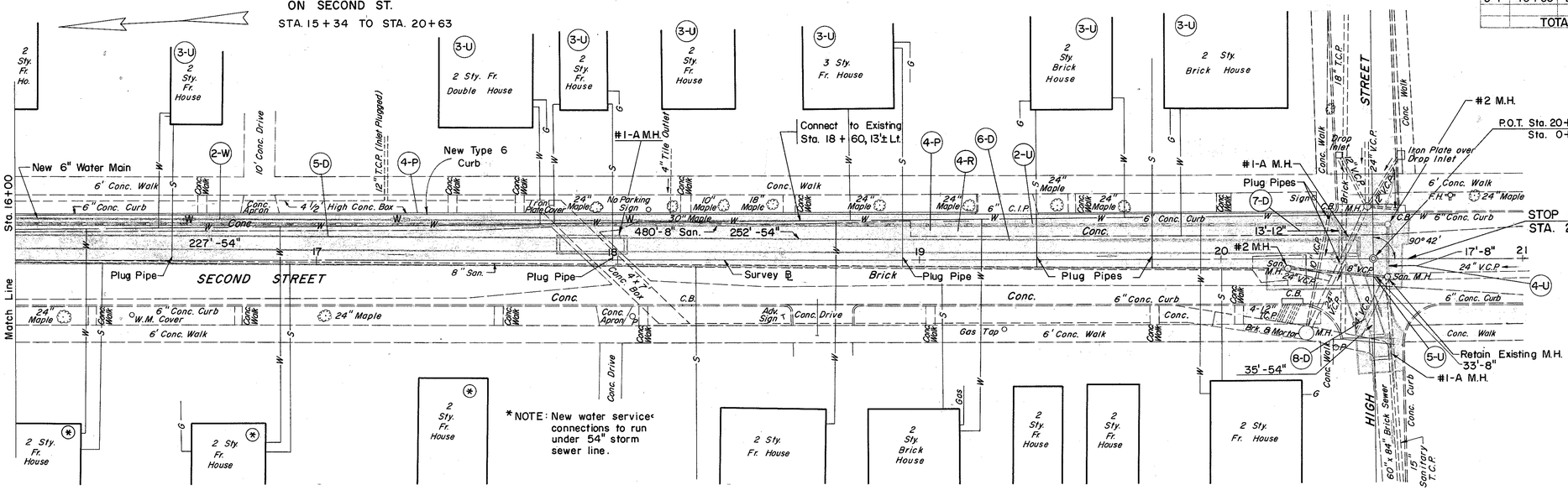
REF. NO.	STATION FROM	STATION TO	SIDE	B-19 AGGR. BASE COURSE	B-35 ASPH. CONC. LEVEL. COURSE	B-70 PORT. CEM. CONC. BASE COURSE 9"	I-12 CONC. CURB TYPE 6	T-30 BIT. PRIME COAT	T-35 ASPH. CONC. SURF. COURSE TYPE C	T-30 BIT. TACK COAT
				C.Y.		S.Y.	L.F.	GAL.	C.Y.	GAL.
1-P	9+33	13+52	-	77						
2-P	13+52	14+50	-	36				72	11	
3-P	14+50	15+20	-	26				54	8	
4-P	15+20	20+60	-			1065	468		60	
5-P	15+58	20+45	-		21				20	62
	TOTAL			139	21	1,065	468	126	99	62

(R) ROADWAY

REF. NO.	STATION FROM	STATION TO	SIDE	E-1 COMP. SUB-GRADE	E-8 REMOVAL & DISPOSAL OF EXISTING CURB	E-8 PAV'T. (RIGID)	E-8 SIDE-WALK	I-13 CONC. SIDE-WALKS 4"
				S.Y.	L.F.	S.Y.	S.F.	S.F.
2-R	13+52	14+50	-	185			69	69
3-R	14+50	15+20	-	135				
4-R	15+20	20+60	-	1065	468	1065		
	TOTAL			1,385	468	1,065	69	69

(U) UTILITIES

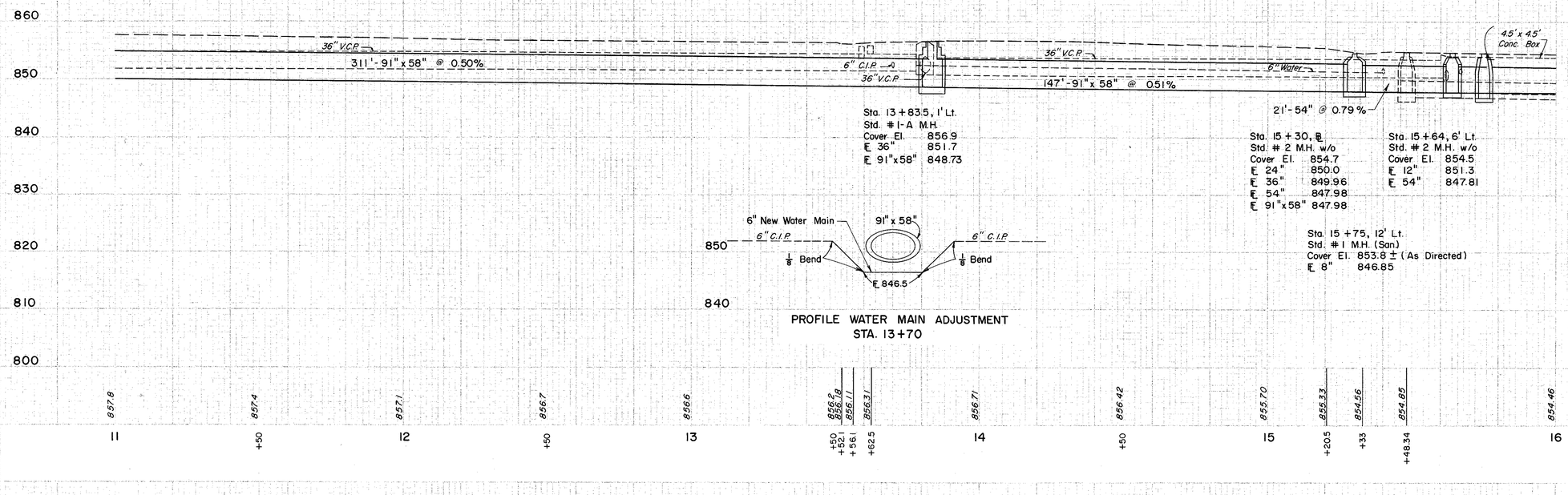
REF. NO.	STATION FROM	STATION TO	SIDE	I-1 PIPE CLASS J-1 SEC. M-6.8 (b) 6"	8"	I-5 CLASS J-1 SEC. M-6.8(b) 6" 45° BEND	8" 45° WYE	I-8 STD. #1 M.H.	STD. #2 M.H.
				L.F.		EA.			
2-U	15+75	20+55	Lt.		480		8	1	1
3-U	15+75	19+77	Lt.	80		8			
4-U	20+55	-	Lt.&Rt.		17				
5-U	20+22	20+55	Rt.		33				1
	TOTAL			80	530	8	8	1	2



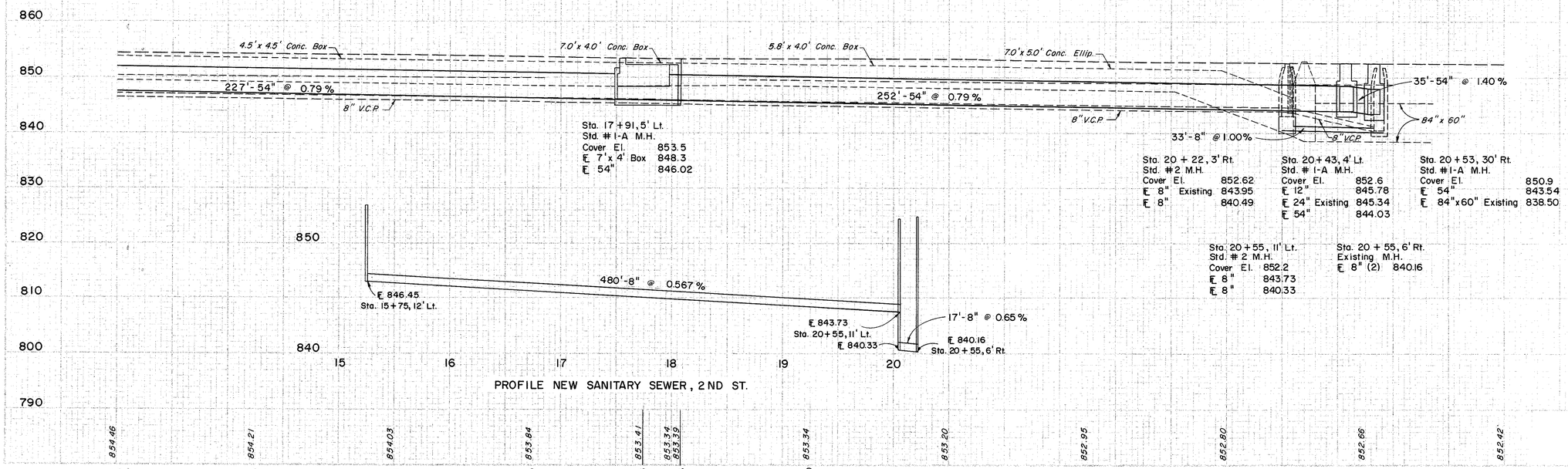
SECOND ST. AREA STORM DRAIN
STA. 11+00 TO STA. 21+00

SHEET NO.	STATE	PROJECT	
2	OHIO		463 662

TUSCARAWAS COUNTY
TUS - 36 - 15.93



PROFILE WATER MAIN ADJUSTMENT
STA. 13+70



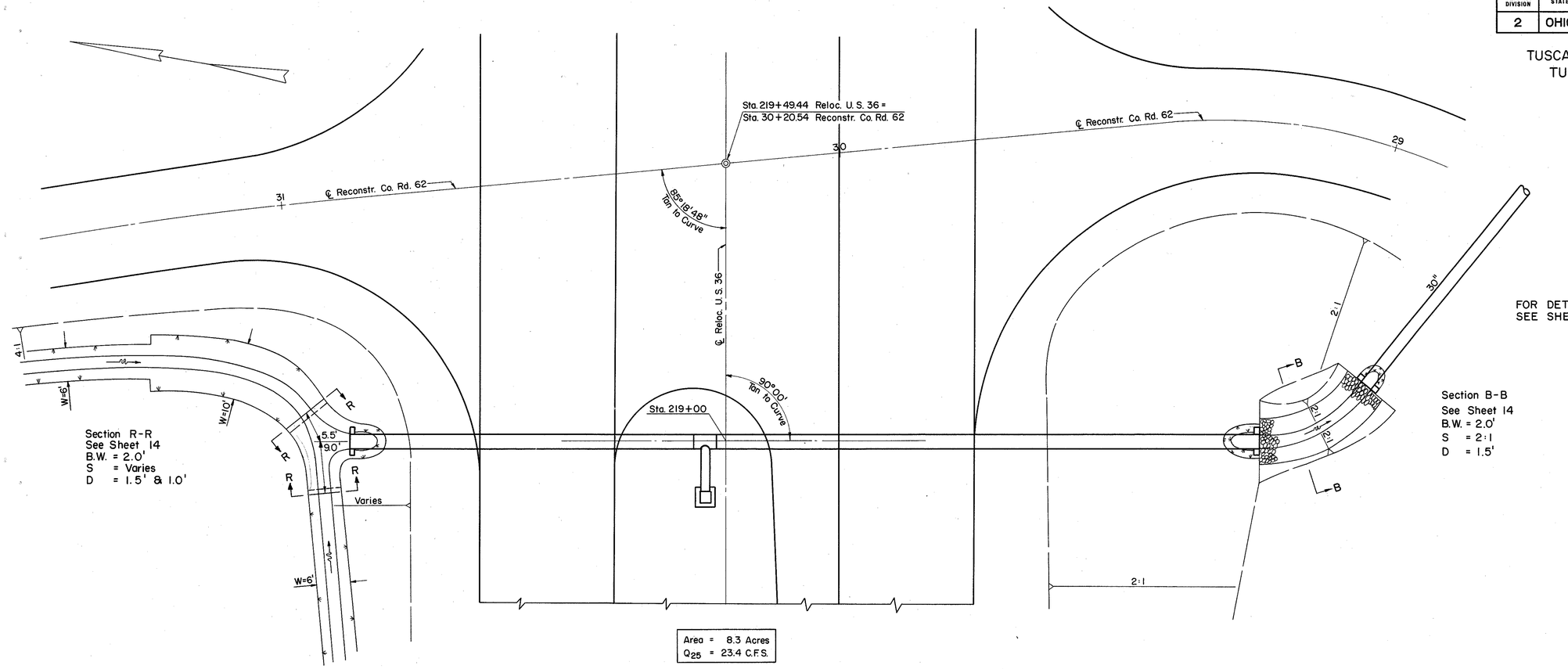
PROFILE NEW SANITARY SEWER, 2ND ST.

SECOND ST. AREA STORM DRAIN
STA. 11+00 TO STA. 21+00

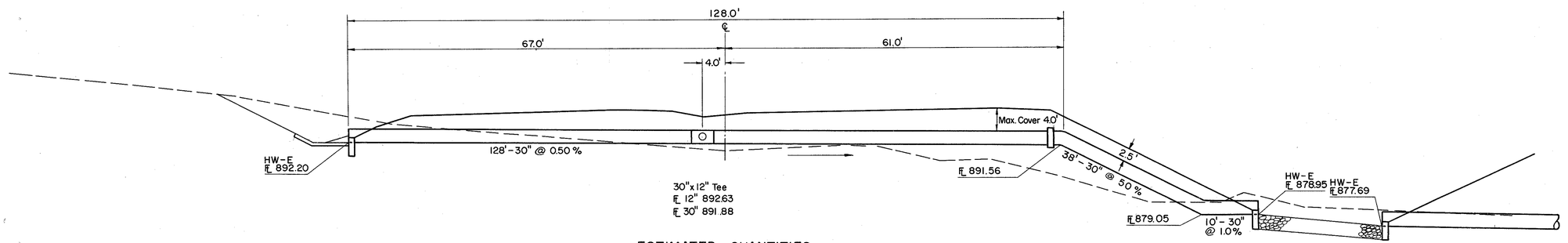
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

464
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93



FOR DETAILS
SEE SHEET 468



ESTIMATED QUANTITIES

I-1	30" Class A-1 Pipe, Sec. M-6.6 (a) or M-6.8(b)	128 L.F.
I-1	30" Class A-4 Pipe, Sec. M-6.4 (d)	38 L.F.
I-2	Masonry	1.02 C.Y.
I-5	30" Class A-4 Pipe Special Sec. M-6.4(d), 25° Bend	2 Ea.
I-5	30"x12" Class A-1 Pipe Special Sec. M-6.6(a) or M-6.8(b), Tee	1 Ea.
I-10	Dumped Rock Channel Protection	16 C.Y.
L-10	Sodding	4 S.Y.
I-10	Riprap, 6" Reinforced	16 S.Y.

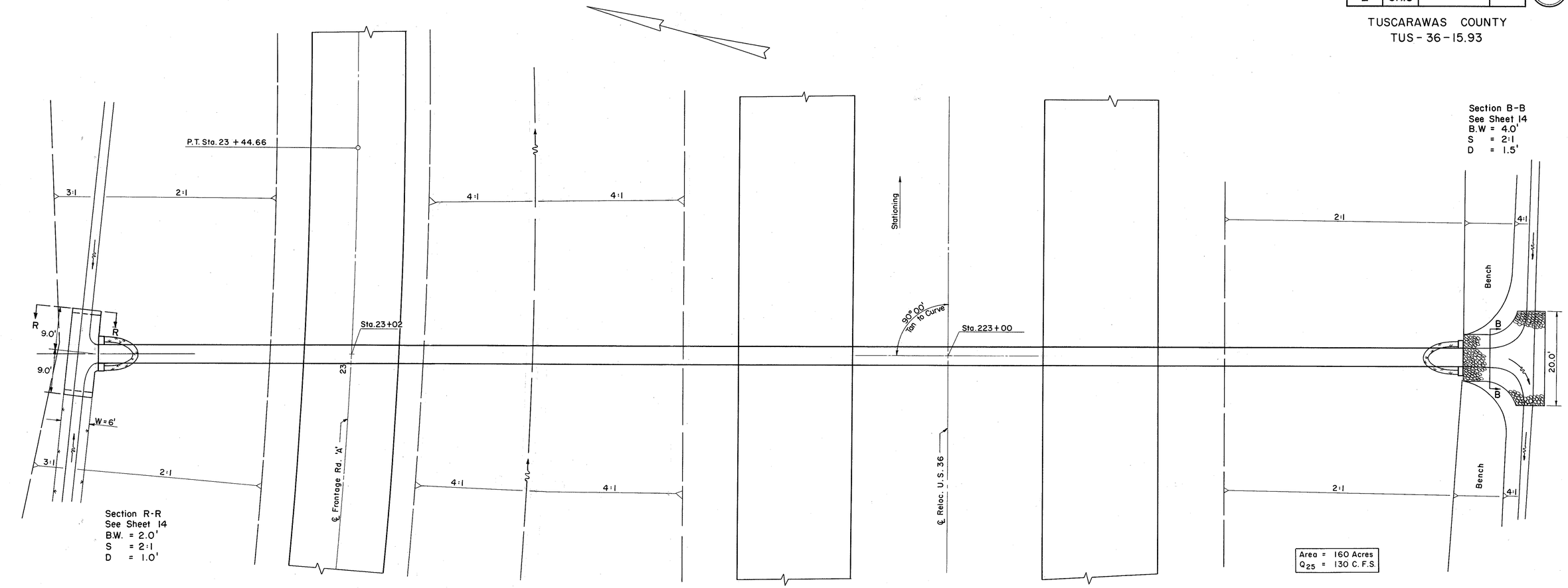
5 0 10 20 30
SCALE IN FEET

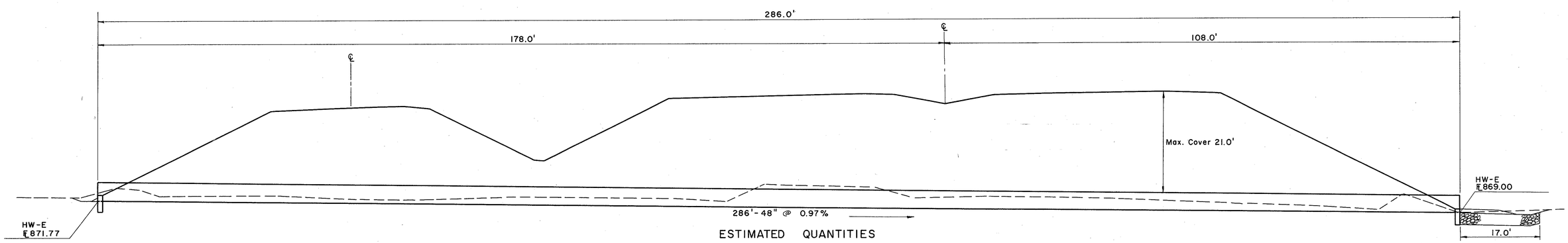
STRUCTURE NO. TUS-36-1629
PIPE CULVERT STA. 219+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

465
662

TUSCARAWAS COUNTY
TUS-36-15.93





ESTIMATED QUANTITIES

I-1	48" Class A-1 Pipe, Sec. M-6.6 (d)	286 L.F.
I-2	Masonry	1.72 C.Y.
I-10	Dumped Rock Channel Protection	18 C.Y.
L-10	Sodding	7 S.Y.
I-10	Riprap, 6" Reinforced	14 S.Y.

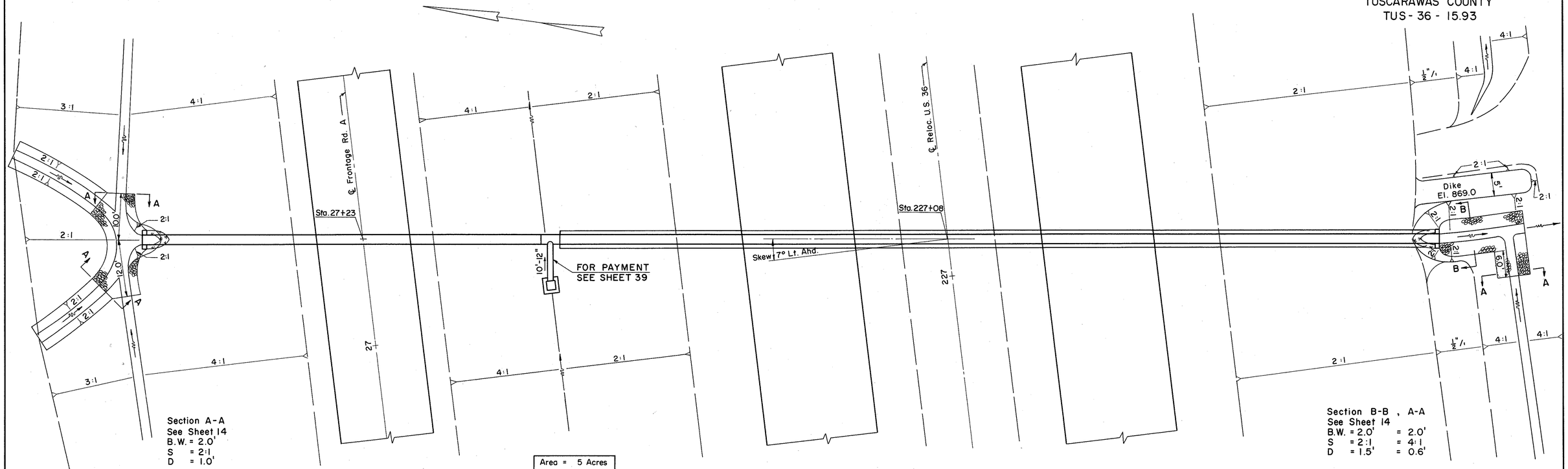
5 0 10 20 30
SCALE IN FEET

STRUCTURE NO. TUS-36-1637
PIPE CULVERT STA. 223 + 00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

466
662

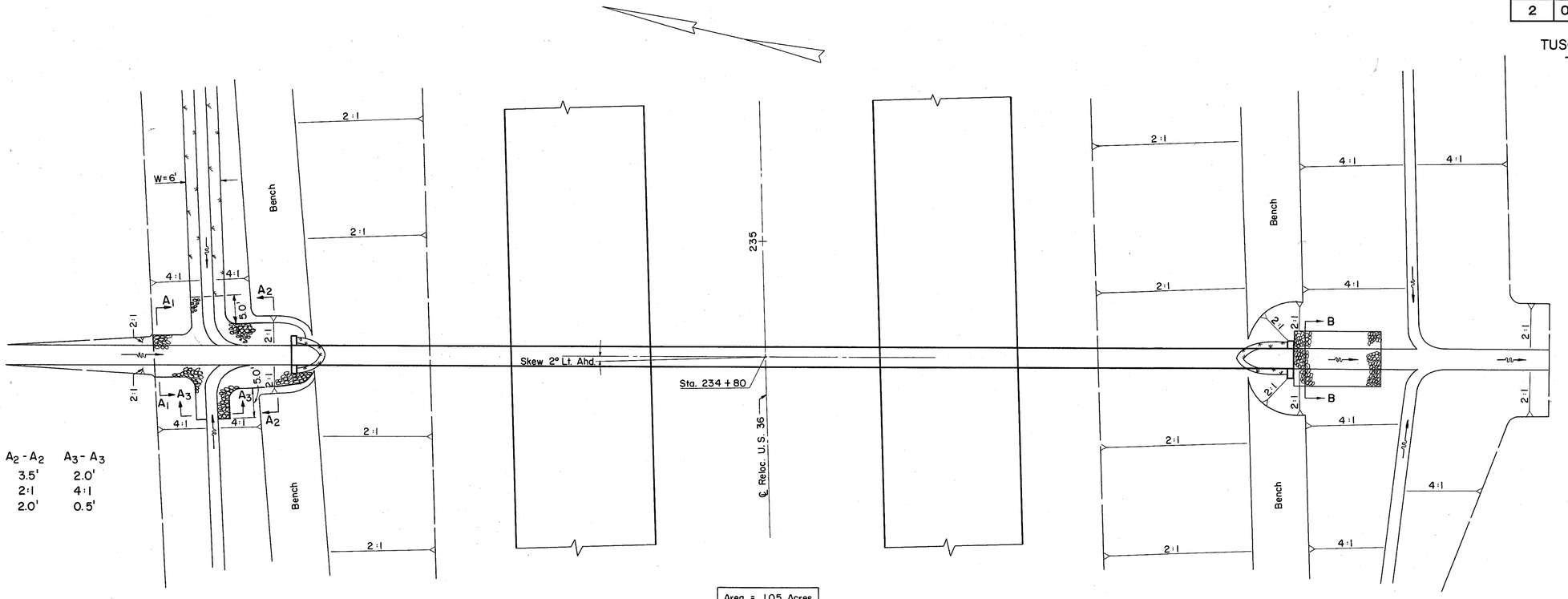
TUSCARAWAS COUNTY
TUS - 36 - 15.93


3:1
4:1
2:1
2:1
2

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

467
662

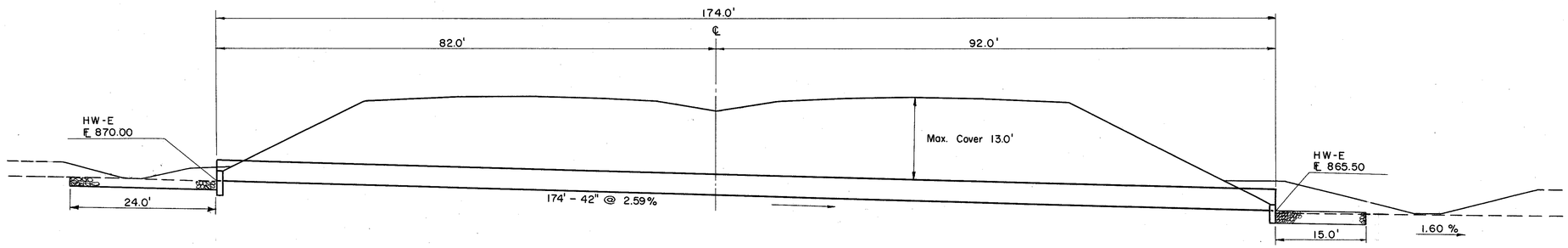
TUSCARAWAS COUNTY
TUS - 36 - 15.93



See Sheet 14

Section	A_1-A_1	A_2-A_2	A_3-A_3
B.W. =	3.5'	3.5'	2.0'
S =	2:1	2:1	4:1
D =	1.0'	2.0'	0.5'

Area = 105 Acres
Q_{25} = 80 C.F.S.



ESTIMATED QUANTITIES

I-1	42" Class A-1 Pipe, $\frac{1}{3}$ Vitrified Lined Sec. M-6.6 (b)	174 L.F.
I-2	Masonry	1.52 C.Y.
I-10	Dumped Rock Channel Protection	30 C.Y.
L-10	Sodding	10 S.Y.

5 0 10 20 30
SCALE IN FEET

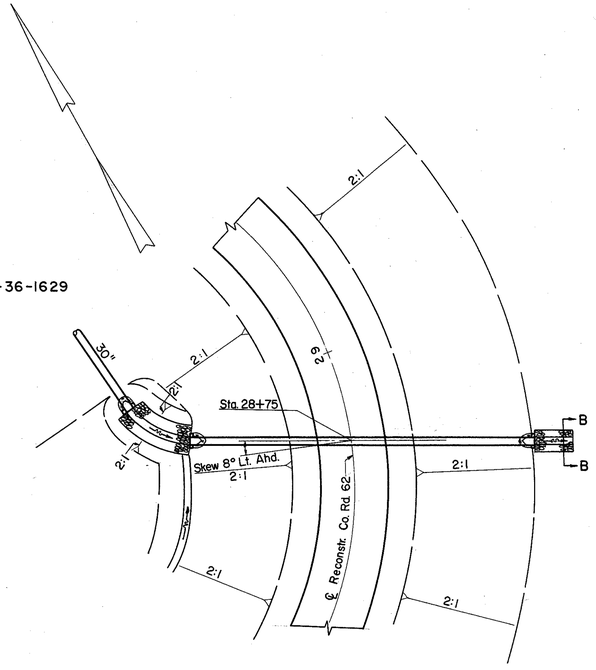
STRUCTURE NO. TUS-36-1659
PIPE CULVERT STA. 234+80

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

468
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

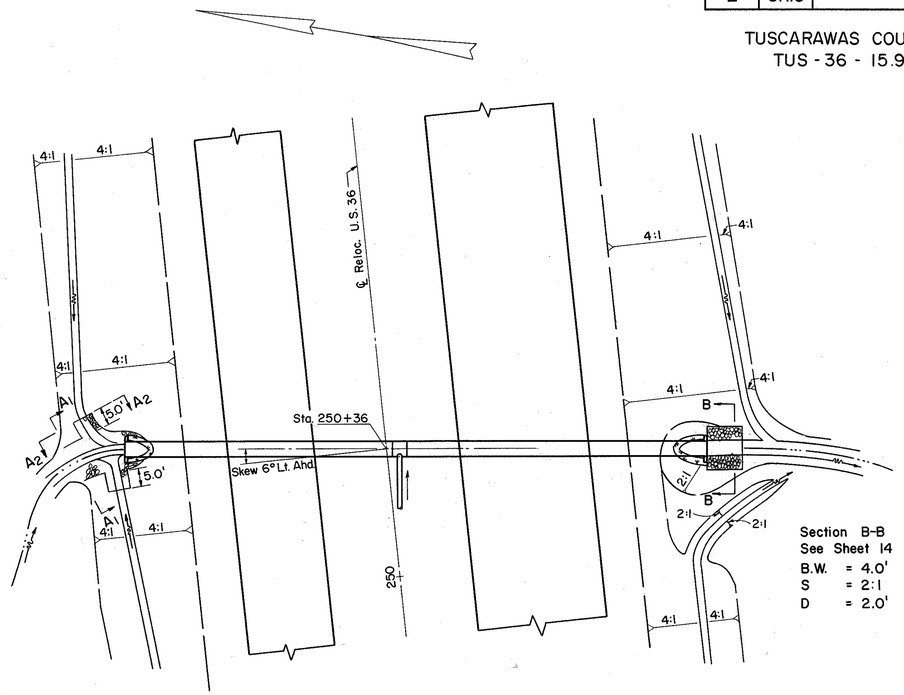
FOR DETAILS
STRUCTURE NO. TUS-36-1629
SEE SHEET 464



Section B-B
See Sheet 14
B.W. = 2.0'
S = 2:1
D = 1.0'

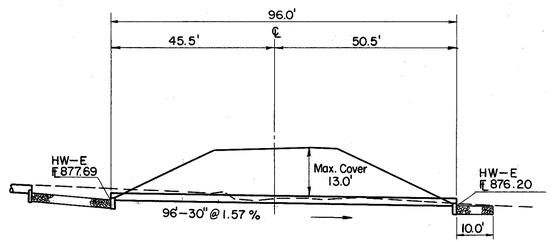
Area = 12.3 Acres
Q_{10} = 26.0 C.F.S.

See Sheet 14
Section A_1-A_1 A_2-A_2
B.W. = 3.0' 2.0'
S = 4:1 4:1
D = 1.0' 0.5'



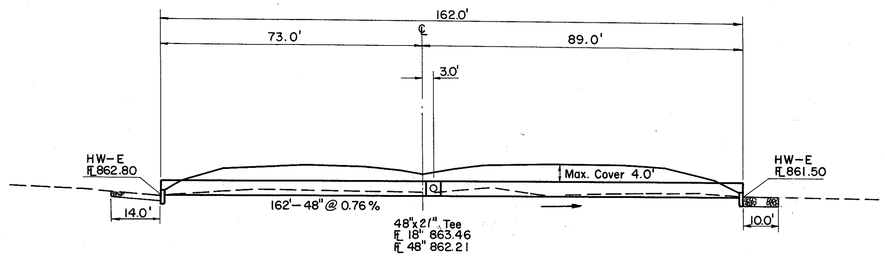
Section B-B
See Sheet 14
B.W. = 4.0'
S = 2:1
D = 2.0'

Area = 100 Acres
Q_{25} = 125 C.F.S.



ESTIMATED QUANTITIES

I-1	30" Class A-1 Pipe, Sec. M-6.6 (b) or M-6.8 (b)	96 L.F.
I-2	Masonry	1.02 C.Y.
I-10	Dumped Rock Channel Protection	6 C.Y.
L-10	Sodding	3 S.Y.



ESTIMATED QUANTITIES

I-1	48" Class A-1 Pipe, $\frac{1}{3}$ Vitrified Lined, Sec. M-6.6 (a)	162 L.F.
I-2	Masonry	1.72 C.Y.
★ I-5	48"x21" Class A-1 Pipe Special, $\frac{1}{3}$ Vitrified Lined, Sec. M-6.6 (a), Tee	1 Ea.
I-10	Dumped Rock Channel Protection	22 C.Y.
L-10	Sodding	7 S.Y.

★ *The 21" branch will not be lined with Vitrified Plates*

10 0 20 40 60
SCALE IN FEET

STRUCTURE
PIPE CULVERT
CO. RD. 62 STA. 28 + 75

10 0 20 40 60
SCALE IN FEET

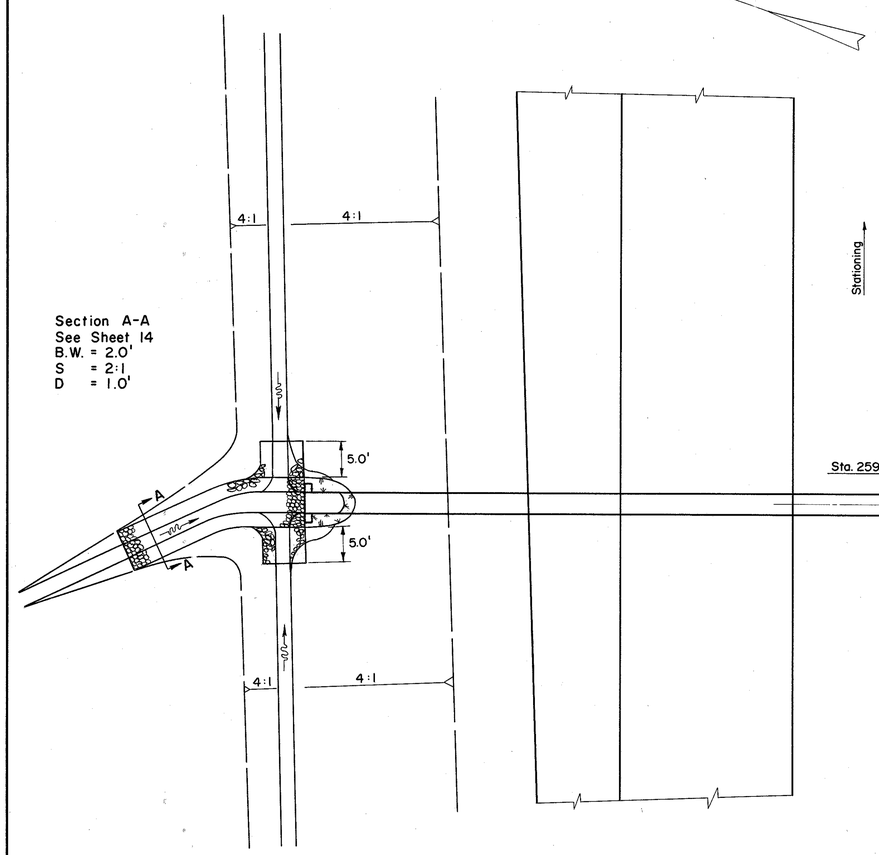
STRUCTURE NO. TUS-36-1688
PIPE CULVERT STA 250 + 36,
& CO. RD. 62 STA. 28 + 75

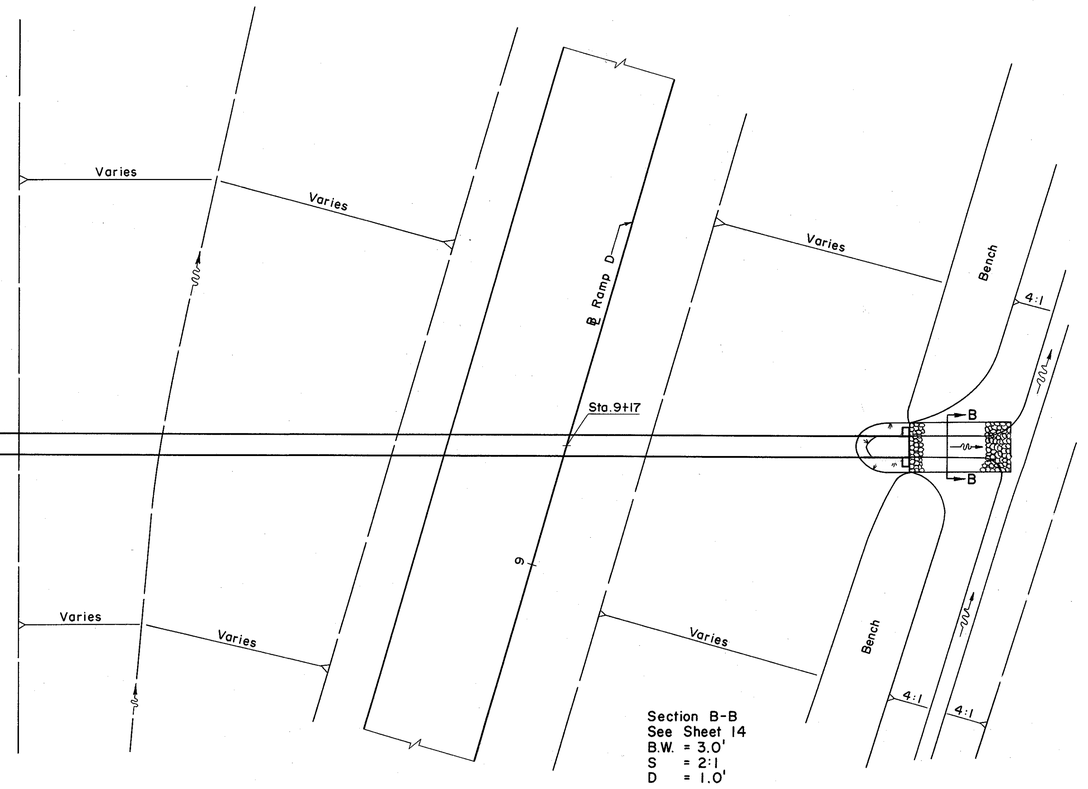
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

469
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

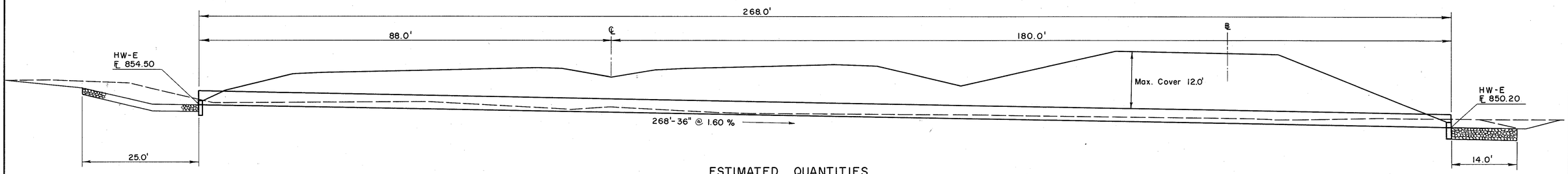
Section A-A
See Sheet 14
B.W. = 2.0'
S = 2:1
D = 1.0'





Section B-B
See Sheet 14
B.W. = 3.0'
S = 2:1
D = 1.0'

Area = 29 Acres
Q_{25} = 45 C.F.S.



ESTIMATED QUANTITIES

I- 1	36" Class A-1 Pipe,	Sec. M-6.8(b)	268 L.F.
I- 2	Masonry		1.18 C.Y.
I-10	Dumped Rock Channel Protection		22 C.Y.
L-10	Sodding		4 S.Y.

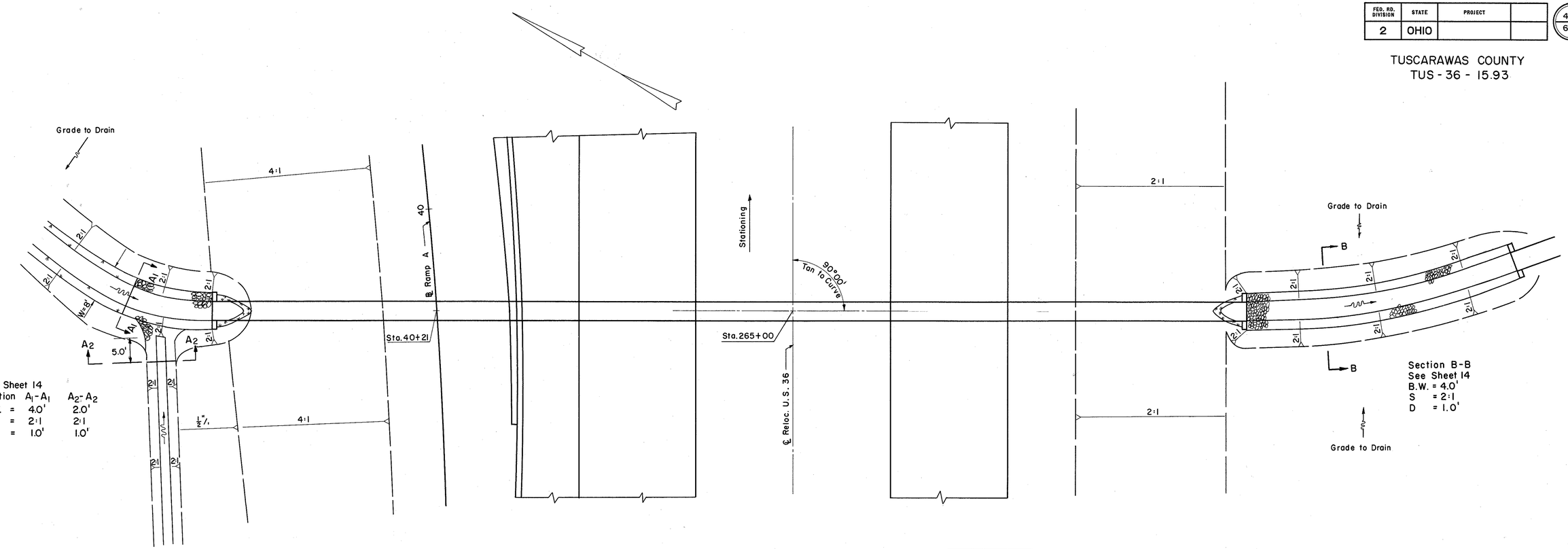
5 0 10 20 30
SCALE IN FEET

STRUCTURE NO. TUS-36-1705
PIPE CULVERT STA. 259+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

470
662

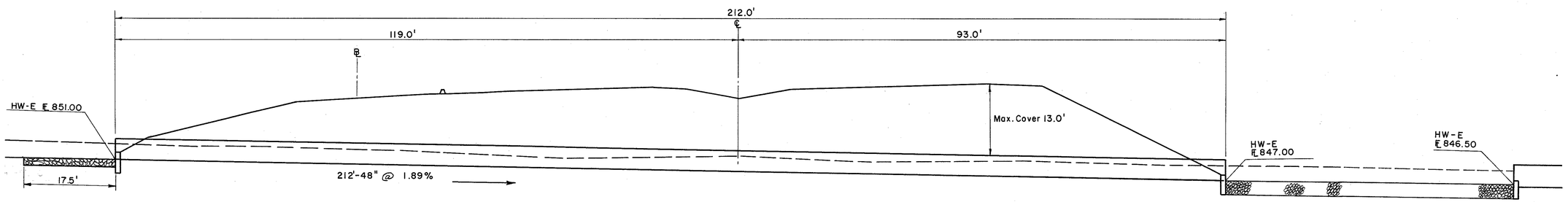
TUSCARAWAS COUNTY
TUS - 36 - 15.93



See Sheet 14

Section	A_1-A_1	A_2-A_2
B.W. =	4.0'	2.0'
S =	2:1	2:1
D =	1.0'	1.0'

Area = 135 Acres
Q_{25} = 118 C.F.S.



ESTIMATED QUANTITIES

I-1	48" Class A-1 Pipe, $\frac{1}{8}$ Vitrified Lined Sec. M-6.6(b)	212 L.F.
I-2	Masonry	1.72 C.Y.
I-10	Dumped Rock Channel Protection	52 C.Y.
L-10	Sodding	7 S.Y.

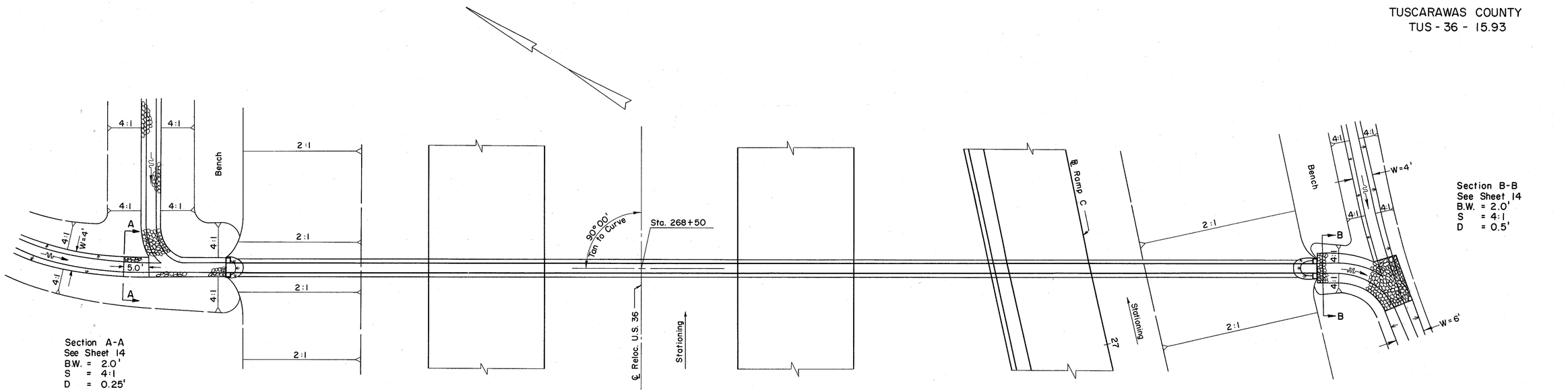
5 0 10 20 30
SCALE IN FEET

STRUCTURE NO. TUS-36-1716
PIPE CULVERT STA. 265 + 00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

471
662

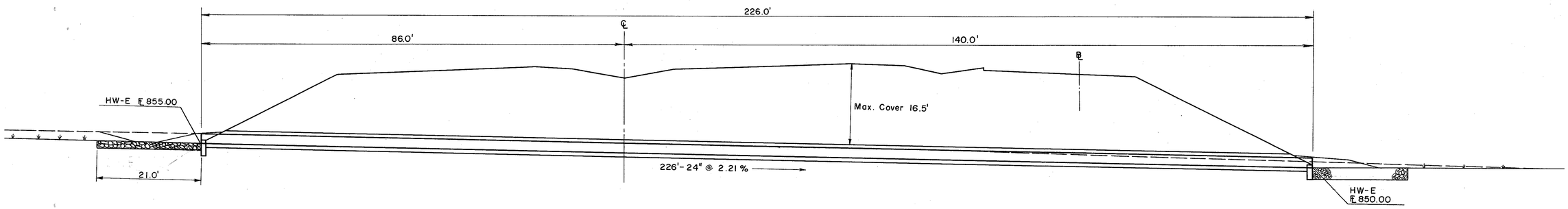
TUSCARAWAS COUNTY
TUS - 36 - 15.93



Section A-A
See Sheet 14
B.W. = 2.0'
S = 4:1
D = 0.25'

Section B-B
See Sheet 14
B.W. = 2.0'
S = 4:1
D = 0.5'

Area = 7.1 Acres
Q_{25} = 15.0 C.F.S.



ESTIMATED QUANTITIES

I-1	24" Class A-1 Pipe, Sec. M-6.8(a), 5" Conc. Encased	226 L.F.
I-2	Masonry	0.82 C.Y.
I-10	Dumped Rock Channel Protection	20 C.Y.
L-10	Sodding	4 S.Y.

5 0 10 20 30
SCALE IN FEET

STRUCTURE NO. TUS-36-1723
PIPE CULVERT STA. 268+50

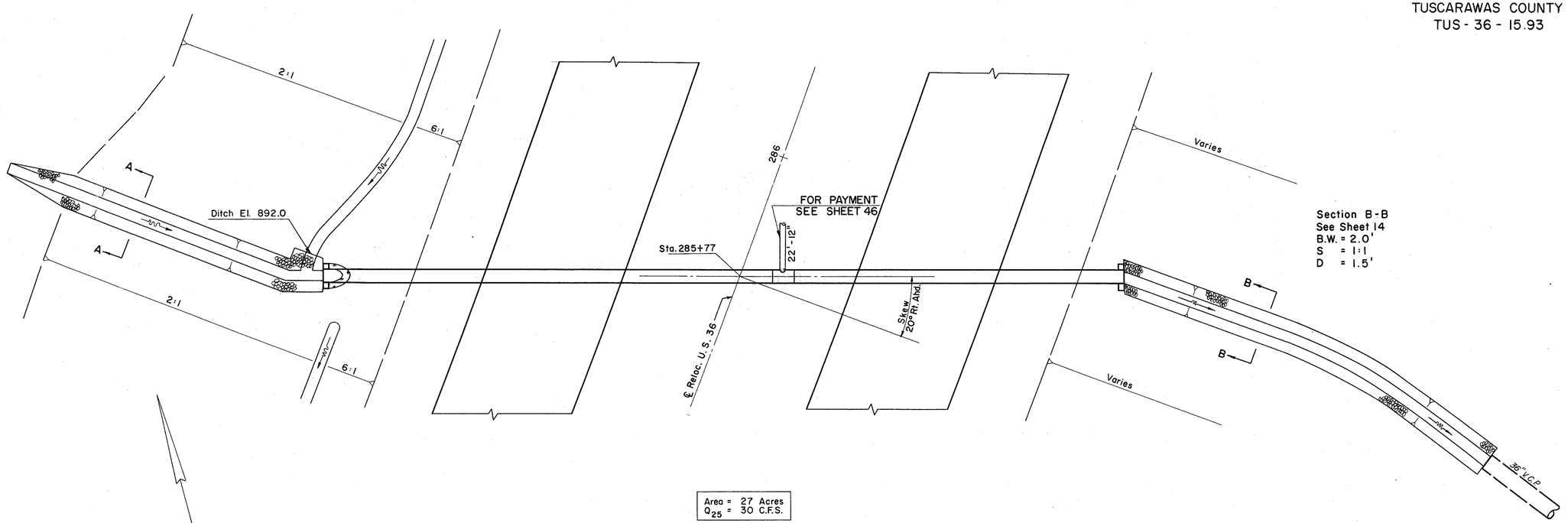
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

472
662

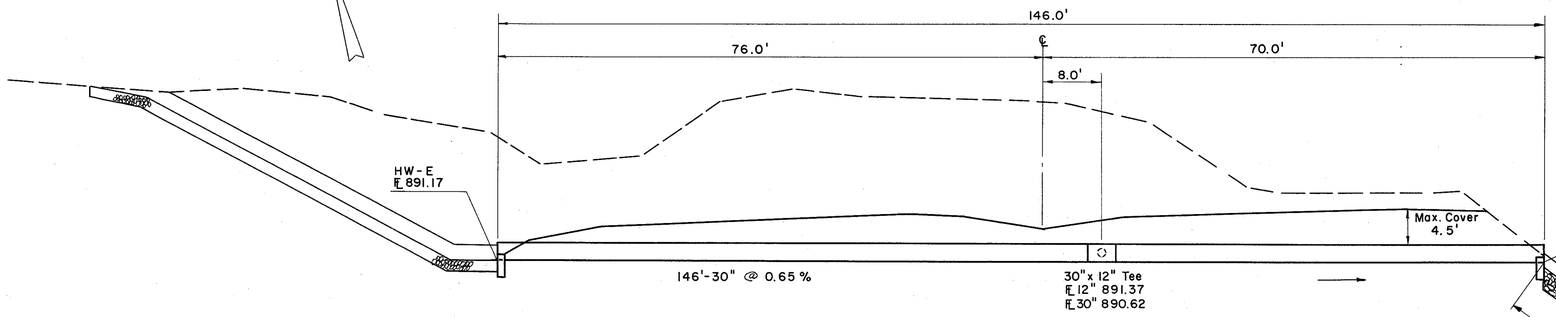
TUSCARAWAS COUNTY
TUS - 36 - 15.93

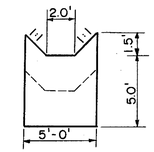
Section A - A
See Sheet 14
B.W. = 2.0'
S = 1:1
D = 2.0'

Section B - B
See Sheet 14
B.W. = 2.0'
S = 1:1
D = 1.5'

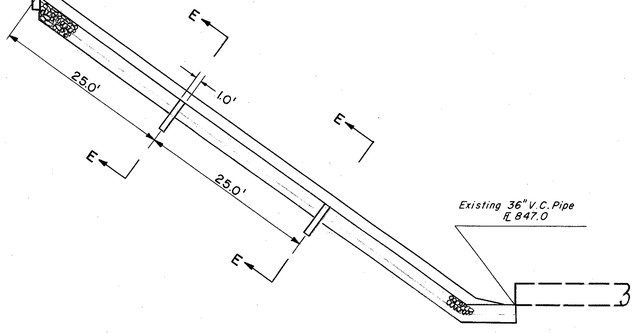


Area = 27 Acres
Q_{25} = 30 C.F.S.





SECTION E-E
DETAIL OF CONCRETE CUT-OFF WALL



ESTIMATED QUANTITIES

I-1	30" Class A-1 Pipe, Sec. M-6.8 (b)	146 L.F.
I-2	Masonry	1.95 C.Y.
I-5	30"x 12" Class A-1 Pipe Special Sec. M-6.8(b), Tee	1 Ea.
I-10	Dumped Rock Channel Protection	54 C.Y.
L-10	Sodding	6 S.Y.

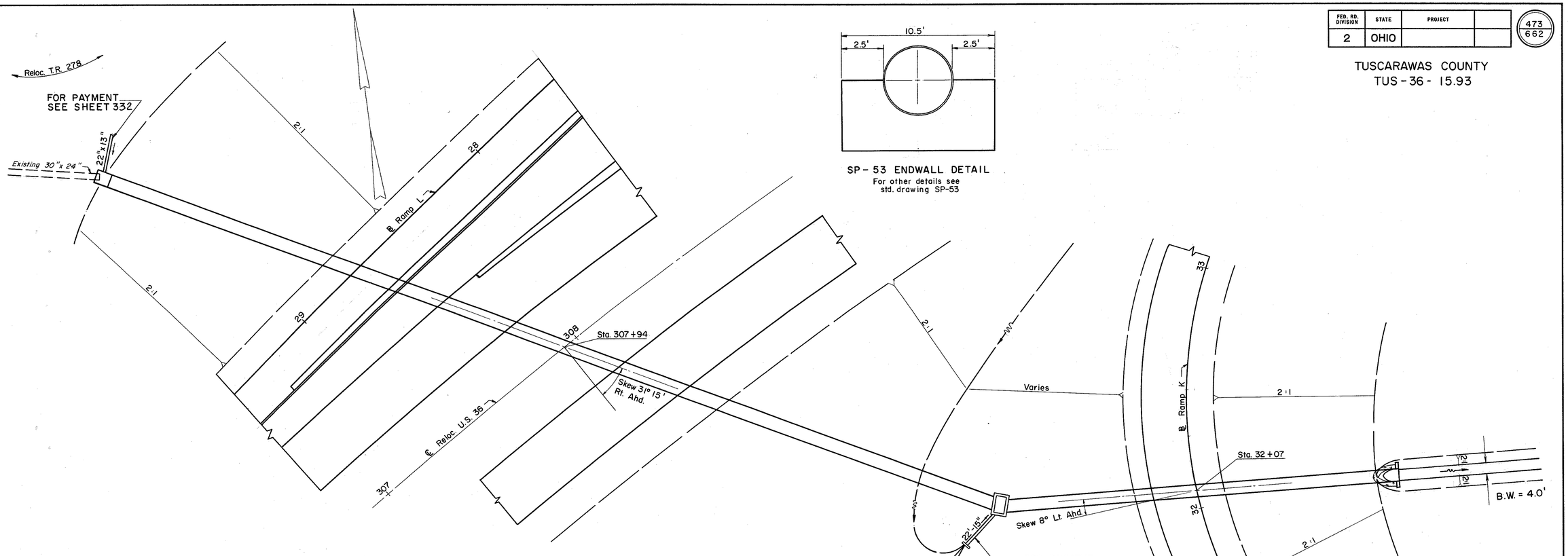
5 0 10 20 30
SCALE IN FEET

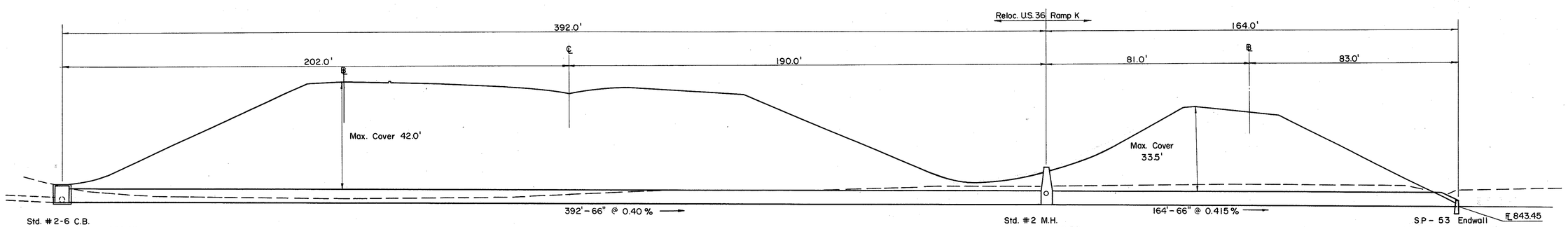
STRUCTURE NO. TUS - 36 - 1755
PIPE CULVERT STA. 285 + 77

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

473
662

TUSCARAWAS COUNTY
TUS-36-15.93





Std. #2-6 C.B.
Grate El. 852.87
Window 851.20
℄ 22"x13" 845.70
℄ 30"x24" Exist. in 845.70
℄ 66" 845.70

Std. #2 M.H.
Cover El. 859.58
℄ 15" 848.63
℄ 66" 844.13

ESTIMATED QUANTITIES

I-1	66" Class A-1 Pipe, Sec. M-6.4(g) Factory Coated and ¼ Field Paved, 10-8 Gage	392 L.F.
I-8	Std. #2-6 C.B.	1 Ea.

ESTIMATED QUANTITIES

I-1	66" Class A-1 Pipe, Sec. M-6.4(g) Factory Coated and ¼ Field Paved, 10-8 Gage	164 L.F.
I-2	Masonry	2.50 C.Y.
I-8	Std. #2 M.H., w/o Drop Pipe	1 Ea.
L-10	Sodding	4 S.Y.

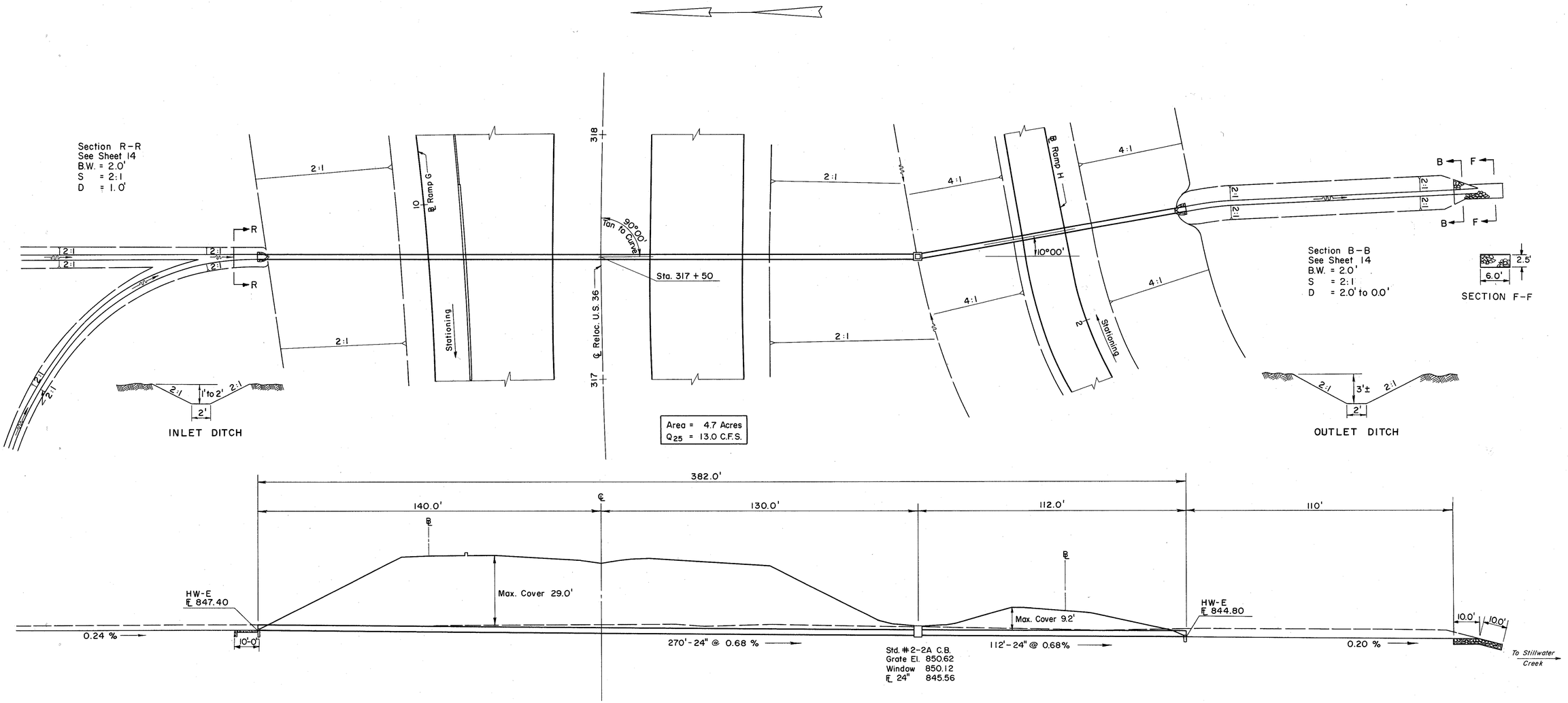
10 0 20 40 60
SCALE IN FEET

STRUCTURE NO. TUS-36-1797
PIPE CULVERT STA. 307+94,
& RAMP K STA. 32+07

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

474
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93



ESTIMATED QUANTITIES

E-3	Channel Excavation	100 C.Y.
I-1	24" Class A-1 Pipe, Sec. M-6.4 (d)	270 L.F.
I-1	24" Class A-1 Pipe, Sec. M-6.6 (b) or M-6.8 (b)	112 L.F.
I-2	Masonry	0.82 C.Y.
I-8	Std. #2-2A C.B.	1 Ea.
L-10	Sodding	6 S.Y.
I-10	Dumped Rock Channel Protection	12 C.Y.
I-10	Riprap, 6" Reinforced	7 S.Y.

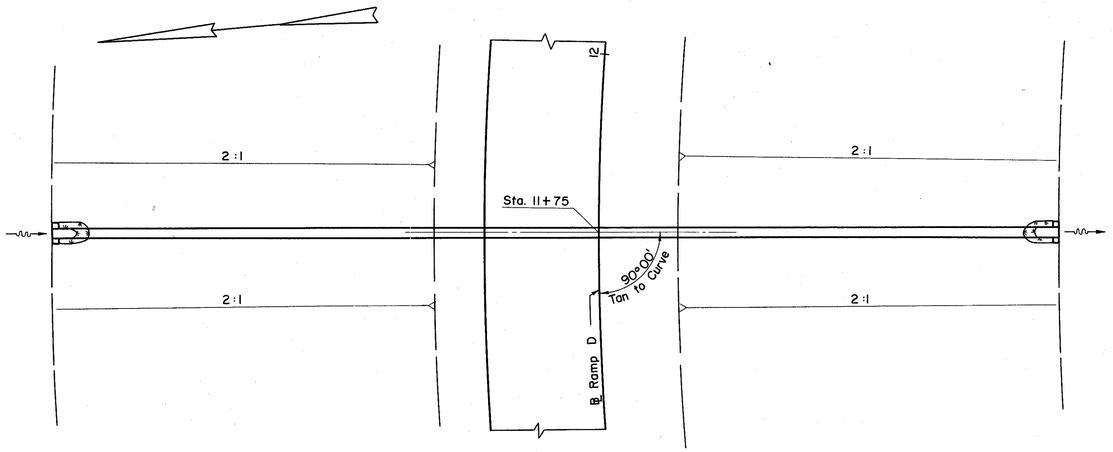
10 0 20 40 60
SCALE IN FEET

STRUCTURE NO. TUS - 36 - 1816
PIPE CULVERT STA. 317+50

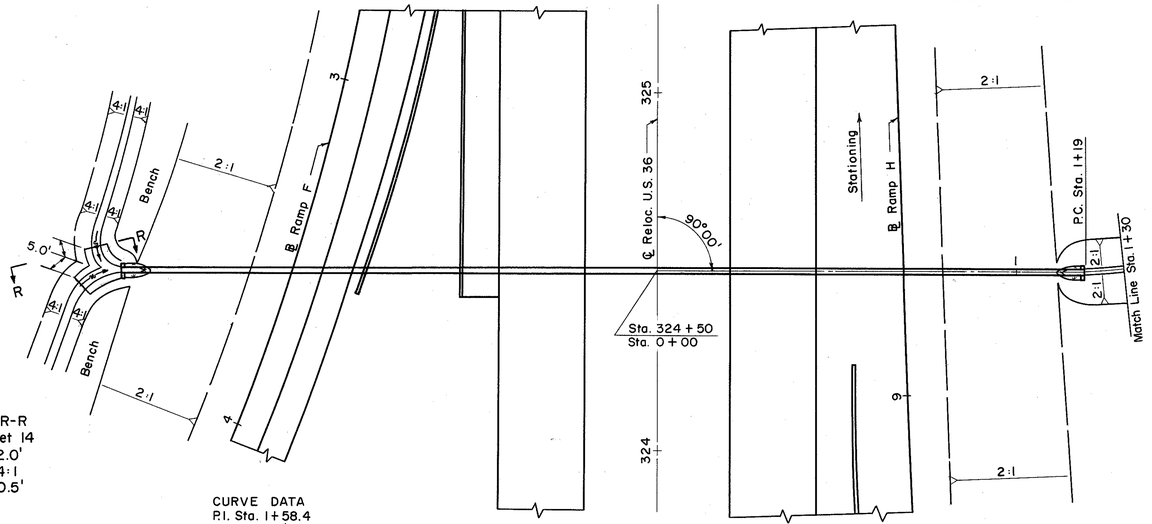
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

475
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93



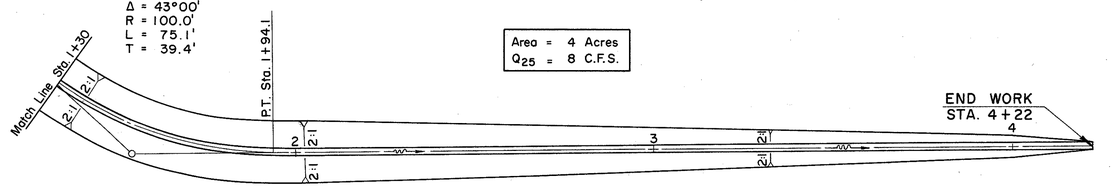
Area = 3.4 Acres
Q_{25} = 9.0 C.F.S.

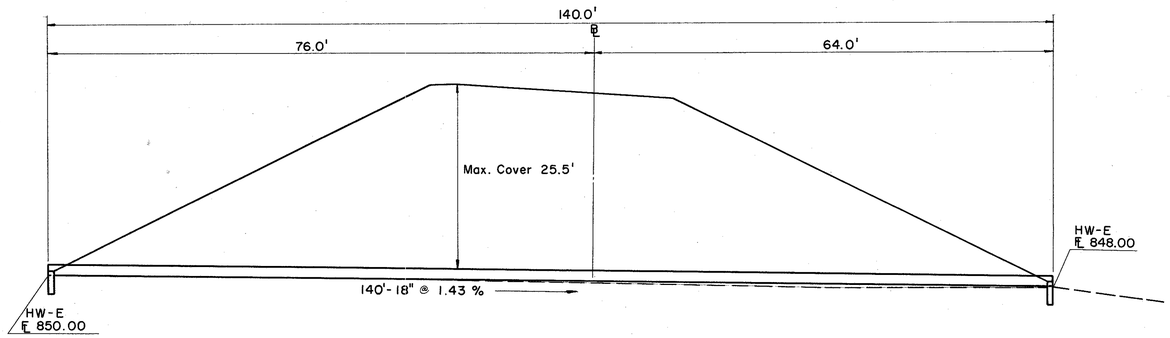


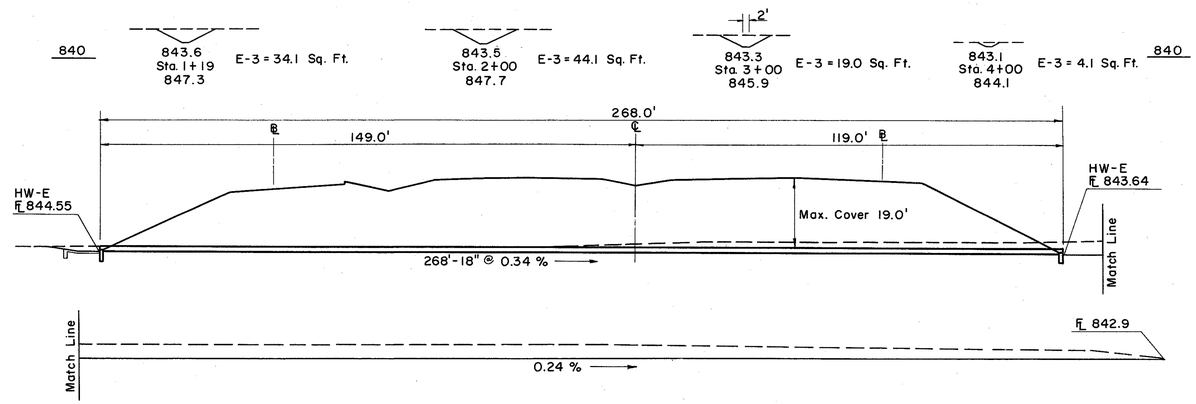
Section R-R
See Sheet 14
B.W. = 2.0'
S = 4:1
D = 0.5'

CURVE DATA
P.I. Sta. 1+58.4
Δ = 43°00'
R = 100.0'
L = 75.1'
T = 39.4'

Area = 4 Acres
Q_{25} = 8 C.F.S.







ESTIMATED QUANTITIES

I- 1	18" Class A-1 Pipe, Sec. M-6.6(d)	140 L.F.
I- 2	Masonry	0.60 C.Y.
L-10	Sodding	3 S.Y.

ESTIMATED QUANTITIES

E- 3	Channel Excavation	277 C.Y.
I- 1	18" Class A-1 Pipe, Sec. M-6.6 (c)	268 L.F.
I- 2	Masonry	0.60 C.Y.
L-10	Sodding	3 S.Y.
I-10	Riprap, 6" Reinforced	11 S.Y.

5 0 10 20 30
SCALE IN FEET

STRUCTURE
PIPE CULVERT
RAMP D STA. 11 + 75

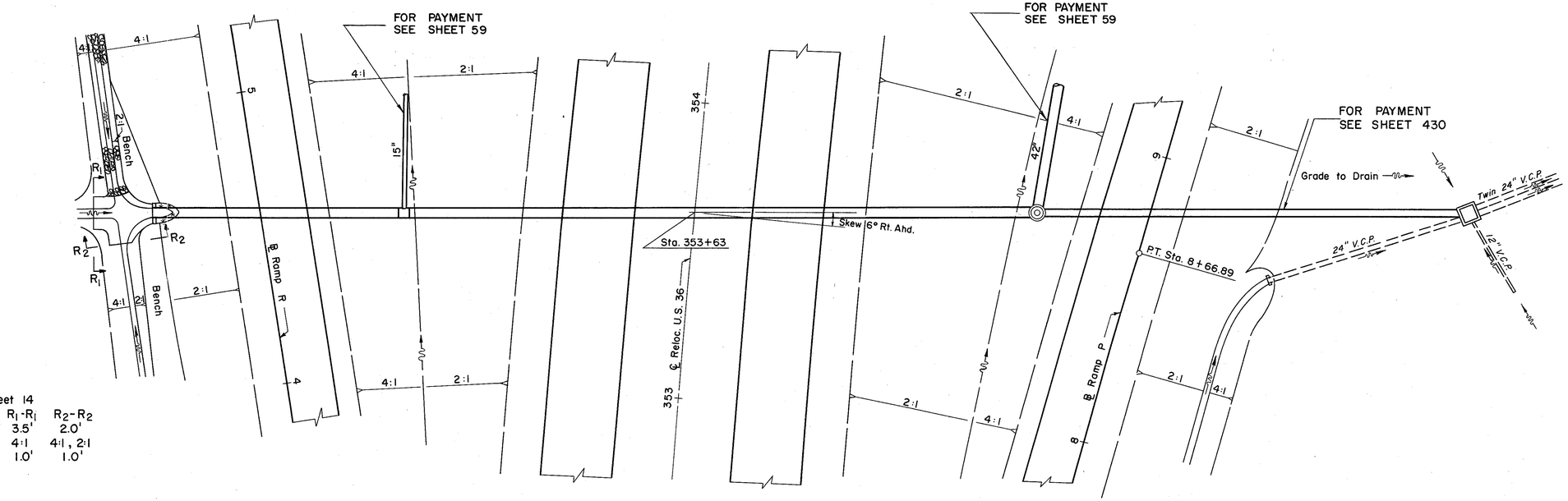
10 0 20 40 60
SCALE IN FEET

STRUCTURE NO. TUS - 36 - 1829
PIPE CULVERT STA. 324+50,
& RAMP D STA. 11 + 75

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

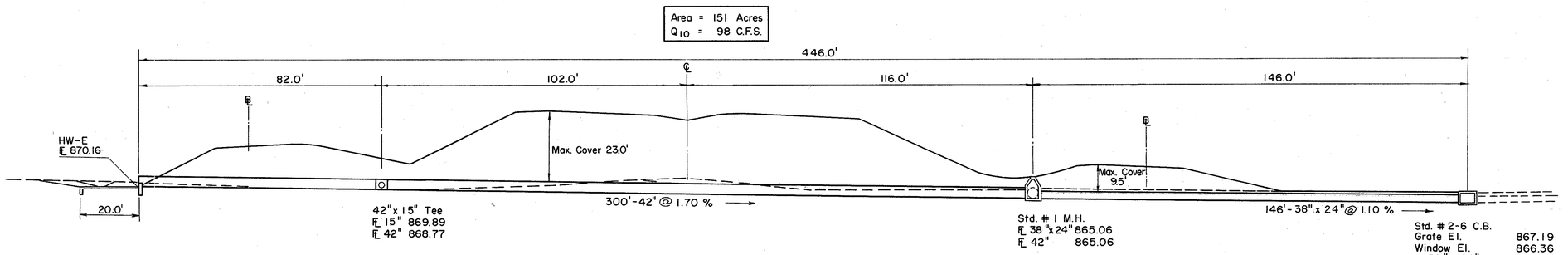
476
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93



See Sheet 14

Section	R_1-R_1	R_2-R_2
B.W. =	3.5'	2.0'
S =	4:1	4:1, 2:1
D =	1.0'	1.0'



ESTIMATED QUANTITIES

I-1	38"x24" G-1 Pipe, Sec. M-6.7 (b)	146 L.F.
I-1	42" Class A-1 Pipe, Sec. M-6.6 (d)	300 L.F.
I-2	Masonry	0.76 C.Y.
I-5	42"x15" Class A-1 Pipe Special Sec. M-6.6 (d), Tee	1 Ea.
I-8	Std. # 1 M.H.	1 Ea.
I-8	Std. #2-6 C.B.	1 Ea.
L-10	Sodding	3 S.Y.
I-10	Riprap, 6" Reinforced	30 S.Y.

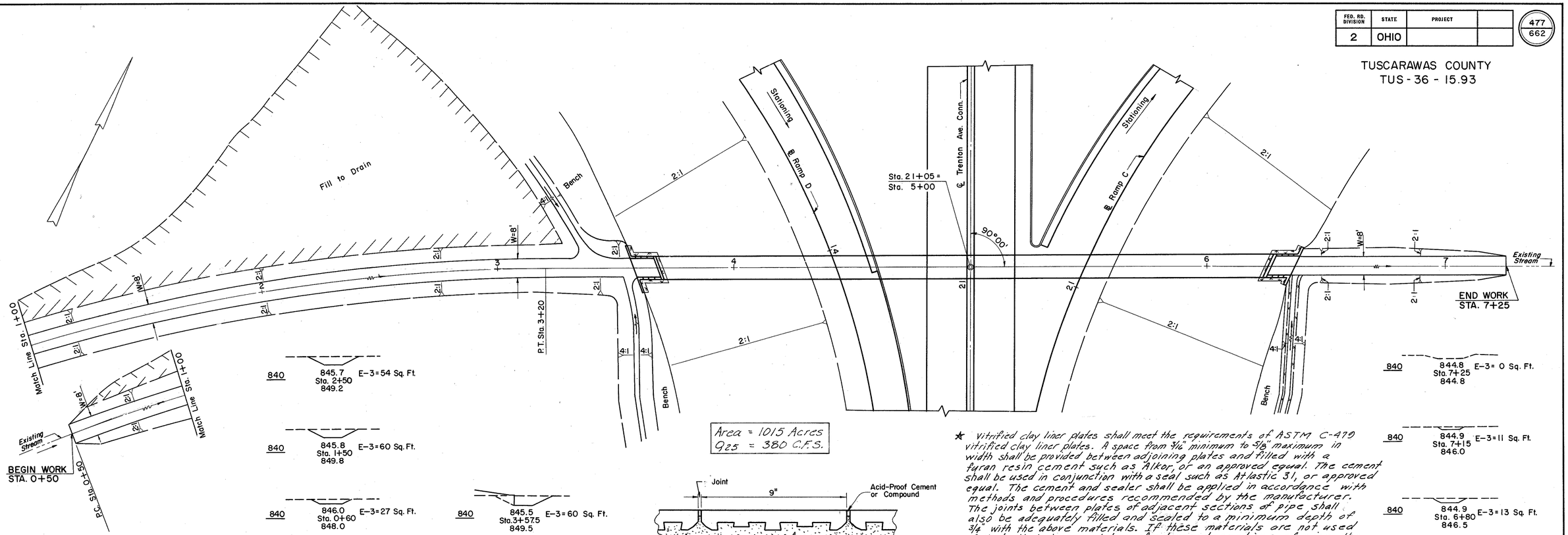
10 0 20 40 60
SCALE IN FEET

STRUCTURE NO. TUS-36-1884
PIPE CULVERT STA. 353 + 63

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

477
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93



840 845.7 Sta. 2+50 849.2 E-3=54 Sq. Ft.

840 845.8 Sta. 1+50 849.8 E-3=60 Sq.Ft.

840 846.0 Sta. 0+60 848.0 E-3=27 Sq. Ft.

840 846.0 Sta. 0+50 846.0 E-3= 0 Sq. Ft.

840 845.5 Sta. 3+57.5 849.5 E-3=60 Sq. Ft.

840 845.6 Sta. 3+15 848.2 E-3=35 Sq. Ft.

840 844.8 Sta. 7+25 844.8 E-3= 0 Sq. Ft.

840 844.9 Sta. 7+15 846.0 E-3=11 Sq. Ft.

840 844.9 Sta. 6+80 846.5 E-3=13 Sq. Ft.

840 845.0 Sta. 6+35 846.2 E-3=13 Sq. Ft.

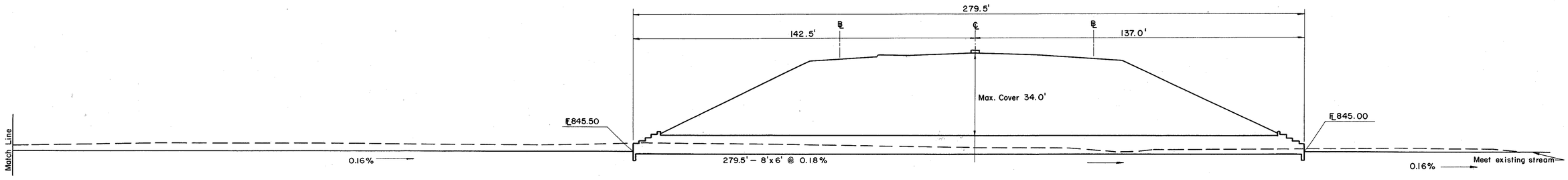
VITRIFIED LINER PLATE DETAIL

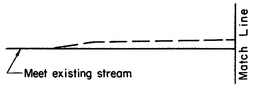
★ Vitrified clay liner plates shall meet the requirements of ASTM C-479 vitrified clay liner plates. A space from 1/16" minimum to 3/8" maximum in width shall be provided between adjoining plates and filled with a furan resin cement such as Alkor, or an approved equal. The cement shall be used in conjunction with a seal such as Atlastic 31, or approved equal. The cement and sealer shall be applied in accordance with methods and procedures recommended by the manufacturer. The joints between plates of adjacent sections of pipe shall also be adequately filled and sealed to a minimum depth of 3/4" with the above materials. If these materials are not used full depth between plates of adjacent sections of pipe, the mortar bed in the joint shall be primed with Atlastic 31 primer, or an approved equal.

In lieu of the above materials for filling and sealing of joints between vitrified liner plates, the Contractor may, at his option, use an inert joint compound such as Tegul-Vitrobond, Basolit, or an approved equal.

The cost of furnishing and placing the Vitrified Clay Liner Plates and special joints shall be included in the square foot price bid for "Item Special, Vitrified Clay Liner Plates".

CURVE DATA
P.I. Sta. 1+86.42
Δ = 20°15'00", Rt.
D = 7°30'
R = 763.94'
L = 270.00'
T = 136.42'





NOTE: Payment for Acid-Proof Cement or Compound shall be included in the price bid per square foot of Item Special, Vitrified Clay Liner Plates. Details other then shown on these Plans shall conform to Standard Drawing No. LBC-45.

ESTIMATED QUANTITIES

E-2	Excavation for Structures	410 C.Y.
E-3	Channel Excavation	582 C.Y.
S-1	Concrete for Structures	437 C.Y.
S-4	Reinforcing Steel	82,596 Lbs.
★ Special	Vitrified Clay Liner Plates	1,980 S.F.
L-3	Sodding	12 S.Y.

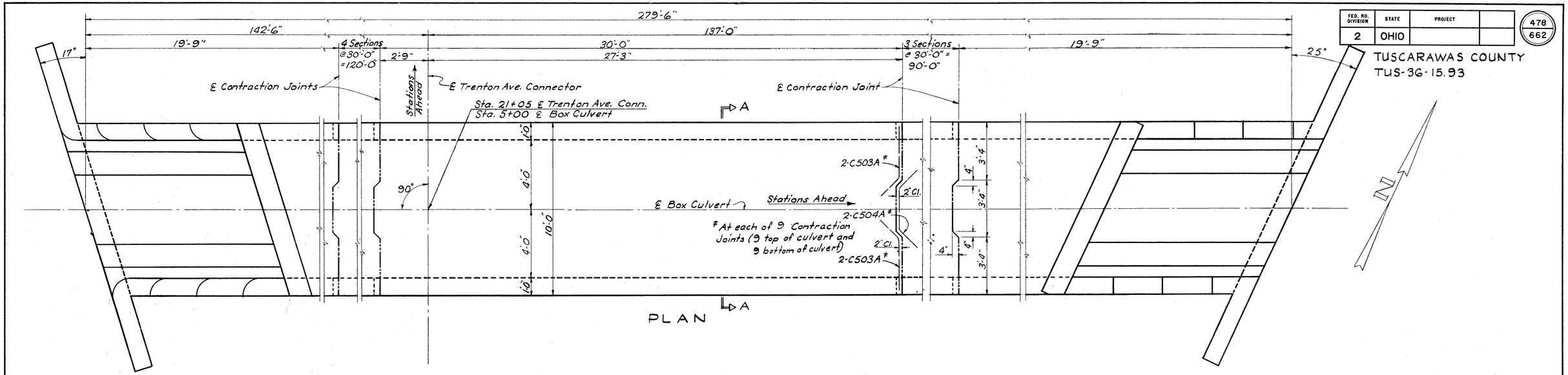
10 0 20 40 60
SCALE IN FEET

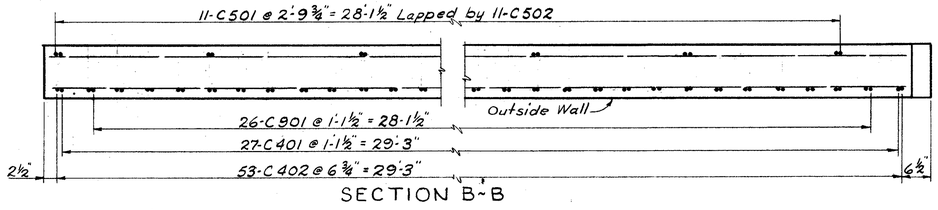
STRUCTURE
BOX CULVERT
TRENTON AVE. CONN. STA. 21+05

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

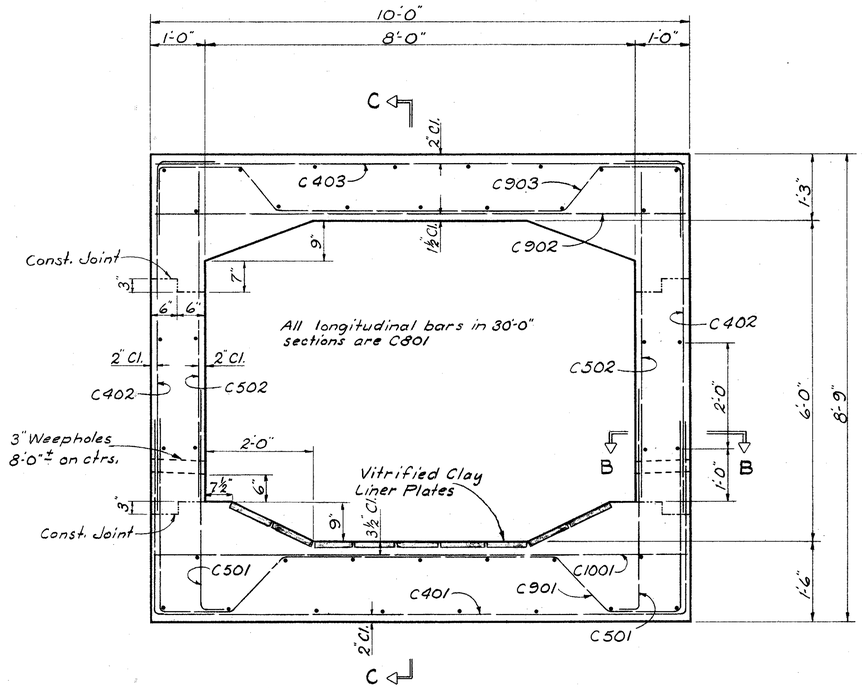
478
662

TUSCARAWAS COUNTY
TUS-36-15.93

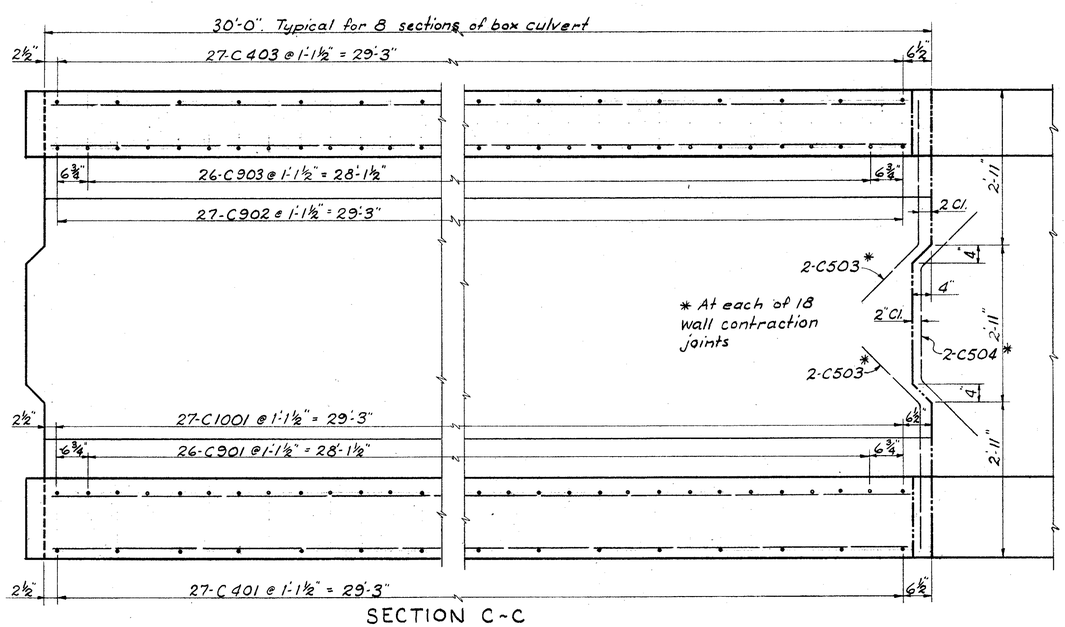




SECTION B-B



SECTION A-A



SECTION C-C

For general layout and further details refer to sheet 477

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES., DILLSBURG, PA.
FOR

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

CULVERT DETAILS

8'-0" x 6'-0" R.C. BOX CULVERT
TRENTON AVE. CONNECTOR
TUSCARAWAS COUNTY

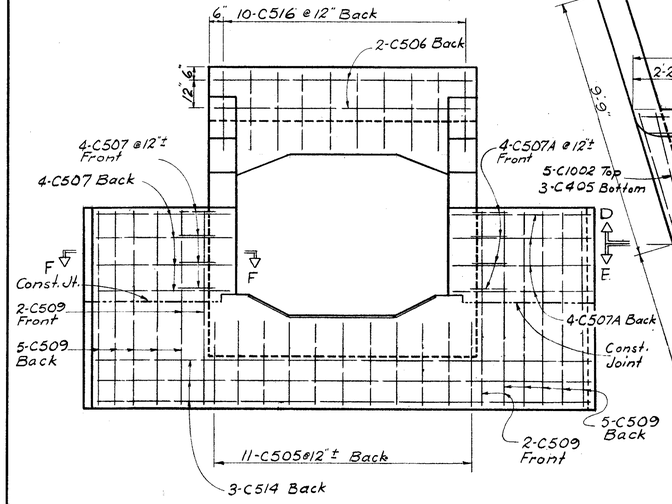
STA. 21+05.00

DESIGNED	DRAWN	TRACED	CHECKED	REVISED	DATE	REVISED
BOL MJF	mjf					

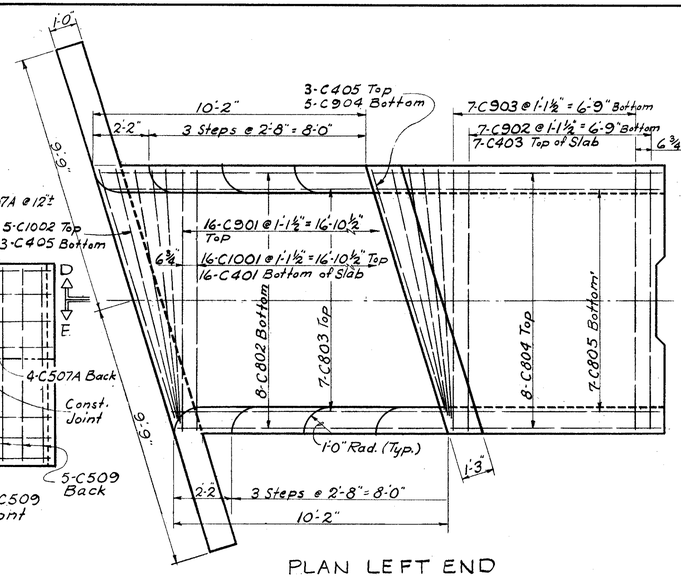
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

479
662

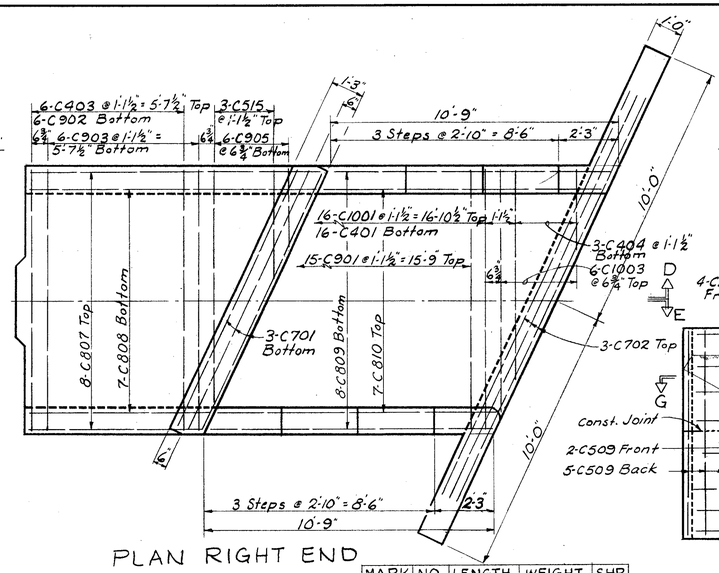
TUSCARAWAS COUNTY
TUS-36-15.93



ELEVATION LEFT END



PLAN LEFT END



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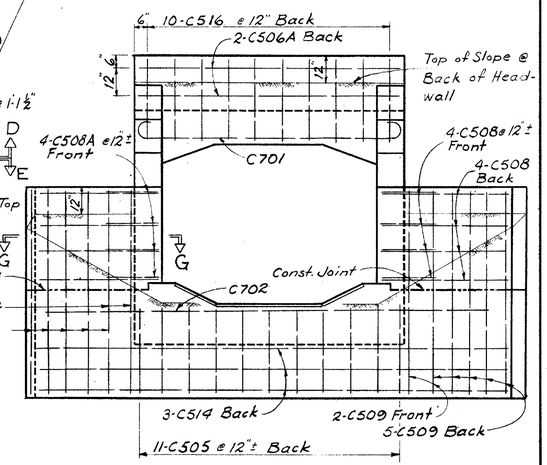

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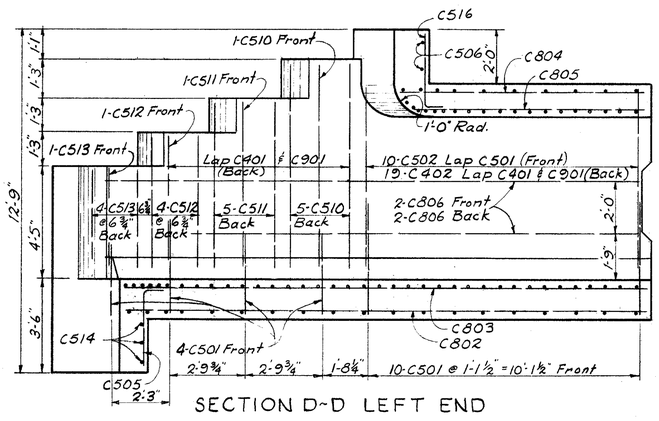
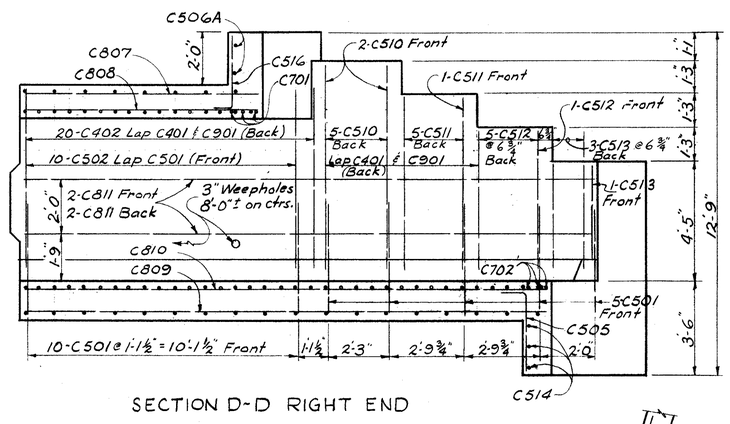
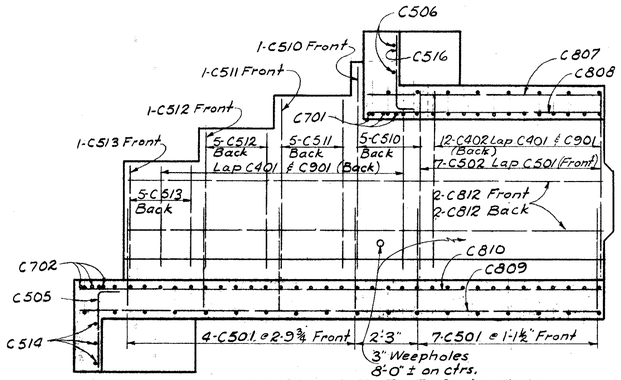


SECTION D-D LEFT END



SECTION D-D RIGHT END



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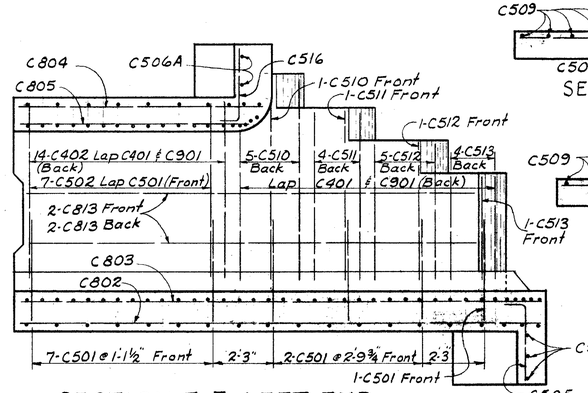
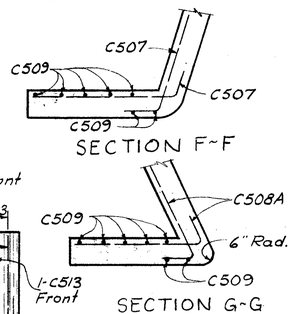


SECTION E-E LEFT END

(For dimensions not shown see Section D-D)



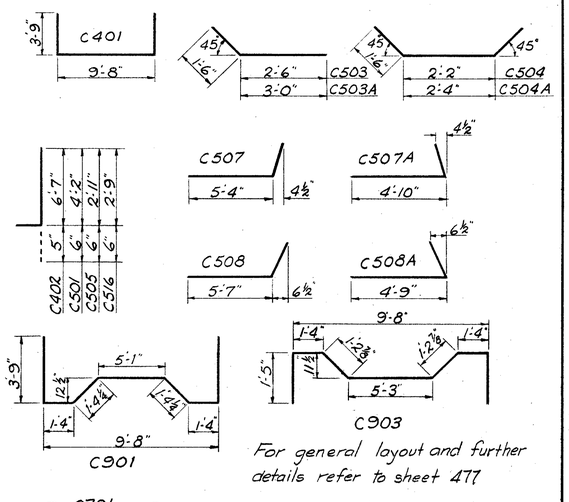
SECTION F-F

SECTION G-G

MARK	NO.	LENGTH	WEIGHT	SHP.
C401	248	17'-0"		B
C402	914	7'-0"		B
C403	229	9'-6"		
C404	3	3'-0" to 7'-10"		
C405	6	9'-8"		
C501	226	4'-8"		B
C502	210	6'-3"		
C503	72	4'-0"		B
C503A	72	4'-6"		B
C504	36	5'-2"		B
C504A	36	5'-4"		B
C505	22	3'-5"		B
C506	2	10'-2"		
C506A	2	10'-6"		
C507	8	6'-7"		B
C507A	8	6'-1"		B
C508	8	6'-10"		B
C508A	8	6'-0"		B
C509	20	7'-6"		
C510	25	7'-2"		
C511	24	5'-11"		
C512	23	4'-8"		
C513	20	3'-5"		
C514	6	19'-2"		
C515	3	4'-0" to 8'-8"		
C516	20	3'-3"		B
C701	3	12'-1"		B
C702	3	16'-6"		
C801	304	29'-8"		
C802	8	18'-0" to 20'-11"		
C803	7	18'-2" to 20'-8"		
C804	8	7'-9" to 10'-8"		
C805	7	7'-0" to 9'-6"		
C806	4	20'-0"		
C807	8	6'-5" to 10'-9½"		
C808	7	6'-9" to 10'-6"		
C809	8	17'-2" to 21'-6½"		
C810	7	17'-5" to 21'-2"		
C811	4	21'-0"		
C812	4	17'-2"		
C813	4	17'-0"		
C901	239	17'-6"		B
C902	229	9'-6"		
C903	221	12'-9"		B
C904	5	9'-8"		
C905	6	2'-10" to 8'-8"		
C1001	248	9'-6"		
C1002	5	9'-8"		
C1003	6	3'-0" to 8'-10"		

REPLACEMENT BARS		
MARK	NUMBER	LENGTH
RE400	1	5'-3"
RE500	1	5'-7"
RE700	1	6'-3"
RE800	2	6'-6"
RE900	2	6'-10"
RE1000	1	7'-3"

BENDING DIAGRAMS



For general layout and further details refer to sheet 477

B Indicates Bent Bar

MARK	VARIES BY	NO. EACH
C404	2'-5"	1
C515	2'-4"	1
C802	5"	1
C803	5"	1
C804	5"	1
C805	5"	1
C807	7½"	1
C808	7½"	1
C809	7½"	1
C810	7½"	1
C905	1'-2"	1
C1003	1'-2"	1

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
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BUREAU OF BRIDGES

CULVERT DETAILS

8'-0" x 6'-0" R.C. BOX CULVERT
TRENTON AVE. CONNECTOR
TUSCARAWAS COUNTY

STA. 21+05.00

DESIGNED	DRAWN	TRACED	CHECKED	REVISED	DATE	REVISED
BOL MJF						

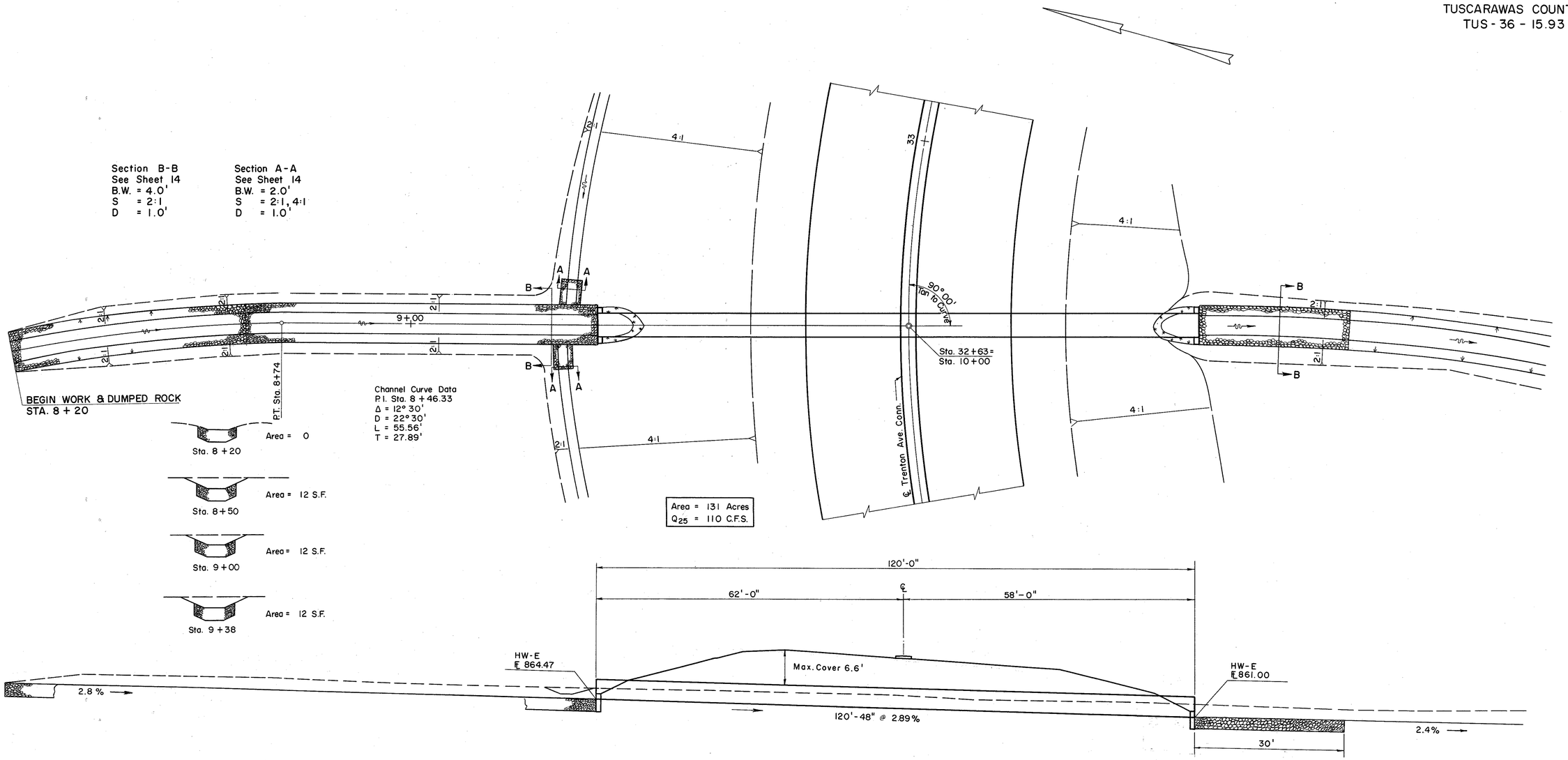
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

480
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

Section B-B
See Sheet 14
B.W. = 4.0'
S = 2:1
D = 1.0'

Section A-A
See Sheet 14
B.W. = 2.0'
S = 2:1, 4:1
D = 1.0'



ESTIMATED QUANTITIES

I- 1	48" Class A-1 Pipe, $\frac{1}{3}$ Vitrified Lined Sec. M-6.6(a)	120 L.F.
I- 2	Masonry	1.72 C.Y.
I-10	Dumped Rock Channel Protection	115 C.Y.
L-10	Sodding	8 S.Y.
E- 3	Channel Excavation	46 C.Y.

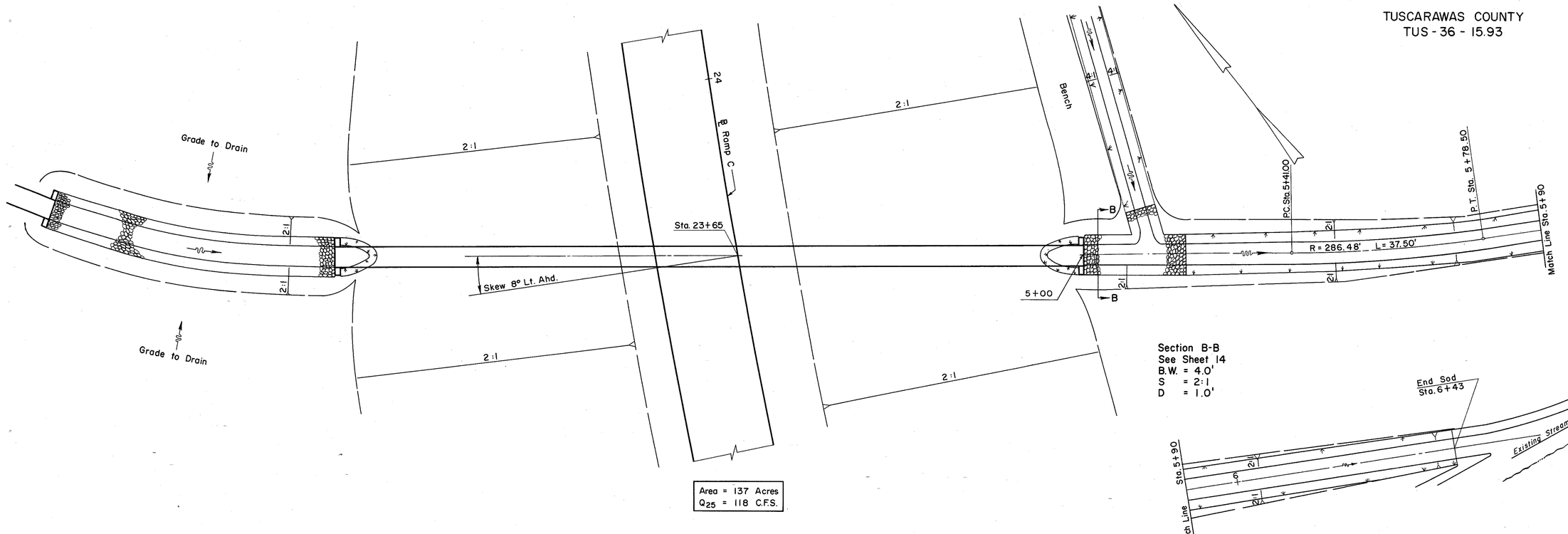
5 0 10 20 30
SCALE IN FEET

STRUCTURE
PIPE CULVERT
TRENTON AVE. CONN. STA. 32+63

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

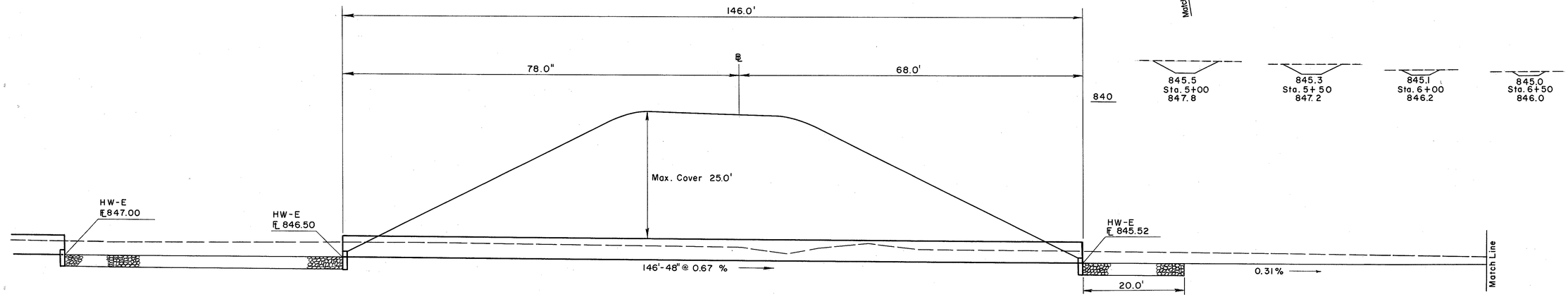
481
662

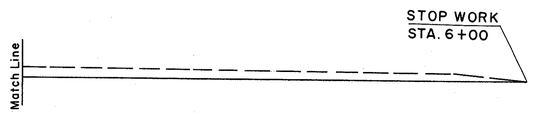
TUSCARAWAS COUNTY
TUS - 36 - 15.93



Section B-B
See Sheet 14
B.W. = 4.0'
S = 2:1
D = 1.0'

Area = 137 Acres
Q_{25} = 118 C.F.S.





ESTIMATED QUANTITIES

I-1	48" Class A-1 Pipe, ½ Vitrified Lined Sec. M-6.6(d)	146 L.F.
I-2	Masonry	1.72 C.Y
I-10	Dumped Rock Channel Protection	17 C.Y.
L-10	Sodding	115 S.Y.
E-3	Channel Excavation	57 C.Y.

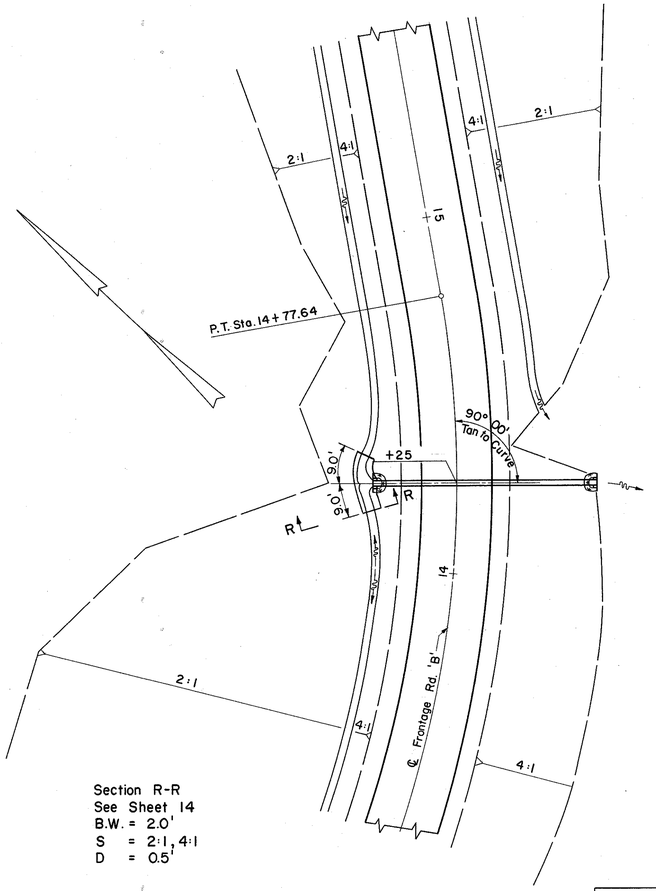
5 0 10 20 30
SCALE IN FEET

STRUCTURE
PIPE CULVERT
RAMP C STA. 23+65

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

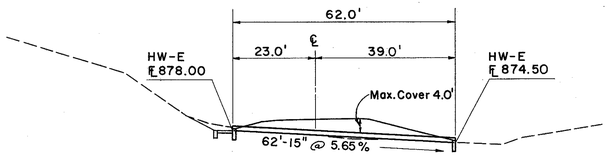
482
662

TUSCARAWAS COUNTY
TUS-36-15.93



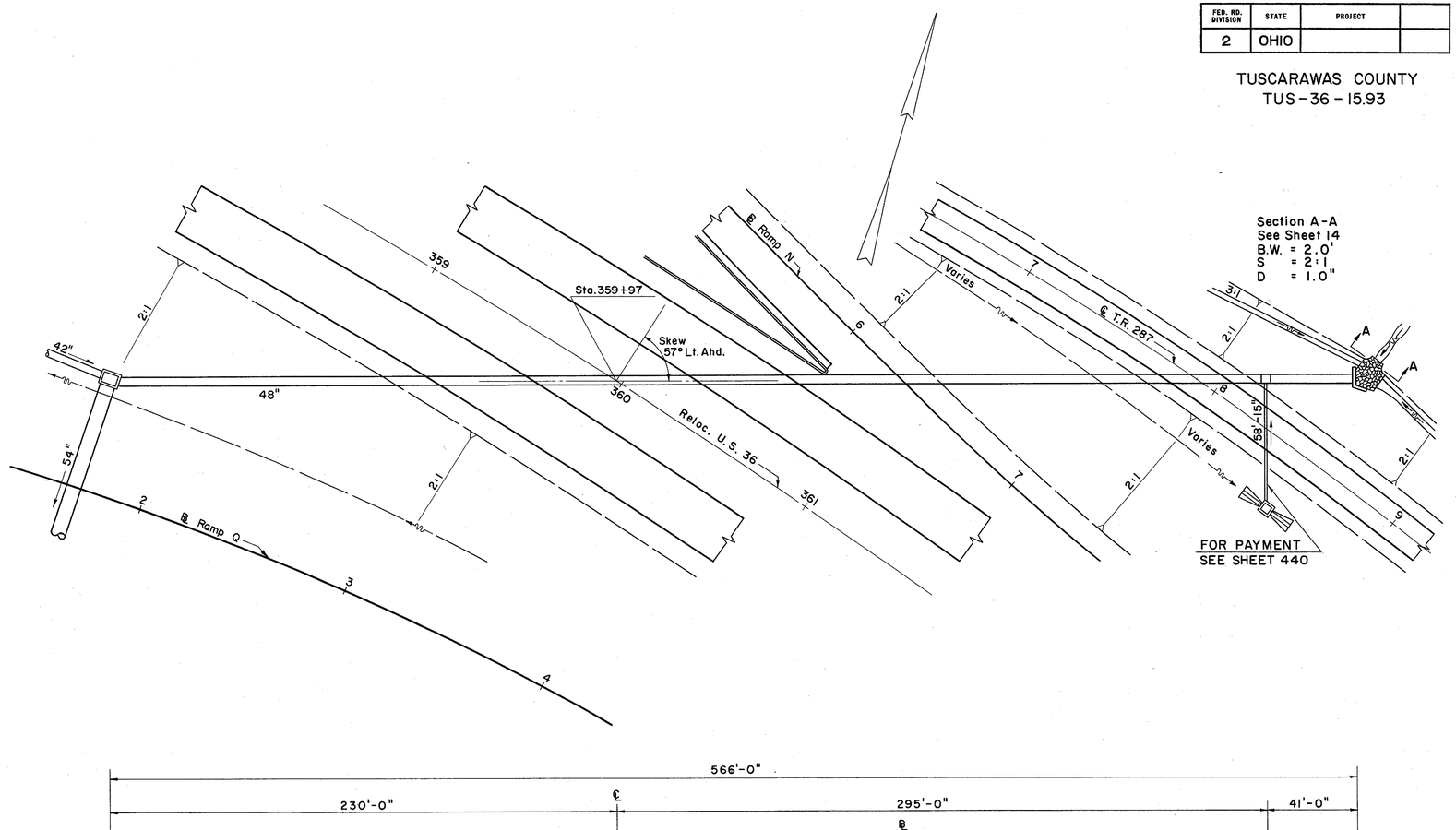
Section R-R
See Sheet 14
B.W. = 2.0'
S = 2:1, 4:1
D = 0.5'

Area = 1.8 Acres
Q_{25} = 4.7 C.F.S.

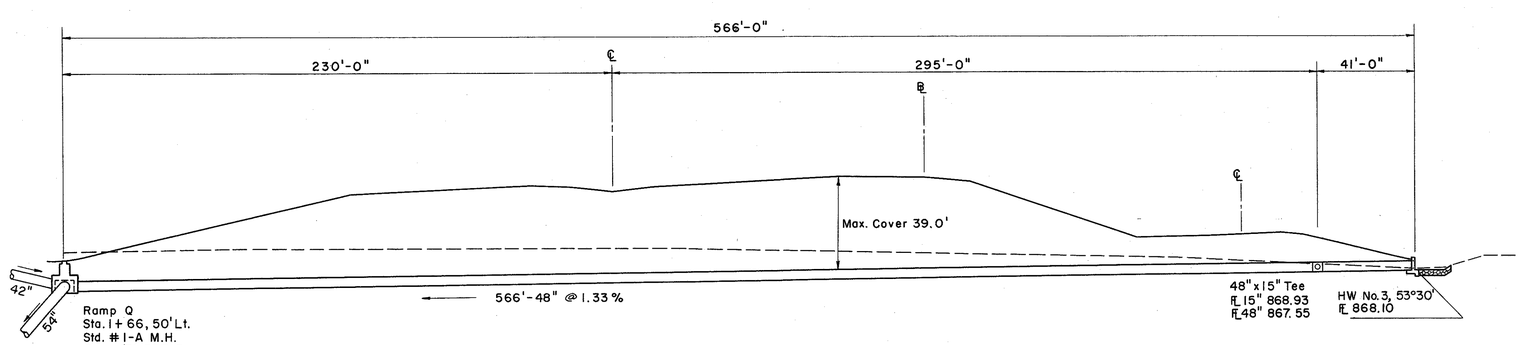


ESTIMATED QUANTITIES

I-1	15" Class A-1 Pipe, Sec. M-6.8 (b)	62 L.F.
I-2	Masonry	0.52 C.Y.
L-10	Sodding	3 S.Y.
I-10	Riprap, 6" Reinforced	9 S.Y.



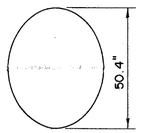
Section A-A
See Sheet 14
B.W. = 2.0'
S = 2:1
D = 1.0"



Ramp Q
Sta. 1+66, 50' Lt.
Std. # 1-A M.H.
Cover El. 873.5
℄ 42" 861.07
℄ 48" 860.57
℄ 54" 860.07

ESTIMATED QUANTITIES

I-1	48" Class A-1 Pipe, Sec. M-6.4 (d) 8 Gage*, *Elongated*	566 L.F.
I-2	Masonry	10.60 C.Y.
I-5	48"x15" Pipe Special Class A-1 Sec. M-6.4 (d) 8 Gage, Tee	1 Ea.
I-10	Dumped Rock Channel Protection	13 C.Y.



*ELONGATION DETAIL

10 0 20 40 60
SCALE IN FEET

STRUCTURE
PIPE CULVERT
FRONTAGE ROAD B STA. 14+25

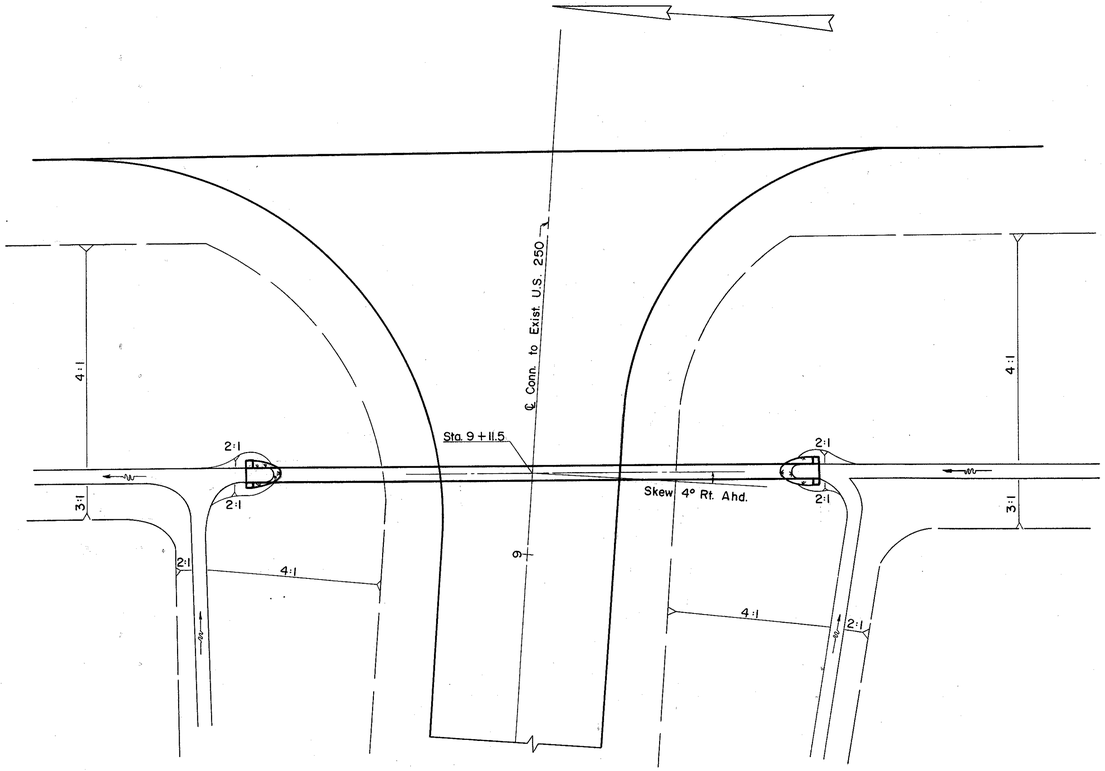
15 0 30 60 90
SCALE IN FEET

STRUCTURE NO. TUS-36-1896
PIPE CULVERT STA. 359+97
& FRONTAGE ROAD 'B' STA. 14+25

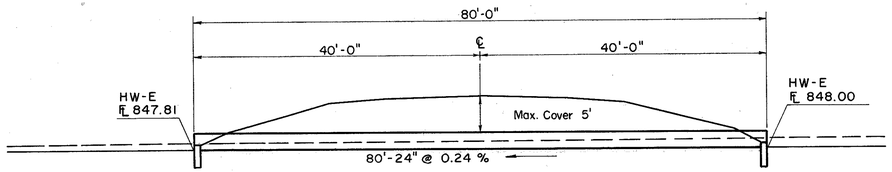
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

483
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

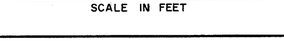


Area = 10 Acres
Q_{25} = 16 C.F.S.

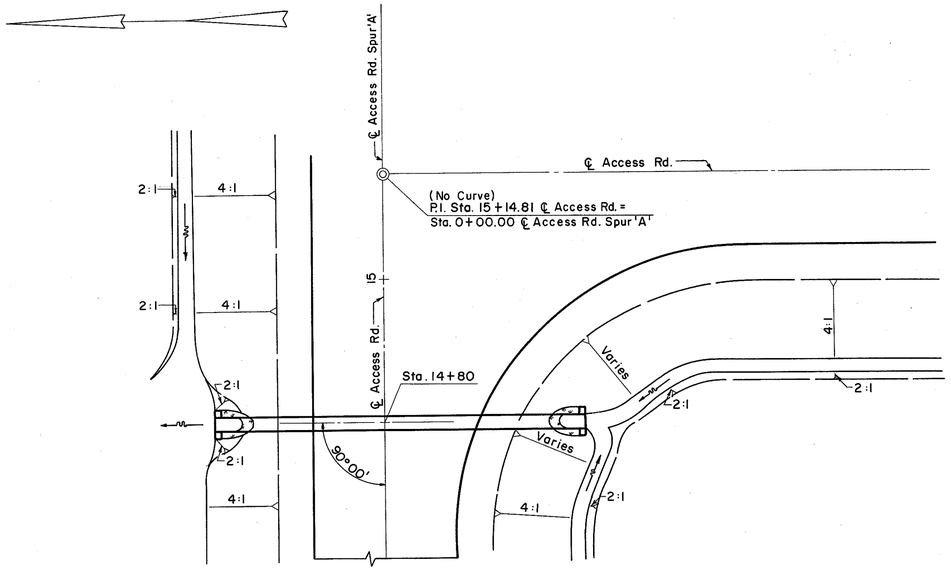


ESTIMATED QUANTITIES

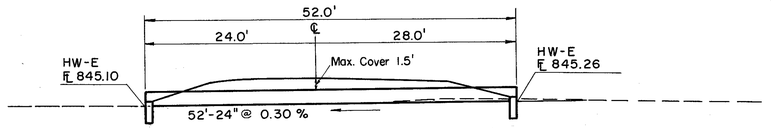
I- 1	24" Class A-1 Pipe, Sec. M-6.6(a) or M-6.8(b)	80 L.F.
I- 2	Masonry	0.82 C.Y.
L-10	Sodding	5 S.Y.



STRUCTURE
PIPE CULVERT, CONN. TO
EXIST. U.S. 250 STA. 9+11.5

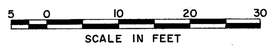


Area = 6 Acres
Q_{10} = 10 C.F.S.



ESTIMATED QUANTITIES

I- 1	24" Class A-1 Pipe, Sec. M-6.4(d)	52 L.F.
I- 2	Masonry	0.82 C.Y.
L-10	Sodding	5 S.Y.

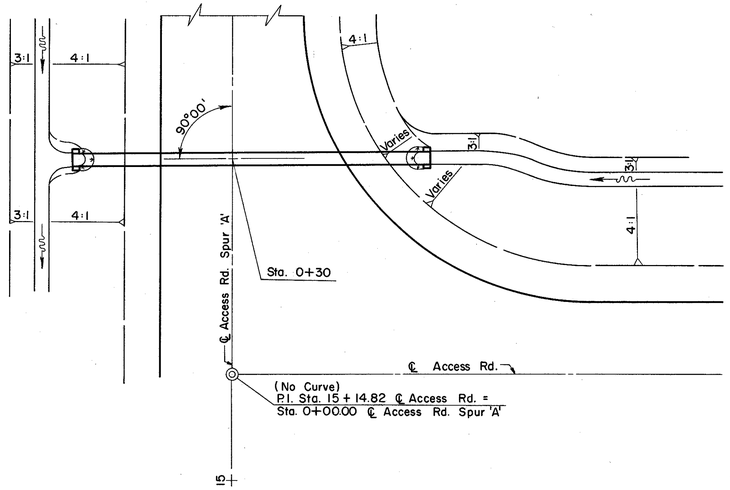


STRUCTURE
PIPE CULVERT, CONN. TO
EXIST. U.S. 250 STA. 9+11.5
& ACCESS RD. STA. 14+80

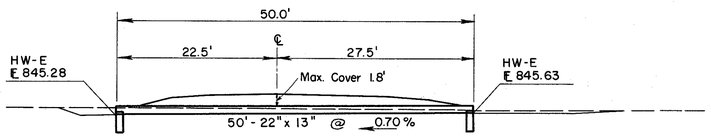
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

484
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93



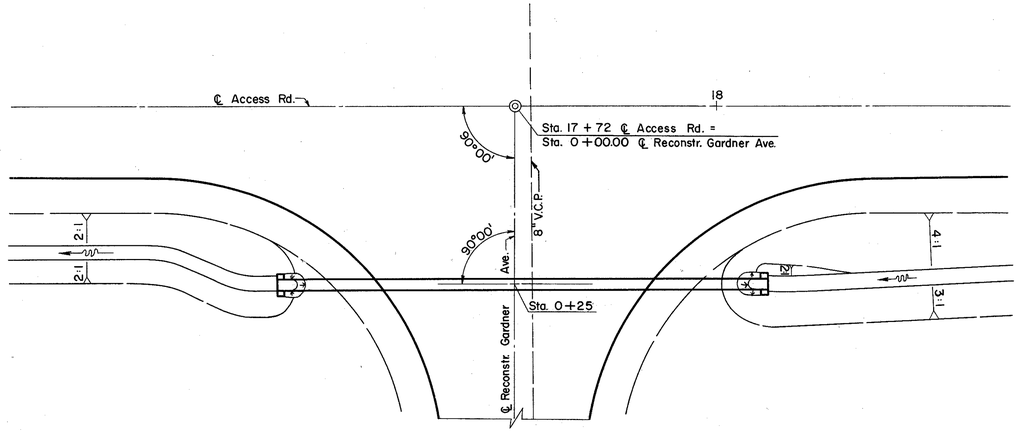
Area = 2 Acres
Q_{10} = 4 C.F.S.



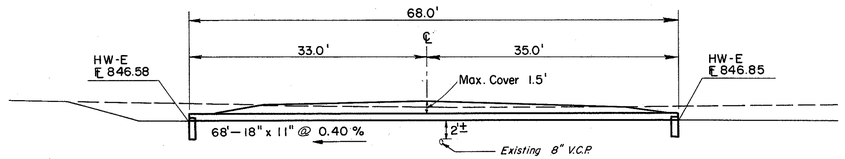
ESTIMATED QUANTITIES

I-1	22" x 13" Class G-1 Pipe, Sec. M-6.4 (j)(d)	50 L.F.
I-2	Masonry	0.82 C.Y.
L-10	Sodding	5 S.Y.

STRUCTURE
PIPE CULVERT, ACCESS RD.
SPUR 'A' STA. 0+30



Area = 0.3 Acres
Q_{10} = 1.0 C.F.S.



ESTIMATED QUANTITIES

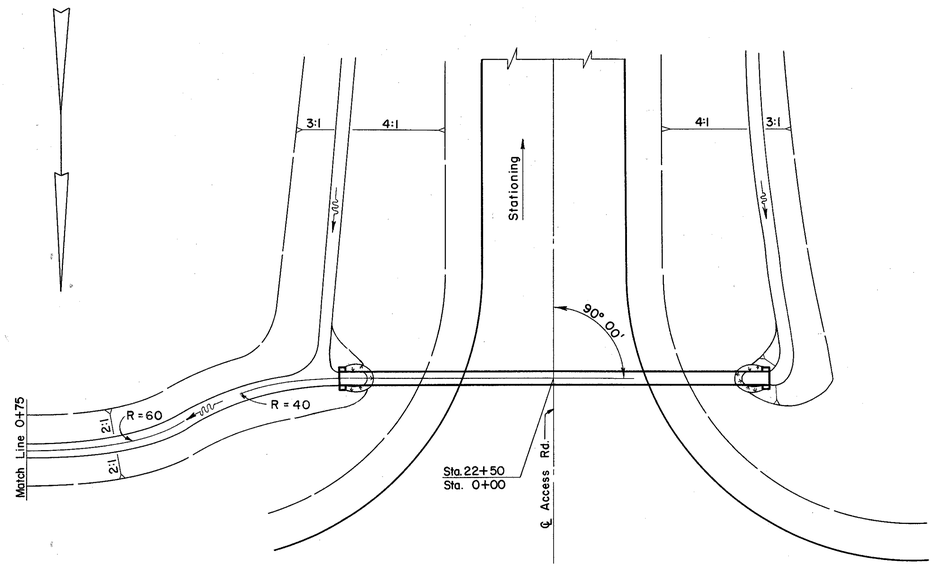
I-1	18" x 11" Class G-1 Pipe, Sec. M-6.4 (j)(d)	68 L.F.
I-2	Masonry	0.60 C.Y.
L-10	Sodding	4 S.Y.

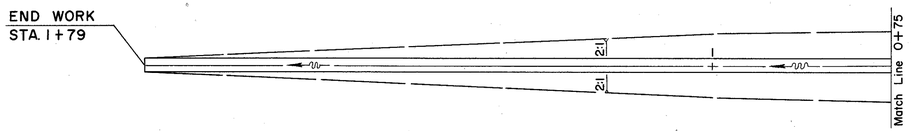
STRUCTURE
PIPE CULVERT, ACCESS RD.
SPUR 'A' STA. 0+30
& RECONSTR. GARDNER AVE. STA. 0+25

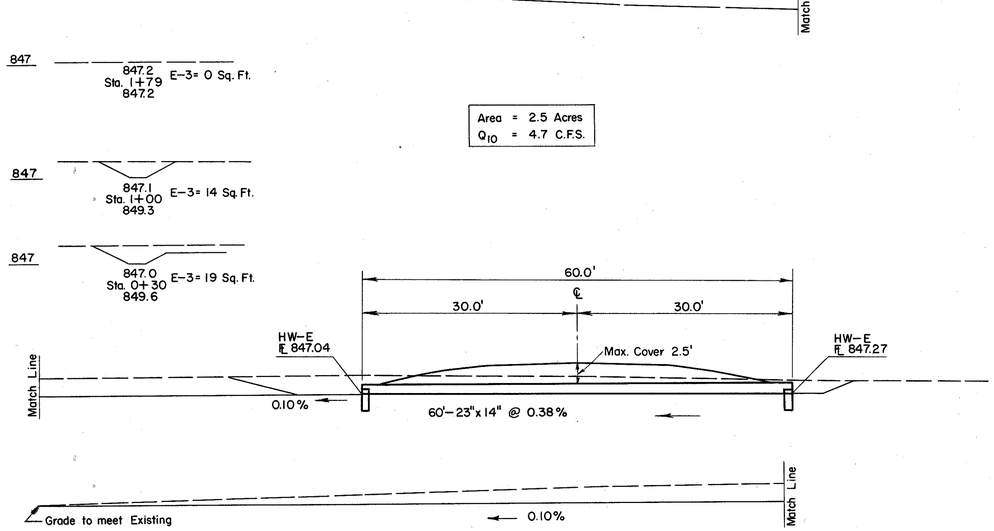
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

485
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93







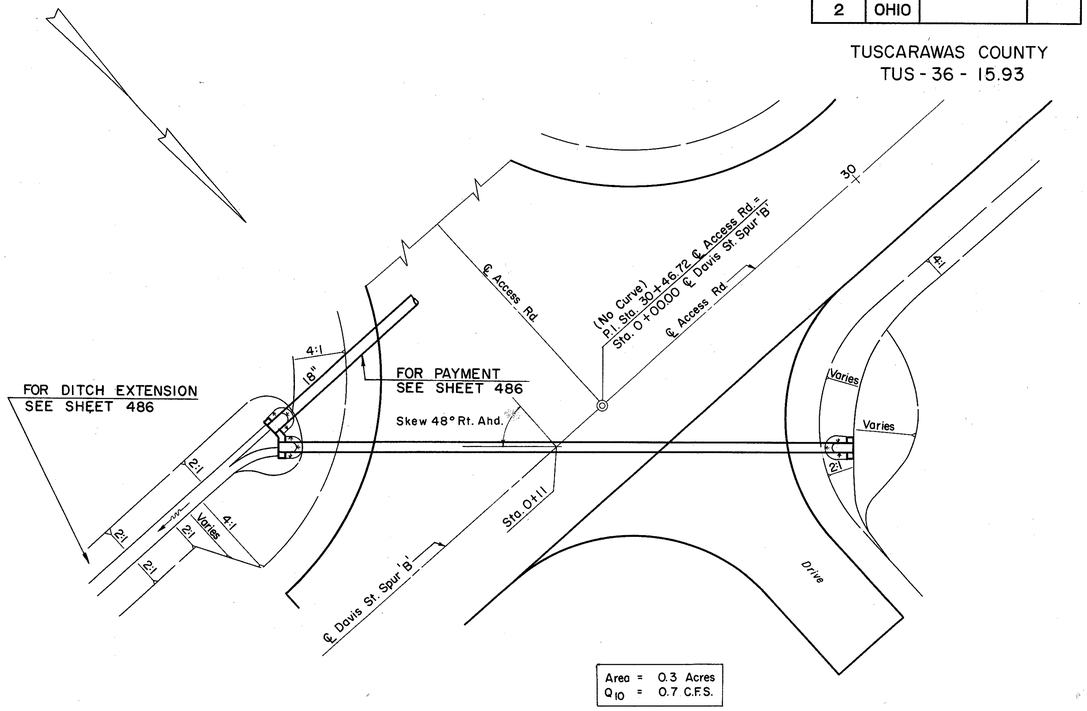
Area = 2.5 Acres
Q_{10} = 4.7 C.F.S.

ESTIMATED QUANTITIES

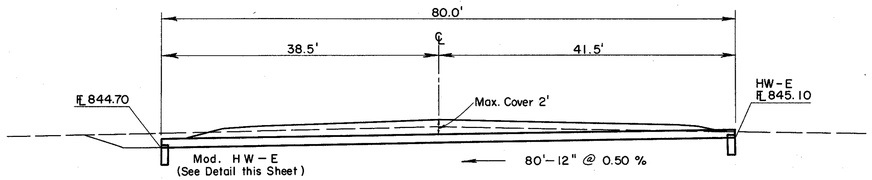
E-3	Channel Excavation	64 C.Y.
I-1	23"x14" Class G-1 Pipe, Sec. M-6.7 (a)	60 L.F.
I-2	Masonry	0.82 C.Y.
L-10	Sodding	5 S.Y.

5 0 10 20 30
SCALE IN FEET

STRUCTURE
PIPE CULVERT
ACCESS RD. STA. 22+50

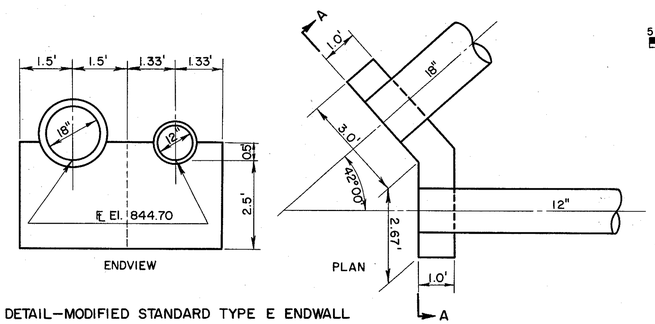


Area = 0.3 Acres
Q_{10} = 0.7 C.F.S.



ESTIMATED QUANTITIES

I-1	12" Class A-1 Pipe, Sec. M-6.4 (d)	80 L.F.
I-2	Masonry	1.05 C.Y.
L-10	Sodding	4 S.Y.



DETAIL-MODIFIED STANDARD TYPE E ENDWALL

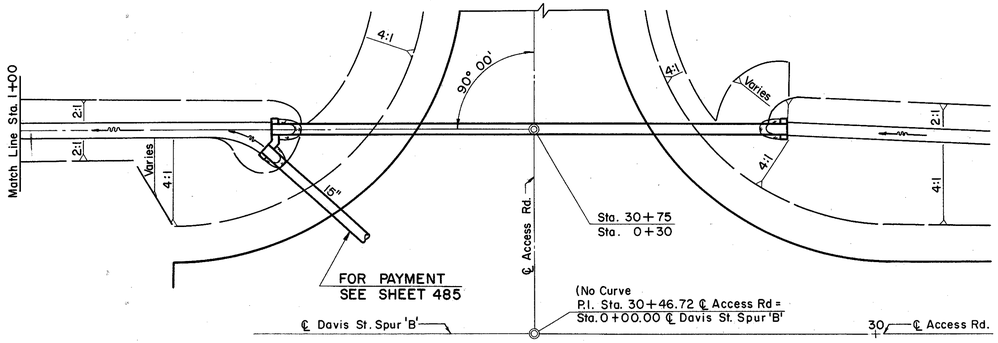
5 0 10 20 30
SCALE IN FEET

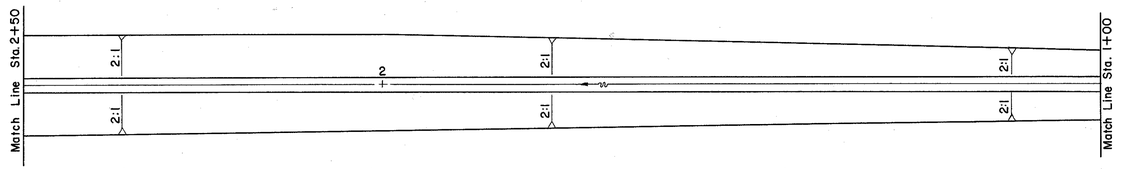
STRUCTURE
PIPE CULVERT
ACCESS RD. STA. 22+50,
& DAVIS ST. SPUR 'B' STA. 0+11

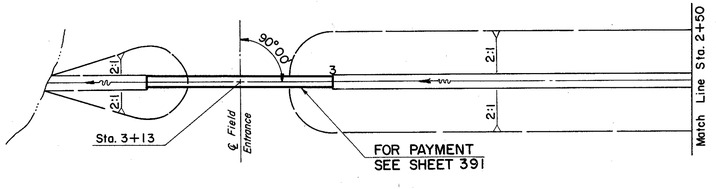
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

486
662

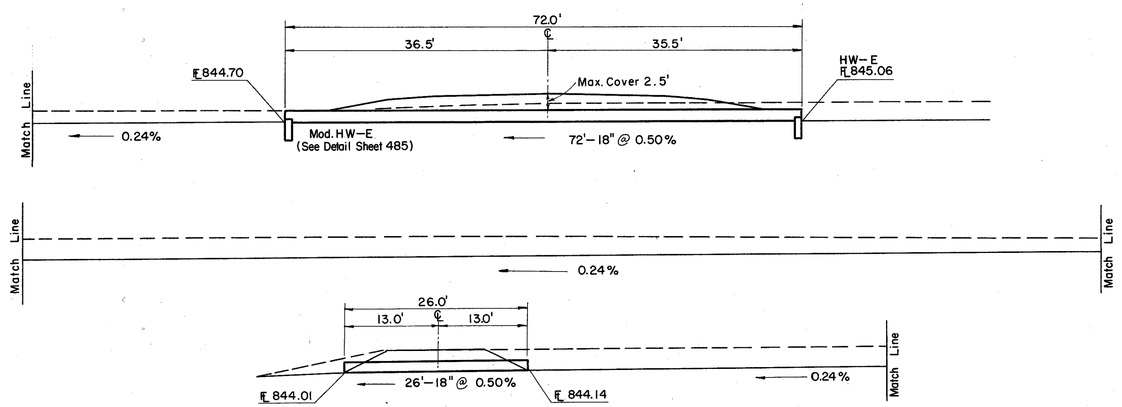
TUSCARAWAS COUNTY
TUS - 36 - 15.93







Area = 6 Acres
Q_{10} = 10 C.F.S.



847
844.1
Sta. 3+00
847.1
E–3 = 14 Sq. Ft.

847
844.6
Sta. 1+00
846.6
E–3 = 12 Sq. Ft.

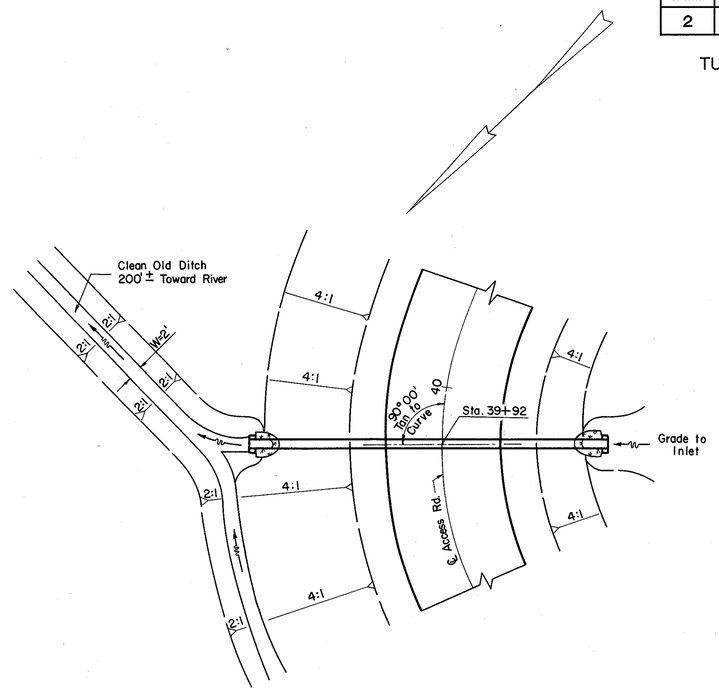
847
844.4
Sta. 2+00
847.3
E–3 = 14 Sq. Ft.

5 0 10 20 30
SCALE IN FEET

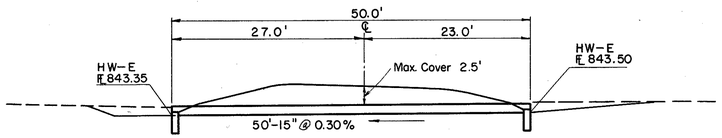
ESTIMATED QUANTITIES

E–3	Channel Excavation	114 C.Y.
I–1	18" Class A–1 Pipe, Sec. M–6.6 (a) or M–6.8 (b)	72 L.F.
I–2	Masonry	0.30 C.Y.
L–10	Sodding	4 S.Y.

STRUCTURE
PIPE CULVERT
ACCESS RD. STA. 30 + 75



Area = 3.7 Acres
Q_{25} = 7.8 C.F.S.



ESTIMATED QUANTITIES

E–3	Channel Excavation	16 C.Y.
I–1	15" Class A–1 Pipe, Sec. M–6.6 (a) or M–6.8 (b)	50 L.F.
I–2	Masonry	0.52 C.Y.
L–10	Sodding	4 S.Y.

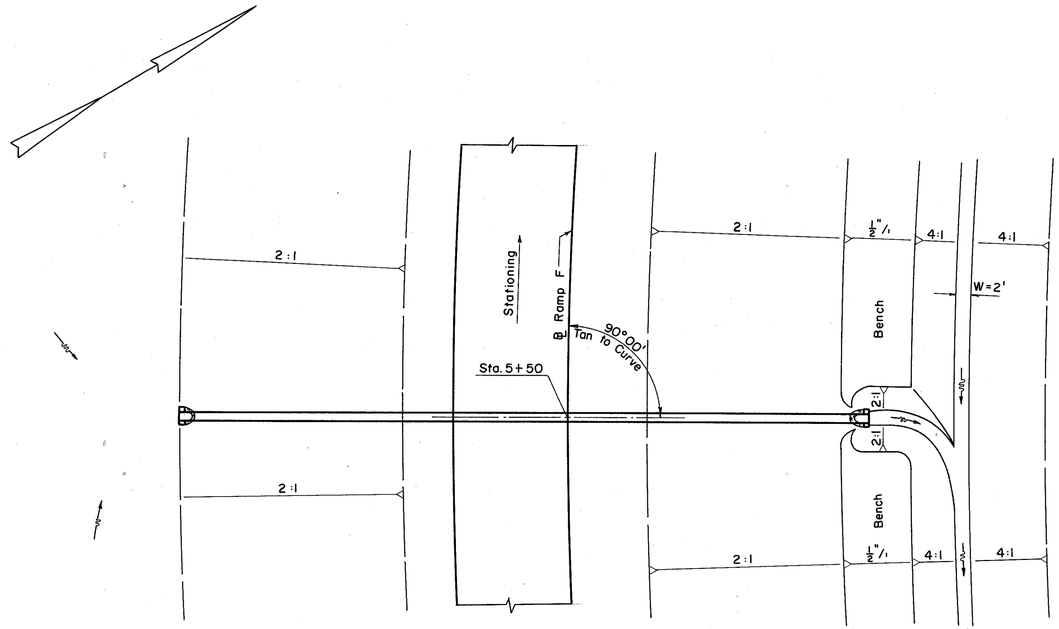
5 0 10 20 30
SCALE IN FEET

STRUCTURE
PIPE CULVERT, ACCESS RD.
STA. 30+75 & STA. 39+92

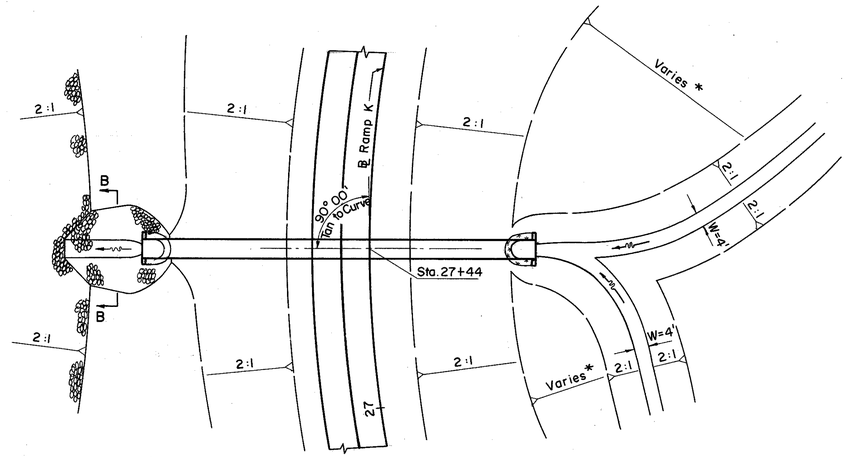
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

487
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93



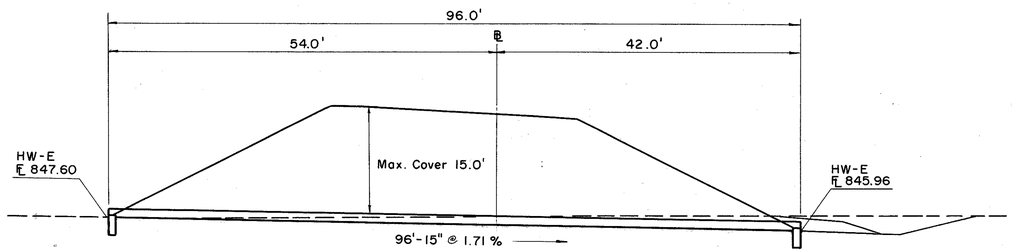
Section B-B
See Sheet 14
B.W. = 5.0'
S = 2:1
D = Varies



*SEE GRADING PLAN SHEET 381

SEE SHEET 21 FOR COATING AND PAVING OF 66" CLASS A-1 PIPE.

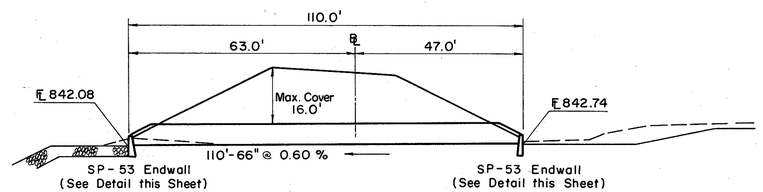
Area = 2 Acres
Q_{25} = 6 C.F.S.

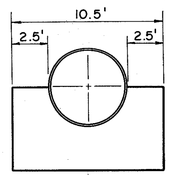


ESTIMATED QUANTITIES

I- 1	15" Class A-1 Pipe, Sec. M-6.6(c)	96 L.F.
I- 2	Masonry	0.52 C.Y.
L-10	Sodding	3 S.Y.

Area = 216 Acres
Q_{25} = 155 C.F.S.





SP-53 ENDWALL DETAIL
For other details see
Std. Drawing SP-53

ESTIMATED QUANTITIES

I- 1	66" Class A-1 Pipe, Sec. M-6.4 (g) Factory Coated and ¼ Field Paved 10-10 Gage	110 L.F.
I- 2	Masonry	5.60 C.Y.
I-10	Dumped Rock Channel Protection	28 C.Y.
L-10	Sodding	4 S.Y.

5 0 10 20 30
SCALE IN FEET

STRUCTURE
PIPE CULVERT
RAMP F STA. 5+50

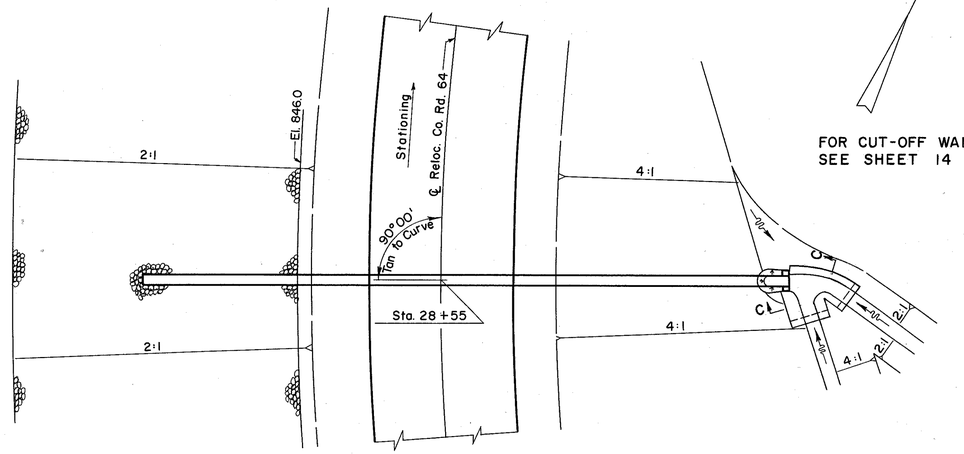
10 0 20 40 60
SCALE IN FEET

STRUCTURE
PIPE CULVERT
RAMP F STA. 5+50
& RAMP K STA. 27+44

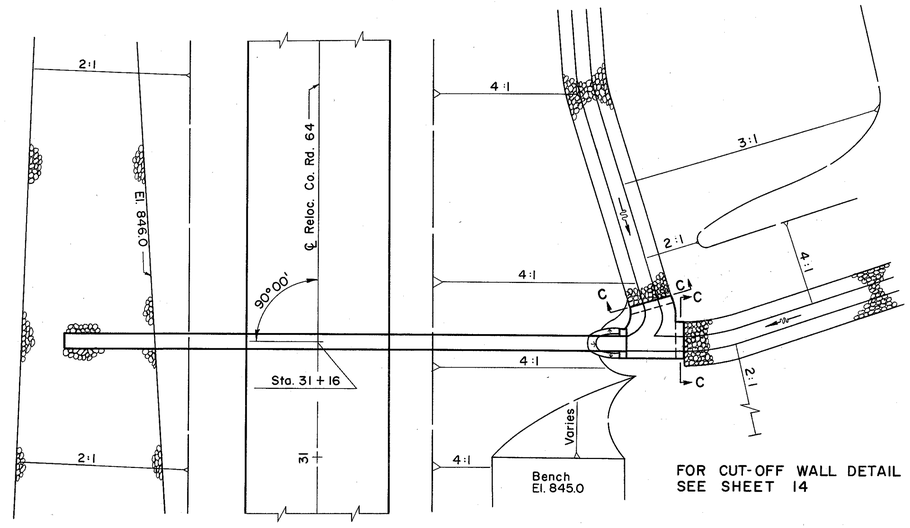
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

488
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

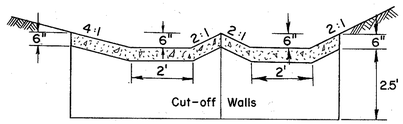


FOR CUT-OFF WALL DETAIL
SEE SHEET 14

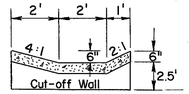


FOR CUT-OFF WALL DETAIL
SEE SHEET 14

Area = 7.7 Acres
Q_{10} = 12.0 C.F.S.

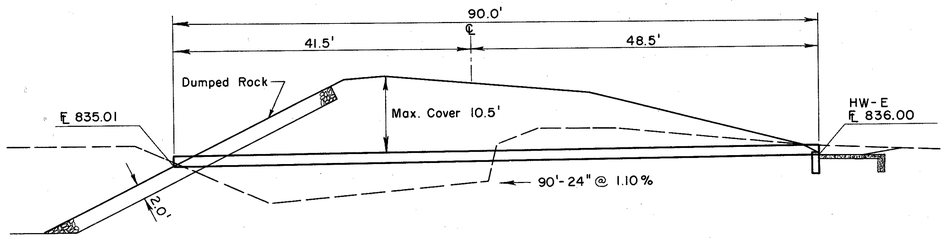


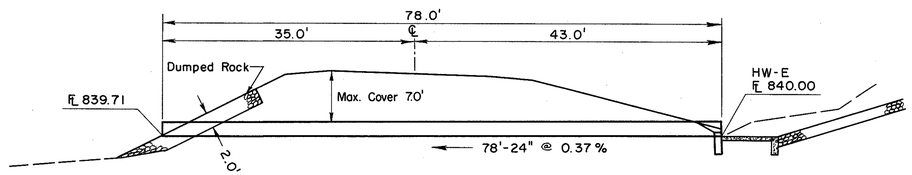
SECTION C-C



SECTION C-C

Area = 11.6 Acres
Q_{10} = 15.0 C.F.S.





ESTIMATED QUANTITIES

I- 1	24" Class A-1 Pipe, Sec. M-6.4(d)	90 L.F.
I- 2	Masonry	0.41 C.Y.
I-10	Riprap, 6" Reinforced	6 S.Y.
L-10	Sodding	2 S.Y.

28
92
118

ESTIMATED QUANTITIES

I- 1	24" Class A-1 Pipe, Sec. M-6.4(d)	78 L.F.
I- 2	Masonry	0.41 C.Y.
I-10	Riprap, 6" Reinforced	7 S.Y.
L-10	Sodding	3 S.Y.

5 0 10 20 30
SCALE IN FEET

STRUCTURE
PIPE CULVERT
RELOC. CO. RD. 64 STA. 28+55

5 0 10 20 30
SCALE IN FEET

STRUCTURE
PIPE CULVERT RELOC. CO. RD. 64
STA. 28+55 & STA. 31+16

GENERAL SUMMARY — Lighting Quantities

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
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LINE NO.	ITEM	BRIDGE: Norm. Partic.	BRIDGE: 100% State	TUS-36-1783 Normal Partic.	TUS-36-1783 100% State	RAMP J Over B&O R.R. Normal Partic.	RAMP J Over B&O R.R. 100% State	RAMP J Over Stillwater Creek Normal Partic.	RAMP J Over Stillwater Creek 100% State	TUS-36-1859 Normal Partic.	TUS-36-1859 100% State	TUS-36-1880 Normal Partic.	TUS-36-1880 100% State	TUS-250-21.76 Stillwater Creek Normal Partic.	TUS-250-21.76 Stillwater Creek 100% State	TUS-36-19.19 Normal Partic.	TUS-36-19.19 100% State	TUS-36-1957 Normal Partic.	TUS-36-1957 100% State
				TRENTON AVE. CONN Over Penna. R.R.															
1	625																		
2	625			X	X 2					1		3		1					
3	625											12						8	
4	625											12						8	
5	625			X	X 2					1		3		1					
6	625																		
7	625																		
8	625																		
9	625																		
10	625																		
11	625																		
12	625																		
13	625																		
14	625									1		3		1					
15	625			X	X 2														
16	625																		
17	625																		
18	625			~~88~~	~~88~~ 176					80		240		80				(1568)	
19	625																		
20	625											4						8	
21	625			X	X 2					1		4		1					
22	625			X	X 2					1		4		1					
23	625											8						14	
24	625	269		~~371~~	371	184		165		483		506		221		592		360	
25	625											258						280	
26	625																	(221)	~~296~~
27	625																		~~542~~ 426
28	625			~~70~~	40	20				40				20		40			
29	625																	(8570)	~~9003~~
30	625	550		~~766~~	766	380		330		1014		432		448				360	(842) ~~1184~~
31	625																		
32	625			X	X 2					1		3		1					
33	625																		
34	625	1		~~2~~	2	1				2				1		2		2	
35	625			X	X 2	1				4		3		1		4		2	
36	625																		
37	625																	(1651)	~~2060~~
38	625																		
39	625											764						688	
40	625											324				592		180	
41	625					1				3								1	
42	625											4						8	

LINE NO.	ROADWAY (LESS BRIDGES): Normal Partic.	100% State	Normal Partic.	100% State	Normal Partic.	100% State	Normal Partic.	100% State	TOTAL ROADWAY: Norm Partic	100% State	ITEM	UNIT	DESCRIPTION
	SHEET 489-D		SHEET 489-E		SHEET 489-F		SHEET 489-G						
1	2		1		3	3	2		11	8	625	EA.	LUMINAIRE, TYPE II WITH INTEGRAL 400 WATT MERCURY BALLAST
2	~~14~~ 15	~~6~~ 5	9		18	6	16	2	71	~~57~~ 58	625	EA.	LUMINAIRE, TYPE III WITH INTEGRAL 400 WATT MERCURY BALLAST
3											625	EA.	UNDERPASS LUMINAIRE - 175 WATT MERCURY
4											625	EA.	MERCURY VAPOR LAMP, 175 WATT (H-39-22 KB)
5	~~16~~ 17	~~6~~ 8	10		21	9	18	2	82	~~62~~ 66	625	EA.	MERCURY VAPOR LAMP, 400 WATT (H-33-1 CD)
6	1				1	2	1		5	3	625	EA.	GLARE SHIELDS
7						2	1	1	4	1	625	EA.	LIGHT POLE WITH 6' BRACKET ARM (Circular) DESIGN 11A 6B 32.5
8						1		1	2		625	EA.	LIGHT POLE WITH 8' BRACKET ARM (Circular) DESIGN 11A 8B 32.5
9	~~2~~ 8	~~6~~ 8	1		3		2		14	~~8~~ 9	625	EA.	LIGHT POLE WITH 12' BRACKET ARM (Circular) DESIGN 11A12B 32.5
10	14		9		16	4	15		58	54	625	EA.	LIGHT POLE WITH 15' BRACKET ARM (Circular) DESIGN 11A15B 32.5
11					2				2	2	625	EA.	LIGHT POLE WITH TWO 8' BRACKET ARMS (Circular) DESIGN 11A 8BB 32.5
12						2			2		625	EA.	LIGHT POLE WITH ONE 8' & ONE 15' BRACKET ARM (Circular) DESIGN 11A 8B 15B 32.5
13													
14											625	EA.	LIGHT POLE WITH 8' BRACKET ARM (Circular) DESIGN 11A 8B 30.0
15											625	EA.	LIGHT POLE WITH 12' BRACKET ARM (Circular) DESIGN 11A12B 30.0
16	~~16~~ 17	~~6~~ 8	10		21	9	18	2	82	~~65~~ 66	625	EA	LIGHT POLE FOUNDATION
17	~~22~~ 23	~~6~~ 8	10		29	9	18	2	96	~~79~~ 80	625	EA.	GROUND ROD UNITS
18	~~1,658~~ → ~~475~~ 365		974		1,922	828	1,680	160	7,697	~~6144~~ 6154 ~~1763~~ 1553	625	L.F.	POLE AND BRACKET CABLE, 1/C NO. 12 AWG, 600 V.
19	~~333~~ 6	3	1		53	2	24		116	~~114~~ 52	625	EA.	CONNECTOR KIT, TYPE I
20											625	EA.	ESNA CONNECTOR KIT, STYLE 64
21	~~16~~ 17	~~6~~ 8	10		21	9	18	2	82	~~65~~ 66	625	EA.	CONNECTOR KIT, TYPE II
22	~~16~~ 17	~~6~~ 8	10		21	9	18	2	82	~~65~~ 66	625	EA.	CONNECTOR KIT, TYPE III
23	16		14		26		18		74	74	625	EA.	CONNECTOR KIT, TYPE IV
24											625	L.F.	CONDUIT - 2 INCH RIGID GALVANIZED STEEL IN BRIDGES
25											625	L.F.	CONDUIT - 1¼ INCH RIGID GALVANIZED STEEL IN BRIDGES
26	~~296~~	75			380		86		762	~~687~~ 762	625	L.F.	CONDUIT - 2 INCH RIGID GALVANIZED STEEL OFF STRUCTURES
27	~~542~~ 426	116	89		1,073	60	778		2,542	~~2482~~ 2326 ~~776~~	625	L.F.	CONDUIT - 1-WAY, 3 INCH, GALV. STEEL OR W.I. AS PER SPECIFICATIONS.
28										~~3295~~ 3295 ~~1430~~	625	L.F.	EXPOSED CONDUIT SYSTEM ON STRUCTURE
29	~~9003~~	~~923~~ 450	2819		15,990	150	5,546	357	34,355	~~33358~~ 33358 ~~937~~	625	L.F.	DUCT CABLE - 2/C NO. 4 AWG, 600 V.
30	~~1184~~	342	129		1,546	80	834		3,773	~~3331~~ 3331 ~~422~~	625	L.F.	CIRCUIT CABLE - 1/C NO. 4 AWG, 600V.
31					5		4		9	9	625	EA.	MARKER
32	~~16~~ 17	~~6~~ 8	10		21	9	18	2	82	~~63~~ 66 ~~17~~ 16	625	EA.	CIRCUIT AND LIGHT POLE IDENTIFICATION
33	1				2		1		4	4	625	EA.	SERVICE POLE AND CONTROL EQUIP MENT
34											625	EA.	BRIDGE STRUCTURE GROUNDING SYSTEM
35											625	SET	LIGHT POLE ANCHOR BOLTS (L) FOR STRUCTURE (SET OF 4)
36	~~20~~ 24	4	7		42	1	25		99	~~94~~ 99	625	EA.	PULL BOX, 18" I.D. FIBER - TYPE II COVER x 5
37	~~2060~~	~~852~~ 449	831		4,324	130	1,755	337	9,886	~~8567~~ 8,576 ~~1319~~	625	L.F.	TRENCHING 2' DEPTH
38	6,804		1848		12,181		3,591		24,424	24,424	625	L.F.	TRENCHING 4'-6" DEPTH
39											625	L.F.	UNDERPASS LUMINAIRE CABLE, 1/C NO. 12 AWG, 600V.
40					261		199		460	460	625	L.F.	PULL WIRE, NO. 10 GALVANIZED STEEL
41											625	EA.	STRUCTURE JUNCTION BOX
42											625	EA.	ESNA CONNECTOR KIT, STYLE 20

ALTERNATE BID ITEMS

43																				2	1	1	4	1	3	625	EA.	Light Pole with 6' Bracket Arm-Design 11AGB325 (Other than Circular)
44																				1		1	2		2	625	EA.	Light Pole with 8' Bracket Arm-Design 11A8B 325 (Other than Circular)
45																			3	5	1		3		2	14	9	5	625	EA.	Light Pole with 12' Bracket Arm-Design 11A12B 32.5 (Other than Circular)
46																			14		9		16	4	15	58	54	4	625	EA.	Light Pole with 15' Bracket Arm-Design 11A15B 32.5 (Other than Circular)
47																							2			2	2		625	EA.	Light Pole with two (2) 8'-0" Bracket Arms-Design 11A8BB325 (Other than Circular)
48																								2		2		2	625	EA.	Light Pole with one (1) 8' and one (1) 15' Bracket Arm-Design 11ABB15B325 (Other than Circular)
49											1		3		1														625	EA.	Light Pole with 8' Bracket Arm-Design 11A8B 300 (Other than Circular)
50				1	1																								625	EA.	Light Pole with 12' Bracket Arm-Design 11A 12B 300 (Other than Circular)

Revised 4-15-66 C.E.H.

LIGHTING PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-16.63

LIGHTING NOTES

GENERAL

All reference herein to "The Director" refers to those positions as outlined in Section 101.171 of the Specifications.
These notes and specifications supplement The State of Ohios Construction and Material Specifications, Items 625, dated Jan. 1, 1965 for the materials used and for the installation of the Roadway, Bridge, Underpass, Illuminated sign lighting system for the entire project. The type and location of lights shall be as indicated. The cable installation generally shall be direct burial duct cable system. Under paving cables shall be rigid ferrous metal conduit. Cable to serve luminaires on structures shall be installed in rigid metal conduit. Specifications by these notes shall take precedence over those shown in the above noted specification book. Power will be supplied by the Ohio Power Co., Canton, Ohio.

STEEL LIGHT POLES

Steel light poles shall conform to Section 625.05. Shaft fittings must be interchangeable with those used by the State in adjoining projects.

Shaft Transverse Section Configuration

1. Bid items as shown and detailed are for poles with shafts of Circular Transverse Section.
2. Alternate bid items are for poles with shafts of transverse section other than circular. Specify configuration bid.
3. All shafts throughout the project shall have the same Transverse Section Configuration.

All pole hardware shall be stainless steel, galvanized steel, or Everdur.
All poles shall be plumbed by using galvanized steel shims.
The base shall be provided with four (4) holes to receive the anchor bolts. Four (4) holes for ventilation located in the body of the base directly behind each anchor bolt hole, and four (4) tapped holes for attaching the four bolt covers furnished.

Anchor Bolts

Four high grade steel anchor bolts fitted with hex nuts shall be furnished for each pole. Each anchor bolt shall have an "L" bend at the bottom and be threaded at the top end. Threaded ends and nuts shall be galvanized in accordance with ASTM A-153 with galvanizing extending 1" to 4" beyond threads. Anchor bolts shall conform to ASTM 107, grade 1035 Special Quality, and shall comply with the following minimum requirements: Bolt stock shall conform with ASTM Spec. 9-20 and nominal bar size shall equal nominal bolt size.

SIZE	YIELD p.s.i.	ULTIMATE p.s.i.
3/4" thru 1 1/2"	46000	67000
1 3/4" thru 4"	42000	63000

LIGHT POLE FOUNDATIONS

Light Pole Foundations shall conform to Section 625.06
All material required to complete pole foundations on structures shall be included in the price bid for the particular type of concrete used on the structure.
The Contractor shall provide anchor bolts and conduits in the concrete blisters outside the handrails for mounting the lighting units on bridge structures, where indicated on the plans, the bases shall be complete with anchor bolts, anchor nuts, lock nuts, reinforcing, entrance conduits, and grounding. Extend a No. 1/0 7 strand, bare copper grounding wire from one anchor rod of each pole to girder or beam flange and connect each end by exothermic weld. Provisions for future light poles shall be as shown on details.

LUMINAIRES shall conform to Section 625.07 and further:
Luminaires shall be General Electric M-400, Westinghouse OV-25, or Line Material Unistyle or approved equal.
Except for special application only the integral type ballast having dual voltage rated for 240/480 Volt operation shall be used.
Underpass Luminaires shall be provided at locations shown on the plans and shall be connected to the roadway lighting feeders in accordance with the details. The luminaires shall be served from pull boxes located under the structure through rigid galvanized conduits, junction boxes, flexible conduit and two single conductor No. 8 RHW wires. Cable connector kits of the type specified on the plan shall be used to make connections.
The conduit and luminaire wiring shall be grounded by using a grounding rod as indicated at pull boxes.
Bonding straps shall be placed of all fittings in order to insure a proper ground at the pull box. Luminaire shall be Holophane Co., Inc. Catalog No. U488-480-06.

*

LAMPS shall conform to Section 625.08 and further:
Lamps shall be General Electric Bonus Line, Westinghouse Lifeguard, Sylvania Banner Line, or approved equal.

PULL BOXES shall conform to Section 625.11 and further:
Use 18" I.D. Fiber Pull Boxes, Type II cover.

PAYMENT FOR FURNISHING AND INSTALLATION OF UNDERPASS LUMINAIRES will be made at the contract unit price bid for each item 625, "UNDERPASS LUMINAIRE, 175 Watt Mercury", including ballast completely assembled in place, completed and accepted including the luminaire with cast guard, inbuilt ballast, supports, 3/4" flexible and rigid conduits, reducers, bondings cast iron junction boxes, clamps, installation, connections, No. 8 Coble, and all incidentals required.

TRENCH shall conform to Section 625.12 and further:

At those locations where a 4'-6" trench depth prevails in the vicinity of a structure the depth shall be transitioned in a length of 20 feet to meet the required depth of rigid galvanized conduit on the structure. In addition, where the trench depth changes on speed change lane to mainline depth, use the same transition.
Top of ground rods in a 4'-6" trench shall be driven to a point 18 to 20 inches below grade to facilitate exothermic welding of the insulated ground wire to the rod.

CONDUIT shall conform to Section 625.13 and further:

Conduit - on Structures 713.04 Type I where encased in concrete or 713.04 Type II or Type III where attached externally. Conduits on structures shall be placed as shown on the plans. Expansion couplings shall be of such size as to provide for up to four inches of movement at all expansion joints. Expansion fittings shall be similar to OZ. Co. Type AX, Hope Electrical Co., Spring City Co. type AF, or approved equal. Conduit where surface mounted shall be supported at not over 6-foot intervals by one-hole malleable steel clamps. Flexible conduit where indicated shall be joint industry conference approved, polyvinylchloride jacketed, liquid-tight type. Flexible conduit sections shall be complete with approved fittings and bonding jumpers.

CABLE shall conform to Section 625.14 and further:

All cable shall be 1/c 600 volt General Electric cable No. SI-58063 or approved equiv. as manufactured by Rome, Simplex, Phelps Dodge, Kaiser or approved equal.

DUCT-CABLE shall conform to Section 625.15 and further:

In no case shall the nominal inside diameter of the duct be less than 1 1/2", and shall not have less than a 21" bending radius.

SERVICE POLE shall conform to Section 625.18 and further:

The Contractor shall furnish and install a 35'-0" Class 5 full-length penta treated pole for supporting service equipment and to receive the Utility Company's service loop. The pole shall be pressure-treated Southern Pine, Ponderosa Pine, Douglas Fir, Lodgepole Pine, Western Fir or Northern White Cedar. A grounded anchor guy, guy guard, and anchor assembly shall be installed to resist the service loop pull.
Conduits shall be terminated on the panel in hubs.
Service - The Contractor shall make all necessary arrangements for Secondary Power from the Ohio Power Co. The service to be supplied to the service equipment for the roadway lighting will be 480 volts, one side grounded.

CONTROL CENTER shall conform to Section 625.19 and further: As shown on plans and details.

ILLUMINATED SIGNS

At each roadway illuminated sign, the cable duct shall be pulled through the 3" fiber duct to the surface of the foundation. Sufficient wire shall be provided to connect to the cable connectors at each unit.

LIGHTING DESIGN DATA

ROADWAY	MAINLINE 24' PAVEMENT	RAMPS 16' PAVEMENT	UNDERPASS LUMINAIRES
Traffic	Heavy	Heavy	Heavy
Pedestrian	None	None	Light
Pave. Reflect.	10%	10%	10%
Avg. Initial Intensity	1.2	1.2	2.0
Min. Initial Intensity	0.3	0.3	--
Luminaire Mtg. Hgt.	32'-6"	32'-6"	14'-0" min.
Luminaire Overhang	2'-0" nom.	2'-0" nom.	--
Lamp Designation	H-33-1CD	H-33-1CD	H-39-22KB
Initial Lamp Output (3)	19,200	19,200	8000
Photometric Data	E-359-84 (1)	E-359-95 (1)	18843-DS (2)
Design Spacing	191'	218'	30'-0"

1. Line Material Test Chart Number.
2. Holophane Test Chart Number.
3. Corrected for Lamp Operating Position.

STRUCTURE GROUNDING

Steel Structure. This item shall consist of furnishing and installing a complete grounding system of one outside beam on the fixed piers of bridges, where indicated on the plans. Grounds shall consist of a bare copper coil under the concrete footings, leads to above piers, and welded connections to superstructure steelwork. A 25-foot length of bare copper wire shall be looped and placed under the bottom of the footing and two layers of tar paper placed to cover the loop before concrete is placed, or if steel piles or steel-jacketed concrete piles are used at the structure the grounding wire may be exothermically welded to at least two piles. The lead connecting the closed loop under the footing to the superstructure steel shall be as short and direct as practicable. Each grounding conductor from the poles shall be exothermically welded to a beam flange, grounding shall be accomplished as soon as the material to which the grounding wires are to be attached is in place. All disturbed painting shall be restored.

Concrete Structures. On reinforced concrete structures, grounding shall be accomplished by running a jumper from the light pole grounding hole as shown on the plan to the conduit. Grounding shall then be accomplished by placing bonding straps at each fitting encountered along the run of conduit using exothermic welds and finally attaching a ground wire to a ground rod at the nearest pull box. A continuous ground, by use of jumpers, shall be made across the entire structure.

*Underpass Lighting Systems shall be grounded with ground rods located at pull boxes servicing the system.

STRUCTURE JUNCTION BOXES shall conform to Section 625.21 and further: Cast Iron Galvanized Boxes shall be used as manufactured by "O-Z", "T&B", Russell & Stoll or approved equal, except that covers may be cast aluminum.

Mechanical Properties for Anchor Base Poles

Pole Size	ANCHOR BOLTS: Bolt Circle in Inches	ANCHOR BOLTS: Proj. above found. in In.	ARM LENGTH in Feet	Elastic Def'l. Rate In. per 100 LBS.	AT 2/3 OF YIELD: Load in LBS.	AT 2/3 OF YIELD: Total Def'l. in Inches	AT 2/3 OF YIELD: Perm. Set in Inches	AT YIELD STRESS: Load in LBS.	AT YIELD STRESS: Total Def'l. in Inches	AT YIELD STRESS: Perm. Set in Inches	DESIGN NUMBER
9"x4.87"x 29'-6"	12 1/2"	3"	15	2.16	659	14.73	0.5	989	24.00	2.64	11A15 B 32.5
9"x4.87"x 29'-6"	12 1/2"	3"	12	2.16	659	14.73	0.5	989	24.00	2.64	11A12 B 32.5
9"x4.87"x 29'-6"	12 1/2"	3"	8 & 15	2.16	659	14.73	0.5	989	24.00	2.64	11A15 BB 32.5
8"x4.22"x 27'-0"	11"	2 5/8"	12	2.37	568	13.96	0.5	852	22.71	2.52	11A12 B 30.0
8"x4.22"x 27'-0"	11"	2 5/8"	8	2.37	568	13.96	0.5	852	22.71	2.52	11AB B 30.0
8"x3.87"x 29'-6"	11"	2 5/8"	6	3.32	517	17.66	0.5	776	28.84	3.08	11A6 B 32.5
8"x3.87"x 29'-6"	11"	2 5/8"	8	3.32	517	17.66	0.5	776	28.84	3.08	11A8 BB 32.5
8"x3.87"x 29'-6"	11"	2 5/8"	8 & 8	3.32	517	17.66	0.5	776	28.84	3.08	11A8 BB 32.5

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TABULATION OF LIGHT POLES OTHER THAN STANDARD

LIGHT POLE NUMBER	BRACKET ARM LENGTH	TYPE LUMINAIRE	*POLE & TRENCH PLACEMENT
A1-3	12'	III	II'**
A1-2	12'	III	II'**
A1-1	12'	III	II'**
A2-1	12'	III	II'**
A2-6	12'	III	II'**
A2-7	15'	III	II'**
A2-8	12'	III	II'**
A2-10	12'	III	II'
A2-11	12'	III	II'
A2-12	12'	III	II'
A2-13	12'	III	II'
A2-17	15'	III	II'**

*Location of pole and 2'-0" trench from face of curb.

**Location of pole and 4'-6" trench at shoulder P.I.

GENERAL NOTES

ALL LIGHT POLES WITH MAINLINE STATIONS SHALL HAVE A 15 FOOT BRACKET ARM AND A TYPE III LUMINAIRE, INCLUDES M AND SPEED CHANGE LANES TO NOSE. POLE DESIGN NUMBER II A 15 B 32.5.

ALL LIGHT POLES ON RAMPS SHALL HAVE A 12 FOOT BRACKET ARM WHEN PLACED RIGHT OF TRAFFIC, POLE DESIGN NUMBER II A 12 B 32.5 AND A TYPE II LUMINAIRE UNLESS OTHERWISE NOTED IN TABULATION.

ALL LIGHT POLES ON RAMPS SHALL HAVE AN 8 FOOT BRACKET ARM WHEN PLACED LEFT OF TRAFFIC, POLE DESIGN NUMBER IIA 8B 32.5 AND A TYPE II LUMINAIRE UNLESS OTHERWISE NOTED IN TABULATION.

ALL OTHER LIGHT POLES SHOWN ON THESE PLANS SHALL USE THE BRACKET ARM & LUMINAIRE AS SHOWN ON TABULATION OF BRACKET ARMS & LUMINAIRE TYPES. LIGHT POLES SHALL BE AS PER STANDARDS FOR RESPECTIVE BRACKET ARMS.

ALL BRIDGES SHALL HAVE A LIGHT POLE WITH NOMINAL HEIGHT OF 27'-0"; MOUNTING HEIGHT OF 30'-0" WITH BRACKET ARMS AS SHOWN ON TABULATION.

ALL M LIGHT POLE FOUNDATIONS SHALL BE LOCATED 13'-6" BACK OF EDGE OF PAVEMENT WITH A 24" DEPTH TRENCH LOCATED 10'-0" FROM EDGE OF PAVEMENT.

ALL RAMP & SPEED CHANGE LANES LIGHT POLE FOUNDATIONS SHALL BE LOCATED AT P.I. OF SHOULDERS LT. OR RT. AS PER PLAN, WITH 54" DEPTH TRENCH ALSO AT P.I. OF SHOULDERS.

SEE CONSTR. PLAN SHEETS FOR LOCATION OF GUARD FENCE.

GROUND THOSE PULL BOXES WITH RIGID GALVANIZED STEEL CONDUIT AS DETAILED ON SHEET 489-I.

NOTES

For dimensions and lighting structural details on Structure No. TUS-36-1783 See Sheet 490.

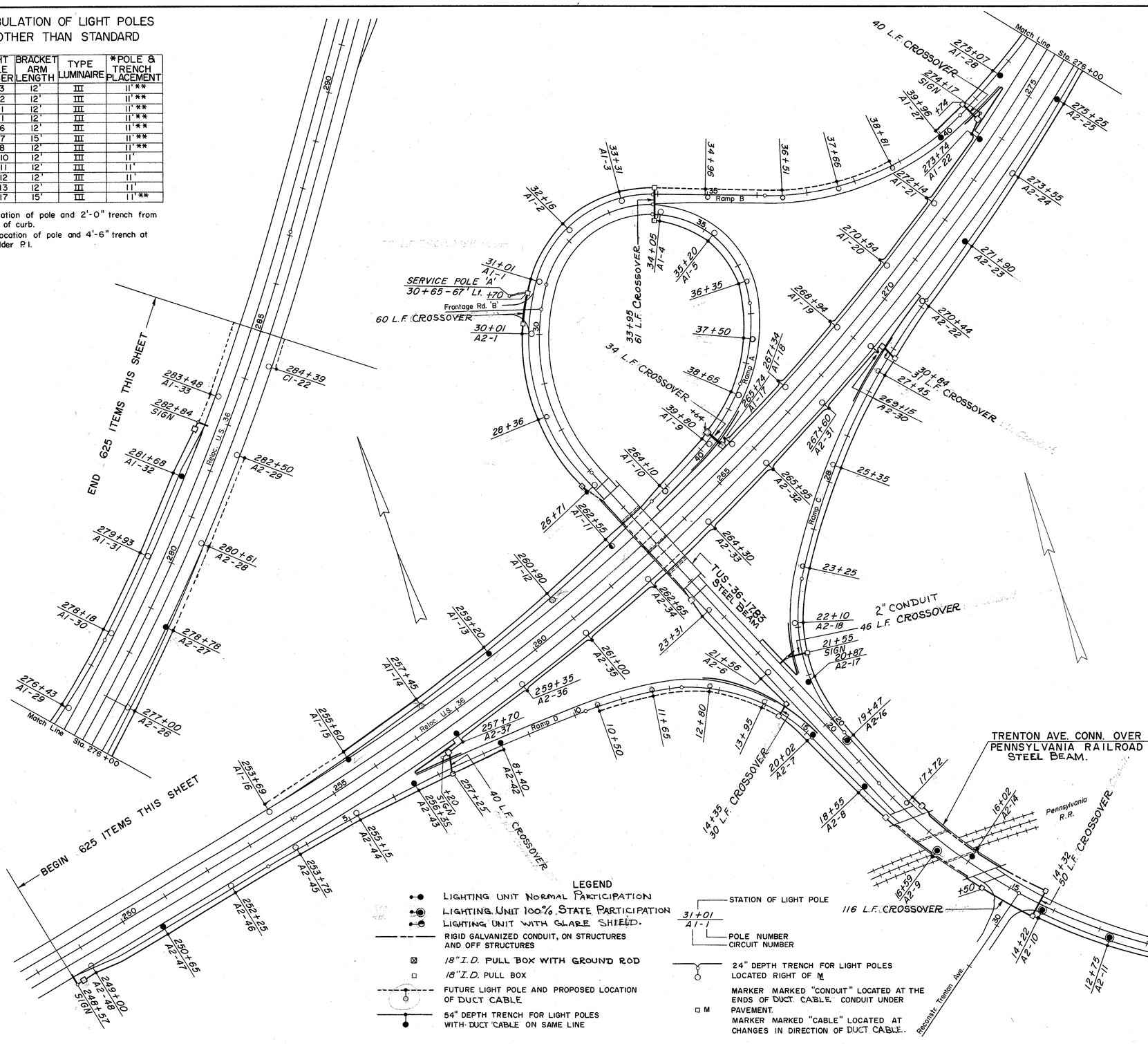
For dimensions and lighting structural details on Structure - Trenton Ave. Conn. over Penna. R.R., See Sheet 499.

Light poles on Structure - Trenton Ave. Conn. over Penna. R.R. are design number II A 12 B 30.0.

See Sheet 296 for Signs.

Conduit, off structures, to be located at shoulder P.I. at both ends of Structure No. TUS-36-1783

Conduit, off structures, to be located at shoulder P.I. both ends, except at South Abutment of Rt. structure which will be located inside of guard rail, of Structure - Trenton Ave. Conn. over Penna. R.R.



LEGEND

- LIGHTING UNIT NORMAL PARTICIPATION
- LIGHTING UNIT 100% STATE PARTICIPATION
- LIGHTING UNIT WITH GLARE SHIELD.
- RIGID GALVANIZED CONDUIT, ON STRUCTURES AND OFF STRUCTURES
- 18"I.D. PULL BOX WITH GROUND ROD
- 18"I.D. PULL BOX
- FUTURE LIGHT POLE AND PROPOSED LOCATION OF DUCT CABLE
- 54" DEPTH TRENCH FOR LIGHT POLES WITH DUCT CABLE ON SAME LINE
- STATION OF LIGHT POLE
- 31+01 / A1-1: POLE NUMBER / CIRCUIT NUMBER
- 24" DEPTH TRENCH FOR LIGHT POLES LOCATED RIGHT OF M
- M MARKER MARKED "CONDUIT" LOCATED AT THE ENDS OF DUCT CABLE. CONDUIT UNDER PAVEMENT.
- MARKER MARKED "CABLE" LOCATED AT CHANGES IN DIRECTION OF DUCT CABLE.

LIGHTING PLAN
TRENTON AVE. INTERCHANGE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

489-E
662

TUSCARAWAS COUNTY
TUS-36-16.63

NOTES:

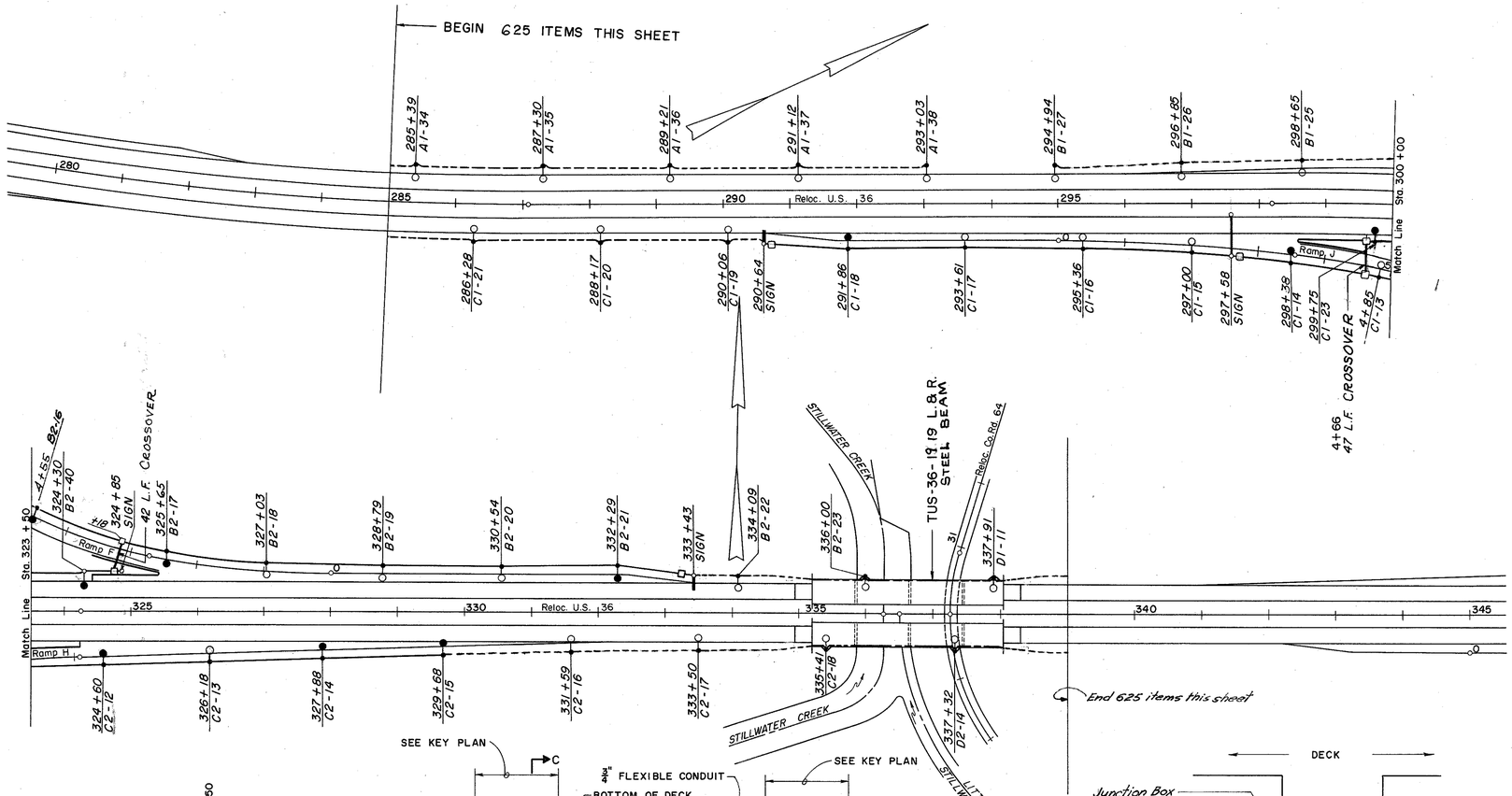
See Sheet 296 for signs.

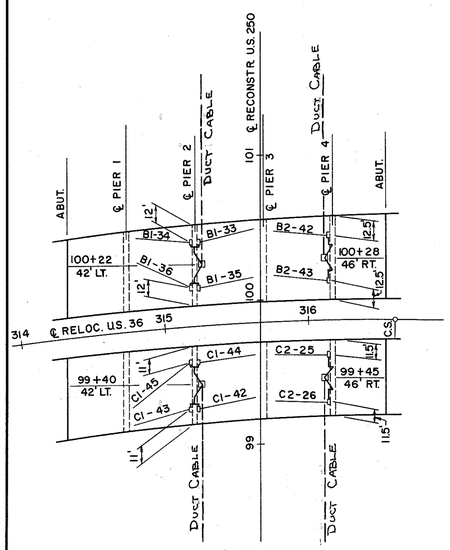
Light poles located on Structure No. TUS-36-1919 are Pole Design No. 11A8B30.0.

Conduit, off structures, to be located at shoulder P.I. west of Structure No. TUS-36-1919, and inside guard rail east of these structures, see detail sheet.

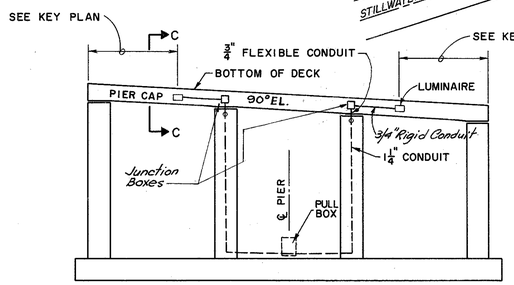
PULL wire to be left in place between the light poles on the structure , No. TUS-36-1919, with sufficient coil of wire for future use.

For dimension and Lighting Structural Details of Structure No. TUS-36-1919. See Sheet 577.

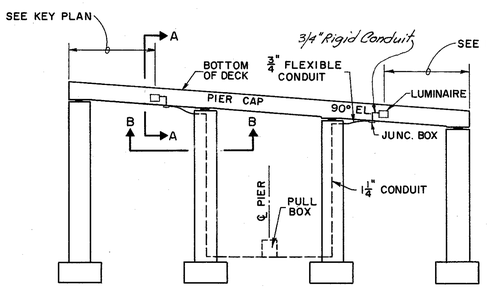




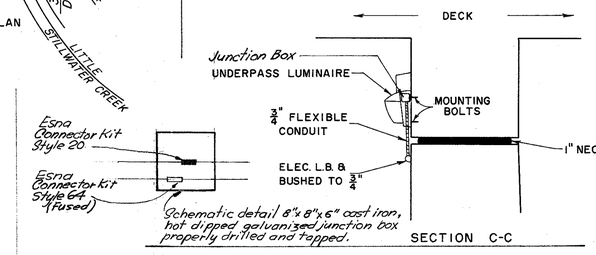
KEY PLAN
TUS-36-18.80
See Sheet 489-F

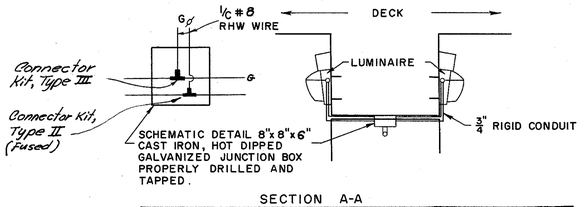


ELEVATION
PIER #4 BOTH BRIDGES



ELEVATION
PIER #2 BOTH BRIDGES





NOTES:

Slope all conduit to drain toward Pull Box.

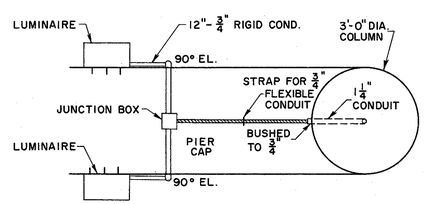
Minimum 0'-4" cover of concrete at top of column where conduit exists.

See Pull Box Schematic for hardware.

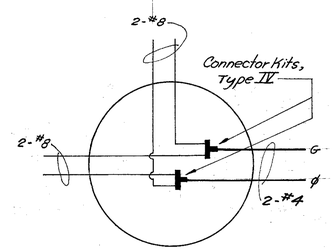
Top mounting bolts of all Underpass Luminaire to be located 14" above bottom of pier cap.

For dimensions of piers & caps on Structure No. TUS-36-1880 See Sheet 543.

Locate 1¼" Rigid Galv. Conduit at the 2nd. and 3rd. columns of all piers.



SECTION B-B



SCHEMATIC DIAGRAM
PULL BOXES UNDER U.S. 250 BRIDGE

50 0 100 200 300
SCALE IN FEET

U.S. 250 UNDERPASS LUMINAIRE PLACEMENT

LIGHTING PLAN
U.S. 250 INTERCHANGE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-16.63

NOTES:

Conduit, off structure, to be located inside guard rail both ends of structure No. Tus-36-1859 Right.

Conduit, off structure, to be located at shoulder P.I. at both ends of the following structures:
Ramp J over Stillwater Creek
U.S. 250 over Stillwater Creek, new structure
Ramp J over B & O R.R.
TUS-36-1859 Left.
TUS-36-1880

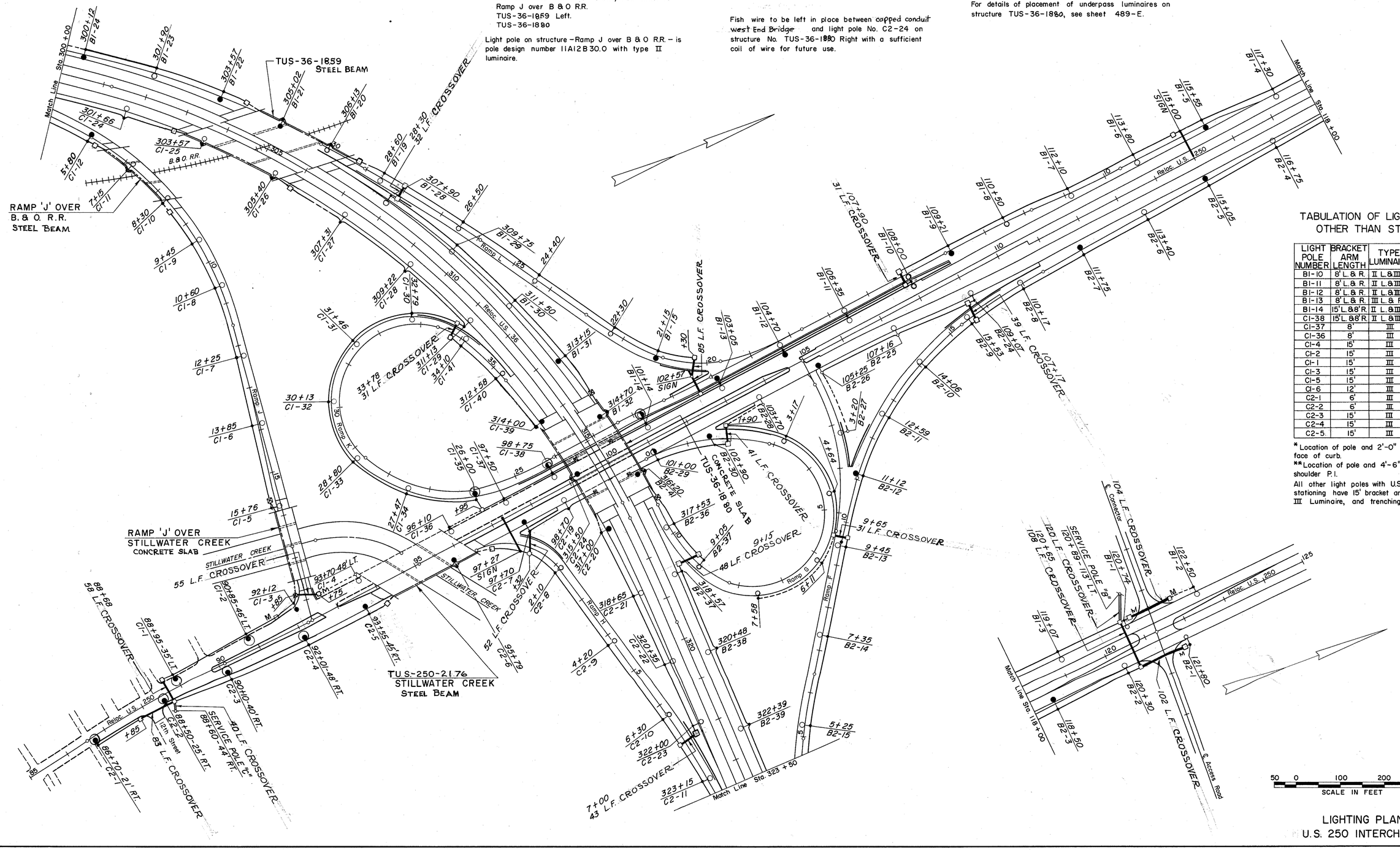
Light pole on structure - Ramp J over B & O R.R. - is pole design number 11A12B30.0 with type II luminaire.

Light pole on structure No. TUS-36-1859, structure No. TUS-36-1880 and U.S. 250 over Stillwater Creek, (new structure) are pole design number 11A8B30.0.

Fish wire to be left in place between capped conduit west End Bridge and light pole No. C2-24 on structure No. TUS-36-1880 Right with a sufficient coil of wire for future use.

For dimensions and Lighting Structural Details on:
Ramp J over B & O R.R., see sheet 509
Ramp J over Stillwater Creek, see sheet 518
U.S. 250 over Stillwater Creek, new, see sheet 569
No. TUS-36-1859, see sheet 526
No. TUS-36-1880, see sheet 543

For details of placement of underpass luminaires on structure TUS-36-1880, see sheet 489-E.



TABULATION OF LIGHT POLES OTHER THAN STANDARD

LIGHT POLE NUMBER	BRACKET ARM LENGTH	TYPE LUMINAIRE	*POLE & TRENCH PLACEMENT
B1-10	8' L. & R.	II L.& III R.	6'
B1-11	8' L.& R.	II L.& III R.	6'
B1-12	8' L.& R.	II L.& III R.	6'
B1-13	8' L.& R.	III L.& R.	6'
B1-14	15' L.&8' R.	II L.& III R.	6'
C1-38	15' L.&8' R.	II L.& III R.	6'
C1-37	8'	III	6'
C1-36	8'	III	6'
C1-4	15'	III	OFFSET
C1-2	15'	III	OFFSET
C1-1	15'	III	OFFSET
C1-3	15'	III	II'**
C1-5	15'	III	II'**
C1-6	12'	III	II'**
C2-1	6'	III	OFFSET
C2-2	6'	III	OFFSET
C2-3	15'	III	OFFSET**
C2-4	15'	III	OFFSET**
C2-5.	15'	III	OFFSET**

*Location of pole and 2'-0" trench from face of curb.
**Location of pole and 4'-6" trench at shoulder P.I.
All other light poles with U.S. 250 stationing have 15' bracket arms with I.E.S. III Luminaire, and trenching as per plan.

SCALE IN FEET 50 0 100 200 300

LIGHTING PLAN
U.S. 250 INTERCHANGE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-16.63

TABULATION OF LIGHT POLES OTHER THAN STANDARD

LIGHT POLE NUMBER	BRACKET ARM LENGTH	TYPE LUMINAIRE	*POLE & TRENCH PLACEMENT
D2-1	15'	III	12'
D2-2	6'	III	3'
D2-3	6'	III	3'
D1-18	15'	III	12'
D1-19	15'	III	12'
D1-1	8'	III	6'**
D2-31	12'	III	10'**
D2-32	12'	III	10'**

*Location of pole and 2'-0" trench from face of curb.
**Location of pole and 2'-0" trench at shoulder P.I.

NOTES:

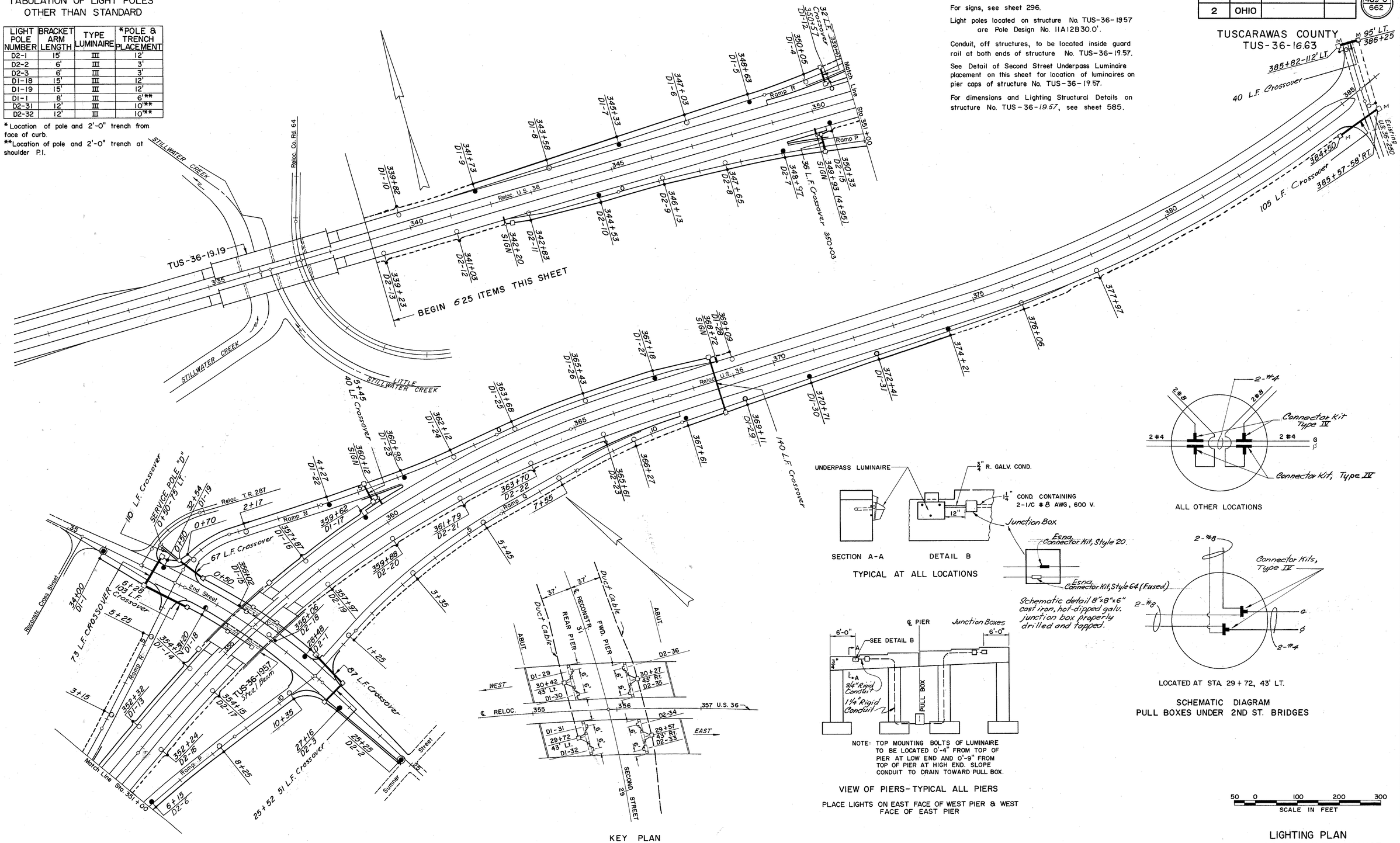
For signs, see sheet 296.

Light poles located on structure No. TUS-36-19.57 are Pole Design No. 11A12B30.0'.

Conduit, off structures, to be located inside guard rail at both ends of structure No. TUS-36-19.57.

See Detail of Second Street Underpass Luminaire placement on this sheet for location of luminaires on pier caps of structure No. TUS-36-19.57.

For dimensions and Lighting Structural Details on structure No. TUS-36-19.57, see sheet 585.



KEY PLAN

ALL OTHER LOCATIONS

TYPICAL AT ALL LOCATIONS

Schematic detail 8"x8"x6" cast iron, hot-dipped galv. junction box properly drilled and tapped.

LOCATED AT STA. 29 + 72, 43' LT.

SCHEMATIC DIAGRAM
PULL BOXES UNDER 2ND ST. BRIDGES

NOTE: TOP MOUNTING BOLTS OF LUMINAIRE TO BE LOCATED 0'-4" FROM TOP OF PIER AT LOW END AND 0'-9" FROM TOP OF PIER AT HIGH END. SLOPE CONDUIT TO DRAIN TOWARD PULL BOX.

VIEW OF PIERS-TYPICAL ALL PIERS

PLACE LIGHTS ON EAST FACE OF WEST PIER & WEST FACE OF EAST PIER

50 0 100 200 300
SCALE IN FEET

SECOND STREET UNDERPASS LUMINAIRE PLACEMENT

LIGHTING PLAN
2ND STREET INTERCHANGE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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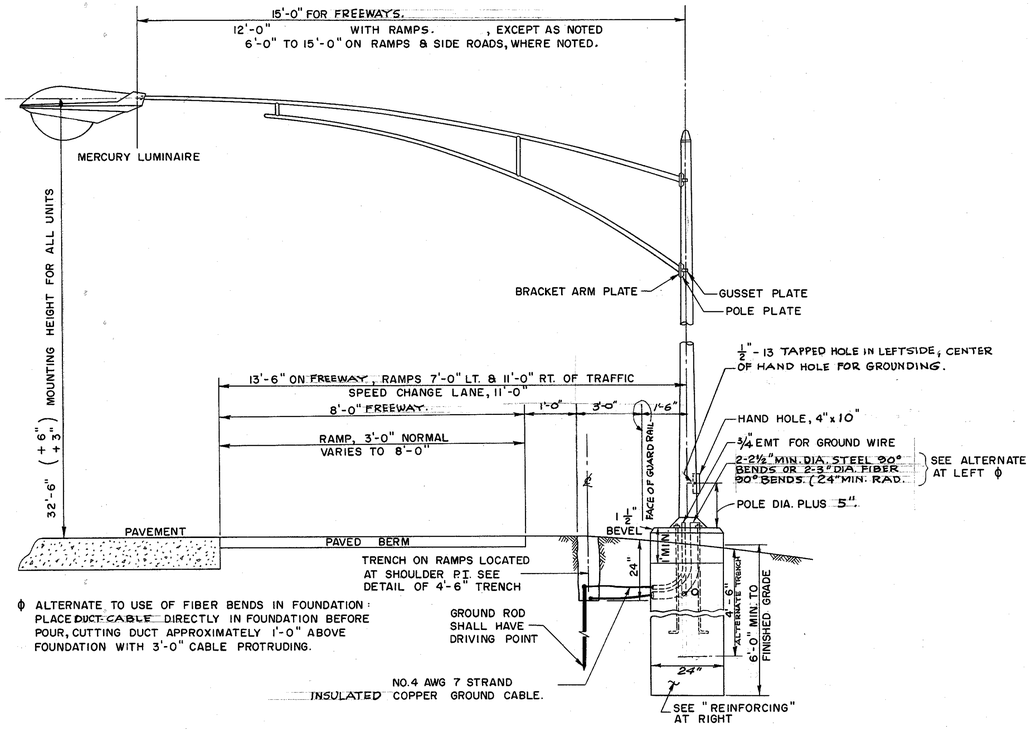
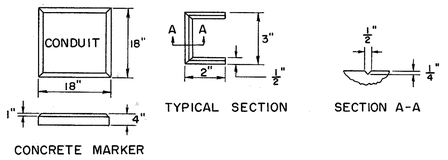
TUSCARAWAS COUNTY
TUS-36-16.63



ϕ ALTERNATE TO USE OF FIBER BENDS IN FOUNDATION: PLACE ~~DUCT CABLE~~ DIRECTLY IN FOUNDATION BEFORE POUR, CUTTING DUCT APPROXIMATELY 1'-0" ABOVE FOUNDATION WITH 3'-0" CABLE PROTRUDING.

LIGHT POLE & FOUNDATION DETAILS
(Not to Scale)



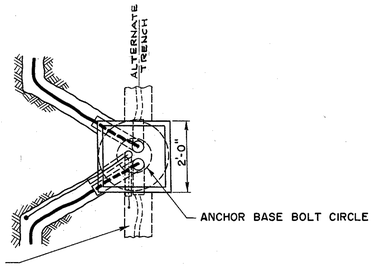
CONCRETE MARKER

TYPICAL SECTION

SECTION A-A

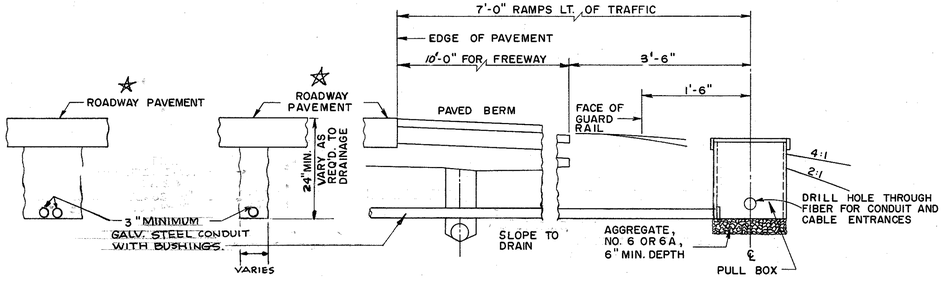
IMPRESS THE WORD:
"CONDUIT" TO INDICATE CONDUIT. (INITIAL AND FUTURE LIGHTING.)
"CABLE" TO INDICATE ABRUPT CHANGE IN DIRECTION OF ~~DUCT CABLE~~ OR CABLE.

MARKER DETAILS



HORIZONTAL LOCATION OF TRENCH EXCEPT ON MAIN-LINE. SEE TYPICAL CABLE-DUCT TRENCH

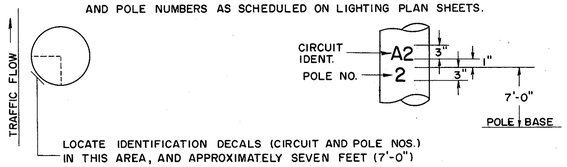
ANCHOR BASE TYPE
FOR MULTIPLE CIRCUITS



TYPICAL CONDUIT CROSSOVER DETAIL

★ *See sheet No 308 for "Typical Section Patched Area."*

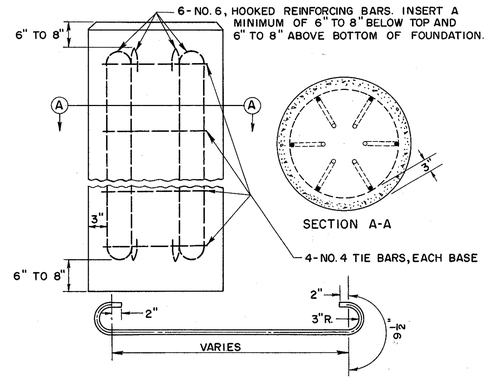
DECALS SHALL BE ADHESIVE TYPE WITH SILVER WHITE REFLECTIVE CHARACTERS ON A REFLECTIVE GREEN BACKGROUND, WITH CIRCUIT AND POLE NUMBERS AS SCHEDULED ON LIGHTING PLAN SHEETS.



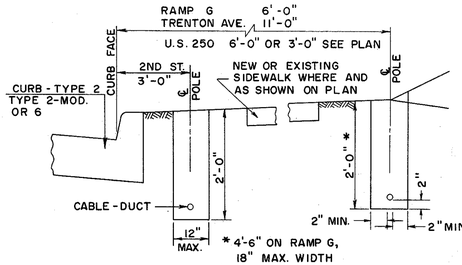
LOCATE IDENTIFICATION DECALS (CIRCUIT AND POLE NOS.) IN THIS AREA, AND APPROXIMATELY SEVEN FEET (7'-0") ABOVE POLE BASE.

REFLECTIVE LETTERS AND NUMBERS (SPECIFICATION MIL-R-13689 A). SERIES "B" TYPE LETTERS AND NUMBERS WITH SPACING PER A.A.S.H.O. SPECIFICATIONS.

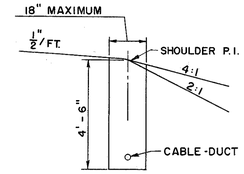
LIGHT POLE CIRCUIT IDENTIFICATION



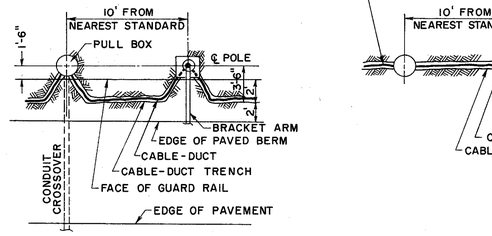
REINFORCING BARS (FOUNDATION)



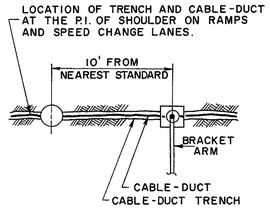
TYPICAL CABLE - DUCT TRENCH



RAMPS AND SPEED CHANGE LANES



CABLE - DUCT AND PULL BOX LOCATIONS



NOTES

FOUNDATION for light standards shall be poured-in-place concrete. The lower portion may be poured in a 2'-0" diameter or 2'-0" square hole with forms, unless, at the discretion of the Engineer soil stability precludes the need for forms.
The top portion shall be formed 2'-0" square for at least 1'-0" deep or a minimum of six (6) inches below the finished grade. Foundation must be to a minimum depth of six (6) feet, below lowest point of finished grade, additional depth required depending upon soil conditions. All concrete shall be Class "C". Top surface shall be sloped to drain.

FOUNDATION CONDUIT shall be type I fiber duct or standard weight galvanized steel conduit. Conduit shall project 2" above top and 1" beyond face of foundation. Both ends of conduit shall be capped or plugged until light standard and electrical conductors are installed. Steel conduit ends shall be equipped with bushings.

GROUND RODS - All ground rods shall be 1" round by 10'-0" in length, solid wrought iron. A rod shall be placed vertically in the trench adjacent to each foundation or pull box if noted on the plan. Additional rods, when directed, shall be driven 6'-0" from the previous. Sectional rods, at a greater depth, may be used to obtain the specified low resistance ground. Additional rods shall be connected in parallel to the grounding nut. The top of the ground rod shall be placed within 4" of the trench bottom.

MARKERS - Constructed of Class "C" Concrete, No. 4 max. aggregate. Set flush with finished grade.

DUCT for Item S-25 Cable Duct, shall be medium density black polyethylene plastic conforming to the overall diameter of IPS schedule conduit. The duct shall be flexible enough for easy coiling and uncoiling at 14° F. and shall have the following properties as tested by ASTM specifications:

Tensile Strength	2500 PSI Min.	ASTM D 412
Elongation	300 % Min.	ASTM D 412
Melt Index	1.50 Max.	ASTM D 1238
Carbon Black content	Less than 2%	ASTM D 1603

BACKFILLING - Backfill all trenches in accordance with Sec. I-1.07 Type 4, except that the material in the first 4" above the Cable-Duct shall contain no pieces larger than 1".

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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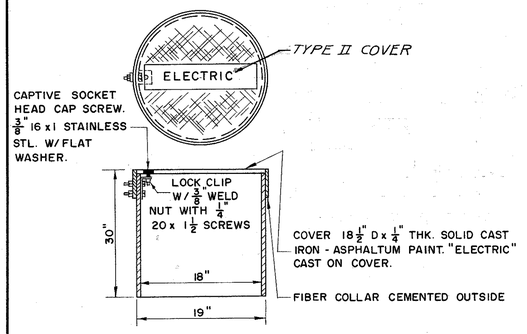
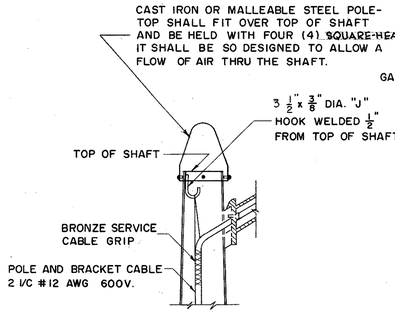
TUSCARAWAS COUNTY
TUS-36-16.63

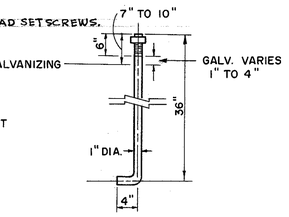


BITUMINOUS FIBRE REINFORCED FEDERAL GENERAL SERVICES SPEC-WC-581

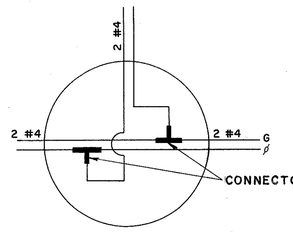
PULL BOX DETAILS



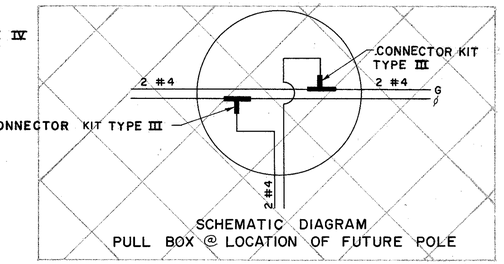
CABLE SUPPORT



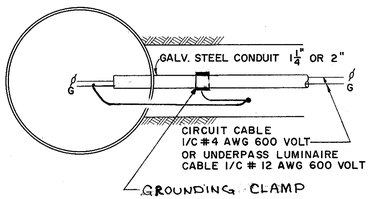
ANCHOR BOLT DETAIL ALL POLES

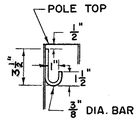


SCHEMATIC DIAGRAM
PULL BOX T LINE

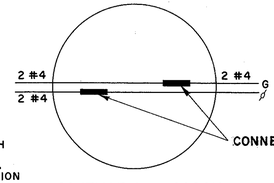


SCHEMATIC DIAGRAM
PULL BOX @ LOCATION OF FUTURE POLE

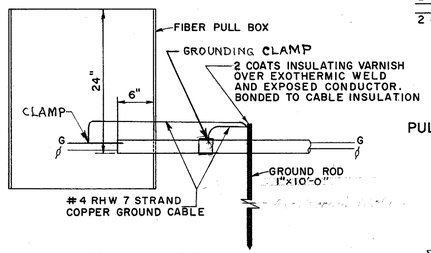




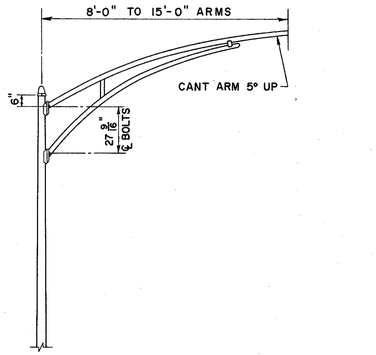
"J" HOOK DETAIL



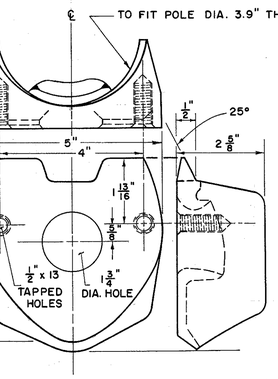
SCHEMATIC DIAGRAM
PULL BOX STRAIGHT THROUGH



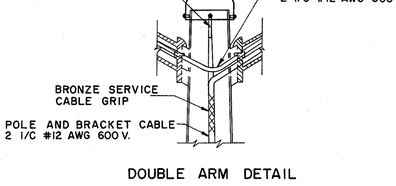
CONDUIT ENTERING
PULL BOX
WITH GROUND ROD



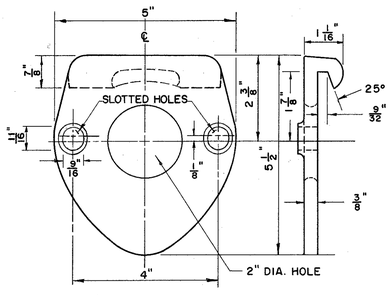
DESIGN FOR 8' TO 15' ARMS



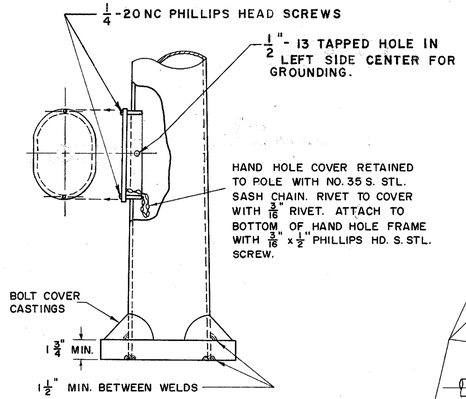
POLE PLATE (CAST STEEL)



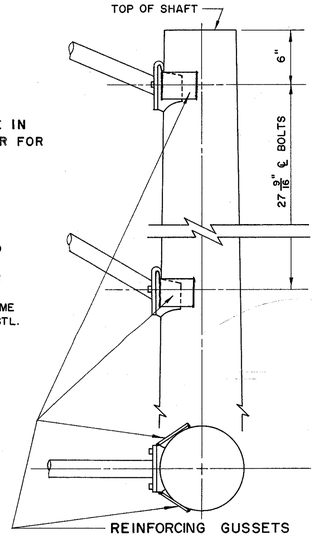
DOUBLE ARM DETAIL



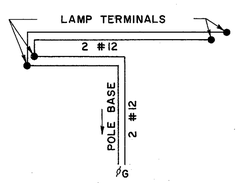
BRACKET ARM PLATE (CAST STEEL)



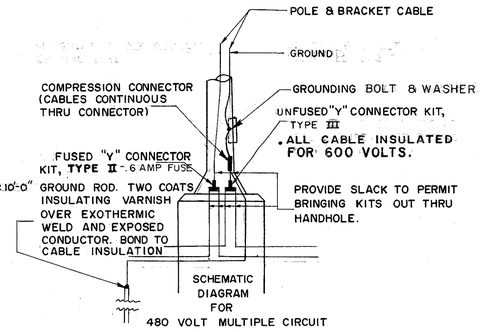
HAND HOLE WITH COVER
AND STEEL PLATE BASE DATA



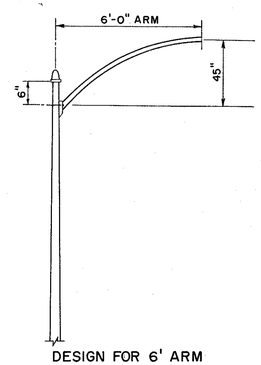
SHALL BE PROVIDED ON 11 GA. SHAFTS WITH DIAMETERS LARGER THAN 4.4"; OTHERWISE PROVIDE SEPARATE STEEL CASTINGS MODIFIED TO FIT SHAFT DIAMETERS USED.



SCHEMATIC DIAGRAM
TOP OF POLES WITH DOUBLE ARMS



ELECTRICAL WIRING AT LIGHT POLE



DESIGN FOR 6' ARM

LIGHTING DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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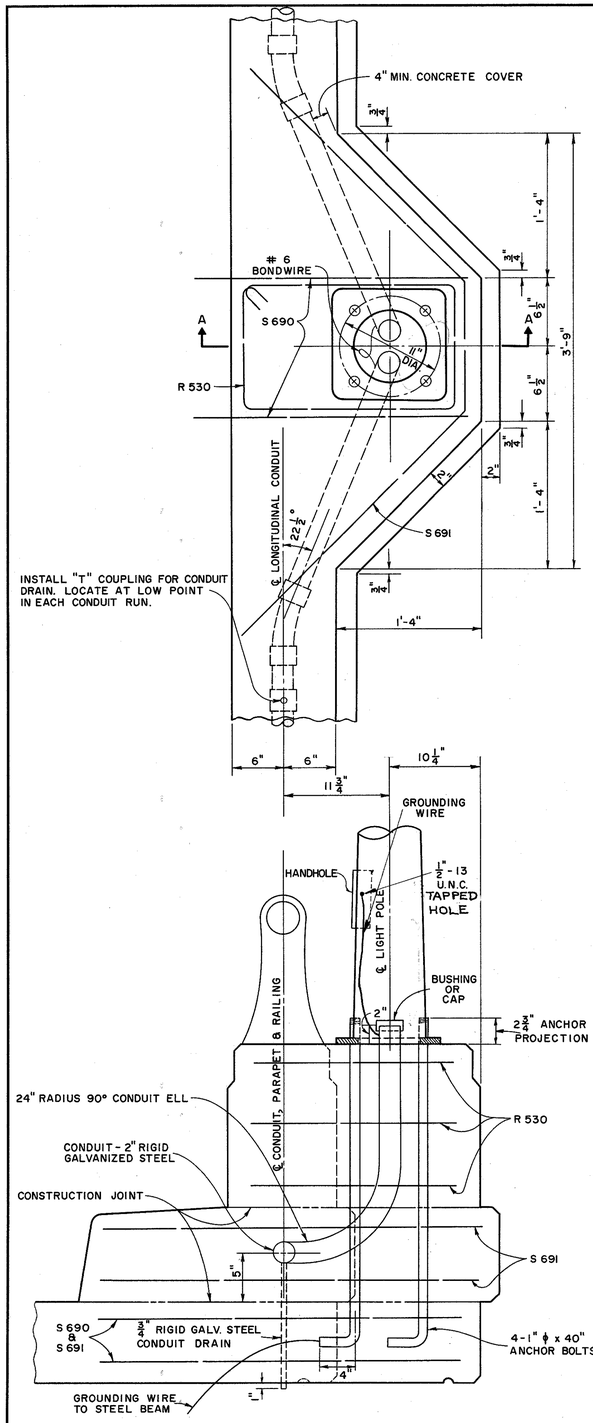
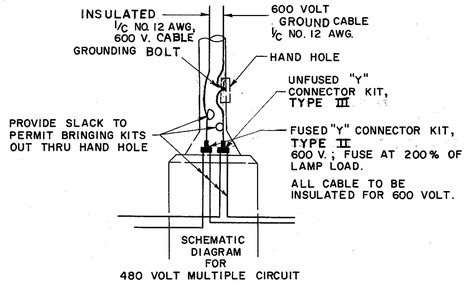
TUSCARAWAS COUNTY
TUS - 36 - 16.63

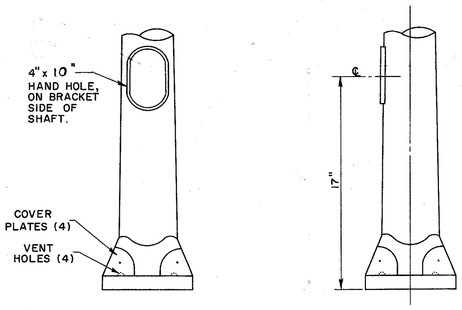


SECTION A-A

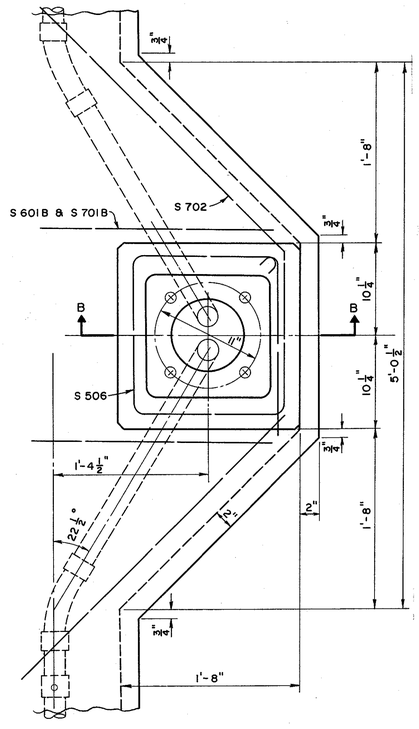
DETAILS OF BRIDGE LIGHTING
(EXCEPT RECONSTR. U.S. 250 OVER STILLWATER CREEK)

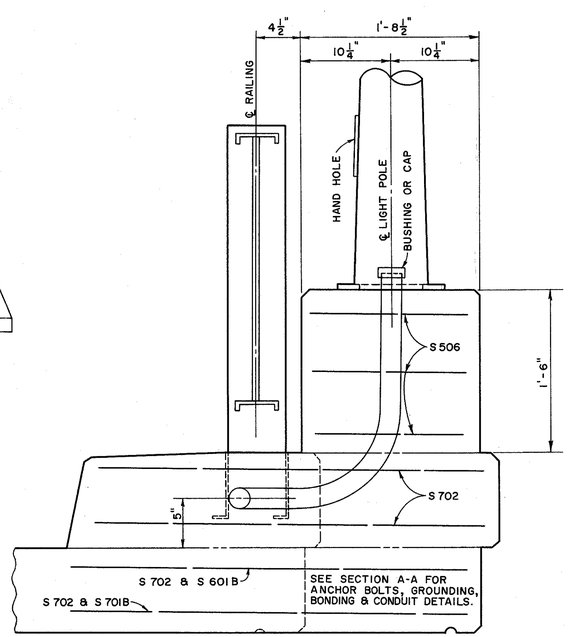


ELECTRICAL WIRING AT STRUCTURE LIGHT POLE



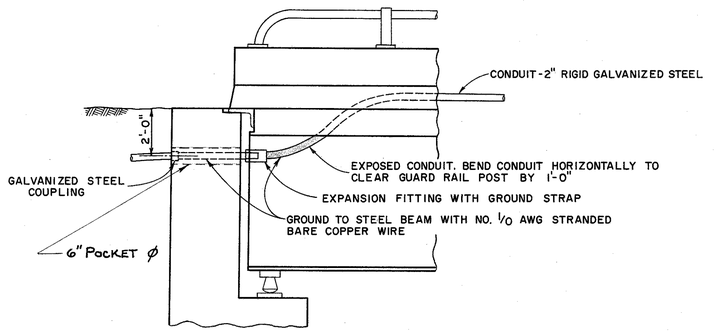
HAND HOLE FOR LIGHT POLES
MOUNTED ON STRUCTURES





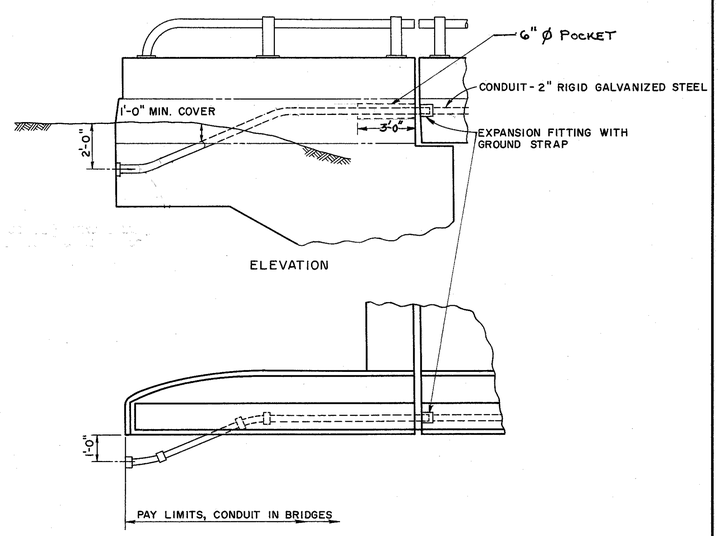
SECTION B-B

DETAILS OF BRIDGE LIGHTING
RECONSTR. U.S. 250 OVER STILLWATER CREEK



DETAIL OF CONDUIT AT ABUTMENTS

BRIDGES NO. TUS-36-1859 L.& R., -1979 L.& R., TRENTON AVE. CONNECTOR OVER PENNA. R.R., RAMP J OVER B.& O. R.R., (RECONSTR. U.S. 250 OVER STILLWATER CREEK CONDUIT IS SIMILAR)



DETAIL OF CONDUIT AT ABUTMENTS

BRIDGES NO. TUS-36-1783, -1889 L.& R. & 1887 L.& R.

LIGHTING DETAILS

DETAILS FOR FUTURE LIGHTING ON BRIDGES

TUS-36-19.19 L & R
TUS-36-18.59
BRIDGE RAMP "J" OVER B & O RR
TUS-36-1957

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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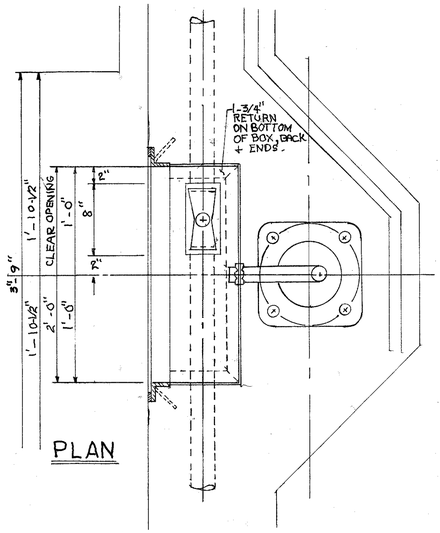
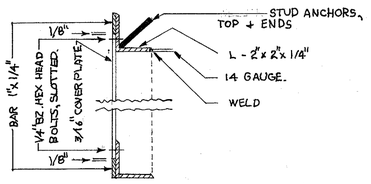
TUSCARAWAS COUNTY.
TUS-36-16.63

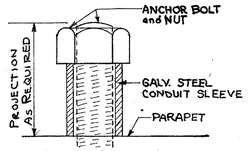


PLAN



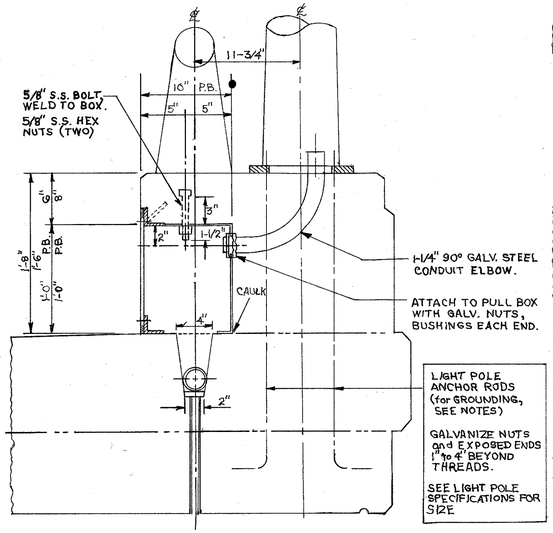
STEEL PULL BOX DETAILS

WELDED FABRICATION. HOT DIPPED GALV. AFTER FABRICATION.

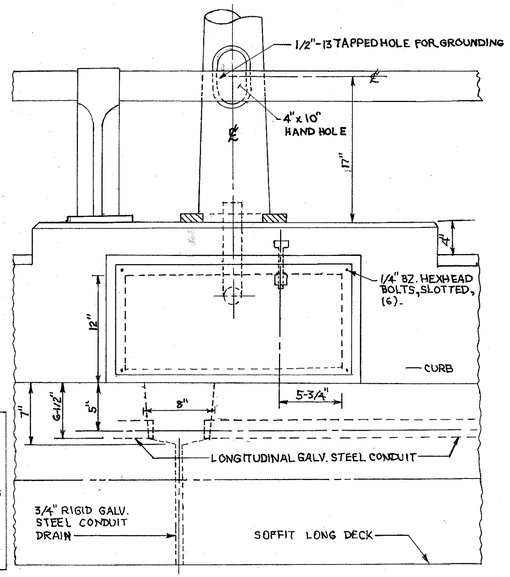


COVER FOR ANCHOR RODS

WHERE LIGHTING INSTALLATION WILL BE MADE AT FUTURE DATE.



SECTION

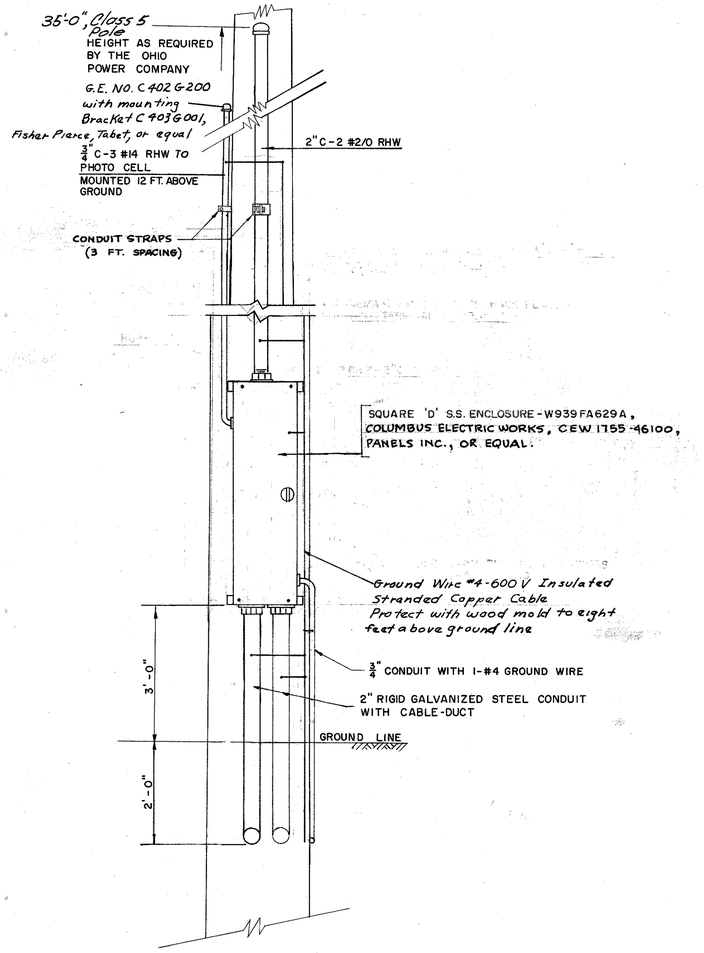


ELEVATION

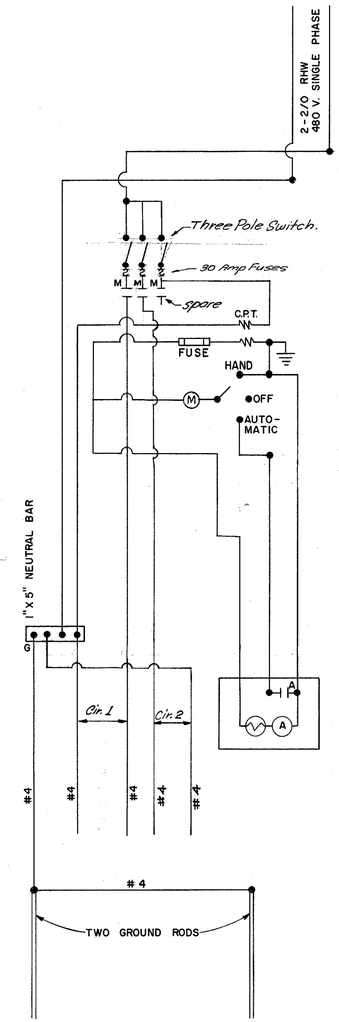
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

489-L
662

TUSCARAWAS COUNTY
TUS-36-16.63



SERVICE POLE



Schematic Diagram
Control Center

NOTES

Pole construction to be in accordance with National Electrical Safety Code Class B Construction.

A screwdriver is necessary for entrance into the enclosure.

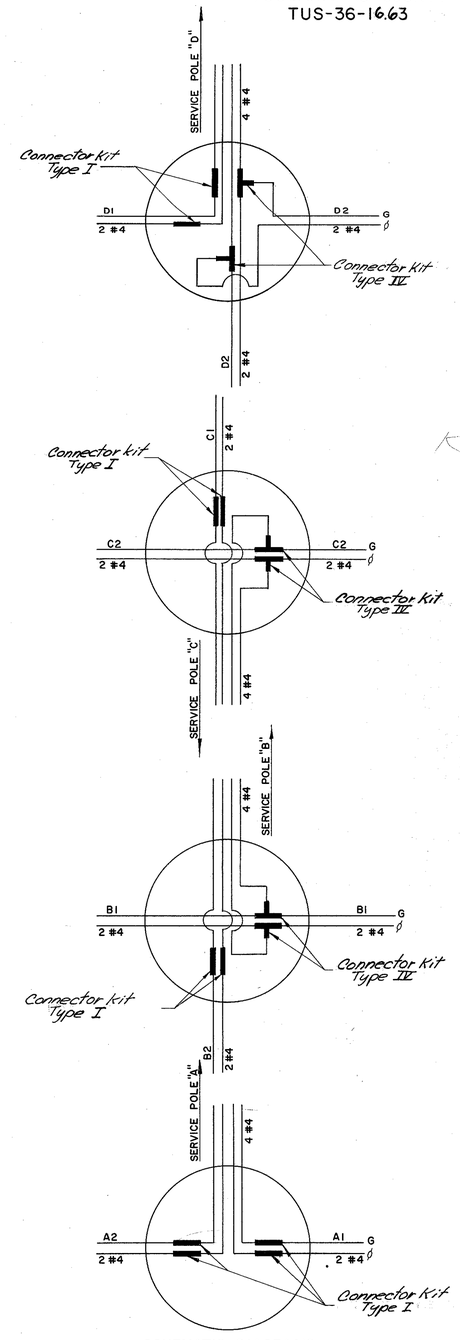
The disconnect handle shall be mounted so as to remain with the housing when the door is opened.

The disconnect shall have provision for padlocking in either the "on" or the "off" position.

The disconnect cannot be turned on unless the door is completely closed and sealed.

The door may not be opened normally when the disconnect is "on". Provision shall be made for opening the door intentionally while the disconnect is "on".

The enclosure shall be stainless steel, NEMA-4 with three mounting holes in each of the top and bottom flanges. Dimensions to be 34" H. x 10 1/2" W. x 7 5/16" D.



SCHEMATIC DIAGRAMS
PULL BOXES AT SERVICE POLES "A", "B", "C" & "D"

MICROFILMED
FEB 22 1989

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	"	

490
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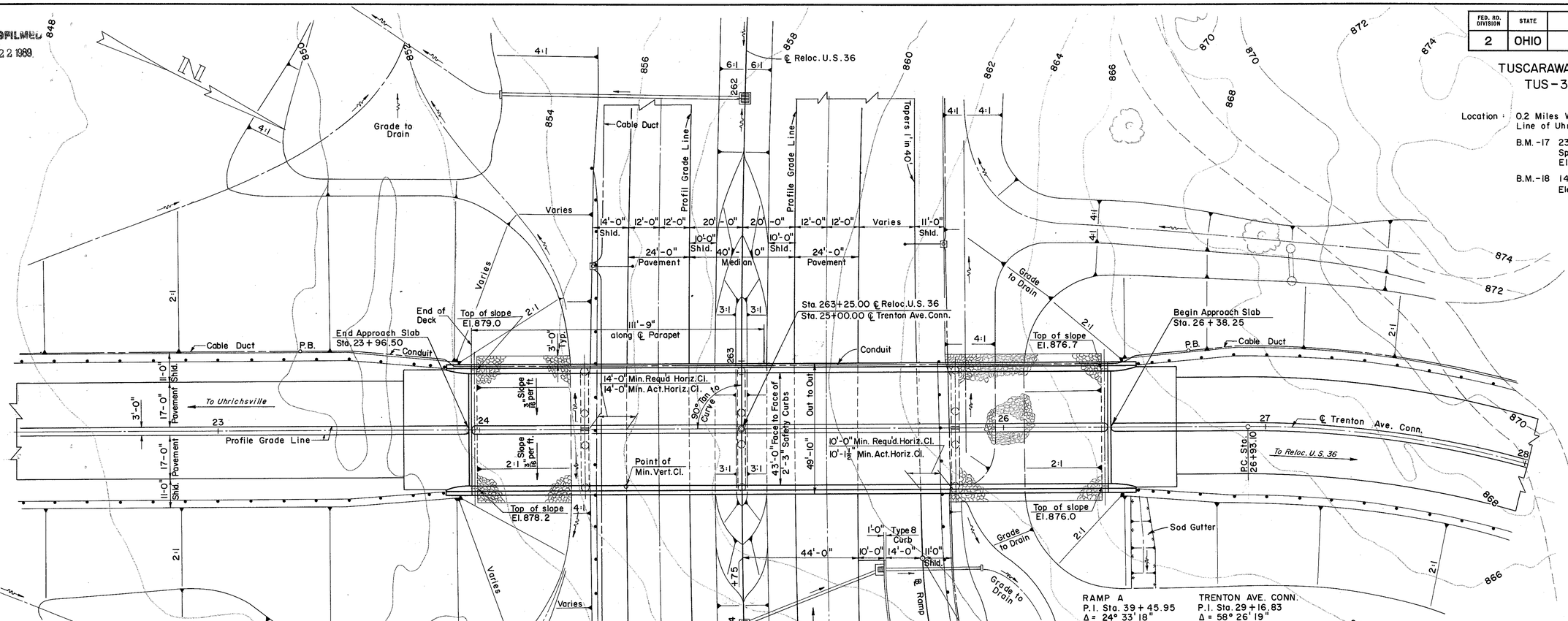
TUSCARAWAS COUNTY
TUS-36-15.93

Location : 0.2 Miles West of West Corpation Line of Uhrichsville.

B.M.-17 238' Lt. Sta. 257+00, Spike in 6" Triple Cherry. Elev. 867.366

B.M.-18 149' Rt. Sta. 273+31, Spike in 9" Elm. Elev. 878.723

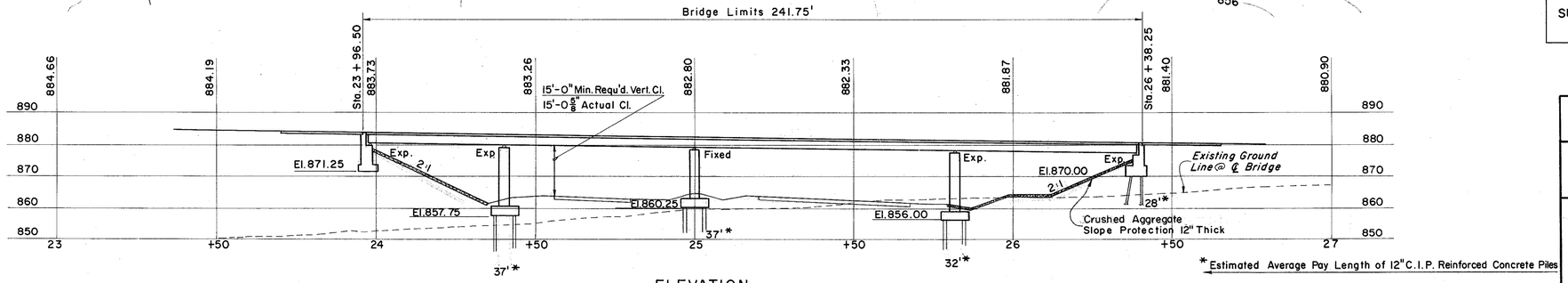


PLAN

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.

RELOC. U.S. 36
-0.884% +1.568%
P.V.I. Sta. 262+00.00
Elev. 860.06
L.V.C. = 800.00'

TRENTON AVE. CONN.
-0.93% -1.60%
P.V.I. Sta. 27+50.00
Elev. 880.47
L.V.C. = 200.00'



ELEVATION

*Estimated Average Pay Length of 12" C.I.P. Reinforced Concrete Piles

PROPOSED STRUCTURE

TYPE : 4 Span Continuous Steel Beam with Reinforced Concrete Deck and Substructure

SPANS : 41'-9", 59'-6", 80'-0" and 56'-0"

ROADWAY : 43'-0" w/ 2'-3" Safety Curbs

LOAD FREQUENCY : CF = 400 (57)

WEARING SURFACE : 1" Monolithic Concrete

APPROACH SLABS : Special 25'-0" Long

ALIGNMENT : Trenton Ave. Connector Tangent
Reloc. U.S. 36 Curve

SKEW : 00° 00'

A.D.T. : 3170 (1977) Trenton Ave. Connector

SUPERELEVATION : Reloc. U.S. 36 0.030 Ft. per Ft.
Trenton Ave. Connector 3/16" per Ft.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

SITE PLAN
BRIDGE NO. TUS-36-1783
RELOC. US-36 UNDER TRENTON AVENUE CONNECTOR
TUSCARAWAS COUNTY STA. 263+25.00

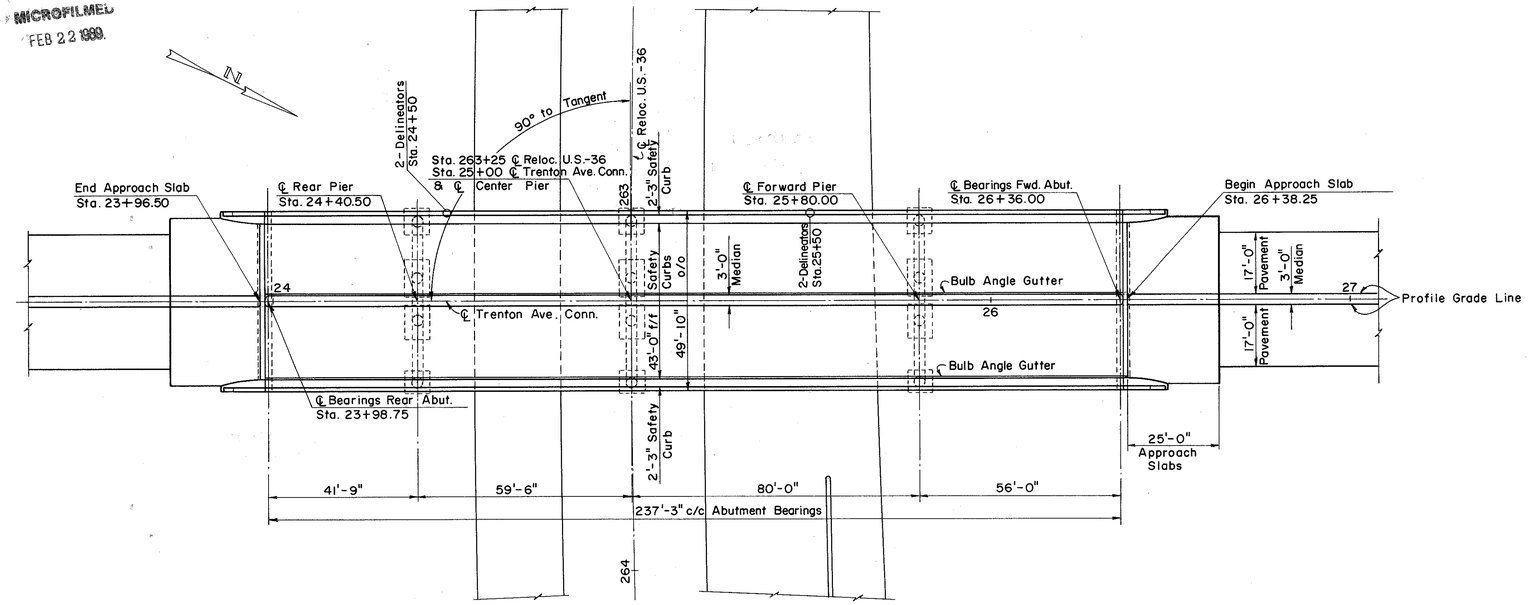
DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
	M.J.F.	F.W.B.	L.L.D.	H.C.M. 8-17-64	

MICROFILMED
FEB 22 1999

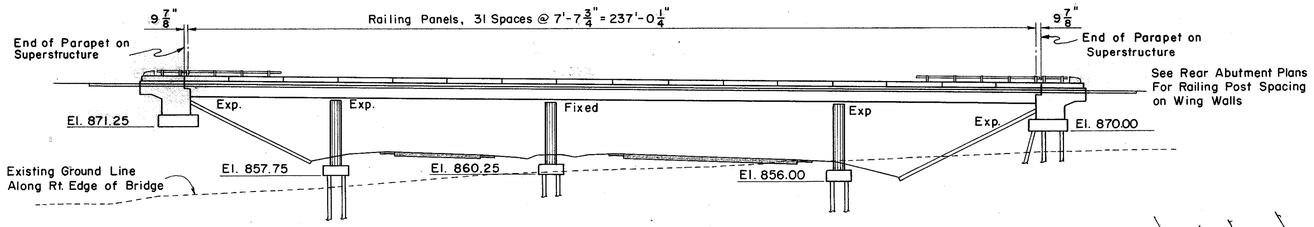
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

491
662

TUSCARAWAS COUNTY
TUS-36-15.93



PLAN



ELEVATION

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUTS.	PIERS	GEN'L.		
503	545	Cu. Yds.	Unclassified Excavation		285	260			
511	387	Cu. Yds.	Class C Concrete, Superstructure	387					
511	102	Cu. Yds.	Class C Concrete, Pier Caps & Columns			102			
511	120	Cu. Yds.	Class E Concrete, Abut. above Footings		120				
511	169	Cu. Yds.	Class E Concrete, Footings		69	100			
509	142,005	Lbs.	Reinforcing Steel	103,790	12,074	26,141			
513	307,000	Lbs.	Structural Steel	307,000					
514	307,000	Lbs.	Field Painting of Structural Steel	307,000					
517	527.17	Lin. Ft.	Railing Type I	478.50	48.67				
505	Lump	Sum	First Test Pile				Lump		
507	2,570	Lin. Ft.	12" Cast-in-Place Reinforced Concrete Piles		450	2,120			
518	84	Lin. Ft.	6" Perforated Helical Corr. Met. Pipe, 707.06 Including Specials		84				
518	89	Lin. Ft.	6" Helical Corr. Met. Pipe, 707.06 Non-Perforated		89				
625			For lighting quantities see sheet #489						
518	40	Cu. Yds.	Porous Backfill		40				
518	16	Each	Scuppers, Including Supports	16					
808	387	Each	Water-reducing, Set-retarding Admixtures for Conc.	387					
601	505	Sq. Yds.	Crushed Aggregate Slope Protection				505		

ESTIMATED LIGHTING QUANTITIES
ITEM 625

TOTAL	UNIT	DESCRIPTION
1	EA.	LIGHT POLE WITHOUT BRACKET ARM - DESIGN 11A8530.0
1	EA.	ESNA KIT - STYLE 82
1	EA.	ESNA KIT - STYLE 83
269	L.F.	CONDUIT - 2 INCH RIGID GALVANIZED STEEL IN BRIDGES
550	L.F.	CIRCUIT CABLE - 1/C, NO. 4 AWG, 600 V.
LUMP(1)	L.S.	BRIDGE STRUCTURE GROUNDING SYSTEM

GENERAL NOTES

REFERENCE shall be made to Standard Drawings SD-1-63, Sheets No. 1 thru 4 of 4 dated 11-12-63, FSB-1-62 revised 1-15-63, BR-1-63(Sheet 1) dated 2-1-65, and to Supplemental Specifications 808 dated 7-14-65 & 811 revised 3-29-65.

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

DESIGN LOADING: CF 400 (57)

BASIC UNIT WORKING STRESSES:
Concrete Class C - basic unit stress 1,333 p.s.i.
Concrete Class E - basic unit stress 1,133 p.s.i.

Structural Steel - ASTM A36 - basic unit stress 20,000 p.s.i.

Reinforcing Steel - ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 p.s.i. Except, spiral reinforcement may be plain, Structural Grade with basic unit stress of 18,000 p.s.i.

PROCEDURE: The center and forward piers may be constructed before embankment has been placed. The embankment shall be placed and compacted up to the finished spill thru slope and to the level of subgrade for a distance of 200 feet back of abutments, after which the rear pier and forward abutment may be constructed. A waiting period of 120 days after compaction of the embankment is required before construction of the rear abutment is begun.

SETTLEMENT HUBS: Settlement hubs shall be driven in the compacted embankment 15 feet right and left of centerline at Sta. 23+90.1f the hubs, as determined at approximately one week intervals, indicate that all settlement has ceased before the end of the waiting period, construction of the abutments may proceed after approval from Director.

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

PILES shall be driven to a minimum bearing capacity of 29 tons per pile for the Forward Abutment and 36 tons per pile for the Piers.

FOUNDATION BEARING PRESSURE: Footing of Rear Abutment is designed for a maximum bearing pressure of 1.6 tons per sq. ft.

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.

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

LIGHTING DETAILS are shown in Lighting Plans beginning with Sheet 489.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

GENERAL PLAN
BRIDGE NO. TUS.-36-1783
RELOC. U.S.-36 UNDER TRENTON AVE. CONNECTOR
TUSCARAWAS COUNTY
STA. 263 + 25.00

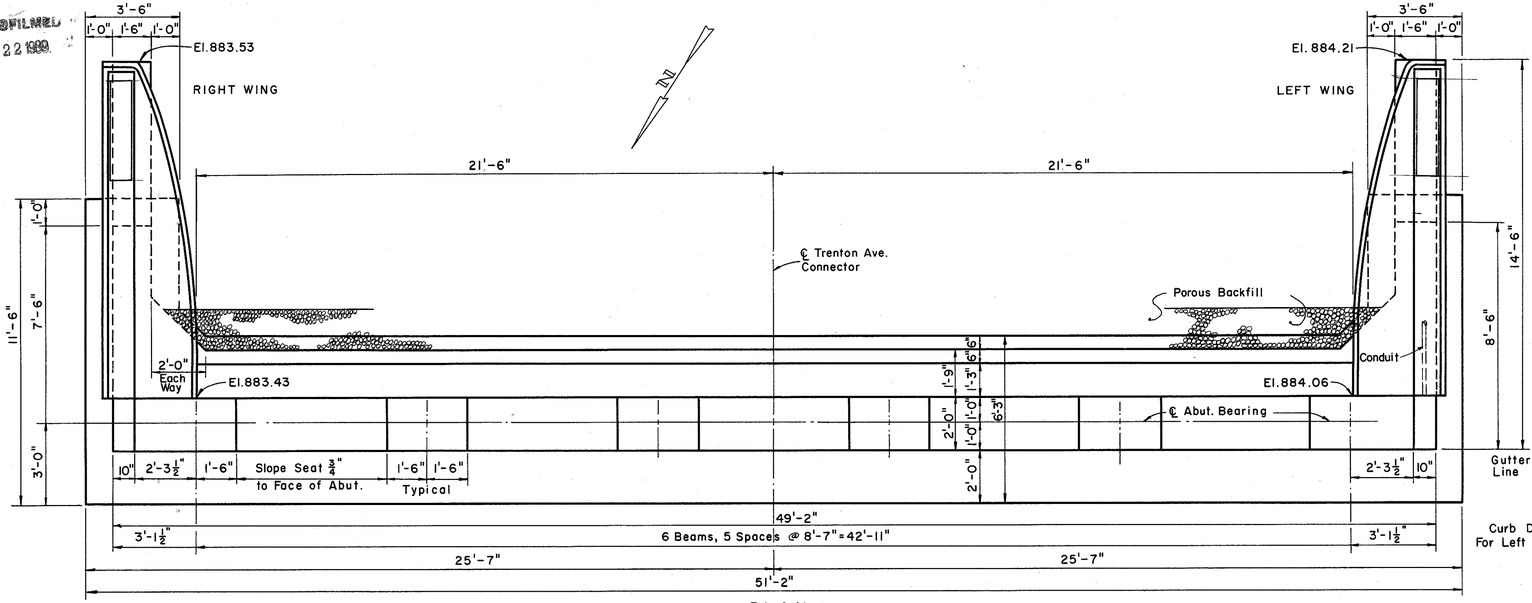
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
H.C.M.	M.J.F.	FWB P.A.D.	L.L.D.	H.C.M 8-17-64	

MICROFILMED
FEB 22 1999

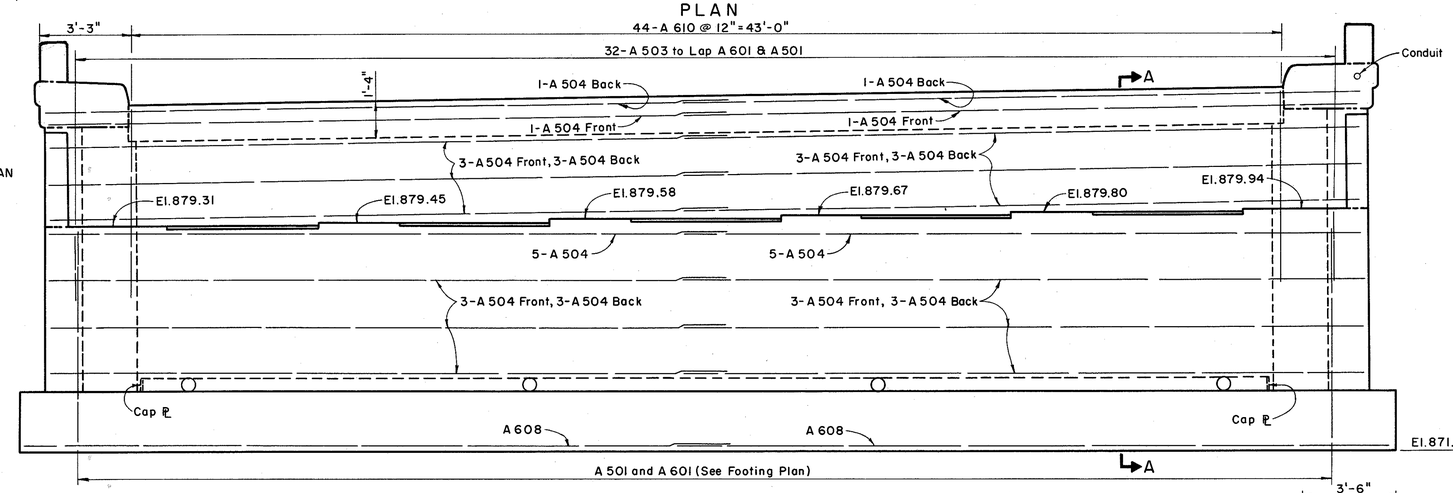
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

492
662

TUSCARAWAS COUNTY
TUS-36-15.93

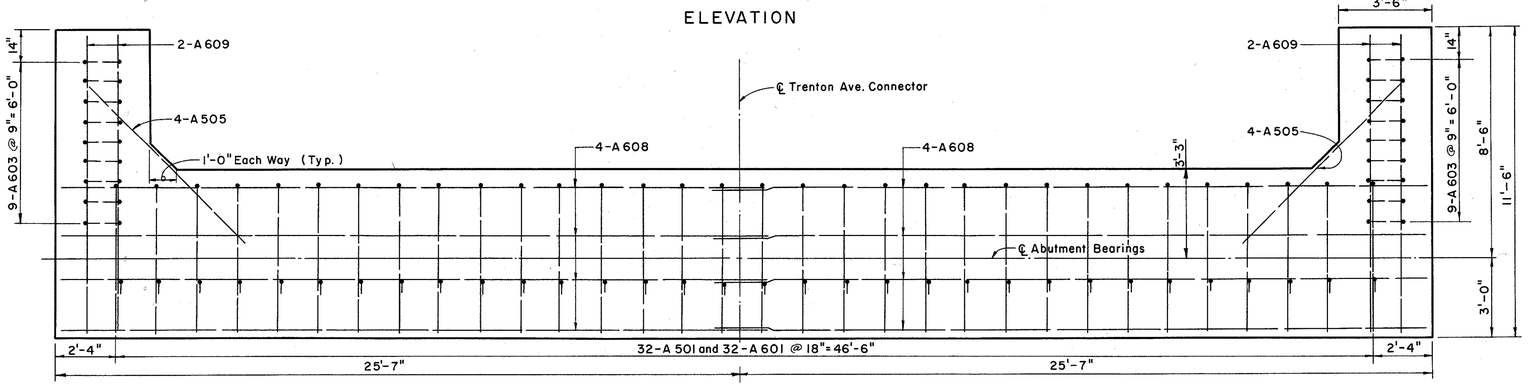


PLAN

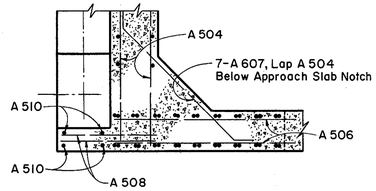


FOR TOP OF SLOPE ELEV. SEE SITE PLAN

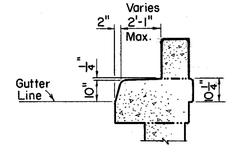
ELEVATION



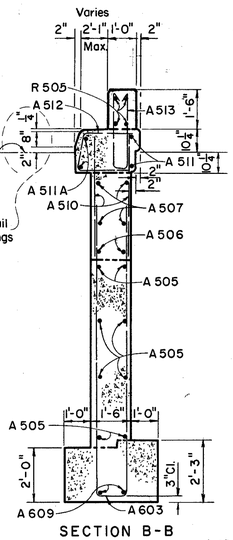
FOOTING PLAN



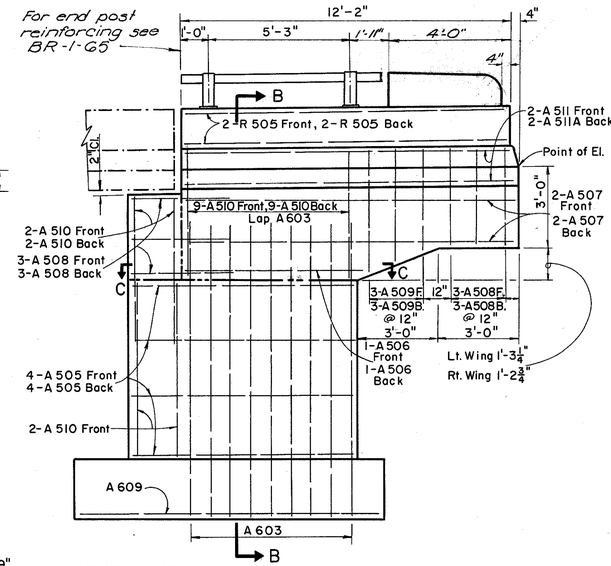
SECTION C-C



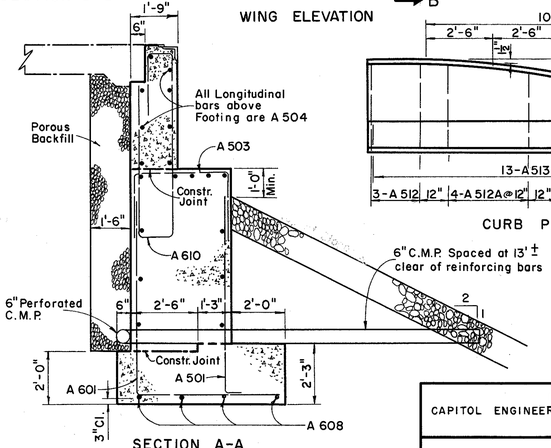
CURB DETAIL FOR RIGHT WINGS



SECTION B-B



WING ELEVATION



SECTION A-A

CURB PLAN

REINFORCING STEEL shall have 3" cover at bottom of footing and 2" cover elsewhere.

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.

DETAIL OF CONDUIT is shown in Lighting Plans.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

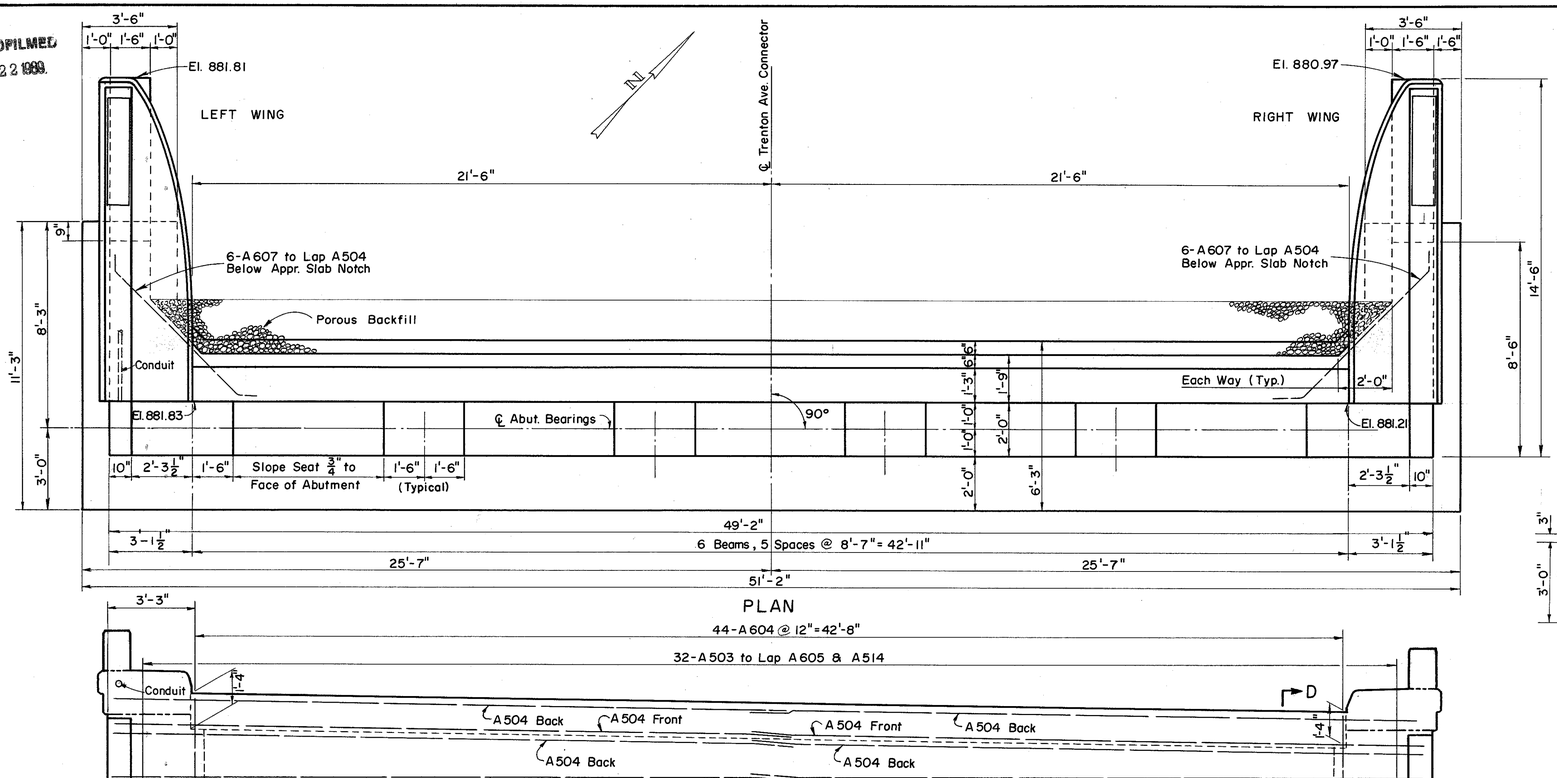
REAR ABUTMENT
BRIDGE NO. TUS-36-1783
RELOC. U.S 36 UNDER TRENTON AVE. CONNECTOR
TUSCARAWAS COUNTY STA. 263+25.00

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
M.C.P.	M.F.	F.W.B.	F.W.B. P.A.D.	H.C.M. 8-17-64	

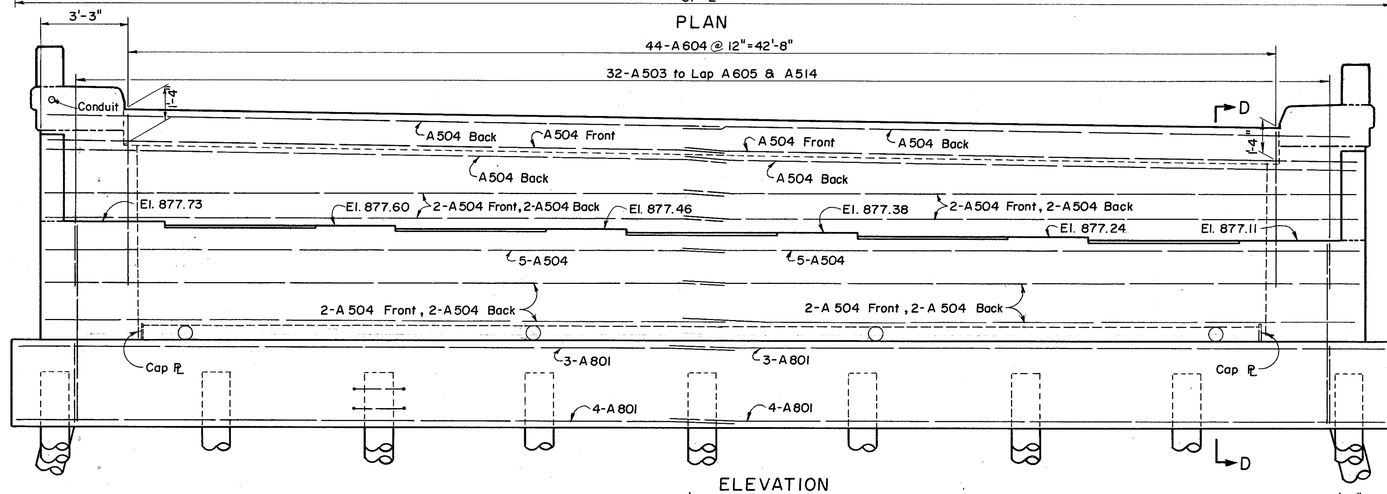
MICROFILMED
FEB 22 1999

FED. RD. DIVISION	STATE	PROJECT		493
2	OHIO			662

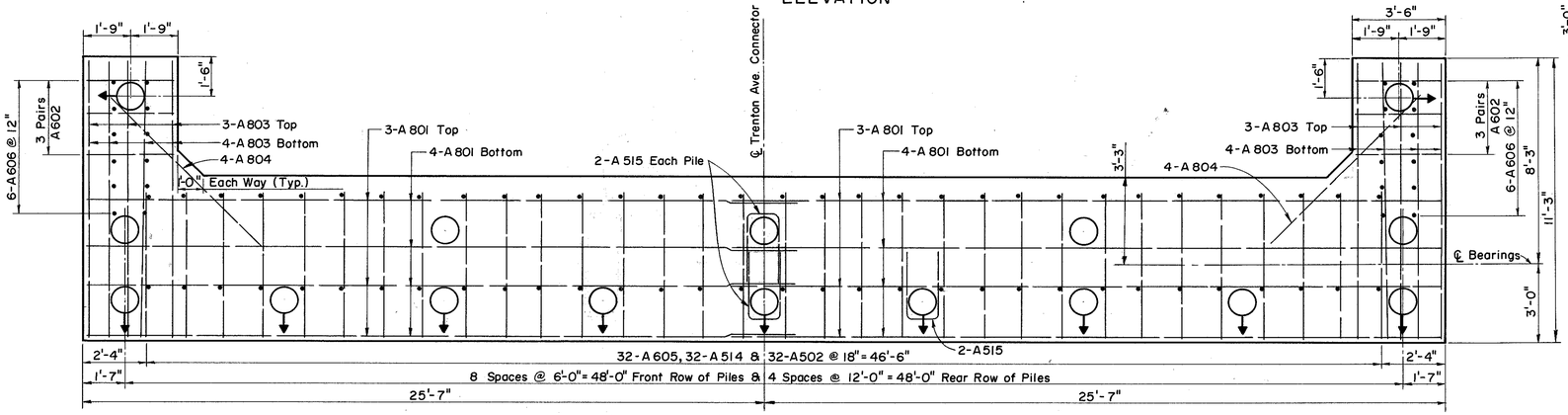
TUSCARAWAS COUNTY
TUS -36 - 15.93



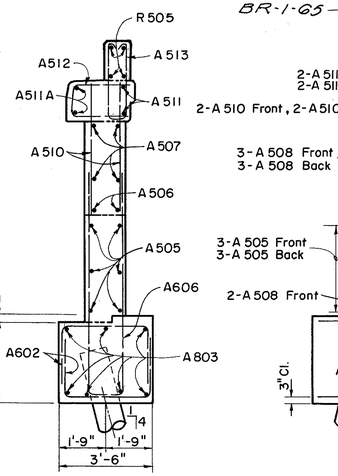
PLAN



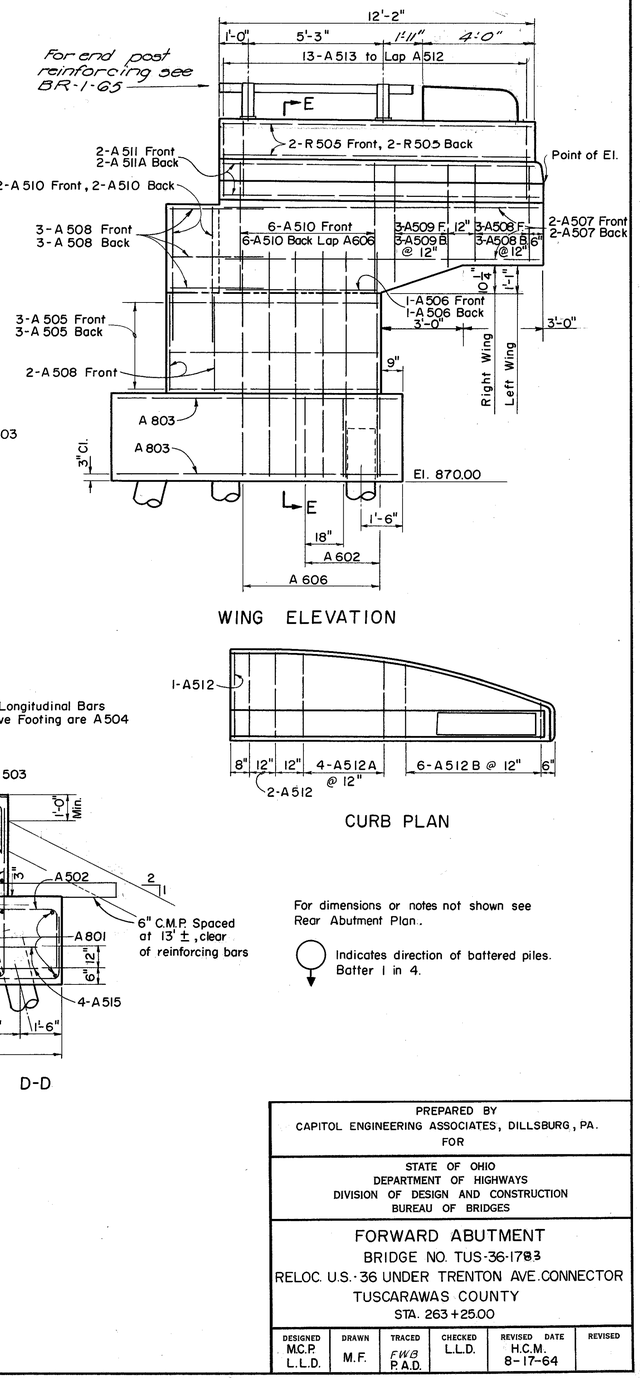
ELEVATION



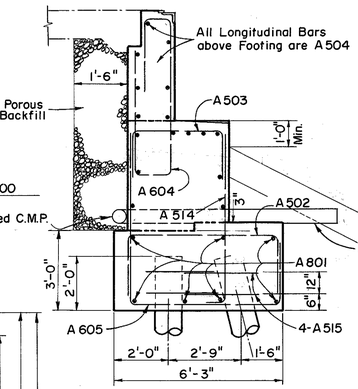
FOOTING PLAN



SECTION E-E



WING ELEVATION



SECTION D-D

CURB PLAN

For dimensions or notes not shown see Rear Abutment Plan.

Indicates direction of battered piles. Batter 1 in 4.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

FORWARD ABUTMENT

BRIDGE NO. TUS-36-1783
RELOC. U.S.-36 UNDER TRENTON AVE. CONNECTOR
TUSCARAWAS COUNTY
STA. 263+25.00

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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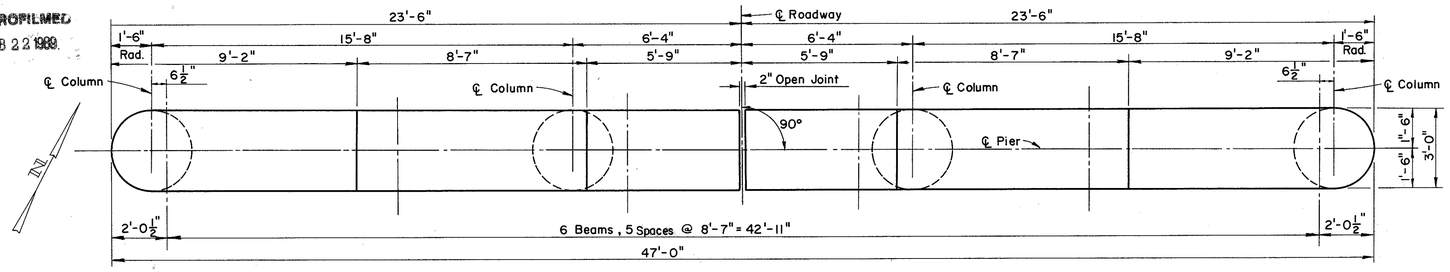
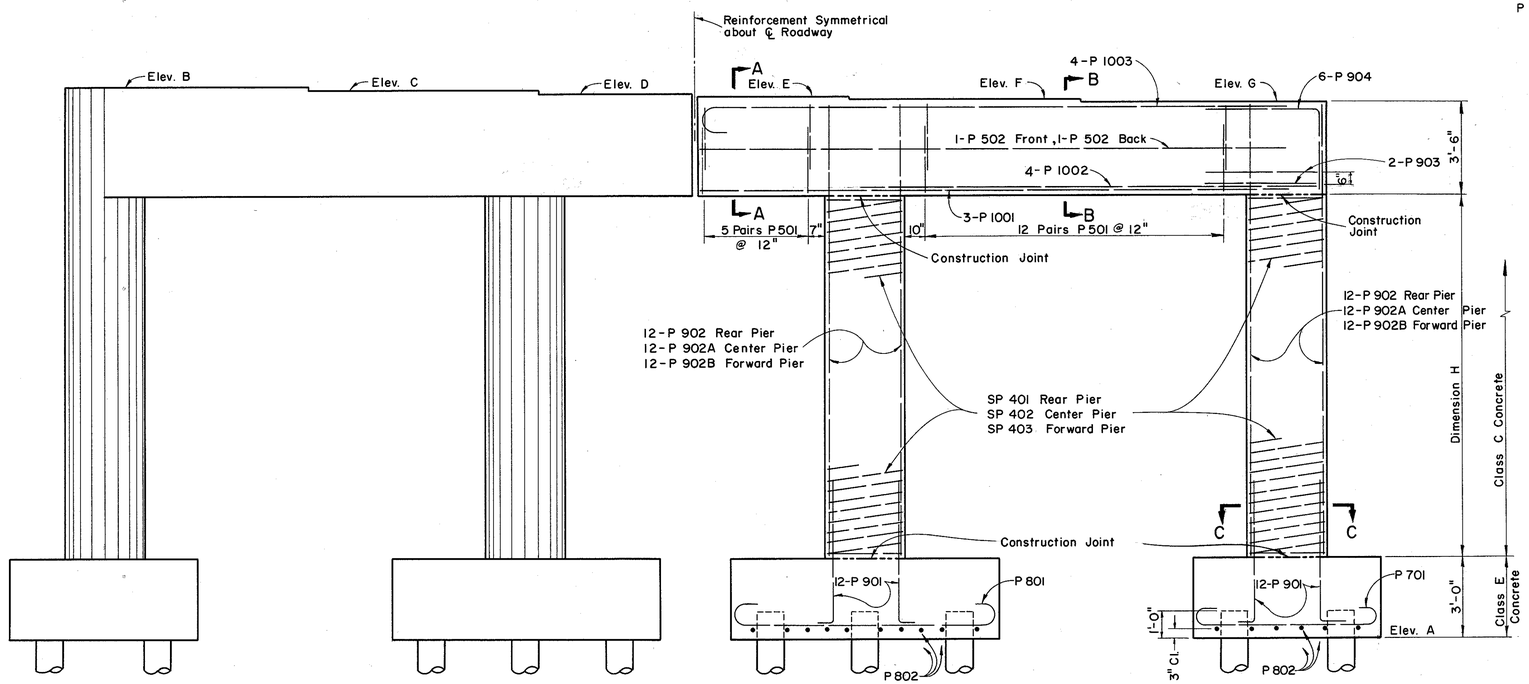
662

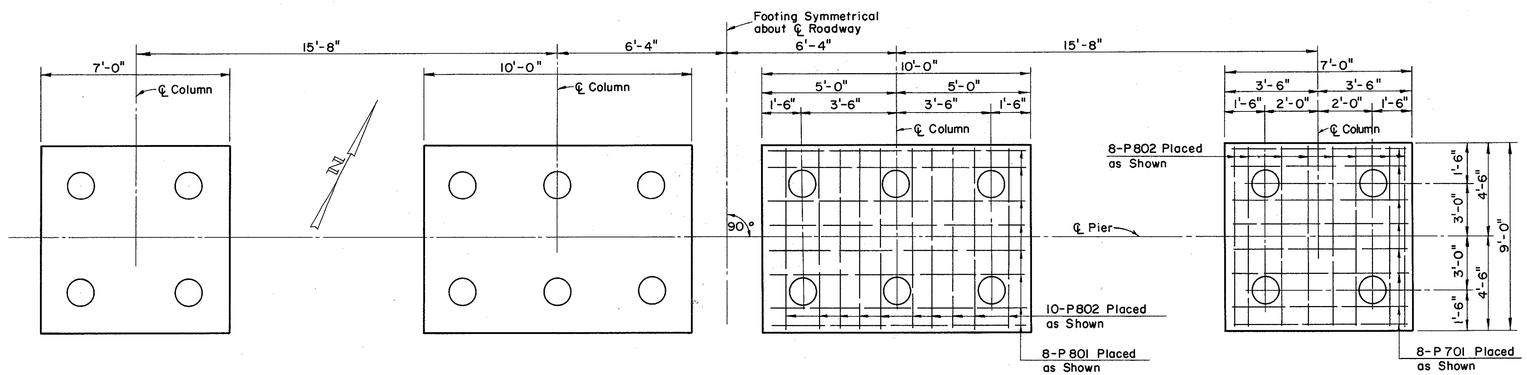
TUSCARAWAS COUNTY
TUS-36-15.93



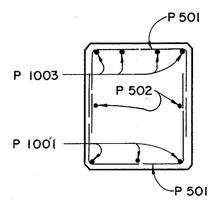
PLAN OF PIER CAP



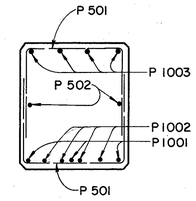
ELEVATION OF PIER



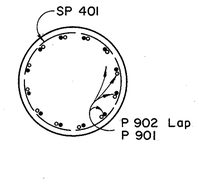
FOOTING PLAN



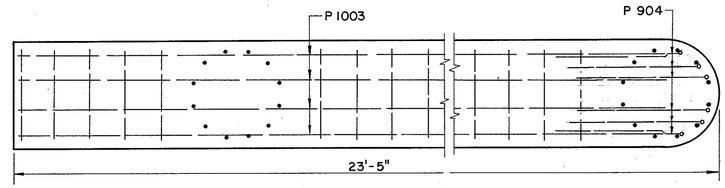
SECTION A-A



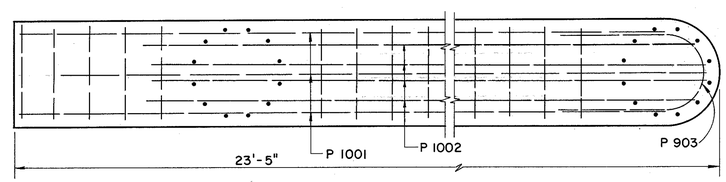
SECTION B-B



SECTION C-C



REINFORCEMENT TOP OF CAP



REINFORCEMENT BOTTOM OF CAP

PIERS	ELEVATIONS							
	A	B	C	D	E	F	G	H
Rear Pier	857.75	879.51	879.37	879.24	879.15	879.02	878.89	14.64
Center Pier	860.25	878.63	878.49	878.36	878.27	878.14	878.00	11.25
Forward Pier	856.00	878.11	877.98	877.84	877.76	877.62	877.49	14.99

REINFORCING STEEL shall have 3" cover at bottom of footing and 2" cover elsewhere.

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.

ELECTRICAL GROUNDING required at Center Pier.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

PIER DETAILS

BRIDGE NO. TUS.-36-1783
RELOC. U.S.-36 UNDER TRENTON AVE. CONNECTOR
TUSCARAWAS COUNTY
STA. 263 + 25.00

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
M.C.P.	M.J.F.	R.E.B. P.A.D.	L.L.D.	H.C.M. 8-17-64	

MICROFILMED
FEB 22 1989

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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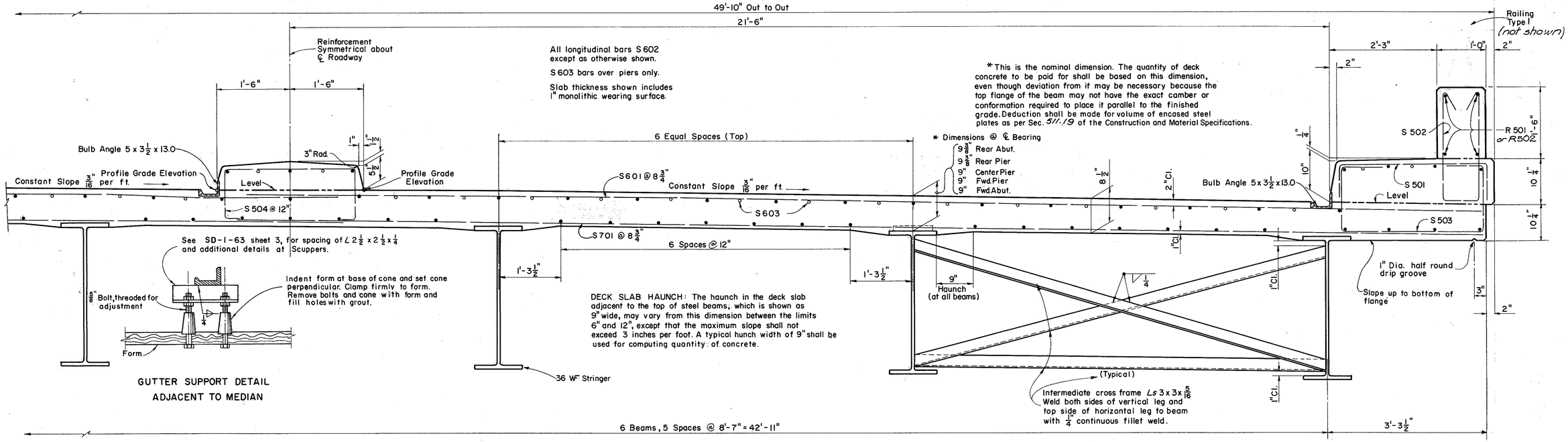
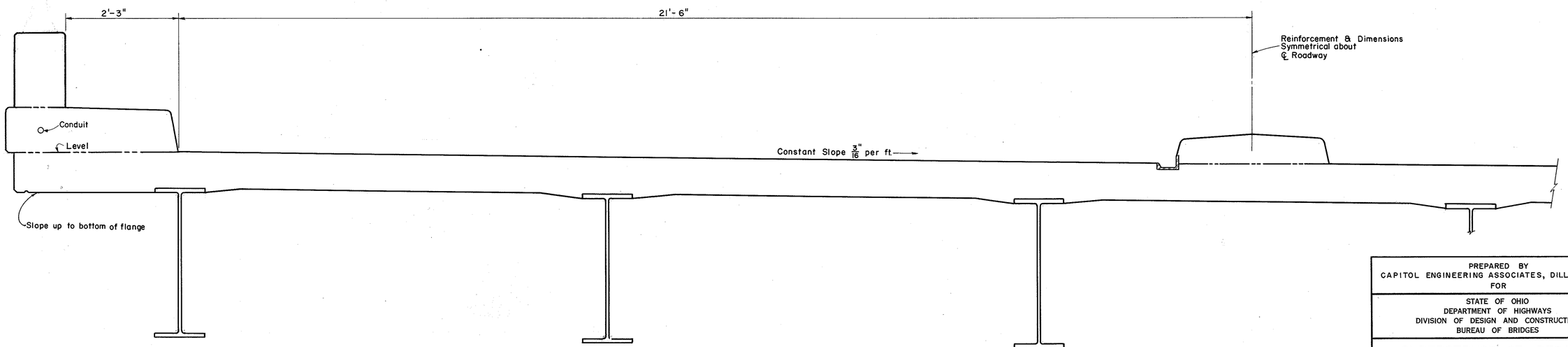
TUSCARAWAS COUNTY
TUS - 36 - 15.93



GUTTER SUPPORT DETAIL
ADJACENT TO MEDIAN

TRANSVERSE SECTION - RIGHT ROADWAY



TRANSVERSE SECTION - LEFT ROADWAY

Construction Joints: ——— - - ——— - - ———

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FOR

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DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

SUPERSTRUCTURE DETAILS

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RELOC. U.S.-36 UNDER TRENTON AVE. CONNECTOR
TUSCARAWAS COUNTY
STA. 263 + 25.00

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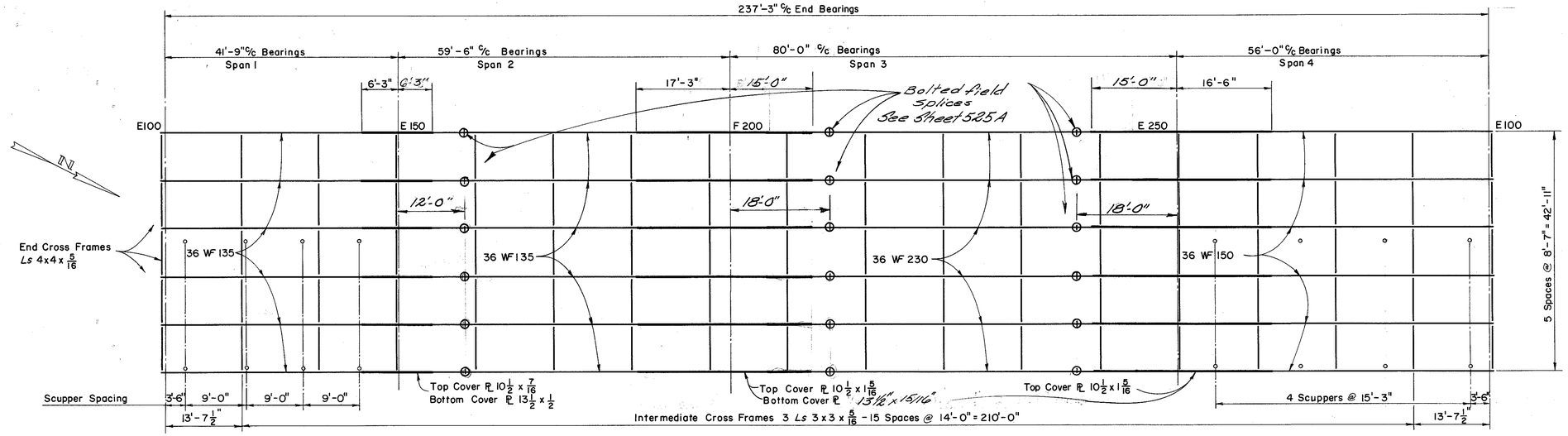
TUSCARAWAS COUNTY
TUS - 36 - 15.93



STEEL FRAMING PLAN

REINFORCING STEEL LIST

ABUTMENTS MARK	REQ'D. REAR	REQ'D. FWD.	TOTAL	LENGTH	WEIGHT	SHP.
A501	32		32	8'- 1"	270	
A502		32	32	9'- 7"	320	
A503	32	32	64	7'- 8"	512	
A504	38	32	70	25'- 3"	1,844	S
A505	24	12	36	8'- 2"	307	S
A506	4	4	8	6'- 2"	51	S
A507	8	8	16	12'- 2"	203	S
A508	24	28	52	3'- 6"	* 190	S
A509	12	12	24	3'-7"/4'- 4"	99	S
A510	48	32	80	4'- 9"	396	S
A511	4	4	8	12'- 0"	100	S
A511A	4	4	8	12'- 3"	102	S
A512	6	6	12	7'- 3"	91	
A512A	8	8	16	6'-2"/6'-11"	109	
A512B	12	12	24	3'-7"/6'-1"	119	
A513	26	26	52	5'- 7"	303	
A514		32	32	6'- 10"	228	
A515		28	28	6'- 5"	187	
A601	32		32	12'- 10"	617	
A602		12	12	7'- 4"	132	
A603	18		18	20'- 10"	563	
A604		44	44	15'- 0"	991	
A605		32	32	13'- 8"	657	
A606		12	12	18'- 10"	339	
A607	14	12	26	8'- 0"	312	
A608	8		8	26'- 5"	317	
A609	4		4	11'- 2"	67	
A610	44		44	16'- 2"	1,069	
A801		14	14	26'- 9"	1,000	S
A803		14	14	10'-11"	408	S
A804		8	8	8'- 0"	171	S

* 8 Each Vary by 4 1/4"

SUPERSTRUCTURE MARK	NO.	LENGTH	WEIGHT	SHP.
S 501	344	2'-10"	1,016	S
S 502	344	5'- 7"	2,003	
S 503	344	6'- 6"	2,332	
S 504	239	5'- 1"	1,267	
S 505	239	2'- 6"	623	S
S 601	654	25'- 7"	25,130	S
S 602	756	28'- 2"	31,984	S
S 603	108	32'- 0"	4,903	S
S 701	654	25'- 9"	34,422	S

RAILING				
R 501	112	14'-10"	Included with Item 517 for Payment	S
R 502	16	11'-11"		S
R 505	16	11'-10"		S

REPLACEMENT BARS				
RE 400	1	5'- 3"		
RE 500	1	5'- 7"		S
RE 600	1	5'-11"		S
RE 700	1	6'- 3"		S
RE 800	1	6'- 6"		S
RE 900	1	6'-10"		S
RE 1000	1	7'- 3"		S

Railing (Continued)

R503	12	4'-2"	B*
R504	8	5'-4"	B*

PIERS MARK	REQ'D REAR	REQ'D CENTR	REQ'D FWD.	TOTAL	LENGTH	WEIGHT	SHP.
P501	68	68	68	204	7'- 5"	1,578	
P502	4	4	4	12	21'- 9"	272	S
P701	16	16	16	48	8'- 4"	817	
P801	16	16	16	48	11'-10"	1,517	
P901	48	48	48	144	6'- 7"	3,223	
P 902	48			48	18'- 0"	2,938	S
P902A		48		48	14'- 6"	2,366	S
P902B			48	48	18'- 3"	2,978	S
P903	4	4	4	12	11'- 2"	456	
P904	12	12	12	36	8'- 6"	1,040	
P1001	6	6	6	18	21'- 9"	1,685	S
P1002	8	8	8	24	17'- 0"	1,756	S
P1003	8	8	8	24	23'- 2"	2,392	
P802	36	36	36	108	10'-10"	3,123	

SPIRALS MARK	NO.	NO. TURN	LENGTH	WEIGHT
CORE DIAM. = 32"			PITCH = 4 1/2"	
SP 401	4	42	14'- 7"	1,109
SP 402	4	33	11'- 3"	871
SP403	4	43	15'- 0"	1,135

BAR VARIATION MARK	VAR. BY	NO. EA.
A 509	4 1/2"	8
A 512 A	3	4
A 512 B	6	4

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 size of the bar. For example, A700 is a No. 7 size bar and A1014 is a No. 10 size bar.

All dimensions are out to out of the bar.

Type "S" bars are straight.

The "length" shown in steel list for the spiral bars is the distance from the top of the footing to the bottom of cap.

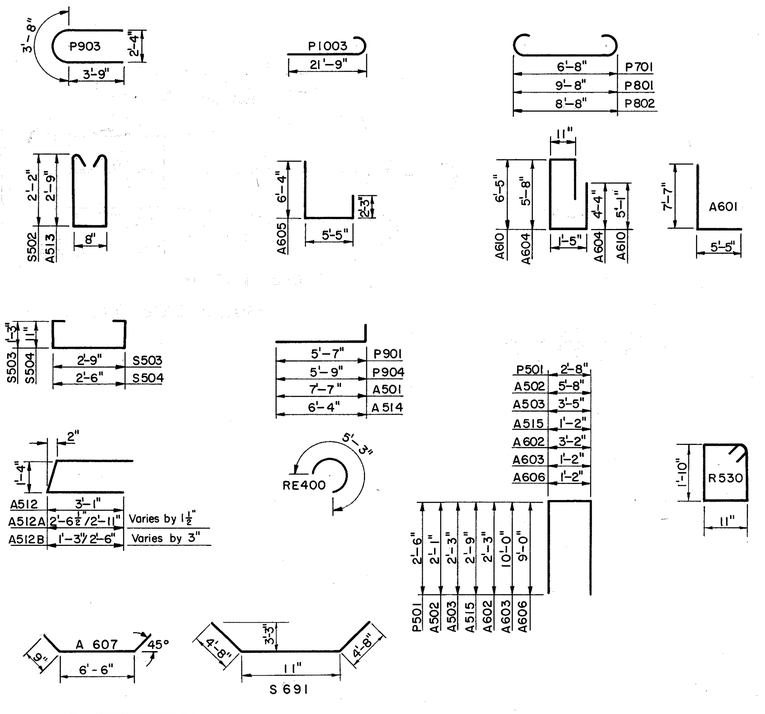
The "number of turns" shown in the steel list for the spiral bars is the "length" divided by the pitch, plus three (3) turns (total number of closed coils) expressed as the nearest whole number.

Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item 509.

1 1/2 closed coils shall be provided at the ends of each spiral unit.

Four steel channel, tee or angle spacers, weighing approximately 0.68 pounds per linear foot 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 pounds per linear foot will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

BENDING DIAGRAMS



* For bending diagrams see BR-1-65

REFERENCE shall be made to Standard Drawing No. SD-1-63 sheets No. 1 thru 4, dated 11-12-63 for details of moment plates crossframes, gutters, scuppers and curb plates.

REFERENCE shall be made to Standard Drawings FSB-1-62 revised 1-15-63 for details of bearings.

All [illegible] of structural steel shall be "Type A" except as otherwise shown. Welds shown on this plans may at the option of the Contractor, be made in the shop.

MOMENT PLATES shall be welded as shown on SD-1-63 except all welds shall be made in the shop rather than in the field, and no splices shall be made in the beams over the piers.

DEFLECTION AND CAMBER LOCATION	SPAN 1	SPAN 2	SPAN 3	SPAN 4
Deflection due to weight of steel	0	0	1/8"	0
Deflection due to remaining dead load	1/8"	1/8"	1/2"	1/8"
Convexity required for vertical curve	0	0	0	0
Sum of Deflection and Convexity	1/8"	1/8"	5/8"	1/8"
Required Camber	0	0	0	0

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FOR
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DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

FRAMING PLAN AND REINFORCING STEEL LIST

BRIDGE NO. TUS-36-1783
RELOC. U.S.-36 UNDER TRENTON AVE. CONNECTOR
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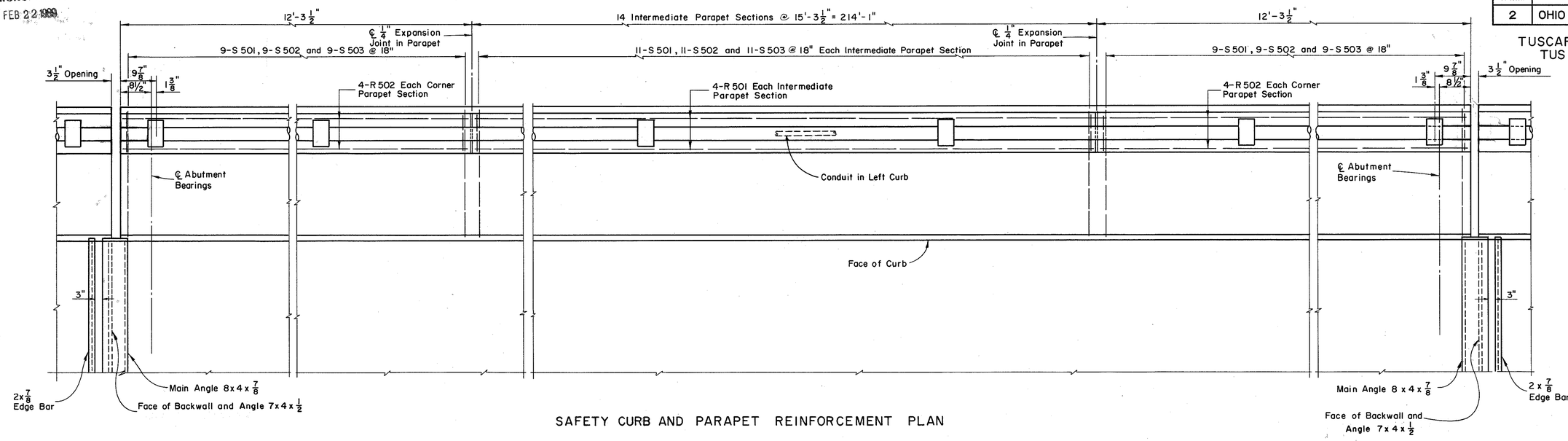
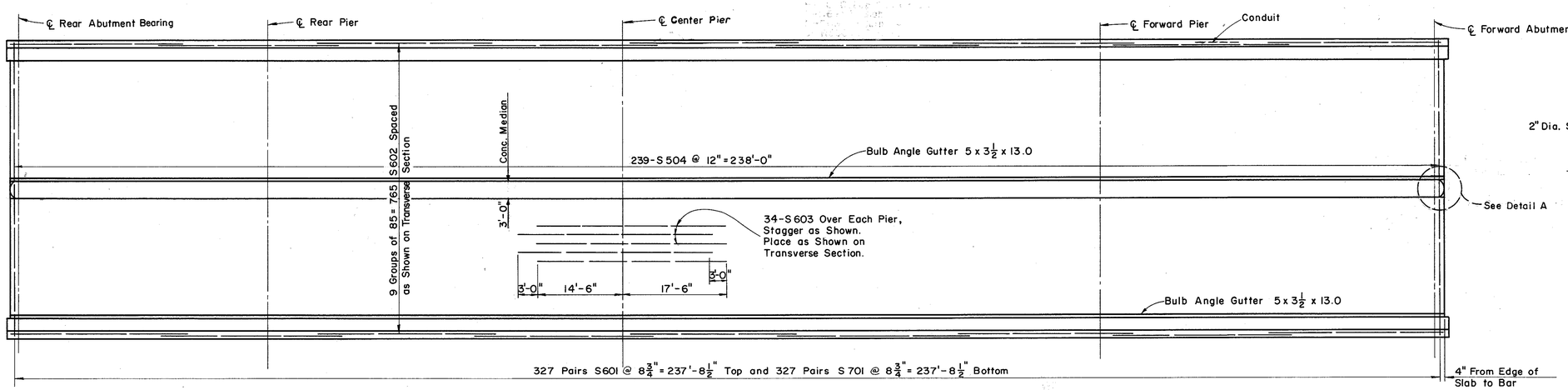
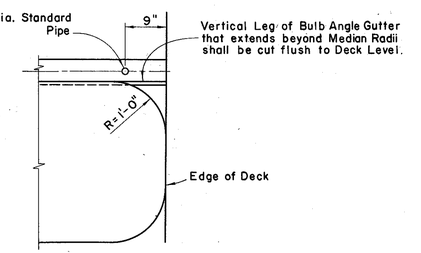


SAFETY CURB AND PARAPET REINFORCEMENT PLAN



MEDIAN AND DECK REINFORCEMENT PLAN



DETAIL A

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

DETAILS OF DECK & PARAPET

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RELOC. U.S.-36 UNDER TRENTON AVE. CONNECTOR
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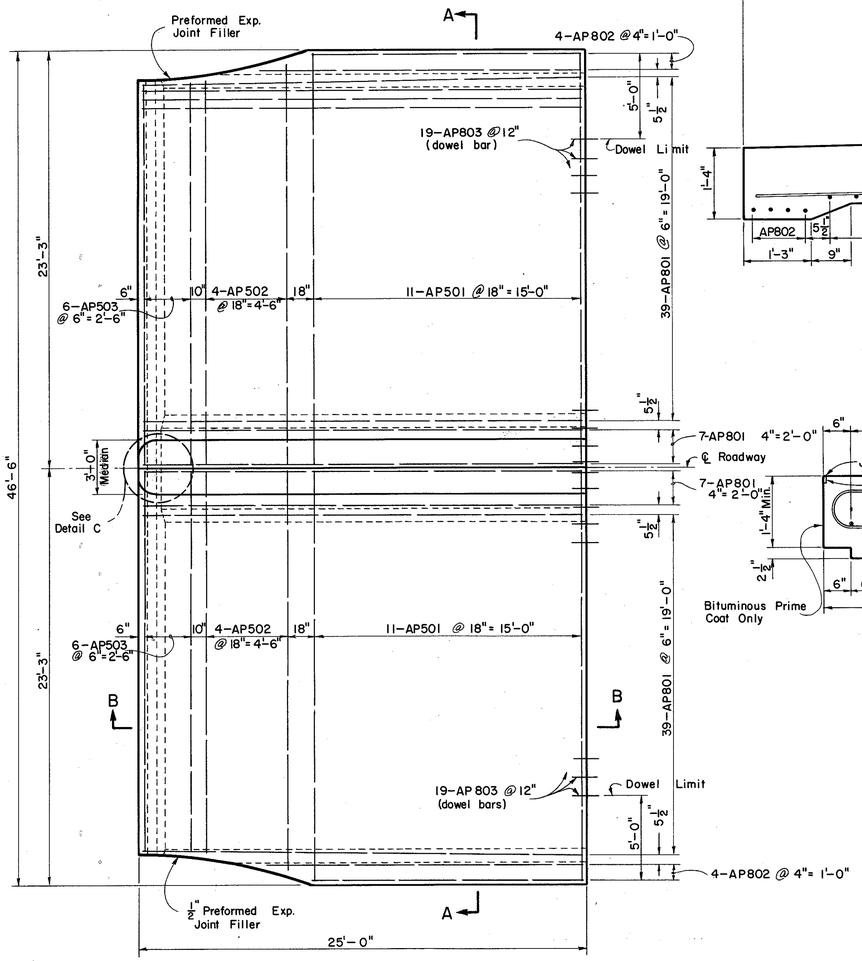
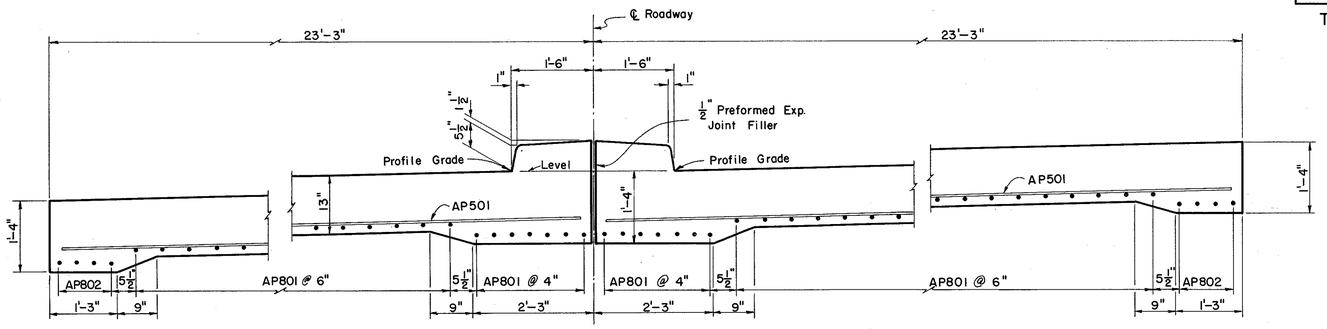
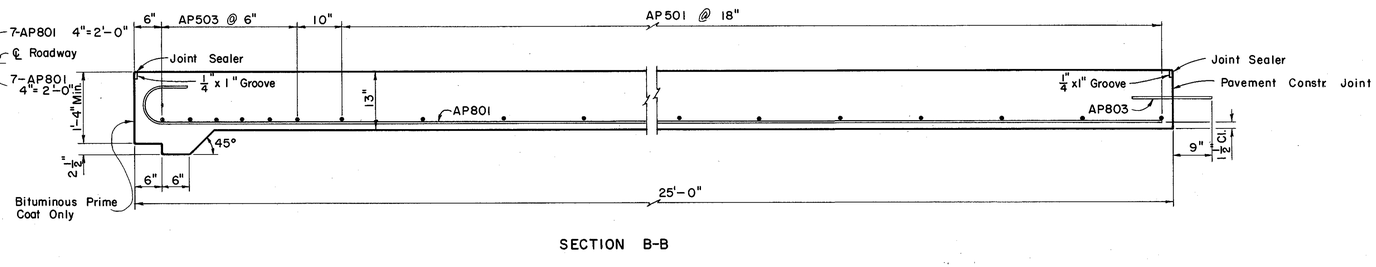


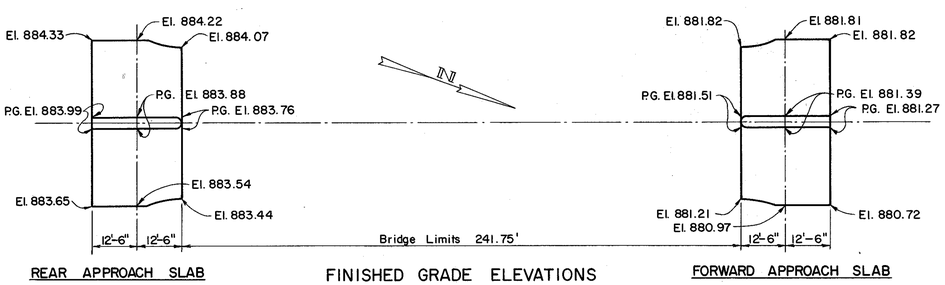
PLAN



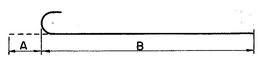
SECTION A-A



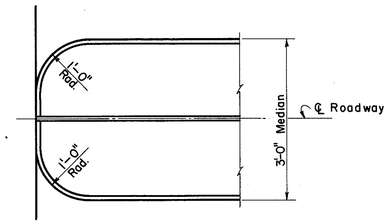
SECTION B-B



REAR APPROACH SLAB — FINISHED GRADE ELEVATIONS — FORWARD APPROACH SLAB



BENT BAR



DETAIL C

REINFORCING STEEL LIST

MARK	REQ'D REAR	REQ'D FWD.	TOTAL	LENGTH	WEIGHT	TYPE	A	B		VARIES BY	NO. OF EACH
AP501	22	22	44	21'-11"	Included with Item 1-7 for Payment	S					
AP502	8	8	16	20'-2⅞"/21'-2"		S				4"	2
AP503	12	12	24	20'-2"		S					
AP801	92	92	184	25'-9"		Bent	1'-1"	24'-8"			
AP802	8	8	16	16'-3/18'-9"		Bent	1'-1"	15'-2⅞"/17'-8"		10"	2
AP803	38	38	76	1'-6"		S					

Type "S" bar is straight

Approach Slabs shall be Class C Concrete

Premolded Expansion Joint Filler shall be Included with Item #// for payment.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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APPROACH SLABS

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STA. 263+25.00

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
M.J.F.	M.J.F.	FWB J.S.	L.L.D.	H.C.M. 8-17-64	

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TUSCARAWAS COUNTY
TUS-36-15.93

Location: West Corporation Line of Uhrichsville

B.M. -17 238' Lt. Sta. 257 + 00, Spike in 6" Triple Cherry. Elev. 867.366

B.M. -WI79 Situated Approximately 700' Rt. Centerline Sta. 258 + 25, a Standard U.S.C. & G.S. Bronze Disk Set in Concrete and Stamped WI79, 1954. Located on the Southerly side of P.R.R. on the Easterly side of a Private Road. Elev. 861.701

Mile Post # 92 @ Sta. 2518 + 60 P.R.R. V.S.S.

Signal @ 2518 + 46 P.R.R. V.S.S.

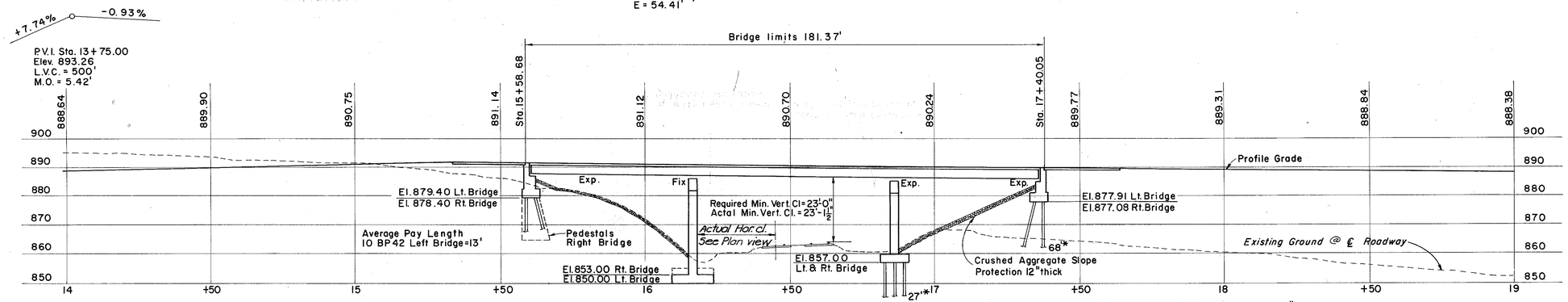
RAILROAD TRAFFIC (daily average)
8 Passenger trains at 60 m.p.h.
8 Through freight trains at 60 m.p.h.
18 Through freight trains at 50 m.p.h.
2 Local freight trains at 20 m.p.h.
2 Yard movements at 10 m.p.h.

PROPOSED STRUCTURE

TYPE: 3 Span continuous steel beam with reinforced concrete deck and substructure.
SPANS: 56'-0", 70'-0" & 50'-0" ℄c Brgs.
ROADWAY: Varies 54'-4" to 60'-0" f/f parapets, 1'-2" curbs.
LOAD FREQUENCY: CF = 400 (57)
WEARING SURFACE: 1" monolithic concrete
APPROACH SLABS: Special (25' Long)
ALIGNMENT: Trenton Ave. Connector and P.R.R. curves
SKEW: 32° 30' L.F. Substructure to Reference Line
A.D.T. = 6,300 (1977)
SUPERELEVATION: 0.053 Ft. per Ft.

TRENTON AVE. CONNECTOR
P.I. Sta. 15 + 04.86
Δ = 34° 38' 15"
D = 5° 00'
R = 1145.92'
T = 357.32'
L = 692.75'
E = 54.41'

B. & O. R.R. transfer track: This track will be removed by railroad forces



*Avg. Pay Length, 10 BP42

SLOPE PROTECTION: Remove upper 12" of earth from existing slopes at the abutments, and replace with 12" of Crushed Aggregate. Excavation therefor shall be considered as paid for in the bid price per sq. yd. paid for Crushed Aggregate Slope Protection. The Slope Protection shall extend to toe of slope.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
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DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

SITE PLAN
TRENTON AVE. CONNECTOR OVER
PENNSYLVANIA RAILROAD
TUSCARAWAS COUNTY
STA. 15 + 58.68
STA. 17 + 40.05

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	M.F.	F.W.B. B.R.	H.C.M.	H.C.M. 8-17-64	

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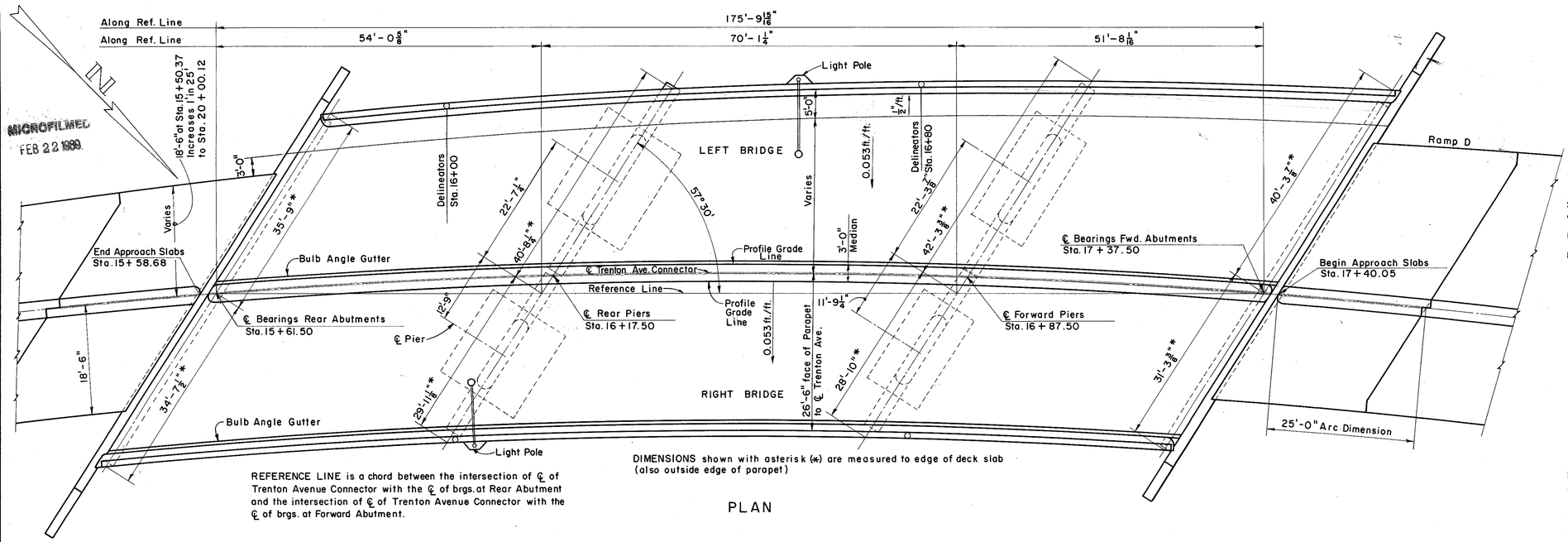
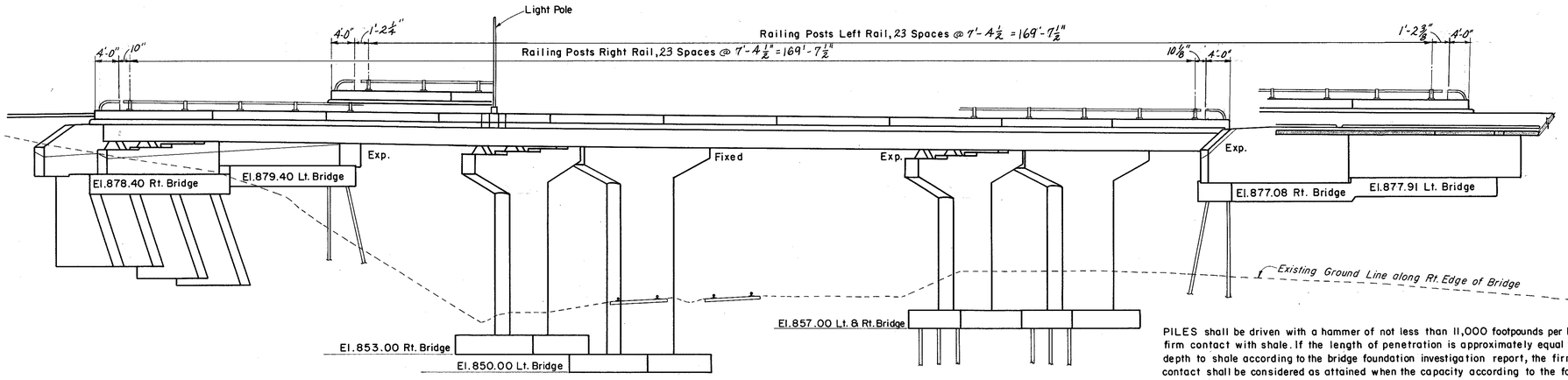


REFERENCE LINE is a chord between the intersection of ℄ of Trenton Avenue Connector with the ℄ of brgs. at Rear Abutment and the intersection of ℄ of Trenton Avenue Connector with the ℄ of brgs. at Forward Abutment.

DIMENSIONS shown with asterisk (*) are measured to edge of deck slab (also outside edge of parapet)

PLAN



ELEVATION

ELEVATIONS—TOP OF DECK SLAB

LOCATION	P.G. ELEV.*	LEFT BRIDGE		RIGHT BRIDGE	LOCATION	P.G. ELEV.*	LEFT BRIDGE		RIGHT BRIDGE
		BOTTOM OF LEFT CURB	CROWN	BOTTOM OF RIGHT CURB			BOTTOM OF LEFT CURB	CROWN	BOTTOM OF RIGHT CURB
Sta. 15+00	890.74				Sta. 16+50	890.70	891.81	891.97	889.44
Sta. 15+25	891.00				Sta. 16+75	890.47	891.63	891.79	889.21
Face of Backwall				889.84	Sta. 17+00	890.24	891.46	891.62	888.97
Sta. 15+50	891.14			889.88	Sta. 17+25	890.00	891.28	891.44	888.74
Face of Backwall	Rt.Br. 891.17				Face of Backwall	Rt.Br. 889.89			888.74
Face of Backwall	Lt.Br. 891.18		892.30		Face of Backwall	Lt.Br. 889.87			
Sta. 15+75	891.18		892.30	889.92	Sta. 17+50	889.77	891.10	891.26	
Face of Backwall		892.14			Face of Backwall		891.05	891.23	
Sta. 16+00	891.11	892.12	892.28	889.85	Sta. 17+75	889.54			
Sta. 16+25	890.94	891.99	892.15	889.67					

*Bottom of Right Curb of Left Bridge & Bottom of Left Curb of Right Bridge

GENERAL NOTES

REFERENCE shall be made to Standard Drawings SD-1-63, Sheets No. 1 thru 4 of 4 dated 11-12-63, RB-1-55 revised 2-2-59, BE-1-65, sheet 1, dated 2-1-65, and AS-1-54 revised 8-10-65, and to Sup. Spec. 808 dated 7-14-65 and 811 revised 3-29-65.

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

DESIGN LOADING: CF 400(57)

BASIC UNIT WORKING STRESSES:
Concrete Class C-basic unit stress ---------- 1,333 p.s.i.
Concrete Class E-basic unit stress ---------- 1,133 p.s.i.

Structural Steel-ASTM A36-basic unit stress ---------- 20,000 p.s.i.

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

Welding shall conform to the Specifications for Welded Highway and Railway Bridges of the American Welding Society, latest edition, except as modified by the Specifications. Welding procedure and welders shall be qualified by the Contractor, before welding is started, as prescribed by the Specifications.

RAILROAD FORCE ACCOUNT WORK

Plans for Railroad Force Account Work maybe seen at the Division Office in New Philadelphia, O. or at the Bureau of Bridges, Construction Bureau or Office of Contract Sales, in Columbus, O.

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.

CONSTRUCTION CLEARANCE of 20 feet vertically above the top of the railroad rails and 8 feet horizonally from the center of tracks shall be maintained at all times.

PROCEDURE: Piers may be constructed before embankment has been placed. The embankment shall be placed and compacted up to the finished spill thru earth slope and for a distance of 200 feet back of the Forward Abutment, after which a delay of 60 days shall occur before driving piles and construction of the Forward Abutment is begun.

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

SETTLEMENT HUBS shall be driven in the compacted embankment 18 feet right and 25 feet left of ℄, Sta. 17+60. If the hubs as determined at approx. one week intervals, indicate that all settlement has ceased before the end of the waiting period, construction of the Forward Abutment may proceed after approval from the Director.

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

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.

ALIGNING RAILROAD TRACKS: After the Contractor has completed all excavation and backfill adjacent to the railroad tracks in compliance with Sec. 503.04 and 503.09 of the Construction and Material Specifications, subject to the Supervision of the Railroad Company, nothing in Sec. 503.04, 503.09 or 108.04 of the Specifications shall be construed to hold the Contractor liable for aligning and resurfacing the railroad tracks.

FOUNDATION BEARING PRESSURE: Pedestals of Rear Abutment of Right Bridge are designed for a maximum bearing pressure of 5 tons per sq. ft. and footings of Rear Piers are designed for a maximum bearing pressure of 3 tons per sq. ft.

LIGHTING DETAILS are shown in Lighting Plans beginning with Sheet 489.

PILES shall be driven with a hammer of not less than 11,000 footpounds per blow to firm contact with shale. If the length of penetration is approximately equal to the depth to shale according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. 507.05 of the Construction Specifications, is not less than the following value for a pile hammer of the indicated energy rating.

HAMMER, FOOT-POUND	ABUTMENTS, TONS PER PILE		PIER TONS PER PILE	
	Rear	Forward	Rear	Forward
11,000	50	35	—	45
15,000	43	35	—	36

If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 34 tons per pile at the Forward Piers and 30 tons per pile at the Rear Abutment of Left Bridge and 35 tons per pile at the Forward Abutments.

CONCRETE DECK PLACING: In order to facilitate water curing 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.

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

REAR PIER FOOTINGS shall extend a minimum of 3 inches into solid rock or to the elevations shown, whichever is lower.

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FOR

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BUREAU OF BRIDGES

GENERAL PLAN

TRENTON AVE. CONNECTOR OVER
PENNSYLVANIA RAILROAD
TUSCARAWAS COUNTY
STA. 15+58.68
STA. 17+40.05

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
	M.F	F.W.B. A.K.	N.P.	G.S.W. 8-17-[illegible]	

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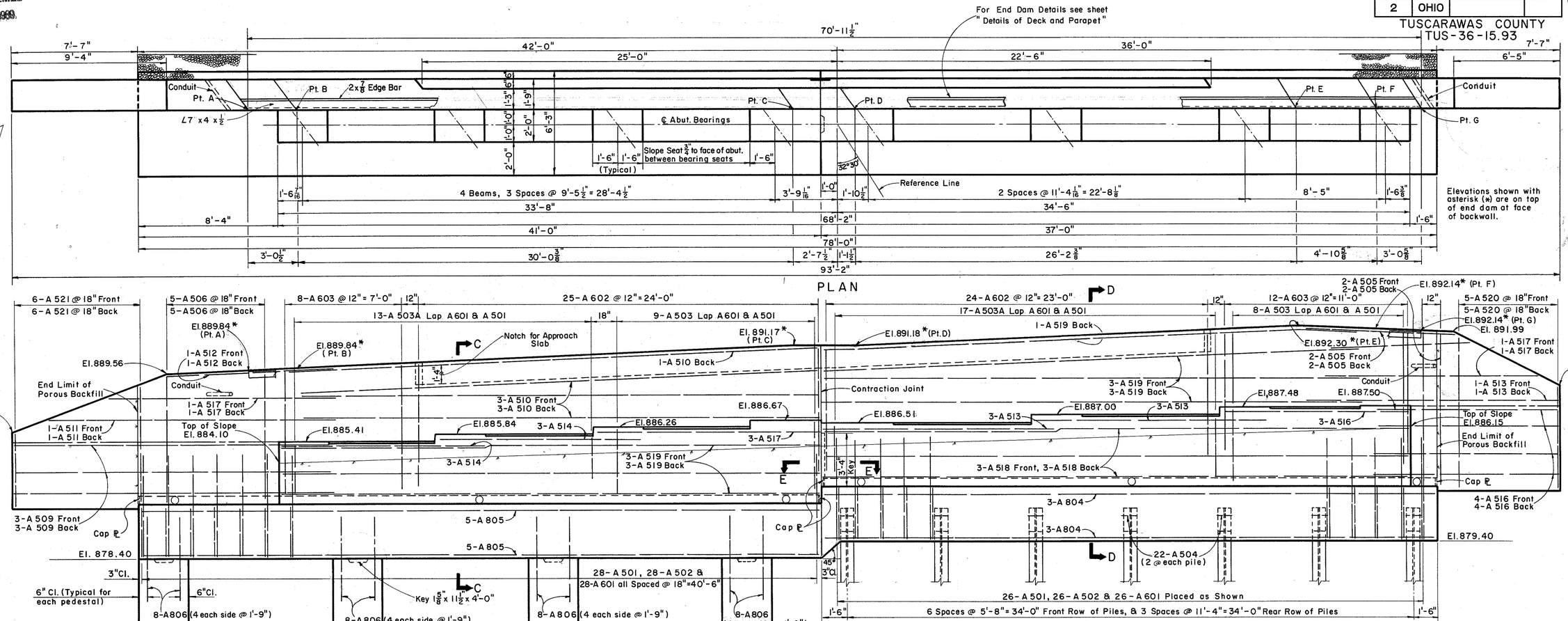
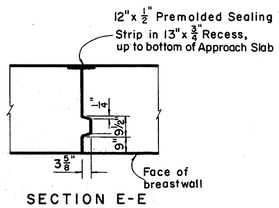
TUSCARAWAS COUNTY
TUS-36-15.93

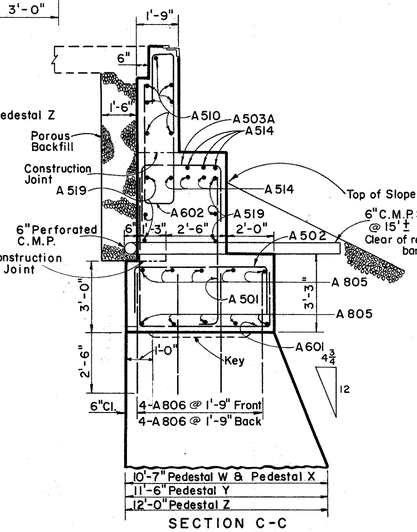
PLAN



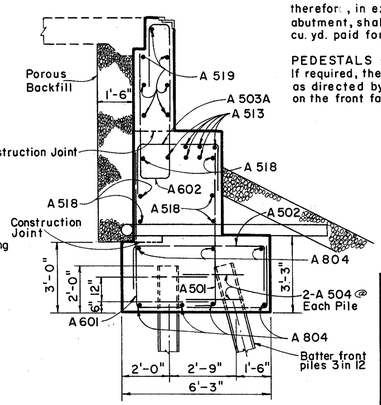
ELEVATION



SECTION E-E



SECTION C-C



SECTION D-D

POROUS BACKFILL shall extend upward to the approach slabs 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.

PEDESTALS shall be set a minimum of 3" into sound rock. If required, the bottom elevations of pedestals shall be adjusted as directed by the Engineer, maintaining the indicated batter on the front face of pedestals.

All reinforcing steel shall have a minimum of 3" of cover in the bottom of footing, and 2" elsewhere unless otherwise shown.

All piles are 10-BP 42.

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FOR

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DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

REAR ABUTMENT

TRENTON AVE. CONNECTOR
OVER PENNSYLVANIA RAIL ROAD
TUSCARAWAS COUNTY
STA. 15+58.68
STA. 17+40.05

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
M.C.P.	M.F.	L.C.Z. E.R.	P.D. B.O.L.	H.C.M. 8-17-64	

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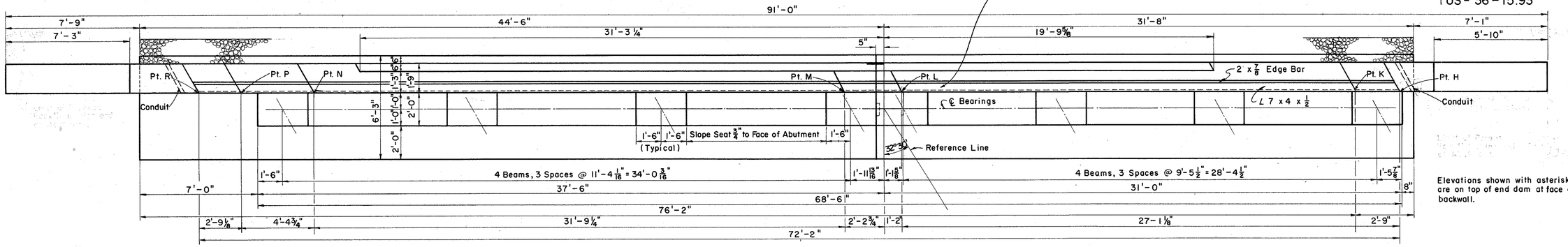
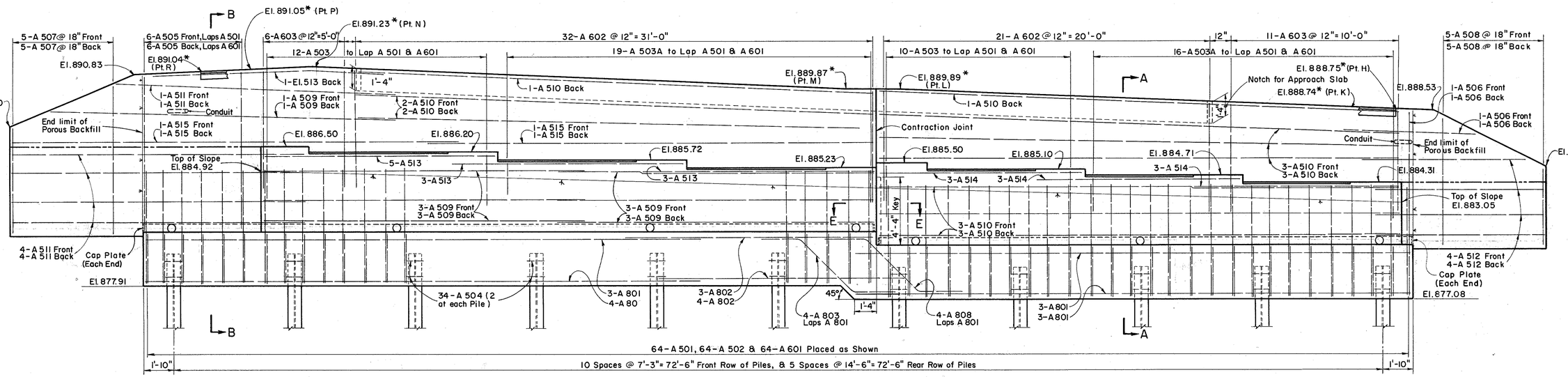
For End Dam Details see sheet "Details of Deck and Parapet"

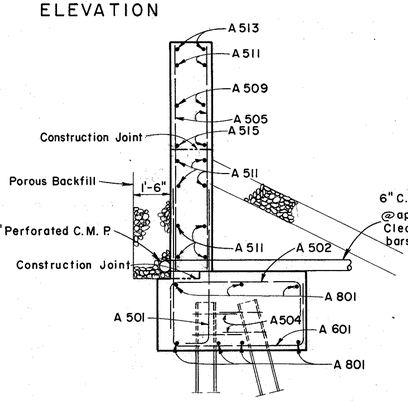


Elevations shown with asterisk (*) are on top of end dam at face of backwall.

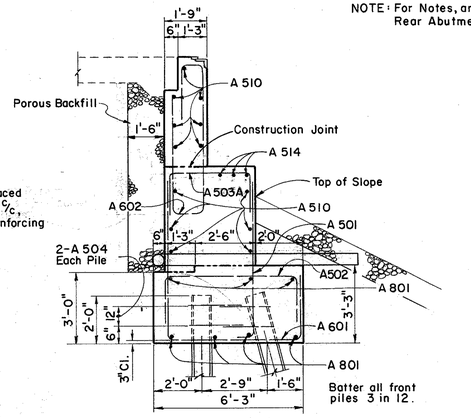
PLAN



ELEVATION



SECTION B-B



SECTION A-A

NOTE: For Notes, and Section E-E see Rear Abutment Sheet.

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FORWARD ABUTMENT

TRENTON AVE. CONNECTOR OVER
PENNSYLVANIA RAILROAD

TUSCARAWAS COUNTY

STA. 15+58.68
STA. 17+40.05

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
H.C.M. M.C.P.	M.F.	F.W.B. B.R.	N.P.	H.C.M. 8-17-64	

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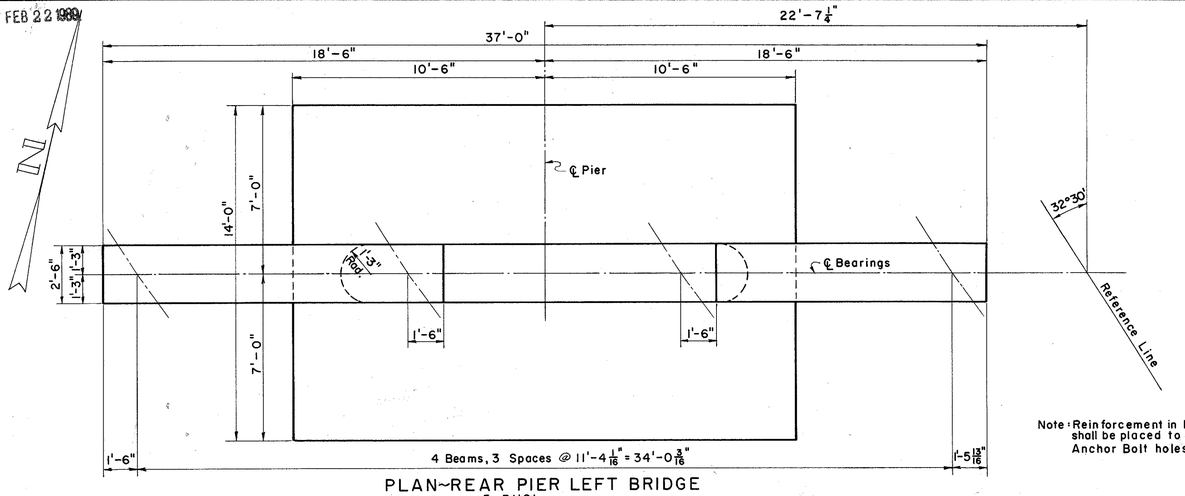
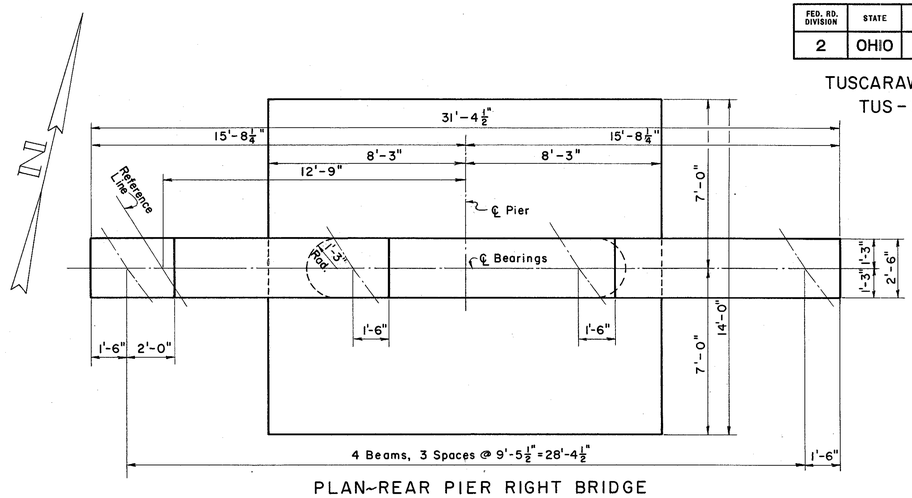
TUS-36-15.93

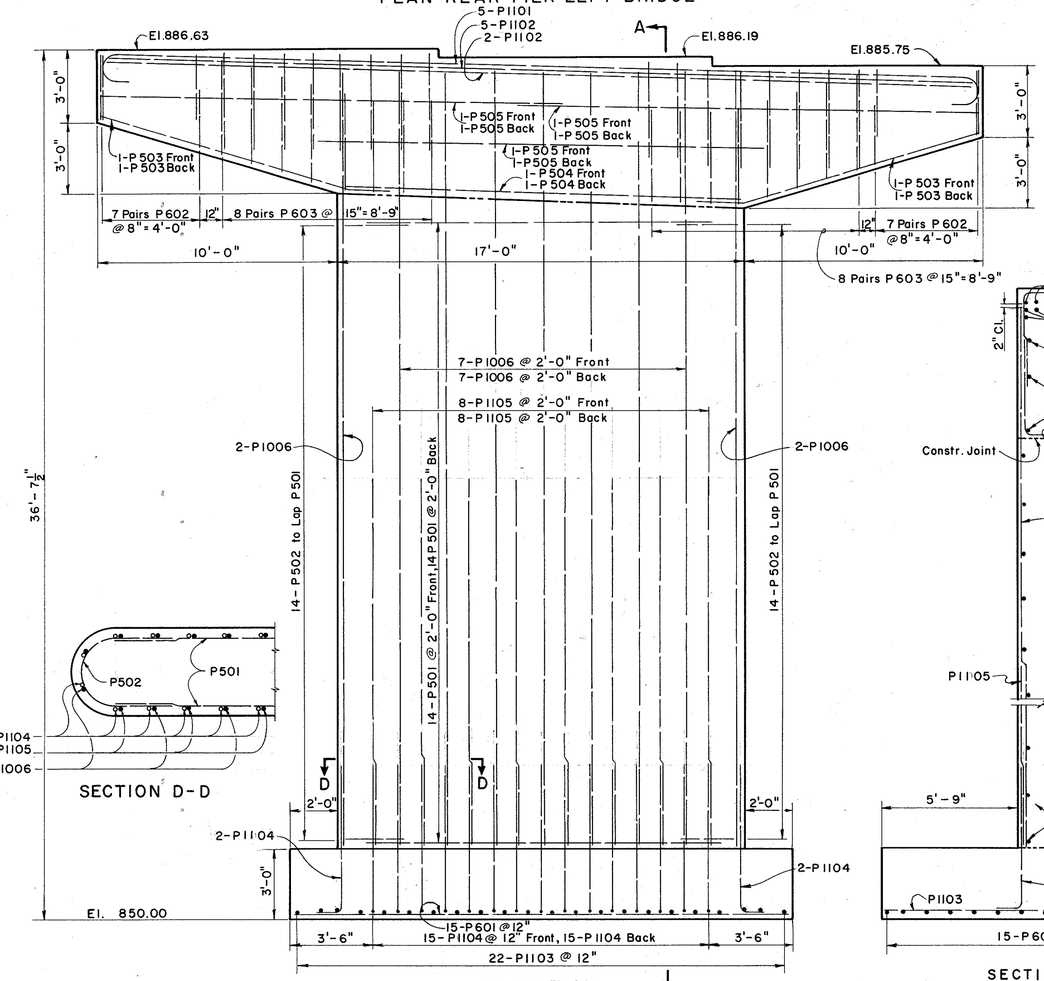


PLAN~REAR PIER LEFT BRIDGE

Note: Reinforcement in Pier Cap shall be placed to clear Anchor Bolt holes.

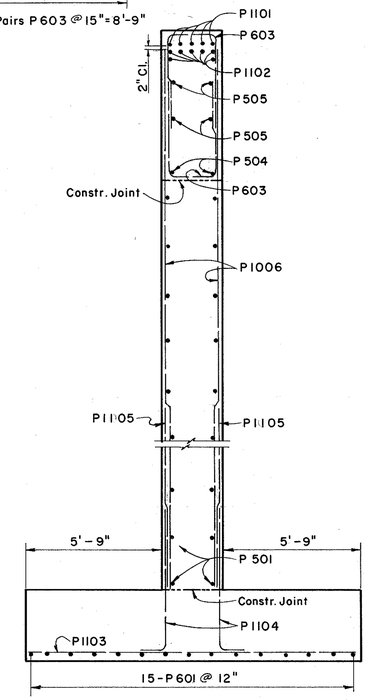


PLAN~REAR PIER RIGHT BRIDGE

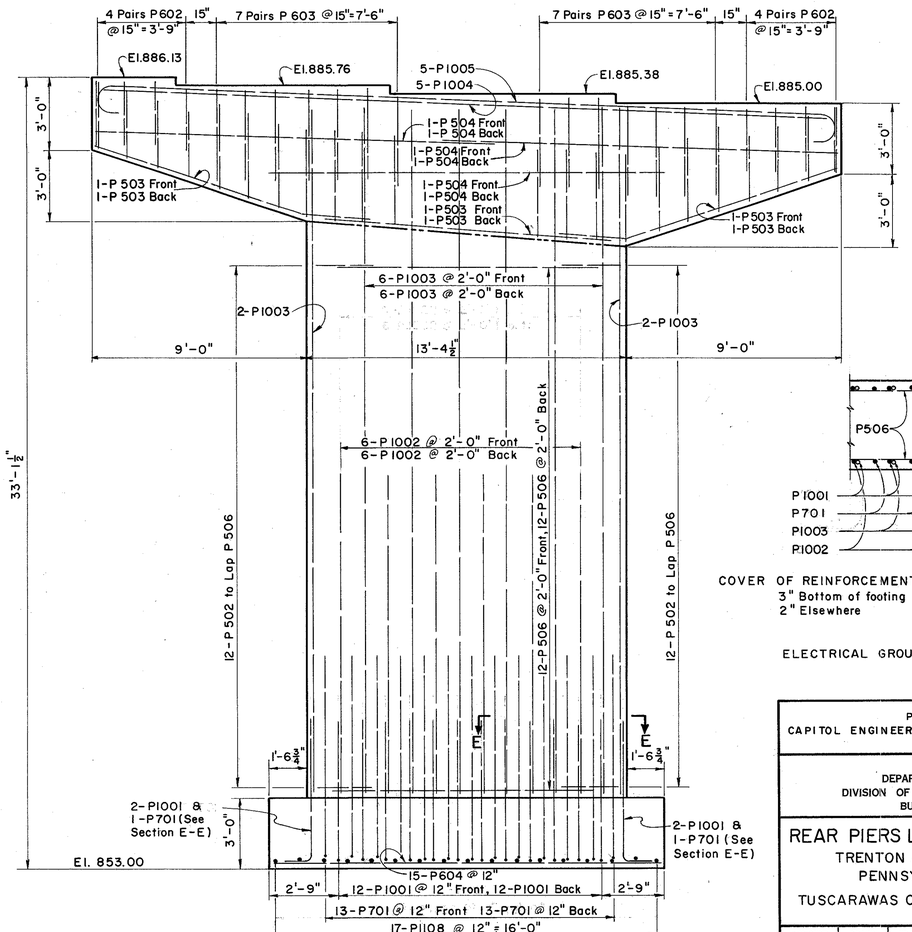


SECTION D-D

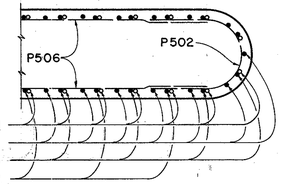
ELEVATION A



SECTION A-A



ELEVATION



SECTION E-E

COVER OF REINFORCEMENT:
3" Bottom of footing
2" Elsewhere

ELECTRICAL GROUNDING required at Rear Piers.

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REAR PIERS LEFT & RIGHT BRIDGES

TRENTON AVE. CONNECTOR OVER
PENNSYLVANIA RAILROAD
TUSCARAWAS COUNTY
STA. 15 + 58.68
STA. 17 + 40.05

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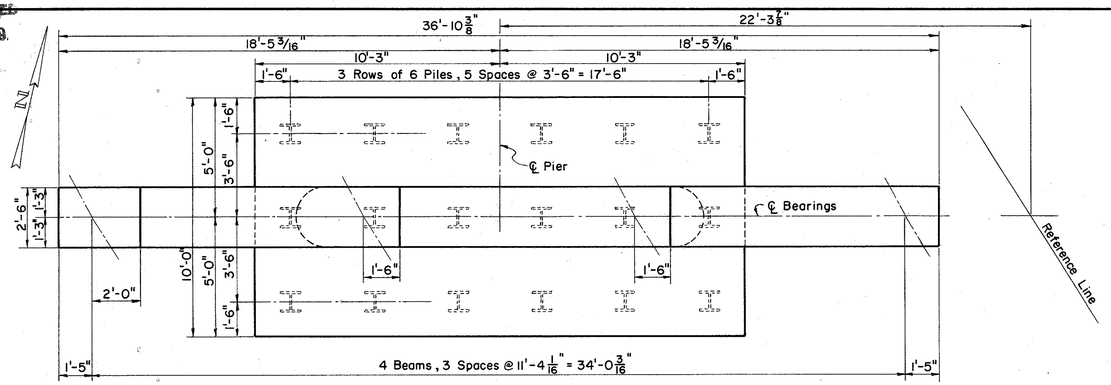
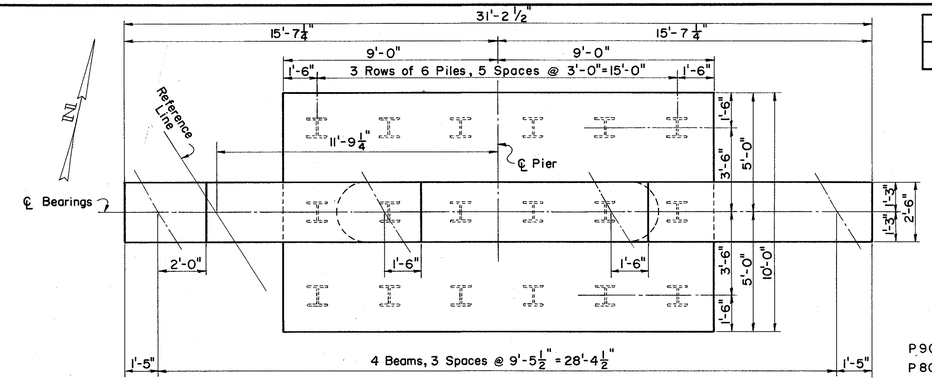
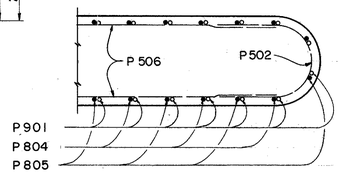
TUSCARAWAS COUNTY
TUS-36-15.93



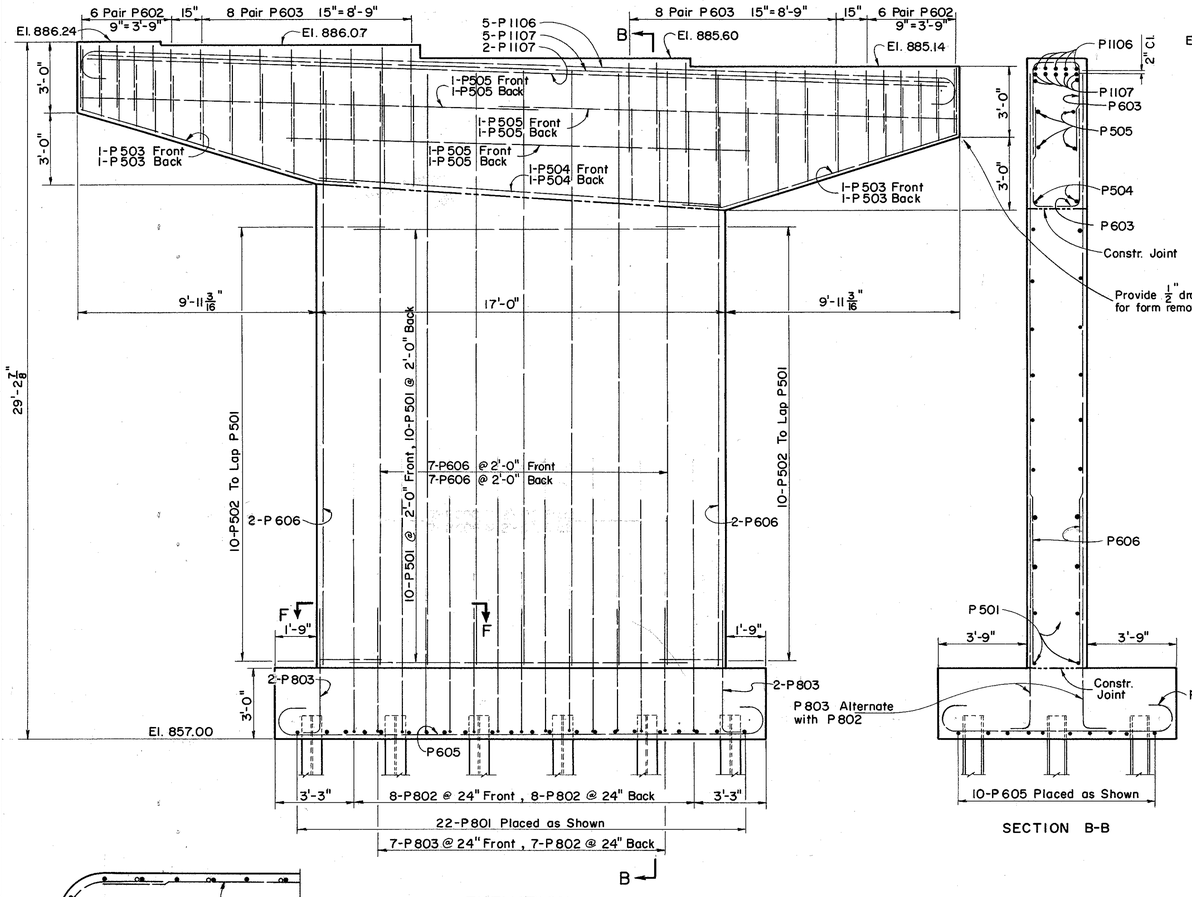
PLAN FORWARD PIER LEFT BRIDGE



PLAN FORWARD PIER RIGHT BRIDGE

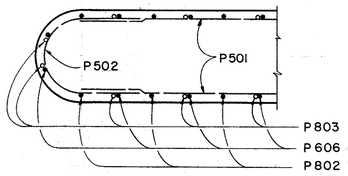


SECTION G-G

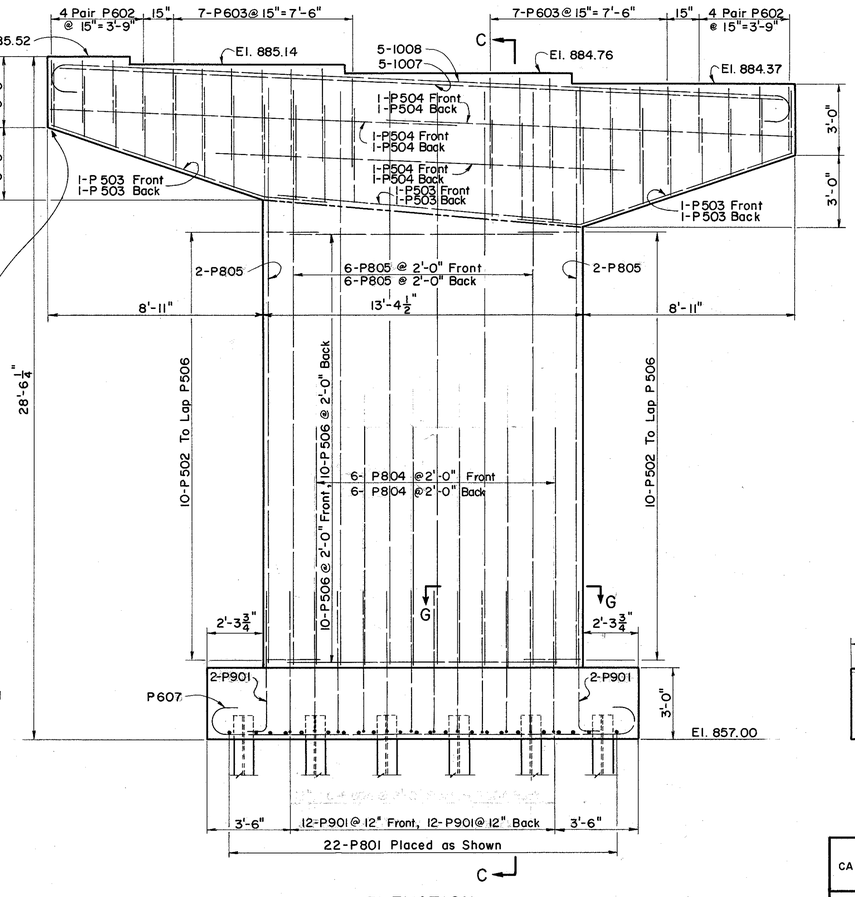


ELEVATION

SECTION B-B



SECTION F-F



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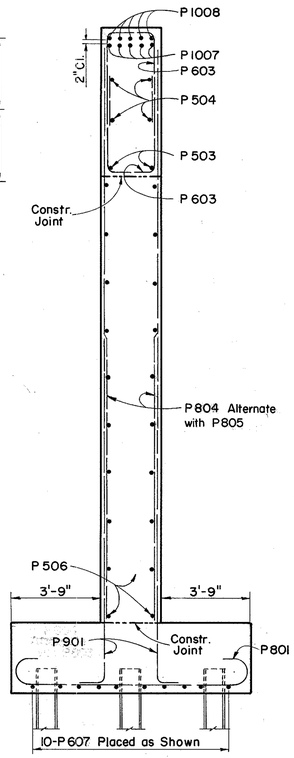

SECTION C-C

COVER OF REINFORCEMENT:
3" Bottom of Footing
2" Elsewhere

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FOR
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BUREAU OF BRIDGES

FORWARD PIERS LEFT & RIGHT BRIDGES

TRENTON AVE. CONNECTOR OVER
PENNSYLVANIA RAILROAD
TUSCARAWAS COUNTY
STA. 15+58.68
STA. 17+40.05

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
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MICROFILMED
FEB 22 1999

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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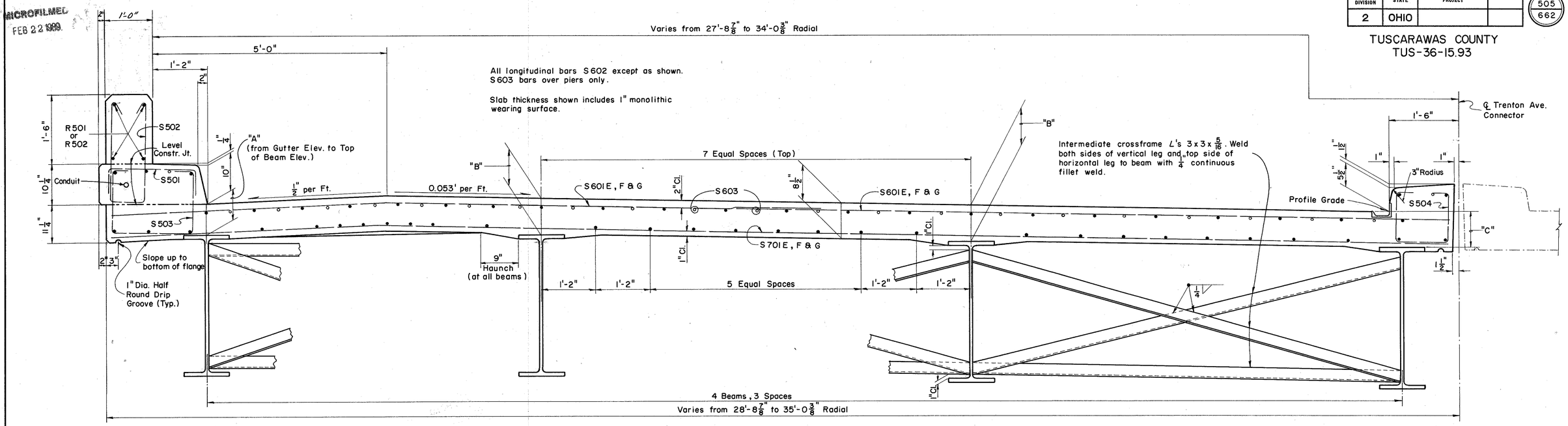
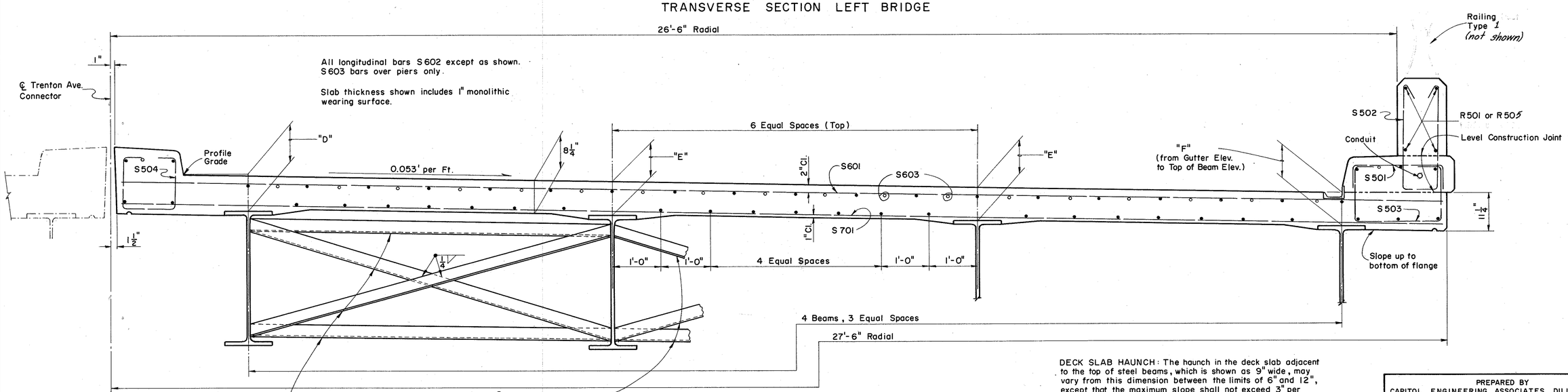
TUSCARAWAS COUNTY
TUS-36-15.93



TRANSVERSE SECTION LEFT BRIDGE



TRANSVERSE SECTION RIGHT BRIDGE

DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of steel beams, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12", except that the maximum slope shall not exceed 3" per foot. A typical haunch width of 9" shall be used for computing quantity of concrete.

SLAB THICKNESSES *

Dimension from Top of Beam to Top of Deck Slab

	"A"	"B"	"C"	"D"	"E"	"F"
℄ Brg. Rear Abut.	8 3/4"	9"	9"	9 3/4"	8 3/4"	8 7/8"
℄ Brg. Rear Pier	9 3/8"	9 1/8"	9"	9"	8 7/8"	8 3/4"
℄ Brg. Fwd. Pier	8 5/8"	9 1/8"	9"	8 3/8"	8 7/8"	8 3/4"
℄ Brg. Fwd. Abut.	8 1/4"	9 3/8"	9 1/8"	8 7/8"	9 1/8"	9 1/2"

* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per Sec. 511.19 of the Construction and Material Specifications.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

TRANSVERSE DECK SECTION

TRENTON AVE. CONNECTOR OVER
PENNSYLVANIA RAILROAD
TUSCARAWAS COUNTY
STA. 15 + 58.68
STA. 17 + 40.05

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
H.C.M.	M.F.	F.W.B. P.A.D.	N.P.	H.C.M. 8-17-64	

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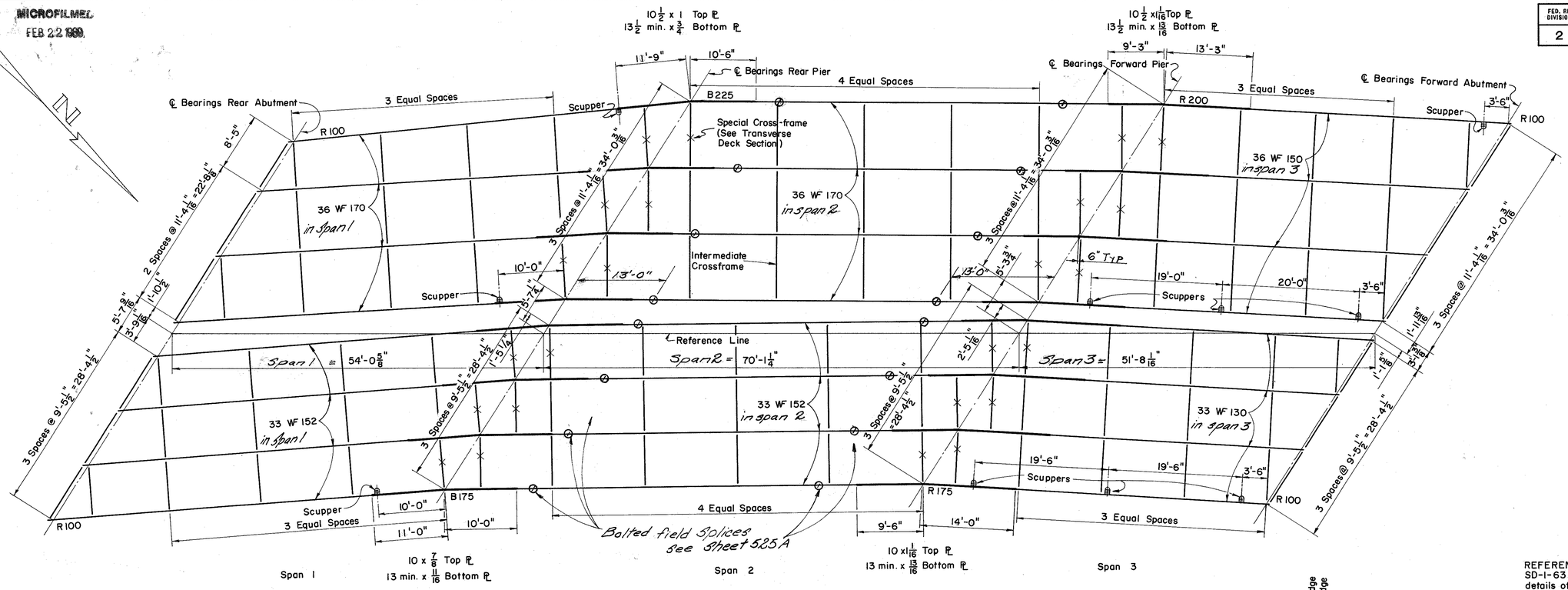
FEB 22 1989

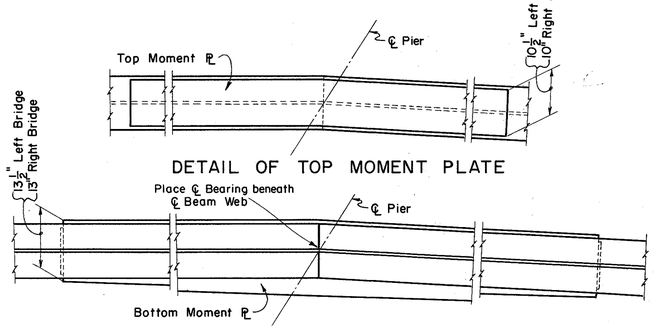
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

506
662

TUSCARAWAS COUNTY
TUS-36-15.93



STEEL FRAMING PLAN



DETAIL OF TOP MOMENT PLATE

DETAIL OF BOTTOM MOMENT PLATE

REFERENCE shall be made to Standard Drawing No. SD-1-63, Sheets 1, 2, 3 and 4 of 4, dated 11-12-63 for details of end dams, gutter, scuppers, crossframes and beam splices at bend line.

REFERENCE shall be made to Standard Drawing RB-1-55, revised 2-2-59, for details of bearings.

BEAM SPLICE at bend line over piers shall be as shown on SD-1-63 but shall be welded in the shop rather than in the field. Ship Left Bridge Pier 1 beams with Left Bridge Abutment ends of beams 2", and the Forward Abutment ends of beams 2½".

2. Butt-weld the beam flanges and web, using the following sequence. Make two passes on the web, then two on each flange; repeat, using one or two passes at each location, until welds are completed.
3. Weld the bottom and the top moment plates.
4. Weld special cross-frame stiffeners in place.
5. Lower the beam ends to final position.

SPECIAL CROSS-FRAMES shall clear web splices by 6".

SLAB OVERHANG

"Radial Dimensions from ℄ of Beam to Bottom Edge of Slab."

LOCATION	LEFT BRIDGE		RIGHT BRIDGE	
	LEFT EDGE	RIGHT EDGE	LEFT EDGE	RIGHT EDGE
℄ Bearing, Rear Abutment	2'-2 1/4"	1'-4 1/2"	2'-10 1/2"	1'-11 5/8"
Center, Span 1	1'-10 5/8"	1'-2"	2'-6 7/8"	1'-10 1/8"
℄ Rear Pier	0'-10 1/2"	1'-7 5/8"	1'-6 3/4"	2'-5 3/8"
Center, Span 2	2'-2 1/2"	1'-1 1/4"	1'-7 1/2"	1'-10 3/4"
℄ Forward Pier	2'-6 1/8"	1'-7 3/4"	0'-7 1/8"	2'-5 1/2"
Center, Span 3	3'-4 7/8"	1'-4 3/8"	1'-0 1/8"	1'-8 3/4"
℄ Bearing, Forward Abutment	3'-9 1/4"	1'-7 1/2"	0'-10 1/2"	1'-6 5/8"

DEFLECTION & CAMBER OF BEAMS

	REAR SPAN	MIDDLE SPAN	FWD. SPAN
Deflection due to weight of steel.	0	1/16"	0
Deflection due to remaining dead load.	1/4"	5/16"	1/8"
Convexity required for vertical curve.	0	0	0
Sum of deflection and convexity.	1/4"	3/8"	1/8"
Required camber	0	0	0

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BUREAU OF BRIDGES

FRAMING PLAN

TRENTON AVE. CONNECTOR OVER
PENNSYLVANIA RAILROAD
TUSCARAWAS COUNTY
STA. 15 + 58.68
STA. 17 + 40.05

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
H.C.M. M.C.P.	M.J.F.	F.W.B. P.A.D.	N.P.	H.C.M. 8-17-64	

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

507
662

TUSCARAWAS COUNTY
TUS-36-15.93

N

//-S501, //-S502 and //-S503 Equally Spaced and 4-R502

10 Intermediate Parapet Sections @ 14'-9" = 147'-6"

//-S501, //-S502 and //-S503 Equally Spaced and 4-R501 in Each Intermediate Parapet Section

16'-9" End Section

16'-3⅛" End Section

End of Parapet

Light Pole Base, See Lighting Plan for Details
Reinforcement: 8-S690, Lap S601 & S701
2-S691 in Slab; 2-S691 in Curb
3-R530 in Parapet

Conduit

LEFT BRIDGE

℄ Bearings Rear Abutment

Start Bar Series E @ Corner of Slab

℄ Bearings Rear Pier

7 Groups of 56 = 392-S602 See Transverse Section for Spacing.

3'-0" 15'-6" 12'-6" 3'-0"

23-S603 over each Pier stagger as shown, spaced as shown in Transverse Section.

℄ Bearings Fwd. Pier

8"

5-S601C Top of Slab
5-S701C Bottom of Slab

22-S601J @ 8¼" = 14'-5¼" Top of Slab
22-S701J @ 8¼" = 14'-5¼" Bottom of Slab

℄ Bearings Fwd. Abutment

25-S601H @ 8¼" = 16'-6" Top of Slab*
25-S701H @ 8¼" = 16'-6" Bottom of Slab*

5-S601D Top of Slab
5-S701D Bottom of Slab

53 Pairs S601E @ 8" = 34'-8" Top of Slab*
53-S701E @ 8" = 34'-8" Bottom of Slab*

8"

105 Pairs S601F @ 8" = 69'-4" Top of Slab*
105-S701F @ 8" = 69'-4" Bottom of Slab*

Start Bar Series F @ Intersection of ℄'s

76 Pairs S601G @ 8" = 50'-0" Top of Slab*
76-S701G @ 8" = 50'-0" Bottom of Slab*

Start Bar Series G @ Intersection of ℄'s

* Placed Radial from ℄ Trenton Ave. Connector.

222 S601 @ 8¾" = 161'-1¾" Top of Slab*
222 S701 @ 8¾" = 161'-1¾" Bottom of Slab*

℄ Trenton Ave. Connector

RIGHT BRIDGE

7 Groups of 51 = 357-S602 See Transverse Section for Spacing.

8¾"

5-S601D Top of Slab
5-S701D Bottom of Slab

Start Bars S601 & S701 @ Intersection of ℄'s

20-S603 over each Pier stagger as shown, spaced as shown in Transverse Section.

3'-0" 15'-6" 12'-6" 3'-0"

15-S601B @ 8¾" = 10'-2½" Top of Slab*
15-S701B @ 8¾" = 10'-2½" Bottom of Slab*

23-S601A @ 8¾" = 16'-0½"
23-S701A @ 8¾" = 16'-0½"

8¾"

Elevations marked thus (**) are on top of end dam at face of backwall.

Light Pole Base, See Lighting Plan for Details
Reinforcement: 8-S690, Lap S-601 & S701, 2-S691 in Slab; 2-S691 in Curb & 3-R530 in Parapet.

Conduit

End of Parapet

5-S601C Top of Slab
5-S701C Bottom of Slab

End Section 15'-10¾"

//-S501, //-S502 and //-S503 Equally Spaced and 4-R501

//-S501, //-S502 and //-S503 Equally Spaced and 4-R501 in Each Intermediate Parapet Section

10 Intermediate Parapet Sections @ 14'-9" = 147'-6"

El. 891.18**

End Section 15'-10⅞"

El. 889.87**

End of Parapet

//-S501, //-S502 and //-S503 Equally Spaced and 4-R501

PLAN OF DECK

Main Angle 8 x 4 x ⅞

Tarpaper (See Note ***)

2" Clear. between ends of L 8 x 4 x ⅞

℄ Bearing Rear Abut.

℄ Bearing Fwd. Abut.

2" Clear. between ends of L 8x4x⅞

R=6"

1'-0"

L 7x4x½

℄ Trenton Ave. Connector

Cut L 7x4x½ and Edge Bar 2x⅞ at this line.

Cut L 7 x 4 x ½ and Edge Bar 2 x ⅞ at this line.

NOTE (***)
Before placing Approach Slab, place 3 layers of tarpaper in area indicated by hatch marks. *Include with Approach Slab for payment.*

Approach Slab Seat
End of Approach Slab

Edge of Deck

6"

5"

Face of Backwall

L7x4x½

2 x ⅞ Edge Bar

El. 891.17**

119 Pairs of S504 @ 18" = 177'-0"

Edge of Deck

Approach Slab Seat

Beginning of Approach Slab

Face of Backwall

2 x ⅞ Edge Bar

El. 889.89**

PLAN OF MEDIAN

Edge of Safety Walk

Supporting Angle 6 x 4 x ⅝

Main Angle 8x4x⅞

L7x4x½

℄ Abut. Brg.

Edge Bar 2x⅞

2"

Terminate L6x4x⅝ and vertical leg of L8x4x⅞ at edge of deck slab.

DETAIL C
(Concrete not shown)

RIGHT BRIDGE
LEFT BRIDGE

Face of Backwall and Angle 7 x 4 x ½

2 x ⅞ Edge Bar

Main Angle 8x4x⅞

℄ Bearings Rear Abut. (Right Bridge)
℄ Bearings Fwd. Abut. (Left Bridge)

3¼

Bulb Angle Gutter 5 x 3½ x 13.0 (Right Bridge Only)

For End Post Reinforcing See BR-1-65

Conduit in Curbs

R=1'-0"

End of Parapet

1'-9" Backwall

4'-0"

1'-2¼" Left Bridge
10" Right Bridge

Railing Posts 23 Spaces @ 7'-4½" = 169'-7½" Left and Right Bridge

PLAN OF CURB & PARAPET

Bulb Angle Gutter 5 x 3½ x 13.0 (Right Bridge Only)

Cut Vertical Leg of Bulb Angle

3"

R=1'-0"

1'-2⅜" Left Bridge
10⅛" Right Bridge

4'-0"

End of Parapet

1'-9" Backwall

SEE DETAIL C

℄ Bearings Fwd. Abut. (Right Bridge)
℄ Bearings Rear Abut. (Left Bridge)

Face of Backwall and Angle 7 x 4 x ½

Main Angle 8 x 4 x ⅞

Edge Bar 2 x ⅞

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

DETAILS OF DECK & PARAPET
TRENTON AVE. CONNECTOR OVER PENNSYLVANIA RAILROAD

TUSCARAWAS COUNTY

STA. 15 + 58.68
STA. 17 + 40.05

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
H.C.M. M.J.F.	M.F.	F.W.B. P.A.D.	N.P	H.C.M. 8-17-64	

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FED. RD. DIVISION	STATE	PROJECT		508 / 662
2	OHIO			

TUSCARAWAS COUNTY
TUS - 36 - 15.93

REINFORCING STEEL LIST

ABUTMENTS

MARK	REQUIRED LT. R.	RT. R.	LT. F.	RT. F.	TOTAL	LENGTH	WEIGHT LT. BR.	RT. BR.	SHP.
A501	26	28	37	27	118	6'-10"	449	391	B
A502	26	28	37	27	118	8'- 4"	547	478	B
A503	8	9	12	10	39	8'-10"	185	175	B
A503A	17	13	19	16	65	7'- 6"	282	227	B
A504	22		18	16	56	5'- 9"	240	96	B
A505	8		12		20	9'- 4"	195		
A506		10		2	12	8'- 0"		100	
A507			10		10	6'-7"to9'-3"	83		
A508				10	10	5'-0"to8'-0"		68	
A509		6	14		20	19'-3"	281	120	
A510		7	5	13	25	31'-8"	165	660	
A511		2	10		12	16'-9"	175	35	
A512		2		8	10	9'-4"		97	
A513	10		12		22	14'-2"	325		
A514		6		9	15	12'-2"		190	
A515			4		4	26'-8"	111		
A516	11				11	11'-1"	127		
A517		5			5	13'-4"		70	
A518	6				6	35'-2"	220		
A519	7	6			13	32'-3"	235	202	
A520	10				10	6'-3"to9'-3"	81		
A521		12			12	4'-5"to8'-0"		78	
A522				2	2	6'- 9"		14	
A601	26	28	37	27	118	13'-11"	1318	1150	B
A602	24	25	32	21	102	18'- 0"	1514	1244	B
A603	12	8	6	11	37	15'- 9"	426	449	B
A801			7	7	14	33'-0"	617	617	
A802			7		7	15'-0"	280		
A803			8		8	9'-10"	210		B
A804	7				7	36'-6"	682		
A805		10			10	40'-8"		1086	
A806		32			32	5'-0"		427	

PIERS

MARK	REQUIRED LT. R.	RT. R.	LT. F.	RT. F.	TOTAL	LENGTH	WEIGHT LT. BR.	RT. BR.	SHP.
P501	28		20		48	14'-6"	725		
P502	28	24	20	20	92	6'-2"	309	283	B
P503	4	6	4	6	20	12'-0"	100	150	
P504	2	6	2	6	16	16'-9"	70	210	
P505	6		6		12	19'-8"	246		
P506		24		20	44	10'-10"		497	
P601	15				15	20'- 6"	462		
P602	28	16	24	16	84	7'-4"	572	352	B
P603	32	28	32	28	120	9'-6"	914	800	B
P604		15			15	16'-0"		360	
P605			10		10	21'-4"	320		B
P606			18		18	24'-9"	669		
P607				10	10	18'-10"		283	B
P701		28			28	9'- 7"		548	B
P801			22	22	44	11'- 8"	686	686	B
P802			16		16	10'- 8"	456		B
P803			18		18	6'-2"	296		B
P804				12	12	10'- 0"		320	
P805				16	16	24'- 0"		1025	
P1001		28			28	7'- 1"		853	B
P1002		12			12	13'-6"		697	
P1003		16			16	28'-6"		1962	
P1004		5			5	31'-0"		667	
P1005		5			5	33'-10"		728	B
P1006	18				18	32'- 3"	2498		
P1007				5	5	30'-10"		663	
P1008				5	5	33'- 9"		726	B
P1101	5				5	39'-10"	1058		B
P1102	7				7	36'- 8"	1364		
P1103	22				22	13'- 6"	1578		
P1104	34				34	7'- 6"	1355		B
P1105	16				16	15'- 6"	1318		
P1106			5		5	39'- 8"	1054		B
P1107			7		7	36'- 6"	1357		
P1108		17			17	13'- 6"		1219	
P901				28	28	6'- 7"		627	B

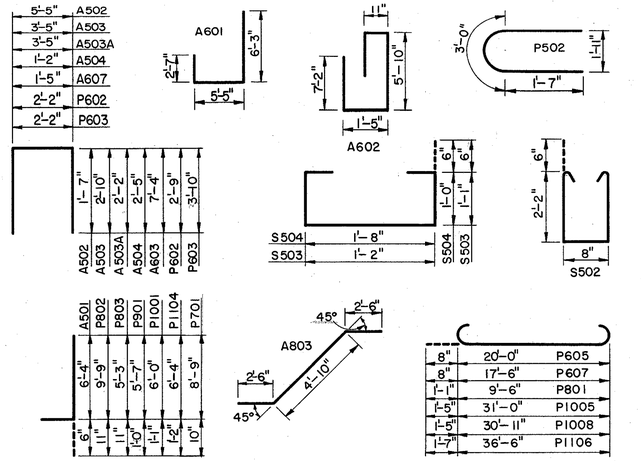
SUPERSTRUCTURE

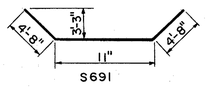
MARK	REQUIRED LT. BR.	RT. BR.	TOTAL	LENGTH	WEIGHT LT. BR.	RT. BR.	SHP.
S501	132	132	264	2'-10"	390	390	B
S502	132	132	264	5'- 9"	792	792	B
S503	132	132	264	4'- 7"	631	631	B
S504	119	119	238	3'-11"	486	486	B
S601		222	222	27'- 2"		9060	
S601A		23	23	5'-0"to27'-0"		553	
S601B		15	15	7'-2"to27'-0"		385	
S601C	5	5	10	3'-0"to 4'-0"	26	26	
S601D	5	5	10	4'-2"to6'-2"	39	39	
S601E	106		106	15'-10"	2520		
S601F	210		210	17'- 3"	5441		
S601G	152		152	18'- 3"	4167		
S601H	25		25	6'-0"to15'-0"	394		
S601J	22		22	5'-6"to33'-6"	644		
S602	392	357	749	27'- 3"	16044	14612	
S603	46	40	86	28'- 0"	1935	1682	
S690	8	8	16	4'- 0"	48	48	
S701		222	222	27'-2"		12329	
S701A		23	23	5'-0"to27'-0"		752	
S701B		15	15	7'-2"to27'-0"		524	
S701C	5	5	10	3'-0"to 4'-0"	36	36	
S701D	5	5	10	4'-2"to 6'-2"	53	53	
S701E	53		53	28'-5"	3079		
S701F	105		105	29'-10"	6402		
S701G	76		76	32'- 8"	5075		
S701H	25		25	6'-0"to15'-0"	537		
S701J	22		22	5'-6"to33'-6"	877		
S691	4	4	8	10'- 3"	62	62	B

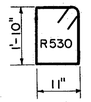
BAR VARIATION

MARK	VARIES BY	NO. EA.
A507	5"	2
A508	6"	2
A520	6"	2
A521	9"	2
S601A	1'-0"	1
S601B	1'-5"	1
S601C	3"	2
S601D	6"	2
S601H	4½"	1
S601J	1'-4"	1
S701A	1'-0"	1
S701B	1'-5"	1
S701C	3"	2
S701D	6"	2
S701J	1'-4"	1
S701H	4½"	1

BENDING DIAGRAMS







RAILING *

MARK	NO.	LENGTH
R501	80	14'-5"
R502	8	15'-11"
R505	8	15'-2"
R530**	6	6'-4"
R250***	12	4'-2"
R504***	8	5'-4"

REPLACEMENT BARS

MARK	NO.	LENGTH
RE500	1	5'-7"
RE600	2	5'-11"
RE700	2	6'- 3"
RE800	1	6'- 6"
RE1000	1	7'- 3"
RE1100	1	7'- 7"

* Included with Item 517 for payment.

** Bent Bars.

*** For bending diagram See BR-1-65

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 size of the bar. For example A700 is a No. 7 size bar and A1014 is a No. 10 size bar.

All dimensions are out to out of the bar.

Shape "B" bars are bent. All other bars are straight. The "length" shown in steel list for the spiral bars is the distance from the top of the footing to the bottom of cap.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	LEFT BRIDGE SUPER	ABUTS.	PIERS	GEN'L.	RIGHT BRIDGE SUPER	ABUTS.	PIERS	GEN'L.
503	Lump	Sum	Cofferdams, Cribs and Sheeting				Lump				Lump
503	677	Cu. Yds.	Unclassified Excavation		165	155			255	102	
503	95	Cu. Yds.	Rock Excavation			33			19	43	
511	325	Cu. Yds.	Class C Concrete Superstructure	174				151			
511	187	Cu. Yds.	Class C Concrete, Piers above Footings			107				80	
511	153	Cu. Yds.	Class E Concrete, Abut. above Footings		83				70		
511	265	Cu. Yds.	Class E Concrete, Footings		60	55			104	46	
509	139,923	Lbs.	Reinforcing Steel	19,678	8,748	17,407		42,460	7,974	13,656	
513	302,500	Lbs.	Structural Steel	160,000				142,500			
514	302,500	Lbs.	Field Painting of Structural Steel	160,000				142,500			
517	359.31	Lin.Ft.	Railing(Aluminum Rail. Type I, [illegible] with Conc. Parapets)	180.01				179.30			
505	Lump	Sum	First Test Pile ⊖				Lump				
507	2,271	Lin.Ft.	Steel Piles, 10 BP 42		755	486			544	486	
518	155	Lin.Ft.	6" Perforated Helical CMP, 707.06 including specials		81				74		
518	111	Lin.Ft.	6" Helical CMP, 707.06, Non-Perforated		61				49		
518	77	Cu. Yds.	Porous Backfill		42				35		
518	10	Each	Scuppers, Including Supports	6				4			
808	305	Each	Water-reducing, Set-retarding Admixtures for Conc.	161				144			
601	1142	Sq.Yds.	Crushed Aggregate Slope Protection				587				555
625			For Lighting Quantities see Sheet 489								

⊖ Payment shall be made for only the first test pile; it may be driven for either the Left or Right Bridge.

ESTIMATED LIGHTING QUANTITIES ITEM 625

TOTAL	UNIT	DESCRIPTION
2	EA.	LUMINAIRE, TYPE III, WITH INTEGRAL 400 W MERCURY BALLAST
2	EA.	MERCURY VAPOR LAMP, 400 WATT (H-33-ICD)
2	EA.	LIGHT POLE WITH 12' BRACKET ARM, DESIGN DA12B30.0
176	L.F.	POLE & BRACKET CABLE, I/C, NO. 2 AWG, 600 V.
2	EA.	ESNA KIT - STYLE 82
2	EA.	ESNA KIT - STYLE 83
371	L.F.	CONDUIT - 2 INCH RIGID GALVANIZED STEEL IN BRIDGES
766	L.F.	CIRCUIT CABLE - I/C, NO.4 AWG, 600 V.
LUMP (2)	L.S.	BRIDGE STRUCTURE GROUNDING SYSTEM

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

REINFORCING STEEL LIST
TRENTON AVE. CONNECTOR OVER
PENNSYLVANIA RAILROAD

TUSCARAWAS COUNTY — STA. 15+58.68 — STA. 17+40.05

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
H.C.M.	M.F.	E.L.M.	B.O.L. M.F.	H.C.M. 8-17-64	

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FEB 22 1999

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

509
662

TUSCARAWAS COUNTY
TUS-36-15.93

Location: 0.2 mi. West of Corporation Limits of City of Uhrichsville & U.S. 250

B.M.-20 213' Rt. Sta. 302+40, Spike in 12" Split Elm. Elev. 870.970

B.M.-21 (U.S.C. & G.S. Monument L-180) Situated Approximately 271'± Lt. Sta. 307+07, Disk Set in Concrete and Stamped L 180, 1954. Located on W. End of N. Bridge Abutment of the B. & O. R.R. Structure on the North side of Township Road 278. Elev. 859.893.

R.R. mile Post at Sta. 3286+48 R.R.V.S.S.

PROPOSED BRIDGE NO. TUS-36-1789 L&R

℄ Reloc. U.S. 36

S.C. Sta. 301+19.54

℄ Ramp J

S.C. Sta. 6+03.32

End Approach Slab Sta. 6+50.81

38° Skew to Ref. Line (Typical)

End of Deck

Top of Slope (Level) El. 888.78

Sta. 7+49.21 ℄ Ramp J
Sta. 3225+35.24 V.S.S. ℄ B&O RR.

70'-6" along ℄ Parapet

Light

Point of Min. Vert. Cl.

Reference Line

Min. Required Hor. Cl. = 17'-6"
Actual Cl. = 17'-6"

℄ Track 3226

R.R. 13 Wires (to be relocated by Owner)

Grade to Drain

Sod Gutter

Begin Approach Slab Sta. 8+29.62

Profile Grade Line

Top of Slope (Level) El. 886.68

Conduit

O.B.T. Cable 3' to 4' deep (to be reloc. by Owner)

To U.S. 250

Min. Requ'd Hor. Cl. = 18'-0"
Actual Cl. = 18'-0"

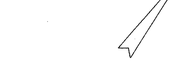
℄ V.S.S. B&O. R.R.

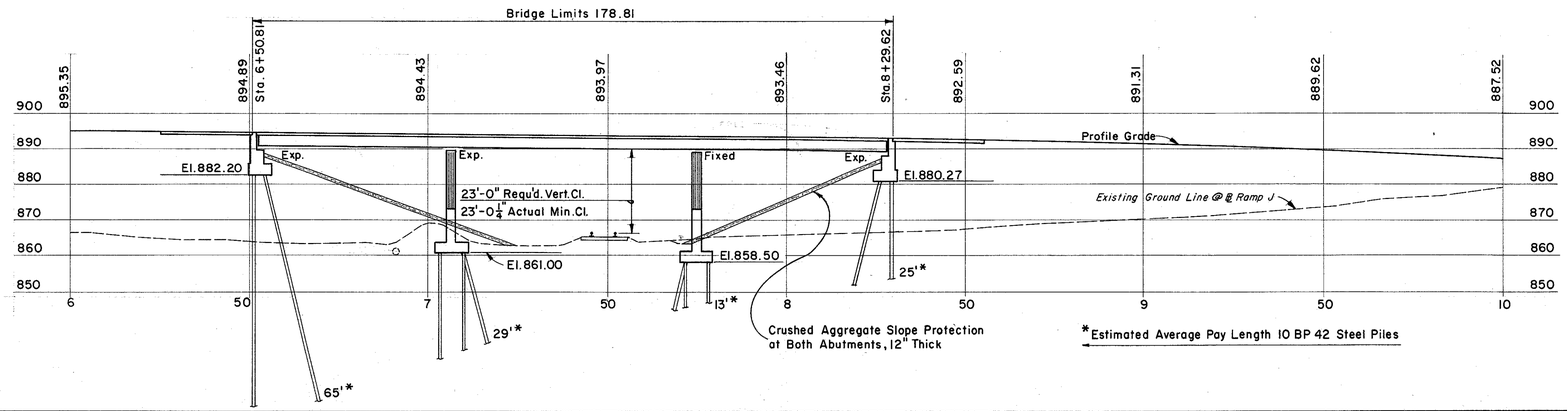
3224

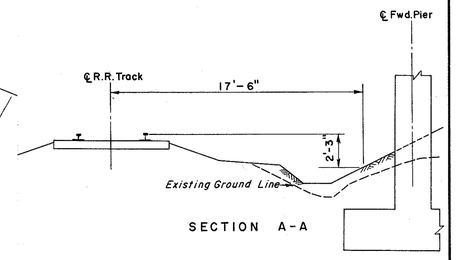
3225

TO BE ABANDONED

RAMP J
P.I. Sta. 8+92.39
Δ = 43° 57' 35"
D = 8° 00'
R = 716.20'
L = 549.50'
T = 289.07'







PROPOSED STRUCTURE

TYPE: 3 Span continuous steel beam bridge with reinforced concrete deck and substructure.
SPANS: 53'-0", 67'-0", 53'-0" ℄c Brgs.
ROADWAY: 28'-0" f/f parapets
LOAD FREQUENCY: CF = 400 (57)
WEARING SURFACE: 1" monolithic concrete
APPROACH SLABS: AS-1-54 (25' Long)
ALIGNMENT: Ramp J and B. & O. R.R. curves.
SKEW: 38° L.F. Substruct. to reference line
A.D.T.: Ramp J: 2135 (1977); B. & O. R.R.: 5 freight trains daily, Max. speed 35 mph.
SUPERELEVATION: 0.083 Ft. per Ft.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

SITE PLAN
RAMP J
OVER B & O RAILROAD

TUSCARAWAS COUNTY — STA. 6+50.81, STA. 8+29.62

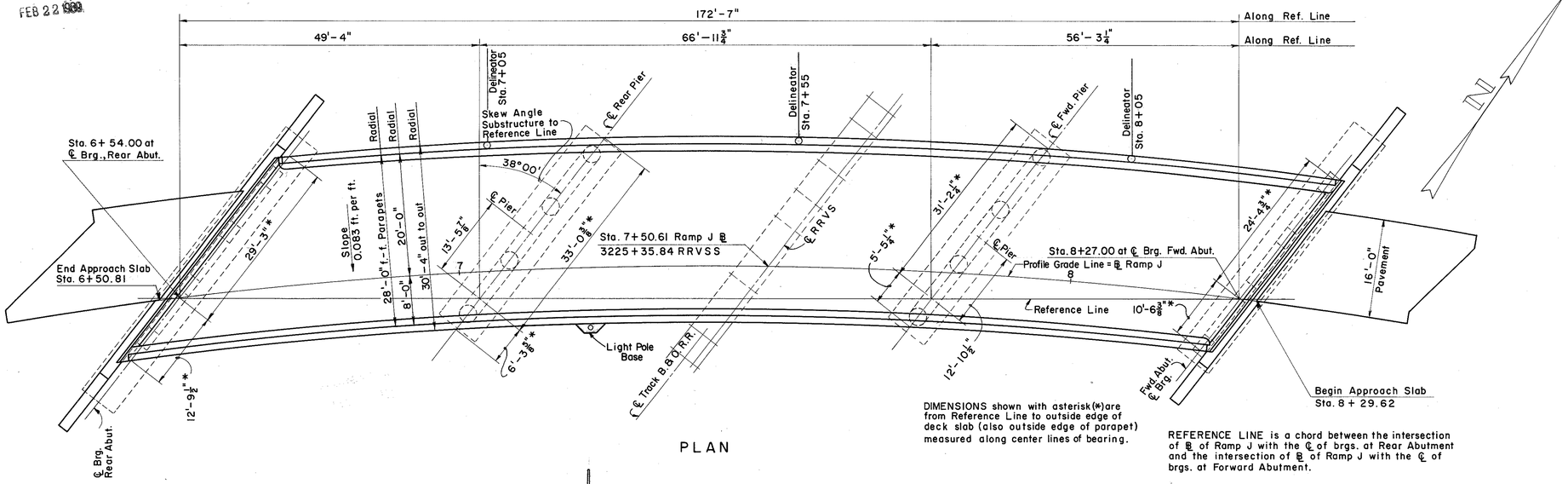
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
H.C.M.	M.J.F	E.L.M.	B.O.L.	H.C.M. 8-17-64	

MICROFILMED
FEB 22 1966

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

510
662

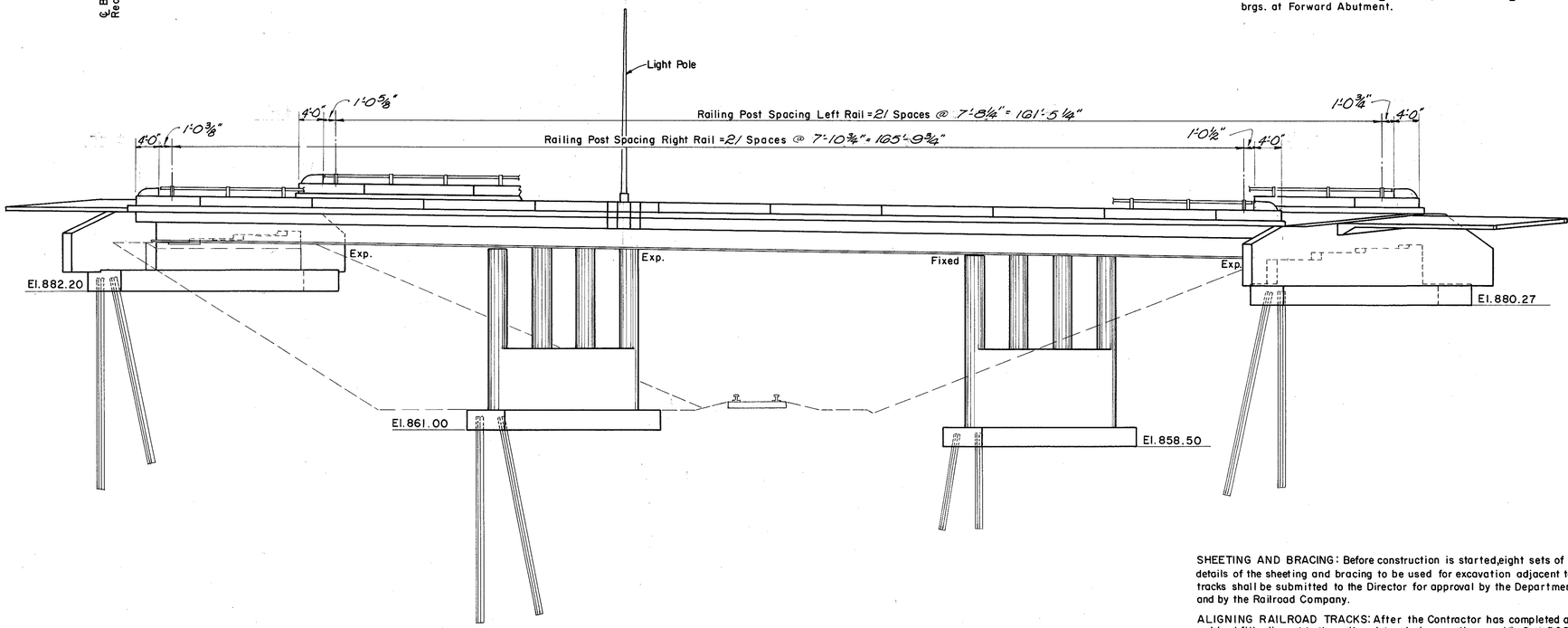
TUSCARAWAS COUNTY
TUS - 36 - 15.93



PLAN

DIMENSIONS shown with asterisk(*) are from Reference Line to outside edge of deck slab (also outside edge of parapet) measured along center lines of bearing.

REFERENCE LINE is a chord between the intersection of ℄ of Ramp J with the ℄ of brgs. at Rear Abutment and the intersection of ℄ of Ramp J with the ℄ of brgs. at Forward Abutment.



ELEVATION

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.

ALIGNING RAILROAD TRACKS: After the Contractor has completed all excavation and backfill adjacent to the railroad tracks in compliance with Sec. 503.04 and 503.09 of the Construction and Material Specifications, subject to the Supervision of the Railroad Company, nothing in Sec. 503.04, 503.09 or 108.04 of the Specifications shall be construed to hold the Contractor liable for aligning and resurfacing the railroad tracks.

Lighting Details are shown on Lighting Plans, beginning with Sheet 489.

GENERAL NOTES

REFERENCE shall be made to Standard Drawings SD-1-63, Sheets No. 1 thru 4 of 4 dated 11-12-63; RB-1-55 revised 2-2-59, BR-1-65 sht. 1, dated 8-1-65 and AS-1-54 revised 8-10-65, and to Sup. Spec. 808 dated 7-17-65 and 811 12/1/3rd 3-29-65.

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

DESIGN LOADING: CF 400 (57)

BASIC UNIT WORKING STRESSES:
Concrete Class C - basic unit stress ---------- 1,333 p.s.i.
Concrete Class E - basic unit stress ---------- 1,133 p.s.i.
Structural Steel - ASTM A36 - basic unit stress ---------- 20,000 p.s.i.
Reinforcing Steel ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade
Basic unit stress ---------- 20,000 p.s.i. ∅

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

PILES shall be driven with a hammer of not less than 11,000 foot-pounds per blow to firm contact with shale. If the length of penetration is approximately equal to the depth to shale according to the bridge foundation investigation report the firm contact shall be considered as attained when the capacity according to the formula in Sec. 507.05 of the Construction Specifications, is not less than the following value for a pile hammer of the indicated energy rating.

HAMMER, FOOT-POUNDS	ABUTMENTS, TONS PER PILE		PIERS, TONS PER PILE	
	Rear	Forward	Rear	Forward
11,000	33	42	42	48
15,000	33	36	36	42

If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 32 tons per pile at the piers and 33 tons per pile at the Rear Abutment and 28 tons per pile at the Forward Abutment.

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.

MACHINE FINISH: The concrete bridge deck may be finished by the use of a finishing machine, at the Contractor's option.

RAILROAD FORCE ACCOUNT WORK: See note on sht. 500

SETTLEMENT HUBS shall be driven in the compacted embankment 10 feet right and 20 feet left of ℄, Sta. 6+25 & Sta. 8+50. If the hubs, as determined at approx. one week intervals, indicate that all settlement has ceased before the end of the waiting period, construction of the Rear Abutment may proceed after approval from the Director.

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.

CONSTRUCTION CLEARANCE of 20 feet vertically above the top of the railroad rails and 8 feet horizontally from the center of tracks shall be maintained at all times.

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 a delay of 120 days shall occur before construction of the Rear Abutment is begun, a delay of 90 days shall occur before construction of the Forward Abutment is begun.

∅ Except, spiral reinforcement may be plain, Structural Grade with basic unit stress of 18,000 p.s.i.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

GENERAL PLAN
RAMP J OVER B & O RAILROAD
TUSCARAWAS COUNTY
STA. 6+50.81
STA. 8+29.62

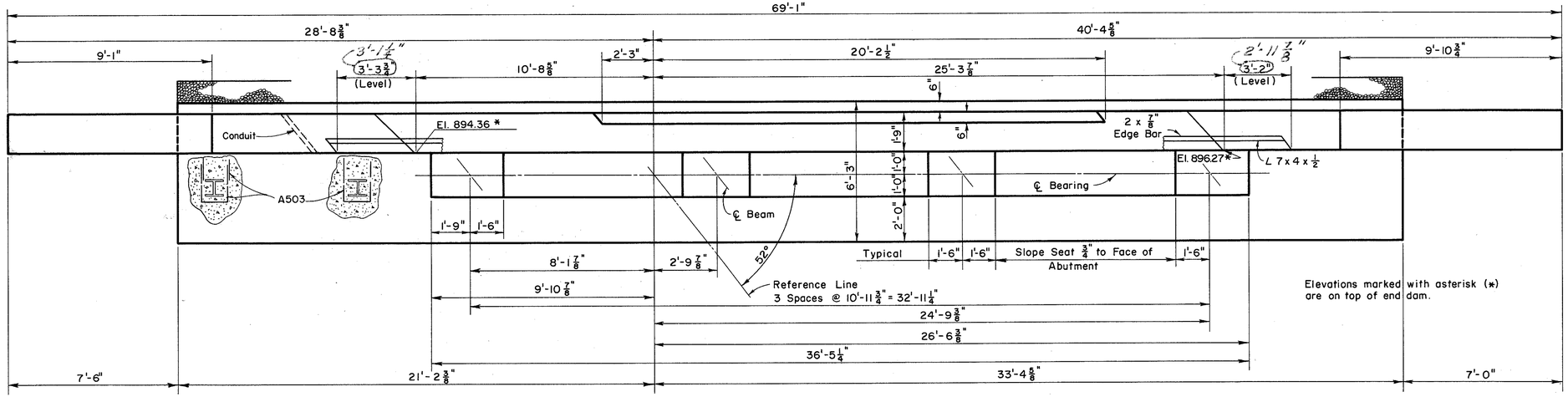
DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
M.C.P. G.S.W.	K.D.L.	F.W.B. B.R.	N.P.	H.C.M. 8-17-64	

MICROFILMED
FEB 22 1993

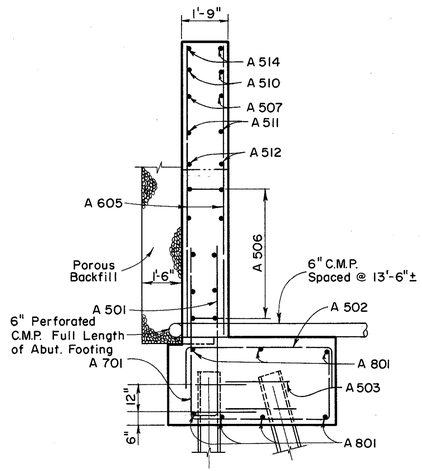
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

511
662

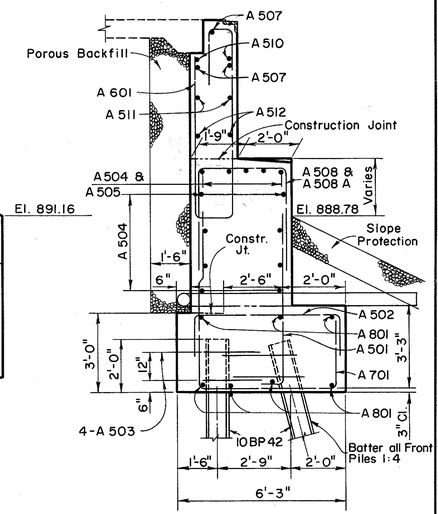
TUSCARAWAS COUNTY
TUS-36-15.93



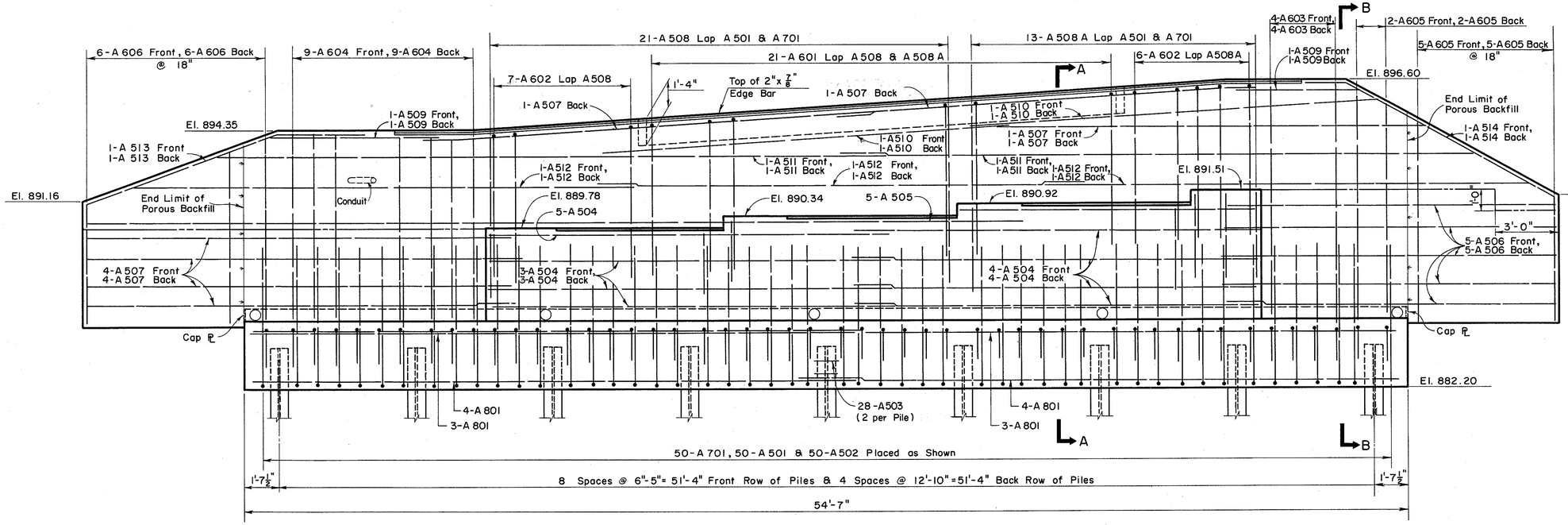
PLAN



SECTION B-B



SECTION A-A



ELEVATION

COVER OF REINFORCEMENT : 3" bottom of footing, 2" elsewhere.

POROUS BACKFILL shall extend upward to the approach slab and to the surface of the earth shoulders.

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FOR

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DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

REAR ABUTMENT
RAMP J
OVER B&O RAILROAD
TUSCARAWAS COUNTY
STA. 6+50.81
STA. 8+29.62

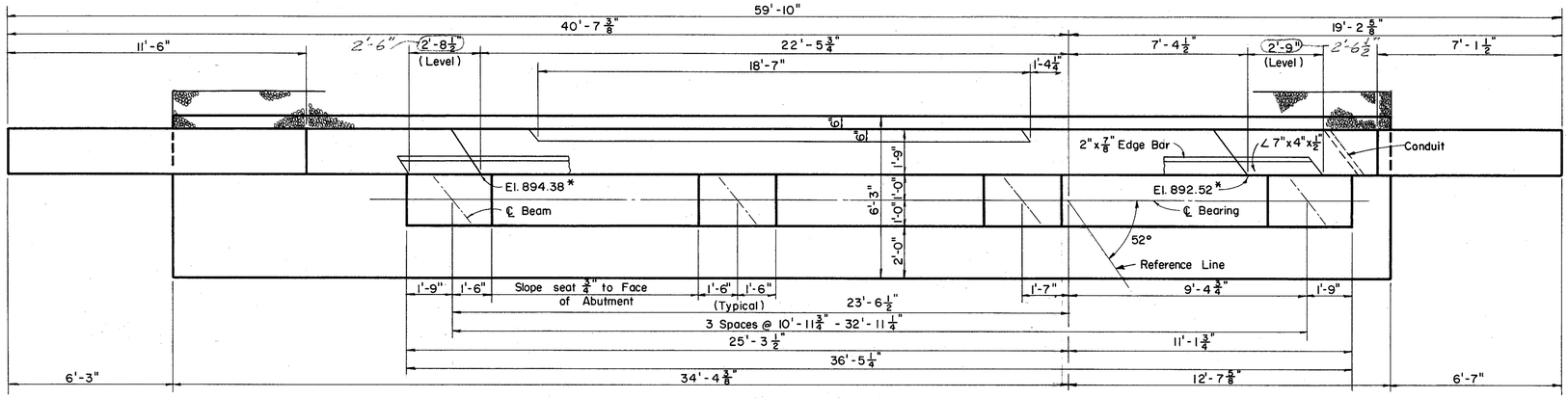
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.P. J.V.R.	K.D.L.	R.E.B. P.D.	B.O.L.	H.C.M.	8-17-64	1-25-67

MICROFILMED
FEB 22 1999

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

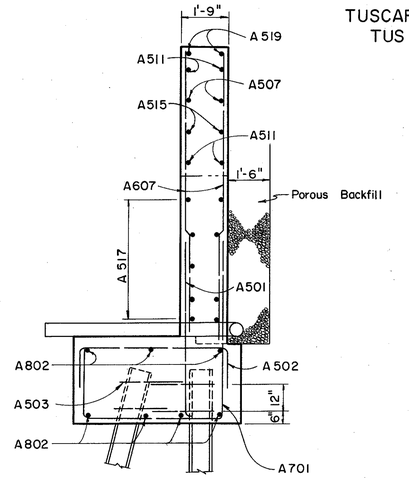
512
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93

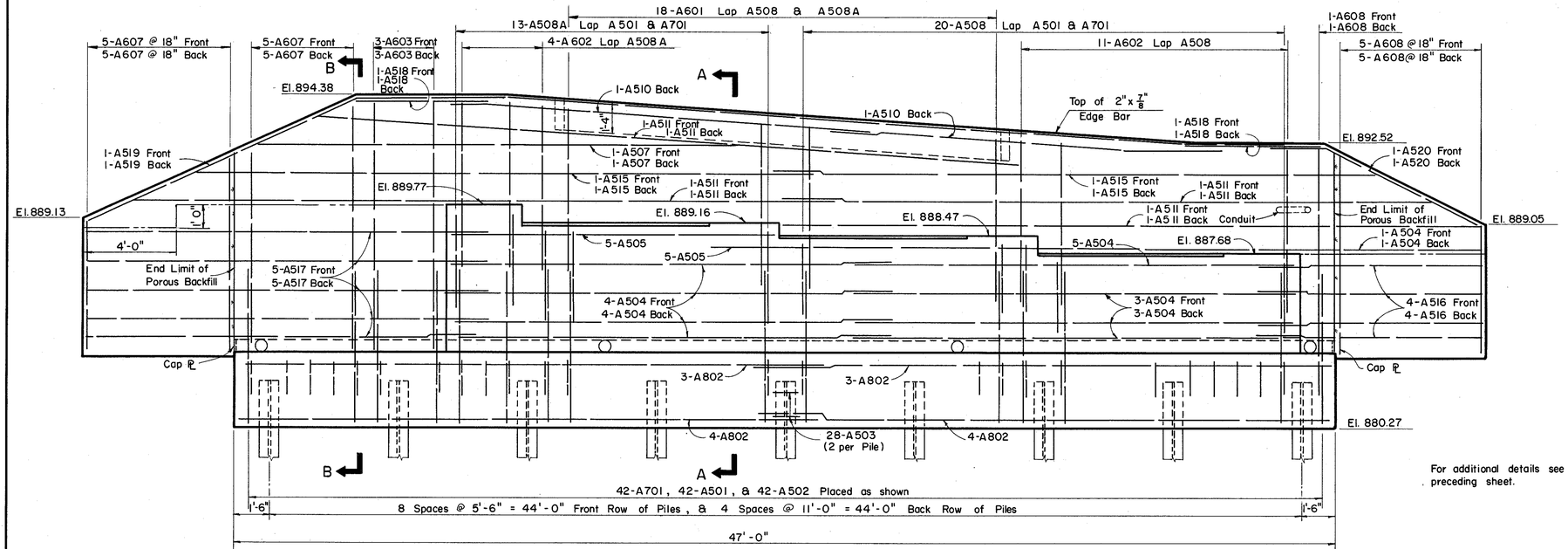


PLAN

Elevations marked with asterisk (*) are on top of end dam.

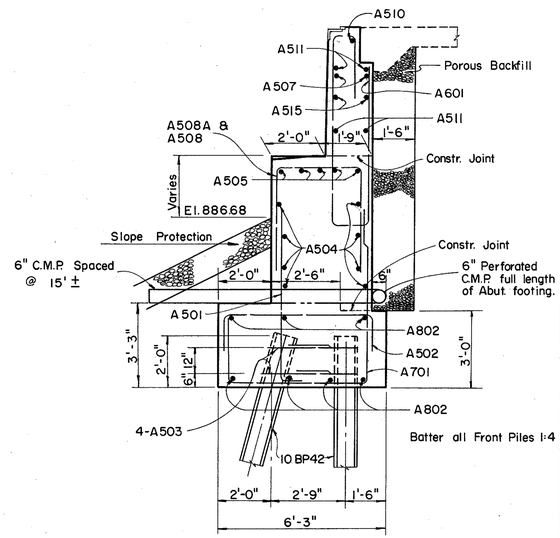


SECTION B-B



ELEVATION

For additional details see preceding sheet.



SECTION A-A

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FOR

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

FORWARD ABUTMENT
RAMP J
OVER B & O RAILROAD
TUSCARAWAS COUNTY
STA. 6 + 50.81
STA. 8 + 29.62

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
N.P. J.V.R.	K.D.L.	L.C.Z. B.A.B.	B.O.L.	H.C.M. 8-17-64	1-26-67

MICROFILMED
FEB 22 1999

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

513
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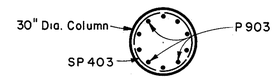
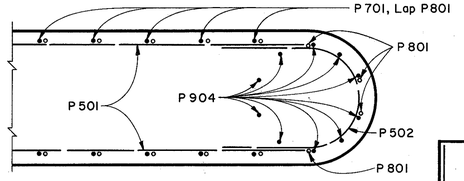
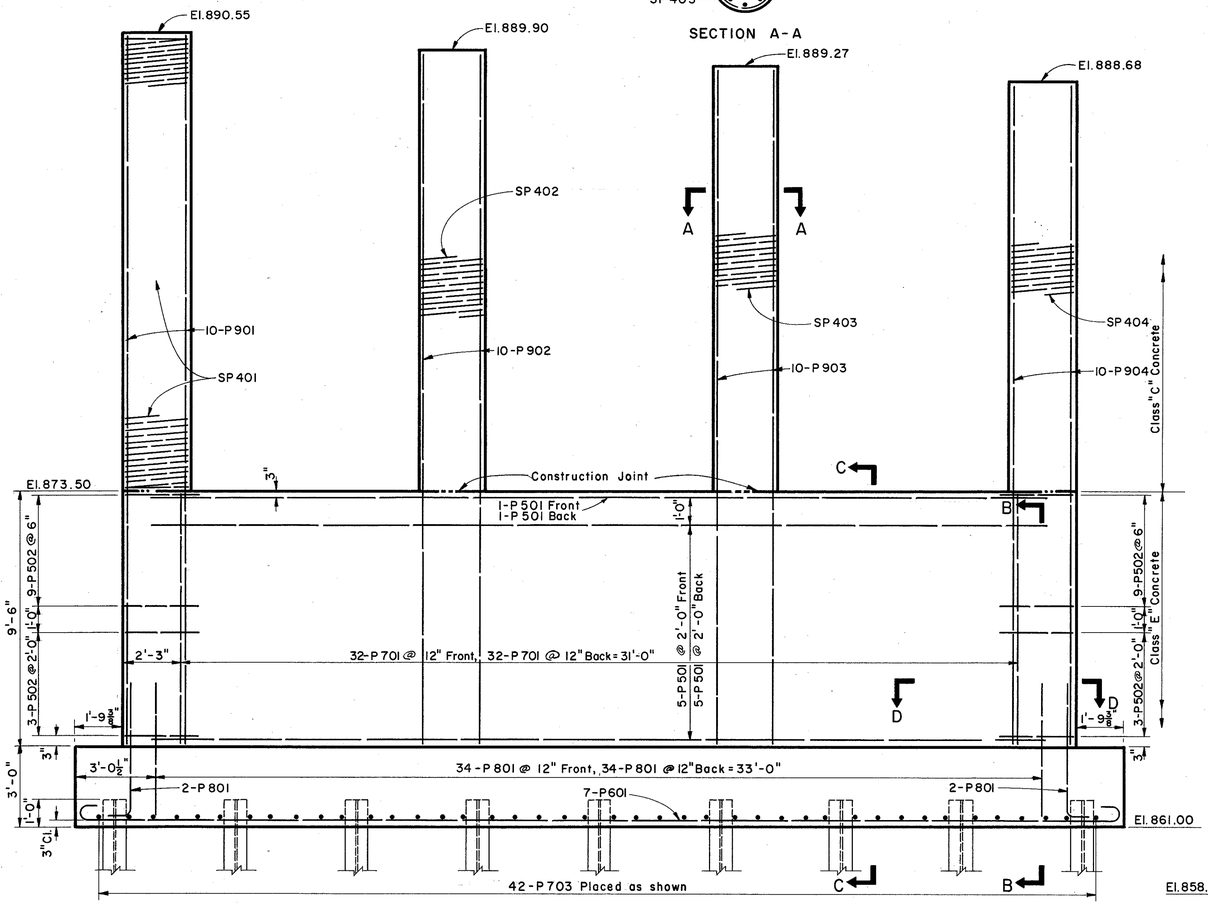
TUSCARAWAS COUNTY
TUS-36-15.93



SECTION A-A



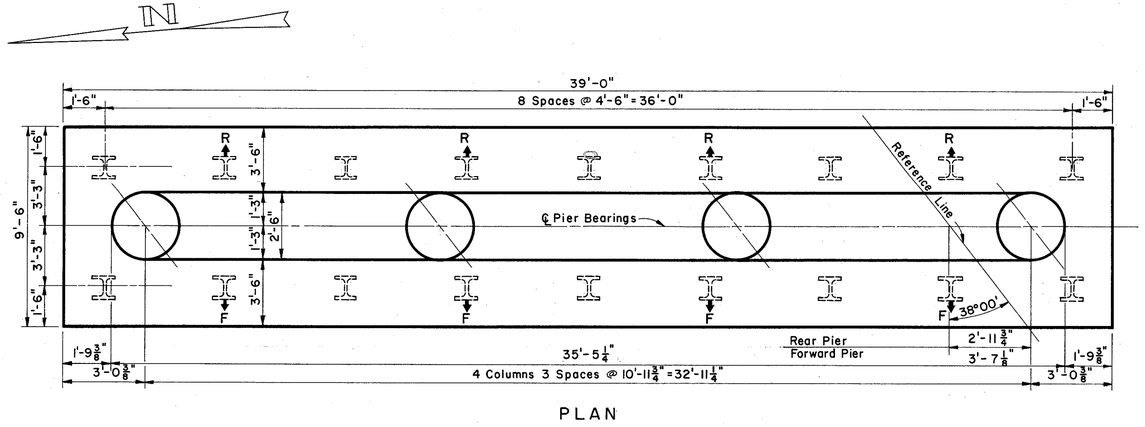
SECTION D-D



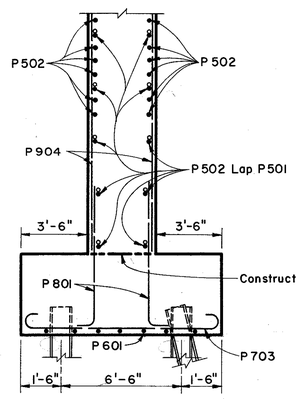
ELEVATION REAR PIER

ELEVATION FORWARD PIER

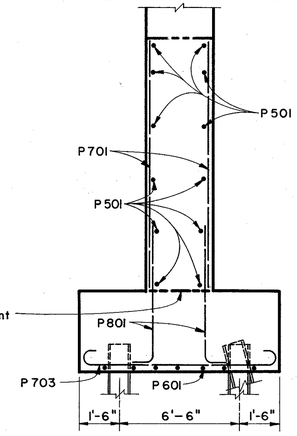
All reinforcing steel shall have 3" of cover in bottom of footing and 2" elsewhere



PLAN



SECTION B-B



SECTION C-C

Indicates pile battered 1:4 & direction of batter. "R" indicates battered at Rear Pier only & "F" indicates battered at Forward Pier only.

ELECTRICAL GROUNDING required at Forward Pier.

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FOR

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

PIERS

RAMP J
OVER B & O RAILROAD
TUSCARAWAS COUNTY
STA. 6+50.81
STA. 8+29.62

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
N.P. J.V.R.	M.J.F.	E.L.M.	E.L.M.	H.C.M. 8-17-64	

MICROFILMED
FEB 22 1999

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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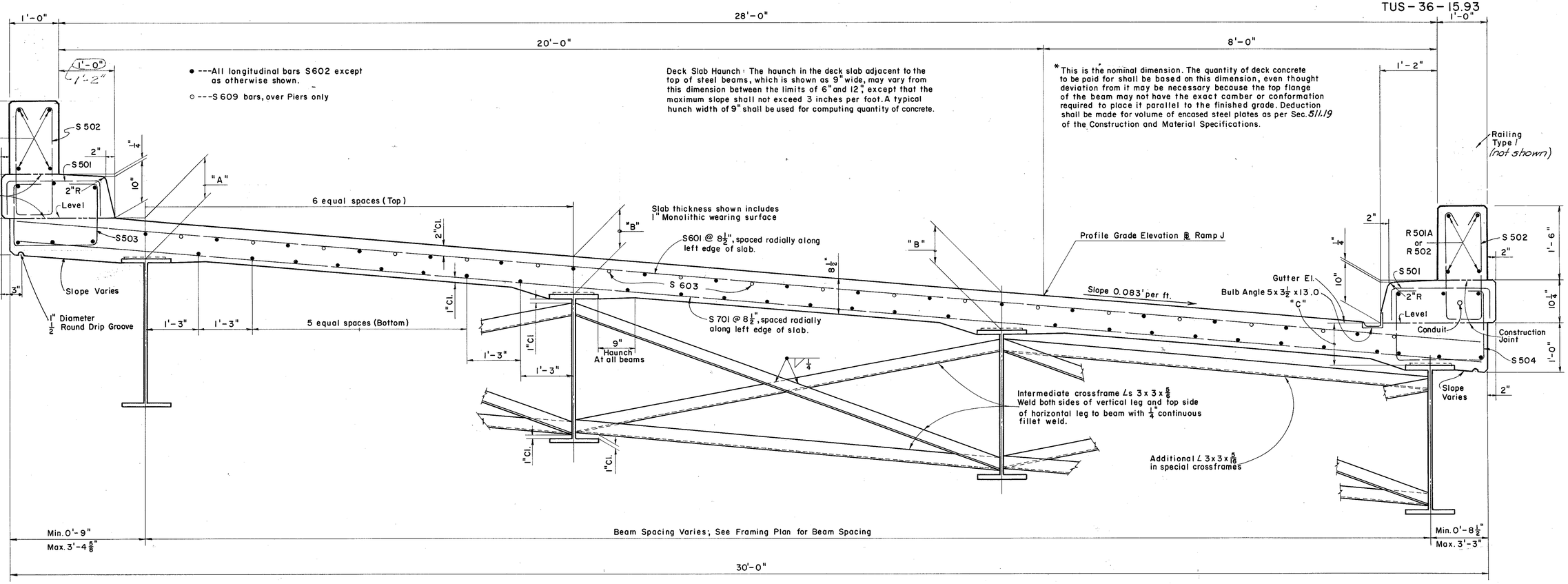
662

TUSCARAWAS COUNTY
TUS-36-15.93



TRANSVERSE DECK SECTION

Horizontal Dimensions are Radial

ELEVATIONS – TOP OF DECK SLAB			
LOCATION	P.G. ELEV.	BOTTOM OF LEFT CURB	BOTTOM OF RIGHT CURB
Sta. 6+25	895.12		
Face of Backwall			894.36
Sta. 6+50	894.89		894.32
Face of Backwall		896.27	
Sta. 6+75	894.66	896.23	894.09
Sta. 7+00	894.43	896.00	893.86
Sta. 7+25	894.20	895.77	893.63
Sta. 7+50	893.97	895.54	893.40
Sta. 7+75	893.74	895.31	893.17
Sta. 8+00	893.46	895.03	892.89
Face of Backwall			892.52
Sta. 8+25	893.08	894.64	
Face of Backwall		894.38	
Sta. 8+50	892.59		
Sta. 8+75	892.00		

REFERENCE shall be made to Standard Drawing No. SD-1-63, dated 11-12-63, Sheet No. 3 of 4 for details of scuppers and gutter supports.

REFERENCE shall be made to Standard Drawing No. BR-1-65, sheet 1, dated 2-1-65 for details of the railing

SLAB THICKNESSES *			
Dimension from Top of Beam to Top of Deck Slab			
	"A"	"B"	"C"
℄ Brg. Rear Abut.	10 3/8"	9 1/4"	8"
℄ Brg. Rear Pier	9 7/8"	9 3/4"	9¼"
℄ Brg. Fwd. Pier	9 1/8"	9 3/4"	10½"
℄ Brg. Fwd. Abut.	8 5/8"	9 1/4"	10½"

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FOR
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DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

SUPERSTRUCTURE DETAILS

RAMP J
OVER B & O RAILROAD
TUSCARAWAS COUNTY
STA. 6+50.81
STA. 8+29.62

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
H.C.M. N.P.	K.D.L.	F.W.B. B.R.	N.P.	H.C.M. 8-17-64	1-22-67

MICROFILMED
FEB 22 1999

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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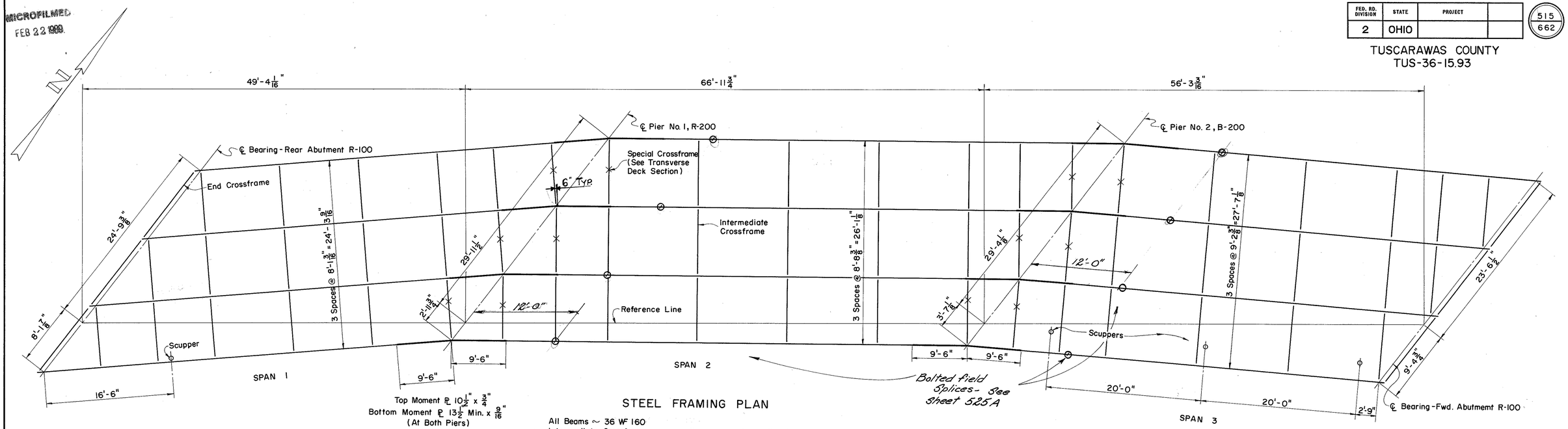
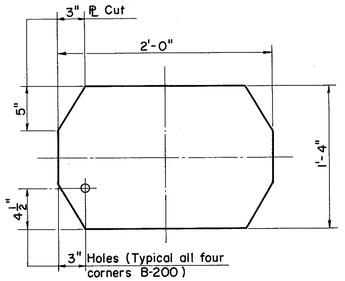
TUSCARAWAS COUNTY
TUS-36-15.93



Top Moment ℙ 10 1/2" x 3/4"
Bottom Moment ℙ 13 1/2" Min. x 9/16"
(At Both Piers)

STEEL FRAMING PLAN

All Beams ~ 36 WF 160
Intermediate Crossframes are equally spaced between the limits shown.
Beams are equally spaced and parallel in each span.
Special Crossframes shall clear beam web splices by 6".



SPECIAL B-200 BOLSTER MASONRY ℙ

(Rocker Masonry ℙ Similar Except That No Anchor Bolt Holes Required)

REFERENCE shall be made to Standard Drawing No. SD-1-63, Sheets No. 2 and 4 of 4, Dated 11-12-63 for details of end dams, gutters and crossframes.

REFERENCE shall be made to Standard Drawing No. SD-1-63, Sheet No. 1 of 4, Dated 11-12-63, for additional details of beam splice at bend line.

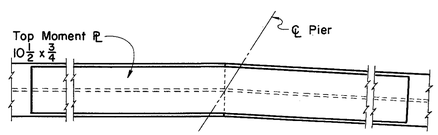
REFERENCE shall be made to RB-1-55, Revised 2-2-59 for details of rockers and bolsters.

SPECIAL CROSSFRAMES shall clear web splices by 6".

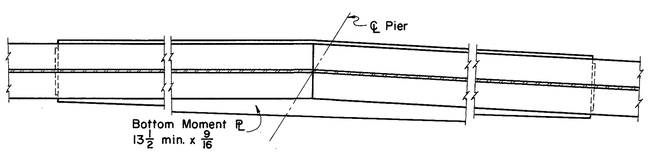
BEAM SPLICE at bend line over piers shall be as shown on SD-1-63 but shall be welded in the shop rather than in the field.

SLAB OVERHANG		
Dimensions from ℄ of Exterior Beam to Edge of Slab (Face of Parapet)		
LOCATION	LEFT EDGE	RIGHT EDGE
℄ Bearing, Rear Abutment	3'-3"	3'-3"
Center, Span 1	3'-3 1/2"	2'-4 5/8"
℄ Rear Pier	2'-4 5/8"	2'-6"
Center, Span 2	2'-8 1/2"	1'-2 5/8"
℄ Forward Pier	1'-6 3/8"	1'-6"
Center, Span 3	1'-7 3/8"	0'-8 7/8"
℄ Bearing, Forward Abutment	0'-9"	0'-11 5/8"

DEFLECTION & CAMBER OF BEAMS			
	SPAN 1	SPAN 2	SPAN 3
Deflection due to weight of steel	0	0	0
Deflection due to remaining dead load	1/4"	1/4"	1/4"
Convexity required for vertical curve	0	0	5/8"
Sum of deflection and convexity	1/4"	1/4"	7/8"
Required camber	0	0	7/8"



DETAIL OF TOP MOMENT PLATE



DETAIL OF BOTTOM MOMENT PLATE

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

FRAMING PLAN
RAMP J
OVER B & O RAILROAD
TUSCARAWAS COUNTY
STA. 6+50.81
STA. 8+29.62

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
H.C.M. N.P.	K.D.L.	F.W.B. P.A.D.	N.P	H.C.M. 8-17-64	

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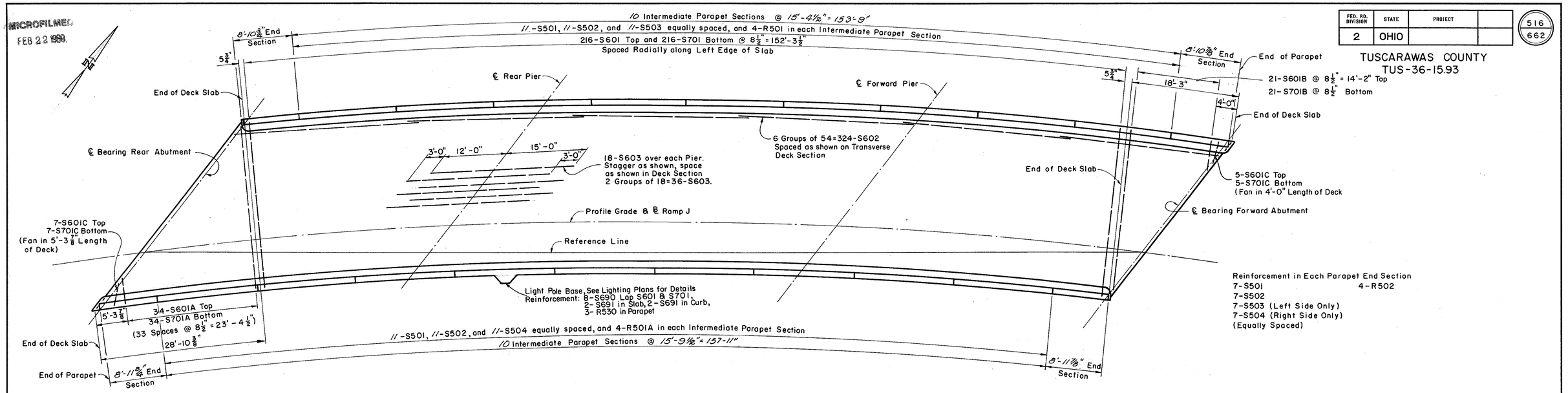
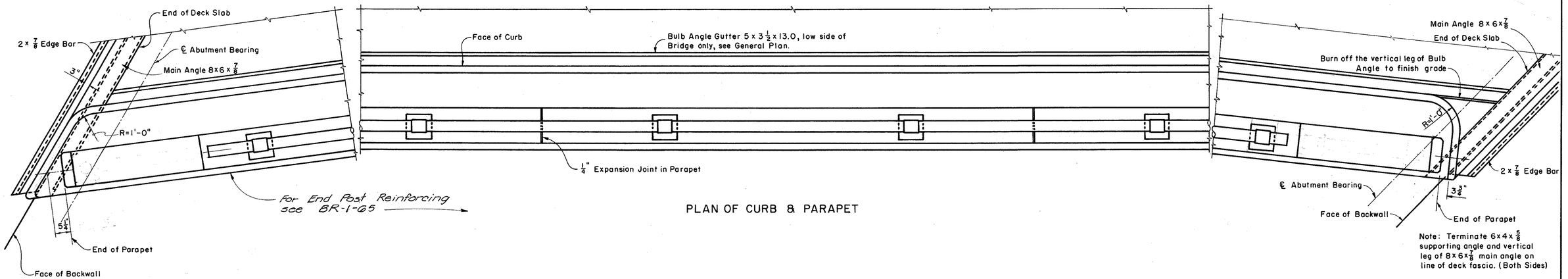


PLAN OF DECK REINFORCEMENT

Reinforcement in Each Parapet End Section
7-S501 4-R502
7-S502
7-S503 (Left Side Only)
7-S504 (Right Side Only)
(Equally Spaced)



PLAN OF CURB & PARAPET

Note: Terminate 6 x 4 x ⅝ supporting angle and vertical leg of 8 x 6 x ⅞ main angle on line of deck fascia. (Both Sides)

Right Parapet
Left Parapet

REFERENCE shall be made to Standard Drawing BR-1-65, sht. 1 dated 2-1-65 for details of aluminum railing and concrete parapet.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

DETAILS OF DECK & PARAPET
RAMP J
OVER B&O RAILROAD
TUSCARAWAS COUNTY
STA. 6+50.81
STA. 8+29.62

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
K.D.L H.C.M.	K.D.L.	M.J.F. G.F.L.	B.O.L.	H.C.M. 8-17-64	

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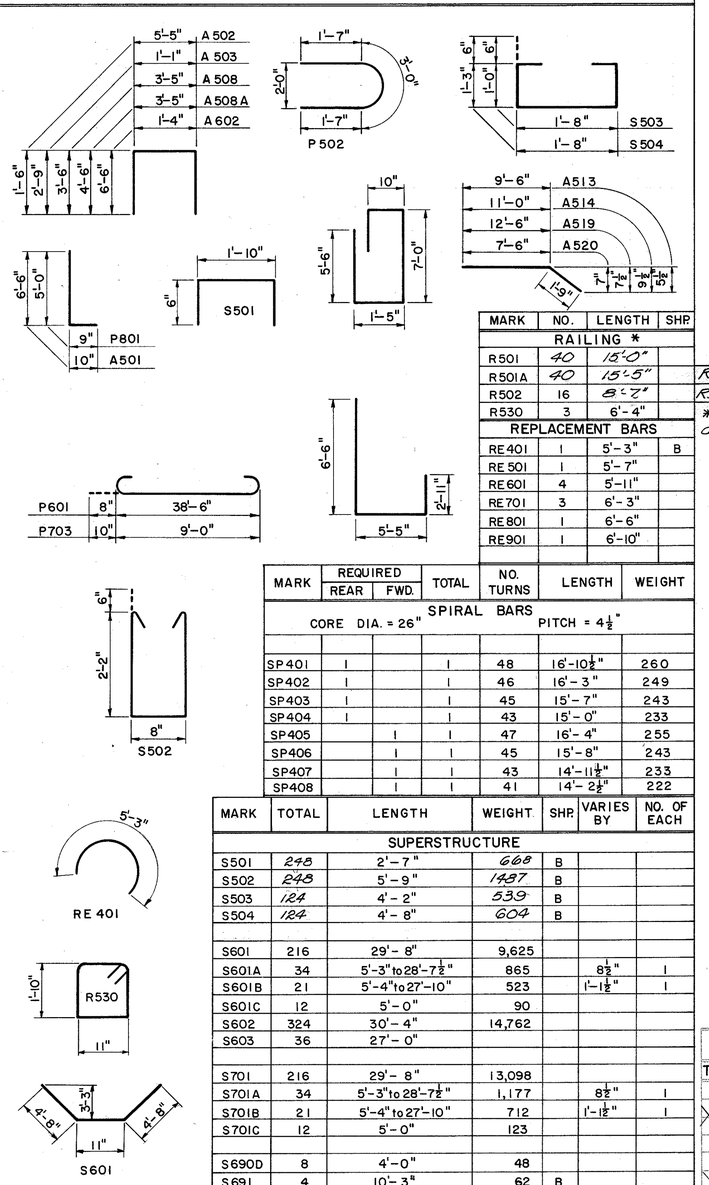
REINFORCING STEEL LIST

MARK	REQUIRED REAR	REQUIRED FWD.	TOTAL	LENGTH	WEIGHT	SHP.	VARIES BY	NO. OF EACH
ABUTMENTS								
A501	50	42	92	7'-2"	688	B		
A502	50	42	92	8'-2"	784	B		
A503	28	28	56	6'-4"	370	B		
A504	19	21	40	18'-10"	786			
A505	10	10	20	13'-10"	289			
A506	10		10	15'-6"	162			
A507	12	2	14	20'-0"	292			
A508	21	20	41	10'-2"	435	B		
A508A	13	13	26	12'-2"	330	B		
A509	4		4	6'-0"	25			
A510	4	2	6	19'-0"	119			
A511	4	8	12	30'-0"	375			
A512	6		6	22'-9"	142			
A513	2		2	11'-3"	23	B		
A514	2		2	12'-9"	27	B		
A515		4	4	26'-8"	111			
A516		8	8	9'-6"	79			
A517		10	10	17'-0"	177			
A518		4	4	5'-0"	21			
A519		2	2	14'-3"	30			
A520		2	2	9'-3"	19	B		
A601	21	18	39	17'-3"	1,010	B		
A602	13	15	28	14'-0"	589			
A603	8	6	14	10'-9"	226			
A604	10		10	8'-6"	128			
A605	14		14	5'-7" to 10'-1"	165		9"	2
A606	12		12	5'-7" to 8'-1"	123		6"	2
A607		20	20	5'-5" to 9'-11"	230		6"	2
A608		12	12	5'-5" to 8'-4"	124		7"	2
A701	50	42	92	14'-6"	2,727			
A801	14		14	28'-5"	1,062			
A802		14	14	24'-7"	919			
PIERS								
P501	12	14	26	32'-11"	893			
P502	24	26	50	6'-2"	322	B		
P601	7	7	14	39'-10"	838	B		
P701	64		64	9'-4"	1,221			
P702		64	64	11'-10"	1,548			
P703	42	42	84	10'-8"	1,831	B		
P801	72	72	144	5'-6"	2,115	B		
P901	10		10	26'-4"	895			
P902	10		10	25'-8"	873			
P903	10		10	25'-1"	853			
P904	10		10	24'-6"	833			
P905		10	10	28'-4"	963			
P906		10	10	27'-7"	938			
P907		10	10	26'-11"	915			
P908		10	10	26'-2"	890			



MARK	NO.	LENGTH	SHP
RAILING *			
R501	40	15'-0"	
R501A	40	15'-5"	
R502	16	8'-7"	
R530	3	6'-4"	
REPLACEMENT BARS			
RE401	1	5'-3"	B
RE501	1	5'-7"	
RE601	4	5'-11"	
RE701	3	6'-3"	
RE801	1	6'-6"	
RE901	1	6'-10"	

R503	12	4'-2"	B**
R504	8	5'-4"	B**

** For bending diagrams see BR-1-65

* Included with Item 517 for payment.

MARK	REQUIRED REAR	REQUIRED FWD.	TOTAL	NO. TURNS	LENGTH	WEIGHT
SPIRAL BARS CORE DIA. = 26" PITCH = 4½"						
SP401	1		1	48	16'-10½"	260
SP402	1		1	46	16'-3"	249
SP403	1		1	45	15'-7"	243
SP404	1		1	43	15'-0"	233
SP405		1	1	47	16'-4"	255
SP406		1	1	45	15'-8"	243
SP407		1	1	43	14'-11½"	233
SP408		1	1	41	14'-2½"	222

MARK	TOTAL	LENGTH	WEIGHT	SHP	VARIES BY	NO. OF EACH
SUPERSTRUCTURE						
S501	248	2'-7"	668	B		
S502	248	5'-9"	1437	B		
S503	124	4'-2"	539	B		
S504	124	4'-8"	604	B		
S601	216	29'-8"	9,625			
S601A	34	5'-3" to 28'-7½"	865		8½"	1
S601B	21	5'-4" to 27'-10"	523		1'-1½"	1
S601C	12	5'-0"	90			
S602	324	30'-4"	14,762			
S603	36	27'-0"				
S701	216	29'-8"	13,098			
S701A	34	5'-3" to 28'-7½"	1,177		8½"	1
S701B	21	5'-4" to 27'-10"	712		1'-1½"	1
S701C	12	5'-0"	123			
S690D	8	4'-0"	48			
S691	4	10'-3"	62	B		

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 size of the bar. For example A700 is a No. 7 size bar and A1014 is a No. 10 size bar.

All dimensions are out to out of the bar.

Shape "B" is a bent bar, all other bars are straight.

The "length" shown in steel list for the spiral bars is the distance from the top of the footing to the bottom of cap.

The "number of turns" shown in the steel list for the spiral bars is the "length" divided by the pitch, plus three (3) turns (total number of closed coils) expressed as the nearest whole number.

Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item 509

1½ closed coils shall be provided at the ends of each spiral unit.

Four steel channel, tee or angle spacers, weighing approximately 0.68 pounds per linear foot 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 pounds per linear foot will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUT'S	PIERS	GEN'L.
503	475	Cu. Yds.	Unclassified Excavation		237	238	
511	173	Cu. Yds.	Class C Concrete Superstructure	173			
511	23	Cu. Yds.	Class C Concrete, Pier Columns			23	
511	75	Cu. Yds.	Class E Concrete, Pier Walls		75		
511	101	Cu. Yds.	Class E Concrete, Abut. above Footings		101		
511	158	Cu. Yds.	Class E Concrete, Footings		76	82	
509	76,134	Lbs.	Reinforcing Steel	45,681	12,587	17,866	
513	150,000	Lbs.	Structural Steel	150,000			
514	150,000	Lbs.	Field Painting of Structural Steel	150,000			
517	347.44	Lin. Ft.	Railing Type 1	347.44			
505	Lump	Sum	First Test Pile				Lump
507	2,060	Lin. Ft.	Steel Piles 10 BP 42		1,300	760	
518	55	Cu. Yds.	Porous Backfill		55		
518	4	Each	Scuppers, Including Supports	4			
518	102	Lin. Ft.	6" Perforated Helical CMP, 707.06 including specials		102		
518	65	Lin. Ft.	6" Helical CMP, 707.06 Non-Perforated		65		
808	160	Each	Water-reducing, Set-retarding Admixtures for Conc.	160			
601	868	Sq. Yds.	Crushed Aggregate Slope Protection	868			
503	Lump	Sum	Cofferdam, Cribs and Sheeting				Lump
625			Lighting Quantities - see sht. 489				

ESTIMATED LIGHTING QUANTITIES
ITEM 625

TOTAL	UNIT	DESCRIPTION
1	EA.	LUMINAIRE, TYPE II, WITH INTEGRAL 400 WATT MERCURY BALLAST
1	EA.	MERCURY VAPOR LAMP, 400 WATT (H-33-ICD)
1	EA.	LIGHT POLE WITH 2' BRACKET ARM - DESIGN 11A12B30.0
88	L.F.	POLE & BRACKET CABLE, 3 C., NO. 12 AWG, 600 V.
1	EA.	ESNA T - STYLE 82
1	EA.	ESNA KIT - STYLE 83
184	L.F.	CONDUIT - 2 INCH RIGID GALVANIZED STEEL IN BRIDGES
380	L.F.	CIRCUIT CABLE - 1/C, NO. 4 AWG, 600 V.
LUMP(1)	L.S.	BRIDGE STRUCTURE GROUNDING SYSTEM

VOID

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

REINFORCING STEEL LIST
RAMP J
OVER B & O RAILROAD
TUSCARAWAS COUNTY
STA. 6+50.81
STA. 8+29.62

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
K.D.L. M.J.F.	K.D.L.	M.J.F. J.A.S.	B.O.L.	H.C.M. 8-17-64	

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2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-15.93

Location: North Corporation Line of Uhrichsville.

B.M.-22 Located 389' Rt. Sta. 314+91, painted West Corner of the N. Abutment of U.S. 250 Bridge. Elev. 856.796

B.M.-22A 3/4" Bolt on N.W. Corner of Anchor Plate for Fleetwing Sign. Located on N.E. Corner of Eleventh and Water Streets. Elev. 851.505

HYDRAULIC INFORMATION

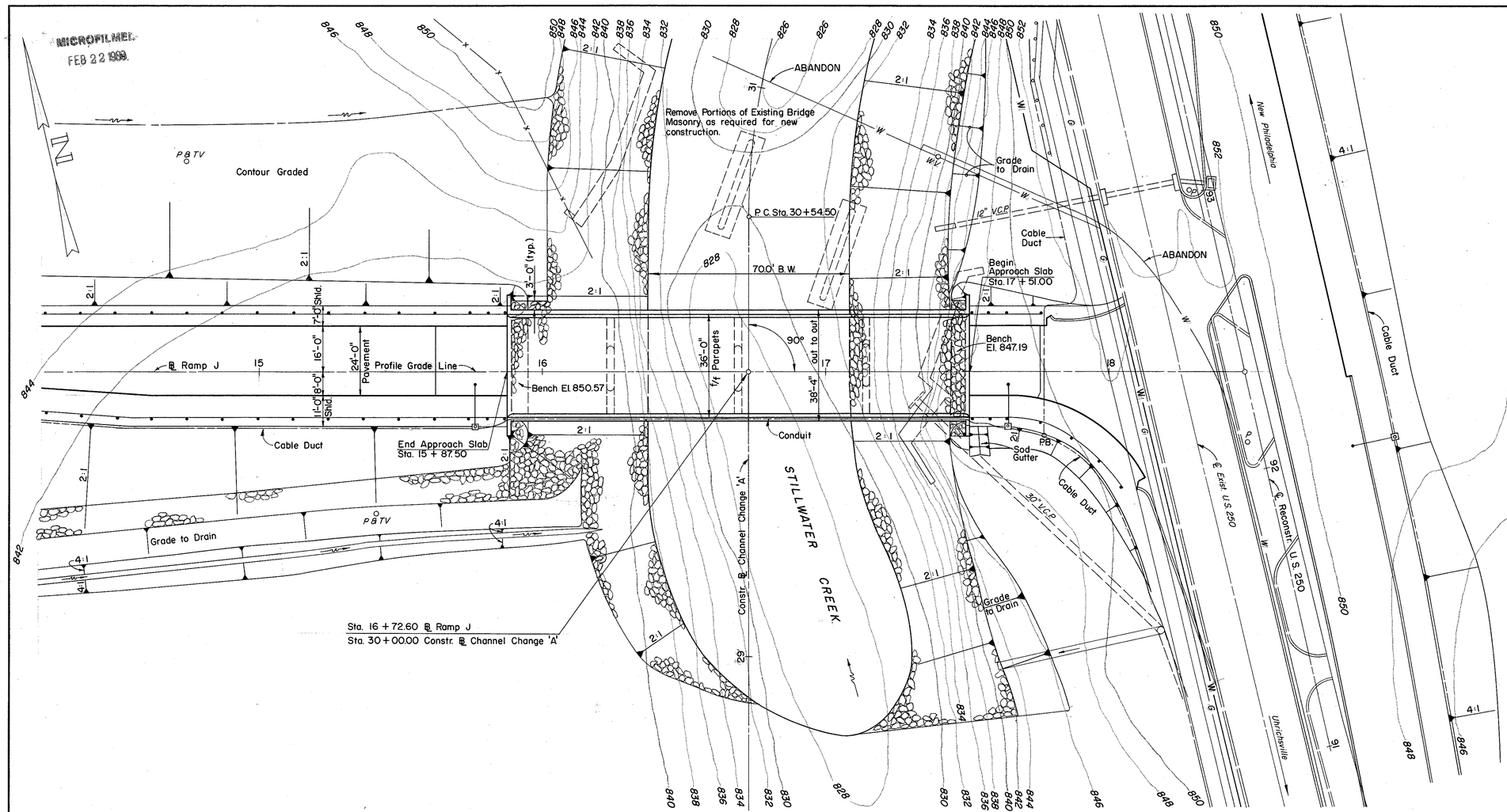
DRAINAGE AREA: 370 Sq. Mi.
MAX. FLOW (during 20 yrs. of regulation): 5,600 c.f.s.
CHANNEL CAPACITY (bankfull at bridge): 10,700 c.f.s.
WATERWAY AREA OF PROPOSED BRIDGE (to Elevation 849.14): 2,360 Sq. Ft.

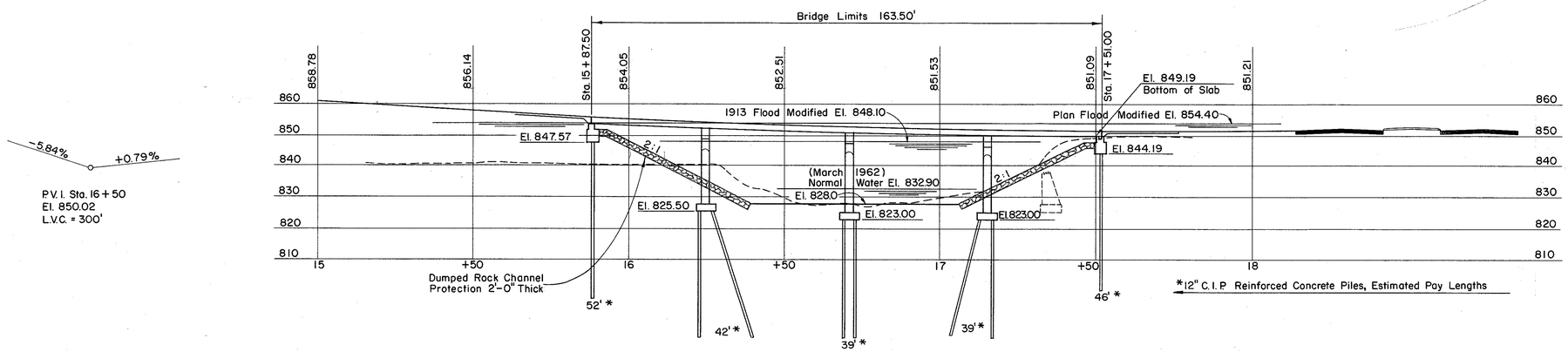
NEAREST EXISTING STRUCTURE

BRIDGE NO.: TU-250-221
LOCATION: 300 feet downstream
TYPE: Continuous steel beam with Reinforced Concrete Deck and Substructure.
SPANS: 64', 80', 64' c/c Brgs.
ROADWAY: 28'-0" f/f of curbs.
SIDEWALKS: Two @ 6'-0"
ALIGNMENT: Tangent
SKEW: 30° R.F.
PLAN APPROVED: 1952
Elevation of bottom of lowest beam 849.70
Waterway Area = 2,360 Sq. Ft. to elevation of lowest beam

PROPOSED STRUCTURE

TYPE: 4 Span continuous reinforced concrete slab with capped pile abutments and T-type piers.
SPANS: 36'-0", 45'-0", 45'-0", 36'-0" c/c Brgs.
ROADWAY: 36'-0" f/f parapets
LOAD FREQUENCY: CF=400 (57)
WEARING SURFACE: 1" monolithic concrete
APPROACH SLABS: AS-1-54 (25'-0" Long)
ALIGNMENT: Tangent
SKEW: 0° 00'
A.D.T. = 2,135 (1977)





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CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

SITE PLAN
RAMP J
OVER STILLWATER CREEK
TUSCARAWAS COUNTY
STA. 15+87.50
STA. 17+51.00

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
H.C.M.	M.F.	J.S. M.B.G.	B.O.L.	H.C.M. 8-17-64	

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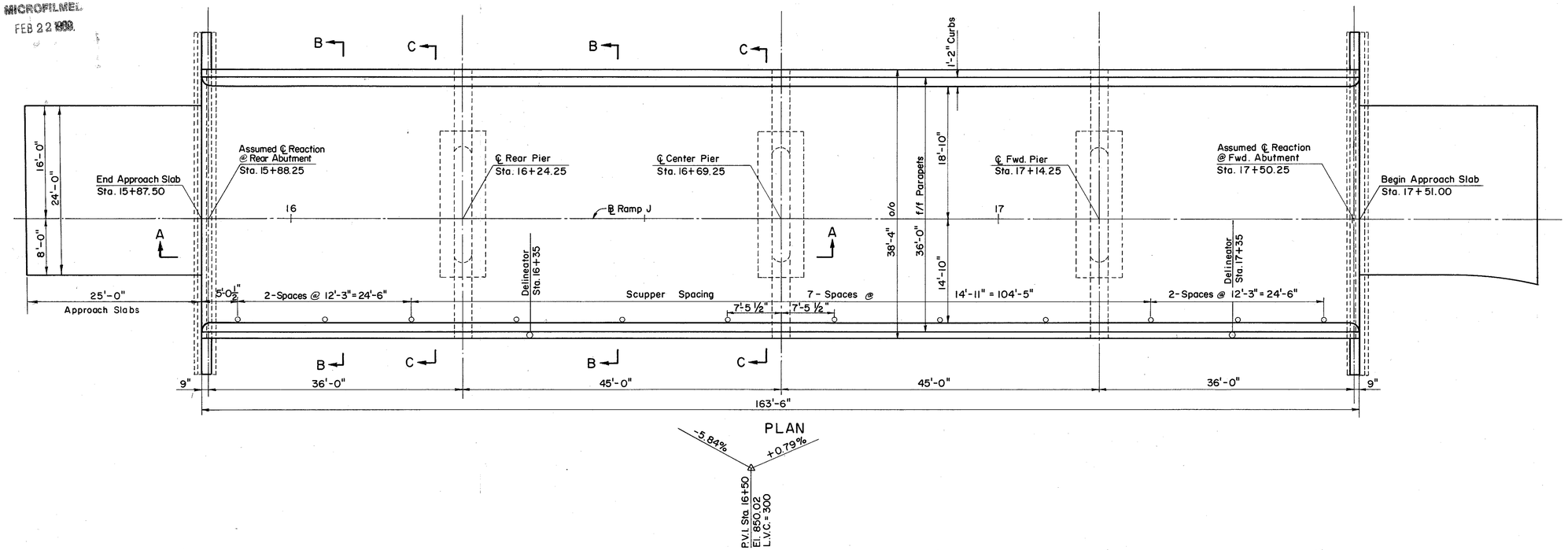
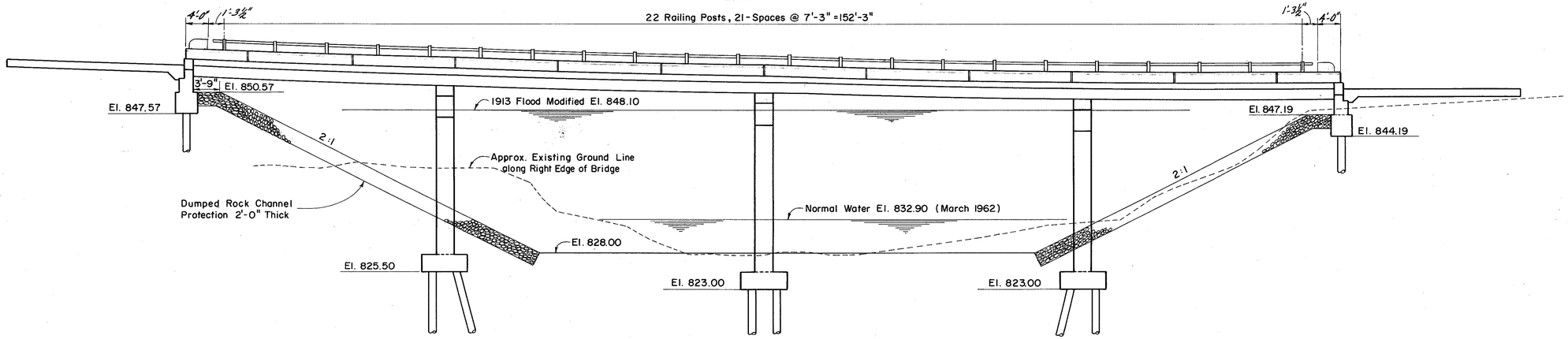


PLAN



ELEVATION

GENERAL NOTES

REFERENCE shall be made to Standard Drawings AS-1-54 revised 8-10-65, BR-1-65, sheet 1 dated 2-1-65 and to Supplemental Specifications 808 dated 7-14-65.

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

DESIGN LOADING: CF 400 (57)

BASIC UNIT WORKING STRESSES:
Concrete, Class C: 1,333 p.s.i.
Concrete, Class E: 1,133 p.s.i.
Reinforcing Steel, ASTM A 15, A 16 & A 160 Deformed, Intermediate or Hard Grade 20,000 p.s.i.

EXCAVATION QUANTITY for the abutments shall be measured as shown on abutment drawings.

PILES shall be driven to a minimum bearing capacity of 30 tons per pile for the abutments and 42 tons per pile for the piers.

POROUS BACKFILL shall extend upward to the approach slab and to the 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 cubic yard paid for porous backfill.

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

PORTIONS OF ABANDONED BRIDGE SUBSTRUCTURE Which interfere with construction of the proposed bridge and channel cleaning shall be removed as per Item 202. Suitable waste masonry placed as bank protection as directed by the Engineer shall be paid for as Dumped Rock Channel Protection.

SETTLEMENT HUBS: Settlement hubs shall be driven in the compacted embankment 15 feet right and left of base line at Sta. 15+80. If the hubs, as determined at approximately one week intervals, indicate that all settlement has ceased before the end of the waiting period, construction of the Rear Abutment may proceed after approval from the Director.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

GENERAL PLAN
RAMP J OVER STILLWATER CREEK
TUSCARAWAS COUNTY
STA. 15+87.50
STA. 17+51.00

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
N.P.	N.P.	FWB P.A.D.	B.O.L.	H.C.M. 8-17-64	

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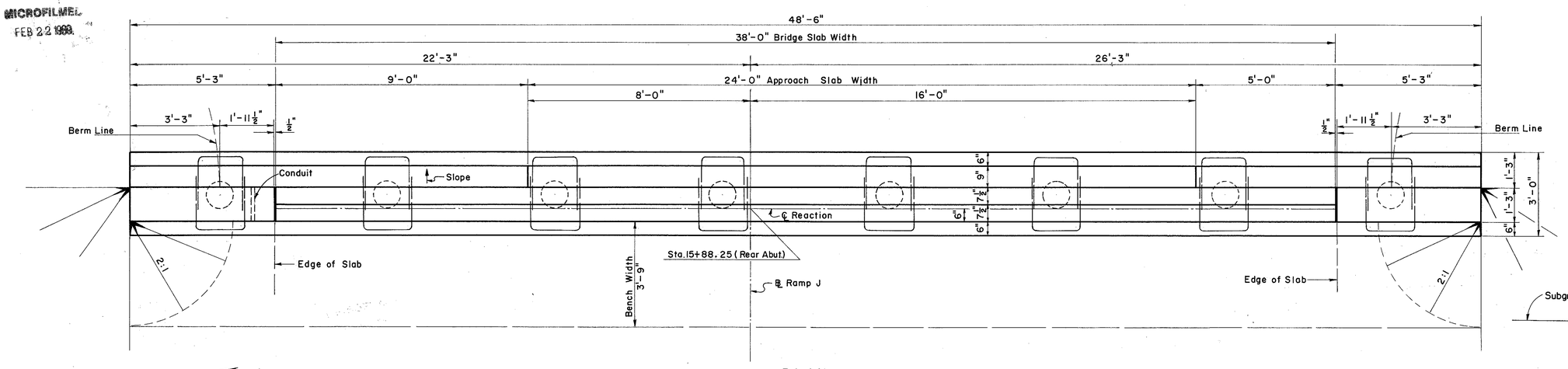
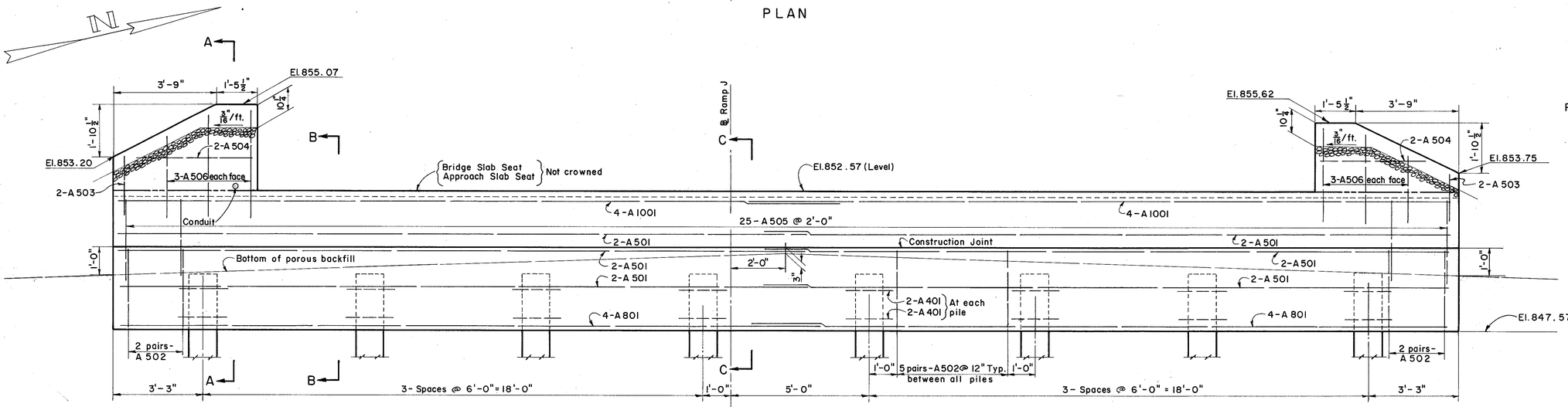
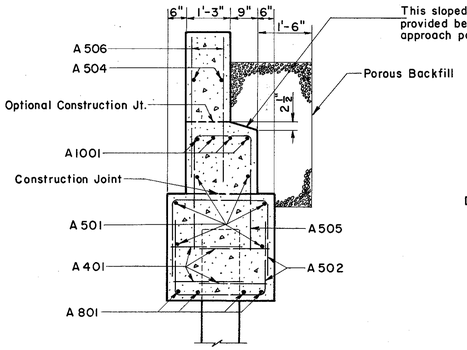
PROCEDURE : The embankment shall be placed and compacted up to the finished earth spill thru slope, and to the level of subgrade for a distance of 200' back of the Rear Abutment, after which a delay of 60 days shall occur before construction of the Rear Abutment is begun.



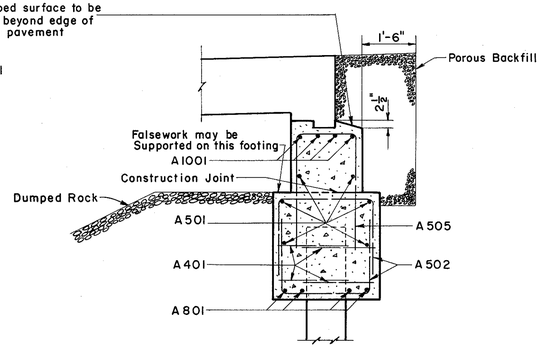
PLAN



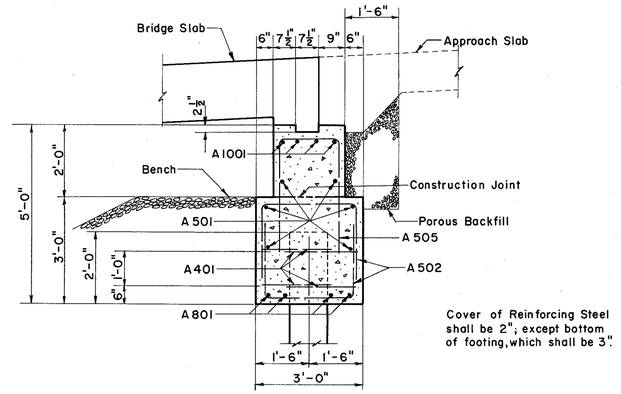
ELEVATION



SECTION AA

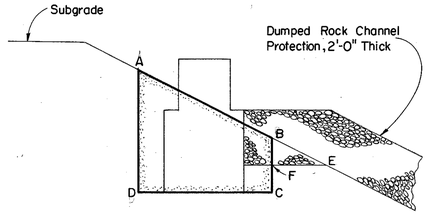


SECTION BB



SECTION CC

Cover of Reinforcing Steel shall be 2"; except bottom of footing, which shall be 3".



PAY LIMITS FOR EXCAVATION
REAR ABUTMENT

Excavation of the Area ABCD shall be included for payment with Item 503, Unclassified Excavation.

Excavation of the Area BEF shall be included for payment with Item 601, Dumped Rock Channel Protection.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
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DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

REAR ABUTMENT
RAMP J OVER STILLWATER CREEK
TUSCARAWAS COUNTY
STA. 15+87.50
STA. 17+51.00

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
N.P. G.S.W.	N.P.	F.W.B. P.A.D.	B.O.L.	H.C.M. 8-17-64	

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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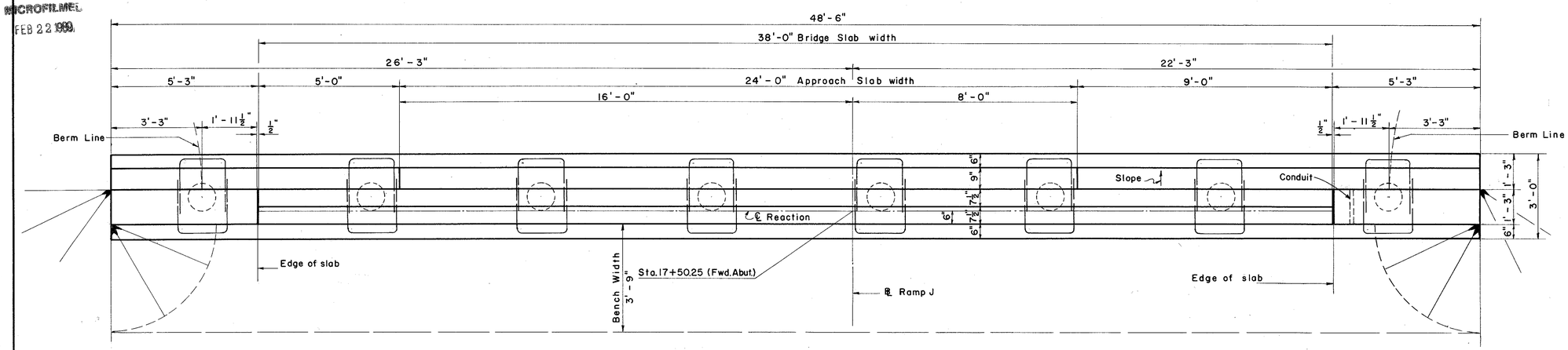
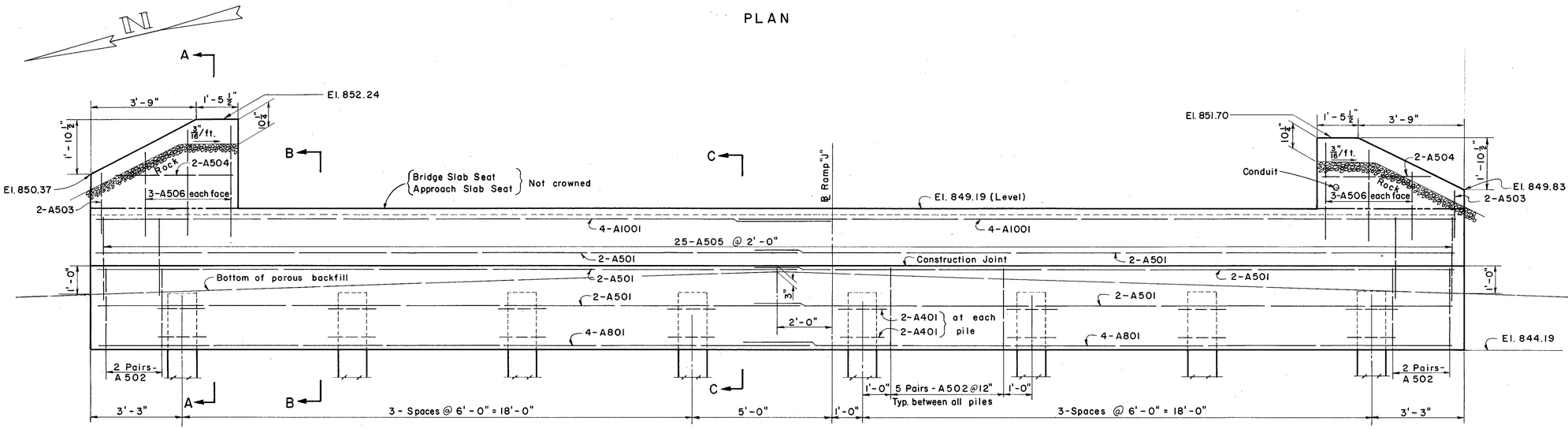
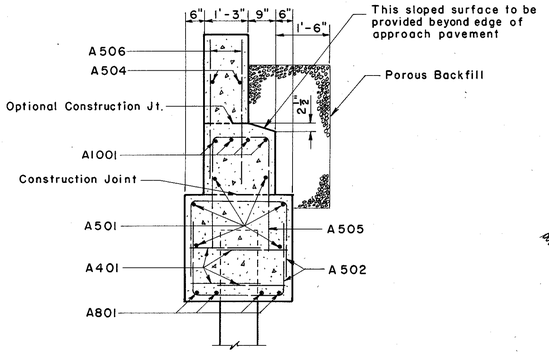
TUSCARAWAS COUNTY
TUS-36-15.93



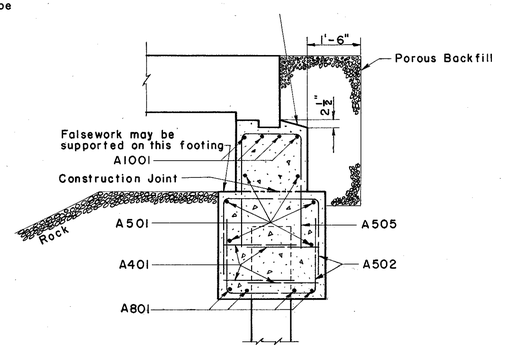
PLAN



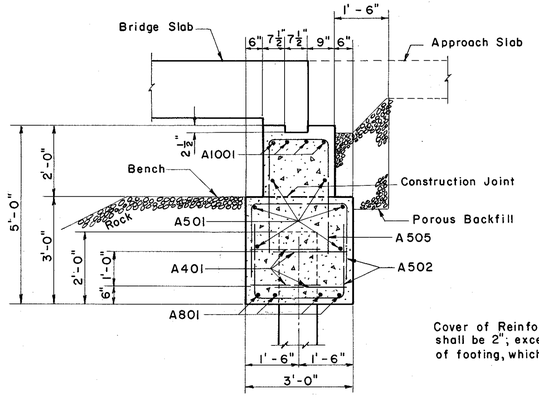
ELEVATION



SECTION A A



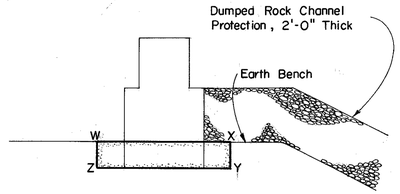
SECTION BB



Cover of Reinforcing Steel shall be 2", except bottom of footing, which shall be 3".

SECTION CC

PROCEDURE: The embankment at the Forward Abutment shall be placed and compacted up to the level of the earth bench, after which excavation shall be made for the abutment and piles driven.



PAY LIMITS FOR EXCAVATION REAR ABUTMENT

Excavation for the Area WXYZ shall be included for payment with Item 503, Unclassified Excavation.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

FORWARD ABUTMENT
RAMP J
OVER STILLWATER CREEK
TUSCARAWAS COUNTY
STA. 15+87.50
STA. 17+51.00

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
N.P. G.S.W.	N.P.	F.W.B. G.F.L.	B.O.L.	H.C.M. 8-17-64	

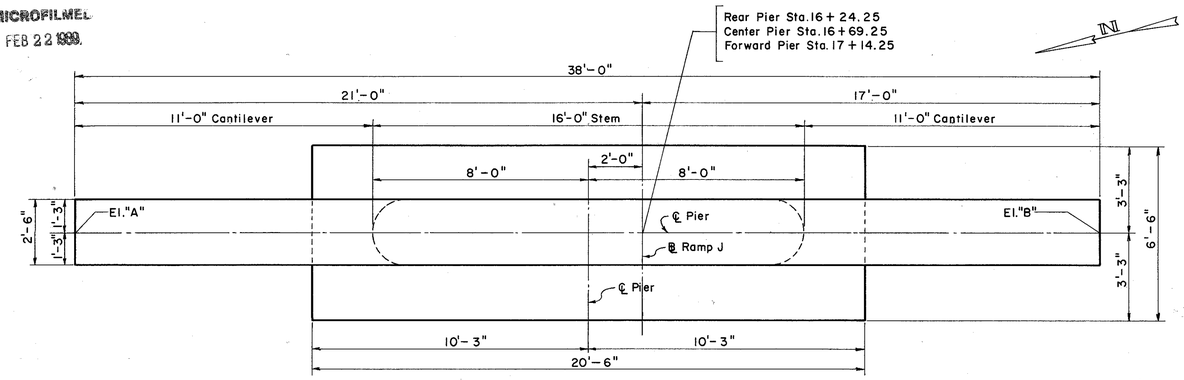
MICROFILMED
FEB 22 1999

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

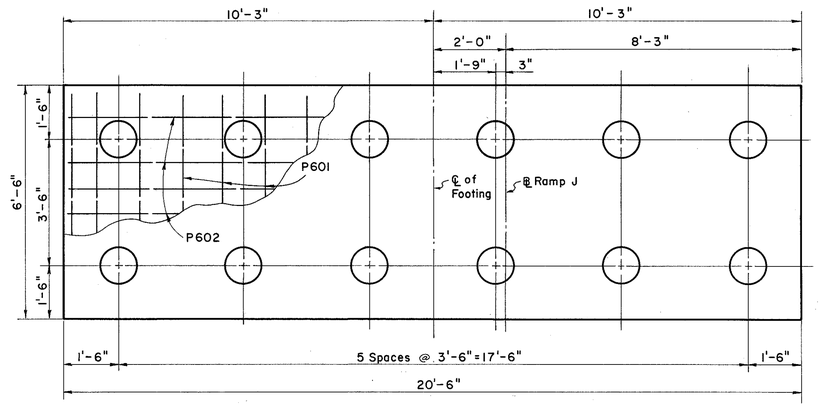
522
662

TUSCARAWAS COUNTY
TUS-36-15.93

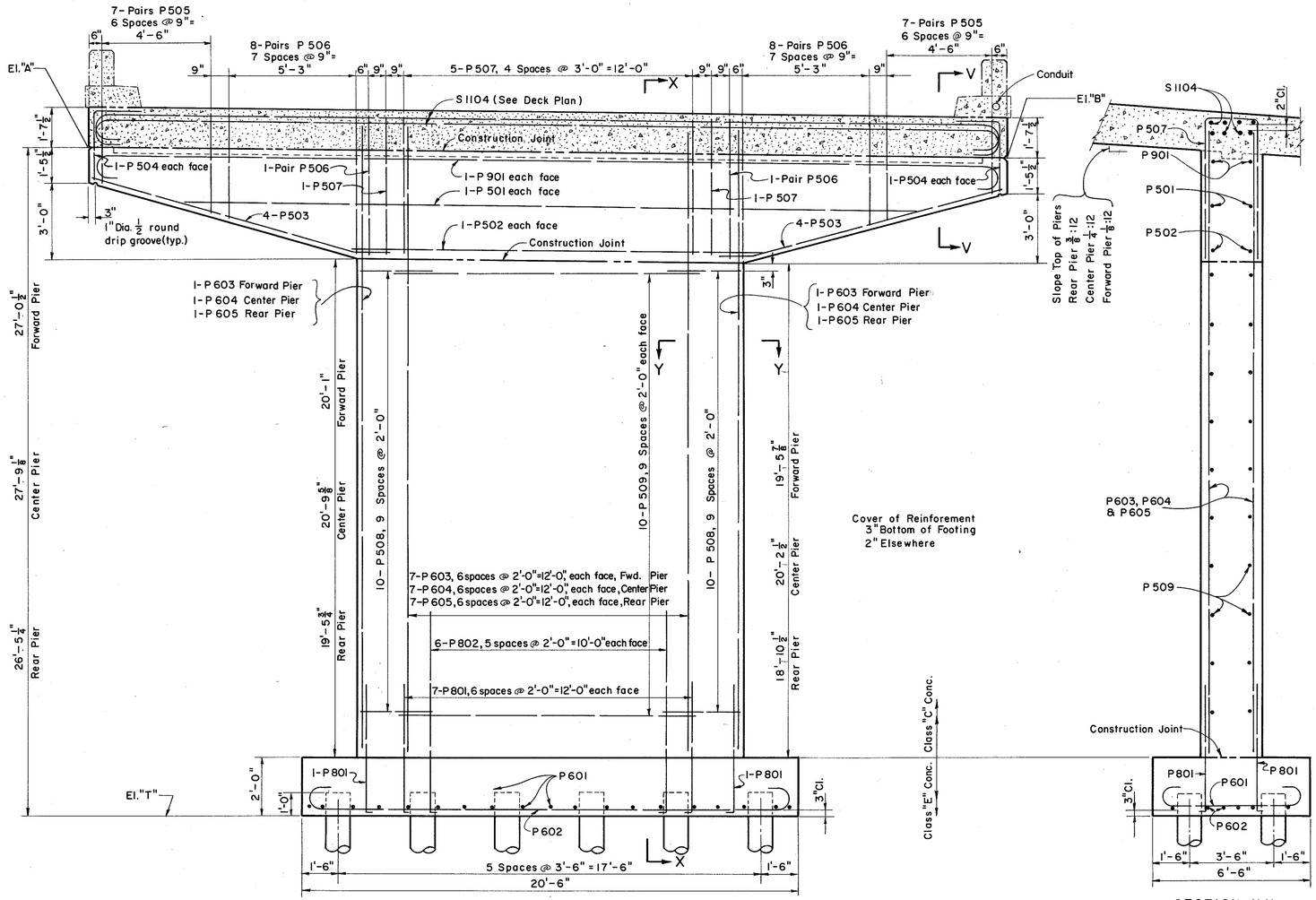
For Rear Pier batter stream side row of piles 3 in 12.
For Forward Pier batter stream side row of piles 3 in 12.
All Other Piles are vertical
Piles-12" Cast-in-Place Reinforced Concrete



PLAN OF PIERS

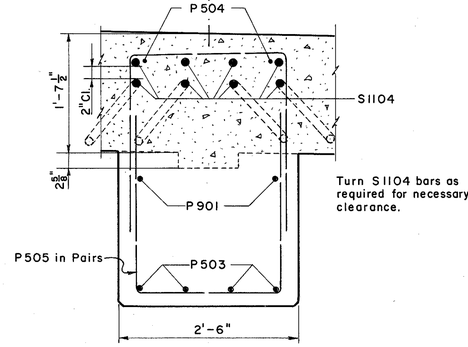


PLAN OF FOOTING



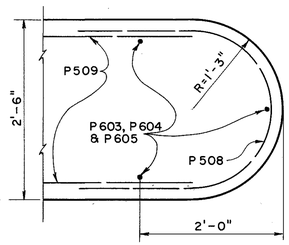
ELEVATION

SECTION XX



SECTION V V

Turn S1104 bars as required for necessary clearance.



SECTION YY

ELEVATIONS			
	REAR PIER	CENTER PIER	FWD. PIER
* El."A"	851.93	850.76	850.04
* El."B"	851.34	850.17	849.45
El."T"	825.50	823.00	823.00

* Elevations are at the ℄ of Pier

PREPARED BY
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FOR

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

PIERS
RAMP J OVER STILLWATER CREEK
TUSCARAWAS COUNTY
STA. 15+87.50
STA. 17+51.00

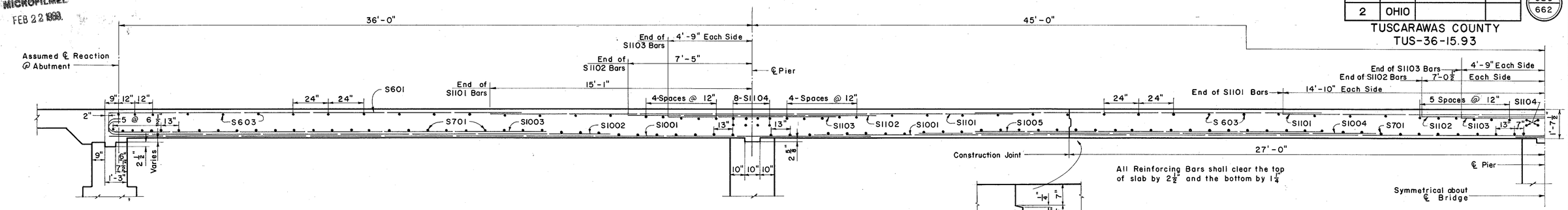
DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
N.P. G.S.W.	N.P.	F.W.B.	B.O.L. B.R.	H.C.M. 8-17-64	

MICROFILMED
FEB 22 1968

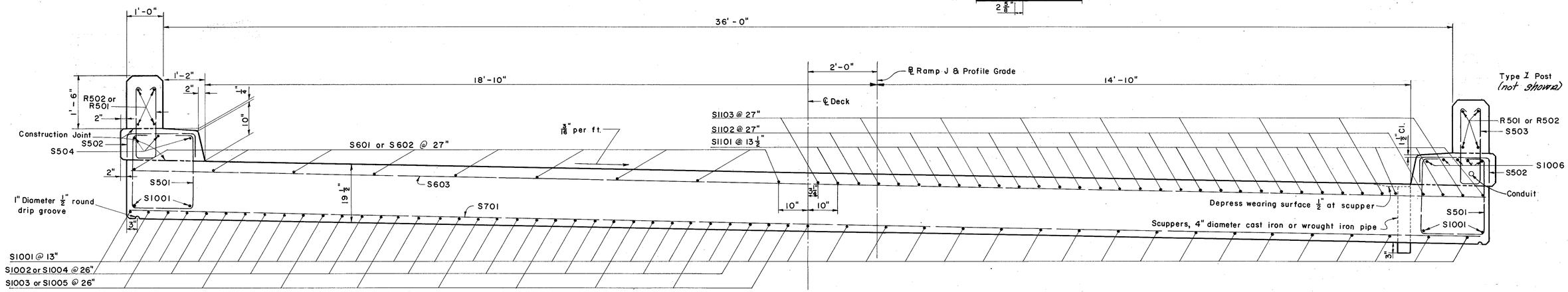
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

523
662

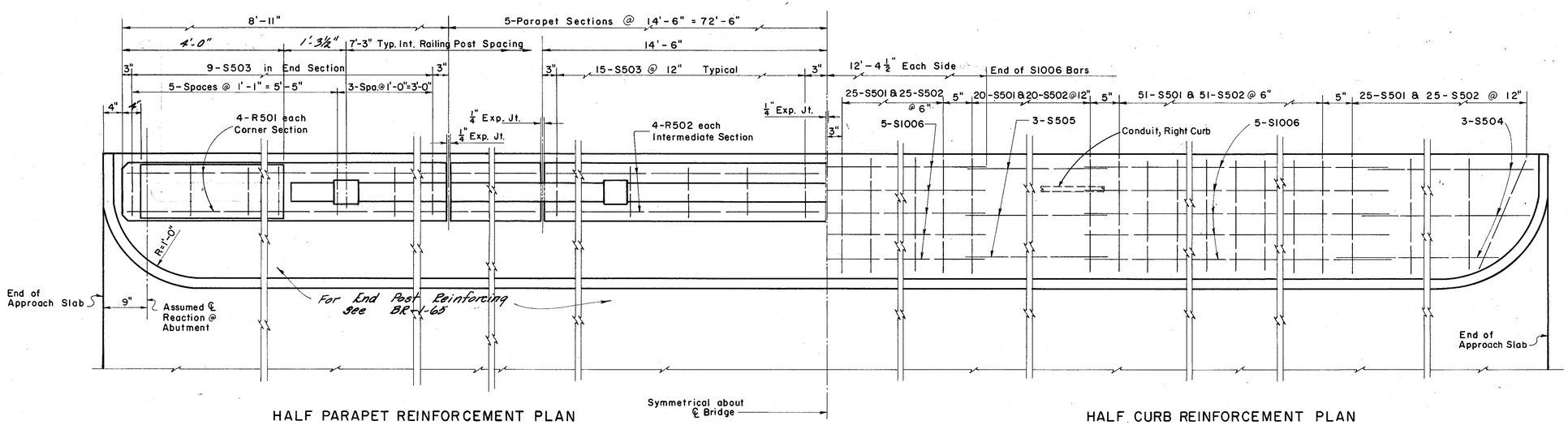
TUSCARAWAS COUNTY
TUS-36-15.93



SECTION A-A



SECTION B-B



HALF PARAPET REINFORCEMENT PLAN

HALF CURB REINFORCEMENT PLAN

SECTION C-C

SLAB THICKNESS shown includes 1" for monolithic wearing surface.

CONCRETE shall be Class "C".

ONE LONGITUDINAL CONSTRUCTION JOINT on the centerline of roadway will be permitted. A horizontal construction joint shall be placed between each curb and the top of the slab.

CAMBER of $\frac{1}{800}$ 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.

LOCATION OF SECTIONS shown on General Plan.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

SUPERSTRUCTURE DETAILS
RAMP J
OVER STILLWATER CREEK
TUSCARAWAS COUNTY
STA. 15+87.50
STA. 17+51.00

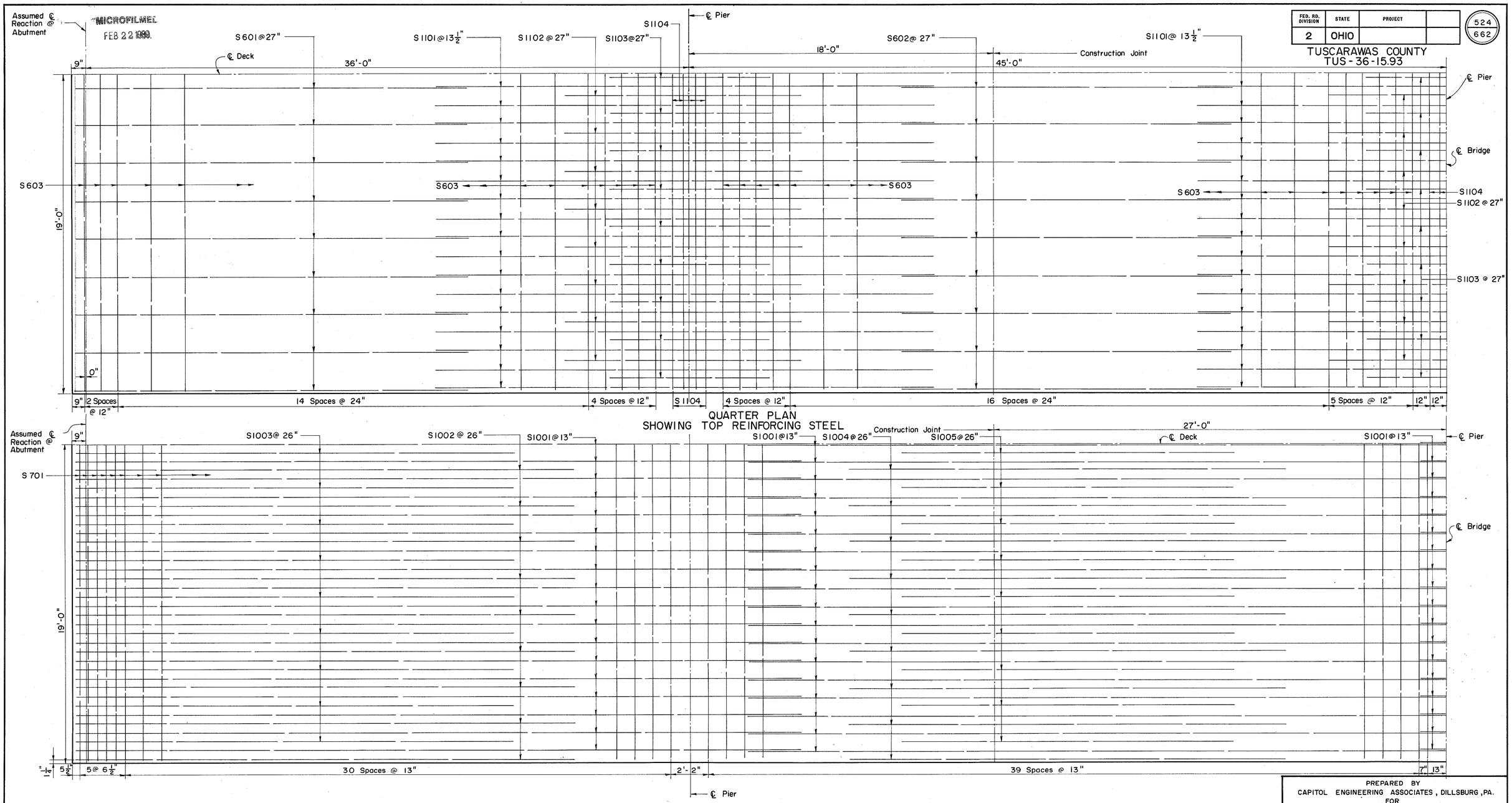
DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
N.P.	N.P.	F.W.B. G.F.L.	B.O.L.	H.C.M. 8-17-64	

MICROFILMED
FEB 22 1999

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

524
662

TUSCARAWAS COUNTY
TUS-36-15.93



QUARTER PLAN
SHOWING TOP REINFORCING STEEL

QUARTER PLAN
SHOWING BOTTOM REINFORCING STEEL

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

DECK REINFORCEMENT

RAMP J
OVER STILLWATER CREEK
TUSCARAWAS COUNTY
STA. 15+87.50
STA. 17+51.00

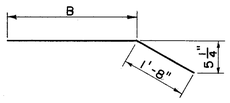
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
N.P.	N.P.	F.W.B. B.A.B.	B.O.L.	H.C.M. 8-17-64	

MICROFILMED
FEB 22 1989

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

525
662

TUSCARAWAS COUNTY
TUS-36-15.93



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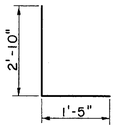

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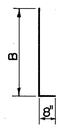

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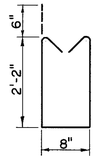

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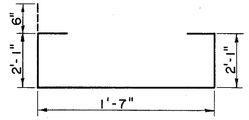
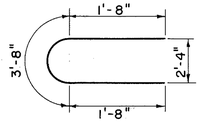
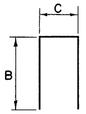


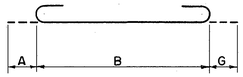
TYPE 5



TYPE 6



TYPE 7



TYPE 8

REINFORCING STEEL LIST

PIERS

MARK	REQ'D REAR	REQ'D CENTR.	REQ'D FWD.			TOTAL	LENGTH	WEIGHT	TYPE	A	B	C	G
P501	2	2	2			6	30'- 0"	188	Str.				
P502	2	2	2			6	16'- 6"	103	Str.				
P503	8	8	8			24	12'-10"	321	1		11'- 2"		
P504	4	4	4			12	4'- 1"	51	2				
P505	28	28	28			84	7'- 3"	635	7		2'- 8"	2'-2"	
P506	36	36	36			108	9'- 3"	1,042	7		3'- 8"	2'-2"	
P507	7	7	7			21	13'- 3"	290	7		5'- 8"	2'-2"	
P508	20	20	20			60	7'- 0"	438	6				
P509	20	20	20			60	13'- 6"	845	Str.				
P601	19	19	19			57	7'- 6"	642	8	8"	6'- 2"		8"
P602	6	6	6			18	21'- 6"	581	8	8"	20'- 2"		8"
P603	–	–	16			16	25'- 5"	611	Str.				
P604	–	16	–			16	26'- 2"	629	Str.				
P605	16	–	–			16	24'-10"	597	Str.				
P801	16	16	16			48	5'- 3"	673	3		4'-10"		
P802	12	12	12			36	9'- 0"	865	3		8'- 4"		
P901	2	2	2			6	40'- 2"	819	8	1'-3"	37'- 8"		1'-3"

ABUTMENTS

MARK	REQ'D REAR	REQ'D FWD.	TOTAL	LENGTH	WEIGHT	TYPE	B	C
A401	32	32	64	5'- 5"	232	7	1'-11"	1'-9"
A501	12	12	24	25'- 0"	626	Str.		
A502	78	78	156	6'- 7"	1,071	7	2'- 1"	2'-8"
A503	4	4	8	2'- 3"	19	Str.		
A504	4	4	8	4'-10"	40	Str.		
A505	25	25	50	7'-11"	413	7	3'- 3"	1'-8"
A506	12	12	24	4'- 0"	100	Str.		
A801	8	8	16	25'- 4"	1,082	Str.		
A1001	8	8	16	25'- 8"	1,767	Str.		

SUPERSTRUCTURE

MARK	TOTAL	LENGTH	WEIGHT	TYPE	A	B	C	D	G
S501	484	6'- 3"	3,155	5					
S502	484	2'-10"	1,430	7		0'-8"	1'-9"		
S503	336	5'- 9"	2,015	4					
S504	12	25'-10"	323	Str.					
S505	12	23'- 5"	293	Str.					
S601	36	23'- 5"	1,266	Str.					
S602	36	19'- 8"	1,064	Str.					
S603	94	37'- 6"	5,294	Str.					
S701	154	37'- 6"	11,804	Str.					
S1001	156	43'- 3"	29,032	Str.					
S1002	36	29'- 9"	4,609	8	1'-3"	28'-6"			
S1003	36	26'- 1"	4,041	8	1'-3"	24'-10"			
S1004	36	26'- 0"	4,028	Str.					
S1005	36	19'-10"	3,072	Str.					
S1006	30	24'- 9"	3,195	Str.					
S1101	102	29'- 8"	16,077	Str.					
S1102	48	14'- 1"	3,592	Str.					
S1103	54	9'- 6"	2,726	Str.					
S1104	24	40'- 8"	5,186	8	1'-7"	37'-6"			1'-7"

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	BRIDGE SUPER	BRIDGE ABUTS.	BRIDGE PIERS	BRIDGE GEN'L
503	Lump	Sum	Cofferdams, Cribs and Sheeting				Lump
503	191	Cu. Yds.	Unclassified Excavation		65	126	
203	2,150	Cu. Yds.	Excavation not including embankment construction, (Channel)				2,150
511	402	Cu. Yds.	Class C Concrete Superstructure	402			
511	123	Cu. Yds.	Class C Concrete Pier Walls above Footings			123	
511	48	Cu. Yds.	Class E Concrete, Abutments		48		
511	36	Cu. Yds.	Class E Concrete, Pier Footings			36	
509	116,882	Lbs.	Reinforcing Steel	102,202	5,350	9,330	
517	325.67	Lin. Ft.	Railing, Type I	325.67			
505	Lump	Sum	First Test Pile				Lump
507	2,220	Lin. Ft.	12" Cast-in-Place Reinforced Concrete Piles		780	1,440	
202	Lump	Sum	Existing Structure removed				Lump
518	29	Cu. Yds.	Porous Backfill		29		
518	12	Each	Scuppers, 4" dia. cast or wrought iron pipe	12			
808	402	Each	Water-reducing, Set-retarding Admixtures for Conc.	402			
601	1,499	Cu. Yds.	Dumped Rock Channel Protection, 2'-0" Thick				1,499

ESTIMATED LIGHTING QUANTITIES
ITEM 625

TOTAL	UNIT	DESCRIPTION
165	L.F.	CONDUIT - 2 INCH RIGID GALVANIZED STEEL IN BRIDGES
330	L.F.	CIRCUIT CABLE - 1/C, NO. 4 AWG, 600 V.

RAILING *

MARK	TOTAL	LENGTH	TYPE
R501	16	8'-8"	Str.
R502	80	14'-2"	Str.

* Included with Item 517 for Payment.

R503	12	4'-2"	B†
R504	8	5'-4"	B†

† FOR Bending Diagrams see BR-1-65

REPLACEMENT BARS (Straight)

MARK	NO.	LENGTH
RE 400	1	5'- 3"
RE 500	1	5'- 7"
RE 600	1	5'-11"
RE 700	1	6'- 3"
RE 800	1	6'- 6"
RE 900	1	6'-10"
RE 1000	3	7'- 3"
RE 1100	2	7'- 7"

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 size of the bar. For example A 700 is a No. 7 bar and A 1014 is a No. 10 size bar.

All dimensions are out to out of the bar

Str. denotes straight bars.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

ESTIMATED QUANTITIES & REINFORCING STEEL LIST
RAMP J
OVER STILLWATER CREEK
TUSCARAWAS COUNTY
STA. 15 + 87.50
STA. 17 + 51.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
G.S.W.	N.P.	F.W.B. B.A.B.	B.O.L.	H.C.M. 8-17-64	

MICROFILMED
FEB 22 1999

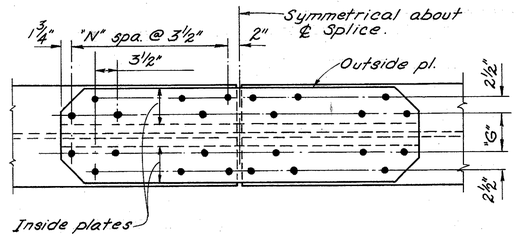
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

525A
GG2

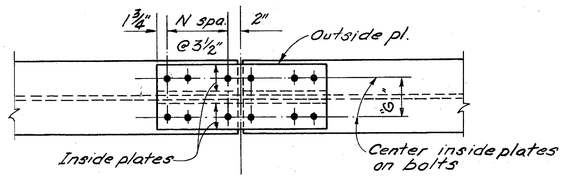
TUSCARAWAS COUNTY
TUS-36-15.93

BEAM SPLICE DATA

Beams to be Spliced		FLANGE SPLICE						WEB SPLICE		
			Plates		Bolts			Plates 2-reqd.	No Bolts reqd.	"M"
BEAM 1	BEAM 2	Type	Outside 2 reqd.	Inside 4-reqd.	No. Reqd.	Dimension "G"	"N"			
36WF182	36WF182	S	11" x 3/16" x 2'-11 1/2"	4 1/2" x 1/16" x 2'-11 1/2"	40	7"	4	19 1/2" x 3/8" x 2'-7"	48	2
36WF170	36WF170	S	11" x 1/2" x 2'-11 1/2"	4 1/2" x 5/8" x 2'-11 1/2"	40	7"	4	19 1/2" x 3/8" x 2'-7"	48	2
36WF160	36WF160	S	11" x 1/2" x 2'-4 1/2"	4 1/2" x 3/16" x 2'-4 1/2"	32	7"	3	19 1/2" x 3/8" x 2'-7"	48	2
36WF150	36WF230	S	11" x 7/16" x 2'-4 1/2"	4 1/2" x 3/16" x 2'-4 1/2"	32	7"	3	13 1/2" x 3/8" x 2'-7"	40	1
"	36WF182									
"	36WF170									
36WF135	36WF230	S	11" x 3/8" x 2'-4 1/2"	4 1/2" x 1/2" x 2'-4 1/2"	32	7"	3	13 1/2" x 3/8" x 2'-7"	40	1
"	36WF150									
"	36WF135									
33WF220	33WF240	D	15" x 9/16" x 4'-8 1/2"	G x 11/16" x 4'-8 1/2"	64	G 1/4"	7	19 1/2" x 7/16" x 2'-4"	54	2
"	33WF220									
33WF200	33WF220	D	15" x 1/2" x 3'-G 1/2"	G x 5/8" x 3'-G 1/2"	48	G 1/4"	5	19 1/2" x 3/8" x 2'-4"	48	2
"	33WF200									
33WF152	33WF152	S	10" x 1/2" x 2'-4 1/2"	4" x 11/16" x 2'-4 1/2"	32	G 1/4"	3	19 1/2" x 3/8" x 2'-4"	42	2
33WF130	33WF152	S	10" x 7/16" x 2'-4 1/2"	4" x 9/16" x 2'-4 1/2"	32	G 1/4"	3	13 1/2" x 3/8" x 2'-4"	36	1
"	33WF130									



FLANGE SPLICE ~TYPE "D"



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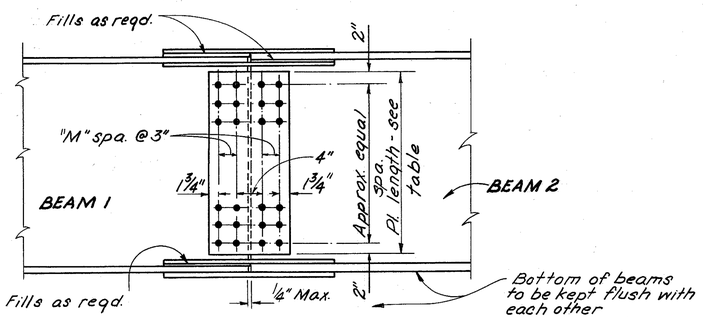
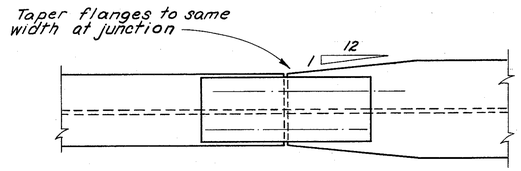


BEAM SPLICE DETAIL



PLAN OF SPLICE FOR BEAMS WITH DIFFERENT NOMINAL FLANGE WIDTHS

BOLTS shall be according to 513 and 711.09 and shall be 1" diameter.

FILLS shall be furnished with necessary thickness to compensate for misalignment of abutting flanges and webs due to splicing beams of different size or to mill tolerances. Surfaces to which splice material bolts shall be brought to within 1/16" of being flush by use of fills, but no fills of less than 1/8" in thickness shall be furnished. Shop drawings shall be prepared showing fill thicknesses based on standard dimensions for detailing.

FIELD ASSEMBLY: During field assembly of bolted splices, beams shall be supported to facilitate placing drift pins in at least 25% of the holes to provide and maintain accurate alignment of holes and parts; bolts shall be placed in another 10% of the holes and made "snug tight" before the temporary support of the beam is withdrawn. Bolts shall then be placed in remaining open holes and made "snug tight" after which all bolts in place shall be tightened to prescribed tightness; [illegible] and [illegible] drift pins shall be replaced with bolts.

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

BEAM SPLICE DETAILS

TUSCARAWAS CO.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
		JH	Rms			

MICROFILMED
FEB 22 1980

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

526
662

TUSCARAWAS COUNTY
TUS-36-15.93

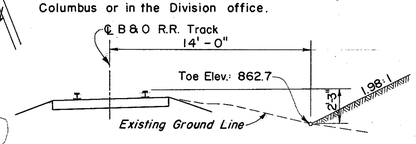
Location: 0.2 Mile West of Corporation Limits of City of Uhrichsville & U.S. 250

B.M.-20 213' Rt. Sta. 302+40, Spike in 12" Split Elm. Elev. 870.970

B.M.-21 (U.S.C. & G.S. Monument L-180) situated approximately 271'± Lt. Sta. 307+07, disk set in concrete and stamped L 180, 1954. Located on W. End of N. Bridge Abutment of the B & O R.R. Structure on the North Side of Township Road 278. Elev. 859.893

RAILROAD TRAFFIC: 5 Freight Trains per day, Max. Speed 35 M.P.H.

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of 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.



SECTION A-A

PROPOSED STRUCTURE

TYPE: Two 3-span continuous steel beam with reinforced concrete deck and substructure

SPANS: 68'-0", 86'-0", 68'-0", ℄ bearings

ROADWAY: 30'-0" ft 2'-3" safety curbs on Rt. Bridge; Varies between 2'-3" safety curbs Lt. Bridge.

LOAD FREQUENCY: CF = 400 (57)

SKEW: 46° L.F. Substructure to Reference Line

WEARING SURFACE: 1" monolithic concrete

APPROACH SLABS: AS-1-54 (25' Long)

ALIGNMENT: U.S.-36 curve, B & O R.R. Tangent

A.D.T. = 7,695 (1977)

SUPERELEVATION: Left Bridge - Varies
Right Bridge - 0.071 ft/ft.

RELOC. U.S. 36
Pl. Sta. 309+69.64
Δ = 55° 13' 50"
D = 3° 00' 00"
R = 1,909.86'
L_c = 1,541.02'
L_s = 300.00'
T_s = 1,150.10'
E_s = 247.76'

All Piles: 12" C.I.P. Reinforced Concrete.

* Estimated Average Pay Length of Piles.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
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DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

SITE PLAN

BRIDGE NO. TUS-36-1859 L & R.
RELOC. U.S.-36 OVER B & O RAILROAD,
TUSCARAWAS COUNTY
STA. 303+71.18
STA. 305+99.56

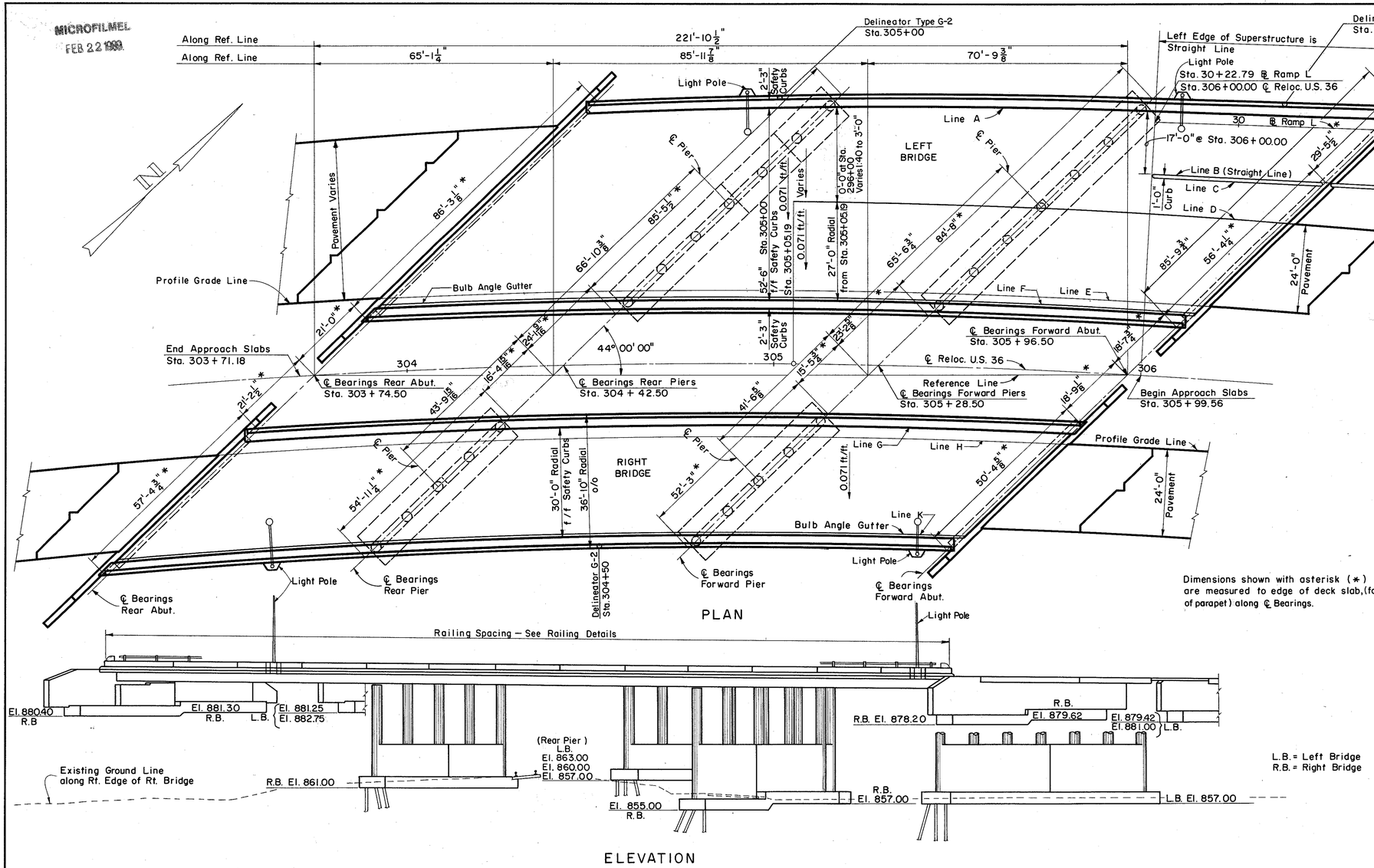
DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
H.C.M.	M.F.	L.T.Z. P.A.D.	L.L.D	H.C.M. 8-17-64	

MICROFILMED
FEB 22 1969

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

527
662

TUSCARAWAS COUNTY
TUS-36-15.93



Dimensions shown with asterisk (*) are measured to edge of deck slab, (face of parapet) along ℄ Bearings.

L.B. = Left Bridge
R.B. = Right Bridge

ELEVATIONS — TOP OF DECK SLAB

LOCATION LINE	E & H (P.G.)	LEFT BRIDGE A	B	C	D	F	RIGHT BRIDGE G	K
Sta. 302+75	895.66							
Sta. 303+00	895.45							
Face of Backwall								893.40
Sta. 303+25	895.24							893.32
Sta. 303+50	895.03							893.11
Face of Backwall							895.22	
Sta. 303+75	894.82						895.03	892.90
Face of Backwall						894.46		
Sta. 304+00	894.61					894.40	894.82	892.69
Sta. 304+25	894.40					894.19	894.61	892.48
Face of Backwall		897.63						
Sta. 304+50	894.19	897.62				893.98	894.40	892.27
Sta. 304+75	893.98	897.45				893.77	894.19	892.06
Sta. 305+00	893.77	897.28				893.56	893.98	89 1.85
Sta. 305+05.19	893.73				895.43			
Sta. 305+25	893.56	897.02			895.26	893.35	893.77	891.64
Sta. 305+50	893.35	896.74			895.05	893.14	893.56	891.62
Face of Backwall								891.41
Sta. 305+75	893.14	896.44			894.84	892.93	893.35	
Face of Backwall							893.29	
Sta. 306+00	892.93	896.15	895.23	895.16	894.63	892.72		
Face of Backwall						892.60		
Sta. 306+25	892.72				894.42			
Face of Backwall					894.32			
Sta. 306+50	892.51							
Sta. 306+75	892.30							
RAMP L ℄	(P.G.)							
Sta. 30+22.79	895.98	896.15	895.23	895.16				
Sta. 30+20	895.94	896.11	895.20	895.13				
Sta. 30+10	895.80	895.95	895.06	895.01				
Sta. 30+00	895.66	895.81	894.94	894.89				
Sta. 29+90	895.53	895.67	894.82	894.77				
Sta. 29+80	895.39	895.53	894.71	894.66				
Face of Backwall			894.64	894.61				
Sta. 29+70	895.26	895.40	894.59	894.55				
Sta. 29+60	895.13	895.26	894.48	894.44				
Face of Backwall		895.22						
Sta. 29+50	895.00		894.37	894.32				
Sta. 29+40	894.87		894.25	894.21				
Sta. 29+30	894.73		894.14	894.11				

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

GENERAL PLAN

BRIDGE NO. TUS-36-1859 L. & R.
RELOC. U.S.-36 OVER B & O RAILROAD
TUSCARAWAS COUNTY
STA. 303 + 71.18
STA. 305 + 99.56

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
H.C.M. J.V.R.	M.F.	E.L.M. F.W.B.	L.L.D.	H.C.M. 8-17-64	

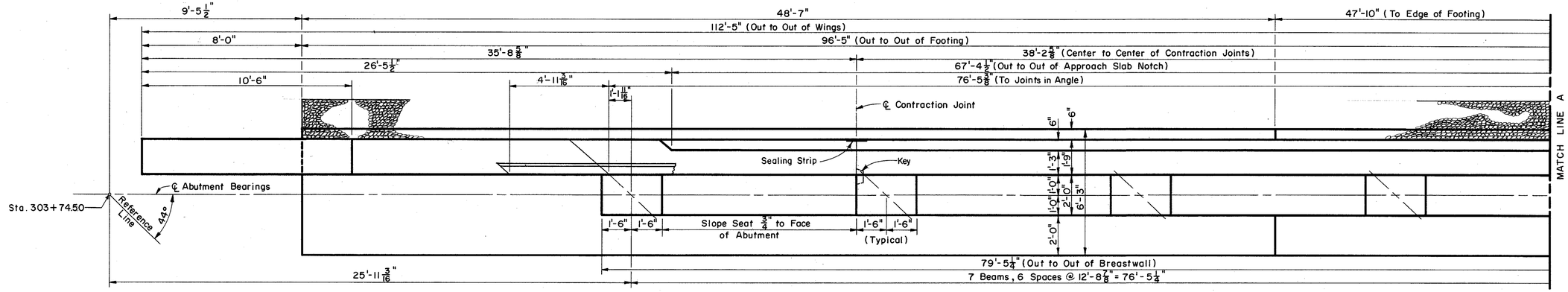
MICROFILMED
FEB 22 1999

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

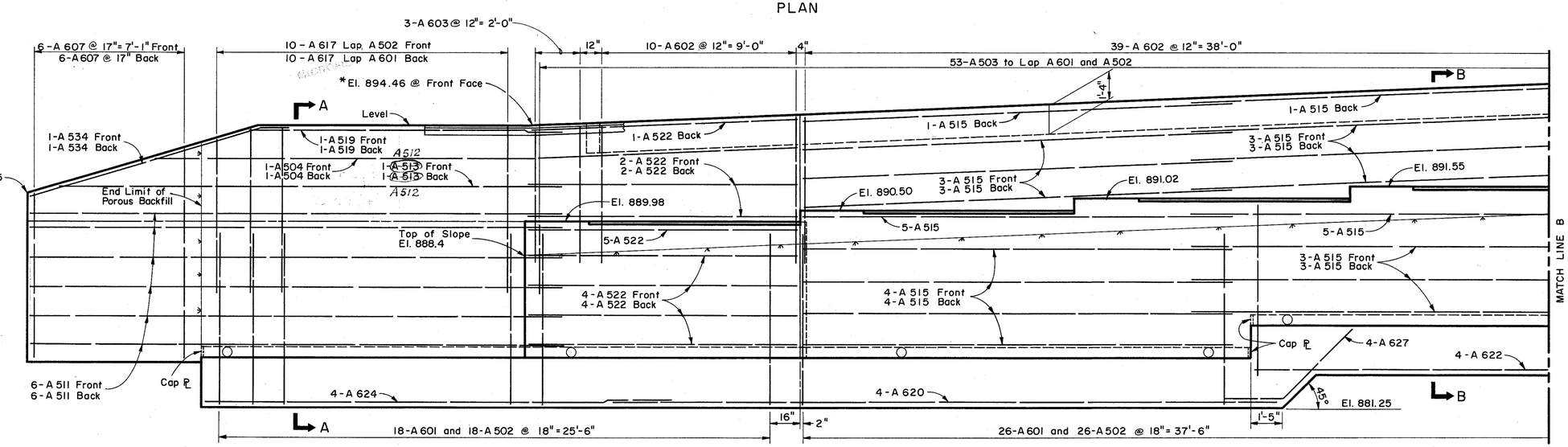
528
662

TUSCARAWAS COUNTY
TUS-36-15.93

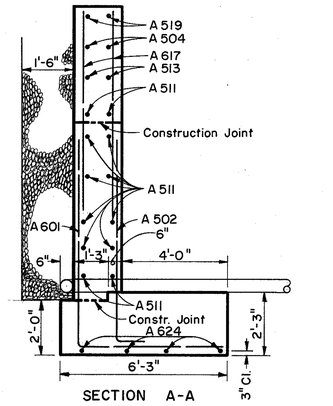
N



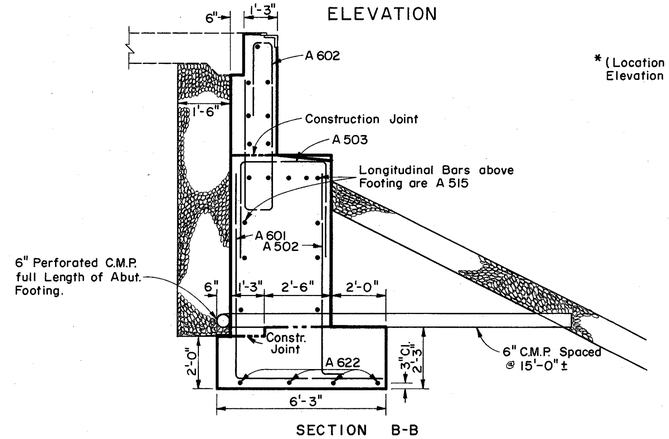
PLAN



ELEVATION



SECTION A-A



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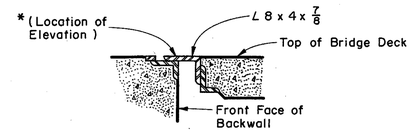


DETAIL OF END DAM

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

LEFT REAR ABUTMENT (1)

BRIDGE NO. TUS-36-1859 L. & R.
RELOC. U.S.-36 OVER B & O RAILROAD
TUSCARAWAS COUNTY
STA. 303+71.18
STA. 305+99.56

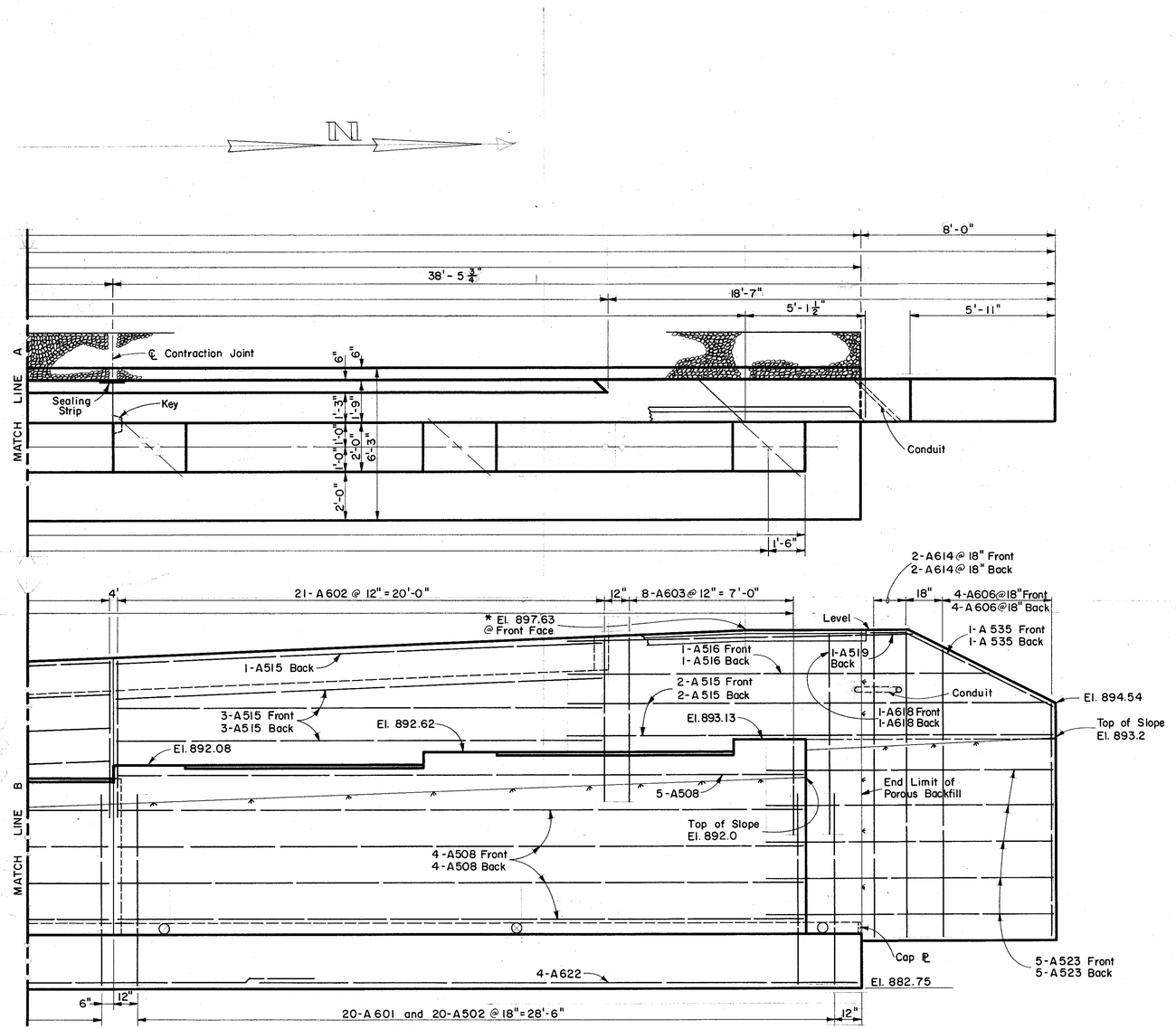
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
J.V.R.	M.J.F.	E.L.M	L.L.D.	H.C.M. 8-17-64	7-26-66

MICROFILMED
FEB 22 1999

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

529
662

TUSCARAWAS COUNTY
TUS-36-15.93



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DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

LEFT REAR ABUTMENT (2)

BRIDGE NO. TUS-36-1859 L. & R.
RELOC. U.S.-36 OVER B & O RAILROAD
TUSCARAWAS COUNTY
STA. 303+71.18
STA. 305+99.56

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
J.V.R.	M.J.F.	E.L.M.	L.L.D.	H.C.M. 8-17-64	

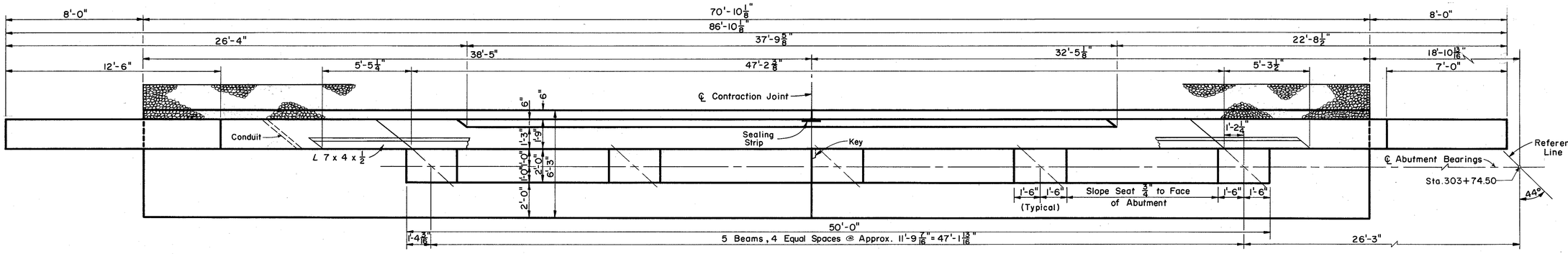
MICROFILMED
FEB 22 1993

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

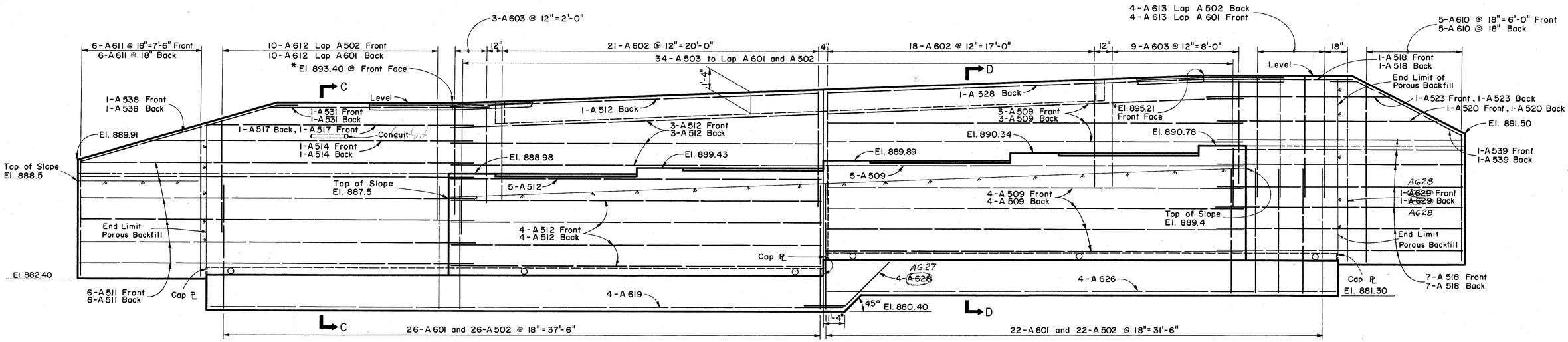
530
662

TUSCARAWAS COUNTY
TUS-36-15.93

N



PLAN



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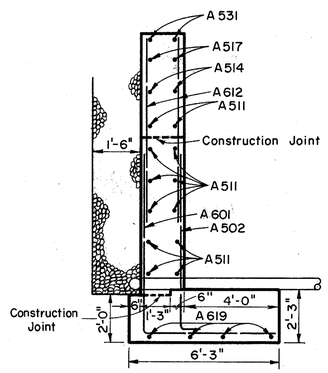

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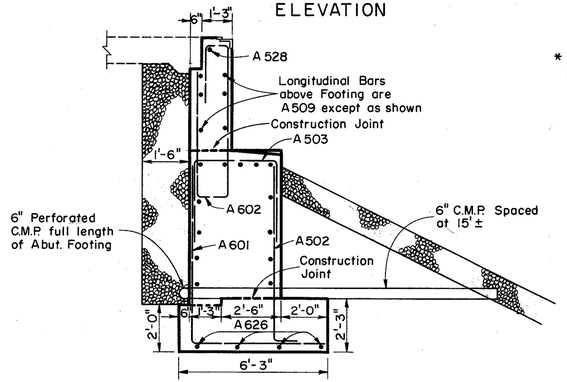

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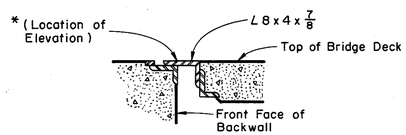


DETAIL OF END DAM

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

RIGHT REAR ABUTMENT

BRIDGE NO. TUS-36-1859 L. & R.
RELOC. U.S.-36 OVER B & O RAILROAD
TUSCARAWAS COUNTY
STA. 303+71.18
STA. 305+99.56

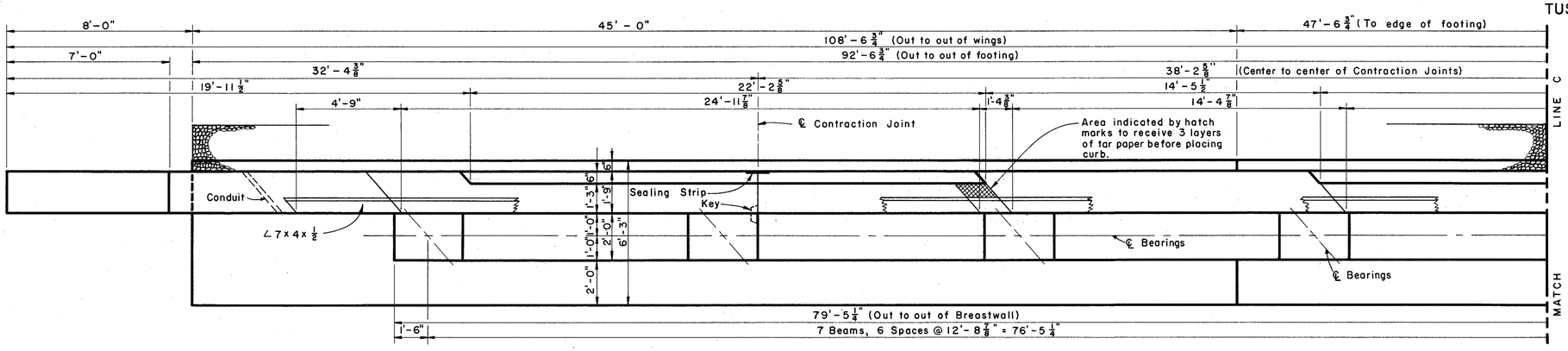
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
J.V.R.	M.J.F.	E.L.M.	L.L.D.	H.C.M. 8-17-64	4-20-66

MICROFILMED
FEB 22 1989

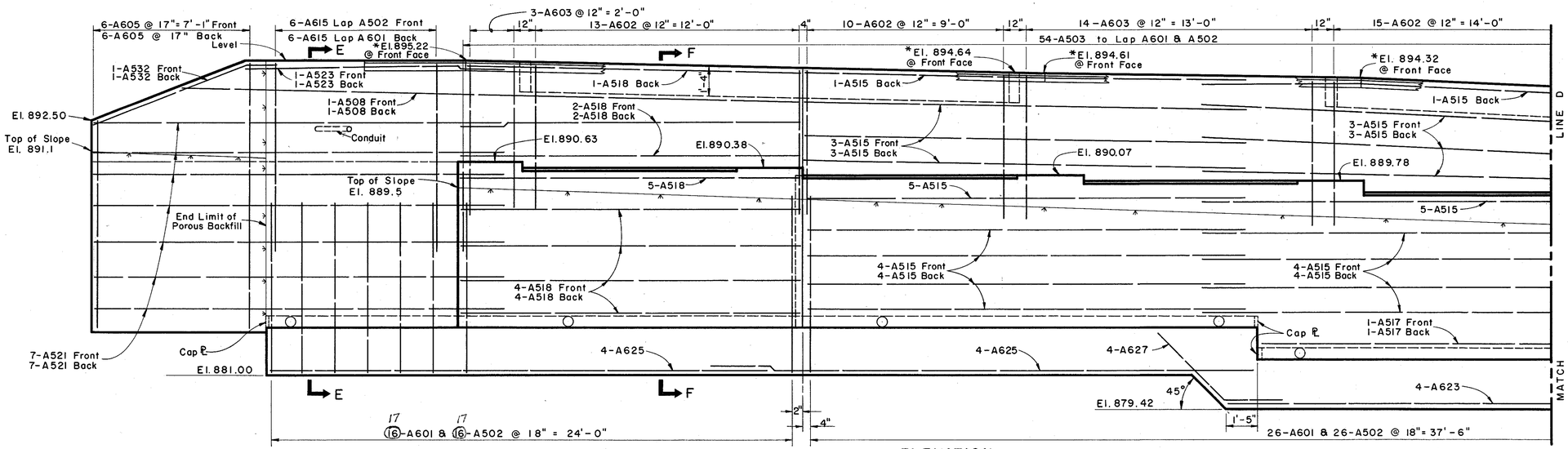
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

531
662

TUSCARAWAS COUNTY
TUS- 36 - 15.93



PLAN



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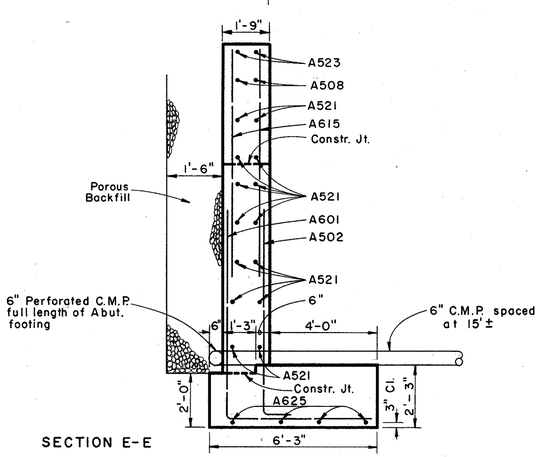
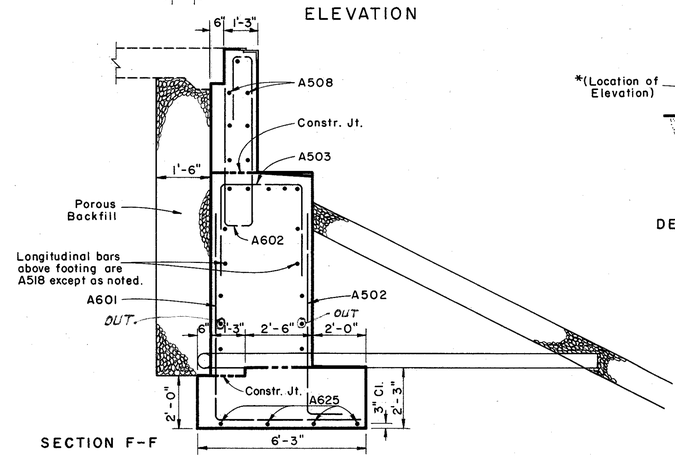
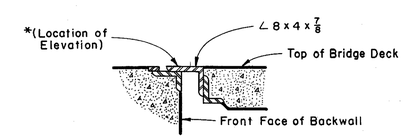


SECTION E-E



SECTION F-F



DETAIL OF END DAM

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FOR

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

LEFT FORWARD ABUTMENT (1)
BRIDGE NO. TUS-36-1859 L&R.
RELOC. U.S. 36 OVER B&O RAILROAD
TUSCARAWAS COUNTY
STA. 303+71.18
STA. 305+99.56

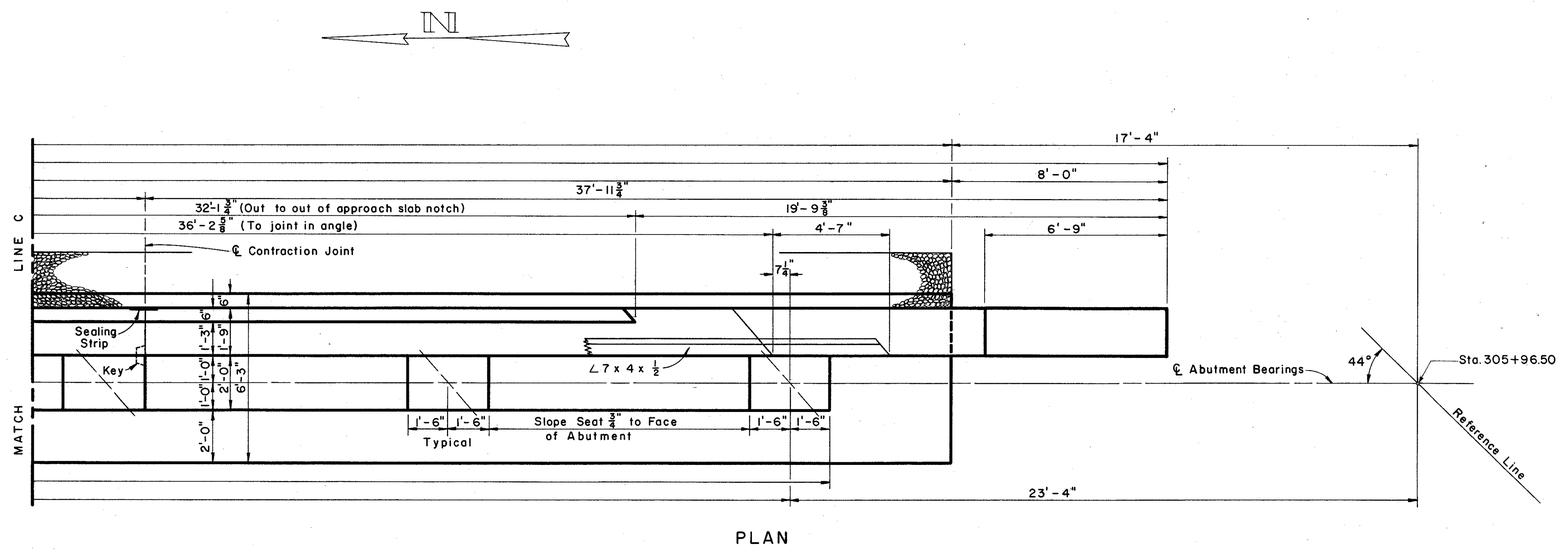
DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
J.V.R.	M.J.F.	E.L.M.	L.L.D.	H.C.M. 8-17-64	9-26-66

MICROFILMED
FEB 22 1999

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

532
662

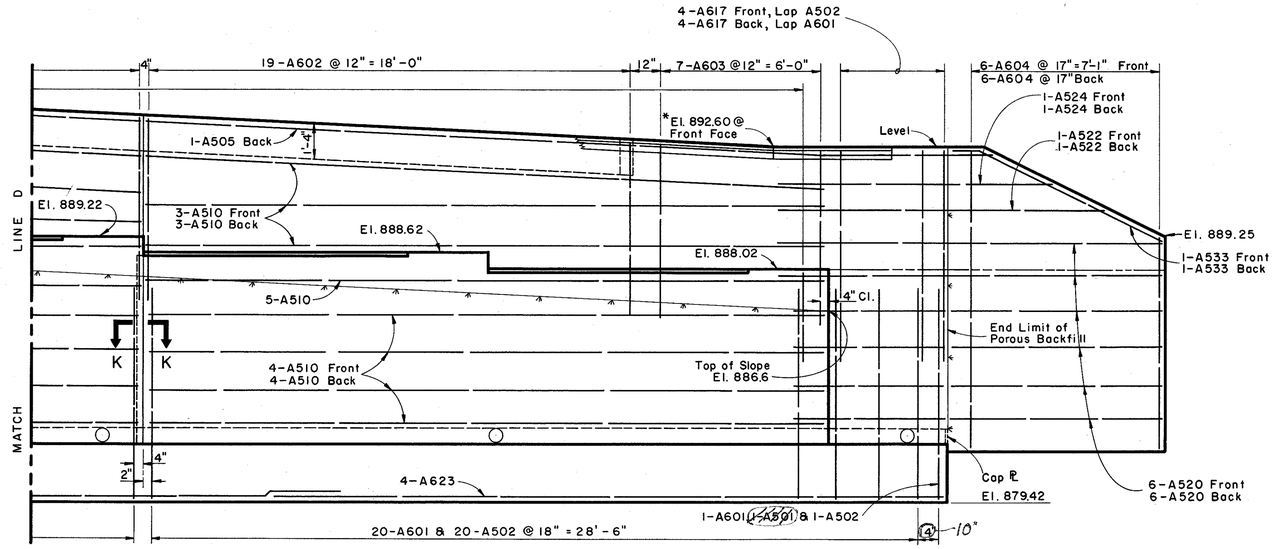
TUSCARAWAS COUNTY
TUS-36-15.93



PLAN

END DAM MATERIAL anchored on the backwall of abutments, shall be cut at each contraction joint. Joints shall be closely butted but not welded, no segment shall be less than 6'-0" in length.

POROUS BACKFILL shall extend upward to the approach slab and to the surface of the shoulders.



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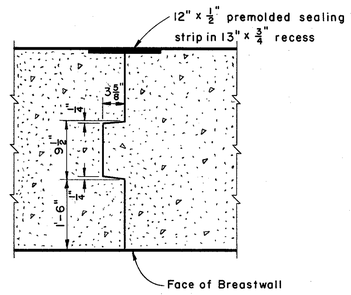


SECTION K-K
Typical For All Contraction Joints

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

LEFT FORWARD ABUTMENT (2)

BRIDGE NO. TUS-36-1859 L.&R.
RELOC. U.S. 36 OVER B&O RAILROAD
TUSCARAWAS COUNTY
STA. 303+71.18
STA. 305+99.56

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
J.V.R.	M.J.F.	E.L.M. G.L.	L.L.D.	H.C.M. 8-17-64	9-26-64

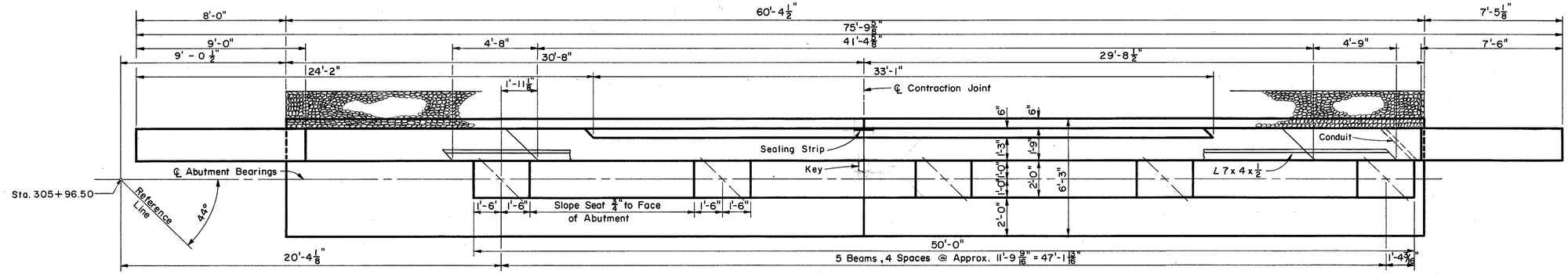
MICROFILMED
FEB 22 1990

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

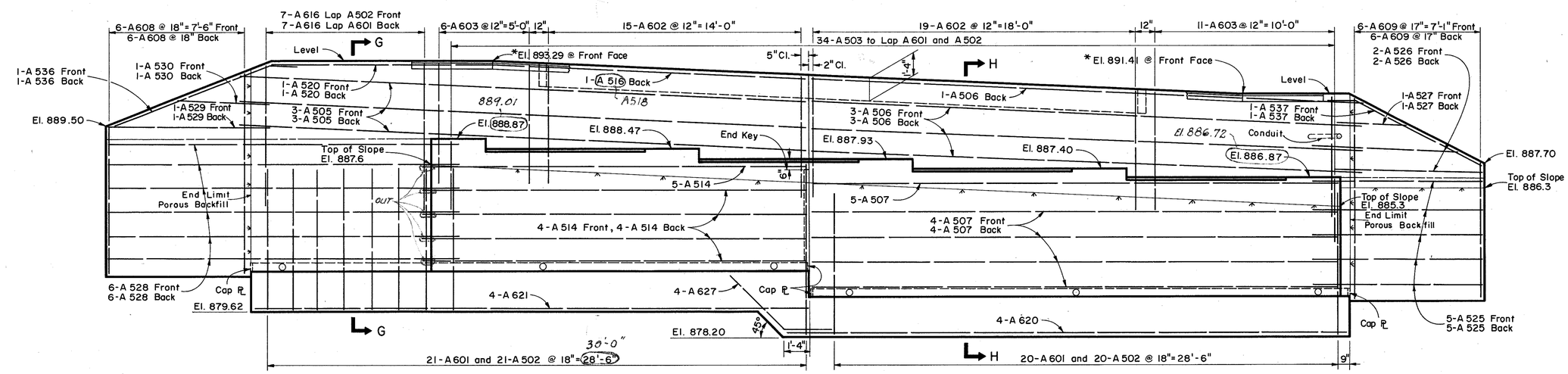
533
662

TUSCARAWAS COUNTY
TUS-36-15.93

N



PLAN



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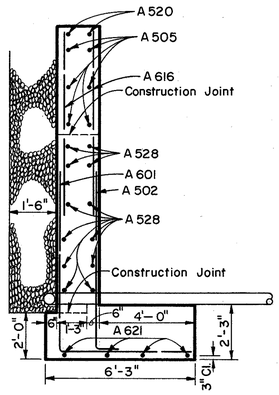
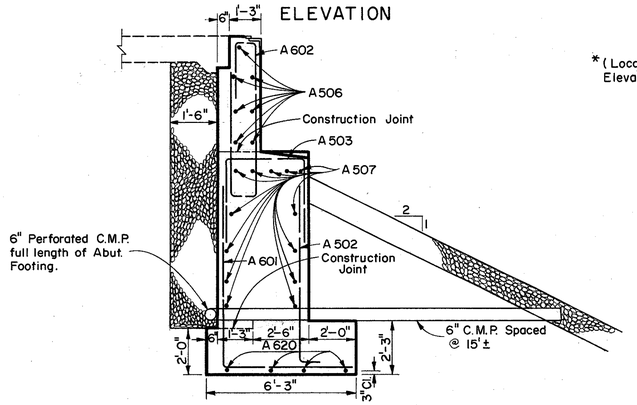
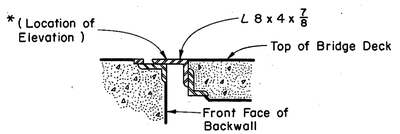


SECTION G-G



SECTION H-H



DETAIL OF END DAM

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

RIGHT FORWARD ABUTMENT

BRIDGE NO. TUS-36-1859 L & R.
RELOC. U.S.-36 OVER B & O RAILROAD
TUSCARAWAS COUNTY
STA. 303+71.18
STA. 305+99.56

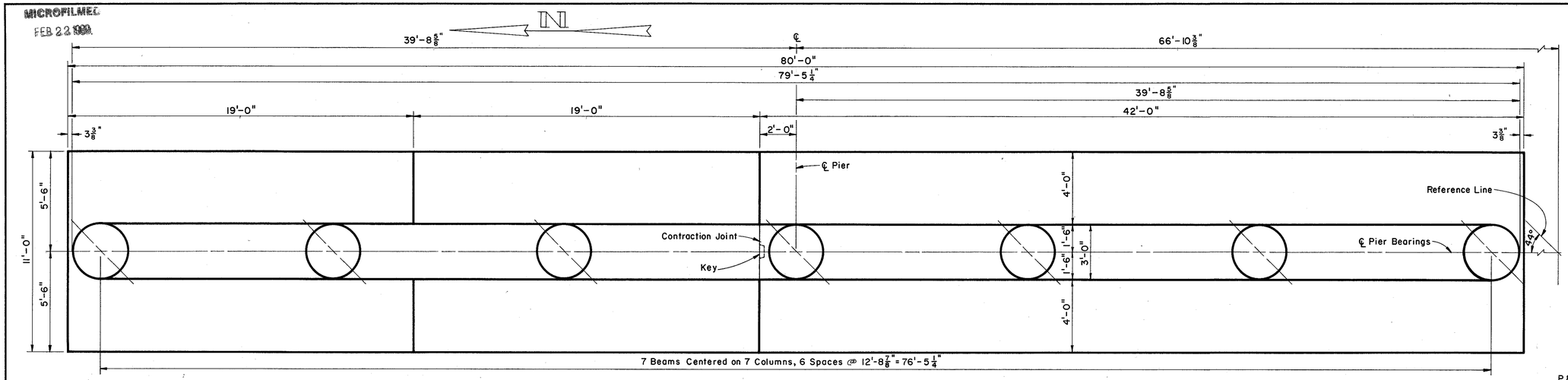
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
J.V.R.	M.J.F.	E.L.M.	L.L.D.	H.C.M. 8-17-64	9-26-66

MICROFILMED
FEB 22 1968

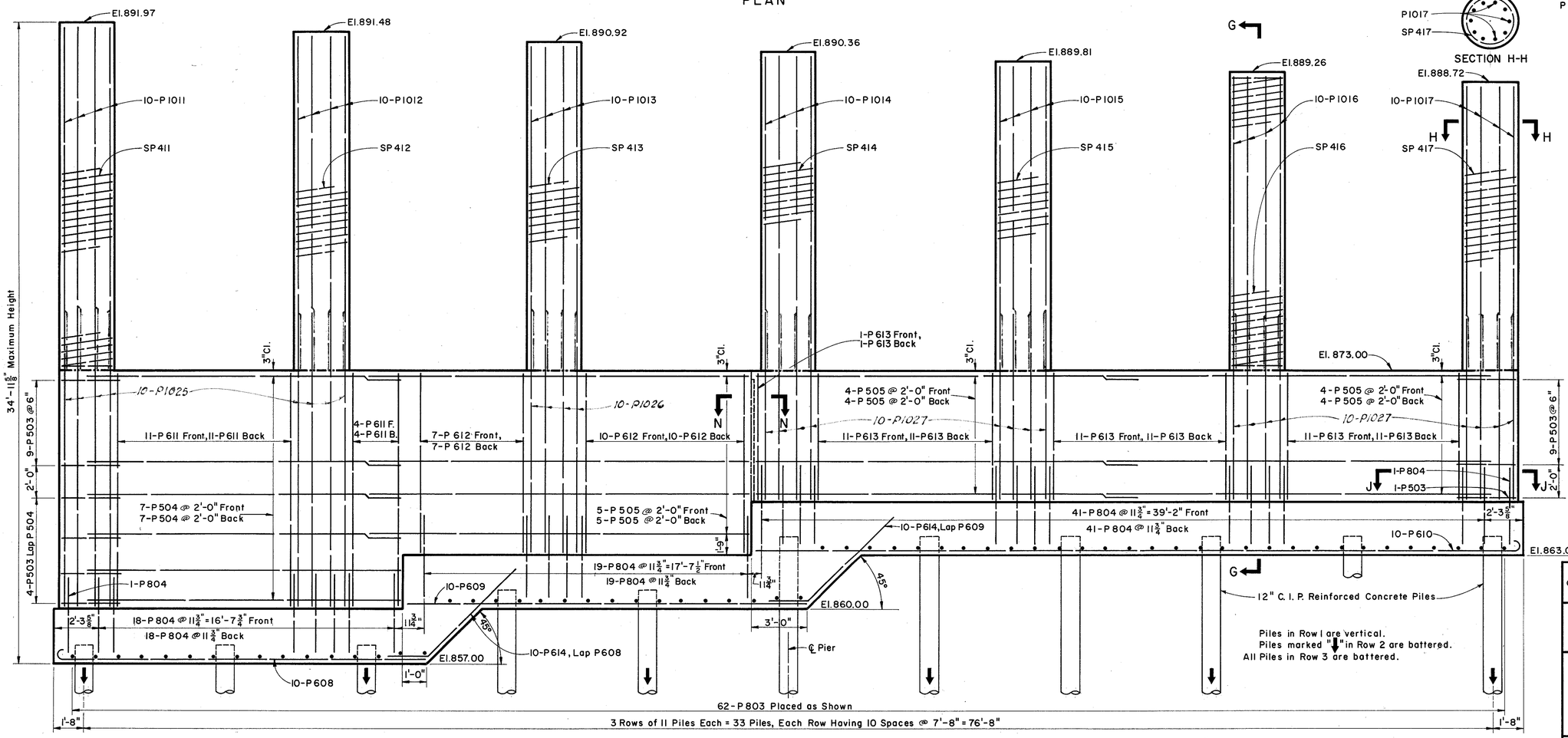
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

534
662

TUSCARAWAS COUNTY
TUS-36-15.93

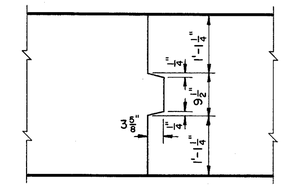


PLAN



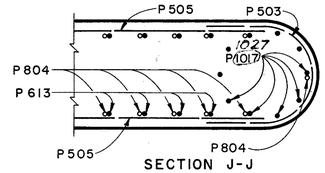
ELEVATION

SECTION H-H

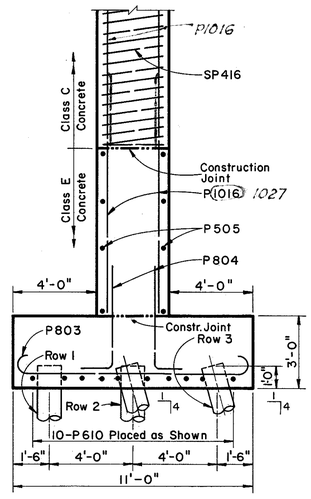


SECTION N-N

(Key Detail Typical for all Piers.
Key to terminate 6" from top of Crash Wall.)



SECTION J-J



SECTION G-G

ELECTRICAL GROUNDING required at Rear Piers.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

REAR PIER LEFT BRIDGE

BRIDGE NO. TUS-36-1859 L&R
RELOC. U S 36 OVER B&O RAILROAD
TUSCARAWAS COUNTY STA. 303+71.18
STA. 305+99.56

G.S.W. M.C.P.	M. J. F	E.L.M. E.R.	B.O.L.	H.C.M. 8-17-64	9-26-66

12" C. I. P. Reinforced Concrete Piles

Piles in Row 1 are vertical.
Piles marked "↓" in Row 2 are battered.
All Piles in Row 3 are battered.

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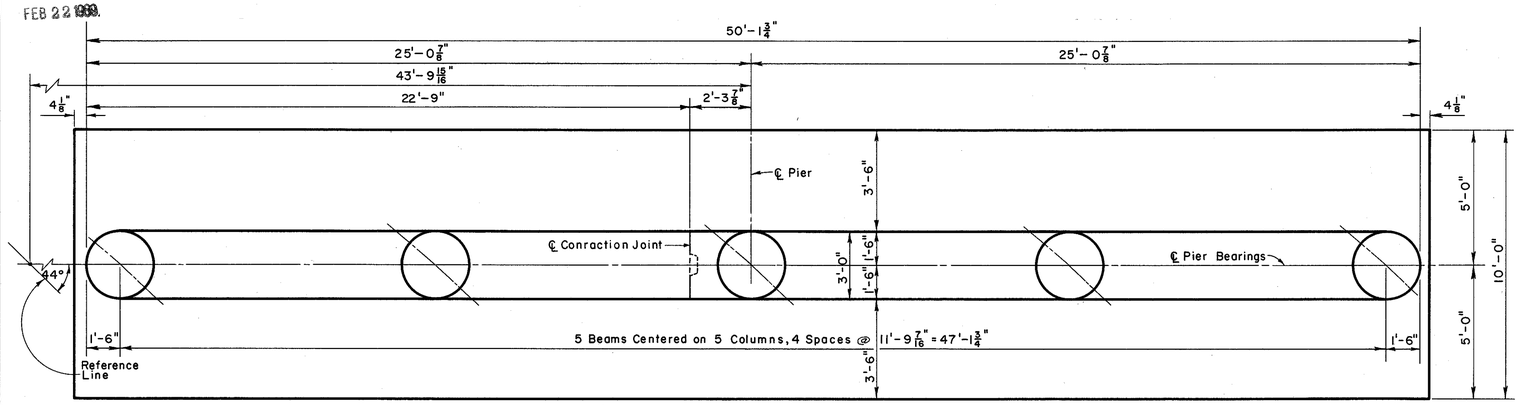
FEB 22 1968

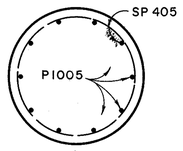
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

535
662

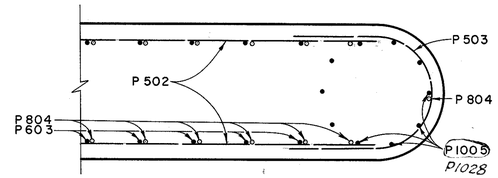
TUSCARAWAS COUNTY
TUS-36-15.93



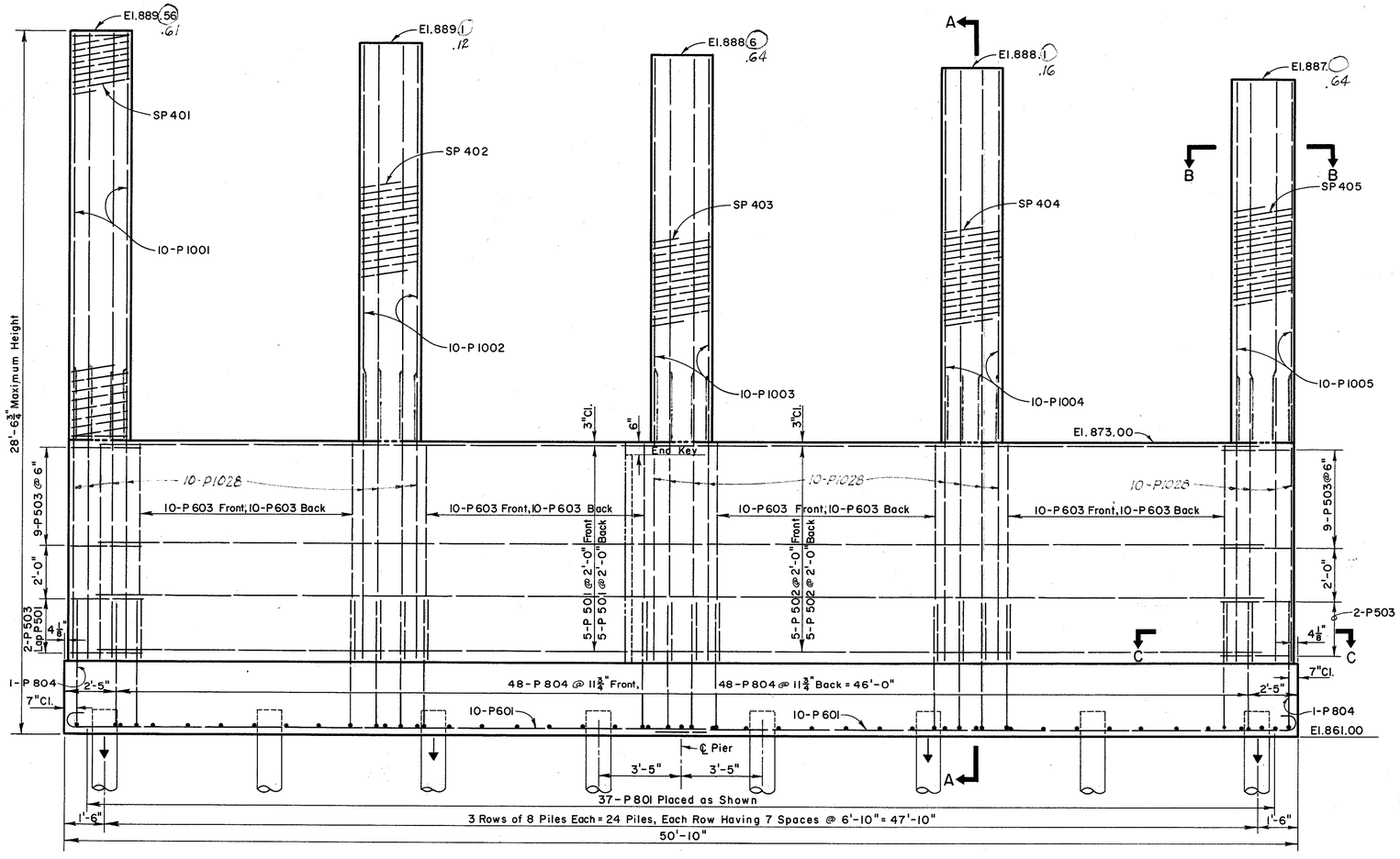
PLAN



SECTION B-B

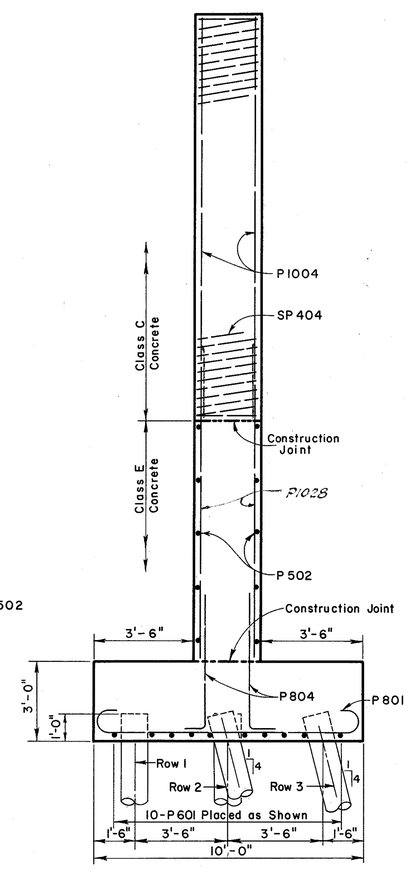


SECTION C-C



ELEVATION

NOTE: All piles in Row 1 are vertical.
Batter piles in Row 2 marked
Batter all piles in Row 3.
12" C.I.P. reinforced concrete piles



SECTION A-A

ELECTRICAL GROUNDING required at Rear Piers.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

REAR PIER RIGHT BRIDGE

BRIDGE NO. TUS-36-1859 L & R
RELOC. U S-36 OVER B & O RAILROAD
TUSCARAWAS COUNTY STA. 303+71.18
STA. 305+99.56

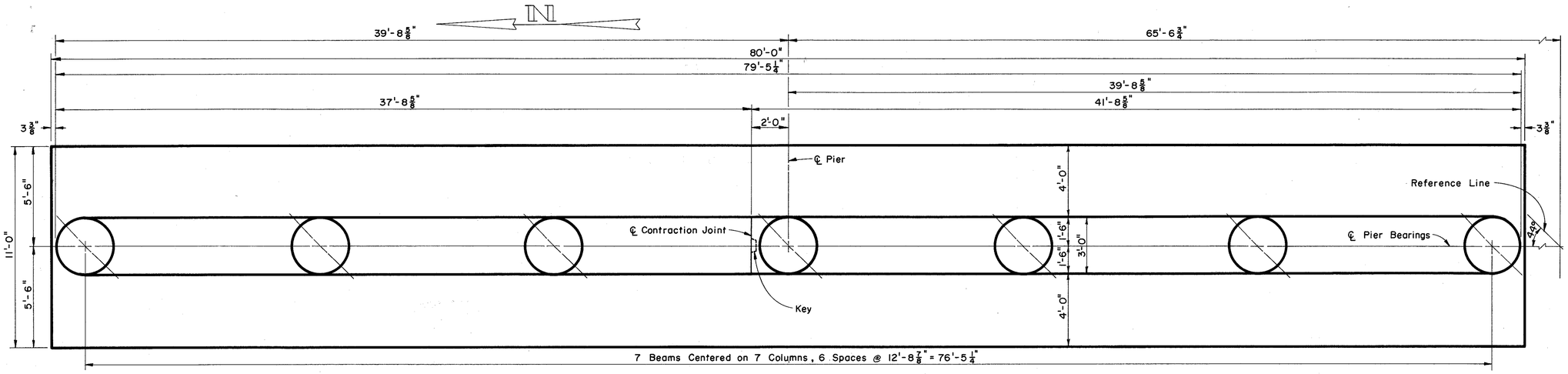
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
G.S.W. M.C.P	M.F.	R.E.B. E.R.	B.O.L.	H.C.M. 8-17-64	9-26-66

MICROFILMED
FEB 22 1969

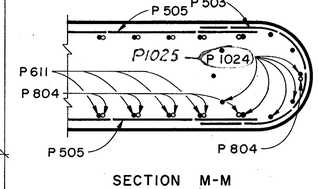
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

536
662

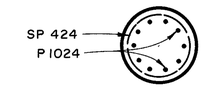
TUSCARAWAS COUNTY
TUS-36-15.93



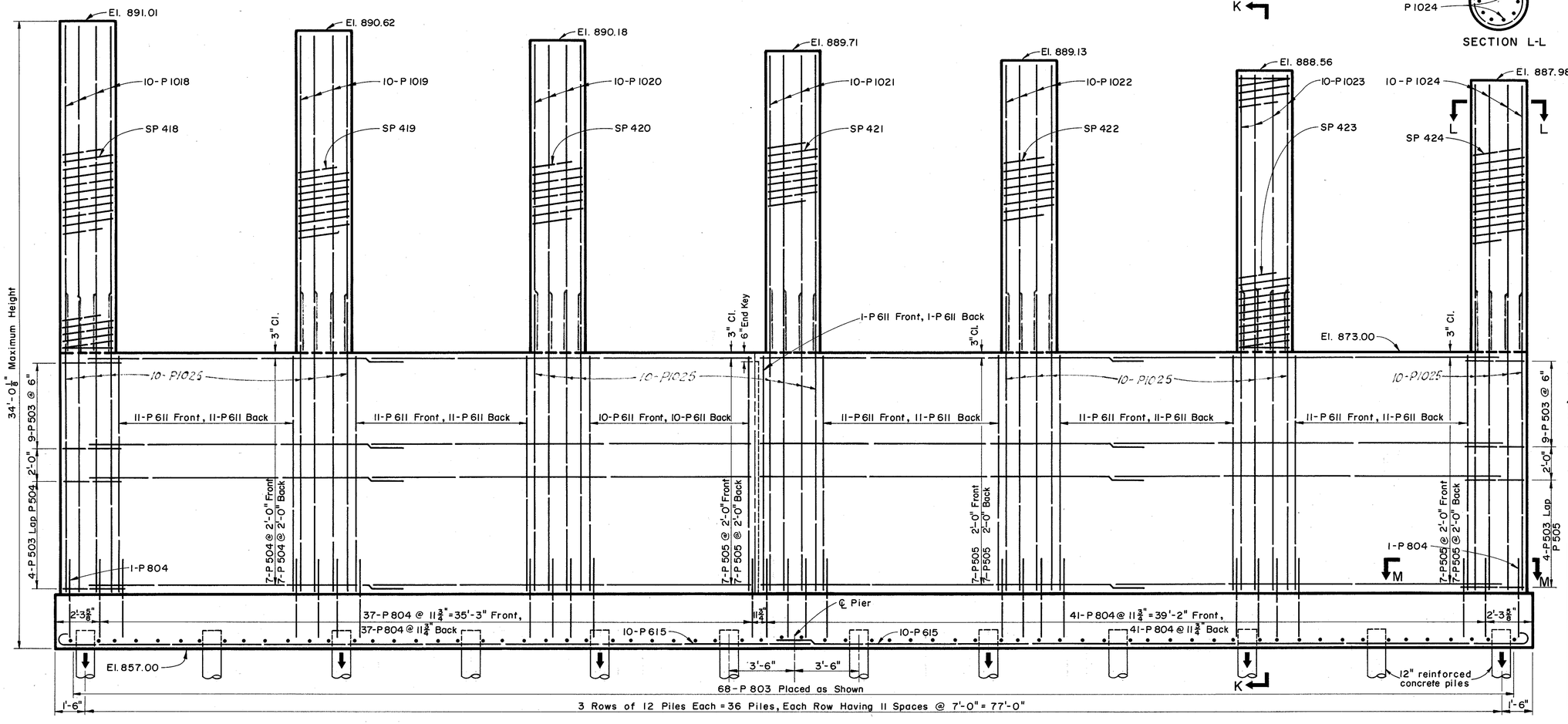
PLAN



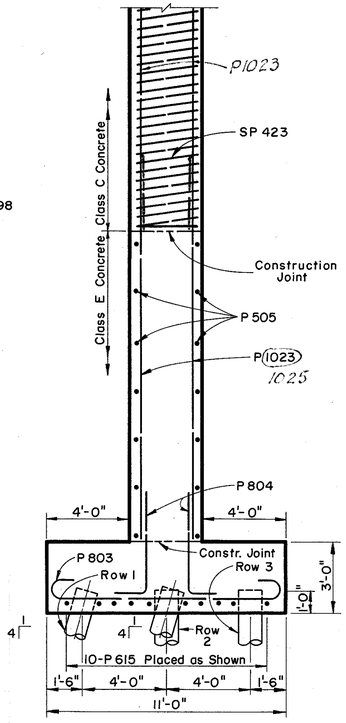
SECTION M-M



SECTION L-L



ELEVATION



SECTION K-K

All Piles in Row 1 are battered.
Piles marked "⬇" in Row 2 are battered.
Piles in Row 3 are vertical.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

FORWARD PIER LEFT BRIDGE

BRIDGE NO. TUS-36-1859 L & R
RELOC. U.S. 36 OVER B. & O. RAILROAD
TUSCARAWAS COUNTY
STA. 303 + 71.18
STA. 305 + 99.56

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
G.S.W. M.C.P.	M.F.	E.L.M. P.D.	B.O.L.	H.C.M. 8-17-64	9-24-64

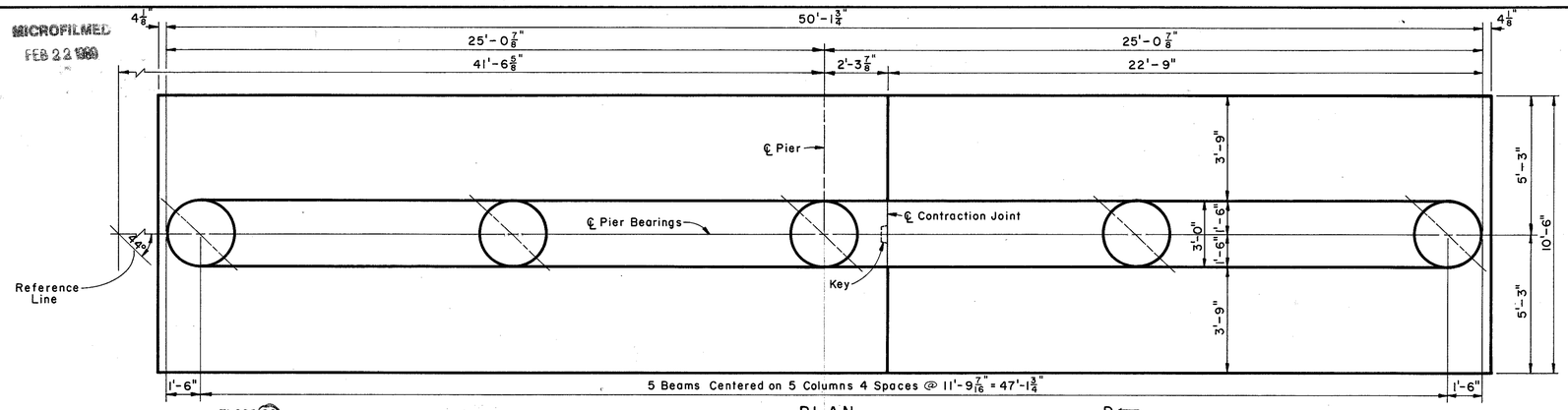
MICROFILMED
FEB 22 1965

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

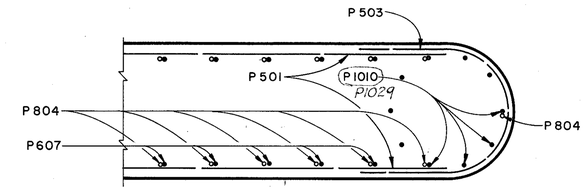
537
662

TUSCARAWAS COUNTY
TUS-36-15.93

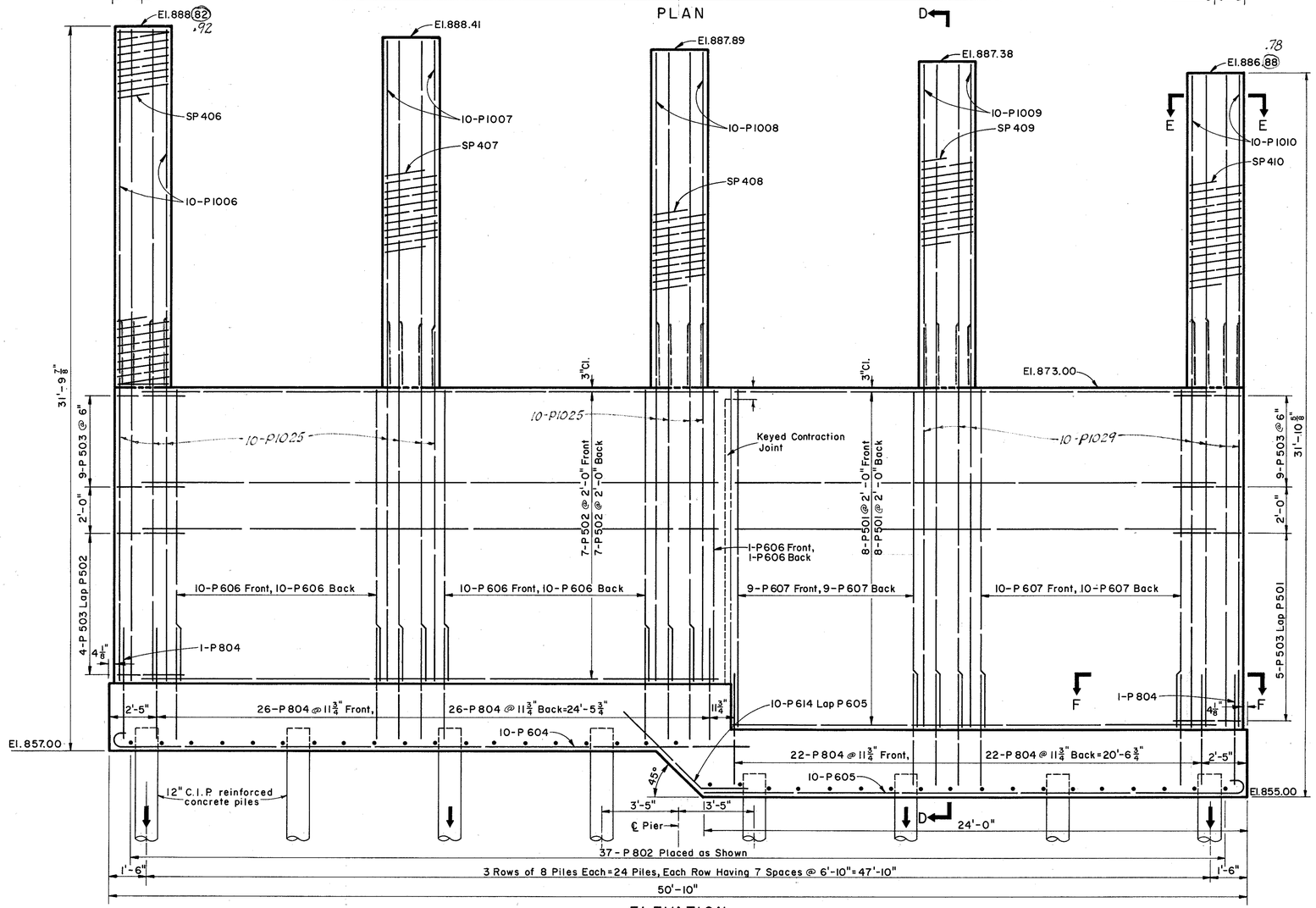
N



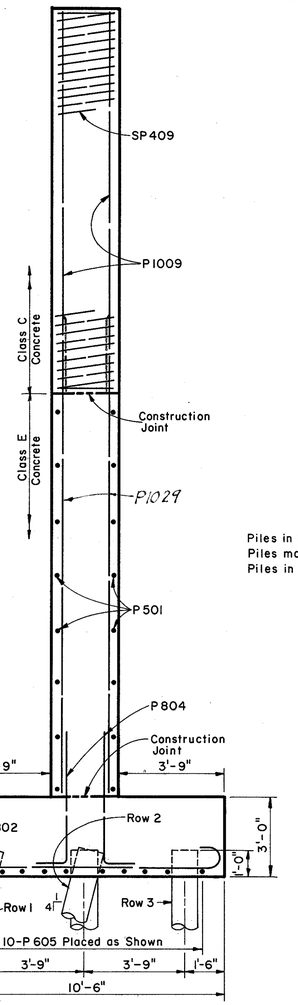
PLAN



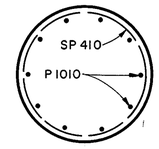
SECTION F-F



ELEVATION



SECTION D-D



SECTION E-E

Piles in Row 1 are battered.
Piles marked "↓" in Row 2 are battered.
Piles in Row 3 are Vertical.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

FORWARD PIER RIGHT BRIDGE

BRIDGE NO. TUS-36-1859 L & R
RELOC. US 36 OVER B.&O. RAILROAD
TUSCARAWAS COUNTY
STA. 303+71.18
STA. 305+99.56

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
G.S.W. M.C.P.	M.F.	E.L.M. E.R.	B.O.L.	H.C.M. 8-17-64	7-22-65

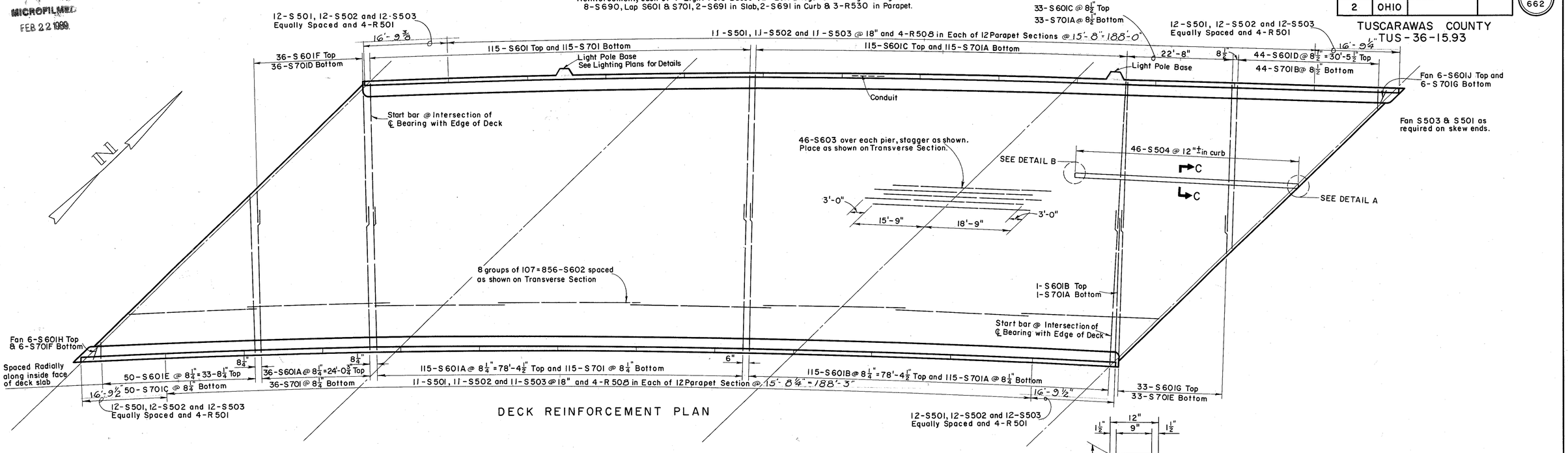
MICROFILMED
FEB 22 1999

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

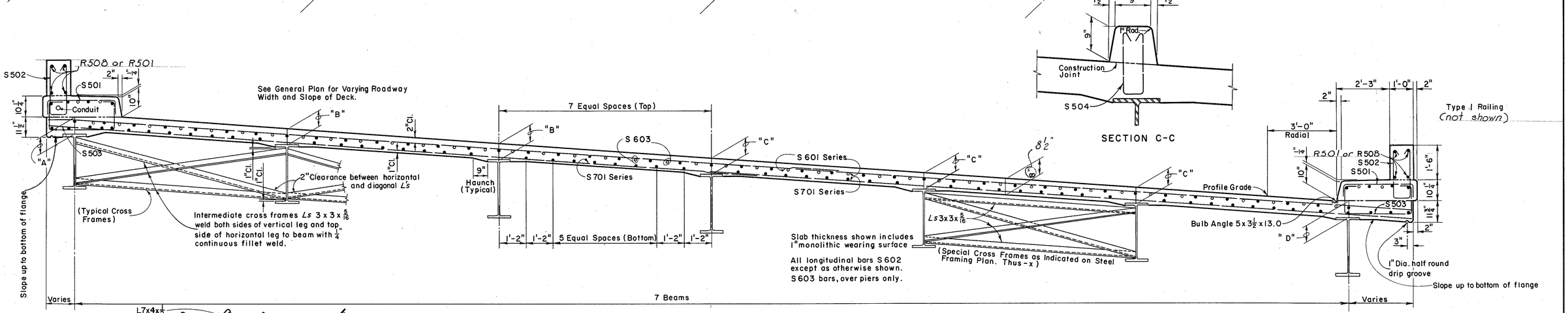
538
662

TUSCARAWAS COUNTY
TUS-36-15.93

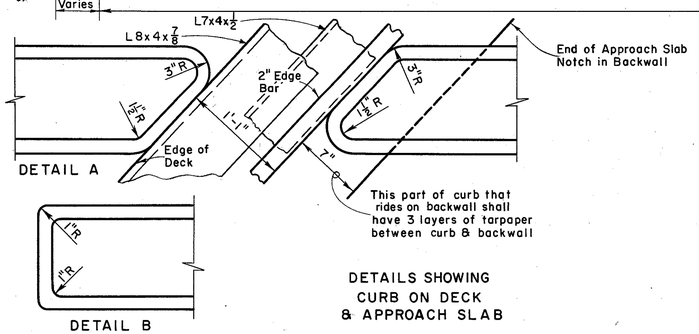
Reinforcement, each of 4 Light Pole Bases (2- Left Bridge & 2 - Right Bridge):
8-S690, Lap S601 & S701, 2-S691 in Slab, 2-S691 in Curb & 3-R530 in Parapet.



DECK REINFORCEMENT PLAN



TRANSVERSE DECK SECTION



DETAILS SHOWING CURB ON DECK & APPROACH SLAB

SECTION C-C

SLAB THICKNESSES

Dimension from top of beam to top of slab

	"A"	"B"	"C"	"D"
℄ Brg. Rear Abutment	9 7/8"	9 5/8"	9 5/8"	9 5/8"
℄ Brg. Rear Pier	10 1/8"	9 7/8"	9 7/8"	10 1/8"
℄ Brg. Fwd. Pier	(9 7/8") 10 1/8"	(9 5/8") 10 1/8"	(9 7/8") 10 1/8"	(10 1/8") 10 3/8"
℄ Brg. Fwd. Abutment	9 1/8"	9 5/8"	9 5/8"	9 3/8"

DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of steel beams, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12", except that the maximum slope shall not exceed 3 inches per foot. A typical haunch width of 9" shall be used for computing quantity of concrete.

*This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per Sec. 511.19 of the Construction and Material Specifications.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

DECK REINFORCING LEFT BRIDGE

BRIDGE NO. TUS-36-1859 L & R
RELOC. U.S. 36 OVER B. & O. RAILROAD
TUSCARAWAS COUNTY
STA. 303 + 71.18
STA. 305 + 99.56

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
J.V.R. H.C.M.	M.F.	R.B. E.R	B.O.L.	H.C.M. 8-17-64	9-26-66

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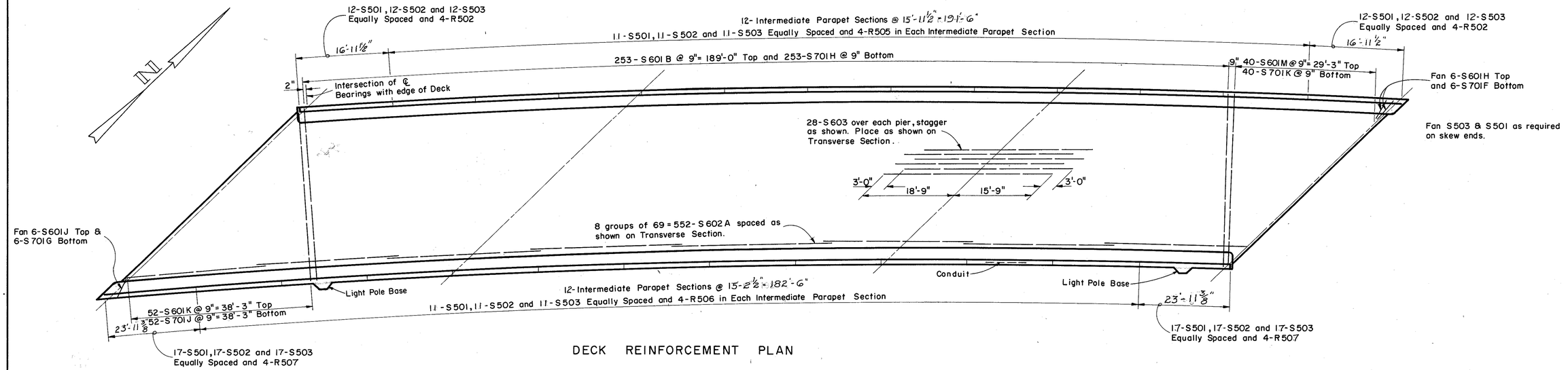
FEB 22 1999

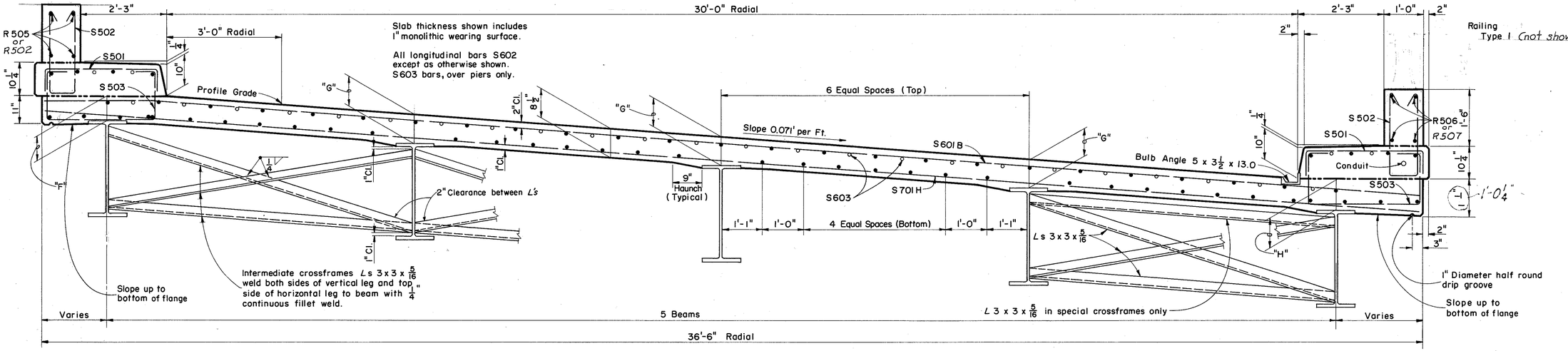
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

539
662

TUSCARAWAS COUNTY
TUS-36-15.93



DECK REINFORCEMENT PLAN



TRANSVERSE DECK SECTION

SLAB THICKNESSES

Dimension from Top of Beam to Top of Deck Slab *

	"F"	"G"	"H"
℄ Brg. Rear Abut.	9 3/8"	9 3/8"	9 3/8"
℄ Brg. Rear Pier	9 3/4"	9 3/4"	10 1/4"
℄ Brg. Fwd. Pier	(9 1/2") 9 3/4"	(9 1/2") 9 3/4"	(10 3/4") 11"
℄ Brg. Fwd. Abut.	9 1/8"	9 1/8"	10 7/8"

* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per Sec. 511.19 of the Construction and Material Specifications.

DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of steel beams, which is shown as 9" wide, may vary from this dimension between the limit of 6" and 12", except that the maximum slope shall not exceed 3 inches per foot. A typical haunch width of 9" shall be used for computing quantity of concrete.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

DECK REINFORCEMENT RT. BRIDGE

BRIDGE NO. TUS-36-1859 L & R
RELOC. U.S. 36 OVER B. & O. RAILROAD
TUSCARAWAS COUNTY
STA. 303 + 71.18
STA. 305 + 99.56

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
H.C.M. M.J.F.	M.F.	E.L.M. P.A.D	L.L.D	H.C.M. 8-17-64	9-26-68

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FEB 22 1966

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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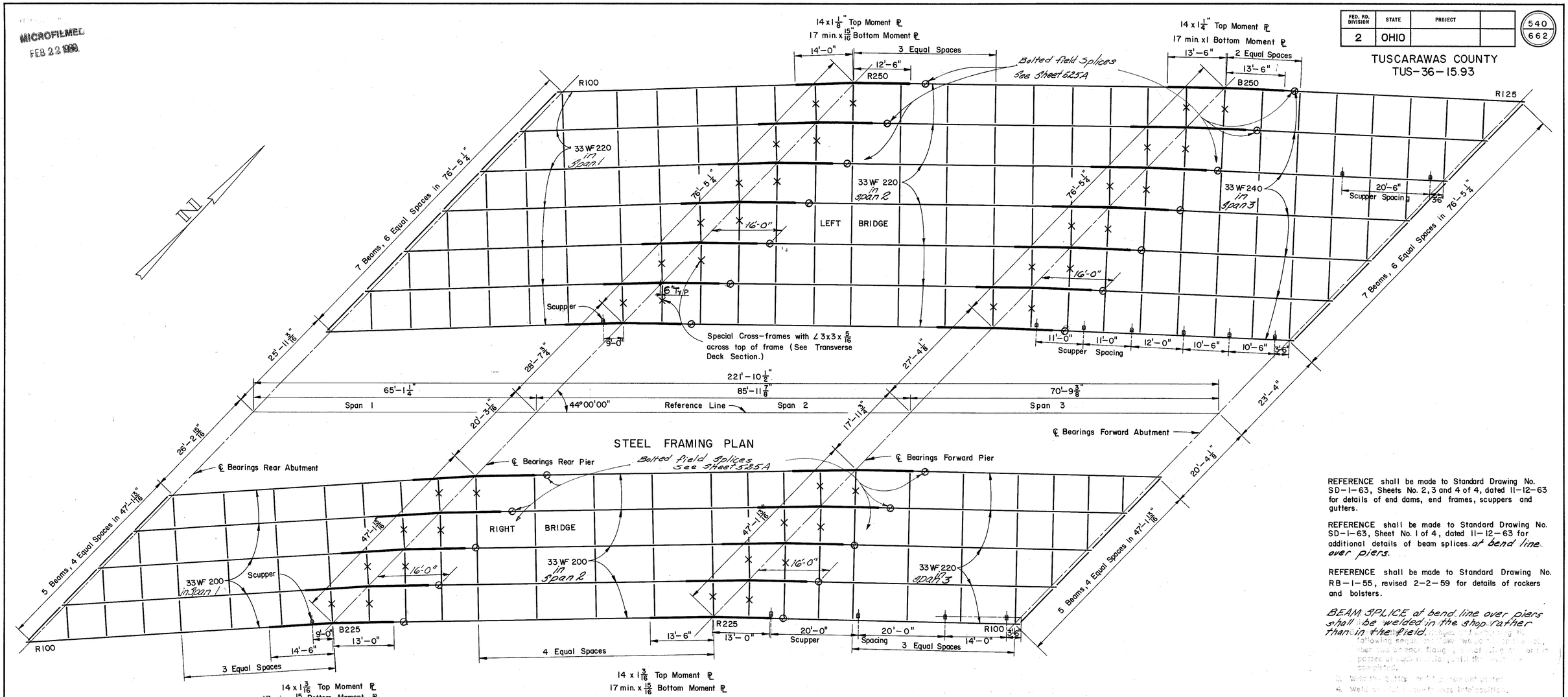
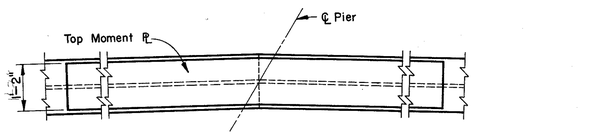
662

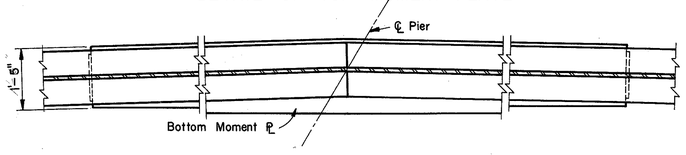
TUSCARAWAS COUNTY
TUS-36-15.93



STEEL FRAMING PLAN



DETAIL OF TOP MOMENT PLATE



DETAIL OF BOTTOM MOMENT PLATE

LT. BRIDGE DEFLECTION AND CAMBER			
LOCATION	SPAN 1	SPAN 2	SPAN 3
Deflection due to weight of steel.	1/8"	1/8"	1/8"
Deflection due to remaining dead load.	3/8"	5/8"	3/8"
Convexity required for vertical Curve.	0	0	0
Sum of deflection and convexity.	1/2"	3/4"	1/2"
Required camber	0	0	0

RT. BRIDGE DEFLECTION AND CAMBER			
LOCATION	SPAN 1	SPAN 2	SPAN 3
Deflection due to weight of steel.	1/8"	1/8"	1/8"
Deflection due to remaining dead load.	3/8"	5/8"	3/8"
Convexity required for vertical curve.	0	0	0
Sum of deflection and convexity.	1/2"	3/4"	1/2"
Required camber	0	0	0

SLAB OVERHANG				
Dimensions from ℄ of Exterior Beam to Edge of Slab (Face of Parapet)				
LOCATION	LEFT BRIDGE		RIGHT BRIDGE	
	LEFT OVER HANG	RIGHT OVERHANG	LEFT OVERHANG	RIGHT OVERHANG
℄ Bearing Rear Abutment	3'-3"	3'-3"	3'-3"	3'-3"
Center, Span 1	3'-5 5/8"	2'-10 1/2"	3'-2 3/4"	2'-7 1/8"
℄ Rear Pier	3'-1 3/8"	3'-1 1/8"	2'-7"	2'-7 1/8"
Center, Span 2	3'-5 7/8"	2'-6 5/8"	2'-8 1/8"	1'-8 1/8"
℄ Forward Pier	2'-11 1/2"	2'-11 3/8"	1'-9 1/4"	1'-9 1/2"
Center, Span 3	3'-2"	2'-10 3/8"	1'-9 3/8"	1'-2"
℄ Bearing Forward Abutment	3'-4 1/4"	3'-5 5/8"	1'-1 7/8"	1'-2 1/4"

REFERENCE shall be made to Standard Drawing No. SD-1-63, Sheets No. 2, 3 and 4 of 4, dated 11-12-63 for details of end dams, end frames, scuppers and gutters.

REFERENCE shall be made to Standard Drawing No. SD-1-63, Sheet No. 1 of 4, dated 11-12-63 for additional details of beam splices at bend line over piers.

REFERENCE shall be made to Standard Drawing No. RB-1-55, revised 2-2-59 for details of rockers and bolsters.

BEAM SPLICE at bend line over piers shall be welded in the shop rather than in the field.

SPECIAL CROSS-FRAMES shall clear web splices by 6".

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

FRAMING PLAN

BRIDGE NO. TUS-36-1859 L & R
RELOC. U.S. 36 OVER B. & O. RAILROAD
TUSCARAWAS COUNTY
STA. 303 + 71.18
STA. 305 + 99.56

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
H.C.M. M.C.P.	M.J.F	E.L.M. J.A.S.	B.O.L.	H.C.M. 8-17-64	

MICROFILMED
FEB 22 1990

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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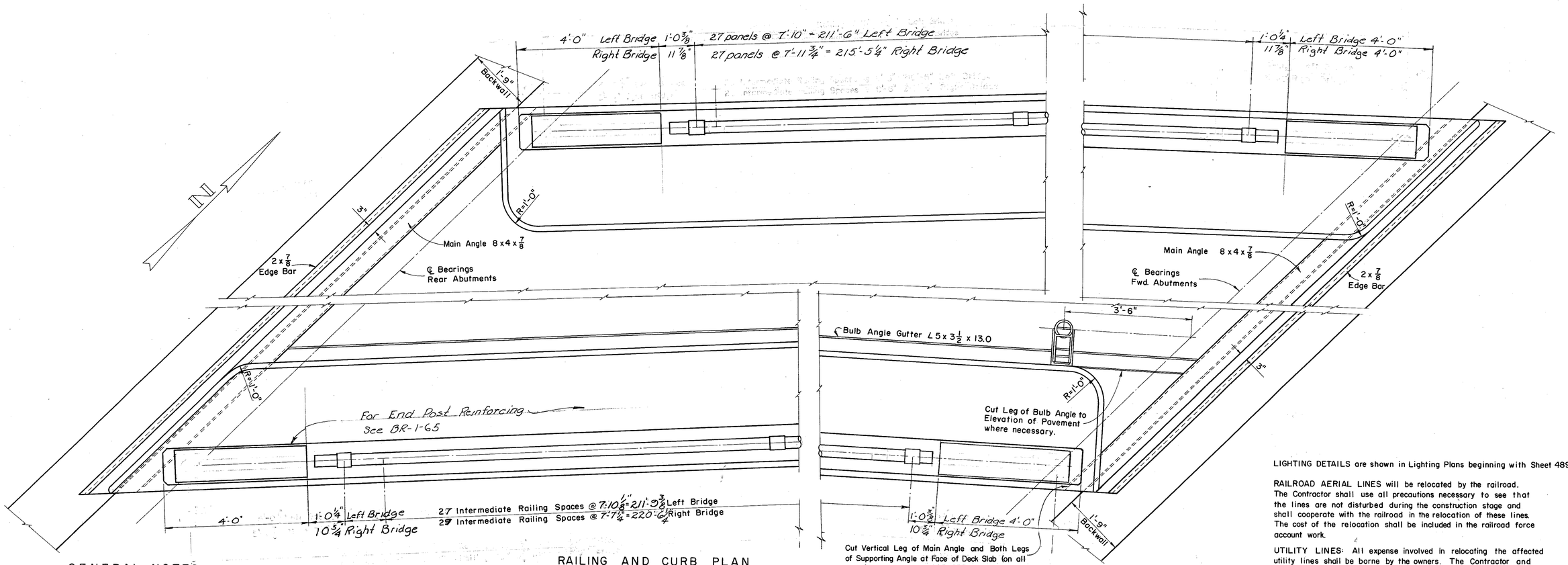
662

TUSCARAWAS COUNTY
TUS-36-15.93



RAILING AND CURB PLAN

GENERAL NOTES

REFERENCE shall be made to Standard Drawings SD-1-63, sheets No. 1, No. 2, No. 3 and No. 4 of 4 dated 11-12-63, RB-1-55 revised 2-2-59, AS-1-54 revised 8-10-65, BR-1-65, sheet 1 dated 2-1-65 and to Supplemental Specifications 808 dated 7-19-65 and 811 revised 3-29-65

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

DESIGN LOADING: CF 400 (57)

BASIC UNIT WORKING STRESSES

Concrete Class C - basic unit stress ---------- 1,333 p. s. i.
Concrete Class E - basic unit stress ---------- 1,133 p. s. i.
Structural Steel - ASTM A36 - basic unit stress - 20,000 p. s. i.
Reinforcing Steel - ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 p.s.i. Except, spiral reinforcement may be plain, Structural Grade with basic unit stress of 18,000 p. s. i.

CONCRETE DECK PLACING: In order to facilitate water curing 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.

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

REFERENCE LINE is a chord between the intersection of ℄ of Relocated U.S. 36 with the ℄ of brgs. at Rear Abutment and the intersection of ℄ of Relocated U.S. 36 with the ℄ of brgs. at Forward Abutment.

PROCEDURE: The embankment shall be placed and compacted up to the finished spill thru earth slope and to the level of the subgrade for a distance of 200 feet back of the abutments after which the piers may be constructed without delay. A delay of 60 days shall occur after completion of the embankment before construction of the abutments is begun.

SETTLEMENT HUBS: Settlement hubs shall be driven in the compacted embankment 50 feet left of centerline, Stations 304+00 and 306+70; and 30 feet right of centerline, Stations 303+00 and 306+00. If the hubs, as determined at approximately one week intervals, indicate that all settlement has ceased before the end of the waiting period, construction of the abutments may proceed after approval from the Director.

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

FOUNDATION BEARING PRESSURE: Abutment footings are designed for a maximum bearing pressure of 2.0 tons per square foot.

PILES shall be driven to a minimum bearing capacity of 41 tons.

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.

ALIGNING RAILROAD TRACKS: After the contractor has completed all excavation and backfill adjacent to the railroad tracks in compliance with Sec. 503.04 and 503.08 of the Construction and Material Specifications, subject to the Supervision of the Railroad Company, nothing in Sec. 503.04, 503.09 or 108.04 of the Specifications shall be construed to hold the Contractor liable for aligning and resurfacing the railroad tracks.

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.

RAILROAD FORCE ACCOUNT WORK.
See note on Sht. 500.

LIGHTING DETAILS are shown in Lighting Plans beginning with Sheet 489.

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.

UTILITY LINES: All expense involved in relocating 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.

CONSTRUCTION CLEARANCE of 20 feet vertically above the top of the railroad rails and 8 feet horizontally from the center of tracks shall be maintained at all times.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

GENERAL NOTES & RAILING DETAILS

BRIDGE NO. TUS-36-1859 L & R
RELOC. U.S. 36 OVER B. & O. RAILROAD
TUSCARAWAS COUNTY
STA. 303+71.18
STA. 305+99.56

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
H.C.M.	M.F.	F.W.B. P.A.D.	L.L.D.	H.C.M. 8-17-64	

MICROFILMED
FEB 22 1989

TUSCARAWAS COUNTY
TUS - 36 - 15.93

REINFORCING STEEL LIST

~~ABUTMENTS~~

MARK	REQUIRED LT. R.	RT. R.	LT. F.	RT. F.	TOTAL	LENGTH	WEIGHT LT. BR.	RT. BR.	SHP.
A501	64	47	64	40	215	9'-2"	1224	832	B
A502	64	47	64	40	215	8'-3"	1101	749	B
A503	53	34	54	34	175	10'-0"	1116	709	B
A504			3		3	31'-6"	99		
A505				6	6	31'-0"		194	
A506				7	7	30'-6"		223	
A507	2			11	13	29'-4"	61	336	
A508	11		2		13	28'-0"	379		
A509	1	18			19	26'-3"	27	493	
A510			18		18	25'-0"	469		
A511	10	10			20	24'-0"	250	250	
A512	2	18			20	23'-0"	48	432	
A513		2			2	21'-6"		45	
A514			12	11	23	20'-6"	257	235	
A515	49		36		85	19'-11"	1766		
A516	2	2		11	15	17'-6"	37	237	
A517			2		2	17'-3"	36		
A518			15		15	15'-5"	241		
A519	1	10			11	14'-3"	15	149	
A520		3		2	5	14'-0"		73	
A521			10		10	13'-9"	143		
A522	15		2		17	12'-3"	218		
A523	8				8	11'-9"	98		
A524		2	2		4	10'-6"	22	22	
A525		1		8	9	8'-9"		82	
A526				4	4	7'-6"		31	
A527				2	2	6'-6"		14	
A528				4	4	4'-6"		19	
A601	64	47	64	40	215	15'-8"	3,013	2,048	B
A602	70	39	57	34	200	16'-4"	3,115	1,791	B
A603	11	12	24	17	64	14'-1"	740	613	B
A604	12				12	6'-6"to9'-0"	140		
A605		14			14	6'-7"to9'-2½"		166	
A606				10	10	6'-9"to10'-0"		126	
A607			8		8	6'-10"to9'-4"	97		
A608		8			8	7'-4"to9'-9¼"		103	
A609				12	12	7'-4"to10'-5½"		160	
A610			12		12	7'-9"to10'-5½"	164		
A611	8				8	8'-4"to10'-7¾"	114		
A612	6				6	11'-4"	102		
A613		4			4	10'-6"		63	
A614			4		4	10'-0"	60		
A615			14		14	8'-6"	179		
A616		22		12	34	7'-9"		396	
A617	18		6		24	7'-6"	271		
A801		7			7	38'-9"		724	
A802	7	7		7	21	30'-10"	576	1,152	
A803				7	7	28'-4"		529	
A804	14				14	25'-0"	934		
A805	14		28		42	25'-3"	2,832		
A806	7				7	20'-8"	386		
A807	8		8		16	10'-9"	460		B
A808				8	8	10'-8"		228	B
A809		8			8	10'-0"		214	B

PIERS (Continued)

MARK	LT. R.	RT. R.	LT. F.	RT. F.	TOTAL	LENGTH	LT. BR.	RT. BR.
P1025	20		70	30	120	16'-2"	6261	2087
P1026	10				10	13'-2"	567	
P1027	40				40	10'-2"	1750	
P1028		50			50	12'-2"		2618
P1029				20	20	18'-2"		1563

PIERS

MARK	REQUIRED LT. R.	RT. R.	LT. F.	RT. F.	TOTAL	LENGTH	WEIGHT LT. BR.	RT. BR.	SHP.
P501		10		16	26	21'-1"		572	
P502		10		14	24	25'-9"		645	
P503	23	22	26	27	98	7'-4"	375	375	B
P504	14		14		28	17'-0"	496		
P505	26		42		68	20'-9"	1,472		
P601		20			20	26'-11"		809	B
P603		80			80	8'-10"		1,061	
P604				10	10	28'-5"		427	B
P605				10	10	24'-4"		365	B
P606				42	42	12'-10"		809	
P607				38	38	14'-10"		846	
P608	10				10	20'-8"	310		B
P609	10				10	21'-8"	325		
P610	10				10	42'-4"	636		B
P611	30		132		162	12'-10"	3,122		
P612	34				34	9'-10"	502		
P613	68				68	6'-10"	698		
P614	20			10	30	8'-6"	255	128	B
P615			20		20	41'-6"	1,247		B
P801		37			37	11'-10"		1,169	B
P802				37	37	12'-4"		1,218	B
P803	62		68		130	12'-10"	4,453		B
P804	158	98	158	98	512	6'-2"	5,206	3,229	B
P1001		10			10	16' ~~25'~~-5"		~~1,094~~ 706	
P1002		10			10	16' ~~25'~~-0"		~~1,076~~ 688	
P1003		10			10	15' ~~24'~~-6"		~~1,054~~ 667	
P1004		10			10	15' ~~24'~~-0"		~~1,033~~ 645	
P1005		10			10	14' ~~26'~~-6"		~~1,140~~ 624	
P1006				10	10	15' ~~28'~~-9"		~~1,237~~ 678	
P1007				10	10	15' ~~28'~~-3"		~~1,216~~ 656	
P1008				10	10	14' ~~27'~~-9"		1,194 635	
P1009				10	10	14' ~~29'~~-2"		~~1,255~~ 610	
P1010				10	10	13' ~~28'~~-8"		~~1,234~~ 588	
P1011	10				10	18' ~~31'~~-10"	810 ~~1,370~~		
P1012	10				10	18' ~~31'~~-3"	785 ~~1,345~~		
P1013	10				10	17' ~~27'~~-9"	764 ~~1,194~~		
P1014	10				10	17' ~~24'~~-2"	739 ~~1,040~~		
P1015	10				10	16' ~~23'~~-7"	714 ~~1,015~~		
P1016	10				10	16' ~~23'~~-1"	692 ~~993~~		
P1017	10				10	15' ~~22'~~-6"	667 ~~968~~		
P1018			10		10	17' ~~30'~~-10"	767 ~~1,327~~		
P1019			10		10	17' ~~30'~~-5"	749 ~~1,309~~		
P1020			10		10	17' ~~30'~~-0"	732 ~~1,291~~		
P1021			10		10	16' ~~29'~~-6"	710 ~~1,269~~		
P1022			10		10	15' ~~28'~~-11"	685 ~~1,244~~		
P1023			10		10	15' ~~28'~~-4"	660 ~~1,219~~		
P1024			10		10	14' ~~27'~~-10"	638 ~~1,197~~		

SUPERSTRUCTURE

MARK	REQUIRED LT.	RT.	TOTAL	LENGTH	WEIGHT LT. BR.	RT. BR.	SHP.
S501	312	322	634	3'-9"	1,220	1,259	B
S502	312	322	634	5'-9"	1,871	1,931	B
S503	312	322	634	5'-10"	1,898	1,959	B
S504	46		46	3'-4"	160		B
S601	115		115	35'-2"	6,075		
S601A	151 ~~115~~		151 ~~115~~	26'-2"	5,935 ~~4,520~~		
S601B	116	253	369	36'-2"	6,302	13,745	
S601C	148		148	27'-2"	6,040		
S601D	44		44	4'-8"to36'-0¼"	1,345		
S601E	50		50	3'-10½"to34'-6"	1,441		
S601F	36		36	11'-2½"to33'-1"	1,197		
S601G	33		33	11'-2"to34'-6"	1,132		
S601H	6	6	12	4'-3"	38	38	
S601J	6	6	12	3'-6"	31	31	
S601K		52	52	4'-1½"to36'-0"		1,567	
S601M		40	40	5'-1½"to36'-0"		1,235	
S602	856		856	29'-3"	37,607		
S602A		552	552	30'-10"		25,561	
S603	92	56	148	34'-6"	4,767	2,902	
S701	266		266	30'-10"	16,762		
S701A	264		264	31'-9"	17,133		
S701B	44		44	4'-8"to36'-0¼"	1,830		
S701C	50		50	3'-10½"to34'-0" (6)	1961 ~~2,012~~		
S701D	36		36	6'-10½"to28'-9"	1,311		
S701E	33		33	6'-11"to30'-3"	1,254		
S701F	6	6	12	4'-3"	52	52	
S701G	6	6	12	3'-6"	43	43	
S701H		253	253	36'-2"		18,705	
S701J		52	52	4'-1½"to36'-0"		2,132	
S701K		40	40	5'-1½"to36'-0"		1,681	
S690	16	16	32	4'-0"	96	96	
S691	8	8	16	10'-3"	123	123	B

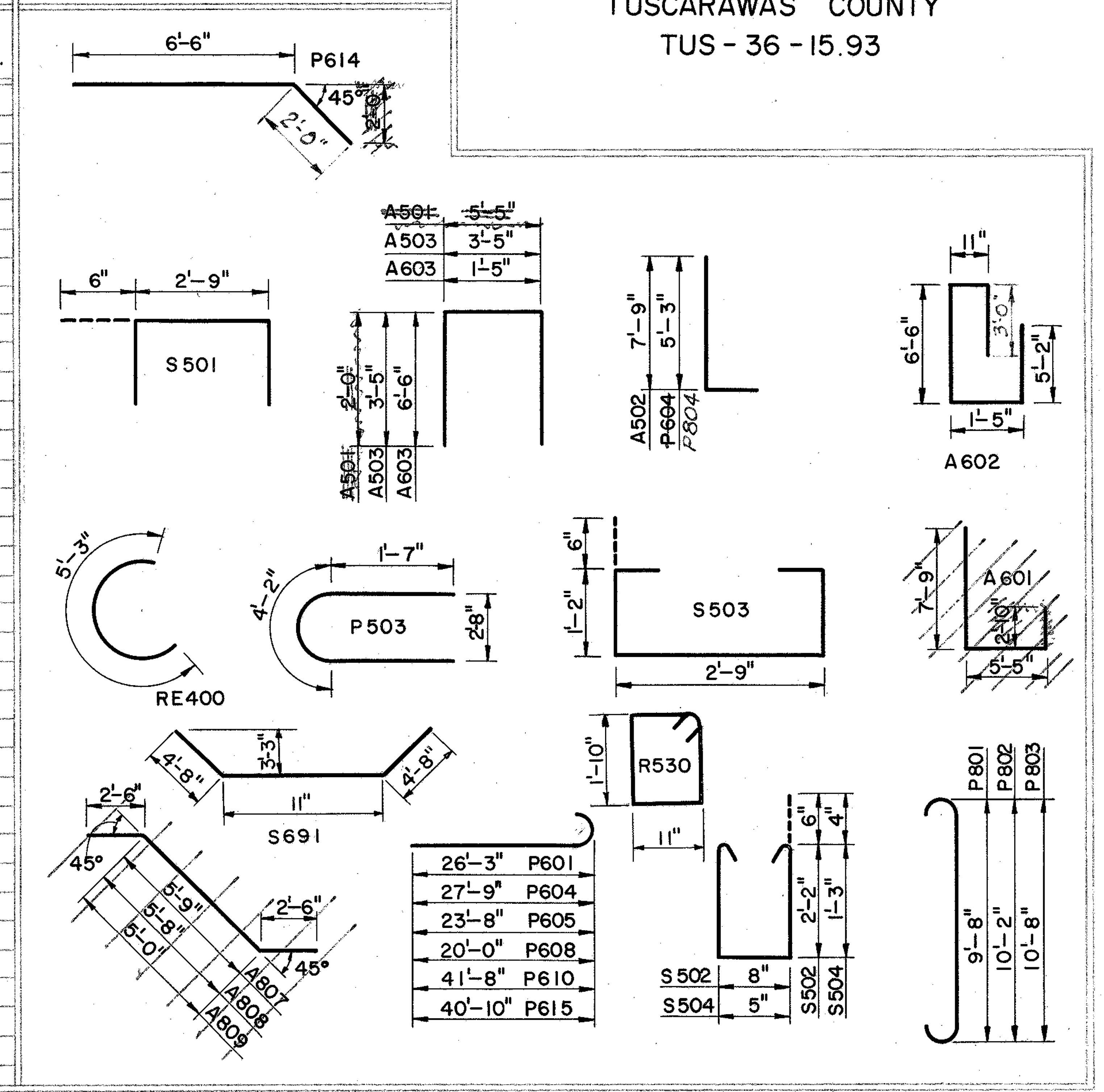
SPIRALS CORE DIAMETER = 32", PITCH = 4½"

MARK	NO. TURNS	LENGTH	WEIGHT LT. BR.	RT. BR.
SP401	47	16'-5"		304
SP402	45	15'-11"		291
SP403	44	15'-6"		284
SP404	43	15'-0"		278
SP405	42	14'-6"		271
SP406	45	15'-9"		291
SP407	44	15'-3"		284
SP408	42	14'-9"		271
SP409	41	14'-2"		265
SP410	39	13'-8"		252
SP411	53	18'-10"	343	
SP412	52	18'-4"	337	
SP413	50	17'-9"	324	
SP414	49	17'-2"	317	
SP415	47	16'-8"	304	
SP416	45	16'-1"	291	
SP417	44	15'-7"	284	
SP418	51	17'-10"	330	
SP419	49	17'-5"	317	
SP420	48	17'-0"	311	
SP421	47	16'-6"	304	
SP422	45	15'-11"	291	
SP423	44	15'-5"	284	
SP424	43	14'-10"	278	

BAR VARIATION

MARK	VARIES BY	NO. EA.
A604	8" ~~6~~"	2
A605	6" ~~5¼~~"	2
A606	9" ~~9¾~~"	2
A607	5" ~~10~~"	2
A608	7" ~~9¾~~"	2
A609	8½" ~~7½~~"	2
A610	9¾" ~~6¼~~"	2
A611	4½" ~~9¾~~"	2
S601D	8¾	1
S601E	7½"	1
S601F	7½"	1
S601G	8¾"	1
S601K	7½"	1
S601M	9½	1
S701B	8¾"	1
S701C	7½"	1
S701D	7½"	1
S701E	8¾"	1
S701J	7½"	1
S701K	9½"	1

BENDING DIAGRAMS



RAILING *

MARK	NO.	LENGTH
R501	16	16'-5"
R502	8	16'-7"
R503**	24	4'-2"
R504**	16	5'-4"
R505	48	15'-7"
R506	48	14'-10"
R530	12	6'-4"
R507	8	23'-7"
R508	96	15'-4"

REPLACMENT BARS

MARK	NO.	LENGTH	SHP.
RE400	1	5'-3"	B
RE500	2	5'-7"	
RE600	8	5'-11"	
RE700	4	6'-3"	
RE800	2	6'-6"	
RE1000	2	7'-3"	

~~ESTIMATED LIGHTING QUANTITIES~~
~~ITEM 625~~

VOID

TOTAL	UNIT	DESCRIPTION
4	EA.	LUMINAIRE, TYPE III, WITH INTEGRAL 400 WATT MERCURY BALLAST
4	EA.	MERCURY VAPOR LAMP, 400 WATT (H-33-ICD)
4	EA.	LIGHT POLE WITH 8' BRACKET ARM - DESIGN 11A8B30.0
320	L.F.	POLE & BRACKET CABLE, 1/C, NO. 12 AWG, 600 V.
4	EA.	ESNA KIT - STYLE 82
4	EA.	ESNA KIT - STYLE 83
483	L.F.	CONDUIT - 1 INCH RIGID GALVANIZED STEEL IN BRIDGES
1,014	L.F.	CIRCUIT CABLE - 1/C, NO. 4 AWG, 600 V.
Lump(2)	L.S.	BRIDGE STRUCTURE GROUNDING SYSTEM

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	LEFT BRIDGE SUPER	ABUTS.	PIERS	GEN'L.	RIGHT BRIDGE SUPER	ABUTS.	PIERS	GEN'L.
503	1,725	Cu. Yds.	Unclassified Excavation		525	560			355	285	
511	703	Cu. Yds.	Class C Concrete, Superstructure	422				281			
511	102	Cu. Yds.	Class C Concrete, Pier Columns			62				40	
511	320	Cu. Yds.	Class E Concrete, Pier Walls			194				126	
511	412	Cu. Yds.	Class E Concrete, Abut. above Footings		248				164		
511	487	Cu. Yds.	Class E Concrete, Footings		97	205			68	117	
512	63	Lin. Ft.	Waterproofing, Premolded Sealing Strip		43				20		
509	286,553 ~~289,518~~	Lbs.	Reinforcing Steel	117,624 ~~116,181~~	15,572 ~~20,790~~	42,102 ~~40,193~~		73,060 ~~73,039~~	10,986 ~~13,438~~	27,201 ~~25,977~~	
513	783,000	Lbs.	Structural Steel	470,500				312,500			
514	783,000	Lbs.	Field Painting of Structural Steel	470,500				312,500			
517	899.20	Lin. Ft.	Railing ( ), Type 1 ( )	443.39				455.81			
505	Lump	Sum	First Test Pile			Lump					
507	5,560	Lin. Ft.	12" Cast-in-Place Reinforced Concrete Piles			3,350				2,210	
518	320	Lin. Ft.	6" Perforated Helical CMP, 707.06 including specials		189				131		
518	284	Lin. Ft.	6" Helical CMP, 707.06, Non-Perforated		170				114		
518	95	Cu. Yds.	Porous Backfill		117				78		
518	12	Each	Scuppers, including Supports	7				5			
808	703	Sum	Water-reducing, Set-retarding Admixtures for Conc.	422				281			
601	2,895	Sq. Yds.	Crushed Aggregate Slope Protection				1,665				1,230
625			for lighting quantities see sheet No. 489								
			Delineator, Type ... Bracket Mou...								
503	Lump	Sum	Cofferdams Cribs + Sheeting								

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 size of the bar. For example A700 is a No. 7 size bar and A1014 is a No. 10 size bar.

All dimensions are out to out of the bar.

Shape "B" bars are bent. All other bars are straight. The "length" shown in steel list for the spiral bars is the distance from the top of the footing to the bottom of cap.

The "number of turns" shown in the steel list for the spiral bars is the "length" divided by the pitch, plus three (3) turns (total number of closed coils) expressed as the nearest whole number.

Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item 509.

1½ closed coils shall be provided at the ends of each spiral unit.

Four steel channel, tee or angle spacers, weighing approximately 0.68 pound per linear foot 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 pound per linear foot will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

** SEE BR-1-65 FOR BENDING DIAGRAM

* Included with Item 517 for payment.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

ESTIMATED QUANTITIES & REINFORCING STEEL LIST

BRIDGE NO. TUS-36-1859 L & R
RELOC. US. 36 OVER B & O RAILROAD
TUSCARAWAS COUNTY
STA. 303+71.18
STA. 305+99.56

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
M.J.F.	M.J.F.	E.L.M. J.A.S.	B.O.L. L.L.D.	H.C.M. 8-17-64	9-26-66

MICROFILMED
FEB 22 1993

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

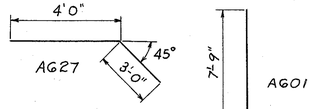
542A
GG2

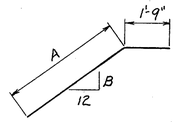
TUSCARAWAS COUNTY
TUS-36-15.93

ABUTMENTS

MARK	REQUIRED LT. R.	REQUIRED RT. R.	REQUIRED LT. F.	REQUIRED RT. F.	TOTAL	LENGTH	WEIGHT LT. BR.	WEIGHT RT. BR.	SHR
A502	64	48	64	41	217	8'-3"	1101	766	B
A503	53	34	54	34	175	10'-0"	1116	709	B
A504	2				2	30'-0"	63		
A505			1	6	7	31'-6"	33	197	
A506				7	7	30'-6"		223	
A507				13	13	29'-0"		393	
A508	13		2		15	28'-0"	438		
A509		19			19	26'-3"		520	
A510			19		19	25'-0"	495		
A511	12	12			24	24'-5"	306	306	
A512	2	20			22	23'-0"	48	480	
A514		2		13	15	20'-6"		321	
A515	49		40		89	19'-11"	1849		
A516	2				2	17'-6"	37		
A517		2	2		4	17'-3"	36	36	
A518		16	18	1	35	15'-5"	289	273	
A519	3				3	14'-3"	45		
A520		2	12	2	16	14'-0"	175	58	
A521			14		14	13'-9"	201		
A522	18		2		20	12'-5"	259		
A523	10	2	2		14	11'-9"	147	25	
A524			2		2	10'-6"	22		
A525				10	10	9'-6"		99	
A526				4	4	8'-3"		34	
A527				2	2	6'-6"		14	
A528		1		12	13	19'-4"		262	
A529				2	2	9'-0"		19	
A530				2	2	5'-3"		11	
A531		2			2	13'-6"		28	
A532			2		2	9'-3"	19		B
A533			2		2	9'-3"	19		B
A534	2				2	12'-9"	27		B
A535	2				2	8'-3"	17		B
A536				2	2	11'-3"		23	B
A537				2	2	9'-9"		20	B
A538		2			2	14'-6"		30	B
A539		2			2	9'-6"		20	B
AG01	64	48	64	41	217	13'-0"	2499	1738	B
AG02	70	39	57	34	200	16'-4"	3115	1791	B
AG03	11	12	24	17	64	14'-1"	740	613	B
AG04			12		12	7'-6" to 10'-10"	165		
AG05			12		12	9'-2" to 11'-8"	188		
AG06	8				8	9'-5" to 11'-8"	127		
AG07	12				12	7'-11" to 10'-0"	161		
AG08				12	12	7'-7" to 10'-6"		163	
AG09				12	12	7'-2" to 10'-8½"		161	
AG10		10			10	7'-11" to 11'-0"		142	
AG11		12			12	7'-2" to 9'-0½"		146	
AG12		20			20	6'-9"		203	
AG13		8			8	7'-8"		92	
AG14	4				4	12'-6"	75		
AG15			12		12	7'-11"	143		
AG16				14	14	7'-4"		154	
AG17	20		8		28	7'-6"	315		
AG18	2				2	8'-7"	26		
AG19		4			4	39'-3"		236	
AG20	4			4	8	30'-10"	185	185	
AG21				4	4	30'-8"		184	
AG22	8				8	25'-0"	300		
AG23			8		8	25'-3"	303		
AG24	4				4	20'-8"	124		
AG25			8		8	23'-4"	280		
AG26		4			4	32'-0"		192	
AG27	4	4	4	4	16	7'-0"	84	84	B
AG28		2			2	11'-7"		35	

BENDING DIAGRAMS





	A	B
A532	7'-6"	4¾
A533	7'-6"	6
A534	11'-0"	3¾
A535	6'-6"	5½
A536	9'-6"	5
A537	8'-0"	6
A538	12'-9"	3¼
A539	7'-9"	6¼

See Sheet 542 for additional Bending Diagrams and for Bar Variations

Added 9-26-66

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

REVISED REINFORCING STEEL LIST FOR ABUTMENTS

BRIDGE NO. TUS-36-1859 L&R

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	CPD	W.R.B.				

MICROFILMED
FEB 22 1980

FED. RD. DIVISION	STATE	PROJECT		543 / 662
2	OHIO			

TUSCARAWAS COUNTY
TUS-36-16.61

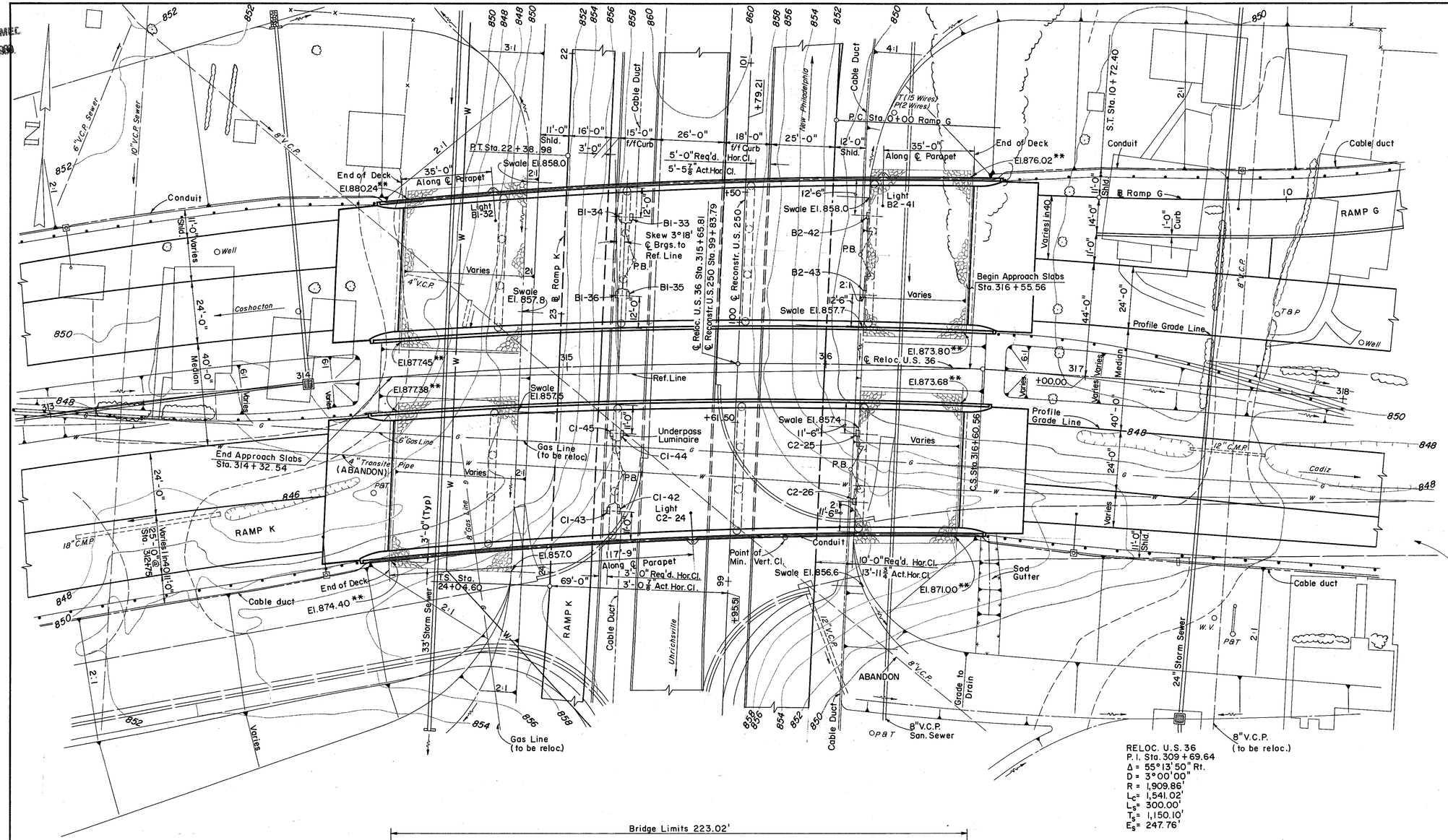
Location: 0.1 mi. North of North Corporation Line of Uhrichsville.

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling 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.

B.M.-22 Located 389' Rt. Sta. 314+91, Painted west corner of the N. Abutment of U.S. 250 Bridge. Elev. 856.796

B.M.-22A ¾" Bolt on N.W. corner of anchor plate for Fleetwing sign. Located on the N.E. corner of Eleventh and Water Streets. Elev. 851.505

Elevations marked thus (**) are Top of Slope Elev. at corners of abutments.



PROPOSED STRUCTURE

TYPE: Two 5 Span continuous reinforced concrete slab and reinforced concrete substructure.

SPANS: 38'-0", 47'-6", 47'-6", 47'-6" and 38'-0"

ROADWAY: Left bridge 48'-7" to 53'-10" f/f 2'-3" safety curbs. Right bridge 51'-1" to 45'-6" f/f 2'-3" safety curbs.

LOAD FREQUENCY: CF = 2,000(57)

WEARING SURFACE: 1" monolithic concrete.

APPROACH SLABS: Special (25' Long)

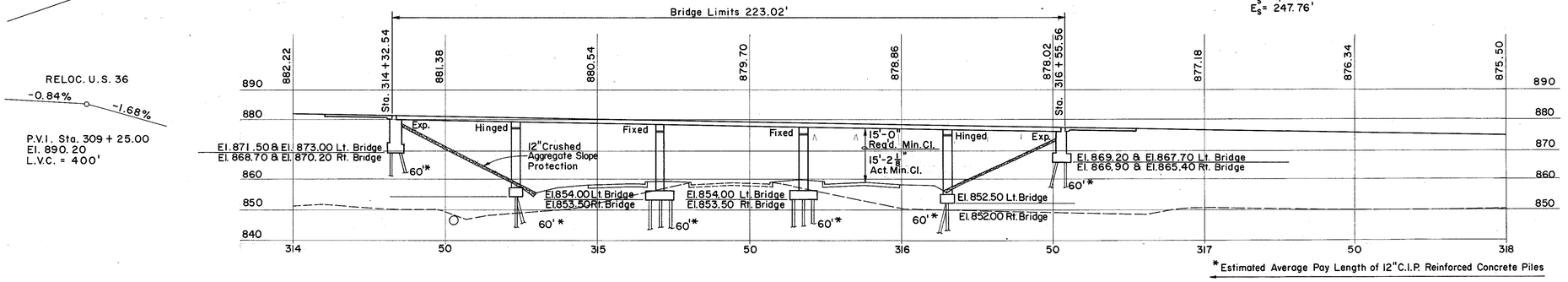
ALIGNMENT: Reloc. U.S. 36 Curve, U.S. 250 Tangent

SKEW: 3°18' L.F. ℄ Bearings to Reference Line

A.D.T. = 10,605(1977) U.S. 36, 12,970(1977) U.S. 250

SUPERELEVATION: Varies, Max. 0.071 ft. per ft.

RELOC. U.S. 36
P.I. Sta. 309+69.64
Δ = 55°13'50" Rt.
D = 3°00'00"
R = 1,909.86'
L_c = 1,541.02'
L_s = 300.00'
T_s = 1,150.10'
E_s = 247.76'



PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

SITE PLAN

BRIDGE NO. TUS-36-1880 L & R
RELOC. U.S 36 OVER RECONSTR. US 250
TUSCARAWAS COUNTY STA. 314+32.54
STA. 316+55.56

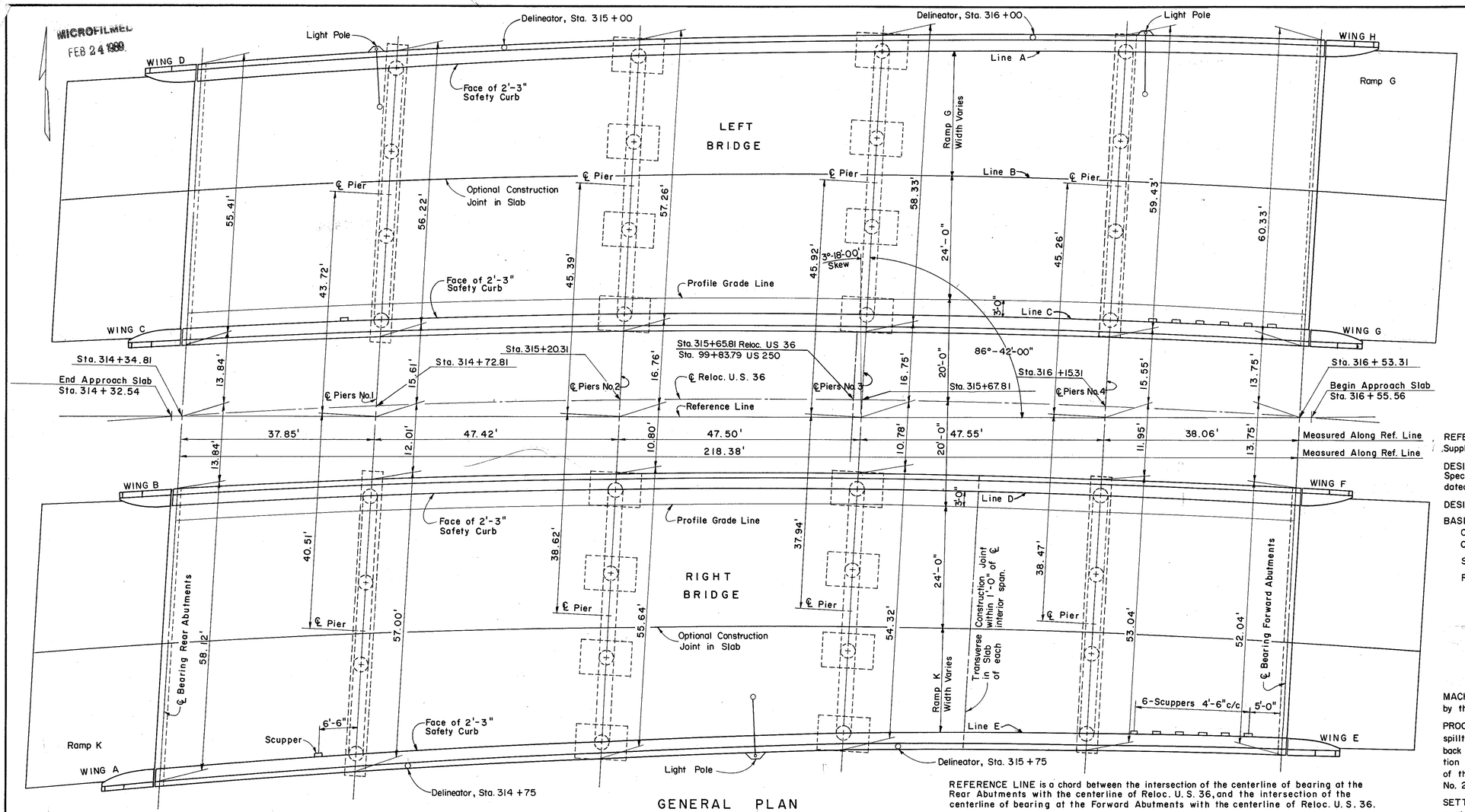
DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
H.C.M.	M.F.	E.L.M. E.R.	B.O.L.	H.C.M. 8-17-64	

MICROFILMED
FEB 24 1969

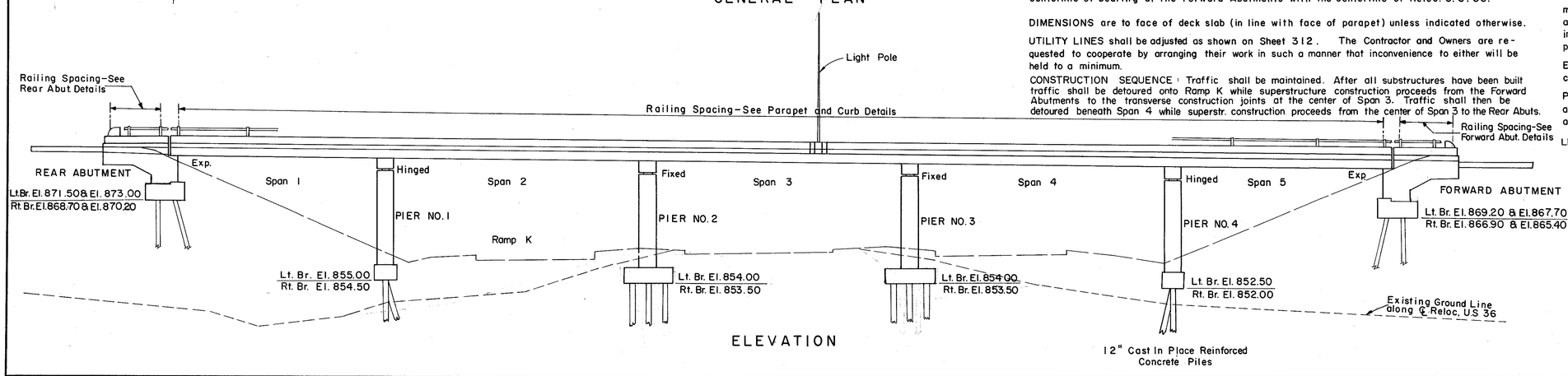
FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

544
662

TUSCARAWAS COUNTY
TUS-36-15.93



GENERAL PLAN



ELEVATION

ELEVATIONS TOP OF DECK SLAB

	LEFT BRIDGE			RIGHT BRIDGE	
STATION	LINE A	LINE B	LINE C	LINE D	LINE E
314 + 40	884.78	883.25	881.34	881.76	878.15
314 + 50	884.63	883.08	881.17	881.59	878.00
314 + 60	884.48	882.92	881.00	881.42	877.85
314 + 70	884.33	882.75	880.83	881.26	877.70
314 + 80	884.18	882.58	880.66	881.09	877.55
314 + 90	884.03	882.41	880.50	880.92	877.40
315 + 00	883.88	882.24	880.33	880.75	877.25
315 + 10	883.73	882.08	880.16	880.58	877.10
315 + 20	883.58	881.91	880.00	880.42	876.95
315 + 30	883.43	881.74	879.82	880.25	876.80
315 + 40	883.28	881.57	879.66	880.08	876.65
315 + 50	883.12	881.40	879.49	879.91	876.50
315 + 60	882.87	881.24	879.32	879.74	876.35
315 + 70	882.62	881.07	879.15	879.58	876.20
315 + 80	882.38	880.90	878.98	879.41	876.04
315 + 90	882.13	880.73	878.82	879.24	875.90
316 + 00	881.87	880.56	878.65	879.07	875.74
316 + 10	881.62	880.40	878.48	878.90	875.59
316 + 20	881.36	880.23	878.31	878.74	875.44
316 + 30	881.11	880.06	878.14	878.57	875.29
316 + 40	880.85	879.89	877.97	878.40	875.14
316 + 50	880.58	879.72	877.81	878.23	874.99

Profile Grade Line (Both Bridges) is 0.21' below Line D

GENERAL NOTES

REFERENCE shall be made to Standard Drawing *BR-1-65, sheet 1, dated 2-1-65 and to* Supplemental Specification *809* dated *7-19-65*.

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

DESIGN LOADING: CF 2000 (57)

BASIC UNIT STRESSES:
Concrete Class C - basic unit stress ---------- 1,333 p.s.i.
Concrete Class E - basic unit stress ---------- 1,133 p.s.i.
Structural Steel - ASTM A36
Reinforcing Steel - ASTM A15, A16, A160, Deformed, Intermediate or hard Grade. Basic unit stress ---------- 20,000 p.s.i. Except, spiral reinforcement may be plain, Structural Grade with basic unit stress of 18,000 p.s.i.

REFERENCE LINE is a chord between the intersection of the centerline of bearing at the Rear Abutments with the centerline of Reloc. U. S. 36, and the intersection of the centerline of bearing at the Forward Abutments with the centerline of Reloc. U. S. 36.

DIMENSIONS are to face of deck slab (in line with face of parapet) unless indicated otherwise.

UTILITY LINES shall be adjusted as shown on Sheet 312. 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.

CONSTRUCTION SEQUENCE: Traffic shall be maintained. After all substructures have been built traffic shall be detoured onto Ramp K while superstructure construction proceeds from the Forward Abutments to the transverse construction joints at the center of Span 3. Traffic shall then be detoured beneath Span 4 while superstr. construction proceeds from the center of Span 3 to the Rear Abuts.

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

PROCEDURE: The embankment shall be placed and compacted up to the finished spillthru slope and to the level of the subgrade for a distance of 200 feet back of the abutments after which a delay of 180 days shall occur before construction of the abutments is begun. A delay of 60 days shall occur after completion of the embankment before construction of Piers No. 1 and No. 4 is begun. Piers No. 2 and No. 3 may be constructed after completion of the embankment.

SETTLEMENT HUBS: Settlement hubs shall be driven in the compacted embankment 50 feet right and 50 feet left of centerline, Reloc. U. S. 36, Station 314 + 15 and Station 316 + 75. If the hubs as determined at approximately one week intervals, indicate that all settlement has ceased before the end of the waiting period, construction of the abutments may proceed after approval from the Director.

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

PILES shall be driven to a minimum bearing capacity of 36 tons per pile for the abutments and 40 tons per pile for the piers. The Contractor may prebore thru the approach embankment at his option and expense, before driving the abutment piles.

LIGHTING DETAILS are shown on Lighting Plans, beginning with Sheet 489.

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FOR

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

GENERAL PLAN

BRIDGE NO TUS-36-1880 L & R
RELOC U.S. 36 OVER RECONSTR U.S. 250
TUSCARAWAS COUNTY
STA. 314 + 32.54
STA. 316 + 55.56

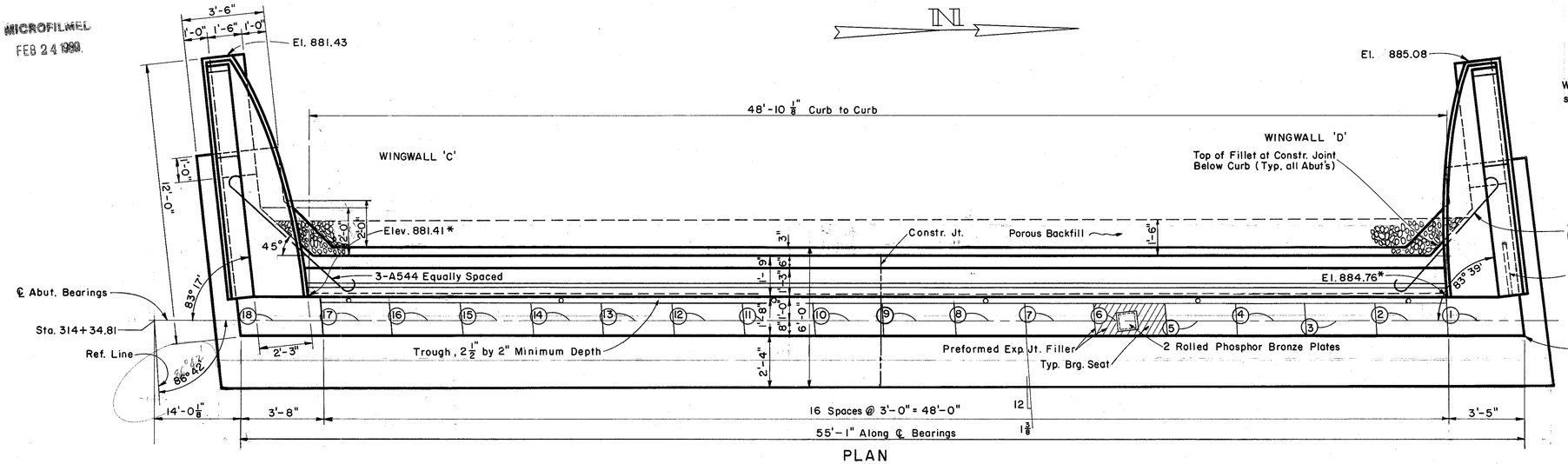
DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
H.C.M.	R.J.A.	F.W.B. E.R.	B.O.L.	H.C.M. 8-17-64	

MICROFILMED
FEB 24 1990

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

545
662

TUSCARAWAS COUNTY
TUS-36-15.93

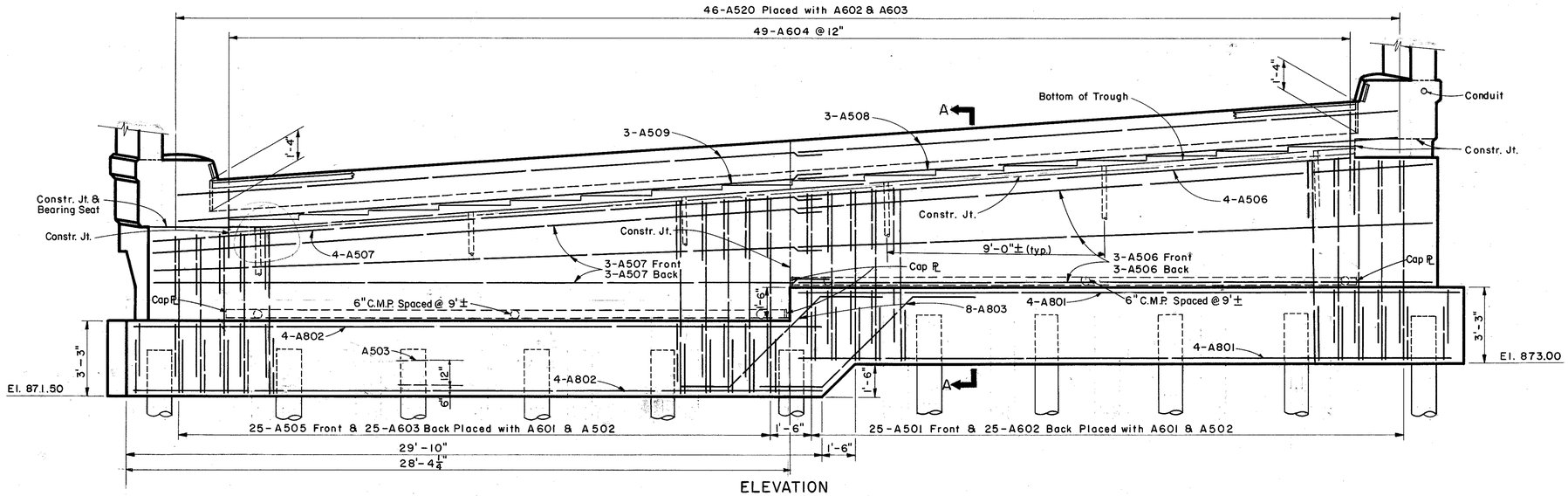


PLAN

Wing dimensions not shown are the same as for Wingwall 'C'.

Note: Top of embankment slope is a straight line. See Site Plan for elevation at corners of abutments. (Typical all Abut's.)

Elevations marked with asterisk (*) are on top of end dam.

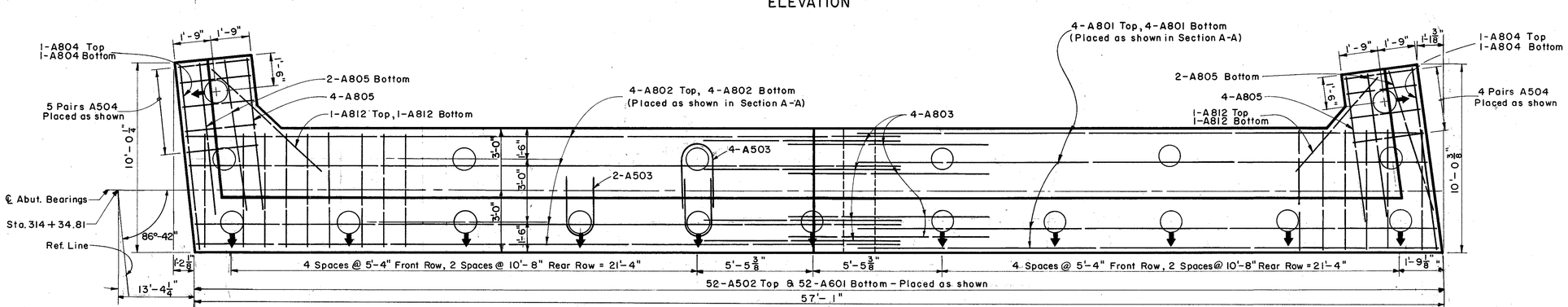


ELEVATION

For Typical Cross Section, See Sheet, "Forward Abutment – Right Bridge."

For Notes and Bridge Seat Elevations, See Sheet "Wingwalls & Bearing Seats."

FOR DETAILS OF CONDUITS See Lighting Plans, beginning with Sheet 489.



FOOTING PLAN

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

REAR ABUTMENT - LEFT BRIDGE

BRIDGE NO. TUS-36-1880 L. & R.
RELOC. U.S. 36 OVER RECONSTR. U.S. 250
TUSCARAWAS COUNTY
STA. 314+32.54
STA. 316+55.56

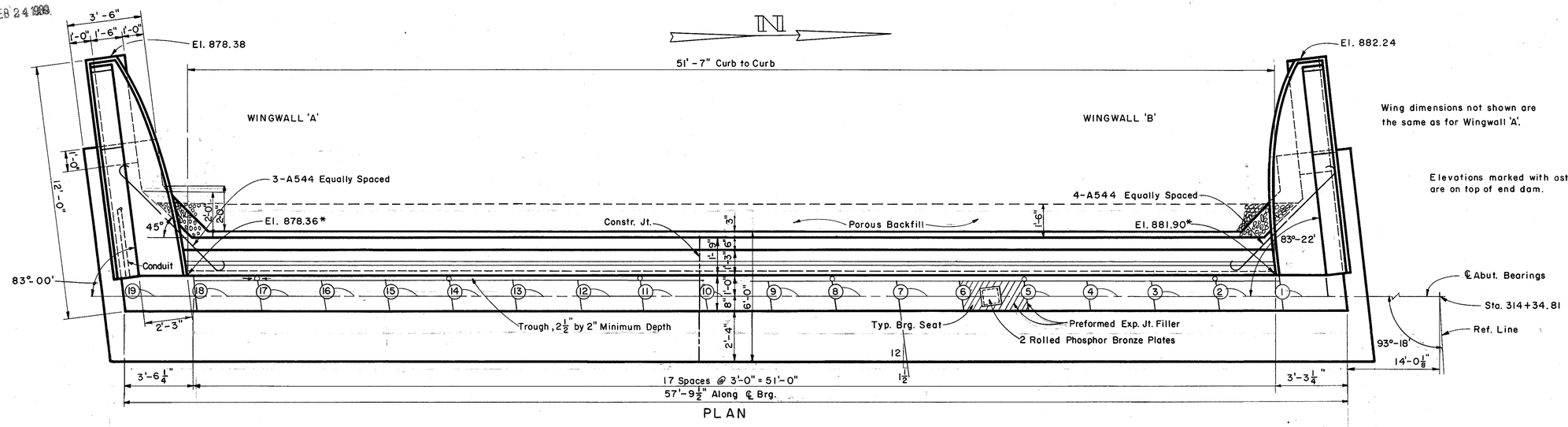
DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
R.J.A. N.P.	R.J.A.	E.L.M. G.F.L.	B.O.L.	H.C.M. 8-17-64	

MICROFILMED
FEB 24 1999

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

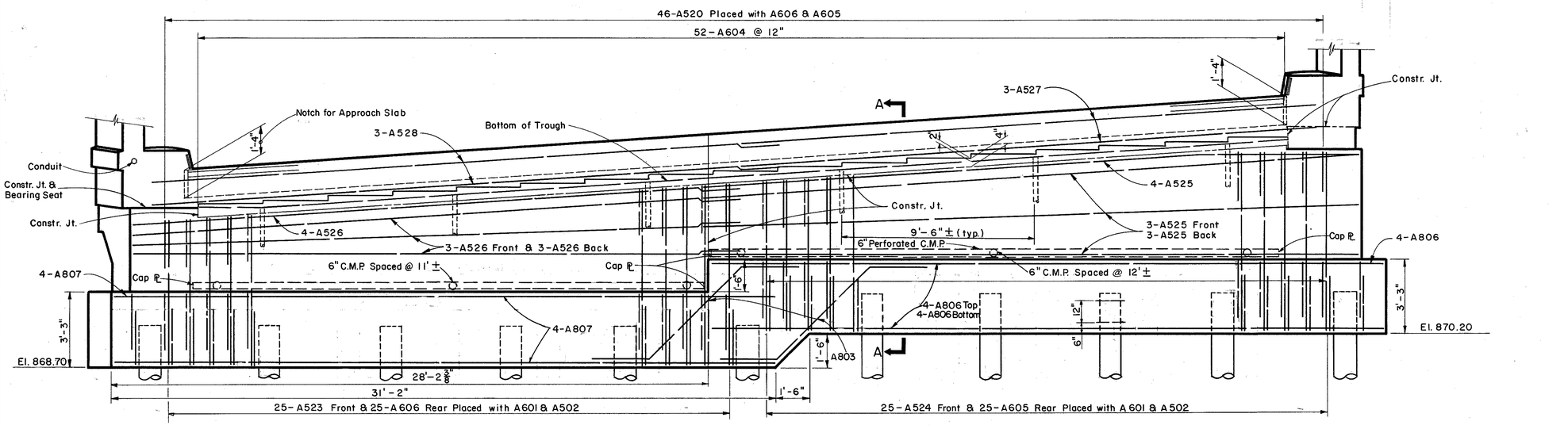
546
662

TUSCARAWAS COUNTY
TUS-36-15.93



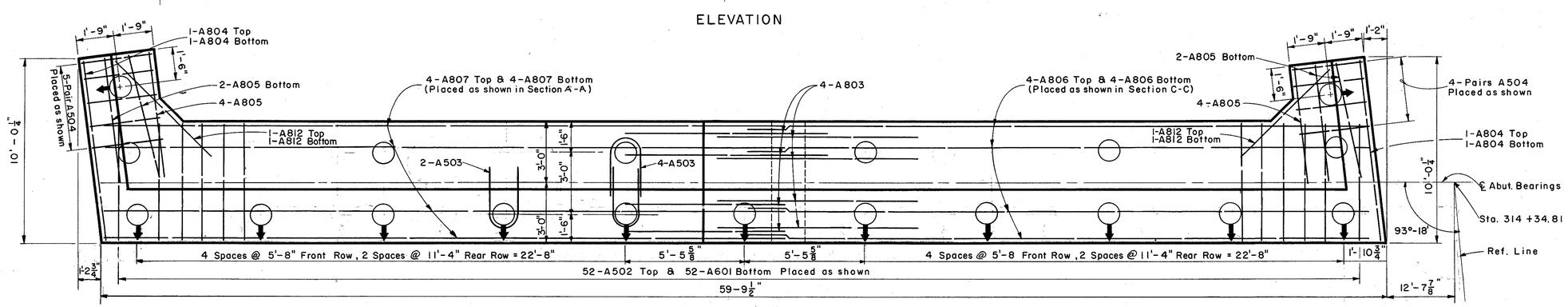
Wing dimensions not shown are the same as for Wingwall 'A'.

Elevations marked with asterisk (*) are on top of end dam.



For Typical Cross Section, See Sheet, "Forward Abutment – Right Bridge."

For Notes and Bridge Seat Elevations See Sheet, "Wingwalls & Bearing Seats."



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FOR

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

REAR ABUTMENT – RIGHT BRIDGE

BRIDGE NO. TUS-36-1880 L. & R.
RELOC. U.S. 36 OVER RECONSTR. U.S.250
TUSCARAWAS COUNTY
STA. 314+32.54
STA. 316+55.56

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
G.S.W. N.P.	R.J.A.	E.L.M. G.F.L.	B.O.L.	H.C.M. 8-17-64	

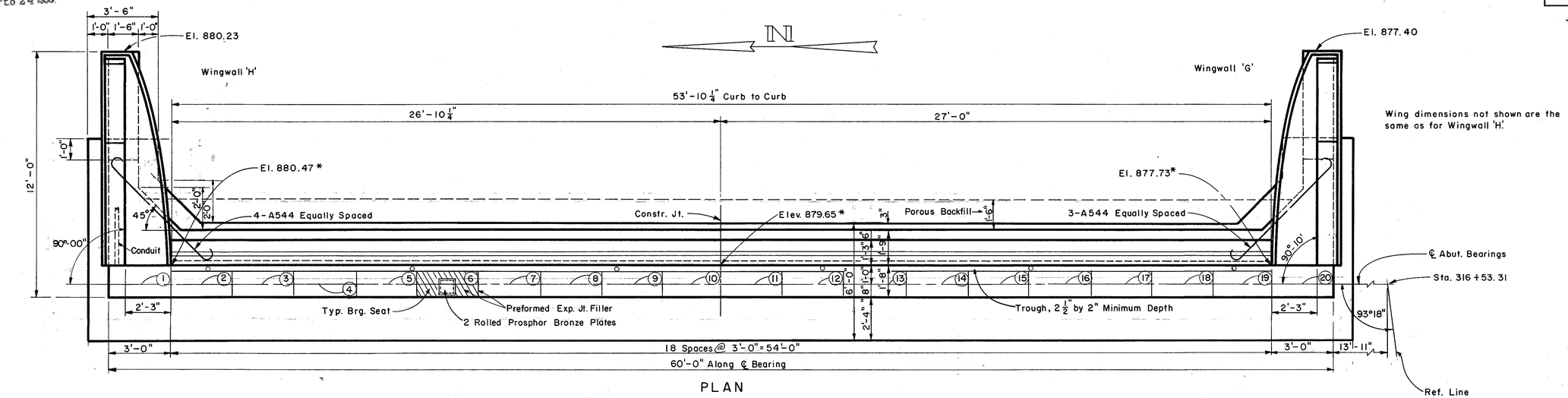
MICROFILMED
FEB 24 1999

Elevations marked with asterisk (*) are on top of end dam.

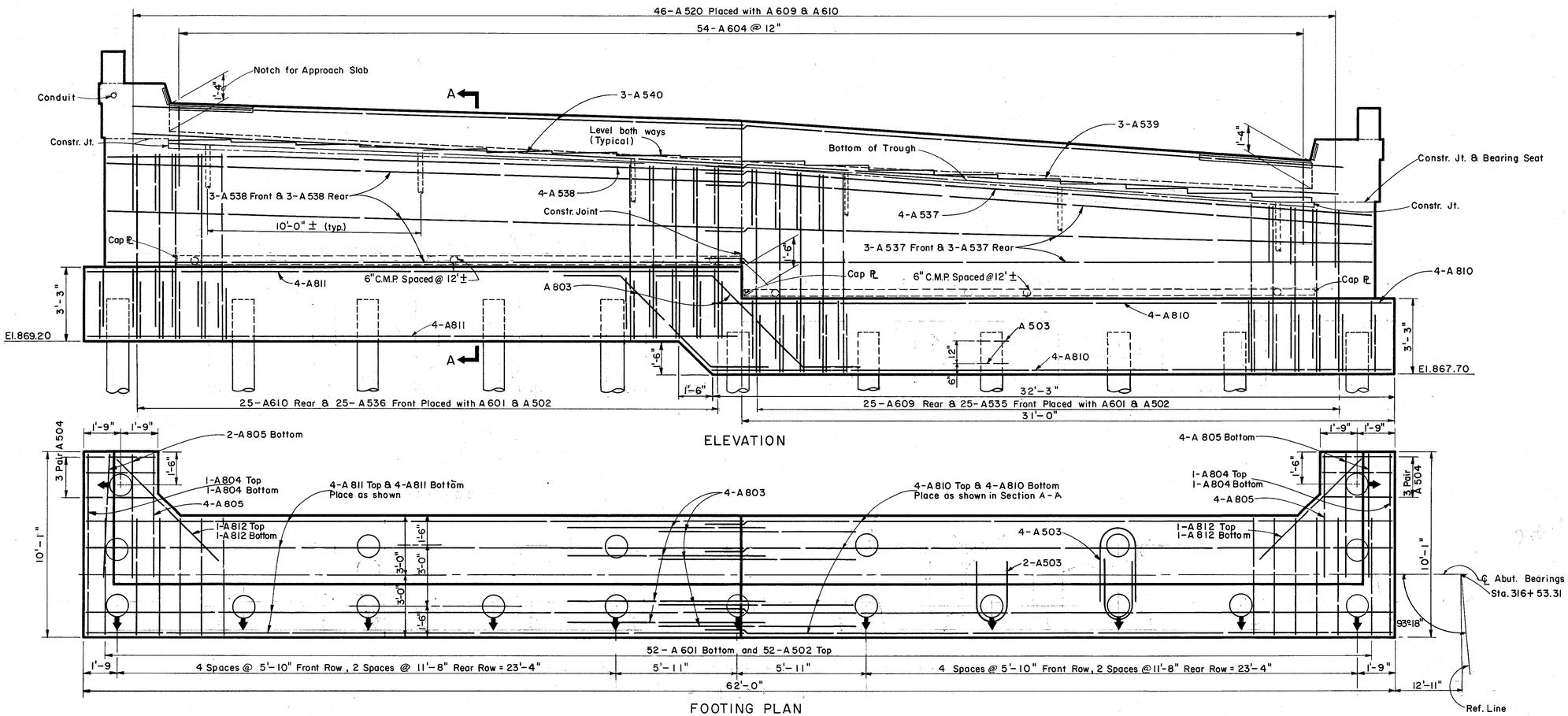
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

547
662

TUSCARAWAS COUNTY
TUS-36-15.93



PLAN



FOOTING PLAN

For Typical Cross Section, See Sheet, " Forward Abutment — Right Bridge."

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FOR

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

FORWARD ABUTMENT-LEFT BRIDGE

BRIDGE NO. TUS-36-1880L & R
RELOC. US 36 OVER RECONST. US 250
TUSCARAWAS COUNTY
STA. 314+32.54
STA. 316+55.56

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
R.J.A. N.P.	R.J.A	E.L.M. E.R.	B.O.L.	H.C.M. 8-17-64	

MICROFILMED
FEB 24 1969

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

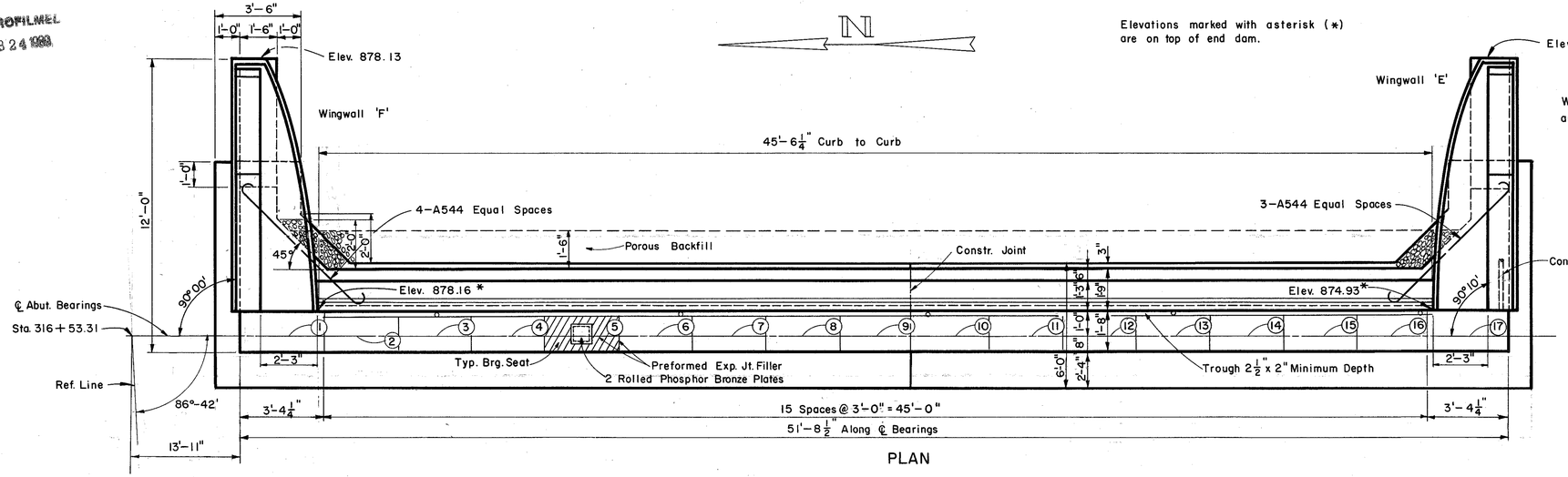
548
662

TUSCARAWAS COUNTY
TUS-36-15.93

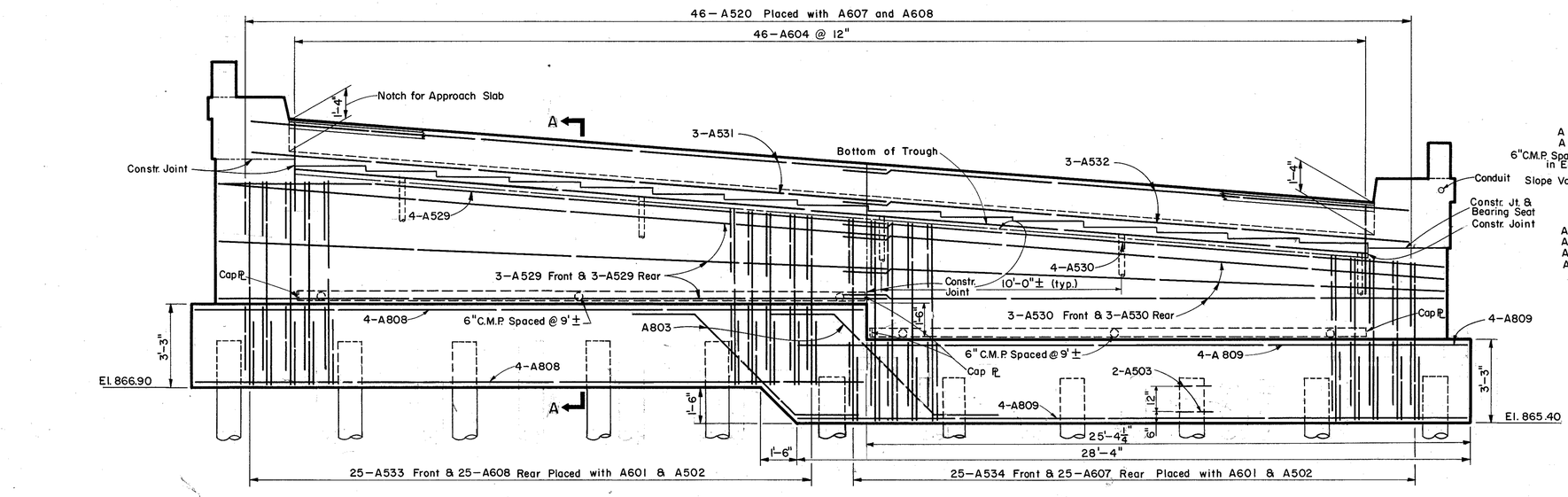
N

Elevations marked with asterisk (*) are on top of end dam.

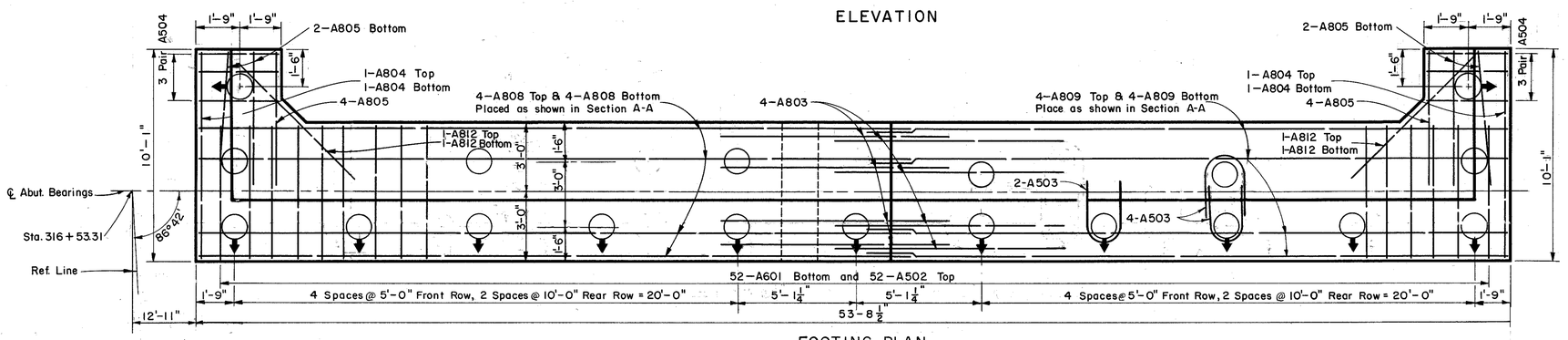
Wing dimensions not shown are the same as for Wingwall 'F.'



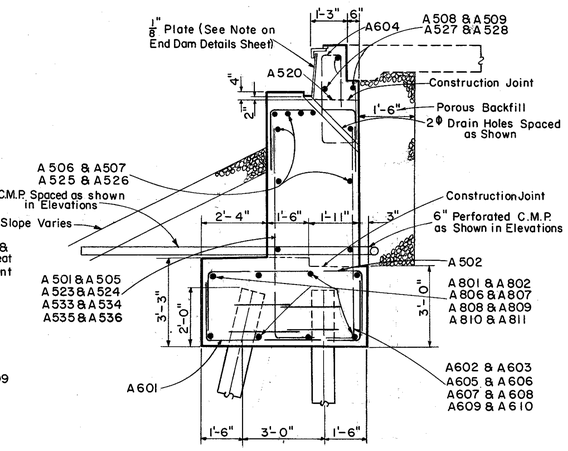
PLAN



ELEVATION



FOOTING PLAN



SECTION A-A
(Typical For All Abutments)

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FOR

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

FORWARD ABUTMENT-RIGHT BRIDGE

BRIDGE NO. TUS-36-1880 L & R
RELOC. U.S. 36 OVER RECONST. U.S. 250

TUSCARAWAS COUNTY

STA. 314+32.54
STA. 316+55.56

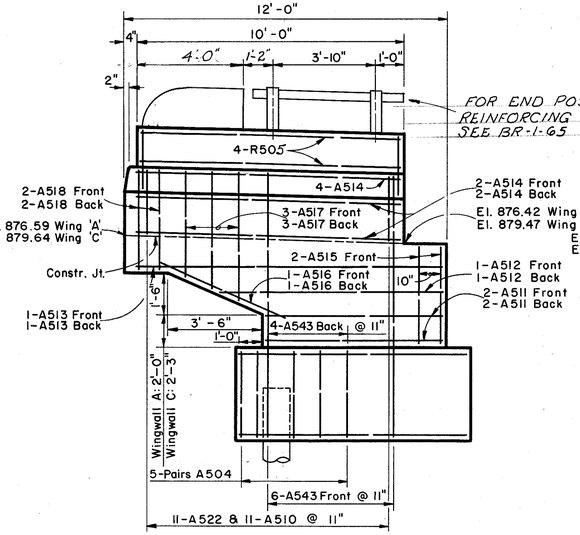
DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
N.P. R.J.A.	R.J.A.	E.L.M. J.A.S.	B.O.L.	H.C.M. 8-17-64	

MICROFILMED
FEB 24 1969

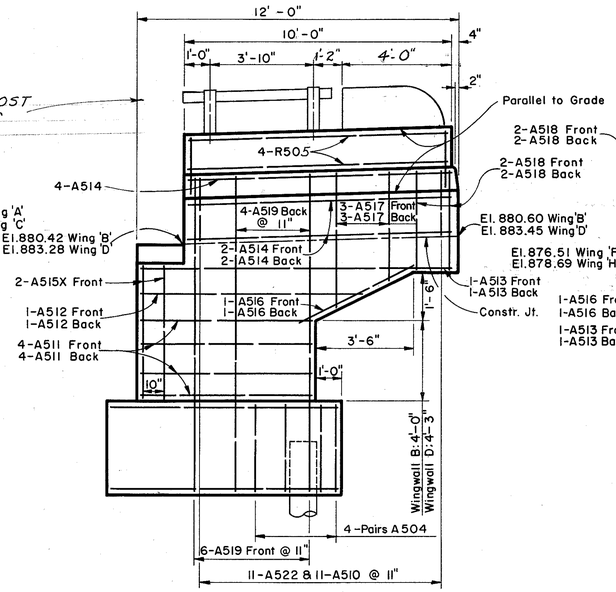
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

549
662

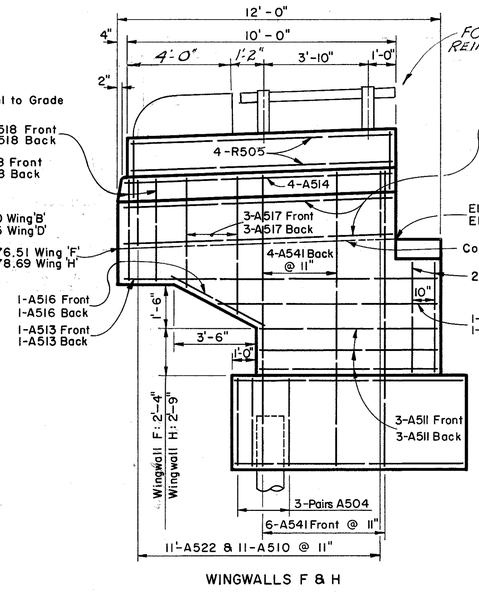
TUSCARAWAS COUNTY
TUS-36-15.93



WINGWALLS A & C



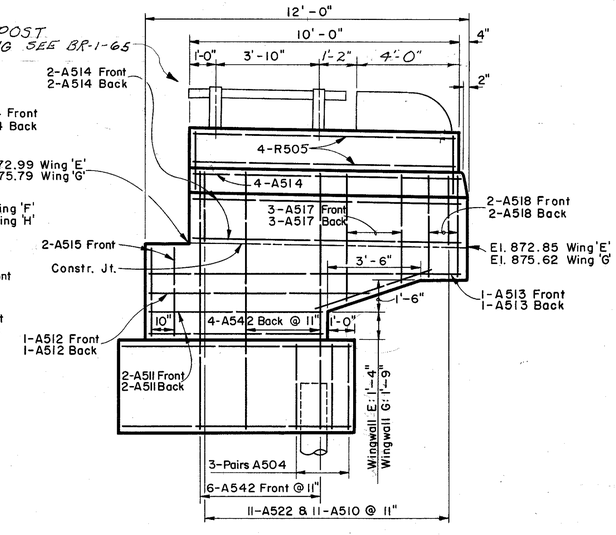
WINGWALLS B & D



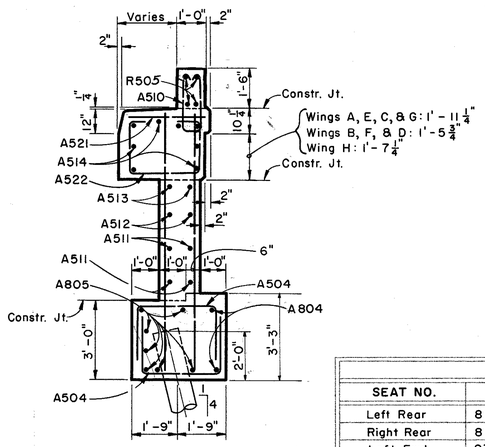
WINGWALLS F & H

REAR ABUTMENTS

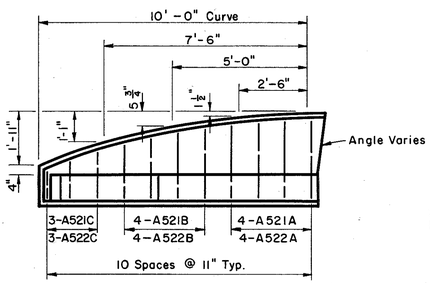
FORWARD ABUTMENTS



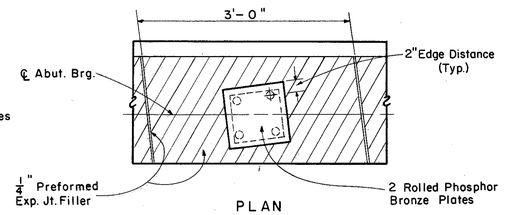
WINGWALLS E & G



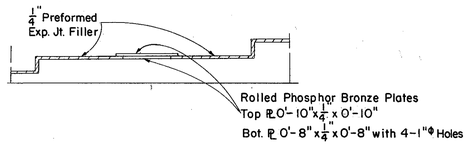
TYPICAL WINGWALL SECTION



PARAPET PLAN (TYPICAL)



PLAN



ELEVATION

DETAIL OF BEARING SEATS

ELEVATIONS OF ABUTMENT SEATS

SEAT NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Left Rear	882.24	882.78	882.58	882.37	882.16	881.96	881.75	881.55	881.34	881.13	880.93	880.72	880.52	880.31	880.10	879.90	879.69	879.45		
Right Rear	879.38	879.93	879.72	879.52	879.31	879.10	878.90	878.69	878.49	878.28	878.08	877.87	877.67	877.46	877.26	877.05	876.84	876.64	876.40	
Left Fwd.	878.02	878.68	878.59	878.49	878.40	878.31	878.22	878.13	878.03	877.94	877.73	877.52	877.30	877.09	876.87	876.66	876.44	876.23	876.01	875.80
Right Fwd.	875.68	876.22	876.00	875.79	875.58	875.36	875.15	874.94	874.73	874.51	874.30	874.09	873.87	873.66	873.45	873.23	873.00			

The Abutment Seat Elevations are at the bottom of plates 8"x¼"x 0'-8". Before concrete has set these plates shall be placed on a thin layer of Portland Cement Grout with the holes in the bottom plates filled with Grout to keep the plates from moving.

NOTES (For 4 Abutments)

All reinforcing steel shall have 3" cover in the bottom of the footing and 2" elsewhere.

Railing tube on wingwalls shall be continuous

Indicates pile battered 1:4 and direction of batter.

All piles are 12" C.I.P. reinforced concrete.

Excavation required for placing porous backfill 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.

For additional notes see General Plan.

For details of conduit in wingwalls, see lighting plans.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

WINGWALLS & BEARING SEATS & TYPICAL CROSS SECTION

BRIDGE NO. TUS-36-1880 L. & R.
RELOC. U.S. 36 OVER RECONSTR. U.S. 250
TUSCARAWAS COUNTY STA. 314+32.54
STA. 316+55.56

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
R.J.A. N.P.	R.J.A.	E.L.M. G.F.L.	B.O.L.	H.C.M. 8-17-64	

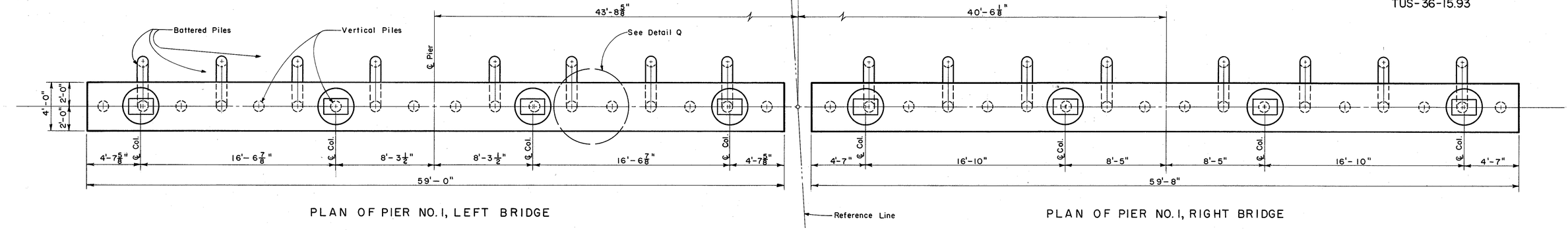
MICROFILMED
FEB 24 1969

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

550
662

TUSCARAWAS COUNTY
TUS-36-15.93

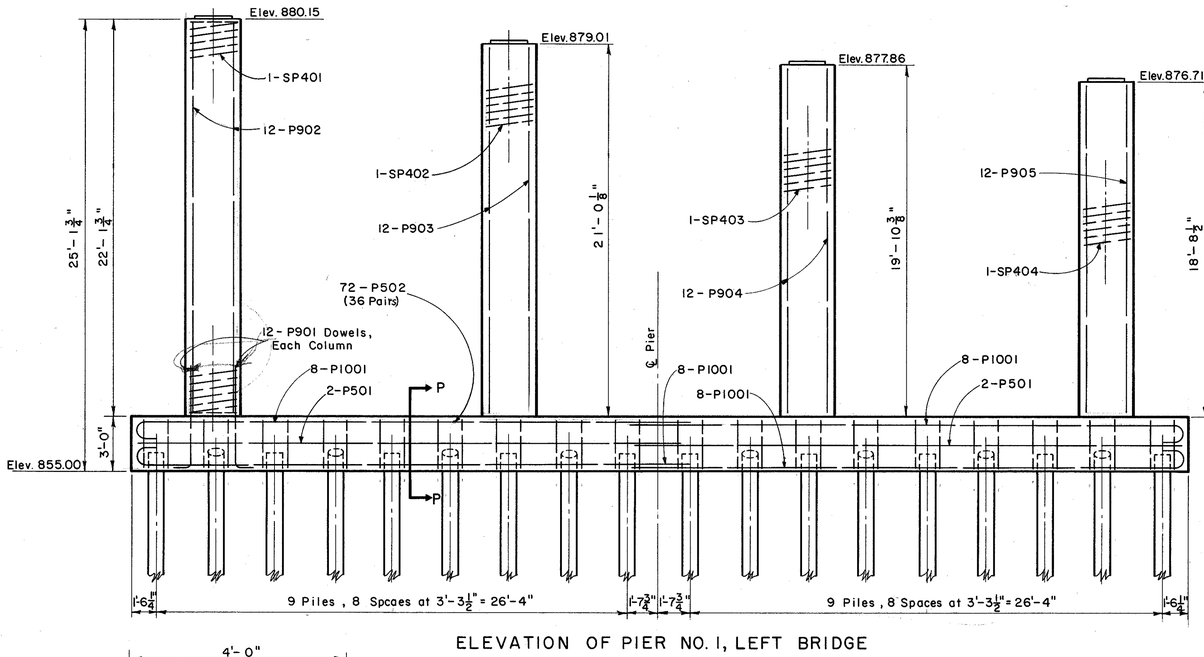
N



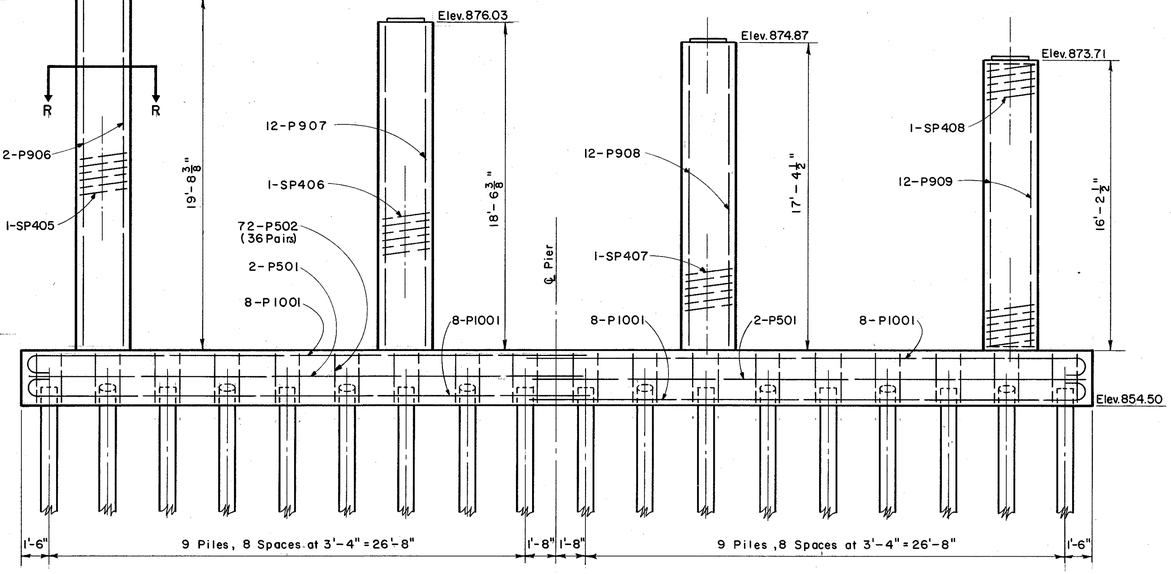
PLAN OF PIER NO. I, LEFT BRIDGE

PLAN OF PIER NO. I, RIGHT BRIDGE

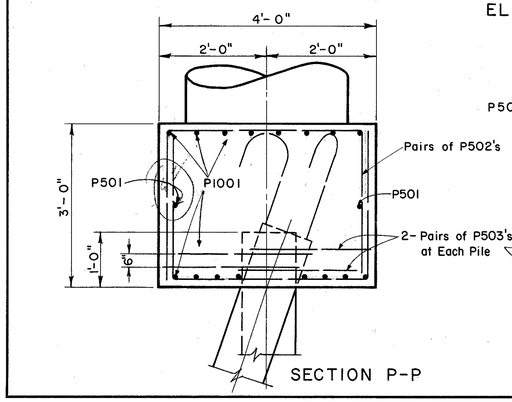
COVER OF REINFORCEMENT : 3" Bottom of footings; 2" elsewhere.



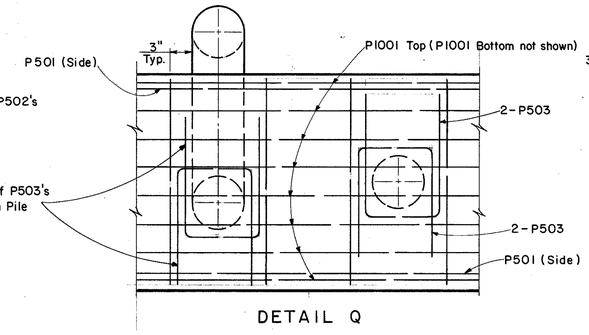
ELEVATION OF PIER NO. I, LEFT BRIDGE



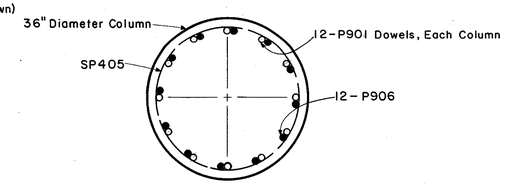
ELEVATION OF PIER NO. I, RIGHT BRIDGE



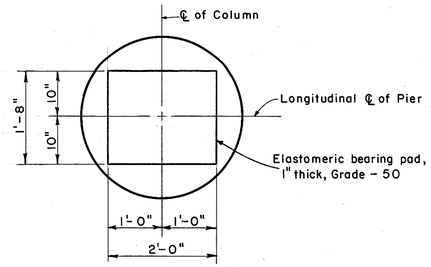
SECTION P-P



DETAIL Q



SECTION R-R



BEARING PAD
(Alike for all piers)

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FOR
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DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

PIERS NO. I

BRIDGE NO. TUS-36-1880 L & R.
RELOC. US-36 OVER RECONSTR. US-250
TUSCARAWAS COUNTY
STA. 314+32.54
STA. 316+55.56

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
G.S.W. N.P.	G.S.W.	M.C.S. G.F.L.	B.O.L.	H.C.M. 8-17-64	

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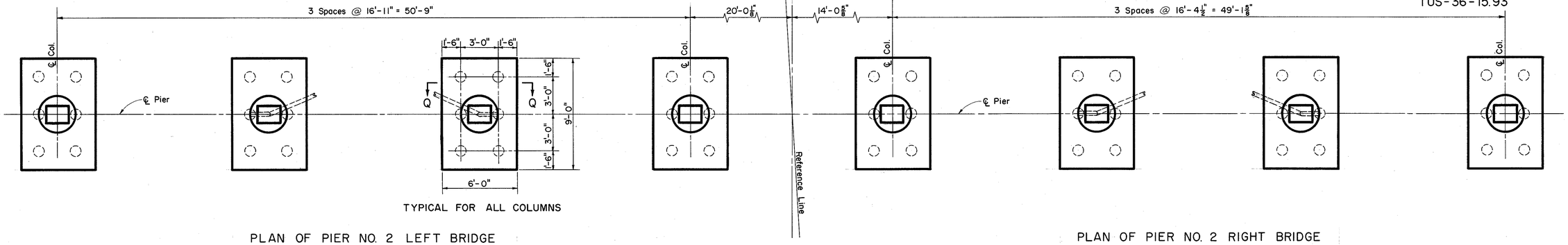
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

551
662

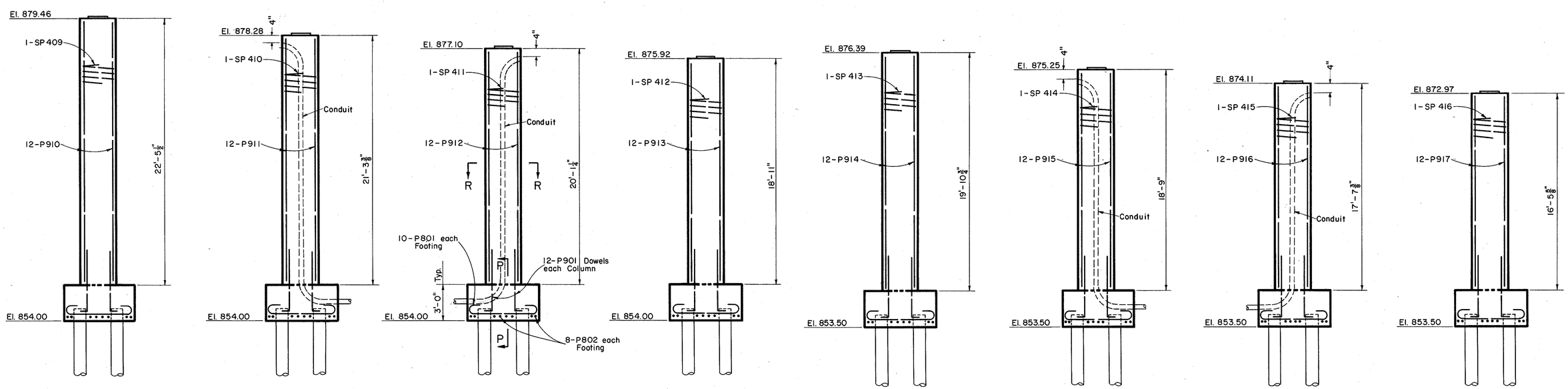
TUSCARAWAS COUNTY
TUS-36-15.93



TYPICAL FOR ALL COLUMNS

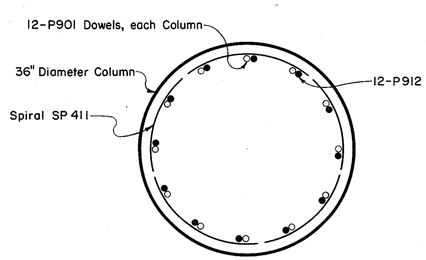
PLAN OF PIER NO. 2 LEFT BRIDGE

PLAN OF PIER NO. 2 RIGHT BRIDGE

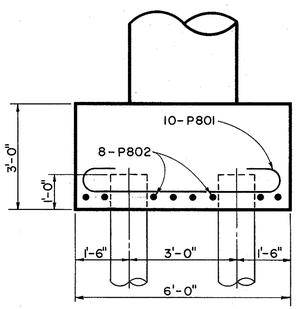


ELEVATION OF PIER NO. 2 LEFT BRIDGE

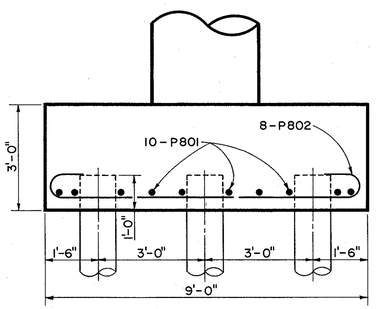
ELEVATION OF PIER NO. 2 RIGHT BRIDGE



SECTION R-R



SECTION Q-Q (TYP.)



SECTION P-P (TYP.)

DETAILS OF LIGHTING are shown in Lighting Plans, beginning with Sheet 489.

CONDUIT EMBEDDED IN PIERS: 1 1/4" ϕ Galvanized Steel, 18" Max. Radius of Bending.

Cover of Reinforcement: 3" bottom of footing; 2" elsewhere.

Max. allowable Load on Pile = 35 Tons.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

PIERS NO. 2

BRIDGE NO. TUS-36-1880 L & R
RELOC. U. S. 36 OVER RECONSTR. U.S. 250
TUSCARAWAS COUNTY
STA. 314 + 32.54
STA. 316 + 55.56

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
G.S.W. N.P.	G.S.W.	E.L.M. E.R.	B.O.L.	H.C.M. 8-17-64	

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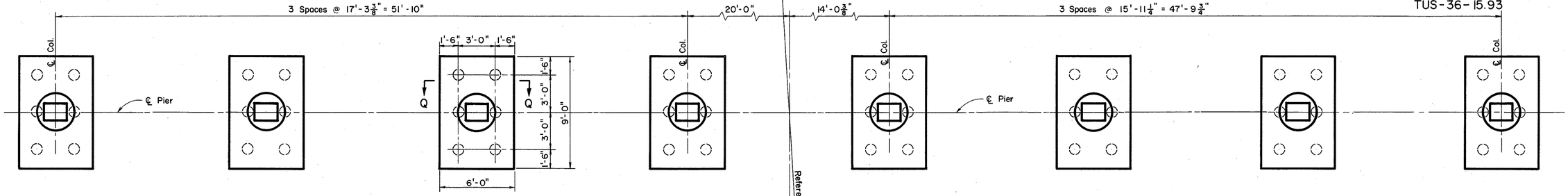
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

552
662

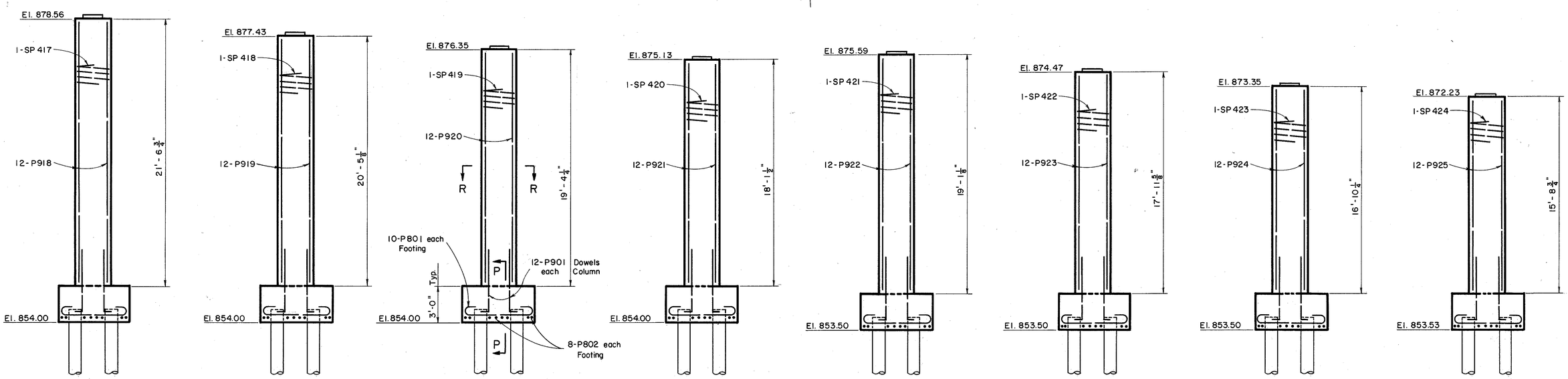
TUSCARAWAS COUNTY
TUS-36-15.93



TYPICAL FOR ALL COLUMNS

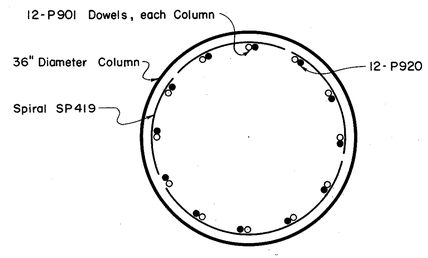
PLAN OF PIER NO. 3 LEFT BRIDGE

PLAN OF PIER NO. 3 RIGHT BRIDGE

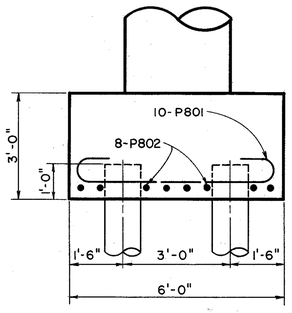


ELEVATION OF PIER NO. 3 LEFT BRIDGE

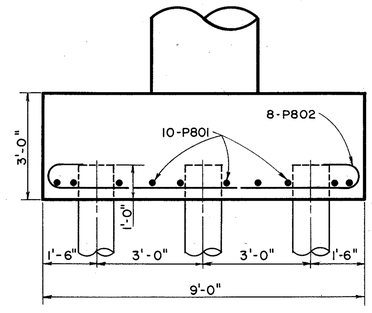
ELEVATION OF PIER NO. 3 RIGHT BRIDGE



SECTION R-R



SECTION Q-Q (TYP.)



SECTION P-P (TYP.)

Cover of Reinforcement : 3" bottom of footing; 2" elsewhere.

Max. allowable Load on Pile = 35 Tons.

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FOR

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

PIERS NO. 3

BRIDGE NO. TUS-36-1880 L & R
RELOC. U. S. 36 OVER RECONSTR. U.S. 250
TUSCARAWAS COUNTY
STA. 314 + 32.54
STA. 316 + 55.56

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
G.S.W. N.P.	G.S.W.	E.L.M. E.R.	B.O.L.	H.C.M. 8-17-64	

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FEB 24 1969

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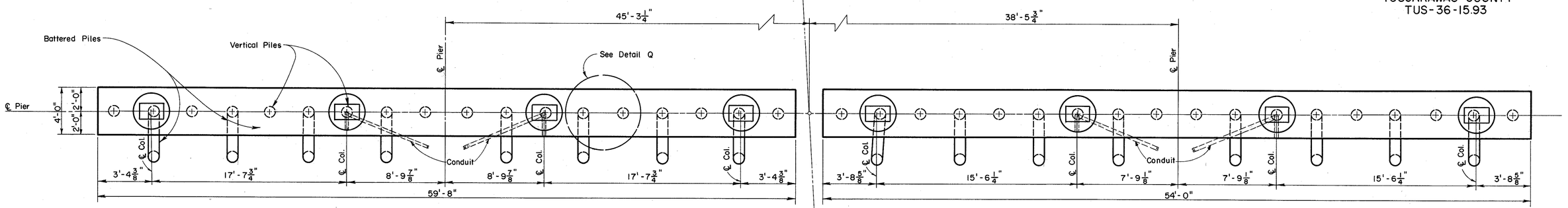
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

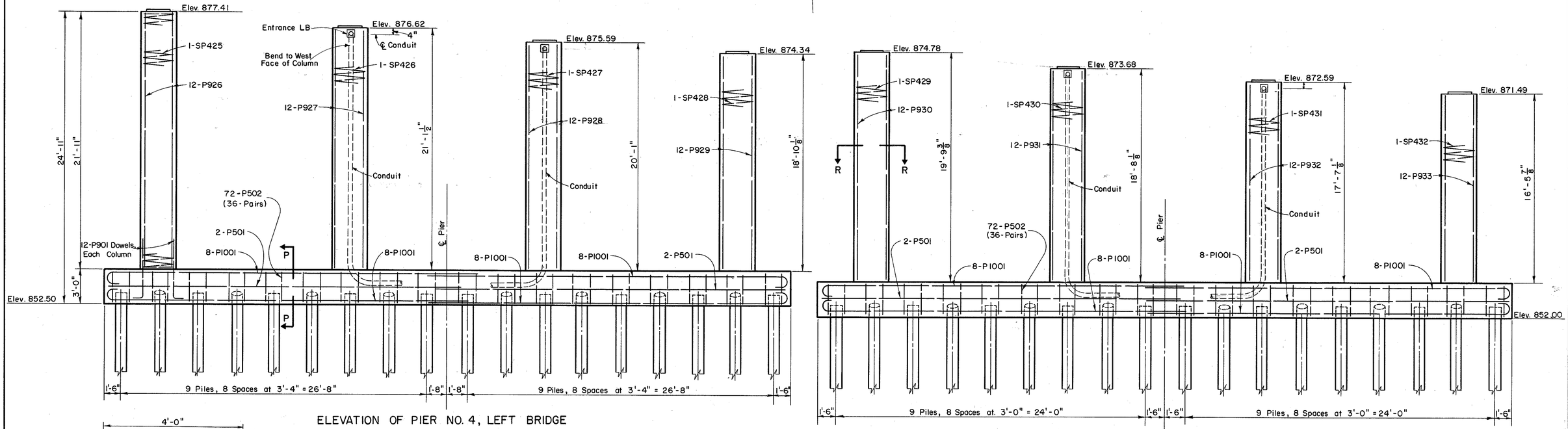
553
662

TUSCARAWAS COUNTY
TUS-36-15.93



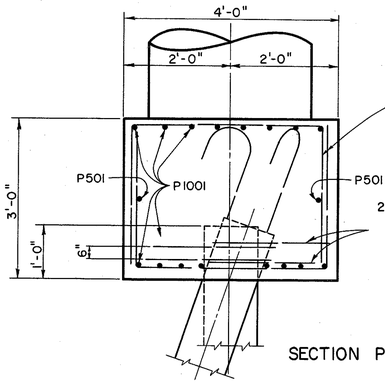
PLAN OF PIER NO. 4, LEFT BRIDGE

PLAN OF PIER NO. 4, RIGHT BRIDGE

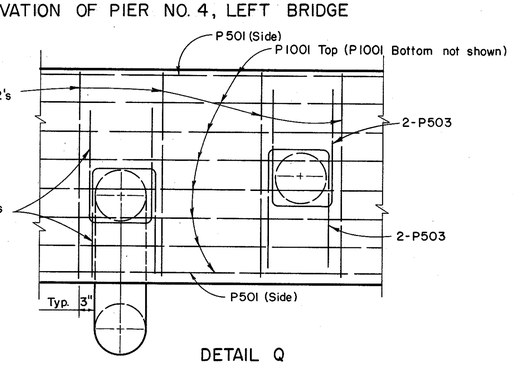


ELEVATION OF PIER NO. 4, LEFT BRIDGE

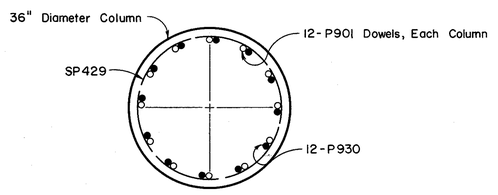
ELEVATION OF PIER NO. 4, RIGHT BRIDGE



SECTION P-P



DETAIL Q



SECTION R-R

COVER OF REINFORCEMENT : 3" Bottom of footing ; 2" elsewhere.

DETAILS OF BEARINGS : Shown on next sheet.

DETAILS OF LIGHTING are shown in Lighting Plans, beginning with Sheet 489.

CONDUITS EMBEDDED IN PIERS: 1¼" Φ Galvanized Steel, 18" Max. Radius of Bending.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

PIERS NO. 4

BRIDGE NO. TUS-36-1880 L.&R.
RELOC. US-36 OVER RECONSTR. US-250
TUSCARAWAS COUNTY
STA. 314+32.54
STA. 316+55.56

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
G.S.W. N.P	G.S.W.	R.E.B. G.F.L.	B.O.L.	H.C.M. 8-17-64	

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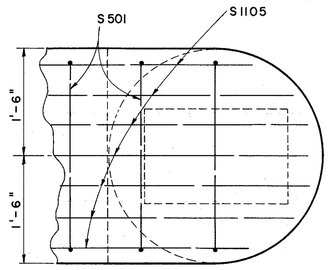
FEB 24 1969

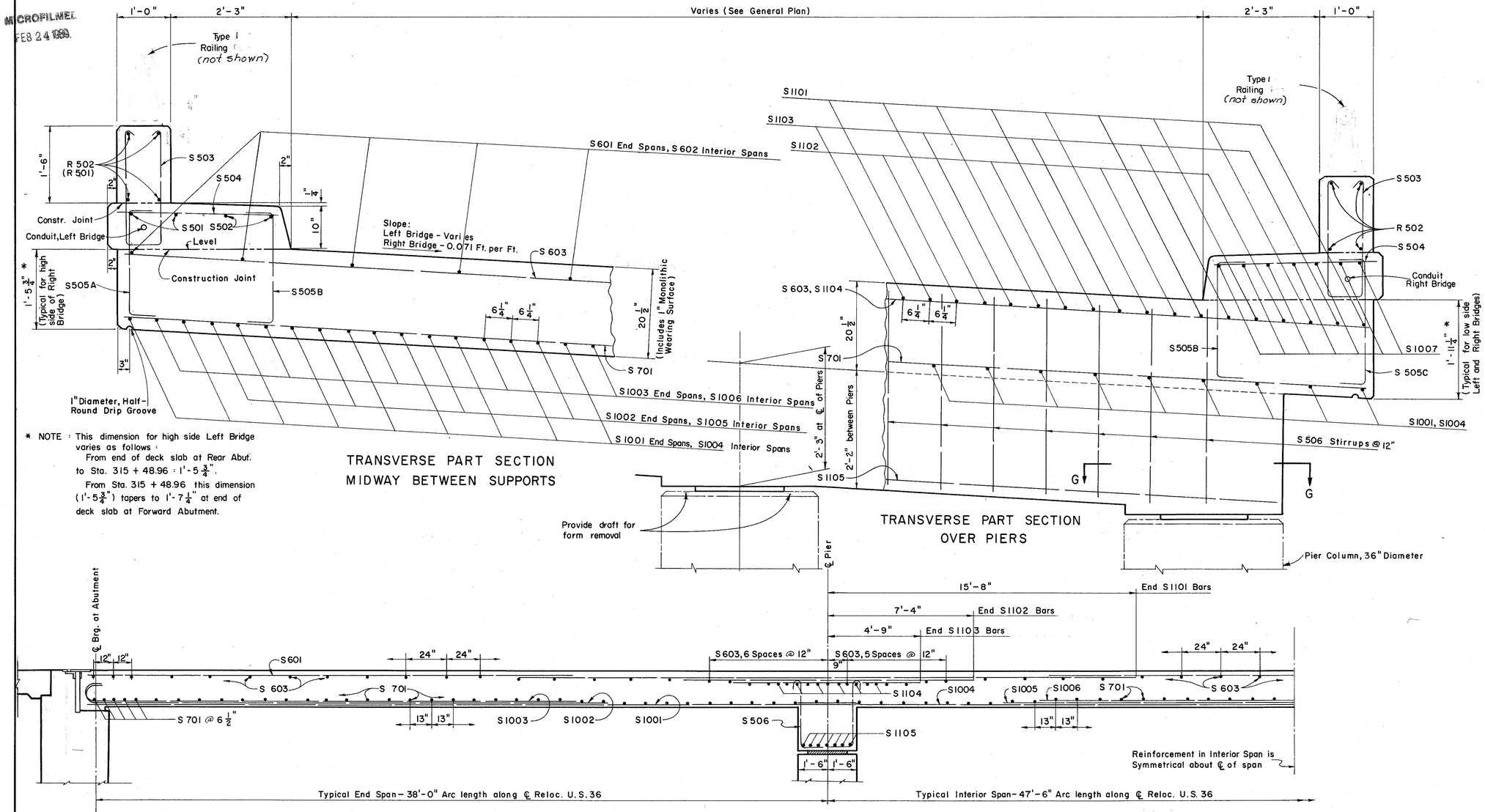
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

554
662

TUSCARAWAS COUNTY
TUS-36-15.93



SECTION G-G



* NOTE : This dimension for high side Left Bridge varies as follows :
From end of deck slab at Rear Abut. to Sta. 315 + 48.96 : 1'-5¾".
From Sta. 315 + 48.96 this dimension (1'-5¾") tapers to 1'-7¼" at end of deck slab at Forward Abutment.

TRANSVERSE PART SECTION
MIDWAY BETWEEN SUPPORTS

TRANSVERSE PART SECTION
OVER PIERS

LONGITUDINAL PART SECTION

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FOR

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

SUPERSTRUCTURE DETAILS

BRIDGE NO. TUS-36-1880 L & R
RELOC. U.S. 36 OVER RECONSTR. U.S. 250
TUSCARAWAS COUNTY
STA. 315 + 65.81

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
N.P.	R.J.A.	F.W.B. E.R.	B.O.L.	H.C.M. 8-17-64	

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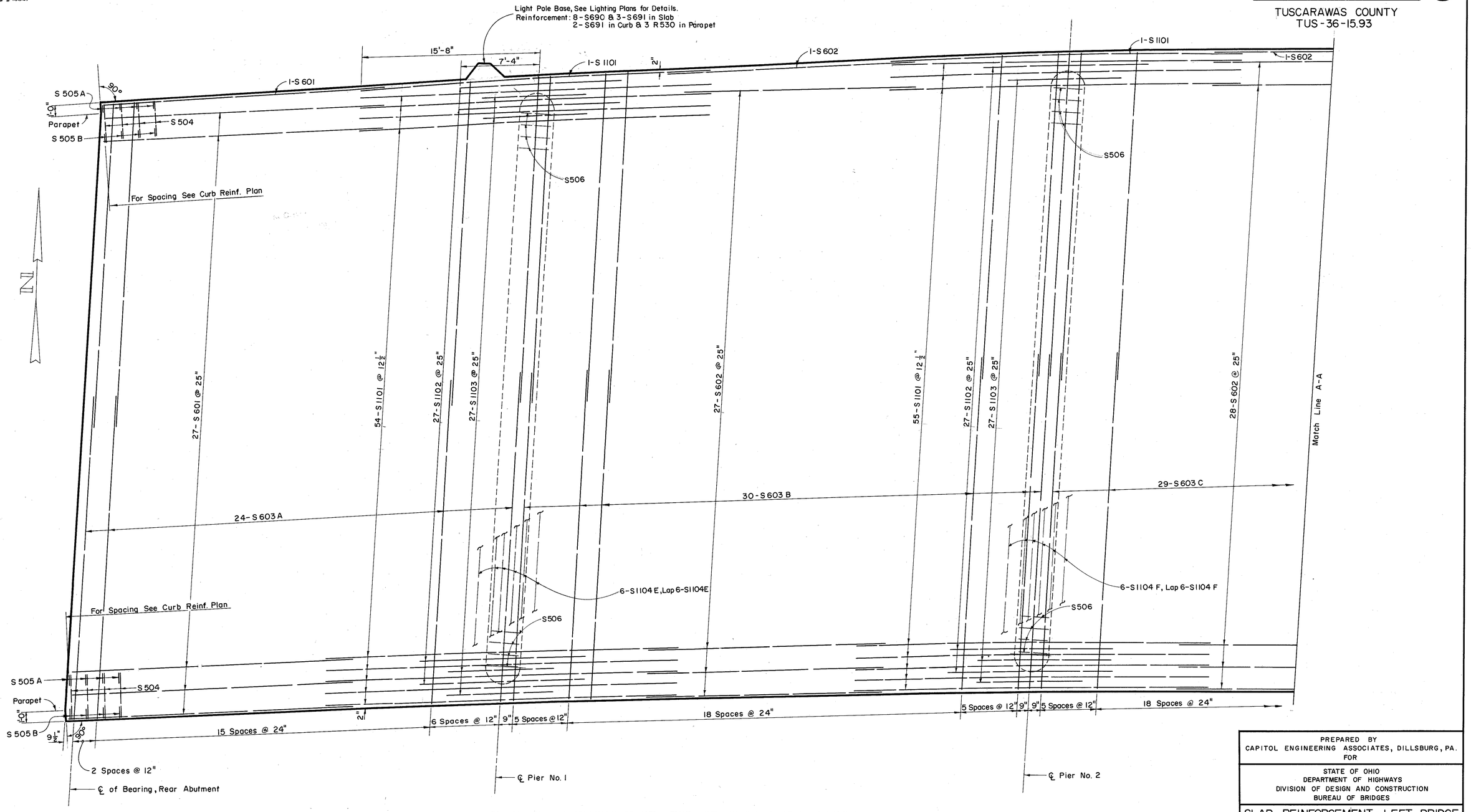
FEB 24 1999

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

555
662

TUSCARAWAS COUNTY
TUS-36-15.93



PLAN OF REINFORCEMENT - TOP OF SLAB LEFT BRIDGE

Longitudinal bars top & bottom of slab of both bridges are parallel to edges of slab adjacent to median.

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FOR

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

SLAB REINFORCEMENT - LEFT BRIDGE

BRIDGE NO. TUS-36-1880 L & R
RELOC. U.S. 36 OVER RECONSTR. U.S. 250
TUSCARAWAS COUNTY
STA. 314 + 32.54
STA. 316 + 55.56

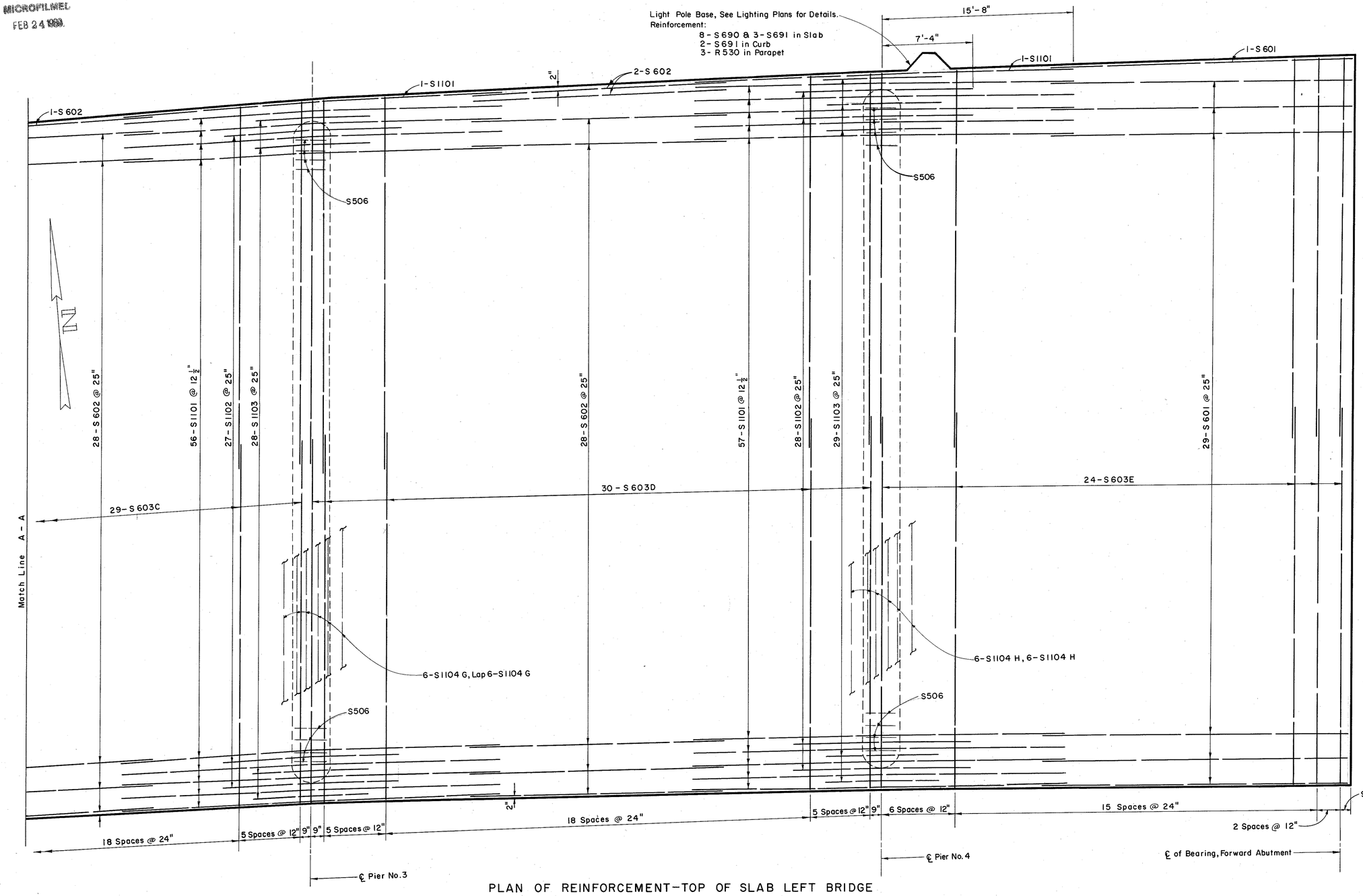
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
N.P. G.S.W.	S.M.	J.S. P.D.	B.O.L.	H.C.M. 8-17-64	

MICROFILMED
FEB 24 1969

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

556
662

TUSCARAWAS COUNTY
TUS-36-15.93



PLAN OF REINFORCEMENT-TOP OF SLAB LEFT BRIDGE

Longitudinal reinforcement in Left Bridge placed parallel to south edge of slab unless otherwise shown.

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DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

SLAB REINFORCEMENT-LEFT BRIDGE

BRIDGE NO. TUS-36-1880 L & R
RELOC. US 36 OVER RECONSTR. U S 250
TUSCARAWAS COUNTY
STA. 314+32.54
STA. 316+55.56

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
N.P. G.S.W.	S.M.	J.S. E.R.	B.O.L.	H.C.M. 8-17-64	

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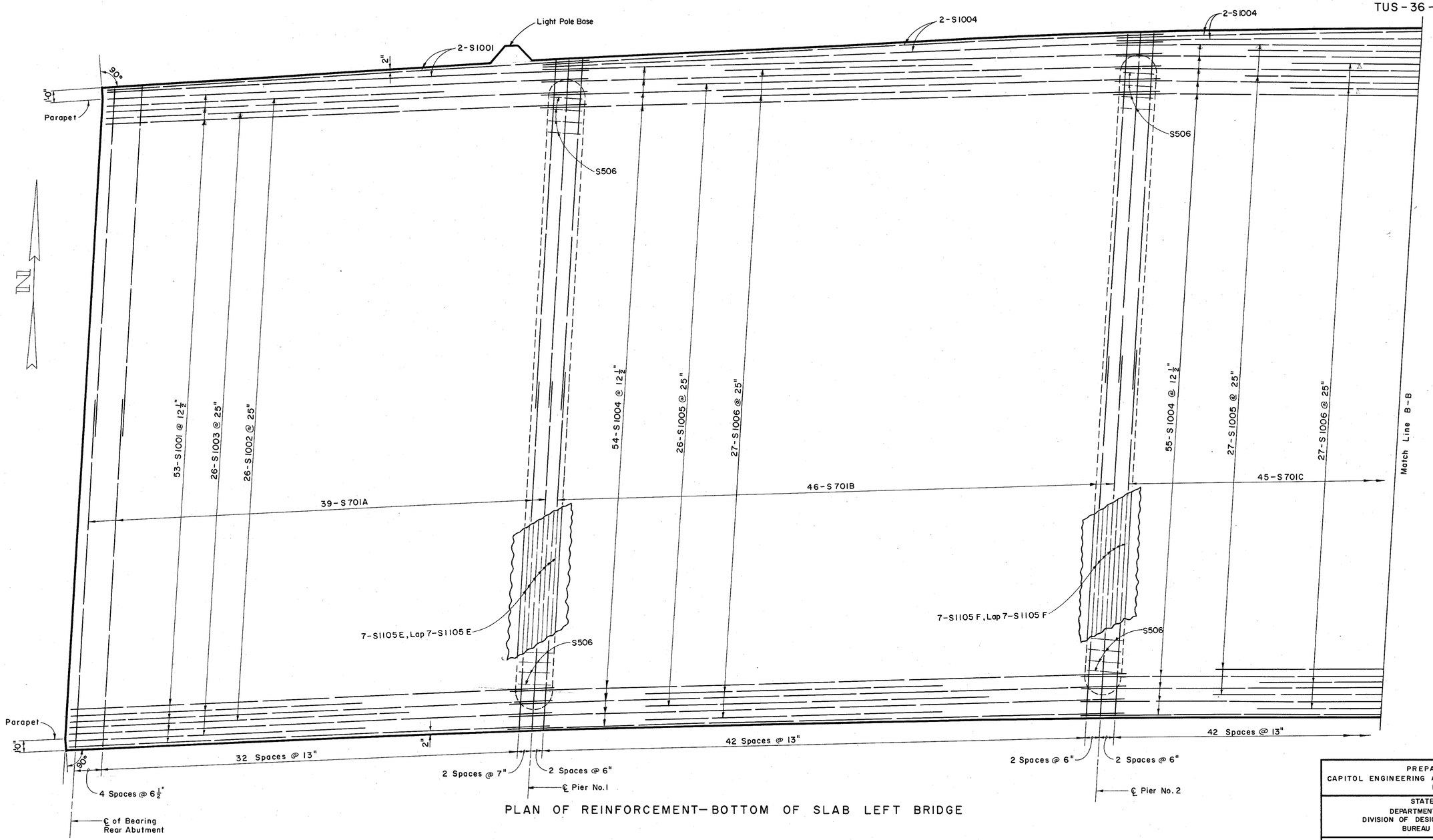
FEB 24 1969

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

557
662

TUSCARAWAS COUNTY
TUS-36-15.93



PLAN OF REINFORCEMENT—BOTTOM OF SLAB LEFT BRIDGE

PREPARED BY
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FOR

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

SLAB REINFORCEMENT-LEFT BRIDGE

BRIDGE NO. TUS-36-1880 L & R
RELOC. U S 36 OVER RECONSTR. U S 250
TUSCARAWAS COUNTY
STA. 314+32.54
STA. 316+55.56

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
N.P. G.S.W.	S.M	J.S. E.R.	B.O.L.	H.C.M. 8-17-64	

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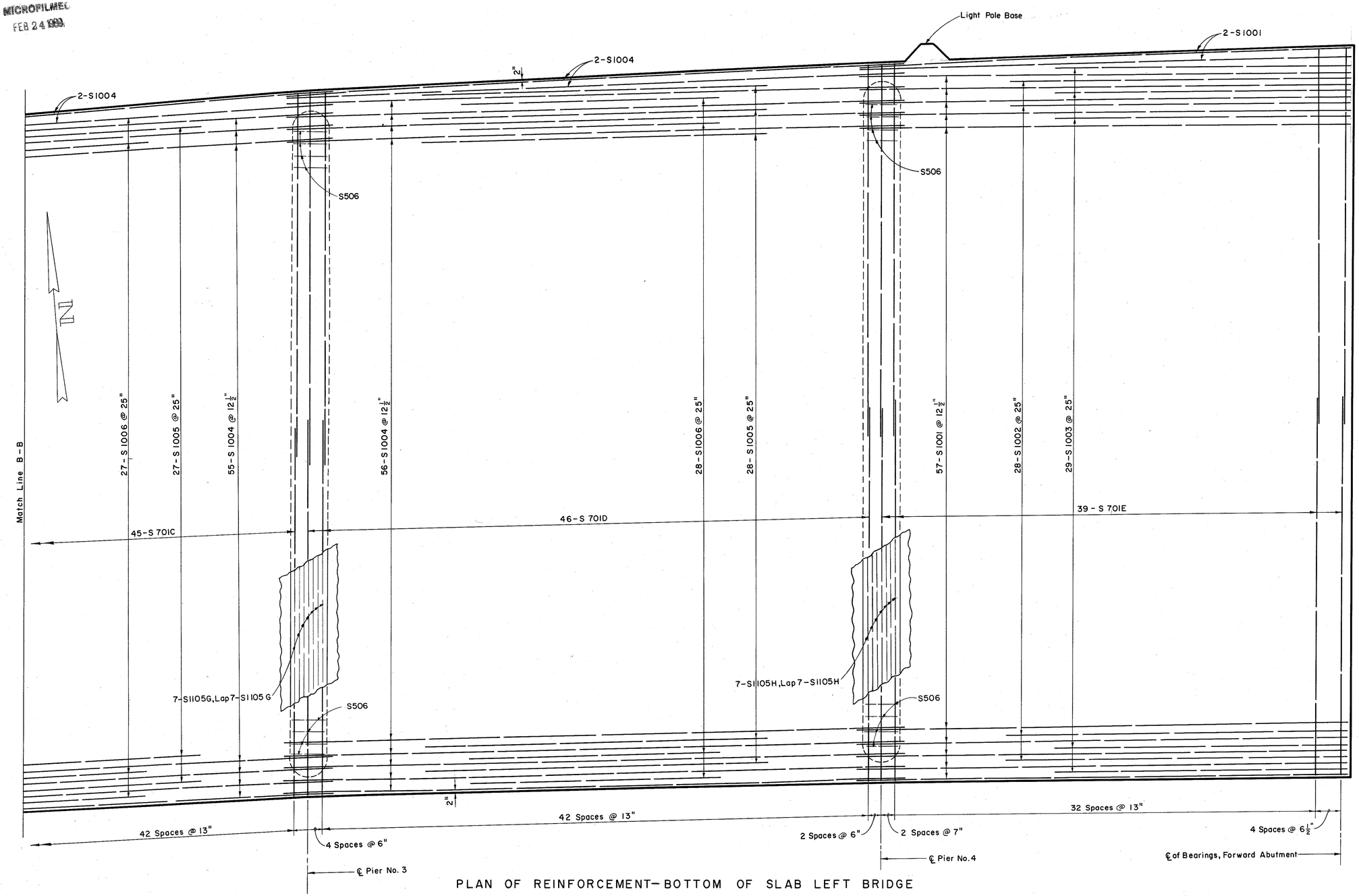
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

558
662

TUSCARAWAS COUNTY
TUS-36-15.93



PLAN OF REINFORCEMENT—BOTTOM OF SLAB LEFT BRIDGE

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

SLAB REINFORCEMENT LEFT BRIDGE

BRIDGE NO. TUS-36-1880L & R
RELOC. US 36 OVER RECONSTR. US 250
TUSCARAWAS COUNTY
STA. 314+32.54
STA. 316+55.56

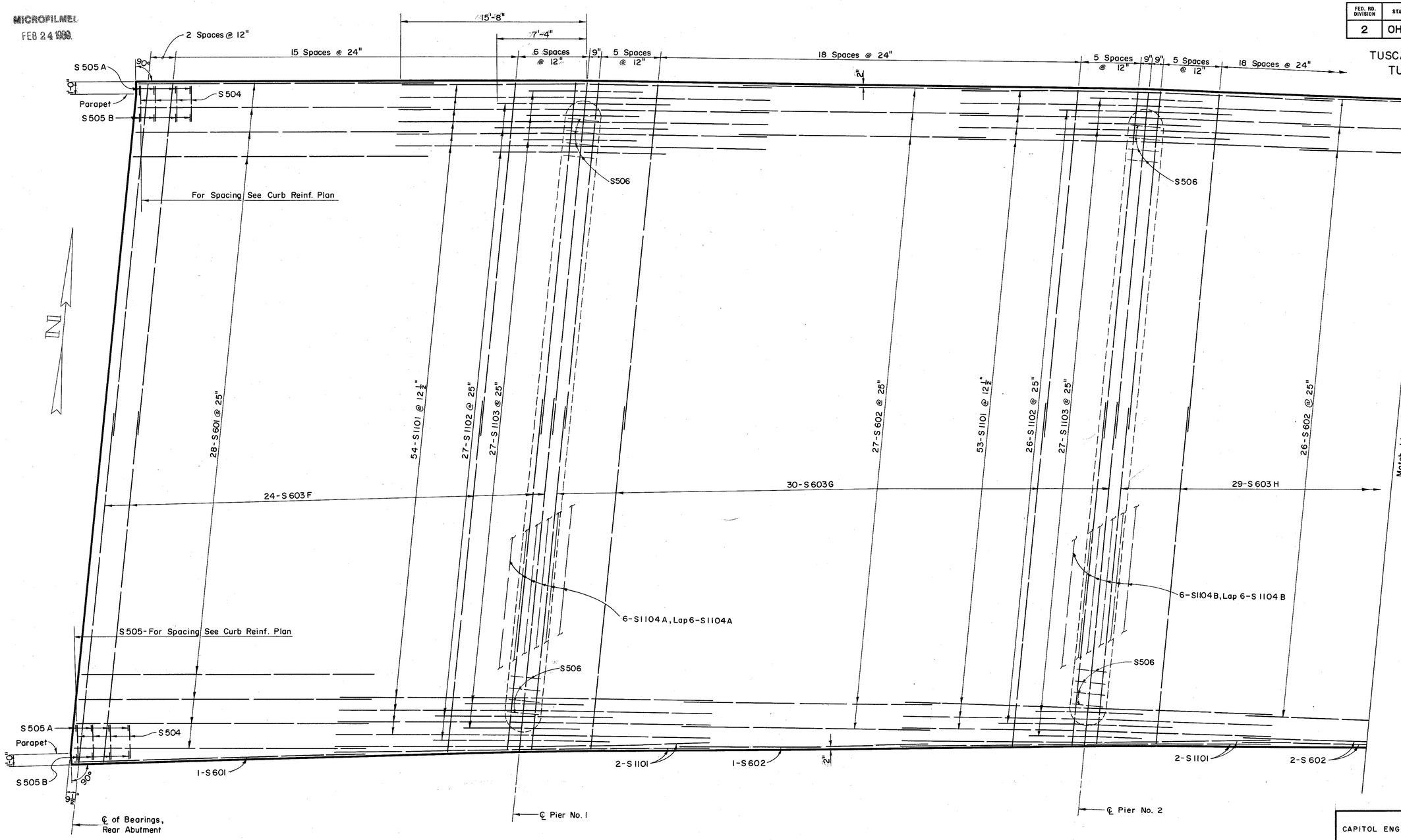
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
N.P. G.S.W.	S.M.	J.S. E.R.	B.O.L.	H.C.M. 8-17-64	

MICROFILMED
FEB 24 1969

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

559
662

TUSCARAWAS COUNTY
TUS-36-15.93



PLAN OF REINFORCEMENT - TOP OF SLAB RIGHT BRIDGE

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

SLAB REINFORCEMENT - RIGHT BRIDGE

BRIDGE NO. TUS-36-1880 L & R
RELOC. U.S. 36 OVER RECONSTR. U.S. 250
TUSCARAWAS COUNTY
STA. 314 + 32.54
STA. 316 + 55.56

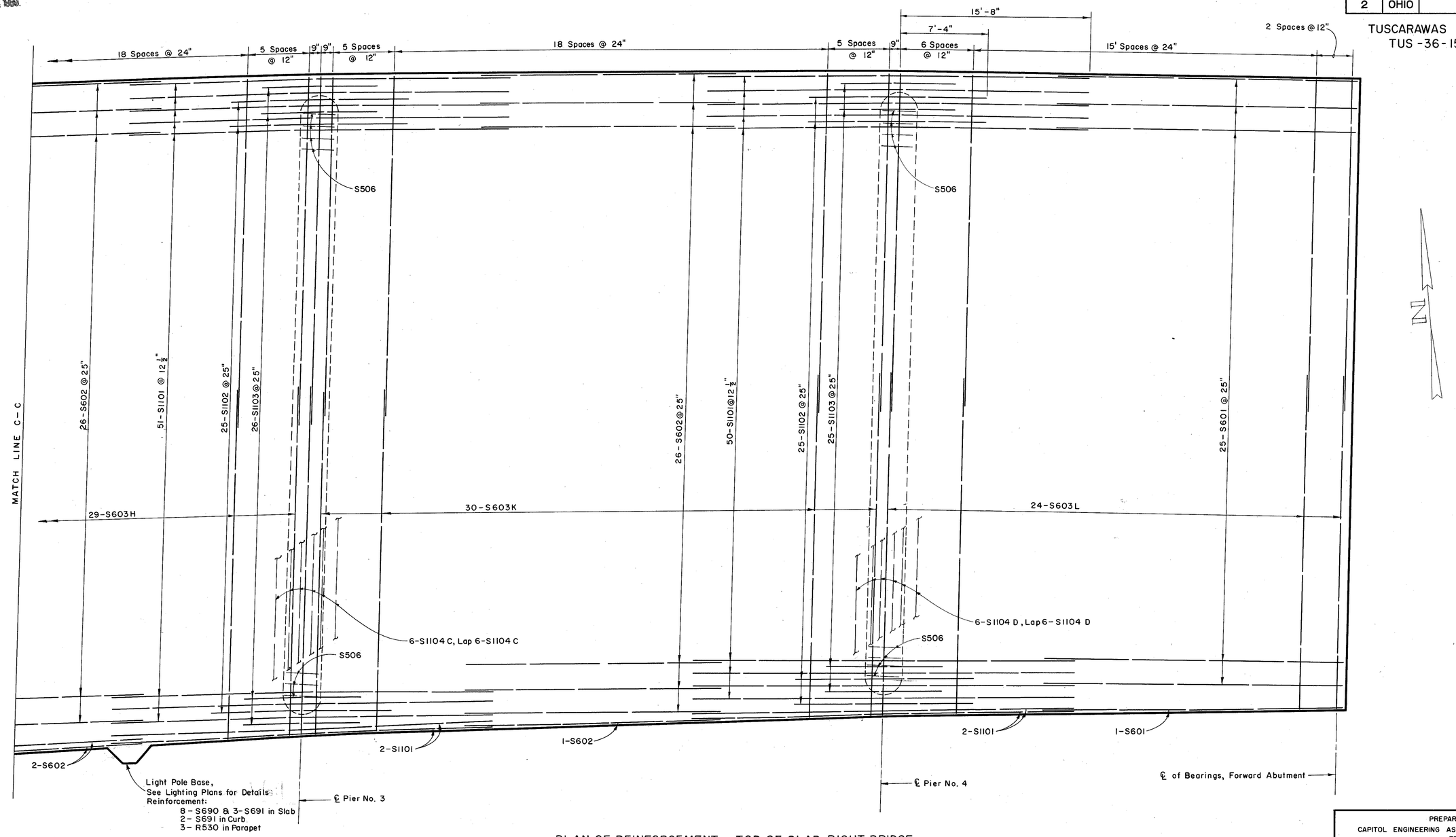
DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
N.P. G.S.W.	S.M.	J.S. P.D.	B.O.L.	H.C.M. 8-17-64	

MICROFILMED
FEB 24 1990

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

560
662

TUSCARAWAS COUNTY
TUS-36-15.93



PLAN OF REINFORCEMENT – TOP OF SLAB RIGHT BRIDGE

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

SLAB REINFORCEMENT – RIGHT BRIDGE

BRIDGE NO. TUS-36-1880 L. & R.
RELOC. U.S. 36 OVER RECONSTR. U.S. 250
TUSCARAWAS COUNTY
STA. 314+32.54
STA. 316+55.56

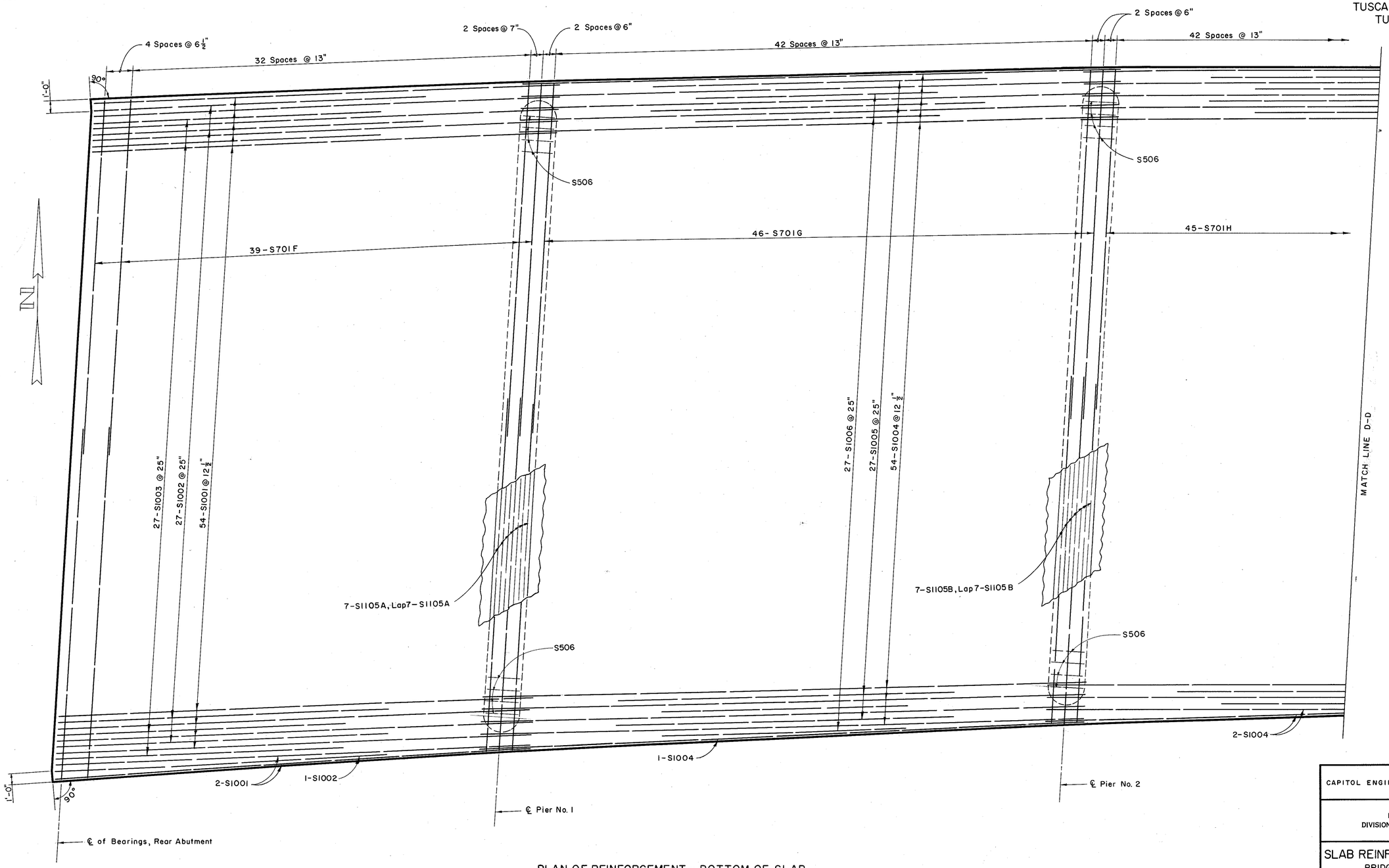
DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
N.P. G.S.W.	S.M.	J.S. G.F.L.	B.O.L.	H.C.M. 8-17-64	

MICROFILMED
FEB 24 1969

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

561
662

TUSCARAWAS COUNTY
TUS-36-15.93



PLAN OF REINFORCEMENT – BOTTOM OF SLAB
RIGHT BRIDGE

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

SLAB REINFORCEMENT - RIGHT BRIDGE

BRIDGE NO. TUS-36-1880L. & R.
RELOC. U.S. 36 OVER RECONSTR. U.S. 250
TUSCARAWAS COUNTY
STA. 314+32.54
STA. 316+55.56

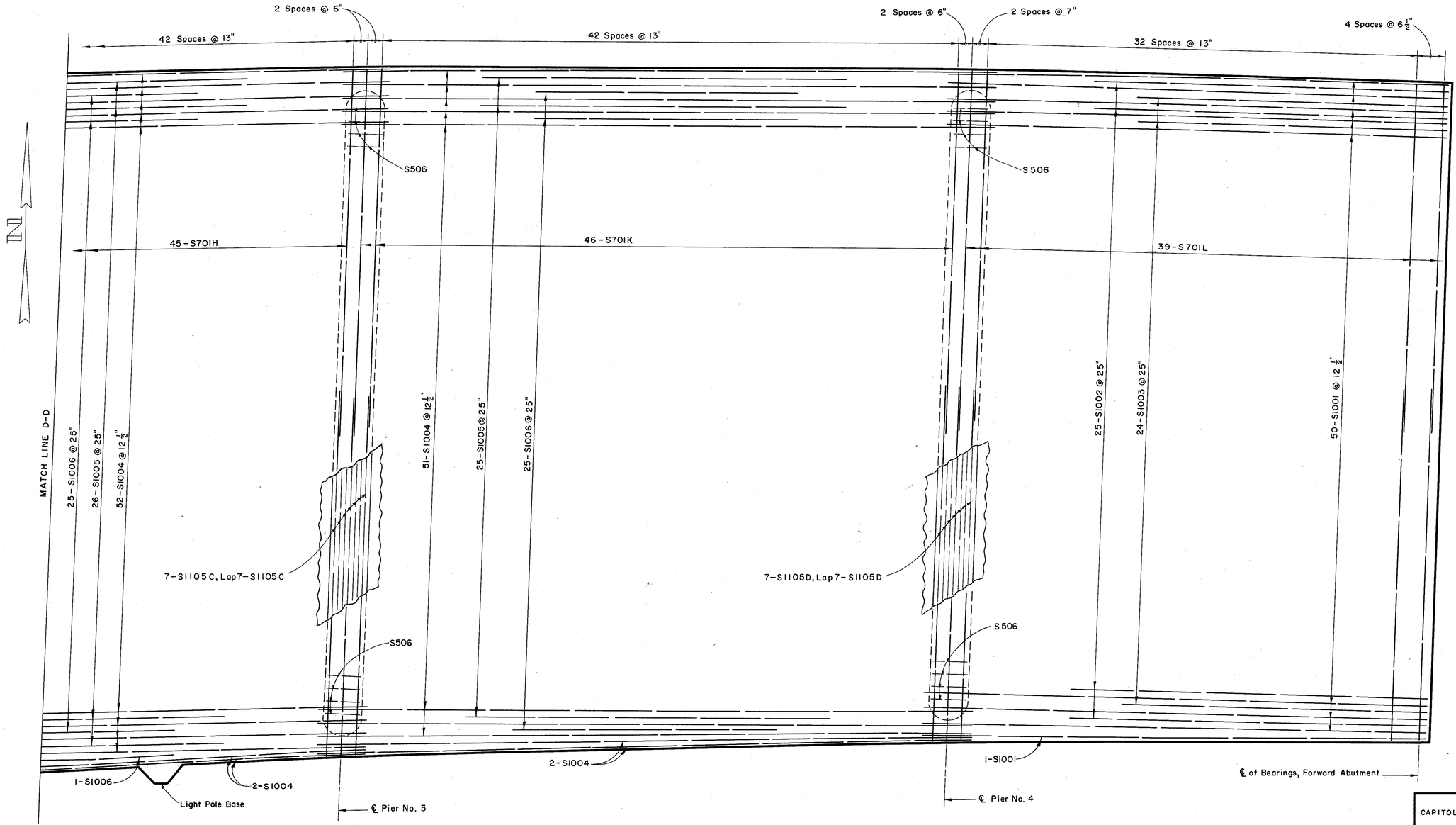
DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
N.P. G.S.W.	S.M.	J.S. G.F.L.	B.O.L.	H.C.M. 8-17-64	

MICROFILMED
FEB 24 1999

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

562
662

TUSCARAWAS COUNTY
TUS-36-15.93



PLAN OF REINFORCEMENT – BOTTOM OF SLAB
RIGHT BRIDGE

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

SLAB REINFORCEMENT – RIGHT BRIDGE

BRIDGE NO. TUS-36-1880 L. & R.
RELOC. U.S. 36 OVER RECONSTR. U.S. 250
TUSCARAWAS COUNTY STA. 314+32.54
STA. 316+55.56

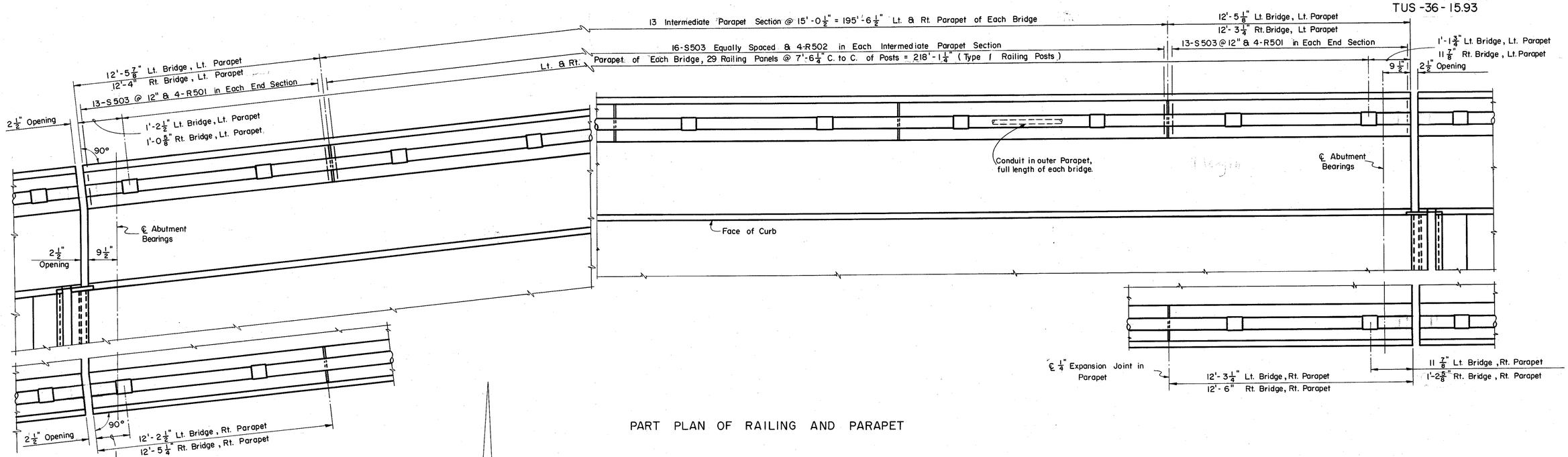
DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
N.P. G.S.W.	S.M.	J.S. G.F.L.	B.O.L.	H.C.M. 8-17-64	

MICROFILMED
FEB 24 1969

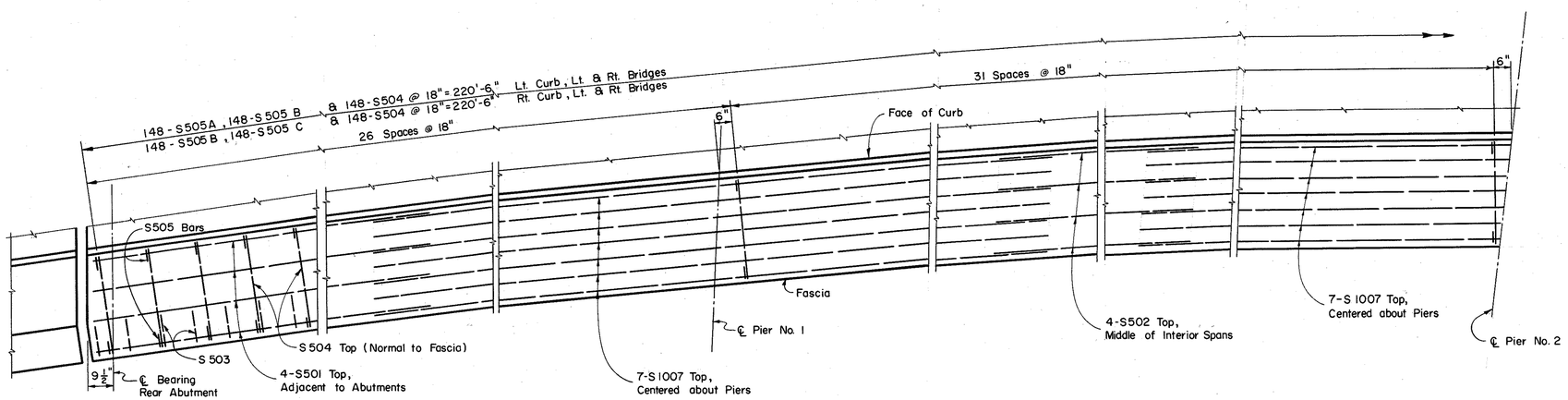
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

563
662

TUSCARAWAS COUNTY
TUS-36-15.93



PART PLAN OF RAILING AND PARAPET



PART PLAN OF CURB

REFERENCE shall be made to Standard Drawing Number BR-1-65, sheet 1, dated 2-1-65 for details of railing.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

DETAILS OF CURB, PARAPET & RAILING

BRIDGE NO. TUS-36-1880 L & R.
RELOC. U.S.-36 OVER RECONSTR. U.S-250
TUSCARAWAS COUNTY
STA. 314 + 32.54
STA. 316 + 55.56

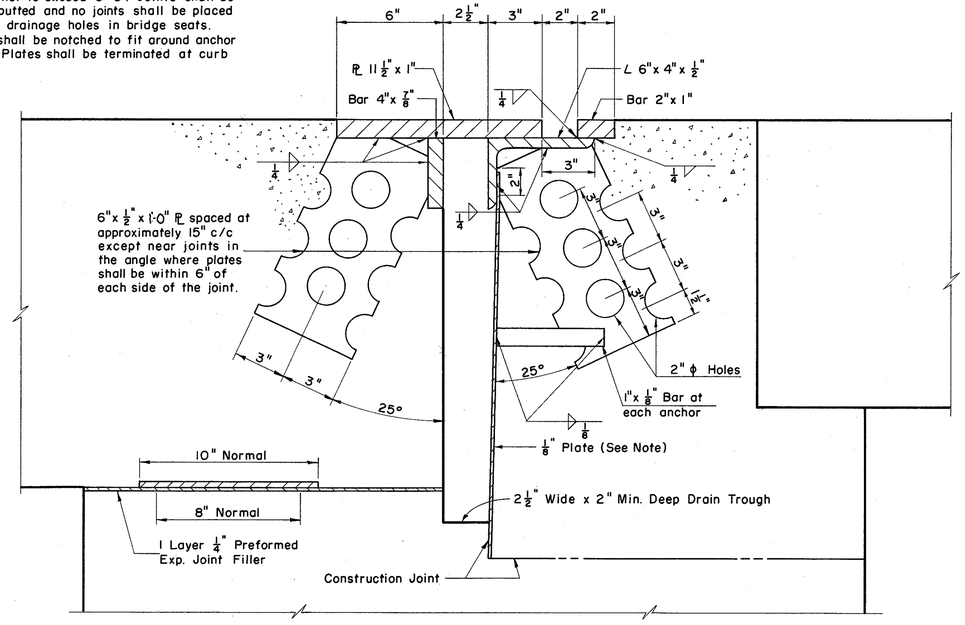
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
S.M. J.V.R.	S.J.M.	M.J.F. B.A.B.	B.O.L.	H.C.M. 8-17-64	

MICROFILMED
FEB 24 1969

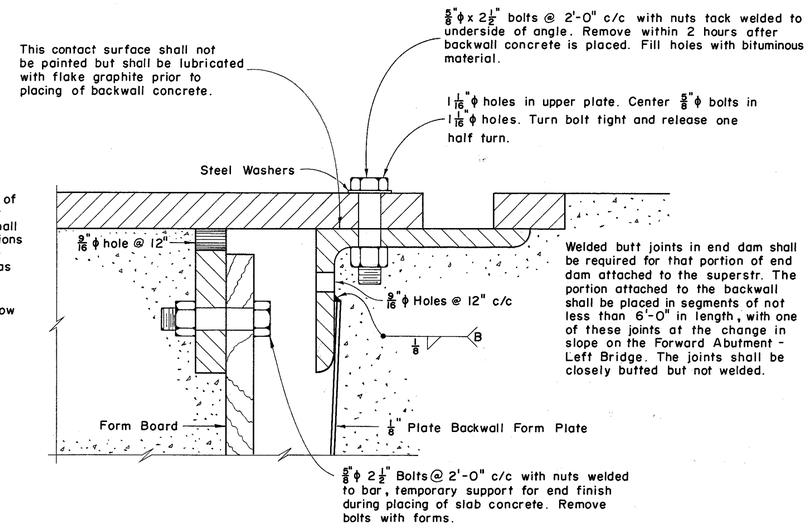
FED. RD. DIVISION	STATE	PROJECT		564
2	OHIO			662

TUSCARAWAS COUNTY
TUS-36-15.93

NOTE: $\frac{1}{8}$" Backwall form plate shall be provided in lengths not to exceed 6'-0". Joints shall be tightly butted and no joints shall be placed opposite drainage holes in bridge seats. Plates shall be notched to fit around anchor plates. Plates shall be terminated at curb plates.



ROADWAY END FINISH

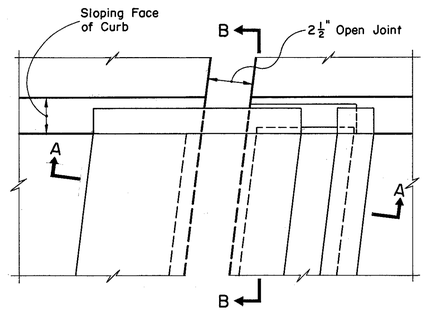


Omit shop coat on all portions of end finish. Portions in contact with steel or with concrete shall not be painted. All other portions shall be cleaned and given the shop coat in the field as well as the two field coats.

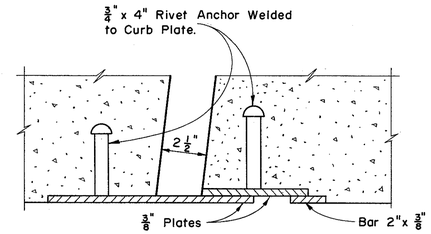
Top of slab form shall be below ⅝" holes.

Welded butt joints in end dam shall be required for that portion of end dam attached to the superstr. The portion attached to the backwall shall be placed in segments of not less than 6'-0" in length, with one of these joints at the change in slope on the Forward Abutment - Left Bridge. The joints shall be closely butted but not welded.

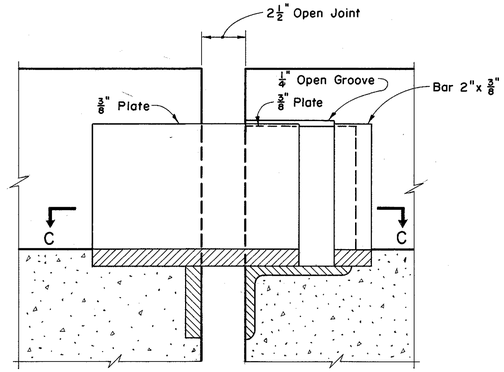
END FINISH DETAILS



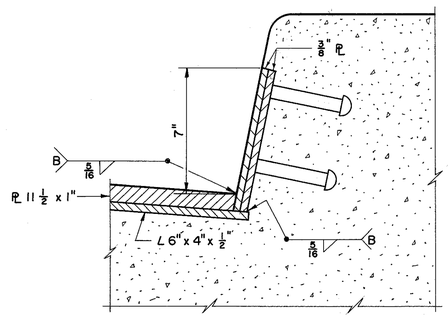
PART PLAN



SECTION C-C



SECTION A-A



SECTION B-B

'B' Indicates Class B Manual Welds.

CURB PLATE DETAILS

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

DETAILS OF END DAM

BRIDGE NO. TUS-36-1880 L & R
RELOC. U.S. 36 OVER RECONSTR. U.S. 250
TUSCARAWAS COUNTY STA. 314+32.54
STA. 316+55.56

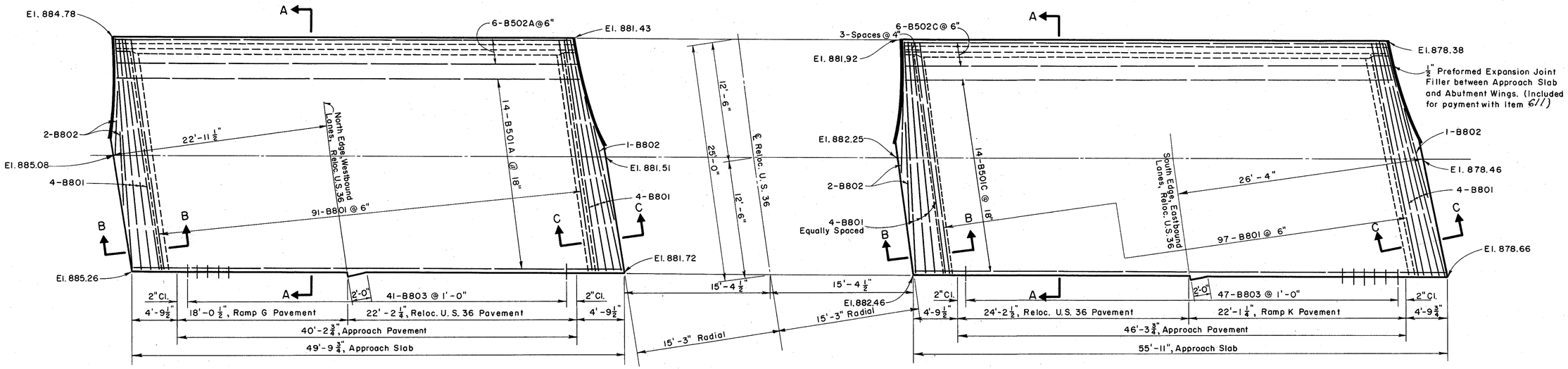
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
R.J.A.	R.J.A.	J.S. P.D.	B.O.L.	H.C.M. 8-17-64	

MICROFILMED
FEB 24 1969

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

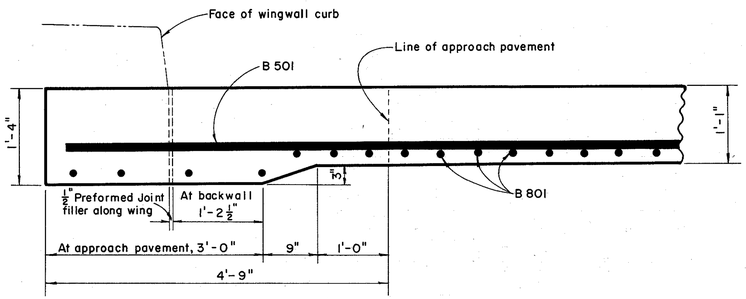
565
662

TUSCARAWAS COUNTY
TUS-36-15.93

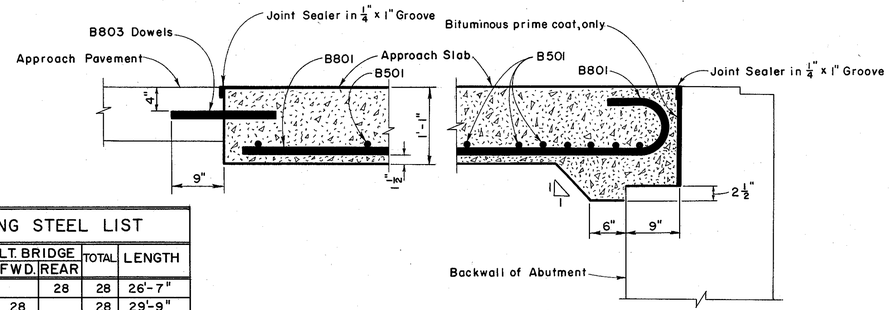


PLAN OF REAR APPROACH SLAB – LEFT BRIDGE

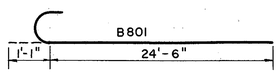
PLAN OF REAR APPROACH SLAB – RIGHT BRIDGE



SECTION B-B SHOWN
SECTION C-C OPPOSITE HAND



SECTION A-A



REINFORCEMENT included for payment with Item 611

REINFORCING STEEL LIST

MARK	RT. BRIDGE FWD.	RT. BRIDGE REAR	LT. BRIDGE FWD.	LT. BRIDGE REAR	TOTAL	LENGTH
B 501A				28	28	26'-7"
B 501B			28		28	29'-9"
B 501C		28			28	29'-0"
B 501D	28				28	24'-11"
B 502A				6	6	25'-3"
B 502B			6		6	27'-8"
B 502C		6			6	26'-8"
B 502D	6				6	23'-8"
B 801	93	105	109	99	406	25'-7"
B 802	4	3	4	3	14	8'-0"
B 803	39	47	49	41	176	1'-6"

Bars are straight, except B 801

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

REAR APPROACH SLABS

BRIDGE NO. TUS-36-1880 L&R.
U. S. 36 OVER RECONSTR. U.S. 250
TUSCARAWAS COUNTY STA. 314+32.54 STA. 316+55.56

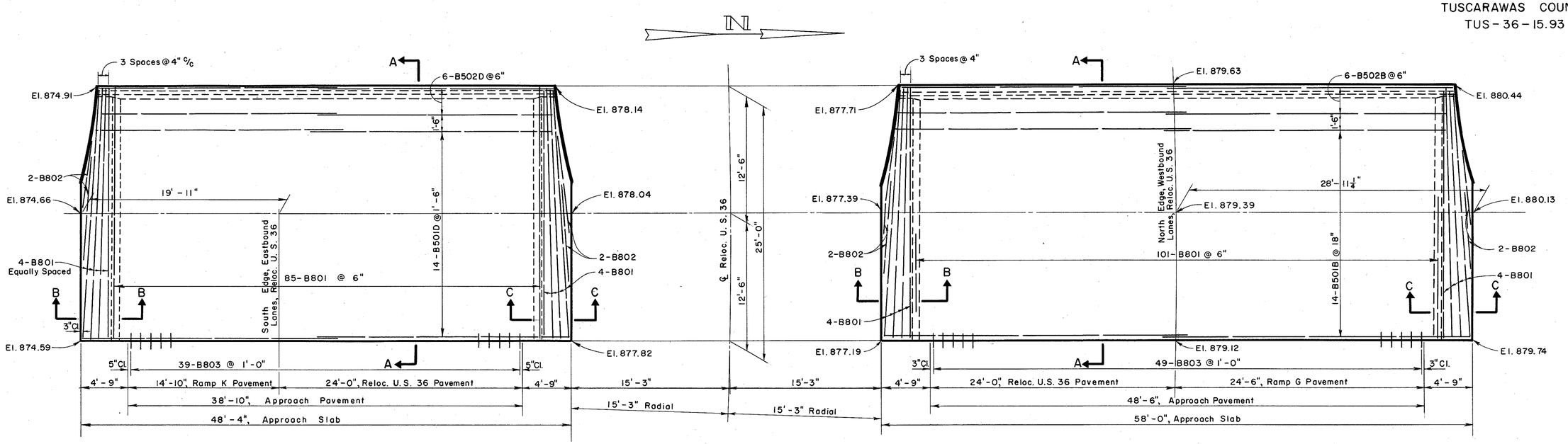
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
S.J.M.	S.J.M.	R.E.B. G.F.L.	B.O.L.	H.C.M. 8-17-64	

MICROFILMED
FEB 24 1999

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

566
662

TUSCARAWAS COUNTY
TUS-36-15.93



PLAN OF FORWARD APPROACH SLAB - RIGHT BRIDGE

PLAN OF FORWARD APPROACH SLAB - LEFT BRIDGE

See preceding sheet for additional details.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

FORWARD APPROACH SLABS

BRIDGE NO. TUS-36-1880 L&R.
U.S. 36 OVER RECONSTR. U.S. 250
TUSCARAWAS COUNTY STA. 314+32.54
STA. 316+55.56

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
S.J.M.	S.J.M.	L.C.Z. G.F.L.	B.O.L.	H.C.M. 8-17-64	

MICROFILMED
FEB 24 1999

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

567
662

TUSCARAWAS COUNTY
TUS-36-15.93

REINFORCING STEEL LIST

ABUTMENTS

MARK	LT. BRIDGE REAR	LT. BRIDGE FWD.	RT. BRIDGE REAR	RT. BRIDGE FWD.	TOTAL	LENGTH	WEIGHT LEFT	WEIGHT RIGHT	SHP.	VARIES BY	NO.
A501	25				25	8'-1" to 9'-5"	228		B	4"	5
A502	52	52	52	52	208	9'-11"	1075	1075	B		
A503	34	34	34	34	136	6'-0"	426	426	B		
A504	18	12	18	12	60	7'-5"	232	232	B		
A505	25				25	7'-10" to 9'-2"	222		B	4"	5
A506	10				10	26'-10"	2				
A507	10				10	29'-7"	309				
A508	3				3	25'-6"	80				
A509	3				3	28'-0"	88				
A510	11	11	11	11	44	5'-9"	132	132	B		
A511	12	10	12	10	44	6'-4"	145	145			
A512	4	4	4	4	16	8'-0"	67	67			
A513	4	4	4	4	16	11'-6"	96	96			
A514	8	8	8	8	32	9'-6"	159	159			
A515	2	2	2	2	8	3'-6"	15	15			
A515X	2	2	2	2	8	4'-6"	19	19			
A516	4	4	4	4	16	4'-0"	33	33			
A517	12	12	12	12	48	3'-9" to 4'-9"	106	106		6"	16
A518	8	8	8	8	32	3'-6"	58	58			
A519	10		10		20	11'-5"	119	119			
A520	46	46	46	46	184	7'-10"	752	752	B		
A521A	8	8	8	8	32	2'-9"	46	46			
A521B	8	8	8	8	32	2'-0" to 2'-6"	38	38		2"	4
A521C	6	6	6	6	24	1'-3" to 1'-9"	19	19		3"	3
A522A	8	8	8	8	32	7'-5"	124	124	B		
A522B	8	8	8	8	32	6'-8" to 7'-2"	115	115	B	2"	4
A522C	6	6	6	6	24	5'-11" to 6'-5"	77	77	B	3"	3
A523			25		25	7'-7" to 8'-11"		215	B	4"	5
A524			25		25	7'-10" to 9'-2"		222	B	4"	5
A525			10		10	30'-0"		313			
A526			10		10	29'-4"		306			
A527			3		3	29'-0"		91			
A528			3		3	28'-0"		88			
A529				10	10	27'-0"		282			
A530				10	10	26'-0"		271			
A531				3	3	26'-0"		81			
A532				3	3	25'-9"		81			
A533				25	25	7'-6" to 8'-10"		213	B	4"	5
A534				25	25	7'-6" to 8'-10"		213	B	4"	5
A535		25			25	8'-0" to 9'-8"	230		B	5"	5
A536		25			25	8'-3" to 8'-11"	224		B	2"	5
A537		10			10	31'-9"	331				
A538		10			10	29'-6"	308				
A539		3			3	30'-3"	95				
A540		3			3	29'-0"	91				
A541		10		10	20	10'-8"	111	111			
A542		10		10	20	9'-4"	97	97			
A543	10		10		20	9'-5"	98	98			
A544	7	7	7	7	28	7'-2"	105	105	B		
A601	52	52	52	52	208	9'-10"	1536	1536	B		
A602	25				25	8'-3" to 9'-7"	335		B	4"	5
A603	25				25	8'-0" to 9'-4"	325		B	4"	5
A604	49	54	52	46	201	9'-1"	1405	1337	B		
A605			25		25	8'-0" to 9'-4"		325	B	4"	5
A606			25		25	7'-9" to 9'-1"		316	B	4"	5
A607				25	25	7'-8" to 9'-0"		313	B	4"	5
A608				25	25	7'-8" to 9'-0"		313	B	4"	5
A609		25			25	8'-2" to 9'-10"		338	B	5"	5
A610		25			25	8'-5" to 9'-1"		328	B	2"	5
A801	8				8	26'-9"	571				
A802	8				8	29'-0"	619				
A803	8	8	8	8	32	8'-8"	370	370	B		
A804	4	4	4	4	16	9'-9"	208	208			
A805	12	12	12	12	48	8'-0"	513	513			
A806			8		8	30'-6"		651			
A807			8		8	31'-0"		662			
A808				8	8	27'-10"		595			
A809				8	8	28'-0"		598			
A810		8			8	32'-0"	634				
A811		8			8	30'-6"	651				
A812	4	4	4	4	16	7'-6"	160	160			

PIERS

MARK	1 LT.	1 RT.	2 LT.	2 RT.	3 LT.	3 RT.	4 LT.	4 RT.	TOTAL	LENGTH	WEIGHT LT. BRIDGE	WEIGHT RT. BRIDGE	SHP.
P501	4	4					4	4	16	30'-4"	253	253	
P502	72	72					72	72	288	8'-7"	1,289	1,289	B
P503	72	72					72	72	288	4'-11"	739	739	B
P801			40	40	40	40			160	7'-10"	1,672	1,672	B
P802			32	32	32	32			128	10'-10"	1,851	1,851	B
P901	48	48	48	48	48	48	48	48	384	5'-9"	3,754	3,754	B
P902	12								12	21'-10"	891		
P903	12								12	20'-9"	847		
P904	12								12	19'-7"	799		
P905	12								12	18'-5"	752		
P906		12							12	19'-5"		792	
P907		12							12	18'-3"		745	
P908		12							12	17'-1"		697	
P909		12							12	15'-11"		650	
P910			12						12	22'-2"	905		
P911			12						12	21'-0"	857		
P912			12						12	19'-10"	809		
P913			12						12	18'-8"	762		
P914				12					12	19'-7"		799	
P915				12					12	18'-6"		755	
P916				12					12	17'-4"		707	
P917				12					12	16'-2"		660	
P918					12				12	21'-3"	867		
P919					12				12	20'-3"	826		
P920					12				12	19'-1"	778		
P921					12				12	17'-10"	727		
P922						12			12	18'-10"		768	
P923						12			12	17'-8"		721	
P924						12			12	16'-7"		676	
P925						12			12	15'-5"		629	
P926							12		12	21'-8"	884		
P927							12		12	20'-10"	850		
P928							12		12	19'-10"	809		
P929							12		12	18'-7"	758		
P930								12	12	19'-6"		796	
P931								12	12	18'-5"		752	
P932								12	12	17'-4"		707	
P933								12	12	16'-3"		663	
P1001	32	32					32	32	128	32'-9"	9,019	9,019	B

RAILING

MARK	TOTAL	LENGTH	WEIGHT
R501	32	11'-10"	Included with Item 517 for Payment
R502	208	14'-8"	
R505	32	9'-8"	
R530	12	6'-4"	
R503**	24	4'-2"	
R504**	16	5'-4"	

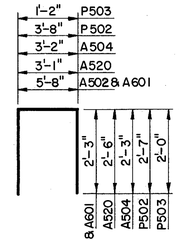
REPLACEMENT BARS

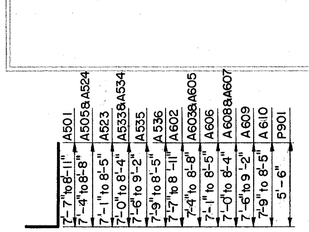
MARK	NO.	LENGTH	SHP
RE400	1	5'-3"	
RE500	2	5'-7"	
RE600	3	5'-11"	
RE700	3	6'-3"	
RE800	1	6'-6"	
RE1000	10	7'-3"	
RE1100	7	7'-7"	

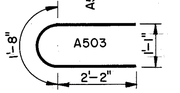
SUPERSTRUCTURE

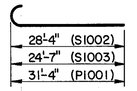
MARK	BRIDGE LT.	BRIDGE RT.	TOTAL	LENGTH	WEIGHT LT. BRIDGE	WEIGHT RT. BRIDGE	SHP.
S501	16	16	32	27'-1"	452	452	
S502	24	24	48	24'-6"	613	613	
S503	468	468	936	5'-9"	2807	2,807	B
S504	296	296	592	3'-0"	926	926	
S505A	148	148	296	3'-0"	463	463	B
S505B	296	296	592	3'-2"	978	978	B
S505C	148	148	296	3'-5"	527	527	B
S601	58	55	113	24'-10"	2,163	2,051	
S602	87	83	170	21'-0"	2,744	2618	
S603A	48		48	28'-11"	2085		
S603B	60		60	29'-5"	2,651		
S603C	58		58	30'-0"	2,613		
S603D	60		60	30'-6"	2,749		
S603E	48		48	31'-0"	2,235		
S603F		48	48	29'-11"		2,157	
S603G		60	60	29'-4"		2,644	
S603H		58	58	28'-8"		2,497	
S603K		60	60	28'-0"		2,523	
S603L		48	48	27'-4"		1,971	
S701A	78		78	29'-2"	4,650		
S701B	92		92	29'-8"	5,579		
S701C	90		90	30'-3"	5,565		
S701D	92		92	30'-9"	5,782		
S701E	78		78	31'-3"	4,982		
S701F		78	78	30'-2"		4,810	
S701G		92	92	29'-7"		5,563	
S701H		90	90	28'-11"		5,320	
S701K		92	92	28'-3"		5,312	
S701L		78	78	27'-7"		4,398	
S1001	114	107	221	40'-3"	19,744	18,532	
S1002	54	53	107	29'-9"	6,913	6,785	B
S1003	55	51	106	26'-0"	6,153	5,706	B
S1004	171	162	333	50'-8"	37,281	35,319	
S1005	81	78	159	28'-6"	9,933	9,566	
S1006	82	78	160	20'-10"	7,351	6,992	
S1007	56	56	112	26'-2"	6,305	6,305	
S1101	226	216	442	31'-4"	37,623	35,958	
S1102	109	103	212	14'-8"	8,494	8,026	
S1103	111	105	216	9'-6"	5,603	5,300	
S1104A		12	12	30'-3"		1,929	
S1104B		12	12	29'-6"		1,881	
S1104C		12	12	28'-10"		1,838	
S1104D		12	12	28'-2"		1,796	
S1104E	12		12	29'-10"	1,902		
S1104F	12		12	30'-4"	1,934		
S1104G	12		12	30'-10"	1,966		
S1104H	12		12	31'-5"	2,003		
S1105A		14	14	28'-5"		2,114	
S1105B		14	14	27'-8"		2,058	
S1105C		14	14	27'-1"		2,015	
S1105D		14	14	26'-7"		1,977	
S1105E	14		14	28'-0"	2,083		
S1105F	14		14	28'-6"	2,120		
S1105G	14		14	29'-2"	2,169		
S1105H	14		14	29'-7"	2,200		
S690	16	16		6'-0"	144	144	
S506	208	197	405	10'-11"	2,369	2,244	B
S691	10	10	20	10'-3"	154	154	B

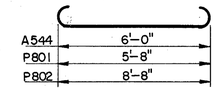
BENDING DIAGRAMS

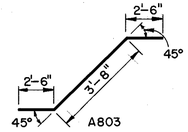


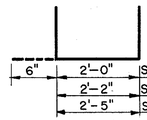


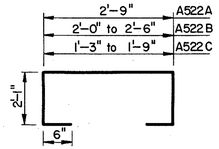


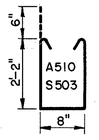


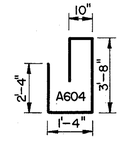


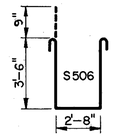


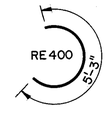


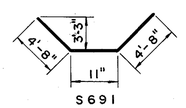


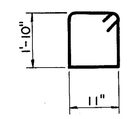












NOTES

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 size of the bar. For example A700 is a No. 7 size bar and A1014 is a No. 10 size bar.

All dimensions are out to out of the bar.

Shape B" indicate bars are bent. Bars are straight unless otherwise designated.

Reinforcing Steel List concluded on following sheet.

** See BR-1-65 FOR BENDING DIAGRAM

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

REINFORCING STEEL LIST
BRIDGE NO. TUS-36-1880 L&R
RELOC. U.S. 36 OVER RECONSTR. U.S. 250
TUSCARAWAS COUNTY STA. 314 + 32.54
STA. 316 + 55.56

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
S.J.M. M.J.F.	R.J.A.	E.L.M. G.F.L.	B.Q.L.	H.C.M. 8-17-64	

MICROFILMED
FEB 24 1969

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

568
662

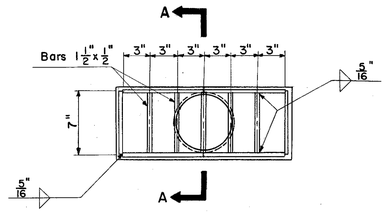
TUSCARAWAS COUNTY
TUS – 36 – 15.93

SPIRALS CORE DIA. = 32" PITCH = 4½"					
MARK	TOTAL	LENGTH	WEIGHT LEFT	WEIGHT RIGHT	NO. TURNS
SP401	1	20'-0"	402		62
SP402	1	20'-11"	383		59
SP403	1	19'-9"	363		56
SP404	1	18'-7"	343		53
SP405	1	19'-7"		356	55
SP406	1	18'-5"		337	52
SP407	1	17'-3"		317	49
SP408	1	16'-1"		298	46
SP409	1	22'-4"	409		63
SP410	1	21'-2"	389		60
SP411	1	20'-0"	369		57
SP412	1	18'-10"	343		53
SP413	1	19'-9"		363	56
SP414	1	18'-8"		343	53
SP415	1	17'-6"		324	50
SP416	1	16'-4"		304	47
SP417	1	21'-5	396		61
SP418	1	20'-5"	376		58
SP419	1	19'-3"	356		55
SP420	1	18'-0"	330		51
SP421	1	19'-0"		350	54
SP422	1	17'-10"		330	51
SP423	1	16'-9"		311	48
SP424	1	15'-7"		291	45
SP425	1	21'-10"	396		61
SP426	1	21'-0"	383		59
SP427	1	20'-0"	369		57
SP428	1	18'-9"	343		53
SP429	1	19'-8"		363	56
SP430	1	18'-7"		343	53
SP431	1	17'-6"		324	50
SP432	1	16'-5"		304	47

ESTIMATED LIGHTING QUANTITIES
ITEM 625

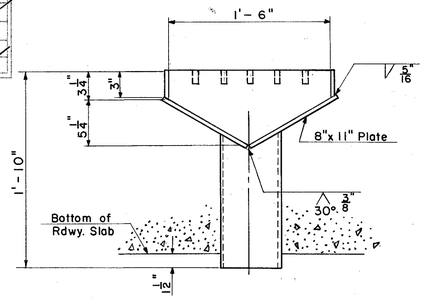
TOTAL	UNIT	DESCRIPTION
3	EA.	LUMINAIRE, TYPE III, WITH INTEGRAL 400 WATT MERCURY BALLAST
12	EA.	UNDERPASS LUMINAIRE - 175 WATT MERCURY
12	EA.	MERCURY VAPOR LAMP, 175 WATT (H-39-22 KB)
3	EA.	MERCURY VAPOR LAMP, 400 WATT (H-33-1CD)
3	EA.	LIGHT POLE WITH 8' BRACKET ARM - DESIGN 11A 8B30.0
240	L.F.	POLE & BRACKET CABLE, 1/C, NO. 12 AWG, 600 V.
4	EA.	ESNA KIT - STYLE 51
4	EA.	ESNA KIT - STYLE 61
4	EA.	ESNA KIT - STYLE 82
4	EA.	ESNA KIT - STYLE 83
8	EA.	ESNA KIT - STYLE 84
506	L.F.	CONDUIT - 2 INCH RIGID GALVANIZED STEEL IN BRIDGES
258	L.F.	CONDUIT - ¼ INCH RIGID GALVANIZED STEEL IN BRIDGES
432	L.F.	CIRCUIT CABLE [illegible], NO. 4 AWG, 600 V.
764	L.F.	UNDERPASS LUMINAIRE CABLE, 1/C, NO. 12 AWG, 600 V.
324	L.F.	FISHWIRE, 1/C, NO. 18 BARE COPPER WIRE

VOID

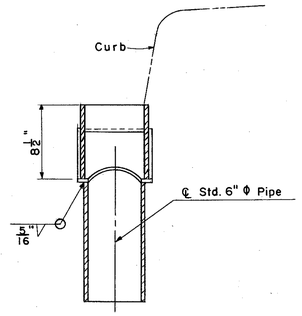


PLAN

All plates and bars ⅜" unless otherwise noted.



ELEVATION



SECTION A-A

SCUPPER DETAILS

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	LEFT BRIDGE SUPER	LEFT BRIDGE ABUTS.	LEFT BRIDGE PIERS	LEFT BRIDGE GEN'L.	RIGHT BRIDGE SUPER	RIGHT BRIDGE ABUTS.	RIGHT BRIDGE PIERS	RIGHT BRIDGE GEN'L.
503	1,206	Cu. Yds.	Unclassified Excavation		292	331			260	323	
511	1,766	Cu. Yds.	Class C Concrete, Superstructure	904				862			
511	160	Cu. Yds.	Class C Concrete, Pier Columns			85				75	
511	217	Cu. Yds.	Class E Concrete, Abut. above Footings		113				104		
511	378	Cu. Yds.	Class E Concrete, Footings		90	101			88	99	
509	522,595	Lbs.	Reinforcing Steel	215,008	14,762	37,648		205,269	14,556	35,352	
516	19,550	Lbs.	Structural Steel Expansion Joints	10,030				9,520			
516	395	Sq. Ft.	¼" Preformed Expansion Joint Filler, AASHO Specs. M-153		200				195		
516	32	Each	Elastomeric Bearing Pads			16				16	
516	947	Lbs.	¼" Rolled Phosphor Bronze Sliding Plates		486				461		
517	961.95	Lin. Ft.	Railing Type 1	440.90	40.00			441.05	40.00		
505	Lump	Sum	First Test Pile ⊕				Lump				
506	Lump	Sum	First Pile Test Load				Lump				
506	1	Each	Subsequent Pile Test Load				Each				
507	14,640	Lin. Ft.	12" Cast-in-Place Reinforced Concrete Piles		2,280	5,040			2,280	5,040	
518	197	Lin. Ft.	6" Perforated Helical CMP, 707.06 including specials		101				96		
518	338	Lin. Ft.	6" Helical CMP, 707.06 Non-Perforated,		168				170		
518	73	Cu. Yds.	Porous Backfill		38				35		
518	14	Each	Scuppers, including Supports	7				7			
808	1,766	Each	Water-reducing, Set-retarding Admixtures for Conc.	904				862			
601	1,280	Sq. Yds.	Crushed Aggregate Slope Protection		654				626		
625			Lighting Quantities - see sht. 489					2			

⊕ Payment shall be made for only the first test pile; it may be driven for either the Left or the Right Bridge

NOTES

The "length" shown in steel list for the spiral bars is the distance from the top of the footing to the bottom of cap.

The "number of turns" shown in the steel list for the spiral bars is the "length" divided by the pitch, plus three (3) turns (total number of closed coils) expressed as the nearest whole number.

Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item 509

1½ closed coils shall be provided at the ends of each spiral unit.

Four steel channel, tee or angle spacers, weighing approximately 0.68 pounds per linear foot 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 pounds per linear foot will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

ESTIMATED QUANTITIES & MISCELLANEOUS DETAILS

BRIDGE NO. TUS-36-1880 L & R
RELOC. U.S. 36 OVER RECONSTR. U.S. 250
TUSCARAWAS COUNTY STA. 314 + 32.54
STA. 316 + 55.56

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
S.J.M. R.J.A.	R.J.A.	E.L.M.	B.O.L.	H.C.M. 8-17-64	

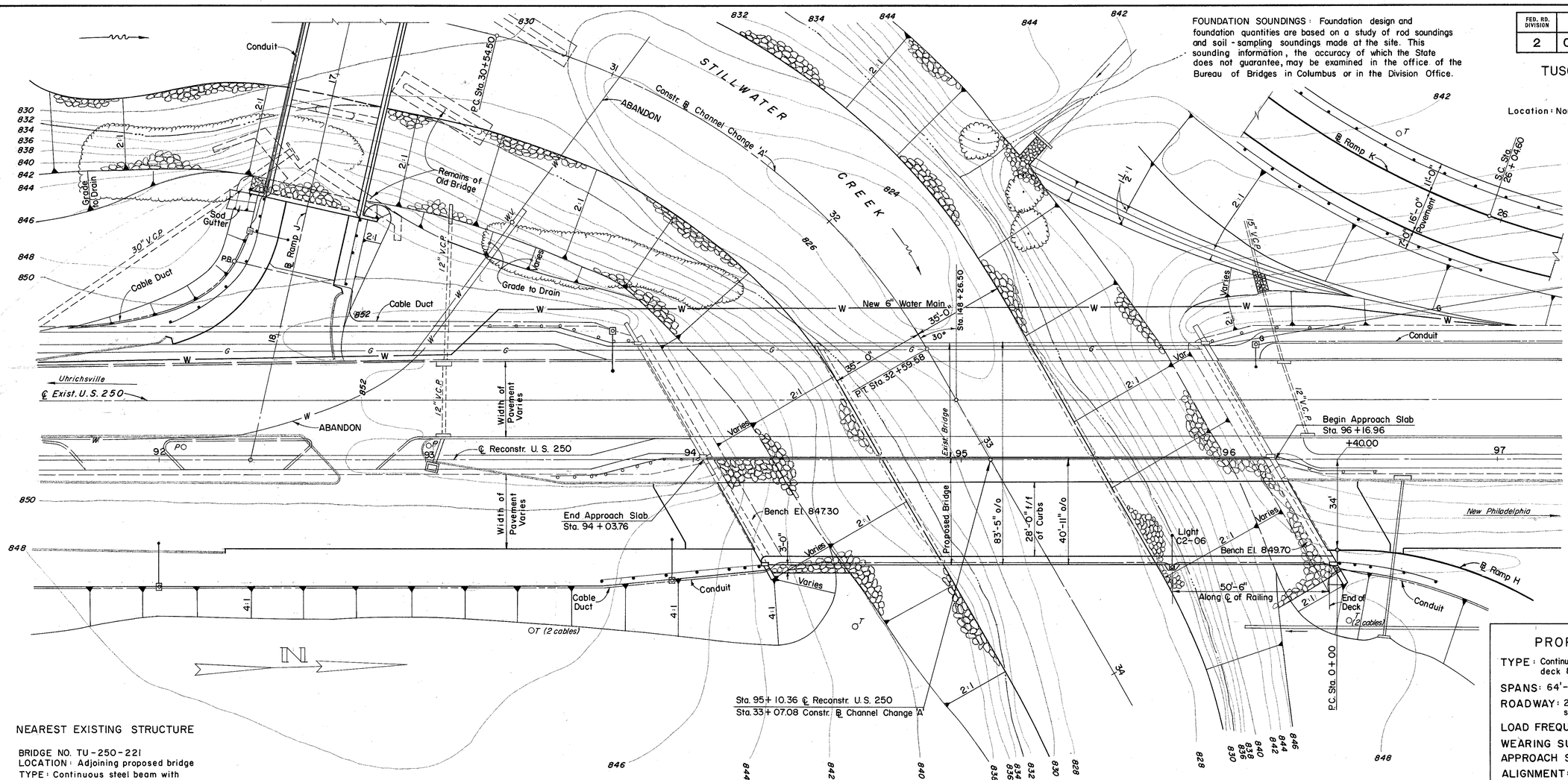
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

569
662

TUSCARAWAS COUNTY
TUS-36-15.93

Location: North Corporation Line of Uhrichsville.

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.



B.M.-22 Located 389' Rt. Sta. 314+91, Painted west corner of the N. Abutment of U.S. 250 Bridge. Elev. 856.796

B.M.-22A Bolt on N.W. Corner of Anchor Plate for Fleetwing Sign. Located on the N.E. Corner of Eleventh and Water Streets. Elev. 851.505

PROPOSED STRUCTURE

TYPE: Continuous steel beam with reinforced concrete deck & substructure.
SPANS: 64'-0", 80'-0" & 64'-0" ℄ Brgs.
ROADWAY: 28'-0" f/f of 9'-8" median lt. & 2'-3" safety curb rt.
LOAD FREQUENCY: CF = 2000 (57)
WEARING SURFACE: 1" monolithic concrete.
APPROACH SLABS: AS-1-54 (25'-0")
ALIGNMENT: Tangent
SKEW: 30°00' R.F.
WATERWAY OPENING: Below Elev. 848.00, 2020 sq. ft. (equal to opening of exist. bridge)
RAILING: to be removed from right side of existing bridge and placed on right side of proposed structure.
A.D.T. = 5050 (1977)

NEAREST EXISTING STRUCTURE

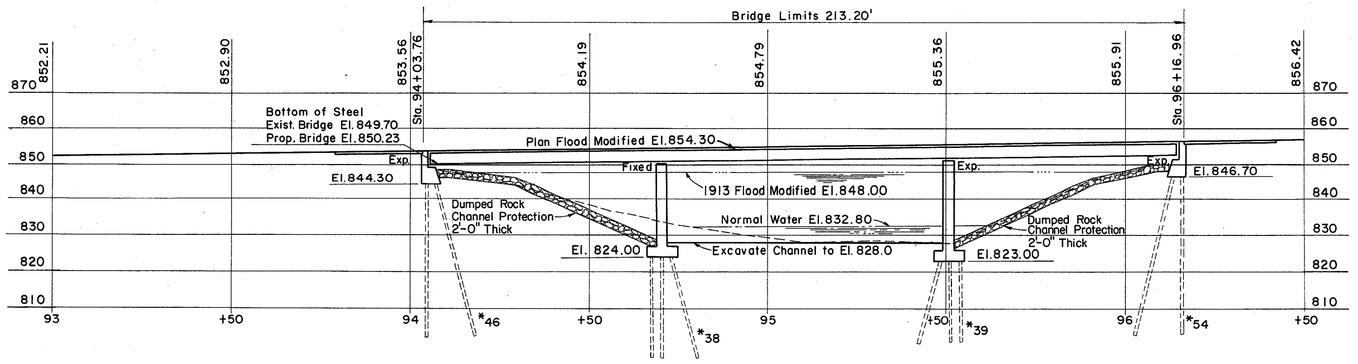
BRIDGE NO. TU-250-221
LOCATION: Adjoining proposed bridge
TYPE: Continuous steel beam with Reinforced Concrete Deck and Substructure.
SPANS: 64', 80', & 64' ℄ Brgs.
ROADWAY: 28'-0" f/f of Curbs.
SIDEWALKS: Two @ 6'-0"
ALIGNMENT: Tangent
SKEW: 30° R.F.
PLAN APPROVED: 1952

Channel Capacity 10,100 cfs.
Drainage Area 370 sq. miles.

RECONSTR. U.S. 250
+1.50% −0.40%
P.I. Sta. 100+25.00
El. 863.11
L.V.C. = 1600'

RAMP H
P.I. Sta. 1+29.45
Δ = 81° 35' 23"
R = 150.00'
L = 213.60'
T = 129.45'

RAMP K
P.I. Sta. 27+45.20
Δ = 50°13'20"
R = 300.00'
L = 262.96'
T = 140.60'



* Estimated Average Pay Length of 12" C.I.P. Reinforced Concrete Piles

Bridge No. Tus.-250-2176

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

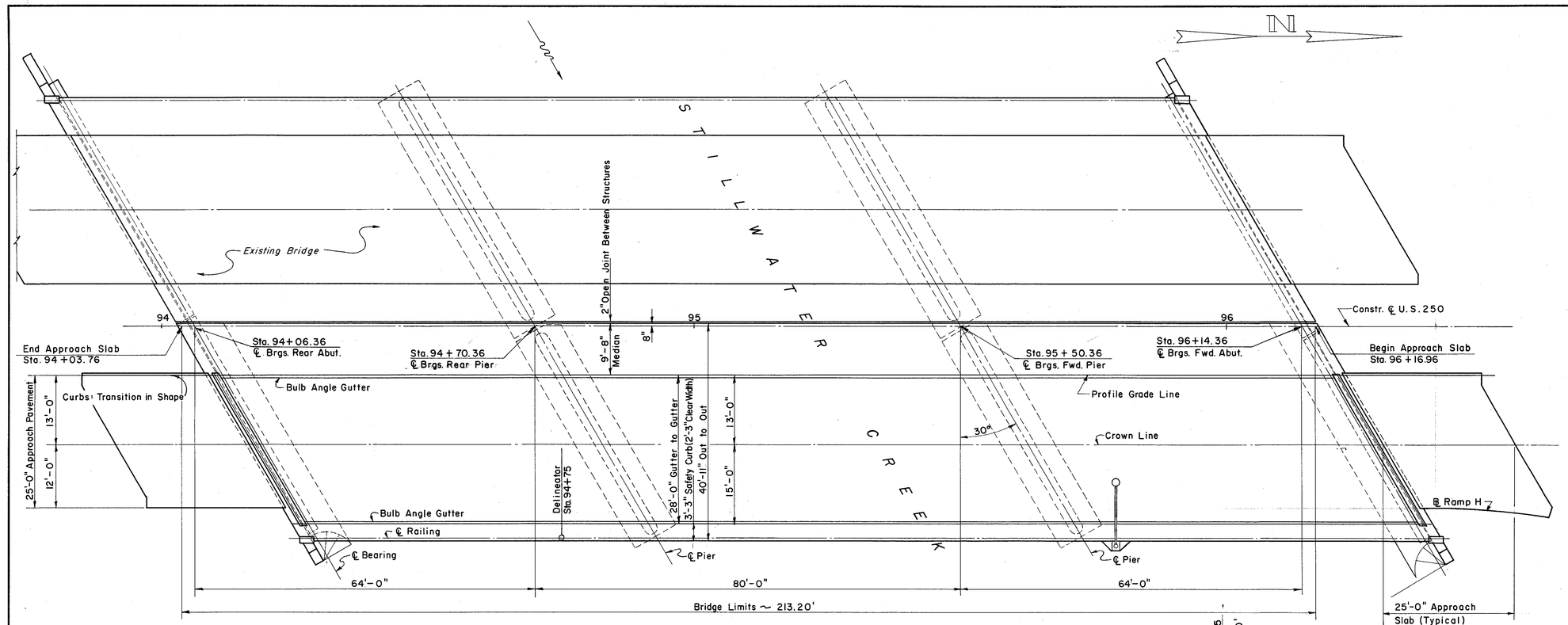
SITE PLAN
RECONSTR. U.S. 250 OVER STILLWATER CREEK
TUSCARAWAS COUNTY
STA. 94+03.76
STA. 96+16.96

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
L.L.D.	M.J.F.	E.R.	B.O.L.	H.C.M. 8-17-64	

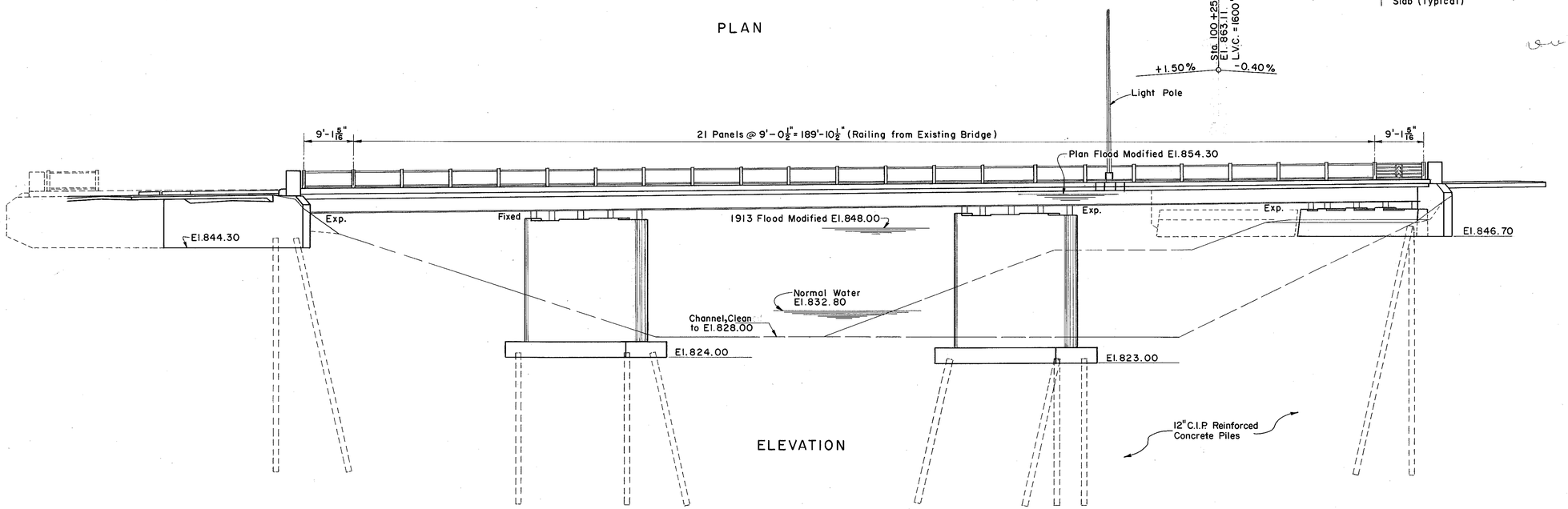
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

570
662

TUSCARAWAS COUNTY
TUS - 36 - 15.93



PLAN



ELEVATION

GENERAL NOTES

REFERENCE shall be made to Standard Drawings SD-1-63, Sheets No. 1 thru 4 of 4 dated 11-12-63, RB-1-55 revised 2-2-59 and AS-1-54 revised 8-10-65 and to Supplemental Specifications 808 dated 7-14-65 and 811 dated 3-29-65

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

DESIGN LOADING: CF 2000 (57)

BASIC UNIT WORKING STRESSES:
Concrete Class C – basic unit stress -- 1,333 p.s.i.
Concrete Class E – basic unit stress -- 1,133 p.s.i.

Structural Steel – ASTM A36 - basic unit stress 20,000 p.s.i.

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

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

PILES shall be driven to a minimum bearing capacity of 32 tons per pile for the abutments and 36 tons per pile for the piers.

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.

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

[illegible]

PAYMENT for "Painting of Existing Structural Steel" includes payment for painting of railing and existing structural steel.

PAYMENT for "Railing as per Plan" includes payment for dismantling of railing, the removal of portions of existing anchors, the removal of reinforced concrete end posts, the patching with mortar of concrete damaged by removals, the furnishing and installing of new anchors, the reerection of railing and the construction of new reinforced concrete end posts.

QUANTITY for payment under "Removal of Portions of Existing Structure" includes only removals not paid for under any other item of payment.

LIGHTING DETAILS are shown on Lighting Plans, beginning with Sheet 489.

Bridge No. TUS.-250-2176

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

GENERAL PLAN
RECONSTR. US 250 OVER STILLWATER CREEK
TUSCARAWAS COUNTY
STA. 94 + 03.76
STA. 96 + 16.96

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
L.L.D.	K.D.L.	F.W.B. E.R.	B.O.L.	G.S.W. 8-17-64	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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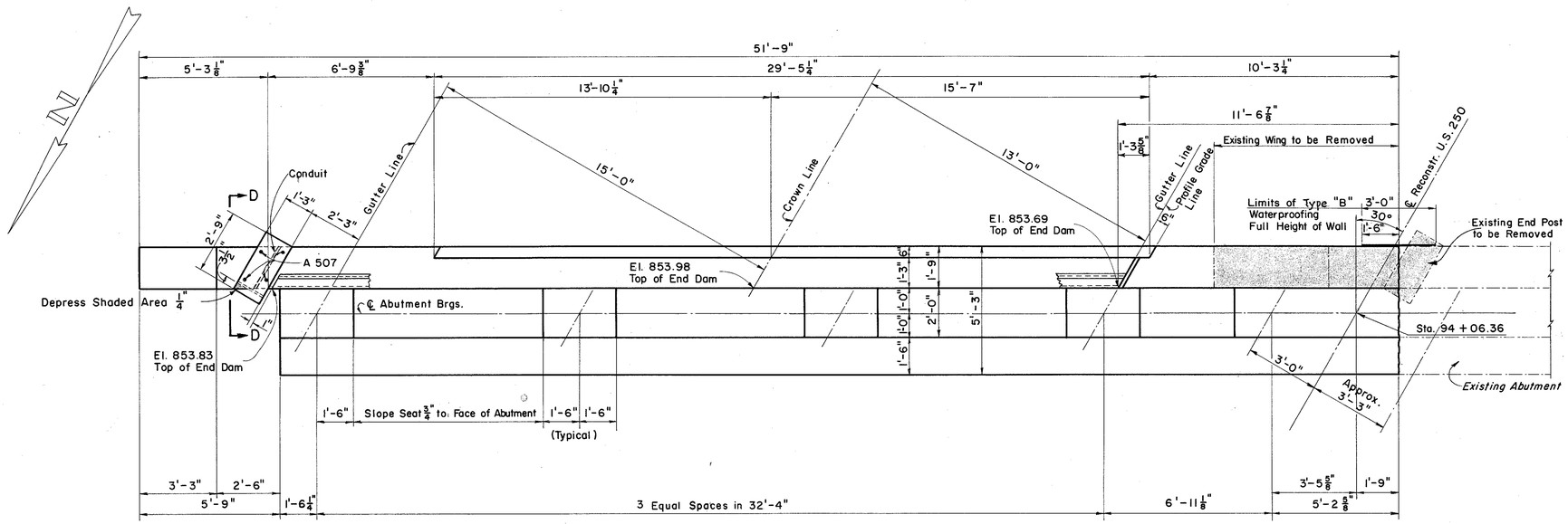
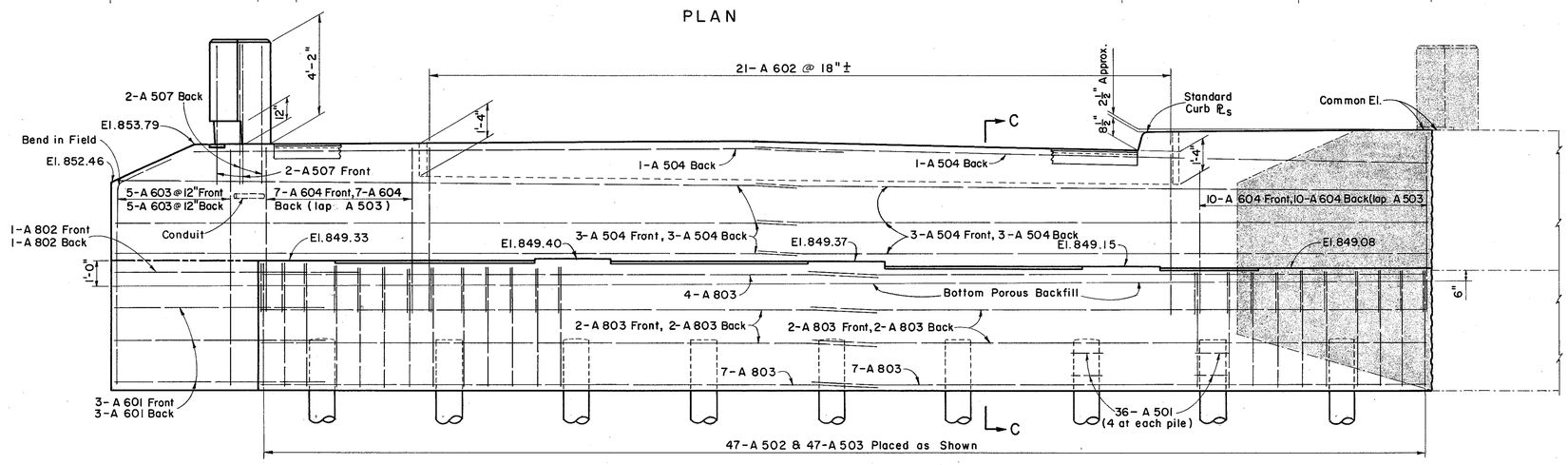
662

TUSCARAWAS COUNTY
TUS-36-15.93

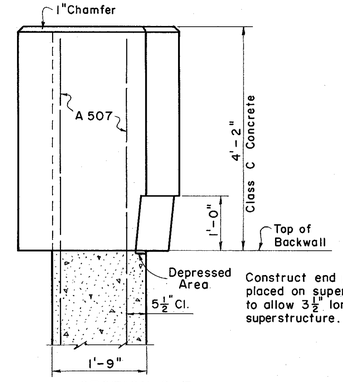
POROUS BACKFILL at both abutments shall extend upward to the approach slab and to the surface of the earth shoulders, and outward to the surface of the embankment slopes. Excavation therefor, in excess of that required for construction of the abutment, shall be considered as paid for in the bid price per cubic yard paid for porous backfill.



PLAN

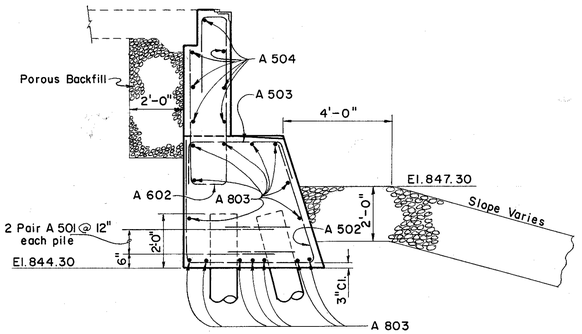


ELEVATION

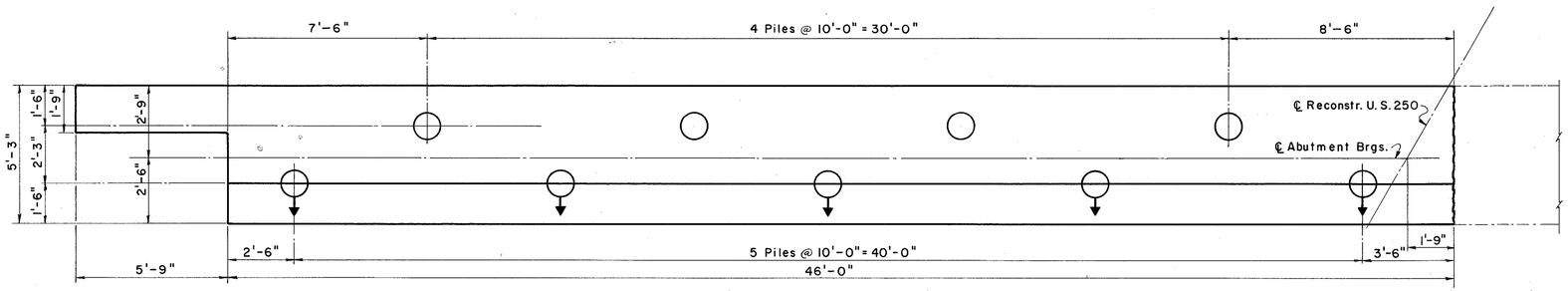


SECTION D-D

Construct end post after curb has been placed on superstructure. Form end post to allow 3 1/2" longitudinal movement of superstructure.



SECTION C-C



FOOTING PLAN

Indicates Battered Piles and Direction of 1 in 4 Batter.

All Reinforcing Steel shall have 3" of Cover in the Bottom of the footing and 2" elsewhere.

Bridge No. TUS-250-2176

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

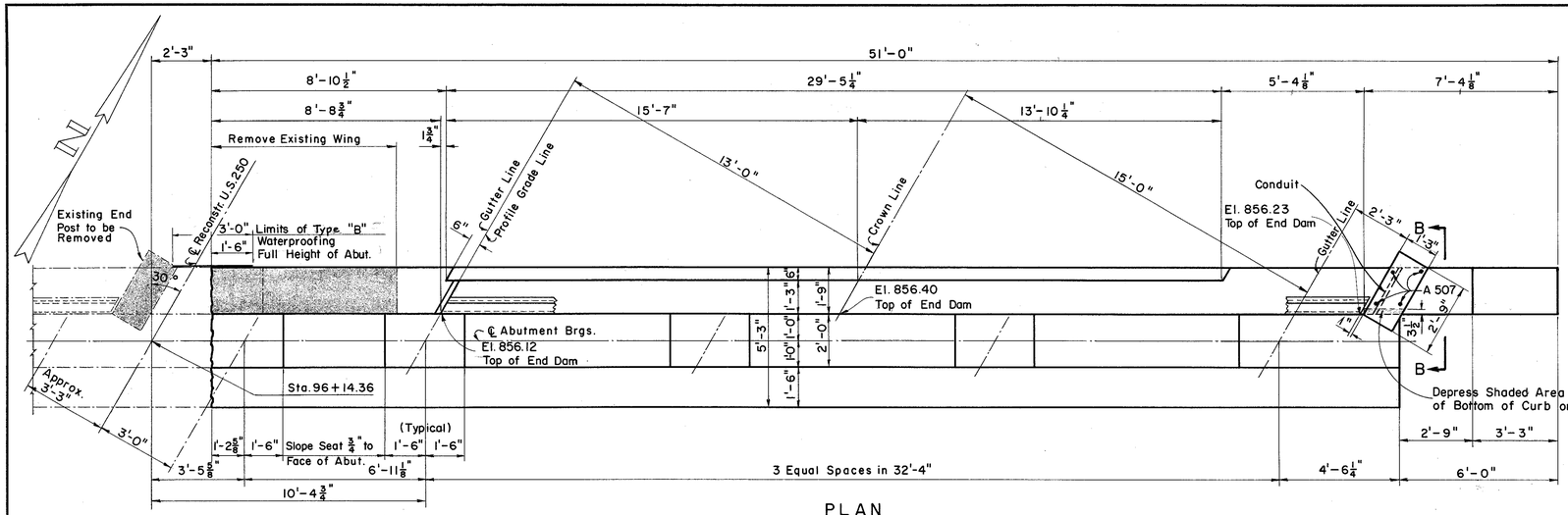
REAR ABUTMENT DETAILS
RECONST. US 250 OVER STILLWATER CREEK
TUSCARAWAS COUNTY
STA. 94+03.76
STA. 96+16.96

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
L.L.D.	M. F.	F.W.B. B.R.	B.O.L.	G.S.W. 8-17-64	

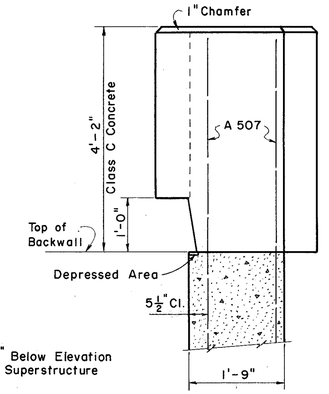
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

572
662

TUSCARAWAS COUNTY
TUS-36-15.93

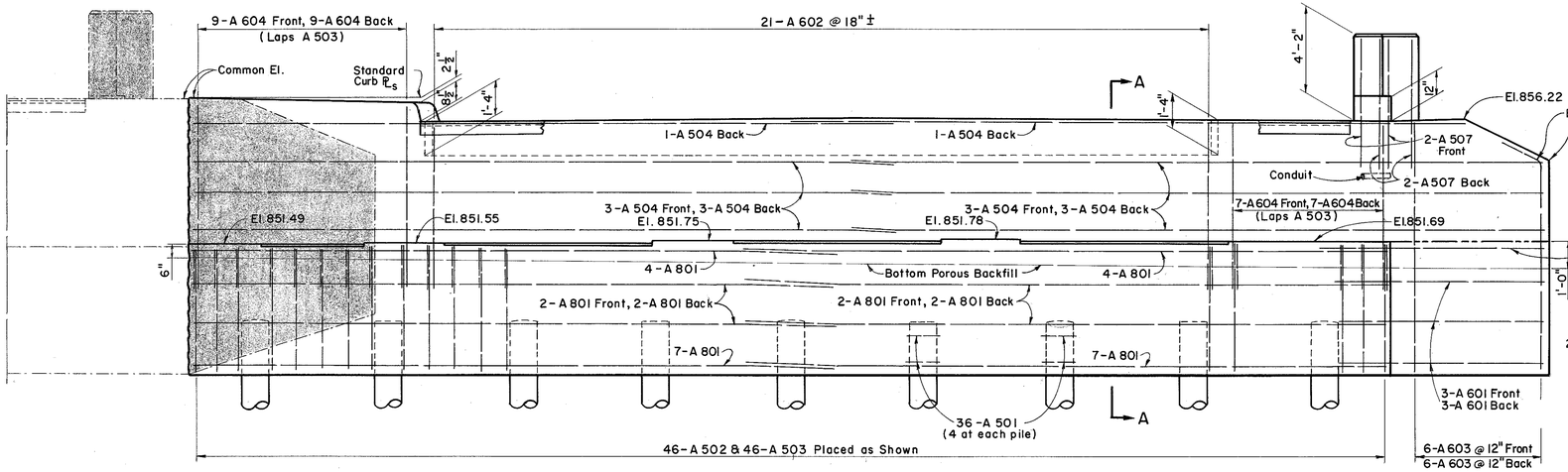


PLAN

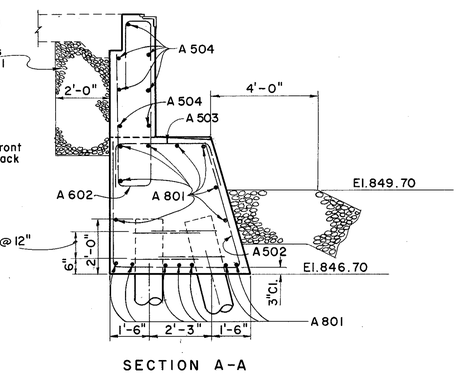


SECTION B-B

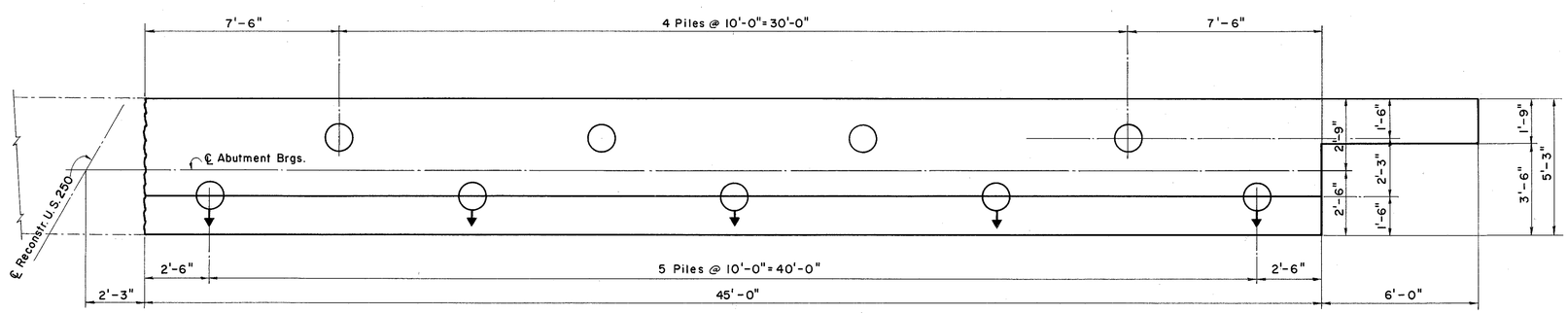
Construct end post after curb has been placed on superstructure. Form end post to allow for 3½" longitudinal movement of superstructure.



ELEVATION



SECTION A-A



FOOTING PLAN

○ Indicates Battered Piles and Direction of 1 in 4 Batter

All Reinforcing Steel shall have 3" of Cover in the Bottom of the Footing and 2" Elsewhere

Bridge No. TUS.-250-2176

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

FORWARD ABUTMENT DETAILS

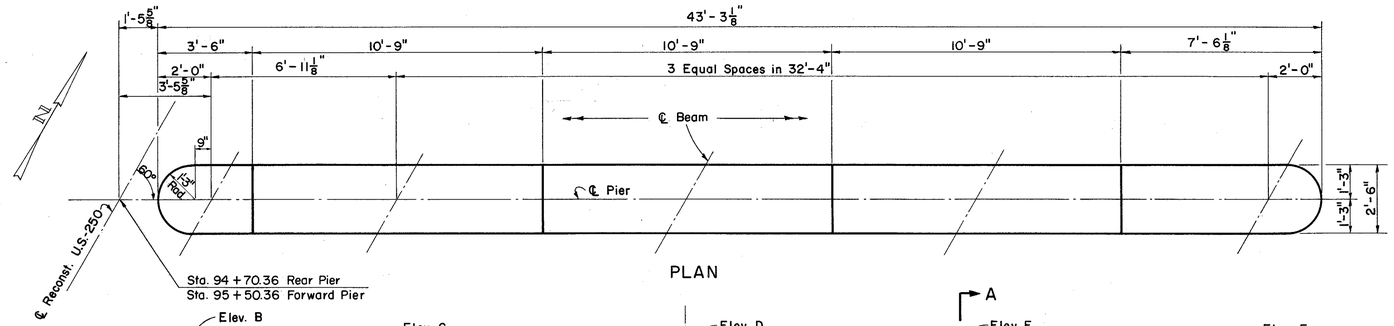
RECONSTR. U.S 250 OVER STILLWATER CREEK
TUSCARAWAS COUNTY
STA. 94+03.76
STA. 96+16.96

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
L.L.D.	M.F.	F.W.B. B.R.	B.O.L.	G.S.W. 8-17-64	

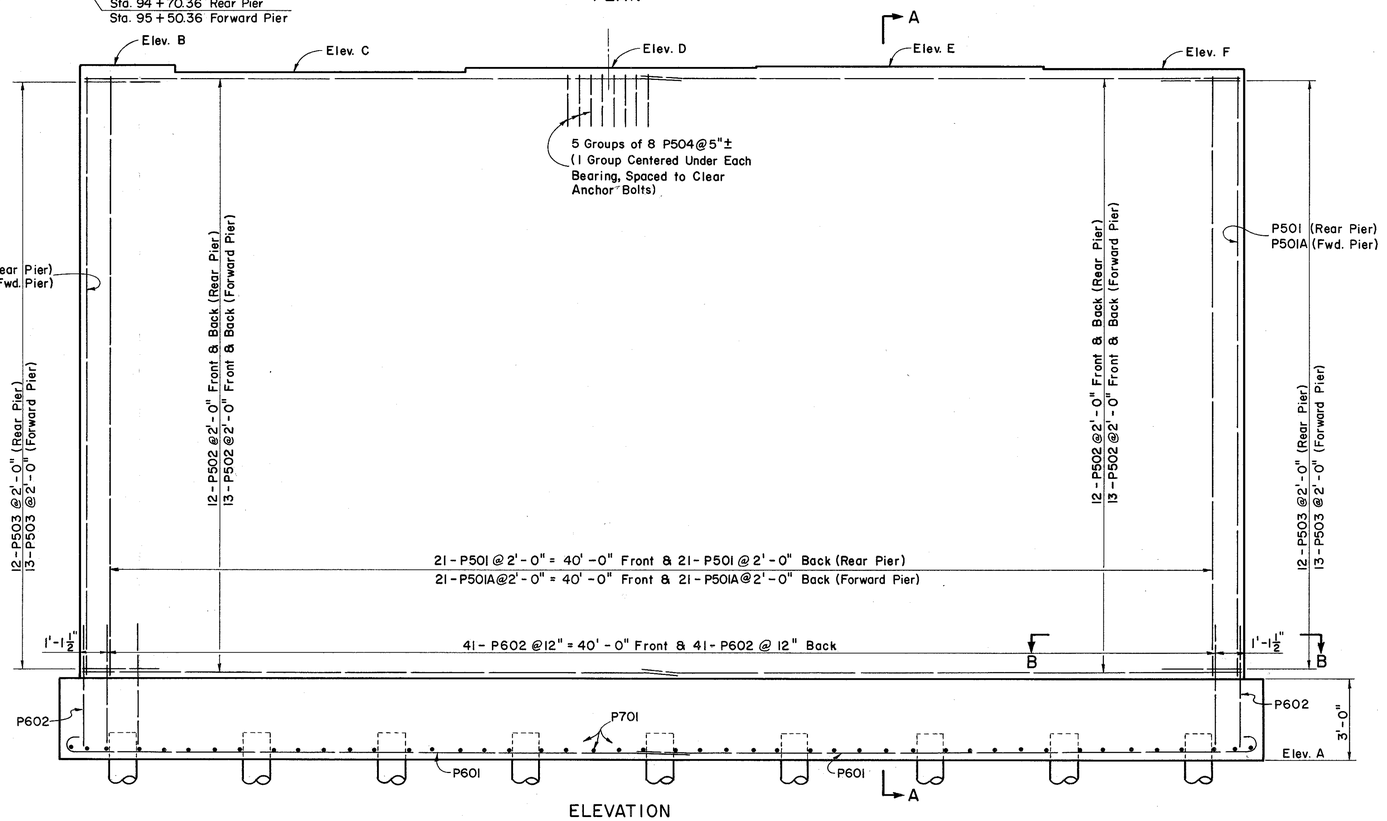
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

573
662

TUSCARAWAS COUNTY
TUS-36-15.93



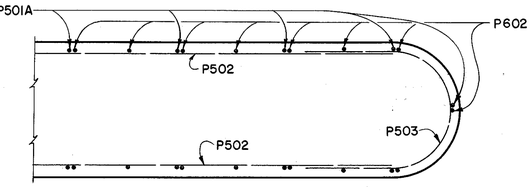
PLAN



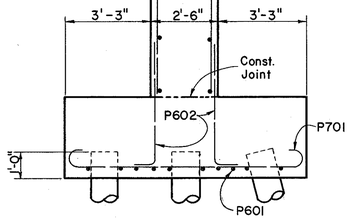
ELEVATION

PIER	ELEVATIONS					
	A	B	C	D	E	F
Rear Pier	824.00	849.71	849.41	849.62	849.65	849.57
Forward Pier	823.00	850.64	850.33	850.53	850.56	850.48

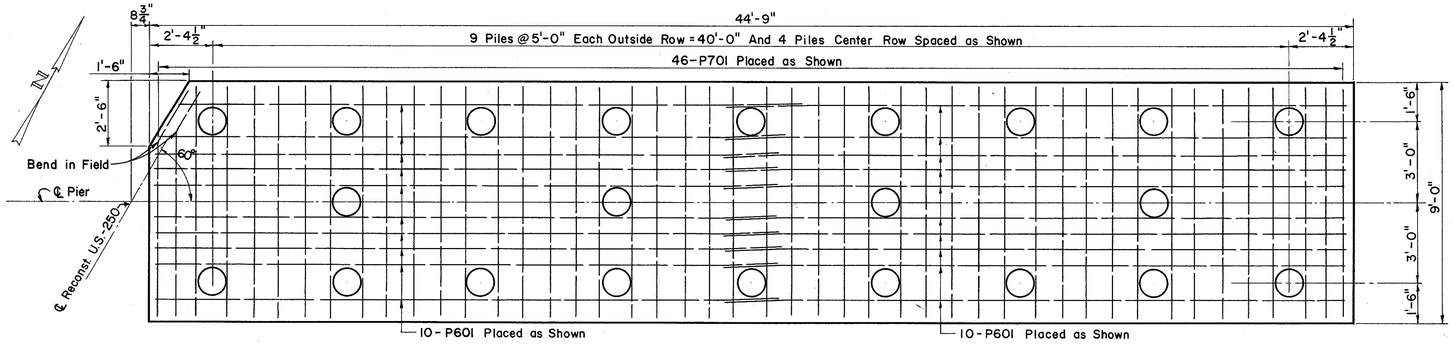




SECTION B-B



SECTION A-A



FOOTING PLAN

Batter Stream Side Piles 1 in 4 on Each Pier.

All reinforcing steel shall have 3" of cover in the bottom of the footing and 2" elsewhere.

BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seats of the Rear Pier so as to avoid interference with drilling of anchor bolt holes.

ELECTRICAL GROUNDING required at Rear Pier.

Bridge No. TUS-250-2176

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FOR

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

PIER DETAILS

RECONST. U.S.-250
OVER STILLWATER CREEK
TUSCARAWAS COUNTY
STA. 94+03.76
STA. 96+16.96

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
L.L.D.	M.F.	F.W.B. G.F.L.	B.O.L.	G.S.W. 8-17-64	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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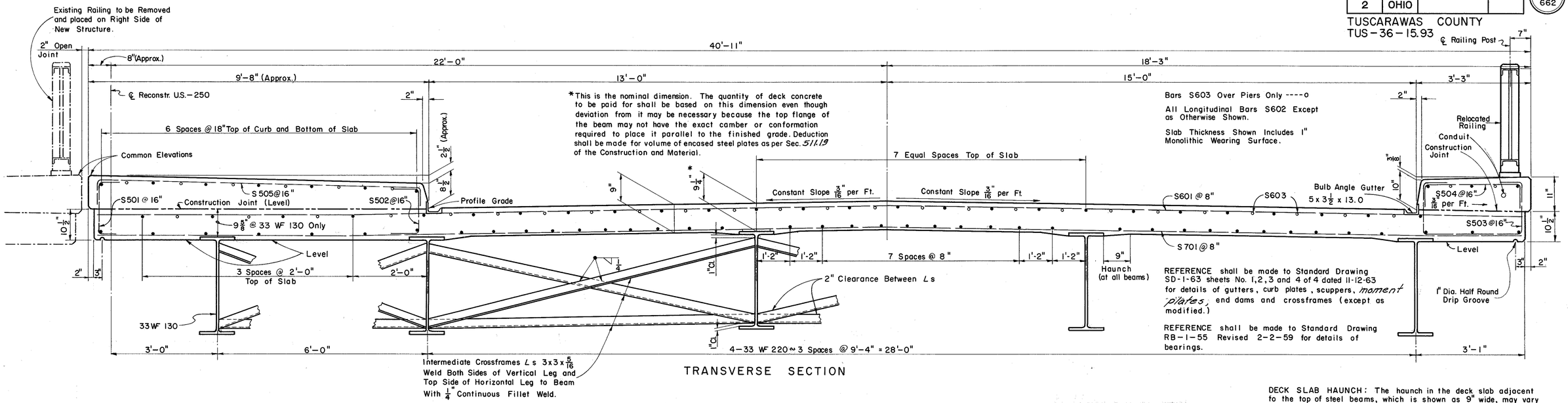
662

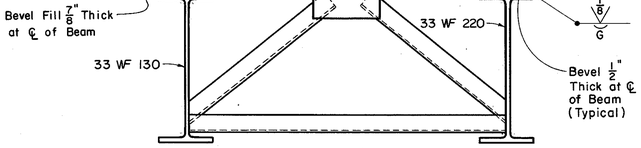
TUSCARAWAS COUNTY
TUS-36-15.93



TRANSVERSE SECTION

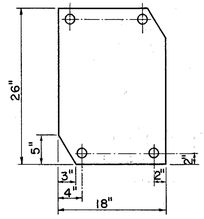
DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of steel beams, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12", except that the maximum slope shall not exceed 3 inches per foot. A typical haunch width of 9" shall be used for computing quantity of concrete.

MOMENT PLATES shall be welded as shown on SD-1-63 except welding shall be done in the shop rather than in the field. No splices shall be made in beams over the piers.

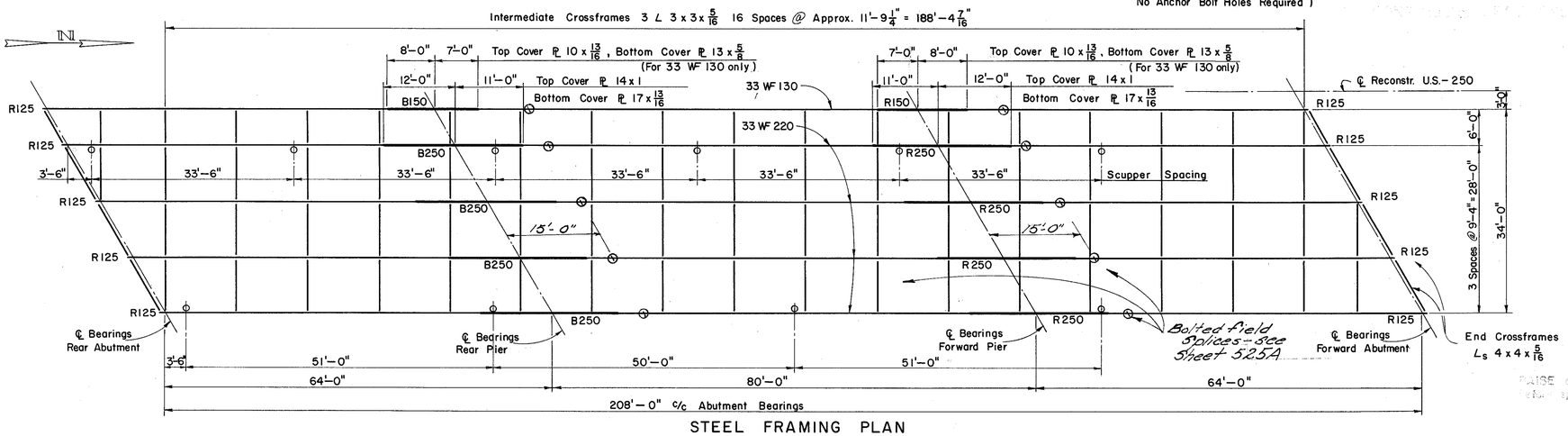


END CROSS FRAME FOR 6'-0" BEAM SPACE
(For Details not Shown See Standard Drawing SD-1-63)

DEFLECTION & CAMBER OF BEAMS	END SPAN		INTERIOR SPAN	
	33 WF 130	33 WF 220	33 WF 130	33 WF 220
DEFLECTION DUE TO WEIGHT OF STEEL	1"	1"	1"	1"
	8	8	8	8
DEFLECTION DUE TO REMAINING DEAD LOAD	1¼"	¾"	1¼"	⅞"
CONVEXITY REQUIRED FOR VERTICAL CURVE	1"	1"	1"	1"
	8	8	8	8
SUM OF DEFLECTION AND CONVEXITY	1½"	1"	1½"	1⅛"
REQUIRED CAMBER	1½"	1"	1½"	1⅛"



SPECIAL B250 BOLSTER MASONRY ℙ
(Rocker Masonry ℙ Similar Except That No Anchor Bolt Holes Required)



STEEL FRAMING PLAN

Bridge No.-250-2176

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

SUPERSTRUCTURE DETAILS

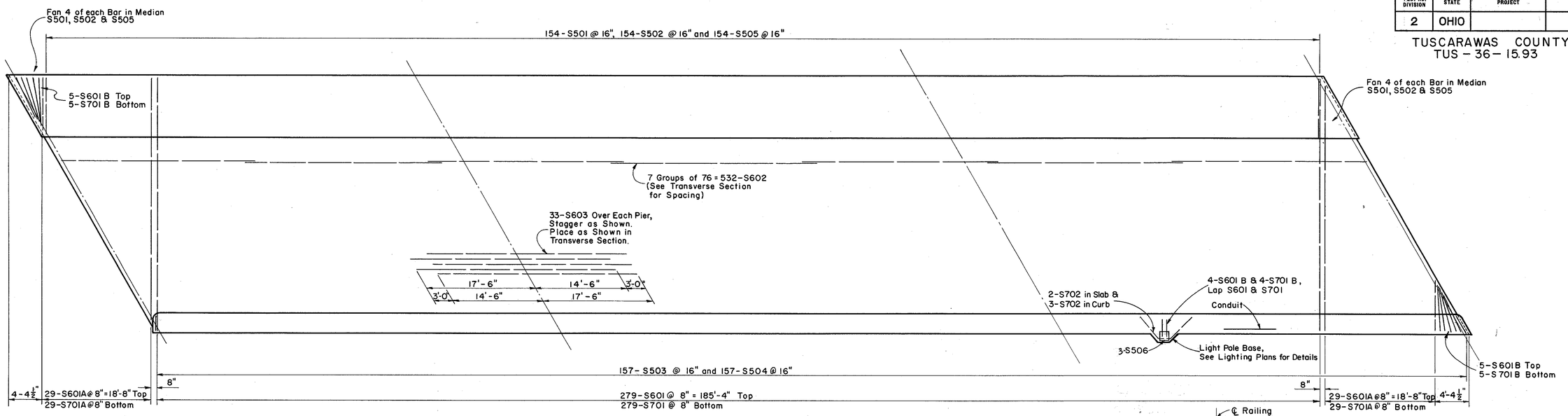
RECONSTR. U.S.-250 OVER STILLWATER CREEK
TUSCARAWAS COUNTY
STA. 94 + 03.76
STA. 96 + 16.96

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
L.L.D.	M.F.	FWB J.S.	B.O.L.	G.S.W. 8-17-64	

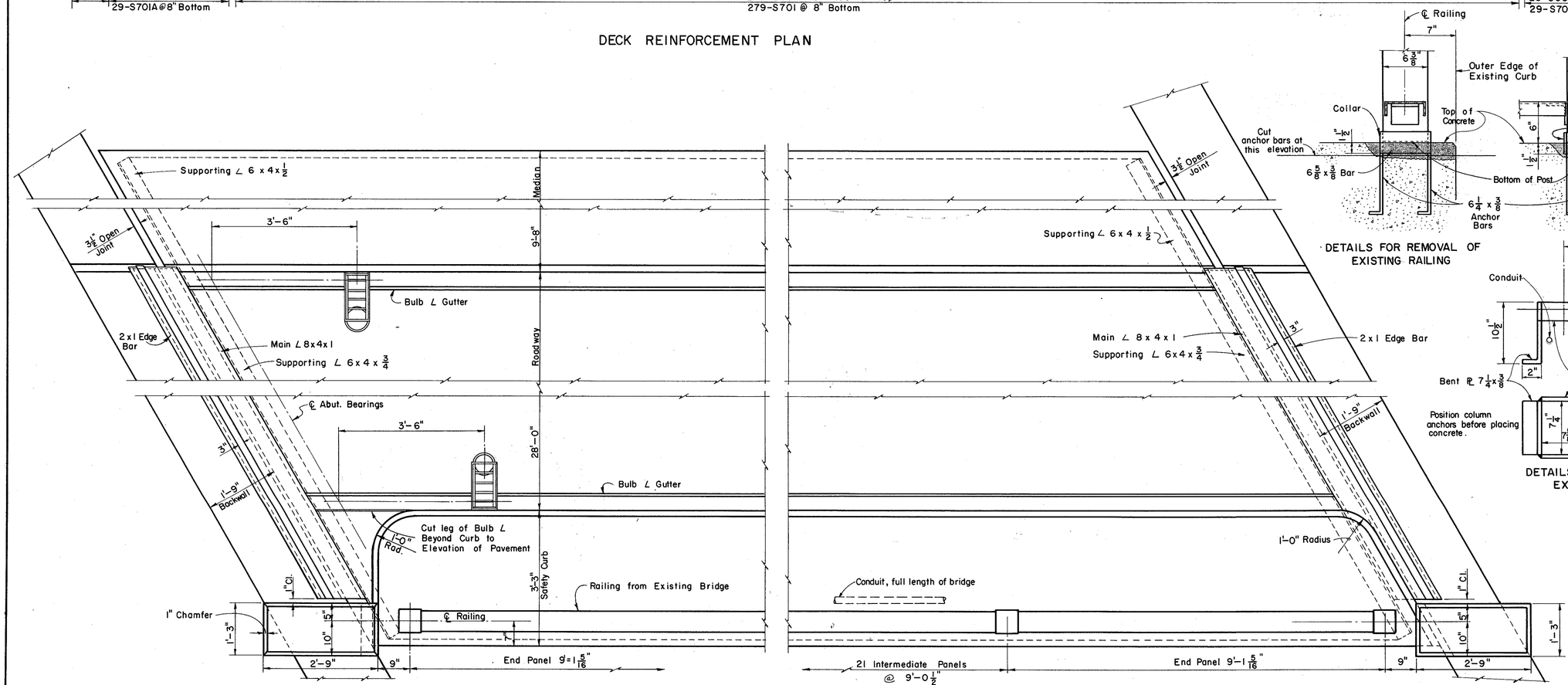
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

575
662

TUSCARAWAS COUNTY
TUS – 36 – 15.93



DECK REINFORCEMENT PLAN



RAILING & END DAM DETAILS

DETAILS FOR REMOVAL OF EXISTING RAILING

DETAILS FOR RESETTING OF EXISTING RAILING

Bridge No. TUS-250-2176

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

DECK DETAILS

RECONSTR. U.S.-250 OVER STILLWATER CREEK
TUSCARAWAS COUNTY
STA. 94 + 03.76
STA. 96 + 16.96

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
L.L.D.	M.F.	FWB	B.O.L.	G.S.W. 8-17-64	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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662

TUSCARAWAS COUNTY
TUS-36-15.93

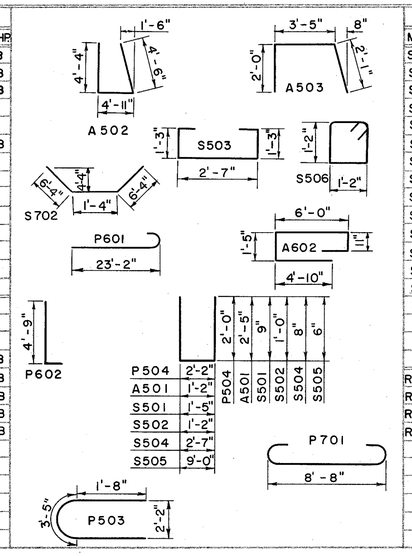
REINFORCING STEEL LIST

ABUTMENTS

MARK	REQ'D REAR	REQ'D FWD.	TOTAL	LENGTH	WEIGHT	SHP
A501	36	36	72	5'-9"	432	B
A502	47	46	93	13'-6"	1,309	B
A503	47	46	93	7'-3"	703	B
A504	14	14	28	26'-6"	774	
A601	6	6	12	8'-0"	144	
A602	21	21	42	15'-5"	977	B
A603	10	12	22	9'-2"	303	
A604	34	32	66	7'-9"	768	
A801		30	30	23'-7"	1,889	
A802	2	2	4	8'-6"	91	
A803	30		30	24'-1"	1,929	

PIERS

P501	44		44	22'-3"	1,021	
P501A		44	44	24'-1"	1,105	
P502	48	52	100	21'-2"	2,208	
P503	24	26	50	6'-9"	352	B
P504	40	40	80	5'-11"	494	B
P601	20	20	40	23'-10"	1,432	B
P602	84	84	168	5'-1"	1,282	B
P701	46	46	92	10'-4"	1,943	B



SUPERSTRUCTURE

MARK	NO.	LENGTH	WEIGHT	SHP	VARIES BY	NO. EACH
S501	162	2'-8"	451	B		
S502	162	2'-5"	409	B		
S503	157	6'-4"	1,037	B		
S504	157	3'-8"	601	B		
S505	162	10'-0"	1,690	B		
S601	279	40'-3"	16,867			
S601A	58	6'-11"/39'-7"	2,025		1'-2"	2
S601B	14	6'-0"	126			
S602	532	31'-6"	25,171			
S603	66	32'-0"	3,172			
S701	279	40'-3"	22,954			
S701A	58	6'-11"/39'-7"	2,756		1'-2"	2
S701B	14	6'-0"	172			
S702	5	14'-0"	143			
S506	3	5'-6"	17	B		

REPLACEMENT BARS

RE500	1	5'-7"				
RE600	3	5'-11"				
RE700	2	6'-3"				
RE800	1	6'-6"				

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 size of the bar. For example A700 is a No. 7 size bar and A1014 is a No. 10 size bar.

All dimensions are out to out of the bar.

Bars are straight unless otherwise shown.

ESTIMATED LIGHTING QUANTITIES
ITEM 625

TOTAL	UNIT	DESCRIPTION
1	EA.	LUMINAIRE, TYPE III, WITH INTEGRAL 400 WATT MERCURY BALLAST
1	EA.	MERCURY VAPOR LAMP, 400 WATT (H-33-ICD)
1	EA.	LIGHT POLE WITH 8' BRACKET ARM - DESIGN IIA8B30.0
80	L.F.	POLE & BRACKET CABLE, 7C, NO. 12 AWG, 600 V.
1	EA.	ESNA KIT - STYLE 82
1	EA.	ESNA KIT - STYLE 83
221	L.F.	CONDUIT - 2" INSULRIGID GALVANIZED STEEL IN BRIDGES
448	L.F.	CIRCUIT CABLE - 7C, NO. 4 AWG, 600 V.
LUMP	L.S.	BRIDGE STRUCTURE GROUNDING SYSTEM

V27

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUTS.	PIERS	GEN'L.
503	Lump	Sum	Cofferdams, Cribs and Sheeting				Lump
503	258	Cu. Yds.	Unclassified Excavation		116	142	
203	2,151	Cu. Yds.	*Excavation not including embankment construction (channel)*				2,151
511	329	Cu. Yds.	Class C Concrete Superstructure	329			
511	186	Cu. Yds.	Class E Concrete Pier Walls above Footings			186	
511	109	Cu. Yds.	Class E Concrete, Abutments		109		
511	88	Cu. Yds.	Class E Concrete, Pier Footings			88	
512	7	Sq. Yds.	Type "B" Waterproofing		7		
509	96,747	Lbs.	Reinforcing Steel	77,591	9,319	9,837	
513	274,000	Lbs.	Structural Steel	274,000			
514	274,000	Lbs.	Field Painting of New Structural Steel	274,000			
514	Lump	Sum	*Cleaning and painting of existing structural steel*	Lump			
517	215.09	Lin. Ft.	Railing as per Plan	209.59	5.50		
505	Lump	Sum	First Test Pile		Lump		
507	2,520	Lin. Ft.	12" Cast-in-Place Reinforced Concrete Piles		1,690	830	
202	9	Cu. Yds.	Portions of Existing Structure *removed*		9		
518	30	Cu. Yds.	Porous Backfill		30		
518	10	Each	Scuppers, Including Supports	10			
808	329	Each	Water-reducing, Set-retarding Admixtures for Concrete	329			
601	1,500	Cu. Yds.	Dumped Rock Channel Protection, 2'-0" Thick				1,500
625			*for lighting quantities see sheet 489*				

Bridge No. TUS.-250-2176

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

ESTIMATED QUANTITIES & REINFORCING STEEL LIST
RECONSTR. U.S. 250
OVER STILLWATER CREEK
TUSCARAWAS COUNTY
STA. 94 + 03.76
STA. 96 + 16.96

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	M.J.F.	R.E.B. G.F.L.	B.O.L.	G.S.W. 8-17-64	

MICROFILMED
FEB 27 1969

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS-36-15.93

FOUNDATION SOUNDINGS : Foundation design and foundation quantities are based on a study of rod soundings and soil - sampling soundings made of 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.

Location : North Corporation Line of Uhrichsville.

B.M.-24 LOCATED 256' LT. STA. 329 + 87, IRON PIN IN 12" CONCRETE MONUMENT. ELEV. 847.702

B.M.-25 LOCATED 18'± LT. STA. 21 + 40, RELOC. CO. ROAD 64, SPIKE IN 14" STUMP. ELEV. 869.454

HYDRAULIC INFORMATION

DRAINAGE AREA : 479 Sq. Mi.
FLOW REGULATED by Piedmont, Clendening and Tappan Reservoirs of Muskingum Water Conservancy District.
REGULATED Q_{50} = 9,700 c.f.s. (Subject to backwater from Tuscarawas River.)

NEAREST EXISTING STRUCTURE

BRIDGE NO. TU-250-2.21
LOCATION: 0.5 mile upstream
TYPE : Continuous steel beam with Reinforced Concrete Deck and Substructure.
SPANS : 64', 80', 64' c/c Brgs.
ROADWAY : 28'-0" f/f of Curbs.
SIDEWALKS : Two @ 6'-0"
ALIGNMENT : Tangent
SKEW : 30° R.F.
PLAN APPROVED : 1952

PROPOSED STRUCTURE

TYPE : Two 4 span continuous steel beam bridges with reinforced concrete deck & substructure
SPANS : 64'-0", 80'-0", 80'-0", 56'-0" c/c Brgs.
ROADWAY : 30'-0" f/f 2'-3" safety curbs.
LOAD FREQUENCY : CF = 2,000 (57)
WEARING SURFACE : 1" monolithic concrete
APPROACH SLABS : AS-1-54 (25'-0")
ALIGNMENT : Reloc. U.S. 36 tangent, County Road 64, 18° 00' curve.
SKEW : 0° 00'
A.D.T. = 14,470 (1977)

RELOC. U.S. 36
- 1.68 % + 1.72 %
P.I. Sta. 330+50
El. 854.50
L.V.C. = 800.00'

Bridge Limits 284.50'

* Estimated Average Pay Length of 12" C.I.P. Reinforced Concrete Piles

PREPARED BY
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FOR
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DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

SITE PLAN
BRIDGE NO. TUS-36-1919 L & R.
RELOC. U.S-36 OVER STILLWATER CREEK
AND RELOC. COUNTY RD. 64
TUSCARAWAS COUNTY STA. 335+20.03
STA. 338+04.53

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
M.C.P.	M.F.	E.L.M. E.R.	L.L.D.	H.C.M. 8-17-64	

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

578
662

TUSCARAWAS COUNTY
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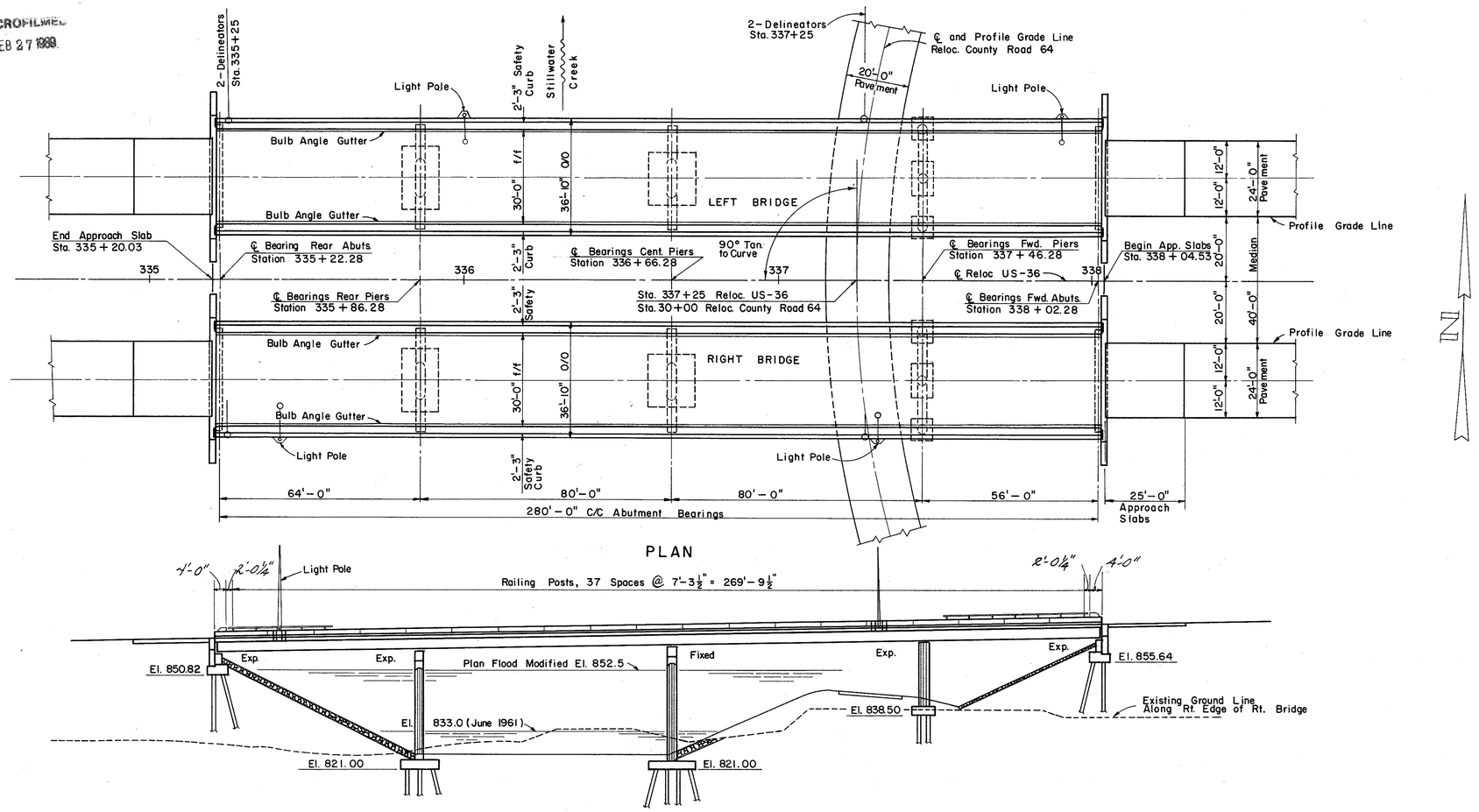

ELEVATION

LIGHTING DETAILS are shown on Lighting Plans beginning with Sheet 489.

GENERAL NOTES

REFERENCE shall be made to Standard Drawings No. SD-1-63, sheets No. 1, 2, 3 & 4 of 4 dated 11-12-63, RB-1-55 revised 2-2-59, BP-1-65, sheet 1, dated 2-1-65, AS-1-54 revised 8-10-65, and to Supplemental Specifications 808 dated 7-14-65, and 811 dated 3-29-65.

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

ALL STRUCTURAL STEEL: ASTM A36,

DESIGN LOADING: CF 2000(57).

BASIC UNIT WORKING STRESSES:

Concrete, Class C:	1,333 p.s.i.
Concrete, Class E:	1,133 p.s.i.
Structural Steel: ASTM A36	20,000 p.s.i.
Reinforcing Steel, ASTM A15, A16, & A160; Deformed, Intermediate or Hard Grade: Basic unit stress	20,000 p.s.i.
Except spiral reinforcement may be plain Structural Grade with basic unit stress of	18,000 p.s.i.

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

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.

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

PILES shall be driven to a minimum bearing capacity of 35 tons per pile for the abutments and 41 tons per pile for the piers.

PROCEDURE: The embankment for Relocated County Road 64 between Sta. 28+00 and Sta. 32+00 and for Relocated U.S. 36 between Sta. 333+00 and Sta. 340+00 shall be placed and compacted (with rock excluded from the embankment where footings and piles are required) up to the finished spill thru earth and rock slopes, and to the level of the subgrade, after which the following waiting periods shall elapse before construction of substructure units may begin:

Unit	Waiting Period, days
Rear Abutment	90
Rear Pier	30
Center Pier	0
Forward Pier	30
Forward Abutment	90

SETTLEMENT: Settlement hubs shall be driven in the compacted embankment 30 feet right and left of Centerline at Sta. 338+15. If the settlement hubs and platform with readings taken at one week intervals, indicate that all settlement has ceased before the end of the waiting period, construction of the abutments may proceed after approval from the Director.

ESTIMATED LIGHTING QUANTITIES
ITEM 625

TOTAL	UNIT	DESCRIPTION
4	EA.	LUMINAIRE, TYPE III, WITH INTEGRAL 400 WATT MERCURY BALLAST
4	EA.	MERCURY VAPOR LAMP, 400 WATT (H-33-(CD)
4	EA.	LIGHT POLE WITH 1 BRACKET ARM - DESIGN RA8B30.0
320	L.F.	POLE & BRACKET CABLE, 1/C, NO 12 AWG, 600 V.
4	EA.	ESNA KIT STYLE 82
4	EA.	ESNA KIT STYLE 83
592	L.F.	CONDUIT - RIGID GALVANIZED STEEL IN BRIDGES
428	L.F.	CIRCUIT CABLE - 1/C, NO. 4 AWG, 600 V.
LUMP(2)	L.S.	BRIDGE STRUCTURE GROUNDING SYSTEM
406	L.F.	FISHWIRE - 1/C, NO 18 BARE COPPER WIRE

ESTIMATED QUANTITIES

				LEFT BRIDGE						RIGHT BRIDGE					
ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS	PIERS	GEN'L			SUPER	ABUTS	PIERS	GEN'L		
503	Lump	Sum	Cofferdams, Cribs and Sheeting				Lump						Lump		
503	694	Cu. Yds.	Unclassified Excavation		162	185					162	185			
203	26,029	Cu. Yds.	Excavation not including embankmen construction (Channel)				13,015						13,014		
511	686	Cu. Yds.	Class C Concrete Superstructure	343						343					
511	316	Cu. Yds.	Class C Concrete, Piers above Footings			158						158			
511	150	Cu. Yds.	Class E Concrete, Abut. above Footings		75						75				
511	254	Cu. Yds.	Class E Concrete, Footings		53	74					53	74			
509	259,400	Lbs.	Reinforcing Steel	96,687	7,502	25,511				96,687	7,502	25,511			
513	643,000	Lbs.	Structural Steel	321,500						321,500					
514	643,000	Lbs.	Field Painting of Structural Steel	321,500						321,500					
517	1127.32	Lin. Ft.	Railing, Type I	563.66						563.66					
505	Lump	Sum	First Test Pile		Lump										
507	8,060	Lin. Ft.	12" Cast-in-Place Reinforced Concrete Piles		1,370	2,660					1,370	2,660			
518	66	Cu. Yds.	Porous Backfill		33						33				
518	28	Each	Scuppers, Including Supports	14						14					
518	148	Lin. Ft.	6" Perforated Helical Corr. Met. Pipe, 707.06 Including Specials		74						74				
518	102	Lin. Ft.	6" Helical Corr. Met. Pipe, 707.06 Non-Perforated		51						51				
625			Lighting quantities, see sheet 489												
908	686	Each	Water-reducing, Set-retarding Admixtures for Conc.	343						343					
601	7,088	Cu. Yds.	Dumped Rock Channel Protection, 2'-0" Thick				3,544						3,544		
601	532	Sq. Yds.	Crushed Aggregate Slope Protection				266						266		

Payment will be made for only one "First test Pile. It may be driven for either the Left Bridge or the Right Bridge.

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FOR
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DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

GENERAL PLAN
BRIDGE NO. TUS-36-19.9 L & R.
RELOC. US-36 OVER STILLWATER CREEK AND RELOC. COUNTY ROAD 64
TUSCARAWAS COUNTY
STA. 335 + 20.03
STA. 338 + 04.53

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
S.M.	M.F.	E.L.M.	L.L.D.	H.C.M. 8-17-64	

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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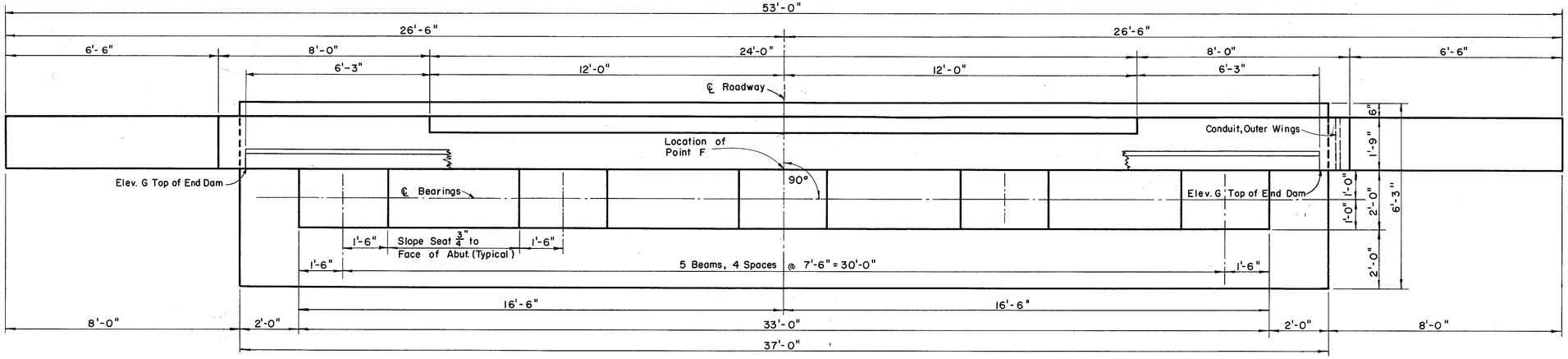
TUSCARAWAS COUNTY
TUS - 36 - 15.93



PLAN

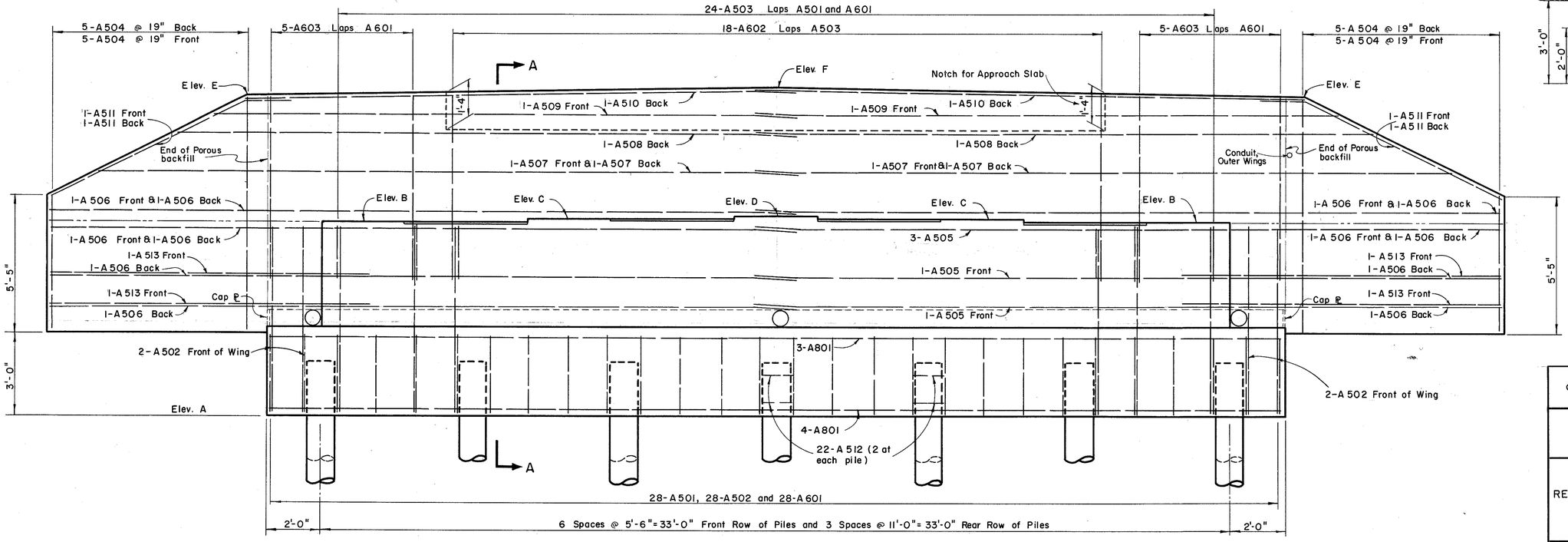
POROUS BACKFILL shall extend upward to the approach slab and to the surface of the earth shoulders.

N
Rear Abutment

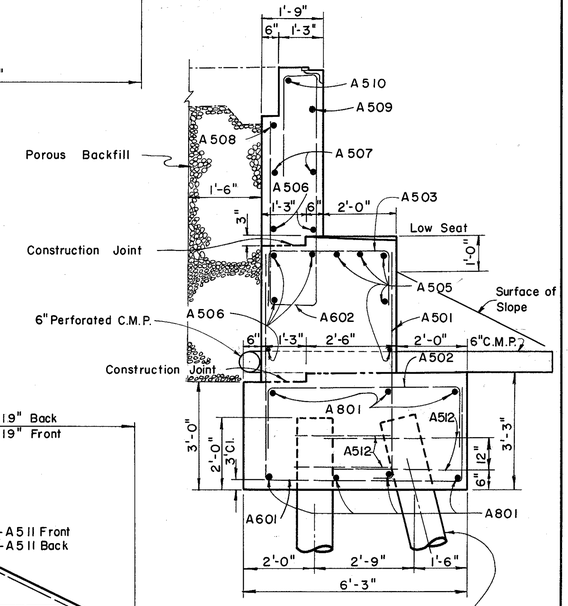
ELEVATIONS

ABUTMENT	A	B	C	D	E	F	G
Left Rear	850.82	857.90	858.02	858.13	862.48	862.79	862.51
Right Rear	850.82	857.90	858.02	858.13	862.48	862.79	862.51
Left Forward	855.64	862.71	862.83	862.95	867.33	867.64	867.36
Right Forward	855.64	862.71	862.83	862.95	867.33	867.64	867.36

N
Forward Abutment



ELEVATION



SECTION A-A

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DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

ABUTMENT DETAILS

BRIDGE NO. TUS-36-19/9 L&R.
RELOC. U.S. 36 OVER STILLWATER CREEK
AND RELOC. COUNTY ROAD 64
TUSCARAWAS COUNTY
STA. 335 + 20.03
STA. 338 + 04.53

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
M.C.P.	M.F.	R.E.B. B.A.B.	L.L.D.	H.C.M. 8-17-64	

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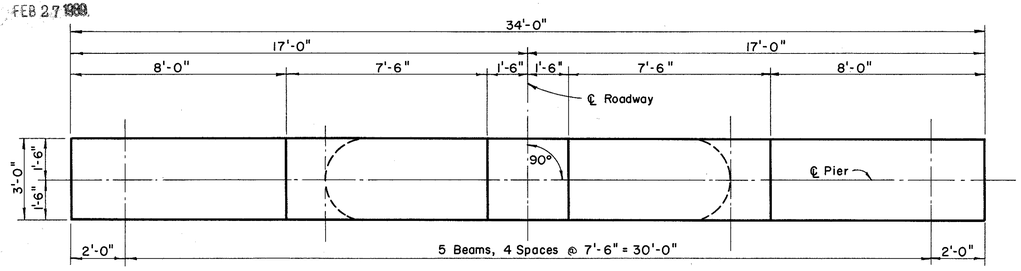
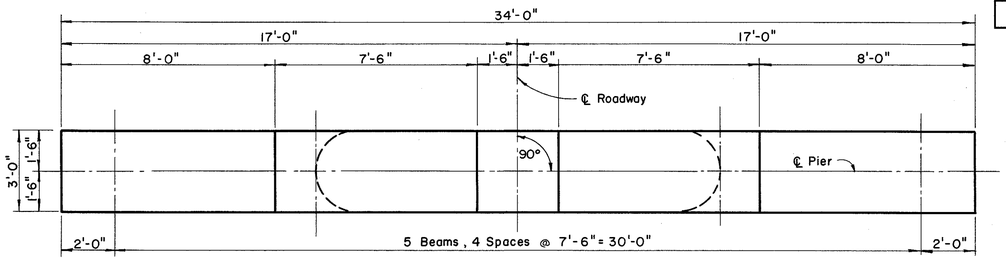
TUSCARAWAS COUNTY
TUS-36-15.93

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



PLAN OF CAP



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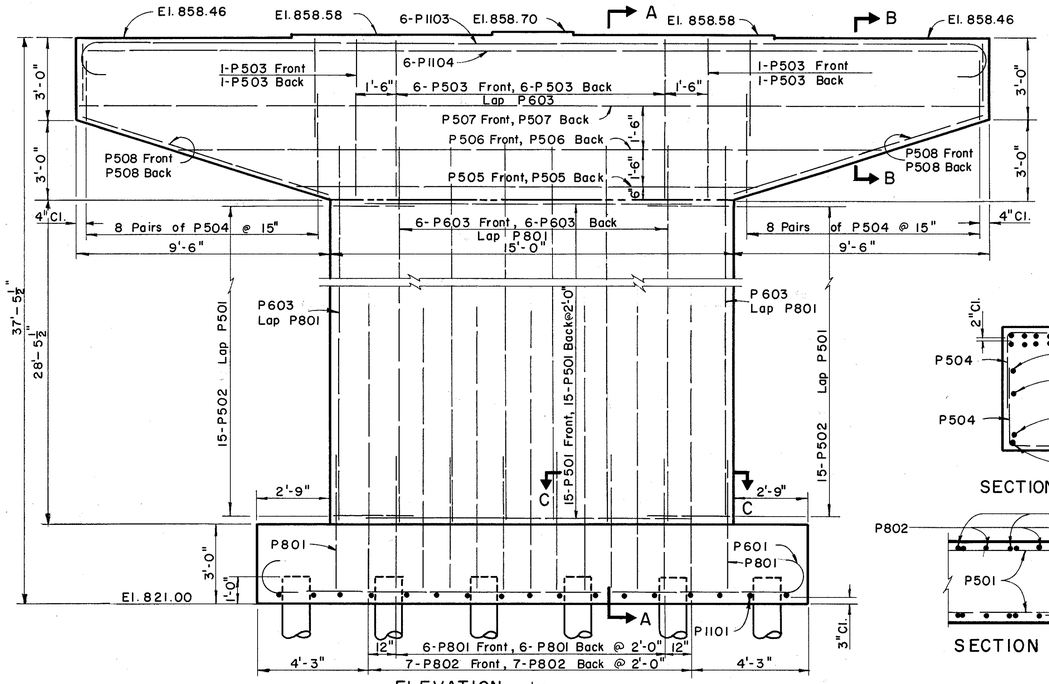

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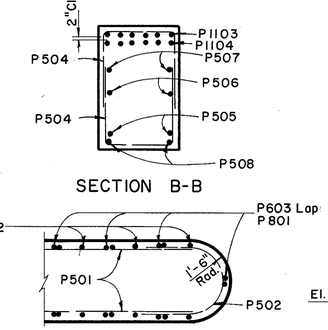
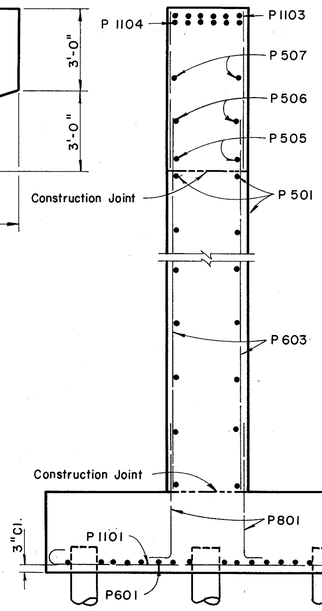


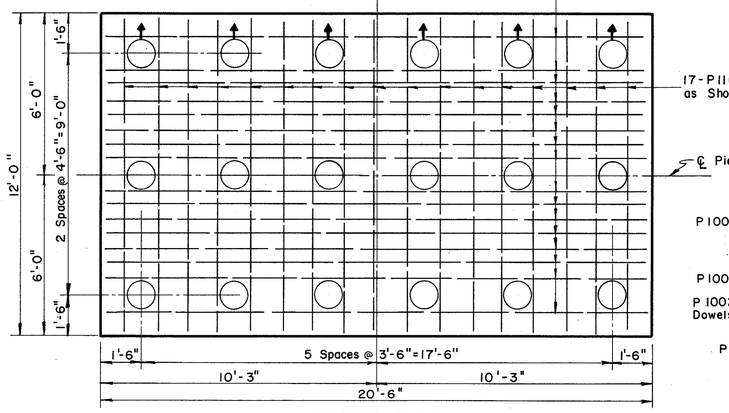
SECTION B-B

SECTION C-C

ELEVATION

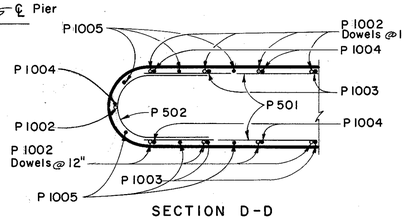


SECTION A-A

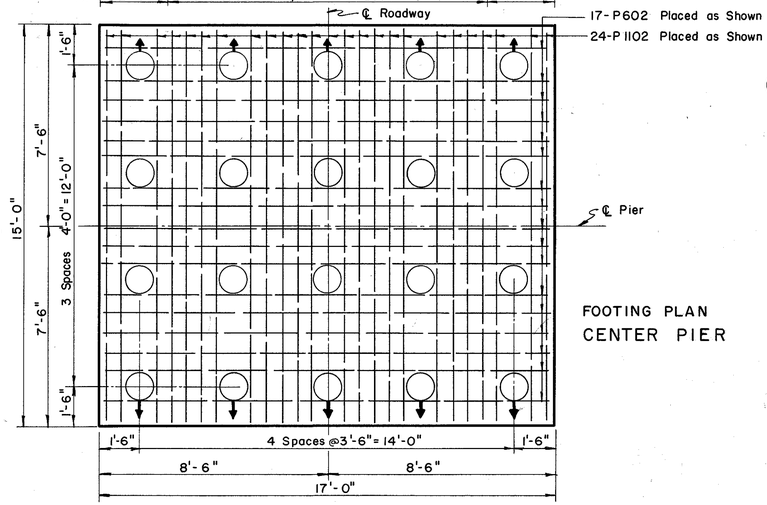


FOOTING PLAN
REAR PIER

N



SECTION D-D



FOOTING PLAN
CENTER PIER

Indicates Direction of Battered Pile
Batter 1 in 4

Reinforcement Cover: 2" unless otherwise Shown.

Electrical Grounding required at Center Pier.

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FOR
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DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

REAR PIER & CENTER PIER

BRIDGE NO. TUS-36-19/9 L & R.
RELOC. U.S. 36 OVER STILLWATER CREEK
AND RELOC. COUNTY ROAD 64
TUSCARAWAS COUNTY
STA. 335 + 20.03
STA. 338 + 04.53

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
M.C.P. G.S.W.	M.J.F.	F.W.B. B.A.B.	L.L.D.	H.C.M. 8-17-64	

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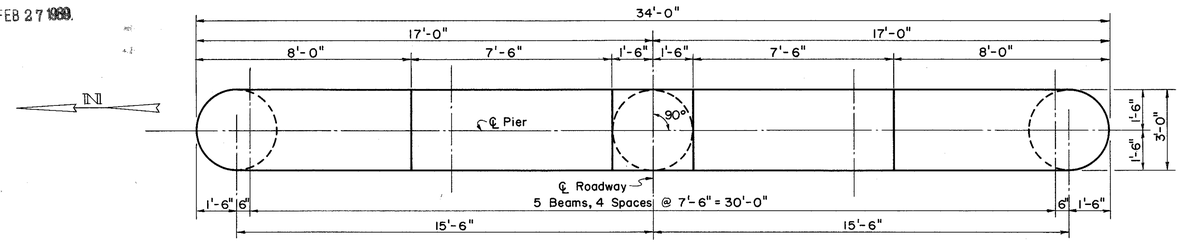
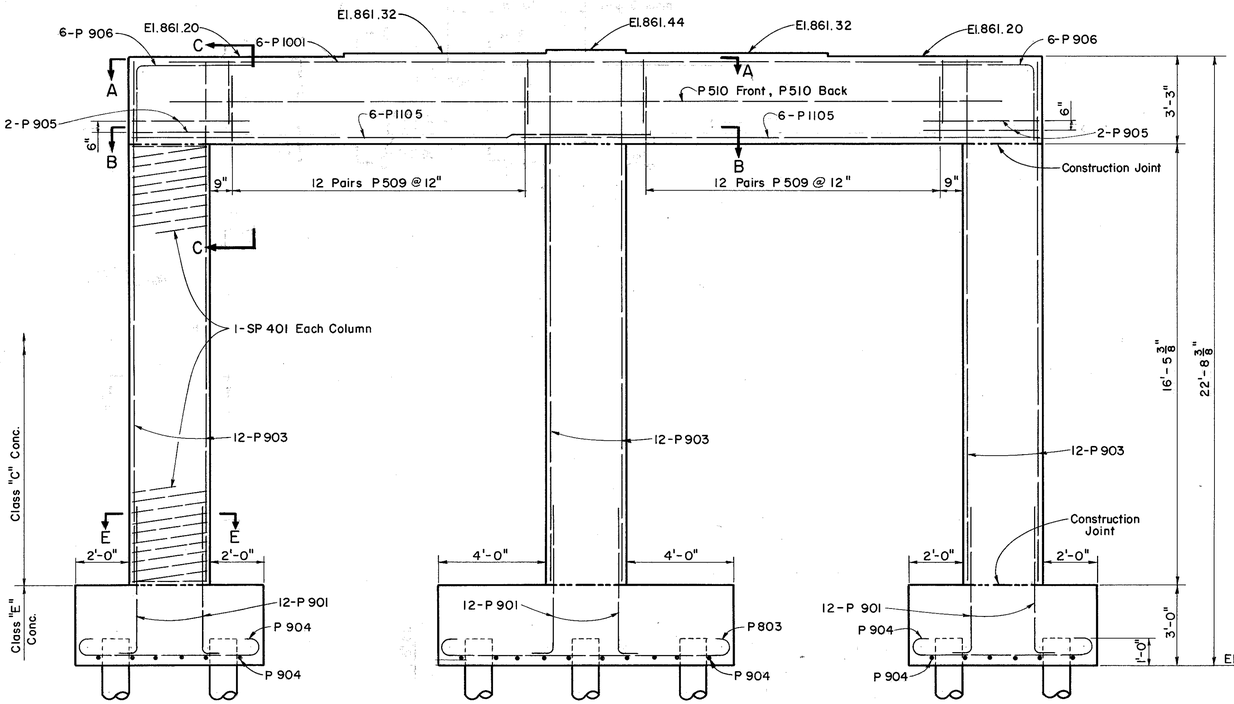
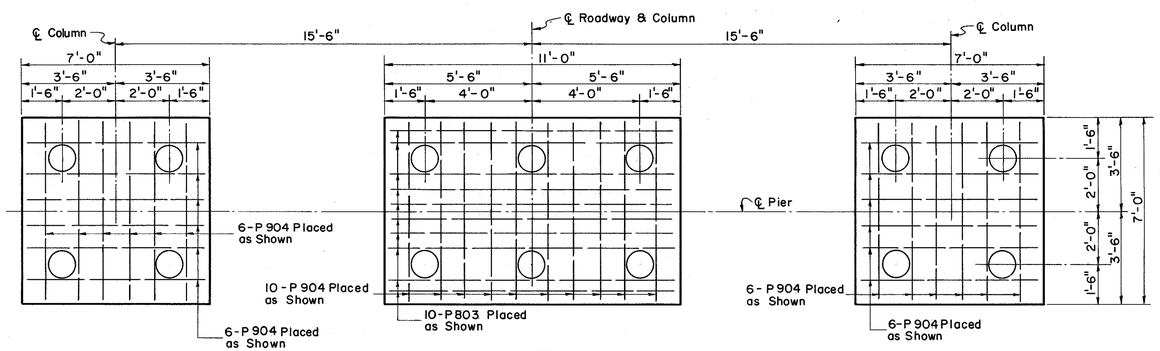


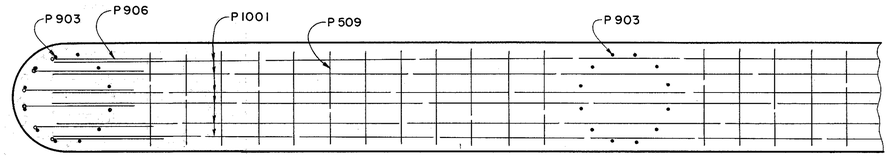
PLAN



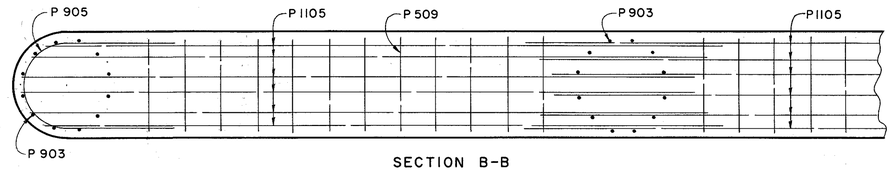
ELEVATION



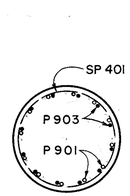
FOOTING PLAN



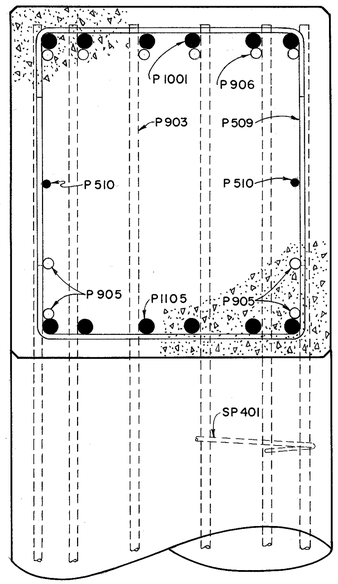
SECTION A-A



SECTION B-B



SECTION E-E



SECTION C-C

REINFORCEMENT shall have a minimum cover of 3" in the bottom of footings and 2" elsewhere.

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FOR

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FORWARD PIER

BRIDGE NO. TUS-36-19/9 L&R.
RELOC. U.S. 36 OVER STILLWATER CREEK
AND RELOC. COUNTY ROAD 64
TUSCARAWAS COUNTY
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M.C.P. G.S.W.	M.F. G.S.W.	F.W.B. B.R.	L.L.D.	H. C. M. 8 - 17 - 64	

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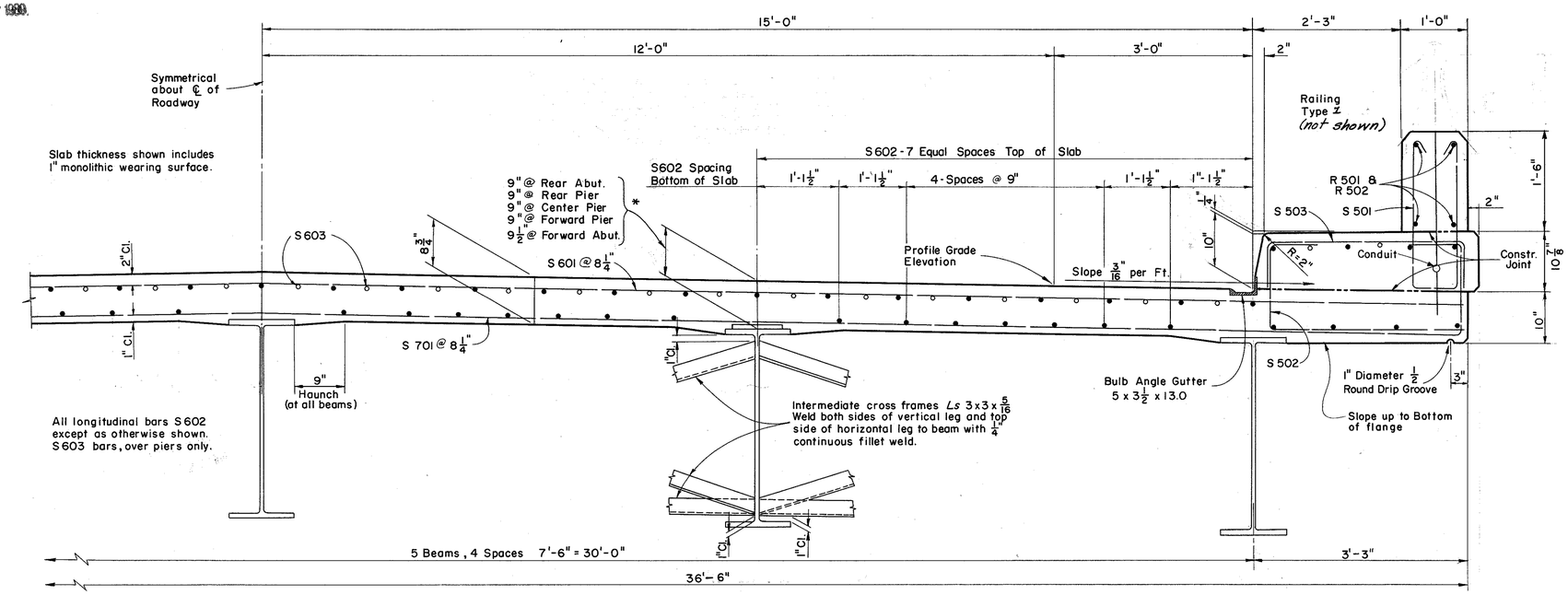


TRANSVERSE SECTION

* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per Sec. 511.19 of the Construction and Material Specifications.

NOTES:

REFERENCE shall be made to Standard Drawing SD-1-63 Sheets 1 thru 4 of 4 Dated 11-12-63 for details of end dams, gutters, end frames, scuppers, cross frames and moment plates, and details of bearings.

REFERENCE shall be made to Standard Drawing RB-1-55 revised 2-2-59 for details of bearings.

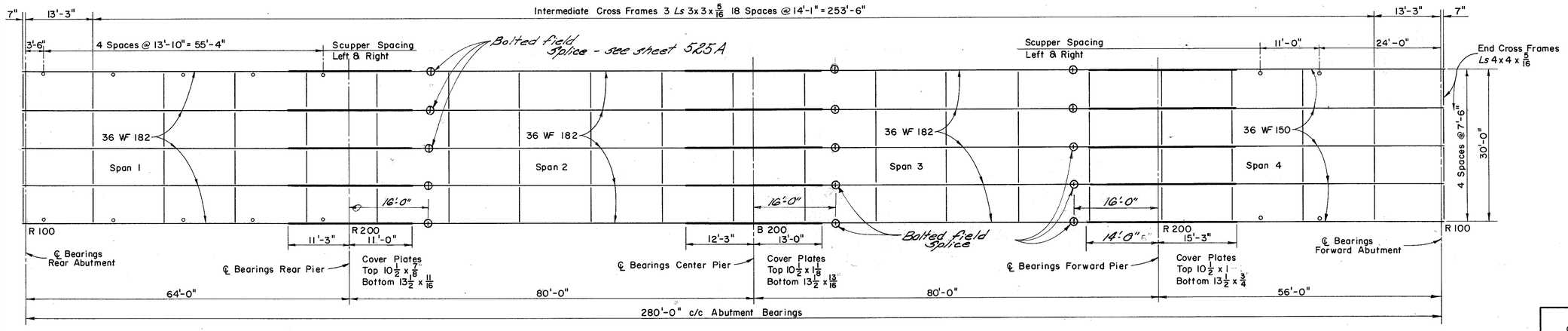
REFERENCE shall be made to Standard Drawing BR-1-65, sheet 1, dated 2-1-65, for details of aluminum railing, Type "1", and concrete parapet.

MOMENT PLATES shall be welded as shown on SD-1-63 except welding shall be done in the shop rather than in the field. No splice shall be made in beams over piers.

DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of steel beams, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12", except that the maximum slope shall not exceed 3 inches per foot. A typical haunch width of 9" shall be used for computing quantity of concrete.

DEAD LOAD DEFLECTION WELDING PROCEDURE:

[illegible]



STEEL FRAMING PLAN

DEFLECTION AND CAMBER

LOCATION	SPAN 1	SPAN 2	SPAN 3	SPAN 4
Deflection due to Weight of Steel	⅛"	⅛"	⅛"	0
Deflection due to remaining Dead Load	⅜"	⅜"	⅜"	¼"
Convexity required for Vertical Curve	0	0	0	0
Sum of Deflection and Convexity	½"	½"	½"	¼"
Required Camber	0	0	0	0

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DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

SUPERSTRUCTURE DETAILS

BRIDGE NO. TUS-36-1919 L & R.
RELOC. U.S. 36 OVER STILLWATER CREEK
AND RELOC. COUNTY ROAD 64
TUSCARAWAS COUNTY
STA. 335 + 20.03
STA. 338 + 04.53

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
M.C.P.	M.F.	R.E.B P.A.D.	L.L.D.	H.C.M. 8-17-64	

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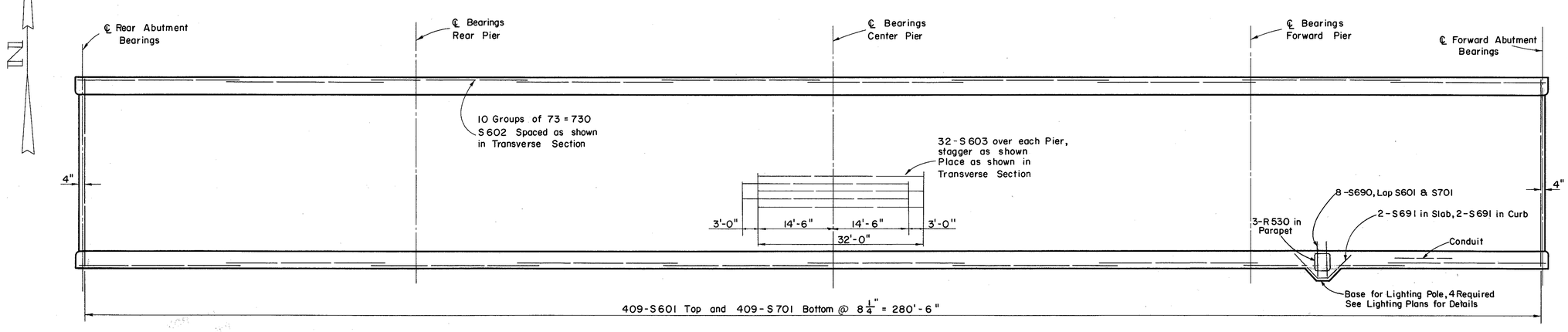
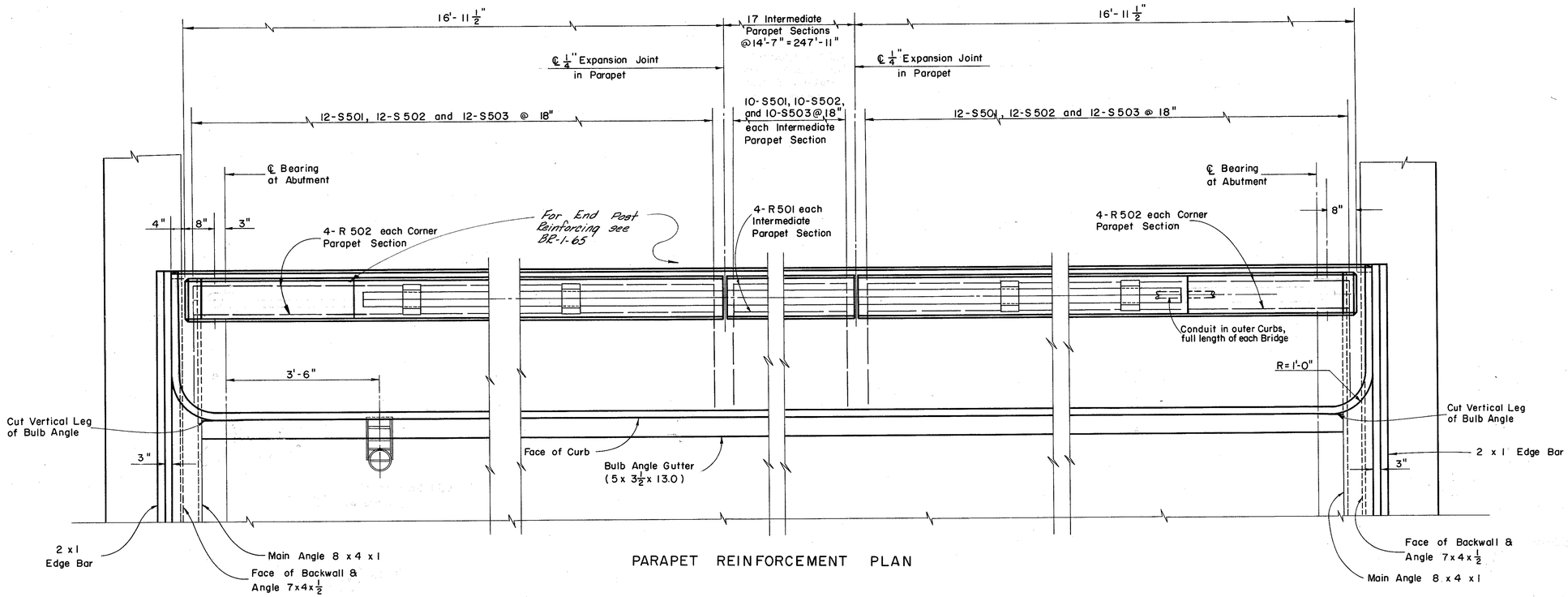
TUS - 36 - 15.93



DECK REINFORCEMENT PLAN
(ONE BRIDGE SHOWN)

NOTE:
Terminate 6 x 4 x 3/4 supporting angle and vertical leg of 8 x 4 x 1 main angle on line of deck fascia.



PARAPET REINFORCEMENT PLAN

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

DETAILS OF DECK & PARAPET

BRIDGE NO. TUS-36-19/9 L.& R.
RELOC. U.S. 36 OVER STILLWATER CREEK
AND RELOC. COUNTY ROAD 64
TUSCARAWAS COUNTY
STA. 335 +20.03
STA. 338 +04.53

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
M.C.P.	K.D.L.	REB B.A.B.	L.L.D.	H.C.M. 8-17-64	

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2	OHIO		

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662

TUSCARAWAS COUNTY
TUS-36-15.93

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 size of the bar. For example A 700 is a No. 7 size bar and A 1014 is a No. 10 size bar.

All dimensions are out to out of the bar.

Shape "B" is a bent bar, all other bars are straight.

The "length" shown in steel list for the spiral bars is the distance from the top of the footing to the bottom of cap.

The "number of turns" shown in the steel list for the spiral bars is the "length" divided by the pitch, plus three (3) turns (total number of closed coils) expressed as the nearest whole number.

Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item 509.

1½ closed coils shall be provided at the ends of each spiral unit.

Four steel channel, tee or angle spacers, weight approximately 0.68 pounds per linear foot 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 pounds per linear foot will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

REINFORCING STEEL LIST

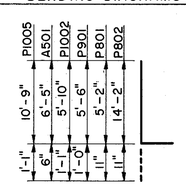
ABUTMENTS

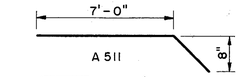
MARK	REQUIRED LT. REAR	RT. REAR	LT. FWD.	RT. FWD.	TOTAL	LENGTH	WEIGHT LT. BRIDGE	RT. BRIDGE	SHP.
A501	28	28	28	28	112	6'-11"	404	404	B
A502	28	28	28	28	112	8'-4"	487	487	B
A503	24	24	24	24	96	6'-10"	342	342	B
A504	20	20	20	20	80	5'-1" to 8'-4"	280	280	*
A505	5	5	5	5	20	32'-8"	341	341	
A506	12	12	12	12	48	27'-3"	682	682	
A507	4	4	4	4	16	26'-0"	217	217	
A508	2	2	2	2	8	23'-0"	96	96	
A509	2	2	2	2	8	21'-9"	91	91	
A510	2	2	2	2	8	20'-9"	87	87	
A511	4	4	4	4	16	8'-7"	72	72	B
A512	22	22	22	22	88	6'-5"	295	295	B
A513	4	4	4	4	16	11'-9"	98	98	
A601	28	28	28	28	112	14'-4"	1,205	1,205	B
A602	18	18	18	18	72	16'-2"	874	874	B
A603	10	10	10	10	40	18'-8"	561	561	B
A801	7	7	7	7	28	36'-8"	1,370	1,370	

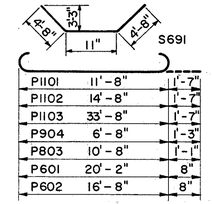
PIERS

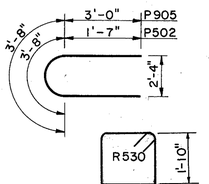
MARK	REQUIRED LEFT REAR	RIGHT REAR	LEFT CENT'R	RIGHT CENT'R	LEFT FWD.	RIGHT FWD.	TOTAL	LENGTH	WEIGHT LEFT BRIDGE	RIGHT BRIDGE	SHP.
P501	30	30	32	32			124	12'-0"	776	776	
P502	30	30	32	32			124	6'-10"	442	442	B
P503	16	16	16	16			64	5'-10"	195	195	
P504	32	32	32	32			128	6'-7" to 9'-6"	534	534	B*
P505	2	2	2	2			8	17'-6"	73	73	
P506	2	2	2	2			8	26'-6"	111	111	
P507	2	2	2	2			8	33'-8"	140	140	
P508	4	4	4	4			16	10'-0"	83	83	
P509					48	48	96	6'-7"	329	329	B
P510					2	2	4	31'-0"	65	65	
P601	10	10					20	21'-6"	323	323	B
P602			17	17			34	18'-0"	460	460	B
P603	14	14					28	30'-6"	641	641	
P801	14	14					28	6'-1"	227	227	B
P802	14	14					28	15'-1"	564	564	B
P803					10	10	20	12'-10"	343	343	B
P901					36	36	72	6'-6"	796	796	B
P903					36	36	72	19'-6"	2,387	2,387	
P904					34	34	68	9'-2"	1,060	1,060	B
P905					4	4	8	9'-8"	131	131	B
P906					12	12	24	5'-3"	214	214	B
P1001					6	6	12	31'-9"	820	820	
P1002			28	28			56	6'-11"	834	834	B
P1003			12	12			24	18'-0"	929	929	
P1004			16	16			32	33'-0"	2,272	2,272	
P1005			12	12			24	11'-10"	611	611	B
P1101	17	17					34	14'-10"	1,339	1,339	B
P1102			24	24			48	17'-10"	2,274	2,274	B
P1103	6	6	6	6			24	36'-10"	2,348	2,348	B
P1104	6	6	6	6			24	33'-2"	2,115	2,115	
P1105					12	12	24	18'-3"	1,163	1,163	

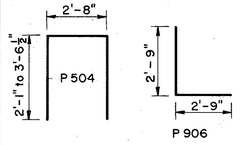
BENDING DIAGRAMS

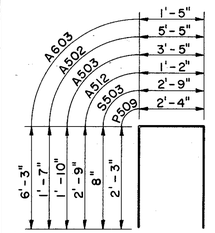


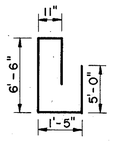


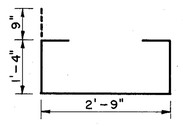












** For Bending Diagram See BR-1-65.

SUPERSTRUCTURE

MARK	REQUIRED LT. BRIDGE	RT. BRIDGE	TOTAL	LENGTH	WEIGHT LT. BRIDGE	RT. BRIDGE	SHP.
S501	388	388	776	5'-7"	2,258	2,258	B
S502	388	388	776	6'-8"	2,695	2,695	B
S503	388	388	776	3'-10"	1,550	1,550	B
S690	16	16	32	4'-0"	96	96	
S601	409	409	818	36'-2"	22,219	22,219	
S602	730	730	1,460	30'-0"	32,894	32,894	
S603	96	96	192	32'-0"	4,614	4,614	
S691	8	8	16	10'-3"	123	123	B
S701	409	409	818	36'-2"	30,238	30,238	

RAILING (Included with Item 517 for Payment)

MARK	REQUIRED LT. BRIDGE	RT. BRIDGE	TOTAL	LENGTH		SHP.
R 501	136	136	272	14'-3"		
R 502	16	16	32	16'-7"		
R 530	6	6	12	6'-4"		B
R503	12	12	24	3'-3"		B**
R504	8	8	16	5'-4"		B**

REPLACEMENT BARS

MARK	RQD.	LENGTH	SHP.
RE 400	1	5'-3"	B
RE 500	2	5'-7"	
RE 600	7	5'-11"	
RE 700	4	6'-3"	
RE 800	1	6'-6"	
RE 900	1	6'-10"	
RE 1000	1	7'-3"	
RE 1100	1	7'-7"	

* VARYING BARS

MARK	VARIES BY	NO. OF EACH
A 504	9 3/4"	16
P 504	2 1/2"	16

SPIRAL BARS

MARK	REQUIRED LT. FWD.	RT. FWD.	TOTAL	LENGTH	WEIGHT LT. BRIDGE	RT. BRIDGE	PITCH	NO. TURNS	CORE DIA.
SP401	3	3	6	16'-6"	912	912	4 1/2"	47	32

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

REINFORCING STEEL LIST
BRIDGE NO. TUS-36-19/9 L&R
RELOC. U.S.-36 OVER STILLWATER CREEK AND COUNTY ROAD 64
TUSCARAWAS COUNTY
STA. 335+20.03
STA. 338+04.53

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
	M.F.	E.L.M. G.F.L.	B.O.L.	H.C.M. 8-17-64	

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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.

TUSCARAWAS COUNTY
TUS-36-15.93

Location, 0.02 mi. N. of N. corporation line of Dennison.

B.M.-25 Located 18'± Lt. Sta. 21+40, Reloc. Co. Road 64, spike in 14" stump. Elev. 869.454

B.M.-26 Bolt on fire hydrant between hose connections N.E. corner of 2nd. & Summer Streets. El. 868.622

NEW WATER LINE is to be installed after footings of Forward Pier are in place.

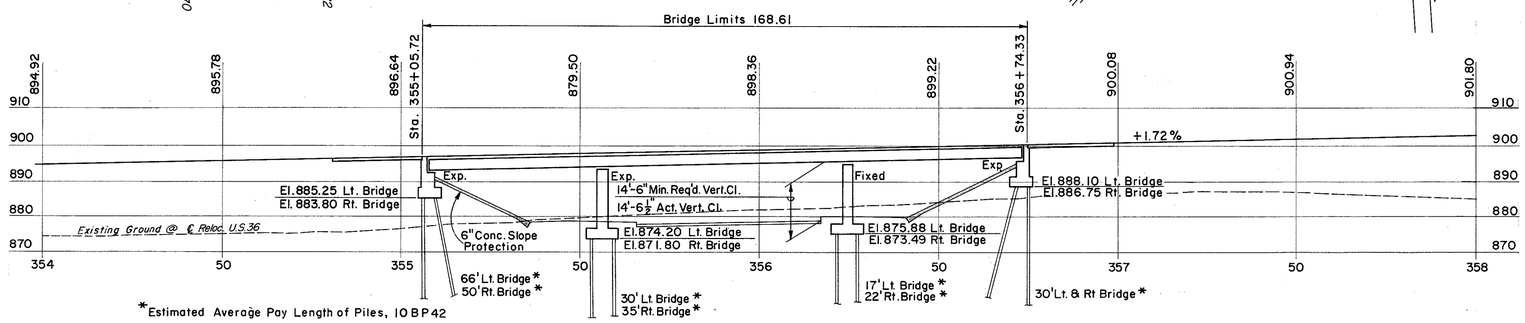
LIGHTING DETAILS are shown on Lighting Plans beginning with Sheet 489.

PROPOSED STRUCTURE

TYPE : Two 3 span continuous steel beam with reinforced concrete deck & substructure.
SPANS : 48'-0", 68'-0" & 48'-0" ℄ brg's.
ROADWAY : 40'-0" ft of parapets
LOAD FREQUENCY: CF = 2,000 (57)
WEARING SURFACE : 1" monolithic concrete.
APPROACH SLABS : AS-1-54 (25'-0" Long).
ALIGNMENT : Curves
SKEW : 12° 21' R.F. ℄ Brg's. to Ref. Line.
A.D.T. : Reloc. U.S. 36, 4,108 (1977)
2nd. Street not available.
SUPERELEVATION : Reloc. U.S. 36, 0.059 ft/ft
2nd. Street, 0.042 ft/ft

RECONSTR. SECOND ST
P.I. Sta. 29+88.63
Δ = 16° 05' 16"
D = 4° 00' 00"
R = 1,432.40'
L = 402.20'
T = 202.43'

RELOC. U.S. 36
P.I. Sta. 359+80.72
Δ = 32° 41' 13"
D = 2° 30' 00"
R = 2,291.83'
L = 1,057.47'



*Estimated Average Pay Length of Piles, 10 BP 42

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

SITE PLAN
BRIDGE NO. TUS-36-1957 L & R.
RELOC US-36 OVER RECONSTR. SECOND ST.
TUSCARAWAS COUNTY
STA. 355+05.72
STA. 356+74.33

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
H. C. M.	M. F.	E. L. M. M. B. G.	L. L. D.	H. C. M. 8-17-64	

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FEB 27 1969

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2	OHIO		

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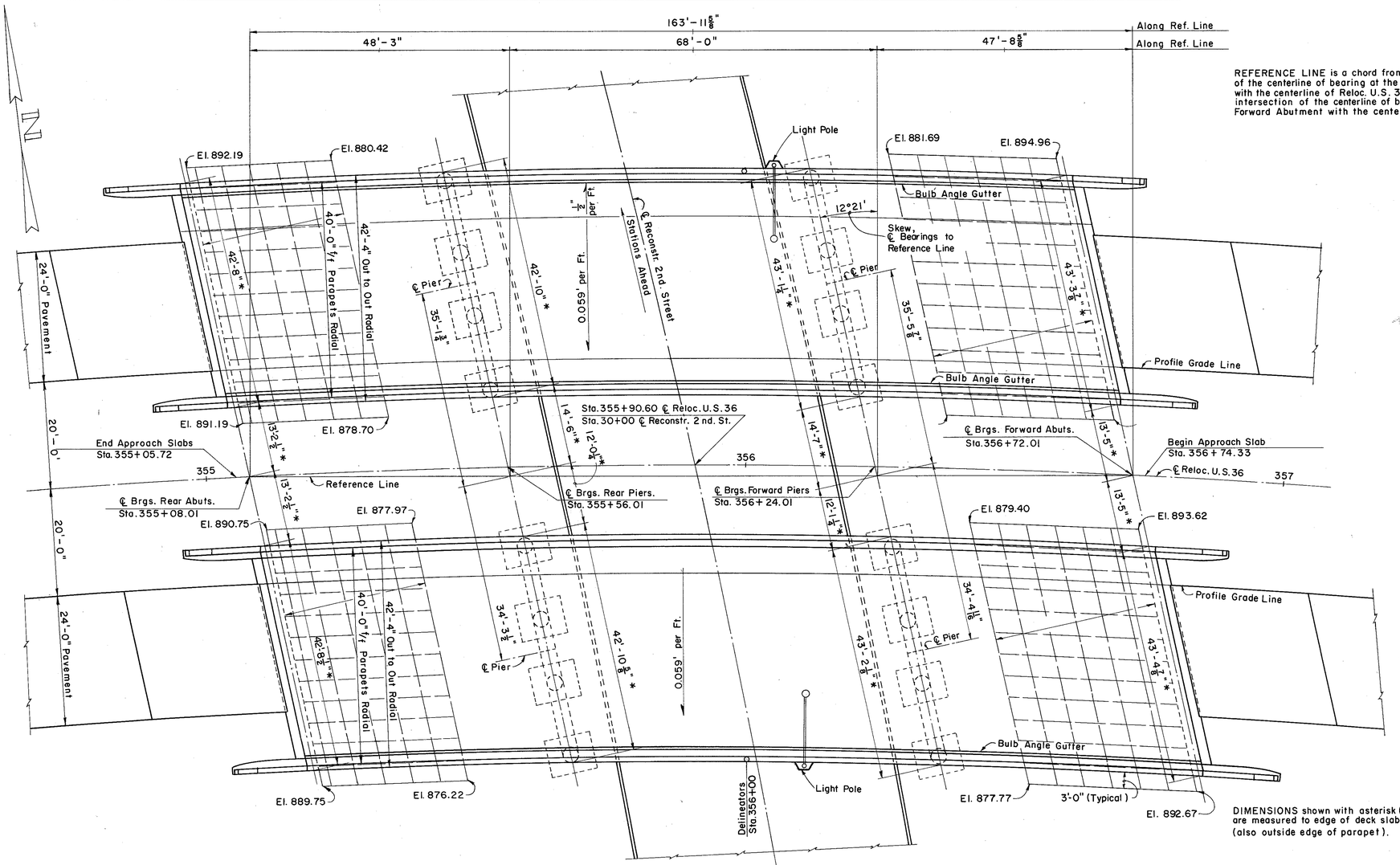
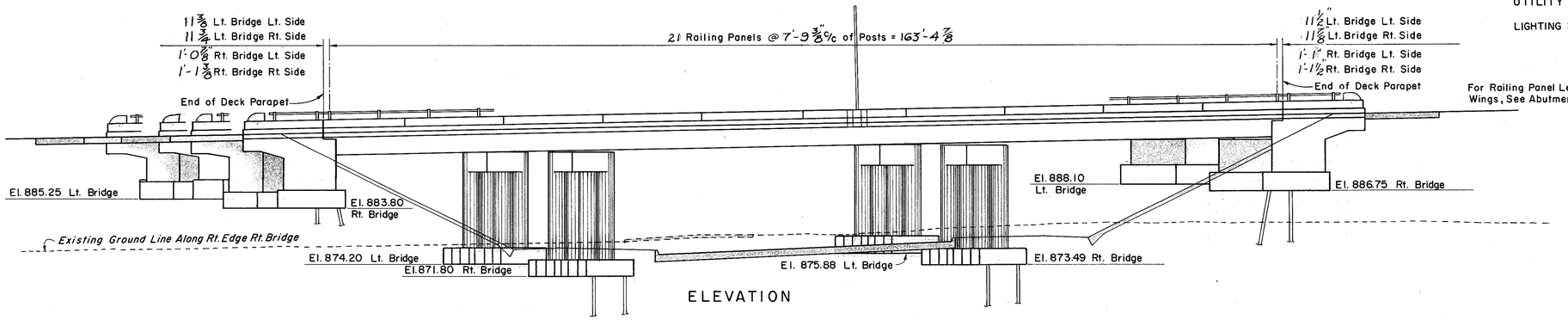
TUSCARAWAS COUNTY
TUS-36-15.93



REFERENCE LINE is a chord from the intersection of the centerline of bearing at the Rear Abutment with the centerline of Reloc. U.S. 36, and the intersection of the centerline of bearing at the Forward Abutment with the centerline of Reloc. U.S. 36.

DIMENSIONS shown with asterisk (*) are measured to edge of deck slab (also outside edge of parapet).

PLAN



ELEVATION

GENERAL NOTES

REFERENCE shall be made to Standard Drawings SD-1-63, Sheets No. 1 thru 4 of 4 dated 11-12-63; FSB-1-62 revised 1-15-63, BR-1-65, sheet 1 dated 2-1-65 and AS-1-54 revised 8-10-65, and to Sup. Spec. 808 dated 7-19-65 and 811 dated 3-29-65

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

DESIGN LOADING: CF 2000 (57)

BASIC UNIT WORKING STRESSES:
Concrete Class C - basic unit stress ---------- 1,333 p.s.i.
Concrete Class E - basic unit stress ---------- 1,133 p.s.i.
Structural Steel-ASTM A36 basic unit stress ---------- 20,000 p.s.i.
(Note: For ASTM A709 Grade 36 steel the same stress is permitted)
Reinforcing Steel ASTM A15, A16, A160, Deformed, Intermediate or hard Grade Basic unit stress 20,000 p.s.i. Except, spiral reinforcement may be plain Structural Grade with basic stress of 18,000 p.s.i.

PROCEDURE: The embankment shall be placed and compacted up to the finished spill thru earth slope and to the level of subgrade for a distance of 200 feet back of abutments, after which a delay of 30 days shall occur before construction of the abutments and piers is begun.

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

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.

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of 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.

SURFACE FINISH OF CONCRETE: The requirements of Section 511.01 Rubbed Finish, (Optional)
(a) The ceiling shall consist of the original bottom surface of earth and rock.
(b) The walls shall be plane or otherwise except that [illegible] vertical [illegible] between outside forms.

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

EXPANSION DEVICES: Expansion devices shall be [illegible] of the [illegible] at [illegible] of the abutments. The [illegible] of the [illegible] at [illegible] at [illegible] at

MICROFILMED FEB 27 1968

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUSCARAWAS COUNTY
TUS - 36-15.93

Elevations marked with asterisk (*) are on top of end dam.

CURB PLAN LEFT WING

PLAN

ELEVATION RIGHT WING

SECTION B-B

NOTES (FOR 4 ABUT'S.)

All reinforcing steel shall have 3" cover in the bottom of the footing and 2" elsewhere.

Bridge Seat Reinforcing: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seats so as to avoid interference with drilling of anchor rod holes.

Railing tube on wing walls shall be continuous.

Indicates pile battered 1:4 and direction of batter.

All piles are 10 BP 42.

For additional notes see General Plan.

FOR DETAILS OF CONDUIT see Lighting Plans beginning with Sheet 489.

ELEVATION

FOOTING PLAN

SECTION A-A

ELEVATION LEFT WING

CURB PLAN RIGHT WING

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

LEFT REAR ABUTMENT

BRIDGE NO. TUS-36-1957 L. & R.
RELOC. U.S.-36 OVER RECONSTR. SECOND ST.
TUSCARAWAS COUNTY
STA. 355+05.72
STA. 356+74.33

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
M.C.P. L.L.D.	M.J.F.	M.J.F. B.A.B.	L.L.D.	H.C.M. 8-17-64	

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FEB 27 1969

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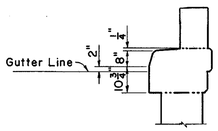
TUSCARAWAS COUNTY
TUS - 36 - 15.93

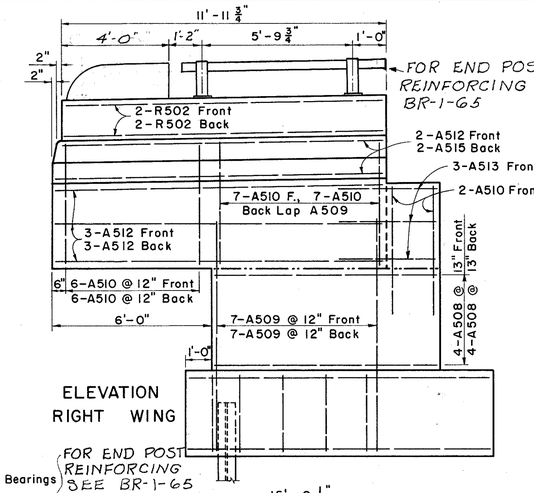
N

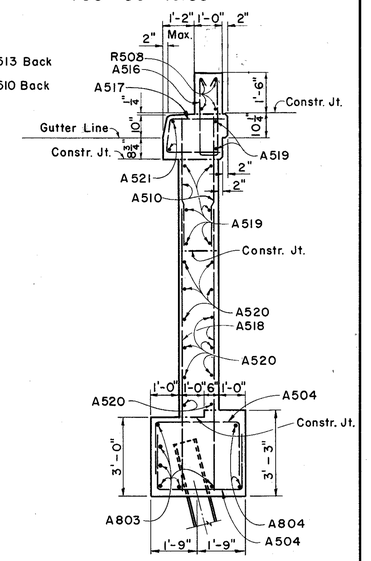
Elevations marked with asterisk (*) are on top of end dam.

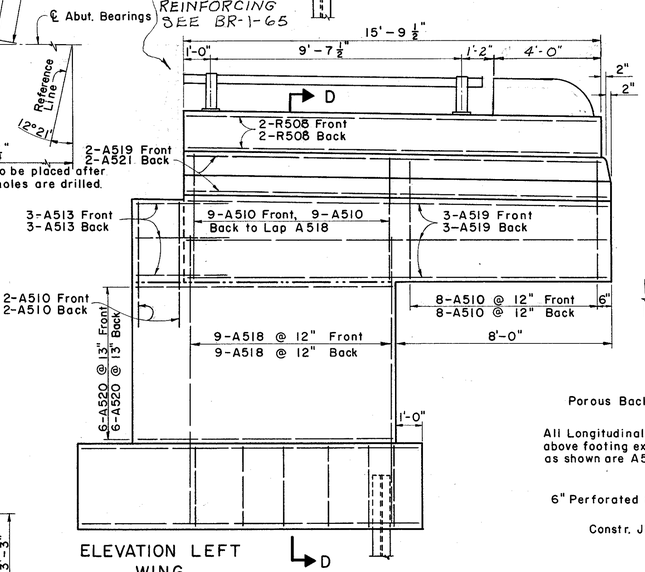
GUTTER DETAIL FOR RIGHT WING

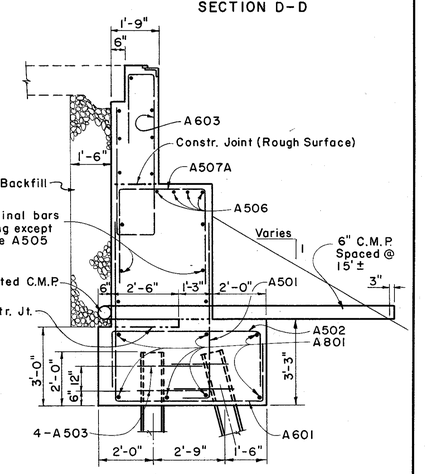


LEFT WING

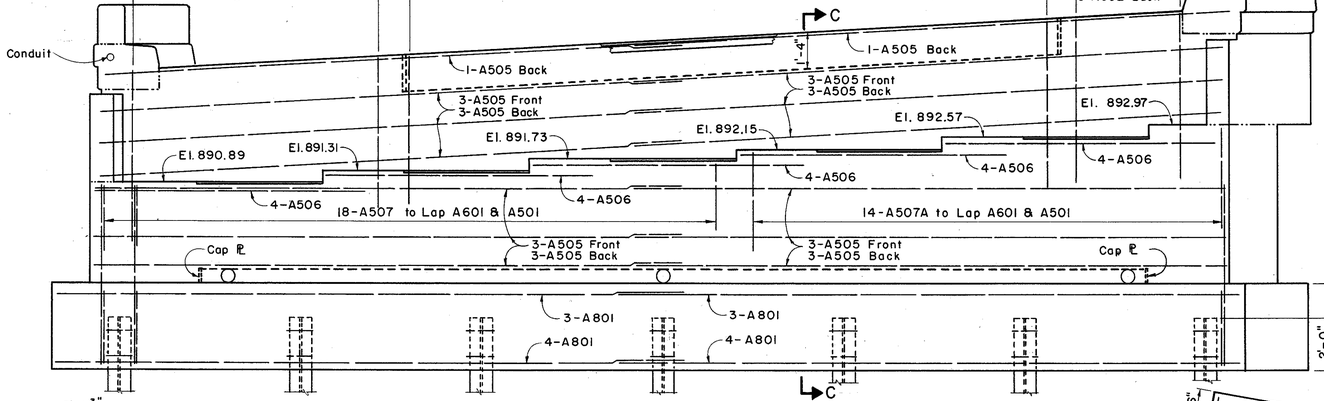


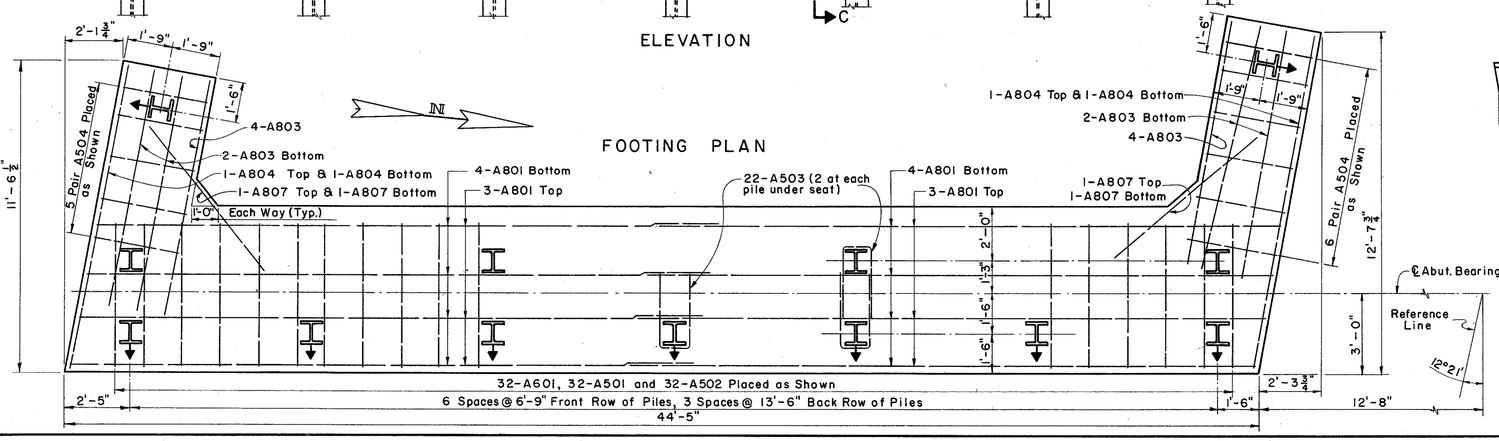


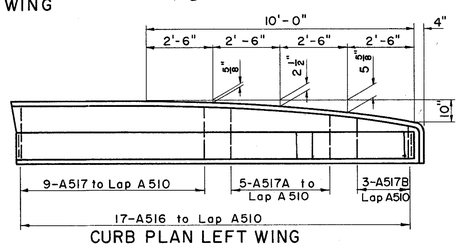


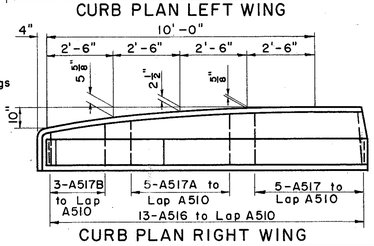


For notes see drawing "Left Rear Abutment"









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CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

RIGHT REAR ABUTMENT

BRIDGE NO. TUS.- 36-1957 L.&R.
RELOC. U.S.-36 OVER RECONSTR. SECOND STREET
TUSCARAWAS COUNTY
STA. 355+05.72
STA. 356+74.33

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
J.V.R	M.J.F.	M.J.F. G.L.	L.L.D	H.C.M. 8-17-64	

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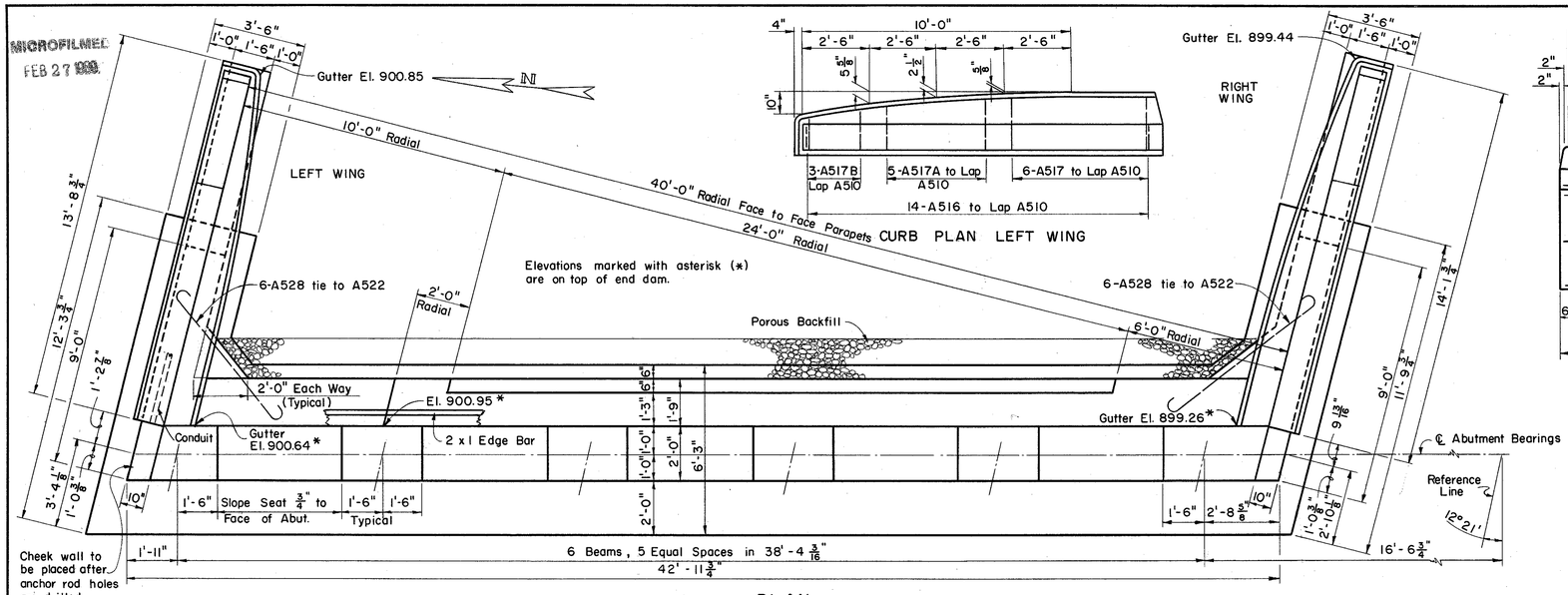
FEB 27 1969

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

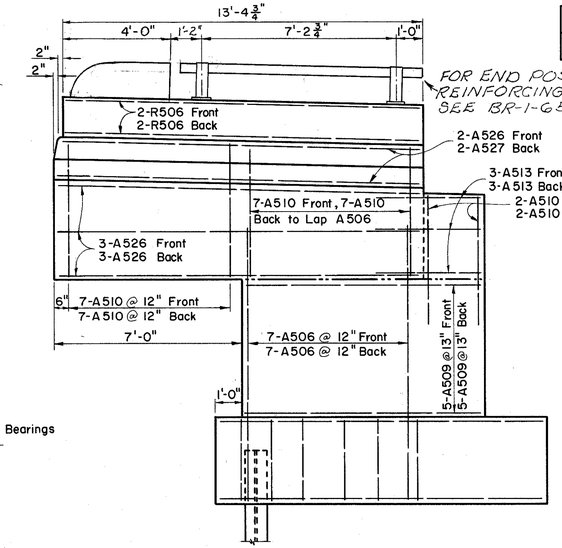
589
662

FOR END POST REINFORCING SEE BR-1-65

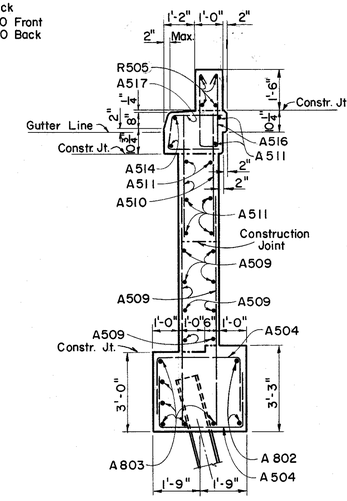
TUSCARAWAS COUNTY
TUS - 36 - 15.93



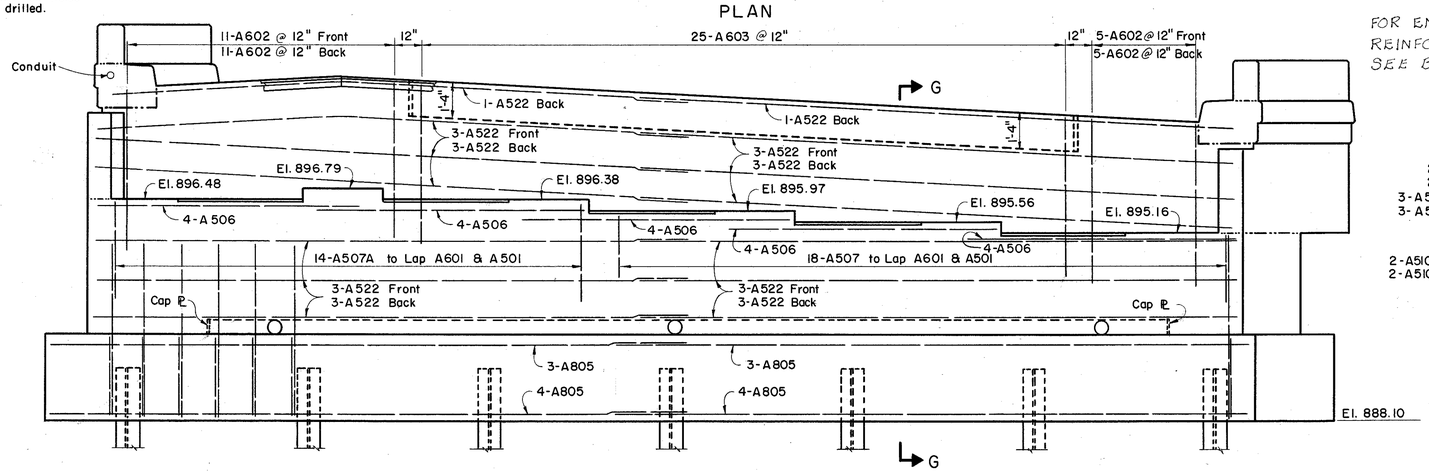
CURB PLAN LEFT WING



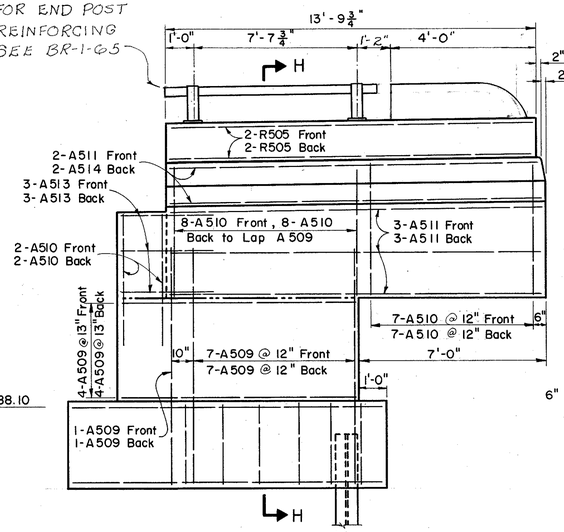
ELEVATION LEFT WING



SECTION H-H



ELEVATION



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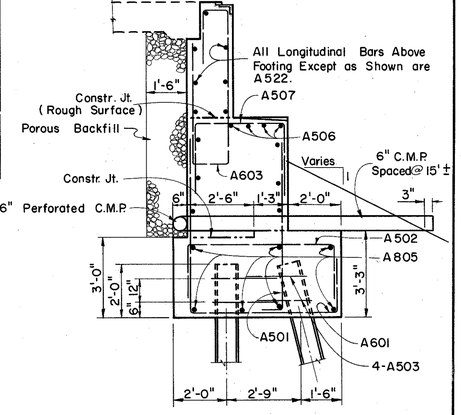
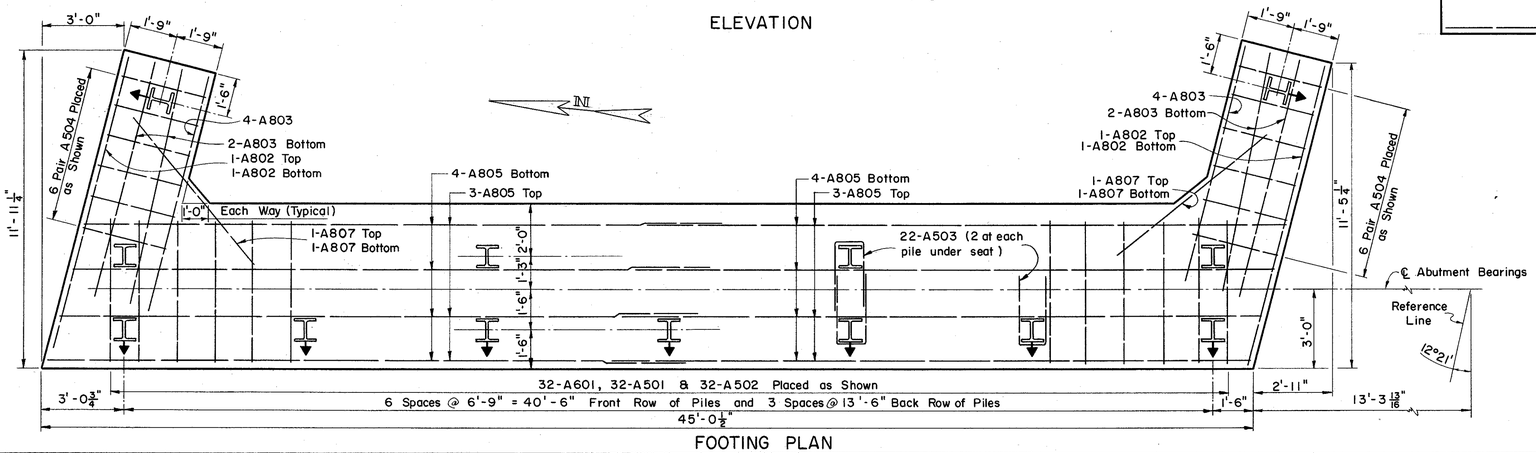
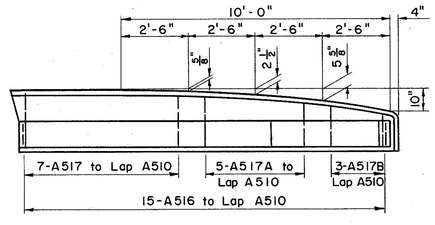


SECTION G-G



FOOTING PLAN



CURB PLAN RIGHT WING

For notes see drawing "Left Rear Abutment"

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

LEFT FORWARD ABUTMENT

BRIDGE NO. TUS-36-1957 L & R.
RELOC. U.S.-36 OVER RECONSTR. SECOND ST.
TUSCARAWAS COUNTY
STA. 355+05.72
STA. 356+74.33

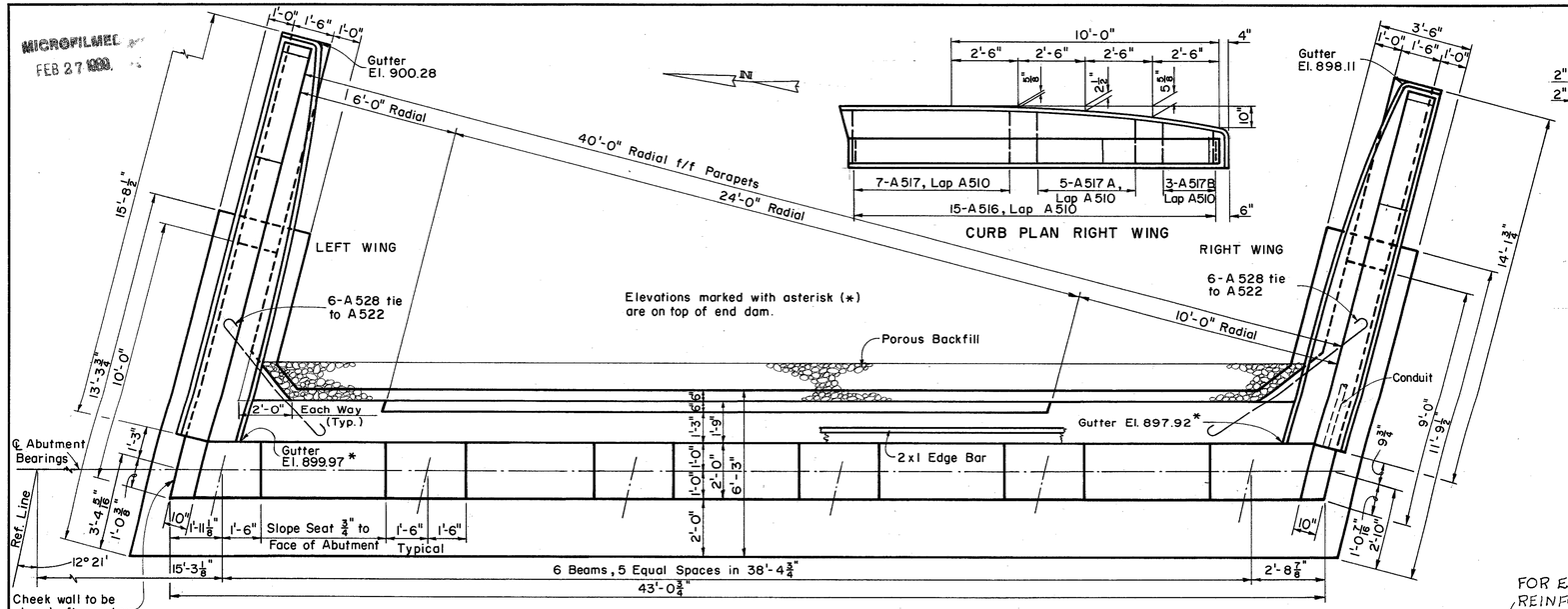
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
J.V.R.	M.F.	M.F.	L.L.D.	H.C.M. 8-17-64	

MICROFILMED
FEB 27 1990

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

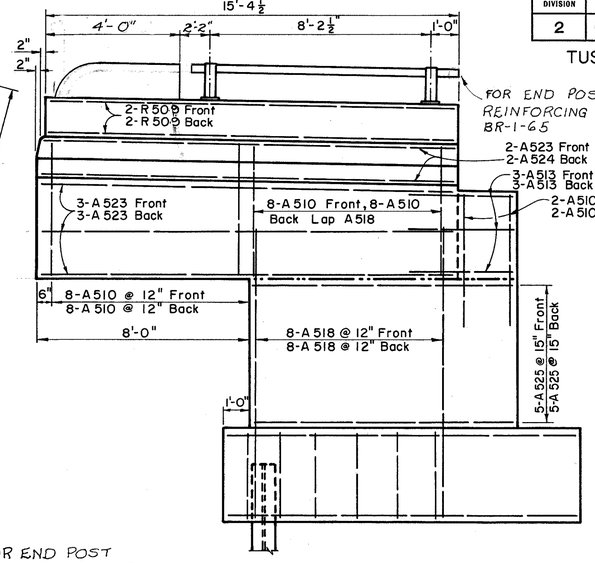
590
662

TUSCARAWAS COUNTY
TUS-36-15.93

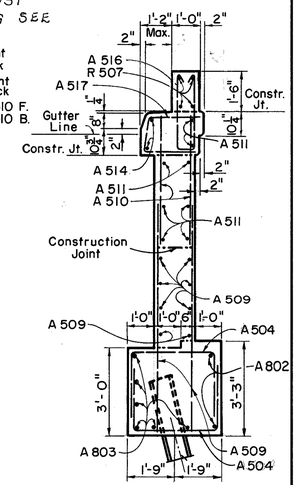


PLAN

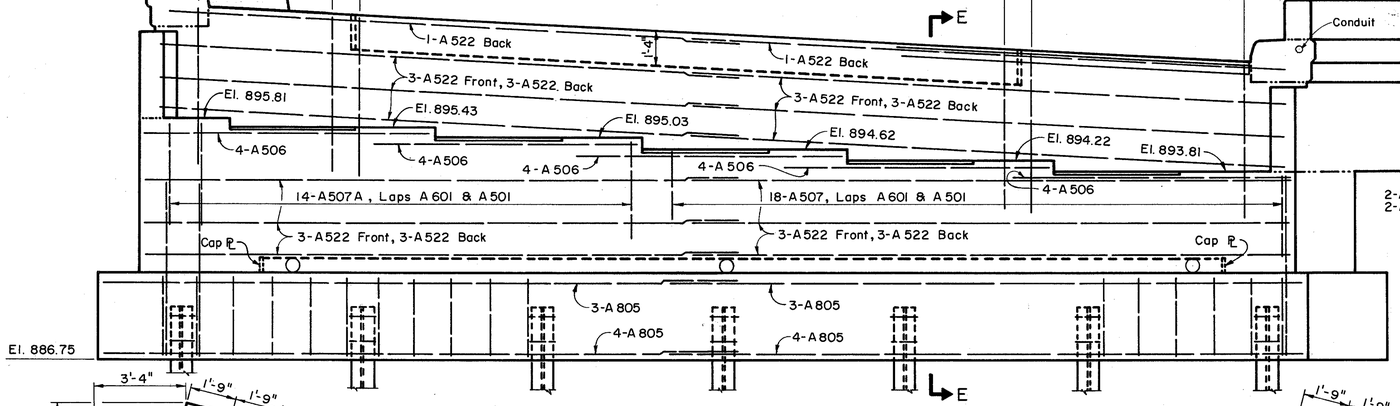
CURB PLAN RIGHT WING



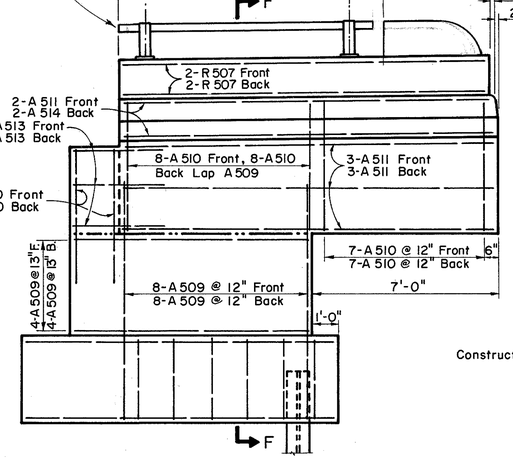
ELEVATION LEFT WING



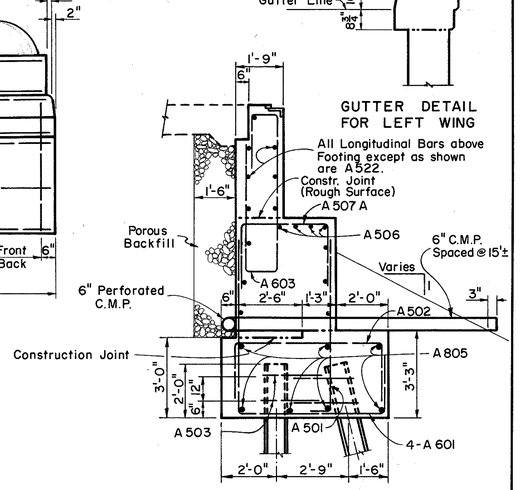
SECTION F-F



ELEVATION

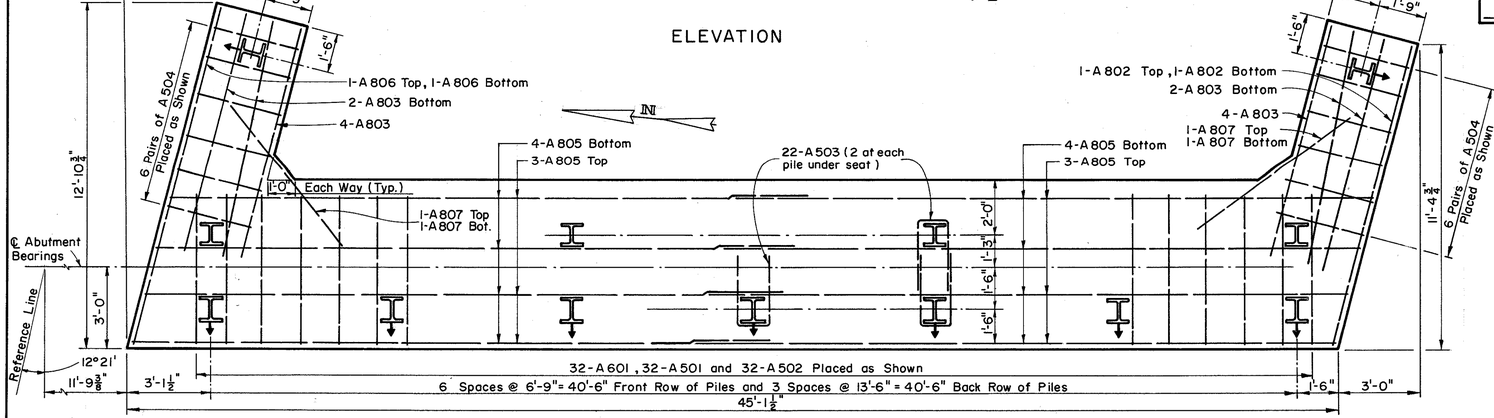


ELEVATION RIGHT WING

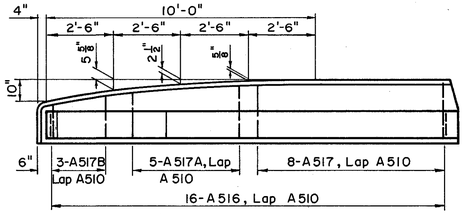


SECTION E-E

For notes see drawing "Left Rear Abutment"



FOOTING PLAN



CURB PLAN LEFT WING

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

RIGHT FORWARD ABUTMENT

BRIDGE NO. TUS-36-1957 L & R.
RELOC. US-36 OVER RECONSTR. SECOND ST.
TUSCARAWAS COUNTY
STA. 355+05.72
STA. 356+74.33

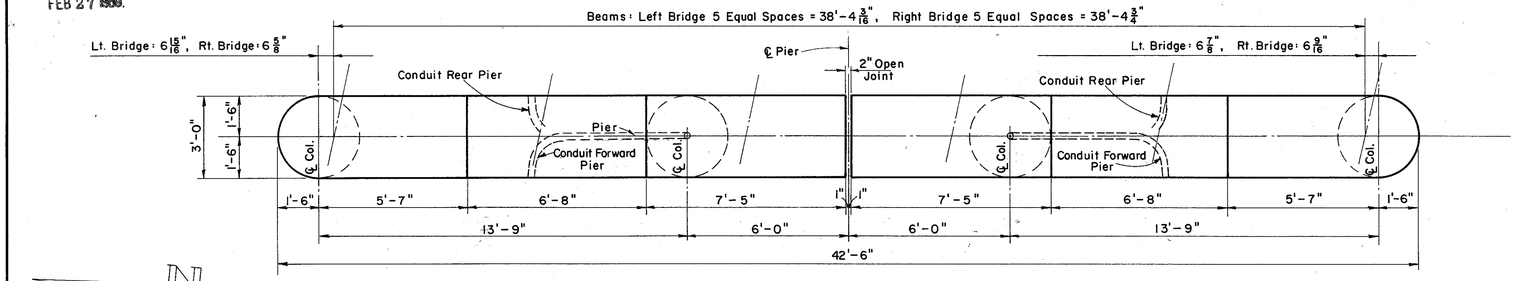
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
J.V.R.	M.F.	M.F. P.D.	L.L.D.	H.C.M. 8-17-64	

MICROFILMED
FEB 27 1990.

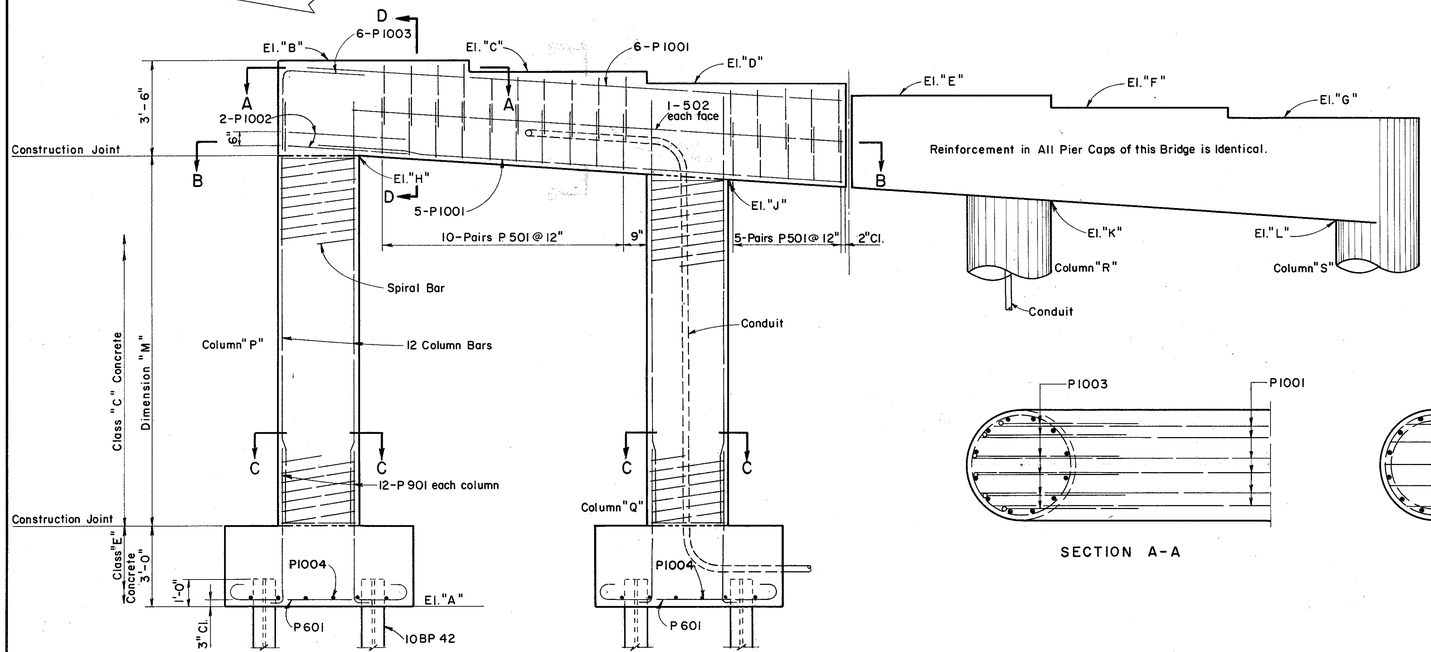
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

591
662

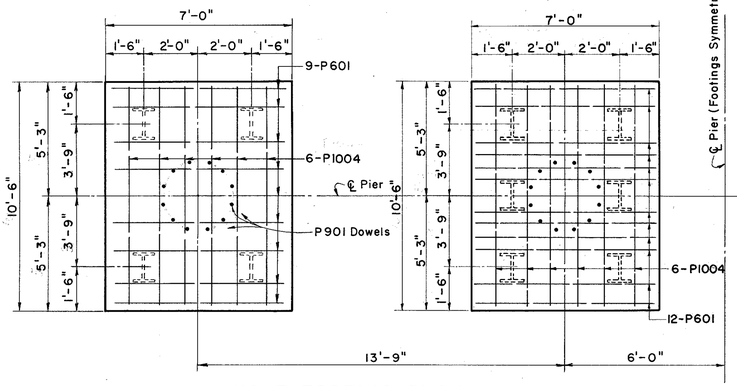
TUSCARAWAS COUNTY
TUS-36-15.93



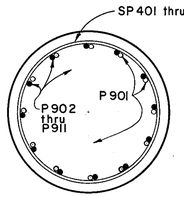
PLAN



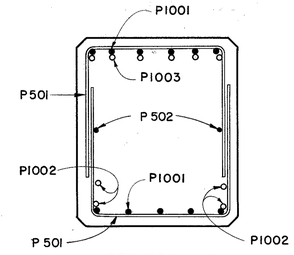
HALF ELEVATION



HALF FOOTING PLAN

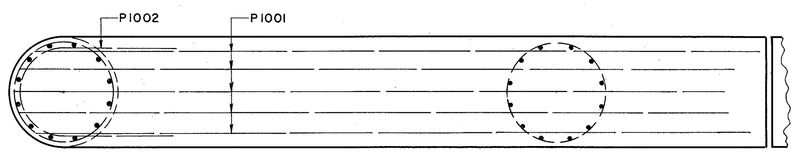


SECTION C-C



SECTION D-D

SECTION A-A



SECTION B-B

ELECTRICAL GROUNDING required at Forward Pier.

CONDUIT: 1 1/4" ϕ Galvanized Steel, Max. 18" Radius, Bending See Lighting Plans for Details.

PIER		ELEVATION "A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"J"	"K"	"L"	Dimension "M"
Left Bridge	Rear	874.20	894.53	894.72	894.30	893.88	893.47	893.09	891.03	890.60	890.01	889.37	13'-10"
	Forward	875.88	895.38	895.58	895.17	894.76	894.34	893.96	891.88	891.45	890.86	890.22	13'-0"
Right Bridge	Rear	871.80	893.72	893.30	892.89	892.47	892.05	891.68	890.22	889.12	888.46	888.03	15'-5"
	Forward	873.49	894.61	894.20	893.79	893.38	892.97	892.59	891.11	890.01	889.35	888.92	14'-7 1/2"

PIER		COLUMN REINFORCEMENT COLUMN "P"	COLUMN "Q"	COLUMN "R"	COLUMN "S"
Left Bridge	Rear	12-P908 & 1-SP413	12-P908 & 1-SP410	12-P907 & 1-SP406	12-P903 & 1-SP403
	Forward	12-P906 & 1-SP408	12-P905 & 1-SP405	12-P904 & 1-SP402	12-P902 & 1-SP401
Right Bridge	Rear	12-P911 & 1-SP416	12-P910 & 1-SP414	12-P909 & 1-SP412	12-P907 & 1-SP409
	Forward	12-P910 & 1-SP415	12-P908 & 1-SP411	12-P907 & 1-SP407	12-P905 & 1-SP404

COVER OF REINFORCEMENT: Bottom of footing - 3"
Elsewhere - 2"

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

PIERS

BRIDGE NO. TUS-36-1957 L & R
RELOC. U.S. RTE. 36 OVER RECONSTR. SECOND ST.
TUSCARAWAS COUNTY
STA. 355+05.72
STA. 356+74.33

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
M.C.P G.S.W.	R.J.A	F.W.B. B.R.	L.L.D.	H.C.M. 8-17-64	

MICROFILMED
FEB 27 1969

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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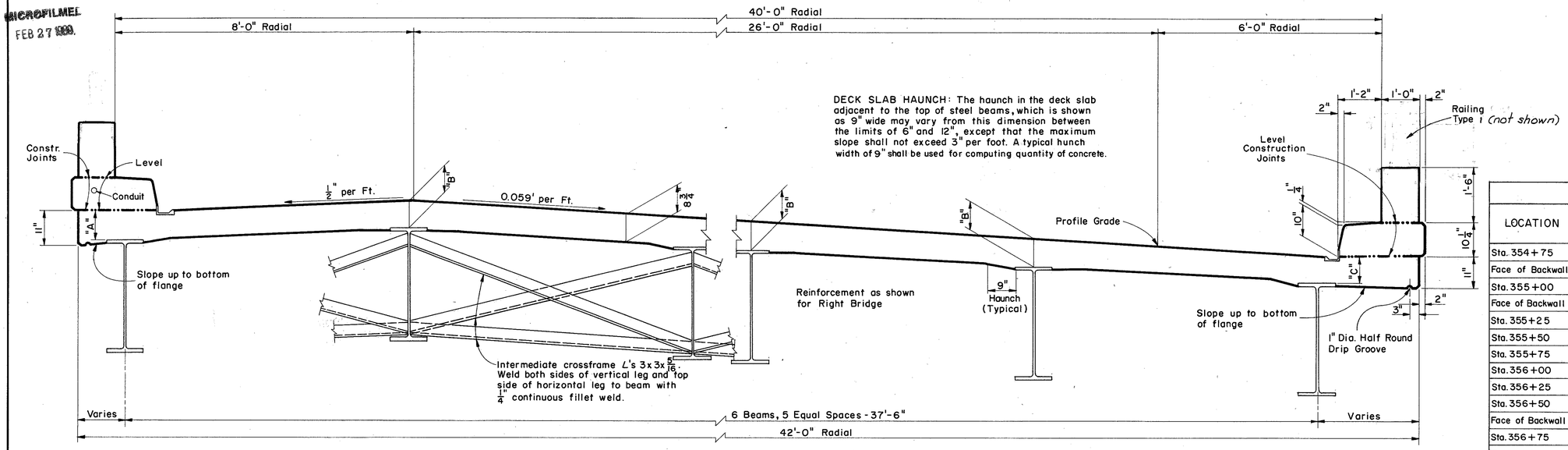
662

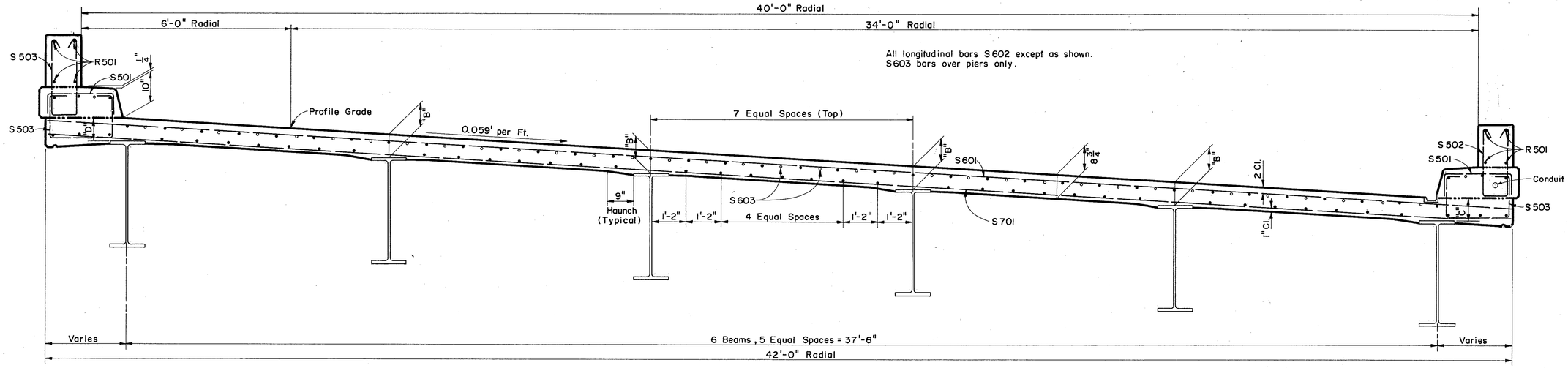
TUSCARAWAS COUNTY
TUS-36-15.93



TRANSVERSE SECTION LEFT BRIDGE

ELEVATIONS – TOP OF SLAB

LOCATION	PG. ELEV.	LEFT BRIDGE			RIGHT BRIDGE	
		BOTTOM OF LEFT CURB	CROWN LINE	BOTTOM OF RIGHT CURB	BOTTOM OF LEFT CURB	BOTTOM OF RIGHT CURB
Sta. 354+75	896.21					
Face of Backwall		897.85	898.15			
Sta. 355+00	896.64	897.89	898.17			
Face of Backwall				896.43	897.09	894.99
Sta. 355+25	897.07	898.32	898.60	896.78	897.36	895.13
Sta. 355+50	897.50	898.75	899.03	897.22	897.78	895.56
Sta. 355+75	897.93	899.18	899.46	897.64	898.22	895.99
Sta. 356+00	898.36	899.61	899.89	898.08	898.64	896.42
Sta. 356+25	898.79	900.04	900.32	898.50	899.08	896.85
Sta. 356+50	899.22	900.47	900.75	898.94	899.50	897.28
Face of Backwall		900.64	900.95	899.26		
Sta. 356+75	899.65				899.94	897.71
Face of Backwall					899.97	897.92
Sta. 357+00	900.08					
Sta. 357+25	900.51					



TRANSVERSE SECTION RIGHT BRIDGE

* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension even though deviation from this 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. Deduction shall be made for volume of encased steel plates as per Sec. 511.19 of the Construction and Material Specifications.

Slab thickness shown includes 1" monolithic wearing surface.

SLAB THICKNESSES *

Dimension from Top of Beam to Top of Deck Slab

	"A"	"B"	"C"	"D"
℄ Brg. Rear Abut.	9 5/8"	9 5/8"	9 3/8"	9 5/8"
℄ Brg. Rear Pier	8 7/8"	9 1/4"	9 3/4"	9 7/8"
℄ Brg. Fwd. Pier	8 7/8"	9 1/4"	9 5/8"	9 7/8"
℄ Brg. Fwd. Abut.	9 5/8"	9 5/8"	9"	9 5/8"

REFERENCE shall be made to Standard Drawing No. SD-1-63 dated 11-12-63, Sheet No. 3 of 4 for details of scuppers and gutter supports.

REFERENCE shall be made to Standard Drawing No. BR-1-65, sheet 1, dated 2-1-65 for details of railing.

SLAB OVERHANG VARIES: See following sheet.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

SUPERSTRUCTURE SECTIONS

BRIDGE NO. TUS-36-1957 L. & R.
RELOC. US 36 OVER RECONSTR. SECOND ST.
TUSCARAWAS COUNTY
STA. 355+05.72
STA. 356+74.33

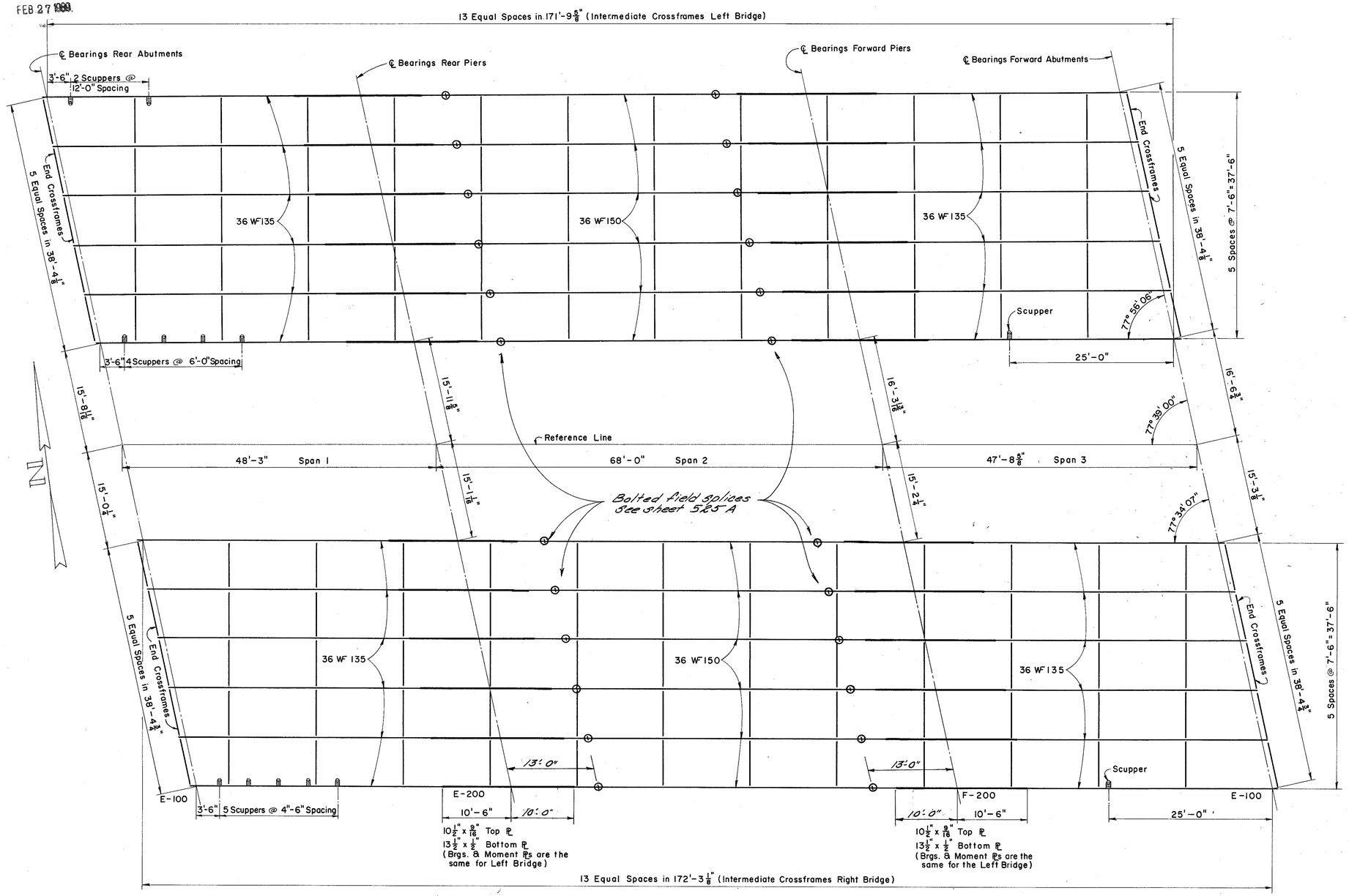
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
M.C.P. G.S.W.	M. F.	E.L.M. P.A.D.	L.L.D.	H.C.M. 8-17-64	

MICROFILMED
FEB 27 1990

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

593
662

TUSCARAWAS COUNTY
TUS-36-15.93



STEEL FRAMING PLAN

REFERENCE shall be made to Standard Drawing No. SD-1-63 Sheets 2, 3 & 4 of 4, Dated 11-12-63, for details of end dams, gutters, scuppers and cross frames.

REFERENCE shall be made to Standard Drawing No. SD-1-63 Sheet No. 1 of 4, Dated 11-12-63, for details of *Moment Plates*.

REFERENCE shall be made to Standard Drawing FSB-1-62, Revised 1-15-63, for details of bearings.

MOMENT PLATES shall be welded as shown on SD-1-63 except welding shall be done in the shop rather than in the field, and no splice shall be made in beams over piers.

SLAB OVERHANG

Dimensions from ℄ of Exterior Beam to Edge of Slab (Face of Parapet)

LOCATION	LEFT BRIDGE		RIGHT BRIDGE	
	LEFT EXTERIOR BEAM	RIGHT EXTERIOR BEAM	LEFT EXTERIOR BEAM	RIGHT EXTERIOR BEAM
℄ Bearing, Rear Abutment	1'-9 3/8"	2'-5 5/8"	1'-9 1/4"	2'-5 1/2"
Center, Span 1	2'-6"	1'-9 7/8"	2'-6 1/4"	1'-9 5/8"
℄ Rear Pier	2'-11 5/8"	1'-5 1/4"	3'-0"	1'-4 3/4"
Center, Span 2	3'-2 1/2"	1'-3 5/8"	3'-3"	1'-3 1/8"
℄ Forward Pier	2'-11 1/2"	1'-8 5/8"	2'-11 7/8"	1'-7 7/8"
Center, Span 3	2'-5 7/8"	2'-2 7/8"	2'-6 1/8"	2'-2 3/4"
℄ Bearing, Forward Abutment	1'-9 3/8"	3'-0 1/2"	1'-9 1/4"	3'-0 7/8"

DEFLECTION AND CAMBER

LOCATION	SPAN 1	SPAN 2	SPAN 3
Deflection due to weight of steel	0	1/16"	0
Deflection due to remaining dead load	1/8"	3/8"	1/8"
Convexity required for vertical curve	0	0	0
Sum of Deflection and Convexity	1/8"	7/16"	1/8"
Required Camber	0	0	0

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

FRAMING PLAN

BRIDGE NO. TUS-36-1957 L & R
RELOC. US-36 OVER RECONST. SECOND STREET
TUSCARAWAS COUNTY
STA. 355+05.72
STA. 356+74.33

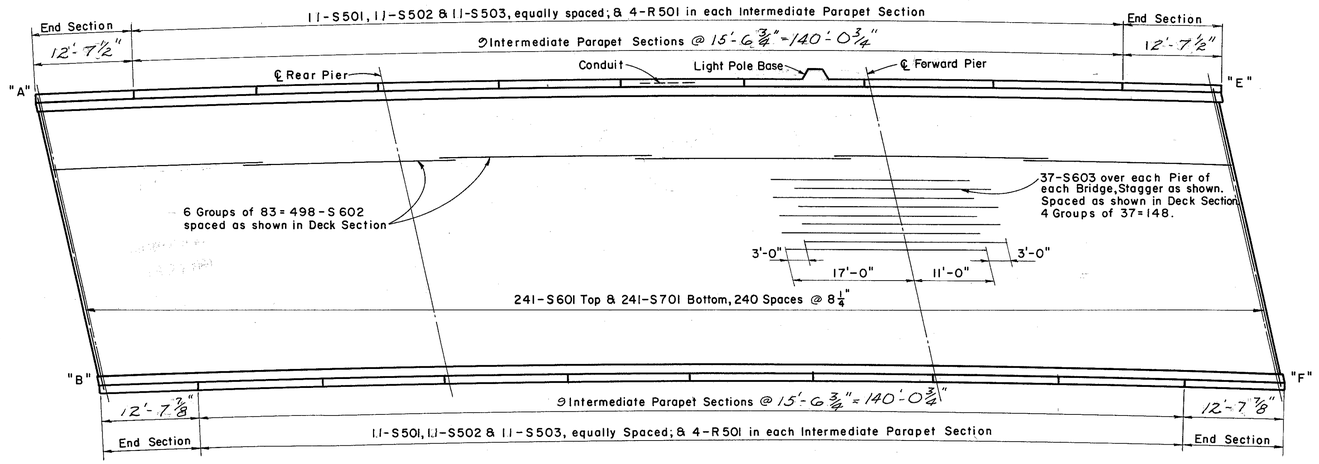
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
M.C.P. G.S.W.	M.J.F.	F.W.B. B.R.	L.L.D.	H.C.M. 8-17-64	

MICROFILMED
FEB 27 1969.

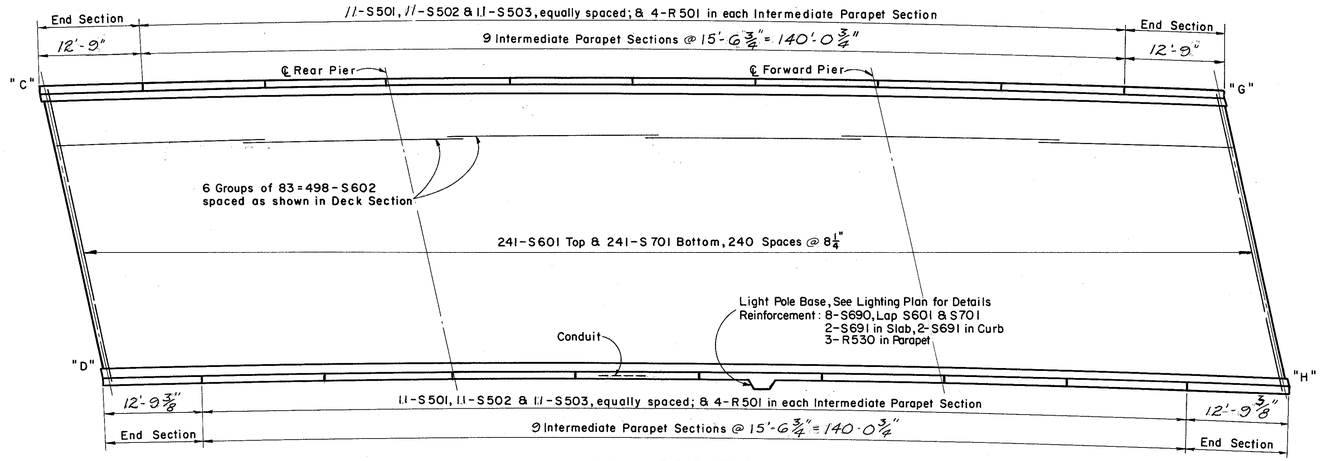
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

594
662

TUSCARAWAS COUNTY
TUS-36-15.93



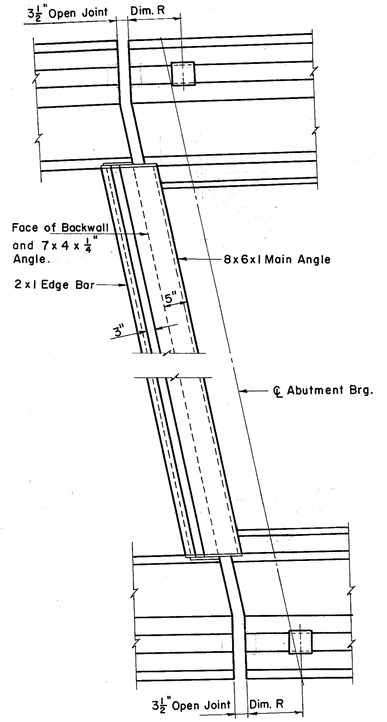
LEFT BRIDGE DECK



RIGHT BRIDGE DECK

DECK REINFORCEMENT PLAN

Reinforcement in Each End Section
9-S501 4-R501A
9-S502
9-S503
(Equally Spaced)



DETAIL OF SUPERSTRUCTURE AT ABUTMENT

CORNER	DIM. R
"A" & "B"	10⅞"
"B" & "F"	11¼"
"C" & "G"	1'-0⅜"
"D" & "H"	1'-0⅞"

REFERENCE shall be made to Standard Drawing SD-1-63, Dated 11-12-63, Sheets 2 & 4 of 4 for details of end dam.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR

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

DECK DETAILS

BRIDGE NO. TUS-36-1957 L & R
RELOC US-36 OVER RECONSTR. SECOND STREET
TUSCARAWAS COUNTY STA. 355+05.72
STA. 355+05.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
M.C.P.	R.J.A.	F.W.B. B.R.	L.L.D.	H.C.M. 8-17-64	

MICROFILMED
FEB 27 1989

ESTIMATED LIGHTING QUANTITIES
ITEM 625

VOID

TOTAL	UNIT	DESCRIPTION
2	EA.	LUMINAIRE, TYPE III, WITH INTEGRAL 400 WATT MERCURY BALLAST
8	EA.	UNDERPASS LUMINAIRE - 175 WATT MERCURY
8	EA.	MERCURY VAPOR LAMP, 175 WATT (H-39-22KB)
2	EA.	MERCURY VAPOR LAMP, 400 WATT (H-33-1CD)
2	EA.	LIGHT POLE WITH 12' BRACKET ARM - DESIGN 11 (2B50) O
176	L.F.	POLE BRACKET CABLE, 1/C, NO. [illegible] AWG, 600 V.
1	EA.	ESNA KIT - STYLE 51
1	EA.	ESNA KIT - STYLE 61
9	EA.	ESNA KIT - STYLE 82
9	EA.	ESNA KIT - STYLE [illegible]
410	L.F.	CONDUIT - 2 INCH RIGID GALVANIZED STEEL IN BRIDGES
280	L.F.	CONDUIT - 1/4 INCH RIGID GALVANIZED STEEL IN BRIDGES
868	L.F.	CIRCUIT CABLE - 1/C, NO. 4 AWG, 600 V.
LUMP(2)	L.S.	BRIDGE STRUCTURE GROUNDING SYSTEM
688	L.F.	UNDERPASS LUMINAIRE CABLE, 1/C, NO. 12 AWG, 600 V.

REINFORCING STEEL LIST

ABUTMENTS

MARK	REQUIRED LT. R.	RT. R.	LT. F.	RT. F.	TOTAL	LENGTH	WEIGHT LT. BR.	RT. BR.	SHP.
A501	32	32	32	32	128	6'-11"	462	462	B
A502	32	32	32	32	128	8'-4"	556	556	B
A503	22	22	22	22	88	6'-3"	287	287	B
A504	22	22	24	24	92	7'-1"	340	340	B
A505	26	26			52	22'-0"	597	597	
A506	36	20	34	36	126	10'-0"	730	584	
A507	18	18	18	18	72	8'-0"	300	300	B
A507A	14	14	14	14	56	10'-6"	307	307	B
A508	8	8			16	8'-2"	68	68	
A509	24	14	34	24	96	8'-6"	514	337	
A510	64	68	66	70	268	4'-6"	610	648	
A511	8		8	8	24	13'-9"	229	115	
A512	8	8			16	11'-10"	99	99	
A513	12	12	12	12	48	3'-6"	88	88	
A514	2		2	2	6	14'-0"	58	29	
A515	2	2			4	11'-7"	24	24	
A516	28	30	29	31	118	6'-11"	411	440	B
A517	12	14	13	15	54	4'-7"	120	139	B
A517A	10	10	10	10	40	3'-9" to 4'-5"	85	85	B
A517B	6	6	6	6	24	2'-11" to 3'-7"	41	41	B
A518		18			18	10'-9"		202	
A519		8			8	15'-9"		131	
A520		12			12	9'-8"		121	
A521		2			2	16'-0"		33	
A522			26	26	52	22'-3"	578	579	
A523				8	8	15'-3"		127	
A524				2	2	15'-0"		31	
A525				10	10	9'-5"		98	
A526			8		8	13'-3"	111		
A527			2		2	13'-0"	27		
A528	12	12	12	12	48	7'-2"	179	179	
A601	32	32	32	32	128	14'-1"	1,999	1,999	B
A602	30	30	32	30	122	5'-9"	535	518	
A603	25	25	25	25	100	15'-0"	1,126	1,127	B
A801	14	14			28	23'-3"	869	869	
A802	4	2	4	2	12	11'-3"	240	120	
A803	12	12	12	12	48	9'-0"	577	577	
A804		2			2	12'-6"		67	
A805			14	14	28	23'-6"	878	878	
A806				2	2	13'-0"		69	
A807	4	4	4	4	16	7'-0"	58	58	

PIERS

MARK	REQUIRED LT. R.	RT. R.	LT. F.	RT. F.	TOTAL	LENGTH	WEIGHT LT. BR.	RT. BR.	SHP.
P501	60	60	60	60	240	7'-11"	991	991	B
P502	4	4	4	4	16	18'-0"	150	150	
P601	42	42	42	42	168	8'-0"	1,009	1,009	B
P901	48	48	48	48	192	6'-6"	2,122	2,122	B
P902			12		12	14'-11"	609		
P903	12				12	15'-2"	619		
P904			12		12	15'-8"	639		
P905			12	12	24	15'-11"	649	649	
P906			12		12	16'-4"	666		
P907	12	12		12	36	16'-6"	673	1,346	
P908	24			12	36	16'-11"	1,380	690	
P909		12			12	17'-6"		714	
P910		12		12	24	17'-11"		1,462	
P911		12			12	18'-9"		765	
P1001	22	22	22	22	88	20'-0"	3,787	3,787	
P1002	4	4	4	4	16	10'-2"	350	350	B
P1003	12	12	12	12	48	7'-3"	749	749	B
P1004	24	24	24	24	96	13'-0"	2,685	2,685	B

SPIRALS CORE DIA. = 32" PITCH = 4½"

MARK	NO. TURNS	LENGTH	WEIGHT LT. BR.	RT. BR.
SP401	33	11'-3"	213	
SP402	34	11'-9"	219	
SP403	35	12'-1"	226	
SP404	36	12'-4"		232
SP405	37	12'-7"	239	
SP406	37	12'-9"	239	
SP407	37	12'-10"		240
SP408	38	13'-0"	245	
SP409	38	13'-1"		245
SP410	39	13'-4"	252	
SP411	39	13'-6"		252
SP412	39	13'-8"		253
SP413	40	13'-10"	258	
SP414	41	14'-4"		265
SP415	42	14'-7"		271
SP416	44	15'-5"		285

SUPERSTRUCTURES

MARK	REQUIRED LT. BR.	RT. BR.	TOTAL	LENGTH	WEIGHT LT. BR.	RT. BR.	SHP.
S501	234	234	468	2'-6"	610	601	B
S502	234	234	468	5'-9"	1403	1403	B
S503	234	234	468	5'-5"	1322	1322	B
S601	241	241	482	42'-3"	15,294	15,294	
S602	498	498	996	29'-6"	22,066	22,066	
S603	74	74	148	28'-0"	3,112	3,112	
S701	241	241	482	42'-3"	20,813	20,813	
S690	8	8	16	4'-0"	48	48	
S691	4	4	8	10'-3"	62	62	B

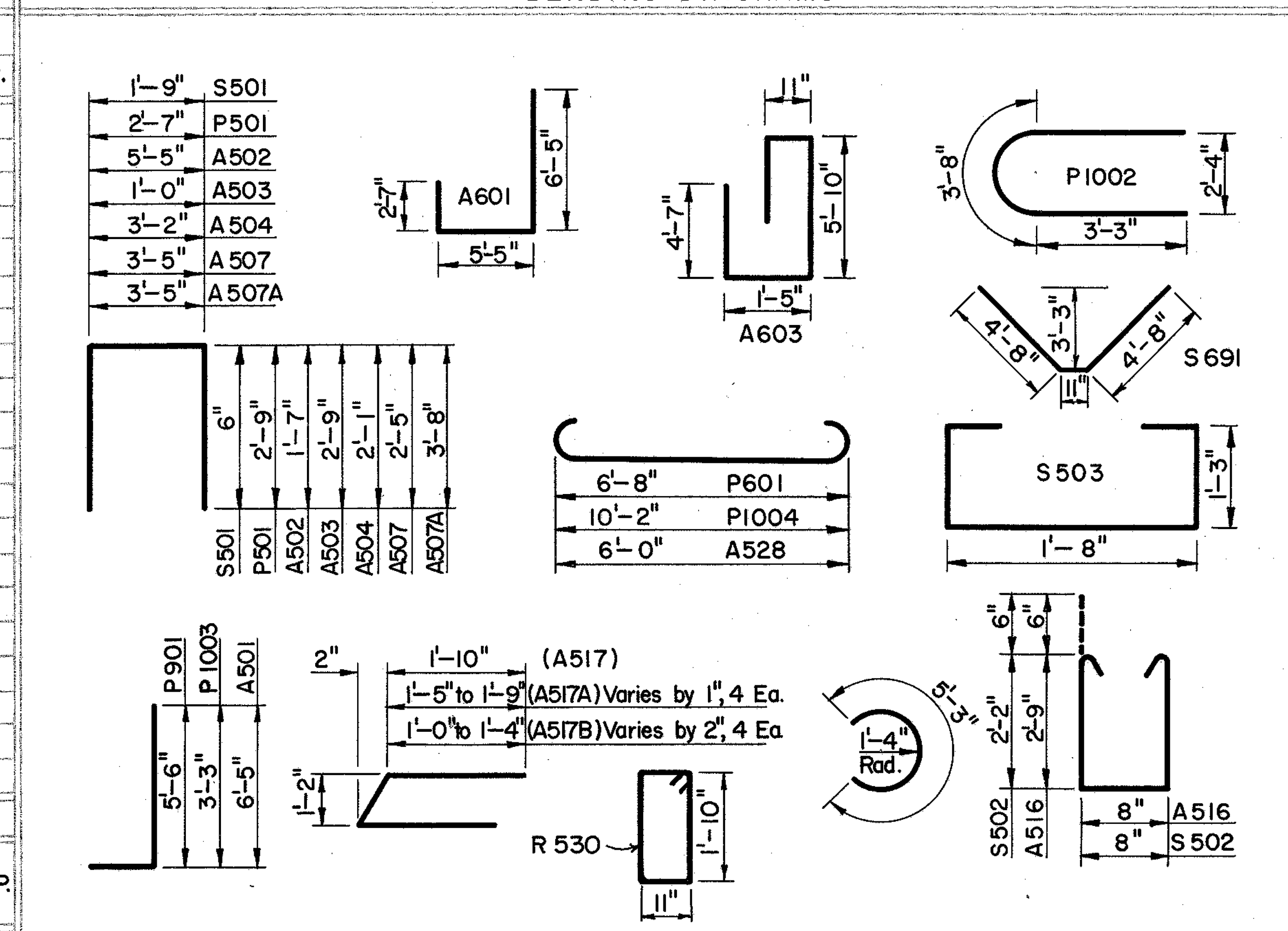
RAILING *

MARK	TOTAL	LENGTH
R501	144	15'-2"
R501A	32	12'-1"
R502	8	11'-8"
R503	24	4'-2"
R504	16	5'-4"
R505	4	13'-3"
R506	4	13'-0"
R507	8	13'-5"
R530**	6	6'-4"
R508***	4	15'-6"
R509***	4	15'-0"

REPLACEMENT BARS

MARK	NO.	LENGTH	SHP.
RE400	1	5'-3"	B
RE500	2	5'-7"	
RE600	5	5'-11"	
RE700	3	6'-3"	
RE800	1	6'-6"	
RE900	1	6'-10"	
RE1000	1	7'-3"	

BENDING DIAGRAMS



* Included with Item 517 for payment.

** Bent Bar

*** SEE BR-1-65 FOR BENDING DIAGRAM

REINFORCING STEEL 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 size of the bar. For example A700 is a No. 7 size bar and A1014 is a No. 10 size bar.

All dimensions are out to out of the bar.

Shape "B" is a bent bar, all other bars are straight.

The "length" shown in steel list for the spiral bars is the distance from the top of the footing to the bottom of cap.

The "number of turns" shown in the steel list for the spiral bars is the "length" divided by the pitch, plus three (3) turns (total number of closed coils) expressed as the nearest whole number.

Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item 509.

1½ closed coils shall be provided at the ends of each spiral unit.

Four steel channel, tee or angle spacers, weighing approximately 0.68 pounds per linear foot 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 pounds per linear foot will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	LEFT BRIDGE SUPER	ABUTS.	PIERS	GEN'L.	RIGHT BRIDGE SUPER	ABUTS.	PIERS	GEN'L.
503	834	Cu. Yds.	Unclassified Excavation		261	147			277	149	
511	445	Cu. Yds.	Class C Concrete, Superstructure	223				222			
511	124	Cu. Yds.	Class C Concrete, Pier Caps and Columns			61				63	
511	212	Cu. Yds.	Class E Concrete, Abut. above Footings		103				109		
511	256	Cu. Yds.	Class E Concrete, Footings		75	53			75	53	
509	194,132	Lbs.	Reinforcing Steel	64,730	12,483	18,969		64,730	12,708	19,512	
513	362,500	Lbs.	Structural Steel	182,500				180,000			
514	362,500	Lbs.	Field Painting of Structural Steel	182,500				180,000			
517	773.26	Lin. Ft.	Railing [illegible], Type [illegible]	331.40	52.98			331.92	56.96		
505	Lump	Sum	First Test Pile ⊕				Lump				
507	3,950	Lin. Ft.	Steel Piles 10 BP 42		1,250	750			1,040	910	
518	142	Lin. Ft.	6" Perforated Helical CMP, 707.06 including specials		71				71		
518	128	Lin. Ft.	6" Helical CMP, 707.06 Non-Perforated		64				64		
518	62	Cu. Yds.	Porous Backfill		31				31		
518	13	Each	Scuppers, including Supports	7				6			
808	445	Sum	Water-reducing, Set-retarding Admixtures for Conc.	223				222			
601	684	Sq. Yds.	Concrete Slope Protection				342				342
625			for lighting quantities see sht. No. 489								

⊕ Payment will made for only the first test pile, it may be driven for either the Left or Right Bridge.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

ESTIMATED QUANTITIES AND REINFORCING STEEL LIST

BRIDGE NO. TUS-36-1957 L.&R.
RELOC. U.S.-36 OVER RECONSTR. SECOND ST.
TUSCARAWAS COUNTY STA. 355+05.72 STA. 356+74.33

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
M.J.F.	M.J.F.	E.L.M.	L.L.D. B.O.L.	H.C.M. 8-17-64	

GENERAL INFORMATION

INTRODUCTION

The project consists of a major relocation of USR 36 (Urichsville-Dennison By-Pass), approximately 3.6 miles in length, beginning on USR 36, 2000 feet west of Co. Rd. 62, approximately 1 mile west of Urichsville, extends eastward, terminating north of Dennison near the intersection of existing USR 36-250 and North 11th Street.

The proposed grade indicates cuts, maximum 136 feet deep, at ditchline, and fill embankments, maximum 82 feet high.

GEOLOGY AND OBSERVATIONS OF THE PROJECT

The alignment incepts on the north valley wall, traverses the dissected lower portion, descends to the flood plain of Stillwater Creek, crosses Stillwater Creek, ascends the dissected east valley wall, descends to and terminates on the flood plain of Stillwater Creek. Thin residual soil cover and deep valley fill overlies shale, sandstone, indurated clay and associated coal, of Pennsylvanian age. Several areas of poor surface drainage were observed along the project as well as several areas of inactive coal mining operation and dumps. Stratigraphic rock sections were measured along the project.

EXPLORATION

Exploratory borings were made by means of truck-mounted mechanical earth auger, hand auger (in areas of difficult access), and rotary type-drill rig, between April 5 and May 22, 1962.

INVESTIGATIONAL DISCLOSURES

Materials occurring immediately below proposed grade consist of silt clays and clays, in the A-6 and A-7-6 classifications, having moisture contents within the plastic range, as well as shale, sandstone, indurated clay and coal bedrock. It is noted that random fill, comprised of cinders, brick bats and broken tile, was encountered at grade between stations 287+00 and 290+00.

It is anticipated that bedrock will be encountered in the excavations at the following approximate area limits.

Stations 202+00 to 204+00 - shale bedrock at left grade and ditchline and in the lower portion of left backslope.

Stations 204+00 to 209+00 - shale and sandstone bedrock at grades and both ditchlines and in the backslopes.

Stations 209+00 to 217+00 - shale, sandstone and coal bedrock at left grade and ditchline and in the lower portion of left backslope.

Stations 217+00 to 219+50 - shale and coal bedrock at left ditchline and in the lower portion of left backslope.

Stations 219+00 to 229+00, shale **bedrock** at grade and left ditchline and in the lower portion of left backslope.

Stations 229+00 to 234+00 - shale and possibly coal bedrock at both grades and left ditchline and in the lower portion of left backslope, indurated clay, coal and sandstone in upper portion of left backslope.

Stations 272+00 to 274+00 - shale bedrock at left ditchline and in the lower portion of left backslope.

Stations 276+00 to 281+50 - shale, indurated clay and sandstone bedrock at both grades and ditchlines and in the backslopes.

Stations 281+50 to 284+50 - shale, indurated clay and sandstone bedrock at left grade and ditchline and in the backslope.

Stations 289+00 to 292+50 - shale and sandstone bedrock at left grade and ditchline and in the backslope.

Stations 299+50 to 303+50 - shale and sandstone bedrock at both grades and ditchlines in the left backslope and lower portion of right backslope.

Stations 303+50 to 317+00 - shale and sandstone bedrock at both grades and ditchlines and in the backslopes.

Stations 341+00 to 349+00 - indurated clay, shale, and possibly coal bedrock at both grades and ditchlines and in the backslopes.

Stations 367+00 to 370+00 - shale and sandstone bedrock at both grades and ditchlines and in the backslopes.

Stations 370+00 to 373+50 - shale and sandstone bedrock at left grade and ditchline and in the lower portion of left backslope.

Stations 372+50 to 378+00 - shale, sandstone, possibly coal or mined out interval at grades and ditchlines and in the backslopes.

Materials occurring in the embankment foundation areas are predominantly comprised of sandy silts, silts, silt clays, and clays, in the A-4, A-6 and A-7-6 classifications, generally having moisture contents within the plastic range, however, wet, somewhat organic materials were encountered between approximately stations 220+00 to 238+00, 240+00 to 252+00, 261+00 to 271+00, 332+00 to 339+00 and 351+00 to 368+00. It is noted that at-surface random fill was encountered at station 223+00 and between approximately stations 287+00 to 292+00.

LEGEND FOR PROJECT-AVERAGE RESULTS OF TESTS- 901 SAMPLES TESTED

DESCRIPTION	H.R.B. CLASS	OHIO CLASS	% AGG	% C SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
Gravel and stone fragments	A-1-a(0)	A-1-a	76	2	11	6	6	NP	NP	15	2
Gravel and stone fragments with sand	A-1-b(0)	A-1-b	47	20	17	6	10	NP	NP	13	10
Coarse and fine sand	-----	A-3a	15	8	57	10	10	NP	NP	30	2
Gravel and stone fragments with sand and silt	A-2-4(0)	A-2-4	47	5	18	16	14	27	4	17	34
Gravel and stone fragments with sand, silt, and clay	A-2-6(1)	A-2-6	64	3	5	10	18	40	16	18	7
Sandy silt	A-4(3)	A-4a	21	5	23	29	22	26	4	18	115
Silt	A-4(8)	A-4b	0	1	6	58	35	29	6	28	160
Elastic silt and clay	A-5(9)	A-5	0	3	2	41	54	42	10	28	1
Silt and clay	A-6(9)	A-6a	9	2	7	37	45	33	12	22	312
Silty clay	A-6(11)	A-6b	12	2	6	39	46	37	17	21	78
Elastic clay	A-7-5(20)	A-7-5	13	4	6	26	51	64	30	33	10
Clay	A-7-6(13)	A-7-6	11	2	4	29	65	45	21	23	142
Underclay				VISUAL CLASSIFICATION							
Random fill consisting of cinders, rubbish, brick, and tile fragments.				VISUAL CLASSIFICATION							
Coal				VISUAL CLASSIFICATION							
Coal blossom				VISUAL CLASSIFICATION							
Weathered indurated clay				VISUAL CLASSIFICATION							4
Weathered shale				VISUAL CLASSIFICATION							2
Weathered sandstone				VISUAL CLASSIFICATION							2
Indurated clay				VISUAL CLASSIFICATION							2
Shale				VISUAL CLASSIFICATION							17
Sandstone				VISUAL CLASSIFICATION							1
Various other materials				VISUAL CLASSIFICATION							

Sod and/or Topsoil=X'=Approximate depth.

Berm material.

Auger boring - plan view.

Drive sample and/or core boring - plan view.

Auger boring plotted to vertical scale only.

Drive sample and/or core boring plotted to vertical scale only.

Number of blows for "Standard Penetration" test.
X=number of blows for the first 6 inches.
Y=number of blows for the second 6 inches

Water content nearly equal to or greater than liquid limit.

Indicates a non-plastic material with water content.

Free water.

B Indicates broken rock interval

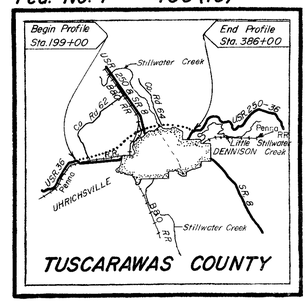
NOTE: Figures beside borings indicate water content in percent. e.g. 15

SOIL PROFILE
TUSCARAWAS COUNTY
TUS-36-16.63
OHIO STATE HIGHWAY TESTING LABORATORY
COLUMBUS, OHIO

1/60

NOTE: INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS OBTAINED SOLELY FOR USE IN ESTABLISHING DESIGN CONTROLS FOR THE PROJECT. THE STATE OF OHIO DOES NOT GUARANTEE THE ACCURACY OF THIS DATA AND IT IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT

Fed. No. F- 405(10)



LOCATION MAP

Recon — C.J.K. — 2/8/62

Drilling — Auger — B.E.B., L.M.D., J.A.G., 4/30/62 to 5/17/62
Core — K.D.E., R.F.S. - 4/5/62 to 5/22/62

Drafting — F.H.S., C.L.I., D.H.A. 7/3/62

PROJECT INDEX

ALIGNMENT STATIONS	PLAN VIEW SHEET	PROFILE SHEET
199+00 to 231+00	5	5
231+00 to 263+00	6	6
263+00 to 295+00	7	8
295+00 to 327+00	9	10
327+00 to 359+00	11	12
359+00 to 386+00	13	14

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100 10 60

SOIL PROFILE
TUSCARAWAS COUNTY
TUS-36-16.63

OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO

2
60

SUMMARY OF SOIL TEST DATA

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.
*Denotes sample taken at or near grade.

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
201+00	30'Lt	0.3-5.0	0	0	5	70	25	NP	NP	23	A-4b
		5.0-9.0	0	0	4	74	22	NP	NP	37	A-4b
		9.0-11.0	0	2	5	75	18	NP	NP	24	A-4b
		11.0-16.0	23	6	5	32	34	36	11	13	A-6a
		16.0-17.8	Coal Blossom							—	Visual
201+00	CL	0.4-3.0	16	5	10	43	26	NP	NP	21	A-4a*
		3.0-7.0	45	10	11	17	22	28	10	13	A-4a*
		7.0-10.5	36	3	15	24	17	29	9	13	A-4a
		10.5-12.0	0	2	3	73	17	NP	NP	29	A-4b
201+00	60'Rt	0.0-2.5	Cinders							—	Visual
		2.5-9.0	0	7	13	43	32	27	8	19	A-4a
		9.0-12.0	0	1	16	39	34	28	11	17	A-6a
203+40	CL	0.0-5.0	Brown Broken Shale							12	Visual
		5.0-11.0	Brown Broken Shale							12	Visual*
		11.0-14.0	Brown Weathered Shale							26	Visual
		14.0-16.0	Brown Broken Clay Shale							11	Visual
200+00	80'Rt	0.0-2.0	0	11	24	41	24	25	7	14	A-4a
		2.0-5.0	44	5	16	21	14	24	3	20	A-2-4
		5.0-10.0	39	1	24	24	12	NP	NP	13	A-4a*
		10.0-15.0	34	2	23	20	21	26	5	15	A-4a*
200+00	90'Lt	0.0-5.0	0	2	15	56	27	NP	NP	7	A-4b
		5.0-10.0	0	3	6	70	21	NP	NP	17	A-4b
		10.0-16.0	63	1	12	15	9	NP	NP	15	A-1-b
209+00	CL	0.0-5.0	0	8	18	43	31	35	11	23	A-6a
		5.0-10.0	0	7	16	35	21	NP	NP	14	A-4b
		10.0-16.0	26	2	23	32	12	NP	NP	12	A-4a
		16.0-20.0	0	5	4	41	50	37	11	13	A-6a
213+00	24'Lt	0.0-5.0	Brown Silty Sand W/Sandstone Fragments							—	Visual
		5.0-9.0	Brown Silty Sand W/Sandstone Fragments							—	Visual
		9.0-14.5	Brown Broken Shale							11	Visual
213+00	85'Rt	0.0-5.0	Brown Weathered Sandstone							12	Visual
		5.0-10.0	Brown Weathered Sandstone							15	Visual
216+00	70'Lt	0.0-5.0	44	5	9	25	17	23	6	9	A-1a
		5.0-10.0	33	5	21	21	20	26	5	12	A-1a
		10.0-15.0	46	3	22	17	12	NP	NP	12	A-2-4
		15.0-18.0	0	6	6	17	71	52	29	26	A-7-6
		18.0-20.0	Black Coal							—	Visual*
217+00	CL	0.0-4.0	31	6	14	33	26	29	11	16	A-6a*
		4.0-9.0	21	6	14	36	23	29	11	14	A-4a
		9.0-12.0	0	2	5	61	32	32	6	21	A-4b
217+00	65'Rt	0.0-5.0	0	12	27	34	27	34	7	15	A-4a
		5.0-9.0	0	7	3	63	27	33	8	15	A-4b
		9.0-12.0	0	3	7	66	23	33	9	14	A-4b
		12.0-15.0	29	14	7	43	27	33	9	15	A-6a
		15.0-20.0	0	2	5	73	20	33	9	15	A-4b
217+30	90'Lt	0.0-5.0	Brown Sandy Silt W/Shale Fragments							—	Visual
		5.0-10.0	Brown Silty Sand W/Sandstone Fragments							—	Visual
		10.0-16.0	Brown Broken Shale							12	Visual
221+00	90'Lt	0.4-5.0	0	3	23	43	31	33	13	7	A-6a
		5.0-10.0	0	2	3	67	28	33	8	14	A-6a
		10.0-15.0	0	1	1	74	24	32	8	12	A-4a
		15.0-21.0	0	1	6	56	37	34	10	15	A-6a
		21.0-25.0	0	1	1	58	40	34	10	15	A-6a
		25.0-30.0	0	1	1	33	65	34	10	15	A-6a
221+00	100'Rt	0.5-5.0	0	2	14	56	28	33	10	13	A-4b
		5.0-11.0	0	2	3	56	39	34	10	16	A-6a
		11.0-16.0	0	1	2	47	50	35	13	16	A-6b
		16.0-21.0	0	1	3	47	49	34	12	16	A-6b
		21.0-26.0	21	16	11	32	20	29	6	12	A-4a
		26.0-30.0	29	9	2	24	36	31	11	15	A-6a
221+00	CL	1.0-6.0	0	1	4	49	46	33	11	20	A-6a
		6.0-11.0	0	1	3	50	46	35	13	20	A-6b
		11.0-16.0	0	1	3	53	43	34	13	20	A-6b
		16.0-21.0	0	1	3	50	46	34	13	20	A-6b
		21.0-26.0	0	1	5	53	41	32	12	23	A-6a
		26.0-30.0	0	1	1	44	54	35	11	13	A-6a
221+50	CL	1.0-6.0	0	14	9	51	26	30	8	19	A-4b
		6.0-12.0	0	1	2	62	35	34	10	20	A-6b
		12.0-17.0	0	0	1	63	36	34	10	20	A-6b
		17.0-22.0	0	1	1	62	36	34	10	20	A-6b
		22.0-28.0	0	2	7	54	37	32	10	23	A-6b
		28.0-30.0	22	14	9	24	31	29	6	15	A-1a
222+00	100'Lt	0.0-5.0	15	13	22	11	39	NP	NP	23	A-1-b
		5.0-10.0	0	2	5	58	35	31	6	13	A-6a
		10.0-15.0	0	1	3	63	33	31	9	16	A-6a
		15.0-20.0	0	2	7	59	32	33	10	19	A-6a
		20.0-25.0	0	2	5	59	34	33	10	19	A-6a
		25.0-30.0	0	6	15	36	43	31	11	19	A-6a
222+00	CL	1.0-6.0	0	1	2	51	46	36	16	26	A-6b
		6.0-11.0	0	0	1	58	41	34	12	23	A-6b
		11.0-16.0	0	1	5	67	27	31	11	23	A-6a
		16.0-21.0	0	1	5	67	27	31	11	23	A-6a
		21.0-26.0	0	1	4	68	27	31	11	23	A-6a
		26.0-30.0	0	1	5	67	27	31	11	23	A-6a
222+50	100'Lt	1.0-5.0	0	2	9	60	29	37	6	20	A-4b
		5.0-10.0	0	1	5	60	34	36	9	19	A-4b
		10.0-15.0	0	1	6	56	37	35	9	20	A-4b
		15.0-20.0	15	11	21	30	23	27	8	15	A-4a
		20.0-25.0	0	3	8	55	34	30	8	15	A-4b
		25.0-30.0	0	5	18	28	49	25	11	23	A-6a
222+50	CL	0.5-5.0	0	3	13	52	32	37	12	26	A-6a
		5.0-10.0	0	2	14	52	32	36	11	26	A-6a
		10.0-15.0	0	1	11	52	36	35	9	24	A-6a
		15.0-20.0	0	1	5	63	31	NP	NP	24	A-4b
		20.0-25.0	0	1	5	61	33	NP	NP	24	A-4b
		25.0-30.0	0	1	7	59	33	NP	NP	24	A-4b
223+00	100'Lt	0.5-5.0	0	14	27	45	24	28	7	23	A-4a
		5.0-10.0	0	1	2	55	42	31	11	24	A-6a
		10.0-15.0	0	1	5	55	39	32	11	24	A-6a
		15.0-20.0	0	1	5	55	39	32	10	23	A-6b
		20.0-25.0	0	2	10	47	41	32	11	26	A-6a
		25.0-30.0	0	1	5	65	29	32	11	27	A-6b
223+00	CL	0.0-2.0	Cinders and Broken Tile							—	Visual
		2.0-5.0	0	14	8	44	34	55	16	23	A-7-5
		5.0-10.0	0	3	11	61	24	32	10	27	A-4b
		10.0-15.0	0	1	2	59	38	36	8	27	A-4b
		15.0-20.0	0	1	4	55	39	32	9	24	A-4b
		20.0-25.0	0	14	7	44	35	35	8	25	A-4b
		25.0-30.0	0	1	2	58	39	33	24	5	25	A-4b
223+00	100'Rt	0.0-1.0	Broken Tile							—	Visual
		1.0-6.0	0	1	3	62	34	34	25	6	A-4b
		6.0-11.0	0	14	1	48	37	51	34	16	A-6b
		11.0-16.0	0	14	1	46	38	51	33	13	A-6a
		16.0-21.0	0	0	2	71	27	33	8	26	A-4b
		21.0-26.0	0	0	2	68	30	33	8	29	A-4b
		26.0-30.0	0	1	3	57	39	33	8	26	A-4b
224+00	100'Lt	2.0-7.0	0	1	6	56	37	33	6	25	A-4b
		7.0-12.0	0	1	6	56	37	33	6	25	A-4b
		12.0-17.0	0	1	5	57	37	33	6	25	A-4b
		17.0-22.0	0	1	5	57	37	33	6	25	A-4b
		22.0-26.0	0	1	5	57	37	33	6	25	A-4b
		26.0-30.0	0	2	9	54	35	31	11	23	A-6a
224+00	CL	0.0-5.0	0	3	10	46	41	35	10	22	A-6a
		5.0-10.0	0	2	10	46	42	36	10	22	A-6a
		10.0-15.0	0	3	10	45	42	36	10	22	A-6a
		15.0-20.0	0	1	3	51	45	34	10	22	A-6b
		20.0-25.0	0	2	6	51	41	34	10	22	A-6b
		25.0-30.0	0	2	11	56	31	34	10	22	A-6b
224+00	100'Rt	0.0-1.0	Cinders and Broken Tile							—	Visual
		1.0-5.0	0	1	3	53	43	34	10	22	A-4b
		5.0-10.0	0	1	3	53	43	34	10	22	A-6a
		10.0-15.0	0	1	3	53	43	34	10	22	A-6b
		15.0-20.0	0	1	3	53	43	34	10	22	A-6b
		20.0-25.0	0	1	3	53	43	34	10	22	A-6b
		25.0-30.0	0	2	8	51	39	33	10	22	A-6a

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
226+00	100'Rt	0.5-5.0	0	3	9	55	33	31	13	17	A-6a
		5.0-10.0	0	2	8	55	35	32	11	17	A-6b
		10.0-15.0	0	1	4	55	40	33	11	17	A-6b
		15.0-20.0	0	1	4	55	40	33	11	17	A-6b
		20.0-25.0	0	1	4	55	40	33	11	17	A-6b
		25.0-30.0	0	2	6	55	37	33	10	17	A-6b
227+30	100'Lt	0.5-5.0	12	2	3	55	28	31	10	20	A-6a
		5.0-10.0	0	2	5	57	36	32	9	16	A-6b
		10.0-15.0	0	1	3	58	38	33	11	16	A-6b
		15.0-20.0	0	1	3	58	38	33	11	17	A-6b
		20.0-25.0	0	1	3	58	38	33	11	17	A-6b
		25.0-30.0	0	1	3	55	41	33	11	17	A-6b
229+00	CL	0.5-5.0	0	3	13	52	32	36	11	23	A-6a
		5.0-10.0	0	2	14	52	32	36	11	24	A-6a
		10.0-15.0	0	1	10	52	37	35	9	23	A-6a
		15.0-20.0	0	1	5	63	31	NP	NP	24	A-4b
		20.0-25.0	0	1	5	61	33	NP	NP	24	A-4b
		25.0-30.0	0	1	7	59	33	NP	NP	24	A-4b
229+00	90'Rt	0.0-5.0	0	14	16	44	26	30	8	13	A-4a
		5.0-10.0	0	2	14	52	32	36	11	24	A-6a
		10.0-15.0	0	1	2	58	39	34	10	23	A-6a
		15.0-20.0	0	1	2	58	39	34	10	23	A-6a
		20.0-25.0	0	1	3	58	38	34	10	23	A-6a
		25.0-30.0	0	1	3	58	38	34	10	23	A-6a
231+75	100'Rt	0.5-5.0	0	5	15	44	36	30	11	23	A-6a
		5.0-10.0	0	1	4	55	40	34	11	23	A-6a
		10.0-15.0	0	1	5	57	37	34	11	23	A-6a
		15.0-20.0	0	2	12	52	34	34	11	23	A-6b
		20.0-25.0	0	2	11	54	33	34	11	23	A-6b
		25.0-30.0	0	2	5	61	32	34	11	23	A-6b
232+80	100'Lt	0.5-5.0	0	14	7	53	26	29	6	20	A-6b
		5.0-10.0	0	2	5	61	32	33	11	22	A-6a
		10.0-15.0	0	1	3	63	33	33	11	22	A-6a
		15.0-20.0	0	1	4	63	32	33	11	21	A-6a
		20.0-25.0	0	2	7	61	30	34	11	23	A-6a
		25.0-30.0	31	9	3	43	14	NP	NP	16	A-1a
235+00	100'Lt	0.5-5.0	34	1	4	44	17	23	3	11	A-2a
		5.0-10.0	0	3	11	61	25	33	11	25	A-4a
		10.0-15.0	0	2	9	63	26	33	11	25	A-4a
		15.0-20.0	0	2	9	63	26	33	11	25	A-4a
		20.0-25.0	26	6	21	29	18	28	7	17	A-1a
		25.0-30.0	0	6	21	29	24	32	11	21	A-4a
235+00	100'Rt	0.5-5.0	22	5	20	33	20	29	11	22	A-6a
		5.0-10.0	0	2	3	55	40	34	13	26	A-6a
		10.0-15.0	0	1	5	58	36	34	13	26	A-6b
		15.0-20.0	0	1	5	58	36	34	13	26	A-6b
		20.0-25.0	0	1	5	58	36	34	13	26	A-6b
		25.0-30.0	0	2	9	55	34	31	11	23	A-6a
237+00	CL	0.5-5.0	0	2	12	46	40	35	13	21	A-6a
		5.0-10.0	0	1	4	55	40	34	11	21	A-6a
		10.0-15.0	0	1	4	55	40	34	11	21	A-6a
		15.0-18.0	23	12	12	26	27	31	7	17	A-2a
237+20	70'Rt	0.5-4.0	36	11	16	23	15	24	7	13	A-1a
		4.0-6.0	0	1	16	39	44	34	11	21	A-4a
241+00	15'Lt	0.0-6.0	15	6	10	34	35	32	11	20	A-6a
		6.0-8.0	0	0	3	53	44	33	10	19	A-6a
		8.0-11.0	Black Coal Blossom							—	A-7-6
		11.0-16.0	0	0	2	26	72	53	23	15	Visual
		16.0-20.0	Gray Broken Clay Shale							12	A-7-6
221+00	85'Rt	0.5-5.0	24	6	15	31	24	30	8	13	Visual
		5.0-11.0	51	14	13	16	6	NP	NP	13	A-1a*
		11.0-16.0	0	0	3	44	53	34	15	16	A-2-4
		16.0-19.0	35	3	2	36	24	35	12	16	A-4a
243+00	110'Lt	0.0-4.0	24	7	14	28	27	31	5	11	A-4a
		4.0-9.0	0	3	11	52	34	34	11	15	A-6a
		9.0-11.0	6	1	4	53	36	34	11	15	A-6a
		11.0-15.0	45	5	14	21	15	NP	NP	15	A-1a
		15.0-20.0	21	5	14	25	35	30	7	15	A-2-4
243+00	CL	0.0-6.0	0	2	8	52	38	34	11	23	A-6a
		6.0-7.0	28	10	14	22	26	29	8	16	A-2-4
		7.0-8.0	Black Coal							—	A-7-6
		8.0-14.0	Gray Broken Clay Shale							11	Visual
		14.0-20.0	Gray Broken Clay Shale							12	Visual
245+00	80'Lt	0.0-4.0	0	2	5	65	28	51	24	23	A-7-5
		4.0-6.5	0	1	2	66	31	62	25	21	A-7-6
		6.5-8.0	Black Coal Fragments							—	Visual
		8.0-11.0	0	6	5	56	33	51	21	21	A-7-6
		11.0-15.0	0	5	4	56	35	53	23	13	A-6b
		15.0-20.0	0	2	6	63	29	33	15	13	A-6a
245+00	CL	0.0-4.0	0	2	9	51	38	34	10	25	A-6b
		4.0-9.0	0	1	3	55	41	34	10	25	A-6b
		9.0-13.0	0	1	5	57	37	34	10	25	A-6b*
		13.0-15.0	23	7	8	43	19	27	6	16	A-6a*
		15.0-20.0	13	11	8	38	30	33	11	16	A-6a*
245+00	90'Rt	0.0-4.0	6	28	16	23	27	8	16	8	A-4a
		4.0-9.0	43	11	15	19	12	15	3	15	A-2-4
		9.0-11.0	11	11	6	36	36	33	11	15	A-6a
		11.0-15.0	11	11	6	36	36	33	11	15	A-6a
		15.0-20.0	0	2	8	51	39	33	10	22	A-6a

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
247+00	CL	0.0-3.0	Gray Broken Cinders							—	Visual*
		3.0-8.0	0	2	13	37	48	36	13	23	A-6a
		8.0-12.5	0	2	7	43	48	32	11	17	A-6a
247+00	75'Rt	0.0-4.0	Brown Cinders and Brick Bats							—	Visual
		4.0-9.0	0	14	13	40	43	37	13	18	A-6a
		9.0-14.5	0	1	3	36	60	34	18	19	A-7-6
248+00	75'Lt	0.0-3.0	Cinders, Broken Tile and Bricks							—	Visual
		3.0-8.0	23	2	7	31	37	35	16	16	A-6b
		8.0-15.0	30	1	2	22	45	32	13	20	A-7-6
248+00	CL	0.0-4.5	Cinders, Broken Tile and Bricks							—	Visual*
		4.5-9.0	0	2	7	39	52	37	21	20	A-7-6
		9.0-14.5	23	1	2	31	43	31	15	20	A-7-6
248+00	75'Rt	0.0-4.5	Cinders, Broken Tile and Bricks							—	Visual
		4.5-9.0	29	6	13	24	28	35	15	15	A-4a
		9.0-14.5	29	0	3	31	37	32	11	15	A-6a
249+00	75'Lt	0.0-5.0	Broken Tile and Cinders							—	Visual
		5.0-10.0	17	3	11	36	33	34	11	23	A-6a
		10.0-15.0	0	1	3	36	60	36	14	23	A-6a
		15.0-18.0	0	1	3	31	65	35	15	23	A-6b
249+00	CL	0.0-5.0	Broken Tile and Cinders							—	Visual*
		5.0-9.0	0	5	10	36	49	33	16	23	A-6b
		9.0-13.0	0	3	22	36	39	33	15	23	A-6a
		13.0-18.0	0	1	3	30	66	34	11	23	A-6a
249+00	75'Rt	0.0-6.0	Broken Tile and Cinders							—	Visual
		6.0-12.0	0	1	2	22	75	45	25	21	A-7-6
		12.0-17.0	0	1	2	22	75	45	25	21	A-7-6
250+00	60'Lt	0.0-6.0	Broken Tile and Cinders							—	Visual
		6.0-8.0	0	14	13	41	32	37	17	20	A-6b
		8.0-13.0	0	1	4	27	68	37	13	21	A-7-6
		13.0-18.0	0	1	2	31	66	33	11	21	A-6a
250+00	CL	0.0-5.0	Tile, Bricks, and Cinders							—	Visual
		5.0-8.0	15	5	14	35	31	33	7	16	A-1a
		8.0-13.0	0	0	5	35	60	36	14	23	A-6a
		13.0-18.0	0	1	6	36	57	35	13	23	A-6b
250+00	75'Rt	0.0-7.0	Cinders and Broken Tile							—	Visual
		7.0-12.0	0	2	4	35	59	34	15	25	A-6a
		12.0-17.0	0	1	3	36	60	36	16	25	A-7-6
251+00	75'Lt	0.0-2.5	Cinders							—	Visual
		2.5-7.0	0	3	11	53	33	33	11	21	A-6a
		7.0-12.0	0	2	5	53	40	33	11	21	A-6b
		12.0-18.0	0	4	15	51	30	33	11	21	A-6a
251+00	CL	0.0-3.0	Cinders and Bricks							—	Visual
		3.0-8.0	0	2	3	36	59	35	16	21	A-6b
		8.0-13.0	0	1	5	35	59	33	13	21	A-7-6
		13.0-18.0	0	1	2	35	62	35	13	21	A-6a
251+00	75'Rt	0.0-2.3	Cinders							—	Visual
		2.3-8.0	0	2	9	45	44	36	11	21	A-6a
		8.0-13.0	0	2	9	45	44	36	11	21	A-6a
		13.0-18.0	0	2	8	45	45	36	12	22	A-7-6
251+60	75'Lt	0.0-2.5	0	2	10	45	43	34	11	22	A-6a
		2.5-7.0	0	1	5	51	43	34	11	22	A-6a
		7.0-12.0	0	1	5	51	43	34	11	22	A-6a
		12.0-17.0	0	1	3	51	45	34	11	22	A-7-6
251+60	CL	0.0-1.8	0	2	7	51	40	36	16	26	A-7-6
		1.8-6.5	0	0	10	23	67	36	16	26	A-6a
		6.5-11.0	0	0	4	31	65	34	13	26	A-7-6
		11.0-16.0	0	0	3	43	54	35	13	23	A-6a
251+60	75'Rt	0.0-1.5	Cinders							—	Visual
		1.5-5.0	0	1	2	44	53	36	14	31	A-6b
		5.0-8.0	0	4	14	39	43	33	15	23	A-6b
		8.0-13.0	17	1	4	39	39	34	11	20	A-6a
		13.0-17.0	0	0	3	39	58	33	11	20	A-6b
252+00	75'Lt	0.0-2.3	Cinders and Bricks							—	Visual
		2.3-6.0	0	0	2	64	34	33	11	23	A-6a
		6.0-12.0	0	1	1	56	42	36	13	29	A-7-6
		12.0-16.0	0	1	1	56	42	36	13	29	A-7-6
		16.0-20.0	0	1	4	56	39	36	11	19	A-6a
252+00	CL	0.0-1.0	Cinders							—	Visual
		1.0-6.5	0	3	12	41	44	34	10	23	A-6a
		6.5-11.0	0	1	5	52	42	31	11	23	A-6b
		11.0-15.0	0	1	5	56	38	32	11	23	A-6a
		15.0-20.0	0	1	4	54	41	34	11	23	A-6a
252+00	75'Rt	0.0-2.0	Cinders							—	Visual
		2.0-8.0	0	5	7	44	44	36	17	23	A-6b
		8.0-11.0	0	1	13	44	42	36	11	23	A-6a
		11.0-16.0	0	1	3	43	53	36	11	23	A-7-6
		16.0-20.0	0	1	2	44	53	36	11	23	A-7-6
255+00	CL	0.0-5.0	0	0	1	33	66	34

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SOIL PROFILE
TUSCARAWAS COUNTY
TUS-36-16.63

OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO

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SUMMARY OF SOIL TEST DATA (Cont'd)

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.
*Denotes sample taken at or near grade.

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
258+00	CL	0.0-2.5	Brown & Gray Sandy Silty Clay W/ Cinders & Trace of Stone Fragments							—	Visual
		2.5-5.0	10	3	9	31	47	50	28	15	A-7-6
		5.0-11.0	0	1	11	51	37	42	16	22	A-7-6
		11.0-18.0	0	0	1	32	67	52	22	22	A-7-6
258+00	75'Rt	0.0-5.0	0	0	1	47	52	39	19	26	A-6b
		5.0-10.0	0	0	1	26	74	45	23	23	A-7-6
		10.0-15.0	0	0	1	36	63	45	15	22	A-7-6
		15.0-20.0	0	0	1	24	75	45	17	24	A-7-6
259+00	75'Lt	0.0-2.0	0	2	7	35	45	90	45	59	A-7-5
		2.0-5.0	0	2	7	24	67	45	23	35	A-7-6
		5.0-10.0	0	1	2	33	64	45	21	28	A-7-6
		10.0-15.0	0	0	1	36	63	36	13	23	A-6a
		15.0-20.0	0	0	0	23	77	33	15	23	A-6a
259+00	CL	0.0-2.0	Black Sediments							—	Visual
		2.0-5.0	0	0	2	33	65	91	50	114	A-7-5
259+00	100'Rt	0.0-2.0	Black Sediments							—	Visual
		2.0-6.5	0	1	3	45	51	50	32	30	A-7-6
260+00	75'Lt	0.0-5.0	0	1	4	43	52	37	14	23	A-6a
		5.0-10.0	0	0	2	28	70	46	11	21	A-6a
		10.0-16.0	0	0	1	28	71	52	16	21	A-7-6
260+00	CL	1.0-4.0	0	0	1	23	76	50	14	16	A-7-6
		4.0-10.0	0	0	1	23	76	52	25	26	A-7-6
		10.0-14.0	0	0	1	33	66	41	12	23	A-6a
		14.0-20.0	0	0	0	12	88	35	16	23	A-7-6
260+00	75'Rt	1.0-5.0	0	0	1	1	98	53	17	25	A-7-6
		5.0-10.0	0	0	1	34	65	43	11	22	A-6a
		10.0-15.0	0	0	0	26	74	45	16	23	A-7-6
		15.0-20.0	0	0	1	26	73	45	16	21	A-6b
263+25	140'Lt	0.5-5.0	0	1	2	26	71	49	27	21	A-7-6
		5.0-10.0	0	0	2	31	67	45	11	21	A-6a
		10.0-15.0	0	0	1	41	58	39	11	20	A-6a
		15.0-20.0	0	0	1	41	58	33	15	22	A-6a
263+25	100'Rt	0.5-5.0	0	3	13	34	50	38	17	22	A-6b
		5.0-10.0	0	1	1	26	72	45	16	23	A-6b
		10.0-15.0	0	1	2	34	64	45	16	22	A-6b
		15.0-20.0	0	0	0	27	73	45	11	23	A-6a
265+00	CL	0.0-5.0	0	2	4	34	60	38	14	20	A-6a
		5.0-10.0	0	1	1	33	65	36	12	22	A-6a
		10.0-15.0	0	0	1	27	72	42	20	22	A-7-6
		15.0-20.0	0	0	1	27	72	39	12	21	A-6a
266+00	90'Rt	0.0-4.0	0	2	20	34	44	33	11	20	A-6a
		4.0-9.0	0	1	3	36	60	41	17	26	A-6b
		9.0-14.0	0	0	1	35	63	41	17	24	A-7-6
		14.0-20.0	0	0	1	30	62	35	11	26	A-6a
266+50	CL	0.0-4.0	0	0	1	60	39	36	11	25	A-6a
		4.0-9.0	0	0	1	50	45	39	13	28	A-6a
		9.0-14.0	0	0	1	37	62	37	11	23	A-6a
		14.0-20.0	0	0	1	29	70	43	21	25	A-7-6
266+90	80'Lt	0.0-5.0	0	1	2	62	35	36	13	22	A-6a
		5.0-8.0	0	0	2	73	25	31	9	24	A-4b
		8.0-14.0	0	0	1	70	29	32	9	24	A-4b
		14.0-20.0	0	0	4	33	63	37	15	23	A-6a
269+00	CL	1.2-5.0	0	0	6	49	45	50	25	30	A-7-6
		5.0-10.0	11	1	19	32	37	30	11	20	A-6a
		10.0-15.0	0	0	1	36	63	43	18	23	A-7-6
		15.0-20.0	0	0	1	16	59	30	11	21	A-6a
271+00	15'Lt	0.5-5.0	30	12	18	21	19	19	NP	14	A-1a*
		5.0-11.0	0	1	24	46	29	26	10	15	A-4a
		11.0-15.0	45	9	23	10	13	NP	NP	17	A-1-b
		15.0-18.5	37	7	21	16	19	26	6	13	A-2-4
273+00	100'Lt	0.0-4.0	21	3	14	16	44	35	16	23	A-6b
		4.0-9.0	34	7	4	32	23	33	13	19	A-6b
		9.0-14.0	10	4	23	24	31	23	11	19	A-6a
		14.0-18.0	Gray Weathered Shale							9	Visual
273+00	CL	0.0-5.0	11	2	31	23	23	23	10	10	A-4a
		5.0-11.0	0	1	3	33	63	43	13	24	A-6a
		11.0-12.5	0	13	21	22	44	44	15	38	A-7-6
		12.5-15.0	14	0	1	23	57	36	13	24	A-6a*
		15.0-18.5	0	1	3	32	64	36	13	18	A-6a*
273+00	80'Rt	0.0-5.0	19	4	18	32	27	33	11	26	A-6a
		5.0-10.0	20	5	25	26	24	33	14	24	A-4a
		10.0-15.0	17	7	21	18	37	36	17	24	A-6b
		15.0-20.0	0	2	2	38	58	37	18	16	A-6b
274+00	100'Lt	0.0-4.0	28	3	27	22	20	NP	NP	11	A-1a
		4.0-9.5	46	4	26	13	17	NP	NP	19	A-2-4
		9.5-16.0	75	2	12	6	5	NP	NP	19	A-1-a
		16.0-20.0	Brown Broken Shale							16	Visual
274+00	CL	0.0-5.0	Coal, Sandstone and Sandy Silt Stone Fragments, Coal Fragments and Brown to Gray Clayey Silt							—	Visual
		5.0-10.0								—	Visual
		10.0-14.0	40	3	5	17	35	44	18	21	A-7-6*
		14.0-18.0	35	4	7	28	26	38	15	13	A-6a*

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
274+00	90'Rt	0.0-5.0	Black Cinders, Coal, Glass and Brick Bats							—	Visual
		5.0-10.0	Black Cinders, Coal, Glass and Brick Bats							—	Visual
		10.0-16.0	Black Cinders, Coal, Glass and Brick Bats							—	Visual
		16.0-18.5	Black Cinders, Coal, Glass and Brick Bats							—	Visual
274+50	CL	0.0-5.0	15	9	9	31	36	35	13	17	A-6a
		5.0-11.0	9	3	12	23	47	34	16	21	A-6b
		11.0-12.0	Black Coal Blossom							—	Visual*
		12.0-16.0	0	0	2	19	79	35	16	15	A-6b*
		16.0-18.0	29	1	3	29	38	35	13	34	A-6a
275+00	75'Lt	0.0-3.0	24	6	9	24	37	33	19	16	A-6b
		3.0-4.0	31	7	3	13	36	35	16	15	A-7-6
		4.0-6.0	35	9	10	14	32	34	15	22	A-6a
275+00	CL	0.0-6.0	Rubbish							—	Visual
		6.0-11.0	Brown and Gray Silty Clay with Little Shale Fragments							—	Visual
		11.0-15.0	20	4	11	20	45	39	12	22	A-6a
		15.0-20.0	23	5	8	29	44	45	20	21	A-7-6*
275+00	50'Rt	0.0-5.0	21	5	9	24	41	39	14	23	A-6a
		5.0-10.0	19	4	20	29	34	38	11	16	A-6a
		10.0-15.0	24	3	33	14	31	32	7	17	A-4a
		15.0-20.0	33	4	26	13	24	27	8	20	A-4a
275+00	90'Rt	0.0-5.0	23	3	12	19	23	27	7	18	A-4a
		5.0-10.0	23	4	14	29	30	36	14	16	A-6a
		10.0-15.0	22	5	9	15	51	45	16	42	A-7-6
		15.0-20.0	32	1	24	15	28	34	16	19	A-6b
276+00	55'Lt	0.0-5.5	27	7	12	16	38	44	22	25	A-7-6
276+00	CL	0.0-2.0	Gray Cinders and Brick Bats							—	Visual
		2.0-6.0	Gray Cinders and Brick Bats							—	Visual
276+00	65'Rt	0.0-5.0	60	1	17	12	10	NP	NP	14	A-1-b
		5.0-10.0	34	3	9	21	33	37	16	16	A-6b
		10.0-15.0	0	7	18	25	50	37	15	24	A-6a
		15.0-20.0	33	6	12	17	32	39	15	29	A-6a
276+00	130'Rt	0.0-5.0	74	1	2	7	16	17	13	15	A-2-7
		5.0-10.0	41	3	6	22	28	38	16	13	A-6b
		10.0-15.0	29	4	8	23	36	41	19	15	A-7-6
		15.0-20.0	32	1	21	4	42	38	14	15	A-6a
277+00	5'Rt	0.0-2.0	Rubbish							—	Visual
		2.0-4.0	37	3	16	13	26	31	11	26	A-6a
		4.0-10.0	26	1	3	20	50	45	19	19	A-7-6
		10.0-15.0	41	1	3	30	11	44	NP	17	A-2-4
		15.0-20.0	35	5	12	17	31	36	11	21	A-6a
		20.0-26.0	23	5	7	18	52	37	13	21	A-6a
		26.0-30.0	24	3	9	19	45	38	15	23	A-6a
		30.0-35.0	22	4	11	24	39	37	18	20	A-6b
		35.0-38.5	24	3	5	26	42	35	14	20	A-6a
278+00	30'Rt	0.0-5.0	59	3	22	4	12	NP	NP	10	A-1-b
		5.0-11.0	Gray Broken Sandstone fragments							—	Visual
		11.0-15.0	51	3	11	11	24	35	13	27	A-6a
		15.0-20.0	47	3	9	14	27	36	16	20	A-6b
278+00	110'Rt	0.0-5.0	Rubbish							—	Visual
		5.0-8.0	35	3	22	13	13	NP	NP	13	A-2-4
		8.0-13.0	35	4	13	19	29	35	11	20	A-6a
		13.0-20.0	35	5	13	18	29	33	11	22	A-6a
279+00	25'Rt	0.0-4.0	Brown Broken Sandstone fragments							—	Visual
		4.0-9.0	22	4	35	19	20	23	6	15	A-4a
279+00	40'Rt	0.0-6.0	40	2	28	12	18	NP	NP	14	A-2-4
		6.0-10.0	30	4	10	15	42	38	17	25	A-6a
		10.0-15.0	29	6	9	14	42	38	17	23	A-6b
		15.0-20.0	38	4	17	13	28	33	13	20	A-6a
279+00	110'Rt	0.0-4.0	Rubbish							—	Visual
		4.0-9.0	43	1	4	24	28	33	14	18	A-6a
		9.0-15.0	43	1	4	26	26	33	11	18	A-6a
		15.0-20.0	29	6	8	22	35	35	11	21	A-6a
280+00	25'Rt	0.0-5.0	Brown Broken Sandstone fragments							—	Visual
		5.0-11.0	Brown Broken Sandstone fragments							—	Visual
280+00	100'Rt	0.0-4.5	Rubbish							—	Visual
		4.5-9.0	66	2	8	7	17	36	12	17	A-2-6
		9.0-14.0	69	2	8	8	13	31	9	20	A-2-4
		14.0-20.0	38	3	12	19	28	33	11	18	A-6a
281+00	30'Rt	0.0-4.5	Brown Broken Sandstone fragments							—	Visual
281+00	45'Rt	0.0-4.0	Black Cinders and Brick Bats							—	Visual
		4.0-8.0	32	1	17	19	25	30	9	24	A-1a
		8.0-13.0	47	4	19	12	18	28	3	23	A-2-4
		13.0-20.0	22	11	12	19	36	45	19	24	A-7-5
281+00	90'Rt	0.0-5.0	Cinders and Glass W/Sandy Clayey Silt							—	Visual
		5.0-12.0	Cinders and Brick Bats							—	Visual
		12.0-13.0	32	3	9	24	32	36	17	20	A-6b
		13.0-20.0	60	3	5	12	21	37	16	17	A-2-6
		20.0-23.0	19	5	7	22	27	39	22	24	A-7-6
		23.0-24.0	33	1	2	11	53	57	29	27	A-7-6
		24.0-25.0	32	1	1	23	43	37	13	9	A-6a

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
281+00	125'Rt	0.0-1.0	Cinders							—	Visual
		1.0-3.0	30	1	1	15	40	42	17	13	A-7-6
		3.0-5.5	13	3	5	35	44	45	16	16	A-7-6
282+00	30'Rt	0.0-6.0	Brownish-Gray Broken Shale & Sandstone Fragments - Fill Material							—	Visual
		6.0-11.0	30	1	3	23	43	36	17	11	A-6b
		11.0-16.0	21	1	1	34	45	25	11	6	A-6a*
283+00	20'Rt	0.0-6.0	Black Tile and Soil Mixture							—	Visual*
		6.0-11.0	13	1	3	15	43	29	11	6	A-6a
		11.0-16.0	19	2	6	22	51	33	13	9	A-6a
283+00	60'Rt	0.0-5.0	35	5	13	11	13	39	9	16	A-2-4
		5.0-10.0	51	5	21	15	13	39	15	16	A-1-b
		10.0-14.0	21	10	22	17	30	34	13	23	A-6a
		14.0-18.0	Gray Broken Indurated Clay							11	Visual
283+50	25'Rt	0.0-1.0	Cinders							—	Visual
		1.0-3.0	25	1	2	24	45	43	17	16	A-7-6
		3.0-4.5	34	1	2	21	42	45	15	16	A-7-6
284+00	70'Lt	0.0-5.0	21	9	29	28	23	29	6	15	A-4a
		5.0-10.0	18	11	26	28	33	33	11	16	A-6a
		10.0-16.0	0	5	16	28	51	34	11	16	A-6a
		16.0-20.0	0	6	2	29	63	34	11	20	A-6a
284+00	110'Rt	0.0-5.0	21	2	3	29	45	55	28	21	A-7-6
		5.0-9.0	0	5	3	29	63	55	19	30	A-7-6*
		9.0-14.0	0	6	6	33	55	33	15	15	A-6a*
		14.0-18.5	23	11	5	36	32	34	11	15	A-6a
284+00	75'Rt	0.0-1.0	Cinders							—	Visual
		1.0-4.0	36	9	11	29	34	36	14	24	A-6a
		4.0-5.5	36	18	10	17	15	34	9	24	A-2-4
		5.5-6.0	33	11	2	23	38	35	20	15	A-7-6
285+00	110'Lt	0.0-5.0	35	5	16	13	16	25	3	13	A-2-4
		5.0-10.0	36	11	20	15	18	29	11	15	A-4a
		10.0-15.0	29	14	28	21	28	26	6	15	A-4a
		15.0-20.0	29	6	15	25	26	31	8	19	A-4a
285+00	115'Rt	0.0-5.0	37	5	6	15	17	53	22	23	A-7-5
		5.0-9.0	29	6	6	15	15	53	19	29	A-7-5
		9.0-14.0	22	4	7	21	15	39	13	13	A-7-6
		14.0-20.0	22	1	1	31	45	35	17	13	A-6b
285+20	10'Lt	0.0-5.0	33	3	9	19	31	35	21	23	A-7-6
		5.0-10.0	29	6	11	17	34	41	15	23	A-7-6
		10.0-15.0	33	9	11	17	30	34	15	20	A-7-6
		15.0-20.0	28	5	15	21	31	36	15	19	A-4a
286+00	CL	0.0-5.0	33	5	16	16	30	42	18	18	A-2-4
		5.0-10.0	36	4	11	15	34	41	15	19	A-4a
		10.0-15.0	36	4	11	15	34	41	15	19	A-4a
		15.0-20.0	36	4	11	15	34	41	15	19	A-4a
286+50	100'Rt	0.0-2.0	35	5	16	15	29	38	15	15	A-4a
		2.0-5.0	35	5	16	15	29	38	15	15	A-6a
		5.0-10.0	35	5	16	15	29	38	15	15	A-6a
		10.0-16.5	37	12	16	15	20	38	15	15	A-6a
⑧ 288+00	CL	1.0-2.0	53	3	12	17	15	31	14	18	A-2-6
		2.0-4.0	28	2	9	15	46	55	31	29	A-7-6
		4.0-9.0	22	3	3	28	44	43	25	16	A-7-6
		9.0-14.5	34	3	4	18	41	51	26	14	A-7-6
		14.5-18.0	Black Coal								Visual
		18.0-21.0	23	1	2	27	47	35	14	8	A-6a

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
290+00	12'Rt	0.0-5.0	45	5	6	16	28	39	11	14	A-6a
		5.0-11.0	32	4	26	21	23	39	5	16	A-4a
		11.0-12.5	Black Coal Blossom							—	Visual
		12.5-14.0	0	1	3	26	70	45	21	15	A-7-6
		14.0-16.0	17	7	10	21	45	41	15	15	A-7-6
		16.0-20.0	19	3	9	27	42	33	15	15	A-6a
290+00	115'Rt	0.0-7.0	33	3	5	15	44	45	22	15	A-7-6
		7.0-9.0	0	1	3	23	73	45	23	15	A-7-6
		9.0-13.0	16	3	3	28	50	41	22	12	A-7-6
		13.0-16.0	33	1	2	26	38	39	21	15	A-7-6
		16.0-18.0	32	1	6	17	19	36	16	21	A-4a
290+50	90'Rt	0.0-2.5	39	5	7	22	36	45	18	24	A-6a
		2.5-5.0	0	1	2	38	59	36	13	13	A-7-6
		5.0-9.0	21	1	2	23	53	43	19	9	A-6b
		9.0-12.0	22	1	5	31	41	35	18	7	A-6b
291+00	CL	0.0-1.0	16	1	12	13	25	34	13	26	A-6a
		1.0-3.0	Black Coal Blossom							—	Visual
		3.0-11.0	0	0	1	19	80	45	15	23	A-7-6
		11.0-16.5	22	2	2	29	45	41	16	11	A-7-6
		16.5-18.5	36	4	5	28	27	34	13	16	A-6a*
292+00	20'Rt	0.0-4.0	50	4	5	24	17	34	13	11	A-6a
		4.0-10.0	42	5	12	29	12	31	11	13	A-6a*
		10.0-18.0	38	1	2	28	33	34	13	9	A-6a*
		18.0-19.5	58	1	1	18	22	31	12	8	A-6a
292+00	70'Rt	0.0-4.0	34	4	12	13	17	39	7	15	A-2-4
		4.0-13.0	37	2	10	5	6	35	15	10	A-1-a*
		13.0-17.0	26	3	5	13	15	35	11	11	A-2-4
		17.0-22.0	26	4	8	23	39	35	15	11	A-6b
		22.0-26.0	34	4	12	23	31	35	15	21	A-6a
		26.0-29.0	0	2	2	38	58	37	22	14	A-6b
		29.0-30.0	42	0	1	15	39	32	11	6	A-6a
293+00	25'Rt	0.0-5.5	37	3	5	22	32	34	11	11	A-6a
		5.5-12.0	61	2	3	16	18	32	10	8	A-2-4
		12.0-12.5	Gray Silty Clay and Shale Fragments								Visual
		12.5-18.0	25	4	3	15	53	31	12	10	A-6a
		18.0-26.0	0	1	2	37	60	34	11	9	A-6a
293+00	100'Rt	0.0-4.0	44	1	2	14	39	34	3	24	A-2-4
		4.0-11.0	63	0	2	5	30	31	11	15	A-6a
		11.0-13.0	63	0	2	5	30	31	13	13	A-2-6
		13.0-20.0	33	1	3	12	51	41	15	9	A-7-6
		20.0-21.0	33	1	5	6	17	33	15	21	A-7-6
		21.0-24.0	33	1	5	5	15	33	15	30	A-7-6
		24.0-27.0	33	1	2	15	47	33	15	29	A-7-6
		27.0-30.0	33	1	1	23	34	29	12	9	A-6a
295+00	CL	0.0-2.0	Gray Broken Sandstone							5	Visual
296+00	20'Lt	0.0-2.0	39	6	7	17	35	45	13	23	A-7-6
		2.0-4.0	38	1	2	12	47	38	32	26	A-7-6
		4.0-6.0	Coal Blossom								Visual
		6.0-10.0	0	0	4	30	66	34	13	11	A-6a
296+00	CL	0.0-5.0	0	0	2	11	87	33	11	16	A-6a
		5.0-10.0	0	0	1	33	66	36	12	22	A-6a
		10.0-15.0	0	0	1	17	82	45	16	24	A-6b
		15.0-20.0	0	0	2	30	68	33	11	22	A-6b
		20.0-25.0	0	0	3	25	72	36	13	22	A-6a
		25.0-30.0	32	3	21	25	19	25	7	16	A-4a
296+00	100'Rt	0.0-5.0	0	2	5	43	50	30	20	21	A-6b
		5.0-10.5	0	1	3	36	60	35	17	21	A-7-6
		10.5-15.0	0	0	1	33	66	35	11	23	A-6a
		15.0-19.0	39	1	2	28	30	33	11	23	A-4b
		19.0-25.0	0	0	1	36	63	34	13	19	A-4b
		25.0-30.0	33	1	31	15	20	31	3	14	A-2-4
297+00	75'Lt	0.0-4.0	0	0	1	1	98	61	12	22	A-6a
		4.0-9.0	0	0	1	37	62	36	13	15	A-4b
		9.0-14.0	0	0	1	33	66	36	15	21	A-7-6
		14.0-19.0	0	0	1	33	66	33	15	20	A-6a
		19.0-25.0	0	0	1	28	71	33	15	20	A-6a
		25.0-30.0	0	0	1	32	67	35	16	27	A-6b
303+00	CL	0.0-5.0	21	1	1	28	49	33	21	21	A-7-6
		5.0-9.0	24	1	1	27	47	32	15	24	A-7-6
		9.0-14.0	24	1	1	27	47	33	15	23	A-7-6
		14.0-20.0	0	0	1	34	65	34	15	21	A-6a
		20.0-25.0	0	0	1	34	65	34	11	21	A-6a
		25.0-30.0	0	0	2	36	62	36	12	24	A-6a
303+00	75'Rt	0.0-2.5	0	0	2	3	97	34	15	25	A-6a
		2.5-7.0	0	0	1	15	84	33	13	23	A-6a
		7.0-12.0	0	0	1	15	84	33	13	24	A-6b
		12.0-17.0	0	0	1	33	66	34	11	23	A-6a
		17.0-26.0	0	0	1	30	69	33

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SOIL PROFILE
TUSCARAWAS COUNTY
TUS-36 — 16.63

OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO

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SUMMARY OF SOIL TEST DATA (Cont'd)

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.
*Denotes sample taken at or near grade.

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
301+00	150'Lt	0.3-1.0	0	0	17	58	25	31	9	31	A-4b
		1.0-2.0	0	1	9	70	20	35	11	36	A-6a
		2.0-6.0	0	6	30	42	22	28	8	35	A-4a
		6.0-12.0	0	0	2	36	62	36	11	29	A-6a
		12.0-17.0	0	0	1	36	63	37	11	29	A-6a
		17.0-22.0	0	0	2	36	62	33	11	26	A-6a
		22.0-30.0	0	0	1	44	55	31	11	25	A-6a
301+00	75'Lt	0.0-4.0	0	1	3	51	45	35	11	26	A-6a
		4.0-8.0	0	1	5	53	41	32	12	25	A-6a
		8.0-13.0	0	1	1	49	49	37	11	22	A-6a
		13.0-18.0	0	0	1	39	60	42	18	25	A-7-6
		18.0-21.0	0	0	1	36	63	37	11	25	A-6a
		21.0-30.0	0	0	1	53	46	36	5	23	A-4b
301+00	CL	0.0-5.0	0	1	1	51	47	34	9	23	A-4b
		5.0-10.0	0	1	2	53	44	32	9	23	A-6a
		10.0-15.0	0	1	1	36	62	35	11	23	A-6a
		15.0-20.0	0	0	1	35	64	33	11	23	A-6a
		20.0-25.0	0	0	1	35	64	34	11	23	A-6a
305+00	150'Lt	0.0-5.0	0	1	24	46	29	30	11	21	A-6a
		5.0-10.0	0	0	1	31	68	35	11	23	A-7-6
		10.0-15.0	0	0	6	51	43	33	11	23	A-6a
		15.0-20.0	0	0	1	41	58	34	11	23	A-6a
		20.0-25.0	0	1	6	45	48	33	11	23	A-6a
		25.0-30.0	0	0	1	32	67	39	17	24	A-6b
307+00	150'Lt	0.0-5.0	0	2	3	45	50	35	21	27	A-7-6
		5.0-9.0	0	1	2	30	67	34	11	21	A-6a
		9.0-11.0	0	0	1	39	60	36	11	23	A-7-6
		11.0-15.0	0	0	1	39	60	36	15	25	A-6b
		15.0-25.0	0	0	1	39	60	35	13	25	A-6a
		25.0-30.0	0	0	1	39	61	37	15	25	A-6a
307+00	CL	0.0-3.0	0	1	22	43	34	30	11	21	A-6a
		3.0-7.0	0	0	3	43	54	35	11	22	A-6a
		7.0-12.0	0	0	1	45	54	35	11	22	A-6a
		12.0-17.0	0	0	1	44	55	35	15	25	A-6a
		17.0-22.0	0	0	1	44	55	33	11	22	A-6a
		22.0-26.0	0	0	1	46	53	32	11	22	A-7-6
		26.0-30.0	0	0	1	46	53	32	11	22	A-7-6
309+15	℄	0.5-5.0	0	1	6	46	47	33	13	23	A-6a
		5.0-10.0	0	0	3	22	75	33	11	23	A-6a
		10.0-15.0	0	0	0	1	99	33	11	23	A-6a
		15.0-20.0	0	0	0	1	99	33	11	23	A-6a
		20.0-26.0	0	0	1	15	84	33	11	23	A-6a
		26.0-30.0	0	0	1	15	84	33	11	23	A-6a
312+25	15'Rt	0.5-5.0	21	3	7	47	22	25	5	17	A-1-b
		5.0-10.0	0	2	5	51	42	31	11	22	A-6a
		10.0-15.0	0	1	3	51	45	31	11	22	A-6a
		15.0-20.0	0	0	3	51	46	31	11	22	A-6a
		20.0-25.0	0	1	3	51	45	31	11	22	A-6a
		25.0-30.0	0	1	2	51	46	33	13	23	A-6a
315+00	CL	0.5-5.0	0	1	5	53	41	32	9	21	A-4a
		5.0-10.0	0	2	5	53	40	32	9	21	A-4a
		10.0-15.0	0	1	2	53	44	32	9	21	A-4b
		15.0-20.0	0	0	1	53	46	32	9	21	A-6a
		20.0-25.0	0	0	1	55	44	32	9	21	A-6a
		25.0-30.0	0	0	2	55	43	32	9	21	A-6a
316+00	CL	0.5-5.0	0	2	16	51	31	31	11	21	A-6a
		5.0-10.0	0	1	21	50	28	30	11	21	A-6a
		10.0-15.0	0	1	21	50	28	30	11	21	A-6a
		15.0-20.0	0	0	3	54	43	32	11	22	A-4b
		20.0-25.0	0	1	3	56	40	32	11	22	A-4b
		25.0-30.0	0	0	4	55	41	33	11	22	A-4b
321+00	CL	0.2-5.0	0	1	5	54	40	31	9	21	A-4a
		5.0-10.0	0	1	5	54	40	31	9	21	A-4a
		10.0-15.0	0	0	2	54	44	31	9	21	A-4a
		15.0-20.0	0	0	2	54	44	31	9	21	A-4a
		20.0-25.0	0	0	1	55	44	31	9	21	A-4a
		25.0-30.0	0	0	1	55	44	31	9	21	A-4a
321+50	60'Lt	0.5-5.0	0	3	16	52	29	31	11	21	A-6a
		5.0-10.0	0	2	15	52	31	31	11	21	A-6a
		10.0-15.0	31	15	33	16	35	31	11	21	A-2-4
		15.0-20.0	0	2	11	51	36	31	11	21	A-6a
		20.0-25.0	0	1	5	54	40	31	11	21	A-6a
		25.0-30.0	0	0	4	54	42	31	11	21	A-6a
322+00	CL	0.5-5.0	0	2	23	43	32	31	11	21	A-6a
		5.0-10.0	0	1	23	43	33	31	11	21	A-6a
		10.0-15.0	0	0	1	43	56	31	11	21	A-6a
		15.0-20.0	0	1	2	43	54	31	11	21	A-6a
		20.0-25.0	0	0	2	51	47	31	11	21	A-6a
		25.0-30.0	0	0	3	51	46	31	11	21	A-6a
323+50	115'Rt	0.0-4.5	0	0	5	60	35	31	11	21	A-6a
		4.5-10.0	0	1	15	53	31	31	11	21	A-6a
		10.0-12.0	0	0	24	50	26	31	13	21	A-6a
		12.0-17.0	Brown Silty Sand and Gravel								Visual
		17.0-22.0	0	0	3	50	47	31	11	21	A-6a
		22.0-27.0	0	0	3	50	47	31	11	21	A-6a
		27.0-32.0	0	1	2	51	46	31	11	21	A-6a
323+00	15'Lt	0.0-5.0	0	0	16	36	48	32	8	21	A-4a
		5.0-10.0	0	0	21	51	28	31	11	21	A-4b
		10.0-15.0	0	0	8	56	36	31	11	21	A-6a

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
332+00	CL	0.0-5.0	0	0	26	44	30	27	9	23	A-4a
		5.0-10.0	0	0	20	51	29	30	12	23	A-6a
		10.0-13.0	0	0	13	50	37	29	9	23	A-4b
		13.0-18.0	0	0	21	46	33	31	11	23	A-4a
		18.0-23.0	0	0	0	46	54	34	11	23	A-6a
334+00	75'Rt	0.0-4.0	0	1	11	32	56	25	5	21	A-4a
		4.0-10.0	0	0	17	51	32	30	10	22	A-4b
		10.0-13.0	0	0	11	55	34	32	12	31	A-6a
		13.0-16.0	0	1	20	53	26	31	3	33	A-4b
		16.0-20.0	0	1	16	63	18	32	NP	36	A-3a
		20.0-21.0	0	0	2	27	71	34	11	27	A-6a
		21.0-27.0	0	0	1	21	78	35	13	26	A-7-6
		27.0-30.0	0	0	1	24	75	50	24	32	A-7-6
335+00	CL	0.0-5.0	0	1	1	57	39	32	NP	20	A-4a
		5.0-10.5	0	0	17	57	26	29	NP	20	A-4b
		10.5-13.0	0	0	22	55	23	33	12	23	A-6a
		13.0-17.0	0	1	33	35	31	27	7	25	A-4a
		17.0-21.0	0	1	31	43	25	34	11	24	A-6a
		21.0-26.0	0	0	1	32	67	39	17	26	A-7-6
		26.0-30.0	0	0	0	33	62	34	11	25	A-6a
330+00	100'Lt	0.0-5.0	0	1	5	50	44	30	6	21	A-4b
		5.0-10.0	0	1	10	50	39	30	7	21	A-4b
		10.0-11.0	28	5	12	33	27	32	7	21	A-1a
		11.0-16.0	0	1	12	33	54	35	11	17	A-6a
		16.0-22.0	0	1	3	26	70	36	11	22	A-6a
		22.0-26.0	0	1	17	51	31	23	6	17	A-4b
		26.0-30.0	34	5	13	23	21	24	5	15	A-1a
330+30	CL	0.0-4.0	0	1	2	46	51	33	11	23	A-6a
		4.0-6.0	0	1	3	46	50	33	13	23	A-6a
		6.0-10.0	26	2	10	33	29	32	11	17	A-6a
		10.0-15.0	0	1	4	51	44	35	13	17	A-6a
		15.0-20.0	0	0	1	51	48	33	11	17	A-4b
		20.0-25.0	0	0	1	55	44	30	7	15	A-4b
		25.0-30.0	0	2	11	55	31	23	5	13	A-4b
330+00	50'Rt	0.0-5.0	0	1	10	51	38	35	15	25	A-6a
		5.0-7.0	0	0	34	36	30	30	6	20	A-4a
		7.0-12.0	0	1	11	34	54	34	11	23	A-6a
		12.0-17.0	0	1	15	35	49	32	12	21	A-6a
		17.0-22.0	0	0	2	33	65	34	11	23	A-6a
		22.0-26.0	0	0	1	33	66	34	11	23	A-6a
		26.0-30.0	0	0	1	34	65	34	11	23	A-6a
333+00	110'Rt	0.0-4.0	0	0	2	39	59	34	11	26	A-7-6
		4.0-11.0	0	0	3	39	58	34	11	26	A-6a
		11.0-13.0	0	0	1	41	58	34	11	27	A-7-6
		13.0-24.0	0	0	3	41	56	34	11	29	A-7-6
		24.0-30.0	0	0	2	43	55	34	11	29	A-6a
340+00	CL	0.0-5.0	31	3	17	28	21	31	15	15	A-1a*
		5.0-9.5	0	5	26	33	28	31	15	15	A-1a*
		9.5-11.0	35	5	26	33	28	31	15	15	A-1a
342+00	CL	0.0-5.0	0	1	7	36	56	32	11	23	A-6b
		5.0-10.0	0	1	16	36	47	32	11	23	A-6a
		10.0-13.0	0	0	8	36	56	32	11	23	A-6a
		13.0-15.5	0	0	12	36	52	32	11	23	A-7-5
		15.5-19.0	0	1	11	36	52	33	11	23	A-6a
342+00	CL	0.0-4.5	34	3	9	31	23	28	11	16	A-6a
		4.5-7.0	34	3	12	32	19	28	11	16	A-1a
		7.0-9.0	Brown Broken Shale								Visual
		9.0-11.0	Brown Broken Shale								Visual
		11.0-20.0	Brown Broken Shale								Visual
350+50	CL	0.0-5.0	0	0	2	34	63	34	11	23	A-6a*
		5.0-9.0	0	0	2	34	63	34	11	23	A-6b
		9.0-12.5	0	1	6	34	58	34	11	23	A-6b
		12.5-17.5	0	1	7	37	55	34	11	23	A-6b
		17.5-23.0	0	1	6	37	56	34	11	23	A-6a
		23.0-30.0	0	2	8	39	51	34	11	23	A-6a
352+50	100'Lt	0.0-4.0	0	1	7	57	36	31	11	21	A-4b
		4.0-9.0	0	1	7	57	35	31	11	21	A-4b
		9.0-10.5	0	0	6	58	36	31	11	21	A-2-4
		10.5-15.0	0	0	5	58	37	31	11	21	A-4a
		15.0-20.0	0	0	6	58	36	31	11	21	A-4a
		20.0-26.0	0	0	6	58	36	31	11	21	A-4a
		26.0-32.0	0	1	8	58	33	31	11	21	A-4b
353+00	100'Lt	0.0-3.0	0	0	9	59	32	31	11	21	A-4b
		3.0-7.0	0	0	8	58	34	31	11	21	A-4a
		7.0-12.0	0	0	8	58	34	31	11	21	A-4a
		12.0-15.0	0	0	8	58	34	31	11	21	A-4a
		15.0-17.0	0	1	12	58	29	31	11	21	A-4b
		17.0-20.0	0	1	13	58	28	31	11	21	A-2-4
		20.0-25.0	0	0	13	58	29	31	11	21	A-2-4
		25.0-30.0	0	0	18	58	24	31	11	21	A-4a
353+00	CL	0.0-4.0	0	0	13	58	29	31	11	21	A-4a
		4.0-6.0	0	0	11	58	31	31	11	21	A-6a
		6.0-10.0	0	0	12	58	30	31	11	21	A-4a
		10.0-14.0	0	0	13	58	29	31	11	21	A-2-4
		14.0-18.0	0	0	11	58	31	31	11	21	A-1-b
		18.0-23.0	0	0	11	58	31	31	11	21	A-2-4
		23.0-27.0	0	0	15	58	27	31	11	21	A-4a
		27.0-30.0	0	0	13	58	29	31	11	21	A-4a

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
353+00	100'Rt	0.0-4.0	0	1	10	51	38	30	11	23	A-6b
		4.0-6.0	0	1	9	51	39	30	11	23	A-6a
		6.0-11.0	0	2	15	51	32	30	11	23	A-6a
		11.0-16.0	0	3	22	51	24	30	11	23	A-6a
		16.0-20.0	0	2	15	51	32	30	11	23	A-6a
		20.0-25.0	0	2	15	51	32	30	11	23	A-6a
		25.0-30.0	0	2	15	51	32	30	11	23	A-6a
354+00	CL	0.0-5.0	0	1	5	55	39	32	11	23	A-6a
		5.0-9.0	0	1	3	60	36	31	10	21	A-4b
		9.0-13.0	0	1	3	61	35	31	10	21	A-4b
		13.0-17.0	0	1	3	61	35	31	10	21	A-4b
		17.0-21.0	0	1	3	61	35	31	10	21	A-4b
		21.0-26.0	0	1	3	61	35	31	10	21	A-4b
		26.0-30.0	0	1	3	61	35	31	10	21	A-4b
355+00	CL	0.0-5.0	0	1	5	55	39	32	11	23	A-6a
		5.0-9.0	0	1	3	60	36	31	10	21	A-4b
		9.0-13.0	0	1	3	61	35	31	10	21	A-4b
		13.0-17.0	0	1	3	61	35	31	10	21	A-4b
		17.0-21.0	0	1	3	61	35	31	10	21	A-4b
		21.0-26.0	0	1	3	61	35	31	10	21	A-4b
		26.0-30.0	0	1	3	61	35	31	10	21	A-4b
355+67	50'Rt	5.0-6.0	13	0	2	32	53	34	13	17	A-1a
		6.5-8.5	0	2	1	36	61	34	13	17	A-6a
		10.0-11.0	0	0	1	34	65	34	13	17	A-6a
		12.5-13.5	0	1	1	36	62	34	13	17	A-6a
		15.0-16.0	0	0	1	36	63	34	13	17	A-7-5
		17.5-18.5	0	0	1	36	63	34	13	17	A-6a
		20.0-21.0	0	0	1	36	63	34	13	17	A-7-5
		22.5-23.5	0	0	1	36	63	34	13	17	A-6a
		25.0-26.0	0	0	1	36	63	34	13	17	A-6a
		27.5-28.5	0	0	1	36	63	34	13	17	A-6a
		30.0-31.0	0	0	1	36	63	34	13	17	A-6a
356+00	CL	0.0-5.0	0	1	5	55	39	32	11	23	A-6a
		5.0-9.0	0	1	3	60	36	31	10	21	A-4b
		9.0-13.0	0	1	3	61	35	31	10	21	A-4b
		13.0-17.0	0	1	3	61	35	31	10	21	A-4b
		17.0-21.0	0	1	3	61	35	31	10	21	A-4b
		21.0-26.0	0	1	3	61	35	31	10	21	A-4b
		26.0-30.0	0	1	3	61	35	31	10	21	A-4b
356+67	50'Rt	5.0-6.0	0	0	2	32	66	34	13	17	A-1a
		6.5-8.5	0	2	1	36	61	34	13	17	A-6a
		10.0-11.0	0	0	1	34	65	34	13	17	A-6a
		12.5-13.5	0	1	1	36	62	34	13	17	A-6a
		15.0-16.0	0	0	1	36	63	34	13	17	A-7-5
		17.5-18.5	0	0	1	36	63	34	13	17	A-6a
		20.0-21.0	0	0	1	36	63	34	13	17	A-7-5
		22.5-23.5	0	0	1	36	63	34	13	17	A-6a
		25.0-26.0	0	0	1	36	63	34	13	17	A-6a
		27.5-28.5	0	0	1	36	63	34	13	17	A-6a
		30.0-31.0	0	0	1	36	63	34	13	17	A-6a
357+00	CL	0.0-5.0	0	1	5	55	39	32	11	23	A-6a
		5.0-9.0	0	1	3	60	36	31	10	21	A-4b
		9.0-13.0	0	1	3	61	35	31	10	21	A-4b
		13.0-17.0	0	1	3	61	35	31	10	21	A-4b
		17.0-21.0	0	1	3	61	35	31	10	21	A-4b
		21.0-26.0	0	1	3	61	35	31	10	21	A-4b
		26.0-30.0	0	1	3	61	35	31	10	21	A-4b
357+45	50'Rt	0.0-3.0	31	7	9	15	38	35	11	21	A-7-6
		3.0-6.0	0	1	1	39	59	34	11	22	A-7-6
		6.0-10.0	Gray Weathered Indurated Clay								Visual
		10.0-15.0	Gray Weathered Indurated Clay								Visual
		15.0-20.0	Gray Weathered Indurated Clay								Visual
357+45	100'Rt	0.0-3.5	0	1	3	39	57	34	11	23	A-7-6
		3.5-6.0	34	5	6	39	56	34	11	23	A-6a
		6.0-10.0	0	3	7	36	54	33	11	23	A-6a
		10.0-14.0	0	1	3	22	74	53	34	45	A-7-6
		14.0-20.0	Gray Weathered Indurated Clay								Visual
357+67	CL	0.0-3.5	0	7	7	15	76	30	13	25	A-7-6
		3.5-6.0	35	0	7	15	43	36	13	25	A-7-6
		6.0-12.0	29	1	8	33	51	34	11	28	A-6b
		12.0-15.0	31	1	8	33	33	31	16	24	A-6b
358+00	CL	0.0-4.0	0	2	13	45	52	35	15	26	A-6a
		4.0-7.0	33	1	7	49	45	33	13	23	A-7-5
		7.0-9.0	65	5	5	23	24	33	13	23	A-2-7
		9.0-11.5	Black Coal W/Soft Shale Fragments								Visual
		11.5-15.0	0	1	3	34	62	36	15	24	A-6a
		15.0-17.0	Brown Broken Shale								Visual
360+00	CL	0.0-5.0	0	1	5	55	39	32	11	24	A-6a
		5.0-9.0	0	1	3	60	36	31	10	21	A-4b
		9.0-13.0	0	1	3	61	35	31	10	21	A-4b
		13.0-17.5	0	1	3	61	35	31	10	21	A-4b
		17.5-20.0	0	1	3	61	35	31	10	21	A-4b
		20.0-21.0	0	1	3	61	35	31	10	21	A-4b
		21.0-26.5	0	1	3	61	35	31	10	21	A-4b
		26.5-30.0	0	1	3	61	35	31	10	21	A-4b
362+50	70'Lt	0.0-5.0	36	7	11	22	24	29	11	23	A-6a
362+50	25'Rt	0.0-4.0	0	1	3	55	41	34	11	21	A-6a
		4.0-7.0	0	1	3	55	41	34	11	21	A-6a
		7.0-11.0	0	1	3	55	41	34	11	21	A-6a
		11.0-13.0	0	1	3	55	41	34	11	21	A-4b
		13.0-15.0	0	1	3	55	41	34	11	21	A-4b
		15.0-21.0	0	1	3	55	41	34	11	21	A-4a
		21.0-30.0	0	1	3	55	41	34	11	21	A-4a
362+50	90'Rt	0.0-4.0	0	1	3	55	41	34	11	23	A-6a
		4.0-8.0	0	1	3	55	41	34	11	23	A-6a
		8.0-13.0	0	1	3	55	41	34	11	23	A-6a
		13.0-18.0	0	1	3	55	41	34	11	23	A-4b
		18.0-23.0	0	1	3	55	41	34	11	23	A-4a
		23.0-30.0	0	1	3	55	41	34	11	23	A-4a
362+60	150'Lt	0.0-4.5	0	1	3	55	41	34	11	23	A-6b
		4.5-8.0	0	1	3	55	41	34	11	23	A-6b
		8.0-11.0	0	1	3	55	41	34	11	23	A-4b
		11.0-16.0	0	1	3	55	41	34	11	23	A-4a
		16.0-21.0	0	1	3	55	41	34	11	23	A-4a
		21.0-26.0	0	1	3	55	41	34	11	23	A-4a
		26.0-30.0	0	1	3	55	41	34	11	23	A-4b
363+10	90'Rt	0.0-5.0	0	1	9	53	37	31	11	21	A-6b
		5.0-10.0	0	1	5	57	37	31	11	21	A-4b
		10.0-15.0	0	1	5	57	37	31	11	21	A-4b
		15.0-20.0	0	1	5	57	37	31	11	21	A-4b
		20.0-25.0	0	1	5	57	37	31	11	21	A-4b
		25.0-30.0	0	1	5	57	37	31	11	21	A-4b
364+50	CL	0.0-5.0	0	0	5	31	64	31	6	21	A-4b
		5.0-10.0	0	0	1	31	68	31	6	21	A-4b
		10.0-15.0	0	0	1	31	68	31	6	21	A-4a
		15.0-19.0	0	0	1	31	68	31	6	21	A-4b
		19.0-25.0	0	0	1	31	68	31	6	21	A-4a
		25.0-30.0	0	0	1	31	68	31	6	21	A-4a
366+80	CL	0.0-5.0	Black Coal Fragments								Visual
		5.0-8.0	26	1	2	23	48	34	21	15	A-7-6

TE-54 B
1500 10 60

SOIL PROFILE
TUSCARAWAS COUNTY
TUS-36-16.63
OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO

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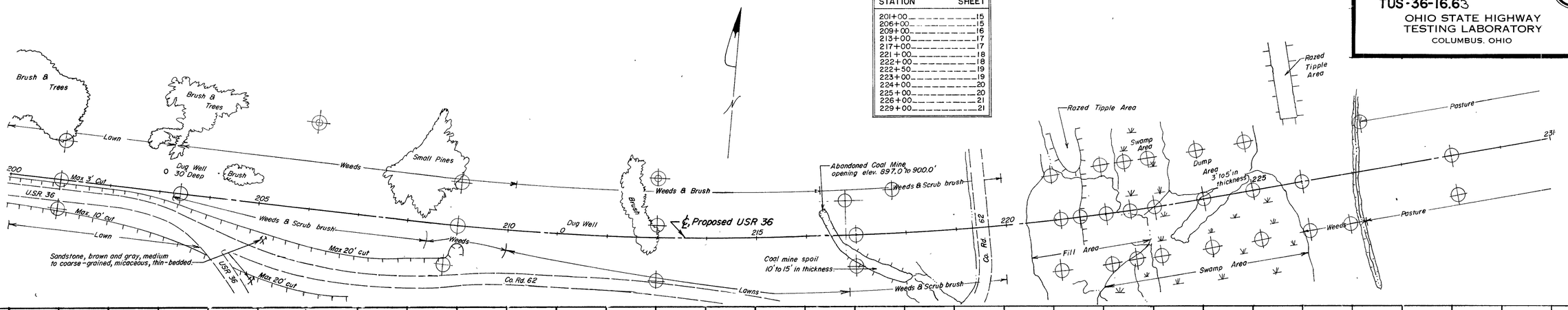
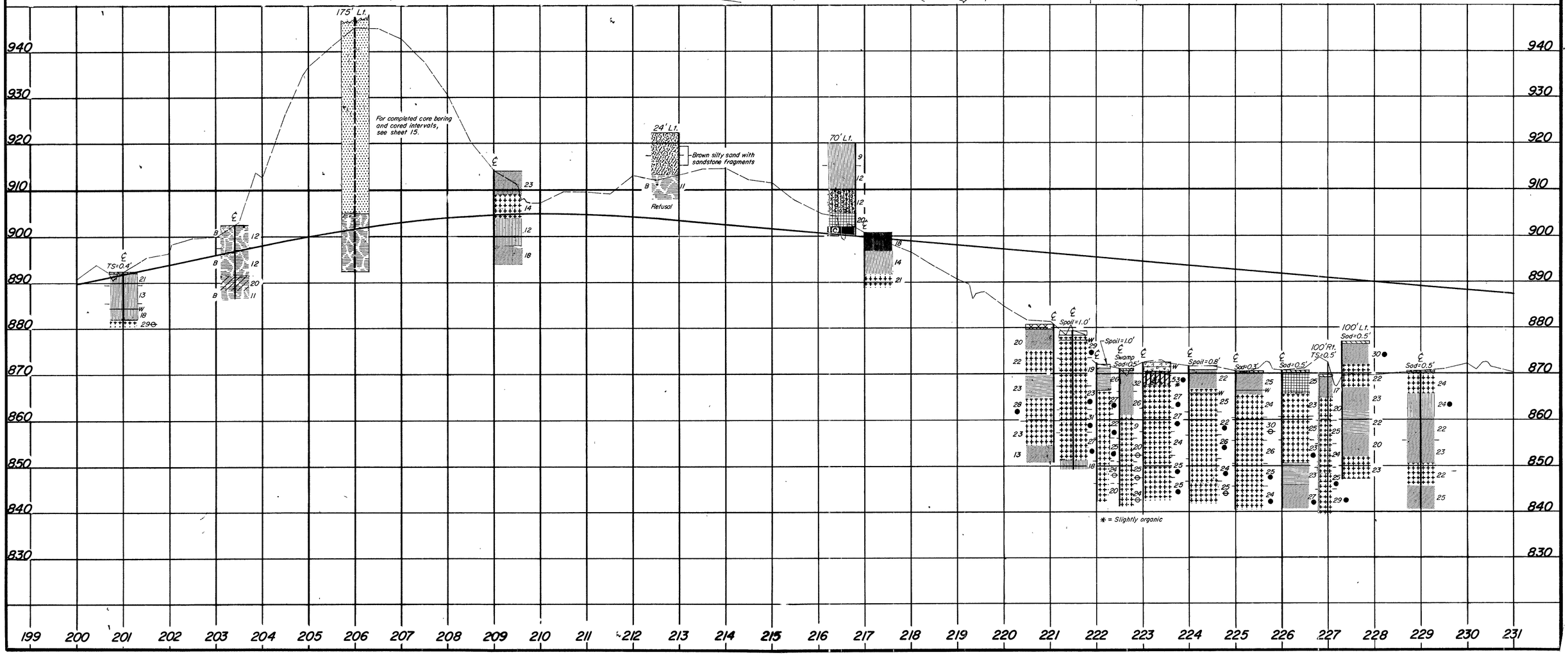
60

CROSS SECTION INDEX	
STATION	SHEET
201+00	15
206+00	15
209+00	16
213+00	17
217+00	17
221+00	18
222+00	18
222+50	19
223+00	19
224+00	20
225+00	20
226+00	21
229+00	21





TE 54 B
1500 10 60

SOIL PROFILE
TUSCARAWAS COUNTY
TUS-36-16.63
OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO

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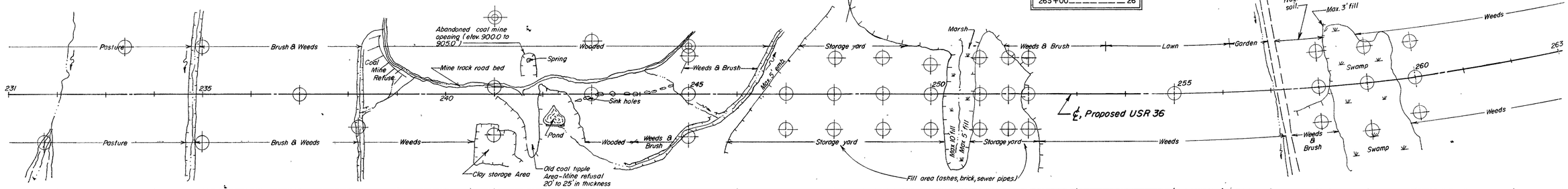
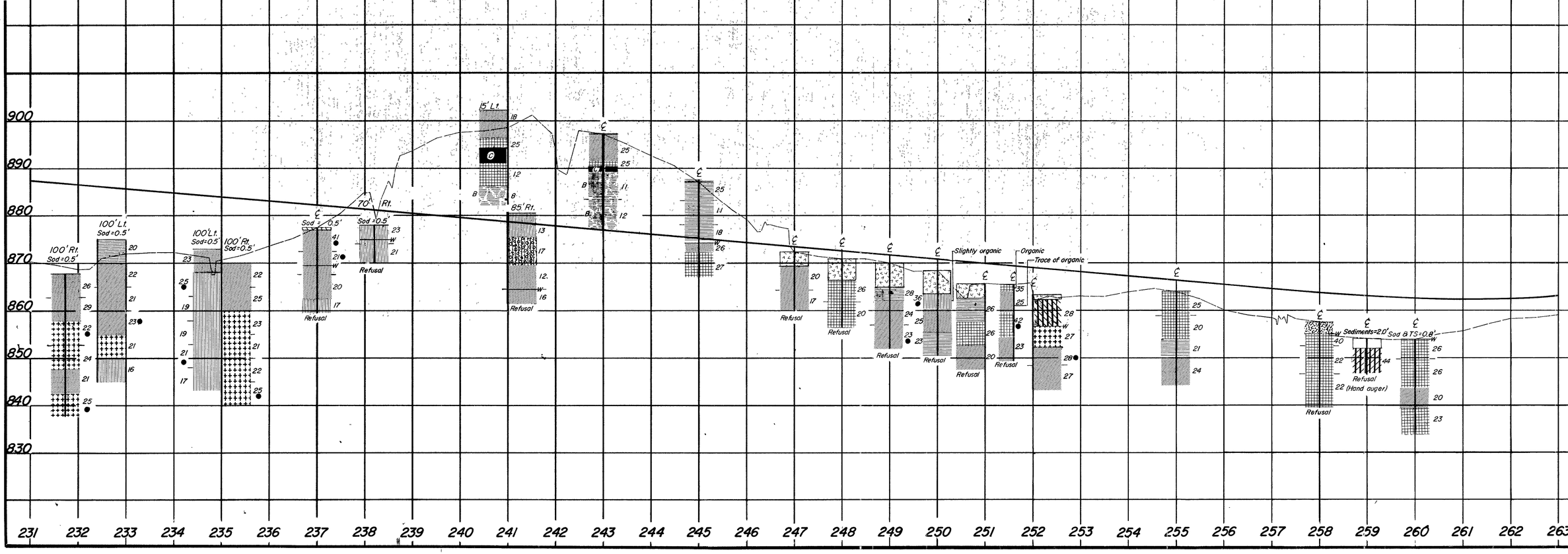
CROSS SECTION INDEX	
STATION	SHEET
241+00	22
243+00	22
245+00	23
248+00	23
249+00	24
250+00	24
251+00	24
251+50	24
252+00	25
258+00	25
259+00	25
260+00	26
263+00	26





TL 54 B
1500 10 60

SOIL PROFILE
TUSCARAWAS COUNTY
TUS-36-16.63

OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS OHIO

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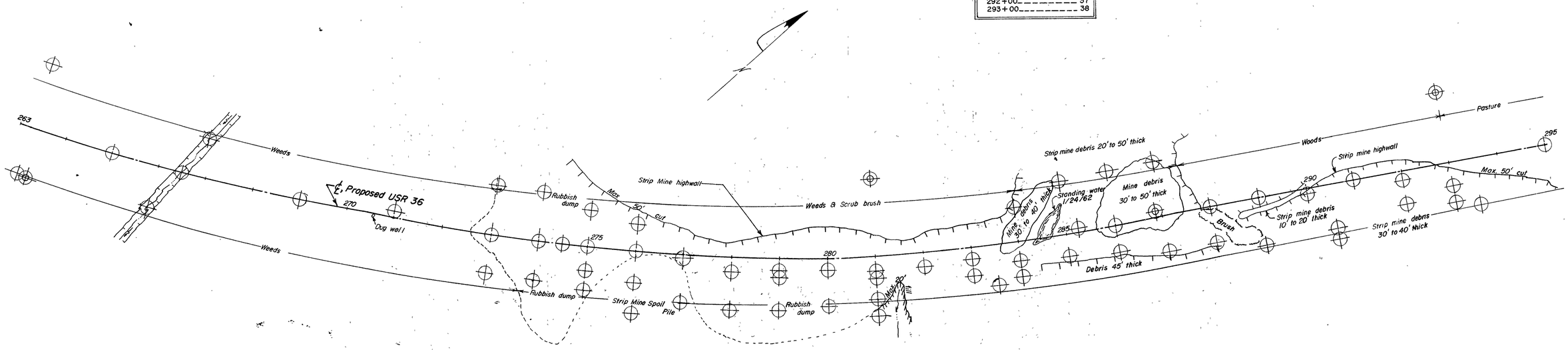
60

CROSS SECTION INDEX	
STATION	SHEET
263+00	26
266+00	27
273+00	27
274+00	27
275+00	28
276+00	28
277+00	29
278+00	29
279+00	30
280+00	30
281+00	31
283+00	32
284+00	33
285+00	33
286+00	34
287+00	34
288+00	35
289+00	35
290+50	36
292+00	37
293+00	38



7-05-36

TE 54 B
1500-10 60

SOIL PROFILE
TUSCARAWAS COUNTY
TUS—36—16.63

OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO

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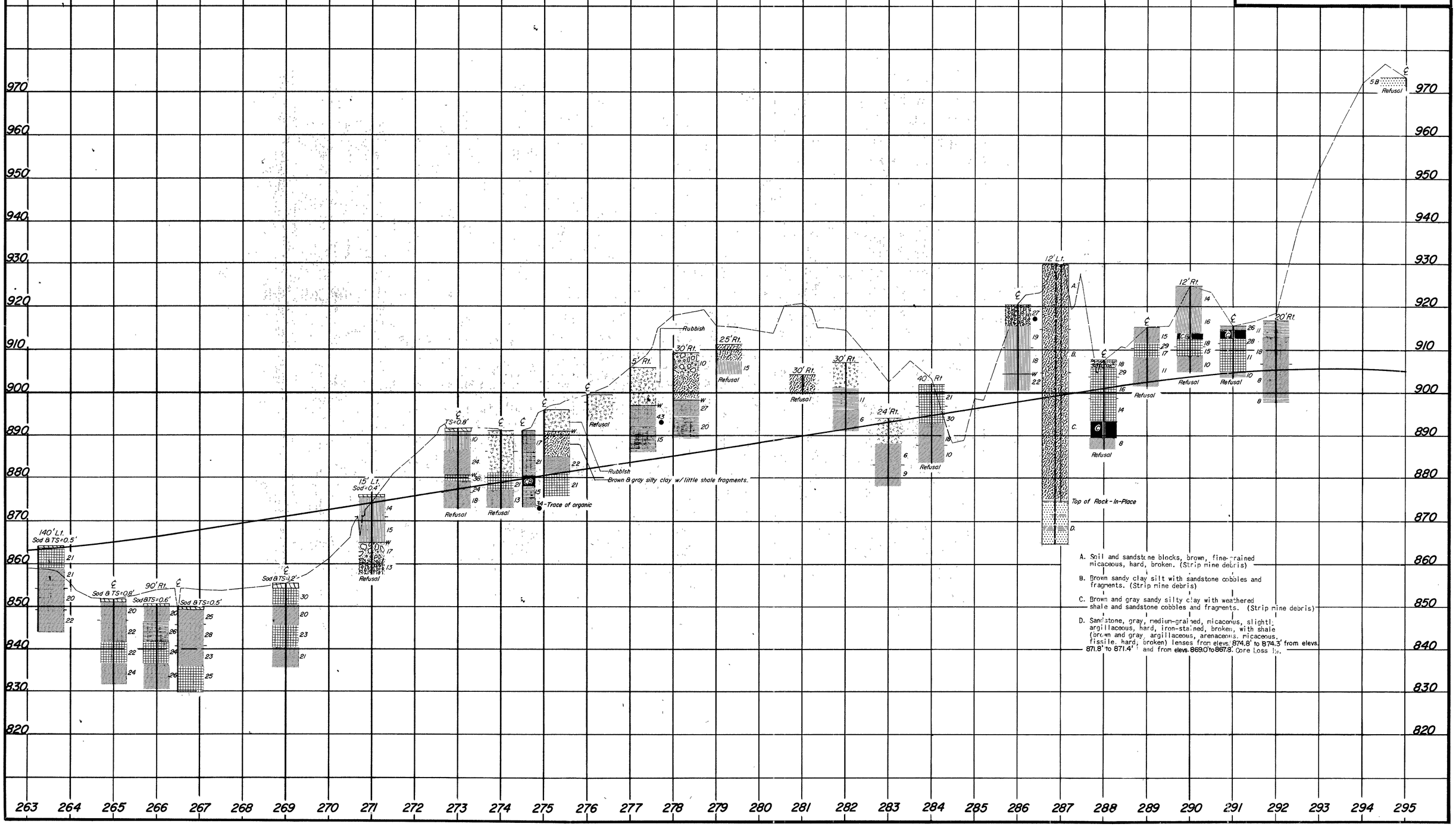

A. Soil and sandstone blocks, brown, fine-grained micaceous, hard, broken. (Strip mine debris)

B. Brown sandy clay silt with sandstone cobbles and fragments. (Strip mine debris)

C. Brown and gray sandy silty clay with weathered shale and sandstone cobbles and fragments. (Strip mine debris)

D. Sandstone, gray, medium-grained, micaceous, slightly argillaceous, hard, iron-stained, broken, with shale (brown and gray, argillaceous, arenaceous, micaceous, fissile, hard, broken) lenses from elevs. 874.8' to 874.3' from elevs. 871.8' to 871.4' and from elevs. 869.0' to 867.8'. Core Loss 1%.

TE 54 B
1500 10 60

MICROFILMED
FEB 21 1964

SOIL PROFILE
TUSCARAWAS COUNTY
TUS-36-16.63

OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS OHIO

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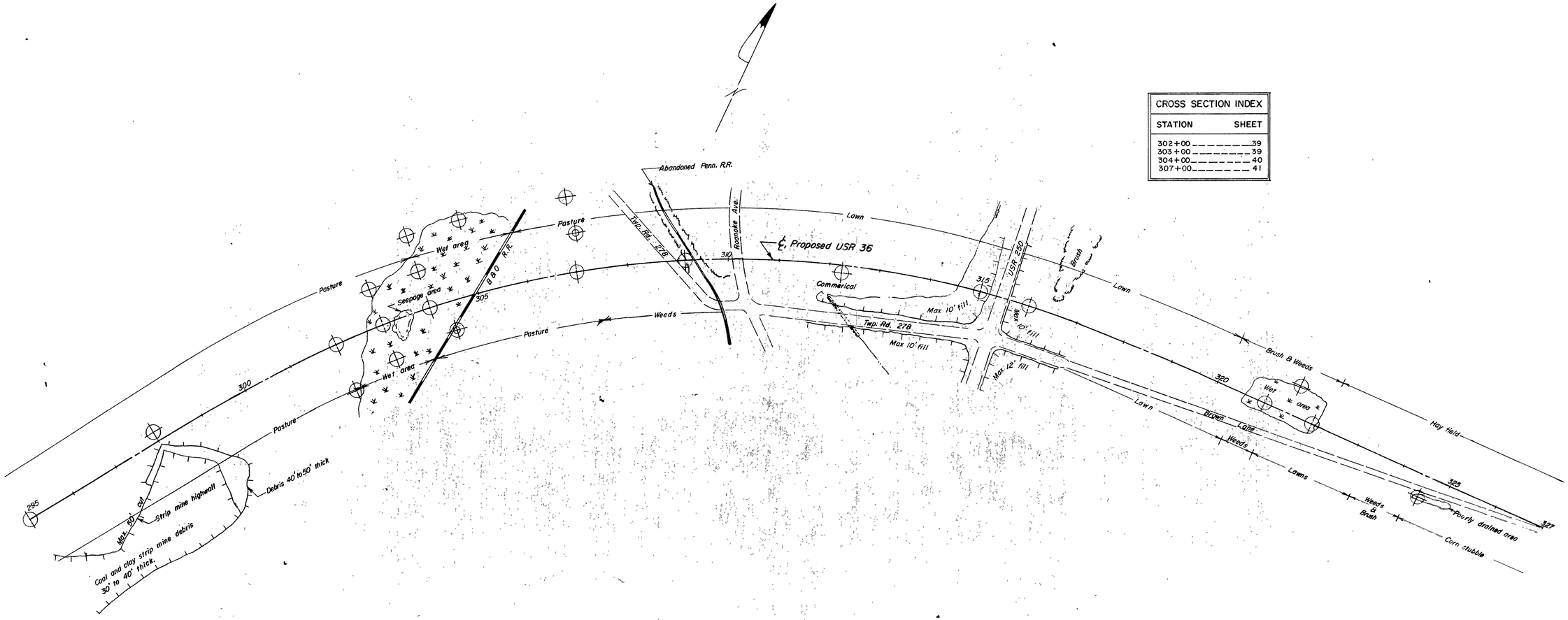
60

CROSS SECTION INDEX	
STATION	SHEET
302+00	39
303+00	39
304+00	40
307+00	41



TE 54 B
1500 10 60

SOIL PROFILE
TUSCARAWAS COUNTY
TUS – 36 – 16.63

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60

OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO

970
960
950
940
930
920
910
900
890
880
870
860
850
840
830
820
810

℄ 5B Refusal

Sod 8 TS=0.5'
23
26
CB
11

℄ 20 24 22 22 23 16

℄ 21 22 23 27 24 24

℄ 23 23 24 25 27 Refusal

150' Lt. 21 25 23 24 26 24

150' Lt. ℄ 27 21 26 24 25 25

℄ 24 27 26 27 27 26 27

Hole squeezed in at elev. 840.0'

℄ Sod=0.5' 28 30 ● Trace of organic 26 27 29 W 30 ● Trace of organic

℄ Sod=0.5' 21 W 9 26 25 24 31

℄ Sod=0.5' 24 24 27 W 24 26 27

℄ Sod=0.5' W 24 23 26 28 41 26

℄ Sod=0.5 22 27 W 26 24 24 25

45' Rt. 23 25 17 Trace of organic Brown silty sand & gravel 25 27 22

295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327

TE 54.8
1500 10 60

SOIL PROFILE
TUSCARAWAS COUNTY
TUS-36-16.63

OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO

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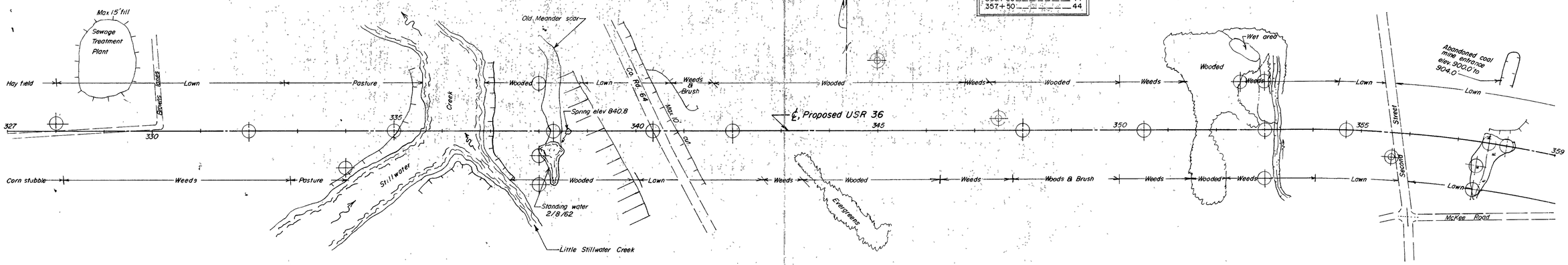
60

CROSS SECTION INDEX	
STATION	SHEET
338+00	42
345+00	43
353+00	44
357+50	44



TE 54 B
1500 10 60

SOIL PROFILE
TUSCARAWAS COUNTY
TUS-36-16.63

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OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO

A. Brown sandy silty clay with sandstone cobbles and fragments.

C. Shale, brown, argillaceous, micaceous, fissile, firm, broken. Core Loss 20%.

D. Sandstone, gray, fine-grained, micaceous, hard, medium-bedded, broken. No Core Loss.

E. Shale, gray, argillaceous, arenaceous, micaceous, fissile, hard, broken. Core Loss 1%.

F. Coal, black, vitreous, conchoidal fracture, badly broken. Core Loss 60%.

G. Indurated clay, gray, arenaceous, calcareous, slickensided, firm to hard, badly broken. Core Loss 10%.

H. Coal, black, vitreous, fissile, broken. No Core Loss.

J. Underclay, gray, soft, crumoly. Core Loss 60%.

K. Indurated Clay, gray, arenaceous, micaceous, firm, broken. Core Loss 10%.

Top of Rock-In-Place

Sandstone, brown and gray, medium-grained, argillaceous, micaceous, hard, medium-bedded, broken, vertically jointed from elev. 838.7' to 837.7'. Core Loss 11%.

Refusal

Trace of organic

15' Lt.

75' Rt.

25' Lt.

100' Lt.

50' Rt.

SOIL PROFILE
TUSCARAWAS COUNTY
TUS-36-16.63

OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS OHIO

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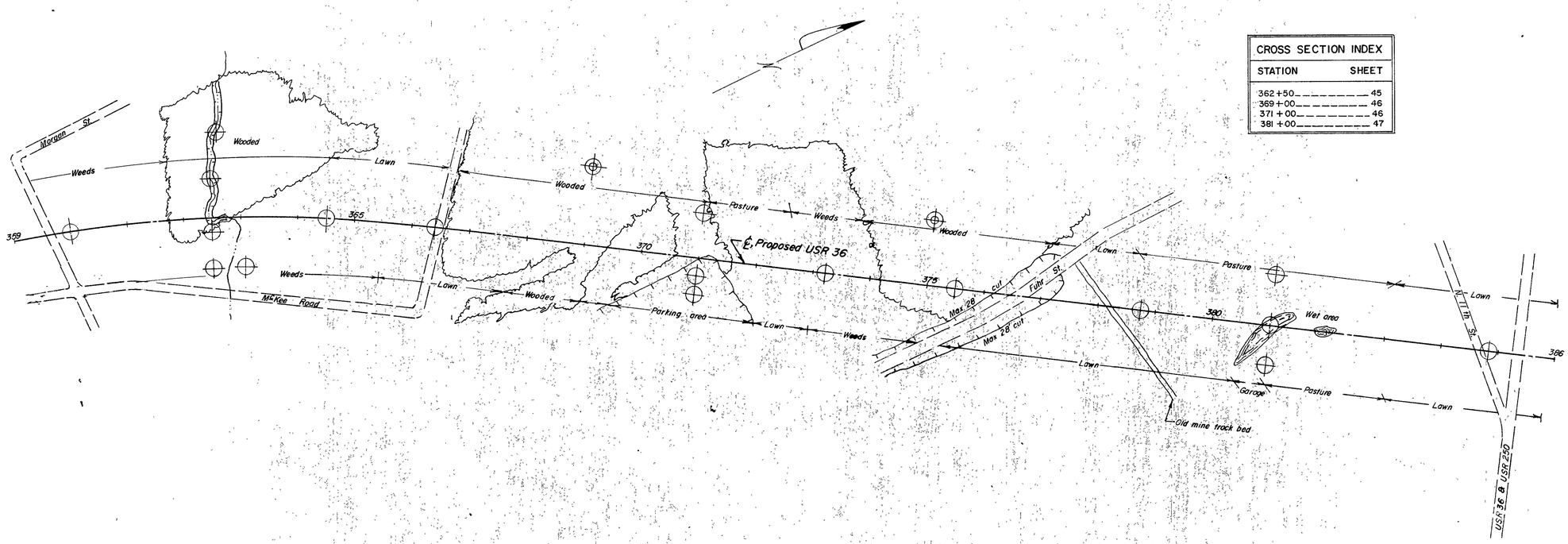
60

CROSS SECTION INDEX	
STATION	SHEET
362+50	45
369+00	46
371+00	46
381+00	47

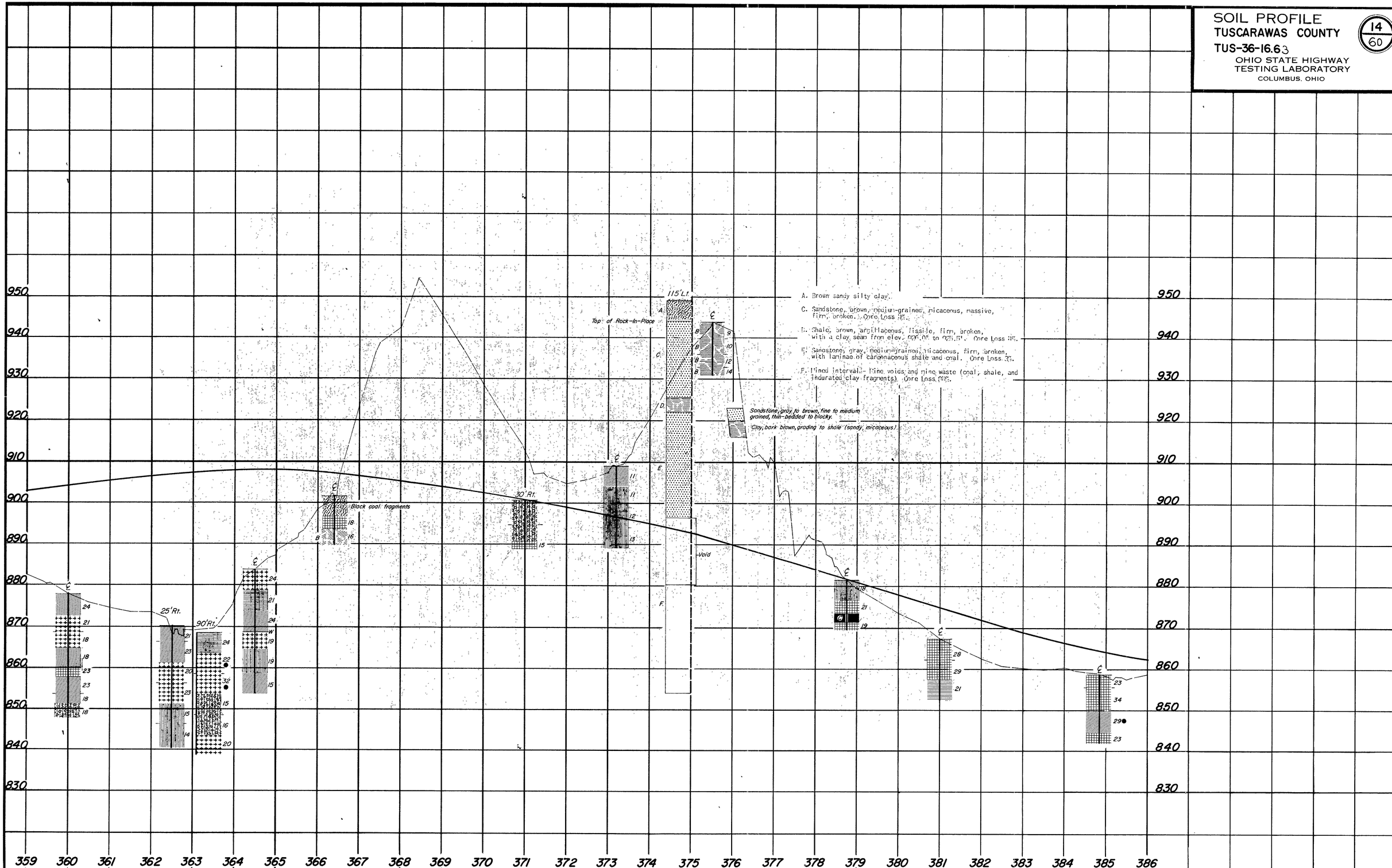


TE-54 B
1500-10-60

SOIL PROFILE
TUSCARAWAS COUNTY
TUS-36-16.63

OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO

14/60



36 (FORMERLY TE-54-B)
3-10-61

SOIL PROFILE

TUSCARAWAS COUNTY

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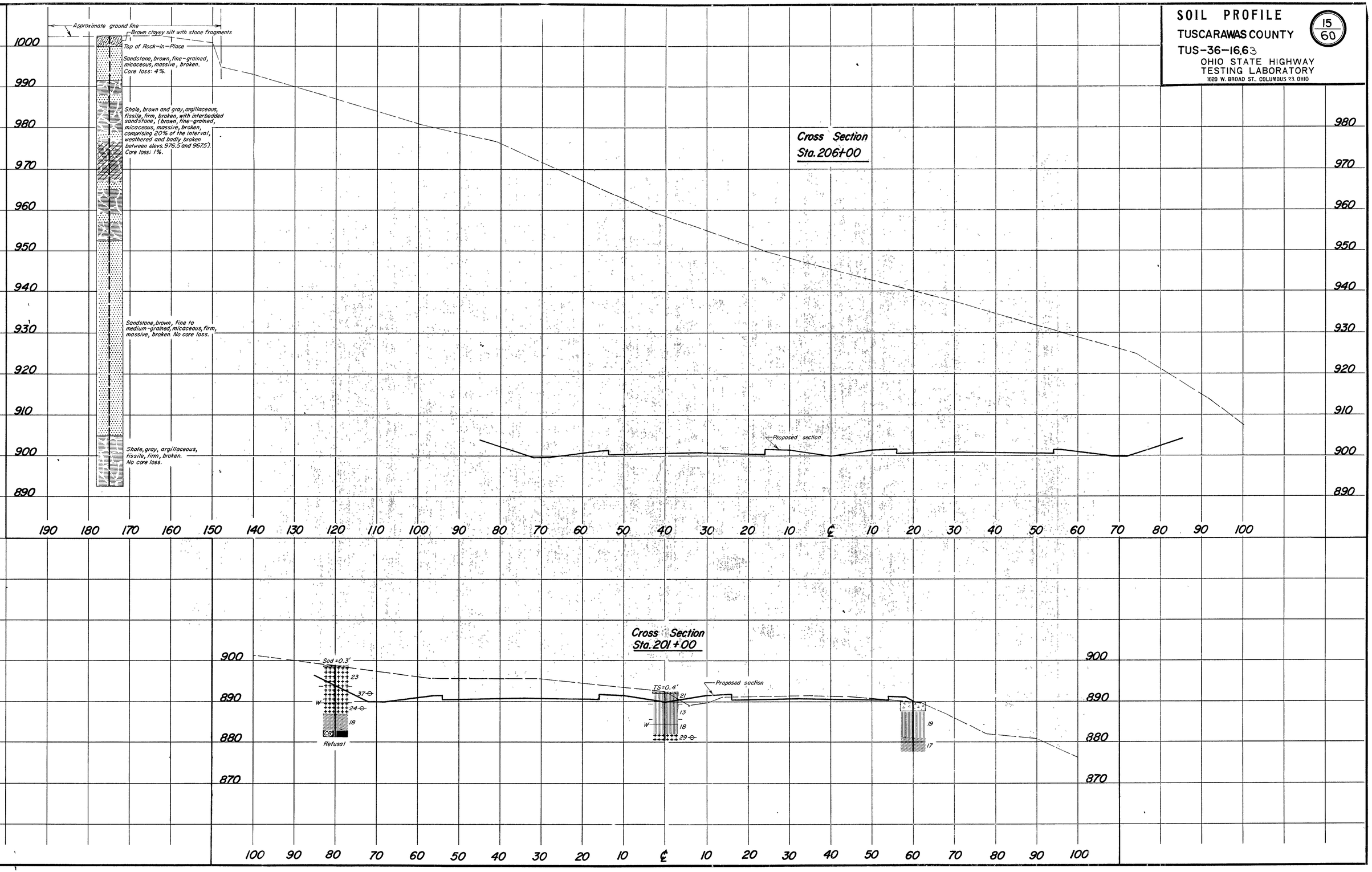
TUS-36-16.63

OHIO STATE HIGHWAY TESTING LABORATORY

1620 W. BROAD ST., COLUMBUS 23, OHIO



6 (FORMERLY TE-54-1)
-10-61

SOIL PROFILE

TUSCARAWAS COUNTY

TUS—36—16.63

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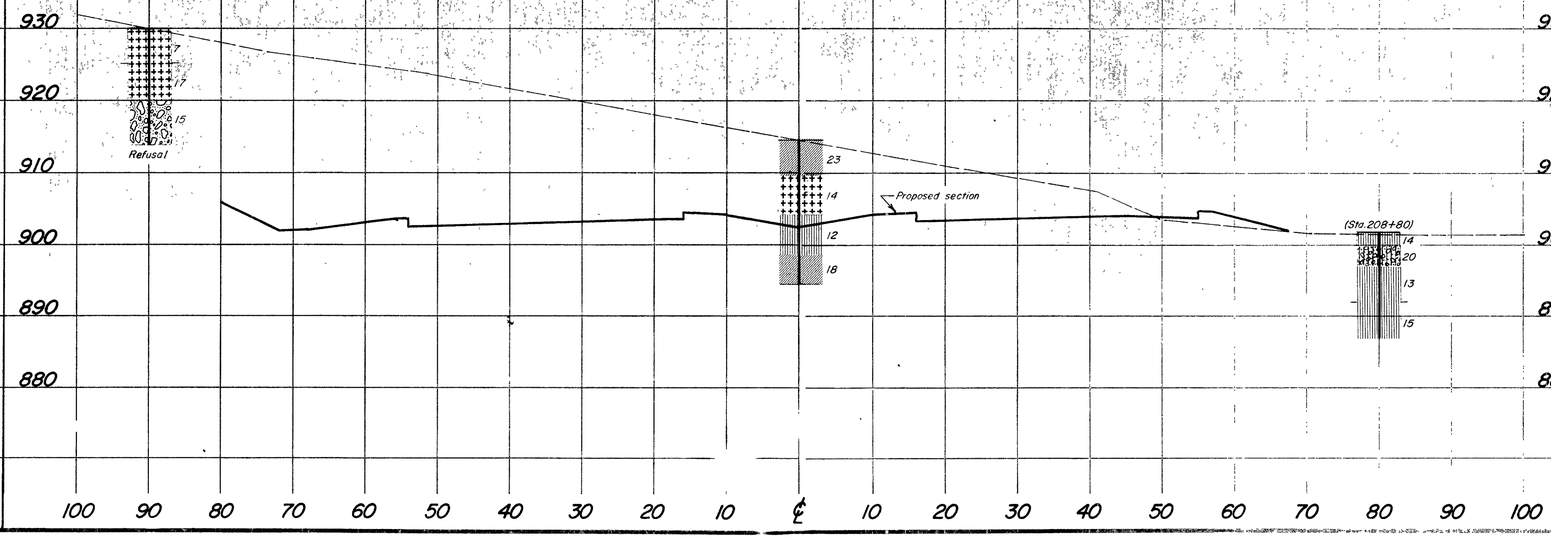
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

Cross Section
Sta. 209+00



(FORMERLY TE-54-B
10-61

SOIL PROFILE

TUSCARAWAS COUNTY

TUS-36-16.63

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

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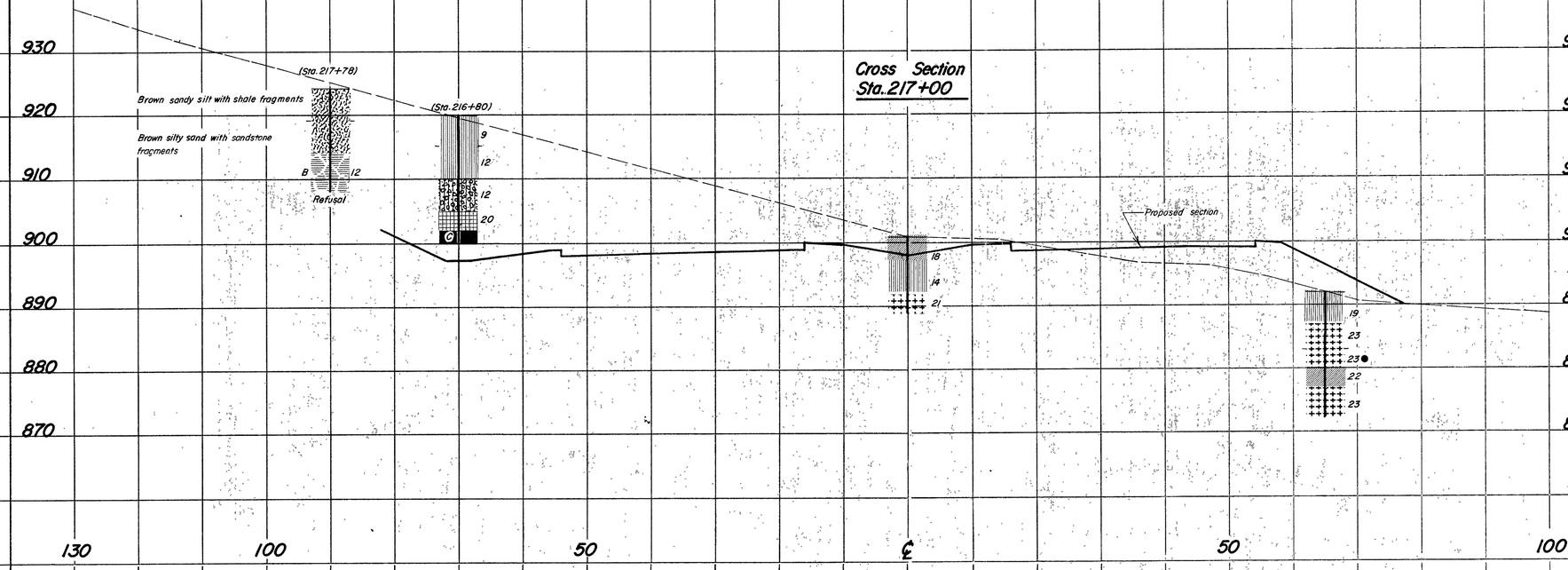
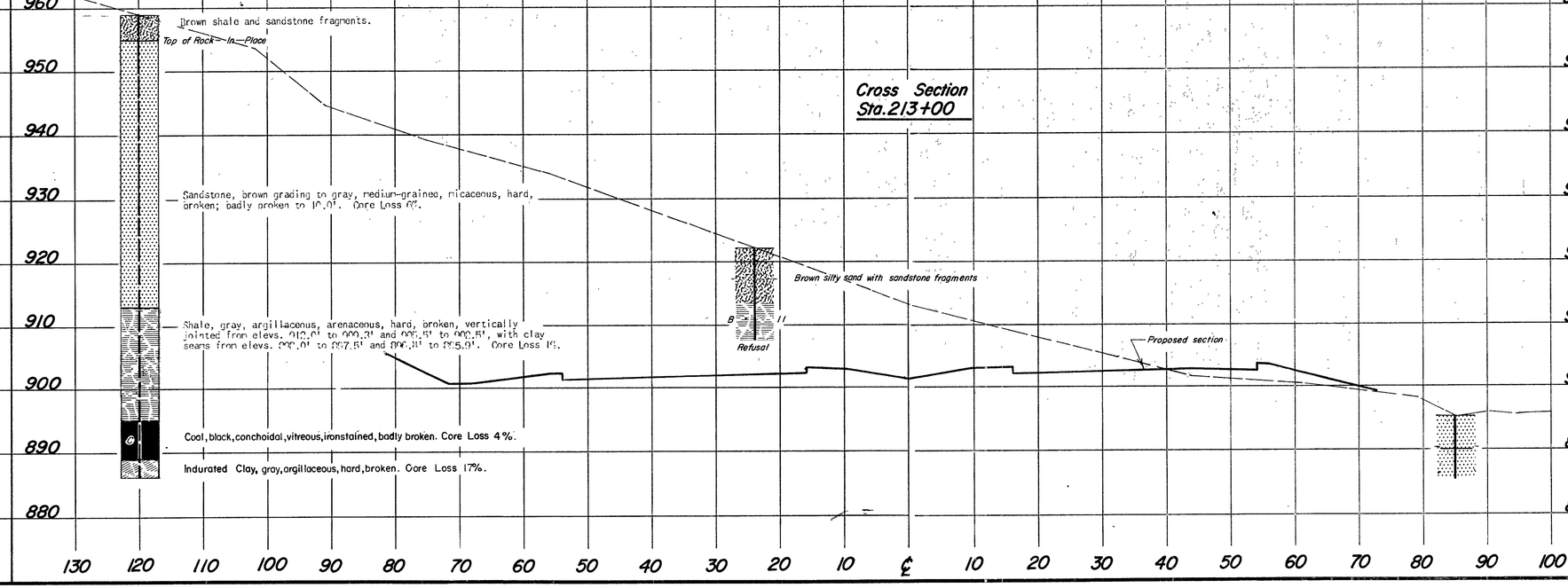
60

Cross Section Sta. 217+00



Cross Section Sta. 213+00



(FORMERLY TE-54-B)
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SOIL PROFILE

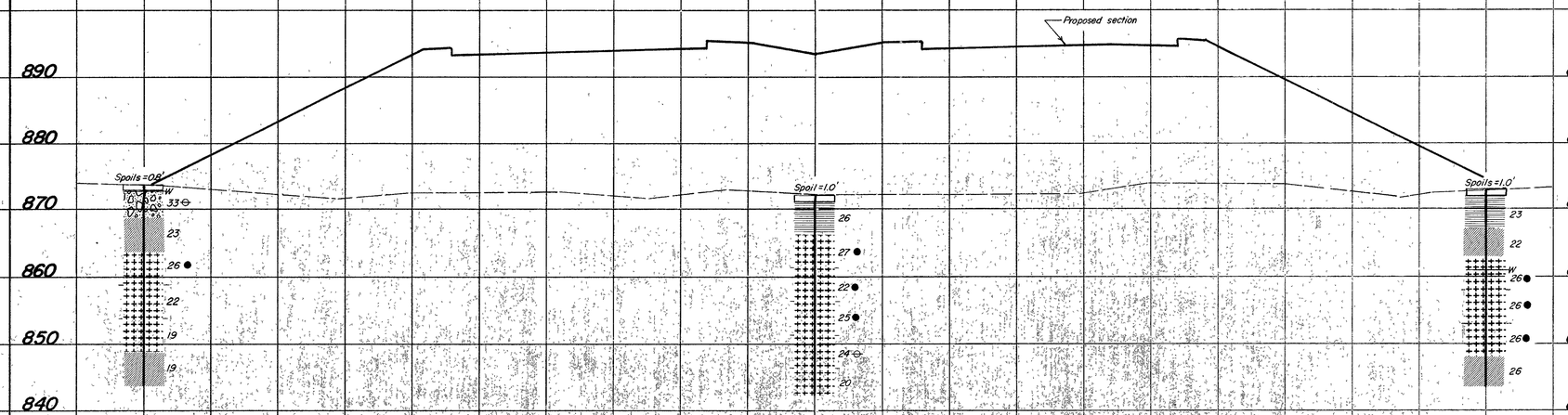
TUSCARAWAS COUNTY

TUS-36-16.63

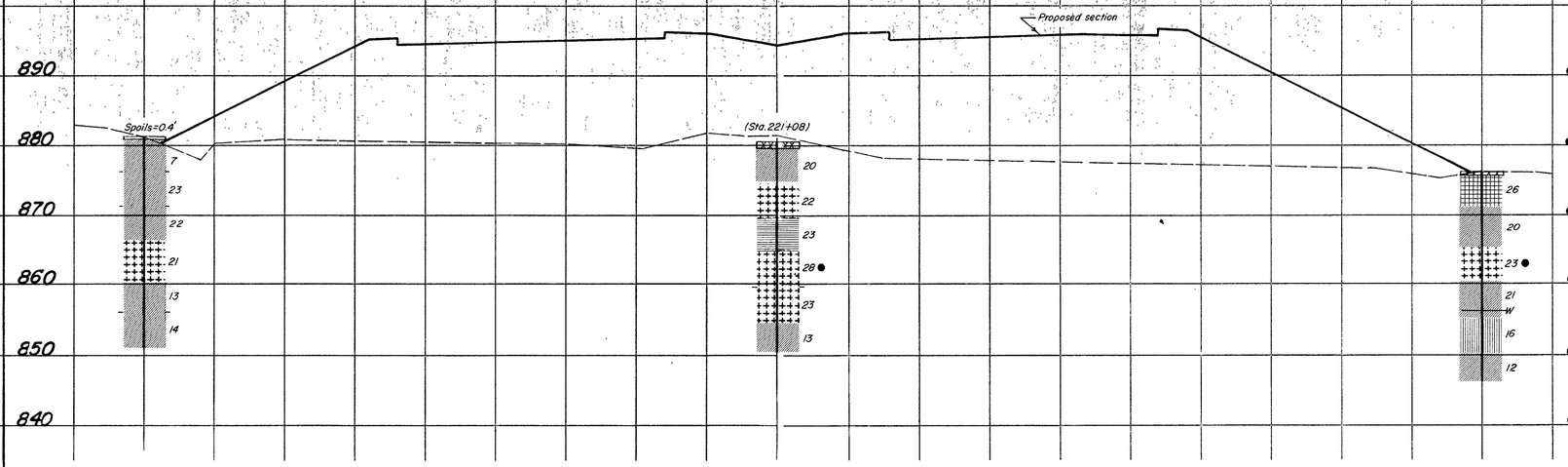
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

18
60

Cross Section Sta. 222+00



Cross Section Sta. 221+00



16 (FORMERLY TE-54 I)
1-10-61

SOIL PROFILE

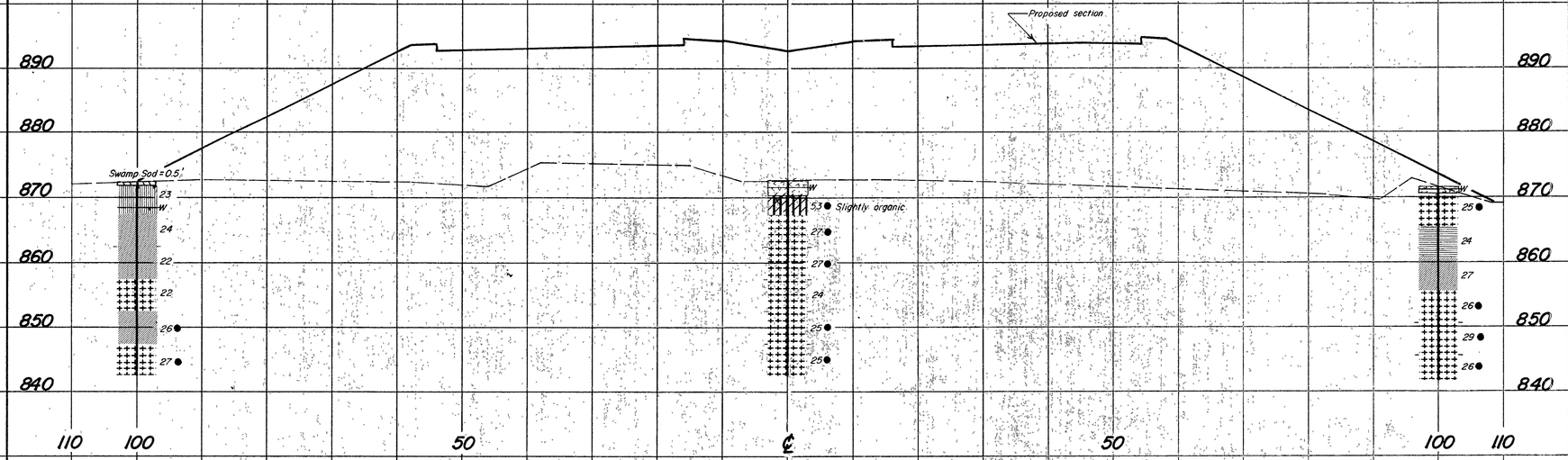
TUSCARAWAS COUNTY

19/60

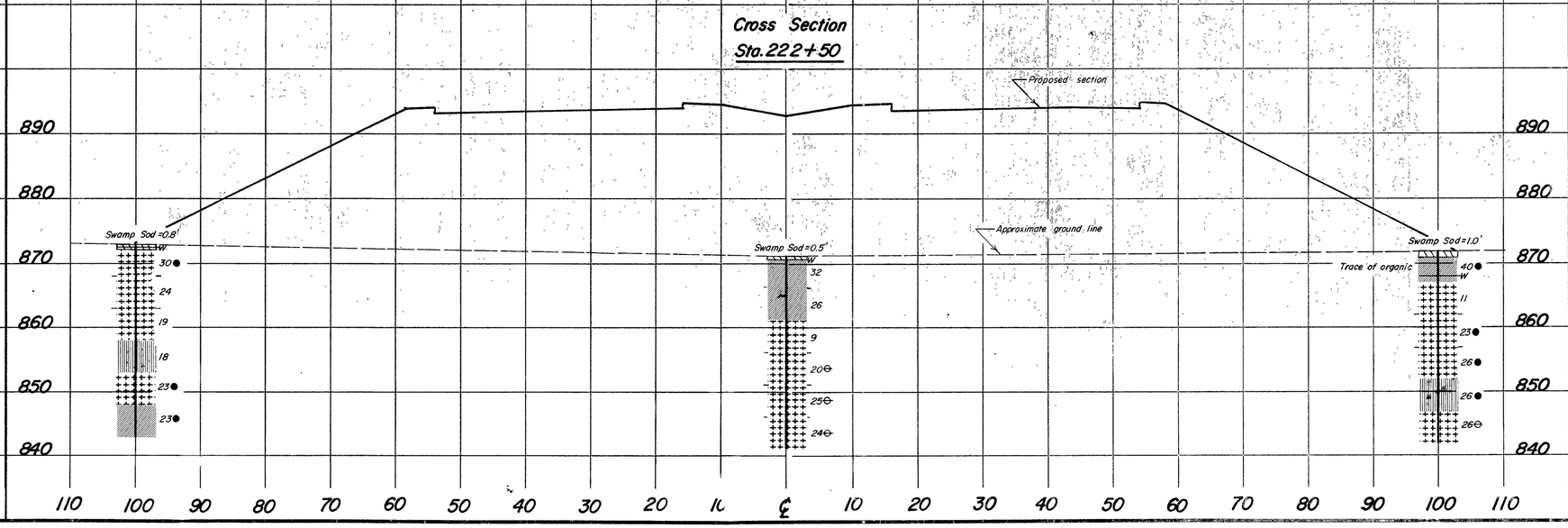
TUS-36-16.63

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

Cross Section Sta. 223+00



Cross Section Sta. 222+50



FORMERLY TE-54-B)
-61

SOIL PROFILE

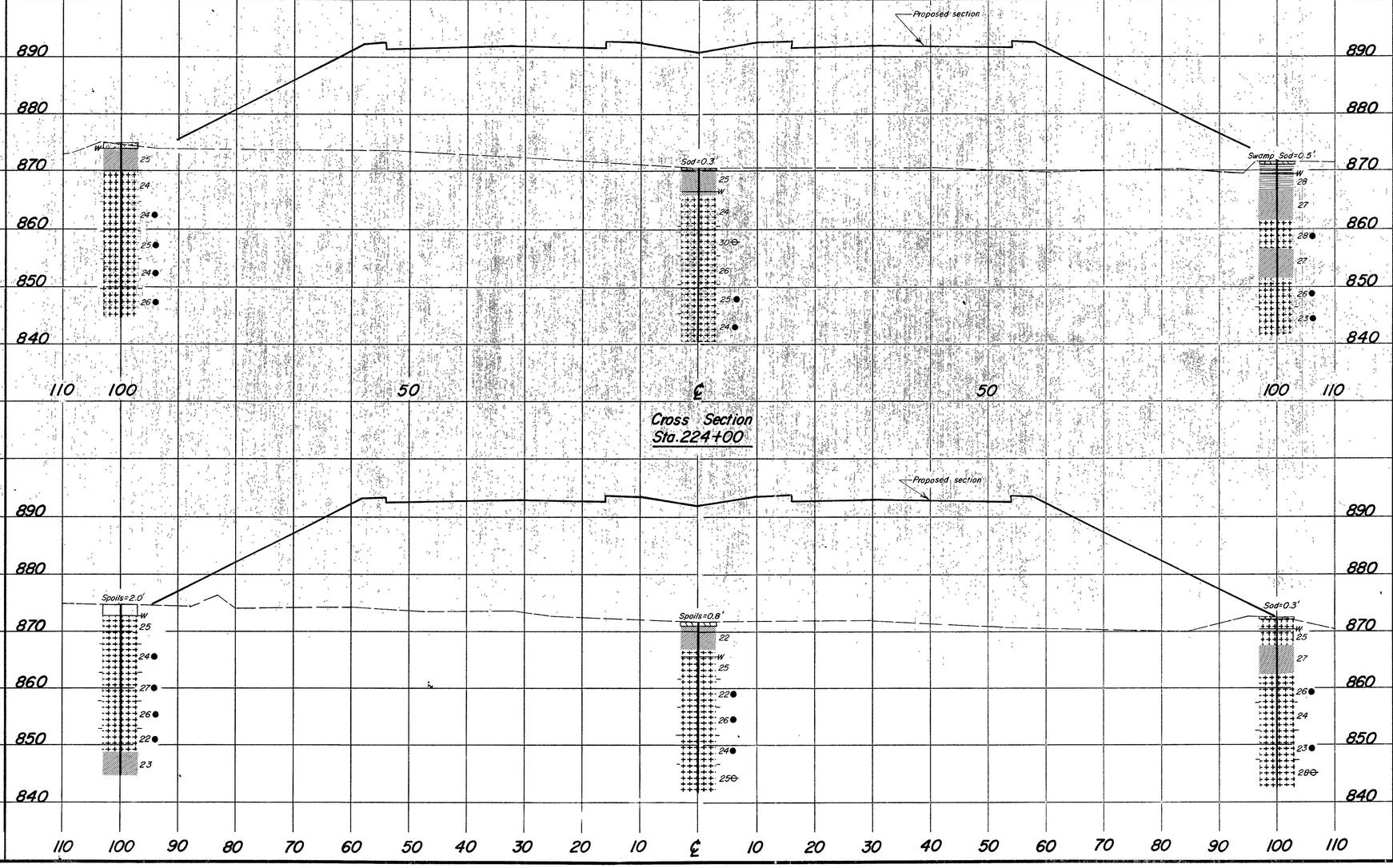
TUSCARAWAS COUNTY

20/60

TUS-36-16.63

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

Cross Section Sta. 225+00



Cross Section Sta. 224+00

(FORMERLY TE-54-B)
)-61

SOIL PROFILE

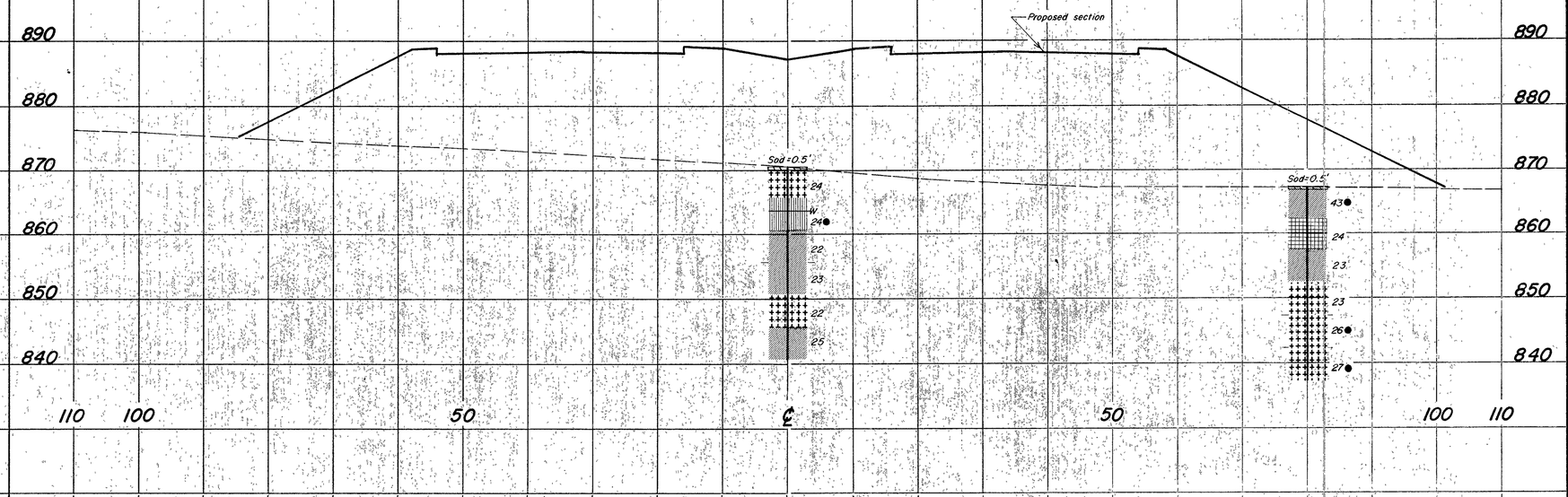
TUSCARAWAS COUNTY

21
60

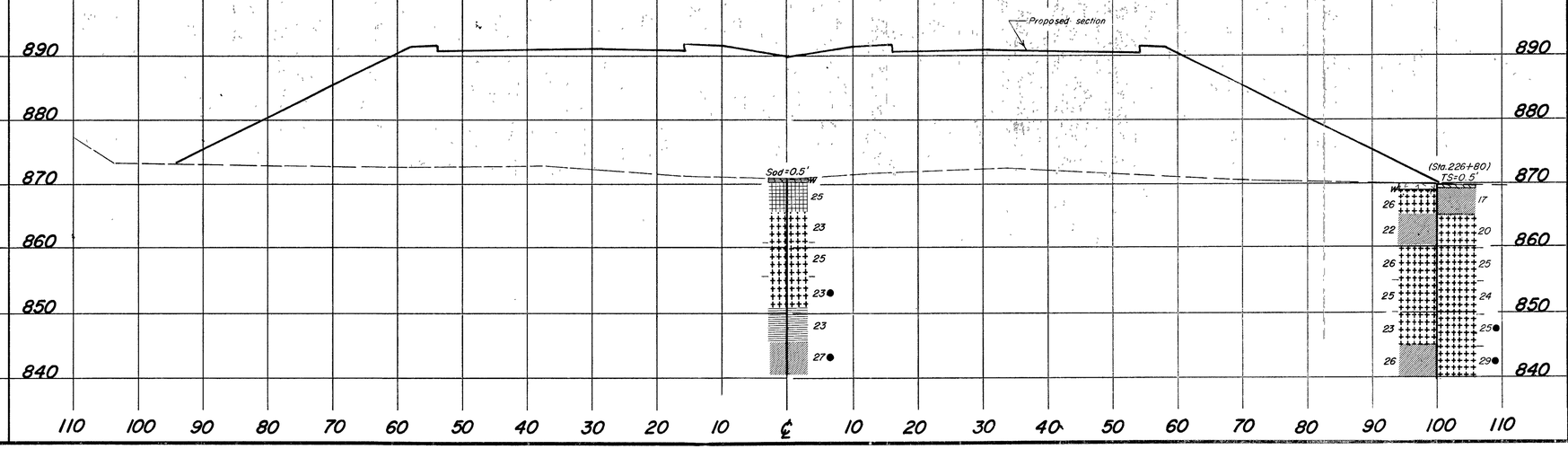
TUS-36-16.6

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

Cross Section Sta. 229+00



Cross Section Sta. 226+00



1 (FORMERLY TE-54-B)
10-61

SOIL PROFILE

TUSCARAWAS COUNTY

TUS-36-16.63

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

Sod=0.4'

11
15
W
18
15
18

Cross Section
Sta. 243+00

25
25
18
B
B

Proposed Section

920
910
900
890
880
870

120 100 50 ℄ 50 100

Approximate ground line

Top of Rock -In-Place

A
C
D
E
F
G
H
J

Cross Section
Sta. 241+00

A. Brown clay silt with stone fragments.

C. Sandstone, brown, medium-grained, micaceous, slightly argillaceous to elev. 931.6', firm to hard, friable to elev. 925.6', badly broken to elev. 925.6', broken below elev. 925.6', vertically jointed from elev. 935.6' to 931.6'. Core Loss 10%.

D. Shale, brown grading to gray, argillaceous, carbonaceous below elev. 913.6', firm, badly broken. No Core Loss.

E. Coal, black, iron-stained, sulpher-stained, vitreous, fissile, vertically jointed, very broken. No Core Loss.

F. Indurated clay, gray, argillaceous, firm, badly broken; soft and crumbly zone from elev. 937.6' to 936.6'. Core Loss 17%.

G. Mined Interval - Coal fragments, gray clay and indurated clay fragments. No Core Loss.

H. Underclay, gray, argillaceous, soft, crumbly. Core Loss 10%.

J. Shale, gray, argillaceous, firm, broken. No Core Loss.

18
25
12
B
8

Proposed Section

13
17
12
W-
16
Refusal

940
930
920
910
900
890
880
870
860

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100

06 (FORMERLY TE-54-1)
)-10-61

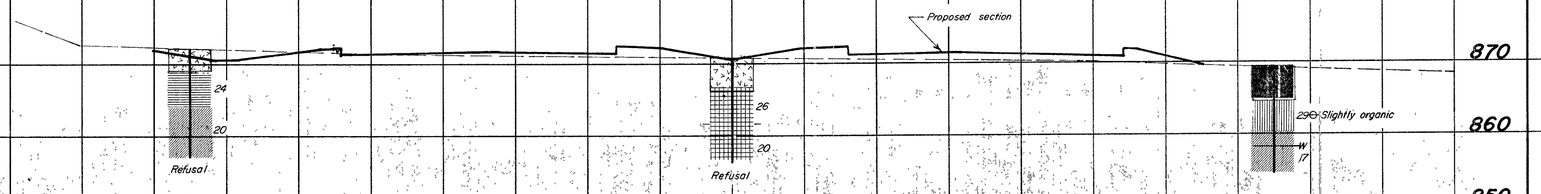
SOIL PROFILE

TUSCARAWAS COUNTY 23/60

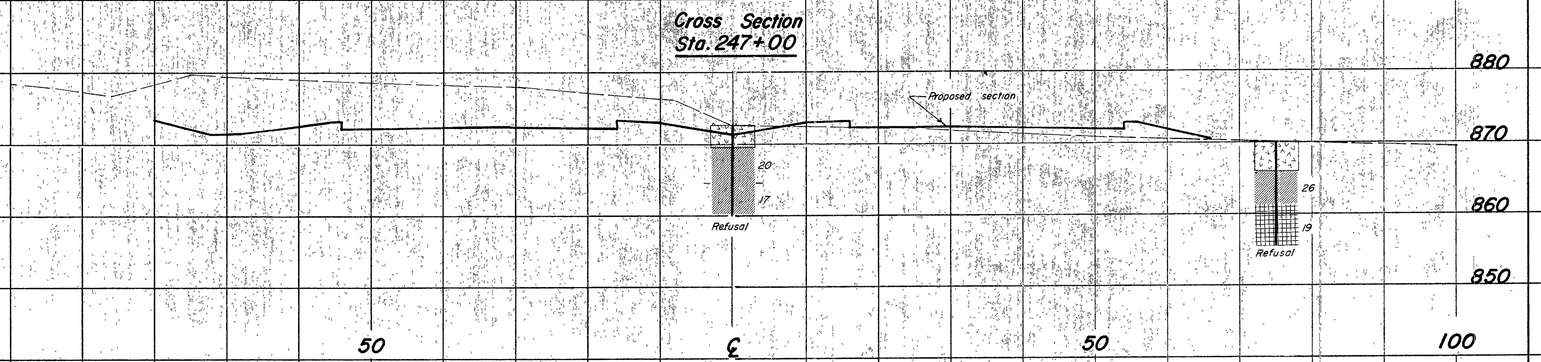
TUS-36-16.63

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

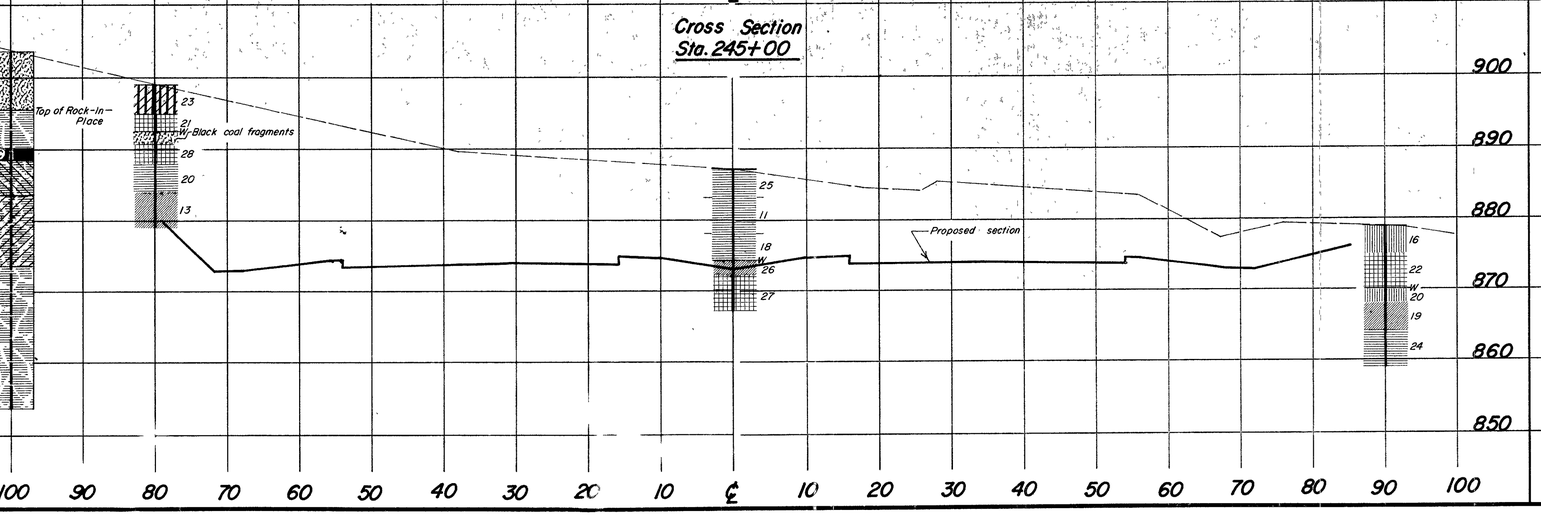
Cross Section Sta. 248+00



Cross Section Sta. 247+00



Cross Section Sta. 245+00



A. Brown clay silt.

B. Shale, brown, argillaceous, micaceous, arenaceous, firm, extremely weathered, crumbly. Core Loss 10%.

C. Coal, black, iron-stained, weathered, dull, blocky, badly broken. No Core Loss.

D. Underclay, gray, very weathered, soft, crumbly. Core Loss 30%.

E. Shale, gray, argillaceous, arenaceous, micaceous, firm, very weathered, crumbly. Core Loss 12%.

F. Shale, gray, argillaceous, very arenaceous, micaceous, fissile, hard, broken. Core Loss 1%.

(FORMERLY TE-54-B)
10-61

SOIL PROFILE

TUSCARAWAS COUNTY

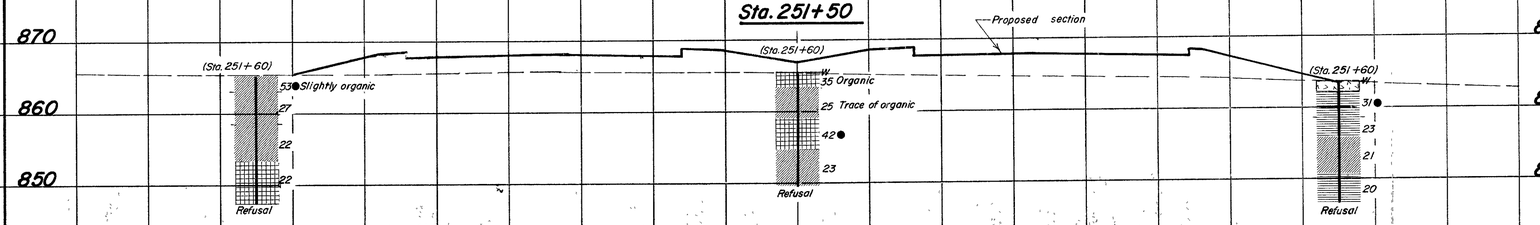
TUS-36-16.63

OHIO STATE HIGHWAY TESTING LABORATORY

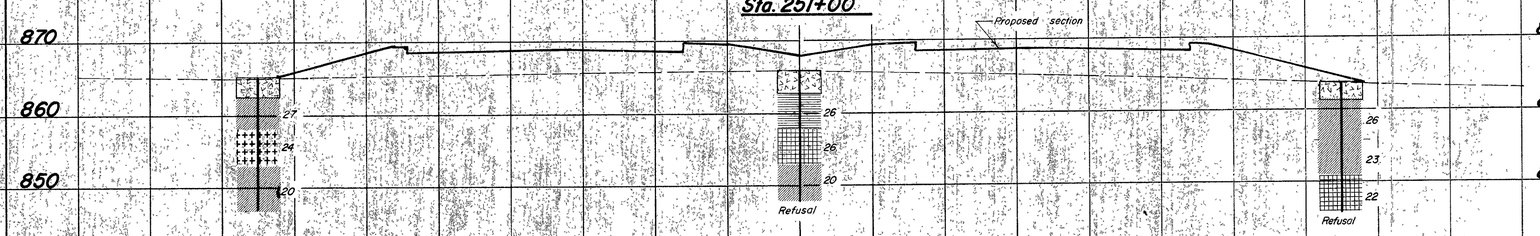
1620 W. BROAD ST., COLUMBUS 23, OHIO

24
60

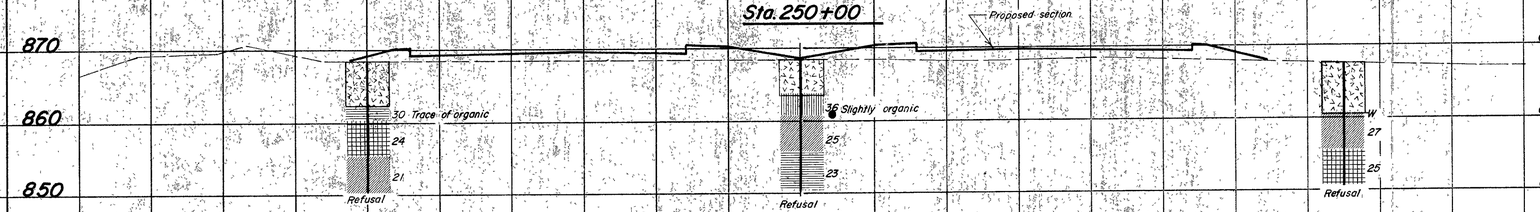
Cross Section Sta. 251+50



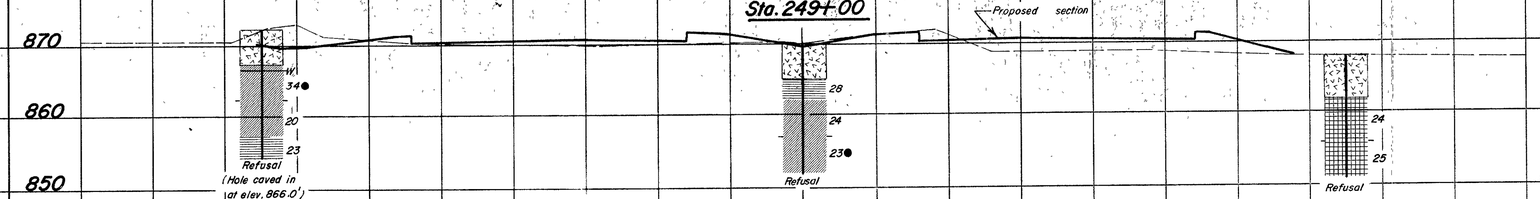
Cross Section Sta. 251+00



Cross Section Sta. 250+00



Cross Section Sta. 249+00



100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100

(FORMERLY TE-54-B)
0-61

SOIL PROFILE

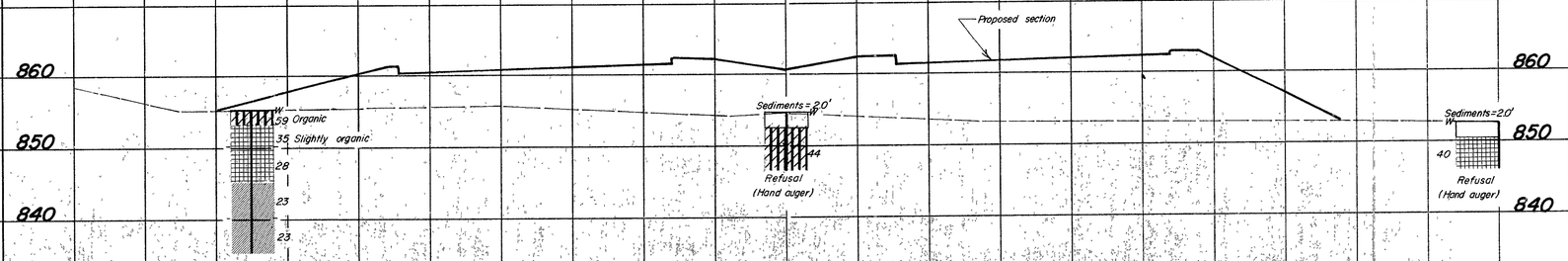
TUSCARAWAS COUNTY

25
60

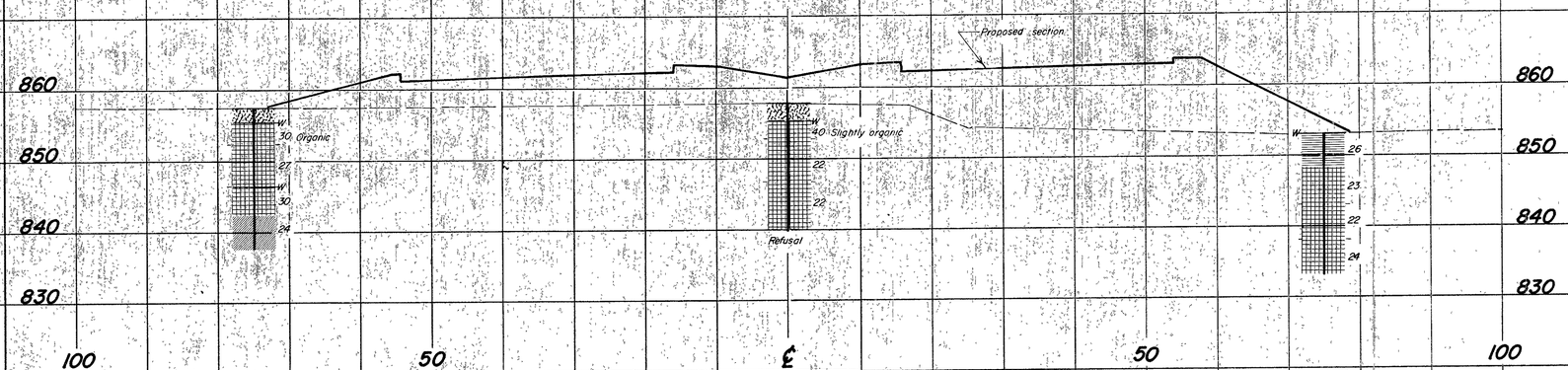
TUS-36-16.63

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

Cross Section Sta. 259+00



Cross Section Sta. 258+00



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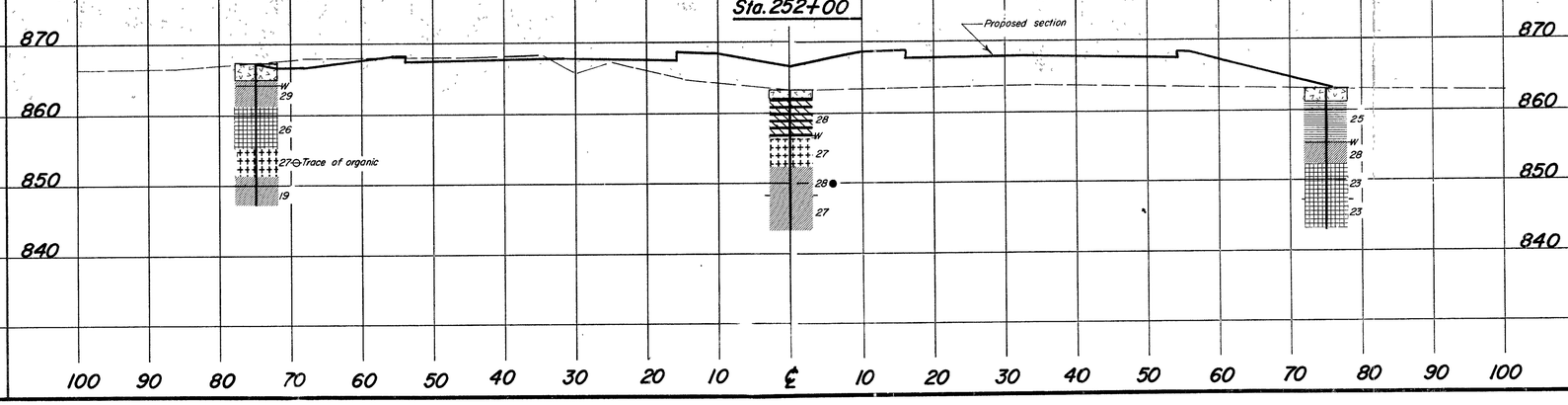


(FORMERLY TE-54-B)
3-61

SOIL PROFILE

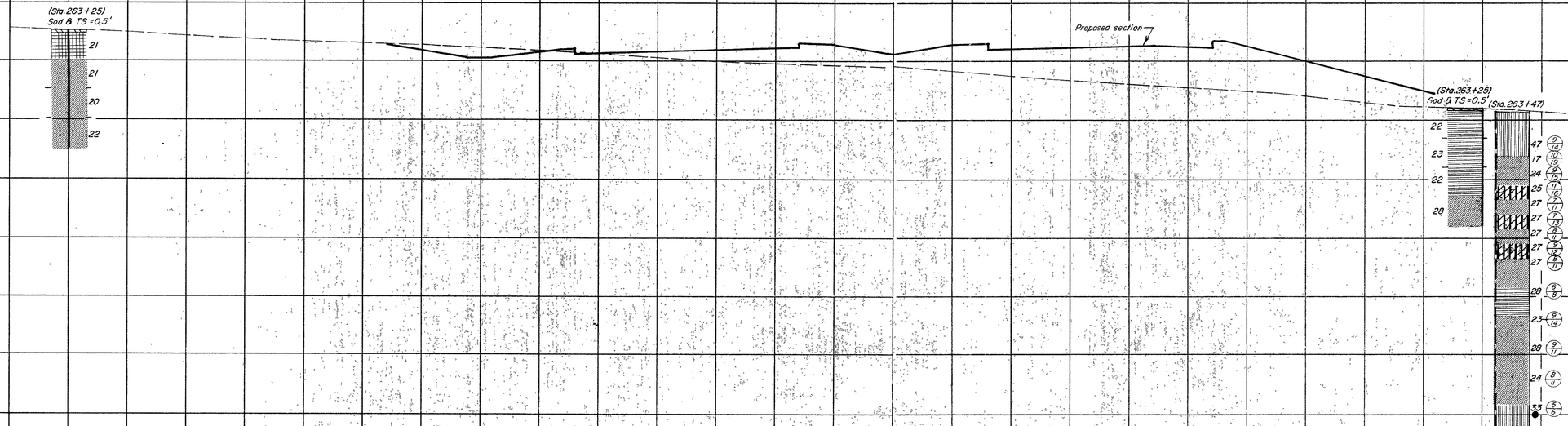
TUSCARAWAS COUNTY

TUS—36—16.63

26
60

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

Cross Section Sta. 263+00



Cross Section Sta. 260+00

(FORMERLY TE-54-B)
10-61

SOIL PROFILE

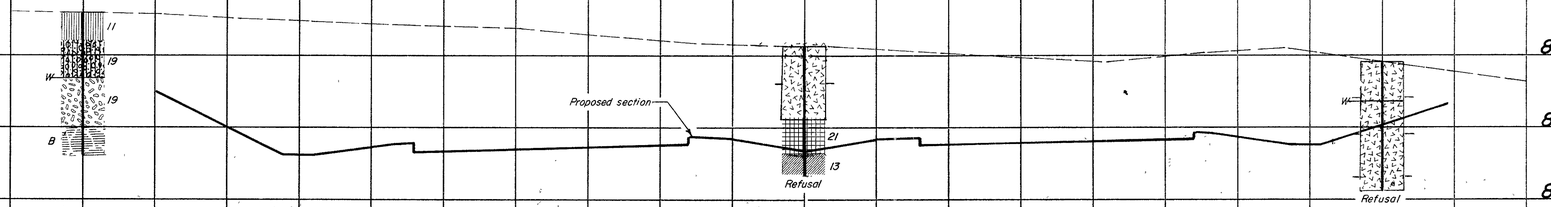
TUSCARAWAS COUNTY

TUS-36-16.63

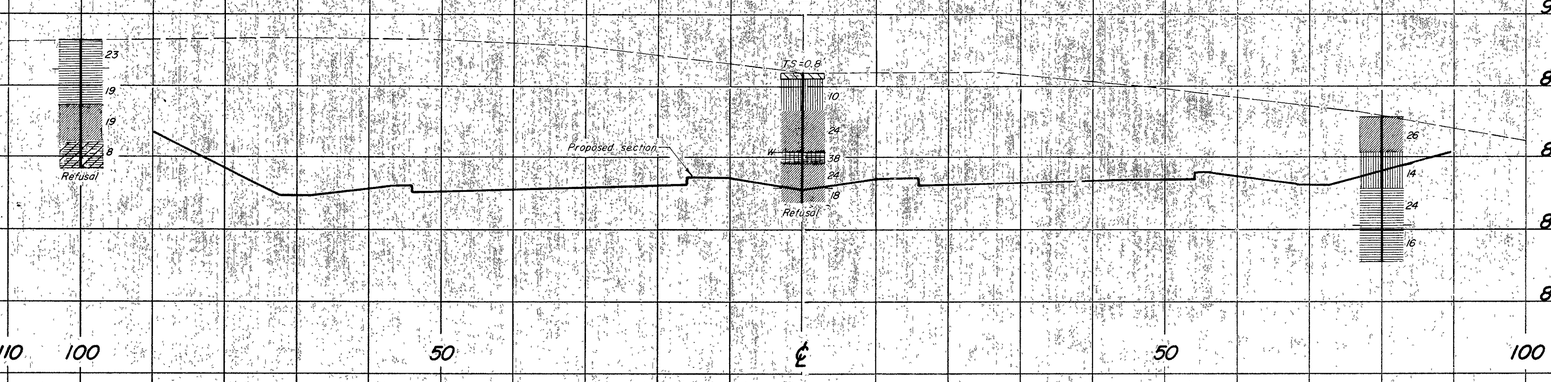
27/60

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

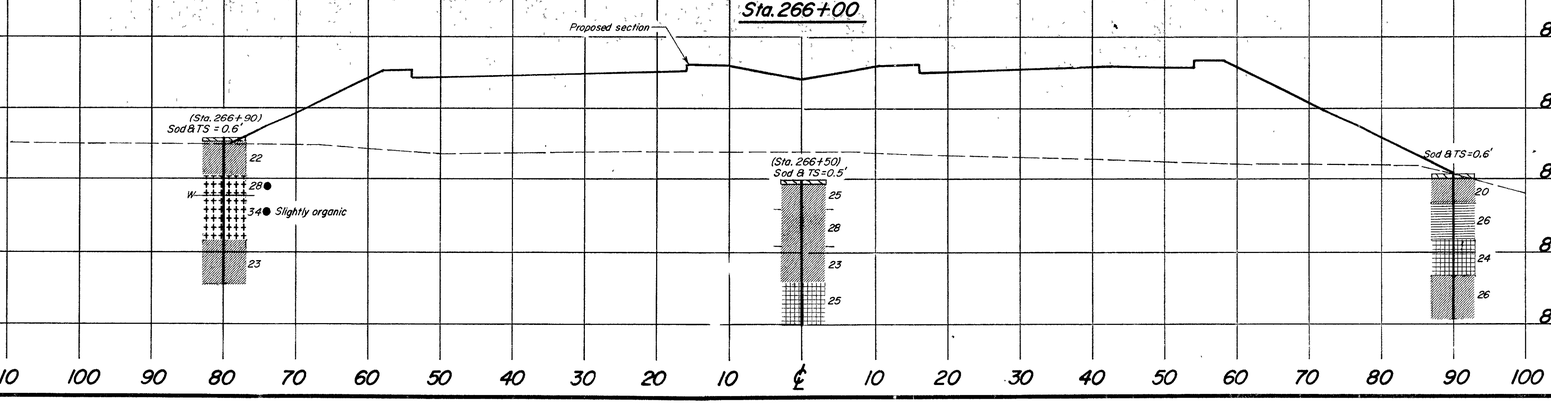
Cross Section Sta. 274+00



Cross Section Sta. 273+00



Cross Section Sta. 266+00



(FORMERLY TE-54-B)
10-61

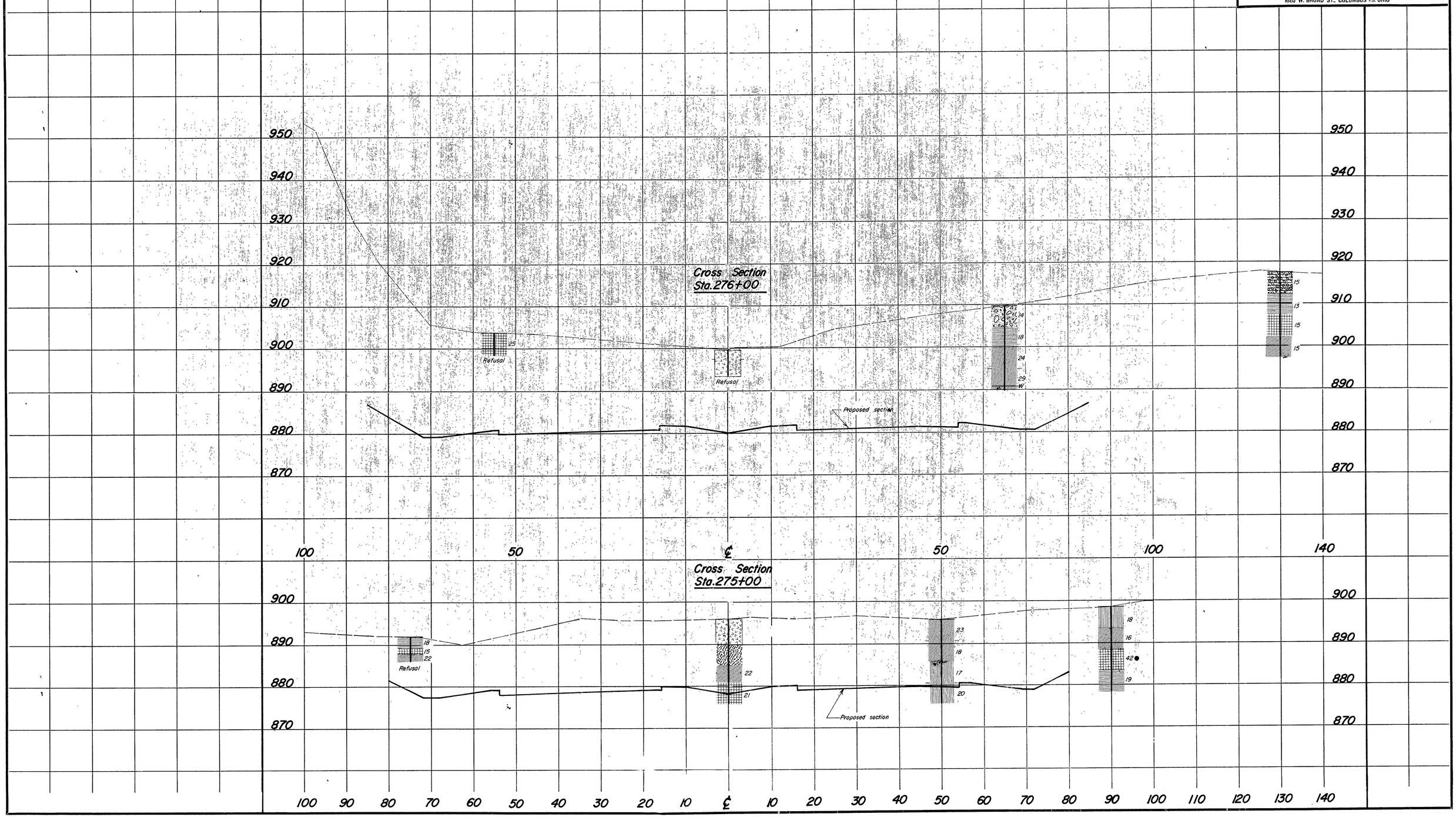
SOIL PROFILE

TUSCARAWAS COUNTY

TUS-36-16.63

28/60

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO



(FORMERLY TE 54 B)
0 61

SOIL PROFILE

TUSCARAWAS COUNTY

TUS-36-16.63

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

29
60

970
960
950
940
930
920
910
900
890

Cross Section
Sta. 278+00

10
W
27
20'

Rubbish
W
18
20
22

Proposed section

80 50 ℄ 50 100 120

970
960
950
940
930
920
910
900
890
880

Cross Section
Sta. 277+00

Rubbish
W
43
15

26 Slightly organic
W
19
17
21
21
12
20
20
Refusal

Proposed section

80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120

6 (FORMERLY TE 54 I)
10 61

SOIL PROFILE

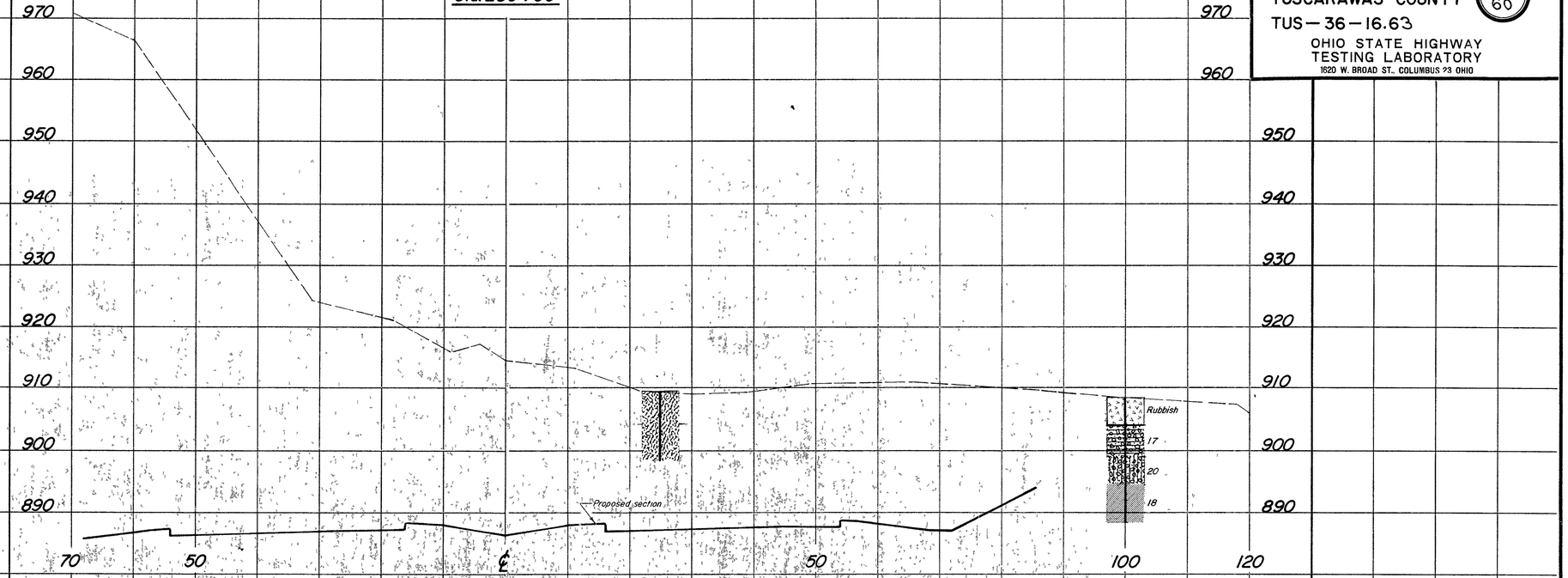
TUSCARAWAS COUNTY

30/60

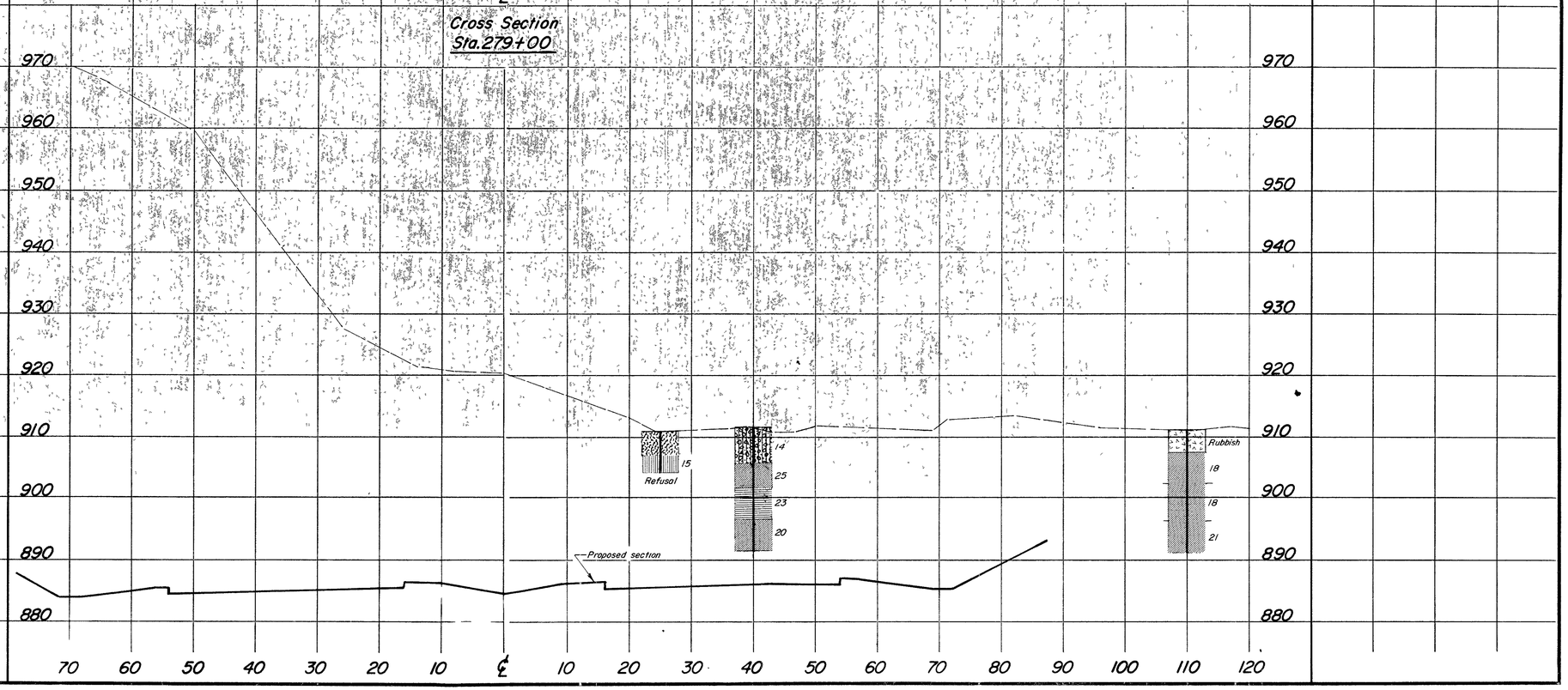
TUS — 36 — 16.63

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23 OHIO

Cross Section Sta. 280+00



Cross Section Sta. 279+00



(FORMERLY TE-54-B)
) 61

SOIL PROFILE

TUSCARAWAS COUNTY

TUS-36-16.63

OHIO STATE HIGHWAY TESTING LABORATORY

1620 W. BROAD ST., COLUMBUS 23, OHIO

31/60

Cross Section Sta. 281+00

A. Gray and brown sandy silty clay with sandstone cobbles and fragments.

Top of Rock-In-Place

B. Shale, brown, argillaceous, arenaceous, firm, weathered, crumbly to 19.5'; hard and broken below 19.5'. No Core Loss.

C. Sandstone, brown and gray, medium-grained, micaceous, hard, broken, vertically jointed from 33.5' to 36.7', from 36.9' to 39.6', from 66.0' to 66.4' and from 72.6' to 73.3'. Core Loss 1%.

D. Shale, dark gray, argillaceous, carbonaceous, hard, badly broken, with clay seam and coal fragments between approximate elev. 912' to 93.0'. Core Loss 17%.

E. Indurated clay, gray, argillaceous, arenaceous, micaceous, firm, crumbly. Core Loss 7%.

Proposed section

Refusal

W 24 23 24

W 20 17 24 27 8

Hole squeezed in at elev. 886.9'

W 13 16

Refusal

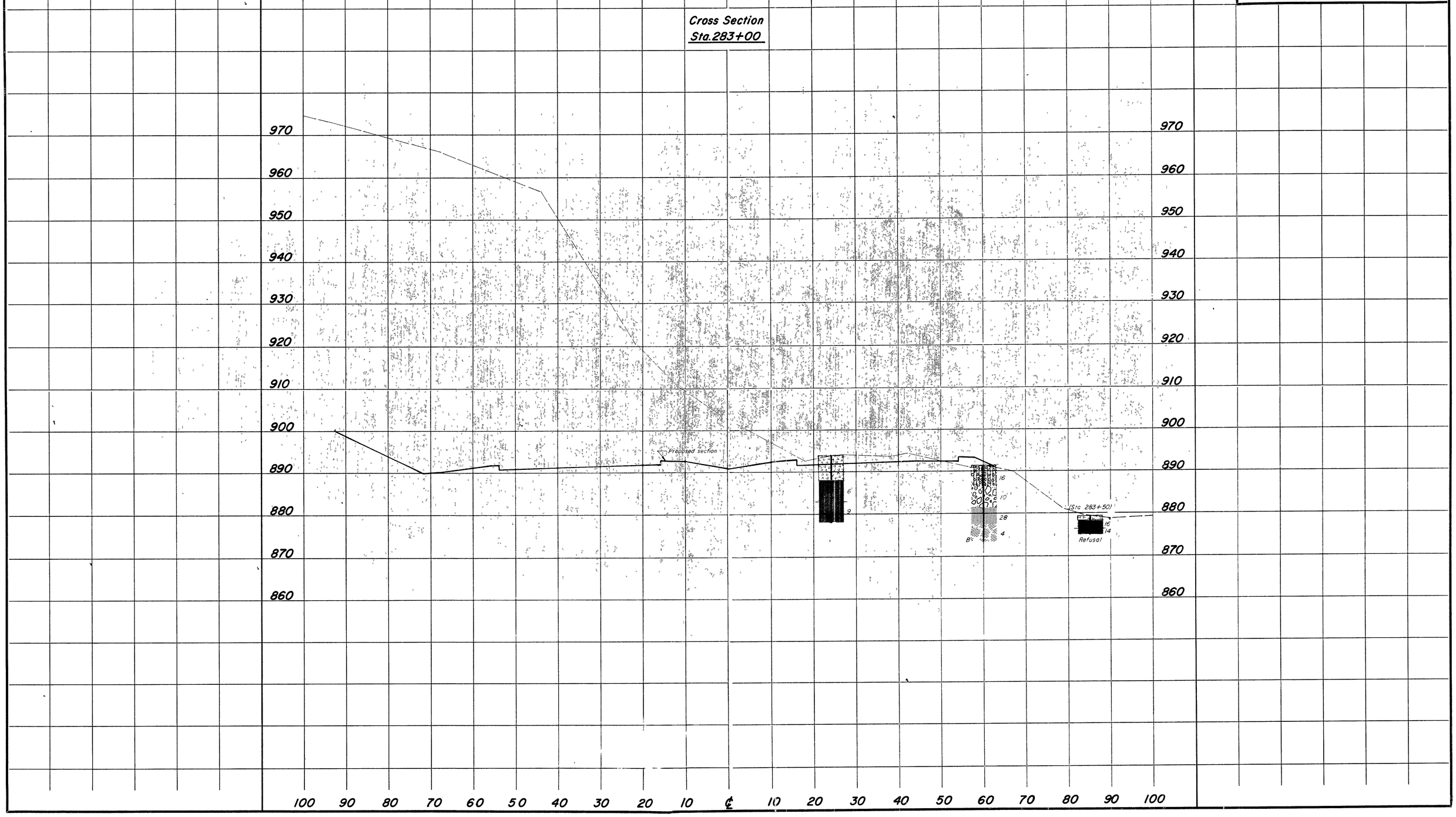
1000 990 980 970 960 950 940 930 920 910 900 890 880 870 860

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

SOIL PROFILE
TUSCARAWAS COUNTY
TUS-36-16.63

32/60

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO



TE 96 (FORMERLY TE 54 B)
2000 10 69

SOIL PROFILE

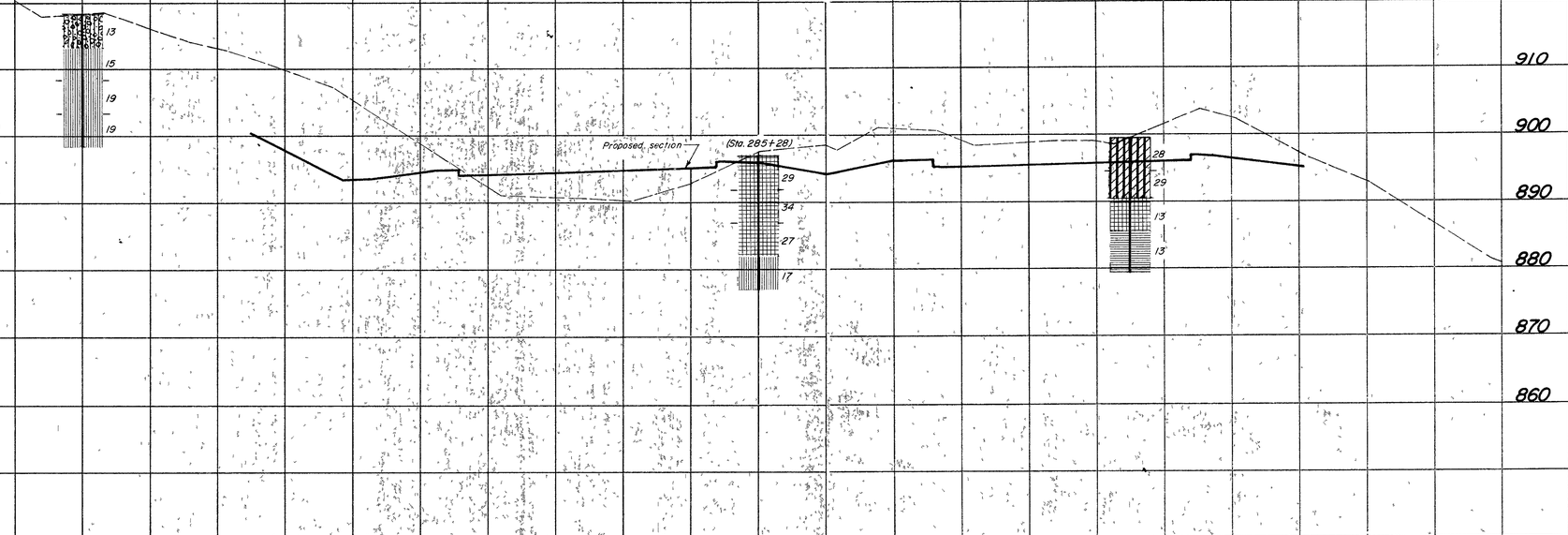
TUSCARAWAS COUNTY

TUS – 36 – 16.63

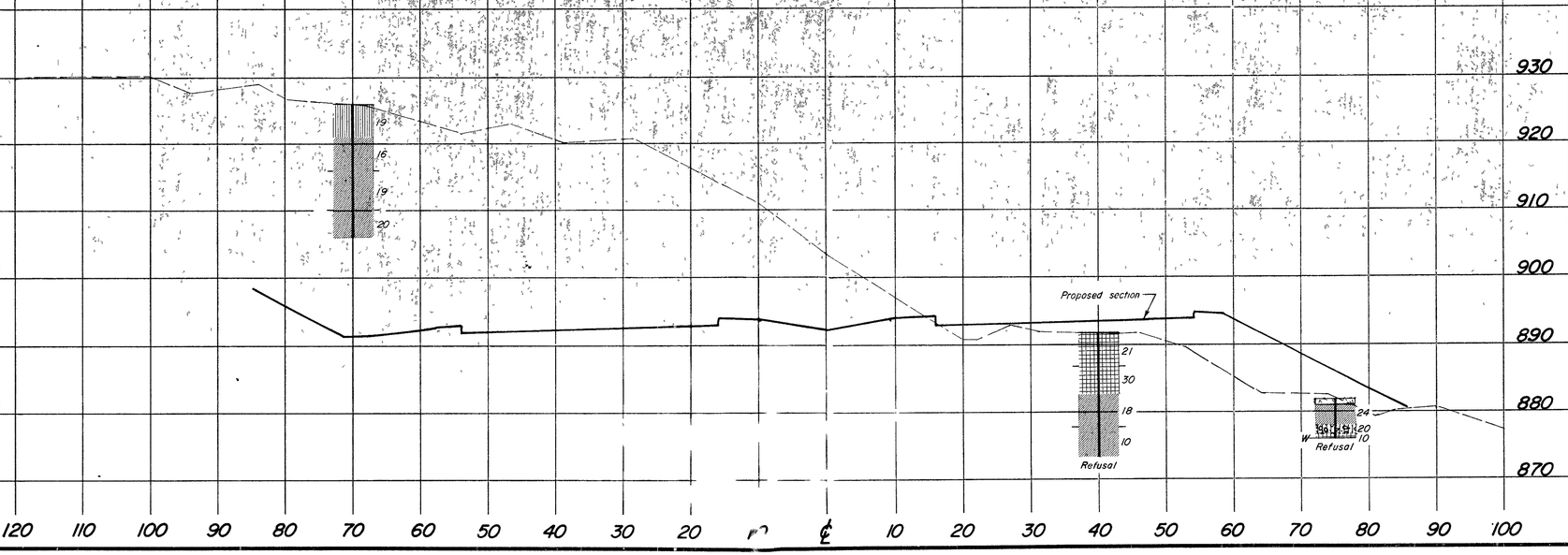
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

33
6

Cross Section Sta. 285+00



Cross Section Sta. 284+00



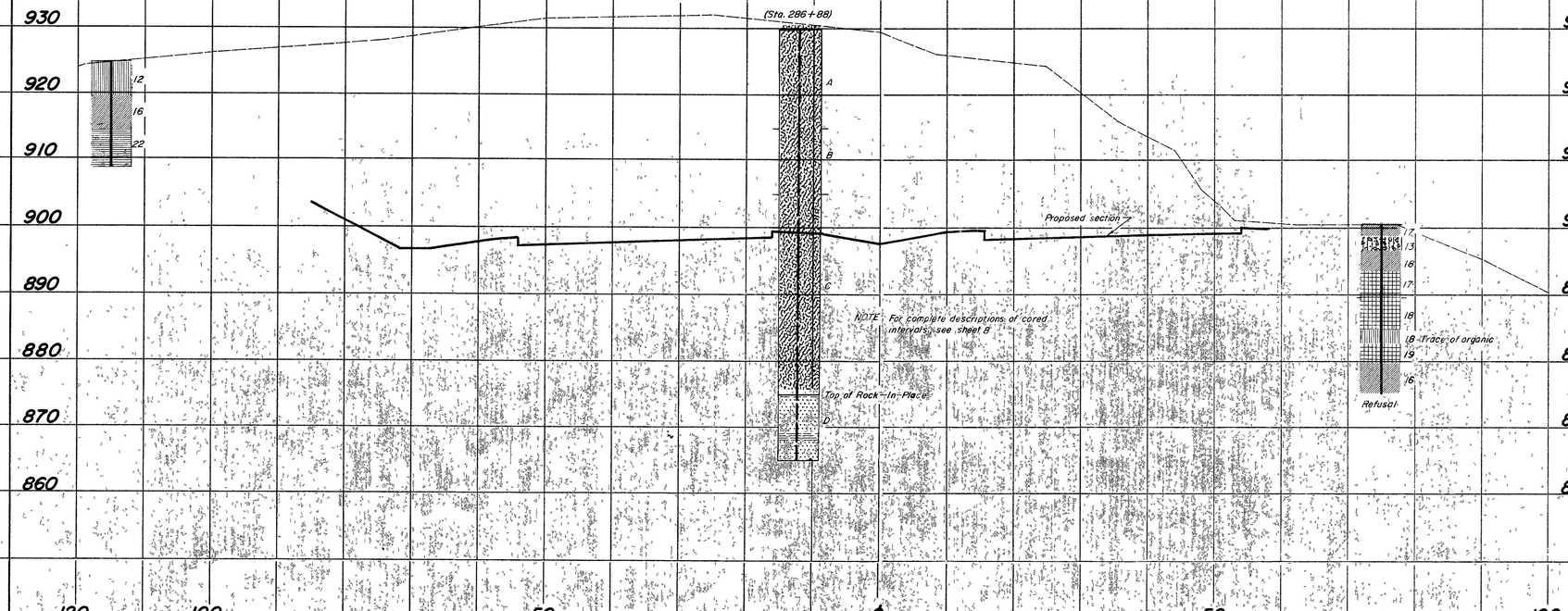
6 (FORMERLY TE 54 ")
10-61

SOIL PROFILE
TUSCARAWAS COUNTY
TUS-36-16.63

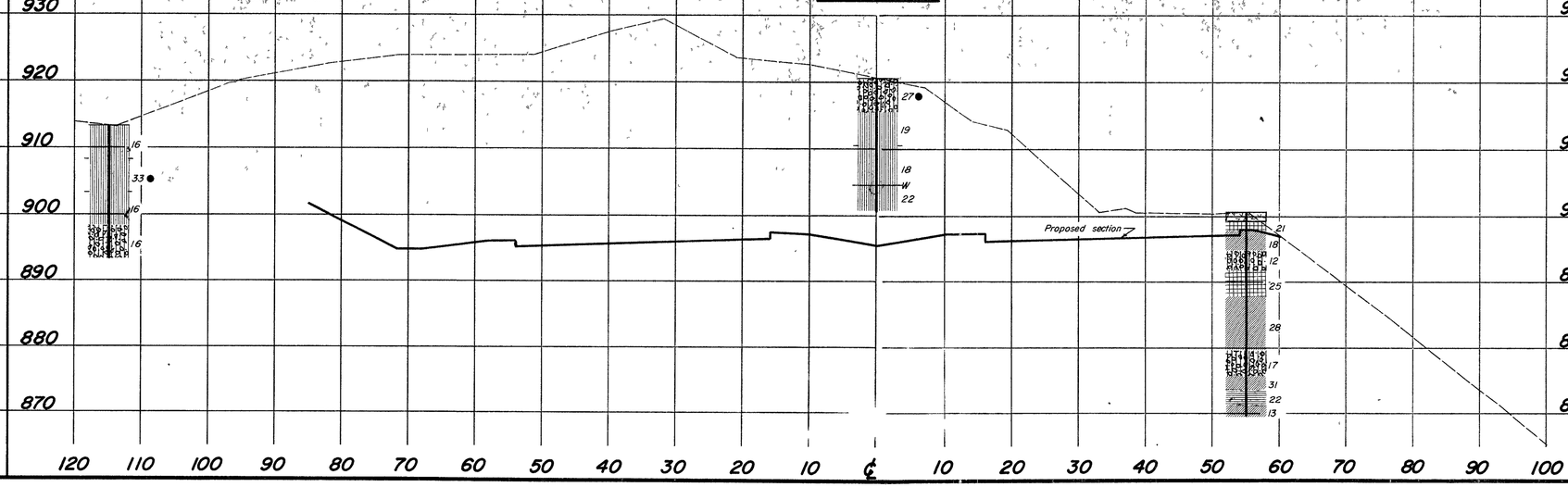
34/60

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23 OHIO

Cross Section Sta. 287+00



Cross Section Sta. 286+00



(FORMERLY TE-54 B
10 61

SOIL PROFILE

TUSCARAWAS COUNTY

35
60

TUS—36—16.63

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

Cross Section Sta. 289+00

950
940
930
920
910
900
890
880
870

Proposed section

15
29
17
11
Refusal

25
18
8
14
W 22
Refusal

Cross Section Sta. 288+00

100 50 ℄ 50 100 110

930
920
910
900
890
880
870

Proposed section

18
29
16
14
8
Refusal

17
15
29
14
21
Refusal

100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110

SOIL PROFILE

TUSCARAWAS COUNTY

TUS-36-16.63

36/60

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST., COLUMBUS 23, OHIO

Cross Section Sta. 290+50

980
970
960
950
940
930
920
910
900
890
880
870

100 90 80 70 60 50 40 30 20 ℄ 10 20 30 40 50 60 70 80 90 100 110 120

Proposed section

(Sta. 290+00)
14
16
(CB)
18
15
10
Refusal

(Sta 290+00)
24
13
9
7
Refusal

19
15
14
W
16
24
Refusal

(FORMERLY TE 54 B)
) 61

SOIL PROFILE

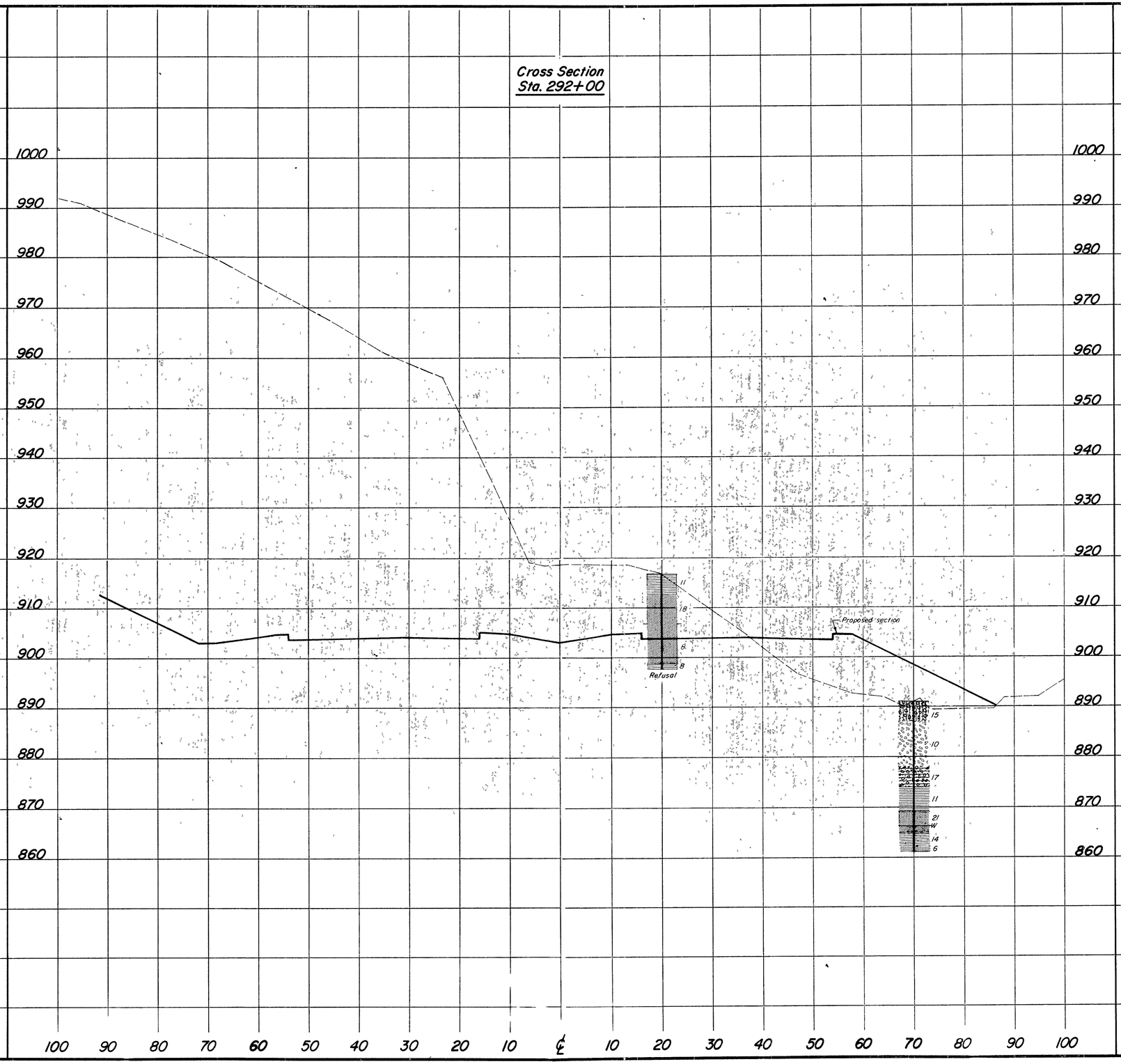
TUSCARAWAS COUNTY

TUS — 36 — 16.63

37
60

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23 OHIO

Cross Section
Sta. 292+00



FORMERLY TE 54 B)
01

SOIL PROFILE

TUSCARAWAS COUNTY

38/60

TUS-36-16.63

OHIO STATE HIGHWAY TESTING LABORATORY

1620 W. BROAD ST., COLUMBUS 23, OHIO

Cross Section Sta. 293+00

Top of Rock - In - Place

A. Clay with shale blocks and fragments.

B. Shale, brown, argillaceous, arenaceous, micaceous, carbonaceous below 10.5', medium-firm, broken, with a clay seam from 17.7' to 18.5'. Core loss 28%.

C. Coal, black, fissile, iron-stained, dull, badly broken. No Core Loss.

D. Underclay, gray, medium-firm, crumbly. Core Loss 1%.

E. Indurated clay, gray, calcareous, hard, broken; slickensided soft and crumbly below 32.5'. Core Loss 5%.

F. Sandstone, brown and gray, medium-grained, micaceous, hard, thin-bedded, badly broken, vertically jointed. Core Loss 1%.

G. Shale, gray, argillaceous, slightly arenaceous, fissile, hard, badly broken. No Core Loss.

H. Sandstone, brown and gray, medium-grained, micaceous, hard, massive, broken. No Core Loss.

J. Shale, gray, argillaceous, slightly arenaceous, fissile, hard, broken; carbonaceous and fossiliferous below 97.0'. Core Loss 1%.

K. Coal, black, vitreous, iron-stained, fissile, hard, badly broken. Core Loss 10%.

L. Indurated clay, gray, arenaceous, soft, crumbly to 105.0'; firm and broken below 105.0'; firm and badly broken below 105.0'. Core Loss 5%.

Proposed section

(Sta. 293+50)

24 15 11 9 18 30 14 6

Hole caved in at elev. 887.9'

11 8 14 18 9

Refusal

1020 1010 1000 990 980 970 960 950 940 930 920 910 900 890 880 870

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110

(FORMERLY TE-54 B)
9 61

SOIL PROFILE

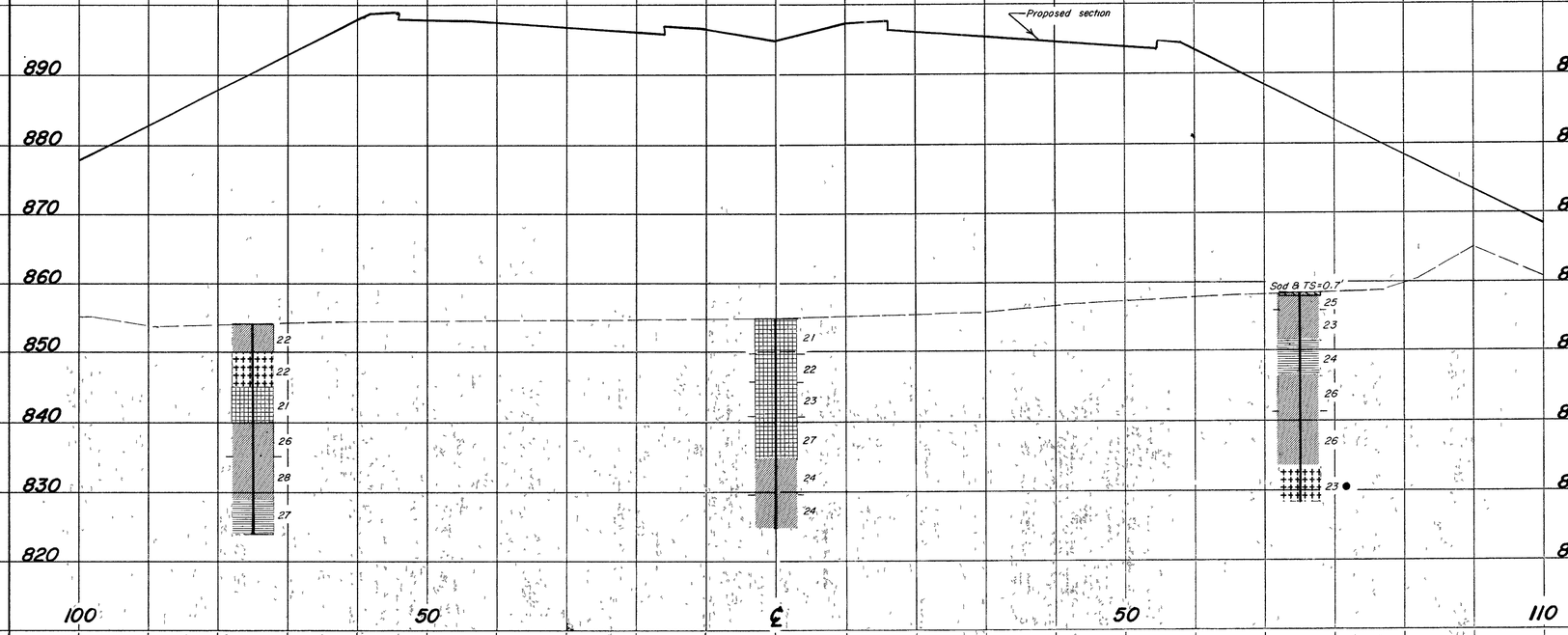
TUSCARAWAS COUNTY

TUS-36-16.63

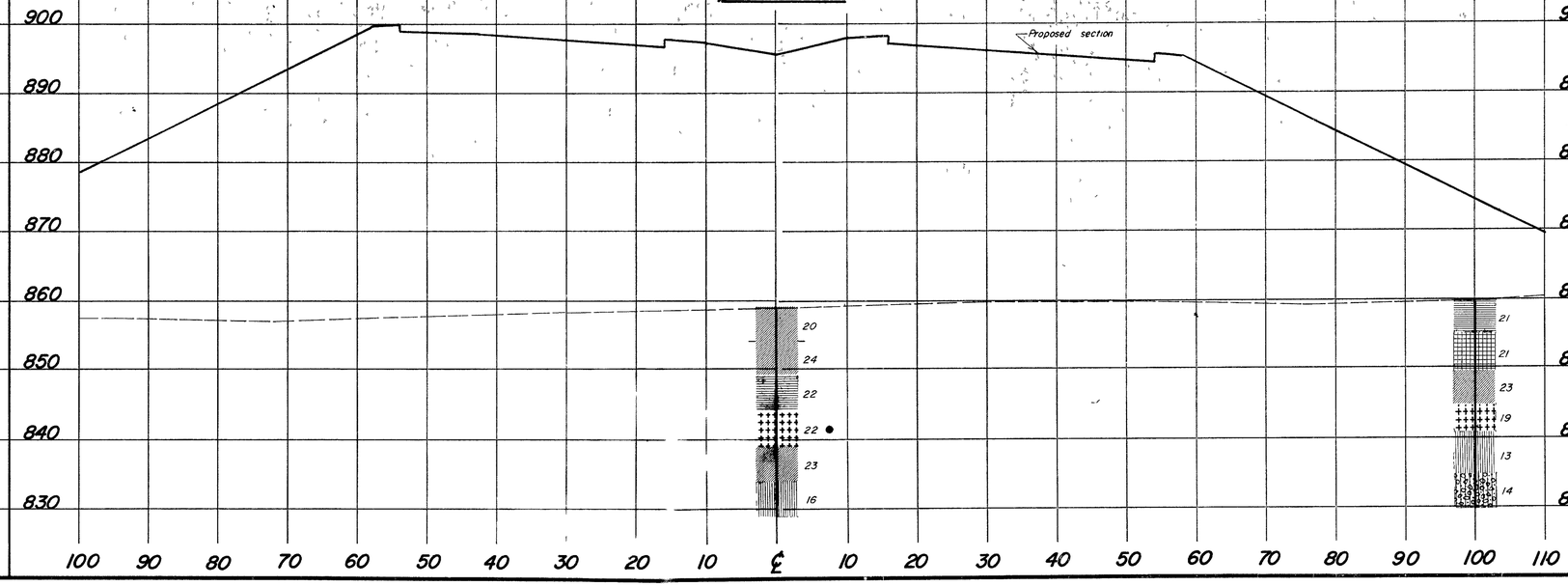
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23 OHIO

39
60

Cross Section Sta. 303+00



Cross Section Sta. 302+00



96 (FORMERLY TE 54 B)
10 10 61

SOIL PROFILE

TUSCARAWAS COUNTY

TUS-36-16.63

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23 OHIO

40/60

Cross Section Sta. 304+00

900
890
880
870
860
850
840
830
820
810
800

Proposed section

(Sta. 304+40)

Soil = 0.3'
3 ● Trace of organic
36 ● Slightly organic
26 ● Trace of organic
28
26
26
25
W

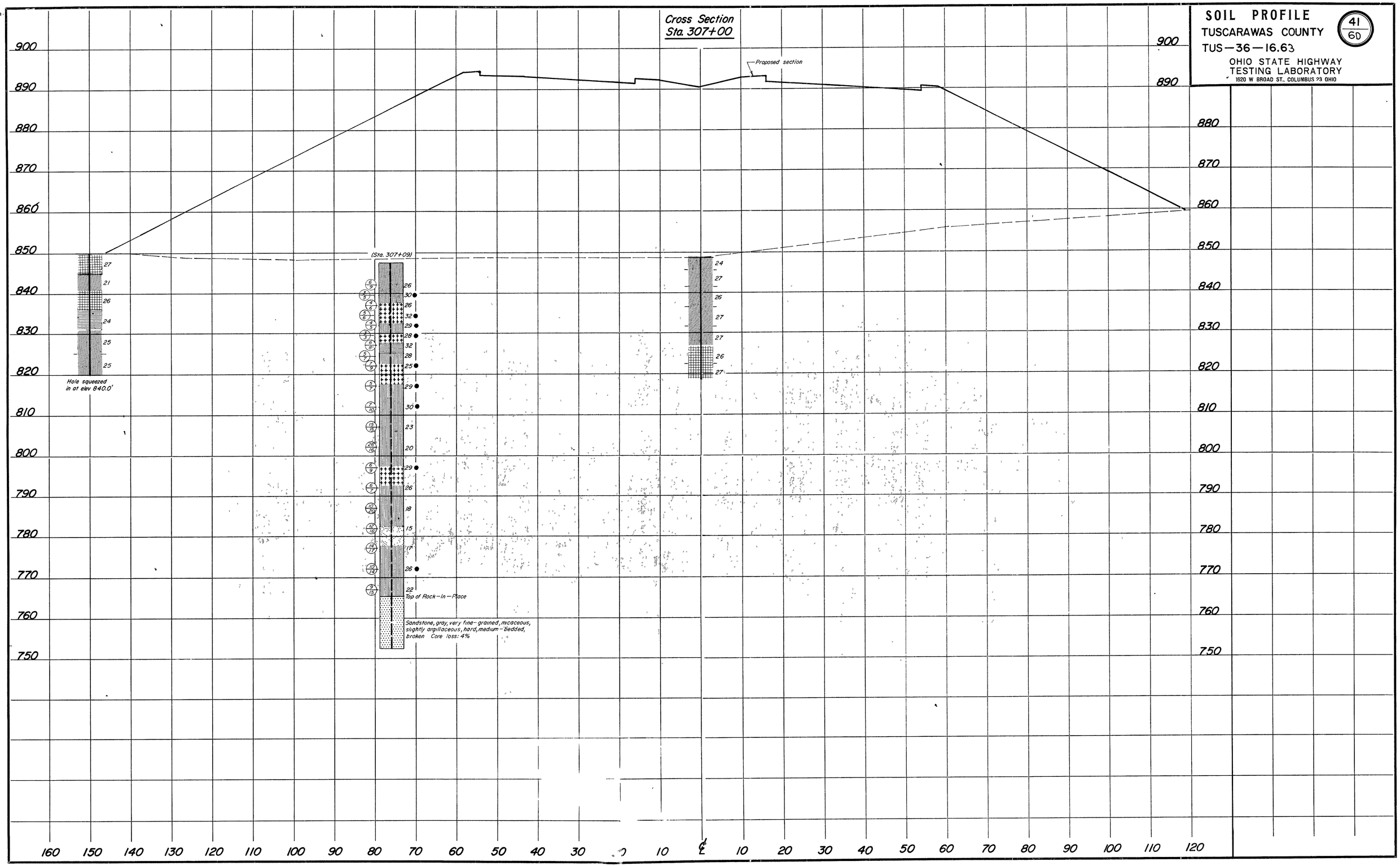
26
25
22
25
25
23

23
23
24
25
27
Refusal

3/5 27
6/8 18
8/12 26
9/12 28
6/8 26
8/11 30
7/10 26
9/10 28
6/8 24
8/11 38 ●
8/12 18
8/12 25
Top of Rock-In-Place

Shale, gray, argillaceous, slightly micaceous, hard, broken, badly broken above elev 816.8
Core loss: 19%.

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130



SOIL PROFILE
TUSCARAWAS COUNTY
TUS—36—16.63
41
60
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W BROAD ST., COLUMBUS 23 OHIO
Cross Section
Sta. 307+00
Proposed section
(Sta. 307+09)
Hole squeezed
in at elev 840.0'
Top of Rock—In—Place
Sandstone, gray, very fine-grained, micaceous,
slightly argillaceous, hard, medium-bedded,
broken Core loss: 4%
900
890
880
870
860
850
840
830
820
810
800
790
780
770
760
750
160
150
140
130
120
110
100
90
80
70
60
50
40
30
10
℄
10
20
30
40
50
60
70
80
90
100
110
120

FORMERLY TE 54 B)
61

SOIL PROFILE

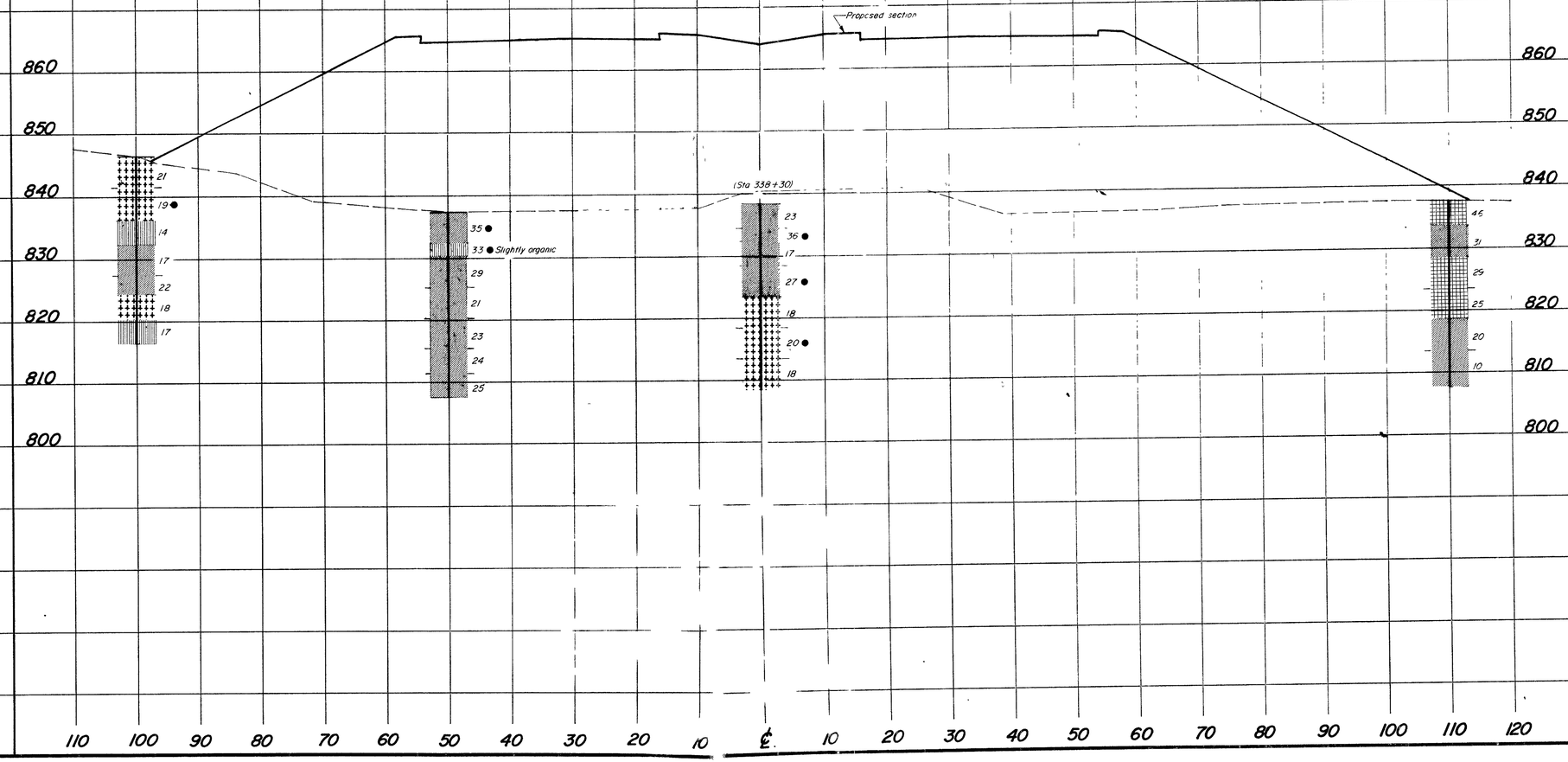
TUSCARAWAS COUNTY

42/60

TUS-36-16.63

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23 OHIO

Cross Section
Sta. 338+00



(FORMERLY TE-54-B)
0-61

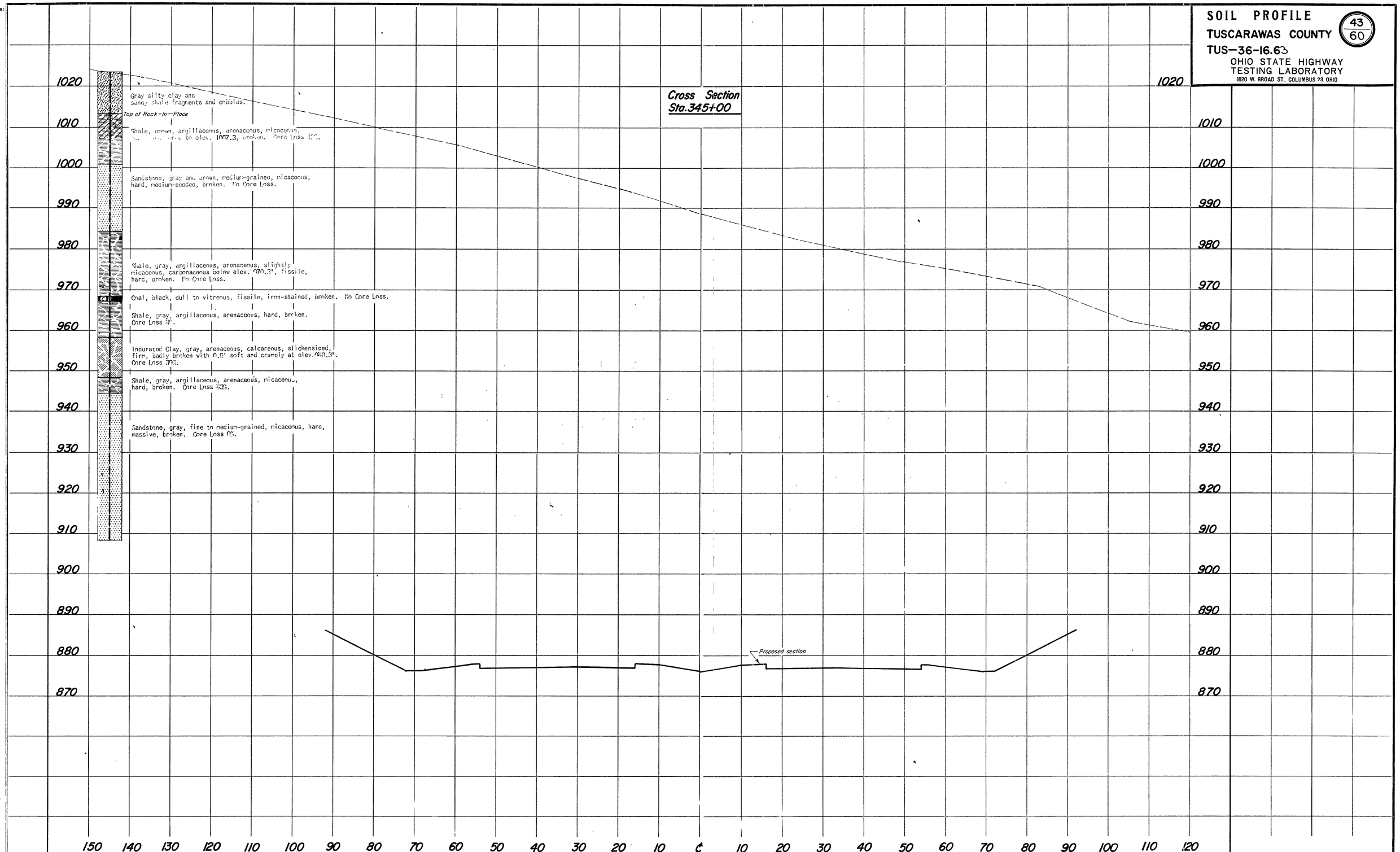
SOIL PROFILE

TUSCARAWAS COUNTY

TUS—36-16.63

43/60

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO



(FORMERLY TE-54-B)
9-61

SOIL PROFILE

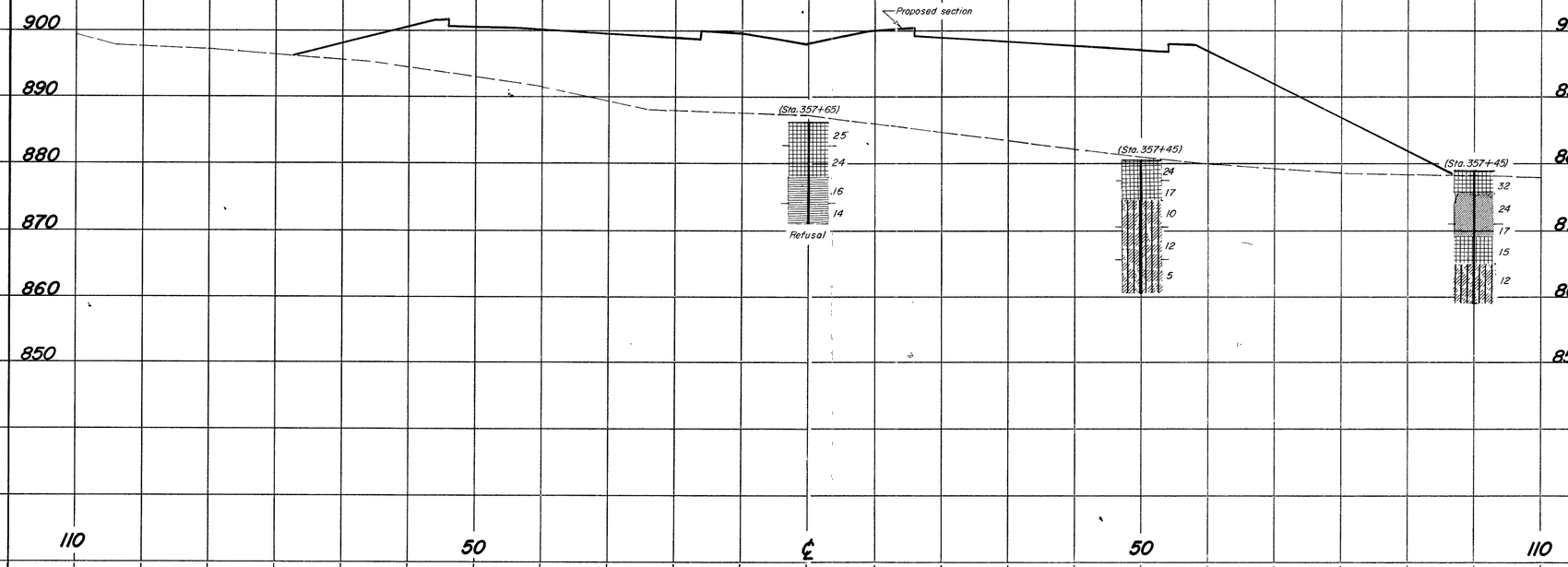
TUSCARAWAS COUNTY 44/60

TUS-36-16.63

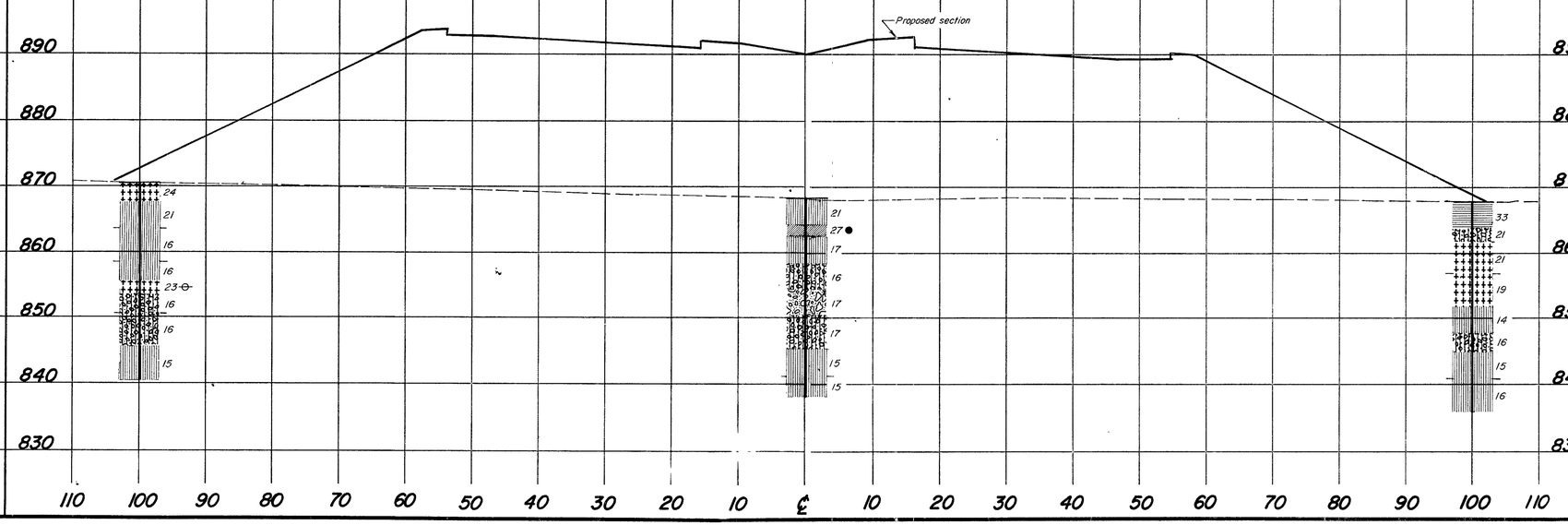
OHIO STATE HIGHWAY TESTING LABORATORY

1620 W. BROAD ST., COLUMBUS 23, OHIO

Cross Section Sta. 357+50



Cross Section Sta. 353+00



FORMERLY TE-54-B)
1-61

SOIL PROFILE

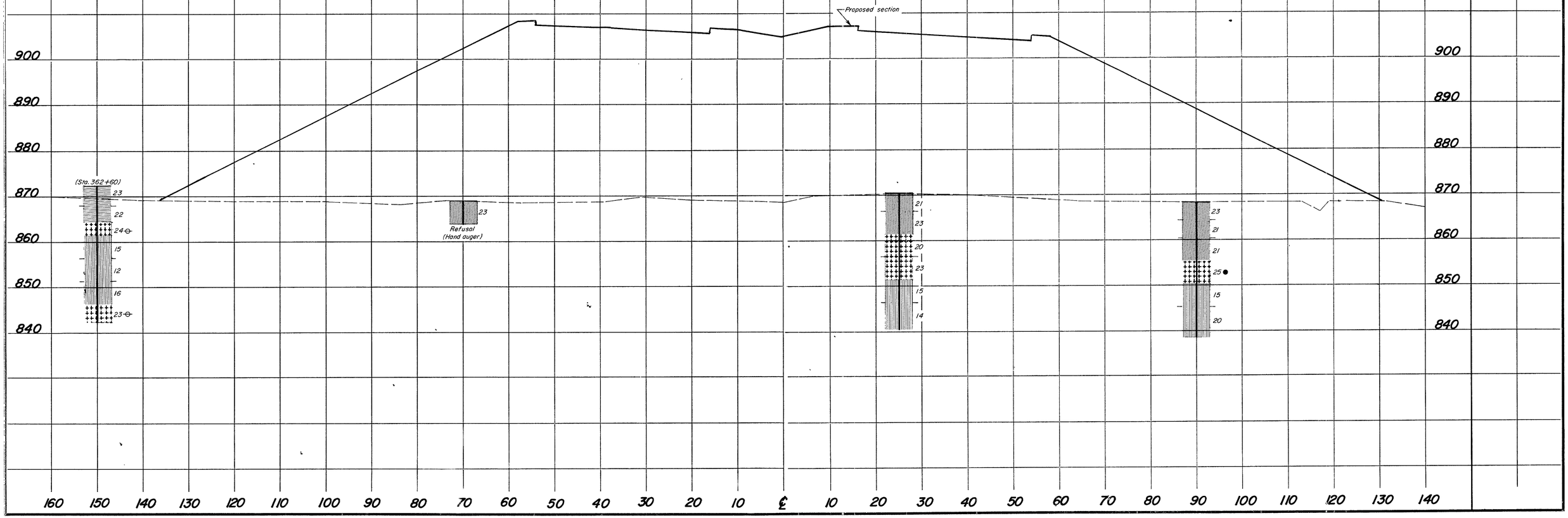
TUSCARAWAS COUNTY

TUS-36-16.63

45
60

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

Cross Section Sta. 362+50



SOIL PROFILE

TUSCARAWAS COUNTY

TUS-36-16.63

OHIO STATE HIGHWAY
TESTING LABORATORY
1820 W. BROAD ST., COLUMBUS 23, OHIO

46/60

Cross Section
Sta. 371+00

Refusal
(Hand auger)

Proposed section

Cross Section
Sta. 369+00

Brown silty clay

Top of Rock-In-Place

Shale, brown, argillaceous, cretaceous, micaceous, fissile, hard, badly broken to elev. 965.0, broken below elev. 965.0. Core loss: 23 %.

Sandstone, brown grading to gray, medium-grained, micaceous, hard, massive, broken. Core loss: 1 %.

Proposed section

(FORMERLY TE-54-B)
D-01

(FORMERLY TE-54-B
10-61

SOIL PROFILE

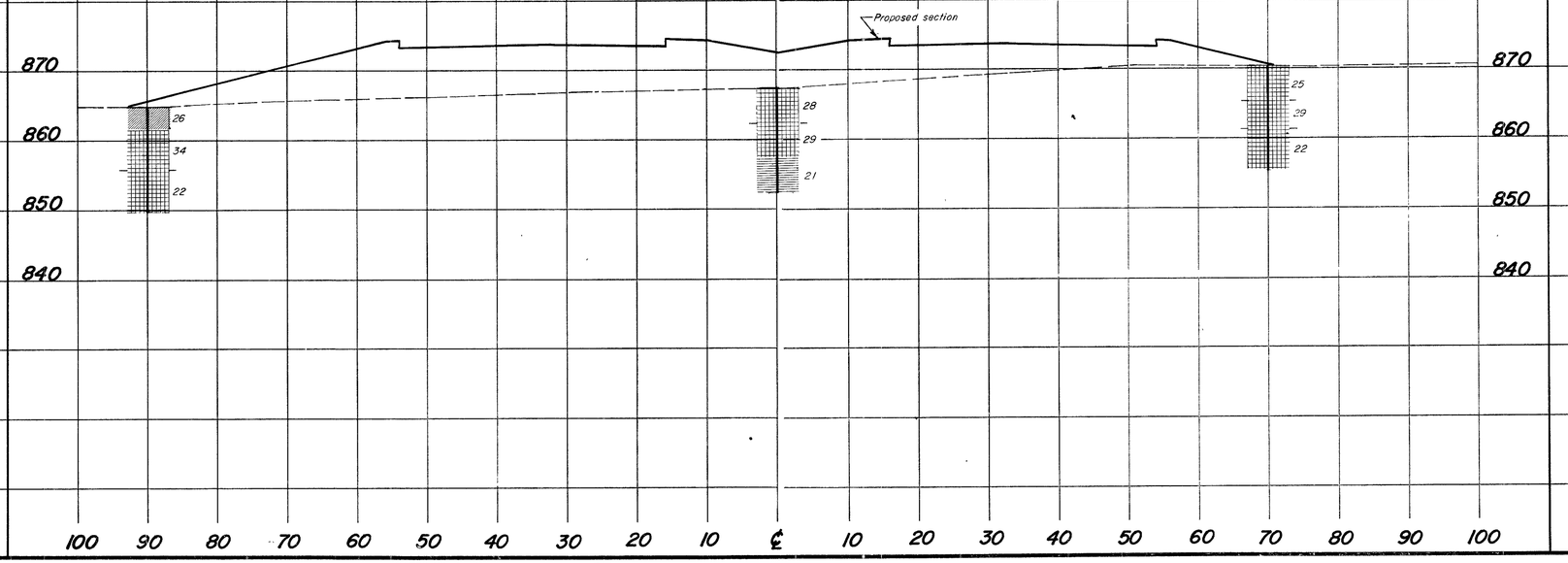
TUSCARAWAS COUNTY

TUS-36-16.63

47/60

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

Cross Section
Sta. 381+00



MICROFILMED
FEB 28 1963

48
60

TUSCARAWAS COUNTY
TUS-36-16.63

GEOLOGY OF THE SITE

The structure site is located at the base of the south valley wall and upon the flood plain of a tributary valley to Stillwater Creek. Thin to moderately deep alluvial deposits overlie bedrock, of Pennsylvanian age.

EXPLORATION

The exploration consisted of four drive sample-core borings, one core boring, six drive rod penetration tests, and one hand driven probe, made during June, July, and August, 1963.

INVESTIGATIONAL FINDINGS

The borings disclosed moist, loose to medium-dense clayey and sandy and gravelly silts, stiff to hard sandy gravelly and silty clays, and medium-dense to dense silty and sandy gravels occurring above bedrock surface, encountered at 15 to 58-foot depths, elevations 873 to 806 feet. The borings were terminated at 35 to 66-foot depths, elevations 843 to 799 feet, after penetrating 7 to 30 feet below bedrock surface.

Rod soundings met increasing resistance to penetration with increasing depth, and were terminated upon encounter with refusal to penetration at 5 to 38-foot depths, elevations 871 to 823 feet; soundings 1 through 4, considered to be on, or very near bedrock surface; sounding 6, to be on firm rock, below the weathered bedrock; sounding 7, above bedrock surface.

On the basis of the tests, bedrock surface is considered to slope downward from the left side to the right side and from the rear to the forward portion of the structure site, between approximately elevations 873 and 806 feet.

It is considered that the rear pier will be founded on sandstone, having a crushing strength of about 250 tons per square foot.

LEGEND

- Auger Boring - Plan View.
- Press and/or Drive Sample and/or Core Boring - Plan View.
- Drive Rod Penetration Resistance - Soundings - Plan View
- R — Electrical Resistivity Probe - Plan View.
- A — Indicates Auger Boring.
- B — Indicates Press and/or Drive Sample and/or Core Boring.
- R — Electrical Resistivity Probe plotted to vertical scale only.
- TR — Top of Rock
- Water saturated zone.
- TD — Total Depth.
- Horizontal bar on log indicates the depth the sample was taken.
- X-Y — Figures to the right of boring log in profile view indicate the number of blows for "Standard Penetration" test. X = First 6 inches; Y = Second 6 inches
- Casing
- Resistance "R" ≤ 10,000 lbs.
- Resistance "R" ≥ 10,000 lbs.
- 1/16 — Indicates final measurement of penetration in inches
- W — Indicates Free Water elevation.
- Indicates Static Water elevation
- Footing — Capped pile
- Footing on pile

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Tests

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

Drive Sample Borings - Drive - Press Sample Borings

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

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

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

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

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
8"	3"	2.0mm	0.42mm	0.074mm	0.005mm	
		No 10 sieve	No 40 sieve	No 200 sieve		

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

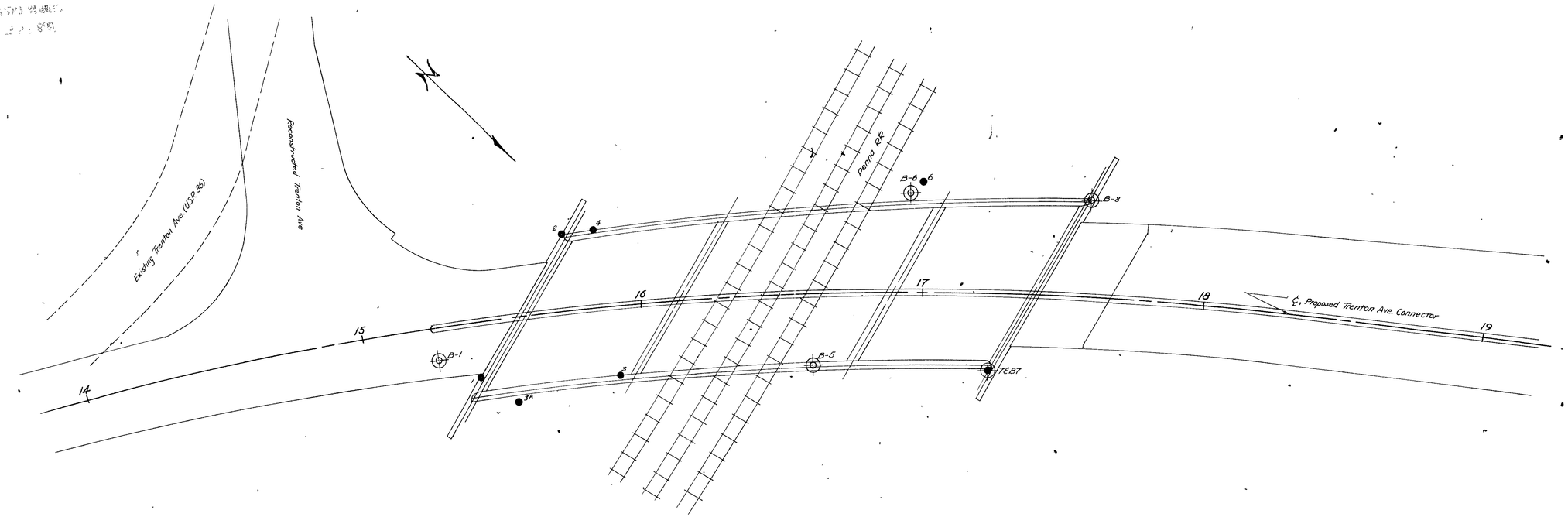
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

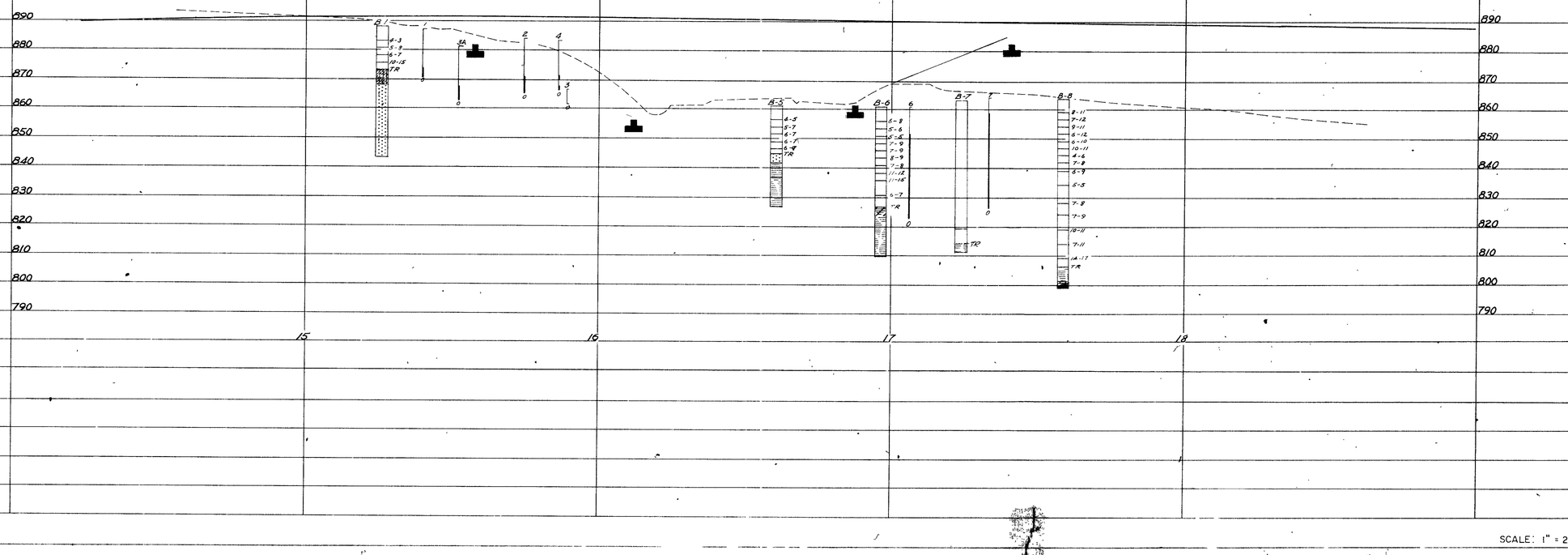
STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO TUS-36-
TRENTON AVE CONNECTOR OVER PENNA RR
SEC. TUS-36-16.63

CHECKED BY	REVIEWED BY	DATE
RPM	ROR	8-21-63

49/60

TUS-36-16.63





SCALE: 1" = 20'

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. TUS-36-
TRENTON AVE. CONNECTOR OVER PENNA RR
SEC. TUS-36-16.63

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
RDS	EPM	RDL	8-21-63

50
60

TUS-36-16.63

LOG OF BORING

Date Started 6-28-63 | Sampler Type SS | Dia. 1 3/8" | Water Elev.
Date Completed 6-28-63 | Casing: Length 15' | Dia. 3 1/2" | Surface Elev. 888.2'
Boring No. B-1 | Station & Offset 15+26, 12 Rt. (REAR ABUTMENT)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
888.2	0														
	2														
	4														
883.2	6	4/3			Brown Silty Sandy Gravel	1	52	4	20	14	10	PL+19		22	
880.7	8	5/8			Light-Brown and Gray Gravelly Clay	2	25	2	2	30	41	38	13	22	
878.2	10	6/7			Brown and Gray Silty Gravel	3	55	2	11	11	21	30	10	13	
875.7	12														
873.2	14	10/15			Brown and Gray Sandy Clay	4	0	16	9	16	59	40	21	26	
					TOP OF ROCK										
	16														
	18		3.8	1.2	Clay bedrock, light-gray, soft, mottled orange-in-part, crumbly, damp, with an interval of very soft, moist clay from 17.5 to 18.5'. Core loss 24%.										
868.2	20														
	22														
	24		5.0	0.0											
	26				Sandstone, dark greenish-gray, firm, micaceous, fine-grained, argillaceous, with thin interbeds of soft damp dark-gray clay, and thin zones of siderite pellets. Vertical recemented joints in very argillaceous dark orange-brown iron stained sandstone from 24.0' to 25.0'. Sandstone gray with carbonaceous laminae from 25.0' to base. Joints and iron stain at 30.0' to 31.0', 33.0 to 35.0' and 37.3 to 37.6'. Interval broken throughout. No core loss.									
	28		5.0	0.0											
	30														
	32														
	34		5.0	0.0											
	36														
	38		5.0	0.0											
	40														
	42		5.0	0.0											
843.2	44														

BOTTOM OF BORING

LOG OF BORING

Date Started 7-11-63 | Sampler Type SS | Dia. 1 3/8" | Water Elev.
Date Completed 7-12-63 | Casing: Length 30' | Dia. 3 1/2" | Surface Elev. 860.8'
Boring No. A-6 | Station & Offset 16+97, 36' Lt. (FORWARD PIER)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
860.8	0														
	2														
	4														
855.8	6	6/8			Brownish-Gray Silt and Clay	1	0	2	2	25	71	38	12	27	
853.3	8	5/6			Gray Silt	2	0	2	6	40	52	25	3	27	
850.8	10	5/5			Gray Clayey Silt	3	0	1	5	46	48	25	7	23	
848.3	12	7/9			Gray Clayey Silt	4	0	1	6	36	57	27	10	22	
845.8	16	7/9			Gray Sandy Silt	5	0	2	20	42	36	NP	NP	21	
843.3	18	8/9			Brown and Gray Silty Sandy Gravel	6	47	3	24	14	12	NP	NP	14	
840.8	20	7/8			Gray Silty Sandy Gravel	7	45	5	15	20	15	NP	NP	14	
838.3	22	11/12			Gray and Brown Silty Sandy Gravel	8	51	5	14	20	10	NP	NP	11	
835.8	26	11/15			Brown and Gray Silty Sandy Gravel	9	40	4	17	22	17	21	3	22	
830.8	30	6/7			Brown and Gray Silty Gravel	10	50	5	8	22	15	27	2	15	
826.8	34				TOP OF ROCK										
	36		4.5	0.0											
	38														
	40														
	42														
	44		10.8	0.2	Shale, black, firm, carbonaceous, fissile, broken, few shattered zones, few clay seams throughout. Slightly to moderately calcareous. Top 1.0' weathered, soft, moist, crumbly. Core loss 10%.										
	46														
	48														
800.8	50														

BOTTOM OF BORING

LOG OF BORING

Date Started 7-10-63 | Sampler Type SS | Dia. 1 3/8" | Water Elev.
Date Completed 7-11-63 | Casing: Length 17' | Dia. 3 1/2" | Surface Elev. 861.4'
Boring No. B-5 | Station & Offset 16+61, 26' Rt. (FORWARD PIER)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
861.4	0														
	2														
	4														
856.4	6	4/5			Gray Gravelly Sand	1		7	I	S	U	A	L	28	
853.9	8	5/7			Gray Silt	2	0	1	13	50	36	22	4	21	
851.4	10	6/7			Gray Silt	3	0	2	18	47	33	22	4	22	
848.9	12	6/7			Gray Silt	4	0	1	17	47	35	NP	NP	21	
846.4	14	6/9			TOP OF ROCK Gray Silt	5	0	1	15	50	34	22	5	20	
844.9	16														
	18		2.6	0.9	Sandstone, light-gray, firm, fine-grained, calcareous, with micaceous carbonaceous laminae; interbedded with many thin brown and gray clay seams comprising 40% of the interval. Very argillaceous, soft from*										
841.4	20														
	22		4.2	0.8	Clay shale, gray, soft, damp and crumbly, with few very broken, soft, shale seams. Core loss 16%.										
	24														
836.4	26														
	28		5.0	0.0	Shale, dark-gray to black, carbonaceous, fissile, firm, few joints and clay seams throughout. Broken from 33.0' to 34.0'. No core loss.										
	30														
	32														
	34		5.0	0.0											
826.4					BOTTOM OF BORING										

*19.0 to 20.0' Core loss 30%.

LOG OF BORING

Date Started 7-12-63 | Sampler Type SS | Dia. 1 3/8" | Water Elev.
Date Completed 7-12-63 | Casing: Length 27' | Dia. 3 1/2" | Surface Elev. 863.5'
Boring No. B-2 | Station & Offset 17+24, 28' Rt. (FORWARD ABUTMENT)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C	SHTL Class.
863.5	0														
	2														
	4														
	6														
	8														
	10														
	12														
	14														
	16														
	18														
	20														
	22														
	24														
	26														
	28														
	30														
	32														
	34														
	36														
	38														
	40														
	42														
819.5	44				No Drive Samples Taken										
	46		2.0	1.0	Sandstone cobbles and fragments with brown and gray sandy silt. Core loss 33%.										
814.5	48				TOP OF ROCK										
	50		3.9	1.1	Shale, dark-gray, argillaceous, firm, poorly fissile, very badly broken in top 1.0'. Core loss 32%.										
811.5	52				BOTTOM OF BORING										

LOG OF BORING

Date Started 7-2-63 | Sampler Type SS | Dia. 1 3/8" | Water Elev.
Date Completed 7-10-63 | Casing: Length 50' | Dia. 3 1/2" | Surface Elev. 864.2'
Boring No. B-4 | Station & Offset 17+52, 35' Lt (FORWARD ABUTMENT)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	HTL Class.
864.2	0														
	2														
	4														
859.2	6	2/12			Brown and Gray Silt and Clay	1	0	0	2	39	59	39	13	24	
856..	8	2/12			Brown and Gray Silt and Clay	2	0	1	1	29	69	37	11	22	
854..	10	3/11			Brown and Gray Silty Clay	3	0	0	1	23	76	41	16	26	
851.7	12	6/..			Brown and Gray Silt and Clay	4	0	0	1	39	60	37	11	24	
849.2	14	6/10			Gray Silt and Clay	5	0	0	1	31	68	37	12	26	
846.7	16	10/13			Gray Silty Clay	6	0	0	2	33	65	39	16	22	
844..	18	4/6			Gray Clayey Silt	7	0	3	11	33	55	29	7	25	
841.7	20	5/8			Gray Silt and Clay	8	0	1	2	31	66	33	11	27	
839.2	22	4/..			Gray Silty Clay	9	0	0	4	33	63	36	17	27	
836.7	24														
	26														
	28														
831.7	30	4/6			Gray Clayey Silt	10	0	0	3	29	68	34	8	27	
	32														
	34														
826.7	36	7/8			Gray Sandy Gravelly Silt	11	33	7	12	27	21	24	4	19	
	38														
821.7	40	7/9			Gray Sandy Gravelly Silt	12	25	6	12	33	24	NP	NP	19	
	42														
	44														
819.2	46	10/11			Brown and Gray Silty Sandy Gravel	13	32	6	25	24	13	NP	NP	18	
	48														
814.2	50	7/11			Gray Gravelly Clay	14	32	1	1	32	34	32	13	23	
	52														
	54														
809.2	56	14/17			Gray Gravelly Clay	15	40	3	2	28	27	PL+26		16	
806.2	58				TOP OF ROCK										
	60		1.7	0.3	Clay shale, dark-gray, soft, damp, with firm, sub-fissile, broken, arenaceous shale at 58.0 to 60.0 feet. Core loss 10%.										
801.4	62														
800.8	64		4.4	0.6	Limestone, gray, hard, dense, fossiliferous, with open weathered joints.*										
799.2					Coal, black, brittle, laminated, vitreous luster, broken-in-part jointed.**										
					BOTTOM OF BORING										

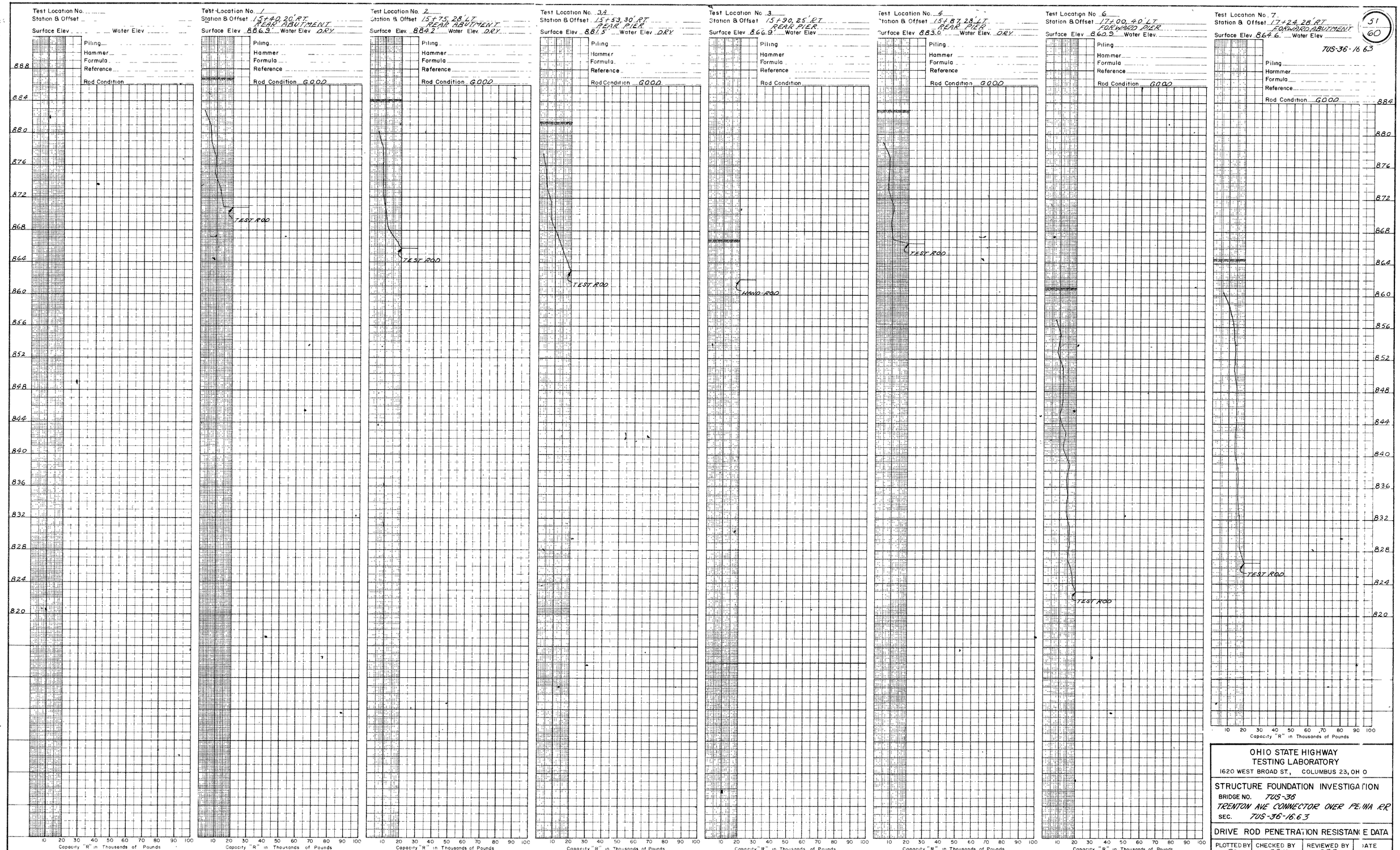
* No core loss.
** with thin clay seam at top. Core loss 10%.

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST., COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. TUS-36-
TRENTON AVE. CONNECTOR OVER PENN'A. RR
SEC. TUS-36-16.63

BORING DATA

TYPED BY	CHECKED BY	REVIEWED BY	DATE
JAC	RRW	EDP	8-1-63



OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST., COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. TUS-36
TRENTON AVE CONNECTOR OVER PENNA RR
SEC. TUS-36-16.63

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
RC	RPW	ROR	6-21-63

TUSCARAWAS COUNTY
TUS-36-16.63

GEOLOGY OF THE SITE

The structure site is located upon the flood plain and sloping west valley wall of Stillwater Creek. Shallow residual soils and moderately deep alluvial deposits overlie sandstone and shale bedrock, of Pennsylvanian age.

EXPLORATION

The exploration consisted of one core boring, two drive sample-core borings and eight drive rod penetration tests, made between June 18 and 25, 1963.

INVESTIGATIONAL FINDINGS

The borings disclosed moist, medium-dense sandy and gravelly silts, silty sandy gravel, sand, and intervals of very stiff and hard clays, occurring above bedrock surface, encountered at 5 to 45-foot depths, elevations 864 to 820 feet. The borings were terminated at 20 to 56-foot depths, elevations 849 to 809 feet, after penetrating 11 to 15 feet below bedrock surface.

The rod soundings met increasing and occasionally erratic resistance to penetration with increase in depth and were terminated upon encounter with near refusal and refusal to penetration at 8 to 47-foot depths, elevations 859 to 818 feet. Rod soundings 1, 2, 7 and 8 are considered to be on or to have penetrated below bedrock surface, as indicated by the borings, into weathered bedrock; the remainder above bedrock surface in medium-dense silts and gravels.

On the basis of the tests, bedrock surface is considered to slope downward from the forward to the rear portion of the structure site, between elevations 864 and 820 feet.

No free water was observed in the rod sounding holes.

LEGEND

- Auger Boring - Plan View
- Press and/or Drive Sample and/or Core Boring - Plan View
- Drive Rod Penetration Resistance - Plan View
- Electrical Resistivity Probe - Plan View
- A — Indicates Auger Boring
- B — Indicates Press and/or Drive Sample and/or Core Boring
- Electrical Resistivity Probe plotted to vertical scale only
- TR — Top of Rock
- Water saturated zone
- TD — Total Depth
- Horizontal bar on log indicates the depth the sample was taken
- X-Y — Figures to the right of boring log in profile view indicate the number of blows for "Standard Penetration" test. X = First 6 inches, Y = Second 6 inches
- Casing
- Resistance "R" < 10,000 lbs
- Resistance "R" > 10,000 lbs
- 1/16 — Indicates final measurement of penetration in inches
- W — Indicates Free Water elevation
- Indicates Static Water elevation
- Footing — Capped pile
- Footing on pile

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Tests

Drive rod penetration resistance tests constitute driving a 3.5 inch diameter steel rod, with a 45° cone point, into the ground, using a 22 pound drop hammer with a free fall of five feet. At one or two foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests of other locations on the structure site. From this comparison, the overall uniformity of subsurface conditions may be evaluated.

Drive Sample Borings - Drive - Press Sample Borings

Drive sample borings are by means of a rotary type drilling, employing a 2" O.D., 1-3/8 I.D. sampler, at 2-1/2 and/or 5 foot depth intervals, driven by means of a 40 pound drop-hammer, with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

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

The Boring Log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6 inch increments, depths of press samples, field sample number, sample description based on laboratory test results and the Casagrande A.C. classification system and gradation, plasticity and moisture content determinations. Results of strength and consolidation testing appear on separate enclosures.

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

Particle Size Definitions

Boulder	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
	8"	3	2.0 mm	0.42 mm	0.074 mm	0.005 mm
			No. 10 sieve	No. 40 sieve	No. 200 sieve	

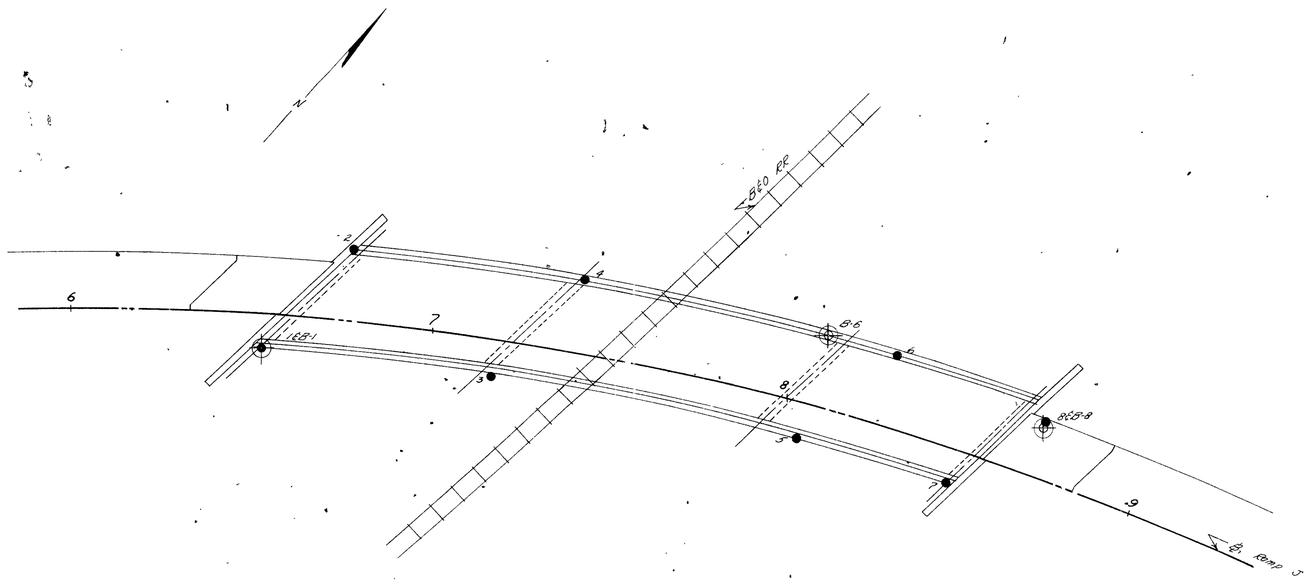
NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design criteria for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

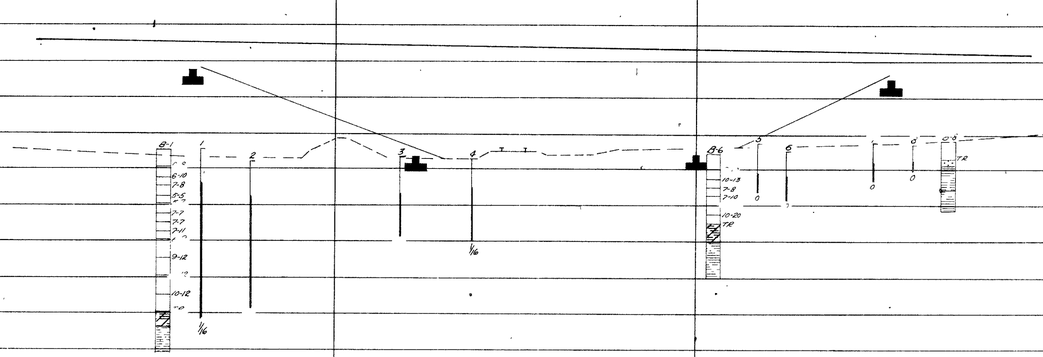
OHIO STATE HIGHWAY
TESTING LABORATORY
620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. TUS-36-
RAMP J OVER BED RR
SEC. TUS-36-16.63

CHECKED BY	REVIEWED BY	DATE
F.L.R.	R.D.R.	7-23-63

TUS-36-16.63





SCALE : 1" = 20'

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST., COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. TUS-36-
RAMP J OVER B&O RR
SEC TUS-36-16.63

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.F.	F.L.R.	R.D.R.	7-23-63

54
60

TUS-36-16.63

LOG OF BORING

Date Started 6-20-63 | Sampler Type SS | Dia. 1 3/8" | Water Elev. ---
Date Completed 6-24-63 | Casing Length --- | Dia ---
Boring No. B-1 | Station & Offset 6+53, 10' Rt. (TUS-36 PROJECT) | Surface Elev. 865.2

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No	% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	W.C.	SHTL Class.
865.2	0														
	2														
	4														
860.2	6	6/8			Brownish-Gray Sandy Silt	1	0	1	23	31	45	29	9	21	
857.7	8	6/10			Brown Silty Clay	2	0	0	12	37	51	39	18	20	
855.2	10														
	12	7/8			Brownish-Gray Sandy Silt	3	0	0	20	38	42	25	5	20	
852.7	14	5/5			Brown Silty Sandy Gravel	4	42	7	18	16	17	22	2	18	
850.2	16	5/7			Brownish-Gray Silty Sand	5	0	1	64	12	23	NP	NP	18	
847.7	18	2/2			Brownish-Gray Silty Gravelly Sand	6	25	5	45	9	16	NP	NP	16	
845.2	20	7/7			Brownish-Gray Silty Sandy Gravel	7	43	2	28	10	17	NP	NP	18	
842.7	22														
	24	7/11			Reddish-Brownish-Gray Silty Sandy Gravel	8	41	2	28	12	17	NP	NP	15	
840.2	26	6/0			Brown and Gray Silty Sandy Gravel	9	55	2	19	10	14	21	6	17	
	28														
835.2	30	6/12			Brownish-Gray Silty Sandy Gravel	10	34	3	31	12	20	24	2	17	
	32														
830.2	34														
	36	8/12			Brown and Gray Sandy Gravelly Silt	11	33	3	18	21	25	NP	NP	16	
	38														
825.2	40	17/17			Brown and Gray Silty Sandy Gravel	12	38	1	22	20	19	NP	NP	13	
	42														
820.2	44														
	46				TOP OF ROCK										
	48				Gray weathered shale (Driller's description)										
816.2	50				Shale, gray, fissile, firm, jointed and broken-in-part. No core loss.										
	52														
	54		7.0	0.0											
809.2	56														

BOTTOM OF BORING

LOG OF BORING

Date Started 6-25-63 | Sampler Type --- | Dia 1 3/8" | Water Elev ---
Date Completed 6-27-63 | Casing Length --- | Dia ---
Boring No. B-2 | Station & Offset 8+05, 20' Lt. (TUS-36 PROJECT) | Surface Elev. 865.0

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No	% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	W.C.	SHTL Class.
865.0	0														
	2														
860.0	4														
	6	8/10			Brown Silt and Clay	1	0	0	3	37	60	34	12	25	
857.5	8	10/12			Brown Silt and Clay	2	0	0	1	38	61	35	11	26	
855.0	10														
	12	5/8			Brown Silt	3	0	0	7	45	48	28	6	22	
850.5	14														
	14	7/10			Brown Silty Gravel	4	63	1	4	17	15	26	6	22	
850.0	16	9/21			Brown Silty Gravelly Silt	5	34	4	18	28	16	25	4	33	
847.5	18	10/20			Brown Gravelly Silt	6	28	2	11	24	35	27	9	19	
845.0	20														
	22				TOP OF ROCK										
	24		5.0	0.0	Shale, brown, slightly fissile, medium-firm, slightly weathered, broken to very badly broken and crumbly. Core loss 5'.										
840.0	26														
	28		5.0	0.0	Shale, gray, argillaceous, fissile, firm, very badly broken and crumbly-in-part above 30.0', badly broken in remainder. No core loss.										
	30														
	32														
	34		5.0	0.0											
825.0															

BOTTOM OF BORING

LOG OF BORING

Date Started 6-27-63 | Sampler Type --- | Dia 1 3/8" | Water Elev ---
Date Completed 6-27-63 | Casing Length --- | Dia ---
Boring No. B-3 | Station & Offset 8+05, 14' Lt. (TUS-36 PROJECT) | Surface Elev. 862.6

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No	% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	W.C.	SHTL Class.
862.6	0				Brown silty clay (Driller's description).										
	2														
	4				TOP OF ROCK										
857.7	6				Shale, brown, argillaceous-in-part, generally firm, fissile, broken-in-part. Core loss 10'.										
	8														
	10				Shale, brown, calcareous-in-part, argillaceous, soft to medium-firm and crumbly above 12.0', medium-firm in remainder, weathered, poorly fissile to fissile. Core loss 5'.										
	12		5.0	0.0											
	14														
847.1	16				Shale, brown to gray, argillaceous-in-part, generally firm, fissile, broken-in-part. No core loss.										
	18		5.0	0.0											
	20														
842.6															

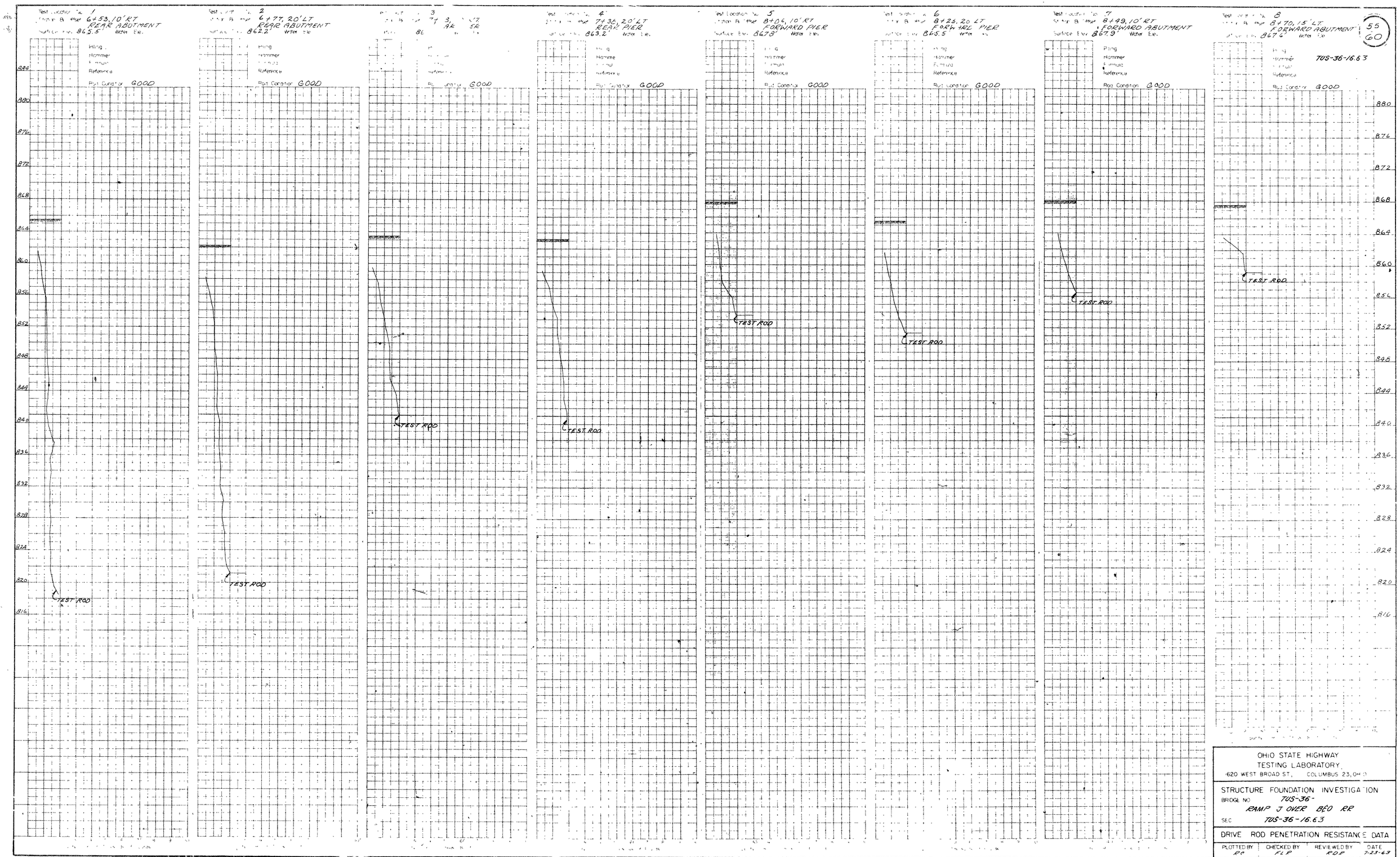
BOTTOM OF BORING

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST., COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. TUS-36-
RAMP J OVER B&O RR
SEC. TUS-36-16.63

BORING DATA

TYPED BY	CHECKED BY	REVIEWED BY	DATE
BC	FLR	EDR	7-23-63



OHIO STATE HIGHWAY
TESTING LABORATORY
620 WEST BROAD ST., COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. TUS-36-
RAMP J OVER B&O RR
SEC. TUS-36-16.63

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
RC	FLR	RDR	7-23-63

56
60

TUSCARAWAS COUNTY
TUS-36-16.63

GEOLOGY OF THE SITE

The structure site is located upon the flood plain, near the west valley wall of Big Stillwater Creek, which occupies a valley formed by pre-glacial and inter-glacial streams. Moderately deep to deep alluvium and glacial outwash overlies sandstone, shale and coal bedrock, of Pennsylvanian age.

EXPLORATION

The exploration consisted of one drive sample boring, two drive sample-core borings and six drive rod penetration tests, made between June 14 and 20, and July 16 and 23, 1963.

INVESTIGATIONAL FINDINGS

The borings disclosed moist and wet, loose to medium-dense clayey, sandy, and gravelly silts, some with organic material, occasional intervals of gravel and sand, and stiff to very stiff clays. Bedrock surface was encountered in borings B-1 and B-4 at 41 and 58-foot depths, elevations 789 and 781 feet. The borings were terminated at 66 to 101-foot depths, elevations 766 to 746 feet.

The rod soundings met increasing and relatively uniform resistance to penetration with increase in depth and were terminated upon encounter with near refusal to penetration at 41 to 52-foot depths, elevations 798 to 792 feet, in medium-dense and very very dense silts, as revealed by the borings.

On the basis of the borings, bedrock surface is considered to slope rapidly downward from the rear to the forward portion of the structure site from elevation 789 feet to below 746 feet.

No free water was observed in the rod sounding holes.

LEGEND

- Auger Boring - Plan View.
- Press and/or Drive Sample and/or Core Boring - Plan View.
- Drive Rod Penetration Resistance Soundings - Plan View
- Electrical Resistivity Probe - Plan View.
- A — Indicates Auger Boring.
- B — Indicates Press and/or Drive Sample and/or Core Boring.
- Electrical Resistivity Probe plotted to vertical scale only
- TR — Top of Rock
- Water saturated zone.
- TD — Total Depth.
- Horizontal bar on log indicates the depth the sample was taken.
- X-Y — Figures to the right of boring log in profile view indicate the number of blows for "Standard Penetration" test. X = First 6 inches, Y = Second 6 inches
- Casing
- Resistance "R" = 10,000 lbs
- Resistance "R" = 10,000 lbs
- 1/16 — Indicates final measurement of penetration in inches
- Indicates Free Water elevation
- Indicates Static Water elevation
- Footing — Capped pile
- Footing on pile

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Tests

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

Drive Sample Borings Drive-Press Sample Borings

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

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

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

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

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
8"	3"	2.0mm (No 10 sieve)	0.42mm (No 40 sieve)		0.074mm (No 200 sieve)	0.005mm

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

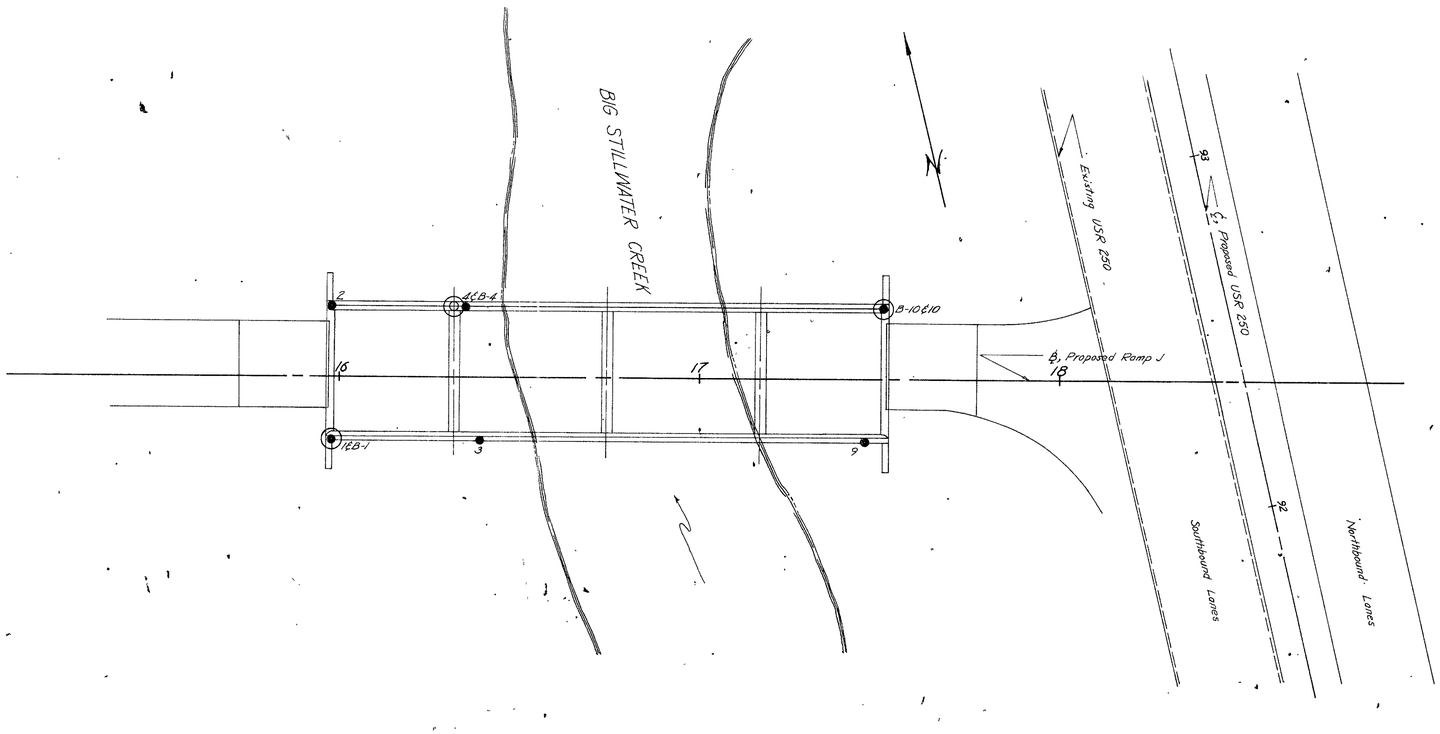
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

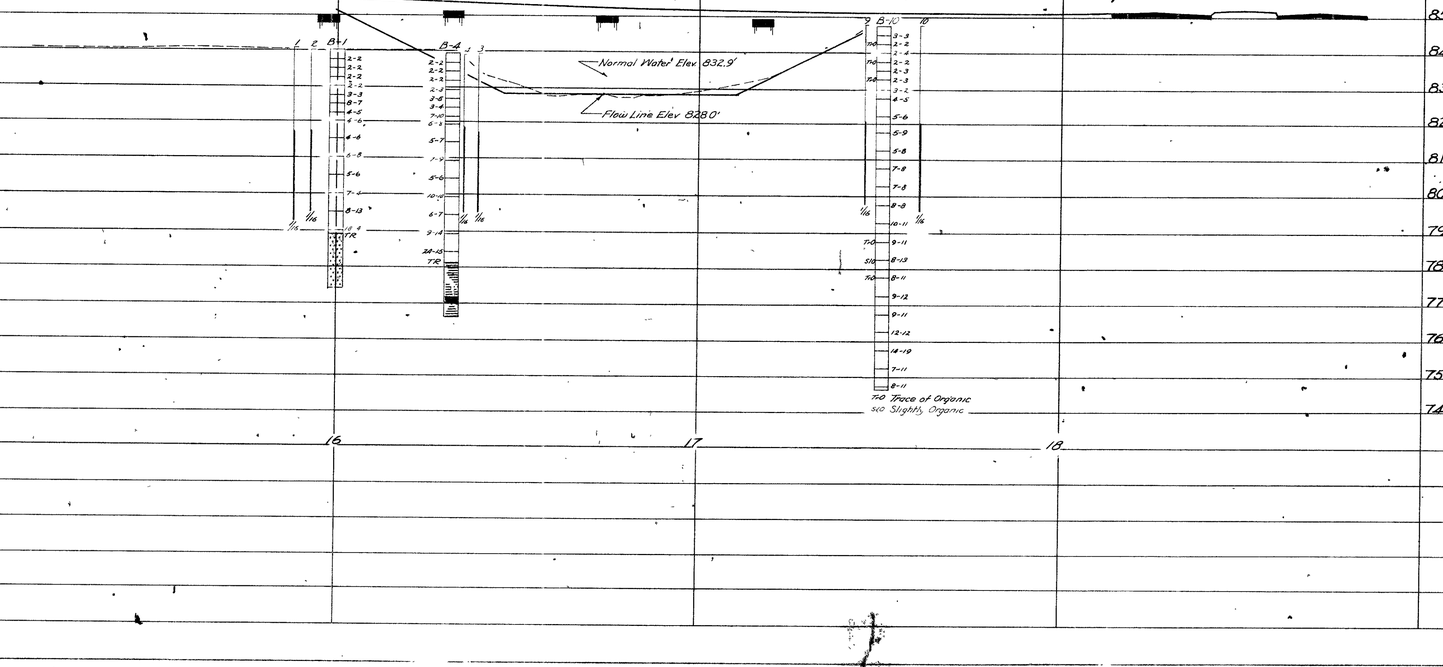
STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO TUS-36-
RAMP J OVER BIG STILLWATER CREEK
SEC TUS-36-16.63

CHECKED BY	REVIEWED BY	DATE
F.L.R.	E.O.R.	8-20-63

57
60

TUS-36-16.63





SCALE: 1" = 20'

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST., COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. TUS-36-
RAMP J OVER BIG STILLWATER CR.
SEC. TUS-36-16.63

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.P.S.	F.L.R.	R.O.R.	8-20-63

TUS-36-16.63

LOG OF BORING

Date Started 7-18-63 | Sampler Type SS | Dia. 1 3/8" | Water Elev.
Date Completed 7-18-63 | Casing: Length 30' | Dia. 3 1/2" | Surface Elev. 840.1'
Boring No. B-1 | Station & Offset 15+98, 17' Rt., (REAR ABUTMENT)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
840.1	0														
	2														
837.6	4	2/2			Brown Sandy Silt	1	0	0	23	45	32	28	5	27	
835.1	6	2/2			Brown Sandy Silt	2	0	0	24	46	30	31	8	33	
832.6	8	2/2			Brownish-Gray Sandy Silt	3	0	0	22	44	34	28	7	36	
830.1	10	2/2			Brownish-Gray Clayey Silt, Trace of Organic	4	0	1	18	44	37	30	8	34	
827.6	12	3/3			Gray Sandy Silt, Trace of Organic	5	0	1	45	28	26	NP	NP	39	
825.1	14	8/7			Brownish-Gray Silty Gravelly Sand	6	26	18	30	17	9	NP	NP	23	
822.6	16	4/5			Gray Silty Sandy Gravel	7	43	12	21	10	14	NP	NP	27	
820.1	18	4/6			Gray Gravelly Clay	8	32	2	4	24	38	31	11	25	
	20														
	22														
815.1	24														
	26	4/6			Gray Silty Clay	9	0	0	0	20	80	40	16	31	
	28														
810.1	30	6/8			Gray Clayey Silt	10	0	1	4	37	58	30	8	27	
	32														
	34														
805.1	36	5/6			Gray Silt and Clay	11	0	0	2	46	52	31	11	31	
	38														
800.1	40	7/4			Brown and Gray Sandy Silt	12	0	11	17	36	36	26	3	31	
	42														
	44														
795.1	46	8/13			Brownish-Gray Gravelly Sandy Silt	13	19	10	14	38	19	NP	NP	22	
	48														
790.1	50														
789.1		18/4"			Gray Clayey Silt	14	0	1	2	57	40	32	7	12	
	52				℄ TOP OF ROCK										
	54		3.7	0.3											
	56				Sandstone, light gray to dark gray fine-grained, many very thin scattered carbonaceous, micaceous laminae, becomes carbonaceous in basal 1.5', large vertical joint below 63.0'; Thin bedded, max. 0.8' beds, firm, calcareous. Core loss 2%.											
	58														
	60		5.0	0.0											
	62														
	64														
774.1	66		6.0	0.0											
					℄ BOTTOM OF BORING										

Minor artesian condition encountered.

LOG OF BORING

Date Started 7-19-63 | Sampler Type SS | Dia. 1 3/8" | Water Elev.
Date Completed 7-23-63 | Casing. Length 20' | Dia. 3 1/2" | Surface Elev. 839.3
Boring No. B-4 | Station & Offset 16+32, 20' Lt (REAR PIER)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
839.3	0														
	2														
836.8	4	2/2			Brown Silt	1	0	1	14	51	34	29	4	24	
834.3	6	2/2			Brown Sandy Silt,	2	0	1	22	50	27	28	6	30	
831.8	8	2/2			Brown and Gray Silt, Trace of Organic	3	0	1	10	53	36	29	6	30	
829.3	10	2/3			Brown and Gray Silt, Slightly Organic	4	0	0	8	73	19	21	2	35	
826.8	12														
	14	3/5			Brown and Gray Sandy Gravelly Silt, Trace of Organic	5	27	0	17	45	10	NP	NP	29	
824.3	16	4/4			Gray Clayey Silt	6	0	7	6	31	56	31	8	31	
821.8	18	7/10			Gray Clayey Silt	7	0	2	8	49	41	33	10	27	
819.3	20	6/8			Gray Silt	8	0	0	11	45	44	28	6	28	
	22														
	24														
814.3	26	5/7			Gray Clayey Silt	9	0	1	6	35	58	28	8	31	
	28														
809.3	30	7/9			Gray Silty Clay	10	0	0	1	34	65	40	18	29	
	32														
	34														
804.3	36	5/6			Gray Clayey Silt	11	0	0	11	43	46	27	7	32	
	38														
799.3	40	10/10			Brown and Gray Clayey Silt	12	3	2	11	43	41	26	10	34	
	42														
	44														
794.3	46	6/7			Gray Silt and Clay	13	1	0	2	16	81	36	13	28	
	48														
789.3	50	9/14			Brown Silt	14		0	4	67	29	27	4	24	
	52														
	54														
784.3	56	14/15			Brownish-Gray Gravelly Silt	15	44	4	7	29	16	25	6	18	
783.1	58														
	60		3.0	0.1	℄ TOP OF ROCK										
	62				Shale, gray, firm, carbonaceous, fissile, broken, 58.0' to 61.6', very broken and shattered, very argonaceous, micaceous. 59.0' to 60.5'; crumbly clay shale. Core loss 3%.											
	64		4.9	0.1											
	66														
771.3	68				Coal, black, brittle, hard, vitreous luster, laminated, broken. Core loss 2%.										
768.4	70		7.8	0.7	Shale, gray, firm, very carbonaceous, with sandstone laminae, wavy clevage planes, fissile and black 71.0 to 74.0. Core Loss 3%.										
	72														
766.3					℄ BOTTOM OF BORING										

Minor artesian condition encountered between elevations 780 to 760 feet.

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. TUS-36-
RAMP J OVER BIG STILLWATER CREEK
SEC. TUS-36-16.63

BORING DATA

TYPED BY	CHECKED BY	REVIEWED BY	DATE
JAC	FLP	FDR	9-20-63

59
60

TUS-35-16.63

LOG OF BORING SS

Date Started 7-16-63
Date Completed 7-17-63
Boring No. B-10

Sampler Type — Dia. 1 3/8"
Casing: Length 30' Dia. 3 1/2"
Station & Offset 17+51, 20' Lt., (FORWARD ABUTMENT) Surface Elev. 847.5'

Water Elev.

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
847.5	0								V	I	S	U	*A	L	
845.0	2	3/3			Brown Cinders and Brickbats										
842.5	4	2/2			Brownish-Gray Sandy Silt, Trace of Organic	2	0	2	32	37	29	NP	NP	23	
840.0	6	2/4			Gray Sandy Silt	3	32	0	0	44	24	26	6	27	
837.5	8	2/2			Brownish-Gray Sandy Silt, Trace of Organic	4	15	4	17	36	28	26	9	33	
835.0	10	2/3			Brownish-Gray Sandy Silt	5	0	4	30	33	33	27	6	29	
832.5	12	2/3			Brownish-Gray Sandy Silt, Trace of Organic	6	0	7	17	45	31	NP	NP	29	
830.0	14	3/2			Brown Silty Gravelly Sand	7	24	17	46	13	NP	NP	NP	24	
827.5	16	4/5			Brown Silty Gravelly Sand	8	20	18	39	14	9	NP	NP	23	
822.5	18	5/6			Gravelly Sandy Clay	9	0	1	36	11	52	32	12	18	
817.5	20	5/9			Gray Silt	10	0	0	5	48	47	24	6	24	
812.5	22	5/8			Gray Clayey Silt	11	0	0	10	33	57	29	7	28	
807.5	24	7/8			Gray Silt	12	0	2	4	54	40	29	8	32	
802.5	26	7/8			Gray Silt	13	0	0	5	41	54	27	5	32	
797.5	28	8/8			Gray Clayey Silt	14	0	0	3	30	67	31	10	26	
792.5	30	10/11			Gray Silt	15	0	0	10	61	29	NP	NP	29	
787.5	32	9/11			Gray Sandy Silt, Trace of Organic	16	0	1	22	58	19	NP	NP	26	
782.5	34	8/13			Gray Sandy Silt, Slightly Organic	17	0	9	42	31	18	NP	NP	32	
777.5	36	8/11			Gray Silt, Trace of Organic	18	0	1	6	68	25	NP	NP	29	
772.5	38	9/12			Gray Sandy Silt	19	0	1	26	49	24	NP	NP	24	
767.5	40	9/11			Gray Silt	20	0	3	16	49	32	NP	NP	28	
762.5	42	12/12			Gray Silt	21	0	4	14	50	32	NP	NP	29	
757.5	44	14/19			Gray Silty Sand	22	0	13	58	12	17	NP	NP	25	
752.5	46	7/11			Gray Silt	23	0	1	10	49	40	25	5	25	
747.5	48														
746.5	50	8/11			Gray Clayey Silt	24	0	3	17	44	36	29	6	32	
	52				BOTTOM OF BORING										

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. TUS-35-
RAMP J OVER BIG STILLWATER CREEK
SEC. TUS-35-16.63

BORING DATA

TYPED BY	CHECKED BY	REVIEWED BY	DATE
J.A.C.	K.L.R.	R.O.P.	9-20-63

MICROFILMED
FEB 28 1969

Test Location No ____
Station & Offset ____
Surface Elev ____ Water Elev ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

Test Location No ____
Station & Offset ____
Surface Elev ____ Water Elev ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

Test Location No 1
Station & Offset 15+98, 17' RT REAR ABUTMENT
Surface Elev 840.5' Water Elev ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

Test Location No 2
Station & Offset 15+98, 20' LT REAR ABUTMENT
Surface Elev 840.0 Water Elev ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

Test Location No 3
Station & Offset 16+39, 17' RT REAR PIER
Surface Elev 839.2' Water Elev ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

Test Location No 4
Station & Offset 16+35, 20' LT REAR PIER
Surface Elev 838.9' Water Elev ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

Test Location No 9
Station & Offset 17+46, 17' RT FORWARD
Surface Elev 847.8' + Water Elev ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

Test Location No 10
Station & Offset 17+51, 20' LT FORWARD ABUTMENT
Surface Elev 847.8' Water Elev ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

60
60

TUS-36-16.63

851 847 843 839 835 831 827 823 819 815 811 807 803 799 795 791 787

TEST ROD

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST., COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO TUS-36-
RAMP J OVER BIG STILLWATER CR.
SEC TUS-36-16.63

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
RC	RLC	ROP	8-20-68