FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	S-50(5)	

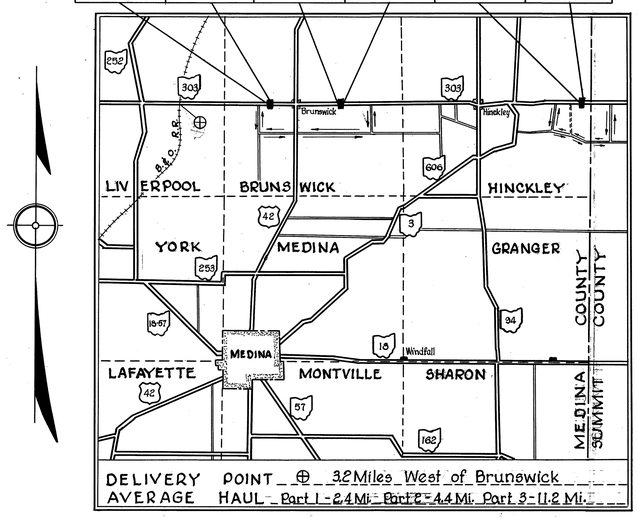
1/22

MED-303-(6.20)(8.13)(14.90)

S-50(5)

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
MED-303-(6.20)(8.13)(14.90)
BRUNSWICK AND HINCKLEY TOWNSHIPS
MEDINA COUNTY

PART 1		PART 2		PART 3	
Begin Project Sta. 324+65	Suspend Proj. Sta. 324+95	Resume Proj. Sta. 430+25	Suspend Proj. Sta. 432+50	Resume Proj. Sta. 783+75	End Project Sta. 794+50



CONVENTIONAL SIGNS

COUNTY LINE
TOWNSHIP LINE
SECTION LINE
CORPORATION LINE
FENCE LINE
CENTER LINE
POLE LINE
STEAM RAILROAD
GUARD RAIL

INDEX OF SHEETS

	SHEET Nº
TITLE PAGE	1
TYPICAL SECTIONS	2
GENERAL NOTES	3
GENERAL SUMMARY	3
PLAN & PROFILE	4, 7, 11, 12
ROADWAY CROSS SECTIONS	5, 8, 13, 14, 15
CHANNEL	6, 9, 16
STRUCTURE DETAILS	6, 10
STRUCTURE OVER 20 FT. SPAN	17-19
RIGHT OF WAY	20-22

LINE DATA

	PART 1	PART 2	PART 3
BEGIN WORK	Sta. 323+75	Sta. 430+00	Sta. 782+00
END WORK	Sta. 325+75	Sta. 432+75	795+00
GROSS & NET LENGTH OF WORK	200 Lin. Ft. or 0.037 Mi.	275 Lin. Ft. or 0.052 Mi.	1300 Lin. Ft. or 0.246 Mi.
BEGIN PROJECT	Sta. 324+65	Sta. 430+25	Sta. 783+75
END PROJECT	Sta. 324+95	Sta. 432+50	794+50
GROSS & NET LENGTH OF PROJECT	30 Lin. Ft. or 0.005 Mi.	225 Lin. Ft. or 0.042 Mi.	1075 Lin. Ft. or 0.203 Mi.

TOTAL LENGTH OF PROJECT = 1330 Lin. Ft. or 0.251 Mi.
TOTAL LENGTH OF WORK = 1775 Lin. Ft. or 0.336 Mi.

LOCATION MAP

Scale 1" = 2 Miles

PORTION TO BE IMPROVED
STATE HIGHWAYS
OTHER ROADS
DETOURS

SCALES

PLAN 1" = 50'
PROFILE HORIZONTAL 1" = 50'
PROFILE VERTICAL 1" = 5'
CROSS SECTIONS 1" = 5'

CONSTRUCTION BUREAU
JUN 1 1959
GROUND PHOTOLAB

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 necessary 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 require the closing to traffic of the highway, except as noted on sheet 3, and that detours will be provided as indicated on the plans.

Approved E. L. Sohm
Date 3/16/56 Division Deputy Director

Approved John J. Weiss
Date 5-4-56 Deputy Director of Planning & Programming

Approved Richard Orth
Date 4/30/56 Engineer of Bridges

Approved E. S. Sutton
Date 4-30-56 Engineer of Location & Design

Approved I. F. Arnold
Date 4-30-56 Deputy Director of Design & Construction

Approved W. T. Lafferty
Date 5-5-56 First Assistant Director

Approved S. Lincoln
Date 5-7-56 Director of Highways

SUPPLEMENTAL SPECIFICATIONS		
B-119	R-12-14-55	
M-110.27	9-9-52	
L-209.12	7-17-54	

STANDARD DRAWINGS			
L-1	4-1-50	I-8 C.B. 22-A & B	5-1-52
L-3	4-1-50	I-15 No. 1	8-1-55
L-3A	4-1-50	I-15 No. 2	12-1-54
RI-1	1-3-55	G-7.07	4-2-56
DR-1	1-3-55	AB-1-54	12-1-54
T-35	1-2-56	SB-1-47	1-20-48
S-27 RC.3	2-20-45	CS-1-54 (2 Shts.)	12-1-54
S-27 RC.4	1-4-54	A-1-54	12-1-54
I-1,2,3,4,&5	2-20-45	P-1-54	12-1-54

FILE Nº	MED-303-(6.20)(8.13)(14.90)
206M	DATE OF LETTING:
	CONTRACT Nº

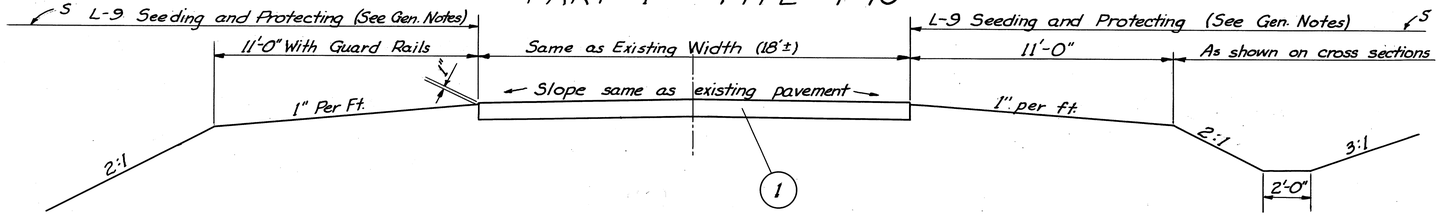
DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DISTRICT ENGINEER DATE

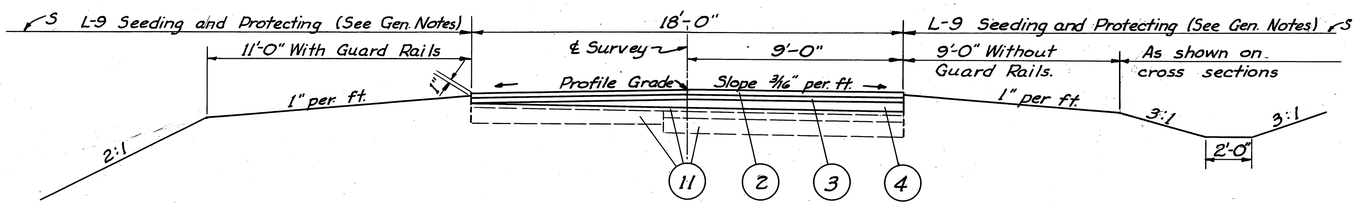
TYPICAL SECTIONS

PART 1 TYPE T-70



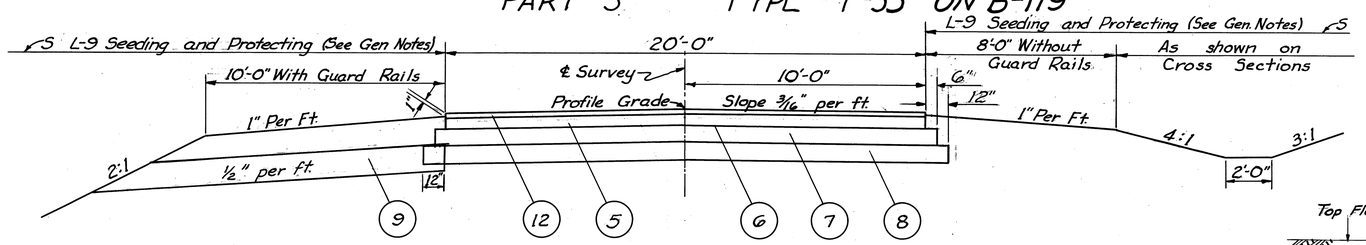
Sta. 324+65.00 to 324+95.00 = 30.00 Lin. Ft.

PART 2 TYPE T-35

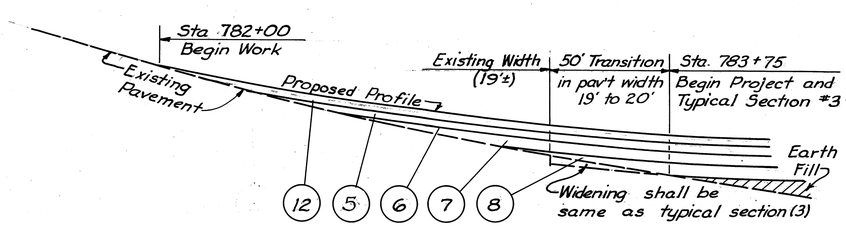


Sta. 430+25.00 to 430+81.71 = 56.71 Lin. Ft.
Sta. 431+28.29 to 432+50.00 = 121.71 Lin. Ft.
TOTAL 178.42 Lin. Ft.

PART 3 TYPE T-35 ON B-119



Sta. 783+75.00 to 787+44.99 = 369.99 Lin. Ft.
Sta. 788+61.01 to 794+50.00 = 588.99 Lin Ft.
TOTAL 958.98 Lin. Ft.



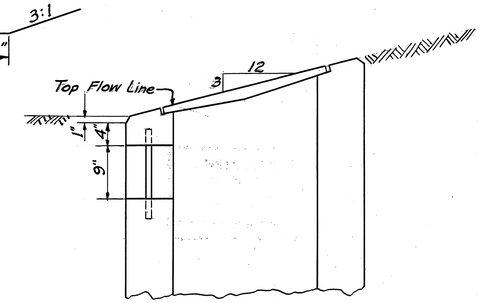
GRAPHIC REPRESENTATION OF VARIOUS COURSES IN LONGITUDINAL PROFILE

1. T-70 9" Portland Cement Concrete Pavement
2. T-35 1¼" Asphaltic Concrete Surface Course Type "A" (70-80)
3. B-35 1¼" Asphaltic Concrete Leveling Course (70-80)
4. B-35 0" Min. Asphaltic Concrete Leveling Course (70-80)
5. B-35 2½" Asphaltic Concrete Leveling Course (70-80)
6. T-30 Bituminous Prime Coat Sec. M-5.2 RC-1 or RC-2, Sec. M-5.3, MC-0 or MC-1, applied at the rate of 0.35 gal. per sq. yd.
7. B-119 5" Crushed Aggregate Base Course
8. I-22 6" Subbase
9. I-9 Stone Underdrains No. 2 To be placed 50 ft. apart on alternate sides as directed by the Engineer.

11. Existing Pavement, 18' Asphaltic Road Mix over 8' Traffic Bound Base and 10' Brick on Concrete Base.
12. T-35 1½" Asphaltic Concrete Surface Course Type "A" (70-80)

NOTE: Details of shoulders, slopes and ditches not shown are to conform with Standard Drawing No. RI-1 unless otherwise shown on cross sections.

Grading adjacent to Typical Sections shall have merging slopes and berm widths within the limits of work as shown on the roadway cross sections.



For details not shown, see Standard Drawing I-8 C.B. 2-2-A

DETAIL OF #2-2-A CATCH BASIN MODIFICATION

SUBGRADE COMPACTION: Subgrade under drives, approaches or mailbox turnouts paved with B-119 Material shall be compacted for a depth of six (6) inches to the density requirements of Table III Section E-1.09. Payment for subgrade compaction, as specified above, shall be included in the unit price bid for Item E-1 Roadway Excavation.

GENERAL NOTES

DESIGN SPEED: 60 Miles per hour.

FIELD OFFICE: The Contractor shall provide two suitable "Field Offices", one to serve Parts 1 and 2, and one to serve Part 3, in accordance with Section S-0.01(b) having a minimum of 150 sq. ft. per unit. The Contractor shall have telephones installed and maintained during the construction of this project.

UTILITIES: Any and all work required for the adjustment of public or private utilities shall be done by and at the expense of their respective owners unless otherwise shown on these plans.

CALCULATIONS: All calculations are on file in the Division Office.

PAVEMENT REMOVAL: The removal of approximately 40 sq. yds of existing rigid pavement under Parts 1 and 2 is included in channel excavation and shall be paid for as such. All other pavement removal on this project is of a flexible type and is included in E-1 Roadway Excavation and shall be paid for as such.

T-70 PORTLAND CEMENT CONCRETE PAVEMENT (PART 1) shall be placed to meet the line and grade of the existing undisturbed pavement. The use of wooden side forms and hand finishing as per Section T-71.211 will be permitted. Expansion and longitudinal joints will not be required.

"GUARD RAIL REMOVED AND STORED" shall include careful removal and storage only of the rail and hardware. The posts shall become the property of the Contractor and shall be disposed of by him. Rail to be stored shall not be used on run-around bridge and approaches.

PIPE UNDERDRAINS (PART 3): An estimated quantity of 500 linear feet of 6" I-4 Underdrains is included in the general summary to be used on part 3 of this project if and as directed by the Engineer. Construction shall be in accordance with Standard Construction Drawing RI-1.

SODDED DITCHES (PART 3) shall be of the same contour as shown on the cross sections and shall contain 2/3 sq. yd. per linear foot unless otherwise shown on these plans.

SEEDING AND PROTECTING: Quantities for seeding are calculated for the soil areas between construction limits as shown on roadway and channel cross sections. All areas outside these limits where the vegetative growth has been injuriously disturbed or destroyed by the Contractor shall be restored and seeded in accordance with the provisions of Item L-9 by the Contractor at his own expense.

Seeding areas shall be fertilized using commercial fertilizer having a formula of 10-6-4 and applied at the rate of 20 lbs. per 1000 sq. ft. and seeded with the following mixture: 45% Kentucky 31 Fescue, 20% Creeping Red Fescue, 15% Kentucky Bluegrass, 15% Redtop, and 5% Alsike Clover, sown at the rate of 3 lbs. per 1000 sq. ft.

Seeding limits are indicated on the cross sections by the symbol ⌐S.

REMOVAL OF TREES AND STUMPS shall be paid for by a lump sum bid. The number of trees and stumps shown in the following table is for estimating purposes only. Sizes under 12" are not listed. The State does not guarantee the table's accuracy.

	Size	12"-18"	18"-24"	24"-30"	30"-36"	36"-42"	42"-48"
Part 1	Trees			1			
Part 2	Trees	3		2			
Part 3	Trees	9	4	1	1		
Part 3	Stumps				1		

TRAFFIC (PARTS 1 and 2): State Route 303 will be closed to traffic for a maximum period of 90 consecutive calendar days with detours to be established as indicated on sheet 1.

The Contractor shall notify the Director in writing, for approval, his intentions of closing the road to traffic at least ten (10) days in advance of the proposed date of closing.

While the highway is closed to traffic, all structure and pavement items shall be completed on both parts.

(PART 3) During construction of the bridge, two way traffic shall be maintained at all times on the existing roadway and temporary run-around bridge and approaches as provided for on structure detail sheets, until the detour is placed into effect.

State Route 303 will be closed to traffic for a maximum period of 30 consecutive calendar days to provide for construction of earthwork and pavement in connection with approaches. Detours will be established as indicated on the title sheet.

The Contractor shall notify the Director in writing, for approval, his intentions of closing the road to traffic at least ten (10) days in advance of the proposed date of closing. Approval will be granted only when the structure is completed or near enough to completion that it shall be finished within the 30 day detour period.

NOTES CONTINUED IN NEXT COLUMN

GENERAL SUMMARY

PART 1 CODE 7001	PART 2 CODE 6807	PART 3 CODE 6201	ITEM NO.	GRAND TOTAL	UNITS	DESCRIPTION	From Sheets No
						ROADWAY	
235	79	6858	E-1	7172	Cu.Yds.	Roadway Excavation, As per plan	4,7,11,12
60	67	2200	E-1	2327	Sq.Yds.	Compacted Subgrade	*
322	431		E-4	753	Cu.Yds.	Borrow	4,7
Lump	Lump	Lump	E-9	Lump	Lump	Removal of Trees and Stumps	3
3	3	35	E-11	41	M.Gal.	Water	*
7500	91.84	127.96	I-15	294.80	Lin.Ft.	Guard Rail, Steel Beam Type (Deep)	4,7,11
72			I-15	72	Lin.Ft.	Guard Rail Removed and Disposed of.	4
		100	I-15	100	Lin.Ft.	Guard Rail Removed and Stored, As per plan.	11
1160	1680	12,820	L-9	15,660	Sq.Yds.	Seeding and Protecting, As per plan	*
0.11	0.15	1.22	L-9	1.48	Tons	Commercial Fertilizer (10-6-4)	*
		767	L-10	767	Sq.Yds.	Sodding	11,12
						DRAINAGE	
14	120	46	E-2	180	Cu.Yds	Excavation For Structures, Unclassified	4,10,12
	Lump		E-2	Lump	Lump	Cofferdams, Cribs, and Sheeting.	10
168	175	20	E-3	363	Cu.Yds.	Channel Excavation, As per plan	4,10,12
	21		S-1	21	Cu.Yds.	Concrete For Structures, Class C (Slabs)	10
4.2		2.4	S-1	6.6	Cu.Yds.	Concrete For Structures, Class E	4,12
	39		S-1	39	Cu.Yds.	Concrete For Structures, Class E (Footers)	10
	46		S-1	46	Cu.Yds.	Concrete For Structures, Class E (Walls)	10
	70		S-3	70	Sq.Yds.	Waterproofing, Type C	10
	14		S-3	14	Lin.Ft.	Waterproofing, 12" x ½" Premolded Sealing Strip	10
	7533		S-4	7533	Pounds	Reinforcing Steel	10
	8		S-9	8	Sq.Ft.	¼" Bituminous Premolded Expansion Joint Filler	10
	33.16		S-14	33.16	Lin.Ft.	Railing, (Type I-15.13 with Steel Posts)	10
Lump	Lump	Lump	S-24	Lump	Lump	Removal of Existing Structures	4,10,12
124			S-27	124	Lin.Ft.	54" Pipe For Roadway Culverts	4
		58	S-27	58	Lin.Ft.	65" x 40" Paved Bituminous Coated Corrugated Metal Arch With Integral Base 8 Ga. Sec. M16.4(i)(d) for Roadway Culverts	12
	47		S-29	47	Cu.Yds.	Porous Backfill	10
		44	I-1	44	Lin.Ft.	15" Pipe For Driveways Sec. M-6.4(a)	12
		676	I-2	676	Lin.Ft.	12" Class "A" Storm Sewers	11,12
34			I-2	34	Lin.Ft.	24" Class "A" Storm Sewers	4
		500	I-4	500	Lin.Ft.	6" Underdrains	3
		1	I-8	1	Each	Standard No. 2-2-A Catch Basin	12
		3	I-8	3	Each	Standard No. 2-2-A Catch Basin, Modified As Per Plan	11,12
		214	I-9	214	Lin.Ft.	Stone Underdrains No. 2	*
						PAVEMENT	
	26	169	B-35	195	Cu.Yds.	Asphaltic Concrete Leveling Course (70-80)	11,*
	7	7	T-30	14	Gal.	Bituminous Tack Coat, As per plan.	7,11
		746	T-30	746	Gal.	Bituminous Prime Coat Sec. M-5.2, RC-1 or RC-2, or Sec. M-5.3, MC-0 or MC-1.	*
	27	118	T-35	145	Cu.Yds.	Asphaltic Concrete Surface Course, Type "A" (70-80)	7,10,11,12*
60			T-70	60	Sq.Yds.	9" Portland Cement Concrete Pavement.	4
	67	67	I-7	134	Sq.Yds.	Reinforced Concrete Approach Slabs (T=10")	7,11
		404	I-22	404	Cu.Yds.	Subbase	11,*
		408	B-119	408	Cu.Yds.	Crushed Aggregate Base Course	11,*
		QUANTITIES	FOR	STRUCTURE	OVER	20 FT. SPAN, SEE SHEET NO. 18	

* From Calculations

TRAFFIC-CONTINUED (PARTS 1, 2, and 3): In the event any part of this project can not be completed by November 30, 1956, the detour for that part will not be used before May 1, 1957. The road will not be closed to traffic on any part of this project unless it is determined by the State that the structure and pavement on that part will be completed by Nov. 30, 1956.

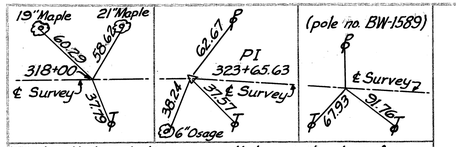
Any other method of maintaining traffic may be used if approved, in writing, by the Director.

Aggregate and Chloride required for the purpose of maintaining local traffic shall be measured and paid for under the respective S-15 Items as shown on the Structure Summary, Sheet 18.

Rev 5/17/56

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

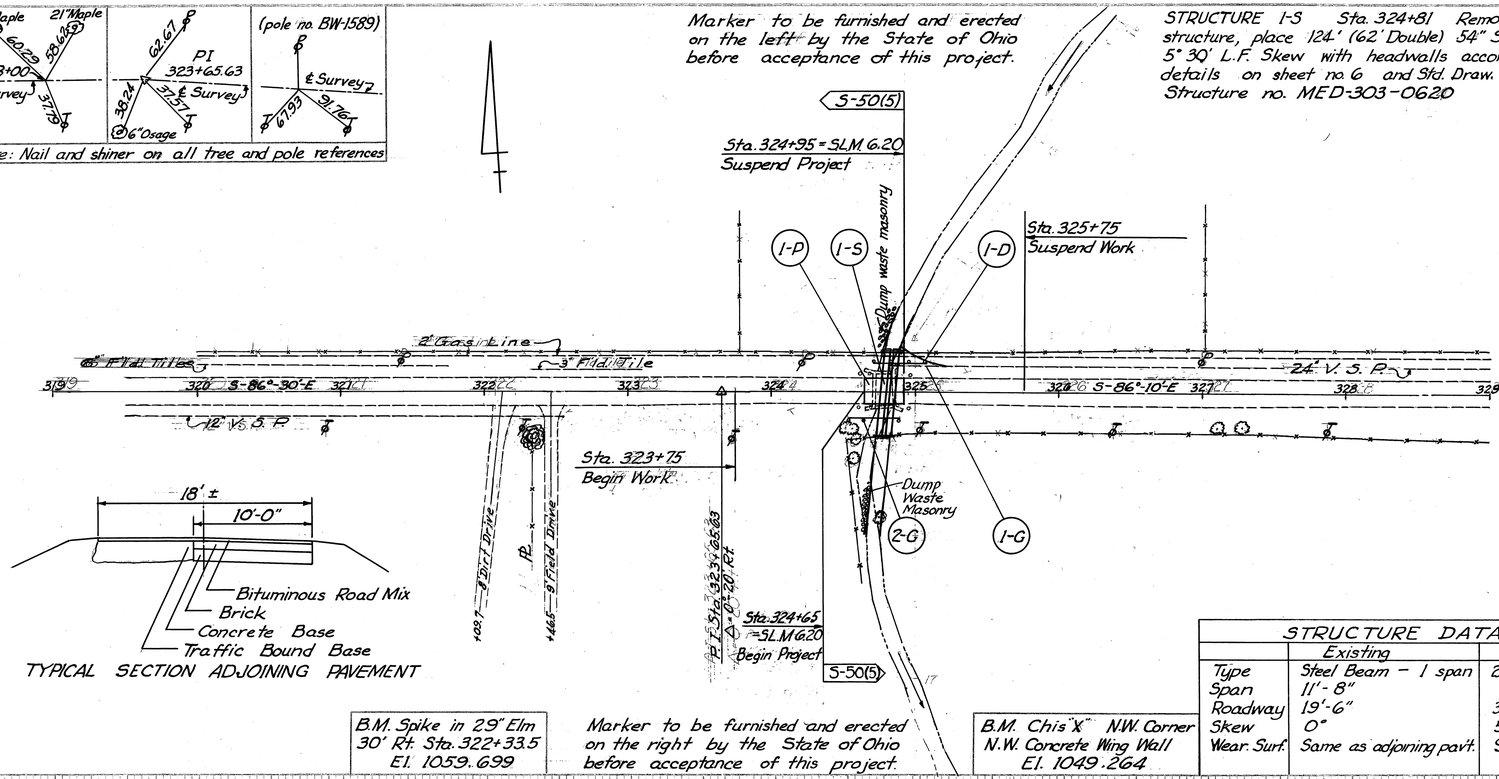
MED-303-(6.20)(8.13)(14.90)
Part 1



Note: Nail and shiner on all tree and pole references

Marker to be furnished and erected on the left by the State of Ohio before acceptance of this project.

STRUCTURE 1-S Sta. 324+81 Remove existing structure, place 124' (62' Double) 54" S-27 on 5° 30' L.F. Skew with headwalls according to details on sheet no. 6 and Std. Draw. S-27 P.C.4. Structure no. MED-303-0620



Ref. No.	Station	E-2 Excavation For Structure Cu. Yds.	E-3 Channel Excavation Cu. Yds.	T-70 9" P.C. Concrete Pavement Sq. Yds.	I-2 24" Storm Sewer Type A Lin. Ft.	I-15 Guard Rails Stl Beam Type Deep Lin. Ft.	I-15 Guard Rails Removed & Disposed of Lin. Ft.	S-1 Concrete for Struc. Class E Cu. Yds.	*S-24 Struct. Removal * Lump.	S-27 54" Pipe for Rdw. Culverts Lin. Ft.	E-1 Comp. Subgrade Sq. Yds.
1-G	324+70.5 - 325+08					37.5	36				
2-G	324+52.5 - 324+90					37.5	36				
1-P	324+65 - 324+95			60							60
1-S	324+81.5	14	168					4.2	(1) Lump	124	
1-D	324+90 - 325+20				34						
TOTALS		14	168	60	34	75	72	4.2	(1) Lump *	⊙ 124	60

* Waste masonry shall be used for channel protection as noted on this sheet; All other materials from structure removal shall become the Contractor's property

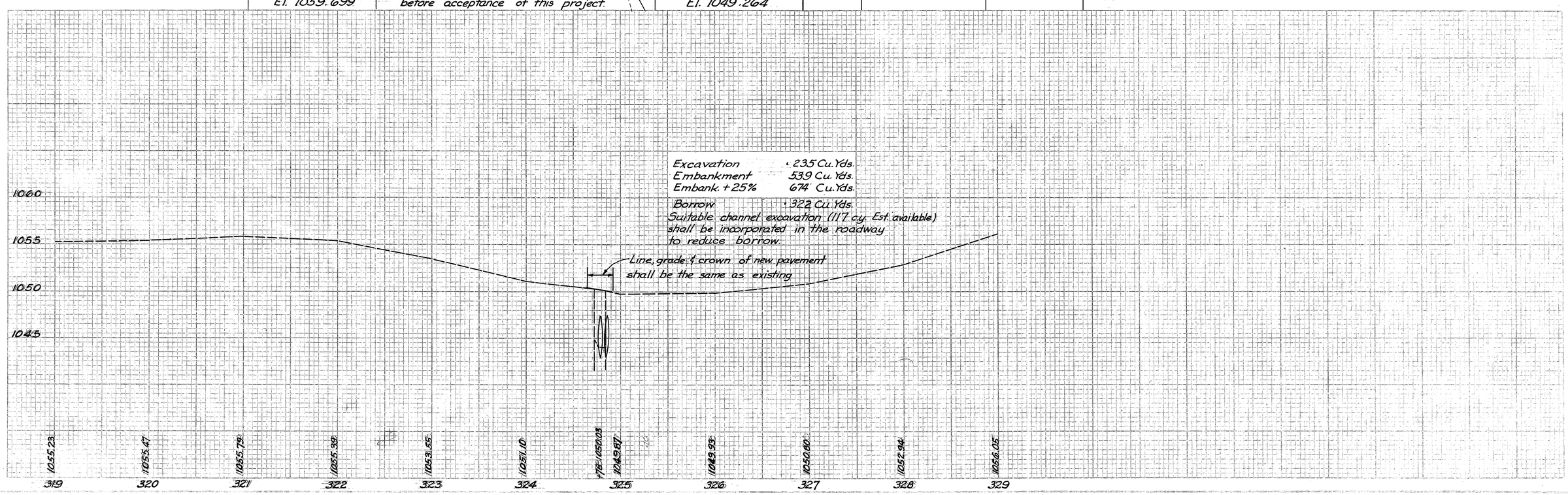
⊙ NOTE: If the contractor elects to use 54" M-6.4(d) pipe the gage shall be #10 or heavier.

STRUCTURE DATA	Existing	Proposed
Type	Steel Beam - 1 span	2-54" x 62' S-27
Span	11'-8"	
Roadway	19'-6"	36'-0" ⅞ G. Rails
Skew	0°	5° 30' L.F.
Wear. Surf.	Same as adjoining pav't.	9" T-70

B.M. Spike in 29" Elm 30' Rt. Sta. 322+33.5 El. 1059.699

Marker to be furnished and erected on the right by the State of Ohio before acceptance of this project.

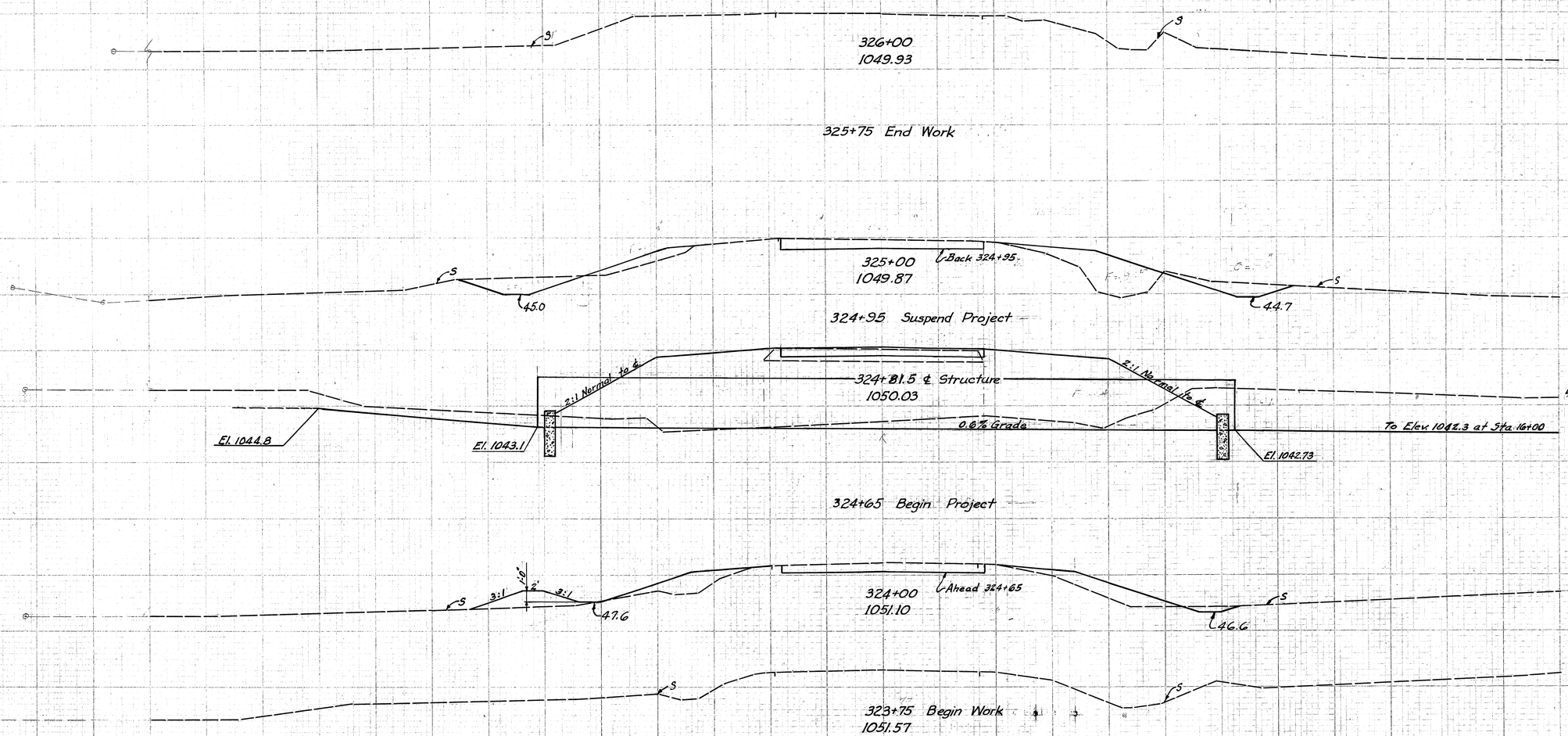
B.M. Chis "X" N.W. Corner N.W. Concrete Wing Wall El. 1049.264



FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

5
22

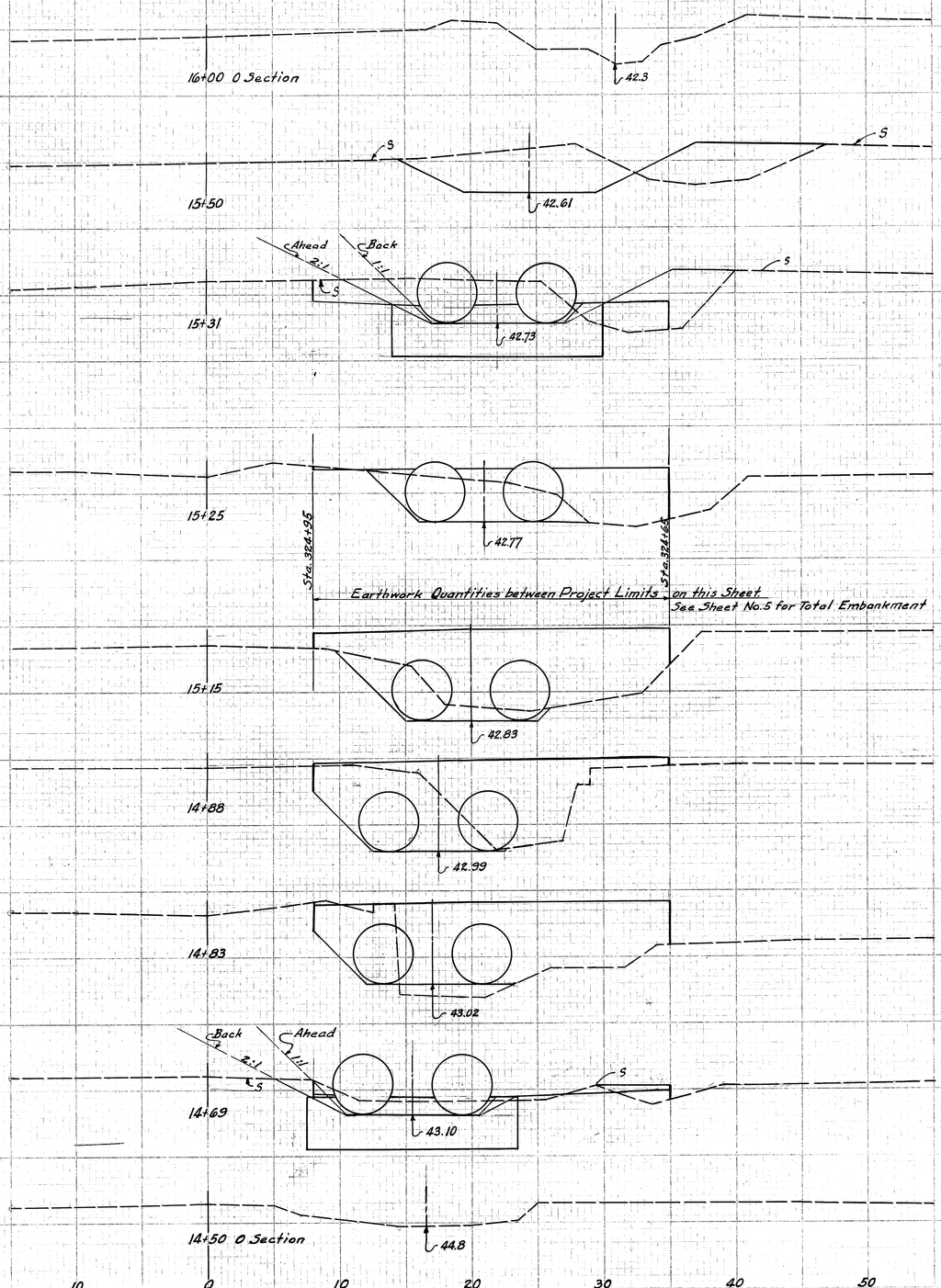
MED-303-(6.20) (8.13) (14.90)
Part 1



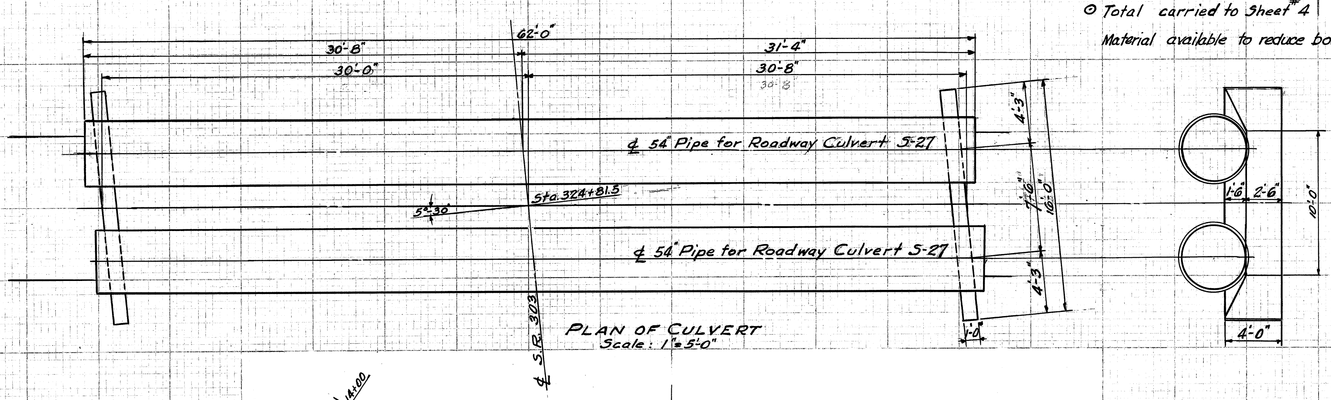
	END AREA Cut	END AREA Fill	CU. YDS. Cut	CU. YDS. Fill
325+75	0	0		
			25	43
325+00	18	31		
			18	23
324+95 Ahead	107	127		
Embankment from Sheet # 6				190
324+65 Back	157	191		
			191	268
324+00	2	32		
			1	15
323+75	0	0		
Totals			235	539

60 50 40 30 20 10 ℄ Survey 10 20 30 40 50 60

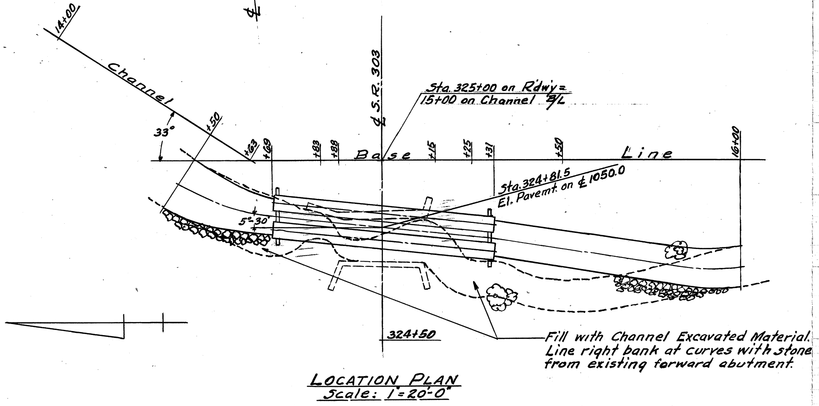
Cross Sections Part 1



	Embankment Area Sq. Ft.	Embankment Vol. Cu. Yds.	Excavation Area Sq. Ft.	Excavation Vol. Cu. Yds.
	0		0	
		*26		41
	28		44	
		*21		32
Ahead	32		46	
Back	20		51	
		8		10
	53		43	
		30		13
	108		28	
		100		44
	92		59	
		19		8
	116		22	
		33		10
Ahead	11		15	
Back	8		19	
		* 4		10
	0		0	
Totals		241		⊙168
* Fill Existing Channel outside of Roadway Limits.		-51		-51
Total carried to Sheet #5		190		
⊙ Total carried to Sheet #4				
Material available to reduce borrow				⊙117



PLAN OF CULVERT
Scale: 1" = 5'-0"



LOCATION PLAN
Scale: 1" = 20'-0"

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	MED-303-(6.20) (8.13) (14.90) Part 1.	

6
22

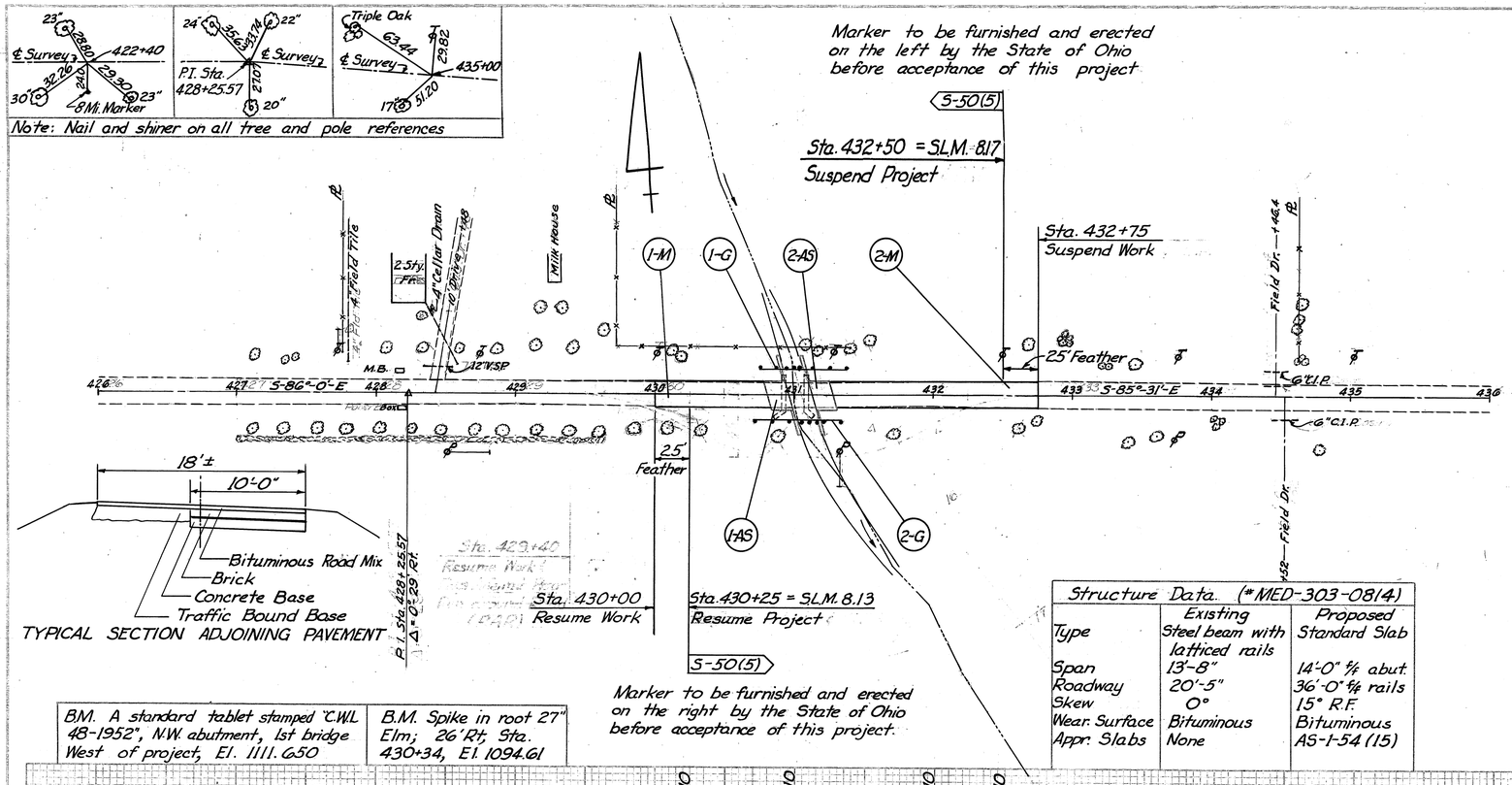
Channel Part 1

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

7 / 22

MED-303-(6.20)(8.13)(14.90)
Part 2

Note: Nail and shiner on all tree and pole references



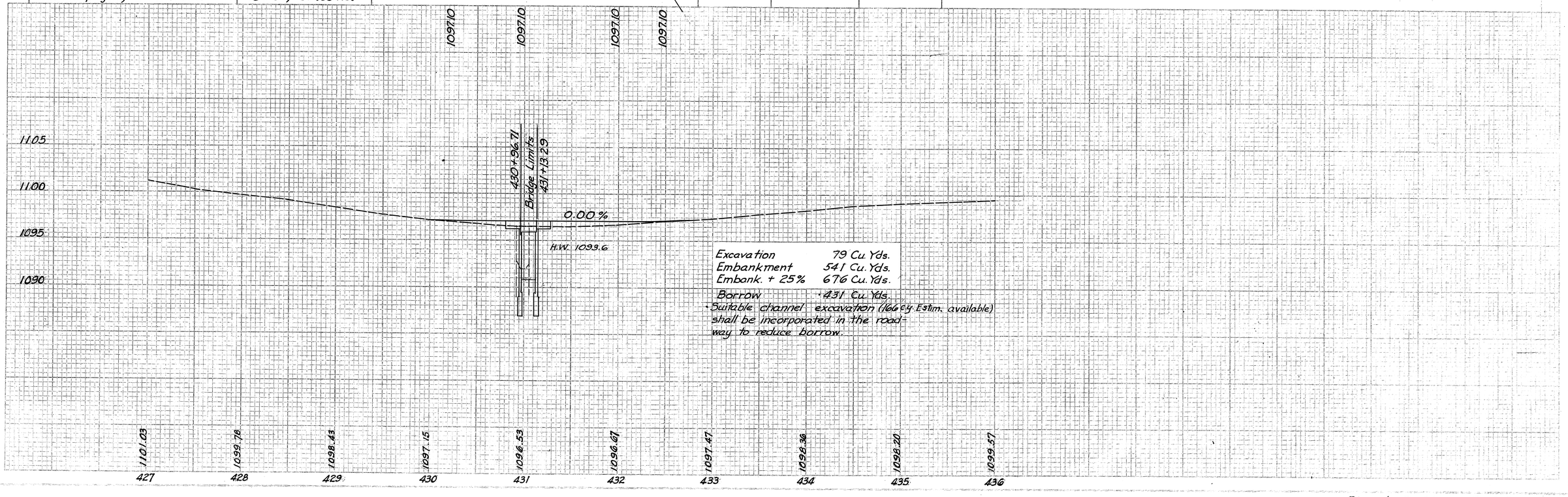
Ref. No.	Station	T-30 Bituminous Tack Coat ⊗ Gal.	T-35 A.C. Surface Course Cu.Yds.	T-7 Rein.Conc. Approach Slabs Sq.Yds.	I-15 Guard Rails Type Deep Lin.Ft.	E-1 Compacted Subgrade
1-AS	430+81.71-430+96.71	3.3	2.3*	33.3		33.3
2-AS	431+13.29-431+28.29	3.3	2.3*	33.3		33.3
1-G	430+75.05-431+37.55				45.92	
2-G	430+72.47-431+34.97				45.92	
1-M	430+00-430+25		3.0			
2-M	432+50-432+75		1.0			
	Structure Quantities on sheet no. 10					
TOTALS		6.6	8.6	66.6	91.84	66.6

* T-35 laid in 2 - 1¼ inch courses on approach slabs.
⊗ T-30 Bituminous Tack Coat Sec. M-5.5, MS-2 or RS-1 or Sec. M-5.2, RC-1 or RC-2 applied at the rate of 0.1 gal. per sq. yd. (See note in proposal)

Structure Data. (*MED-303-0814)		
	Existing	Proposed
Type	Steel beam with latticed rails	Standard Slab
Span	13'-8"	14'-0" ⁵⁄₈ abut.
Roadway	20'-5"	36'-0" ⁵⁄₈ rails
Skew	0°	15° R.F.
Wear. Surface	Bituminous	Bituminous
Appr. Slabs	None	AS-1-54 (15)

B.M. A standard tablet stamped "C.W.L. 48-1952", N.W. abutment, 1st bridge West of project, El. 1111.650

B.M. Spike in root 27" Elm; 26' Rt, Sta. 430+34, El. 1094.61



Excavation	79 Cu. Yds.
Embankment	541 Cu. Yds.
Embank. + 25%	676 Cu. Yds.
Borrow	*431 Cu. Yds.

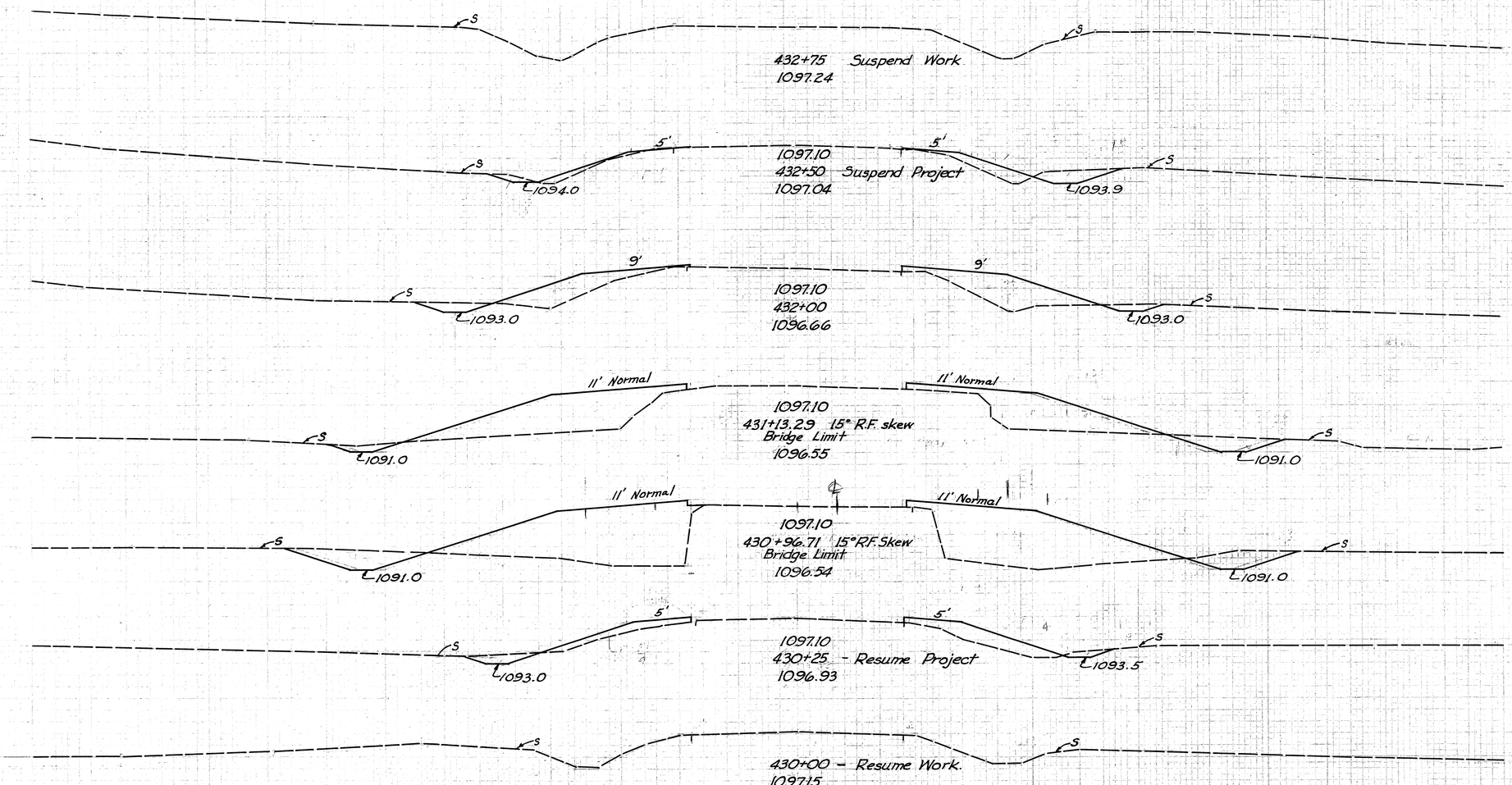
*Suitable channel excavation (166 c.y. Estim. available) shall be incorporated in the roadway to reduce borrow.

Plan & Profile Part 2

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

8
22

MED-303-(6.20)(8.13)(14.90)
Part 2



	END AREA Cut	END AREA Fill	CU. YDS. Cut	CU. YDS. Fill
	0	0		
			2	4
	5	9		
			10	44
	6	38		
			26	229
Backfill Abut. from channel sheet 9.				25
Normal	10	103		
Structure				
Normal	21	146		
			38	231
	6	17		
			3	8
	0	0		
Total			78	541

60 50 40 30 20 10 ℄ Survey 10 20 30 40 50 60

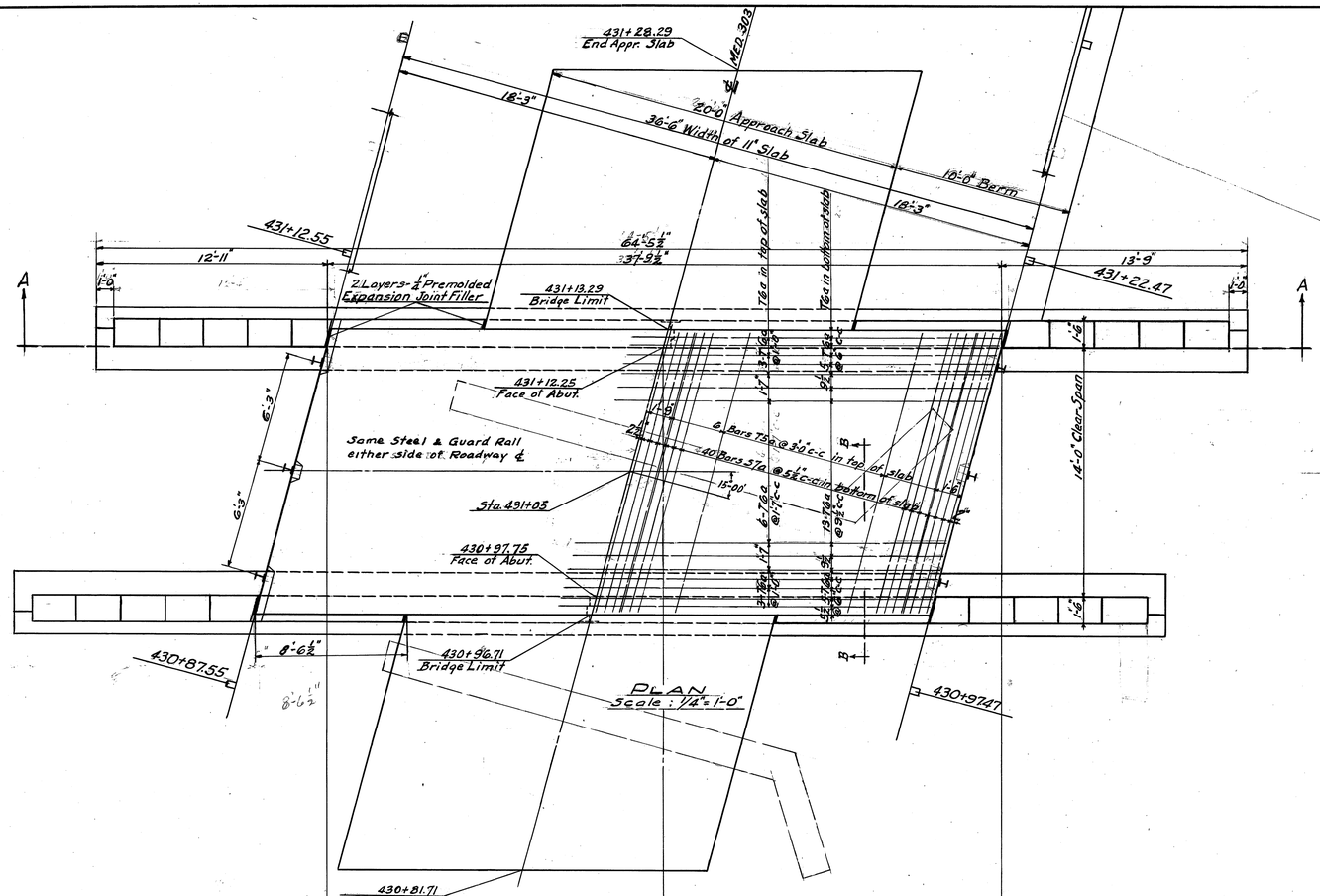
Cross sections Part 2

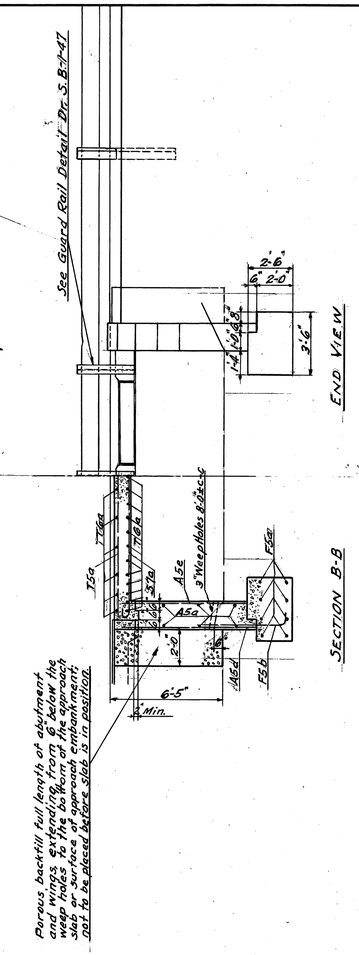
| Excavation | | |

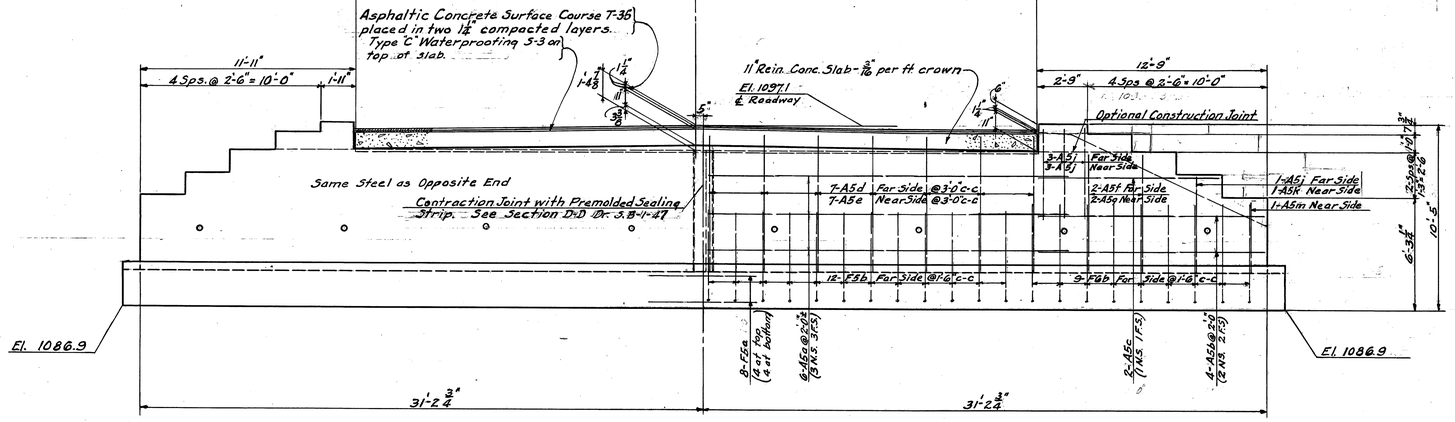
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

10
2.2

MED-303 - (6.20)(8.13)(14.90)
Part 2



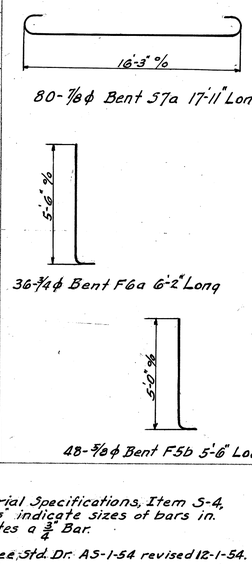




FORWARD ABUTMENT ELEVATION A-A AS SHOWN
REAR ABUTMENT - OPPOSITE HAND

REINFORCING STEEL

Number	Mark	Length	Shape	Weight
80	S7a	17'-11"	Bent	2930
70	T6a	20'-6"	St.	2155
36	F6a	6'-2"	Bent	334
24	A5a	20'-0"	St.	501
12	T5a	16'-3"	St.	203
16	A5b	12'-6"	St.	209
8	A5c	10'-0"	St.	83
28	A5d	7'-6"	St.	219
28	A5e	7'-0"	St.	204
8	A5f	6'-6"	St.	54
16	F5a	6'-0"	St.	100
8	A5g	6'-0"	St.	50
48	F5b	5'-6"	Bent	275
28	A5j	5'-3"	St.	153
4	A5k	4'-9"	St.	20
4	A5m	3'-6"	St.	15
Replacement Bars for Test Samples: 1	R7a	6'-3"	St.	13
1	R6a	6'-0"	St.	9
1	R5a	5'-9"	St.	6
			Total	7533



NOTES:
Conforming to Construction & Material Specifications, Item S-4, numbers in the different bar "Marks" indicate sizes of bars in eighth inches. Thus T6a indicates a ¾" Bar.

For Details of Approach Slabs, see Std. Dr. A5-1-54 revised 12-1-54.

For Details not shown, see Std. Dr. SB-1-47 revised 1-20-48.

Removal of Existing Structure: When no longer needed to maintain traffic, the existing structure shall be removed and all materials shall become the property of the Contractor

Gravel, if used as the course aggregate, shall be according to Sec. M-3.93 instead of M-3.91.

Asphaltic Concrete Surface Course, Item T-35 laid in two 1½" Courses, shall be provided.

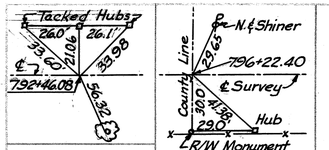
A finished Bridge Camber of approximately 1/700 of the span shall be provided to avoid appearance of sag.

ESTIMATED QUANTITIES

Item	Total	Units	Description
E-2	120	Cu.Yds.	Unclassified Excavation.
E-2	Lump	Sum	Cofferdams, Cribs and Sheeting.
E-3	175	Cu.Yds.	Channel Excavation.
S-1	39	Cu.Yds.	Concrete for Structure Class "E" (Footers)
S-1	45.5	Cu.Yds.	Concrete for Structure Class "E" (Walls)
S-1	21	Cu.Yds.	Concrete for Structure Class "C" (Slab)
S-3	70	Sq.Yds.	Type "C" Waterproofing.
S-4	7533	Lbs.	Reinforcing Steel.
S-14	33.16	Lin.Ft.	Railing (Type I-15.13 with Steel Posts)
S-24	Lump	Sum	Removal of Existing Structure.
S-29	47	Cu.Yds.	Porous Backfill.
T-35	4.8	Cu.Yds.	Asphaltic Concrete Surface Course Type A (70-80)
S-3	14	Lin.Ft.	Premolded Sealing Strip 12" x ½"
S-9	8	Sq.Ft.	Bituminous Premolded Expansion Joint Filler ½" Thick.

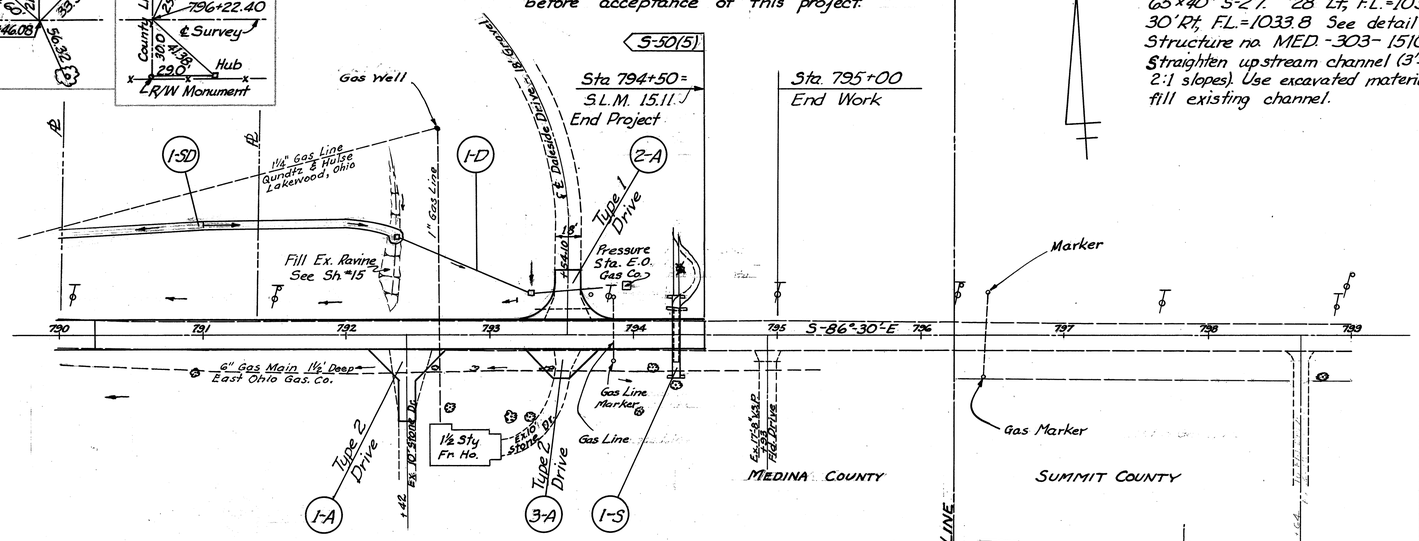
FED. RD. NO.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

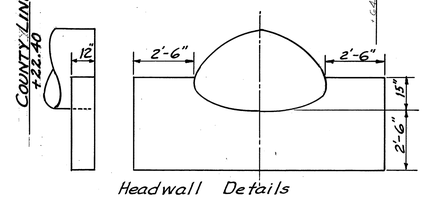
MED-303-(6.20)(8.13)(14.90)
Part 3



Marker to be furnished and erected on the left by the State of Ohio before acceptance of this project.

1-S Sta. 794+27.5 Remove and dispose existing 48" C.M.P. Place 65"×40" S-27. 28" Lt; F.L.=1035.0; 30' Rt, F.L.=1033.8 See detail below Structure no. MED.-303-1510 Straighten upstream channel (3'± bottom, 2:1 slopes). Use excavated material to fill existing channel.

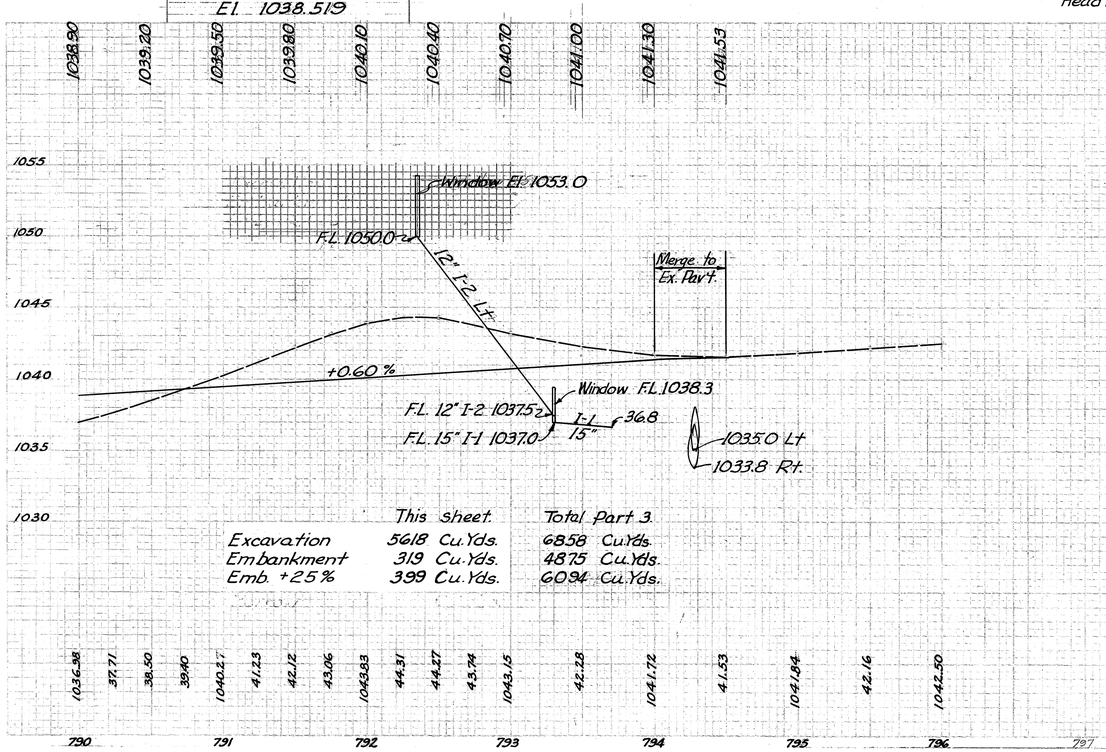




Headwall Details

Ref. No.	Station	E-2 Excav. For Struc.	B-119 Crushed Aggregate	S-1 Conc. for Struct. Class E	*S-24 Structure Removal	S-27 Pipe Arch. Culverts 65"×40"	I-1 15" Pipe For Drives	I-8 Catch Basins 2-2-A St'd	I-8 Catch Basins 2-2-A Modified	L-10 Sodding	I-2 12" Storm Sewer Class A	T-35 2" A.C. Surface Course	E-3 Channel Excavation
		Cu. Yds.	Cu. Yds.	Cu. Yds.	Lump	Lin. Ft.	Lin. Ft.	Each	Each	Sq. Yds.	Lin. Ft.	Cu. Yds.	Cu. Yds.
1-A	792+42 Rt.		19 (6")										
2-A	793+54 Lt.		15 (5")				44					6	
3-A	793+58.5 Rt.		10 (5")									4	
1-D	792+35 - 793+30							1	1		104		
1-S	794+27.5	46		2.4	Lump*	58							20°
1-SD	790+00 - 792+38									162			
	Totals	46	44	2.4	Lump*	58	44	1	1	162	104	10	20°

* Structure Removal Materials shall become the Contractor's property.
° To be used for filling existing channel.

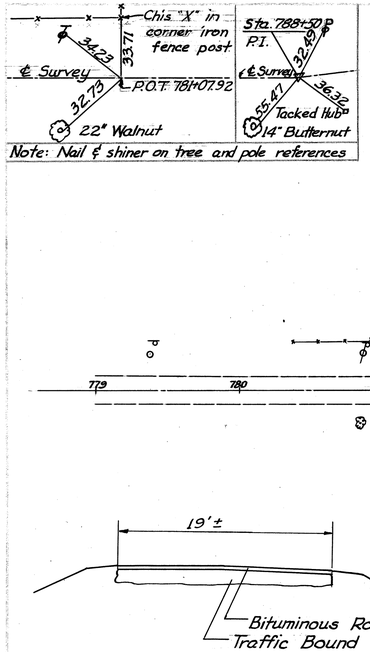


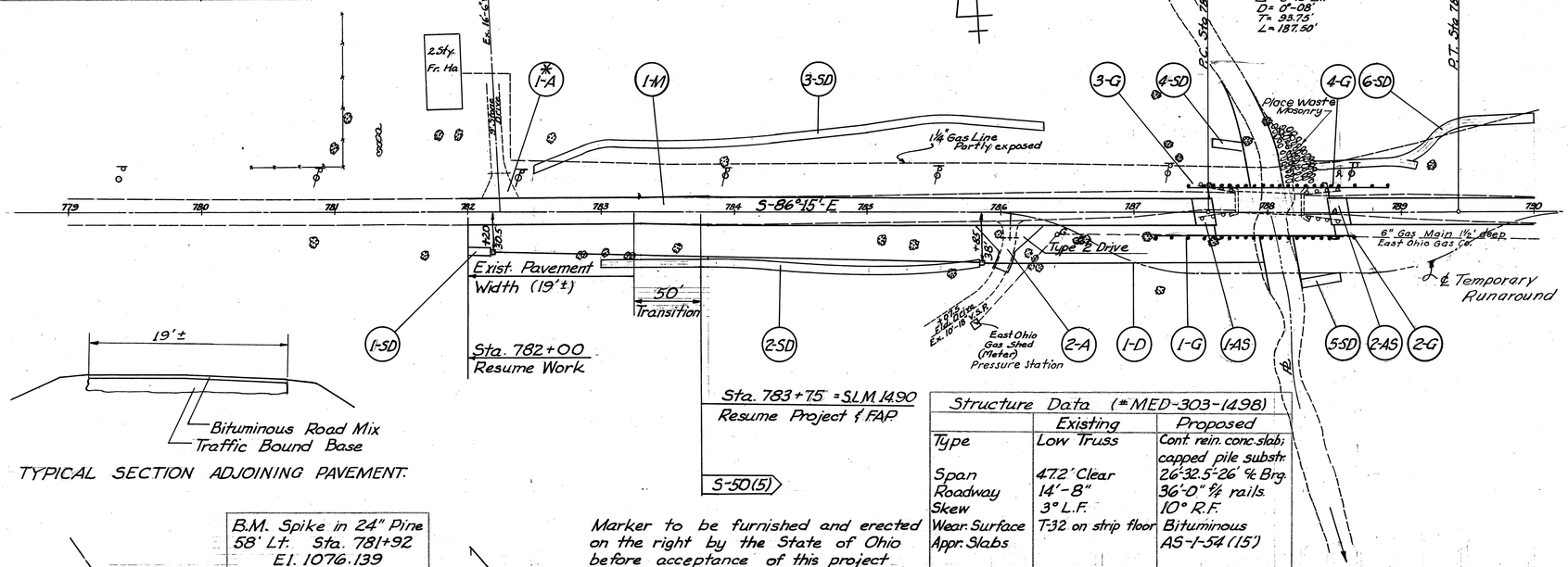
	This sheet.	Total Part 3.
Excavation	5618 Cu. Yds.	6858 Cu. Yds.
Embankment	319 Cu. Yds.	4875 Cu. Yds.
Emb. +25%	399 Cu. Yds.	6094 Cu. Yds.

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

11
22

MED-303-(6.20)(8.13)(14.90)
Part 3



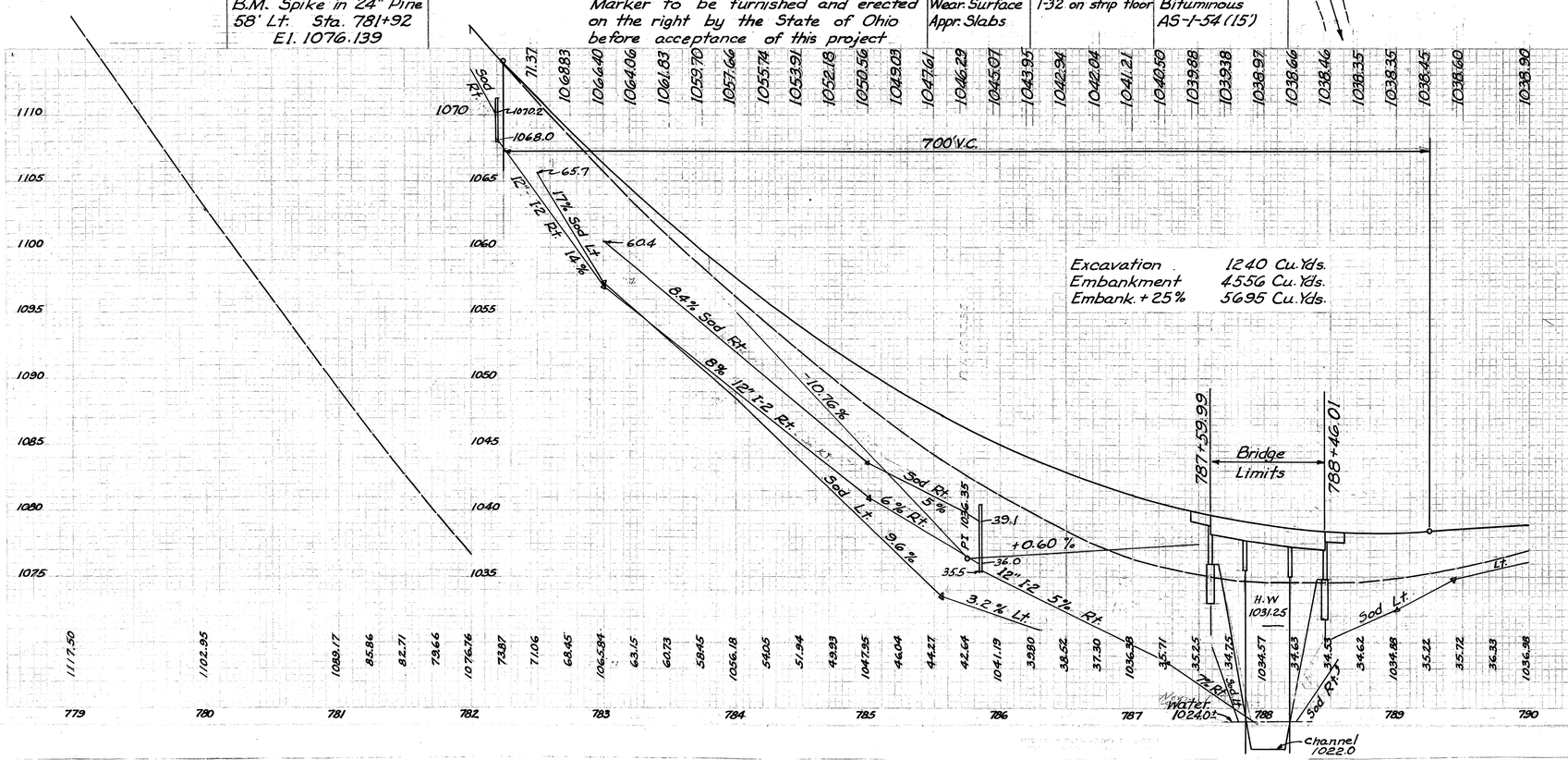


TYPICAL SECTION ADJOINING PAVEMENT.

B.M. Spike in 24" Pine 58' Lt. Sta. 781+92 El. 1076.139

Marker to be furnished and erected on the right by the State of Ohio before acceptance of this project

Structure Data (* MED-303-14.98)	Existing	Proposed
Type	Low Truss	Cont. rein. conc. slab; capped pile substr.
Span	47.2' Clear	26'-32.5'-26' % Brg.
Roadway	14'-8"	36'-0" ⅌ rails
Skew	3° L.F.	10° R.F.
Wear. Surface	T-32 on strip floor	Bituminous
Appr. Slabs		AS-1-54 (15')



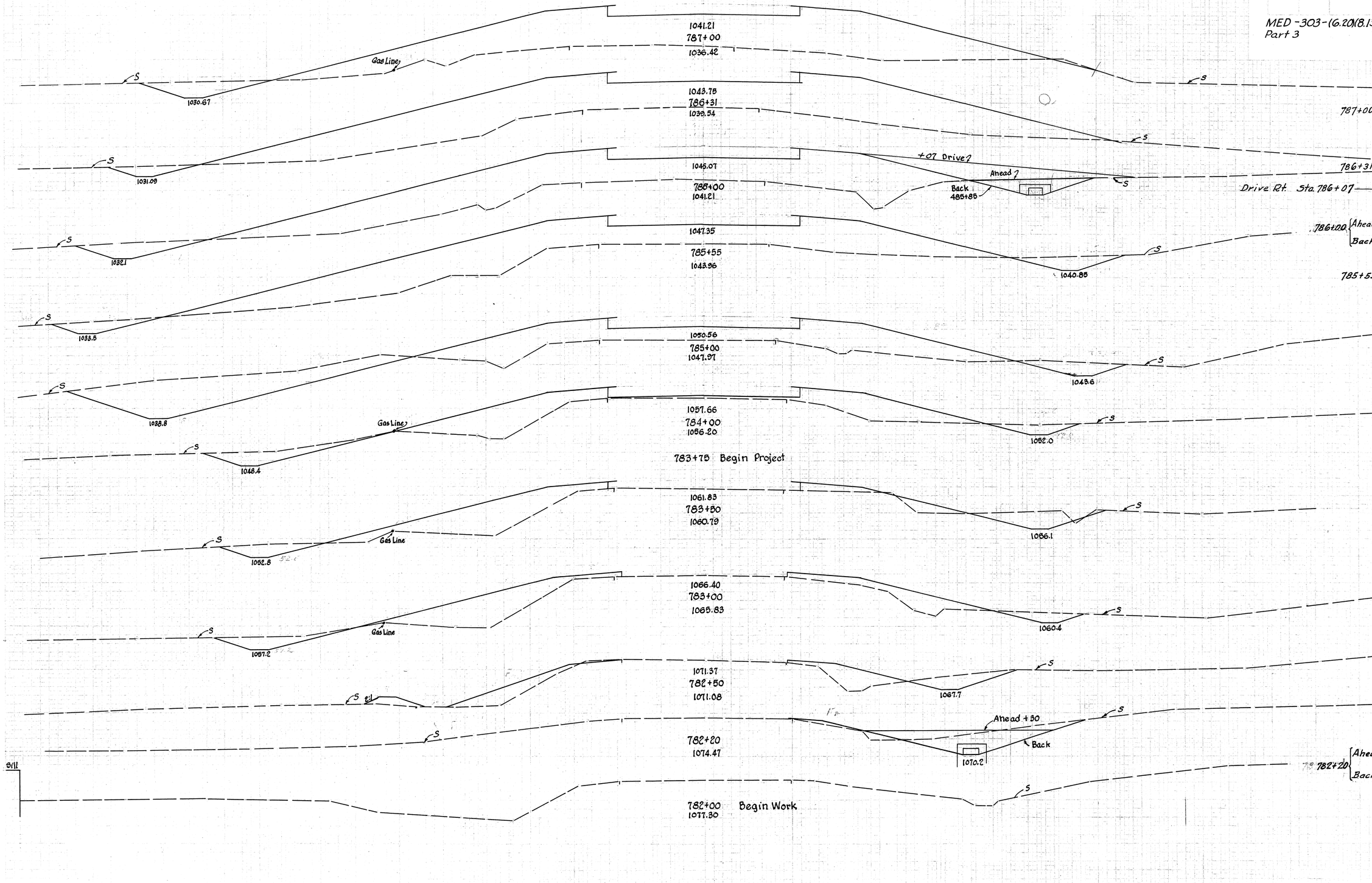
Excavation 1240 Cu. Yds.
Embankment 4556 Cu. Yds.
Embank. + 25% 5695 Cu. Yds.

Ref. No.	Station	T-30 Bitum. Tack Coat Gal.	T-35 Surface Course Cu. Yds.	1-2 12" Stem Sewers Lin. Ft.	1-7 Rein. C. Approach Slabs Sq. Yds.	1-8 Catch Basins 22" A Mat. Each	1-15 Guard Rails Type Remove & Store Lin. Ft.	L-10 Sodding Sq. Yds.	B-119 "Crush. Agg. Base Course Cu. Yds.	B-35 A.C. Level Course Cu. Yds.	T-22 6" Sub-base Cu. Yds.
1-A	782+24 Lt.								2*		
2-A	786+07.5 Rt.								15(6")		
1-AS	787+44.99 - 789+59.99	3.3	2.3 ⊗		33.3						
2-AS	788+46.01 - 788+61.01	3.3	2.3 ⊗		33.3						
1-D	782+20 - 787+94 Rt.			572		2					
1-G	787+15.40 - 787+59.99						44.59	25.0			
2-G	788+46.01 - 788+65.40						19.39	25.0			
3-G	787+40.60 - 787+59.99						19.39	25.0			
4-G	788+46.01 - 788+90.60						44.59	25.0			
1-SD	782+00 - 782+18 Rt.								12		
2-SD	783+00 - 785+83 Rt.								189		
3-SD	782+50 - 786+30 Lt.								253		
4-SD	787+58 - 787+82 Lt.								16		
5-SD	788+25 - 788+55 Rt.								20		
6-SD	788+45 - 790+00 Lt.								115		
1-M	782+00 - 783+75		14.8						36 (6")	20.3	13
TOTALS		46.6	19.4	572	66.6	2	127.96	100	605	53	20.3	13

* To be placed on existing drive for berm adjustment.
⊗ Laid in 2 - 1¼ inch courses.
△ T-30 Bituminous tack coat Sec. M-5.5 M5-2 or RS-1 or RC-2 applied at the rate of 0.1 gal. per sq. yd. (See note in proposal)

Plan & Profile Part 3

MED-303-(6.20)(8.13)(14.90)
Part 3



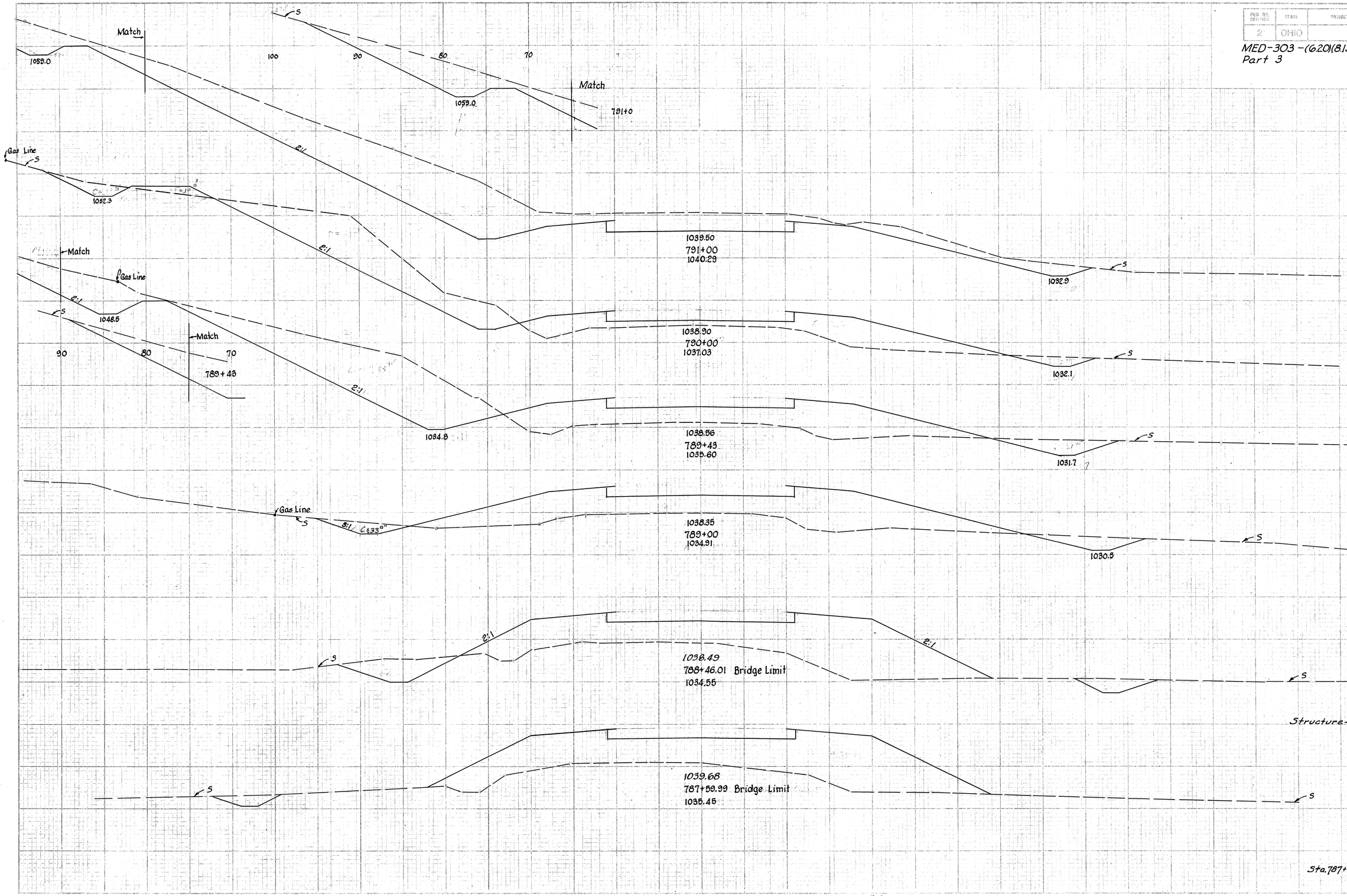
	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
787+00	18	278		
			33	782
786+31	8	334		
Drive Rt. Sta. 786+07				9
			13	342
786+00 Ahead	15	262		
Back	31	262		
			45	433
785+55	23	257		
			132	400
	106	136		
			239	420
	23	91		
			43	102
	23	73		
			39	139
	19	77		
			29	109
	12	40		
			9	30
782+20 Ahead	4	14		
Back	27	3		
			10	1
	0	0		

Cross Sections Part 3

FED. RD. DIV. REGION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

14
22

MED-303-(6.20)(8.13)(14.90)
Part 3



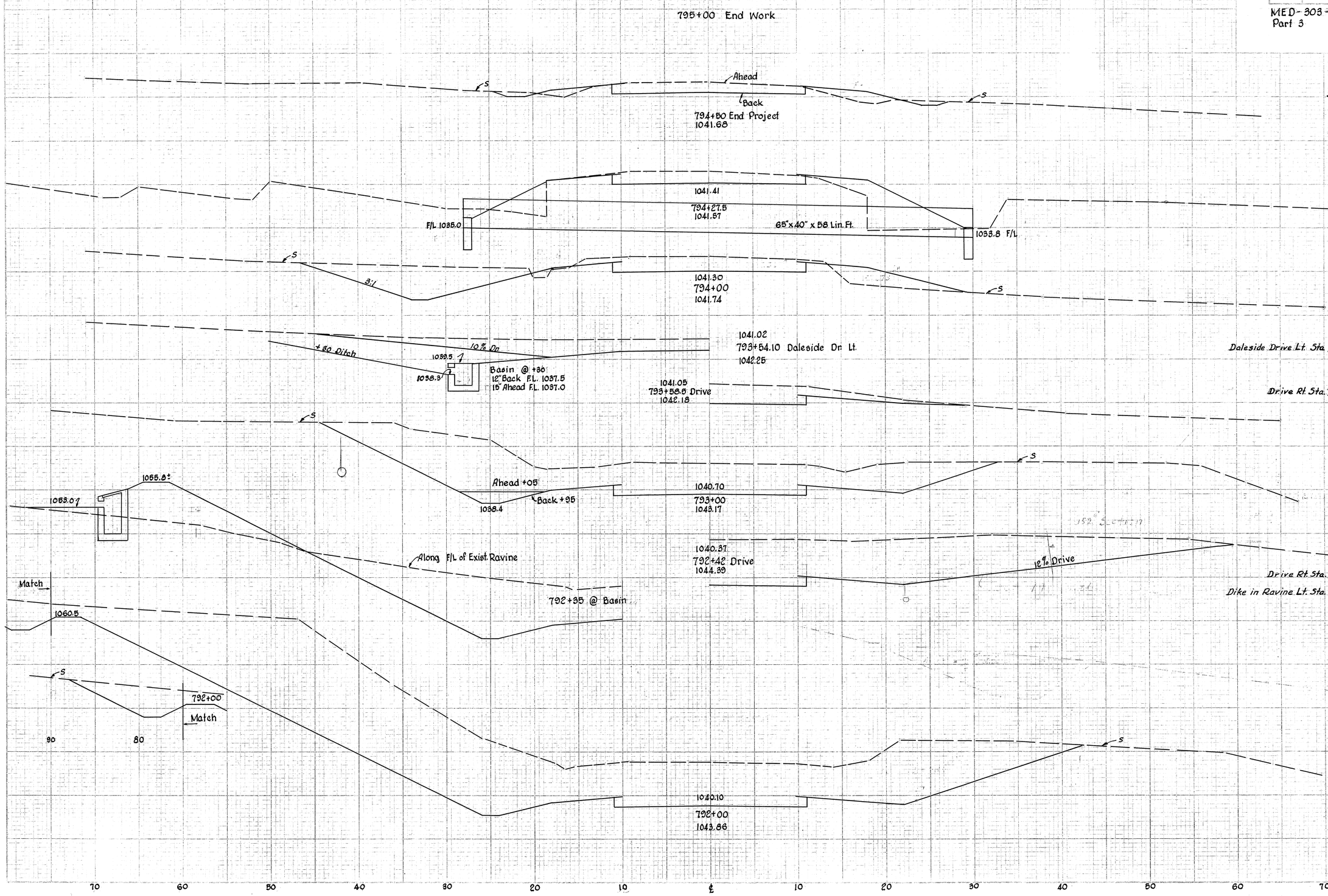
	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
	350	0		
			891	172
	131	93		
			373	239
	222	133		
			194	251
	21	182		
			53	403
	32	221		
Structure				321
	7	240		
			28	575
Sta. 787+00	18	278		

Cross sections Part 3

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

15
22

MED-303-(6.20) (8.13) (14.90)
Part 3



	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
Sta. 795+00	0	0		
			4	11
794+50 Ahead	4	12		
794+50 Back	28	12		
			23	27
	28	52		
			63	37
	96	21		
Daleside Drive Lt. Sta. 793+54.1			21	
Drive Rt. Sta. 793+58.5			14	
			641	39
793+00 Ahead	250	0		
793+00 Back	257	0		
Drive Rt. Sta. 792+42			126	
Dike in Ravine Lt. Sta. 792+35			33	
			1831	0
	732	0		
			2004	0
Sta. 791+00	350	0		

Cross Sections Part 3

MED-303-(6.20)(8.13)(14.90)
Part 3

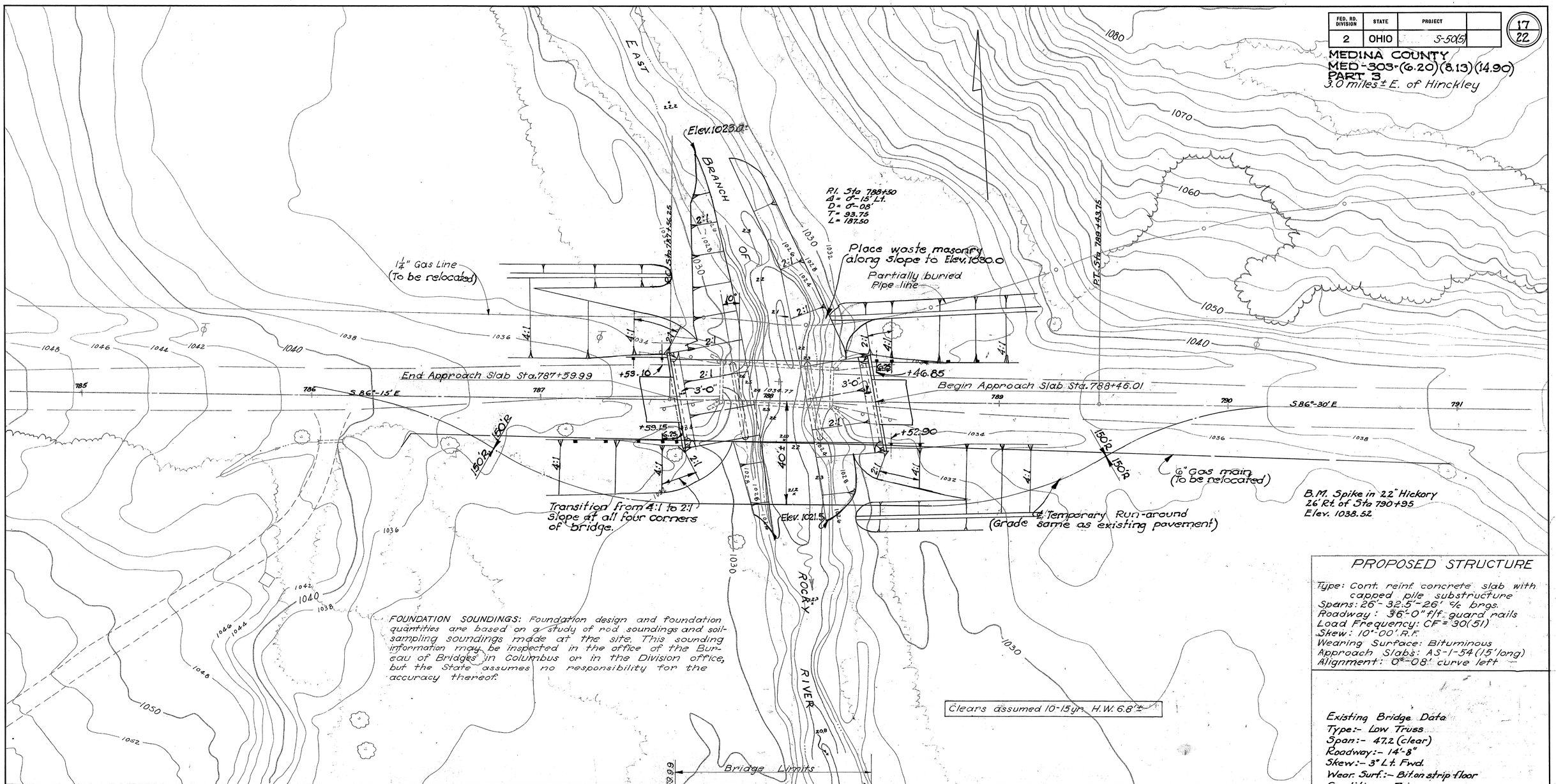
Excavation Area Sq. Ft.	0	18	39	114	104	102	115	97	22	14	0						
Excavation Vol. Cu. Yds.												345					
Embankment Area Sq. Ft.	0	0	58	73	56	51	125	127	80	0							
Embankment Vol. Cu. Yds.												321					

Channel Part 3.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	S-50(5)	

17/22

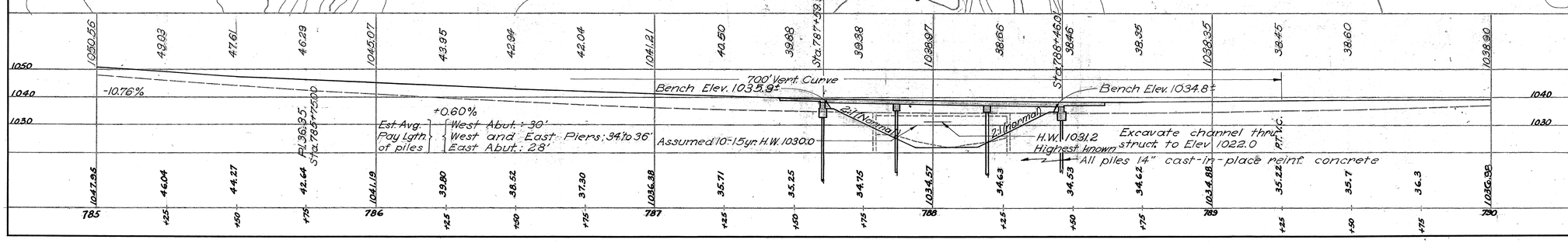
MEDINA COUNTY
MED-303-(6.20)(8.13)(14.90)
PART 3
3.0 miles ± E. of Hinckley



PROPOSED STRUCTURE

Type: Cont. reinf. concrete slab with capped pile substructure
Spans: 26'-32.5'-26' c/c brgs.
Roadway: 36'-0" f/f guard rails
Load Frequency: CF = 30(51)
Skew: 10°-00' R.F.
Wearing Surface: Bituminous
Approach Slabs: AS-1-54 (15' long)
Alignment: 0°-08' curve left

Existing Bridge Data
Type:- Low Truss
Span:- 47.2 (clear)
Roadway:- 14'-8"
Skew:- 3° Lt. Fwd.
Wear. Surf.:- Bit. on strip floor
Condition:- Fair
Drainage Area 9.5 Sq. Mi.



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SITE PLAN

BRIDGE NO. MED-303-1498
over East Branch of Rocky River
MEDINA CO. S.R. 303
STA. 787+59.99
788+46.01
SCALE 1" = 20'

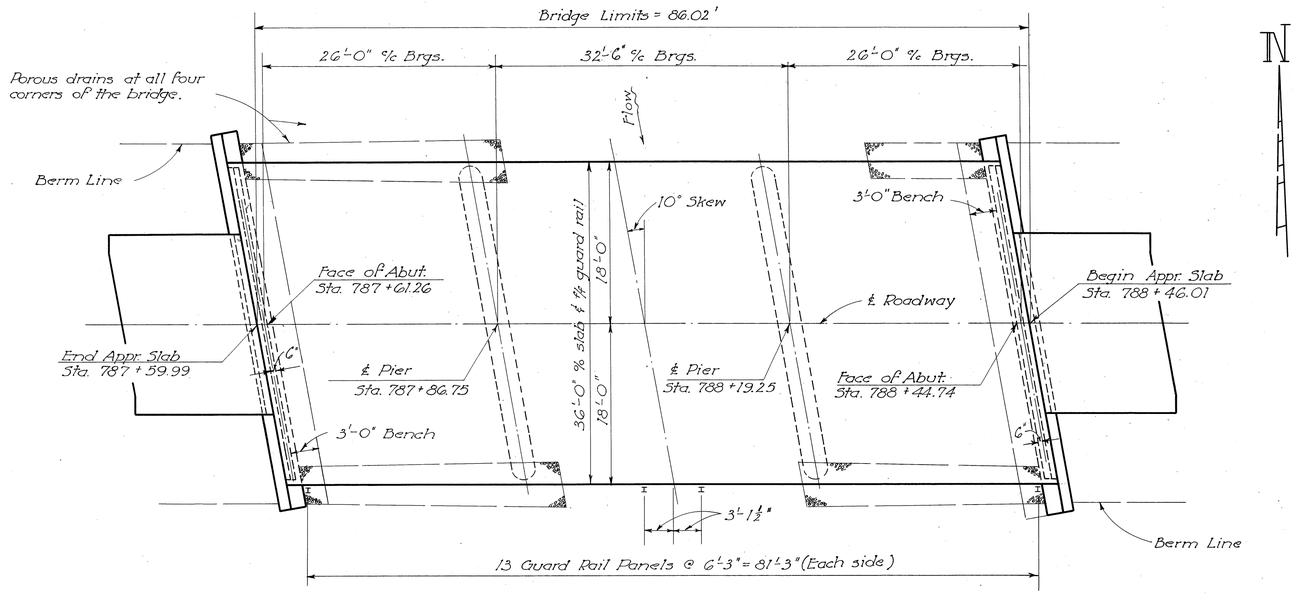
PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
Aerial Survey	Aerial Survey	D.I.C.	D.I.C.	J.C.P.	P.E.S.

BFG A.J.P. 4-11-56

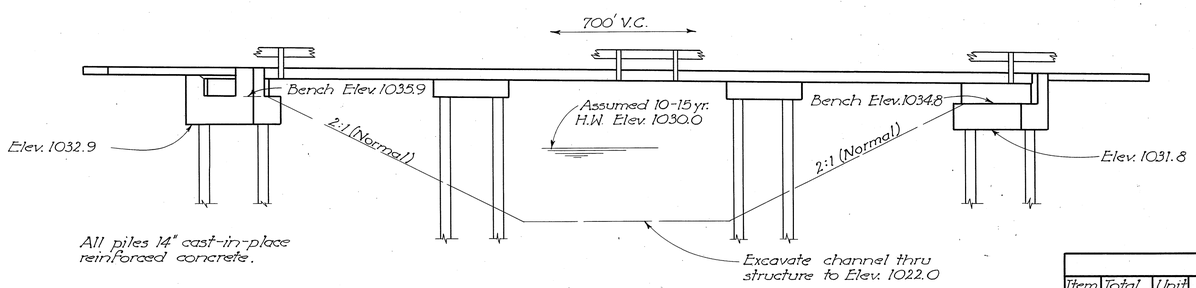
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

18
22

MEDINA COUNTY
MED-303-(6.20)(8.13)(14.90)
PART 3



~ GENERAL PLAN ~



~ ELEVATION ~
(All piles not shown)

NOTES

REFERENCE shall be made to Standard Drawings CS-1-54, A-1-54 and P-1-54, all revised 12-1-54.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 10-1-51, together with revisions thereof dated 7-15-52, 4-1-54 and 2-1-55.

TEMPORARY RUN-AROUND BRIDGE AND APPROACHES: Load frequency for bridge, CF=30, with unit stresses increased 25 % as per Sec. 82 of the Design Specifications for Highway Structures. T-10 surface course on the approaches.

REMOVAL OF EXISTING STRUCTURE: When no longer needed to maintain traffic the existing structure shall be removed. Stringers and floor beams shall be carefully dismantled and piled along the right-of-way for disposal by the State's forces. Substructure shall be removed to proposed ground lines. Suitable waste masonry shall be incorporated in the embankment at forward abutment as bank protection where shown on the site plan and as directed by the Engineer. The remainder of the removed materials shall become the property of the Contractor. Waste masonry may be incorporated in fill adjacent to structure.

PILES shall be driven to a minimum bearing capacity of 23 tons for the abutments and 36 tons for the piers. The length of penetration of every pile shall be at least 80 % of the estimated average penetration of the piles in the pertinent pier or abutment as indicated on the plans unless a lesser penetration is approved by the Director. Pile encasement for pier piles as shown on Standard Drawing P-1-54 may be omitted provided that the tapered portion of all pier piles is entirely below ground. If the tapered portion of any pile extends above ground the encasement shall be provided for all piles in both piers.

GRAVEL, if used as the coarse aggregate, shall be according to Sec. M-3.93 instead of M-3.91 for Class "C" concrete in the superstructure. Gravel meeting the requirements of Sec. M-3.93 also may be used for other concrete in this structure.

POROUS DRAINS shall be provided at all four corners of the bridge. The drain at the northeast corner shall be 4 ft. wide, one foot thick and shall extend from face of abutment to Elev. 1030.0. The other three drains shall be 5 ft. wide at the low end, tapering to 4 ft. wide at face of abutment, one foot thick, and shall extend from face of abutment to Elev. 1023.0.

GALVANIZING of all members which are specified to be galvanized shall be as called for in Sec. M-7.4(d).

ASPHALTIC CONCRETE SURFACE COURSE, Item T-35, laid in two courses, shall be provided.

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Super.	Piers	Abuts.	Gen'l.		
E-2	50	Cu.Yds.	Unclassified excavation			50			
E-3	345	Cu.Yds.	Channel excavation				345		
S-1	133	Cu.Yds.	Class "C" concrete, superstructure and pier caps	120	13				
S-1	42	Cu.Yds.	Class "E" concrete, abutments			42			
S-3	368	Sq.Yds.	Type "C" waterproofing	368					
S-4	36,274	Lb.	Reinforcing steel	27,702	3,620	4,849	103		
S-14	172.04	Lin.Ft.	Railing (Type I-15.13 with galvanized steel posts and bolts)	172.04					
S-15	Lump	Sum	Temporary run-around bridge and approaches				Lump		
S-16	Lump	Sum	First test pile				Lump		
S-18	830	Lin.Ft.	14" cast-in-place reinforced concrete piling		420	410			
S-24	Lump	Sum	Removal of existing structure				Lump		
S-29	14	Cu.Yds.	Porous backfill			14			
S-29	15	Cu.Yds.	Porous drains on embankment slopes				15		
T-35	21	Cu.Yds.	Asphaltic concrete surface course, Type "A" or "C" (1080)	21					
S-15	491	Cu.Yds.	T-10 surface course for run-around approaches				491		
S-15	10	Tons	Chloride (M-10) for surface course of run-around approaches				10		

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

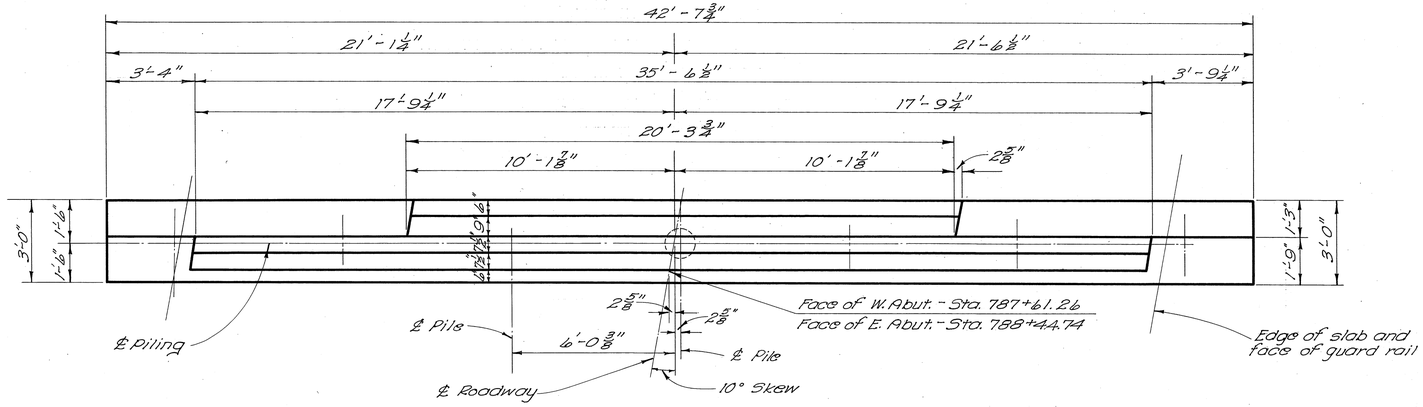
GENERAL PLAN, ELEVATION, NOTES & ESTIMATED QUANTITIES
BRIDGE NO. MED-303-1498
OVER EAST BRANCH OF ROCKY RIVER
MEDINA CO. STA. 787+59.99 to 788+46.01

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JVP	JVP	Grosselli	E.B.L.	BFG	4-11-56	

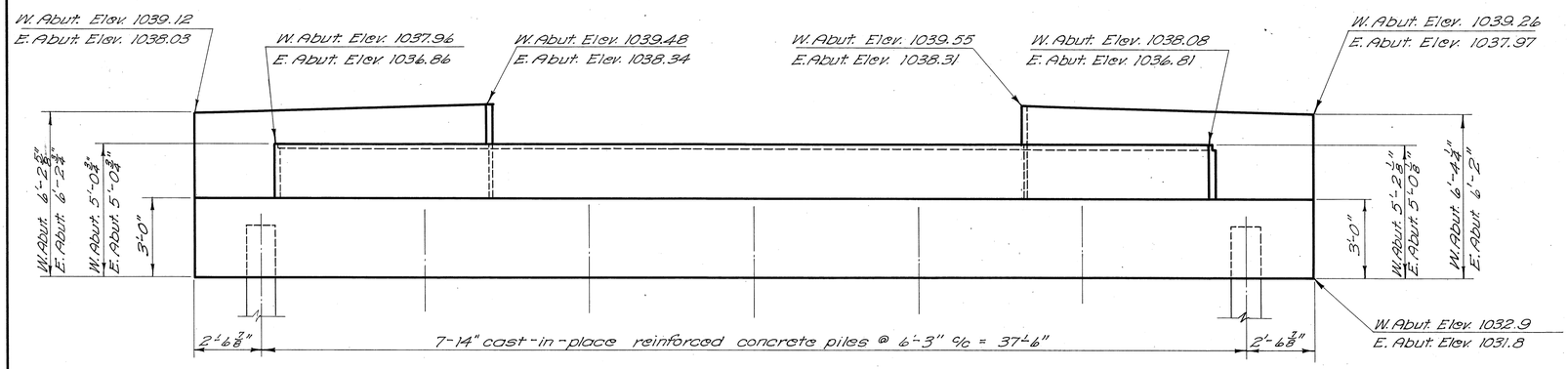
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

19
22

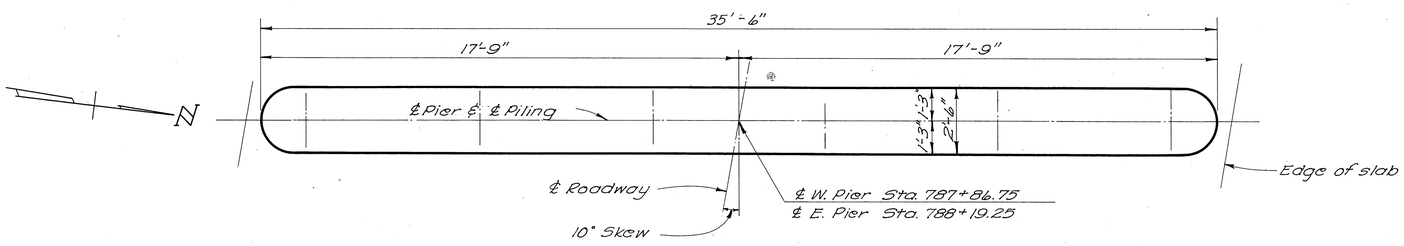
MEDINA COUNTY
MED-303-(6.20)(8.13)(14.90)
PART 3



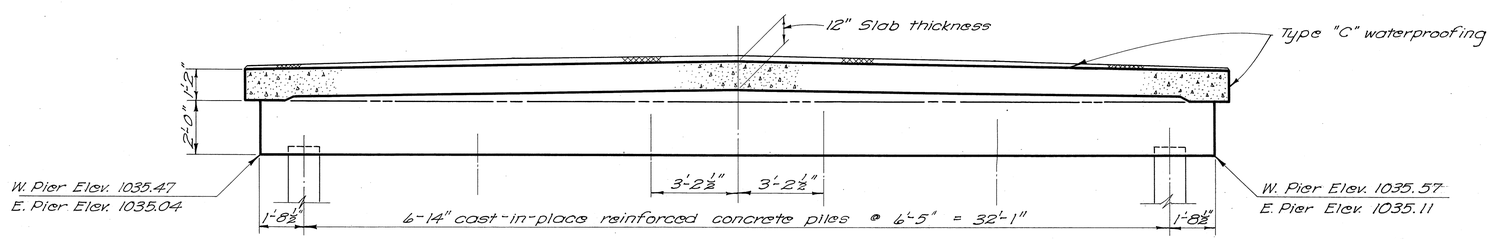
ABUTMENT PLAN



ABUTMENT ELEVATION



PIER PLAN

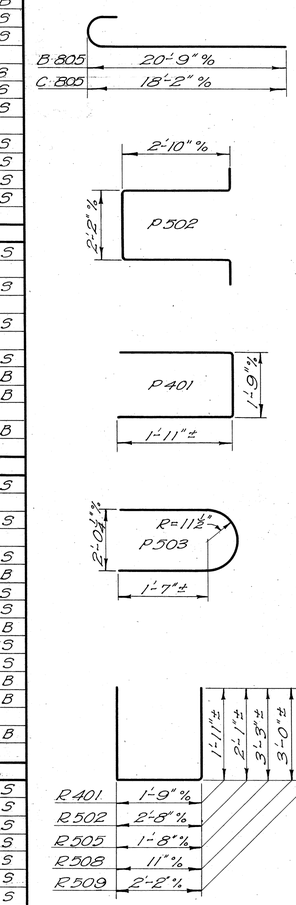


PIER ELEVATION

REINFORCING STEEL LIST

Mark	No.	Length	Weight	Ship.
SUPERSTRUCTURE				
A805	93	30'-3"	7511	S
B805	30	21'-10"	1749	B
C805	32	19'-3"	1645	B
D805	15	20'-10"	834	S
E805	16	15'-8"	669	S
F905	62	22'-2"	4673	S
G905	30	12'-0"	1224	S
H905	32	9'-6"	1034	S
J601	32	17'-9"	853	S
K601	16	14'-10"	356	S
M601	75	36'-1"	4065	S
N601	57	36'-1"	3089	S
PIERS				
P1001	8	36'-1"	1242	S
P901	8	33'-0"	898	S
P701	72	4'-0"	589	S
P501	4	33'-0"	138	S
P502	56	9'-0"	526	B
P503	8	6'-4"	53	B
P401	48	5'-5"	174	B
ABUTMENTS				
R1001	16	19'-2"	1320	S
R801	16	22'-5"	958	S
R501	16	21'-11"	366	S
R502	136	6'-7"	934	B
R503	8	18'-4"	153	S
R504	24	5'-4"	134	S
R505	28	7'-11"	231	B
R506	8	10'-9"	90	S
R507	16	4'-11"	82	S
R508	24	6'-8"	167	B
R509	24	8'-5"	211	B
R401	56	5'-5"	203	B
REPLACEMENT STEEL				
RE1001	1	7'-2"	31	S
RE901	1	6'-10"	23	S
RE801	1	6'-6"	17	S
RE701	1	6'-2"	13	S
RE601	1	5'-11"	9	S
RE501	1	5'-7"	6	S
RE401	1	5'-3"	4	S

Bending Diagrams



For additional details see Std. Dwgs. P-1-54 & A-1-54.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

ABUTMENT & PIER DETAILS & REINFORCING STEEL LIST

BRIDGE No. MED-303-1498
OVER EAST BRANCH OF ROCKY RIVER
MEDINA COUNTY STA. 787+59.99
STA. 788+46.01

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JVP	JVP	RHD	E.B.L.	BFG / A.J.S.T.	4-11-56	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

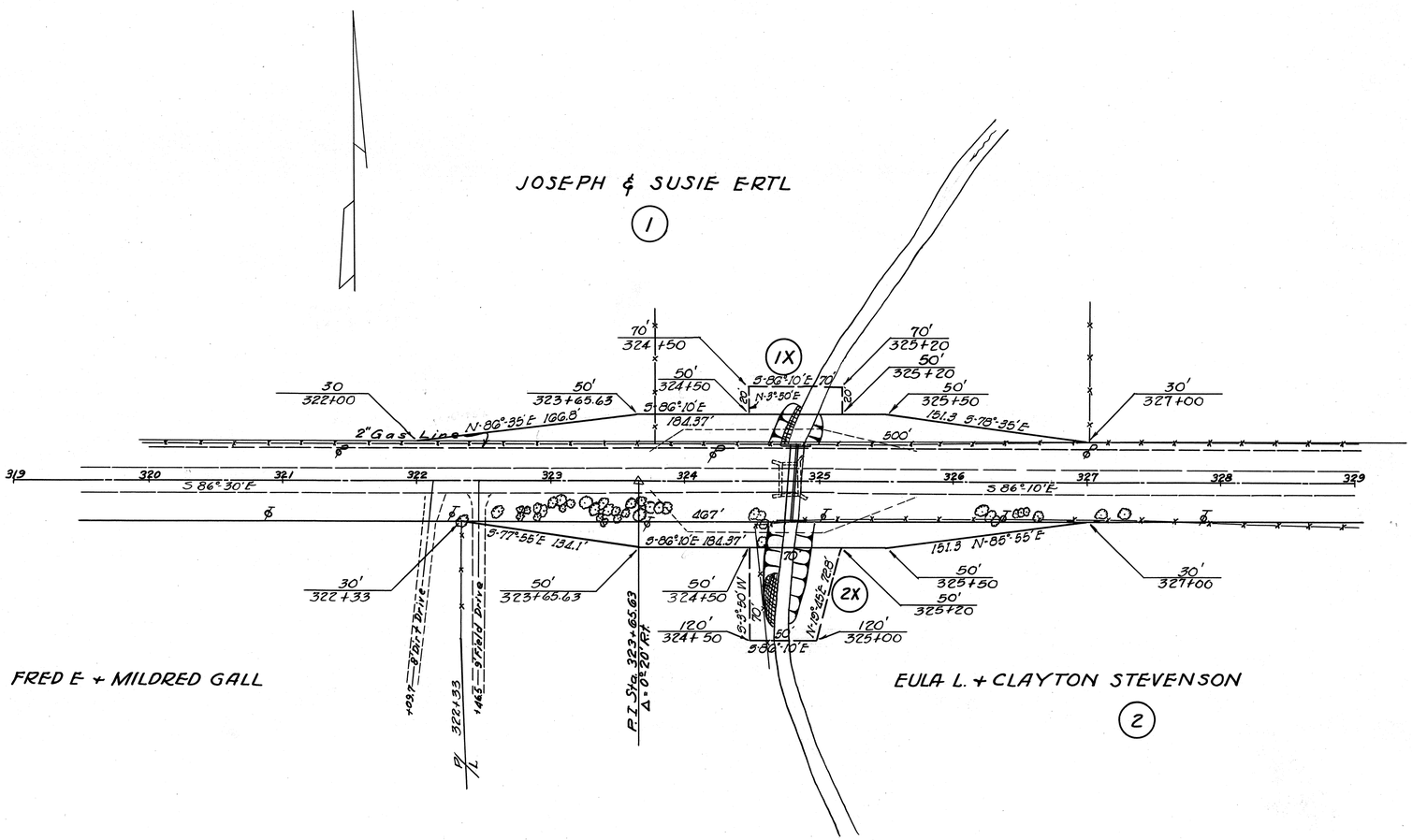
RIGHT OF WAY PLANS
MED-303-6.20

R/W SHOWN ON THIS PLAN SECURED BY EASEMENTS OR APPROPRIATION

1/1

SCALE 1" = 50'

* Reference MED-303-5;73/6.21 & info (2006)



BRUNSWICK TWP - TRACT 1 - LOT 13 T-4 R-14 MEDINA COUNTY - OHIO

3-20-56

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

21/22

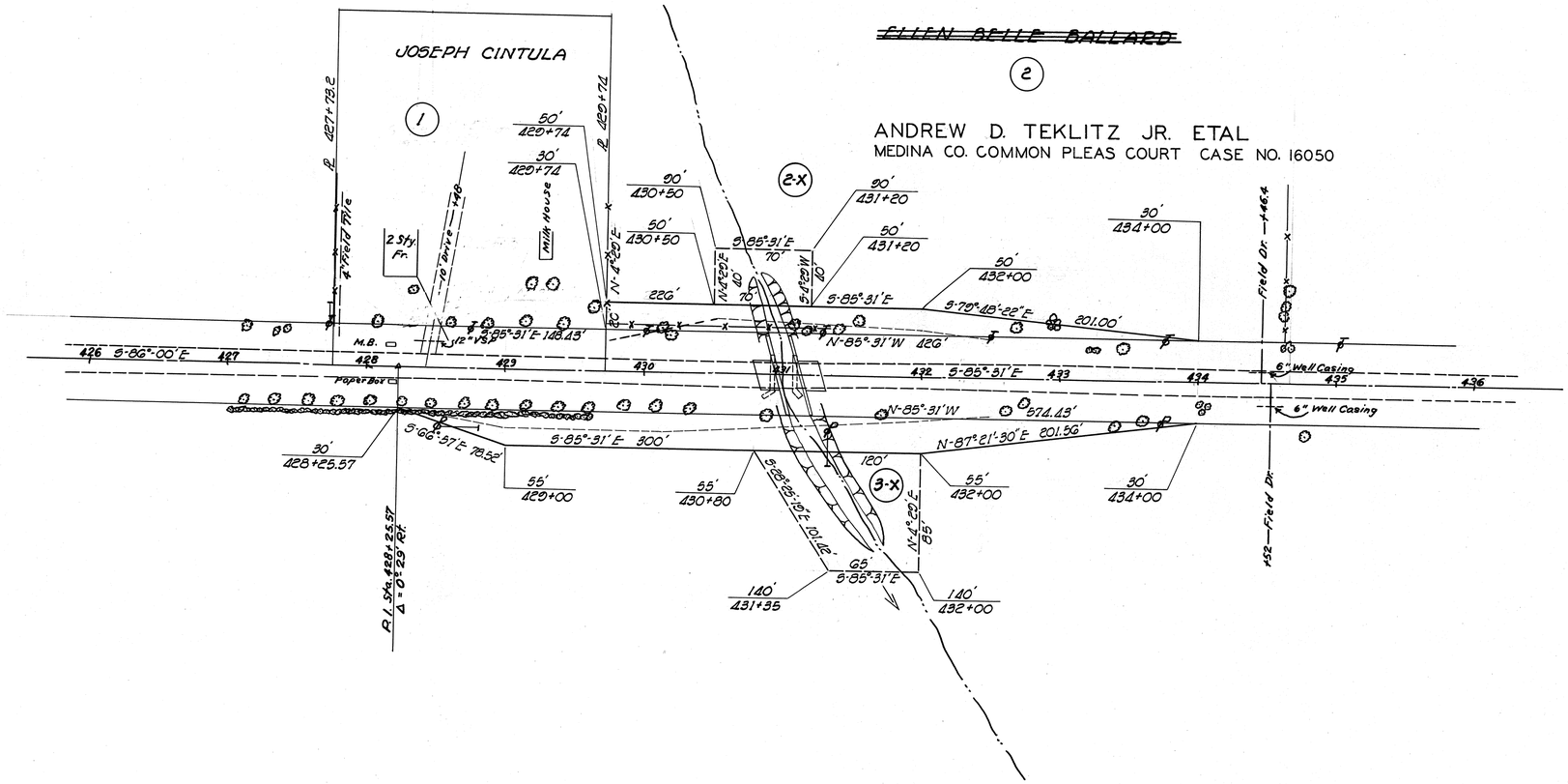
MED-303-8.15
RIGHT-OF-WAY

1/1

R/W SHOWN ON THIS PLAN SECURED BY EASEMENTS OR APPROPRIATION.

Scale: 1" = 50'

* Entire sheet superseded by MED-303-(6.67)(9.41) 1984



MEDINA CO. BRUNSWICK TWP. T-4 R-14 TRACT-2 LOT-7&8

4-27-60
3-25-56
3-20-56

15

MED-303-8.15 R/W 1/1

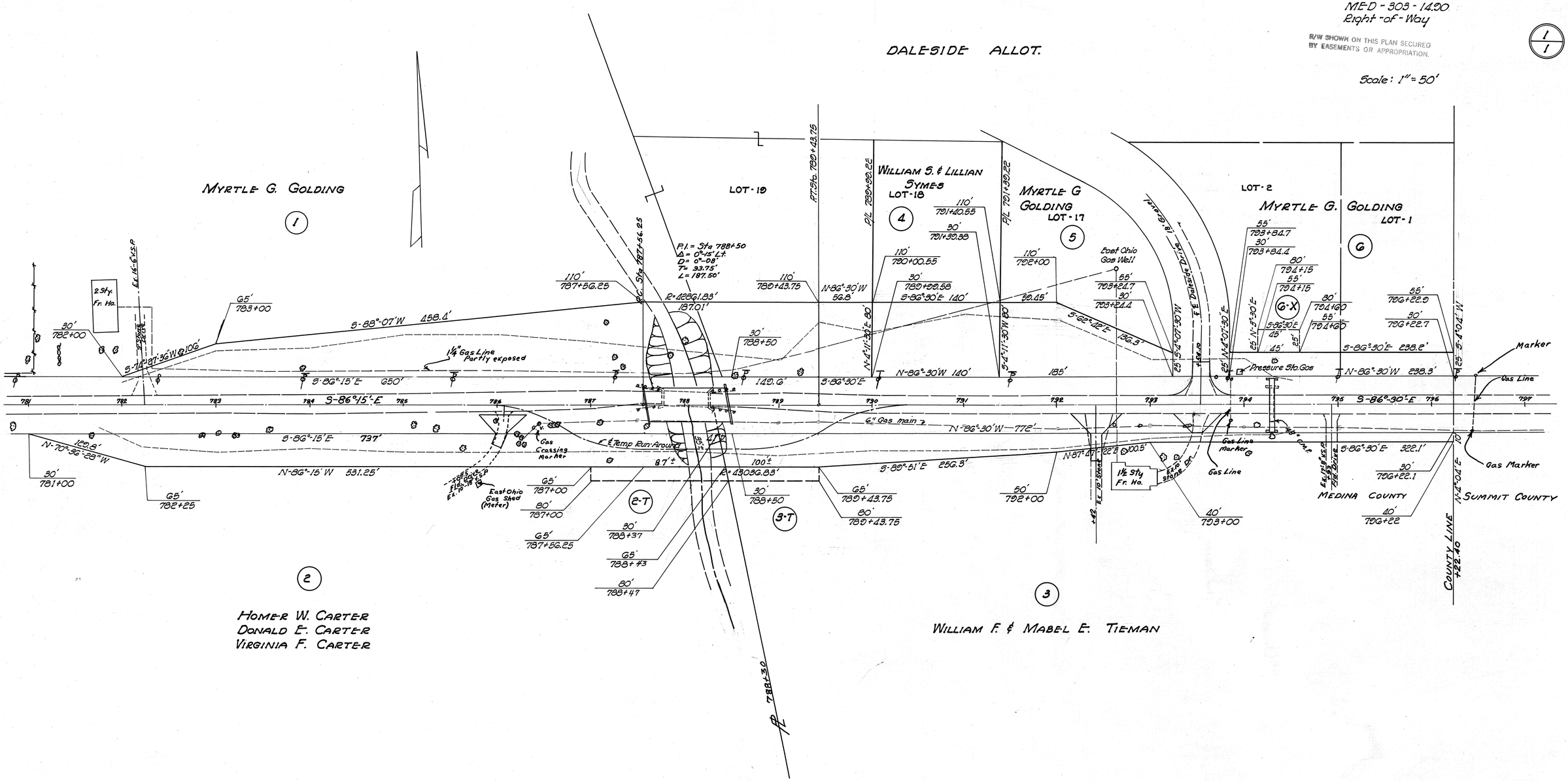
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

ME-D - 303 - 14.90
Right-of-Way

R/W SHOWN ON THIS PLAN SECURED BY EASEMENTS OR APPROPRIATION.

1/1

Scale: 1" = 50'



MEDINA CO. HINCKLEY TWP. T-4 R-13 LOT-50

5-7-56
3-22-56

ME-D-303-14.90 R/W 1/1

SOIL PROFILE

MEDINA COUNTY

MED-303-(6.20)(8.13)(14.90)

STATE HIGHWAY TESTING AND RESEARCH LABORATORY

O. S. U. CAMPUS, COLUMBUS, OHIO

LEGEND FOR PROJECT-AVERAGE RESULTS OF TESTS- 23 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 WITH SAND	A-1-b(0)	A-1-b	56	13	17	8	6	NP	NP	15	1
GRAVEL WITH SAND AND SILT	A-2-4(0)	A-2-4	37	11	19	18	15	27	9	19	2
SANDY SILT	A-4(5)	A-4a	14	9	19	35	23	24	5	19	7
SILT	A-4(8)	A-4b	1	1	3	61	34	26	5	23	3
SILT AND CLAY	A-6(9)	A-6a	3	2	4	39	52	34	13	23	9
SILTY CLAY	A-6(10)	A-6b	2	5	13	39	41	37	16	23	1

BERM MATERIAL

AUGER BORING-PLAN VIEW

AUGER BORING PLOTTED TO VERTICAL SCALE ONLY

● WATER CONTENT NEARLY EQUAL TO OR GREATER THAN LIQUID LIMIT

—W FREE WATER

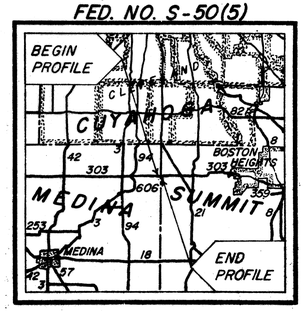
SAMPLES TESTED
LAB. NOS. SO 33857 THRU 33879

NOTE A: THIS A-4a SOIL WILL BE RUBBERY AND UNSTABLE AT MOISTURES WHICH EXCEED THE OPTIMUM

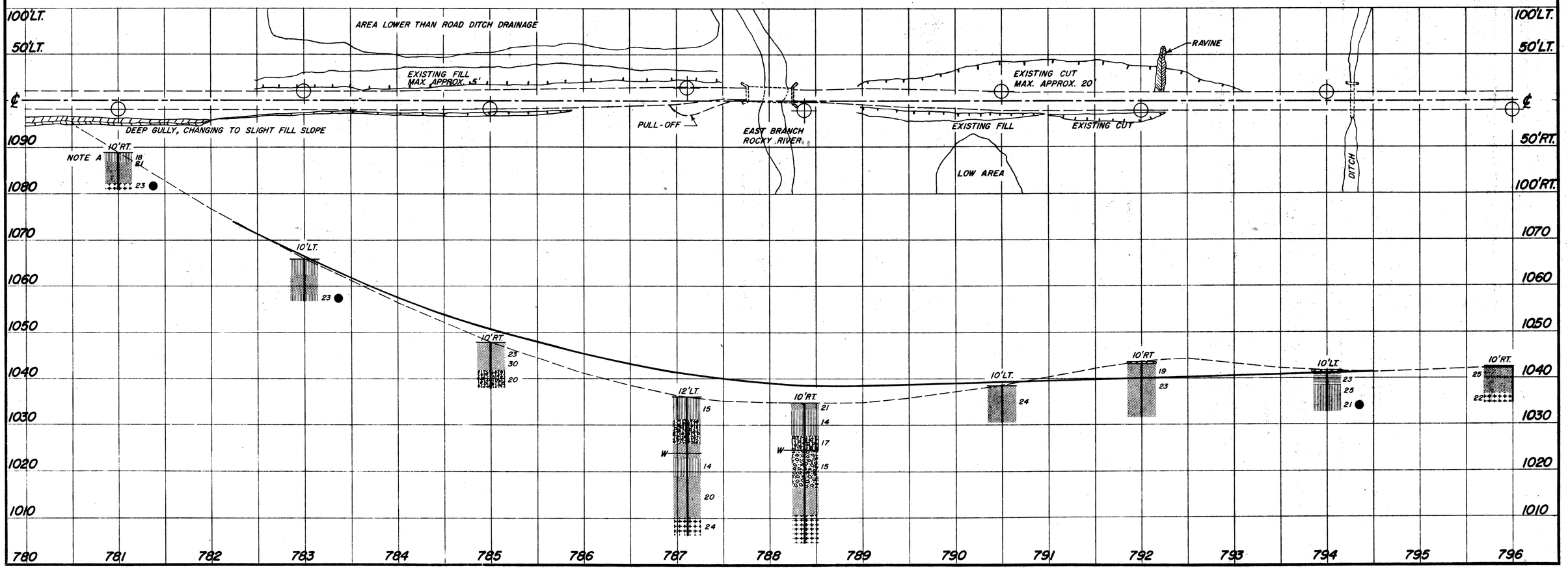
NOTE: FIGURES BESIDE BORINGS INDICATE WATER CONTENT IN PERCENT

NOTE: THE INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS SECURED FOR THE USE OF THE STATE OF OHIO AND IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING THE CONSTRUCTION OF THE PROJECT.

FED. NO. S-50(5)



LOCATION MAP

FIELD 1/24/56

DRAFTING 2/7/56