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

1/21

TUSCARAWAS COUNTY
TUS-259-0.00

AUG 29 1963
GROUND PHOTOLAB

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

TUS-259-0.00
TUSCARAWAS COUNTY

GOSHEN TOWNSHIP

CONVENTIONAL SIGNS

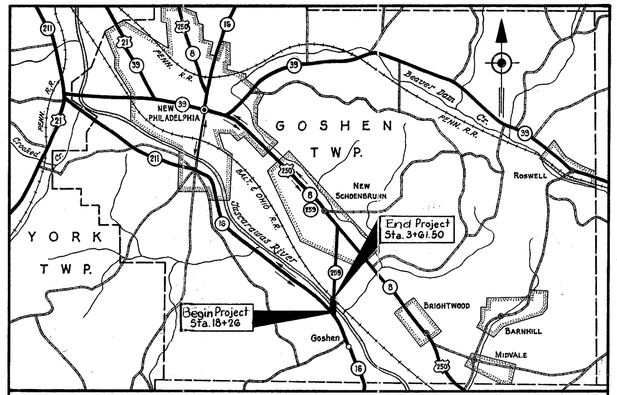
Township Line
Center Line of Road
Street Line
Property Line — PL
Existing Right of Way
Right of Way Only — RW
Corporation Line
Limits of Cut or Fill
Slope Easement — SL
Building
Tree
Stream
Guard Rail — New
Power Pole
Telephone Pole
Fire Hydrant
Fence Line

INDEX OF SHEETS

Title Sheet	1
Typical Section, General Notes, Quantities & General Summary	2
Plan & Profile	3-4
Cross Sections	5-14
Structures Over 20'	15-20
Right of Way Plan	21

LINE DATA

End Project	Sta. 3+61.50
Begin Project	Sta. 18+26
Net Length of Project	1464.5 Lin. Ft. or 0.277 Miles
End Work	Sta. 3+61.50
Begin Work	Sta. 18+26
Net Length of Work	1464.5 Lin. Ft. or 0.277 Miles



Delivery Point New Philadelphia, Ohio
Average Haul from Siding 3.5 Miles

LOCATION PLAN

SCALE OF MILES
0 1 2 3

Portion to be improved
Other Roads
Detours

SCALE:

Plan:	1" = 30'
Profile: Horizontal	1" = 30'
Profile: Vertical	1" = 5'

The Standard Specifications of The State of Ohio, Department of Highways, including changes and Supplemental Specifications listed in the proposal shall govern this improvement.

I hearby approve these plans and declare the making of this improvement will require the closing of the highway to traffic, except as noted on Sheet 2 and that detours will be provided as indicated on the plans.

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

Approved Wm. G. McKenna
Date 10-6-60 Division Deputy Director

OK
H.B.17
10-31-60

Approved Guy E. Tueper
Date 11-8-60 Deputy Director of Planning and Programming

Approved D. H. Berman
Date 10-27-60 Engineer of Bridges

Approved [illegible]
Date 10-31-60 Engineer of Location and Design

Approved C. W. McCaughey
Date 10-31-60 Deputy Director of Design and Construction

Approved G. A. Berry
Date 11-8-60 First Assistant Director

Approved [illegible]
Date 11-8-60 Director of Highways

AUG 29 1963
GROUND PHOTOLAB

Plans Prepared by
MICHAEL BAKER, JR.
Consulting Engineers
Rochester, Pennsylvania

STATE OF OHIO
Michael Baker, Jr.
No. 9065
REGISTERED
PROFESSIONAL ENGINEER

Supplemental Prints of Standard Construction Drawings					
G-7.07	6-1-56	L-3-A	4-1-50	AS-1-54	12-1-54
I-15 No.1	5-21-59	RI-1	7-15-58	CSB-2-56(1,2&3)	2-2-59
I-15 No.2A	8-17-60	T-35	1-2-56	L-1	4-1-50
L-3	4-1-50	RB-1-55	2-2-59		

Supplemental Specifications	
S-101	12-2-59

FILE NO.	TUSCARAWAS COUNTY TUS-259-0.00
	DATE OF LETTING 196
	CONTRACT NO.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

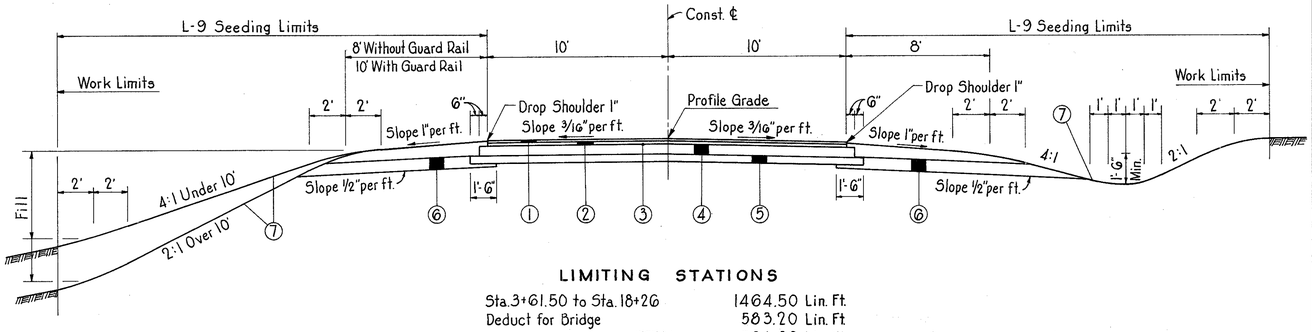
2/21

TUSCARAWAS COUNTY
TUS-259-0.00

TYPICAL SECTION & SUMMARY OF QUANTITIES

TYPE T-35 ON B-19

Scale: 1/4" = 1'-0"



LIMITING STATIONS

Sta. 3+61.50 to Sta. 18+26	1464.50 Lin. Ft.
Deduct for Bridge	583.20 Lin. Ft.
TOTAL	881.30 Lin. Ft.

① T-35 1¼" Asphaltic Concrete Surface Course, Type C (85-100)
② B-35 1¾" Asphaltic Concrete Leveling Course (85-100)
③ T-30 Bituminous Prime Coat; Sec. M-5.7, RT-2 or RT-3 applied at the rate of 0.40 gal. per Sq. Yd.
④ B-19 6" Aggregate Base Course
⑤ I-22 5" Subbase
⑥ I-9 Stone Underdrain (No. 2)
⑦ L-9 Seeding & Protecting Roadway Areas

GENERAL SUMMARY

SHEET NO. 3	SHEET NO. 4	CALC.	ITEM TYPE	QUAN.	UNIT CODE	DESCRIPTION
						ROADWAY
		2620	E-1	2620	Cu.Yds.	Roadway Excavation, Method A
		2314	E-1	2314	Sq.Yds.	Compacted Subgrade
		12,931	E-1	12,931	Cu.Yds.	Embankment, Method 'A'
		891	E-8	891	Sq.Yds.	Removal and Disposal of Existing Pavement, as per Plan.
Lump	Lump		E-9	Lump	Lump	Removal of Trees and Stumps
		69	E-11	69	M.Gal.	Water
1	2		I-8	3	Each	Monument Assemblies, Standard
608.76	657.34		I-15	1296.10	Lin.Ft.	Guard Rail Steel Beam, Standard Type, Deep
608	992		I-15	1600	Lin.Ft.	Guard Rail Removed and Disposed of
		4.81	L-9	4.81	Tons	Agricultural Liming Material
		10,692	L-9	10,692	Sq.Yds.	Seeding and Protecting
		0.96	L-9	0.96	Tons	Commercial Fertilizer (12-12-12)
						DRAINAGE
Lump			S-24	Lump	Lump	Removal of Existing Structure
		450	I-9	450	Lin.Ft.	Stone Underdrain No. 2
						PAVEMENT
		107	B-35	107	Cu.Yds.	Asphaltic Concrete Leveling Course (85-100)
		384	B-19	384	Cu.Yds.	Aggregate Base Course
		111	I-7	111	Sq.Yds.	Reinforced Concrete Approach Slab, T=13"
		350	I-22	350	Cu.Yds.	Subbase
		921	T-30	921	Gal.	Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3
		76	T-35	76	Cu.Yds.	Asphaltic Concrete Surface Course, Type C (85-100)
				Lump	Lump	Construction Layout Stakes
						STRUCTURES OVER 20' SPAN
						Bridge No. TUS-259-0011 (See Sheet No. 16)

GENERAL NOTES CONT'D

PAVEMENT REMOVAL OUTSIDE NORMAL CONSTRUCTION LIMITS:

After the existing pavement has been removed, the old roadway shall be plowed, harrowed and dragged to a smooth grade 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 Item E-8, Removal and Disposal of Existing Pavement. Seeding shall be measured and paid for in accordance with Item L-9.

STONE UNDERDRAINS:

No. 2 Stone Underdrains shall be constructed at 50 ft. intervals on both sides of the pavement. Additional underdrains may be required and shall be constructed at locations determined by the Engineer. An estimated quantity of 450 Lin. ft. has been included in the General Summary. In the final finishing of slopes care shall be exercised to assure that the exposed edges of the underdrains will be left free of earth cover that would impede free drainage.

LIMITATION OF DETOUR.

The detour shown on Sheet 1 shall not be placed into effect prior to May 1, 1961, unless otherwise approved by the Director. Maximum use shall be made of the existing pavement and structure for maintenance of traffic, holding the period of use of the detour to a minimum.

QUANTITIES

Sta. 3+61.50 to Sta. 6+93.40 = 331.90 Lin. Ft.
Sta. 12+76.60 to Sta. 17+25 = 448.40 Lin. Ft.
Sta. 17+25 to Sta. 18+26 = 101.00 Lin. Ft.

T-35 1¼" Asphaltic Concrete Surface Course
331.90 × 20 × .104 ÷ 27 = 25.57 Cu. Yds.
448.40 × 20 × .104 ÷ 27 = 34.54 Cu. Yds.
4217.4 × .104 ÷ 27 = 16.25 Cu. Yds
Total = 76.36 Cu. Yds. — Use 76 Cu. Yds.

B-35 1¾" Asphaltic Concrete Leveling Course
331.90 × 20 × .146 ÷ 27 = 35.89 Cu. Yds.
448.40 × 20 × .146 ÷ 27 = 48.49 Cu. Yds.
4217.4 × .146 ÷ 27 = 22.81 Cu. Yds.
Total = 107.19 Cu. Yds. — Use 107 Cu. Yds.

T-30 0.40 Gal. per Sq. Yd. Bituminous Prime Coat
331.90 × 21 ÷ 9 × 0.40 = 309.77 Gal.
448.40 × 21 ÷ 9 × 0.40 = 418.50 Gal.
4336.4 ÷ 9 × 0.40 = 192.73 Gal.
Total = 921.00 Gal. — Use 921 Gal.

B-19 6" Aggregate Base Course
331.90 × 21 × .50 ÷ 27 = 129.07 Cu. Yds.
448.40 × 21 × .50 ÷ 27 = 174.38 Cu. Yds.
4336.4 × .50 ÷ 27 = 80.30 Cu. Yds.
Total = 383.75 Cu. Yds. — Use 384 Cu. Yds.

I-22 5" Subbase
331.90 × 22 × .416 ÷ 27 = 112.50 Cu. Yds.
448.40 × 22 × .416 ÷ 27 = 151.99 Cu. Yds.
4455.4 × .416 ÷ 27 = 68.65 Cu. Yds.
50 × 22 × .416 ÷ 27 = 16.95 Cu. Yds. — Use 350 Cu. Yds.
Under Appr. Slab
Total 350.09 Cu. Yds.

I-9 Stone Underdrain (No. 2) — Use 450 Lin. Ft.

I-7 13" Reinforced Concrete Approach Slab
(25 × 20 ÷ 9) × 2 = 111.1 Sq. Yds. — Use 111 Sq. Yds.

E-11 Water
B-19 = 384 Cu. Yds.
Embankment = 12,931 Cu. Yds.
I-22 = 350 Cu. Yds.
Total = 13,665 Cu. Yds.
13,665 × 5 ÷ 1000 = 68.33 M. Gal. — Use 69 M. Gal.

L-9 Agriculture Liming Material
Area Seeded Under L-9 = 9232 Sq. Yds.
Area Seeded Under L-9
Sta. 4+85 to Sta. 8+77, Existing S.R. 259 = 1414 Sq. Yds.
Area Seeded Under L-9
Sta. 3+78 to Sta. 4+16, Existing S.R. 16 = 46 Sq. Yds.
Total = 10,692 Sq. Yds. or 96,228 Sq. Ft.
96,228 × 100 ÷ 1000 = 9622.8 lbs. — Use 4.81 Tons

L-9 Commercial Fertilizer (12-12-12)
Total Area Seeded Under L-9 = 96,228 Sq. Ft.
96,228 × 20 ÷ 1000 = 1924.56 lbs. — Use 0.96 Tons

E-1 Embankment
Roadway Embankment S.R. 259 = 12,878 Cu. Yds.
Roadway Embankment S.R. 16 = 53 Cu. Yds.
Total = 12,931 Cu. Yds.
Roadway Excavation S.R. 259 = 2613 Cu. Yds.
Roadway Excavation S.R. 16 = 7 Cu. Yds.
Total = 2620 Cu. Yds.

E-8 Removal and Disposal of Existing Pavement
Sta. 4+85 to Sta. 8+77, Existing S.R. 259
32 × 16.75 ÷ 9 = 59.56 Sq. Yds.
283 × 18 ÷ 9 = 566.00 Sq. Yds.
2385 ÷ 9 = 265.00 Sq. Yds.
Total = 890.56 Sq. Yds. — Use 891 Sq. Yds.

E-1 Compacted Subgrade
Sta. 3+61.50 to Sta. 7+18.40 = 356.9 Lin. Ft.
Sta. 12+51.60 to Sta. 17+25 = 473.4 Lin. Ft.
Sta. 17+25 to Sta. 18+26 = 101.0 Lin. Ft.
356.9 + 473.4 = 830.3 × 20 ÷ 9 = 1845.11 Sq. Yds.
4217.4 ÷ 9 = 468.60 Sq. Yds.
Total = 2313.71 Sq. Yds. — Use 2314 Sq. Yds.

GENERAL NOTES

FIELD OFFICE

The Contractor shall provide a suitable Field Office for the exclusive use of State employees, in accordance with Sec. S-0.01(b), having a minimum of 300 square feet of floor space. The Contractor shall have installed and shall maintain in the Field Office during the construction of this project a telephone and a 110 volt electrical circuit with suitable outlets for office equipment. Field Office will be furnished within 10 days after Contractor begins operations.

DESIGN SPEED

The geometrics for this project have been planned for a design speed of 50 miles per hour.

UTILITIES

The Contractor shall notify at least 48 hours before breaking ground all Public Service Corporations having wire, poles, pipe, conduits, manholes or other structures that may be affected by this operation, including all structures which are affected and not shown these plans. Any and all work required for public or private utilities will be done by and at the expense of their respective owners.

ROUNDING OF CORNERS ON CROSS SECTIONS

The rounded corners shown on the typical section apply to all cross sections even though otherwise shown in these plans.

ELEVATION DATUM

All elevations are based on U.S.G.S. datum.

MAINTENANCE OF TRAFFIC

State Route 259 will be closed to traffic during the construction of the bridge, approach slabs and roadway. The Contractor shall erect and maintain barricades, red lights and danger signals in accordance with Sec. G-7.07 of the Construction and Materials Specifications.

CROWN AT RAILROAD CROSSING:

The crown shall be worked out of the pavement beginning 50 feet south of the railroad crossing by raising the edge of the pavement to meet the rail elevation.

CONSTRUCTION LAYOUT STAKES

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

REMOVAL OF TREES AND STUMPS

The number and size of trees and stumps shown below for removal under the construction as detailed on these plans are as nearly correct as available information permits. The State of Ohio will not be responsible for any variations found during the construction. The lump sum bid for Item E-9, Removal of Trees and Stumps, shall constitute full payment for this item and no additional compensation will be allowed. The number and size of trees and stumps are estimated as follows: 12"-18" (74) 18"-24" (18) 24"-30" (12) 30"-36" (1).

REMOVAL OF EXISTING STRUCTURE:

When no longer needed to maintain traffic the existing structure at Sta. 5+51 shall be removed and disposed of in accordance with Item S-24.

NON-RIGID PAVEMENT REMOVAL

Removal and disposal of existing non-rigid pavement, unless otherwise indicated on these plans, shall be measured and paid for as Item E-1, Roadway Excavation.

SEEDING

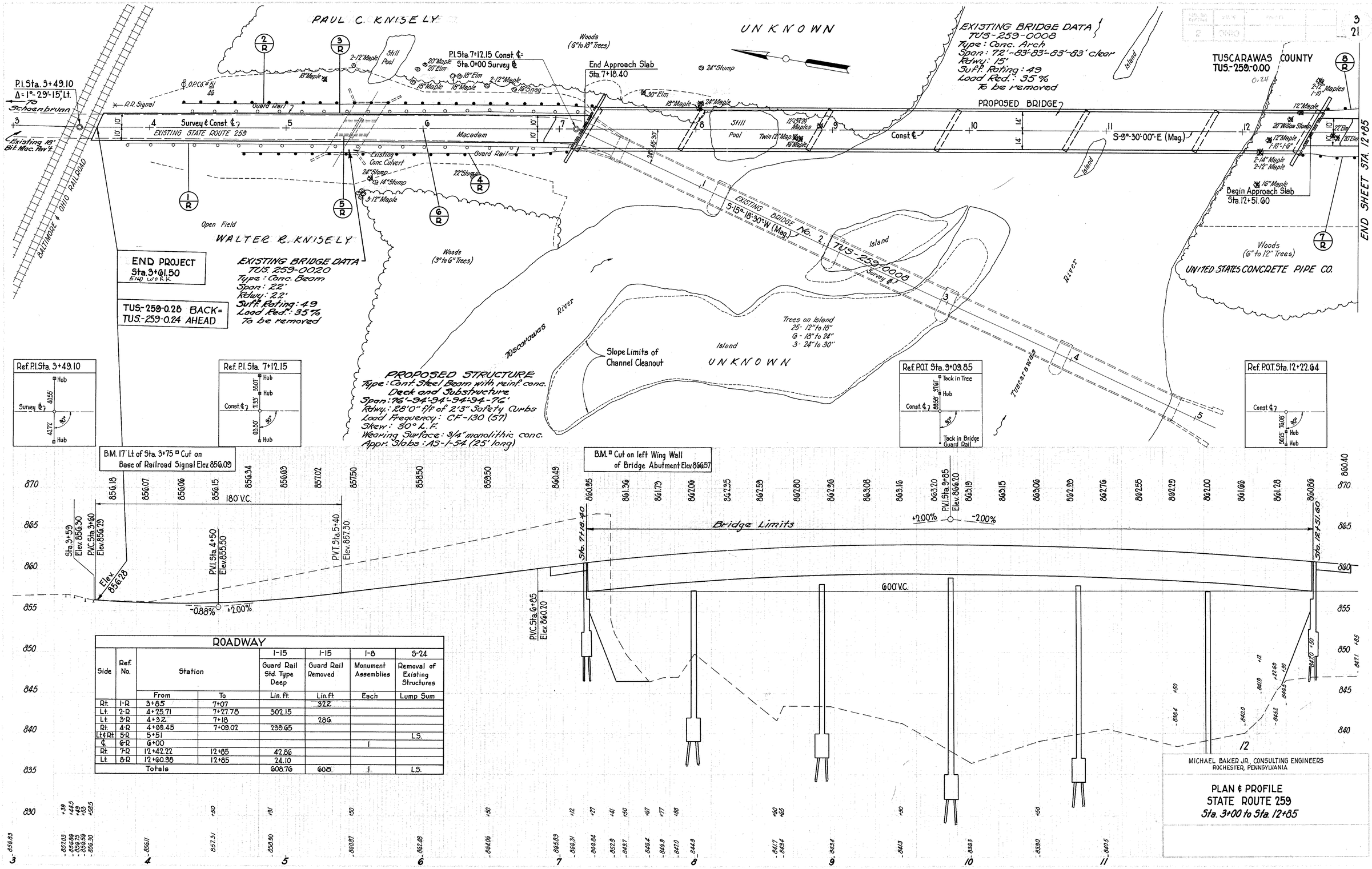
Quantities for seeding are calculated for the soil areas between the work limits, as shown on the cross sections.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

TYPICAL SECTION, GENERAL NOTES, QUANTITIES & GENERAL SUMMARY
STATE ROUTE 259
OVER TUSCARAWAS RIVER

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

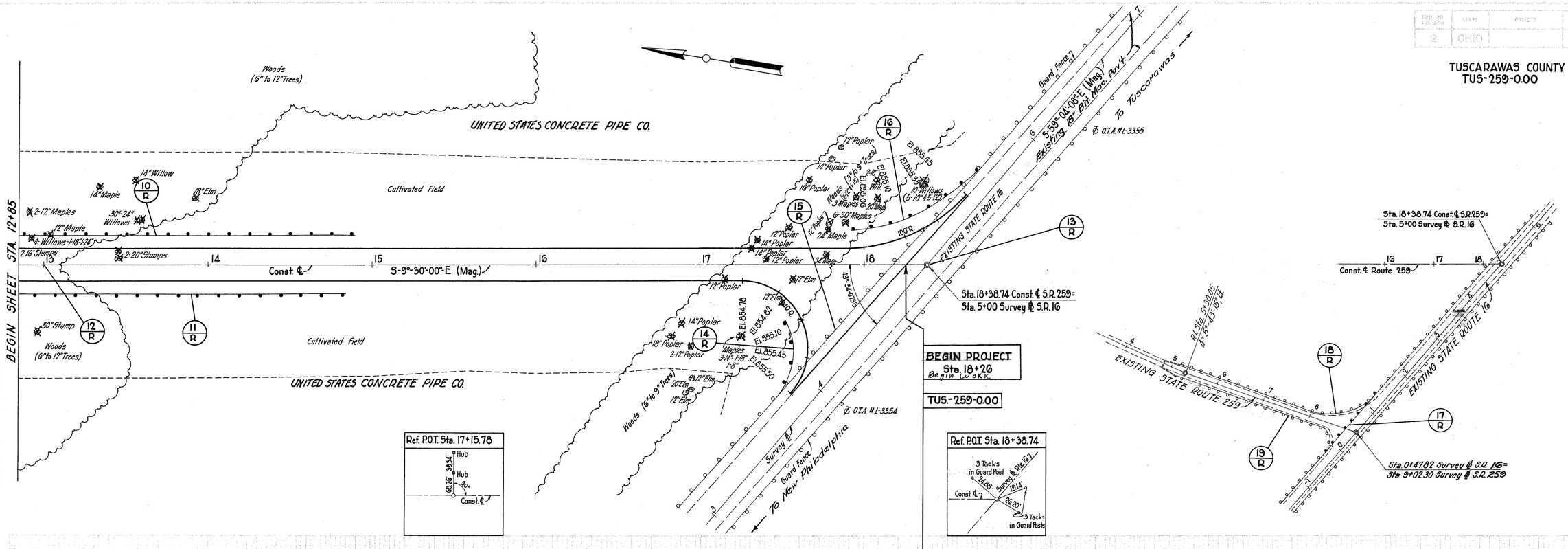
BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-39921-1



ROADWAY

Side	Ref. No.	Station From	Station To	I-15 Guard Rail Std. Type Deep (Lin. ft.)	I-15 Guard Rail Removed (Lin. ft.)	I-8 Monument Assemblies (Each)	S-24 Removal of Existing Structures (Lump Sum)
Rt.	1-R	3+85	7+07		322		
Lt.	2-R	4+25.71	7+27.78	302.15			
Lt.	3-R	4+32	7+18		286		
Rt.	4-R	4+69.45	7+09.02	239.65			
Lt. & Rt.	5-R	5+51					L.S.
℄	6-R	6+00				1	
Rt.	7-R	12+42.22	12+85	42.86			
Lt.	8-R	12+60.98	12+85	24.10			
Totals				608.76	608	1	L.S.

TUSCARAWAS COUNTY
TUS-259-0.00



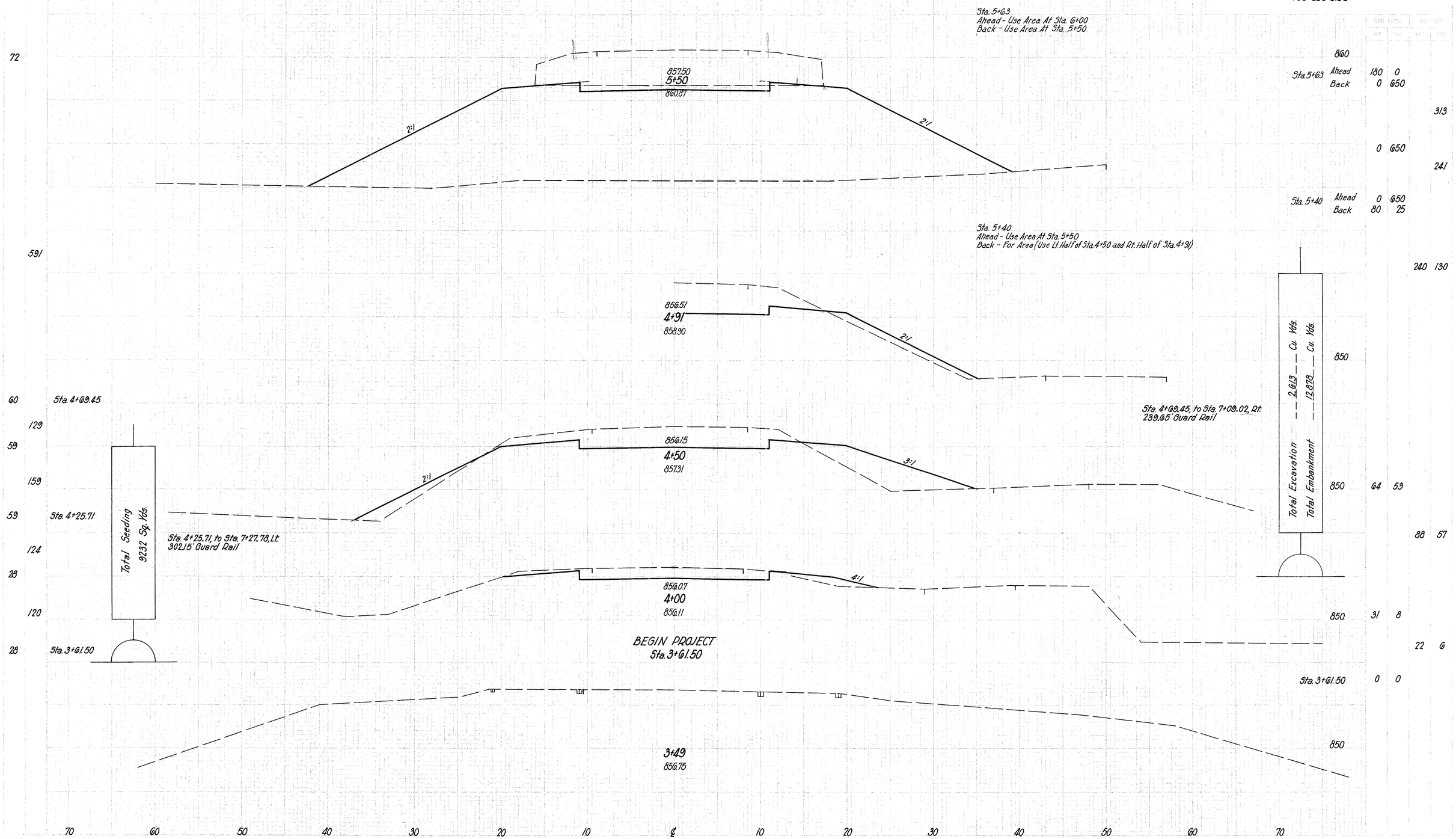
ROADWAY

Side	Ref No.	Station From	Station To	I-15 Guard Rail Std. Type Deep Lin. ft.	I-15 Guard Rail Removed Lin. ft.	I-8 Monument Assemblies Each
Lt.	10-R	12+85 S.R. 259	14+88.05 S.R. 259	203.05		
Rt.	11-R	12+85 S.R. 259	14+81.79 S.R. 259	196.79		
℄	12-R	13+00 S.R. 259				1
℄	13-R	18+38.74 S.R. 259				1
Lt.	14-R	3+77 S.R. 16	4+18 S.R. 16	50.00		
Lt.	15-R	3+77 S.R. 16	5+77 S.R. 16		200	
Lt.	16-R	4+87 S.R. 16	5+77 S.R. 16	100.0		
Lt.	17-R	0-10 S.R. 16	1+27.5 S.R. 16	137.50		
Lt.	18-R	5+17 Old S.R. 259	1+27.5 S.R. 16		422	
Rt.	19-R	5+17 Old S.R. 259	0-10 S.R. 16		370	
Totals				687.34	992	2

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

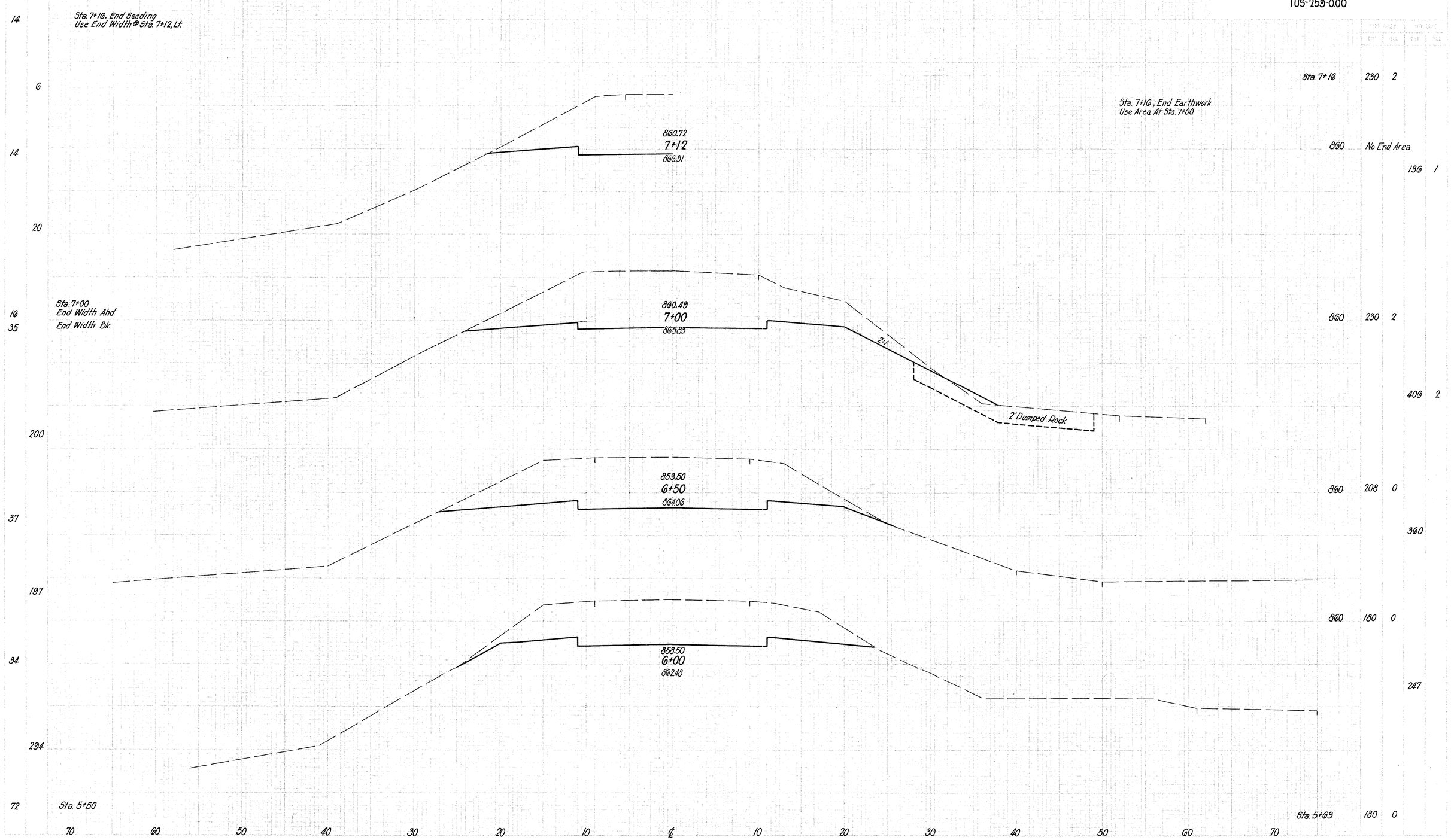
PLAN & PROFILE
STATE ROUTE 259
Sta. 12+85 to Sta. 18+26.00

TUSCARAWAS COUNTY
TUS-259-0.00

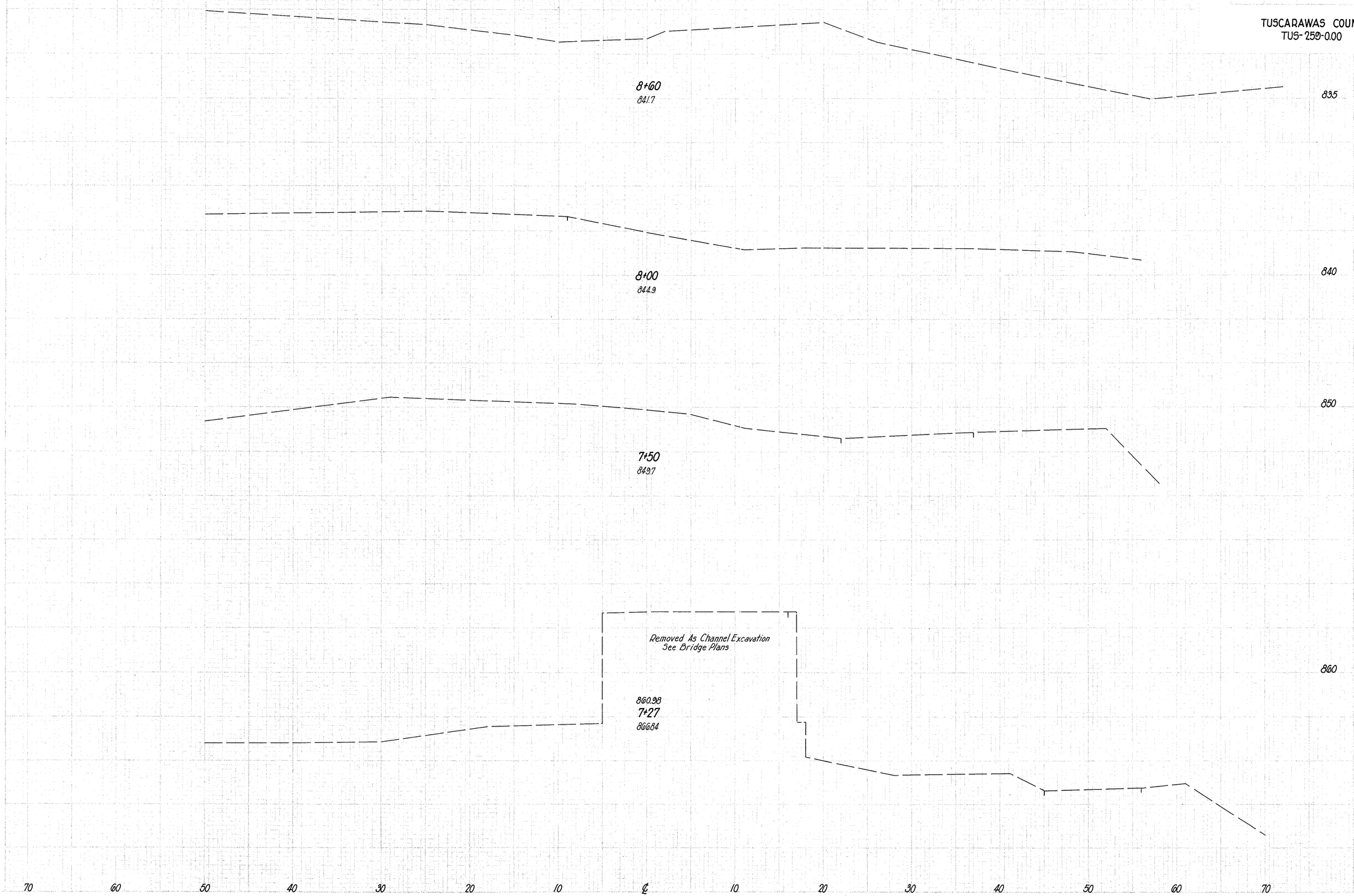


Sta. 3+49 to Sta. 5+50

TUSCARAWAS COUNTY
TUS-259-0.00

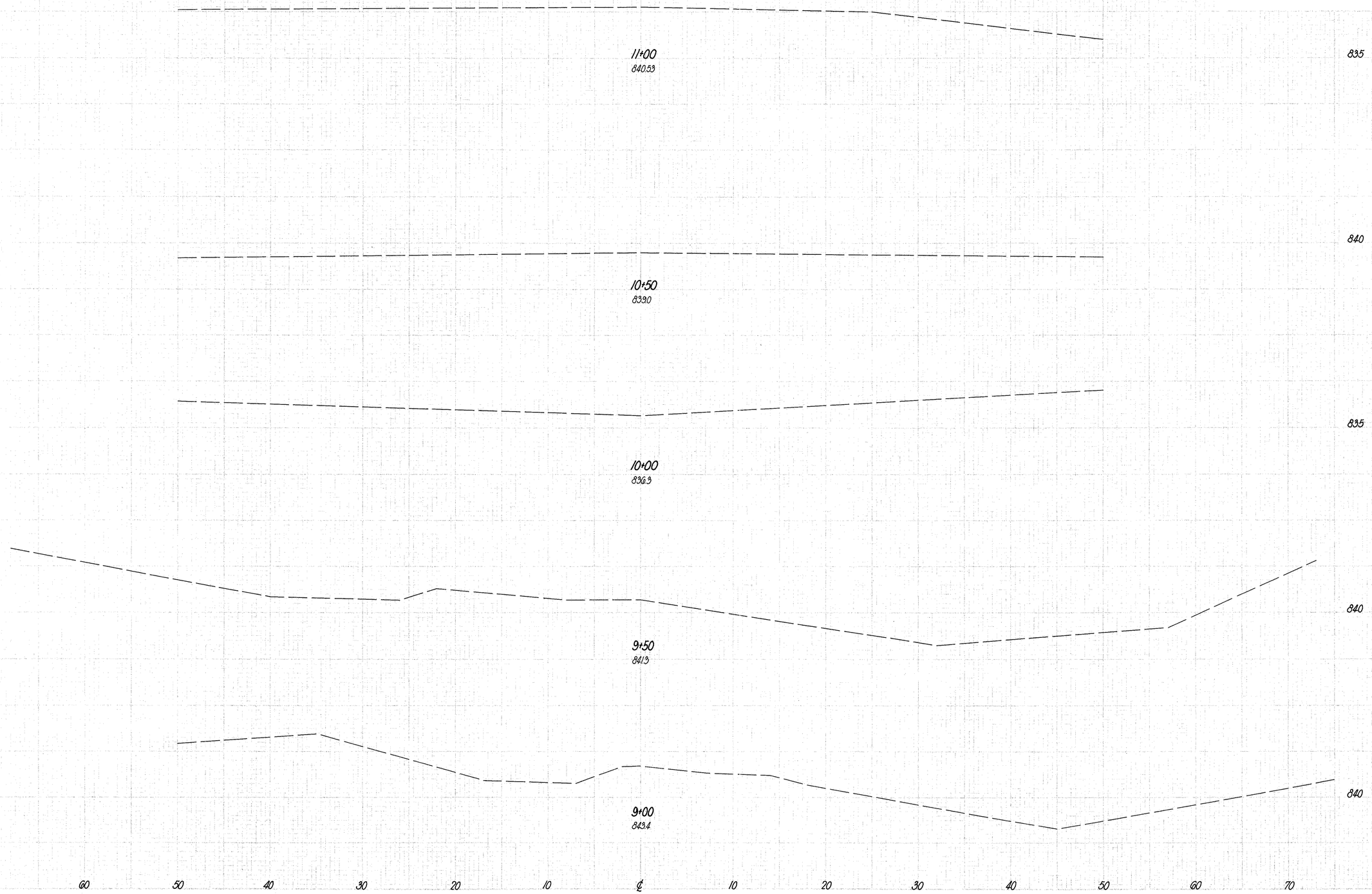


TUSCARAWAS COUNTY
TUS-259-0.00



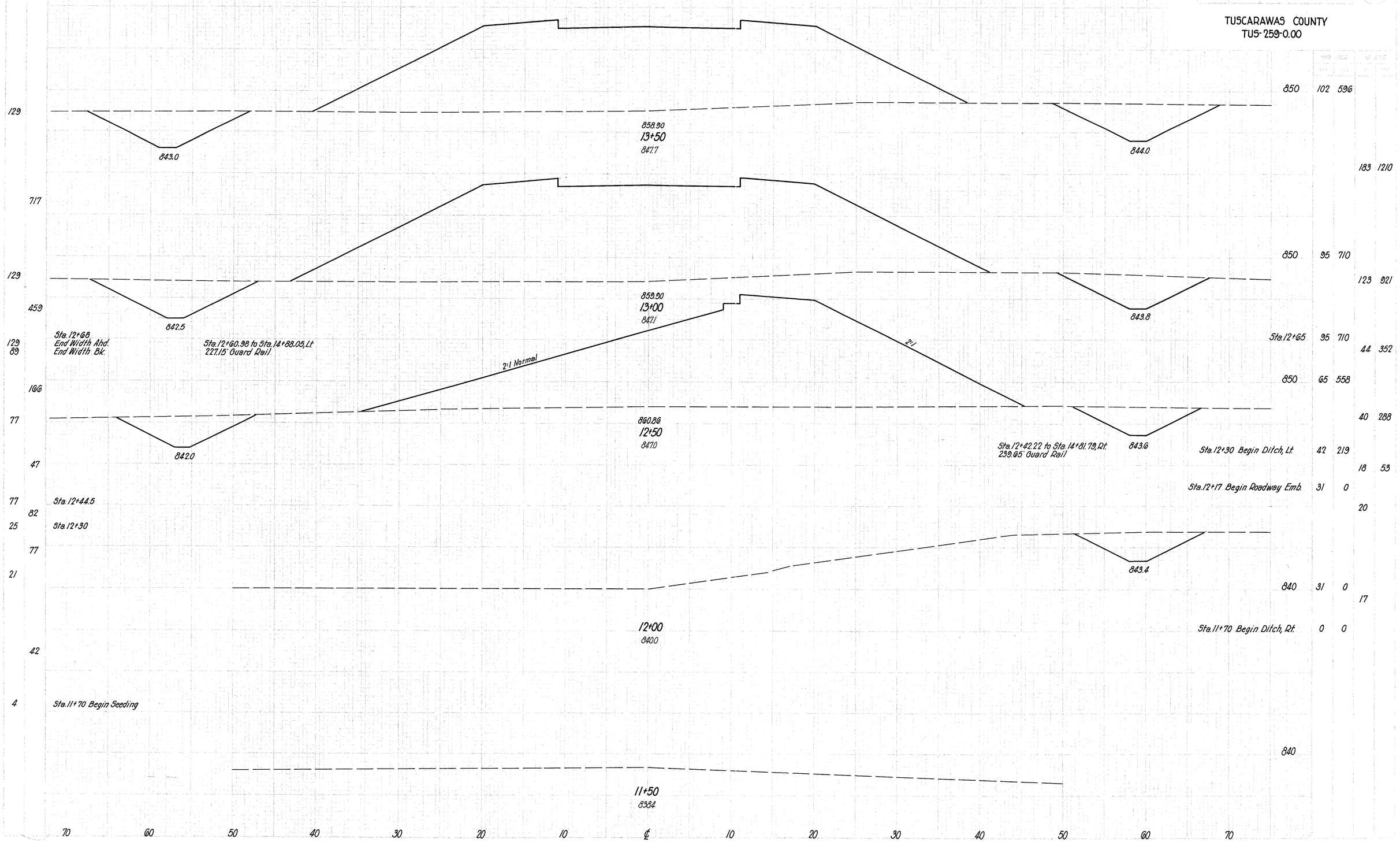
Sta. 7+27 to Sta. 8+60

TUSCARAWAS COUNTY
TUS-259-0.00



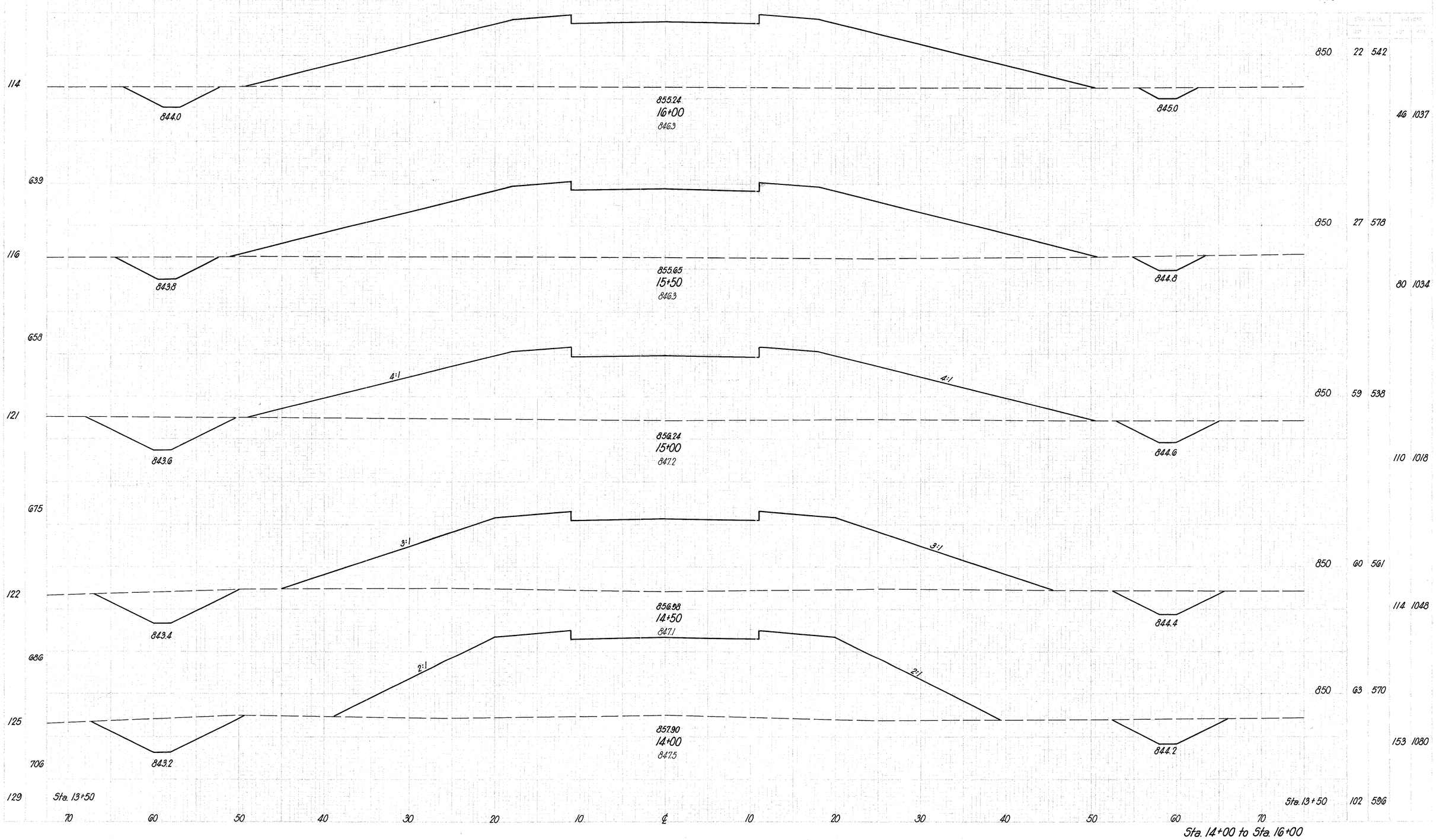
Sta. 9+00 to Sta. 11+00

TUSCARAWAS COUNTY
TUS-259-0.00

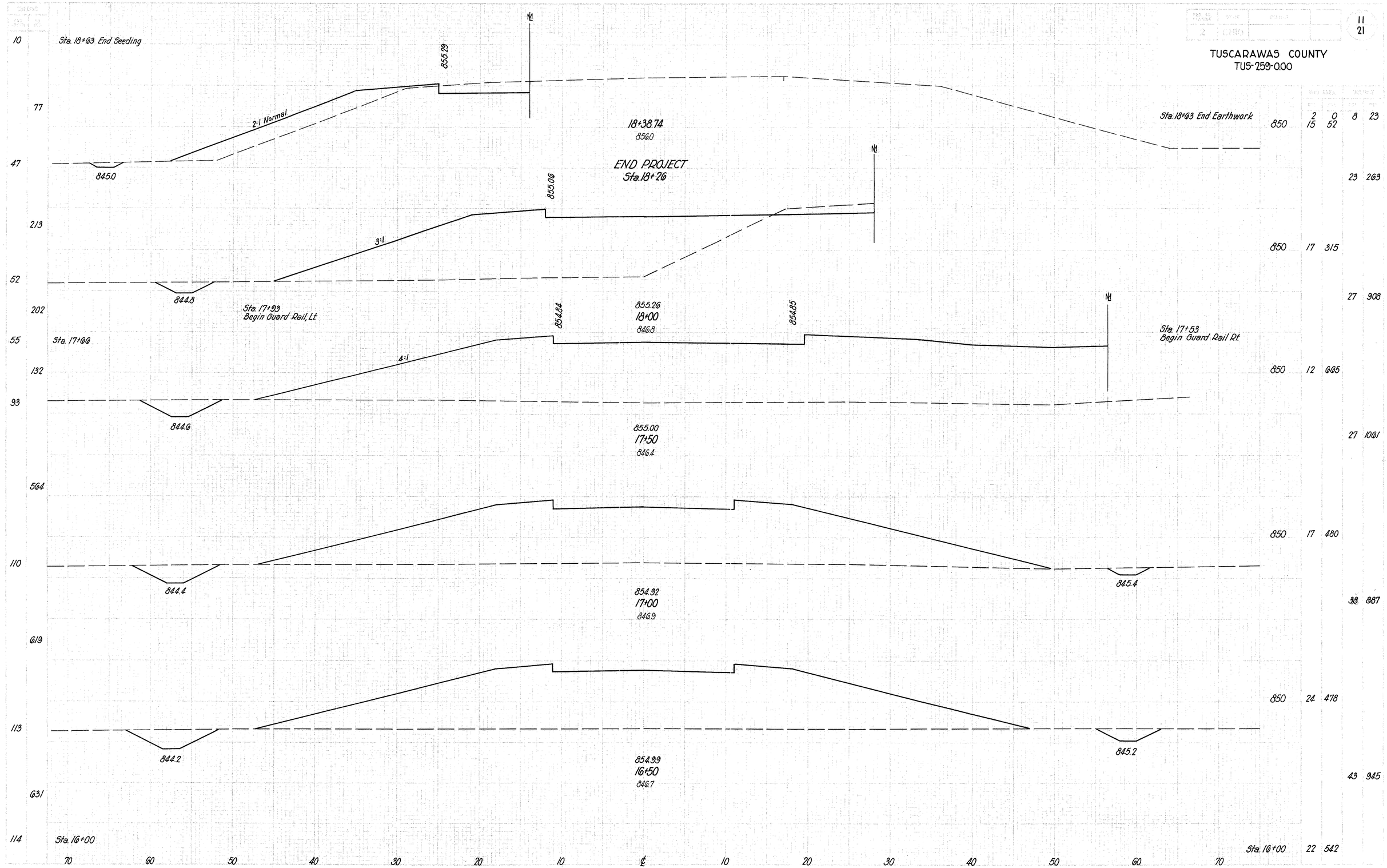


Sta. 11+50 to Sta. 13+50

TUSCARAWAS COUNTY
TUS-259-0.00

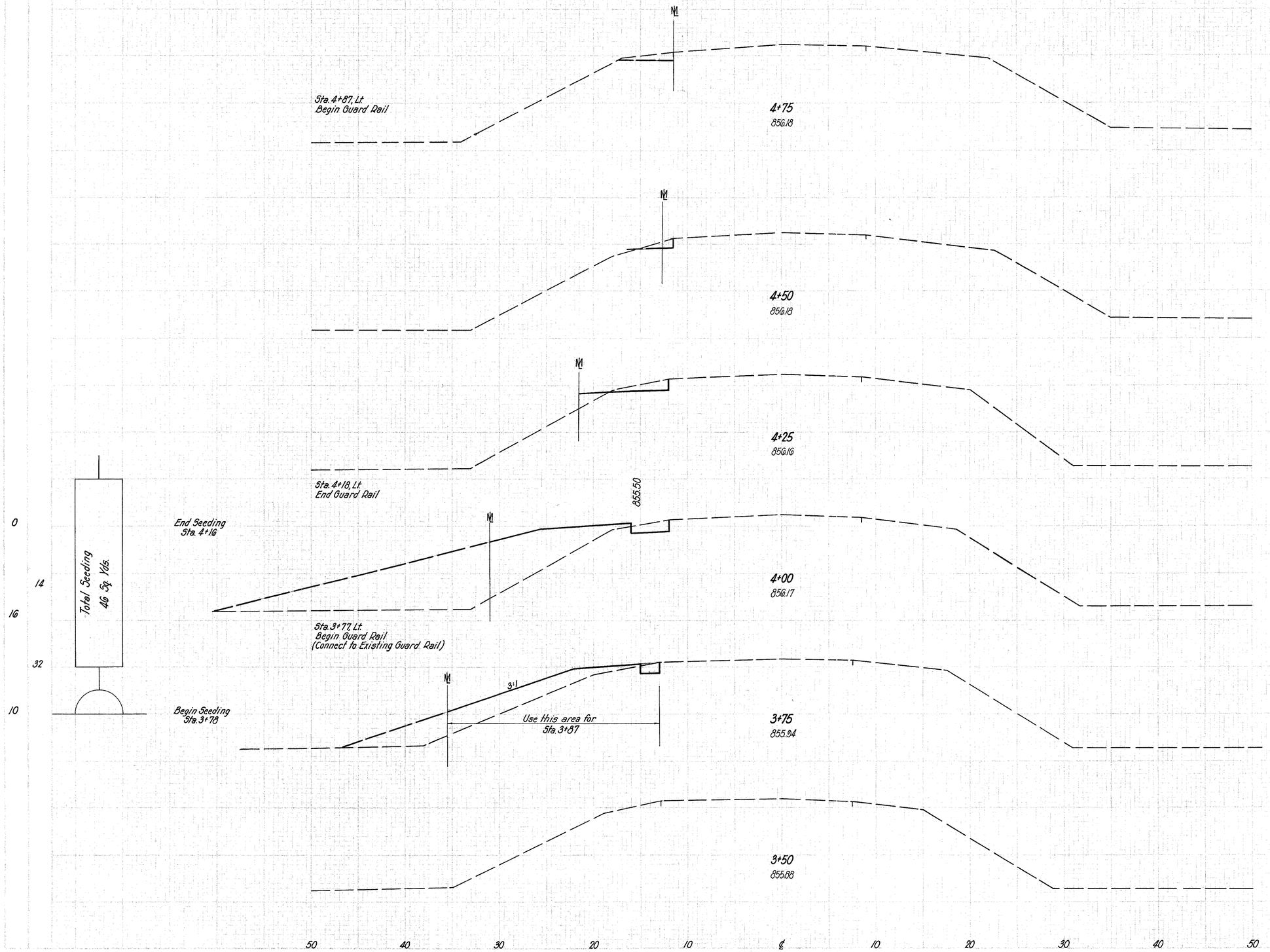


TUSCARAWAS COUNTY
TUS-259-0.00

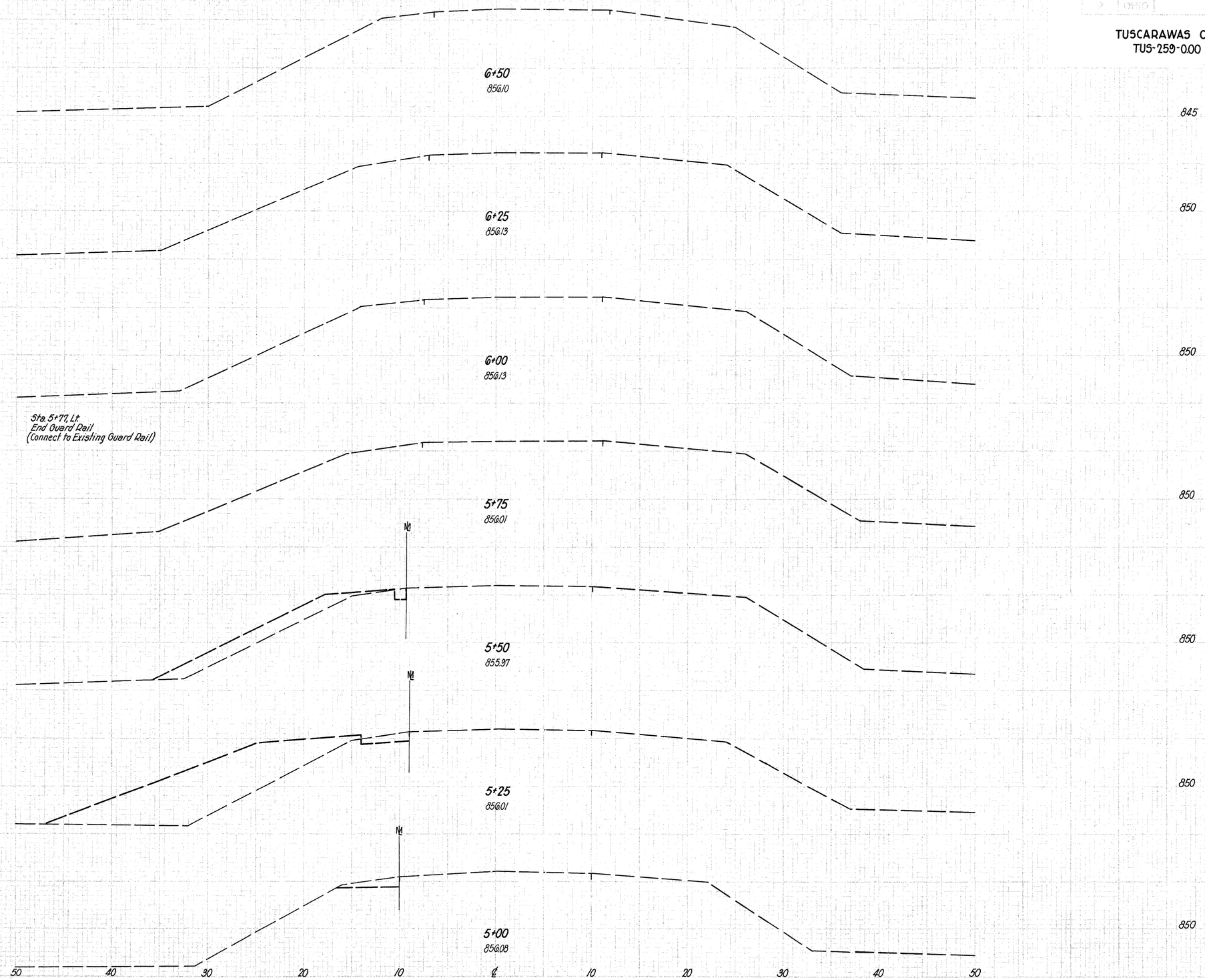


Sta. 16+50 to Sta. 18+38.74

TUSCARAWAS COUNTY
TUS-259-0.00

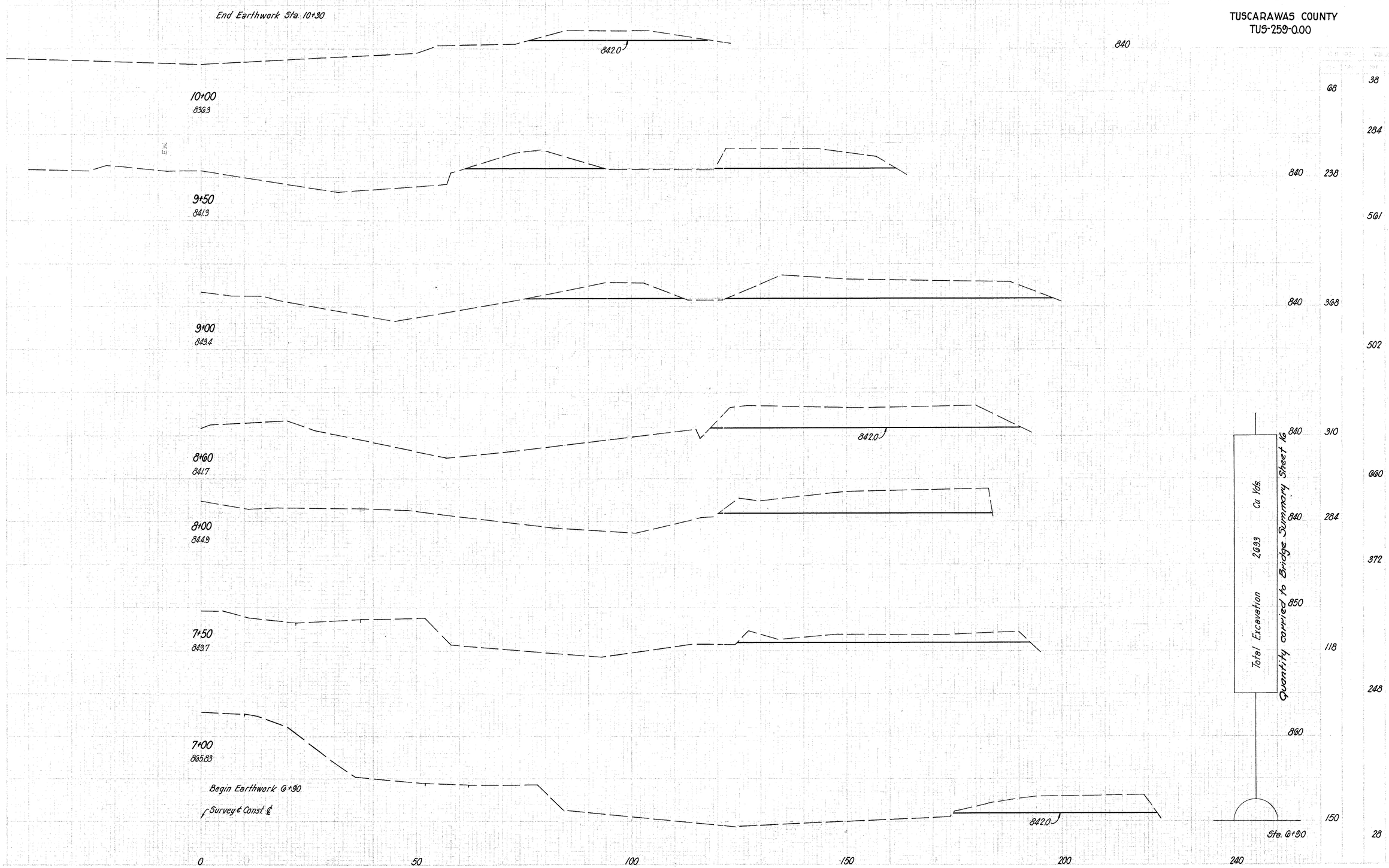


TUSCARAWAS COUNTY
TUS-259-0.00



S.R. 16 - Sta. 5+00 to Sta. 6+50

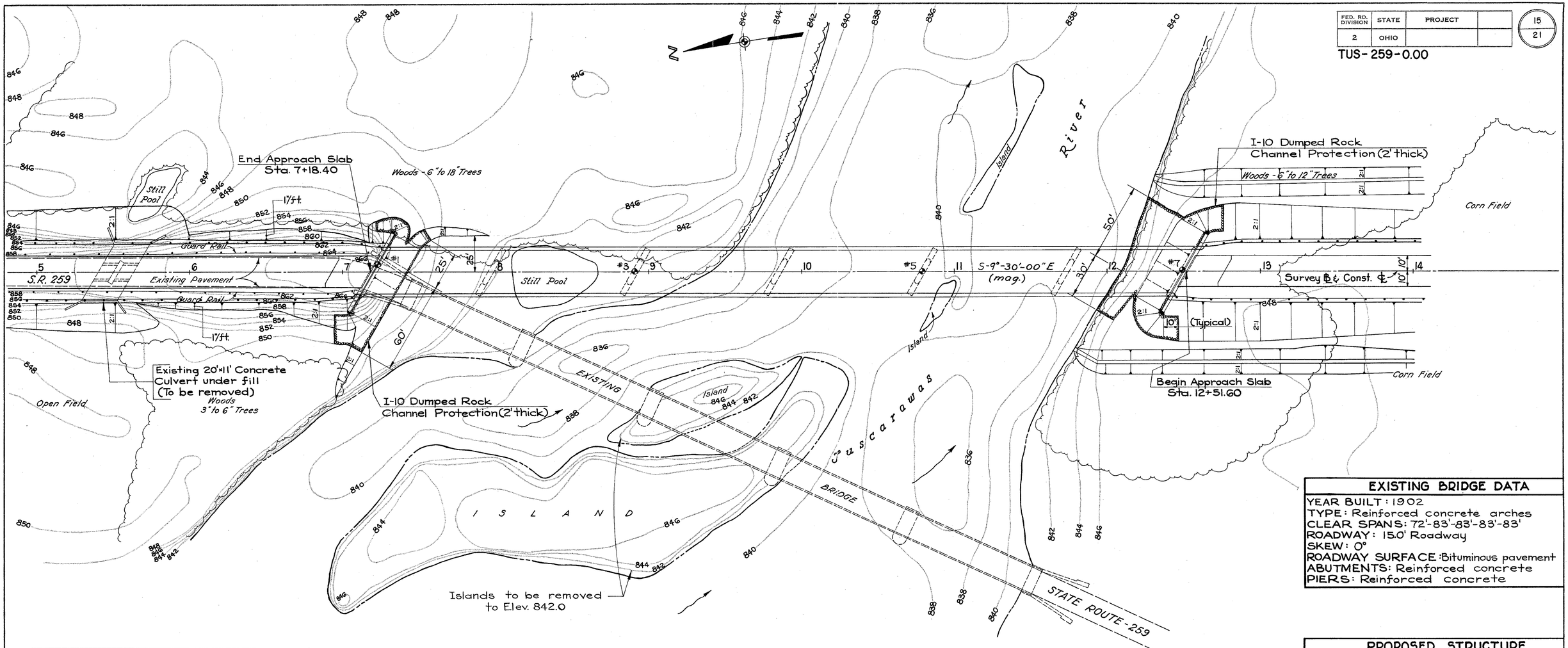
TUSCARAWAS COUNTY
TUS-259-0.00



Channel Cleanout (Island) Sta. 6+90 to Sta. 10+30

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TUS-259-0.00



EXISTING BRIDGE DATA

YEAR BUILT: 1902
TYPE: Reinforced concrete arches
CLEAR SPANS: 72'-83'-83'-83'-83'
ROADWAY: 15.0' Roadway
SKEW: 0°
ROADWAY SURFACE: Bituminous pavement
ABUTMENTS: Reinforced concrete
PIERS: Reinforced concrete

BENCH MARK

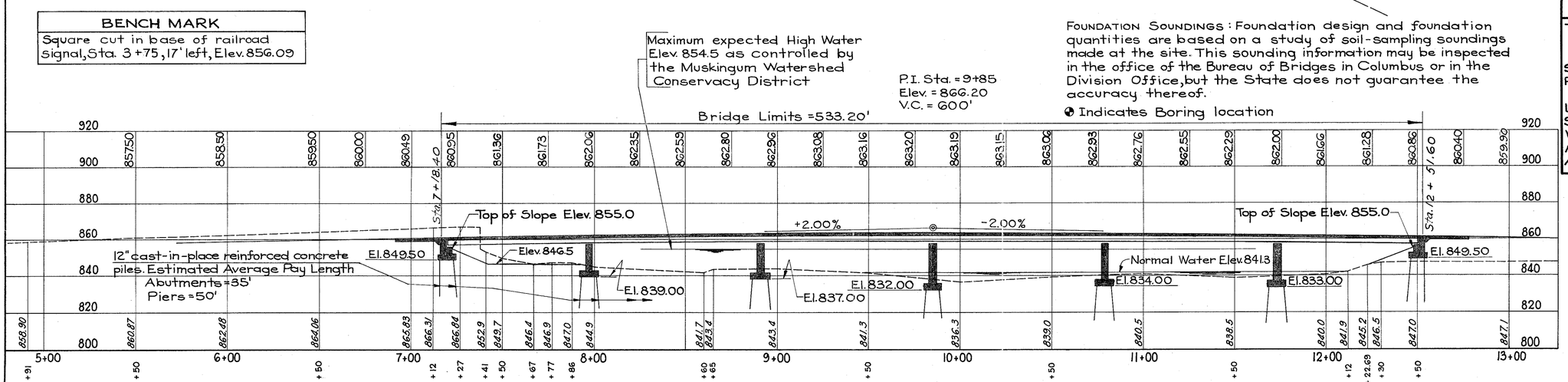
Square cut in base of railroad signal, Sta. 3+75, 17' left, Elev. 856.09

PROPOSED STRUCTURE

TYPE: 6-Span continuous steel beam with reinforced concrete deck and substructure
SPANS: 76'-94'-94'-94'-94'-76'
ROADWAY: 28'-0" curb to curb with 2'-3" safety curbs
LOAD FREQUENCY: CF 130 (57)
SKEW: 30° L.F.
WEARING SURFACE: ¾" Monolithic concrete
APPROACH SLABS: AS-1-54 (25' long)
ALIGNMENT: Tangent

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of soil-sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division Office, but the State does not guarantee the accuracy thereof.

◐ Indicates Boring location



MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SITE PLAN

BRIDGE NO. TUS.-259-0011
OVER TUSCARAWAS RIVER

TUSCARAWAS COUNTY

STA. 7+18.40
STA. 12+51.60

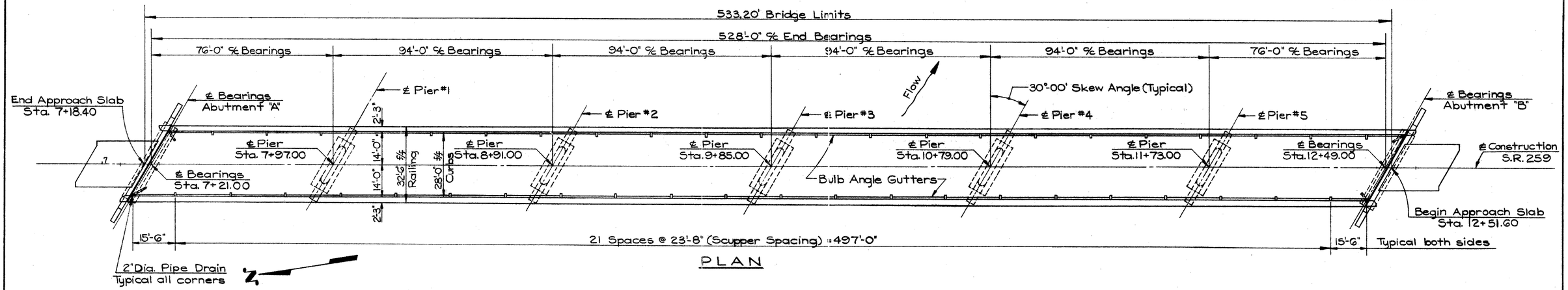
PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
M.B. Jr.	J. H.	P. M.	J. H.	E.F.R.	10-3-60

BEAVER VALLEY ENGINEERING SUPPLIES CO.

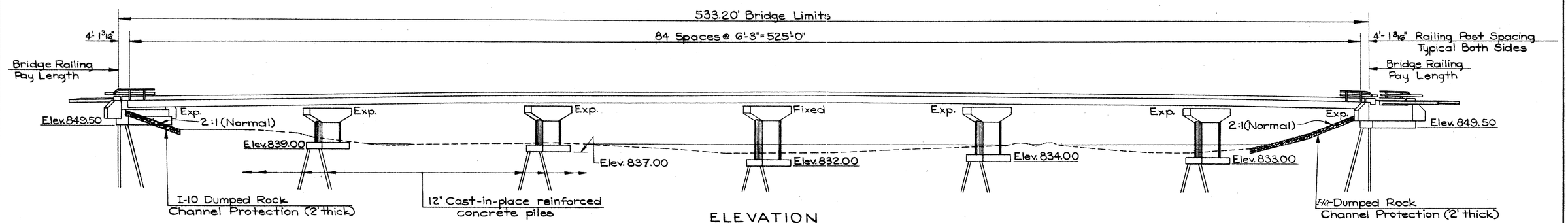
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

16 / 21

TUS-259-0.00



PLAN



ELEVATION

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Superstr.	Abuts.	Piers	General		
E-2	lump	sum	Cofferdams, cribs and sheeting			lump			
E-2	450	cu. yds.	Unclassified excavation		190	260			
E-3	3380*	cu. yds.	Channel excavation				3380		
S-1	472	cu. yds.	Class "C" concrete, superstructure	472					
S-1	219	cu. yds.	Class "C" concrete, pier walls			219			
S-1	87	cu. yds.	Class "E" concrete, abutments above footings		87				
S-1	152	cu. yds.	Class "E" concrete, footings		50	102			
S-3	14	lin. ft.	Waterproofing, premoulded sealing strip		14				
S-4	170,991	lbs.	Reinforcing steel	131,050	6,260	33,681			
S-7	627,100	lbs.	Structural steel	627,100					
S-8	627,100	lbs.	Field painting of structural steel, as per plan	627,100					
S-14	1066.4	lin. ft.	Railing (Type I-15.13 with handrail and galvanized steel posts and bolts)	1066.4					
S-16	lump	sum	First test pile				lump		
S-18	4080	lin. ft.	12" cast-in-place reinforced concrete piles		980	3100			
S-24	lump	sum	Removal of existing structure				lump		
S-29	38	cu. yds.	Porous backfill		38				
S-29	44	each	Scuppers	44					
I-10	440	cu. yds.	Dumped rock channel protection				440		

* 2693 cu. yds. for Island Removal
687 cu. yds. for Channel Clean-out at Abutment "A"

GENERAL NOTES

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.

REFERENCE shall be made to Standard Drawings CSB-2-56, Sheets 1, 2 & 3 of 6, revised 2-2-59; RB-1-55, revised 2-2-59 and Supplemental Specifications S-101, dated 12-2-59.

REMOVAL OF EXISTING STRUCTURE: When no longer needed to maintain traffic the existing structure shall be removed. Abutments shall be removed in accordance with Sec. S-24.02. Piers shall be removed to the existing stream bed.

EXCAVATION QUANTITY includes the removal of fill material required for construction of Abutment "B".

PILES shall be driven to a minimum bearing capacity of 35 tons per pile for the abutments and 50 tons per pile for the piers.

CHANNEL EXCAVATION: Pay quantities for channel cleanout at Abutment "A" will be determined by end area methods in accordance with the provisions of Item E-3.

STRUCTURAL STEEL: See Proposal Note regarding A-373 Steel.

MACHINE FINISH: The top of the bridge deck slab shall be machine finished in accordance with the Proposal Note "Machine Finishing of Bridge Deck Slabs".

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

GENERAL PLAN & ELEVATION

BRIDGE NO. TUS-259-0011
OVER TUSCARAWAS RIVER

TUSCARAWAS COUNTY — STA. 7+18.40 STA. 12+51.60

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
P.M.	J.H.	J.H.	E.F.R.	10-3-60	

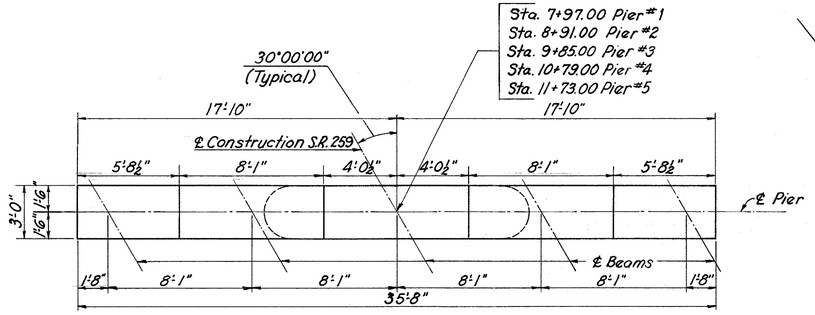
BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-97075

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS

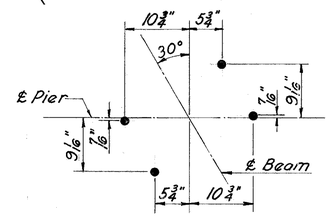
17 / 21

TUS-259-0.00

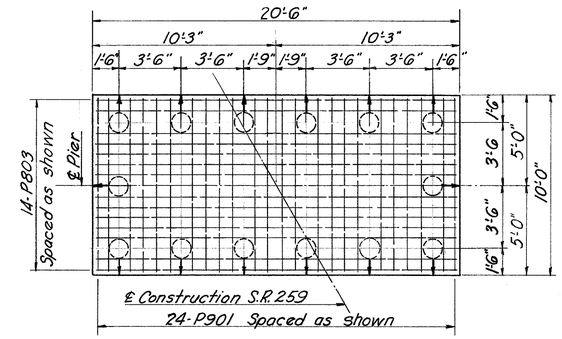
TABLE OF ELEVATIONS							
LOCATION	A	B	C	D	E	F	G
Pier #1	856.88	856.94	857.00	856.84	856.68	849.18	839.00
Pier #2	857.72	857.80	857.89	857.75	857.61	850.11	837.00
Pier #3	857.96	858.07	858.18	858.07	857.96	850.46	832.00
Pier #4	857.61	857.75	857.89	857.80	857.72	850.11	834.00
Pier #5	856.68	856.84	857.00	856.94	856.88	849.18	833.00



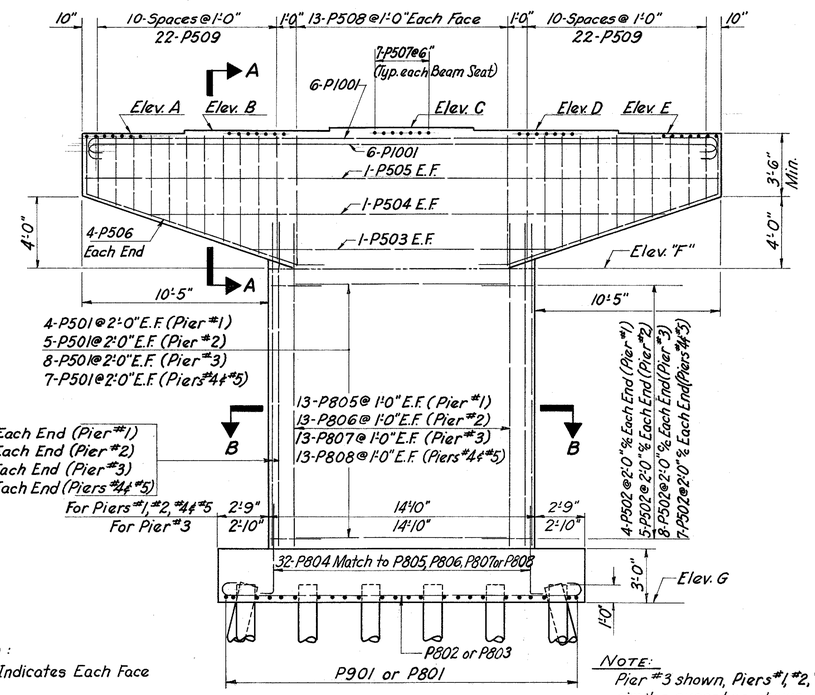
PIER CAP PLAN



ANCHOR BOLT LAYOUT
(Pier #3 only)



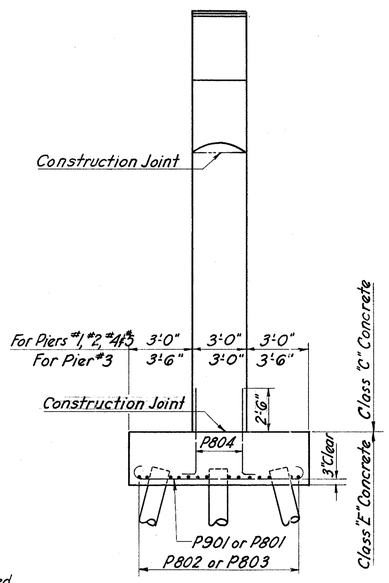
FOOTING PLAN-PIER #3



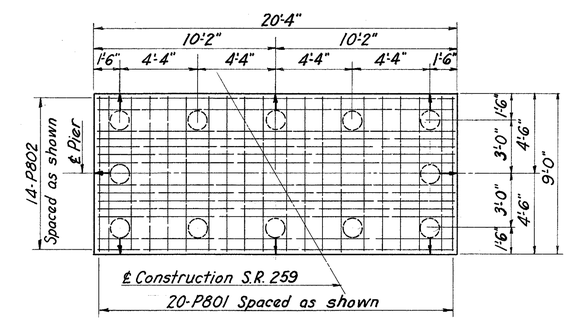
ELEVATION

LEGEND:
E.F. Indicates Each Face

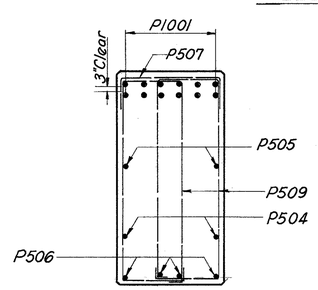
NOTE:
Pier #3 shown, Piers #1, #2, #4 & #5 similar except as shown and noted.



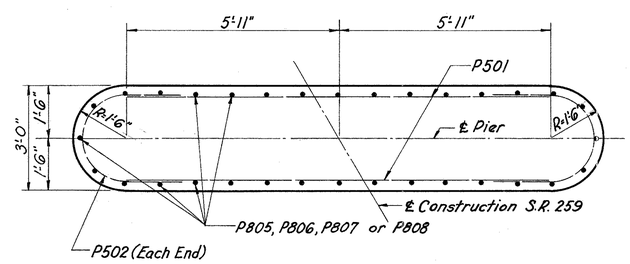
END VIEW



FOOTING PLAN- PIERS #1, #2, #4 & #5



SECTION A-A



SECTION B-B

NOTES:
Special care shall be taken in placing reinforcing steel in the beam seats so that it will not interfere with the drilling of anchor bolt holes at Pier #3.

All piles shall be 12" Cast-in-place reinforced concrete. Batter piles 1:4 in direction shown by arrows on "Footing Plan".

MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER PENNSYLVANIA

PIERS

BRIDGE NO. TUS.-259-0011
OVER TUSCARAWAS RIVER

TUSCARAWAS COUNTY

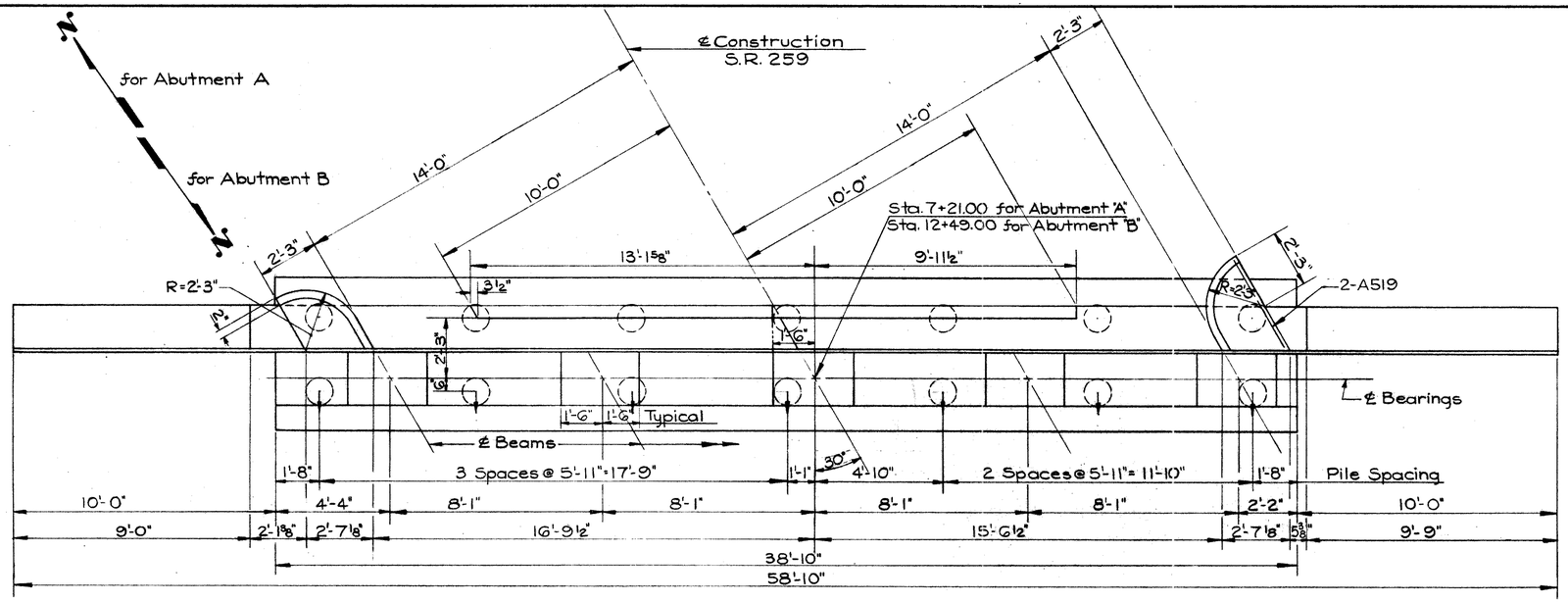
STA. 7+18.40
STA. 12+51.60

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
P.M.	P.M.	B	E.F.R.		10-3-60	

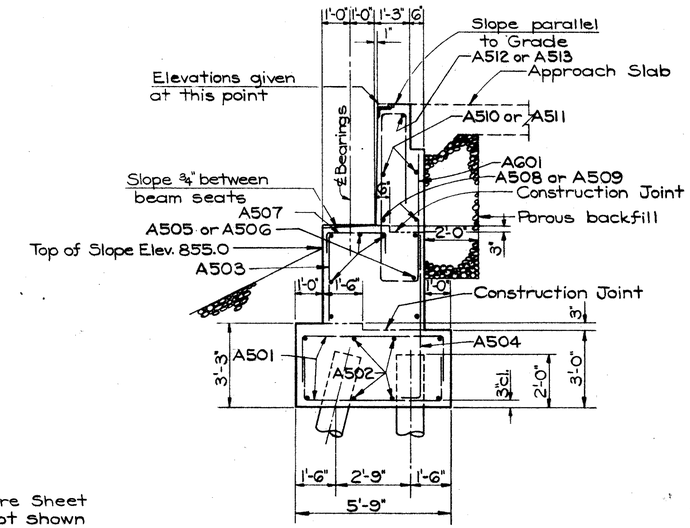
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

18 / 21

TUS-259-0.00

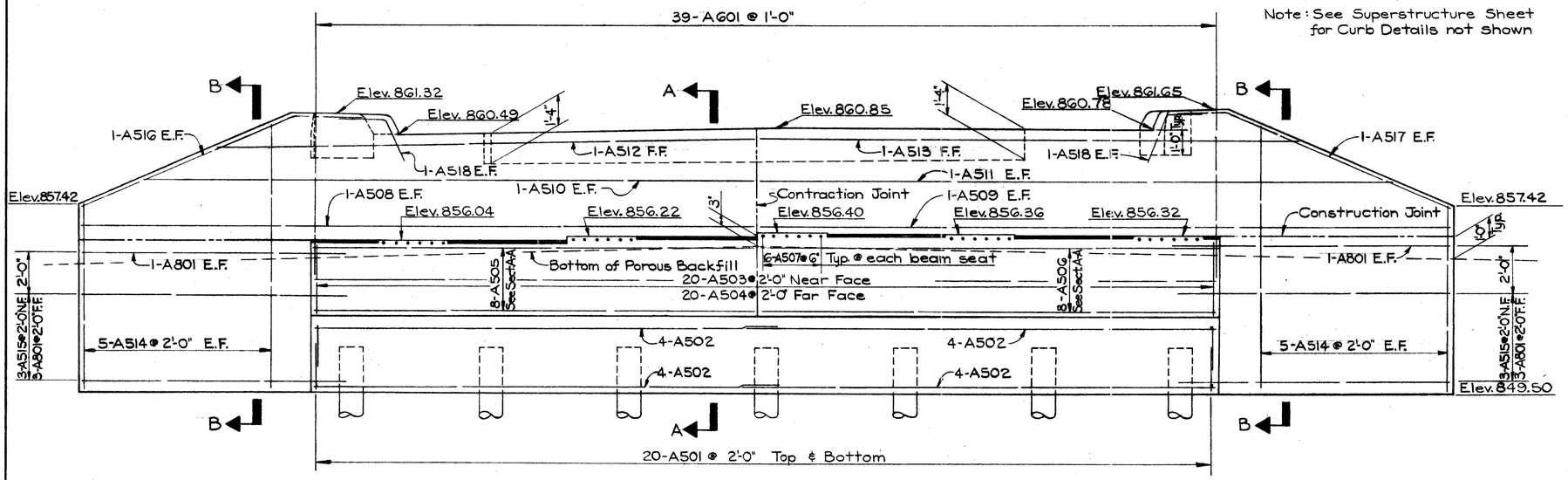


PLAN

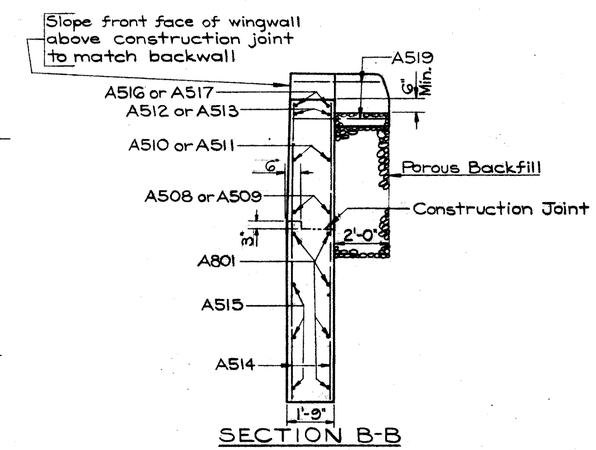


SECTION A-A

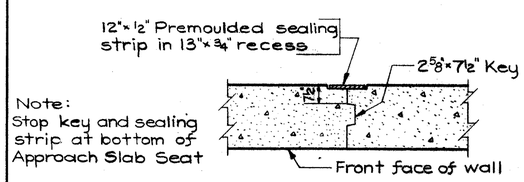
Note: See Superstructure Sheet for Curb Details not Shown



ELEVATION



SECTION B-B



Note:
Stop key and sealing strip at bottom of Approach Slab Seat

CONTRACTION JOINT DETAIL

LEGEND: N.F Indicates Near Face
F.F. Indicates Far Face
E.F. Indicates Each Face

NOTES:

- CONCRETE shall be Class "E".
- 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 thereof, 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.
- PILES shall be 12" cast-in-place reinforced concrete. Batter piles 1:4 in direction shown on Plan
- PROCEDURE: The embankment shall be placed and compacted to the level of the subgrade, after which excavation shall be made for the forward abutment and the piles driven.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

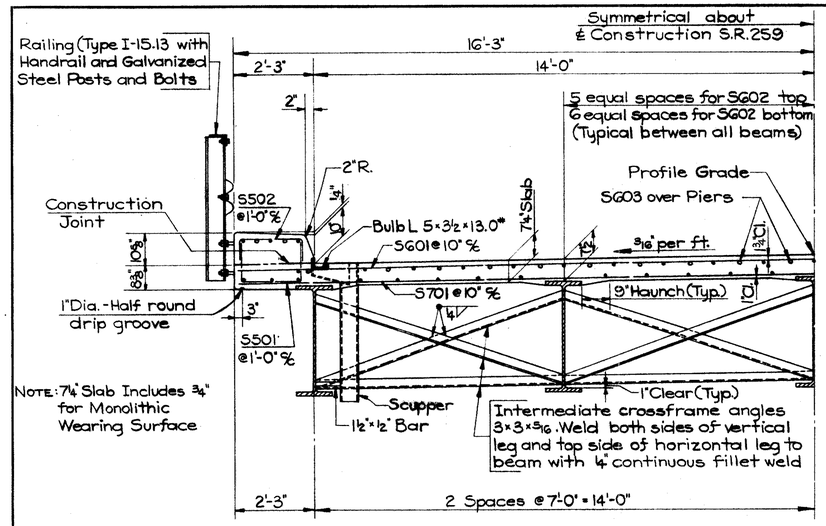
ABUTMENTS

BRIDGE NO. TUS-259-0011 OVER TUSCARAWAS RIVER

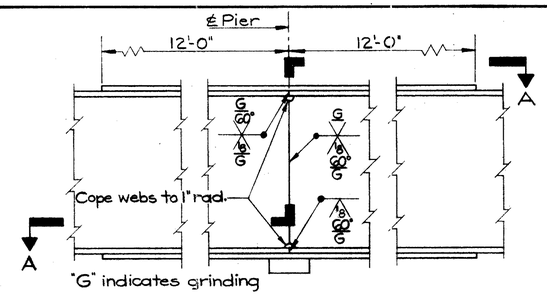
TUSCARAWAS COUNTY — STA. 7+18.40, STA. 12+51.60

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
P.M.	J.H.	J.H.	E.F.R.	EFR	10-3-60	

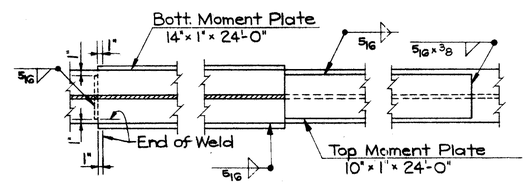
BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-37078



HALF TRANSVERSE SECTION



BEAM SPLICE DETAILS



SECTION A-A

DEFLECTION AND CAMBER

Location	End Span	Middle Span
Deflection due to weight of steel	3/16"	3/16"
Deflection due to remaining dead load	9/16"	5/8"
Convexity required for vertical curve	9/16"	7/8"
Sum of deflection and convexity	1 5/16"	1 11/16"
Required camber	1 5/16"	1 11/16"

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

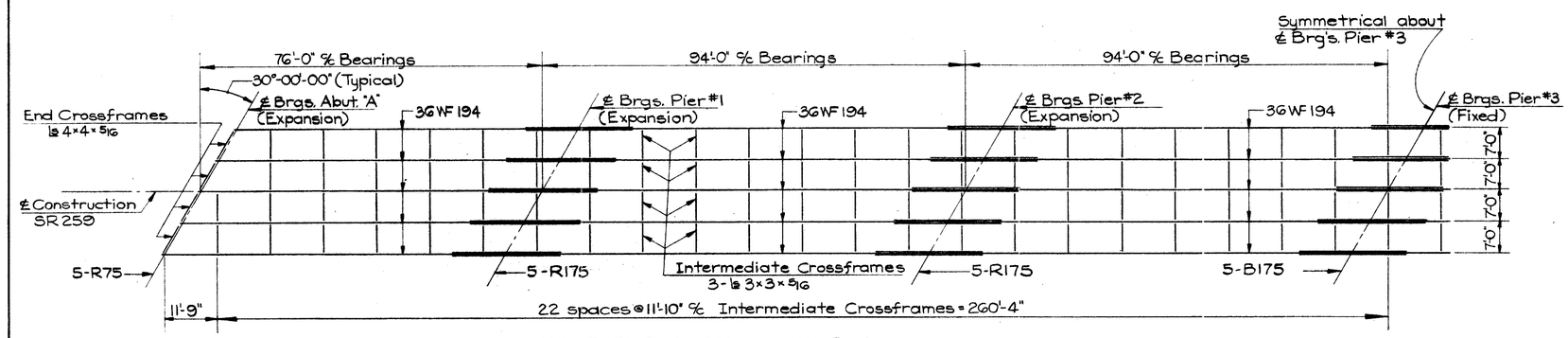
TUS-259-0.00

BEAM SPLICE WELDING PROCEDURE

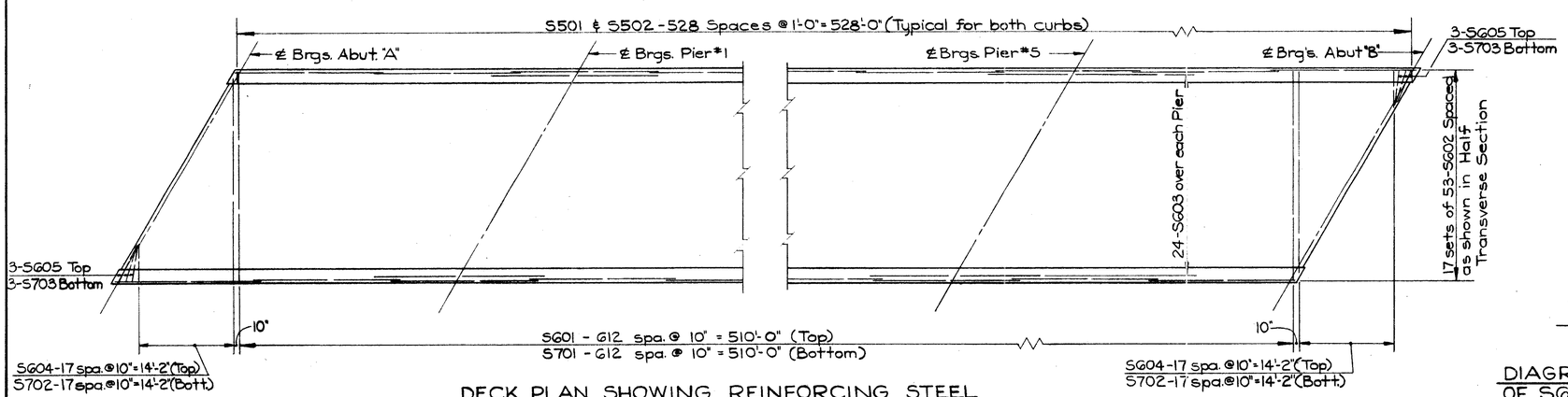
1. Raise end of beam 5" at Pier #2.
2. Butt-weld the beam flanges and web at Pier #1, using the following sequence: make two passes on each flange, then two on the web; repeat using one pass at each location, until welds are completed.
3. Weld the bottom and top moment plates.
4. Lower the beam ends to final position.
5. Make splices at Piers #2, #3, #4 and #5 in the same manner, raising the ends of the beams 5" at Piers #3, #4 & #5, and 2¾" at Abutment "B".

PAINTING

After erection and after the shop coat has been cleaned and, where necessary, repainted in accordance with Sec. S-8.04, an additional coat of the same paint as used in the shop shall be applied over the the outside face of the outside steel beams and all sides of the bottom flange.



HALF STEEL FRAMING PLAN



DECK PLAN SHOWING REINFORCING STEEL

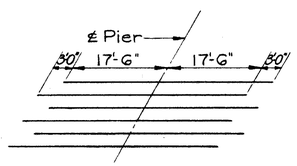


DIAGRAM SHOWING STAGGER OF SG03 BARS OVER PIERS

NOTES

Refer to Standard Drawing CSB-2-56, Sheets 1, 2 & 3 of 6 for details of Railing, End Dams, End Crossframes, Scuppers, Gutters, 2" Pipe Drains and additional notes.

Refer to Standard Drawing RB-1-55 for details of Rockers and Bolsters.

Refer to General Plan and Elevation for location of Scuppers, 2" Pipe Drains and Railing Posts.

Concrete shall be Class "C" in accordance with Supplemental Specification S-101.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SUPERSTRUCTURE

BRIDGE NO. TUS.-259-0011
OVER TUSCARAWAS RIVER

TUSCARAWAS COUNTY — STA. 7+18.40 — STA. 12+51.60

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
P.M.	P.M.	J.H.	E.F.R.	10-3-60.	

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-97076

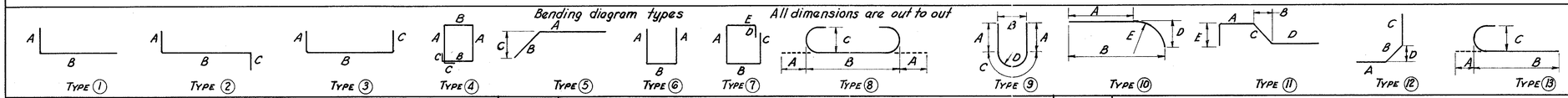
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS

20
21

TUS-259-0.00

REINFORCING STEEL BAR SCHEDULE

Bending diagram types — All dimensions are out to out



PIERS

MARK	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
P1001	60	38'-2"	8	1'-5"	35'-4"	1'-0½"			9854
P901	24	12'-2"	8	1'-3"	9'-8"	11¼"			993
P801	80	10'-10"	8	1'-1"	8'-8"	9"			2314
P802	56	22'-2"	8	1'-1"	20'-0"	9"			3314
P803	14	22'-4"	8	1'-1"	20'-2"	9"			835
P804	160	5'-10"	1	5'-1"	1'-0"				2492
P805	32	9'-8"	Str.						826
P806	32	12'-8"	Str.						1082
P807	32	18'-0"	Str.						1538
P808	64	15'-8"	Str.						2677
P501	62	11'-10"	Str.						765
P502	62	7'-1"	9	1'-7"	2'-6"	3'-11"	1'-3"		458
P503	10	16'-9"	Str.						175
P504	10	28'-3"	Str.						295
P505	10	35'-4"	Str.						369
P506	40	17'-3"	12	1'-7"	12'-7"	3'-2"	4'-0"		720
P507	175	4'-5"	6	1'-0"	2'-8"				806
P508	130	7'-4"	Str.						994
P509	220	10'-6" to 17'-2"	4	3'-5" to 8'-9"	1'-8"	6"	20 Each Vary A by 4"		3174
								TOTAL WEIGHT	33,681

ABUTMENTS

MARK	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A801	20	12'-6"	Str.						668
A601	78	13'-3"	7	5'-6"	1'-4"	4'-2"	2'-0"	10"	1552
A501	80	9'-2"	6	2'-0"	5'-5"				765
A502	32	20'-1"	Str.						670
A503	40	3'-9"	Str.						156
A504	40	7'-4"	1	1'-0"	6'-6"				306
A505	16	18'-8"	Str.						312
A506	16	19'-6"	Str.						325
A507	60	4'-0"	6	1'-0"	2'-3"				250
A508	4	28'-8"	Str.						120
A509	4	29'-6"	Str.						123
A510	4	26'-0"	Str.						108
A511	4	26'-10"	Str.						112
A512	2	22'-9"	Str.						47
A513	2	23'-7"	Str.						49
A514	40	7'-8" to 11'-2"	Str.	8 each Vary by 10½"					393
A515	12	11'-7"	Str.						145
A516	4	12'-7"	5	9'-10"	2'-9"	1'-1"			52
A517	4	12'-9"	5	10'-7"	2'-2"	10"			53
A518	8	4'-8"	5	2'-9"	2'-0"	6"			39
A519	4	3'-7"	Str.						15
								TOTAL WEIGHT	6,260

SUPERSTRUCTURE

MARK	TOTAL	LENGTH	TYPE	A	B	C	D	E	WEIGHT
S701	613	32'-2"	Str.						40 304
S702	36	6'-6½" to 31'-4"	Str.	2 each Vary by 1'-5½"					1393
S703	6	5'-6"	Str.						67
S601	613	32'-2"	Str.						29 616
S602	901	32'-8"	Str.						44 207
S603	120	38'-0"	Str.						6 849
S604	36	6'-6½" to 31'-4"	Str.	2 each Vary by 1'-5½"					1024
S605	6	5'-6"	Str.						50
S501	1058	4'-1"	6	1'-4"	1'-8"				4 506
S502	1058	2'-9"	6	8"	1'-8"				3034
								TOTAL WEIGHT	131,050

* Use one hook as detailed for P1001
** Use one hook as detailed for P901

REPLACEMENT BARS			
MARK	No.	LENGTH	TYPE
RE1001	1	9'-3"	13*
RE901	1	8'-7"	13**
RE801	1	6'-6"	Str.
RE701	3	6'-3"	Str.
RE601	5	5'-11"	Str.
RE501	1	5'-7"	Str.

REPLACEMENT BARS:
If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Hwy. Testing Laboratory, test sample as provided in Section S-402 need not be furnished and replacement bars will not be required.

BAR SIZE:
Bar size is indicated in the bar mark. The first digit where three digits are used and the first two where four are used, indicates the bar size number. For example, P801 is a number 8 bar and P1102 is a number 11 size bar.

MICHAEL BAKER, JR, CONSULTING ENGINEERS
ROCHESTER PENNSYLVANIA

REINFORCING BAR SCHEDULE

BRIDGE NO. TUS.-259-0011
OVER TUSCARAWAS RIVER

TUSCARAWAS COUNTY — STA. 7+18.40, STA. 12+51.60

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
P.M.	J.H.	J.H.	E.F.R.	EFR	10-3-60	

SUMMARY OF ADDITIONAL R/W REQUIRED

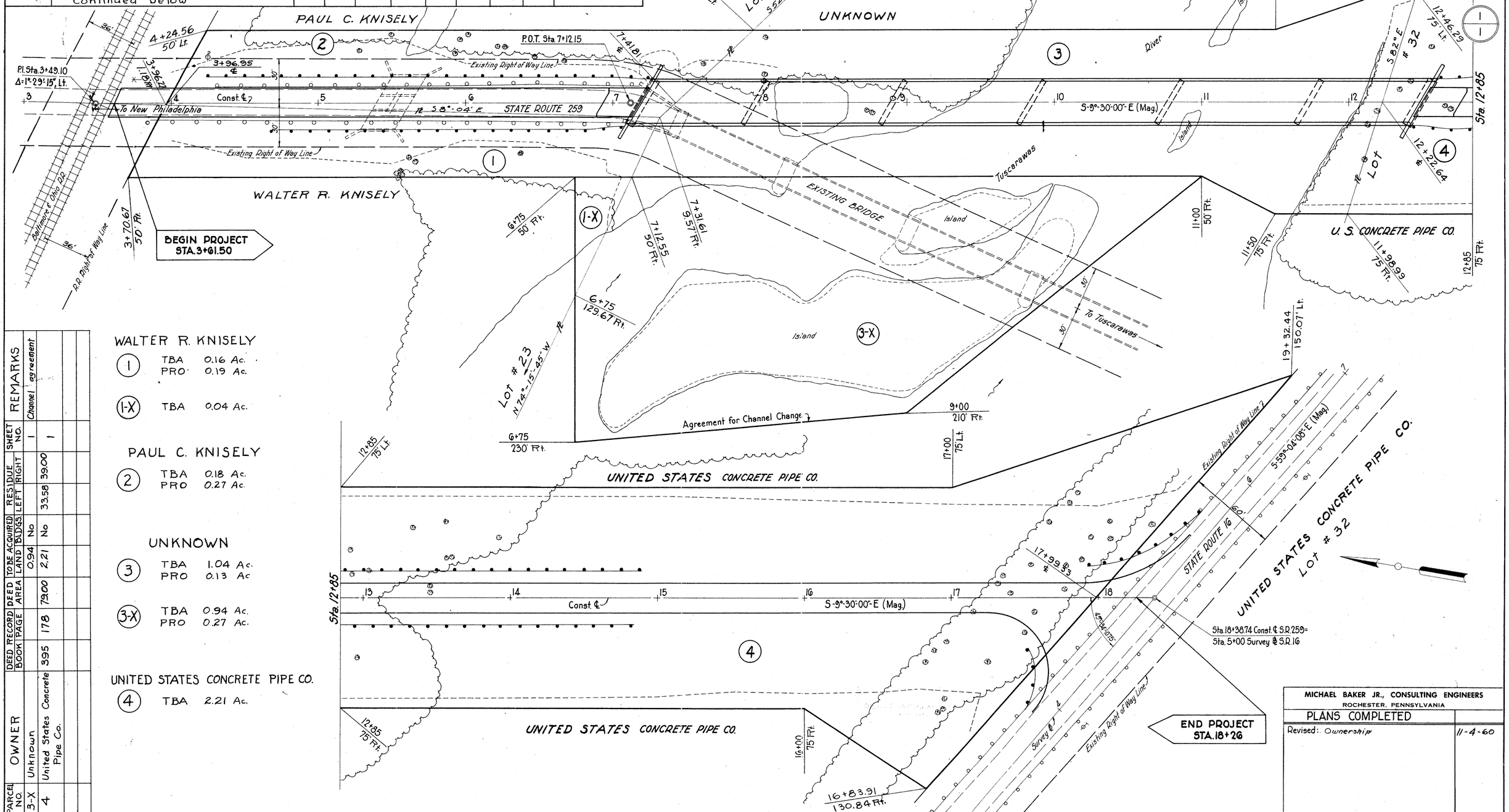
PARCEL NO.	OWNER	DEED BOOK	DEED PAGE	DEED AREA	TO BE ACQUIRED LAND	TO BE ACQUIRED BLDG.	RESIDUE LEFT	RESIDUE RIGHT	SHEET NO.	REMARKS
1	Walter R. Knisely	225	502	22.66	0.16	No			1	
1-X	Walter R. Knisely	225	502	22.66	0.04	No		22.27	1	Agreement for Channel
2	Paul C. Knisely	203	81	57.19	0.18	No	56.74		1	
3	Unknown				1.04	No			1	
	Continued below									

GOSHEN TWP.-LOTS 23 & 32 TWP. 8-N; R-1W
SCHOENBRUN TRACT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

21
21

TUS-259-0.00
RIGHT OF WAY PLAN
Scale: 1" = 30'



PARCEL NO.	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA	TO BE ACQUIRED LAND	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	SHEET NO.	REMARKS
3-X	Unknown				0.94	No			1	Channel agreement
4	United States Concrete Pipe Co.	395	178	7.900	2.21	No	33.58	39.00	1	

WALTER R. KNISELY

(1) TBA 0.16 Ac.
PRO 0.19 Ac.

(1-X) TBA 0.04 Ac.

PAUL C. KNISELY

(2) TBA 0.18 Ac.
PRO 0.27 Ac.

UNKNOWN

(3) TBA 1.04 Ac.
PRO 0.13 Ac

(3-X) TBA 0.94 Ac.
PRO 0.27 Ac.

UNITED STATES CONCRETE PIPE CO.

(4) TBA 2.21 Ac.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

PLANS COMPLETED

Revised: Ownership 11-4-60

STA. 3+61.50 TO STA. 18+26

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-599-1-1