FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-1042(13)	

1/118

OTT-2-27.36 ERI-2-0.15
OTTAWA & ERIE COUNTIES
PART I

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

F-1042 (13)

OTT-2-27.36
OTTAWA COUNTY
DANBURY TOWNSHIP

ERI-2-0.15
ERIE COUNTY
MARGARETTA TOWNSHIP

CONVENTIONAL SIGNS

- Railroad
- Existing Right of Way
- Right of Way With Limited Access — LA
- Fence Line
- Property Line
- County Line
- Center Line
- Guard Rail (Proposed)
- Trees or Stumps (Exist.)
- Shore Line
- Telegraph, Telephone & Power Poles
- Limit of Construction Line
- Power Poles
- Telephone Poles
- Guard Rail - Barrier Type
- Delineators — Type A1, Type C2
- Delineation of Work Not Included in This Contract — ~~Notes or Dimensions~~

INDEX OF SHEETS

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~~Miscellaneous Details~~ Omitted Sheets ~~10-A, 11, 11A, 12, 12-A, 13, 13-A~~	
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LINE DATA

Begin Project 50+38.00 OTT
Suspend Project 106+45.00 OTT
5607.00 L.F.

Add for Equation
54+03.94 Bk. to 54+03.05 OTT Ah. = 0.89 L.F.
Length of Project Ottawa Co. 5607.89 L.F. or 1.062 Mi.

Resume Project 7+95.00 ERI
End Project 95+00.00 ERI
8705.00 L.F.

Deduct for Equation
43+26.27 Bk. to 43+27.16 ERI Ah. = 0.89 L.F.
Length of Project Erie Co. 8704.11 L.F. or 1.648 Mi.

TOTAL LENGTH OF PROJECT 14,312.00 L.F. or 2.710 Mi.

Add For Work
48+50.00 To 50+38.00 OTT = 188.00 L.F.
106+45.00 To 108+28.00 OTT = 183.00 L.F.
Length of Work Ottawa Co. 5978.89 L.F. or 1.132 Mi.

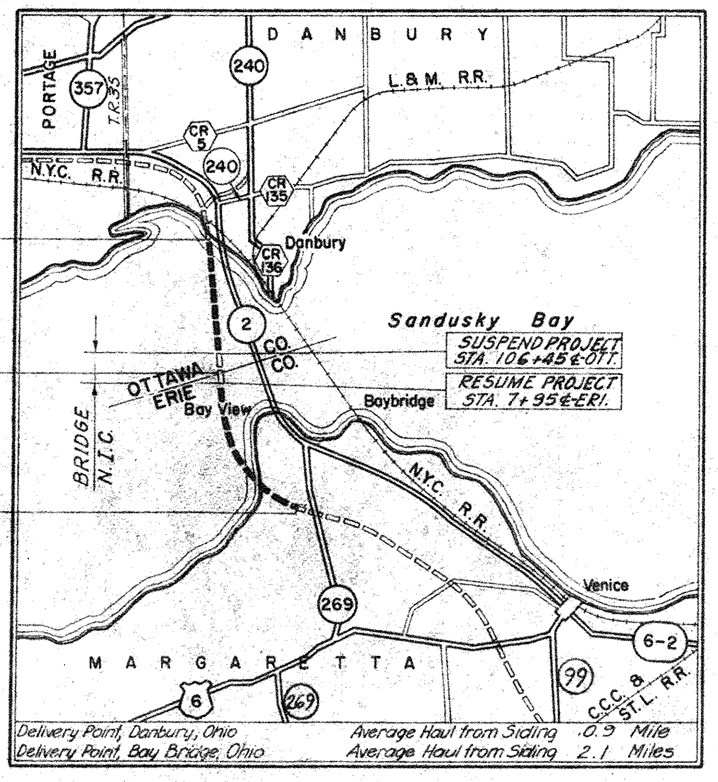
6+40.00 To 7+95.00 ERI = 155.00 L.F.
95+00.00 To 97+00.00 ERI = 200.00 L.F.
Length of Work Erie Co. 9059.11 L.F. or 1.715 Mi.

TOTAL LENGTH OF WORK 15,038.00 L.F. or 2.848 Mi.

BEGIN PROJECT STA. 50+38 ℄ OTT.

STA. 120+00 ℄ OTT. = STA. 0+00 ℄ ERI.

END PROJECT STA. 95+00 ℄ ERI



LOCATION MAP

SCALE OF MILES
0 1 2

Sheets 94, 95, 99, & 100 revised 9-17-62.
Revised Sheet No. 18 R.E.C. 11-19-62

Portion to be improved
State Roads (2)
Other Roads
County Roads (CR 5)

Prepared and Recommended by
KING AND GAVARIS
Consulting Engineers

Plan
Profile: Horizontal 0 20 40 60 80 100
Profile: Vertical 0 2 4 6 8 10
Cross Section 0 4 8 12 16 20

LIMITED ACCESS

This improvement is especially designed for through traffic and 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 of the Revised Code of Ohio.

1961 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 to traffic of the highway and that provisions for the maintenance and safety of traffic will be as set forth on these plans and estimates.

Approved G. W. Lieber
Date Dec. 22, 1961 Division Deputy Director, Division 2

Approved E. L. Joplin
Date Dec. 27-61 Division Deputy Director, Division 3

Approved W. Overman
Date 6-4-62 Engineer of Bridges

Approved [signature]
Date 7-5-62 Engineer of Location and Design

Approved C. W. McCaughey
Date 7-5-62. Deputy Director of Design and Construction

Approved W. J. Orr
Date 7-12-62 Deputy Director of Right of Way

Approved Guy E. Yeager
Date 7-12-62 Deputy Director of Planning and Programming

Approved G. A. Berry
Date 7-12-62 First Assistant Director

Approved E. S. Preston
Date 7-12-62 Director of Highways

STANDARD CONSTRUCTION DRAWINGS							
~~B-T-70-71~~	~~11-15-60~~	~~I-15 No. 2~~	~~11-15-60~~	FACI-2	12-27-61		
~~B-T-71-R~~	~~3-2-59~~	~~I-21-29~~	~~6-1-56~~	CSB-1-55 (Sh. 1&2)	2-2-59		
G-7.07	6-1-56	~~I-12~~	~~7-1-54~~				
I-1	11-15-60	~~L-3~~	~~4-1-50~~	~~I-15 No. 2-A~~	~~8-17-60~~		
~~I-8-58 No. 3~~	~~1-26-59~~	~~L.J. No. 1~~	~~7-1-55~~	~~L-1~~	~~4-1-50~~		
~~I-81 No. 2~~	~~4-23-59~~	~~RI-1~~	~~7-15-58~~	~~L-3-A~~	~~4-1-50~~		
~~I-15 No. 1~~	~~11-15-60~~	~~T.J.~~	~~3-12-60~~	~~AS-1-54~~	~~12-1-54~~		
~~HW-A & B~~	~~7-15-57~~	FACI-1	12-27-61				

SUPPLEMENTAL SPECIFICATIONS	
~~B-112~~	~~8-21-61~~
~~I-125~~	~~Rev. 6-26-61~~
~~I-127~~	~~Rev. 1-15-62~~
~~L-120~~	~~Rev. 1-2-62~~
M-107.18	Rev. 4-3-61
CE-101.04	5-22-56
I-128	7-31-59
I-129	Rev. 4-5-61
M-109.28	Rev. 8-12-59

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER DATE

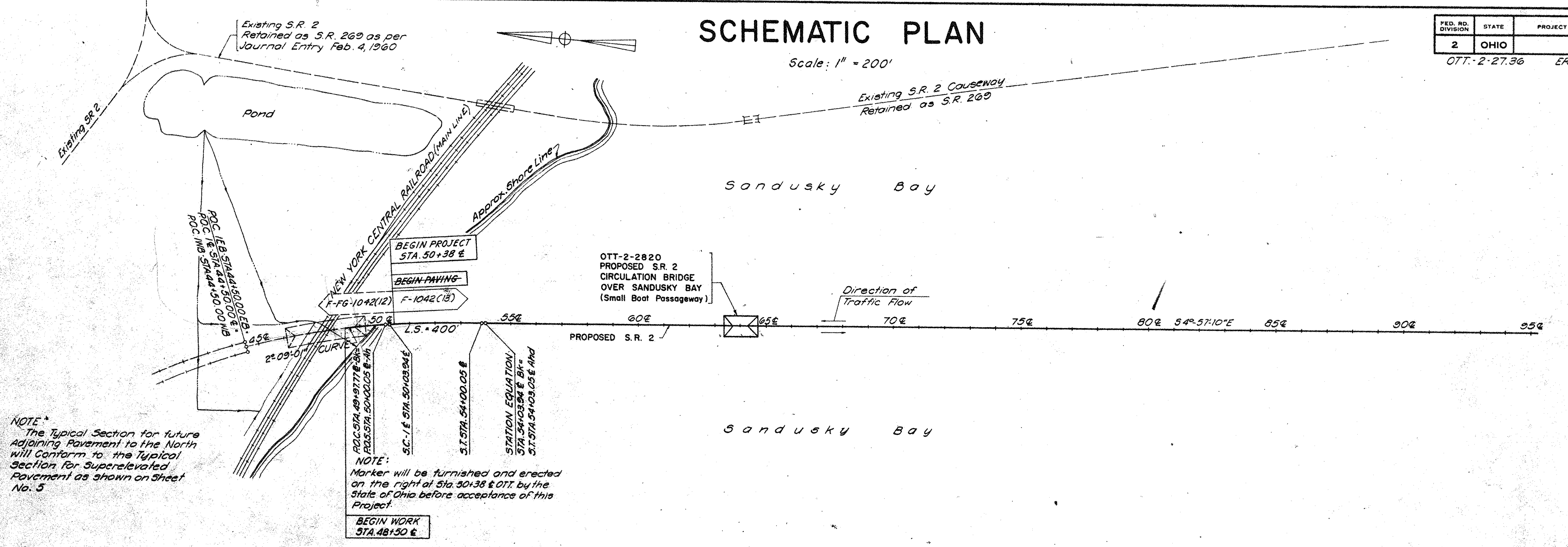
OTT-2-27.36 & ERI-2-0.15 OTTAWA & ERIE CO.
DATE OF LETTING __________ 196
CONTRACT NO. __________

SCHEMATIC PLAN

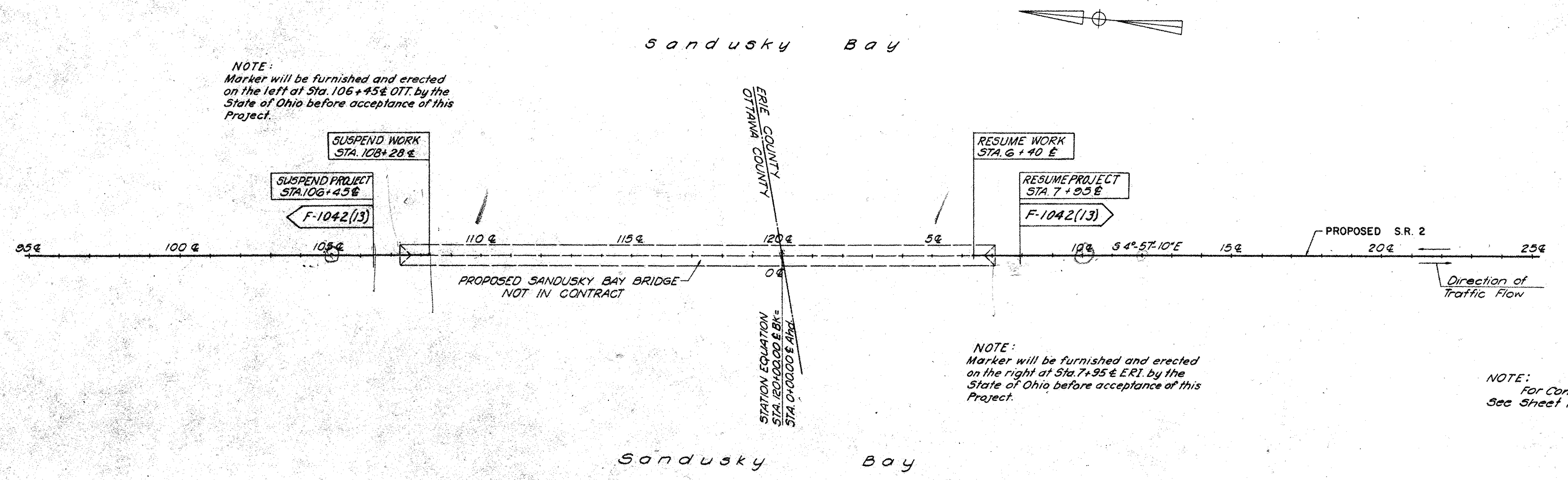
Scale: 1" = 200'

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

OTT.-2-27.36 ERI.-2-0.15



NOTE:
The Typical Section for future Adjoining Pavement to the North will Conform to the Typical Section for Superelevated Pavement as shown on Sheet No. 5



NOTE:
For Continuation of Alignment See Sheet No. 3

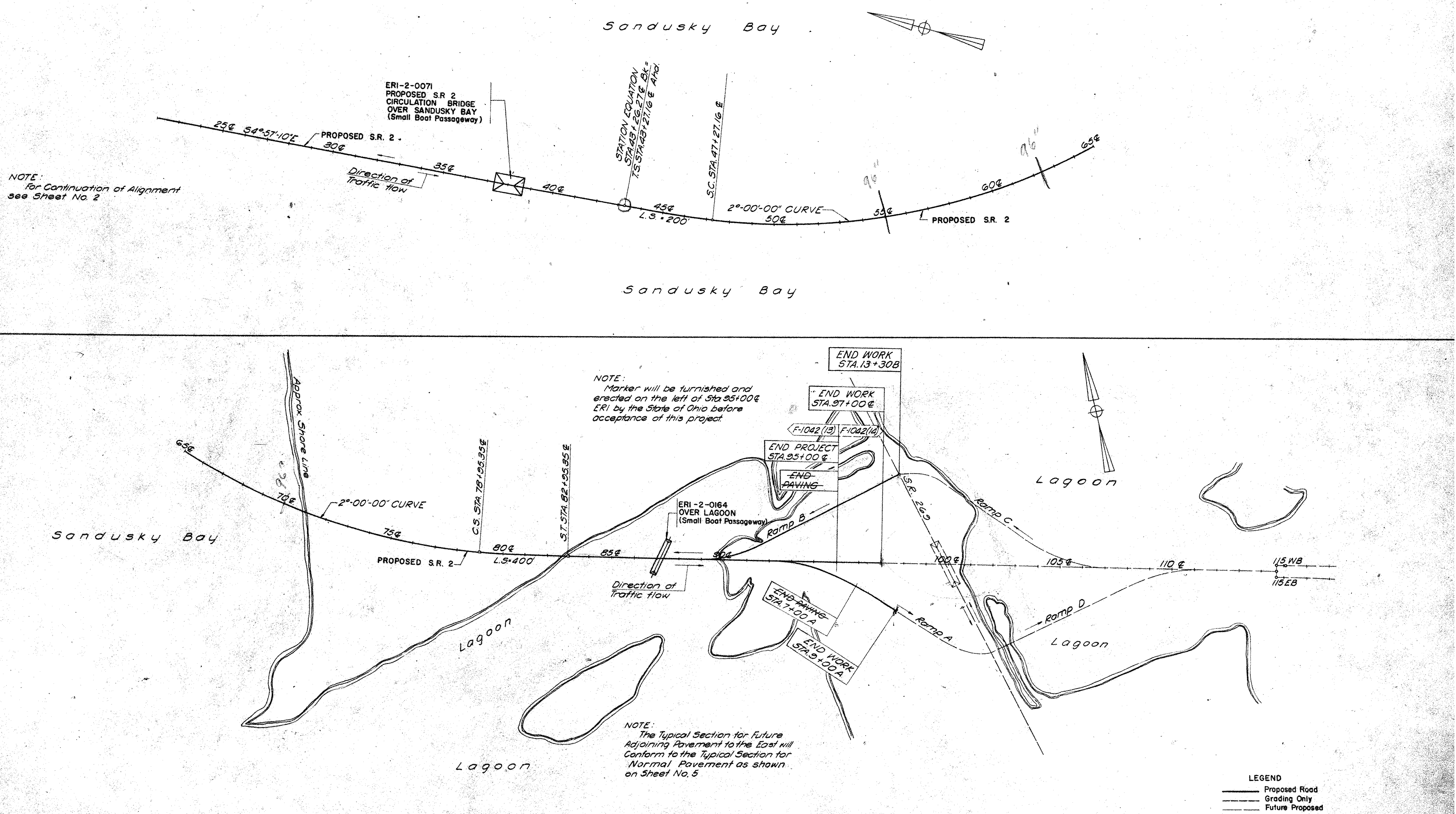
LEGEND
- Proposed Road
- Rough Grading
- Future Proposed

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

OTT-2-27.36 ERI-2-0.15

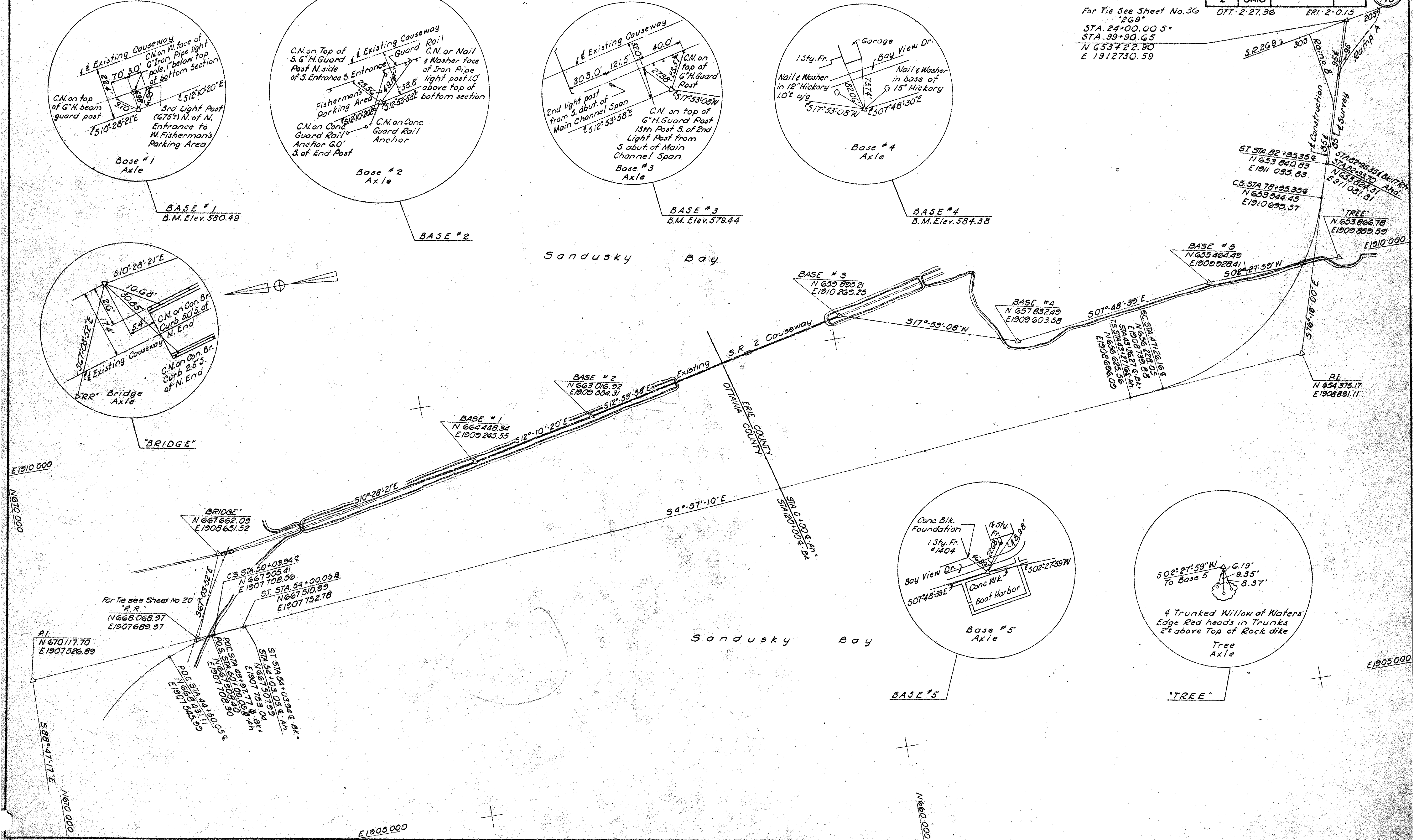
SCHEMATIC PLAN

Scale: 1" = 200'



FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

4
118



BASELINE STAKEOUT PLAN

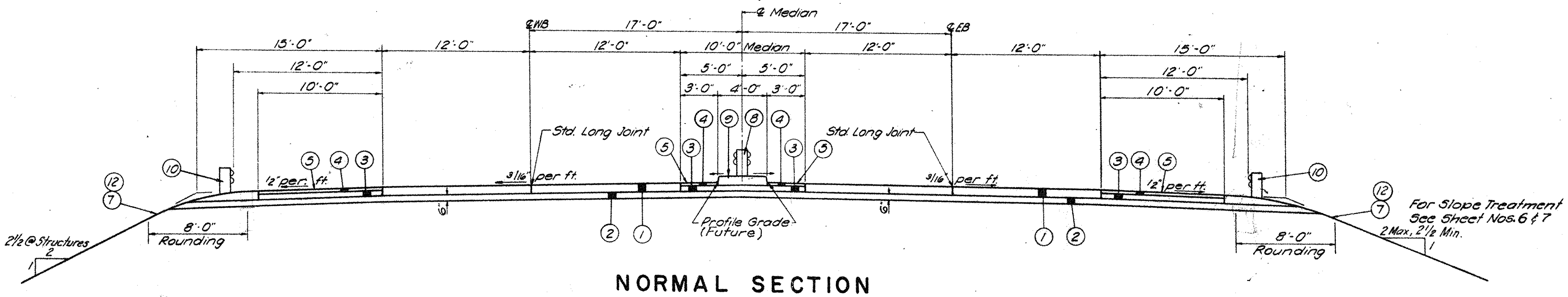
FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

OTT-2-27.36 ERI-2-0.15

TYPICAL SECTIONS

TYPE T-71 (FUTURE)

Scale: 3/16"=1'-0"



NORMAL SECTION

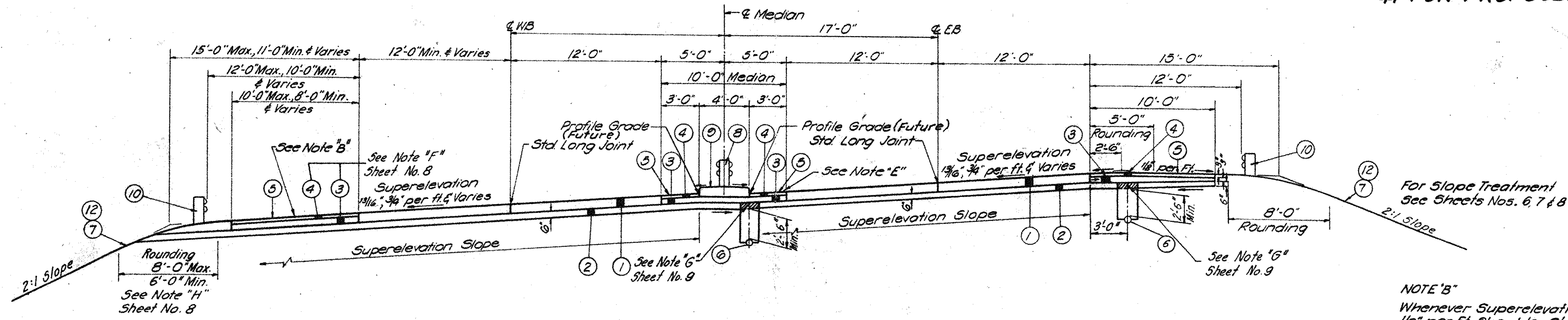
LIMITING STATIONS

Sta. 54+08.94 ℄ EB to Sta. 55+72.00 ℄ EB OTT.
Sta. 55+72.00 ℄ to Sta. 63+07.75 ℄ OTT.
Sta. 64+92.25 ℄ to Sta. 106+45.00 ℄ OTT.
Sta. 7+95.00 ℄ to Sta. 37+07.75 ℄ ERI.
Sta. 38+92.25 ℄ to Sta. 41+58.00 ℄ ERI.
Sta. 41+58.00 ℄ WB to Sta. 48+27.16 ℄ WB ERI.

For Slope Treatment See Sheet Nos. 6 & 7

NOTE:
DISREGARD ALL CONSTRUCTION ITEMS AND DETAILS SHOWN HEREON WHICH ARE NOT APPLICABLE TO THIS GRADING AND SLOPE PROTECTION CONTRACT. (SEE GENERAL NOTE ON SHEET 15)

SEE TYPICAL CROSS SECTION ON SHEET 41 FOR PROPOSED TOP OF EMBANKMENT.



For Slope Treatment See Sheets Nos. 6, 7 & 8

SUPERELEVATED SECTION

LIMITING STATIONS

Sta. 41+58.00 ℄ EB to Sta. 48+27.16 ℄ EB ERI.
Sta. 48+27.16 ℄ to Sta. 71+00.00 ℄ ERI.
Sta. 50+38.00 ℄ to Sta. 54+08.94 ℄ OTT. (Opposite hand)
Sta. 54+08.94 ℄ WB to Sta. 55+72.00 ℄ WB OTT. (Opposite hand)
Sta. 71+00 ℄ to Sta. 84+65 ℄ (EB) ERI
Sta. 71+00 ℄ to Sta. 82+95 ℄ (WB) ERI

NOTE "B"
Whenever Superelevation is greater than 1/2" per Ft. Shoulder Slope must be the same as Main Line Superelevation.

NOTE
For Station Equations see Sheet No. 1. For paved berms see Transition Sections Sheet No. 8
For Details of Approach Slabs see Sheet No. 91

NOTE "E"
Whenever Superelevation on high side of roadway on Spirals is less than 1/2" per ft. median shoulder slope must be maintained at 1/2" per ft. down towards curb. Transition of Median Shoulder Slope from 1/2" per ft. down towards curb to 3/16" per ft. down away from curb will take place on tangent beginning at T.S. of Spiral. Length of Transition will be equal to the length of the Tangent Run-out for the Superelevation.

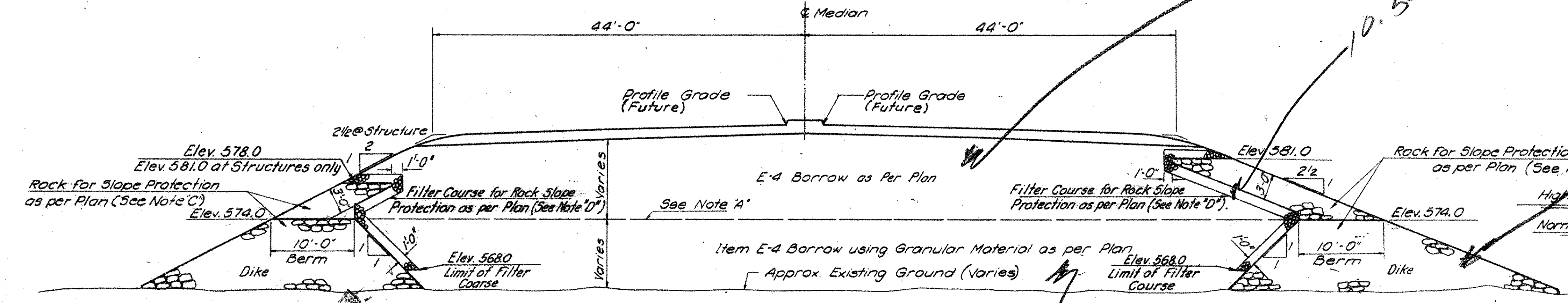
COURSE LEGEND (FUTURE CONSTRUCTION)

1. T-71 9" Reinforced Portland Cement Concrete Pavement
2. 1-22 Subbase (Variable Thickness), "A" or "B" Grading, As Per Plan
3. B-112 Porous Base Course (Variable Thickness)
4. ‡ B-21 3" Waterproofed Aggregate Base Course (Type "A" T-35 Material may be used in construction of this course - See Note in Proposal)
5. T-31 Bituminous Surface Treatment using 0.008 cu.yd. No. 6 aggregate per sq.yd. and 0.25 gal. bituminous material per sq.yd. (See note in proposal)
6. 1-1 6" Class 1-3 Pipe
7. L-9 Seeding and Protecting, As Per Plan
8. 1-15 Guard Rail Wire Cable Barrier Type (4 Cables) using 6"x8" square sawed Wood Posts
9. 1-21 Portland Cement Concrete Median Standard Type 2
10. 1-15 Guard Rail Wire Cable Standard Type (4 Cables) Using 6"x8" square sawed wood Posts
12. L-120 Jute Matting

‡ Thickness shown is "designed" thickness as described in Section B21.01.

TYPICAL SECTIONS
TYPE GRADING & SLOPE PROTECTION

Scale: 1/8"=1'-0"



SECTION A
LIMITING STATIONS

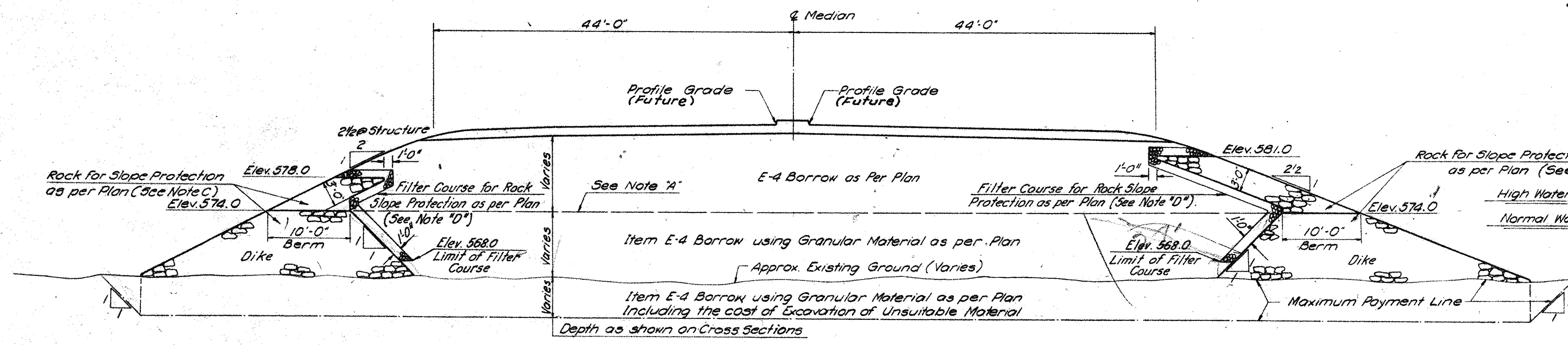
Sta. 48+50 ℄ to Sta. 63 + 73 ℄ (OTT)
Sta. 64 + 27 ℄ to Sta. 84+00 ℄ (OTT)
Sta. 6 +40 ℄ to Sta. 37+73 ℄ (ERI)
Sta. 38+27 ℄ to Sta. 68+05 ℄ (ERI)

1.55 ex.

NOTE:
FOR PROPOSED TOP OF EMBANKMENT SEE TYPICAL CROSS SECTION, SHEET 41.

NOTE "A"

When the Granular Fill (Item E-4) has been placed to Elev. 574, it shall be compacted to the satisfaction of the Engineer by a Vibratory Roller, CH-30 Terra-Pac, VT 6-4 Vibrotamper, or Approved Equal or with a 50 Ton pneumatic-tired roller meeting the requirements of S.S.-CE-101.04. Payment for this work is to be included in the unit price bid for Item E-4 Borrow using Granular Material as per Plan.



NOTE:
For Pavement Items See Sheet No. 5
For Station Equations See Sheet No. 1

SECTION B
LIMITING STATIONS

Sta. 84+00 ℄ to Sta. 98+00 ℄ (OTT)

NOTE "D"

ITEM SPECIAL FILTER COURSE FOR ROCK SLOPE PROTECTION, AS PER PLAN.
Material for this course should meet the same quality requirements as Item Special Rock for Slope Protection, As Per Plan, and shall be graded as follows:

Sieve Size	Percent Passing
3"	100
2"	35-70
1"	10-30

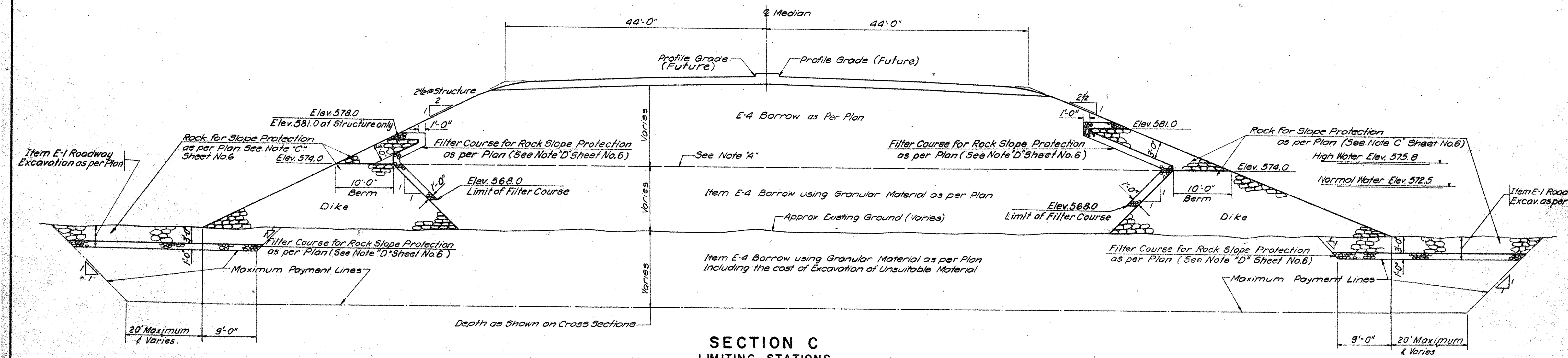
The material shall be spread over the upper 6 feet of dike back slope, and/or behind the Rock Slope Protection on the fill slopes as shown on the plans, using hand rakes or other suitable tools so as to fill the voids between the larger rock in the dikes and Rock Slope Protection. It is not the intent to provide everywhere a uniform thickness of this filter but rather to seal the major voids on the inner slopes of the dikes and the Rock Slope Protection. A quantity of material sufficient for a one foot thick layer has been set up in the estimate. The quantity to be used will be determined by the Engineer.
The number of cubic yards furnished shall be determined on the basis of a conversion factor of 3000 pounds per cubic yard. Freight bills or certified weigh bills shall be furnished to the Engineer as requested during progress of the work.
The yardage measured as provided above shall be paid for at the unit price per cubic yard bid for Item Special Filter Course for Rock Slope Protection, As Per Plan, which price and payment shall constitute full compensation for furnishing, hauling and spreading the material and for all labor, equipment, tools and incidentals necessary to complete this item.
If a quantity of filter greater than the plan amount is provided, the volume of this extra material shall be deducted from the volume of the granular embankment using the conversion factor of 3000 pounds per cubic yard.

NOTE "C"

ITEM SPECIAL ROCK FOR SLOPE PROTECTION AS PER PLAN. Material for this item shall be slag or sound and durable uncrushed stone (limestone) with a minimum of voids, crystalline filled vugs, cracks, seams and other defects that would accelerate its deterioration. Limestone shall meet the quality requirements of Sec. M-3.1, slag the quality requirements of Sec. M-3.6. The solid stone or slag shall weigh not less than 145 pounds per cubic foot. Individual pieces shall weigh between 10 and 1,000 pounds with at least 50 percent by weight of the total materials being made up of pieces weighing between 100 and 600 pounds. The stone shall be free of dirt, clay and rock fines. Slabby stone with parallel faces less than 6" apart will not be accepted. Not more than 10 percent by weight of the material shall consist of spalls weighing less than 10 pounds. If, in the opinion of the Engineer, material of Specification size is not being furnished the Contractor shall change his source or adjust the blasting, processing or loading methods to obtain material of the specified size.
The rock shall be placed so as to build the section called for on the plans. The completed section shall be free from pockets of small sizes or clusters of larger stone. In general the larger sizes shall be placed toward the outer sides of the dikes & slopes.
The quantity to be paid for shall be the neat quantity as determined from the maximum payment lines on the plans for this item.
The yardage of Rock for Slope Protection measured as provided above shall be paid for at the contract unit price per cubic yard, which price and payment shall constitute full compensation for furnishing, hauling and placing, and all labor, tools, equipment and materials necessary to complete this item.

TYPICAL SECTIONS
TYPE
GRADING & SLOPE PROTECTION

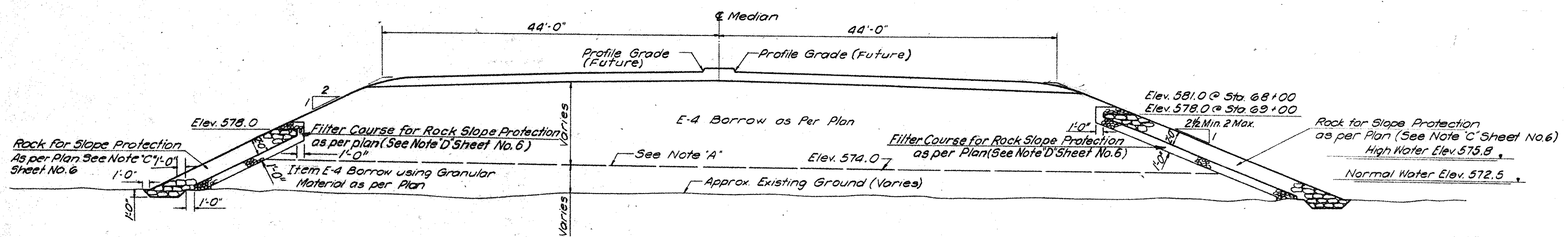
Scale: 1/8"=1'-0"



SECTION C
LIMITING STATIONS

Sta. 98+00 ℄ to Sta. 108+28 ℄ (OTT)

NOTE: FOR PROPOSED TOP OF EMBANKMENT SEE TYPICAL CROSS SECTION, SHEET 41.



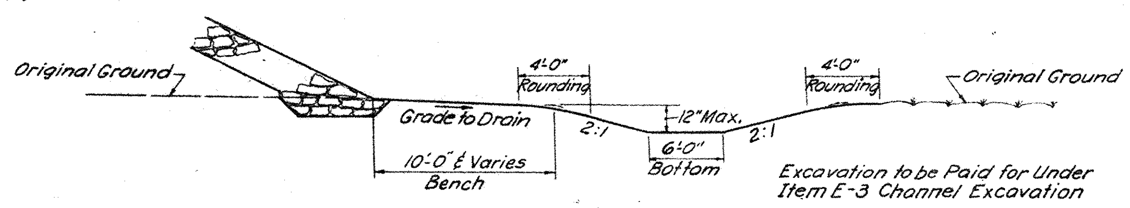
SECTION D
LIMITING STATIONS

Sta. 68+05 ℄ to Sta. 71+00 ℄ (ERI)

NOTE:

For Pavement Items see Sheet No. 5
For Station Equations see Sheet No. 1

NOTE: "A"
When the Granular Fill (Item E-4) has been placed to Elev. 574, it shall be compacted to the satisfaction of the Engineer by a Vibratory Roller, CH-30 Terra-Pac, VTG-4 Vibrotamper, or Approved Equal or with a 50 Ton pneumatic-tired roller meeting the requirements of S.S. CE-101.04. Payment for this work is to be included in the unit price bid for Item E-4 Borrow using Granular Material as per Plan.



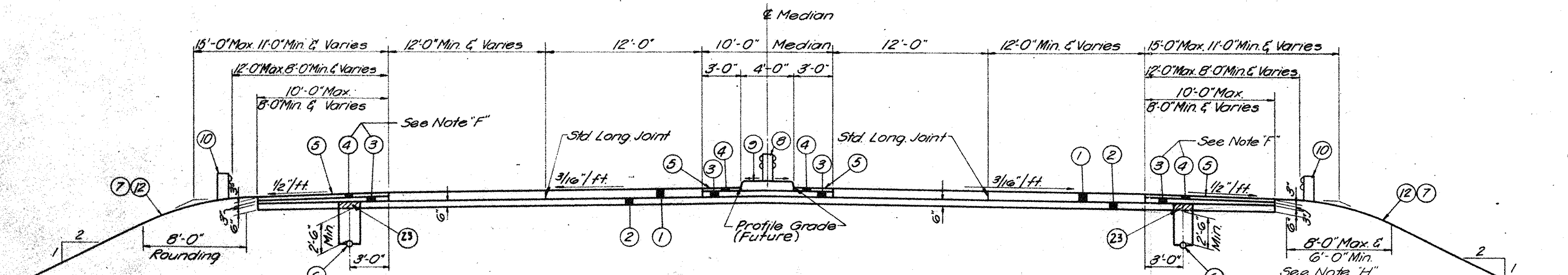
TYPICAL CHANNEL SECTION
LIMITING STATIONS

Sta. 48+14℄ to Sta. 48+35℄

Not to Scale

TYPICAL SECTIONS

TYPE T-71 (FUTURE)



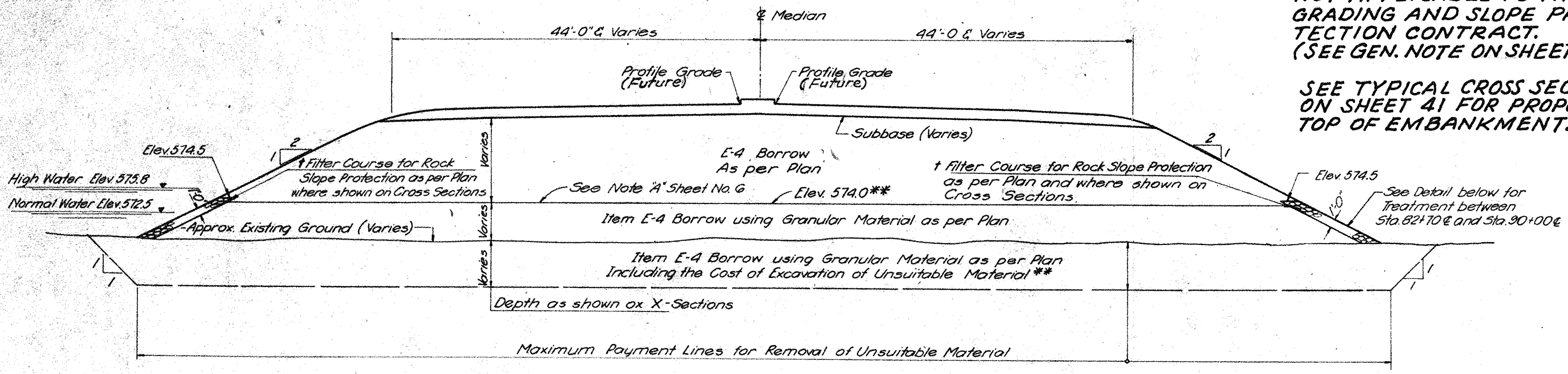
NORMAL SECTION

LIMITING STATIONS

Sta. 82+55℄-EB to Sta. 84+65℄-EB-ERI
Sta. 84+65℄ to Sta. 95+00℄-ERI
Scale: 3/16"=1'-0"

NOTE:
DISREGARD ALL CONSTRUCTION ITEMS AND DETAILS SHOWN HEREON WHICH ARE NOT APPLICABLE TO THIS GRADING AND SLOPE PROTECTION CONTRACT. (SEE GEN. NOTE ON SHEET 15)

SEE TYPICAL CROSS SECTION ON SHEET 41 FOR PROPOSED TOP OF EMBANKMENT.



** Except that, between stations 71+00℄ and 77+50℄, granular material, under Item E-4 Borrow using granular material as per plan, will be placed by the method of end dumping to a height of 2'-0" above the existing ground. No excavation of unsuitable material scalping or precompaction of foundation soil will be required in this area.

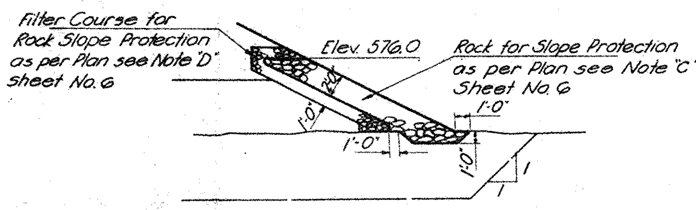
† This material shall be spread on the fill slopes in the manner and to the dimensions shown on the plans. Gradation, material placement and payment shall be in accordance with the requirements of Note "D" Sheet No. 6

EMBANKMENT SECTION

LIMITING STATIONS

Sta. 71+50℄ to Sta. 97+00℄-ERI

Scale: 1/8"=1'-0"

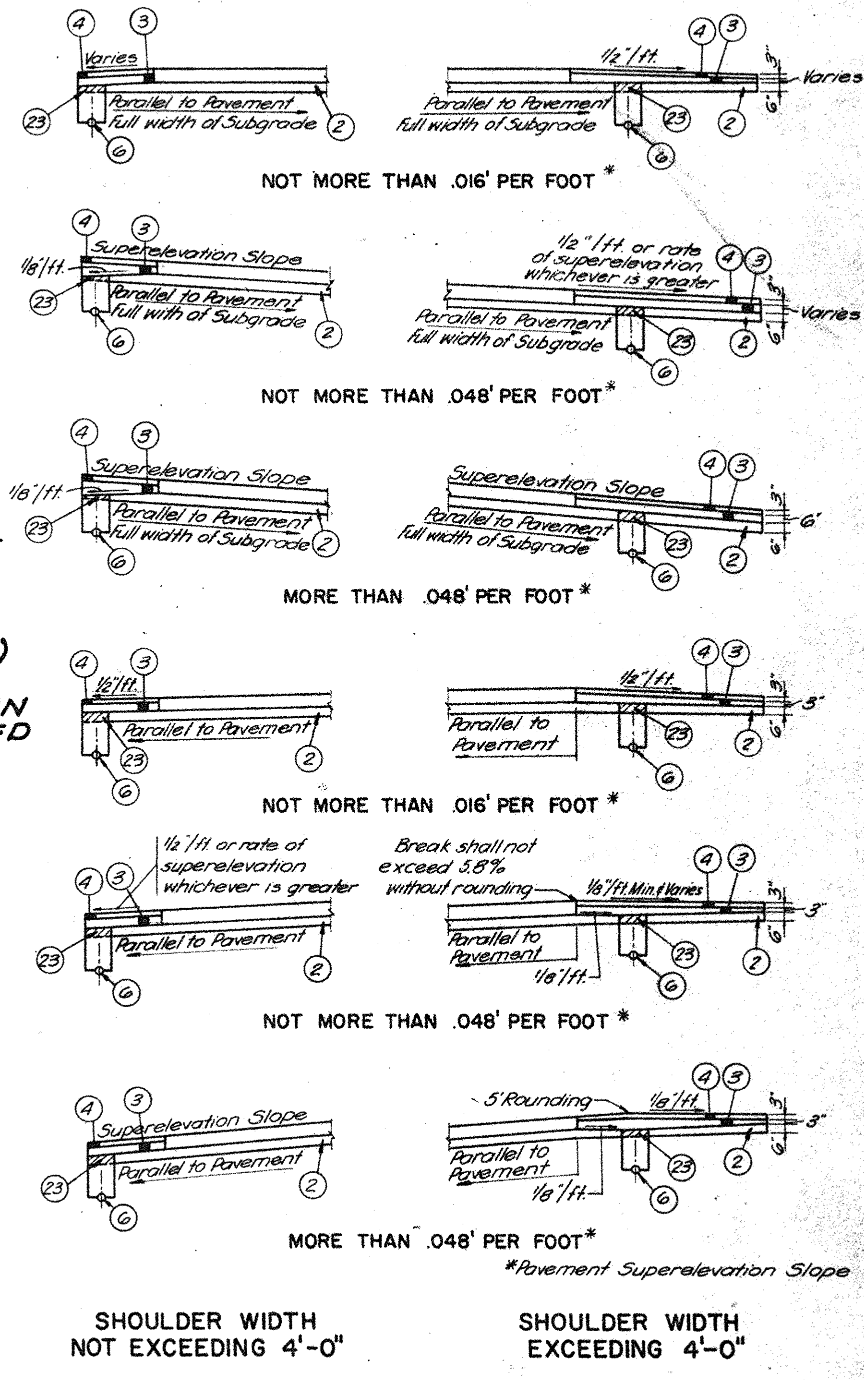


SLOPE PROTECTION DETAIL

LIMITING STATIONS

Sta. 82+70℄ to Sta. 90+00℄-ERI-Right Side

Scale: 1/8"=1'-0"



TRANSITION SECTIONS (FUTURE)

See Note "F"
Scale: 3/16" = 1'-0"

‡ Thickness shown is "designed" thickness as described in Section B-21.01.

COURSE LEGEND (FUTURE CONSTRUCTION)

1. T-71 9" Reinforced Portland Cement Concrete Pavement
2. I-22 Subbase (Variable Thickness), "A" or B Grading, As Per Plan
3. B-112 Porous Base Course (Variable Thickness)
4. ‡B-21 3" Waterproofed Aggregate Base Course (Type "A" T-35 Material may be used in construction of this Course - See Note in Proposal)
5. T-31 Bituminous Surface Treatment using 0.008 cu. yd. No. 6 aggregate per sq. yd. and 0.25 gal. bituminous material per sq. yd. (see note in proposal)
6. I-1 6" Class I-3 Pipe
7. L-9 Seeding and Protecting, as per Plan.
8. I-15 Guard Rail Wire Cable Barrier Type (4 Cables) using 6"x8" square sawed wood posts
9. I-21 Portland Cement Concrete Median - Standard Type 2
10. I-15 Guard Rail Wire Cable Standard Type (4 Cables) using 6"x8" square sawed wood posts
23. Remove subbase for width of Item I-1 Trench and replace with either Class 3 backfill or with porous base material immediately prior to placing the Item B-112 Porous Base Course. Cost shall be included in price bid per linear foot for Item I-1 6" Class I-3 Pipe.
12. L-120 Jute Matting

NOTE: "F"
Adjacent to Ramps and Speed Change Lanes, the Thickness of the Bituminous Material shall be increased from 3" to 6" with a compensating reduction in Thickness applied to the Porous Base Course.

NOTE: "H"
Rounding is to be 8'-0" where shoulder is 15'-0" wide and 6'-0" where shoulder is 11'-0" wide.

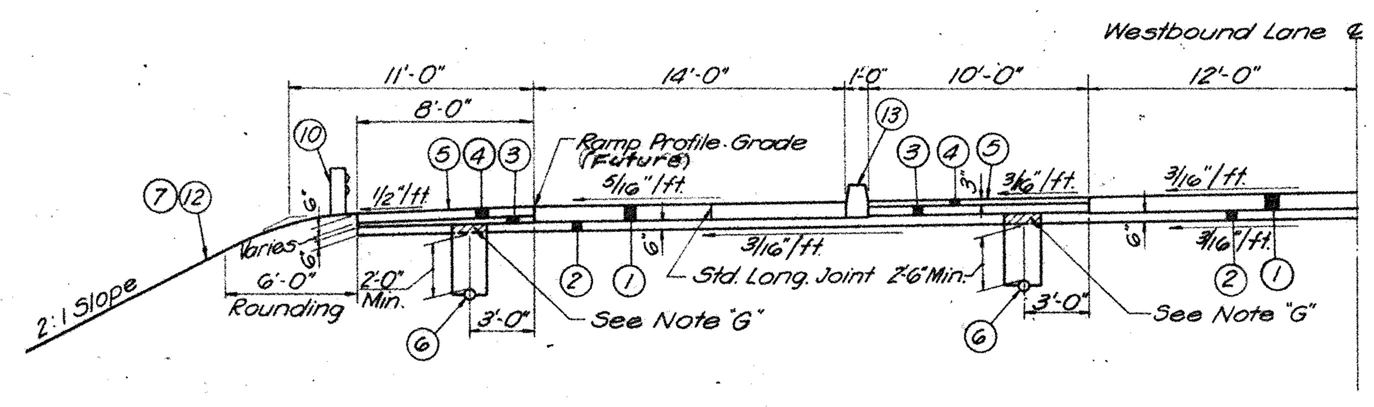
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

OTT-2-27.36 ERI-2-0.15

9 / ~~118~~

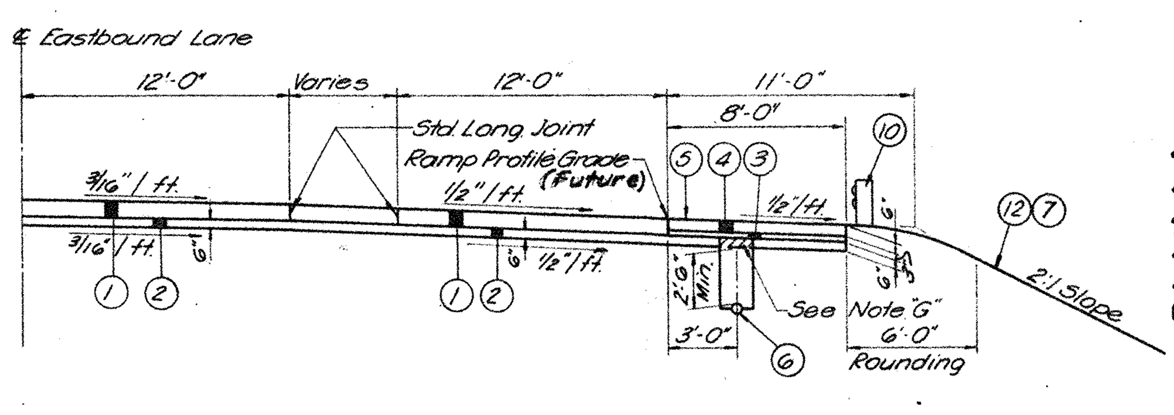
TYPICAL SECTIONS

TYPE T-71 (FUTURE)



Sta. 0+00.00 B

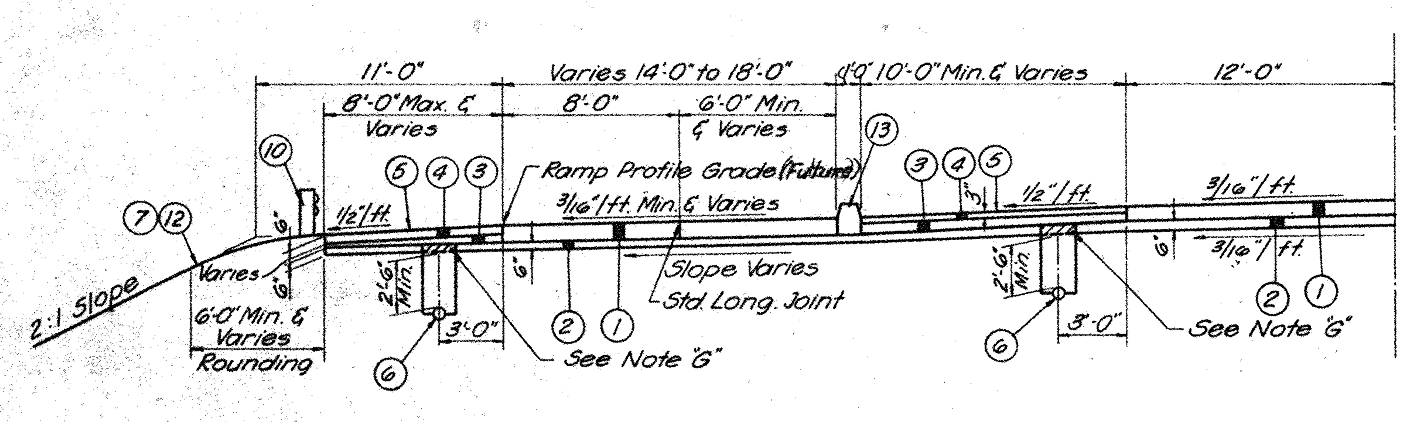
Sta. 85+08.03 ℄



Sta. 93+40.01 ℄

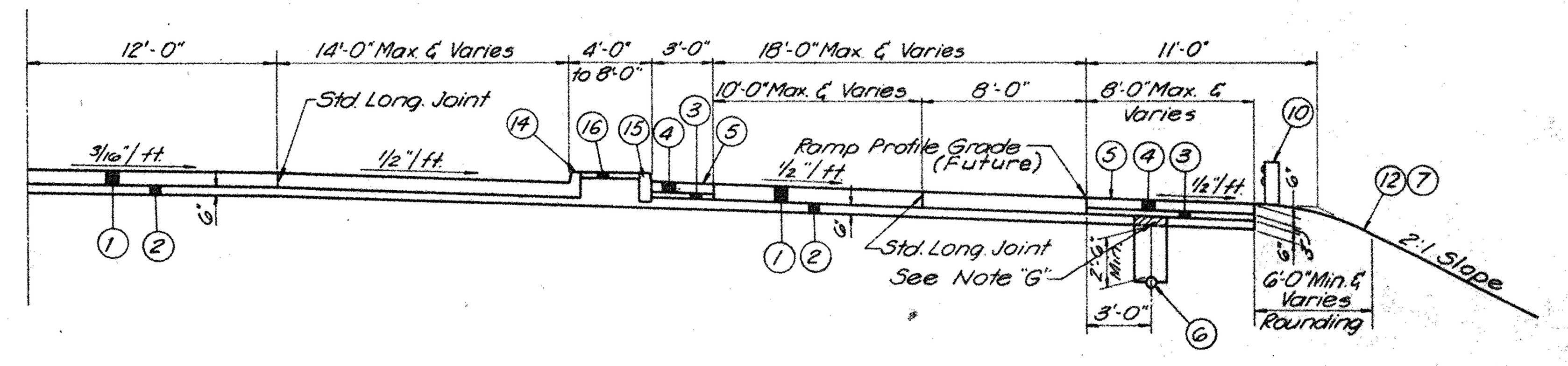
NOTE:
DISREGARD ALL CONSTRUCTION ITEMS AND DETAILS SHOWN HEREON WHICH ARE NOT APPLICABLE TO THIS GRADING AND SLOPE PROTECTION CONTRACT. (SEE GEN. NOTE ON SHEET 15)

SEE TYPICAL CROSS SECTION ON SHEET 41 FOR PROPOSED TOP OF EMBANKMENT.



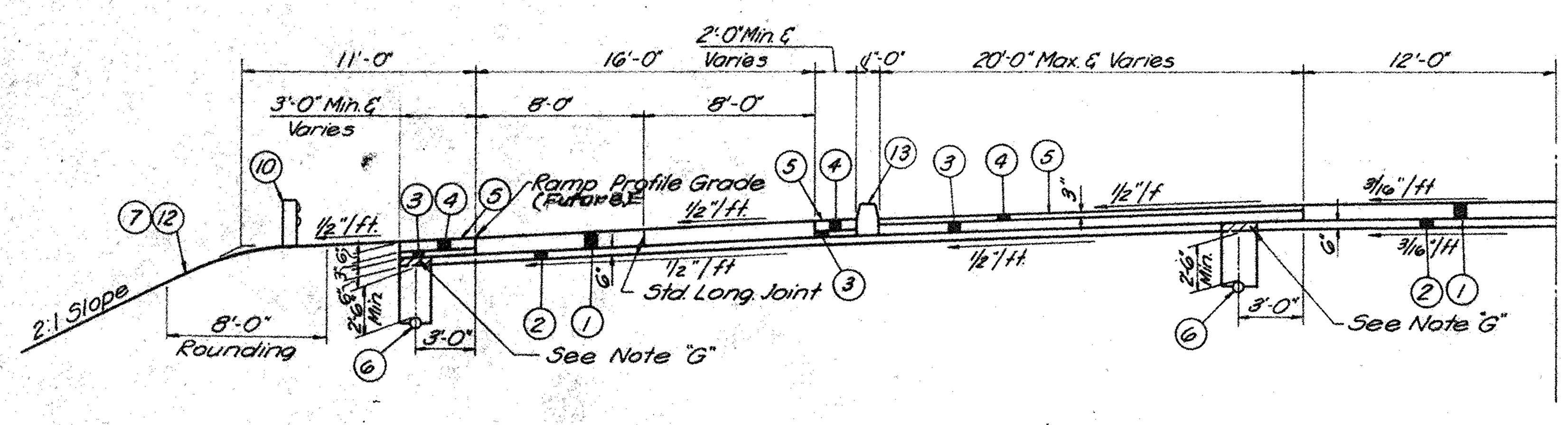
Sta. 0+00.00 B TO STA. 4+33.00 B

Sta. 85+08.03 ℄ TO STA. 85+42.00 ℄



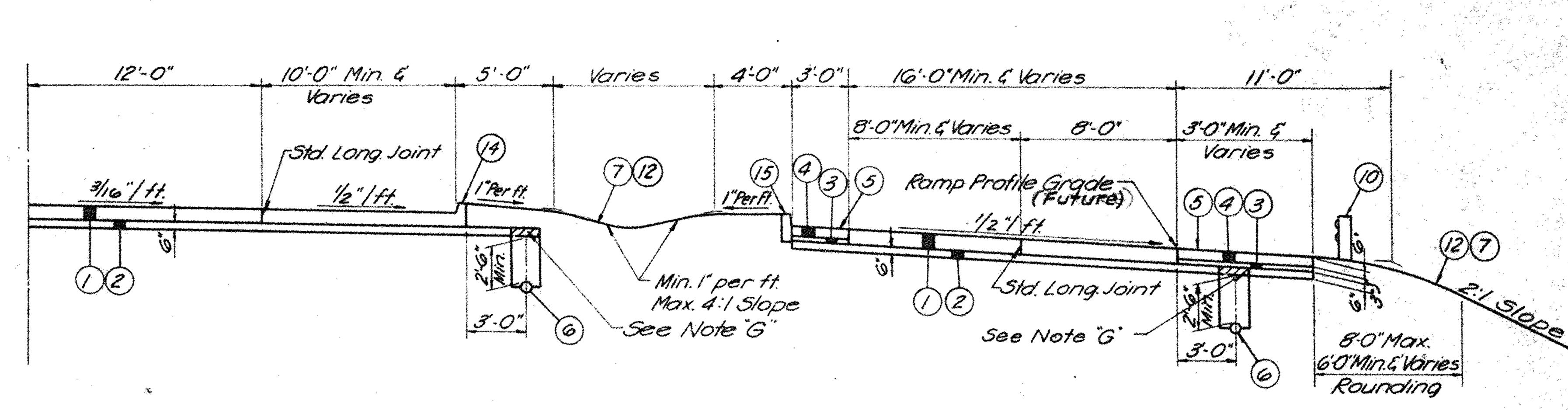
Sta. 93+40.01 ℄ TO STA. 93+80.00 ℄

Sta. 4+53.07 A TO STA. 4+88.00 A



Sta. 4+33.00 B TO STA. 4+75.00 B

Sta. 85+42.00 ℄ TO STA. 85+85.00 ℄



Sta. 93+80.00 ℄ TO Sta. 94+42.00 ℄

Sta. 4+88.00 A TO Sta. 5+53.00 A

ENTRANCE TERMINAL SECTIONS

EXIT TERMINAL SECTIONS

COURSE ~~LEGEND~~ (FUTURE CONSTRUCTION)

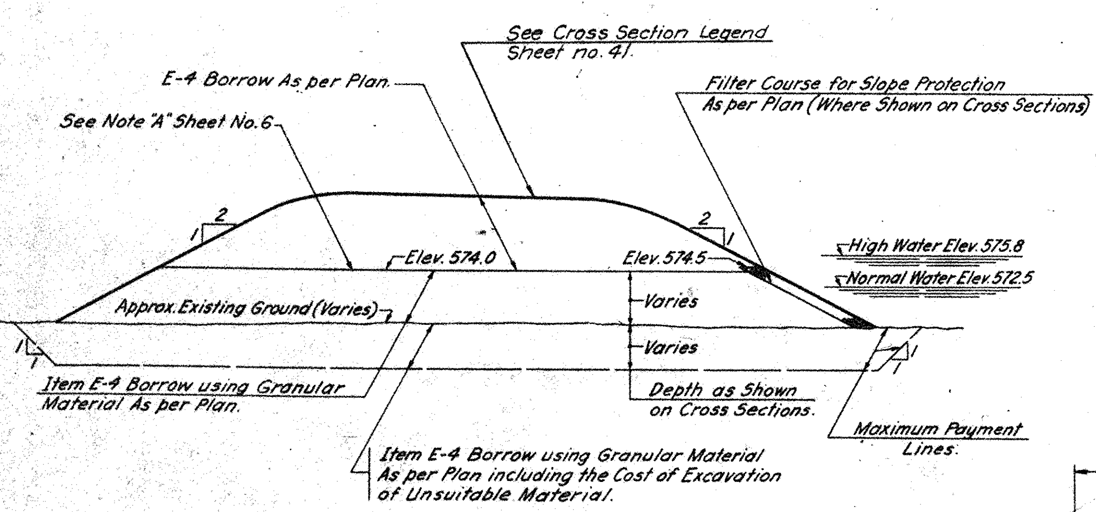
1. T-71 9" Reinforced Portland Cement Concrete Pavement
2. I-22 Subbase (Variable Thickness) "A" or "B" Grading, As Per Plan
5. T-31 Bituminous Surface Treatment using 0.008 cu. yd No. 6 aggregate per sq. yd. and 0.25 gal. bit. mat'l per sq. yd. (see proposal note)
6. I-1 6" Class I-3 Pipe
13. I-12 Special Barrier Curb, as per plan
14. I-12 Concrete Curb Type 2A Standard

NOTE: For paved berms see Transition Sections Sheet No. 8

NOTE "G"
Remove Subbase for width of Item I-1 trench and replace with

TYPICAL SECTIONS

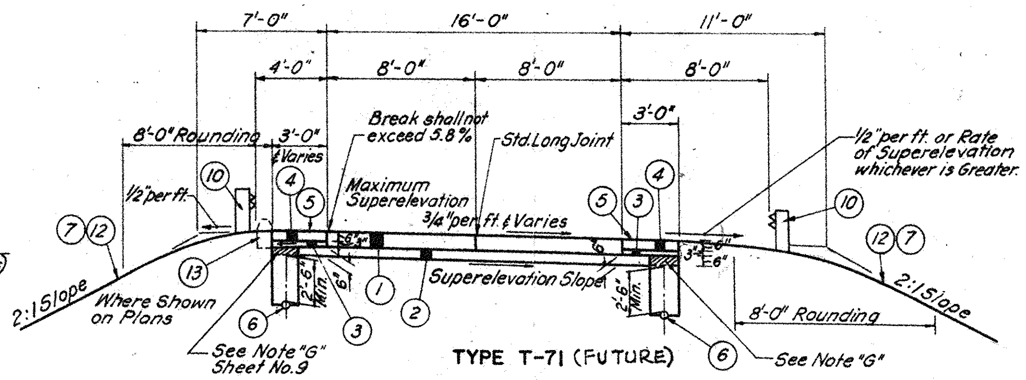
Scale: 3/16"=1'-0"



EMBANKMENT SECTION

LIMITING STATIONS

Sta. 5+53A to Sta. 9+00A
Sta. 4+75B to Sta. 12+00B (Opp. Hand)



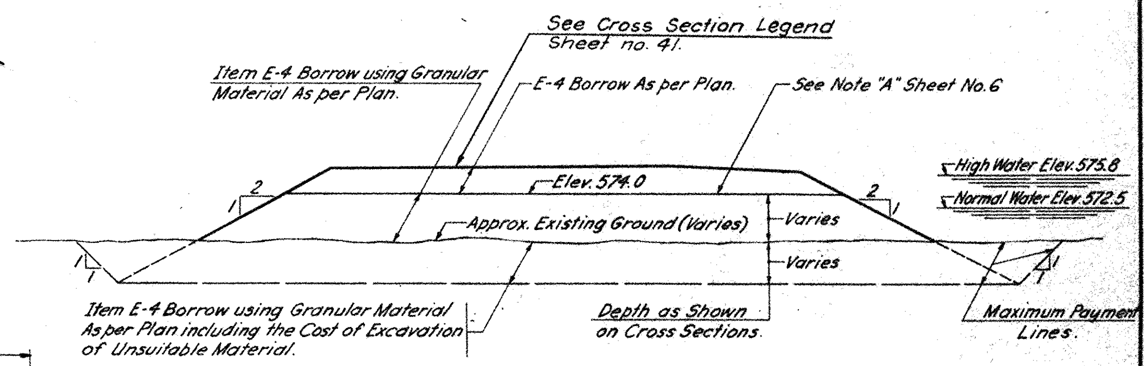
TYPE T-71 (FUTURE)

SUPERELEVATED SECTION

ONE WAY-ONE LANE RAMP

LIMITING STATIONS

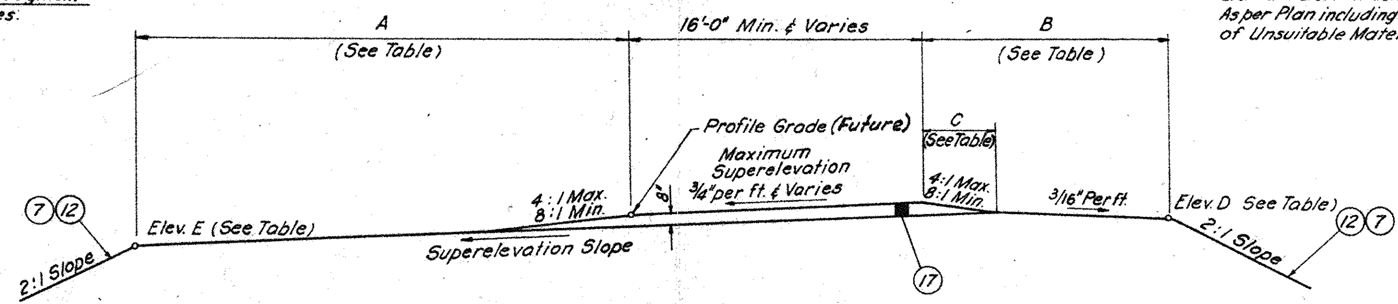
Sta. 5 + 53 A to Sta. 7 + 00 A
Sta. 4 + 75 B to Sta. 6 + 60 B (Opposite Hand)



EMBANKMENT SECTION

LIMITING STATIONS

Sta. 12+00B to Sta. 13+30B



TYPE T-10 (FUTURE)

TYPICAL SECTION

CONSTRUCTION ACCESS ROAD-RAMP B

LIMITING STATIONS

Sta. 6 + 60 B to Sta. 13 + 30 B

COURSE LEGEND (FUTURE CONSTRUCTION)

(1) T-71 9" Reinforced Portland Cement Concrete Pavement
(2) I-22 Subbase (Variable Thickness), Grading "A" or "B", As Per Plan
(3) B-112 Porous Base Course (Variable Thickness)
(4) #B-21 6" Waterproofed Aggregate Base Course (Type "A" T-35 Material may be used in construction of this Course - See Note in Proposal
(5) T-31 Bituminous Surface Treatment using 0.008 cu.yd. No. 6 aggregate per sq.yd. and 0.25 gal. bituminous material per sq. yd. (See note in proposal)
(6) I-1 6" Class I-3 Pipe
(7) L-9 Seeding and Protecting, as per Plan.
(8) I-15 Guard-Rail Wire Cable Barrier Type (4 Cables) using 6"x8". square sawed Wood Posts
(9) I-21 Portland Cement Concrete Medien - Standard Type 2 (Modified)
(10) I-15 Guard Rail Wire Cable Standard Type (4 Cables) using 6"x8" square sawed Wood Posts
(12) L-120 Jute Matting
(13) I-12 Special Barrier Curb, as per Plan
(17) T-10 Traffic Compacted Surface Course

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

NOTE:
DISREGARD ALL CONSTRUCTION ITEMS AND DETAILS SHOWN HEREON WHICH ARE NOT APPLICABLE TO THIS GRADING AND SLOPE PROTECTION CONTRACT. (SEE GENERAL NOTE ON SHEET 15)

SEE TYPICAL CROSS SECTION ON SHEET 41 FOR PROPOSED TOP OF EMBANKMENT.

STATION	DISTANCE			ELEVATION		STATION	DISTANCE			ELEVATION		STATION	DISTANCE			ELEVATION	
	A	B	C	D	E		A	B	C	D	E		A	B	C	D	E
6+75B	12.58	7.92	3.56	581.00	576.06	9+00B	22.53	18.33	4.66	577.34	576.78	11+25B	39.53	34.52	4.74	574.38	573.94
7+00B	12.85	8.17	3.56	580.70	578.75	9+25B	24.34	19.32	4.74	576.98	576.53	11+50B	41.14	36.13	4.74	574.19	573.75
7+25B	13.38	8.68	3.62	580.34	578.46	9+50B	26.24	21.22	4.74	576.65	576.20	11+75B	42.50	37.49	4.74	574.14	573.70
7+50B	14.18	9.47	3.74	579.91	578.20	9+75B	28.14	23.12	4.74	576.33	575.88	12+00B	43.78	38.77	4.74	574.12	573.68
7+75B	15.10	10.39	4.00	579.49	578.03	10+00B	30.04	25.02	4.74	576.00	575.55	12+25B	23.89	21.38	4.74	575.61	573.95
8+00B	16.37	11.61	4.01	579.07	577.69	10+25B	31.96	26.94	4.74	575.67	575.22	12+50B	4.00	4.00	3.71	574.31	574.27
8+25B	17.51	13.02	4.15	578.64	577.53	10+50B	33.83	28.82	4.74	575.35	574.90	12+75B	4.00	4.00	2.67	574.98	574.98
8+50B	19.24	14.65	4.29	578.23	577.18	10+75B	35.75	30.74	4.74	575.02	574.58	13+00B	4.00	4.00	2.67	574.98	574.98
8+75B	20.89	16.50	4.48	577.77	576.98	11+00B	37.65	32.64	4.74	574.69	574.25	13+25B	4.00	4.00	2.67	574.98	574.98

GENERAL NOTES

DESIGN SPEED

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

ELEVATION DATUM

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

HORIZONTAL CONTROL

THE HORIZONTAL CONTROL FOR THIS PROJECT IS BASED ON U.S.G.S. PLANE COORDINATE SYSTEM, OHIO NORTH ZONE.

FIELD OFFICE

THE CONTRACTOR SHALL, IN ACCORDANCE WITH SEC. S-0.01 (b), PROVIDE, FOR THE EXCLUSIVE USE OF THE STATE'S EMPLOYEES, A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 800 SQ. FT. OF FLOOR SPACE. THE CONTRACTOR SHALL HAVE A TELEPHONE INSTALLED AND MAINTAINED IN THIS FIELD OFFICE DURING THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL ALSO PROVIDE AND INSTALL WIRING AND OUTLETS SUITABLE FOR CONNECTING ELECTRIC LIGHTS AND OFFICE EQUIPMENT IN THE FIELD OFFICE AND PROVIDE 110-VOLT ALTERNATING CURRENT TO THE OFFICE DURING THE ENTIRE PERIOD OF CONSTRUCTION OF THIS PROJECT.

CONSTRUCTION LAYOUT STAKES

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

SUPERELEVATION

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

ROUNDING OF CORNERS ON CROSS SECTIONS

THE ROUNDED CORNERS, SHOWN ON TYPICAL SECTIONS, APPLY TO ALL CROSS SECTIONS EVEN THOUGH OTHERWISE SHOWN IN THESE PLANS.

HEAVY EQUIPMENT

THE CONTRACTOR SHALL EXERCISE CARE IN THE USE OF HEAVY EQUIPMENT OVER FINISHED WORK AND WILL BE REQUIRED TO REMOVE AND REPLACE ANY COMPLETED WORK DESTROYED THEREBY. CULVERTS SHALL BE BACKFILLED TO A HEIGHT OF FOUR FEET BEFORE LOADED EARTH-MOVING EQUIPMENT IS PERMITTED TO CROSS THE TRENCH. ANY ADDITIONAL FILL AND SUBSEQUENT EXCAVATION REQUIRED TO PROVIDE THIS MINIMUM COVER SHALL BE MADE AT NO ADDITIONAL COST TO THE STATE. HEAVY EQUIPMENT SHALL NOT BE OPERATED OVER ANY COMPLETED LAYER OF EMBANKMENT, COMPACTED SUBGRADE, OR SUBBASE IF SUCH OPERATION TENDS TO DESTROY THE SOIL STRUCTURE OR PIPE UNDERDRAINS; HOWEVER, IF SUCH OPERATION CANNOT BE AVOIDED, THE CONTRACTOR WILL BE REQUIRED TO REDUCE THE SIZE OF LOADS TO AN EXTENT THAT DAMAGE DOES NOT OCCUR.

UTILITY ADJUSTMENT

ANY OR ALL WORK REQUIRED FOR PUBLIC OR PRIVATE UTILITIES WILL BE DONE BY AND AT THE EXPENSE OF THEIR RESPECTIVE OWNERS, UNLESS OTHERWISE NOTED ON THESE PLANS.

UNDERGROUND UTILITIES

DILIGENT FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS HAVE SHOWN NO EXISTING UNDERGROUND UTILITIES IN THIS PROJECT EXCEPT FOR THE DRAINAGE LINES SHOWN ON THE PLANS. IT IS BELIEVED THAT THIS INFORMATION IS ESSENTIALLY CORRECT BUT THE STATE OF OHIO MAKES NO GUARANTEES AS TO ITS ACCURACY OR COMPLETENESS.

UTILITIES

THE CONTRACTOR SHALL NOTIFY AT LEAST FORTY-EIGHT (48) HOURS BEFORE BREAKING GROUND ALL PUBLIC SERVICE CORPORATIONS HAVING WIRE, POLES, PIPE CONDUITS, MANHOLES, AND FOOTINGS OR OTHER STRUCTURES WHICH MAY BE AFFECTED BY THIS OPERATION. ANY AND ALL WORK REQUIRED FOR PUBLIC OR PRIVATE UTILITIES WILL BE DONE BY AND AT THE EXPENSE OF THEIR RESPECTIVE OWNERS, UNLESS OTHERWISE NOTED ON THESE PLANS.

UTILITY OWNERSHIP

OHIO BELL TELEPHONE COMPANY 121 HURON STREET TOLEDO 1, OHIO	TELEPHONE LINES
NEW YORK CENTRAL RAILROAD LA SALLE STREET STATION CHICAGO 5, ILLINOIS	TELEGRAPH, TELEPHONE AND POWER DISTRIBUTION LINES DRAINAGE CULVERTS

SEQUENCE OF CONSTRUCTION OPERATIONS

SUBGRADE SHALL BE CONSTRUCTED FULL WIDTH OF PAVEMENT, PAVED SHOULDERS AND PAVED MEDIAN. UNDERDRAINS, WHERE CALLED FOR ON THE PLANS, SHALL BE INSTALLED AND BACKFILLED TO SUBGRADE ELEVATION IMMEDIATELY PRIOR TO CONSTRUCTION OF THE SUBBASE.

THE SUBBASE SHALL BE CONSTRUCTED FULL WIDTH OF PAVEMENT, PAVED SHOULDERS AND PAVED MEDIAN IN ONE OPERATION.

CONCRETE PAVEMENT SHALL BE CONSTRUCTED.

AFTER THE SURFACE OF THE SUBBASE IN THE SHOULDER AREA IS IN PLACE AND COMPACTED AS SPECIFIED, AND IMMEDIATELY PRIOR TO PLACING THE POROUS BASE COURSE, THE MATERIAL LOCATED ABOVE AND WITHIN THE UNDERDRAIN TRENCH SHALL BE REMOVED TO THE DEPTH NECESSARY TO EXPOSE CLEAN CLASS 3 BACKFILL.

THE TRENCH SO EXCAVATED SHALL BE BACKFILLED WITH NEW CLASS 3 BACKFILL MATERIAL, OR IF THE CONTRACTOR SO ELECTS, HE MAY SUBSTITUTE MATERIAL MEETING THE REQUIREMENTS OF ITEM B-112, POROUS BASE COURSE.

POROUS BASE COURSE SHALL BE CONSTRUCTED AND CONSTRUCTION OF THE WATERPROOFED AGGREGATE COURSE SHALL FOLLOW IMMEDIATELY.

LIGHTING

FOR GENERAL NOTES (LIGHTING), SEE LIGHTING PLANS.

TRAFFIC MAINTENANCE

TWO LANES OF TRAFFIC WITH A MINIMUM HORIZONTAL WIDTH OF 24'-0" SHALL BE MAINTAINED ON EXISTING S.R. 269 WITHIN THE LIMITS OF WORK AT ALL TIMES. THE COST OF ALL MATERIAL, EQUIPMENT, AND LABOR REQUIRED TO ACCOMPLISH THE ABOVE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "MAINTAINING TRAFFIC".

POSSIBILITY OF NON-PERFORMANCE

THE APPROACH AREAS AT BOTH ENDS OF THE PROJECT HAVE BEEN SHOWN AND ESTIMATED UNDER THE ASSUMPTION THAT THIS PROJECT WILL BE BUILT PRIOR TO EITHER OF THE ADJACENT SECTIONS. HOWEVER, THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT, SHOULD THE CONSTRUCTION SCHEDULING OF THE ADJACENT PROJECTS RESULT IN EITHER OR BOTH BEING BUILT FIRST, THE APPROPRIATE ITEMS BETWEEN STATIONS 48+50℄ TO 50+38℄; 95+00℄ TO 97+00℄; 7+00A TO 9+00A AND 6+60B TO 13+30B WILL BE NON-PERFORMED AT THE DIRECTION OF THE ENGINEER.

PROTECTION OF SEEDED SLOPES

THE OUTER 12 INCHES OF THE EMBANKMENT WHICH WILL BE SEEDED SHALL BE REASONABLY FREE FROM LARGE ROCK OR OTHER FOREIGN MATERIAL WHICH WOULD PREVENT THE FORMATION OF A SUITABLE SEED BED. THE MATERIAL USED IN THIS AREA SHALL CONTAIN PARTICLES OR GRAINS OF WHICH AT LEAST 50% BY WEIGHT WILL PASS A #200 SIEVE. THIS TREATMENT SHALL BE APPLIED TO ALL EMBANKMENT SLOPES WHICH ARE TO BE SEEDED, FOR THE ENTIRE LENGTH OF SLOPE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM E-4 BORROW AS PER PLAN.

EROSION CONTROL

ITEMS I-10, L-10, L-120 AND ITEM SPECIAL ROCK FOR SLOPE PROTECTION ARE PROVIDED IN THESE PLANS FOR EROSION CONTROL. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES FOR THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

ITEM L-9 SEEDING AND PROTECTING ROADWAY AREAS, AS PER PLAN

QUANTITIES FOR SEEDING ARE CALCULATED FOR THE FOLLOWING UNSODDED SOIL AREAS:

WHERE SPECIAL ROCK SLOPE PROTECTION IS PROVIDED

NORMAL SECTION -

FROM EDGE OF PAVED BERM TO TOP OF SPECIAL ROCK SLOPE PROTECTION ALONG OUTSIDE FILL SLOPES EXCEPT THAT THE EXPOSED AREA OF SUBBASE OUTLET IS NOT TO BE SEEDED.

SUPERELEVATED SECTION -

LOW SIDE

FROM EDGE OF PAVED BERM TO TOP OF SPECIAL ROCK SLOPE PROTECTION ALONG OUTSIDE FILL SLOPES EXCEPT THAT THE EXPOSED AREA OF THE SUBBASE OUTLET IS NOT TO BE SEEDED.

HIGH SIDE

FROM EDGE OF PAVED BERM TO TOP OF SPECIAL ROCK SLOPE PROTECTION ALONG OUTSIDE FILL SLOPES.

WHERE SPECIAL ROCK SLOPE PROTECTION IS NOT PROVIDED

NORMAL SECTION -

FROM EDGE OF PAVED BERM TO WATER SURFACE ALONG OUTSIDE FILL SLOPES EXCEPT THAT THE EXPOSED AREA OF THE SUBBASE OUTLET IS NOT TO BE SEEDED.

SUPERELEVATED SECTION -

LOW SIDE

FROM EDGE OF PAVED BERM TO WATER SURFACE OR TO TOE OF FILL SLOPE, WHICHEVER IS HIGHER, ALONG OUTSIDE FILL SLOPES EXCEPT THAT THE EXPOSED AREA OF THE SUBBASE OUTLET IS NOT TO BE SEEDED.

HIGH SIDE

FROM EDGE OF PAVED BERM TO WATER SURFACE OR TOE OF FILL SLOPE, WHICHEVER IS HIGHER, ALONG OUTSIDE FILL SLOPES.

OTHER AREAS ABOVE WATER SURFACE

FROM TOE OF FILL SLOPES TO A LINE TEN FEET (10') OUTSIDE THE WORK LIMITS AS SHOWN ON THE PLANS AND CROSS SECTIONS OR TO THE RIGHT OF WAY LINE IF IT IS LESS THAN TEN FEET (10') FROM THE WORK LIMITS.

THE FOLLOWING SEED MIXTURE SHALL BE APPLIED TO ALL THE ABOVE AREAS AT THE RATE OF THREE POUNDS (3 LBS) PER 1000 SQUARE FEET.

CREEPING RED FESCUE	70%
KENTUCKY BLUEGRASS	25%
ALSIKE CLOVER	5%

AGRICULTURAL LIMING MATERIALS, AS PER PLAN

THE LOCATION AND NEED FOR AGRICULTURAL LIMING MATERIALS WILL BE DETERMINED BY LABORATORY TESTS AFTER ROUGH GRADING OPERATIONS HAVE BEEN PERFORMED. QUANTITIES OF AGRICULTURAL LIMING MATERIALS AS SHOWN ON THE PLANS ARE SUFFICIENT FOR THE ENTIRE PROJECT, BUT WILL BE NON-PERFORMED FOR THE AREAS WHERE TESTS SHOW THAT THE LIMING MATERIAL IS NOT NEEDED. WHERE USED THIS MATERIAL SHALL BE APPLIED AT THE RATE OF 100 LBS. PER 1000 SQ. FT.

GUARD RAIL CONNECTION AT BRIDGES

THE JUNCTION BETWEEN THE HIGHWAY AND BRIDGE GUARD RAIL SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE APPROACH SLAB DETAIL DRAWING FOR EACH BRIDGE AND IN ACCORDANCE WITH THE REQUIREMENTS OF ITEM I-15. PAYMENT FOR ALL MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLY WITH THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM I-15 GUARD RAIL.

BARRIER GUARD RAIL AT APPROACH SLABS

ALL BARRIER GUARD RAIL POSTS ON APPROACH SLABS AT STRUCTURES SHALL BE STEEL POSTS OF THE SIZE AND TYPE SHOWN ON THE APPROACH SLAB DETAIL DRAWING FOR EACH STRUCTURE. PAYMENT FOR THESE POSTS WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE GUARD RAIL ITEM.

GUARD RAIL AT BRIDGES

ONE (1) ADDITIONAL GUARD RAIL POST SHALL BE PROVIDED IN THE CENTER OF EACH PANEL OF GUARD RAIL ADJOINING A BRIDGE, PAYMENT FOR WHICH SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM I-15 GUARD RAIL.

GENERAL NOTES

New plans Rdwy. Excav. will consist of removing Sur-charge Method 'B'

BEAM TYPE GUARD RAIL AT BRIDGES

THE END POSTS FOR THE BEAM TYPE GUARD RAIL AND FOR THE BEAM TYPE BARRIER GUARD RAIL SHALL BE INCLUDED IN THE HIGHWAY ESTIMATE. PAYMENT FOR THESE POSTS WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM I-16 GUARD RAIL.

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 DRAWING T.J.

JOINT LEGEND

TYPES OF PAVEMENT JOINTS TO BE USED ARE SPECIFIED BY THE FOLLOWING LEGEND:

1 = STANDARD LONGITUDINAL JOINT
2 = STANDARD EXPANSION JOINT
3 = STANDARD CONTRACTION JOINT

PAVEMENT ITEMS

CALCULATIONS FOR ESTIMATION OF PAVEMENT ITEMS ARE ON FILE IN THE DIVISION OFFICE.

ITEM I-22 SUBBASE AS PER PLAN

THE MATERIAL FURNISHED FOR THIS ITEM SHALL MEET THE REQUIREMENTS OF GRADING A OR B OF SECTION I-22.02 EXCEPT THAT, FOR EITHER GRADING, NOT MORE THAN 10% OF THE MATERIAL SHALL PASS THE NUMBER 200 SIEVE AFTER ALL OPERATIONS OF PLACEMENT AND COMPACTION HAVE BEEN COMPLETED.

ITEM T-31 BITUMINOUS SURFACE TREATMENT

THE RATE OF APPLICATION FOR THIS ITEM, WHEN PLACED ON B-21 WATERPROOF AGGREGATE BASE COURSE, SHALL BE 0.25 GAL. OF BITUMINOUS MATERIAL, AND 0.008 CU. YD. OF NO. 6 AGGREGATE PER SQUARE YARD.

FOR VARIETY AND GRADE OF BITUMINOUS MATERIALS PERMITTED IN THE CONSTRUCTION OF THIS ITEM, SEE NOTE IN PROPOSAL.

PORTLAND CEMENT CONCRETE MEDIAN

THE CROWN OF THE PORTLAND CEMENT CONCRETE MEDIAN ON APPROACH SLABS SHALL BE TRANSITIONED FROM THE STANDARD SECTION USED ON THE APPROACH PAVEMENT TO THE SECTION USED ON THE BRIDGE WITHIN THE LIMITS OF THE APPROACH SLAB.

CURB END AND MEDIAN ENDS

CURB ENDS AND MEDIAN ENDS SHALL BE TAPERED FROM 6" HIGH TO 2" HIGH IN A DISTANCE OF 20 FT. UNLESS OTHERWISE SHOWN ON THE PLANS. THE SPECIAL BARRIER CURB SHALL BE TAPERED FROM 9" HIGH TO 2" HIGH IN A DISTANCE OF 20 FT. AT ITS CURB END.

DELINEATORS

DELINEATORS HAVE BEEN ESTIMATED ALONG THE RIGHT SIDE OF EACH DIRECTIONAL PAVEMENT IN AREAS OF THIS PROJECT WHERE LIGHTING IS NOT SPECIFIED. SPECIFIC LOCATIONS FOR DELINEATORS SHALL BE AS SHOWN ON THE PLANS OR AS DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

DRAINAGE OF BASE MATERIAL

WHERE THE BASE MATERIAL IS DRAINED BY EXTENSION OF THE SUBBASE THROUGH THE SHOULDERS TO THE FILL SLOPE, THE CONTRACTOR SHALL FINISH, SEED AND MULCH THE SLOPES SO AS NOT TO IMPEDE DRAINAGE OF THE BASE MATERIAL. THE ACTUAL AREA OF THE OUTCROP OF THE SUBBASE MATERIAL SHALL NOT BE SEEDED.

PIPE

WHEN BELL AND SPIGOT PIPE IS USED, ANY NECESSARY PIPE CUTOFFS WILL BE MADE AT THE SPIGOT END OF THE LENGTH OF PIPE ADJACENT TO THE END LENGTH. WHEN TONGUE AND GROOVE PIPE IS USED, THE LENGTH OF PIPE NEXT TO THE END LENGTH SHALL BE CUT AND BUTT JOINT FORMED WITH A CLASS "E" CONCRETE 6" MINIMUM THICKNESS COLLAR, 12" IN LENGTH. THE COST OF THE JOINT AND COLLAR SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR THE PERTINENT PIPE ITEM.

SEALING OF PIPE JOINTS

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

LOCATION AND SIZE OF PIPES

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

SPECIAL BEDDING FOR PIPE CULVERTS

WHERE SPECIAL BEDDING IS CALLED FOR ON THE PLANS USING MATERIALS DIFFERENT FROM THOSE SPECIFIED IN SECTION I-1.04, THERE SHALL BE NO SEPARATE PAYMENT FOR THE WORK OF PLACING AND SHAPING THE SPECIAL MATERIAL. THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT PIPE ITEM. HOWEVER, THE COST OF THE SPECIAL MATERIAL ITSELF SHALL BE PAID FOR SEPARATELY UNDER THE APPROPRIATE ITEM AS CALLED FOR ON THE PLAN.

ITEM E-1 ROADWAY EXCAVATION AS PER PLAN

QUANTITIES OF ITEM E-1 ROADWAY EXCAVATION AS PER PLAN IN THIS CONTRACT CONSIST OF UNSUITABLE MATERIAL ONLY, WHICH IS NOT TO BE USED AS EMBANKMENT BUT IS TO BE WASTED OR DISPOSED OF IN ACCORDANCE WITH SECTION E-106(a).

PAYMENT WILL BE MADE ON THE BASIS OF THE NUMBER OF CUBIC YARDS OF MATERIAL IN THE ORIGINAL POSITION ACCEPTABLY EXCAVATED, MEASURED BY THE METHOD OF AVERAGE END AREAS, COMPUTED FROM PLAN LINES WITHIN THE NEAT LINES SHOWN ON THE CROSS SECTIONS AND TYPICAL SECTIONS AND DESIGNATED AS MAXIMUM PAYMENT LIMITS AT THE UNIT PRICE BID FOR THIS ITEM. EXCAVATION OUTSIDE PLAN LINES SHALL NOT BE INCLUDED IN MEASUREMENT FOR PAYMENT.

DISPOSAL OF UNSUITABLE MATERIAL

MATERIAL EXCAVATED UNDER ITEM E-4 BORROW USING GRANULAR MATERIAL AS PER PLAN INCLUDING THE COST OF EXCAVATION OF UNSUITABLE MATERIAL OR UNDER OTHER PAYMENT ITEMS IN THE CONTRACT SHALL NOT BE USED IN EMBANKMENTS BUT SHALL BE WASTED OR DISPOSED OF IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION E-1.06(a). NO ADDITIONAL PAYMENT SHALL BE MADE FOR THE HANDLING, PLACEMENT, OR DISPOSITION OF THIS MATERIAL BUT THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE ITEM.

COOPERATION BETWEEN CONTRACTORS

DURING THE LIFE OF THE CONTRACT THERE MAY BE WORK DONE BY OTHERS ON THE SANDUSKY BAY BRIDGE AND APPROACHES WHICH WORK IS NOT IN THIS CONTRACT. HOWEVER, THE CONTRACTOR'S ATTENTION IS CALLED TO THE NECESSITY OF COOPERATION, IN ACCORDANCE WITH THE PROVISIONS OF SECTION G-5.05, WITH THE OTHERS WORKING WITHIN THE AREA COVERED BY THIS PROJECT.

~~MULCHING~~

MULCHING WILL NOT BE ~~REQUIRED UNDER~~ ITEM L-9. SEEDING AND ~~PROTECTING~~ ROADWAY AREAS, AS PER PLAN.

~~ITEM S.S.~~ CE-101.04

AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN INCLUDED IN THE GENERAL SUMMARY, FOR USE AS INDICATED BY THE ENGINEER, IN PROOF ROLLING OF ALL SUBGRADE.

EST. QUANTITY - 59 HOURS

FEDERAL AID CONSTRUCTION IDENTIFICATION SIGN

The contractor shall furnish, erect, maintain and, subsequently, remove Federal aid construction identification sign at Sta. 13+20 Ramp B.

This sign shall be in accordance with design N-44(2)-102 on Std. drawing FACI-1 and mounted in accordance with Std. drawing FACI-2. For additional details, see note in proposal.

CONSTRUCTION PLANS

THESE PLANS WERE DRAWN FOR CONSTRUCTION OF A COMPLETE AND FINISHED PAVED HIGHWAY FACILITY. HOWEVER, THIS CONTRACT SHALL INCLUDE ONLY THOSE ITEMS NECESSARY FOR CONSTRUCTION OF THE CAUSEWAY EMBANKMENT, AS SHOWN ON THE TYPICAL CROSS SECTION ON SHEET 41, AND FOR THE CONSTRUCTION OF THE SMALL BOAT PASSAGEWAY STRUCTURES AND THE EQUALIZER PIPE STRUCTURES.

ALL DETAILS, NOTES, REFERENCES ETC. SHOWN THROUGHOUT THESE PLANS PERTAINING TO ITEMS OF CONSTRUCTION, WHICH ARE NOT A PART OF THIS CONTRACT, SHALL BE DISREGARDED EVEN THOUGH THEY HAVE NOT BEEN SHOWN DELETED.

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

OTT-2-27.36 ER1-2-0.15

16
48

GENERAL NOTES

CAUSEWAY CONSTRUCTION PROCEDURE

GENERAL

THE CAUSEWAY SHALL BE BUILT BY CONSTRUCTING TWO ROCK DIKES USING ITEM SPECIAL ROCK FOR SLOPE PROTECTION AS PER PLAN. THE INNER FACE OF THE ROCK DIKE WILL BE PROTECTED BY A ONE FOOT LAYER OF SPECIAL FILTER COURSE AS SHOWN ON TYPICAL SECTIONS, SHEETS 6 AND 7 , OF THE PLANS. GRANULAR MATERIAL WILL THEN BE USED AS A FILL BETWEEN THE DIKES. THE DIKES WILL BE RESTING, IN CERTAIN AREAS, ON EXISTING BOTTOM. IN OTHER AREAS THE BOTTOM CONSISTS OF FIBROUS AND SEDIMENTARY PEAT WHICH IS TO BE EXCAVATED AND REPLACED WITH GRANULAR MATERIAL AS SHOWN ON THE PLANS, TYPICAL SECTIONS AND CROSS SECTIONS, BEFORE PLACING THE ROCK DIKES.

EXCAVATION AND BACKFILLING

THE WORK OF EXCAVATING MUCK, PEAT AND OTHER UNSUITABLE MATERIAL, REPLACING WITH GRANULAR MATERIAL AND CONSTRUCTION OF DIKES SHALL BE COORDINATED SO THAT ONE FOLLOWS THE OTHER IN A CONTINUOUS OPERATION. DREDGING OR EXCAVATION SHALL NOT BE CARRIED ON SO MUCH AHEAD OF BACKFILLING THAT THE TRENCH MAY FILL UP WITH UNSUITABLE MATERIAL. THE ENGINEER MAY DIRECT THE SUSPENSION OF ANY OPERATION UNTIL THE LAGGING STEPS ARE BROUGHT UP TO HIS SATISFACTION.

GRANULAR MATERIAL AND EMBANKMENT

THE GRANULAR MATERIAL USED TO REPLACE THE EXCAVATED UNSUITABLE MATERIAL AND TO CONSTRUCT THE EMBANKMENT BETWEEN THE STONE DIKES UP TO ELEVATION 574 SHALL MEET THE REQUIREMENTS OF SEC. E-1.02 GRANULAR MATERIAL EXCEPT THAT AT LEAST 80 PERCENT BY WEIGHT OF THE GRAINS OR PARTICLES SHALL BE RETAINED ON A NO. 200 SIEVE. INFORMATION ON FILE WITH THE DIVISION OF SHORE EROSION OF THE OHIO DEPARTMENT OF NATURAL RESOURCES INDICATES THAT MATERIAL MEETING THESE REQUIREMENTS IS AVAILABLE IN COMMERCIAL DREDGING AREAS IN LAKE ERIE OFF CEDAR POINT, OHIO. PERMIT FOR DREDGING FROM THE LAKE BOTTOM MAY BE OBTAINED FROM THE DIRECTOR OF THE DEPARTMENT OF NATURAL RESOURCES.

GRANULAR EMBANKMENT BELOW ELEVATION 574 MAY BE PLACED BY DUMPING FROM BARGES OR TRUCKS OR IT MAY BE PLACED HYDRAULICALLY SO LONG AS THE METHODS USED DO NOT DISTURB THE ROCK DIKE OR THE SPECIAL ROCK FILTER MATERIAL. BEFORE CONSTRUCTING EMBANKMENT ABOVE ELEVATION 574, THE GRANULAR EMBANKMENT AND ROCK DIKE SHALL BE THOROUGHLY COMPACTED BY A VIBRATORY ROLLER, CH-30 TERRA-PAC, VT8-4 VIBROTAMPER OR APPROVED EQUAL, OR WITH A 50 TON PNEUMATIC TIRED ROLLER MEETING THE REQUIREMENTS OF S.S. CE-101.04, TO THE SATISFACTION OF THE ENGINEER. . PAYMENT FOR THIS ROLLING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM E-4 BORROW USING GRANULAR MATERIAL AS PER PLAN.

EMBANKMENT ABOVE ELEVATION 574 SHALL BE CONSTRUCTED USING ANY SUITABLE MATERIAL AS DEFINED IN E-1, EXCEPT THAT THE OUTER ONE FOOT OF MATERIAL ABOVE THE ROCK SLOPE PROTECTION SHALL BE EITHER SOIL AS DEFINED IN SEC. E-1.02 OR ROCK SIMILAR TO THAT USED IN THE SLOPE PROTECTION BELOW. PLACEMENT OF THIS PART OF THE FILL SHALL BE IN CONFORMANCE WITH SEC. E-1.08 OF THE SPECIFICATIONS.

~~EMBANKMENT SHALL BE COMPLETED TO SUBGRADE ELEVATION OR ABOVE FOR A PERIOD OF AT LEAST SIX MONTHS BEFORE BEGINNING SUBGRADING OPERATIONS.~~

ROCK DIKES & FILTER COURSE

THE ROCK DIKES SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN ON THE PLAN USING ITEM SPECIAL, ROCK FOR SLOPE PROTECTION AS PER PLAN AS DESCRIBED IN NOTE "C" ON SHEET 6 . THE FILTER COURSE SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN ON THE PLAN USING ITEM SPECIAL, FILTER COURSE FOR ROCK SLOPE PROTECTION AS PER PLAN AS DESCRIBED IN NOTE "D" ON SHEET 6 .

MEASUREMENT AND PAYMENT

PAYMENT FOR ITEM SPECIAL FILTER COURSE FOR ROCK SLOPE PROTECTION SHALL BE AT THE UNIT PRICE BID PER CUBIC YARD FOR THE NUMBER OF CUBIC YARDS INCORPORATED IN THE WORK, USING THE CONVERSION FACTOR AS DESCRIBED IN NOTE "D" ON SHEET 6 . IF A QUANTITY OF FILTER COURSE GREATER THAN THE PLAN AMOUNT IS FURNISHED AS DIRECTED BY THE ENGINEER, THE VOLUME OF THIS EXTRA MATERIAL SHALL BE DEDUCTED FROM THE VOLUME OF THE GRANULAR EMBANKMENT AS COMPUTED FROM THE CONVERSION FACTOR IN NOTE "D" SHEET 6 .

PAYMENT FOR ITEM E-4 BORROW AS PER PLAN, ITEM E-4 BORROW USING GRANULAR MATERIAL AS PER PLAN, ITEM E-4 BORROW USING GRANULAR MATERIAL AS PER PLAN INCLUDING THE COST OF EXCAVATION OF UNSUITABLE MATERIAL AND ITEM SPECIAL ROCK FOR SLOPE PROTECTION AS PER PLAN, SHALL BE BASED ON THE NUMBER OF CUBIC YARDS COMPUTED FROM PLAN LINES WITHIN THE NEAT LINES SHOWN ON THE PLANS, PROFILES, CROSS SECTIONS AND TYPICAL SECTIONS AND DESIGNATED AS MAXIMUM PAYMENT LIMITS AT THE UNIT PRICE BID FOR EACH RESPECTIVE ITEM.

NO EXTRA PAYMENT WILL BE MADE FOR GRANULAR MATERIAL OR ROCK DIKE MATERIAL WHICH MAY BE REQUIRED DUE TO SETTLEMENT OF THE FOUNDATION SOILS.

THE PLAN QUANTITY FOR ITEM E-4 BORROW USING GRANULAR MATERIAL AS PER PLAN MAY BE ADJUSTED AS DESCRIBED IN THE PARAGRAPH ABOVE WHICH REFERS TO PAYMENT FOR ITEM SPECIAL FILTER COURSE FOR ROCK SLOPE PROTECTION.

IN THE CASE OF THE GRANULAR MATERIAL USED TO REPLACE THE EXCAVATED UNSUITABLE MATERIAL, THE UNIT PRICE BID FOR THIS ITEM WILL INCLUDE THE COST OF EXCAVATION AND DISPOSAL OF THE UNSUITABLE MATERIAL.

SPECIAL EARTHWORK ITEMS

STATION TO STATION	E-4 BORROW A	E-4 BORROW C	E-4 BORROW E	ITEM SPECIAL B	ITEM SPECIAL F	EXCAVATION D
	CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.
CODE 0010						
OTTAWA COUNTY						
48+50 ℄ to 66+00 ℄	205739	57938		21855	3294	110
66+00 ℄ to 77+00 ℄	39272	35336		19537	2365	
77+00 ℄ to 87+00 ℄	33937	35152	15197	20639	2150	
87+00 ℄ to 97+00 ℄	33930	35867	36616	21275	2150	
97+00 ℄ to 108+28 ℄	50561	45785	105284	36514	5225	11931
ERIE COUNTY						
6+40 ℄ to 23+00 ℄	72695	65413		33915	3286	
23+00 ℄ to 34+00 ℄	37323	36631		21016	2208	
34+00 ℄ to 45+00 ℄	33173	36463		23915	2118	
45+00 ℄ to 56+00 ℄	50211	36832		18516	2368	
56+00 ℄ to 67+00 ℄	47014	33815		16980	2361	
67+00 ℄ to 92+00 ℄	118300	36190	42086	2932	1845	
92+00 ℄ to 97+00 ℄	18375	6465	8614		76	
6+14A to 9+00A	4335	1777	3850		77	
5+93 B to 13+30 B	2915	4552	6902		126	
Surcharge - See Sheet no. 41	41388					
Total	~~747810~~ 789198	468,216	218,549	237,094	29646	12,041.

"A" - E-4 Borrow as per Plan
"B" - Rock for Slope Protection, as per Plan
"C" - E-4 Borrow using Granular Material, as per Plan
"D" - E-1 Roadway Excavation, as per Plan
"E" - E-4 Borrow, using Granular Material as per plan, including the cost of Excavation of Unsuitable Material
"F" - Filter Course for Rock Slope Protection, as per Plan

I-127 DELINEATORS

STATION TO STATION	OFFSET	SPACING	AMOUNT TYPE A-1	AMOUNT TYPE C2
CODE 7221				
OTTAWA COUNTY				
51+00 ℄ to 105+00 ℄	12.5 Lt.	200	28	
51+00 ℄ to 105+00 ℄	12.5 Rt.	200	28	
ERIE COUNTY				
9+00 ℄ to 45+00 ℄	12.5 Lt.	200	19	
9+00 ℄ to 45+00 ℄	12.5 Rt.	200	19	
46+00 ℄ to 73+00 ℄	12.5 Lt.	200	14	
46+00 ℄ to 73+00 ℄	12.5 Rt.	200	14	
75+00WB to 77+00WB	8.5 Lt.	200	2	
78+00WB to 82+00WB	8.5 Lt.	100		5
75+00EB to 83+00 EB	12.5 Rt.	200	5	
85+42EB	12.5 Rt.			1
Total Contract			129	6

E-9 REMOVAL OF TREES & STUMPS

STATION	OFFSET	DIAMETER	NO.
CODE 0010			
ERIE COUNTY			
79+97 ℄ to 80+18 ℄	Rt.	30"	1
8+06B to 12+86B	Rt.	12"	6
8+06B to 12+86B	Rt.	15"	8
8+06B to 12+86B	Rt.	18"	12
Total Contract			27

I-125 PAVEMENT MARKING

DESCRIPTION	LIN. FT.	MILES
CODE 7221		
6" Center Lines	10734	2.033
4" Lane Lines	338	0.064
8" Channelizing Lines	1167	0.221
Diagonal Stripes		Lump

I-125 CURB MARKING

STATION TO STATION	~~LIN. FT.~~	~~MILES~~
CODE 7221		
ERIE COUNTY		
0+00B to 1+73 B	173	0.033
2+52B to 4+33 B	181	0.034
4+33B to 5+00B	67	0.013
4+51A to 5+85A	102	0.019
93+40 ℄ to 94+44 ℄	102	0.020
Total Contract		0.118
Curb & Island Marking		Lump

L-9 SEEDING & PROTECTING

STATION TO STATION	AREA SQ. YDS.
CODE 7221	
OTTAWA COUNTY	
48+50 ℄ to 66+00 ℄	16615
66+00 ℄ to 77+00 ℄	3068
77+00 ℄ to 87+00 ℄	2560
87+00 ℄ to 97+00 ℄	2560
97+00 ℄ to 108+28 ℄	3604
ERIE COUNTY	
6+40 ℄ to 23+00 ℄	5945
23+00 ℄ to 34+00 ℄	2937
34+00 ℄ to 45+00 ℄	2717
45+00 ℄ to 56+00 ℄	4577
56+00 ℄ to 67+00 ℄	4378
67+00 ℄ to 92+00 ℄	14005
92+00 ℄ to 97+00 ℄	3043
6+14 A to 9+00 A	1347
5+93 B to 13+30 B	1307
Deduct for Sodding	125
Total Seeding	68538

E-1 COMPACTED SUBGRADE

DESCRIPTION	SQ. YDS.
CODE 7221	
From T-71	78569
From B-21	36555
From I-7	1124
Total Contract	116248

I-8 MONUMENT ASSEMBLIES

CODE 7221	
For location, see table on Sheet No. 106	
Total Contract	20 Each

OVERHEAD SIGN SUPPORTS

Station	Sheet Number	Type	Design	Arm Length	Clamp Sizes (Double)	D_{min}	Location of Guard Rail Protection	ITEM I-15 Guard Rail (Std.) L.F.	ITEM I-129 Type 12.24, Des. 4 Each	ITEM I-129 Type 10.48, Des. 4 Each	Concrete C.Y.
91+50 WB	24	12.24	4	20'	1-6", 2-7"	16.5'			1		5.0
40+50 EB	29	12.24	4	20'	1-6", 2-7"	16.5'			1		5.0
85+40 EB	33	12.24	4	20'	1-6", 2-7"	16.5'			1		5.0
94+05 EB	34	10.48	4	32'	4-6", 2-7"	16.5'	93+83 to 94+08 Both Sides of Pole	50		1	5.0
TOTALS (To GENERAL SUMMARY)								50	3	1	20.0

Notes: ℄ of pole for Type 12.24 Supports is 15' from pavement edge.
℄ of pole for Type 10.48 Support is 5' from face of curb along main line pavement
Dimension "H" for all sign attachments is 10 feet.
For additional details, see Sheets 11-A, 12, and 12-A

L-9 FERTILIZER & LIMING MATERIAL

DESCRIPTION	QUANTITY
CODE 7221	
Seeding Area	68538 Sq. Yds.
Sodding Area	125 Sq. Yds.
Total Sq. Yds.	68663 Sq. Yds.
Commercial Fertilizer @ 20 lb. per 1000 Sq. Ft.	6.18 Tons
Lime @ 100 lb. per 1000 Sq. Ft.	30.90 Tons

L-120 JUTE MATTING

LOCATION	AREA SQ. YDS.
CODE 7221	
From L-9 Seeding & Protecting	68538

E-11 WATER

DESCRIPTION	C.Y.	GALS. PER C.Y.	M. GALS.
CODE 0010			
E-4 Borrow as per Plan	749805	5	3749
~~B-112~~	~~7634~~	~~5~~	~~38~~
~~I-22~~	~~23850~~	~~5~~	~~119~~
Total Contract			~~3906~~ 3749

I-125 ISLAND MARKING

STATION TO STATION	Unit
CODE 7221	
ERIE COUNTY	
4+51 A to 4+86 A	
Total	Lump

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

18/48

OTT-2-27.36 ERI-2-0.15

GENERAL SUMMARY

96" I-1

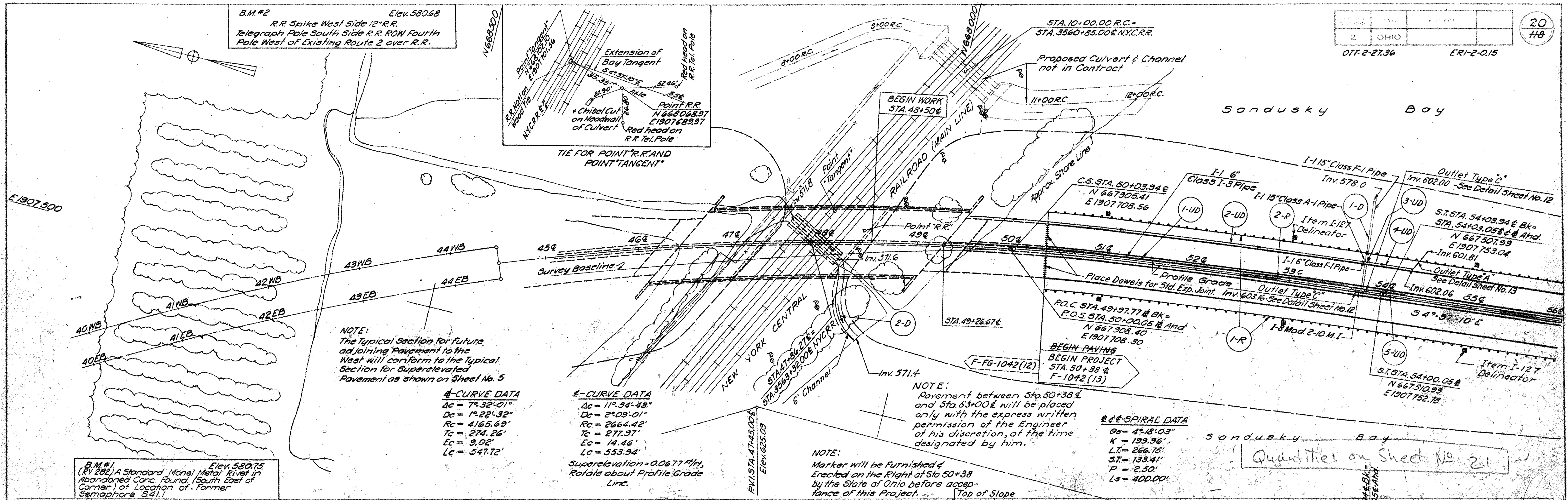
* Quantity deleted from Normal Participation

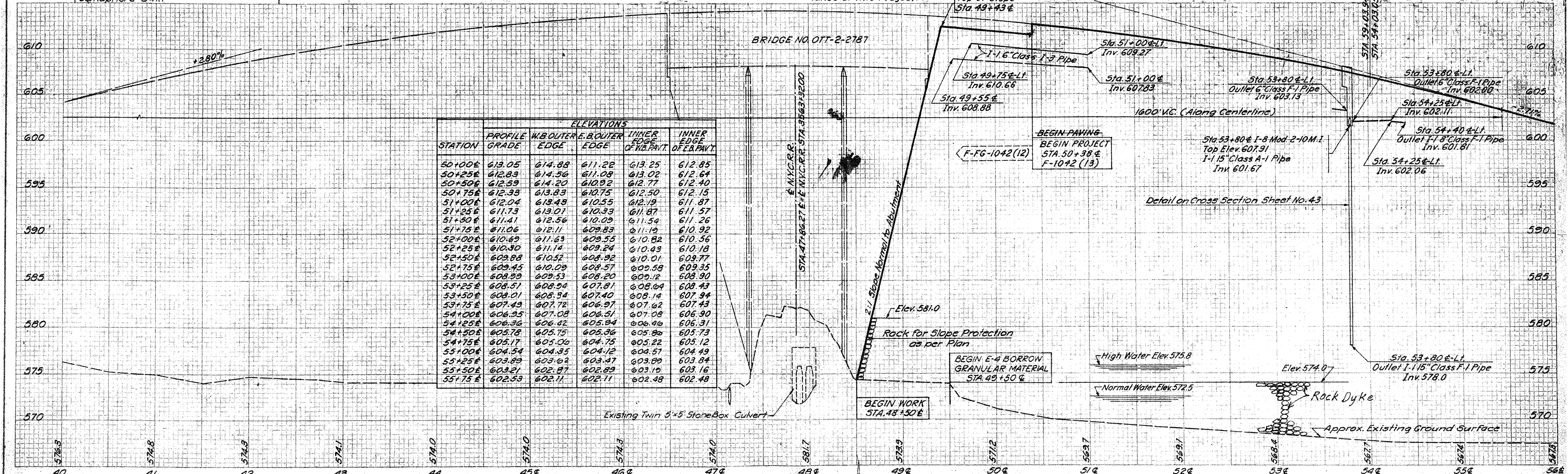
ITEM	GEN NOTES	17	21	22	23	24	27	28	29	30	31	33	37	100% STATE PARTIC.	ITEM	TOTAL QUANTITY	UNIT	DESCRIPTION
CODE															CODE	0010		
																		ROADWAY
E-1		12041													E-1	12041	Cu.Yd.	Roadway Excavation, Method B, as per Plan
~~E-1~~		~~116248~~													~~E-1~~	~~116248~~	~~Sq.Yd.~~	~~Compacted Subgrade~~
~~SS EE-1~~	~~59~~														~~SS EE-1~~	~~59~~	~~Hours~~	~~Compaction using Heavy Pneumatic Tired Roller~~
E-4		789198													E-4	789198	Cu.Yd.	Borrow as per Plan
E-4		468216													E-4	468216	Cu.Yd.	Borrow Using Granular Material, as per Plan
E-4		218549													E-4	218549	Cu.Yd.	Borrow, Using Granular Material, as per Plan including the cost of Excavation of Unsuitable Material
E-9		27													E-9	27	Ea.	Removal of Trees and Stumps
E-11		3749													E-11	3749	M.Gal.	Water
~~I-8~~		~~20~~													~~I-8~~	~~20~~	~~Ea.~~	~~Monument Assemblies~~
~~I-129~~		~~3~~													~~I-129~~	~~3~~	~~Ea.~~	~~Overhead Sign Supports, No. 12.24, Design 4~~
~~I-129~~		~~1~~													~~I-129~~	~~1~~	~~Ea.~~	~~Overhead Sign Support, No. 10.48, Design 4~~
~~I-129~~		~~20.0~~													~~I-129~~	~~20.0~~	~~Cu.Yd.~~	~~Concrete for Sign Support Foundations, Class "C", as per plan~~
~~I-15~~		~~36~~	~~2875~~	~~2200~~	~~2000~~	~~2000~~	~~4900~~	~~2200~~	~~1925~~	~~2200~~	~~2200~~	~~4577.5~~	~~1250~~		~~I-15~~	~~28377.5~~	~~Lin.Ft.~~	~~Guard Rail Wire Cable Standard Type (4 cables)~~
~~I-15~~			~~1437~~	~~1100~~	~~1000~~	~~1000~~	~~2450~~	~~1100~~	~~3625~~	~~1100~~	~~1100~~	~~3312.5~~	~~300~~		~~I-15~~	~~15525~~	~~Lin.Ft.~~	~~Guard Rail Wire Cable Barrier Type (4 cables) as per plan using 6"x8" square sawed Wood Post~~
~~I-15~~													~~50~~		~~I-15~~	~~50~~	~~Lin.Ft.~~	~~Guard Rail Steel Beam Standard Type (Deep), as per plan~~
~~I-125~~		~~0.064~~													~~I-125~~	~~0.064~~	~~Miles~~	~~4" Lane Lines~~
~~I-125~~		~~0.221~~													~~I-125~~	~~0.221~~	~~Miles~~	~~8" Channelizing Lines~~
~~I-125~~		~~2.033~~													~~I-125~~	~~2.033~~	~~Miles~~	~~6" Center Lines~~
~~I-125~~		~~Lump~~													~~I-125~~	~~Lump~~	~~Lump~~	~~Curb and Island Marking~~
~~I-125~~		~~Lump~~													~~I-125~~	~~Lump~~	~~Lump~~	~~Diagonal Stripes~~
~~I-127~~		~~129~~													~~I-127~~	~~129~~	~~Ea.~~	~~Delineators - Type A-1~~
~~I-127~~		~~6~~													~~I-127~~	~~6~~	~~Ea.~~	~~Delineators - Type C-2~~
~~L-9~~		~~30.90~~													~~L-9~~	~~30.90~~	~~Ton~~	~~Agricultural Liming Material as per Plan~~
~~L-9~~		~~68538~~													~~L-9~~	~~68538~~	~~Sq.Yd.~~	~~Seeding and Protecting, as per Plan~~
~~L-9~~		~~6.18~~													~~L-9~~	~~6.18~~	~~Ton~~	~~Commercial Fertilizer (12-12-12)~~
~~L-120~~		~~68538~~													~~L-120~~	~~68538~~	~~S.Y.~~	~~Jute Matting~~
Special		237094												535	Special	237094	Cu.Yd.	Rock for Slope Protection, as per Plan
Special		29646												10.50	Special	29646	Cu.Yd.	Filter Course for Rock Slope Protection as per Plan.
																		DRAINAGE
E-3			30												E-3	30	Cu.Yd.	Channel Excavation
~~I-1~~			~~20~~						~~20~~	~~10~~	~~30~~	~~60~~			~~I-1~~	~~140~~	~~Lin.Ft.~~	~~6" Class F-1 Pipe~~
~~I-1~~			~~882~~						~~352~~	~~2204~~	~~2211~~	~~5200~~	~~2282~~		~~I-1~~	~~13131~~	~~Lin.Ft.~~	~~6" Class I-3 Pipe~~
~~I-1~~			~~86~~									~~110~~			~~I-1~~	~~196~~	~~Lin.Ft.~~	~~6" Class I-3 Pipe Sec. M 6.4 (h)~~
~~I-1~~			~~30~~						~~10~~		~~20~~	~~20~~	~~50~~		~~I-1~~	~~130~~	~~Lin.Ft.~~	~~8" Class F-1 Pipe~~
~~I-1~~			~~42~~									~~120~~			~~I-1~~	~~162~~	~~Lin.Ft.~~	~~15" Class A-1 Pipe, Sec. M-6.6(a) or Sec. M-6.8(b)~~
~~I-1~~									~~58~~	~~56~~	~~112~~	~~64~~			~~I-1~~	~~290~~	~~Lin.Ft.~~	~~15" Class A-1 Pipe Sec. M 6.4 (c)~~
~~I-1~~			~~64~~												~~I-1~~	~~64~~	~~Lin.Ft.~~	~~15" Class F-1 Pipe~~
I-1										162	156	152		470	I-1	* 470	Lin.Ft.	96" Class G-1 Pipe Sec. M 6.4 (g), 10-8 Gage
~~I-2~~												~~64~~			~~I-2~~	~~64~~	~~Cu.Yd.~~	~~Masonry~~
~~I-5~~			~~1~~						~~1~~		~~2~~	~~6~~	~~6~~		~~I-5~~	~~16~~	~~Ea.~~	~~6" Pipe Special for Class I-3 Pipe~~
~~I-5~~			~~2~~												~~I-5~~	~~2~~	~~Ea.~~	~~15" Pipe Special for Class F-1 Pipe~~
~~I-8~~										~~1~~	~~1~~	~~3~~			~~I-8~~	~~5~~	~~Ea.~~	~~Standard No. 2-6 Median Inlet, Modified as per plan~~
~~I-8~~									~~1~~						~~I-8~~	~~1~~	~~Ea.~~	~~Standard No. 2-8 Median Inlet, Modified as per plan~~
~~I-8~~			~~1~~												~~I-8~~	~~1~~	~~Ea.~~	~~Standard No. 2-10 Median Inlet, Modified as per plan~~
~~I-8~~											~~1~~				~~I-8~~	~~1~~	~~Ea.~~	~~Standard No. 3 Catch Basin, Modified as per plan~~
~~I-10~~												~~4~~			~~I-10~~	~~4~~	~~Cu.Yds.~~	~~Dumped Rock Fill Type B~~

Revised R.E.C. 11-19-62

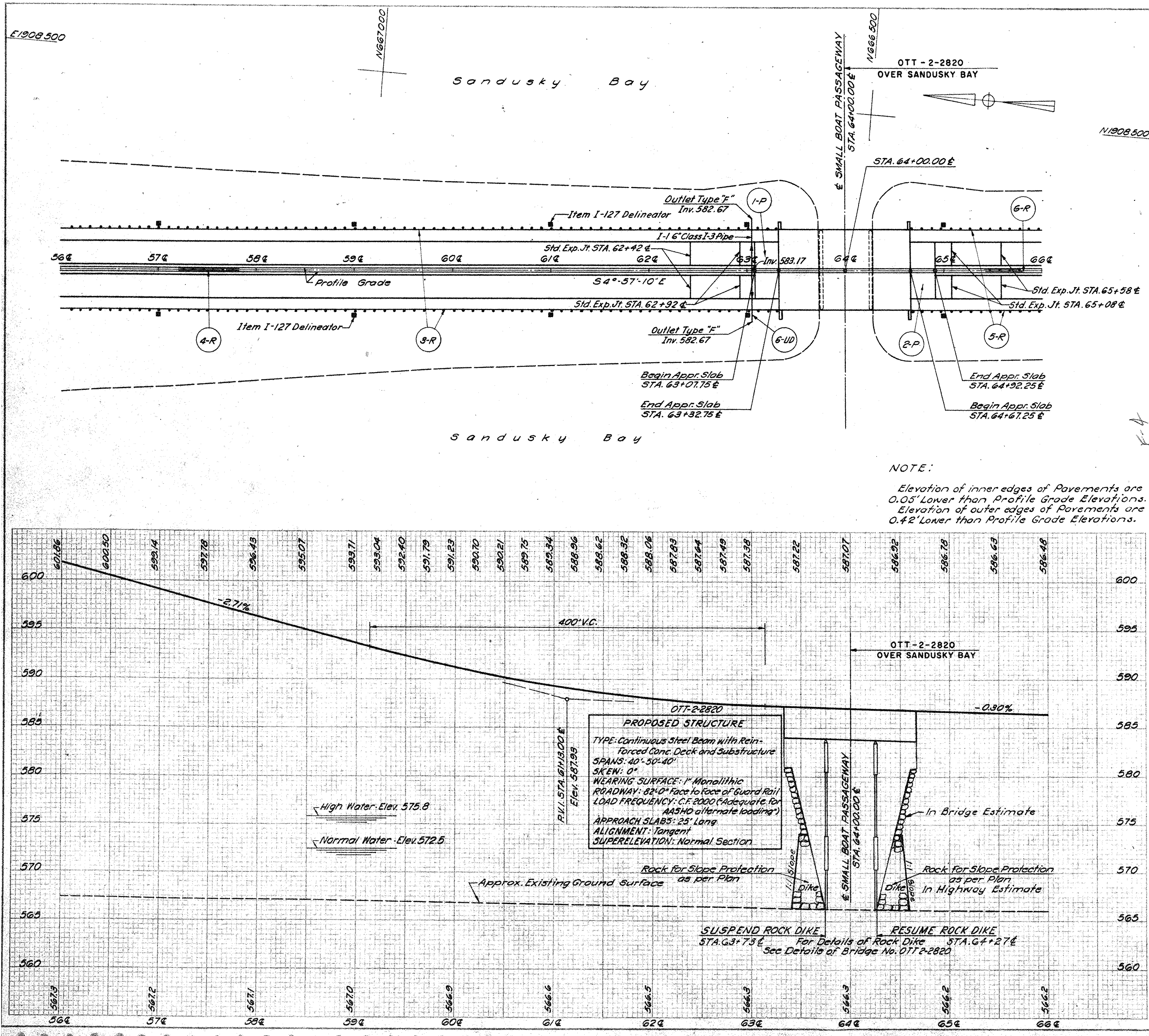
GENERAL SUMMARY

ITEM CODE	GEN. NOTES	21	22	23	24	27	28	29	30	31	33	37	ITEM CODE	TOTAL QUANTITY 0010	UNIT	DESCRIPTION
																DRAINAGE (CONT.)
I-10									46	46			I-10	92 ✓	Cu. Yd.	Crushed Aggregate Bed, as per Plan
I-10									20	20			I-10	40 ✓	Cu. Yd.	Crushed Aggregate No. 1 size, as per Plan
~~I-10~~												~~125~~	~~I-10~~	~~125 ✓~~	~~Sq. Yd.~~	~~Seeding, as per Plan~~
																PAVEMENT
B-21		341	265	241	241	590	265	230	265	265	737	153	B-21	3593 ✓	Cu. Yd.	Waterproofed Aggregate Base Course
B-112		783	611	556	556	1361	611	529	620	620	1222	165	B-112	7634 ✓	Cu. Yd.	Porous Base Course
I-7		322						322			480		I-7	1124 ✓	Sq. Yd.	Reinforced Concrete Approach Slab (T = 13")
I-12											173	(67) 181	I-12	354 (240) ✓	Lin. Ft.	Special Concrete Curb Type A, as per Plan (57) TYPE B
I-12												(81) 67	I-12	67 (181) ✓	Lin. Ft.	Special Concrete Curb Type B, as per Plan "
I-12												106	I-12	106 ✓	Lin. Ft.	Standard Concrete Curb Type 2-A
I-12												102	I-12	102 ✓	Lin. Ft.	Standard Concrete Curb Type 6
I-21		607	489	444	444	1089	489	403	486	486	1066	133	I-21	6136 ✓	Sq. Yd.	Portland Cement Concrete Median - Standard Type 2
I-21												19	I-21	19 ✓	Sq. Yd.	4" Portland Cement Concrete Median - Standard Type 1
I-22		2446	1884	1713	1713	4197	1884	1616	1697	1697	4210	793	I-22	23850 ✓	Cu. Yd.	Subbase, "A or B" Grading, As Per Plan
T-31		1031	794	722	722	1770	794	688	794	794	1767	295	T-31	10171 ✓	Gal.	Bituminous Surface Treatment - Bituminous Material, as per Plan
T-31		33	25	23	23	57	25	22	25	23	56	10	T-31	324 ✓	Cu. Yd.	Bituminous Surface Treatment - No. 6 Aggregate
T-71		7347	5867	5333	5333	13067	5867	4878	5867	5869	15706	3435	T-71	78569 ✓	Sq. Yd.	9" Reinforced Portland Cement Concrete Pavement
																STRUCTURES OVER 20' SPAN
													See Sheet No. 94 for Estimated Quantities Bridge No.			OTT-2-2820 Over Sandusky Bay (Small Boat Passageway)
													See Sheet No. 99 for Estimated Quantities Bridge No.			ERI-2-0071 Over Sandusky Bay (Small Boat Passageway)
													See Sheet No. 105 for Estimated Quantities Bridge No.			ERI-2-0164 Over Lagoon
																~~See Sheet No. 115 for Estimated Quantities - Lighting (Highway)~~
	Lump													Lump	Lump	Maintaining Traffic
	Lump													Lump	Lump	Construction Layout Stakes





	ELEVATIONS				
STATION	PROFILE GRADE	W.B. OUTER EDGE	E.B. OUTER EDGE	INNER EDGE OF W.B. PAV'T.	INNER EDGE OF E.B. PAV'T.
50+00℄	613.05	614.88	611.22	613.25	612.85
50+25℄	612.83	614.56	611.08	613.02	612.64
50+50℄	612.59	614.20	610.92	612.77	612.40
50+75℄	612.33	613.83	610.75	612.50	612.15
51+00℄	612.04	613.49	610.55	612.19	611.87
51+25℄	611.73	613.01	610.33	611.87	611.57
51+50℄	611.41	612.56	610.09	611.54	611.26
51+75℄	611.06	612.11	609.83	611.19	610.92
52+00℄	610.69	611.63	609.55	610.82	610.56
52+25℄	610.30	611.14	609.24	610.43	610.18
52+50℄	609.88	610.52	608.92	610.01	609.77
52+75℄	609.45	610.09	608.57	609.58	609.35
53+00℄	608.99	609.53	608.20	609.12	608.90
53+25℄	608.51	608.94	607.81	608.64	608.43
53+50℄	608.01	608.34	607.40	608.14	607.94
53+75℄	607.49	607.72	606.97	607.62	607.43
54+00℄	606.95	607.08	606.51	607.08	606.90
54+25℄	606.36	606.42	605.94	606.46	606.31
54+50℄	605.78	605.75	605.36	605.80	605.73
54+75℄	605.17	605.06	604.75	605.22	605.12
55+00℄	604.54	604.35	604.12	604.57	604.49
55+25℄	603.89	603.62	603.47	603.89	603.84
55+50℄	603.21	602.87	602.89	603.19	603.16
55+75℄	602.53	602.11	602.11	602.48	602.48



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	B-21 Water-Proofed Aggr. Cu. Yd.	B-112 Porous Base Course Cu. Yd.	I-7 Reinf. Concrete Approach Slab Sq. Yd.	I-21 Concrete Median Type I Sq. Yd.	I-22 Subbase Cu. Yd.	T-31 Surface Treatment Bitum. Gal.	T-31 Surface Treatment Aggr. Cu. Yd.	T-71 9" Reinf. Concrete Pavement Sq. Yd.	E-3 Channel Excav. Cu. Yd.	I-1 Class F-1 6" Lin. Ft.	I-1 Class I-3 6" Lin. Ft.	I-1 Class I-3 6" Lin. Ft.	I-1 Class F-1 8" Lin. Ft.	I-1 Class A-1 15" Lin. Ft.	I-1 Class F-1 15" Lin. Ft.	I-5 6" 60° Bend Ea.	I-5 15" 30° Bend Ea.	I-8 Mod. 2-10 M.I. Ea.	I-15 Guard Rail Wire Cable Std. Lin. Ft.	I-15 Barrier Lin. Ft.	SEE SHEET NO.
	ROADWAY																						
1-R	50+38 ℄ to 56+00 ℄	Lt. Rt.																			~~425~~		20
2-R	50+38 ℄ to 56+00 ℄																				~~475~~	~~563~~	20
3-R	56+00 ℄ to 63+32.75 ℄	Lt. Rt.																			~~275~~	~~727~~	
4-R	56+00 ℄ to 63+32.75 ℄																					~~137~~	
5-R	64+67.25 ℄ to 66+00 ℄	Lt. Rt.																					
6-R	64+67.25 ℄ to 66+00 ℄																						
	PAVEMENT																						
1-P	50+38 ℄ to 66+00 ℄		~~341~~	~~783~~	~~161~~	~~607~~	~~2446~~	~~1031~~	~~33~~	~~7347~~													
2-P	63+07.75 ℄ to 63+32.75 ℄ 64+67.25 ℄ to 64+92.25 ℄				~~161~~																		
	DRAINAGE																						
1-UD	49+33 ℄ to 53+80 ℄	Lt.										~~10~~	~~438~~										20
2-UD	49+55 ℄ to 53+75 ℄	Lt.											~~426~~										20
3-UD	53+75 ℄ to 53+85 ℄	Lt.										~~10~~	~~62~~		~~40~~								20
4-UD	53+85 ℄ to 54+25 ℄	Lt.																~~1~~					20
5-UD	53+80 ℄ to 54+25 ℄	Lt.										~~10~~	~~32~~										
6-UD	63+04 ℄													~~86~~	~~28~~								
1-D	53+80 ℄															~~42~~	~~64~~		~~2~~	~~1~~			20
2-D	48+14 ℄ to 48+35 ℄	Rt.									30												20
TOTALS			~~341~~	~~783~~	~~322~~	~~607~~	~~2446~~	~~1031~~	~~33~~	~~7347~~	30	~~30~~	~~952~~	~~86~~	~~30~~	~~42~~	~~64~~	~~1~~	~~2~~	~~1~~	~~2076~~	~~1437~~	

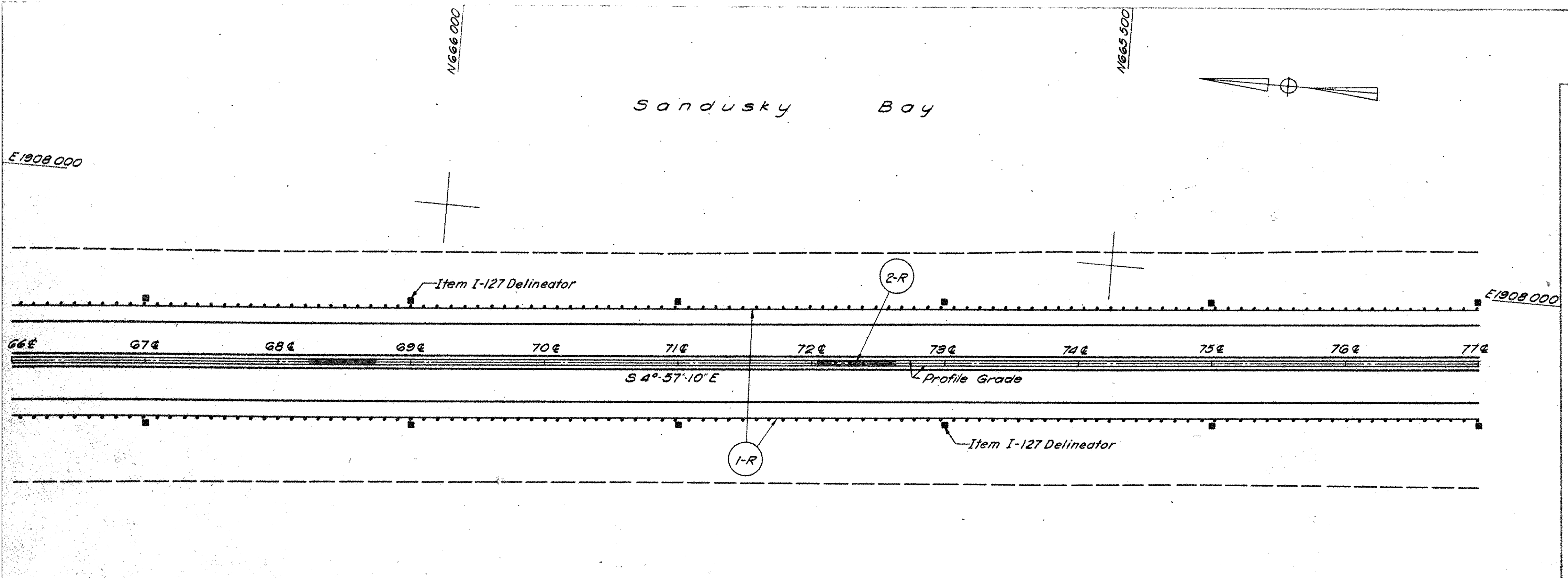
~~See M6.4(h)~~

~~For Class F-1 Pipe~~

~~For Class I-3 Pipe~~

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

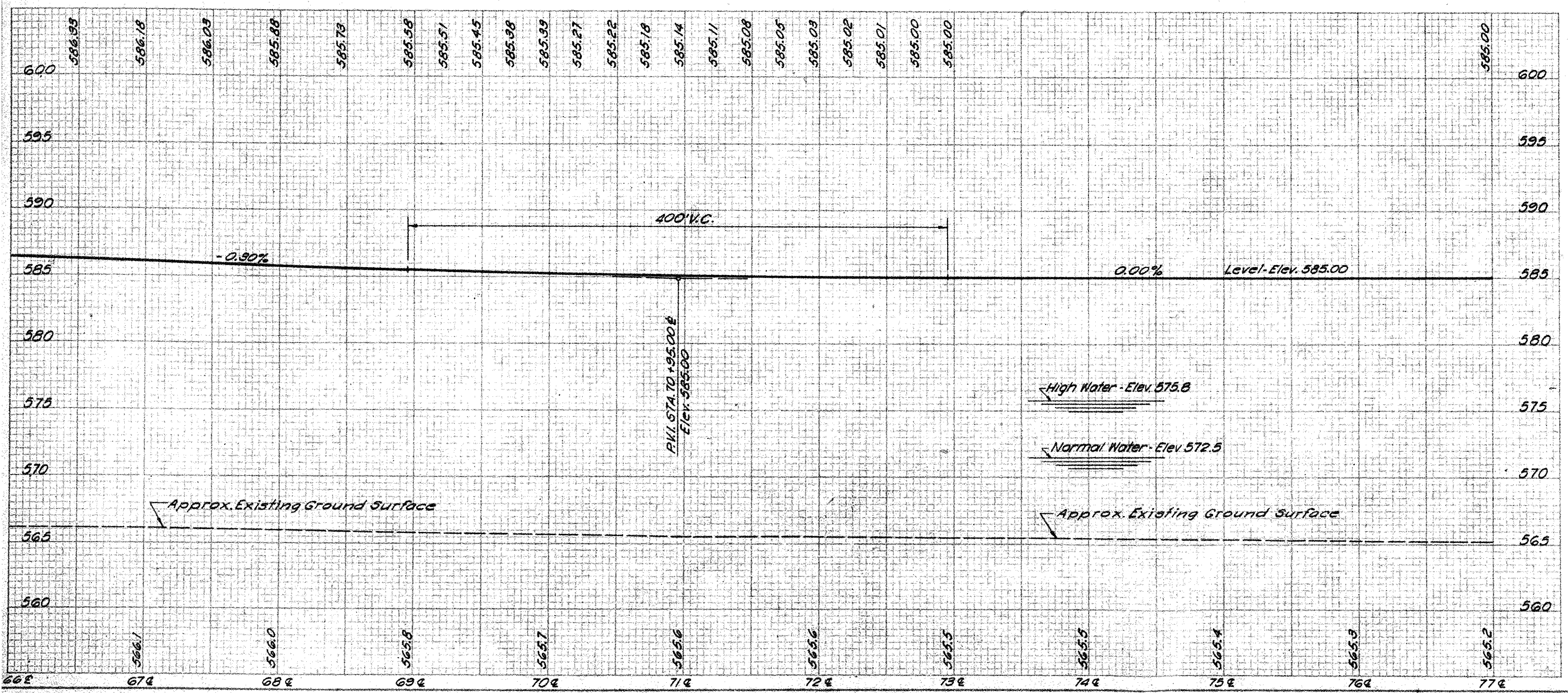
OTT-2-27.36 ERI-2-0.15



Sandusky Bay

NOTE:

Elevation of inner edges of Pavements are 0.05' Lower than Profile Grade Elevations.
Elevation of outer edges of Pavements are 0.42' Lower than Profile Grade Elevations.

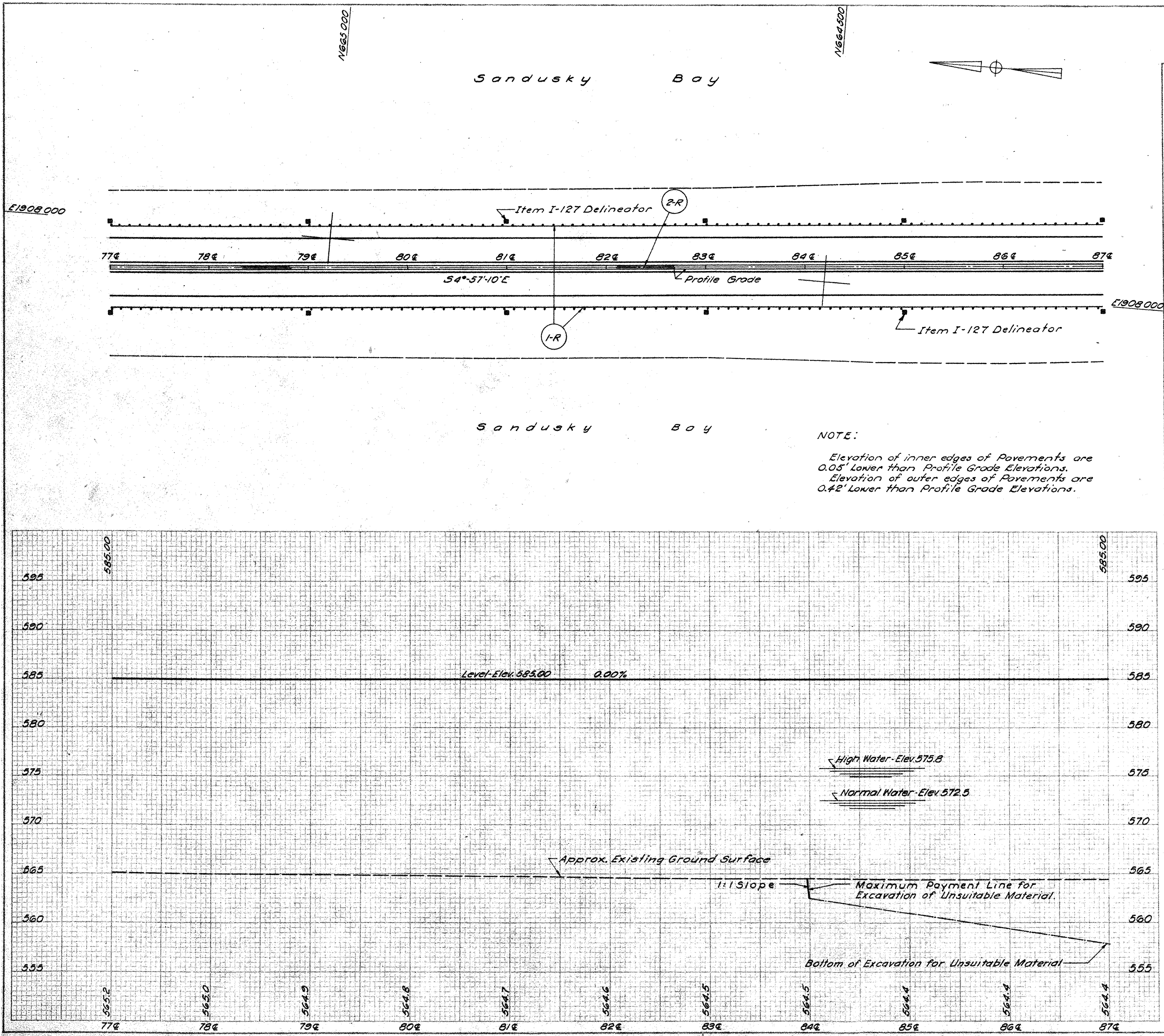


ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	~~B-21 Water-Proofed Aggr. Cu.Yd.~~	~~B-112 Porous Base Course Cu.Yd.~~	~~I-21 Concrete Median Type 2 Sq.Yd.~~	~~I-22 Subbase Cu.Yd.~~	~~T-31 Surface Treatment Bitum. Gal.~~	~~T-31 Surface Treatment Aggr. Cu.Yd.~~	~~I-11 9" Reinf. Conc. Pav't Sq.Yd.~~	~~I-15 Guard Rail Wire Cable Std. Lin.Ft.~~	~~I-15 Guard Rail Barrier Lin.Ft.~~	SEE SHEET NO.
	ROADWAY											
1-R	66+00¢ to 77+00¢	Lt-Rt.								~~2200~~	~~1100~~	
2-R	66+00¢ to 77+00¢											
	PAVEMENT											
	66+00¢ to 77+00¢		~~265~~	~~611~~	~~489~~	~~1884~~	~~794~~	~~25~~	~~5867~~			
TOTALS			~~265~~	~~611~~	~~489~~	~~1884~~	~~794~~	~~25~~	~~5867~~	~~2200~~	~~1100~~	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

OTT-2-27.36 ER1-2-0.15

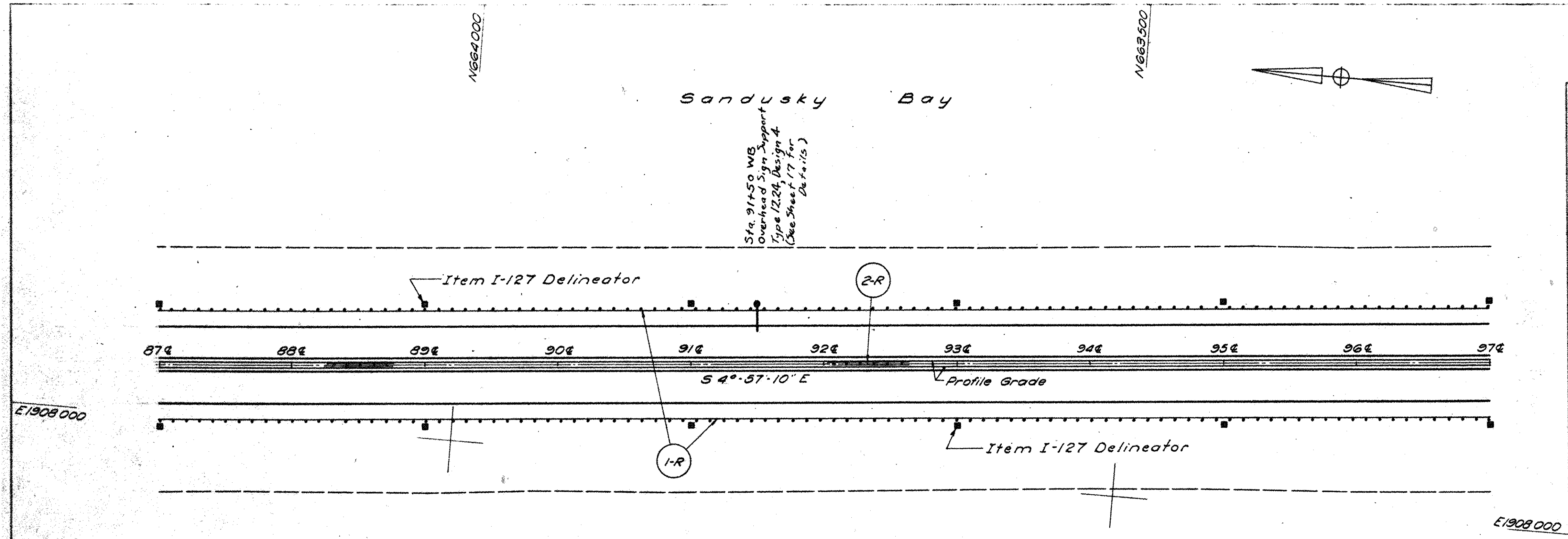


ESTIMATED QUANTITIES

REF NO.	STATION TO STATION	SIDE	I-15 Guard Rail Wire Cable Std. Barrier Lin. Ft. Lin. Ft.	B-21 Water-Proofed Aggr. Cu. Yd.	B-112 Porous Base Course Cu. Yd.	I-21 Concrete Median Type 2 Sq. Yd.	I-22 Subbase Cu. Yd.	T-31 Surface Treatment Bitum. Aggr. Gal. Cu. Yd.	T-11 9" Reinf. Concrete Pavement Sq. Yd.	SEE SHEET NO.
	ROADWAY									
1-R	77+00 ¢ to 87+00 ¢	Lt+Rt	~~2000~~							
2-R	77+00 ¢ to 87+00 ¢		~~1000~~							
	PAVEMENT 77+00 ¢ to 87+00 ¢			~~241~~	~~556~~	~~444~~	~~1713~~	~~722~~ ~~23~~	~~5333~~	
TOTALS			~~2000~~ ~~1000~~	~~241~~	~~556~~	~~444~~	~~1713~~	~~722~~ ~~23~~	~~5333~~	

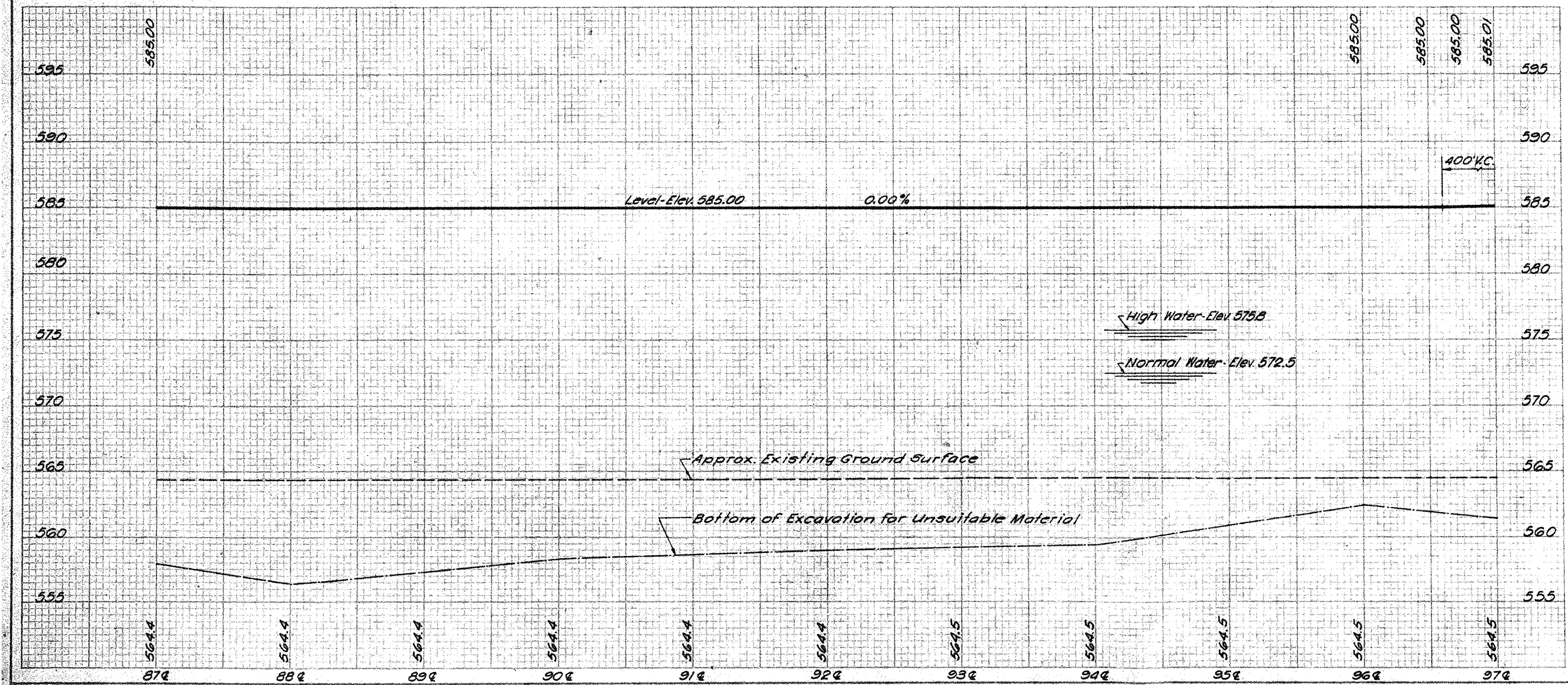
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

OTT-2-27.36 ERI-2-0.15



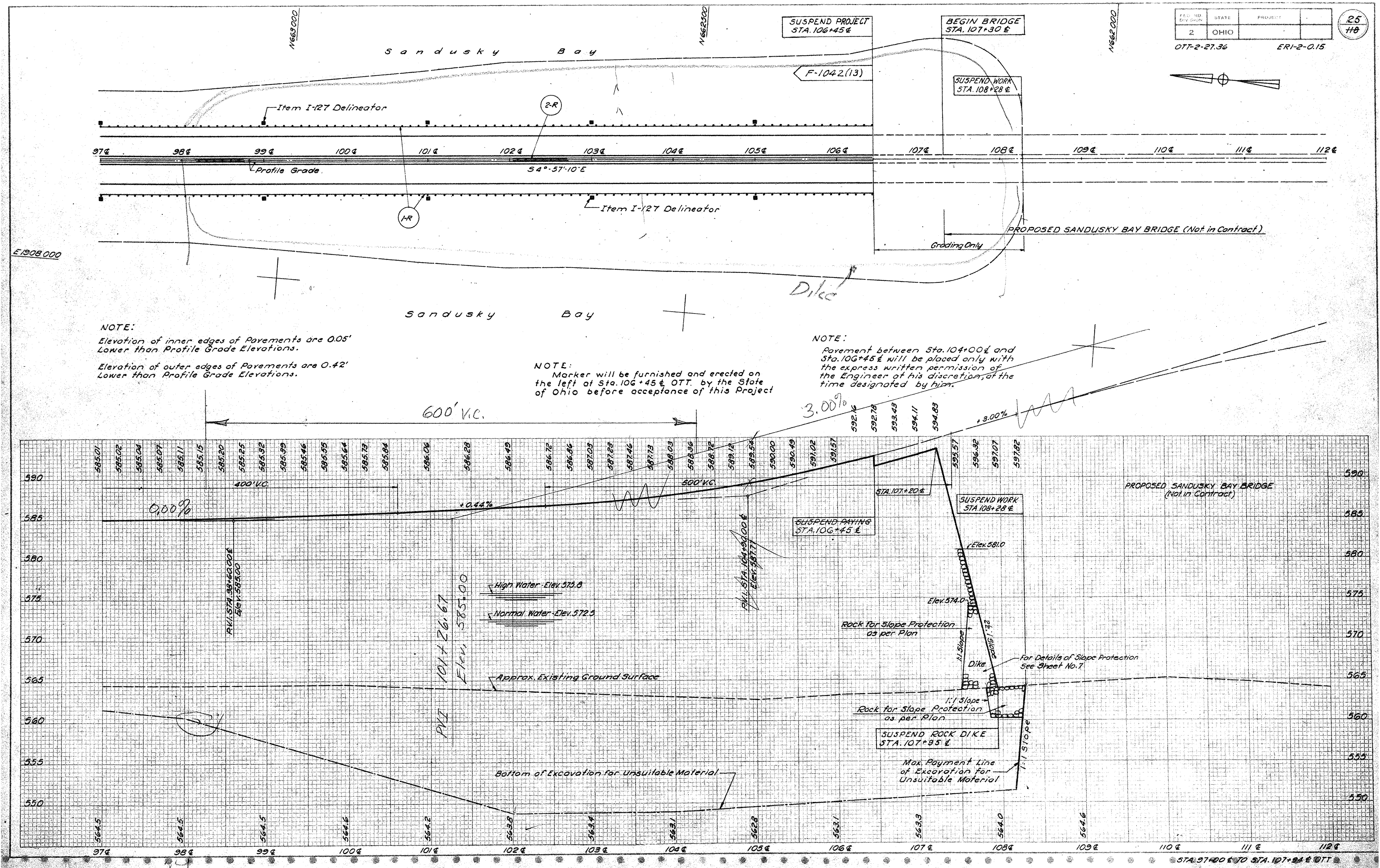
NOTE:

Elevation of inner edges of Pavements are 0.05' lower than Profile Grade Elevations.
Elevation of outer edges of Pavements are 0.42' lower than Profile Grade Elevations.



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	B-21 Water-Proofed Aggr. Cu.Yd.	B-112 Porous Base Course Cu.Yd.	I-21 Concrete Median Type 2 Sq.Yd.	I-22 Subbase Cu.Yd.	T-31 Surface Treatment Bitum. Gal.	Aggr. Cu.Yd.	T-11 9" Reinf. Conc. Pav't Sq.Yd.	I-15 Guard Rail Wire Cable Str. Lin.Ft.	Barrier Lin.Ft.	SEE SHEET NO.
	ROADWAY											
1-R	87+00 ¢ to 97+00 ¢	Lt-Rt								~~2000~~		
2-R	87+00 ¢ to 97+00 ¢										~~1000~~	
	PAVEMENT											
	87+00 ¢ to 97+00 ¢		~~241~~	~~556~~	~~444~~	~~1718~~	~~722~~	~~23~~	~~5333~~			
TOTALS			~~241~~	~~556~~	~~444~~	~~1718~~	~~722~~	~~23~~	~~5333~~	~~2000~~	~~1000~~	



NOTE:

Elevation of inner edges of Pavements are 0.05' Lower than Profile Grade Elevations.

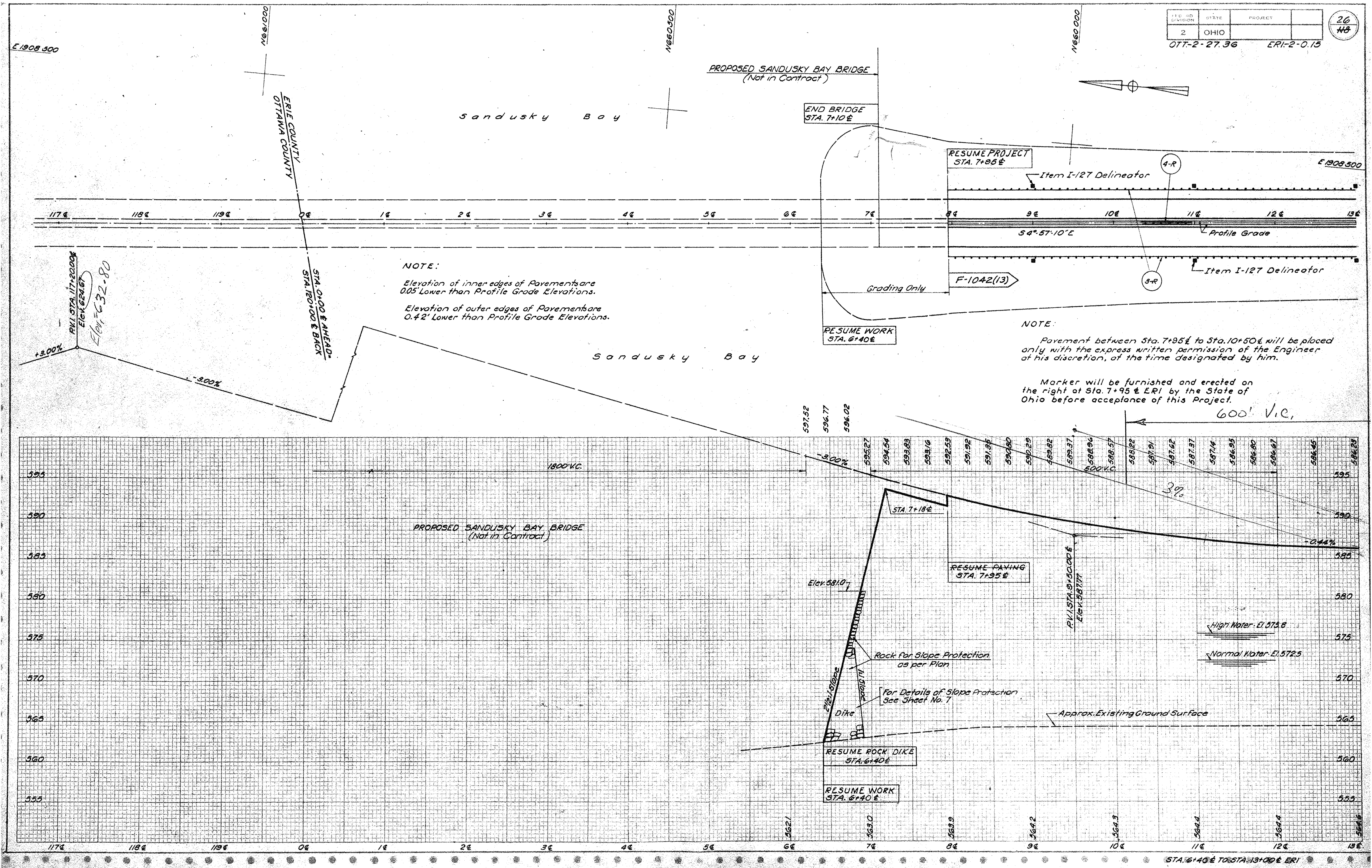
Elevation of outer edges of Pavements are 0.42' Lower than Profile Grade Elevations.

NOTE:

Marker will be furnished and erected on the left at Sta. 106+45 ℄ OTT. by the State of Ohio before acceptance of this Project

NOTE:

Pavement between Sta. 104+00 ℄ and Sta. 106+45 ℄ will be placed only with the express written permission of the Engineer at his discretion, at the time designated by him.

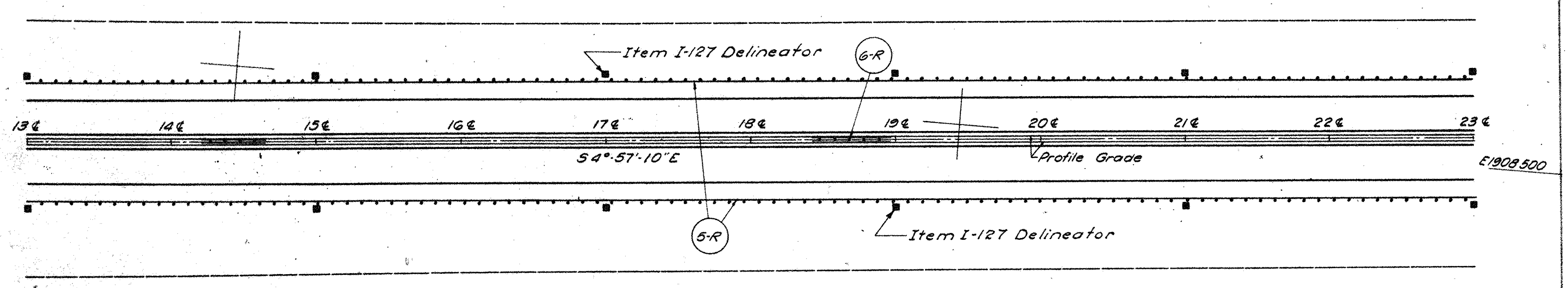


FED. RD. DIVISION | STATE | PROJECT
2 | OHIO
OTT-2-27.36 ERI-2-0.15
26
118
E 1908 500
N 661 000
N 660 500
N 660 000
PROPOSED SANDUSKY BAY BRIDGE (Not in Contract)
END BRIDGE STA. 7+10 ℄
Sandusky Bay
ERIE COUNTY
OTTAWA COUNTY
RESUME PROJECT STA. 7+95 ℄
Item I-127 Delineator
4-R
3-R
E 1908 500
S 4°-57'-10" E
Profile Grade
Item I-127 Delineator
F-1042(13)
Grading Only
RESUME WORK STA. 6+40 ℄
NOTE:
Elevation of inner edges of Pavements are 0.05' Lower than Profile Grade Elevations.
Elevation of outer edges of Pavements are 0.42' Lower than Profile Grade Elevations.
P.V.I. STA. 117+20.00 ℄
Elev. 624.67
Elev. 632.80
STA. 0+00 ℄ AHEAD = STA. 120+00 ℄ BACK
+3.00%
-3.00%
Sandusky Bay
NOTE:
Pavement between Sta. 7+95 ℄ to Sta. 10+50 ℄ will be placed only with the express written permission of the Engineer at his discretion, at the time designated by him.
Marker will be furnished and erected on the right at Sta. 7+95 ℄ ERI by the State of Ohio before acceptance of this Project.
600' V.C.
1800' V.C.
-3.00%
500' V.C.
3%
-0.44%
STA. 7+18 ℄
PROPOSED SANDUSKY BAY BRIDGE (Not in Contract)
RESUME PAVING STA. 7+95 ℄
P.V.I. STA. 9+50.00 ℄
Elev. 587.77
Elev. 581.0
High Water El. 573.8
Normal Water El. 572.5
Rock for Slope Protection as per Plan
For Details of Slope Protection See Sheet No. 7
2½:1 Slope
1½:1 Slope
Dike
Approx. Existing Ground Surface
RESUME ROCK DIKE STA. 6+40 ℄
RESUME WORK STA. 6+40 ℄
597.52 596.77 596.02 595.27 594.54 593.83 593.16 592.53 591.92 591.35 590.80 590.29 589.82 589.37 588.96 588.57 588.22 587.91 587.62 587.37 587.14 586.95 586.80 586.67 586.45 586.23
595 590 585 580 575 570 565 560 555
562.1 563.0 563.9 564.2 564.3 564.4 564.4 564.6
117℄ 118℄ 119℄ 0℄ 1℄ 2℄ 3℄ 4℄ 5℄ 6℄ 7℄ 8℄ 9℄ 10℄ 11℄ 12℄ 13℄
STA. 6+40 ℄ TO STA. 13+00 ℄ ERI

N659500 N659000

Sandusky Bay

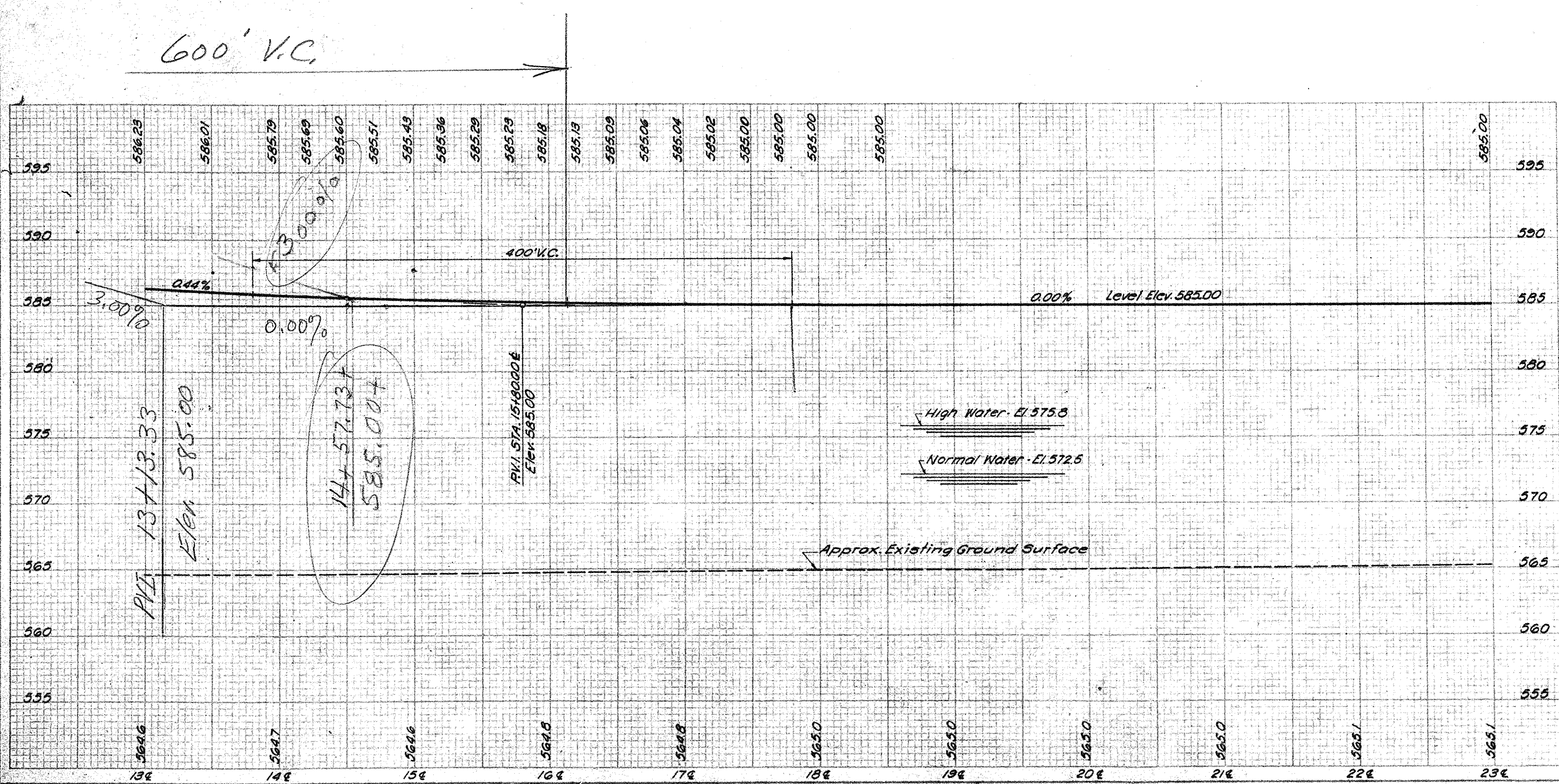
E1908500



NOTE:

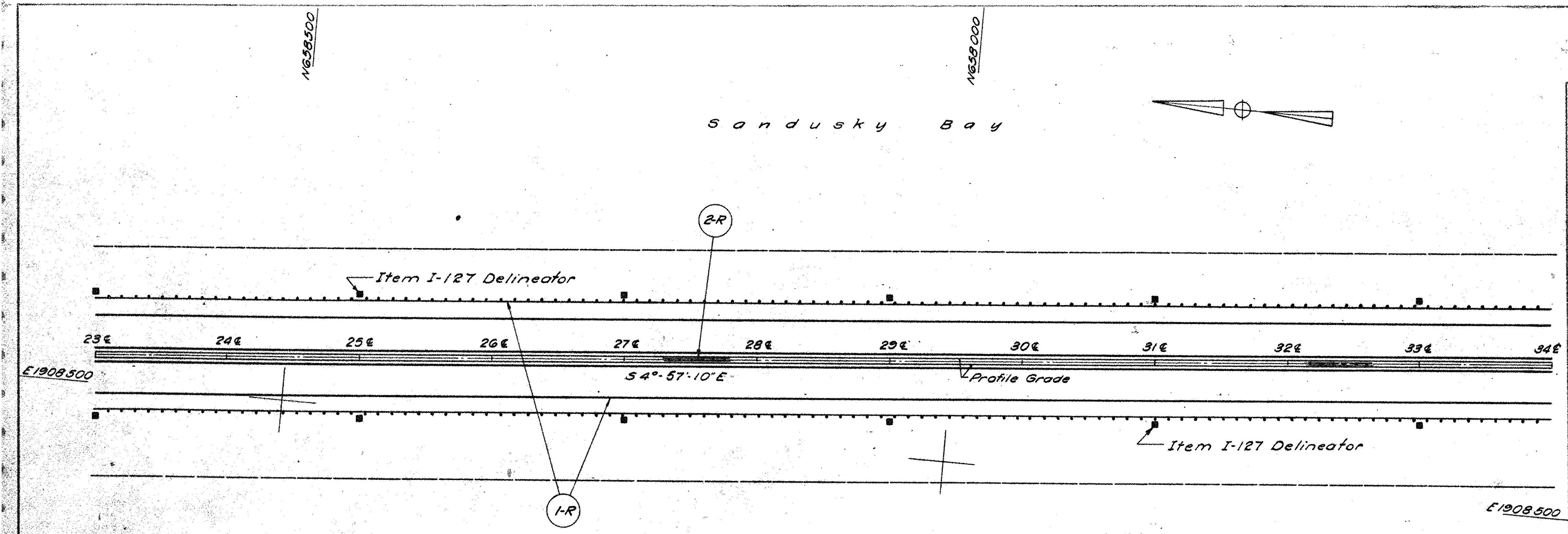
Elevation of inner edges of Pavements are 0.05' lower than Profile Grade Elevations.
Elevation of outer edges of Pavements are 0.42' lower than Profile Grade Elevations.

Sandusky Bay



ESTIMATED QUANTITIES

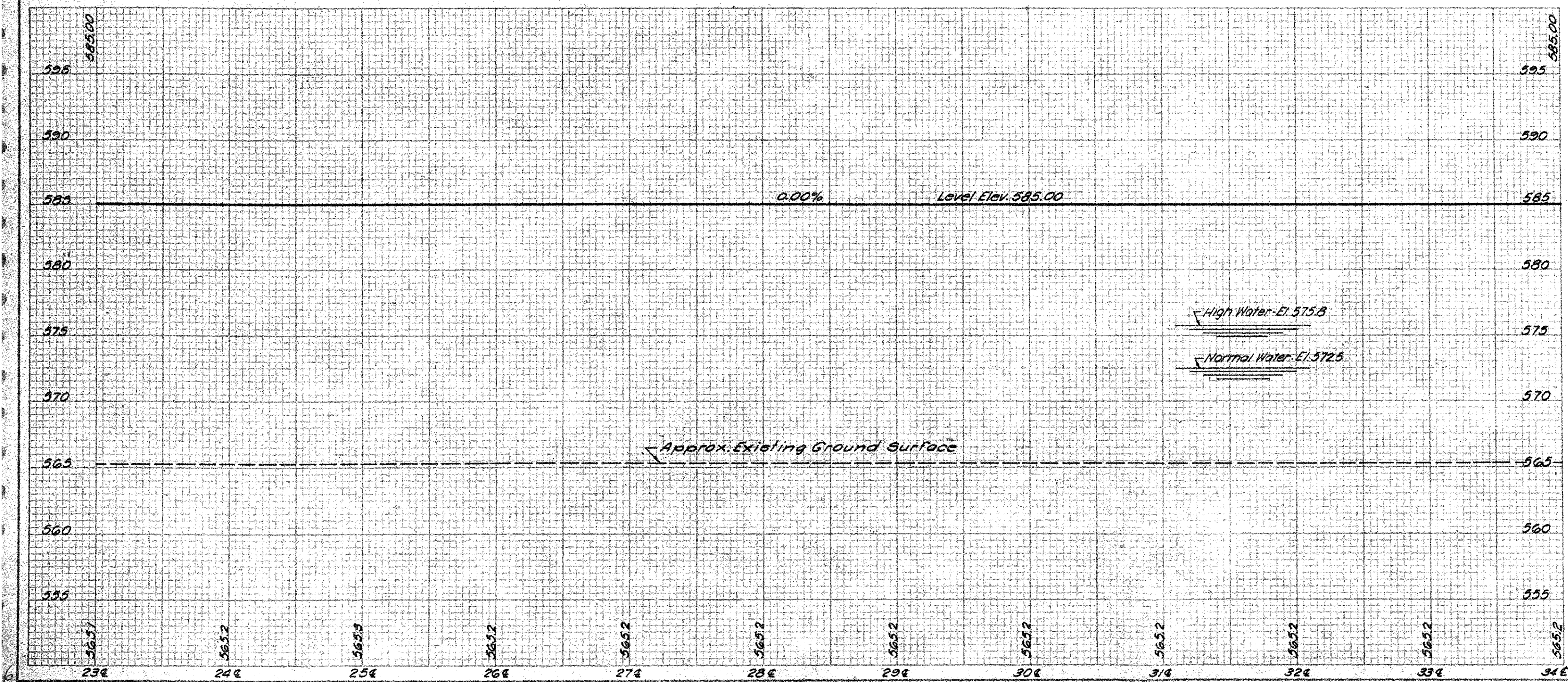
REF. NO.	STATION TO STATION From To	SIDE	B-21 Water-Proofed Aggr. Cu.Yd.	B-112 Porous Base Course Cu.Yd.	I-21 Concrete Median Type 2 Sq.Yd.	I-22 Subbase Cu.Yd.	I-31 Surface Treatment Bitum. Gal.	I-31 Surface Treatment Aggr. Cu.Yd.	I-11 9" Reinf. Conc. Pav't Sq.Yd.	I-15 Guard Rail Wire Cable Std. Lin.Ft.	I-15 Guard Rail Wire Cable Barrier Lin.Ft.	SEE SHEET NO.
	Roadway											
1-R	97+00¢ to 106+45¢	Lt-Rt								~~1900~~		25
2-R	97+00¢ to 106+45¢										~~950~~	25
3-R	7+95¢ to 23+00¢	Lt-Rt								~~1000~~		26
4-R	7+95¢ to 23+00¢										~~500~~	26
5-R	13+00¢ to 23+00¢	Lt-Rt								~~2000~~		27
6-R	13+00¢ to 23+00¢										~~1000~~	27
	PAVEMENT											
	97+00¢ to 106+45¢		~~228~~	~~525~~	~~420~~	~~1619~~	~~688~~	~~22~~	~~5040~~			25
	7+95¢ to 23+00¢		~~362~~	~~836~~	~~660~~	~~2578~~	~~1087~~	~~35~~	~~8027~~			26-27
			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	~~13067~~	~~4900~~	~~2450~~	



NOTE:

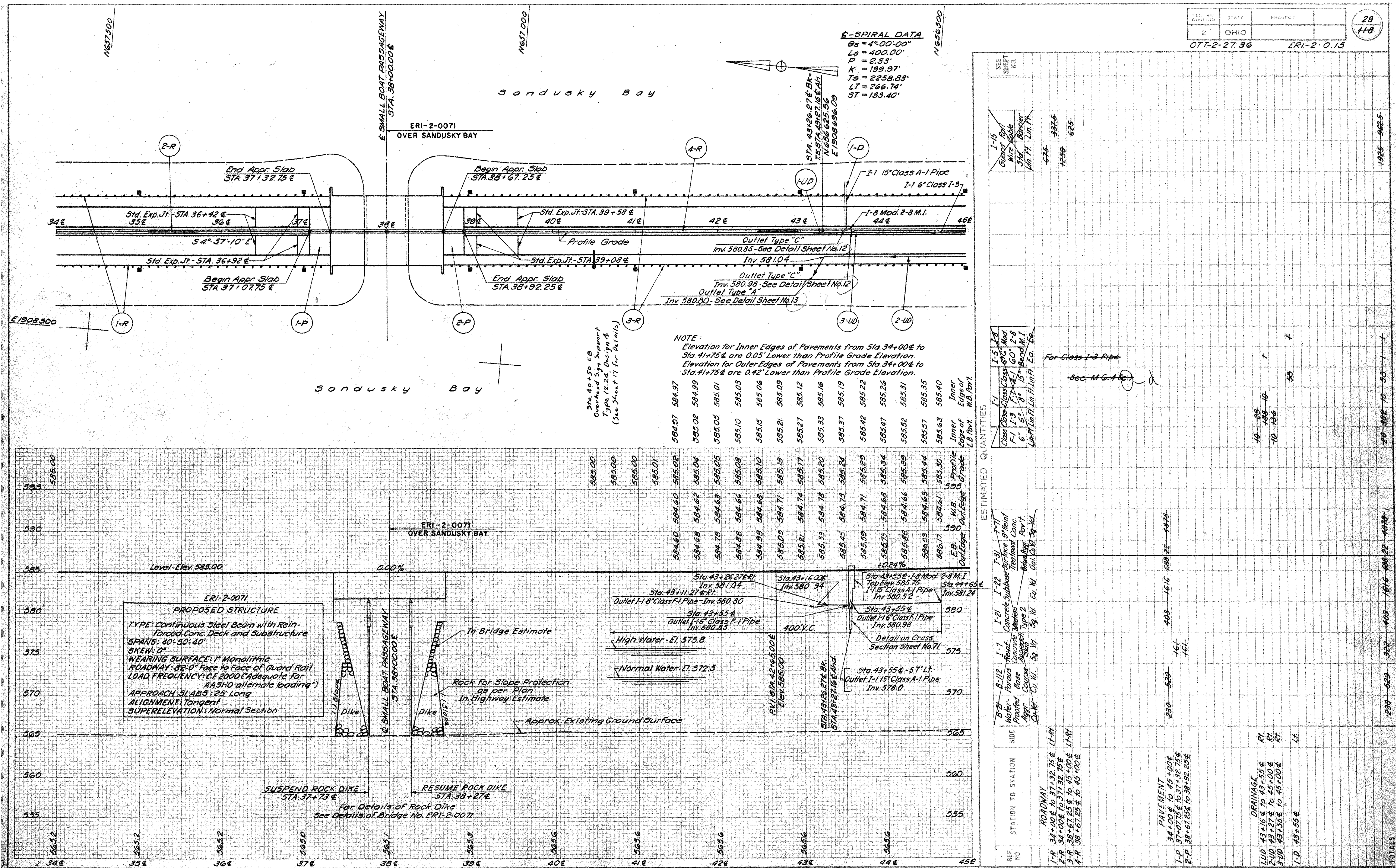
Elevation of inner edges of Pavements are 0.05' lower than Profile Grade Elevations.
Elevation of outer edges of Pavements are 0.42' lower than Profile Grade Elevations.

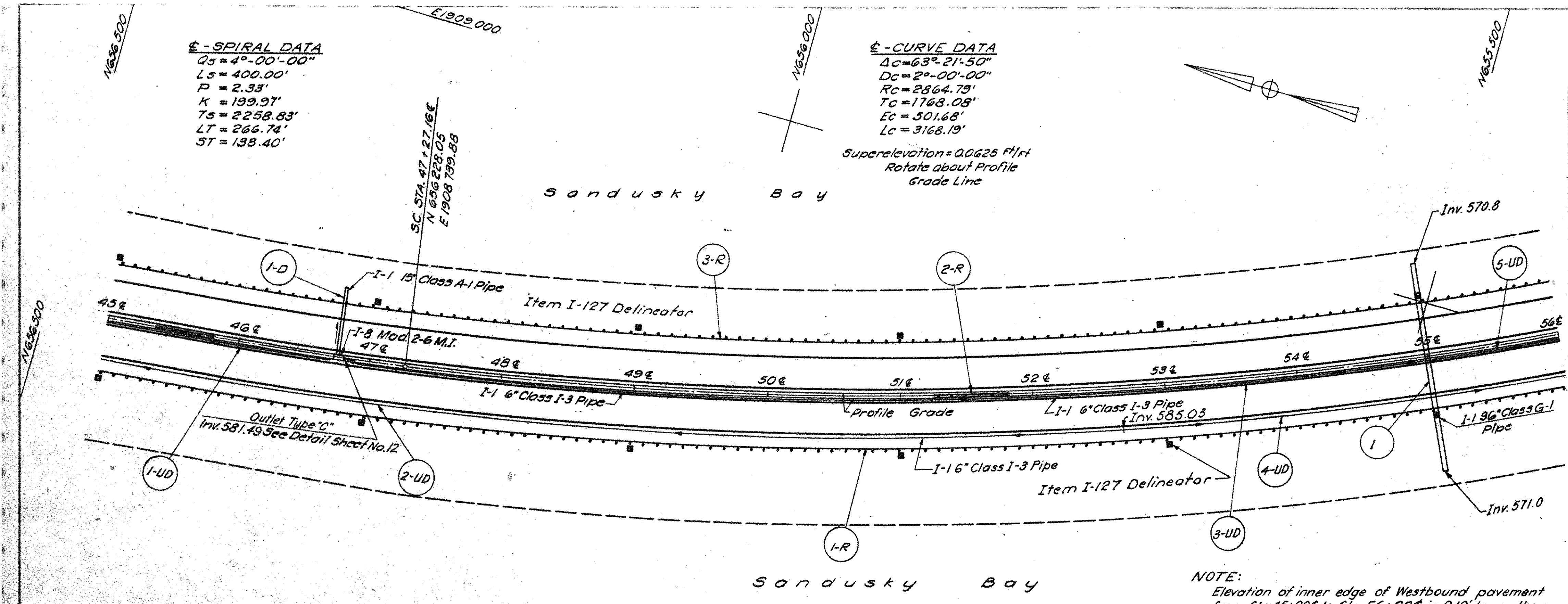
Sandusky Bay



ESTIMATED QUANTITIES

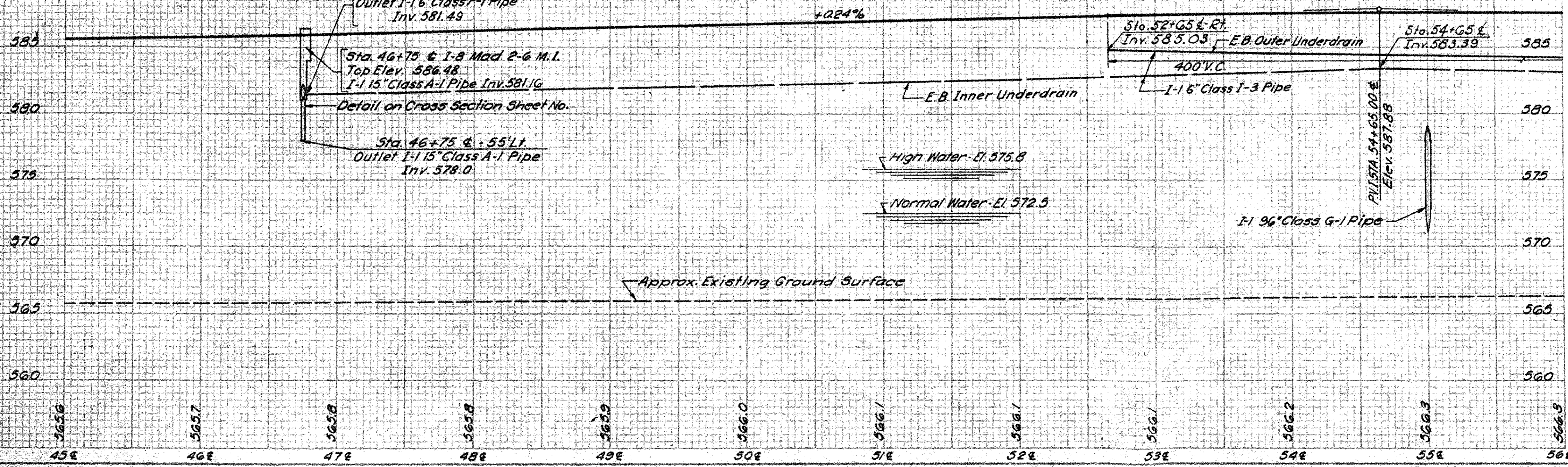
REF. NO.	STATION TO STATION From To	SIDE	B-21 Water-Proofed Aggr. Cu. Yd.	B-112 Porous Base Course Cu. Yd.	I-21 Concrete Median Type 2 Sq. Yd.	I-22 Subbase Cu. Yd.	T-31 Surface Treatment Bitum. Gal.	T-31 Surface Treatment Aggr. Cu. Yd.	I-11 9" Reinf. Conc. Pav't Sq. Yd.	I-15 Guard Rail Wire Cable Std. Barrier	SEE SHEET NO.
	Roadway										
1-R	23+00¢ to 34+00¢	Lt. & Rt.								2200	
2-R	23+00¢ to 34+00¢									1100	
	PAVEMENT 23+00¢ to 34+00¢		265	611	489	1884	794	25	5867		
TOTALS			265	611	489	1884	794	25	5867	2200 1100	


N657500
N657000
N656500
€ SMALL BOAT PASSAGEWAY STA. 38+00.00 €
€-SPIRAL DATA
θs = 4°-00'-00"
Ls = 400.00'
P = 2.83'
K = 199.97'
Ts = 2258.83'
LT = 266.74'
ST = 133.40'
Sandusky Bay
ERI-2-0071
OVER SANDUSKY BAY
End Appr. Slab
STA. 37+32.75 €
Begin Appr. Slab
STA. 38+67.25 €
Std. Exp. Jt. - STA. 36+42 €
Std. Exp. Jt. - STA. 36+92 €
Std. Exp. Jt. STA. 39+58 €
Std. Exp. Jt. - STA 39+08 €
S 4°-37'-10" E
Profile Grade
Begin Appr. Slab
STA. 37+07.75 €
End Appr. Slab
STA. 38+92.25 €
STA. 43+26.27 € Bk.
T.S. STA. 43+27.16 € Ah.
N 656 625.56
E 1908 696.09
I-1 15" Class A-1 Pipe
I-1 6" Class I-3
I-8 Mod. 2-8 M.I.
Outlet Type "C"
Inv. 580.85 - See Detail Sheet No. 12
Inv. 581.04
Outlet Type "C"
Inv. 580.98 - See Detail Sheet No. 12
Outlet Type "A"
Inv. 580.80 - See Detail Sheet No. 13
E 1908 300
Sta. 40+50 € EB Overhead Sign Support Type 12.24 Design 4 (See Sheet 17 for Details)
NOTE:
Elevation for Inner Edges of Pavements from Sta. 34+00 € to Sta. 41+75 € are 0.05' Lower than Profile Grade Elevation.
Elevation for Outer Edges of Pavements from Sta. 34+00 € to Sta. 41+75 € are 0.42' Lower than Profile Grade Elevation.
Inner Edge of W.B. Pav't
Inner Edge of E.B. Pav't
Profile Grade
W.B. Out. Edge
E.B. Out. Edge
Level - Elev. 585.00
0.00%
+0.24%
400' V.C.
ERI-2-0071
PROPOSED STRUCTURE
TYPE: Continuous Steel Beam with Reinforced Conc. Deck and Substructure
SPANS: 40'-50'-40'
SKEW: 0°
WEARING SURFACE: 1" Monolithic
ROADWAY: 82'-0" Face to Face of Guard Rail
LOAD FREQUENCY: C.F. 2000 ("Adequate for AASHO alternate loading")
APPROACH SLABS: 25' Long
ALIGNMENT: Tangent
SUPERELEVATION: Normal Section
In Bridge Estimate
Rock for Slope Protection as per Plan In Highway Estimate
Dike
High Water - El. 575.8
Normal Water - El. 572.5
Approx. Existing Ground Surface
PVI. STA. 42+65.00 € Elev. 585.00
Sta. 43+26.27 € Rt. Inv. 581.04
Sta. 43+16.00 € Inv. 580.94
Sta. 43+11.27 € Rt. Outlet I-1 8" Class F-1 Pipe - Inv. 580.80
Sta. 43+55 € Outlet I-1 6" Class F-1 Pipe Inv. 580.85
Sta. 43+55 € - I-8 Mod. 2-8 M.I. Top Elev. 585.75 I-1 15" Class A-1 Pipe Inv. 580.52
Sta. 44+65 € Inv. 581.24
Sta. 43+55 € Outlet I-1 6" Class F-1 Pipe Inv. 580.98
Detail on Cross Section Sheet No. 71
Sta. 43+55 € - 57' Lt. Outlet I-1 15" Class A-1 Pipe Inv. 578.0
SUSPEND ROCK DIKE STA. 37+73 €
RESUME ROCK DIKE STA. 38+27 €
For Details of Rock Dike See Details of Bridge No. ERI-2-0071
34 € 35 € 36 € 37 € 38 € 39 € 40 € 41 € 42 € 43 € 44 € 45 €
ESTIMATED QUANTITIES
REF NO. STATION TO STATION SIDE SEE SHEET NO.
ROADWAY
1-R 34+00 € to 37+32.75 € Lt.-Rt.
2-R 34+00 € to 37+32.75 €
3-R 38+67.25 € to 45+00 € Lt.-Rt.
4-R 38+67.25 € to 45+00 €
PAVEMENT
1-P 34+00 € to 45+00 €
2-P 37+07.75 € to 37+32.75 €
38+67.25 € to 38+92.25 €
DRAINAGE
1-UD 43+16 € to 43+55 € Rt.
2-UD 43+27 € to 45+00 € Rt.
3-UD 43+55 € to 45+00 € Rt.
1-D 43+55 € Lt.
TOTALS
STA. 34+00 € TO STA. 45+00 € ERI



NOTE:
Elevation of inner edge of Westbound pavement from Sta. 45+00℄ to Sta. 56+00℄ is 0.19' Lower than Profile Grade Elevation.
Elevation of inner edge of Eastbound pavement from Sta. 46+25℄ to Sta. 56+00℄ is 0.19' Higher than Profile Grade Elevation.

Inner Edge of EB Pavement	Profile Grade	W.B. Out. Edge	E.B. Out. Edge
585.69	585.56	584.59	586.33
585.75	585.62	584.57	586.49
585.81	585.68	584.56	586.64
585.87	585.74	584.54	586.79
585.93	585.80	584.52	586.96
	585.86	584.50	587.12
	585.92	584.48	587.29
	585.98	584.46	587.45
	586.04	584.44	587.62
	586.10	584.42	587.78
	586.16	584.48	587.85
	586.22	584.54	587.91
	586.28	584.60	587.97
	586.34	584.66	588.09
	586.40	584.72	588.09
	586.46	584.78	588.15
	586.52	584.84	588.21
	586.58	584.90	588.27
	586.64	584.96	588.33
	586.70	585.02	588.39
	586.76	585.08	588.45
	586.82	585.14	588.51
	586.88	585.20	588.57
	586.94	585.26	588.63
	587.00	585.32	588.69
	587.06	585.38	588.75
	587.12	585.44	588.81
	587.18	585.50	588.87
	587.24	585.56	588.93
	587.30	585.62	588.99
	587.36	585.68	589.05
	587.42	585.74	589.11
	587.48	585.79	589.16
	587.52	585.83	589.21
	587.56	585.87	589.25
	587.59	585.90	589.28
	587.61	585.93	589.30
	587.63	585.94	589.32
	587.64	585.95	589.33
	587.64	585.95	589.33
	587.63	585.95	589.32
	587.62	585.93	589.31
	587.60	585.91	589.28
	587.57	585.88	589.25



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	B-21 Water-proofed Aggr. Cu.Yd.	B-112 Porous Base Course Cu.Yd.	I-21 Concrete Median Type 2 Sq.Yd.	I-22 Subbase Cu.Yd.	T-31 Surface Treatment Gal.	T-11 9" Reinf. Concrete Pavement Sq.Yd.	I-1 Class I-3 6" Lin.Ft.	I-1 Class F-1 6" Lin.Ft.	I-1 Class A-1 15" Lin.Ft.	I-1 Class G-1 96" Lin.Ft.	I-8 Mod. 2-6 M.I. Ea.	I-10 Crushed Aggr. No.1 Cu.Yd.	I-10 Aggr. Bed Cu.Yd.	I-15 Guard Rail / Wire Cable / Std. Barrier Lin.Ft.	SEE SHEET NO.
	ROADWAY																
1-R	45+00℄ to 56+00℄	Rt.														1112.5 ~~1110~~	
2-R	45+00℄ to 56+00℄															~~1087.5~~	
3-R	45+00℄ to 56+00℄	Lt.												As Per Plan	As Per Plan		
	PAVEMENT																
	45+00℄ to 56+00℄		265	620	486	1697	794.25	5867									
	DRAINAGE																
1-UD	45+00℄ to 46+75℄	Rt.							476								
2-UD	45+00℄ to 52+65℄	Rt.							772	10							
3-UD	46+75℄ to 54+65℄	Rt.							782								
4-UD	52+65℄ to 56+00℄	Rt.							338								
5-UD	54+65℄ to 56+00℄	Rt.							198								
1-D	46+75℄	Lt.									56		1				
1	55+00℄											162		20	46		
			265	620	486	1697	794.25	5867	2264	10	56	162	1	20	46	2200 ~~1100~~	

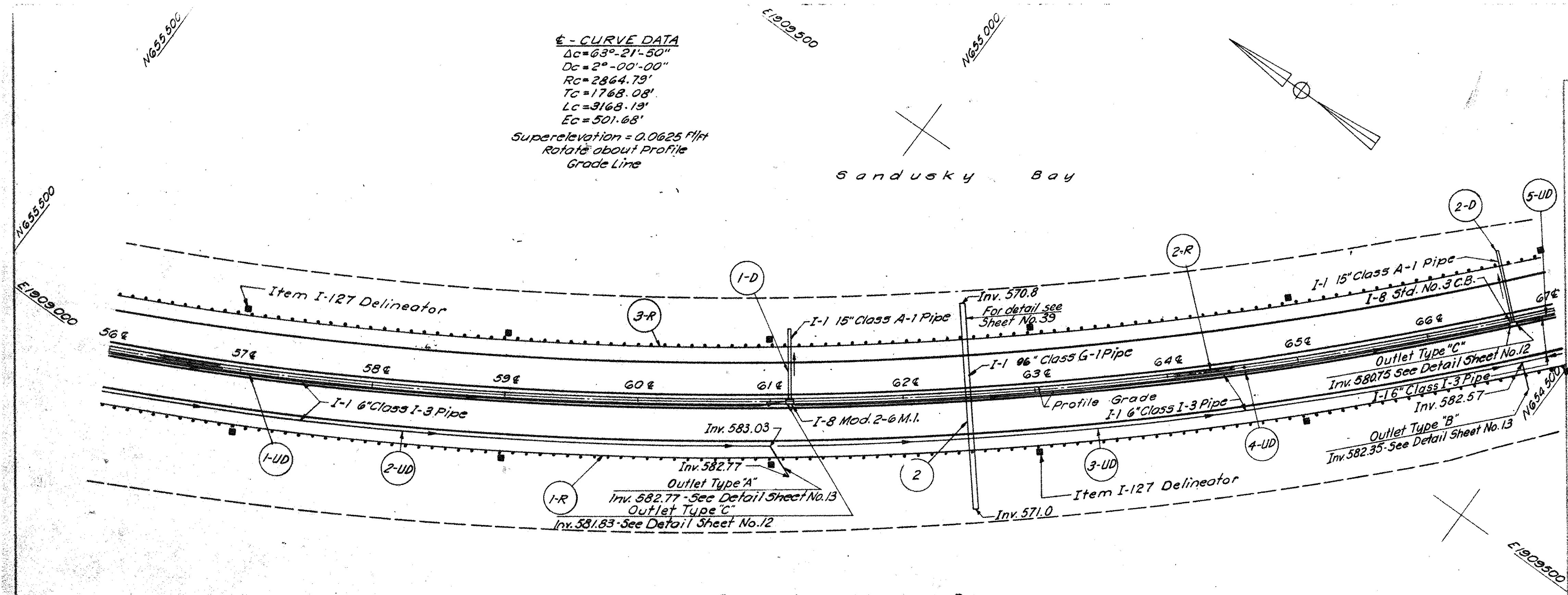
Sec. M-6.4(g) 10-8 ga
~~Sec. M-6.4(a)~~ (2d)

6765 / 10.9 / 1673

℄ - CURVE DATA

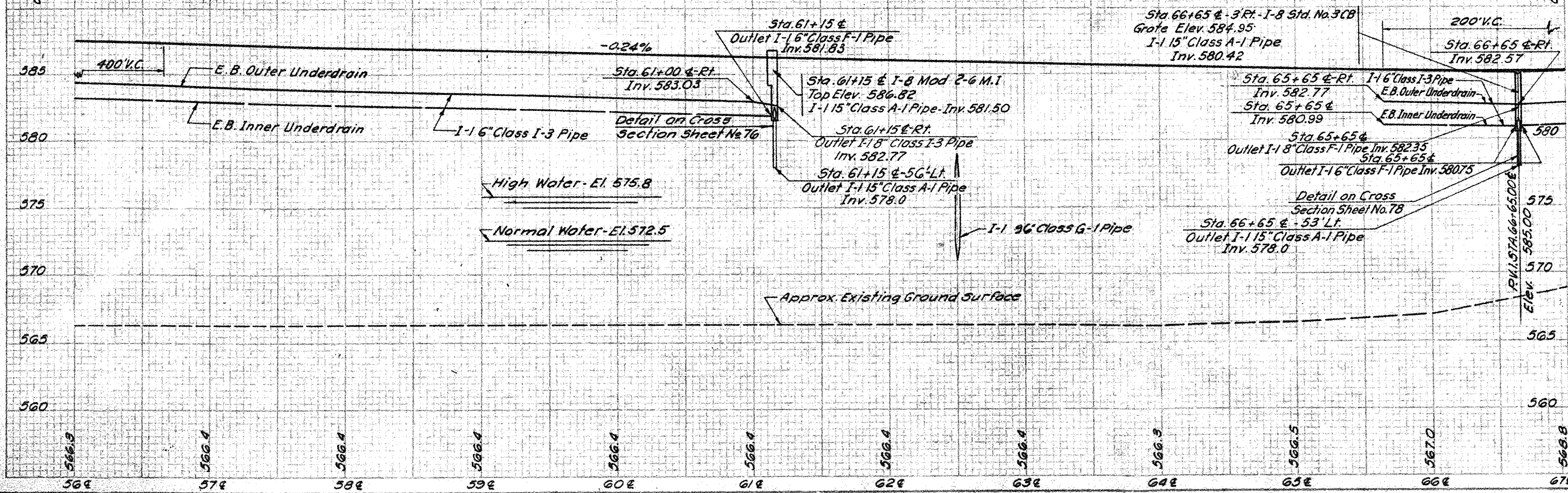
$\Delta c = 63°-21'-50''$
$Dc = 2°-00'-00''$
$Rc = 2864.79'$
$Tc = 1768.08'$
$Lc = 3168.19'$
$Ec = 501.68'$

Superelevation = 0.0625 Ft/Ft
Rotate about Profile Grade Line



NOTE:
Elevation for inner edge of Westbound Pavement is 0.19' Lower than Profile Grade Elevation.
Elevation for inner edge of Eastbound Pavement is 0.19' Higher than Profile Grade Elevation.

Profile Grade	W.B. Out.Edge	E.B. Out.Edge
587.53	585.84	589.22
587.49	585.80	589.17
587.43	585.75	589.12
587.38	585.69	589.06
587.32	585.63	589.00
587.26	585.57	588.94
587.20	585.51	588.88
587.14	585.45	588.82
587.08	585.39	588.76
587.02	585.33	588.70
586.96	585.27	588.64
586.90	585.21	588.58
586.84	585.15	588.52
586.78	585.09	588.46
586.72	585.03	588.40
586.66	584.97	588.34
586.60	584.91	588.28
586.54	584.85	588.22
586.48	584.79	588.16
586.42	584.73	588.10
586.36	584.67	588.04
586.30	584.61	587.98
586.24	584.55	587.92
586.18	584.49	587.86
586.12	584.43	587.80
586.06	584.37	587.74
586.00	584.31	587.68
585.94	584.25	587.62
585.88	584.19	587.56
585.82	584.13	587.50
585.76	584.07	587.44
585.70	584.01	587.38
585.64	583.95	587.32
585.58	583.89	587.26
585.52	583.83	587.20
585.46	583.77	587.14
585.40	583.71	587.08
585.34	583.65	587.02
585.28	583.59	586.96
585.22	583.53	586.90
585.17	583.48	586.86
585.14	583.45	586.83
585.12	583.44	586.81
585.12	583.43	586.81



2	OHIO	

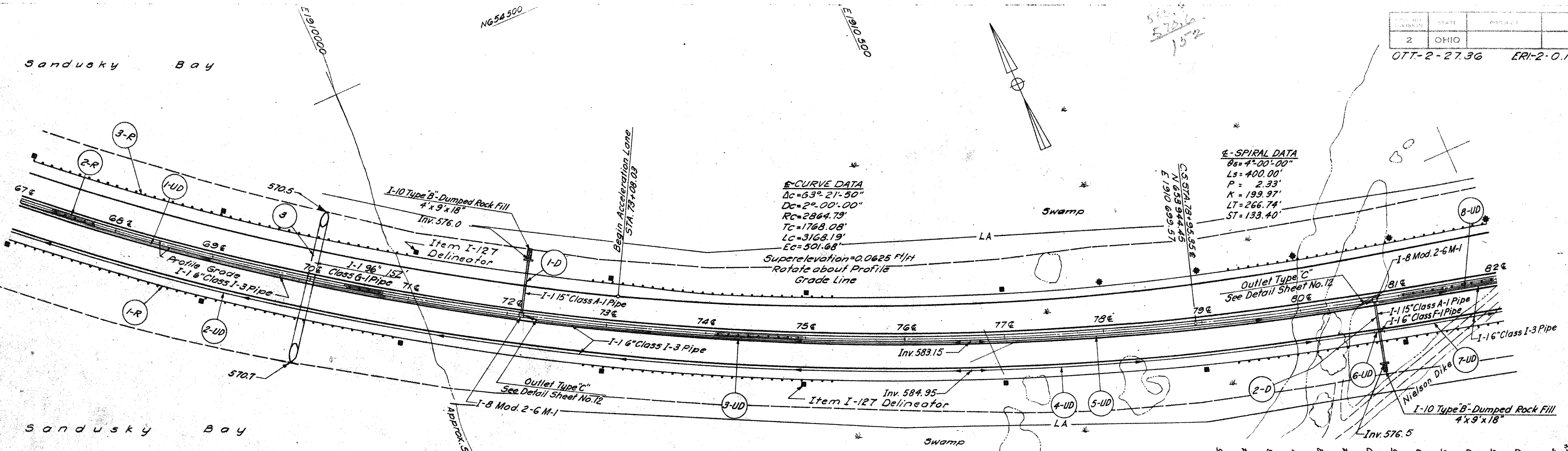
OTT.-2-27.36 ERI-2-0.15

ESTIMATED QUANTITIES

REF NO.	STATION TO STATION	SIDE	~~B-21 Water-Proofed Aggr. Cu.Yd.~~	~~B-112 Porous Base Course Cu.Yd.~~	~~I-21 Concrete Median Type 2 Sq.Yd.~~	~~I-22 Subbase Cu.Yd.~~	~~T-31 Surface Treatment Bitum. Gal.~~	~~T-31 Surface Treatment Aggr. Cu.Yd.~~	~~T-71 9" Reinf. Concrete Pavement Sq.Yd.~~	~~I-1 Class F-1 6" Lin.Ft.~~	~~I-1 Class I-3 6" Lin.Ft.~~	~~I-1 Class F-1 8" Lin.Ft.~~	~~I-1 Class A-1 15" Lin.Ft.~~	I-1 Class G-1 96" Lin.Ft.	~~I-5 6"x6" 60° Bend Ea.~~	I-5 6x6x6 Tee Ea.	I-8 Mod 2-6 M.I. Ea.	~~I-8 Std No.3 C.B. Ea.~~	I-10 Cr. Aggr. No.1 Cu.Yd.	I-10 Cr. Aggr. Bed Cu.Yd.	~~I-15 Guard Rail Wire Cable Std Lin.Ft.~~	~~I-15 Barrier Lin.Ft.~~	SEE SHEET NO.
	ROADWAY																						
1-R	56+00℄ to 67+00℄	Rt.												Sec. M-6.4(g) 10-8 ga.	~~For Class I-3 Pipe~~	~~For Class I-3 Pipe~~			As Per Plan	As Per Plan	~~1112.5~~	~~1100~~	
2-R	56+00℄ to 67+00℄													~~Sec. M-6.4(e)~~ d									
3-R	56+00℄ to 67+00℄	Lt.																			~~1087.5~~		
	PAVEMENT																						
	56+00℄ to 67+00℄		~~265~~	~~620~~	~~486~~	~~1697~~	~~794~~	~~25~~	~~5869~~														
	DRAINAGE																						
1-UD	56+00℄ to 61+15℄	Rt.								~~10~~	~~505~~	~~10~~			+								
2-UD	56+00℄ to 61+00℄	Rt.									~~523~~	~~10~~				+							
3-UD	61+00℄ to 67+00℄	Rt.									~~618~~	~~10~~											
4-UD	61+15℄ to 66+65℄	Rt.								~~10~~	~~540~~												
5-UD	66+65℄ to 67+00℄	Rt.								~~10~~	~~25~~												
1-D	61+15℄	Lt.											~~56~~				+						
2-D	66+65℄	Lt.											56					+					
2	62+50℄	Lt.&Rt.												156					20	46			39
	Total I-5 for Class I-3 Pipe		~~265~~	~~620~~	~~486~~	~~1697~~	~~794~~	~~25~~	~~5869~~	~~30~~	~~2211~~	~~20~~	~~112~~	156	~~1~~ 2	~~1~~	+	+	20	46	~~2200~~	~~1100~~	

2	OHIO	

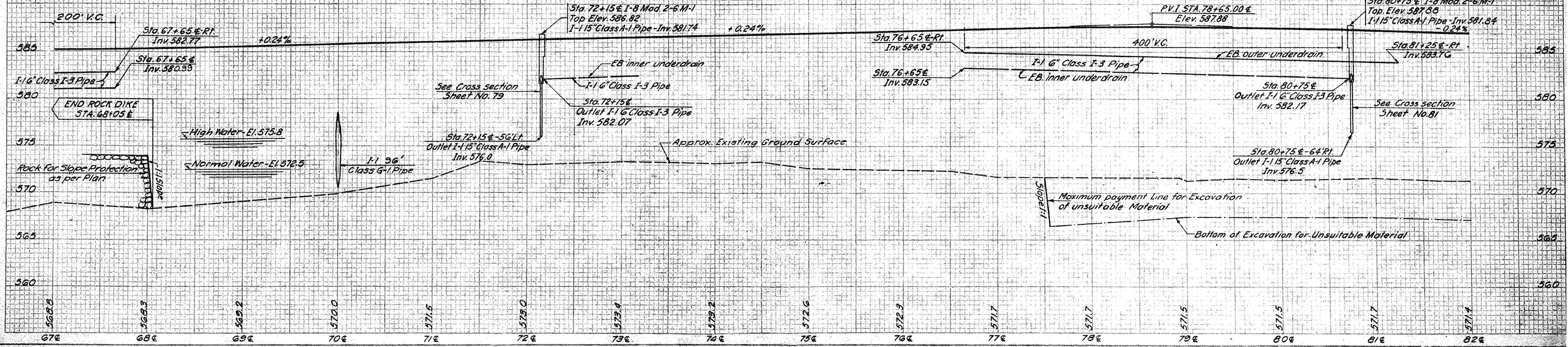
OTT-2-27.36 ERI-2-0.15



NOTE:
Elevation of inner edge of Westbound Pavement from Sta. 67+00¢ to Sta. 78+75¢ is 0.19' Lower than Profile Grade Elevation.
Elevation of inner edge of Eastbound Pavement from Sta. 67+00¢ to Sta. 78+75¢ is 0.19' Higher than Profile Grade Elevation

Quantities Shown on Sheet 33

Profile Grade	W.B. Out. Edge	E.B. Out. Edge	Inner Edge of W.B. Pavt.	Inner Edge of E.B. Pavt.
585.10	583.45	586.82		
585.16	583.48	586.85		
585.21	583.52	586.89		
585.26	583.58	586.95		
585.32	583.64	587.01		
585.38	583.70	587.07		
585.44	583.76	587.13		
585.50	583.82	587.19		
585.56	583.88	587.25		
585.62	583.94	587.31		
585.68	584.00	587.37		
585.74	584.06	587.43		
585.80	584.12	587.49		
585.86	584.18	587.55		
585.92	584.24	587.61		
585.98	584.30	587.67		
586.04	584.36	587.73		
586.10	584.42	587.79		
586.16	584.48	587.85		
586.22	584.54	587.91		
586.28	584.60	587.97		
586.34	584.66	588.03		
586.40	584.72	588.09		
586.46	584.78	588.15		
586.52	584.84	588.21		
586.58	584.87	588.27		
586.64	584.90	588.33		
586.70	584.93	588.39		
586.76	584.96	588.45		
586.82	584.98	588.51		
586.88	585.01	588.57		
586.94	585.04	588.63		
587.00	585.07	588.69		
587.06	585.09	588.75		
587.12	585.12	588.81		
587.18	585.15	588.87		
587.24	585.18	588.93		
587.30	585.20	588.99		
587.36	585.23	589.05		
587.42	585.26	589.11		
587.48	585.28	589.16		
587.52	585.29	589.21		
587.56	585.30	589.25		
587.59	585.30	589.28		
587.61	585.29	589.30		
587.63	585.27	589.32		
587.64	585.25	589.33		
587.64	585.21	589.33		
587.63	585.20	589.30	587.45	587.82
587.62	585.27	589.18	587.44	587.79
587.60	585.33	589.05	587.43	587.76
587.57	585.39	588.92	587.41	587.72
587.53	585.45	588.78	587.38	587.67
587.49	585.50	588.63	587.34	587.61
587.43	585.55	588.48	587.30	587.56
587.38	585.60	588.33	587.25	587.50
587.32	585.64	588.17	587.20	587.44
587.26	585.69	588.02	587.15	587.39
587.20	585.74	587.87	587.10	587.32
587.14	585.80	587.71	587.05	587.26
587.08	585.86	587.56	587.00	587.20

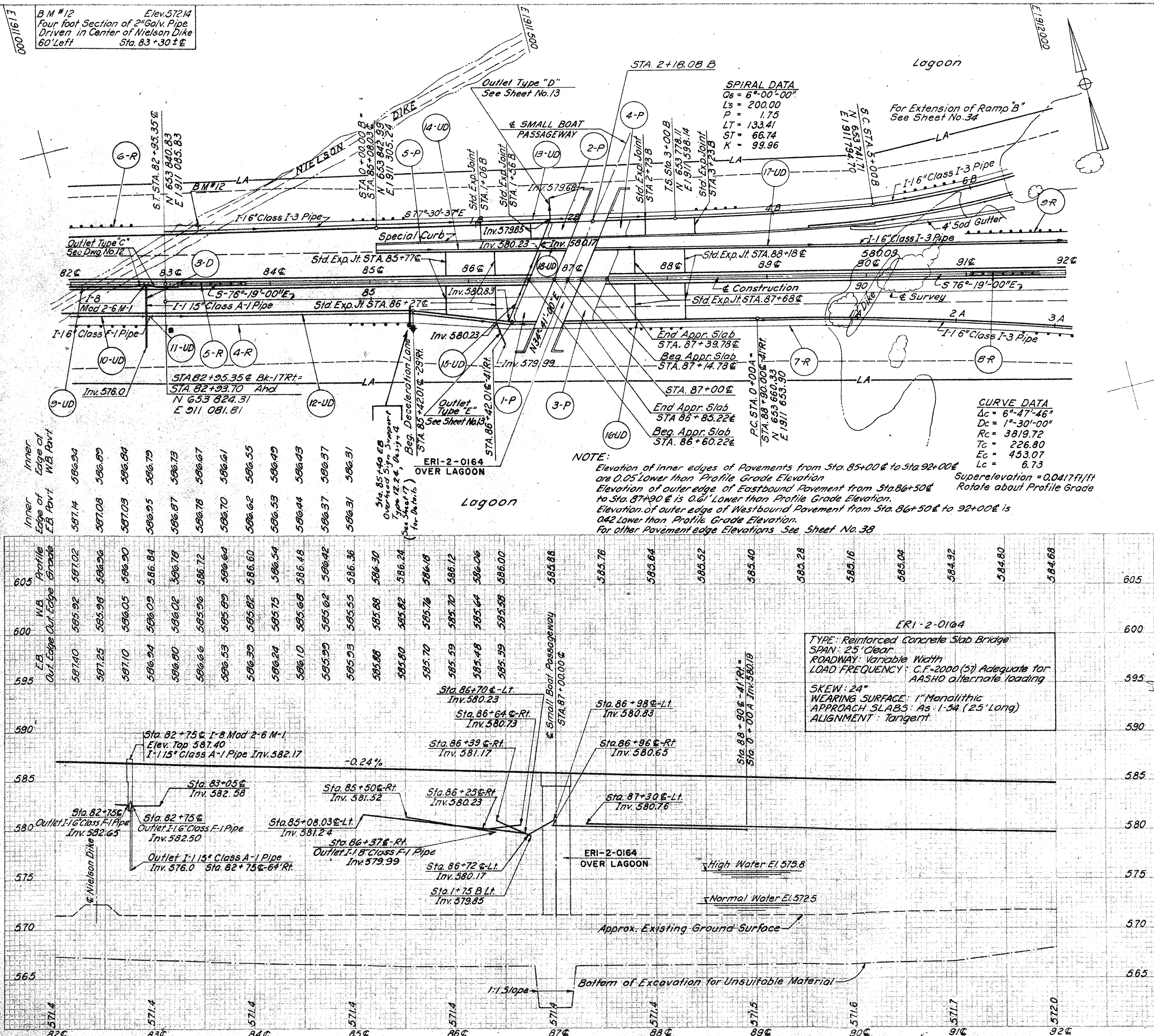


STA. 67+00 ¢ TO STA. 82+00 ¢ ERI

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

33/~~118~~

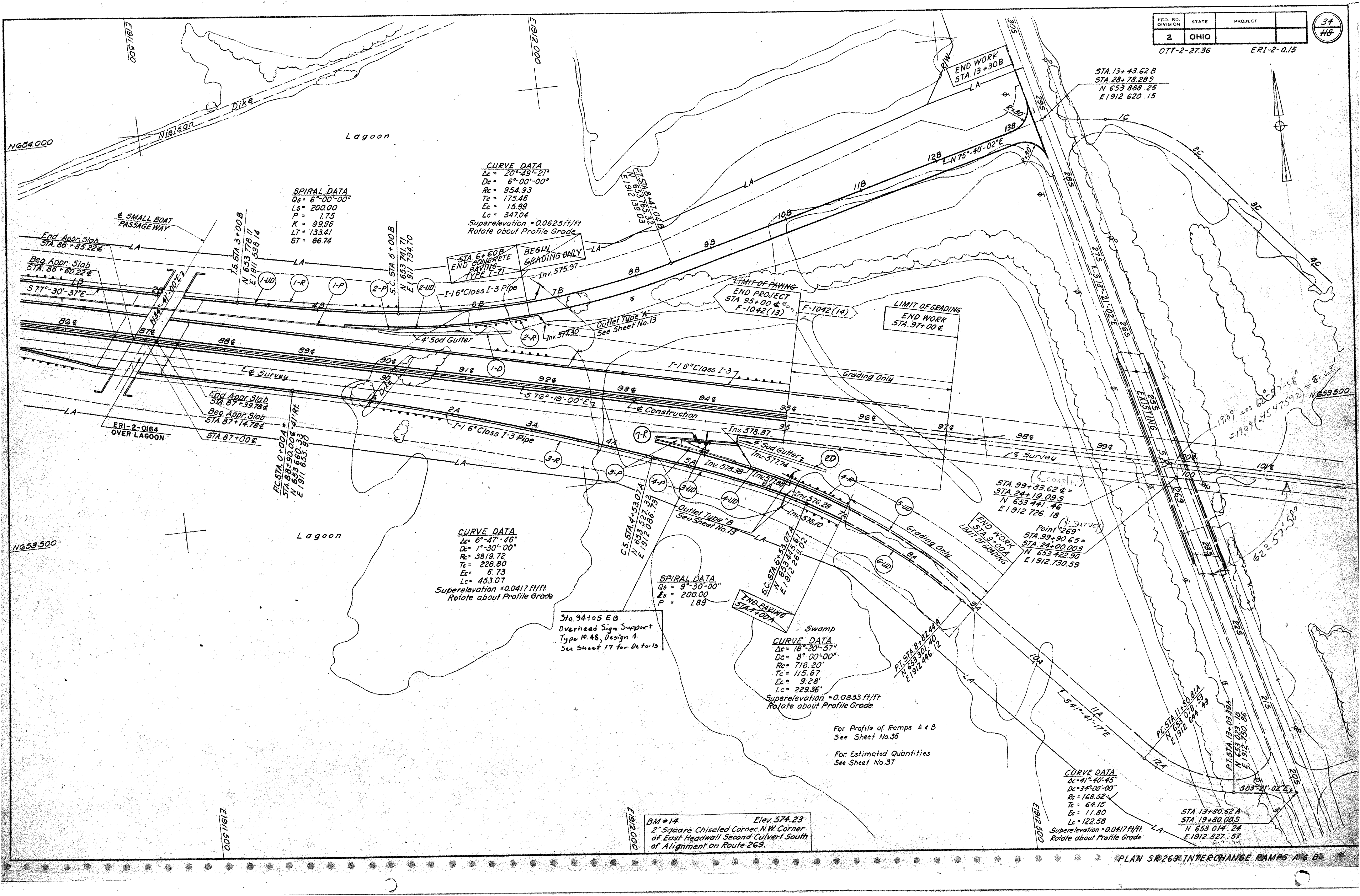
OTT-2-27.36 ERI-2-0.15



ESTIMATED QUANTITIES

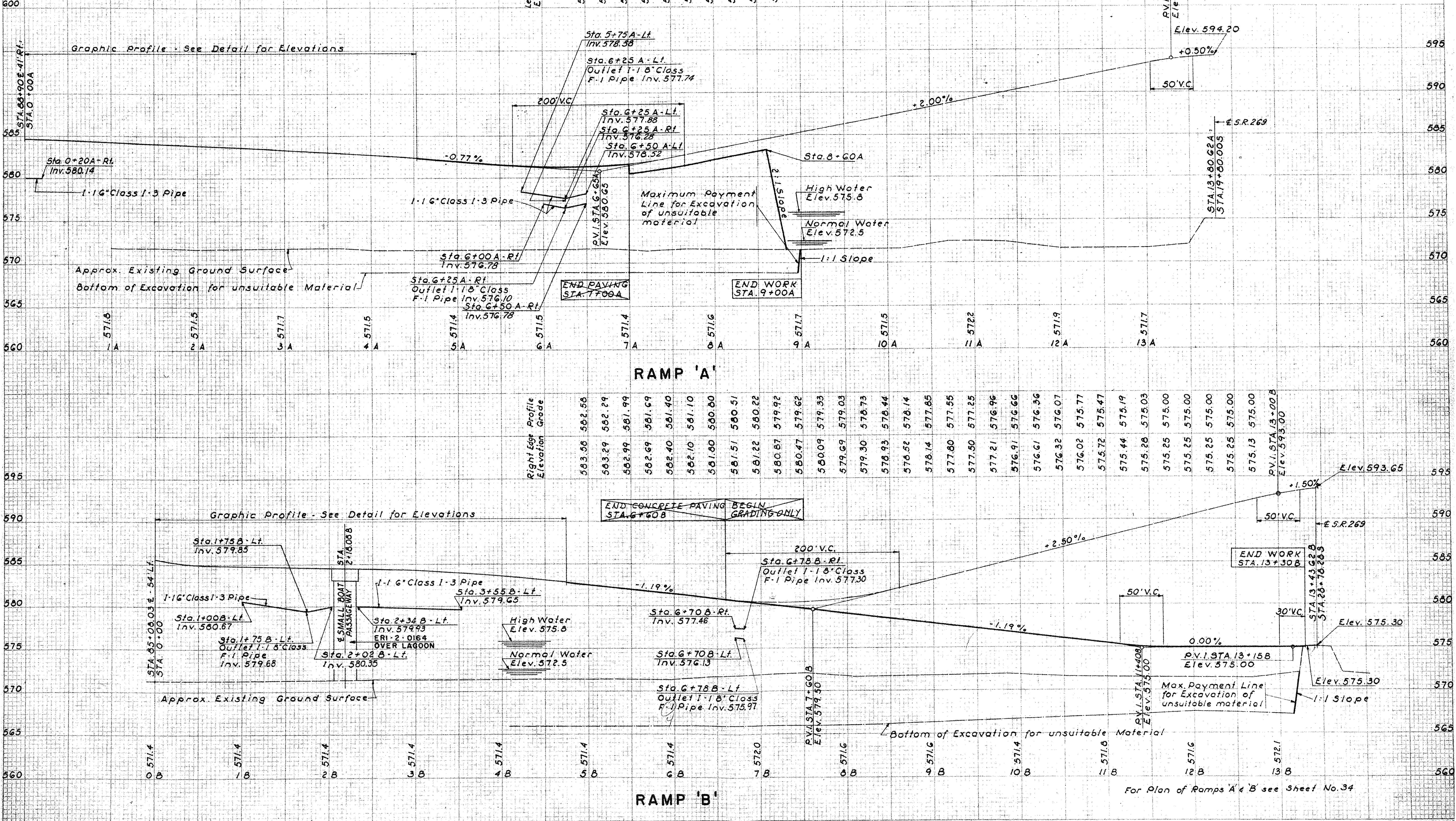
✓ Types 7 & 8

REF. NO.	STATION TO STATION	SIDE	B-21 Water-proofed Aggr. ~~Cu. Yd.~~	B-112 Porous Base Course Cu. Yd.	I-7 Reinf. Concrete Approach Slab Sq. Yd.	I-12 Special Concrete Curb Type A Lin. Ft.	I-12 Type B Lin. Ft.	I-21 Concrete Median Type 2 Sq. Yd.	I-22 Subbase Cu. Yd.	T-31 Surface Treatment Bitum. Aggr. Gal.	T-31 Cu. Yd.	T-71 9" Reinf. Conc. Pavt. Sq. Yd.	I-1 Class I-3 6" Lin. Ft.	I-1 Class I-3 6" Lin. Ft.	I-1 Class F-1 6" Lin. Ft.	I-1 Class F-1 6" Lin. Ft.	I-1 Class A-1 15" Lin. Ft.	I-1 Class A-1 15" Lin. Ft.	I-1 Class G-1 90" Lin. Ft.	I-2 Head Walls Cu. Yd.	I-5 6"x6" 60° Wye Ea.	I-5 6" Cross Ea.	I-5 6" 30° Bend Ea.	I-5 6"x6" Tee Ea.	I-8 Mod. 2-6 M-1 Ea.	I-10 Dumped Rock Fill Type B Cu. Yd.	I-15 Guard Rail Wire Cable Std. Lin. Ft.	I-15 Barrier Lin. Ft.	SEE SHEET NO.
	ROADWAY												~~Sec. M 6.4(h)~~				~~Sec. M 6.4(g)~~ d		Sec. M 6.4(g) 10-8 ga.		~~For Class I-3 Pipe~~	~~For Class I-3 Pipe~~	~~For Class I-3 Pipe~~	~~For Class I-3 Pipe~~					
1-R	67+00 ¢ to 82+00 ¢	Rt.																									~~1498.5~~	~~1500~~	32
2-R	67+00 ¢ to 82+00 ¢																										~~1500~~		32
3-R	67+00 ¢ to 82+00 ¢	Lt.																									~~464~~		32
4-R	82+00 ¢ to 86+64 ¢	Rt.																										~~1987.5~~	
5-R	82+00 ¢ to 86+85.22 ¢	M																									~~515~~		
6-R	82+00 ¢ to 87+15 ¢	Lt.																									~~500~~		
7-R	86+94 ¢ to 92+00 ¢	Rt.																										~~487.5~~	
8-R	87+14.78 ¢ to 92+00 ¢																										~~100~~		
9-R	91+00 ¢ to 92+00 ¢	Lt.																											
	PAVEMENT																												
	67+00 ¢ to 92+00 ¢		~~707~~	~~1207~~				~~1066~~	~~4125~~	~~1721~~	~~55~~	~~15420~~																	
	0+00 B to 5+00 B		~~30~~	~~15~~					~~85~~	~~46~~	~~1~~	~~280~~																	
1-P	86+60.22 ¢ to 86+85.22 ¢				~~194~~																								
2-P	1+78.30 B to 2+03.30 B				~~45~~																								
3-P	87+14.78 ¢ to 87+39.78 ¢				~~194~~																								
4-P	3+32.86 B to 2+57.86 B				~~46~~																								
5-P	0+00 B to 1+73 B					~~173~~																							
	DRAINAGE																												
1-UD	67+00 ¢ to 72+15 ¢	Rt.												~~516~~															32
2-UD	67+00 ¢ to 76+65 ¢	Rt.												~~976~~															32
3-UD	72+15 ¢ to 76+65 ¢	Rt.												~~440~~	~~10~~														32
4-UD	76+65 ¢ to 80+70 ¢	Rt.												~~410~~															32
5-UD	76+65 ¢ to 80+75 ¢	Rt.												~~400~~	~~10~~														32
6-UD	80+70 ¢ to 80+80 ¢	Rt.													~~10~~														32
7-UD	80+80 ¢ to 82+00 ¢	Rt.												~~122~~															32
8-UD	80+75 ¢ to 82+00 ¢	Rt.												~~126~~															32
9-UD	82+00 ¢ to 82+75 ¢	Rt.												~~64~~	~~10~~														
10-UD	82+00 ¢ to 82+70 ¢	Rt.												~~70~~															
11-UD	82+70 ¢ to 82+80 ¢	Rt.													~~10~~														
12-UD	82+80 ¢ to 86+64 ¢	Rt.												~~398~~		~~10~~					+								
13-UD	82+95 ¢ to 2+03 B	Lt.												~~424~~		~~10~~													
14-UD	85+08 ¢ to 86+70 ¢	Lt.												~~162~~															
15-UD	86+39 ¢-Rt. to 1+75 B-Lt.												~~110~~								+	+	2	+					
16-UD	86+96 ¢ to 3+15 A	Rt.												~~510~~															
17-UD	87+30 ¢ to 92+00 ¢	Lt.												~~486~~															
18-UD	86+72 ¢ to 86+98 ¢	Lt.												~~26~~															32
1-D	72+15 ¢	Lt.															~~56~~			~~3.2~~					+	~~2~~			32
2-D	80+75 ¢	Rt.															~~64~~			~~3.2~~					+	~~2~~			
3-D	82+75 ¢	Rt.																~~64~~	152						+				40
3	70+00 ¢	Lt. & Rt.																											
TOTALS			~~737~~	~~1222~~	~~480~~	~~173~~		~~1066~~	~~4210~~	~~1767~~	~~56~~	~~15706~~	~~110~~	~~5130~~	~~50~~	~~20~~	~~120~~	~~64~~	152	~~6.4~~	~~2~~	+ 6	~~2~~	+	3	~~4~~	~~4577.5~~	~~3975.5~~	



FED. RD. DIVISION | STATE | PROJECT
2 | OHIO
34/118
OTT-2-27.36
ERI-2-0.15
END WORK STA. 13+30B
STA. 13+43.62 B
STA. 28+78.28 S
N 653 888.25
E 1912 620.15
Nielson Dike
Lagoon
CURVE DATA
Δc = 20°-49'-21"
Dc = 6°-00'-00"
Rc = 954.93
Tc = 175.46
Ec = 15.99
Lc = 347.04
Superelevation = 0.0625 ft/ft.
Rotate about Profile Grade
SPIRAL DATA
Qs = 6°-00'-00"
Ls = 200.00
P = 1.75
K = 99.96
LT = 133.41
ST = 66.74
P.T. STA. 8+41.04 B
N 653 765.32
E 1912 139.03
℄ SMALL BOAT PASSAGEWAY
End Appr. Slab STA. 86+85.22℄
Beg. Appr. Slab STA. 86+60.22℄
S 77°-30'-37"E
N 34°-41'-00"E
T.S. STA. 3+00 B
N 653 778.11
E 1911 598.14
S.C. STA. 5+00 B
N 653 741.71
E 1911 794.70
STA. 6+60 B END CONCRETE PAVING TYPE T-71
BEGIN GRADING ONLY
Inv. 575.97
I-1 6" Class I-3 Pipe
4' Sod Gutter
Inv. 577.30
Outlet Type "A" See Sheet No. 13
LIMIT OF PAVING
END PROJECT STA. 95+00℄ F-1042(13)
F-1042(14)
LIMIT OF GRADING
END WORK STA. 97+00℄
I-1 6" Class I-3
Grading Only
N 75°-40'-02"E
℄ Survey
S 76°-19'-00"E
℄ Construction
End Appr. Slab STA. 87+39.78℄
Beg. Appr. Slab STA. 87+14.78℄
STA. 87+00℄
ERI-2-0164 OVER LAGOON
P.C. STA. 0+00 A = STA. 88+90.00℄ 41' Rt.
N 653 660.33
E 1911 653.90
I-1 6" Class I-3 Pipe
Inv. 578.87
4' Sod Gutter
Inv. 577.74
Inv. 578.38
Inv. 577.88
Inv. 576.28
Inv. 576.10
Outlet Type "B" See Sheet No. 13
C.S. STA. 4+53.07 A
N 653 527.32
E 1912 086.73
S.C. STA. 6+53.07 A
N 653 445.61
E 1912 269.02
END WORK STA. 9+00 A LIMIT OF GRADING
Grading Only
STA. 99+83.62℄ = STA. 24+19.09 S
N 653 441.46
E 1912 726.18
Point "269"
STA. 99+90.65 = STA. 24+00.00 S
N 653 422.90
E 1912 730.59
S 13°-21'-02"E
EXISTING
19.09 cos 62°-57'-58" = 19.09(.4547592) = 8.68
62°-57'-58"
CURVE DATA
Δc = 6°-47'-46"
Dc = 1°-30'-00"
Rc = 3819.72
Tc = 226.80
Ec = 6.73
Lc = 453.07
Superelevation = 0.0417 ft/ft.
Rotate about Profile Grade
SPIRAL DATA
Qs = 9°-30'-00"
Ls = 200.00
P = 1.89
END PAVING STA. 7+00 A
Sta. 94+05 EB
Overhead Sign Support
Type 10.48, Design 4.
See Sheet 17 for Details
Swamp
CURVE DATA
Δc = 18°-20'-57"
Dc = 8°-00'-00"
Rc = 716.20'
Tc = 115.67
Ec = 9.28'
Lc = 229.36'
Superelevation = 0.0833 ft/ft.
Rotate about Profile Grade
P.T. STA. 8+82.44 A
N 653 301.40
E 1912 446.12
S 41°-41'-17"E
For Profile of Ramps A & B See Sheet No. 35
For Estimated Quantities See Sheet No. 37
P.C. STA. 11+80.81 A
N 653 078.53
E 1912 644.49
P.T. STA. 13+03.39 A
N 653 023.18
E 1912 750.86
S 83°-21'-02"E
CURVE DATA
Δc = 41°-40'-45"
Dc = 34°-00'-00"
Rc = 168.52
Tc = 64.15
Ec = 11.80
Lc = 122.58
Superelevation = 0.0417 ft/ft.
Rotate about Profile Grade
STA. 13+80.62 A
STA. 19+80.00 S
N 653 014.24
E 1912 827.57
BM #14 Elev. 574.23
2" Square Chiseled Corner N.W. Corner of East Headwall Second Culvert South of Alignment on Route 269.
N 654 000
N 653 500
E 1911 500
E 1912 000
E 1912 500
PLAN SR 269 INTERCHANGE RAMPS A & B

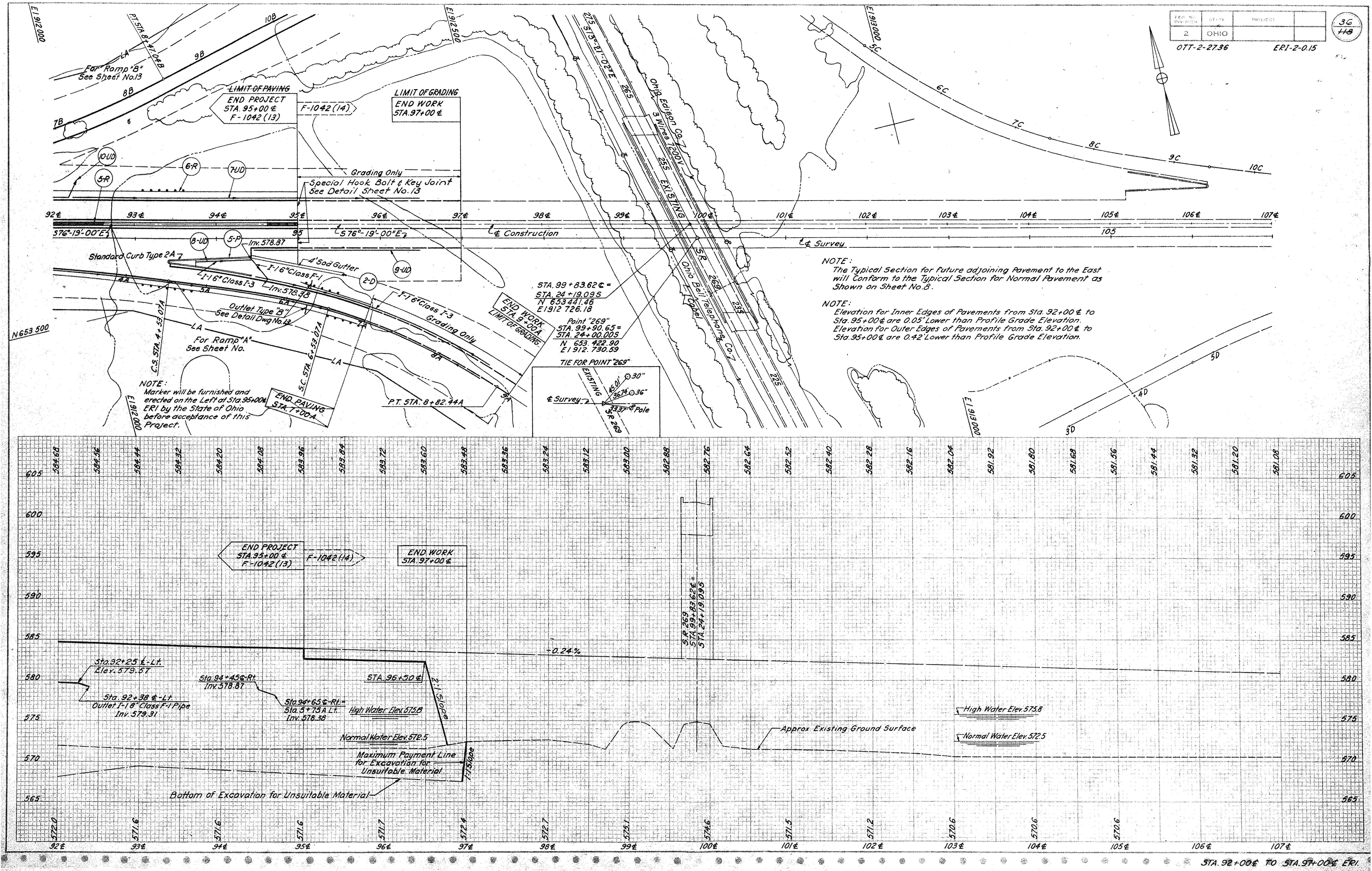
Profile Grade	Left Edge Elevation
581.27	582.59
581.41	582.74
581.64	582.98
581.96	583.29
582.37	583.70
582.85	584.18
583.35	584.68
583.85	585.16
584.35	585.52
584.85	585.89



Profile Grade	Right Edge Elevation
582.58	583.58
582.29	583.29
581.99	582.99
581.69	582.69
581.40	582.40
581.10	582.10
580.80	581.80
580.51	581.51
580.22	581.22
579.92	580.87
579.62	580.47
579.33	580.09
579.03	579.69
578.73	579.30
578.44	578.93
578.14	578.52
577.85	578.14
577.55	577.80
577.25	577.50
576.96	577.21
576.66	576.91
576.36	576.61
576.07	576.32
575.77	576.02
575.47	575.72
575.19	575.44
575.03	575.28
575.00	575.25
575.00	575.25
575.00	575.25
575.00	575.25
575.00	575.13

For Plan of Ramps 'A' & 'B' see Sheet No. 34

RAMPS 'A' & 'B' S.R. 269 INTERCHANGE



FED. RD. DIVISION 2 | STATE OHIO | PROJECT
36/118
OTT-2-27.36
ERI-2-0.15
For Ramp "B" See Sheet No.13
LIMIT OF PAVING
END PROJECT STA. 95+00 ¢ F-1042 (13)
F-1042 (14)
LIMIT OF GRADING
END WORK STA. 97+00 ¢
Grading Only
Special Hook Bolt & Key Joint See Detail Sheet No. 13
S76°-19'-00"E
¢ Construction
¢ Survey
Inv. 578.87
Standard Curb Type 2A
4' Sod Gutter
I-16" Class F-1
I-16" Class I-3
Inv. 578.38
Outlet Type "B" See Detail Dwg No.13
I-16" Class I-3
Grading Only
END WORK STA. 9+00A LIMIT OF GRADING
For Ramp "A" See Sheet No.
C.S. STA. 4+53.07A
S.C. STA. 6+53.07A
P.T. STA. 8+82.44A
P.T. STA. 8+47.04B
NOTE: Marker will be furnished and erected on the Left at Sta. 95+00¢ ERI by the State of Ohio before acceptance of this Project.
END PAVING STA. 7+00A
STA. 99+83.62¢ = STA. 24+19.09S N 653441.46 E1912 726.18
Point "269" STA. 99+90.65 = STA. 24+00.00S N 653.422.90 E1912.730.59
TIE FOR POINT "269"
EXISTING
¢ Survey
S.R. 269
Ohio Edison Co. 3 Wires 7200V
EXISTING S.R. 269
Ohio Bell Telephone Co.
NOTE: The Typical Section for future adjoining Pavement to the East will Conform to the Typical Section for Normal Pavement as Shown on Sheet No.8.
NOTE: Elevation for Inner Edges of Pavements from Sta. 92+00¢ to Sta. 95+00¢ are 0.05' Lower than Profile Grade Elevation. Elevation for Outer Edges of Pavements from Sta. 92+00¢ to Sta. 95+00¢ are 0.42' Lower than Profile Grade Elevation.
E1912 000
E1912 500
E1913 000
N653 500
END PROJECT STA. 95+00 ¢ F-1042 (13)
F-1042 (14)
END WORK STA. 97+00 ¢
S.R. 269 STA. 99+83.62¢ = STA. 24+19.09S
-0.24%
Sta. 92+25 ¢-Lt. Elev. 579.57
Sta. 92+38 ¢-Lt. Outlet I-18" Class F-1 Pipe Inv. 579.31
Sta. 94+45¢-Rt. Inv. 578.87
Sta. 94+65¢-Rt. = Sta. 5+75A Lt. Inv. 578.38
High Water Elev. 575.8
STA. 96+50¢
2:1 Slope
Normal Water Elev. 572.5
Maximum Payment Line for Excavation for Unsuitable Material
1:1 Slope
Bottom of Excavation for Unsuitable Material
Approx. Existing Ground Surface
High Water Elev. 575.8
Normal Water Elev. 572.5
STA. 92+00¢ TO STA. 97+00¢ ERI.

ESTIMATED QUANTITIES

(NOT A PART OF THIS CONTRACT)

now std Types 7 & 8 (all types)

REF. NO.	STATION TO STATION	SIDE	B-21 Water Proofed Aggr. Cu. Yd.	B-112 Porous Base Course Cu. Yd.	I-12 Concrete Curb Special Type A7 Lin.Ft.	I-12 Special Type B8 Lin.Ft.	I-12 Standard Type 2A Lin.Ft.	I-12 Standard Type 6 Lin.Ft.	I-21 Concret Median Type 2 Sq.Yd.	I-21 Concret Median Type 1 Sq.Yd.	I-22 Subbase Cu. Yd.	T-31 Surface Treatment Bitum. Gal.	T-31 Surface Treatment Aggr. Cu.Yd.	T-71 9" Reinf. Concrete Pavement Sq. Yd.	I-1 Class I-3 6" Lin.Ft.	I-1 Class F-1 8" Lin.Ft.	I-5 6"×6" 60° Bend (For Class I-3 Pipe) Each	I-5 6"×6" 6" Tee (For Class I-3 Pipe) Each	I-5 6"×6" 45° Wye (For Class I-3 Pipe) Each	L-10 Sodding as per Plan Sq. Yd.	I-15 Guard Rail Wire Cable Std. Lin. Ft.	I-15 Guard Rail Wire Cable Barrier Lin. Ft.	I-15 Guard Rail Steel Beam Type (Deep) Lin. Ft.	SEE SHEET NO.
	ROADWAY																							
1-R	2 + 37 B to 6 + 60 B	Lt																			425			34
2-R	5 + 93 B to 6 + 60 B	Rt																			62.5			34
3-R	3 + 10 A to 7 + 00 A	Rt																			387.5			34
4-R	6 + 14 A to 6 + 89 A	Lt																			75			34
5-R	92 + 00 ℄ to 95 + 00 ℄	M																				300		36
6-R	92 + 00 ℄ to 95 + 00 ℄	Lt																			300			36
7-R	94 + 05 EB	Rt																					50	34
	PAVEMENT																							
	92 + 00 ℄ to 95 + 00 ℄		65	121					133		505	164	5	2236										34
	4 + 53.07 A to 7 + 00 A		37	18							107	55	2	461										34
	2 + 57.86 B to 5 + 00 B		33	17							118	49	2	454										34
	5 + 00 B to 6 + 60 B		18	9							63	27	1	284										34
																								34
1-P	2 + 52 B to 4 + 33 B	Rt				181																		34
2-P	4 + 33 B to 5 + 00 B	Rt			67																			34
3-P	4 + 51 A to 4 + 86 A	Lt								19														34
4-P	4 + 51 A to 5 + 55 A	Lt						102																34
5-P	93 + 40 ℄ to 94 + 44 ℄	Rt					106																	34
	DRAINAGE																							
1-UD	2 + 34 B to 6 + 70 B	Lt													442	10	1							34
2-UD	5 + 00 B to 6 + 70 B	Rt													176	10	1							34
3-UD	3 + 15 A to 6 + 25 A	Rt													318	10		1						34
4-UD	5 + 53 A to 6 + 25 A	Lt													104				1					34
5-UD	6 + 25 A to 8 + 60 A	Lt													240	10		1						34
6-UD	6 + 25 A to 8 + 60 A	Rt													236									34
7-UD	92 + 25 ℄ to 96 + 60 ℄	Lt													461									36
8-UD	93 + 80 ℄ to 94 + 45 ℄	Rt													64		1							36
9-UD	94 + 44 ℄ to 96 + 60 ℄	Rt													216									36
10-UD	92 + 00 ℄ to 92 + 25 ℄	Lt													25	10								36
1-D	4 + 75 B to 6 + 34 B	Rt																		74				34
2-D	94 + 44 ℄ to 95 + 53 ℄	Rt																		51				36
TOTALS			~~153~~	~~165~~	~~67~~	~~181~~	~~106~~	~~102~~	~~133~~	~~19~~	~~793~~	~~296~~	~~10~~	~~3435~~	~~2282~~	~~50~~	3	2	1	~~125~~	~~1250~~	~~300~~	~~50~~	
																		~~6~~						

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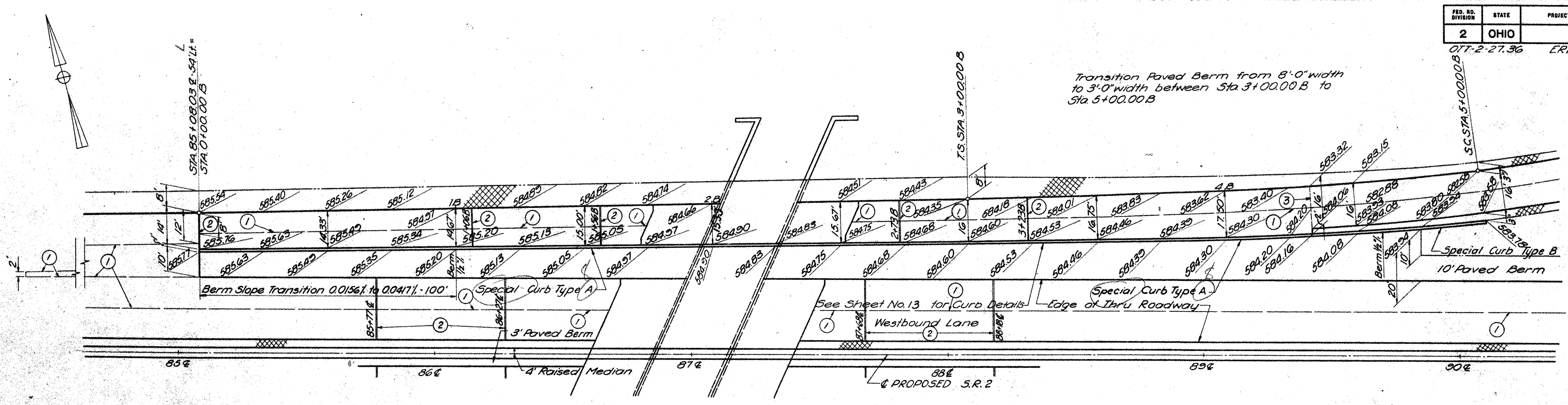
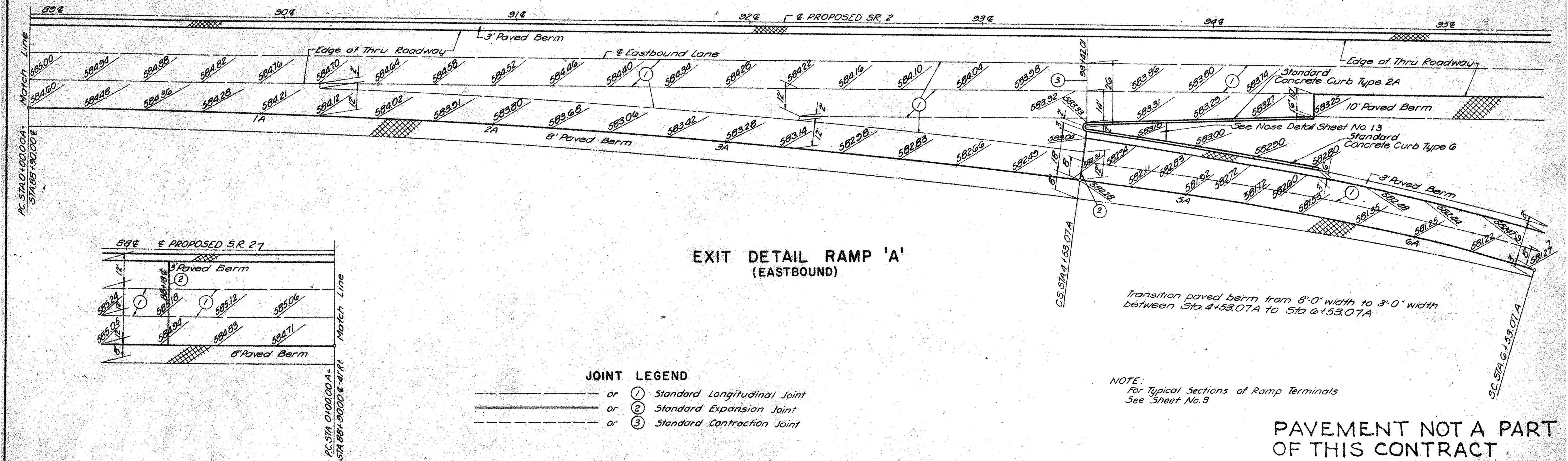
Transition Paved Berm from 8'-0" width to 3'-0" width between Sta. 3+00.00 B to Sta. 5+00.00 B



ENTRANCE DETAIL RAMP 'B'
(WESTBOUND)



EXIT DETAIL RAMP 'A'
(EASTBOUND)

Transition paved berm from 8'-0" width to 3'-0" width between Sta. 4+53.07 A to Sta. 6+53.07 A

JOINT LEGEND

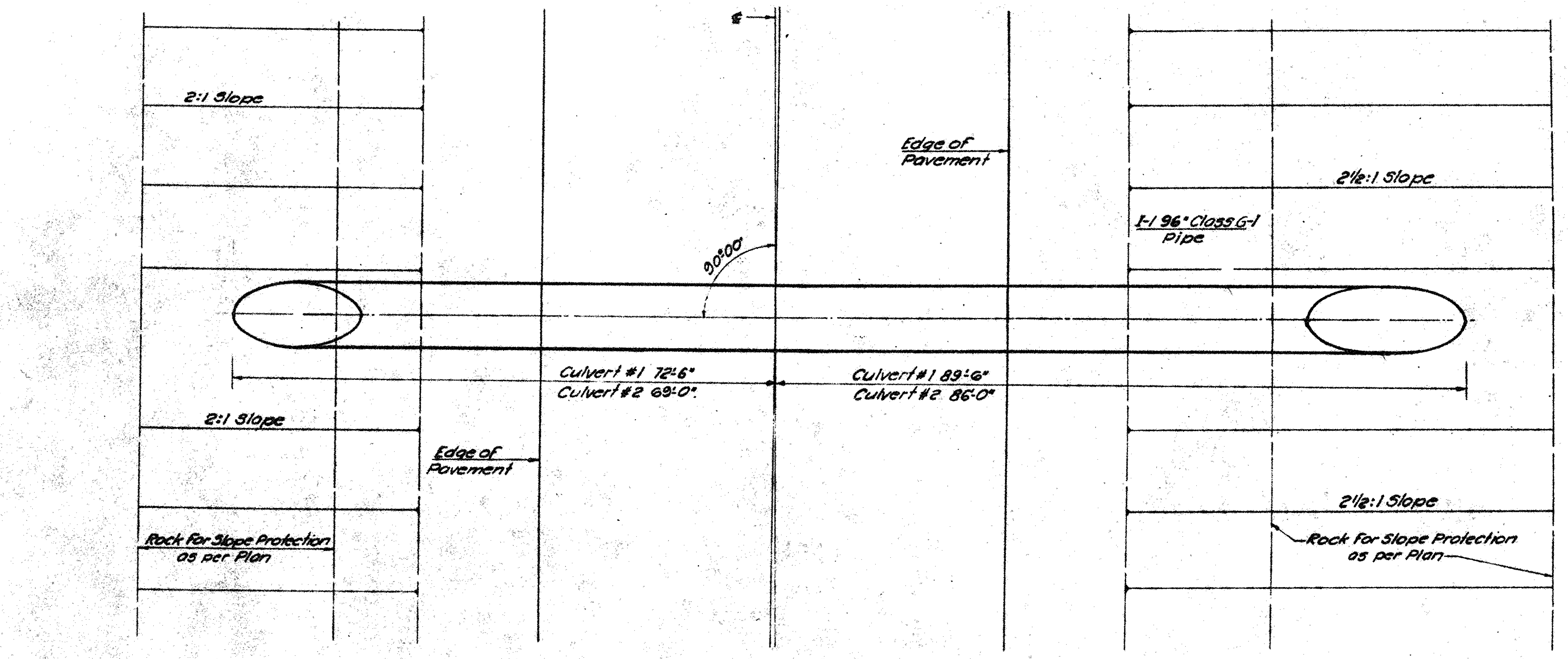
- — — — — or (1) Standard Longitudinal Joint
- ———— or (2) Standard Expansion Joint
- - - - - - or (3) Standard Contraction Joint

NOTE:
For Typical Sections of Ramp Terminals See Sheet No. 9

PAVEMENT NOT A PART OF THIS CONTRACT

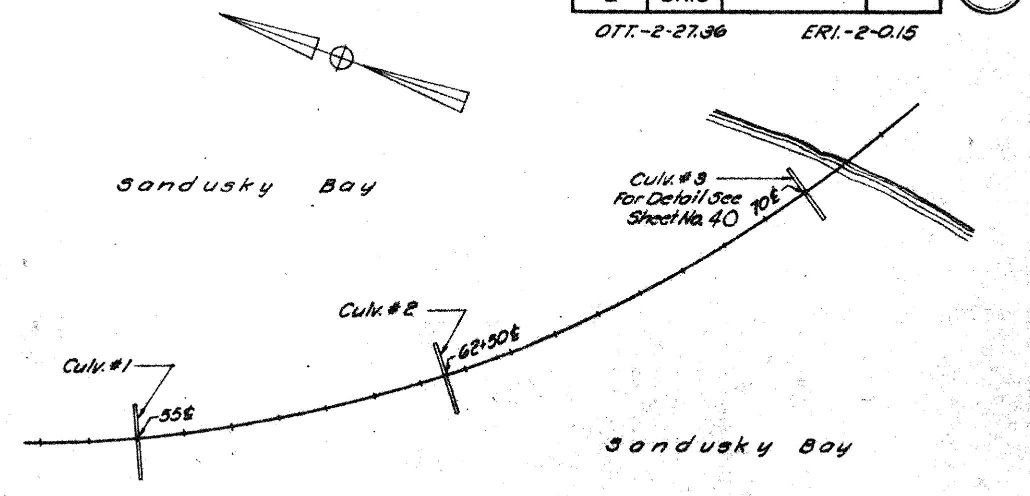
Scale 1" = 20'

S.R. 269 INTERCHANGE DETAIL RAMPS A & B



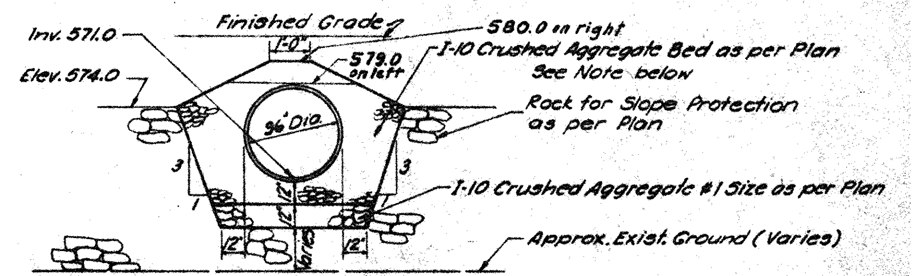
PLAN

Scale: 1"=10'

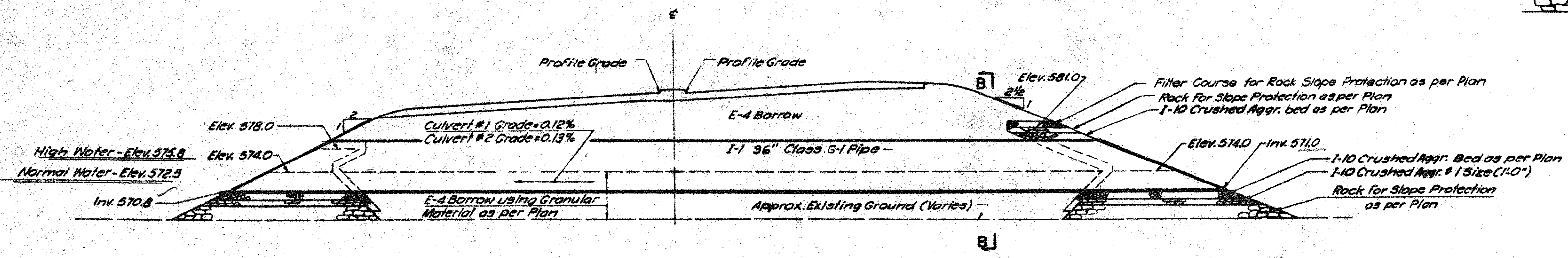


KEY PLAN

Scale: 1"=200'

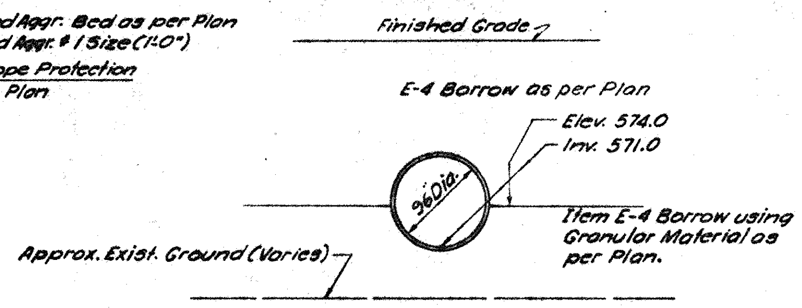


SECTION A-A

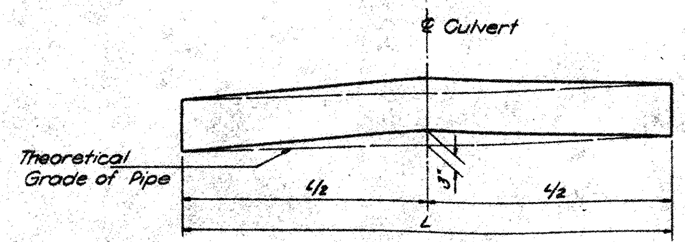


LONGITUDINAL SECTION

Scale: 1"=10'



SECTION B-B



CAMBER DETAIL

PIPE CULV.	L	L/2
#1	160'-6"	80'-3"
#2	154'-0"	77'-0"

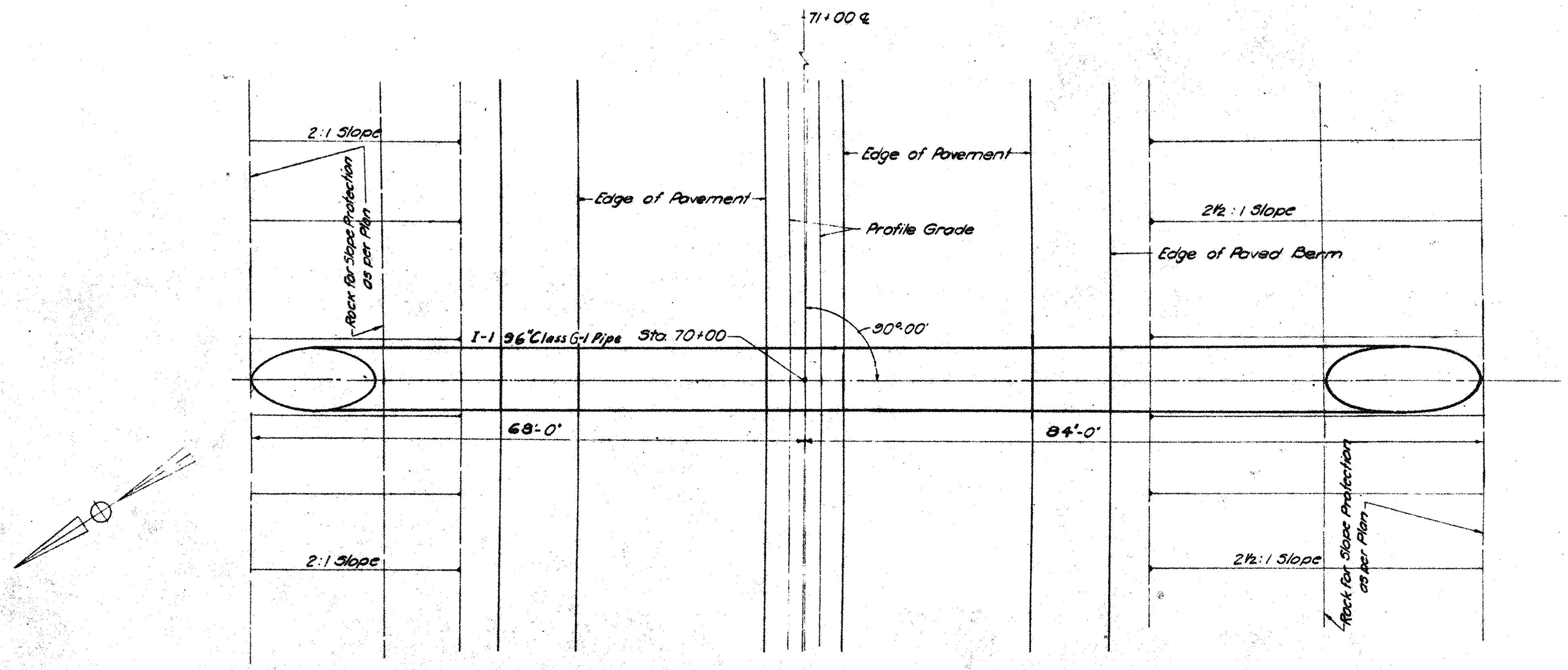
NOTE:
The gradation of Item I-10 Crushed Aggregate Bed As Per Plan shall conform to the gradation shown in Section B-19.02 of the Specifications.

ESTIMATED QUANTITIES

ITEM	CULV. #1	CULV. #2	TOTAL	UNIT	DESCRIPTION
I-1	162	156	318	L.F.	96" Class G-1 Pipe Sec. M-6.4(g) 10-8 ga.
I-10	46	46	92	C.Y.	Crushed Aggr. Bed, as per Plan
I-10	20	20	40	C.Y.	Crushed Aggr. #1 Size, as per Plan

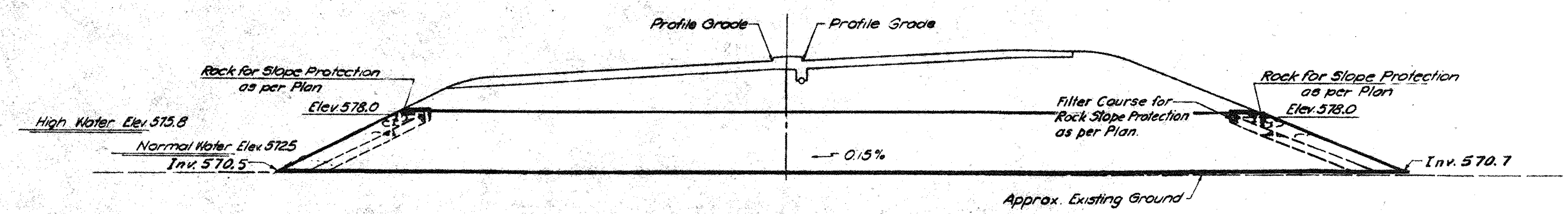
1	STA. 55+00 ℄ ERI. SR-2	R.C. 96"X162'	ERI-2-0.15
2	STA. 62+50 ℄ ERI. SR-2	R.C. 96"X156'	ERI-2-0.15

PIPE CULVERTS AT STA. 55+00℄ & STA. 62+50℄ (ERI)



PLAN

Scale: 1"=10'



LONGITUDINAL SECTION

Scale: 1"=10'

ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITY	DESCRIPTION
I-1	Lin. Ft.	152	96"Class G-1 Pipe Sec. M6.4(g) 10-8 Gage

SEEDING	
END WIDTH	SQ YDS

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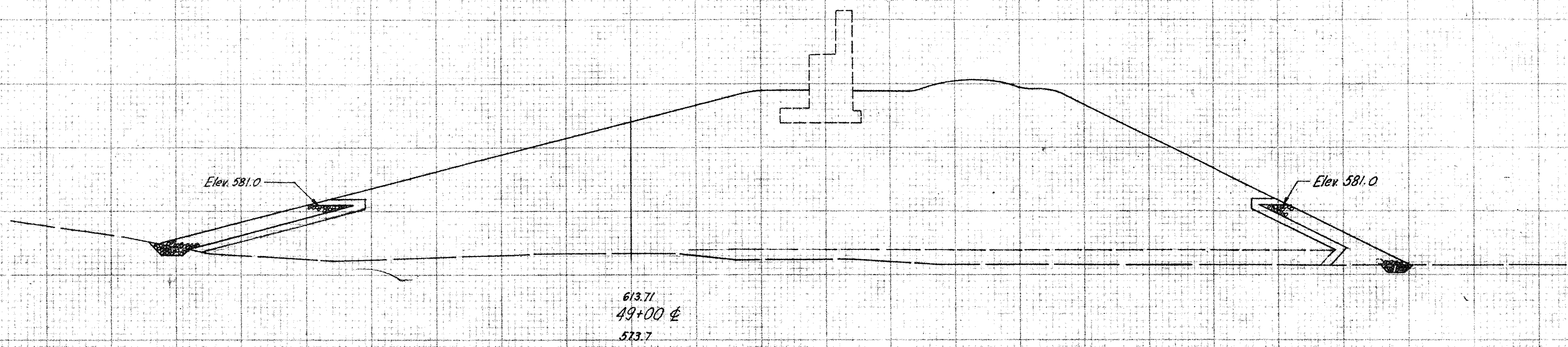
F		B		D		A	
AREA	VOL.	AREA	VOL.	AREA	VOL.	AREA	VOL.
22		59		4			

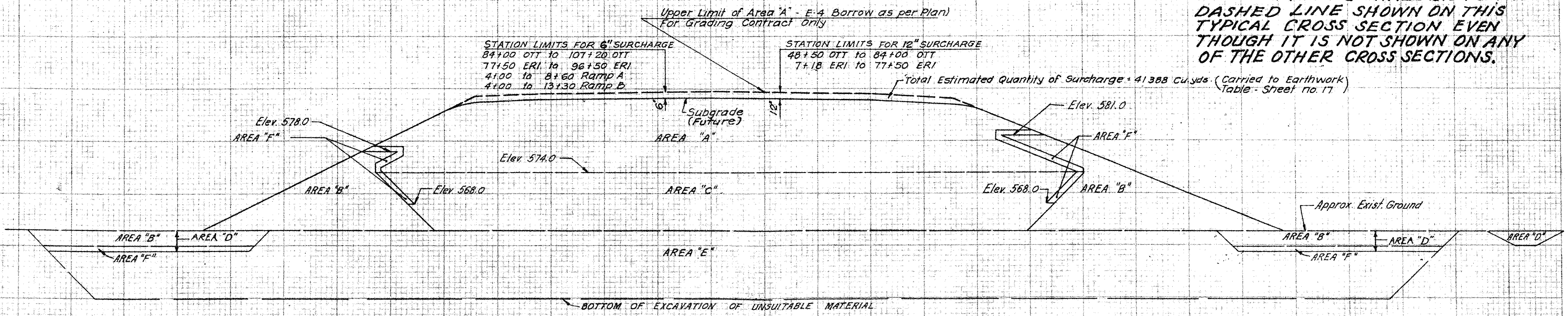


BEGIN WORK STA 48+50 ¢

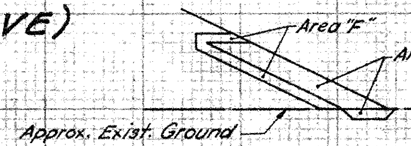
LEGEND FOR TYPICAL CROSS SECTION

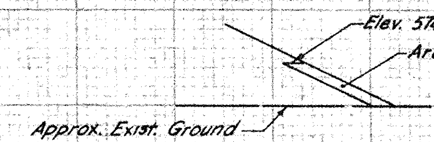
Area "A" = E-4 Borrow as per Plan
Area "B" = Rock for Slope Protection as per Plan
Area "C" = E-4 Borrow Using Granular Material as per Plan
Area "D" = E-1 Roadway Excavation as per Plan
Area "E" = E-4 Borrow Using Granular Material as per Plan Including the cost of Excavation of Unsuitable Material
Area "F" = Filter Course For Rock Slope Protection as per Plan

NOTE:
TOP OF GRADING SHALL BE TO THE DASHED LINE SHOWN ON THIS TYPICAL CROSS SECTION EVEN THOUGH IT IS NOT SHOWN ON ANY OF THE OTHER CROSS SECTIONS.

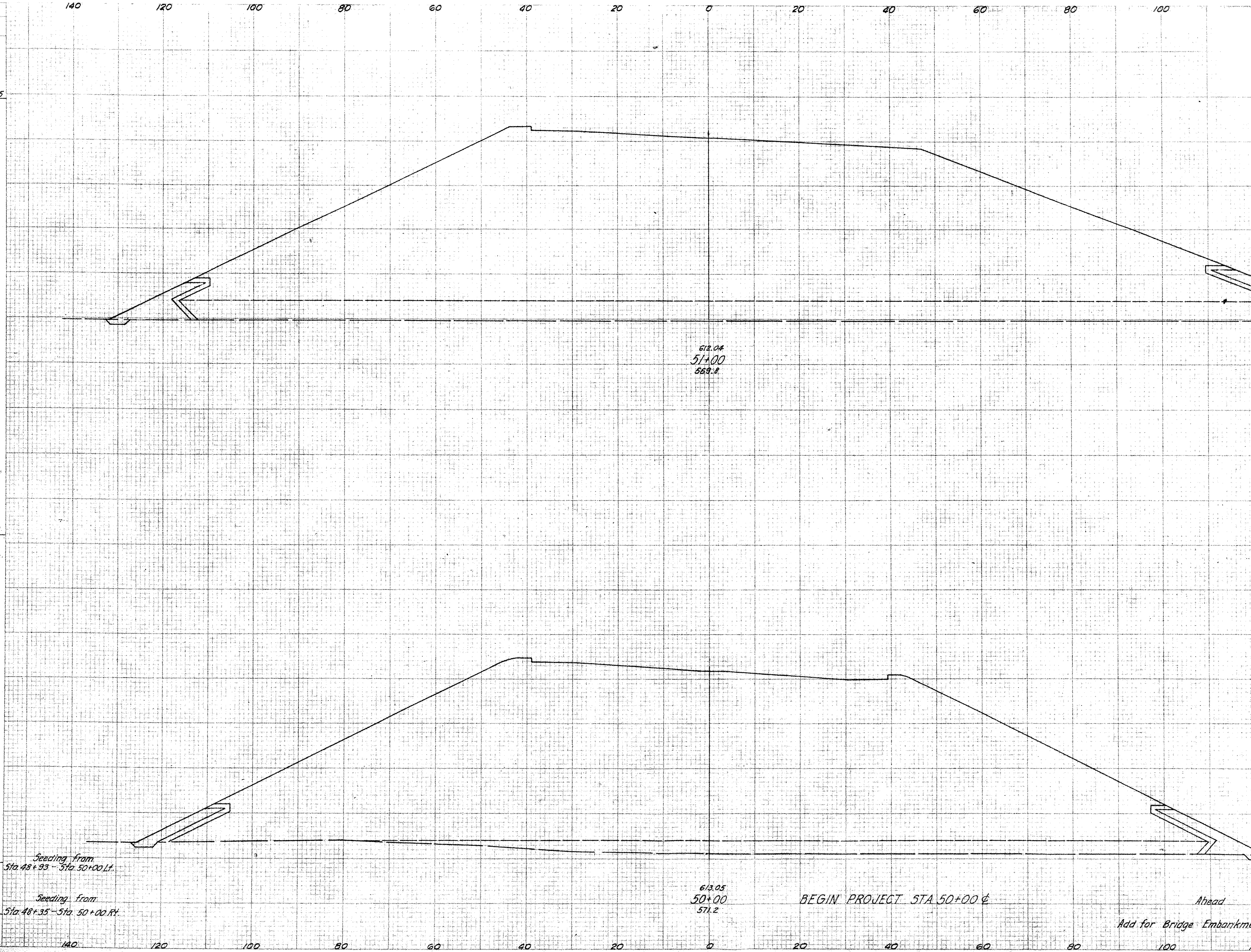


TYPICAL CROSS SECTION
(SEE LEGEND ABOVE)





OTT.-2-27.36 ERI.-2-0.15



Seeding End Width	Seeding SQ. YDS.	Station	D Area	D Vol.	F Area	F Vol.	C Area	C Vol.	B Area	B Vol.	A Area	A Vol.
	1755			40		174		3935		678		22362
161		51+00	10		47		1022		171		6232	
	1711			33		156		2731		476		23085
146		50+00										
	662	Seeding from Sta 48+93 - Sta 50+00 Lt.										
	1150	Seeding from Sta 48+35 - Sta 50+00 Rt.										
		Ahead	8		37		453		86		6234	
		Add for Bridge Embankment				109		1493		543		2402[illegible]

OTT-2-27.36 ERI-2-0.15

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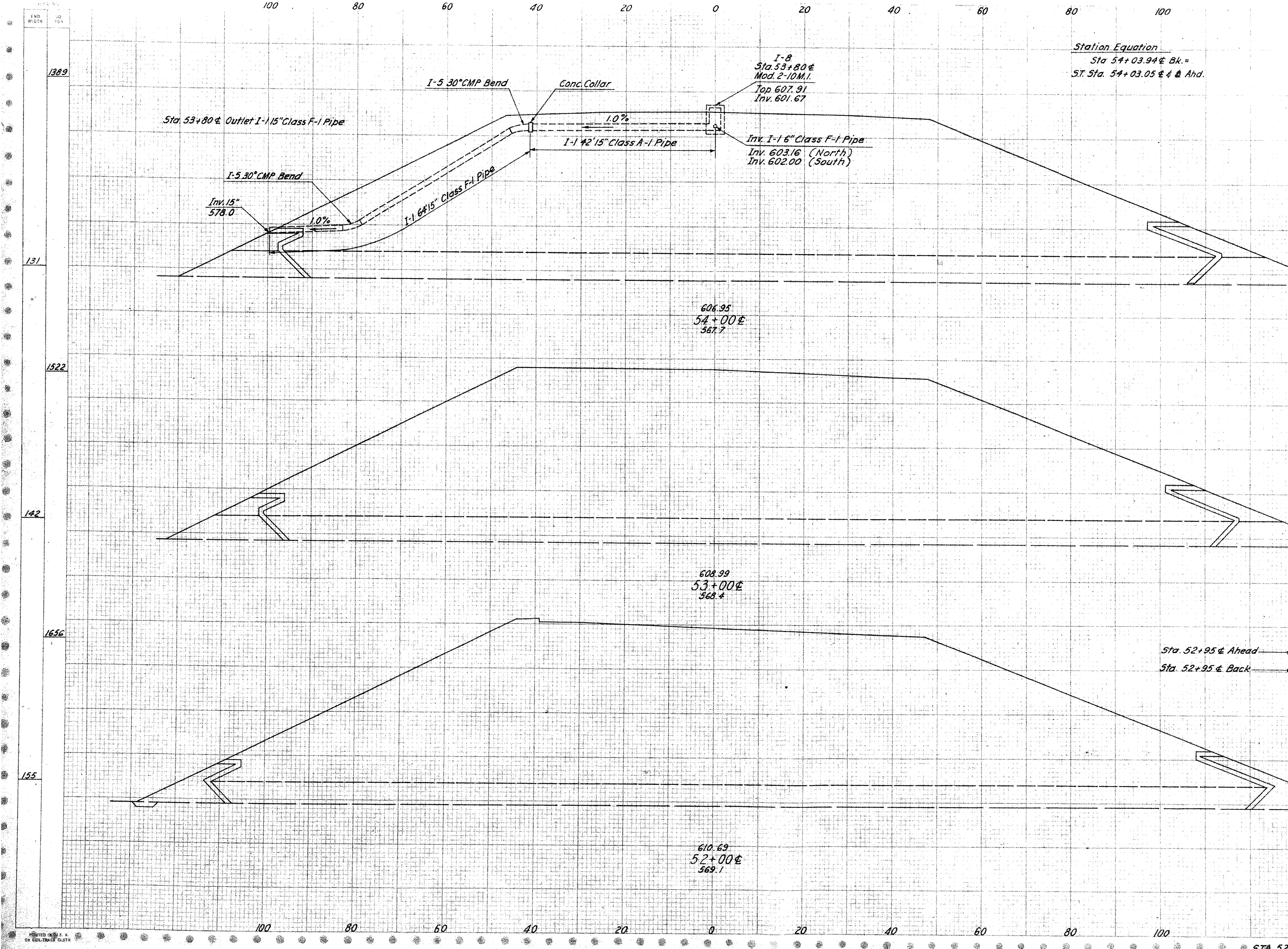
HB



D		F		C		B		A	
AREA	VOL.	AREA	VOL.	AREA	VOL.	AREA	VOL.	AREA	VOL.
			215		4555		1256		17[illegible]
		58		1252		336		4905	
			213		4480		1169		19[illegible]
		57		1168		295		5396	
	37		193		4205		907		20[illegible]
12		47		1103		195		5843	

STA 52+00℄ TO STA 54+00℄ (OTT.)

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

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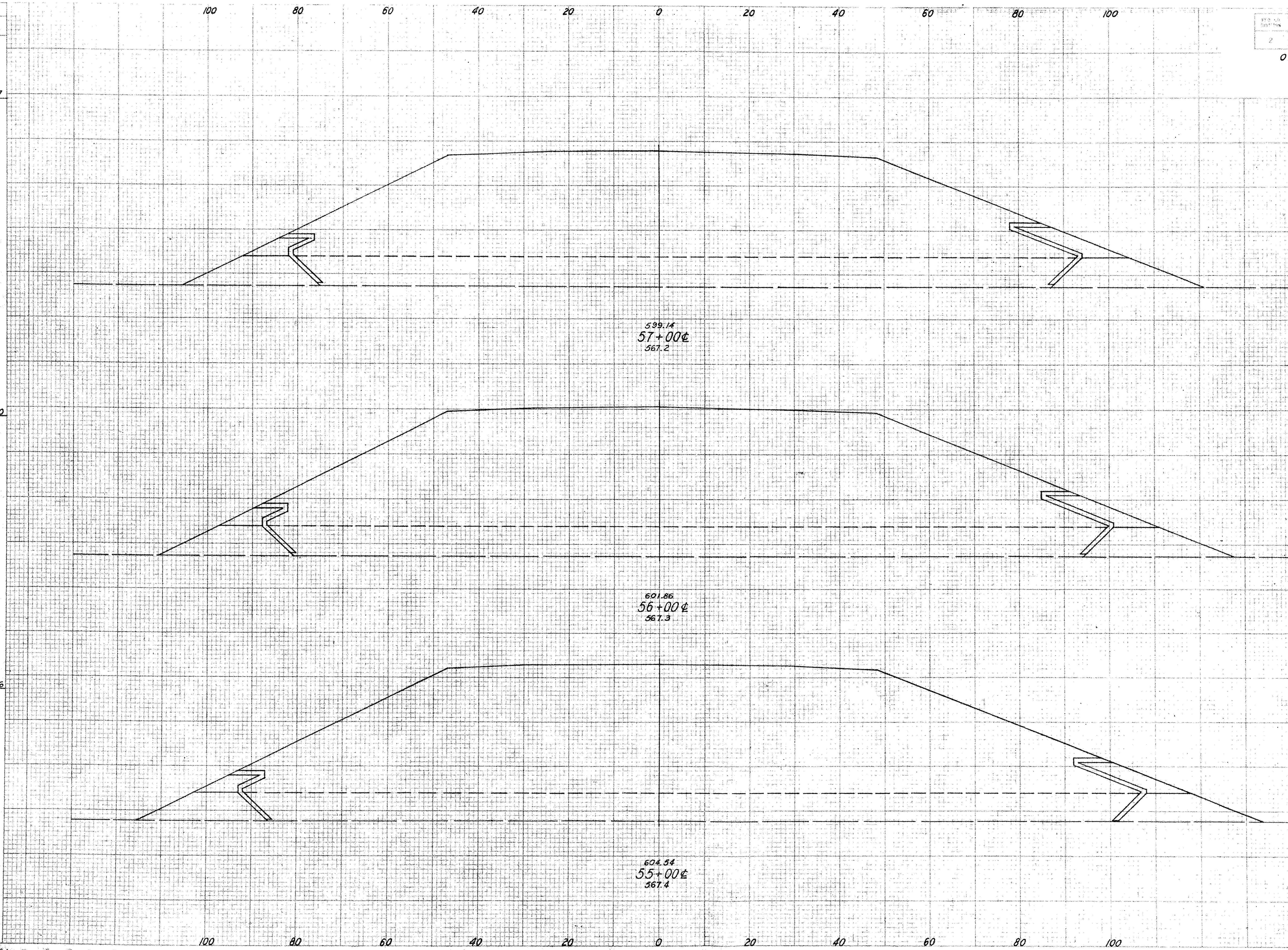
OTT-2-27.36 ERI-2-0.15

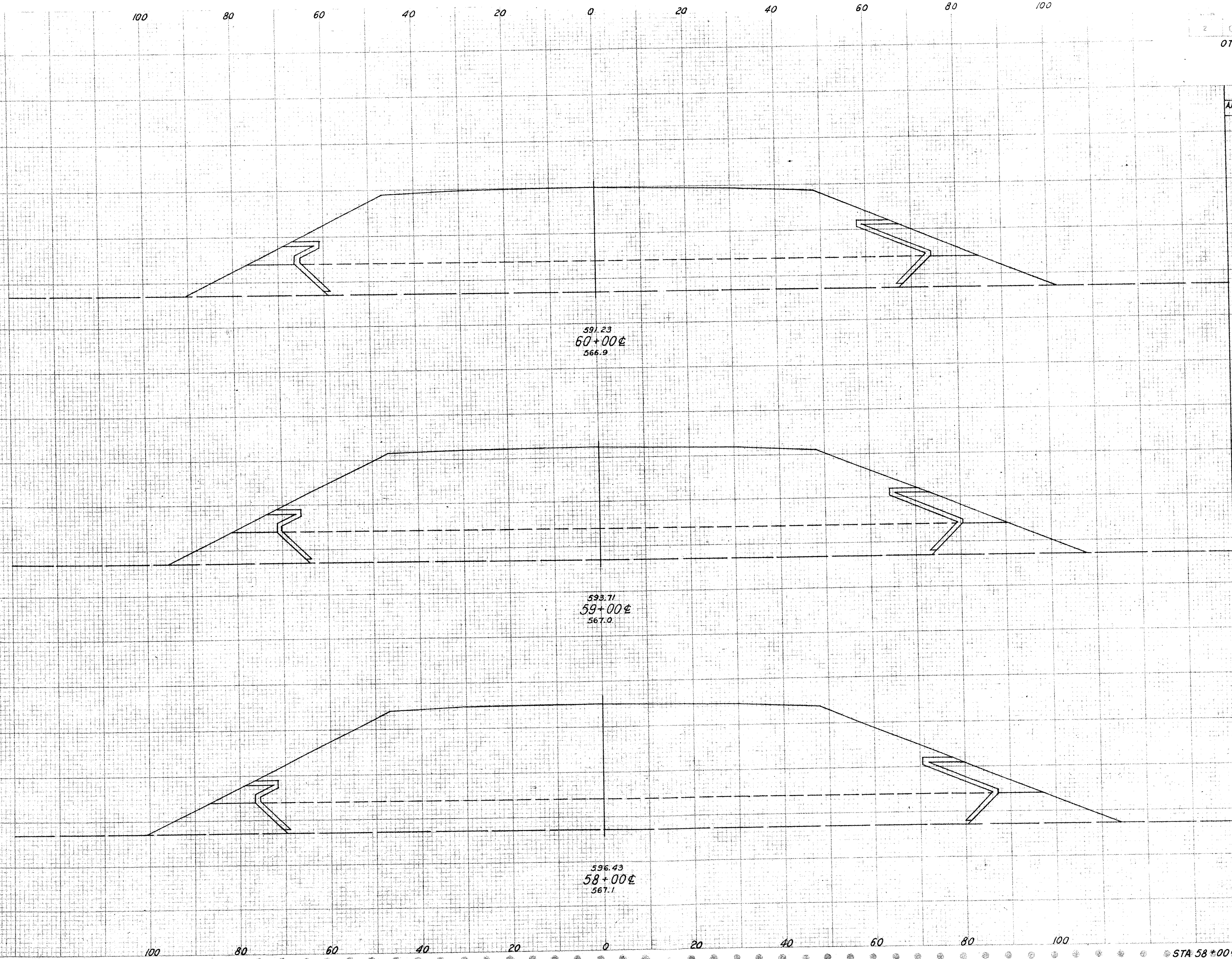


SEEDING END WIDTH	SEEDING SQ. YDS.
	967
93	
	1100
106	
	1256
119	

F AREA	F VOL.	C AREA	C VOL.	B AREA	B VOL.	A AREA	A VOL.
	215		4086		1394		11074
58		1137		373		3249	
	215		4338		1370		13050
58		1203		367		3798	
	215		4464		1313		15133
58		1208		342		4374	

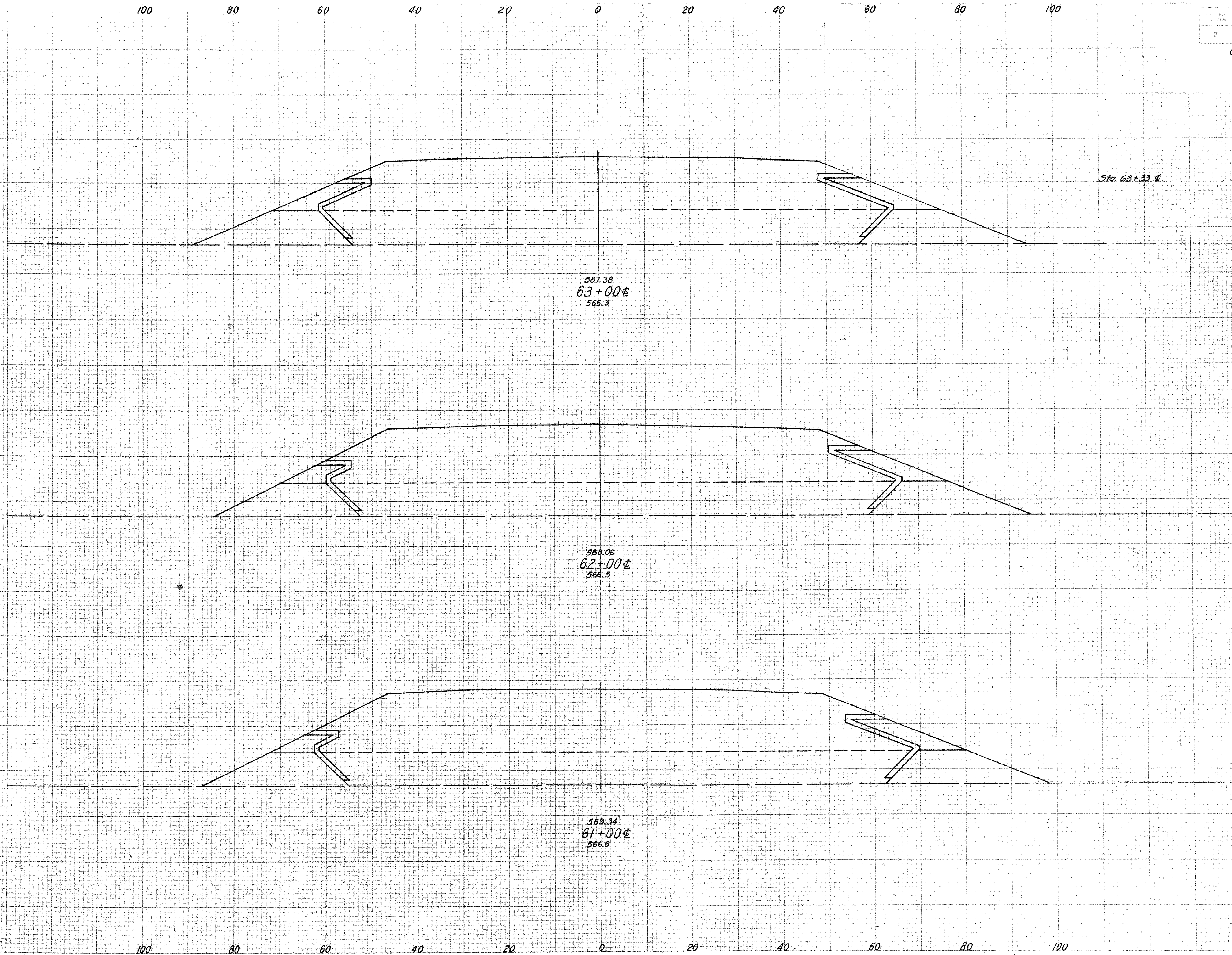
STA 55+00℄ TO STA 57+00℄ (OTT)

PRINTED IN U.S.A. ON ... TRACE ...



Station	Seeding End Width	Seeding Sq. Yds.	F Area	F Vol.	C Area	C Vol.	B Area	B Vol.	A Area	A Vol.
		544		215		3409		1493		6244
60+00¢	54		58		933		393		1834	
		667		215		3578		1443		7559
59+00¢	66		58		999		386		2248	
		811		215		3830		1418		922
58+00¢	80		58		1071		380		2731	

SEEDING	
END WIDTH	SQ. YDS.
34	
	117
31	
	368
38	
	456
44	



	F		C		B		A	
	AREA	VOL.	AREA	VOL.	AREA	VOL.	AREA	VOL.
Sta. 63+33 ℄	58		882		454		1228	
		71		1698		555		1500
	58		882		454		1246	
		215		3255		1619		4428
	58		880		420		1345	
		215		3304		1543		5339
	58		908		413		1538	

PRINTED IN U.S.A. ON CROSS SECTION TRACING CLOTH

SEEDING	
END WIDTH	SQ. YDS
	311
29	
	333
31	
	361
34	
	123
33	

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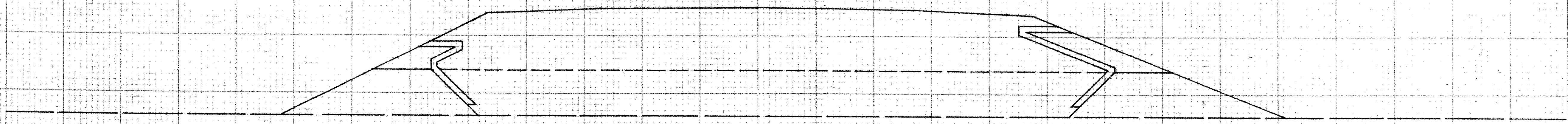
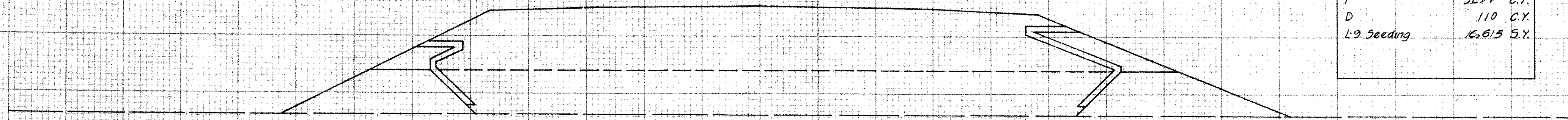
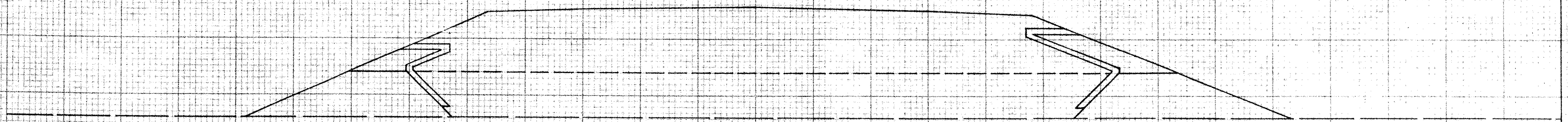


586.18
67+00¢
566.1



586.48
66+00¢
566.2



586.78
65+00¢
566.2

Sta 64+67 ¢

SMALL BOAT PASSAGEWAY – BRIDGE No. OTT-2-2820

587.07
64+00¢
566.3

Sta 48+50¢ — Sta 66+00¢
E-4 BORROW

A	205,739	C.Y.
C	57,938	C.Y.
B	21,855	C.Y.
F	3294	C.Y.
D	110	C.Y.
L-9 Seeding	16,615	S.Y.

	F		C		B		A	
	AREA	VOL.	AREA	VOL.	AREA	VOL.	AREA	VOL.
		215		3161		1672		3907
67+00	58		854		448		1076	
		215		3162		1646		4061
66+00	58		854		441		1117	
		215		3194		1657		4214
65+00	58		871		454		1159	
		71		1065		555		1434
Sta 64+67 ¢	58		871		454		1187	
Volume of Material from Sta 64+27 ¢ to Sta 64+67 ¢		78		159		1233		
Volume of Material from Sta 63+59 ¢ to Sta 63+74 ¢		78		159		1233		

STA 64+00¢ TO STA 67+00¢ (OTT)

48
48

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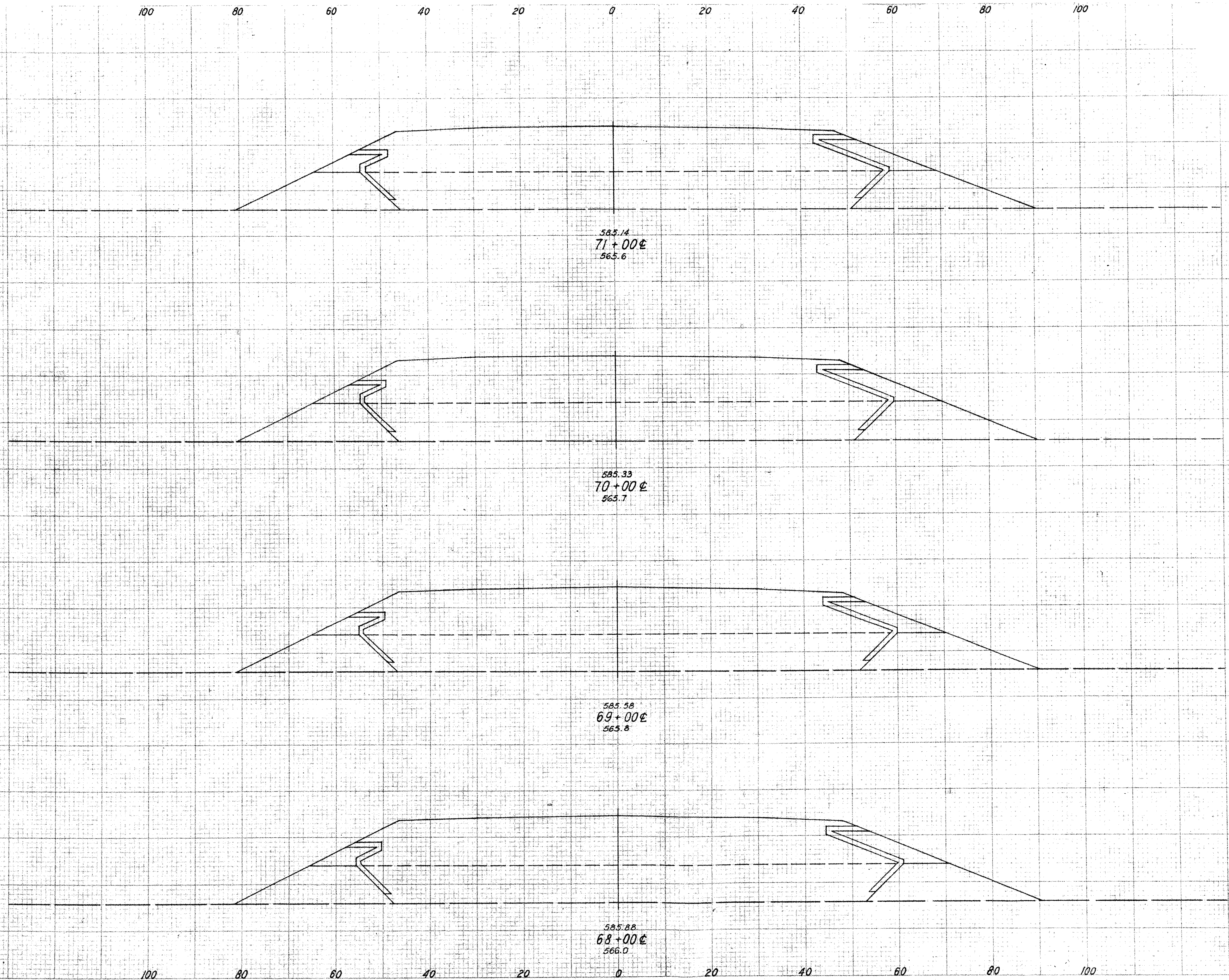
SEEDING	
END WIDTH	SQ. YDS.
	267
25	
	283
26	
	294
27	
	300
27	



F		C		B		A	
AREA	VOL.	AREA	VOL.	AREA	VOL.	AREA	VOL.
	215		3196		1793		3433
58		865		484		934	
	215		3200		1780		3507
58		863		477		960	
	215		3194		1752		3618
58		862		469		994	
	215		3176		1711		3774
58		853		455		1034	

STA. 68+00℄ TO STA 71+00℄ (OTT.)

2	OHIO		

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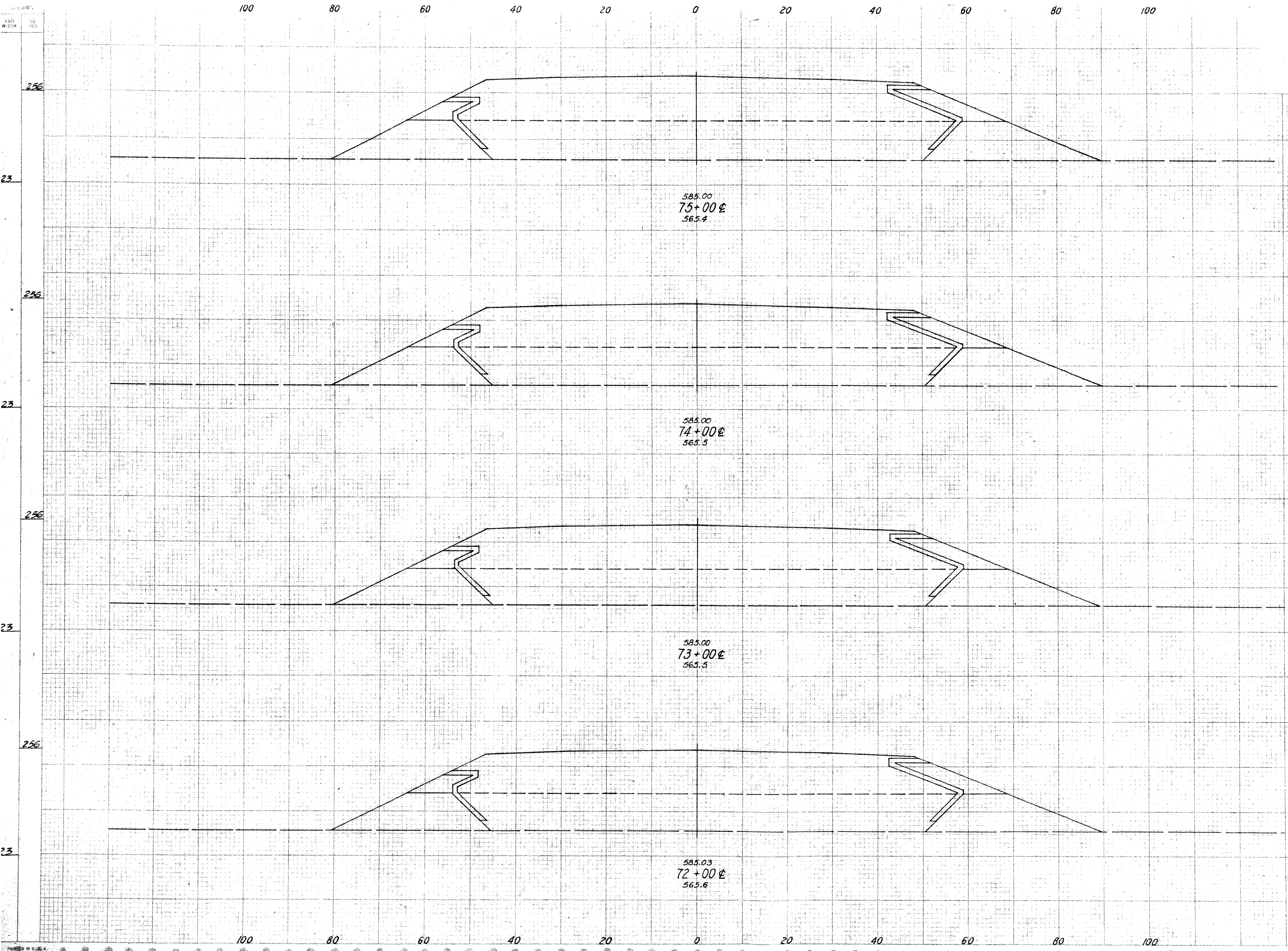
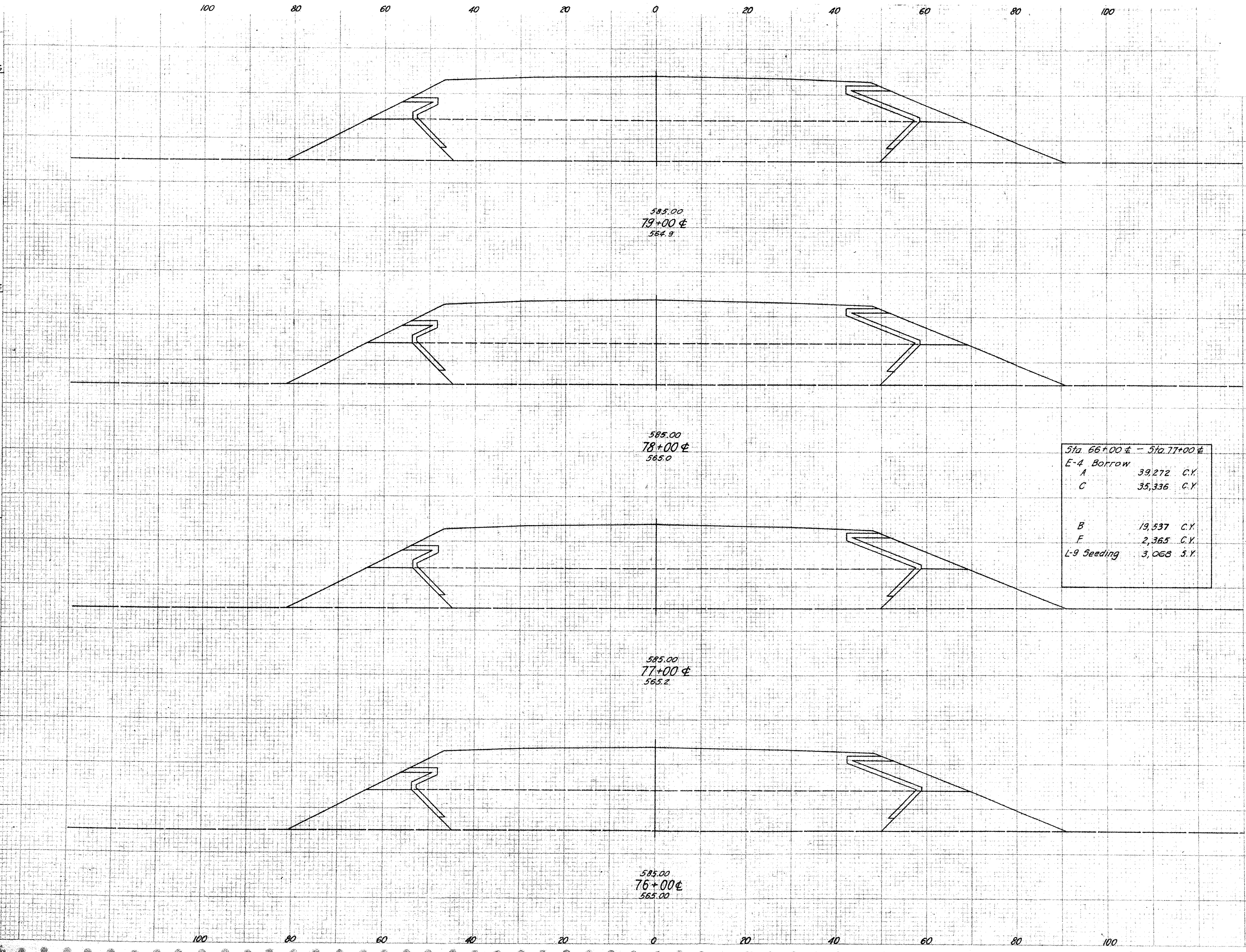
OTT-2-27.36 ERI-2-0.15



F		C		B		A	
AREA	VOL.	AREA	VOL.	AREA	VOL.	AREA	VOL.
	215		3274		1863		3393
58		881		499		916	
	215		3241		1835		3393
58		869		482		916	
	215		3219		1785		3393
58		869		482		916	
	215		3204		1807		3400
58		861		484		920	

STA. 72+00 ℄ TO STA. 75+00 ℄ (OTT.)



END WIDTH	SQ YDS
	256
23	
	256
23	
	256
23	
	256
23	

Sta. 66+00 ℄ – Sta. 77+00 ℄
E-4 Borrow
A 39,272 C.Y.
C 35,336 C.Y.
B 19,537 C.Y.
F 2,365 C.Y.
L-9 Seeding 3,068 S.Y.

F AREA	F VOL.	C AREA	C VOL.	B AREA	B VOL.	A AREA	A VOL.
	215		3450		2007		3400
58		927		538		916	
	215		3414		1978		3393
58		917		530		916	
	215		3360		1935		3393
58		889		507		916	
	215		3309		1893		3393
58		898		515		916	

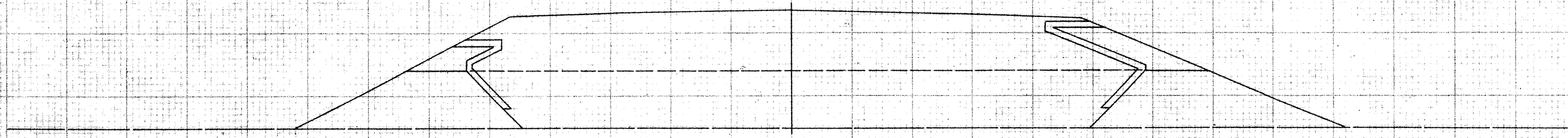
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

51/~~48~~

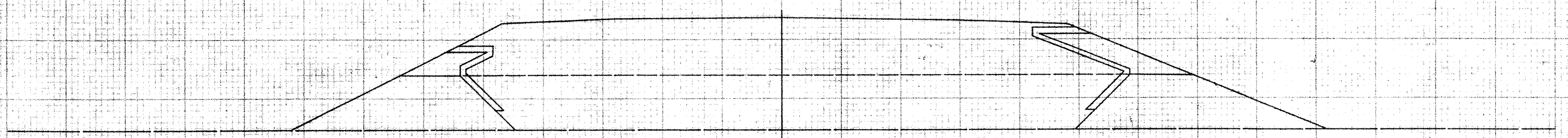
OTT-2-27.36 ERI-2-0.15

SEEDING END WIDTH	10 YDS.
	256
23	
	256
23	
	256
23	

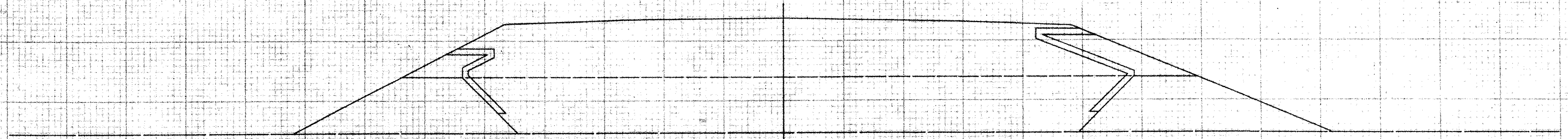
100 80 60 40 20 0 20 40 60 80 100



585.00
82+00 ℄
564.6



585.00
81+00 ℄
564.7



585.00
80+00 ℄
564.8

100 80 60 40 20 0 20 40 60 80 100

F		C		B		A	
AREA	VOL.	AREA	VOL.	AREA	VOL.	AREA	VOL.
	215		3554		2096		339
58		955		562		916	
	215		3518		2067		339
58		945		554		916	
	215		3483		2037		339
58		936		546		916	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

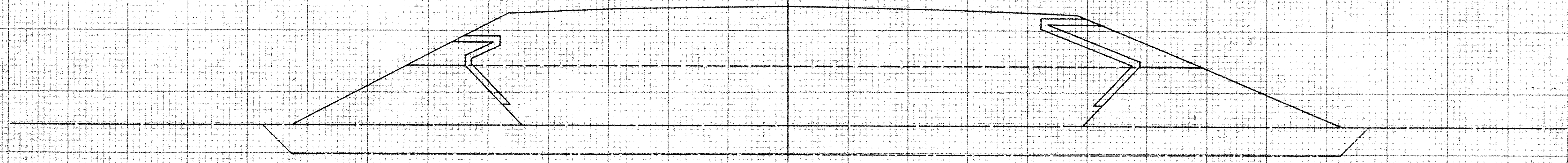
52

~~48~~

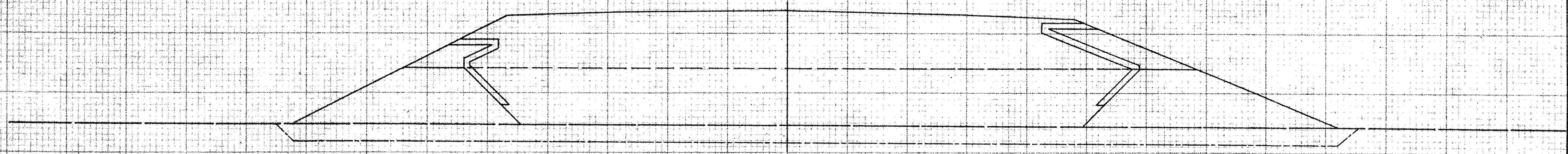
OTT-2-27.36   ERI-2-0.15

SEEDING END WIDTH	SQ. YDS.
	256
23	
	256
23	
	256
23	

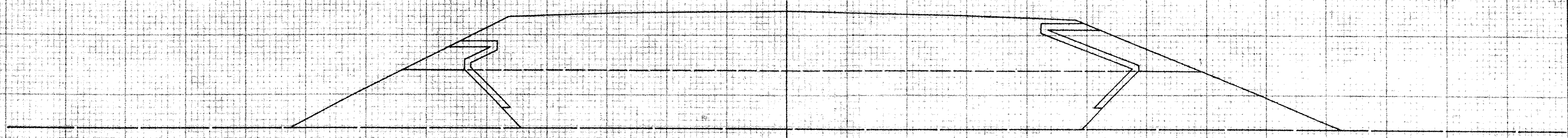
100 80 60 40 20 0 20 40 60 80 100



585.00
85+00 ℄
564.4



585.00
84+00 ℄
564.5



585.00
83+00 ℄
564.5

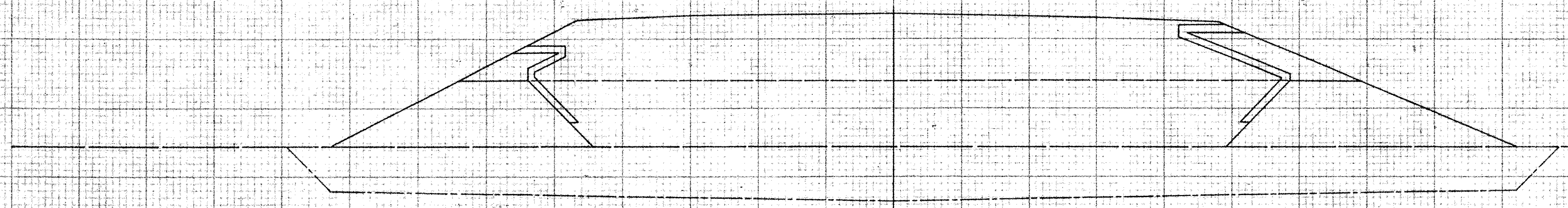
100 80 60 40 20 0 20 40 60 80 100

F		E		C		B		A	
AREA	VOL.	AREA	VOL.	AREA	VOL.	AREA	VOL.	AREA	VOL.
	215		7408		3607		2141		3393
58		879		974		578		916	
	215		2819		3589		2126		3393
58		532		964		570		916	
	215		984		3570		2111		3393
58		0		964		570		916	

STA. 83+00 ℄ TO STA. 85+00 ℄ (OTT.)

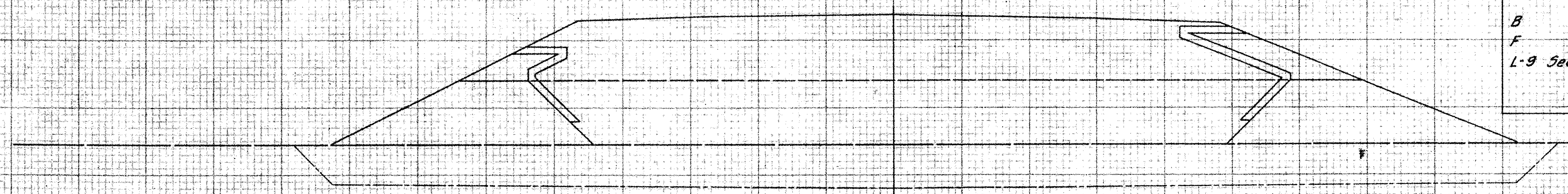
100 80 60 40 20 0 20 40 60 80 100

END WIDTH	SQ. YDS.	F AREA	F VOL.	E AREA	E VOL.	C AREA	C VOL.	B AREA	B VOL.	A AREA	A VOL.
	256		2.15		4704		3607		2141		3393
23		58		1344		974		578		916	
	256		215		4726		3607		2141		3393
23		58		1208		974		578		916	
	256		215		3986		3607		2141		3393
23		58		945		974		578		916	

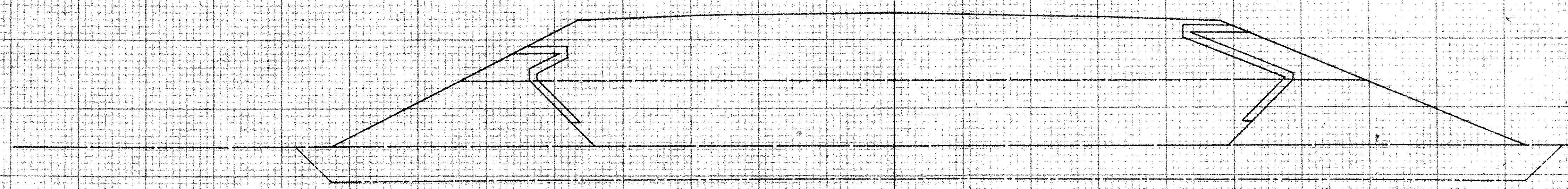


585.00
88+00 ℄
564.4

Sta. 77+00 ℄ — Sta. 87+00 ℄		
E-4 Borrow		
A	33,937	C.Y.
C	35,152	C.Y.
E	15,197	C.Y.
B	20,639	C.Y.
F	2,150	C.Y.
L-9 Seeding	2.560	S.Y.



585.00
87+00 ℄
564.4



585.00
86+00 ℄
564.4

100 80 60 40 20 0 20 40 60 80 100

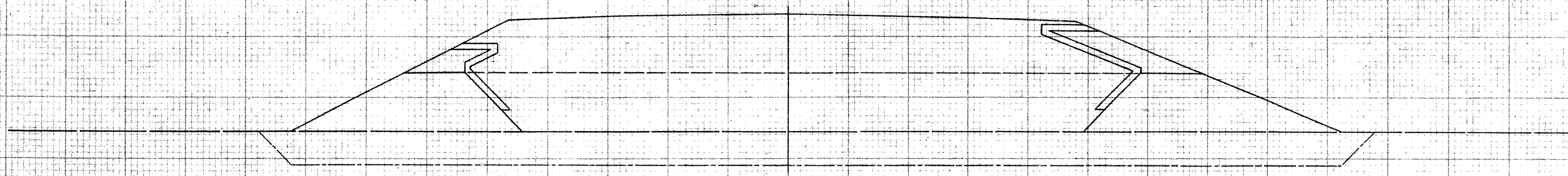
PRINTED IN U.S.A. ON ... TRACE CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

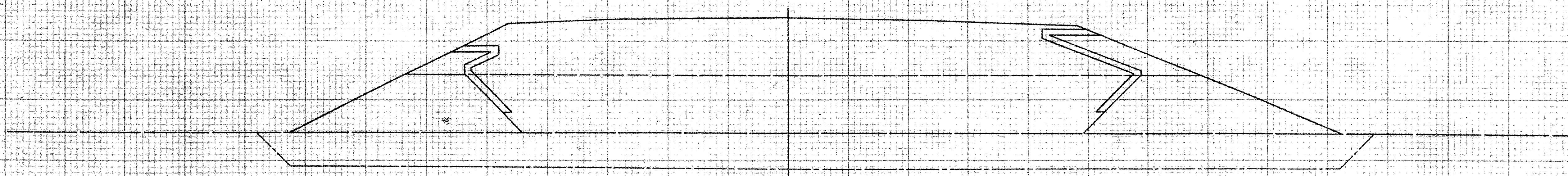
OTT-2-27.36 ERI-2-0.15

SEEDING	
END WIDTH	SQ. YDS.
	256
23	
	256
23	
	256
23	

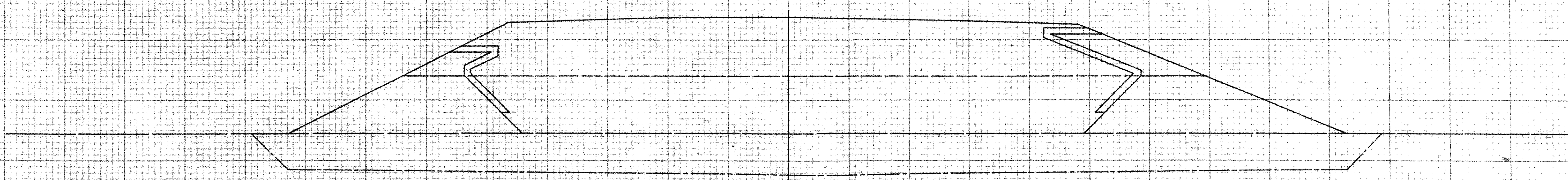
100 80 60 40 20 0 20 40 60 80 100



585.00
91+00 ℄
564.4



585.00
90+00 ℄
564.4



585.00
89+00 ℄
564.4

100 80 60 40 20 0 20 40 60 80 100

F		E		C		B		A	
AREA	VOL.	AREA	VOL.	AREA	VOL.	AREA	VOL.	AREA	VOL.
	215		3782		3607		2141		3393
58		1058		974		578		916	
	215		3926		3607		2141		3393
58		1072		974		578		916	
	215		4200		3607		2141		3393
58		1196		974		578		916	

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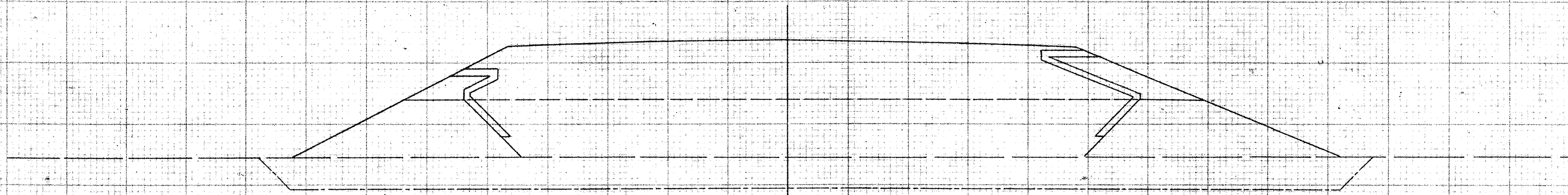
FED RD DIVISION	STATE	PROJECT	
2	OHIO		

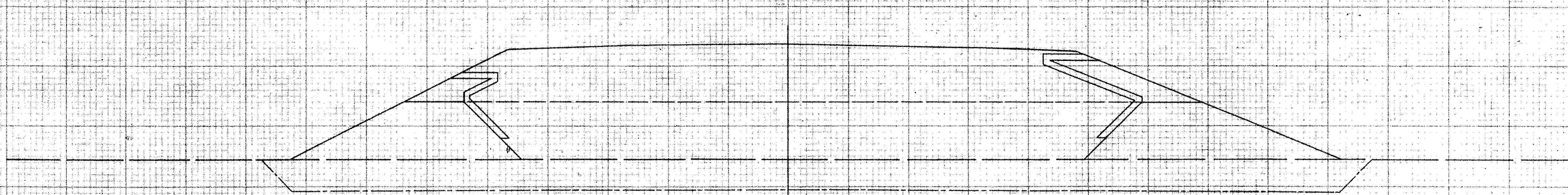
55
~~48~~

OTT-2-27.36 ERI-2-0.15

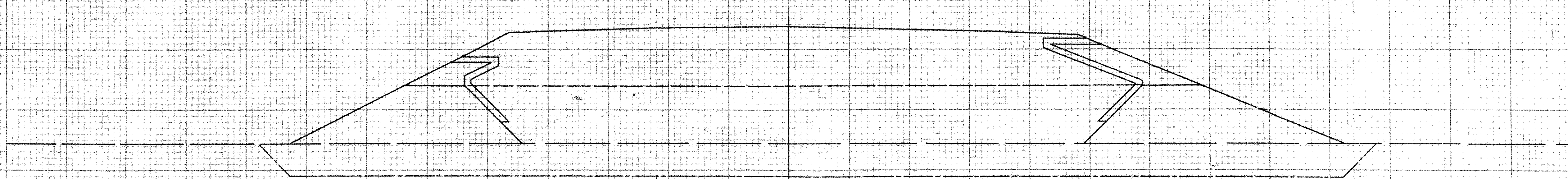
100 80 60 40 20 0 20 40 60 80 100



585.00
94+00℄
564.5



585.00
93+00℄
564.5



585.00
92+00℄
564.4

100 80 60 40 20 0 20 40 60 80 100

SEEDING END WIDTH	SQ YDS	F AREA	F VOL.	E AREA	E VOL.	C AREA	C VOL.	B AREA	B VOL.	A AREA	A VOL.
	256		215		3496		3570		2111		3393
23		58		945		964		570		916	
	256		215		3486		3570		2111		3393
23		58		938		964		570		916	
	256		215		3560		3552		2126		3393
23		58		984		974		578		916	

100 80 60 40 20 0 20 40 60 80 100

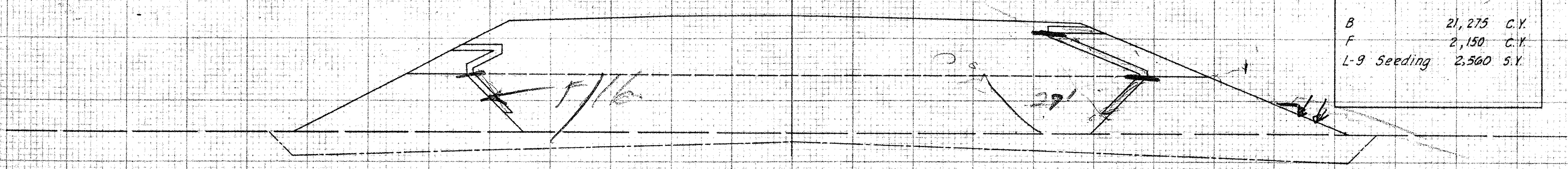
Sta 87+00 ¢ – Sta 97+00 ¢

E-4 Borrow

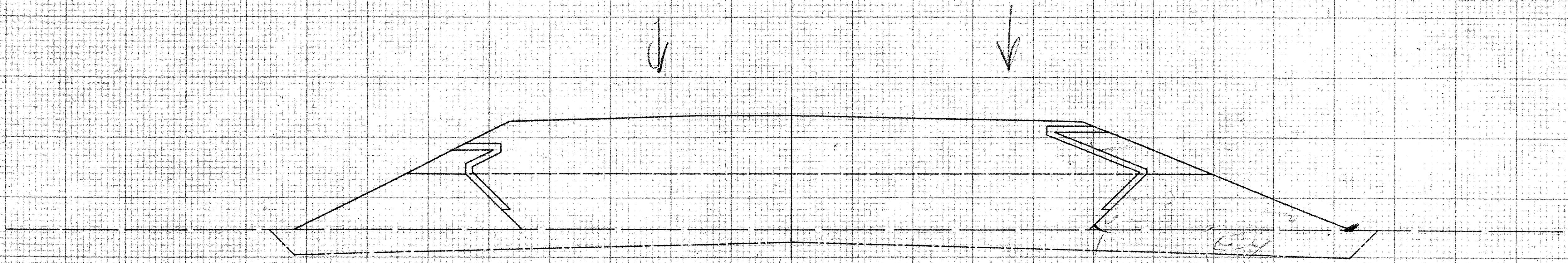
A	33, 930	C.Y.
C	35, 867	C.Y.
E	36, 616	C.Y.
B	21, 275	C.Y.
F	2, 150	C.Y.
L-9 Seeding	2,560	S.Y.

SEEDING END WIDTH	SQ YDS
	261
23	
	256
23	
	256
23	

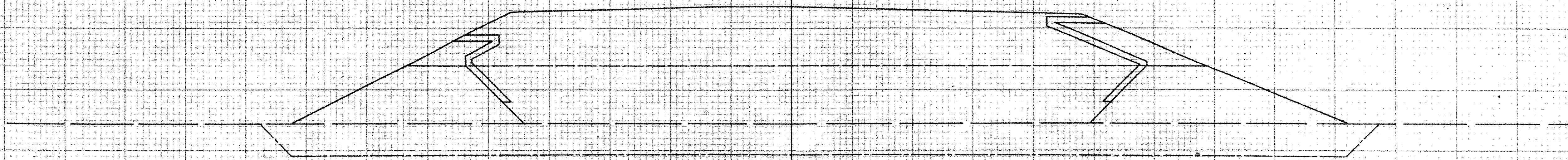
F AREA	F VOL.	E AREA	E VOL.	C AREA	C VOL.	B AREA	B VOL.	A AREA	A VOL.
	215		2460		3581		2111		3412
58		493		964		570		916	
	215		1896		3570		2111		3393
58		591		964		570		916	
	215		2840		3570		2111		339
58		943		964		570		916	



585.01
97+00¢
564.5



585.00
96+00¢
564.5



585.00
95+00¢
564.5

100 80 60 40 20 0 20 40 60 80 100

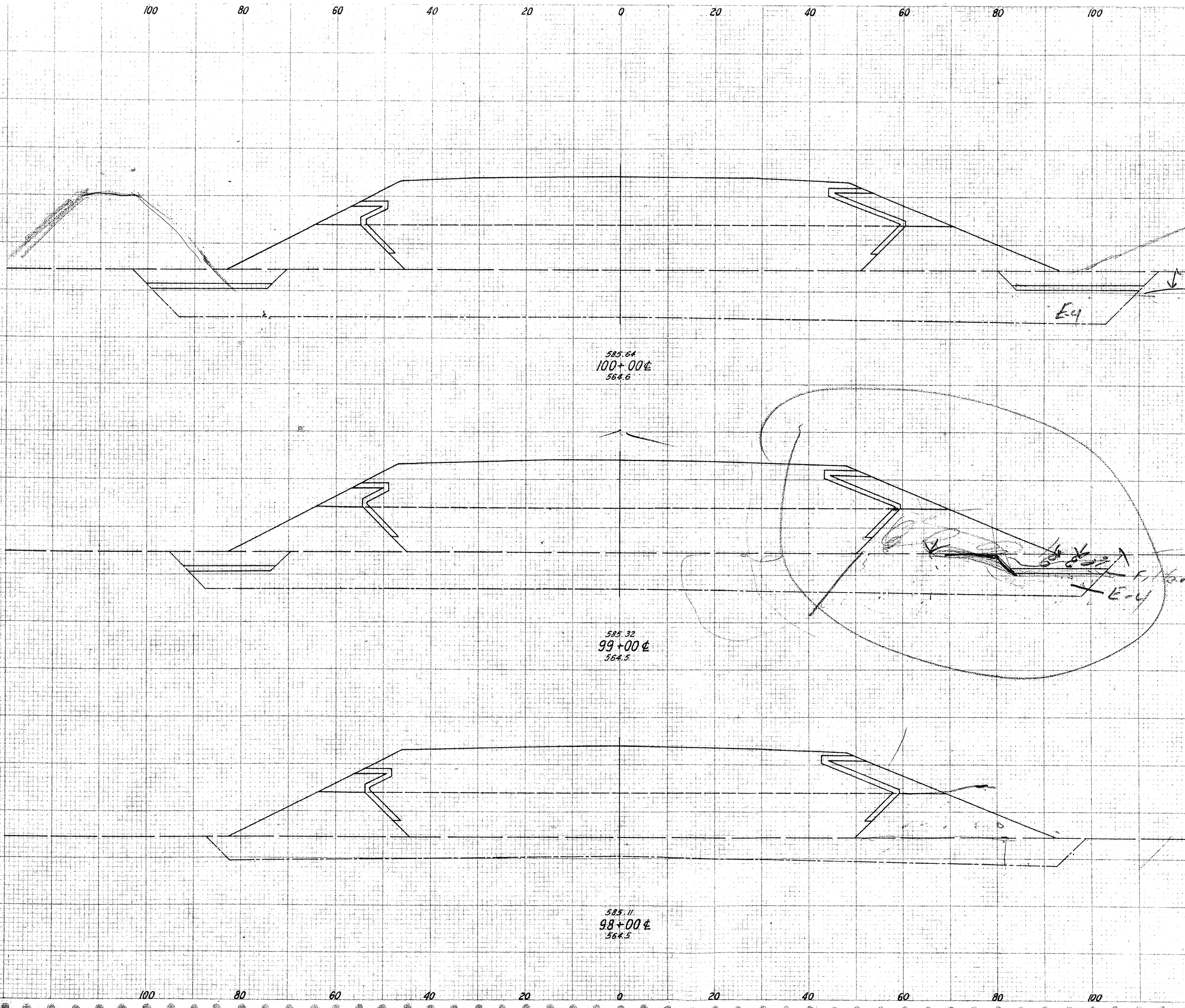
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

57
~~118~~

OTT-2-27.36 ERI-2-0.15

SEEDING

END WIDTH	SQ. YDS.
	300
25	
	278
25	
	278
24	



D Area	D Vol.	F AREA	F VOL.	E AREA	E VOL.	C AREA	C VOL.	B AREA	B VOL.	A AREA	A VOL.
	983		461		8642		3698		2818		3820
239		110		1933		985		731		1004	
	752		382		6154		3633		2472		3633
167		96		1390		977		604		958	
	309		285		4418		3606		2174		3496
0		58		895		970		570		930	

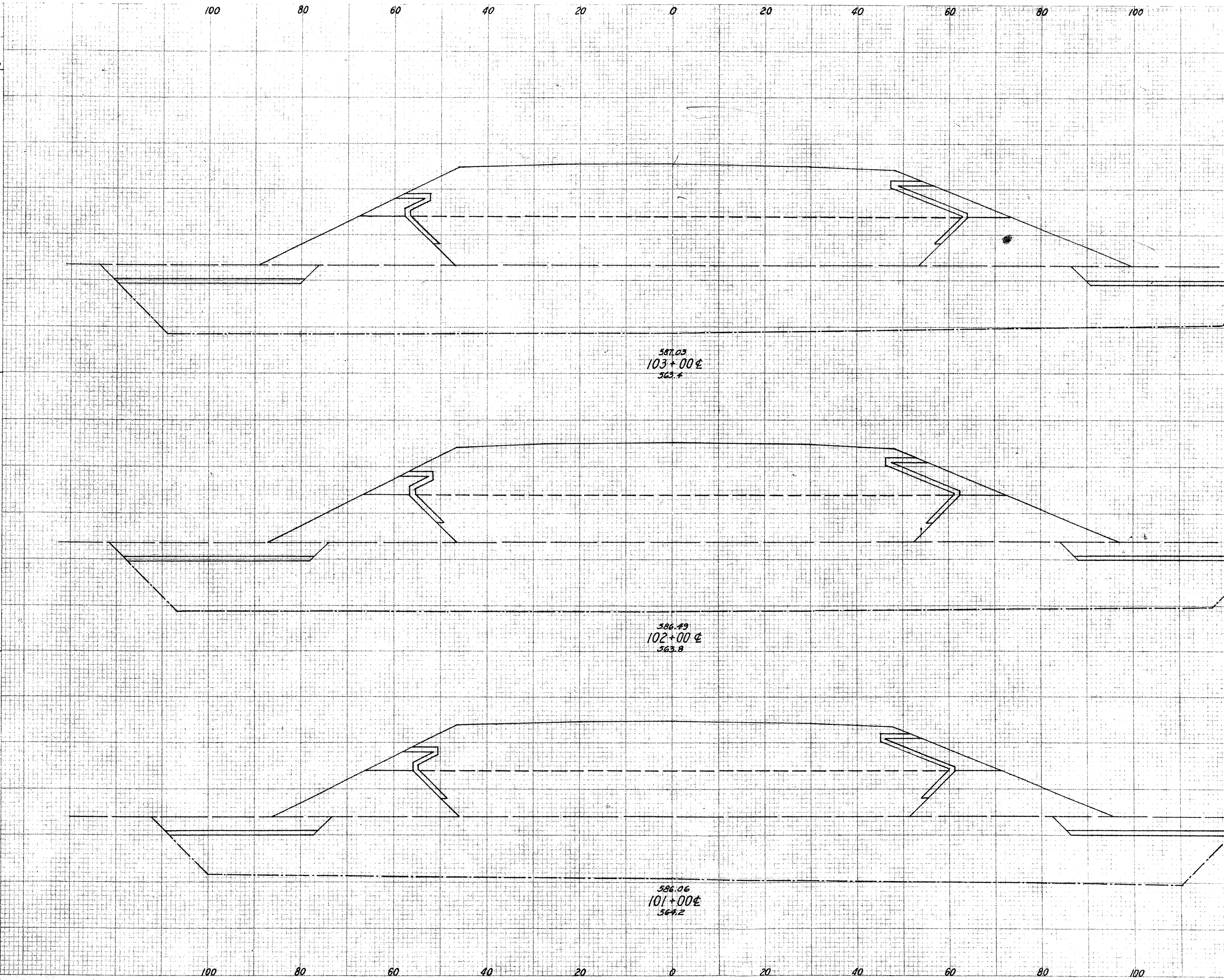
STA. 98+00℄ TO STA. 100+00℄ (OTT)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

58 ~~118~~

OTT-2-27.36 ERI-2-0.15

SEEDING	
END WIDTH	SQ. YDS
	400
33	
	300
29	
	300
29	



D		F		E		C		B		A	
Area	Vol	AREA	VOL.	AREA	VOL.	AREA	VOL.	AREA	VOL.	AREA	VOL.
	1256		504		11124		4419		3136		4696
338		136		3138		1168		842		1195	
	1263		506		11662		4170		3112		4283
334		138		3160		1084		838		1118	
	1178		513		10912		3879		3017		4031
292		139		2733		1011		791		1059	

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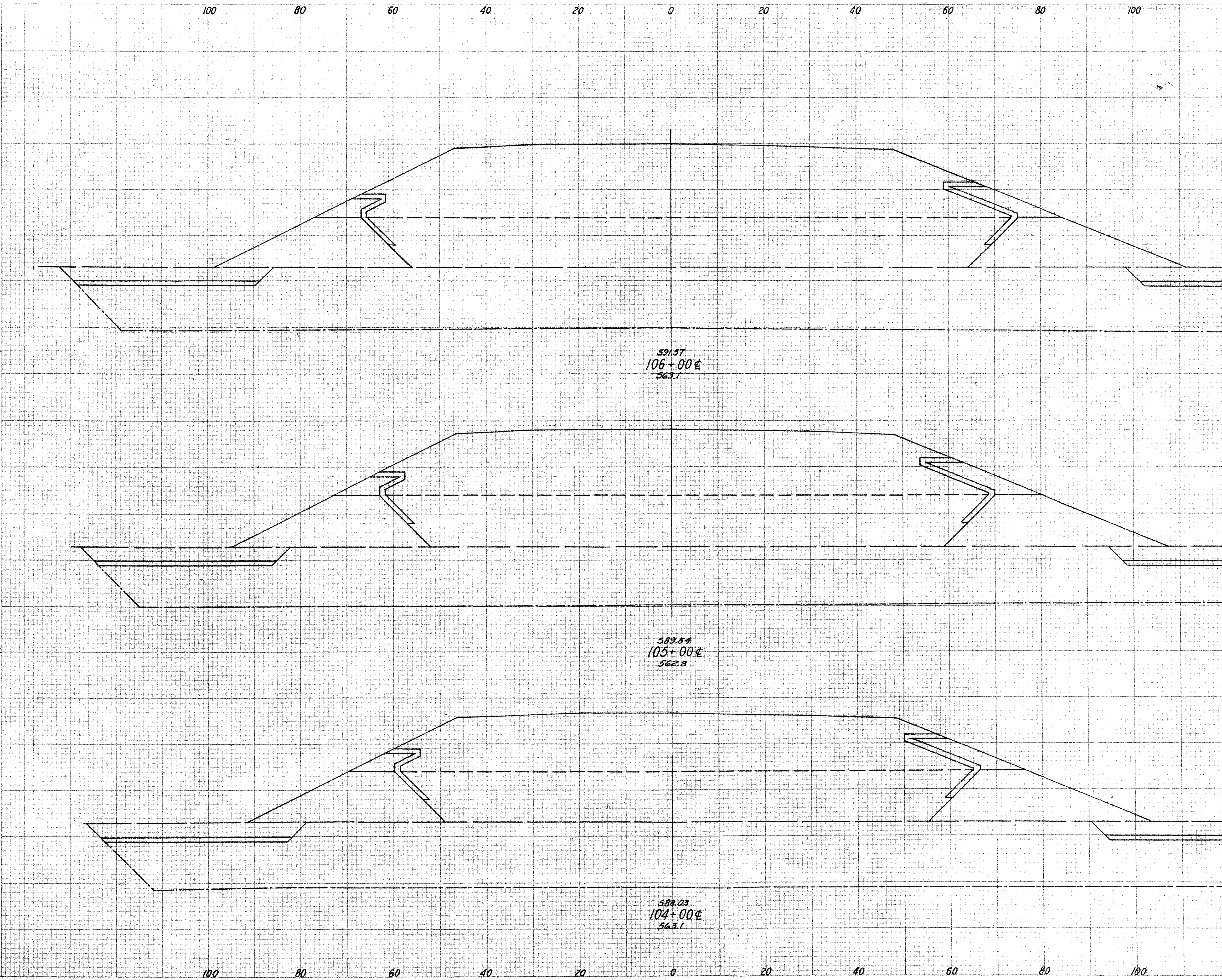
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

59
~~18~~

OTT.-2-27.36 ERI.-2-0.15

SEEDING	
END WIDTH	50 YDS.
	307
56	
	507
46	
	408
39	



D		F		E		C		B		A	
Area	Vol.	AREA	VOL.	AREA	VOL.	AREA	VOL.	AREA	VOL.	AREA	VOL.
342		136		3237		1415		867		1926	
	1235		492		11,348		5076		3192		6541
325		130		2891		1326		857		1606	
	1231		494		10668		4713		3162		5456
340		136		2869		1219		851		1340	

STA. 104+00 ℄ TO STA. 106+00 ℄ (OTT.)

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

OTT-2-27.36 ERI-2-0.15

Sandusky Bay Bridge N.I.C.

Sta. 97+00 — Sta. 108+28 ¢			
E-4 Borrow			
A		50 561	C.Y.
C		45,785	C.Y.
E		105.284	C.Y.
B		36.514	C.Y.
F		5,225	C.Y.
D		11,931	C.Y.
L-9 Seeding		3,604	S.Y.

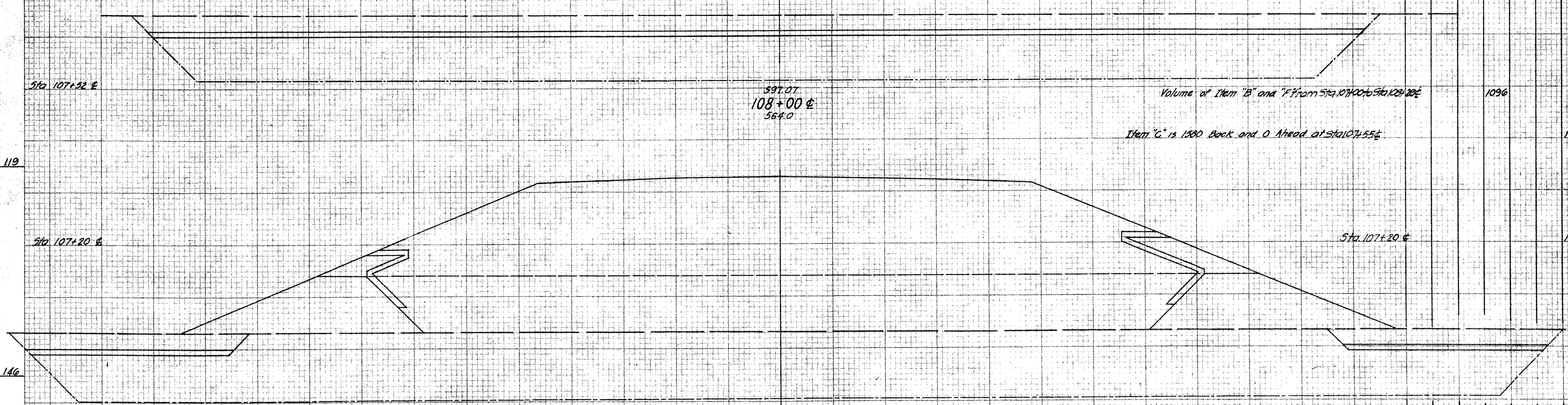
SUSPEND WORK STA 108+28 ¢

End Excavation of Unsuitable Material Sta. 108+28 ¢

Volume of Unsuitable Material from Sta. 107+00 to Sta. 108+28 ¢

Volume of Item "B" and "F" from Sta. 107+00 to Sta. 108+28 ¢

Item "C" is 1580 Back and 0 Ahead at Sta. 107+55 ¢



SEEDING END WIDTH	SEEDING SQ. YDS.	D Area	D Vol.	F AREA	F VOL.	E AREA	E VOL.	C AREA	C VOL.	B AREA	B VOL.	A AREA	A VOL.
			2468				15790						
0					1096						7894		
								1508				0	
	119												
									2060				1544
67								1670				2382	
									1297				1749
	146												
		336		135		3300		1670		983		2340	
64													
			1256		277		12106		5713		3426		7900

STA. 107+00 ¢ TO STA. 108+00 ¢ (OTT.)

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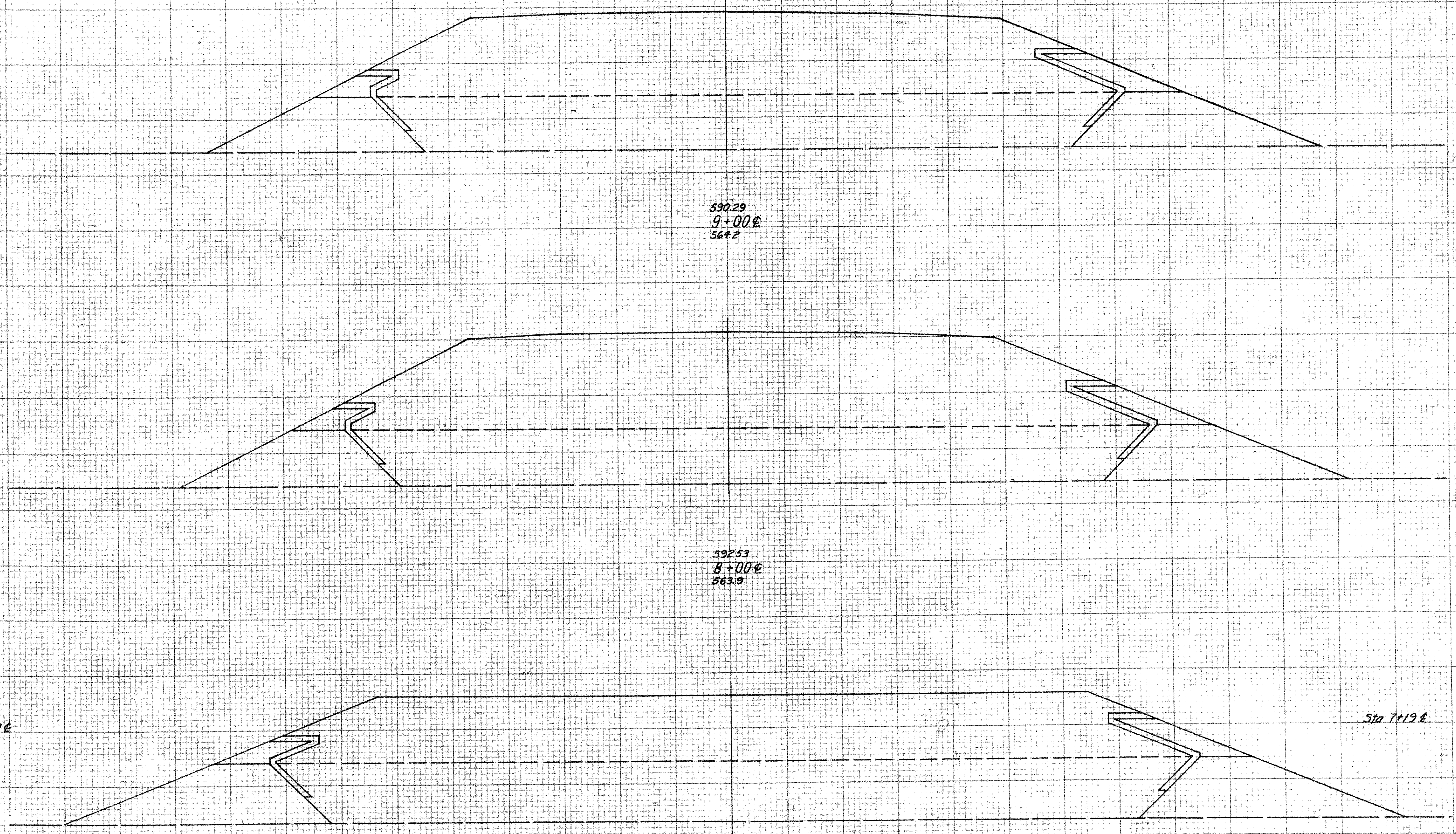
FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

61
48

OTT-2-27.36 ERI-2-0.15



590.29
9+00℄
564.2

592.53
8+00℄
563.9

Sta 7+19℄

595.27
7+00℄
563.0

Begin Rock Fill Sta 6+40℄

Sta 6+40℄

RESUME WORK STA 6+40℄

SEEDING END WIDTH	SQ. YDS.
	500
50	
	611
60	
	657
86	
	135
42	
	140
0	

F AREA	F VOL.	C AREA	C VOL.	B AREA	B VOL.	A AREA	A VOL.
	200		4426		2188		5740
54		1250		595		1681	
	196		4826		2170		6867
52		1355		576		2027	
	174		5597		1922		7950
64		2400		705		3274	
	45		1631		506		1769
64		2236		733		1753	
	71		2484		814		1948
0		0		0		0	

STA 7+00℄ TO STA 9+00℄ (ERI)

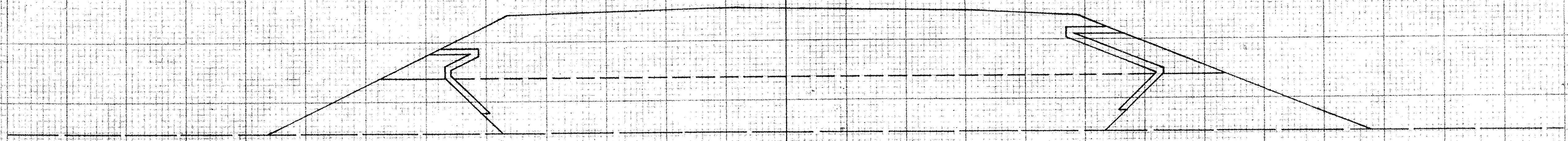
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

62 / 118

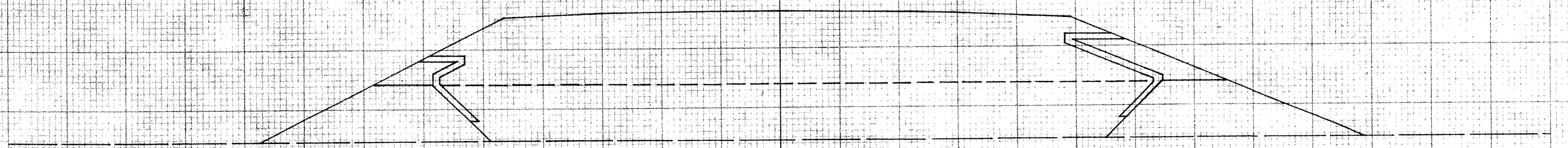
OTT-2-27.36 ERI-2-0.15

120 100 80 60 40 20 0 20 40 60 80 100 120

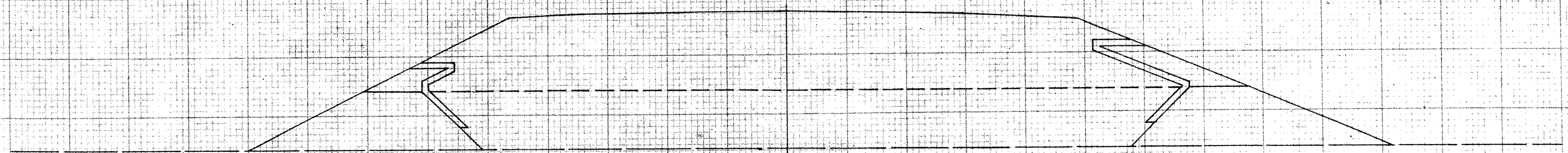
SEEDING	
END WIDTH	SQ. YDS.
	345
32	
	372
35	
	428
40	



586.67
12+00℄
564.4



587.37
11+00℄
564.4



588.37
10+00℄
564.3

F		C		B		A	
AREA	VOL.	AREA	VOL.	AREA	VOL.	AREA	VOL.
	200		3802		2111		4124
54		1046		578		1144	
	200		3930		2141		442[illegible]
54		1076		578		1243	
	200		4101		2157		493[illegible]
54		1139		587		1419	

120 100 80 60 40 20 0 20 40 60 80 100 120

STA. 10+00℄ TO STA 12+00℄ (ERI)

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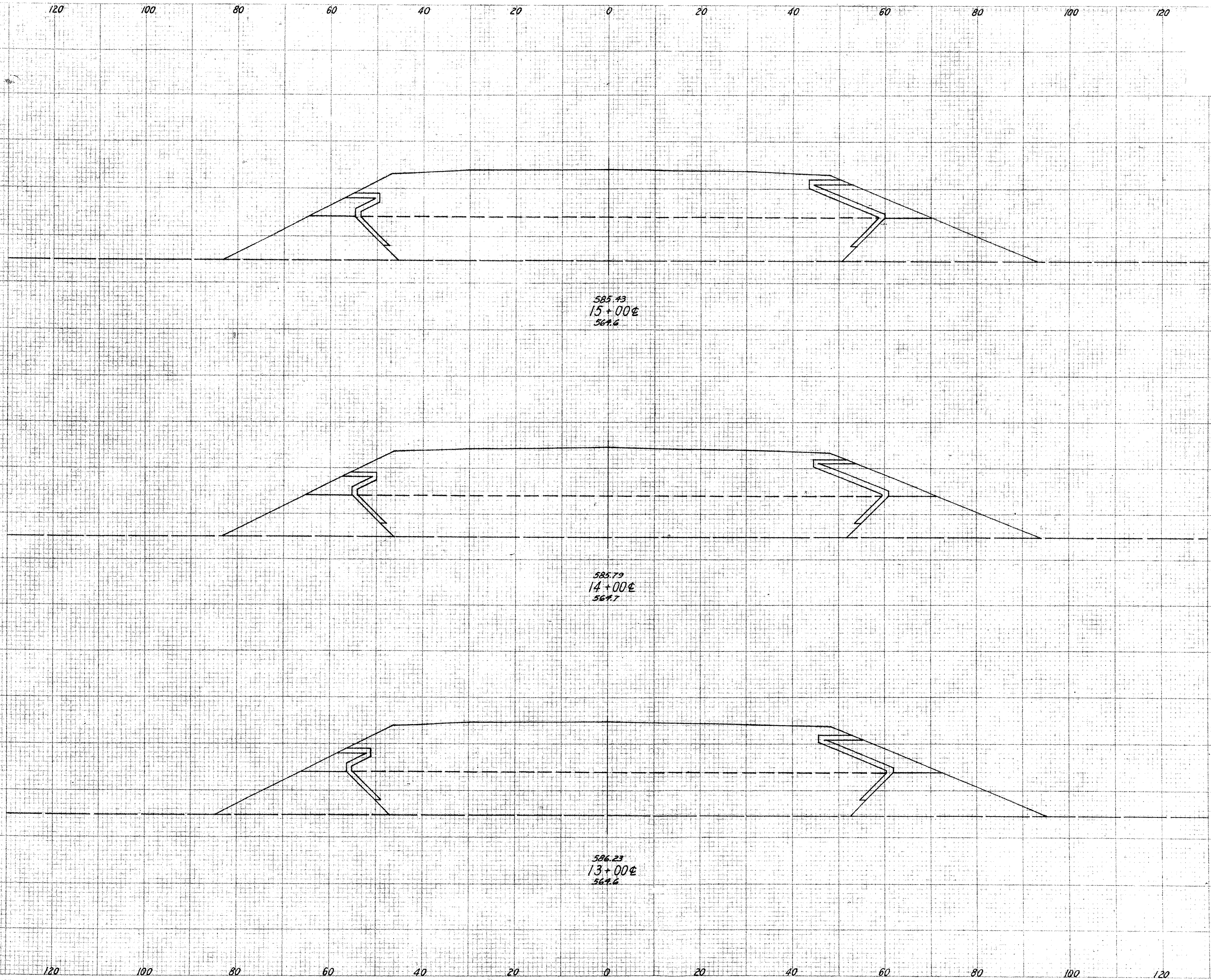
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

63 / 48

OTT-2-27.36 ERI-2-0.15



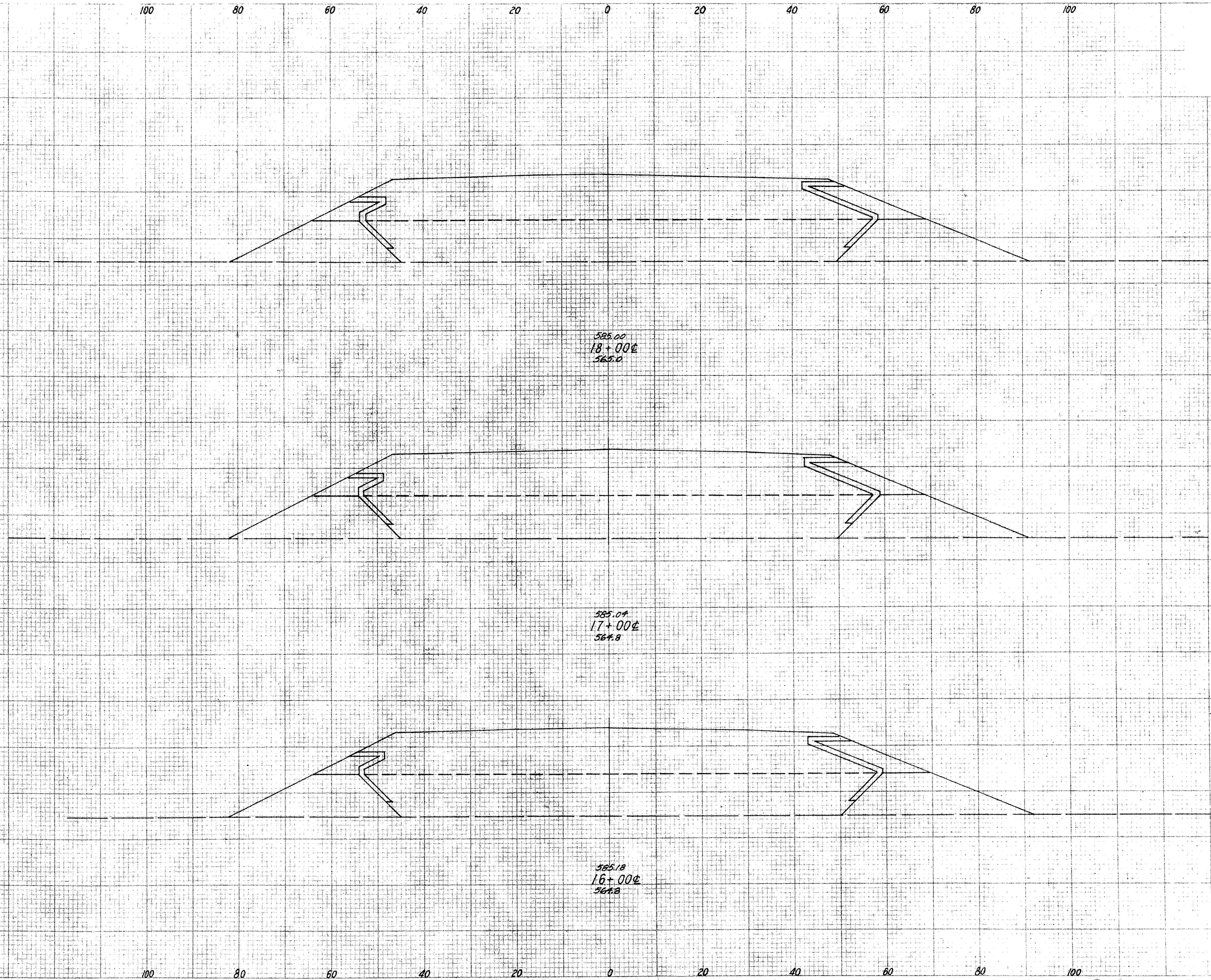
SEEDING END WIDTH	SEEDING SQ. YDS.	F AREA	F VOL.	C AREA	C VOL.	B AREA	B VOL.	A AREA	A VOL.
	272		200		3513		2022		3542
24		54		954		546		973	
	289		200		3579		2037		3694
28		54		979		554		1022	
	322		200		3678		2067		3898
30		54		1007		562		1083	

STA 13+00℄ TO STA 15+00℄ (ERI)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

64 / ~~48~~

OTT.-2-27.36   ERI.-2-0.15



SEEDING END WIDTH	SEEDING SQ. YDS.
	267
24	
	267
24	
	272
25	

F AREA	F VOL.	C AREA	C VOL.	B AREA	B VOL.	A AREA	A VOL.
	200		3396		1963		3393
54		917		530		916	
	200		3435		1993		3402
54		938		546		921	
	200		3482		2022		3446
54		943		546		940	

STA. 16 + 00℄ TO STA. 18 + 00℄ (ERL)

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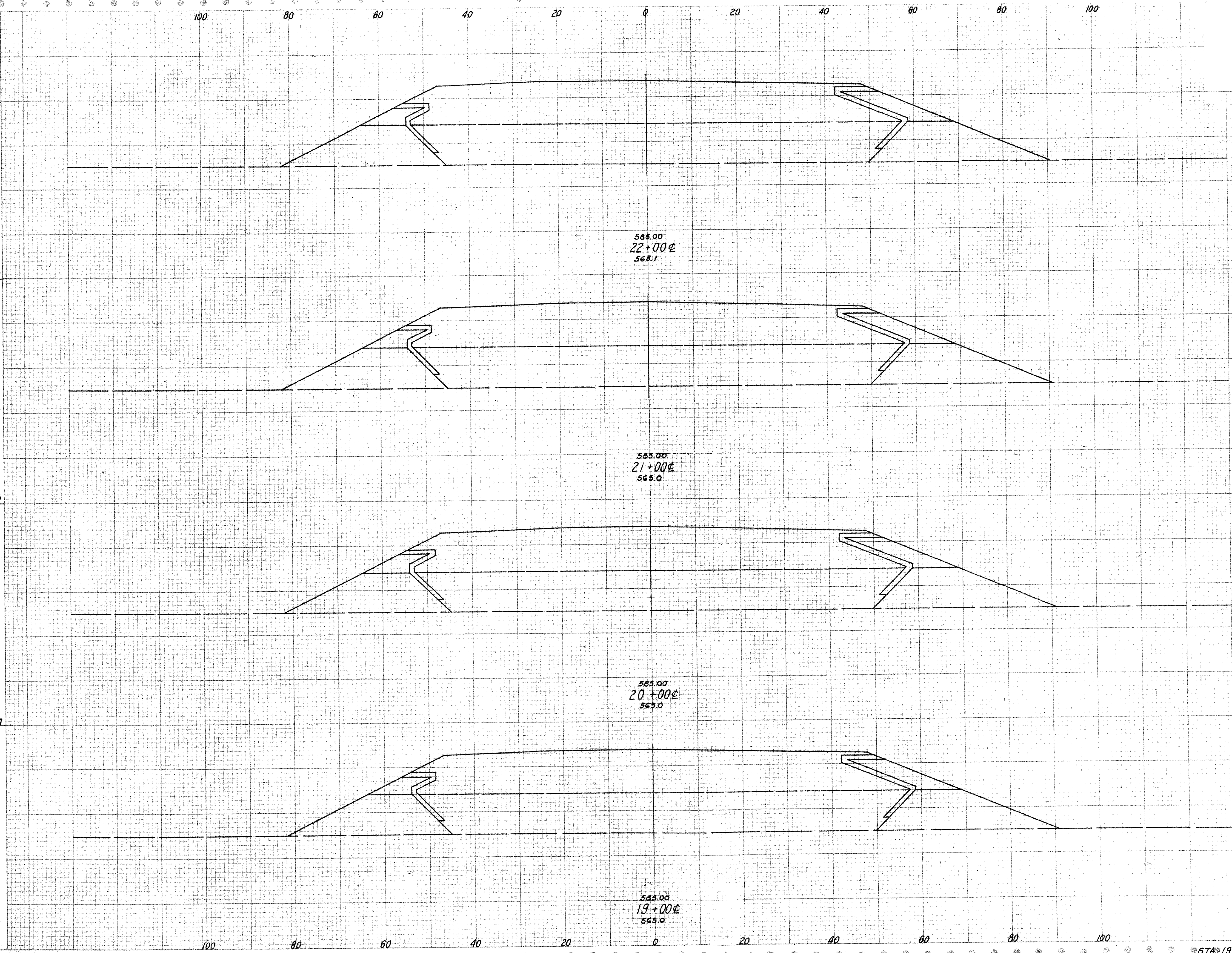
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

65
48

OTT.-2-27.36 ERI-2-0.15

SEEDING	
ID TH	SQ YDS
267	
'4	
267	
'4	
267	
24	
267	
24	



F		C		B		A	
AREA	VOL	AREA	VOL	AREA	VOL.	AREA	VOL
	200		3362		1933		3393
54		908		522		916	
	200		3379		1943		3393
54		917		530		916	
	200		3396		1963		3393
54		917		530		916	
	200		3396		1963		3393
54		917		530		916	

STA. 19+00¢ TO STA. 22+00¢ (ERI)

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		66 / 48

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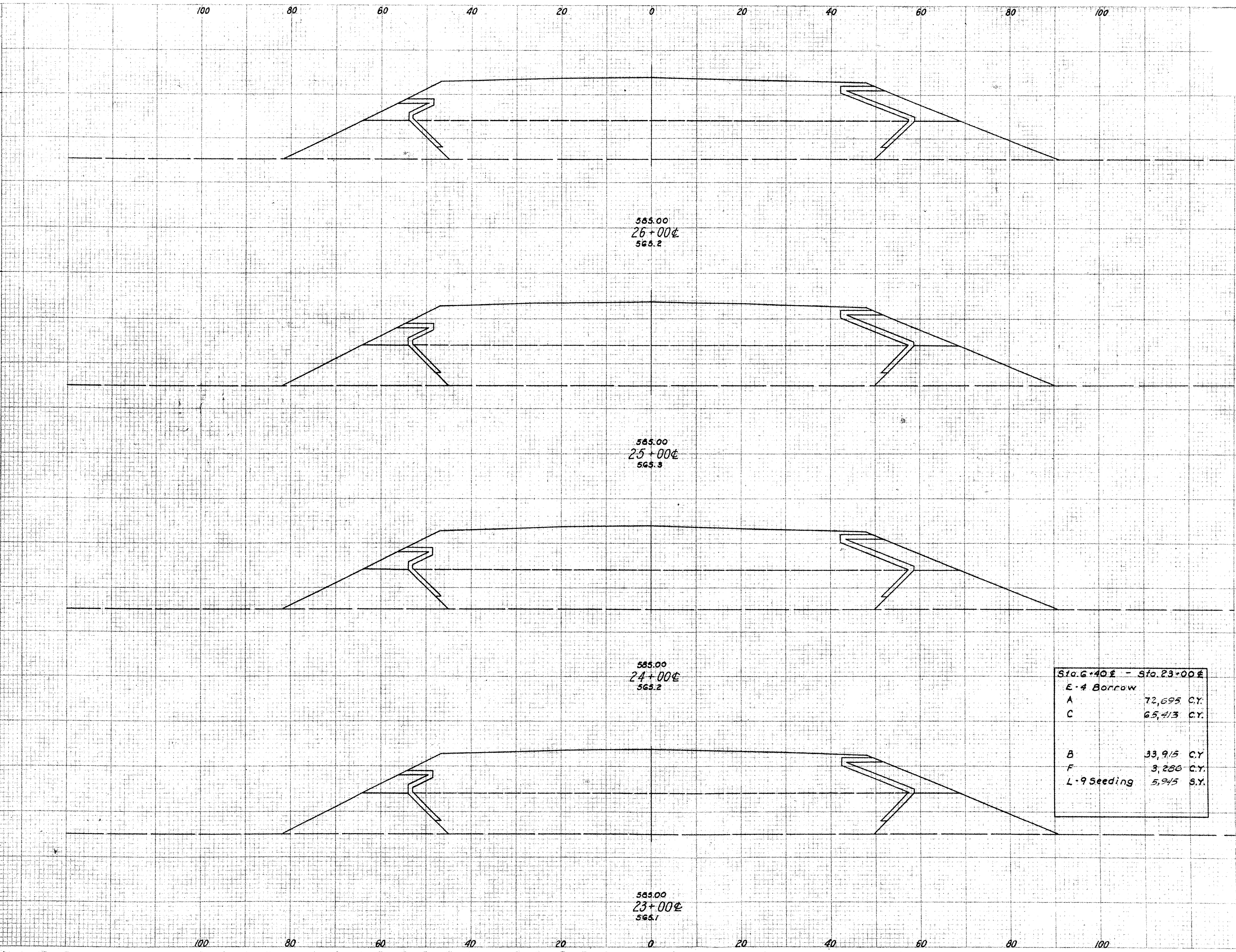

SEEDING END WIDTH	SEEDING SQ. YDS.	F AREA	F VOL	C AREA	C VOL	B AREA	B VOL	A AREA	A VOL
	267		200		3325		1907		3393
24		54		898		515		916	
	267		200		3325		1907		3393
24		54		898		515		916	
	267		200		3344		1920		3393
24		54		908		522		916	
	267		200		3362		1933		3393
24		54		908		522		916	

Sta. 6+40℄ - Sta. 23+00℄	
E-4 Borrow	
A	72,695 C.Y.
C	65,413 C.Y.
B	33,915 C.Y.
F	3,280 C.Y.
L-9 Seeding	5,945 S.Y.

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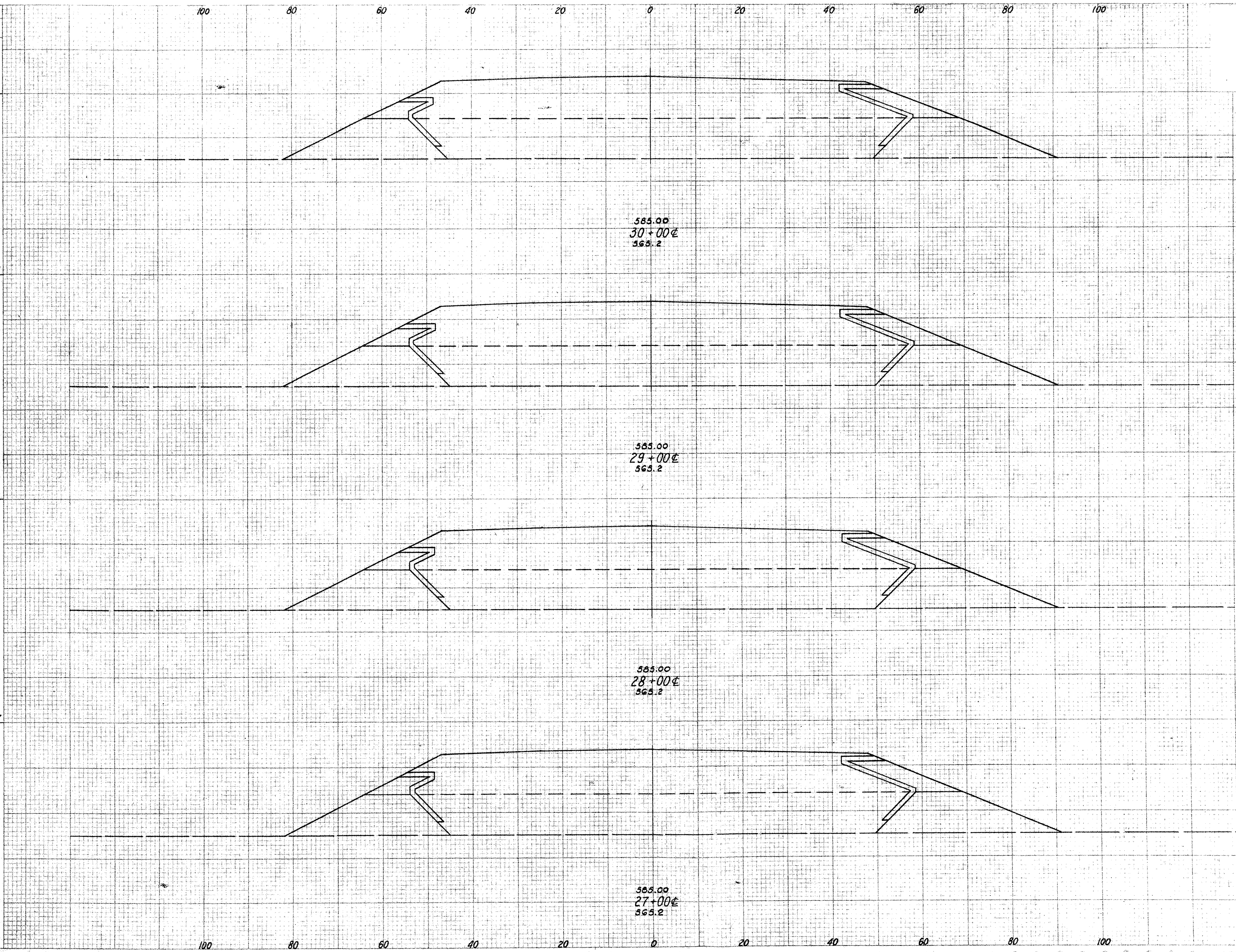

SEEDING END WIDTH	SEEDING SQ. YDS.	F AREA	F VOL.	C AREA	C VOL.	B AREA	B VOL.	A AREA	A VOL.
	267		202		3325		1907		3393
24		54		898		515		916	
	267		200		3325		1907		3393
24		54		898		515		916	
	267		200		3325		1907		3393
24		54		898		515		916	
	267		200		3325		1907		3393
24		54		898		515		916	

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FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

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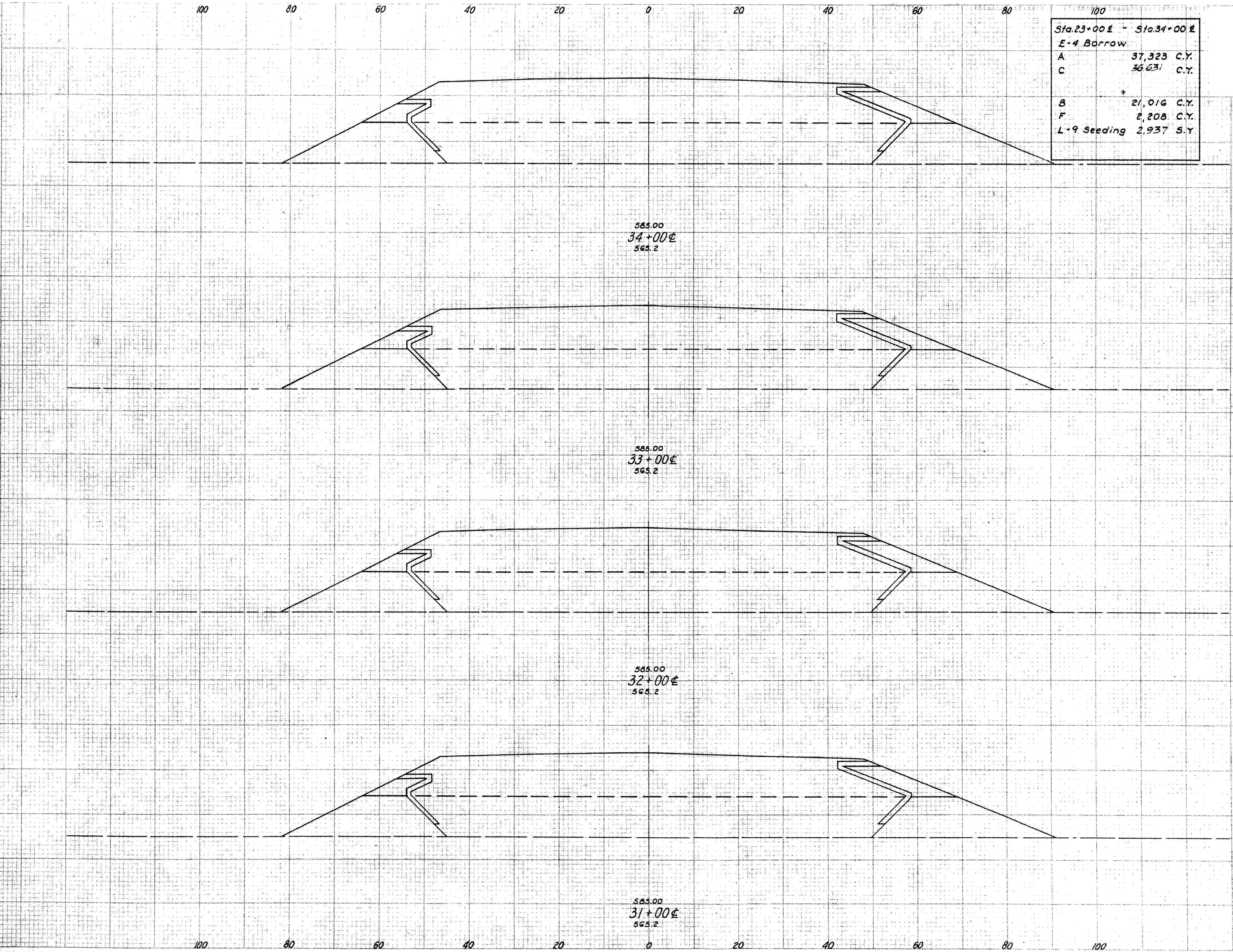
Sta. 23+00 ℄ - Sta. 34+00 ℄
E-4 Borrow

A	37,323	C.Y.
C	36,631	C.Y.
B	21,016	C.Y.
F	2,208	C.Y.
L-9 Seeding	2,937	S.Y.

SEEDING

END WIDTH	SQ. YDS.
	267
24	
	267
24	
	267
24	
	267
24	



F AREA	F VOL.	C AREA	C VOL.	B AREA	B VOL.	A AREA	A VOL.
	202		3325		1907		3393
55		898		515		916	
	202		3325		1907		3393
55		898		515		916	
	202		3325		1907		3393
55		898		515		916	
	202		3325		1907		3393
55		898		515		916	

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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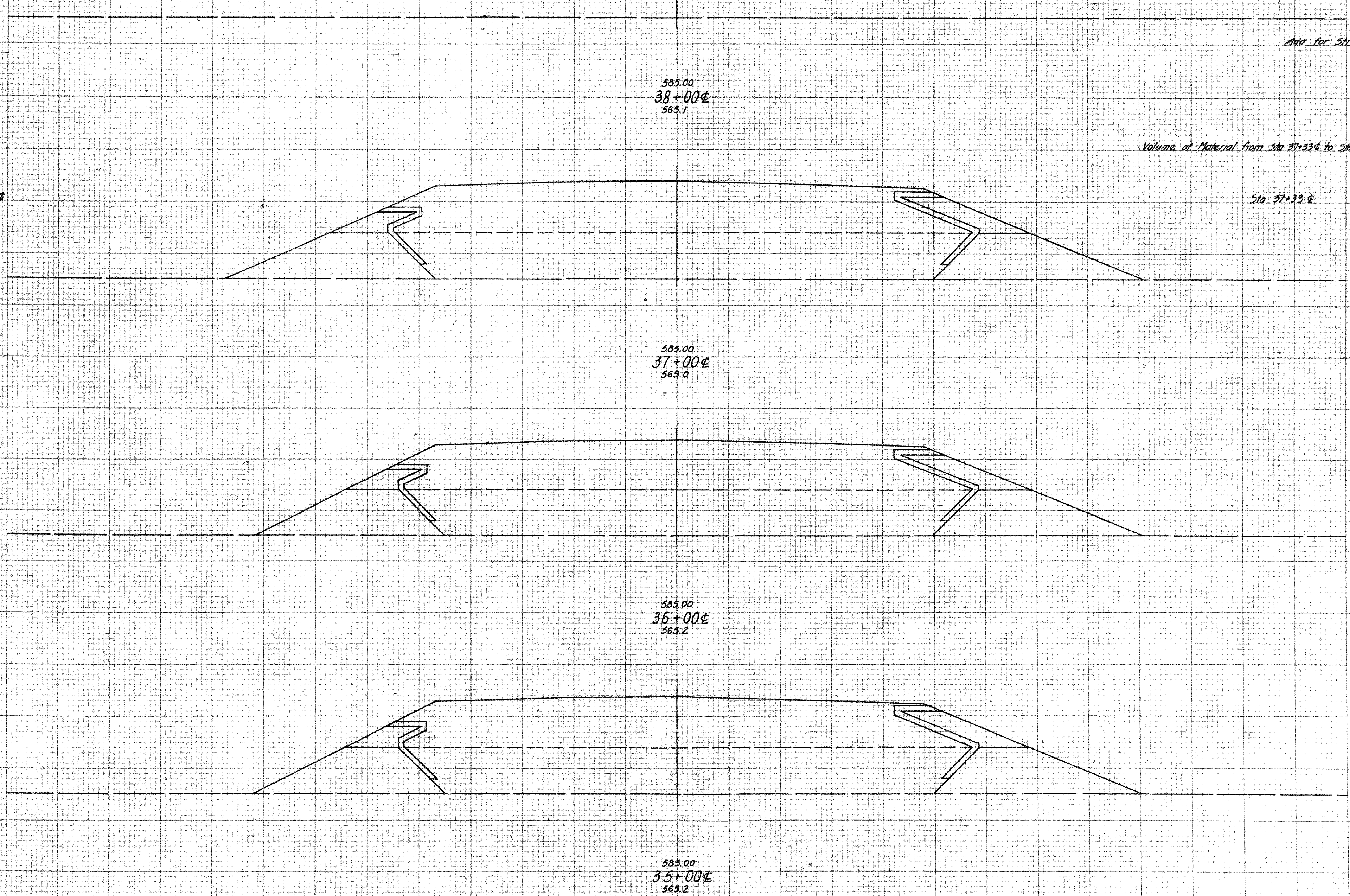
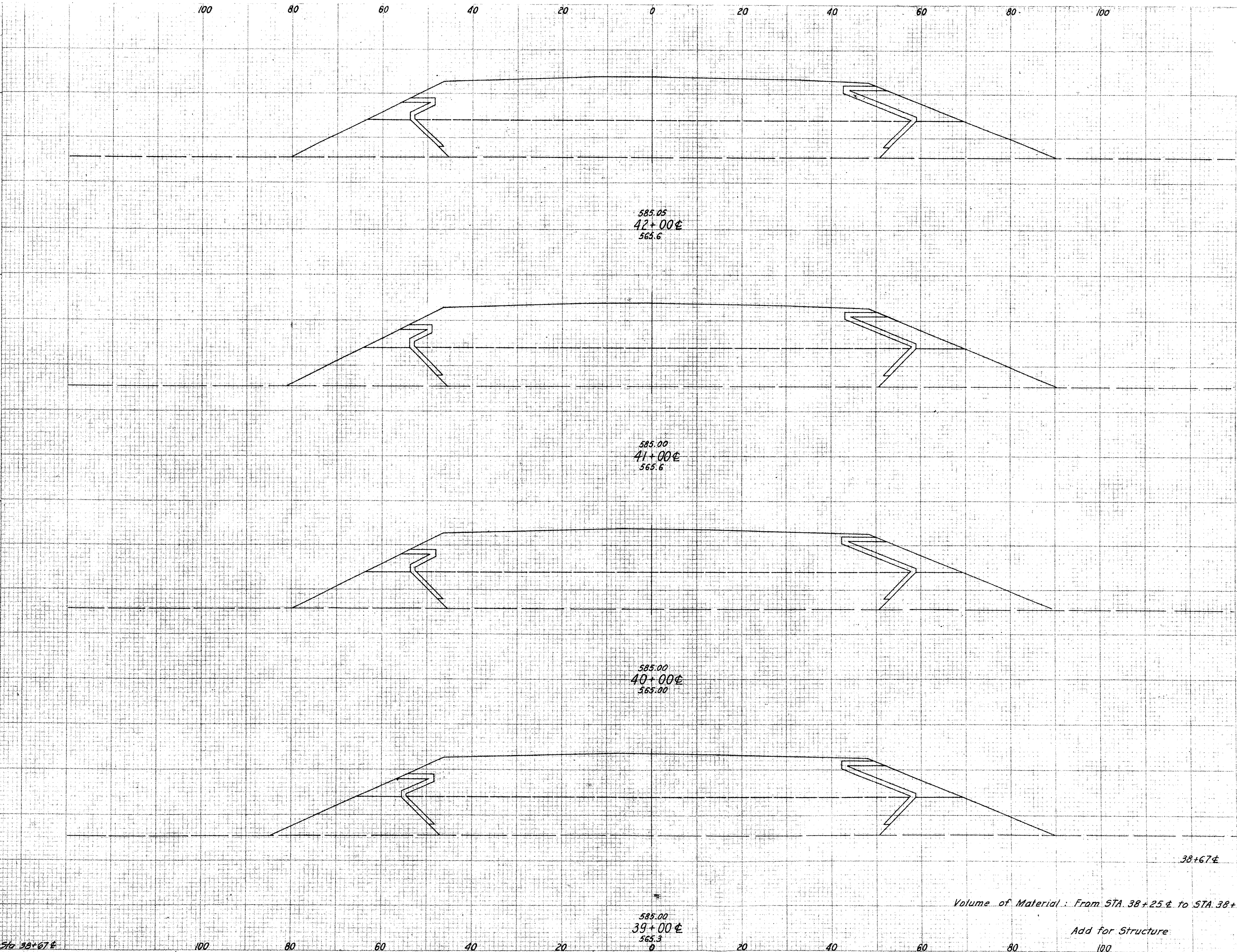
SMALL BOAT PASSAGEWAY- BRIDGE NO ERI-2-0071



SEEDING END WIDTH	SEEDING 50 YDS		F AREA	F VOL.	C AREA	C VOL.	B AREA	B VOL.	A AREA	A VOL.
		Add for Structure		3		120		118		
		Volume of Material from Sta 37+33¢ to Sta 37+75 ¢		40		2440		2567		
24		Sta 37+33 ¢	55		940		498		937	
	88			67		1151		637		1133
24			55		943		545		917	
	267			202		3409		1962		3394
24			55		898		515		916	
	267			202		3325		1907		3393
24			55		898		515		916	

100 80 60 40 20 0 20 40 60 80 100

STA. 35+00¢ TO STA. 38+00¢ (ERI.)

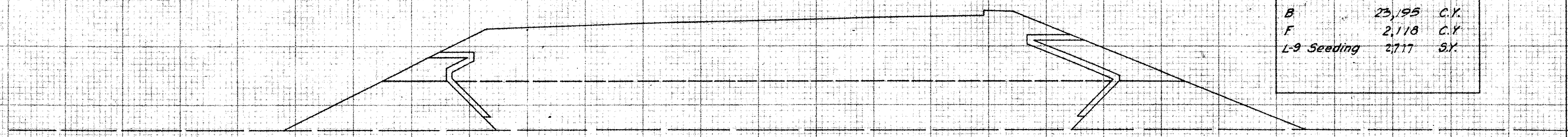


SEEDING	
END WIDTH	SQ. Y'S.
	272
24	
	267
24	
	267
24	
	267
24	
	88
24	Sta 38+67¢

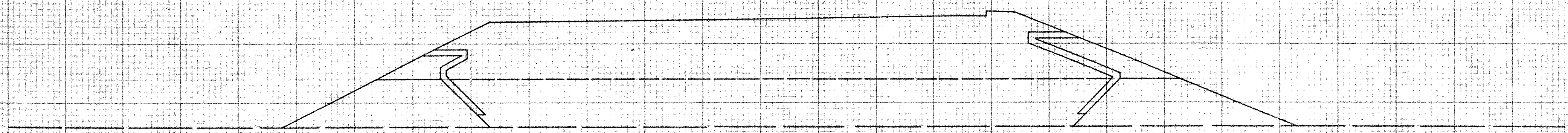
	F		C		B		A	
	AREA	VOL.	AREA	VOL.	AREA	VOL.	AREA	VOL.
		215		3199		1793		3444
42+00¢	58		862		484		922	
		215		3188		1793		3404
41+00¢	58		860		484		916	
		215		3184		1793		3393
40+00¢	58		860		484		916	
		215		3250		1833		3394
39+00¢	58		895		506		917	
		69		846		614		1130
38+67¢	55		490		498		937	
Volume of Material: From STA. 38+25¢ to STA. 38+67¢		40		2440		2567		0
Add for Structure		3		120		118		

Sta. 34+00¢ — Sta. 45+00¢		
E-4 Borrow		
A	33,173	C.Y.
C	36,463	C.Y.
B	23,195	C.Y.
F	2,118	C.Y.
L-9 Seeding	2,717	S.Y.

100 80 60 40 20 0 20 40 60 80 100



585.56
45+00¢
565.6



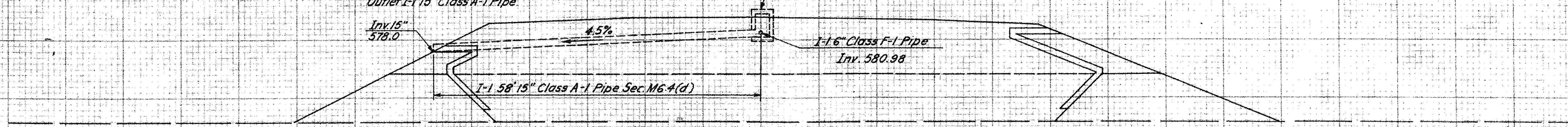
585.34
44+00¢
565.6

Station Equation
Sta. 43+26.27 ¢ Bk. =
T.S. Sta. 43+27.16 ¢ Ahd.

I-8
Sta. 43+55¢
Mod. 2-8M.I.
Top 585.75
Inv. 580.52

Sta. 43+55¢ -57' Lt.
Outlet I-1 15" Class A-1 Pipe

Inv. 15"
578.0



585.17
43+00¢
565.6

100 80 60 40 20 0 20 40 60 80 100

SEEDING END WIDTH	SEEDING SQ. YDS.	F AREA	F VOL.	C AREA	C VOL.	B AREA	B VOL.	A AREA	A VOL.
	350		215		3300		1780		3857
31		58		881		484		991	
	350		215		3247		1793		3615
32		58		873		484		961	
	317		215		3219		1793		3480
25		58		866		484		938	

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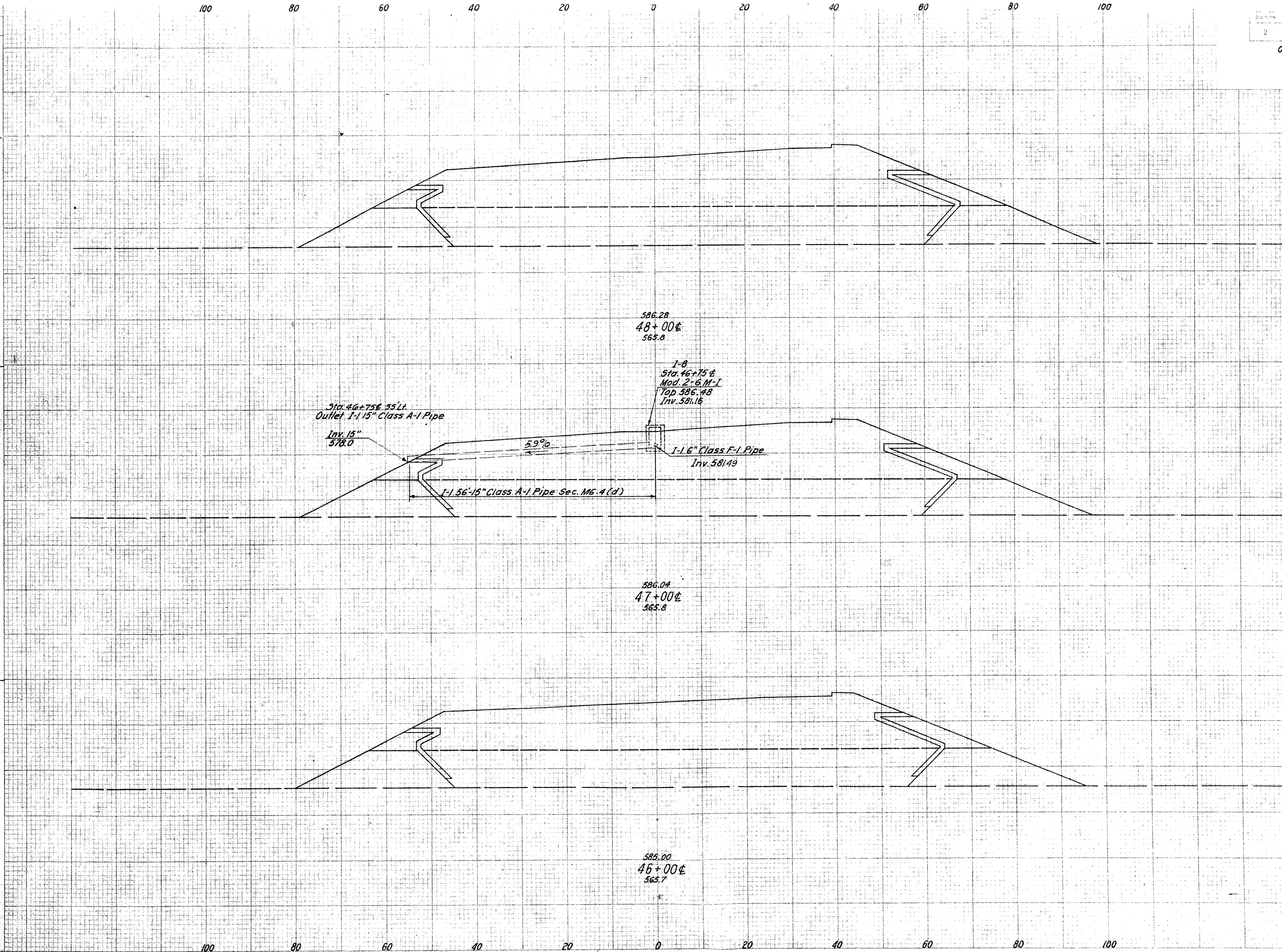
SEEDING	
END WIDTH	SQ. YDS.
	400
35	
	383
34	
	367
32	



F AREA	F VOL.	C AREA	C VOL.	B AREA	B VOL.	A AREA	A VOL.
	215		3363		1724		4356
58		909		469		1159	
	215		3350		1738		4230
58		900		469		1125	
	215		3335		1752		4105
58		901		477		1092	

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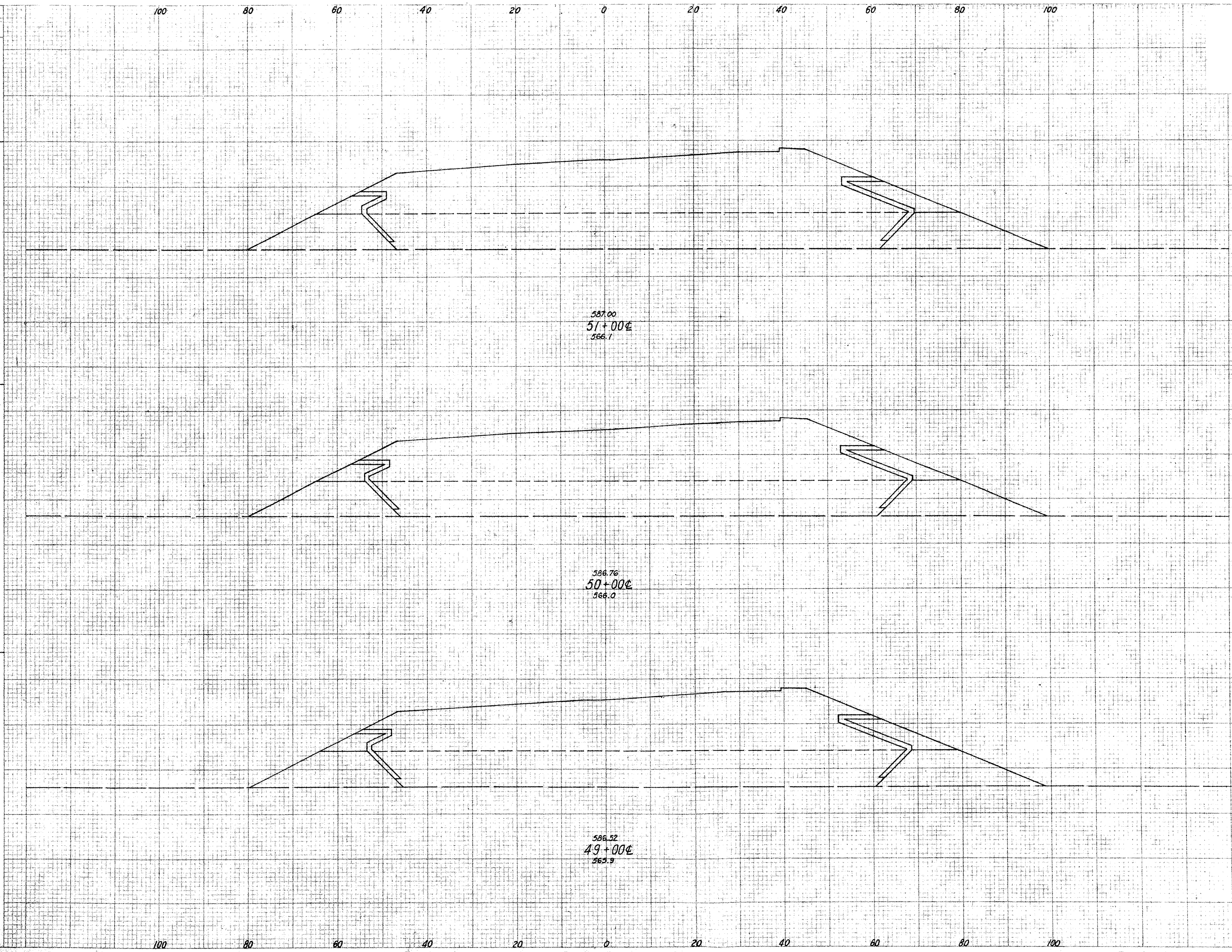
SEEDING END WIDTH	SEEDING SQ. YDS.
	428
37	
	417
38	
	417
37	



F AREA	F VOL.	C AREA	C VOL.	B AREA	B VOL.	A AREA	A VOL.
	215		3359		1659		4739
58		903		448		1262	
	215		3340		1672		4609
58		905		455		1227	
	215		3355		1698		4481
58		907		462		1193	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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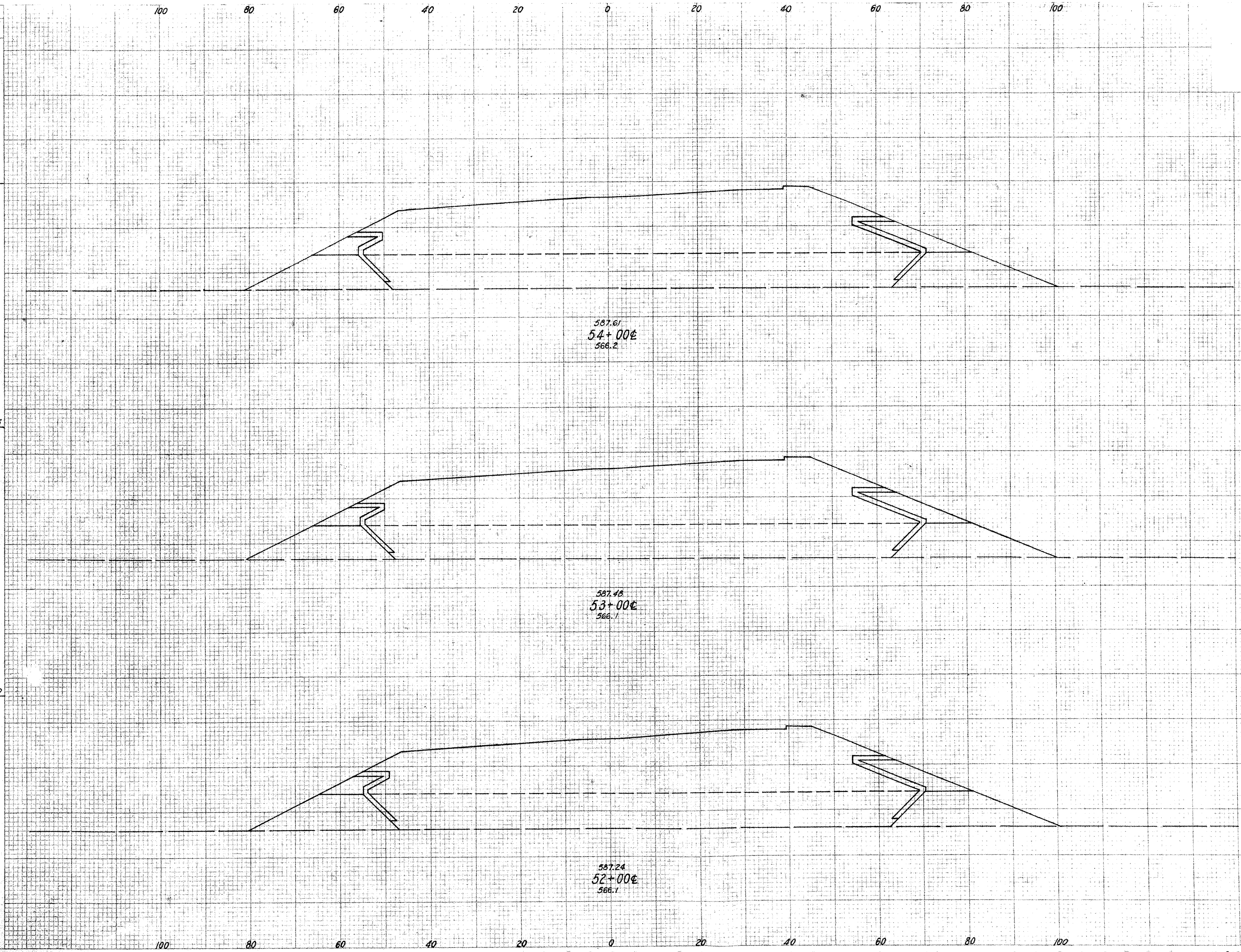

SEEDING END WIDTH	SEEDING SQ. YDS.	F AREA	F VOL.	C AREA	C VOL.	B AREA	B VOL.	A AREA	A VOL.
	455		215		3342		1607		5009
41		58		919		441		1351	
	455		215		3394		1646		4969
41		58		920		448		1332	
	450		215		3390		1659		4869
40		58		911		448		1297	

STA. 52+00℄ TO STA. 54+00℄ (ERI)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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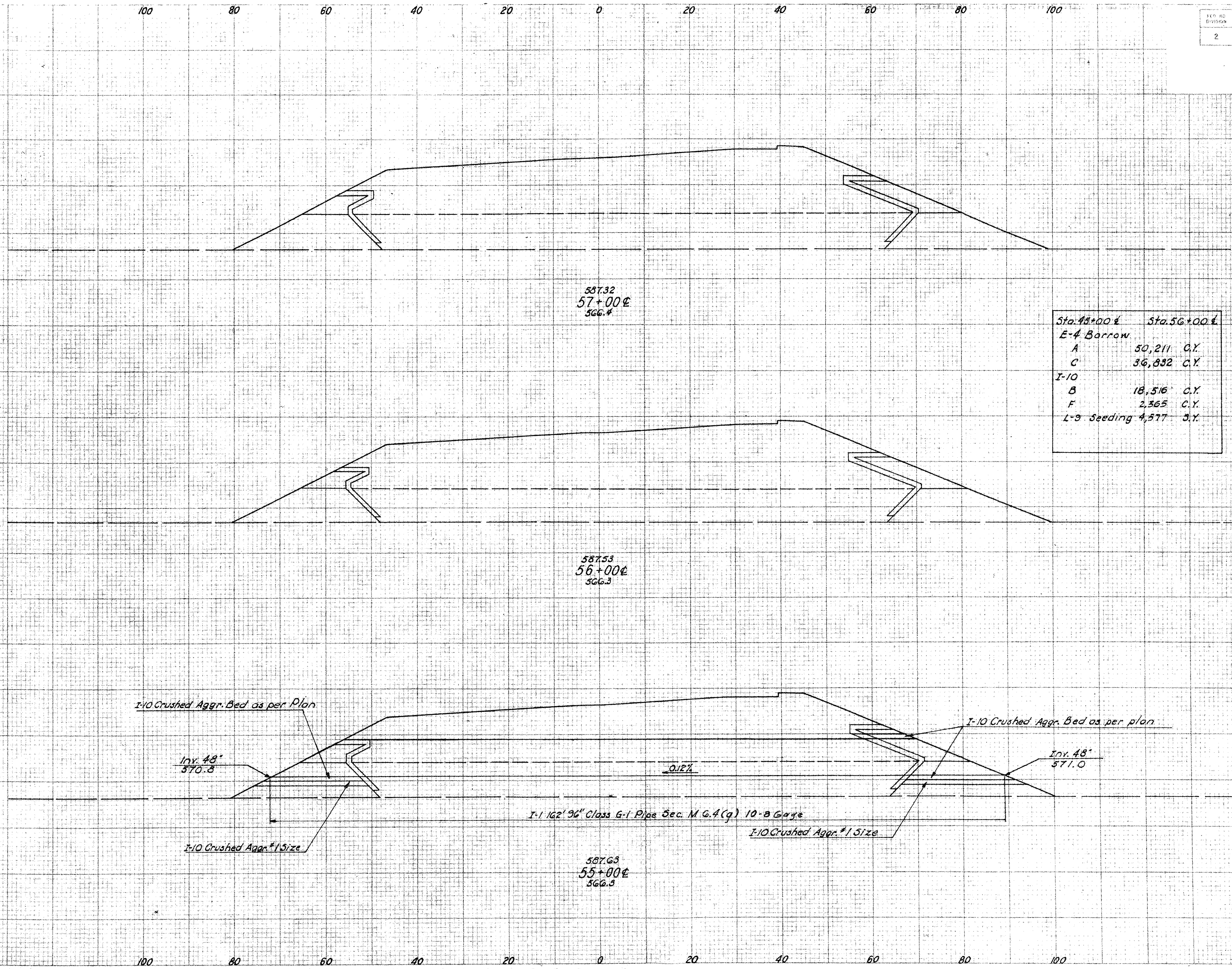
OTT.-2-27.36 ERI-2-0.15

SEEDING	
END WIDTH	SQ. YDS.
	422
38	
	439
41	
	455
41	



Sta. 45+00℄ Sta. 56+00℄
E-4 Borrow
A 50,211 C.Y.
C 36,832 C.Y.
I-10
B 18,516 C.Y.
F 2,365 C.Y.
L-9 Seeding 4,577 S.Y.

F		C		B		A	
Area	Vol.	Area	Vol.	Area	Vol.	Area	Vol.
	215		3248		1581		4780
58		881		427		1308	
	215		3275		1581		4902
58		888		427		1338	
	215		3296		1581		4987
58		892		427		1354	

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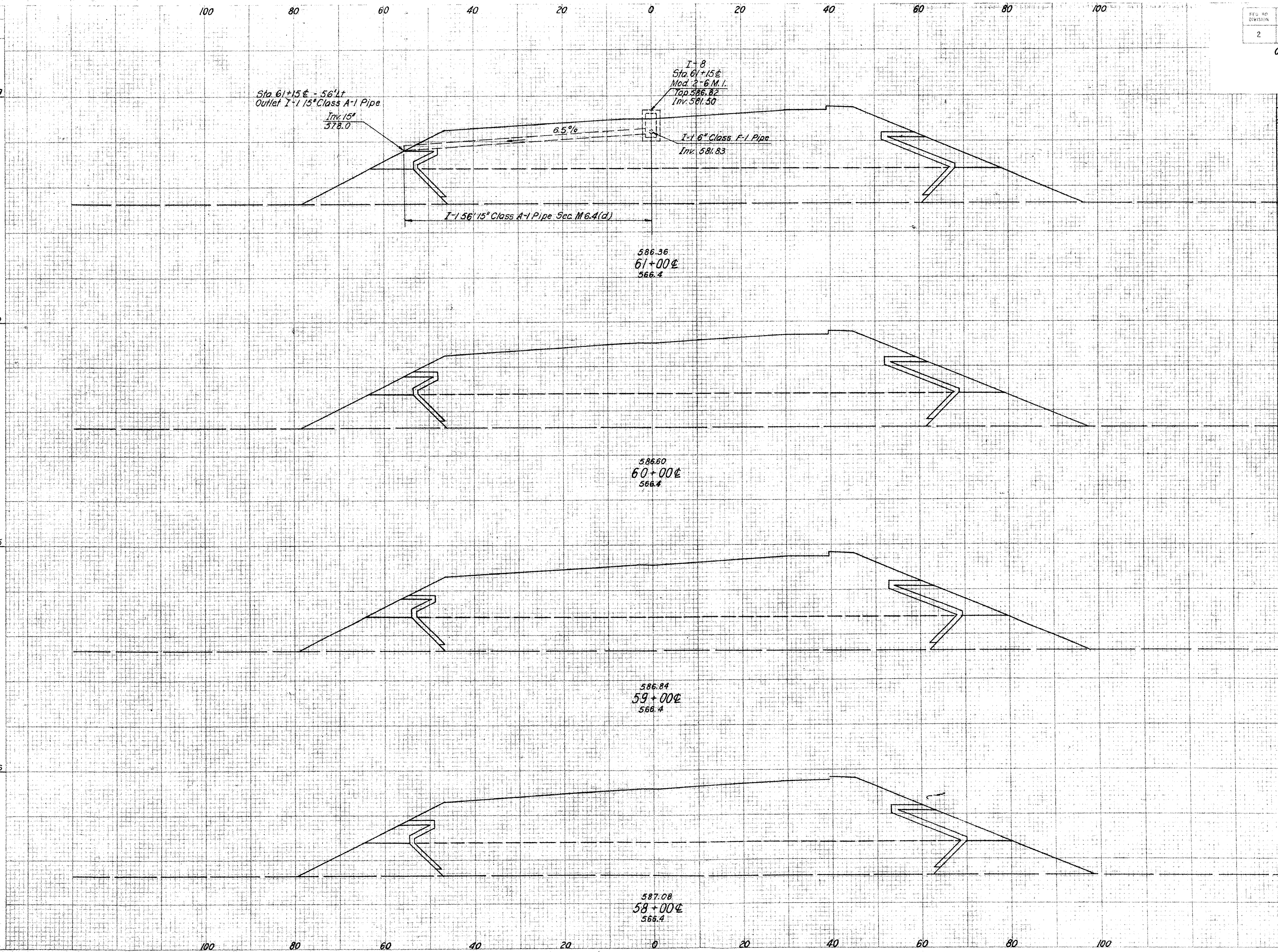
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

OTT-2-27.36 ERI-2-0.15



SEEDING	
END WIDTH	SQ. YDS.
	389
36	
	400
36	
	395
35	
	556
38	

F		C		B		A	
AREA	VOL.	AREA	VOL.	AREA	VOL.	AREA	VOL.
	215		3125		1581		4204
58		848		427		1170	
	215		3156		1581		4396
58		856		427		1204	
	215		3185		1581		4524
58		864		427		1239	
	215		3216		1581		4652
58		873		427		1273	

STA. 58+00¢ TO STA. 61+00¢ (ERI)

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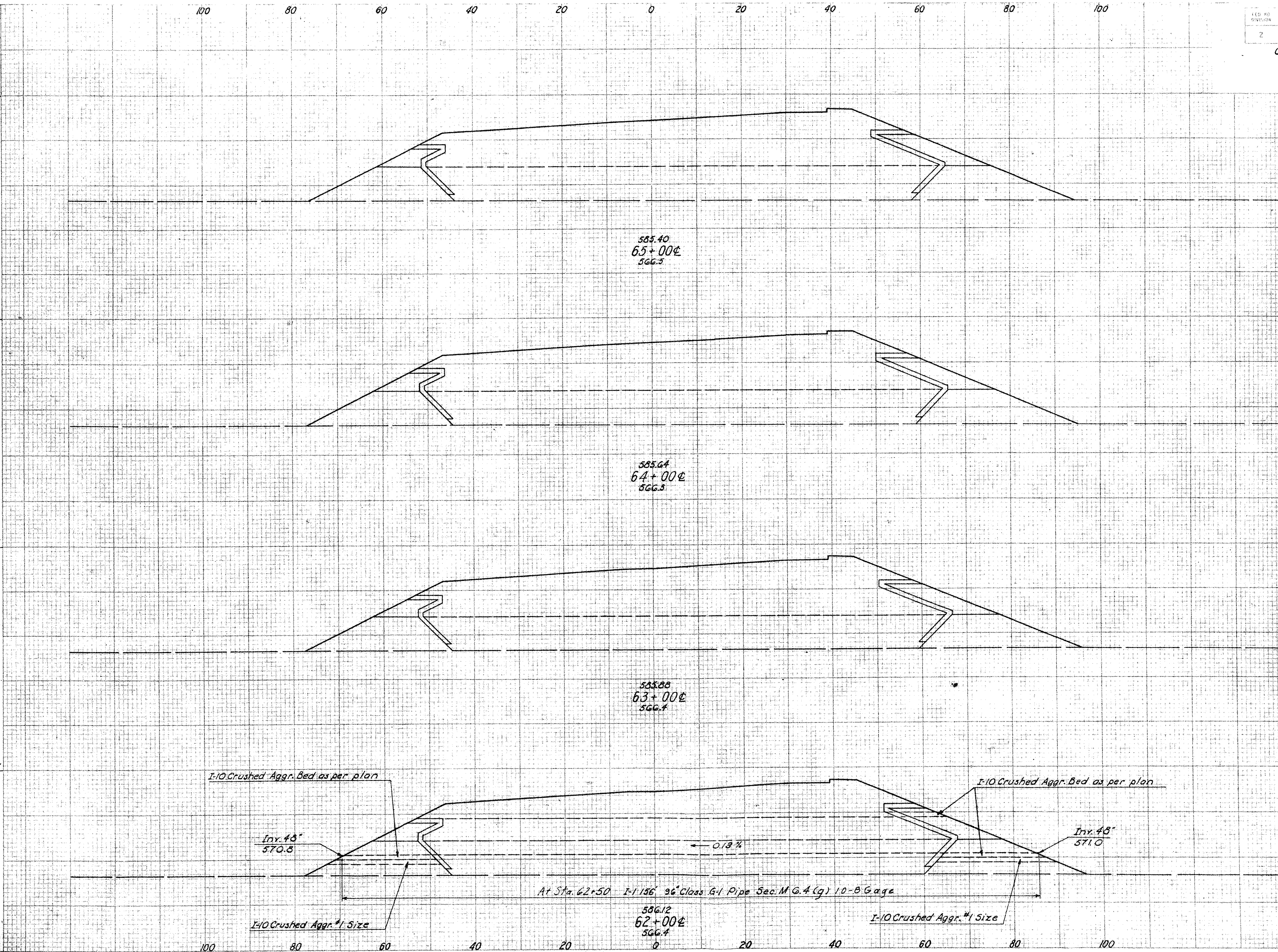
SEEDING	
END WIDTH	SQ. YDS.
	344
32	
	356
32	
	367
34	
	377
34	



F		C		B		A	
Area	Vol.	Area	Vol.	Area	Vol.	Area	Vol.
	215		2916		1519		3807
58		825		434		1037	
	215		3081		1589		3856
58		839		423		1045	
	215		3089		1574		3977
58		832		427		1103	
	215		3096		1581		4148
58		840		427		1137	

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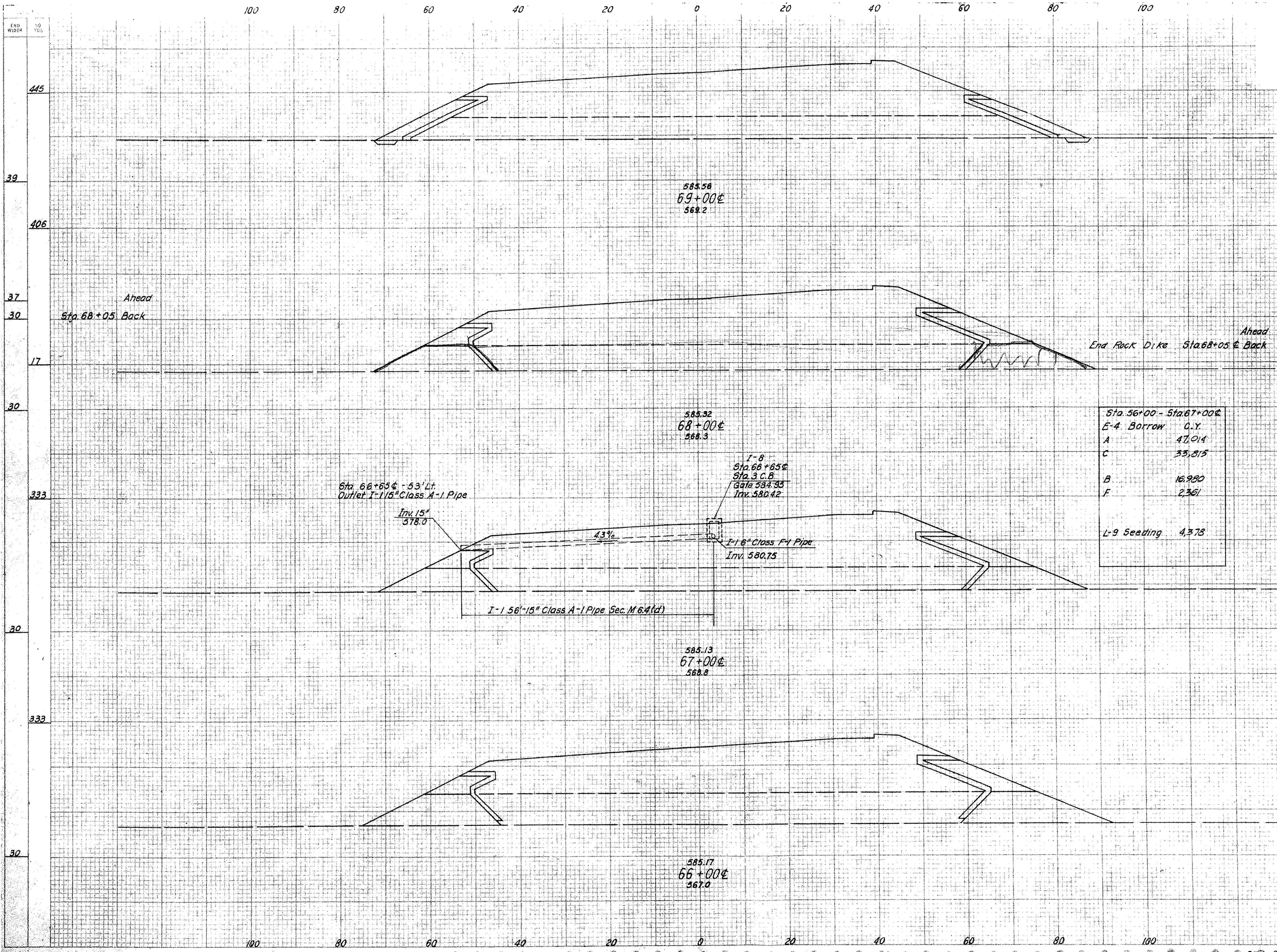

F AREA	F VOL.	D AREA	D VOL.	C AREA	C VOL.	B AREA	B VOL.	A AREA	A VOL.
	187		37		2192		335		3852
55		10		648		97		1020	
	218		35		2463		387		3451
68		10		752		122		1102	
57				618		306		1030	
	11				114		57		191
57				618		306		1030	
	209				2187		1083		3789
56				563		279		1016	
	211				2428		1231		3768
58				750		386		1019	

Sta. 56+00 - Sta. 67+00¢	
E-4 Borrow	C.Y.
A	47,014
C	33,815
B	16,980
F	2,361
L-9 Seeding	4,378

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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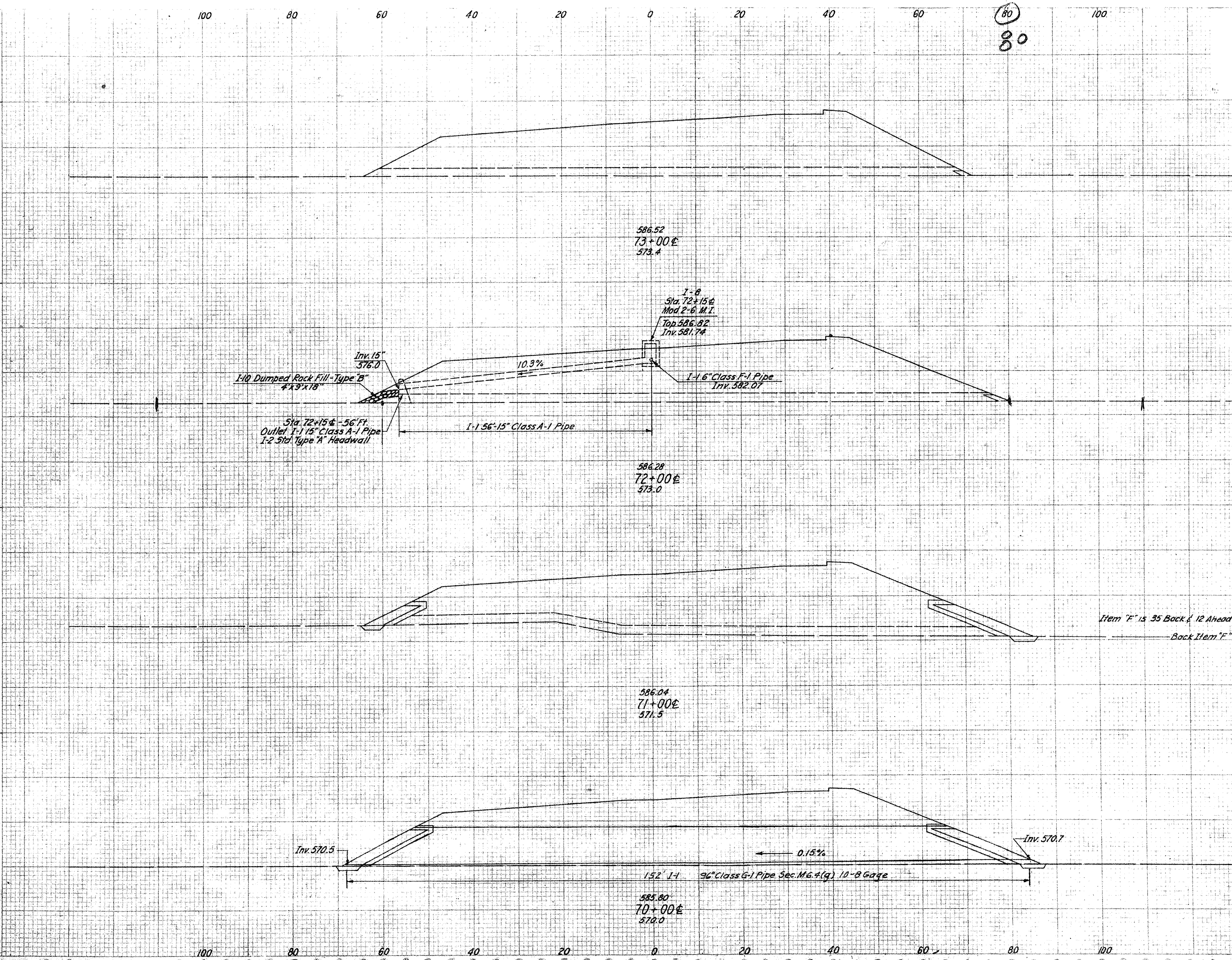
SEEDING	
END WIDTH	SQ. YDS.
	650
58	
	661
61	
	572
42	
	461
41	



F AREA	F VOL.	D AREA	D VOL.	C AREA	C VOL.	B AREA	B VOL.	A AREA	A VOL.
	19				989				3792
4				264				928	
	22				1007				3866
8				280				1160	
	37				1000				4477
12									
35		10		260		66		1259	
	151		37		1474		278		429[illegible]
46		10		536		84		1060	

STA. 70+00℄ TO STA. 73+00℄ (ERI.)

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

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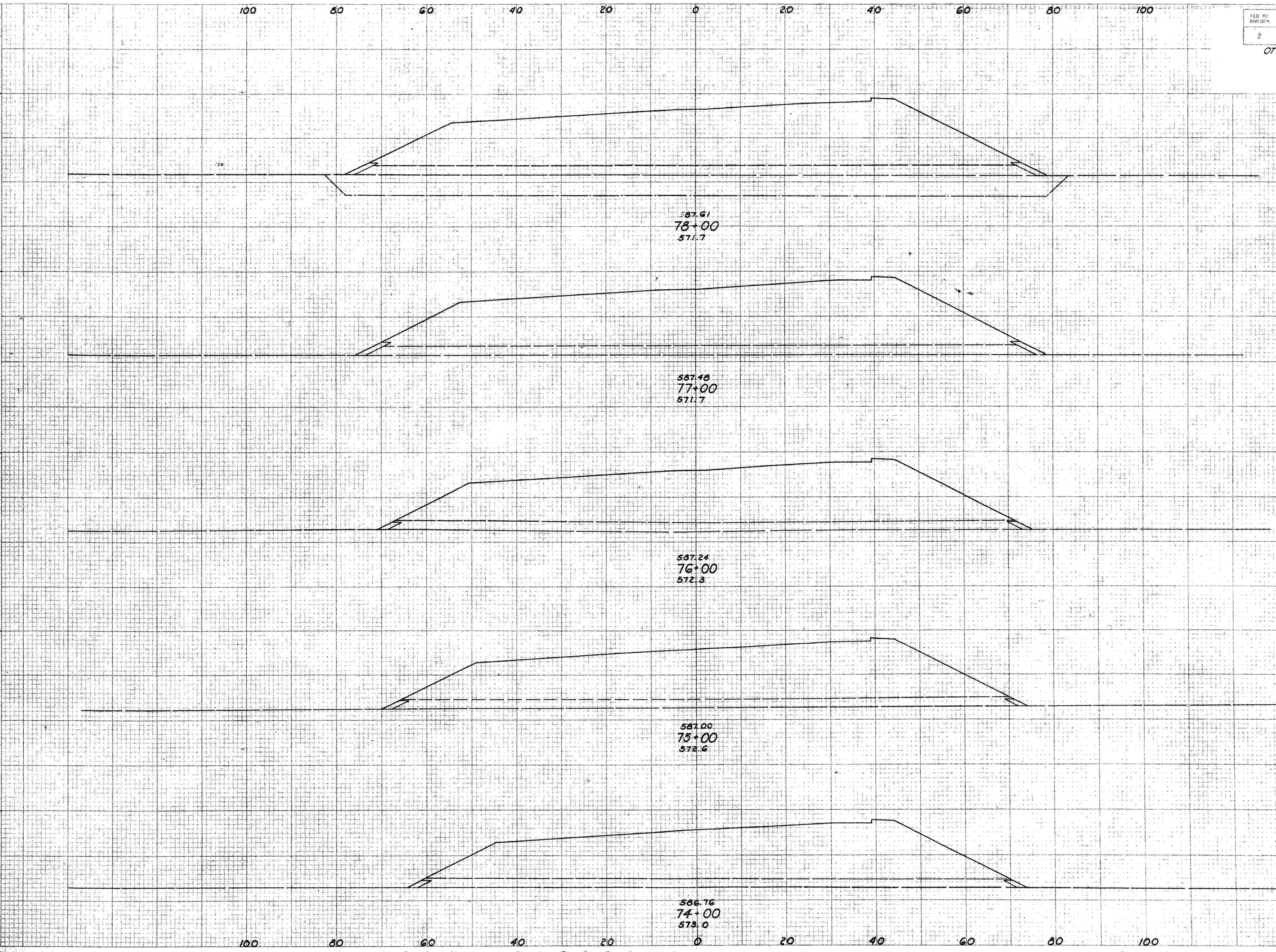
OTT-2-27.36 ERI-2-0.15



Station	SEEDING END WIDTH	SEEDING SQ. YDS.	F Area	F Vol.	C Area	C Vol.	E Area	E Vol.	A Area	A Vol.
		700		50		1333		1296		5592
78+00	63		13		350		79		1524	
		700		48		1264		73		5600
77+00	63		13		300		0		1500	
		694		39		1074				5204
76+00	62		8		280				1310	
		683		30		1052				4759
75+00	61		8		288				1260	
		667		26		1041				4407
74+00	59		6		270				1120	

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FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

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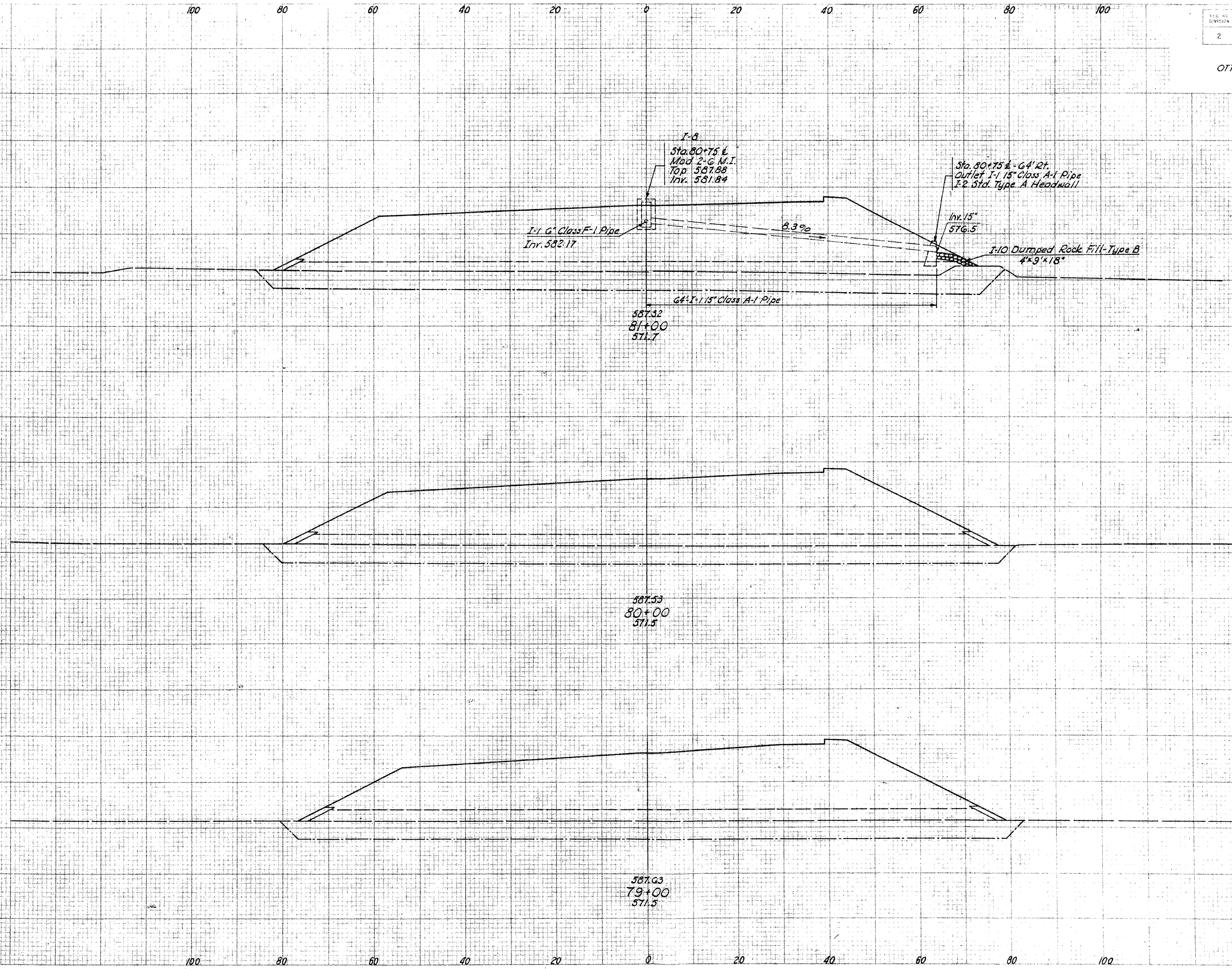
OTT-2-27.36 ERI.-2-0.15

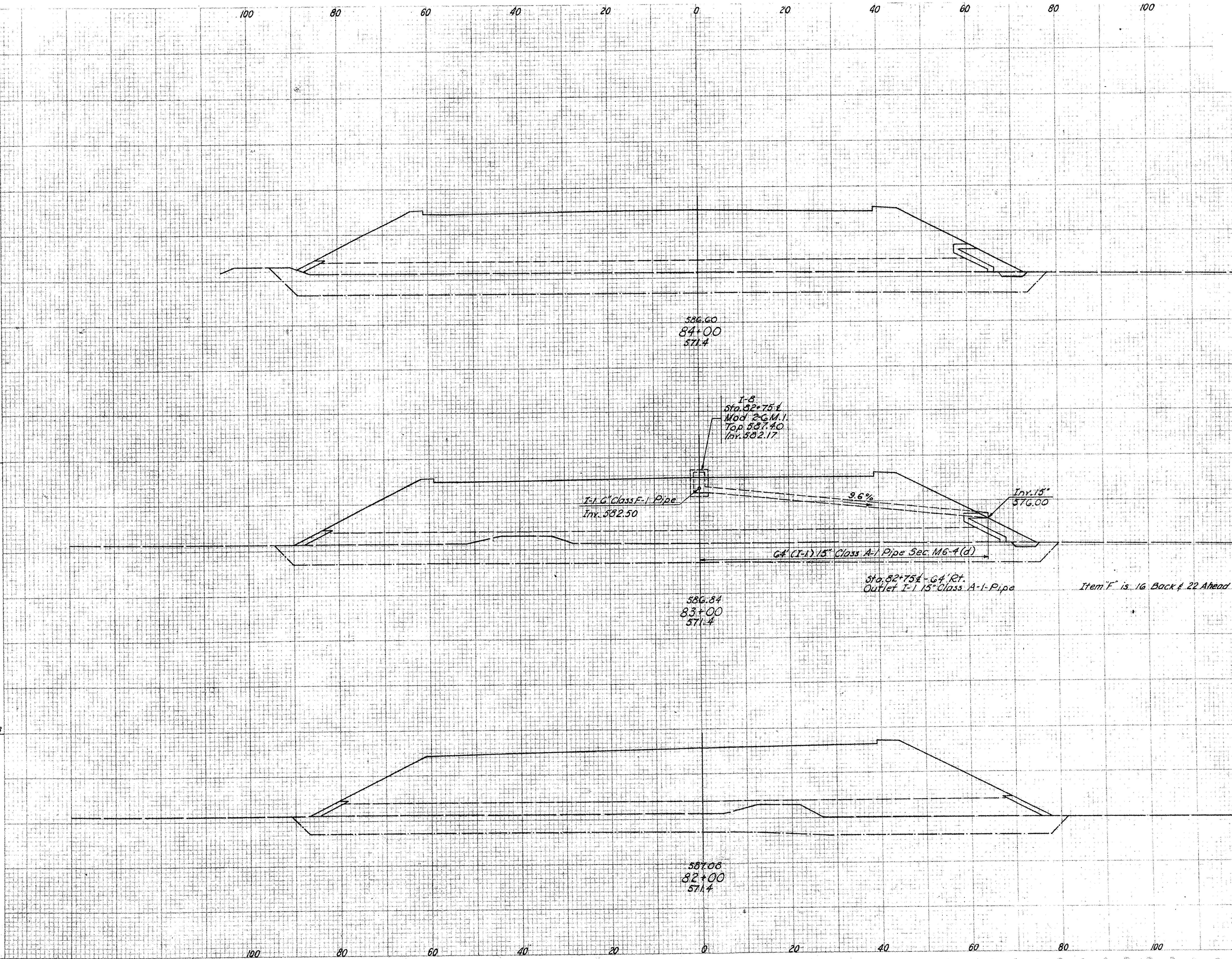
SEEDING END WIDTH	SEEDING SQ. YDS.
	683
62	
	694
63	
	700
63	

F Area	F Vol.	A Area	A Vol.	C Area	C Vol.	E Area	E Vol.
	48		5570		1452		3148
9		1800		332		710	
	43		5556		1335		2533
14		1500		388		658	
	52		5548		1404		2367
14		1496		370		620	



OTT-2-27.36 ERI-2-0.15

SEEDING END WIDTH	SEEDING SQ. YDS.
	544
50	
	567
52	
	628
61	



Item "F" is 16 Back & 22 Ahead

A Area	A Vol.	C Area	C Vol.	E Area	E Vol.	B Area	B Vol.	F Area	F Vol.
	5148		1563		3056		150		80
1410		424		800		31		20	
	5348		1600		2925		114		78
1478		440		780		30		22	
								16	
	5530		1655		3278				61
1508		454		990				17	

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

OTT.-2-27.36 ERI.-2-0.15

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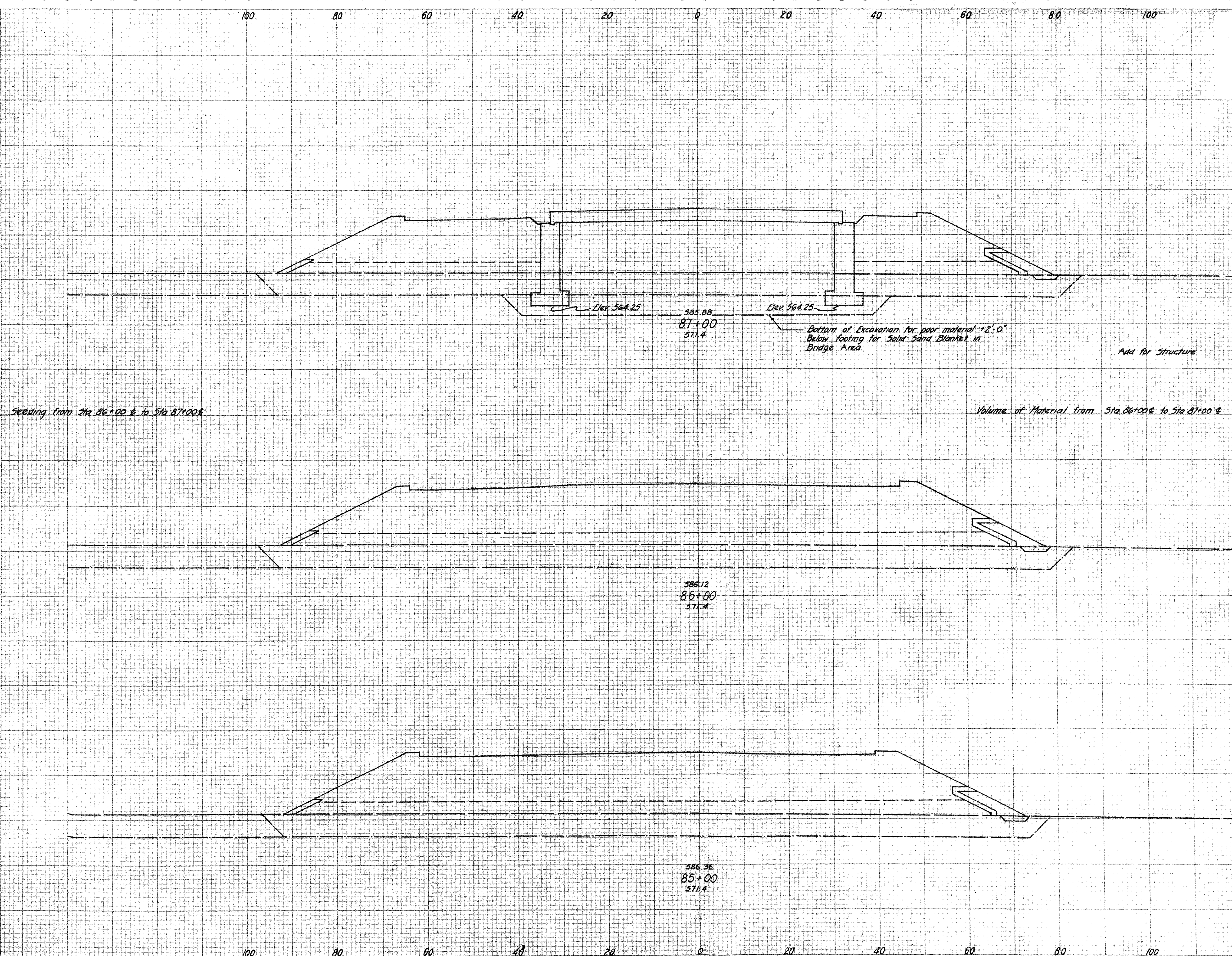
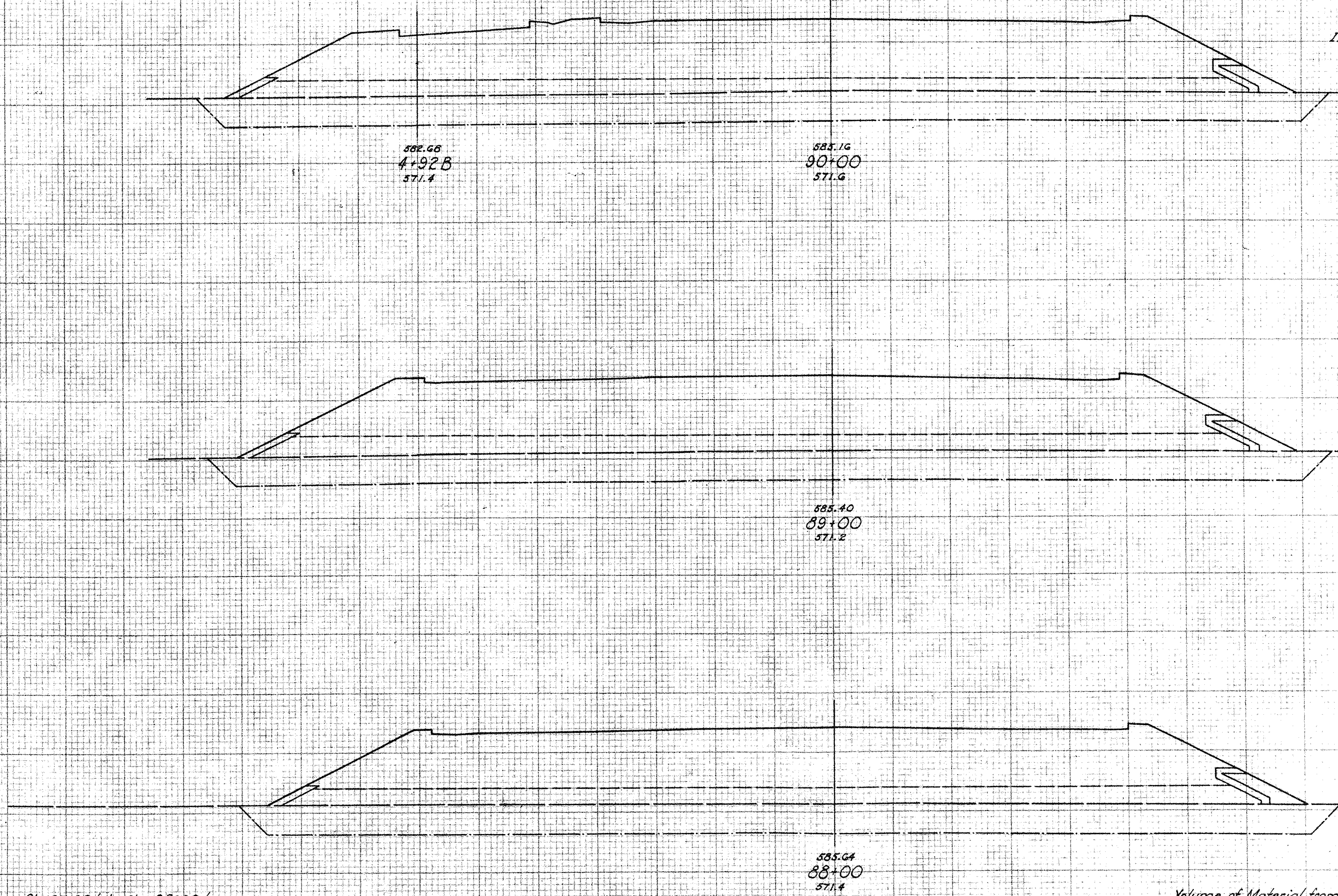


SEEDING END WIDTH	SEEDING SQ. YDS.		A AREA	A VOL.	B AREA	B VOL.	C AREA	C VOL.	E AREA	E VOL.	F AREA	F VOL.
		Add for Structure								1238		
	394	Seeding from Sta 86+00 ¢ to Sta 87+00 ¢ / Volume of Material from Sta 86+00 ¢ to Sta 87+00 ¢		3242		70		1038		2119		36
47		86+00	1418		32		430		890		22	
	528			5103		113		1574		3222		83
48		85+00	1370		29		420		850		23	

STA. 85+00 TO STA. 87+00 (ERI.)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

OTT.-2-27.36 ERI. 2-0.15



Seeding End Width	Seeding Sq. Yds.	A Area	A Vol.	C Area	C Vol.	E Area	E Vol.	B Area	B Vol.	F Area	F Vol.
	706		5200		1680		3610				54
										15	
55		1410		396		938		27		22	
	556		5222		1537		3489		103		85
45		1410		434		946		30		24	
	491		5222		1607		3430		150		85
44		1410		434		906		30		22	
	487		4359		1352		2344		92		69

Seeding from Sta. 87+00 ¢ to Sta. 88+00 ¢

Volume of Material from Sta. 87+00 ¢ to Sta. 88+00 ¢

STA. 88+00 TO STA. 90+00 (ERI)

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FED. RD. DIVISION	STATE	PROJECT	
7	OHIO		

OTT.-2-27.36 ERI.-2-0.15

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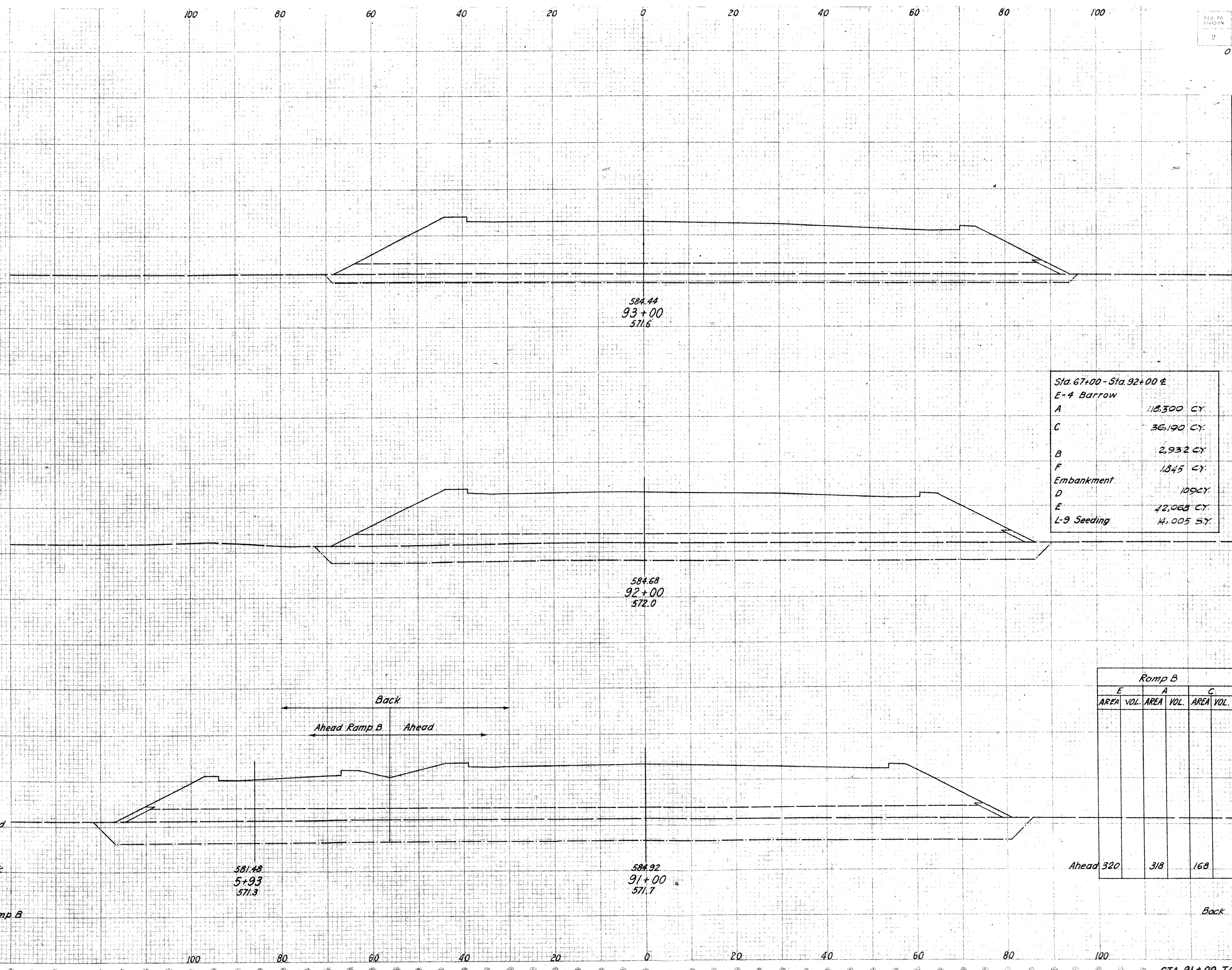


SEEDING	
END WIDTH	SQ. YDS.
	578
51	
	589
55	
	522
41 (Ahead)	
72 (Total Back)	
31 (Ahead Ramp B)	

Sta. 67+00 - Sta. 92+00 ℄
E-4 Barrow

A	118,300 C.Y.
C	36,190 C.Y.
B	2,932 C.Y.
F	1,845 C.Y.
Embankment	
D	109 C.Y.
E	42,068 C.Y.
L-9 Seeding	14,005 S.Y.

	F		A		C		E	
	AREA	VOL.	AREA	VOL.	AREA	VOL.	AREA	VOL.
		26		4425		1522		1433
93+00	7		1179		394		308	
		24		4333		1362		1726
92+00	6		1150		342		623	
		24		4120		1265		3440
91+00 Ahead	7		1094		342		692	
Back	14		1412		510		1012	

Ramp B

	E		A		C	
	AREA	VOL.	AREA	VOL.	AREA	VOL.
Ahead	320		318		168	

STA. 91+00 TO STA. 93+00 (ERI.)

PRINTED IN U.S.A. ON DIE. TRACE CLOTH

100 80 60 40 20 0 20 40 60 80 100

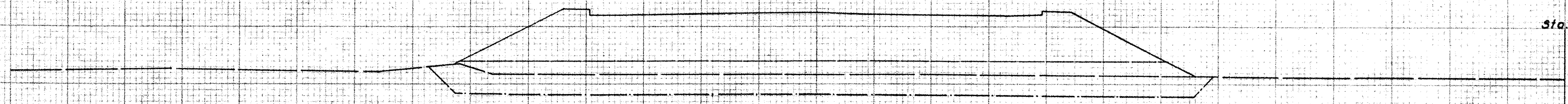
SEEDING END WIDTH	50 TOS
0	
	92
55	
	428
55	
	589
51	
85	
34	
	767
53	

END WORK STA. 97+00 ℄

583.48
97+00
572.4

Sta. 92+00℄ - Sta. 97+00℄	
E-4 Borrow	
A	18,375 C.Y.
C	6,465 C.Y.
E	8,614 C.Y.
F	76 C.Y.
L-9 Seeding	3,043 S.Y.

96+50℄

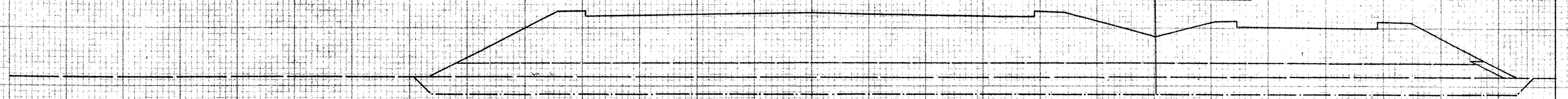


583.72
96+00
571.7

END PROJECT STA. 95+00 ℄

Back
Ahead
Ahead Ramp A

AHEAD
BACK
AHEAD RAMP A

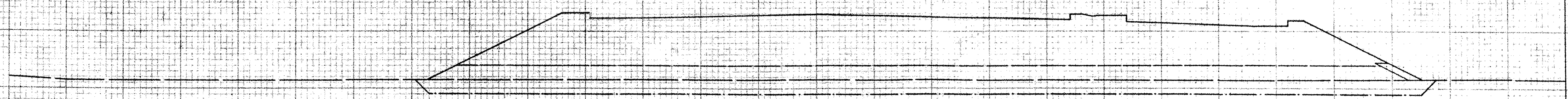


583.96
95+00
571.6

581.22
6+14 A

Ramp A

	E		A		C	
	AREA	VOL.	AREA	VOL.	AREA	VOL.
Ahead	198		438		130	



584.20
94+00
571.6

581.83
5+11A

	F		A		C		E	
	AREA	VOL.	Area	Vol.	Area	Vol.	Area	Vol.
Volume of Unsuitable Material from Sta. 96+50℄ to Sta. 97+00 →								1060
Sta. 96+77℄			0		238			
				436		244		
Sta. 96+50℄			872		250		485	
				1615		509		898
			872		300		485	
				3080		1170		1590
	0		780		333		385	
Back Sta. 95+00℄	7		1218		463		583	
		26		4486		1658		1907
	7		1210		428		446	

100 80 60 40 20 0 20 40 60 80 100

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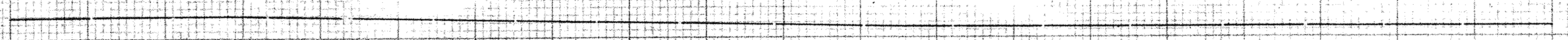
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

OTT-2-27.36 ERI-2-0.15

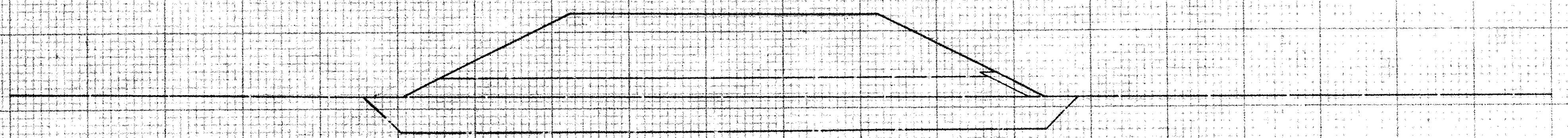
100 80 60 40 20 0 20 40 60 80 100

Sta. 6+14A - Sta. 9+00A	
E-4 Borrow	
A	4335 C.Y.
C	1777 C.Y.
E	3850 C.Y.
F	67 C.Y.
L-9 Seeding	1347 S.Y.

END WORK STA. 9+00A



9+00A
571.7



583.35
8+00A
571.6

END PAVING STA. 7+00A

581.64
7+00A
571.4

100 80 60 40 20 0 20 40 60 80 100

SEEDING END WIDTH	SEEDING SQ. YDS.	Station	F Area	F Vol.	A Area	A Vol.	C Area	C Vol.	E Area	E Vol.
0			0		0					
	61			3		233				
45		Sta. 8+60A	7		547					
		Sta. 8+00A to Sta. 9+00A						581		1811
	389			16		1166				
41			7		502		196		396	
	511			26		1633		700		1266
51			7		380		182		288	
	406			22		1303		496		773

STA. 7+00A TO STA. 9+00A

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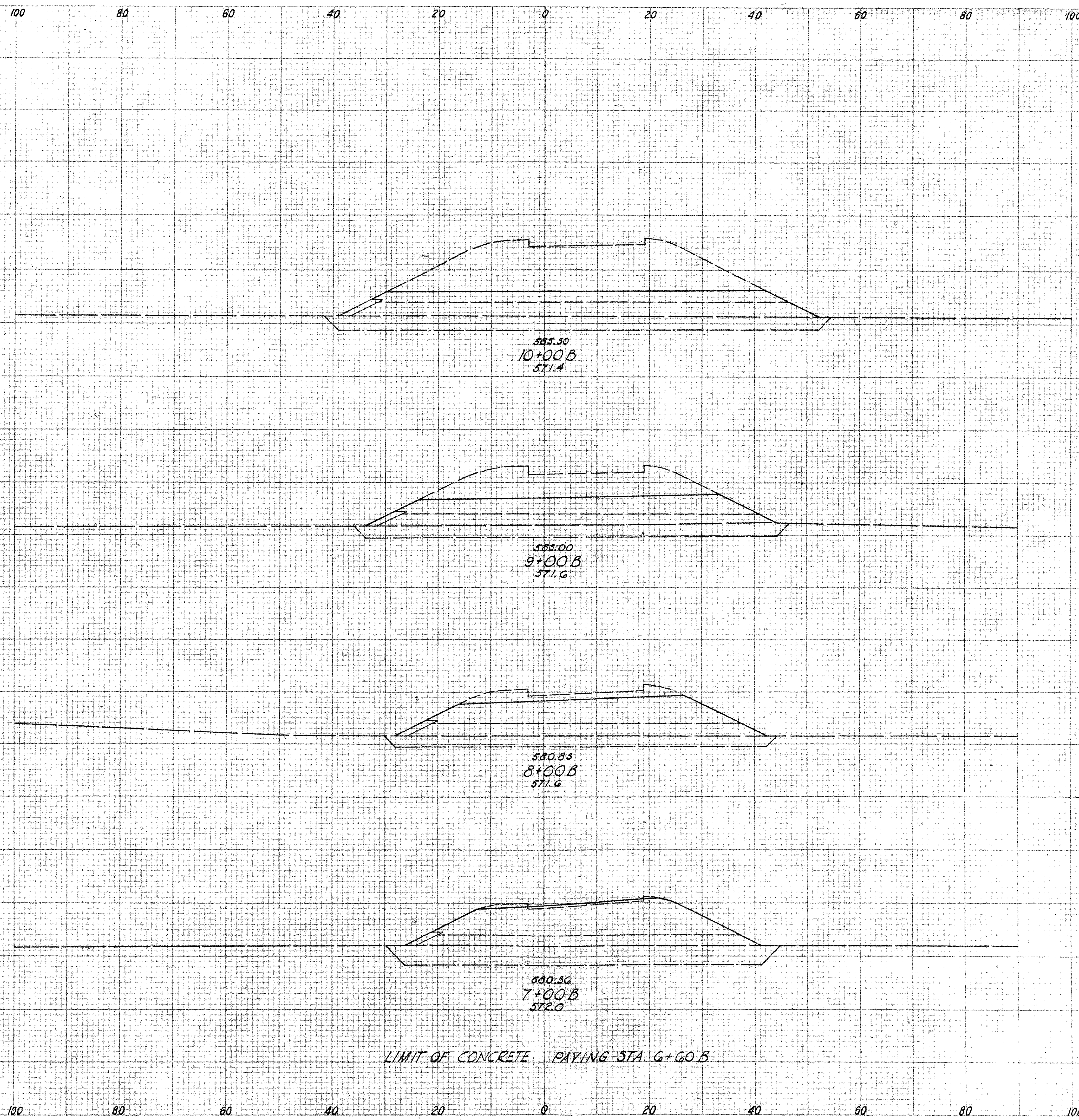
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

88
118

OTT-2-27.36 ERI-2-0.15

SEEDING	
END WIDTH	SQ. YDS.
	111
15	
	172
16	
	228
25	
	306
30	
	363



F		A		C		E	
Area	Vol.	Area	Vol.	Area	Vol.	Area	Vol.
	24		411		762		1040
7		152		224		236	
	26		648		800		782
7		197		148		186	
	26		807		562		604
7		239		156		140	
	24		961		522		718
6		280		126		248	
	26		1185 1118		582 544		1051
		318		168		320	

5+73

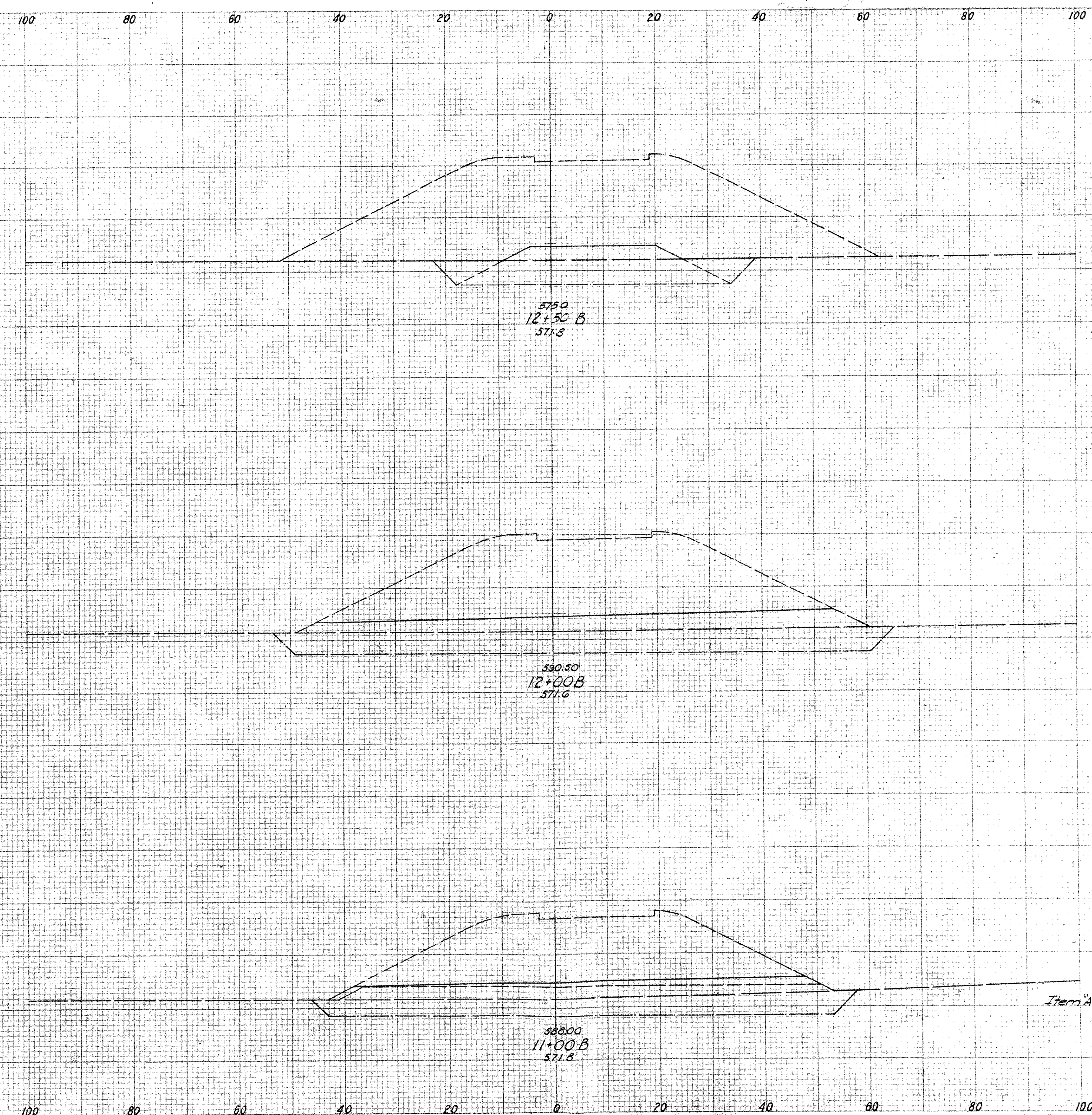
STA. 7+00 B TO STA. 10+00 B

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

89
18

OTT-2-27.36 ERI.-2-0.15

SEEDING END WIDTH	SQ. YDS.
0	
	33
12	
	94
5	



F Area	F Vol.	A Area	A Vol.	C Area	C Vol.	E Area	E Vol.
					119		477
				73		255	
					342		664
				296		462	
					885		1422
6							
		70		182		326	

Item "A" is 70 Back & 0 Ahead

STA. 11+00 B TO STA. 12+50 B

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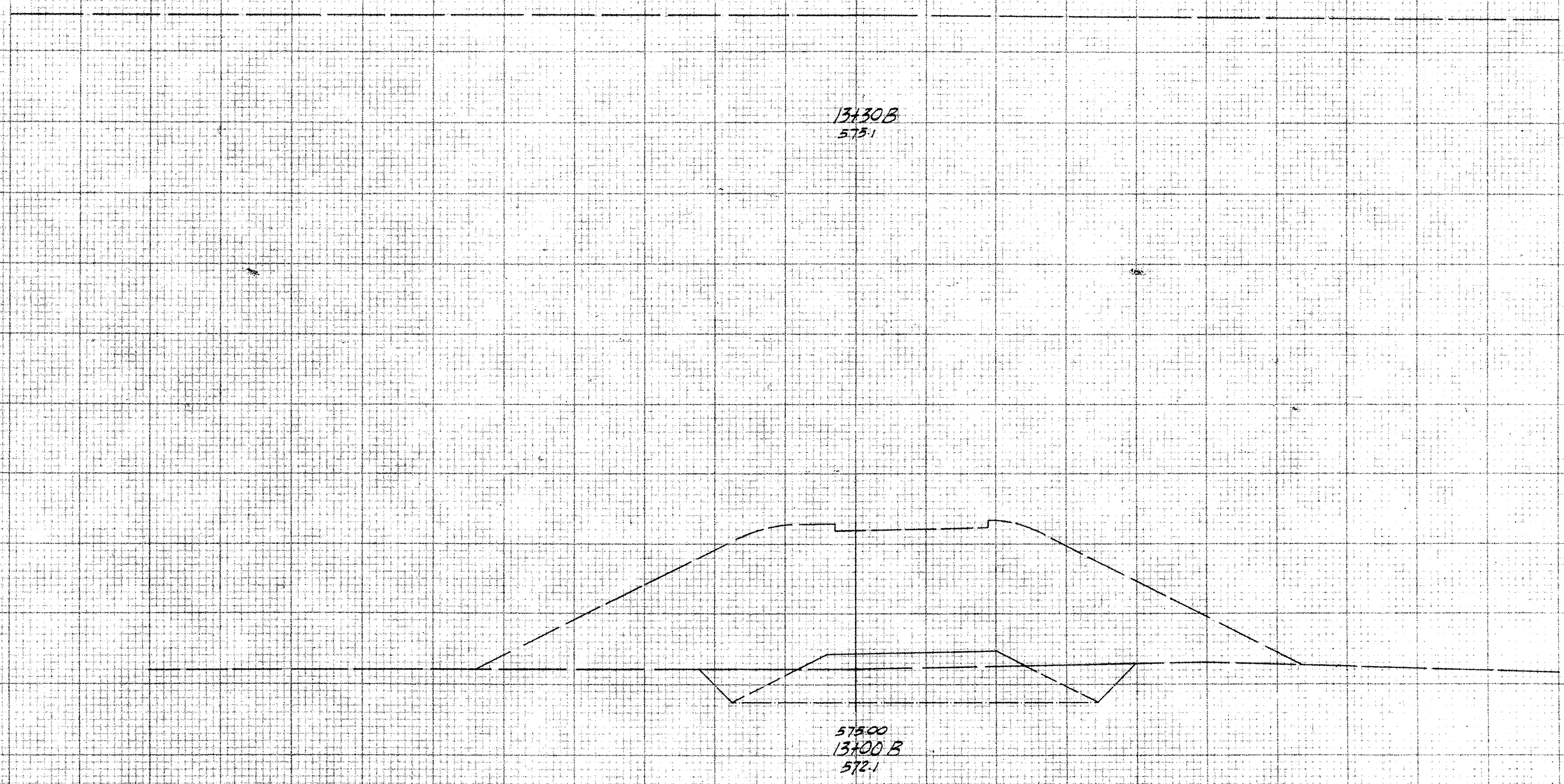
OTT- 2- 27.33 ERI - 2-0.15

SEEDING	
END WIDTH	SQ. YD.

END WORK STA 13+30B

STA 5+93 B TO STA 13+30B
E-4 BORROW

A	2,945	C.Y.
C	4,552	C.Y.
E	6,902	C.Y.
F	126	C.Y.
L-9 SEEDING.	1,307	S.Y.

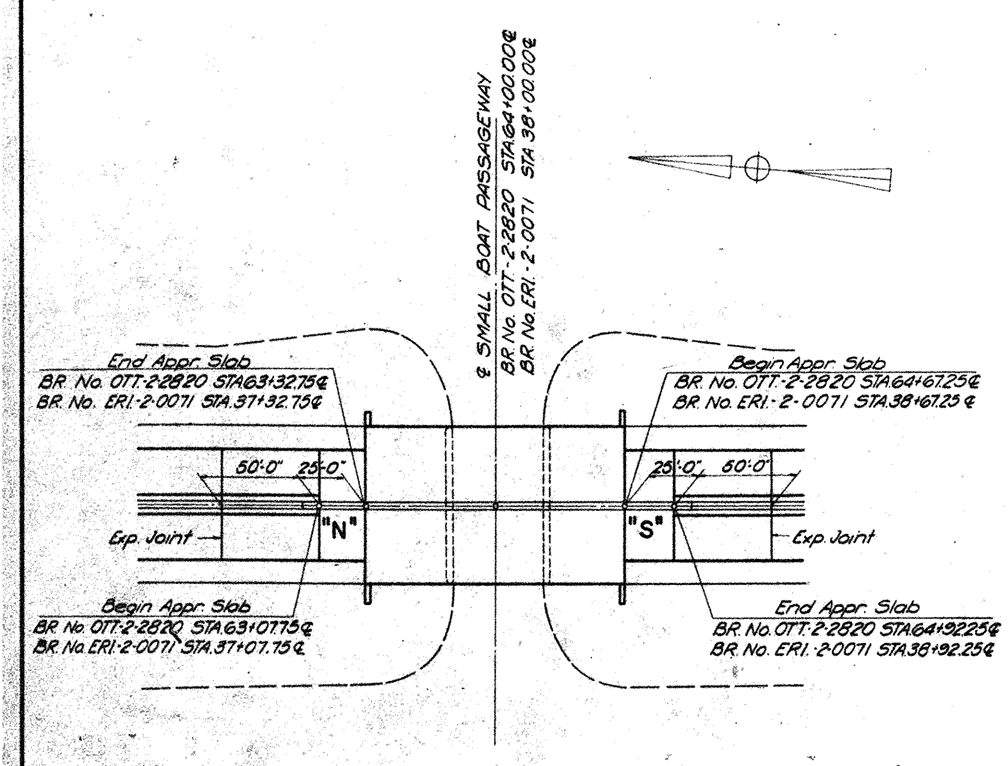


C		E	
Area	Vol.	Area	Vol.
0		0	
	26		144
56		260	

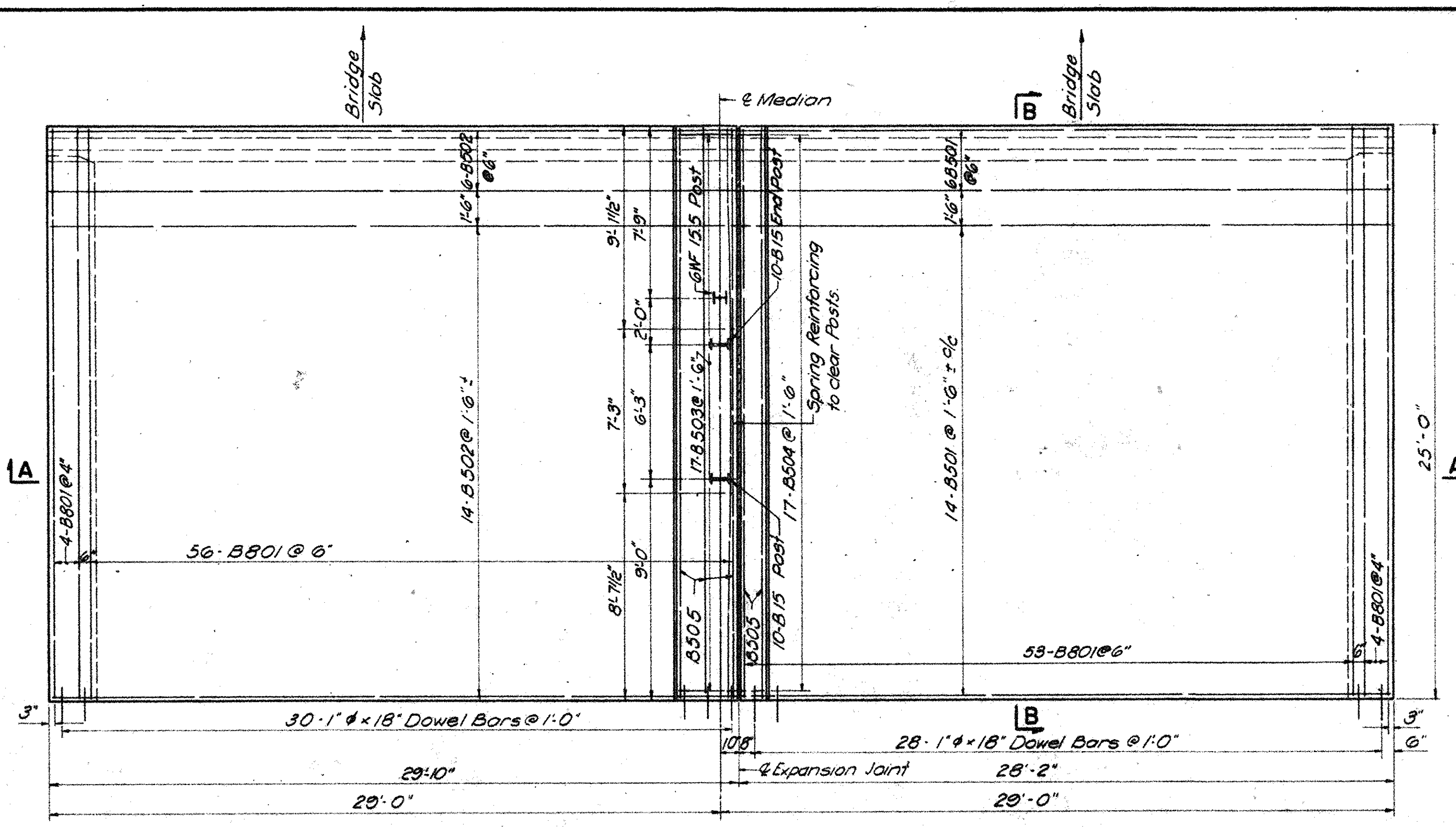
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

91
H8

OTT-2-27.36 ERI-2-0.15



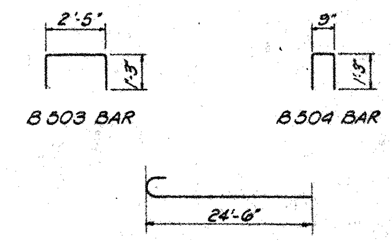
PLAN



PLAN
NORTH APPROACH SLAB "N"
SOUTH APPROACH SLAB "S" (OPP. HAND)

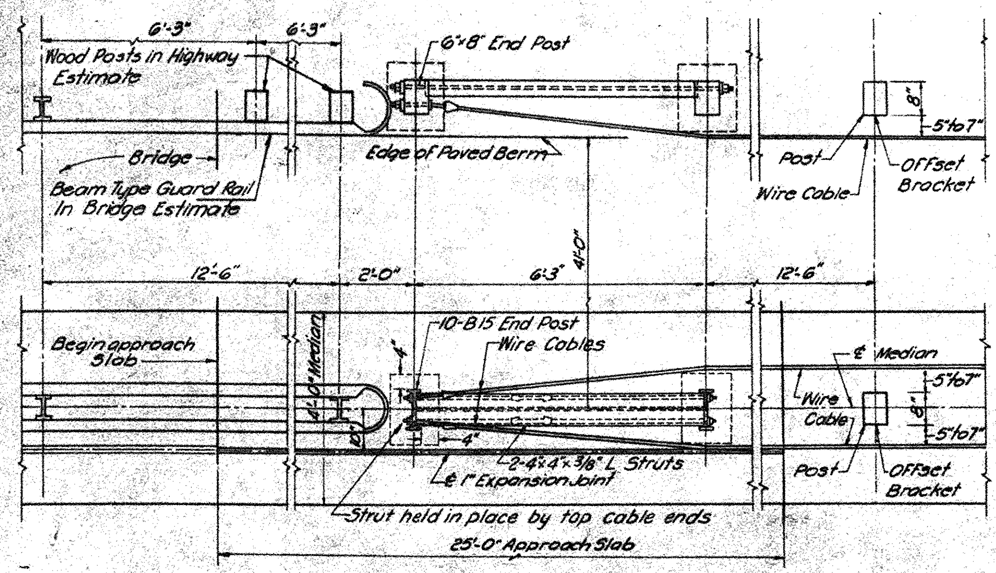
*REINFORCING STEEL LIST				
MARK	No.	LENGTH	SHAPE	TOT. WEIGHT
B501	40	27'-8"	Str.	1154
B502	40	29'-4"	Str.	1224
B503	34	4'-9"	Bt	168
B504	34	3'-1"	Bt	109
B505	10	24'-6"	Str.	256
B801	234	25'-7"	Bt	15984

* Reinforcing Steel Quantities as shown above are the Quantities for one bridge only.

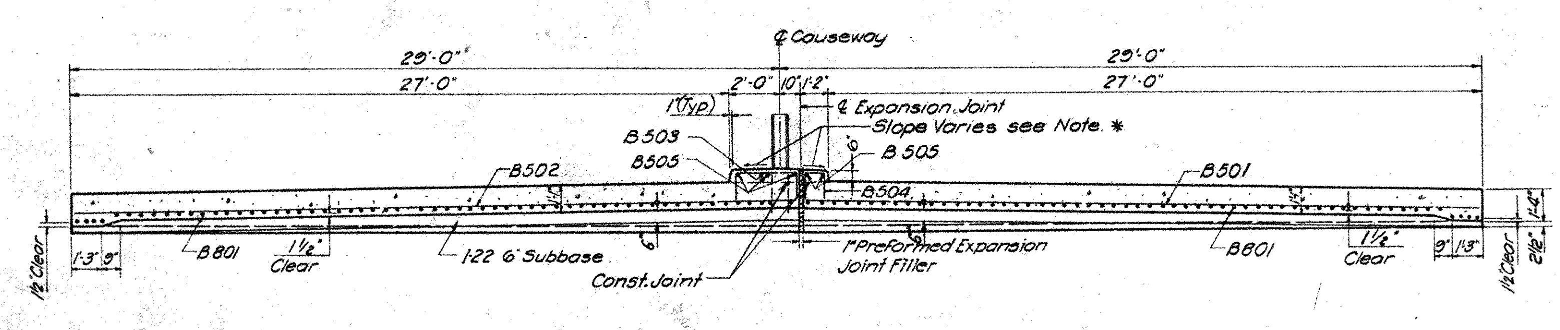


NOTE:

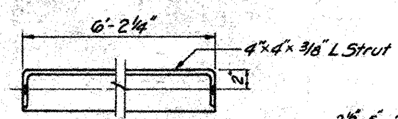
1. Bar size is indicated in the Bar Mark. The first digit indicates the bar size number. For example B503 is a No. 5 size bar.
2. Bar Dimensions are out to out.
3. Payment for Reinforcing Steel & Expansion Joint Filler & for thickened Median Section as detailed shall be included in the unit price bid for Item I-7 Reinforced Concrete Approach Slab.
4. Expansion Joint to remain on right hand side looking toward increasing Stations.



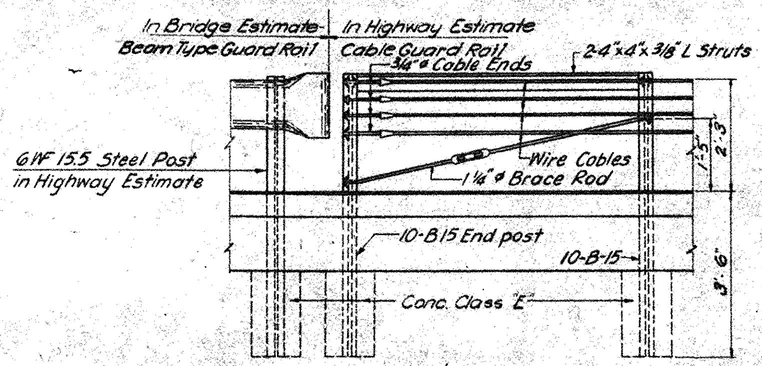
PLAN



SECTION A-A

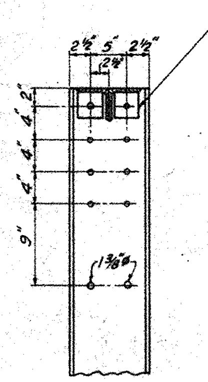


DETAIL OF STRUT



FRONT ELEVATION

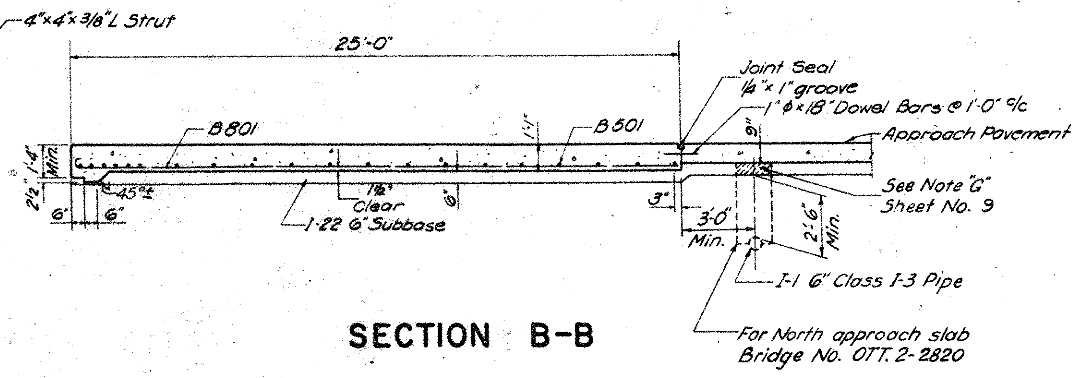
NOTE:
For additional details & Notes see Standard Construction Drawings I-15 No.1, I-15 No.2



All holes 7/8"φ except as noted

END POST

SPECIAL ANCHOR DETAIL
GUARD RAIL



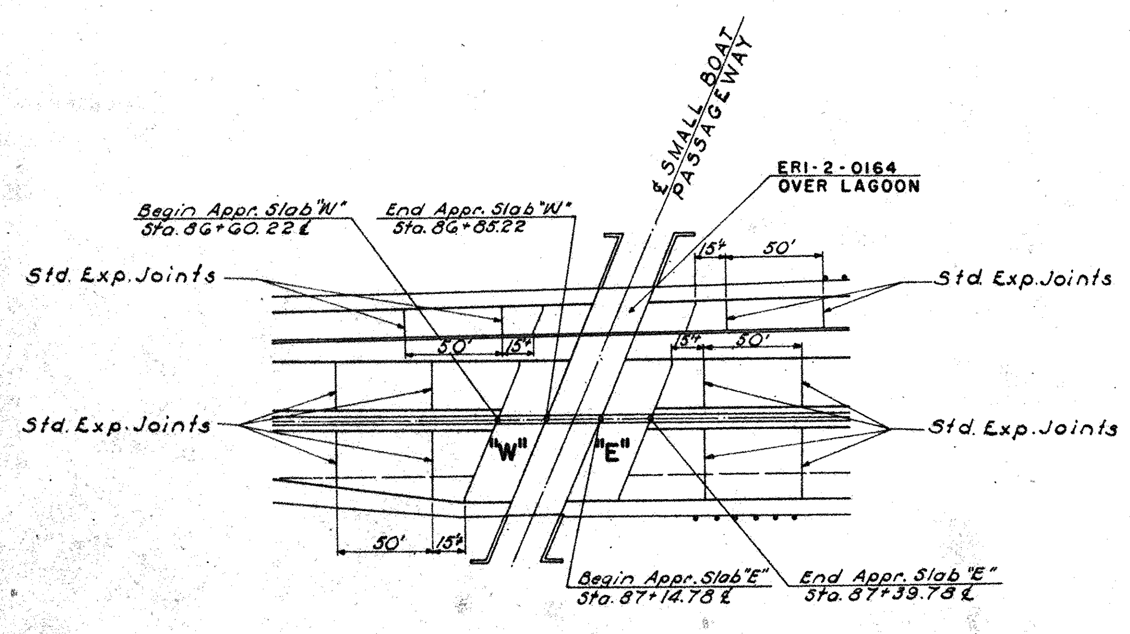
SECTION B-B

* NOTE:
The Crown of the Median shall be Transitioned from the Standard Section used on the Approach Pavement to the Section used on the Bridge within the Limits of the Approach Slab.

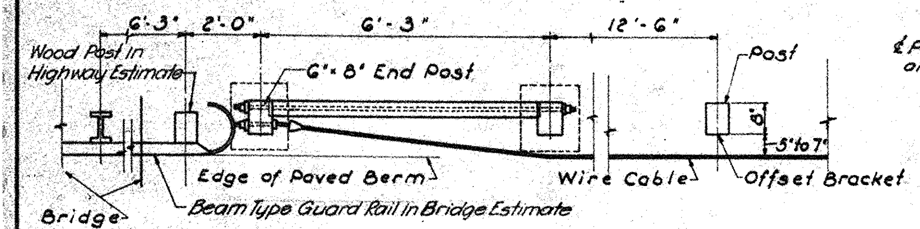
APPROACH SLABS NOT A PART OF THIS CONTRACT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

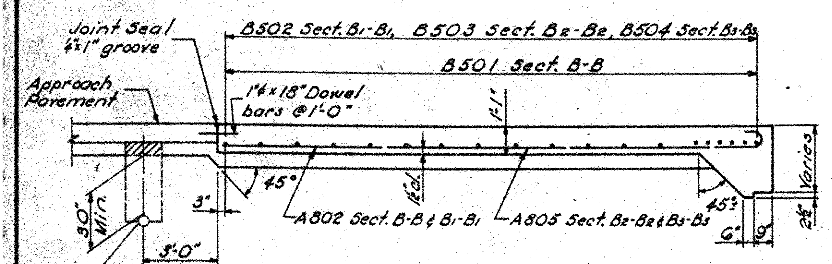
OTT-2-27.36 ERI-2-0.15



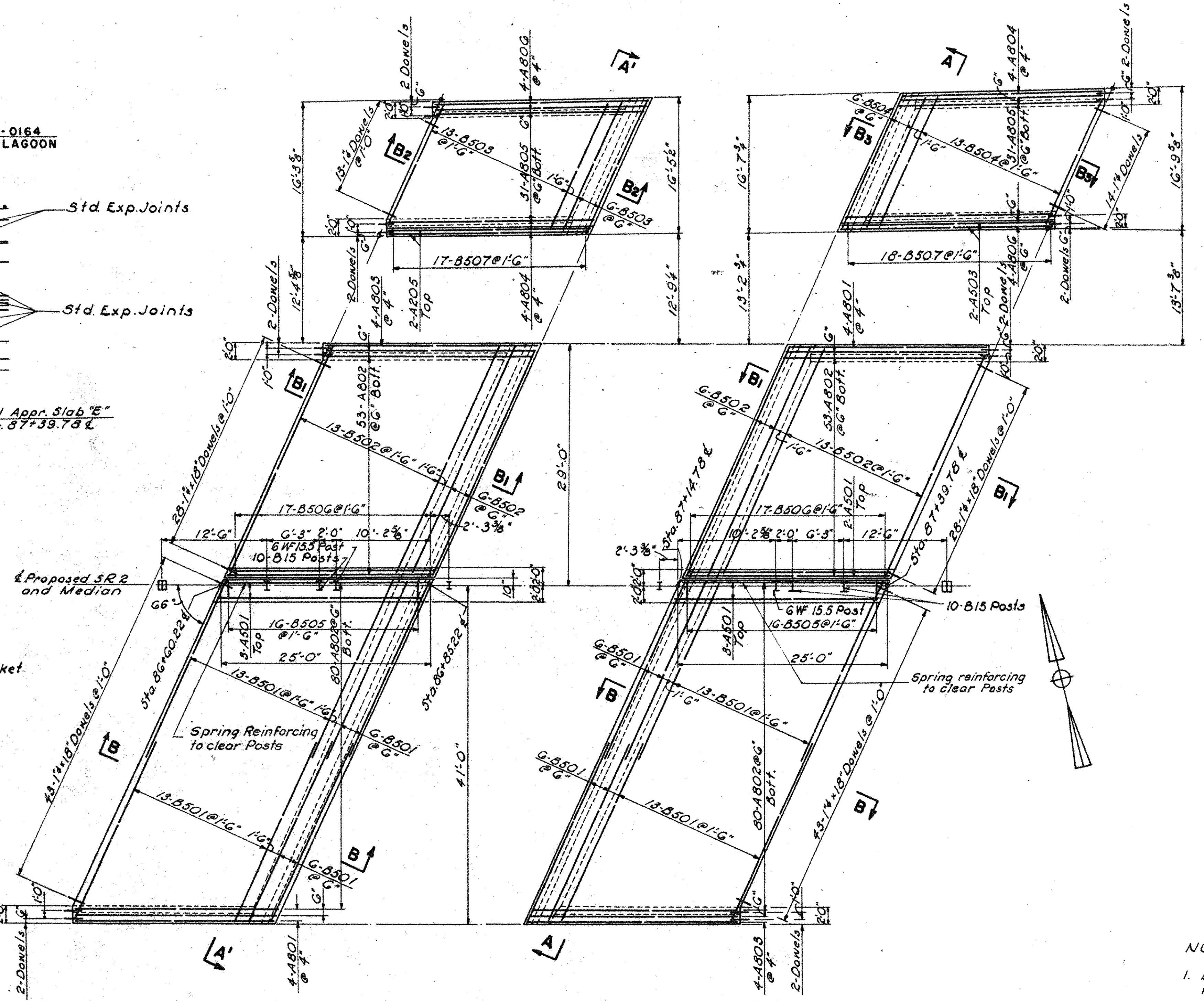
PLAN



SPECIAL ANCHOR DETAIL GUARD RAIL



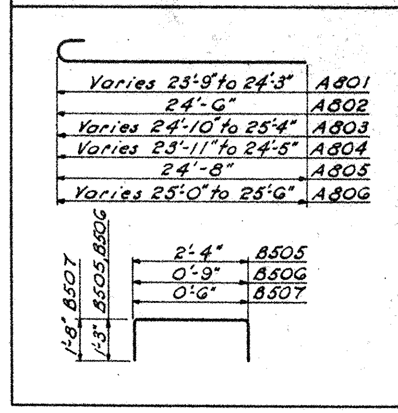
SECTION B-B
SECTIONS B_1-B_1, B_2-B_2, B_3-B_3

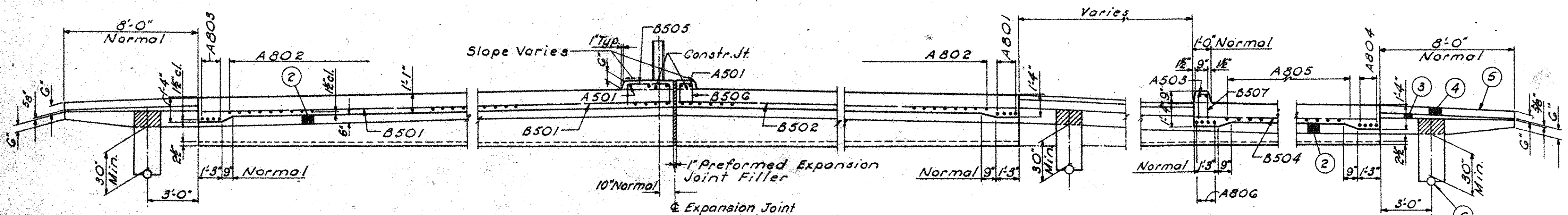


PLAN

REINFORCING STEEL LIST				
MARK	NO.	LENGTH	SHAPE	TOT. WEIGHT
A501	10	24'-6"	Str.	256
A502	2	23'-11"	Str.	50
A503	2	25'-1"	Str.	52
B501	76	23'-6"	Str.	1863
B502	38	30'-4"	Str.	1202
B503	19	17'-6"	Str.	347
B504	19	17'-11"	Str.	355
B505	32	4'-8"	Bt.	156
B506	34	3'-1"	Bt.	109
B507	35	3'-8"	Bt.	134
A801	2 Series of 4 Bars	24'-10" thru 25'-4" varies by 2"	Bt.	536
A802	266	25'-7"	Bt.	18,170
A803	2 Series of 4 Bars	25'-11" thru 25'-6" varies by 2"	Bt.	559
A804	2 Series of 4 Bars	25'-0" thru 25'-6" varies by 2"	Bt.	539
A805	62	25'-9"	Bt.	4,263
A806	2 Series of 4 Bars	26'-1" thru 26'-7" varies by 2"	Bt.	562

BENDING DIAGRAM





SECTION A-A
SECTION A'-A' (OPPOSITE HAND)

NOTE:

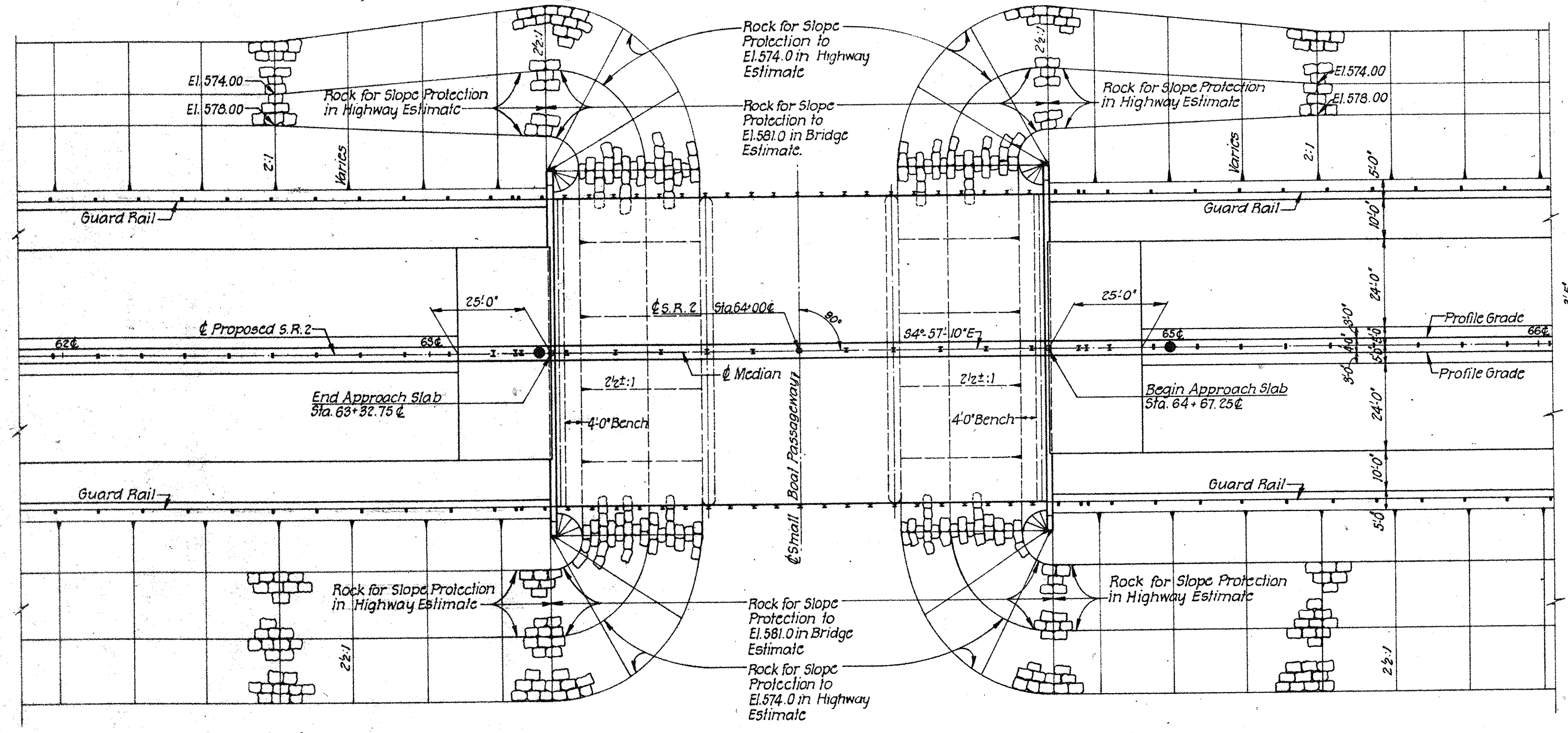
1. Bar size is indicated in the bar mark. The first digit, where three digits are used, indicates the bar size number. A501 is a No. 5 size bar.
2. Bar dimensions are out to out.
3. The Crown of the Median shall be transitioned from the Standard Section used on the Approach Pavement to the Section used on the Bridge within the Limits of the Approach Slab.
4. Payment for Reinforcing Steel and Expansion Joint Filler and for thickened median and curb sections as detailed shall be included in the unit price bid for Item I-7 Reinforced Concrete Approach Slab.
5. For Course Legend see Sheet No. 5
6. For Outside Guard Rail Connection Details see Special Anchor Detail on this Sheet
7. For Barrier Rail Connection Details see Special Anchor Detail Sheet No. 91

APPROACH SLABS NOT A PART OF THIS CONTRACT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F1042(13)	

93
~~118~~

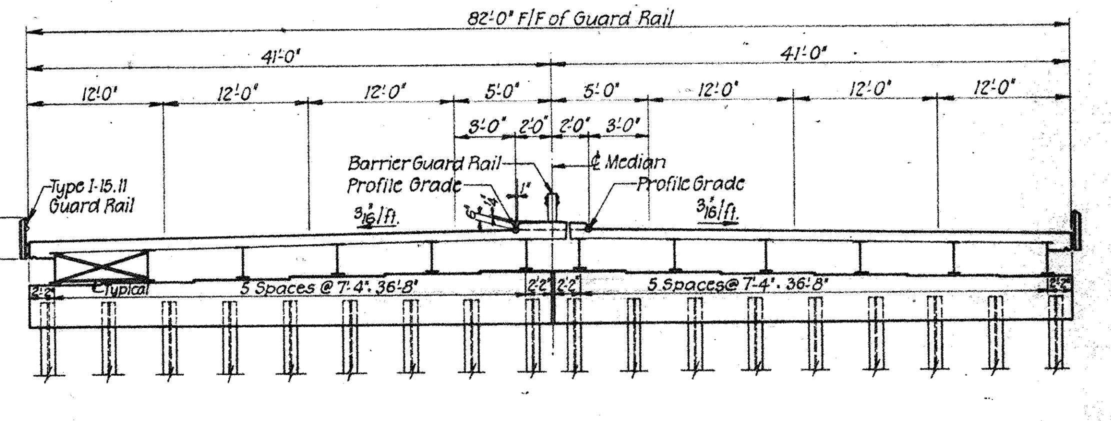
OTT-2-27.36
ERI-2-0.15



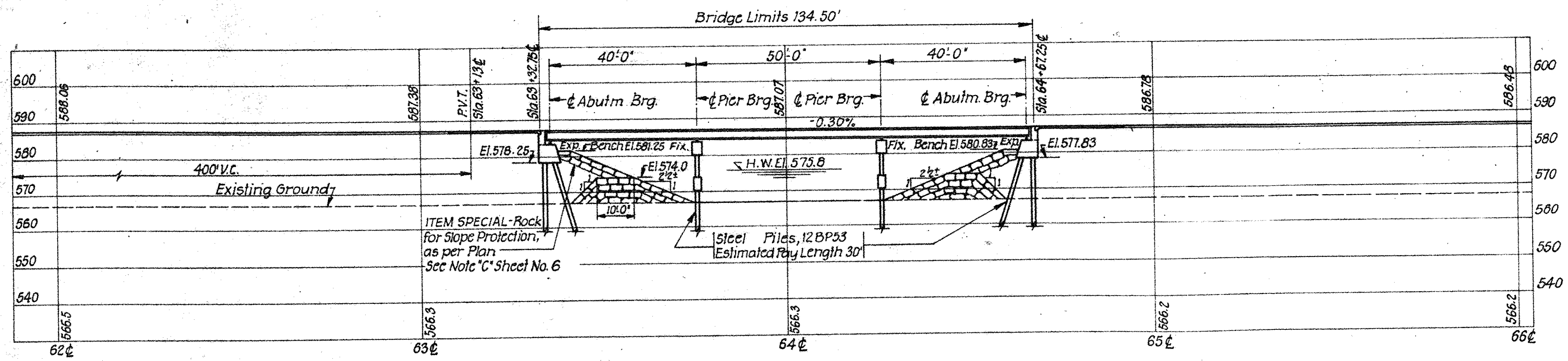
PLAN

● Indicate location of borings

FOUNDATION SOUNDINGS. Foundation design and foundation quantities are based on a study of rod soundings and soil-samplings 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.



SECTION THRU BRIDGE



PROFILE ON GRADE LINE OF PROPOSED S.R. 2

PROPOSED STRUCTURE

TYPE: Continuous Steel Beam with reinforced Conc. Deck and Substructure
SPANS: 40'-50'-40'
SKEW: 0°
WEARING SURFACE: 1" Monolithic
ROADWAY: 82'-0" Face to face of Guard Rail
LOAD FREQUENCY: C.F. 2000(?) Adequate for AASHO alternate loading
APPROACH SLABS: 25' Long
ALIGNMENT: Tangent

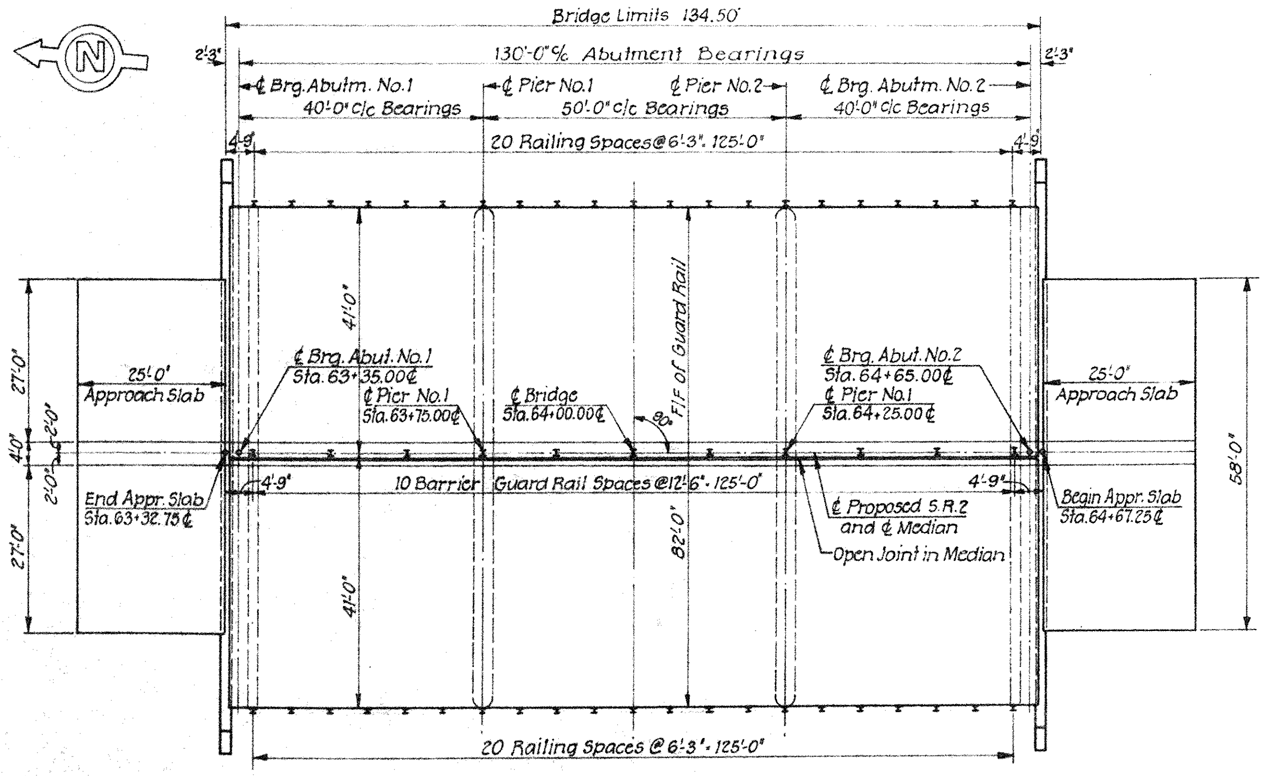
KING & GAVARIS
CONSULTING ENGINEERS

SITE PLAN

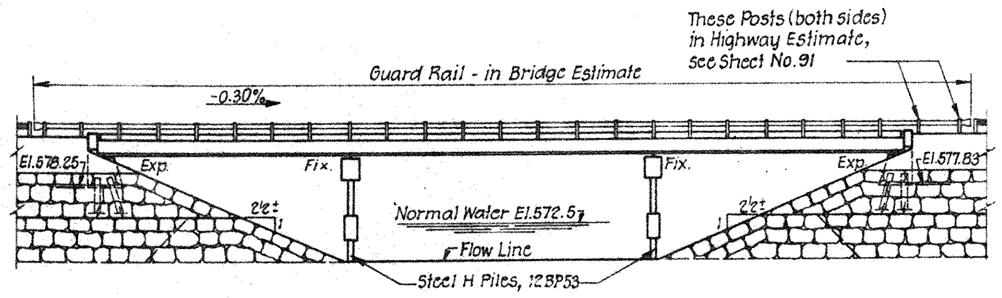
BRIDGE NO. OTT-2-2820
OVER SANDUSKY BAY
(SMALL BOAT PASSAGEWAY)

OTTAWA COUNTY STA.63+32.75¢ STA.64+67.25¢

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVISIONS
AERIAL SURVEY	AERIAL SURVEY	T.J.L.	V.B.	T.J.L.	



PLAN



ELEVATION

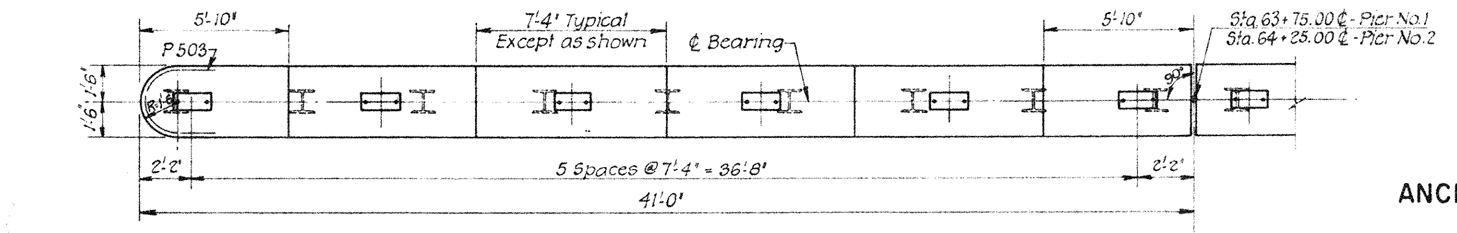
	PIER ELEVATIONS						
	A .18	B .30	C .41	D .53	E .64	F .75	G
PIER NO. 1	583.14	583.26	583.37	583.49	583.60	583.71	579.57
PIER NO. 2	582.99 (3.03)	583.11 (.15)	583.22 (.26)	583.34 (.38)	583.45 (.49)	583.56 (.60)	579.50

PIER NOTES
1. All reinforcing steel shall be 2" clear from face of concrete unless otherwise shown
2. For Reinforcing Steel List, see Sheet No 97

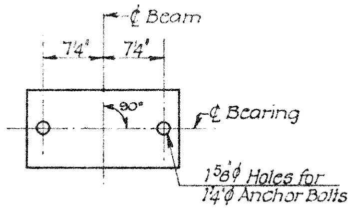
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F1042(13)	

94/118

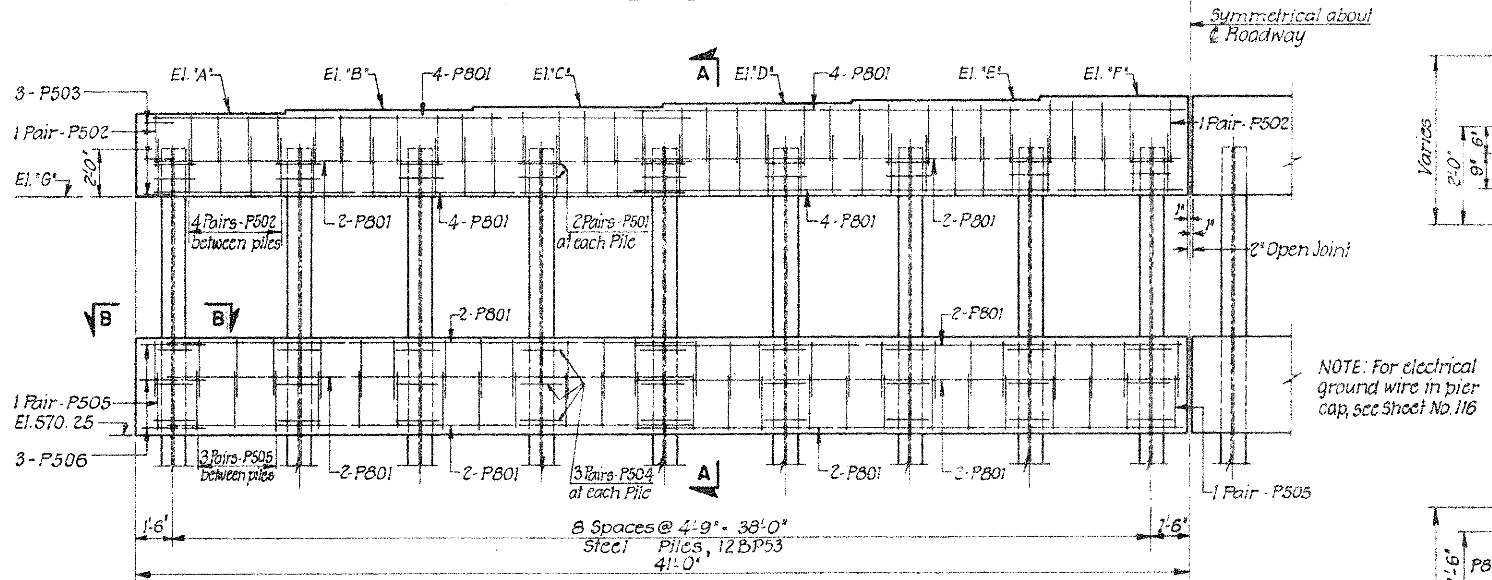
OTT-2-27.36
ERI-2-0.15



HALF PLAN

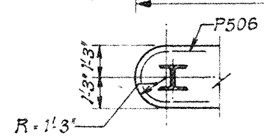


ANCHOR BOLT LAYOUT

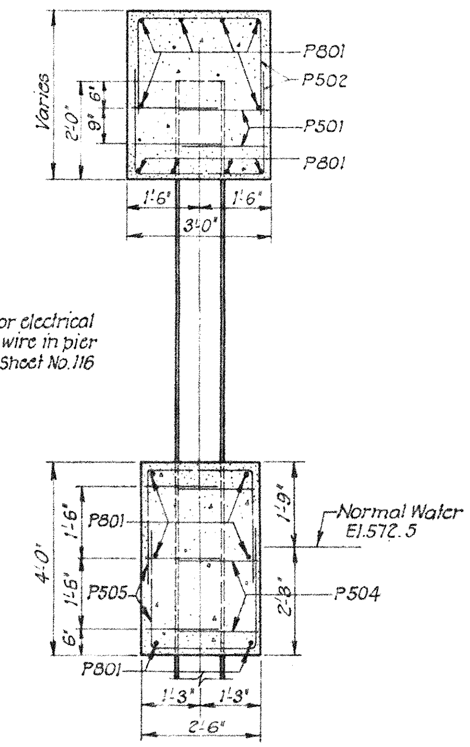


HALF ELEVATION

CAPPED PILE PIERS



SECTION B-B



SECTION A-A

ESTIMATED QUANTITIES									
Item	Total	Unit	Description	Super.	Abut.	Piers	Gen'l.		
E-2	143	Cu.Yd.	Unclassified Excavation		143				
S-1	320	Cu.Yd.	Class "C" Concrete, Superstructure	320					
S-1	128	Cu.Yd.	Class "C" Concrete, Pier Caps & Diaphragms			128			
S-1	210	Cu.Yd.	Class "E" Concrete, Abutments		210				
S-3	15	Lin.Ft.	Waterproofing premolded sealing strip		15				
S-4	118,345	Lb.	Reinforcing Steel	90,505	14,938	12,902			
S-7	243,200	Lb.	Structural Steel	243,200					
S-8	243,200	Lb.	Field painting of structural steel	243,200					
S-9	72	Sq.Ft.	1" thick preformed expansion joint filler		72				
S-14	304	Lin.Ft.	Railing (Type I-15, II with galvanized steel posts and bolts)	304					
S-14	152	Lin.Ft.	Railing (Barrier Guard-Type I-15, II with galvanized steel posts & bolts)	152					
S-16	Lump	Lump Sum	First Test Pile				Lump		
S-18	2520	Lin.Ft.	Steel Piles, 12 BP 53		1440	1080			
S-25	Lump	Lump Sum	Electric Lighting System*				Lump		
S-29	50	Cu.Yd.	Porous Backfill		50				
SPECIAL	700	Cu.Yd.	Rock for Slope Protection, as per Plan**				700		
SPECIAL	320	Each	Water-reducing set-retarding admixture***	320					

* For Quantities breakdown see Estimated Quantities - Lighting Sheet No. 115
** Rock for Slope Protection, as per plan see Note "C" Sheet No. 6
*** See Proposal Note.

GENERAL NOTES

REFERENCE shall be made to Standard Drawings AS-1-54 revised 12-1-54, CSB-1-55 Sheets 1 & 2 revised 2-2-59.

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 therefore.

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

PILES shall be driven to a minimum bearing capacity of 30 tons per pile for the abutments and 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.

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.

PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope (bottom of rock slope protection) and to the level of the subgrade for a distance of 200 ft. back of the abutments, after which excavation shall be made for the abutment. All embankment should be in place before the abutments are constructed.

KING & GAVARIS
CONSULTING ENGINEERS

GENERAL PLAN AND PIERS

BRIDGE NO. OTT-2-2820
OVER SANDUSKY BAY
(SMALL BOAT PASSAGEWAY)

OTTAWA COUNTY
STA. 63+32.75℄
STA. 64+67.25℄

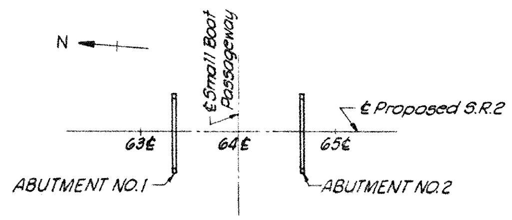
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
T.T.L.	V.B.	P.A.M.	T.T.L.	[illegible]	12-8-61	9-17-62

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F1042 (13)	

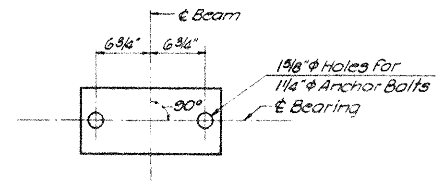
OTT-2-27.36
ERI-2-0.15

95/118

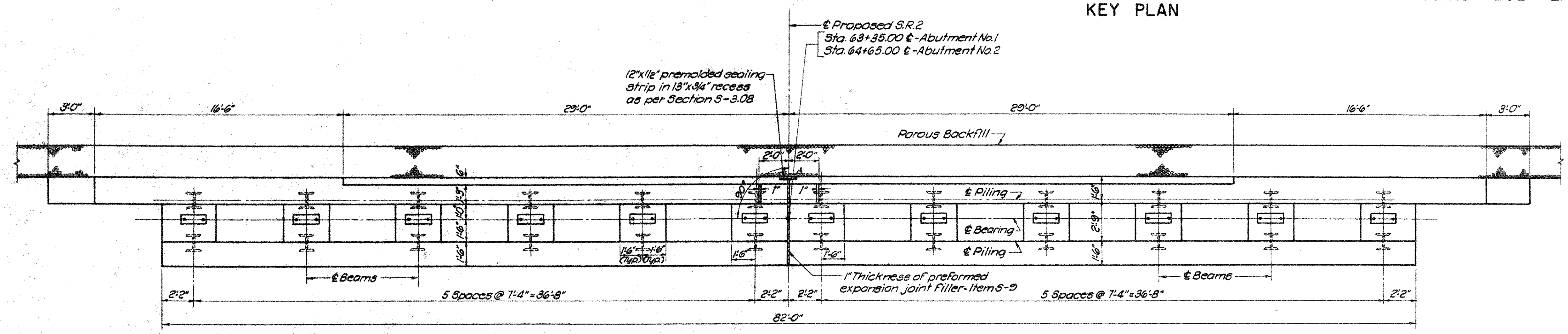
POROUS BACKFILL shall extend upward to the approach slab and to the paved shoulders, and outward to the surface of the embankment slopes. Excavation therefore, in excess of that required for the construction of the abutment, shall be considered as paid for in the price per cu. yd. paid for porous backfill.



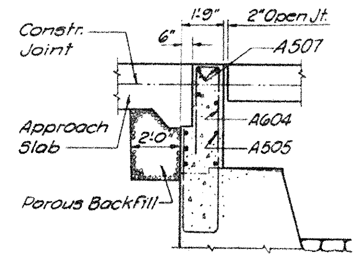
KEY PLAN



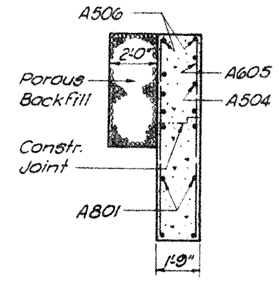
ANCHOR BOLT LAYOUT



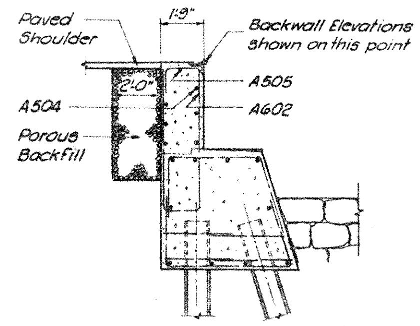
PLAN



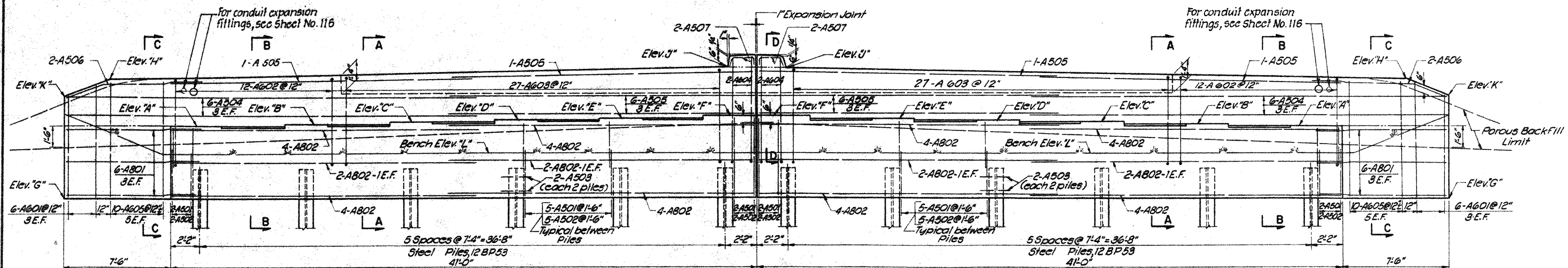
SECTION D-D



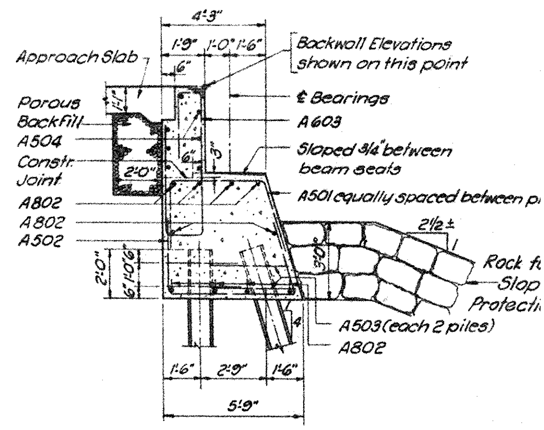
SECTION C-C



SECTION B-B



ELEVATION



SECTION A-A

ABUTMENT ELEVATIONS											
	A .28	B .39	C .50	D .62	E .73	F .85	G	H	J	K	L
ABUTMENT NO.1	583.24	583.35	583.46	583.58	583.69	583.81	578.25	586.59	587.27	585.39	581.25
ABUTMENT NO.2	582.85	582.96	583.08	583.19	583.31	583.42	577.83	586.20	586.88	585.00	580.83
	.89	3.00	.12	.23	.35	.46					

NOTES:

1. All reinforcing steel shall be 2" clear from face of concrete unless otherwise shown.
2. Designations used are as follows: E.F. = Each Face.
3. For Reinforcing Steel List, see Sheet No. 97

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ABUTMENTS

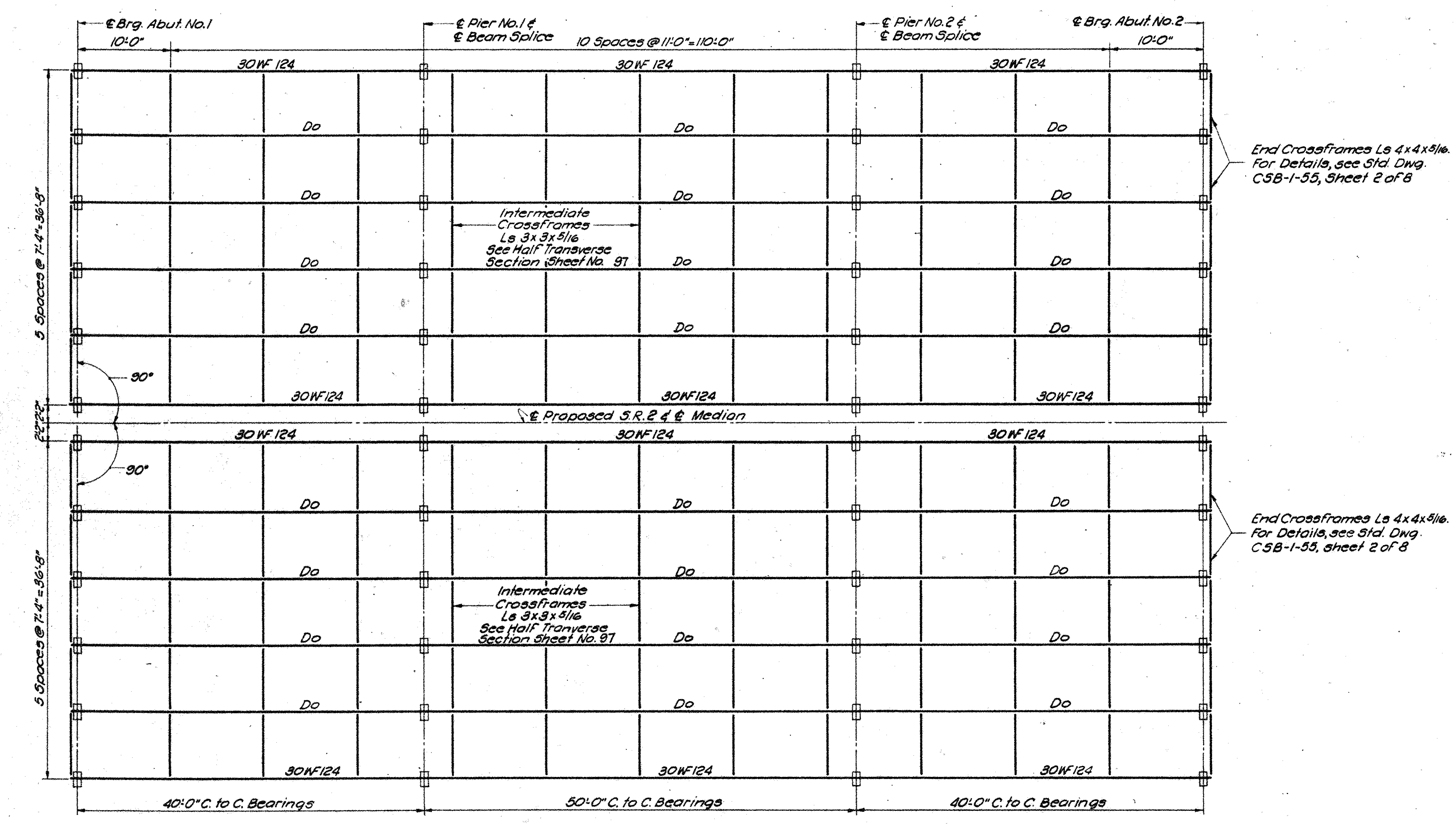
BRIDGE NO. OTT-2-2820
OVER SANDUSKY BAY
(SMALL BOAT PASSAGEWAY)
OTTAWA COUNTY

STA. 63+32.75 ℄
STA. 64+67.25 ℄

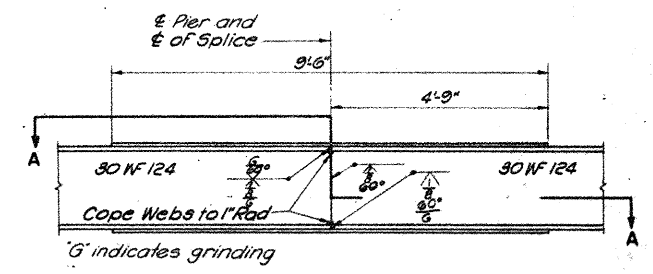
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
V.J.L.	P.A.M.	A.M.	V.J.L.	[illegible]	12-8-61	9-17-

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F1042 (13)	

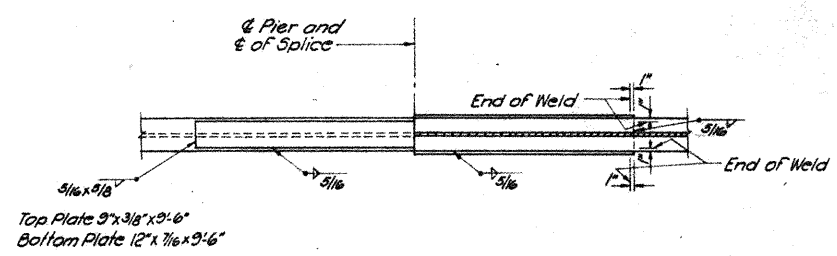
OTT-2-27.36
ERI-2- 0.15



FRAMING PLAN



ELEVATION



SECTION A-A

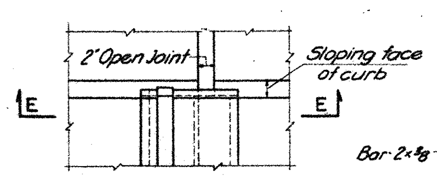
BEAM SPLICE DETAILS

BEAM SPLICE WELDING PROCEDURE

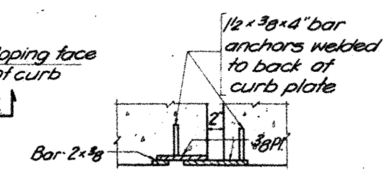
1. Raise the Abutment ends of the beams 3/8".
2. Butt-weld the beam flanges and web, using the following sequence: make two passes on each flange, then two on the web; repeat, using one pass at each location, until welds are completed.
3. Weld the bottom and top moment plates.
4. Lower the beam ends to final position.

NOTES:

1. For Bearing Plate Details see Std. Dwg. CSB-1-55 Sheet No. 1 of 8.
2. Provide Bumper Ls-8"x6"x3/4" at Abutments, see Standard Drawing CSB-1-55, sheet No. 1 of 8.

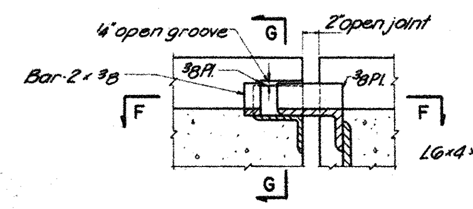


PART PLAN

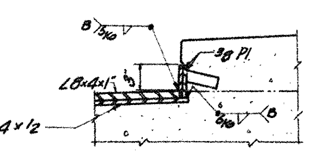


SECTION F-F

DEFLECTIONS AND CAMBER				
LOCATION	OUTSIDE BEAMS		INSIDE BEAMS	
	END SPAN	MID. SPAN	END SPAN	MID. SPAN
Deflection due to Wt. of steel	0	0	0	0
Deflection due to remaining D.L.	1/8"	1/8"	1/8"	1/8"
Sum of Deflections	1/8"	1/8"	1/8"	1/8"
Required Camber	0	0	0	0



SECTION E-E



SECTION G-G

CURB PLATE DETAILS AT MEDIAN

KING & GAVARIS
CONSULTING ENGINEERS

STEEL FRAMING PLAN

BRIDGE NO. OTT-2-2820
OVER SANDUSKY BAY
(SMALL BOAT PASSAGEWAY)
OTTAWA COUNTY

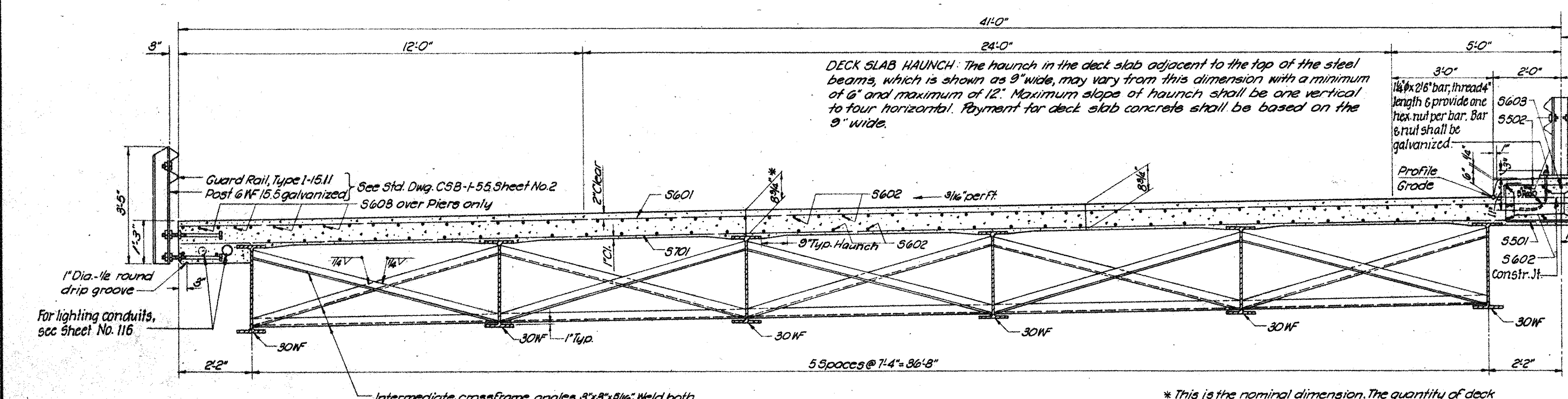
STA. 63+32.75 ℄
STA. 64+67.25 ℄

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
V.J.L.	A.J.	A.M.B.	V.J.L.		12-8-61	

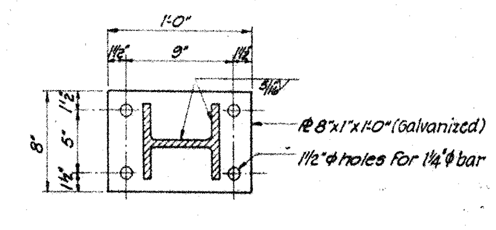
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F1042 (13)	

97/148

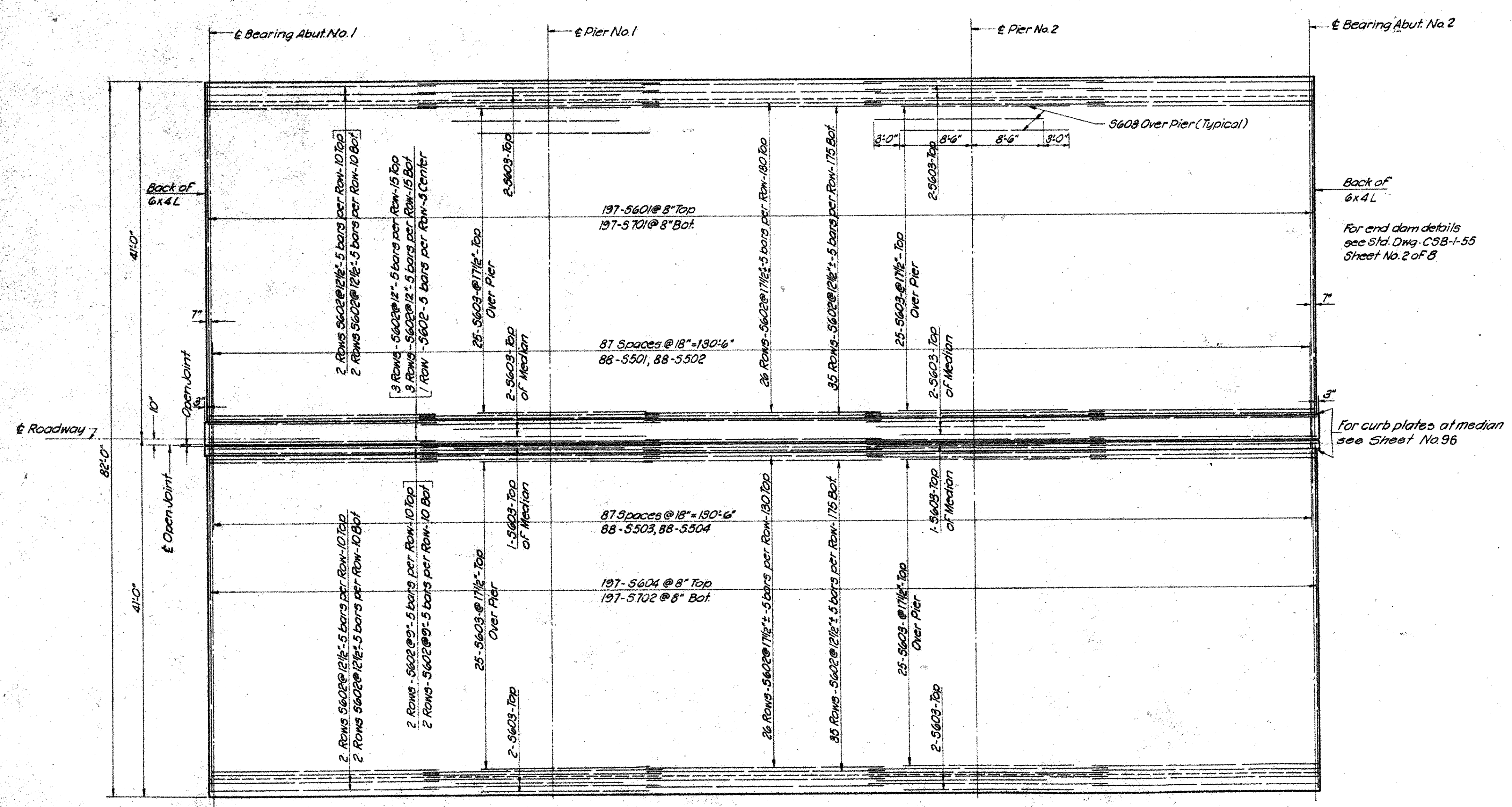
OTT-2-27.36
ERI-2-0.15



HALF TRANSVERSE SECTION



DETAIL "A"



SLAB REINFORCING

REINFORCING STEEL LIST

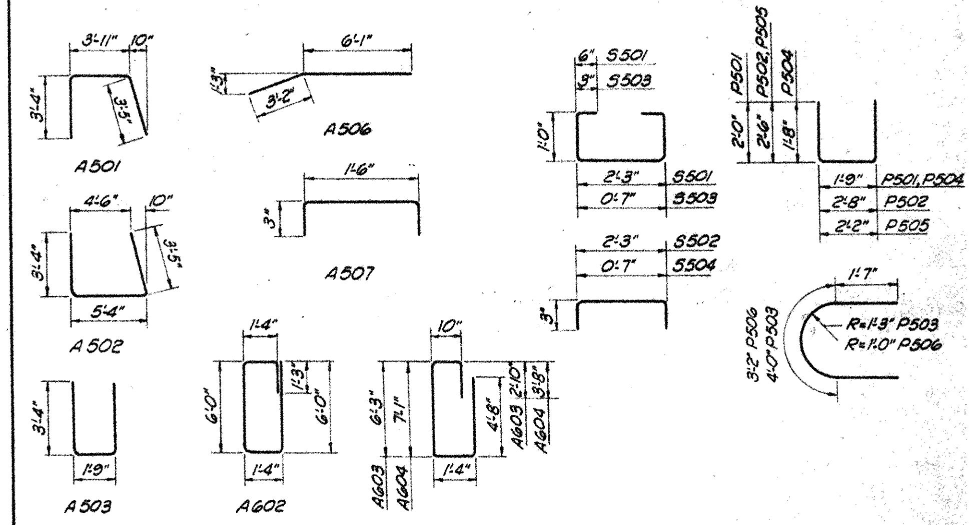
MARK	LENGTH	SHAPE	NO.	WEIGHT
ABUTMENTS				
A 501	10'-6"	Bt.	116	1270
A 502	11'-11"	Bt.	116	1442
A 503	8'-3"	Bt.	96	826
A 504	28'-8"	Str.	24	718
A 505	21'-2"	Str.	32	706
A 506	9'-3"	Bt.	8	77
A 507	1'-10"	Bt.	8	15
A 601	7'-0" thru 7'-10" Varies by 5"	Str.	8-Series of 3 bars	267
A 602	15'-8"	Bt.	48	1130
A 603	15'-8"	Bt.	108	2541
A 604	17'-4"	Bt.	8	208
A 605	8'-0"	Str.	40	481
A 801	10'-0"	Str.	24	641
A 802	21'-7"	Str.	80	4610
PIERS				
P 501	5'-7"	Bt.	144	899
P 502	7'-6"	Bt.	272	2128
P 503	7'-2"	Bt.	12	90
P 504	4'-9"	Bt.	216	1070
P 505	7'-0"	Bt.	208	1519
P 506	6'-4"	Bt.	12	79
P 801	21'-0"	Str.	128	7177

MARK	LENGTH	SHAPE	NO.	WEIGHT
SUPERSTRUCTURE				
S 501	4'-11"	Bt.	88	451
S 502	2'-7"	Bt.	88	237
S 503	2'-9"	Bt.	88	252
S 504	0'-11"	Bt.	88	84
S 601	41'-4"	Str.	197	12,230
S 602	27'-10"	Str.	705	20,473
S 603	20'-0"	Str.	114	3425
S 604	39'-8"	Str.	197	11,737
S 701	41'-4"	Str.	197	16,643
S 702	39'-8"	Str.	197	15,973
REPLACEMENT BARS				
RE 5	5'-7"	Str.	1	
RE 6	5'-11"	Str.	4	
RE 7	6'-2"	Str.	2	
RE 8	6'-6"	Str.	1	

If reinforcing bars are fabricated from stock which has previously been tested approved by the OHIO Highway Testing Laboratory, test samples as provided in Sec. S-4.02 need not be furnished and replacement bars will not be required.

NOTES

1. Bar size is indicated in the bar mark. The first digit where three digits are used, indicates the bar size number. For example, A601 is a No. 6 size bar.
2. Bar dimensions are out to out.



NOTE:

Slab thicknes includes 1" monolithic wearing surface.

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SUPERSTRUCTURE ROADWAY SLAB & REINFORCING STEEL LIST

BRIDGE NO. OTT-2-2820
OVER SANDUSKY BAY
(SMALL BOAT PASSAGEWAY)
OTTAWA COUNTY

STA. 63+32.75 ℄
STA. 64+67.25 ℄

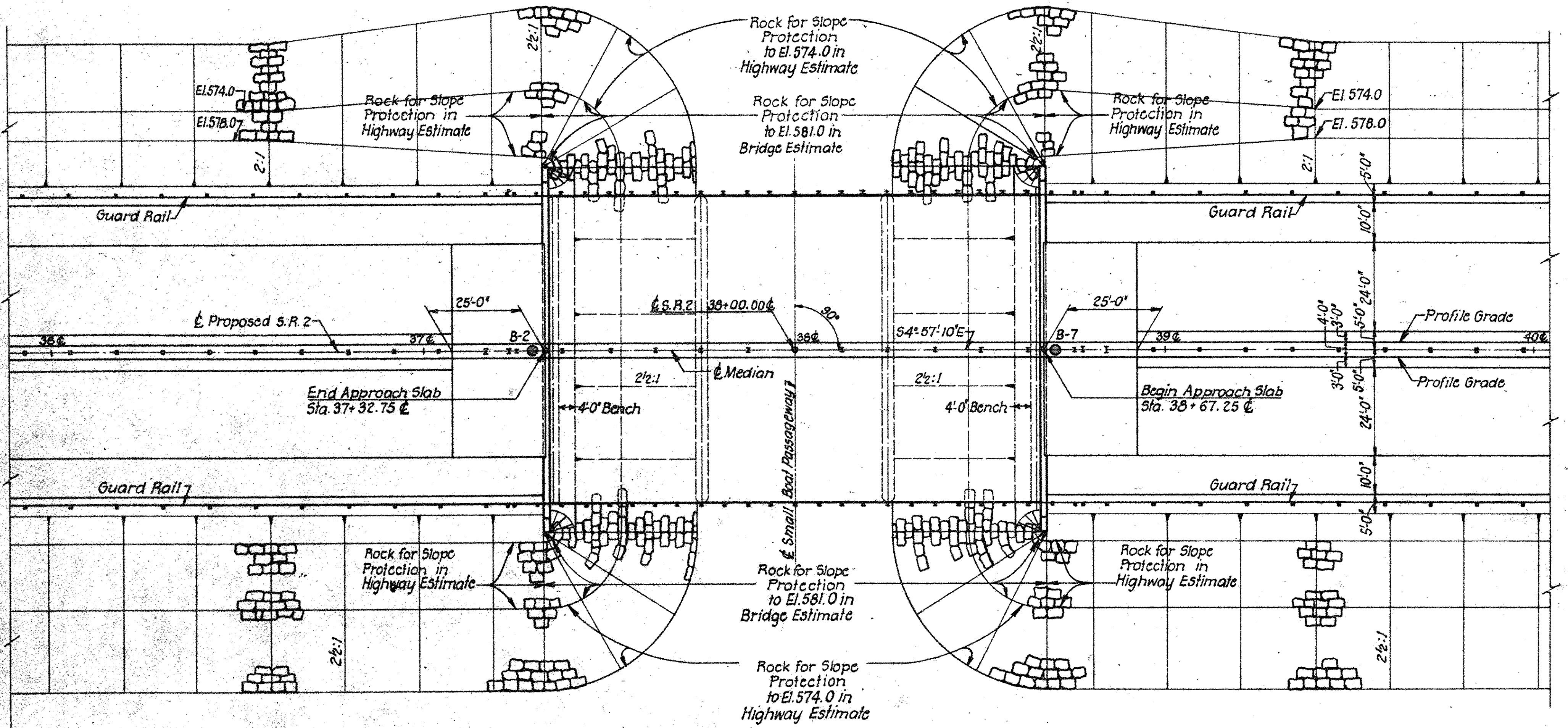
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
V.J.L.	P.A.M.	R.M.	V.J.L.		12-8-61	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F1042(13)	

98/48

OTT-2-27.36
ERI-2- 0.15

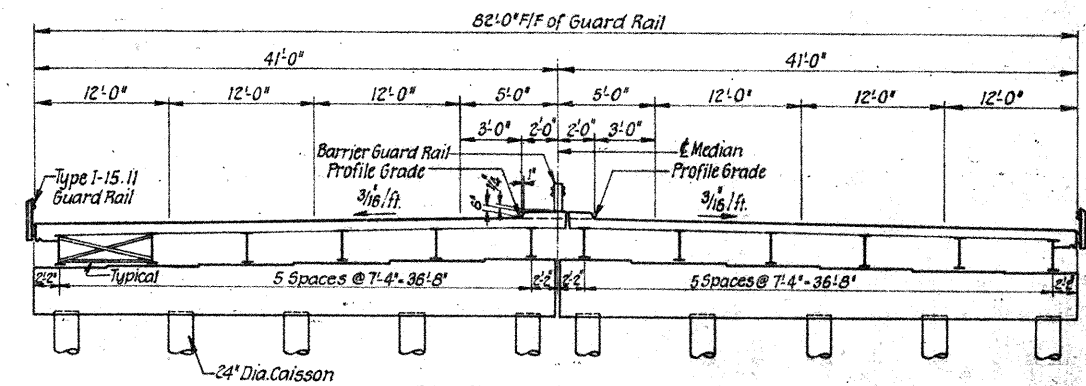
37+32.75
1.25
37+34.00 = 0.7071



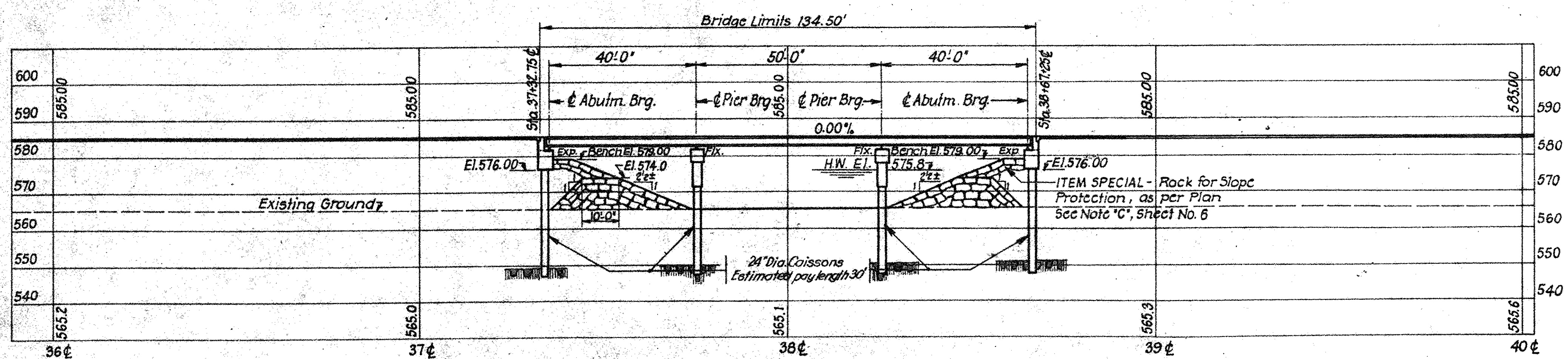
PLAN

● B2 and B-7 indicate location of borings.

FOUNDATION SOUNDINGS. Foundation design and foundation quantities are based on a study of rod soundings and soil-samplings 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.



SECTION THRU BRIDGE



PROFILE ON GRADE LINE OF PROPOSED S. R. 2

CAISSON NOTES

ITEM SPECIAL - DRILLED CAISSONS

DESCRIPTION. This item shall consist of furnishing and installing caissons of the kind and size called for on the Plans and in the following Specifications. Caissons shall be installed in accordance with these Specifications and in the location and manner and to the elevation shown on the Plans or as directed by the Director. It shall be the Contractor's responsibility to determine the proper lengths of shell or casings and caisson materials to be brought to the site and this responsibility shall not be considered in anyway affected if the approximate estimated pay lengths shown on the Plans are different from that found at the site.

MATERIALS. The materials for concrete shall be the same as for "Sec. S-1 Concrete for Structures." Concrete shall be Class "C." Metal shells or casings shall be water-tight and shall be of sufficient strength to withstand earth pressure during installation and before being filled with concrete. Weld metal for splices shall be in accordance with Sec. M-7.16.
The caissons are designed for a minimum bearing capacity of 75 tons per caisson.

METAL SHELLS OR CASINGS. Caissons shall be of a type using a metal shell or casing 24" in diameter with a ½" wall thickness and shall be left in place. If splices are required the Contractor shall make adequate preparation so as to reduce to a minimum the interruption of casing installation while the splice is being made. Welds shall be made at least two feet above ground.

INSTALLATION. The hole for the caisson shall be drilled through the overlying soil and into solid rock a minimum of 2 ft as specified on the Plans. When the proper depth has been reached, the hole shall be cleaned, dewatered, and inspected by the Engineer. Upon his approval, reinforcement may be then placed and concrete poured up to the elevation shown on the Plans. In all cases, the concrete mix, after pouring, shall fill completely the excavated space to the top of the caisson. The tops of the shells or casings shall be completely covered until the concrete is placed. Any accumulation of water or other foreign matter in the shell or casing shall be removed before placing the concrete.
However, if artesian water pressure is encountered, the concrete shall be placed by the tremie method. To counterbalance this pressure a full head of water must be maintained in the casing through extending the caisson length and filling with water or by another method approved by the Director.

DEFECTIVE CAISSONS. A caisson shall be removed and replaced at no additional cost to the State, if it is injured or if its location differs from the specified location by more than one inch at the top. During the installation, no jetting to aid in the penetration shall be permitted.
The caissons shall be installed straight and shall not be out of plumb more than two percent. If a caisson is out of plumb more than this, the design of the caisson shall be modified accordingly.

METHOD OF MEASUREMENT. The length of each caisson to be paid for shall be the completed and accepted length, measured along the axis of the caisson from the bottom of the drilled hole to 4" above the underside of the pier cap or abutment footing.

BASIS OF PAYMENT. The quantity of caissons, measured as described above, shall be paid for at the contract unit price per linear foot bid under "Item Special Drilled Caissons," complete in place, which price and payment shall constitute full compensation for furnishing all materials, labor and work, the use of tools and equipment and all incidentals necessary to complete this item.

PROPOSED STRUCTURE

TYPE: Continuous Steel Beam with reinforced Conc. Deck and Substructure
SPANS: 40'-50'-40'
SKEW: 0°
WEARING SURFACE: 1" Monolithic
ROADWAY: 82'-0" Face to Face of Guard Rail
LOAD FREQUENCY: C.F. 2000 ("Adequate for AASHO alternate loading")
APPROACH SLABS: 25' Long
ALIGNMENT: Tangent

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CONSULTING ENGINEERS

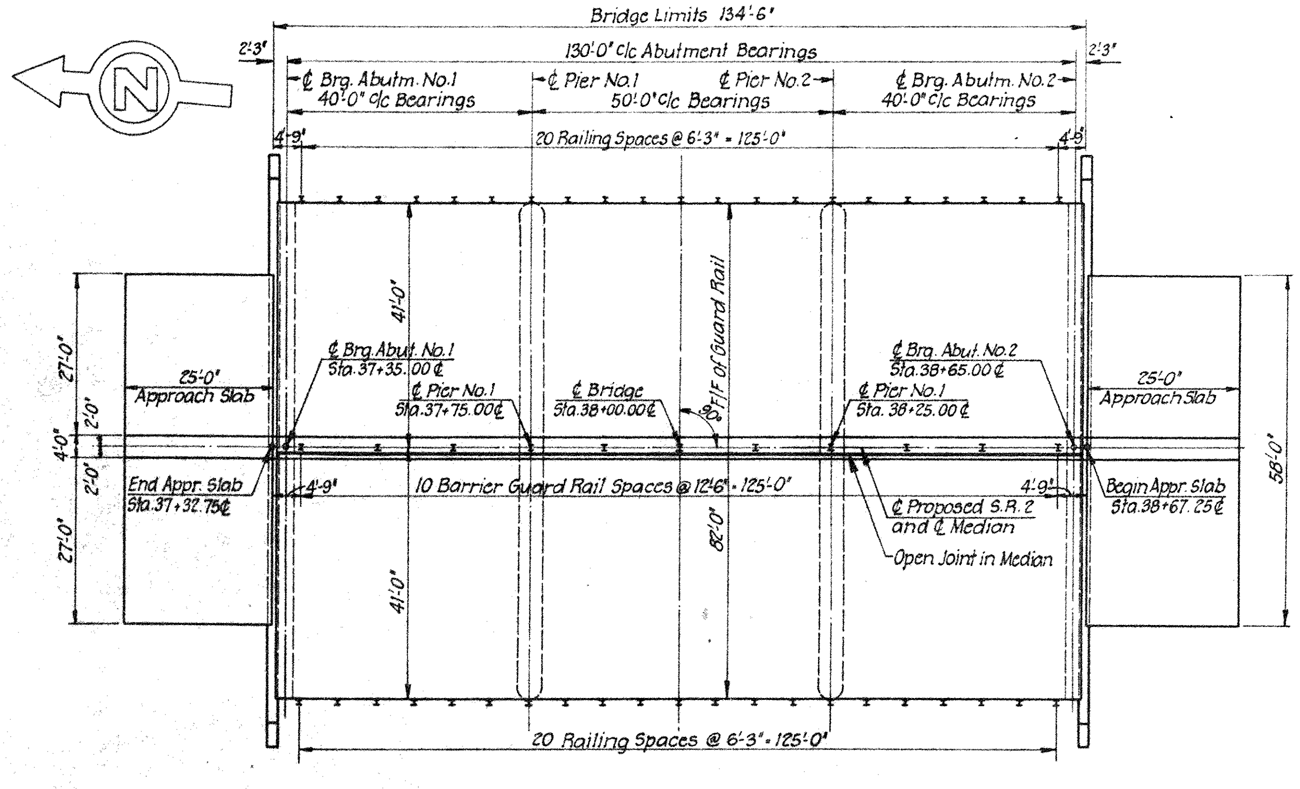
SITE PLAN

BRIDGE NO. ERI-2-0071
OVER SANDUSKY BAY
(SMALL BOAT PASSAGEWAY)

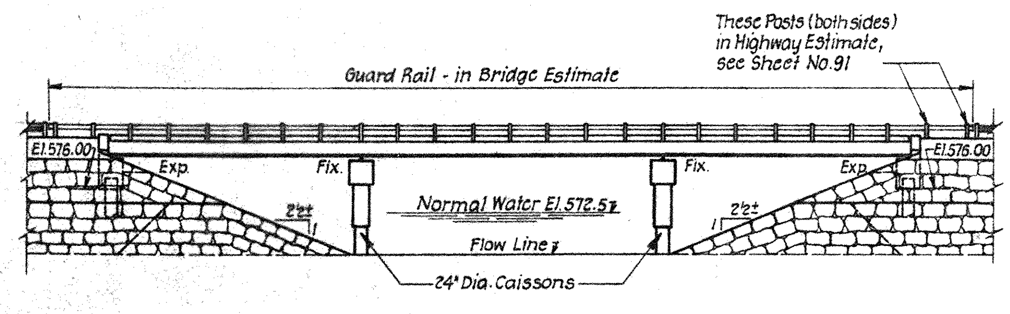
ERIE COUNTY

STA. 37+32.75℄
STA. 38+67.25℄

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVISIONS
AERIAL SURVEY	AERIAL SURVEY	V.J.L.	P.A.M.	V.J.L.	



PLAN



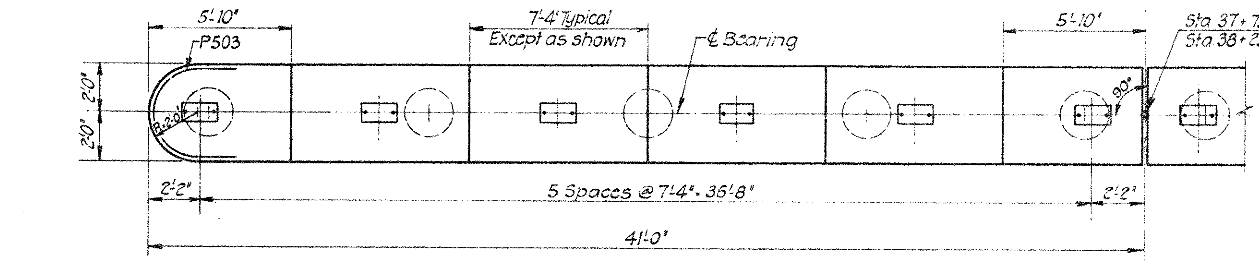
ELEVATION

ESTIMATED QUANTITIES									
Item	Total	Unit	Description	Super.	Abut.	Piers	Gen'l.		
E-2	114	Cu. Yd.	Unclassified Excavation		114				
S-1	320	Cu. Yd.	Class 'C' Concrete, Superstructure	320					
S-1	102	Cu. Yd.	Class 'C' Concrete, Pier Caps			102			
S-1	173	Cu. Yd.	Class 'E' Concrete, Abutments		173				
S-3	15	Lin. Ft.	Waterproofing, premolded Sealing Strip		15				
S-4	115,586	Lb.	Reinforcing Steel	90,505	16,917	8,164			
S-7	243,200	Lb.	Structural Steel	243,200					
S-8	243,200	Lb.	Field Painting of Structural Steel	243,200					
S-9	57	Sq. Ft.	1" Thick preformed expansion joint filler		57				
S-14	304	Lin. Ft.	Railing (Type I-15,11 with galvanized steel posts and bolts)	304					
S-14	152	Lin. Ft.	Railing (Barrier Guard-Type I-15,11 with galvanized steel posts & bolts)	152					
S-25	Lump	Lump Sum	Electric Lighting System*				Lump		
S-29	54	Cu. Yd.	Porous Backfill		54				
SPECIAL	565	Cu. Yd.	Rock for Slope Protection as per Plan**				565		
SPECIAL	320	Each	Water-reducing set-retarding admixture***	320					
SPECIAL	1080	Lin. Ft.	Drilled Caissons		480	600			

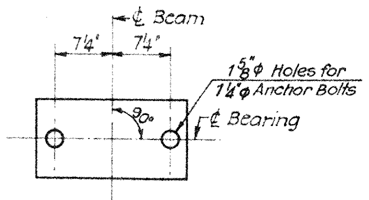
* For Quantities breakdown see Estimated Quantities - Lighting Sheet No. 115
** Rock for Slope Protection, as per plan see Note 'C' Sheet No. 6
*** See Proposal Note

PIER ELEVATIONS	A 1.03	B .15	C .26	D .38	E .49	F .63	G
PIER NO. 1	580.99	581.11	581.22	581.34	581.45	581.57	577.00
PIER NO. 2	580.99	581.11	581.22	581.34	581.45	581.57	577.00
	1.03	.15	.26	.38	.49	.63	

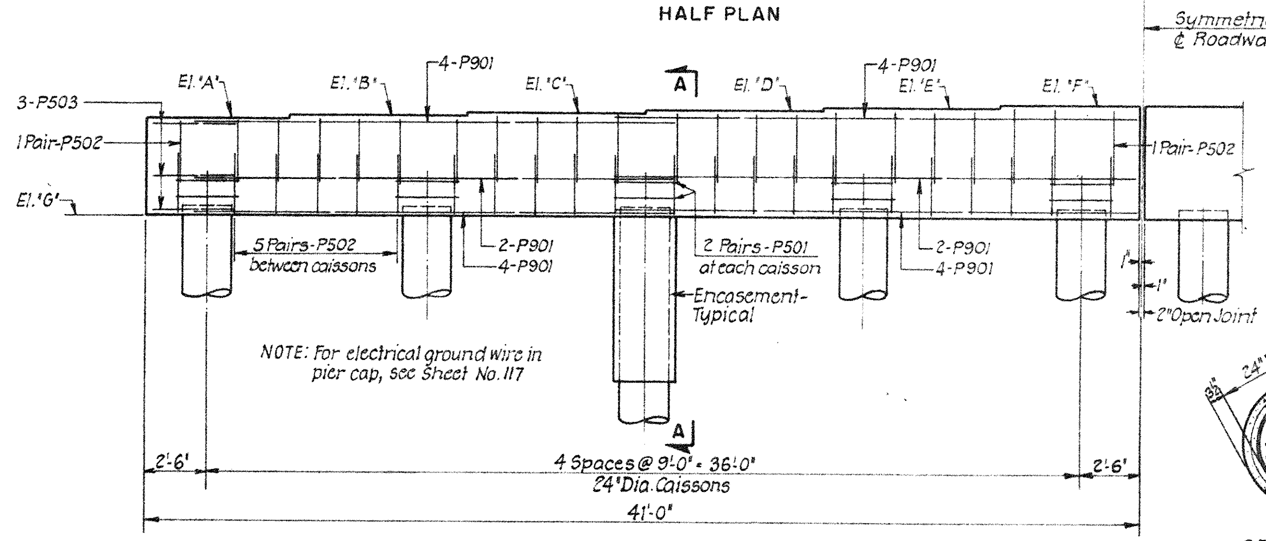
PIER NOTES:
1. All reinforcing steel shall be 2" clear from face of concrete unless otherwise shown.
2. For Reinforcing Steel List, see Sheet No. 102



HALF PLAN

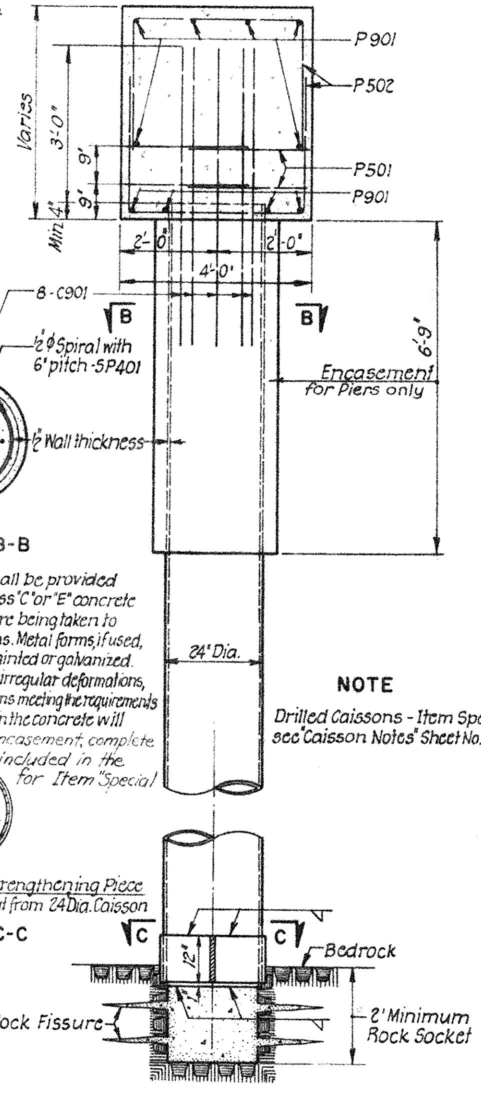


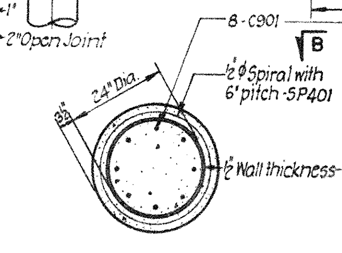
ANCHOR BOLT LAYOUT



HALF ELEVATION

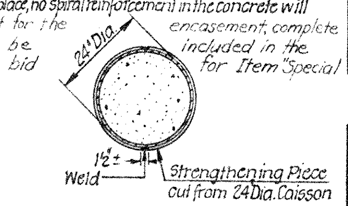
CAPPED CAISSON PIERS





SECTION B-B

ENCASEMENT, as shown hereon, shall be provided for each pier caisson. It shall consist of Class "C" or "E" concrete and may be placed in water as per Sec. S-1.18, care being taken to remove all dirt between the caissons and the forms. Metal forms, if used, may be left in place if the exposed portion is painted or galvanized. Corrugated metal may be used. Metal forms with irregular deformations, such as oil drums, will not be permitted. If metal forms meeting the requirements of Sec. M-6.4(a) are left in place, no spiral reinforcement in the concrete will be required. Payment for the encasement, complete and in place shall be included in the price per lin. ft. bid for Item "Special Drilled Caissons".



SECTION C-C

NOTE

Drilled Caissons - Item Special, see "Caisson Notes" Sheet No. 98

SECTION A-A

DRILLED CAISSON DETAILS

GENERAL NOTES

REFERENCE shall be made to Standard Drawings AS-1-54 revised 12-1-54, CSB-1-55 Sheets 1 & 2 revised 2-2-59.

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

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

24" DIA. CAISSONS are designed for a minimum bearing capacity of 75 tons per caisson for the abutments and 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.

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.

PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope (bottom of rock slope protection) and to the level of the subgrade for a distance of 200 feet back of the abutments, after which excavation shall be made for the abutment. All embankment should be in place before the abutments are constructed.

KING & GAVARIS
CONSULTING ENGINEERS

GENERAL PLAN AND PIERS

BRIDGE NO. ERI-2-0071
OVER SANDUSKY BAY
(SMALL BOAT PASSAGEWAY)

ERIE COUNTY

STA. 37+32.75 ℄
STA. 38+67.25 ℄

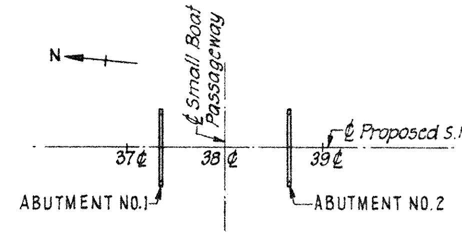
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
V.T.d.	P.A.M.	P.A.M.	V.T.d.	[illegible]	12-8-61	9-17-62

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F1042 (13)	

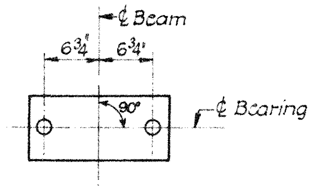
100
118

OTT-2-27.36
ERI-2- 0.15

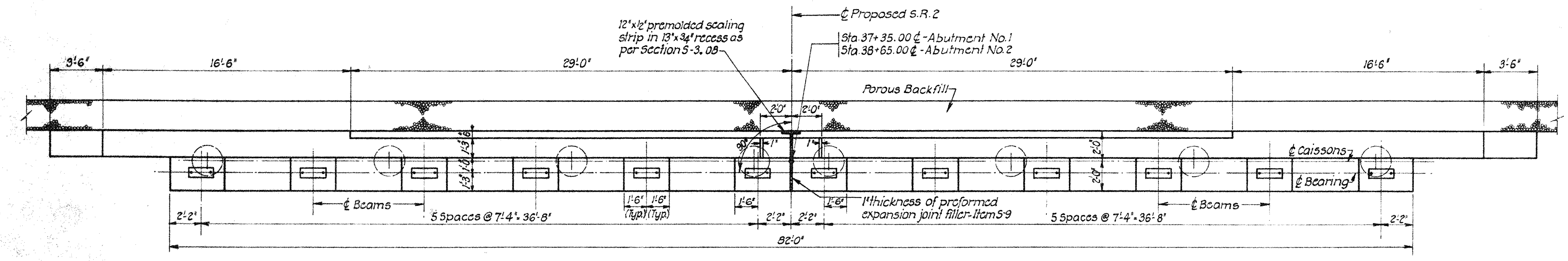
POROUS BACKFILL shall extend upward to the approach slab and to the paved shoulders, and outward to the surface of the embankment slopes. Excavation therefore, in excess of that required for the construction of the abutment, shall be considered as paid for in the price per cu. yd. paid for porous backfill.



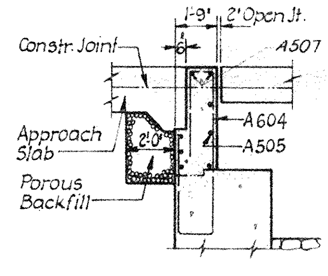
KEY PLAN



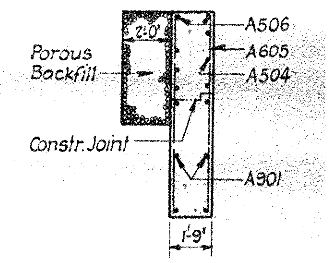
ANCHOR BOLT LAYOUT



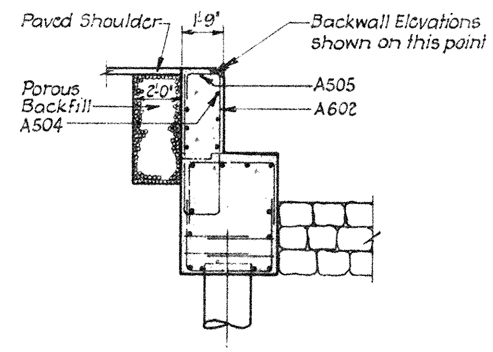
PLAN



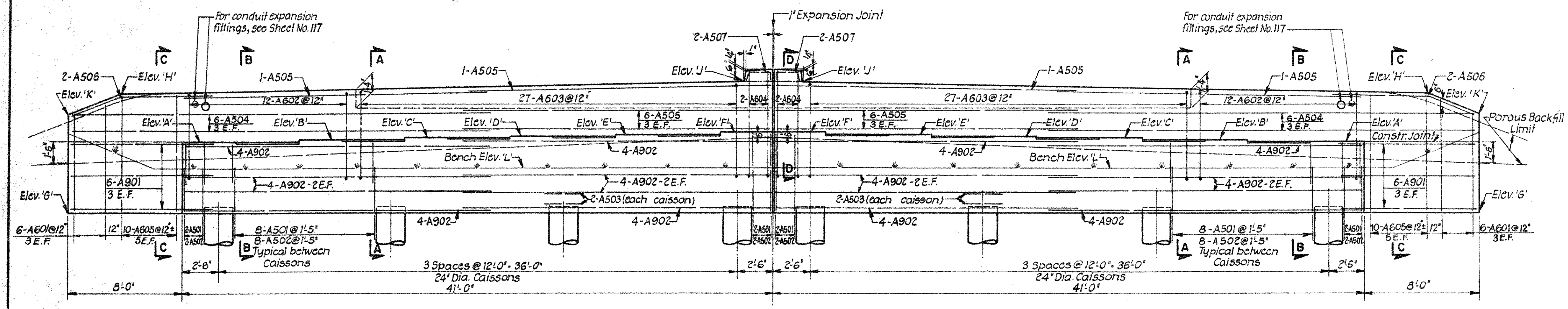
SECTION D-D



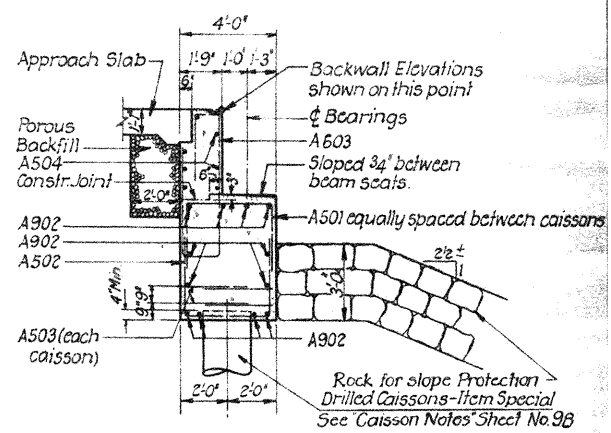
SECTION C-C



SECTION B-B



ELEVATION



SECTION A-A

ABUTMENT ELEVATIONS											
	A 1.01	B .12	C .24	D .35	E .47	F .58	G	H	J	K	L
ABUTMENT Nº1	580.97	581.08	581.20	581.31	581.43	581.54	576.00	584.32	585.00	582.92	579.00
ABUTMENT Nº2	580.97	581.08	581.20	581.31	581.43	581.54	576.00	584.32	585.00	582.92	579.00
	1.01	.12	.24	.35	.47	.58					

585.00
581.58
3.42
.83
2.59

NOTES:

1. All reinforcing steel shall be 2" clear from face of concrete unless otherwise shown.
2. Designations used are as follows: E.F. = Each Face.
3. For Reinforcing Steel List, see Sheet No. 102
4. Caisson Details, same as shown in Section A-A, Sheet No. 99, except omit encasement.
5. Areas on abutment face (9"x1'-6" centered at each beam) shall be finished with particular care to insure full bearing for bumper angles.

KING & GAVARIS
CONSULTING ENGINEERS

ABUTMENTS

BRIDGE NO. ERI-2-0071
OVER SANDUSKY BAY
(SMALL BOAT PASSAGEWAY)

ERIE COUNTY

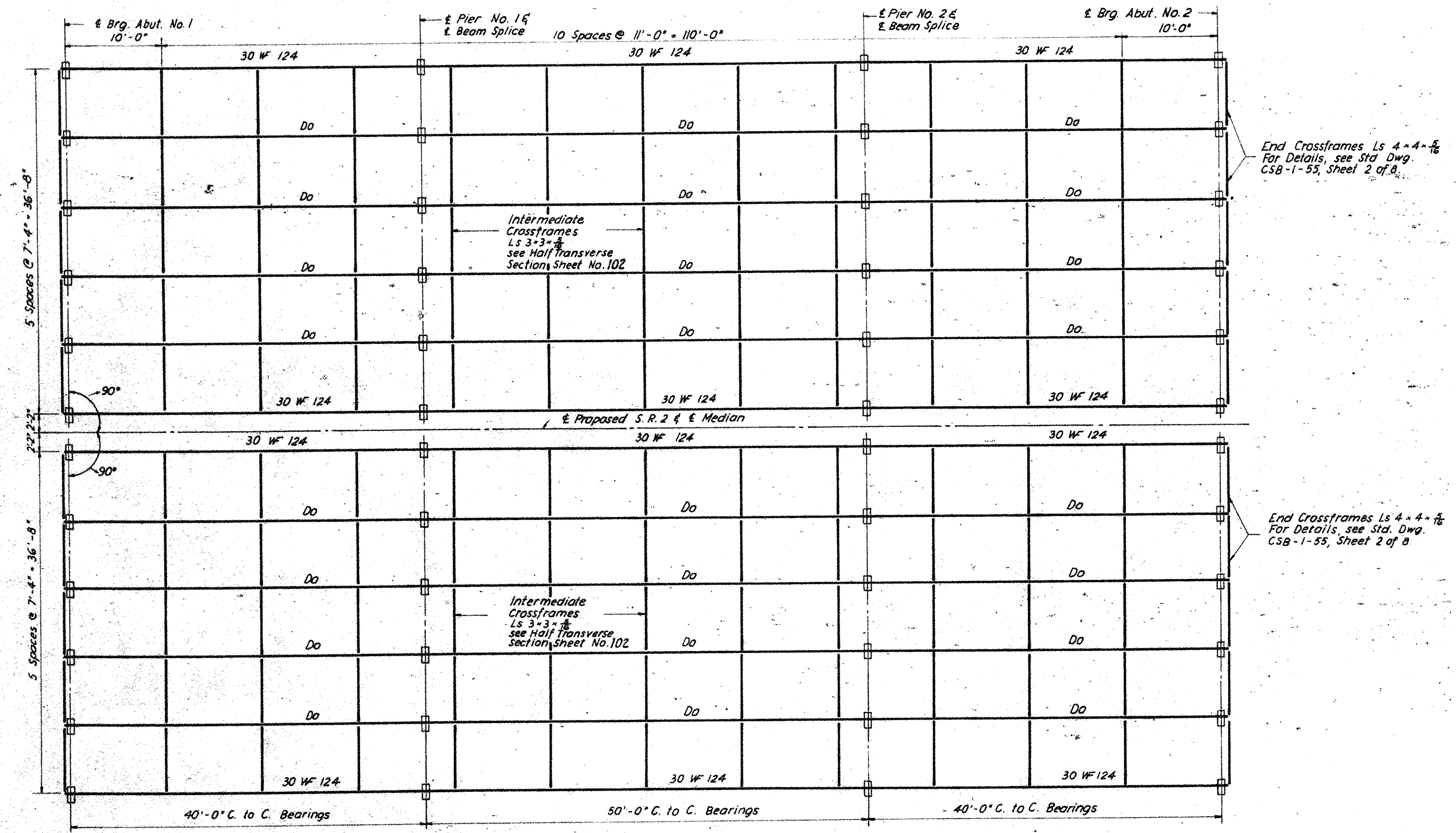
STA. 37+32.75 ℄
STA. 38+67.25 ℄

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
T.J.L.	P.A.M.	P.A.M.	T.J.L.	[illegible]	12-8-61	9-17-62

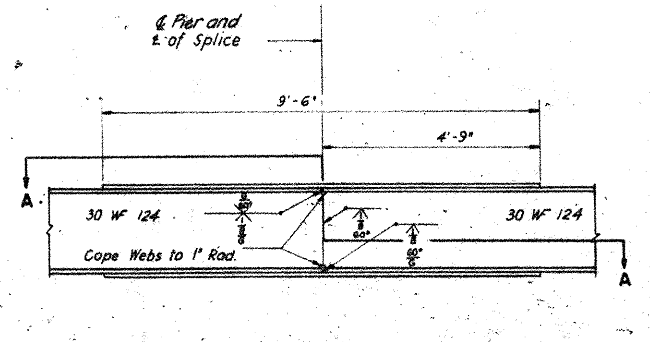
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F1042(13)	

OTT-2-27.36
ERI - 2-0.15

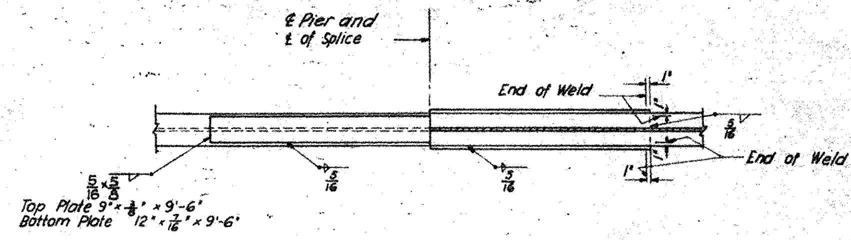
101
118



FRAMING PLAN



ELEVATION



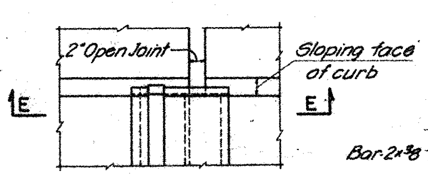
SECTION A-A

BEAM SPLICE DETAILS

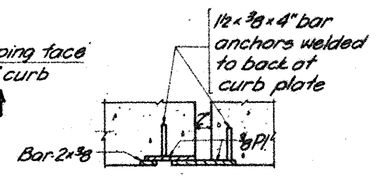
BEAM SPLICE WELDING PROCEDURE

1. Raise the Abutment ends of the beams 3/8."
2. Butt.-weld the flanges and web, 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.

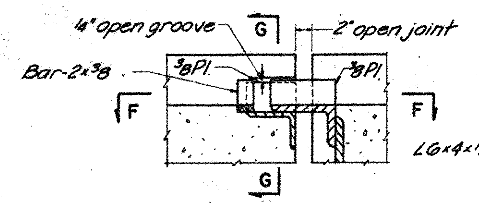
DEFLECTIONS & CAMBER				
LOCATION	OUTSIDE BEAMS END SPAN	OUTSIDE BEAMS MID SPAN	INSIDE BEAMS END SPAN	INSIDE BEAMS MID SPAN
Deflection due to Wt. of steel	0	0	0	0
Deflection due to remaining D.L.	1/8"	1/8"	1/8"	1/8"
Sum of Deflections	1/8"	1/8"	1/8"	1/8"
Required Camber	0	0	0	0



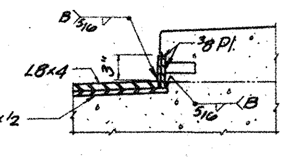
PART PLAN



SECTION F-F



SECTION E-E



SECTION G-G

CURB PLATE DETAILS AT MEDIAN

NOTES:

1. For Bearing Plate Details see Std. Dwg. CSB-1-55 Sheet No. 1 of 8.
2. Provide Bumper Ls-8"×6"×3/4" at Abutments, see Standard Drawing CSB-1-55 Sheet No. 1 of 8.

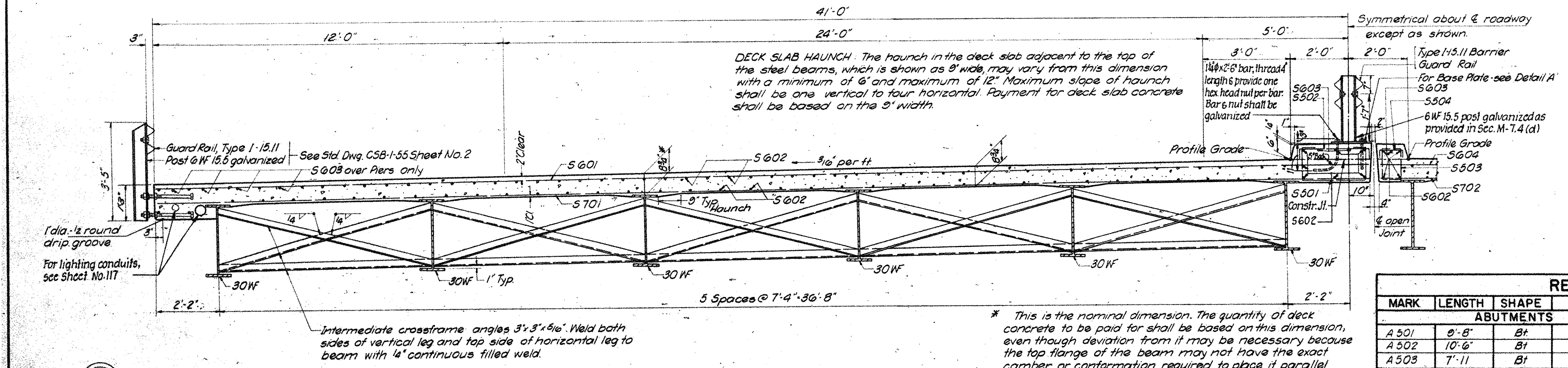
KING & GAVARIS
CONSULTING ENGINEERS

STEEL FRAMING PLAN

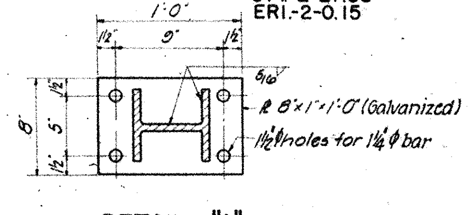
BRIDGE NO. ERI-2-0071
OVER SANDUSKY BAY
(SMALL BOAT PASSAGEWAY)
ERIE COUNTY

STA. 37+32.75 ℄
STA. 38+67.25 ℄

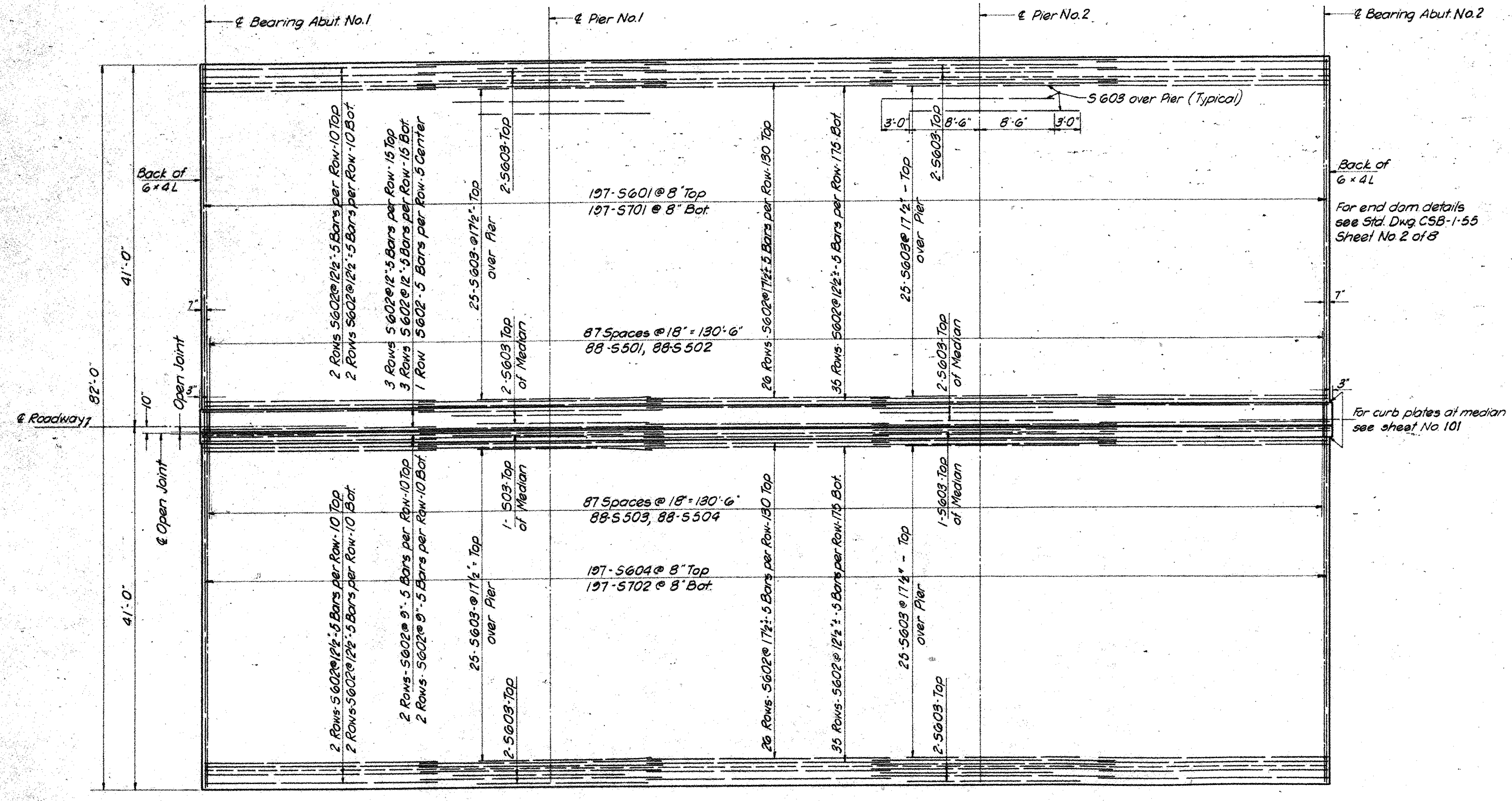
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
V.J.L.	A.J.	I.H.	V.J.L.		12-8-61	



HALF TRANSVERSE SECTION



DETAIL "A"



SLAB REINFORCING

NOTE:
Slab thickness includes 1" monolithic wearing surface.

REINFORCING STEEL LIST

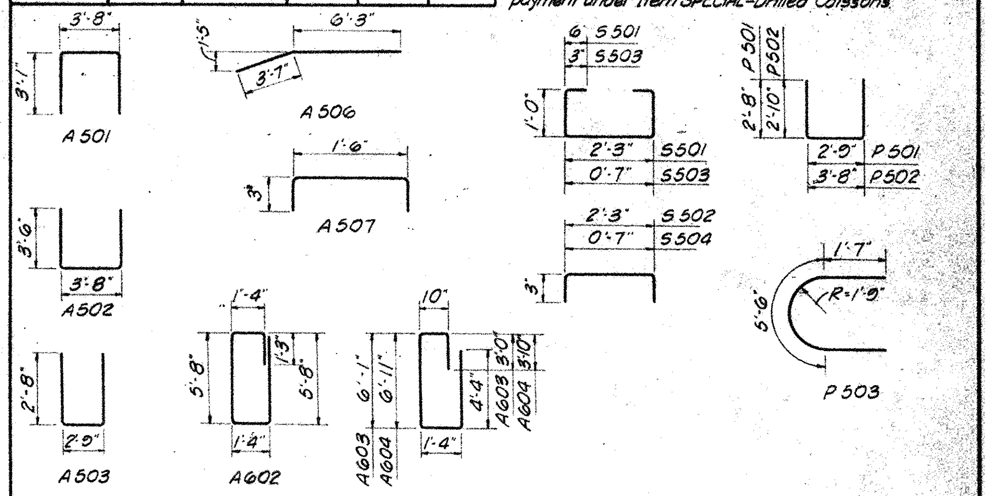
MARK	LENGTH	SHAPE	NO.	WEIGHT	MARK	LENGTH	SHAPE	NO.	WEIGHT
ABUTMENTS					**SUPERSTRUCTURE**				
A 501	9'-8"	Bt.	112	1129	S 501	4'-11"	Bt.	88	451
A 502	10'-6"	Bt	112	1227	S 502	2'-7"	Bt.	88	237
A 503	7'-11	Bt	64	528	S 503	2'-9"	Bt	88	252
A 504	29'-2"	Str.	24	730	S 504	0'-11"	Bt.	88	84
A 505	21'-2"	Str.	32	705					
A 506	9'-10"	Bt.	8	82	S 601	41'-4"	Str.	197	12,230
A 507	1'-10"	Bt.	8	15	S 602	27'-10"	Str.	705	29,473
					S 603	20'-0"	Str.	114	3425
A 601	6'-9" thru 7'-7" Varies by 5	Str.	8-Series of 3 bars	258	S 604	39'-3"	Str.	197	11,737
A 602	15'-0"	Bt.	48	1081	S 701	41'-6"	Str.	197	16,643
A 603	15'-4"	Bt.	108	2487	S 702	39'-9"	Str.	197	15,973
A 604	17'-0"	Bt.	8	204	**REPLACEMENT BARS**				
A 605	8'-0"	Str.	40	481	RE 5	5'-7"	Str.	1	
A 901	10'-10"	Str.	24	884	RE 6	5'-11"	Str.	4	
A 902	21'-9"	Str.	96	7099	RE 7	6'-2"	Str.	2	
PIERS					RE 9	6'-10"	Str.	1	
P 501	7'-11"	Bt.	80	661					
P 502	9'-2"	Bt.	176	1683					
P 503	8'-8"	Bt.	12	108					
P 901	21'-0"	Str.	80	5712					
CAISSONS									
*C 901	6'-0"	Str.	288						

SPIRAL REINFORCING LIST

Mark	No.	Core Dia. o/o Spiral	Length	Pitch	No. of Turns
*SP 401	20	28"	6'-9"	6"	17

If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Sec. S-4.02 need not be furnished and replacement bars will not be required.

1. Bar size is indicated in the bar mark. The first digit where three digits are used indicates the bar size number. For example, A 601 is a No. 6 size bar.
2. Bar dimensions are out to out.
3. Bars marked with sigle asterisk to be included for payment under Item "SPECIAL"-Drilled Caissons.



KING & GAVARIS
CONSULTING ENGINEERS

SUPERSTRUCTURE ROADWAY SLAB & REINFORCING STEEL LIST

BRIDGE NO. ERI.-2-0071
OVER SANDUSKY BAY
(SMALL BOAT PASSAGEWAY)
ERIE COUNTY

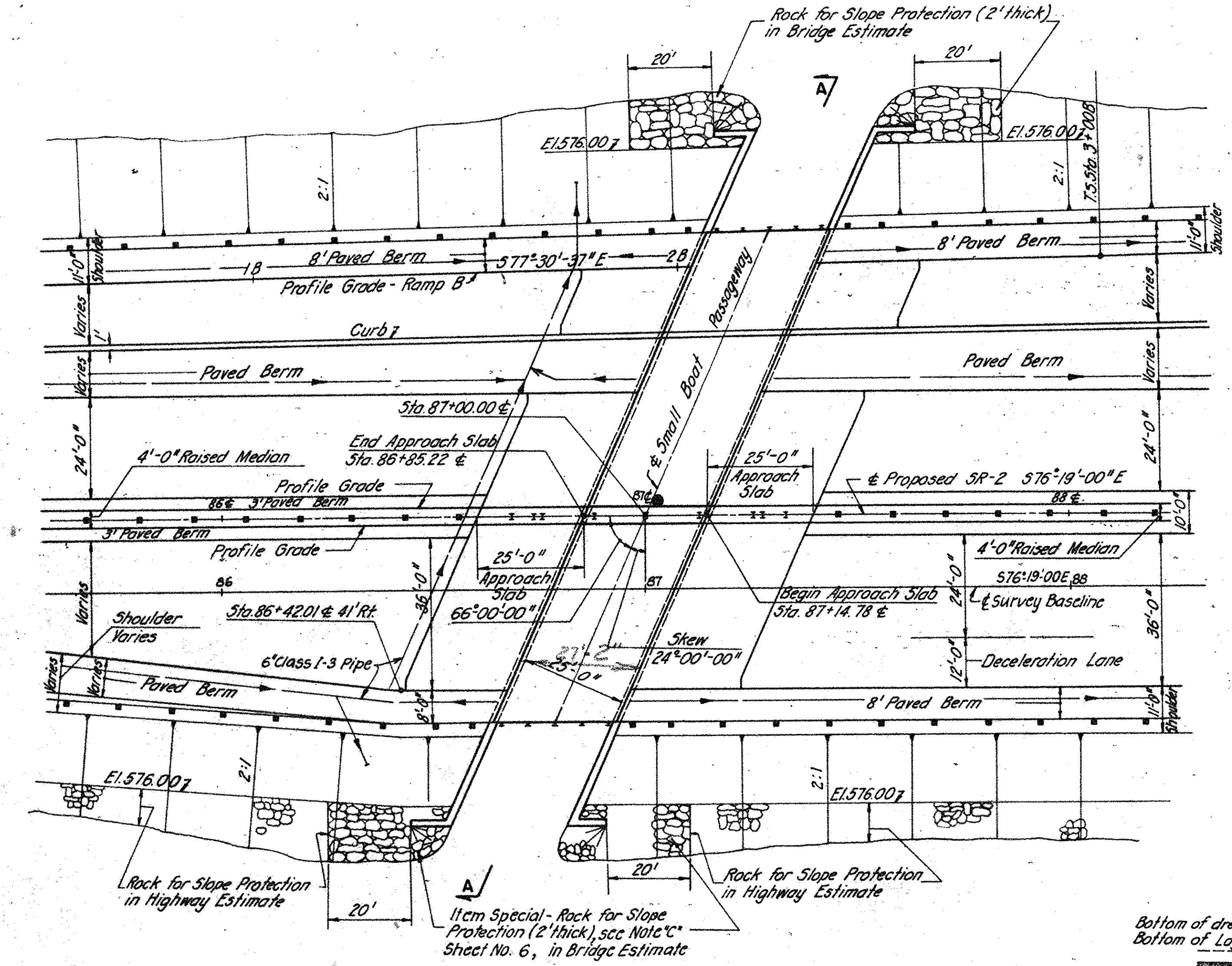
STA. 37+32.75 ℄
STA. 38+67.25 ℄

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
V.J.L.	A.J.	A.J.	V.J.L.	DC	12-8-61	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F 1042 (13)	

103
~~118~~

OTT-2-27.36
ERI-2-0.15



● Indicates location of soil profile boring

PLAN

86+85.22 = 01.6449
3.01
86+88.23 = 01.6454

cos A = 25/h
1.0864 = 25/h
27.16

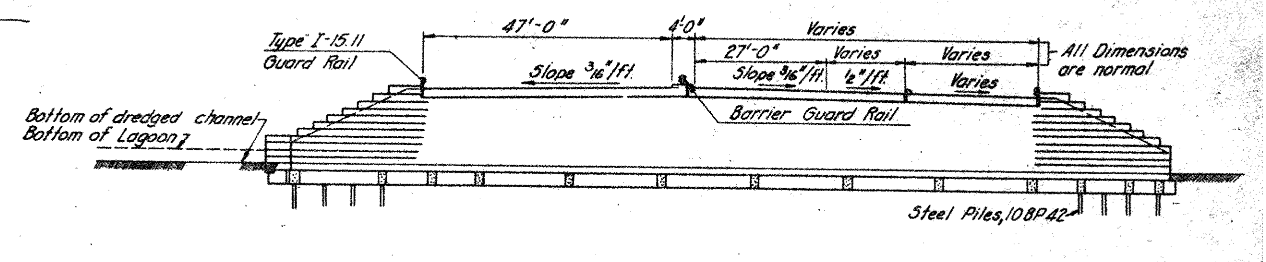
GENERAL NOTES

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.

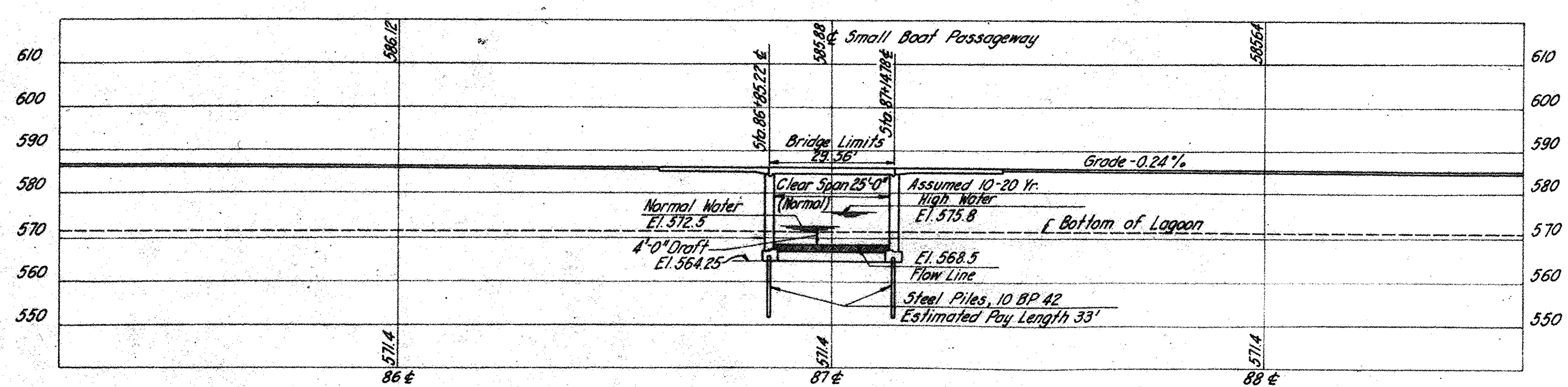
EXCAVATION QUANTITY includes the removal of fill material required for the construction of the abutments.

PILES shall be driven to firm contact with rock. If the length of penetration is approximately equal to the depth to rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. 5-18.05 is not less than the following value for a pile hammer of the indicated energy rating: For the abutment piles 55 tons per pile using a 15000 Ft. lb. or greater hammer. The design load is 35 tons per pile for the abutment piles.

PROCEDURE: The embankment shall be placed and compacted with a 1:1 slope from the bottom of existing lagoon at Elev. 571.4 at the back face of the abutment, up to the level of the subgrade prior to the construction of the abutments (including the driving of the piles).
After the abutments and deck slab are in place, the embankment shall be completed and the approach slabs constructed.



SECTION A-A



PROFILE ON GRADE LINE PROPOSED SR-2

PPOPOSED STRUCTURE

TYPE: Reinforced Concrete Slab Bridge
SPAN: 25' Clear
ROADWAY: Variable Width
LOAD FREQUENCY: C.F. = 2000 (57) Adequate for AASHO alternate loading
SKEW: 24° L.F.
WEARING SURFACE: 1" Monolithic
APPROACH SLABS: 25' long
ALIGNMENT: Tangent

KING & GAVARIS
CONSULTING ENGINEERS

SITE PLAN

BRIDGE NO. ERI-2-0164
OVER LAGOON
(SMALL BOAT PASSAGEWAY)
ERIE COUNTY

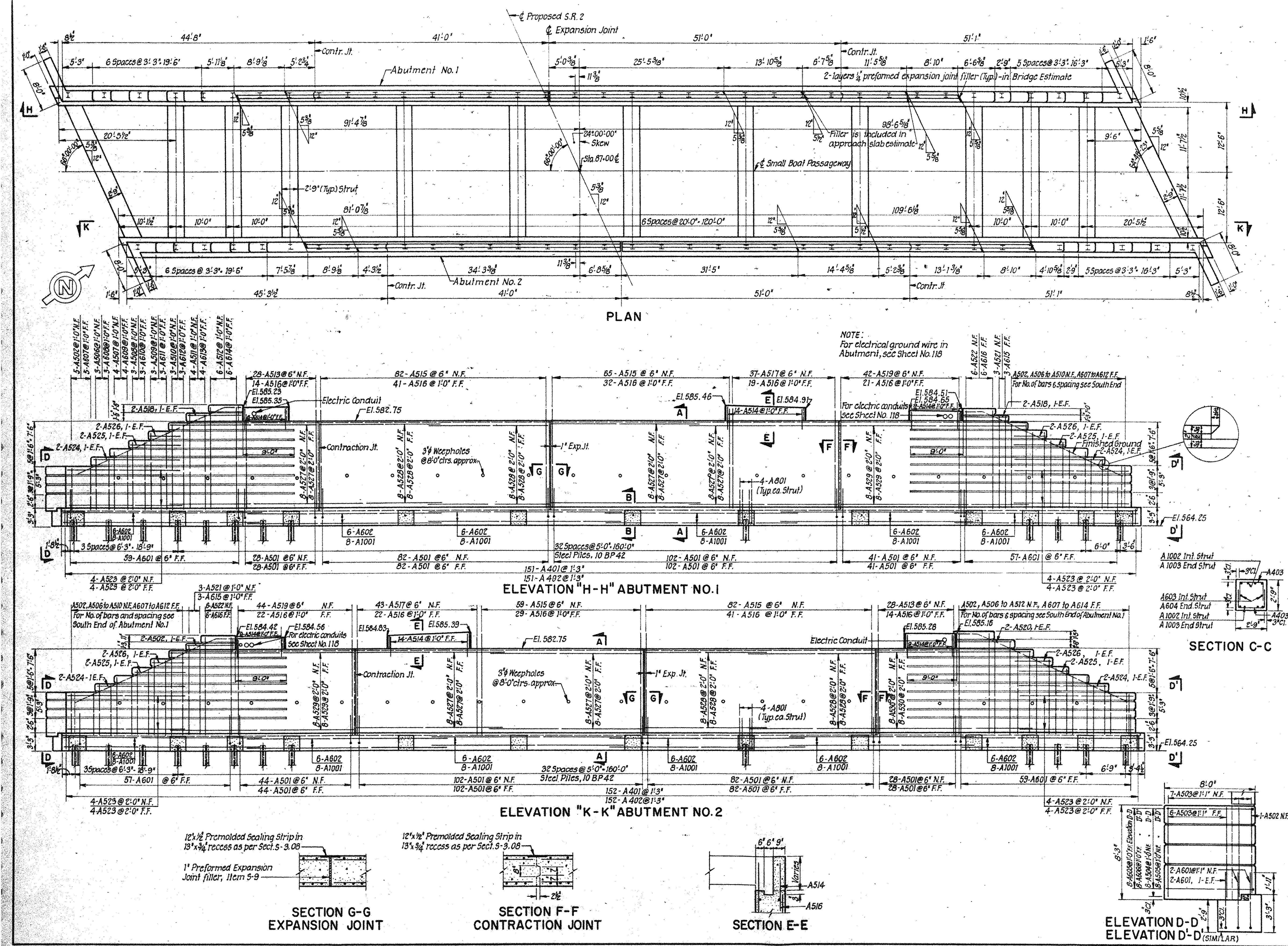
STA. 86+85.22 ℄
STA. 87+14.78 ℄

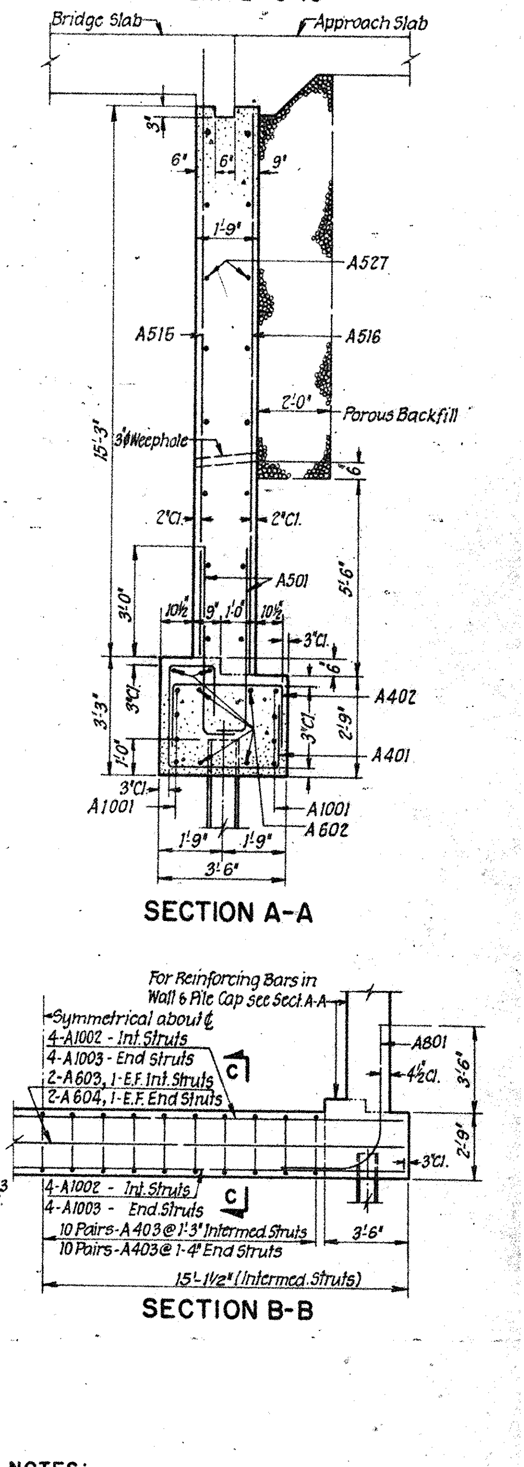
PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVISIONS
AERIAL SURVEY	AERIAL SURVEY	V.J.L.	P.A.M.	V.J.L.	

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F1042 (13)

104/118

OTT-2-27.36
ERI-2-0.15





NOTES:
1. Designation used are as follows: N.F. = Near Face, F.F. = Far Face, E.F. = Each Face.
2. For Reinforcing Steel List, see Sheet No. 105

KING & GAVARIS
CONSULTING ENGINEERS

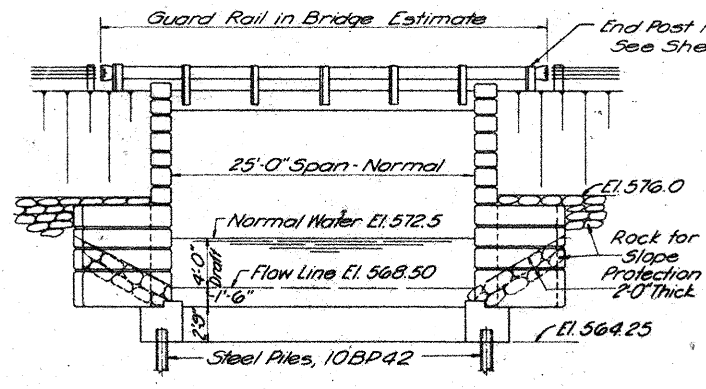
ABUTMENTS

BRIDGE NO. ERI-2-0164
OVER LAGOON
(SMALL BOAT PASSAGEWAY)

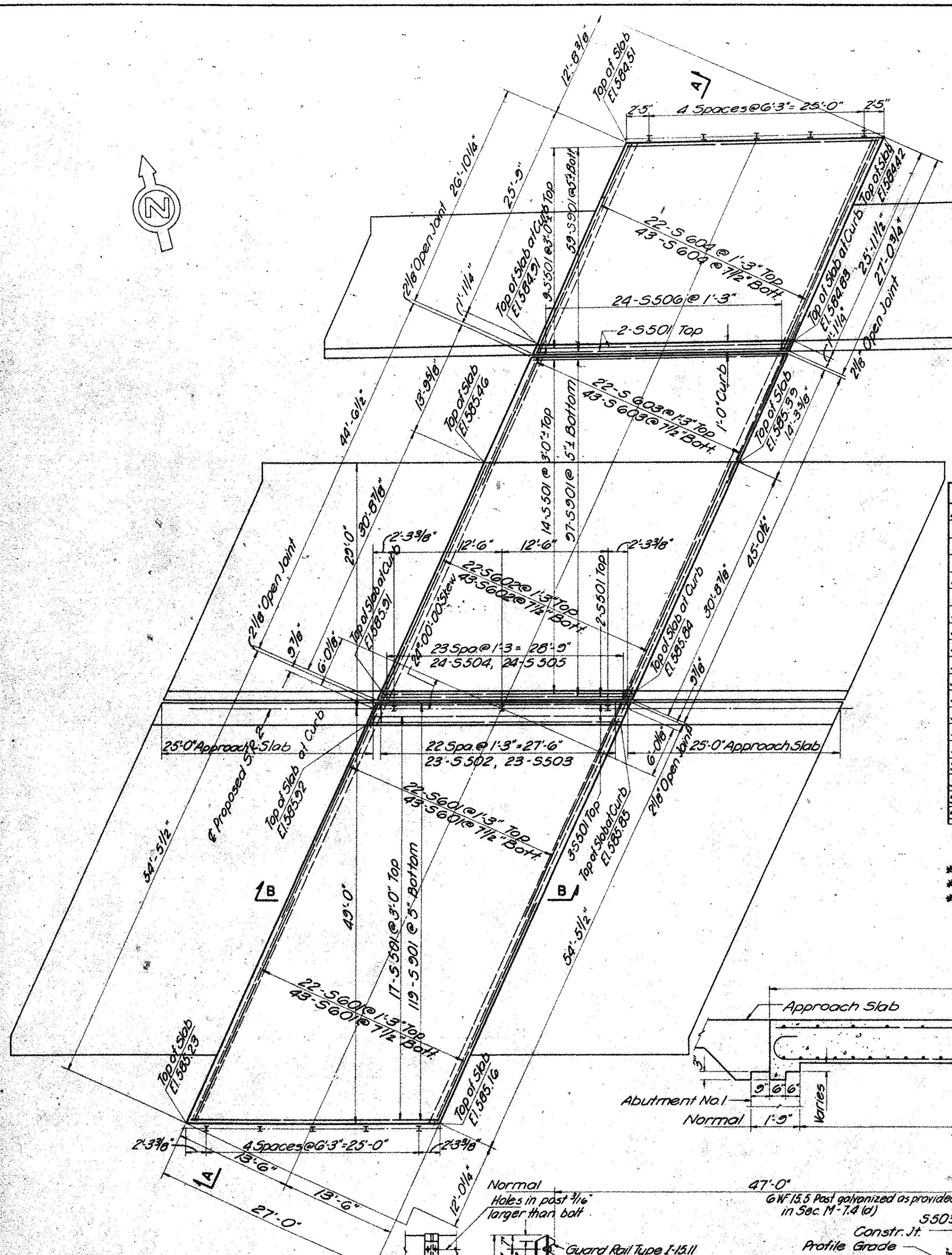
ERIE COUNTY

STA. 86+85.22 ¢
STA. 87+14.78 ¢

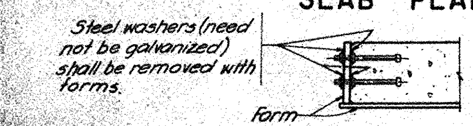
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
[illegible]	H.H.	P.A.M.	[illegible]	[illegible]	12-8-61	



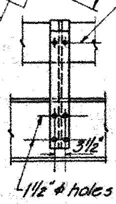
SIDE ELEVATION



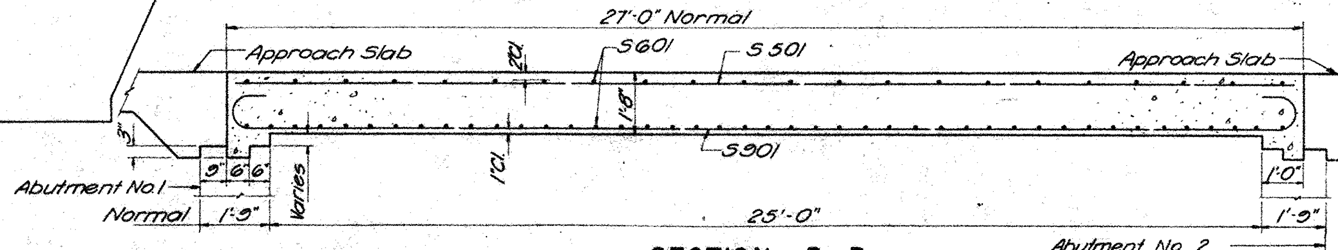
SLAB PLAN



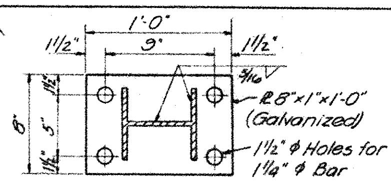
DETAIL "B"



ELEVATION OF RAILING POST

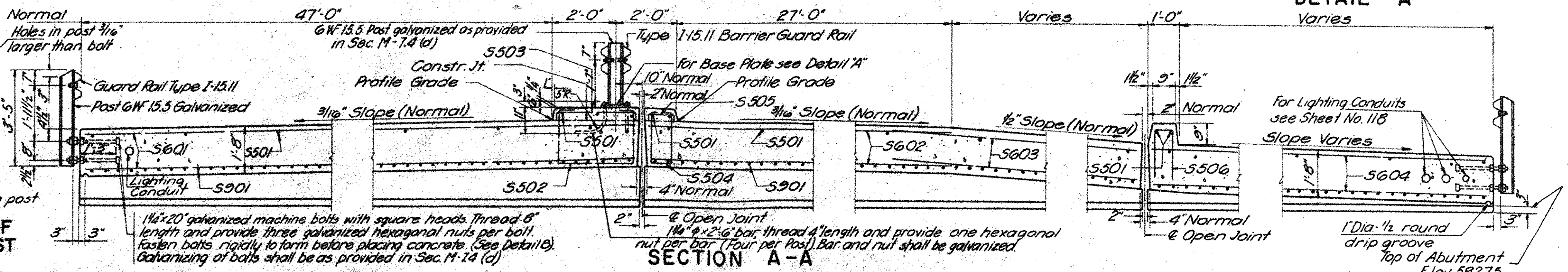


SECTION B-B



DETAIL "A"

NOTE:
Slab Thickness Includes 1" Monolithic Wearing Surface.



SECTION A-A

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Super	Abut.	General		
E-2	Lump	Sum	Cofferdams, Cribs and Sheeting		Lump			
E-2	1600	Cu.Yd.	Unclassified Excavation		1600			
S-1	219	Cu.Yd.	Class "C" Concrete, Superstructure	219				
S-1	220	Cu.Yd.	Class "C" Concrete, Abutment Footings & Struts		220			
S-1	371	Cu.Yd.	Class "C" Concrete, Abutment Walls		371			
S-3	95	Lin.Ft.	Waterproofing, Premolded Sealing Strip		95			
S-4	119,173	Lbs.	Reinforcing Steel	45,560	73,613			
S-9	22	Sq.Ft.	¼" Preformed Expansion Joint Filler		22			
S-9	55	Sq.Ft.	1" Preformed Expansion Joint Filler		55			
S-14	80	Lin.Ft.	Railing (Type I-15.11 with Galvanized Steel Posts & Bolts)	80				
S-14	52	Lin.Ft.	Railing (Barrier Guard Type I-15.11 with Galvanized Steel Posts & Bolts)	52				
S-16	Lump	Sum	First Test Pile			Lump		
S-18	2440	Lin.Ft.	Steel Piles, 10BP42		2440			
S-25	Lump	Sum	Electric Lighting System *			Lump		
S-29	310	Cu.Yd.	Porous Backfill		310			
Special	120	Cu.Yd.	Rock for Slope Protection as per Plan **			120		
Special	219	Each	Water-reducing Set-retarding Admixture ***	219				

* For Quantities Breakdown see Estimated Quantities - Lighting Sheet No. 115
** See Note "C" Sheet No. 6
*** See Proposal Note

REINFORCING STEEL LIST

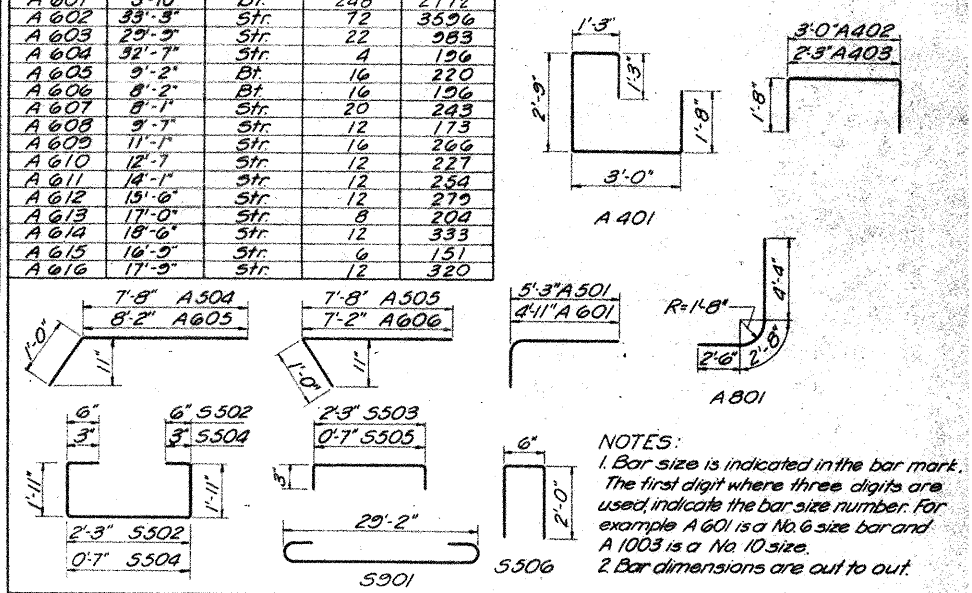
MARK	LENGTH	SHAPE	NO.	WEIGHT
ABUTMENTS				
A 401	9'-7"	Bt.	303	1940
A 402	6'-2"	Bt.	303	1248
A 403	5'-5"	Bt.	494	1787
A 501	6'-0"	Bt.	1018	6371
A 502	7'-7"	Str.	26	206
A 503	7'-10"	Str.	52	425
A 504	8'-8"	Bt.	16	145
A 505	8'-8"	Bt.	16	145
A 506	9'-1"	Str.	12	114
A 507	10'-7"	Str.	16	177
A 508	12'-1"	Str.	12	151
A 509	13'-7"	Str.	12	170
A 510	15'-0"	Str.	12	188
A 511	16'-6"	Str.	8	137
A 512	18'-0"	Str.	12	225
A 513	17'-6"	Str.	56	1022
A 514	4'-0"	Str.	63	263
A 515	17'-8"	Str.	288	5307
A 516	15'-7"	Str.	255	4143
A 517	17'-1"	Str.	80	1425
A 518	8'-9"	Str.	4	37
A 519	16'-9"	Str.	86	1502
A 520	10'-0"	Str.	2	21
A 521	16'-3"	Str.	6	102
A 522	16'-8"	Str.	12	209
A 523	19'-10"	Str.	32	662
A 524	14'-7"	Str.	8	122
A 525	8'-1"	Str.	8	67
A 526	4'-10"	Str.	8	40
A 527	26'-1"	Str.	80	2176
A 528	21'-2"	Str.	64	1413
A 529	32'-6"	Str.	32	1085
A 530	26'-9"	Str.	16	446
A 601	5'-10"	Bt.	248	2172
A 602	33'-3"	Str.	72	3596
A 603	29'-9"	Str.	22	983
A 604	32'-7"	Str.	4	196
A 605	9'-2"	Bt.	16	220
A 606	8'-2"	Bt.	16	196
A 607	8'-1"	Str.	20	243
A 608	9'-7"	Str.	12	173
A 609	11'-1"	Str.	16	266
A 610	12'-7	Str.	12	227
A 611	14'-1"	Str.	12	254
A 612	15'-6"	Str.	12	279
A 613	17'-0"	Str.	8	204
A 614	18'-6"	Str.	12	333
A 615	16'-9"	Str.	6	151
A 616	17'-9"	Str.	12	320

MARK	LENGHT	SHAPE	NO.	WEIGHT
ABUTMENTS				
A 801	9'-6"	Bt.	104	2638
A 1001	34'-4"	Str.	96	14183
A 1002	29'-9"	Str.	88	11265
A 1003	32'-7"	Str.	16	2243
SUPERSTRUCTURE				
S 501	29'-2"	Str.	47	1430
S 502	6'-9"	Bt.	23	1619
S 503	2'-7"	Bt.	23	62
S 504	4'-7"	Bt.	24	115
S 505	0'-11"	Bt.	24	23
S 506	4'-4"	Bt.	24	108
S 601	28'-0"	Str.	130	5467
S 602	30'-6"	Str.	65	2978
S 603	16'-0"	Str.	65	1562
S 604	26'-6"	Str.	65	2588
S 901	31'-8"	Bt.	275	29608

REPLACEMENT BARS

MARK	LENGHT	SHAPE	NO.
RE4	5'-3"	Str.	1
RE5	5'-7"	Str.	2
RE6	5'-11"	Str.	2
RE8	6'-6"	Str.	1
RE9	6'-10"	Str.	2
RE10	7'-3"	Str.	2

If reinforcing bars are fabricated from stock, which has previously been tested and approved by the OHIO Highway Testing Laboratory, test samples as provided in Sec. S-4.02 need not be furnished and replacement bars will not be required.



NOTES:
1. Bar size is indicated in the bar mark. The first digit where three digits are used, indicate the bar size number. For example A 601 is a No. 6 size bar and A 1003 is a No. 10 size.
2. Bar dimensions are out to out.

KING & GAVARIS CONSULTING ENGINEERS						
ROADWAY SLAB AND REINFORCING STEEL LIST						
BRIDGE NO. ERI-2-0164 OVER LAGOON (SMALL BOAT PASSAGEWAY)						
ERIE COUNTY STA. 86+85.22 ℄ STA. 87+14.78 ℄						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
dc	H.H.	A.J.	F.J.L.	dc	12-8-61	

LOCATION PLAN

OTT-2-27.36
OTTAWA COUNTY
ERI-2-0.15
ERIE COUNTY

0 600 1200 1800
SCALE

OTTAWA CO. DANBURY TOWNSHIP
ERIE CO. ANNEXATION OF
MARGARETTA TOWNSHIP
LOT 16

This improvement has been declared a limited access highway by action of the director of Highways and recorded in Volume 45, Page 80 of the Director's Journal.
Hearing held in Sandusky, Ohio December 29, 1959.

I hereby certify this plat to be a true delineation of a survey made for King & Gavaris Consulting Engineers

Date: Nov. 30, 1961 Signed: C. W. Miller
Registered Surveyor No. 3195

Approved:
Signed: D. H. Timmer Date: 10/25/63
Division Deputy Director
Professional Engineer No. 24400

RECEIVED ____ AT ____
RE-RECORDED ____
PLAT BOOK ____ PAGE ____
FEE ____ FILE NO. ____
SIGNED ____
ERIE COUNTY RECORDER

RECEIVED November 14th 1963 AT 8:38 A.M.
RECORDED November 14th 1963
PLAT BOOK Volume 14 PAGE 73
FEE 2.00 Paid FILE NO. 192978
SIGNED Carl A. Speir
ERIE COUNTY RECORDER

RECEIVED December 16, 1963 AT ____
RECORDED ____
PLAT BOOK Volume 12 PAGE 42
FEE ____ FILE NO. ____
SIGNED ____
OTTAWA COUNTY RECORDER

SPIRAL DATA
θs = 4°-18'-03"
Ls = 400.00'
P = 2.50'
K = 199.96'
LT = 266.75'
ST = 133.40'

SPIRAL DATA
θs = 4°-00'-00"
Ls = 400.00'
P = 2.33'
K = 199.97'
LT = 266.74'
ST = 133.40'

CURVE DATA #1
Δ = 63°-21'-50"
Dc = 2°-00'-00"
Rc = 2864.79'
Tc = 1768.08'
Lc = 3168.19'

CURVE DATA #2
Δ = 4°-00'-00"
Dc = 1°-30'-00"
Rc = 3819.93'
Tc = 133.40'
Lc = 266.68'

I-8 MONUMENT ASSEMBLIES	
Station	Location
S.T. 54+00.05	℄ Survey (℄ Median)
75+00	" "
85+00	" "
96+00	" "
106+45	" "
12+94.91	" "
23+00	" "
33+00	" "
S.T. 43+26.27 Back =	" "
43+27.16 Ahead	
S.C. 47+27.16	" "
55+00	" "
63+00	" "
71+00	" "
P.C.C. 78+95.35	" "
P.T. 81+62.03	" "
82+95.36	" "
82+95.36 -17' Rt. =	" (℄ E.B. Lane)
82+93.70 Ahead	
93+00	" "
Total-Code 7221	19 Each

Note: For detail of Monument Assemblies see Standard Construction Drawing RI-1.

DATE	REVISION
12/23/65	MON. STA. 64+00 REMOVED CHANGED MON. FROM 13+00 TO 12+94.91

R/W PLANS
OTT-2-27.36
ERI-2-0.15

SCALE: 1" = 50'

SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

PARCEL NO.	OWNER	DEED RECORD		DEED AREA	TO BE ACQUIRED		RESIDUE		SHEET NO.	REMARKS
		BOOK	PAGE		LAND	BLDGS.	LEFT	RIGHT		
1-LA	The Bay View Property Owners Assn.	149	495	4.81(+)	0.59		3.24(+)	0.98(L)	2	
2-LA	The Bobridge Game and Fur Farms Co.	142	216	149.579	19.38		49.±	231.±	2 & 3	Part of Area of V.142, P.216
2A-LA	" " " " " " "	147	565	216.185	0.53				3 & 4	to be acquired under
2B-LA	" " " " " " "	149	493	56.668	0.58				3 & 4	ERI-2-1.80, Par. 3LA, etc.
2	" " " " " " "				0.55				3	
2A	" " " " " " "				0.68				3	
2T	" " " " " " "				1.30 ~~1.82~~				3 & 4	
2T-1	" " " " " " "				1.18				3 & 4	
2WA	" " " " " " "				0.34				3 & 4	
2WA-1	" " " " " " "				0.43				3 & 4	
2T-2	" " " " " " "				0.36				3 & 4	

As Aquired

Volume	Page
Vol 329	Pg 308-309
Vol 331	Pg 196-202

NOTE: (L) indicates residual lands that are landlocked.

R/W PLAN STA. 69+00 TO STA. 94+50

OTT/ERI-2-27.36/0.15 R/W 3/4

R/W PLAN STA. 94+50 TO STA. 105+00 SR 2
STA. 17+00 TO STA. 32+00 SR 269

OTT/ERI-2-27.36/0.15 R/W 4/4

R/W PLAN STA. 12+17 TO STA. 17+00 SR 269
STA. 32+37 TO STA. 37+00 SR 269

GENERAL NOTES - LIGHTING

DESCRIPTION

THIS ITEM SHALL CONSIST OF FURNISHING ALL MATERIALS AND LABOR REQUIRED FOR THE COMPLETE INSTALLATION OF THE ROADWAY LIGHTING AND ASSOCIATED ELECTRICAL FACILITIES IN ACCORDANCE WITH THE DESIGNS, DIMENSIONS AND DETAILS SHOWN ON THE PLANS AND DESCRIBED IN THE SPECIFICATIONS.

ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION METHODS OF THIS PROJECT, EXCEPT AS MODIFIED HEREIN, OR ON THE DRAWINGS, SHALL CONFORM TO THE GENERAL REQUIREMENTS OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, CONSTRUCTION AND MATERIAL SPECIFICATIONS, LATEST ISSUE. ATTENTION IS DIRECTED TO ITEM S-25, ELECTRICAL EQUIPMENT. OTHER ITEMS WHICH APPLY ARE INCLUDED BELOW, WITH MODIFICATIONS OF THE SPECIFICATIONS, WHICH SHALL BE COMPLIED WITH BY THE CONTRACTOR.

THE CONTRACTOR SHALL ALSO COMPLY WITH REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND WITH THE ELECTRICAL SERVICE RULES AND REGULATIONS OF THE OHIO EDISON COMPANY.

MATERIALS

1. GENERAL

CERTIFIED STATEMENTS REGARDING COMPLIANCE OF MATERIALS WITH SPECIFICATIONS SHALL BE FURNISHED UPON REQUEST. MATERIALS OTHER THAN THOSE LISTED HERE SHALL BE OF THE SIZE AND QUALITY INDICATED ON THE PLANS AND IN THE SPECIFICATIONS.

2. CONDUIT

STEEL CONDUIT AND FITTINGS SHALL BE HEAVY WALL, THREADED, GALVANIZED TYPE CONFORMING TO THE FEDERAL SPECIFICATION WW-C-581C.

FIBRE CONDUIT AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF FEDERAL SPECIFICATION W-C-581 AND SHALL BE TYPE I FOR CONCRETE ENCASEMENT OR TYPE II FOR DIRECT BURIAL AS NOTED ON THE PLANS.

STEEL CONDUIT SHALL BE HOT DIPPED GALVANIZED EQUAL TO YOUNGSTOWN SHEET AND TUBE CO. "YOLOY", APPROVED EQUIVALENT AS MANUFACTURED BY REPUBLIC STEEL CO. OR OTHERS, OR GALVANIZED WROUGHT IRON, ETC., AS APPROVED.

CONDUIT BUSHINGS SHALL BE O. Z. COMPANY TYPE B, APPROVED EQUIVALENT AS MANUFACTURED BY THE APPLETON CO. OR APPROVED EQUAL.

3. WIRE AND CABLE

DIRECT BURIAL CABLE FOR ROADWAY LIGHTING SHALL BE SINGLE CONDUCTOR 19-STRAND COPPER WIRE INSULATED WITH 8/64 INCH OF OZONE-RESISTANT COMPOUND CONFORMING TO A.S.T.M. SPECIFICATION D-574 AND FINISHED WITH 4/64 INCH POLYMERIZED CHLOROPRENE SHEATH CONFORMING TO A.S.T.M. SPECIFICATION D-752. THIS CABLE SHALL CONFORM TO FEDERAL AVIATION AGENCY SPECIFICATION L-824 TYPE B FOR SINGLE CONDUCTOR CABLE WITH 3000 VOLT TYPE B OZONE RESISTANT TYPE INSULATION WITH NEOPRENE JACKET. THIS HIGH VOLTAGE REQUIREMENT IS INTENDED TO PROVIDE GREATER STRENGTH AND PROTECTIVE QUALITIES THAN 600 VOLT INSULATION. THIS CABLE SIZE SHALL BE NO. 4.

POLE and BRACKET CABLE SHALL BE NO. 12, SINGLE CONDUCTOR, SEVEN (7) STRAND F.A.A. SPECIFICATION L-824 TYPE A, and SHALL BE GENERAL ELECTRIC NO. SI 58089, OR GENERAL CABLE, OR OTHER APPROVED EQUAL.

4. SPLICING MATERIALS

CABLE SPLICE MATERIALS SHALL CONSIST OF THE FOLLOWING OR APPROVED EQUAL:

STRAIGHT LINE SPLICE KIT - MINNESOTA MINING AND MFG. CO. SKOTCHCAST SPLICING KIT NO. 82A, APPROVED EQUIVALENT AS MANUFACTURED BY THE O. Z. CO. OR APPROVED EQUAL.

WYE OR TAP SPLICE KIT - MINNESOTA MINING AND MFG. CO. SKOTCHCAST SPLICING KIT NO. 90-B1, APPROVED EQUIVALENT AS MANUFACTURED BY THE O. Z. CO. OR APPROVED EQUAL.

INSULATING TAPE - OKONITE CO. OKOWELD NO. 92-512, APPROVED EQUIVALENT AS MANUFACTURED BY THE O. Z. CO. OR APPROVED EQUAL.

SHEATHING TAPE - OKONITE CO. OKOPRENE NO. 92-42, APPROVED EQUIVALENT AS MANUFACTURED BY THE O. Z. CO. OR APPROVED EQUAL.

~~CABLE CONNECTORS - BURNDY CORP. TYPE KS-3 EXTENDED BODY FOR 3 MAXIMUM SIZE CONDUCTORS, APPROVED EQUIVALENT AS MANUFACTURED BY THE NATIONAL ELECTRIC PRODUCTS CORP. OR APPROVED EQUAL.~~

COMPRESSION CONNECTORS - BURNDY CORP. TYPE YS OR YST, APPROVED EQUIVALENT AS MANUFACTURED BY THE NATIONAL ELECTRIC PRODUCTS CORP. OR APPROVED EQUAL.

5. GROUND RODS AND CONNECTORS

GROUND RODS SHALL BE COPPERCLAD STEEL, COPPERWELD, 5/8" OR 3/4" AS NOTED AND OF LENGTH AS NOTED, APPROVED EQUIVALENT AS MANUFACTURED BY BLACKBURN CO. OR APPROVED EQUAL.

GROUND CONNECTORS SHALL BE ANDERSON ELEC. CO. TYPE GC-111, APPROVED EQUIVALENT AS MANUFACTURED BY THOMAS & BETTS CO., OR APPROVED EQUAL.

EQUIPMENT GROUND CONNECTORS SHALL BE ANDERSON ELEC. CO. TYPE GC-143-01, APPROVED EQUIVALENT AS MANUFACTURED BY THOMAS & BETTS CO., OR APPROVED EQUAL.

TERMINAL CONNECTORS SHALL BE ANDERSON ELEC. CO. TYPE ITE, APPROVED EQUIVALENT AS MANUFACTURED BY THOMAS & BETTS CO., OR APPROVED EQUAL.

6. REINFORCING STEEL

REINFORCING STEEL SHALL BE PLAIN INTERMEDIATE GRADE AS REQUIRED BY ITEM M-7, SECTION M-7.1.

7. STRUCTURAL STEEL

STRUCTURAL STEEL FOR MISCELLANEOUS SUPPORTS AS DETAILED ON PLANS SHALL CONFORM TO REQUIREMENTS OF ITEM M-7, SECTION M-7.4 (a).

GALVANIZING SPECIFIED FOR STRUCTURAL STEEL SHALL CONFORM TO REQUIREMENTS OF ITEM M-7, SECTION M-7.4 (d).

8. LIGHTING STANDARDS AND BRACKETS

LIGHTING STANDARDS SHALL CONSIST OF #11 GAUGE ROUND STEEL SHAFTS TAPERED AT .14 INCH PER FOOT WITH A CAST STEEL ANCHOR BASE WHICH TELESCOPES THE SHAFT AND IS WELDED TO IT. THE SHAFT SHALL BE MADE FROM ONE PIECE OF STEEL WITH ONE LONGITUDINAL WELD AND A MINIMUM YIELD STRENGTH OF 48,000 POUNDS PER SQUARE INCH. SHAFT DIAMETER SHALL BE 8.5 INCHES AT THE BASE AND 4.7 INCHES AT THE TOP.

BRACKET ARMS SHALL BE MADE OF 2 INCH STANDARD PIPE WITH BASIC DESIGN AS SHOWN ON THE DRAWINGS.

ANCHOR BOLTS SHALL BE MADE OF HIGH STRENGTH STEEL IN ACCORDANCE WITH DETAILS SHOWN ON DRAWINGS.

STANDARDS AND BRACKETS SHALL BE THOROUGHLY CLEANED INSIDE AND OUT AND SHALL BE GIVEN TWO SHOP COATS OF PAINT BEFORE LEAVING THE FACTORY IN ACCORDANCE WITH ITEM S-25.10.

STANDARDS SHALL BE UNION METAL MFG. CO. DESIGNS 440A WITH HANDHOLE 4" X 6½", OR APPROVED EQUAL.

EACH STANDARD SHALL HAVE FOUR ANCHOR BOLTS AS NOTED ON DRAWINGS. NOMINAL HEIGHT SHALL BE 30 FT.

9. LUMINAIRES

LUMINAIRES SHALL BE MERCURY VAPOR TYPE FOR USE ON MULTIPLE CIRCUITS AND DESIGNED TO FURNISH LIGHT PATTERNS OF DISTRIBUTION ACCORDING TO A.S.A. IES TYPES NOTED ON THE DRAWINGS. EACH LUMINAIRE SHALL HAVE INTEGRAL MOUNTED BALLAST. LUMINAIRES SHALL BE WESTINGHOUSE OV-25 18-W-8677 FOR TYPE III, APPROVED EQUIVALENT AS MANUFACTURED BY THE GENERAL ELEC. CO., THE LINE MATERIAL CO., OR APPROVED EQUAL.

PROVIDE 2" SLIP FITTER FOR MOUNTING ON BRACKET.

10. BALLASTS

BALLASTS SHALL BE REGULATED OUTPUT TYPE, RATED 400 WATTS 480 VOLTS, FOR USE WITH 21,000 LUMEN MERCURY VAPOR LAMPS AND SHALL PROVIDE PLUS OR MINUS 2 PER CENT REGULATION IN LAMP WATTS WITH PLUS OR MINUS 13 PER CENT VARIATION IN PRIMARY VOLTS FROM THE BALLAST VOLTAGE DESIGN CENTER. POWER FACTOR SHALL BE 95%.

11. LAMPS

LAMPS SHALL BE MERCURY VAPOR TYPE, 400 WATTS, 21,000 LUMENS INITIAL, CLEAR, MINIMUM RATED LIFE 12,000 HOURS AT 5 TO 10 HOURS OPERATION PER START, WESTINGHOUSE LIFEGUARD TYPE H-33-1-CD, APPROVED EQUIVALENT AS MANUFACTURED BY THE GENERAL ELEC. CO. OR APPROVED EQUAL.

12. PULL BOXES AND COVERS

PULL BOXES SHALL BE EITHER PRE-CAST CONCRETE, STEEL REINFORCED, OR FORMED POURED-IN-PLACE REINFORCED CONCRETE.

PULL BOX COVERS SHALL BE PRE-CAST CONCRETE, STEEL REINFORCED. PROVIDE TWO GALVANIZED STEEL LIFTING EYES RECESSED FLUSH WITH THE TOP OF THE COVER.

13. CONCRETE FOUNDATION FOR STANDARD

FOUNDATIONS FOR LAMP STANDARDS SHALL BE POURED-IN-PLACE CONCRETE. THE LOWER PORTION SHALL BE POURED IN A SQUARE HOLE WITHOUT FORMS, 2 FT. 0 IN. SQUARE. TOP PORTION SHALL BE FORMED 2 FT. 0 IN. SQUARE AT LEAST ONE FOOT DEEP OR A MINIMUM OF 6 INCHES BELOW FINISHED GRADE LINE.

14. CONCRETE

CONCRETE MATERIALS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF ITEM M-1, M-2 AND M-3.

15. PAINT

PRIMER SHALL CONSIST OF RED LEAD PAINT CONFORMING TO REQUIREMENTS OF ITEM M-9, SECTION M-9.10, SEMI-QUICK DRYING RED LEAD PAINT.

FINISH PAINT COAT SHALL CONSIST OF ENAMEL AS SPECIFIED UNDER ITEM M-9, SECTION M-9.23, GREEN ENAMEL.

NOTE:
ALL LIGHTING CONSTRUCTION EXCEPT FOR THE LIGHTING SYSTEMS ON THE SMALL BOAT PASSAGEWAY STRUCTURES WILL BE DONE UNDER ANOTHER CONTRACT. (SEE GENERAL NOTE ON SHEET 15)

GENERAL NOTES - LIGHTING

INSTALLATION

1. GENERAL

INSTALLATION OF THE ROADWAY LIGHTING SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH ITEM S-25.

2. EXCAVATION AND BACKFILL

EXCAVATION AND BACKFILL FOR LIGHTING STANDARD FOUNDATIONS, PULL BOXES AND CONDUITS SHALL CONFORM TO THE REQUIREMENTS OF ITEM E-2, EXCAVATION AND BACKFILL.

3. CONCRETE

CONCRETE FOR THE SEVERAL PURPOSES OF THIS WORK SHALL BE PLACED, CURED AND PROPORTIONED IN ACCORDANCE WITH APPLICABLE PARTS OF ITEM S-1, CONCRETE FOR STRUCTURES.

CONCRETE SHALL BE CLASS C OR E AS NOTED ON DRAWINGS.

4. METHODS AND MATERIALS

CONTRACTOR SHALL INITIATE CONTACT WITH THE OHIO EDISON CO. AT BEGINNING OF PROJECT TO COORDINATE SERVICE WITH OTHER PARTS OF WORK ON THIS SYSTEM.

CONTRACTOR SHALL APPLY FOR DETAILED INFORMATION REGARDING THE POSITION OF ALL EQUIPMENT WHERE THE FINAL OR REQUIRED LOCATION MAY DIFFER FROM THOSE INDICATED ON THE DRAWINGS.

UPON COMPLETION OF THE WORK THE CONTRACTOR SHALL LEAVE ALL LUMINAIRES, POLES, AND OTHER EQUIPMENT IN FIRST CLASS CONDITION, FREE FROM DIRT, DUST AND FOREIGN MATERIALS. GLASSWARE SHALL BE CLEANED WITH SOAP AND WATER.

SCHEDULE WORK FOR LIGHTING SYSTEM TO COORDINATE WITH GENERAL ROADWAY CONSTRUCTION SO THAT ALL WORK MAY BE INSTALLED IN MOST DIRECT MANNER AND SO AS TO AVOID INTERFERENCES.

5. SYMBOLS

ELECTRICAL WORK IS SHOWN ON PLANS BY SYMBOLS AND NUMBERS WHICH ARE EXPLAINED IN THE LEGEND.

6. LIGHTING STANDARD FOUNDATIONS

THESE FOUNDATIONS SHALL CONFORM TO DESIGN AND DETAILS ON DRAWINGS AND TO REQUIREMENTS IN THESE SPECIFICATIONS. LOCATIONS OF LIGHTING UNIT FOUNDATIONS ARE NOTED IN TERMS OF ROADWAY CENTERLINES AND DISTANCE FROM PAVEMENT. CONTRACTOR SHALL CHECK ALL LOCATIONS IN THE FIELD, SHALL STAKE OUT ALL LOCATIONS AND SHALL OBTAIN APPROVAL OF THE ENGINEER BEFORE EXCAVATIONS. ADJUST FINAL POSITIONS TO SUIT FIELD CONDITIONS.

PAYMENT FOR LIGHTING STANDARD FOUNDATIONS SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR EACH FOUNDATION COMPLETED AND ACCEPTED IN ACCORDANCE WITH THE PLANS OR AS ORDERED BY THE ENGINEER. UNIT PRICE BID FOR STANDARD FOUNDATIONS SHALL INCLUDE FURNISHING AND PLACING OF CONCRETE, ANCHOR BOLTS, CONDUIT ELLS, ETC., AND THE COST OF EXCAVATION, BACKFILL AND DISPOSAL OF SURPLUS MATERIAL.

7. PULL BOXES

PROVIDE PULL BOXES IN ACCORDANCE WITH ITEM S-25, SECTION 25.12, AND AS SPECIFIED HEREIN AND SHOWN ON PLANS.

PROVIDE PULL BOXES AT ENDS OF ALL CROSSOVER CONDUITS AND WHEREVER SHOWN ON DRAWINGS.

8. UNDERGROUND CONDUIT

PROVIDE UNDERGROUND CONDUIT FOR ROADWAY CROSSOVERS, ETC., AS INDICATED ON DRAWINGS.

CONDUIT INSTALLATION SHALL CONFORM TO ITEM S-25, SECTION S-25.06, SIZES, MATERIALS AND TYPES AS ON PLANS.

CONDUITS SHALL HAVE POSITIVE SLOPE TO PULL BOXES AND DRAINAGE POINTS. CONDUITS SHALL CROSS ROADWAYS AT RIGHT ANGLES AND FOLLOW ROADWAY CONTOURS AT UNIFORM DEPTH AND ALIGNMENT. TERMINATE CONDUIT WITH END BELL OR BUSHING. SLOPE OF CONDUIT TO DRAIN SHALL BE 5 INCHES PER 100 FT. MINIMUM.

CONDUITS SHALL BE MANDRELLED WITH IRON SHOD MANDRELL 1/4" SMALLER THAN BORE OF CONDUIT AND SHALL BE PUSHED THROUGH BY MEANS OF JOINTED CONDUIT RODS. MANDREL GASKET, LEATHER OR RUBBER, TO BE SLIGHTLY LARGER THAN CONDUIT.

CONDUITS SHALL BE PLUGGED OR CAPPED TO PREVENT SEEPAGE OF GROUND WATER OR DIRT INTO THEM. CAP WITH TAPERED PLUG UNTIL WIRE IS INSTALLED.

CONDUIT TRENCHES SHOULD HAVE ESSENTIALLY VERTICAL WALLS.

PROVIDE A NO. 10 GALVANIZED STEEL DRAG OR FISH WIRE IN EACH EMPTY CONDUIT, WITH EXTRA LENGTH BENT BACK AT ENDS.

PAYMENT FOR UNDERGROUND CONDUIT SHALL BE MADE AT THE CONTRACT UNIT PRICE PER LINEAL FOOT FOR EACH TYPE AND SIZE OF SINGLE-WAY OR MULTI-WAY CONDUIT COMPLETED AND ACCEPTED, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING AND INSTALLING ALL MATERIALS, INCLUDING CONCRETE, CONDUIT, EXCAVATION, BACKFILL AND ALL PREPARATION, ASSEMBLY, RESTORATION, SURPLUS MATERIAL DISPOSAL AND FOR ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS REQUIRED TO COMPLETE THE WORK.

9. TRENCHES

PROVIDE TRENCHES FOR ALL UNDERGROUND CABLES, AS INDICATED ON PLANS AND DETAILS.

TRENCHES FOR CABLES MAY BE EXCAVATED MANUALLY OR WITH MECHANICAL TRENCHING EQUIPMENT, BUT NOT WITH GRADERS.

TRENCH BOTTOMS SHALL BE SMOOTH AND FREE OF COARSE AGGREGATE. BEDDING MATERIAL SHALL CONSIST OF CLEAN COMMERCIAL GRADE SAND CONFORMING TO ITEM M-2, SECTION M-2.1, SAND.

LOCATE CABLE TRENCHES AS INDICATED ON PLANS AND DETAILS.

TRENCHES SHALL NOT BE EXCESSIVELY WET NOR CONTAIN POOLS OF WATER DURING BACKFILLING OPERATIONS. TRENCHES SHALL BE BACKFILLED IN LAYERS AND SHALL BE COMPACTED WITH MECHANICAL TAMPERS TO DENSITY SPECIFIED UNDER ITEM E-1, ROADWAY EXCAVATION AND EMBANKMENT, TABLE II, CONDITION I.

PAYMENT FOR TRENCHES SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER LINEAL FOOT OF TRENCH. PRICE SHALL INCLUDE EXCAVATION, BACKFILL, RESTORATION, GUARD RAIL REMOVAL AND REPLACEMENT, DISPOSAL OF SURPLUS MATERIAL, REMOVAL OF ROCK, SAND AND GRADED BACKFILL AND FOR ALL PREPARATION, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK. NO SEPARATE PAYMENT SHALL BE MADE FOR TRENCHES OF DIFFERENT WIDTHS.

10. WIRE AND CABLE

INSTALL THE SPECIFIED WIRE AND CABLE AT LOCATIONS INDICATED AND ACCORDING TO PLANS AND DETAILS. CABLES SHALL BE IN CONTINUOUS LENGTHS WITHOUT SPLICES EXCEPT IN PULL BOXES AND LIGHTING UNITS, ETC.

CABLES INSTALLED IN CONDUITS SHALL CONFORM TO ITEM S-25, SECTION S-25.09.

CABLES SHALL BE UNREELED IN PLACE ALONGSIDE OR IN TRENCH, NOT PULLED FROM ONE END. ELIMINATE KINKS. OBSERVE REQUIREMENTS FOR LATERAL SPACING OF CABLES IN TRENCHES, PER DETAILS ON DRAWINGS.

PROVIDE LIBERAL SLACK CABLE IN PULL BOXES, BASES OF STANDARDS, ETC.

CABLE SPLICE KITS SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS, WITH COPY TO ENGINEER. WRAPPED SPLICES SHALL USE SPECIFIED TAPES AND CONNECTORS, FOLLOWING MANUFACTURER'S INSTRUCTIONS. TERMINATE AND FINISH EXPOSED ENDS OF CABLES AS RECOMMENDED BY MANUFACTURER.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE PER LINEAL FOOT FOR EACH TYPE OF CABLE OR WIRE INSTALLED IN TRENCH, CONDUIT, OR LIGHTING STANDARDS. THIS PRICE WILL BE FULL COMPENSATION FOR ALL FURNISHING, TESTING, SPLICING, AND INSTALLATION OF THE MATERIALS AND FOR ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM. NO SEPARATE MEASUREMENTS SHALL BE MADE FOR CABLE INSTALLED IN CONDUIT, TRENCH OR LIGHTING STANDARDS.

11. LIGHTING UNITS

PROVIDE ROADWAY LIGHTING UNITS WHERE INDICATED CONFORMING TO DETAILS, DIMENSIONS, ETC., AS ON PLANS.

PROVIDE ON EACH STANDARD 6 FT. ABOVE BASE A 16 GA. BRASS PLATE 3" X 2" WITH 1" HIGH LETTER AND NUMBER INDICATING CIRCUIT LETTER AND POSITION NUMBER CORRESPONDING TO IDENTIFICATIONS SHOWN ON PLANS.

PROVIDE STANDARDS AND BRACKETS AS DESIGNATED ON PLANS AND HEREIN. INSTALL PER ITEM S-25, SECTION S-25.10. STANDARDS SHALL BE SET VERTICAL WITHIN 2 DEGREES. BRACKETS SHALL BE PERPENDICULAR TO CENTERLINES OF RAMPS AND ROADWAYS AT POINTS OF INSTALLATION.

PROVIDE LUMINAIRES OF TYPES DESIGNATED ON PLANS, WITH LAMPS AS SPECIFIED, ALSO BALLASTS AS SPECIFIED.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH LIGHTING STANDARD, LUMINAIRE AND LAMP INSTALLED IN PLACE AND ACCEPTED, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS, FOR ALL PREPARATION, ASSEMBLY AND INSTALLATION OF THESE MATERIALS AND FOR THE LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

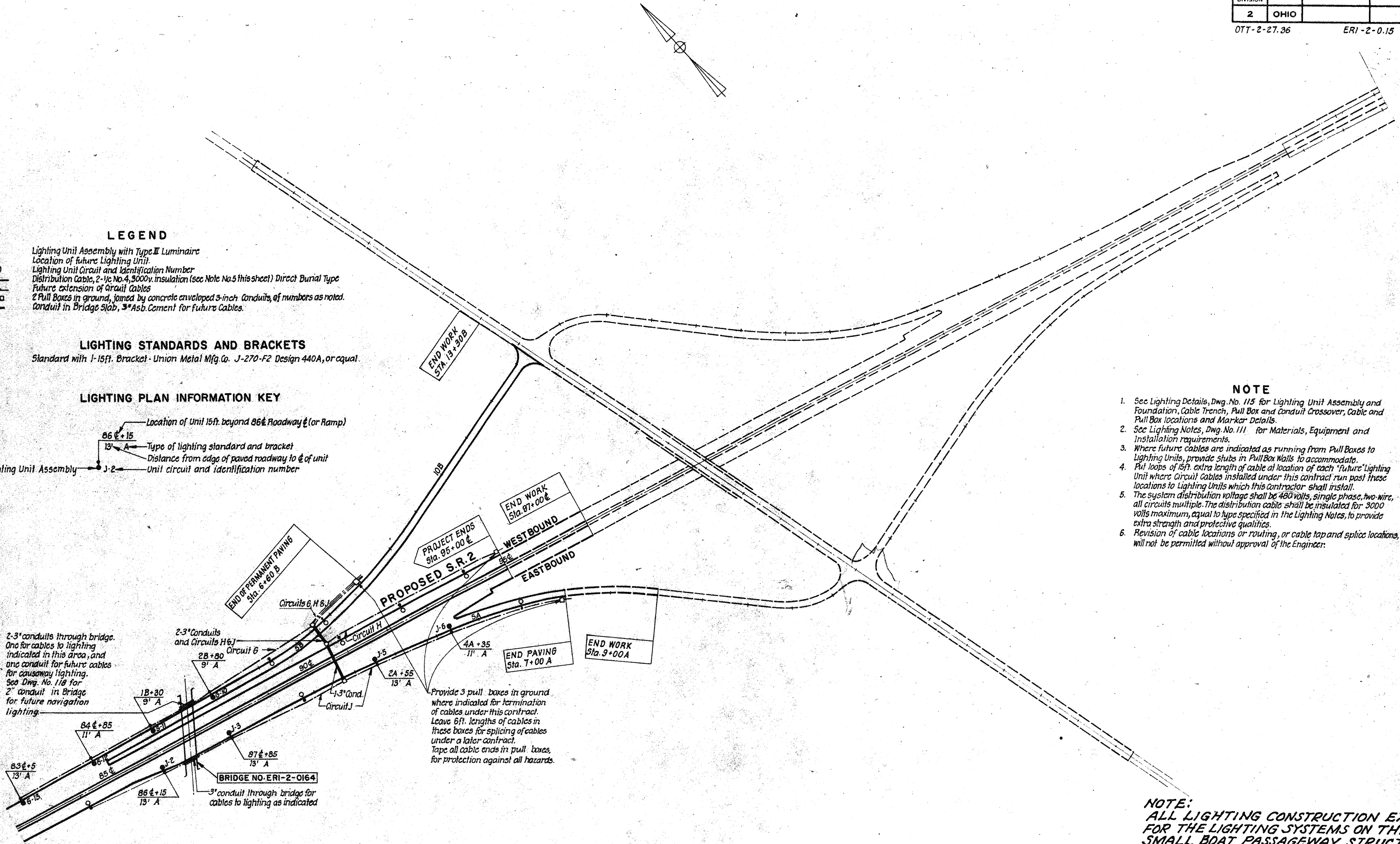
12. GROUNDING

PROVIDE COMPLETE PERMANENT GROUNDING SYSTEMS FOR ALL LIGHTING STANDARDS. THIS WORK SHALL COMPLY WITH REQUIREMENTS OF ITEM S-25, SECTION S-25.13, GROUNDING.

GROUNDING CONDUCTORS SHALL BE ATTACHED BY MEANS OF SUITABLE LUGS, PRESSURE CONNECTORS OR CLAMPS. CONDUITS MAY BE GROUND CONNECTED BY PROPER COPPER STRAPPING, WITH GOOD METALLIC CONTACTS. THE GROUND RODS SHALL HAVE GROUND CONDUCTORS BRAZED TO THEM. GROUND RESISTANCE SHALL NOT EXCEED 20 OHMS, AND EXTRA GROUND RODS SHALL BE PROVIDED FOR THIS LIMIT. RUN NO. 4 GROUND WIRE NECESSARY DISTANCE FOR GOOD GROUND CONDITION.

NO SEPARATE PAYMENT SHALL BE MADE FOR GROUNDING. GROUNDING SHALL BE CONSIDERED AS SUBSIDIARY WORK AND COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEMS WHERE GROUNDING IS SPECIFIED OR REQUIRED.

NOTE:
ALL LIGHTING CONSTRUCTION EXCEPT FOR THE LIGHTING SYSTEMS ON THE SMALL BOAT PASSAGEWAY STRUCTURES WILL BE DONE UNDER ANOTHER CONTRACT. (SEE GENERAL NOTE ON SHEET 15)



LEGEND

- Lighting Unit Assembly with Type III Luminaire
- Location of future Lighting Unit.
- 6-10 Lighting Unit Circuit and Identification Number
- Distribution Cable, 2-1/c No. 4, 3000v. insulation (see Note No. 5 this sheet) Direct Burial Type
- Future extension of Circuit Cables
- 2 Pull Boxes in ground, joined by concrete enveloped 3-inch Conduits, of numbers as noted.
- Conduit in Bridge Slab, 3" Asb. Cement for future Cables.

LIGHTING STANDARDS AND BRACKETS

A Standard with 1-15ft. Bracket - Union Metal Mfg. Co. J-270-F2 Design 440A, or equal.

LIGHTING PLAN INFORMATION KEY

86℄ +15 — Location of Unit 15ft. beyond 86℄ Roadway ℄ (or Ramp)
13' A — A: Type of lighting standard and bracket; 13': Distance from edge of paved roadway to ℄ of unit
Lighting Unit Assembly — J-2 — Unit circuit and identification number

NOTE

1. See Lighting Details, Dwg. No. 115 for Lighting Unit Assembly and Foundation, Cable Trench, Pull Box and Conduit Crossover, Cable and Pull Box locations and Marker Details.
2. See Lighting Notes, Dwg. No. 111 for Materials, Equipment and Installation requirements.
3. Where future cables are indicated as running from Pull Boxes to Lighting Units, provide stubs in Pull Box Walls to accommodate.
4. Put loops of 15ft. extra length of cable at location of each "future" Lighting Unit where Circuit Cables installed under this contract run past these locations to Lighting Units which this Contractor shall install.
5. The system distribution voltage shall be 480 volts, single phase, two-wire, all circuits multiple. The distribution cable shall be insulated for 3000 volts maximum, equal to type specified in the Lighting Notes, to provide extra strength and protective qualities.
6. Revision of cable locations or routing, or cable tap and splice locations, will not be permitted without approval of the Engineer.

NOTE:
ALL LIGHTING CONSTRUCTION EXCEPT FOR THE LIGHTING SYSTEMS ON THE SMALL BOAT PASSAGEWAY STRUCTURES WILL BE DONE UNDER ANOTHER CONTRACT. (SEE GENERAL NOTE ON SHEET 15)

Scale: 1" = 100'

GENERAL NOTES - LIGHTING

INSTALLATION (CONTINUED)

13. DUCT AND CABLE MARKERS

PROVIDE MARKERS AS DETAILED ON DRAWINGS FOR LOCATIONS OF CABLE AND CONDUITS.

THE MARKERS SHALL HAVE APPROPRIATE INFORMATION ON TOP OF SLAB.

EACH CABLE RUN THAT DEVIATES FROM THE NORMAL TRENCH PARALLEL TO THE ROADWAY SHALL BE MARKED AT EACH END AND AT APPROXIMATELY EVERY 150 FT. OF THE CABLE RUN. ADDITIONAL MARKERS SHALL BE PLACED AT EACH CHANGE OF DIRECTION. PLACE A MARKER AT EACH END OF EACH CONDUIT OR DUCT IN THE GROUND WHERE THERE IS NO PULL BOX.

NO SEPARATE PAYMENT SHALL BE MADE FOR MARKERS. THE COST OF MARKERS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONDUIT AND CABLE.

14. TESTING

PROVIDE ALL NECESSARY EQUIPMENT AND APPLIANCES FOR TESTING THE UNDERGROUND CABLE CIRCUITS AFTER INSTALLATION.

TEST AND DEMONSTRATE TO THE SATISFACTION OF THE ENGINEER THE FOLLOWING:

THAT ALL LIGHTING CIRCUITS ARE CONTINUOUS AND FREE FROM SHORT CIRCUITS

THAT ALL CIRCUITS ARE FREE FROM UNSPECIFIED GROUNDS

THAT THE RESISTANCE TO GROUND OF ALL NON-GROUNDED CIRCUIT CONDUCTORS IS NOT LESS THAN 10 MEGOHMS

THAT ALL CIRCUITS ARE PROPERLY CONNECTED AND OPERABLE

RESISTANCE SHALL BE MEASURED WITH BALLASTS CONNECTED IN THE CIRCUITS. TESTS SHALL BE MADE WITH A 500 VOLT MEGGER IN THE PRESENCE OF THE ENGINEER. RECORDS OF ALL TESTS SHALL BE FURNISHED TO THE ENGINEER.

TESTING SHALL BE CONSIDERED A SUBSIDIARY WORK ITEM PERTAINING TO CABLE AND COSTS SHALL BE INCLUDED IN UNIT PRICE BID FOR CABLE.

15. COMPLETION, INSPECTION AND PERFORMANCE TESTS

THE ROADWAY LIGHTING SYSTEM SHALL BE COMPLETE IN EVERY DETAIL AND FREE FROM ALL SHORT OR OPEN CIRCUITS, IMPROPER CONNECTIONS, INFERIOR WORKMANSHIP, DAMAGED OR INFERIOR MATERIALS.

BEFORE ACCEPTANCE OF THE SYSTEM, OPERATE THE ENTIRE LIGHTING SYSTEM FROM SUNSET TO SUNRISE EACH NIGHT FOR ONE WEEK, DURING WHICH TIME ALL NECESSARY CORRECTIONS SHALL BE MADE. MAKE PAYMENT FOR ALL ENERGY COSTS INVOLVED. TEMPORARY ENERGY SOURCE SHALL BE PROVIDED BY THE CONTRACTOR AT NO COST TO THE STATE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS AND OCCURRENCES DURING THIS WEEK'S TEST AND INSPECTIONS.

PERFORMANCE TESTS SHALL BE CONSIDERED AS A SUBSIDIARY WORK ITEM PERTAINING TO THE LIGHTING UNIT COMPONENTS AND COSTS SHALL BE INCLUDED IN THE PRICE BID FOR THESE ITEMS.

16. CABLE CODE

ALL CABLES AND WIRES SHALL BE FULLY CODED FOR FUTURE MAINTENANCE AND TESTING.

WIRES IN LIGHTING STANDARDS SHALL BE COLOR CODED.

DIRECT BURIAL CABLE SHALL BE MARKED ON THE JACKET SURFACE WITH A SYMBOL TO IDENTIFY EACH INDIVIDUAL CABLE WHERE GROUPED IN TRENCH, OR PULL BOX. MARKING SHALL BE DONE BY CABLE MANUFACTURER IN A PERMANENT AND EFFECTIVE MANNER AND SHALL BE REPEATED AT A MAXIMUM SPACING OF APPROX. TWELVE (12) INCHES.

CODING SHALL BE UNIFORM THROUGHOUT THE ENTIRE PROJECT WIRING SYSTEM.

CODING SHALL BE CONSIDERED A SUBSIDIARY ITEM PERTAINING TO CABLE AND COSTS SHALL BE INCLUDED IN UNIT PRICE BID FOR CABLE.

19. MAINTAINING TRAFFIC

DURING THE COURSE OF THIS CONSTRUCTION, THERE SHALL BE NO INTERRUPTION OF TRAFFIC OVER EXISTING TRANSPORTATION ROUTES DUE TO THE ERECTION OF WORK UNDER THIS CONTRACT.

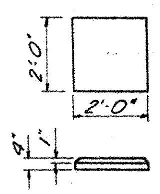
NOTE:
ALL LIGHTING CONSTRUCTION EXCEPT FOR THE LIGHTING SYSTEMS ON THE SMALL BOAT PASSAGEWAY STRUCTURES WILL BE DONE UNDER ANOTHER CONTRACT. (SEE GENERAL NOTE ON SHEET 15)

ESTIMATED QUANTITIES – LIGHTING

ITEM NO.	UNIT	DESCRIPTION	ESTIMATED QUANTITIES			
			HIGHWAY	BRIDGES		
				* NO. OTT-2-2820	* NO. ERI-2-0071	* NO. ERI-2-0164
~~S-25~~	~~Ea.~~	~~Luminaire - Type III with Integral 400W Ballast - Multiple~~	~~8~~			
~~S-25~~	~~Ea.~~	~~Mercury Vapor Lamps~~	~~8~~			
~~S-25~~	~~Ea.~~	~~Standard with 15 foot Bracket - Type A - Union Metal Mfg. Co. J-270-F2 Design 440 A, or equal~~	~~8~~			
~~S-25~~	~~Ea.~~	~~Standard Foundation~~	~~8~~			
~~S-25~~	~~L.F.~~	~~Distribution Cable 1/c No. 4 - 3000 v.~~	~~2524~~			
~~S-25~~	~~L.F.~~	~~Trenching~~	~~2180~~			
~~S-25~~	~~L.F.~~	~~Single 3 inch Fibre Conduit for Crossover~~	~~110~~			
~~S-25~~	~~L.F.~~	~~Double 3 inch Fibre Conduit for Crossover~~	~~50~~			
S-25	L.F.	3" Asbestos Cement Conduit - Bridge		280	280	115
S-25	L.F.	2" Galv. Steel Conduit - Bridge		140	140	20
S-25	L.F.	1¼" Galv. Steel Conduit - Bridge		140	140	130
S-25	Ea.	Junction Boxes		2	2	2
S-25	Ea.	Grounding System for Bridge		2	2	1
~~S-25~~	~~Ea.~~	~~Pull Boxes~~	~~6~~			
~~S-25~~	~~L.F.~~	~~Lighting Unit Wire 1/c No. 12 - 600 v Rhw.~~	~~750~~			

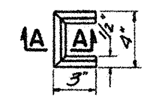
* These quantities are included for payment in the Lump Sum bid for Item S-25, Electric Lighting System" for each Bridge.

NOTE:
Impress the Word "Conduit" in the Top of Concrete Marker using Letters of the Type and Dimensions per Details.

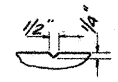


CONCRETE MARKER

NOTE:
Dimensions Shown are for all Symbols Impressed in Concrete Marker.

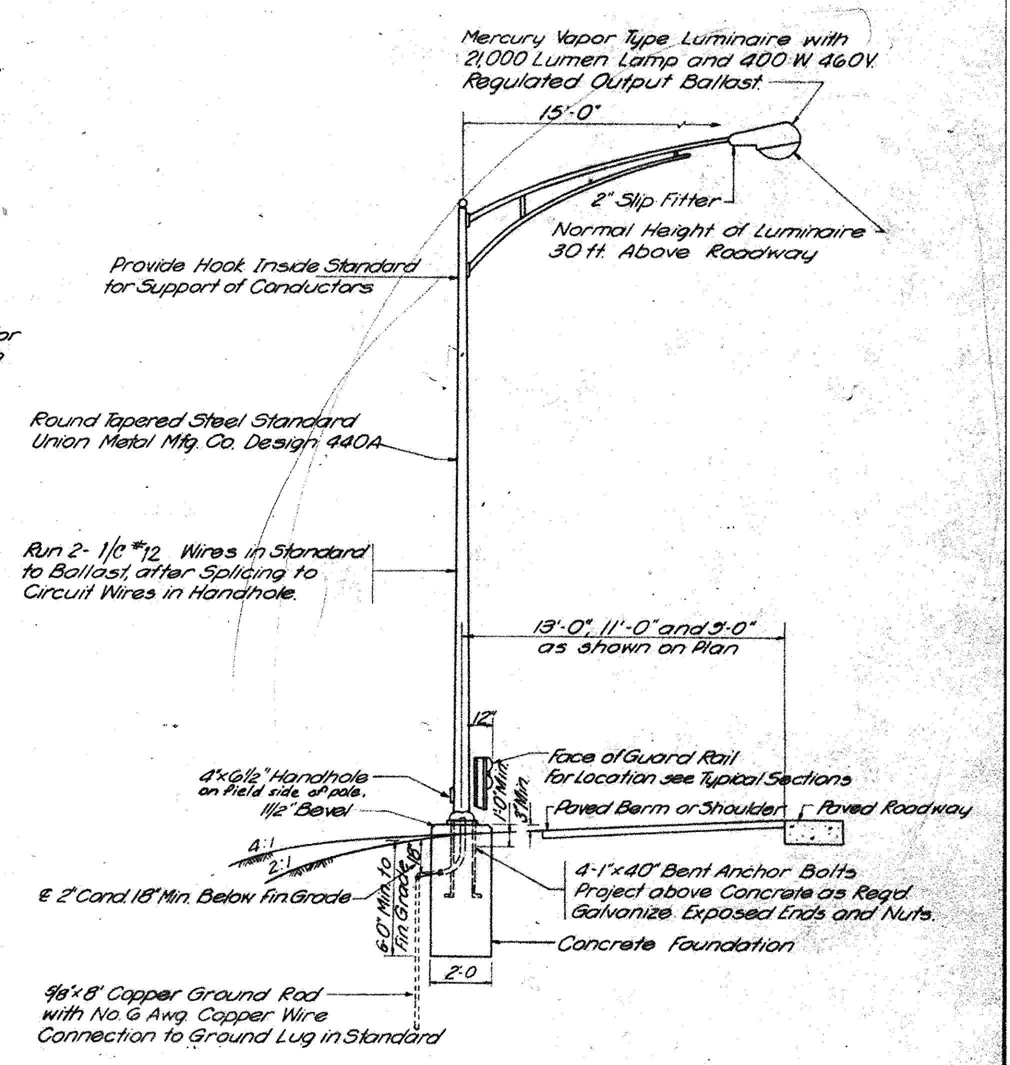


TYPICAL SYMBOL

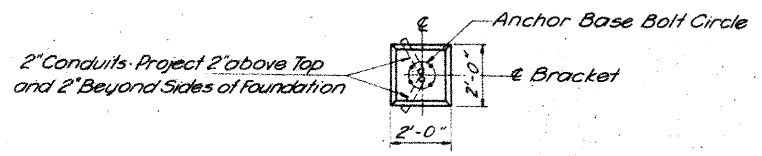


SECTION A-A

MARKER DETAIL

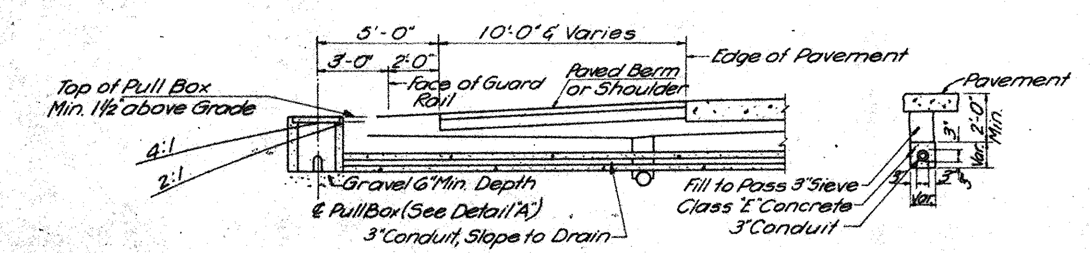


ELEVATION

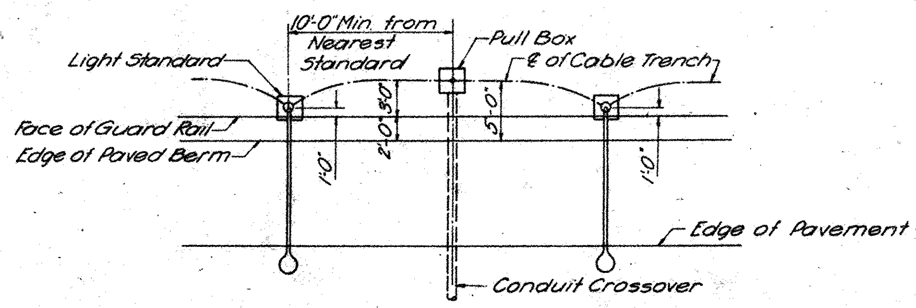


FOUNDATION PLAN

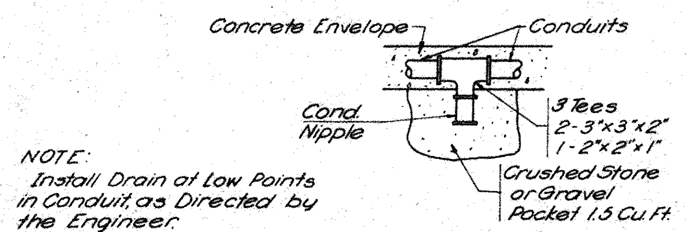
LIGHTING UNIT AND FOUNDATION



TYPICAL CONDUIT CROSSOVER DETAIL

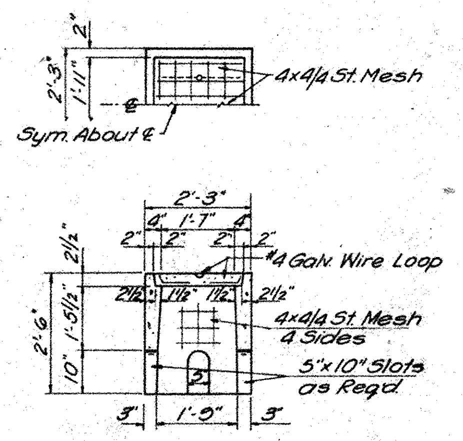


CABLE AND PULL BOX LOCATION

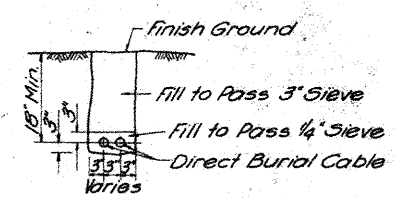


NOTE:
Install Drain at Low Points in Conduit, as Directed by the Engineer.

DETAIL OF CONDUIT DRAIN



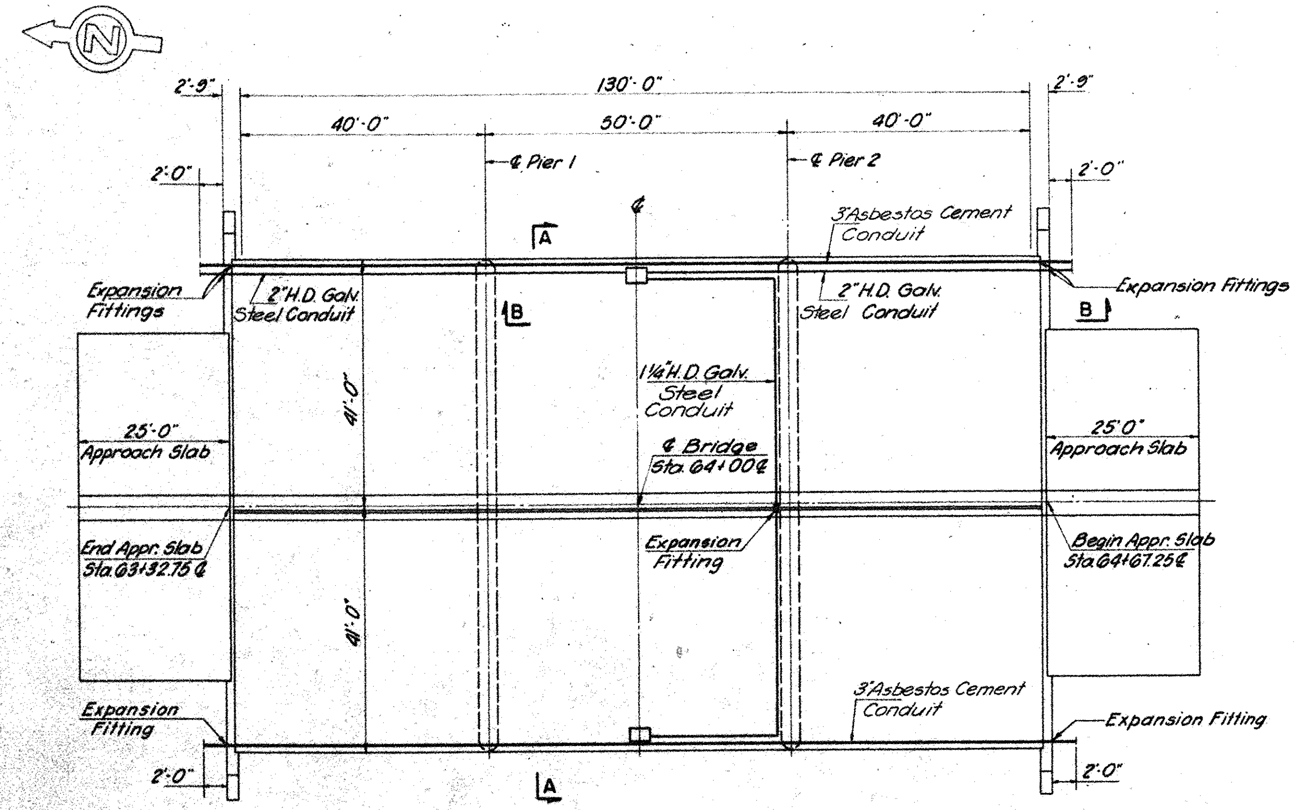
DETAIL "A"
(PULL BOX)



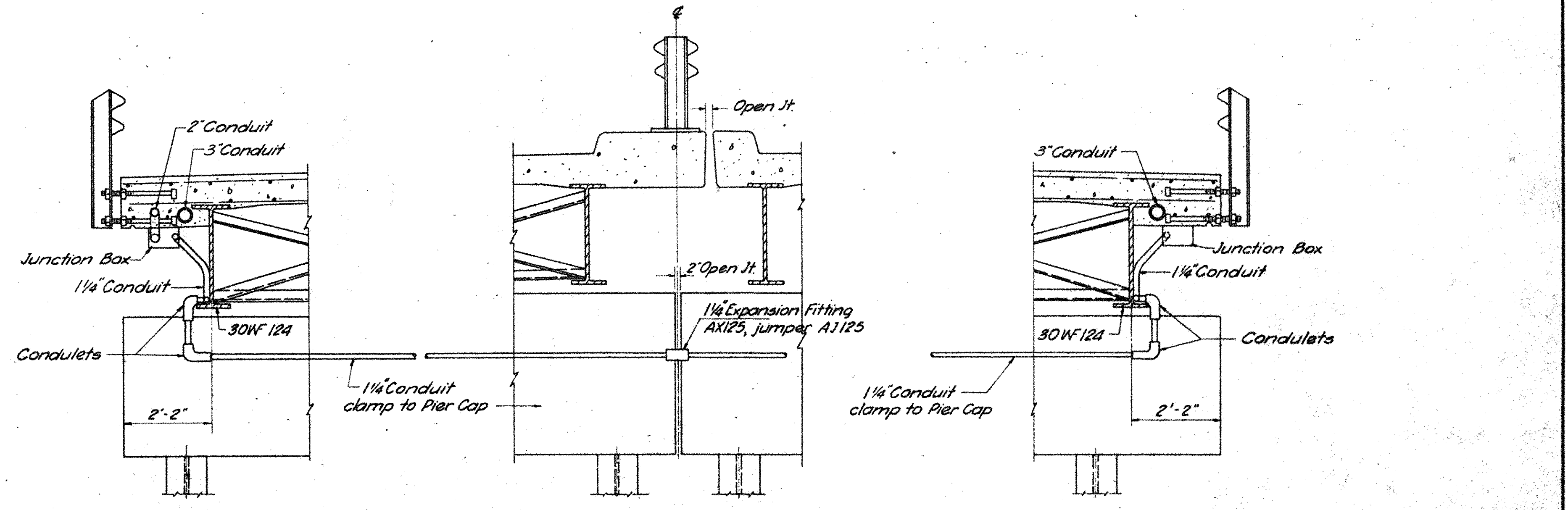
TYPICAL CABLE TRENCH

NOTE:
ALL LIGHTING CONSTRUCTION EXCEPT FOR THE LIGHTING SYSTEMS ON THE SMALL BOAT PASSAGEWAY STRUCTURES WILL BE DONE UNDER ANOTHER CONTRACT. (SEE GENERAL NOTE ON SHEET 15)

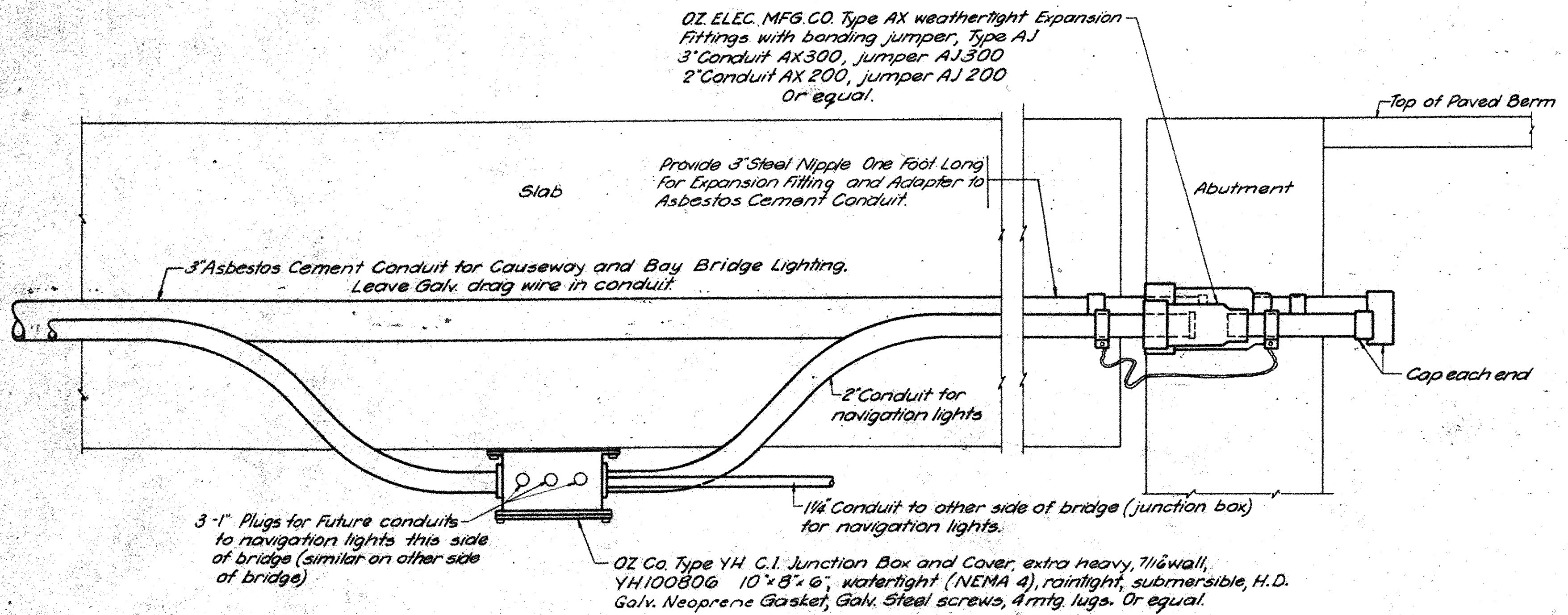
Not to Scale



PLAN



SECTION A-A



SECTION B-B

NOTES:

A solid No. 0 gage, bare copper wire electrical ground shall be embedded in pier pile cap at each side of fixed Pier No. 1. The lower ends of the wire shall be brazed to the top of one of the steel H-piles, and the upper ends shall extend sufficiently above the top of the concrete pile cap to provide for a suitable splice and extension for connection to the superstructure and Steel Conduits. The connection to the superstructure shall be a No. 0 gage, bare, stranded, tinned copper wire brazed or bolted to a beam flange and brazed to the solid copper wire in the pier pile cap. All Steel Conduits shall be grounded with 1½" copper ground strap brazed to a tinned No. 0 gage copper wire, the lower ends of which shall be brazed to the solid No. 0 gage bare copper ground embedded in the pier pile cap.

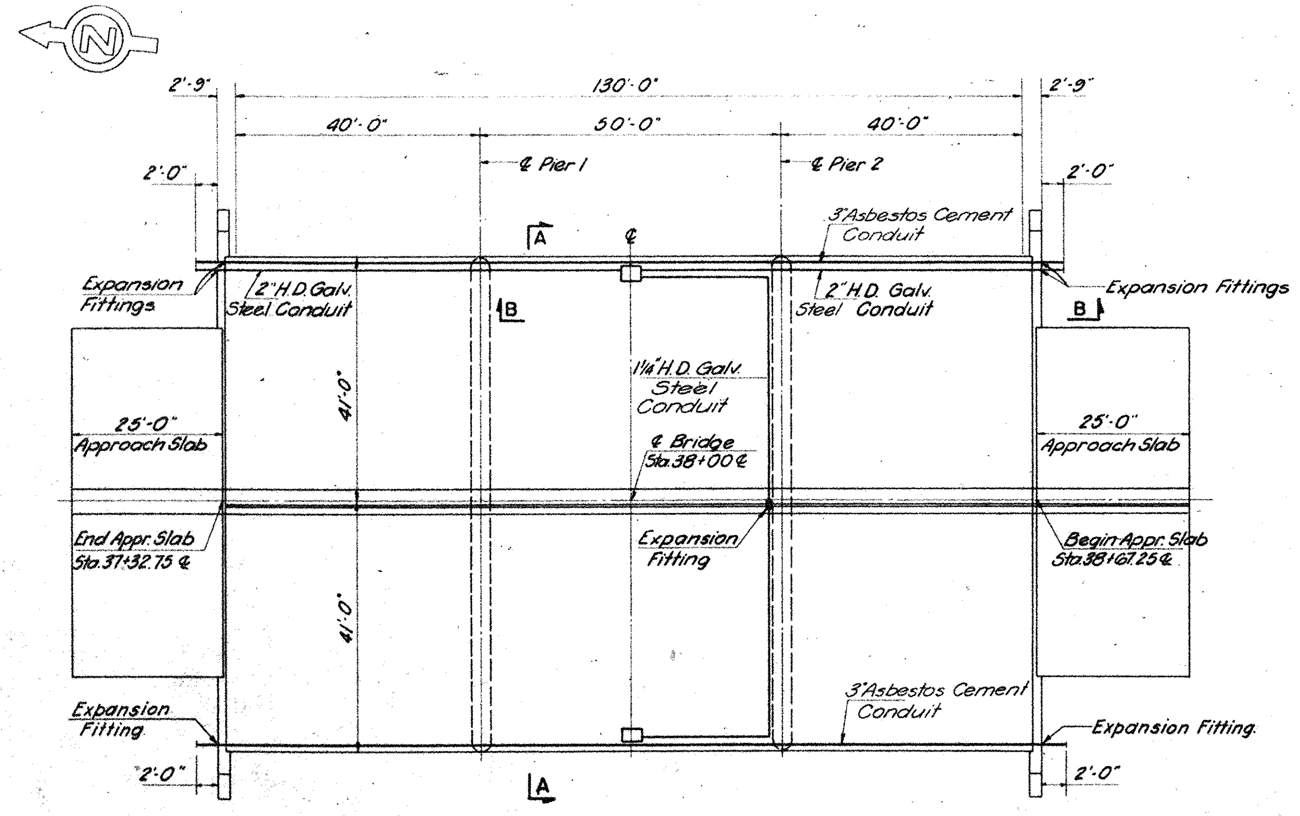
Payment for electrical grounds is included in the Item 5-25, "Electrical Lighting System." See Sheet No. 115

KING & GAVARIS
CONSULTING ENGINEERS

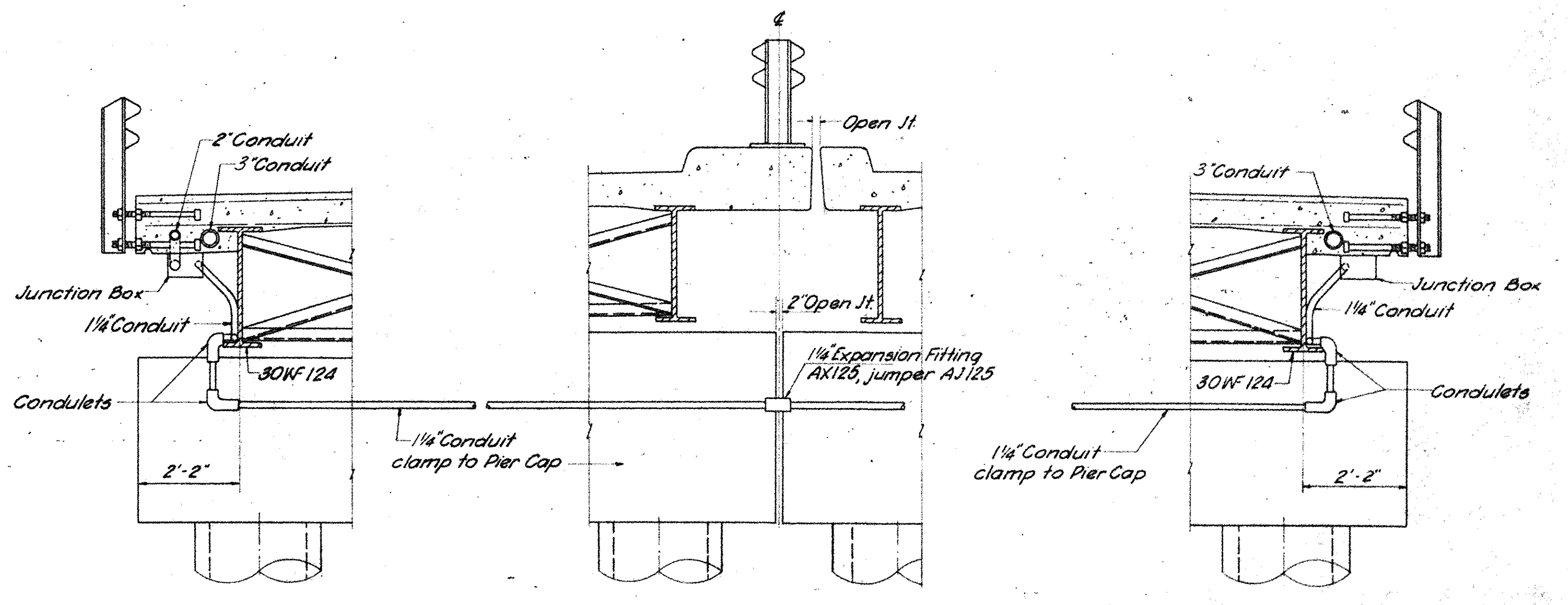
LIGHTING DETAILS

BRIDGE NO. OTT-2-2820
OVER SANDUSKY BAY
(SMALL BOAT PASSAGEWAY)
OTTAWA COUNTY

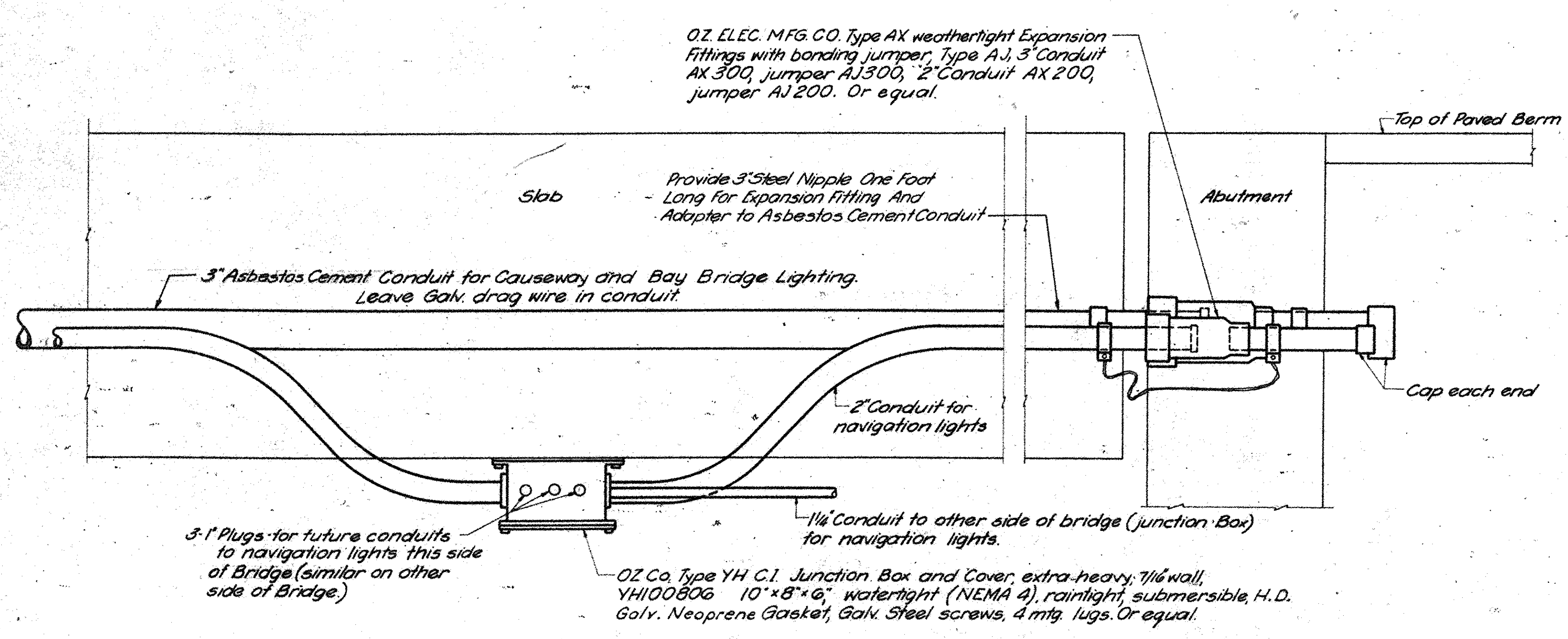
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.A.H.	H.H.	A.J.	De	De	12/8/61	6-6-62 J.B.W.



PLAN



SECTION A-A



SECTION B-B

NOTES:

A solid No. 0 gage, bare copper wire electrical ground shall be embedded in pier pile cap at each side of fixed Pier No. 1. The lower ends of the wire shall be brazed to the top of the steel shell of one of the caissons and the upper ends shall extend sufficiently above the top of the concrete pile cap to provide for a suitable splice and extension for connection to the superstructure and Steel Conduits. The connection to the superstructure shall be a No. 0 gage, bare, stranded, tinned copper wire brazed or bolted to a beam flange and brazed to the solid copper wire in the pier pile cap. All Steel Conduits shall be grounded with 1½" copper ground strap brazed to a tinned No. 0 gage copper wire, the lower ends of which shall be brazed to the solid No. 0 gage bare copper ground embedded in the pier pile cap.

Payment for electrical grounds is included in the Item S-25, "Electrical Lighting System." See Sheet No. 115

KING & GAVARIS
CONSULTING ENGINEERS

LIGHTING DETAILS

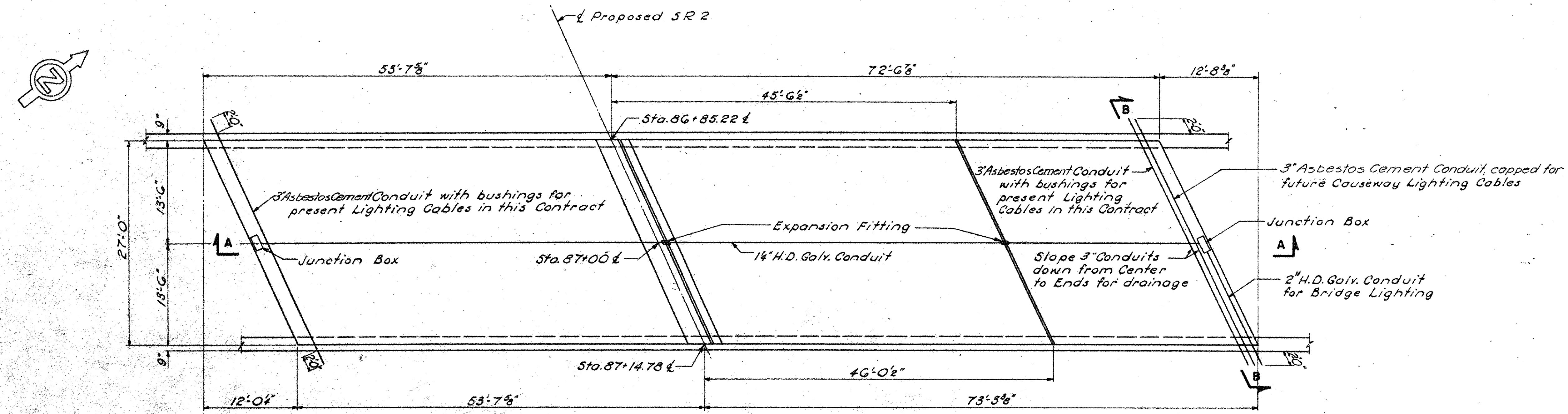
BRIDGE NO. ERI.-2-0071
OVER SANDUSKY BAY
(SMALL BOAT PASSAGEWAY)
ERIE COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.A.H.	H.H.	A.J.	[illegible]	[illegible]	12/8/61	6-6-62 J.E.W.

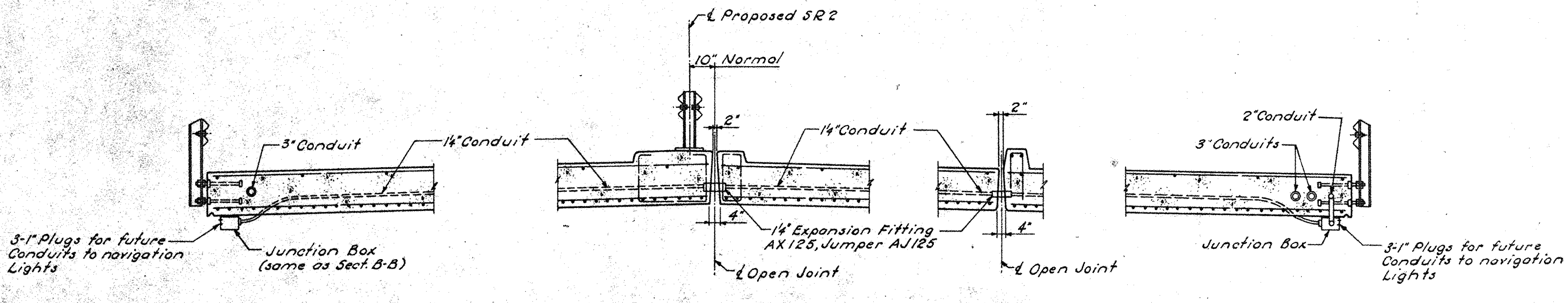
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

OTT-2-27.36 ERI-2-0.15

118/118



PLAN

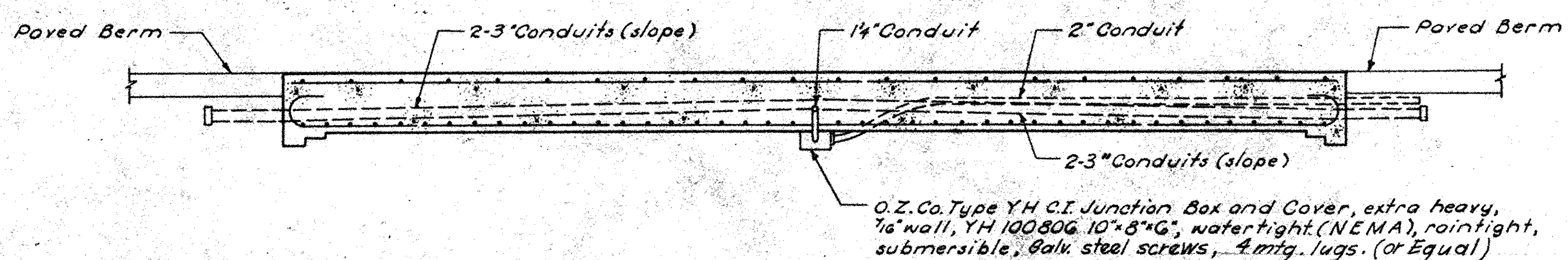


SECTION A-A

NOTES:

A solid No. 0 gage, bare copper wire electrical ground shall be embedded longitudinally in Abutment No. 1, 2'-0" below the bridge slab seat. One end of this ground shall drop down and be brazed to the top of one of the Steel H-Piles and extensions at each end of the abutment shall extend sufficiently above the slab seat to provide for a suitable splice and extension for connection to the Steel Conduits, which shall be grounded with 1 1/2" copper ground strap brazed to a tinned No. 0 gage copper wire, the ends of which shall be brazed to the solid No. 0 gage bare copper ground embedded in Abutment No. 1.

Payment for electrical ground is included in Item 5-25 "Electrical Lighting System." See Sheet No. 115



SECTION B-B

KING & GAVARIS
CONSULTING ENGINEERS

LIGHTING DETAILS

BRIDGE NO. ERI-2-0164
OVER LAGOON
(SMALL BOAT PASSAGEWAY)

ERIE COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.A.H.	H.A.H.	M.W.	de	de	12/8/61	6-6-62 J.E.W.

GENERAL INFORMATION

INTRODUCTION

The project consists of a major relocation of SR 2, beginning 3000 feet west of the NYC RR., Ottawa County, and extending for 6.24 miles in a southeasterly direction, approximately paralleling existing SR 2, on the average of 0.5 mile to the west and south of existing SR 2, terminating at the intersection of USR 6, Erie County. Also included is the SR 240 Connector and associated ramps, and the SR 269 Interchange. Following are brief comments concerning the proposed grades on the project:

SR 2 - The roadway is to be entirely built on fill embankment, generally between 10 and 20 feet in height, but as great as 50 feet in height.

SR 240 Connector Interchange

Proposed SR 240 Connector, Ramps "A", "B", "C" and "D" - fill embankment 0 to 36 feet in height.

SR 240 Connector Southbound and Northbound - fill embankment 0 to 20 feet in height.

SR 269 Interchange

SR 269 - fill embankment, 0 to 30 feet in height.

Ramps "A", "B", "C" and "D" - fill embankment ranging from 8 to 22 feet in height.

GEOLOGY AND OBSERVATIONS OF THE PROJECT

The alignment traverses a relatively flat portion of the glaciated Lake Plain, including the Sandusky Bay and bordering swamp land, where glacial deposits, lake sediments and lacustrine soils, found to be as much as 55 feet in depth, overlie dolomite and limestone bedrock, of Silurian age. On both sides of the bay there are areas of poor surface drainage and to the south of the bay there are commercial clay pits, some of which are currently being excavated.

EXPLORATION

Exploratory borings were made by means of truck-mounted mechanical earth auger, hand auger (in areas of difficult access), peat sampler, and rotary-type drill rig, between June 6 and August 18, 1960. Also included in this report are logs of drive sample-core borings made in conjunction with the proposed structures.

INVESTIGATIONAL DISCLOSURES

Borings disclose the following:

SR 2

North of Sandusky Bay (Station 10+00 to 50+00) - Embankment foundation materials are comprised predominantly of silt clay and clay, in the A-6a and A-7-6 classifications.

Sandusky Bay (Station 50+00 to 120+00, Ottawa Co., 0+00 to 71+00, Erie Co.) - Embankment foundation materials in this area are comprised of as much as 25 feet of unstratified intervals of soft, wet, highly compressible, low strength peats, sandy silts, silt, silt clay and clay, in the A-4, A-6, and A-7-6 classifications, generally having moisture contents in the upper portion of or above the plastic range.

Swamp South of Sandusky Bay (Station 71+00 to 159+00) - Materials in the embankment foundation are composed of 2 to 7 feet of wet, soft, highly compressible, low strength peats occurring at or near ground surface, immediately underlain most generally by clay, in the A-7-6 classification, which in turn is underlain by sandy silt and silt clay, in the A-4 and A-6 classification. Moisture contents in the upper 30 feet are generally in the upper portion of or above the plastic range.

Area South of Swamp (Station 159+00 to 220+00) - Embankment foundation materials are comprised predominantly of silt clays and clays, in the A-6 and A-7-6 classifications, with localized areas of peats and organic soils.

SR 240 Connector Interchange

Embankment foundation materials in this area are comprised of unstratified intervals of sandy silt, silt, silt clay and clay, in the A-4, A-6, and A-7-6 classifications.

SR 269 Interchange

SR 269 - Embankment foundation materials consist of approximately 5 feet of wet, soft, highly compressible, low strength sedimentary and fibrous peat, occurring within 4 feet of ground surface, overlying clay, in the A-7-5 and A-7-6 classifications.

Ramps "A", "B", "C", and "D" - Materials in the embankment foundation are comprised of 2 to 5 feet of wet, soft, highly compressible, low strength peats, occurring at ground surface, underlain by silt clay and clay, in the A-6 and A-7-6 classifications.

LEGEND FOR PROJECT-AVERAGE RESULTS OF TESTS- 1148 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/or stone fragments with sand	A-1-b (0)	A-1-b	47	20	25	5	3	NP	NP	23	2
Coarse and fine sand	----	A-3a	17	35	21	13	11	NP	NP	22	3
Sandy silt	A-4(4)	A-4a	14	11	19	31	25	23	5	16	35
Silt	A-4(8)	A-4b	0	0	1	57	42	28	6	29	31
Silt and clay	A-6(9)	A-6a	1	1	6	39	47	32	13	25	126
Silty clay	A-6(11)	A-6b	2	2	5	38	53	37	18	25	124
Elastic clay with or without organic material	A-7-5 (20)	A-7-5	1	2	5	42	50	84	35	77	34
Clay	A-7-6 (16)	A-7-6	0	1	2	37	60	48	25	32	449
Random fill			VISUAL CLASSIFICATION								1
Fibrous peat			VISUAL CLASSIFICATION								14
Fine-textured peat			VISUAL CLASSIFICATION								22
Marly sedimentary peat			VISUAL CLASSIFICATION								55
Sedimentary peat			VISUAL CLASSIFICATION								59
Broken shale			VISUAL CLASSIFICATION								1
Dolomite			VISUAL CLASSIFICATION								14
Various other material			VISUAL CLASSIFICATION								148

Sod and/or Topsoil X' = Approximate depth.

Berm material

Auger boring - plan view.

Core boring plan view.
Drive sample-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 high water content.

W Free water

B Indicates broken rock interval.

NOTE: Figures beside borings indicate water content in percent. e.g. 15

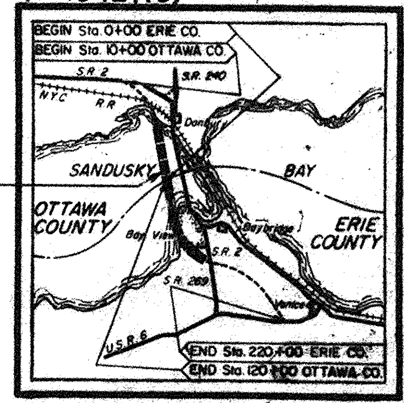
SOIL PROFILE
OTTAWA - ERIE COUNTIES
OTT - 2 - 27.36
ERI - 2 - 0.15
OHIO STATE HIGHWAY TESTING LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO

1/26

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.

F-1042(13)

OTT-2-27.36
ERI-2-0.15



LOCATION MAP

Recon - C.J.K. May 1960
Drilling - Auger - J.A.G., R.R., J.M., K.D.E., J.F., H.D.P. - 6/8/60 to 8/18/60
Core - K.D.E., W.F.H., H.D.P., A.W.H., J.E.T. - 6/6/60 to 8/18/60
Drafting - D.J.T., L.N.L., W.E.J., D.M., R.B. - 10/11/60

SUPPLEMENT
Drilling - Auger - C.E.G., F.S. - 8/15/61 to 8/22/61
Drafting - C.L.I., A.F., C.R.M., C.C.T. -

NOTE:

The Contractor shall refer to this Soil Profile Set only insofar as Contract OTT-2-27.36 ERI-2-0.15 is concerned. The Limits of Work for this Contract are as Follows
Sta. 48+50¢ OTT to Sta. 97+00¢ ERI and Ramp A at Rte. 269 to Sta. 9+00A and Ramp B at Rte. 269 to Sta. 13+30 B.

SOIL PROFILE
OTTAWA-ERIE COUNTIES
OTT-2-27.36
ERI-2-0.15
OHIO STATE HIGHWAY
TESTING LABORATORY

2/26

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.
			OTTAWA COUNTY								
50+00	CL	1.0-5.0	0	0	2	32	66	43	20	27	A-7-6
		5.0-10.0	0	2	2	20	67	42	22	29	A-7-6
50+00	150'Rt	0.5-2.0	Brown & Gray Sandy Silty Clay							29	Visual
53+00	CL	0.5-1.0	Brown & Gray Silty Clay							33	Visual
56+00	150'Lt	0.0-0.4	55	7	20	- 10 -		NP	NP	31	A-1-b
		0.4-1.0	Brown & Gray Clayey Silty Sand W/Gravel							19	Visual
56+00	CL	0.4-1.0	Brown & Gray Sandy Silty Clay W/Little Gravel							14	Visual
56+00	150'Rt	0.0-1.0	Brown & Gray Silty Clay, Slightly Organic							30	Visual
58+00	CL	0.5-1.0	Gray Organic Clayey Silt							34	Visual
62+00	200'Lt	0.0-0.5	Black to Gray Organic Cloy Silt					85	54	85	Visual
		5.0-10.0	Black to Gray Organic Cloy Silt					79	40	83	Visual
		10.0-15.0	Black to Gray Organic Clayey Silt							64	Visual
62+00	CL	0.5-2.0	6	3	8	38	45	53	27	116	A-7-6
62+00	150'Rt	0.0-0.8	17	2	8	32	41	60	38	110	A-7-5
70+00	150'Lt	0.0-1.5	Gray & Black Organic Silty Clay							91	Visual
70+00	CL	0.0-1.5	Gray Clayey Silt - Slightly Orgonic							46	Visual
70+00	150'Rt	0.0-1.0	Gray Organic Silty Clay							84	Visual
72+00	CL	0.0-1.5	Gray & Black Organic Silty Clay							90	Visual
74+00	150'Lt	0.0-0.8	Gray Organic Silty Clay							91	Visual
74+00	CL	0.0-1.0	Gray & Black Organic Silty Clay							92	Visual
74+00	150'Rt	0.0-1.0	Gray Organic Silty Clay							90	Visual
76+00	CL	0.0-1.5	Gray & Black Organic Silty Clay							73	Visual
76+00	150'Lt	0.0-1.5	Gray & Black Organic Clayey Silt							53	Visual
78+00	CL	0.0-1.5	Gray & Black Organic Silty Clay							75	Visual
78+00	150'Rt	0.0-1.0	Gray & Black Organic Silty Clay							88	Visual
80+00	CL	0.0-2.0	Gray & Black Organic Clayey Silt							47	Visual
82+00	150'Lt	0.0-2.0	Gray to Black Organic Clayey Silt, Trace of Marl							74	Visual
82+00	CL	0.0-2.5	Gray & Black Organic Clayey Silt							70	Visual
82+00	150'Rt	0.0-2.0	Gray & Black Organic Clayey Silt							65	Visual
84+00	CL	0.0-2.0	Gray to Black Organic Clayey Silt, Trace of Marl							56	Visual
86+00	150'Lt	0.0-4.5	Gray Organic Silty Clay							66	Visual
		4.5-5.5	(0	0	1	33	66	44	24	32)	A-7-6
86+00	CL	0.0-4.0	Gray Organic Silty Clay							73	Visual
		4.0-5.0	0	0	1	33	66	44	24	32	A-7-6
86+00	150'Rt	0.0-4.5	Gray Organic Clayey Silt							66	Visual
		4.5-5.5	Gray Silty Clay, Slightly Organic							43	Visual
88+00	CL	0.0-6.0	Gray & Black Organic Silty Clay							102	Visual
		6.0-8.0	Gray Silty Clay, Slightly Organic							32	Visual
90+00	150'Lt	0.0-4.0	Gray to Black Organic Silty Clay							92	Visual
		4.0-5.0	(0	0	1	33	66	44	24	32)	A-7-6
90+00	CL	0.0-5.0	Gray to Black Organic Silty Clay							104	Visual
		5.0-6.0	(0	0	1	33	66	44	24	32)	A-7-6
			OTTAWA COUNTY (Continued)								
80+00	150'Rt	0.0-4.5	Gray to Black Organic Silty Clay							92	Visual
		4.5-5.5	Gray Silty Clay W/Marl, Slightly Organic							37	Visual
82+00	CL	0.0-4.5	Gray & Black Organic Silty Clay							95	Visual
		4.5-5.0	Gray Silty Clay, Slightly Organic							33	Visual
84+00	150'Lt	0.0-5.0	Gray & Dark Gray Organic Clayey Silt, Trace of Marl							75	Visual
		5.0-5.5	Gray Silty Clay, Trace of Gravel, Slightly Organic							22	Visual
94+00	CL	0.0-4.5	Gray & Black Organic Silty Clay							92	Visual
		4.5-5.0	(0	0	1	33	66	44	24	32)	A-7-6
94+00	150'Rt	0.0-5.0	Gray & Black Organic Silty Clay							99	Visual
		5.0-5.5	(0	0	1	33	66	44	24	32)	A-7-6
96+00	CL	0.0-2.0	Gray & Black Organic Silty Clay							100	Visual
98+00	150'Lt	0.0-5.5	Gray & Black Organic Clayey Silt Trace of Marl.							92	Visual
		5.5-6.0	(0	0	1	33	66	44	24	32)	A-7-6
98+00	CL	0.0-1.0	Gray & Black Organic Silty Clay							104	Visual
98+00	150'Rt	0.0-5.0	Gray & Black Organic Silty Clay							102	Visual
		5.0-7.0	Gray & Black Organic Silty Clay							99	Visual
100+00	150'Lt	0.0-5.0	Gray & Black Organic Clayey Silt							99	Visual
		5.0-9.5	Gray Silty Sedimentary Peat, Trace of Marl							91	Visual
		9.5-10.0	Gray Clayey Silt W/Little Gravel & Marl, Trace of Organic							17	Visual
100+00	150'Rt	0.0-5.0	Gray & Black Organic Clayey Silt							102	Visual
		5.0-12.0	Gray Silty Marly Sedimentary Peat							118	Visual
102+00	150'Lt	0.0-5.0	Gray & Black Organic Clayey Silt							96	Visual
		5.0-10.0	Gray Silty Marly Sedimentary Peat							87	Visual
		10.0-14.0	Gray Silty Marly Sedimentary Peat					103		114	Visual
		14.0-15.0	15	10	21	27	27	22	6	20	A-4a
102+00	CL	0.0-5.0	Gray & Black Organic Clayey Silt							95	Visual
		5.0-10.0	Gray Silty Marly Sedimentary Peat							67	Visual
		10.0-14.0	Gray Silty Marly Sedimentary Peat							43	Visual
		14.0-15.0	Gray Silty Sand & Marl							136	Visual
102+00	150'Rt	0.0-5.0	Gray Organic Clayey Silt							105	Visual
		5.0-10.0	Gray Silty Marly Sedimentary Peat							79	Visual
		10.0-14.0	Gray Silty Marly Sedimentary Peat							58	Visual
104+00	150'Lt	0.0-5.0	Gray Organic Clayey Silt							62	Visual
		5.0-14.0	Gray Silty Marly Sedimentary Peat							72	Visual
		14.0-15.0	Gray Sandy Clayey Silt W/Little Gravel and Marl							39	Visual
104+00	CL	0.0-5.0	Gray & Black Organic Clayey Silt							100	Visual
		5.0-11.0	Gray Silty Marly Sedimentary Peat							89	Visual
		11.0-12.0	Gray Silty Sand W/Marl							37	Visual
104+00	150'Rt	0.0-5.0	Gray & Black Organic Clayey Silt							105	Visual
		5.0-12.0	Gray Silty Marly Sedimentary Peat							101	Visual
		12.0-13.0	Gray Silty Sand W/Marl							52	Visual
106+00	150'Lt	0.0-5.0	Gray & Black Organic Clayey Silt, Trace of Marl							89	Visual
		5.0-10.0	Gray Silty Marly Sedimentary Peat							83	Visual
		10.0-14.0	Gray Silty Marly Sedimentary Peat							90	Visual
106+00	CL	0.0-12.0	Gray Organic Clayey Silt							78	Visual
		12.0-13.0	Gray Silty Sand & Gravel, Slightly Organic							30	Visual
106+00	150'Rt	0.0-5.0	Gray & Black Organic Clayey Silt Trace of Marl							60	Visual
		5.0-13.0	Gray Organic Clayey Silt & Silty Marly Sedimentary Peat (Mixture)							70	Visual
		13.0-14.0	Gray Silty Sand W/Marl							22	Visual
			ERIE COUNTY								
7+00	150'Lt	0.0-2.0	Gray & Black Organic Clayey Silt W/Marl							77	Visual
7+00	CL	0.0-2.0	Gray Organic Silty-Marly Sedimentary Peat Mixture							61	Visual
		2.0-2.5	(0	0	1	33	66	44	24	32)	A-7-6
7+00	150'Rt	0.0-2.5	Gray Organic Silty Sedimentary Peat Mixture							52	Visual
9+00	CL	0.0-3.0	Gray Organic Silty Sedimentary Peat Mixture							-	Visual
11+00	150'Lt	0.0-1.5	Gray & Black Organic Clayey Silt, Trace of Marl							72	Visual
11+00	CL	0.0-2.0	Gray & Black Organic Clayey Silt							72	Visual
11+00	150'Rt	0.0-2.0	Gray & Black Organic Clayey Silt							88	Visual
13+00	CL	0.0-2.0	Gray Organic Clayey Silt							71	Visual
15+00	150'Lt	0.0-2.0	Gray Organic Clayey Silt							66	Visual
15+00	150'Rt	0.0-2.0	Gray Organic Clayey Silt							83	Visual
17+00	CL	0.0-2.5	Gray Organic Clayey Silt, Trace of Marl							84	Visual
19+00	150'Lt	0.0-1.0	Gray & Black Organic Clayey Silt							76	Visual
19+00	CL	0.0-1.5	Gray Organic Clayey Silt							79	Visual
19+00	150'Rt	0.0-2.0	Gray & Black Organic Clayey Silt							74	Visual
21+00	CL	0.0-2.0	Gray & Black Organic Clayey Silt							77	Visual
23+00	150'Lt	0.0-2.0	Gray & Black Organic Clayey Silt							67	Visual
23+00	CL	0.0-2.0	Gray & Black Organic Clayey Silt							72	Visual
23+00	150'Rt	0.0-2.0	Gray & Black Organic Clayey Silt							67	Visual
27+00	150'Lt	0.0-1.0	Gray & Black Organic Clayey Silt							73	Visual
27+00	CL	0.0-1.0	Gray & Black Organic Clayey Silt							65	Visual
27+00	150'Rt	0.0-1.5	Gray & Black Organic Clayey Silt							70	Visual
29+00	CL	0.0-2.0	Gray & Black Organic Clayey Silt							68	Visual
32+00	150'Lt	0.0-2.5	Gray to Black Organic Clayey Silt							71	Visual
32+00	CL	0.0-2.5	Gray to Black Organic Clayey Silt							73	Visual
32+00	150'Rt	0.0-2.5	Gray to Black Organic Clayey Silt							73	Visual
34+00	CL	0.0-2.0	Gray to Black Organic Clayey Silt							68	Visual
36+00	150'Lt	0.0-2.0	Gray to Black Organic Clayey Silt							80	Visual
36+00	CL	0.0-2.0	Gray to Black Organic Clayey Silt							75	Visual
38+00	150'Rt	0.0-1.5	Gray to Black Organic Clayey Silt							72	Visual
38+00	CL	0.0-2.0	Gray to Black Organic Clayey Silt							66	Visual
40+00	150'Lt	0.0-2.0	Gray to Black Organic Clayey Silt							76	Visual
40+00	CL	0.0-1.5	Gray to Black Organic Clayey Silt							72	Visual
40+00	150'Rt	0.0-1.5	Gray to Black Organic Clayey Silt							77	Visual
			ERIE COUNTY (Continued)								
43+00	CL	0.0-2.0	Gray to Black Organic Clayey Silt							85	Visual
46+00	150'Lt	0.0-1.5	Gray to Black Organic Clayey Silt							85	Visual
46+00	CL	0.0-1.5	Gray to Black Organic Clayey Silt							76	Visual
46+00	150'Rt	0.0-1.5	Gray to Black Organic Clayey Silt							84	Visual
49+00	CL	0.0-1.5	Gray to Black Organic Clayey Silt							61	Visual
52+00	150'Lt	0.0-1.0	Gray to Black Organic Clayey Silt							70	Visual
52+00	CL	0.0-1.0	Gray to Black Organic Clayey Silt							71	Visual
52+00	150'Rt	0.0-1.0	Gray to Black Organic Clayey Silt							70	Visual
58+00	150'Lt	0.0-0.3	0	1	3	44	52	40	16	13	A-6b
58+00	CL	0.0-0.4	Brownish-Gray Organic Clayey Silt, Trace of Marl							27	Visual
58+00	150'Rt	0.0-0.5	Gray to Brown Silty Clay, Trace of Marl Slightly Organic							17	Visual
61+00	CL	0.0-0.3	(0	1	3	44	52	40	16	13)	A-6b
64+00	150'Lt	0.0-0.3	(0	1	3	44	52	40	16	13)	A-6b
64+00	CL	0.0-0.3	(0	1	3	44	52	40	16	13)	A-6b
64+00	150'Rt	0.2-0.4	Brownish-Gray Sandy Clayey Silt, Slightly Organic							53	Visual
67+00	CL	0.0-0.2	(0	1	3	44	52	40	16	13)	A-6b
70+00	150'Lt	0.0-0.3	0	1	3	44	52	40	16	13)	A-6b
70+00	CL	0.0-0.3	(0	1	3	44	52	40	16	13)	A-6b

NOTE:
Classification characteristics in parentheses indicate test data for a sample determined by visual examination to have characteristics essentially the same as the sample obtained as representative of the given interval.

SOIL PROFILE
OTTAWA-ERIE COUNTIES
OTT-2-27.36
ERI-2-0.15
OHIO STATE HIGHWAY TESTING LABORATORY
O S U CAMPUS COLUMBUS, OHIO

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SUMMARY OF SOIL TEST DATA

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.

STATION	OFFSET	DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS	LOSS ON IGNITION
OTTAWA COUNTY												
10+00	CL	0.5-2.0	0	2	4	37	57	36	17	17	A-6b	
		2.0-5.0	0	1	2	35	62	42	23	22	A-7-6	
		5.0-12.0	11	6	12	27	44	28	11	18	A-6a	
14+00	38'Lt	0.0-5.0	0	0	1	41	58	45	24	22	A-7-6	
		5.0-6.0	13	12	20	24	31	26	10	16	A-4a	
		6.0-12.0	9	6	13	28	44	33	15	16	A-6a	
16+34	CL	0.0-3.0	0	1	8	22	69	41	22	22	A-7-6	
		3.0-7.0	3	4	9	26	58	34	18	22	A-6b	
		7.0-10.0	12	5	10	28	45	34	20	19	A-6b	
		10.0-15.0	11	6	12	25	46	25	13	14	A-6a	
		15.0-20.0	7	9	15	40	29	19	8	9	A-4a	
10+00	CL	0.4-5.0	0	1	1	30	68	47	29	20	A-7-6	
		5.0-10.0	0	8	13	39	40	28	14	14	A-6a	
		10.0-12.0	0	7	13	33	47	28	12	13	A-6a	
23+50	CL	0.4-5.0	0	1	3	37	59	52	32	23	A-7-6	
		5.0-10.0	12	6	12	25	45	32	15	15	A-6a	
		10.0-12.0	5	7	11	34	43	27	11	13	A-6a	
27+00	20'Lt	0.4-4.0	0	1	3	36	60	52	31	25	A-7-6	
		4.0-8.0	0	26	12	34	28	54	32	26	A-7-6	
31+50	CL	0.4-5.0	0	1	2	35	62	41	23	17	A-7-6	
		5.0-10.0	10	7	12	28	43	32	16	14	A-6b	
		10.0-14.0	16	8	11	27	38	31	12	13	A-6a	
36+00	CL	0.4-5.0	0	2	4	29	65	42	20	20	A-7-6	
		5.0-10.0	0	8	13	34	45	32	15	14	A-6a	
		10.0-15.0	11	12	17	31	29	23	9	13	A-4a	
		15.0-16.0	32	10	13	24	21	22	8	10	A-4a	
40+00	CL	0.4-5.0	0	1	3	34	62	44	25	22	A-7-6	
		5.0-11.0	12	7	11	29	41	31	14	17	A-6a	
43+00	50'Rt	0.0-5.0	0	0	1	29	70	62	30	29	A-7-6	
		5.0-8.0	0	1	1	24	74	49	27	28	A-7-6	
		8.0-11.0	0	0	0	9	91	57	29	41	A-7-6	
		11.0-12.0	0	1	2	17	80	41	21	32	A-7-6	
		12.0-15.0	Gray Broken Shale							9	Visual	
45+00	75'Lt	0.0-2.0	0	0	0	40	60	47	21	63	A-7-6	
		2.0-4.0	0	0	0	38	62	53	26	62	A-7-6	8%
		4.0-6.0	1	0	0	40	59	38	18	31	A-6b	
45+00	CL	0.0-5.0	0	0	1	34	65	50	29	28	A-7-6	
		5.0-10.0	20	7	12	27	34	24	11	14	A-6a	
		10.0-12.0	0	1	4	36	59	45	23	33	A-7-6	
45+25	[illegible]	0.0-3.0	0	0	2	34	64	46	25	26	A-7-6	
		3.0-9.0	0	0	1	38	61	49	27	27	A-7-6	
		9.0-12.0	0	2	4	31	63	43	23	26	A-7-6	
[illegible]	75'Lt	[illegible]	0	0	1	41	58	51	25	32	A-7-6	
		3.0-[illegible]	0	0	2	35	63	46	24	29	A-7-6	
		[illegible]	0	0	1	30	69	46	25	32	A-7-6	
		[illegible]-10.0	0	0	1	31	68	43	22	25	A-7-6	
46+00	CL	0.0-3.0	0	0	0	41	58	41	20	25	A-7-6	
		3.0-6.0	0	8	14	31	47	30	16	16	A-6b	
		6.0-10.0	0	8	15	35	42	28	11	18	A-6a	
		10.0-12.0	0	8	15	31	45	23	11	15	A-4a	
46+09	75'Rt	0.0-3.0	0	0	2	37	60	52	17	33	A-7-6	
		3.0-8.0	0	0	1	32	66	48	26	37	A-7-6	
		8.0-10.0	0	2	3	36	59	38	18	35	A-6b	
47+90	75'Rt	[illegible]	0	0	0	32	64	48	25	25	A-7-6	
		2.0-7.0	0	0	1	34	65	44	25	36	A-7-6	
49+00	CL	0.0-5.0	0	0	1	31	68	51	28	31	A-7-6	
		5.0-10.0	0	0	1	22	77	51	24	33	A-7-6	
		10.0-14.0	0	7	11	26	29	23	9	13	A-4a	
		14.0-18.0	11	9	16	36	28	23	7	10	A-4a	
49+08	75'Lt	0.0-5.0	0	0	1	39	60	52	28	32	A-7-6	
		5.0-10.0	0	0	1	22	77	52	28	32	A-7-6	
ERIE COUNTY												
71+50	CL	0.0-1.0	0	0	1	35	64	63	28	46	A-7-5	
		1.0-5.0	0	0	2	36	62	58	30	33	A-7-5	
		5.0-8.0	0	0	2	37	60	44	22	31	A-7-6	
73+00	150'Lt	0.0-3.0	0	0	1	31	68	60	32	49	A-7-5	
		3.0-6.0	0	3	6	31	60	57	24	38	A-7-5	
		6.0-8.0	0	0	1	34	65	60	26	34	A-7-6	
73+00	CL	0.0-1.0	0	0	2	40	58	57	23	63	A-7-5	
		1.0-4.0	0	0	2	36	62	55	28	35	A-7-6	
		4.0-8.0	0	0	2	36	62	42	21	32	A-7-6	
73+00	150'Rt	0.0-1.0	0	0	1	38	61	73	33	68	A-7-5	15%
		1.0-4.0	0	2	0	31	67	54	24	41	A-7-5	
		4.0-7.0	0	0	4	32	64	53	28	40	A-7-6	
		7.0-8.0	0	0	2	36	62	41	18	32	A-7-6	
74+85	10'Rt	0.5-1.0	Brown Fibrous Peat							104	Visual	19%
		1.0-3.0	0	0	2	41	57	47	23	41	A-7-6	
		3.0-6.0	0	0	2	37	61	46	22	41	A-7-6	
		6.0-10.0	0	0	2	33	65	39	17	29	A-6b	
		10.0-13.0	0	0	1	36	63	40	18	29	A-6b	
		13.0-16.0	Brown Silt and Clay							24	Visual	
		16.0-22.0	Gray Silt and Clay							28	Visual	
		22.0-25.0	Gray Silt and Clay							28	Visual	
		25.0-28.0	0	3	10	35	52	27	11	22	A-6a	
77+00	123'Lt	0.0-3.0	0	0	4	45	51	73	41	62	A-7-5	
		3.0-5.0	0	0	3	35	62	55	25	41	A-7-5	
		5.0-8.0	0	0	1	38	61	50	22	36	A-7-6	
77+00	27'Rt	0.0-1.0	Black Fine-Textured Peat							182	Visual	32%
		1.0-3.0	0	0	4	38	58	54	30	46	A-7-6	10%
		3.0-6.0	0	0	2	33	65	53	27	37	A-7-6	
		6.0-8.0	0	0	1	42	57	46	17	37	A-7-6	
77+00	75'Rt	0.0-2.5	Gray Fibrous Peat							148	Visual	26%
		2.5-4.0	0	0	1	30	69	61	33	48	A-7-6	
		4.0-9.0	0	1	1	32	66	52	29	34	A-7-6	
77+00	177'Rt	0.0-2.0	Gray Marly Sedimentary Peat					131	NP	193	Visual	23%
		2.0-3.0	Black Fibrous Peat							282	Visual	43%
		3.0-6.0	0	0	3	42	55	69	46	60	A-7-6	6%
		6.0-8.0	0	0	1	42	57	45	21	37	A-7-6	
78+00	160'Lt	1.1-3.5	Black Fine-Textured Peat							382	Visual	50%
		3.5-6.0	0	0	3	33	64	51	25	51	A-7-6	
		6.0-11.0	0	0	1	32	67	55	29	38	A-7-6	
78+00	CL	0.0-1.5	Black Fibrous Peat							288	Visual	39%
		1.5-2.0	0	0	5	48	55			62	A-7-6	
		2.0-5.0	0	0	2	32	66	63	36	44	A-7-6	
		5.0-7.0	0	0	2	28	70	57	29	42	A-7-6	
		7.0-9.0	0	1	1	35	63	46	23	34	A-7-6	
		9.0-11.0	0	0	1	30	69	46	19	36	A-7-6	
		11.0-12.0	0	1	1	37	61	46	21	37	A-7-6	
78+00	150'Rt	0.7-1.5	0	2	10	49	39	105	58	111	A-7-5	15%
		1.5-2.0	Gray Fibrous Peat							422	Visual	64%
		2.0-4.0	Light Brown Marly Sedimentary Peat							114	Visual	8%
		4.0-6.0	0	0	1	32	67	57	33	43	A-7-6	
		6.0-8.0	0	0	0	35	65	55	27	36	A-7-6	
		8.0-10.0	0	0	1	51	48	39	15	32	A-6a	
78+92	27'Rt	0.0-1.0	Black Fibrous Peat							361	Visual	44%
		1.0-3.0	Gray Marly Sedimentary Peat					120	NP	40	Visual	12%
		3.0-4.0	Gray Silty Sedimentary Peat					184	71	178	Visual	25%
		4.0-8.0	0	0	1	35	64	51	[illegible]	[illegible]	[illegible]	
		[illegible]	[illegible]	[illegible]	1	33	66	[illegible]	30	38	A-7-6	
79+00	160'Lt	0.0-3.0	Black Fibrous Peat							422	Visual	62%
		3.0-6.0	0	0	2	33	65	58	33	50	A-7-6	
		6.0-8.0	0	1	1	30	68	49	22	41	A-7-6	
		8.0-12.0	0	0	2	33	65	49	22	38	A-7-6	
79+00	90'Rt	1.0-1.5	Black Fibrous Peat							212	Visual	
		1.5-2.0	Gray Marly Sedimentary Peat					129	63	137	Visual	15%
		2.0-3.5	Light Brown Marly Sedimentary Peat					60	NP	98	Visual	7%
		3.5-4.5	Black Fine-Textured Peat							328	Visual	42%
		4.5-5.0	Gray Sedimentary Peat					103	63	108	Visual	15%
		5.0-7.5	0	1	6	29	64	58	36	43	A-7-6	
		7.5-10.0	0	1	1	44	54	42	18	39	A-7-6	
		10.0-11.0	0	1	1	52	46	40	18	31	A-6a	
		11.0-12.0	0	0	1	38	61	50	27	46	A-7-6	
81+00	20'Lt	1.1-3.0	Light Gray Marly Sedimentary Peat					143	64	134	Visual	39%
		3.0-5.0	Dark Brown Fine-Textured Peat							283	Visual	42%
		5.0-7.0	0	1	2	31	66	41	23	38	A-7-6	
		7.0-11.0	0	0	1	31	68	52	34	33	A-7-6	
		11.0-16.0	0	0	1	27	72	35	17	34	A-6b	
81+00	130'Rt	2.7-4.0	Gray Marly Sedimentary Peat					127	82	100	Visual	16%
		4.0-5.0	Dark Gray Fine-Textured Peat							421	Visual	58%
		5.0-5.5	Gray Marly Sedimentary Peat							100	Visual	16%
		5.5-7.5	0	0	2	7	91			46	A-7-6	
		12.0-15.0	0	0	1	32	67	36	23	30	A-6b	
		15.0-18.0	0	0	1	35	64	34	15	32	A-6a	
81+00	170'Rt	0.8-1.5	Dark Brown Fine-Textured Peat							223	Visual	39%
		1.5-4.0	Light Gray Marly Sedimentary Peat					65		89	Visual	5%
		4.0-6.5	0	1	2	13	84	89	55	74	A-7-5	12%
		6.5-8.0	(0	0	2	7	91)	68	47	33	A-7-6	
		8.0-9.0	(0	0	2	7	91)	64	38	28	A-7-6	
		9.0-14.0	0	0	2	46	52	46	27	28	A-7-6	
		14.0-15.0	(0	0	2	7	91)	45	21	32	A-7-6	
83+00	20'Lt	3.3-8.0	Gray Sedimentary Peat					112	60	144	Visual	21%
		8.0-12.0	0	1	1	33	65	49	29	31	A-7-6	
		12.0-15.0	0	1	1	32	66	37	20	29	A-6b	
85+00	20'Lt	2.7-4.0	Light Gray to Gray Sedimentary Peat							99	Visual	7%
		4.0-6.0	Black Fine-Textured Peat							419	Visual	57%
		6.0-7.0	Gray Marly Sedimentary Peat					133	60	150	Visual	19%
		7.0-8.0	0	1	1	20	78	53	34	46	A-7-6	
		8.0-11.0	0	0	1	29	70	52	29	22	A-7-6	
		11.0-14.5	0	0	1	27	72	50	27	27	A-7-6	
		14.5-15.0	(0	0	1	27	72)	49	25	27	A-7-6	
87+00	20'Lt	2.9-4.0	Sedimentary Peat					155	106	194	Visual	21%
		4.0-5.5	Black Fine-Textured Peat							410	Visual	65%
		5.5-6.5	(0	0	1	23	76)			40	A-7-6	
		6.5-8.0	0	0	1	23	76	51	29	38	A-7-6	
		8.0-11.0	0	0	2	33	65	39	17	29	A-6b	
		11.0-18.0	0	0	1	44	55	35	18	32	A-6b	
		18.0-26.0	(0	0	1	44	55	35	18	32)	A-6b	
		26.0-30.0	0	0	1	40	59	31	13	33	A-6a	
		30.0-33.0	0	0	0	26	74	38	21	42	A-6b	
		33.0-39.0	0	7	11	33	49	21	11	21	A-6a	
89+00	20'Lt	2.2-3.0	Gray & Brown Marly Sedimentary Peat					122	63	129	Visual	17%
		3.0-4.5	Dark Brown Fibrous Peat							284	Visual	34%
		4.5-6.5	Light Gray Sedimentary Peat					126	72	88	Visual	
		6.5-11.5	0	0	1	24	75	51	31	30	A-7-6	
		11.5-16.0	0	0	1	39	60	44	18	31	A-7-6	
		16.0-17.0	0	0	1	32	67	42	23	29	A-7-6	
91+00	20'Lt	1.3-6.0	Gray & Brown Marly Sedimentary Peat					142	NP	148	Visual	16%
		6.0-8.0	(0	0	1	28	71)	65	29	40	A-7-6	10%
		8.0-10.0	0	0	1	28	71	50	28	32	A-7-6	
		10.0-14.0	0	0	1	31	68	48	22	28	A-7-6	
		14.0-16.0	0	0	1	43	56	38	19	27	A-6b	
93+00	25'Lt	1.0-4.0	Gray & Brown Marly Sedimentary Peat					63		111	Visual	10%
		4.0-7.0	0	0	2	18	80	62	39	38	A-7-6	
		7.0-9.0	0	1	1	53	45	27	7	32	A-4b	
		9.0-15.5	0	0	1	40	59	39	18	24	A-6b	
		15.5-17.0	0	0	1	46	53	37	17	28	A-6b	
95+00	25'Lt	1.4-3.0	Brown & Gray Marly Sedimentary Peat							181	Visual	29%
		3.0-4.5	0	0	0	77	23			58	A-7-6	
		4.5-6.0	0	0	0	40	60			44	A-7-6	
		6.0-11.0	0	0	2	12	86	48	24	33	A-7-6	
		11.0-15.0	0	0	1	34	65	36	16	27	A-6b	
		15.0-19.0	0	0	0	44	56	33	22	31	A-6b	
		19.0-24.0	0	0	0	51	49	26	8	45	A-4b	
		24.0-29.0	0	0	0	35	65	30	13	38	A-6a	
		29.0-35.0	0	0	1	28	71	39	18	40	A-6b	
		35.0-37.0	20	7	13	27	30	21	6	14	A-4a	
97+00	175'Lt	0.5-3.0	Light Gray Marly Sedimentary Peat					102		126	Visual	18 %
		3.0-4.0	Light Gray Marly Sedimentary Peat							108	Visual	41 %
		4.0-6.0	Gray Silt and Clay					60	19	42	Visual	
		6.0-9.0	0	1	1	47	51	40	16	37	A-6b	
		9.0-13.5	0	0	1	38	61	36	17	26	A-6b	
		13.5-15.0	0	0	0	42	58	43	20	27	A-7-6	
97+00	25'Lt	0.0-5.0	Light Brown & Gray Marly Sedimentary Peat					88	NP	184	Visual	
		5.0-8.5	0	0	1	41	58	48	27	33	A-7-6	
		8.5-14.0	0	0	1	39	60	36	15	30	A-6a	
		14.0-16.0	0	0	0	41	59	37	20	29	A-6b	
97+00	125'Rt	1.7-3.0	Brown & Gray Marly Sedimentary Peat					140	NP	261	Visual	31%
		3.0-3.5	Dark Brown Fibrous Fine-Textured Peat							240	Visual	39%
		3.5-7.5	0	0	1	29	70	69	23	60	A-7-5	11%
		7.5-11.0	0	1	2	42	55	43	23	27	A-7-6	
		11.0-11.5	0	1	1	21	77			34	A-6b	
		11.5-13.5	0	0	1	37	62	40	22	30	A-6b	
		13.5-15.0	0	0	1	41	58	36	14	32	A-6a	
99+00	25'Lt	0.0-1.8	0	4	18	39	39	NP	NP	48	A-4a	
		1.8-5.0	Brown and Gray Marly Sedimentary Peat							82	Visual	20%
		5.0-8.0	Brown and Black Fibrous Peat							233	Visual	46%
		8.5-10.0	Gray Silt and Clay					55	30	40	Visual	
		10.0-12.0	Gray Silt and Clay					52	24	57	Visual	
		12.0-12.5	0	0	1	34	65	43	18	28	A-7-6	
99+00	125'Rt	0.5-4.5	Light Gray Marly Sedimentary Peat					70	NP	125	Visual	16%
		4.5-5.5	Gray Silt and Clay					65	41	39	Visual	
		5.5-7.0	Gray Silt and Clay					63	39	37	Visual	
		7.0-9.0	0	0	1	44	55	38	18	32	A-6b	
		9.0-13.0	0	0	1	38	61	42	20	24	A-7-6	
		13.0-15.0	0	0	0	68	32	38	17	26	A-6b	
101+00	175'Lt	1.0-3.0	Gray Marly Silty Sedimentary Peat					79	37	150	Visual	17%
		3.0-5.0	Gray Organic Clay							98	Visual	13%
		5.0-7.0	0	1	2	23	74	48	24	35	A-7-6	
		7.0-10.5	0	1	2	42	55	45	22	27	A-7-6	
		10.5-15.0	0	0	1	41	58	41	17	27	A-7-6	
101+10	25'Lt	1.5-3.0	Brown Fibrous Peat							254	Visual	33%
		3.0-6.5	(0	0	4	45	51)	19	12	67	A-7-5	
		6.5-8.0	0	1	2	20	77	53	30	40	A-7-6	
		8.0-9.0	0	0	0	41	59	52	19	38	A-7-6	
		9.0-15.5	0	0	1	41	58	40	11	24	A-6a	
		15.5-19.0	0	0	0	47	53	37	14	29	A-6a	
		19.0-30.0	(0	1	2	20	77)	42	16	45	A-7-6	
		30.0-33.0	0	0	1	20	79	46	19	42	A-7-6	
101+00	125'Rt	2.0-4.0	Black Fibrous Peat							431	Visual	41%
		4.0-7.0	0	0	1	32	67	57	30	31	A-7-6	
		7.0-11.0	0	0	1	51	48	38	17	27	A-6b	
		11.0-14.0	0	0	1	35	64	49	27	28	A-7-6	
103+00	25'Lt	2.2-4.5	Gray Marly Sedimentary Peat					150	90	158	Visual	24%
		4.5-8.0	0	0	0	37	63	64	39	37	A-7-6	
		8.0-10.5	0	0	1	39	60	48	28	30	A-7-6	
		10.5-12.0	0	0	1	41	58	56	32	28	A-7-6	
		12.0-15.0	0	0	1	40	59	62	18	29	A-7-6	
105+00	175'Lt	2.5-4.5	Gray Marly Silty Sedimentary Peat					118	NP	124	Visual	12%
		4.5-6.0	Gray Silt and Clay					57	31	36	Visual	
		6.0-8.0	Gray Silt and Clay					57	34	48	Visual	
		8.0-12.0	(0	0	1	41	58)	47	22	32	A-7-6	
		12.0-15.0	0	0	1	41	58	42	20	29	A-7-6	
105+00	25'Lt	2.3-4.5	Gray Marly Silty Sedimentary Peat					246	NP	145	Visual	24%
		4.5-9.0	0	0	1	41	58	47	25	31	A-7-6	
		9.0-11.0	0	0	1	34	65	47	26	30	A-7-6	
		11.0-16.0	0	0	1	35	64	55	31	29	A-7-6	
105+00	125'Rt	3.5-5.0	Gray Marly Silty Sedimentary Peat					136	88	105	Visual	17%
		5.0-6.0	(0	1	1	41	51)	27	33	49	A-7-6	
		6.0-11.0	0	1	1	41	57	42	17	32	A-7-6	
		11.0-15.0	0	0	1	39	60	47	25	27	A-7-6	
107+00	25'Lt	2.5-4.0	Gray Organic Silt & Peat Mixture							160	Visual	22%
		4.0-6.5	Gray Fibrous Peat							254	Visual	44%
		6.5-9.0	0	0	0	33	66	59	35	33	A-7-6	
		9.0-11.0	0	0	0	37	63	43	20	28	A-7-6	
		11.0-14.0	0	0	2	39	59	28	11	28	A-6b	
		14.0-15.0	0	0	2	38	60	13	22	29	A-7-6	
109+09	29'Lt	2.2-5.5	Gray Marly Sedimentary Peat							145	Visual	21%
		5.5-7.0	0	1	1	18	80	57	35	31	A-7-6	
		7.0-11.0	0	0	1	39	60	52	30	28	A-7-6	
		11.0-16.0	0	0	2	37	60	48	24	30	A-7-6	
		16.0-18.0	0	0	1	41	58	33	14	29	A-6a	
		18.0-21.0	0	1	4	22	73	33	26	[illegible]	A-7-6	
		21.0-28.0	0	0	2	40	58	53	28	28	A-7-6	
		28.0-31.0	0	0	0	40	60	38	20	26	A-6b	
		31.0-39.0	0	0	1	40	59	45	21	27	A-7-6	
		39.0-40.0	17	12	17	24	30	22	11	11	A-6a	
		40.0-43.0	37	34	21	6	2	NP	NP	15	A-1-b	
111+00	29'Lt	2.0-4.0	Gray Sedimentary Peat							93	Visual	18%
		4.0-5.5	Gray Marly Sedimentary Peat					177	119	188	Visual	20%
		5.5-7.0	0	1	2	24	73	38	18	36	A-6b	
		7.0-10.0	0	1	1	52	47	33	13	26	A-6a	
		10.0-15.0	0	0	1	35	64	37	16	27	A-6b	
113+00	25'Lt	2.4-4.0	Gray Sedimentary Peat					111	38	138	Visual	17%
		4.0-5.5	Black Fine-Textured Peat							221	Visual	36%
		5.5-6.5	(0	0	2	34	64)	59	32	42	A-7-6	
		6.5-10.0	0	1	2	31	66	40	11	27	A-6a	
		10.0-15.0	0	0	1	42	57	38	17	25	A-6b	
115+00	25'Lt	2.0-4.0	Gray Marly Silty Sedimentary Peat					98	28	122	Visual	21%
		4.0-6.0	Gray Fibrous Peat							104	Visual	
		6.0-7.0	Gray Sedimentary Peat					104	77	124	Visual	
		7.0-8.5	0	1	2	40	57	48	28	39	A-7-6	
		8.5-10.0	0	0	1	30	67	53	28	30	A-7-6	
		10.0-11.0	0	1	2	30	67	41	17	26	A-7-6	
		11.0-12.0	0	0	2	30	68	60	36	35	A-7-6	
		12.0-15.0	0	0	1	24	75	42	22	28	A-7-6	
117+00	175'Lt	2.0-4.0	Gray Marly Silty Sedimentary Peat					92		103	Visual	18%
		4.0-6.5	Gray Sedimentary Peat					177	69	122	Visual	21%
		6.5-8.0	0	0	2	25	73	61	36	40	A-7-6	
		8.0-11.0	0	0	1	30	69	64	38	30	A-7-6	
		11.0-15.0	0	0	1	37	62	46	23	27	A-7-6	

Note: Classification characteristics in parentheses indicate test data for a sample determined by visual examination to have characteristics essentially the same as the sample obtained as representative of the given interval.

(Continued on following sheet)

SOIL PROFILE
OTTAWA-ERIE COUNTIES
OTT-2-27.36
ERI-2-0.15
OHIO STATE HIGHWAY TESTING LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO

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.	LOSS ON IGNITION
198+00 100'Lt	0.7-2.0	0	3	16	51	30	NP	NP	59	A-4b	
	2.0-3.0	0	1	3	42	54	51	21	58	A-7-5	
	3.0-6.0	0	0	1	57	42	39	19	36	A-6b	
	6.0-9.5	0	0	2	62	36	36	17	29	A-6b	
	9.5-10.0	0	0	8	54	38	33	14	29	A-6a	
198+00 CL	0.7-2.0	0	1	10	56	43	41	12	63	A-7-6	
	2.0-3.0	0	0	2	39	59	55	19	85	A-7-5	4%
	3.0-5.0	0	0	1	36	63	54	31	43	A-7-6	
	5.0-6.0	Light Brown Silty Sedimentary Peat					38	11	50	Visual	
	6.0-9.0	0	1	2	51	46	33	14	28	A-6a	
	9.0-10.0	0	0	1	58	41	33	13	30	A-6a	
	10.0-11.0	0	0	5	58	37	33	15	30	A-6a	
196+00 100'Rt	0.0-1.5	0	1	14	57	28	37	10	50	A-4b	
	1.5-2.0	0	0	2	37	61	53	24	64	A-7-6	
	2.0-6.0	0	0	1	44	55	48	25	36	A-7-6	
	6.0-9.0	0	0	1	55	44	35	15	29	A-6a	
	9.0-11.5	0	0	2	66	32	28	9	30	A-4b	
	11.5-13.5	0	0	10	56	34	28	9	34	A-4b	
	13.5-15.0	0	0	0	64	36	27	5	31	A-4b	
198+00 150'Rt	0.0-3.0	0	1	3	47	49	45	18	32	A-7-6	
	3.0-4.5	0	1	2	37	60	51	20	44	A-7-5	
	4.5-8.0	0	0	1	46	53	42	21	33	A-7-6	
	8.0-13.0	0	0	1	51	48	35	13	33	A-6a	
	13.0-13.3	0	0	0	56	44	26	6	31	A-4b	
199+00 60'Lt	0.4-3.0	0	3	9	54	34	45	19	55	A-7-6	
	3.0-7.0	0	0	1	44	55	42	18	28	A-7-6	
	7.0-11.0	0	0	0	58	42	26	7	26	A-4b	
	11.0-20.0	0	0	0	61	39	29	5	28	A-4b	
	20.0-28.0	0	0	0	57	43	26	4	36	A-4b	
	28.0-30.0	0	4	7	45	44	29	11	23	A-6a	
199+00 CL	0.4-3.0	0	0	2	50	48	45	15	47	A-7-6	
	3.0-6.0	0	0	1	56	43	48	25	29	A-7-6	
	6.0-10.0	0	0	0	77	23	31	12	26	A-6a	
	10.0-15.0	0	0	0	60	40	25	6	26	A-4b	
	15.0-20.0	0	0	0	61	39	28	6	36	A-4b	
199+00 60'Rt	0.3-3.0	0	0	2	45	53	50	19	60	A-7-5	
	3.0-8.0	0	0	1	47	52	39	17	24	A-6b	
	8.0-12.0	0	0	0	59	41	32	11	28	A-6a	
	12.0-21.0	0	0	1	49	50	32	13	38	A-6a	
	21.0-30.0	10	1	2	42	45	28	11	34	A-6a	
200+00 5'Rt	0.5-3.0	0	0	1	53	46	41	23	18	A-7-6	
	3.0-5.0	0	1	3	42	54	38	19	21	A-6b	
	5.0-6.5	0	0	1	46	53	35	18	23	A-6b	
	6.5-9.0	0	0	1	45	54	38	19	25	A-6b	
	9.0-10.0	0	0	1	46	53	36	16	29	A-6b	
	10.0-12.0	0	0	0	48	52	33	14	27	A-6a	
	12.0-13.5	0	0	0	48	52	29	11	30	A-6a	
204+00 CL	0.4-3.0	0	1	1	49	49	36	18	22	A-6b	
	3.0-11.0	0	2	2	58	39	38	19	20	A-6a	
	11.0-15.0	0	0	0	49	51	31	14	24	A-6a	
208+[illegible] CL	0.4-8.0	0	1	1	47	51	31	14	20	A-6a	
	8.0-11.0	0	0	1	63	36	33	15	26	A-6a	
	11.0-15.0	0	[illegible]	[illegible]	50	49	[illegible]	[illegible]	27	A-6b	
213+50 CL	0.4-7.0	0	1	2	38	59	42	22	21	A-7-6	
	7.0-12.0	0	0	1	48	51	29	12	23	A-6a	
	12.0-15.0	0	0	1	61	38	27	10	27	A-4b	
219+25 CL	0.4-7.0	0	0	2	23	65	49	26	26	A-7-6	
	7.0-11.0	0	0	1	52	47	32	14	29	A-6a	
	11.0-15.0	0	0	2	67	31	NP	NP	23	A-4b	
	15.0-20.0	0	0	0	59	41	25	6	22	A-4b	
	20.0-25.0	0	0	0	68	32	NP	NP	24	A-4b	

S.P. 240 CONNECTOR

STATION & OFFSET	DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.	LOSS ON IGNITION
26+00 NB CL	0.4-5.0	14	4	8	43	31	39	12	15	A-6a	
	5.0-10.0	13	7	12	35	33	32	16	12	A-6b	
	10.0-12.0	0	9	14	30	47	29	15	13	A-6a	
31+00 NB CL	0.5-4.0	0	3	5	29	63	43	19	26	A-7-6	
	4.0-7.0	0	2	6	27	65	42	17	25	A-7-6	
	7.0-9.0	13	5	10	30	42	35	17	22	A-6b	
	9.0-13.0	8	7	11	32	42	31	14	15	A-6a	
	13.0-15.0	19	10	15	32	24	21	6	14	A-4a	
	15.0-17.0	21	13	19	27	20	NP	NP	9	A-4a	
	17.0-20.0	11	10	18	37	24	23	9	10	A-4a	
37+00 NB CL	0.5-3.0	0	1	3	32	64	50	29	24	A-7-6	
	3.0-6.0	0	1	1	34	64	49	27	23	A-7-6	
	6.0-11.0	12	6	12	36	34	30	15	15	A-6a	
	11.0-13.0	8	7	14	29	42	29	13	16	A-6a	
	13.0-14.0	14	15	22	33	16	NP	NP	11	A-4a	
	14.0-21.0	10	10	18	33	29	19	5	9	A-4a	
38+65 NB CL	0.5-4.0	2	1	1	33	63	51	30	23	A-7-6	
	4.0-6.0	2	4	9	27	58	30	14	18	A-6a	
	6.0-11.0	8	7	13	27	45	27	12	16	A-6a	
	11.0-13.0	8	7	14	30	41	29	13	15	A-6a	
	13.0-13.5	16	4	37	29	14	NP	NP	14	A-4a	
	13.5-15.0	14	9	21	36	20	NP	NP	14	A-4a	
	15.0-18.0	13	11	22	35	19	NP	NP	7	A-4a	
42+90 NB 18'Rt	0.5-2.0	0	2	5	31	62	38	18	25	A-6b	
	2.0-5.0	0	1	3	35	61	42	20	24	A-7-6	
	5.0-10.5	15	15	15	15	40	30	14	24	A-6a	
	10.5-13.0	7	7	12	33	41	29	15	15	A-6a	
	13.0-15.0	3	6	25	51	15	NP	NP	12	A-4b	
49+10 NB 75'Lt	0.6-3.0	0	1	2	34	63	44	24	22	A-7-6	
	3.0-5.0	0	1	1	23	75	51	29	24	A-7-6	
	5.0-9.0	13	6	12	26	43	30	17	16	A-6b	
	9.0-11.0	15	7	12	31	35	25	11	13	A-6a	
	11.0-12.0	6	8	32	38	16	NP	NP	14	A-4a	
	12.0-15.0	9	11	28	36	16	NP	NP	12	A-4a	
	15.0-17.0	24	10	17	31	18	16	3	7	A-4a	
53+37 SB 122'Lt	0.5-5.0	0	1	0	40	59	46	26	26	A-7-6	
	5.0-7.0	10	3	5	28	54	38	19	22	A-6b	
	7.0-11.0	18	6	12	18	46	32	16	14	A-6b	
	11.0-12.0	7	7	12	35	39	27	11	11	A-6a	
54+60 NB CL	0.5-5.0	0	1	2	28	69	51	30	26	A-7-6 *	
	5.0-9.0	0	1	1	39	59	33	17	24	A-6b	
	9.0-11.0	0	7	11	31	51	34	18	17	A-6b	
	11.0-15.0	21	11	14	35	19	17	4	11	A-4a	
55+83 NB 870'Rt	1.0-3.0	8	1	2	26	63	47	20	31	A-7-6	
	3.0-8.0	10	0	1	34	55	52	30	28	A-7-6	
	8.0-10.0	0	1	1	40	58	44	22	26	A-7-6	
	10.0-12.0	6	6	12	33	43	31	14	17	A-6a	
	12.0-14.0	17	2	4	24	53	40	19	32	A-6b	
	14.0-15.0	10	9	16	35	30	22	7	9	A-4a	
56+00 NB 665'Rt	0.6-1.5	0	0	1	26	73	55	31	32	A-7-6	
	1.5-7.0	0	1	1	37	61	45	22	26	A-7-6	
	7.0-9.0	0	0	0	6	94	57	31	35	A-7-6	
	9.0-10.0	12	7	12	27	42	30	14	14	A-6a	
	10.0-15.0	10	9	16	28	37	34	11	12	A-6a	
57+01 NB 480'Rt	0.8-2.0	0	6	9	33	52	36	16	24	A-6b	
	2.0-8.0	9	3	5	31	52	49	26	28	A-7-6	
	8.0-10.0	0	2	4	42	52	41	21	32	A-7-6	
	10.0-13.0	12	13	22	28	25	22	5	11	A-4a	
	13.0-15.0	6	10	19	34	31	23	9	11	A-4a	
58+48 SB 103'Lt	0.5-3.0	0	1	3	38	58	45	25	20	A-7-6	
	3.0-5.0	0	0	5	36	59	36	21	22	A-6b	
	5.0-10.0	10	6	12	29	43	28	11	14	A-6a	
	10.0-13.0	12	6	12	27	43	34	19	13	A-6b	
59+30 NB 170'Rt	1.0-2.5	0	3	6	47	44	38	19	23	A-6b	
	2.5-7.0	0	1	3	41	55	46	27	22	A-7-6	
	7.0-13.0	0	7	12	32	49	30	13	17	A-6a	
	13.0-14.0	9	7	25	40	19	NP	NP	13	A-4a	
	14.0-15.0	16	12	24	27	21	20	8	10	A-4a	
61+55 NB 40'Rt	0.8-2.0	0	4	7	39	50	37	20	25	A-6b	
	2.0-6.0	0	1	1	35	63	44	26	22	A-7-6	
	6.0-7.0	0	1	1	36	62	42	25	21	A-7-6	
	7.0-10.0	8	8	12	34	38	29	16	13	A-6b	
	10.0-14.0	9	6	12	28	45	32	18	17	A-6b	
	14.0-15.0	8	5	11	33	43	40	12	14	A-6a	
65+20 SB 30'Lt	0.6-2.0	0	0	1	36	63	39	21	21	A-6b	
	2.0-3.0	0	2	3	36	59	43	22	20	A-7-6	
	3.0-8.0	17	5	11	27	40	29	14	14	A-6a	
	8.0-10.0	0	7	14	32	47	32	13	15	A-6a	
	10.0-15.0	25	6	9	25	35	27	11	15	A-6a	
68+18 SB 24'Rt	0.5-2.0	0	9	2	27	62	49	24	25	A-7-6	
	2.0-7.0	0	1	1	42	56	42	23	26	A-7-6	
	7.0-9.0	0	7	13	32	48	29	14	15	A-6a	
	9.0-13.0	6	7	12	27	48	33	17	14	A-6b	
	13.0-15.0	14	7	14	33	32	23	11	13	A-6a	

RAMP "A" (S.R. 240 CONNECTOR)

STATION & OFFSET	DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.	LOSS ON IGNITION
18+50 CL	0.4-5.0	0	6	8	32	54	37	24	23	A-6b	
	5.0-10.0	10	7	11	26	46	32	15	16	A-6a	
	10.0-13.0	13	13	16	19	45	32	16	16	A-6b	
	13.0-15.0	13	7	12	31	37	26	11	14	A-6a	
20+80 CL	0.4-5.0	9	5	9	28	49	39	24	18	A-6b	
	5.0-10.0	9	8	12	27	44	30	14	14	A-6a	
	10.0-15.0	7	7	12	31	43	33	16	13	A-6b	
	15.0-17.0	11	6	11	28	44	29	11	11	A-6a	

RAMP "C" (S.R. 240 CONNECTOR)

STATION & OFFSET	DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.	LOSS ON IGNITION
37+00 CL	0.4-5.0	0	2	2	30	66	42	22	21	A-7-6	
	5.0-7.0	0	0	1	20	79	49	25	27	A-7-6	
	7.0-12.0	15	7	17	22	39	29	13	16	A-6a	
	12.0-15.0	23	11	14	25	27	22	6	14	A-4a	
42+90 CL	0.0-5.0	0	1	1	29	69	55	33	31	A-7-6	
	5.0-10.0	0	0	2	30	68	49	29	25	A-7-6	
	10.0-13.0	0	0	1	16	83	49	28	32	A-7-6	
	13.0-15.0	12	10	15	33	30	21	7	9	A-4a	

S.R. 269

STATION & OFFSET	DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.	LOSS ON IGNITION
15+50 14'Lt	0.0-1.0	8	6	4	29	53	56	27	25	A-7-6	
	1.0-4.0	0	7	11	58	24	91	32	55	A-7-5	10%
	4.0-7.0	Gray and Brown Sedimentary Peat							192	Visual	20%
	7.0-10.0	0	0	1	42	57	84	53	51	A-7-5	9%
	10.0-12.0	0	0	0	53	47	34	11	24	A-6a	
15+50 12'Rt	0.0-2.0	0	0	1	40	59	46	21	28	A-7-6	
	2.0-4.0	Brown Marly Sedimentary Peat							100	Visual	
	4.0-8.0	Brown Sandy Sedimentary Peat							113	Visual	
	8.0-10.0	0	0	2	27	70	50	29	40	A-7-6	
	10.0-12.0	0	0	1	43	56	52	27	33	A-7-6	
18+00 12'Lt	0.0-1.0	0	3	4	36	57	47	22	26	A-7-6	
	1.0-2.0	18	31	21	18	12	NP	NP	11	A-3a	
	2.0-3.0	Gray to Light Brown Marly Sedimentary Peat							130	Visual	25%
	3.0-5.0	Gray to Light Brown Marly Sedimentary Peat							86	Visual	16%
	5.0-7.0	0	0	1	41	58	63	30	41	A-7-6	
	7.0-11.0	0	1	0	37	62	68	34	27	A-7-6	
	11.0-15.0	0	0	1	39	60	46	20	28	A-7-6	
18+00 12'Rt	0.0-1.0	9	2	2	37	50	56	22	34	A-7-5	
	1.0-3.0	0	1	1	43	55	46	21	27	A-7-6	
	3.0-6.0	Gray Organic Clay and Sedimentary Peat Mixture					71	18	79	A-7-5	20%
	6.0-9.0	0	1	2	37	60	73	47	49	A-7-6	9%
	9.0-15.0	0	0	1	31	68	53	30	30	A-7-6	
20+50 12'Lt	0.0-1.0	0	1	2	30	67	48	24	25	A-7-6	
	1.0-2.0	Gray Sedimentary Peat							90	Visual	26%
	2.0-5.0	Light Brown Sandy Sedimentary Peat							73	Visual	15%
	5.0-10.0	0		1	44	55	55	32	26	A-7-6	
	10.0-15.0	0	0	1	42	56	47	22	24	A-7-6	
	15.0-20.0	0	0	1	36	63	43	21	27	A-7-6	
20+50 15'Rt	0.0-2.0	0	3	3	34	60	51	25	27	A-7-6	
	2.0-3.0	0	0	2	29	69	53	24	36	A-7-6	
	3.0-5.0	Dark Brown to Black Fine-Textured Peat							72	Visual	11%
	5.0-6.0	Brown Sandy Marly Sedimentary Peat								Visual	6%
	6.0-11.0	0	0	1	35	66	47	23	40	A-7-6	
	11.0-15.0	0	0	1	35	64	43	23	36	A-7-6	
23+00 15'Lt	0.0-2.0	0	1	2	42	55	43	21	31	A-7-6	
	2.0-5.0	Light Brown Marly Sedimentary Peat							91	Visual	6%
	5.0-6.0	Brown Fibrous Peat							253	Visual	15%
	6.0-11.0	0	0	0	22	78	55	32	32	A-7-6	
	11.0-15.0	0	0	1	42	57	40	18	28	A-6b	
23+00 12'Rt	0.4-2.0	0	0	1	34	65	51	24	26	A-7-6	
	2.0-3.0	0	0	1	35	64	58	32	34	A-7-6	
	3.0-7.0	Brown Sandy Sedimentary Peat							128	Visual	
	7.0-12.0	0	0	2	35	63	51	19	31	A-7-5	
	12.0-16.0	0	0	1	39	60	41	19	31	A-7-6	
	16.0-21.0	0	0	1	37	62	45	23	30	A-7-6	
	21.0-26.0	0	0	1	39	60	46	24	32	A-7-6	
	26.0-31.0	0	0	1	40	59	41	20	32	A-7-6	
	31.0-36.0	0	1	3	38	58	40	20	26	A-6b	
	36.0-39.0	0	30	55	-15-		NP	NP	19	A-3a	
	39.0-41.0	0	0	2	38	60	41	20	25	A-7-6	
25+50 12'Lt	0.4-2.0	44	6	4	19	27	50	23	28	A-7-6	
	2.0-6.0	Brown and Gray Sandy Silty Sedimentary Peat							84	Visual	
	6.0-11.0	0	8	3	36	52	54	32	31	A-7-6	
	11.0-16.0	0	0	1	43	56	43	22	31	A-7-6	
	16.0-21.0	0	3	2	43	52	48	24	29	A-7-6	
	21.0-26.0	0	0	1	39	59	41	16	34	A-7-6	
	26.0-31.0	0	0	1	38	60	46	26	34	A-7-6	
	31.0-36.0	0	0	1	41	58	44	19	32	A-7-6	
	36.0-40.0	0	10	16	41	33	23	8	18	A-4a	
25+50 12'Rt	0.4-2.0	45	9	7	20	19	38	18	34	A-6a	
	2.0-7.0	Light Brown Sedimentary Peat							107	Visual	
	7.0-12.0	0	1	1	51	48	36	16	30	A-6b	
	12.0-15.0	0	1	1	45	53	41	19	26	A-7-6	
28+00 12'Lt	0.4-3.0	0	2	2	38	60	46	25	28	A-7-6	
	3.0-7.0	Light Brown Sedimentary Peat							87	Visual	17%
	7.0-11.0	0	0	1	38	61	49	28	36	A-7-6	
	11.0-15.0	0	0	1	40	59	42	20	27	A-7-6	
28+00 13'Rt	0.4-3.0	16	2	1	33	48	46	24	28	A-7-6	
	3.0-6.0	Light Brown Sandy Sedimentary Peat							75	Visual	20%
	6.0-8.0	Dark Brown to Black Fibrous Peat							487	Visual	84%
	8.0-10.0	0	0	1	43	56	44	26	29	A-7-6	
	10.0-15.0	0	0	1	38	60	38	18	28	A-6b	
	15.0-20.0	0	0	1	45	54	39	18	29	A-6b	
30+50 14'Lt.	0.0-3.0	0	1	1	35	63	51	22	25	A-7-6	
	3.0-4.0	19	13	6	25	37	37	11	27	A-6a	
	4.0-7.0	Light Brown Sedimentary Peat							88	Visual	10%
	7.0-9.0	Brown to Black Fine-Textured Peat							246	Visual	46%
	9.0-13.0	0	0	1	28	71	51	27	36	A-7-6	
	13.0-15.0	0	0	1	33	66	46	21	30	A-7-6	
30+50 12'Rt	0.4-2.0	0	1	2	44	53	44	20	30	A-7-6	
	2.0-4.0	Brown Sandy Gravel and Cinders								Visual	
	4.0-9.0	Light Brown Sedimentary Peat							126	Visual	16[illegible]
	9.0-12.0	0	0	1	60	39	52	30	35	A-7-6	
	12.0-15.0	0	0	1	29	70	46	24	30	A-7-6	
33+00 14'Lt	0.4-1.0	0	0	1	40	59	48	25	32	A-7-6	
	1.0-6.0	Light Brown Sedimentary Peat							98	Visual	19[illegible]
	6.0-10.0	0	0	0	43	57	49	25	32	A-7-6	
	10.0-15.0	0	0	1	32	67	43	22	28	A-7-6	
33+00 12'Rt	0.0-1.0	0	0	1	41	58	50	25	25	A-7-6	
	1.0-3.0	25	10	8	23	34	36	11	29	A-6a	
	3.0-6.0	35	9	11	24	21	50	15	53	A-7-5	17%
	6.0-9.0	Gray Marly Sedimentary Peat							101	Visual	11%
	9.0-10.0	Gray Marly Sedimentary Peat							160	Visual	6[illegible]
	10.0-13.0	0	1	1	32	66	52	25	38	A-7-6	
	13.0-15.0	0	0	1	35	64	44	18	31	A-7-6	

S.R. 269 INTERCHANGE RAMP "A"

STATION & OFFSET	DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.	LOSS ON IGNITION
85+02 106'Rt	2.6-4.0	Light Brown and Gray Marly Sedimentary Peat					113	NP	116	Visual	16%
	4.0-5.0	Black Fine-Textured Peat							236	Visual	38%
	5.0-7.0	Gray Marly Sedimentary Peat					158	97	118	Visual	16%
	7.0-9.0	0	0	2	13	85			36	A-7-6	
	9.0-11.5	0	0	0	73	28	56	32	27	A-7-6	
	11.5-15.0	0	0	1	34	65			28	A-6a	
89+10 86'Rt	2.1-4.0	Gray Marly Sedimentary Peat					92	NP	148	Visual	10[illegible]
	4.0-5.5	Light Gray Marly Sedimentary Peat					133	45	108	Visual	17[illegible]
	5.5-7.0	0	0	1	22	77	43	27	21	A-7-6	
	7.0-11.0	0	1	1	26	72	41	16	38	A-7-6	
	11.0-15.0	0	0	1	40	59	44	22	30	A-7-6	
	15.0-17.0	0	0	1	43	56	38	13	32	A-6a	
93+15 11'Rt	2.0-4.5	Gray Marly Sedimentary Peat					142	22	186	Visual	12[illegible]
	4.5-6.5	0	1	2	29	68	78	49	58	A-7-6	11%
	6.5-10.0	0	0	1	35	64	41	24	26	A-7-6	
	10.0-15.0	0	0	1	48	51	41	21	28	A-7-6	
97+60 CL	1.4-3.5	Light Brown Silty Sedimentary Peat					152	14	251	Visual	36[illegible]
	3.5-6.0	0	1	2	18	79	42	21	48	A-7-6	
	6.0-8.5	0	0	1	77	22			28	A-7-6	
	8.5-10.0	0	0	1	62	37	41	20	24	A-7-6	
	10.0-10.5	Gray Silty Clay					40	18	34	Visual	
	10.5-14.0	0	0	1	39	60	44	21	28	A-7-6	
	14.0-15.0	0	1	1	41	57	43	22	27	A-7-6	
99+80 38'Rt	0.8-3.0	Light Marly Silty Sedimentary Peat					109		108	Visual	20[illegible]
	3.0-3.5	Gray Organic Clay and Peat Mixture					200		112	Visual	
	3.5-5.5	Gray Silt and Clay					81		52	Visual	
	5.5-9.0	0	0	1	34	65	54	31	29	A-7-6	
	9.0-10.0	0	0	1	19	80			26	A-7-6	
	10.0-11.5	0	0	0	85	15	48	26	31	A-7-6	
	11.5-14.0	0	0	1	34	65	39	15	30	A-6a	
	14.0-15.0	0	0	1	15	84	39	18	30	A-6b	
101+80 CL	0.0-2.0	0	1	3	34	62	50	24	30	A-7-6	
	2.0-3.0	Light Gray Marly Silty Sedimentary Peat					100	52	86	Visual	18[illegible]
	3.0-4.0	Brown Clayey Silt and Peat Mixture								Visual	
	4.0-9.0	Gray Clay					63	38	26	Visual	
	9.0-12.0	0	0	1	40	59	48	25	30	A-7-6	
	12.0-15.0	0	0	1	34	65	42	17	20	A-7-6	

RAMP "B"

STATION & OFFSET	DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.	LOSS ON IGNITION
84+91 80'Lt	2.8-4.5	Gray Sedimentary Peat					122	67	186	Visual	28[illegible]
	4.5-7.0	0	2	6	11	81	43	19	70	A-7-6	
	7.0-11.0	0	0	1	30	69	44	24	33	A-7-6	
	11.0-15.0	0	0	1	33	66	40	21	31	A-6b	

(Continued on following sheet)

SOIL PROFILE
OTTAWA-ERIE COUNTIES
OTT-2-27.36
ERI-2-0.15

OHIO STATE HIGHWAY TESTING LABORATORY
O. S. U. CAMPUS, 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 samples 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.	Loss on Ignition
RAMP "B"												
88+05	78'Lt	2.3-3.0	Dark Gray Marly Sedimentary Peat					128	80	130	Visual	19%
		3.0-5.5	Dark Brown Fibrous Peat							350	Visual	51%
		5.5-7.0	Dark Gray Marly Sedimentary Peat					119	37	111	Visual	17%
		7.0-9.0	0	0	1	4	95			45	A-7-6	
		9.0-10.5	0	0	2	14	84			23	A-7-6	
		10.5-16.0	0	0	1	35	64	42	24	27	A-7-6	
		16.0-17.0	0	0	1	29	70	38	12	28	A-6a	
92+97	5'Rt	0.0-4.0	Gray & Brown Marly Sedimentary Peat					117	NP	206	Visual	16%
		4.0-4.5	Dark Brown Fibrous Fine-Textured Peat							450	Visual	58%
		4.5-7.0	Gray Marly Sedimentary Peat					81	48	72	Visual	4%
		7.0-9.0	0	1	2	27	70	49	29	45	A-7-6	
		9.0-11.0	0	0	1	36	63	40	16	35	A-6b	
		11.0-15.0	0	0	1	39	60	40	13	21	A-6a	
		15.0-17.0	0	1	1	40	58	33	12	28	A-6a	
97+45	9'Rt	0.7-3.0	Brown & Gray Marly Sedimentary Peat					143		132	Visual	20%
		3.0-5.0	Gray Marly Sedimentary Peat							179	Visual	49%
		5.0-8.0	0	1	2	22	75	58	36	39	A-7-6	
		8.0-12.0	0	0	0	32	68	40	16	30	A-6b	
		12.0-17.0	0	0	2	33	65	37	17	31	A-6b	
97+68	40'Lt	1.0-5.0	Light Brown Marly Silty Sedimentary Peat					124		46	Visual	8%
		5.0-7.0	Gray Silt Clay					68	41	40	Visual	
		7.0-10.5	0	0	0	51	49	38	17	27	A-6b	
		10.5-14.0	0	0	1	34	65	44	20	23	A-7-6	
		14.0-15.0	Brown Clay					43	22	25	Visual	
RAMP "C"												
100+45	22'Rt	2.4-4.0	Light Gray Silty Marly Sedimentary Peat					135		152	Visual	16%
		4.0-5.0	Light Gray Marly Fine-Textured Peat							468	Visual	69%
		5.0-6.5	Gray Organic Silty Clay					87	54	46	Visual	
		6.5-10.5	0	0	0	41	59	45	25	26	A-7-6	
		10.5-15.0	0	0	1	40	59	41	19	25	A-7-6	
102+73	23'Rt	2.3-3.0	Dark Gray Silty Marly Sedimentary Peat					253	NP	267	Visual	20%
		3.0-6.5	Black Fibrous Fine-Textured Peat							795	Visual	72%
		6.5-7.5	Gray Organic Silt					100	63	58	Visual	
		7.5-10.0	0	1	2	26	71	54	25	26	A-7-6	
		10.0-11.0	0	0	1	47	52	43	21	21	A-7-6	
		11.0-15.0	0	0	1	42	57	43	21	26	A-7-6	
106+07	5'Rt	2.6-5.5	Gray Silty Marly Sedimentary Peat					138	50	148	Visual	18%
		5.5-7.0	Gray Marly Fine-Textured Peat							379	Visual	45%
		7.0-9.5	0	1	2	31	66	46	19	29	A-7-6	
		9.5-11.0	0	0	1	50	48	32	12	35	A-6a	
		11.0-15.0	0	0	1	39	60	41	16	81	A-7-6	
109+00	15'Lt	2.2-5.0	Gray Sedimentary Peat					74	26	152	Visual	
		5.0-7.0	Gray Sedimentary Peat					100	39	164	Visual	27%
		7.0-8.0	0	6	2	9	83	58	34	30	A-7-6	
		8.0-13.0	0	0	1	38	61	38	17	32	A-6b	
		13.0-16.0	0	0	1	37	62	40	18	30	A-6b	
113+00	05'Lt	1.0-4.0	Gray Sedimentary Peat					104	NP	123	Visual	17%
		[illegible]	Black Fibrous Peat							234	Visual	45%
		6.0-7.5	0	0	1	35	64	45	23	31	A-7-6	
		7.5-11.0	0	0	1	48	51	40	17	28	A-6b	
		11.0-15.0	0	0	2	36	62	48	26	26	A-7-6	
RAMP "D"												
102+45	13'Lt	1.7-3.0	Brown Marly Silty Sedimentary Peat					134		283	Visual	29%
		3.0-4.5	Dark Brown Silty Fibrous Peat							461	Visual	61%
		4.5-7.0	0	0	1	30	69	60	33	17	A-7-6	
		7.0-10.0	0	0	1	41	58	40	18	32	A-6b	
		10.0-12.0	0	0	1	34	65	43	20	25	A-7-6	
		12.0-15.0	0	0	1	29	70	40	16	29	A-6b	
107+05	0'Lt	2.7-4.5	Gray Silty Marly Sedimentary Peat					145	74	161	Visual	19%
		4.5-5.5	Brown Silt Clay					60	32	73	Visual	
		5.5-8.0	0	0	1	36	63	64	42	37	A-7-6	
		8.0-10.0	0	0	1	37	62	48	25	33	A-7-6	
		10.0-11.0	0	0	1	36	63	44	22	29	A-7-6	
		11.0-15.0	0	0	1	36	63	42	20	31	A-7-6	
109+08	63'Rt	2.0-3.5	Gray Organic Clay							129	Visual	19%
		3.5-5.0	Black Fibrous Peat							196	Visual	38%
		5.0-7.0	0	1	2	22	75	48	27	32	A-7-6	
		7.0-11.0	0	1	2	37	60	46	21	27	A-7-6	
		11.0-15.0	0	0	1	41	58	40	18	28	A-6b	
113+08	87'Rt	2.3-4.0	Gray Marly Silty Sedimentary Peat					100	33	171	Visual	22%
		4.0-6.0	Black Fibrous Peat							300	Visual	57%
		6.0-7.5	0	1	4	32	63	40	24	32	A-6b	
		7.5-10.0	0	0	2	34	64	54	28	33	A-7-6	
		10.0-12.5	0	0	1	51	48	33	13	24	A-6a	
		12.5-15.0	0	0	1	42	57	43	19	27	A-7-6	

DRIVE SAMPLE CORE BORINGS

Station	Offset	Depth From-To	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	% W.C.	SHTL Class.	Loss on Ignition
OTTAWA COUNTY												
48+22	9'Lt	2.0-2.5	59	25	8	-8-		NP	NP	24	A-1-a	
		5.0-6.0	0	8	4	24	64	52	29	32	A-7-6	
		7.5-8.2	0	14	6	25	55	46	16	41	A-7-5	
		8.2-9.0	0	1	2	34	63	53	30	63	A-7-6	
		10.0-11.0	0	0	1	36	63	53	29	28	A-7-6	
		12.0-14.0	0	1	2	30	67	54	29	33	A-7-6	
		15.0-16.0	0	0	1	22	77	49	23	29	A-7-6	
		17.5-18.2	49	3	5	15	28	41	18	27	A-7-6	
		18.2-19.0	26	6	11	26	31	27	10	10	A-4a	
		20.0-20.7	0	9	18	40	33	27	10	9	A-4a	
		25.0-25.5	33	8	13	22	24	23	6	10	A-4a	
		30.0-30.5	28	14	15	25	18	21	3	12	A-4a	
		35.0-36.0	36	14	12	12	16	22	7	9	A-4a	
		40.0-40.5	24	10	15	28	23	21	6	11	A-4a	
55+00	CL	0.0-0.2	(0	2	4	28	66)	53	28	32	A-7-6	
		0.2-0.8	0	2	4	28	66	43	21	27	A-7-6	
		0.8-1.5	(0	2	4	28	66)	38	16	19	A-7-6	
		3.5-4.5	0	10	17	32	41	28	12	14	A-6a	
		9.0-10.0	0	21	22	25	32	21	8	18	A-4a	
		14.0-14.5	0	15	18	42	25	20	7	10	A-4a	
		19.0-19.5	0	24	21	39	16	16	2	10	A-4a	
63+30	CL	0.0-1.0	39	6	11	18	26	30	13	16	A-6a	
		3.5-4.5	21	5	12	27	35	29	8	13	A-4a	
		6.0-7.0	0	21	17	30	32	26	9	21	A-4a	
		8.5-9.5	0	34	17	26	23	25	8	21	A-4a	
		11.0-12.0	0	10	14	38	38	29	12	22	A-6a	
		13.5-14.5	0	9	13	46	32	27	10	11	A-4a	
		16.0-16.5	0	13	24	48	15	NP	NP	11	A-4a	
		18.5-19.5	0	10	19	47	24	20	3	10	A-4a	
		21.0-21.5	0	13	16	50	21	25	7	9	A-4b	
		26.0-27.0	0	12	16	46	26	NP	NP	11	A-4a	
		31.0-31.5	60	11	16	9	4	NP	NP	12	A-1-a	
		36.0-36.5	74	9	5	10	2	NP	NP	11	A-1-a	
		41.0-41.5	75	12	7	-6-		NP	NP	6	A-1-a	
65+00	CL	0.0-0.4	0	8	17	44	31	31	14	13	A-6a	
		2.5-3.5	0	8	15	37	39	28	13	14	A-6a	
		5.0-6.0	0	12	15	36	37	27	12	19	A-6a	
		7.5-8.5	0	7	13	37	43	29	12	15	A-6a	
		10.0-11.0	0	7	13	36	44	27	12	17	A-6a	
		12.5-13.5	(0	7	13	36	44)	27	12)	17	A-6a	
		17.5-18.5	15	7	9	39	30	24	7	12	A-4a	
		20.0-20.5	29	9	9	27	26	25	9	15	A-4a	
		25.0-26.0	45	3	2	12	38	37	14	28	A-6a	
		27.5-28.0	69	11	7	9	4			10	A-6b	
		32.5-33.0	40	11	13	18	18	16	2	14	A-4a	
75+00	CL	0.0-1.1	0	3	7	32	58	74	54	105	A-7-6	
		1.1-2.1	8	8	14	30	40	25	11	17	A-6a	
		4.2-4.7	10	9	17	26	38	25	9	15	A-4a	
		6.7-7.7	10	10	14	26	40	26	10	14	A-4a	
		11.0-12.7	14	7	12	28	39	28	12	14	A-6a	
		16.0-17.2	27	13	13	26	21	18	6	10	A-4a	
85+00	CL	0.0-0.9	0	3	7	22	68	45	26	97	A-7-6	
		0.9-2.1	0	0	1	[illegible]	52	[illegible]	[illegible]	[illegible]	A-7-6	
		2.1-2.4	0	0	4	41	55	[illegible]	22	60	A-7-6	
		3.6-5.1	0	1	6	44	49	[illegible]	45	55	A-7-6	
		5.1-6.1	0	0	1	27	72	57	34	31	A-7-6	
		6.1-7.6	0	0	1	35	64	42	23	29	A-7-6	
		[illegible]	0	0	1	38	61	41	20	28	A-7-6	
		[illegible]	0	0	1	33	66	45	24	26	A-7-6	
		10.1-11.1	0	1	1	42	56	44	22	27	A-7-6	
		11.1-12.6	0	0	0	34	66	34	16	28	A-6b	
		12.6-13.6	0	0	1	36	62	39	20	35	A-6b	
		15.6-17.1	0	0	0	45	55	38	17	34	A-6b	
		19.0-20.6	0	0	2	40	58	45	24	41	A-7-6	
		20.7-21.6	0	2	3	25	70	40	17	40	A-6b	
		21.6-22.6	0	1	9	25	65	21	13	37	A-6a	
		22.6-23.1	0	7	15	70	28	20	5	12	A-4b	
		23.1-24.1	38	8	12	22	23	22	7	12	A-4a	
		24.6-26.0	23	11	15	26	25	20	5	10	A-4a	
95+00	CL	0.0-2.2	0	1	3	28	68	62	37	112	A-7-6	
		2.2-3.2	0	4	13	38	45	30	11	36	A-6a	
		3.9-4.6	0	4	9	35	52	29	11	42	A-6a	
		4.6-5.4	0	0	1	27	72	45	23	29	A-7-6	
		5.4-6.1	0	1	2	23	74	33	11	41	A-6a	
		6.1-6.9	0	9	12	34	45	30	16	16	A-6b	
		6.9-7.9	0	10	16	36	38	28	13	16	A-6a	
		7.9-8.3	30	7	12	18	33	29	15	12	A-6a	
		8.3-8.7	24	8	12	22	34	30	10	15	A-4a	
		8.7-9.7	13	10	16	26	35	27	14	16	A-6a	
		10.9-11.9	11	8	14	25	42	24	11	14	A-6a	
		15.9-16.3	0	10	17	40	33	16	2	10	A-4a	
100+00	CL	0.0-2.2	Gray Sedimentary Peat					73	48	111	Visual	
		2.2-5.4	Brown Sedimentary Peat					74	47	64	Visual	
		5.4-10.4	Brown Sedimentary Peat					93	47	94	Visual	
		10.4-11.4	0	8	15	37	40	26	11	19	A-6a	
		11.4-14.6	40	10	10	15	25			31	A-4a	
		14.6-15.4	Brown Silt & Clay W/Gravel							15	Visual	
105+00	CL	0.0-0.2	(0	1	4	41	54)	67	45	96	A-7-5	
		0.2-0.5	0	1	4	41	54	105	76	102	A-7-5	8%
		0.5-4.5	Gray Silty Marly Sedimentary Peat							72	Visual	5%
		9.0-10.0	Gray Silty Marly Sedimentary Peat					85	48	74	Visual	7%
		11.5-13.0	0	1	6	44	49	85	47	87	A-7-5	
		13.0-14.0	0	23	59	-18-		NP	NP	28	A-3a	
		14.0-15.0	0	17	54	-29-		NP	NP	31	A-3a	
		18.0-19.0	13	38	36	-13-		NP	NP	18	A-1-b	
		21.5-22.5	42	12	12	18	16	NP	NP	11	A-2-4	
		24.0-25.0	32	12	14	25	17	17	3	10	A-4a	
		29.0-30.0	0	6	14	40	40	21	9	13	A-4a	
		31.5-32.5	49	14	14	20	3	NP	NP	12	A-1-b	
		34.0-35.0	56	12	9	14	9	NP	NP	12	A-1-b	

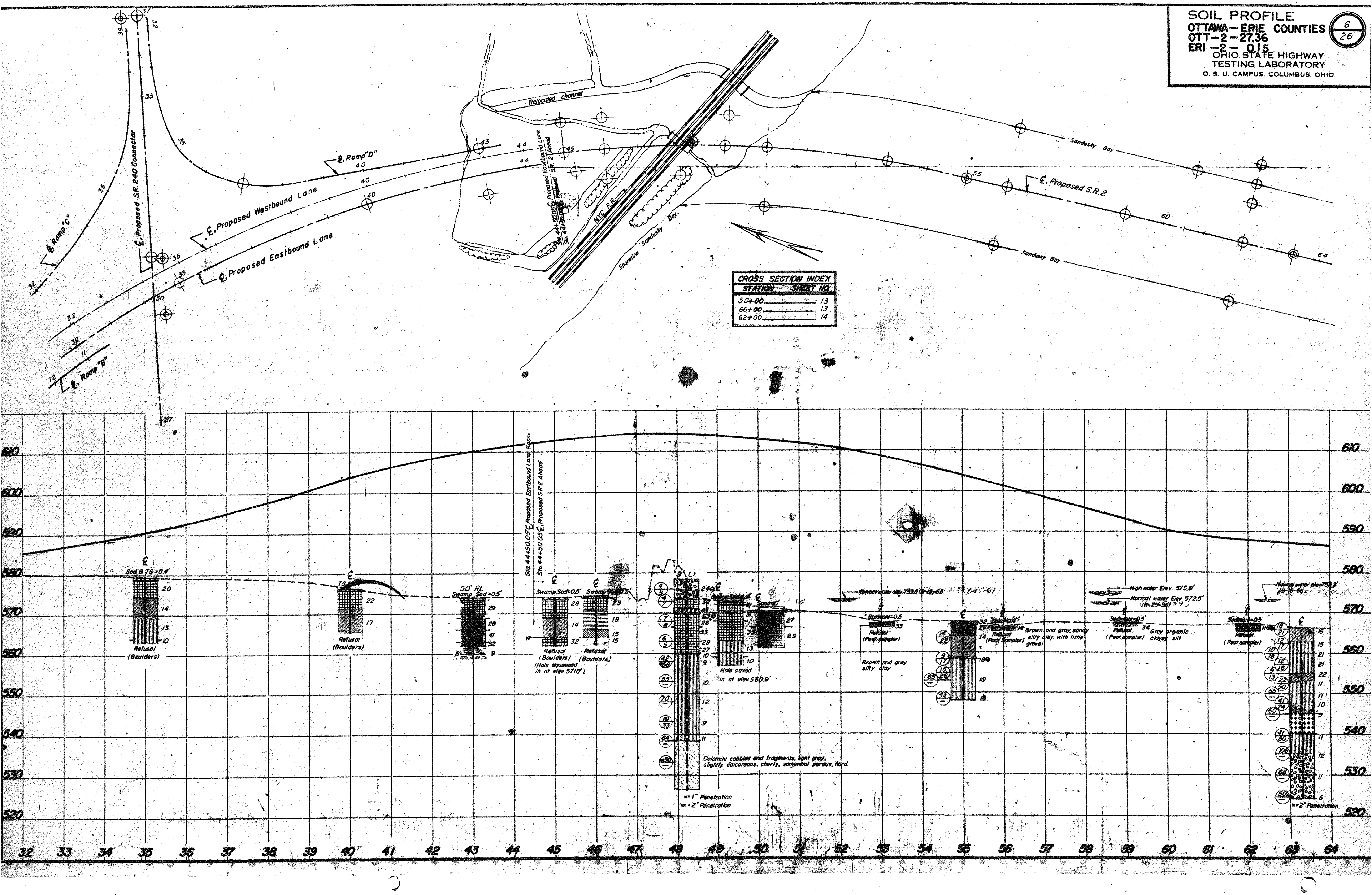
Station	Offset	Depth From-To	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	% W.C.	SHTL Class.	Loss on Ignition
ERIE COUNTY												
5+00	CL	0.0-1.0	(0	4	2	9	85)			107	A-4a	
		1.3-2.0	0	4	2	9	85			63	A-7-6	
		2.0-2.8	0	18	28	23	33			80	A-4a	
		4.3-5.3	0	0	2	32	66	49	26	271	A-7-6	
		6.8-7.5	0	6	2	30	62	51	32	42	A-7-6	
		7.5-8.3	0	0	1	38	61			22	A-6b	
		9.3-10.3	0	0	1	36	63	40	22	27	A-6b	
		11.8-12.5	0	0	1	17	82	46	25	44	A-7-6	
		12.5-13.3	0	0	0	36	64			29	A-6b	
		14.3-15.3	0	0	0	79	21	37	15	36	A-6a	
		16.8-17.5	0	0	0	44	56			30	A-6b	
		17.5-18.3	0	0	0	31	69	41	22	31	A-7-6	
		19.3-20.3	0	0	0	23	77	40	24	38	A-6b	
		24.3-25.3	0	8	17	35	40	22	11	15	A-6a	
		26.8-27.8	0	15	20	27	38			17	A-6a	
		29.3-30.0	24	10	13	25	28	25	12	13	A-6a	
		31.8-32.8	Gray Limestone Fragments								Visual	
		34.3-35.3	40	2	22	30	6	NP	NP	17	A-4a	
15+00	CL	0.0-1.0	(0	0	2	39	59)	44	22	80	A-7-6	
		2.4-3.1	0	1	2	36	61			78	A-7-6	
		3.1-3.9	0	0	2	39	59	72	46	72	A-7-6	
		5.4-6.4	0	0	1	12	87			43	A-7-6	
		7.9-8.6	0	0	1	37	62	51	28	48	A-7-6	
		8.6-9.4	0	0	0	35	65	37	21	26	A-6b	
		10.4-11.4	0	0	1	47	52	38	21	37	A-6b	
		12.9-13.6	0	0	0	28	72	40	16	31	A-6b	
		13.0-14.4	0	1	3	43	53	35	16	27	A-6b	
		15.4-16.4	0	0	1	29	70	42	19	36	A-7-6	
		17.9-18.6	0	1	3	22	74	42	15	26	A-7-6	
		18.7-19.4	0	3	7	24	66	39	19	24	A-6b	
		20.4-21.4	26	5	12	24	33	25	11	14	A-6a	
25+00	CL	0.0-1.5	Gray Sedimentary Peat					57	28	95	Visual	10%
		[illegible]	0	1	4	56	39	65	37	67	A-7-6	8%
		6.5-7.5	0	0	1	40	59	36	11	29	A-6a	
		9.0-10.7	0	1	1	30	50	[illegible]	9	25	A-4a	
		11.5-12.5	0	1	1	42	56	41	17	56	A-7-6	
		14.0-15.6	[illegible]	6	11	24	20	[illegible]	15	18	A-6a	
		16.5-17.5	16	7	11	31	25	27	11	14	A-6a	
35+00	CL	0.0-1.0	(0	0	2	39	59)	56	31	79	A-7-6	
		2.2-3.8	0	1	2	46	51	44	22	72	A-7-6	
		6.4-7.4	0	1	1	41	27	39	18	26	A-6b	
		9.9-10.7	0	4	11	5	80	32	15	29	A-6a	
		10.7-11.5	0	13	17	37	33	23	7	18	A-4a	
37+30	CL	0.0-0.8	(0	0	2	39	59)	68	39	73	A-7-6	
		0.8-1.7	0	0	0	44	56	34	12	27	A-6a	
		3.7-4.7	0	5	8	39	48	31	15	16	A-6a	
		6.2-7.2	22	9	8	29	32	30	13	24	A-6a	
		8.7-9.7	8	6	8	32	46	33	16	18	A-6b	
		11.2-12.2	9	14	10	27	40	31	11	23	A-6a	
		13.7-14.1	11	4	6	64	15	NP	NP	18	A-4b	
38+70	CL	0.0-1.0	0	1	2	28	69	51	29	71	A-7-6	
		1.0-2.7	Gray Clay					47	25	125	Visual	
		2.7-3.5	Gray Silt and Clay					35	15	55	Visual	
		6.0-7.0	0	1	4	23	72	37	19	36	A-6b	
		11.0-11.5	16	12	16	24	32	21	11	11	A-6a	
		13.5-14.7	Gray Limestone Fragments								Visual	
45+00	CL	0.0-1.0	0	1	5	46	48			71	A-7-6	
		1.0-3.6	0	0	0	33	67	36	18	26	A-6b	
		4.2-6.1	0	0	1	45	54	38	18	30	A-6b	
		10.3-11.3	0	2	3	27	68	36	17	31	A-6b	
		11.3-12.3	11	9	13	35	32	20	6	14	A-4a	
		16.3-16.8	Brown Shale Fragments							14	Visual	
		17.3-17.8	Brown Shale Fragments							16	Visual	
55+00	CL	0.0-0.9	0	0	5	46	49	60	35	62	A-7-6	
		0.9-1.8	0	0	0	47	53	35	13	20	A-6a	
		2.1-3.9	0	1	1	43	55	39	18	28	A-6b	
		3.9-5.7	0	0	2	33	65	36	13	32	A-6a	
		5.7-7.5	0	0	1	36	63	41	17	35	A-7-6	
		7.5-9.1	0	0	0	36	64			31	A-7-6	
		9.1-10.8	0	0	0	30	70	48	29	36	A-7-6	
		10.8-12.7	0	1	0	18	81	51	26	47	A-7-6	
		12.7-14.5	0	0	1	18	81	45	20	44	A-7-6	
		14.5-15.7	0	6	11	30	53	28	12	20	A-6a	
65+00	CL	0.0-1.0	0	1	45	38	16	NP	NP	49	A-4a	
		1.0-2.3	0	0	1	44	55	34	14	28	A-6a	
		2.7-3.7	0	0	0	52	48	32	13	27	A-6a	
		5.2-6.7	0	0	1	44	55	36	17	33	A-6b	
		6.7-7.7	0	0	1	46	53	34	14	33	A-6a	
		10.2-11.5	0	0	1	47	52	32	11	32	A-6a	
		12.7-13.7	0	0	0	21	79	40	20	25	A-6b	
		15.2-15.9	0	2	6	45	47	26	12	27	A-6a	
		15.9-16.7	0	6	10	47	37	25	8	22	A-4a	
		17.7-18.7	17	10	13	31	29	20	7	14	A-4a	
80+39	78'Rt	4.0-5.0	Marly Sedimentary Peat					154	NP		Visual	
		7.5-9.0	0	0	2	38	60	38	18	19	A-6b	
		10.0-11.0	0	0	0	80	20	44	22	52	A-7-6	
		12.0-14.0	0	0	1	57	42	42	19	38	A-7-6	
		15.0-16.0	0	0	0	35	65	40	17	32	A-6a	
		17.5-19.0	0	0	1	41	58	31	22	35	A-6a	
		20.0-21.0	0	1	0	30	69	32	13	33	A-6a	
		22.5-24.0	0	0	1	36	63	32	12	32	A-6a	
		25.0-26.0	0	0	0	46	54	28	12	30	A-6a	
		27.5-28.2	0	0	1	31	63	34	18	47	A-6a	

* For complete summary test data see bottom of column No. 4.

Station	Offset	Depth From-To	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	% W.C.	SHTL Class.	Loss on Ignition
135+00	CL	0.0-1.5	0	1	2	36	61	50	25	30	A-7-6	
		1.5-2.5	0	5	2	31	62	48	[illegible]	30	A-7-6	
		2.5-3.5	0	1	2	45	52	38	[illegible]	25	[illegible]	
		3.5-5.5	0	0	1	39	60	48	29	26	A-7-6	
		5.5-6.0	0	1	2	40	57	35	19	23	A-6a	
		7.5-8.0	0	1	1	38	60	41	23	24	A-7-6	
		8.0-9.0	0	0	1	41	58	38	17	28	A-6b	
		10.0-11.0	0	0	0	48	52	34	14	28	A-6a	
		12.0-13.5	0	0	1	56	43	32	14	28	A-6a	
		15.0-16.0	0	0	0	50	50	32	11	32	A-6a	
		17.5-19.5	0	0	0	63	37	24	4	30	A-4b	
		20.0-21.0	0	0	0	53	47	[illegible]	[illegible]	30	A-4b	
		22.5-25.0	0	0	0	26	74	[illegible]	19	34	A-6a	
		25.0-26.0	0	1	1	41	57	32	12	31	A-6a	
		27.5-29.0	0	0	0	32	68	38	17	38	A-6b	
		30.0-31.0	40	9	11	22	18	21	7	15	A-4a	
		32.5-33.5	57	12	9	13	9	17	4	11	A-1-b	
SR 240												
29+56	27'Rt	2.0-3.0	0	1	2	38	59	38	19	22	A-6b	
		5.0-6.0	0	1	2	25	72	[illegible]	27	27	A-7-6	
		7.5-8.5	5	6	11	28	50	30	12	14	A-6a	
		10.0-11.0	8	8	14	27	43	30	12	18	A-6a	
		12.5-13.2	11	8	13	28	40	30	14	18	A-6a	
		15.0-16.0	6	11	30	30	23	NP	NP	10	A-4a	
		20.0-21.0	8	10	14	33	30	22	7	10	A-4a	
		25.0-25.4	5	10	17	34	[illegible]	22	7	10	A-4a	
		30.0-30.4	8	17	18	27	32	24	9	12	A-4a	
		35.0-35.9	12	14	28	18	30	20	6	9	A-4a	
		40.0-41.0	8	13	17	32	30	21	4	12	A-4a	
		46.0-46.3	49	19	10	12	10	NP	NP	11	A-1-b	
30+95	27'Rt	2.0-3.0	0	6	11	35	48	34	15	19	A-6a	
		5.0-6.0	17	6	11	30	36	37	15	15	A-6a	
		7.5-8.5	7	8	14	39	32	28	11	15	A-6a	
		10.0-11.0	9	5	13	31	39	28	11	16	A-6a	
		12.5-13.5	10	9	18	29	34	23	3	14	A-4a	
		15.0-15.5	17	17	23	33	10	NP	NP	10	A-4a	
		20.0-21.0	7	11	18	33	31	23	8	12	A-4a	
		25.0-25.8	9	10	16	34	31	21	8	10	A-4a	
		30.0-30.5	34	16	13	17	20	21	10	10	A-4a	
		35.0-36.0	20	13	15	28	24	19	4	13	A-4a	
		40.0-40.5	13	14	18	34	21	18	3	8	A-4a	
36+95	40'Lt	5.0-6.0	0	6	11	27	56	56	17	[illegible]	[illegible]	
		7.5-8.5	9	7	13	29	42	33	12	[illegible]	[illegible]	
		10.0-11.0	9	6	14	23	48	36	18	[illegible]	[illegible]	
		12.5-13.4	10	8	12	23	47	37	18	[illegible]	[illegible]	
		15.0-16.0	25	14	17	29	15	NP	NP	[illegible]	[illegible]	
		26.0-26.8	6	9	19	36	30	22	2	[illegible]	[illegible]	
		30.0-30.5	17	16	18	27	24	21	7	9	[illegible]	
		35.0-35.4	13	14	22	33	18	NP	NP	12	A-4a	
		40.0-40.5	11	11	11	39	28	NP	NP	12	A-4a	
38+34	40'Rt	5.0-6.0	11	8	13	28	40	35	[illegible]	17	[illegible]	
		7.5-8.5	14	8	12	30	36	32	[illegible]	[illegible]	[illegible]	
		10.0-11.0	7	8	14	42	29	33	13	17	[illegible]	
		12.5-13.5	5	7	19	35	34	24	9	16	[illegible]	
		15.0-15.4	55	8	13	13	11	NP	NP	14	A-1-b	
		20.0-20.5	11	13	18	32	26	23	7	10	A-4a	
		25.0-25.5	13	8	16	32	31	23	8	11	A-4a	
		30.0-30.5	21	12	17	27	20	NP	NP	10	A-4a	
		35.0-35.5	20	10	15	35	20	21	4	14	A-4a	
		40.0-40.5	13	13	17	34	23	22	6	14	A-4a	
SR 269												
23+89	20'Rt	2.7-3.9	Dark Brown Marly Sedimentary Peat							91	Visual	
		3.9-4.7	Dark Gray Fine-Textured Peat							[illegible]	Visual	
		4.7-6.7	0	0	1	30	69	33	13	41	[illegible]	
		6.7-8.7	0	0	0	55	45	33	12	17	A-6a	
		8.7-10.5	0	0	0	53	47	55	33	27	A-7-6	
		10.5-11.5	0	0	1	44	55	41	21	[illegible]	A-7-6	
		12.5-13.5	0	0	1	37	62	41	20	27	A-7-6	
		15.0-16.0	0	0	0	44	56	36	16	31	A-6a	
		17.5-18.5	0	0	0	53	47	22	4	28	A-4b	
		20.0-21.0	0	0	0	50	50	31	13	33	A-6a	
		25.0-26.0	0	0	0	44	51	31	12	38	A-6a	
		30.0-31.0	0	4	6	38	52	27	11	27	A-6a	
		35.0-36.0	0	12	20	37	31	22	9	15	A-4a	
		40.0-41.0	0	1	52	31	16	NP	NP	19	A-4a	
		45.0-46.0	20	7	29	29	15	NP	NP	14	A-4a	

NOTE:
Classification characteristics in parentheses indicate test data for a sample determined by visual examination to have characteristics essentially the same as the sample obtained as representative of the given interval.

Station	Offset	Depth From-To	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	% W.C.	SHTL Class.
80+39 (cont'd)	78'Rt*	30.0-31.0	0	0	0	44	56	31	11	38	A-6a
		32.5-34.0	0	1	3	48	48	31	13	42	A-6a
		35.0-36.0	0	0	0	18	82	44	18	58	A-7-6
		40.0-40.3	39	12	9	17	23	21	5	18	A-4a


SOIL PROFILE
OTTAWA-ERIE COUNTIES
OTT-2-27.36
ERI-2-0.15
OHIO STATE HIGHWAY TESTING LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO
6
26
Relocated channel
Sandusky Bay
℄ Proposed S.R. 2
℄ Ramp "D"
℄ Ramp "C"
℄ Ramp "B"
℄ Proposed S.R. 240 Connector
℄ Proposed Westbound Lane
℄ Proposed Eastbound Lane
NYC R.R.
Shoreline Sandusky Bay
CROSS SECTION INDEX
STATION SHEET NO.
50+00 13
56+00 13
62+00 14
Sta. 44+50.05 ℄ Proposed Eastbound Lane Back = Sta. 44+50.05 ℄ Proposed S.R. 2 Ahead
Sod & TS = 0.4'
Refusal (Boulders)
50' Rt. Swamp Sod = 0.5'
Swamp Sod = 0.5'
Refusal (Boulders) (Hole squeezed in at elev. 571.0')
Hole caved in at elev. 560.9'
Dolomite cobbles and fragments, light gray, slightly calcareous, cherty, somewhat porous, hard.
* = 1" Penetration
** = 2" Penetration
Sediment = 0.5'
Refusal (Peat sampler)
Brown and gray silty clay
Brown and gray, sandy silty clay with little gravel
High water Elev. 575.8'
Normal water Elev. 572.5'
Gray organic clayey silt
610
600
590
580
570
560
550
540
530
520
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64

SOIL PROFILE
OTTAWA-ERIE COUNTIES
OTT-2-27.36
ERI -2- 0.15
OHIO STATE HIGHWAY
TESTING LABORATORY
O. S. U. CAMPUS. COLUMBUS, OHIO

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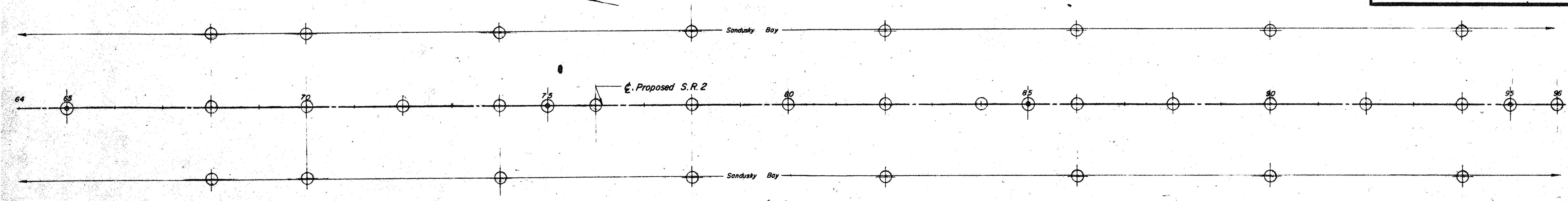
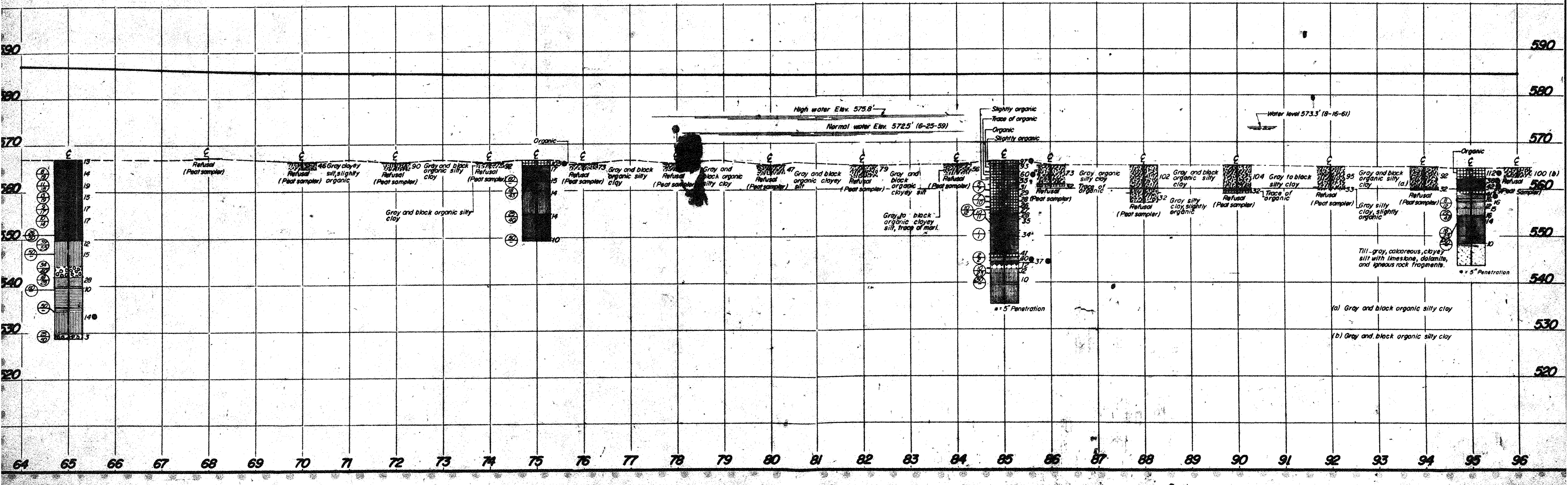


CROSS SECTION INDEX	
STATION	SHEET NO.
68+00	14
70+00	14
74+00	15
78+00	15
82+00	15
86+00	16
90+00	16
94+00	16



SOIL PROFILE
OTTAWA - ERIE COUNTIES
OTT - 2 - 27.36
ERI - 2 - 0.15

OHIO STATE HIGHWAY TESTING LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO

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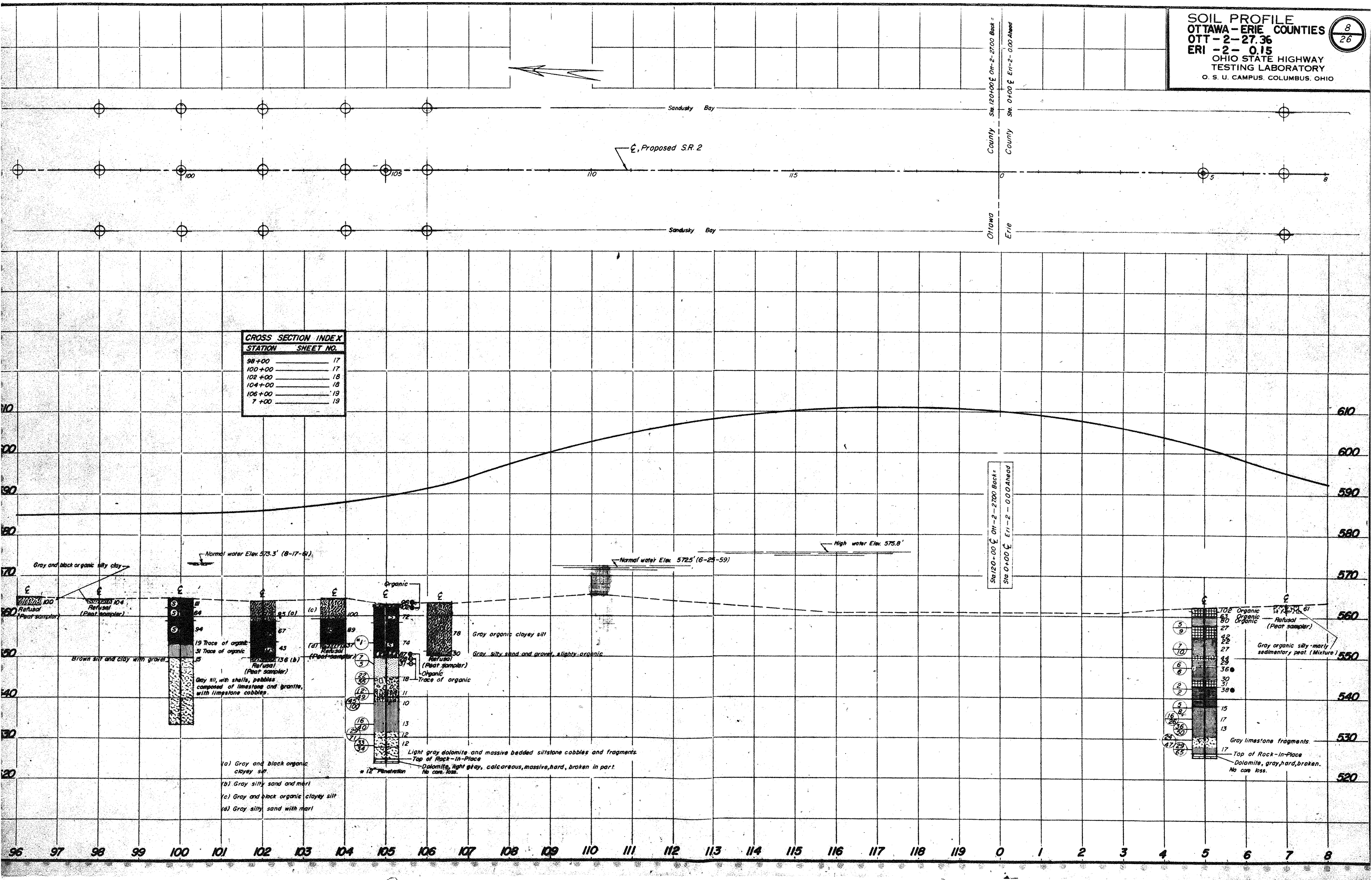

CROSS SECTION INDEX

STATION	SHEET NO.
98+00	17
100+00	17
102+00	18
104+00	18
106+00	19
7+00	19

SOIL PROFILE
OTTAWA-ERIE COUNTIES
OTT-2-27.36
ERI -2- 0.15
OHIO STATE HIGHWAY TESTING LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO

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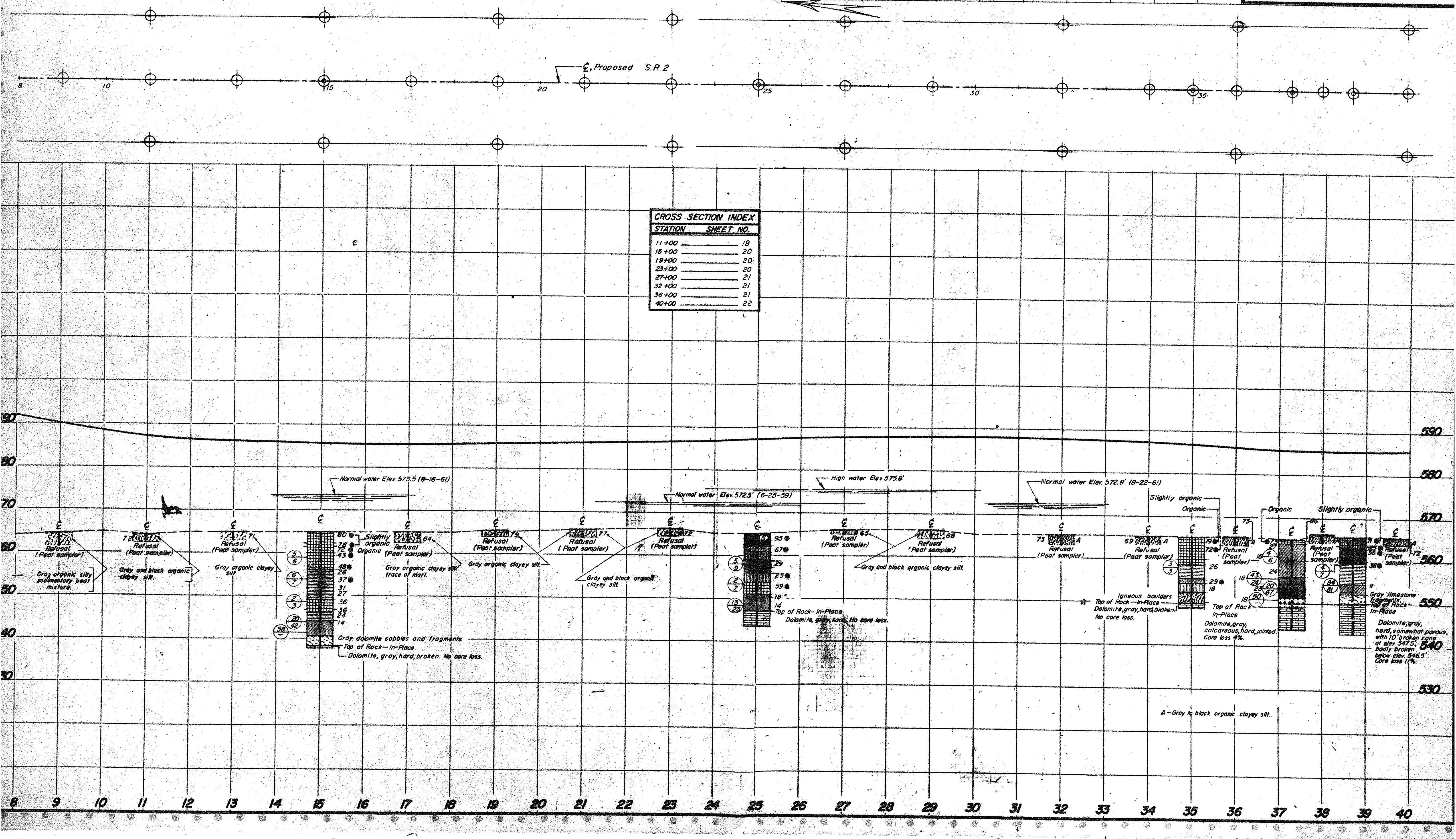
CROSS SECTION INDEX

STATION	SHEET NO.
11+00	19
15+00	20
19+00	20
23+00	20
27+00	21
32+00	21
36+00	21
40+00	22



SOIL PROFILE
OTTAWA-ERIE COUNTIES
OTT-2-27.36
ERI-2-0.15

OHIO STATE HIGHWAY
TESTING LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO

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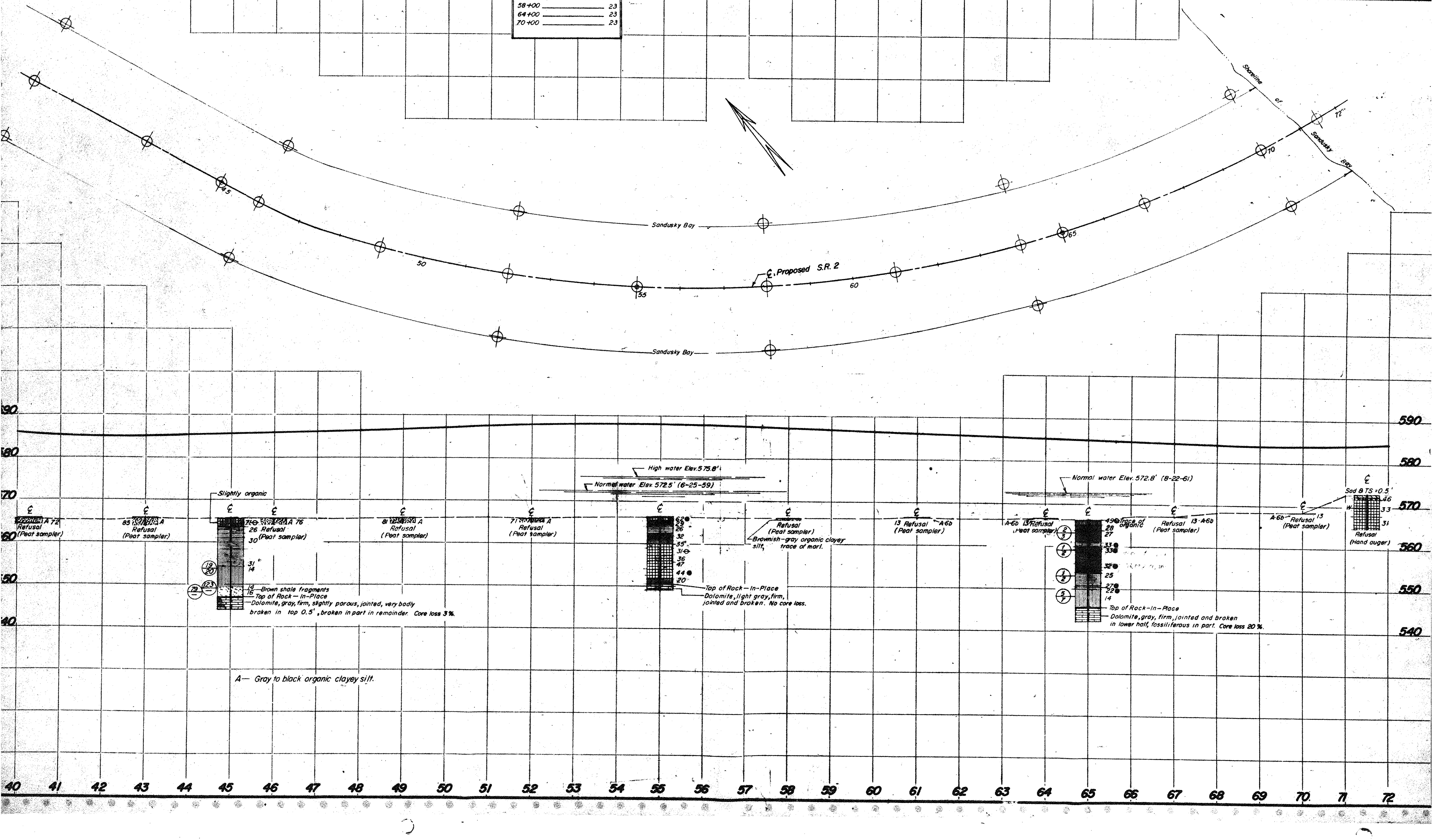
CROSS SECTION INDEX

STATION	SHEET NO.
40+00	22
46+00	22
52+00	22
58+00	23
64+00	23
70+00	23

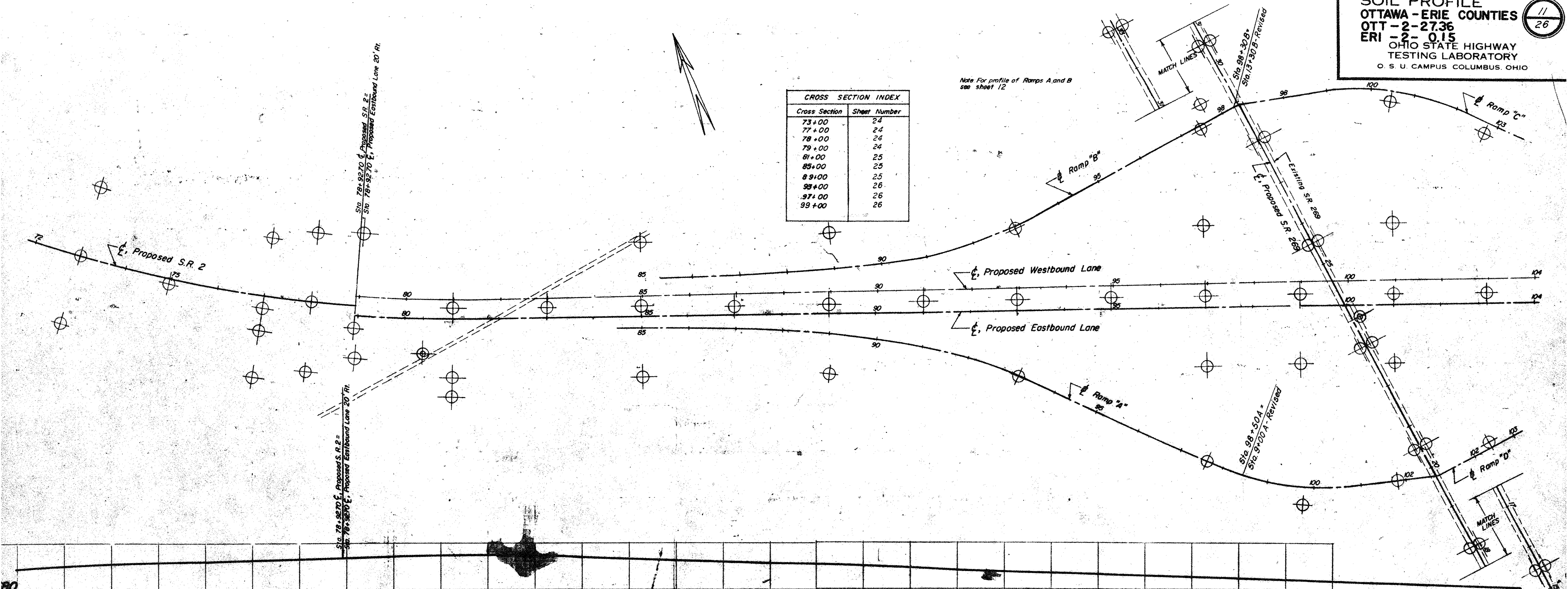


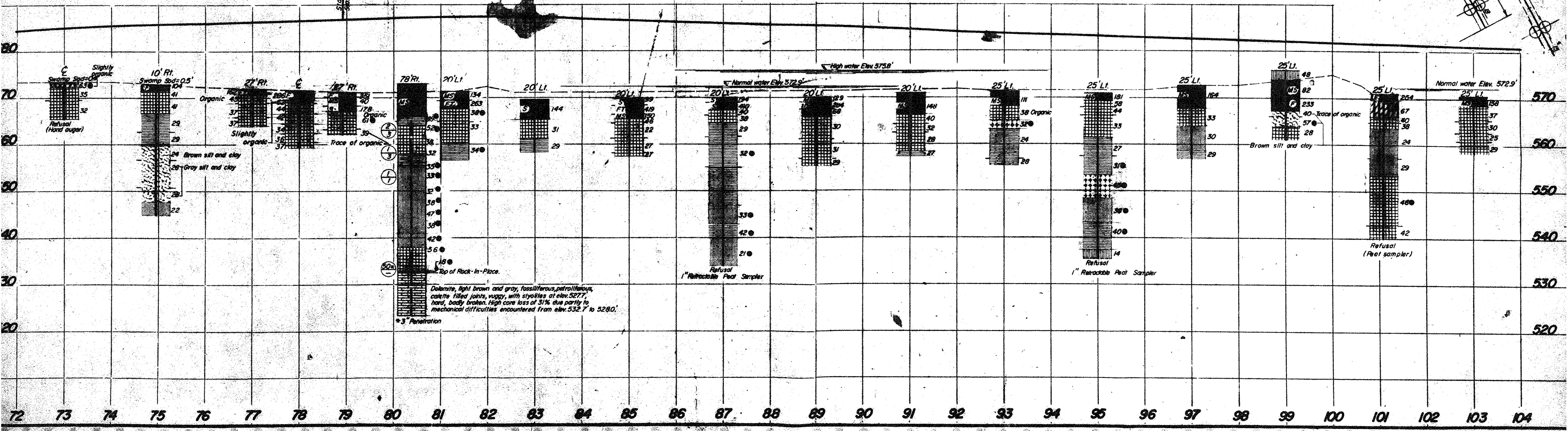
SOIL PROFILE
OTTAWA - ERIE COUNTIES
OTT - 2 - 27.36
ERI - 2 - 0.15
OHIO STATE HIGHWAY TESTING LABORATORY
O. S. U. CAMPUS COLUMBUS, OHIO

11/26

Note For profile of Ramps A and B see sheet 12

CROSS SECTION INDEX	
Cross Section	Sheet Number
73+00	24
77+00	24
78+00	24
79+00	24
81+00	25
85+00	25
89+00	25
93+00	26
97+00	26
99+00	26






625
615
Relocated U.S. 6
SR 8

SOIL PROFILE
OTTAWA-ERIE COUNTIES
OTT-2-27.36
ERI-2-0.15
OHIO STATE HIGHWAY TESTING LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO

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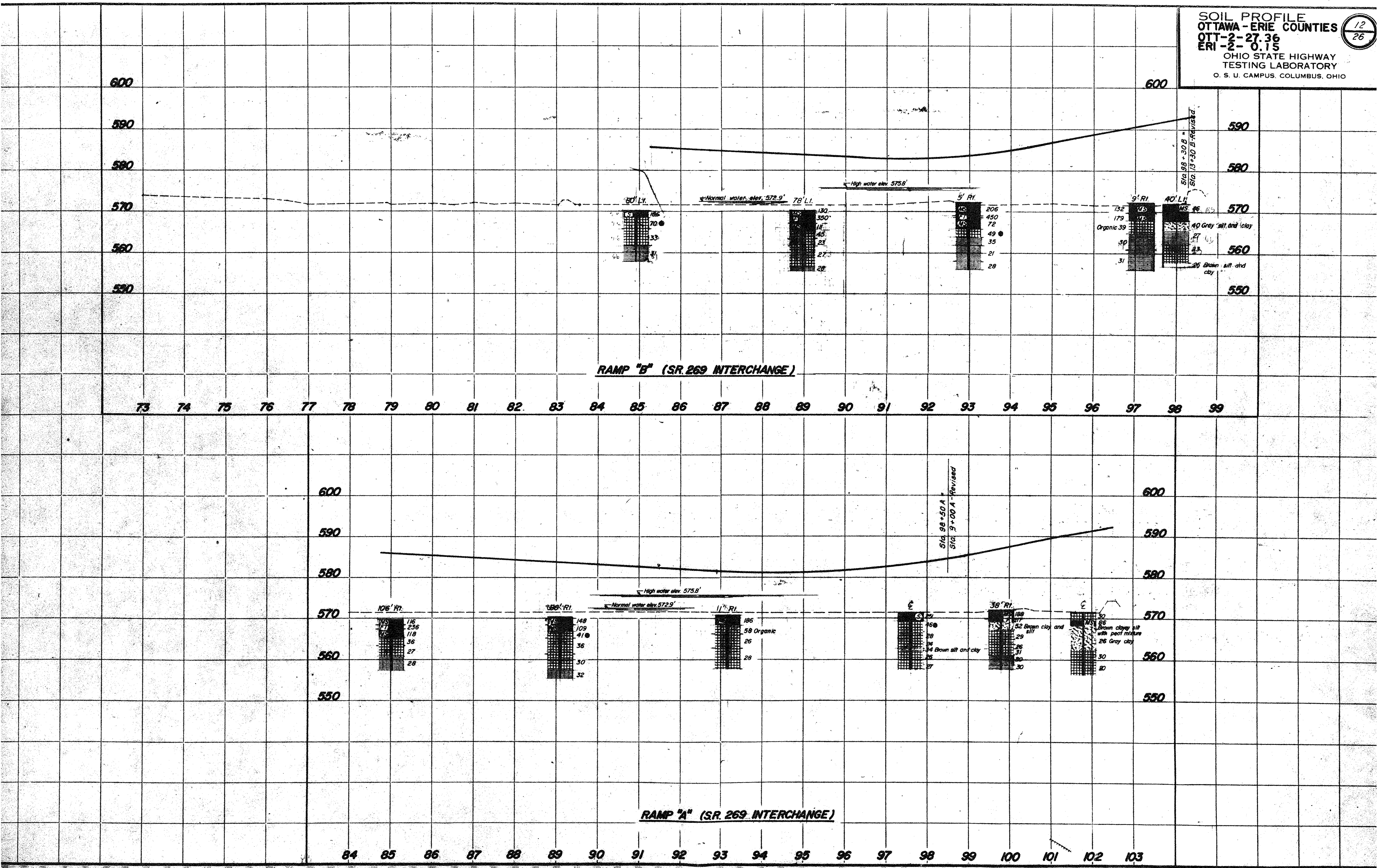
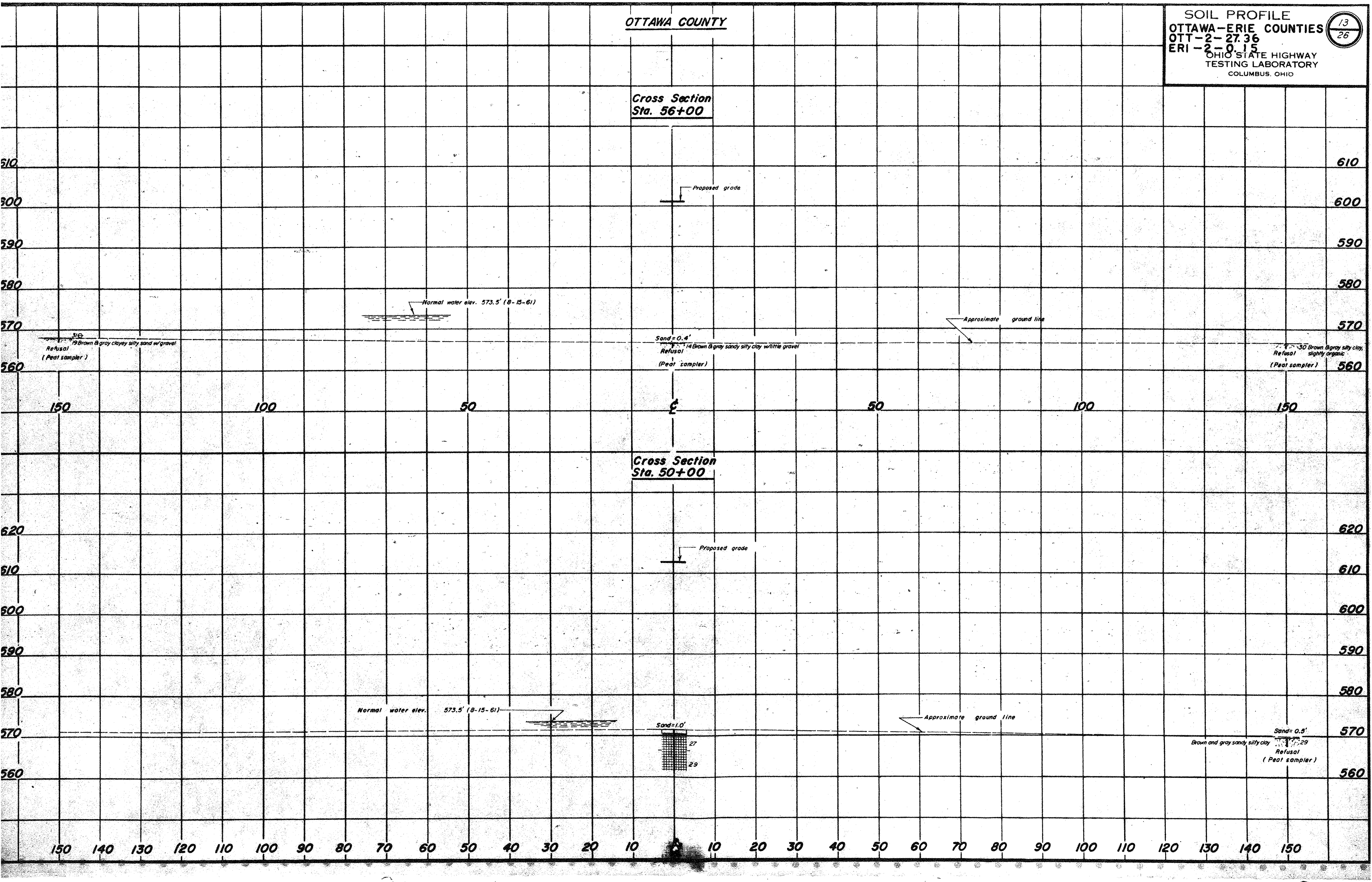
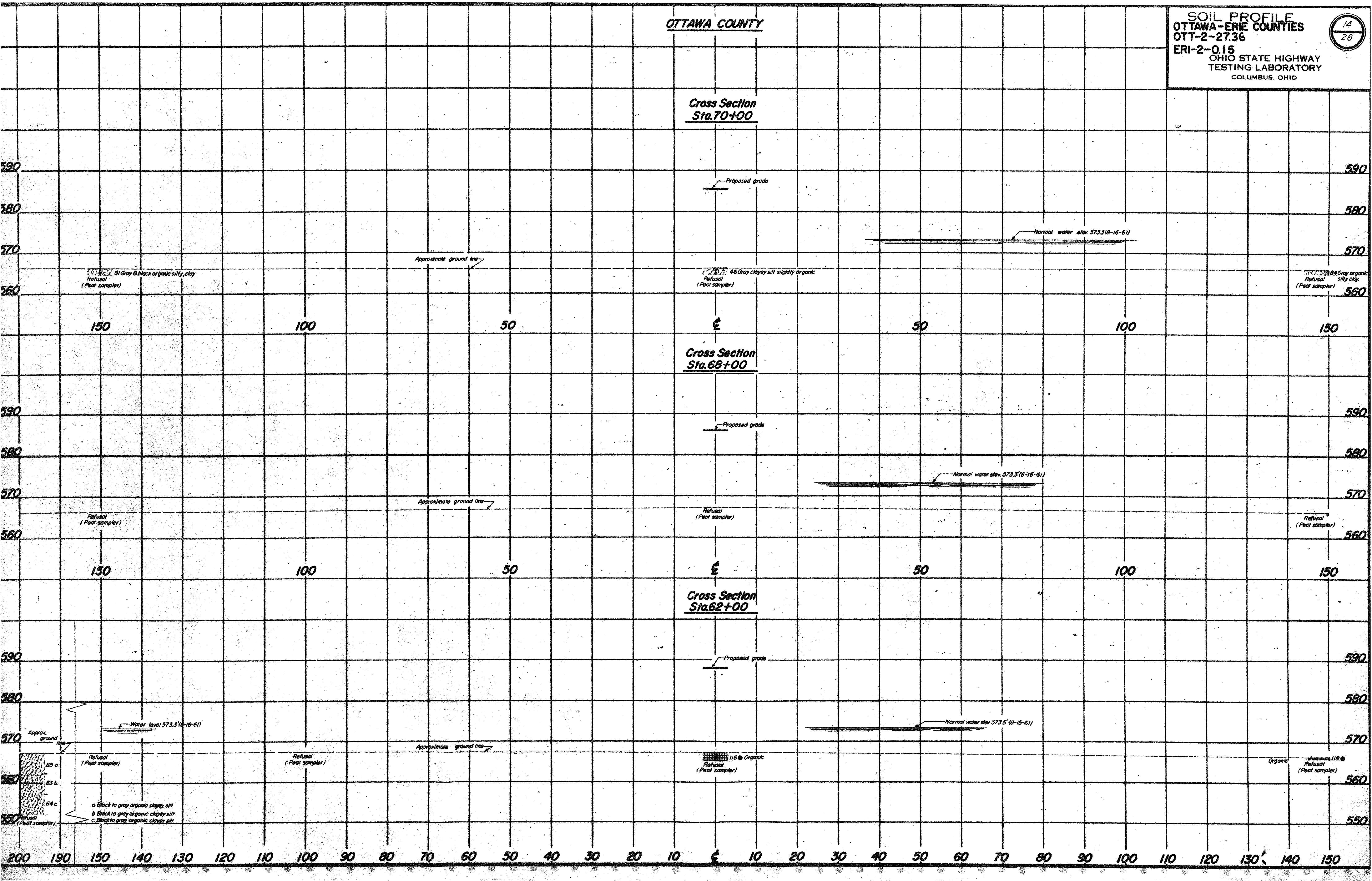


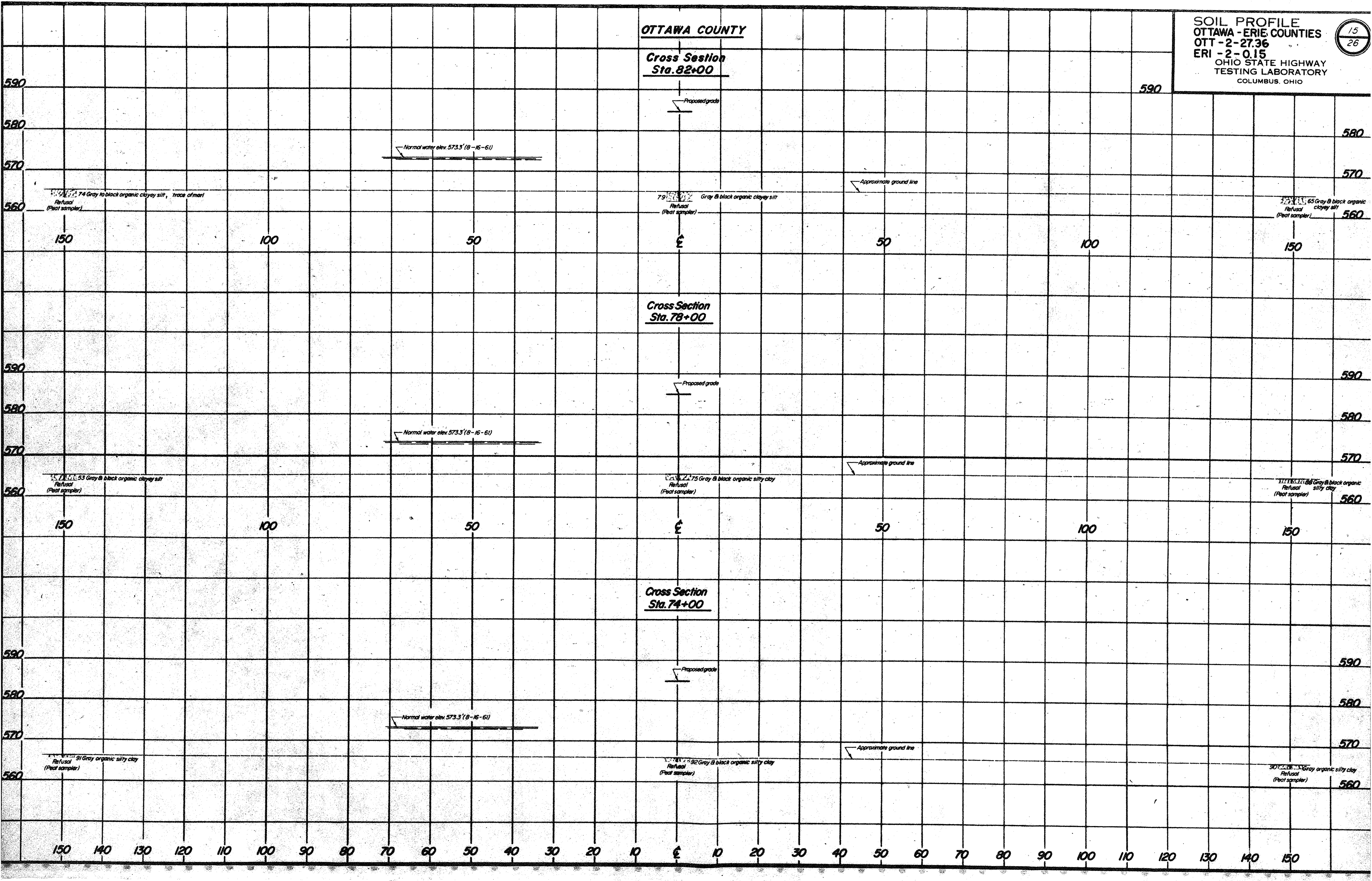
SOIL PROFILE
OTTAWA-ERIE COUNTIES
OTT-2-27.36
ERI-2-0.15
13/26

OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO

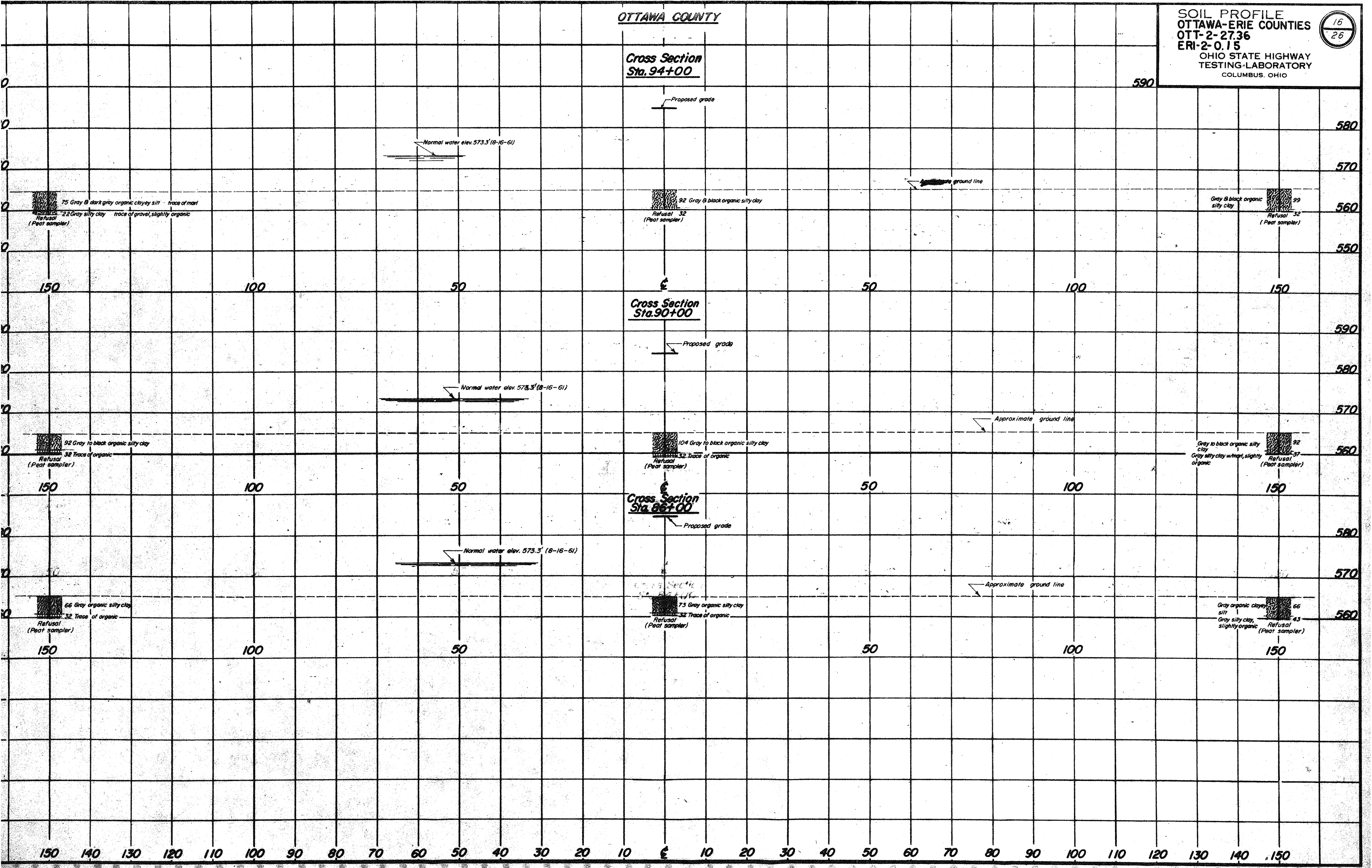




SOIL PROFILE
OTTAWA-ERIE COUNTIES
OTT-2-27.36
ERI-2-0.15
OHIO STATE HIGHWAY TESTING LABORATORY
COLUMBUS, OHIO
14/26
OTTAWA COUNTY
Cross Section Sta.70+00
Proposed grade
Normal water elev. 573.3(8-16-61)
Approximate ground line
91 Gray & black organic silty, clay
Refusal (Peat sampler)
46 Gray clayey silt slightly organic
Refusal (Peat sampler)
84 Gray organic silty clay.
Refusal (Peat sampler)
Cross Section Sta.68+00
Proposed grade
Normal water elev. 573.3'(8-16-61)
Approximate ground line
Refusal (Peat sampler)
Cross Section Sta.62+00
Proposed grade
Water level 573.3'(8-16-61)
Normal water elev. 573.5'(8-15-61)
Approx. ground line
Approximate ground line
Refusal (Peat sampler)
116 Organic
118 Organic
85 a.
83 b.
64 c.
a. Black to gray organic clayey silt
b. Black to gray organic clayey silt
c. Black to gray organic clayey silt
590
580
570
560
550
150 100 50 ℄ 50 100 150
200 190 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150



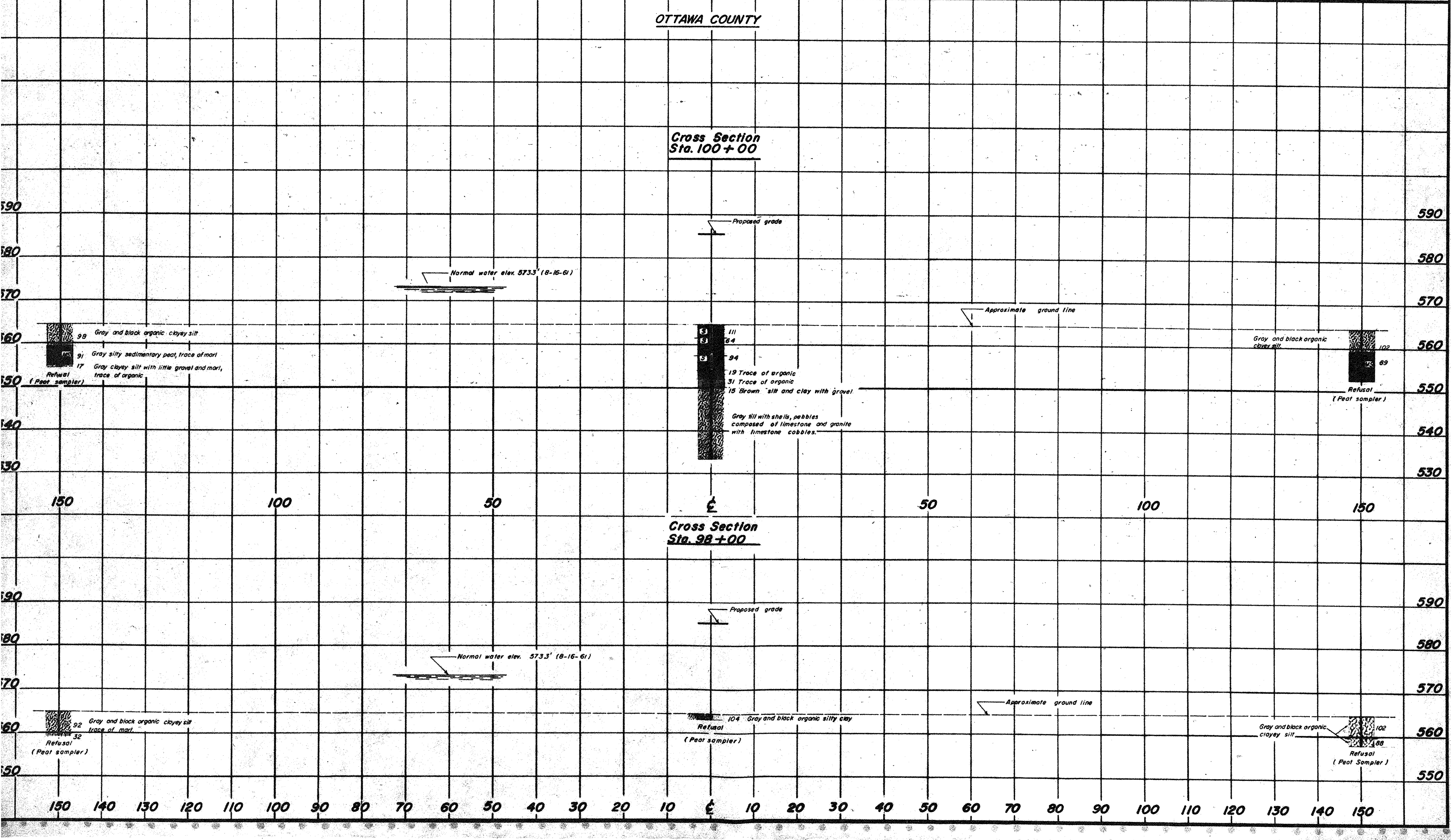
SOIL PROFILE
OTTAWA - ERIE COUNTIES
OTT - 2 - 27.36
ERI - 2 - 0.15
OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO
15/26
OTTAWA COUNTY
Cross Section
Sta. 82+00
Proposed grade
Normal water elev. 573.3' (8-16-61)
Approximate ground line
74 Gray to black organic clayey silt, trace of marl
Refusal
(Peat sampler)
79 Gray & black organic clayey silt
Refusal
(Peat sampler)
65 Gray & black organic clayey silt
Refusal
(Peat sampler)
Cross Section
Sta. 78+00
Proposed grade
Normal water elev. 573.3' (8-16-61)
Approximate ground line
53 Gray & black organic clayey silt
Refusal
(Peat sampler)
75 Gray & black organic silty clay
Refusal
(Peat sampler)
Gray & black organic silty clay
Refusal
(Peat sampler)
Cross Section
Sta. 74+00
Proposed grade
Normal water elev. 573.3' (8-16-61)
Approximate ground line
91 Gray organic silty clay
Refusal
(Peat sampler)
92 Gray & black organic silty clay
Refusal
(Peat sampler)
90 Gray organic silty clay
Refusal
(Peat sampler)
590
580
570
560
150
100
50
℄
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150



SOIL PROFILE
OTTAWA-ERIE COUNTIES
OTT-2-27.36
ERI-2-0.15
OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO
16/26
OTTAWA COUNTY
Cross Section Sta. 94+00
Proposed grade
Normal water elev. 573.3' (8-16-61)
ground line
75 Gray & dark gray organic clayey silt trace of marl
22 Gray silty clay trace of gravel, slightly organic
Refusal (Peat sampler)
92 Gray & black organic silty clay
Refusal 32 (Peat sampler)
Gray & black organic silty clay 99
Refusal 32 (Peat sampler)
Cross Section Sta. 90+00
Proposed grade
Normal water elev. 573.3' (8-16-61)
Approximate ground line
92 Gray to black organic silty clay
32 Trace of organic
Refusal (Peat sampler)
104 Gray to black organic silty clay
32 Trace of organic
Refusal (Peat sampler)
Gray to black organic silty clay 92
Gray silty clay w/marl, slightly organic 37
Refusal (Peat sampler)
Cross Section Sta. 86+00
Proposed grade
Normal water elev. 573.3' (8-16-61)
Approximate ground line
66 Gray organic silty clay
32 Trace of organic
Refusal (Peat sampler)
73 Gray organic silty clay
32 Trace of organic
Refusal (Peat sampler)
Gray organic clayey silt 66
Gray silty clay, slightly organic 43
Refusal (Peat sampler)
590 580 570 560 550
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

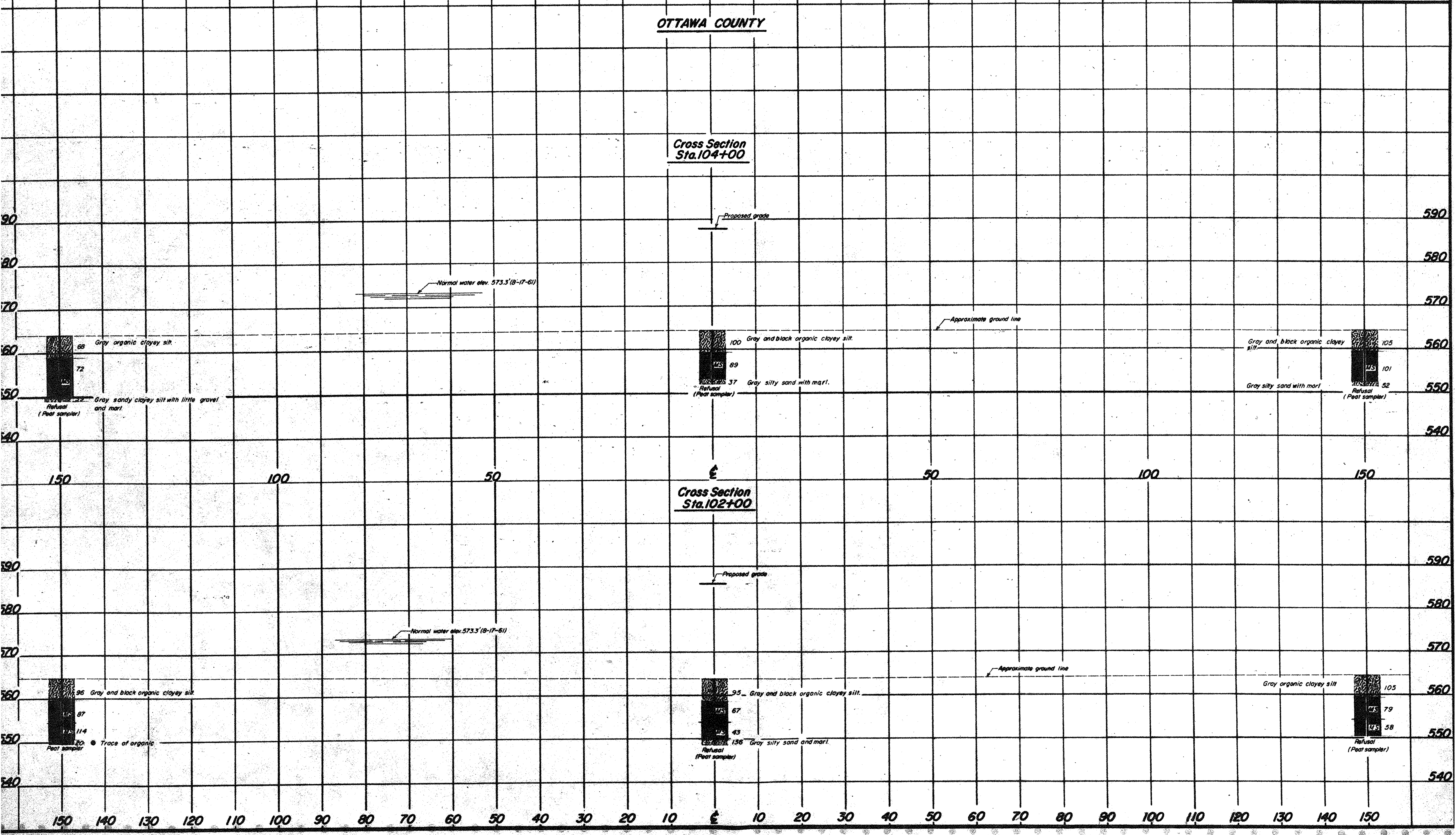
SOIL PROFILE
OTTAWA-ERIE-COUNTIES
OTT-2-27.36
ERI-2- 0.15
OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO

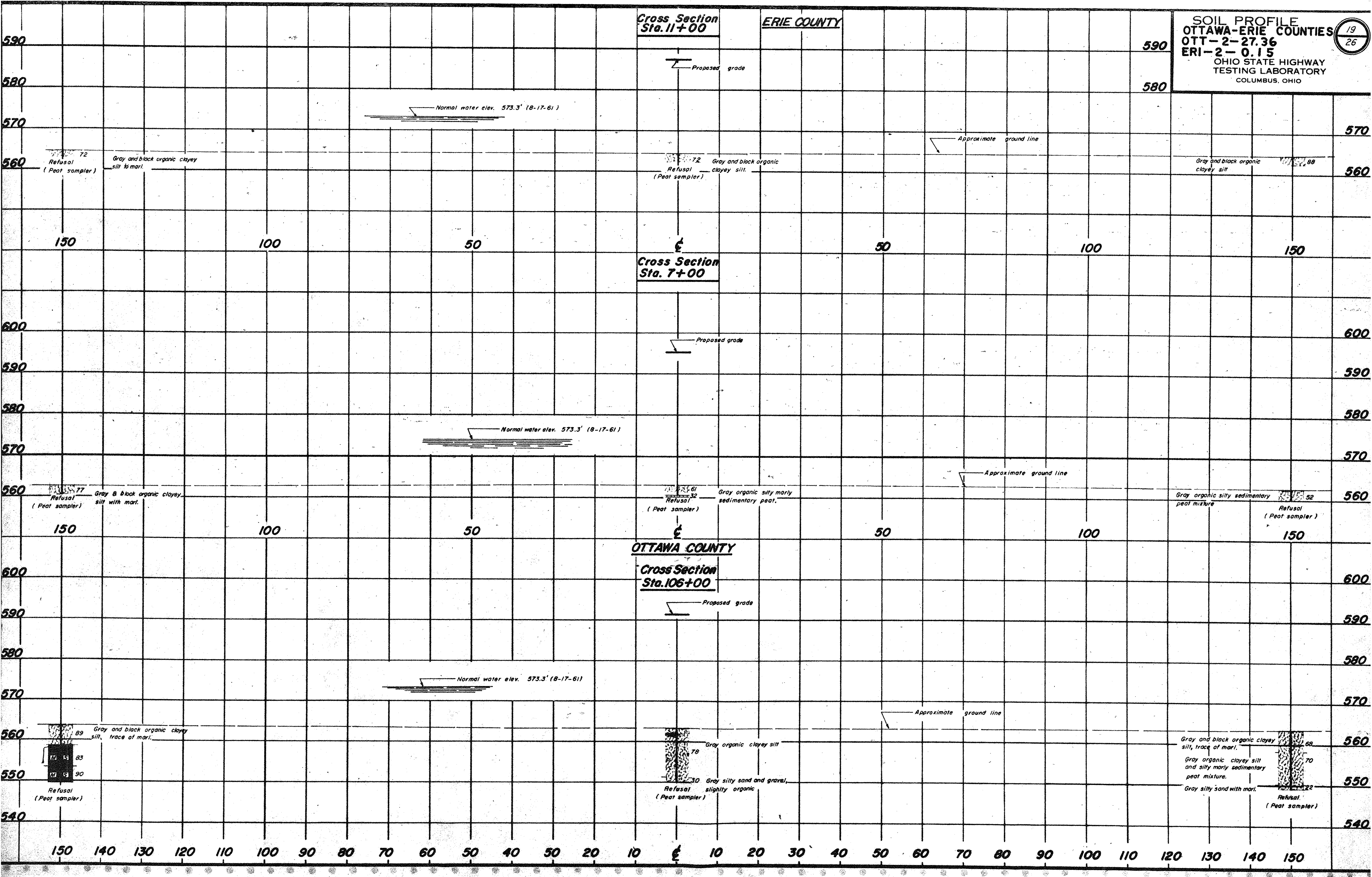
17/26

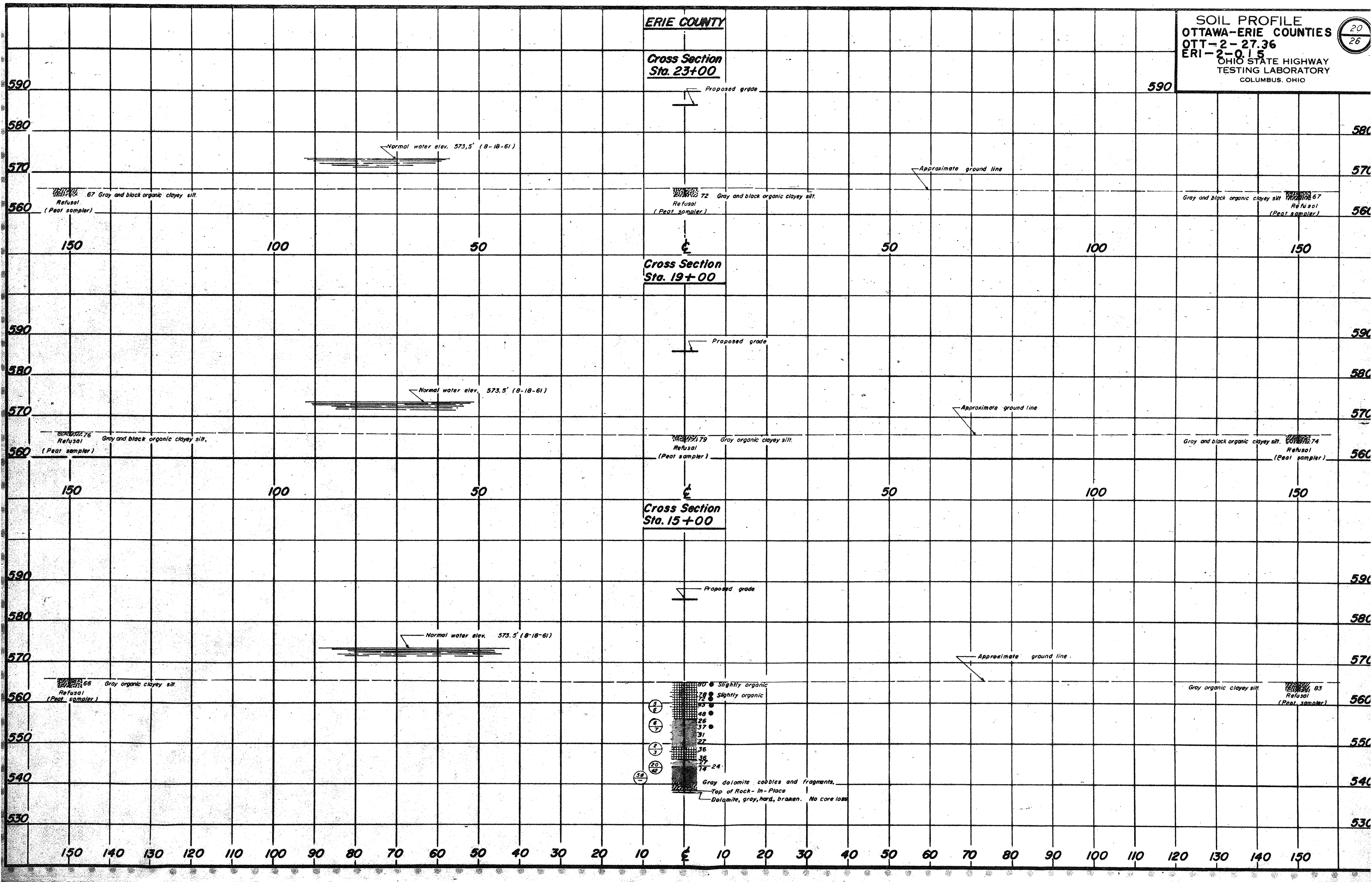


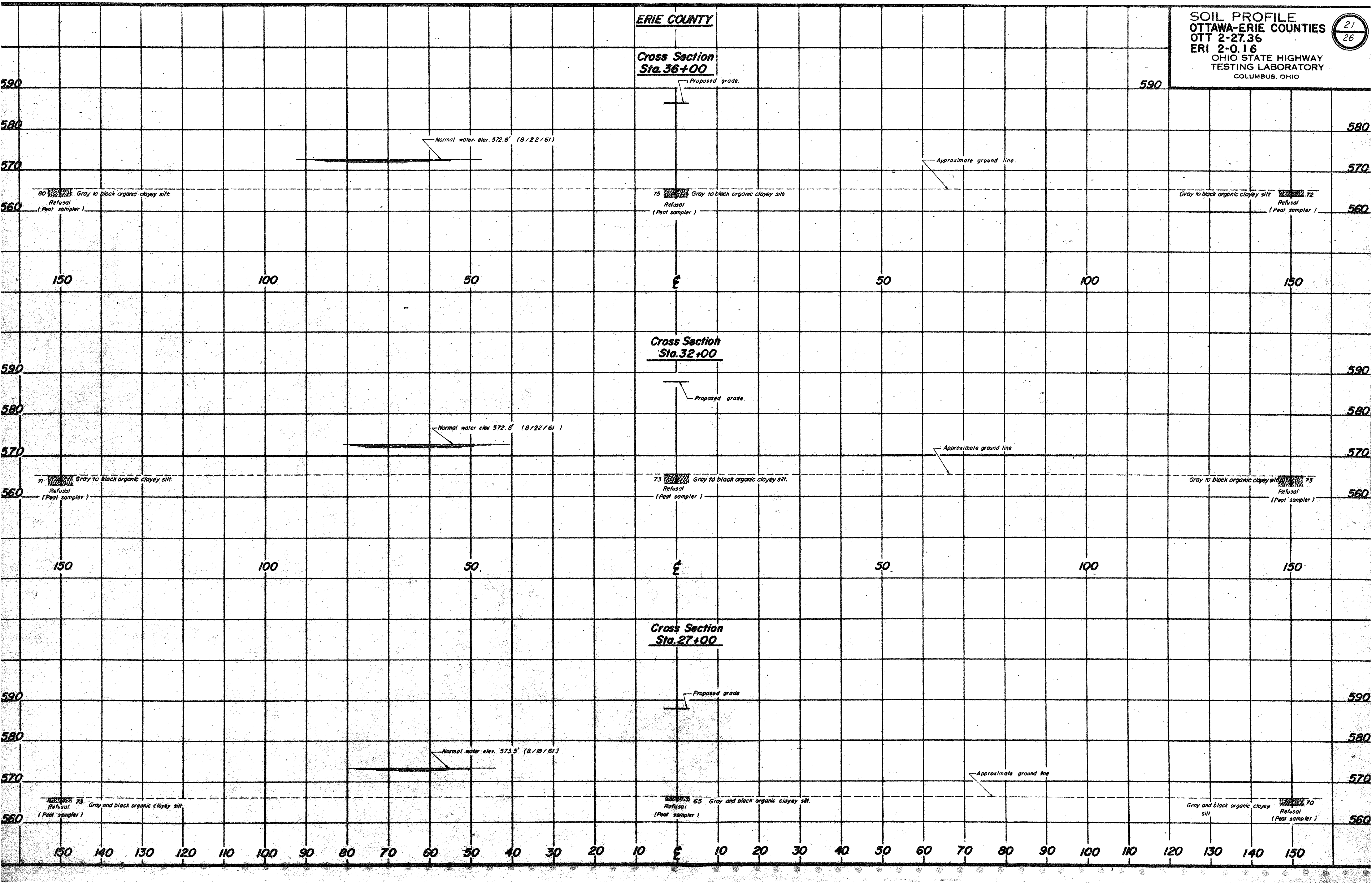
SOIL PROFILE
OTTAWA-ERIE COUNTIES
OTT-2-27.36
ERI-2-0.15
OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO

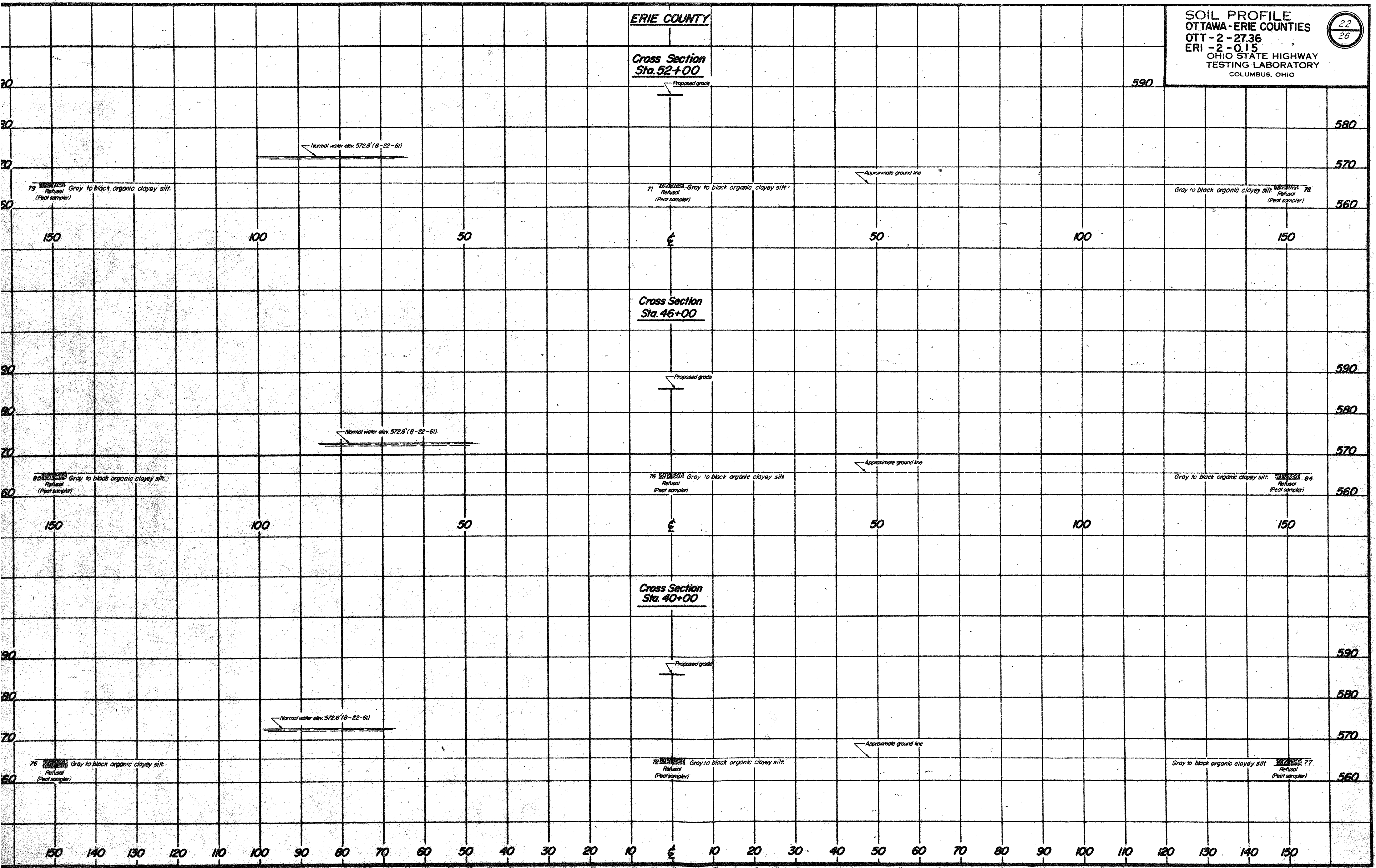
18/26




SOIL PROFILE
OTTAWA-ERIE COUNTIES
OTT-2-27.36
ERI-2-0.15
OHIO STATE HIGHWAY TESTING LABORATORY
COLUMBUS, OHIO
19/26
ERIE COUNTY
Cross Section Sta. 11+00
Proposed grade
Normal water elev. 573.3' (8-17-61)
Approximate ground line
Refusal (Peat sampler)
Gray and black organic clayey silt to marl.
Gray and black organic clayey silt.
Gray and black organic clayey silt
Cross Section Sta. 7+00
Proposed grade
Normal water elev. 573.3' (8-17-61)
Approximate ground line
Refusal (Peat sampler)
Gray & black organic clayey silt with marl.
Gray organic silty marly sedimentary peat.
Gray organic silty sedimentary peat mixture
OTTAWA COUNTY
Cross Section Sta. 106+00
Proposed grade
Normal water elev. 573.3' (8-17-61)
Approximate ground line
Gray and black organic clayey silt, trace of marl.
Refusal (Peat sampler)
Gray organic clayey silt
Gray silty sand and gravel, slightly organic
Gray and black organic clayey silt, trace of marl.
Gray organic clayey silt and silty marly sedimentary peat mixture.
Gray silty sand with marl.
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
540 550 560 570 580 590 600


SOIL PROFILE
OTTAWA-ERIE COUNTIES
OTT-2-27.36
ERI-2-0.15
OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO
20/26
ERIE COUNTY
Cross Section Sta. 23+00
Proposed grade
Normal water elev. 573,5' (8-18-61)
Approximate ground line
67 Gray and black organic clayey silt.
Refusal (Peat sampler)
72 Gray and black organic clayey silt.
Refusal (Peat sampler)
Gray and black organic clayey silt 67
Refusal (Peat sampler)
Cross Section Sta. 19+00
Proposed grade
Normal water elev. 573.5' (8-18-61)
Approximate ground line
76 Gray and black organic clayey silt.
Refusal (Peat sampler)
79 Gray organic clayey silt.
Refusal (Peat sampler)
Gray and black organic clayey silt. 74
Refusal (Peat sampler)
Cross Section Sta. 15+00
Proposed grade
Normal water elev. 573.5' (8-18-61)
Approximate ground line
66 Gray organic clayey silt
Refusal (Peat sampler)
80 Slightly organic
78 72 Slightly organic
48
26 37
31 27
36
36 27 14 24
Gray dolomite cobbles and fragments.
Top of Rock-In-Place
Dolomite, gray, hard, broken. No core loss
Gray organic clayey silt 83
Refusal (Peat sampler)
590
580
570
560
550
540
530
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

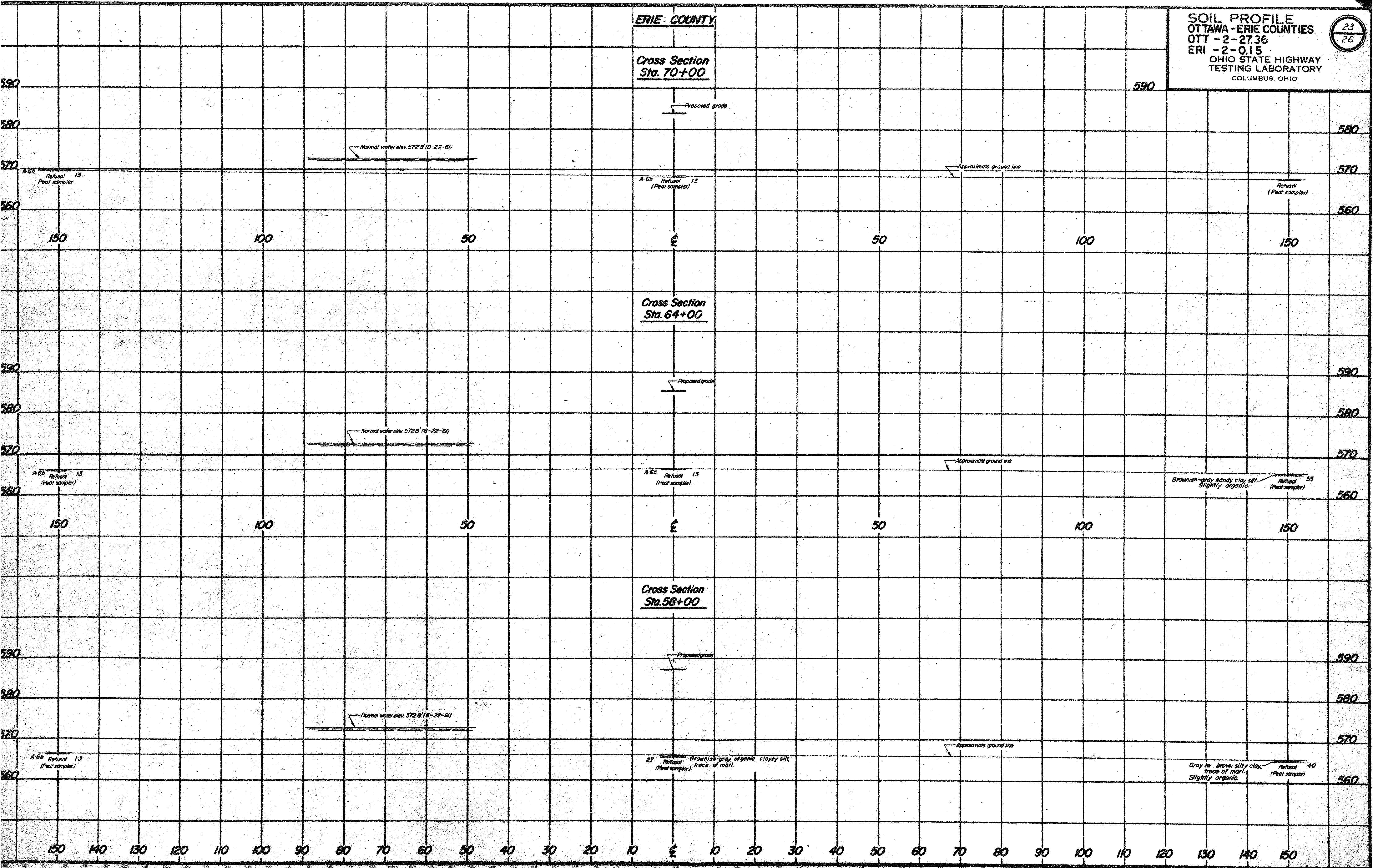

SOIL PROFILE
OTTAWA-ERIE COUNTIES
OTT 2-27.36
ERI 2-0.16
OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO
21/26
ERIE COUNTY
Cross Section
Sta. 36+00
Proposed grade
Normal water elev. 572.8' (8/22/61)
Approximate ground line
80 Gray to black organic clayey silt
Refusal
(Peat sampler)
75 Gray to black organic clayey silt
Refusal
(Peat sampler)
Gray to black organic clayey silt 72
Refusal
(Peat sampler)
590
580
570
560
150
100
50
℄
50
100
150
Cross Section
Sta. 32+00
Proposed grade
Normal water elev. 572.8' (8/22/61)
Approximate ground line
71 Gray to black organic clayey silt
Refusal
(Peat sampler)
73 Gray to black organic clayey silt
Refusal
(Peat sampler)
Gray to black organic clayey silt 73
Refusal
(Peat sampler)
Cross Section
Sta. 27+00
Proposed grade
Normal water elev. 573.5' (8/18/61)
Approximate ground line
73 Gray and black organic clayey silt
Refusal
(Peat sampler)
65 Gray and black organic clayey silt
Refusal
(Peat sampler)
Gray and black organic clayey silt
70
Refusal
(Peat sampler)
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

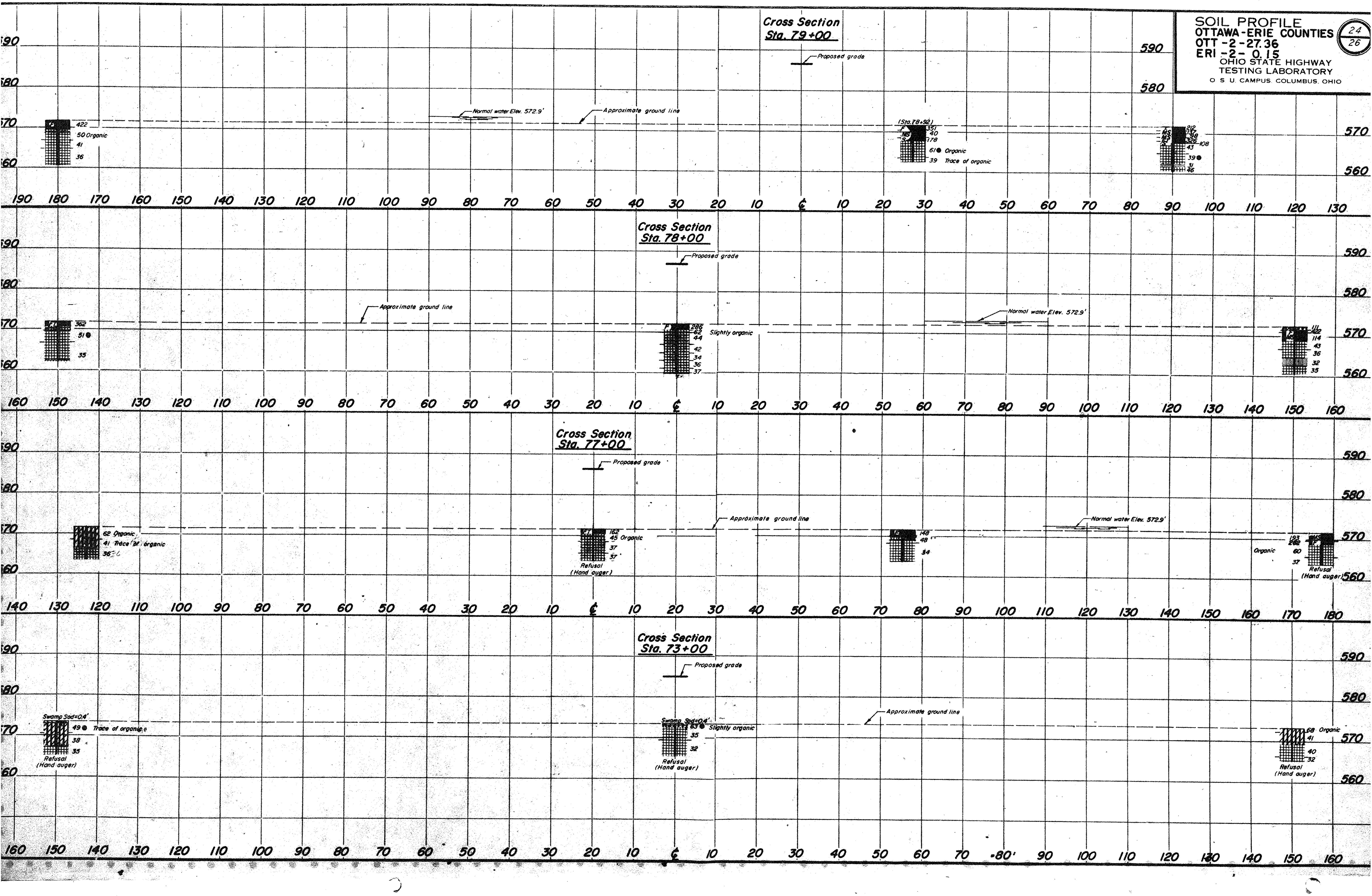


SOIL PROFILE
OTTAWA-ERIE COUNTIES
OTT-2-27.36
ERI-2-0.15
OHIO STATE HIGHWAY TESTING LABORATORY
COLUMBUS, OHIO
22/26
ERIE COUNTY
Cross Section Sta. 52+00
Proposed grade
Normal water elev. 572.8' (8-22-61)
Approximate ground line
79 Refusal (Peat sampler) Gray to black organic clayey silt.
71 Refusal (Peat sampler) Gray to black organic clayey silt.
Gray to black organic clayey silt. Refusal (Peat sampler) 78
Cross Section Sta. 46+00
Proposed grade
Normal water elev. 572.8' (8-22-61)
Approximate ground line
85 Refusal (Peat sampler) Gray to black organic clayey silt.
76 Refusal (Peat sampler) Gray to black organic clayey silt.
Gray to black organic clayey silt. Refusal (Peat sampler) 84
Cross Section Sta. 40+00
Proposed grade
Normal water elev. 572.8' (8-22-61)
Approximate ground line
76 Refusal (Peat sampler) Gray to black organic clayey silt.
72 Refusal (Peat sampler) Gray to black organic clayey silt.
Gray to black organic clayey silt Refusal (Peat sampler) 77
590
580
570
560
150 100 50 ℄ 50 100 150
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

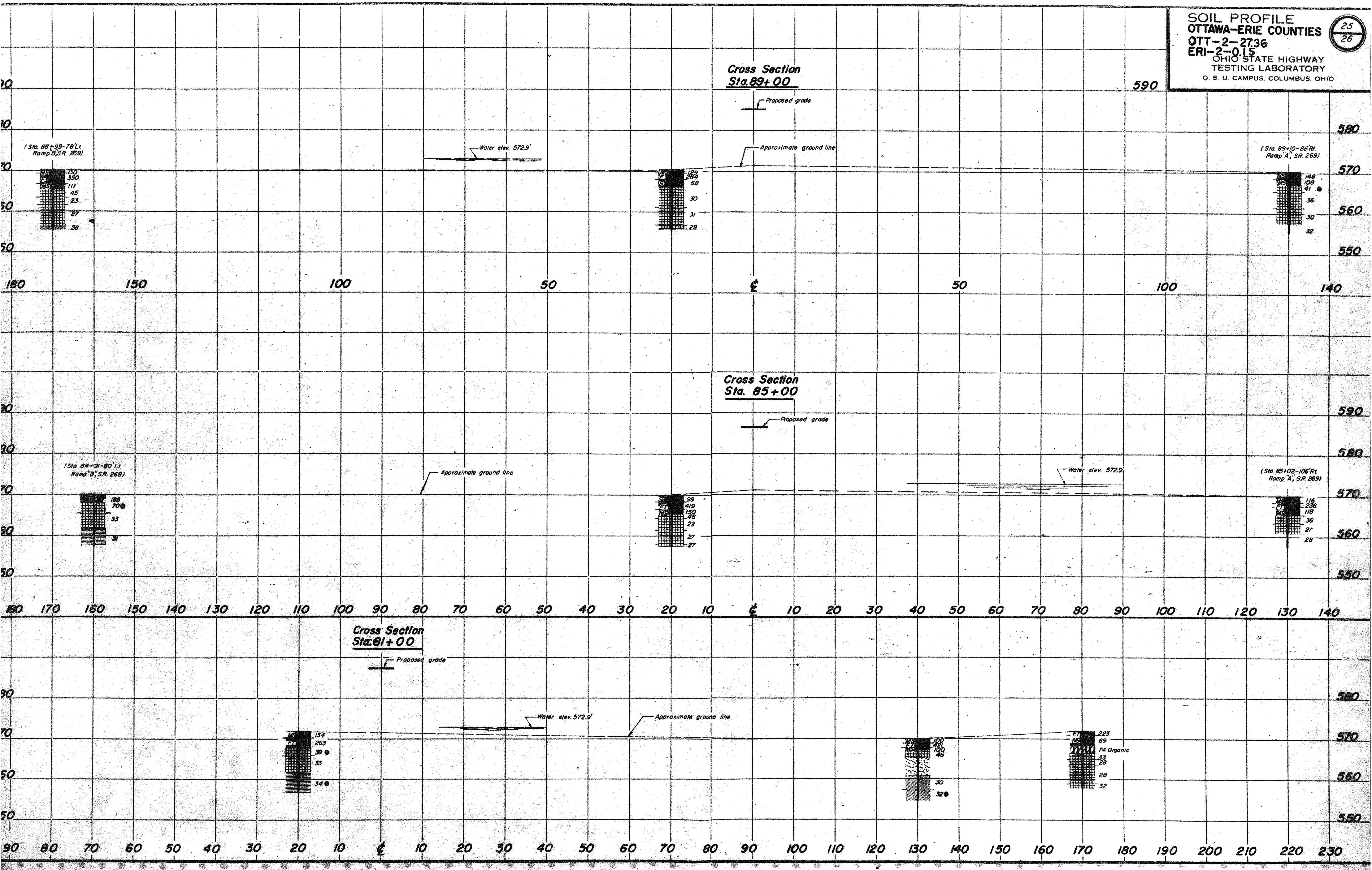
SOIL PROFILE
OTTAWA - ERIE COUNTIES
OTT - 2 - 27.36
ERI - 2 - 0.15
OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO

23/26

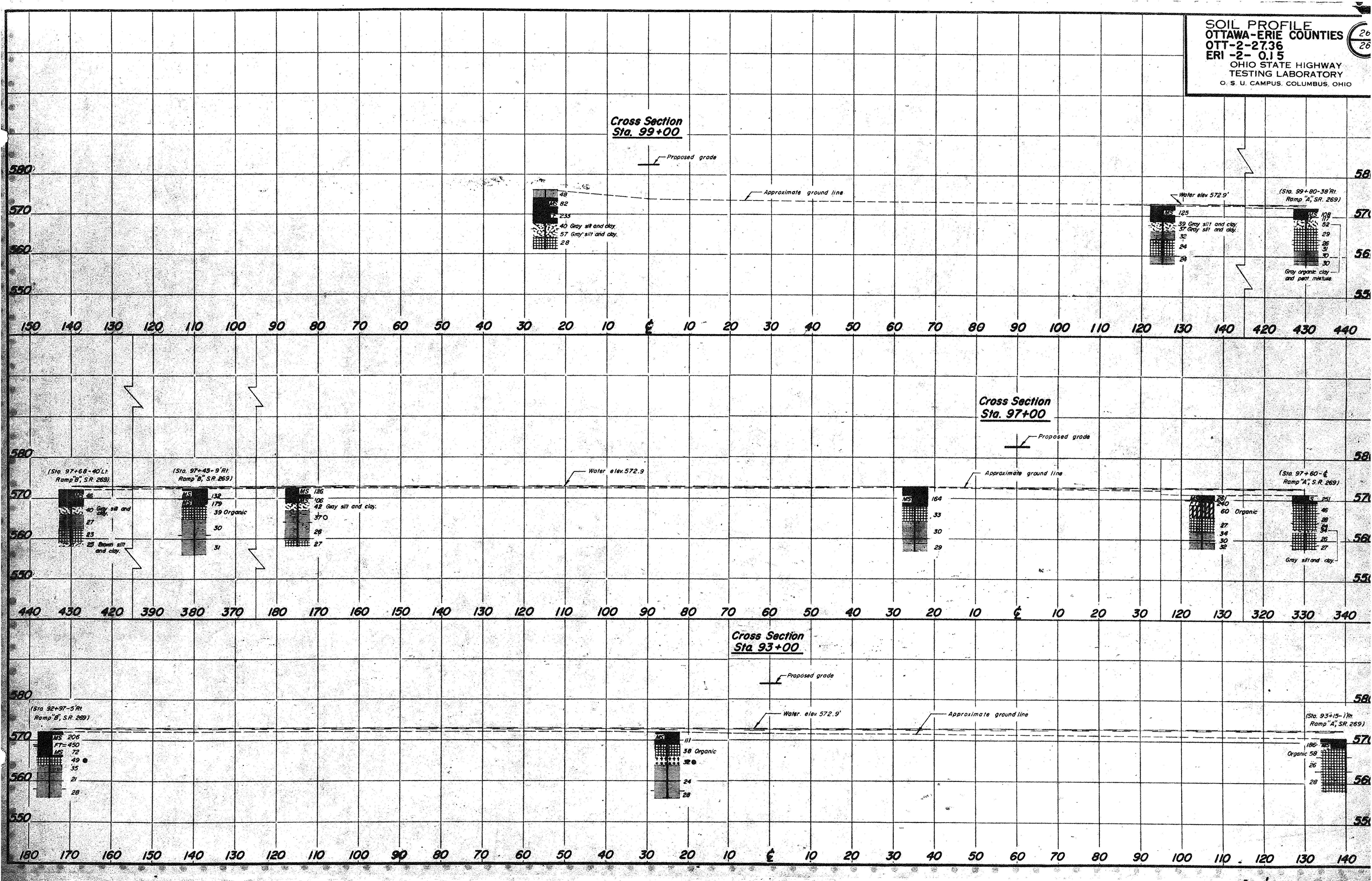




SOIL PROFILE
OTTAWA-ERIE COUNTIES
OTT -2 -27.36
ERI -2 - 0.15
OHIO STATE HIGHWAY
TESTING LABORATORY
O S U CAMPUS COLUMBUS, OHIO
24
26
Cross Section
Sta. 79+00
Proposed grade
Normal water Elev. 572.9'
Approximate ground line
(Sta.78+92)
Organic
Trace of organic
Cross Section
Sta. 78+00
Proposed grade
Approximate ground line
Normal water Elev. 572.9'
Slightly organic
Cross Section
Sta. 77+00
Proposed grade
Approximate ground line
Normal water Elev. 572.9'
62 Organic
41 Trace of organic
45 Organic
Refusal
(Hand auger)
Organic
Refusal
(Hand auger)
Cross Section
Sta. 73+00
Proposed grade
Approximate ground line
Swamp Sod=0.4'
Trace of organic
Refusal
(Hand auger)
Swamp Sod=0.4'
Slightly organic
Refusal
(Hand auger)
68 Organic
Refusal
(Hand auger)
590
580
570
560



SOIL PROFILE
OTTAWA-ERIE COUNTIES
OTT-2-27.36
ERI-2-0.15
OHIO STATE HIGHWAY
TESTING LABORATORY
O. S. U. CAMPUS. COLUMBUS, OHIO
25/26
Cross Section
Sta. 89+00
Proposed grade
Water elev. 572.9'
Approximate ground line
(Sta. 88+95-78' Lt. Ramp "B", S.R. 269)
(Sta. 89+10-86' Rt. Ramp "A", S.R. 269)
Cross Section
Sta. 85+00
Proposed grade
Approximate ground line
Water elev. 572.9'
(Sta. 84+91-80' Lt. Ramp "B", S.R. 269)
(Sta. 85+02-106' Rt. Ramp "A", S.R. 269)
Cross Section
Sta. 81+00
Proposed grade
Water elev. 572.9'
Approximate ground line
74 Organic



SOIL PROFILE
OTTAWA-ERIE COUNTIES
OTT-2-27.36
ERI -2- 0.15
OHIO STATE HIGHWAY
TESTING LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO
Cross Section
Sta. 99+00
Proposed grade
Approximate ground line
Water elev. 572.9'
(Sta. 99+80-38' Rt.
Ramp "A", SR. 269)
40 Gray silt and clay.
57 Gray silt and clay.
39 Gray silt and clay.
57 Gray silt and clay.
Gray organic clay and peat mixture.
Cross Section
Sta. 97+00
Proposed grade
Approximate ground line
Water elev. 572.9
(Sta. 97+68-40' Lt.
Ramp "B", S.R. 269)
(Sta. 97+45-9' Rt.
Ramp "B", S.R. 269)
(Sta. 97+60-℄
Ramp "A", S.R. 269)
40 Gray silt and clay.
25 Brown silt and clay.
39 Organic
42 Gray silt and clay.
60 Organic
Gray silt and clay.
Cross Section
Sta. 93+00
Proposed grade
Water. elev. 572.9'
Approximate ground line
(Sta. 92+97-5' Rt.
Ramp "B", S.R. 269)
FT=450
38 Organic
(Sta. 93+15-1' Rt.
Ramp "A", S.R. 269)
Organic 58