CURRENT A.D.T. (1981)	= 14,500
DESIGN YEAR A.D.T. (2001)	= 23,200
DHV	= 3,250
D	= 50%
T	= 4%
V	= 55

MICROFILMED DEC 19 1980

MICROFILMED MAY 7 1985

OHIO	1/27
FHWA REGION 5	
BRF-58(17)	FEDERAL PROJECT

POR-43-13.75
PORTAGE COUNTY

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

POR-43-13.75

FRANKLIN TOWNSHIP

PORTAGE COUNTY

RECONSTRUCTION OF EXISTING SEPARATED CROSSING WITH THE CONRAIL RAILROAD

BRF-58(17)

CONVENTIONAL SIGNS

County Line
Township Line
Section Line
Corporation Line or
Fence Line (existing) (proposed)
Center Line 352 353
Trees, Stumps, (to be removed)
Utility Poles: Telephone, Power, Light.

Limited Access (only) LA
Right of Way (only) RW
Limited Access & Right of Way LA & RW
Existing Right of Way
Property Line (in existing fence)
Railroad or
Guardrail (existing) (proposed)

INDEX OF SHEETS

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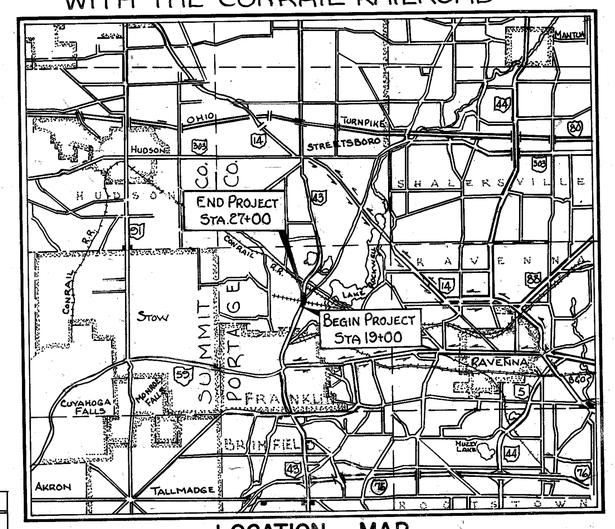
Cross Sections	8-12
Details	13
Structure over 20' Span	14-18
Reinforced Earth	19-22
Right of Way Plans	24-27

UNDERGROUND UTILITIES
48 HOURS
BEFORE YOU DIG
Call---800-362-2764 (Toll Free)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY



LOCATION MAP

SCALE IN MILES
0 1 2 3 4 5 6 7 8

Portion to be improved
State & Federal Routes
Other Roads
Detour (Passenger Car & Light Commercial)

SCALES

Plan 20 10 0 10 20
Profile: Horizontal 20 10 0 10 20, Vertical 5 4 3 2 1 0 5
Cross Section: Horizontal 5 4 3 2 1 0 5, Vertical 5 4 3 2 1 0 5

1981 SPECIFICATIONS

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

I hereby approve these plans and declare that the making of this improvement will require the closing to traffic of the highway and that detours will be provided as indicated on the plans.

Approved William M. Goldman
Date 1-5-83 District Deputy Director of Transportation

Approved Robert B. Pfeifer P.E.H.S.
Date 2-10-83 Engineer, Bureau of Bridges and Structural Design

Approved Wayne H. Kauble
Date 3-28-83 Chief Engineer, Planning and Design

Approved Warren J. Smith
Date 3-28-83 Director, Department of Transportation

SUPPLEMENTAL SPECIFICATIONS		
836	3-12-75	
1001	1-3-77	
824	10-8-82	

LINE DATA

Begin Project	Sta. 19+00	
End Project	Sta. 27+00	
	Net Length	800 L.F.
	or	0.151 Miles
Begin Work	Sta. 18+00	
End Work	Sta. 28+00	
	Net Length	1000 L.F.
	or	0.189 Miles

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS					
BP-5	7-16-81	PSBD-1-81	9-18-81		
GR-1	2-5-82	BR-1	5-29-79		
GR-2B	2-5-82	BP-4	7-16-81		
GR-3	2-5-82				
GR-4	2-5-82				
MC-3	6-1-73				
AS-1-81	11-27-81				
MC-1	6-13-69				

Bridge Plans Prepared By:
Dalton, Dalton and Newport
34 N. Hawkins Ave
Akron, Ohio

Roadway Plan Prepared By:
Ohio Department of Transportation
District Four
Location & Design

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

Project: POR-43-13.75
Date of Letting _____ 19__, Contract No. _____

LD 0300 Rev. 11-1-78

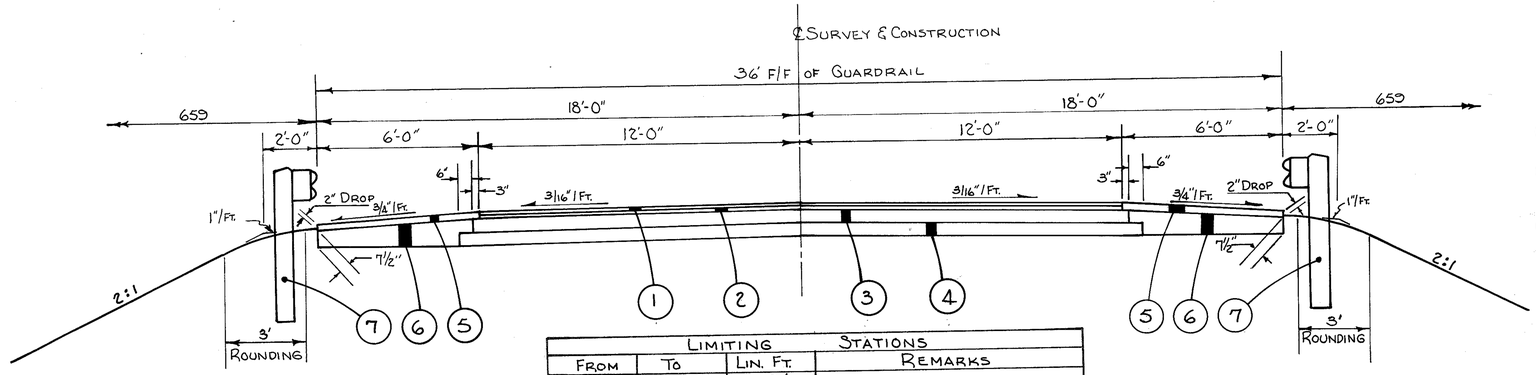
TYPICAL SECTIONS
TYPE 404 ON 301

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

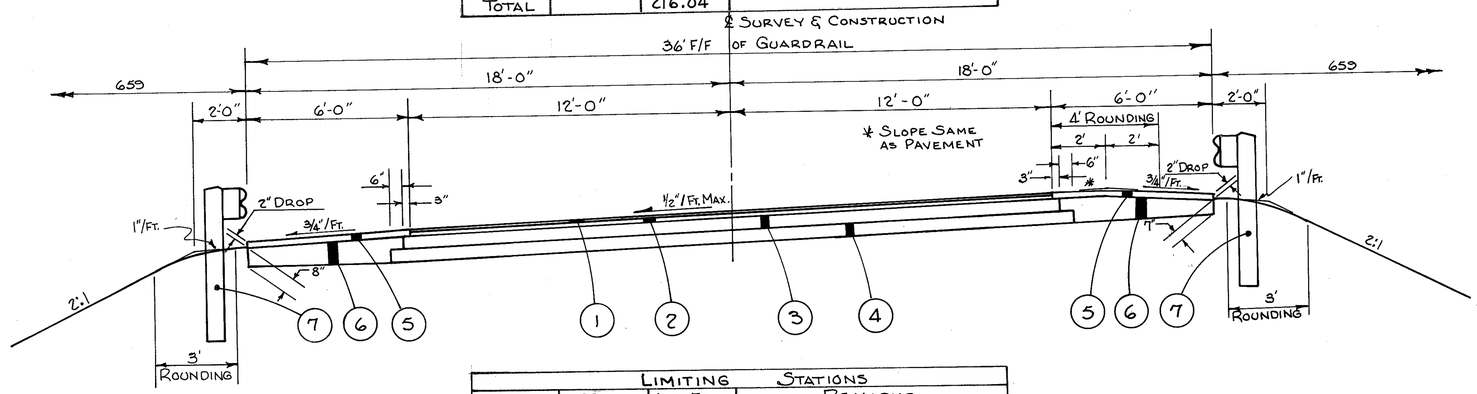
POR-43-13.75
PORTAGE COUNTY

2/27

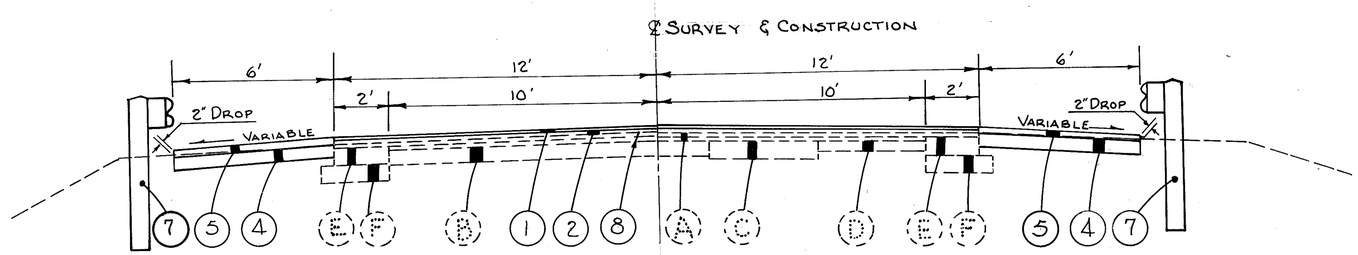
0 1 2 3 4 5 10
SCALE IN FEET



LIMITING STATIONS			
FROM	TO	LIN. FT.	REMARKS
19+00	19+93.84	93.84	
25+77.80	27+00	122.20	
TOTAL		216.04	



LIMITING STATIONS			
FROM	TO	LIN. FT.	REMARKS
19+93.84	21+56.06	162.22	
21+56.06	22+46.07	90.01	DEDUCT FOR BRIDGE & APPROACH SLABS
22+46.07	25+77.80	331.73	
TOTAL		493.95	



LIMITING STATIONS			
FROM	TO	LIN. FT.	REMARKS
18+50	19+00	50	
27+00	27+50	50	
TOTAL		100	

LEGEND

1	404	1 1/4" ASPHALT CONCRETE, AC-20
2	402	1 3/4" ASPHALT CONCRETE, AC-20
3	301	6" BITUMINOUS AGGREGATE BASE: AC-20, RT-11 OR RT-12
4	310	6" SUBBASE
5	301	3" BITUMINOUS AGGREGATE BASE: AC-20, RT-11 OR RT-12
6	310	VARIABLE DEPTH SUBBASE
7	606	TYPE 5 GUARDRAIL
8	407	TACK COAT
A		VARIABLE DEPTH ASPHALT COURSES
B		7" CONCRETE BASE
C		8" CONCRETE BASE
D		4" TRAFFIC BOUND BASE
E	B-21	8" BASE
F	I-22	8" BASE

GENERAL NOTES

FHWA REGION	STATE	PROJECT NO.	FUNDS
5	OHIO		

3/27

POR-43-13.75
PORTAGE COUNTY

~~614 TEMPORARY PAVEMENT MARKING~~

~~THE CONTRACTOR SHALL FURNISH, AND INSTALL TEMPORARY RETRO-REFLECTIVE PAVEMENT MARKINGS ON RECONSTRUCTED OR RE-SURFACED ROADS WITHIN THE WORK LIMITS, IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS, UNLESS OTHERWISE SPECIFIED IN THE PLANS.~~

~~CENTER LINES AND EDGE LINES SHALL CONSIST OF 12"x4" SEGMENTS SPACED AT A MAXIMUM 10' CENTER TO CENTER.~~

~~THE MATERIAL FURNISHED SHALL BE FLEXIBLE RETROREFLECTIVE PREFORMED PRESSURE SENSITIVE TAPE FOR PAVEMENT LINES. IT SHALL BE FREE OF CRACKS WITH STRAIGHT EDGES AND CONSIST OF PIGMENT AND FILLERS, BUT HAVE SUFFICIENT BINDER AND PLASTICIZER TO RETAIN GLASS BEADS HAVING AN APPROPRIATE REFRACTIVE INDEX TO MEET MINIMUM REFLECTIVE INTENSITY STANDARDS OUTLINED IN THE MANUFACTURERS INFORMATION. MATERIAL SHALL BE FLEXOLITE "WET REFLECTIVE", 3M "SCOTCHLANE," OR APPROVED EQUAL.~~

~~GLASS BEADS SHALL BE MIXED UNIFORMLY THROUGHOUT THE MARKING MATERIAL WITH SUFFICIENT SURFACE BEADS TO PROVIDE OPTIMUM REFLECTORIZATION AT ALL TIMES.~~

~~THE MATERIAL SHALL HAVE A PRECOATED ADHESIVE LAYER FOR PAVEMENT APPLICATION WITHOUT THE USE OF HEAT, SOLVENTS OR ADDITIONAL ADHESIVES. THE ADHESIVE SHALL BE SUFFICIENT TO RETAIN COMPLETE MARKINGS ON THE PAVEMENT SURFACE THROUGHOUT THE USEFUL LIFE OF THE MARKINGS.~~

~~WHITE MARKING MATERIAL SHALL BE FREE OF TINT. YELLOW MATERIAL SHALL CONFORM TO COLOR NO. 33538 OF FEDERAL STANDARD 595.~~

~~IN ADDITION, ALL APPLICABLE MANUFACTURERS MATERIAL AND APPLICATION INSTRUCTIONS, IN FORCE AT THE TIME OF PLACEMENT, SHALL BE ADHERED TO. THE CONTRACTOR SHALL FURNISH TO THE ENGINEER CERTIFICATION THAT THE MATERIAL SUPPLIED MEETS THE PROPERTIES SPECIFIED HEREIN.~~

~~MARKINGS SHALL BE ACCURATELY LAID OUT IN CONFORMANCE WITH 621.051 AND SHALL BE LOCATED IN A TRUE LINE ON THE CENTER LINE, OR EDGE LINE WHERE NORMAL PERMANENT MARKING WOULD LIE, UNLESS OTHERWISE SPECIFIED IN THE PLANS. THE TEMPORARY TAPE SHALL BE PLACED BY ROLLING THE MATERIAL INTO THE SURFACE.~~

~~METHOD OF MEASUREMENT AND BASIS OF PAYMENT SHALL BE IN CONFORMANCE WITH 621.15 AND 621.16 RESPECTIVELY FOR:~~

~~ITEM~~	~~UNIT~~	~~QUANT.~~	~~DESCRIPTION~~
~~614~~	~~MILES~~	~~0.38~~	~~TEMPORARY EDGE LINES, CLASS II~~
~~614~~	~~MILES~~	~~0.19~~	~~TEMPORARY CENTER LINES, CLASS II~~

EXISTING PAVEMENT MAINTENANCE

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AND REPAIR ANY PAVEMENT OR BERM OUTSIDE THE LIMITS OF WORK THAT IS DAMAGED BY HIS EQUIPMENT.

LOCATION OF GUARDRAIL

THE LOCATIONS OF GUARDRAIL RUNS, AS SHOWN IN THESE PLANS, ARE SUBJECT TO ADJUSTMENT PRIOR TO FINAL ACCEPTANCE. THE ENGINEER SHALL BE SATISFIED THAT ALL INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

GUARD RAIL REMOVAL

AT LOCATIONS WHERE EXISTING GUARD RAIL IS TO BE REMOVED, GUARD RAIL ELEMENTS AND HARDWARE SHALL BE STORED IN STAGING AREA FOR REMOVAL BY STATE FORCES.

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 ORC.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR PLAN ITEMS SET UP TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED AT THE ENGINEER'S DISCRETION SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

MOBILIZATION AS PER PLAN

THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 300 SQ. FT. OF FLOOR SPACE WHICH SHALL BE IN ACCORDANCE WITH 619.01 AND 619.02. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 624 MOBILIZATION, AS PER PLAN.

SEEDING

QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS BETWEEN THE TEN (10) FEET OUTSIDE THE WORK LIMITS, AS SHOWN ON THE CROSS SECTIONS, OR TO THE RIGHT OF WAY LINE, IF SUCH LINE IS LESS THAN TEN (10') FEET FROM THE WORK LIMITS.

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS

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

MAINTENANCE OF TRAFFIC (LIGHTS AND SIGNS)

THE CONTRACTOR SHALL IN ADDITION TO THE GENERAL REQUIREMENT OF ITEM 614 ON THIS PROJECT PERFORM THE FOLLOWING:

PROVIDE, ERECT AND MAINTAIN STANDARD 48" x 30" SIZE "ROAD CLOSED" SIGNS, SIGN SUPPORTS AND LIGHTS AT THE FOLLOWING LOCATIONS WITH THE FOLLOWING NOTE ADDED:

S.R. 59 MAIN ST (SOUTH OF PROJECT) "BRIDGE OUT 2 MILES AHEAD"
LAKE ST (SOUTH OF PROJECT) "BRIDGE OUT 1 3/4 MILES AHEAD"
RAVENNA RD. (NORTH OF PROJECT) "BRIDGE OUT 1/2 MILE AHEAD"
S.R. 303 (NORTH OF PROJECT) "BRIDGE OUT 4 MILES AHEAD"
"ROAD CLOSED" BARRICADES AT STA. 19+00 AND STA. 27+00

SIGN SUPPORTS AND LIGHTS FOR SIGNS SHALL BE AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR PROVIDING, ERECTING, MAINTAINING AND REMOVING LIGHTS, SIGNS, AND SIGN SUPPORTS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN ADDED TO THE SUMMARY TO BE USED AT THE DIRECTION OF THE ENGINEER, FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.

ITEM 207 TEMPORARY SEEDING AND MULCHING	771 SQ. YDS.
ITEM 659 WATER	1.67 M-GALS
ITEM 659 FERTILIZER	0.04 TONS

UTILITY OWNERSHIP

THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT:

Ohio Bell Telephone Co	Ohio Edison Co.	The East Ohio Gas Co.
2525 State Road	76 So. Main St.	2100 Eastwood Ave.
Cuyahoga Falls, Ohio 44223	Akron, Ohio 44308	Akron, Ohio 44305
Attn: Mr James J. Coyle	Attn: Mr John C. Lewis Jr.	Attn: Mr. Rich Zalenko
Engr. Mgr. 922-2591	Div. Engr 384-4714	Div. Engr. 798-7140

UTILITIES NOTIFICATION

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN AN AREA WHICH MAY INVOLVE UNDERGROUND UTILITY FACILITIES, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE REGISTERED UTILITY PROTECTION SERVICE AND THE OWNERS OF EACH UNDERGROUND UTILITY FACILITY SHOWN IN THE PLANS.

THE OWNER OF THE UNDERGROUND UTILITY FACILITY SHALL, WITHIN FORTY EIGHT HOURS, EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS, AFTER NOTICE IS RECEIVED, STAKE, MARK OR OTHERWISE DESIGNATE THE LOCATION OF THE UNDERGROUND UTILITY FACILITIES IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH AT WHICH THEY ARE INSTALLED. THE MARKING OR LOCATING SHALL BE COORDINATED TO STAY APPROXIMATELY TWO DAYS AHEAD OF THE PLANNED CONSTRUCTION.

MONUMENT ASSEMBLIES

MONUMENT ASSEMBLIES SHALL BE CONSTRUCTED, IN ACCORDANCE WITH DETAILS SHOWN ON STANDARD CONSTRUCTION DRAWING MC-1, JUST PRIOR TO PLACING OF THE FINISH COURSE. STATE FORCES WILL ESTABLISH THE LOCATIONS OF THE MONUMENTS.

DUST CONTROL

A QUANTITY OF 50 M-GALS OF ITEM 616 WATER AND ONE (1) TON OF ITEM 616 CALCIUM CHLORIDE HAS BEEN ADDED TO THE GENERAL SUMMARY FOR THE TREATMENT OF DUST CONTROL.

DETOUR

THE CONTRACTOR SHALL ADVISE THE OHIO DEPARTMENT OF TRANSPORTATION'S TRAFFIC ENGINEER ONE WEEK IN ADVANCE OF WHEN HE INTENDED TO START CONSTRUCTION. THE TRAFFIC ENGINEER SHALL THEN PROVIDE AND INSTALL ALL DEVICES NECESSARY TO OUTLINE THE ROUTE OF THE DETOUR AND MAINTAIN THE SAME THROUGH OUT CONSTRUCTION OF THE PROJECT.

FHWA	STATE	PROJECT	
5	OHIO		

3A
27

POR-43-13.75
PORTAGE COUNTY

TEMPORARY PAVEMENT MARKINGS
NOTE B

GENERAL

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, AND WHEN NECESSARY, REMOVE TEMPORARY RETROREFLECTIVE PAVEMENT MARKINGS ON EXISTING, RECONSTRUCTED, RESURFACED OR TEMPORARY ROADS WITHIN THE WORK LIMITS, IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS.

THE MARKINGS SHALL BE MAINTAINED IN GOOD CONDITION DURING THE REQUIRED SERVICE PERIOD TO PROVIDE DAY AND NIGHT VISIBILITY. THE MARKINGS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER TO MAINTAIN REQUIRED VISIBILITY AND/OR REFLECTIVITY AT NO ADDITIONAL COST TO THE STATE.

MATERIALS

UNLESS OTHERWISE INDICATED ON THE PLANS, TEMPORARY PAVEMENT MARKINGS MAY BE OF PAINT, PAVEMENT MARKING TAPE OR REMOVABLE PAVEMENT MARKING TAPE (TYPE R TAPE).

A. PAINT

PAINT SHALL COMPLY WITH 708.14 AND SHALL BE APPLIED IN ACCORDANCE WITH 621 EXCEPT AS MODIFIED HEREIN.

B. PAVEMENT MARKING TAPE

FLEXIBLE RETROREFLECTIVE PREFORMED PRESSURE SENSITIVE TAPE SHALL HAVE STRAIGHT EDGES AND BE FREE OF CRACKS. THE TAPE SHALL CONSIST OF PIGMENT AND FILLERS WITH SUFFICIENT BINDER AND PLASTICIZER TO RETAIN GLASS BEADS HAVING A REFRACTIVE INDEX MEETING THE MINIMUM REFLECTIVE INTENSITY STANDARD STATED IN THE MANUFACTURERS INFORMATION. THE TAPE SHALL BE FLEXOLITE "WET REFLECTIVE", 3M "SCOTCHLANE", OR AN APPROVED EQUAL.

THE GLASS BEADS SHALL BE DISTRIBUTED UNIFORMLY THROUGHOUT THE TAPE WITH SUFFICIENT SURFACE BEADS TO PROVIDE OPTIMUM REFLECTORIZATION AT ALL TIMES.

PAVEMENT MARKING TAPE SHALL COMPLY WITH THE COLOR REQUIREMENTS OF 708.14.

THE TAPE SHALL HAVE A PRECOATED ADHESIVE LAYER FOR PAVEMENT APPLICATION WITHOUT THE USE OF HEAT, SOLVENTS OR ADDITIONAL ADHESIVES. THE ADHESIVE SHALL BE SUFFICIENT TO RETAIN COMPLETE MARKINGS ON THE PAVEMENT SURFACE THROUGHOUT THE USEFUL LIFE OF THE MARKINGS.

IN ADDITION TO THE FOREGOING, ALL TEMPERATURE APPLICATION REQUIREMENTS AND OTHER APPLICABLE MANUFACTURERS MATERIAL AND APPLICATION INSTRUCTIONS SHALL BE FOLLOWED.

WHEN APPROVED BY THE ENGINEER THE CONTRACTOR MAY USE REMOVABLE PAVEMENT MARKING TAPE (TYPE R TAPE), IN LIEU OF THAT DESCRIBED ABOVE, TO FACILITATE REMOVAL OF MARKINGS.

C. REMOVABLE PAVEMENT MARKING TAPE (TYPE R TAPE)

THE MARKING MATERIAL SHALL BE A MIXTURE OF POLYMERIC MATERIALS, PIGMENTS, REINFORCING MEDIUM TO FACILITATE REMOVAL, GLASS BEADS THROUGHOUT THE PIGMENTED PORTION, AND A RETROREFLECTIVE LAYER OF GLASS BEADS BONDED TO THE TOP SURFACE.

THE TAPE SHALL BE PRECOATED WITH A PRESSURE SENSITVE ADHESIVE CAPABLE OF TEMPORARILY BONDING TO ASPHALT CONCRETE OR PORTLAND CEMENT CONCRETE PAVEMENT AT AN AMBIENT TEMPERATURE OF NOT LESS THAN 50° F AND RISING, AT A PAVEMENT TEMPERATURE OF NOT LESS THAN 50° F NOR MORE THAN 150° F, WITHOUT THE USE OF HEAT, SOLVENTS, AND ADDITIONAL ADHESIVES OR ACTIVATORS.

MATERIALS SHALL CONFORM TO THE COLOR REQUIREMENTS OF 708.14.

THE TAPE SHALL BE REMOVABLE FROM APSHALT AND PORTLAND CEMENT CONCRETE INTACT OR IN LARGE PIECES AT TEMPERATURES ABOVE 40° F WITHOUT USE OF HEAT, SOLVENTS, GRINDING, OR SANDBLASTING. REMOVAL SHALL NOT RESULT IN DAMAGE TO OR OBJECTIONABLE STAINING OF THE PAVEMENT.

GLASS BEADS SHALL BE PROVIDED IN A PROPER SIZE, QUANTITY AND DISTRIBUTION TO ASSURE OPTIMUM RETROREFLECTIVITY AS THE FILM WEARS. THE FOLLOWING INITIAL AVERAGE REFLECTANCE VALUES AT 86.0 ENTRANCE ANGLE AS MEASURED IN ACCORDANCE WITH THE TESTING PROCEDURES OF FEDERAL TEST METHOD 370 SHALL BE CERTIFIED:

	WHITE		YELLOW	
OBSERVATION ANGLE	0.2	0.5	0.2	0.5
SPECIFIC LUMINANCE	1770	1270	1310	810

$(MCD/FT^2)/FC$

THE TAPE SHALL BE 3-M COMPANY'S "STAMARK, DETOUR GRADE (SERIES 57L0, 5711, 6270, 6211)" OR AN APPROVED EQUAL.

THE CONTRACTOR SHALL FURNISH TO THE ENGINEER CERTIFICATION THAT THE MATERIAL SUPPLIED MEETS THE PROPERTIES SPECIFIED HEREIN.

LAYOUT

THE TEMPORARY MARKINGS SHALL BE ACCURATELY LAID OUT IN CONFORMANCE WITH 621.051 AND SHALL BE LOCATED IN A TRUE LINE ON THE CENTER LINE, LANE LINE, EDGE LINE, OR CHANNELIZING LINE WHERE PERMANENT MARKINGS WOULD LIE UNLESS OTHERWISE SPECIFIED IN THE PLANS.

PLACEMENT

TEMPORARY MARKINGS SHALL BE PLACED IN ACCORDANCE WITH LAYOUTS ON SHEETS AND THE FOLLOWING REQUIREMENTS, UNLESS OTHERWISE SPECIFIED IN THE PLANS.

TEMPORARY MARKINGS SHALL BE COMPLETE AND IN PLACE ON ALL PAVEMENT PRIOR TO EXPOSING IT TO TRAFFIC. WHEN TEMPORARY MARKINGS ARE NO LONGER NEEDED, THEY SHALL BE REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH 621.134 AND NECESSARY PAVEMENT MARKINGS INSTALLED BEFORE THE FLOW OF TRAFFIC IS CHANGED TO THE NEXT PHASE OR RETURNED TO ITS NORMAL CHANNEL.

WHERE PERMANENT PAVEMENT MARKINGS ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL FURNISH AND PLACE THE PERMANENT MARKINGS WITHIN 30 CALENDAR DAYS FOLLOWING COMPLETION OF ALL SURFACE COURSES IN A SINGLE ROADWAY OR PRIOR TO THE END OF THE CONSTRUCTION SEASON, WHICHEVER COMES FIRST. PERMANENT MARKINGS SHALL NOT BE PLACED OVER ANY TAPE MARKINGS.

A. CLASS I MARKINGS

CLASS I MARKINGS SHALL BE AS DEFINED IN 621, EXCEPT AS FOLLOWS:
1) LANE LINES SHALL BE 4-INCHES IN WIDTH.
2) TRANSVERSE LINES SHALL BE 8-INCHES IN WIDTH.
3) STOP LINES SHALL BE 12-INCHES IN WIDTH.
4) CROSS WALK LINES SHALL BE 8-INCHES IN WIDTH.

GORE MARKINGS SHALL CONSIST OF TWO CHANNELIZING LINES PLACED AT THE THEORETICAL OR TEMPORARY GORE OF RAMPS AND DIVERGING OR CONVERGING ROADWAYS.

THE PAINT APPLICATION RATE SHALL BE NOT LESS THAN 16 GALLONS PER MILE FOR SOLID 4-INCH LINES, 24 GALLONS PER MILE FOR SOLID 6-INCH LINES, 48 GALLONS PER MILE FOR SOLID 12-INCH LINES, AND 4 GALLONS PER MILE FOR 4-INCH DASHED LINES.

B. CLASS II MARKINGS

CENTER LINES SHALL CONSIST OF SINGLE, YELLOW 12-INCH BY 4-INCH DASHES SPACED AT A MAXIMUM OF 40-FOOT INTERVALS.

LANE LINES SHALL CONSIST OF WHITE 12-INCH BY 4-INCH DASHES SPACED AT A MAXIMUM OF 40-FOOT INTERVALS.

CHANNELIZING LINES SHALL CONSIST OF WHITE 12-INCH BY 4-INCH DASHES SPACED AT A MAXIMUM OF 20-FOOT INTERVALS.

GORE MARKINGS SHALL BE TWO CONTINUOUS, WHITE 50-FOOT BY 4-INCH LINES PLACED AT THE THEORETICAL GORE OF AN EXIT RAMP OR DIVERGING ROADWAYS.

THE PAINT APPLICATION RATE SHALL BE NOT LESS THAN 16 GALLONS PER MILE FOR GORE MARKINGS, 0.8 GALLONS PER MILE FOR CHANNELIZING LINE, AND 0.4 GALLONS PER MILE FOR LANE LINE AND CENTER LINE.

CONFLICTING MARKINGS

THE CONTRACTOR SHALL, PRIOR TO PLACING TEMPORARY MARKINGS, REMOVE ALL EXISTING CONFLICTING MARKINGS VISIBLE TO THE TRAVELING PUBLIC DURING DAYLIGHT OR NIGHTTIME HOURS IN ACCORDANCE WITH 621.134. THE COST FOR REMOVAL OF CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS.

METHOD OF MEASUREMENT

TEMPORARY PAVEMENT MARKINGS WILL BE MEASURED COMPLETE IN PLACE, BY CLASS AND MATERIAL, IN THE UNITS DESIGNATED. DASHED LINE QUANTITIES WILL BE THE LENGTH OF THE COMPLETED STRIPE, INCLUDING GAPS, INTERSECTIONS, AND OTHER SECTIONS OF PAVEMENT NOT NORMALLY MARKED, IN ACCORDANCE WITH 621.15

TEMPORARY PAVEMENT MARKINGS WILL INCLUDE THE LAYOUT, APPLICATION AND REMOVAL OF THE MARKINGS, WHEN REQUIRED.

BASIS OF PAYMENT

PAYMENT FOR ACCEPTED QUANTITIES COMPLETE IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR PLACEMENT, MAINTENANCE AND NECESSARY REMOVAL OF THE MARKINGS.

ITEM	UNIT	DESCRIPTION
614	MILES	TEMPORARY LANE LINES, CLASS ____, (PAINT, TAPE OR TYPE R TAPE)
614	MILES	TEMPORARY CENTER LINES, CLASS ____, (PAINT, TAPE OR TYPE R TAPE)
614	MILES/LIN. FT.	TEMPORARY CHANNELIZING LINES, CLASS ____, (PAINT, TAPE OR TYPE R TAPE)
614	MILES	TEMPORARY EDGE LINES, CLASS I, (PAINT, TAPE OR TYPE R TAPE)
614	LIN. FT.	TEMPORARY GORE MARKING, CLASS II, (PAINT, TAPE OR TYPE R TAPE)
614	LIN. FT.	TEMPORARY STOP LINES, CLASS I, (PAINT, TAPE OR TYPE R TAPE)
614	LIN. FT.	TEMPORARY CROSSWALK LINES, CLASS I, (PAINT, TAPE OR TYPE R TAPE)
614	EACH	TEMPORARY LANE ARROWS, CLASS I, (PAINT, TAPE OR TYPE R TAPE)
614	EACH	TEMPORARY WORD "ONLY" ON PAVEMENT, 72-INCH, CLASS I, (PAINT OR TAPE)
614	LIN. FT.	TEMPORARY TRANSVERSE LINES, CLASS I, (PAINT, TAPE OR TYPE R TAPE)

PERMANENT PAVEMENT MARKINGS SHALL BE INSTALLED BY ODOT. THE DISTRICT 4 TRAFFIC ENGINEER SHALL BE NOTIFIED AT LEAST 5 WORKING DAYS PRIOR TO OPENING THE ROAD TO ALLOW FOR SCHEDULING OF THE PERMANENT MARKING INSTALLATION.

A QUANTITY OF 0.21 MILES OF TEMPORARY CENTER LINES, CLASS II IS CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

THE PROJECT SHALL NOT BE OPENED TO TRAFFIC WITHOUT EITHER THE PERMANENT OR TEMPORARY PAVEMENT MARKINGS IN PLACE.

5/13/82

CALCULATIONS

404 1¼" ASPHALT CONCRETE

STA. 18+50 to STA. 21+56.06 = 306.06 L.F.
STA. 22+46.07 to STA. 27+50 = 503.93 L.F.
306.06 + 503.93 × 24 ÷ 9 × 1.25 ÷ 36 = 75.00 C.Y.
FEATHER AREA
STA. 18+00 to STA. 18+50 = 50.00 L.F.
STA. 27+50 to STA. 28+00 = 50.00 L.F.
50 + 50 × 24 ÷ 9 × 1.25 ÷ 36 = 9.26 C.Y.
TOTAL 84.26 C.Y.
USE 85 C.Y.

403 1¾" ASPHALT CONCRETE

LENGTHS SAME AS FOR ITEM 404
306.06 + 503.93 × 24 ÷ 9 × 1.75 = 105.00 C.Y.
FEATHER AREA
50 + 50 × 24 ÷ 9 × 0.875 AVE ÷ 36 = 6.48 C.Y.
TOTAL 111.48 C.Y.
USE 112 C.Y.

301 3" BITUMINOUS AGGREGATE BASE (BERMS)

LEFT SIDE STA 19+45 to STA. 21+56.06 = 211.06 L.F.
STA. 22+46.07 to STA. 27+80 = 533.93 L.F.
RIGHT SIDE STA. 18+50 to STA. 21+56.06 = 306.06 L.F.
STA. 22+46.07 to STA. 23+28 = 81.93 L.F.
STA. 23+97 to STA. 27+23 326.00 L.F.
TOTAL 1458.98 L.F.
1458.98 × 6 ÷ 9 × 3 ÷ 36 = 81.05 C.Y.

301 6" BITUMINOUS AGGREGATE BASE

STA. 19+00 to STA. 21+56.06 = 256.06 L.F.
STA. 22+46.07 to STA. 27+00 = 453. L.F.
256.06 + 453. × 24.5 ÷ 9 × 6 ÷ 36 = 322.13 C.Y.
TOTAL ITEM 301 = 403.18 C.Y.
USE 405 C.Y.

310 6" SUBBASE

LENGTH SAME AS FOR ITEM 301
256.06 + 453. × 25.5 ÷ 9 × 6 ÷ 36 = 335.27 C.Y.

310 VARIABLE DEPTH SUBBASE (BERMS)

1458.98 × 4.67 (AVE. END AREA) ÷ 27 = 252.35 C.Y.
TOTAL ITEM 310 = 587.62 C.Y.
USE 590 C.Y.

407 TACK COAT

STA. 18+00 to STA. 19+00 = 100 L.F.
STA. 27+00 to STA. 28+00 = 100 L.F.
100 + 100 × 24 ÷ 9 × 0.10 GAL/S.Y. = 53.33 GALS.
USE 54 GALS.

659 FERTILIZER

3854 S.Y. SEEDING × 9 ÷ 1000 × 20 ÷ 2000 = 0.347 TONS
USE 0.35 TONS

659 LIMING MATERIAL

3854 S.Y. SEEDING × 9 ÷ 1000 × 100 ÷ 2000 = 1.734 TONS
USE 1.73 TONS

659 WATER

3854 S.Y. SEEDING × 9 ÷ 1000 × 120 ÷ 1000 = 4.16 M-GALS.
USE 4.16 M-GALS.

SUPERELEVATION

PC. STA 19+93.84 7°00 CURVE LT. PT. STA. 25+77.80

STATION	ELEV. 12' LT.	% SLOPE	+ OR −	℄ ELEV	+ OR −	% SLOPE	ELEV. 12' RT
18+00				1080.04			
+08.84	1080.29	-0.0156	-0.19	1080.48	-0.19	-0.0156	1080.29
+25	1081.08			1081.27	-0.15	-0.0122	1081.12
+50	1082.31			1082.50	-0.08	-0.0070	1082.42
+75	1083.55			1083.74	-0.02	-0.0018	1083.72
+83.84	1083.99			1084.18	0.00	0.0000	1084.18
19+00	1084.79			1084.98	+0.03	+0.0029	1085.01
+25	1085.99			1086.18	+0.09	+0.0075	1086.27
+50	1087.17	-0.0156	-0.19	1087.36	+0.14	+0.0120	1087.50
+75	1088.22	-0.0167	-0.20	1088.42	+0.20	+0.0165	1088.64
+93.84	1088.90	-0.0200	-0.24	1089.14	+0.24	+0.0200	1089.38
20+00	1089.10	-0.0209	-0.26	1089.36	+0.26	+0.0210	1089.52
+25	1089.88	-0.0249	-0.30	1090.18	+0.30	+0.0250	1090.48
+50	1090.52	-0.0289	-0.35	1090.87	+0.35	+0.0290	1091.22
+75	1091.05	-0.0329	-0.39	1091.44	+0.40	+0.0330	1091.84
21+00	1091.45	-0.0369	-0.44	1091.89	+0.44	+0.0370	1092.33
+08.84	1091.55	-0.0400	-0.48	1092.03	+0.48	+0.0400	1092.51
+25	1091.74			1092.22			1092.70
+50	1091.95			1092.43			1092.91
+75	1092.04			1092.52			1093.00
22+00	1092.00			1092.48			1092.96
+25	1091.84			1092.32			1092.80
+50	1091.56			1092.04			1092.52
+75	1091.16			1091.64			1092.12
23+00	1090.64			1091.12			1091.60
+25	1090.00			1090.48			1090.96
+50	1089.23			1089.71			1090.19
+75	1088.34			1088.82			1089.30
24+00	1087.33			1087.81			1088.29
+25	1086.20			1086.68			1087.16
+50	1085.01			1085.49			1085.97
+62.80	1084.40	-0.0400	-0.48	1084.88	+0.48	+0.0400	1085.36
+75	1083.85	-0.0379	-0.45	1084.30	+0.45	+0.0379	1084.75
25+00	1082.70	-0.0335	-0.40	1083.10	+0.40	+0.0335	1083.50
+25	1081.56	-0.0292	-0.35	1081.91	+0.35	+0.0292	1082.26
+50	1080.42	-0.0248	-0.30	1080.72	+0.30	+0.0248	1081.02
+75	1079.27	-0.0205	-0.25	1079.52	+0.25	+0.0205	1079.77
+77.80	1079.14	-0.0204	-0.24	1079.39	+0.24	+0.0204	1079.64
26+00	1078.29	-0.0161	-0.19	1078.48	+0.20	+0.0164	1078.68
+25	1077.31	-0.0156		1077.50	+0.14	+0.0118	1077.64
+50	1076.38			1076.57	+0.09	+0.0073	1076.66
+75	1075.54			1075.73	+0.03	+0.0027	1075.76
+87.80	1075.23			1075.42	0.00	+0.0000	1075.42
27+00	1074.94			1075.13	-0.03	-0.0025	1075.10
+25	1074.60			1074.73	-0.06	-0.0077	1074.67
+50	1074.26			1074.45	-0.15	-0.0129	1074.30
+62.80	1074.16	-0.0156	-0.19	1074.35	-0.19	-0.0156	1074.16
28+00				1074.06			

GRAPHIC CENTERLINE GRADE

FEATHERING

GENERAL SUMMARY

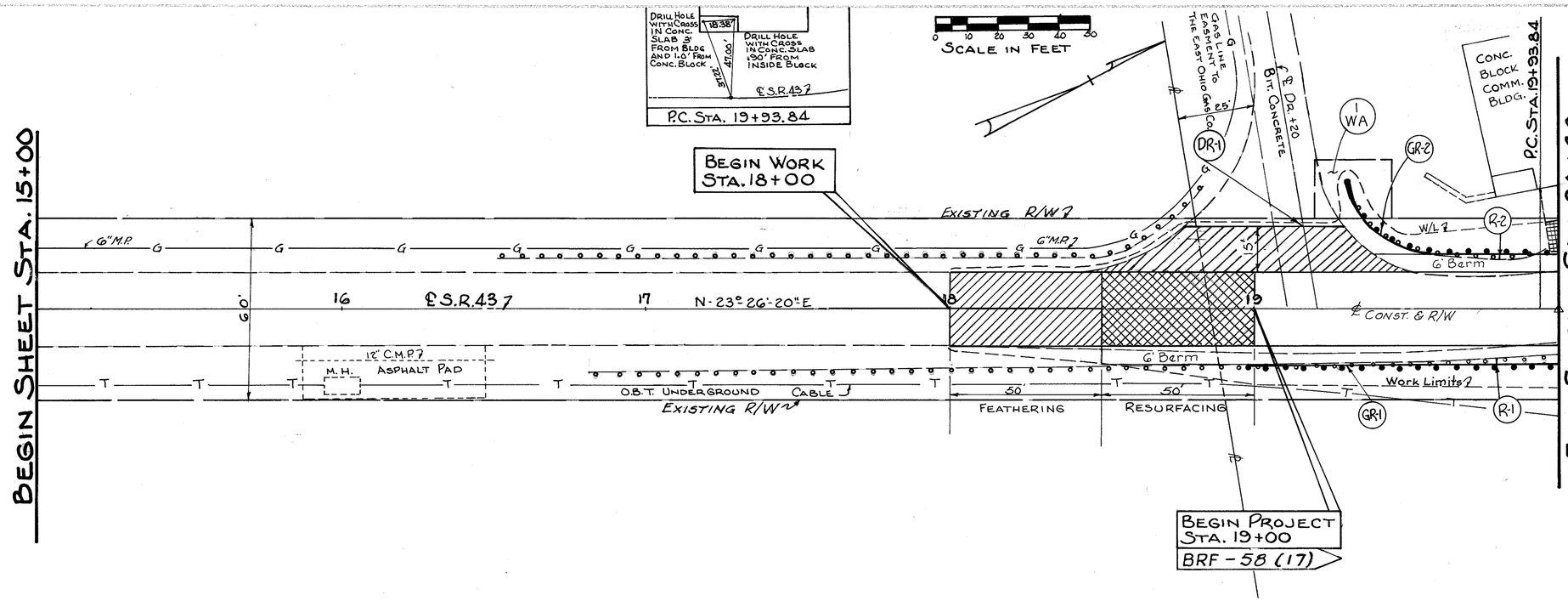
ITEM	SHEET NUMBERS 3A	3	4		5	6	7		13	QUANT.	UNIT	DESCRIPTION
												ROADWAY
201										LUMP	LUMP	CLEARING AND GRUBBING
202					178	661	208			1047	LIN.FT.	GUARD RAIL REMOVED FOR STORAGE
202						20				20	SQ.YD	PAVEMENT REMOVED, AS PER PLAN
203					170	593	236		53	1052	CU.YD.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
203					11	990	49		108	1158	CU.YD.	EMBANKMENT
604						2				2	EACH	MONUMENT ASSEMBLY, STANDARD
606					158.29	653.85	175.86			988	LIN.FT.	GUARD RAIL, TYPE 5
606					1	2	2			5	EACH	ANCHOR ASSEMBLY, STANDARD TYPE A
606						4				4	EACH	BRIDGE TERMINAL ASSEMBLY, STANDARD TYPE A
616		1								1	TON	CALCIUM CHLORIDE
616		50								50	M-GAL	WATER
												PAVEMENT
404			85		4.46	5.56			10	105	CU.YD.	ASPHALT CONCRETE - AC-20
403			112		3.12	9.44			12.5	137	CU.YD.	ASPHALT CONCRETE - AC-20
407			54		12.83	16			5	88	GAL.	TACK COAT
301			405						39	444	CU.YD.	BITUMINOUS AGGREGATE BASE; AC-20, RT-11 OR RT-12
310			590			-			41	631	CU.YD.	SUBBASE, TYPE 1
411							2			2	CU.YD.	STABILIZED CRUSHED AGGREGATE
611						175				175	SQ.YD.	REINFORCED CONCRETE APPROACH SLAB (T=13") AS PER PLAN
												TRAFFIC CONTROL
614	0.21									0.21	MILES	TEMPORARY CENTERLINE, CLASS II
												EROSION CONTROL
659					370	2296	858		330	3854	SQ.YD.	SEEDING AND MULCHING
659		0.04	0.35							0.40	TON	COMMERCIAL FERTILIZER
659			1.73							1.73	TON	AGRICULTURAL LIMING
659		1.67	4.16							6	M-GAL	WATER
207		771								771	SQ.YD.	TEMPORARY SEEDING AND MULCHING
614		LUMP									LUMP	MAINTAINING TRAFFIC
623										LUMP	LUMP	CONSTRUCTION LAYOUT STAKES
624		LUMP								LUMP	LUMP	MOBILIZATION, AS PER PLAN
												FOR STRUCTURE QUANTITIES SEE SHEET NO. 14

Calc. By R.L.M.
Date 10/82
Ck'd. By W.D.P.
Date 11/82

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

5
27

POR-43-13.75
PORTAGE COUNTY

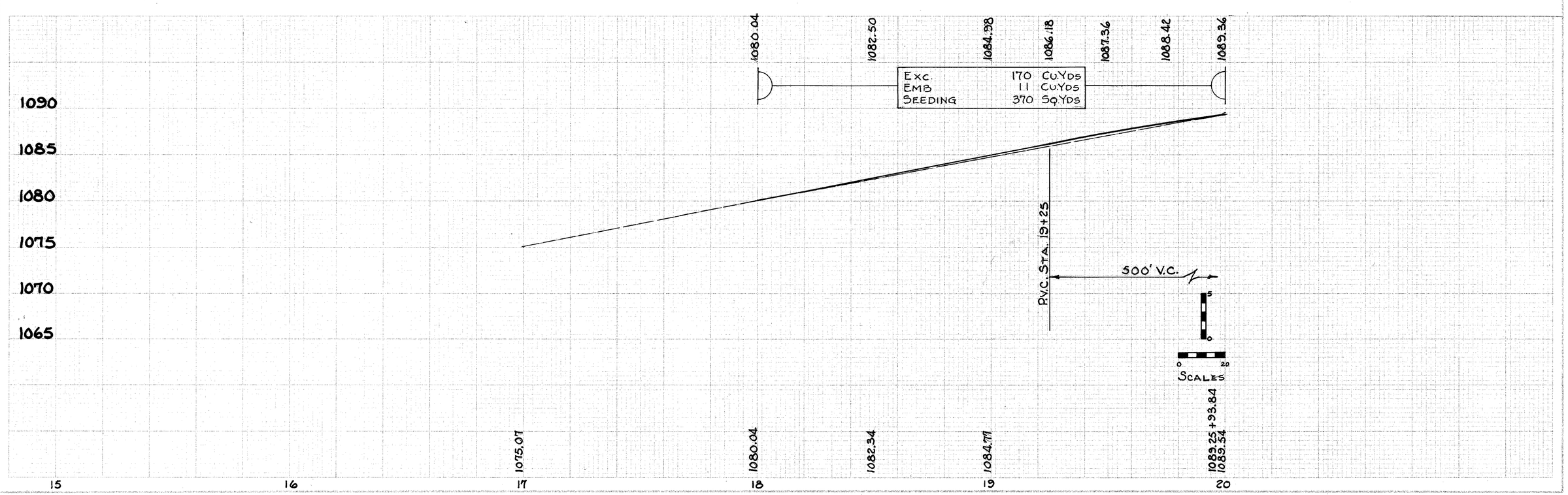


Estimated Quantities

Mark	Station From	Station To	Side	202 Guard Rail Rem'd. & Stored L.F.	606 Guard Rail Type 5 L.F.	606 Anchor Assy. Type A Ea.	
R-1	18+97.60	20+00	Rt.	102.40			
R-2	19+30	19+96	Lt.	75			
GR-1	18+97.60	20+00	Rt.		102.40		
GR-2	19+30	20+00	Lt.		55.89	1	
Totals				177.40	158.29	1	

Estimated Quantities (Con't.)

Mark	Station	Side	404 Asph. Conc. 1¼" C.Y.	403 Asph. Conc. ⅞" Ave. C.Y.	407 Tack Coat Gal.		
DR-1	19+20	Lt.	4.46	3.12	12.83		
Totals			4.46	3.12	12.83		



Line Sheet Sta. 15+00 to Sta. 20+00

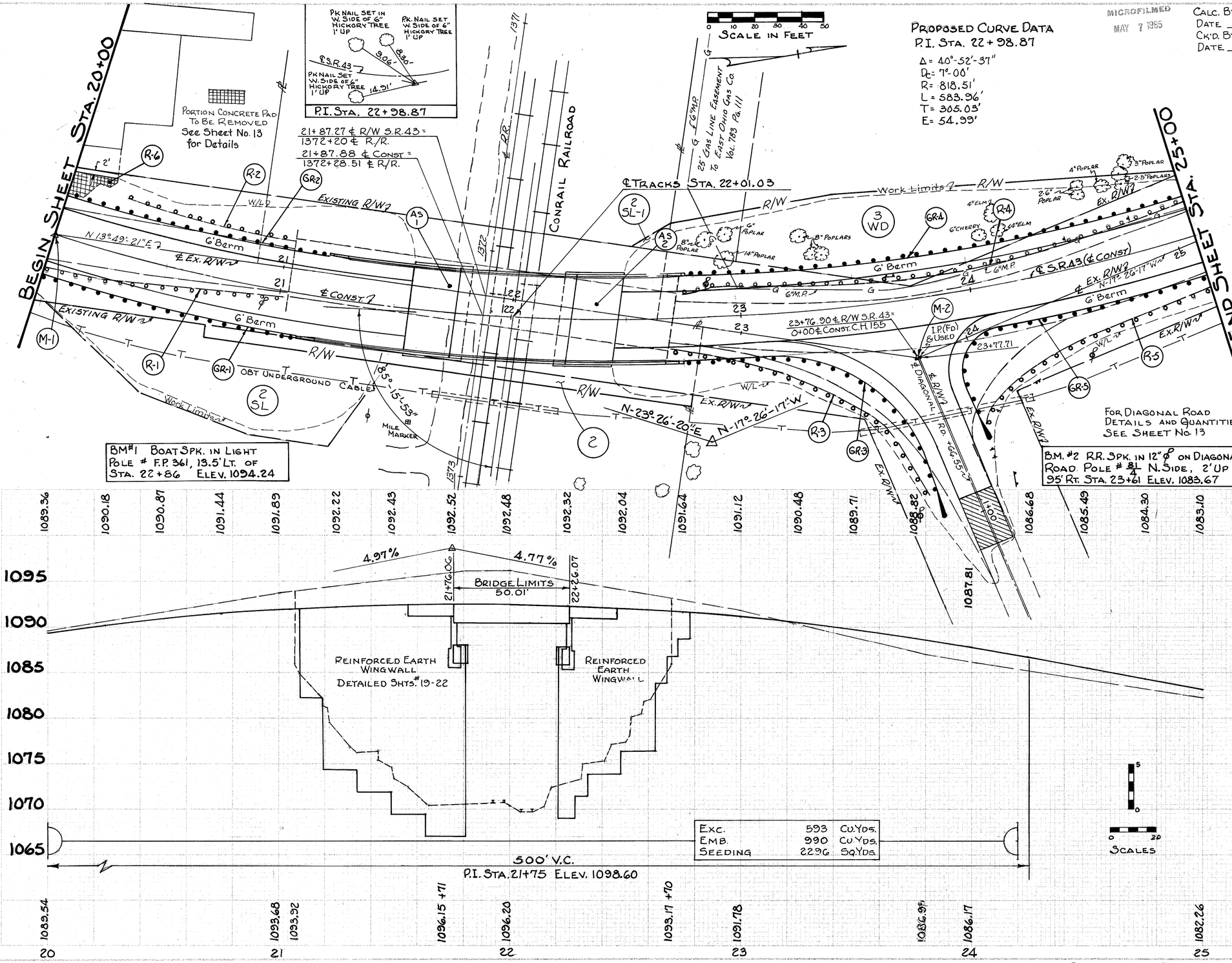
MICROFILMED
MAY 7 1985

CALC. BY	R.L.M.
DATE	10/82
CK'D. BY	W.D.P.
DATE	11/82

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

6
27

POR-43-13.75



ESTIMATED QUANTITIES

MARK	STATION FROM	STATION TO	SIDE	202 GUARD RAIL REM'D. & STORED L.F.	202 PAV'T REM'D. S.Y.	606 GUARD RAIL TYPE 5 L.F.	606 BRIDGE TERMINAL ASSEMBLY TYPE A EA.	606 ANCHOR ASSEMBLY TYPE A EA.
R-1	20+00	21+03	RT.	103				
R-2	20+25	21+03	LT.	78				
R-3	22+63	* 0+84	RT.	137				
R-4	22+73	25+00	LT.	227				
R-5	23+97	25+00	RT.	116				
R-6	19+96	20+19	LT.		20			
GR-1	20+00	21+10.10	RT.			97.60	1	
GR-2	20+00	21+19.11	LT.			106.61	1	
GR-3	22+74.31	* 0+95.19	RT.			113.00	1	1
GR-4	22+76.35	25+00	LT.			211.15	1	
GR-5	* 0+70.81	25+00	RT			123.49		1
TOTALS				661	20	653.85	4	2

* STATIONING ON DIAGONAL RD.

611 APPROACH SLAB

MARK	STATION FROM	STATION TO	APP. SLAB S.Y.	407 TACK COAT GAL.	404 ASPH. CONC. 1¼" C.Y.	403 ASPH. CONC. 2⅛" AVE. C.Y.
AS-1	21+56.06	21+76.06	87.5 *	8	2.78	4.72
AS-2	22+26.07	22+46.07	87.5 *	8	2.78	4.72
TOTALS			175.0	16	5.56	9.44

* Includes Barrier Rail

ESTIMATED QUANTITIES (CONT.)

MARK	STATION	LOCATION	604 MONUMENT ASSEMBLY EA
M-1	20+00	℄ EXIST. R/W	1
M-2	23+76.90	℄ EXIST R/W	1
TOTAL			2

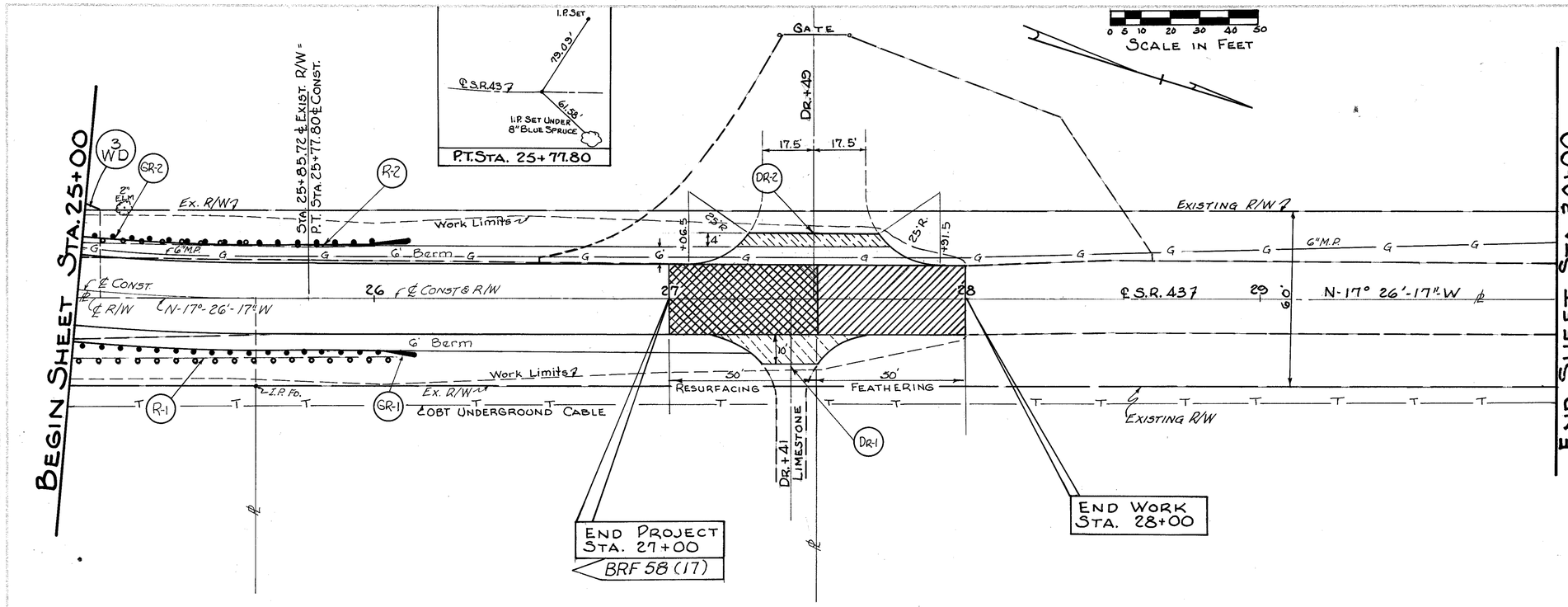
LINE SHEET STA. 20+00 TO STA. 25+00

Calc. By R.L.M.
Date 10/82
Ck'd. By W.D.P.
Date 11/82

Dist.	State	Project	
5	Ohio		

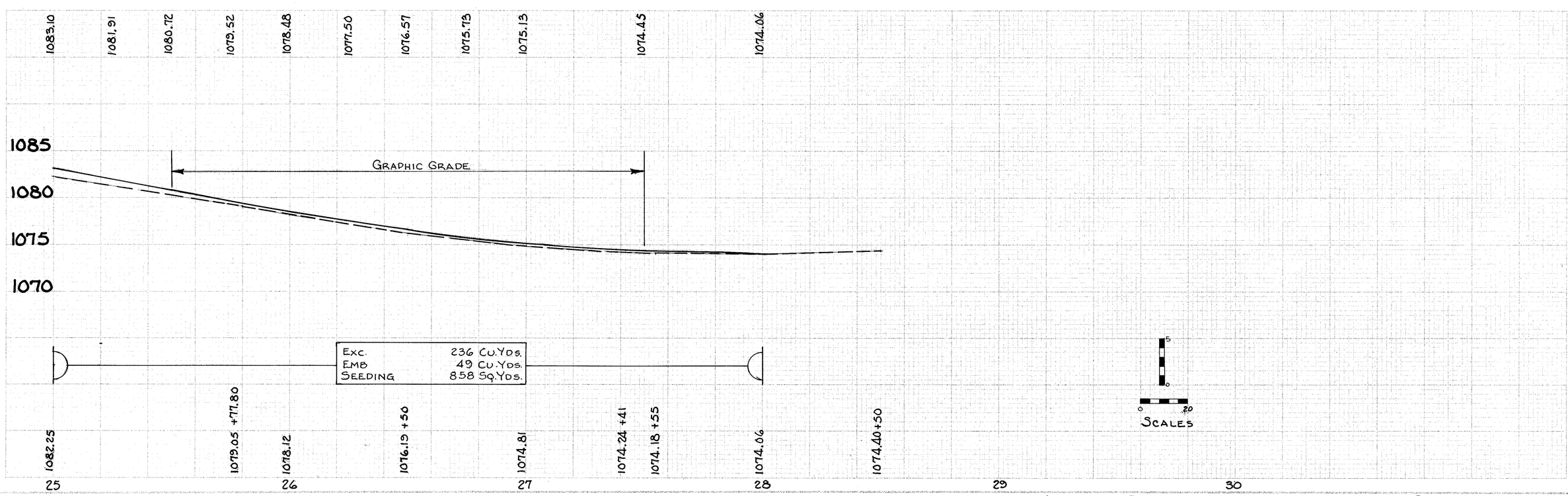
7
27

POR-43-13.75
PORTAGE COUNTY



Estimated Quantities

Mark	Station From	Station To	Side	202 Guard Rail Rem'd & Stored L.F.	606 Guard Rail Type 5 L.F.	606 Anchor Assembly Type A Ea.	411 Stab. Crushed Aggr. 1" Ave C.Y.
R-1	25+00	26+10	Rt.	110			
R-2	25+00	25+38	Lt.	38			
GR-1	25+00	26+12.01	Rt.		87.01	1	
GR-2	25+00	26+13.85	Lt.		88.85	1	
Dr-1	27+41		Rt.				1.0
Dr-2	27+49		Lt.				1.0
Totals				208	175.86	2	2.0

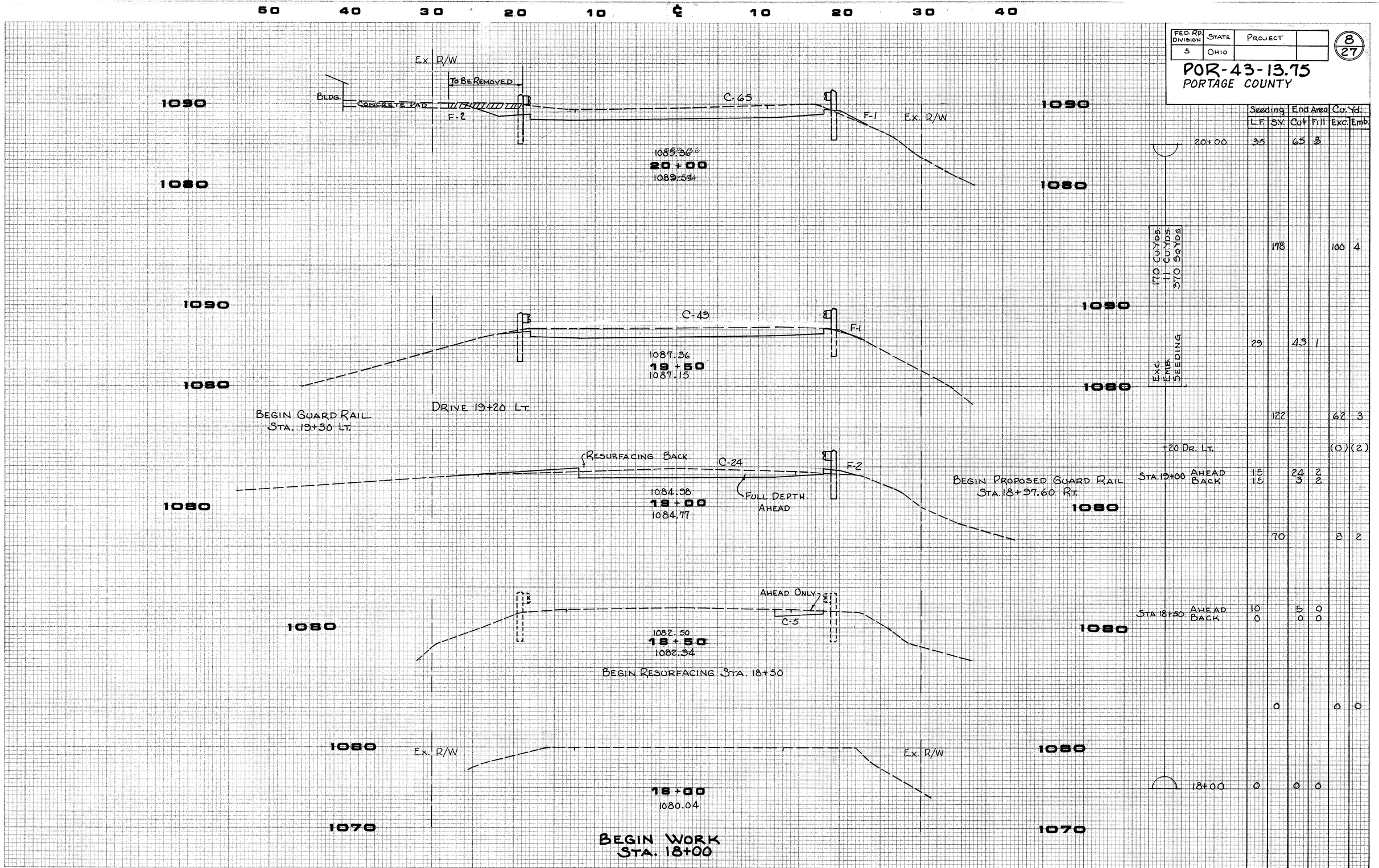


Line Sheet Sta. 25+00 to Sta. 30+00

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

8/27

POR-43-13.75
PORTAGE COUNTY



	Seeding		End Area		Cu. Yd.	
	L.F.	S.Y.	Cut	Fill	Exc.	Emb.
20+00	35		65	3		
		178			100	4
	29		43	1		
		122			62	3
+20 Dr. Lt.					(0)	(2)
Sta. 19+00 Ahead	15		24	2		
Back	15		3	2		
		70			8	2
Sta. 18+50 Ahead	10		5	0		
Back	0		0	0		
		0			0	0
18+00	0		0	0		

FINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED — NOTE BOOK NO. — BY — DATE

ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED — NOTE BOOK NO. — BY — DATE

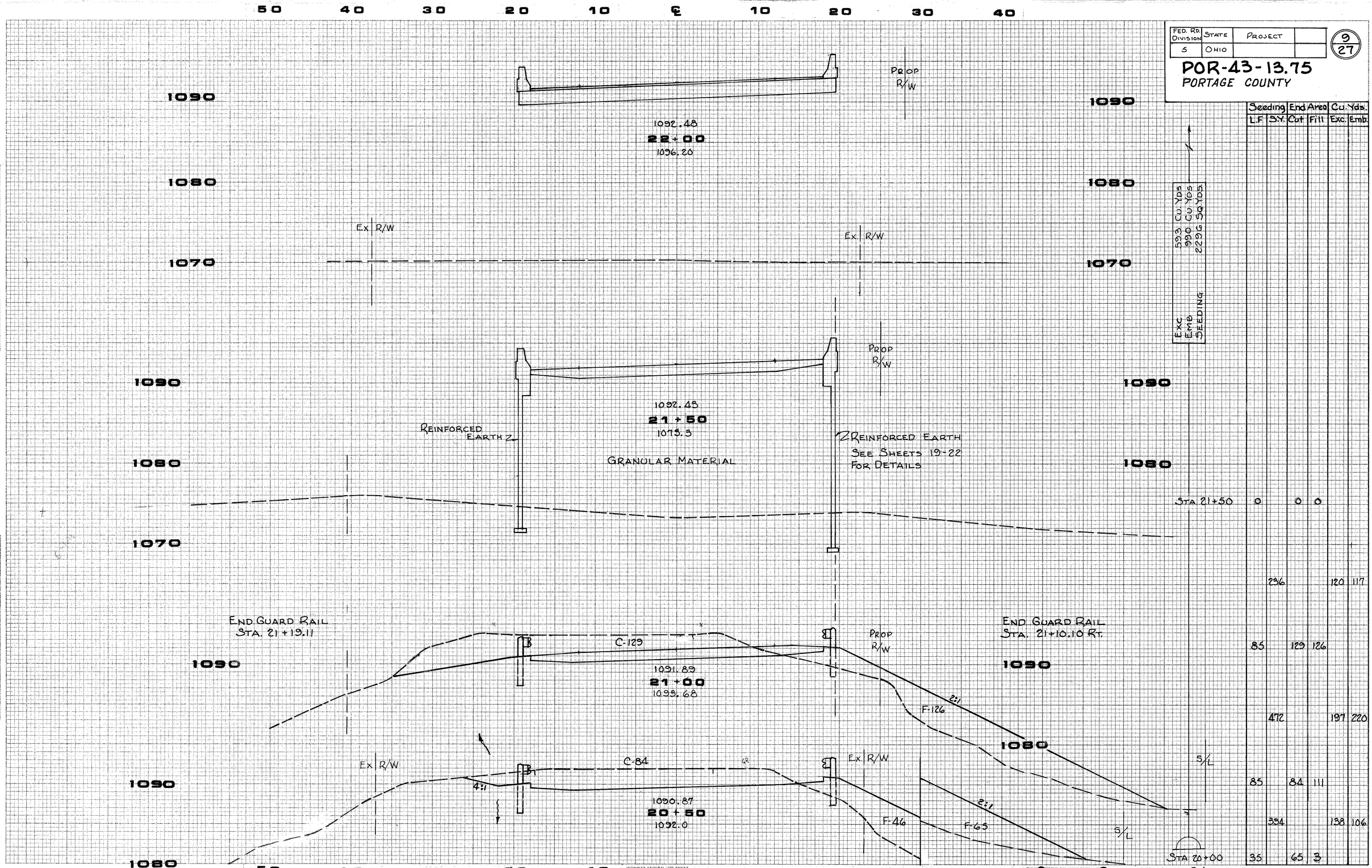
HIGHWAY FEDERAL AID SHEET
NOTE 3-FULL CROSS SECTION-FULL LINE
R TELEDYNE NATIONAL TRACING PAPER
INDIANAPOLIS INDIANA PRINTED IN U.S.A.

CROSS SECTIONS STA. 18+00 TO STA. 20+00

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

9/27

POR-43-13.75
PORTAGE COUNTY

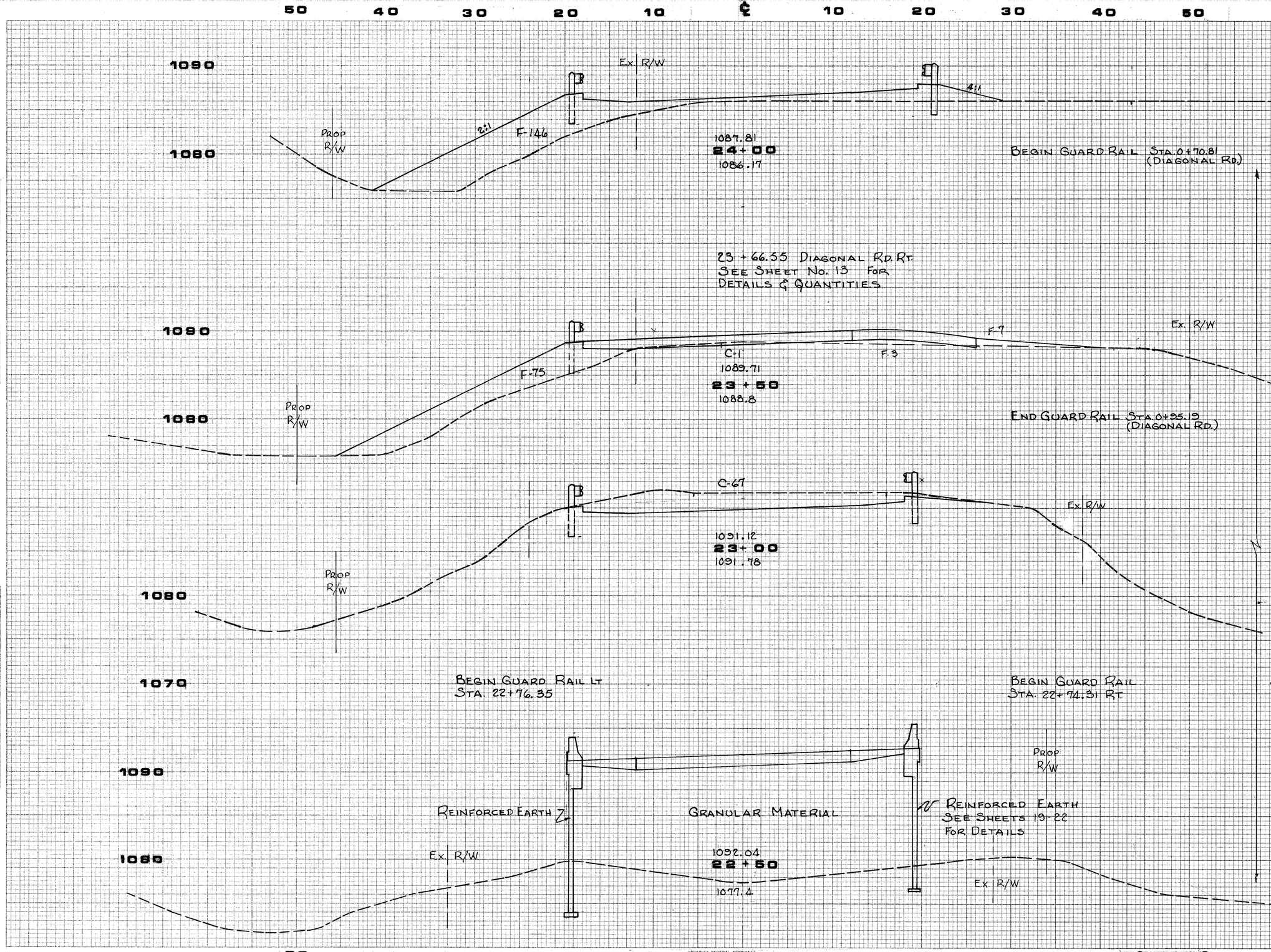


Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

10/27

POR-43-13.75
PORTAGE COUNTY



	Seeding		End Area		Cu. Yds.	
	L.F.	S.Y.	Cut	Fill	Exc	Emb.
	56		0	146		
		350			1	714
				85		
	70		0	85		
		284			63	79
	32		67	0		
		89			62	0
22+50	0		0	0		

FINAL SURVEY — SURVEYED / PLOTTED / TEMPLATE / AREAS / AREAS CHECKED — BY — DATE — NOTE BOOK NO.

ORIGINAL SURVEY — SURVEYED / PLOTTED / TEMPLATE / AREAS / AREAS CHECKED — BY — DATE — NOTE BOOK NO.

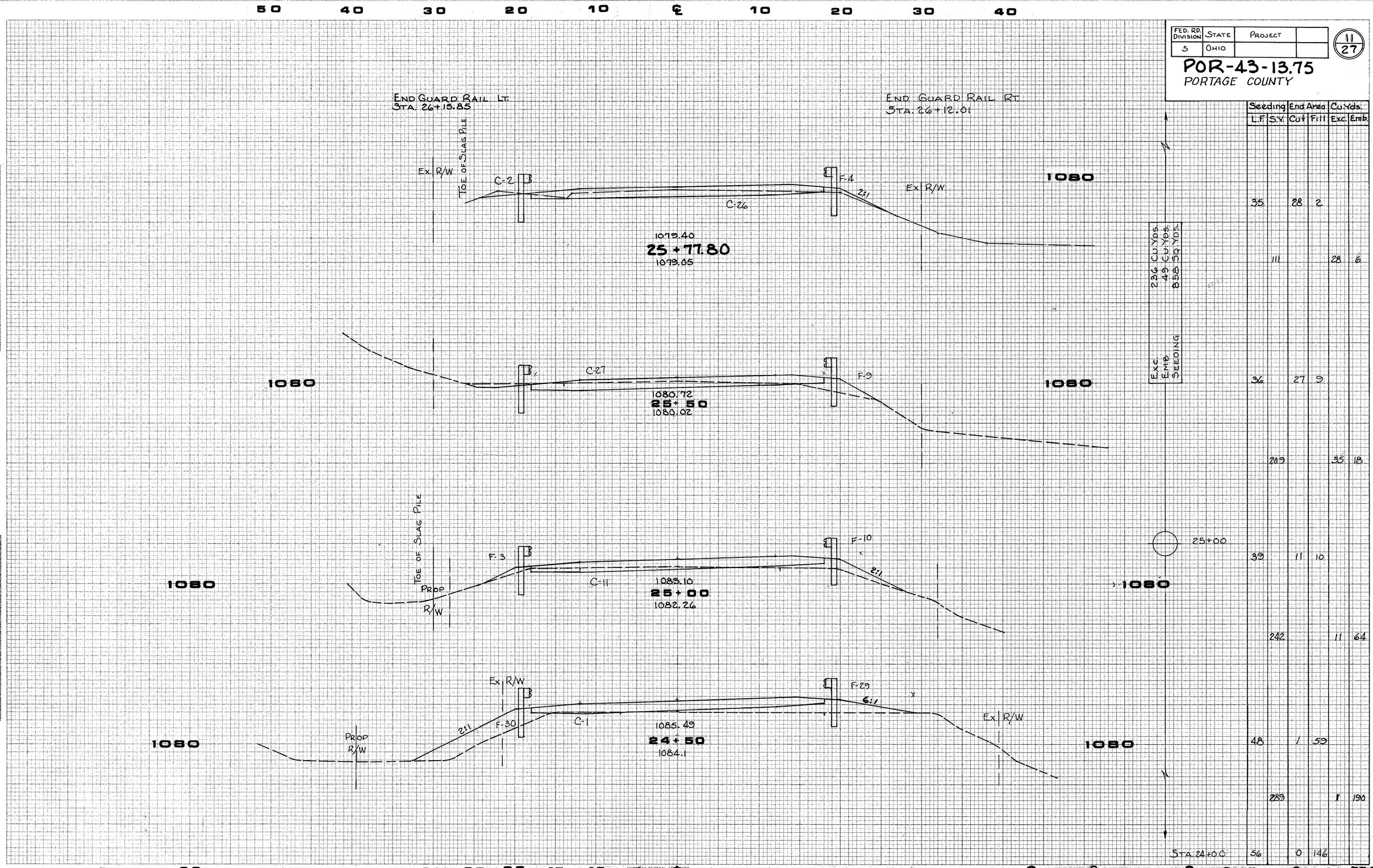
CROSS SECTIONS STA. 22+50 TO STA. 24+00

HIGHWAY FEDERAL AID PROJECT
STATE 3-FULL CROSS SECTION-FULL LINE
TELEDYNE NATIONAL TRACING PAPER
INDIANAPOLIS, INDIANA PRINTED IN U.S.A.

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

11/27

POR-43-13.75
PORTAGE COUNTY



	Seeding		End Area		Cu.Yds.	
	L.F.	S.Y.	Cut	Fill	Exc.	Emb.
	35		28	2		
		111			28	6
	36		27	9		
		209			35	18
	39		11	10		
		242			11	64
	48		1	59		
		289			1	190
STA. 24+00	56		0	146		

FINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, CROSS SECTIONED, NOTE BOOK NO., BY, DATE

ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, CROSS SECTIONED, NOTE BOOK NO., BY, DATE

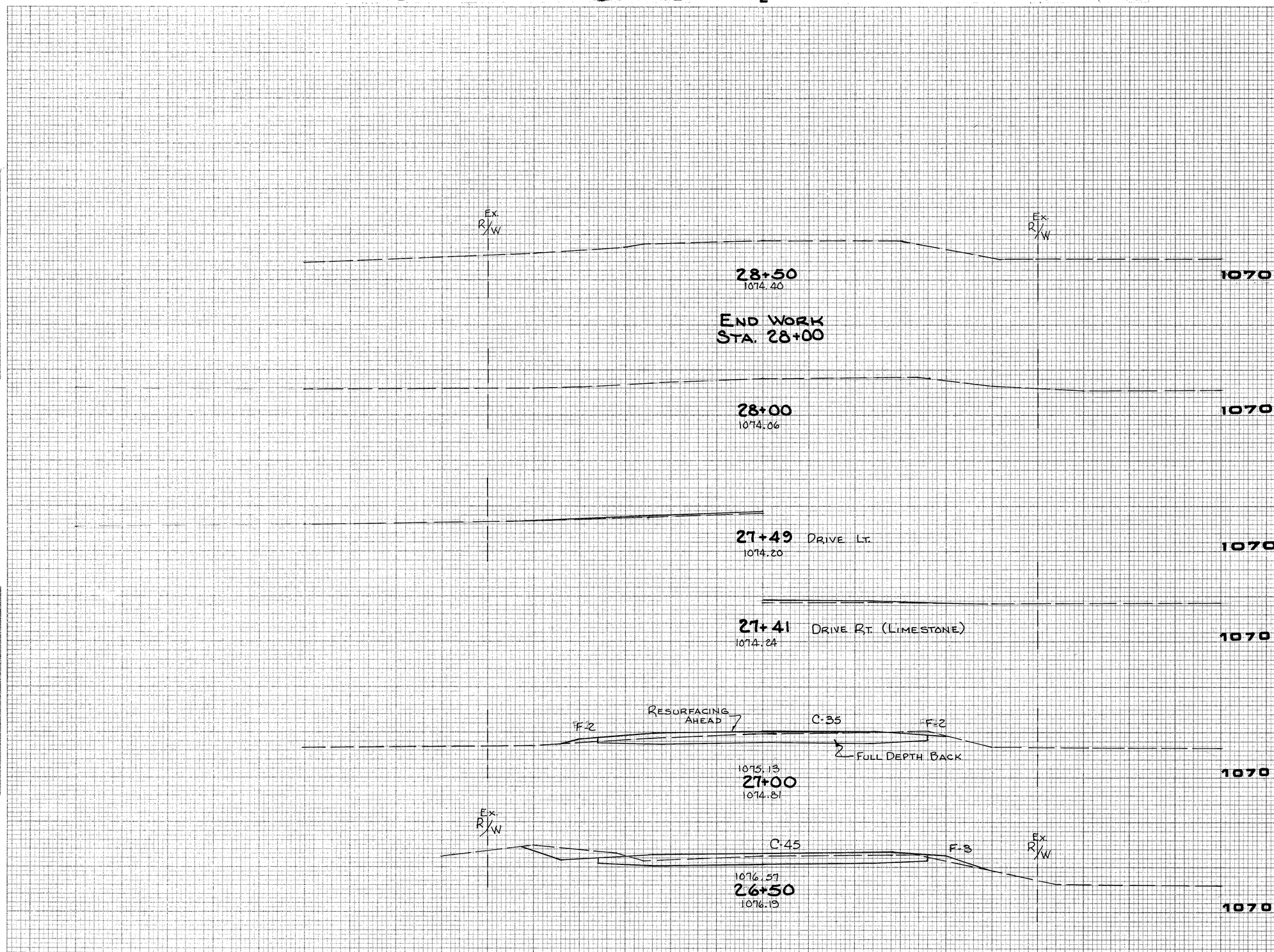
INDIANA FEDERAL AID SHEET
PLATE 3-FUS CROSS SECTION-FULL LEVEL
TELEDYNE NATIONAL TRACING PAPER
INDIANAPOLIS, INDIANA PRINTED IN U.S.A.

CROSS SECTIONS STA. 24+50 TO STA. 25+77.80

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

12
27

POR-43-13.75
PORTAGE COUNTY



	Seeding		End Area		Cu. Yds.	
	L.F.	S.Y.	Cut	Fill	Exc.	Emb
28+00	0		0	0		
		75			0	7
+43 DR. LT.					(0)	(2)
+41 DR. RT.					(0)	(2)
AHEAD	27		0	4		
BACK	27		35	4		
		175			74	7
	36		45	3		
		288			99	7
STA. 25+77.80	35		28	2		

FINAL SURVEY
NOTE BOOK NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

HIGHWAY FEDERAL AID PROJECT
STYLE 3-FULL CROSS SECTION-FULL LINE
SPITZLEDINE NATIONAL TRACING PAPER
INDIANAPOLIS, INDIANA PRINTED IN U.S.A.

CROSS SECTIONS STA. 26+50 TO STA. 28+50

FHWA Region	State	Project	
5	Ohio		

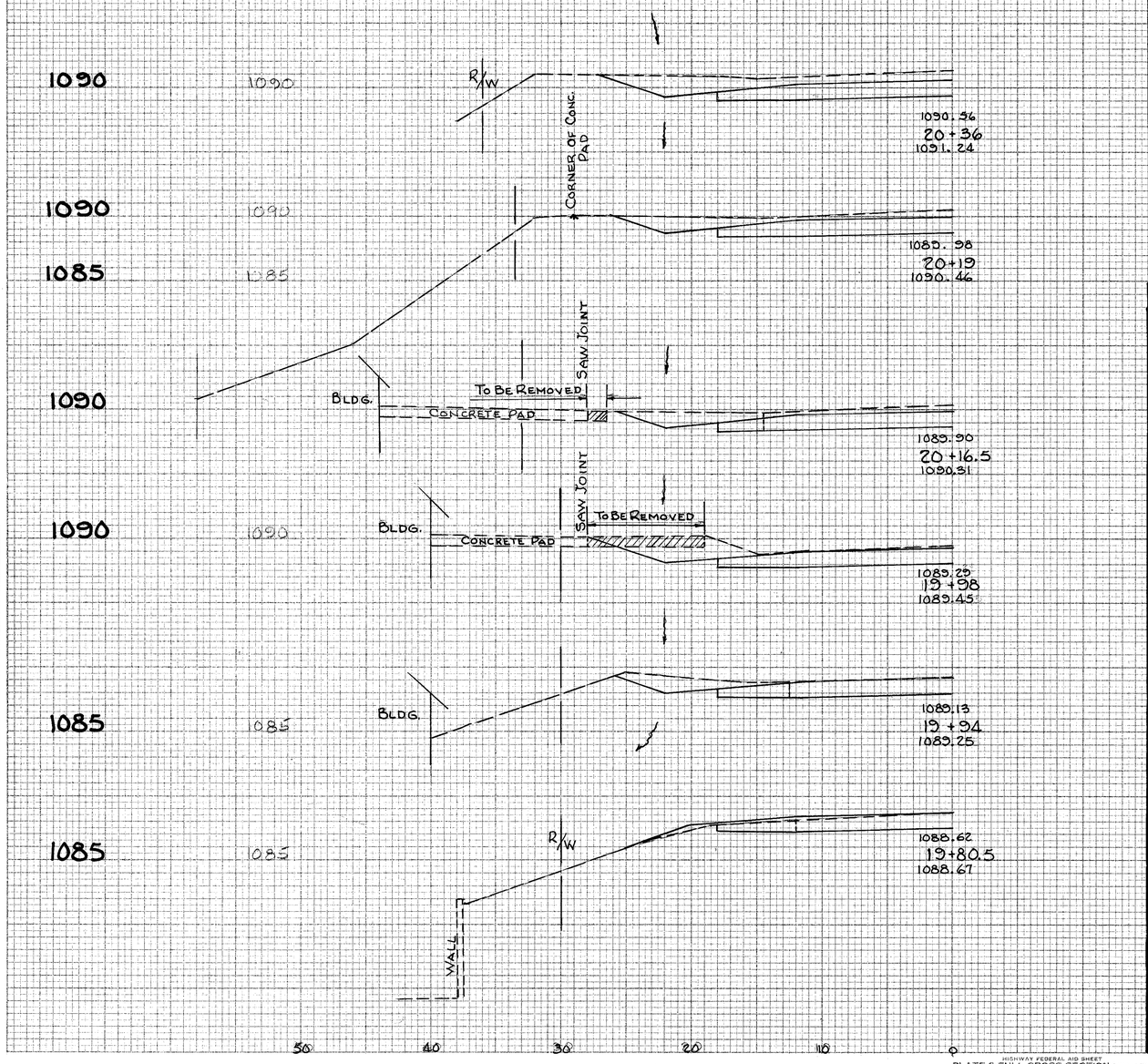
13/27

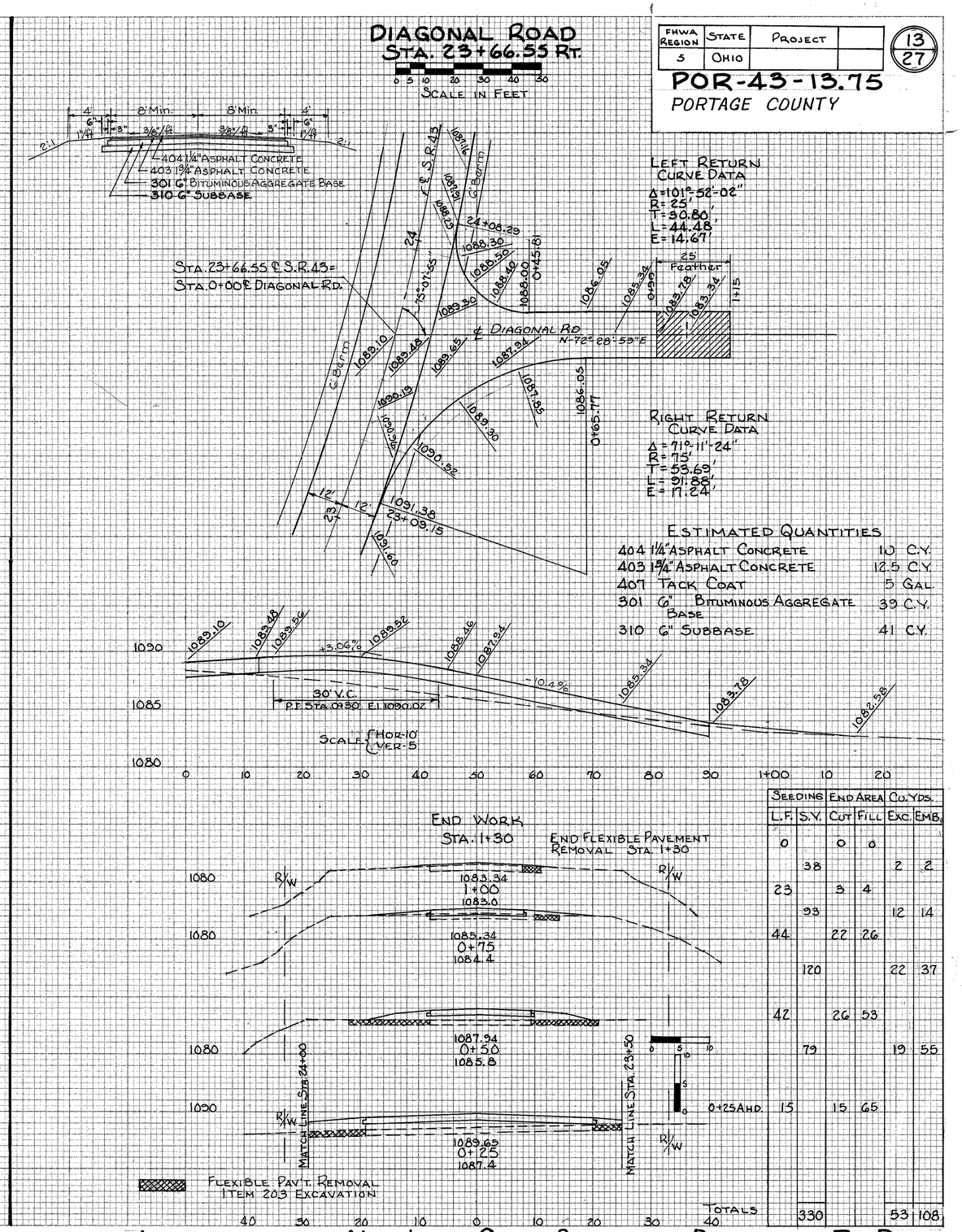
POR-43-13.75

PORTAGE COUNTY

INTERMEDIATE MAINLINE CROSS SECTIONS

FOR RIGHT OF WAY PURPOSES ONLY
NO QUANTITIES TO BE DERIVED
THERE-FROM





ESTIMATED QUANTITIES

404 1¼" ASPHALT CONCRETE	10 C.Y.
403 1¾" ASPHALT CONCRETE	12.5 C.Y.
407 TACK COAT	5 GAL.
301 6" BITUMINOUS AGGREGATE BASE	39 C.Y.
310 6" SUBBASE	41 C.Y.

Seeding L.F.	Seeding S.Y.	End Area Cut	End Area Fill	Co. Yds. Exc.	Co. Yds. Emb.
0		0	0		
	38			2	2
23		3	4		
	93			12	14
44		22	26		
	120			22	37
42		26	53		
	79			19	55
15		15	65		
TOTALS	330			53	108

FINAL SURVEY — NOTE BOOK NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

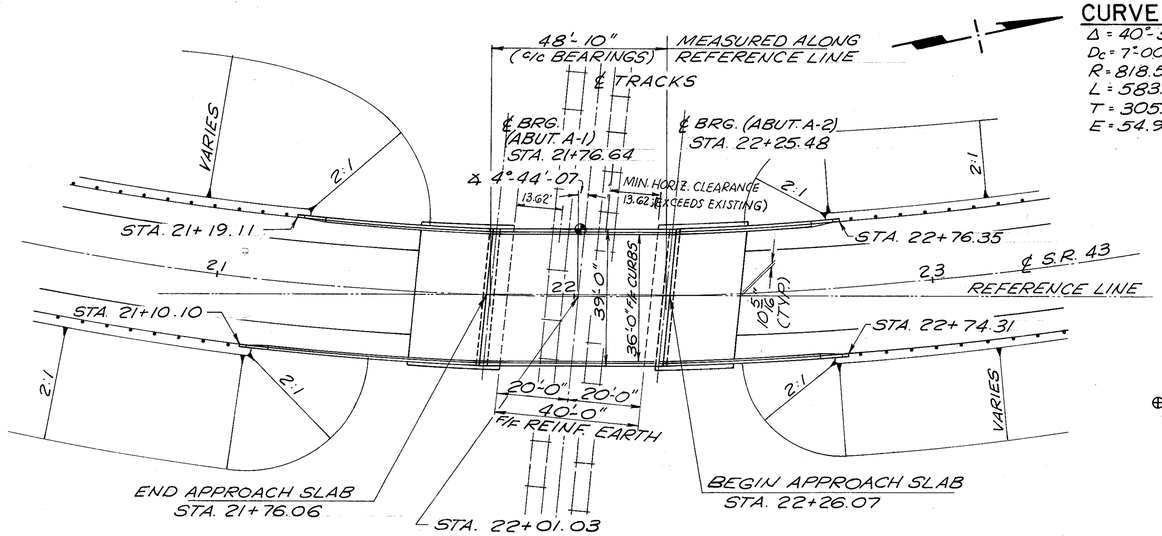
ORIGINAL SURVEY — NOTE BOOK NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

INTERMEDIATE MAIN LINE CROSS SECTIONS & DIAGONAL RD. DETAIL

MICROFILMED
MAY 7 1986

F.H.W.A. REG.	STATE	PROJECT	
5	OHIO		

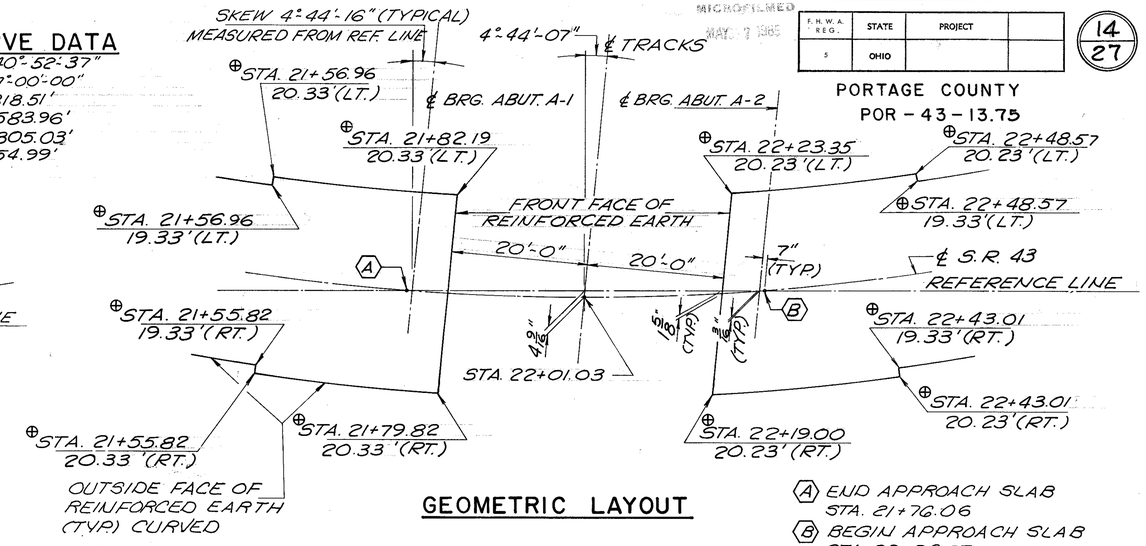
PORTAGE COUNTY
POR - 43 - 13.75



GENERAL PLAN

CURVE DATA

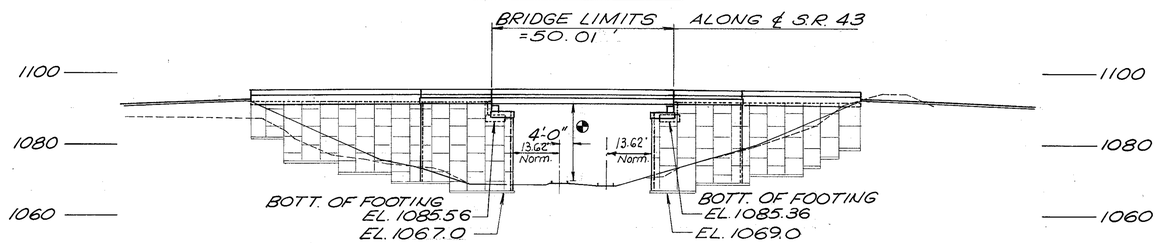
Δ = 40°-52'-37"
D_c = 7°-00'-00"
R = 818.51'
L = 583.96'
T = 305.03'
E = 54.99'



GEOMETRIC LAYOUT

(A) END APPROACH SLAB
STA. 21+76.06
(B) BEGIN APPROACH SLAB
STA. 22+26.07

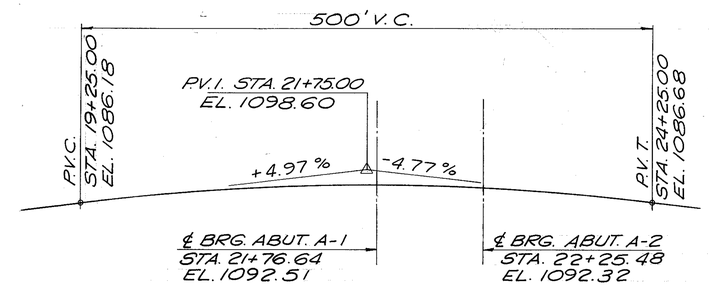
NOTE:
STATIONS MARKED THUS " ⊕ " MAY VARY SLIGHTLY DEPENDING ON THE CONSTRUCTION OF THE REINFORCED EARTH.



VERTICAL CLEARANCE, (MINIMUM)
18.00' REQUIRED
18.64' ACTUAL

NOTE: FOR REINFORCED EARTH DETAILS SEE REINFORCED EARTH DRAWINGS.

ELEVATION



PROPOSED PROFILE GRADE

BENCHMARKS:
B.M. EL. 1094.24, BOATSPIKE ON EAST SIDE OF TELEPHONE POLE AT STA. 22+86.00, OFFSET 13.5' LEFT.
B.M. EL. 1083.67 RAILROAD SPIKE ON NORTH SIDE OF 12" DIAMETER POWER POLE AT STA. 23+61.00, OFFSET 95' RIGHT.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT.	PIER	GEN'L.		
202	LUMP	L.S.	STRUCTURE REMOVED				LUMP		
403	9.3	C.Y.	ASPHALT CONCRETE AC-20	9.3					
404	7.0	C.Y.	ASPHALT CONCRETE AC-20	7.0					
509	3374	LB.	REINFORCING STEEL, GRADE 60		3374				
824	1379	LB.	EPOXY COATED REINFORCING STEEL, GRADE 60	1379					
511	12.1	C.Y.	CLASS "S" CONCRETE, SUPERSTRUCTURE	12.1					
511	55.2	C.Y.	CLASS "C" CONCRETE, ABUTMENTS		55.2				
512	220	S.Y.	TYPE "D" WATERPROOFING	220					

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT.	PIER	GEN'L.		
515	647.8	L.F.	PRESTRESSED CONCRETE BOX BEAMS (B 21-36)	647.8					
516	307	S.F.	1" PREFORMED EXPANSION JOINT FILLER	132	61		114		
516	52	EACH	6"x5"x1" ELASTOMERIC BEARING PADS	52					
516	21.6	S.F.	6"x5"x1/8" PREFORMED BEARING PADS, 711.21	21.6					
516	178	L.F.	JOINT SEALER 705.01 OR 705.02	100	78				
SPEC.	5846.8	S.F.	REINFORCED EARTH WALL (SEE PROPOSAL NOTE)				5846.8		
SPEC.	143	L.F.	CAST IN PLACE CONCRETE BARRIER ON REINFORCED EARTH WALL				143		

F. J. Richardson 10/18/82
F. J. RICHARDSON REG. ENGINEER № 19531

STRUCTURAL PLANS PREPARED BY
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GENERAL PLAN & ELEVATION

S. R. 43 OVER CONRAIL R.R.

BRIDGE № POR-43-1375
STA. 21+76.06 TO STA. 22+26.07

PORTAGE COUNTY OHIO

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BKL	D.T.		RLF	RJP	10-18-82	

MICROFILMED
MAY 7 1985

F.H.W.A. REG.	STATE	PROJECT	
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PORTAGE COUNTY
POR-43-13.75

STRUCTURAL GENERAL NOTES

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1977, INCLUDING THE INTERIM SPECIFICATION THRU 1981 AND THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS.

DESIGN DATA

DESIGN LOADING	- HS 20-44 AND THE ALTERNATE MILITARY LOADING
CONCRETE FOR PRESTRESSED BEAMS	- MIN. COMPRESSIVE STRENGTH AT THE TIME OF INITIAL PRESTRESS. f'_{ci} = 4000 psi MIN. COMPRESSIVE STRENGTH AT 28 DAYS f'_c = 5500 psi
CONCRETE CLASS S	- COMPRESSIVE STRENGTH 4500 psi FOR SUPERSTRUCTURE EXCEPT PRESTRESSED CONCRETE BEAMS.
CONCRETE CLASS C	- COMPRESSIVE STRENGTH 4000 psi FOR SUBSTRUCTURE
REINFORCING STEEL	- ASTM A615, A616, OR A617- GRADE 60, MINIMUM YIELD STRENGTH 60,000 psi
PRESTRESSING STRAND	- ASTM A416 GRADE 270, $\frac{1}{2}$" DIAMETER, SEVEN-WIRE, UNCOATED, STRESS RELIEVED STRAND. A_s = 0.153 sq. in. f'_s = 270,000 psi INITIAL STRESS 0.7f'_s = 189,000 psi STRESS AT RELEASE 0.63 f'_s = 170,000 psi
DECK PROTECTIVE METHOD	- TYPE 'D' WATERPROOFING AND $2\frac{1}{2}$" ASPHALT WEARING SURFACE.

REFERENCE

REFERENCE SHALL BE MADE TO THE FOLLOWING:

STANDARD DRAWING PSBD-1-81 SHEET 1 THRU 4	DATE 9-18-81
STANDARD DRAWING AS-1-81 SHEET 1 THRU 3	DATE 11-27-81
SUPPLEMENTAL SPECIFICATION 836 824	DATE 3-12-75 DATE 10-8-82
STANDARD DRAWING BR-1	DATE 5-29-79

ADJOINING GRAVEL YARD

THE CONTRACTOR SHALL CO-OPERATE WITH THE ADJOINING GRAVEL YARD OWNER IN ARRANGING THE DEMOLITION AND THE CONSTRUCTION WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER PARTY IS HELD TO A MINIMUM.

DEMOLITION OF EXISTING STRUCTURE

REMOVAL OF THE EXISTING STRUCTURE SHALL CONFORM TO ITEM 202 OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, CONSTRUCTION AND MATERIAL SPECIFICATIONS.

THIS ITEM SHALL INCLUDE REMOVAL OF THE ENTIRE SUPERSTRUCTURE AND THE SUBSTRUCTURE TO ACCOMMODATE CONSTRUCTION OF THE PROPOSED STRUCTURE AS DIRECTED BY THE ENGINEER.

THE METHOD AND THE EXTENT OF REMOVAL OF PORTIONS OF THE EXISTING STRUCTURE SHALL BE APPROVED BY THE ENGINEER BEFORE COMMENCING ANY DEMOLITION OPERATION. THE REVIEW AND APPROVAL BY THE ENGINEER SHALL NOT RELIEVE THE CONTRACTOR OF HIS FULL RESPONSIBILITY FOR SAFE DEMOLITION OPERATIONS, THE CONTRACTOR SHALL BE AND SHALL REMAIN RESPONSIBLE FOR A SAFE DEMOLITION OPERATION.

THE EXISTING STRUCTURE PLANS ARE ON FILE AND MAY BE REVIEWED AT THE OFFICES OF THE OHIO DEPARTMENT OF TRANSPORTION, DISTRICT FOUR (4), 705 OAKWOOD STREET, RAVENNA, OHIO 44266.

WORK INVOLVING RAILROADS

ALL WORK WITHIN OR DIRECTLY ADJACENT TO THE RAILROAD R/W SHALL BE SUBJECT TO THE APPROVAL OF THE RAILROAD COMPANY AND TO INSPECTION AT ALL TIMES BY ITS PROPERLY DESIGNATED REPRESENTATIVE. SAFETY AND CONTINUITY OF OPERATIONS OF THE RAILROAD TRAFFIC SHALL BE OF MAJOR IMPORTANCE AND SHALL AT ALL TIMES BE PROTECTED AND SAFEGUARDED. THE CONTRACTOR SHALL GIVE WRITTEN NOTICE TO THE DULY AUTHORIZED REPRESENTITIVE OF THE RAILROAD AT LEAST SEVENTY TWO (72) HOURS IN ADVANCE OF THE TIME THE CONTRACTOR INTENDS TO COMMENCE ANY WORK ON OR ABOVE THE RAILROAD R/W. WHENEVER PERFORMING ANY DEMOLITION OR CONSTRUCTION WORK WHICH IN THE OPINION OF THE ENGINEER COULD AFFECT RAILROAD OPERATION, THE CONTRACTOR SHALL SUBMIT COMPLETE PLANS AND DETAILS OF THE PROPOSED WORK TO BOTH THE RAILROAD AND THE STATE FOR APPROVAL. NO SUCH WORK SHALL BE COMMENCED OR PROSECUTED WITHOUT PRIOR APPROVAL OF BOTH AGENCIES. APPROVAL OF SUCH WORK SHALL NOT BE CONSTRUED AS A RELEASE FROM RESPONSIBILITY OR LIABILITY FOR ANY DAMAGE WHICH THE RAILROAD MAY SUFFER.

THE CONTRACTOR SHALL NOT AT ANY TIME PERMIT EQUIPMENT IN HIS USE TO ENTER UPON OR FOUL THE RAILROAD COMPANY'S TRACKS EXCEPT WHEN SUCH EQUIPMENT IS PROTECTED BY AUTHORIZED EMPLOYEES OF THE RAILROAD COMPANY.

CONSTRUCTION CLEARANCE OF 8 FEET HORIZONTALLY FROM THE CENTER OF TRACKS AND 18 FEET VERTICALLY FROM A POINT LEVEL WITH THE TOP OF THE HIGHER RAIL, AND 4 FEET FROM THE CENTER OF TRACKS, SHALL BE MAINTAINED AT ALL TIMES.

FOUNDATION BEARING PRESSURE

ABUTMENT FOOTINGS ARE DESIGNED FOR A MAXIMUM BEARING PRESSURE OF 1.75 TONS PER SQ. FT.

EXISTING STRUCTURAL DATA

TYPE: STRUCTURAL STEEL TRUSS WITH WOOD DECK AND STEEL AND WOODEN SUBSTRUCTURES.

SKEW: 0°-00'-00"

TOTAL LENGTH: 167'

ROADWAY: 22'-8"

LOADING: H 15-44

WEARING SURFACE: ASPHALT

ALIGNMENT: TANGENT

SLOPE PROTECTION: NONE

PROPOSED STRUCTURAL DATA

TYPE: PRESTRESSED CONCRETE BOX BEAM SUPERSTRUCTURE WITH REINFORCED CONCRETE SUBSTRUCTURE.

SKEW: 4°-44'-16" LF

SPAN: 48'-10" c/c BEARINGS

ROADWAY: 36'-0" GUTTER TO GUTTER

LOADING: HS 20-44 AND ALTERNATE MILITARY LOADING

WEARING SURFACE: $2\frac{1}{2}$" (MIN.) ASPHALT CONCRETE

APPROACH SLABS: 20'-0" AS PER AS-1-81

ALIGNMENT: 7° CURVE LEFT, STRUCTURE TANGENT

SUPERELEVATION: 0.04'/FT.

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STRUCTURAL GENERAL NOTES
S.R. 43 OVER CONRAIL R.R.
BRIDGE Nº POR-43-1375
STA. 21+76.06 TO STA. 22+26.07

PORTAGE COUNTY OHIO

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BKL	CDG		RLF	JJP	10-18-82	

MICROFILMED
MAY 7 1985

F.H.W.A. REG.	STATE	PROJECT	
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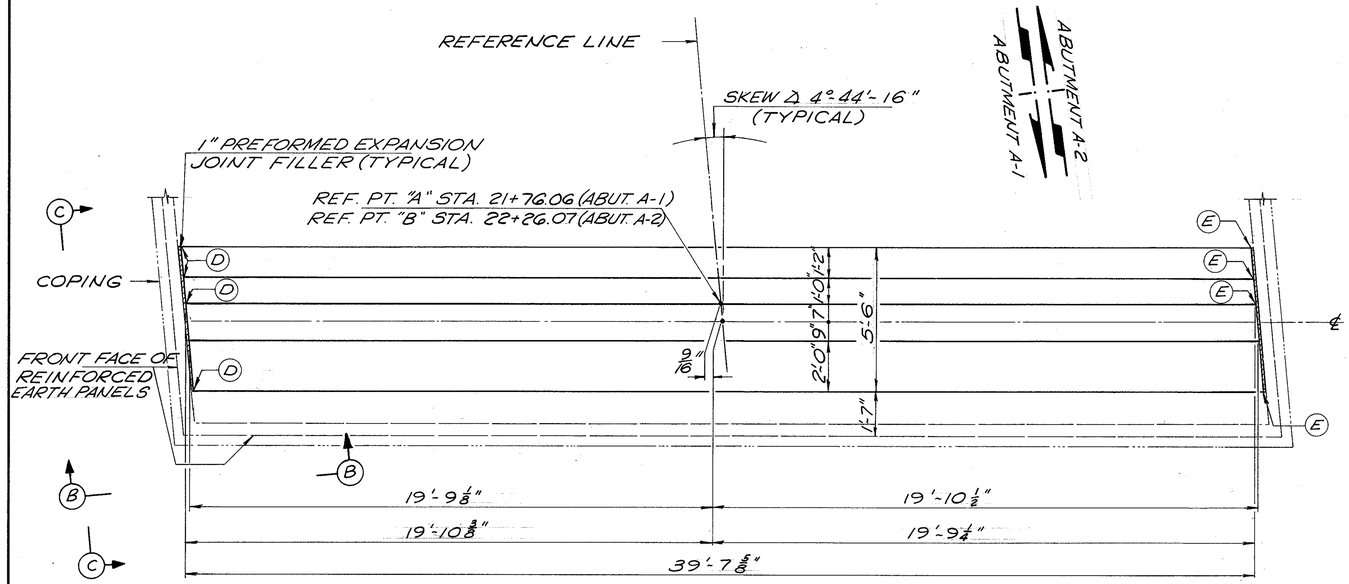
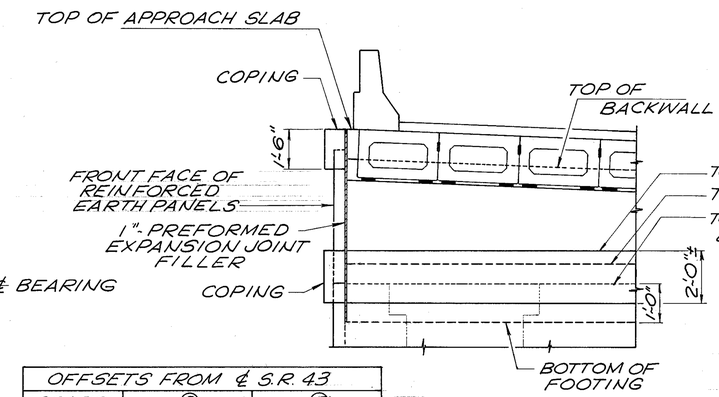
PORTAGE COUNTY
POR-43-13.75



PLAN

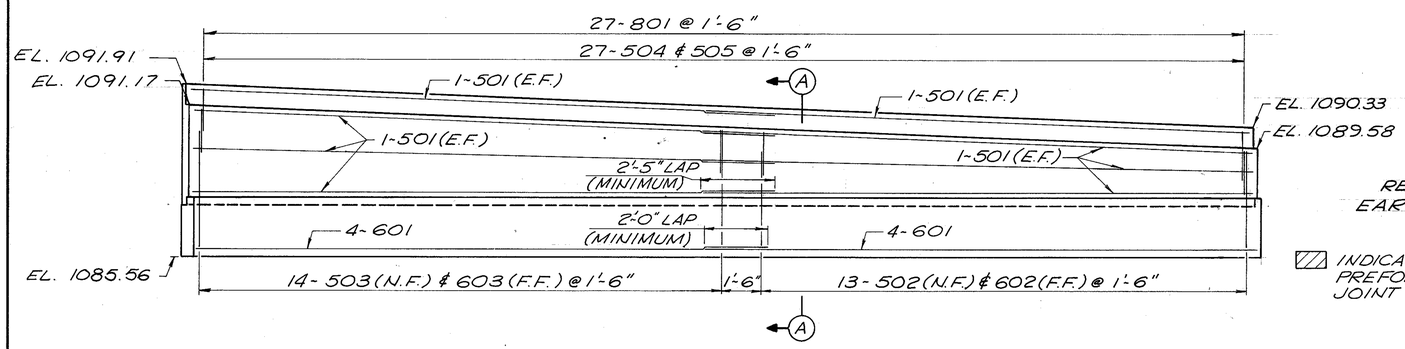


VIEW B-B

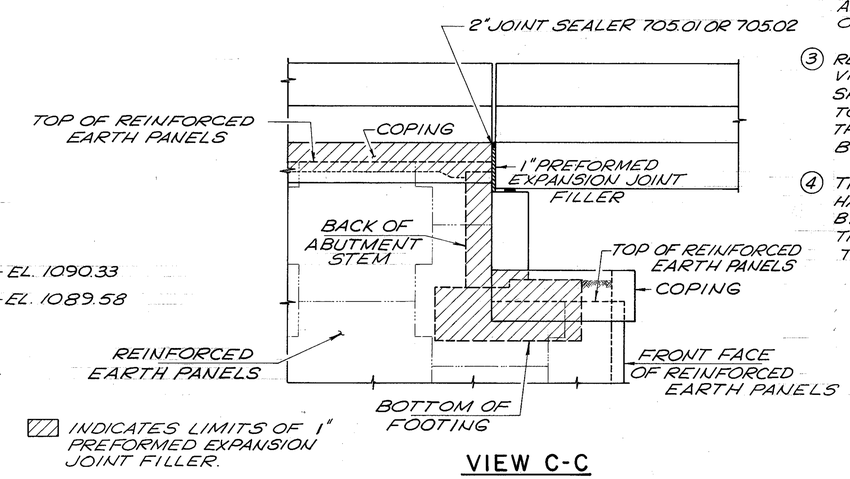
OFFSETS FROM ℄ S.R. 43		
LOCATION	(D)	(E)
ABUT. A-1	19.79' (RT.)	19.79' (LT.)
ABUT. A-2	19.69' (LT.)	19.69' (RT.)

NOTES

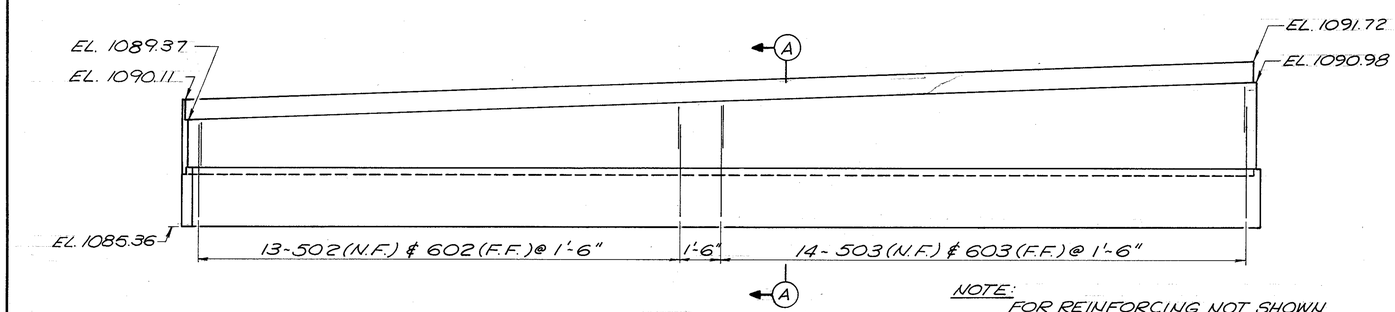
1. ABBREVIATIONS USED ARE:
   N.F. - NEAR FACE
   F.F. - FAR FACE
   E.F. - EACH FACE
2. THE PREFIX "A" SHALL BE ADDED TO ALL REINFORCING BAR MARKS IN THE ABUTMENTS UNLESS SHOWN OTHERWISE.
3. REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF THE ANCHOR BAR HOLES.
4. THE BRIDGE SEAT ELEVATIONS HAVE BEEN ADJUSTED UPWARDS BY 0.01' TO COMPENSATE FOR THE VERTICAL DEFORMATION OF THE BEARINGS.



ELEVATION - ABUTMENT A-1
(REINFORCED EARTH NOT SHOWN FOR CLARITY)

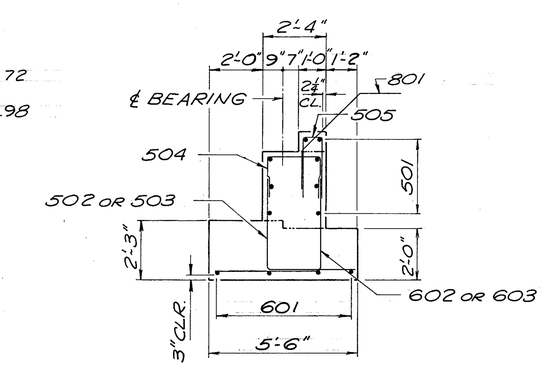


VIEW C-C



ELEVATION - ABUTMENT A-2
(REINFORCED EARTH NOT SHOWN FOR CLARITY)

NOTE:
FOR REINFORCING NOT SHOWN SEE ELEVATION-ABUTMENT A-1.



SECTION A-A

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ABUTMENT DETAILS

S.R. 43 OVER CONRAIL R.R.

BRIDGE № POR-43-1375
STA. 21+76.06 TO STA. 22+26.07

PORTAGE COUNTY — OHIO

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BKL	D.T.		RLF	JOP	10-18-82	

MICROFILMED
MAY 17 1985

F.H.W.A. REG.	STATE	PROJECT	
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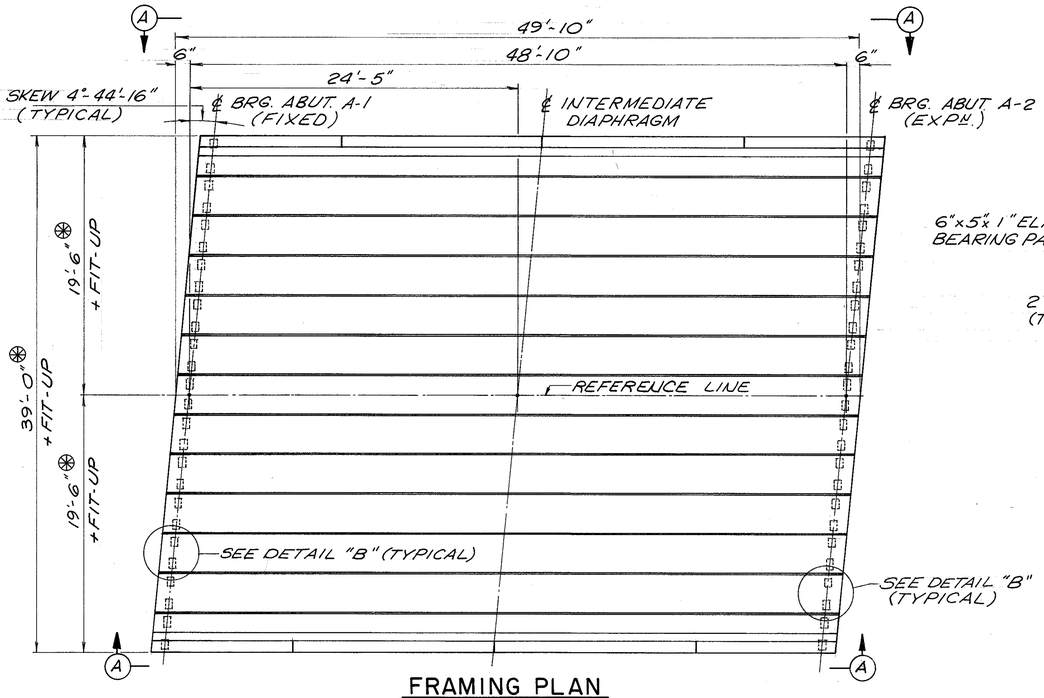
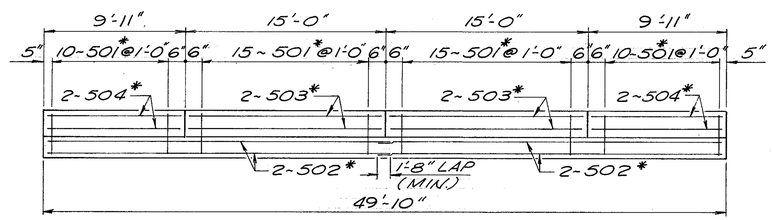
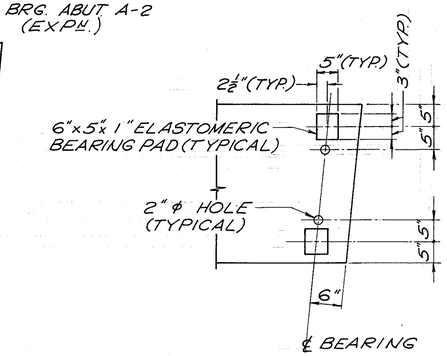
PORTAGE COUNTY
POR-43-13.75



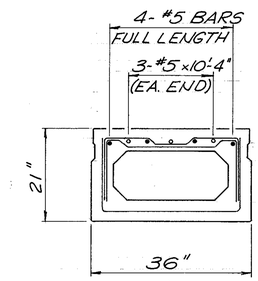
FRAMING PLAN



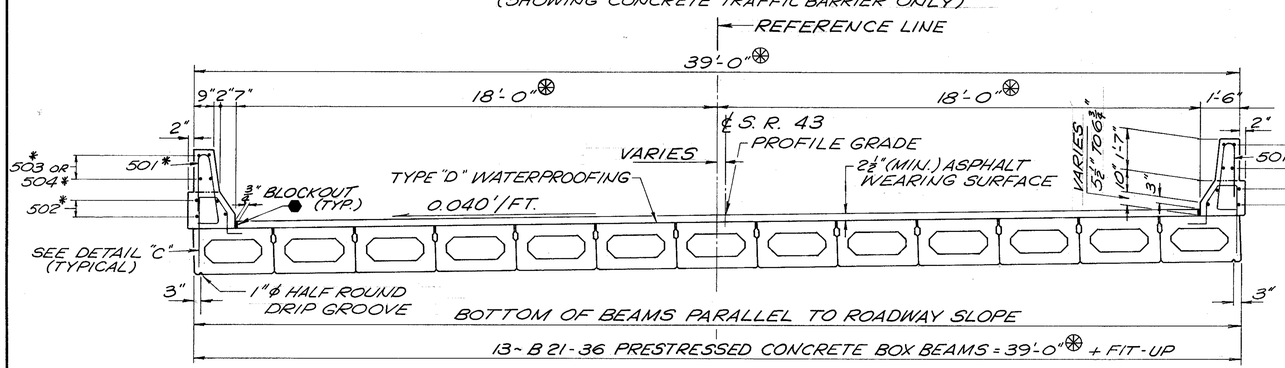
VIEW A-A
(SHOWING CONCRETE TRAFFIC BARRIER ONLY)



DETAIL "B"

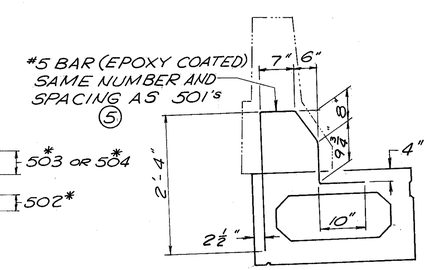


TYPICAL SECTION THRU B21-36
(FOR STIRRUP SPACING AND SIZE SEE STANDARD DRAWING PSBD-1-81.)

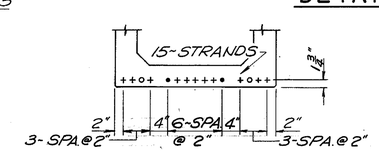


● JOINT SEALER 705.01 OR 705.02

TRANSVERSE SECTION



DETAIL "C"



+ DENOTES STRANDS TO BE BONDED FULL LENGTH.
• DENOTES STRANDS TO BE DEBONDED TO 1'-6" FROM END OF BEAM.
○ DENOTES STRANDS TO BE DEBONDED TO 1'-6" FROM END OF BEAM.

STRAND PATTERN DETAIL
(FOR B 21-36 BEAMS)

NOTES

⊛ (1) THE DIMENSION MARKED ⊛ WILL VARY DEPENDING ON THE ACTUAL DIMENSIONS OF THE PRESTRESSED BEAMS.

(2) PRESTRESSED CONCRETE BOX BEAM CAMBER:
a.) CALCULATE CAMBER AT TIME OF PAVING, INCLUDING ALLOWANCE FOR CAMBER GROWTH DUE TO CREEP, IS 2.02".
b.) CALCULATED DEFLECTION DUE TO WEIGHT OF SURFACE COURSE AND CONCRETE TRAFFIC BARRIERS IS 0.22".
c.) CAMBER OF 0.53" AT CENTER OF SPAN IS REQUIRED FOR CREST VERTICAL CURVE.
d.) NET FINAL CAMBER OF BEAM IS 1.80". THIS IS 1.27" IN EXCESS OF THE AMOUNT REQUIRED TO PLACE THE TOP OF THE BEAM PARALLEL TO PROFILE GRADE. THIS EXCESS AMOUNT SHALL BE COMPENSATED FOR BY THICKENING THE 403 LEVELING COURSE FROM 1.25" AT CENTER OF SPAN TO 2.52" AT ENDS OF SPAN.

(3) THE ELASTOMERIC BEARING PADS SHALL BE MADE FROM 70 DUROMETER HARDNESS NEOPRENE.

* (4) * INDICATES REINFORCING BARS TO BE EPOXY COATED.

(5) NO SEPERATE PAYMENT WILL BE MADE FOR Nº 5 EPOXY COATED REINFORCING BARS IN FASCIA BEAMS, BUT COST THERE OF SHALL BE INCLUDED IN THE COST OF ITEM 515 "PRESTRESSED CONCRETE BOX BEAM (B 21-36)".

(6) THE ASPHALT SURFACE COURSE SHALL CONSIST OF A VARIABLE THICKNESS OF 403 AND A 1¼" THICKNESS OF 404. THE 403 SHALL BE PLACED IN TWO OPERATIONS. THE FIRST COURSE SHALL BE FEATHERED TO PLACE THE SURFACE PARALLEL TO AND 2½" BELOW FINAL PAVEMENT SURFACE ELEVATION. THE SECOND COURSE SHALL BE OF UNIFORM THICKNESS.

(7) THE PREFIX "S" SHALL BE ADDED TO ALL REINFORCING BAR MARKS IN THE CONCRETE TRAFFIC BARRIER.

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FRAMING PLAN

S.R. 43 OVER CONRAIL R.R.

BRIDGE Nº POR-43-1375
STA. 21+76.06 TO STA. 22+26.07

PORTAGE COUNTY — OHIO

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
B.K.L.	D.T.		R.L.F.	JJP	10-18-82	

F.H.W.A. REG.	STATE	PROJECT	
5	OHIO		

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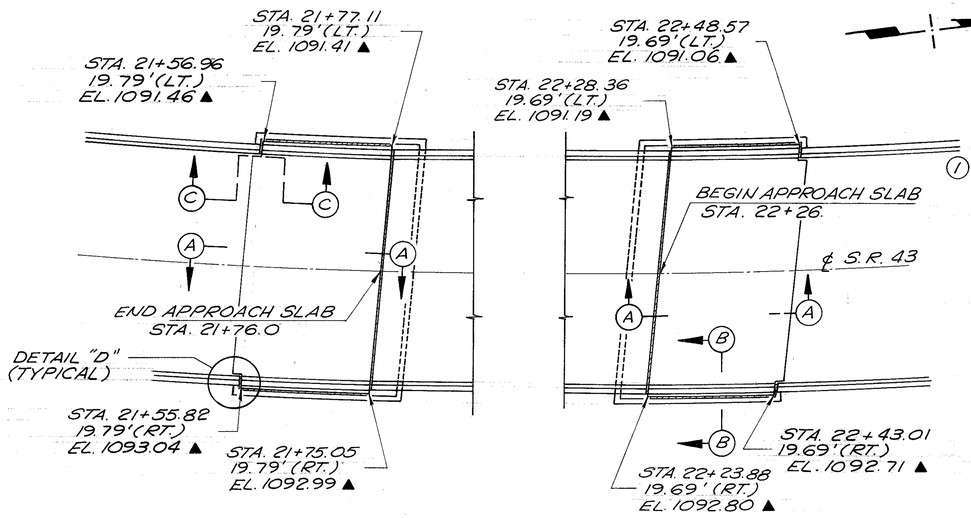
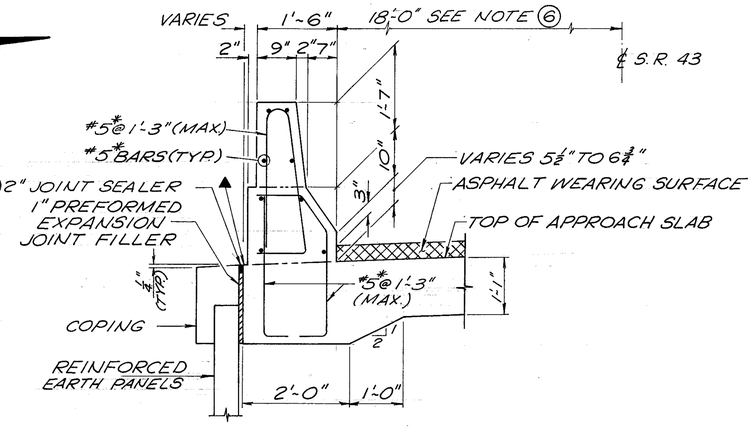
PORTAGE COUNTY
POR-43-13.75

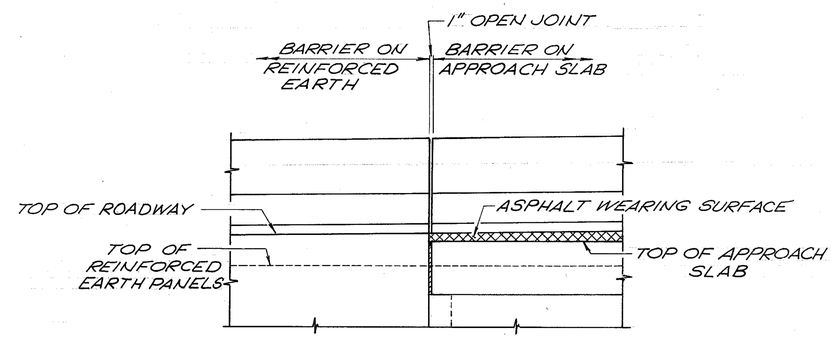


PLAN OF APPROACH SLABS

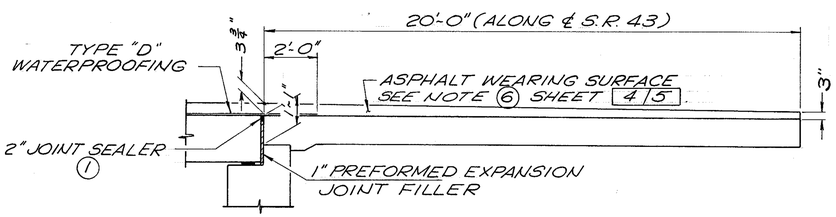


SECTION B-B

(TYPICAL EACH SIDE OF APPROACH SLAB)



SECTION C-C



SECTION A-A

REINFORCING BAR SCHEDULE

MARK	Nº REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	INCRM.	WEIGHT LBS.
SUPERSTRUCTURE									
*S501	100	5'-3"	3	2'-2"	2'-5"				547.6
*S502	16	25'-7"	ST						426.9
*S503	16	14'-8"	ST						244.7
*S504	16	9'-7"	ST						159.9
			NON-EPOXY COATED					= 0	
			EPOXY COATED					= 1379	
			TOTAL SUPERSTRUCTURE					=	1379
ABUTMENTS A-1 & A-2									
A501	32	20'-11"	ST						698.1
A502	26	6'-6"	1	3'-1"	3'-6"				176.3
A503	28	7'-4"	1	3'-1"	4'-4"				214.1
A504	54	4'-11"	2	1'-7"	2'-0"				276.9
A505	54	4'-5"	2	2'-0"	8"				248.8
A601	16	20'-8"	ST						496.7
A602	26	7'-3"	1	3'-11"	3'-6"				283.1
A603	28	8'-1"	1	3'-11"	4'-4"				343.2
A801	54	4'-5"	4	1'-5"	1'-3"	1'-3"	1'-5"		636.8
			NON-EPOXY COATED					= 3374	
			EPOXY COATED					= 0	
			TOTAL ABUTMENTS					=	3374

NON-EPOXY COATED

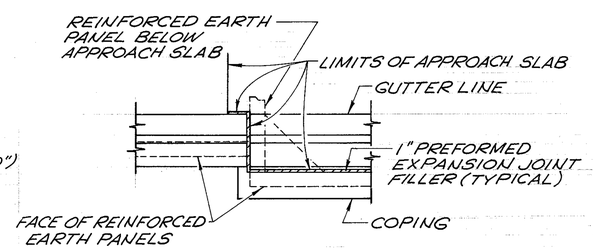
SUPERSTRUCTURE = 0
ABUTMENTS = 3374
GRAND TOTAL = 3374

EPOXY COATED

SUPERSTRUCTURE = 1379
ABUTMENTS = 0
GRAND TOTAL = 1379

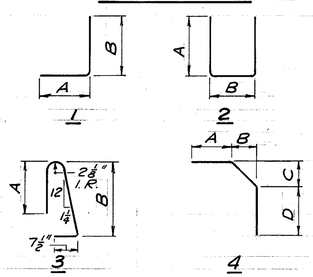
NOTES

1. THE 2" JOINT SEALER SHALL BE 705.01 OR 705.02.
2. ▲ THE ELEVATIONS MARKED "▲" ARE THE TOP OF CONCRETE ELEVATIONS PROPER ALLOWANCE HAS BEEN MADE FOR THE THICKNESS OF THE ASPHALT WEARING SURFACE.
3. * THE REINFORCING BARS MARKED * SHALL BE EPOXY COATED.
4. NO SEPARATE PAYMENT WILL BE MADE FOR FURNISHING AND INSTALLING IN PLACE, THE CONCRETE TRAFFIC BARRIER ON THE APPROACH SLAB. CONCRETE IN THE TRAFFIC BARRIER SHALL BE CLASS "S" CONCRETE. COST OF BARRIER SHALL BE INCLUDED IN ITEM 611 APPROACH SLAB FOR PAYMENT
5. REFER TO STANDARD DRAWING BR-1 FOR ADDITIONAL TRAFFIC BARRIER DETAILS.
6. MATCH ACTUAL SUPERSTRUCTURE DIMENSION. SEE NOTE 1, SHEET 4/5. PROVIDE A TRANSITION TO THE NORMAL DIMENSION (18'-0") WITHIN THE LENGTH OF THE APPROACH SLAB.



DETAIL "D"

BAR TYPES



REINFORCING STEEL SAMPLES:
REFER TO CMS SECTIONS 106.03, 700, 709.01 THRU 709.05 AND 709.08. SUFFICIENT ADDITIONAL REINFORCING STEEL SHALL BE PROVIDED FOR SAMPLING. RANDOM SAMPLES SHALL BE REPLACED IN THE STRUCTURES BY THE ADDITIONAL STEEL, SPLICED IN ACCORDANCE WITH 509.08.

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CLEVELAND, OHIO — AKRON, OHIO

5/5

MISCELLANEOUS DETAILS & REINF. BAR SCHEDULE

S.R. 43 OVER CONRAIL R.R.
BRIDGE Nº POR-43-1375
STA. 21+76.06 TO STA. 22+26.07

PORTAGE COUNTY — OHIO

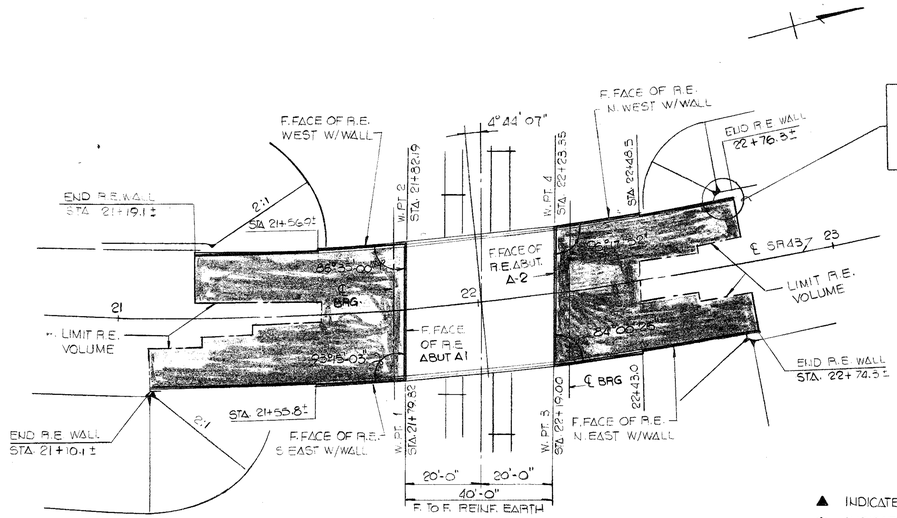
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BKL	D.T.		RLF	JOP	10-18-82	

F.H.W.A. REG.	STATE	PROJECT	
5	OHIO		

19
27

MAY 7 1985

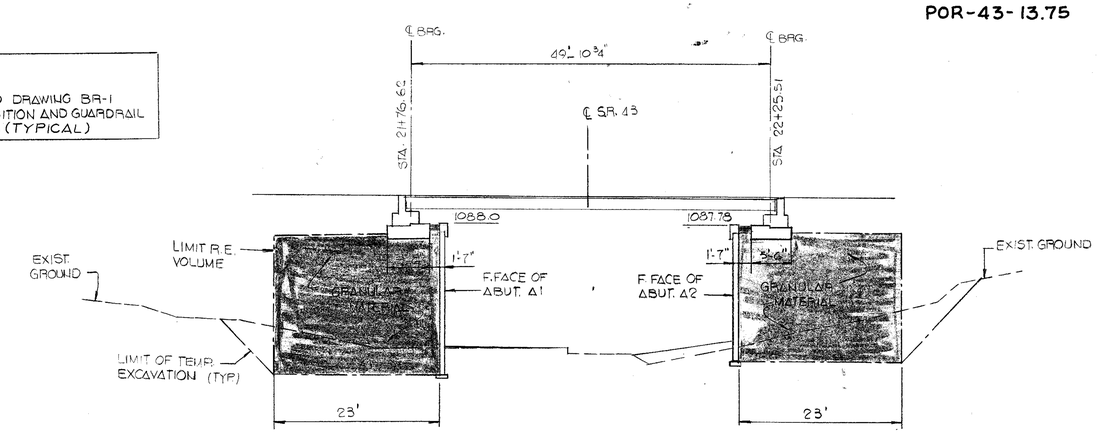
PORTAGE COUNTY
POR-43-13.75



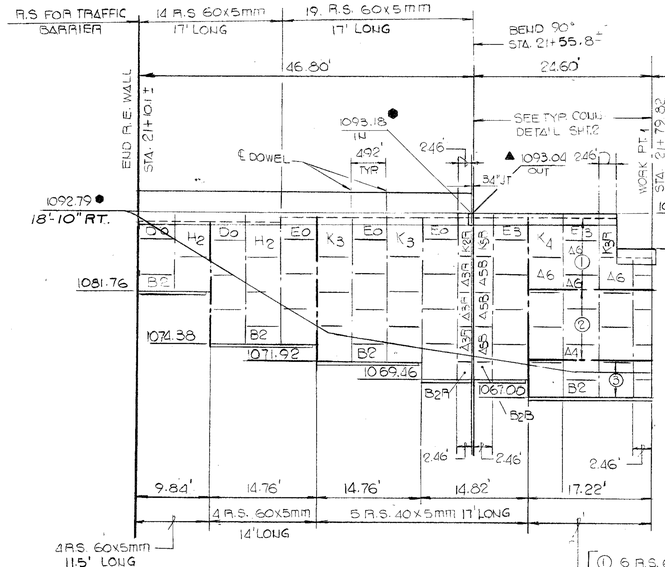
KEY PLAN
N.T.S

NOTE 'A'
REFER TO STANDARD DRAWING BR-1 FOR PARAPET TRANSITION AND GUARDRAIL ATTACHMENT DETAILS (TYPICAL)

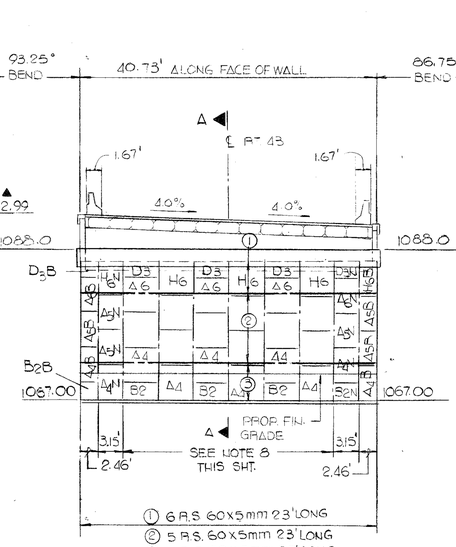
▲ INDICATES ELEVATION AT TOP OF COPING
● INDICATES FINISHED GRADE ELEVATION AT GUTTER LINE



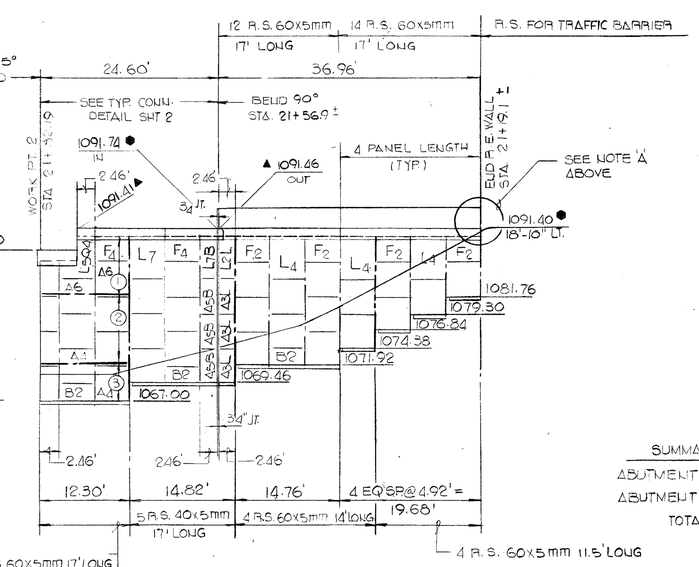
SECTION 'A-A'
SCALE: 1"=10'-0"



SOUTH EAST WINGWALL



ELEVATION ABUT A-1
SCALE: 1" = 10'-0"



SOUTH WEST WINGWALL

① 6 R.S. 60x5mm 17' LONG
② 5 R.S. 60x5mm 17' LONG
③ 4 R.S. 60x5mm 17' LONG

6 R.S. 60x5mm 17' LONG
5 R.S. 60x5mm 17' LONG
4 R.S. 60x5mm 17' LONG

GENERAL NOTES:

1. ALL PANELS ARE TYPE 'A' UNLESS OTHERWISE NOTED
2. R.E. ON CURVED SECTION WILL FORM A SERIES OF SHORT CHORDS TO MATCH DESIRED WALL ALIGNMENT
3. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE REINFORCED EARTH VOLUME, METHODS OF CONSTRUCTION AND QUALITY OF PREFABRICATED MATERIALS SHALL CONFORM TO THE MANUFACTURER'S SPECIFICATIONS
4. FOR LOCATION AND ALIGNMENT OF R.E. WALLS SEE HIGHWAY PLANS
5. CORK IS NOT REQUIRED BETWEEN CONC. LEVELLING PAD AND LOWER ROW OF R.E. PANELS
6. SYMBOLS: H_5 — TYPE OF PANELS; NO. TIE STRIPS
   ① INDICATES TYPE OF REINFORCING STRIPS PER PANEL
7. FOR STANDARD PANELS SEE SHT 4
8. DIMENTION TO BE FIELD CHECKED PRIOR TO CASTING NARROW PANELS AT ABUTMENT WALLS

SUMMARY OF WALLS SURFACE AREA SQ.FT

ABUTMENT A1 & WINGWALLS	3,391.6 SQ.FT.
ABUTMENT A2 & WINGWALLS	2,455.2 SQ.FT.
TOTAL PROJ	5846.8 SQ.FT.

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S.R. 43 OVER CONRAIL R.R.

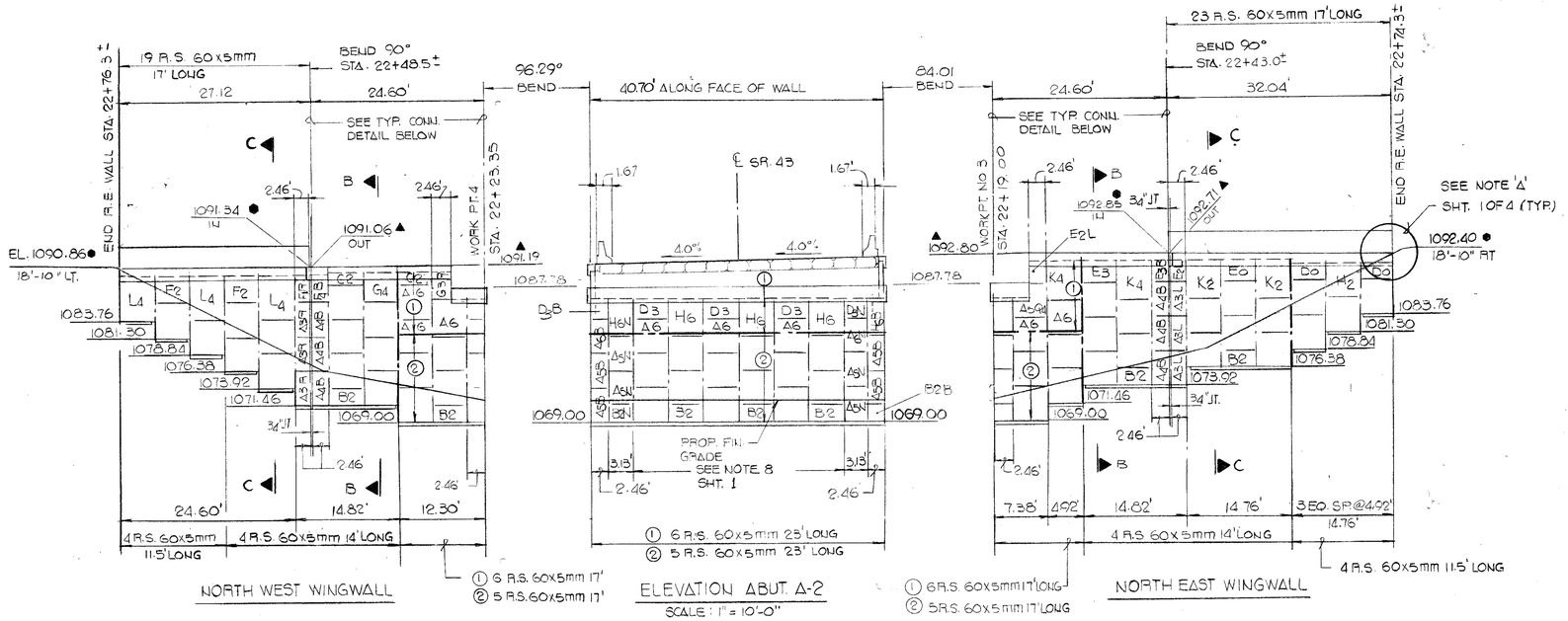
PROJECT NO. POR-43-13.75

MICROFILMED
MAY 7 1986

F.H.W.A. REG.	STATE	PROJECT	
5	OHIO		

20
27

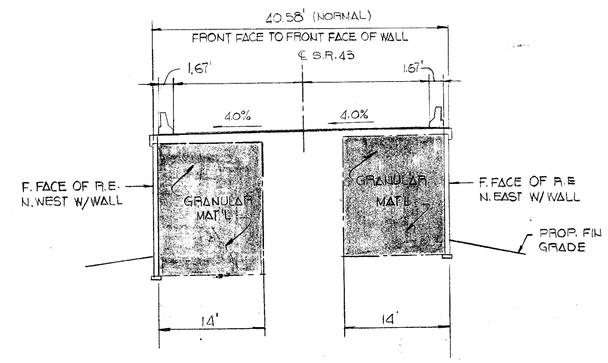
PORTAGE COUNTY
POR-43-13.75



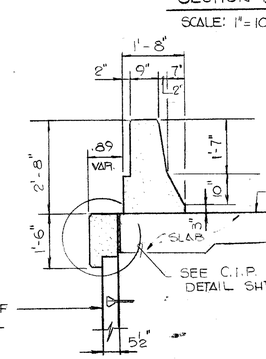
NORTH WEST WINGWALL

ELEVATION ABUT. A-2
SCALE: 1" = 10'-0"

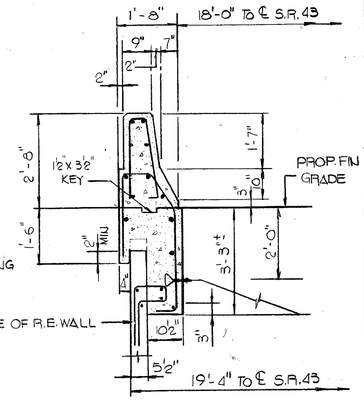
NORTH EAST WINGWALL



SECTION 'B-B'
SCALE: 1" = 10'-0"



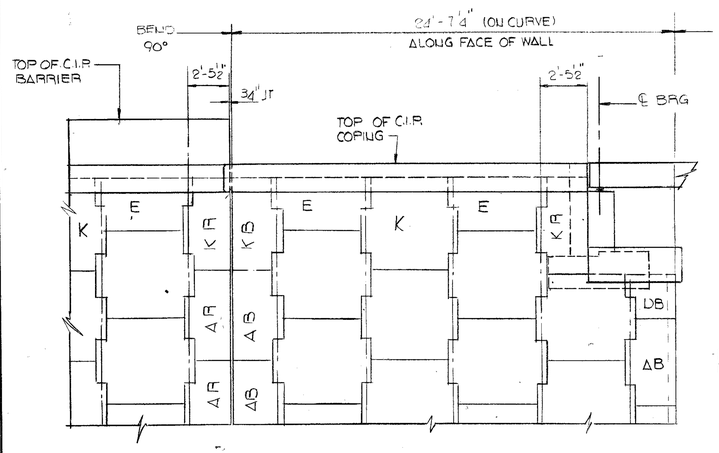
SECTION Z-Z



SECTION Y-Y

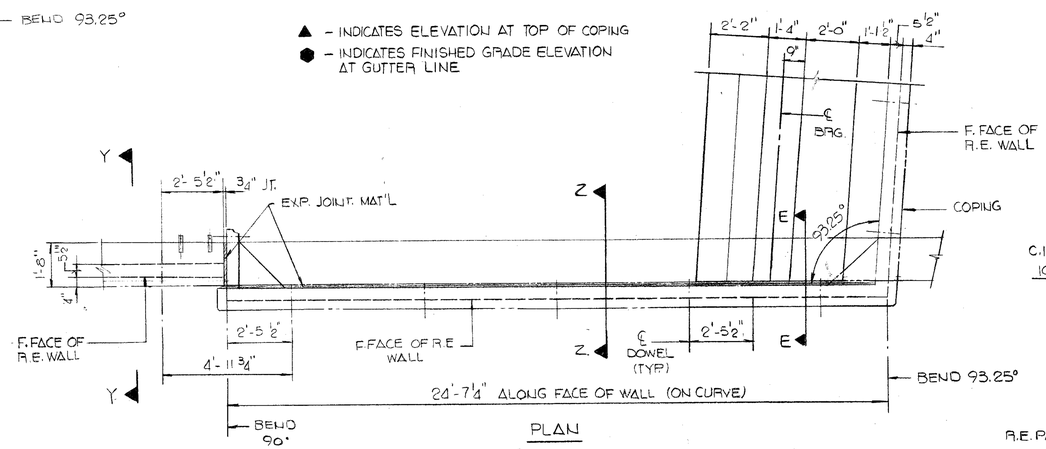
C.I.P. TRAFFIC BARRIER
SCALE: 1" = 1'-0"

REFER TO STANDARD DRAWING BR-1 FOR REINFORCING REQUIREMENTS AND ADDITIONAL DETAILS.



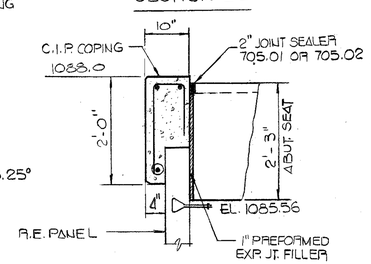
PARTIAL ELEVATION
SCALE: ¼" = 1'-0"

▲ - INDICATES ELEVATION AT TOP OF COPING
● - INDICATES FINISHED GRADE ELEVATION AT GUTTER LINE



PLAN

TYPICAL CONNECTION DETAIL AT ABUTMENT AND BEND
SCALE: ⅜" = 1'-0"



SECTION E-E

C.I.P. CONCRETE NOTES

1. CAST IN PLACE CONCRETE SHALL BE CLASS 'S' f'c = 4500 psi.
2. REINFORCING STEEL SHALL BE ASTM A615 A 616 OR A 617, GRADE 60. Fy = 60,000 psi.
3. TRAFFIC BARRIER REINFORCING ABOVE FINISHED GRADE SHALL BE EPOXY COATED.

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S.R. 43 OVER CONRAIL R.R.

PROJECT NO. POR-43-13.75

10-20-82 R.E. 1207 SHT 2 OF 4

MICROFILMED
MAY 7 1985

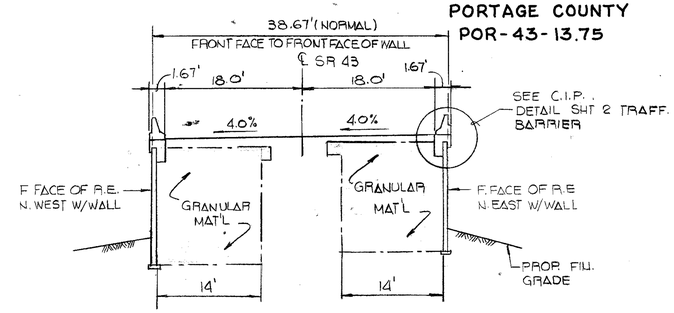
F.H.W.A. REG.	STATE	PROJECT	
5	OHIO		

PORTAGE COUNTY
POR-43-13.75

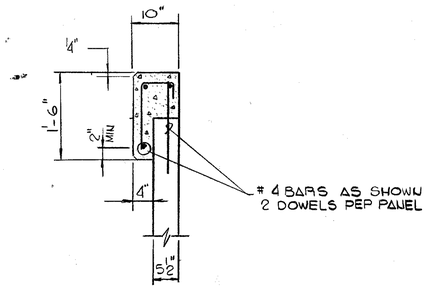
		PANEL SCHEDULE ABUT. A-1																										
		STANDARD PANELS								BEND 86.75		BEND 90°				BEND 93.25°			NARROW 3.15'					CUT 2.46'			CUT 2.46		SP
TYPE	No.TS	A	B	D	E	F	H	K	L	AB	HB	AB	BB	KB	LB	AB	BB	DB	AN	BN	DN	HN	—	AR	BR	KR	AL	LL	LQ4
P_3	0			2	3																								
	2		10			4							1				1			1					1	1			
	3			3	2													1			1			3		1	3		
	4	35				2		1		1						1			2										
	5	40								2		6		1		1			3										1
	6	9					3				1					1			1			1							
	7								1						1														
P_7	2						2																					1	
	3							2																					
	4								3																				
	5																												
SQ. FT. PER PANEL		24.2	12.1	12.1	14.9	17.9	24.2	27.0	30.0	24.2	30.0	24.2	12.1	27.0	30.0	24.2	12.1	12.1	15.5	7.7	7.7	15.5	—	12.1	6.1	13.5	12.1	15.0	20.9

REINFORCING STRIPS SCHEDULE				
TYPE \ LENGTH	11.5	14'	17'	23'
40 x 5mm		207		
60 x 5mm	36	90	119	200
60 x 5mm*			59	

* R.S. FOR TRAFFIC BARRIER



SECTION 'C-C'
SCALE: 1"=10'-0"



C.I.P. CONC. COPING DETAIL
SCALE: 3/4"=1'-0"

		PANEL SCHEDULE ABUT. A-2 & W/WALLS																										
		STANDARD PANELS										BEND 90°			BEND 96.29°	BEND 84.01°			CUT 2.46'					NARROW 3.13'				SP
TYPE	No.TS	A	B	C	D	E	F	G	H	K	L	AB	EB	FB	AB	DB	AB	BB	HB	AL	EL	AR	FR	GR	AN	BN	DN	HN	AQ4
P_3	0				2	1															1								
	1																						1						
	2		7	2			2											1			1					1			
	3				3	1							1			1				3		3		1			1		
	4	27						1		2		6		1															
	5	20													2		2								4				1
	6	8							3						1				1						1			1	
P_7	2								1	2																			
	3																												
	4										3																		
	5																												
SQ. FT. PER PANEL		24.2	12.1	8.8	12.1	14.9	17.9	20.9	24.2	27.0	30.0	24.2	14.9	17.9	24.2	12.1	24.2	12.1	24.2	12.1	7.4	12.1	8.9	10.5	15.4	7.7	7.7	15.4	18.1

REINFORCING STRIPS SCHEDULE				
TYPE \ LENGTH	11.5	14	17'	23
60 x 5 mm	36	163	88	185
60 x 5 mm *			42	

* R.S. REQ. FOR TRAFFIC BARRIER

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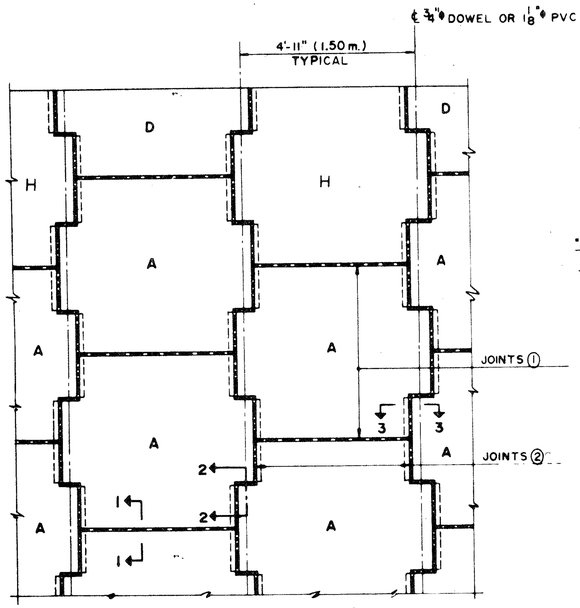
S R 43 OVER CONRAIL R.R.
PROJECT NO. POR-43-13.75

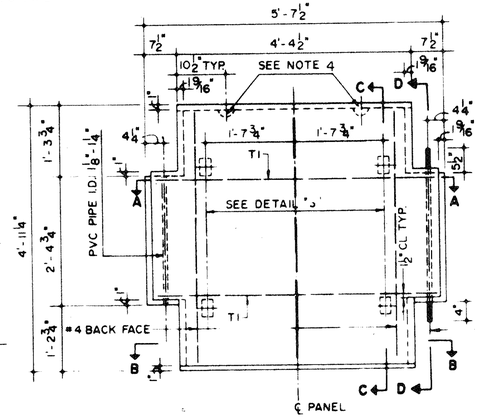
MICROFILMED
MAY 7 1985

F.H.W.A. REG.	STATE	PROJECT	
5	OHIO		

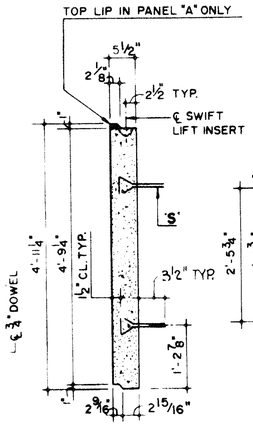
PORTAGE COUNTY
POR-43-13.75



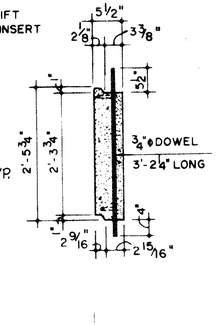
TYPICAL PANEL LAYOUT
SCALE 1/2" = 1'-0"



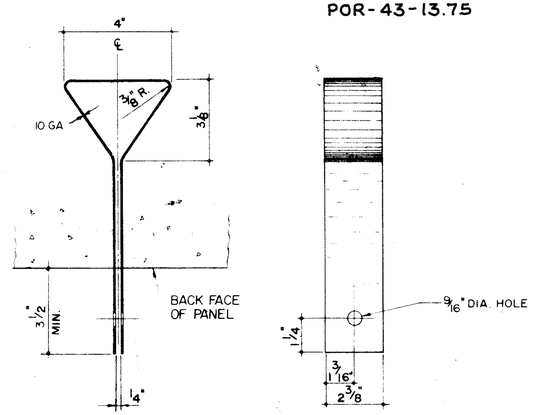
PANEL TYPE A & H
FRONT VIEW



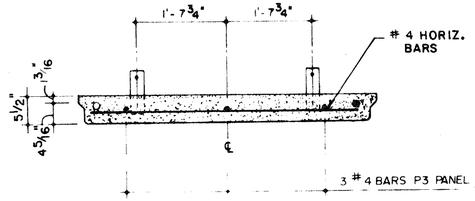
SECTION C-C



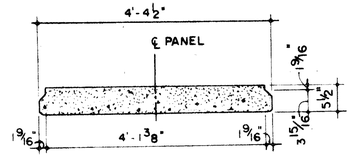
SECTION D-D



TIE STRIP DETAIL "S"
NOT TO SCALE



SECTION A-A

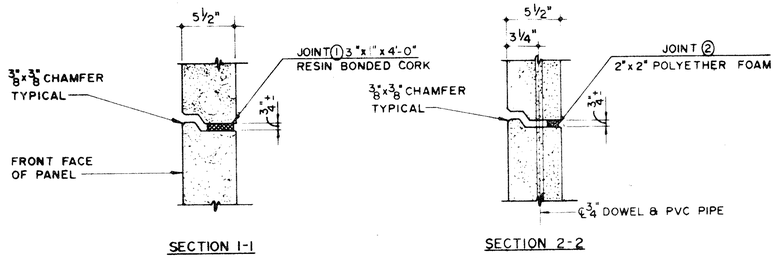


SECTION B-B

TYPICAL PANEL DETAILS
SCALE 3/4" = 1'-0"

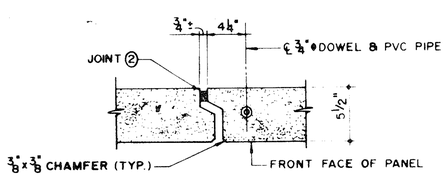
NOTE:

1. REINFORCING STEEL TO BE STEEL A615 GRADE 40.
2. 3/8" x 3/8" CHAMFER SHALL BE PROVIDED ON ALL EXPOSED EDGES (FRONT FACE ONLY).
3. ALL PANELS AND OTHER RELATED ELEMENTS WILL BE DETAILED ON SHOP DRAWINGS.
4. ONE TON SWIFT LIFT INSERTS 3/8" x 3/8" LONG AS MANUFACTURED BY SUPERIOR CONC. ACCESSORIES.
5. PANEL DESIGN THICKNESS IS 5 1/2" QUANTITY OF CONCRETE WILL INCREASE TO ACCOMMODATE ANY ARCHITECTURAL SURFACE FINISH THAT MAY BE SPECIFIED.

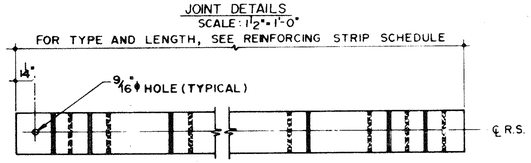


SECTION 1-1

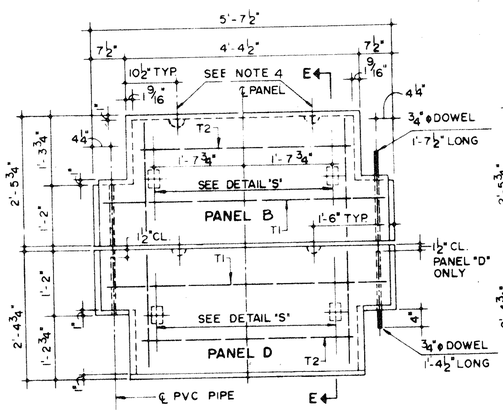
SECTION 2-2



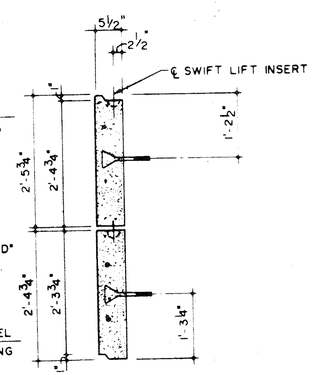
SECTION 3-3
JOINT DETAILS
SCALE: 1 1/2" = 1'-0"



DETAIL OF REINFORCING STRIP
NOT TO SCALE



HALF PANELS B & D
FRONT VIEW



SECTION E-E

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"REINFORCED EARTH" IS THE REGISTERED TRADEMARK OF THE REINFORCED EARTH COMPANY.

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The Reinforced Earth Company is exclusive licensee in the United States under patents issued to Henri Vidal, and the furnishing of this drawing does not constitute an express or implied license under the Vidal patents.

S.R. 43 OVER CONRAIL R.R.
PROJECT NO. POR-43-13.75

10-20-82 R.E. 1207

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO	BRF-58( )	

24/27

PO R-43 - 13.75

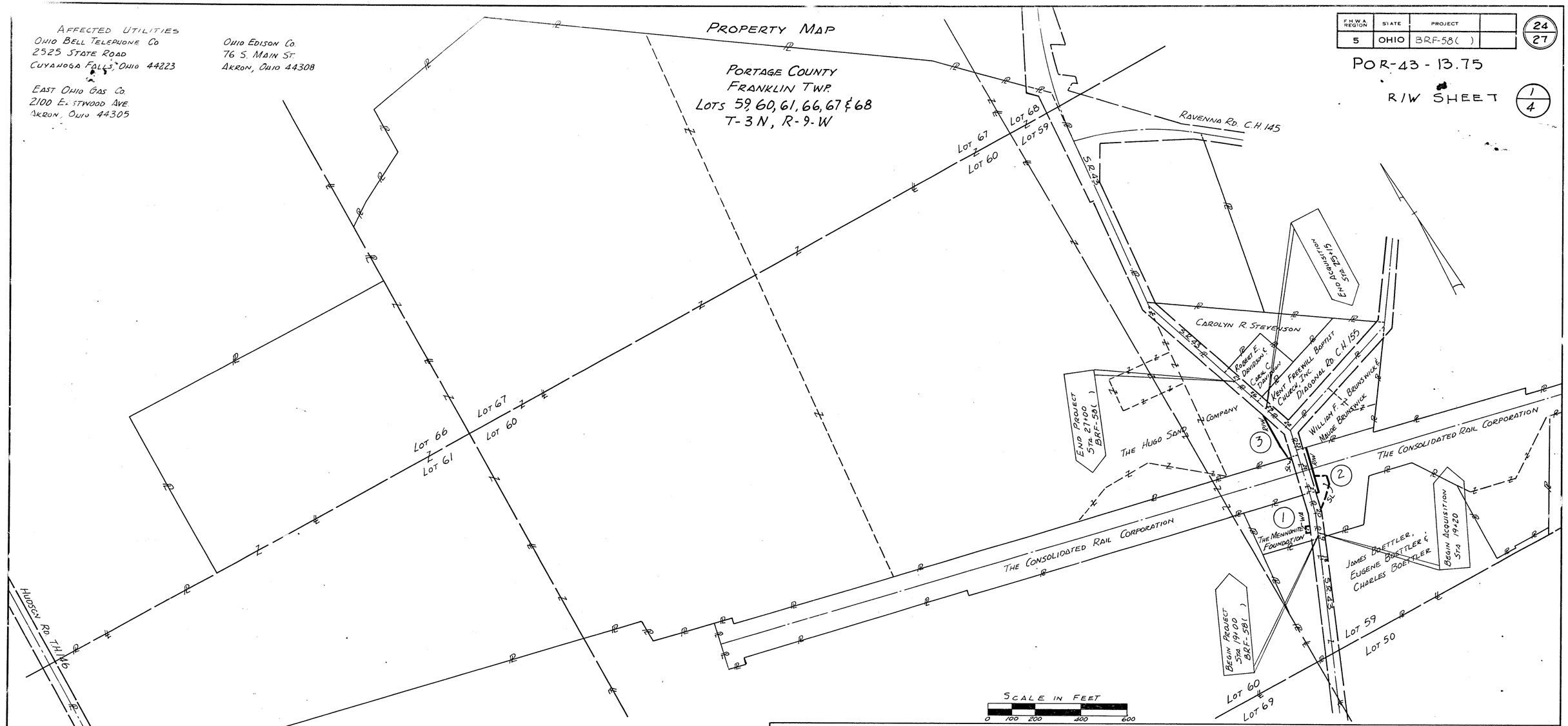
R/W SHEET 1/4

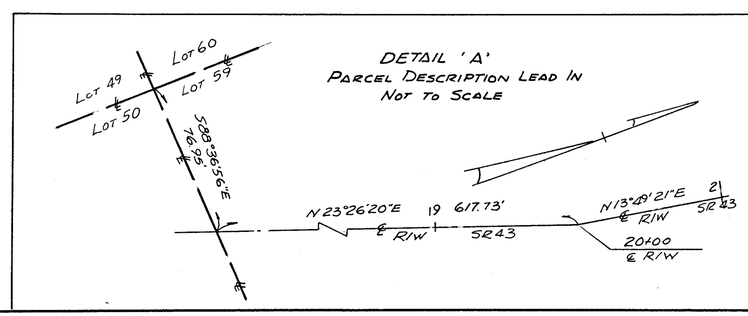
AFFECTED UTILITIES

OHIO BELL TELEPHONE CO
2525 STATE ROAD
CUYAHOGA FALLS, OHIO 44223

EAST OHIO GAS CO.
2100 EASTWOOD AVE
AKRON, OHIO 44305

OHIO EDISON CO.
76 S. MAIN ST.
AKRON, OHIO 44308





SUMMARY OF ADDITIONAL RIGHT-OF-WAY REQUIRED

NO. OF OWNERS 3 TOTAL NO. OF OWNERS WITH STRUCTURES 0 NO. OF TOTAL TAKES 0

PARCEL No.	TYPE FUNDS	OWNER	RECORDED VOL.	RECORDED PAGE	DEED AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O IN TAKE	NET TAKE	NET RESIDUE LEFT	NET RESIDUE RIGHT	BLDG	SHEET No	REMARKS
1-WA	BRF	THE MENNONITE FOUNDATION, INC.	974	592	1.290								2	REPLACE EXISTING GUARD RAIL
2		THE CONSOLIDATED RAIL					0.023Ac	-	0.023Ac				3	
2-SL		CORPORATION					0.010Ac	-	0.010Ac				3	CONSTRUCT SLOPE
2-SL-1							0.002Ac	-	0.002Ac				3	CONSTRUCT SLOPE
3-WD		THE HUGO SAND COMPANY	788	331	182.215Ac	1.894Ac	0.295Ac	0.168Ac	0.127Ac	180.194 Ac.			3 & 4	
			789	136										

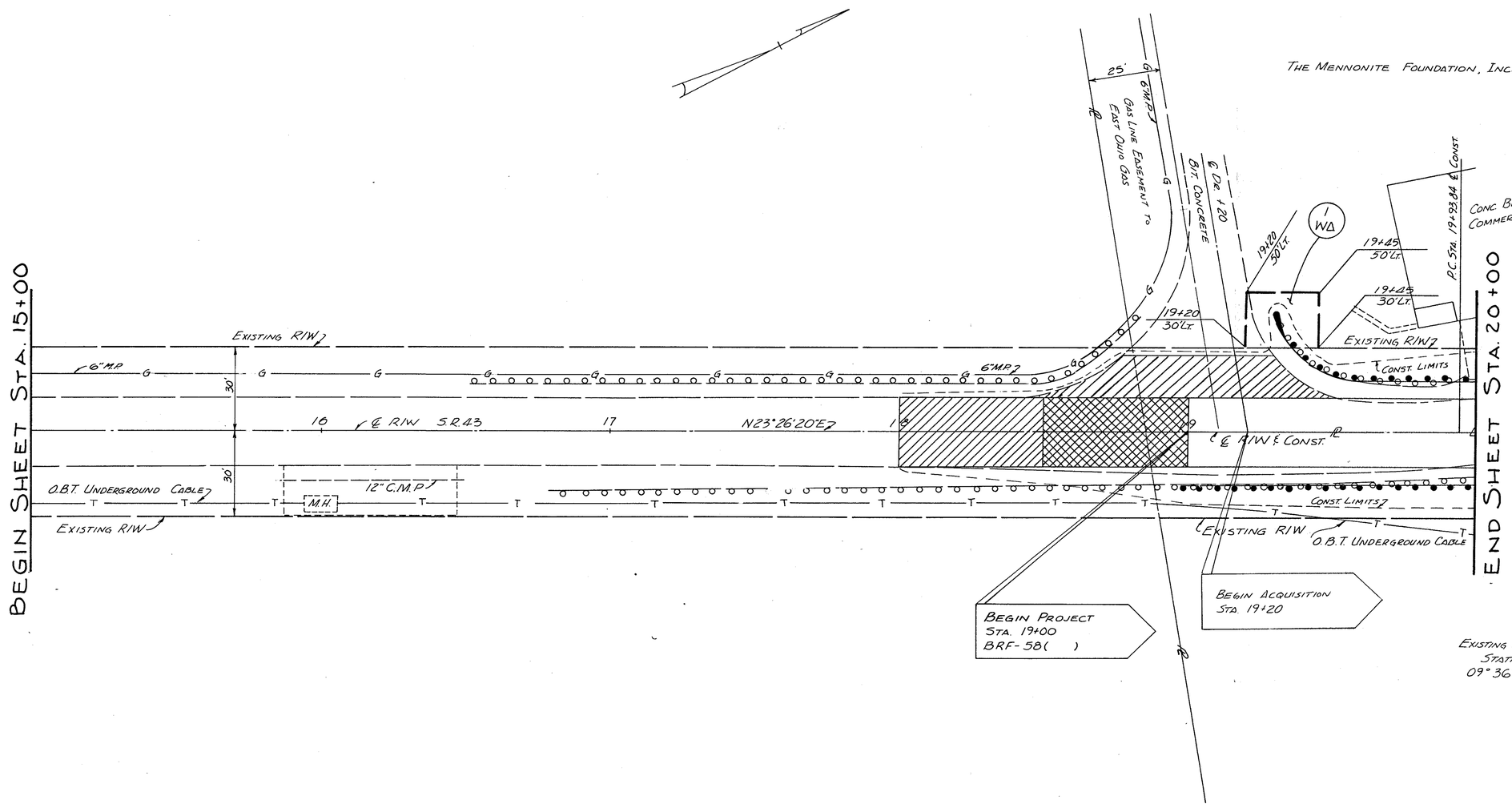
PROPERTY MAP & SUMMARY

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO	BRF-58( )	

25/27

POR-43-13.75

R/W SHEET 2/4



℄ CONSTRUCTION CURVE DATA
P.I. STA. 22+98.87
Δ = 40°52'37" LT.
R = 818.51'
D = 7°00'00"
L = 583.96'
T = 305.03'
E = 54.99'

EXISTING DEFLECTION POINT
STATION 20+00
09°36'59" LT.

PORTAGE COUNTY
FRANKLIN TWP.
LOT 59
T-3-N, R-9-W

0 5 10 20 30 40 50
SCALE IN FEET

FUNDS: BRF

DATE	REVISIONS

R/W SHEET STA. 15+00 TO STA. 20+00

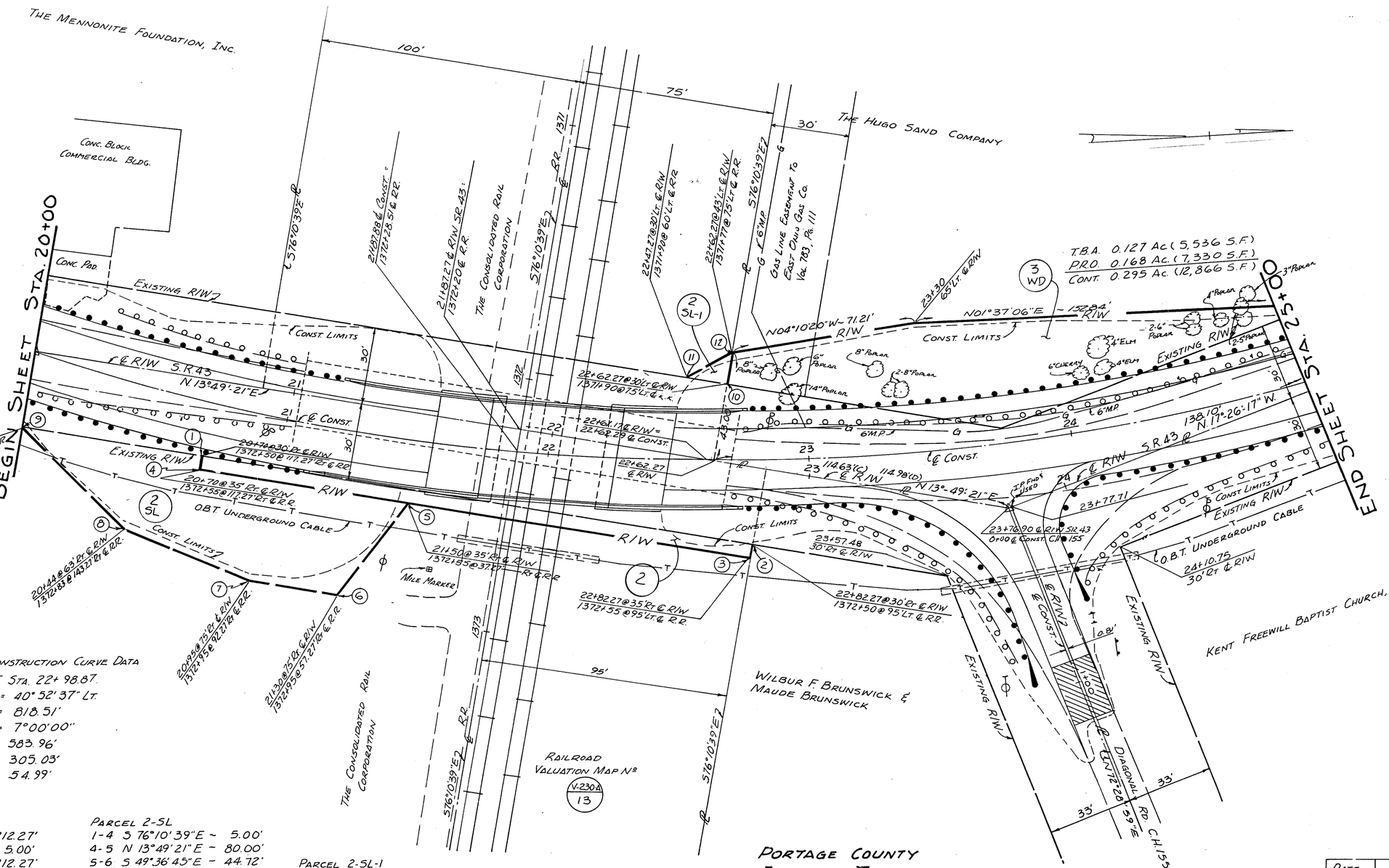
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO	BRF-58( )	

26/27

POR-43-13.75

R/W SHEET 3/4

NOTE: FOR COMMENCING POINT FOR ALL PARCELS SEE DETAIL 'A' SHEET 1 OF 4.



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R = 818.51'
D = 7°00'00"
L = 583.96'
T = 305.03'
E = 54.99'

PARCEL 2
1-2 N 13°49'21"E ~ 212.27'
2-3 S 76°10'39"E ~ 5.00'
3-4 S 13°49'21"W ~ 212.27'
4-1 N 76°10'39"W ~ 5.00'
T.B.A. 0.023 Ac. (1,061 S.F.)

PARCEL 2-SL
1-4 S 76°10'39"E ~ 5.00'
4-5 N 13°49'21"E ~ 80.00'
5-6 S 49°36'45"E ~ 44.72'
6-7 S 13°49'21"W ~ 35.00'
7-8 S 27°03'47"W ~ 52.39'
8-9 S 50°41'33"W ~ 55.00'
9-1 N 13°49'21"E ~ 70.00'
T.B.A. 0.101 Ac. (4,390 S.F.)

PARCEL 2-SL-1
10-11 S 13°49'21"W ~ 15.00'
11-12 N 27°05'31"W ~ 19.85'
12-10 S 76°10'39"E ~ 13.00'
T.B.A. 0.002 Ac. (98 S.F.)

PORTAGE COUNTY
FRANKLIN TWP.
LOT 59
T-3-N, R-9-W

FUNDS: BRF

DATE	REVISIONS
1-14-83	REVISED COURSE 7-8 PCL. 2-SL

R/W SHEET STA. 20+00 TO STA. 25+00

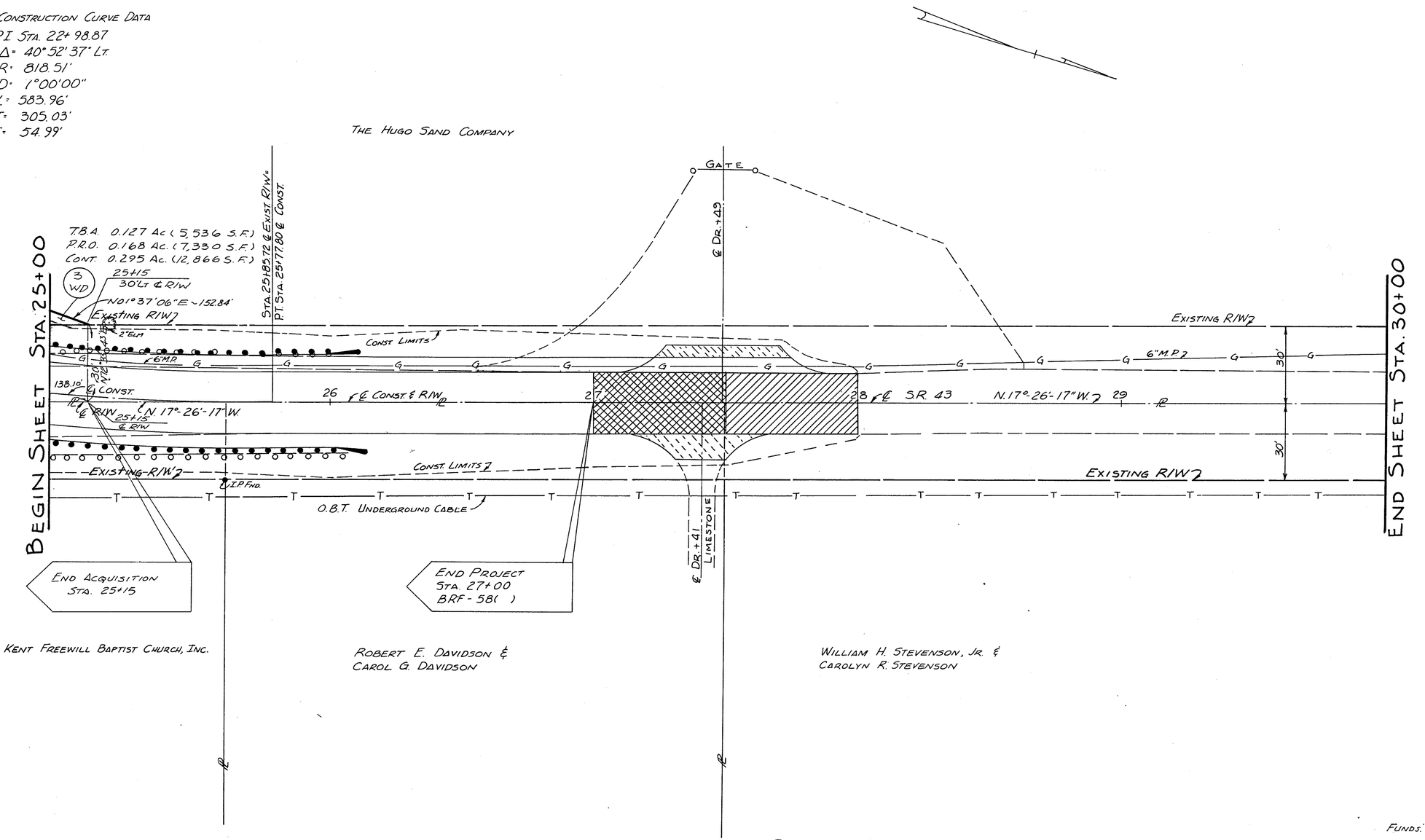
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO	BRF-58( )	

27/27

POR-43-13.75

R/W SHEET 4/4

℄ CONSTRUCTION CURVE DATA
P.I. STA. 22+98.87
Δ = 40°52'37" Lt.
R = 818.51'
D = 1°00'00"
L = 583.96'
T = 305.03'
E = 54.99'



PORTAGE COUNTY
FRANKLIN TWP.
LOT 59
T-3-N, R-9-W

0 5 10 20 30 40 50
SCALE IN FEET

FUNDS: BRF

DATE	REVISIONS

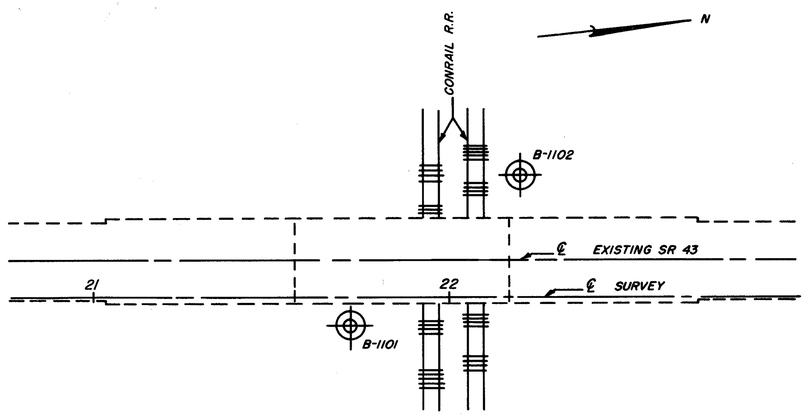
R/W SHEET STA. 25+00 TO STA. 30+00

MICROFILMED
MAY 7 1995

F.H.W.A. REG.	STATE	PROJECT	
5	OHIO		

1/1

POR-43-13.75



SCALE 1"=20'

ADDITIONAL SOIL INFORMATION All available soil and bedrock information which can be conveniently shown on the soil profile and/or structure foundation investigation sheets has been so reported. Additional subsurface investigations may have been made to study some special aspect of the project. Copies of this data, if any, may be inspected in the District Deputy Director's Office, the Bureau of Tests at 1600 West Broad Street, the Pavement and Soils Section of the Bureau of Location and Design or in the Bridge Bureau at 25 South Front Street.

LOG OF BORING NO. B-1101
BRIDGE NO. POR-43-1375

LOCATION: Sta. 21 + 72, 8'Rt. ELEVATION: 1069.7 DATE: 5/20-21/82
SAMPLER(S): 2" O.D. Split-barrel
DRILLING METHOD: 4¼" Auger to 35.0', then rotary to completion COMPLETION DEPTH: 46.5'

DEPTH, FEET	SAMPLE NUMBER	SAMPLING EFFORT	DESCRIPTION	NATURAL CONSISTENCY INDEX (NATURAL MOISTURE CONTENT, PLASTIC LIMIT, LIQUID LIMIT)	TEST RESULTS
0			Fill: Loose black cinders & gravel.		
1	1	4/6/8	Med-dense brown c & f sand, some f-c gravel, trace silt. Contains thin seams of silty clay and silt. Est. A-3a		
5	2A 2B	7/8/5	Med-dense brown sandy silt, trace fine gravel, trace clay. Est. A-4a		
10	3	7/7/10	Stiff to hard brown silty clay, some sand, in/b with silt. Est. A-4b, A-6b		H=1.2-4.5+
	4	9/9/13			
15	5	9/13/18	Med-dense to dense brown gravel w/sand, trace silt. A-1-b GRADATION ON SAMPLE NO. 6 AGG. 59% C.S. 26% F.S. 10% SILT & CLAY 5%		
	6	8/13/27			
	7	10/16/26	GRADATION ON SAMPLE NO. 8 AGG. 29% C.S. 46% F.S. 20% SILT & CLAY 5%		
20	8	8/14/13			
25	9	11/12/26	Med-dense to dense brown fine sand, interbedded w/coarse & fine sand, trace f gravel, trace to little silt. A-3a, Est. A-3 GRADATION ON SAMPLE NO. 10 AGG. 0% C.S. 6% F.S. 79% SILT & CLAY 15%		
	10	9/12/19			
30	11	6/10/17	GRADATION ON SAMPLE NO. 12 AGG. 5% C.S. 33% F.S. 47% SILT & CLAY 15%		
35	12	10/26/37			
40	13	19/27/31	Very-dense gray silt, some fine sand, trace clay. Est. A-4b		
			Dense gray f sand, little silt. A-3a GRADATION ON SAMPLE NO. 14 AGG. 0% C.S. 3% F.S. 85% SILT & CLAY 12%		
45	14	10/16/23	Encountered water at 29'. Used 4¼" dia. conventional auger to 35.0', then 3-1/8" tricone bit & water.		
50					

WATER LEVEL: Caved at 5.0', dry
DATE: 5/21/82

SYMBOLS USED TO INDICATE TEST RESULTS
G - GRADATION; Q - UNCONFINED COMPR.; T - TRIAXIAL COMPR.; C - CONSOLIDATION (SEE SEPARATE CURVES)
N - PENETROMETER (tsf); W - UNIT DRY WEIGHT (psf); D - RELATIVE DENSITY (%)

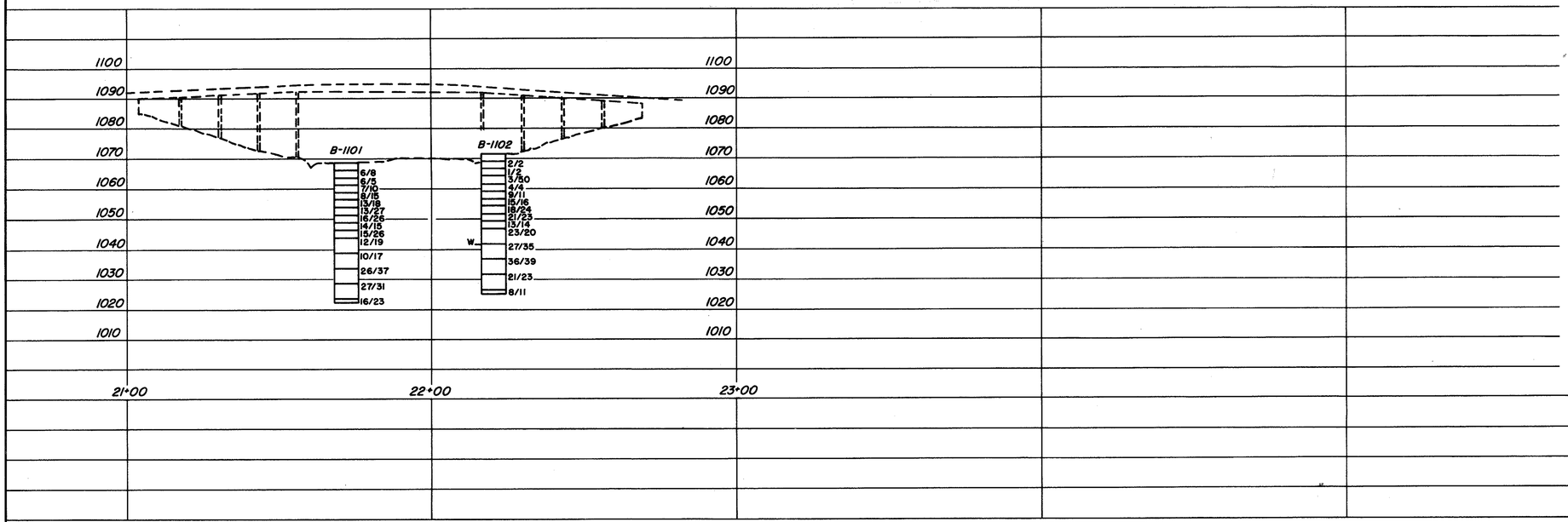
LOG OF BORING NO. B-1102
BRIDGE NO. POR-43-1375

LOCATION: Sta. 22 + 20, 24' Lt. ELEVATION: 1072.2 DATE: 5/24/82
SAMPLER(S): 2" O.D. Split-barrel
DRILLING METHOD: 4¼" dia. Conventional Auger COMPLETION DEPTH: 46.5'

DEPTH, FEET	SAMPLE NUMBER	SAMPLING EFFORT	DESCRIPTION	NATURAL CONSISTENCY INDEX (NATURAL MOISTURE CONTENT, PLASTIC LIMIT, LIQUID LIMIT)	TEST RESULTS
0			Fill: Loose black cinders & gravel.		
1	1	1/2/2	Very-loose brown gravel w/sand, some silt and clay. A-1-b GRADATION ON SAMPLE NO. 2 AGG. 37% C.S. 22% F.S. 18% SILT & CLAY 23%		
5	2	1/2/2			
	3	3/4/50	Brown cobbles and boulders. Est. A-1-a		
10	4	4/4/4	Loose to med-dense brown gravel w/sand, trace silt, few thin seams of sandy silt. Est. A-1-b		
	5	6/8/11			
15	6A 6B	10/15/16	Hard brown sandy silt in/b with f sand. Est. A-4a, A-3		H=4.5+
	7A 7B	11/18/24	Med-dense to dense brown gravel w/sand, trace silt. A-1-b GRADATION ON SAMPLE NO. 8 AGG. 45% C.S. 33% F.S. 17% SILT & CLAY 5%		
20	8	20/21/23			
25	9	12/13/14	Medium-dense to dense brown fine sand interbedded with coarse and fine sand, trace to little fine gravel, trace to little silt.		
	10	19/23/20			
30	11	16/27/35	Est. A-3a, A-3		
35	12	14/36/39			
40	13	11/21/23	Dense gray silt, little fine sand, little silt. A-4b GRADATION ON SAMPLE NO. 13 AGG. 0% C.S. 1% F.S. 13% SILT & CLAY 86%		
			Medium-dense gray fine sand, little silt. Est. A-3a		
45	14	6/8/11	Encountered slight seepage between 1.5' and 12.5', water @ 28'.		
50					

WATER LEVEL: 30.0'
DATE: 5/24/82

SYMBOLS USED TO INDICATE TEST RESULTS
G - GRADATION; Q - UNCONFINED COMPR.; T - TRIAXIAL COMPR.; C - CONSOLIDATION (SEE SEPARATE CURVES)
N - PENETROMETER (tsf); W - UNIT DRY WEIGHT (psf); D - RELATIVE DENSITY (%)



GEOLOGY OF THE SITE

THE STRUCTURE SITE IS LOCATED ON THE GLACIATED PLATEAU PHYSIOGRAPHIC SECTION OF OHIO AND OVER A BURIED BEDROCK VALLEY. THE OVERBURDEN CONSISTS MOSTLY OF GRANULAR SOILS WHICH WERE DEPOSITED AS OUTWASH, AND SHALE AND SANDSTONE BEDROCK OF PENNSYLVANIAN AGE LIES AT AN APPROXIMATE DEPTH OF 200 FEET.

EXPLORATION

BETWEEN MAY 20 AND 24, 1982, TWO BORINGS WERE DRILLED NEAR OPPOSITE CORNERS OF THE PROPOSED STRUCTURE. CONVENTIONAL, SOLID-STEM AUGERS WERE USED TO ADVANCE BORING NO. B-1101 TO A DEPTH OF 35 FEET AND BORING NO. B-1102 TO COMPLETION AT 46.5 FEET. BORING B-1101 WAS CONTINUED TO COMPLETION USING ROTARY DRILLING METHODS AND WATER AS A DRILLING FLUID.

INVESTIGATIONAL FINDINGS

ONE AND TWO FEET OF CINDER AND GRAVEL FILL WERE PRESENT AT THE GROUND SURFACE AT THE BORING LOCATIONS. WITH THE EXCEPTION OF TWO- TO THREE-FOOT-THICK LAYERS OF STIFF TO HARD COHESIVE SOIL STRATA AT DEPTHS OF 10 AND 15 FEET, THE REMAINING SOILS WERE ALL GRANULAR AND RANGED FROM LOOSE TO VERY-DENSE IN COMPACTNESS. THE BORINGS ENDED AT DEPTHS OF 46.5 FEET (ELEVATIONS 1026 AND 1023).

SLIGHT SEEPAGE WAS ENCOUNTERED BETWEEN DEPTHS OF 1.5 AND 12.5 FEET IN BORING B-1102 AND IS PROBABLY PERCHED WATER. RAPID WATER FLOW INTO THE BORINGS WAS ENCOUNTERED AT DEPTHS OF 28 AND 29 FEET, AND THE GROUND-WATER LEVEL IS BELIEVED TO BE CLOSE TO THOSE LEVELS (APPROXIMATE ELEVATIONS 1044 AND 1041).

BENEDICT, BOWMAN, CRAIG & MOOS
195 CHITTENDEN AVE.
COLUMBUS, OHIO (614) 294-3745

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. POR-43-1375
OVER CONRAIL R.R.

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.F.C.	M.H.M		

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO	BRF-58( )	

24/27

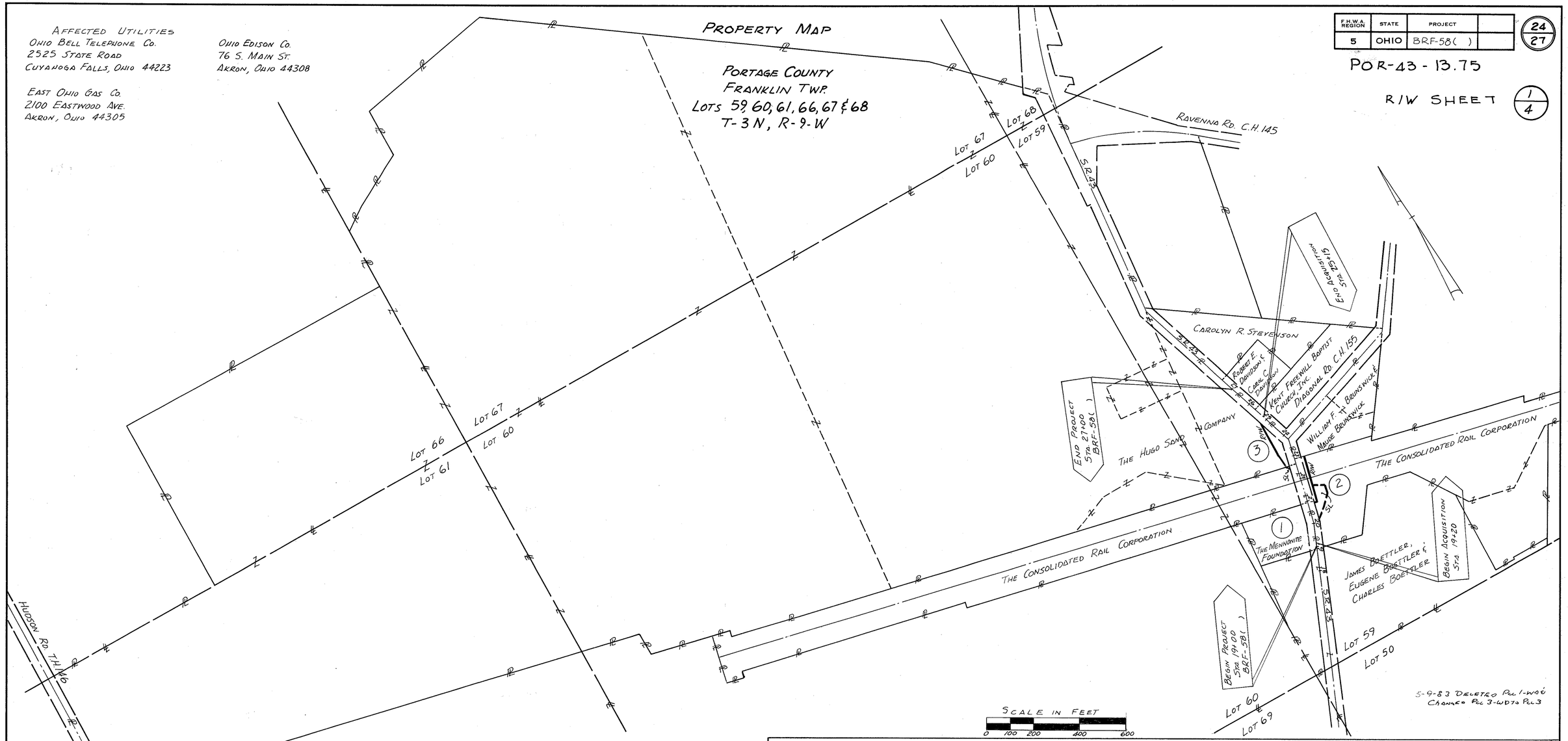
POR-43-13.75

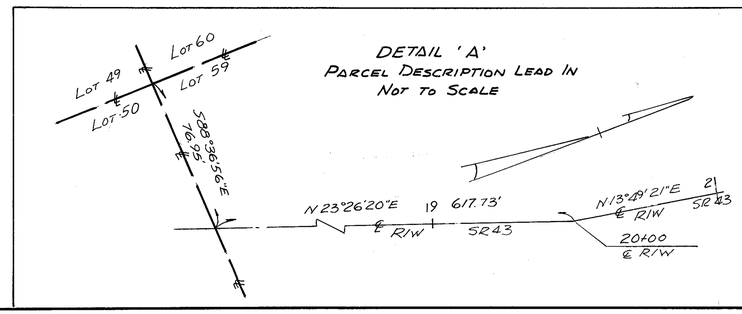
R/W SHEET 1/4

AFFECTED UTILITIES
OHIO BELL TELEPHONE CO.
2525 STATE ROAD
CUYAHOGA FALLS, OHIO 44223

OHIO EDISON CO.
76 S. MAIN ST.
AKRON, OHIO 44308

EAST OHIO GAS CO.
2100 EASTWOOD AVE.
AKRON, OHIO 44305





SUMMARY OF ADDITIONAL RIGHT-OF-WAY REQUIRED

NO. OF OWNERS 3 TOTAL NO. OF OWNERS WITH STRUCTURES 0 NO. OF TOTAL TAKES 0

PARCEL No.	TYPE FUNDS	OWNER	RECORDED VOL.	RECORDED PAGE	DEED AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O IN TAKE	NET TAKE	NET RESIDUE LEFT	NET RESIDUE RIGHT	BLDG	SHEET No	REMARKS
1	BRF	THE MENNONITE FOUNDATION, INC.	974	592	1.290								2	
2		THE CONSOLIDATED RAIL					0.023Ac	-	0.023Ac				3	
2-SL		CORPORATION					0.010Ac	-	0.010Ac				3	CONSTRUCT SLOPE
2-SL-1							0.002Ac	-	0.002Ac				3	CONSTRUCT SLOPE
3		THE HUGO SOND COMPANY	788	331	182.215Ac	1.894Ac	0.295Ac	0.168Ac	0.127Ac	180.194 Ac.			3 & 4	
			789	136										

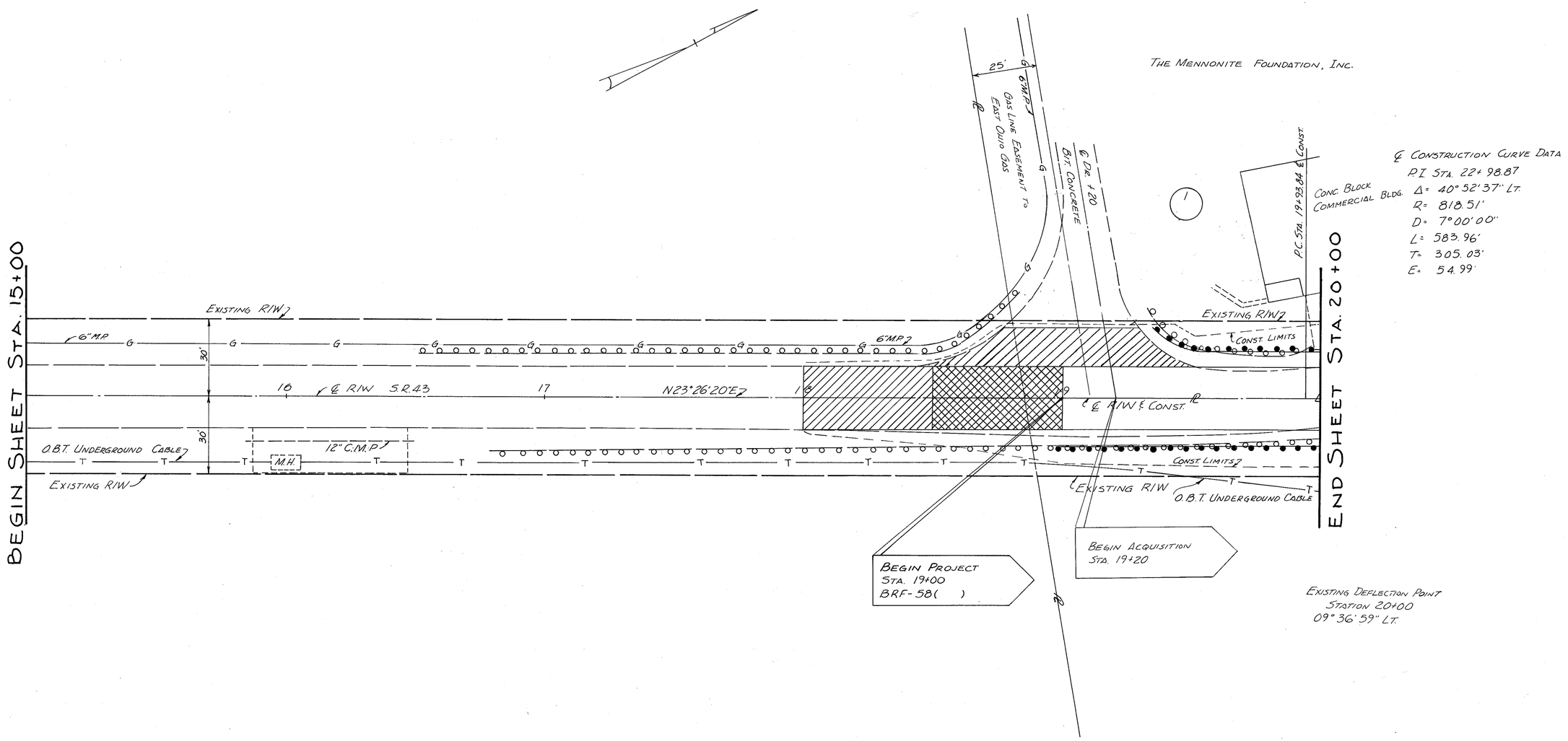
PROPERTY MAP & SUMMARY

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO	BRF-58( )	

25/27

POR-43-13.75

R/W SHEET 2/4



PORTAGE COUNTY
FRANKLIN TWP.
LOT 59
T-3-N, R-9-W

0 5 10 20 30 40 50
SCALE IN FEET

FUNDS: BRF

DATE	REVISIONS
5-10-83	DELETED PCL 1-WA. & REVISED PROPOSED
	GUARD RAIL PER CHANGE ORDER

R/W SHEET STA. 15+00 TO STA. 20+00

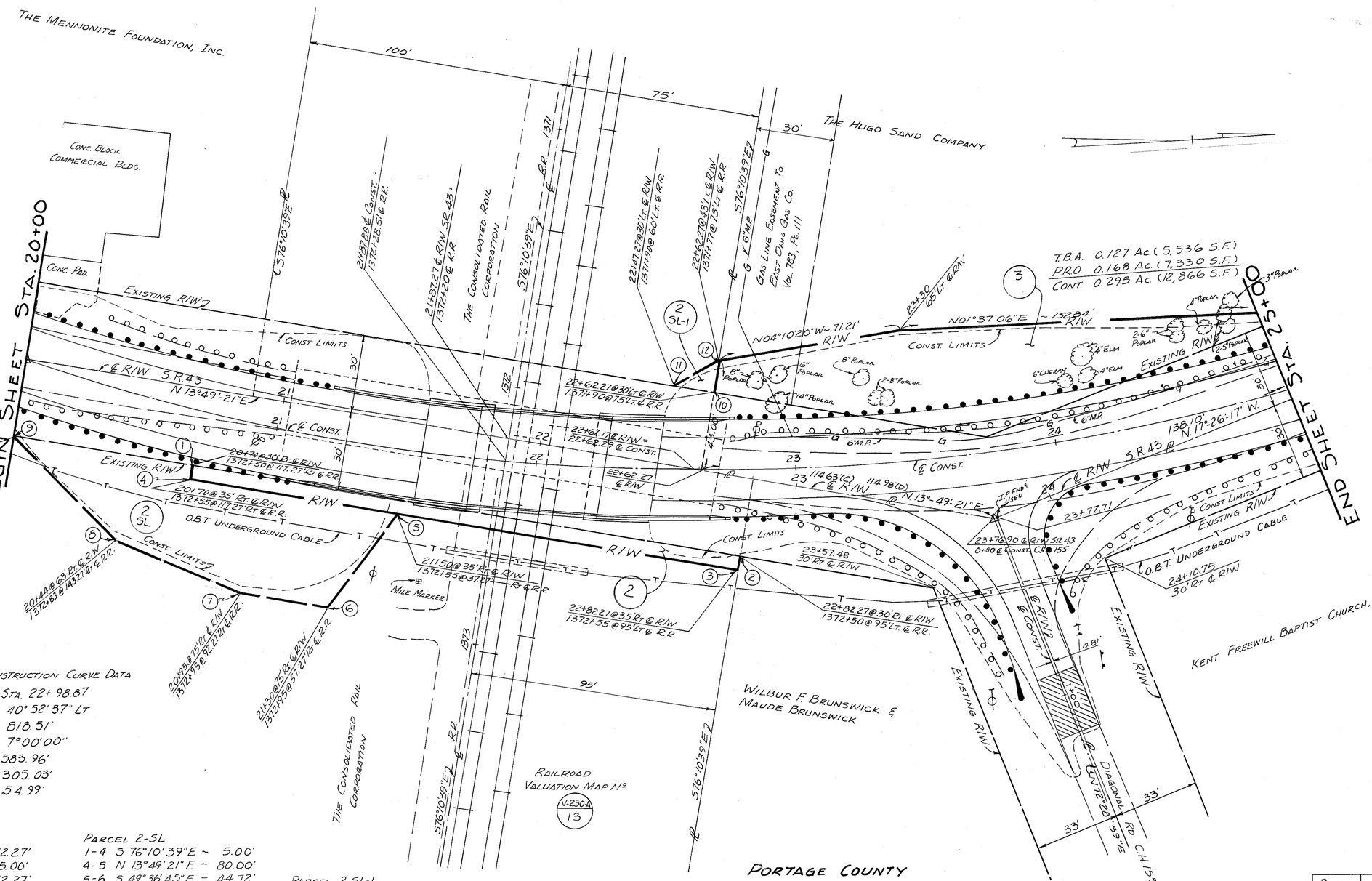
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO	BRF-58( )	

26/27

POR-43-13.75

R/W SHEET 3/4

NOTE: FOR COMMENCING POINT FOR ALL PARCELS SEE DETAIL 'A' SHEET 1 OF 4.



FUNDS: BRF

DATE	REVISIONS
1-14-83	REVISED COURSE 7-8 PCL. 2-SL
5-10-83	Changed P.I. 3-WD To P.I. 3

R/W SHEET STA. 20+00 TO STA. 25+00

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO	BRF-58( )	

27/27

POR-43-13.75

R/W SHEET 4/4

℄ CONSTRUCTION CURVE DATA
P.I. STA. 22+98.87
Δ = 40°52'37" LT.
R = 818.51'
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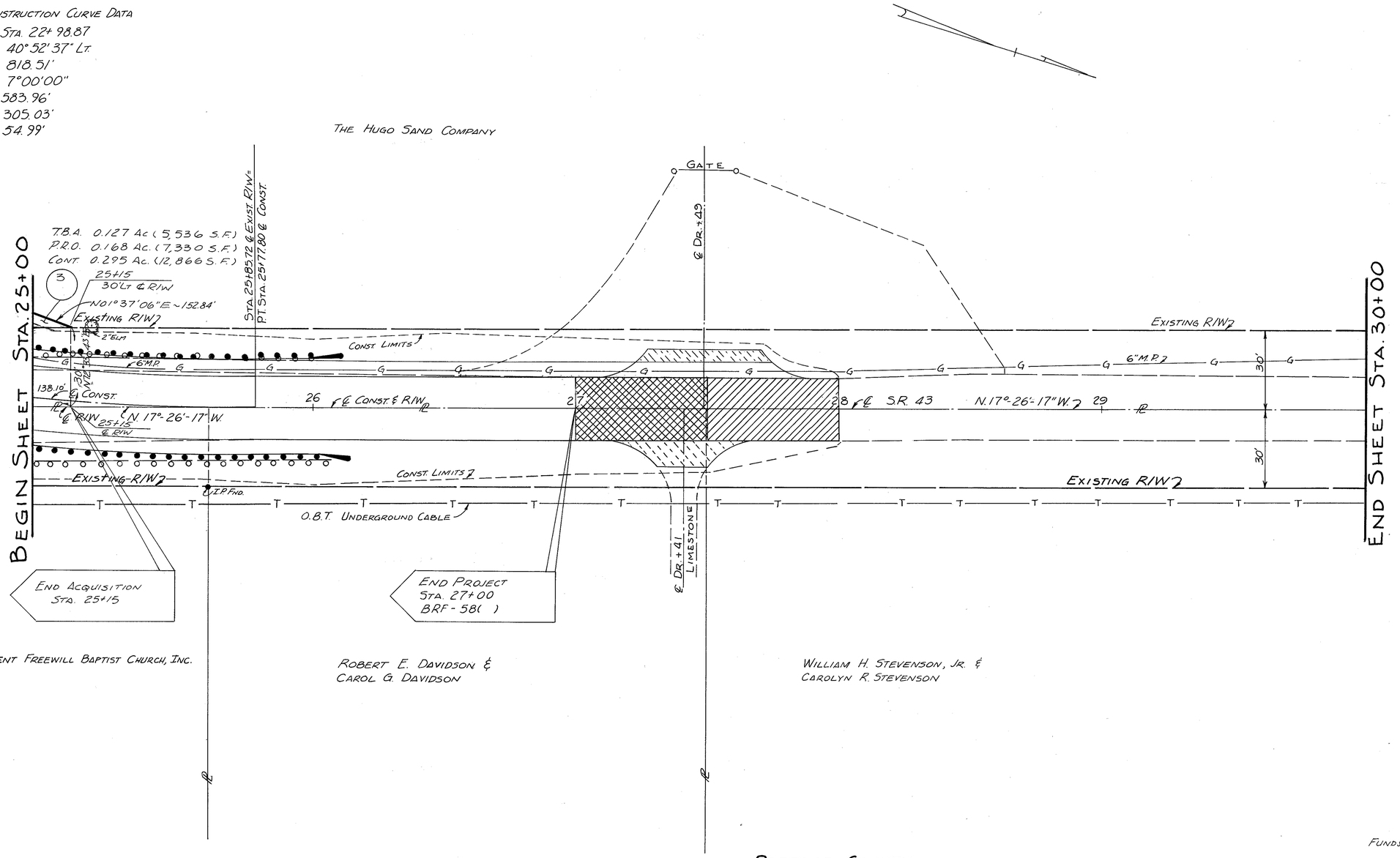

PORTAGE COUNTY
FRANKLIN TWP.
LOT 59
T-3-N, R-9-W

0 5 10 20 30 40 50
SCALE IN FEET

FUNDS: BRF

DATE	REVISIONS
5-10-83	CHANGED PL 3-WD TO PL 3

R/W SHEET STA. 25+00 TO STA. 30+00