FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

1/179

MAD-40-(0.00-2.47).

(502)

FILE C-3

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
MAD-40-(0.00-2.47)
MADISON COUNTY
SOMERFORD & DEER CREEK TOWNSHIPS

F-24 (3)
F-190 (5)

Note:
Sections MAD-40 (0.00-6.84) appearing elsewhere on these plans shall be considered as MAD-40 (0.00-2.47).

PART 2
For Part 1 See
CLA-40-24.31

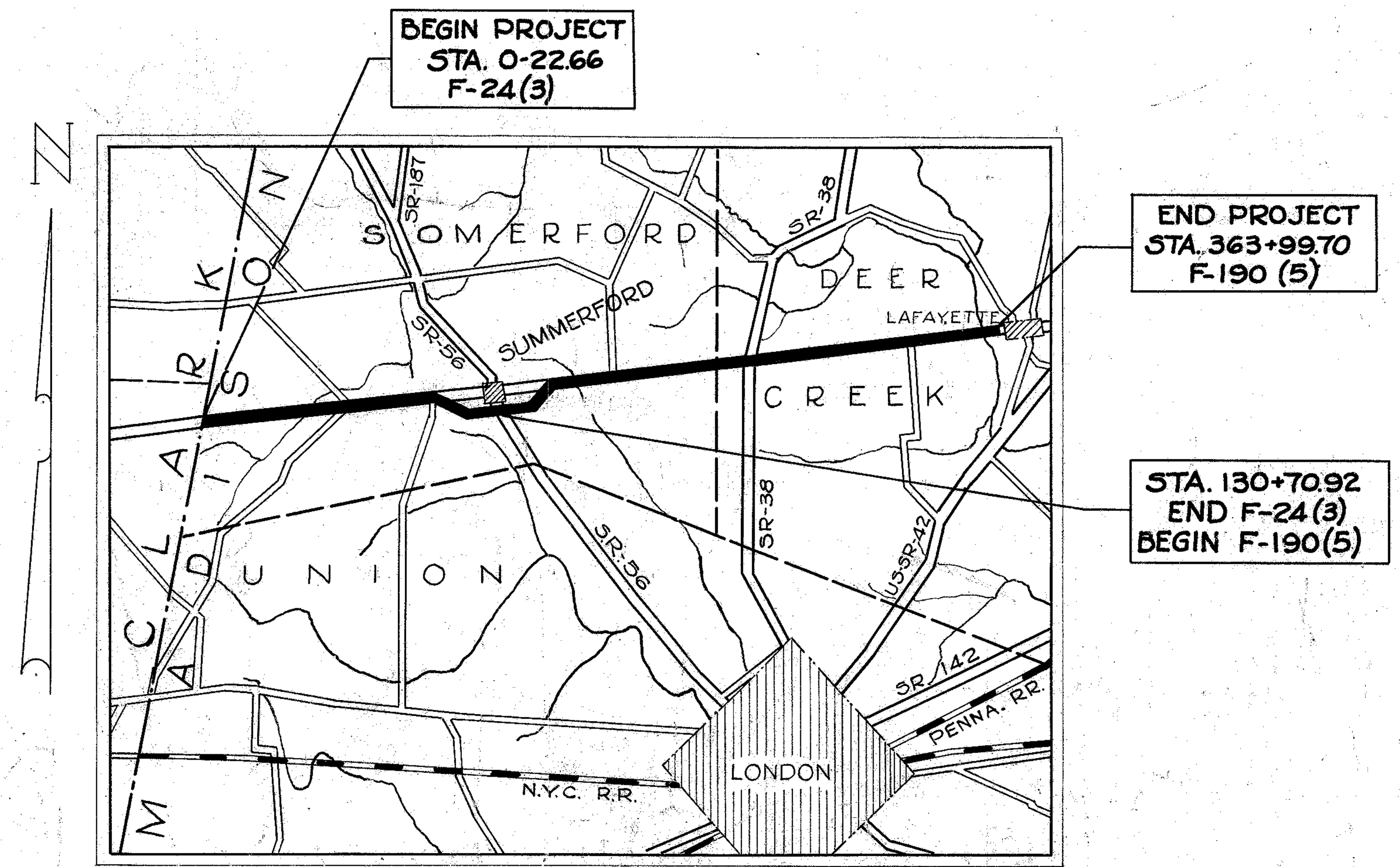
The Standard Specifications of the State of Ohio, Department of Highways, including changes and Supplemental Specifications listed in the proposal shall govern this improvement.

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

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

LINE DATA

BEGIN PROJECT F-24(3) STA. 0-22.66
END F-24 (3) STA. 130+70.92
NO ADDITIONS OR DEDUCTIONS
NET LENGTH OF F-24(3) = 13,093.58 LIN.FT. OR 2.479 MILES.
BEGIN F-190 (5) STA. 130+70.92
END F-190 (5) STA. 363+99.70
TOTAL LENGTH OF F-190 (5) = 23,328.78 LIN.FT.
ADD FOR EQUATION STATION
STA. 161+01.26 BACK = 160+22.53 AHEAD = 78.73 LIN.FT.
NET LENGTH OF F-190 (5) 23,407.51 LIN.FT. OR 4.433 MILES
TOTAL LENGTH OF PROJECT = 36,501.09 LIN.FT. OR 6.913 MILES.
END WORK STA. 364+57 (DEDUCT 0.3' STA. 363+99.7 BACK = STA. 364+00 AHEAD)
TOTAL LENGTH OF WORK = 36,558.09 LIN.FT. OR 6.923 MILES.



DELIVERY POINT
LONDON

AVERAGE HAUL
5 MILES

LOCATION PLAT

SCALE IN MILES

CONVENTIONAL SIGNS

COUNTY LINE
TOWNSHIP LINE
SECTION LINE
CENTER LINE
PROPERTY LINE
CITY OR VILLAGE LINE
FENCE LINE
STEAM RAILROAD
POLE LINE

PORTION TO BE IMPROVED
STATE HIGHWAYS
COUNTY ROADS

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

INDEX OF SHEETS

Revised As-Built

Note added on Sheet 8
Date 10-25-50 by C.A.S.

GROUND PHOTOLAB
MAR 6 1957
CONSTRUCTION BUREAU

APPROVED O. Ammor
DATE 4-28-50 RESIDENT DIVISION DEPUTY DIRECTOR
APPROVED
DATE CHIEF ENG'R. BUREAU OF MAINTENANCE
APPROVED
DATE 5-23-50 CHIEF ENG'R. BUREAU OF BRIDGES & R.R. CROSSINGS
APPROVED
DATE 5-26-50 CHIEF ENG'R. BUREAU OF LOCATION & DESIGN
APPROVED
DATE 5-26-50 FIRST ASS'T. DIRECTOR & CHIEF ENGINEER
APPROVED
DATE 5-26-50 DIRECTOR OF HIGHWAYS

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS.

RECOMMENDED FOR APPROVAL:

DISTRICT ENGINEER DATE

APPROVED:

DIVISION ENGINEER DATE

SUPPLEMENTAL SPECIFICATIONS	
M-110.23	REV. 1-3-47
5	5-28-48
5-303	12-20-46
31	6-13-49

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS							
I-1,2,3,4 & 5	2-20-45	I-15 No 1	3-1-47	LBC-45	9-18-47	B-T-50-70-71 E No 1	10-1-47
I-8 CB. 1-2A & B	12-15-41	I-15 No 2	6-17-49	SBC-45	9-18-47	B-T-71 R	5-22-50
I-8 CB. 1-3 & 1-4	12-15-41	L-3	4-1-50	STC-47	9-18-47	L-3-A	4-1-50
I-8 CB. No 3	12-15-41	G-8.07	2-7-50	L.J. No 1	2-7-50	CS-1-47	1-20-48
I-8 CB. No 3A	12-15-41	S-27 PC-3	2-20-45	TJ. No 1	2-7-50	A-1-49	7-27-49
I-8 CB. No 7	5-1-47	AS-1-47 AS-2-47	7-27-49	TJ. No 2	2-7-50	P-1-49	7-27-49
I-12	3-15-48	AS-3-47 AS-4-47	7-27-49	TJ. No 3	2-7-50	CSB-1-47	8-25-49
I-8 C.B. 2-2A & B	12-15-41	I-14 G	2-1-47	L-1	4-1-50		

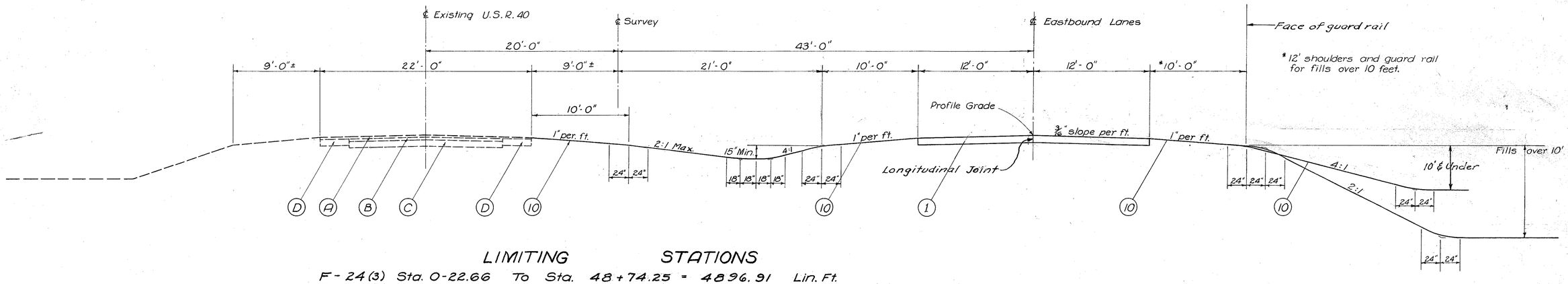
FILE NO.	MADISON COUNTY MAD-40-(0.00-2.47).
	DATE OF LETTING
	CONTRACT NO.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUND
2	OHIO	F-24(3) F-190(5)	POST WAR

2 / 179

MAD - 40 - (0.00 - 6.84)

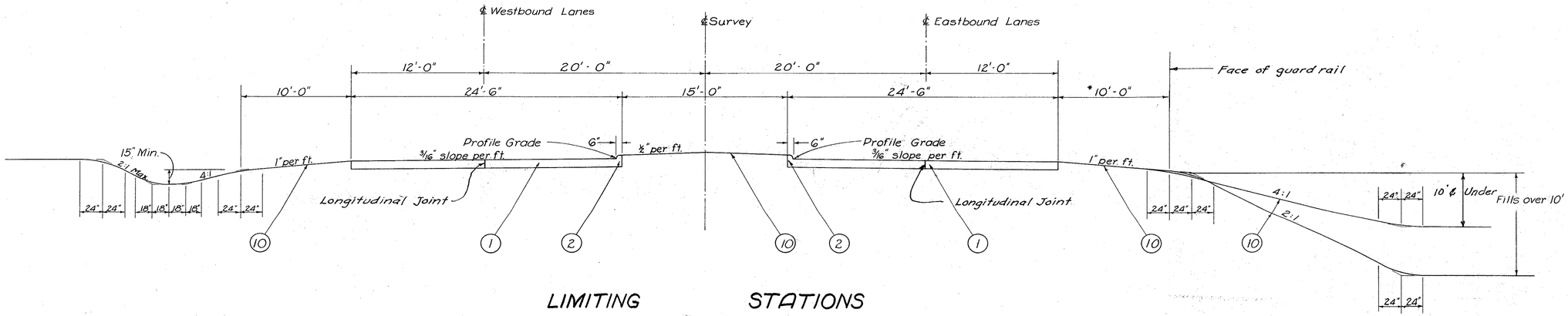
TYPICAL SECTIONS
TYPE T-71



LIMITING STATIONS

F-24(3)	Sta. 0-22.66	To	Sta. 48+74.25	=	4896.91	Lin. Ft.
F-24(3)	Sta. 49+53.75	To	Sta. 99+97	=	5043.25	Lin. Ft.
			TOTAL	=	9940.16	Lin. Ft.

Sta. 48+59.25 to 48+74.25 and
Sta. 49+53.75 to 49+68.75 approach slabs = 30.00 Lin. Ft.



LIMITING STATIONS

F-24(3)	Sta. 108+77.59	To	Sta. 130+70.92	=	2193.33	Lin. Ft.
F-190(5)	Sta. 130+70.92	To	Sta. 151+77.05	=	2106.13	Lin. Ft.
			TOTAL	=	4299.46	Lin. Ft.

- (A) EXISTING 2"± BITUMINOUS CONCRETE SURFACE COURSE
- (B) EXISTING 3"± BITUMINOUS CONCRETE SURFACE COURSE
- (C) EXISTING 8" WATERBOUND MACADAM BASE COURSE
- (D) EXISTING 9" CONCRETE BASE WIDENING
- (1) ITEM T-71 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
- (2) ITEM I-12 TYPE 4-A CONCRETE CURB
- (10) ITEM L-9 SEEDING AND PROTECTING TYPE A

GENERAL NOTES

Berms shall be dropped ½ inch below the edge of the pavement except on the high side of superelevated curves.

Superelevated curves shall be built without crown. The crown shall be worked out of the pavement in that portion between the beginning of the transition and the point where the superelevation equals twice the crown.

For special ditch grades see the cross-section sheets.

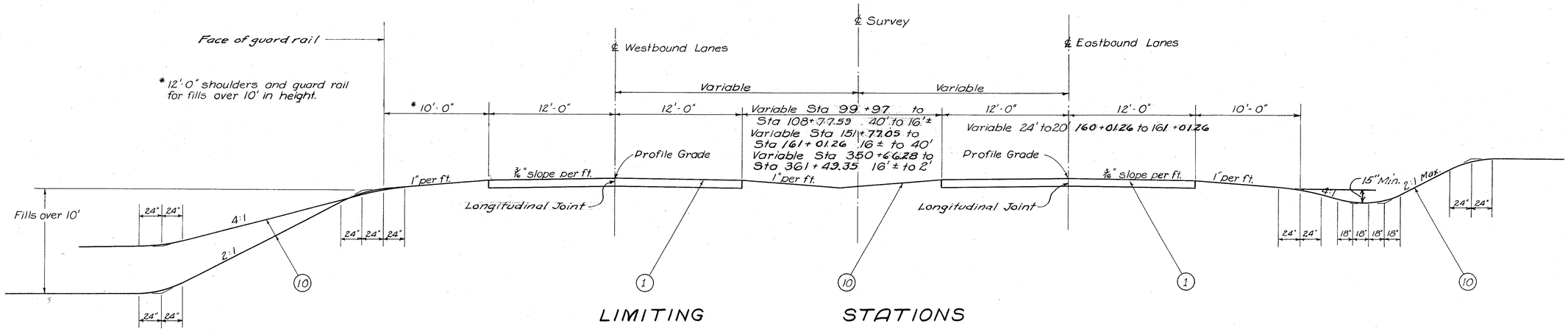
For details of classified embankment subbase see sheets 5-6-7

TYPICAL SECTIONS

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

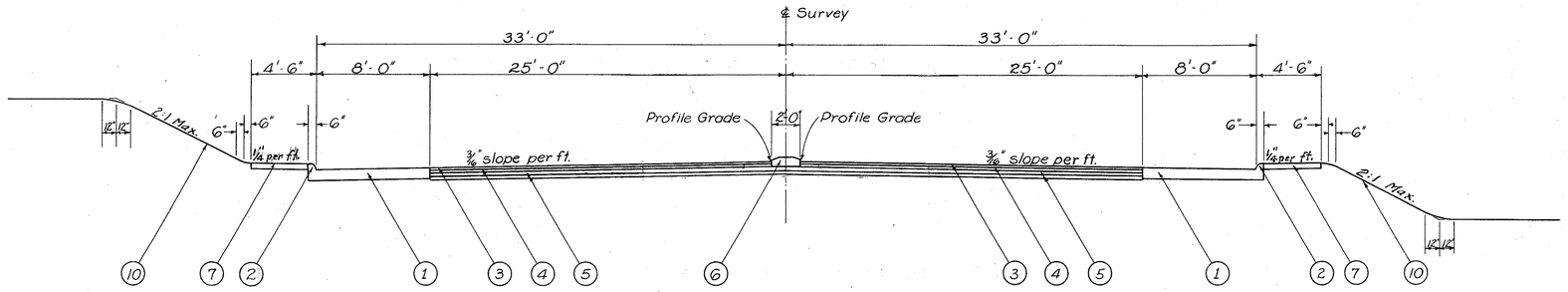
3
179

MAD-40-(0.00-6.84)



LIMITING STATIONS

F-24 (3)	Sta.	99+97	To	Sta	108+77.59	=	880.59 Lin. Ft.
F-190 (5)	Sta.	151+77.05	To	Sta	161+01.26	=	924.21 Lin. Ft.
F-190 (5)	Sta.	350+66.28	To	Sta	361+49.35	=	1083.07 Lin. Ft.
					TOTAL	=	2887.87 Lin. Ft.
Sta. 350+66.28 to 350+81.28					approach slabs	=	15.00 Lin. Ft.



LIMITING STATIONS

F-190 (5) Sta. 361+49.35 To Sta. 363+99.70 = 250.35 Lin. Ft.

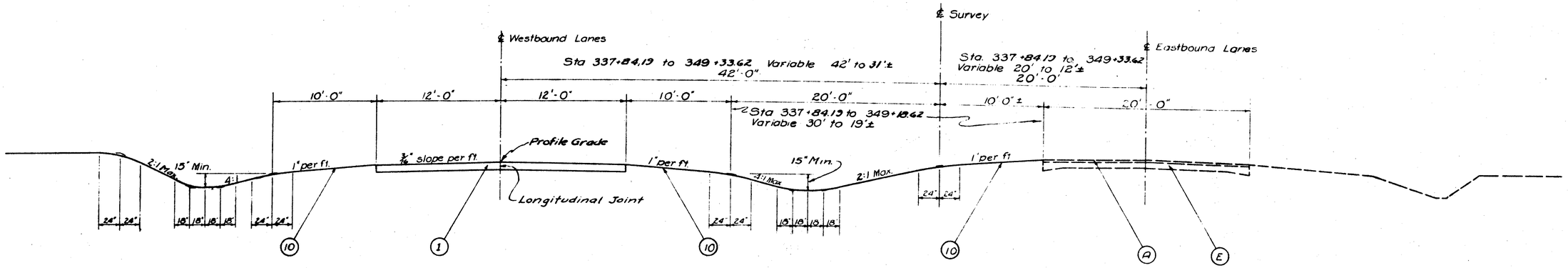
(1) ITEM T-71 9" REINFORCED PORTLAND CEMENT CONCRETE SURFACE COURSE
(2) ITEM I-12 TYPE 2-A CONCRETE CURB
(3) ITEM T-35 1½" ASPHALTIC CONCRETE SURFACE COURSE TYPE A (70-80)
(4) ITEM B-35 1½" ASPHALTIC CONCRETE LEVELING COURSE
(5) ITEM B-35 2-3" ASPHALTIC CONCRETE BASE COURSES
(6) ITEM SPECIAL PRECAST CONCRETE TRAFFIC DIVIDERS (See Sheet No. 131)
(7) ITEM I-13 4" CONCRETE SIDEWALKS
(10) ITEM L-9 SEEDING AND PROTECTING TYPE A

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

4 / 179

MAD-40-(0.00-6.84)

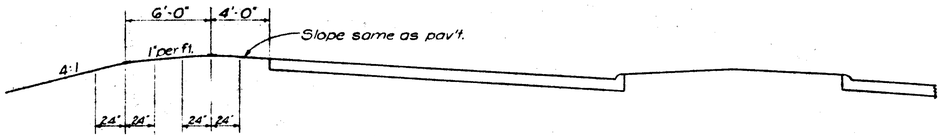
TYPICAL SECTIONS



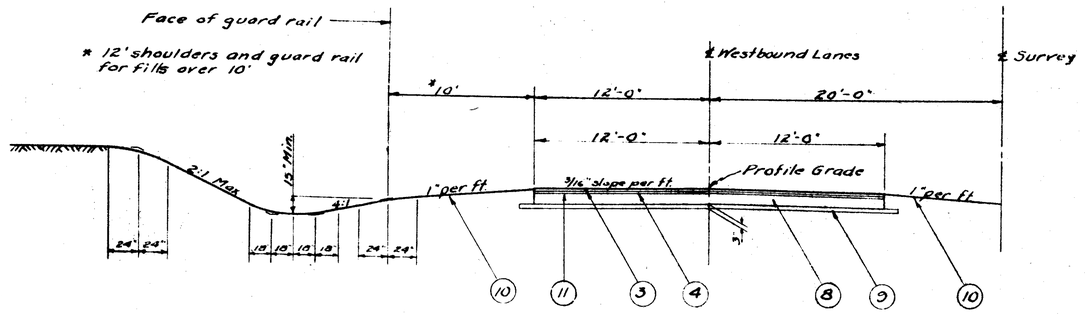
LIMITING STATIONS

F-190(5) Sta 160+22.53 To Sta 349+33.62 = 18911.09 Lin. Ft.
Sta 349+18.62 to 349+33.62 approach slabs = 15.00 Lin. Ft.

- (A) Existing 2"± Bituminous Surface Course
- (E) Existing 9"-7"-7"-9" Plain Concrete Pavement
- (1) Item T-71 9" Reinforced Portland Cement Concrete Pavement
- (10) Item L-9 Seeding and Protecting Type A
- (8) Item B-71 9" Reinforced Portland Cement Concrete Base Course
- (9) Item SS-5 Classified Embankment Material
- (11) Item T-30 Bituminous Tack Coat using 0.10 gal. per sq.yd. Sec. M-5.5 M5-2 or 55-1
- (3) Item T-35 1½" Asphaltic Concrete Surface Course Type A (70-80)
- (4) Item B-35 1½" Asphaltic Concrete Leveling Course



SUPERELEVATED SECTION



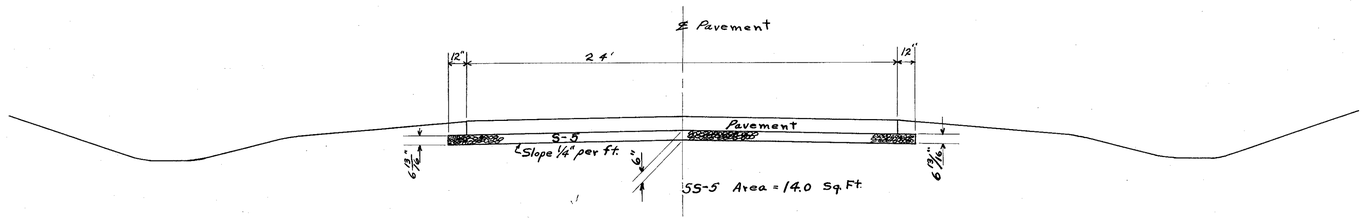
LIMITING STATIONS

F-24(3) Sta. 7+50 To Sta 16+00 = 850.00 Lin. Ft.
Sta 47+50 To Sta. 48+74.25 = 124.25 Lin. Ft.
Sta. 49+53.75 To Sta 51+50 = 196.25 Lin. Ft.
Sta. 48+59.25 to 48+74.25 and
Sta 49+53.75 to 49+68.75 approach slabs = 30.00 Lin. Ft.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUND
2	OHIO	F-24(3) F-190(5)	POST WAR

5
179

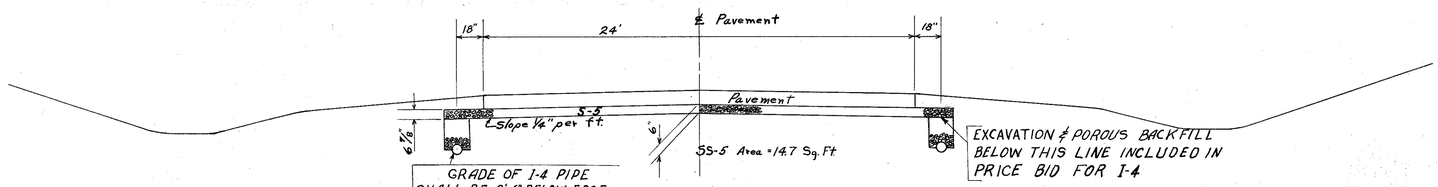
MAD-40-(0.00-6.84)



F-24(3) 7221	STA	4+25	TO	10+00	E	=	575	Lin. Ft.	STA	228+00	TO	243+50	W	=	1550 Lin. Ft.
	STA	21+50	TO	31+50	E	=	1000	Lin. Ft.	STA	248+50	TO	280+00	W	=	3150 Lin. Ft.
	STA	37+85	TO	48+73.75	E	=	1088.75	Lin. Ft.	STA	286+10	TO	296+50	W	=	1040 Lin. Ft.
	STA	49+54.25	TO	99+97	E	=	5042.75	Lin. Ft.	STA	301+50	TO	313+50	W	=	1200 Lin. Ft.
F-190(5) 7221	STA	160+22.53 ahead	TO	174+75	W	=	1452.47	Lin. Ft.	STA	344+25	TO	349+34.87	W	=	509.87 Lin. Ft.
	STA	188+25	TO	211+50	W	=	2325	Lin. Ft.	STA	320+50	TO	341+00	W	=	2050 Lin. Ft.

F-190(5) 7221

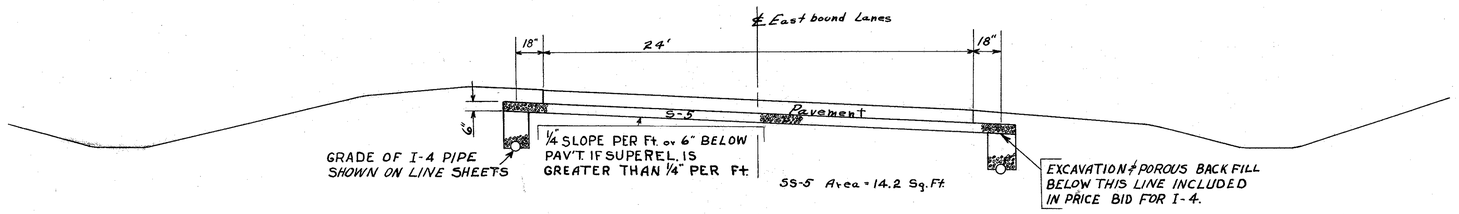
Total F-24(3) = 7706.50 Lin. Ft.
Total F-190(5) = 13,277.34 Lin. Ft.



F-24(3) 7221	STA	0-22.66	TO	4+25	E	=	447.66	Lin. Ft.	STA	243+50	TO	248+50	W	=	500 Lin. Ft.
									STA	280+00	TO	286+10	W	=	610 Lin. Ft.
	STA	18+50	TO	21+50	E	=	300	Lin. Ft.	STA	296+50	TO	301+50	W	=	500 Lin. Ft.
F-190(5) 7221	STA	174+75	TO	188+25	W	=	1350	Lin. Ft.	STA	341+00	TO	344+25	W	=	325 Lin. Ft.
	STA	211+50	TO	228+00	W	=	1650	Lin. Ft.	STA	313+50	TO	320+50	W	=	700 Lin. Ft.

F-190(5) 7221

Total F-24(3) = 747.66 Lin. Ft.
Total F-190(5) = 5633.00 Lin. Ft.



F-24(3) 7221 STA 10+00 TO 18+50 = 850 Lin. Ft.

NOTE

SS-5 MATERIAL SHALL MEET ONE OF THE FOLLOWING REQUIREMENTS:
(1) GRADING "C" SS-5 EXCEPT THAT PER CENT PASSING THE Nº 50 SIEVE SHALL BE WAIVED AND PER CENT PASSING THE Nº 200 SIEVE 5-15.
(2) GRADING "D" SS-5 EXCEPT THAT PER CENT PASSING THE Nº 50 SIEVE SHALL BE WAIVED AND PER CENT PASSING THE Nº 200 SIEVE 5-20

EXCEPT THAT WHERE PIPE UNDERDRAINS ARE PROVIDED UNDER THE CLASSIFIED EMBANKMENT, MATERIAL MEETING THE REQUIREMENTS OF GRADING A, B, C OR D, OR MATERIAL WITH THE FOLLOWING SPECIAL GRADING MAY BE USED.

Sieve	Total % Passing	Sieve	Total % Passing
3 inch	100	No. 10	25 to 75
2 inch	65 to 100	No. 50	0 to 20
1 inch	50 to 100		

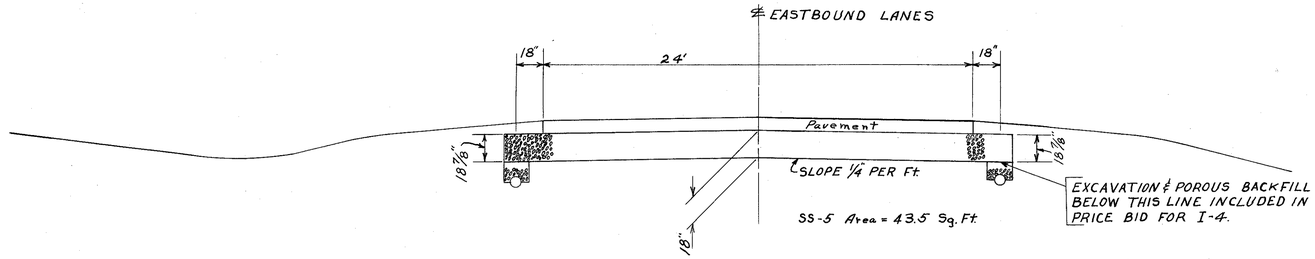
WHILE THE PLANS SHOW A MINIMUM SLOPE OF ¼" PER FOOT FOR SS-5 WHERE DENSE GRADED MATERIAL (C OR D AS MODIFIED ABOVE) IS USED THE THICKNESS OF THE COURSE SHALL BE UNIFORM AND HAVE THE SAME SLOPE AS THE PAVEMENT. PAYMENT WILL BE MADE ON THE BASIS OF FINAL CALCULATIONS.

TYPICAL SECTIONS ~ CLASSIFIED EMBANKMENT

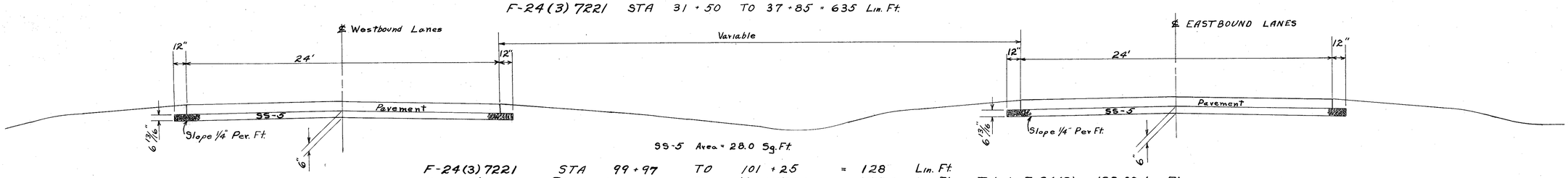
FED. RD. DIVISION	STATE	PROJECT	TYPE FUND
2	OHIO	F-24(3) F-190(5)	POST WAR

6
179

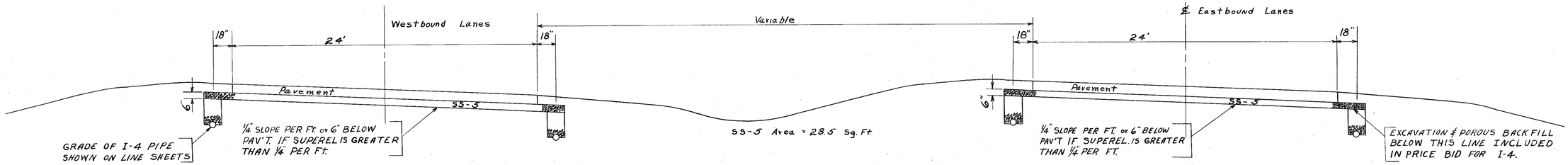
MAD-40-(0.00-6.84)



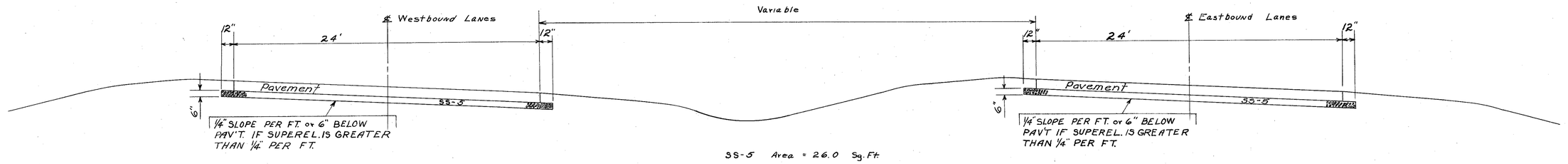
F-24(3) 7221 STA 31 + 50 TO 37 + 85 = 635 Lin. Ft.



F-24(3) 7221	STA	99 + 97	TO	101 + 25	= 128	Lin. Ft.	
F-190(5) 7221	STA	160 + 00	TO	161 + 01.26 back	= 101.26	Lin. Ft.	Total F-24(3) = 128.00 Lin. Ft.
	STA	350 + 65.03	TO	361 + 49.35	= 1084.32	Lin. Ft.	Total F-190(5) = 1185.58 Lin. Ft.



F-190(5) 7221 STA 153 + 00 TO 157 + 50 = 450 Lin Ft.



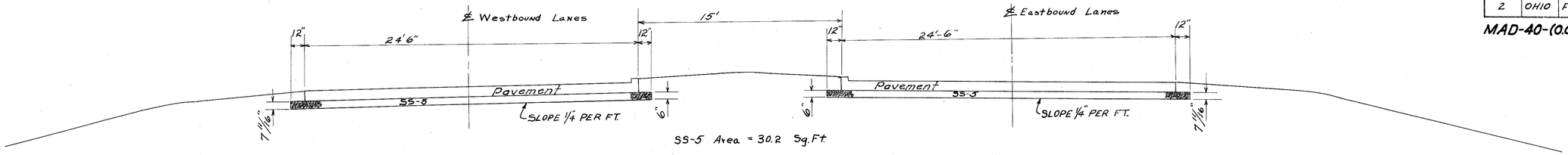
F-24(3) 7221	STA	101 + 25	TO	108 + 78	= 753	Lin. Ft.	Total F-24(3) = 753 Lin. Ft.
F-190(5) 7221	STA	151 + 77	TO	153 + 00	= 123	Lin. Ft.	Total F-190(5) = 373 Lin. Ft.
	STA	157 + 50	TO	160 + 00	= 250	Lin. Ft.	

TYPICAL SECTIONS ~ CLASSIFIED EMBANKMENT

FED. RD. DIVISION	STATE	PROJECT	TYPE FUND
2	OHIO	F-24(3) F-190(5)	POST WAR

7
179

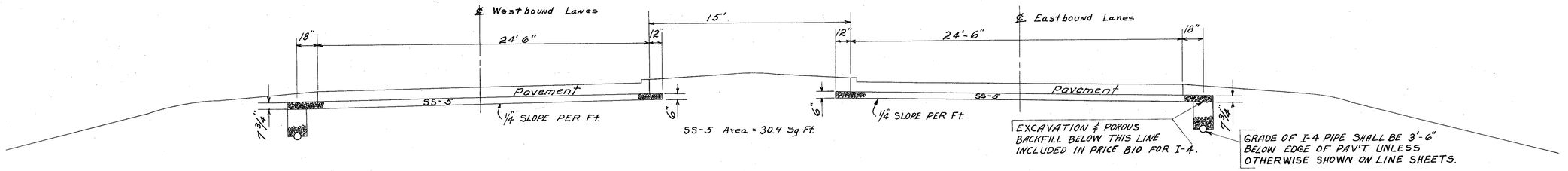
MAD-40-(0.00-6.84)



SS-5 Area = 30.2 Sq. Ft.

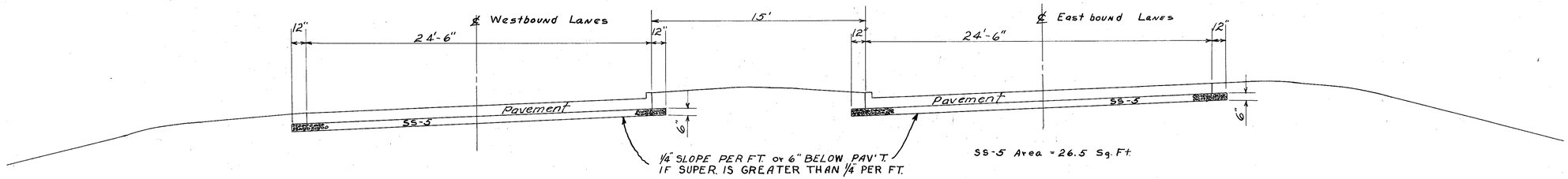
F-24(3)7221 { STA 108 + 78 TO 114 + 25 = 547 Lin. Ft.
STA 121 + 25 TO 128 + 75 = 750 Lin. Ft.
F-190(5) 7221 STA 134 + 25 TO 141 + 25 = 700 Lin. Ft.

Total F-24(3) = 1297 Lin. Ft.
Total F-190(5) = 700 Lin. Ft.



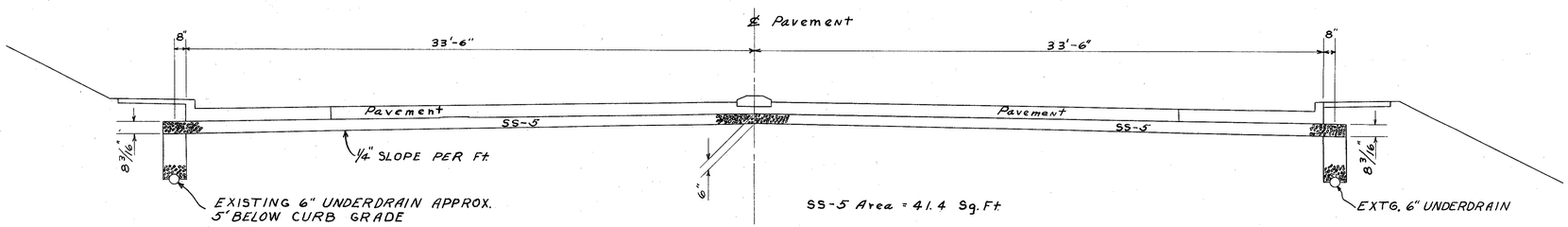
SS-5 Area = 30.9 Sq. Ft.

F-24(3) 7221 STA 128 + 75 To 130 + 70.92 = 195.92 Lin. Ft.
F-190(5) 7221 STA 130 + 70.92 To 134 + 25 = 354.08 Lin. Ft.



SS-5 Area = 26.5 Sq. Ft.

F-24(3) 7221 STA 114 + 25 TO 121 + 25 = 700 Lin. Ft.
F-190(5) 7221 STA 141 + 25 TO 151 + 77 = 1052 Lin. Ft.



SS-5 Area = 41.4 Sq. Ft.

F-190(5) Type Code 6201 STA 361 + 49.35 TO 363 + 99.70 = 250.35 Lin. Ft.

TYPICAL SECTIONS ~ CLASSIFIED EMBANKMEN

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OH10	F-24(3) F-190(5)	POST WAR

8
179

MAD.-40-(0.00-6.84)

FINISHING CONCRETE PAVEMENT÷ Hand finishing will be permitted as per Sec. T-71.211 of the General Specifications at intersections and at Sta. 361+49.35 to Sta. 363+99.70.

* L-9 SEEDING & PROTECTING ROADWAY AREAS÷ Quantities for seeding Item L-9 are calculated for the soil areas between lines ten feet (10) outside the work limits as shown on the cross sections or to the R/W line if such line is less than ten (10) feet from the work limits.

L-9 COMMERCIAL FERTILIZER÷ Commercial fertilizer with an analysis of 10-6-4 shall be applied to all areas having seeding or sodding and shall be disced, harrowed or raked into the soil to a depth of (2") two inches. To be applied at the rate of 20 lbs. per 1000 sq. ft.

EXISTING PAVEMENT REMOVAL÷ After the existing pavement has been removed from Sta. 104+30 to 109+40, and from Sta. 151+15 to 153+85 the old roadway shall be plowed, harrowed and dragged to a smooth grade, the old ditches filled and the entire area left in a neat condition. Cost of this work shall be included in the price bid for pavement removal, Item E-8. Areas shall then be seeded and mulched, Item L-9.

FIELD OFFICE÷ The contractor shall provide a field office having a minimum of 150 sq. ft. of floor space and shall conform with the requirements of Sec. S.0.01b.

CONNECTING DRAINS÷ Existing farm drains and house connections that are cut or intercepted by the new drainage system shall be connected to the new drainage system. Connections to be made where and directed by the Engineer.

40 Farm drains @ 20' = 800 Lin. Ft.
20 House drains @ 10' = 200 " ".
Total 6" Pipe 1000 " ".

F-24(3) = 380 Lin. Ft., F-190(5) 7221 = 580 Lin. Ft., F-190(5) 6201 = 40 Lin. Ft.

RESETTING OF MONUMENTS÷ The existing monuments shall be carefully removed by the contractor and reset at the location designated by the engineer. Special care shall be taken to place the monument in its exact location. For the location of existing monuments see Plan Sheets.

REMOVAL OF EXISTING R/W MONUMENTS÷ All existing right-of-way monuments which will be disturbed in the construction shall be carefully removed and placed along the right-of-way available for removal by State forces. The cost of removal of the right-of-way monuments to be included in the unit price bid for E-1 excavation. Estimated monuments to be removed = 68.

PIPE REMOVAL÷ The removal and disposal of any existing pipe lying within the limits of the proposed excavation, of either Item E-1, or E-2, is classified and paid for as excavation and shall be removed and disposed of by the contractor.

CONCRETE (AND/OR) MASONRY REMOVAL÷ The removal and disposal of the whole or any portion of existing steps, side walks, walls, headwalls, curb and foundations, lying within the limits of the proposed excavation, of either Items E-1 or E-2 and not listed for removal is classified and paid for as excavation and shall be removed and disposed of by the contractor.

FLARED GUARD RAIL÷ Guard rail shall be flared to meet bridge railing in such a manner that the change in alignment at the guard rail will not exceed 1 to 10.

EMBANKMENT÷ In lieu of the requirements for full width construction under E 1.04, the embankment, where traffic is maintained, may be placed in port width construction at Stations 7+50 to 16+00, 47+50 to 51+50, 99+97 to 105+00, 154+00 to 161+01.26, 350+65.03 to 363+99.7.

UTILITY ADJUSTMENT÷ Any and all work required for Public or Private Utilities will be done by and at the expense of their respective owners unless otherwise noted in these plans.

TRAFFIC AND SCHEDULE OF OPERATIONS÷ Two-way traffic shall be maintained at all times. The item of "Maintaining Traffic" shall include furnishing lights, signs, barricades and watchmen necessary to secure the flow of two-way traffic twenty-four (24) hours daily.

The Contractor shall, before work is started on this contract submit to the Director for approval, a schedule of operations.

The items T-10 and M-10 are calculated to provide a temporary cross-over at Station 6+38, a temporary connecting road from Station 104+00 to 106+00 and from Station 154+00 to 156+00 and from Station 355+00 to 363+99.7.⊕ The temporary road shall be surfaced 20' wide and have berms not less than 3' wide. One way traffic shall be maintained at all times at the intersections with Route 56 and Route 38. The items T-10 and M-10 include one-way traffic lanes at the intersections with Route 56 and Route 38. The cost of constructing, maintaining and removing the temporary road and cross-overs is included in the unit price bid for Items T-10 and M-10.

Estimated Quantities

	T-10	M-10
F-24-(3) Code 7221 =	296.0 Cu.Yds.	5.9 Tons
F-190(5) Code 7221 =	1042.0 " "	20.9 "
F-190(5) Code 6201 =	185.0 " "	3.7 "
	1523.0 Cu.Yds.	30.5 Tons

The above traffic scheme is based on a schedule that the new eastbound bridge at Sta. 49+14, the pavement from Sta. 5+50 to 66+00, and the crossover at Sta. 65+52 will be built and opened to traffic before the existing bridge at Sta. 49+14 is closed to traffic.

⊕ The items T-10 & M-10 also include a temporary run-around at Sta. 293+00 to Sta. 298+00 during construction of the outlet pipe (see Sheet 132) and the pavement replacement.

* L-9 SEEDING & PROTECTING – TYPE "A" (Continued) ÷

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.

Seed mixtures to be used shall be as follows÷

(a.) In the median strip Sta. 0-22.66 to Sta 161+00, 15% Perennial Ryegrass (Lolium perenne); 15% Alsike Clover (Trifolium hybridum); 10% Hairy Vetch (Vicia villosa); 60% Kentucky Bluegrass (Poa pratensis) shall be sown at the rate of 4 lbs. per 1000 sq. ft.

(b.) In the median strip Sta. 161+00 to Sta. 359+00, the above mixture (a.) shall be sown at the rate of 3 lbs. per 1000 sq. ft.

(c.) Over all other areas the above mixture (a.) shall be sown at the rate of 4 lbs. per 1000 sq. ft., but (in group "C" only) 60% Meadow Fescue (Festuca pratensis), Alta Fescue (Festuca elatior var. Alta) and/or Chewings Fescue (Festuca rubra var. fallax) may be substituted for Kentucky Bluegrass.

DECLARATION OF LIMITATION OF ACCESS÷

This improvement between Sta. 0-22.66 and Sta. 363+99.70 has been declared a limited access highway or freeway by action of the Director of Highways in accordance with the provisions of Section 1178-21, General Code of Ohio. Recorded in Volume 35, Page 410 of the Director's Journal.

DESIGN SPEED ÷ is (70) seventy miles per hour.

DRAINAGE "D"

SHEET NO	I-3 PIPE FOR ROADWAY DRAINAGE 4" L.F.	6" L.F.	8" L.F.	10" L.F.	12" L.F.	15" L.F.	18" L.F.	21" L.F.	24" L.F.	27" L.F.	I-3 PIPE UNDER DRIVES 10" L.F.	12" L.F.	15" L.F.	21" L.F.	
F-24(3) CODE 7221															
8		380													
16			119	141	348	149					20	40			
17					102	972							20		
18						625	268	59					20	20	
19					169			324				20			
20					255	680									
21				528	14						44				
22				395											
23	32			431											
25						281									
26				154	533	99									
27															
28				306	377										
29					102										
24									6						
RECAP															
SUM	32	380	119	1955	1900	2806	268	383	6		64	60	40	20	
F-190(5) CODE 7221															
8		580													
45				18						306					
29					36										
30					220										
31			348	199	142										
32				712											
33				135							20				
34															
37					213							20			
38															
40					579										
46															
47					23										
48				4											
49				3											
50				34		633							48		
51			38				911								
52		55													
43															
44															
RECAP					1213										
SUM		635	386	1105		633	911			306	20	20	48		
F-190(5) CODE 6201															
52															
8		40													
SUM		40													

SHEET NO	I-3 PIPE OUTLETS 30" L.F.	8" L.F.	10" L.F.	12" L.F.	15" L.F.	18" L.F.	I-2 PIPE UNDER PAVEMENT 27" L.F.	8" L.F.	10" L.F.	12" L.F.	15" L.F.	24" L.F.
F-24(3) CODE 7221												
8												
16			16									
17				16								
18												
19												
20				16	16							
21			32									
22			16						44			
23			16									
25											58	
26			16						44	48		
27								86				
28				32					94			
29										40		
24												
RECAP												
SUM			96	64	16			86	182	88	58	
F-190(5) CODE 7221												
8												
45	16						66					
29										40		
30				16				100				
31								30		92		
32								76				
33												
34								52				
37												
38												
40					12						60	
46												
47				20								
48												
49												
50					16							
51		10				16			47			
52		10										
43												
44										63	20	20
RECAP												
SUM	16	20		36	28	16	66	258	47	192	80	20
F-190(5) CODE 6201												
52												
8												
SUM												

SHEET NO	I-5 PIPE SPECIALS 18"x10" T EACH	10"x4" T EACH	10"x4" Y EACH	10"x10" TEE EA.	12"x6" WYE EA.	15"x12" TEE EA.	27"x10" TEE EA.	I-8 CATCH BASINS I-2A EACH	2-2A EACH	3 EACH	3-A EACH	7 EACH	I-3
F-24(3) CODE 7221													
8													
16		1						3					
17								4					
18								4					
19								1					
20								3					
21								2					
22								1			1	1	1
23		2						1				1	
25								3					
26								3				1	
27										1	2		
28			1		1								
29													
24													
RECAP													1
SUM		3	1		1			25		1	3	3	
F-190(5) CODE 7221													
8													
45							1						1
29												2	
30										1			
31								1				3	
32								3					
33													
34													
37												1	
38								1					
40						1		1			1		
46													
47								2					
48				1				1					
49				1				1					
50								3					
51	1								1				
52													
43													
44								3					1
RECAP													
SUM	1			2		1	1	16	1	1	1	6	2
F-190(5) CODE 6201													
52										2			
8													
SUM										2			

SHEET NO	I-14 PAVED GUTTER LIN. FT.	I-16 ABANDON INLETS EACH	S-22 REMOVAL OF PORTION EX. STR. CU. YDS.	E-12 PIPE REMOVED & DISPOSED OF 4" D.T.	6" D.T.	8" D.T.	12" CMP	10" D.T.		10" V.S.P.	15" V.S.P.	18" V.S.P.	12" V.S.P.	I-16 ABANDON MANHOLE EACH	L-10 SODDING SQ. YDS.	I-10 RIPRAP TYPE B SQ. YDS.
F-24(3) CODE 7221																
8																
16				36											15	
17															905	
18	400					35									637	
19						329									205	
20															83	
21				40											310	
22							23								20	
23				82											210	
25				295											15	
26				665		46									25	
27																
28																
29					65									1		
24																
RECAP				1118	65	410	23								2425	
SUM	400													1		
F-190(5) CODE 7221																
8																
45															11	4
29		1			80						26				10	
30																
31					183										600	
32															15	
33								144								
34																
37								133							305	
38															5	
40						75									5	
46																
47															10	
48															5	
49															5	
50										300			423		140	
51			0.2									903	136		5	
52			0.2													
43															50	
44															20	
RECAP			0.4		263	75		277		300	26	903	559		1186	4
SUM		1														
F-190(5) CODE 6201																
52															213	
8																
SUM															213	

APPROACH SLABS "AS"

SHEET №	I-7 APPROACH SLABS SQ.YDS.	T-35 2½" SQ.YDS.	S-3 WATER PROOF-ING. SQ.YDS.				
F-24(3) CODE 7221							
170	160.00	160.00	160.00				
CAL.		160.00					
SUM.	160.00		160.00				
F-190(5) CODE 7221							
170	89.94	89.94	89.94				
CAL.		89.94					
SUM	89.94		89.94				

DRAINAGE CON'T. "D"

SHEET №	I-2 PIPE OUTLETS 10"	12"	15"	I-2 PIPE STORM SEWERS 12"	15"	18"	24"
F-24(3) CODE 7221							
22		24					
23		6					
25		12	12				
27		10		801			
SUM		52	12	801			
F-190(5) CODE 6201							
30		10		70			
32	20						
38			10				
44					278	278	399
45							537
RECAP					278		
SUM.	20	10	10	70		278	936

WATER CALCULATION

F-24(3) Code 7221	91488 x 0.005 =	457.4 M. Gallons
F-190(5) Code 7221	111219 x 0.005 =	556.1 M. Gallons
F-190(5) Code 6201	285 x 0.005 =	1.4 M. Gallons.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

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MAD-40-(0.00-6.84)

APPROACHES "A"

SHEET NO.	DRIVEWAYS I-1 PIPE 12" LIN.FT.	I-1 PIPE 15" LIN.FT.	I-1 PIPE 18" LIN.FT.	I-1 PIPE 24" LIN.FT.	I-17 6" AGG. SQ.YDS.	T-70 6" SQ.YDS.	DEDUCT CURB TYPE 2-A LIN.FT.	CROSSOVERS I-17 6" AGG. SQ.YDS.	I-1 PIPE 12" LIN.FT.	I-1 PIPE 15" LIN.FT.	E-12 PIPE REMOVED & DISPOSED 12" VSP LIN.FT.	12" CMP LIN.FT.	18" CMP LIN.FT.
F-24(3) CODE 7221													
15					41.3								
16					315.1			301.2	116				
17	28				57.0			98.8					
18				36	91.3			200.8					
19			32		102.4			100.4					
21					221.1			200.8	28		31		
22	24				82.6								
23					56.0			100.4	28				
24			48		74.6			100.4	28				16
25								100.4		28			
26					363.2								
132								427.9					
RECAP					1404.6			1631.1			31		16
SUM.	52		80	36					200	28			
F-190(5) CODE 7221													
31					198.1			469					
33					49.2			200.8	28				
35	24				52.4			100.4	28				
36								100.4	28				
37					71.7			100.4		28			
38								100.4		28			
42								100.4		28			
44		24			58.0			200.8		56		16	
46								100.4		28			
48	24				52.4			100.4	28			16	
49	24				74.6			100.4	28			16	
50								187.8					
54	48				152.4								
132								350.1					
RECAP					708.8			1789.6				48	
SUM	120	24							140	168			
F-190(5) CODE 6201													
54					27.8	29.25	69.5						
CAL					27.8		69.5						
SUM.						29.25							

SIDEWALKS AND STEPS "SW"

SHEET NO.	E-8 SIDEWALK REMOVED & DISPOSED SQ.FT.	I-13 4" CONC. SIDE WALK SQ.FT.	I-13 CONC. STEPS LIN.FT.	S-24 REMOVAL OF EXISTING STRUC'S LUMP
F-24(3) CODE 7221				
16	53		32	
23			55	1
RECAP				1
SUM.	53		87	
F-190(5) CODE 7221				
31	205			1
54		253		
SUM	205	253		1
F-190(5) CODE 6201				
54	31	184T		
SUM	31	184T		

ITEM L-7
(Sheet 31 & 91)
7 Sq.Yds. Riprap for Tree Protection

TREES AND STUMPS

SHEET NO.	E-9 REMOVAL OF TREES & STUMPS EACH.
F-24(3) CODE 7221	
15	1
16	8
17	2
18	2
19	2
20	23
21	1
22	3
23	3
24	4
25	1
26	2
27	3
28	1
29	1
SUM	57
F-190(5) CODE 7221	
29	14
30	5
31	12
33	9
37	1
38	2
39	1
47	1
51	1
52	1
SUM	47
F-190(5) CODE 6201	
52	1
SUM	1

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

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MAD-40-(0.00-6.84)

STRUCTURES ~ 20' SPAN AND UNDER "S"

SHEET NO.	STATION	STRUCTURE NO.	DESCRIPTION	E-2	E-3	E-12 PIPE REMOVED AND DISPOSED OF						E-12 PIPE REMOVED & STORED	S-1 CONCRETE FOR STRUCTURES		S-4 REINF. STEEL	S-22 REMOVAL PORTION EX. STR.	S-23 DOWEL HOLES 1¼"	S-24 REMOVAL OF EXIST. STRUC.	S-27 PIPE FOR ROADWAY CULVERT C.M.P.M-6.4(6)						I-2 STORM SEWERS			I-3	I-5 PIPE SPECIALS					I-6 CATCH BASINS	I-10 RIPRAP		L-10 SODDING
						8" D.T.	10" D.T.		15" D.T.	12" D.T.	24" V.S.P.	36" CMP	CLASS "E"	CLASS "C"					15"	24"	30"	36"	15"	48"	6"	10"	15"	12"	TEE 30"x12"	TEE 15"x6"	TEE 36"x12"	10° CURVE	DOUBLE 18"x12" TEE		A	B	
				CU.YDS.	CU.YDS	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	CU.YDS.	CU.YDS.	LBS.	CU.YDS.	LIN.FT.	LUMP	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	EACH	EACH	EACH	EACH	EACH	EACH	SQ.YDS.	SQ.YDS.	SQ.YDS.
F-24(3) CODE 7221																																				
148	33+29	MA-40-06	PIPE	38							41					4.5			76														1			
149	61+62	MA-40-12	PIPE	86		52	64											1			122				124					1	2				5	6	20
150	69+93	MA-40-13	PIPE	44	5							24				8.0						58										1				12	25
151-152	97+03	MA-40-18	SMALL BOX	31										23.6	4110	2.0	16																				10
153	103+85	MA-40-20	PIPE	14																		78															24
154	109+38	MA-40-21	PIPE	10															92																		22
155	110+81	MA-40-21A	PIPE	27	3																112								1								32
RECAP						52	64				41					14.5		1														1			5		133
SUM.				250	8							24		23.6	4110		16		92	76	112	122	78	58		124			1		1	2	1			18	
F-190(5) CODE 7221																																				
156-157	147+70	MA-40-28	PIPE	100	94	128															240				128				1							40
158-159	166+41	MA-40-31	SLAB TOP	79					80				57.1		4122	1.9	24							9		77				1							47
160	183+56	MA-40-35	PIPE	17			55															80															17
161	183+56	MA-40-35A	PIPE	20															76																		18
162-163	224+15	MA-40-42	SLAB TOP	70									51.8		3287	2.5	19																			7		15
164-166	310+35	MA-40-59	LARGE BOX	191	297					270				92.5	14312	8.0	43												100							2	30
RECAP						128	55		80	270			108.9	92.5	21,721	12.4			76		240	80		9	128	77		100	1	1					7	2	167
SUM.				477	391																															

INTERSECTIONS "I"

SHEET NO.	E-8 REMOVAL OF EXIST. PAV'T.	B-35 3" COURSE	B-35 LEVELING COURSE 1½"	T-35 SURFACE COURSE 1½"	T-35 SURFACE COURSE	T-71		I-12 COMBINATION		I-17 6"	I-21 CONC. MEDIAN	DEDUCT CURB	SS-5 CLASSIF. EMB.	SS-5 CLASSIF. EMB.
						8" THICK	9" THICK	TYPE 4	TYPE 4-A			TYPE 4-A	6" THICK	3" THICK
	SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	CU.YDS.	SQ.YDS.	SQ.YDS.	LIN.FT.	LIN.FT.	SQ.YDS.	SQ.YDS.	LIN.FT.	SQ.YDS.	CU.YDS.
F-24(3) CODE 7221														
133					1.0	1271.14			688.0	105.0			1414.2	
136						432.67			156.0	184.4			467.7	
138							746.9		154.0			220	794.1	
140		31.04	11.94	11.94	0.4		533.97		250.19		28.93	438	271.6	1.59
RECAP			11.94	11.94						289.4				1.59
CAL.		31.04			1.4		1280.87		1248.19			658	2947.6	
SUM.						1703.81					28.93			
F-190(5) CODE 7221														
140		40.60	16.72	16.72	0.4		533.97		250.19		28.93	438	271.6	1.59
142							957.66		156.0			223	1016.6	
144						523.0			207.0	175.1			563.4	
144						260.0			207.0				283.0	
146	529				0.4		1210.02	220	429.0				1270.0	
RECAP	529		16.72	16.72			2701.65			175.1	28.93		3404.6	1.59
CAL.		40.60			0.8				1249.19			661		
SUM.						783.0		220						

UNDERDRAINS "U"

SHEET NO	I-4 6"	I-4 8" PIPE OUTLETS	I-5 PIPE SPECIALS 6"x6" WYE
	LIN.FT.	LIN.FT.	EACH
F-24(3) CODE 7221			
16	1842		1
17	3353	16	
18	340	16	
19	1336		1
28	257	16	
29	142		
SUM.	7270	48	2
F-190(5) CODE 7221			
29	738		
31	1999	16	
33	1097	16	1
34	1703	16	1
37	1700		
38	1639	16	1
40	1024	32	
44	1172		1
45	700		
46	350	16	1
47	1300		
48	150	16	1
50	720		1
SUM.	14292	128	7

GUARD RAIL

SHEET NO.	I-15,12 OR I-15,14	I-15 REMOVE & STORE	I-15,13
	LIN.FT.	LIN.FT.	LIN.FT.
F-24(3) CODE 7221			
16		998	
17		987	
18	640	573	
19	960	954	
20	1560	1657	241.50
21	376	573	15.50
22		438	
SUM.	3536	6180	257
F-190(5) CODE 7221			
46	25		
47	87		
50	128	530	
51	224	1866	
52		31	
SUM.	464	2427	

STRUCTURES OVER 20' SPAN.

STATION	STRUCTURE NO.	FAP SECTION	TYPE	SIZE	TYPE CODE	
49+14	MA-40-09	F-24(3)	Cont. Slab	24'-30'-24'	X020	
349+99.95	MA-40-66	F-190(5)	Cont. Steel Beam	42.54-43.08-42.54'%	X031	

CULVERTS-UNDERDRAINS-INTERSECTION- GUARDRAIL.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR.

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MAD-40-(0.00-6.84)

MISCELLANEOUS

SHEET NO.	E-8 REMOVAL OF EXIST. PAV'T.	T-10	T-35 1½"		B-35 1½" LEVELING COURSE	B-35 3" BASE COURSE	T-71 9"	B-71 9"	S-22 REMOVAL OF PORTION EX. STR.	S-24 REMOVAL OF EXIST. STR.	T-30 TACK COAT		I-10 RIPRAP GROUTED TYPE A	I-12 CURB & GUTTER TYPE 4	M-10 CALCIUM CHLORIDE DEL & APPL.	SPECIAL MONUMENT REMOVED & RESET	SPECIAL PRECAST CONC. DIVIDERS	S5-5 CLASIF. EMB. 6" THICK	I-12 CONC. CURB TYPE 2-A	I-21 CONC. MEDIAN	S5-5 3" THICK
	SQ.YDS.	CU.YDS.	SQ.YDS.		SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	CU.YDS.	LUMP	SQ.YDS.		SQ.YDS.	LIN.FT.	TONS	EACH	EACH.	SQ.YDS.	LIN.FT.	SQ.YDS.	CU.YDS.
F-24 (3) CODE 7221																					
8		296.0													5.9						
16	611															1					65.74
17	1467															1					157.78
18									8.1	4											
19	61		61.11		61.11			61.11	57.3	6	61.11		150								5.55
20	367		369.11		369.11			369.11			369.11										40.10
21	367		394.44		394.44			394.44		3	394.44										35.65
22	61		61.11		61.11			61.11			61.11										5.55
25	7																				
26	2497													145							
27	93																				
RECAP			885.77		885.77				65.4	13			150								310.37
CAL.		296.0									885.77										
SUM	5531							885.77						145	5.9	2					
F-190 (5) CODE 7221																					
8		1042.0													20.9						
31	2278																				
32	229						244.44											266.67			
33																1					
38																1					
39																1					
44																1					
45	78		77.78		77.78			77.78			77.78										7.13
49																1					
51	2080																				
52	332																				
131							194.46											190.0		117.06	
RECAP	4997		77.78		77.78		398.90											456.67		117.06	7.13
CAL.		1042.0									77.78										
SUM.								77.78							20.9	5					
F-190 (5) CODE 6201																					
52	556																20				
131			1418.48		1418.48	2836.96	472.9												500.7		
8		185													3.7						
RECAP																					
CAL.		185	1418.48		1418.48	2836.96													500.7		
SUM.	556						472.9								3.7		20				

EARTHWORKS.

SHEET NO	E-1 EXCAV.	EMB.	EMB. + 14.%
	CU.YDS.	CU.YDS.	CU.YDS.
F-24 (3) CODE 7221			
16	3358	11505	13116
17	14057	4689	5345
18	6160	6441	7343
19	24987	3762	4289
20	8052	12210	13919
21	8971	5594	6377
22	4686	1883	2147
23	2992	2160	2462
24	1834	5095	5808
25	4926	4733	5396
26	3005	6506	7417
27	1017	8991	10250
28	477	17879	20382
29	229	40	46
CAL.	84751	91488	104297
F-190 (5) CODE 7221			
29	1078	9405	10722
30	624	9714	11074
31	3873	4966	5661
32	672	8555	9753
33	836	2986	3404
34	3985	1298	1480
35	559	7124	8121
36	2385	551	628
37	4247	510	581
38	1772	1962	2237
39	553	2150	2451
40	2347	1657	1889
41	369	4149	4730
42	494	3683	4199
43	1092	2278	2597
44	3977	2082	2373
45	2482	2303	2625
46	1486	5960	6794
47	1353	3190	3637
48	3462	2364	2695
49	482	5501	6271
50	859	7451	8494
51	1112	19801	22573
52	0	1579	1800
CAL.	40079	111,219	126,789
F-190 (5) CODE 6201			
52	315	285	325
CAL.	315	285	325

SEEDING & PROTECTING

SHEET NO	L-9 SEEDING	L-9 FERTILIZER	L-10 SODDING ⊛
	SQ.YDS.	LBS.	SQ.YDS.
F-24 (3) CODE 7221			
15	28	5	
16	3892	1796	70
17	12977	2502	20
18	9556	1840	30
19	16762	3057	20
20	18364	3320	0
21	10824	2010	30
22	8842	1607	20
23	7755	1437	20
24	9220	1663	20
25	10776	1946	10
26	11440	2073	0
27	10735	1938	0
28	11614	2090	0
29	482	87	0
RECAP			240
SUM	149267	27371	
F-190 (5) CODE-7221			
29	8688	1566	0
30	10049	1816	0
31	11257	2136	10
32	10228	1852	0
33	7703	1388	10
34	8865	1602	0
35	8921	1609	20
36	7723	1392	10
37	7385	1386	10
38	7814	1412	10
39	7689	1384	0
40	7070	1273	0
41	8178	1472	0
42	7945	1432	10
43	9105	1648	0
44	8875	1606	30
45	8222	1480	0
46	8835	1592	10
47	8115	1468	0
48	8447	1525	20
49	8508	1536	20
50	7180	1318	0
51	12993	2341	0
52	1246	224	0
RECAP			160
SUM	201,041	36,458	
F-190 (5) CODE 6201			
52	80	53	0
SUM	80	53	0

⊛ Estimated sodding around driveway pipes not included in 'D' or '5' Tables.

S5-5 CLASSIFIED EMBANKMENT.

F-24(3) TYPE CODE 7221

From S5-5 Typicals.

7706.50 x 14.0 ÷ 27 =	3995.96	Cu.Yds.
747.66 x 14.7 ÷ 27 =	407.06	Cu.Yds.
850.00 x 14.2 ÷ 27 =	447.04	Cu.Yds.
635.00 x 43.5 ÷ 27 =	1023.06	Cu.Yds.
128.00 x 28.0 ÷ 27 =	132.74	Cu.Yds.
753.00 x 26.0 ÷ 27 =	725.11	Cu.Yds.
1297.00 x 30.2 ÷ 27 =	1450.72	Cu.Yds.
195.92 x 30.9 ÷ 27 =	224.22	Cu.Yds.
70.000 x 26.5 ÷ 27 =	687.04	Cu.Yds.
Total	9092.95	Cu.Yds.
From Table "I" =	2947.60 Sq.Yds.	
2947.6 x 6 ÷ 36 =	491.27	Cu.Yds.
From Recap	311.96	Cu.Yds.
Total S5-5 = 9092.95 + 491.27 + 311.96 =	9896.18	Cu.Yds.

F-190(5) TYPE CODE 7221

From S5-5 Typicals

13277.34 x 14.0 ÷ 27 =	6884.55	Cu.Yds.
5635.00 x 14.7 ÷ 27 =	3067.94	Cu.Yds.
1165.58 x 28.0 ÷ 27 =	1229.49	Cu.Yds.
450.00 x 28.5 ÷ 27 =	475.00	Cu.Yds.
373.00 x 26.0 ÷ 27 =	359.19	Cu.Yds.
700.00 x 30.2 ÷ 27 =	782.96	Cu.Yds.
354.08 x 30.9 ÷ 27 =	405.22	Cu.Yds.
1052.00 x 26.5 ÷ 27 =	1032.52	Cu.Yds.
Total	14,236.87	Cu.Yds.
From Recap. 6" thick 3861.27 Sq.Yds.		
3861.27 x 6 ÷ 36 =	643.55	Cu.Yds.
From Recap 3" thick.	8.72	Cu.Yds.
Total S5-5 = 14,236.87 + 643.55 + 8.72 =	14,889.14	Cu.Yds.

F-190(5) TYPE CODE 6201

From S5-5 Typical.—

250.35 x 41.4 ÷ 27 =	383.87	Cu.Yds.

BORROW CALCULATION

	F-24-(3) Code 7221	F-190(5) Code 7221	F-190(5) Code 6201	Totals
Embankment +14%	104,297	126,789	325	231,411
Excavation	84,751	40,079	315	125,145
Borrow	19,546	86,710	10	106,266
Deduct Volume of E-8 Removal of Pavement	1690	1586	170	3446
Deduct 70% of E-3, Channal Excavation =	2259	274		2533
Total Borrow	15597©	84850*	-160*	100287
Net Borrow	7186	84690		91876

*Surplus excavation to be used to reduce borrow on F-190(5) Code 7221 84850-160 = 84,690 Cu.Yds.

© 8411 cu.yds. of Emb. to be placed by contractor of adjacent project(CLA-40-2431) and deducted from borrow item. 15597-8411 = 7186 cu.yds. net borrow.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS	13
2	OHIO	F-24(3) F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)

RECAP

TABLE	E-8 REMOVAL OF EXIST. PAV'T.	E-12 REMOVE & DISPOSE EXISTING PIPE 15" & UNDER	E-12 REMOVE & DISPOSE EXISTING PIPE OVER 15"	I-8 CATCH BASINS. Nº 1-3	B-35 1½" LEVELING COURSE	T-35 1½" SURFACE COURSE	T-71 9"	I-3 PIPE 12"	I-21 CONCRETE MEDIAN	I-10 RIPRAP TYPE A	I-10 RIPRAP TYPE-B	I-17 6"	S-22 REMOVAL OF PORTION EX. STR.	S-24 REMOVAL OF EXIST. STRUC.	L-10 SODDING	SS-5 CLAS I F. EMB. 6" THICK	SS-5 CLAS I F. EMB. 3" THICK	I-2 STORM SEWERS 15"
	SQ. YDS.	LIN. FT.	LIN. FT.	EACH	SQ. YDS.	SQ. YDS.	SQ. YDS.	L.F.	SQ. YDS.	SQ. YDS.	SQ. YDS.	SQ. YDS.	CU. YDS.	LUMP.	SQ. YDS.	SQ. YDS.	CU. YDS.	LIN. FT.
F-24(3) CODE 7221																		
A		31	16									3035.7						
S		116	41	1						5			14.5	1	133			
D		1616		1											2425			
I					11.94	11.94						289.4					1.59	
M					885.77	885.77				150			65.4	13			310.37	
SW														1				
SP															240			
CAL					897.71	897.71						3325.1					311.96	
SUM.		1763	57	2						155			79.9	15	2798			
F-190(5) CODE 7221																		
A		48										2498.4						
S		533						100			2		12.4		167			77
D		1500	903					1213			4		0.4		1186			278
I	529				16.72	16.72	2701.65		28.93			175.1				3404.6	1.59	
M	4997				77.78	77.78	398.90		117.06							456.67	7.13	
SD															160			
CAL.					94.50	94.50	3100.55					2673.5				3861.27	8.72	
SUM.	5526	2081	903					1313	145.99		6		12.8		1513			355

PAVEMENT CALCULATIONS.

F-24(3) TYPE CODE 7221

T-71 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT.

24' Width	From Typical Eastbound =	9940.16	Lin.Ft.
		880.59	Lin.Ft.
	Westbound	880.59	Lin.Ft.
	Total Length	11,701.34	Lin.Ft.
Deduct 2 approach slabs	Eastbound	30.00	Lin.Ft.
	Net Length	11,671.34	Lin.Ft.
11,671.34 x 24 ÷ 9 =		31,123.57	Sq.Yds.
	From Table "I"	1280.87	Sq.Yds.
24.5' Width	From Typical Eastbound	2193.33	Lin.Ft.
Deduct equation station	Sheet Nº 26.	7.41	Lin.Ft.
Add equation station	Sheet Nº 28	4.72	Lin.Ft.
	Net Length	2190.64	Lin.Ft.
	From Typical Westbound	2193.33	Lin.Ft.
Deduct equation station	Sheet Nº 28	4.72	Lin.Ft.
Add equation station	Sheet Nº 26	4.37	Lin.Ft.
	Net Length	2192.98	Lin.Ft.
Net length of 24.5' width = 2190.64 + 2192.98 =		4383.62	Lin.Ft.
4383.62 x 24.50 ÷ 9 =		11,933.19	Sq.Yds.
Total T-71 = 31,123.57 + 11,933.19 + 1280.87 =		44,337.63	Sq.Yds.

I-12 TYPE 4-A CONCRETE CURB.

Length same as T-71	24.50' width	4383.62	Lin.Ft.
	Add from Table "I"	1,248.19	Lin.Ft.
	Deduct from Table "I"	658.0	Lin.Ft.
	Net Length	4973.81	Lin.Ft.

T-35 ASPHALTIC CONCRETE SURFACE COURSE

From Typical - 850 lin.ft. x 24 ÷ 9 =		2266.67	Sq.Yds.
1½" Thick	From Recap	897.71	Sq.Yds.
	Total Area	3164.38	Sq.Yds.
3164.38 x 1½ ÷ 36 =		131.85	Cu.Yds.
2½" Thick =	From Table "A5"	160.00	Sq.Yds.
160 x 2½ ÷ 36 =		11.11	Cu.Yds.
Variable Depth	From Table "I"	1.4	Cu.Yds.
Total T-35 = 131.85 + 11.11 + 1.4 =		144.36	Cu.Yds.

B-35 ASPHALTIC CONCRETE LEVELING COURSE.

1½" Thick	From T-35	131.85	Cu.Yds.

B-35 ASPHALTIC CONCRETE BASE COURSE

3" Thick	From Table "I"	31.04	Sq.Yds.
31.04 x 3 ÷ 36 =		2.59	Cu.Yds.

T-10 TRAFFIC BOUND SURFACE COURSE

	From Table "M"	296.0	Cu.Yds.
Coarse Aggregate	= 296.0 x 0.80 =	236.8	Cu.Yds.
Screenings	= 296.0 x 0.20 =	59.2	Cu.Yds.

F-24(3) TYPE CODE 7221 (CON'T.)

I-17 SIDE APPROACHES, MAIL BOX TURNOUTS & BERM MATERIAL.

	From Recap	3325.1	Sq.Yds.
3325.1 x 6" ÷ 36 x 115 %		637.31	Cu.Yds.

T-30 BITUMINOUS TACK COAT.

	From Table "M"	885.77	Sq.Yds.
850.0 lin. Ft. x 24 ÷ 9 =		2266.67	Sq.Yds.
	Total Area.	3,152.44	Sq.Yds.
3152.44 x 0.10 =		315.24	Gals.

F-190(5) TYPE CODE 6201

T-35 ASPHALTIC CONCRETE SURFACE COURSE

1½" Thick	From Table "M"	1418.48	Sq.Yds.
1418.48 x 1½ ÷ 36 =		59.10	Cu.Yds.

B-35 ASPHALTIC CONCRETE LEVELING COURSE.

1½" Thick	From Table "M"	1418.48	Sq.Yds.
1418.48 x 1½ ÷ 36 =		59.10	Cu.Yds.

B-35 ASPHALTIC CONCRETE BASE COURSE

3" Thick	From Table "M"	2836.96	Sq.Yds.
2836.96 x 3 ÷ 36 =		236.41	Cu.Yds.

I-12 TYPE 2-A CURB

	From Table "M"	500.7	Lin.Ft.
Deduct Curb	From Table "A"	69.5	Lin.Ft.
	Net Length	431.2	Lin.Ft.

I-17 SIDE APPROACHES, MAIL BOX TURNOUTS & BERM MATERIAL.

	From Table "A"	27.8	Sq.Yds.
27.8 x 6 ÷ 36 x 115 % =		5.32	Cu.Yds.

T-10 TRAFFIC BOUND SURFACE COURSE.

	From Table "M"	185.0	Cu.Yds.
Coarse Aggregate	= 185.0 x 0.80 =	148.0	Cu.Yds.
Screenings	= 185.0 x 0.20 =	37.0	Cu.Yds.

PAVEMENT CALCULATIONS CON'T.

T-71 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT.

24' Width	From Typical - Eastbound	924.21	Lin.Ft.
		1083.07	Lin.Ft.
	Total length	2007.28	Lin.Ft.
Deduct equation station - Sheet Nº 31		6.97	Lin.Ft.
Deduct transition	Sheet Nº 32	100.00	Lin.Ft.
	Net length-Eastbound	1900.31	Lin.Ft.
	From Typical - Westbound	924.21	Lin.Ft.
		1083.07	Lin.Ft.
		18,911.09	Lin.Ft.
	Total length	20,918.37	Lin.Ft.
Deduct 2 approach slabs - Westbound		30.00	Lin.Ft.
Add for equation station - Sheet Nº 32		10.86	Lin.Ft.
	Net length - Westbound	20,899.23	Lin.Ft.
Net length 24' width = 1900.31 + 20,899.23 =		22,799.54	Lin.Ft.
22,799.54 x 24 ÷ 9 =		60,798.77	Sq.Yds.
24.5' Width	From Typical - Eastbound	2106.13	Lin.Ft.
Add equation station - Sheet Nº 31		6.96	Lin.Ft.
	Net length	2113.09	Lin.Ft.
	From Typical - Westbound	2106.13	Lin.Ft.
Deduct equation station - Sheet Nº 31		6.95	Lin.Ft.
	Net length	2099.18	Lin.Ft.
Total length = 2113.09 + 2099.18 =		4212.27	Lin.Ft.
4212.27 x 24.5 ÷ 9 =		11,466.74	Sq.Yds.
	From Recap	3100.55	Sq.Yds.
Total T-71 = 60,798.77 + 11466.74 + 3100.55 =		75,366.06	Sq.Yds.

I-12 TYPE 4-A CONCRETE CURB

Length same as T-71 - 24.5' width		4212.27	Lin.Ft.
	Add from Table "I"	1249.19	Lin.Ft.
	Deduct from Table "I"	661.00	Lin.Ft.
	Net length	4800.46	Lin.Ft.

T-35 ASPHALTIC CONCRETE SURFACE COURSE

1½" Thick	From Recap	94.50	Sq.Yds.
94.5 x 1½ ÷ 36 =		3.94	Cu.Yds.
2½" Thick	From Table "A5"	89.94	Sq.Yds.
89.94 x 2½ ÷ 36 =		6.25	Cu.Yds.
Variable depth	From Table "I"	0.80	Cu.Yds.
Total T-35 = 3.94 + 6.25 + 0.80 =		10.99	Cu.Yds.

B-35 ASPHALTIC CONCRETE LEVELING COURSE

1½" Thick	From Table "I"	94.50	Sq.Yds.
94.5 x 1½ ÷ 36 =		3.94	Cu.Yds.

B-35 ASPHALTIC CONCRETE BASE COURSE

3" Thick	From Table "I"	40.60	Sq.Yds.
40.60 x 3 ÷ 36 =		3.38	Cu.Yds.

T-10 TRAFFIC BOUND SURFACE COURSE.

	From Table "M"	1042.0	Cu.Yds.
Coarse Aggregate	= 1042.0 x 0.80 =	833.6	Cu.Yds.
Screenings	= 1042.0 x 0.20 =	208.4	Cu.Yds.

I-17 SIDE APPROACHES, MAIL BOX TURNOUTS & BERM MATERIAL.

	From Recap	2673.5	Sq.Yds.
2673.5 x 6 ÷ 36 x 115 % =		512.42	Cu.Yds.

T-30 BITUMINOUS TACK COAT

	From Table "M"	77.78	Sq.Yds.
77.78 x 0.10 =		7.8	Gals.

GENERAL SUMMARY

ITEM	F-24(3) CODE-7221	F-190(5) CODE-7221	F-190(5) CODE-6201	QUANTITY	UNIT	DESCRIPTION	F-24(3) CODE-9767
						ROADWAY	
E-1	70,461	40,079	315	125,145	Cu.Yd.	Roadway Excavation	14290
E-4	7186	84,690		91,876	Cu.Yd.	Borrow	
E-8	2719	5,526	556	11,613	Sq.Yd.	Removal and Disposal of Existing Pavement	2812
E-8	53	205	31	289	Sq.Ft.	Removal and Disposal of Existing Sidewalk	
E-9	53	47	1	105	Each	Removal of Trees and Stumps	4
E-11	398	556	2	1,015	M.Gal.	Water	59
E-12	1,763	2,081		3,844	Lin.Ft.	Pipe Removed and Disposed of (15" and Under)	
E-12	57	903		960	Lin.Ft.	Pipe Removed and Disposed of (Over 15")	
T-10	237	834	148.0	1,219	Cu.Yd.	Traffic Bound Surface Course - Coarse Aggregate	
T-10	59	208	37.0	304	Cu.Yd.	Traffic Bound Surface Course - Screenings	
M-10	6	21	4	31	Tons	Calcium Chloride for Traffic Lanes Delivered and Applied	
I-1	252	260		512	Lin.Ft.	12" Pipe for Driveways	
I-1	28	192		220	Lin.Ft.	15" Pipe for Driveways	
I-1	80			80	Lin.Ft.	18" Pipe for Driveways	
I-1	36			36	Lin.Ft.	24" Pipe for Driveways	
I-2		9		9	Lin.Ft.	6" Pipe for Storm Sewers	
I-2	124	128		252	Lin.Ft.	10" Pipe for Storm Sewers	
I-2	801	70		871	Lin.Ft.	12" Pipe for Storm Sewers	
I-2		355		355	Lin.Ft.	15" Pipe for Storm Sewers	
I-2		278		278	Lin.Ft.	18" Pipe for Storm Sewers	
I-2		936		936	Lin.Ft.	24" Pipe for Storm Sewers	
I-2	86	258		344	Lin.Ft.	8" Pipe for Storm Sewers Under Pavement	
I-2	182	47		229	Lin.Ft.	10" Pipe for Storm Sewers Under Pavement	
I-2	88	192		280	Lin.Ft.	12" Pipe for Storm Sewers Under Pavement	
I-2	58	80		138	Lin.Ft.	15" Pipe for Storm Sewers Under Pavement	
I-2		20		20	Lin.Ft.	24" Pipe for Storm Sewers Under Pavement	
I-2		66		66	Lin.Ft.	27" Pipe for Storm Sewers Under Pavement	
I-2		20		20	Lin.Ft.	10" Pipe Outlets for Storm Sewers	
I-2	52	10		62	Lin.Ft.	12" Pipe Outlets for Storm Sewers	
I-2	12	10		22	Lin.Ft.	15" Pipe Outlets for Storm Sewers	
I-3	32			32	Lin.Ft.	4" Pipe for Roadway Drainage	
I-3	380	635	40	1,055	Lin.Ft.	6" Pipe for Roadway Drainage	
I-3	119	386		505	Lin.Ft.	8" Pipe for Roadway Drainage	
I-3	1,955	1,105		3,060	Lin.Ft.	10" Pipe for Roadway Drainage	
I-3	1500	1,313		3,213	Lin.Ft.	12" Pipe for Roadway Drainage	400
I-3	1948	633		3,439	Lin.Ft.	15" Pipe for Roadway Drainage	858
I-3	268	911		1,179	Lin.Ft.	18" Pipe for Roadway Drainage	
I-3	383			383	Lin.Ft.	21" Pipe for Roadway Drainage	
I-3	6			6	Lin.Ft.	24" Pipe for Roadway Drainage	
I-3		306		306	Lin.Ft.	27" Pipe for Roadway Drainage	
I-3	64	20		84	Lin.Ft.	10" Pipe for Roadway Drainage Under Pavement	
I-3	40	20		80	Lin.Ft.	12" Pipe for Roadway Drainage Under Pavement	20
I-3	20	48		88	Lin.Ft.	15" Pipe for Roadway Drainage Under Pavement	20
I-3	20			20	Lin.Ft.	21" Pipe for Roadway Drainage Under Pavement	
I-3		20		20	Lin.Ft.	8" Pipe Outlets for Roadway Drainage	
I-3	96			96	Lin.Ft.	10" Pipe Outlets for Roadway Drainage	
I-3	32	36		100	Lin.Ft.	12" Pipe Outlets for Roadway Drainage	32
I-3		28		44	Lin.Ft.	15" Pipe Outlets for Roadway Drainage	16
I-3		16		16	Lin.Ft.	18" Pipe Outlets for Roadway Drainage	
I-3		16		16	Lin.Ft.	30" Pipe Outlets for Roadway Drainage	
I-4	4263	14,292		21,562	Lin.Ft.	6" Pipe for Underdrains	3007
I-4	48	128		176	Lin.Ft.	8" Pipe Outlets for Underdrains	
I-5	2	7		9	Each	6" Pipe Specials for Underdrains	
I-5	4	2		6	Each	10" Pipe Specials for Roadway Drainage	
I-5	1			1	Each	12" Pipe Specials for Roadway Drainage	
I-5		1		1	Each	15" Pipe Specials for Roadway Drainage	
I-5		1		1	Each	18" Pipe Specials for Roadway Drainage	
I-5		1		1	Each	27" Pipe Specials for Roadway Drainage	
I-8	19	16		41	Each	Standard No. 1-2A Catch Basins	6
I-8	2	2		4	Each	Standard No. 1-3 Catch Basins	
I-8		1		1	Each	Standard No. 2-2A Catch Basins	
I-8	1	1	2	4	Each	Standard No. 3 Catch Basins	
I-8	3	1		4	Each	Standard No 3-A Catch Basins	
I-8	3	6		9	Each	Standard No. 7 Catch Basins	
I-15	4586	2427		8607	Lin.Ft.	Guard Rail Removed and Stored	1594
I-13		253	1,847	2,100	Sq.Ft.	4" Concrete Sidewalk	
I-13	87			87	Lin.Ft.	Concrete Steps	
I-14	400			400	Lin.Ft.	Paved Gutter	
I-15	2936	464		4,000	Lin.Ft.	Guard Rail, Flexible Steel Plate Tension Type, standard strength or Steel Beam Type (Shallow)	600
I-16	1			1	Each	Manholes Abandoned	
I-16		1		1	Each	Inlets Abandoned	
I-17	597.3	512.4	5.3	1,155	Cu.Yd.	Side Approaches, Mail Box Turnouts and Berm Material	40
I-21	29	146		175	Sq.Yd.	Portland Cement Concrete Median Pavement as per plan	
L-9	132,137	201,041	80	350,388	Sq.Yd.	Seeding and Protecting, Type "A" as per plan	17130
L-9	12.09	18.23	.02	31.94	Tons	10-6-4 Commercial Fertilizer	1.60
L-10	2215	1,513	213	4,524	Sq.Yd.	Sodding	583
L-7		7		7	Sq.Yd.	Riprap for Tree Protection	
Special			20	20	Each	Precast Concrete Traffic Dividers (As per plan)	
35-5	9,597	14,889	384	25,169	Cu.Yd.	Classified Embankment Material as per plan	299
Special	2	5		7	Each	Monument Removed and Reset	
I-15				257	Lin.Ft.	Guard Rail, Steel Beam Type (Deep)	257
						PAVEMENT	
B-35	3	3	236	242	Cu.Yd.	Asphaltic Concrete Base Course (70-80)	
B-35	6	4	59	195	Cu.Yd.	Asphaltic Concrete Leveling Course (70-80)	126
T-35	8	11	59	215	Cu.Yd.	Asphaltic Concrete Surface Course, Type A (70-80)	137
T-30	12	8		323	Gal.	Bituminous Tack Coat Sec. M-5.5 MS-2 or SS-1	303
T-70			29	29	Sq.Yd.	6" Portland Cement Concrete Pavement	
T-71	1,704	783		2,487	Sq.Yd.	8" Reinforced Portland Cement Concrete Pavement	
T-71	44,338	75,366	473	120,177	Sq.Yd.	9" Reinforced Portland Cement Concrete Pavement	
S-3	160	90		250	Sq.Yd.	Waterproofing, Type "C"	
B-71	122	78		3230	Sq.Yd.	9" Reinforced Portland Cement Concrete Base Course	3030
I-7		90		250	Sq.Yd.	Reinforced Concrete Approach Slabs	160
I-12	4,974	4,800		9,774	Lin.Ft.	Type 4-A Concrete Curb	
I-12			431	431	Lin.Ft.	Type 2-A Concrete Curb	
I-12	145	220		365	Lin.Ft.	Type 4 Combination Curb and Gutter	
						STRUCTURES - 20' SPAN AND UNDER	
E-2	250	477		727	Cu.Yd.	Excavation for Structures	
E-3	8	391		399	Cu.Yd.	Channel Excavation	
E-12	24			24	Lin.Ft.	Pipe Removed and Stored, Over 15"	
S-1		108.9		108.9	Cu.Yd.	Concrete for Structures, Class "E"	
S-1	23.6	92.5		116.1	Cu.Yd.	Concrete for Structures, Class "C"	
S-4	4,110	21,721		25,831	Lb.	Reinforcing Steel	
S-22	80	13		93	Cu.Yd.	Removal of Portions of Existing Structures	
S-23	16	86		102	Lin.Ft.	1¼" Dowel Holes	
S-24	Lump (16)	Lump (1)		Lump	Lump	Removal of Existing Structures	
S-27	92	76		168	Lin.Ft.	15" Pipe for Roadway Culverts	
S-27	76			76	Lin.Ft.	24" Pipe for Roadway Culverts	
S-27	112	240		352	Lin.Ft.	30" Pipe for Roadway Culverts	
S-27	122			122	Lin.Ft.	36" Pipe for Roadway Culverts	
S-27	58			58	Lin.Ft.	48" Paved Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4(d) for Roadway Culverts	
I-5	2			2	Each	10" Pipe Specials for Roadway Culverts	
I-5		1		1	Each	15" Pipe Specials for Roadway Culverts	
I-5	1	1		2	Each	30" Pipe Specials for Roadway Culverts	
I-5	1			1	Each	36" Pipe Specials for Roadway Culverts	
I-5	1			1	Each	48" Pipe Specials for Roadway Culverts	
I-10	155	7		162	Sq.Yd.	Riprap, (Type A) (Grout Filled)	
I-10	18	6		24	Sq.Yd.	Riprap, (15" Type B) (Grout Filled)	
S-27	78	80		158	Lin.Ft.	15" Paved Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4(d) for Roadway Culverts	
						STRUCTURES - OVER 20' SPAN	
						(For quantities, see Sheets 172 & 174)	

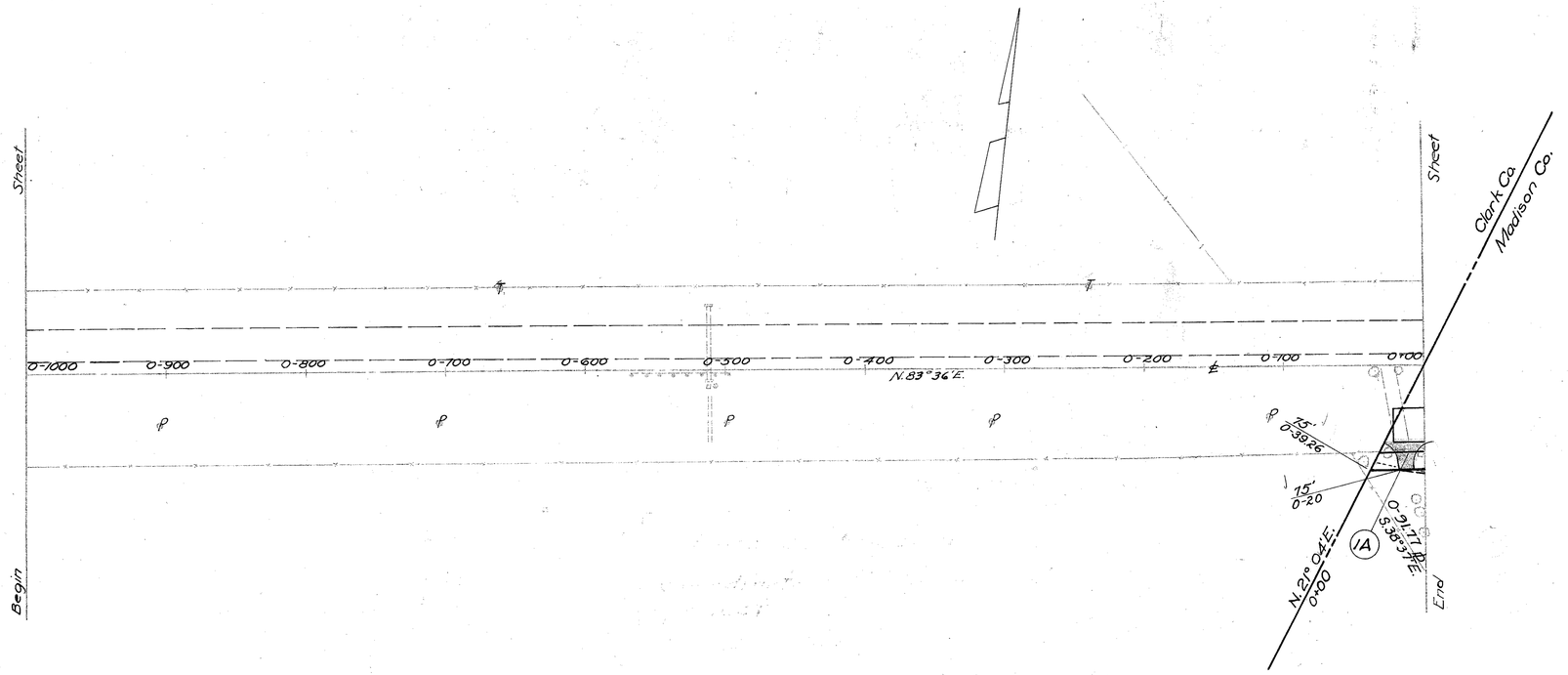
FED. RD. DIVISION 2 | STATE OHIO | PROJECT F-24(3)/F-190(5) | TYPE FUNDS POST WAR

MAD-40-(0.00-6.84)

TYPE FUNDS F-24(3) F-190(5) POST WAR

15
179

MAD - 40 - (0.00 - 6.84)

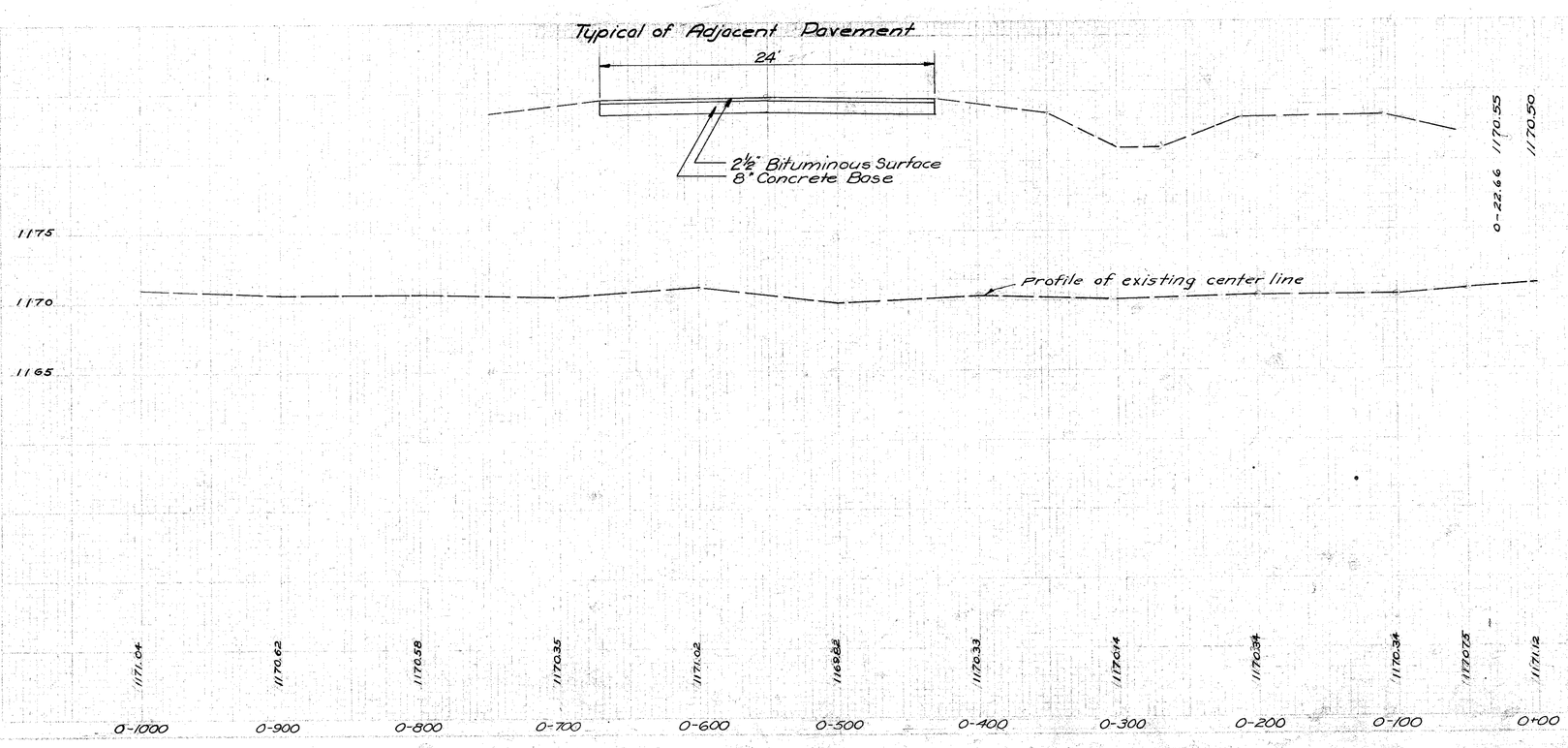


DRIVES & APPROACHES

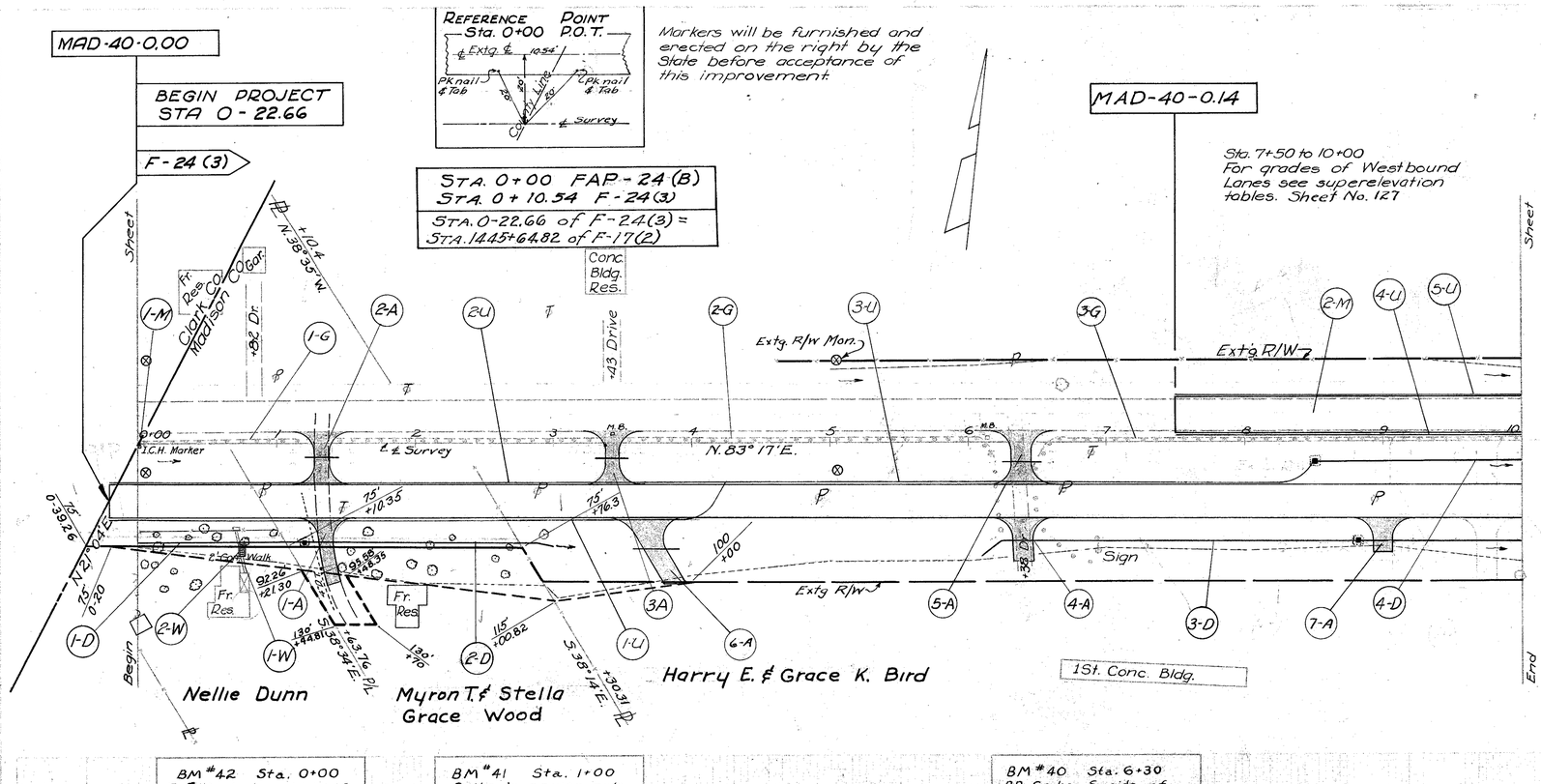
Ref. No.	Station	Side	Δ	W	L	Radius Rt	Radius Lt	Drives I-17 6" thick Sq. Yds.		
1-A	0-15	Rt.	80°	10'	20'	20'	20'	41.3		
Totals								41.3		

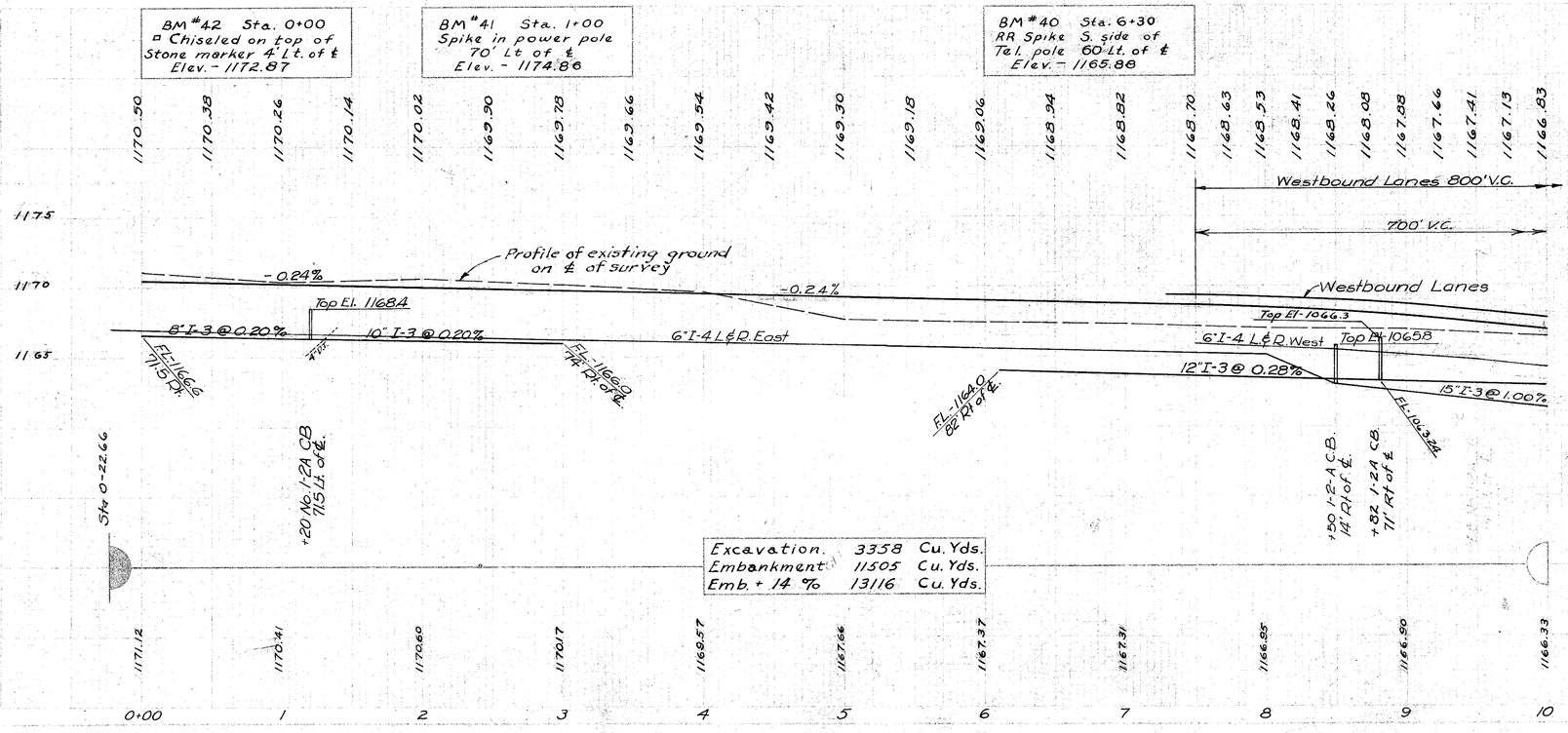
REMOVAL OF TREES & STUMPS

Station	Side	Size & Kind	No
0-05	63' Rt.	12" Maple	1
Totals			1



STA. 0-1000 TO STA. 0+00





UNDERDRAINS

TYPE FUNDS: POST WAR — F-24(3) F-190(5) — 16 179

MAD - 40 - (0.00 - 6.84)

Ref. No.	Station From	Station To	Side	I-4 6" Lin. Ft.	I-5 Special 6"x6" Wye Each	Remarks
1U	0-22.66	4+25	Rt. E.	463.		Conn. to Wye
2U	0-22.66	4+25	Lt. E.	447	1	
3U	4+25	8+50	Lt. E.	432		Conn. to C.B.
4U	7+50	10+00	Rt. W.	250		
5U	7+50	10+00	Lt. W.	250		
Totals				1842	1	

DRIVES & APPROACHES

Ref. No.	Station	Side	Δ	W	L	Radius L	Radius R	Drives I-17 6" thick	Crossovers I-17 6" thick	Crossovers I-1 Pipe 12"
								Sq. Yds.	Sq. Yds.	Lin. Ft.
1A	1+33	Rt.	82°	10'	45'	20'	20'	70.0		
2A	1+33	Med.	90°	14'	40'	20'	20'		100.4	28
3A	3+43	Med.	90°	14'	40'	20'	20'		100.4	28
4A	6+38	Rt.	86°	14'	30'	20'	20'	65.7		
5A	6+38	Med.	90°	14'	40'	20'	20'		100.4	28
6A	3+60	Rt.	60°	14'	55'	20'	30'	121.4		32
7A	9+00	Rt.	90°	14'	25'	20'	20'	58.0		
Totals								315.1	301.2	116

ROADWAY DRAINAGE

Ref. No	Station From	Station To	Side	I-3 8" Lin. Ft.	I-3 10" Lin. Ft.	I-3 12" Lin. Ft.	I-3 15" Lin. Ft.	I-3 Under Drives 10" L.F.	I-3 Under Drives 12" L.F.	I-5 Pipe Spec. 10"x14" T Each	I-3 Pipe Outlets 10" Lin. Ft.	I-8 Catch Basins 1-2A Each	L-10 Sodding Sq. Yds.	E-12 Pipe Removed & Disposed 4" D.T. Lin. Ft.
1-D	0+00	1+20	Rt.	119								1	5	
2-D	1+20	3+00	Rt.		141			20		1	16			36
3-D	6+10	10+00	Rt.			348			40			1	5	
4-D	8+50	10+00	Med.				149					1	5	
Totals				119	141	348	149	20	40	1	16	3	15	36

SIDEWALKS & STEPS

Ref. No.	Station From	Station To	Side	L	W	E-8 Sidewalks Removed & disposed Sq. Ft.	I-13 Concrete Steps Lin. Ft.	For Detail See Sheet
1-W	0+71		Rt.		2	53		
2W	0+75		Rt.	8	3		32	130
Totals						53	32	

GUARD RAIL

Ref. No	Station From	Station To	Side	I-15 Removed & Stored Lin. Ft.
1-G	0-05	1+15	Lt.	110
2G	1+45	6+21	Lt.	523
3-G	6+47	10+00	Lt.	365
Totals				998

TREES

Station	Side	Size & Kind	No.
0+14	64 Rt.	24" Apple	1
0+48	59 Rt.	12" Elm	1
0+58	72 Rt.	16" Pear	1
0+97	63 Rt.	24" Maple	1
1+46	89 Rt.	12" Apple	1
1+74	93 Rt.	16" Catalpa	1
2+12	89 Rt.	36" Poplar	1
6+66	41 Lt.	18" W. Cherry	1
Totals			8

MISCELLANEOUS

Ref. No.	Station From	Station To	Side	Special Monument Reset Each	E-8 Removal & disposal of Bit. Pvt. Sq. Yds.	S5-5 Class. Emb 3" thick Cu. Yds.
1-M	0+01		Rt.	1		
2-M	7+50	10+00	Lt.		611	65.74
Totals				1	611	65.74

STA. 0+00 TO STA. 10+00

TYPE FUNDS 17
F-24(3) F-190(5) POST WAR 179

MAD - 40 - (0.00 - 6.84)

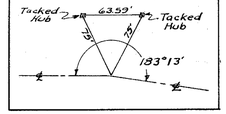
Westbound Lanes	
PI	= 15 + 97.06
Δ	= 3°13'
D	= 0°36'
R	= 9549.30'
T	= 268.13'
L	= 536.11'
PC	= 13 + 28.93
PT	= 18 + 65.04

CURVE DATA

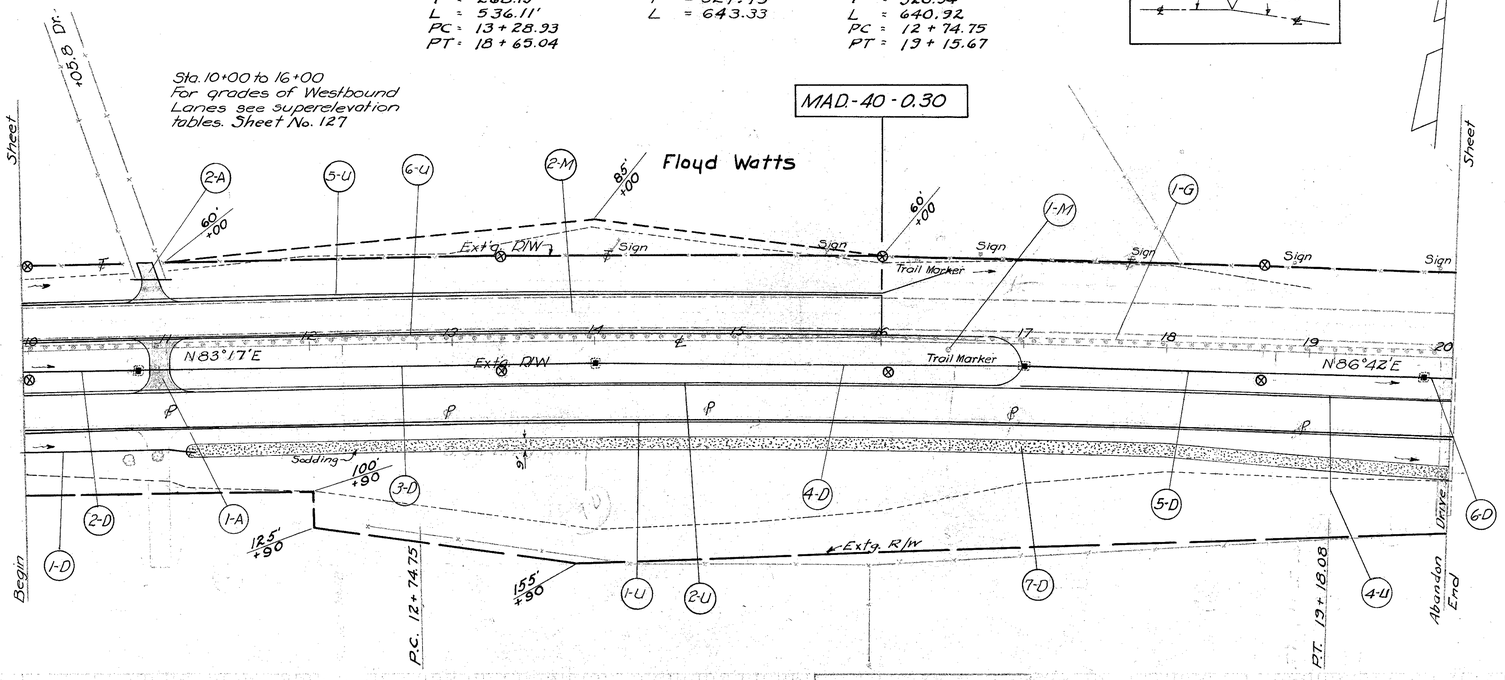
P.I	= 15 + 96.50
Δ	= 3°-13'
D	= 0°-30'
R	= 11459.16
T	= 321.75'
L	= 643.33

Eastbound Lanes	
PI	= 15 + 95.29
Δ	= 3°13'
D	= 0°30'07"
R	= 11416.16'
T	= 320.54'
L	= 640.92
PC	= 12 + 74.75
PT	= 13 + 15.67

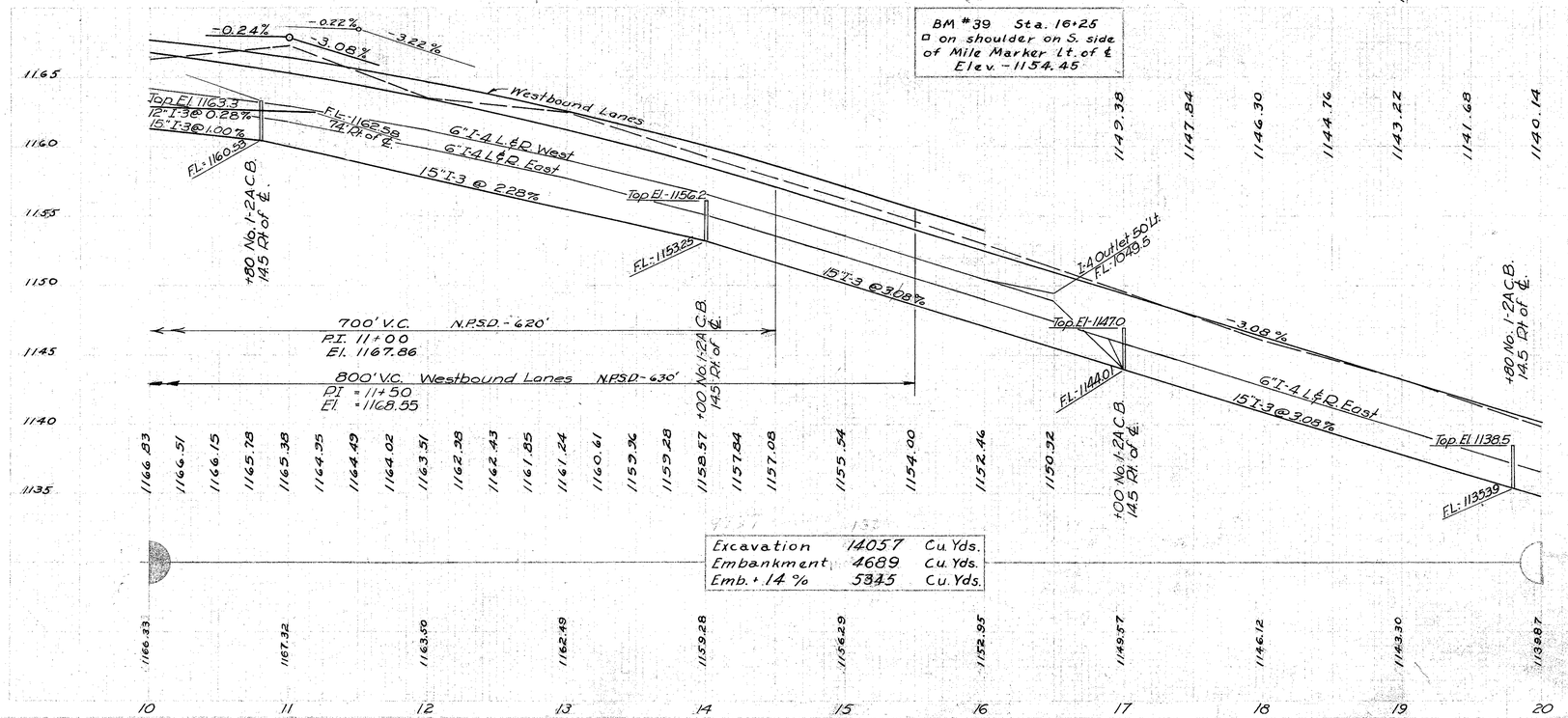
REFERENCE POINT
Sta. 15+96.50 PI



Sta. 10+00 to 16+00
For grades of Westbound Lanes see superelevation tables. Sheet No. 127



BM #39 Sta. 16+25
□ on shoulder on S. side of Mile Marker Lt. of ℄
Elev. - 1154.45



Excavation	14057	Cu. Yds.
Embankment	4689	Cu. Yds.
Emb. + 14 %	5845	Cu. Yds.

DRIVES & APPROACHES

Ref. No.	Station	Side	Δ	W	L	Radius Rt.	Radius Lt.	Drives I-17 6" thick Sq. Yds.	Drives I-1 12" Lin. Ft.	Drives I-1 Lin. Ft.	Crossovers I-17 6" thick Sq. Yds.
1-A	10+95	Med.	90°	14'	39'	20'	20'				98.8
2-A	10+95	Lt.	108°	10'	30'	20'	20'	57.0	28		
Totals								57.0	28		98.8

ROADWAY DRAINAGE

Ref. No.	Station From	Station To	Side	I-3 Pipe 12" Lin. Ft.	I-3 Pipe 15" Lin. Ft.	I-3 Pipe Outlets 12" Lin. Ft.	I-3 Pipe Under Drives 15" Lin. Ft.	I-8 Catch Basin I-2A Each	L-10 Sodding Sq. Yds.
1-D	10+00	11+18	Rt.	102		16			
2-D	10+00	10+80	Med.		79			1	5
3-D	10+80	14+00	Med.		298		20	1	5
4-D	14+00	17+00	Med.		298			1	5
5-D	17+00	19+80	Med.		278			1	5
6-D	19+80	20+00	Med.		19				
7-D	11+15	20+00	Rt.						885
Totals				102	972	16	20	4	905

GUARD RAIL

Ref. No.	Station From	Station To	Side	I-15 Removed & Stored Lin. Ft.
1-G	10+00	19+87	Lt.	987
Totals				987

MISCELLANEOUS

Ref. No.	Station From	Station To	Side	Special Monument Reset Each	E-8 Removal & Disposal of Exist. Pvmt. Sq. Yds.	55-5 Classified Emb. 3" thick Cu. Yds.
1-M	16+46		Rt.	1		
2-M	10+00	16+00	Lt.		1467	157.78
Totals				1	1467	157.78

TREES

Station	Side	Size & Kind	No.
10+72	78' Rt.	24" Maple	1
10+91	75' Rt.	26" Maple	1
Totals			2

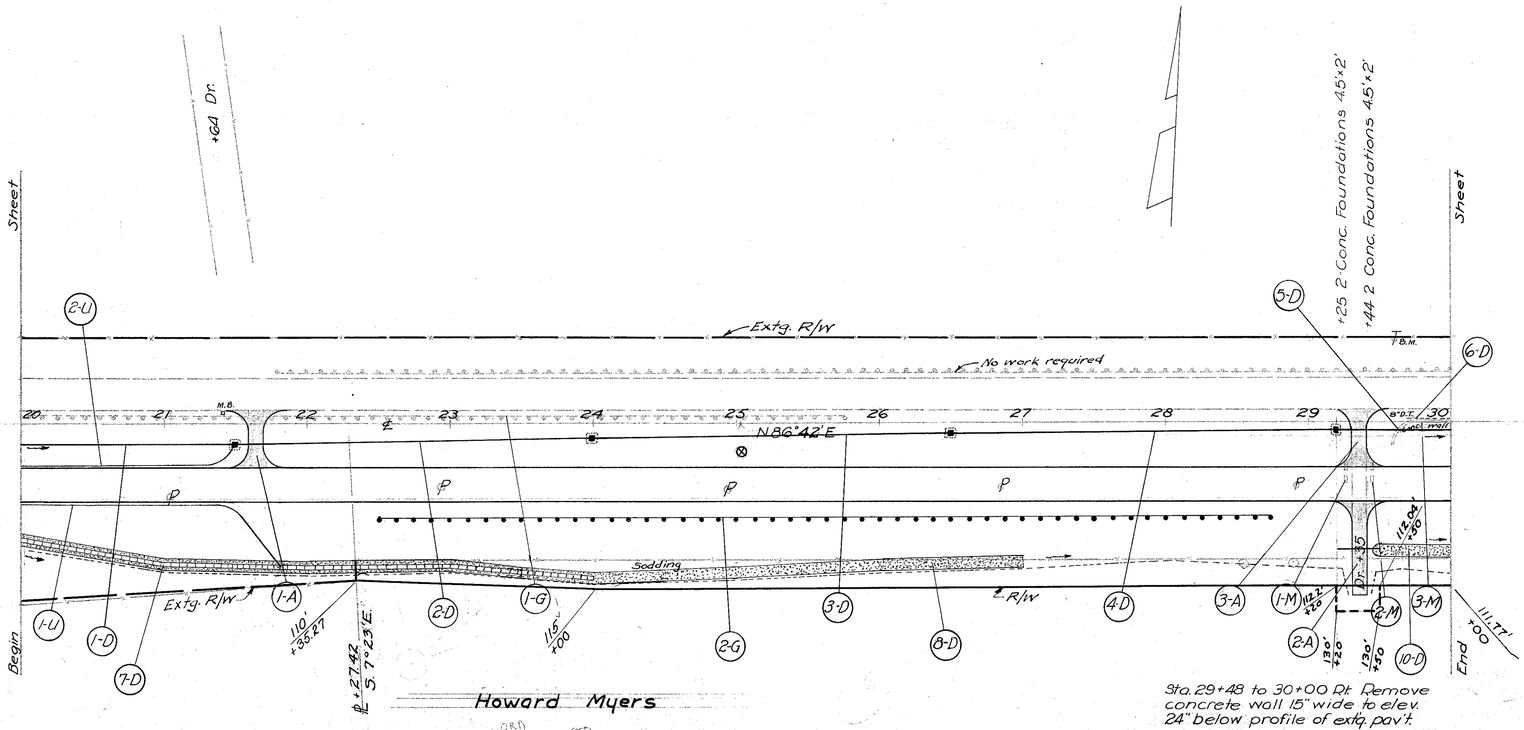
UNDERDRAINS

Ref. No.	Station From	Station To	Side	I-4 6" Lin. Ft.	I-4 Outlets 8" Lin. Ft.	Remarks
1-U	10+00	20+00	Rt. E.	1000		
2-U	10+00	17+00	Lt. E.	707		Conn. to C.B.
4-U	17+00	20+00	Lt. E.	300		
5-U	10+00	16+50	Lt. W.	636	16	Outlet to ditch
6-U	10+00	17+00	Rt. W.	710		Conn. to C.B.
Totals				3353	16	

STA. 10+00 TO STA. 20+00

TYPE FUNDS 18
F-24(3) F-190(5) POST WAR 179

MAD - 40 -(0.00-6.84)



DRIVES & APPROACHES

Ref. No.	Station	Side	Δ	L	W	Radius L	Radius R	Drives I-17 6" thick	Drives I-1 Pipe 24"	Crossovers I-17 6" thick	
								Sq. Yds.	L.F.	L.F.	Sq. Yds.
1-A	21+64	Med.	90°	40'	14'	20'	20'				100.4
2-A	29+35	Rt.	90°	65'	10'	20'	20'	91.3		36	
3-A	29+35	Med.	90°	40'	14'	20'	20'				100.4
Totals								91.3		36	200.8

ROADWAY DRAINAGE

Ref. No.	Station From	Station To	Side	I-3 15" Lin.Ft.	I-3 18" Lin.Ft.	I-3 21" Lin.Ft.	I-3 Under Drives 15" Lin.Ft.	I-3 Under Drives 21" Lin.Ft.	E-12 Pipe Removed &disposed 8" D.T. Lin. Ft.	I-8 Catch Basins 1-2A Each	I-14 Paved Gutter Lin.Ft.	L-10 Sodding Sq.Yds.
1-D	20+00	21+50	Med.	149						1		5
2-D	21+50	24+00	Med.	228			20			1		5
3-D	24+00	26+50	Med.	248						1		5
4-D	26+50	29+20	Med.		268					1		5
5-D	29+20	30+00	Med.			59		20				
6-D	29+65	30+00	Lt.						35			
7-D	20+00	24+00	Rt.								400	267
8-D	24+00	27+00	Rt.									300
10-D	29+50	30+00	Rt.									50
Totals				625	268	59	20	20	35	4	400	637

MISCELLANEOUS

Ref. No.	Station From	Station To	Side	S-24 Removal of Exfg. Struct. Lump	S-22 Removal Portion Exfg. Str. Cu.Yds.	
1-M	29+25		Rt.	2		
2-M	29+44		Rt.	2		
3-M	29+48	30+00	Rt.		8.1	
Totals				4	8.1	

GUARD RAIL

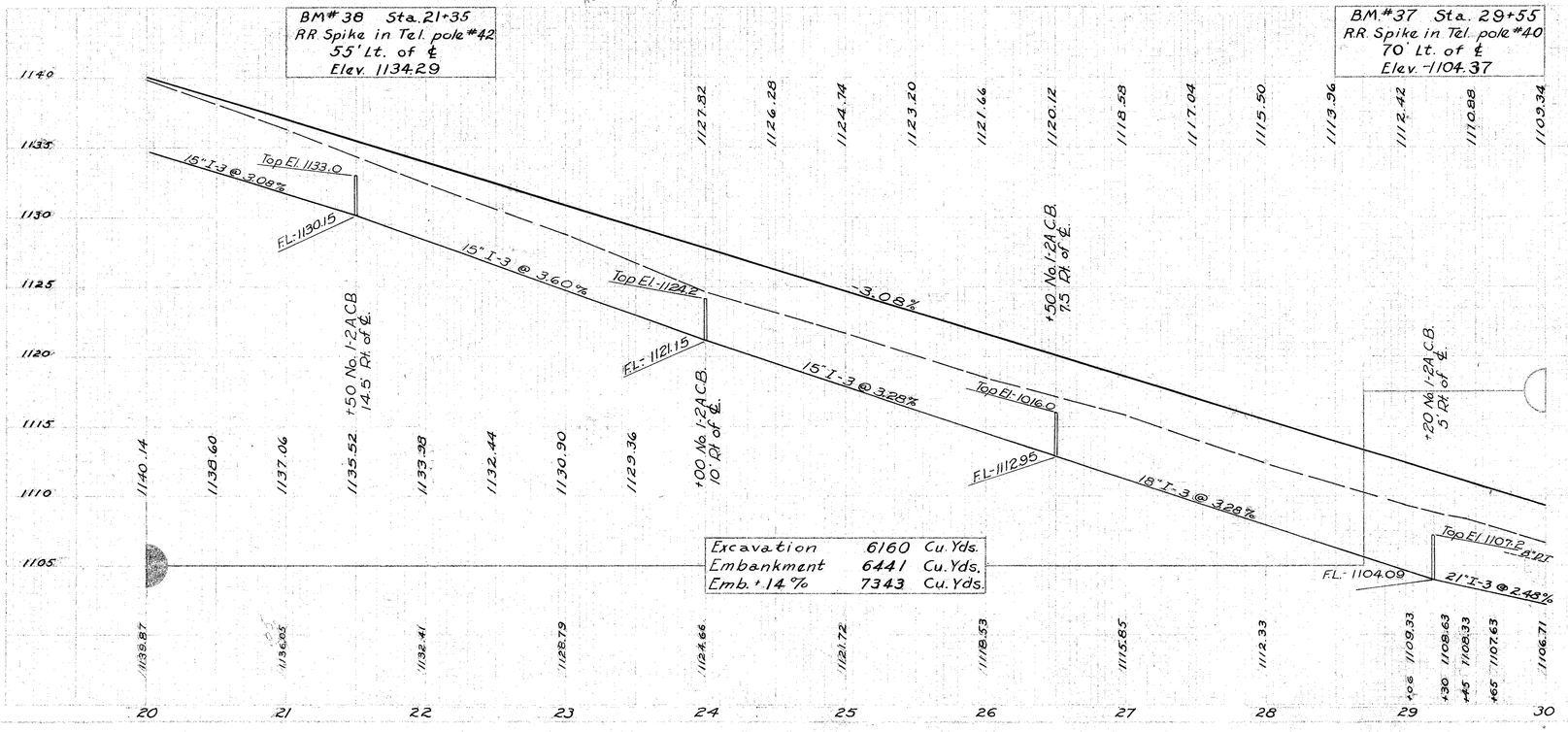
Ref. No.	Station From	Station To	Side	I-15 Removed & Stored Lin. Ft.	I-15,12 OR I-15,14 Lin. Ft.	
1-G	20+05	25+78	Lt	573		
2G	22+35	28+75	Rt		640	
Totals				573	640	

TREES

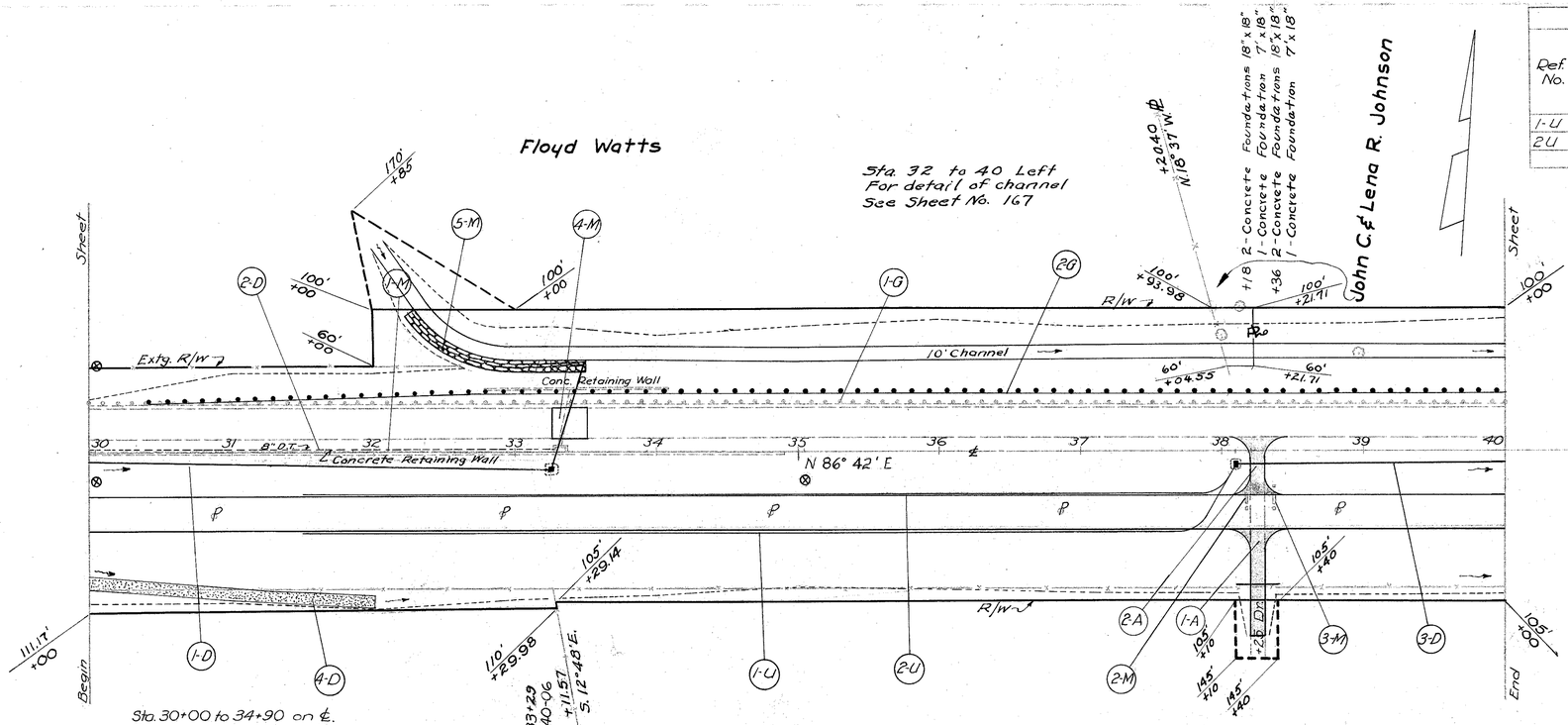
Station	Side	Size & Kind	No.
28+54	97 Rt.	12" Elm	1
28+88	97 Rt.	12" Elm	1
Totals			2

UNDERDRAINS

Ref. No.	Station From	Station To	Side	I-4 6" Lin.Ft.	I-4 Pipe Outlets 8" Lin.Ft.	Remarks
1-U	20+00	21+80	Rt.	186	16	Outlet to ditch
2U	20+00	21+50	Lt.	154		Conn. to C.B.
Totals				340	16	



STA. 20+00 TO STA. 30+00



MAD. - 40 -(0.00 - 6.84)

Excavation	24981	Cu. Yds.
Embankment	3762	Cu. Yds.
Emb. + 14 %	4289	Cu. Yds.

UNDERDRAINS

Ref. No.	Station From	Station To	Side	I-4 6" Lin. Ft.	I-5 Pipe Specials 6x6 Wye Each	Remarks
1-U	31+50	38+00	Rt.	664		Conn. to Wye
2U	31+50	38+10	Lt.	672	1	Conn. to C.B.
		Totals		1336	1	

DRIVES & APPROACHES

Ref. No.	Station	Side	Δ	W	L	Radius L	Radius R	Drives I-17 6" thick Sq. Yds.	Drives I-1 18" Lin. Ft.	Crossovers I-17 6" thick Sq. Yds.	
1-A	38+25	Rt	90°	10'	75'	20'	20'	102.4	32		
2-A	38+25	Med.	90°	14'	40'	20'	20'			100.4	
Totals								102.4	32	100.4	

ROADWAY DRAINAGE

Def. No.	Station From	Station To	Side	I-3 Pipe 12" Lin. Ft	I-3 Pipe 21" Lin. Ft		I-3 Under Drives 12" Lin. Ft.	E-12 Removed & disposed 8" DT Lin. Ft.	L-10 Sodding Sq. Yds.	I-8 Catch Basins 1-2A Ea.		
1-D	30+00	33+25	Med.		324							
2-D	30+00	33+29	Med.					329				
3-D	38+10	40+00	Med.	169			20		5	1		
4-D	30+00	32+00	Rt.						200			
Totals				169	324		20	329	205	1		

GUARD RAIL

Ref. No.	Station From	Station To	Side	I-15 Removed & stored Lin. Ft.	I-15.12 OR I-15.14 Lin. Ft.	
1-G	30+46	40+00	Lt.	954		
2-G	30+40	40+00	Lt.		960	
Totals				954	960	

REMOVAL OF TREES & STUMPS

Station	Side	Size & Kind	No
38+00	81' Lt	14" Maple	1
38+97	67' Lt	15" Hickory	1
		Totals	2

STRUCTURES 20' SPAN & UNDER

Station	Structure No	Present Type	Present Size	Present Length	Present Disposition	Proposed Type	Proposed Size	Proposed Length	For Detail See Sheet No
33+29	MA-40-06	Pipe	24"	41'-0"	Remove	Pipe	24"	76'-0"	148

MISCELLANEOUS

Ref. No.	Station From	Station To	Side	S-24 Removal of Extg. Struct. Lump	S-22 Removal Portion Extg. Str. Cu. Yds.	I-10 Riprap Type A Sq. Yds.	T-35 & B-35 1½" thick & T-30 Sq. Yds.	B-71 Base Course 9" thick Sq. Yds.	SS-5 Class. Emb. 3" thick Cu. Yds.	E-8 Removal of Extg. Pav't Sq. Yds.	For Detail See Sheet
1-M	30+00	34+95	Med.		57.3						
2-M	38+18		Rt.	3							
3-M	38+36		Rt.	3							
4-M	33+25	33+50	Lt.				61.11	61.11	5.55	61	
5-M	33+24	34+25	Lt.			150					167
	Totals			6	57.3	150	61.11	61.11	5.55	61	

STA. 30+00 TO STA. 40+00

TYPE FUNDS F-24(3) F-190(5) POST WAR

20
179

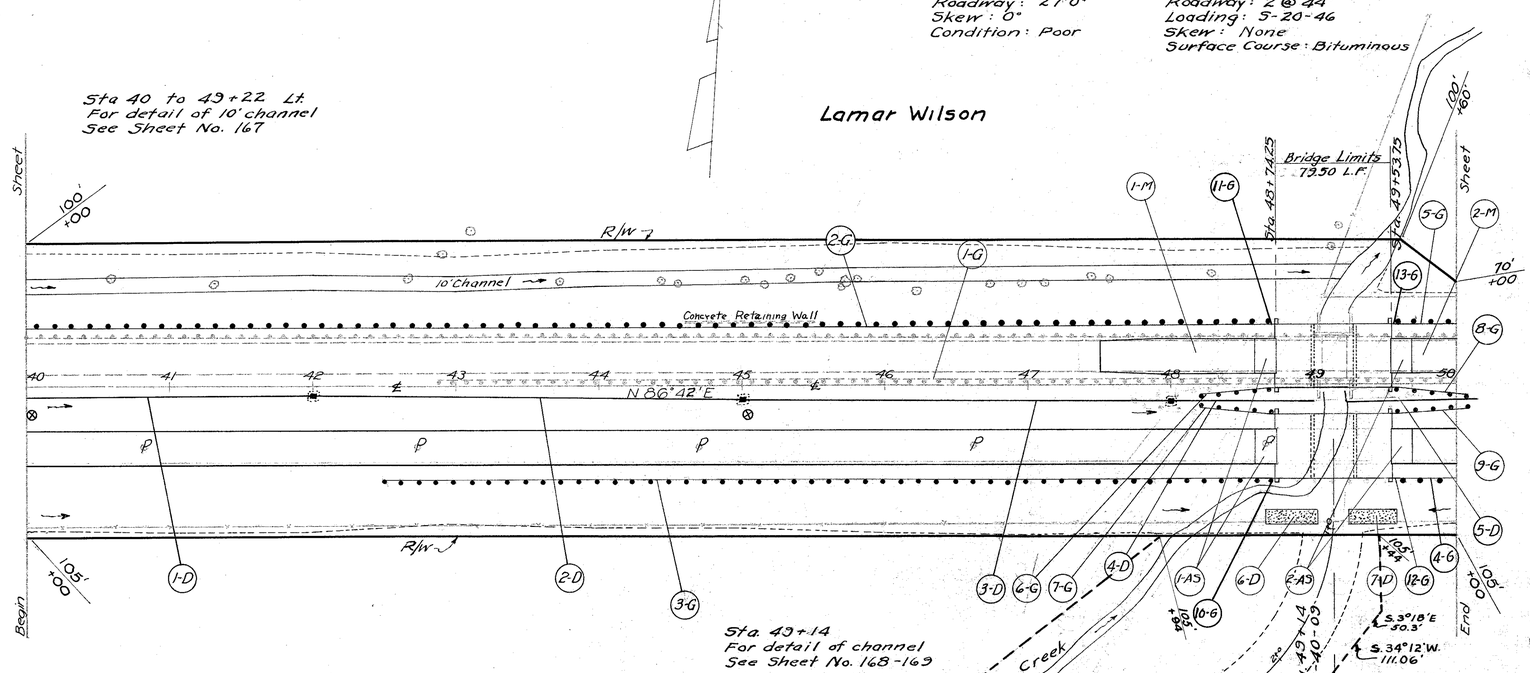
MAD.- 40 -(0.00-6.84)

EXISTING BRIDGE DATA
Type : Stone Arch
Span : 17'0"
Roadway : 27'0"
Skew : 0°
Condition : Poor

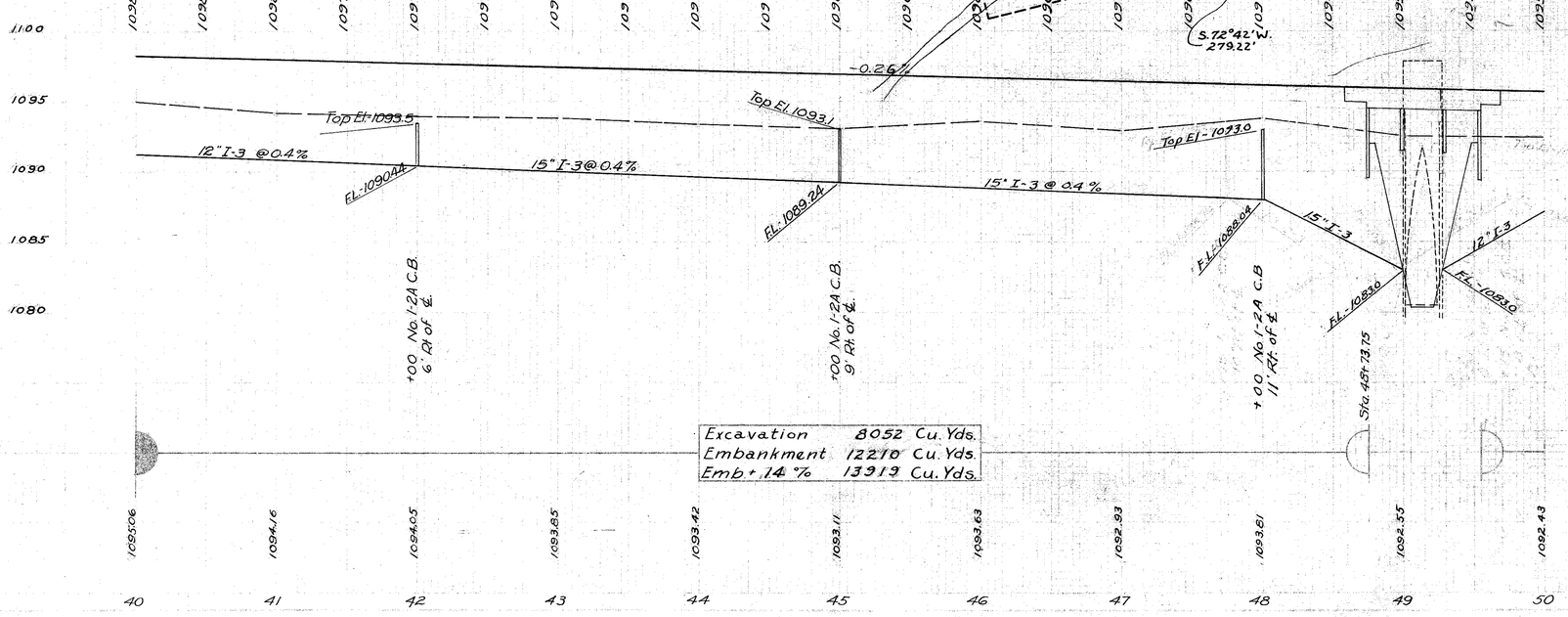
PROPOSED STRUCTURE
Type : Cont. Slab Bridge
Span : 24'-30'-24'
Roadway : 2 @ 44'
Loading : S-20-44
Skew : None
Surface Course : Bituminous

Sta 40 to 49+22 Lt.
For detail of 10' channel
See Sheet No. 167

Lamar Wilson



Bruce D. Lewis Trustee



Excavation	8052 Cu. Yds.
Embankment	12270 Cu. Yds.
Emb. .14 %	13919 Cu. Yds.

ROADWAY DRAINAGE

Ref. No.	Station From	Station To	Side	I-3 12" Lin.Ft.	I-3 15" Lin.Ft.	I-3 18" Lin.Ft.	I-3 Pipe Outlets 12" Lin.Ft.	I-3 Pipe Outlets 15" Lin.Ft.	I-8 Catch Basins I-2A Each	I-10 Sodding Sq.Yds.	
1-D	40+00	42+00	Med.	199					1	5	
2-D	42+00	45+00	Med.		298				1	5	
3-D	45+00	48+00	Med.		298				1	5	
4-D	48+00	49+00	Med.		84			16			
5-D	49+28	50+00	Med.	56			16				
6-D	48+68	49+03	Rt.							35	
7-D	49+25	48+58	Rt.							33	
		Totals		255	680		16	16	3	83	

GUARD RAIL

Ref. No.	Station From	Station To	Side	I-15 Removed & Stored Lin.Ft.	I-15.12 OR I-15.14 Lin.Ft.	I-15.13	
1-G	42+87	49+00	Lt.	613			
2-G	40+00	48+64	Lt.	900			
3-G	42+40	48+64	Rt.		624		
4-G	49+64	50+00	Rt.		36		
5-G	49+64	50+00	Lt.	72	36		
6-G	48+20.25	48+74.25	Lt.			54.00	
7-G	48+20.25	48+74.25	Rt.			54.00	
8-G	49+53.75	50+00	Lt.	72		46.25	
9-G	49+53.75	50+00	Rt.			46.25	
10-G	48+64	48+74.25	Rt.			10.25	
11-G	48+64	48+74.25	Lt.			10.25	
12-G	49+53.75	49+64	Rt.			10.25	
13-G	49+53.75	49+64	Lt.			10.25	
	Totals			1657	1560	241.50	

APPROACH SLABS

Ref No	Station From	Station To	Side			For Detail See Sheet No.
1-AS	48+53.75	48+74.75	L & R			170
2-AS	49+53.75	49+68.75	L & R			170

TREES & STUMPS

Station	Side	Size & kind	No.	Station	Side	Size & kind	No.
40+59	75 Lt.	14" Locust	1	45+71	71 Lt.	12" Locust	5
41+32	72 Lt.	36" Elm	1	45+80	74 Lt.	16" Locust	1
42+67	74 Lt.	12" Locust	1	46+22	65 Lt.	24" Birch	1
				46+70	73 Lt.	12" Elm	1
43+73	73 Lt.	14" Locust	1	46+95	70 Lt.	12" Elm	1
44+43	73 Lt.	12" Locust	1	47+12	70 Lt.	16" Elm	1
44+55	71 Lt.	12" Locust	1	47+43	75 Lt.	12" Elm	1
45+02	73 Lt.	12" Locust	1	47+53	73 Lt.	12" Elm	1
45+15	70 Lt.	16" Chestnut	1	48+28	77 Lt.	16" Elm	1
45+33	74 Lt.	18" Birch	1				
45+54	79 Lt.	12" Locust	1			Totals	23

MISCELLANEOUS

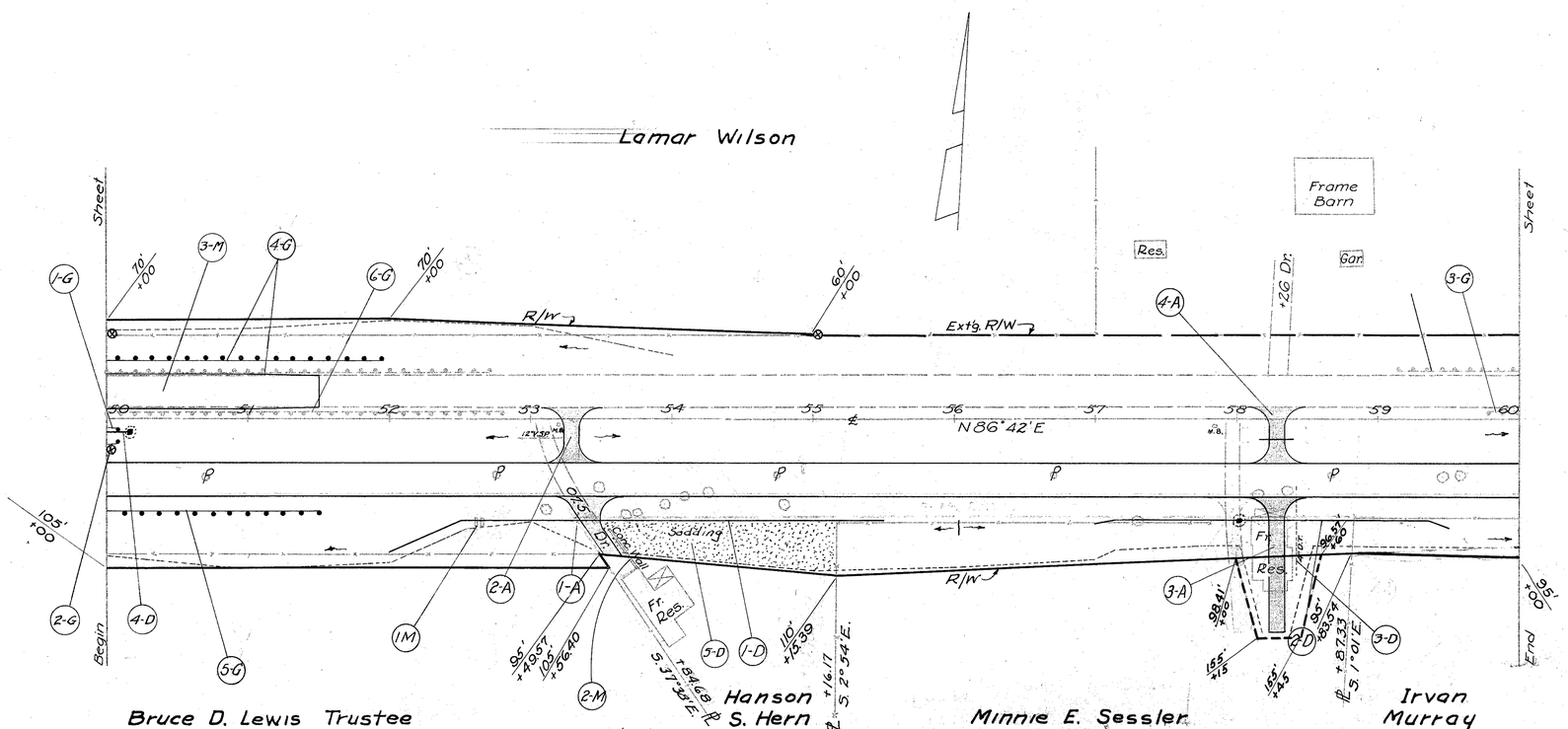
Ref No	Station From	Station To	Side	E-8 Removal of Extg. Pvmt. Sq.Yds.	T-35 & B-35 1¼" thick Sq.Yds.	B-71 Base Course 9" thick Sq.Yds.	35-5 Class. Emb. 3" thick Cu.Yds.	T-30 Tack Coat Sq.Yds.			For Detail See Sheet No.
1-M	47+50	48+59.25	Lt.	367	369.11	369.11	40.10	369.11			130
2-M	49+68.75	50+00	Lt.								130
		Totals		367	369.11	369.11	40.10	369.11			

STA. 40+00 TO STA. 50+00

TYPE FUNDS	
F-24(3) F-190(5)	POST WAR

21
179

MAD. - 40 -(0.00-6.84)



Bruce D. Lewis Trustee

Hanson
S. Hern

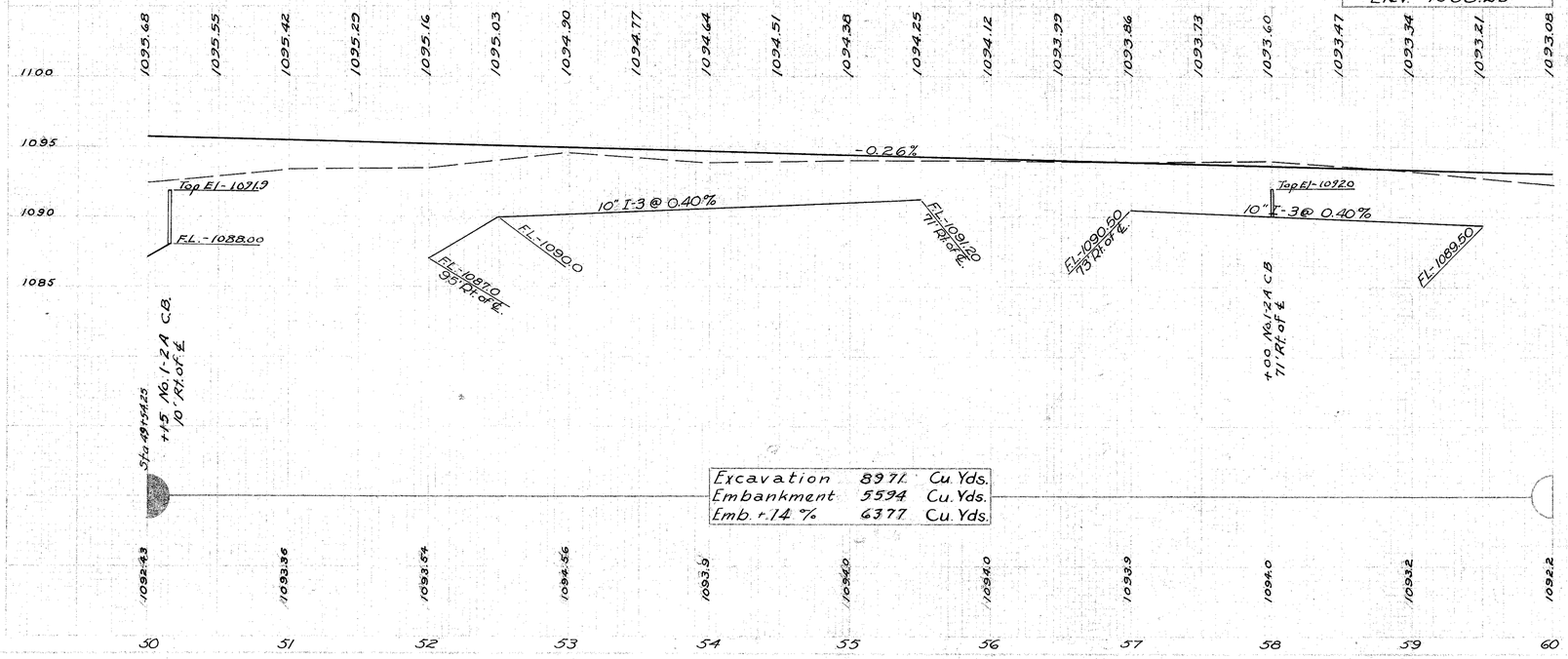
Minnie E. Sessler

Irvan
Murray

Sta. 52+62 Rt.
Remove 2' Stone & brick slab 6"x3'x3'±

Sta. 53+55 Rt.
Remove extg. conc. wall 34' long 12" thick 4'± high

BM. #34 Sta 60+00
Top R/W Marker
60' Lt. of ℄
Elev. - 1088.20



Excavation	8971	Cu. Yds.
Embankment	5594	Cu. Yds.
Emb. ÷ 1.4 %	6377	Cu. Yds.

DRIVES & APPROACHES

Ref. No.	Station	Side	Δ	W	L	Radius L	Radius R	Drives I-17 6" thick	Crossovers I-17	Crossovers I-1 12"	E-12 Removed & Disposed 12" V.S.P.
								Sq. Yds.	Sq. Yds.	Lin. Ft.	Lin. Ft.
1-A	53+28	Rt.	55°	10'	50'	20'	30'	36.5			
2-A	53+28	Med.	90°	14'	40'	20'	20'		100.4		31
3-A	58+26	Rt.	90°	10'	95'	20'	20'	124.6			
4-A	58+26	Med.	90°	14'	40'	20'	20'		100.4	28	
Totals								221.1	200.8	28	31

ROADWAY DRAINAGE

Ref. No.	Station From	Station To	Side	I-3 10" Lin. Ft.	I-3 12"	I-3 Outlets 10" Lin. Ft.	I-3 Under Drives 10" Lin. Ft.	E-12 Pipe Remvd & Disposed 4" V.T. L.F.	I-8 Catch Basins I-2 A Each	L-10 Sodding Sq. Yds.
1-D	52+00	55+50	Rt.	314		16	24			
2-D	57+00	59+50	Rt.	214		16	20		1	5
3-D	58+42		Rt.					40		
4-D	50+00	50+15	Rt.		14				1	5
5-D	53+55	55+16	Rt.							300
Totals				528	14	32	44	40	2	310

GUARD RAIL

Ref. No.	Station From	Station To	Side	I-15 Removed & stored Lin. Ft.	I-15,12 OR I-15,14 Lin. Ft.	I-15,13 Lin. Ft.
1-G	50+00	50+07.75	Med.			7.75
2-G	50+00	50+07.75	Lt.			7.75
3-G	59+77	60+00	Lt.	23		
4-G	50+00	52+04	Lt.	270	204	
5-G	50+00	51+72	Rt.		172	
6-G	50+00	52+80	Lt.	280		
Totals				573	376.00	15.50

TREES

Station	Side	Size & Kind	No.
57+30	72' Rt.	24" Apple	1
Totals			1

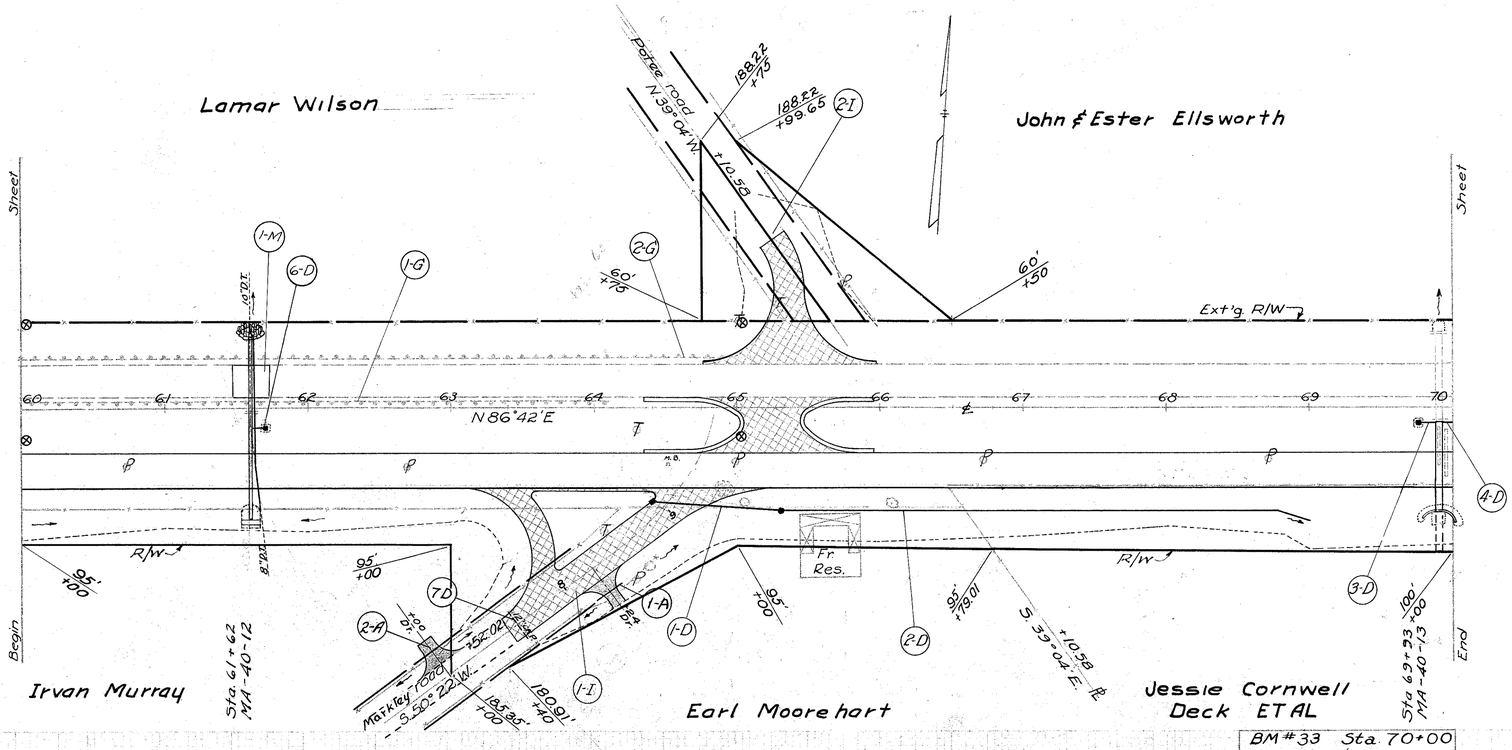
MISCELLANEOUS

Ref. No.	Station From	Station To	Side	S-24 Removal of Extg. Struct. Lump	T-35 & B-35 1½" thick & T-30 Sq. Yds.	B-71 Base Course 3" thick Sq. Yds.	E-8 Remoral of Extg. Pav't Sq. Yds.	35-5 Class Emb. 3" thick Cu. Yds.	For Detail See Sheet
1-M	52+62		Rt.	2					
2-M	53+55		Rt.	1					
3-M	50+00	51+50	Lt.		334.44	334.44	367	35.65	130
Totals				3	334.44	334.44	367	35.65	

STA. 50+00 TO STA. 60+00

TYPE FUNDS 22
F-24(3) F-190(5) POST WAR 179

MAD-40-(10.00-6.84)



BM #33 Sta. 70+00
Top of R/W Marker
60' Lt. of ℄
Elev. - 1084.61

Excavation	4686 Cu. Yds.
Embankment	1883 Cu. Yds.
Emb. + 14%	2147 Cu. Yds.

ROADWAY DRAINAGE

Ref. No.	Station From	Station To	Side	I-3 10" Lin.Ft.	I-2 Under Pav't. 10" Lin.Ft.	I-2 Pipe Outlets 12" L.F.	I-3 Pipe Outlets 10' L.F.	I-8 Catch Basins #3-A Each	#7 Each	1-2A Each	1-3 Each	E-12 Pipe Remove & Dispose 12"CMP Lin.Ft.	L-10 Sodding Sq. Yds.
1-D	64+42	65+30	Rt.	42	44			1					
2-D	65+30	69+00	Rt.	353			16		1				10
3-D	69+79	69+90	Med.			10				1			5
4-D	69+96	70+00	Med.			4							
6-D	61+63	61+75	Med.			10					1		5
7-D	7+59	Side Road	Rt									23	
Totals				395	44	24	16	1	1	1	1	23	20

INTERSECTIONS

Ref. No.	Station	Side	Δ	L	W	For Details See Sheet No.
1-I	65+52.02	Rt.				134
2-I	66+10.58	Lt.				135

GUARD RAIL

Ref. No.	Station From	Station To	Side	I-15 Removed & Stored Lin.Ft.
1-G	60+00	64+08	Med.	408
2-G	64+63	64+93	Lt.	30
Totals				438

REMOVAL OF TREES & STUMPS

Station	Side	Size & kind	No.
64+37	109 Rt.	14" Walnut	1
65+06	66' Rt.	18" Elm	1
66+07	67' Rt.	36" twin apple	1
Totals			3

MISCELLANEOUS

Ref. No.	Station From	Station To	Side	E-8 Removal of Exist. Pav't. Sq. Yds.	T-35 & T-30 1½" thick Sq. Yds.	B-71 Base Course 9" thick Sq. Yds.	S5-5 Class. Emb 3" thick Cu. Yds.
1-M	61+48	61+73	Lt.	61	61.11	61.11	5.55
Totals				61	61.11	61.11	5.55

STRUCTURES UNDER 20' SPAN

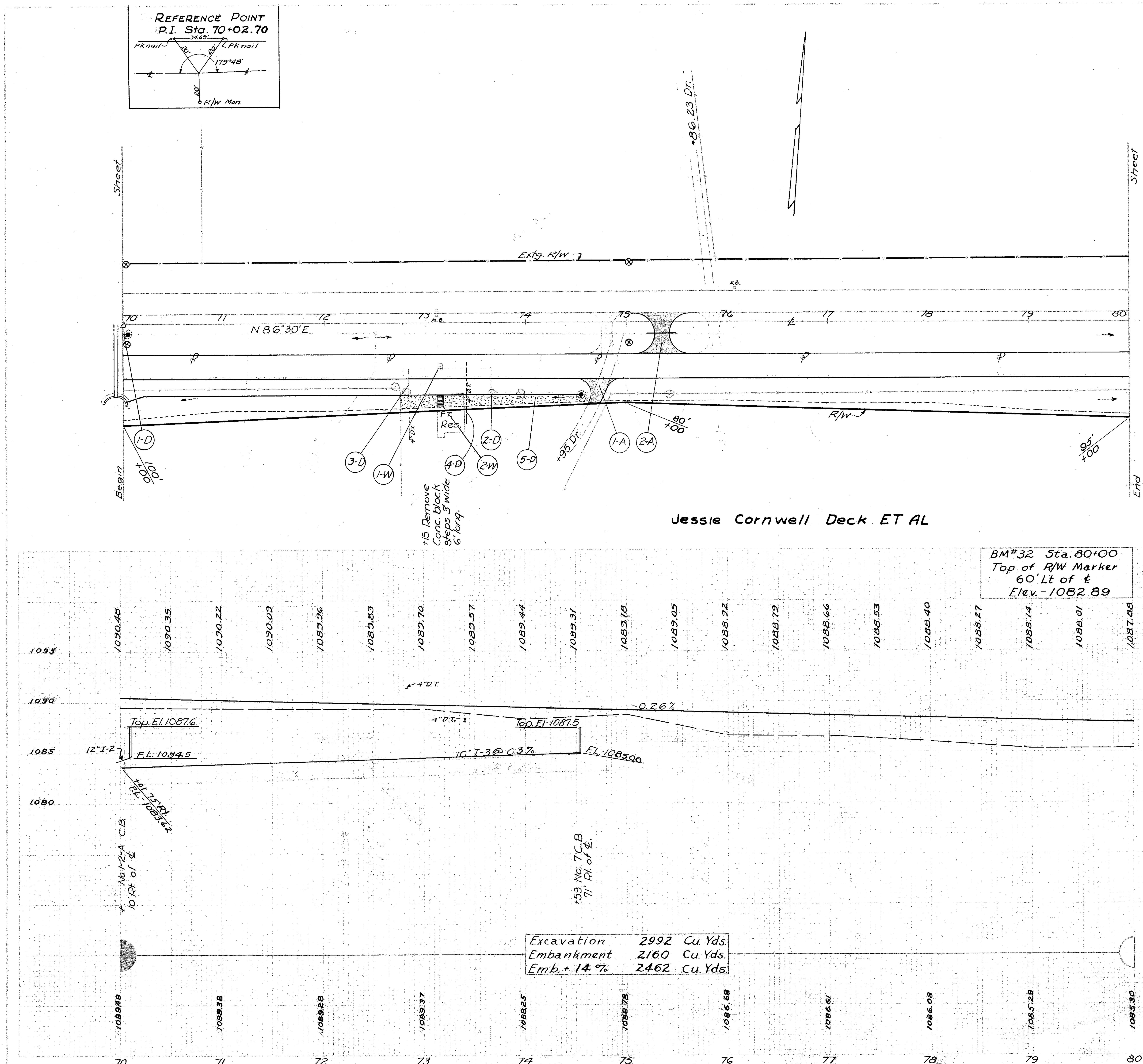
Station	Struct No.	Present Type	Size	Length	Disposition	Proposed Type	Size	Length	For Detail See Sheet
61+62	MA-40-12	St. Box	8'x2'	4'-6"	Remove	Pipe	36"	126'-0"	149
69+93	MA-40-13	Pipe	48"	61'-0"	Extend	Pipe	48"	62'-0"	150

DRIVEWAYS

Ref. NO.	Station	Side	Δ	W	L	Radius L	Radius R	Drives - Sq. Yds. 1-17-6"		I-1 12" Lin.Ft.
1-A	8+24	R	90°	10'	20'	20'	20'	41.3		24
2-A	7+00	Lt	90°	10'	20'	20'	20'	41.3		
Totals								82.6		24

STA. 60+00 TO STA. 70+00

MAD-40-(0.00-6.84)



DRIVES & APPROACHES

Ref. No.	Station	Side	Δ	W	L	Radius L.	Radius R.	Drives I-17 6" thick Sq. Yds.	Drives	Crossovers I-17 6" thick Sq. Yds.	Crossovers I-1 12" Lin. Ft.
1-A	74+80	Rt.	115°	10'	25'	20'	20'	56.0			
2-A	75+35	Med.	90°	14'	40'	20'	20'			100.4	28
Totals								56.0		100.4	28

ROADWAY DRAINAGE

Ref. No.	Station From	Station To	Side	I-3 4" Lin. Ft.	I-3 10" Lin. Ft.	I-3 Pipe Outlets 10" L.F.	I-3 Pipe Outlets	I-2 Pipe Outlets 12" Lin. Ft.	I-2 Pipe Outlets	I-8 Catch Basins #1-2A Each	I-8 Catch Basins #7 Each	I-5 Specials Each	I-5 Specials 10"x4" Tee Each	E-12 Remove & dispose 4" D.T. Lin. Ft.	L-10 Sodding Sq. Yds.
1-D	70+00	70+07	Med.					6		1					5
2-D	70+01	74+53	Rt.		431	16					1		2		5
3-D	72+83		Rt	16										40	
4-D	73+41		Rt.	16										42	
5-D	72+75	74+60	Rt												200
Totals				32	431	16		6		1	1		2	82	210

SIDEWALKS & STEPS

Ref. No.	Station From	Station To	Side	W	L	S-24 Remove & dispose extg. steps Lump	I-13 Conc. steps Lin. Ft.
1-W	73+15		Rt.			1	
2-W	73+15		Rt.	4	11		55
Totals						1	55

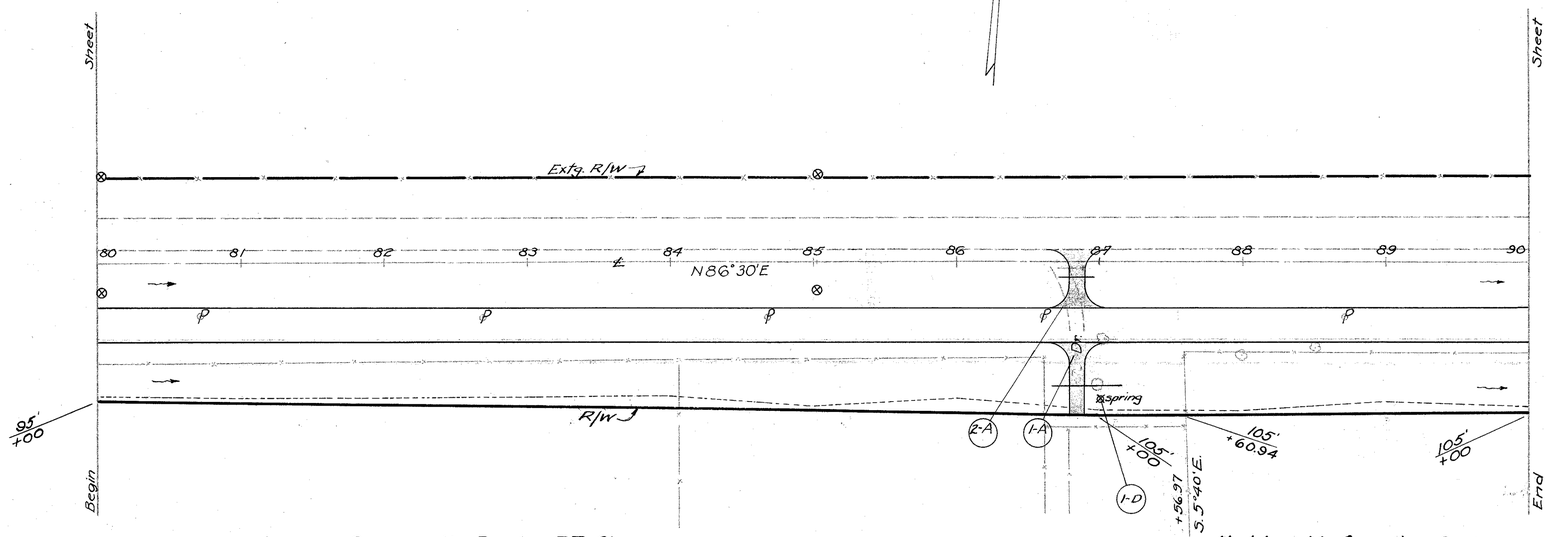
TREES

Station	Side	Size & kind	No
73+66	70' Rt.	12" Maple	1
73+94	70' Rt.	16" Maple	1
75+36	70' Rt.	30" Ash	1
Totals			3

STA. 70+00 TO STA. 80+00

				TYPE FUNDS	24
				POST WAR	179
	OHIO	F-24(3)	F-190(5)		

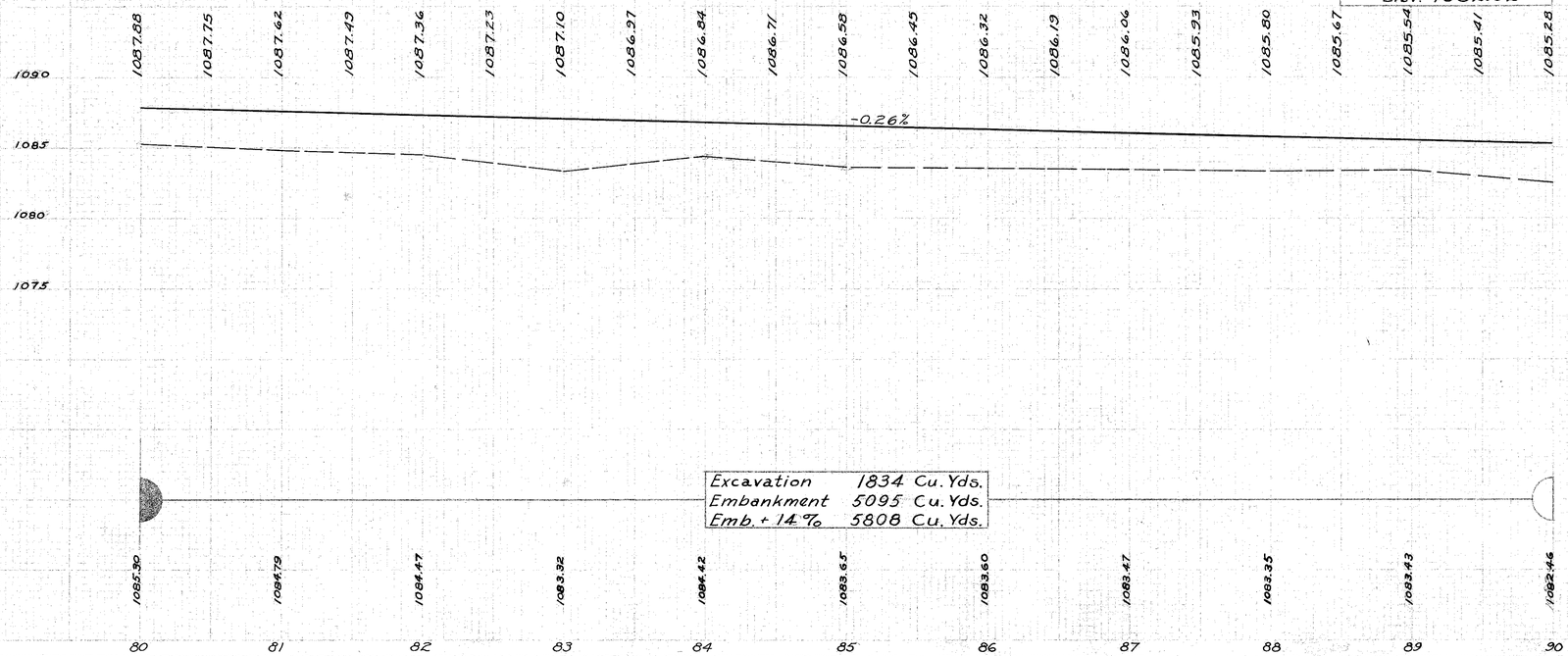
MAD.- 40 -(0.00-6.84)



Jessie Cornwell Deck ET AL

Hattie Y. Overturf

BM #31 Sta 90+00
Top of R/W Marker
60' Lt. of ℄
Elev. 1082.02



Excavation	1834 Cu. Yds.
Embankment	5095 Cu. Yds.
Emb. + 14%	5808 Cu. Yds.

DRIVES & APPROACHES

Ref. No.	Station	Side	Δ	W	L	Radius L	Radius R	Drives I-17 6" thick Sq. Yds.	Drives I-1 18" Lin. Ft.	Crossovers I-17 6" thick Sq. Yds.	Crossovers I-1 12" Lin. Ft.	E-12 Removed & Disposed 18" C.M.P. Lin. Ft.	
1-A	86+85	Rt.	90°	10'	50'	20'	20'	74.6	48				
2-A	86+85	Med.	90°	14'	40'	20'	20'			100.4	28	16	
Totals								74.6	48	100.4	28	16	

TREES

Station	Side	Size & kind	No.
86+97	85 Rt.	20" Ash	1
87+03	53 Rt.	42" Maple	1
88+00	65 Rt.	12" Locust	1
88+50	59 Rt.	12" Locust	1
Totals			4

* The Contractor shall remove 4'± of masonry wall of the spring and place 6" of I-3 pipe to El-1086.0± as directed by the Engineer. Cost of removal of masonry to be included in unit price bid for I-3. Berm of driveway to be shaped as directed to include spring.

DRAINAGE

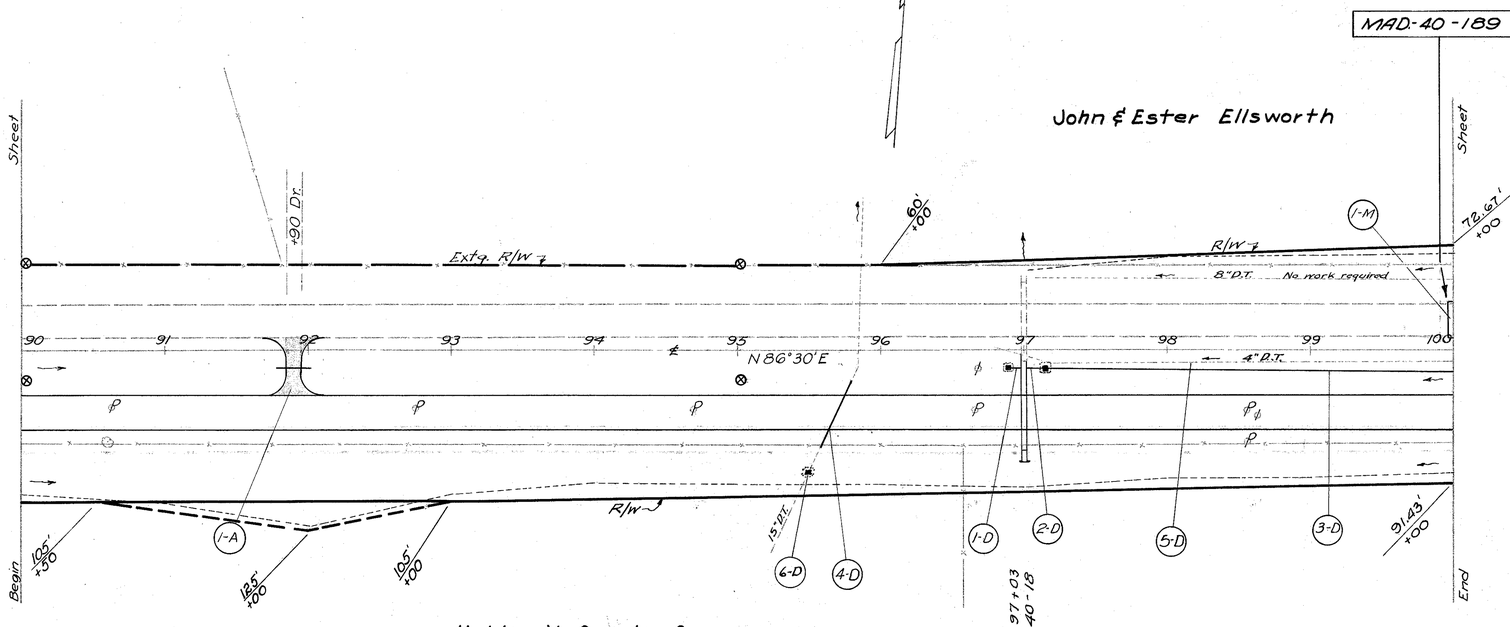
Ref No	Station From	Station To	Side	I-3 Pipe 24" Lin. Ft.	
* 1-D	87+00		Rt.	6	
		Totals		6	

STA. 80+00 TO STA. 90+00

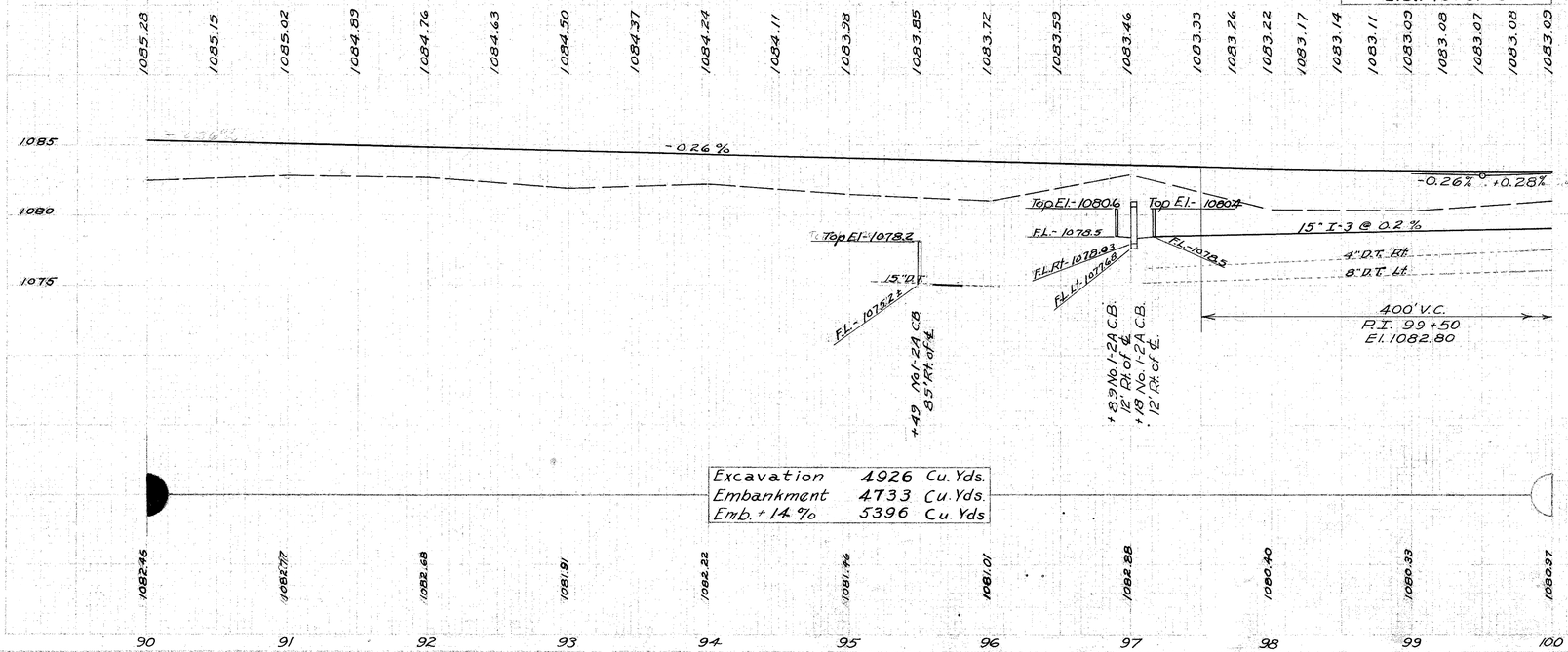
TYPE FUNDS 25
F-24(3) F-190(5) POST WAR 179

MAD - 40 -(0.00-6.84)

MAD-40-189



BM #30 Sta. 100+00
Top of R/W Marker
60' Lt. of ℄
Elev.-1078.03



Excavation	4926	Cu. Yds.
Embankment	4733	Cu. Yds.
Emb. + 14 %	5396	Cu. Yds

DRIVES & APPROACHES

Ref. No.	Station	Side	Δ	W	L	Radius L	Radius R			Crossovers I-17 6" thick	Crossovers I-1 15"		
										Sq. Yds.	Lin. Ft.		
1-A	91+90	Med.	90°	14'	40'	20'	20'			100.4	28		
Totals										100.4	28		

ROADWAY DRAINAGE

Ref. No.	Station From	Station To	Side	I-3 15"	I-8 Catch Basins 1-2A	E-12 Removed & Disposed 4" D.T.	E-12 Removed & Disposed 15"	I-2 Under Pav't.	L-10 Sodding	I-2 Pipe Outlets 12"	I-2 Pipe Outlets 15"
				Lin. Ft.	Each	Lin. Ft.		Lin. Ft.	Sq. Yds.	L.F.	L.F.
1-D	96+89	97+02	Med.		1				5	12	
2-D	97+05	97+18	Med.		1				5		12
3-D	97+18	100+00	Med.	281							
4-D	95+58	95+78	Rt.					58			
5-D	97+05	100+00	Rt.			295					
6-D	95+49		Rt.		1				5		
Totals				281	3	295		58	15	12	12

MISCELLANEOUS

Ref. No.	Station From	Station To	Side	E-8 Removal of Exist'g. Pav't. Sq. Yds.
1-M	99+97	100+00	Lt.	7
Totals				7

TREES

Station	Side	Size & Kind	No.
90+60	63 Rt	18" Locust	1
Totals			1

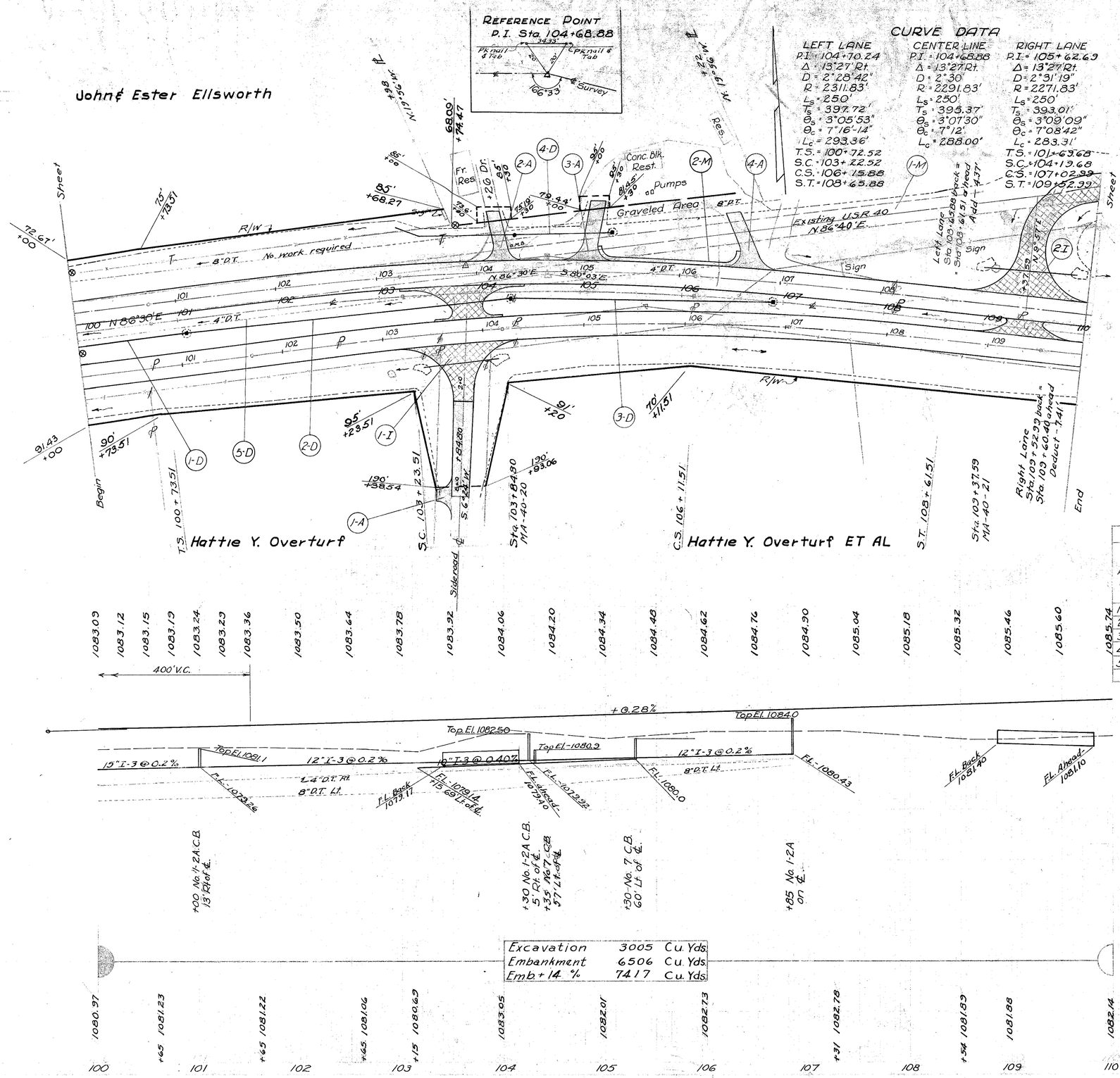
STRUCTURES 20' SPAN & UNDER

Station	Structure No	Present structure Type	Size	Length	Disposition	Proposed Type	Size	Length	For detail See Sheet No
97+03	MA-40-18	Box	3'x3'	54'-8"	Extend	Box	3'x3'	70'-6"	151-152

STA. 90+00 TO STA. 100+00

TYPE FUNDS 26
F-24(3) F-190(5) POST WAR 179

MAD - 40 - (0.00 - 6.84)



DRIVES & APPROACHES

Ref. No.	Station	Side	Δ	W	L	Drives Radius L	Drives Radius R	I-17 6" thick Sq. Yds.	Crossovers		
1-A	7+30	Sidewalk	90°	10'	15'	15'	15'	27.4			
2-A	104+26	Lt.	101°	12'	50'	20'	20'	87.4			
3-A	105+00	Lt.	80°	14'	60'	30'	20'	121.6			
4-A	106+75	Lt.	117°	14'	60'	20'	30'	126.8			
Totals								363.2			

MISCELLANEOUS

Ref. No.	Station From	Station To	Side	E-8 Removal of Exist'g. Pav't. Sq. Yds.	I-12 Curb & Gutter Type 4 Lin. Ft.	For Detail See Sheet
1-M	100+00	110+00	Lt.	249.7		
2-M	105+16	106+42	Lt.		145	130
Totals				249.7	145	

ROADWAY DRAINAGE

Ref. No.	Station From	Station To	Side	I-3 10" Lin. Ft.	I-3 12" Lin. Ft.	I-3 15" Lin. Ft.	L-10 Sod-ding Sq. Yds.	I-3 Under Pav't. 10" Lin. Ft.	I-3 Under Pav't. 12" Lin. Ft.	I-8 Catch Basins "1-2A Each	I-8 Catch Basins "7 Each	E-12 Remove & Dispose 8"D.T. Lin. Ft.	E-12 Remove & Dispose 4"D.T. Lin. Ft.	I-3 Outlets 10" Lin. Ft.
1-D	100+00	101+00	Med.			99	5				1			
2-D	101+00	104+30	Med.		280		5		48		1			
3-D	104+30	106+85	Med.		253		5				1			
4-D	103+15	105+30	Lt.	154			10	44			2	46		16
5-D	100+00	106+60	Rt.										665	
Totals				154	533	99	25	44	48	3	2	46	665	16

TREES

Station	Side	Size & Kind	No.
103+00	75' Rt.	16" Apple	1
109+00	55' Lt.	12" Dead tree	1
Totals			2

INTERSECTIONS

Ref. No.	Station	Side		For Details See Sheet No.
1-I	103+84.80	Rt.		136-137
2-I	109+37.59	Lt.		138-139

STRUCTURES 20' SPAN & UNDER

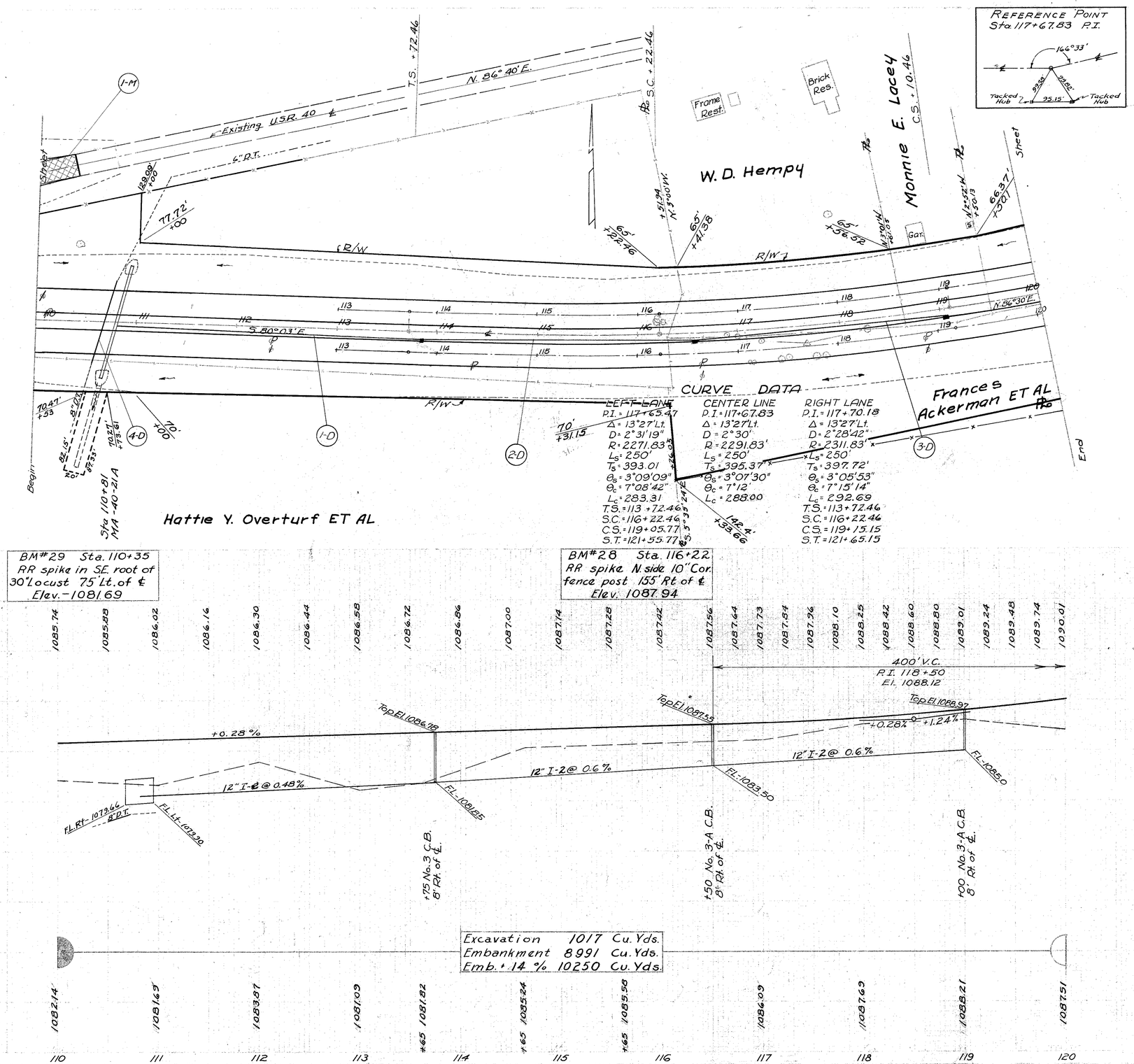
Station	Structure	Present structure Type	Size	Length	Disposition	Proposed Type	Size	Length	For detail see Sheet No.
103+84.8	MA-40-20	—	—	—	—	Pipe	15"	78'-0"	133
103+37.59	MA-40-21	—	—	—	—	Pipe	15"	32'-0"	134

Excavation	3005	Cu. Yds.
Embankment	6506	Cu. Yds.
Emb + 14 %	7417	Cu. Yds.

STA. 100+00 TO STA. 110+00

TYPE FUNDS 27
F-24(3) F-190(5) POST WAR 179

MAD - 40 - (0.00-6.84)



ROADWAY DRAINAGE

Ref. No.	Station From	Station To	Side	I-2 Storm Sewers 12" Lin.Ft	I-2 Under Pav't 8" Lin.Ft	I-8 Catch Basins No.3A Each	I-8 Catch Basins No.3 Each	I-2 Pipe Outlets 12" Lin.Ft
1-D	110+82	113+75	Rt.	281			1	10
2-D	113+75	116+50	Rt.	272		1		
3-D	116+50	119+00	Rt.	248		1		
4-D	110+55	110+73	℄		86			
	Totals			801	86	2	1	10

TREES

Station	Side	Size & Kind	No.
116+15	15' Lt.	12" Dead tree	1
116+19	12' Lt.	12" Dead tree	1
118+21	9' Rt.	15" Apple	1
Totals			3

MISCELLANEOUS

Ref. No.	Station From	Station To	Side	E-8 Removal of exist'g. Pav't. Sq. Yds.
1-M	110+00	110+38	Lt.	93
Totals				93

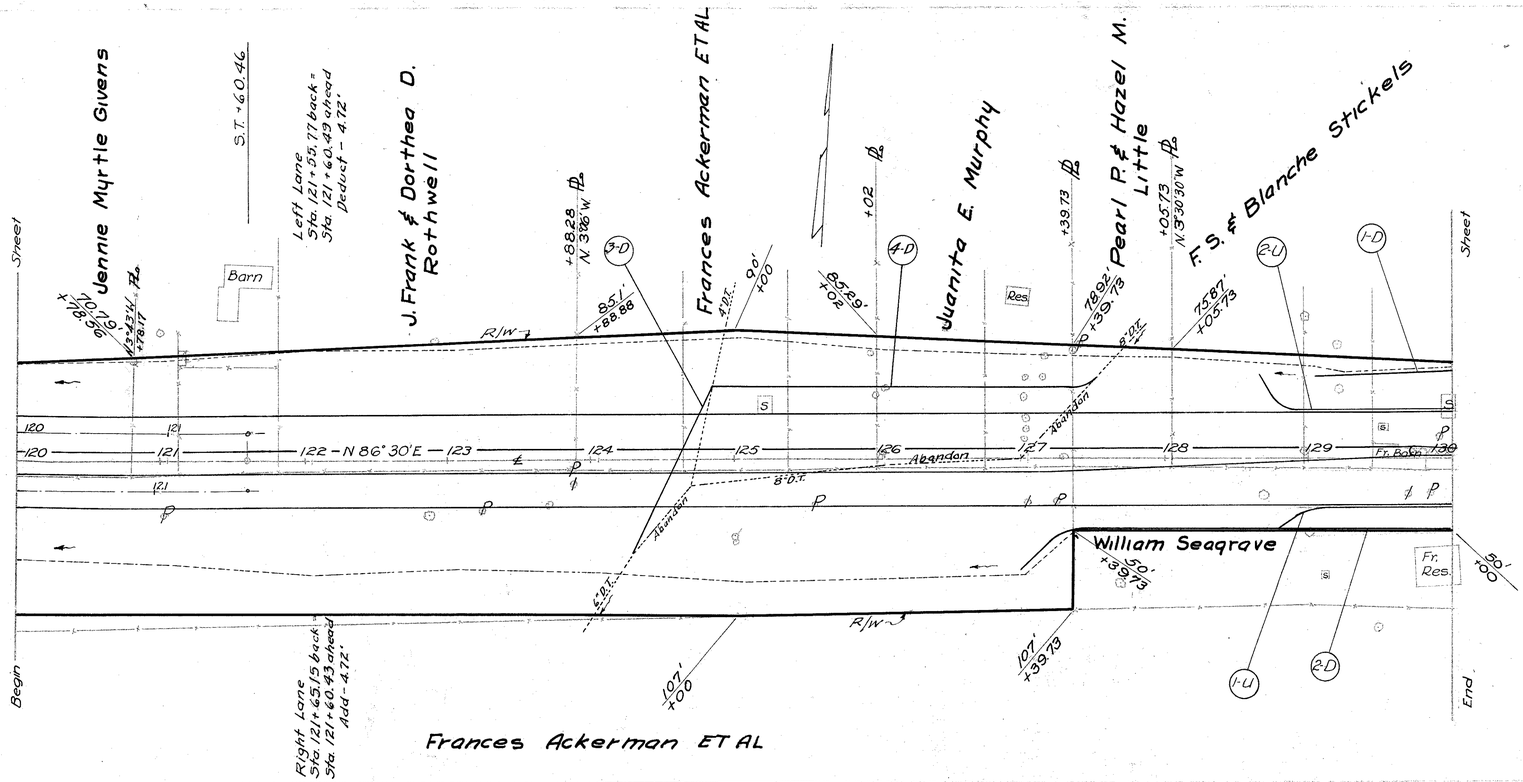
STRUCTURES 20' SPAN & UNDER

Station	Structure No	Existing Type	Existing Size	Existing Length	Existing Disposition	Proposed Type	Proposed Size	Proposed Length	For detail See Sheet No
110+81	MA-40-21A	–	–	–	–	Pipe	30"	116'-0"	155

STA. 110+00 TO STA. 120+00

TYPE FUNDS 28
F-24(3) F-190(5) POST WAR 179

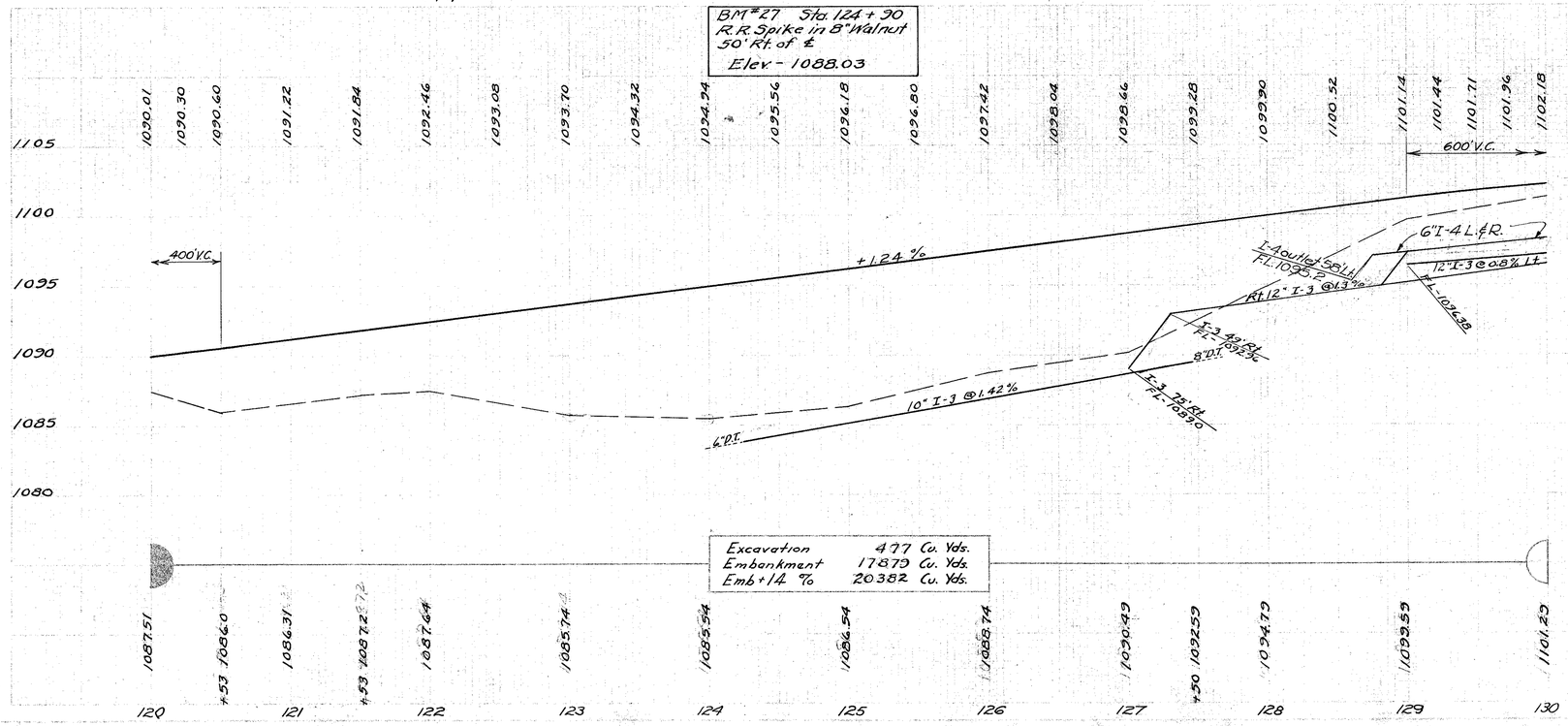
MAD - 40-(0.00-6.84)



ROADWAY DRAINAGE													
Ref. No.	Station From	Station To	Side	I-3 12" Lin.Ft.	I-3 10" Lin.Ft.	I-3 Pipe Outlets 12" Lin.Ft.	I-2 Under Pav't. 10" Lin.Ft.	I-5 Pipe Specials 10"x4"Wye Each				I-5 Pipe Specials 12"x6"Wye Each	
1-D	129+00	130+00	Lt.	84		16							
2-D	127+00	130+00	Rt.	293		16						1	
3-D	124+30	124+86	L & R		36		34	1					
4-D	124+86	127+54	Lt.		270								
		Totals		377	306	32	34	1				1	

TREES			
Station	Side	Size & Kind	No.
128+89	5' Lt.	16" Elm	1
		Totals	1

UNDERDRAINS						
Ref. No.	Station From	Station To	Side	I-4 6" Lin.Ft.	I-4 Pipe Outlets 8" Lin.Ft.	Remarks
1-U	128+80	130+00	Rt.	124		Conn. to I-3
2-U	128+62	130+00	Lt.	133	16	outlet to ditch
		Totals		257	16	



Excavation	477 Cu. Yds.
Embankment	17879 Cu. Yds.
Emb+14 %	20382 Cu. Yds.

STA. 120+00 TO STA. 130+00

TYPE FUNDS 29
F-24(3) F-190(5) POST WAR 179

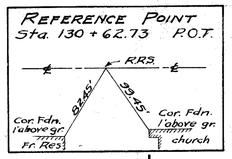
MAD.-40-(0.00-6.84)
2.47

F-24(3) F-190(5)

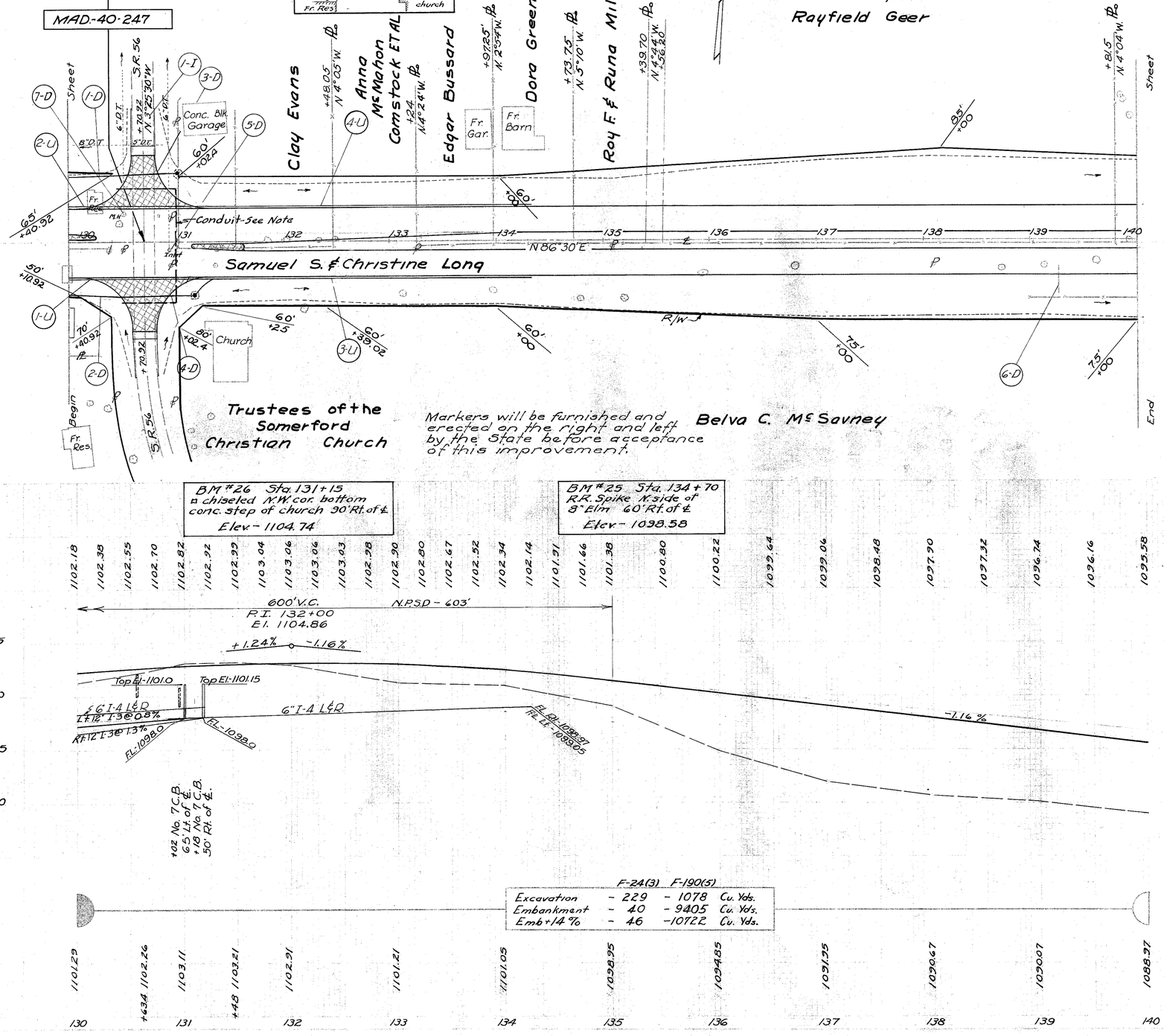
END F-24(3) BEGIN F-190(5)

MAD-40-247

REFERENCE POINT
Sta. 130 + 62.73 P.O.T.



TRAFFIC SIGNAL CONDUIT:~
Conduit for a proposed traffic signal installation is to be furnished and placed by the State prior to the construction of the pavement at the intersection of S.R.U.S. 40 and S.R. 56. the conduit shall be 2½" diameter and placed on 3 approaches to the intersection at a depth of approx. 1' below the subgrade.
The Division Traffic Engineer shall be notified when this item may be performed.



ROADWAY DRAINAGE

Ref. No.	Station From	Station To	Side	I-3 12" Lin.Ft.	I-2 Under Pav't. 12" Lin.Ft.	I-8 Catch Basins No.7 Each		I-16 Abandon Inlets Each	E-12 Removed & disposed 15"S.R Lin. Ft.	E-12 Rem'd & disposed 6"C.P.T. Lin.Ft.	I-16 Abandon Manhole Each	L-10 Sodding Sq.Yds.
F-24(3)												
1-D	130+00	130+70.92	Lt.	51	20							
2-D	130+00	130+70.92	Rt.	51	20							
7-D	130+52		Lt.							65	1	
Totals				102	40					65	1	
F-190(5)												
3-D	130+70.92	131+02	Lt.	10	20	1						5
4-D	130+70.92	131+18	Rt.	26	20	1						5
5-D	130+35		Rt.					1		80		
6-D	139+27		Rt.						26			
Totals				36	40	2		1	26	80		10

INTERSECTIONS

Ref. No.	Station	Side	Δ	W	L					For Details See Sheet
1-I	130+70.92	L&R.								140

TREES

Station	Side	Size & Kind	No.
F-24(3)			
130+39	16' Lt.	32" Maple	1
Totals			1
F-190(5)			
131+78	2' Lt.	15" Apple	1
131+96	3' Lt.	12" Apple	1
132+26	1' Lt.	15" Apple	1
132+41	3' Lt.	12" Apple	1
133+04	49' Rt.	18" Walnut	1
133+89	46' Rt.	12" Elm	1
134+70	55' Rt.	15" Elm	1
135+11	55' Rt.	12" Elm	3
135+86	30' Rt.	15" Walnut clump	1
136+74	25' Rt.	12" Walnuts	1
139+05	23' Rt.	12" W. Cherry	1
139+85	1' Rt.	12" Apple	1
Totals			14

UNDERDRAINS

Ref. No.	Station From	Station To	Side	I-4 6" Lin. Ft.		Remarks
F-24(3)						
1-U	130+00	130+70.92	Rt.	71		
2-U	130+00	130+70.92	Lt.	71		
Totals				142		
F-190(5)						
3-U	130+70.92	134+25	Rt	364		Conn. to C.B.
4-U	130+70.92	134+25	Lt	374		Conn. to C.B.
Totals				738		

BM #26 Sta. 131+15
□ chiseled N.W. cor. bottom conc. step of church 90' Rt. of ℄
Elev. - 1104.74

BM #25 Sta. 134+70
R.R. Spike N. side of 8" Elm 60' Rt. of ℄
Elev. - 1098.58

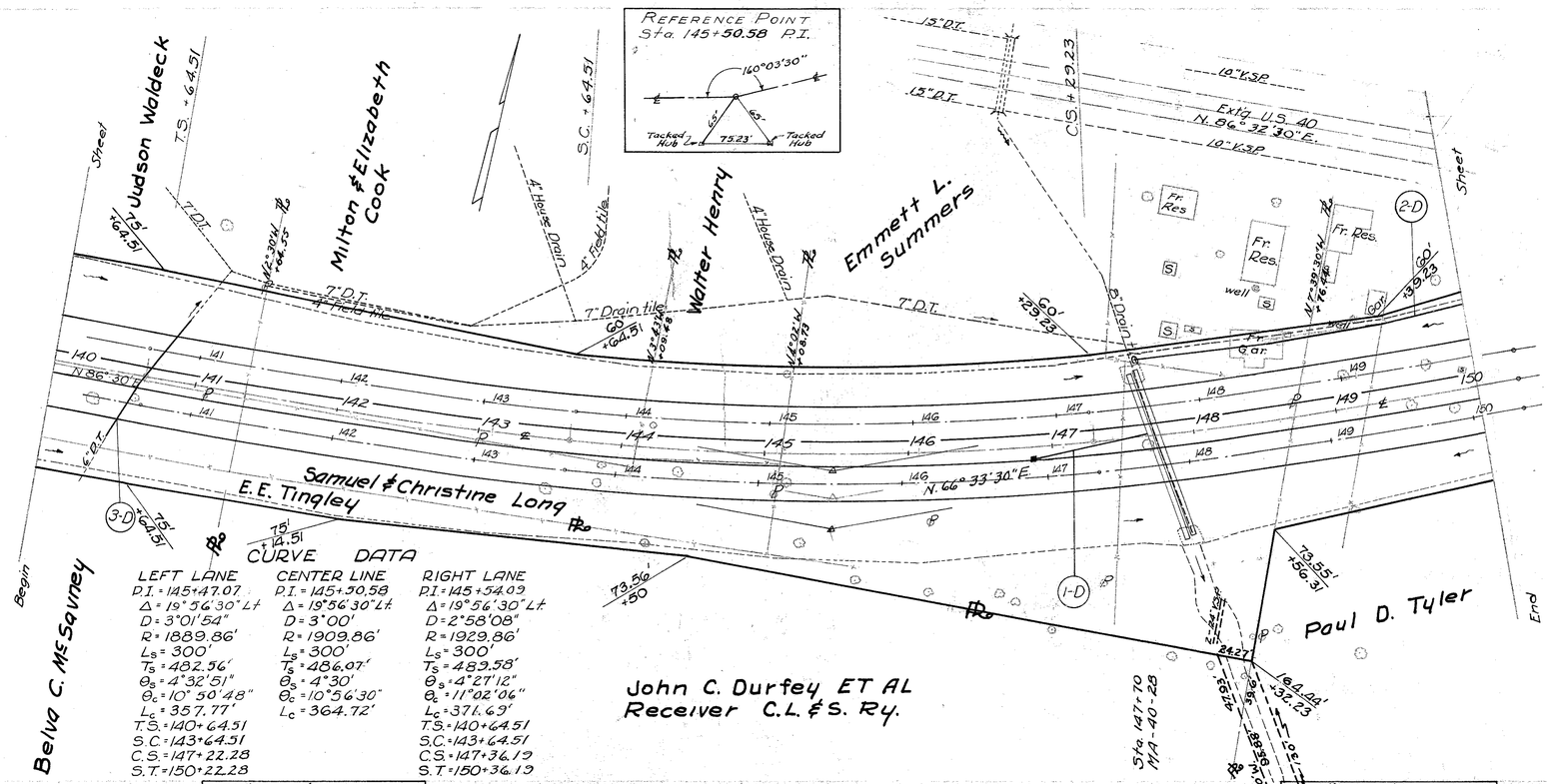
F-24(3) F-190(5)			
Excavation	- 229	- 1078	Cu. Yds.
Embankment	- 40	- 9405	Cu. Yds.
Emb +14%	- 46	-10722	Cu. Yds.

Rev. 6/8/50
C.A.S.

STA. 130+00 TO STA. 140+00

TYPE FUNDS 30
F-24(3) F-190(5) POST WAR 179

MAD-40-(0.00-6.84)



Excavation	624	Cu. Yds.
Embankment	9714	Cu. Yds.
Emb. +14%	11074	Cu. Yds.

ROADWAY DRAINAGE

Ref. No.	Station From	Station To	Side	I-3 12" Lin.Ft.	I-3 Pipe Outlets 12" Lin.Ft.	I-8 Catch Basins No.3 Each	I-2 Under Pavt. 8" Lin.Ft.	I-2 Storm Sewers 12" Lin.Ft.	I-2 Pipe Outlets 12" Lin.Ft.		
1-D	146+85	147+66	Rt.			1		70	10		
2-D	147+64	150+00	Lt.	220	16						
3-D	140+35	140+80					100				
Totals				220	16	1	100	70	10		

TREES

Station	Side	Size & Kind	No.
147+60	5' Rt.	12" Apple	1
149+03	23' Lt.	24" Apple	1
149+46	5' Rt.	15" Apple	1
149+60	20' Lt.	20" Apple	1
149+74	12' Rt.	15" Apple	1
Totals			5

MISCELLANEOUS

Ref. No.	Station From	Station To	Side			

STRUCTURES 20' SPAN & UNDER

Station	Structure No	Present Type	Present Size	Present Length	Present Disposition	Proposed Type	Proposed Size	Proposed Length	For Detail See Sheet No
old location	MA-40-28	S.T.	5'x2'	52'-0"	No work				
147+70	MA-40-28	—	—	—	—	Pipe	2-30"	122'-0"	156-157

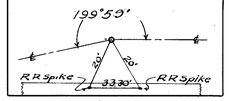
STA. 140+00 TO STA. 150+00

TYPE FUNDS 31
F-24(3) F-190(5) POST WAR 179

MAD. - 40 -(0.00-6.84)

MAD.-40-3.03

"REFERENCE POINT
Sta. 155+21.94 P.I.



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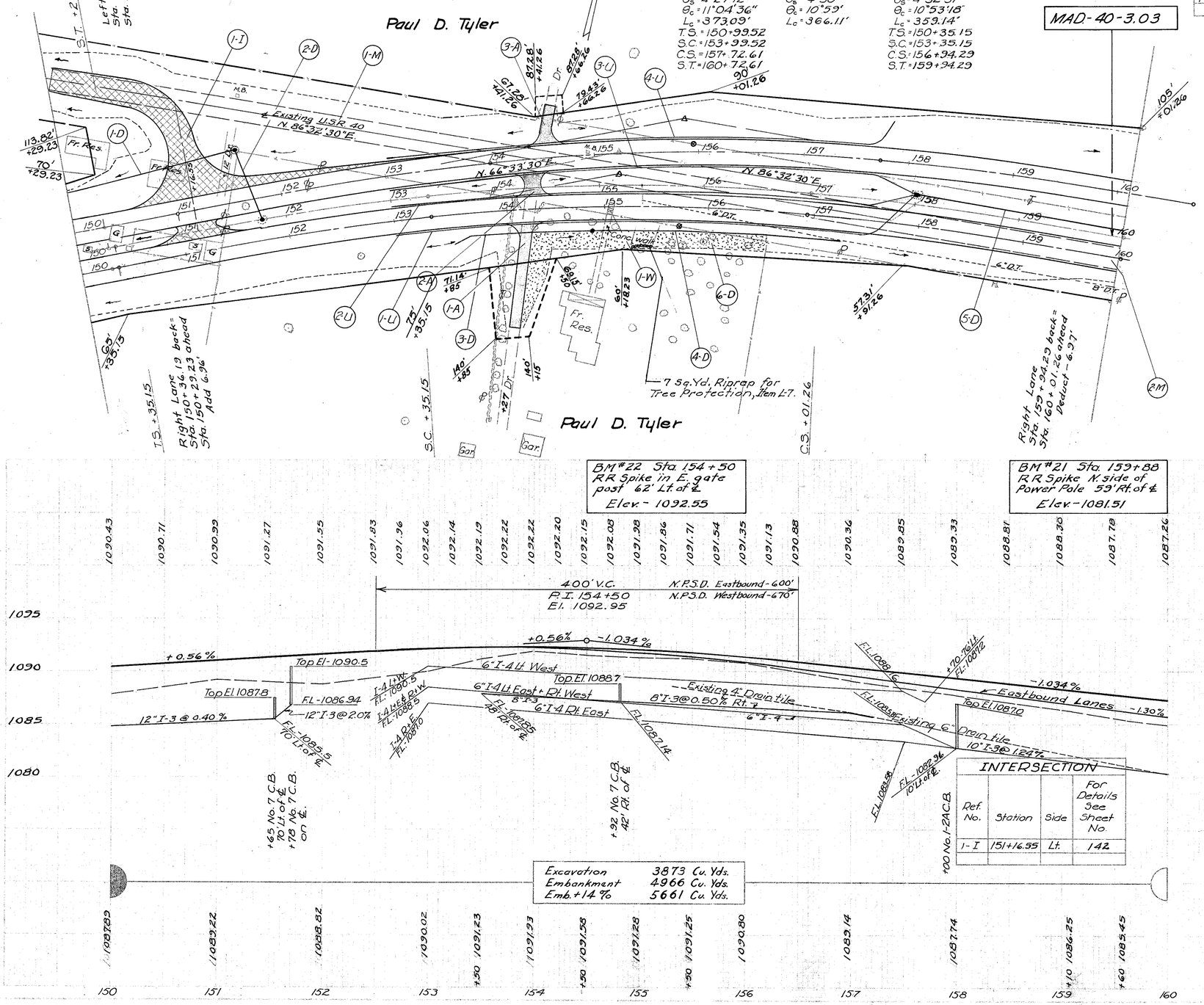
CURVE DATA

LEFT LANE	CENTER LINE	RIGHT LANE
P.I.=155+82.83	P.I.=155+21.94	P.I.=155+18.42
Δ=19°59'	Δ=19°59'	Δ=19°59'
D=2°58'08"	D=3°00'	D=3°01'54"
R=1929.86'	R=1909.86'	R=1889.86'
L_s=300'	L_s=300'	L_s=300'
T_s=490.31'	T_s=486.79'	T_s=483.27'
θ_s=4°27'12"	θ_s=4°30'	θ_s=4°32'51"
θ_c=11°04'36"	θ_c=10°59'	θ_c=10°53'18"
L_c=373.09'	L_c=366.11'	L_c=359.14'
T.S.=150+99.52		T.S.=150+35.15
S.C.=153+99.52		S.C.=153+35.15
C.S.=157+72.61		C.S.=156+94.29
S.T.=160+72.61		S.T.=159+94.29



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BM #22 Sta. 154+50
R.R. Spike in E. gate
post 62' Lt. of ℄
Elev. - 1092.55

BM #21 Sta. 159+88
R.R. Spike N. side of
Power Pole 59' Rt. of ℄
Elev. - 1081.51

1090.43 1090.71 1090.99 1091.27 1091.55 1091.83 1091.96 1092.06 1092.14 1092.13 1092.22 1092.22 1092.20 1092.15 1092.08 1091.98 1091.86 1091.71 1091.54 1091.35 1091.13 1090.88 1090.36 1089.85 1089.33 1088.81 1088.30 1087.78 1087.26

400' V.C.
P.I. 154+50
El. 1092.95

N.P.S.D. Eastbound - 600'
N.P.S.D. Westbound - 670'

INTERSECTION

Ref. No.	Station	Side	For Details See Sheet No.
1-I	151+16.55	Lt.	142

Excavation	3873	Cu. Yds.
Embankment	4966	Cu. Yds.
Emb. +14%	5661	Cu. Yds.

UNDERDRAINS

Ref. No.	Station From	Station To	Side	I-4 6" Lin.Ft.	I-4 Pipe Outlets Lin.Ft.	Remarks
1-U	153+00	158+00	Rt.E	514		Conn. to C.B.
2-U	153+00	158+00	Lt.E	502		Conn. to C.B.
3-U	153+00	158+00	Rt.W	503		Conn. to C.B.
4-U	153+00	157+70	Lt.W	480	16	Outlet to ditch
	Totals			1999	16	

DRIVES & APPROACHES

Ref. No.	Station	Side	Δ	W	L	Radius L	Radius R	Drives I-17 6" thick Sq.Yds.	Cross overs I-17 6" thick Sq.Yds.
1-A	154+27	Rt.	101°	10'	100'	20'	20'	131.9	
2A	154+27	Med.	90°	14'	22'	11.5'	12'		46.9
3-A	154+40	Lt.	76°	10'	40'	20'	20'	66.2	
	Totals							198.1	46.9

MISCELLANEOUS

Ref. No.	Station From	Station To	Side	E-8 Removal of exta. Pavt. Sq. Yds	For Detail See Sheet
1-M	150+05	160+00	L&R	2278	
2-M	159+94.29	160+00	Rt.		32
	Totals			2278	

ROADWAY DRAINAGE

Ref. No.	Station From	Station To	Side	I-3 Pipe 8" Lin.Ft.	I-3 Pipe 10" Lin.Ft.	I-3 Pipe 12" Lin.Ft.	I-2 Under Pavt. 8" Lin.Ft.	I-2 Under Pavt. 12" Lin.Ft.	I-8 Catch Basins I-2A #7 Each	I-8 Catch Basins 6" Each	E-12 Removed & disposed 6" Lin.Ft.	L-10 Sodding Sq.Yds.
1-D	150+00	151+65	Lt.			116		48		1		5
2-D	151+65	151+78	Lt.			26		44		1		5
3-D	153+50	154+32	Rt.	111			30			1		5
4-D	154+32	157+30	Rt.	237							183	
5-D	158+00	160+00	Rt.		199				1			5
6-D	154+10	156+60	Rt.									580
	Totals			348	199	142	30	92	1	3	183	600

SIDEWALKS & STEPS

Ref. No.	Station From	Station To	Side	L	W	S-24 Removal Exta. Conc. Steps Lump	E-8 Removal Exta. Sidewalks Sq. Ft.
1-W	154+95		Rt.	41	5	1	205
	Totals					1	205

TREES

Station	Side	Size & Kind	No.	Station	Side	Size & Kind	No.
151+48	15' Lt.	36" Dead tree	1	156+20	54' Rt.	18" Box Elder	1
152+49	48' Rt.	18" Apple	1				
154+03	60' Rt.	24" Maple	1				
153+90	112' Rt.	20" Maple	1				
154+19	46' Rt.	20" Elm	1				
154+34	36' Rt.	15" W. Birch	1				
154+51	30' Rt.	15" E. Walnut	1				
154+76	34' Rt.	15" E. Walnut	1				
154+96	40' Rt.	24" Ash	1				
155+20	59' Lt.	12" Walnut	1				
155+90	47' Rt.	15" Elm	1			Totals	12

STA. 150+00 TO STA. 160+00

EQUATION STATION ℄ Survey
Sta. 161 + 01.26 back =
Sta. 160 + 22.53 ahead
Long Station = + 78.73'

EQUATION STATION
Sta. 160+22.53 F-190(5) =
Sta. 160+22.53 FAP-190

MAD.-40-3.04 Back
MAD.-40-3.03 Ahead

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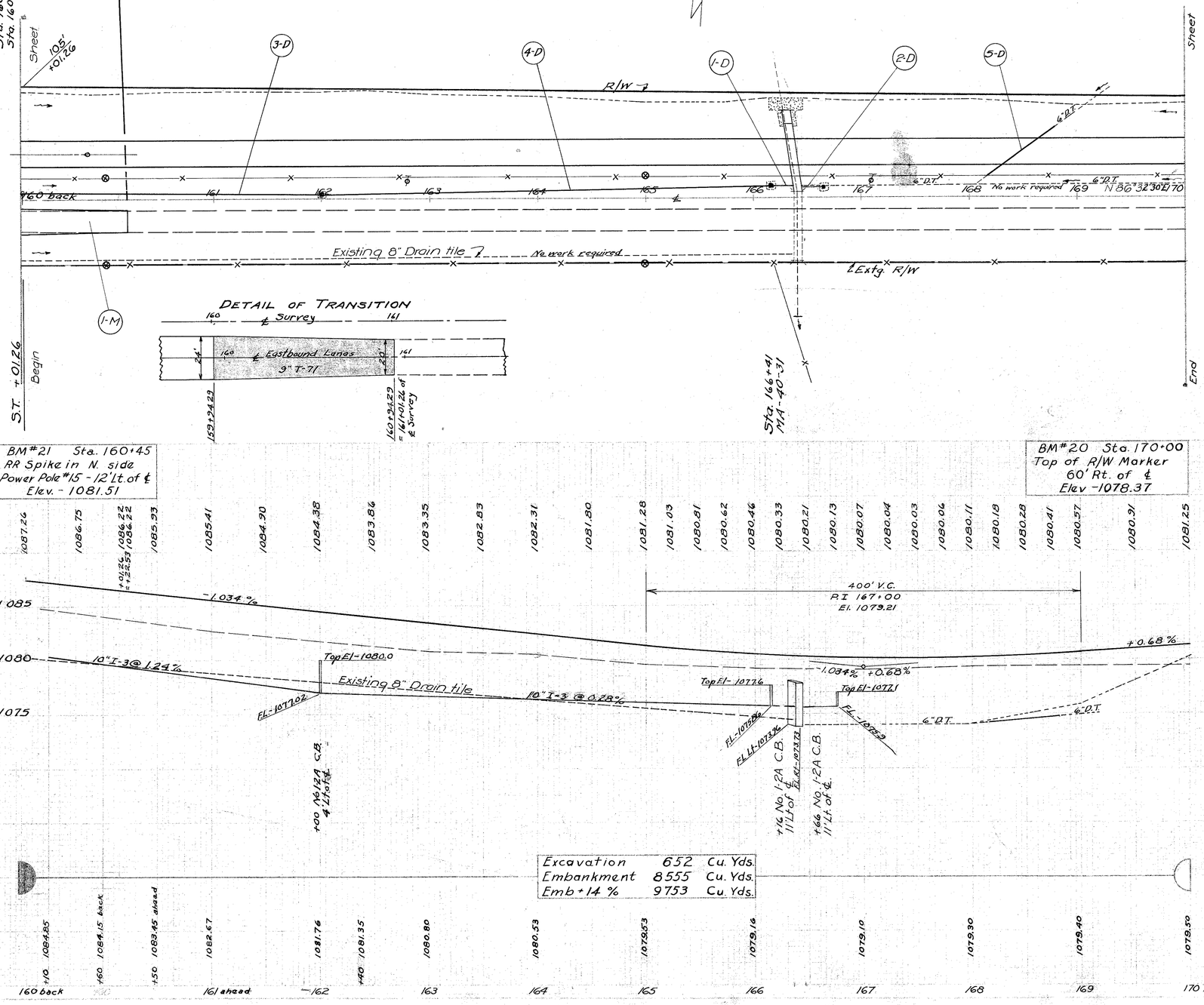
Left Lane
Sta. 160+72.61 back =
Sta. 160+61.75 ahead
Add - 10.86'



BM #21 Sta. 160+45
RR Spike in N. side
Power Pole #15 - 12' Lt. of ℄
Elev. - 1081.51

BM #20 Sta. 170+00
Top of R/W Marker
60' Rt. of ℄
Elev - 1078.37

Excavation	652	Cu. Yds.
Embankment	8555	Cu. Yds.
Emb + 14 %	9753	Cu. Yds.

TYPE FUNDS 32
FED. PROJ. F-24(3) F-190(5) POST WAR 179

MAD. - 40 - (0.00-6.84)

ROADWAY DRAINAGE

Ref. No.	Station From	Station To	Side	I-3 10" Lin.Ft.	I-8 Catch Basins I-2A Each	L-10 Sodding Sq.Yds.	I-2 Under Pav't 8" Lin.Ft.	I-2 Pipe outlets 10" Lin.Ft.
1-D	166+16	166+37	Rt.	10	1	5		10
2-D	166+45	166+66	Rt.	10	1	5		10
3-D	160+00	162+00	Rt.	278	1	5		
4-D	162+00	166+16	Rt.	414				
5-D	168+17	168+80	Lt				76	
		Totals		712	3	15	76	20

MISCELLANEOUS

Ref. No.	Station From	Station To	Side	T-71 9" thick Sq. Yds.	E-8 Removal of exfg. Pav't. Sq. Yds.	SS-5 6" thick Sq. Yds.
1-M	159+34.23	160+34.23	Rt.	244.44	229	266.67
	Totals			24444	229	266.67

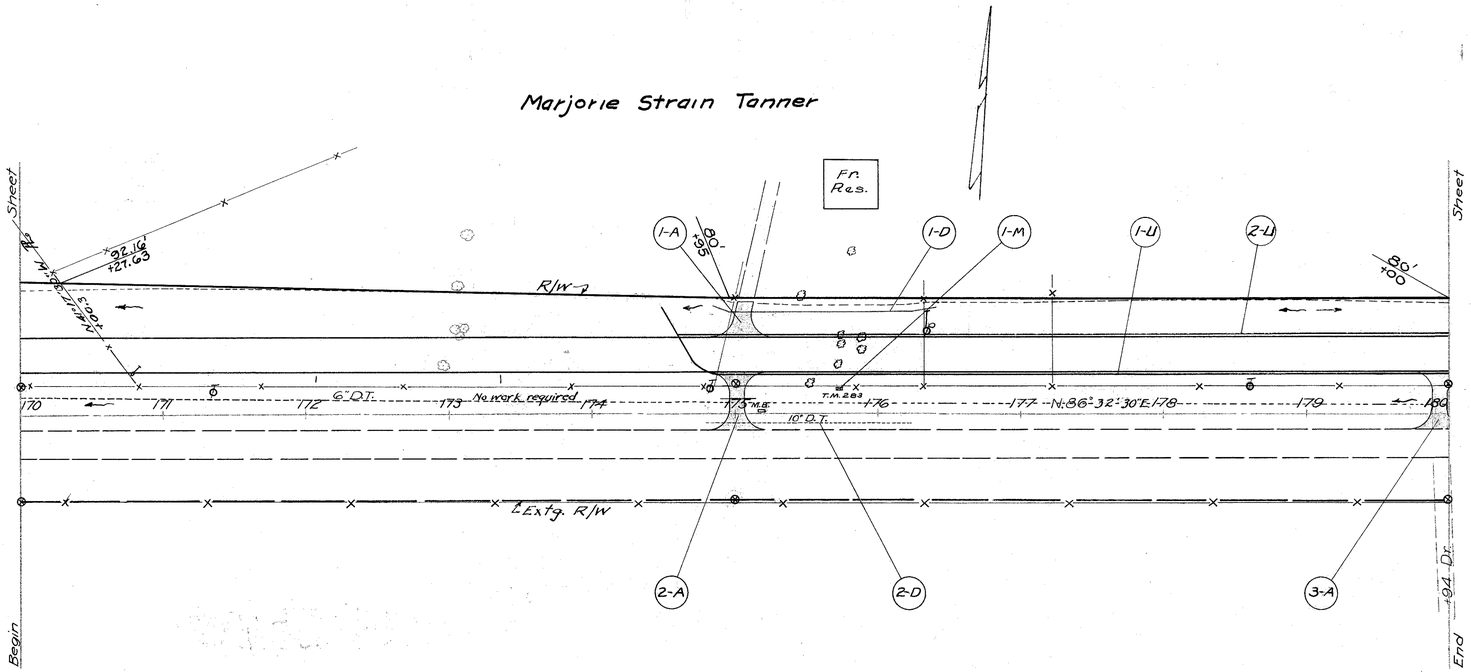
STRUCTURES 20' SPAN ℄ UNDER

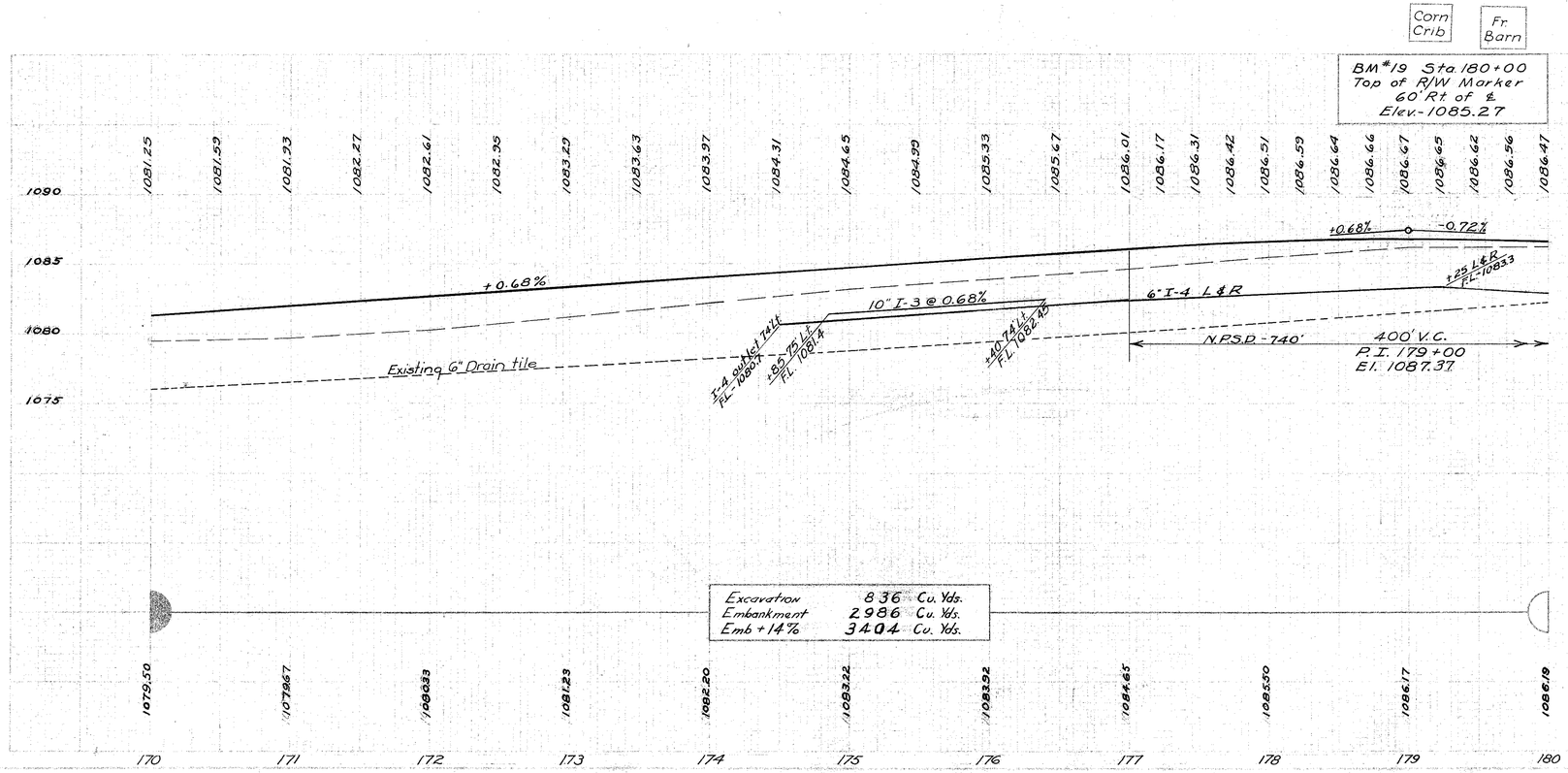
Station	Structure No	Existing Structure Type	Size	Length	Disposition	Proposed Type	Size	Length	Detail See Sheet No.
166+41	MA-40-31	S.T.	8'x4'	53'-0"	Extend	S.T.	8'x4'	75'-10"	158-159

STA. 160+00 TO STA. 170+00

TYPE FUNDS 33
F-24(3) F-190(5) POST WAR 179

MAD-40-(0.00-6.84)





APPROACHES

Ref. No.	Station	Side	Δ	W	L	Radius L	Radius R	Drives I-17 6" Thick Sq. Yds.		Cross-overs I-17 6" Thick Sq. Yds.	Cross-overs I-1 Pipe 12" Lin. Ft.	
1-A	174+90	Lt	77°	10'	25'	20'	20'	49.2				
2-A	175+02	Med.	90°	14'	40	20'	20'			100.4	28	
3-A	179+93	Med.	90°	14'	40	20'	20'			100.4		
Totals								49.2		200.8	28	

DRAINAGE

Ref. No.	Station From	Station To	Side	I-3 Pipe 10" Lin. Ft.	I-3 Pipe Under Drives 10" Lin. Ft.	E-12 Pipe Remvd & Disposed 10" Lin. Ft.	
1-D	174+85	176+40	Lt.	135	20		
2-D	174+80	176+24	Rt.			144	
Totals				135	20	144	

MISCELLANEOUS

Ref. No.	Station From	Station To	Side	Special Monument Removed & Reset Each		
1-M	175+74		Lt.	1		
Totals				1		

REMOVAL OF TREES

Station	Side	Size & Kind	No.
172+98	40' Lt.	24" Oak	1
173+08	57' Lt.	20" Dead Tree	1
173+12	59' Lt.	36" Dead Tree	1
175+73	34' Lt.	42" Maple	1
175+74	48' Lt.	12" Maple	1
175+74	55' Lt.	20" Maple	1
175+87	57' Lt.	24" Maple	1
175+87	45' Lt.	24" Maple	1
173+05	58' Lt.	48" Dead Tree	1
Total			9

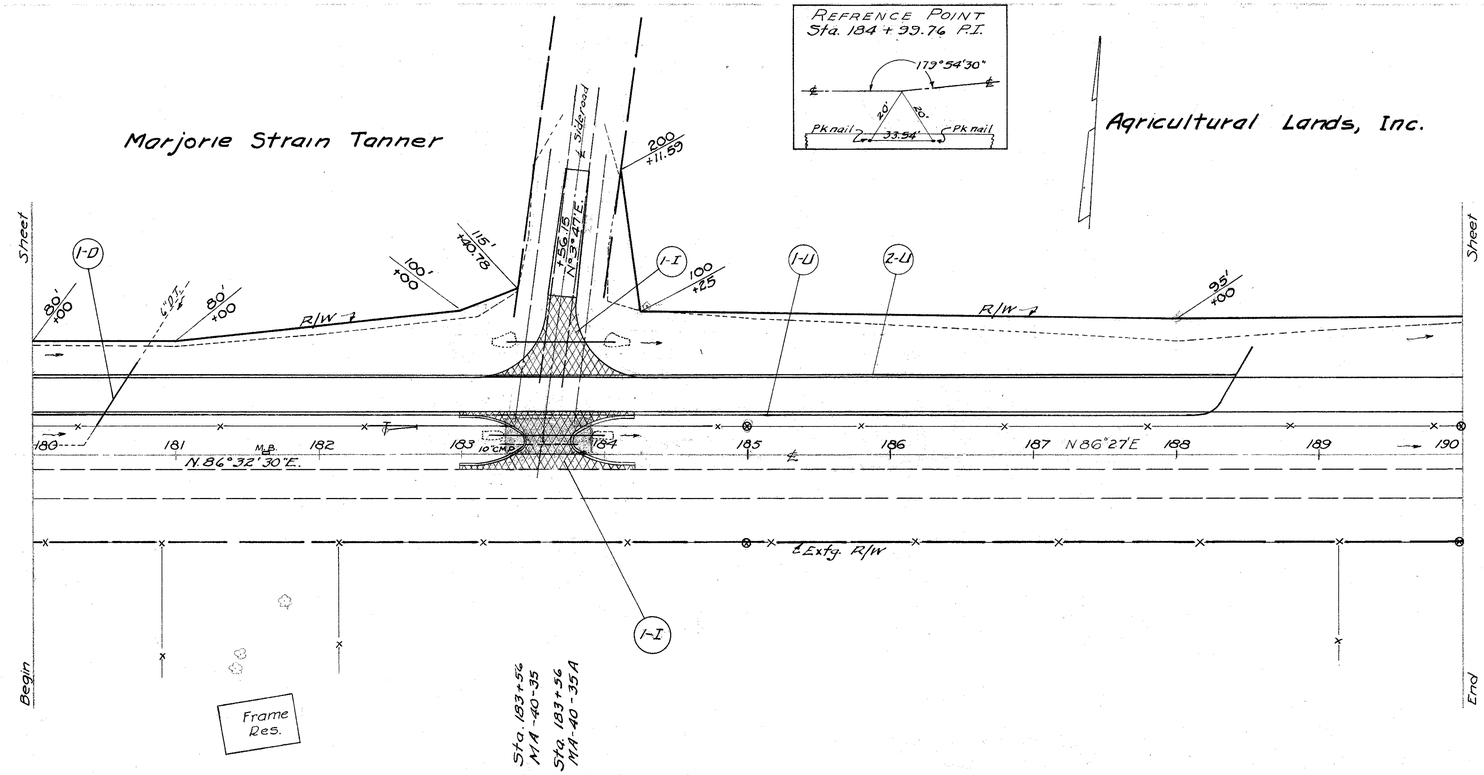
UNDERDRAINS

Ref No	Station From	Station To	Side	I-4 Pipe 6" Lin. Ft.	I-4 Pipe outlets 8" Lin. Ft.	I-5 Pipe Specials 6"x6" Wye Each	Remarks
1-U	174+60	180+00	Rt.	557	16	1	Conn. to Wye
2-U	174+48	180+00	Lt.	540			Outlet to ditch
Totals				1097	16	1	

STA. 170+00 TO STA. 180+00

TYPE FUNDS 34
F-24(3) F-190(5) POST WAR 179

MAD. - 40-(0.00-6.84)



INTERSECTIONS

Ref. No.	Station	Side	Δ	W	L	Radius ℄	Radius R			For Detail See Sheet
1-I	183+56.15									144
Totals										

STRUCTURES-20' SPAN & UNDER

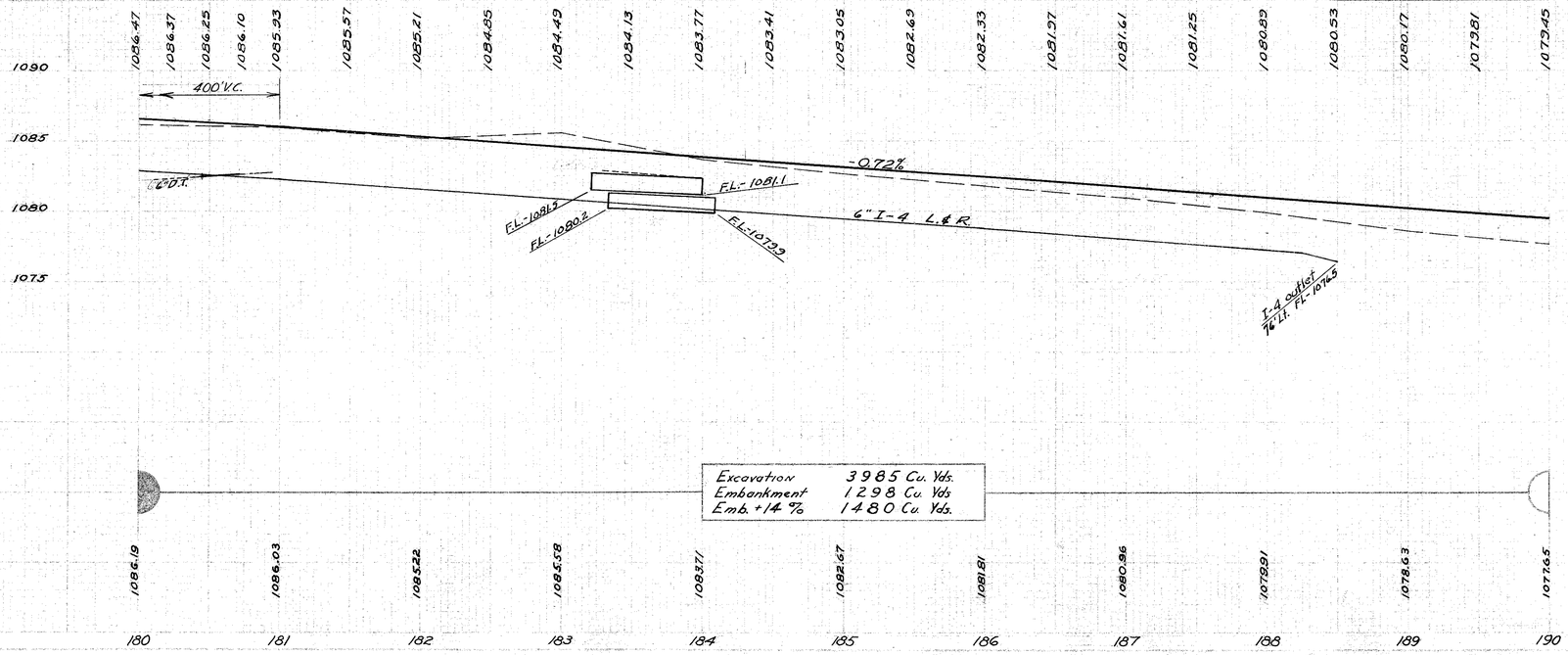
Station	Structure No.	Present Type	Size	Length	Disposition	Proposed Type	Size	Length	Detail Sheet No.
183+56	MA-40-35	CMP	10"	55'-0"	Remove	Pipe	15"	80'-0"	160
183+56	MA-40-35A	—	—	—	—	Pipe	15"	77'-0"	161

UNDERDRAINS

Ref. No	Station From	Station To	Side	I-4 Pipe 6" Lin. Ft.	I-4 Pipe Outlets 8" Lin. Ft.	I-5 Pipe Specials 6"x6" Wye Each	Remarks
1-U	180+00	188+41	Rt.	857			Conn. to Wye
2-U	180+00	188+53	Lt.	846	16	1	Outlet to ditch
Totals				1703	16	1	

DRAINAGE

Ref No.	Station From	Station To	Side	I-2 Pipe under pvt. 8" Lin. Ft.
1-D	180+44	180+72	Lt	52
Totals				52

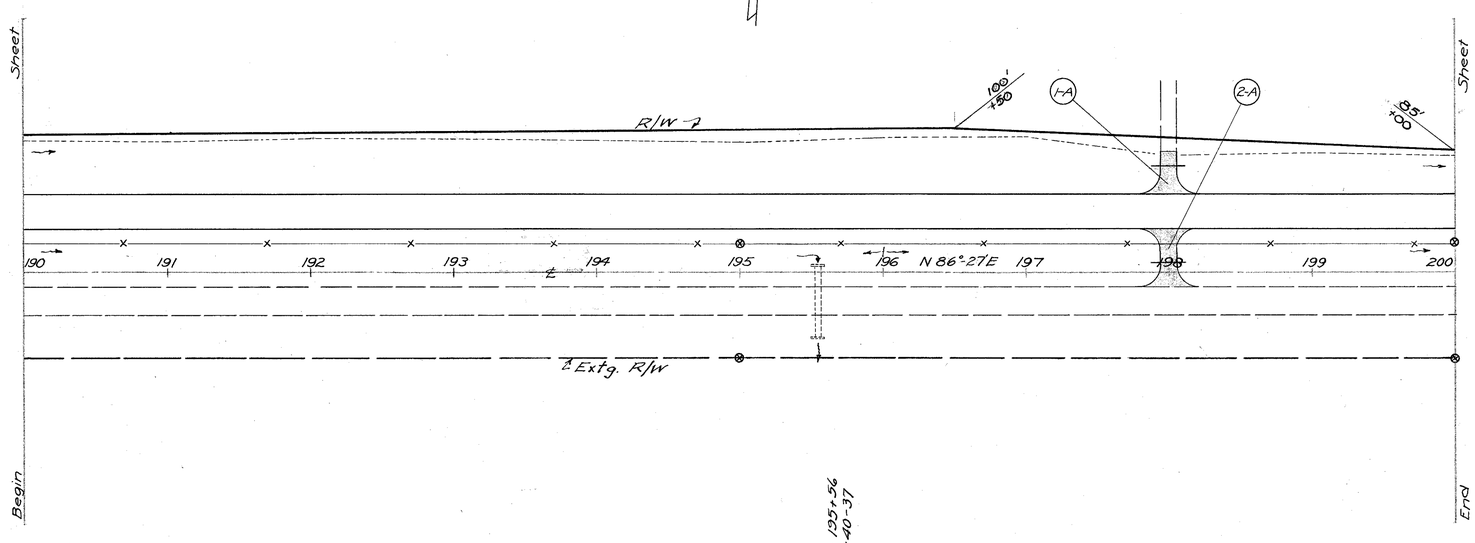


STA. 180+00 TO STA. 190+00

TYPE FUNDS 35
F-24(3) F-190(5) POST WAR 179

MAD-40-(0.00-6.84)

Agricultural Lands, Inc.



Sta 195+56
MA-40-37

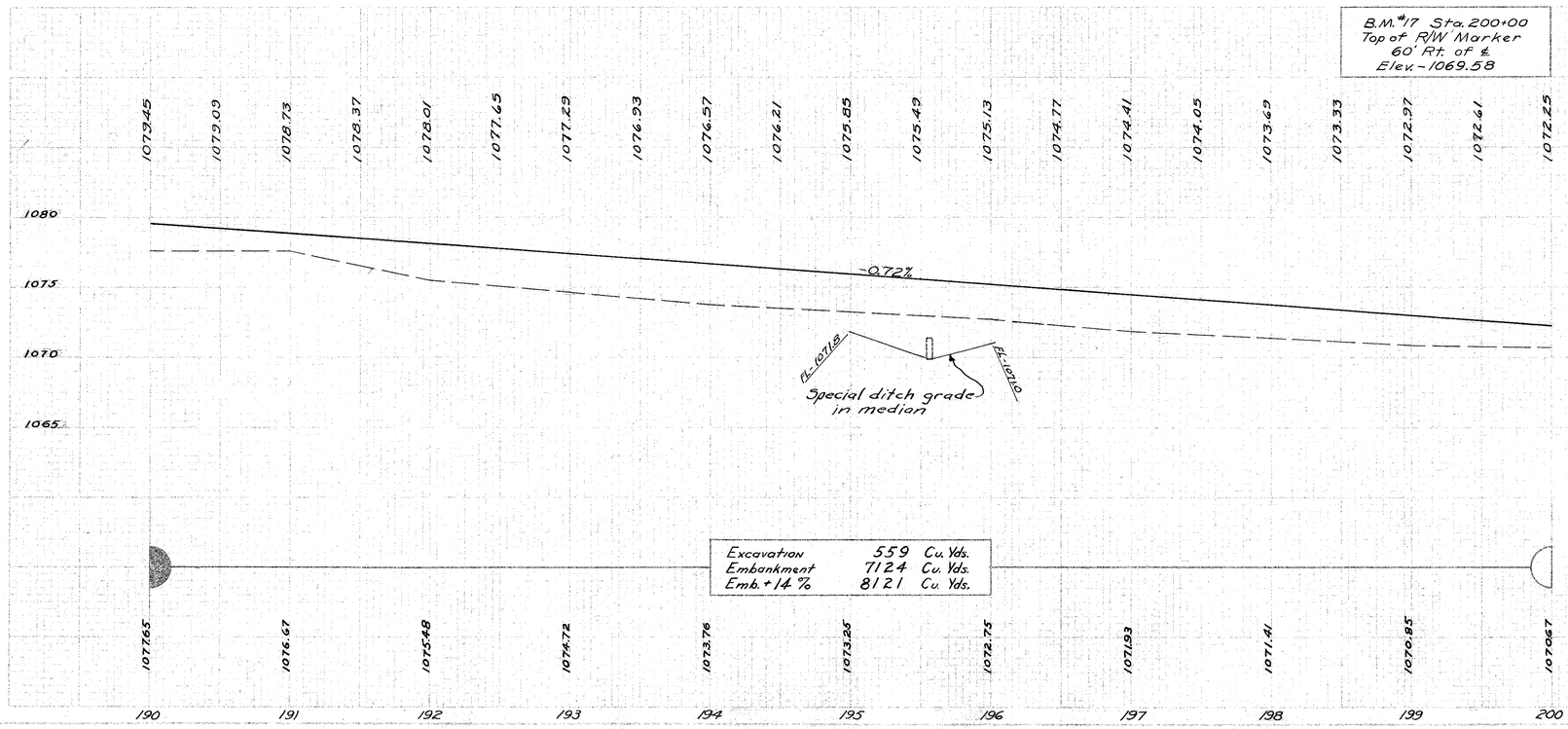
APPROACHES

Ref. No.	Station	Side	Δ	W	L	Radius		Drives I-17	Drives I-1 Pipe 12"	Cross-overs I-17	Cross-overs I-1 Pipe 12"	
						L	R	Sq. Yds.	Lin. Ft.	Sq. Yds.	Lin. Ft.	
1-A	198+00	Lt.	90°	10'	30'	20'	20'	52.4	24			
2-A	198+00	Med.	90°	14'	40'	20'	20'			100.4	28	
						Totals		52.4	24	100.4	28	

STRUCTURES-20' SPAN & UNDER

Station	Structure No.	Present				Proposed			Detail Sheet No.
		Type	Size	Length	Disposition	Type	Size	Length	
195+56	MA-40-37	S.T.	4'x1½'	52'-0"	No work	—	—	—	—

B.M. #17 Sta. 200+00
Top of R/W Marker
60' Rt. of ℄
Elev. - 1069.58



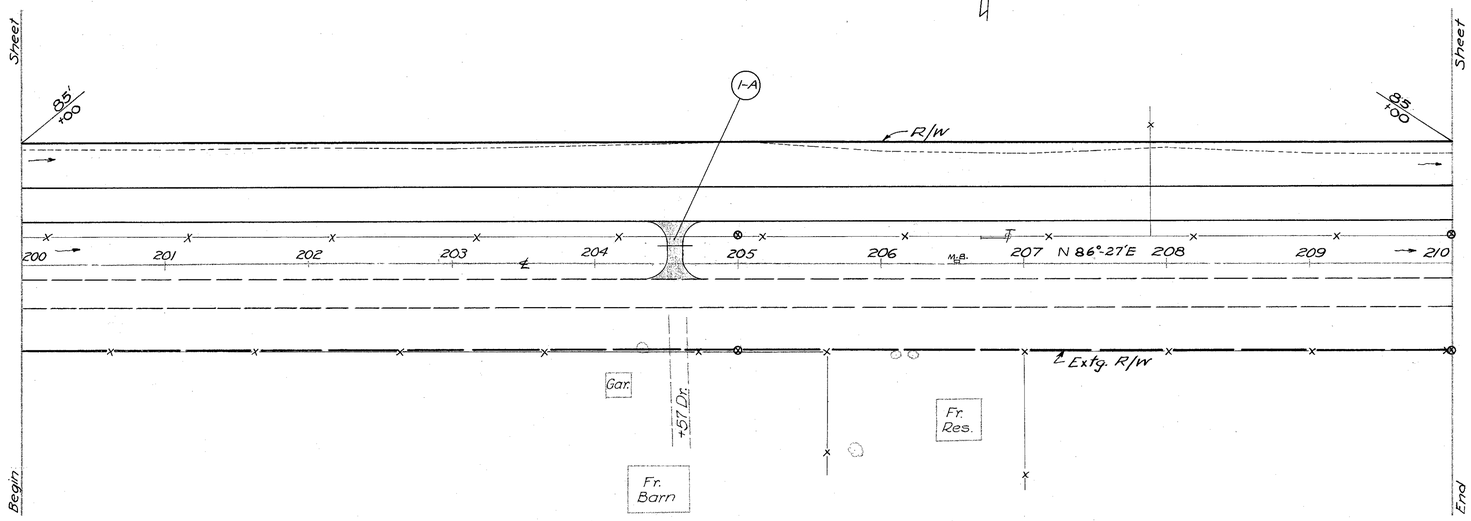
Excavation	559	Cu. Yds.
Embankment	7124	Cu. Yds.
Emb. + 14 %	8121	Cu. Yds.

STA. 190+00 TO STA. 200+00

TYPE FUNDS 36
F-24(3) F-190(5) POST WAR 179

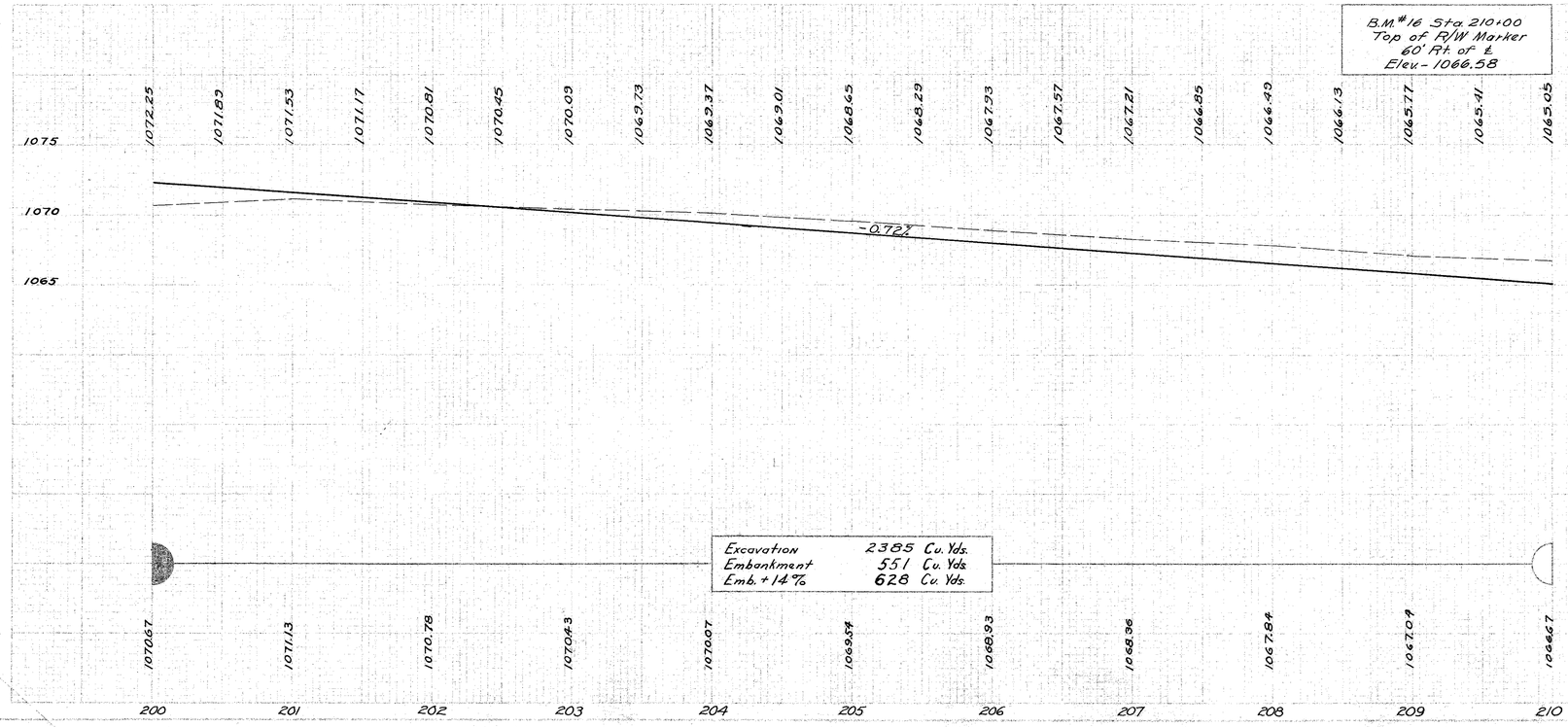
MAD-40-(0.00-6.84)

Agricultural Lands, Inc.



APPROACHES

Ref. No.	Station	Side	Δ	W	L	Radius L	Radius R	Drives		Cross-overs I-17 6" Thick Sq. Yds.	Cross-overs I-1 Pipe 12" Lin. Ft.		
I-A	204+57	Med.	90°	14'	40'	20'	20'			100.4	28		
Totals										100.4	28		



Excavation	2385 Cu. Yds.
Embankment	551 Cu. Yds.
Emb. + 14%	628 Cu. Yds.

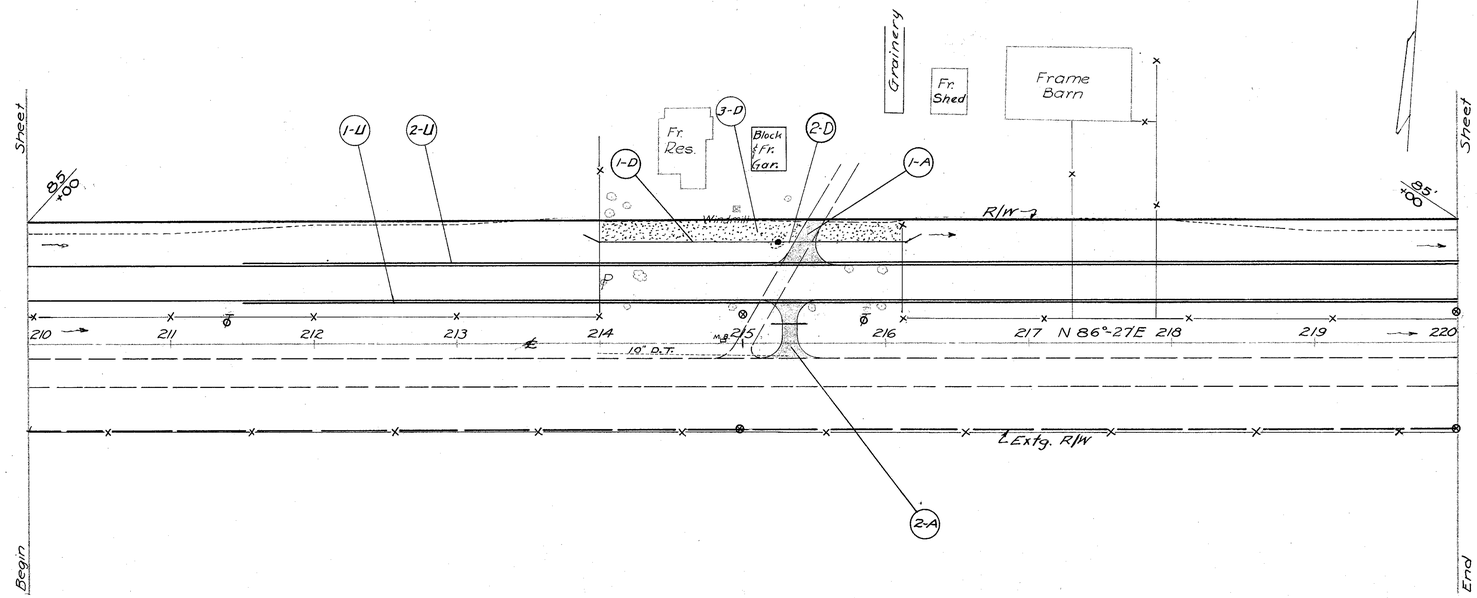
STA. 200+00 TO STA. 210+00

TYPE FUNDS F-24(3) F-190(5) POST WAR

37
179

MAD-40-(0.00-6.84)

Agricultural Lands, Inc.



APPROACHES

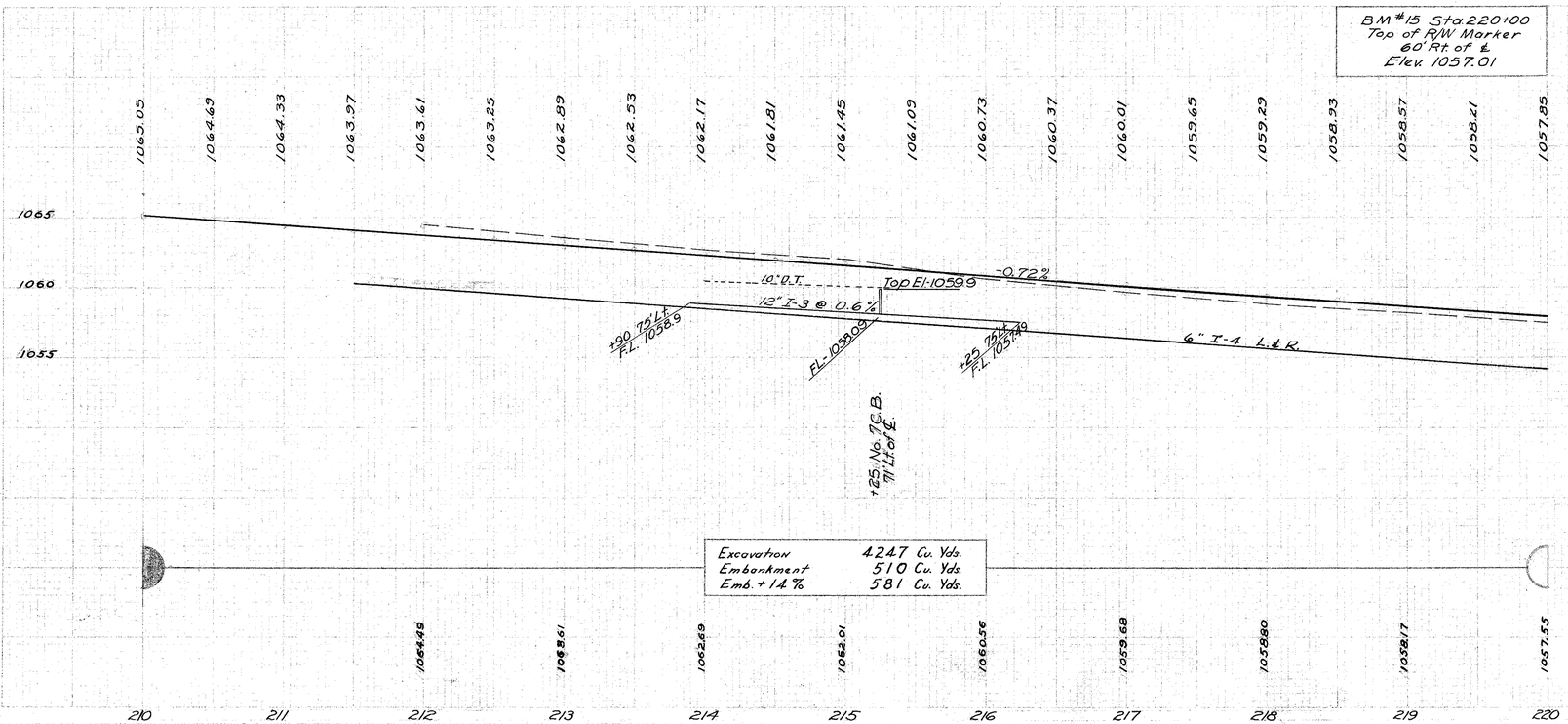
Ref. No.	Station	Side	Δ	W	L	Radius L	Radius R	Drives I-17 6" Thick Sq. Yds.	Cross-overs I-17 6" Thick Sq. Yds.	Cross-overs I-1 Pipe 15" Lin. Ft.
1-A	215+32	Lt.	60°	10'	35'	20'	20'	71.7		
2-A	215+32	Med.	90°	14'	40'	20'	20'		100.4	28
		Totals						71.7	100.4	28

DRAINAGE

Ref. No.	Station From	Station To	Side	I-3 12" Lin. Ft.	I-3 Under Drives 12" Lin. Ft.	E-12 Pipe Remb'd & Disposed 10 D.T. Lin. Ft.	I-8 Catch Basins No. 7 Each	L-10 Sodding Sq. Yds.
1-D	213+90	215+25	Lt.	134		133		
2-D	215+25	216+25	Lt.	79	20		1	5
3-D	214+00	216+25	Lt.					300
		Totals		213	20	133	1	305

REMOVAL OF TREES

Station	Side	Size & Kind	No.
214+47	27' Lt.	36" Poplar	1
	Totals		1



Excavation	4247 Cu. Yds.
Embankment	510 Cu. Yds.
Emb. + 14 %	581 Cu. Yds.

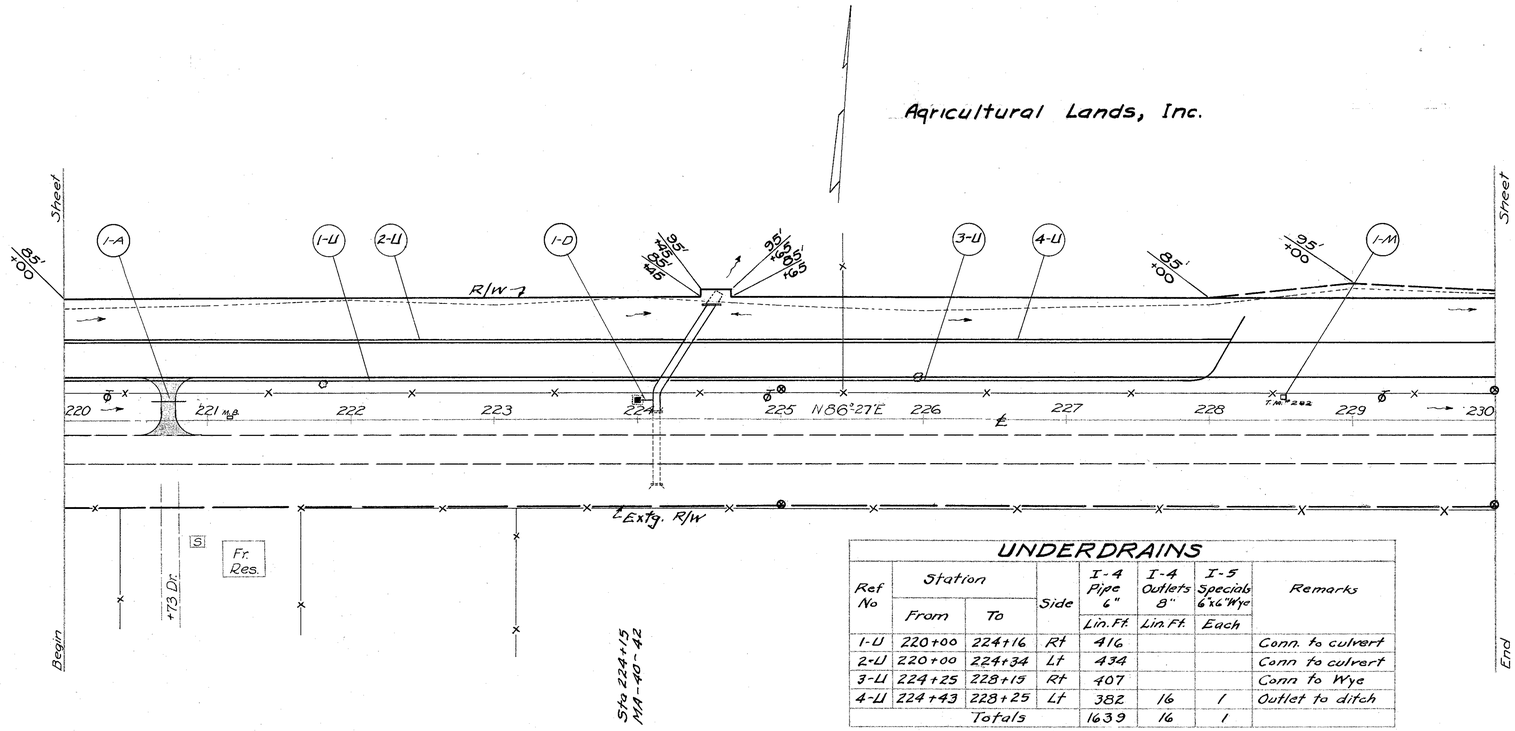
UNDERDRAINS

Ref No	Station From	Station To	Side	I-4 Pipe 6" Lin. Ft.			Remarks
1-U	211+50	220+00	Rt.	850			
2-U	211+50	220+00	Lt.	850			
	Totals			1700			

STA. 210+00 TO STA. 220+00

FED. AID PROJECT	STATE	PROJECT	TYPE FUNDS	SHEET NO.	TOTAL SHEETS
	MISS.	F-24(3) F-190(5)	POST WAR	38	179

MAD-40-(0.00-6.84)



UNDERDRAINS

Ref. No	Station From	Station To	Side	I-4 Pipe 6"	I-4 Outlets 8"	I-5 Specials 6"x6" Wye	Remarks
				Lin. Ft.	Lin. Ft.	Each	
1-U	220+00	224+16	Rt	416			Conn. to culvert
2-U	220+00	224+34	Lt	434			Conn to culvert
3-U	224+25	228+15	Rt	407			Conn to Wye
4-U	224+43	228+25	Lt	382	16	1	Outlet to ditch
Totals				1639	16	1	

APPROACHES

Ref. No.	Station	Side	Δ	W	L	Radius L	Radius R	Drives		Cross-overs I-17 6" Thick	Cross-overs I-1 Pipe 15"		
										Sq. Yds.	Lin. Ft.		
1-A	220+73	Med.	90°	14'	40'	20'	20'			100.4	28		
Totals										100.4	28		

DRAINAGE

Ref. No.	Station From	Station To	Side	I-2 Pipe Outlets 15"	I-8 Catch Basins I-2-A	I-10 Sodding
				Lin. Ft.	Each	Sq. Yds
1-D	224+01	224+12	Lt.	10	1	5
Totals				10	1	5

MISCELLANEOUS

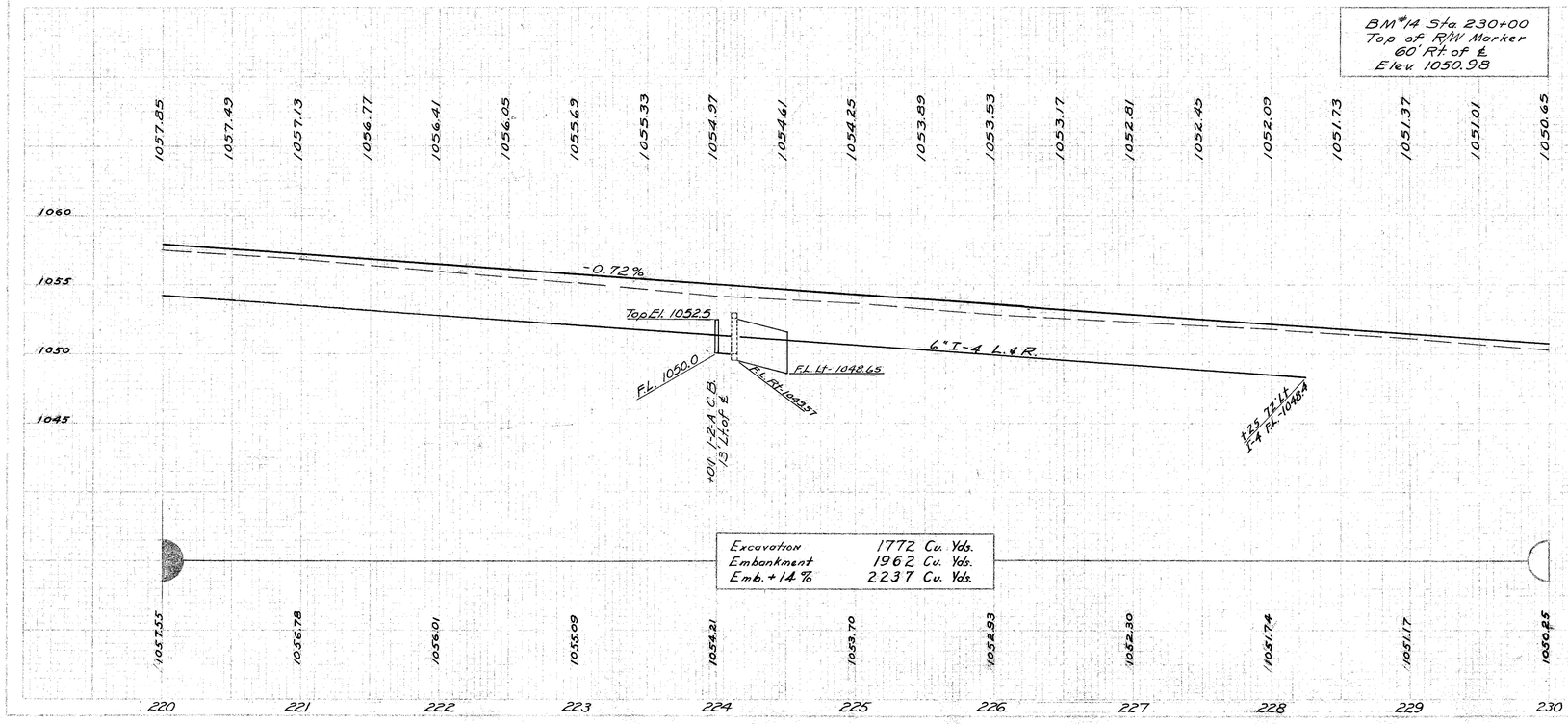
Ref. No.	Station	Side	Special Monument Removed & Reset
			Each
1-M	228+52	Lt.	1
Totals			1

REMOVAL OF TREES

Station	Side	Size & Kind	No.
221+82	25' Lt.	42" Dead Tree	1
225+96	30' Lt.	36" Oak	1
Totals			2

STRUCTURES-20' SPAN & UNDER

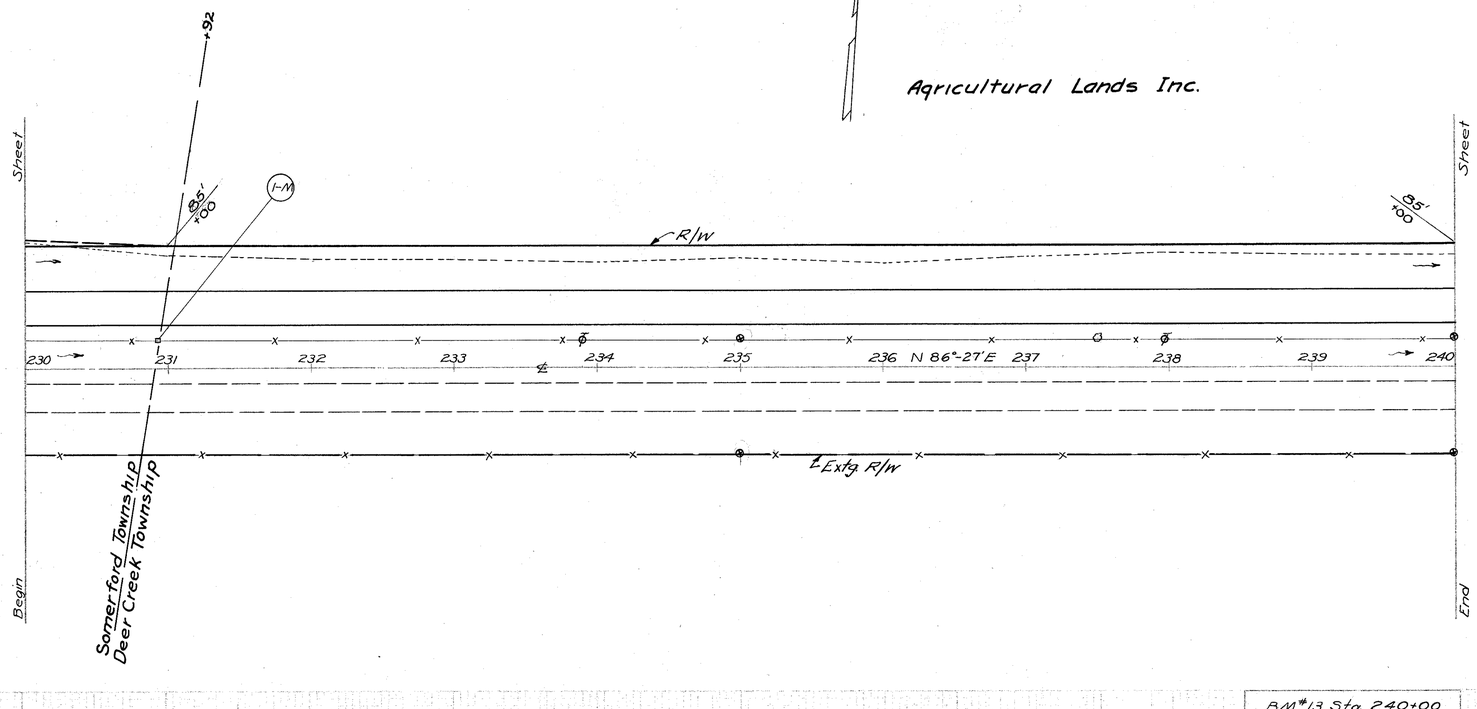
Station	Structure No.	Present Type	Present Size	Present Length	Present Disposition	Proposed Type	Proposed Size	Proposed Length	Detail Sheet
224+15	MA-40-42	S.T.	5×3	52'-2½"	Extend	S.T.	5'x3'	84'-4½"	162'-163



STA. 220+00 TO STA. 230+00

				TYPE FUNDS	39
					179
		OHD	F-24(3) F-190(5)	POST WAR	

MAD-40-(0.00-6.84)

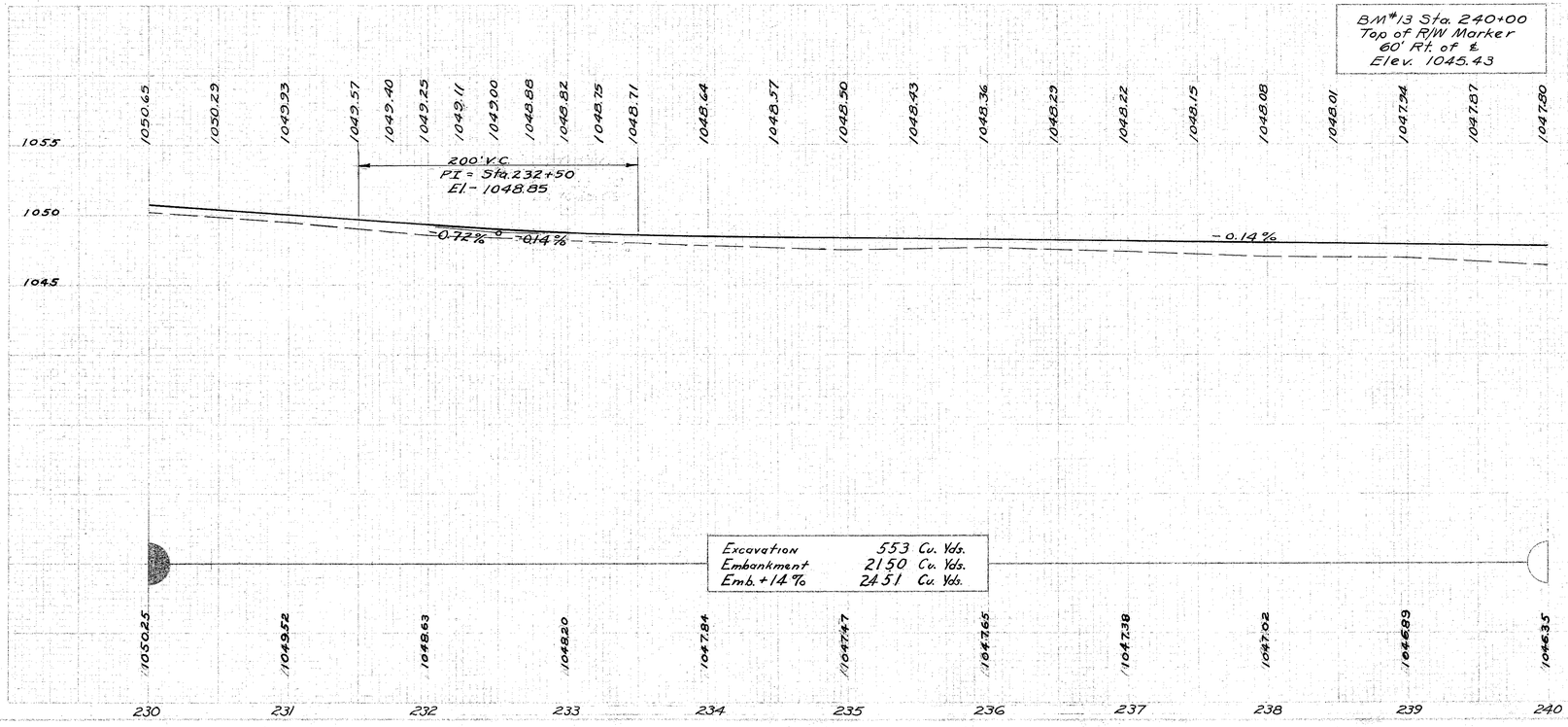


MISCELLANEOUS

Ref. No.	Station	Side	Special Monument Removed & Reset		
			Each		
1-M	230+92	Lt.	1		
Totals			1		

REMOVAL OF TREES & STUMPS

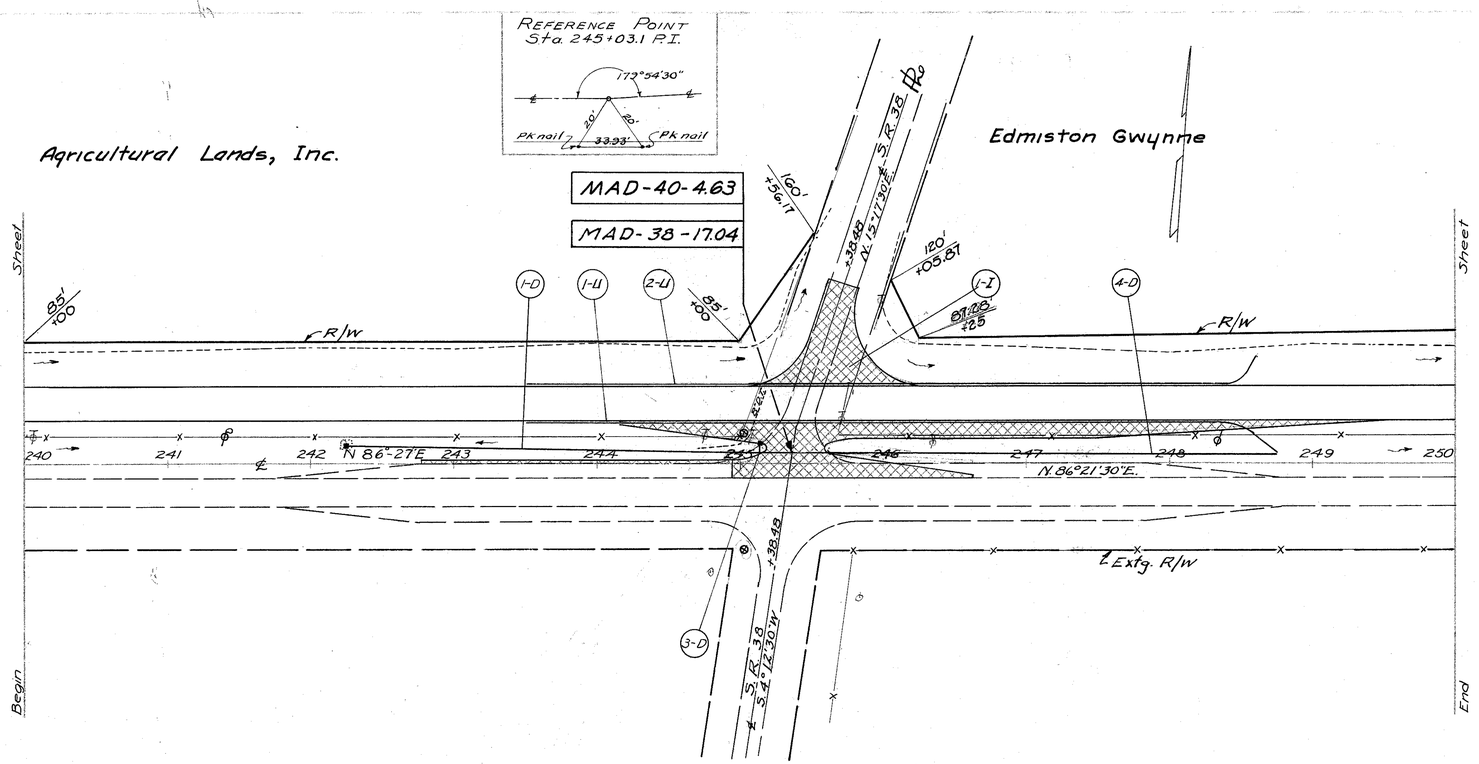
Station	Side	Size & Kind	No.
237+50	21' Lt.	30" Stump	1
		Totals	1



STA. 230+00 TO STA. 240+00

TYPE FUNDS 40
F-24(3) F-190(5) POST WAR 179

MAD.- 40-(0.00-6.84)



INTERSECTIONS

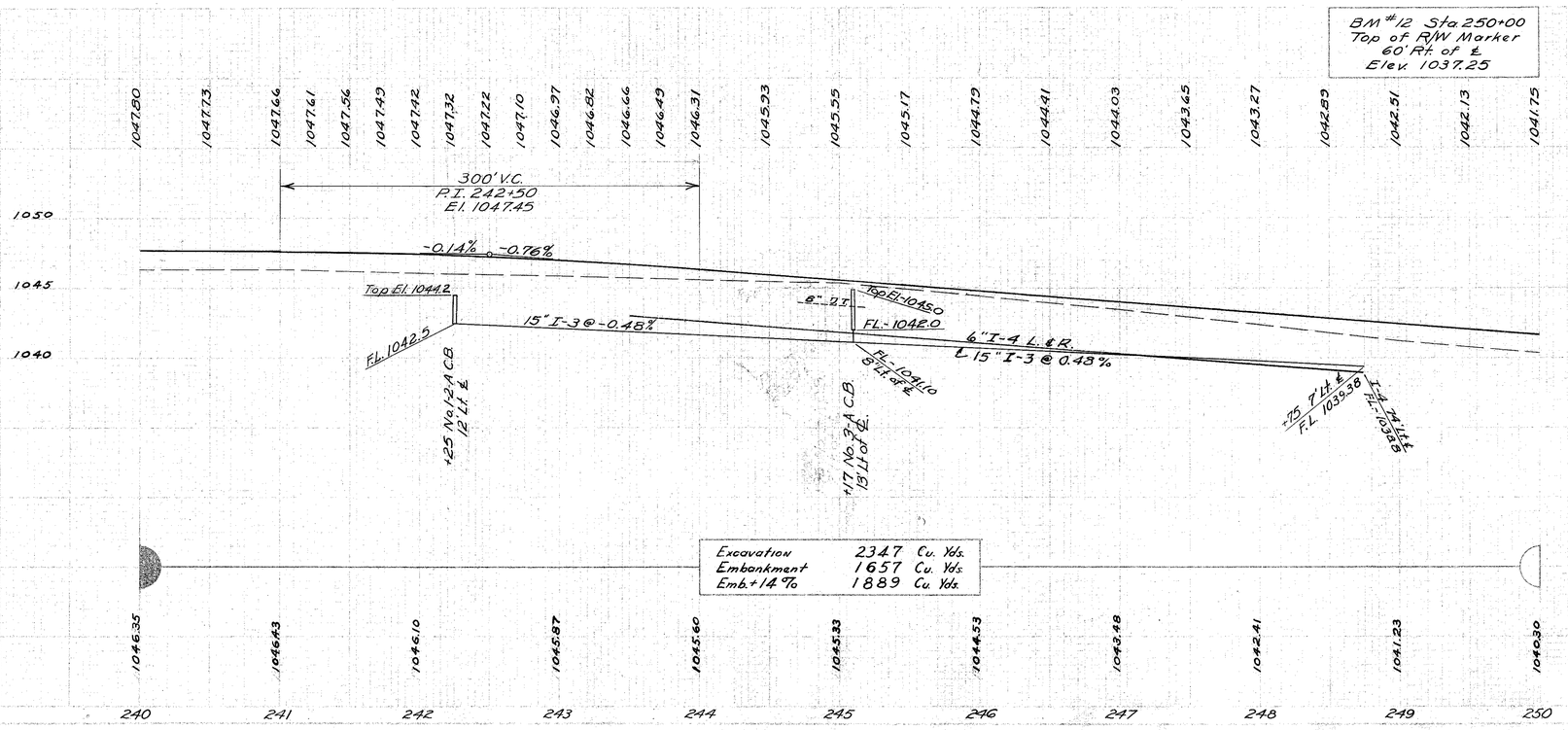
Ref. No	Station	Side	Δ	W	L	Radius L	Radius R				For Detail See Sheet
1-I	245+38.48	L & R									146

DRAINAGE

Ref. No	Station From	Station To	Side	I-3 Pipe 15" Lin.Ft.	I-3 Pipe Outlets 15" Lin.Ft.	I-2 Under Pav't 15" Lin.Ft.	I-8 Catch Basins 1-2-A Each	I-8 Catch Basins 3-A Each	E-12 Rem'd & Disposed 8" D.T. Lin.Ft.	I-5 Pipe Specials 15"x12" T Each	L-10 Sodding Sq.Yds
1-D	242+25	245+17	Lt.	290			1				5
3-D	245+17		13 Lt.	4				1		1	
4-D	245+17	248+75	Lt.	285	12	60			75		
		Totals		579	12	60	1	1	75	1	5

UNDERDRAINS

Ref No	Station From	Station To	Side	I-4 Pipe 6" Lin.Ft.	I-4 Pipe Outlets 8" Lin.Ft.		Remarks
1-U	243+50	248+75	Rt.	518	16		Outlet to Rt. ditch
2-U	243+50	248+62	Lt.	506	16		Outlet to Lt. ditch
	Totals			1024	32		

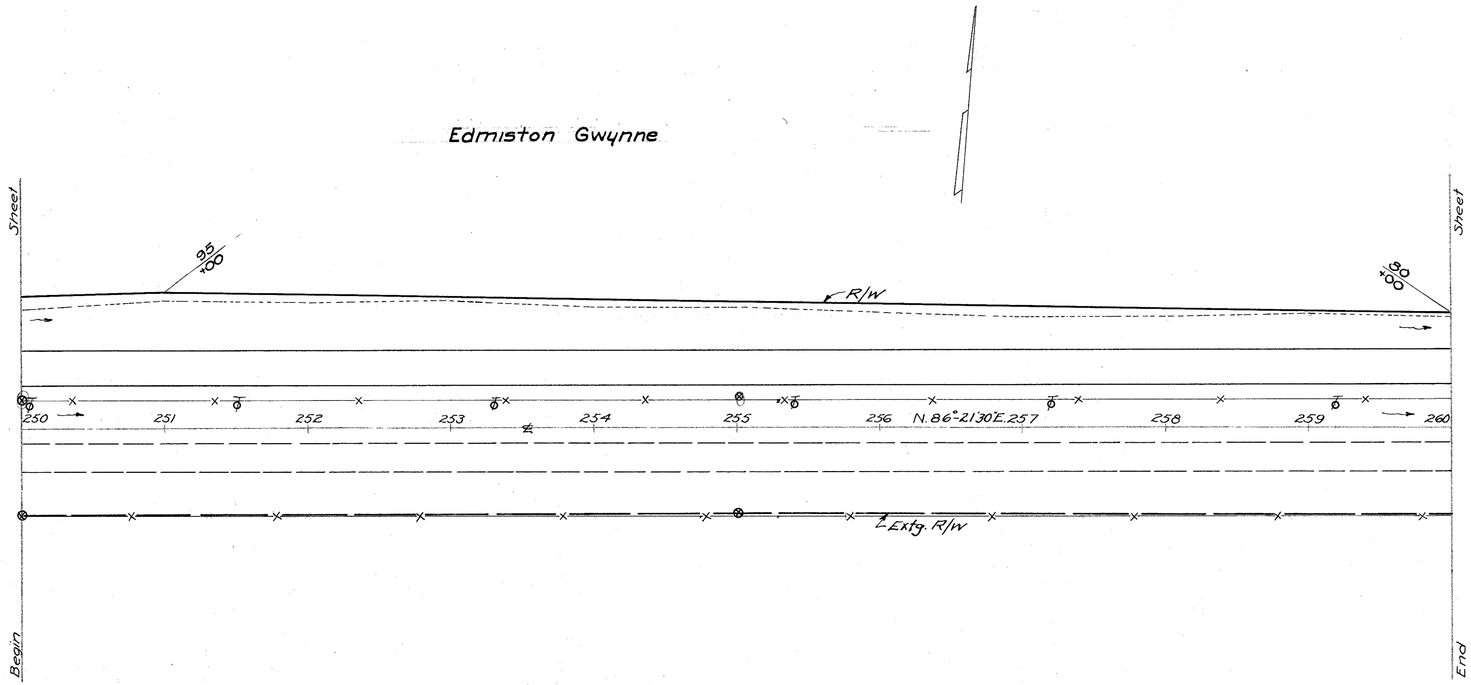


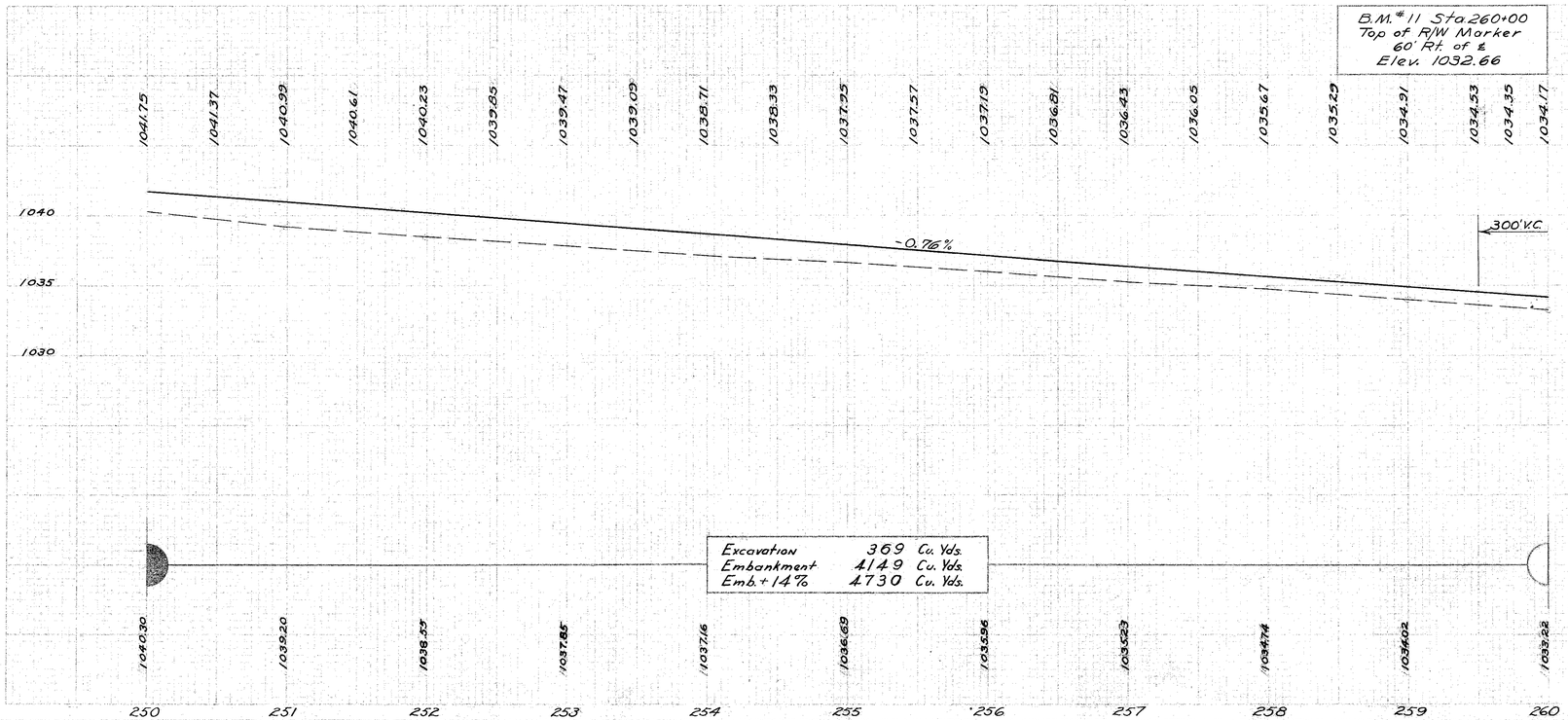
Excavation	2347	Cu. Yds.
Embankment	1657	Cu. Yds.
Emb. +14 %	1889	Cu. Yds.

STA. 240+00 TO STA. 250+00

	STATE	PROJECT	TYPE FUNDS	41
	MAINE	F-24(3) F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)



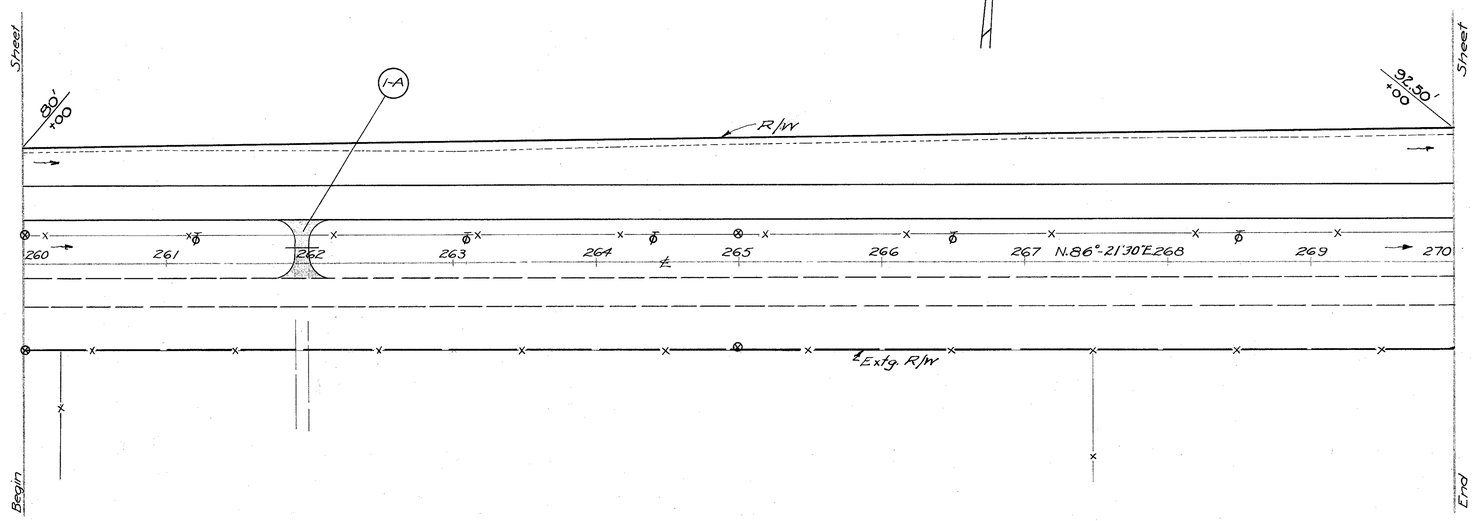


STA. 250+00 TO STA. 260+00

				TYPE FUNDS	42
2	OHIO	F-24(3) F-190(5)		POST WAR	179

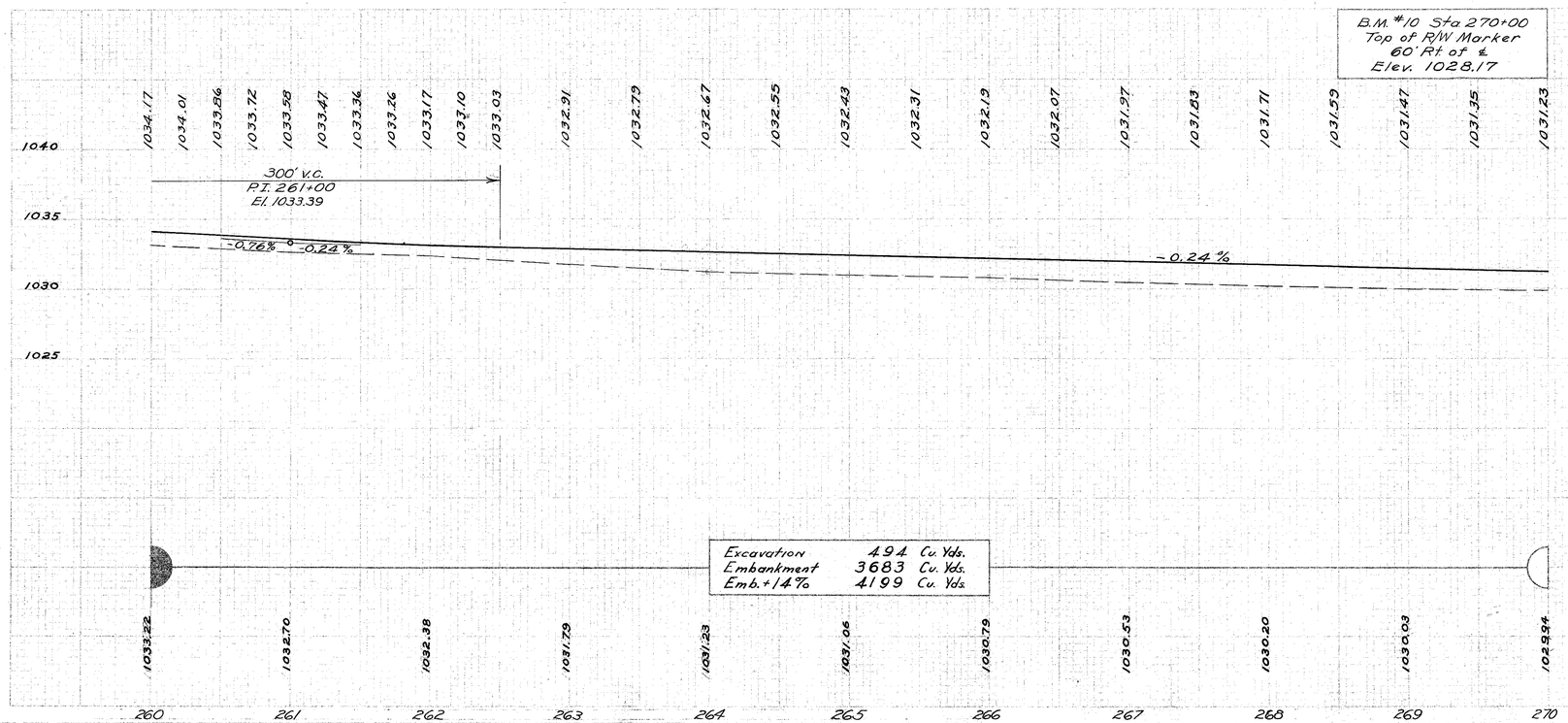
MAD-40-(0.00-6.84)

Edmiston Gwynne



APPROACHES

Ref. No.	Station	Side	Δ	W	L	Radius L	Radius R	Drives		Cross-overs I-17 6" Thick Sq. Yds.	Cross-overs I-1 15" Lin. Ft.		
1-A	261+95	Med.	90°	14'	40'	20'	20'			100.4	28		
Totals										100.4	28		



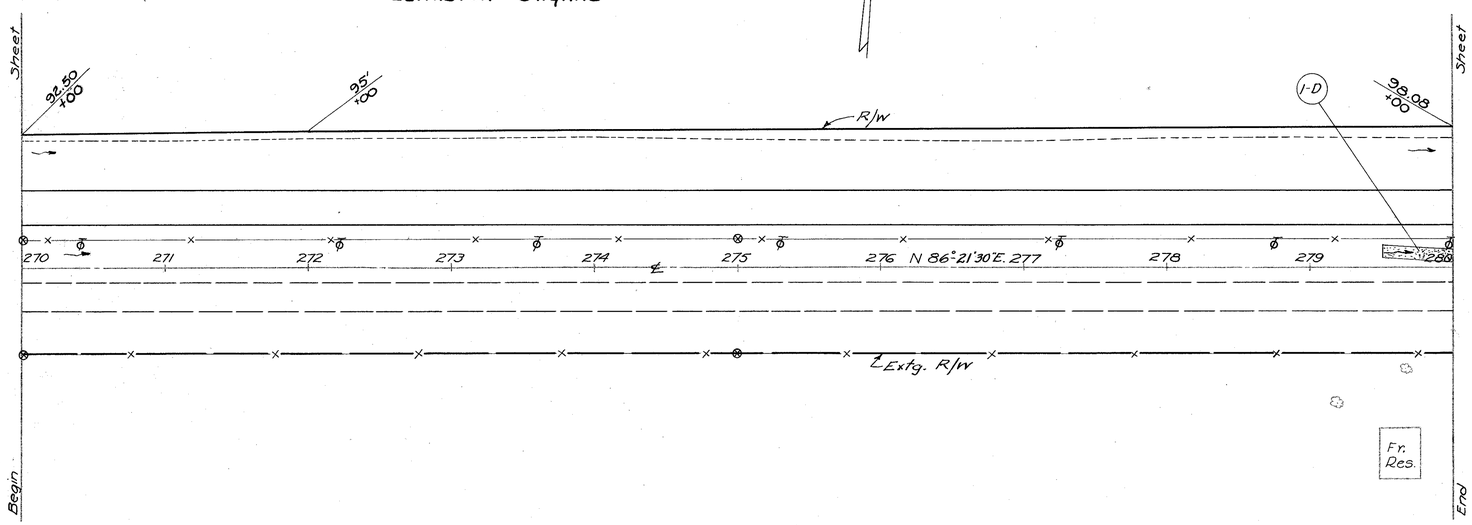
STA. 260+00 TO STA. 270+00

SHEET NO.	STATE	PROJECT	TYPE FUNDS
3	OHIO	F-24(3) F-190(6)	POST WAR

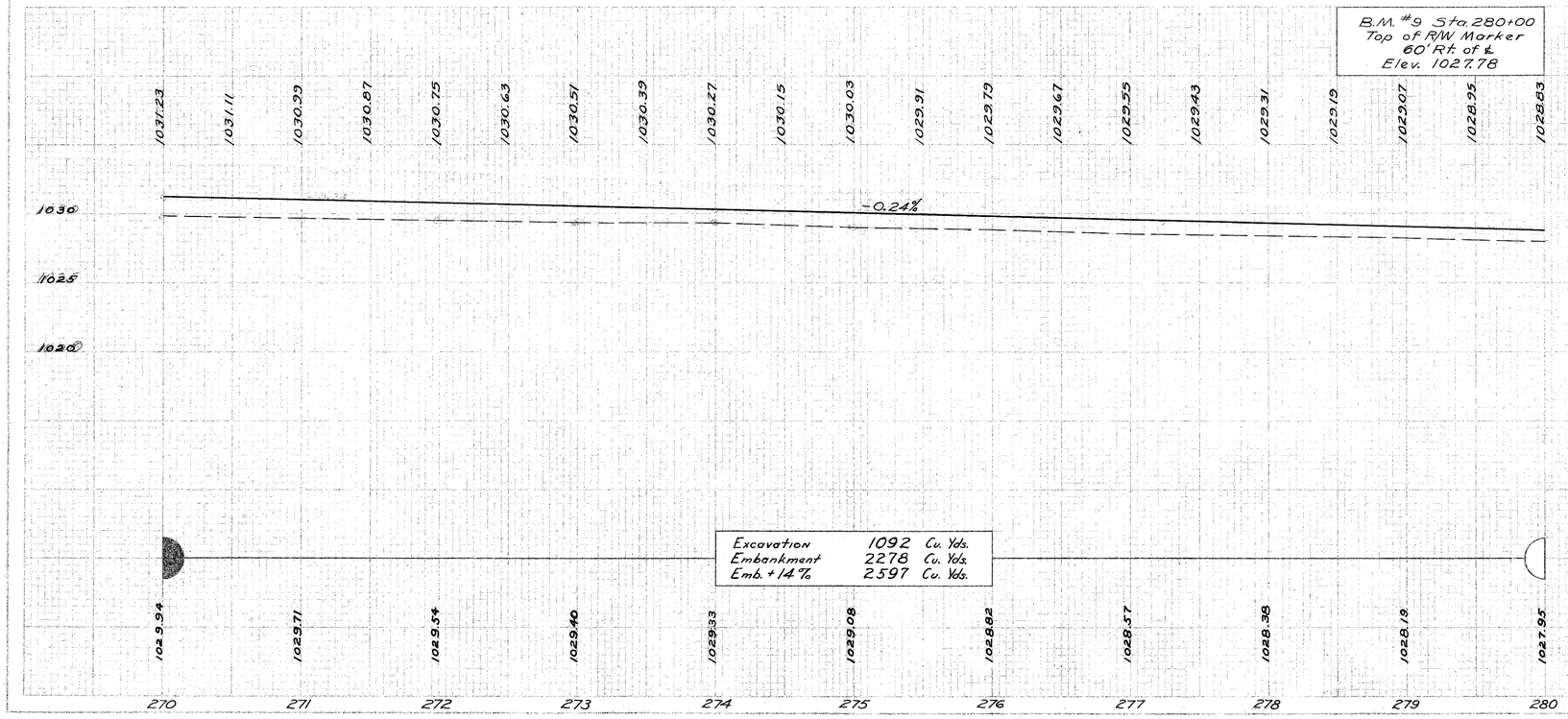
43
179

MAD-40-(0.00-6.84)

Edmiston Gwynne



DRAINAGE					
Ref No	Station From	Station To	Side	L-10 Sodding Sq. Yds.	
I-D	279+50	280+00	Med	50	
Totals				50	

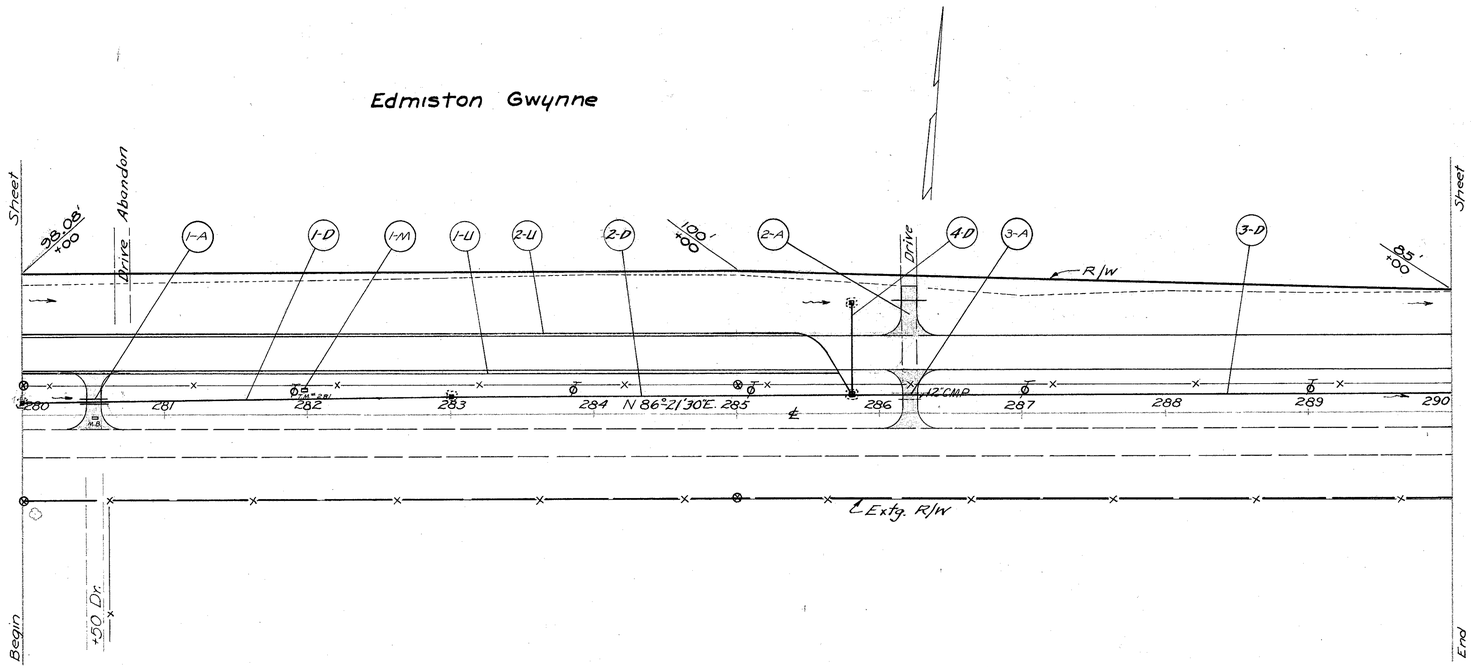


STA. 270+00 TO STA. 280+00

			TYPE FUNDS	44
		F-24(3) F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)

Edmiston Gwynne

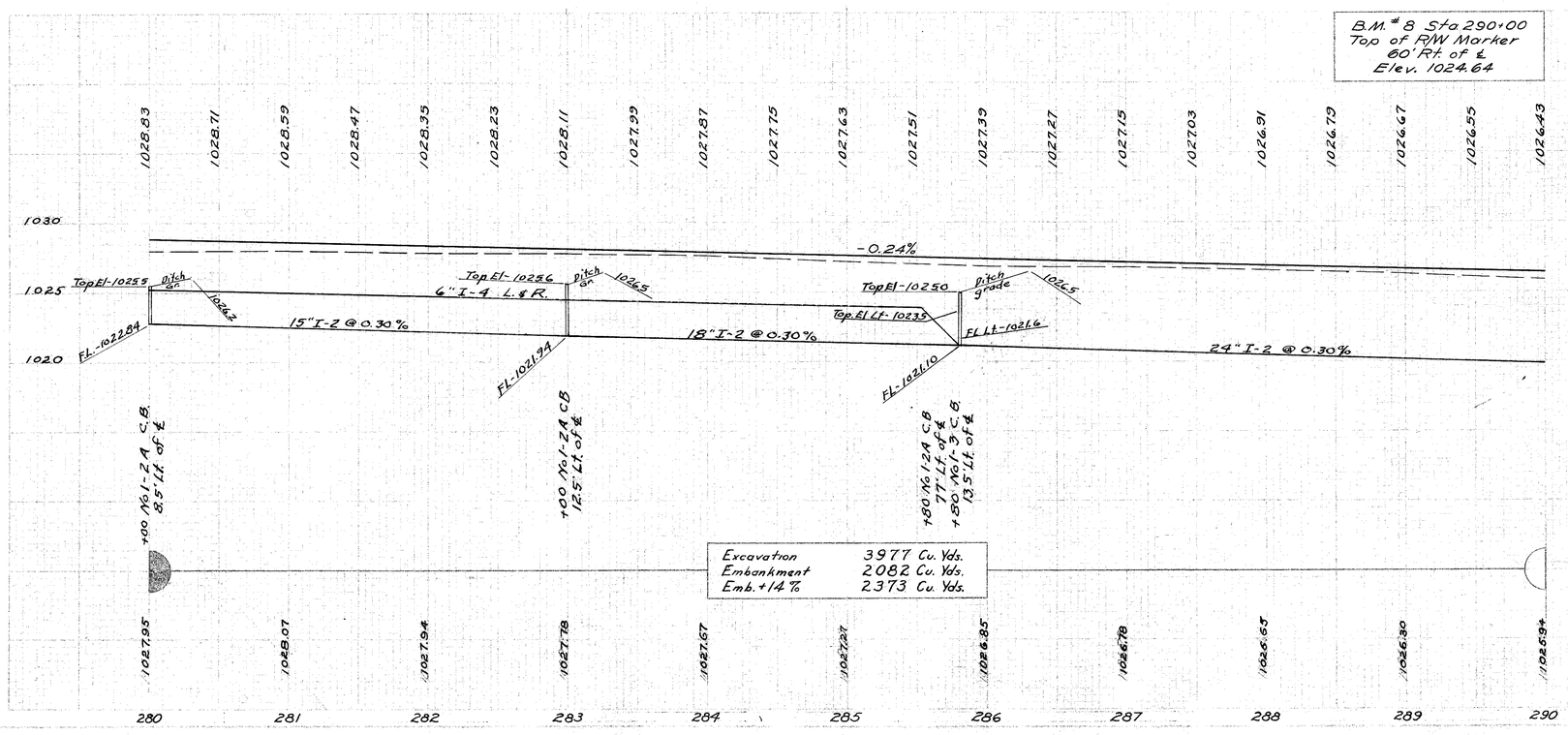


APPROACHES

Ref. No.	Station	Side	Δ	W	L	Radius L	Radius R	Drives I-17 6" Thick Sq.Yds.	Drives I-1 15" Lin.Ft.	Cross-overs I-17 6" Thick Sq.Yds.	Cross-overs I-1 15" Lin.Ft.	E-12 Remove & Dispose 12" C.M.P Lin.Ft.
1-A	280+50	Med.	90°	14'	40'	20'	20'			100.4	56	
2-A	286+22	Lt.	90°	10'	35'	20'	20'	58.0	24			
3-A	286+22	Med.	90°	14'	40'	20'	20'			100.4		16
					Totals			58.0	24	200.8	56	16

MISCELLANEOUS

Ref. No.	Station	Side	Special Monument Removed & Reset Each
1-M	281+99	Lt	1
	Totals		1



UNDERDRAINS

Ref. No.	Station From	Station To	Side	I-4 Pipe 6" Lin.Ft.	I-4 Pipe Outlets 8" Lin.Ft.	I-5 Pipe Specials 6"x6" Wye Each	Remarks
1-U	280+00	285+70	Rt.	570			Conn. to Wye
2-U	280+00	285+80	Lt.	602		1	Outlet to ℄ B.
	Totals			1172		1	

DRAINAGE

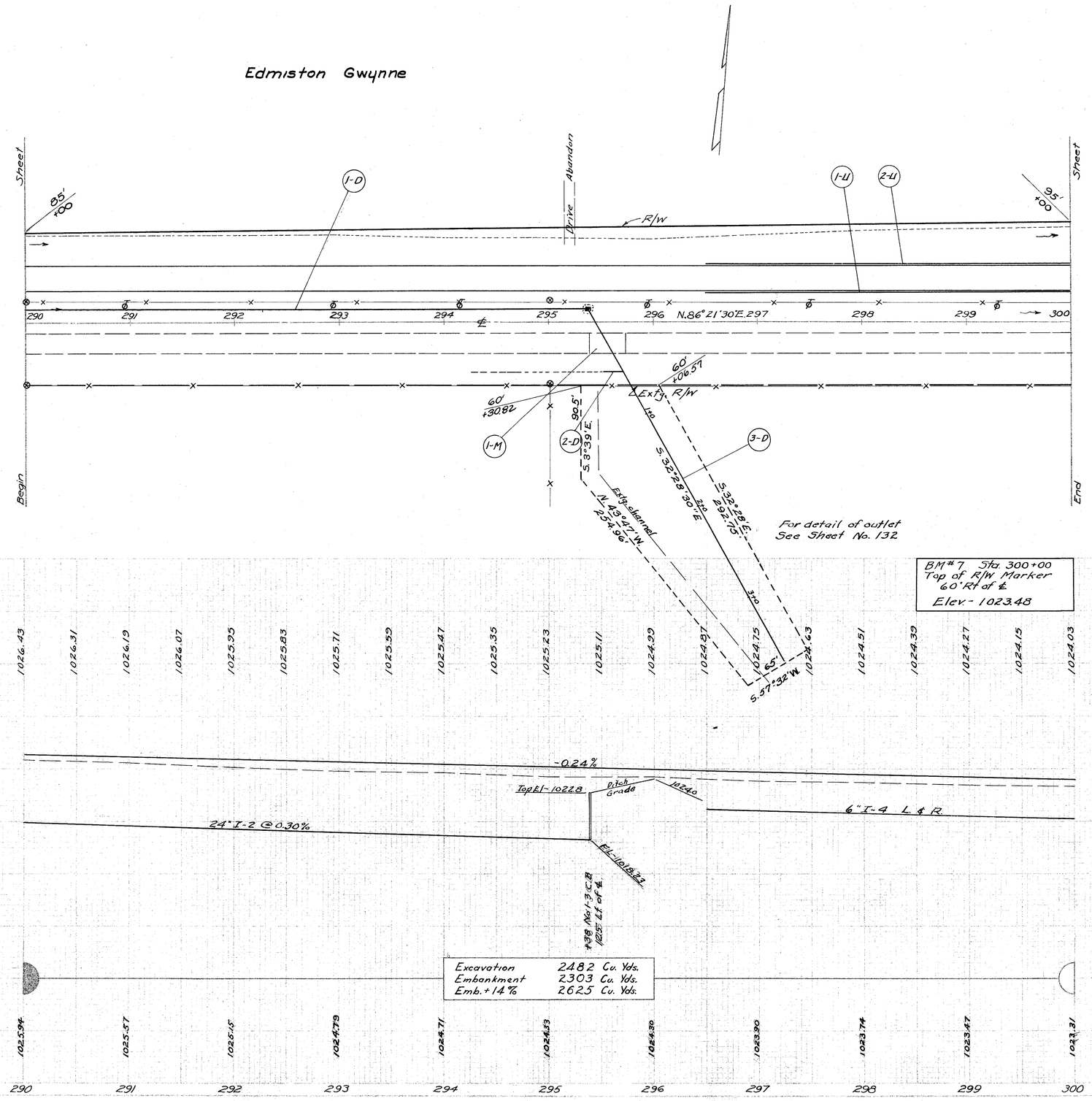
Ref No	Station From	Station To	Side	I-2 Storm Sewers 15" L.F.	18" L.F.	24" L.F.		I-2 Under pvt. 15" L.F.	24" L.F.	12" L.F.	I-3 Catch Basins Each	I-2A Each	I-10 Sodding Sq.Yds.
1-D	280+00	283+00	Med.	278				20				1	5
2-D	283+00	285+80	Med.		278							1	5
3-D	285+80	290+00	Med			399			20		1		5
4-D	285+80		Lt.							63		1	5
	Totals			278	278	399		20	20	63	1	3	20

STA. 280+00 TO STA. 290+00

	STATE	PROJECT	TYPE FUNDS	45
	OHIO	F-24(3) F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)

Edmiston Gwynne



UNDERDRAINS

Ref No	Station From	Station To	Side	I-4 Pipe 6" Lin. Ft.			
1-U	296+50	300+00	Rt.	350			
2-U	296+50	300+00	Lt	350			
Totals				700			

DRAINAGE

Ref No	Station From	Station To	Side	I-8 Catch Basins 1-3 L.F.	I-2 Storm Sewer 24" L.F.	I-2 Under Pav't. 27" L.F.	I-3 10" L.F.	I-3 27" L.F.	I-3 Pipe Outlets 30" L.F.	I-5 Pipe Specials 27x10 Wye Each	I-10 Riprap Type B Sq. Yds.	L-10 Sod-ding Sq. Yds.
1-D	290+00	295+38	Med	1	537							5
2-D	295+38	0+46 R	L&R			66	18			1		
3-D	0+46 R	3+70 R	Rt.					306	16		4	6
Totals				1	537	66	18	306	16	1	4	11

MISCELLANEOUS

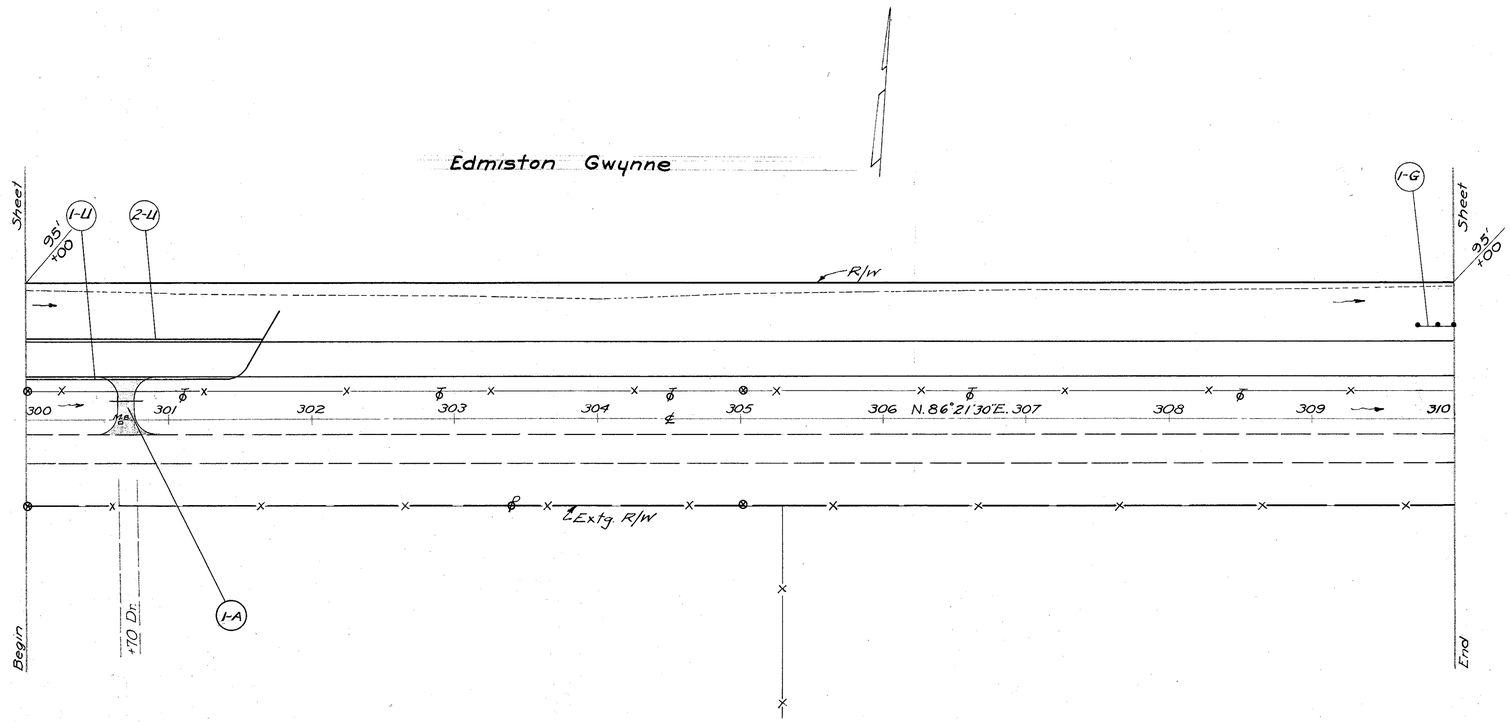
Ref No	Station From	Station To	Side	E-8 Removal of Exist. Pav't. Sq. Yds.	T-35 & B-35 1¼" thick Sq. Yds.	T-30 Tack Coat Sq. Yds.	B-71 9"thick Sq. Yds.	55-5 Class. Emb. 3" thick Cu. Yds.
1-M	295+38	295+73	Rt.	78	77.78	77.78	77.78	7.13
Totals				78	77.78	77.78	77.78	7.13

STA. 290+00 TO STA. 300+00

FED. AID PROJ.	STATE	PROJECT	TYPE FUNDS
D-	OHIO	F-24(3) F-190(5)	POST WAR

46
179

MAD- 40-(0.00-6.84)



APPROACHES

Ref. No.	Station	Side	Δ	W	L	Radius L	Radius R	Drives		Cross-overs I-17 6" Thick Sq. Yds.	Cross-overs I-1 15" Lin. Ft.		
1-A	300+70	Med.	90°	14'	40'	20'	20'			100.4	28		
Totals										100.4	28		

UNDERDRAINS

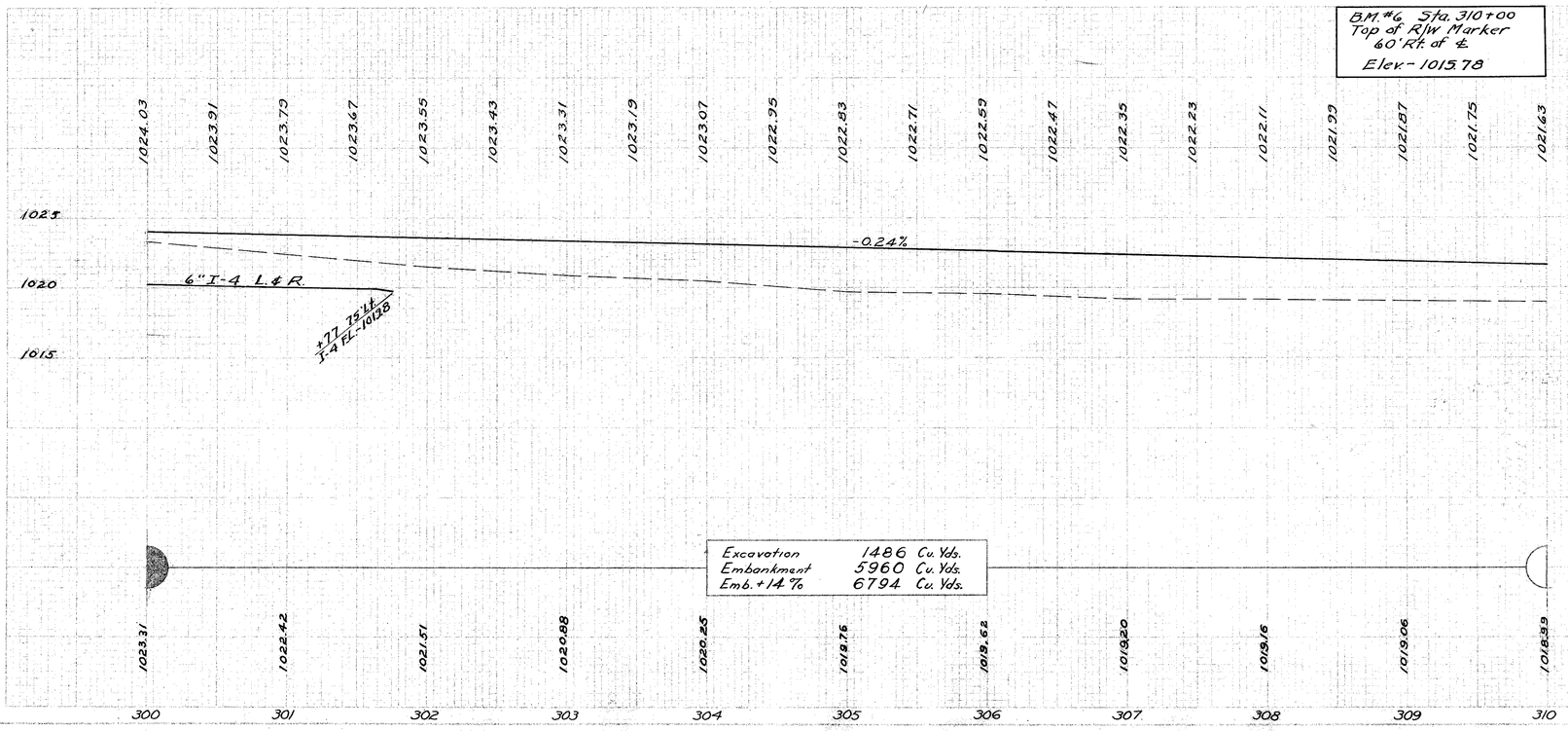
Ref No	Station From	Station To	Side	I-4 Pipe 6" Lin. Ft.	I-4 Pipe Outlets 8" Lin. Fts.	I-5 Pipe Specials 6"x6" Wye Each	Remarks
1-U	300+00	301+66	Rt.	181			Conn. to Wye
2-U	300+00	301+77	Lt.	169	16	1	Outlet to ditch
Totals				350	16	1	

GUARD RAIL

Ref No	Station From	Station To	Side	I-15 Guard Rail Lin. Ft.	
1-G	309+75	310+00	Lt	25	
Totals				25	

DRAINAGE

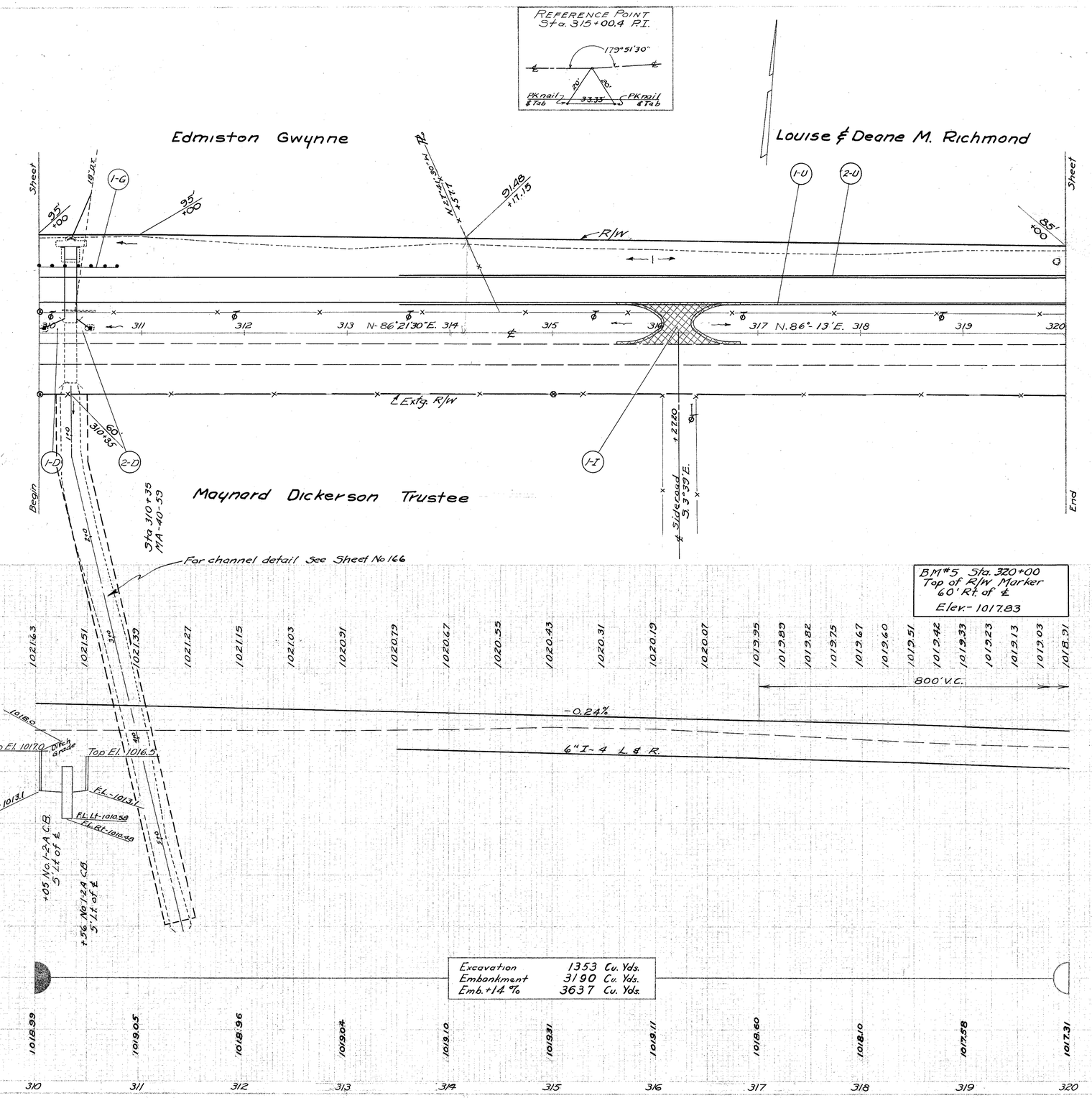
Ref No	Station From	Station To	Side			



STA. 300+00 TO STA. 310+00

			TYPE FUNDS	47
		F-24(3) F-190(5)	POST WAR	179

MAD - 40-(0.00-6.84)



Excavation	1353 Cu. Yds.
Embankment	3190 Cu. Yds.
Emb. +14 %	3637 Cu. Yds.

INTERSECTIONS

Ref. No.	Station	Side	Δ	W	L	Radius L	Radius R					For Details See Sheet
1-I	316+27.20	Med.										144
Totals												

DRAINAGE

Ref. No.	Station From	Station To	Side	I-3 12" Lin. Ft.	I-8 Catch Basins 1-2-A Each	I-10 Sodding Sq. Yds.	I-3 Pipe Outlets 12"
1-D	310+05	310+30	Lt.	16	1	5	10
2-D	310+40	310+56	Lt.	7	1	5	10
Totals				23	2	10	20

REMOVAL OF TREES & STUMPS

Station	Side	Size & kind	No.
313+92	68' Lt.	30" Oak	1
Totals			1

STRUCTURES 20' SPAN & UNDER

Station	Structure No	Present Type	Present Size	Present Length	Present Disposition	Proposed Type	Proposed Size	Proposed Length	For detail see Sheet No
310+35	MA-40-59	L.B.	10'x5'	57'-9"	Extend	L.B.	10'x5'	74'-3"	164-166

UNDERDRAINS

Ref No	Station From	Station To	Side	I-4 Pipe 6" Lin. Ft.			
1-U	313+50	320+00	Rt.	650			
2-U	313+50	320+00	Lt.	650			
Totals				1300			

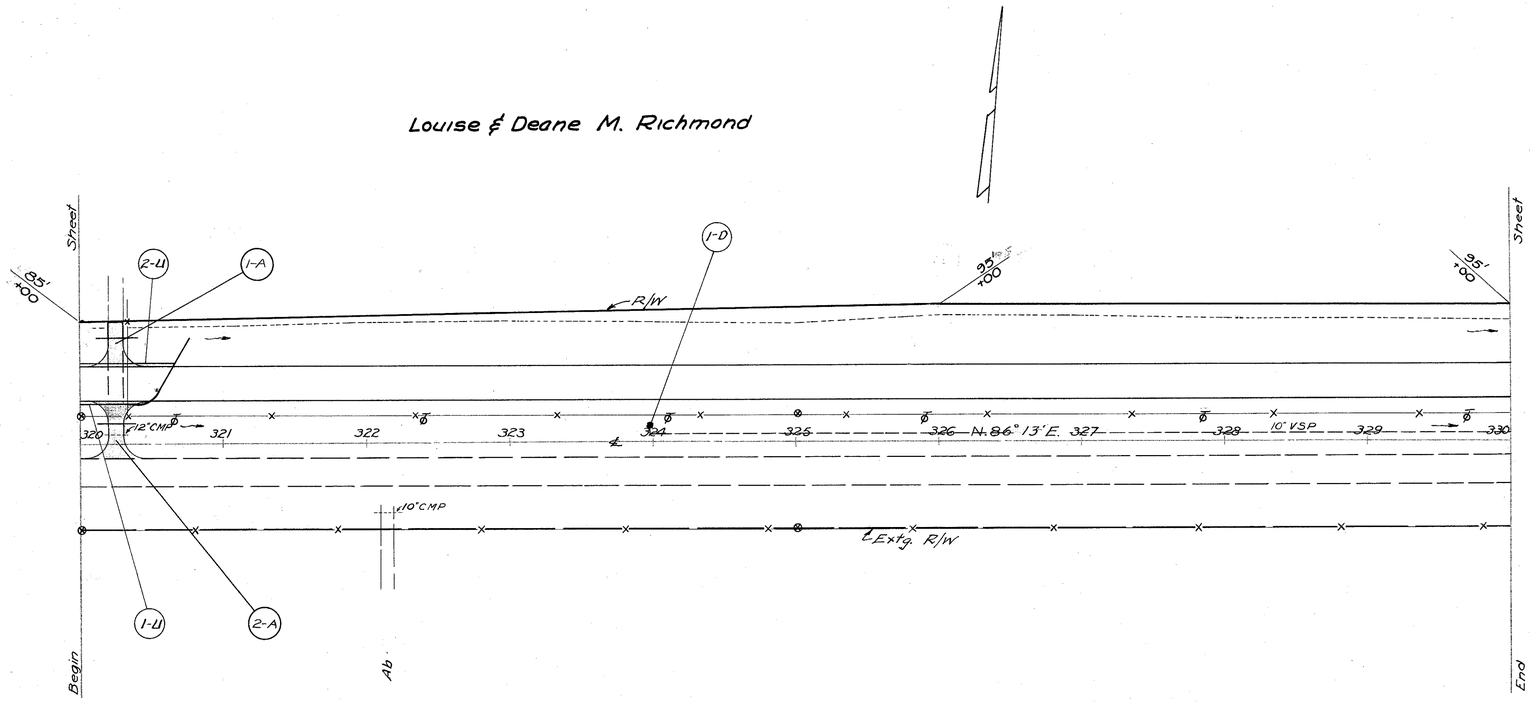
GUARD RAIL

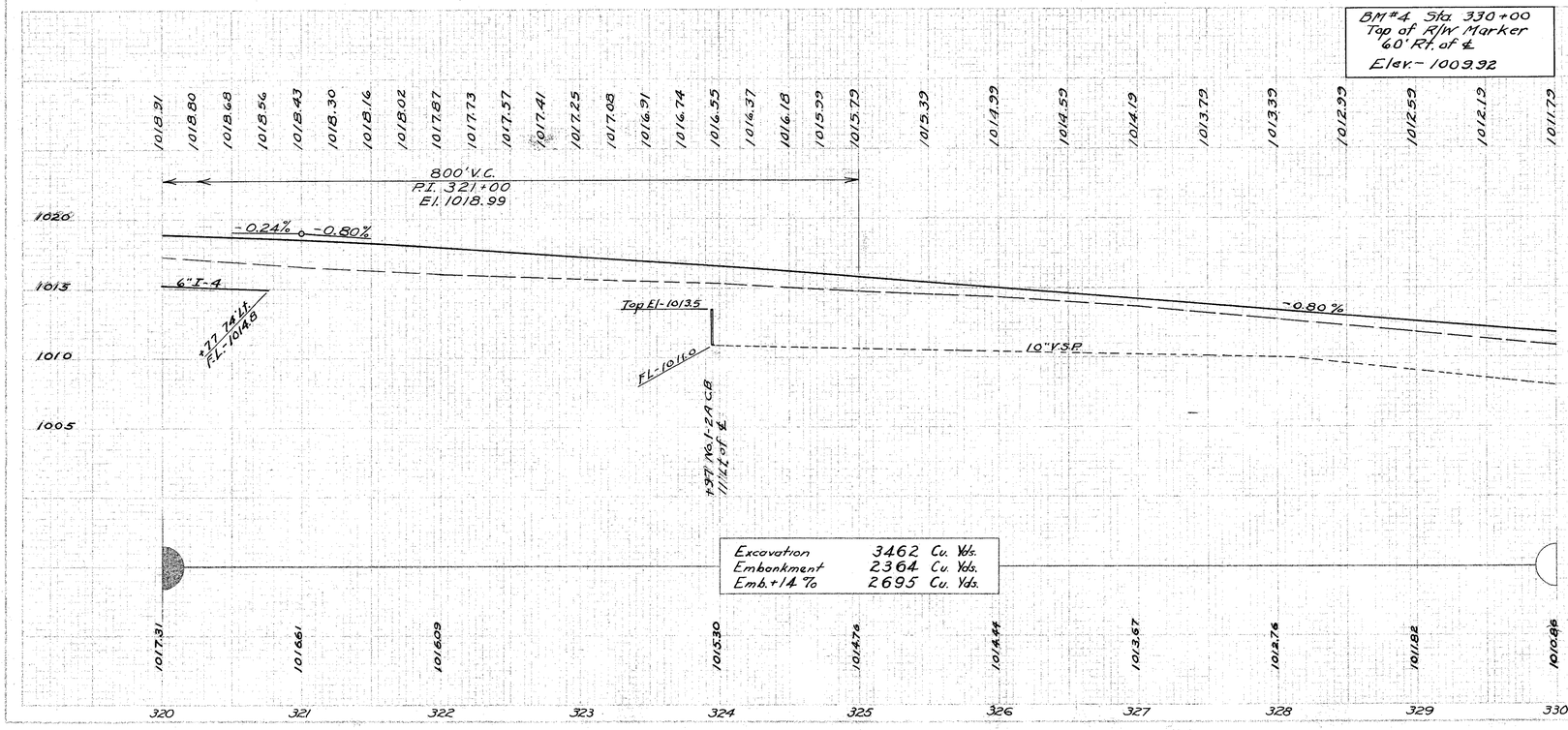
Ref No	Station From	Station To	Side	I-15 Guard Rail Lin. Ft.	
1-G	310+00	310+87	Lt.	87	
Totals				87	

STA. 310+00 TO STA. 320+00

				TYPE FUNDS	48
		F-24(3) F-190(5)		POST WAR	179

MAD-40-(0.00-6.84)





Excavation	3462 Cu. Yds.
Embankment	2364 Cu. Yds.
Emb. +14 %	2695 Cu. Yds.

APPROACHES

Ref. No.	Station	Side	Δ	W	L	Radius L	Radius R	Drives I-17 6" Thick Sq. Yds.	Drives I-1 Pipe 12" Lin. Ft.	Cross-overs I-17 6" Thick Sq. Yds.	Cross-overs I-1 12" Lin. Ft.	E-12 Rem'd & Disposed 12" CMP Lin. Ft.
1-A	320+25	Lt.	90°	10'	30'	20'	20'	52.4	24			
2-A	320+25	Med.	90°	14'	40'	20'	20'			100.4	28	16
							Totals	52.4	24	100.4	28	16

DRAINAGE

Ref. No.	Station From	Station To	Side	I-8 Catch Basins 1-2A Each	I-3 Pipe 10" Lin. Ft.	I-5 Pipe Specials 10"x10" T Each	L-10 Sodding Sq. Yds.
1-D	323+97		Lt.	1	4	1	5
		Totals		1	4	1	5

UNDERDRAINS

Ref No	Station From	Station To	Side	I-4 Pipe 6" Lin. Ft.	I-4 Pipe Outlets 8" Lin. Ft.	I-5 Pipe Specials 6"x6" Wye Each	Remarks
1-U	320+00	320+66	Rt.	81			Conn. to Wye
2-U	320+00	320+77	Lt.	69	16	1	Outlet to ditch
		Totals		150	16	1	

STA. 320+00 TO STA. 330+00

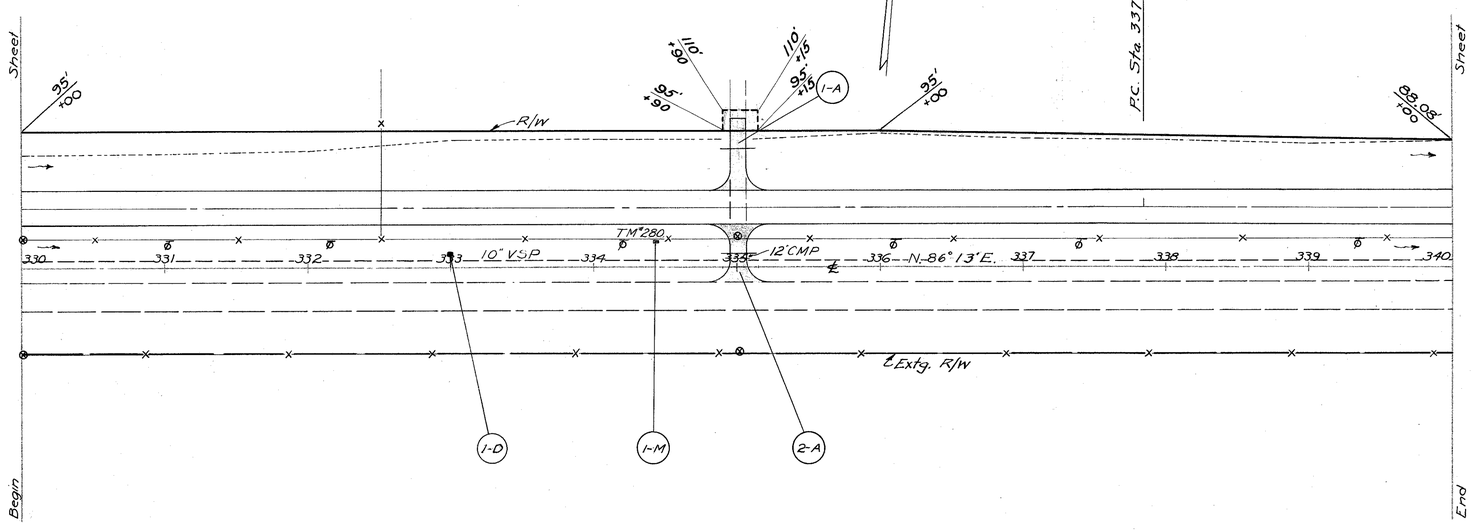
				TYPE FUNDS	49
2	OHD	F-24(3) F-190(5)		POST WAR	179

MAD-40-(0.00-6.84)

Louise & Deane M. Richmond

CURVE DATA WESTBOUND LANES
P.I. = Sta. 342+12.79
Δ = 1°25'43"
D = 0°10'
R = 34377.48'
T = 428.49'
L = 857.17'
E = 2.69'

P.C. Sta. 337+84.19



APPROACHES

Ref. No.	Station	Side	Δ	W	L	Radius L	Radius R	Drives I-17 6" Thick Sq. Yds.	Drives I-1 12" Lin. Ft.	Cross-overs I-17 6" Thick Sq. Yds.	Cross-overs I-1 12" Lin. Ft.	E-12 Rem'd. & Disposed 12" CMP Lin. Ft.
1-A	335+02	Lt.	90°	10'	50'	20'	20'	74.6	24			
2-A	335+02	Med.	90°	14'	40'	20'	20'			100.4	28	16
					Totals			74.6	24	100.4	28	16

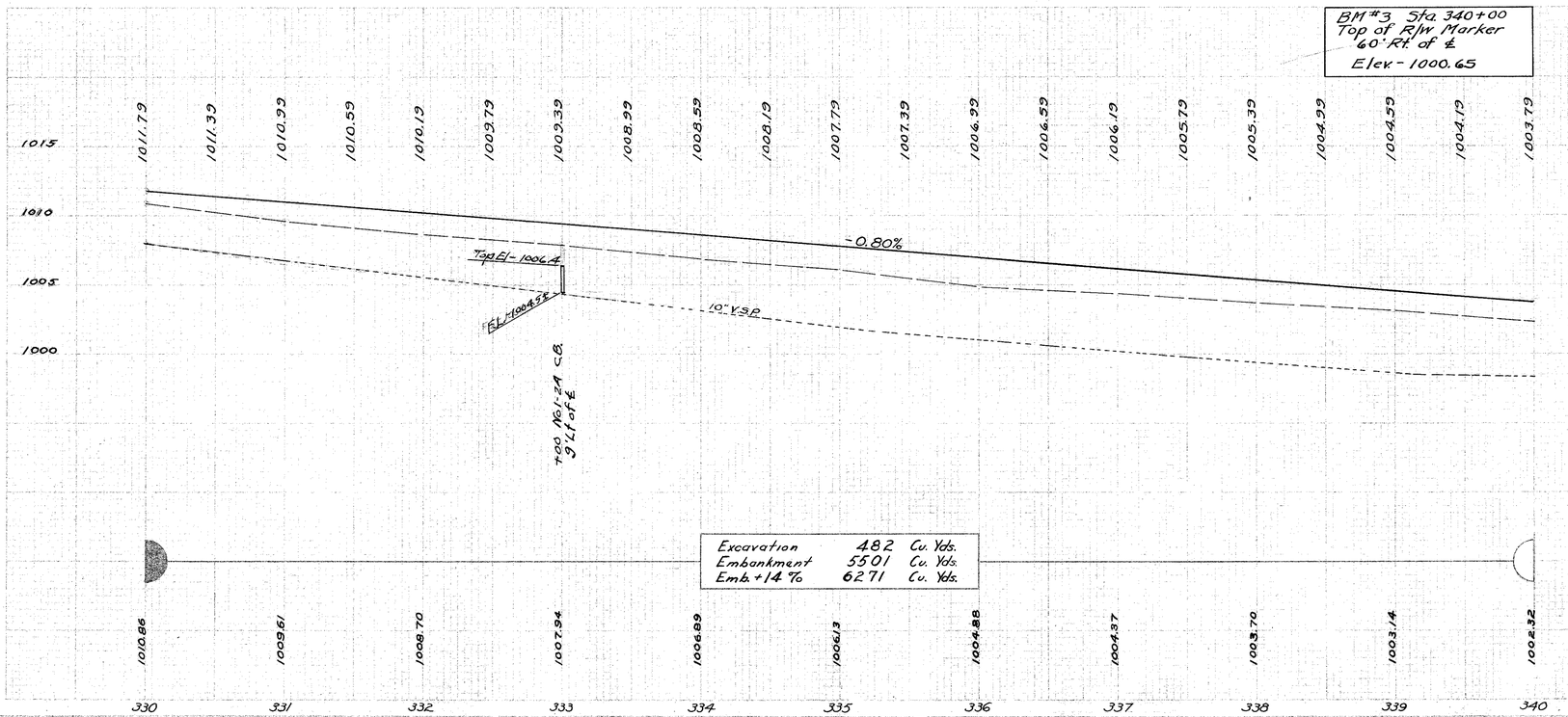
DRAINAGE

Ref. No.	Station From	Station To	Side	I-8 Catch Basins 1-2A Each	I-3 Pipe 10" Lin. Ft.	I-5 Pipe Specials 10"x10" T Each	L-10 Sodding Sq. Yds.
1-D	333+00		Lt.	1	3	1	5
		Totals		1	3	1	5

MISCELLANEOUS

Ref. No.	Station	Side	Special Monument Removed & Reset Each
1-M	334+43	Lt.	1
	Totals		1

BM #3 Sta. 340+00
Top of R/w Marker
60' Rt. of ℄
Elev - 1000.65



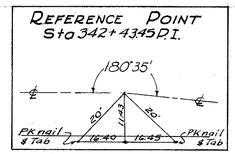
Excavation	482	Cu. Yds.
Embankment	5501	Cu. Yds.
Emb. +14 %	6271	Cu. Yds.

STA. 330+00 TO STA. 340+00

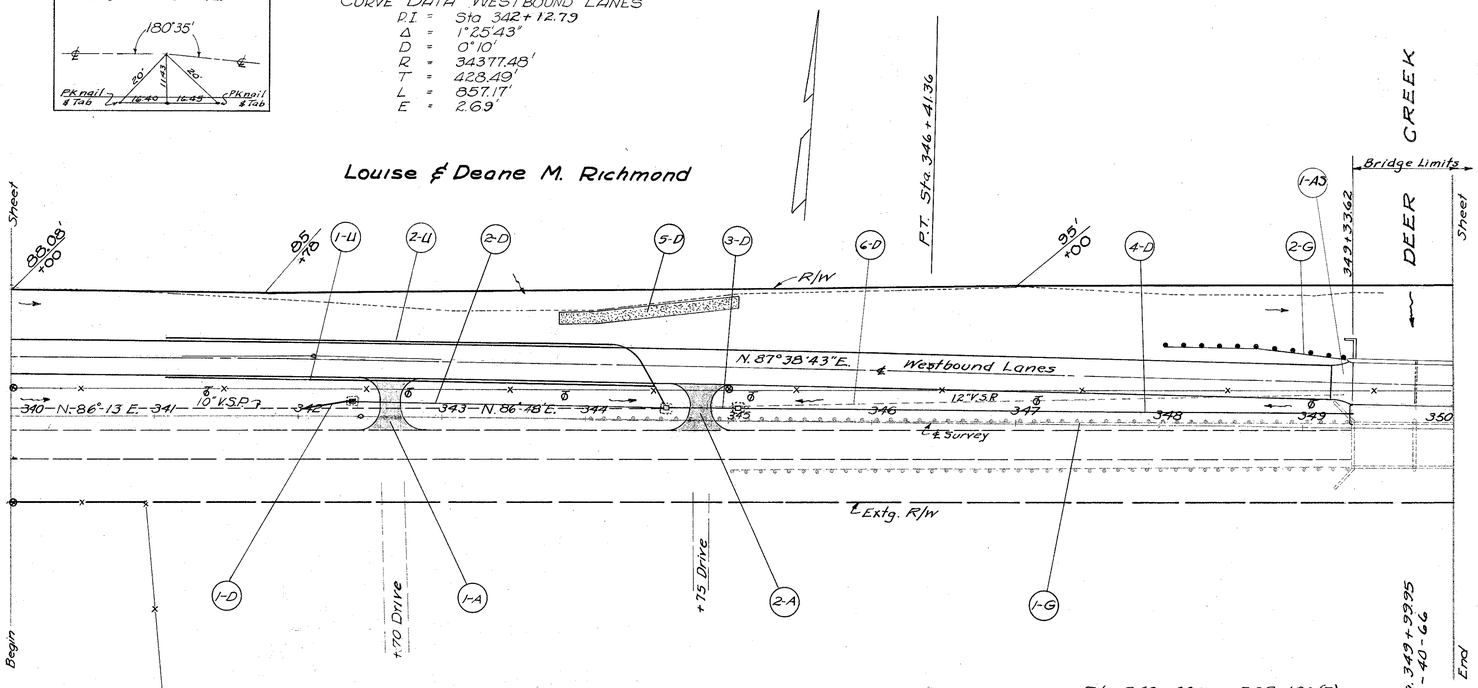
				TYPE FUND	50
			F-24(3) F-190(5)	POST WAR	179

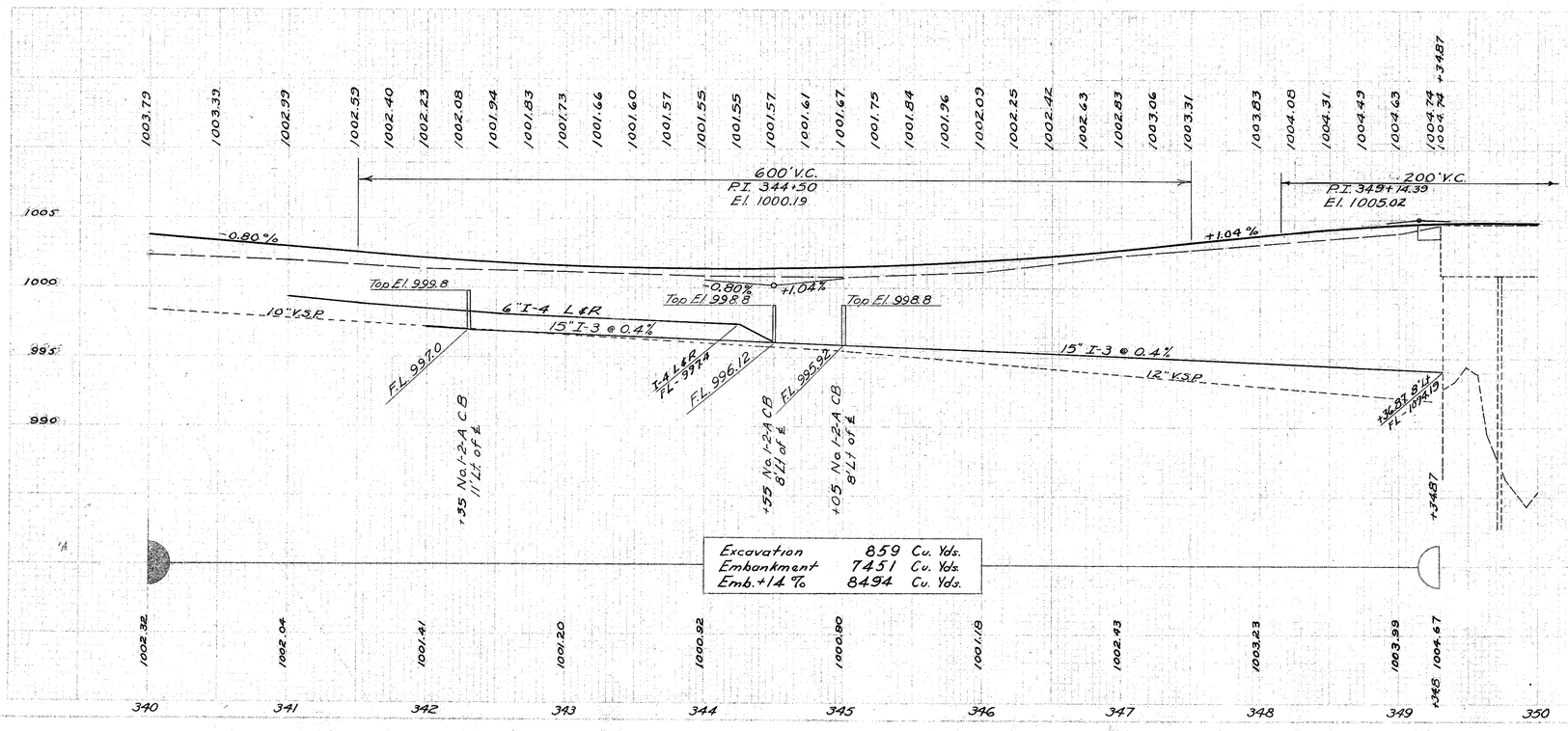
MAD-40-(0.00-6.84)

REFERENCE POINT
Sta 342+43 45 P.I.



CURVE DATA WESTBOUND LANES
P.I. = Sta 342+12.79
Δ = 1°25'43"
D = 0°10'
R = 34377.48'
T = 428.49'
L = 857.17'
E = 2.69'





Excavation	859	Cu. Yds.
Embankment	7451	Cu. Yds.
Emb. +14 %	8494	Cu. Yds.

APPROACHES

Ref. No.	Station	Side	Δ	W	L	Radius L	Radius R	Drives		Cross-overs I-17 6" Thick Sq. Yds.			
1-A	342+70	Med.	90°	18'	36.3	18'±	17½'±			101.1			
2-A	344+75	Med.	90°	18'	32.3	16'±	15½'±			86.7			
Totals										187.8			

DRAINAGE

Ref. No.	Station From	Station To	Side	I-3 Pipe 15" Lin. Ft.	I-3 Under Drives 15" Lin. Ft.	I-3 Pipe Outlets 15" Lin. Ft.	I-8 Catch Basins 1-2-A Each	E-12 Rem'd & Disposed 10" V.S.P. Lin. Ft.	I-10 Sodding Sq. Yds.	E-12 Rem'd & Disposed 12" V.S.P. Lin. Ft.	I-3 Pipe 10" Lin. Ft.
1-D	342+00	342+35	Lt.								34
2-D	342+35	344+55	Lt.	194	24		1		5		
3-D	344+55	345+05	Lt.	24	24		1		5		
4-D	345+05	343+37	Lt.	415		16	1		5		
5-D	343+75	345+00	Lt						125		
6-D	342+00	343+23	Lt.					300		423	
Totals				633	48	16	3	300	140	423	34

GUARD RAIL

Ref. No.	Station From	Station To	Side	I-15 Guard Rail Lin. Ft.	I-15 Removed & Stored Lin. Ft.	
1-G	343+98	349+28	℄		530	
2-G	348+01	349+29	Lt.	128		
Totals				128	530	

APPROACH SLABS

Ref. No.	Station From	Station To	Side	For Detail See Sheet
1-AS	349+18.62	349+33.62	Lt.	170

UNDERDRAINS

Ref No	Station From	Station To	Side	I-4 Pipe 6" Lin. Ft.	I-5 Pipe Specials 6"x6" Wye Each		Remark
1-U	341+00	344+55	Rt.	360	1		Conn. to C.B.
2-U	341+00	341+46	Lt	360			Conn. to Wye
Totals				720	1		

STA. 340+00 TO STA. 350+00

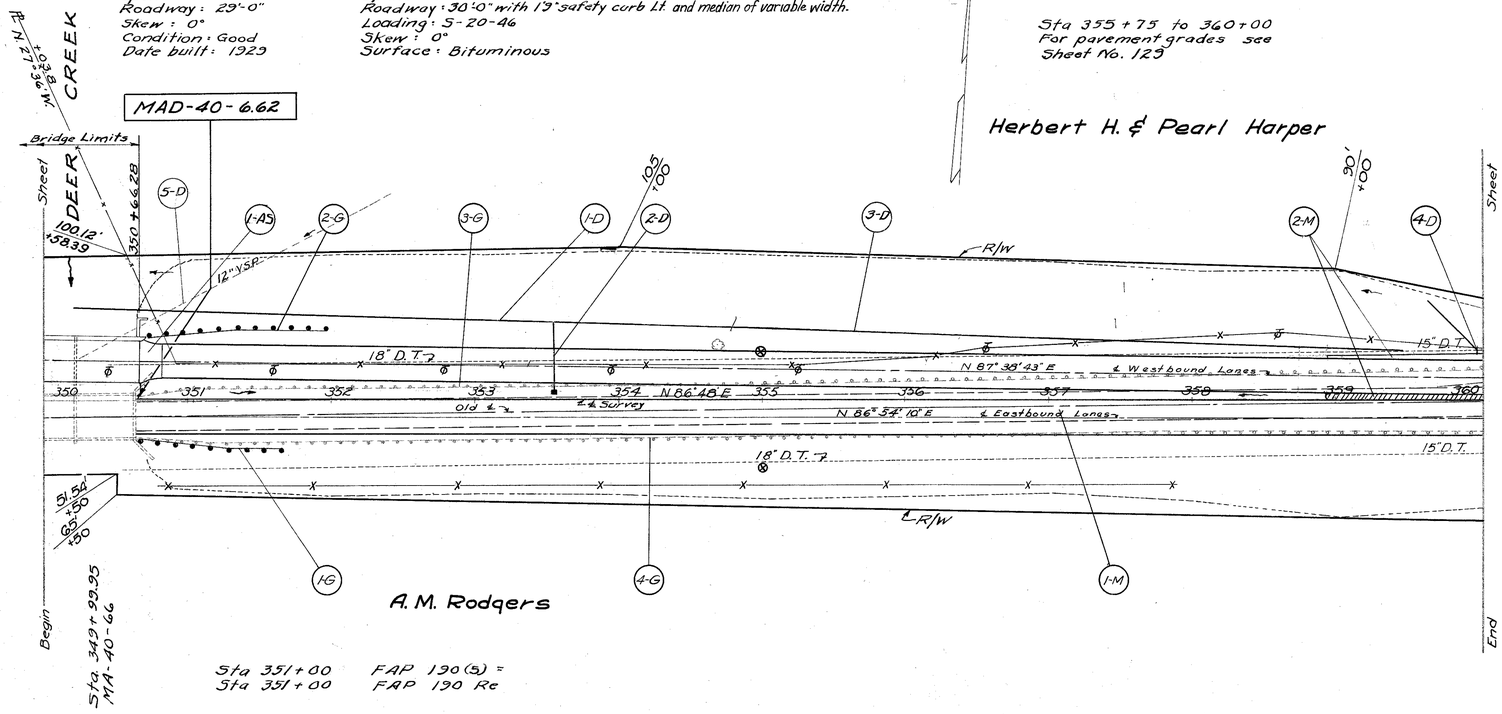
TYPE FUNDS	SHEET	TOTAL SHEETS
F-24(3) F-190(5) POST WAR	51	179

MAD-40-(0.00-6.84)

EXISTING BRIDGE DATA
Type: Concrete Beam
Spans: 3 @ 40'-0"
Roadway: 29'-0"
Skew: 0°
Condition: Good
Date built: 1923

PROPOSED BRIDGE DATA
Type: Steel Beam
Spans: 42.54'-43.08'-42.54'
Roadway: 30'-0" with 19" safety curb Lt. and median of variable width.
Loading: S-20-46
Skew: 0°
Surface: Bituminous

Sta 355+75 to 360+00
For pavement grades see Sheet No. 129



Sta 351+00 FAP 190(5) =
Sta 351+00 FAP 190 Re

GUARD RAIL

Ref. No.	Station From	Station To	Side	I-15 Guard Rail Lin. Ft.	I-15 Removed & Stored Lin. Ft.
1-G	350+67	351+63	Rt	96	
2-G	350+72	352+00	Lt	128	
3-G	350+67	360+00	Lt		933
4-G	350+67	360+00	Rt		933
		Totals		224	1866

MISCELLANEOUS

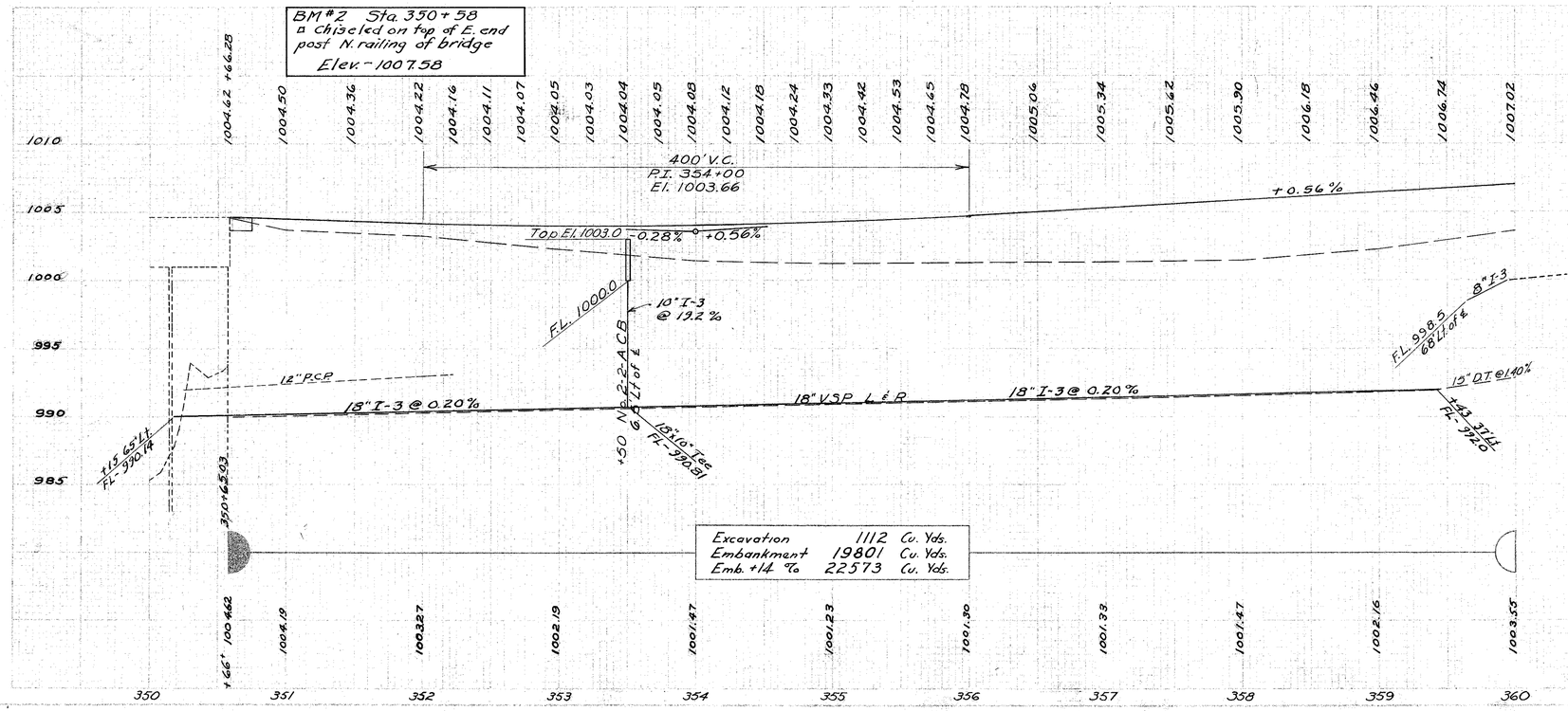
Ref. No.	Station From	Station To	Side	E-8 Removal & Disposal Ex'g Pvmt. Sq. Yds.					For Detail See Sheet No
1-M	350+64	360+00	Rt	2080					
2-M	358+95.49	360+00	L & R						131
		Totals		2080					

REMOVAL OF TREES & STUMPS

Station	Side	Size & Kind	No.
354+65	38 Lt	66" Elm	1
		Totals	1

APPROACH SLABS

Ref No	Station From	Station To	Side	For Detail See Sheet No
1-AS	350+66.28	350+81.28	Lt.	170

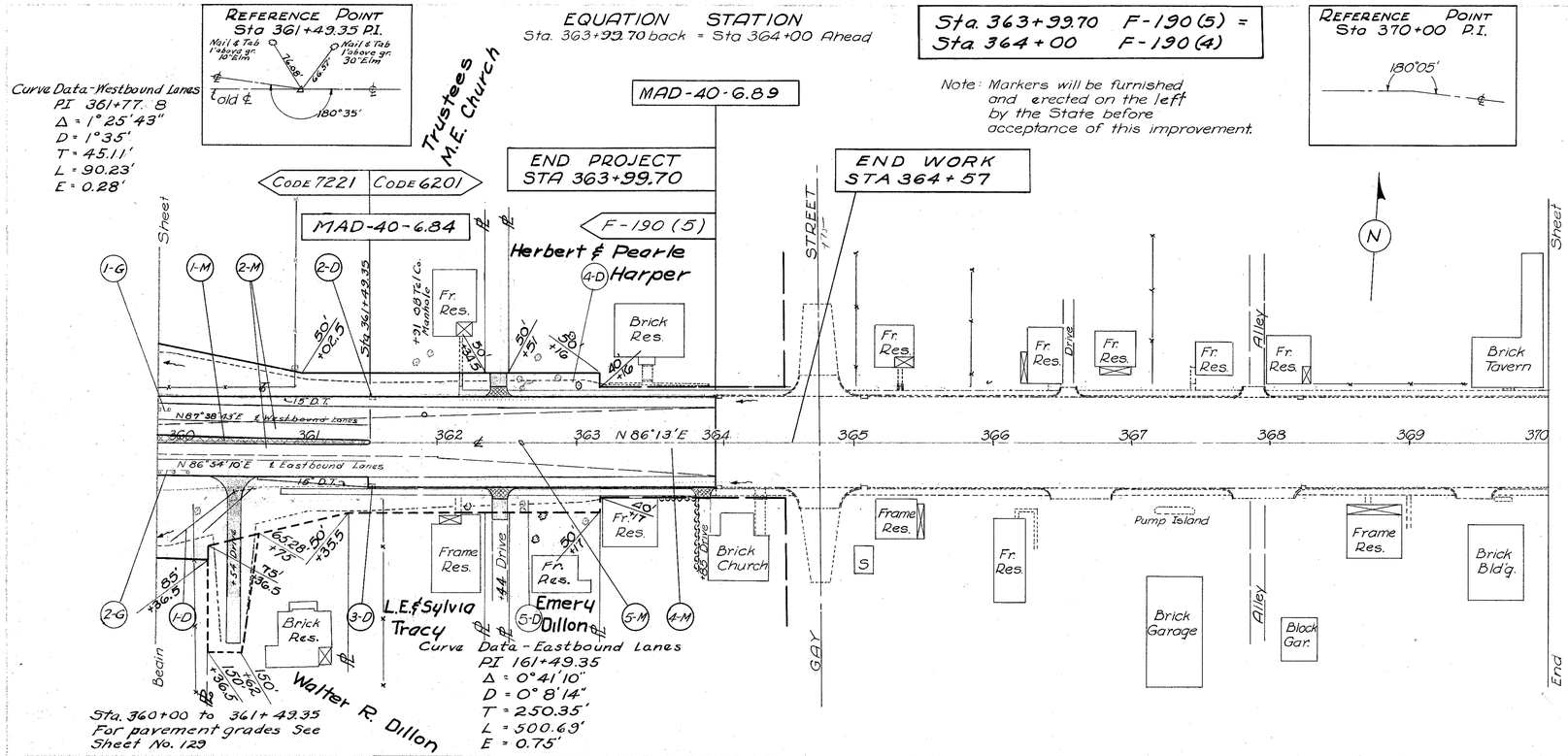


Excavation	1112	Cu. Yds.
Embankment	19801	Cu. Yds.
Emb. +14 %	22573	Cu. Yds.

DRAINAGE

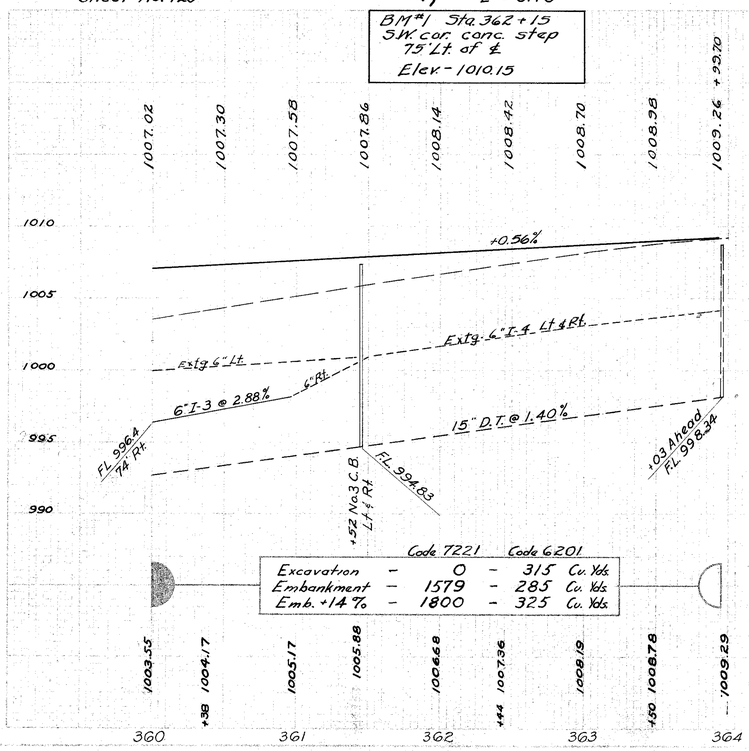
Ref No	Station From	Station To	Side	I-3 Pipe 8" L.F.	I-3 Pipe 18" L.F.	I-2 Under Pav't 10" L.F.	I-3 Pipe Outlets 8" L.F.	I-3 Pipe Outlets 18" L.F.	E-12 Pipe Remvd & disposed 12" VSP L.F.	E-12 Pipe Remvd & disposed 18" VSP L.F.	I-8 Catch Basins 2-2-A Each	S-22 Removal of portion Ex. Str. Cu. Yds.	I-5 Pipe Special 18"x10"T Each	L-10 Sodding Sq. Yds.
1-D	350+15	353+50	Lt		319			16		310			1	
2-D	353+50	353+50	Lt			47					1			5
3-D	353+50	359+43	Lt		592					593				
4-D	353+40	353+74	Lt	38			10					0.2		
5-D	360+25	361+45	Lt						136					
		Totals		38	911	47	10	16	136	903	1	0.2	1	5

STA. 350+00 TO STA. 360+00



Sta. 360+00 to 361+49.35 For pavement grades See Sheet No. 129

BM #1 Sta. 362+15 SW cor. conc. step 75' Lt. of ℄ Elev. - 1010.15



	Code 7221		Code 6201	
Excavation	-	0	-	315 Cu. Yds.
Embankment	-	1579	-	285 Cu. Yds.
Emb. +14 %	-	1800	-	325 Cu. Yds.

TYPE FUNDS POST WAR
F-24(3) F-190(5)

52
179

MAD-40-(0.00-6.84)

DRAINAGE

Ref. No.	Station From	Station To	Side	I-8 Catch Basins No. 3 Each		S-22 Removal Portion Exfg. Str. Cu. Yds.	I-3 Pipe Outlets 8" Lin. Ft.	I-3 Pipe 6" Lin. Ft.	L-10 Sodding Sq. Yds.	
CODE 7221										
1-D	360+00	360+53	Rt.			0.2	10	55		
Totals						0.2	10	55		
CODE 6201										
2-D	361+52		Lt.	1						
3-D	361+52		Rt.	1						
4-D	362+50	364+57	Lt						118	
5-D	362+50	364+00	Rt.						95	
Totals				2					213	

MISCELLANEOUS

Ref. No.	Station From	Station To	Side		E-8 Removal of Exfg Pav't. Sq. Yds.	Special Precast Conc. Dividers Each				For Detail See Sheet No.
CODE 7221										
1-M	360+00	361+49.35	Med.							131
2-M	360+00	361+49.35	L&R		332					
Totals					332					
CODE 6201										
4-M	361+49.35	363+99.70	L&R		556					
5-M	361+59	363+89	℄			20				54
Totals					556	20				

REMOVAL OF TREES & STUMPS

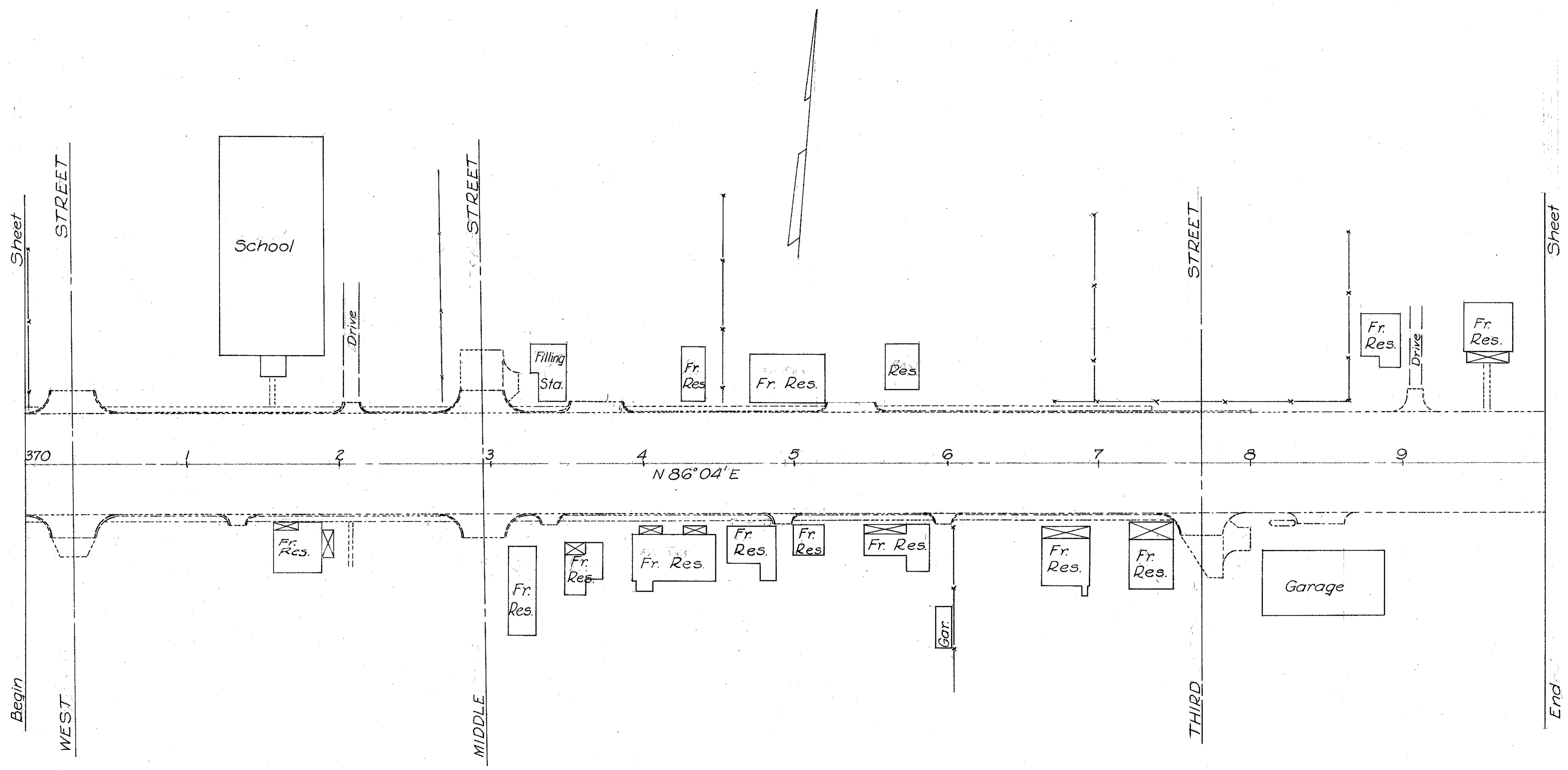
Station	Side	Size & Kind	No.
CODE 7221			
360+21	50' Rt.	12" Elm	1
Totals			1
CODE 6201			
362+94	4' Lt.	14" Locust	1
Totals			1

GUARD RAIL

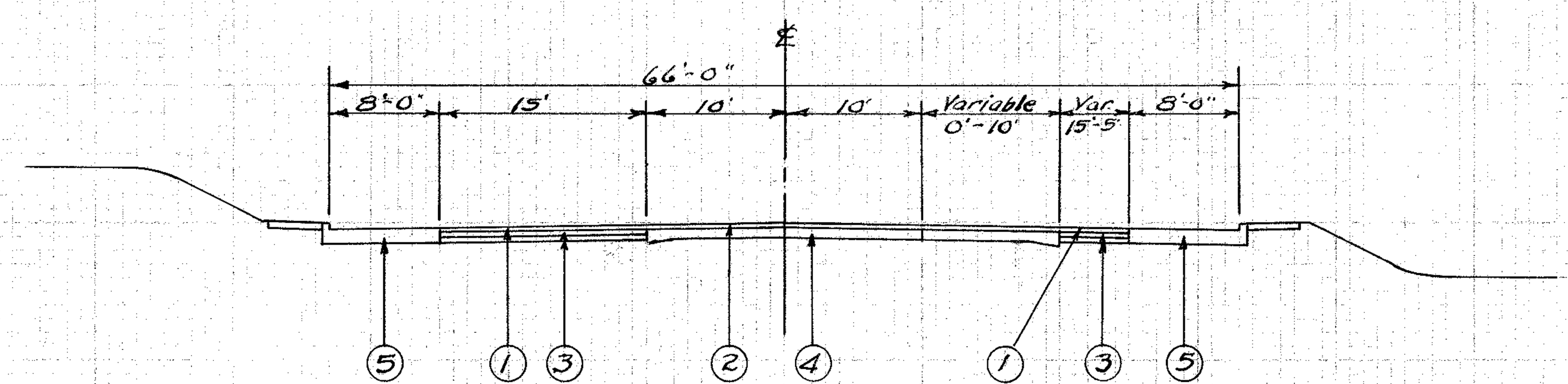
Ref No	Station From	Station To	Side	I-15 Removed & Stored Lin. Ft.	
CODE 7221					
1-G	360+00	360+09	Lt	9	
2-G	360+00	360+22	Rt.	22	
Totals				31	

STA 360+00 TO STA 370+00

MAD-40-(0.00-6.84)



TYPICAL SECTION OF ADJACENT PAVEMENT



(1) 3" Asphaltic Concrete Surface Course
(2) 3"+Asphaltic Concrete Surface Course
(3) 2-3" Asphaltic Concrete Base Courses
(4) 9"-7"-7"-9" Concrete Pavement
(5) 8" Reinforced Concrete Surface Course

TYPE FUNDS F-24(3) F-190(5) POST WAR

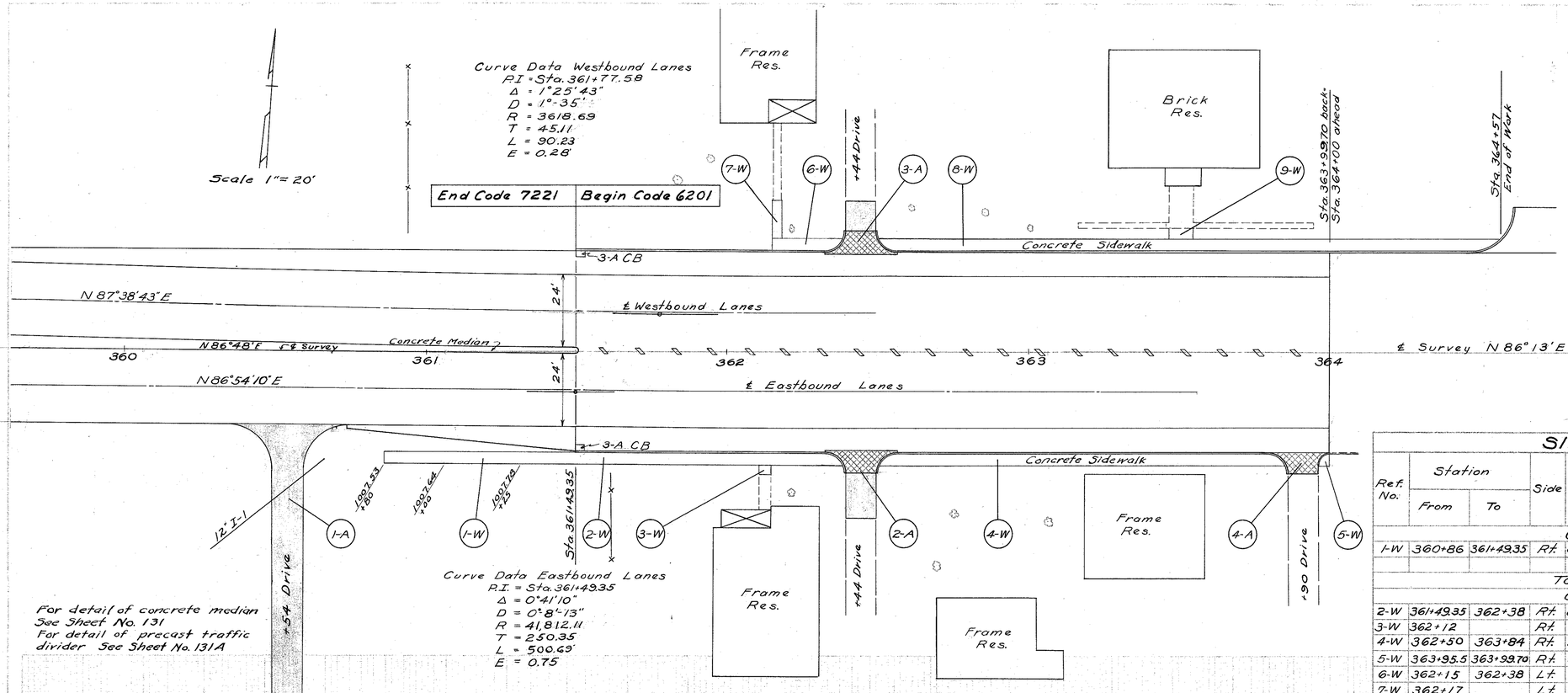
54
179

MAD-40-(0.00-6.84)

Scale 1"= 20'

Curve Data Westbound Lanes
P.I. = Sta. 361+77.58
Δ = 1°25'43"
D = 1°-35'
R = 3618.69
T = 45.11
L = 90.23
E = 0.28

End Code 7221 | Begin Code 6201



Curve Data Eastbound Lanes
P.I. = Sta. 361+49.35
Δ = 0°41'10"
D = 0°-8'-13"
R = 41,812.11
T = 250.35
L = 500.69
E = 0.75

For detail of concrete median See Sheet No. 131
For detail of precast traffic divider See Sheet No. 131A

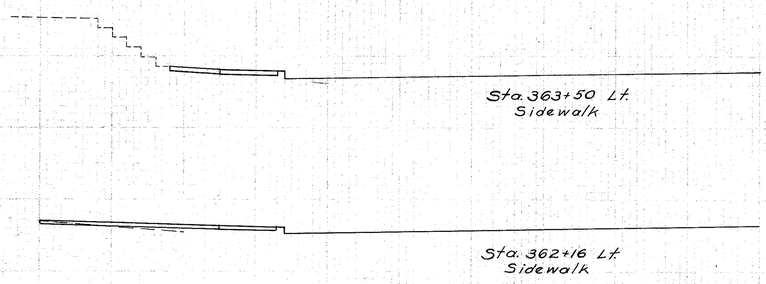
For detail of typical drive see sheet No. 130

SIDEWALKS

Ref. No.	Station From	Station To	Side	L	W	I-13 4" Conc. Walk Sq. Ft.	E-8 Removal & Disposal Ex'tg. Sdwk. Sq. Ft.
CODE 7221							
1-W	360+86	361+49.35	Rt.	63.35	4	253	
					Totals	253	
CODE 6201							
2-W	361+49.35	362+38	Rt.	88.65	4	346	
3-W	362+12		Rt.	3	4	12	
4-W	362+50	363+84	Rt.	134	4	518	
5-W	363+95.5	363+99.70	Rt.	4.2	4	14	
6-W	362+15	362+38	Lt.	23	4	83	
7-W	362+17		Lt.	12.5	3	37	31
8-W	362+50	364+57	Lt.	206.7	4	811	
9-W	363+50		Lt.	3.5	7.5	26	
					Totals	1847	31

APPROACHES

Ref. No.	Station	Side	Δ	W	L	Radius L	Radius R	I-17 6" Thick Sq. Yds.	T-70 6" Thick Sq. Yds.	I-1 Pipe 12" Lin. Ft.	Deduct Curb Type 2A Lin. Ft.
CODE 7221											
1-A	360+54	Rt.	90°	10'	120'	20'	20'	152.4		48	
						Totals		152.4		48	
CODE 6201											
2-A	362+44	Rt.	90°	10	21.5	6.5	6.5	16.7	9.96		24.0
3-A	362+44	Lt.	90°	10	16.5	6.5	6.5	11.1	9.96		24.0
4-A	363+90	Rt.	90°	10	6.5	4.0	6.5		9.33		21.5
						Totals		27.8	29.25		69.5

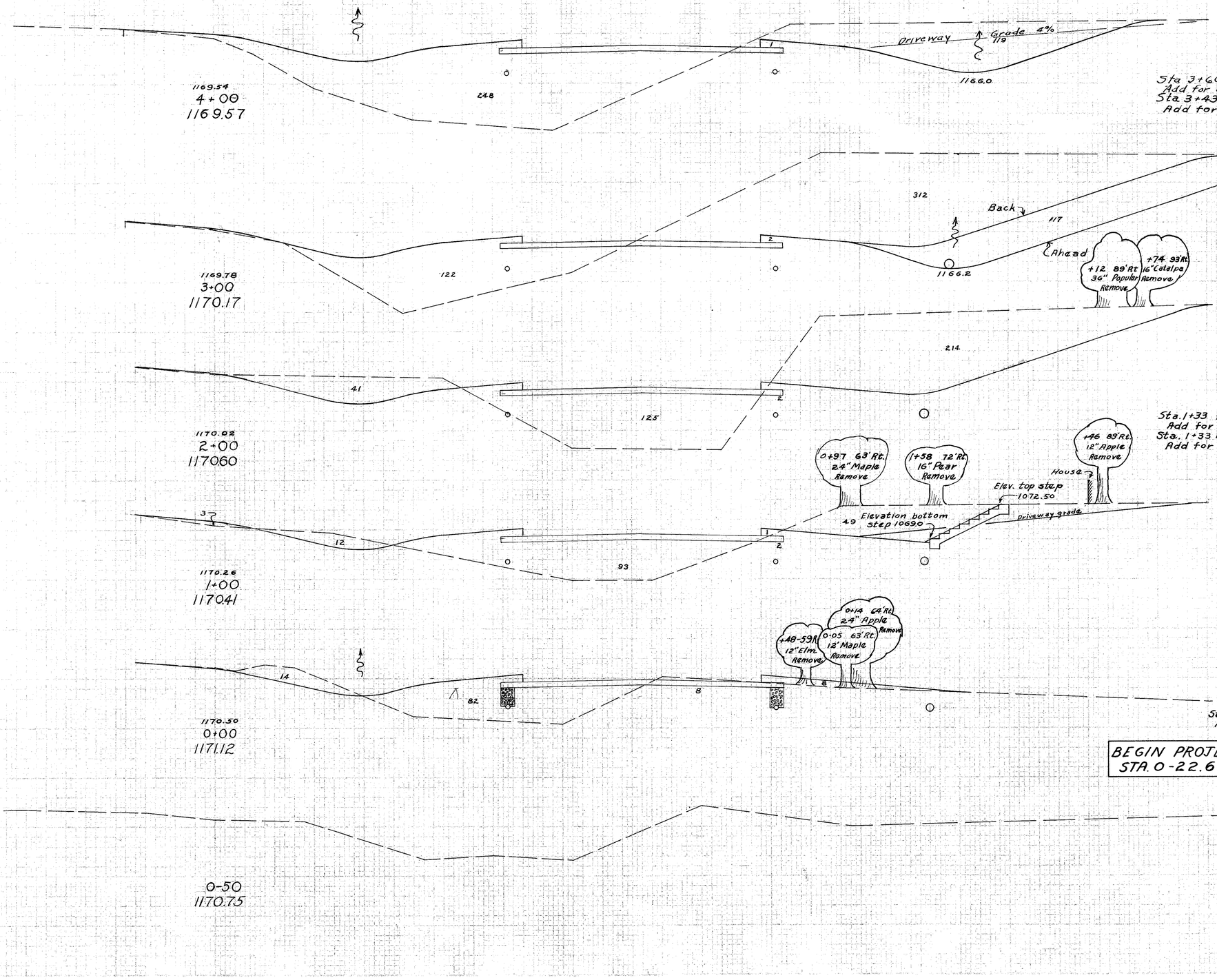


DETAILS STA. 360+00 TO STA. 364+00

30 20 10 ℄ 10 20 30 40 50 60 70 80 90

DIVISION 2 | OH10 F-24(3) F-190(5) | TYPE FUNDS POST WAR 55 179

MAD-40-(0.00-6.84)



Excavation 3358 Cu. Yds.
Embankment 11505 Cu. Yds.
Embankment +148-13116 Cu. Yds.

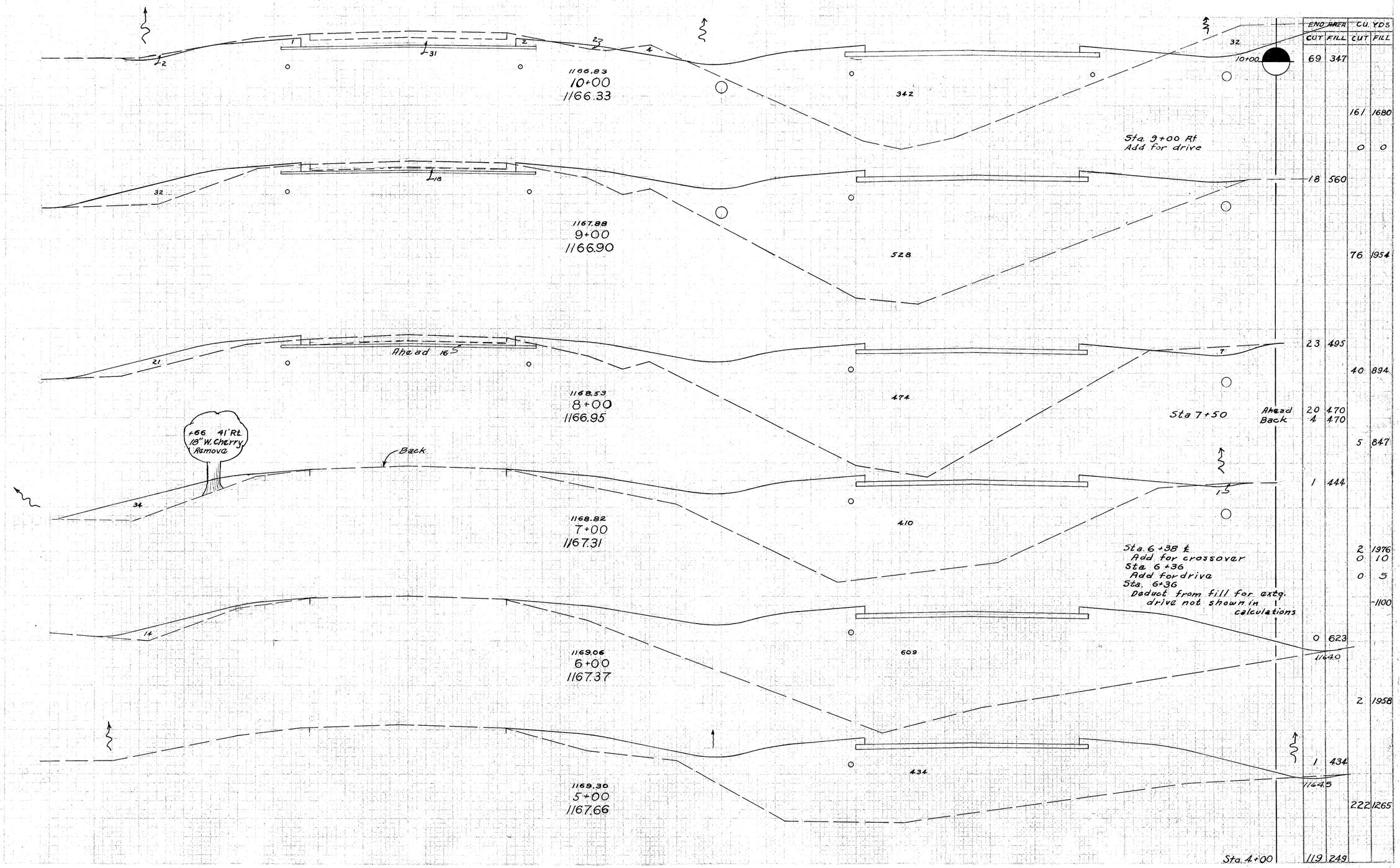
END AREA		CU. YDS	
CUT	FILL	CUT	FILL
119	249		
		3	10
		0	9
		1015	691
Ahead 429	124		
Back 312	124		
		1054	461
257	125		
		593	411
		0	9
		10	2
63	97		
		157	346
22	90		
		0	2
		18	75
22	90		

STA. 0-50 TO STA. 4+00

DIVISION	STATE	PROJECT	TYPE FUNDS	
2	OHIO	F-24(3) F-190(S)	POST WAR	56 179

MAD-40-(0.00-6.84)

60 50 40 30 20 10 ℄ 10 20 30 40 50 60



	END AREA		CU. YDS	
	CUT	FILL	CUT	FILL
	69	347		
			161	1680
			0	0
	18	560		
			76	1954
	23	495		
			40	894
Ahead	20	470		
Back	4	470		
			5	847
	1	444		
			2	1976
			0	10
			0	5
				1100
	0	623		
			2	1958
	1	434		
			222	1265
	119	249		

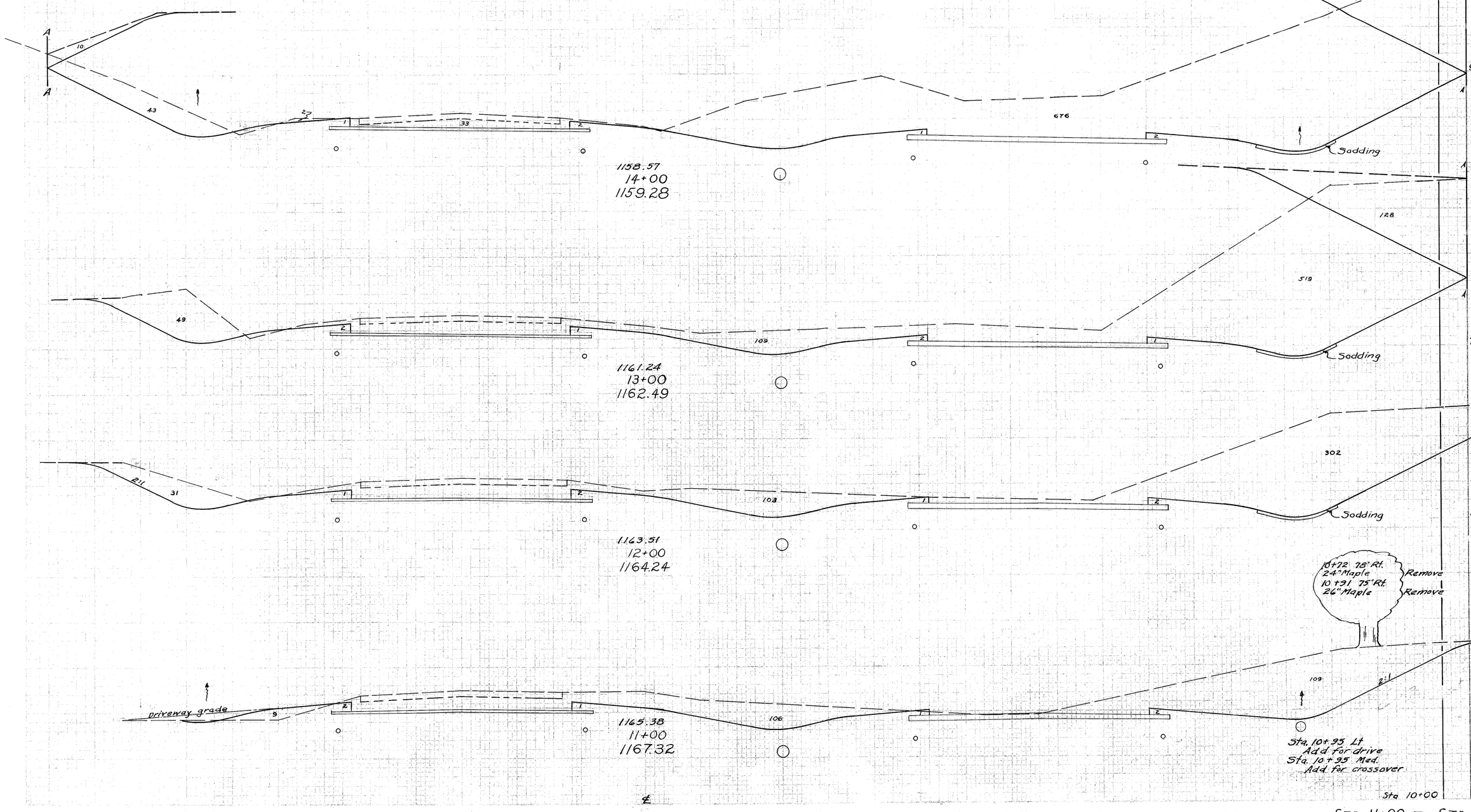
STA 5+00 TO STA 10+00

DIVISION 2 OHIO F-24(3) F-190(S)

TYPE FUNDS POST WAR 57 179

MAD-40-(0.00-6.84)

60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70



END AREA		C.U. YDS.	
CUT	FILL	CUT	FILL
		3308	26

STA. 11+00 TO STA. 14+00

DIVISION 2 | OHIO | F-24(3) F-190(5) | TYPE FUNDS POST WAR | 58 179

MAD-40-(0.00-6.84)

60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
	85		224
			294 946
	74		287
			202 1124
Ahead	35	320	
Back	52	320	
			1932 613
	991	11	
			3683 33
Sta 14+00	988	7	

Excavation 14057 Cu. Yds.
Embankment 4689 Cu. Yds.
Embankment +14% 5345 Cu. Yds.

22 4 63 2:1 Sodding
1146.30
18+00
1146.12
220

10 8 13 13 4 39 Sodding
1047.5
1143.38
17+00
1149.57
278

4 13 Back Ahead 53 17 BACK 9 Sodding
1051.5
1152.46
16+00
1152.95
304

16 3 1 2 29 5 728 2:1 Sodding
1055.0
1155.54
15+00
1156.29
222

℄

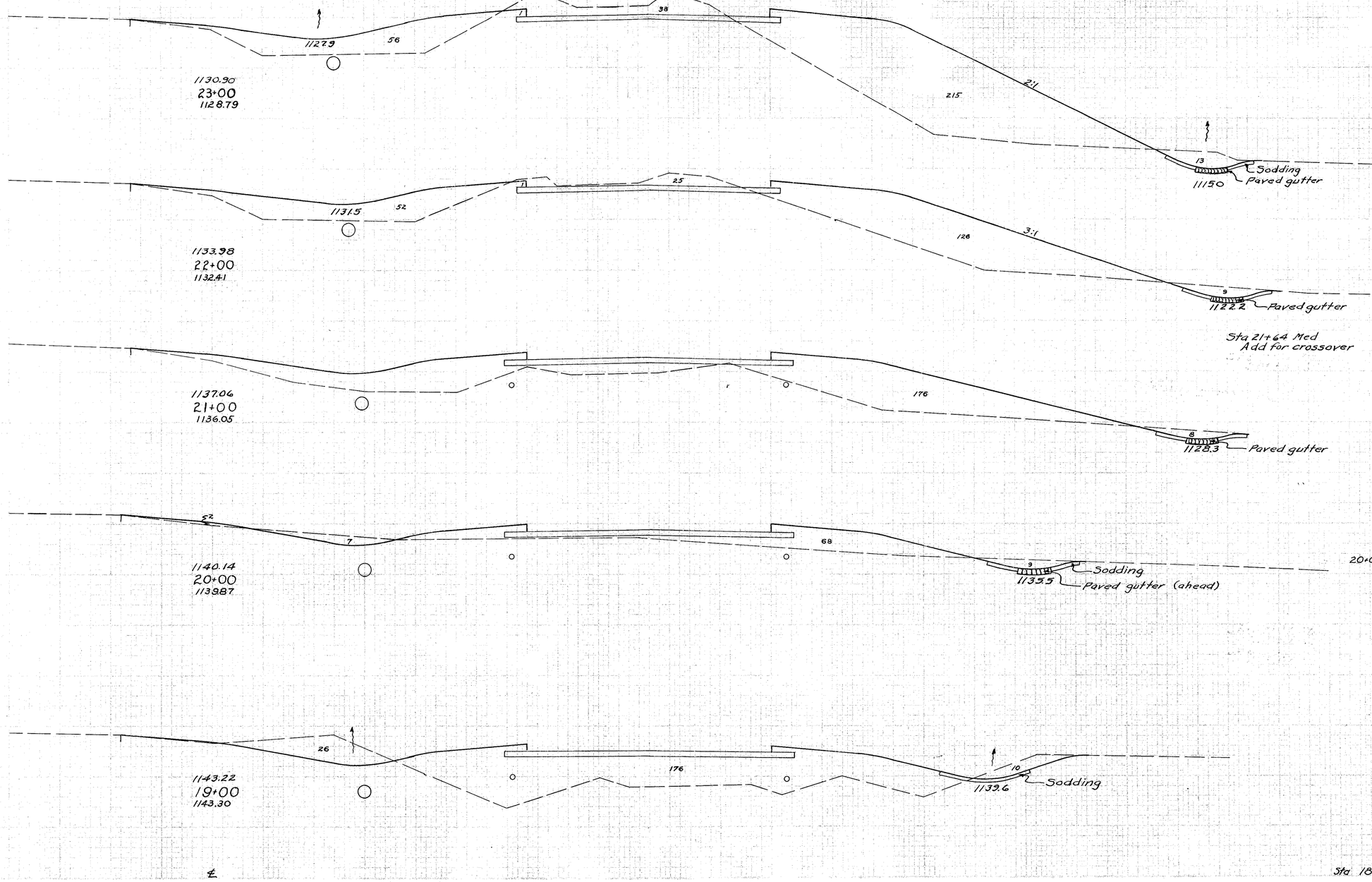
STA. 15+00 TO STA. 18+00

DIVISION 2 OHIO F-24(3) F-190(3)

TYPE FUNDS 59
POST WAR 179

MAD-40-(0,00-6,84)

20 10 ℄ 10 20 30 40 50 60 70 80 90 100



END AREA		CU. YDS	
CUT	FILL	CUT	FILL
51	271		
		157	833
34	179		
		78	657
		0	9
8	176		
		44	456
16	70		
		96	456
36	176		
		224	741
85	224		

STA. 19+00 TO STA. 23+00

DIVISION 2 | OHIO | F-24(3) F-190(5) | TYPE FUNDS POST WAR 60 179

MAD-40-(0.00-6.84)

20 10 ℄ 10 20 30 40 50 60 70 80 90 100

391
1110.9
62
1103.5
1115.50
28+00
1112.33

265
1114.6
130
1103.7
1118.58
27+00
1115.85

159
1117.7
130
1106.5
Sodding
1121.66
26+00
1118.53

118
1120.8
27
202
1107.5
Sodding
1124.74
25+00
1121.72

34
1124.3
65
342
Sodding & Paved gutter
1107.8
1127.82
24+00
1124.66

℄

Excavation 6160 Cu Yds.
Embankment 6441 Cu Yds.
Emb. +14% 7343 Cu Yds.

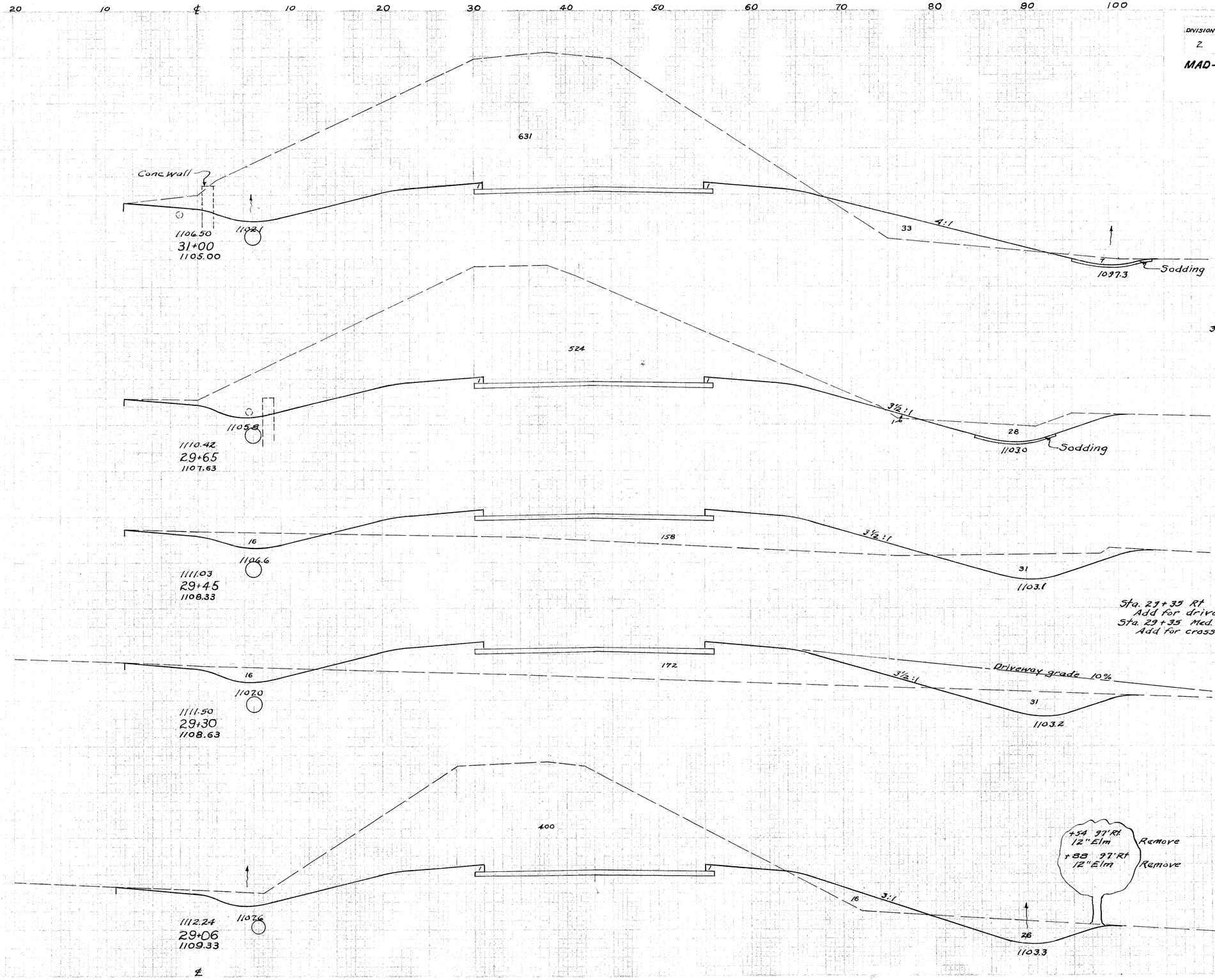
END AREA CUT	END AREA FILL	CU.YDS. CUT	CU.YDS. FILL
396	64		
		1233	365
270	133		
		804	511
164	143		
		535	691
125	230		
		302	1184
38	408		
		165	1257
51	271		

Sta. 23+00

STA. 24+00 TO STA. 28+00

DIVISION				TYPE FUNDS	
2	OHIO	F-24(3) F-190(5)		POST WAR	61 179

MAD-40-(0.00-6.84)

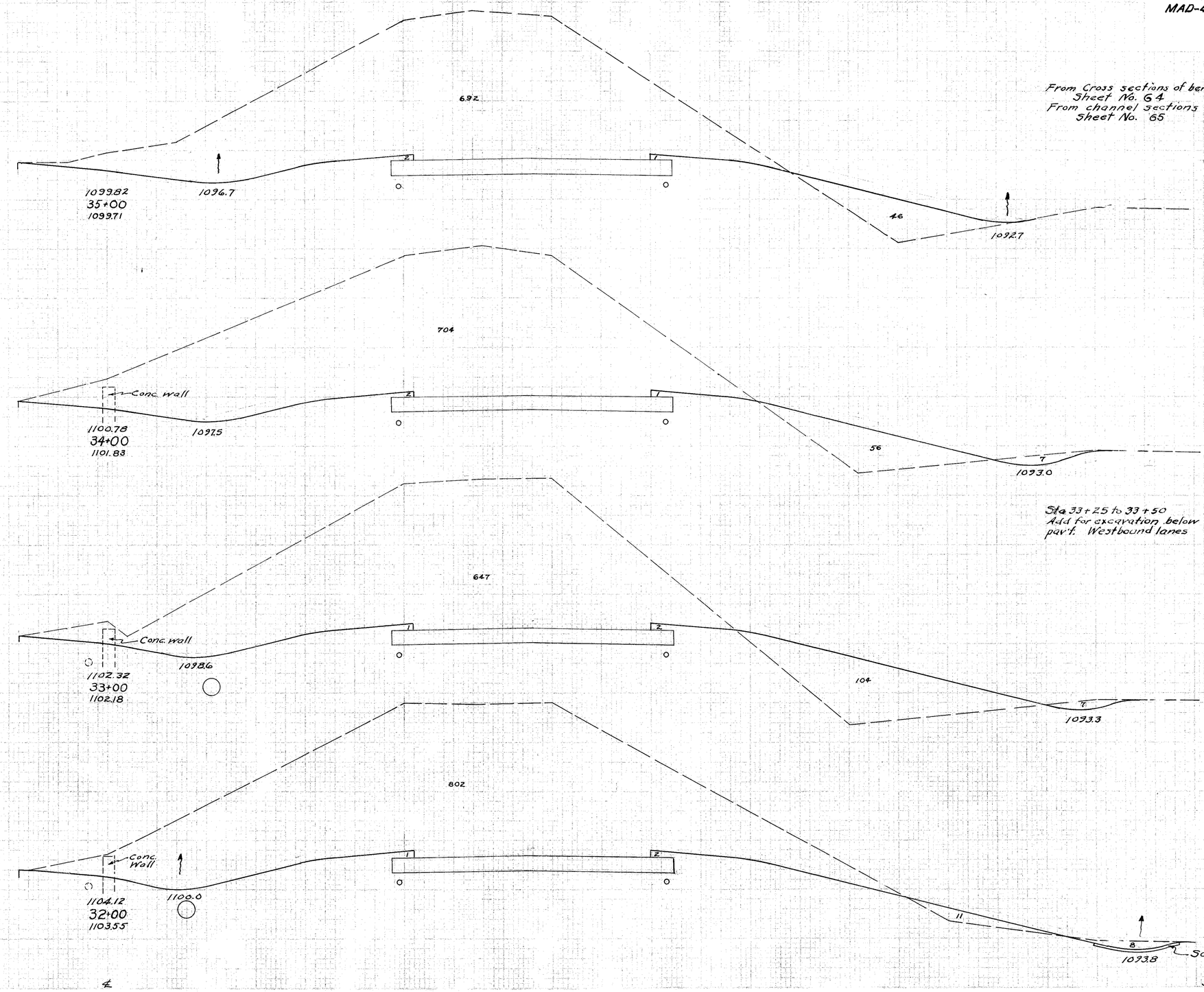


END AREA		CU-YDS.	
CUT	FILL	CUT	FILL
638	35		
		2204	69
		771	24
552	2		
		222	59
47	158		
		0	46
		0	12
		26	92
47	172		
		210	84
426	18		
		1613	161
396	64		

STA. 29+06 TO STA. 31+00

DIVISION 2 | OHIO | F-24(3) F-190(5) | TYPE FUNDS POST WAR | 62 179

MAD-40-(0.00-6.84)



From Cross sections of berm
Sheet No. 64
From channel sections
Sheet No. 65

Sta 33+25 to 33+50
Add for excavation below
pav't. Westbound lanes

Excavation 24987 Cu. Yds.
Embankment 3762 Cu. Yds.
Emb. +4% 4289 Cu. Yds.

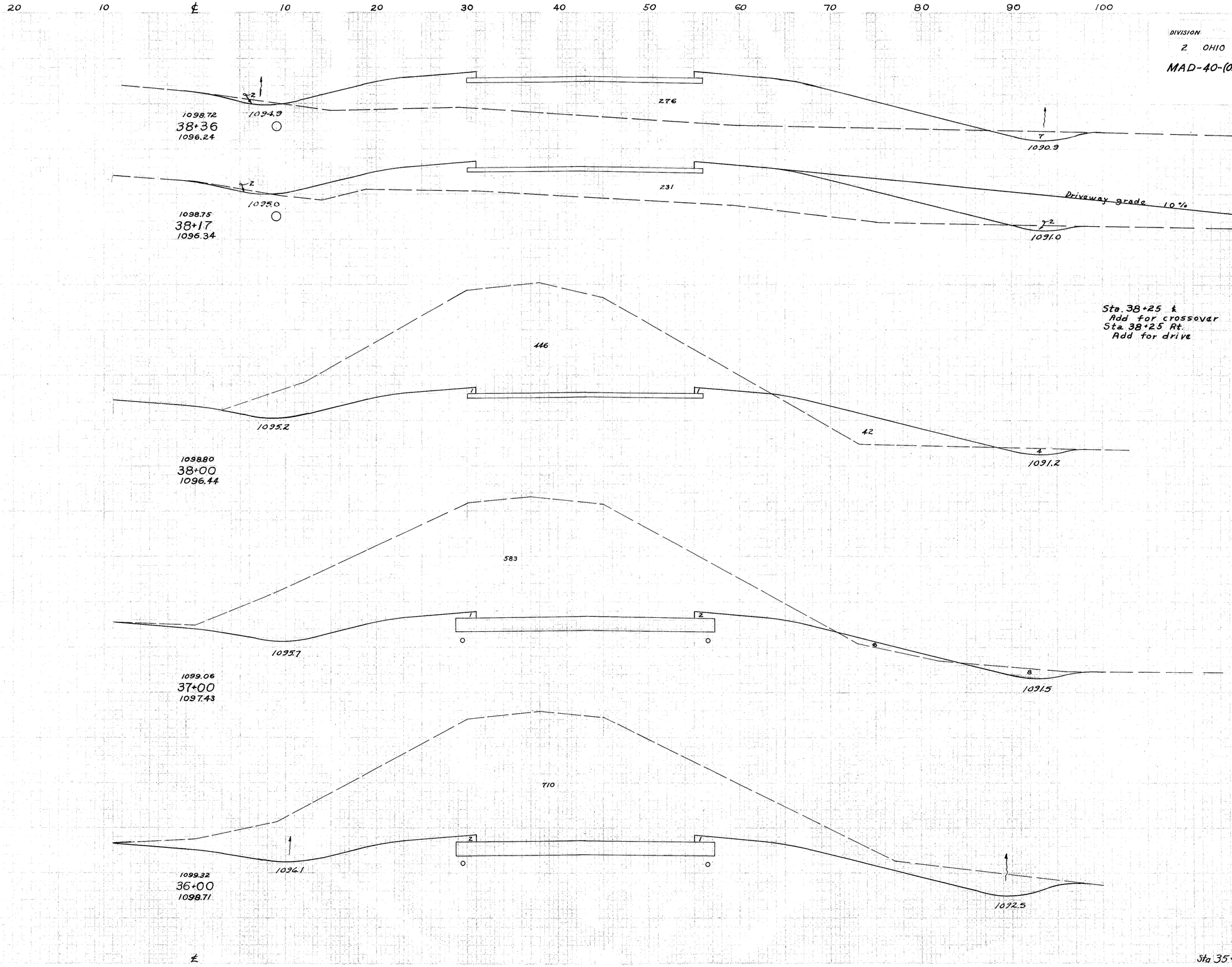
END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		0	377
		3076	1580
652	49		
		2524	200
711	59		
		6	0
		2528	307
654	107		
		2711	224
810	14		
		2682	91
638	35		

Sta 31+00

STA. 32+00 TO STA. 35+00

DIVISION 2 OHIO F-24(3) F-190(5) | TYPE FUNDS POST WAR | 63 179

MAD-40-(0.00-6.84)



	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
	9	276		
			5	178
	4	231		
			143	87
Sta. 38+25 ℄ Add for crossover			0	12
Sta. 38+25 Rt. Add for drive			0	78
	450	45		
			1928	100
	591	9		
			2409	22
	710	3		
			2522	96
Sta 35+00	652	49		

STA. 36+00 TO STA. 38+36

End Area	Cu. Yds.
Cut / Fill	Cut / Fill
Ahead 125 / Back 135	4.9 / 0
45	2 / 213 / 3
Ahead 43 / Back 33	1 / 1
43	23 / 62 / 2
0	0 / 24 / 13
0	0 / 32 / 10
0	0 / 0 / 0

Excavation	0	Cu. Yds.
Embankment	377	Cu. Yds.

End Area	Cu. Yds.
Cut / Fill	Cut / Fill
0 / 49	0 / 114
0 / 74	0 / 135
0 / 23	0 / 85
0 / 23	0 / 43
0 / 0	

DIVISION 2 | OHIO | F-24(3) F-190(5) | TYPE FUNDS POST WAR | 64 179

MAD-40-(0.00-6.84)

Note
Channel quantities from Sta 31+70 to 40+00 carried to road cross sections

Sta. 31+70 Begin channel

Note
Roadway quantities from Sta. 30+00 to 33+25 carried to road cross sections

CHANNEL SECTIONS
Extended Left of ℄ Survey

33+25 / 1100.5
Conc. wall
Ahead 49
Back
Ahead 125
Back 135
109.12

ROADWAY SECTIONS
Extended Left of ℄ Survey

32+75 / 1101.3
74
2:1
32+00 / 1102.01
2.3
31+00 / 1104.21
2.3
30+00 / 1107.02
29+00 / 1109.25

℄ of channel

2
39
Ahead
109.74
32+60.93 Channel

29
Back
Ahead
5
1092.10
32+22.88 Channel

43
23
1092.32
32+00 Channel

CHANNEL SECTIONS LEFT STA. 29+00 TO STA. 33+25

MAD-40-(0.00-6.84)

Station	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
43+00	88	106		
			380	393
42+00	117	106		
			306	417
41+00	156	119		
			559	369
40+00	146	80		
			483	306
39+00	115	85		
			415	250
38+00	109	50		
			413	200
37+00	114	58		
			474	237
36+00	142	70		
			452	224
35+00	102	51		
			272	193
34+00	45	53		
			236	142
Sta 33+25	125	49		

Excavation	3076 Cu. Yds.
Embankment	1580 Cu. Yds.

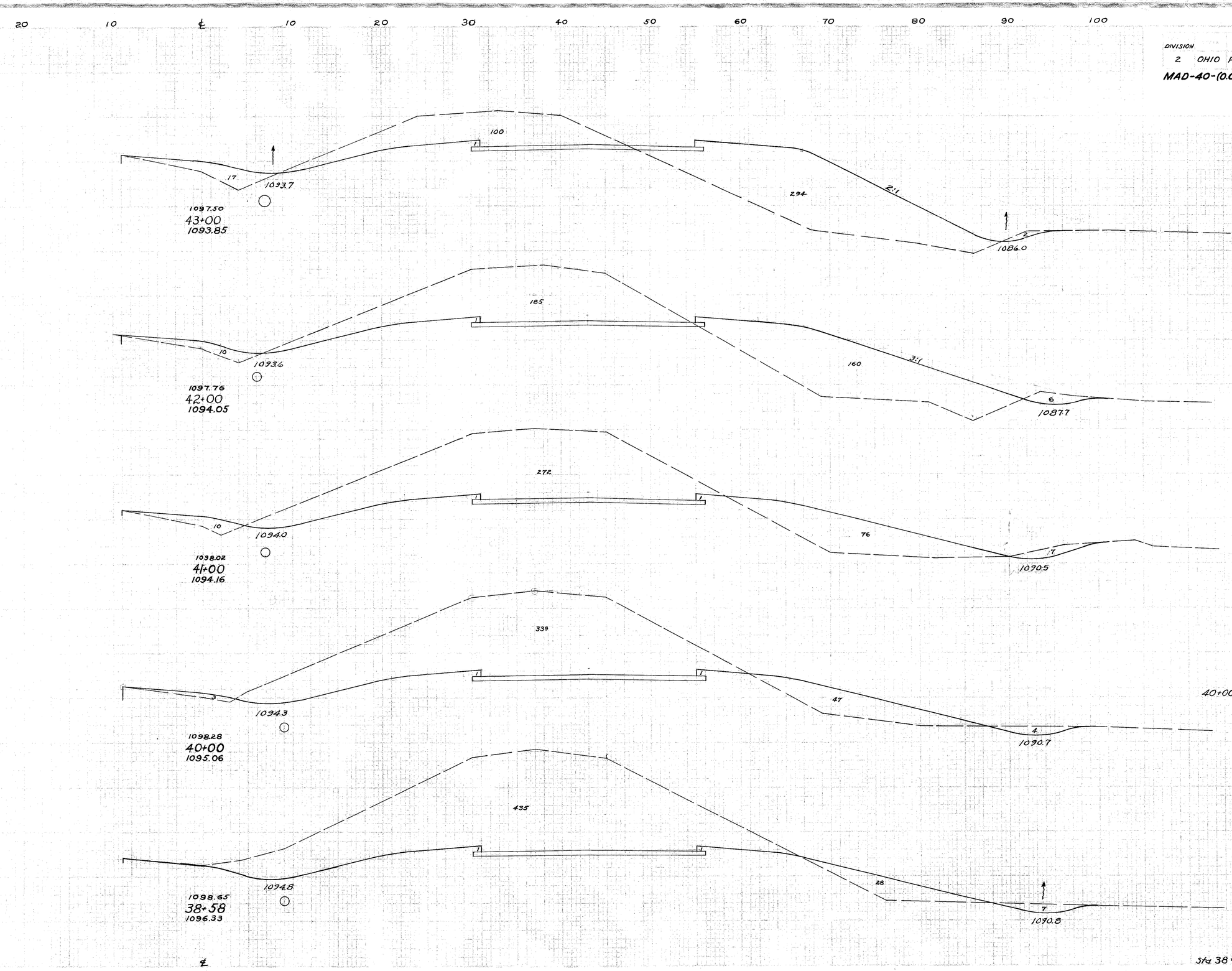

30 Lt. of ℄
40
50
60
70
80
90
100
Note: Channel quantities Sta 40+00 to 50+00 carried to road cross sections Sta 40 to Sta 50
Sections extended Left of ℄ survey
43+00
42+00
41+00
40+00
39+00
38+00
37+00
36+00
35+00
34+00
Sta 33+25
106
88
+67 74 Lt. 12" Locust Remove
106
117
+59 75 Lt. 14" Locust Remove
+32 72 Lt. 36" Elm Remove
119
156
80
146
85
115
50
109
58
114
70
142
51
102
50
45
3
Conc. Wall
Note: Channel quantities from Sta 31+70 to 40+00 carried to road cross sections Sta 30 to 40

CHANNEL SECTIONS LEFT STA. 34+00 TO STA. 43+00

DIVISION 2 OHIO F-24(3) F-190(6)

TYPE FUNDS 66
POST WAR 179

MAD-40-(0.00-6.84)

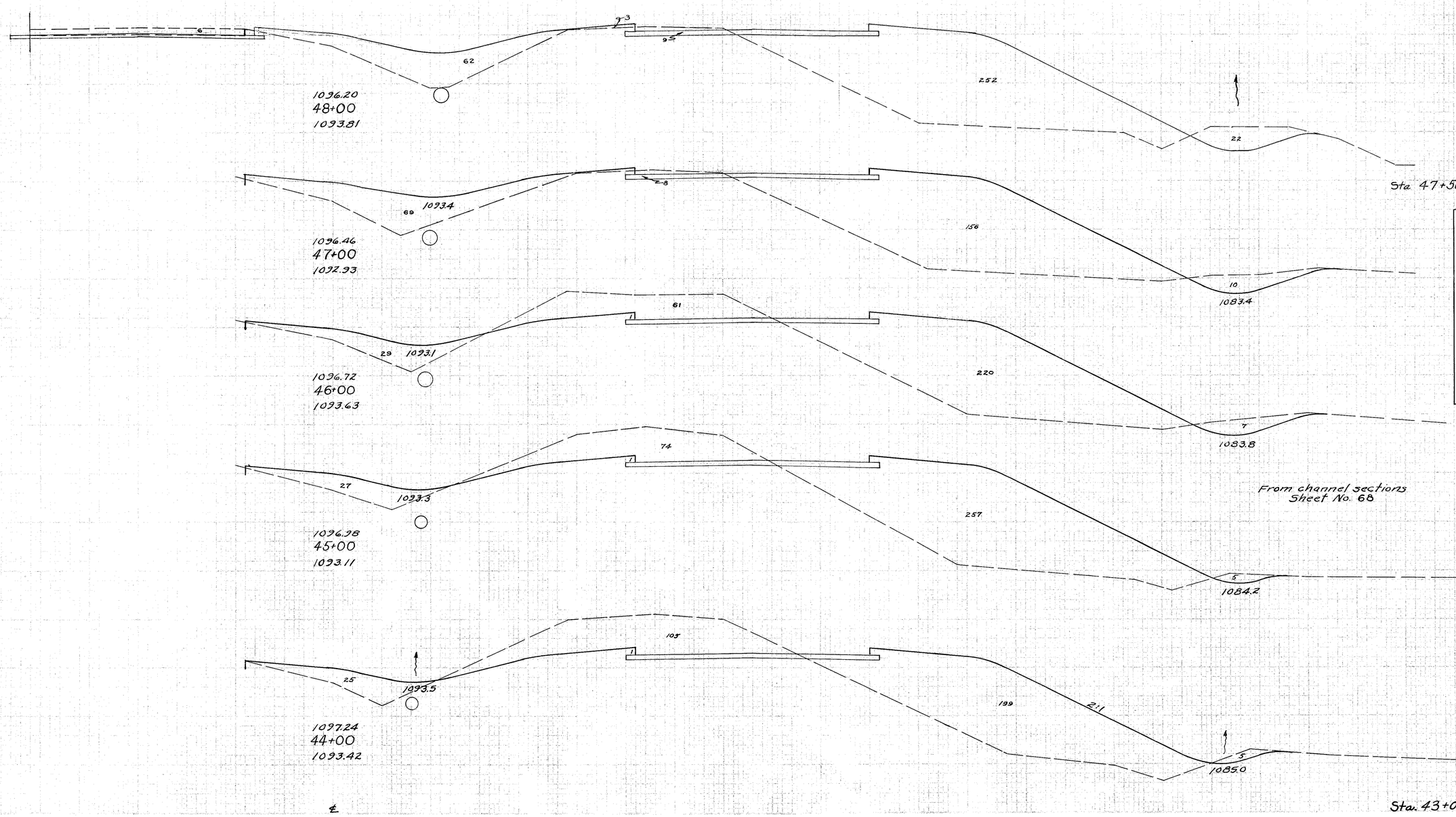


END AREA		C.U. YDS.	
CUT	FILL	CUT	FILL
102	312		
		543	894
191	171		
		870	480
279	88		
		1192	259
343	52		
		2065	216
442	30		
		184	125
9	276		

40+00

Sta 38+36

STA. 39+00 TO STA. 43+00



DIVISION		PROJECT	TYPE FUNDS	67
2	OHIO	F-24(3) F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)

Excavation 8052 Cu. Yds.
Embankment 12210 Cu. Yds.
Emb.+14% 13919 Cu. Yds.

		END AREA		CU. YDS.	
		CUT	FILL	CUT	FILL
		37	317		
				69	545
	Ahead	37	271		
Sta 47+50	Back	31	271		
				46	460
		18	225		
				159	880
		68	250		
				4039	4135
				272	991
		79	285		
				350	944
		110	225		
				393	994
Sta. 43+00		102	312		

STA 44+00 TO STA. 49+00

	End Area		Cu. Yds.	
	Cut	Fill	Cut	Fill
Sta 49+22 End channel	0	0		
49+00	86	161	35	66
48+00	73	144	294	565
Sta 47+50	Ahead 78 Back 73	146 146	140	269
47+00	79	149	142	273
46+00	137	140	437	535
45+00	148	108	565	459
44+00	147	106	546	396
Sta 43+00			435	393

Excavation	4039 Cu. Yds.
Embankment	4135 Cu. Yds.

DIVISION 2 OHIO F-24(3) F-190(5)

TYPE FUNDS POST WAR 68 179

MAD-40-(0.00-6.84)

Note: Channel quantities from Sta 49+00 to 50+00 carried to road cross sections Sta 49 to 50

Sta 49+22 End channel

49+00 1035.22

48+00 1035.63

Sta 47+50

47+00 1035.66

46+00 1035.79

45+00 1035.86

44+00 1035.82

Sta 43+00

Core Wall

+53 73' Lt. 12" Elm Remove
+28 77' Lt. 16" Elm Remove

+70 73' Lt. 12" Elm Remove
+25 80' Lt. 12" Elm Remove

+43 75' Lt. 12" Elm Remove
+12 70' Lt. 16" Elm Remove

+54 73' Lt. 12" Locust Remove
+80 74' Lt. 16" Locust Remove
+71 71' Lt. 5"-12 Locusts Remove
+22 45' Lt. 24" Birch Remove

+55 71' Lt. 12"-1 Locust Remove
+02 73' Lt. 12" Locust Remove
+15 70' Lt. 16" Chestnut Remove
+33 74' Lt. 18" Birch Remove

+73 73' Lt. 14" Locust Remove
+43 75' Lt. 12"-Locust Remove

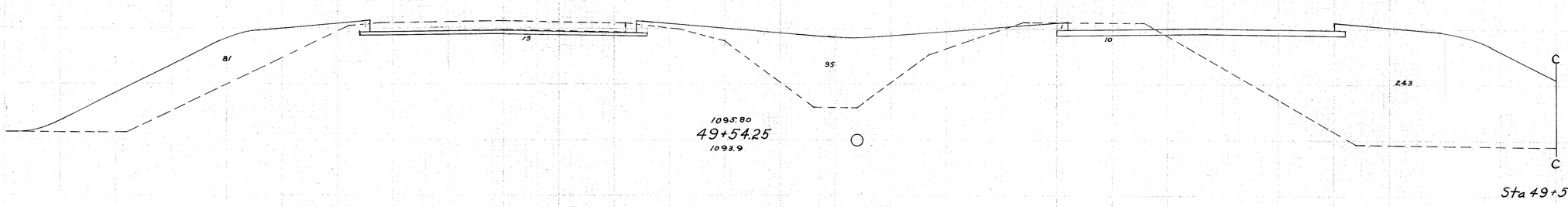
84 70 79 139 143 147

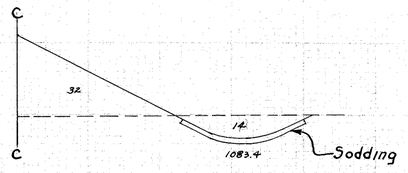
CHANNEL SECTIONS

Sections extended Left of ℄ Survey

30 40 50 60 70 80 90 100

CHANNEL SECTIONS LEFT STA. 44+00 TO STA. 50+00





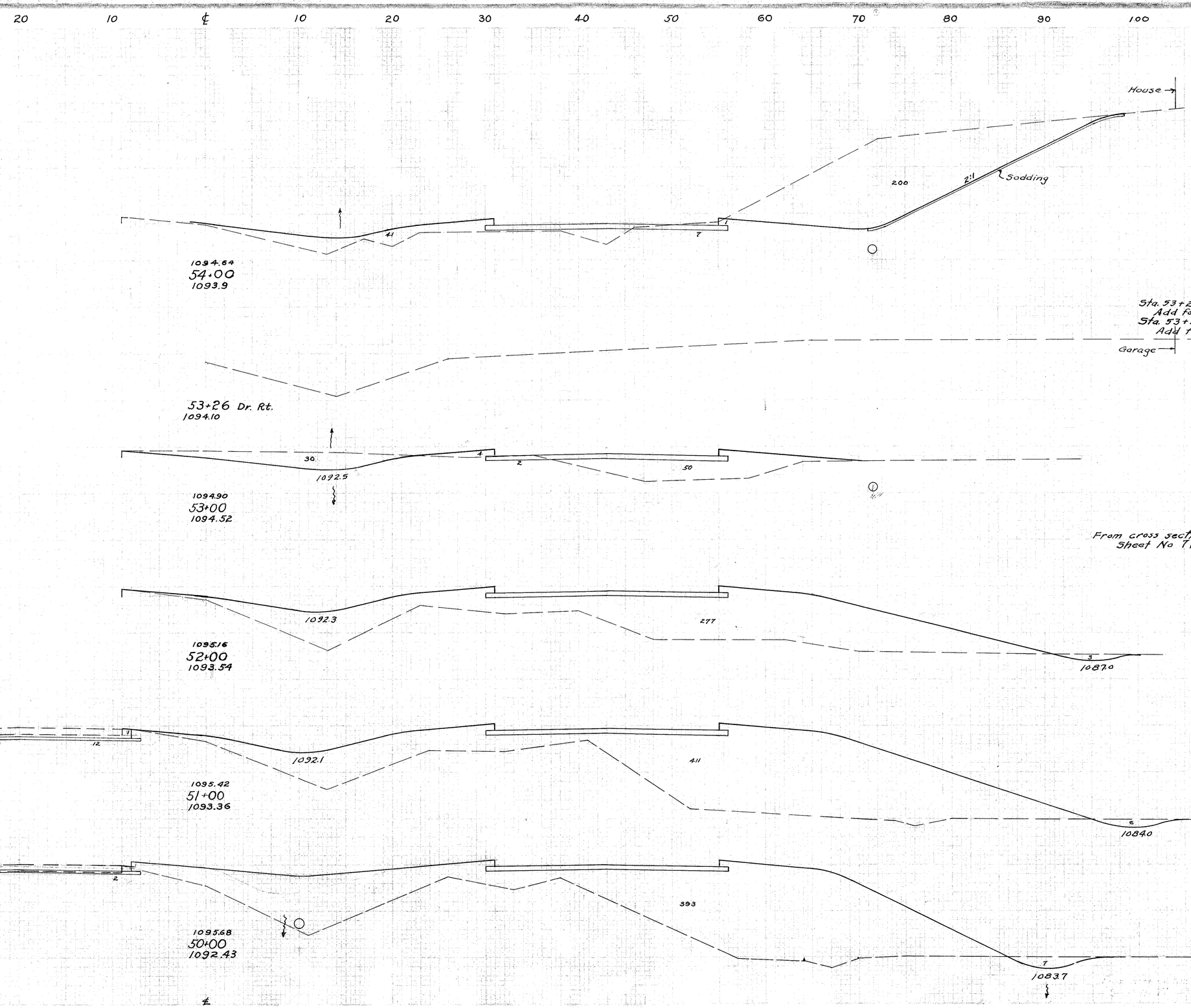
FED. RD. DIVISION 2 F-24(3) F-190(5) POST WAR

MAD-40-(0.00-6.84)

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
37	452		
50	581		
		119	1226
		0	402
37	317		

DIVISION 2 | OHIO | F-Z4(3) F-190(5) | TYPE FUNDS POST WAR | 70 179

MAD-40-(0.00-6.84)



Excavation 8971 Cu. Yds.
Emb. 5594 Cu. Yds.
Emb. +14% 6377 Cu. Yds.

END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
207	42		
		0	9
		5	2
		443	178
32	54		
		59	1023
		65	613
3	277		
		7	575
Sta 51+50 Ahead	5	344	
Back	16	344	
		32	700
18	412		
		50	1491
9	393		
		39	716
Sta 49+54.25	37	452	

STA. 50+00 TO STA. 54+00

End Areas	Cu. Yds.
Cut / Fill	Cut / Fill
0 / 0	0 / 0
22 / 19	12 / 10
22 / 172	0 / 83
0 / 158	0 / 87
6 / 164	3 / 90
9 / 344	2 / 96
0 / 166	

DIVISION 2 | OHIO | F-24(3) F-190(2) | TYPE FUNDS POST WAR

71
179

MAD-40-(0.00-6.84)

Excavation 59 CuYds.
Embankment 1023 CuYds.

Sta 51+50 Ahead Back

Sta. 49+34.25 to Sta. 50+00
Quantity (calculated) 166 Cu yds.

End of work

55+00 103476
54+00 103467
53+00 103474
52+00 103444
51+00 103446
50+00 103443

4:1
3:1
2:1
10
12
10900
83
90
96
3
2

Note: Quantities on this sheet carried to road cross sections Sta 50 to 60

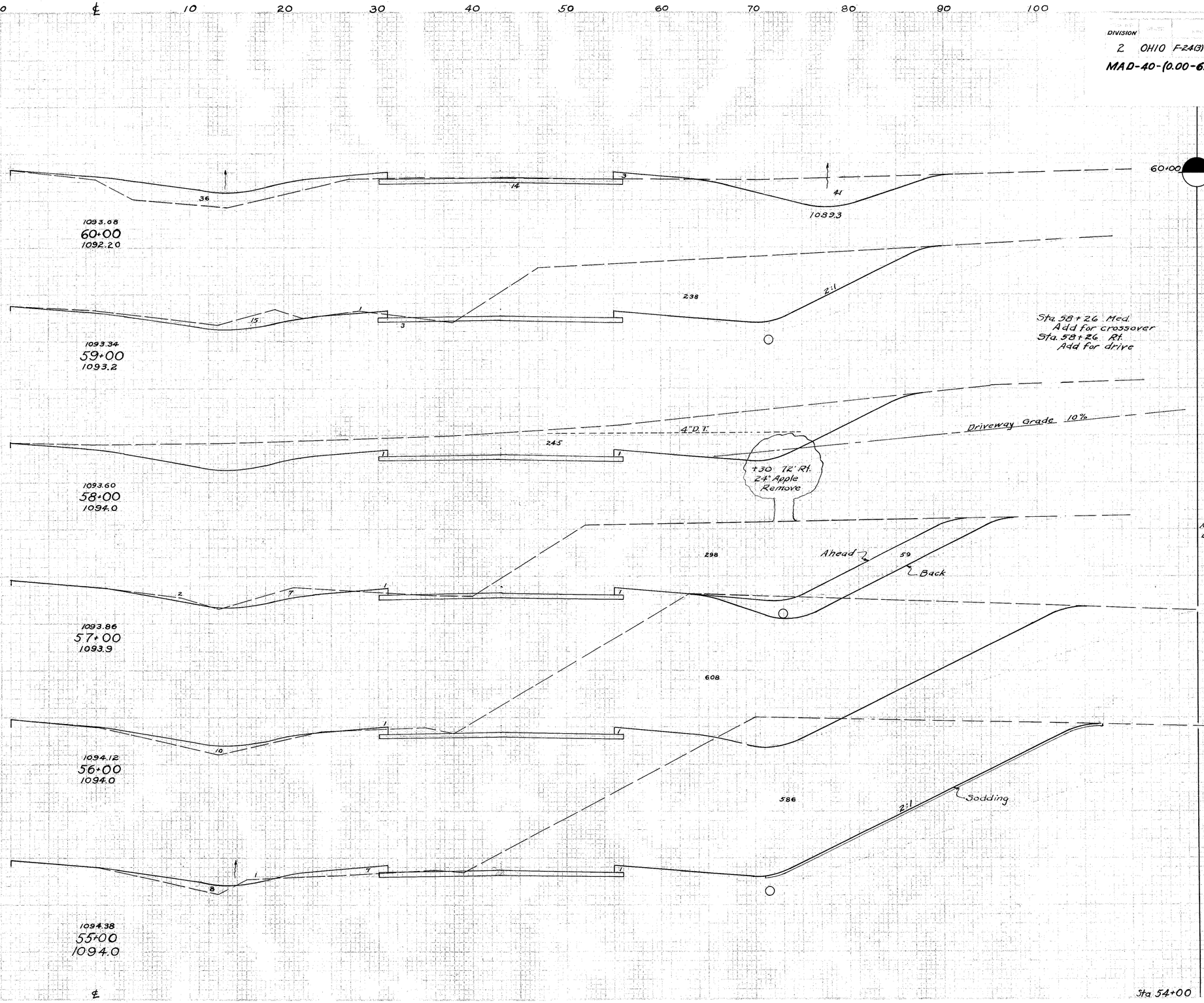
ROADWAY SECTIONS
Sections extended Left of ℄

30 40 50 60 70 80 90
Lt of ℄

BERM SECTIONS LEFT STA 50+00 TO 54+00

DIVISION 2 | OHIO | F-24(3) F-190(5) | TYPE FUNDS POST WAR | 72 / 179

MAD-40-(0.00-6.84)



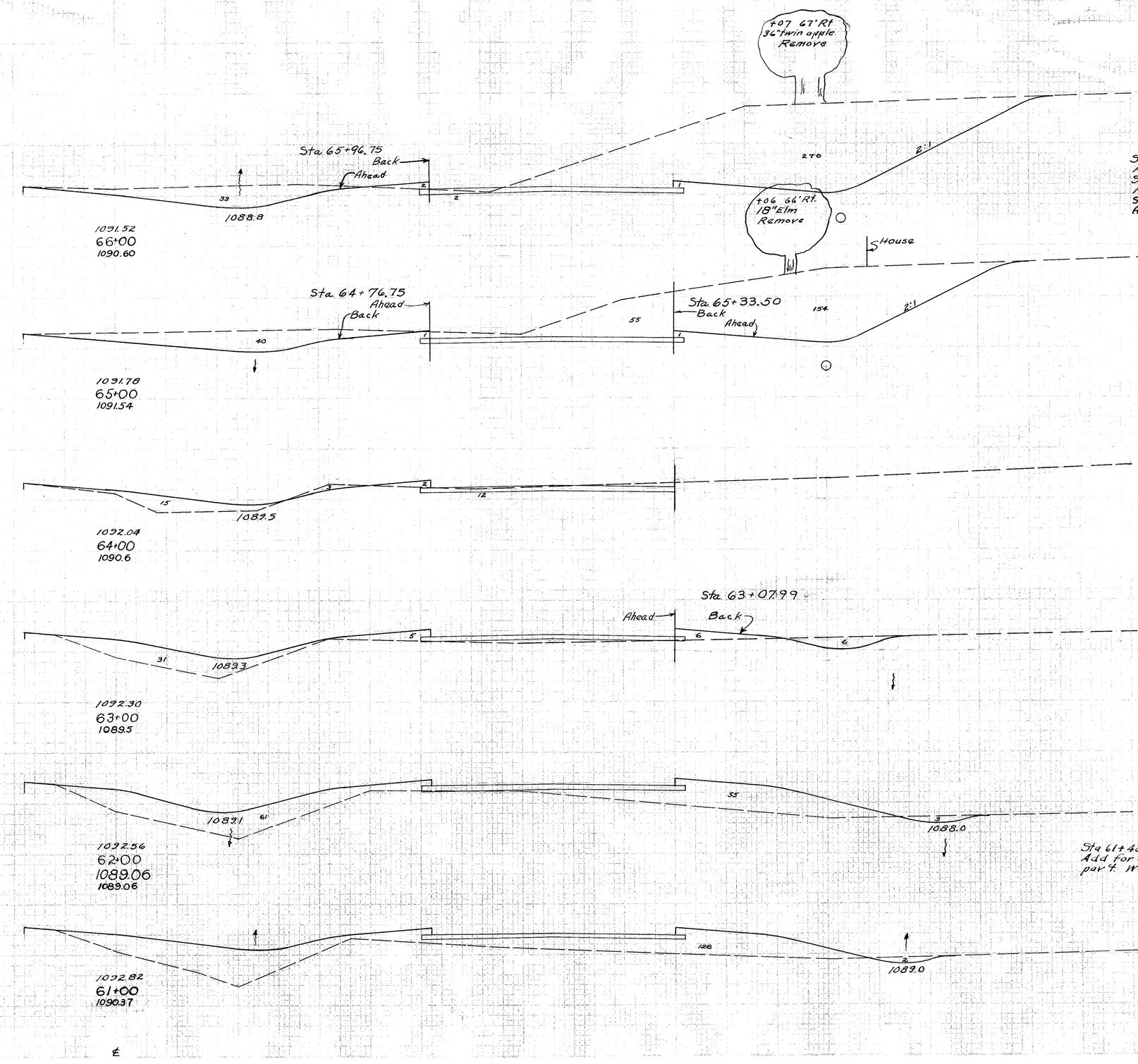
	END AREA		C.U. YDS	
	CUT	FILL	CUT	FILL
60+00	55	39		
			576	76
	256	2		
Sta. 58+26 Med. Add for crossover			3	9
Sta. 58+26 Rt. Add for drive			255	3
			928	7
	245	2		
			1022	7
Ahead	307	2		
Back	366	2		
			1804	26
	608	12		
			2213	52
	587	16		
			1470	107
Sta. 54+00	207	42		

STA. 55+00 TO STA. 60+00

DIVISION 2 | OHIO F-24(3) F-190(5) | TYPE FUNDS / POST WAR | 73 / 179

MAD-40-(0.00-6.84)

20 10 ℄ 10 20 30 40 50 60 70 80 90 100



Sta. 66+10.58 Left
Add for intersection
Sta. 63+52.02 Right
Add for intersection
Sta. 65+37 Cross over
Add for intesection

Sta 61+48 to 61+73
Add for excavation under par't. Westbound lanes

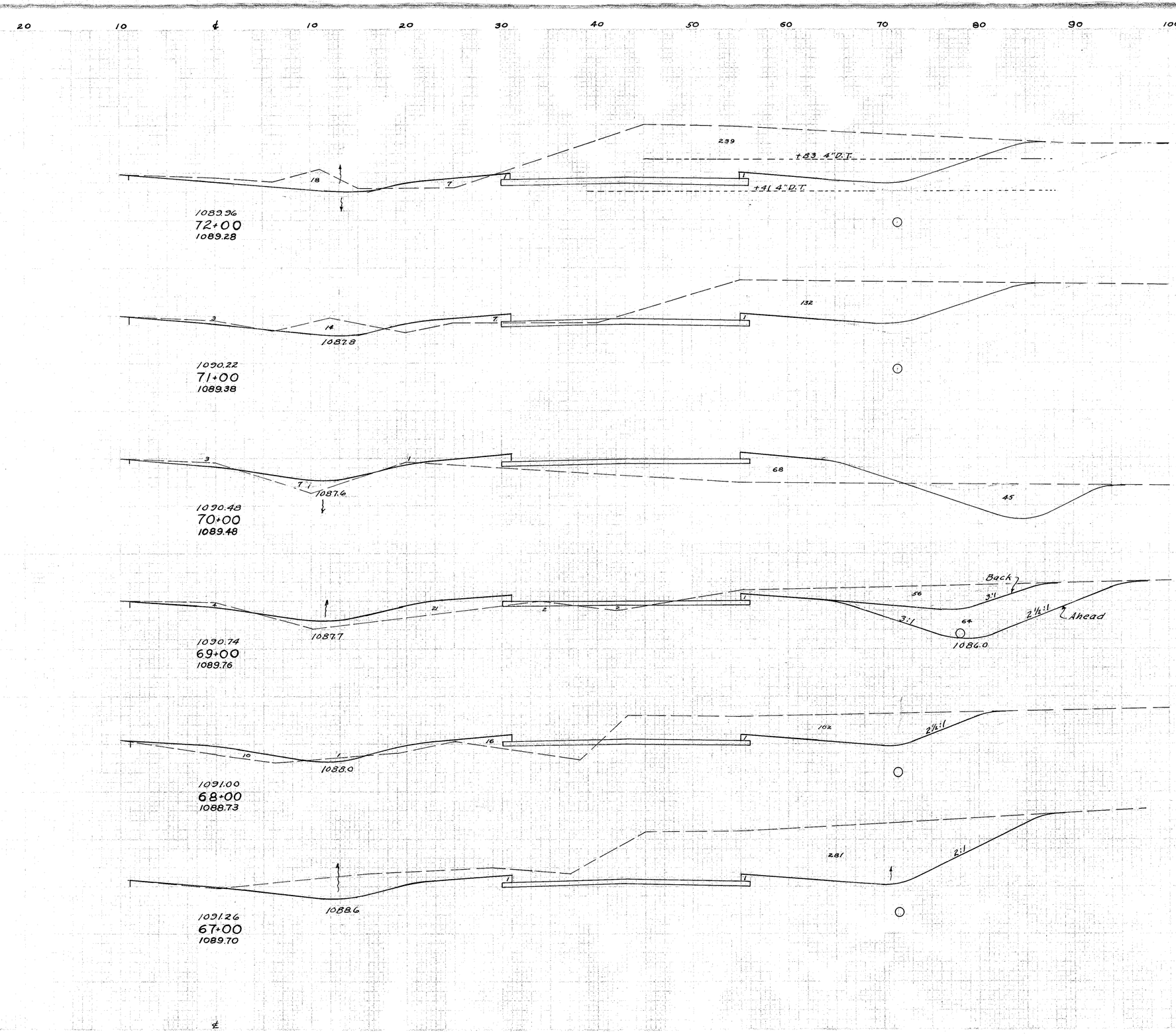
		END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		305	2		
				193	204
				870	144
				159	8
				37	0
Sta. 65+96.75	Ahead	305	3		
	Back	272	1		
				563	3
Sta. 65+33.50	Ahead	209	1		
	Back	55	1		
				68	2
Sta. 65+00		55	1	48	1
Sta. 64+76.55	Ahead	55	1		
	Back	95	2		
				156	27
		15	17		
				26	90
Sta. 63+07.99	Ahead	0	36		
	Back	6	42		
		6	42	2	12
				17	293
				3	116
				6	0
				9	452
				2	128
				106	309
Sta 60+00		55	39		

Excavation 4686 Cu Yds.
Embankment 1,883 Cu Yds.
Emb +1/4 % 2,147 Cu Yds.

STA. 61+00 TO STA. 66+00

DIVISION 2 | OHIO | F-24(3) F-190(5) | TYPE FUNDS POST WAR | 74 179

MAD-40-(0.00-6.84)

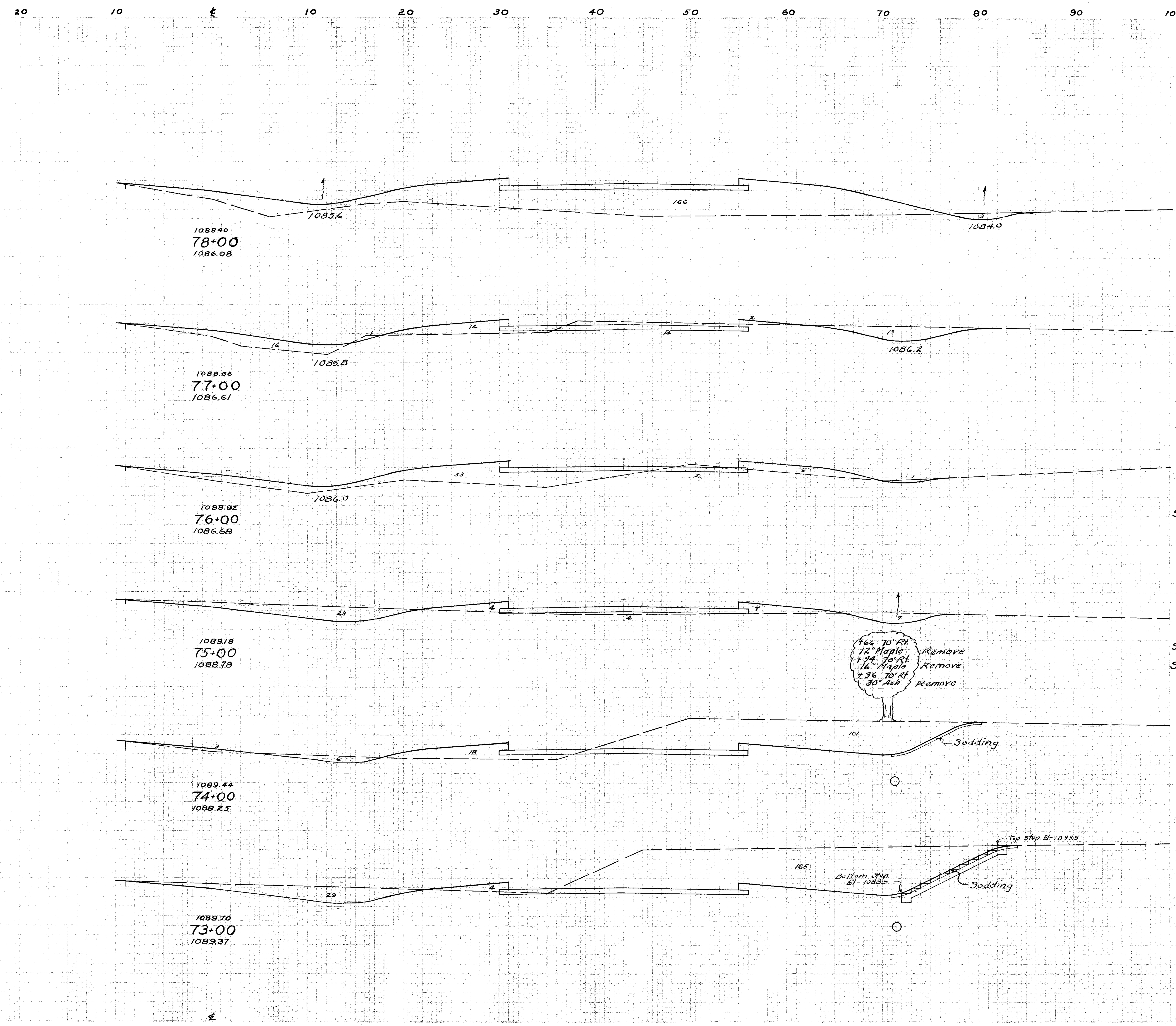


	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
	257	9		
			752	31
	149	8		
			367	154
70+00				
	49	75		
			324	183
Ahead	126	24		
Back	62	24		
			306	94
	103	27		
			711	54
	281	2		
			1085	7
Sta 66+00	305	2		

STA. 67+00 to STA. 72+00

DIVISION	STATE	PROJECT	TYPE FUNDS	75
2	OHIO	F-24(3) F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)



Sta. 75+86 Med.
Add for crossover

Sta. 74+80 Med.
Add for crossover
Sta. 74+80 Rt.
Add for drive

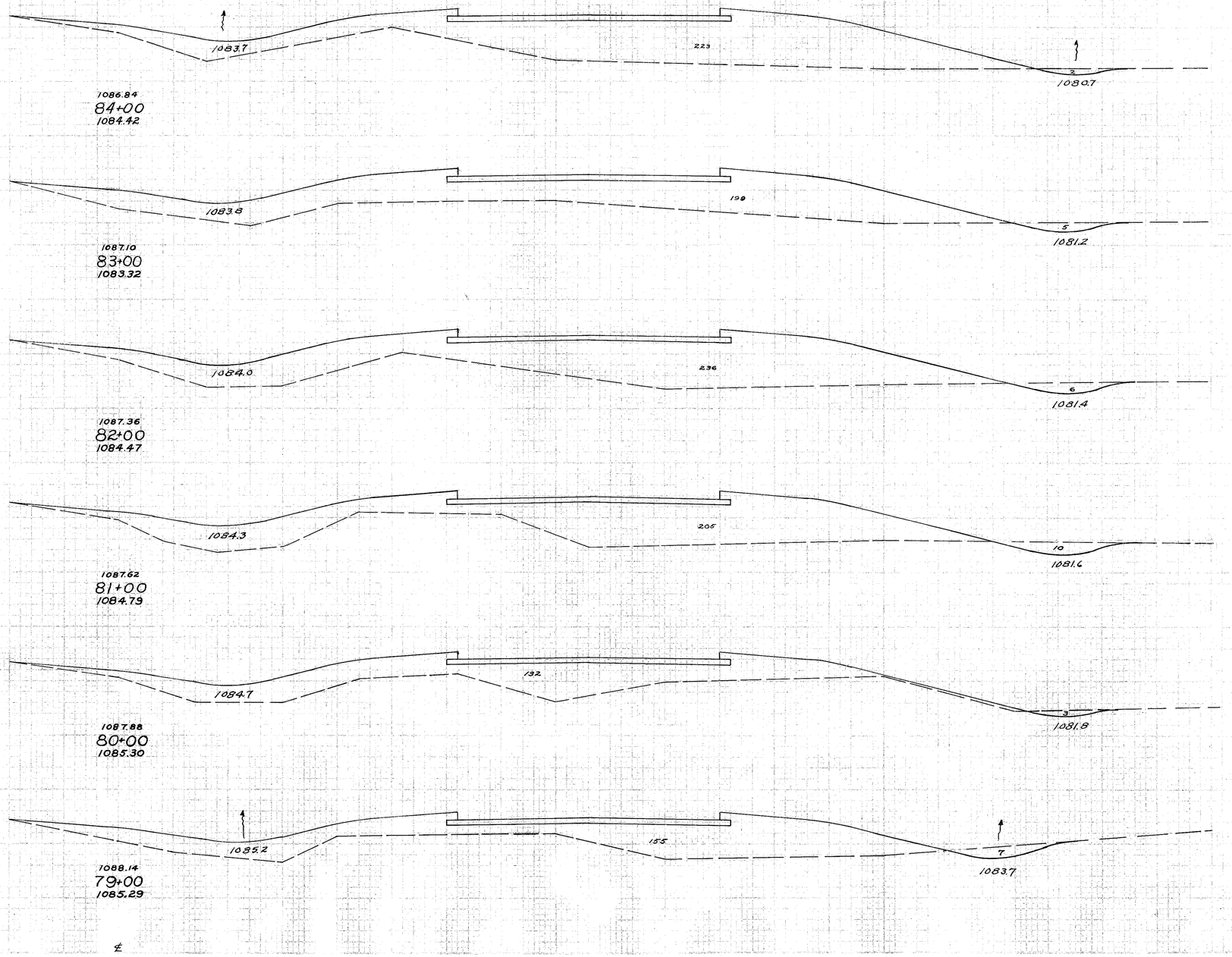
Excavation	2992	Cu. Yds.
Embankment	2,160	Cu. Yds.
Emb + 14 %	2,462	Cu. Yds.

Station	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
78+00	3	166		
			57	367
77+00	28	32		
			63	174
76+00	6	62		
			0	9
			67	143
75+00	30	15		
			0	9
			2	3
			254	69
74+00	107	22		
			557	50
73+00	194	5		
			835	26
Sta 72+00	257	9		

DIVISION		PROJECT	TYPE FUNDS	
2	OHIO	F-24(3) F-190(5)	POST WAR	76 179

MAD-40-(0.00-6.84)

20 10 ℄ 10 20 30 40 50 60 70 80 90 100



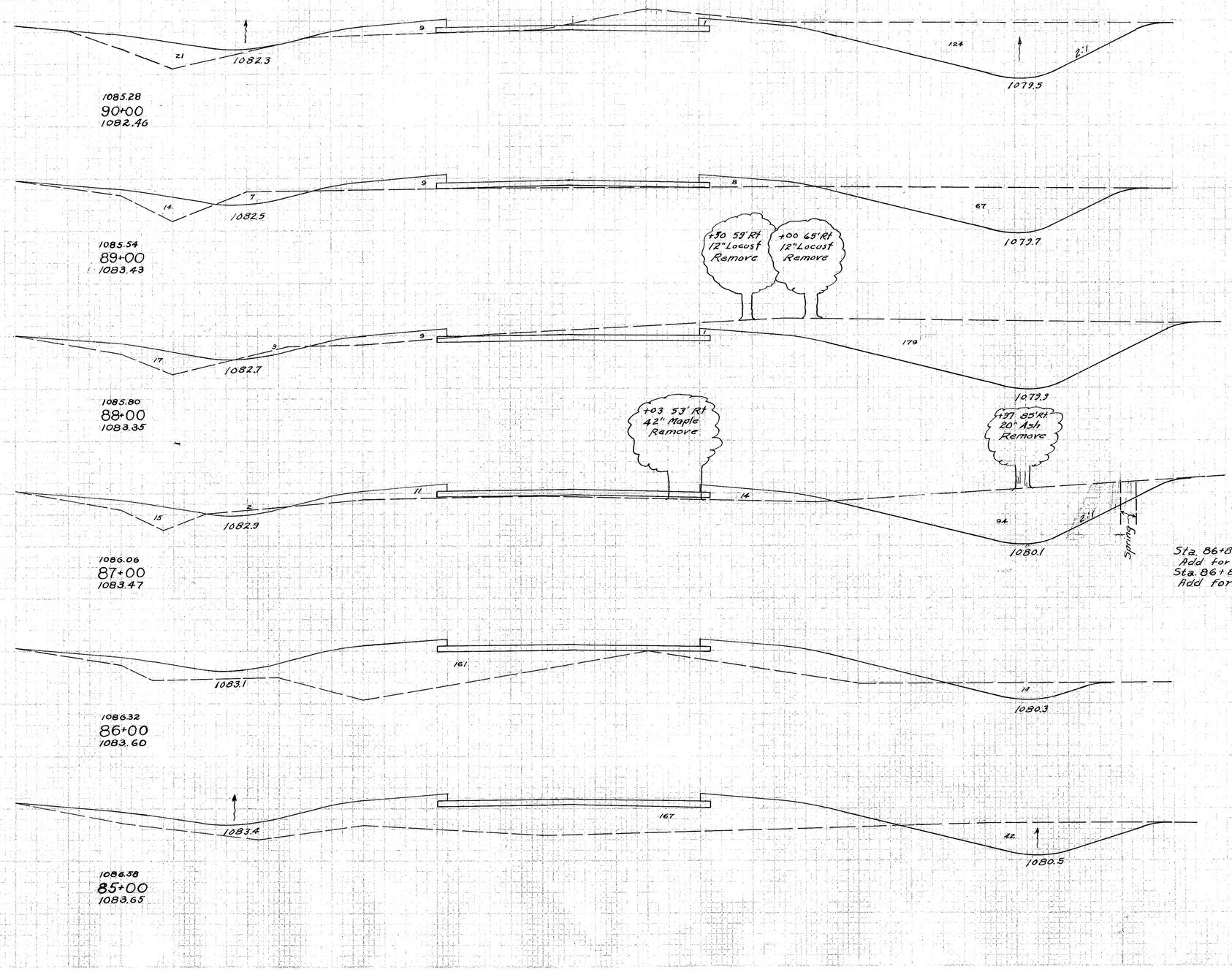
END AREA		C.U. YDS.	
CUT	FILL	CUT	FILL
2	223		
		13	781
5	199		
		20	806
6	236		
		30	817
10	205		
		24	624
80+00			
3	132		
		19	531
7	155		
		19	594
Sta 78+00			
3	166		

STA. 79+00 TO STA. 84+00

FED. RD. DIVISION		PROJECT	TYPE FUNDS	77
2	OHIO	F-24(3) F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)

20 10 ℄ 10 20 30 40 50 60 70 80 90 100



Sta. 86+85 Med
Add for crossover
Sta. 86+85 Rt.
Add for drive

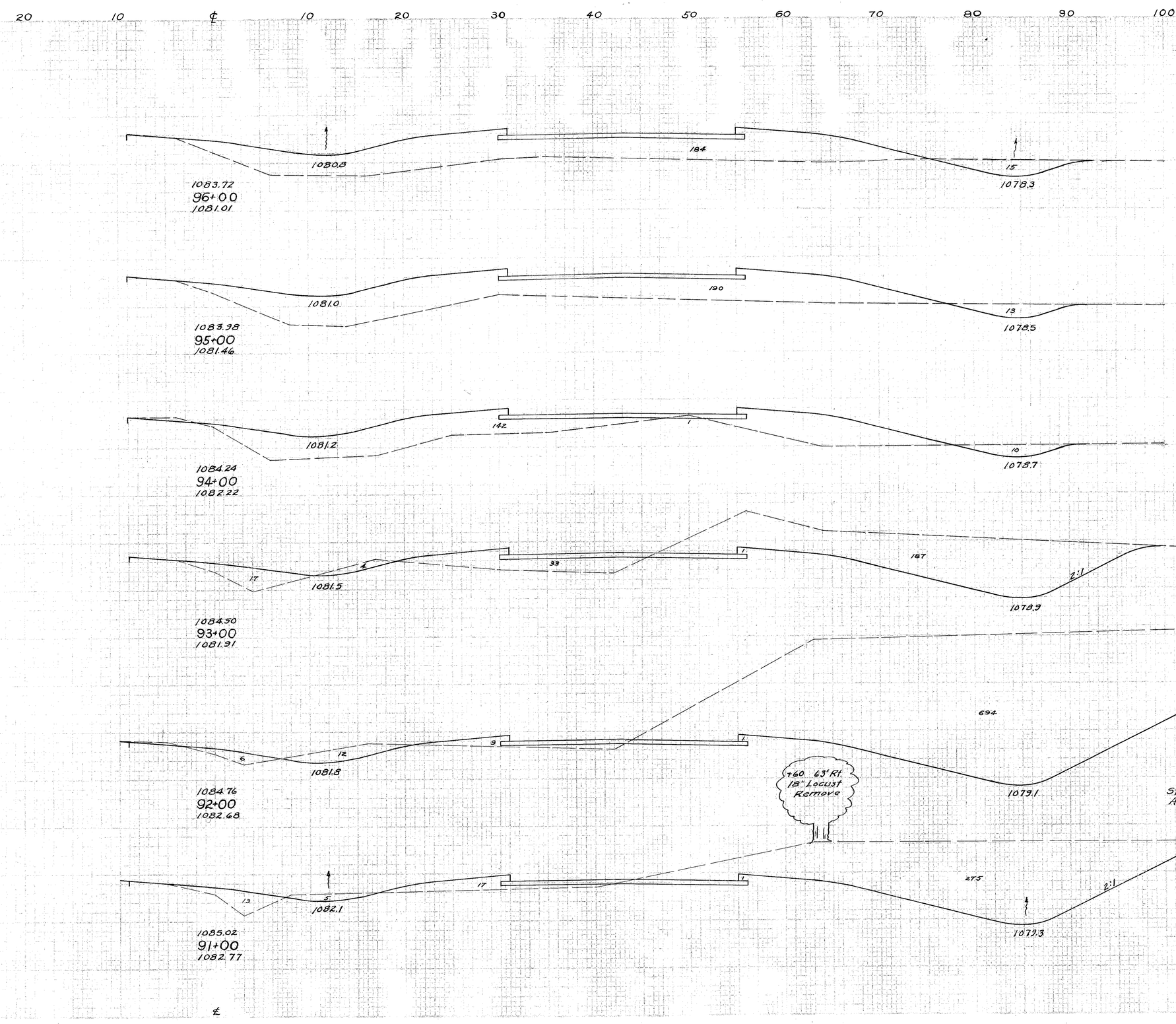
	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
90+00				
	124	3		
			367	115
	74	31		
			474	107
	182	27		
			515	124
	96	40		
			0	10
			2	10
			204	372
	14	161		
			104	607
	42	167		
			81	722
Sta 84+00	2	223		

Excavation 1,834 Cu.Yds.
Emb. 5,095 Cu.Yds.
Emb.+ 1/4 % 5,808 Cu.Yds.

STA. 85+00 TO STA 90+00

FED. RD. DIVISION				TYPE FUNDS	78
2	OHIO	F-24(3)	F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)



	END AREA		CU. YDS	
	CUT	FILL	CUT	FILL
	15	184		
			52	693
	13	190		
			46	615
	12	142		
			376	357
	191	51		
			1663	124
	707	16		
			1828	87
			0	10
	280	31		
			748	115
	124	31		

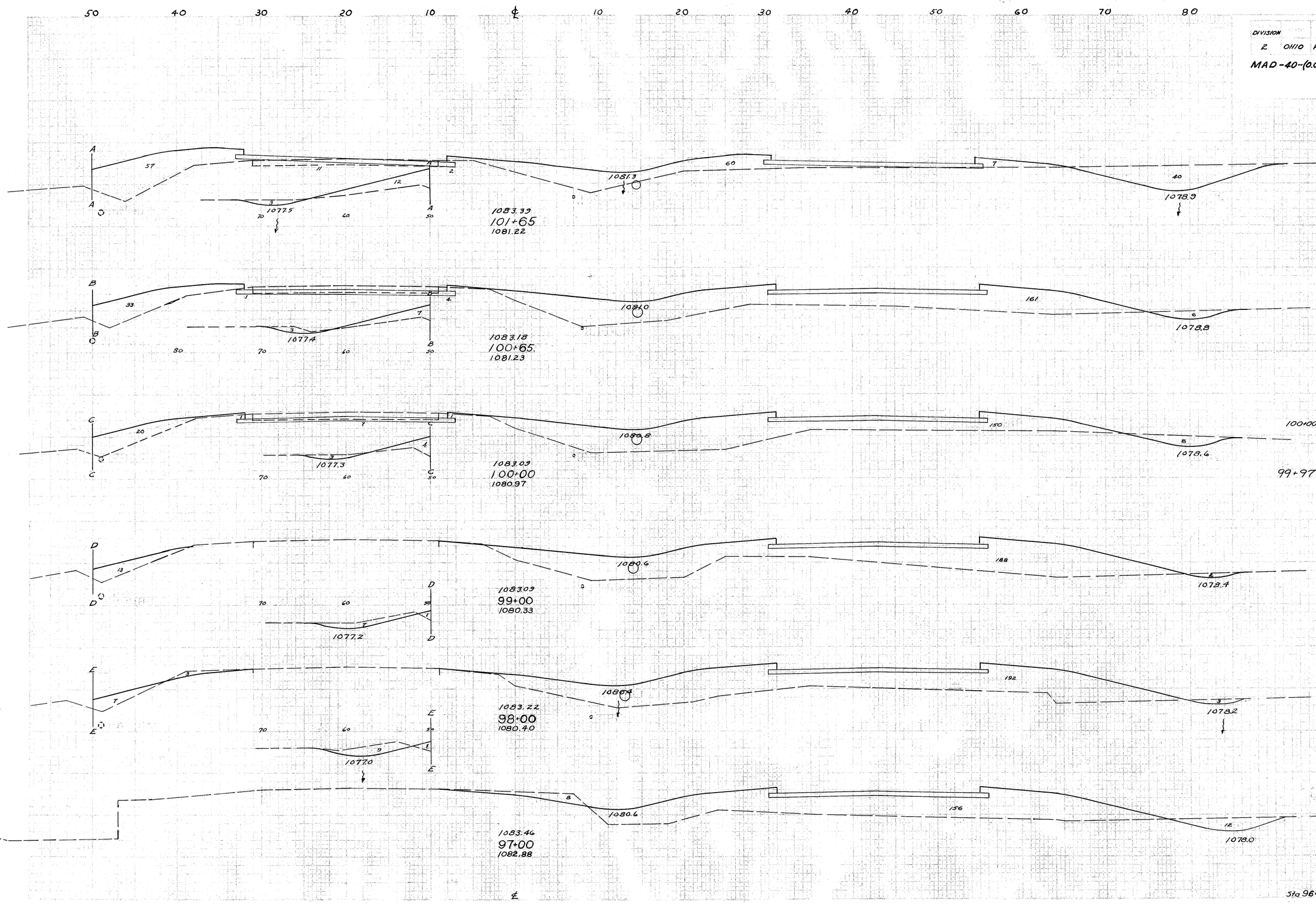
Excavation
Embankment
Emb + 14 %

4,926 Cu Yds.
4,733 Cu Yds.
5,396 Cu Yds.

STA. 91+00 TO STA. 96+00

DIVISION 2 | OHIO | F-24(3) F-190(5) | TYPE FUNDS POST WAR | 79 / 179

MAD-40-(0.00-6.84)



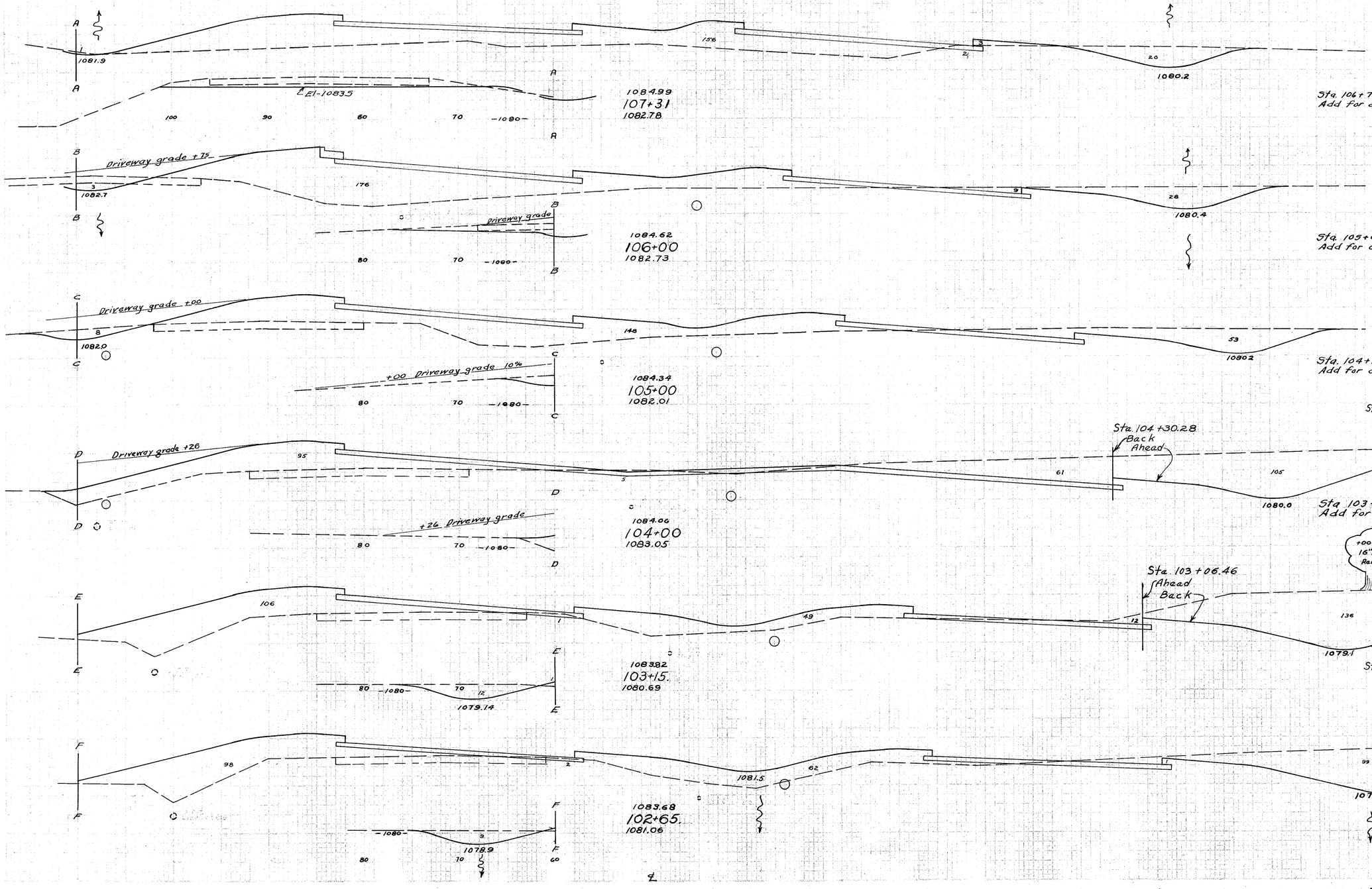
	END AREA		C.U. YDS.	
	CUT	FILL	CUT	FILL
	45	136		
			109	624
	14	201		
			38	454
100+00	18	176		
			2	20
99+97				
Ahead	18	176		
Back	11	176		
			37	679
	9	202		
			44	744
	15	200		
			65	659
	20	156		
			65	630
Sta 96+00	15	184		

STA. 97+00 TO STA. 101+65.20

FED. RD. DIVISION 2 | OHIO | F-24(3) F-190(5) | TYPE FUNDS 80 | POST WAR 179

MAD-40-(0.00-6.84)

60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70



Excavation 3005 Cu. Yds.
Emb. 6506 Cu. Yds.
Emb. + 14% 7417 Cu. Yds.

	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
	36	160		
			0	18
			194	815
	44	176		
			0	16
			194	600
	61	148		
			0	45
			300	314
Ahead	171	95		
Back	66	95		
			74	107
	66	95		
			1571	4
			144	395
	25	156		
			8	49
Ahead	25	156		
Back	161	156		
			208	243
			110	161
			287	550
Sta 101+65	45	136		

STA. 102+65.20 TO STA. 107+30.84

DIVISION 2 | OHIO | F-24(3) F-190(S) | TYPE FUNDS POST WAR | 81 179

MAD-40-(0.00-6.84)

60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

6 1081.0

409

3 1080.5

1086.58
113+00
1081.09

4 1080.0

512

1086.30
112+00
1083.87

3 1079.9

408

3 1079.7

1086.02
111+00
1081.69

Sta 110 +03.74

Ahead

Back

39

6 1081.0

317

1 1079.8

1085.74
110+00
1082.14

+00 55 Lt.
12" dead tree
Remove

271

4 1079.9

1085.46
109+00
1081.88

Sta. 108 +77.74

Back

Ahead

A

2 1081.5

233

7 1080.5

A

1085.34
108+54
1081.89

6 120 110 100 6 90 80 70

℄ El.-1084.0

A

℄

	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
	9	409		
			24	1706
	4	512		
			19	1694
	6	403		
			23	1353
Sta. 110+03.74 Ahead	7	356		
Back	1	317	1	47
110+00	7	356		
Sta 109+40.74 Lt. Add for intersection			103	504
			8	473
	4	271		
			4	190
Sta. 108 +77.74 Ahead	7	191		
Back	21	227		
			19	202
	21	233		
			130	895
Sta 107+31	36	160		

STA. 108+53.20 TO STA 113+00

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

DIVISION 2 | OHIO | F-24(3) F-190(3) | TYPE FUNDS 82 | POST WAR 179

MAD-40-(0.00-6.84)

+21 9' Rt.
15" Apple
Remove

56 | 14 | 3 | 72 | 4

1086.7

1088.25
118+00
1087.63

40 | 109 | 2

1083.6

1087.73
117+00
1086.09

+15 15' Lt.
12" dead tree
+19 12' Lt.
12" dead tree
} Remove

7 | 5 | 42 | 66 | 8

1085.4

1087.32
115+65
1085.58

3 | 161 | 5

1084.2

1082.6

1087.04
114+65
1085.24

4 | 349 | 5

1082.0

1081.2

1084.76
113+65
1081.82

℄

END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
63	86		
		194	361
42	109		
		143	555
15	113		
		46	507
10	161		
		35	944
9	349		
		21	913
113+00 9	409		

Cu Yds. 1017
Cu Yds. 8991
Cu Yds. 10250

Excavation
Emb. + 14 %

STA 113+65 TO STA 118+00

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60

DIVISION 2 | OHIO | F-24(3) F-190(5) | TYPE FUNDS POST WAR | 83 179

MAD-40-(0.00-6.84)

802

4
1085.8

1094.94
124+00
1085.54

672

3
1085.5

1093.70
123+00
1085.74

386

14
1085.3

24
1085.3

1092.46
122+00
1087.64

366

9
1085.1

3
1085.5

1091.22
121+00
1086.31

166

5
36
1084.3

3
1085.8

120+00

1090.01
120+00
1087.51

16

101

84
1084.7

F-1

3
1086.5

1089.01
119+00
1088.21

℄

118+00

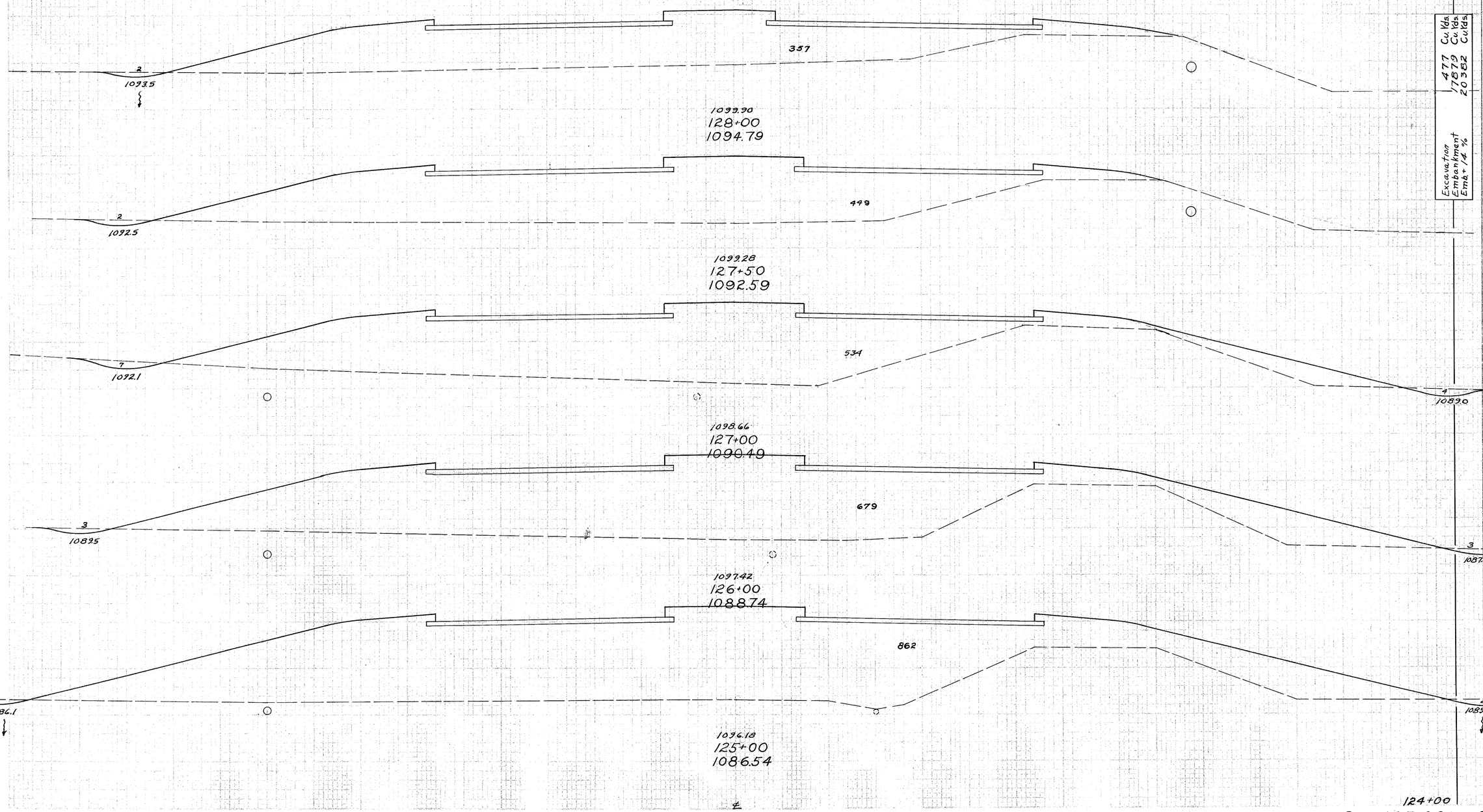
End Area		Cu Yds.	
Cut	Fill	Cut	Fill
4	802		
		13	2730
3	672		
		76	1959
38	386		
		93	1396
12	366		
		94	994
39	171		
		233	533
87	118		
		278	378
63	86		

STA. 119+00 To STA. 124+00

DIVISION 2 | OHIO | F-24(3) F-190(5) | TYPE FUNDS POST WAR | 84 179

MAD-40-(0.00-6.84)

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60



End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
2	357		
		4	747
2	449		
		12	910
11	534		
		31	2246
6	679		
		22	2851
6	862		
		19	3082
124+00	4	802	

Excavation
Embankment
Emb. + 14 %
477 Cu. Yds.
17879 Cu. Yds.
20382 Cu. Yds.

STA. 125+00 to STA. 128+82

DIVISION 2 | OHIO | F-24(3) F-190(5) | TYPE FUNDS POST WAR 85 179

MAD-40-(0.00-6.84)

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60

+78 2'Lt 15" Apple Remove
+76 3'Lt 12" Apple Remove
+26 1'Lt 15" Apple Remove
+41 3'Lt 12" Apple Remove

13 F-1 39 5 3 37

1103.06
132+00
1102.91

131+54
1103.21

131+48
1103.21

Sta. 131+32.03
Back
Ahead
17 95 29
Sta. 131+31.81
Back
Ahead

1102.82
131+00
1103.11

+33 16'Lt. 32" Maple Remove

Sta. 130+10.03
Back
Ahead
12 Median 25 4 2
Sta. 130+09.81
Ahead
Back

1102.18
130+00
1101.29

+89 5'Lt 16" Elm Remove

5 67 10 F-1 C-11 5

1096.4

1101.14
129+00
1099.59

℄

Add for intersection

BEGIN F-190 (5) Sta 130+70.92

END F-24 (3)

Add for intersection

Sta. 130+10

130+00

Sta. 131+32

	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
	56	43		
			248	54
Ahead	141	0		
Back	95	0		
			113	0
	95	0		
			188	4
			83	0
	60	0		
	60	0	96	0
			123	34
Ahead	25	0		
Back	27	16		
			10	6
	27	16		
			80	165
	16	73		
			33	736
	2	357		

128+00

STA. 129+00 TO STA. 132+00

DIVISION 2 | STATE OHIO | F.A. NO. F-24(3) F-190(5) | TYPE FUNDS POST WAR | 86 179

MAD-40-(000-6.84)

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60

+86 30'Rt. 15" Walnut Remove

382

2 1094.5 — 3 1094.2

1100.22
136+00
1094.85

135+42
1096.38

135+35
1098.18

+70 35'Rt. 15" Elm Remove
+11 55'Rt. 12" Elm Remove

14 — 3 — 2 — 167 — 3 1095.8

1101.38
135+00
1098.95

+83 46'Rt. 12" Elm Remove

18 — 2 — 14 — 95 — 2 1098.5

1102.34
134+00
1101.05

+04 47'Rt. 18" Walnut Remove

7 — 6 — 99 — 3 1099.2

1102.30
133+00
1101.21

℄

132+00

	End Area		Cu. Yds.	
	Cut	Fill	Cut	Fill
5	382			
44			1022	
19	170			
98	494			
34	97			
81	365			
10	100			
122	265			
56	93			

F-24(3) F-190(5)
Excavation — 229 - 1078 Cu. Yds.
Embankment — 40 - 9405 Cu. Yds.
Emb + 14 % — 46 — 10722 Cu. Yds.

STA. 133+00 TO STA. 136+00

DIVISION 2 | OHIO F-24(3) F-190(5) | TYPE FUNDS POST WAR | 87 179

MAD-40-(0.00-6.84)

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60

1087.5 — 3 — 267 — 26 — 1089.3

1093.26
142+00
1088.60

1088.0 — 3 — 351 — 10 — 8 — 1089.5

1094.42
141+00
1088.60

1088.7 — 9 — 395 — 24 — 3 — 1089.7

140+00

1095.58
140+00
1088.97

+85 1'Rt. 12" Apple Remove

+405 23'Rt. 12" W. Cherry Remove

1088.9 — 3 — 435 — 17 — 1 — 3 — 1090.1

1096.74
~~139+00~~
1090.07

1089.5 — 4 — 544 — 2 — 1091.1

+74 25'Rt. 12" Walnut Remove

1097.90
~~138+00~~
1090.67

1091.6 — 3 — 528 — 3 — 1092.0

1093.06
137+00
1091.95

℄

136+00

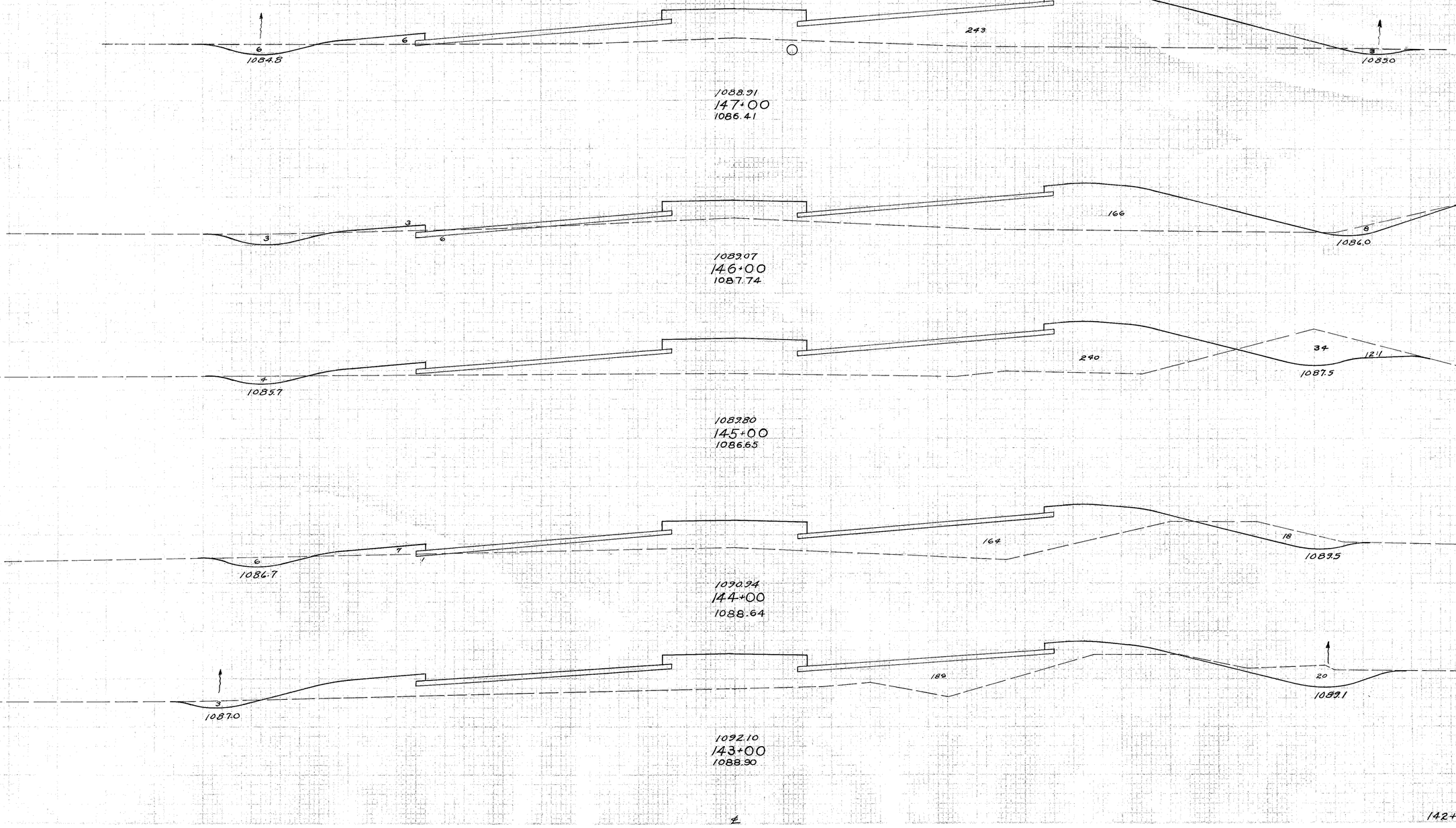
End Area		C.u. Yds.	
Cut	Fill	Cut	Fill
29	267		
		76	1163
12	361		
		44	1444
12	419		
		35	1650
7	472		
		24	1881
6	544		
		22	1985
6	528		
		20	1685
5	382		

STA. 137+00 TO STA. 142+00

DIVISION 2 | OHIO | PROJECT F-24(3) F-190(5) | TYPE FUNDS POST WAR | 88 179

MAD-40-(0.00-6.84)

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60



End Area		Cu Yds.	
Cut	Fill	Cut	Fill
9	249		
		48	774
17	169		
		102	757
38	240		
		117	761
25	171		
		89	667
23	189		
		96	844
29	267		

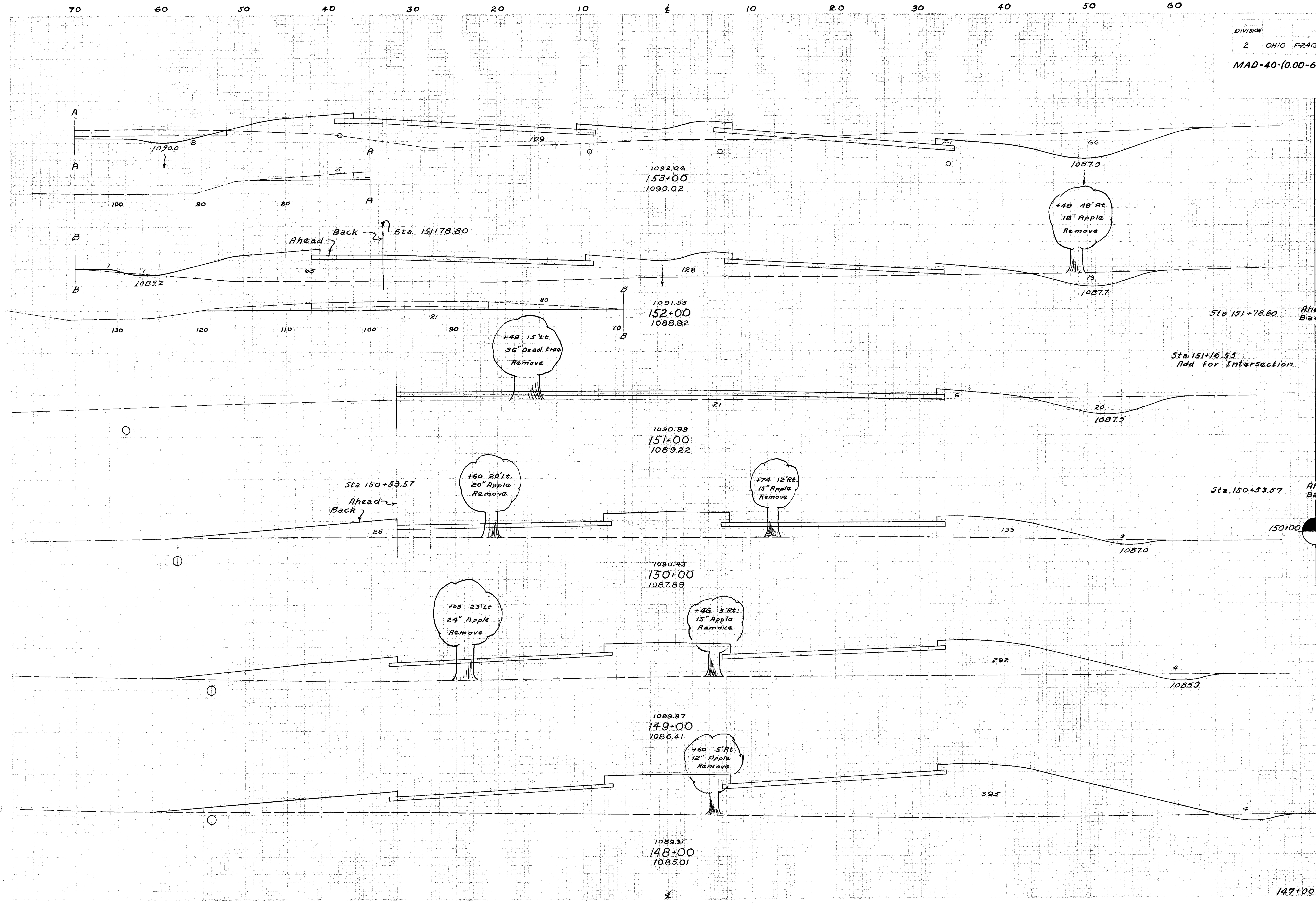
Excavation 624 Cu Yds.
Emb + 14% 971 Cu Yds.
1074 Cu Yds.

142+00

STA. 143+00 TO STA. 147+00

DIVISION			TYPE FUNDS	
2	OHIO	F-24(3) F-190(5)	POST WAR	89 / 179

MAD-40-(0.00-6.84)



70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60
A
A
1090.0
109
66
1087.9
1092.06
153+00
1090.02
100 90 80
+49 48' Rt.
18" Apple
Remove
B
B
Ahead
Back
Sta. 151+78.80
65
128
13
1087.7
1089.2
80
21
130 120 110 100 90 70
1091.55
152+00
1088.82
+48 15' Lt.
36" Dead tree
Remove
6
21
20
1087.5
1090.99
151+00
1089.22
Sta 150+53.57
Ahead
Back
+60 20' Lt.
20" Apple
Remove
+74 12' Rt.
15" Apple
Remove
28
133
3
1087.0
1090.43
150+00
1087.89
+03 23' Lt.
24" Apple
Remove
+46 5' Rt.
15" Apple
Remove
292
4
1085.9
1089.87
149+00
1086.41
+60 5' Rt.
12" Apple
Remove
395
4
1089.31
148+00
1085.01

Sta 151+78.80 Ahead / Back

Sta 151+16.55 Add for Intersection

Sta. 150+53.57 Ahead / Back

150+00

147+00

End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
79	110		
		209	376
34	193		
		27	152
34 (Ahead)	193 (Ahead)		
34 (Back)	128 (Back)		
		79	226
		109	321
20	27		
		20	137
3 (Ahead)	133 (Ahead)		
3 (Back)	161 (Back)		
		6	319
3	161		
		13	839
4	292		
		15	1272
4	395		
		24	1193
9	249		

STA. 148+00 TO STA. 153+00

TYPE FUNDS 90
2 OHIO F-24(3) F-190(5) POST WAR 179

MAD-40-(0.00-6.84)

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60

+20 59'Lt. 12" Walnut Remove

+96 40'Rt. 24" Ash Remove

10915

46 F-6 5 202 2:1 Sodding F-2

1091.98
155+00
1091.28

+51 30'Rt. 15" E.Walnut Remove

+76 34'Rt. 13" E. Walnut Remove

Driveway grade

60 2 1 4 F-1 216 2:1 F-2

1092.15
154+50
1091.58

Driveway grade 10%

Sta. 154+40 Lt. Add for drive

Sta 154+27 Med. Add for crossover

Sta. 154+27 Rt Add for drive

1092.19
154+29 Dr.
1092.33

+34 36'Rt. 15" W. Birch Remove

+19 46'Rt. 20" Elm Remove

+03 60'Rt. 24" Maple Remove

62 5 F-1 156 F-2 2:1

153+90 112'Rt. 20" Maple - Remove

1092.22
154+00
1091.93

80 7 1090.2 158 F-1

1092.19
153+50
1091.23

℄

	END AREA		C.U. YDS.	
	CUT	FILL	CUT	FILL
153+00				
	206	59		
			395	118
	220	69		
			351	129
			0	15
			0	4
			324	0
			300	140
			226	177
153+00			79	110

Sta. 153+50 To Sta 155+00

DIVISION			TYPE FUNDS	91
2	OHIO	F-24(3) F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60

150 3 1086.0 80 90 1087.2 5 1 F-1 60

1089.33
158+00
1087.74

4 15 1090.7 11 8 3 1088.4 7 62

1090.36
157+00
1089.14

+30 47'Rt. 15" Elm Remove

+20 54'Rt. 18" & Elder Remove

74 1091.1 F-1 7 9 5 1 1090.0 F-9 F-1 120 2:1 Sodding

1091.35
156+00
1090.80

+40 58'Rt. 8" Blue Spruce

42 1091.3 F-3 1-C 15 2 1091.0 F-18 F-2 163 2:1 Sodding

7 Sq. Yds. Riprap for Tree Protection

1091.72
155+50
1091.25

155+07 Steps
1091.38

℄

End Area		Cu Yds.	
Cut	Fill	Cut	Fill
63	156		
		265	348
80	32		
		522	106
202	25		
		380	59
208	38		
		382	90
206	59		

Excavation 3873 Cu. Yds.
Embankment 4966 Cu. Yds.
Enb + 14 % 5661 Cu. Yds.

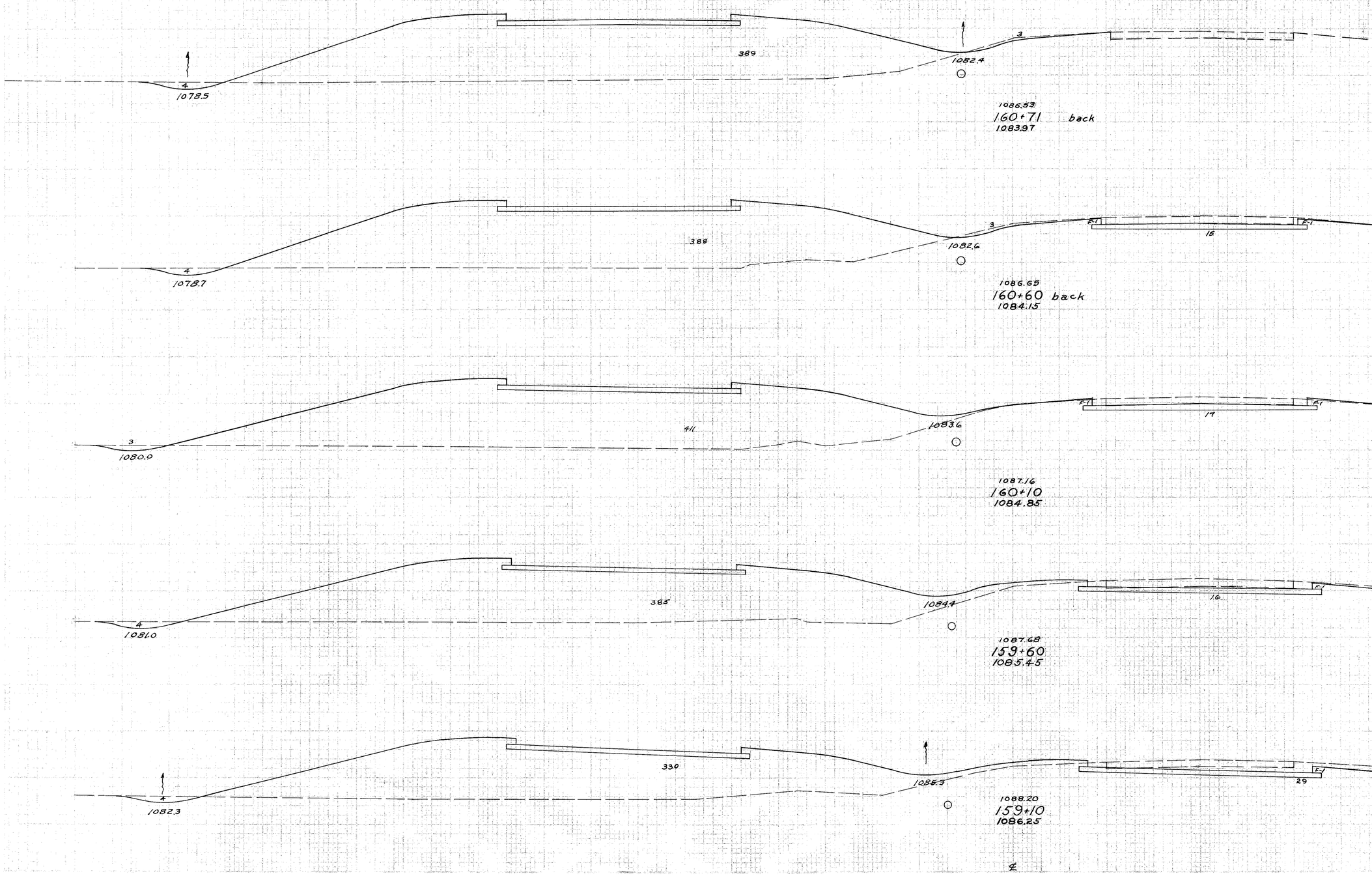
155+00

Sta. 155+07 To Sta. 158+00

DIVISION 2 | OHIO | F-24(3) F-190(5) | TYPE FUNDS POST WAR | 92 179

MAD-40-(0.00-6.84)

100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30



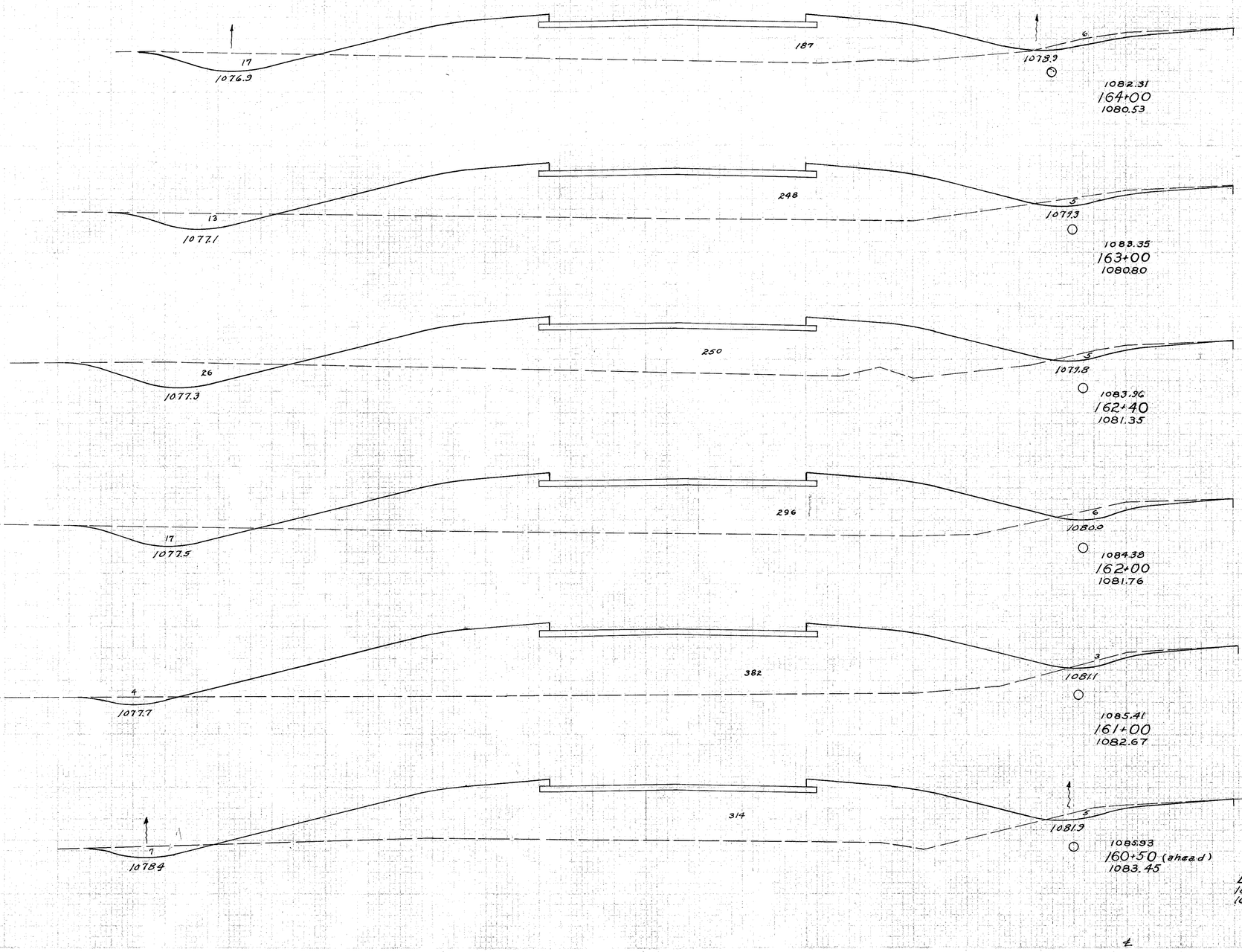
End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
7	389		
		6	159
22	390		
		39	744
20	413		
8	148		
		31	592
22	386		
		51	664
33	331		
		196	992
63	156		

Sta 159+10 To Sta. 160+71.37 ba

DIVISION 2 | OHIO | F-24(3) F-190(5) | TYPE FUNDS POST WAR 93 179

MAD-40-(0.00-6.84)

120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10



Equation Station
161+01.26 back =
160+22.53 ahead

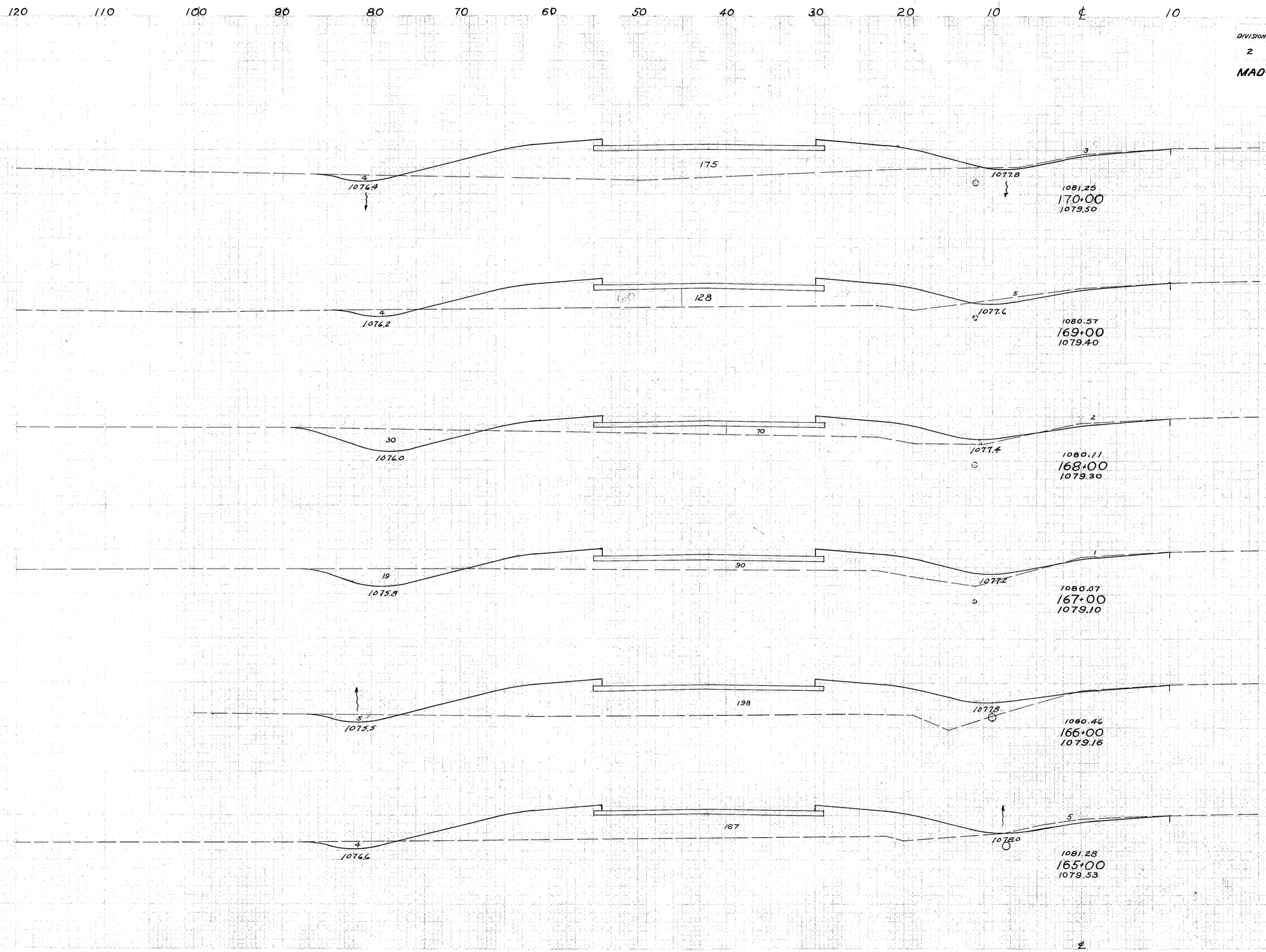
℄ 160+71 Back

END AREA C.U. YDS.			
CUT	FILL	CUT	FILL
23	187		
		76	806
18	248		
		55	553
31	250		
		40	404
23	296		
		56	1256
7	382		
		18	645
12	314		
		10	357
Ahead			
Back		11	394
7	389		

STA. 160+50 TO STA. 164+00

DIVISION 2 | TYPE FUNDS OHIO F-24(3) F-190(5) POST WAR | 94 / 179

MAD-40-(0.00-6.84)



END AREA		C.U. YDS	
CUT	FILL	CUT	FILL
7	175		
		30	561
9	128		
		76	367
32	70		
		96	296
20	90		
		46	533
5	198		
		26	676
9	167		
		59	656
		23	187

Excavation 652 Cu. Yds.
Embankment 8555 Cu. Yds.
Emb + 1/4 % 9753 Cu. Yds.

STA 165+00 TO STA 170+00

DIVISION 2 OHIO F-24(3) F-190(5) | TYPE FUNDS POST WAR | 95 179

MAD-40-(0.00-6.84)

120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10

+74 55' Lt. 20" MAPLE REMOVE
+87 57' Lt. 24" MAPLE REMOVE
+74 46' Lt. 12" MAPLE REMOVE
+87 45' Lt. 24" MAPLE REM.
+73 34' Lt. 42" MAPLE REMOVE

3 5 39 3
1082.0
1085.33
176+00
1083.92

Sta 174+90 Lt.
Add for drive
Sta 175+02 ℄
Add for crossover

15 12 7 29
1081.2
1084.65
175+00
1083.22

18 79 10
1080.2
1083.97
174+00
1082.20

+05 58' Lt. 48" OAK REMOVE
+12 59' Lt. 36" DEAD TREE REMOVE
+10 54' Lt. 36" DEAD TREE REMOVE
+98 40' Lt. 24" OAK REMOVE

5 165 6
1079.0 1079.4
1083.29
173+00
1081.23

5 175 11
1078.0 1078.5
1082.61
172+00
1080.33

4 193 4
1076.7 1078.0
1081.93
171+00
1079.67

℄

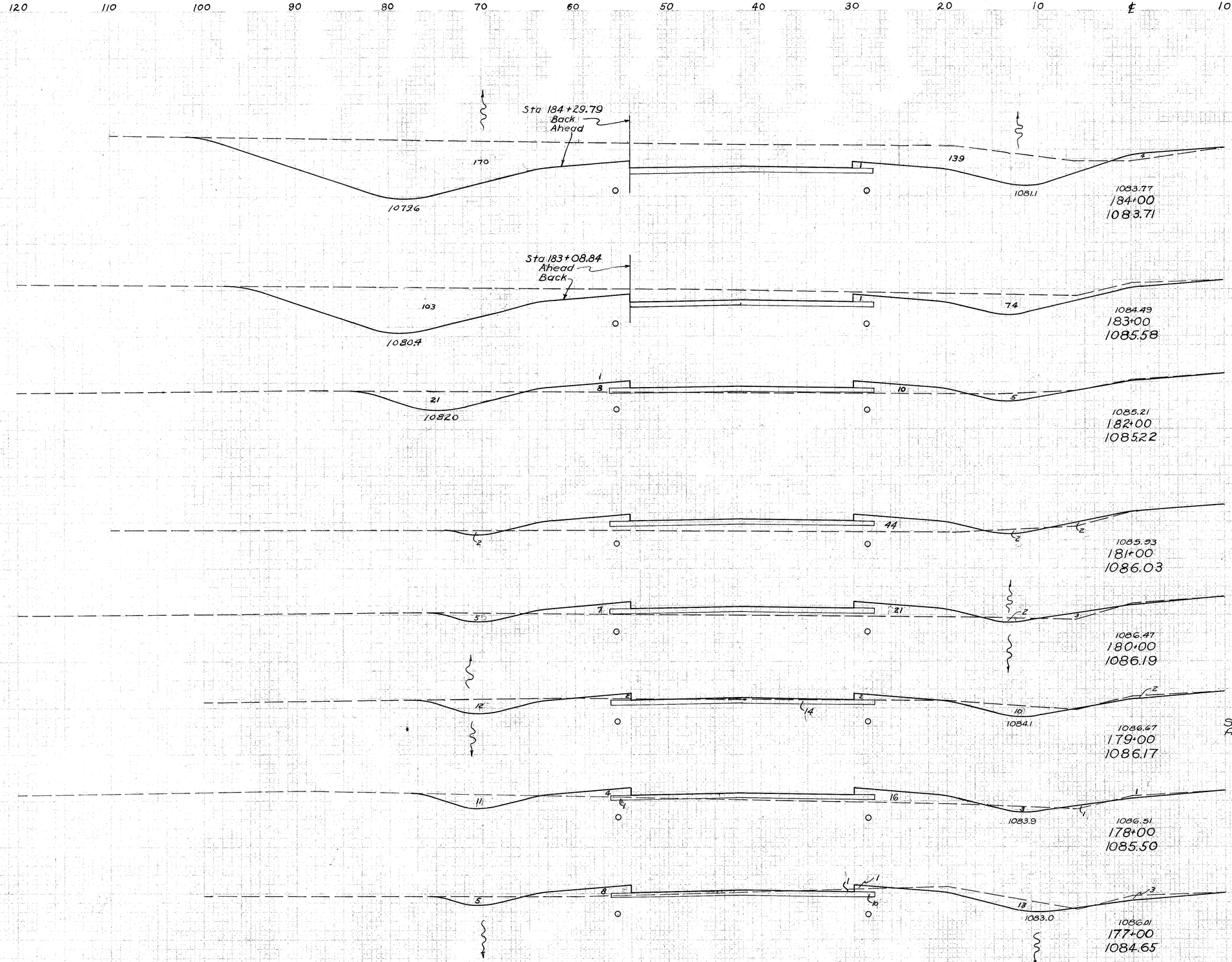
Excavation 836 Cu. Yds.
Embankment 2986 Cu. Yds.
Embankment + 14 % 3404 Cu. Yds.

END AREA CUT	END AREA FILL	C.U. YDS. CUT	C.U. YDS. FILL
13	44		
		2	1
		0	10
		128	96
56	8		
		156	161
28	79		
		712	452
VI	165		
		50	630
16	175		
		444	681
8	193		
		31	681
170+00	7	175	

STA. 171+00 TO STA. 176+00

DIVISION			TYPE FUNDS	
2	OHIO	F-24(3) F-190(5)	POST WAR	96 179

MAD-40-(0.00-6.84)

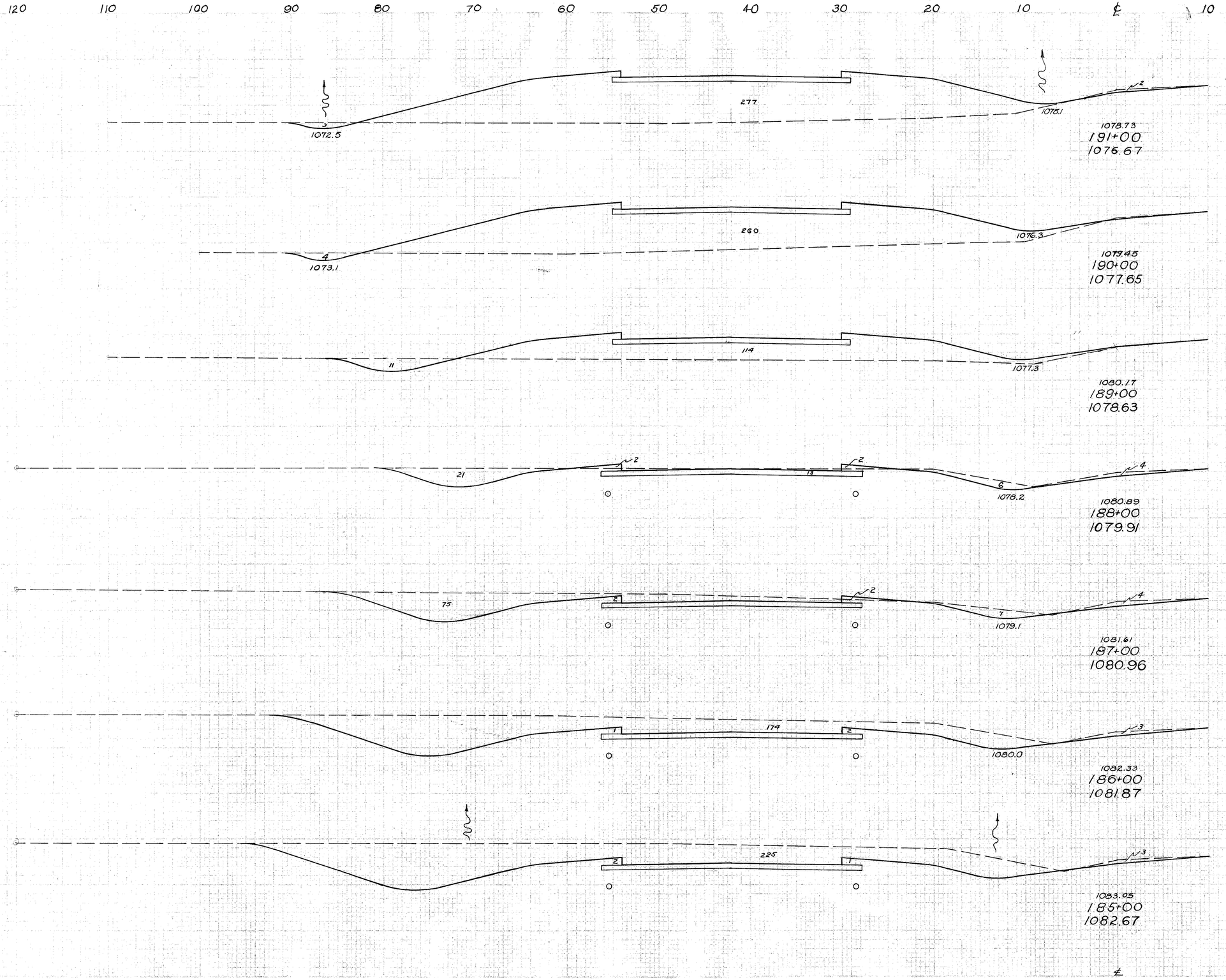


		END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
Sta. 184+29.79	Ahead	309	5		
	Back	139	6		
				153	6
				359	10
Sta. 183+50.15 Add for intersection				655	23
Sta. 183+08.84	Ahead	74	1		
	Back	177	1		
		177	1	58	0
				376	35
		26	18		
		4	46		
				22	143
180+00		8	31		
				85	65
		38	4		
Sta 179+93 ℄ Add for crossover				0	9
				100	46
		16	21		
				87	56
		31	9		
				81	98
176+00		13	44		

STA. 177+00 TO STA. 184+00

DIVISION 2 | OHIO | F-24(3) F-190(S) | TYPE FUNDS 97 | POST WAR 179

MAD-40-(0.00-6.84)



END AREA		C.U. YDS.	
CUT	FILL	CUT	FILL
5	277		
		17	994
4	260		
		28	693
11	114		
		102	219
44	4		
		241	15
86	4		
		487	13
177	3		
		750	11
228	3		
		698	11
184+29.79		309	5

190+00

Excavation 3985 cu. yds.
Emb. 1298 cu. yds.
Emb. + 14 % 1480 cu. yds.

STA. 185+00 TO STA. 191+00

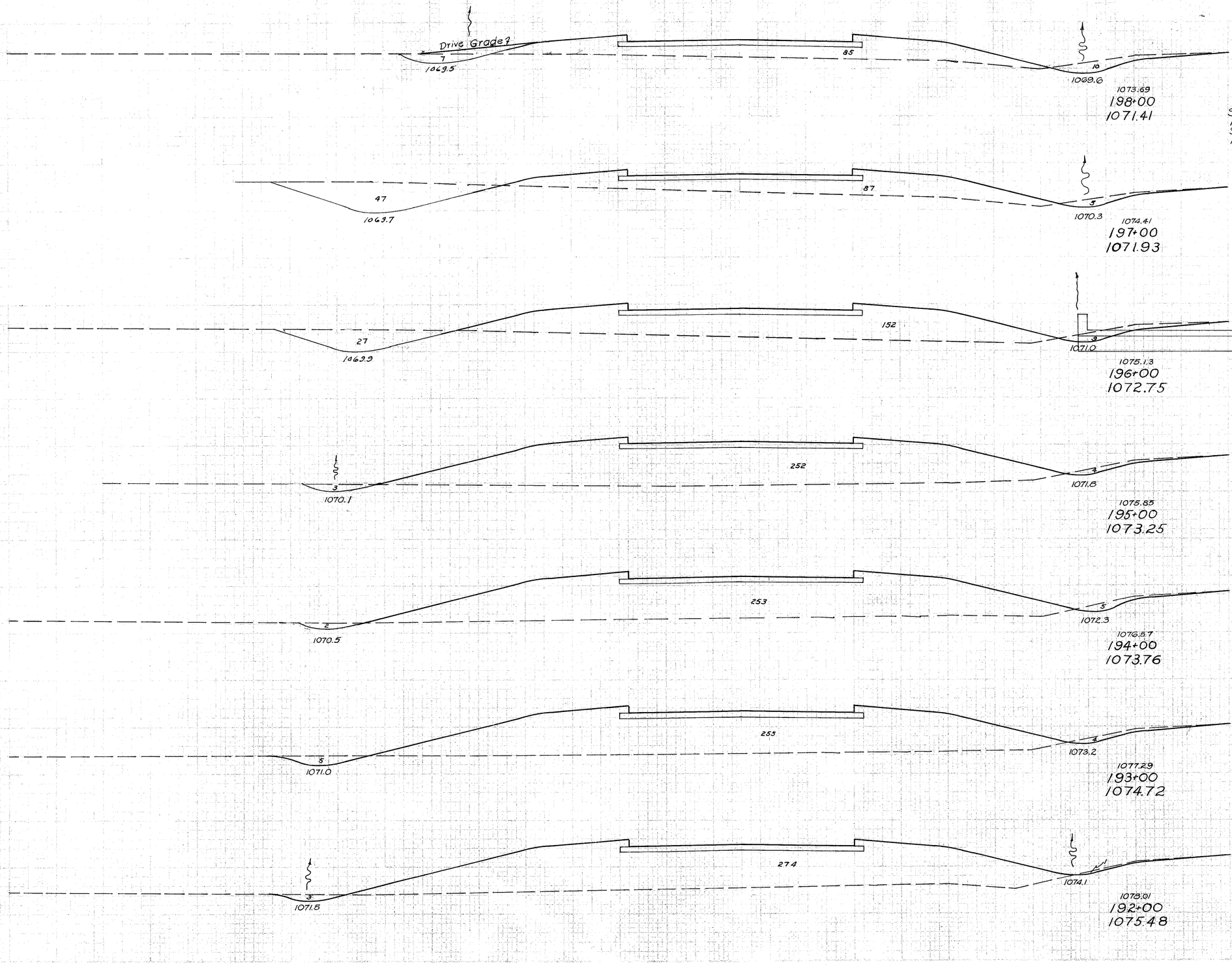
DIVISION 2 OHIO F-24(3) F/90(5)

TYPE FUNDS 98

POST WAR 179

MAD-40-(0.00-6.84)

120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10



END AREA		C.U. YDS.	
CUT	FILL	CUT	FILL
17	85		
		0	2
		0	10
		128	319
52	87		
		163	443
36	152		
		80	748
7	252		
		26	935
7	253		
		30	941
9	255		
		24	980
4	274		
		17	1020
5	277		

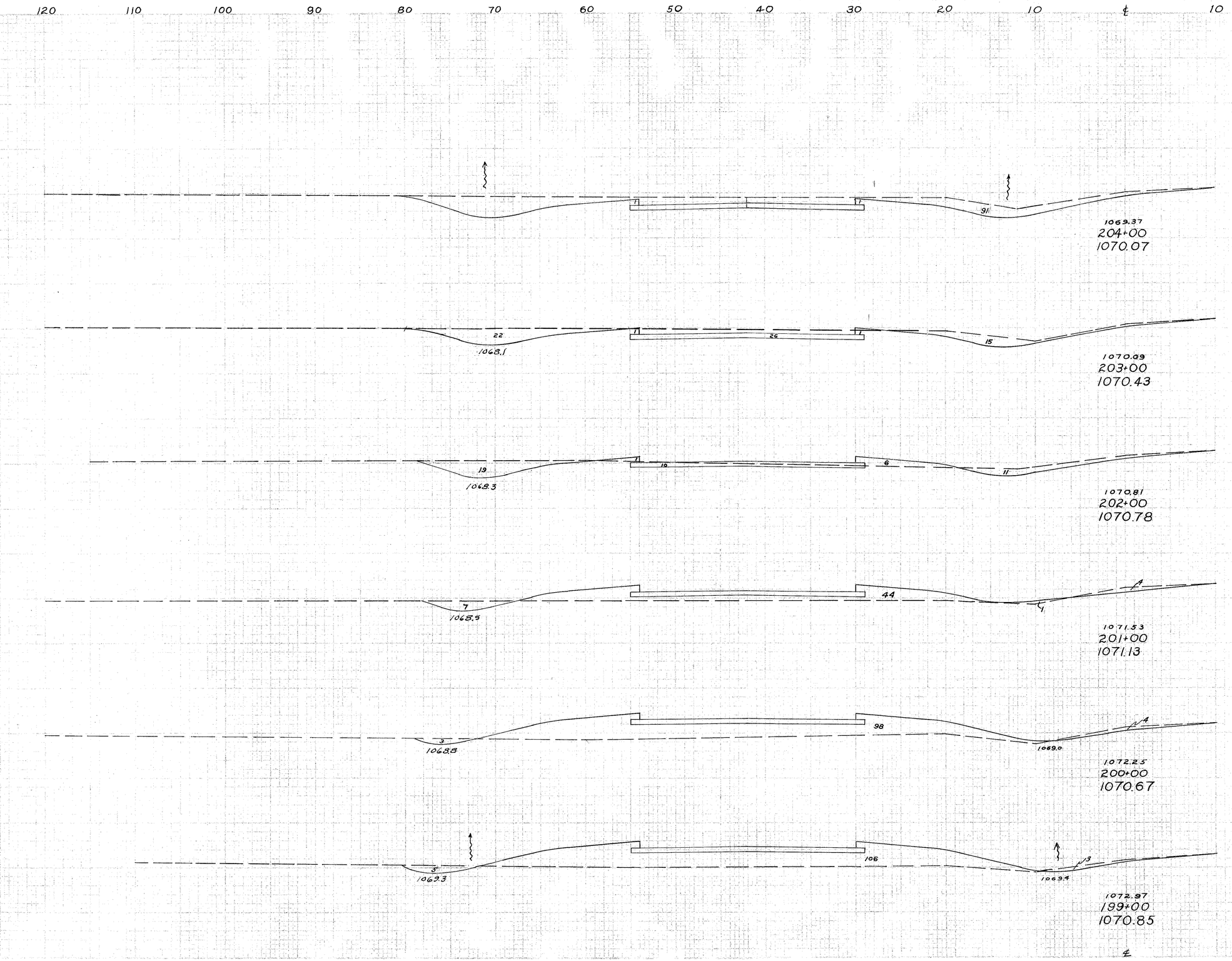
Excavation	559 cu. yds.
Embankment	7124 cu. yds.
Emb x 1.4 %	8121 cu. yds.

191+00

STA. 192+00 TO STA. 198+00

DIVISION			TYPE FUNDS	99
2	OHIO	F-24(3) F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)



END AREA		C.U. YDS.	
CUT	FILL	CUT	FILL
91	2		
		285	7
63	2		
		191	17
40	7		
		94	96
11	45		
		33	265
7	98		
		28	378
8	106		
		46	354
17	85		

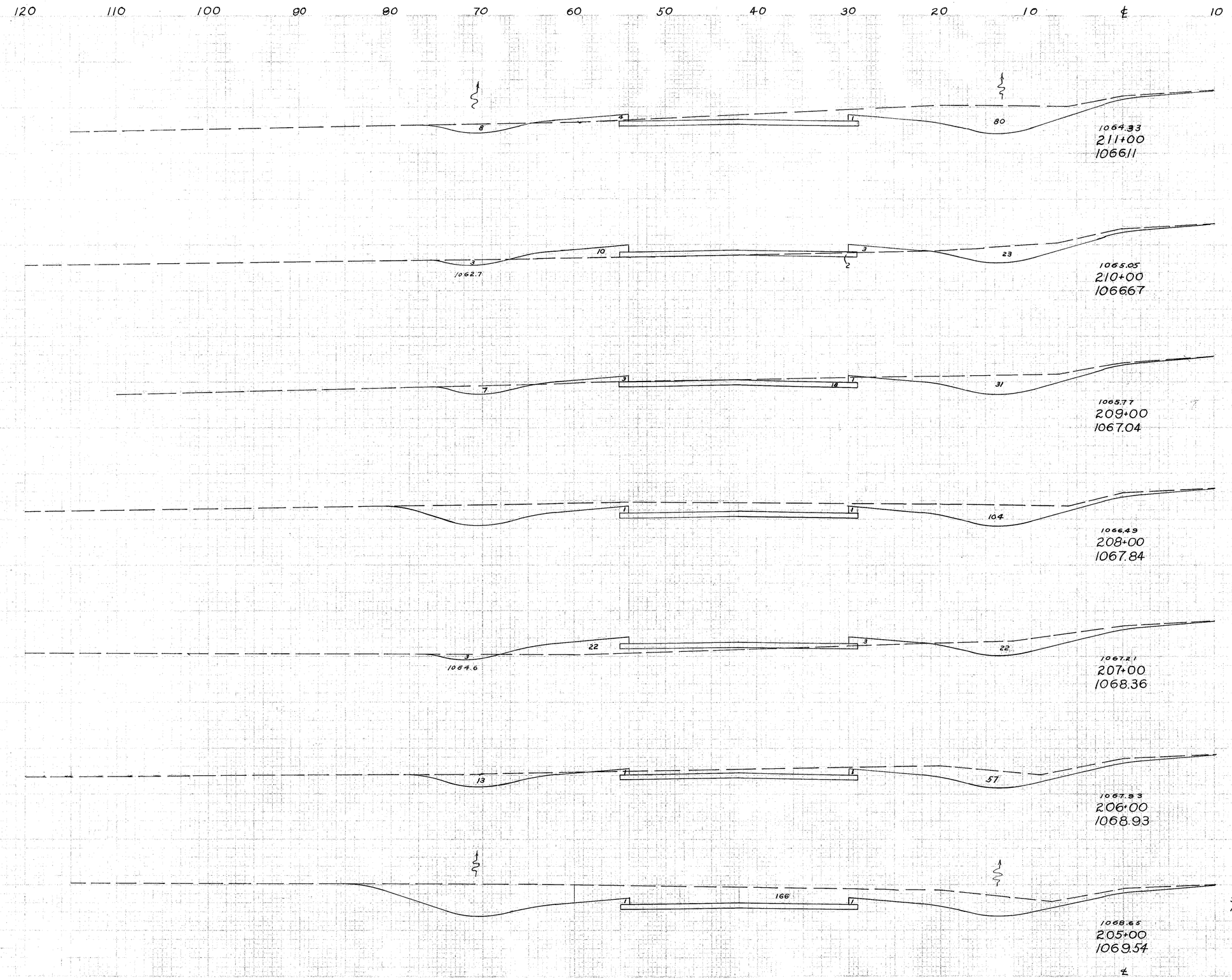
200+00

198+00

STA. 199+00 TO STA. 204+00

DIVISION 2 | OHIO | F-24(3) F-190(S) | TYPE FUNDS POST WAR | 100 | 179

MAD-40-(0.00-6.84)



END AREA		C.U. YDS	
CUT	FILL	CUT	FILL
88	5		
		215	33
28	13		
		156	31
56	4		
		296	11
104	2		
		239	50
25	25		
		176	50
70	2		
		437	7
166	2		
		2	10
		476	7
91	2		

210+00

Excavation	2385	cu. yds.
Embankment	551	cu. yds.
Emb. + 14 %	628	cu. yds.

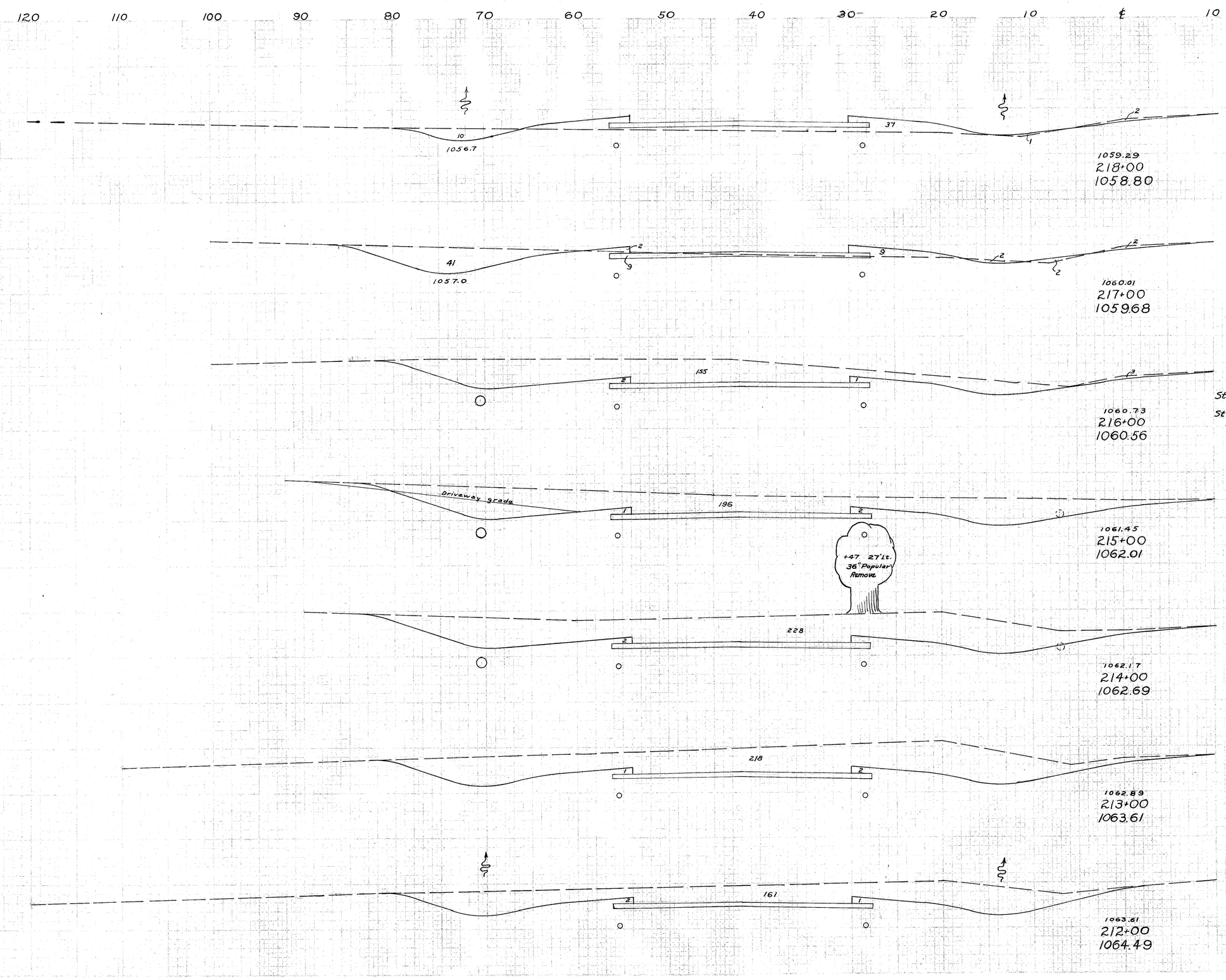
Sta 204+57 Med
Add for crossover

204+00

STA. 205+00 TO STA. 211+0

DIVISION				TYPE FUNDS	101
2	OHIO	F-24(3)	F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)



Sta. 215+32 Lt
Add for drive
Sta. 215+32 Med.
Add for crossover

END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
12	38		
		122	94
54	13		
		393	30
158	3		
		2	3
		2	9
		656	11
196	3		
		185	11
228	3		
		826	11
218	3		
		702	11
161	3		
		461	15
88	5		

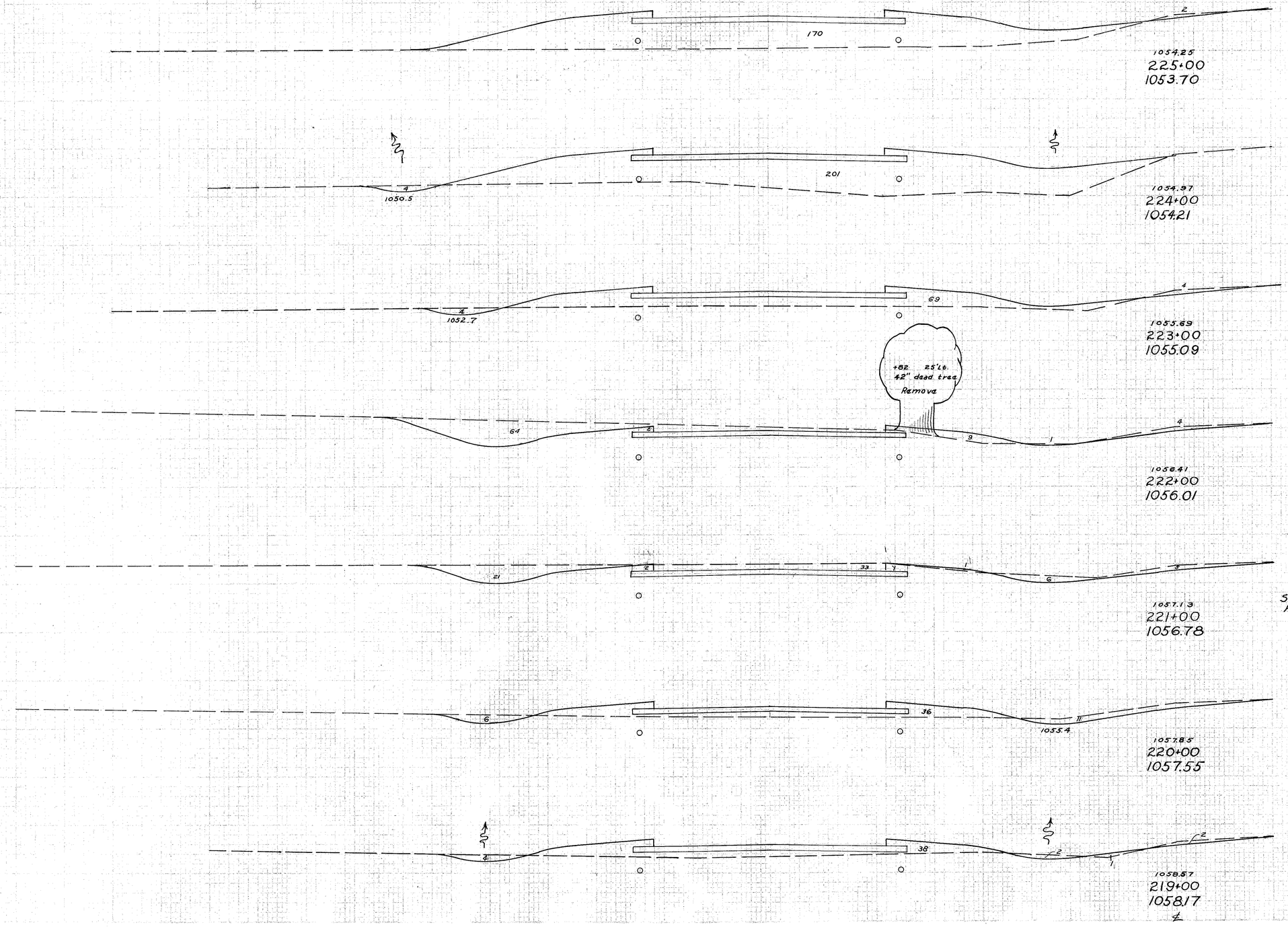
Excavation 4247 cu. yds.
Embankment 510 cu. yds.
Emb. + 14 % 581 cu. yds.

STA. 212+00 TO STA. 218+00

DIVISION			TYPE FUNDS	
2	OHIO	F-24(3) F-190(6)	POST WAR	102 179

MAD-40-(0.00-6.84)

120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10

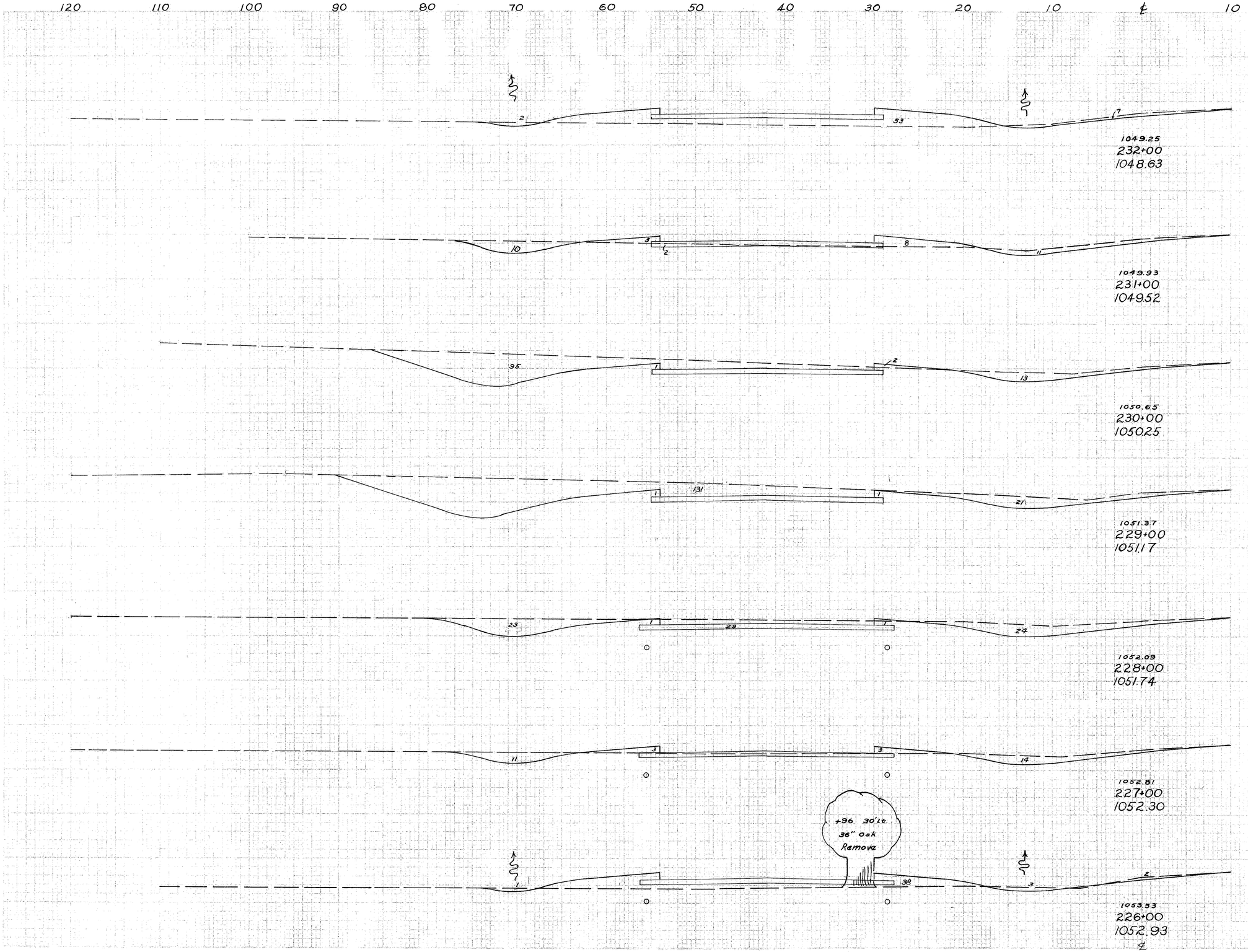


END AREA		C.U. YDS	
CUT	FILL	CUT	FILL
2	170		
			11 687
4	201		
			22 500
8	69		
			143 148
69	11		
			248 28
65	4		
		0	9
			152 74
220+00		17	36
			46 139
8	39		
			37 143
218+00		12	38

STA. 219+00 TO STA. 225+00

DIVISION			TYPE FUNDS	103
2	OHIO	F-24(3) F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)



	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
	9	53		
			59	119
	23	11		
			243	26
230+00	108	3		
			481	9
	152	2		
			422	7
	76	2		
			204	15
	34	6		
			74	81
	6	38		
			15	404
225+00	2	170		

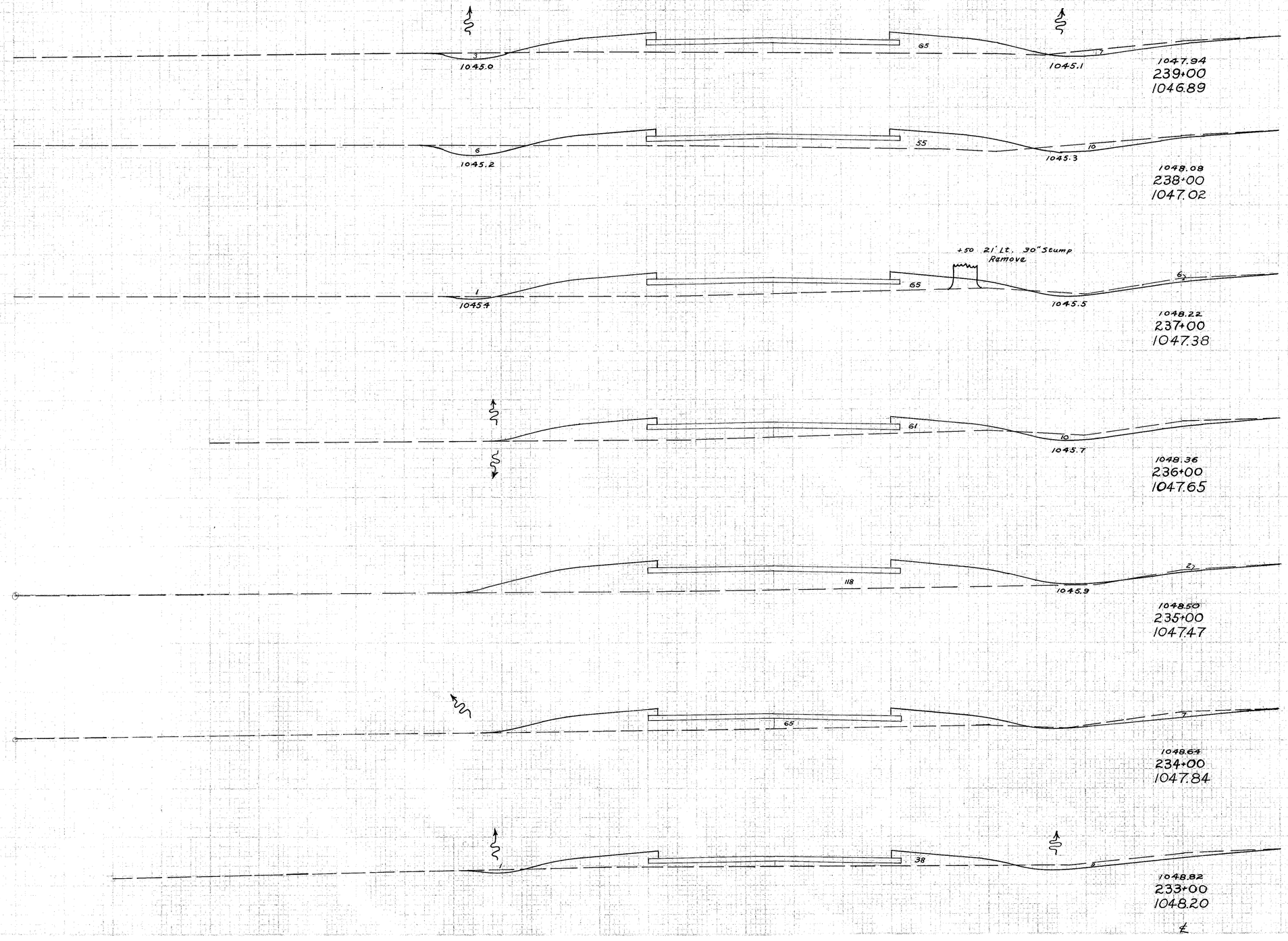
Excavation	1772 cu. yds.
Embankment	1962 cu. yds.
Emb. + 14 %	2237 cu. yds.

STA. 226+00 TO STA. 232+00

DIVISION			TYPE FUNDS	104
2	OHIO	F-24(3) F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)

120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10



	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
	10	65		
			48	222
	16	55		
			43	222
	7	65		
			31	233
	10	61		
			22	331
	2	118		
			17	339
	7	65		
			31	191
	10	38		
			35	169
	9	53		

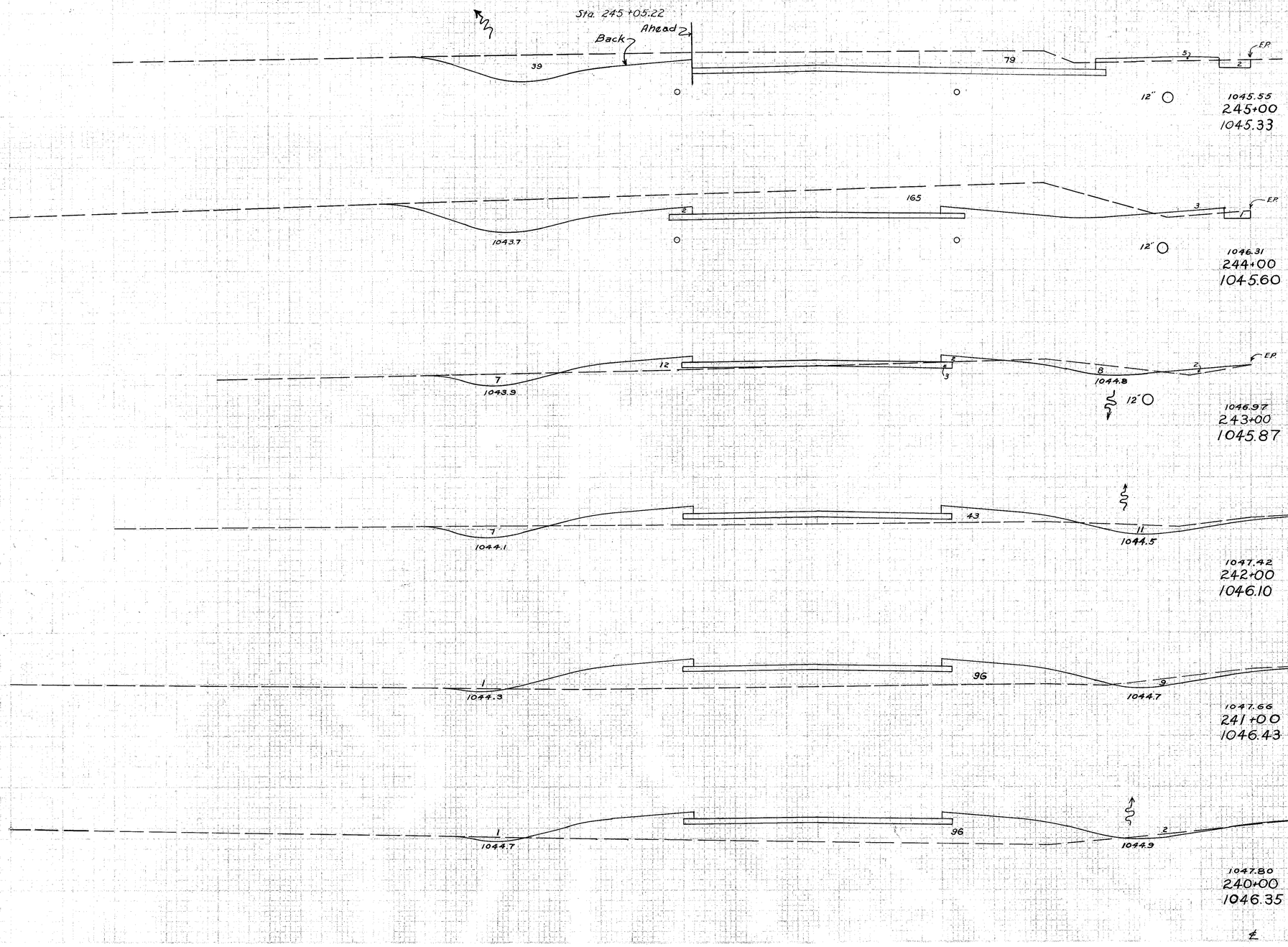
Excavation	553 cu. yds.
Embankment	2150 cu. yds.
Emb. + 14 %	2451

STA. 233+00 to STA. 239+00

DIVISION 2 | OHIO | F-24(3) F-190(5) | TYPE FUNDS POST WAR | 105 179

MAD-40-(000-6.84)

120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10



Sta. 245+38.48
Add for intersection

Sta 245+05.22 Ahead

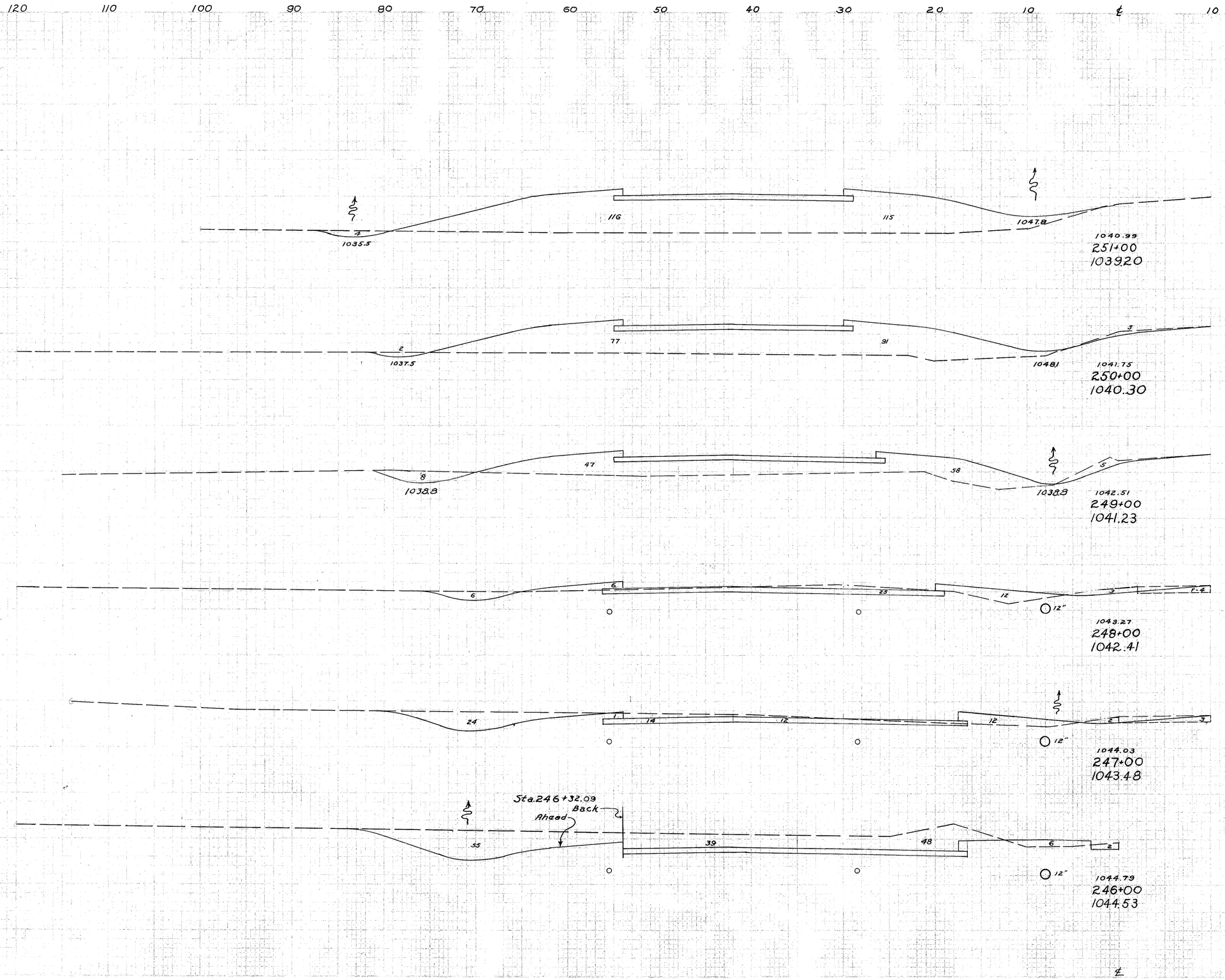
Back

END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		379	4
81	5		
120	5		
		23	1
120	5		
		530	20
166	6		
		341	41
18	16		
		67	109
18	43		
		52	257
10	96		
		24	356
3	96		
		24	298
239+00	10	65	

STA. 240+00 TO STA 245+00

DIVISION			TYPE FUNDS	106
2	OH10	F-24(3) F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)



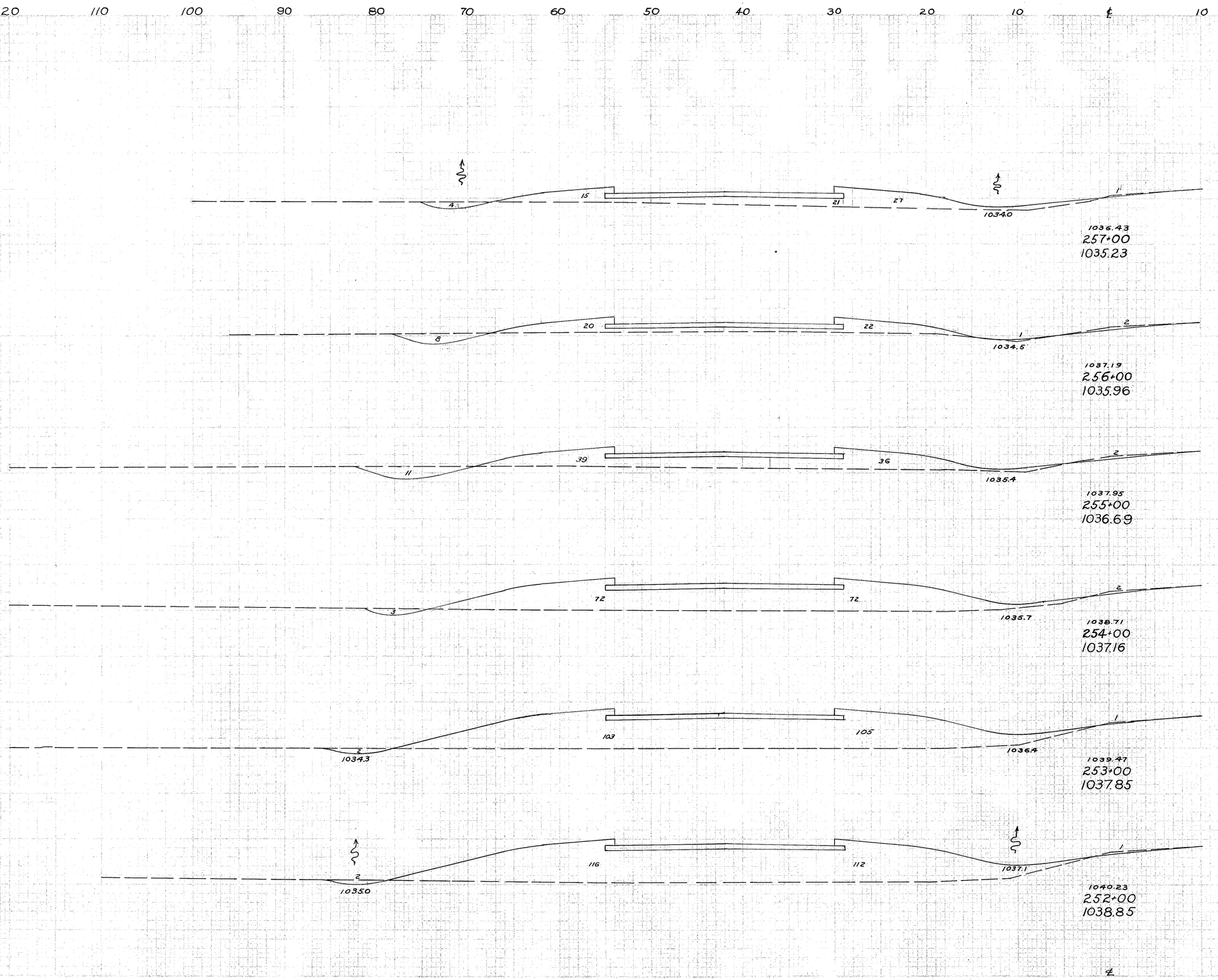
	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
4	231			
			17	739
5	168			
250+00				
			33	506
13	105			
			87	235
			34	22
			159	70
			52	16
			247	29
Sta. 246+32.09 Ahead			144	7
Back			89	7
			106	8
			89	7
			299	21
245+05.22 Ahead			81	5

Excavation 2347 cu. yds.
Embankment 1657 cu. yds.
Emb. + 14 % 1889 cu. yds.

STA. 246+00 TO STA. 251+00

DIVISION			TYPE FUNDS	107
2	OHIO	F-24(3) F/90(5)	POST WAR	179

MAD-40-(0.00-6.84)



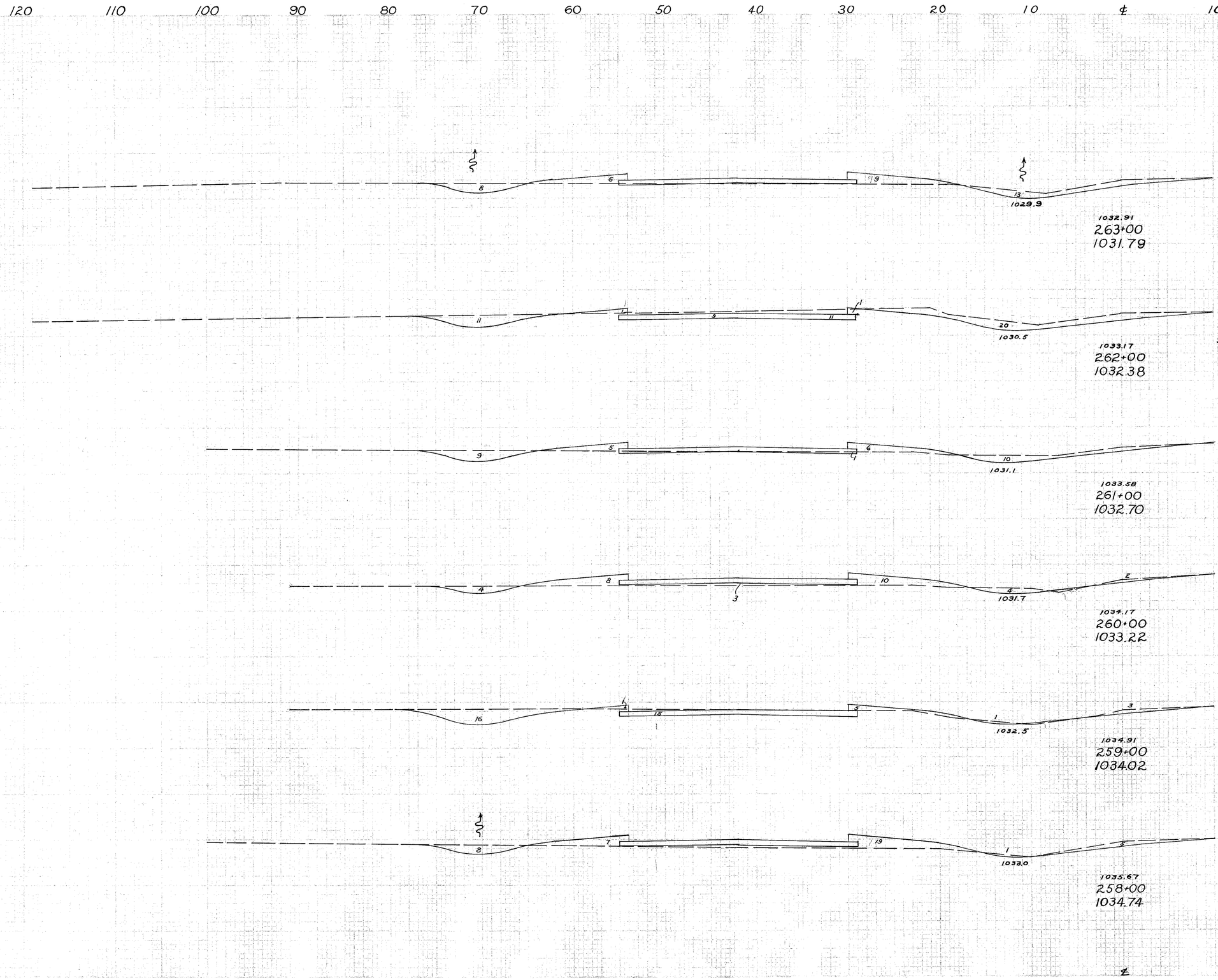
	END AREA		C.U. YDS	
	CUT	FILL	CUT	FILL
	5	63		
			28	196
	10	43		
			43	219
	13	75		
			33	406
	5	144		
			15	652
	3	208		
			11	807
	3	228		
			13	850
251+00	4	231		

Excavation 369 cu. yds.
Emb. 4149 cu. yds.
Emb. + 14 % 4730 cu. yds.

STA. 252+00 TO STA. 257+00

DIVISION			TYPE FUNDS	108
2	OHIO	F-24(3) F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)

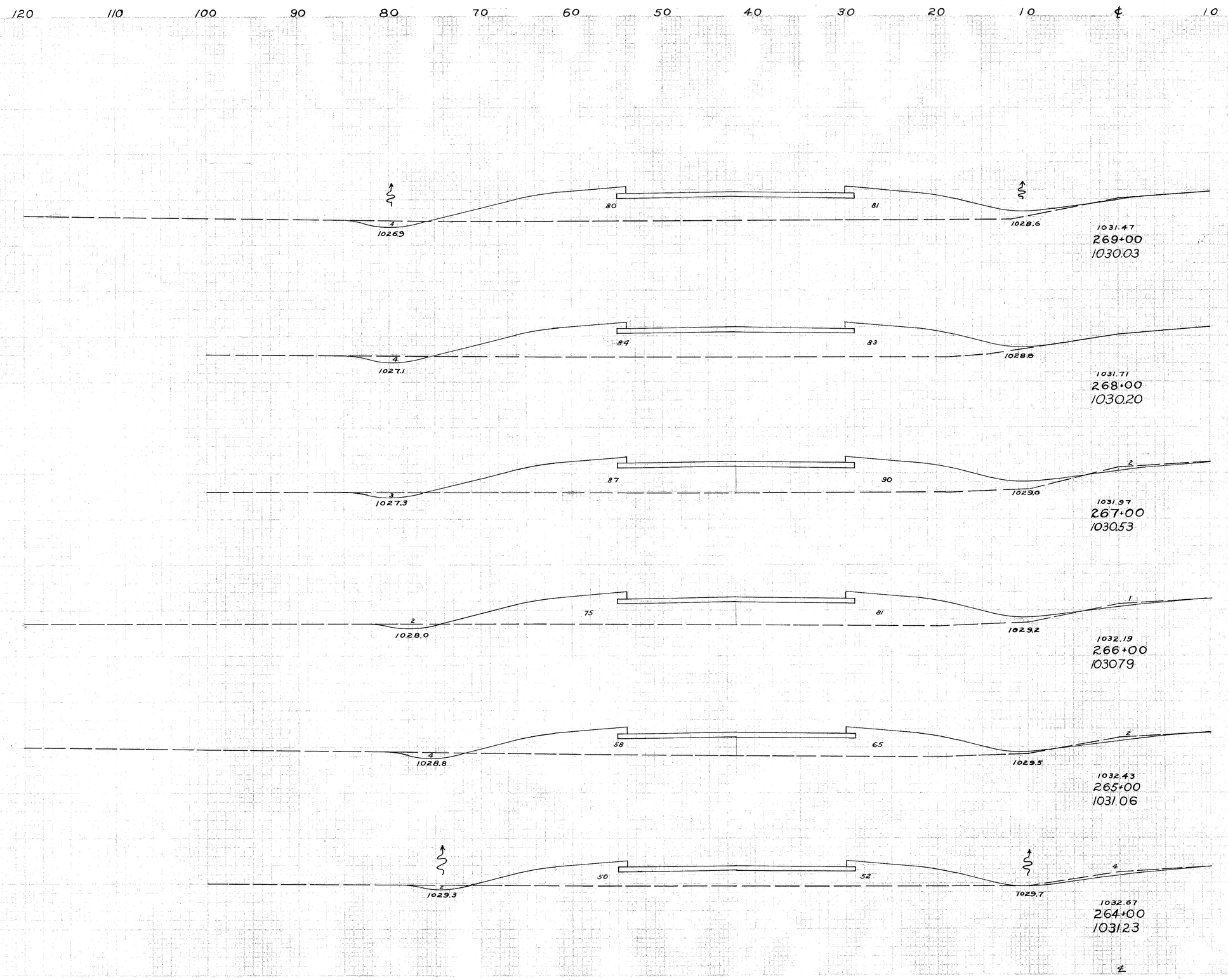


	END AREA		C.U. YDS.	
	CUT	FILL	CUT	FILL
	21	15		
			133	31
	51	2		
			2	9
			133	24
	21	11		
			57	61
260+00	10	22		
			83	54
	35	7		
			91	61
	14	26		
			35	165
257+00	5	63		

STA. 258+00 TO STA. 263+00

DIVISION			TYPE FUNDS	
2	OHIO	F-24(3) F-190(5)	POST WAR	109 179

MAD-40-(0.00-6.84)



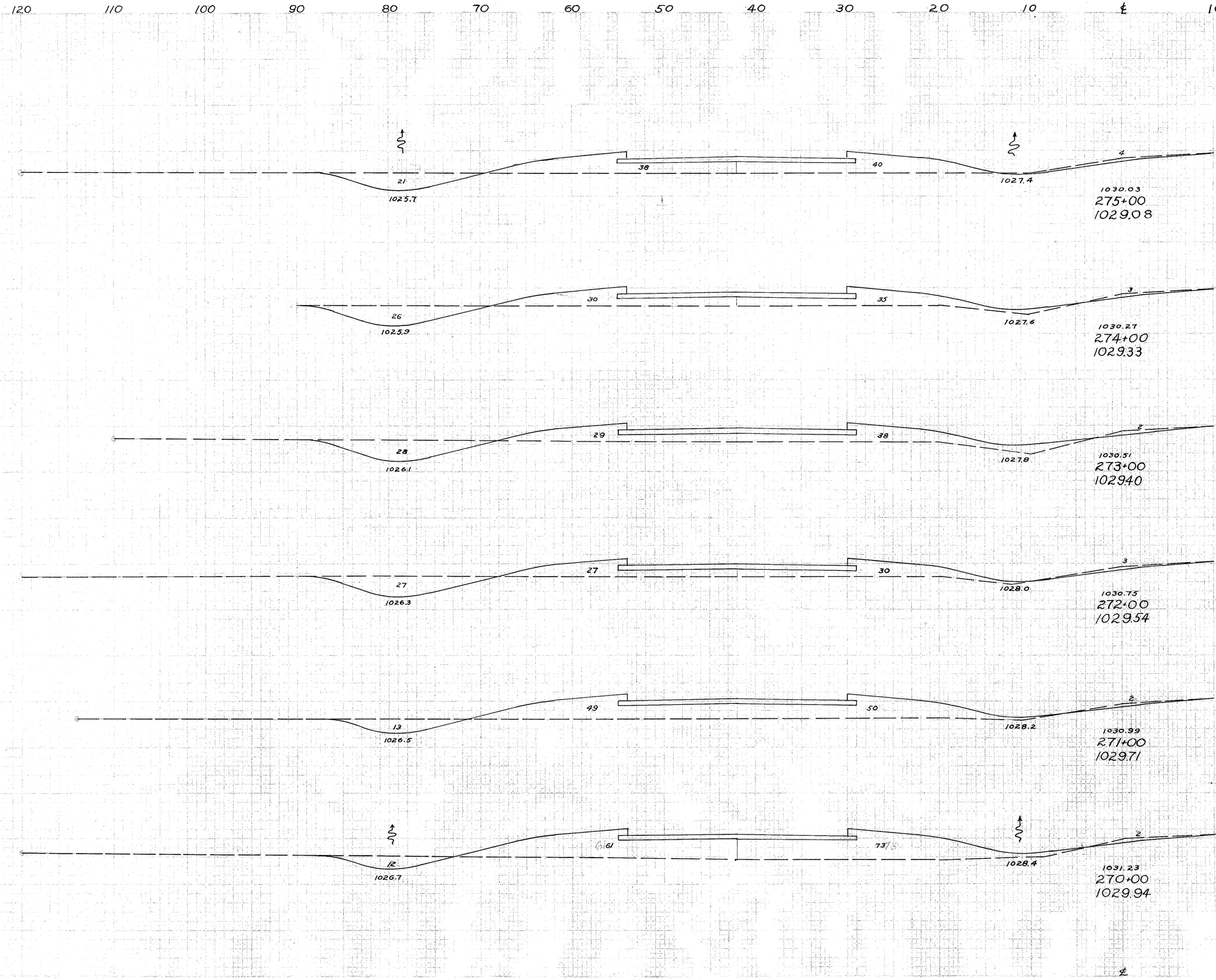
	END AREA		CU. YDS	
	CUT	FILL	CUT	FILL
4	161			
			15	607
4	167			
			17	637
5	177			
			15	617
3	156			
			17	517
6	123			
			22	417
6	102			
			50	217
263+00	21	15		

Excavation 494 cu. yds.
Embankment 3683 cu. yds.
Emb. + 14 % 4199 cu. yds.

STA. 264+00 to STA. 269+00

DIVISION			TYPE FUNDS	110
2	OHIO	F-24(3) F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)

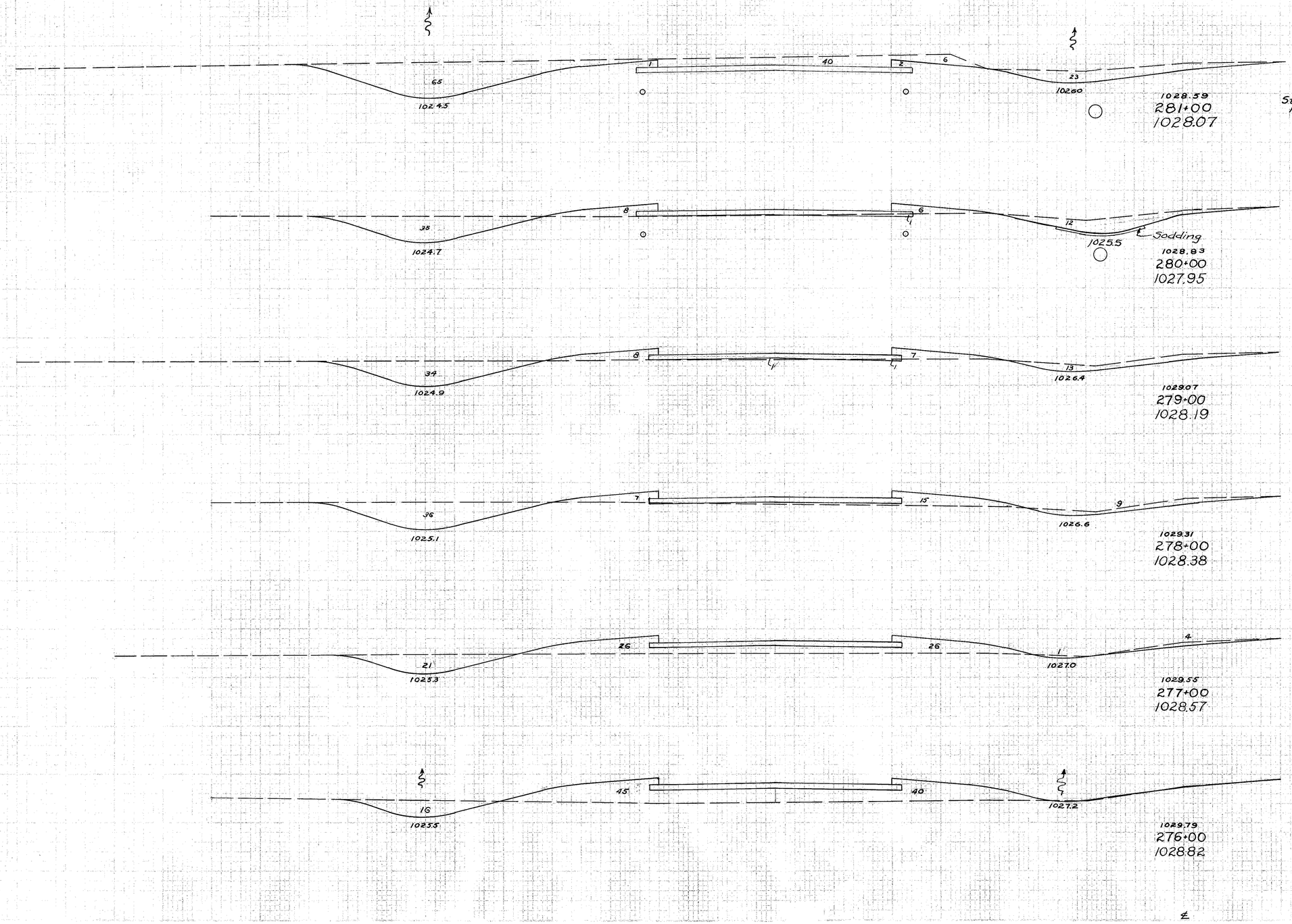


END AREA		C.U. YDS.	
CUT	FILL	CUT	FILL
25	78		
		100	265
29	65		
		109	244
30	67		
		111	230
30	57		
		83	289
15	99		
		54	431
270+00	14	134	
		33	546
269+00	4	161	

STA. 270+00 TO STA. 275+00

DIVISION		PROJECT	TYPE FUNDS	
2	OHIO	F-24(3) F-190(5)	POST WAR	111 / 179

MAD-40-(0.00-6.84)



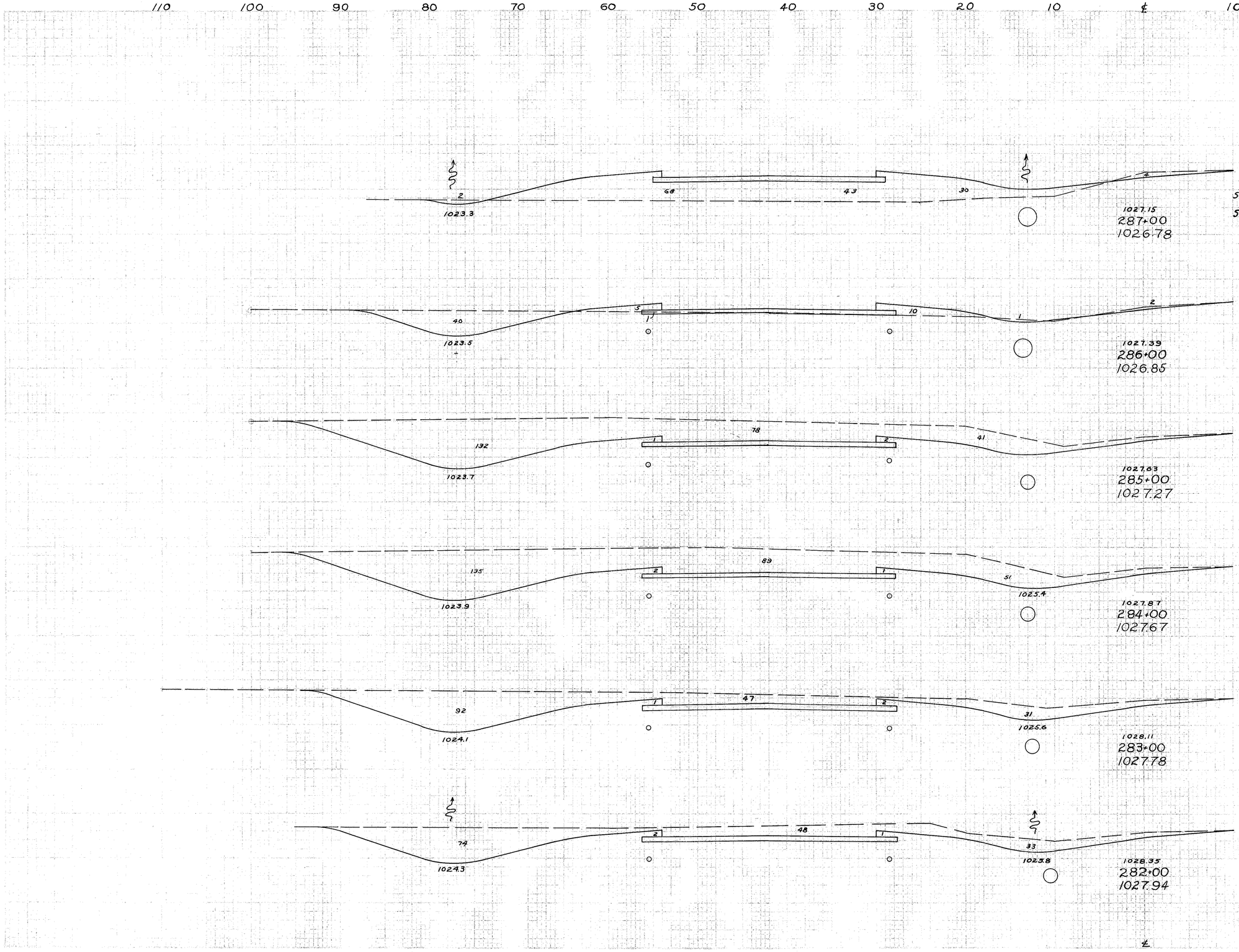
	END AREA		C.Y. YDS	
	CUT	FILL	CUT	FILL
	134	3		
			2	9
			337	31
280+00	48	14		
			178	56
	48	16		
			172	70
	45	22		
			131	137
	26	52		
			78	254
	16	85		
			76	302
275+00	25	78		

Excavation 1092 cu. yds.
Embankment 2278 cu. yds.
Emb. + 14 % 2597 cu. yds.

STA. 276+00 TO STA. 281+00

DIVISION			TYPE FUNDS	
2	OHIO	F-24(3) F-190(5)	POST WAR	112 / 179

MAD-40-(0.00-6.84)



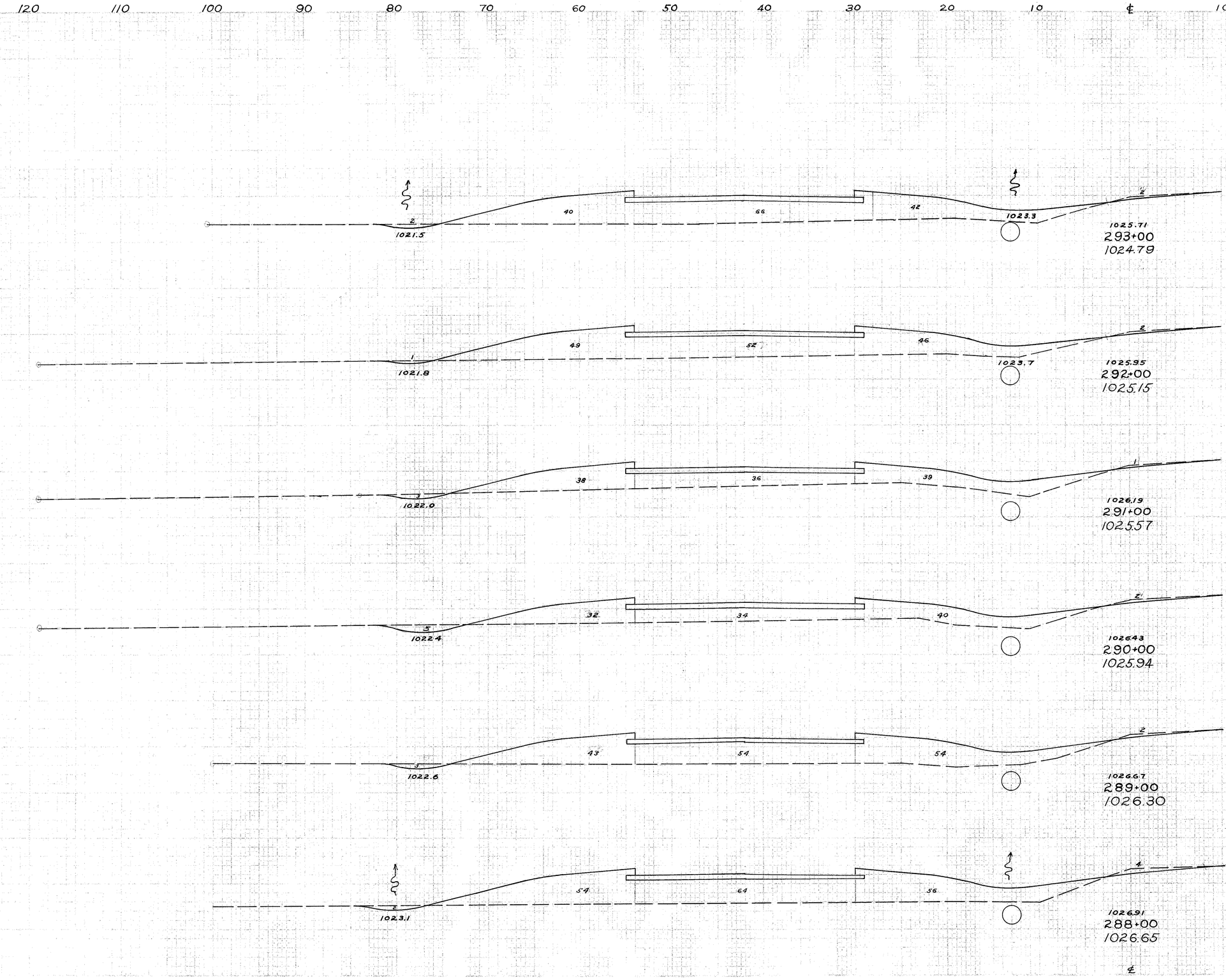
END AREA		CU YDS	
CUT	FILL	CUT	FILL
6	141		
		0	9
		0	6
		93	289
44	15		
		546	33
251	3		
		974	11
275	3		
		824	11
170	3		
		602	11
155	3		
		535	11
281+00	134	3	

Excavation 3977 cu yds.
Emb. 2082 cu yds.
Emb. + 14 % 2373 cu yds.

STA. 282+00 TO STA. 287+00

DIVISION			TYPE FUNDS	113
2	OHIO	F-24(3) F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)

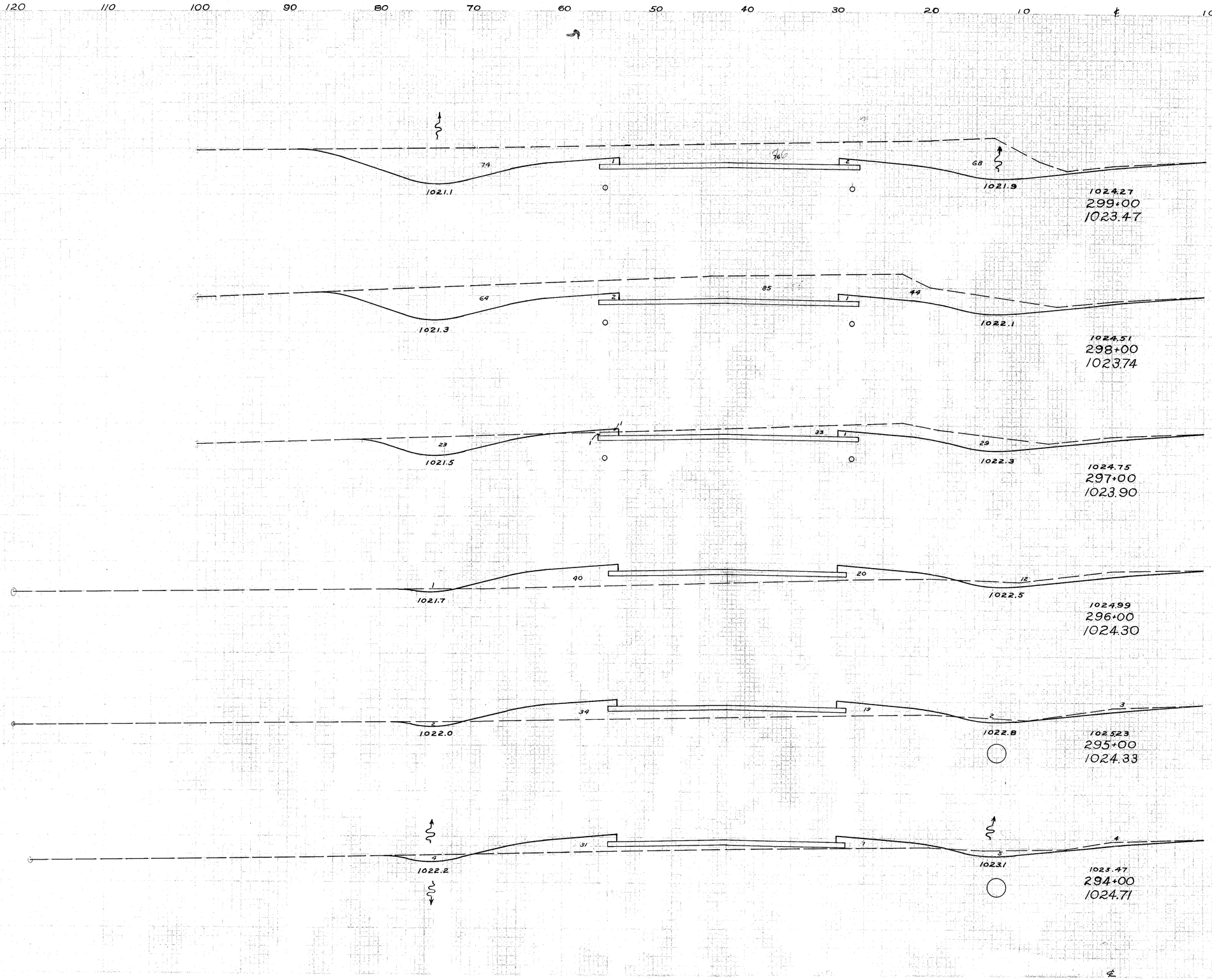


END AREA		CU. YDS	
CUT	FILL	CUT	FILL
4	148		
		13	546
3	147		
		13	481
4	113		
		20	406
290+00			
7	106		
		22	476
5	151		
		20	602
6	174		
		22	583
287+00	6	141	

STA. 288+00 TO STA. 293+00

DIVISION			TYPE FUNDS	114
2	OHIO	F-24(3) F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)



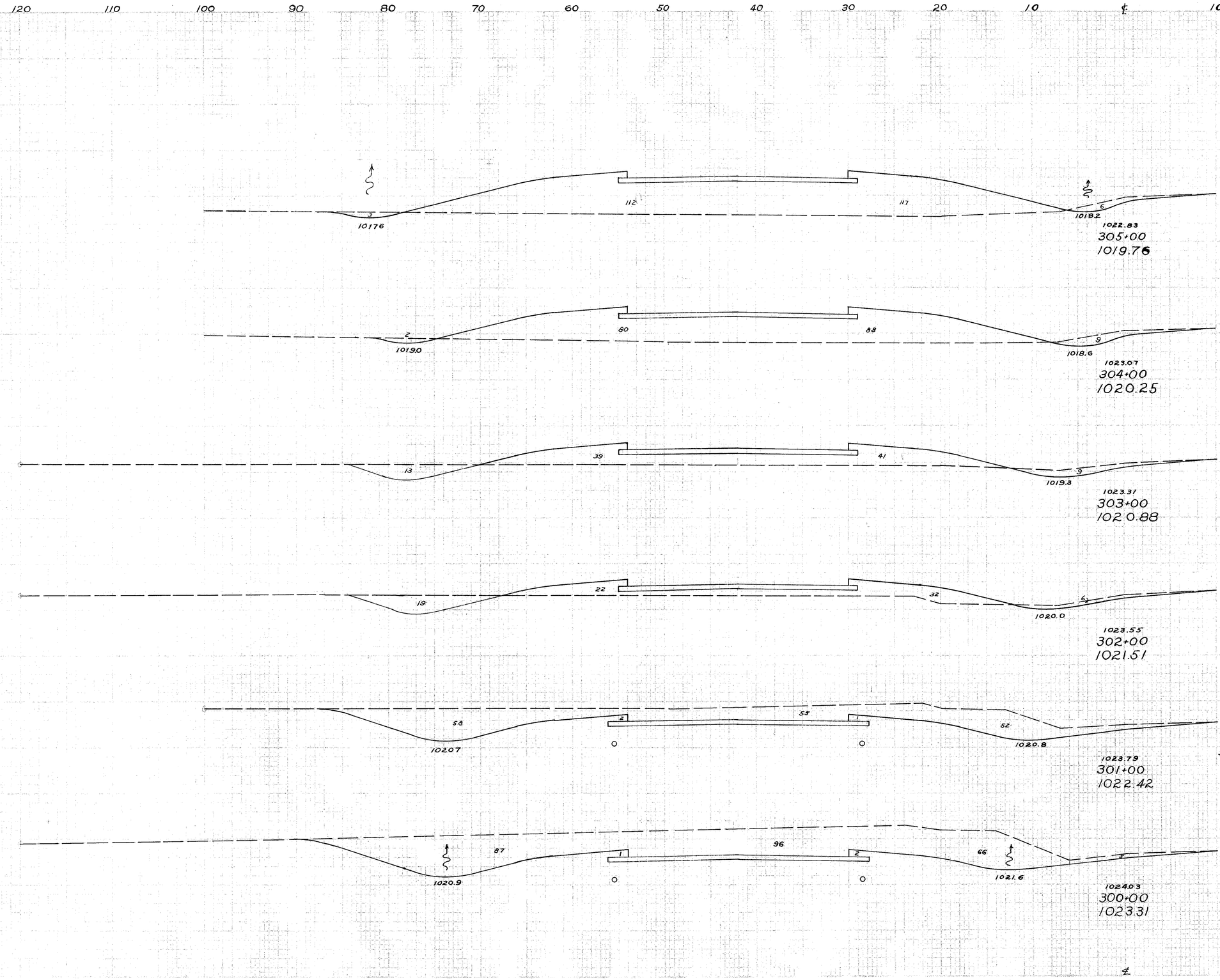
Excavation	2482	cu. yds.
Embankment	2303	cu. yds.
Emb.+ 14 %	2625	cu. yds.

	END AREA		CU. YDS	
	CUT	FILL	CUT	FILL
	218	3		
			761	11
	193	3		
			515	11
	85	3		
			181	117
	13	60		
			37	209
	7	53		
			37	169
	13	38		
			311	344
293+00	4	148		

STA. 294+00 TO STA. 299+00

DIVISION			TYPE FUNDS	
2	OHIO	F-24(3) F-190(5)	POST WAR	115 / 179

MAD-40-(0.00-6.84)

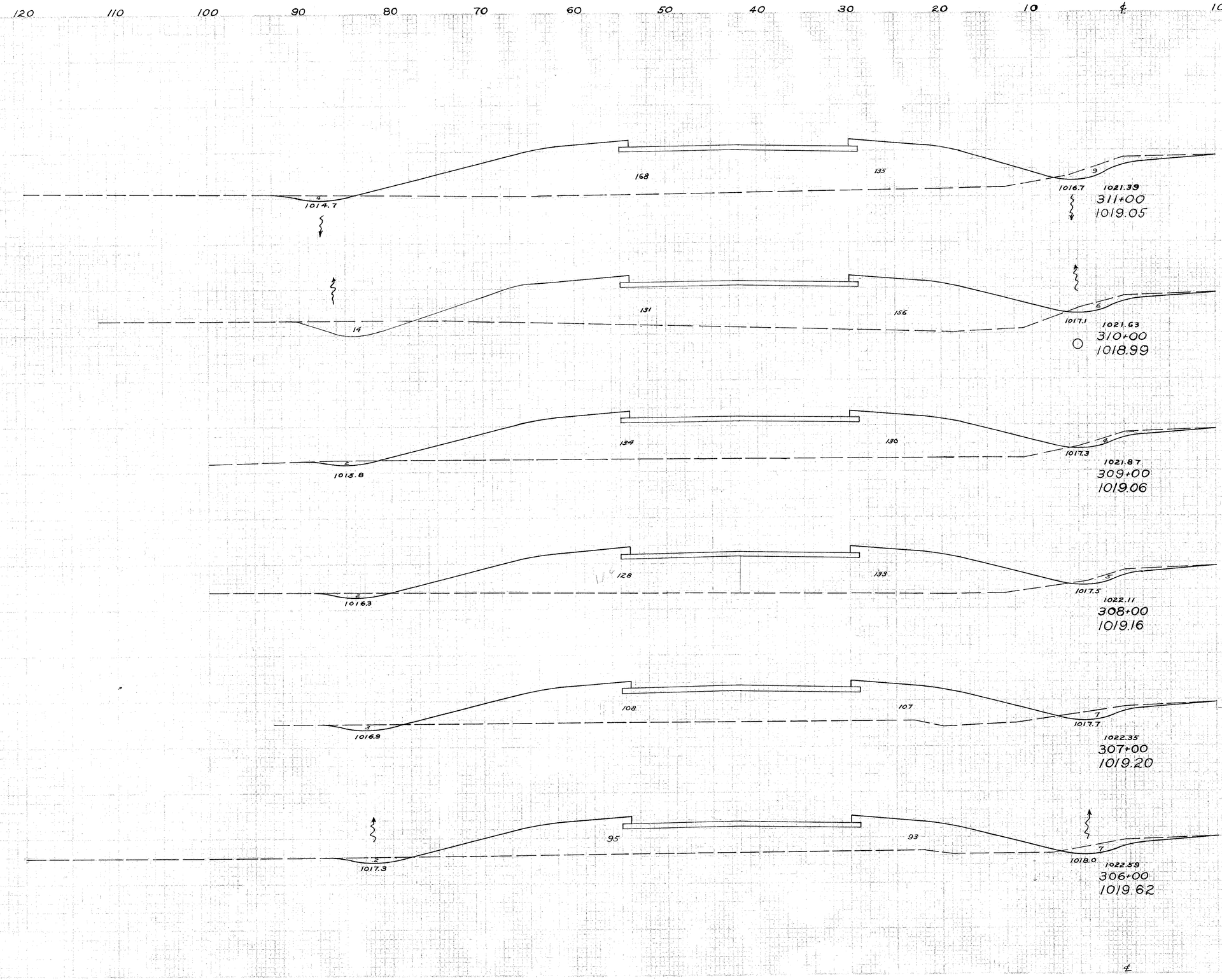


END AREA		CU. YDS	
CUT	FILL	CUT	FILL
9	229		
		37	735
11	168		
		61	459
22	80		
		87	248
25	54		
		352	106
165	3		
		2	10
		776	11
300+00	254	3	
		874	9
229+00	218	2	

STA. 300+00 TO STA. 305+00

DIVISION			TYPE FUNDS	116
2	OHIO	F-24(3) F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)



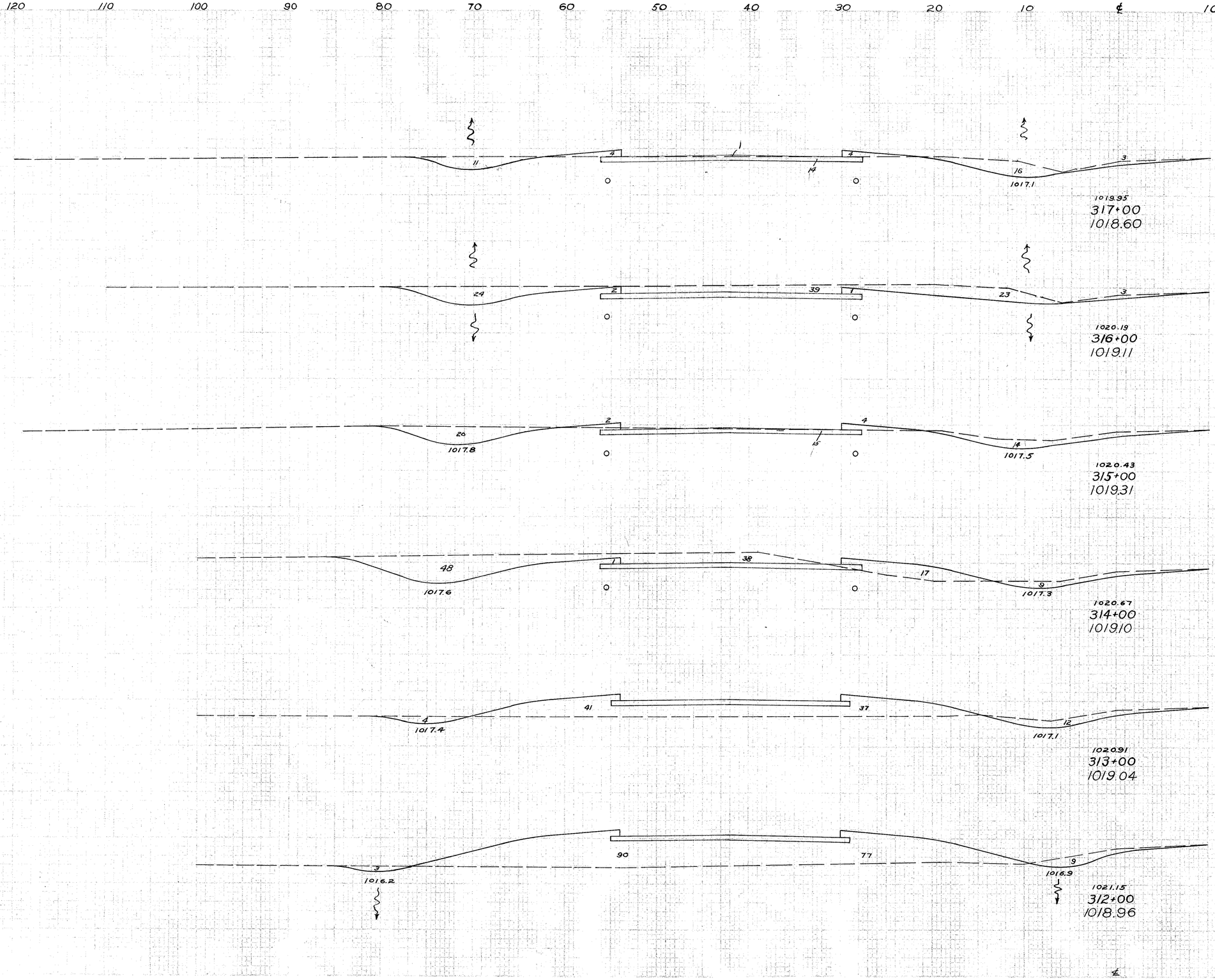
	END AREA		C.U. YDS.	
	CUT	FILL	CUT	FILL
313+00				
	13	303		
				61 1093
	20	287		
310+00				
				48 1020
	6	264		
				24 972
	7	261		
				31 881
			10	215
				35 746
	9	188		
				33 772
305+00	9	229		

Excavation 1486 Cu. Yds.
Embankment 5960 Cu. Yds.
Embankment +4% 6794 Cu. Yds.

STA. 306+00 TO STA. 311+00

DIVISION			TYPE FUNDS	
2	OHIO	F-24(3) F-190(S)	POST WAR	117 / 179

MAD-40-(0.00-6.84)



Sta. 316+27.20 Rt.
Add for intersection

	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
	44	9		
			0	110
			246	22
	89	3		
			256	17
	49	6		
			267	44
	95	18		
			206	178
	16	78		
			52	454
	12	167		
			46	870
	13	303		

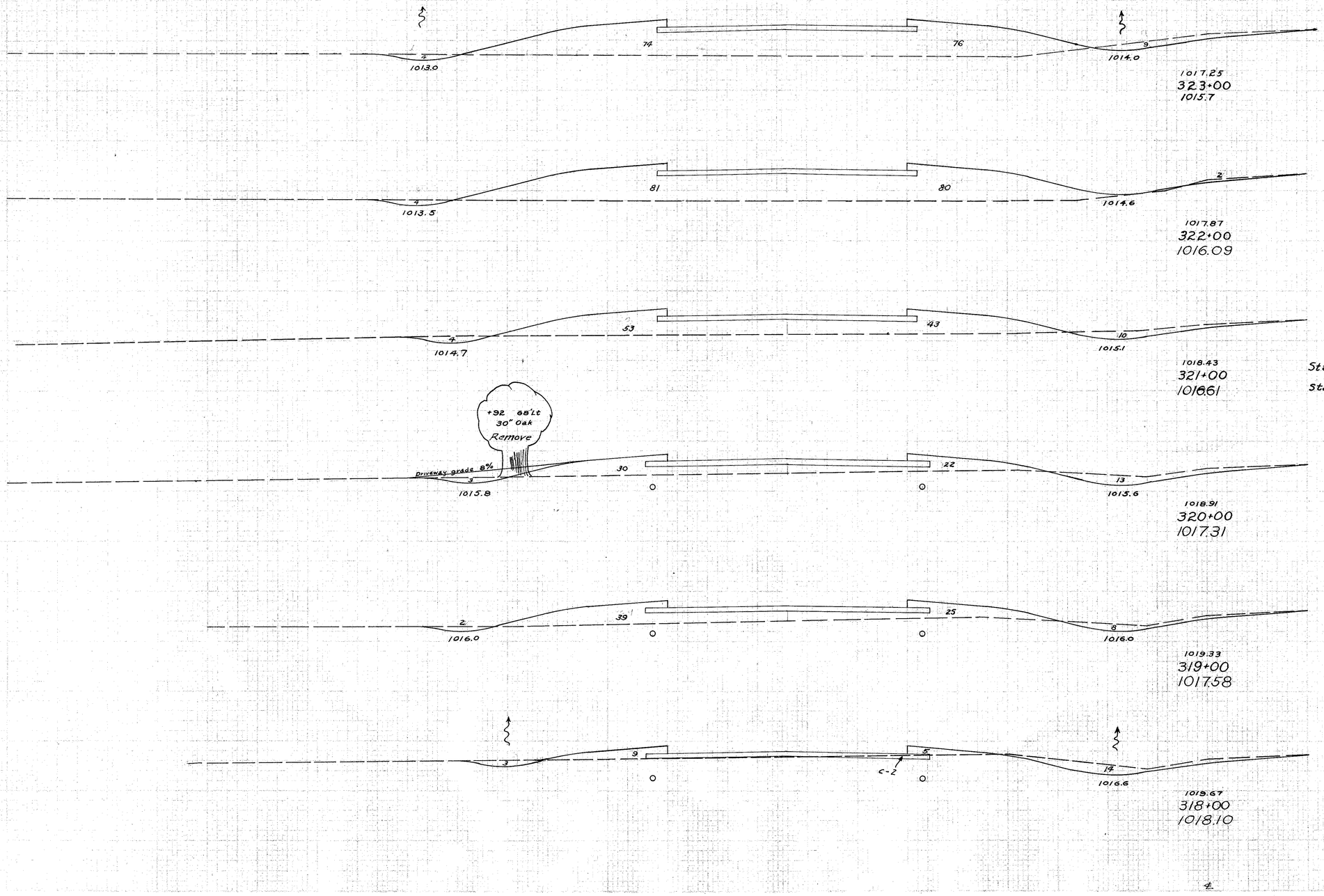
Excavation 1353 Cu.Yds.
Embankment 3190 Cu.Yds.
Embankment +14% 3637 Cu.Yds.

STA. 312+00 TO STA. 317+00

DIVISION				TYPE FUNDS	118
2	OHIO	F-24(3)	F-190(S)	POST WAR	179

MAD-40-(0.00-6.84)

120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10

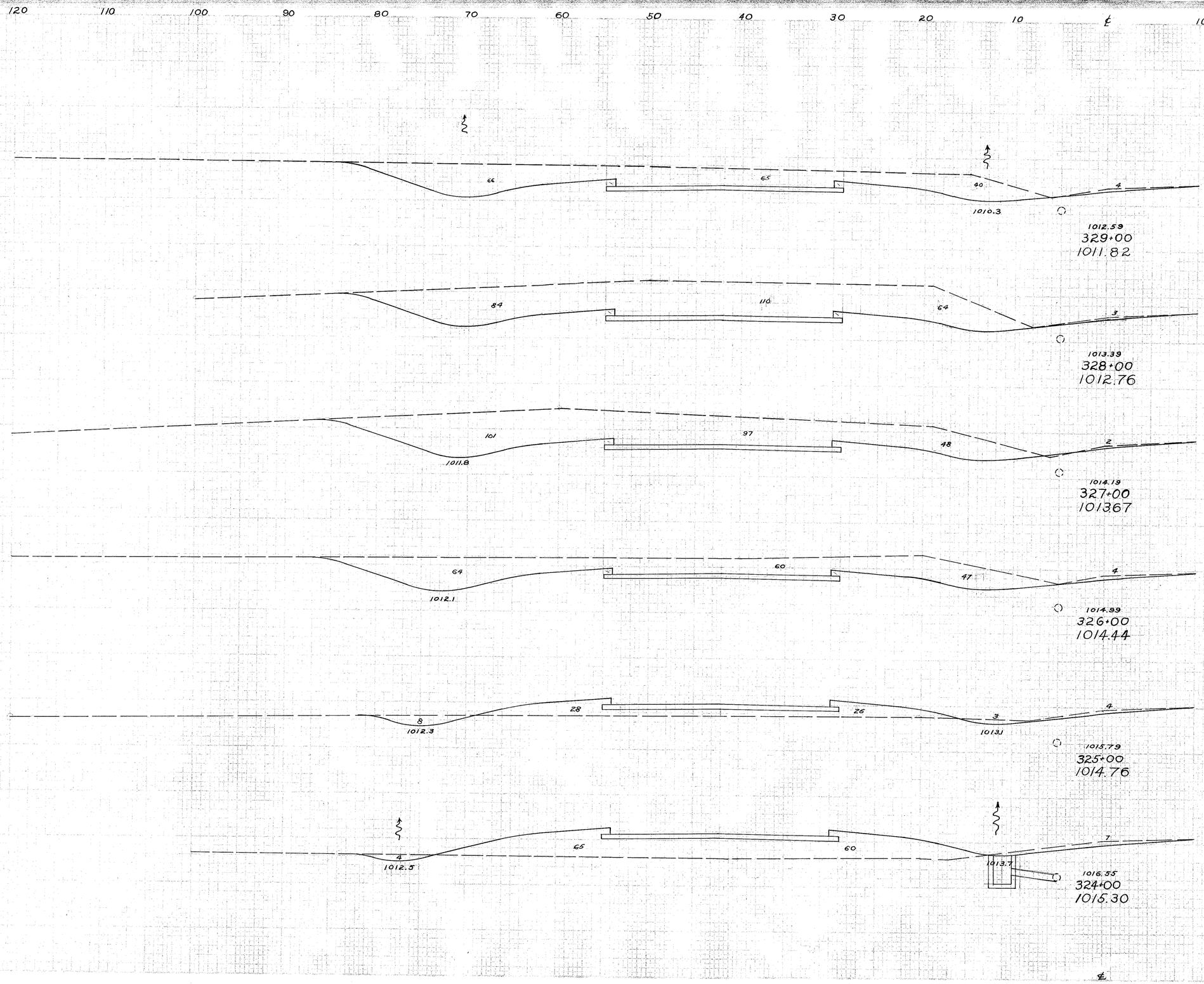


END AREA		C.U. YDS.	
CUT	FILL	CUT	FILL
13	150		
		35	576
6	161		
		37	476
14	96		
		0	6
		0	9
		56	274
16	52		
		48	215
10	64		
		54	144
19	14		
		117	43
320+00			
317+00	44	9	

STA. 318+00 TO STA. 323+00

DIVISION				TYPE FUNDS	119
2	OHIO	F-24(3)	F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)



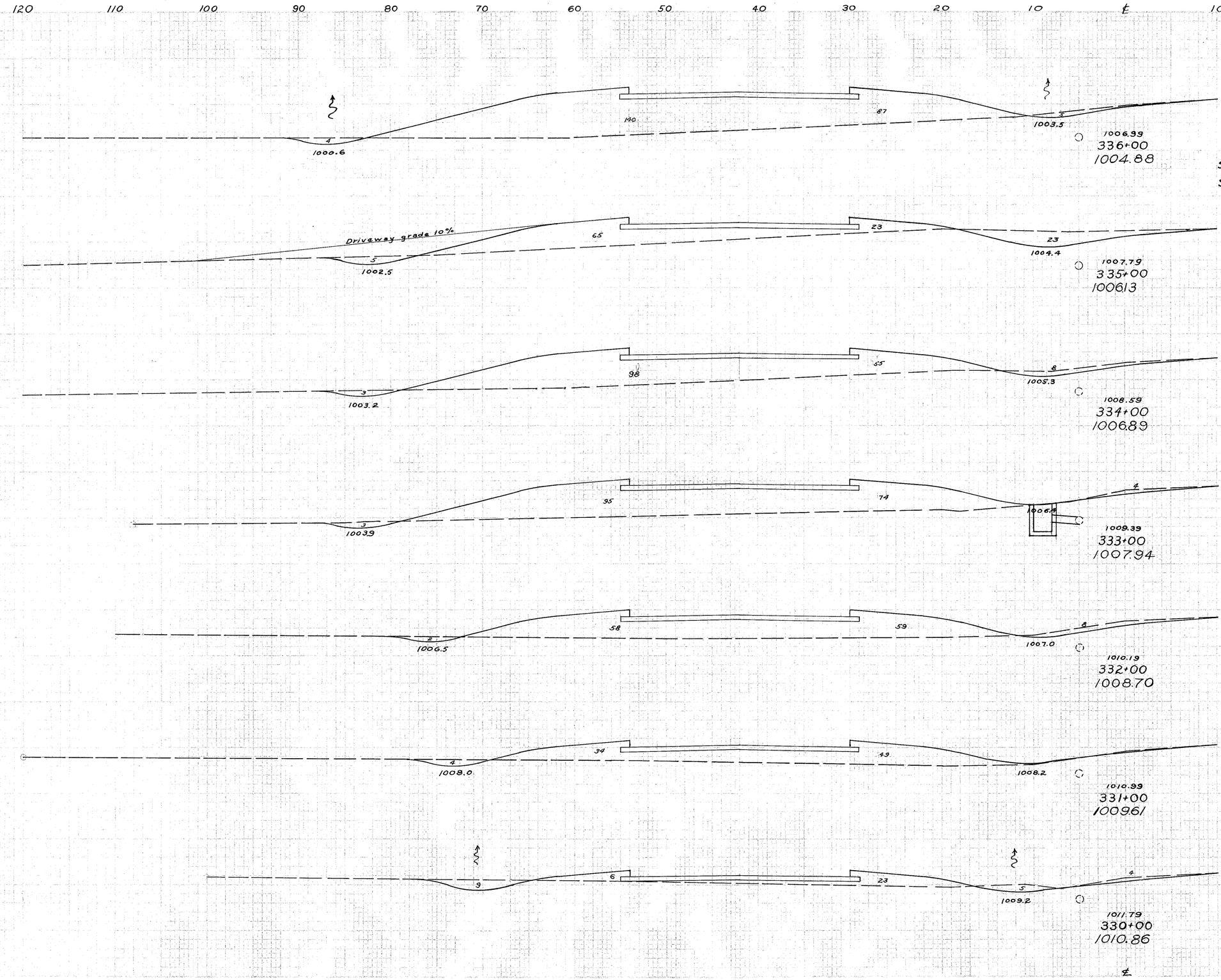
END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
175	2		
		807	7
261	2		
		943	9
248	3		
		783	9
175	2		
		352	102
15	53		
		48	330
11	125		
		44	509
13	150		

Excavation 3462 Cu. Yds.
Embankment 2364 Cu. Yds.
Embankment + 14% 2695 Cu. Yds.

STA 324+00 TO STA 328+00

DIVISION			TYPE FUNDS	
2	OHIO	F-24(3) F-190(5)	POST WAR	120 / 179

MAD-40-(0.00-6.84)



Sta 335+02 Lt.
Add for drive
Sta. 335+02 Med
Add for crossover

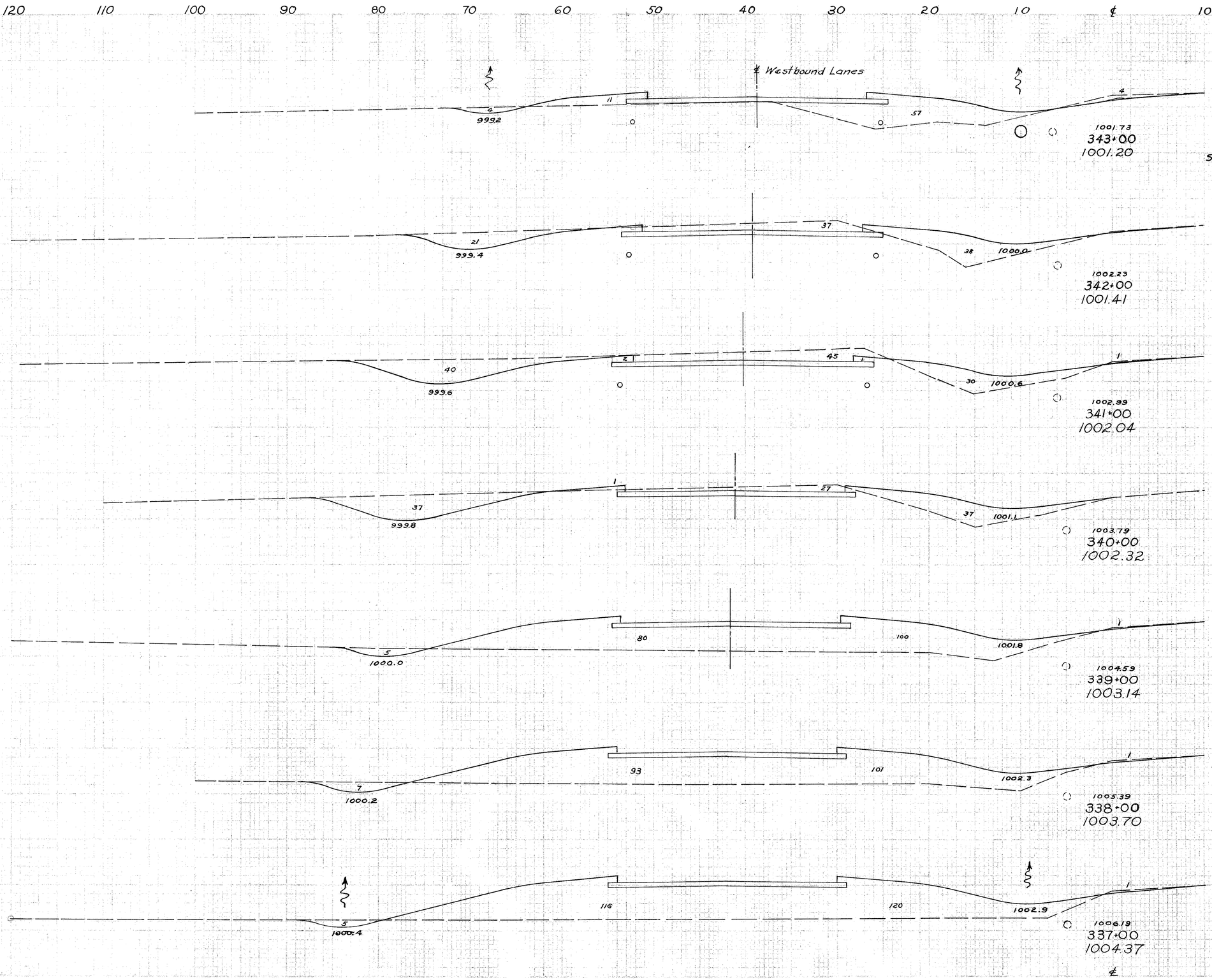
Excavation 482 Cu. Yds.
Embankment 5501 Cu. Yds.
Embankment + 14% 6271 Cu. Yds.

STA	END AREA CUT	END AREA FILL	CU. YDS CUT	CU. YDS FILL
	9	227		
			0	10
			0	9
			69	583
	28	88		
			72	446
	11	153		
			33	590
	7	169		
			31	530
	10	117		
			26	370
	4	83		
			41	207
330+00	18	29		
			357	57
329+00	175	2		

STA. 330+00 TO STA 336+00

DIVISION			TYPE FUNDS	121
2	OHIO	F-24(3) F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)

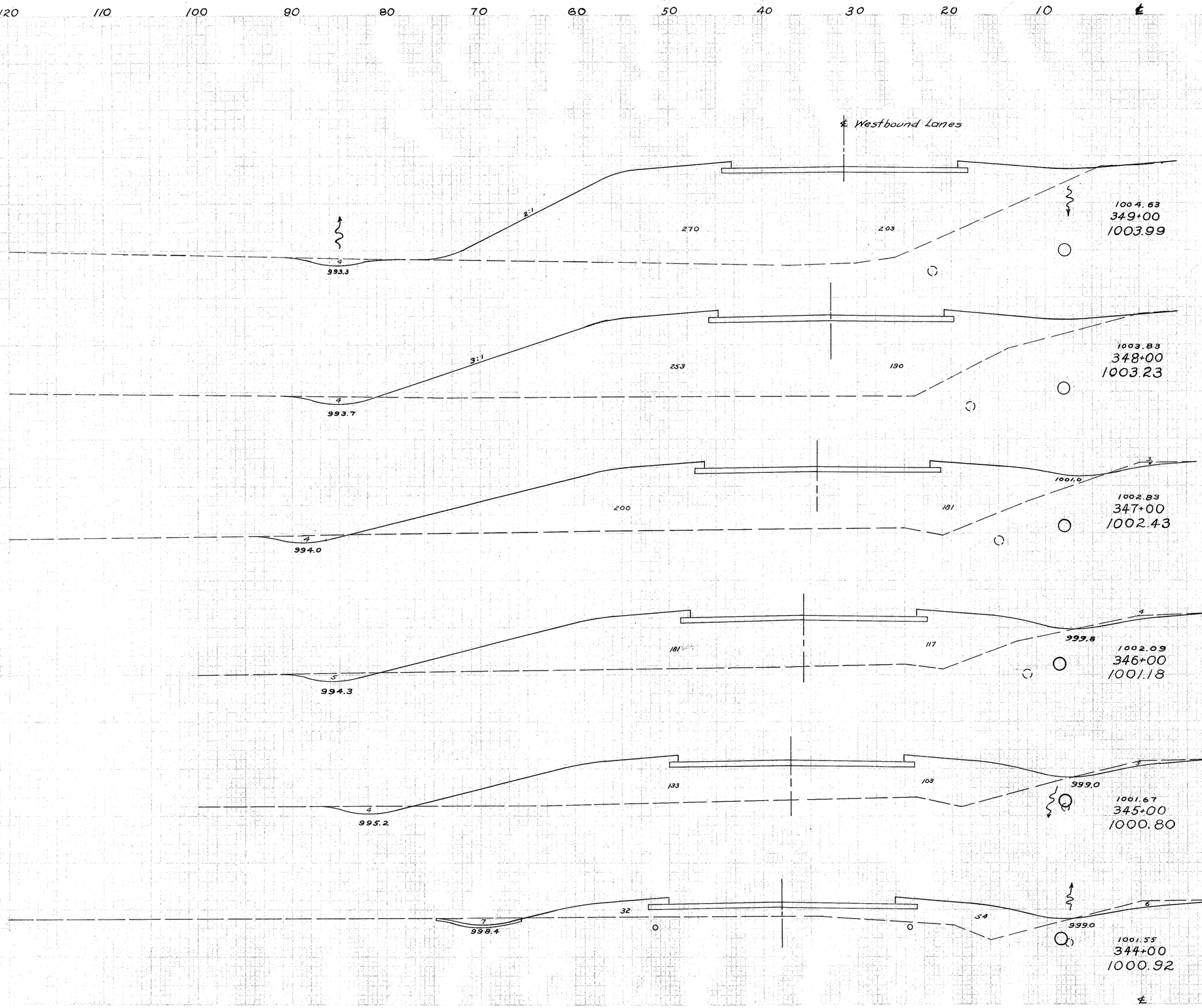


END AREA		CU. YDS	
CUT	FILL	CUT	FILL
8	68		
		0	12
		119	198
58	39		
		267	133
86	33		
		278	131
		340+00	
64	38		
		130	404
6	180		
		26	693
8	194		
		26	796
6	236		
		28	857

STA. 337+00 TO STA. 343+00

DIVISION 2 | OHIO | F-24(3) F-190(3) | TYPE FUNDS POST WAR | 122 179

MAD-40-(0.00-6.84)



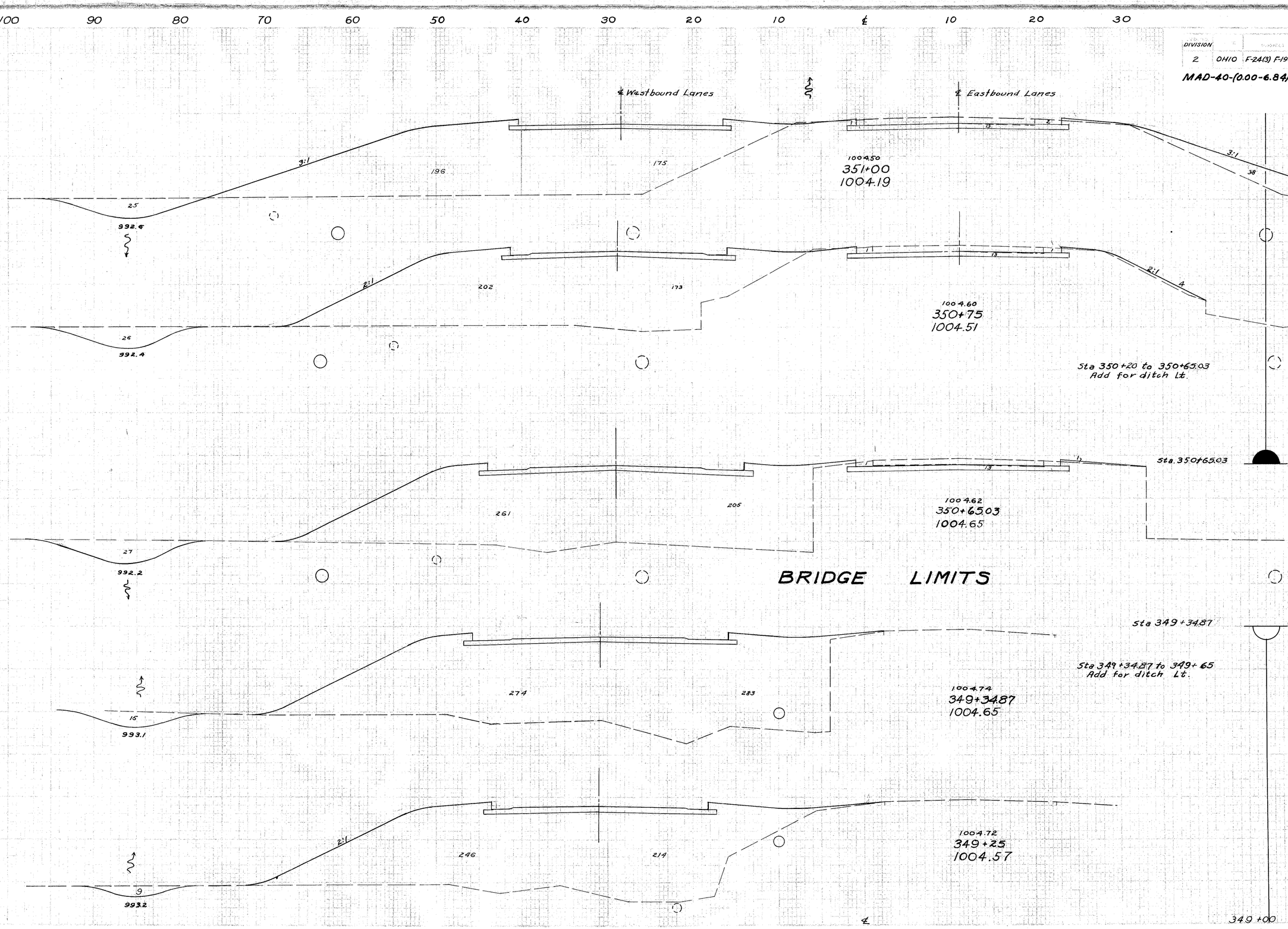
END. AREA		CU. YDS.	
CUT	FILL	CUT	FILL
4	473		
		15	1696
4	443		
		20	1526
7	381		
		30	1257
9	298		
		33	989
9	236		
		0	10
		41	596
13	86		
		39	285
8	68		

Excavation 859 cu. yds.
Embankment 7451 cu. yds.
Emb. + 14 % 8494 cu. yds.

STA. 344+00 To STA. 349+00

DIVISION			TYPE FUNDS	
2	OHIO	F-24(3) F-190(5)	POST WAR	123 / 179

MAD-40-(0.00-6.84)

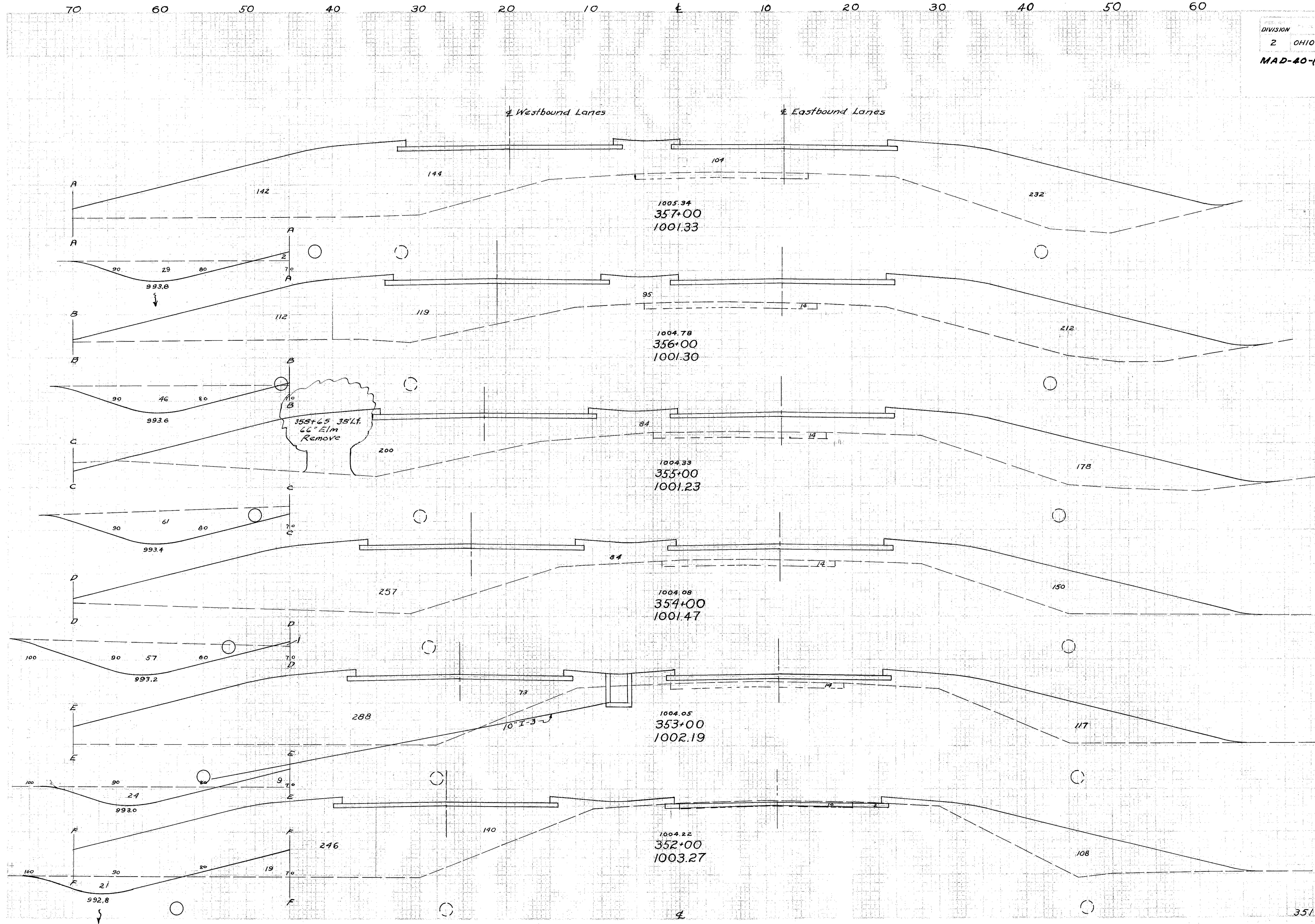


END AREA		CU. YDS.	
Cut	Fill	Cut	Fill
41	411		
		38	367
41	381		
		9	0
		15	156
41	467		
		15	557
		7	0
		4	186
9	460		
		6	432
4	473		

STA. 349+19.8 To STA. 351+00

DIVISION	STATE	PROJECT	TYPE FUNDS	
2	OHIO	F-24(3) F-190(5)	POST WAR	124 / 179

MAD-40-(0.00-6.84)

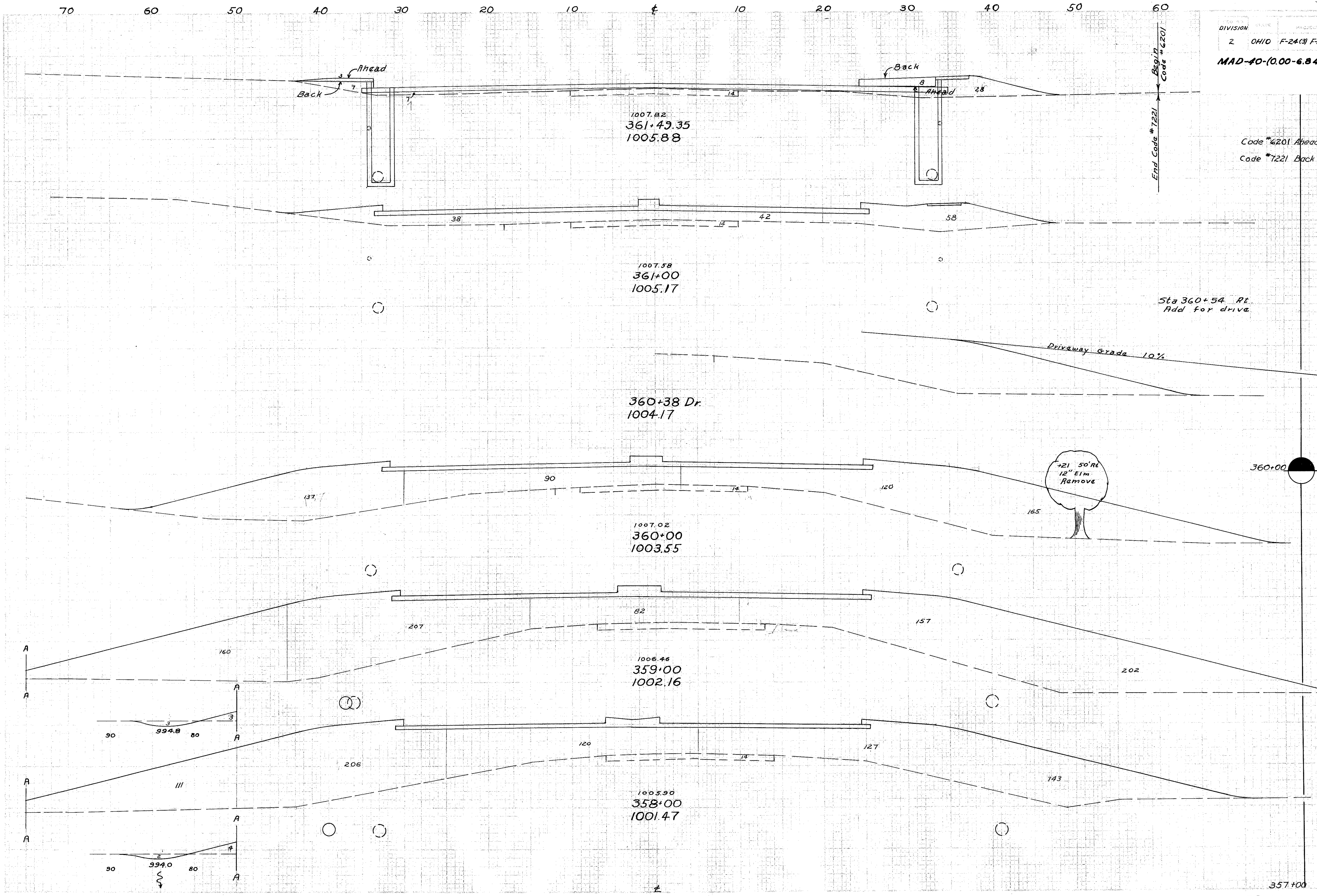


Excavation	1112	cu. yds.
Embankment	19801	cu. yds.
Emb. + 14 %	22573	cu. yds.

END AREA CUT	END AREA FILL	CU. YDS CUT	CU. YDS FILL
29	638		
		139	2204
46	552		
		204	1904
64	476		
		224	1819
57	506		
		150	1865
24	501		
		115	1878
38	513		
		146	1711
41	411		

STA. 352+00 TO STA. 357

MAD-40-(0.00-6.84)



	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
Code #6201 Ahead	0	61		
Code #7221 Back	0	64		
			0	197
361+00	0	152		
			0	126
			0	1256
360+00	0	526		
			6	2502
359+00	3	825		
			9	2871
358+00	2	725		
			57	2524
357+00	29	638		

STA. 358+00 TO STA. 361+49.35

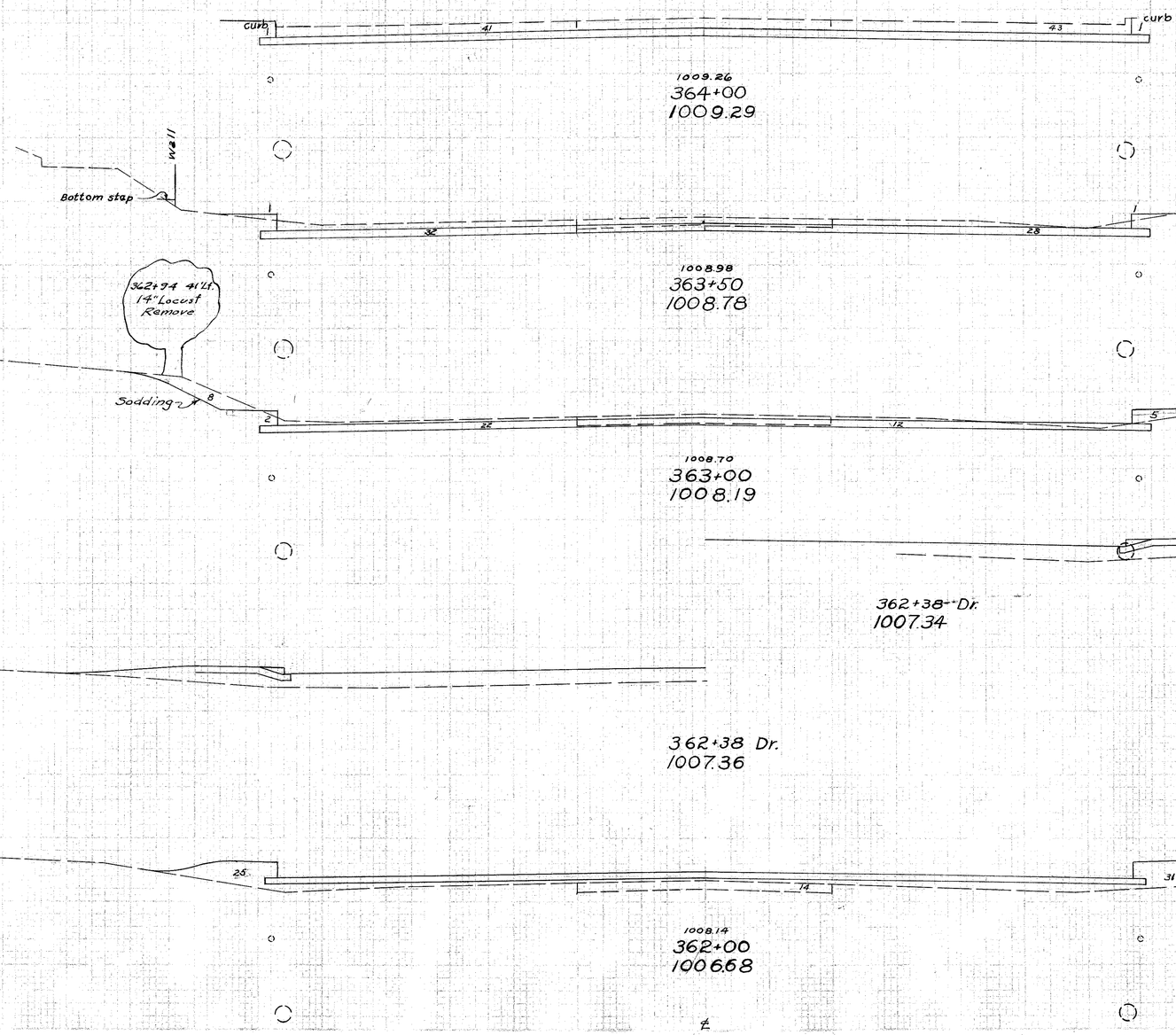
70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60

DIVISION 2 | OHIO | F-24(3) F-190(5) | TYPE FUNDS POST WAR 126 179

MAD-40-(0.00-6.84)

END WORK
STA 364+57

END PROJECT
STA. 363+99.70



END AREA Cu. Yds.			
Cut	Fill	Cut	Fill
86	2		
		136	5
62	4		
		98	10
44	7		
		0	2
		0	2
		81	143
		0	123
0	70		
0	61		

Code #7221 Code 6201

Excavation	- 0	- 315 Cu. yds.
Embankment	- 1579	- 285 Cu. yds.
Emb+ 14 %	1800	325 Cu. yds.

361+49 35

STA. 362+00 To STA. 364+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

127
179

MAD-40-(0.00-6.84)

P.C. = 13+28.93 P.T. = 18+65.04
LEFT PAV'T. D = 0°-36' Rt.
Rate of Superelevation = 0.016%

Elevation Left Edge	Add to Right Edge	Station	Profile Elevation	Deduct From Profile	Elevation Right Edge
		7+50	1169.43		
		+75	1169.36		
		8+00	1169.22		
		+25	1169.15		
		+50	1169.02		
		+75	1168.86		
		9+00	1168.68		
		+25	1168.47		
		+50	1168.24		
		+75	1167.98		
		10+00	1167.71		
		+25	1167.40		
		+50	1167.08		
		+75	1166.73		
		11+00	1166.36		
		+25	1165.96		
		+50	1165.55		1165.36
		+75	1165.10		1164.91
1164.45	.00	12+00	1164.64	0.19	1164.45
1163.98	.02	+25	1164.15		1163.96
1163.51	.06	+50	1163.64		1163.45
1163.04	.13	+75	1163.10		1162.91
1162.55	.19	13+00	1162.55		1162.36
1162.02	.25	+25	1161.96		1161.77
1161.49	.32	+50	1161.36		1161.17
1160.90	.36	+75	1160.73		1160.54
1160.27	.38	14+00	1160.08		1159.89
1159.59		+25	1159.40		1159.21
1158.89		+50	1158.70		1158.51
1158.16		+75	1157.97		1157.78
1157.42		15+00	1157.23		1157.04
1156.65		+25	1156.46		1156.27
1155.86		+50	1155.67		1155.48
1155.05		+75	1154.86		1154.67
1154.25	.38	16+00	1154.06	.19	1153.87

P.C. = 12+74.75 P.T. = 19+15.67
RIGHT PAV'T. D = 0°30' Rt.
Rate of Superelevation = 0.016%

Elevation Left Edge	Add to Right Edge	Station	Profile Elevation	Deduct From Profile	Elevation Right Edge
1164.30	.00	+50	1164.49	.19	1164.30
1163.85	.02	+75	1164.02		1163.83
1163.38	.06	12+00	1163.51		1163.32
1162.92	.13	+25	1162.98		1162.79
1162.43	.19	+50	1162.43		1162.24
1161.91	.25	+75	1161.85		1161.66
1161.37	.32	13+00	1161.24		1161.05
1160.18	.36	+25	1160.61		1160.42
1160.15	.38	+50	1159.96		1159.77
1159.47		+75	1159.28		1159.09
1158.76		14+00	1158.57		1158.38
1158.03		+25	1157.84		1157.65
1157.27		+50	1157.08		1156.89
1156.50		+75	1156.31		1156.12
1155.73		15+00	1155.54		1155.35
1154.96		+25	1154.77		1154.58
1154.19		+50	1154.00		1153.81
1153.42		+75	1153.23		1153.04
1152.65		16+00	1152.46		1152.27
1151.88		+25	1151.69		1151.50
1151.11		+50	1150.92		1150.73
1150.34		+75	1150.15		1149.96
1149.57		17+00	1149.38		1149.19
1148.80		+25	1148.61		1148.42
1148.03		+50	1147.84		1147.65
1147.26		+75	1147.07		1146.88
1146.49		18+00	1146.30		1146.11
1145.72		+25	1145.53		1145.34
1144.95	.38	+50	1144.76		1144.57
1144.16	.36	+75	1143.99		1143.80
1143.35	.32	19+00	1143.22		1143.03
1142.51	.25	+25	1142.45		1142.26
1141.68	.19	+50	1141.68		1141.49
1140.85	.13	+75	1140.91		1140.72
1140.01	.06	20+00	1140.14		1139.95
1139.20	.02	+25	1139.37		1139.18
1138.41	.00	+50	1138.60	.19	1138.41

T.S. = 100+72.52 S.T. = 108+65.88
LEFT PAV'T D = 2°28:42" Rt.
Rate of Superelevation = 0.081%

Elevation Left Edge	Add to Profile Elevation	Station	Profile Elevation	Deduct From Profile	Elevation Right Edge
1082.90	- .19	99+97	1083.09	.19	1082.90
1082.91	- .18	100+00	1083.09		1082.90
1083.00	- .12	+25	1083.12		1082.93
1083.09	- .06	+50	1083.15		1082.96
1083.19	.00	+72.52	1083.19	.19	1083.00
1083.43	+ .19	+97.52	1083.24	.18	1083.06
1083.68	.39	101+22.52	1083.29	.16	1083.13
1083.93	.58	+47.52	1083.35	.14	1083.21
1084.20	.78	+72.52	1083.42	.12	1083.30
1084.46	.97	+97.52	1083.49	.10	1083.39
1084.72	1.16	102+22.52	1083.56	.08	1083.48
1084.99	1.36	+47.52	1083.63	.06	1083.57
1085.25	1.55	+72.52	1083.70	.04	1083.66
1085.52	1.75	+97.52	1083.77	.02	1083.75
1085.74	1.90	103+22.52	1083.84	.00	1083.84
1085.76	1.91	+25	1083.85		1083.85
1085.86	1.94	+50	1083.92		1083.92
1085.93		+75	1083.99		1083.99
1086.00		104+00	1084.06		1084.06
1086.07		+25	1084.13		1084.13
1086.14		+50	1084.20		1084.20
1086.21		+75	1084.27		1084.27
1086.27		105+00	1084.33		1084.33
1086.34		+25	1084.40		1084.40
1086.41		+50	1084.47		1084.47
1086.48	1.94	+75	1084.54		1084.54
1086.53	1.92	106+00	1084.61		1084.61
1086.55	1.90	+15.88	1084.65		1084.65
1086.47	1.75	+40.88	1084.72		1084.72
1086.34	1.55	+65.88	1084.79		1084.79
1086.21	1.36	+90.88	1084.85		1084.85
1086.08	1.16	107+15.88	1084.92		1084.92
1085.96	.97	+40.88	1084.99		1084.99
1085.84	.78	+65.88	1085.06		1085.06
1085.71	.58	+90.88	1085.13		1085.13
1085.59	.39	108+15.88	1085.20		1085.20
1085.46	.19	+40.88	1085.27		1085.27
1085.34	.00	+61.51 Back	1085.34		1085.34
1085.34	.00	+65.88 Ahead	1085.34		1085.34
1085.36	- .03	+75	1085.39		1085.39
1085.36	- .10	109+00	1085.46		1085.46
1085.37	- .16	+25	1085.53		1085.53
1085.38	- .22	+50	1085.60		1085.60
1085.39	- .28	+75	1085.67		1085.67
1085.40	- .34	110+00	1085.74		1085.74
1085.40	- .37	+11	1085.77	.00	1085.77

T.S. = 101+69.68 S.T. = 109+52.99
RIGHT PAV'T D = 2°-31'-19" Rt.
Rate of Superelevation = 0.081%

Elevation Left Edge	Deduct From Profile	Station	Profile Elevation	Deduct From Profile	Elevation Right Edge
1083.04	.19	100+95	1083.23	.19	1083.04
1083.06	.18	101+00	1083.24	.20	1083.04
1083.17	.12	+25	1083.29	.25	1083.04
1083.31	.05	+50	1083.36	.32	1083.04
1083.42	.00	+69.68	1083.42	.37	1083.05
1083.49		+93.68	1083.49	.53	1082.96
1083.56		102+18.68	1083.56	.68	1082.88
1083.63		+43.68	1083.63	.84	1082.79
1083.70		+68.68	1083.70	1.00	1082.70
1083.77		+93.68	1083.77	1.16	1082.61
1083.84		103+18.68	1083.84	1.31	1082.53
1083.91		+43.68	1083.91	1.47	1082.44
1083.98		+68.68	1083.98	1.63	1082.35
1084.05		+93.68	1084.05	1.78	1082.27
1084.12		104+18.68	1084.12	1.90	1082.22
1084.14		+25	1084.14	1.94	1082.20
1084.21		+50	1084.21		1082.27
1084.28		+75	1084.28		1082.34
1084.35		105+00	1084.35		1082.41
1084.42		+25	1084.42		1082.48
1084.49		+50	1084.49		1082.55
1084.56		+75	1084.56		1082.62
1084.64		106+00	1084.64		1082.70
1084.71		+25	1084.71		1082.77
1084.78		+50	1084.78		1082.84
1084.85		+75	1084.85	1.94	1082.91
1084.93		107+02.99	1084.93	1.92	1083.01
1085.00		+27.99	1085.00	1.78	1083.22
1085.07		+52.99	1085.07	1.63	1083.44
1085.14		+77.99	1085.14	1.47	1083.67
1085.22		108+02.99	1085.22	1.31	1083.91
1085.29		+27.99	1085.29	1.16	1084.13
1085.36		+52.99	1085.36	1.00	1084.36
1085.43		+77.99	1085.43	.84	1084.59
1085.50		109+02.99	1085.50	.68	1084.82
1085.57		+27.99	1085.57	.53	1085.04
1085.64		+52.99	1085.64	.37	1085.27
1085.6	.00	.	1085.6	.37	1085.2

SUPERELEVATION TABLES

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

128
179

MAD-40-(000-6.84)

T.S. = 113+72.46 S.T. = 121+55.77
LEFT PAV'T D = 2°31'-19" Lt.
Rate of Superelevation = 0.081 %

Elevation Left Edge	Deduct From Profile	Station	Profile Elevation	Add to Profile	Elevation Right Edge
1086.41	.37	113+72.46	1086.78	.00	1086.78
1086.32	.53	+97.46	1086.85		1086.85
1086.24	.68	114+22.46	1086.92		1086.92
1086.15	.84	+47.46	1086.99		1086.99
1086.06	1.00	+72.46	1087.06		1087.06
1085.97	1.16	+97.46	1087.13		1087.13
1085.89	1.31	115+22.46	1087.20		1087.20
1085.80	1.47	+47.46	1087.27		1087.27
1085.71	1.63	+72.46	1087.34		1087.34
1085.63	1.78	+97.46	1087.41		1087.41
1085.59	1.90	116+22.46	1087.49		1087.49
1085.57	1.93	+25	1087.50		1087.50
1085.63	1.94	+50	1087.57		1087.57
1085.71		+75	1087.65		1087.65
1085.81		117+00	1087.75		1087.75
1085.92		+25	1087.86		1087.86
1086.04		+50	1087.98		1087.98
1086.18		+75	1088.12		1088.12
1086.34		118+00	1088.28		1088.28
1086.51		+25	1088.45		1088.45
1086.69		+50	1088.63		1088.63
1086.89	1.94	+75	1088.83		1088.83
1087.15	1.90	119+00	1089.05		1089.05
1087.20	1.90	+05.77	1089.10		1089.10
1087.56	1.78	+30.77	1089.34		1089.34
1087.95	1.63	+55.77	1089.58		1089.58
1088.37	1.47	+80.77	1089.84		1089.84
1088.82	1.31	120+05.77	1090.13		1090.13
1089.26	1.16	+30.77	1090.42		1090.42
1089.72	1.00	+55.77	1090.72		1090.72
1090.19	.84	+80.77	1091.03		1091.03
1090.67	.68	121+05.77	1091.35		1091.35
1091.13	.53	+30.77	1091.66		1091.66
1091.60	.37	+55.77 Back =	1091.97	.00	1091.97
1091.60	.37	+60.49 Ahead	1091.97	.00	1091.97

T.S. = 113+72.46 S.T. = 121+65.15
RIGHT PAV'T D = 2°28'-42" Lt.
Rate of Superelevation = 0.081 %

Elevation Left Edge	Deduct From Profile	Station	Profile Elevation	Add to Profile	Elevation Right Edge
1086.36	.00	112+22	1086.36	-.37	1085.99
1086.37		+25	1086.37	-.32	1086.05
1086.44		+50	1086.44	-.26	1086.18
1086.51		+75	1086.51	-.21	1086.30
1086.58		113+00	1086.58	-.16	1086.42
1086.65		+25	1086.65	-.11	1086.54
1086.72		+50	1086.72	-.05	1086.67
1086.78		+72.46	1086.78	.00	1086.78
1086.85		+97.46	1086.85	+.19	1087.04
1086.92		114+22.46	1086.92	.39	1087.31
1086.99		+47.46	1086.99	.58	1087.57
1087.06		+72.46	1087.06	.78	1087.84
1087.13		+97.46	1087.13	.97	1088.10
1087.20		115+22.46	1087.20	1.16	1088.36
1087.27		+47.46	1087.27	1.36	1088.63
1087.34		+72.46	1087.34	1.55	1088.89
1087.41		+97.46	1087.41	1.75	1089.16
1087.47		116+22.46	1087.47	1.90	1089.37
1087.48		+25	1087.48	1.93	1089.42
1087.55		+50	1087.55	1.94	1089.49
1087.63		+75	1087.63		1089.57
1087.71		117+00	1087.71		1089.65
1087.82		+25	1087.82		1089.76
1087.94		+50	1087.94		1089.88
1088.08		+75	1088.08		1090.02
1088.22		118+00	1088.22		1090.16
1088.39		+25	1088.39		1090.33
1088.57		+50	1088.57		1090.51
1088.77		+75	1088.77	1.94	1090.71
1088.97		119+00	1088.97	1.93	1090.90
1089.11		+15.15	1089.11	1.89	1091.00
1089.35		+40.15	1089.35	1.75	1091.10
1089.59		+65.15	1089.59	1.55	1091.14
1089.86		+90.15	1089.86	1.36	1091.22
1090.14		120+15.15	1090.14	1.16	1091.30
1090.43		+40.15	1090.43	.97	1091.40
1090.74		+65.15	1090.74	.78	1091.52
1091.05		+90.15	1091.05	.58	1091.63
1091.35		121+15.15	1091.35	.39	1091.74
1091.66		+40.15	1091.66	.19	1091.85
1091.97		+65.15 Back	1091.97	.00	1091.97
1091.97		=+60.43 Ahead	1091.97	.00	1091.97
1092.15		+75	1092.15	-.05	1092.10
1092.46		122+00	1092.46	-.11	1092.35
1092.77		+25	1092.77	-.16	1092.61
1093.08		+50	1093.08	-.21	1092.87
1093.39		+75	1093.39	-.26	1093.13
1093.70		123+00	1093.70	-.32	1093.38
1093.82	.00	+10	1093.82	-.37	1093.45

T.S. = 140+64.51 S.T. = 150+22.28
LEFT PAV'T D = 3°01'-54" Lt.
Rate of Superelevation = 0.083 %

Elevation Left Edge	Deduct From Profile	Station	Profile Elevation	Add to Profile	Elevation Right Edge
1094.46	.37	140+64.51	1094.83	.00	1094.83
1093.95	.53	+94.51	1094.48		1094.48
1093.44	.69	141+24.51	1094.13		1094.13
1092.93	.86	+54.51	1093.79		1093.79
1092.42	1.02	+84.51	1093.44		1093.44
1091.91	1.18	142+14.51	1093.09		1093.09
1091.40	1.34	+44.51	1092.74		1092.74
1090.89	1.50	+74.51	1092.39		1092.39
1090.38	1.67	143+04.51	1092.05		1092.05
1089.87	1.83	+34.51	1091.70		1091.70
1089.41	1.95	+64.51	1091.36		1091.36
1089.25	1.99	+75	1091.24		1091.24
1088.96		144+00	1090.95		1090.95
1088.67		+25	1090.66		1090.66
1088.38		+50	1090.37		1090.37
1088.09		+75	1090.08		1090.08
1087.83		145+00	1089.82		1089.82
1087.59		+25	1089.58		1089.58
1087.39		+50	1089.38		1089.38
1087.23		+75	1089.22		1089.22
1087.10		146+00	1089.09		1089.09
1087.00		+25	1088.99		1088.99
1086.95		+50	1088.94		1088.94
1086.93	1.99	+75	1088.92		1088.92
1086.97	1.97	147+00	1088.94		1088.94
1087.03	1.95	+22.28	1088.98		1088.98
1087.26	1.83	+52.28	1089.09		1089.09
1087.57	1.67	+82.28	1089.24		1089.24
1087.91	1.50	148+12.28	1089.41		1089.41
1088.24	1.34	+42.28	1089.58		1089.58
1088.57	1.18	+72.28	1089.75		1089.75
1088.89	1.02	149+02.28	1089.91		1089.91
1089.23	.86	+32.28	1090.09		1090.09
1089.57	.69	+62.28	1090.26		1090.26
1089.90	.53	+92.28	1090.43		1090.43
1090.23	.37	150+22.28	1090.60		1090.60
1090.23	.37	=+29.23 Ahead	1090.60	.00	1090.60

T. S. = 140+64.51 S.T. = 150+36.19
RIGHT PAV'T D = 2°58'-08" Lt.
Rate of Superelevation = 0.083 %

Elevation Left Edge	Deduct From Profile	Station	Profile Elevation	Add to Profile	Elevation Right Edge
1096.57	.00	139+15	1096.57	-.37	1096.20
1096.45		+25	1096.45	-.30	1096.15
1096.16		+50	1096.16	-.22	1095.94
1095.87		+75	1095.87	-.15	1095.72
1095.58		140+00	1095.58	-.07	1095.51
1095.29		+25	1095.29	.00	1095.29
1094.83		+64.51	1094.83	.00	1094.83
1094.48		+94.51	1094.48	+.20	1094.68
1094.13		141+24.51	1094.13	.40	1094.53
1093.79		+54.51	1093.79	.60	1094.39
1093.44		+84.51	1093.44	.80	1094.24
1093.09		142+14.51	1093.09	1.00	1094.09
1092.74		+44.51	1092.74	1.19	1093.93
1092.39		+74.51	1092.39	1.39	1093.78
1092.05		143+04.51	1092.05	1.59	1093.64
1091.70		+34.51	1091.70	1.79	1093.49
1091.34		+64.51	1091.34	1.94	1093.28
1091.22		+75	1091.22	1.99	1093.21
1090.93		144+00	1090.93		1092.92
1090.64		+25	1090.64		1092.63
1090.35		+50	1090.35		1092.34
1090.06		+75	1090.06		1092.05
1089.78		145+00	1089.78		1091.77
1089.54		+25	1089.54		1091.53
1089.34		+50	1089.34		1091.33
1089.18		+75	1089.18		1091.17
1089.05		146+00	1089.05		1091.04
1088.95		+25	1088.95		1090.94
1088.90		+50	1088.90		1090.89
1088.88		+75	1088.88		1090.87
1088.88		147+00	1088.88	1.99	1090.87
1088.93		+25	1088.93	1.97	1090.90
1088.97		+36.19	1088.97	1.96	1090.93
1089.10		+66.19	1089.10	1.79	1090.89
1089.26		+96.19	1089.26	1.59	1090.85
1089.43		148+26.19	1089.43	1.39	1090.82
1089.59		+56.19	1089.59	1.19	1090.78
1089.76		+86.19	1089.76	1.00	1090.76
1089.92		149+16.19	1089.92	.80	1090.72
1090.09		+46.19	1090.09	.60	1090.69
1090.26		+76.19	1090.26	.40	1090.66
1090.42		150+06.19	1090.42	.20	1090.62
1090.59		+36.19 Back	1090.59	.00	1090.59
1090.59	.00	=+29.23 Ahead	1090.59	.00	1090.59

SUPERELEVATION TABLES

FED. RD. DIVISION	STATE	PROJECT	TYPE FUND
2	OHIO	F-24(3) F-190(5)	POST WAR

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MAD-40-(0.00-6.84)

T.S. = 150+91.98 S.T. = 160+63.67
LEFT PAV'T D=2°58'08" Rt.
Rate of Superelevation = 0.083 ft/ft

Elevation Left Edge	Add to Profile	Station	Profile Elevation	Deduct From Profile	Elevation Right Edge
1090.17	-.37	150+19.69	1090.54	.00	1090.54
1090.23	-.34	+25	1090.57		1090.57
1090.49	-.22	+50	1090.71		1090.71
1090.76	-.09	+75	1090.85		1090.85
1090.94	.00	+91.98	1090.94		1090.94
1091.31	.20	151+21.98	1091.11		1091.11
1091.68	.40	+51.98	1091.28		1091.28
1092.05	.60	+81.98	1091.45		1091.45
1092.43	.80	152+11.98	1091.63		1091.63
1092.79	1.00	+41.98	1091.79		1091.79
1093.12	1.19	+71.98	1091.93		1091.93
1093.47	1.39	153+01.98	1092.08		1092.08
1093.76	1.59	+31.98	1092.17		1092.17
1094.02	1.79	+61.98	1092.23		1092.23
1094.18	1.94	+91.98	1092.24		1092.24
1094.21	1.96	154+00	1092.25		1092.25
1094.22	1.99	+25	1092.23		1092.23
1094.17		+50	1092.18		1092.18
1094.11		+75	1092.12		1092.12
1094.01		155+00	1092.02		1092.02
1093.90		+25	1091.91		1091.91
1093.75		+50	1091.76		1091.76
1093.58		+75	1091.59		1091.59
1093.40		156+00	1091.41		1091.41
1093.17		+25	1091.18		1091.18
1092.92		+50	1090.93		1090.93
1092.67		+75	1090.68		1090.68
1092.41		157+00	1090.42		1090.42
1092.15	1.99	+25	1090.16		1090.16
1091.88	1.97	+50	1089.91		1089.91
1091.71	1.94	+63.67	1089.77		1089.77
1091.25	1.79	+93.67	1089.46		1089.46
1090.74	1.59	158+23.67	1089.15		1089.15
1090.23	1.39	+53.67	1088.84		1088.84
1089.72	1.19	+83.67	1088.53		1088.53
1089.23	1.00	159+13.67	1088.23		1088.23
1088.72	.80	+43.67	1087.92		1087.92
1088.20	.60	+73.67	1087.60		1087.60
1087.70	.40	160+03.67	1087.30		1087.30
1087.19	.20	+33.67	1086.99		1086.99
1086.68	.00	+63.67	1086.68	.00	1086.68
1086.53	-.03	+75	1086.56	.03	1086.53
1086.21	-.09	161+00	1086.30	.09	1086.21
1086.17	-.10	+03.04 Back =	1086.27	.10	1086.17
1086.17	-.10	160+20.82 Ahead	1086.27	.10	1086.17
1086.12	-.11	+25	1086.23	.11	1086.12
1085.80	-.17	+50	1085.97	.17	1085.80
1085.70	-.19	+58	1085.89	.19	1085.70

T.S. = 150+35.15 S.T. = 159+94.29
RIGHT PAV'T. D = 3°01'54" Rt.
Rate of Superelevation = 0.083 ft/ft

Elevation Left Edge	Deduct From Profile	Station	Profile Elevation	Deduct From Profile	Elevation Right Edge
1090.63	.00	150+35.15	1090.63	.00	1090.63
1090.79		+65.15	1090.79	.20	1090.59
1090.96		+95.15	1090.96	.40	1090.56
1091.13		151+25.15	1091.13	.60	1090.53
1091.30		+55.15	1091.30	.80	1090.50
1091.47		+85.15	1091.47	1.00	1090.47
1091.63		152+15.15	1091.63	1.19	1090.44
1091.80		+45.15	1091.80	1.39	1090.41
1091.96		+75.15	1091.96	1.59	1090.37
1092.06		153+05.15	1092.06	1.79	1090.27
1092.14		+35.15	1092.14	1.94	1090.20
1092.16		+50	1092.16	1.99	1090.17
1092.17		+75	1092.17		1090.18
1092.15		154+00	1092.15		1090.16
1092.10		+25	1092.10		1090.11
1092.02		+50	1092.02		1090.03
1091.92		+75	1091.92		1089.93
1091.78		155+00	1091.78		1089.79
1091.62		+25	1091.62		1089.63
1091.42		+50	1091.42		1089.43
1091.20		+75	1091.20		1089.21
1090.94		156+00	1090.94		1088.95
1090.67		+25	1090.67		1088.68
1090.35		+50	1090.35	1.99	1088.36
1090.03		+75	1090.03	1.97	1088.06
1089.78	.00	+94.29	1089.78	1.94	1087.84
1089.37	.02	157+24.29	1089.39	1.81	1087.58
1088.95	.04	+54.29	1088.99	1.63	1087.36
1088.55	.06	+84.29	1088.61	1.45	1087.16
1088.13	.08	158+14.29	1088.21	1.28	1086.93
1087.73	.10	+44.29	1087.83	1.09	1086.74
1087.32	.12	+74.29	1087.44	.91	1086.53
1086.90	.14	159+04.29	1087.04	.73	1086.31
1086.50	.16	+34.29	1086.66	.55	1086.11
1086.08	.18	+64.29	1086.26	.37	1085.89
1085.69	.19	+94.29	1085.88	.21	1085.67
1085.61	.19	160+00	1085.80	.19	1085.61
1085.30	.18	+25	1085.48	.18	1085.30
1084.98	.17	+50	1085.15	.17	1084.98
1084.41	.16	+94.29 Back =	1084.57	.16	1084.41
1084.41	.16	161+01.26 Ahead	1084.57	.16	1084.41

TRANSITION TABLE
STA. 355+75 To STA. 361+49.35
RIGHT LANE

Elevation Left Edge	Deduct From Profile	Station	Profile Elevation	Deduct From Profile	Elevation Right Edge
1004.45	.19	355+75	1004.64	.19	1004.45
1004.61	.17	356+00	1004.78		1004.59
1004.78	.14	+25	1004.92		1004.73
1004.95	.11	+50	1005.06		1004.87
1005.12	.08	+75	1005.20		1005.01
1005.29	.05	357+00	1005.34		1005.15
1005.46	.02	+25	1005.48	.19	1005.29
1005.62	.00	+50	1005.62	.20	1005.42
1005.76		+75	1005.76	.23	1005.53
1005.90		358+00	1005.90	.26	1005.64
1006.04		+25	1006.04	.29	1005.75
1006.18		+50	1006.18	.32	1005.83
1006.32		+75	1006.32	.35	1005.97
1006.43		+95.49	1006.43	.37	1006.06
1006.46		359+00	1006.46	.37	1006.09
1006.74		+50	1006.74		1006.37
1007.02		360+00	1007.02		1006.65
1007.30		+50	1007.30		1006.93
1007.58		361+00	1007.58		1007.21
1007.86	.00	+49.35	1007.86	.37	1007.49

LEFT LANE

Elevation Left Edge	Deduct From Profile	Station	Profile Elevation	Deduct From Profile	Elevation Right Edge
1004.45	.19	355+75	1004.64	.19	1004.45
1004.59		356+00	1004.78	.17	1004.61
1004.73		356+25	1004.92	.14	1004.78
1004.87		+50	1005.06	.11	1004.95
1005.01		+75	1005.20	.08	1005.12
1005.15		357+00	1005.34	.05	1005.29
1005.29	.19	+25	1005.48	.02	1005.46
1005.42	.20	+50	1005.62	.00	1005.62
1005.53	.23	+75	1005.76		1005.76
1005.64	.26	358+00	1005.90		1005.90
1005.75	.29	+25	1006.04		1006.04
1005.83	.32	+50	1006.18		1006.18
1005.97	.35	+75	1006.32		1006.32
1006.06	.37	+95.49	1006.43		1006.43
1006.09	.37	359+00	1006.46		1006.46
1006.37		+50	1006.74		1006.74
1006.65		360+00	1007.02		1007.02
1006.93		+50	1007.30		1007.30
1007.21		361+00	1007.58		1007.58
1007.49	.37	+49.35	1007.86	.00	1007.86

SUPERELEVATION TABLES

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

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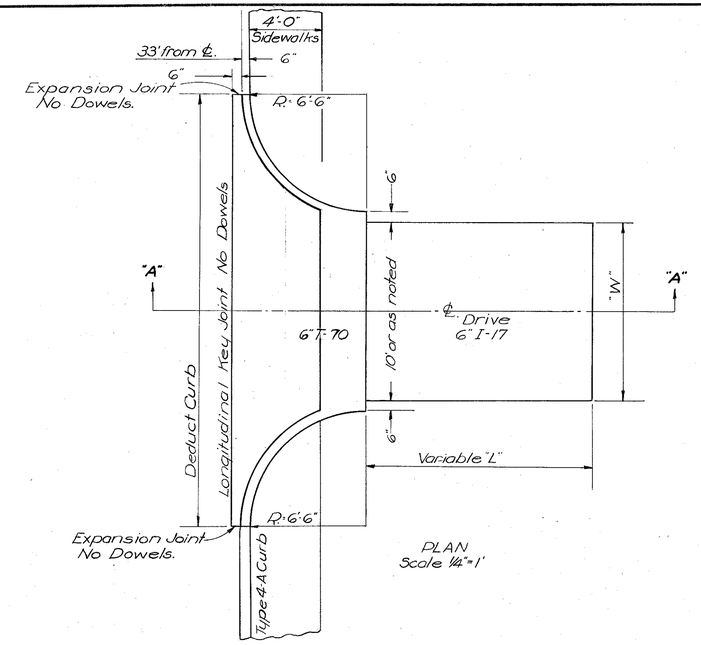
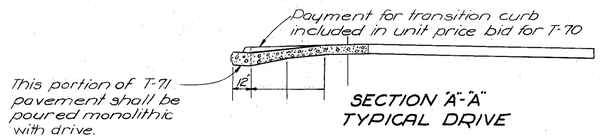
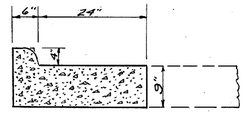
MAD-40-(0.00-6.84)



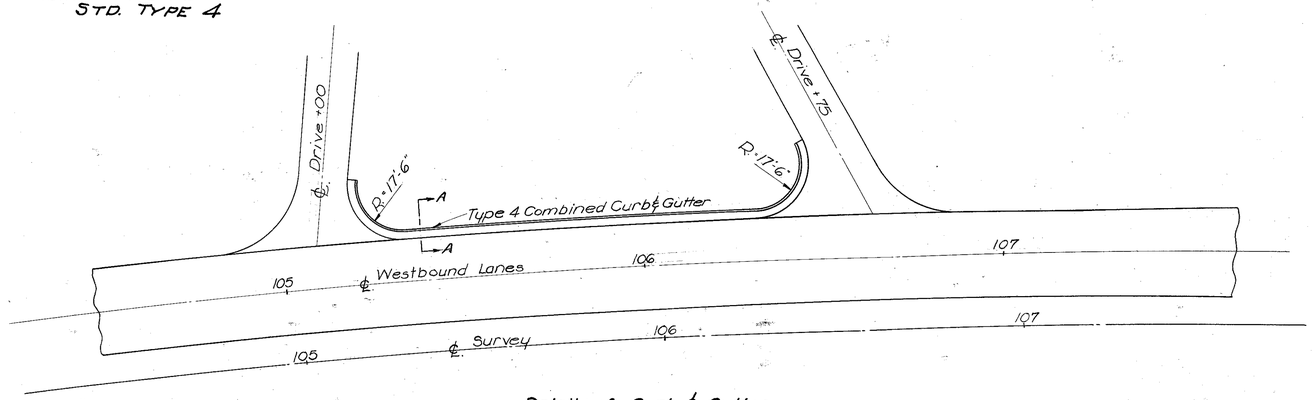
PLAN
Scale 1/2"=1'



SECTION "A"-"A"
TYPICAL DRIVE
For pavement with curbs

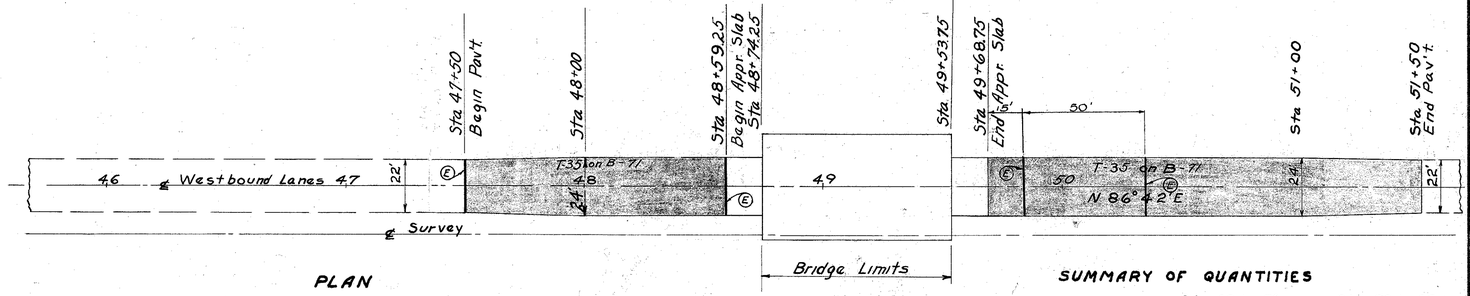


SECTION A-A
COMBINATION CURB & GUTTER
STD. TYPE 4



Detail of Curb & Gutter
Left of Station 105+16 to Station 106+42

I-12 Type 4 Combined Curb & Gutter * 145 Lin. Ft.
* Quantity carried to line sheet No. 26



PLAN

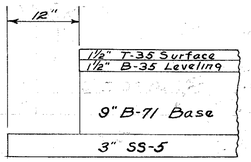
Showing new pavement
Sta 47+50 to 51+50
Scale 1" = 30'

JOINT LEGEND
E ~ Expansion without dowels

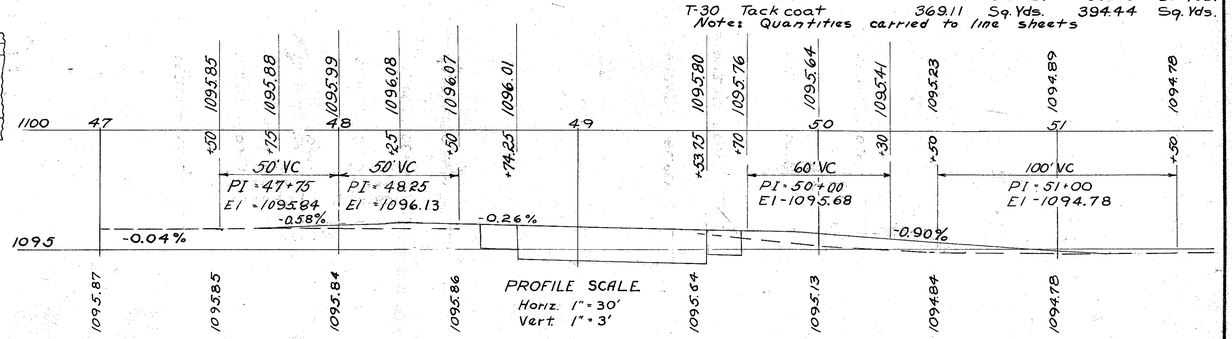
SUMMARY OF QUANTITIES

	Sta 40 to 50		Sta 50 to 60	
T-35 1½" Surface Course	369.11	Sq. Yds.	394.44	Sq. Yds.
B-35 1½" Leveling Course	369.11	Sq. Yds.	394.44	Sq. Yds.
B-71 9" Base Course	369.11	Sq. Yds.	394.44	Sq. Yds.
E-8 Removal of Extg. Pav't	367	Sq. Yds.	367	Sq. Yds.
55-3 3" Classified Emb.	40.10	Cu. Yds.	35.65	Cu. Yds.
T-30 Tack coat	369.11	Sq. Yds.	394.44	Sq. Yds.

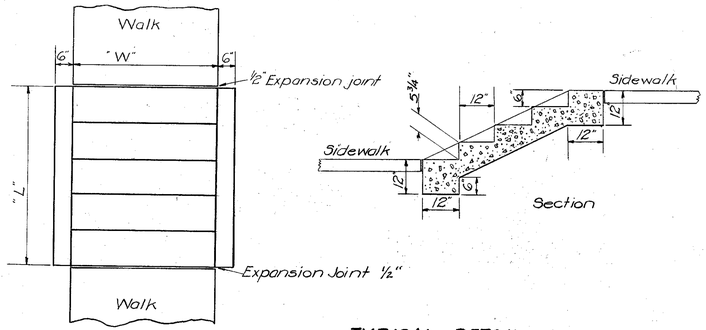
Note: Quantities carried to line sheets



DETAIL OF PAVEMENT EDGE



PROFILE SCALE
Horiz. 1" = 30'
Vert 1" = 3'



PLAN

TYPICAL DETAIL OF CONCRETE STEPS

MISCELLANEOUS DETAILS

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

131
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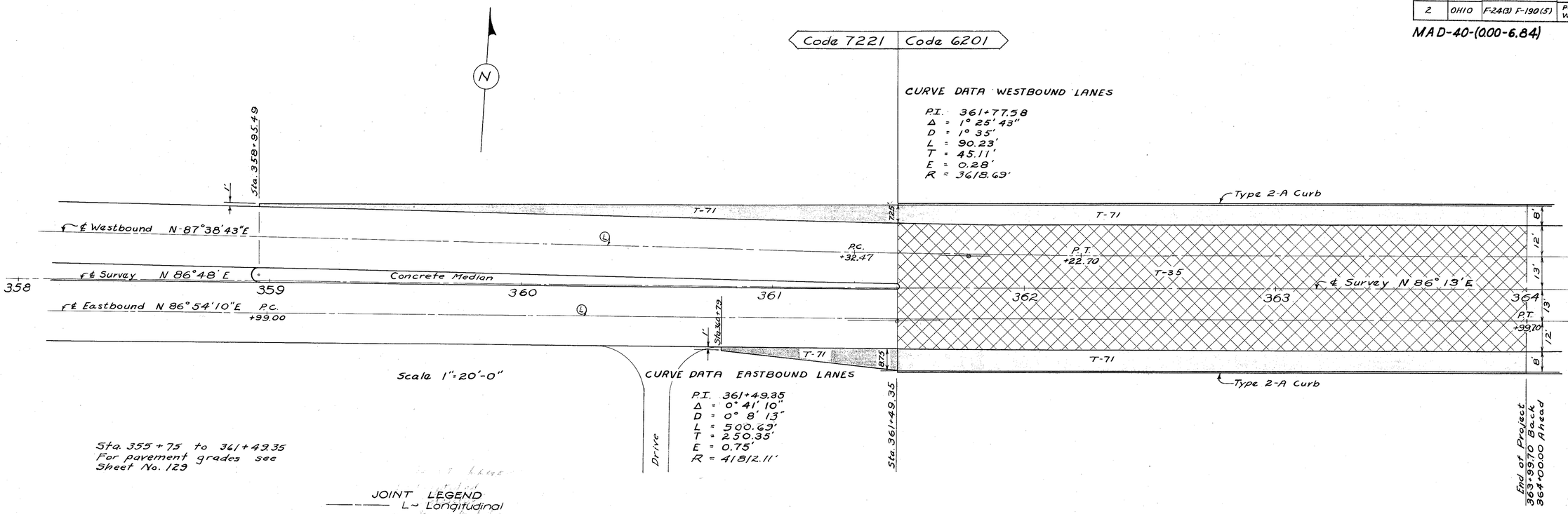
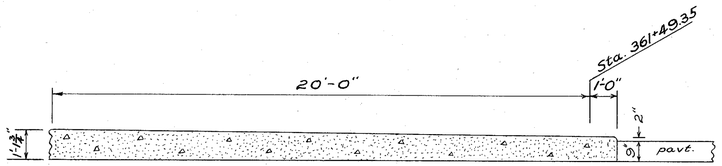
MAD-40-(0.00-6.84)

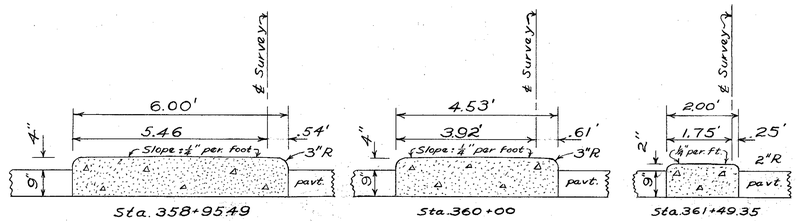


Sta. 355+75 to 361+49.35
For pavement grades see Sheet No. 129

JOINT LEGEND
——— L~ Longitudinal



Median Section - East End
Scale 3/8"=1'-0"



Median Section Details
Scale ½"=1'0"

ESTIMATED QUANTITIES (Code 7221)

Item	T-71	9" Reinforced Portland Cement Concrete Pavement	154.46	Sq. Yds.
Item	SS-5	6" Classified Embamkment	190.	Sq. Yds.
Item	I-21	Concrete Median as Shown	117.06	Sq. Yds.

ESTIMATED QUANTITIES (Code 6201)

Item	T-71	9" Reinforced Portland Cement Concrete Pavement	472.9	Sq. Yds.
Item	I-12	Type 2-A Concrete Curb	500.7	Lin Ft.
Item	T-35	1½" Asphaltic Concrete Surface Course	1418.48	Sq. Yds.
Item	B-35	1½" Asphaltic Concrete Leveling Course	1418.48	Sq. Yds.
Item	B-35	3" Asphaltic Concrete Base Course	2836.96	Sq. Yds.

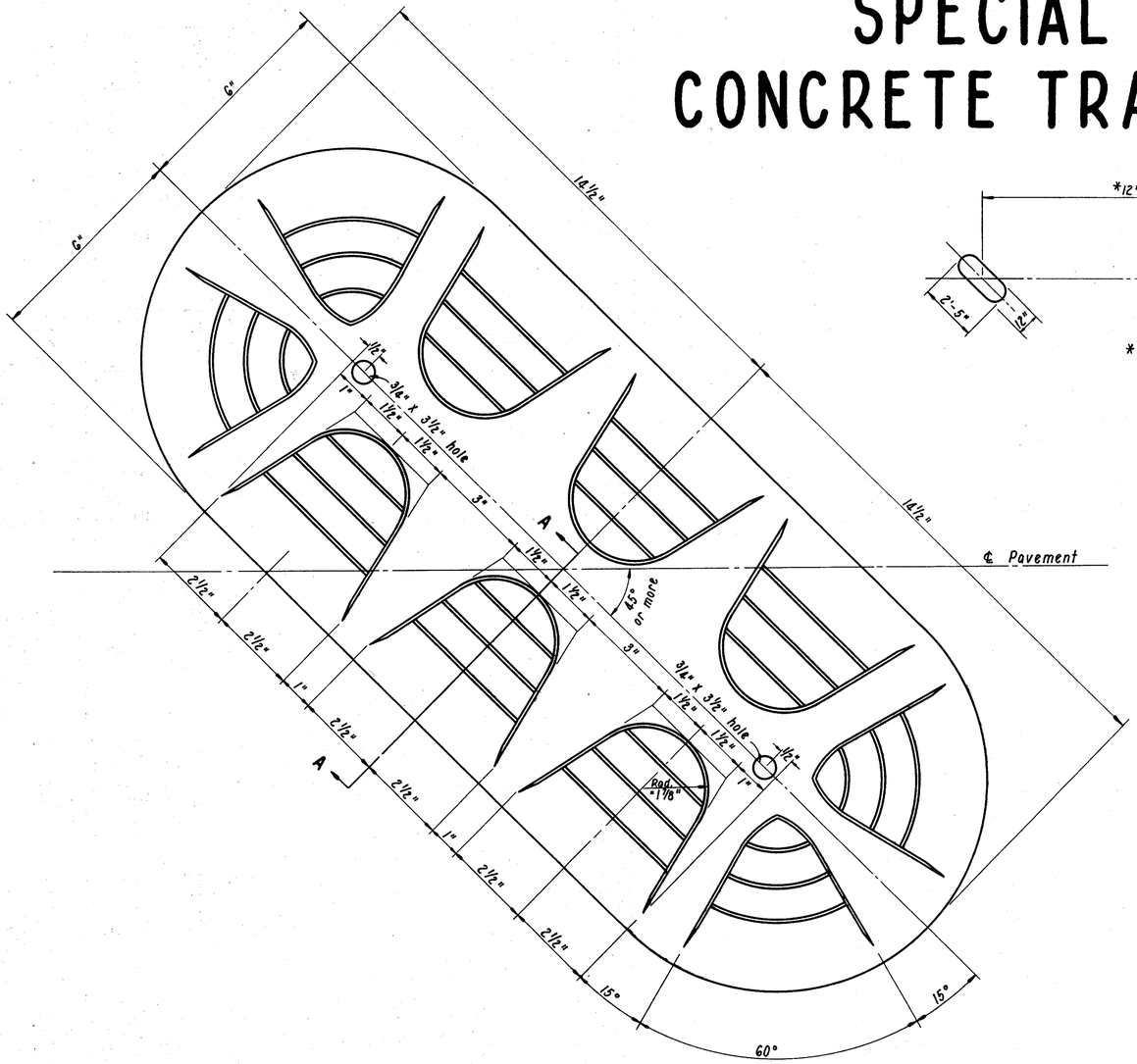
Note: Quantities carried to Miscellaneous Table

PAVEMENT DETAILS STA. 358+92.49 TO 363+99.70

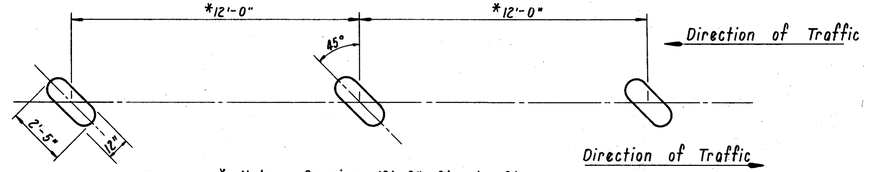
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS	131A
2	OHIO	F-24(3) F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)

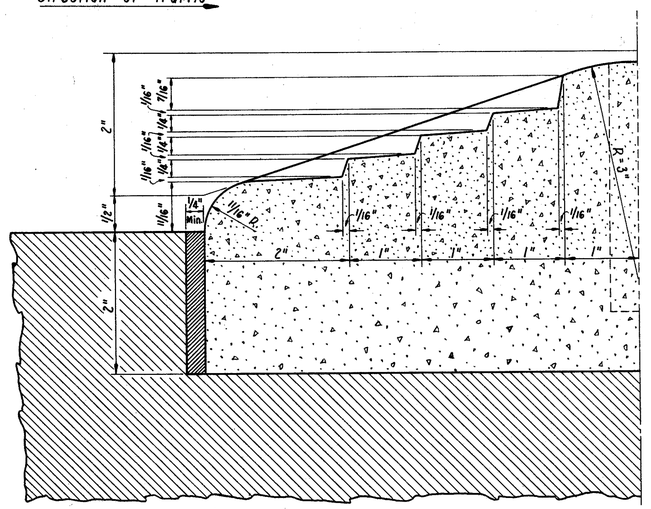
SPECIAL PRECAST CONCRETE TRAFFIC DIVIDERS



PLAN
Scale - Half Size



* Note: Spacing 12'-0" Ctr. to Ctr. except where otherwise shown on plans.



SECTION A-A
Scale - Full Size

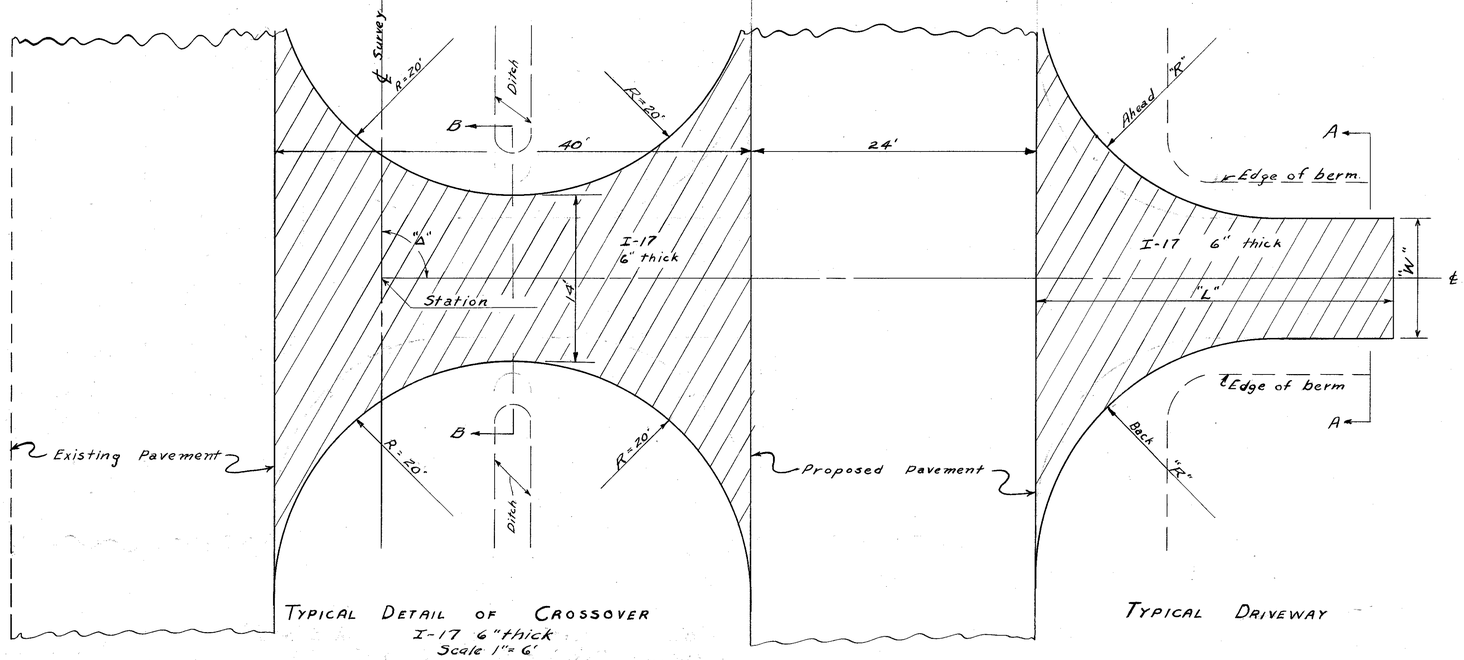
WHEN PLACED IN BITUMINOUS CONCRETE:
The dividers shall not be placed until the bituminous concrete surface has been completed. The opening remaining between the bituminous concrete and the traffic dividers shall be filled with the same type bituminous material used in the mix, care being exercised to keep the traffic divider free of any material tending to deface them.

WHEN PLACED IN PORTLAND CEMENT CONCRETE:
Openings into which the traffic dividers are to be set shall be formed by a method acceptable to the Engineer at the time the concrete pavement is placed. The opening remaining between the concrete pavement and the traffic dividers shall be filled with 1:2 cement mortar or Sec. M-5.1 bituminous material.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

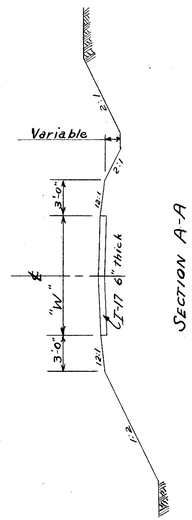
132
179

MAD-40-(0.00-6.84)

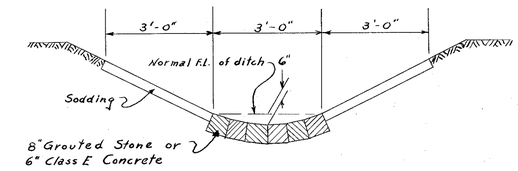


TYPICAL DETAIL OF CROSSOVER
I-17 6" thick
Scale 1"= 6'

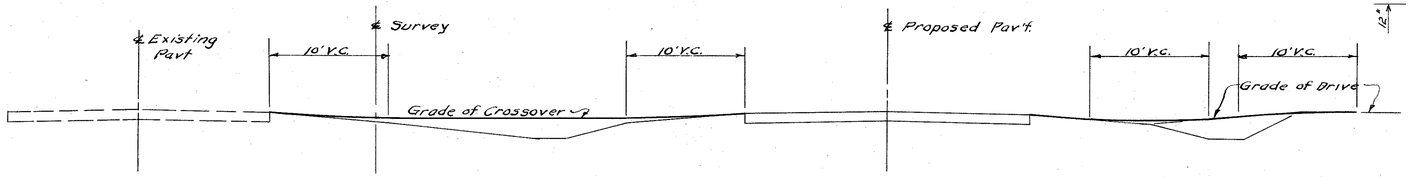
TYPICAL DRIVEWAY



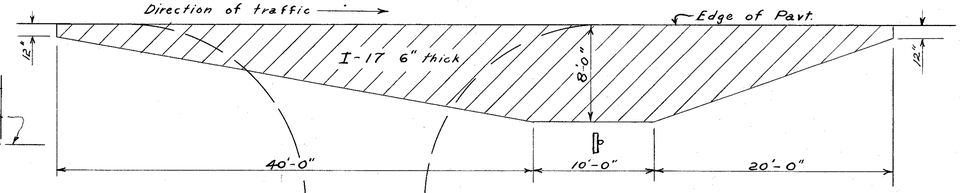
SECTION A-A



DETAIL OF PAVED GUTTER



SECTION ON ℄

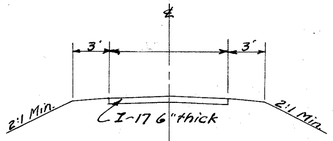


TYPICAL MAIL BOX TURNOUT
I-17 6" thick = 38.9 Sq Yds. each

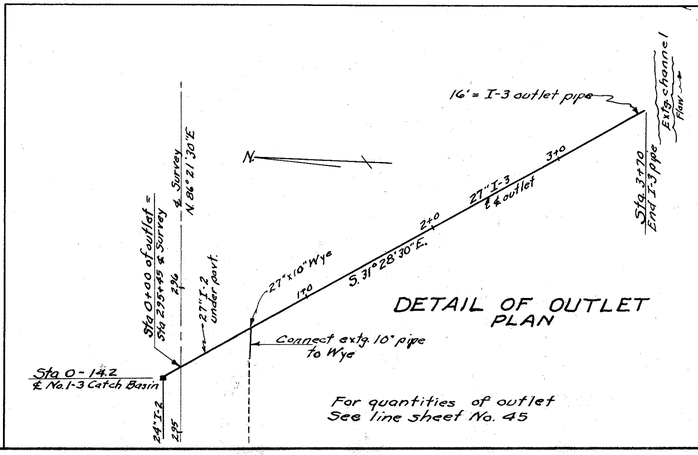
F-24 (3) 11 @ 38.9 = 427.9 Sq Yds
F-190 (5) 9 @ 38.9 = 350.1 Sq Yds

Note: quantities carried to Summary of Tables

Note: Where feasible Drives will be combined with Mail Box Approaches in the manner shown and the quantities will be adjusted by the Engineer

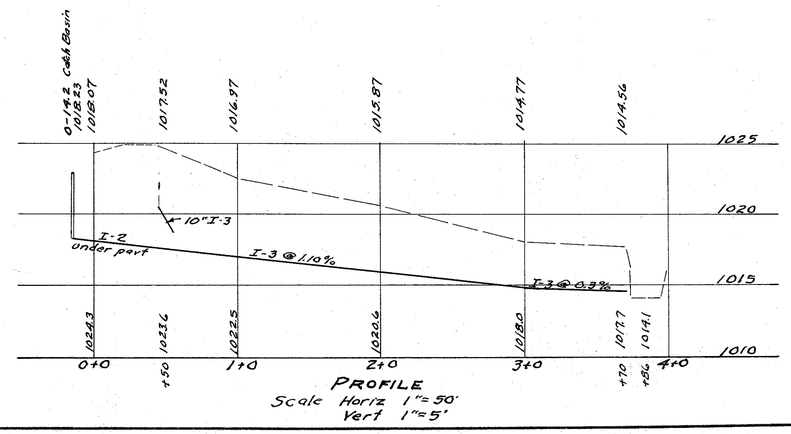


SECTION B-B



DETAIL OF OUTLET PLAN

For quantities of outlet See line sheet No. 45

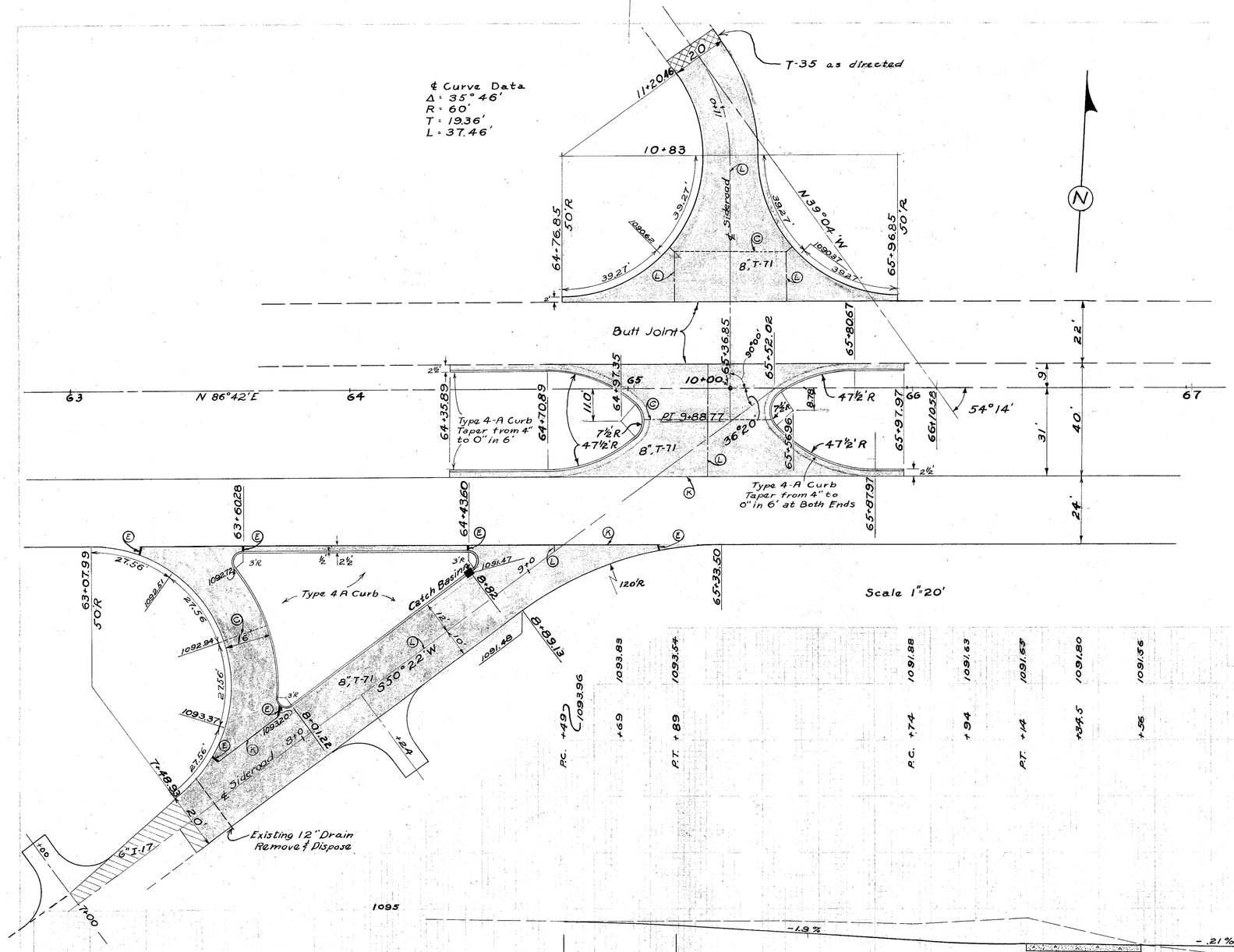


PROFILE
Scale Horiz 1"= 50'
Vert 1"= 5'

MISCELLANEOUS DETAILS

				TYPE FUNDS	133
				POST WAR	179
			F-24(3) F-190(5)		

MAD-40-(0.00-6.84)

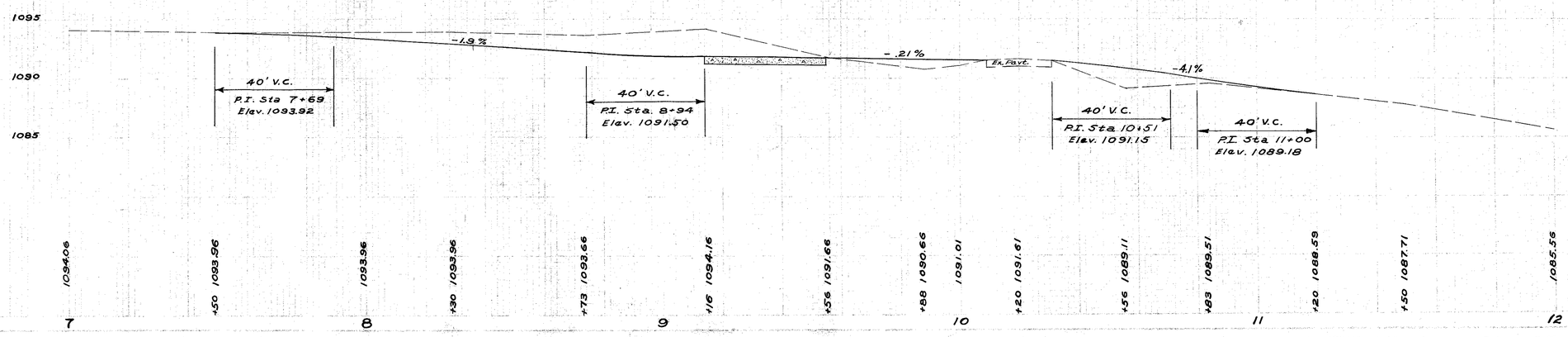


JOINT LEGEND

- (E) Expansion, without dowels
- (K) Key, without ties
- (C) Contraction
- (L) Longitudinal

ESTIMATED QUANTITIES

Item 55-5	6" Classified Embankment	1,414.2	Sq. Yds.
Item T-71	8" Reinforced Concrete Pav't.	1,271.14	Sq. Yds.
Item I-17	6" Side Approach	105	Sq. Yds.
Item I-12	Concrete Curb, Type 4-A	688	Lin. Ft.
Item T-35	Asphaltic Conc. Surface Course (Estimate)	1.0	Cu. Yds.



90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40

SPECIAL QUANTITIES								
DESCRIPTION	CUT Sq. Ft.		FILL Sq. Ft.		Distance between End Areas ft.	Cu. Yds.	
	I	II	I	II		Cut	Fill
Island	–	–	–	–	–	7	53
16' Turnout – ℄ Radius 58'	0	17	8	2	116	36	22
Shoulder & Ditch for Turnout	8	6	9	6	90	23	25
Rt 40 Curb & Gutter	84	84	0	0	2½	8	0
					TOTAL	74	100

2 F-24(3) F-190(5) POST WAR 134 179

MAD-40-(0.00-6.84)

Sta. 63+07.99

16' Turnout

2 19 38

—1090—

A A

250L 220L 210L 200L 190L 180L 170L 160L. 150L (9+16 cont.) for Special Quantities 130L 120L 110L 100L

Begin Work Sta. 9+16

A

← for Special Quantities

46 379

Sta 65+33.50

A

1091.65
9+16
1094.16

+52 21'R 14" Walnut Remove

← for Special Quantities

Edge of Rt 40 Eastbound

129 2:1

1091.88
8+73
1093.66

+24 Right Add for Drive

← for Special Quantities
← Rotated Section

center 3' Rad

Existing Ground Line on Curve Radius

8 9 5 51

1093.33
8+00
1093.96

Back Ahead

3 15 15 3

1093.96
7+50
1093.96

Ahead Back

7+00
1094.06

Excavation 870 Cu. Yds.
Embankment 144 Cu. Yds.
Emb. + 5%

	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
Special Quantities			74	100
	370	0		
			470	1
	129	1		
			243	2
			5	2
	51	1		
			68	18
7+50 Ahead	22	18		
7+50 Back	7	18		
			10	16
+00 Add for Drive			0	5
Begin Work Sta. 7+00	3	0		

Intersection Sta. 65+36.75

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60

1087.71
11+50
1087.71

Ahead
Filled with T-35 as directed
Back
20
14
49
1088.59
11+20
1088.59

72
57
38
1089.96
10+83
1089.51

45
9
35
1090.99
10+56
1089.11

Sta. 64+76.75
150
1091.45
10+31
1091.45
Sta. 65+96.75

Sta. 64+70.89
Sta. 65+80.67
Curb & Gutter Section
Sta. 65+97.97
130
22
1091.45
10+09
1091.45

Sta. 64+70.89
4
11
26
7
26
1091.50
9+89
1090.66
Sta. 65+97.97

Sta. 64+70.89
144
Curb & Gutter Section
11
1091.56
9+56
1091.66
Sta. 65+87.97
Sta. 65+97.97

F-24(3) F-190(5) POST WAR 135 179

MAD-40-(0.00-6.84)

	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
End Work Sta. 11+50	0	0		
			0	35
Sta. 11+20 Ahead	0	63		
Back	20	63		
			56	96
	50	57		
			47	52
	44	46		
			90	21
	150	0		
Begin Work Sta. 10+31				
End Work Sta. 10+09				
	130	0		
			58	0
Add for 4 Curb & Gutter Sections bounding Rt 40			10	0
Add for non-paved Portion of Median			28	8
	26	0		
			63	0
	144	0		

Excavation 193 Cu. Yds
Embankment 204 Cu. Yds
Emb+ % Cu. Yds

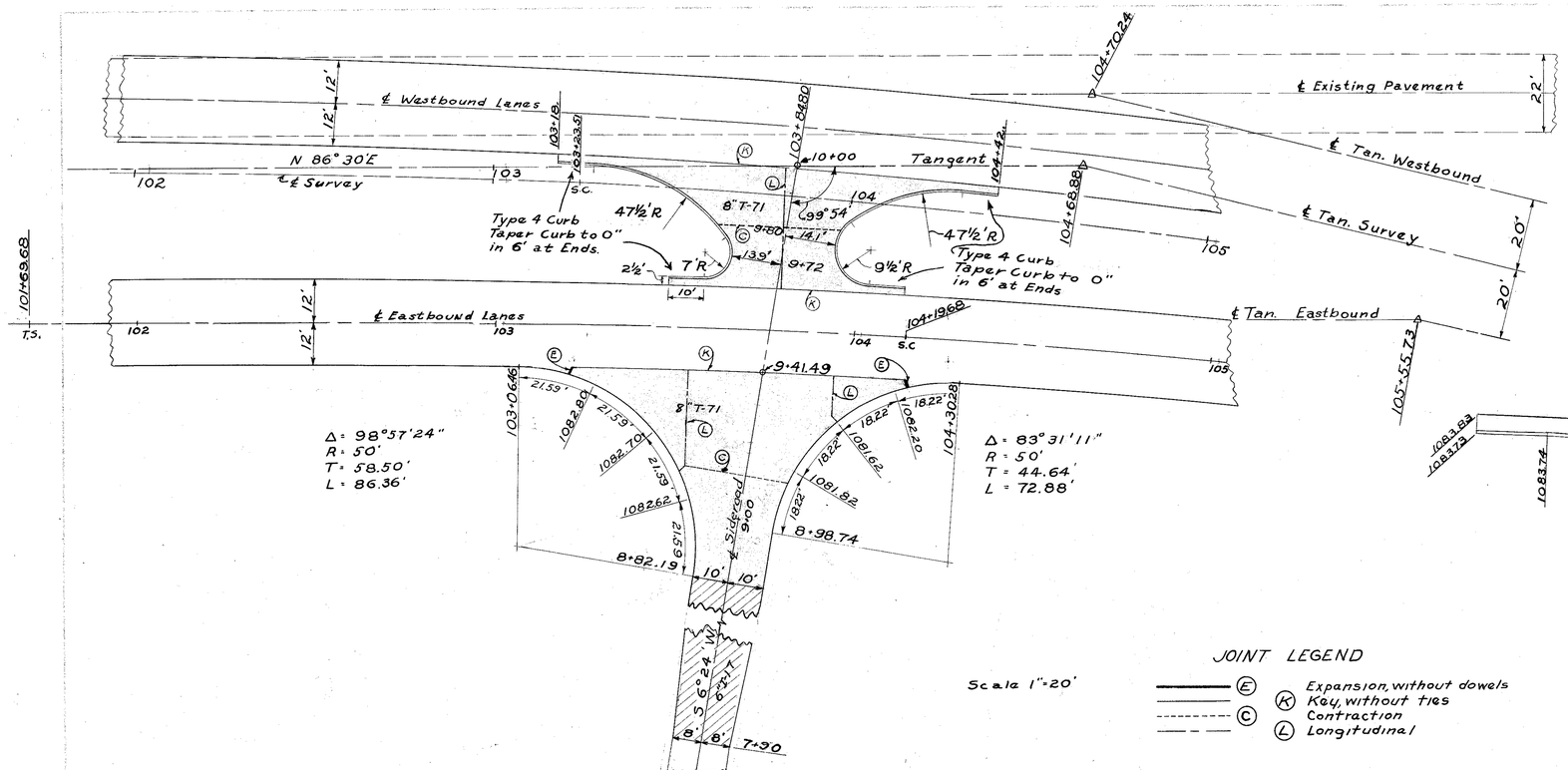
Excavation 159 Cu. Yds.
Embankment 8 Cu. Yds.
Emb+ % Cu. Yds

Begin Work Sta. 9+56

Intersection Sta. 65+36.75

		TYPE FUNDS	136
	F-24(3) F-190(5)	POST WAR	179

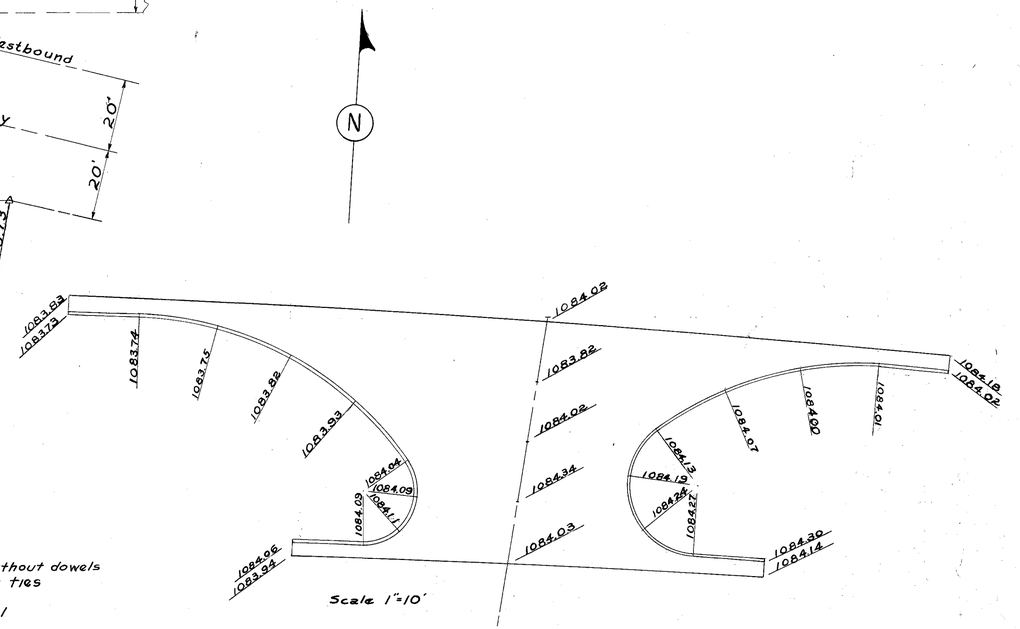
MAD-40-(000-6.84)



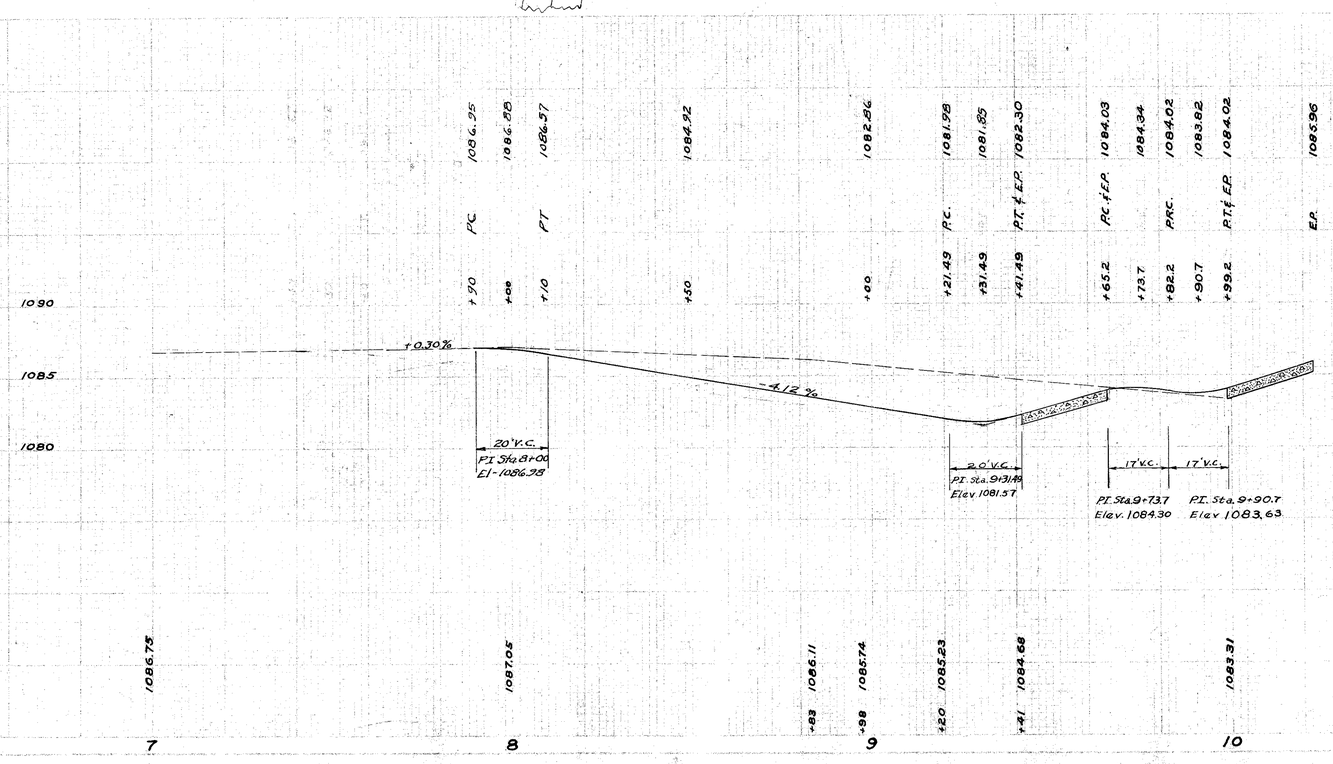
Scale 1"=20'

JOINT LEGEND

(E) Expansion, without dowels
(K) Key, without ties
(C) Contraction
(L) Longitudinal



Scale 1"=10'



ESTIMATED QUANTITIES

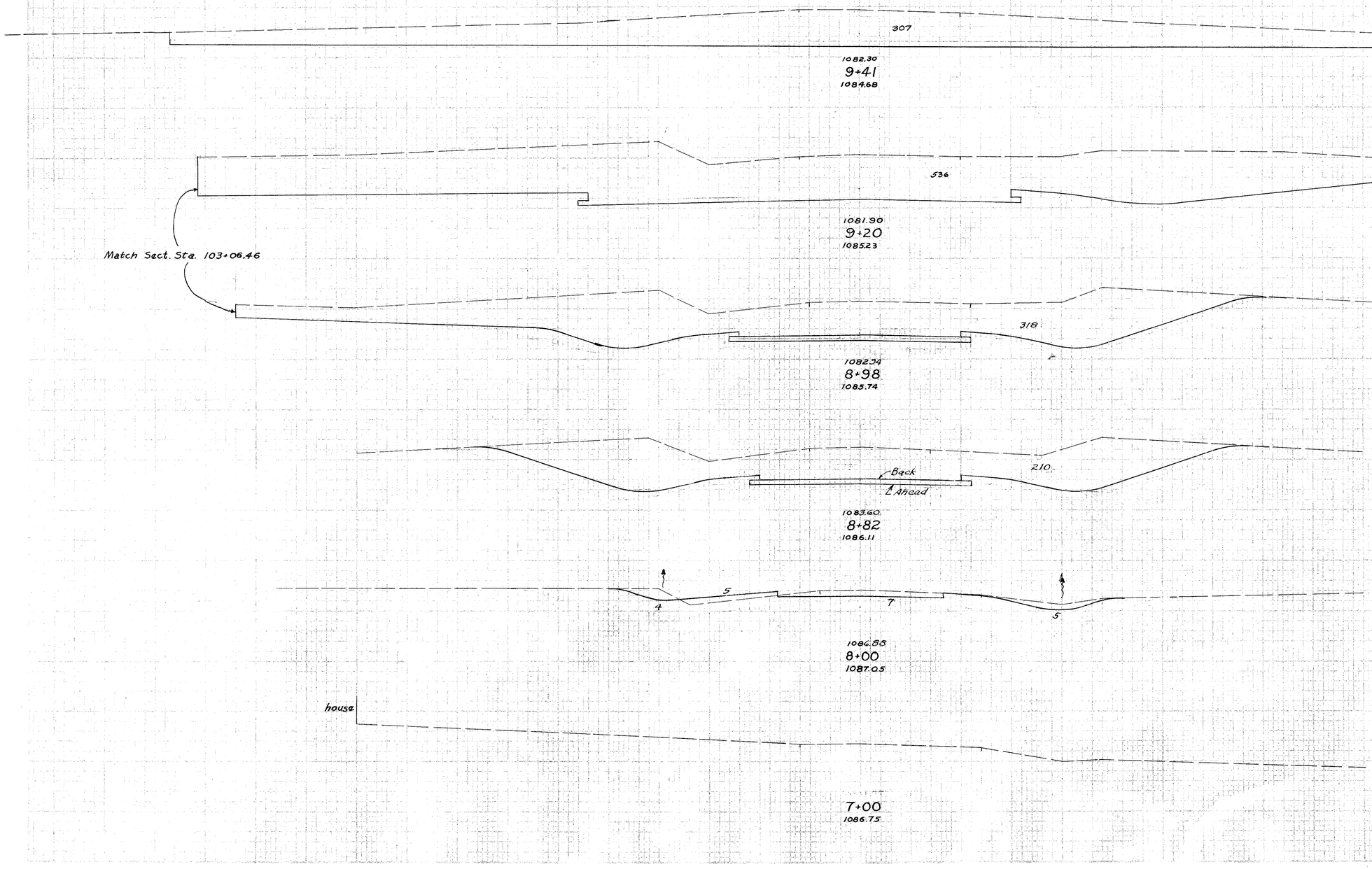
Item, T-71	8" Reinforced Port. Cem. Conc. Pavt	432.67	Sq. Yds.
Item, I-17	6" Side Approaches	184.4	Sq. Yds.
Item, I-12	Concrete Curb, Type 4-A	156	Lin. Ft.
Item, SS-5	6" Classified Embankment	467.7	Sq. Yds.

Intersection Sta. 103+84.80

DIVISION			TYPE FUNDS	
2	OHIO	F-24(3) F-190(5)	POST WAR	137 / 179

MAD-40-(0.00-6.84)

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60



	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
	307	2		
			328	2
	536	2		
			348	1
	318	0		
			160	0
Ahead	222	0		
Back	210	0		
			344	7
	16	5		
			2	1
			3	1
	0	0		

Excavation 1185 Cu. Yds.
Embankment 12 Cu. Yds.
Emb. + % Cu. Yds.

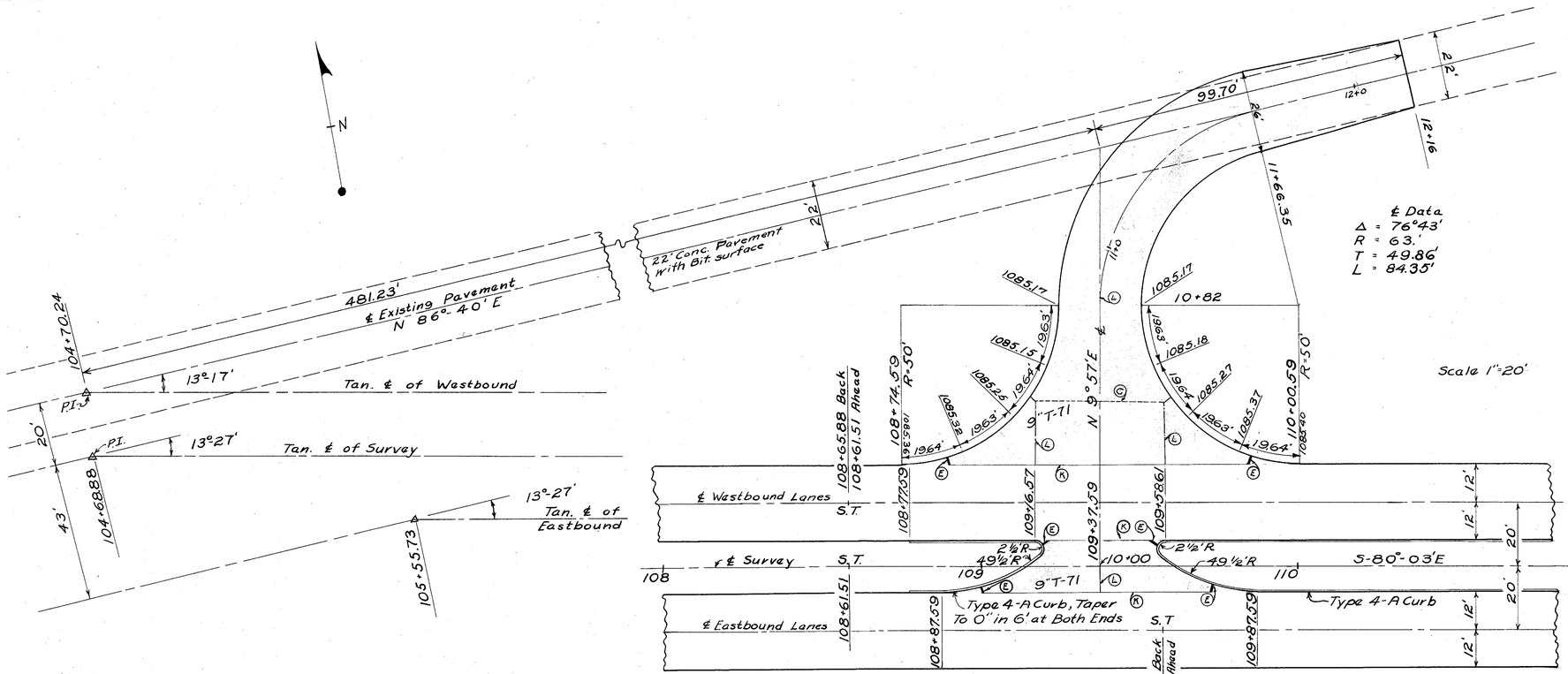
Sta 7+30
Add for drive

Begin Earthworks
Sta. 7+90

Intersection Sta. 103+84.80

DIVISION				TYPE FUNDS	138
2	OHIO	F-24(3) F-190(5)		POST WAR	179

MAD-40-(0.00-6.84)



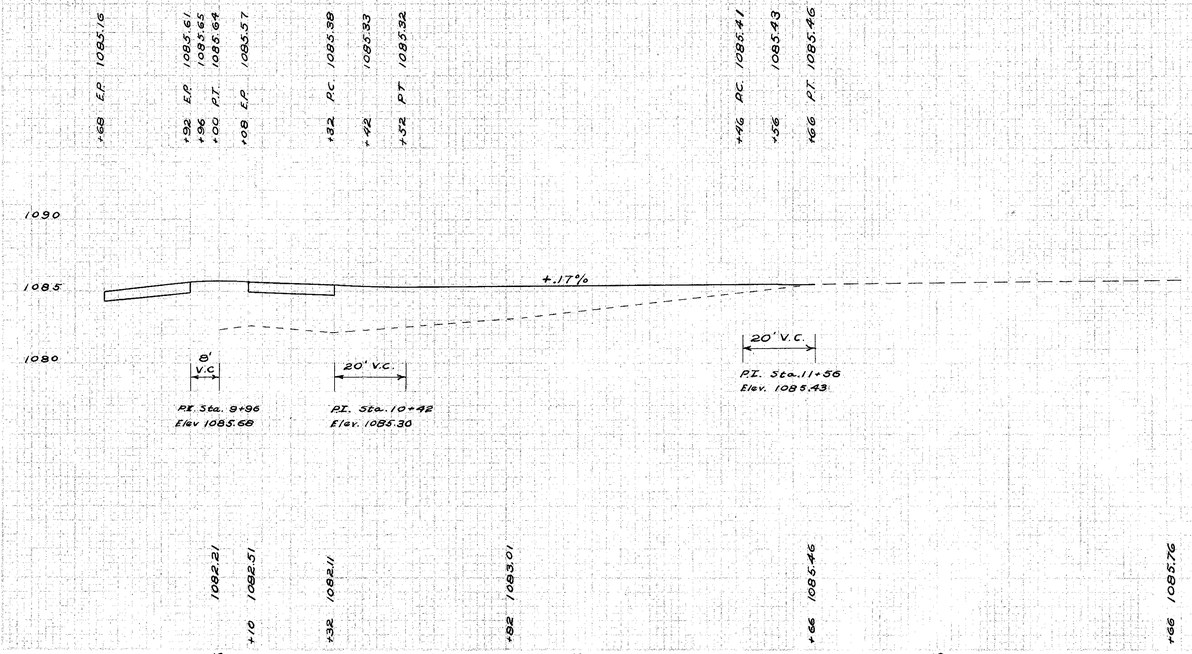
Scale 1"=20'

JOINT LEGEND

- (E) (K) Expansion, without dowels
- Key, without ties
- (C) Contraction
- (L) Longitudinal

ESTIMATED QUANTITIES

Item SS-5	6" Classified Embankment	794.1	Sq. Yds.
Item T-71	9" Reinf. Port. Cem. Conc. Pavement	746.9	Sq. Yds.
Item I-12	Type 4A Concrete Curb	154	Lin. Ft.
	Deduct Curb	220	Lin. Ft.

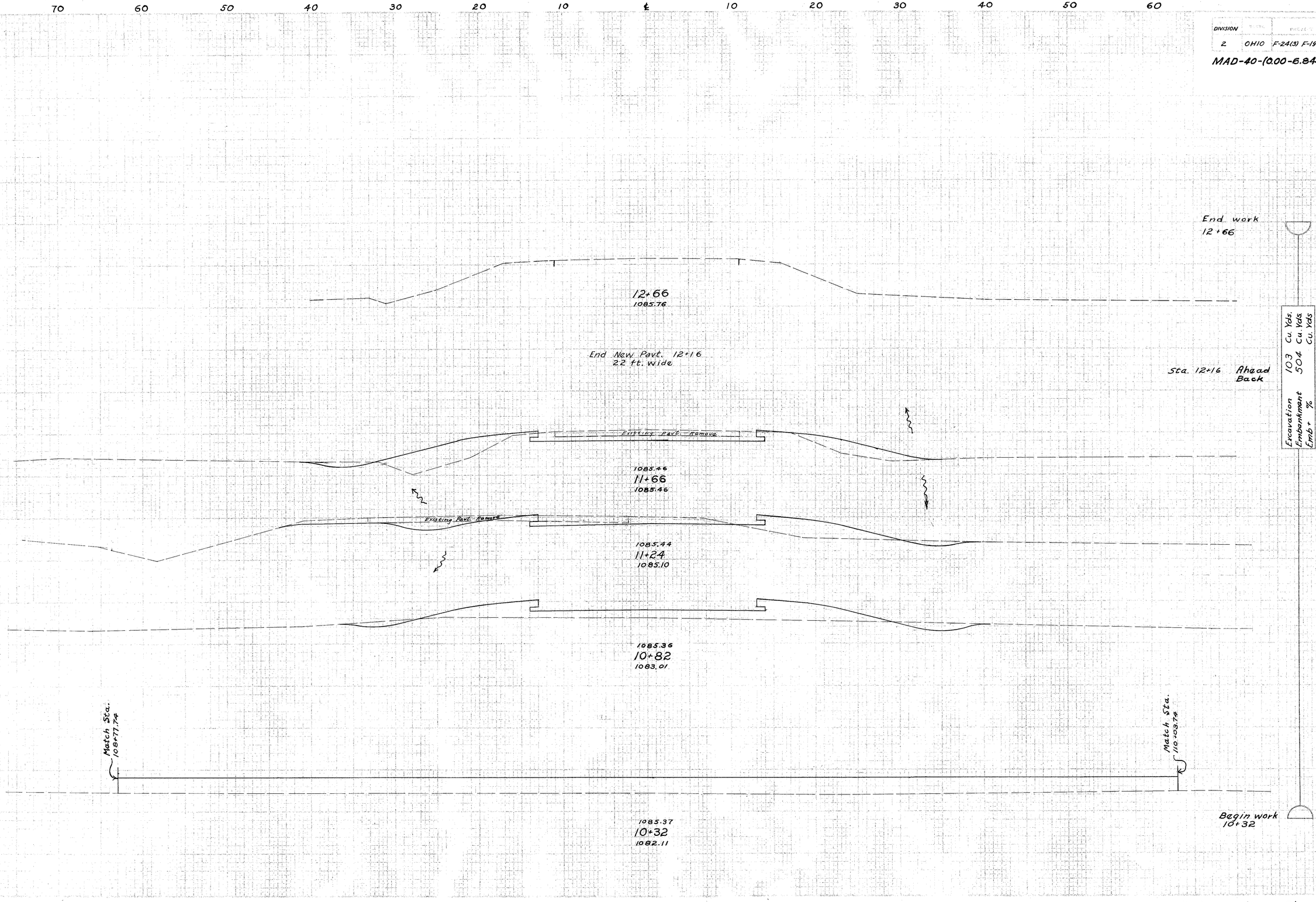


Intersection Sta. 109+37.59

DIVISION		PROJECT		TYPE FUNDS	
2	OHIO	F-24(3) F-190(5)		POST WAR	139 179

MAD-40-(0.00-6.84)

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60



Excavation Embankment Emb + %	103 Cu. Yds. 504 Cu. Yds. Cu. Yds.	End Area Cut	End Area Fill	Cu. Yds. Cut.	Cu. Yds. Fill
		0	0		
				2	21
		2	2.3		
		13	23		
				31	65
		21	47		
				34	51
		23	19		
				26	68
		10	69		
				10	299
		0	254		

Intersection Sta. 109+40.74

	TYPE FUNDS	
F-24(3) F-190(5)	POST WAR	140 179

MAD-40-(0.00-6.84)

Detail - Pav't. Widening for Transition
Scale 1"=1'-0"

Median Detail
West Median Shown - East Median Identical

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

Sect. A-A
Scale
Hor. 1/2" = 1'0"
Vert. 1½" = 1'0"
Sect. B-B

Quantities

	F-24 (3)	F-190 (5)	
T-71 Rein. Conc. 9" thick	533.97	533.97	Sq. Yds.
I-12 Type 4-A Conc. Curb.	250.19	250.19	Lin. Ft.
I-21 Conc. Median - as shown	28.93	28.93	Sq. Yds.
Deduct Curb	438.0	438.0	Lin. Ft.
T-35 1½" Asph. Conc. Surface	11.94	16.72	Sq. Yds.
B-35 1½" Asph. Conc. Leveling	11.94	16.72	Sq. Yds.
B-35 2-3" Asph. Conc. Base	31.04	40.60	Sq. Yds.
SS-5 6" Classified Embankment	271.6	271.6	Sq. Yds.
T-35 Variable Depth - Asph. Conc. S.	0.4	0.4	Cu. Yds.
SS-5 3" Classified Embankment	1.59	1.59	Cu. Yds.

Intersection Sta. 130+70.92

DIVISION		PROJECT	TYPE FUNDS	141
2	OHIO	F-24(3) F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60

F-24 (3) | F-190 (5)

END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
2	0		
		4	0
3	0		
16	1		
		40	10
38	13		
		17	2
55	0		
0	0		
		0	0
0	0		
60	0		
		18	3
37	16		
		38	16
14	5		
5	4		
		6	3
2	0		

Excavation 123 Cu. Yds.
Embankment 34 Cu. Yds.
Emb + % Cu. Yds.

End Work 11+25

Ahead
Back Sta. 10+82

1102.46
10+82
1102.46

Ahead
Back Sta. 10+32

1102.18
10+42
1102.36

Match Sta. 130+09.81
130+10.03

Ahead
Back Sta. 9+68

1102.26
10+32
1102.36

Match Sta. 131+31.87
131+32.08

1102.26
9+68
1102.39

House

Ahead
Back Sta. 9+18

1102.21
9+58
1102.49

Back
Ahead

Church

Begin Work 8+75

1102.89
9+18
1102.88

END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
2	0		
		8	0
8	0		
21	1		
		50	2
47	1		
		25	0
85	0		
0	0		
		0	0
0	0		
94	0		
		29	0
62	1		
		64	2
24	1		
13	0		
		12	0
2	0		

Excavation 188 Cu. Yds.
Embankment 4 Cu. Yds.
Emb + % Cu. Yds.

End Work 11+25

Ahead
Back Sta. 10+82

Ahead
Back Sta. 10+32

Ahead
Back Sta. 9+68

Ahead
Back Sta. 9+18

Begin Work 8+75

Intersection Sta. 130+70.92

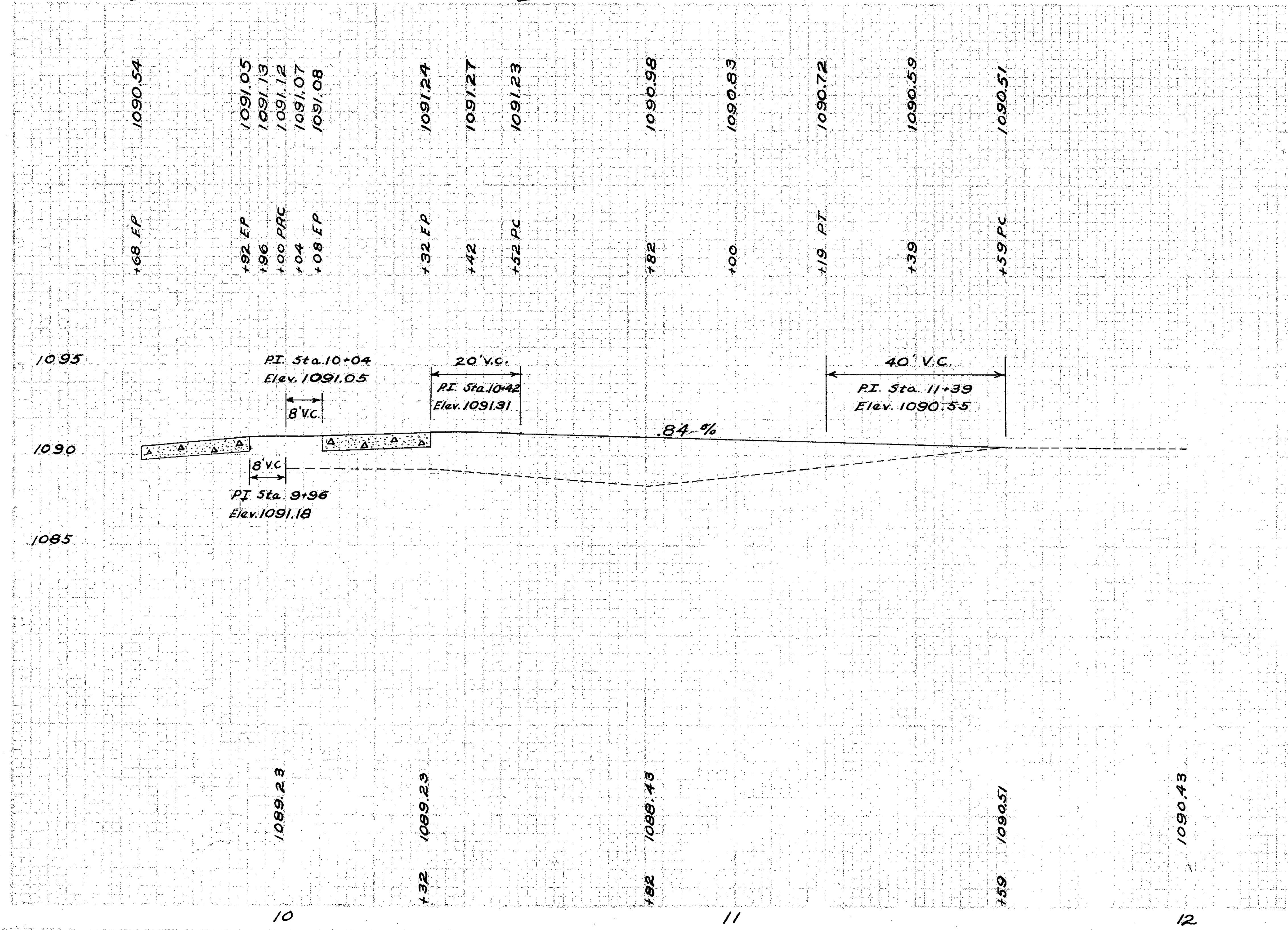
DIVISION			TYPE FUNDS	142
2	OHIO	F-24(3) F-190(5)	POST WAR	179

MAD-40-(0.00-6.84)

℄ Curve Data
Δ = 70° 00' 08"
R = 63'
T = 44.11
L = 76.97
Δ = 85° 12' 11"
R = 50'
T = 45.98'
L = 74.35'
Δ = 89° 59' 08"
R = 50'
T = 50.00'
L = 78.53'
℄ Existing Rt. 40
20' Conc. Pavement with Bit. Surface
S. 86° 32' 30" W
354.68
N 23° 27' 22" W
9" T-71
℄ Westbound Lanes
N 66° 33' 30" E
Tan ℄ Survey
N 66° 33' 30" E
Tan. ℄ Westbound
N 86° 32' 30" E
Tan ℄ Survey
℄ Westbound
℄ Survey
℄ Eastbound Lanes
Type 4-A Curb
Taper from 4" to 0"
Scale 1" = 20'
JOINT LEGEND
Ⓔ Expansion, without dowels
Ⓚ Key, without ties
Ⓒ Contraction
Ⓛ Longitudinal

ESTIMATED QUANTITIES

Item T-71	9" Rein. Portland Cement Concrete		957.66 Sq. Yds.
Item SS-5	6" Classified Embankment		1016.6 Sq. Yds.
Item I-12	4-A Concrete Curb	- Add	156.0 Lin. Ft.
		- Deduct.	223.0 Lin. Ft.



INTERSECTION STA. 151+16.55

DIVISION	STATE	PROJECT	TYPE FUNDS	
2	OHIO	F-24(3) F-190(5)	POST WAR	143 / 179

MAD-40-(0.00-6.84)

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60

Existing 12" CMP

Elev 1087.08

13+37
1090.08

12+67
1090.25

End Earthworks
Sta. 12+34

Ahead

Back

1090.34
12+34
1090.34

1090.51
11+59
1090.51

1090.71
11+20
1090.25

House

1090.98
10+82
1088.43

Sta. 150+53.57

Sta. 151+78.80

1091.24
10+32
1089.23

Begin Earthworks
Sta. 10+32

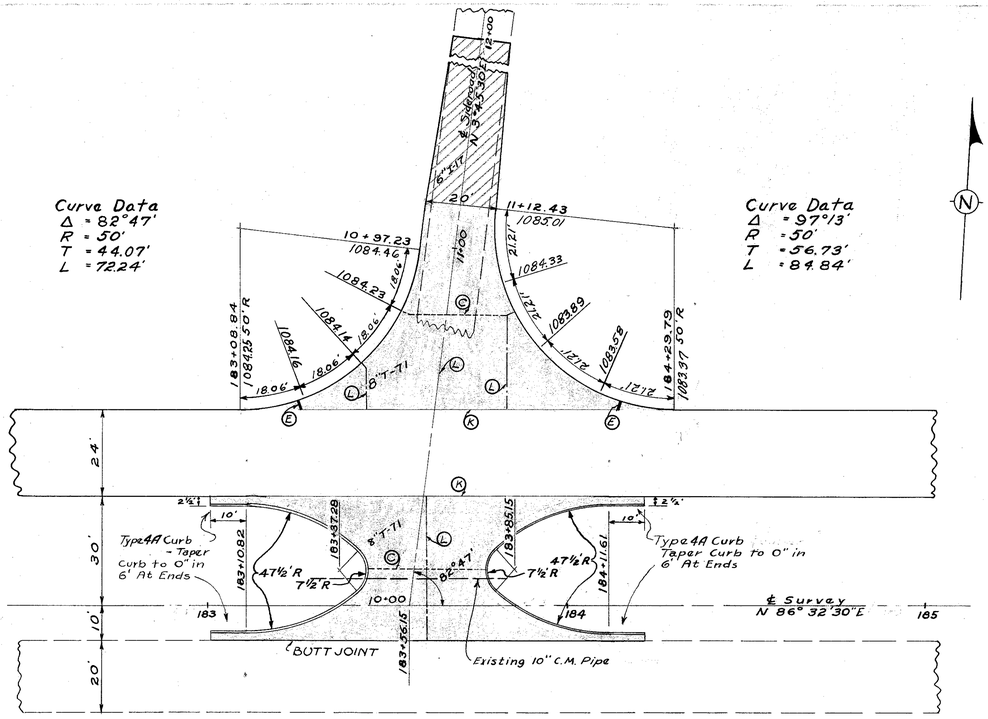
	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
Sta. 12+34 Ahead	0	0		
Back	12	1		
			50	11
	24	7		
			38	17
	28	17		
			20	73
	1	87		
			1	220
	0	151		

Excavation	109	Cu. Yds.
Embankment	321	Cu. Yds.
Emb. + %		

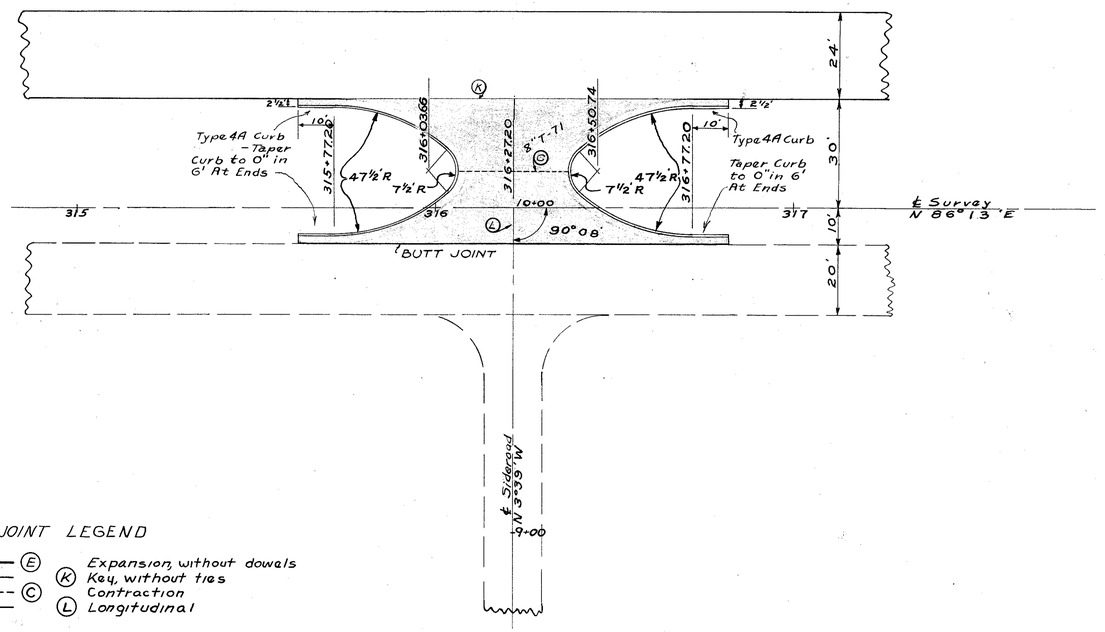
INTERSECTION STA 151+16.55

			TYPE FUNDS	144
		F-24(3) F-190(6)	POST WAR	179

MAD-40-(0.00-6.84)

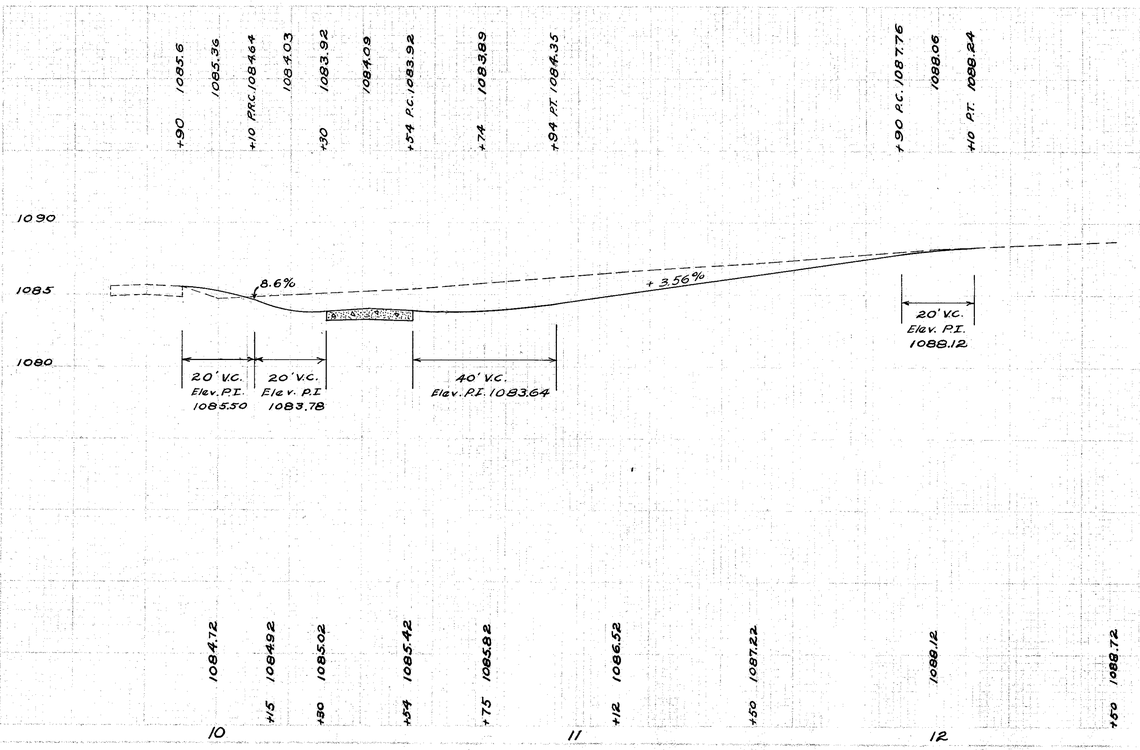


Scale 1"=20'



JOINT LEGEND

(E) Expansion, without dowels
(K) Key, without ties
(C) Contraction
(L) Longitudinal



ESTIMATED QUANTITIES (183+56.15)

Item SS-5	6" Classified Embankment	563.4	Sq. Yds.
Item T-71	8" Reinf. Port. Cem. Concrete	523.0	Sq Yds.
Item I-17	6" Side Approach	175.1	Sq. Yds.
Item I-12	Concrete Curb, Type 4-A	207.0	Lin. Ft.

ESTIMATED QUANTITIES (316+27.20)

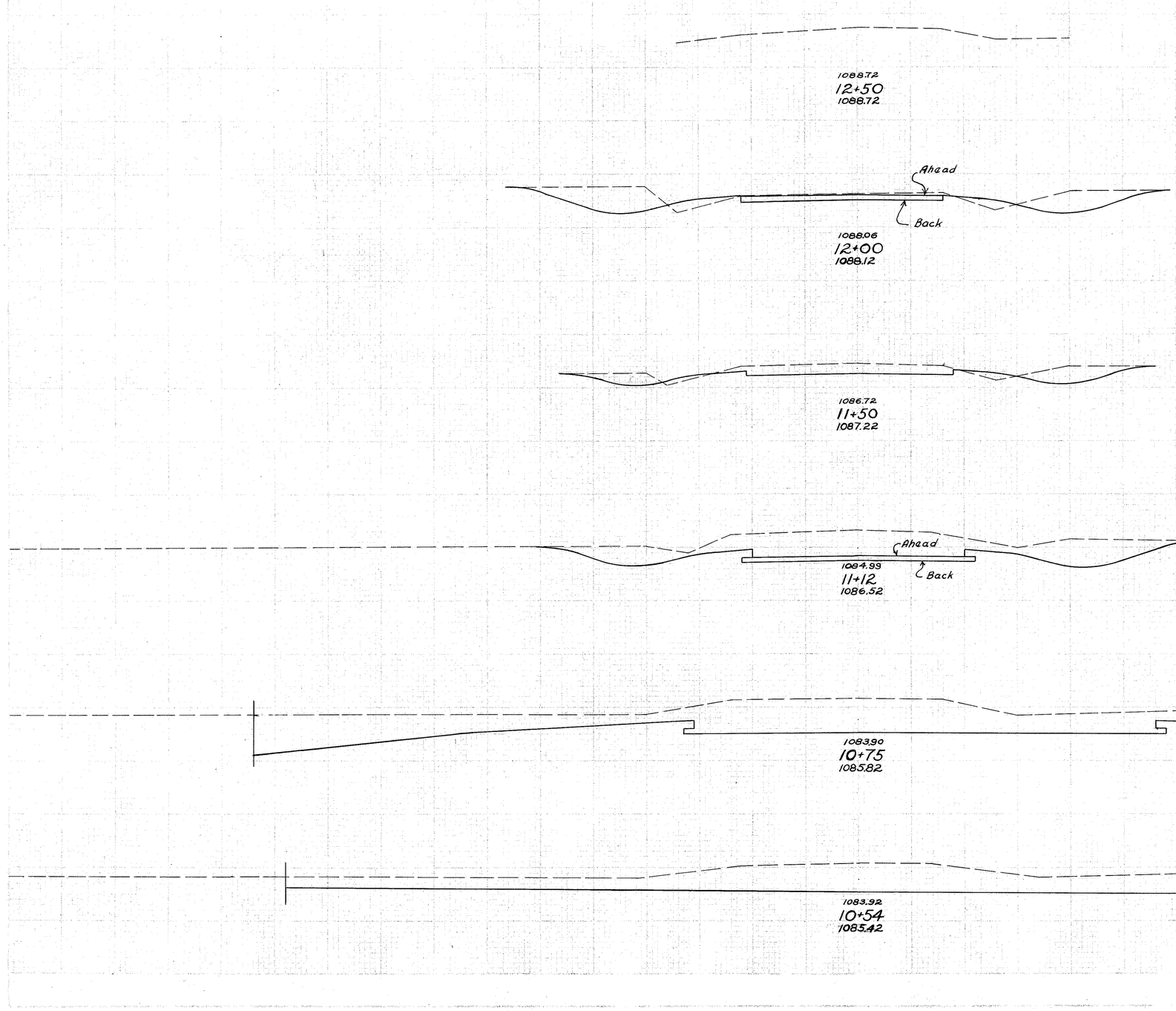
Item SS-5	6" Classified Embankment	283.0	Sq. Yds.
Item T-71	8" Reinf. Port. Cem. Concrete	260.0	Sq. Yds.
Item I-12	Concrete Curb, Type 4-A	207.0	Lin. Ft.

Intersections — Sta. 183+56.15 & Sta. 316+27.20

70 60 50 40 30 20 10 ℄ 10 20 30 40 50

145
F-24(3) F-190(5) POST WAR 179

MAD-40-(0.00-6.84)



	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
END WORK STA. 12+50	0	0		
			37	6
	40	7		
Sta 12+00 Ahead	50	7		
Back				
			78	10
	34	4		
			92	3
Sta. 11+12 Ahead	96	0		
Back	109	2		
			256	3
	265	2		
			192	1
	230	0		

Cu. Yds. Excavation 655
Cu. Yds. Embankment 23
% Emb.

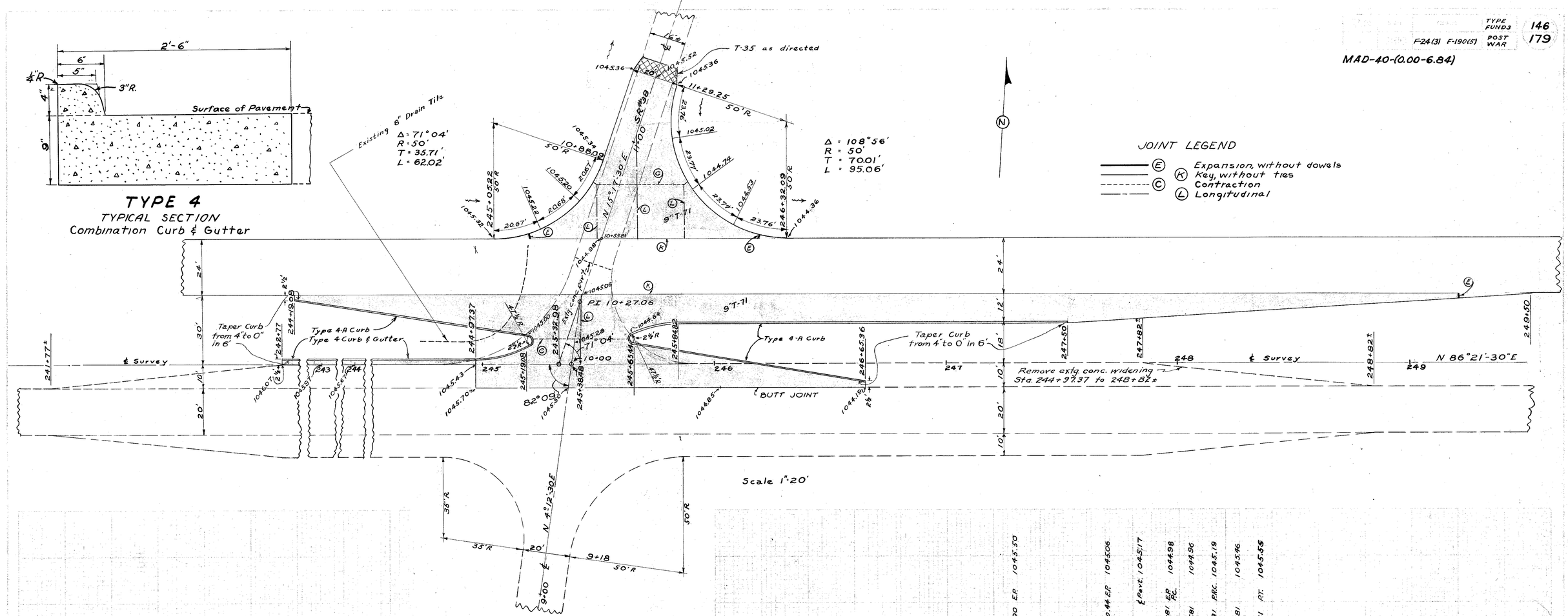
Begin Work Sta. 10+54

Intersection Sta. 183+56.15

TYPE FUNDS 146
F-24(3) F-190(5) POST WAR 179

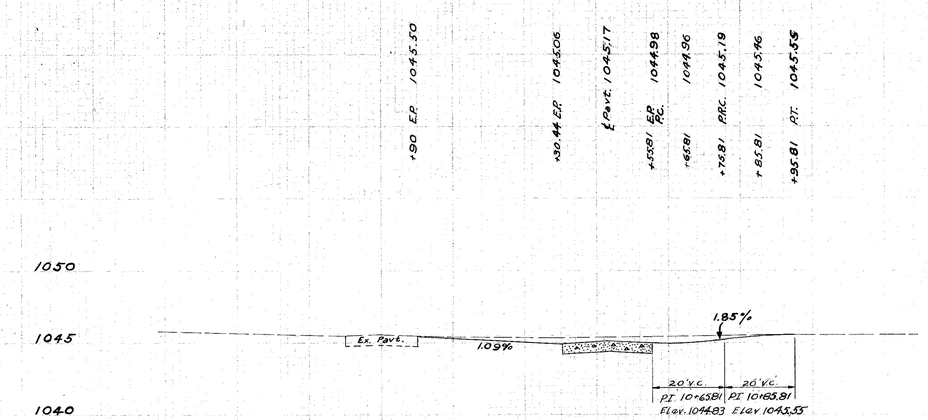
MAD-40-(0.00-6.84)

TYPE 4
TYPICAL SECTION
Combination Curb & Gutter



ESTIMATED QUANTITIES

Item T-71	9" Reinf. Port. Cement Concrete	1,210.02	Sq. Yds.
Item SS-5	6" Classified Embankment	1,270.0	Sq. Yds.
Item T-35	Asphaltic Con. Surface Course (Var. Depth)	0.4	Cu. Yds
Item I-12	Type 4-A Concrete Curb	429	Lin. Ft.
Item I-12	Type 4 Combination Curb & Gutter	220	Lin. Ft.
Item E-8	Removal of Existing Pavement	529	Sq. Yds.

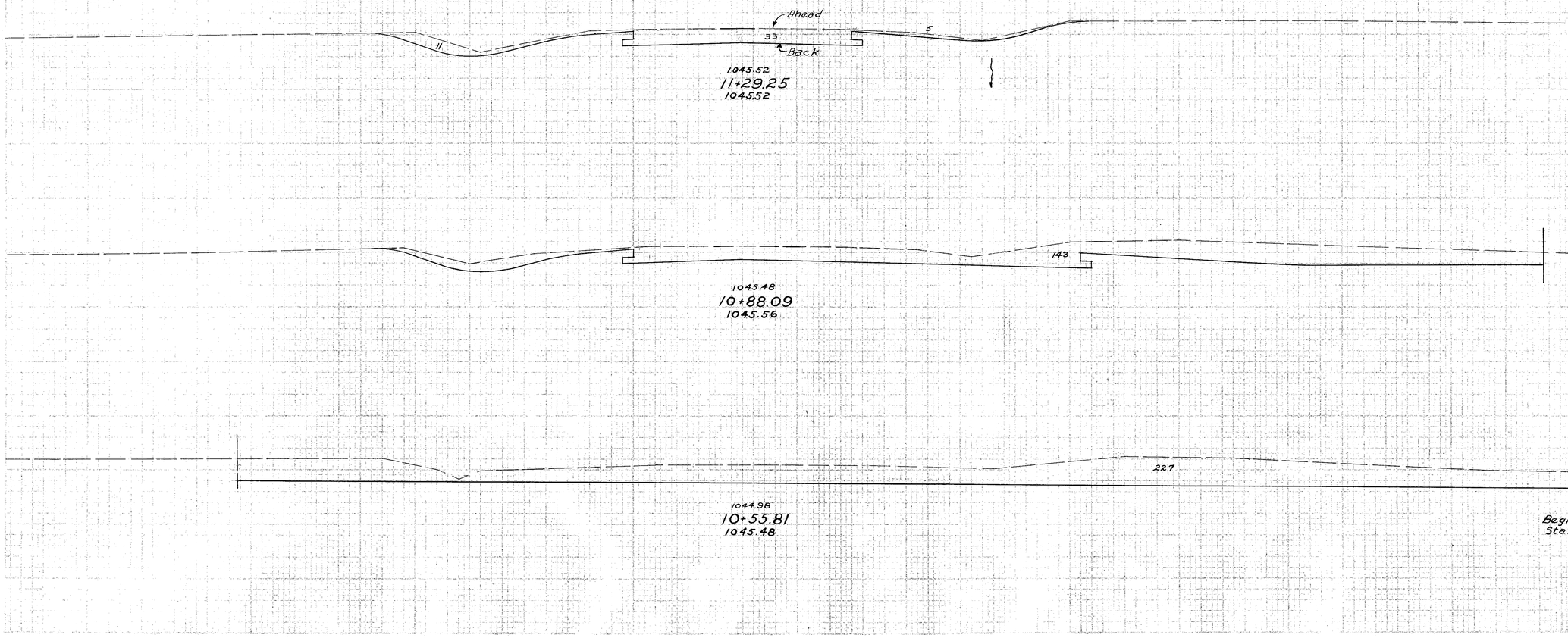


Intersection Sta. 245+38.48

DIVISION	STATE	PROJECT	TYPE FUNDS	
2	OHIO	F-24(3) F-190(S)	POST WAR	147 179

MAD-40-(0.00-6.84)

60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70



End work
Sta. 11+75

Sta 11+29

Ahead	16	0
Back	49	2

	Cu. Yds.
Excavation	379
Embankment	4
Emb + %	Cu. Yds.

0	0	
14	0	
146	3	
143	2	
219	1	
227	0	

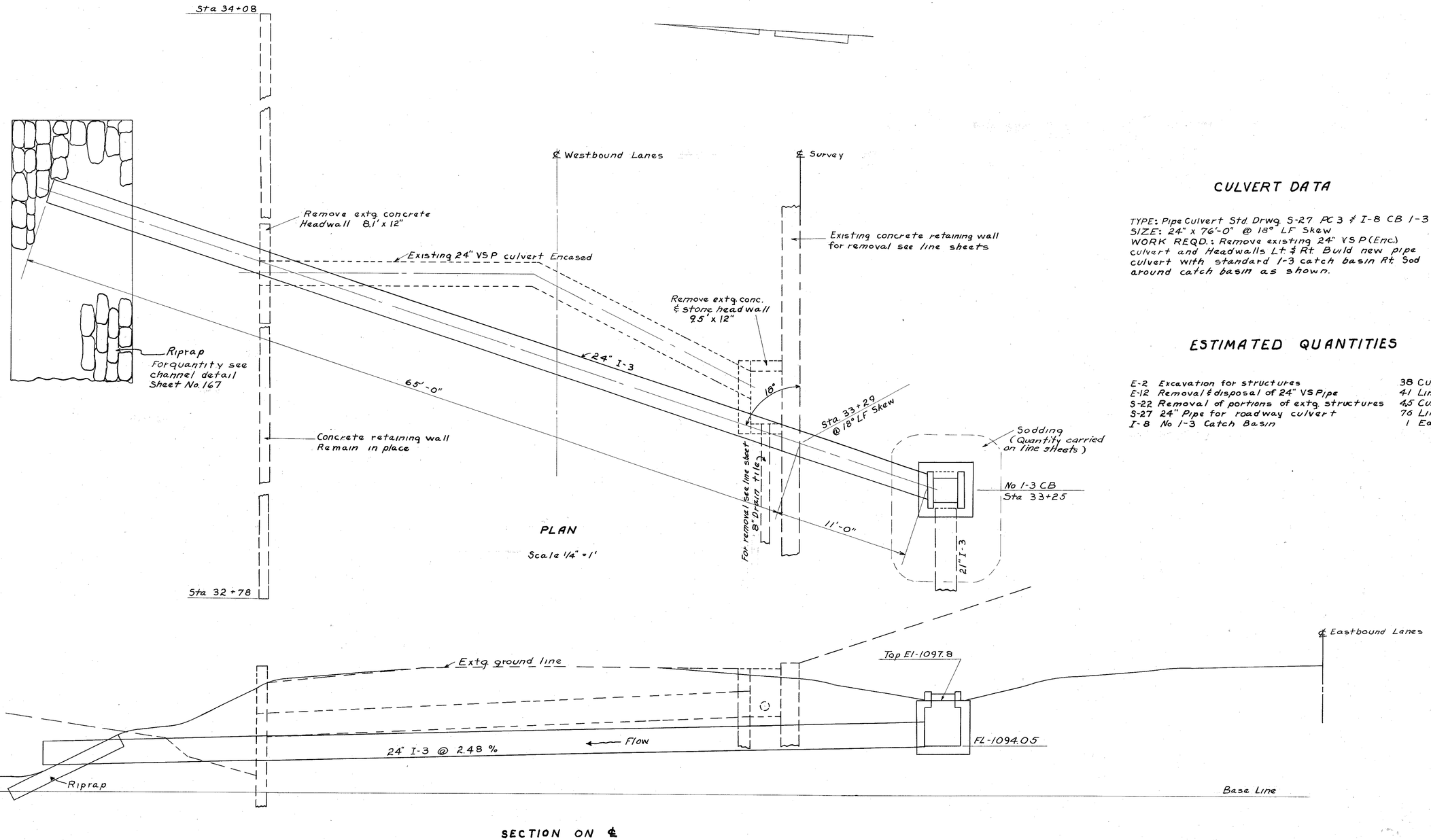
Begin work
Sta. 10+55.81

SIDE ROAD # 38 - STA. 245+35.38

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

148
179

MAD-40-(0.00-6.84)



CULVERT DATA

TYPE: Pipe Culvert Std. Drwg. S-27 PC 3 & I-8 CB 1-3
SIZE: 24" x 76'-0" @ 18° LF Skew
WORK REQD.: Remove existing 24" VSP (Enc.) culvert and Headwalls Lt. & Rt. Build new pipe culvert with standard 1-3 catch basin Rt. Sod around catch basin as shown.

ESTIMATED QUANTITIES

E-2 Excavation for structures	38 Cu. Yds.
E-12 Removal & disposal of 24" VS Pipe	41 Lin. Ft.
S-22 Removal of portions of extg. structures	4.5 Cu. Yds.
S-27 24" Pipe for roadway culvert	76 Lin. Ft.
I-8 No 1-3 Catch Basin	1 Each

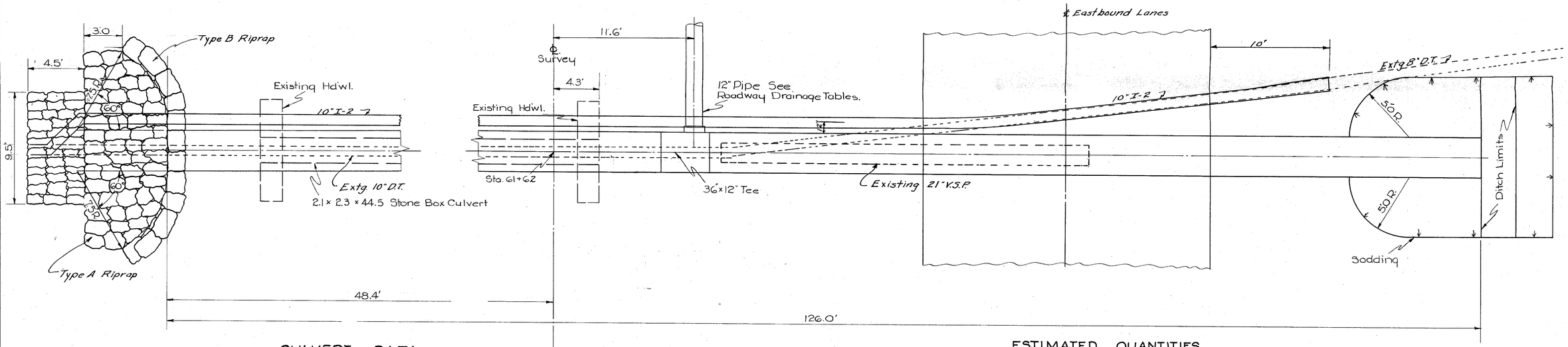
Sta 33+29
MA-40-06

DRAINAGE STRUCTURE MA-40-06

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OH10	F-24(3) F-190(5)	POST WAR

149
179

MAD-40-(0.00-6.84)

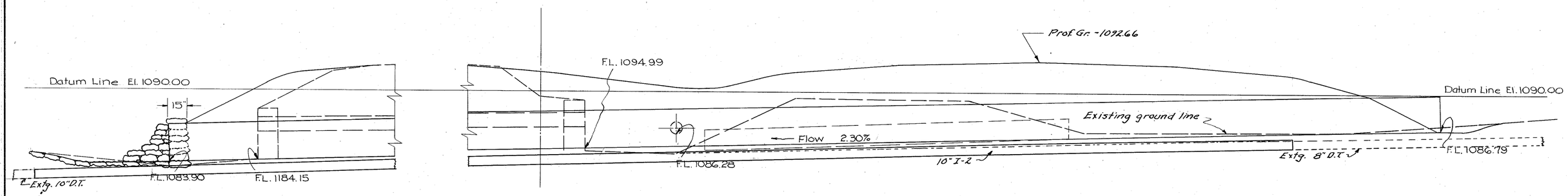


CULVERT DATA

Type: Std Pipe Culvert S-27 P.C.3
Size : 36" × 126.0' Lg.
Work Regd.: Remove Existing 2.1'×2.3'×44.8 Stone Box Culvert & Replace with 36" Pipe Culvert. Place sod as shown on Right and Grouted riprap. on Left. Install a 36"×12" Tee as indicated & connect to roadway drainage. *Remove existing 21" V.S. Pipe. Remove existing 8" & 10" drain tile and replace with 10" I-2 as shown connecting to existing pipe.*

ESTIMATED QUANTITIES

E- 2 Excavation for Structures	86.	Cu. Yds.
S-24 Removal of Existing Structure	Lump Sum	
S-27 Pipe for Roadway Culverts 36"	122.	Lin. Ft.
I- 5 Pipe Special 36"×12" Tee	1	Each
I- 10 15" Grouted Riprap Type "B"	6.	Sq. Yds.
I- 10 Grouted Riprap Type "A"	5.	Sq. Yds.
L- 10 Sodding	20.	Sq. Yds.
E-12 Remove & Dispose 8" D.T.	52	Lin. Ft.
E-12 Remove & Dispose 10" D.T.	64	Lin. Ft.
I-2 10" Storm Sewers	124	Lin. Ft.
I-5 Pipe Specials 10" curves	2	Each



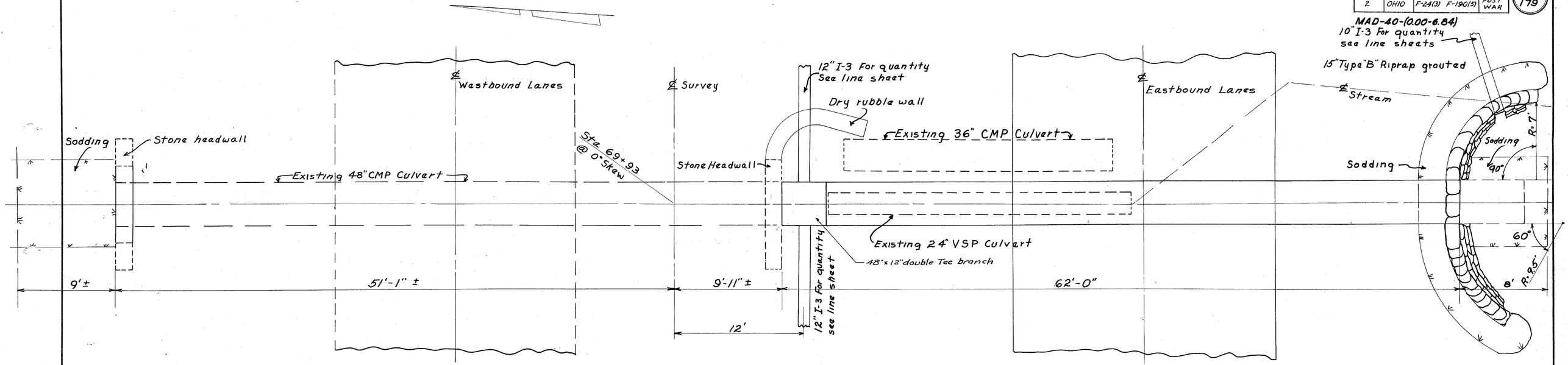
PIPE CULVERT MA-40-12
STATION 61+62

DRAINAGE STRUCTURE No. MA-40-12

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

150
179

MAD-40-(0.00-6.84)

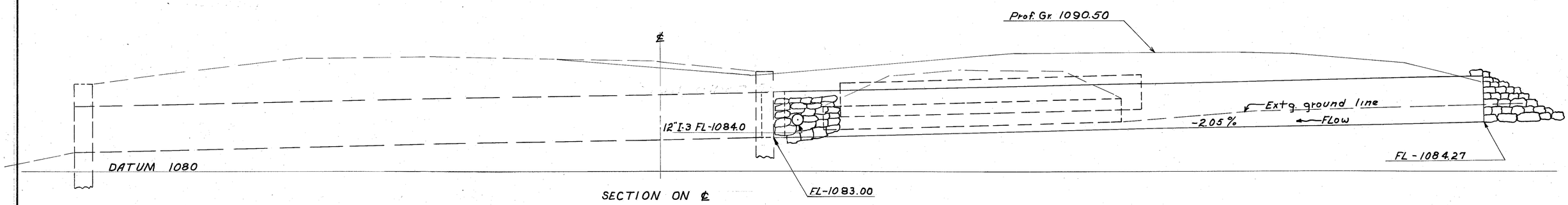


PLAN
Scale 1/4" = 1'

CULVERT DATA

TYPE: Pipe Culvert Extension. Std. Drwg. S-27 PC-3
SIZE: 48" x 62" @ 0° Skew.
WORK REQD.: Remove existing stone and rubble headwall on Rt. Remove existing 24" VSP and 36" CMP Rt. Extend existing CM pipe culvert on Rt. and with CM pipe connecting with a corr. metal band Riprap and sod Rt. end and sod Lt. end as shown. Excavate channel Rt. 28' Rt. of Rt. end, estimated 5 cu. yds. Connect I-3 pipe back and ahead as shown.

E-2	Excavation for structures	44	Cu. Yds.
E-3	Channel excavation	5	Cu. Yds.
I-5	48" x 12" double Tee pipe special	1	Each
E-12	36" CMP Pipe removed & stored	24	Lin. Ft.
S-22	Removal of portions of extg. structures	8.0	Cu. Yds.
S-27	48" Corr. metal pipe Sec. M-6.4(d)	58	Lin. Ft.
I-10	15" Type "B" riprap - grouted	12	Sq. Yds.
L-10	Sodding	25	Sq. Yds.



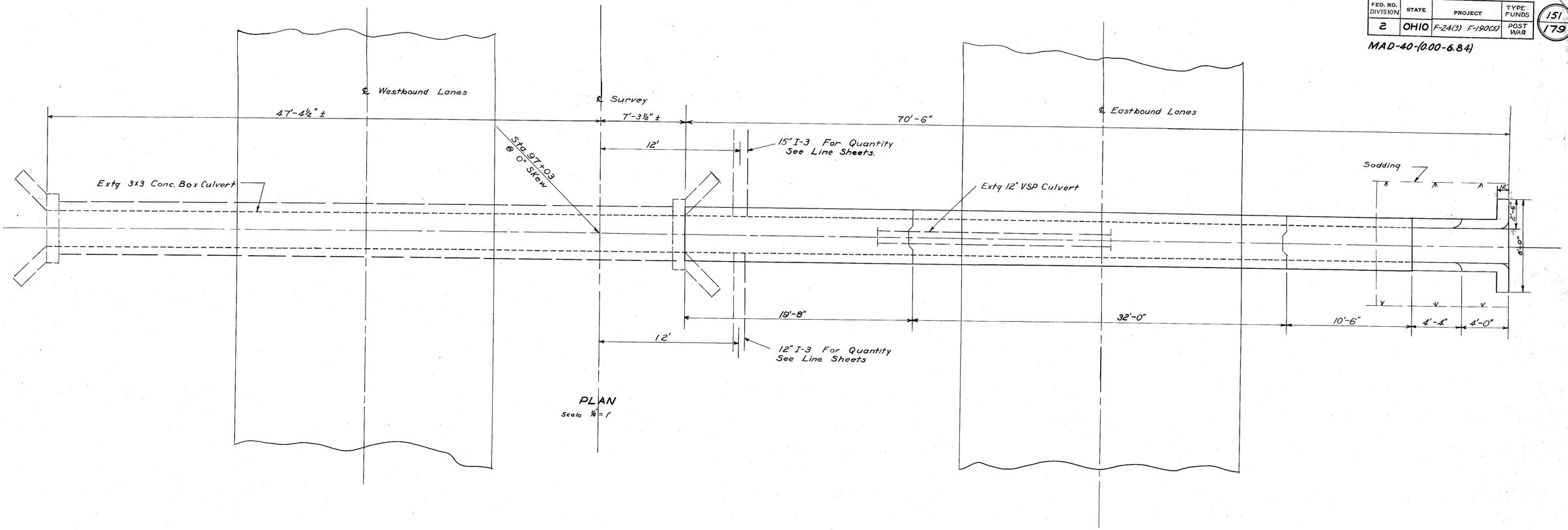
SECTION ON ℄

Sta. 69+93
MA-40-13

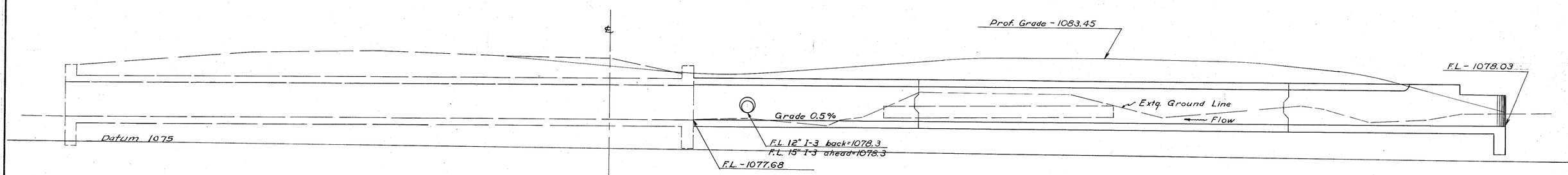
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

151
179

MAD-40-(0.00-6.84)



PLAN
Scale ⅛" = 1'



SECTION ON ℄

CULVERT DATA

Size: 3' x 3' x 70'-6" Extension
Type: Small Box Culvert Extension
Standard Drawing SBC-45
Work Required: Remove Existing South wingwalls and extend Small Box Culvert 70'-6" Rt. Warp Flow Line at existing structure to coincide with fillets of existing structure. Place Sodding at inlet end of Proposed Structure. Remove existing 12" V.S.P. Culvert. Connect 15" & 12" I-3 as shown.

ESTIMATED QUANTITIES

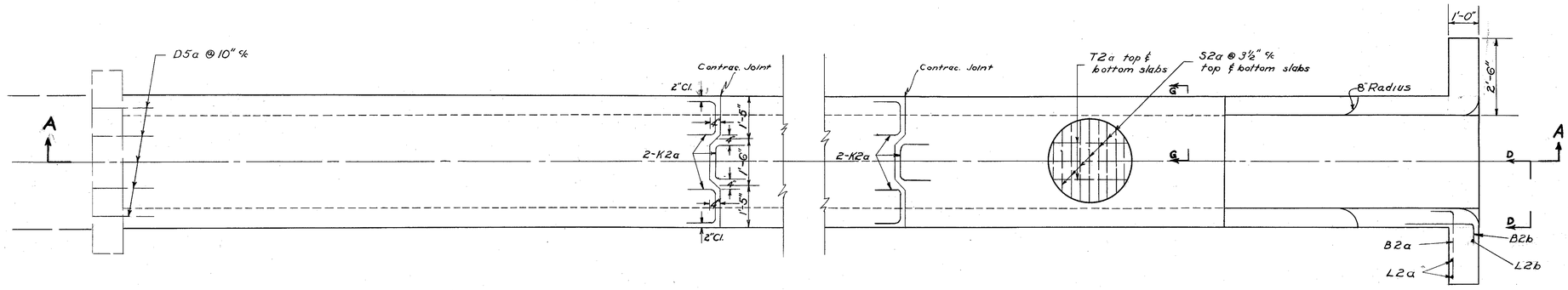
E-2	Excavation for Structure	31 cu. yds.
S-1	Concrete for Structure Class "C"	23.6 cu. yds.
S-4	Reinforcing Steel	4,110 lbs.
S-22	Removal of Portions of Existing Structure	2 cu. yds.
S-23	Dowel Holes 1"⌀x1' long	16 lin. ft.
L-10	Sodding	10 sq. yds.

DRAINAGE STRUCTURE NO. MAD-40-10.13

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

152
179

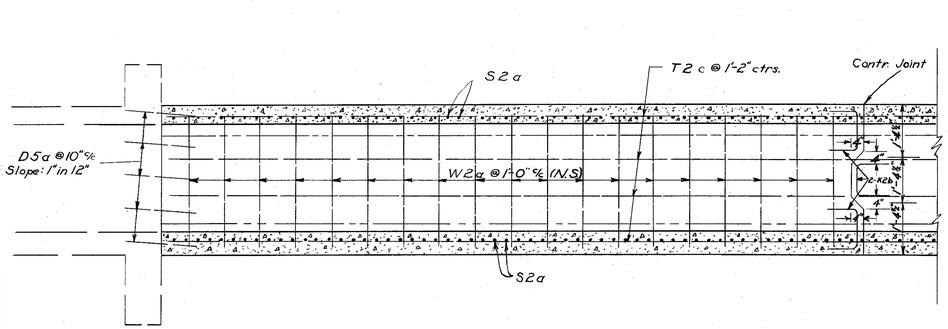
MAD-40-(0.00-6.84)

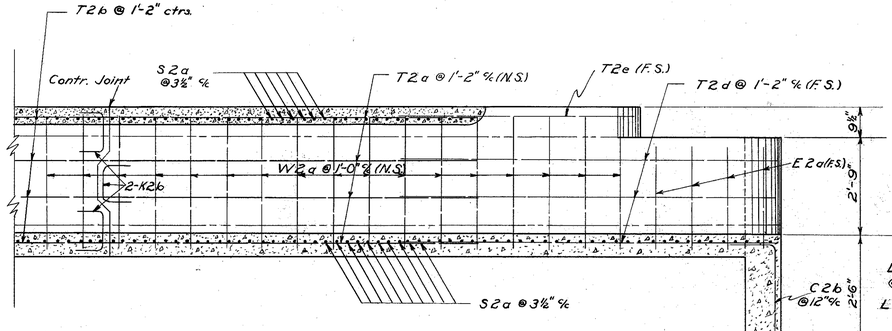


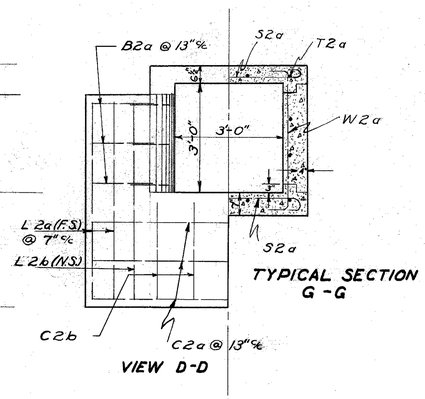
PLAN VIEW
Scale: ½" = 1'-0"

STEEL LIST

MARK	NUMBER	SIZE	SPACING	LENGTH	SHAPE	WEIGHT
W2a	130	½" ϕ	1'-0"	4'-8"	Bent	405
E2a	8	"	1'-0"	3'-5"	"	18
S2a	449	"	3½"	5'-2"	"	1550
C2a	3	"		7'-6"	Str.	15
C2b	5	"	1'-0"	3'-4"	Bent	11
K2a	24	"		2'-3"	"	36
K2b	24	"		2'-3"	"	36
T2a	12		1'-2"	10'-0"	Str.	80
T2b	12	"	1'-2"	31'-6"	"	253
T2c	12	"	1'-2"	19'-2"	"	1536
T2d	6	"	1'-2"	10'-7"	"	42
T2e	2	"		6'-7"	"	9
D5a	16	¾" ϕ	11"	2'-0"	"	48
B2a	6	½" ϕ	1'-1"	2'-10"	Bent	11
B2b	6	"	1'-1"	2'-10"	"	11
L2a	4	"	7"	5'-4"	Str.	14
L2b	2	"		5'-4"	"	7
Re2	2	"		5'-4"	"	7
Re5	2	¾" ϕ		7'-0"	"	21
					TOTAL	4110



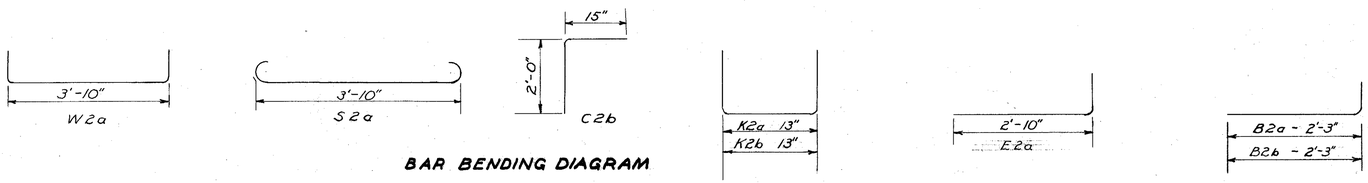




TYPICAL SECTION G-G

VIEW D-D

SECTION A-A



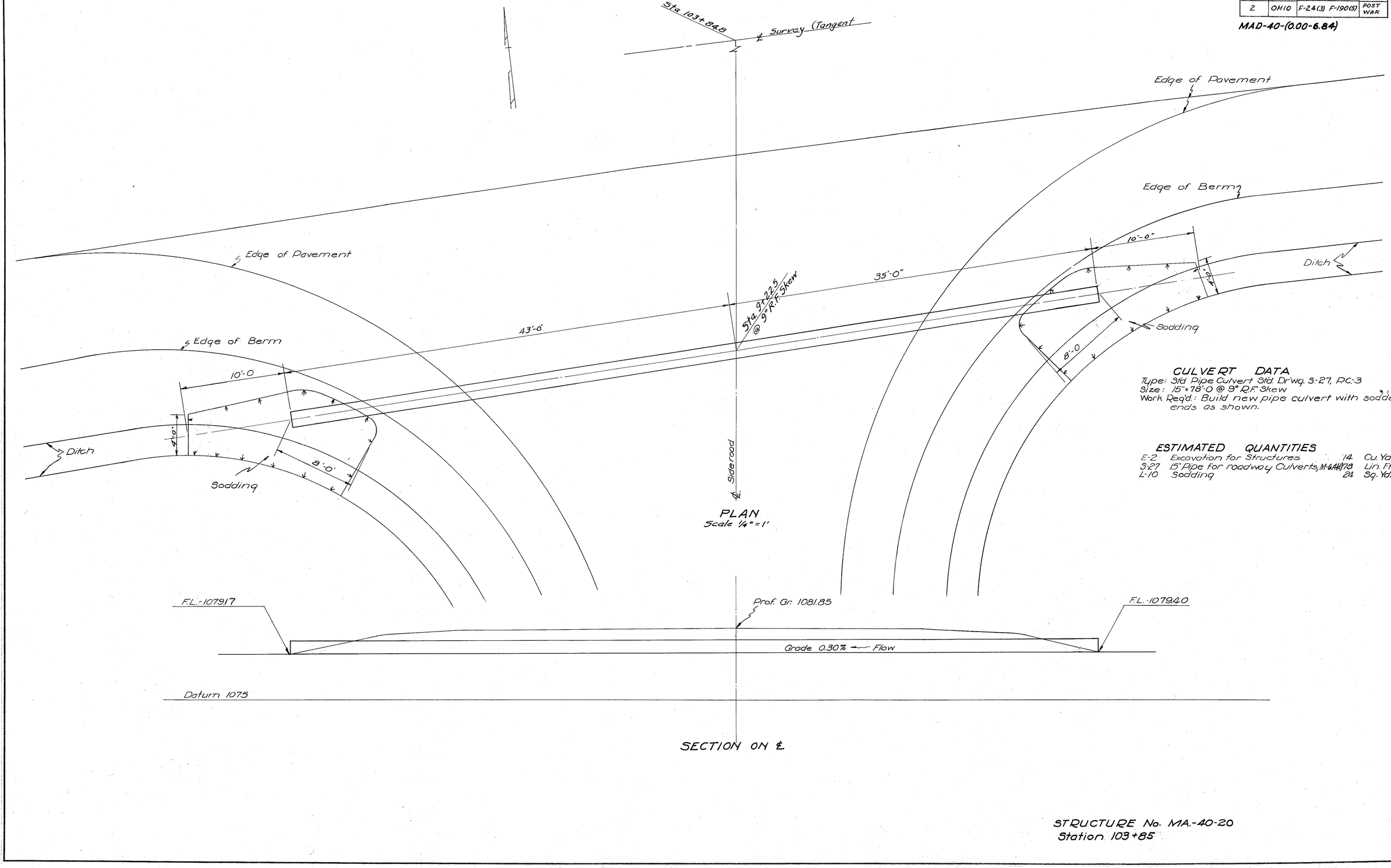
BAR BENDING DIAGRAM

DRAINAGE STRUCTURE NO.- 40-18

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

153
179

MAD-40-(0.00-6.84)



PLAN
Scale 1/4" = 1'

SECTION ON ℄

CULVERT DATA

Type: Std Pipe Culvert Std. Drwg. S-27, PC-3
Size: 15" x 78'-0 @ 9° R.F. Skew
Work Reqd.: Build new pipe culvert with sodded ends as shown.

ESTIMATED QUANTITIES

E-2	Excavation for Structures	14	Cu. Yds.
S-27	15" Pipe for roadway Culverts, M-6.4 & M-6.8	78	Lin. Ft.
L-10	Sodding	24	Sq. Yds

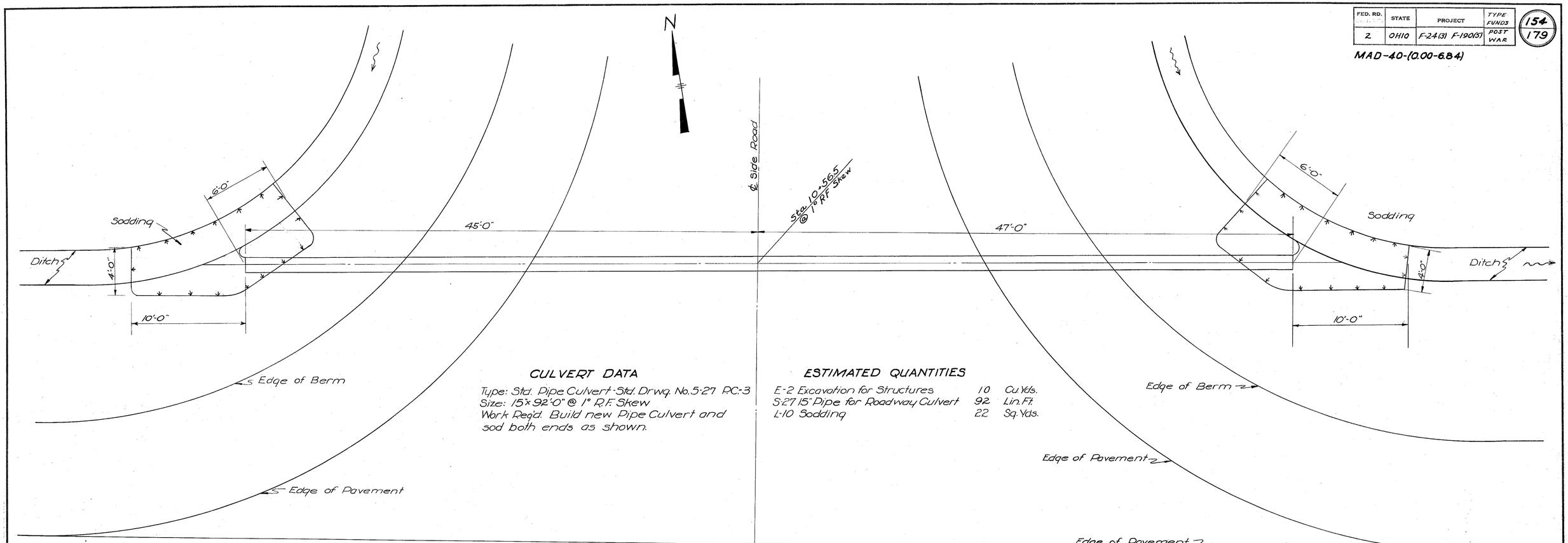
STRUCTURE No. MA.-40-20
Station 103+85

DRAINAGE STRUCTURE No. MA-40-20

FED. RD.	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(3)	POST WAR

154
179

MAD-40-(0.00-6.84)

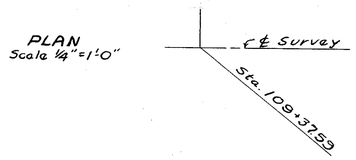


CULVERT DATA

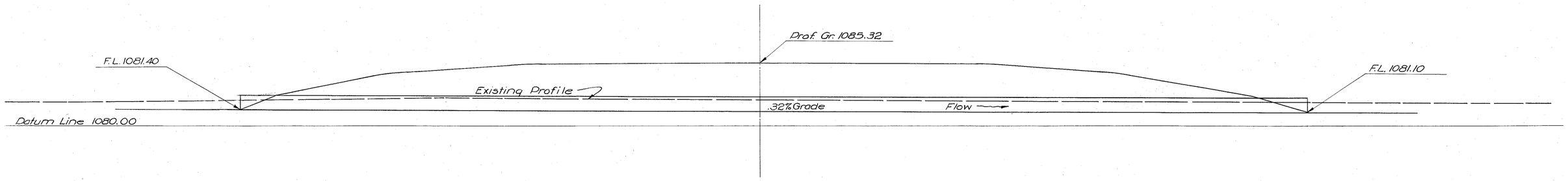
Type: Std. Pipe Culvert - Std. Drwg. No. 5-27 P.C.-3
Size: 15" x 92'-0" @ 1° R.F. Skew
Work Req'd. Build new Pipe Culvert and sod both ends as shown.

ESTIMATED QUANTITIES

E-2 Excavation for Structures	10	Cu. Yds.
S-27 15" Pipe for Roadway Culvert	92	Lin. Ft.
L-10 Sodding	22	Sq. Yds.



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



SECTION on ℄

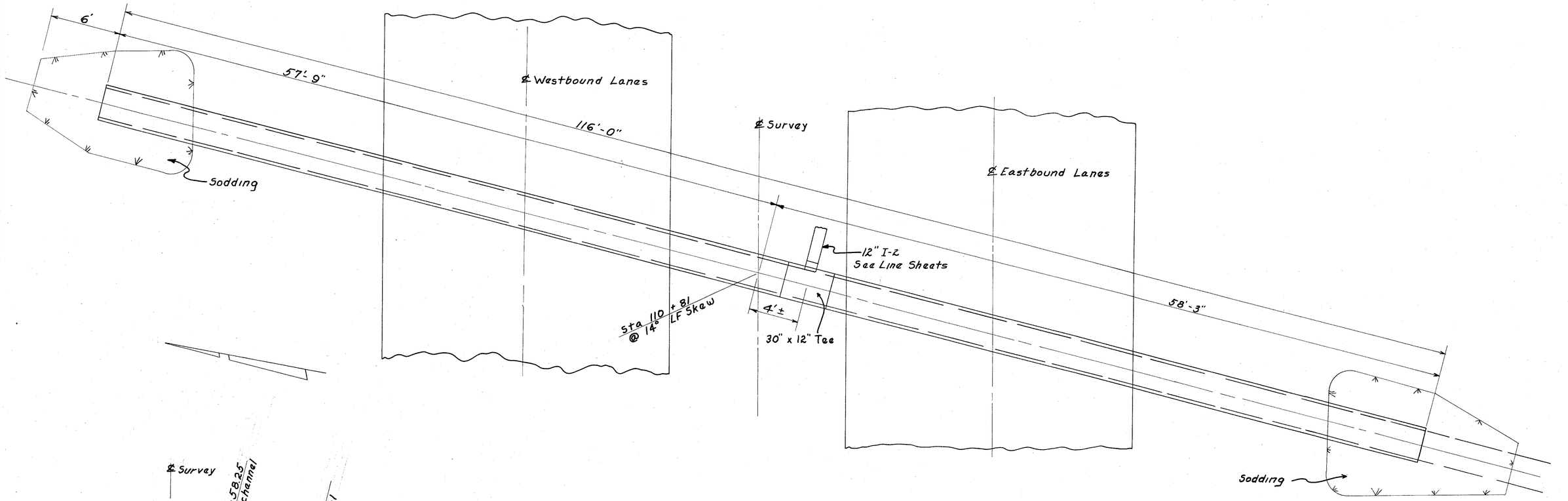
STRUCTURE NO. MA.-40-21
Station 109+37.59

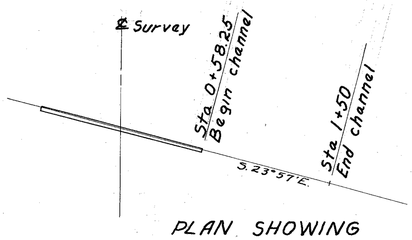
DRAINAGE STRUCTURE NO MA-40-21

FED. RD. DIVISION	STATE	PROJECT	TYPE-FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

155
179

MAD-40-(0.00-6.84)





PLAN SHOWING
CHANNEL LOCATION

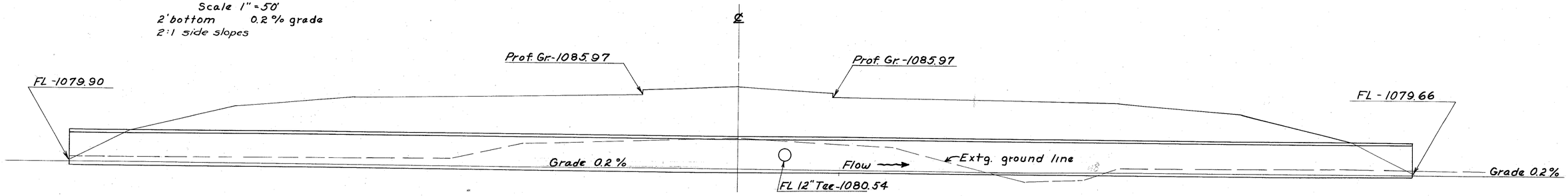
Scale 1" = 50'
2' bottom 0.2 % grade
2:1 side slopes

CULVERT DATA

TYPE: Pipe Culvert Std. Drwg. S-27 PC 3
SIZE : 30" x 116' @ 14° LF Skew
WORK REQD: Build standard pipe culvert with sodded ends as shown. Install 30" x 12" Tee as shown. Excavate channel 150' Rt. of ℄.

ESTIMATED QUANTITIES

E-2	Excavation for structures	27 Cu.Yds.
E-3	Channel excavation	3 Cu.Yds.
S-27	30" Pipe for roadway culvert	112 Lin.Ft.
I-5	30" x12" Tee Pipe special	1 each
L-10	Sodding	32 Sq.Yds.



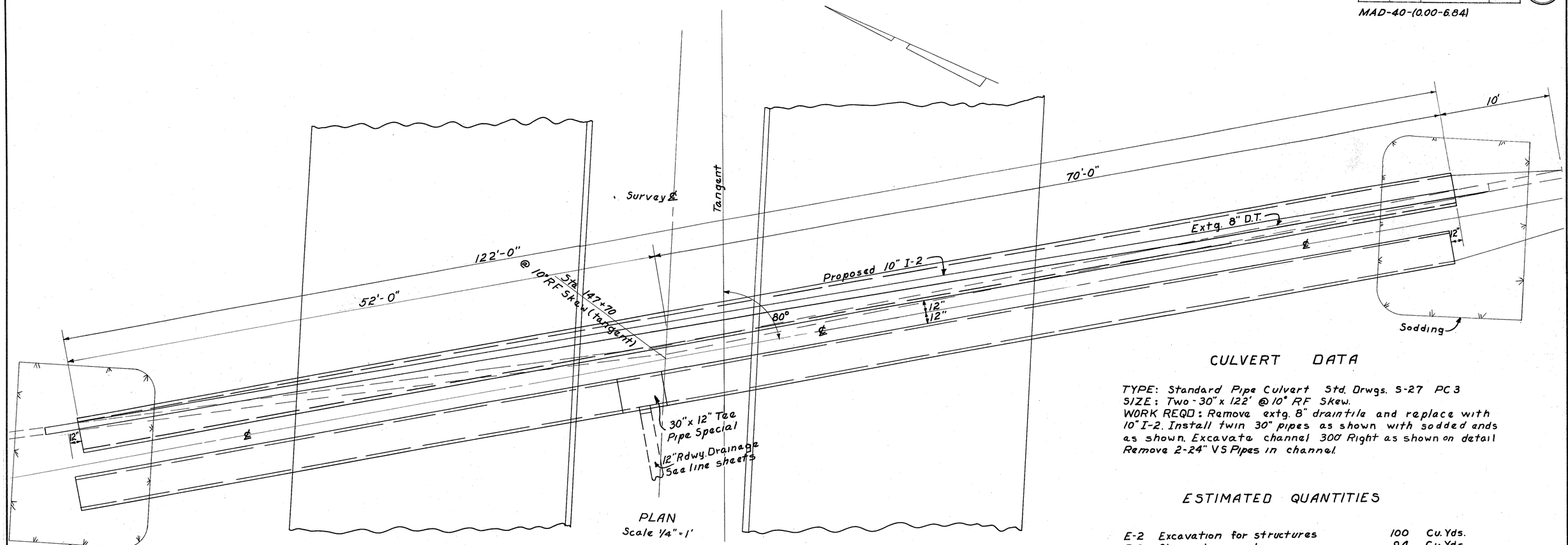
Sta 110 + 81
MA - 40 - 21A

DRAINAGE STRUCTURE MA-40-21A

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

156
179

MAD-40-(0.00-6.84)



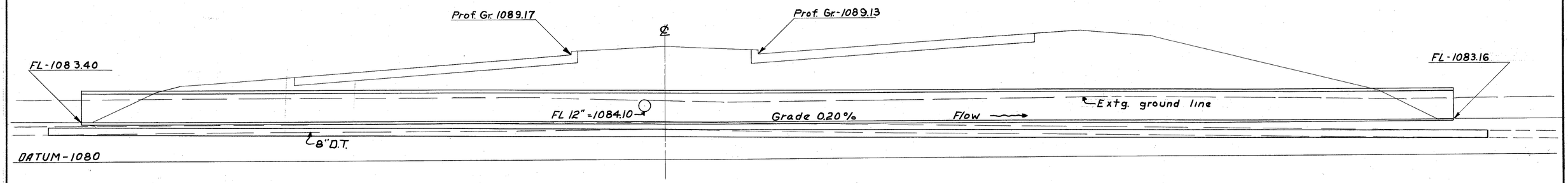
PLAN
Scale 1/4" = 1'

CULVERT DATA

TYPE: Standard Pipe Culvert Std. Drwgs. S-27 PC 3
SIZE: Two-30" x 122' @ 10° RF Skew.
WORK REQD: Remove extg. 8" draintile and replace with 10" I-2. Install twin 30" pipes as shown with sodded ends as shown. Excavate channel 300' Right as shown on detail Remove 2-24" VS Pipes in channel.

ESTIMATED QUANTITIES

E-2	Excavation for structures	100	Cu. Yds.
E-3	Channel excavation	94	Cu. Yds.
S-27	30" Pipe for roadway culvert	240	Lin. Ft.
I-5	Pipe special 30" x 12" Tee	1	Each
E-12	8" D.T. removed & disposed	128	Lin. Ft.
I-2	10" Pipe for storm sewers	128	Lin. Ft.
L-10	Sodding	40	Sq. Yds.

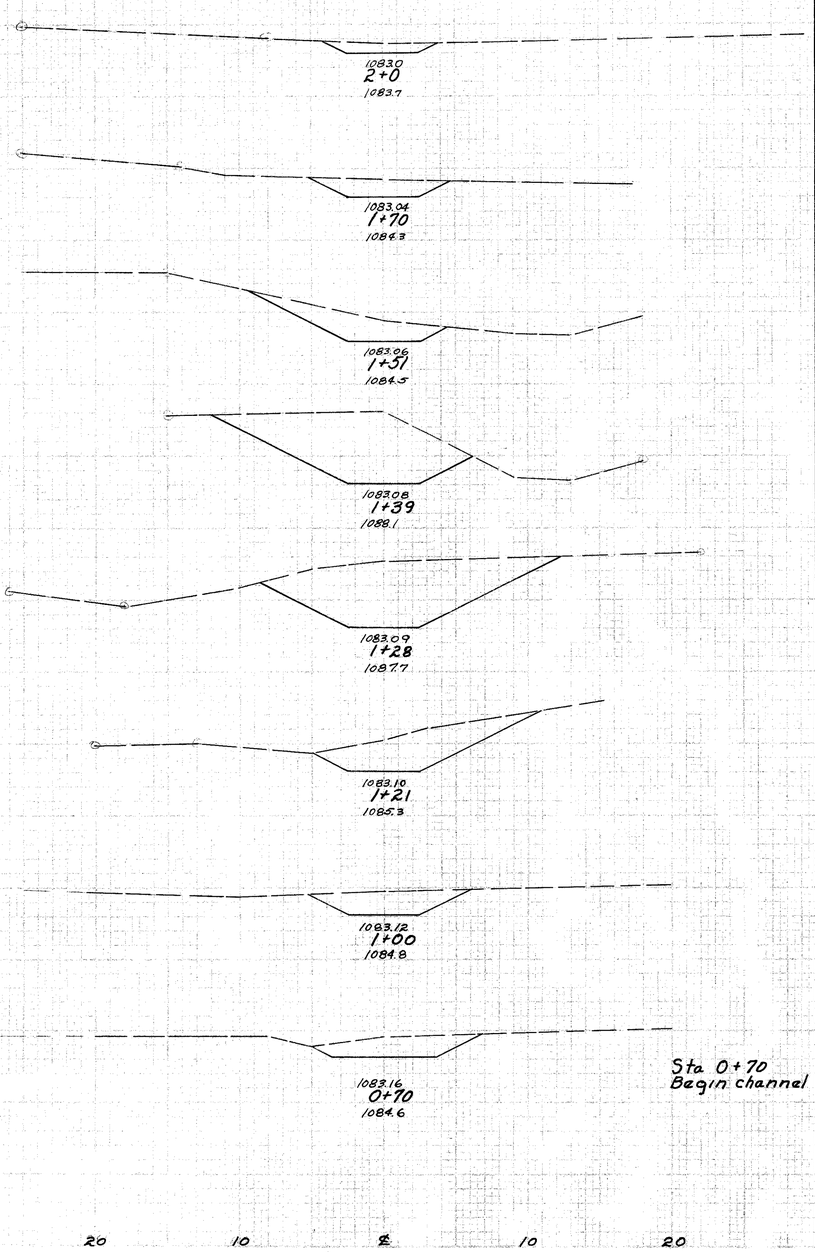


SECTION ON ℄

Sta 147+70
MA-40-28

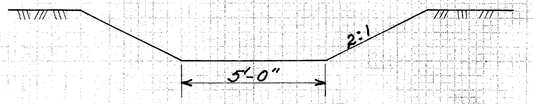
DIVISION	STATE	PROJECT	TYPE FUNDS	157
2	OHIO	F-24(3) F-190(5)	POST WAR	179

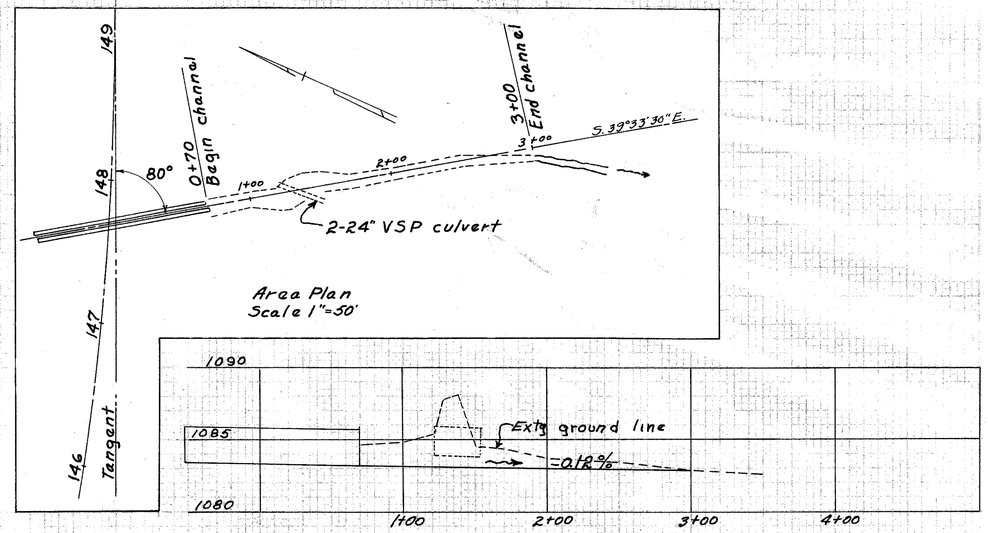
MAD-40-(0.00-6.84)

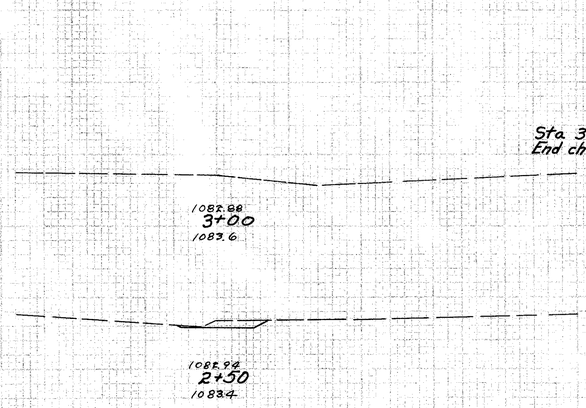


Channel Exc.	
End Area	Cu. Yds.
5	
	7
8	
	8
16	
	15
51	
	22
56	
	10
23	
	13
11	
	10
7	

TYPICAL CHANNEL SECTION







Channel Exc.	
End Area	Cu. Yds.
0	
	2
2	
	7
5	

E-2 Channel Excavation - 94 Cu. Yds.

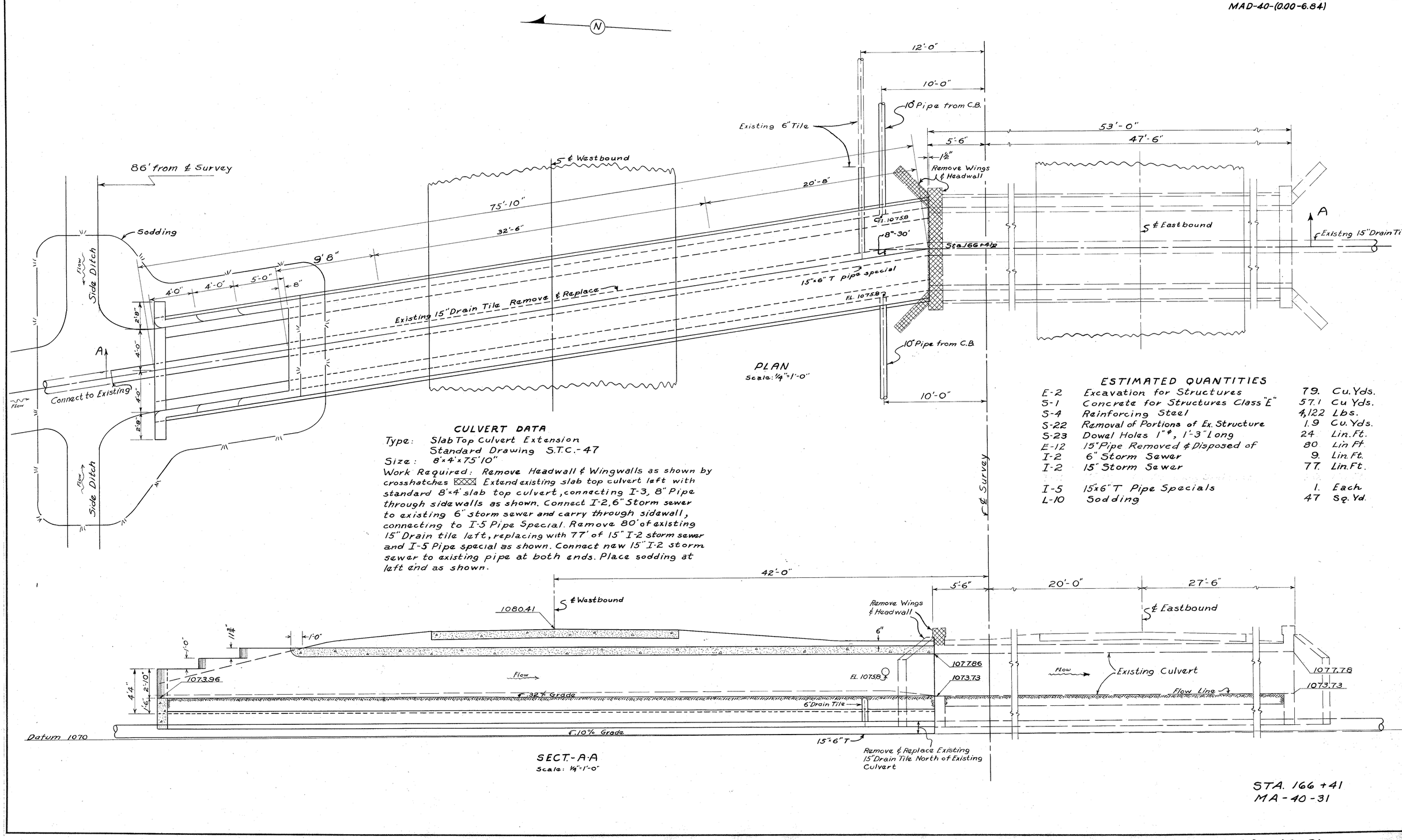
Sta 147+70
MA-40-28

DRAINAGE STRUCTURE MA-40-28

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

158
179

MAD-40-(0.00-6.84)



PLAN
Scale: ¼"=1'-0"

CULVERT DATA

Type: Slab Top Culvert Extension
Standard Drawing S.T.C.-47

Size: 8'x4'x75'10"

Work Required: Remove Headwall & Wingwalls as shown by crosshatches ▨ Extend existing slab top culvert left with standard 8'x4' slab top culvert, connecting I-3, 8" Pipe through sidewalls as shown. Connect I-2, 6" Storm sewer to existing 6" storm sewer and carry through sidewall, connecting to I-5 Pipe Special. Remove 80' of existing 15" Drain tile left, replacing with 77' of 15" I-2 storm sewer and I-5 Pipe special as shown. Connect new 15" I-2 storm sewer to existing pipe at both ends. Place sodding at left end as shown.

ESTIMATED QUANTITIES

E-2	Excavation for Structures	79. Cu. Yds.
S-1	Concrete for Structures Class "E"	57.1 Cu Yds.
S-4	Reinforcing Steel	4,122 Lbs.
S-22	Removal of Portions of Ex. Structure	1.9 Cu. Yds.
S-23	Dowel Holes 1"ϕ, 1'-3" Long	24 Lin. Ft.
E-12	15" Pipe Removed & Disposed of	80 Lin Ft
I-2	6" Storm Sewer	9. Lin. Ft.
I-2	15" Storm Sewer	77. Lin. Ft.
I-5	15"x6" T Pipe Specials	1. Each
L-10	Sodding	47 Sq. Yd.

SECT.-A-A
Scale: ¼"=1'-0"

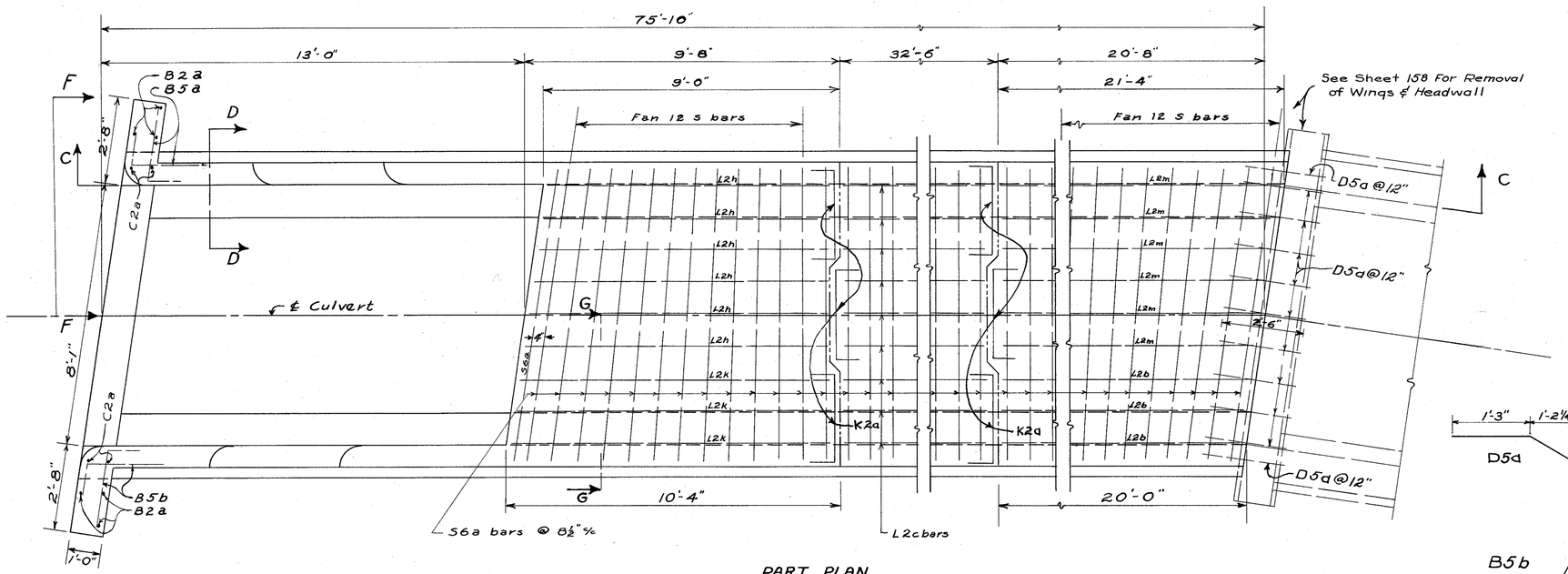
STA. 166+41
MA-40-31

STA. 166+41
MA-40-31

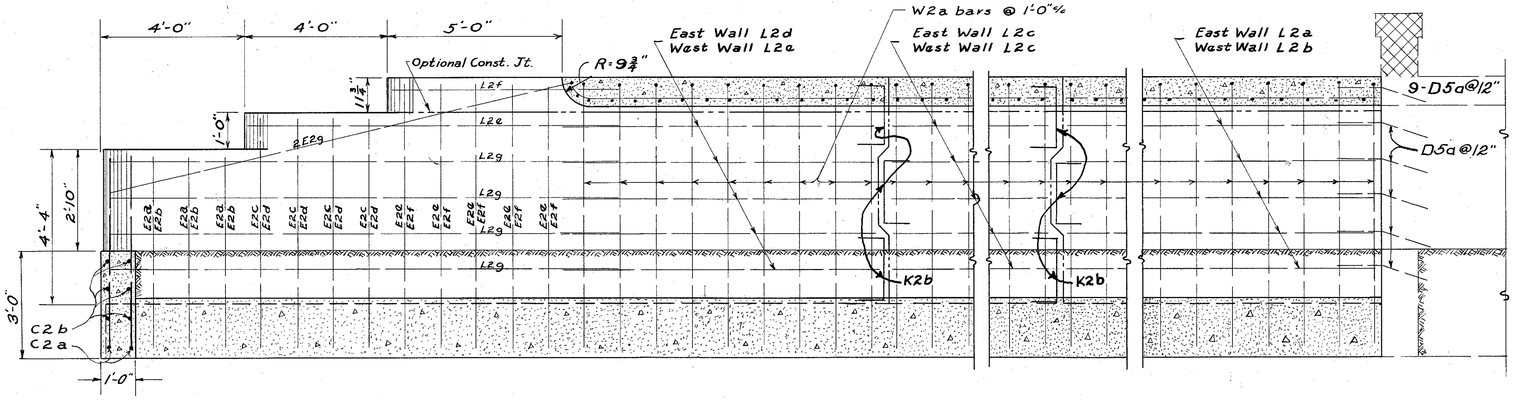
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

159
179

MAD-40-(0.00-6.84)

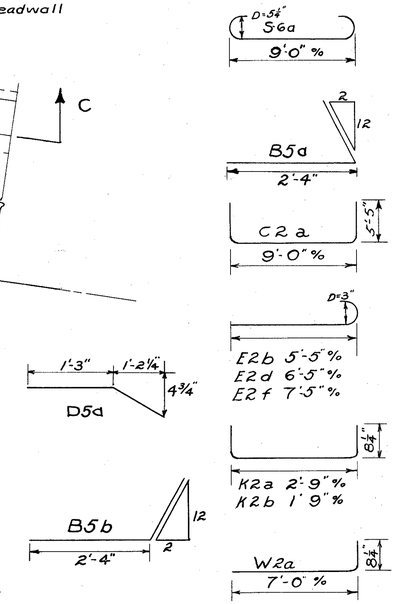


PART PLAN
Scale ½"=1'-0"



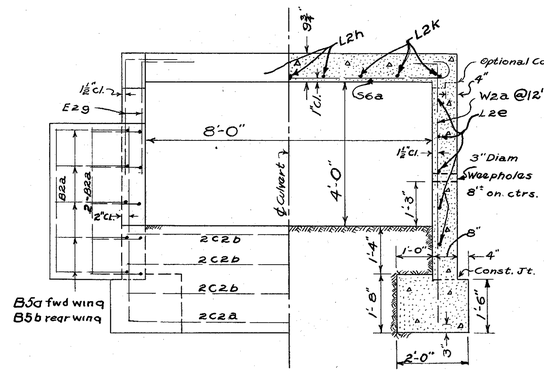
SECTION C-C
Scale ½"=1'-0"

Bending Diag.



STEEL MARK						
Mark	Size	Spc'g	Length	No.	Weight	Shape
S6a	⅞"ϕ	8½"	10'-8"	88	1,919	Bent
D5a	¾"ϕ	12"	2'-6"	19	71	Bent
B5a	¾"ϕ		3'-2"	10	48	Bent
B5b	¾"ϕ		3'-2"	10	48	Bent
B2a	½"ϕ	12"	4'-0"	6	17	Str.
C2a		—	19'-7"	2	26	Bent
C2b		10"	9'-0"	6	36	Str.
E2a		12"	5'-5"	6	22	Str.
E2b			5'-11"	6	24	Bent
E2c			6'-5"	8	35	Str.
E2d			6'-11"	8	37	Bent
E2e			7'-5"	10	50	Str.
E2f		12"	7'-11"	10	53	Bent
E2g		—	13'-6"	4	36	Str.
K2a		—	4'-0"	6	16	Bent
K2b		—	3'-0"	12	24	Bent
L2a		12"	21'-0"	5	70	Str.
L2b			19'-8"	8	105	
L2c			32'-0"	19	406	
L2d			8'-6"	5	28	
L2e			10'-0"	9	60	
L2f			6'-0"	4	16	
L2g			14'-0"	16	150	
L2h			9'-0"	6	36	
L2K			9'-8"	3	19	
L2m			20'-8"	6	83	Str.
W2a	½"ϕ	12"	7'-7"	124	628	Bent
Re 6	⅞"ϕ	—	7'-10"	2	31	Str.
Re 5	¾"ϕ	—	7'-0"	2	21	Str.
Re 2	½"ϕ	—	5'-4"	2	7	Str.
Total					4,122	Lbs.

CONCRETE SUMMARY					
Item	Rt. Sec.	℄ Sec.	Lt Sec. & Wings	Cutoff wall	Totals
Rear footer	2.345	3.811	2.736		8.892
Fwd footer	2.501	3.811	2.658	0.765	9.735
Rear wall	2.650	4.279	3.015		9.944
Fwd. wall	2.825	4.279	2.929		10.033
Deck	5.921	9.262	3.273		18.456
Totals	16.242	25.442	14.611	0.765	57.060



VIEW F-F
Scale ½"=1'-0"

TYPICAL SECT. G-G
Scale ½"=1'-0"

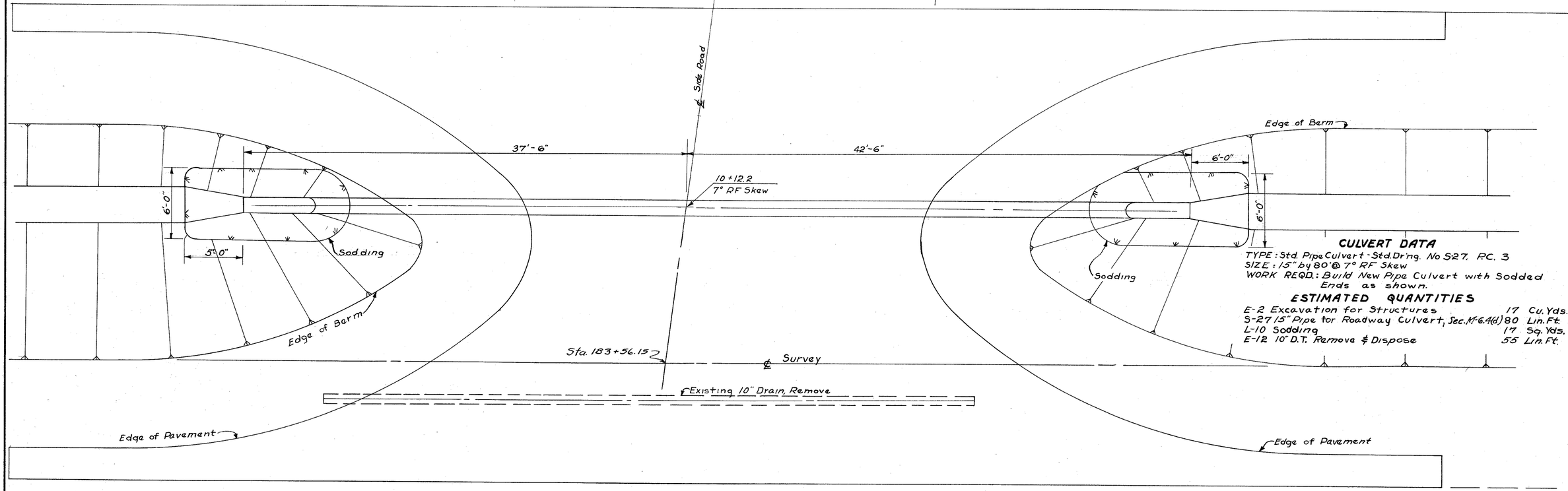
SECTION D-D
Scale ½"=1'-0"

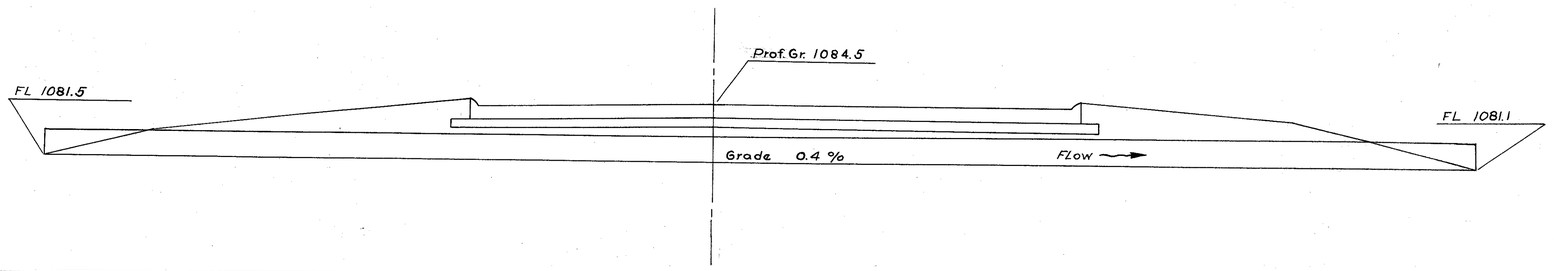
STA. 166+41
MA-40-31

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

160
179

MAD-40-(0.00-6.84)





CULVERT DATA

TYPE: Std. Pipe Culvert - Std. Drng. No S27, PC. 3
SIZE: 15" by 80'@ 7° RF Skew
WORK REQD.: Build New Pipe Culvert with Sodded Ends as shown.

ESTIMATED QUANTITIES

E-2 Excavation for Structures	17 Cu. Yds.
S-27 15" Pipe for Roadway Culvert, Sec. M-6.4(6)	80 Lin. Ft.
L-10 Sodding	17 Sq. Yds.
E-12 10" D.T. Remove & Dispose	55 Lin. Ft.

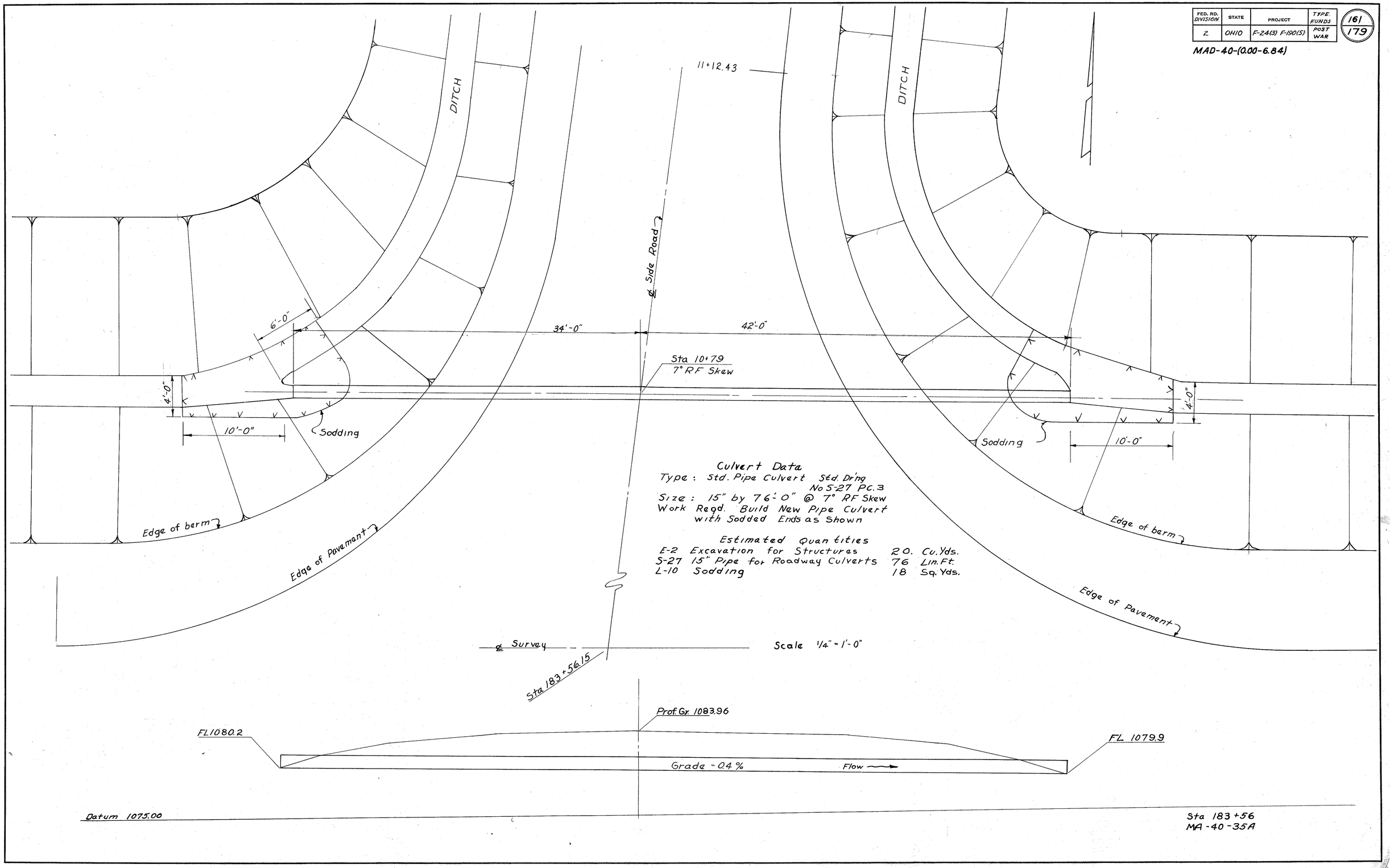
Sta 183+56
MA-40-35

DRAINAGE STRUCTURE MA-40-35

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

161
179

MAD-40-(0.00-6.84)



Culvert Data

Type : Std. Pipe Culvert Std. Dring No 5-27 Pc. 3
Size : 15" by 76'-0" @ 7° RF Skew
Work Reqd. Build New Pipe Culvert with Sodded Ends as Shown

Estimated Quantities

E-2	Excavation for Structures	20.	Cu. Yds.
S-27	15" Pipe for Roadway Culverts	76	Lin. Ft.
L-10	Sodding	18	Sq. Yds.

Scale 1/4" = 1'-0"

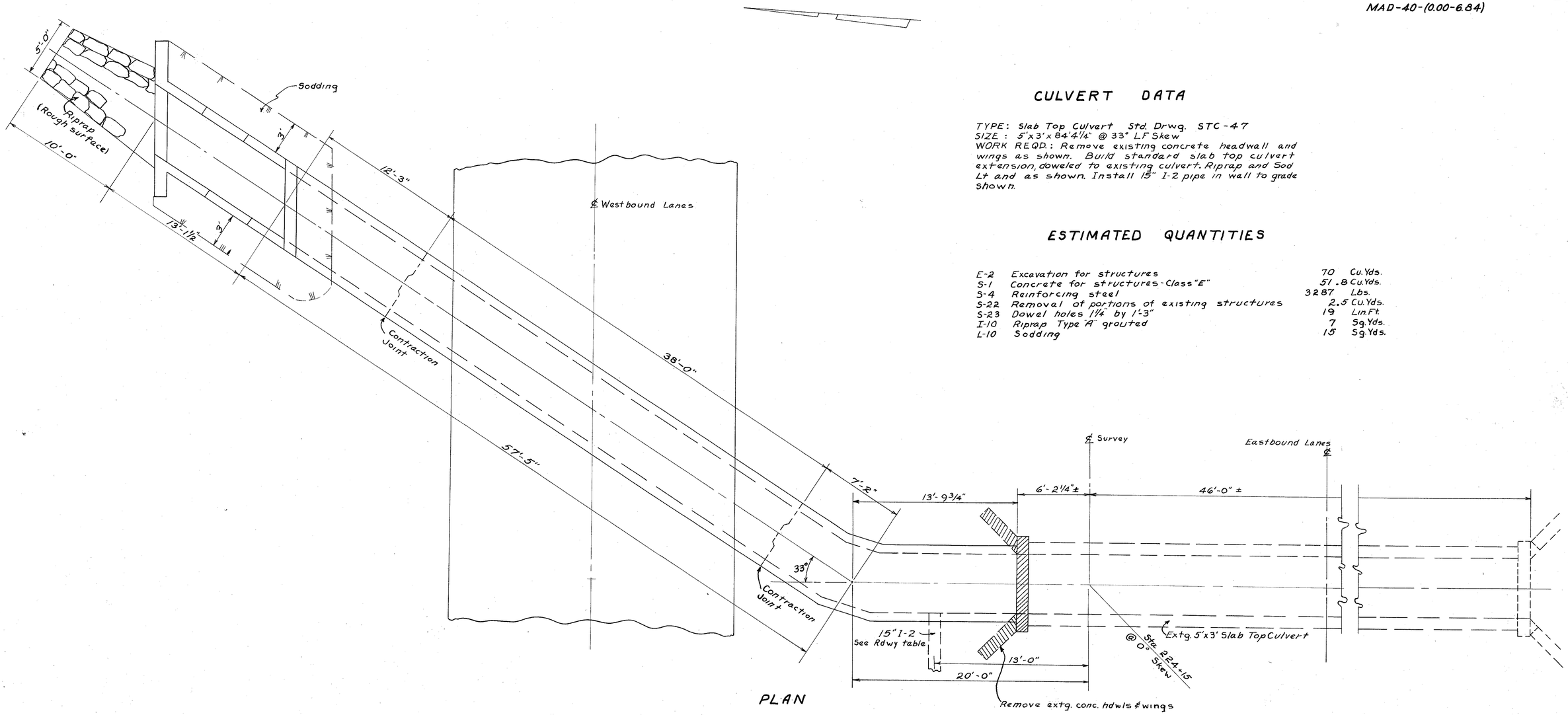
Sta 183+56
MA-40-35A

DRAINAGE STRUCTURE MA-40-35A

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

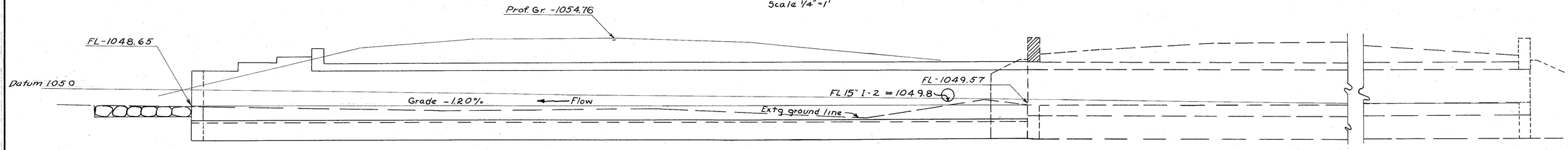
162
179

MAD-40-(0.00-6.84)



PLAN

Scale 1/4"=1'



SECTION ON ℄

CULVERT DATA

TYPE: Slab Top Culvert Std. Drwg. STC-47
SIZE : 5'x3'x84'4 1/4" @ 33° LF Skew
WORK REQD.: Remove existing concrete headwall and wings as shown. Build standard slab top culvert extension, doweled to existing culvert. Riprap and Sod Lt and as shown. Install 15" I-2 pipe in wall to grade shown.

ESTIMATED QUANTITIES

E-2	Excavation for structures	70	Cu.Yds.
S-1	Concrete for structures-Class "E"	51.8	Cu.Yds.
S-4	Reinforcing steel	3287	Lbs.
S-22	Removal of portions of existing structures	2.5	Cu.Yds.
S-23	Dowel holes 1 1/4" by 1'-3"	19	Lin.Ft.
I-10	Riprap Type "A" grouted	7	Sq.Yds.
L-10	Sodding	15	Sq.Yds.

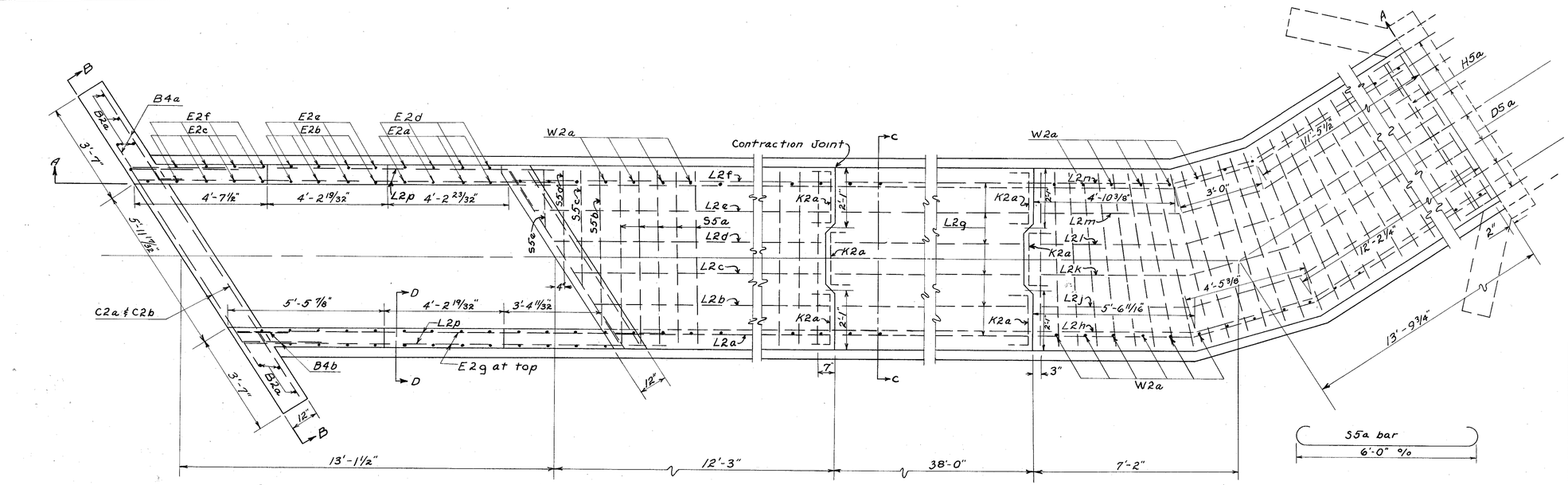
Sta 224+15
MA-40-42

DRAINAGE STRUCTURE MA-40-42

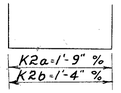
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

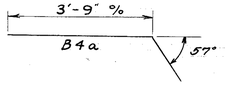
163
179

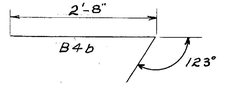
MAD-40-(0.00-6.84)

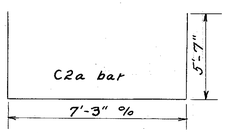


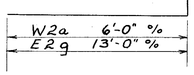
PLAN

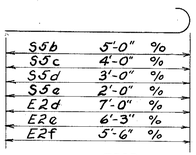




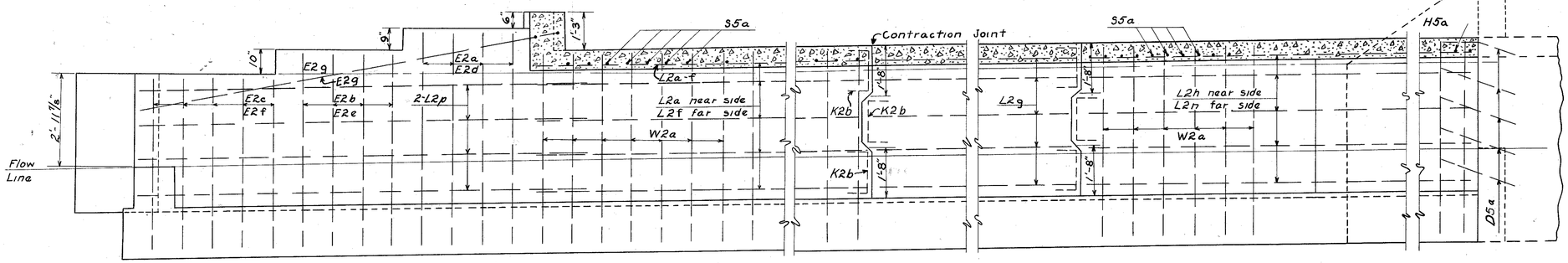




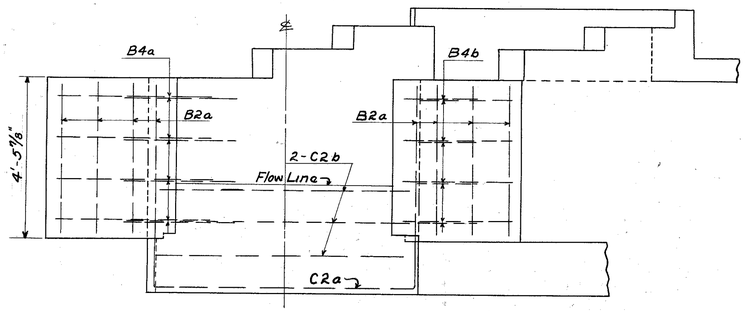




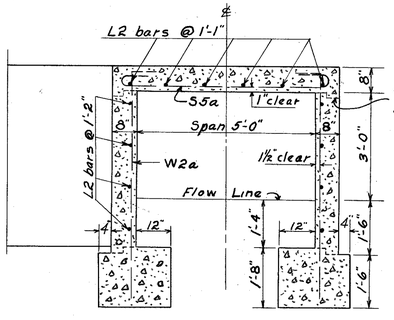
STEEL LIST					
Mark	Size	No	Length	Spacing	Weight
55a	3/4" ϕ	106	7'-4"	8"	1167
55b	3/4" ϕ	1	5'-8"		9
55c	3/4" ϕ	1	4'-8"		7
55d	3/4" ϕ	1	3'-8"		6
55e	3/4" ϕ	1	2'-8"		4
L2a	1/2" ϕ	5	10'-0"	1'-2"	33
L2b	1/2" ϕ	1	10'-8"		7
L2c	1/2" ϕ	1	11'-4"		8
L2d	1/2" ϕ	1	12'-0"		8
L2e	1/2" ϕ	1	12'-9"		9
L2f	1/2" ϕ	5	13'-6"	1'-2"	45
L2g	1/2" ϕ	6	37'-6"	1'-1" Top	150
L2g	1/2" ϕ	8	37'-6"	1'-2" Side	200
L2h	1/2" ϕ	5	27'-11"	1'-2"	93
L2j	1/2" ϕ	1	27'-3"		18
L2k	1/2" ϕ	1	26'-8"		18
L2l	1/2" ϕ	1	26'-1"		17
L2m	1/2" ϕ	1	25'-6"		17
L2n	1/2" ϕ	5	24'-11"	1'-2"	83
L2p	1/2" ϕ	16	14'-9"	1'-2"	158
W2a	1/2" ϕ	142	6'-7"	1'-0"	624
E2a	1/2" ϕ	8	7'-0"	1'-0"	37
E2b	1/2" ϕ	8	6'-3"	1'-0"	33
E2c	1/2" ϕ	10	5'-6"	1'-0"	37
E2d	1/2" ϕ	8	7'-6"	1'-0"	40
E2e	1/2" ϕ	8	6'-9"	1'-0"	36
E2f	1/2" ϕ	9	6'-0"	1'-0"	36
E2g	1/2" ϕ	4	13'-7"		36
B4a	5/8" ϕ	16	4'-9"	1'-2"	79
B4b	5/8" ϕ	16	3'-8"	1'-2"	61
B2a	1/2" ϕ	7	4'-0"		19
C2a	1/2" ϕ	2	18'-5"		25
C2b	1/2" ϕ	6	7'-0	11"	28
K2a	1/2" ϕ	6	3'-1 1/2		13
K2b	1/2" ϕ	6	2'-8 1/2		11
D-5a	3/4" ϕ	15	2'-6"	12"	56
H5a	3/4" ϕ	2	6'-0"		18
Re5a	3/4" ϕ	2	7'-0"		21
Re4a	5/8" ϕ	2	6'-2"		13
Re2a	1/2" ϕ	2	5'-6"		7
Total					3287



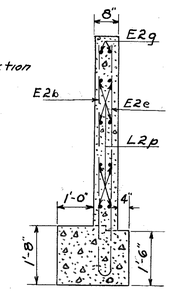
SECTION A-A



END VIEW B-B



TYPICAL SECTION C-C



SECTION D-D

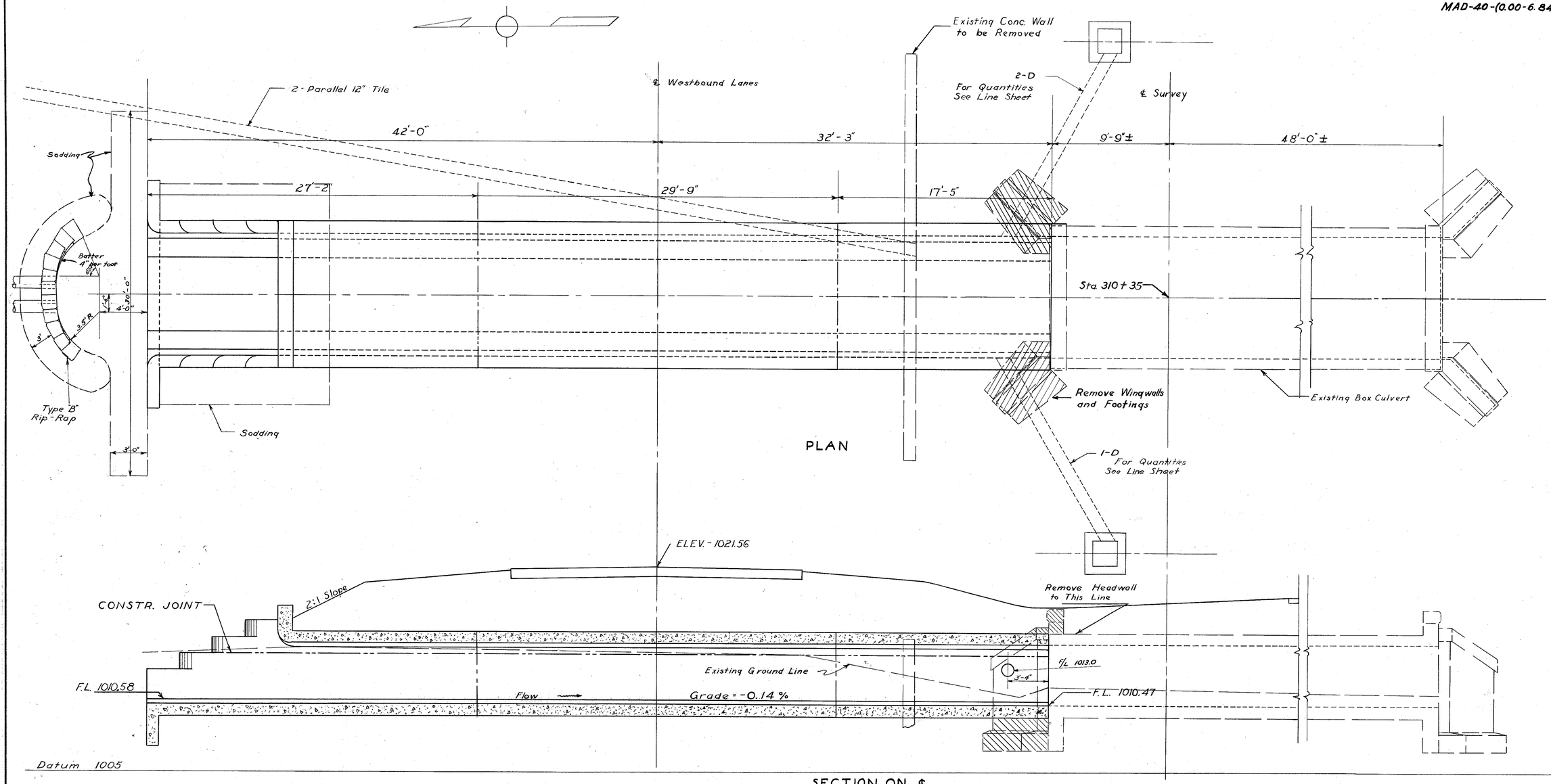
Sta 224+15
MA-40-42

DRAINAGE STRUCTURE MA-40-42

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OH10	F-24(3) F-190(5)	POST WAR

164
179

MAD-40-(0.00-6.84)



SECTION ON ℄

CULVERT DATA

Type: Large Box Culvert Extension
Standard Drawing LBC-45
Size: 10' x 5' x 74'3" @0° Skew
Work Required: Remove Wingwalls and Footings on Left and Extend Box Culvert 74'-3" Left as Shown on Plan.
Removal and Replacement of 2-12 Drain tile to a point 136' North of ℄ as shown
Clean out Channel 580 ft. South of Existing Culvert
Clean out existing Culvert.
Connect Culvert and Catch Basins with I-3 as shown
Construct Rip-Rap Headwall at Outlet of 12" pipes as shown
Place Sodding on Area Indicated on Plans.

ESTIMATED QUANTITIES

E-2	Excavation for Structures	191 cu. yds.
S-1	Concrete for Structure "Class C"	92.5 cu. yds.
S-4	Reinforcing Steel	14312 Lbs.
S-22	Removal of Portions of Existing Structure	8 cu. yds.
S-23	Dowel Holes 1¼" x 1'-3" long	43 lin. ft.
E-12	Removal of Drain Tile 12"	270 lin. ft.
E-3	Excavation of Channel - South	297 cu. yds.
I-3	Roadway Drainage 12" pipe	100 lin. ft.
L-10	Sodding	30 sq. yds.
I-10	Type 'B' Rip-Rap grouted	2 sq. yds.

STRUCTURE NO.
MA-40-59
STATION 310+35
MADISON CO. U.S.R. 40
Scale: ¼"=1' Sheet 1 of 3

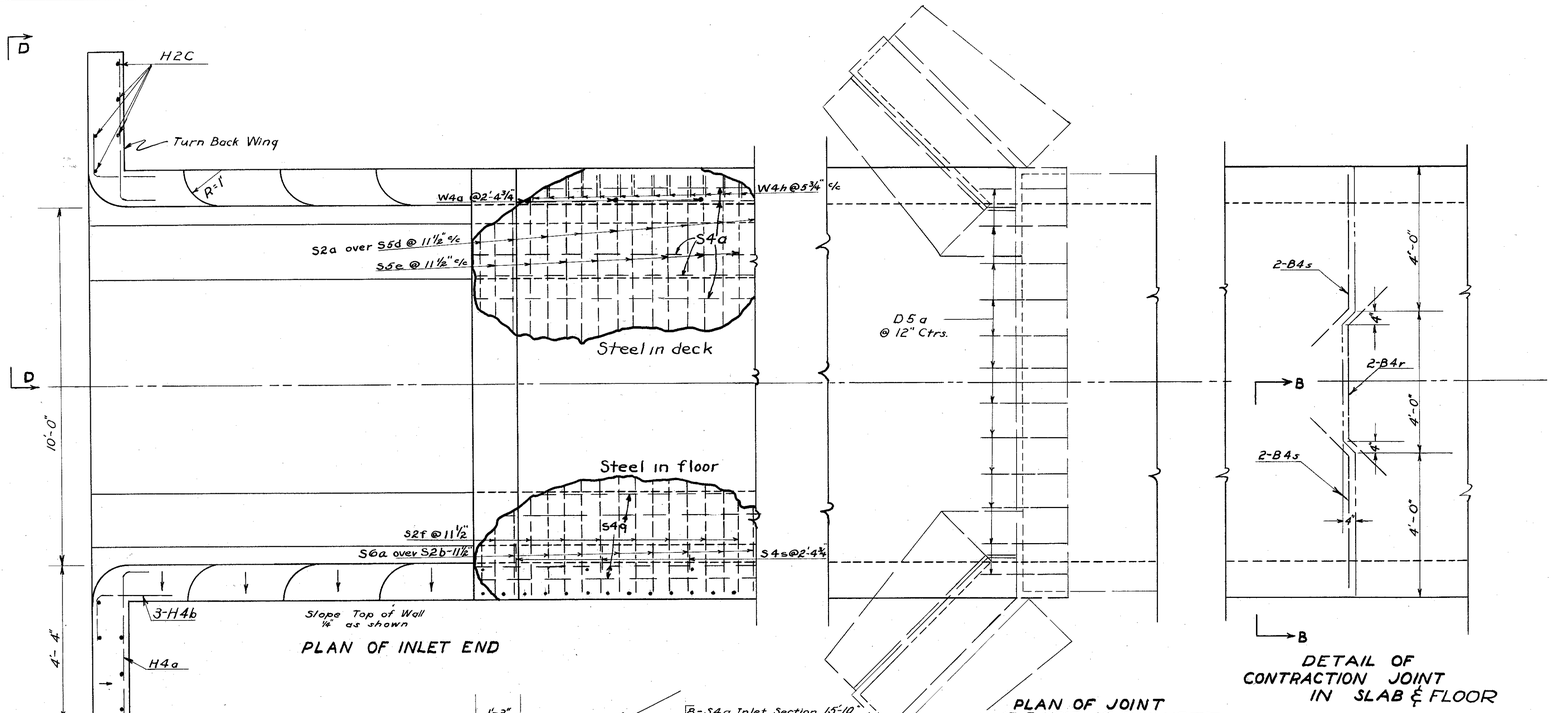
Drawn by	Traced by	Checked by	Reviewed by
T.L.W.	T.L.W.		

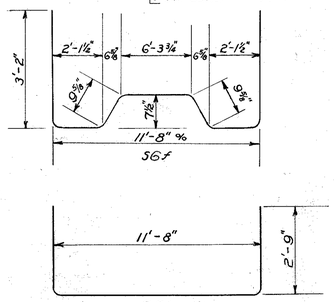
DRAINAGE STRUCTURE NO. MA-40-59 STA. 310+35

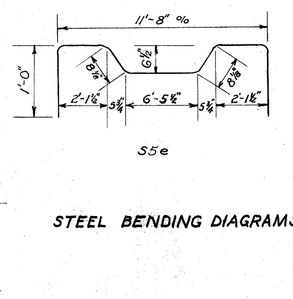
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

165
179

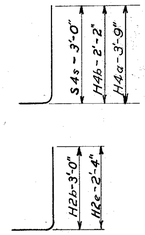
MAD-40-(0.00-6.84)

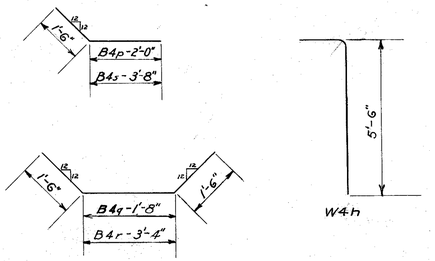






STEEL BENDING DIAGRAMS





Concrete Summary

Item	Lt. Sec.	Cent. Sec.	Rt. Sec.	Total
Floor, Cutoff wall & part wings	15.282	14.600	10.446	40.328 C.Y.
Walls & part wings	8.274	8.815	5.136	22.225 C.Y.
Deck & header	8.480	13.498	7.940	29.918 C.Y.
Total	32.036	36.913	23.522	92.471 C.Y.

STRUCTURE NO. MA-40-59
STATION 310+35
MADISON CO. U.S.R. 40
Scale: ½"=1' Sheet 2 of 3

Drawn by	Traced by	Checked by	Reviewed by
T.L.W.	T.L.W.		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

166
179

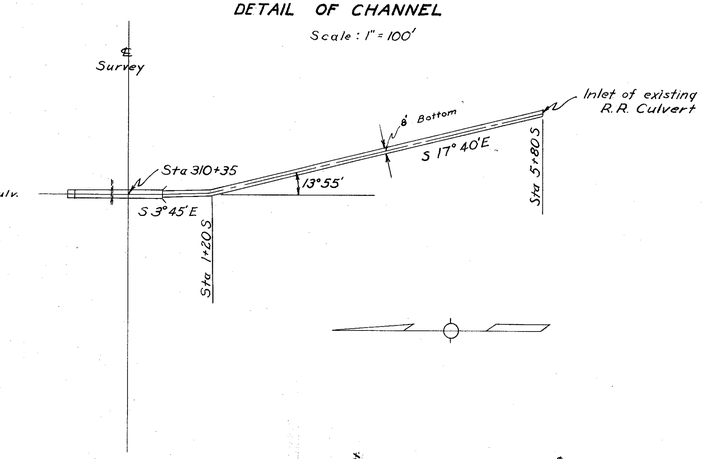
MAD-40-(0.00-6.84)

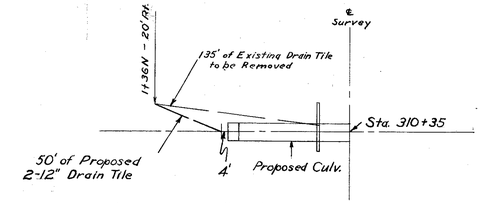
STEEL LIST

MARK	NUMBER	SIZE	SPACING	LENGTH	SHAPE	WEIGHT
B4q	8	5/8" ϕ		4'-8"	Bent	39.0
B4p	16	"		3'-6"	"	58.4
B4r	8	"		6'-4"	"	52.8
B4s	16	"		5'-2"	"	86.2
D5a	34	3/4" ϕ	1'-0" c/c	2'-6"	Str.	127.7
W4a	56	5/8" ϕ	2'-4 3/4"	5'-4"	"	311.5
W4b	8	"	1'-0"	26'-6"	"	221.1
W4c	8	"	1'-0"	29'-5"	"	245.4
W4d	8	"	1'-0"	17'-1"	"	142.5
W4e	4	"		21'-2"	"	88.3
W4f	4	"		29'-5"	"	122.7
W4g	4	"		17'-1"	"	71.3
W4h	264	5/8" ϕ	5 3/4"	6'-1"	Bent	1675.0
W4i	10	"	5 3/4"	6'-3"	Str.	65.1
W4j	12	"	5 3/4"	4'-11"	"	61.5
W4k	10	"	5 3/4"	3'-7"	"	37.4
H2a	3	1/2" ϕ	1'-0"	18'-2"	Str.	36.4
H2b	13	1/2"	1'-0"	3'-7"	Bent	31.1
H2c	10	1/2"	1'-0"	5'-11"	Str.	39.5
H2d	2	1/2"	1'-0"	11'-6"	"	15.4
H2e	12	1/2"	1'-0"	2'-11"	Bent	23.4
H4a	6	5/8" ϕ	1'-0"	4'-6"	"	28.2
H4b	6	5/8"	1'-0"	3'-9"	"	23.5
S2a	66	1/2" ϕ	11½"	11'-6"	Str.	507.1
S2b	77	"	11½"	16'-11"	Bent	870.3
S4a	15	5/8" ϕ		15'-10"	Str.	247.7
S4b	15	"		29'-5"	"	460.3
S4c	15	"		17'-1"	"	267.3
S5d	66	3/4" ϕ	11½"	11'-6"	"	1140.0
S5e	66	"	11½"	13'-9"	Bent	1363.0
S6f	77	7/8" ϕ	11½"	18'-1"	"	2845.6
S4g	15	5/8" ϕ		26'-6"	Str.	414.6
S4h	15	"		29'-5"	"	460.2
S4k	15	"		17'-1"	"	267.3
S4s	64	5/8" ϕ	2'-4 3/4	3'-9"	Bent	250.3
S6a	77	7/8" ϕ	11½"	11'-6"	Str.	1810.0
R2a	2	1/2" ϕ		5'-4"	Str.	7.0
R4a	2	5/8" ϕ		6'-2"	"	13.0
R5a	2	3/4" ϕ		7'-0"	"	21.0
R6a	2	7/8" ϕ		7'-10"	"	32.0
					Total	14312.4

DETAIL OF CHANNEL

Scale: 1" = 100'



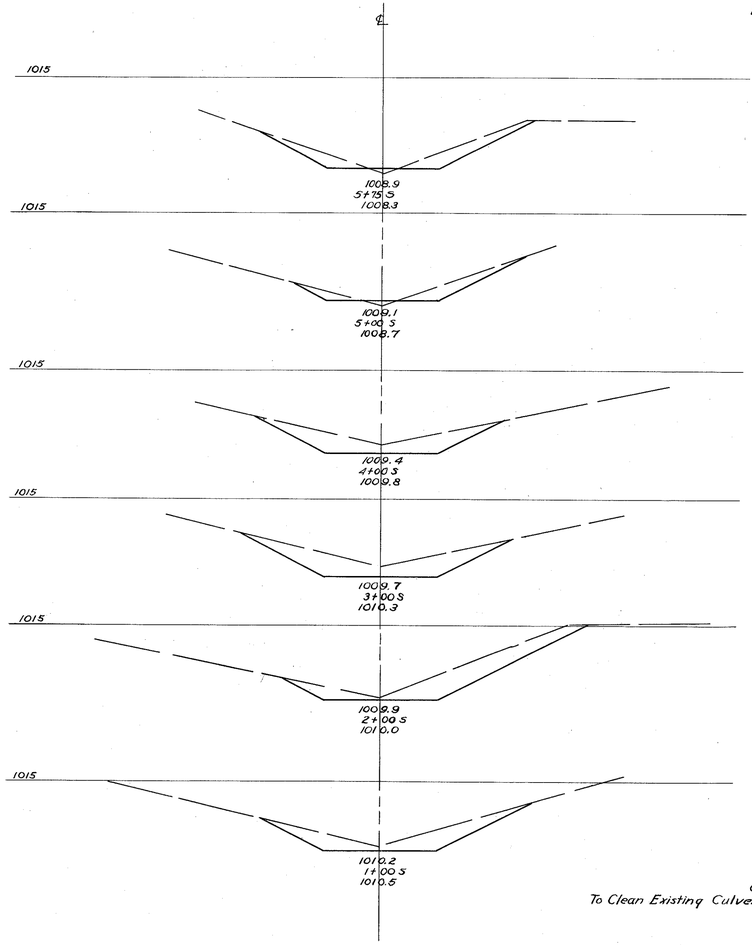


DETAIL OF DRAIN TILE

Scale: 1" = 50'

CHANNEL SECTIONS

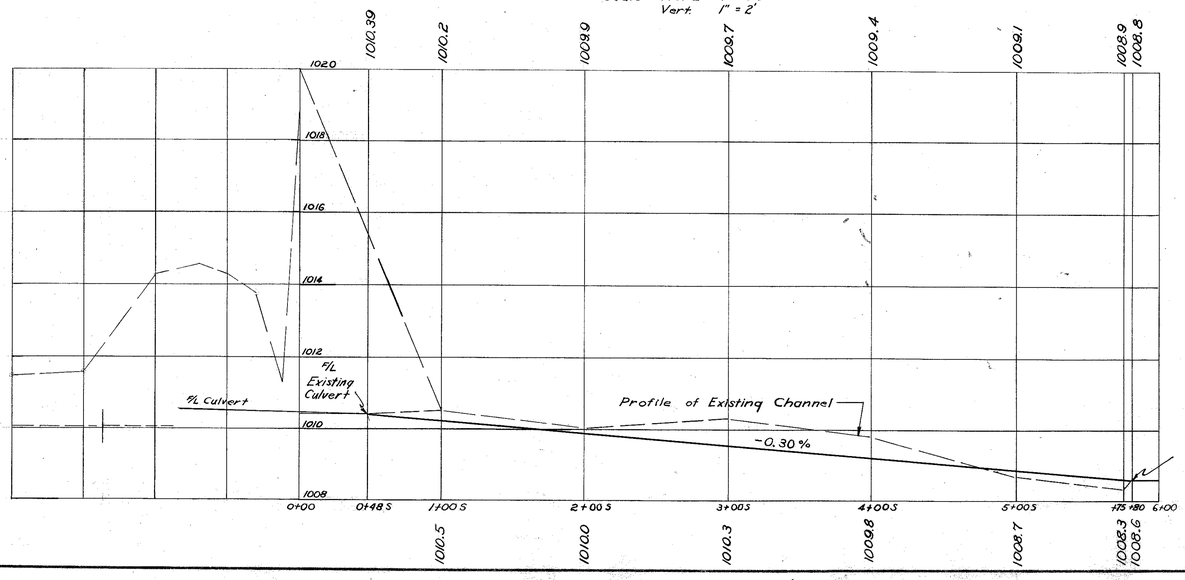
Scale: 1" = 5'

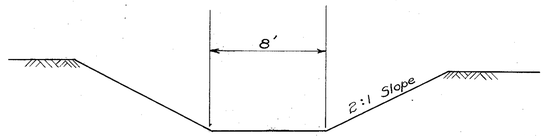


	EXCAVATION E.A.	EXCAVATION C.Y.
5+80	0	1
5+75	8	
		22
	8	
		43
	15	
		63
	19	
		70
	19	
		59
	13	
	0	13
0+48 To Clean Existing Culvert		26
Total		297 cu. yds.

CHANNEL PROFILE

Scale: Hor'z 1" = 50'
Vert. 1" = 2'





TYPICAL CHANNEL SECTION

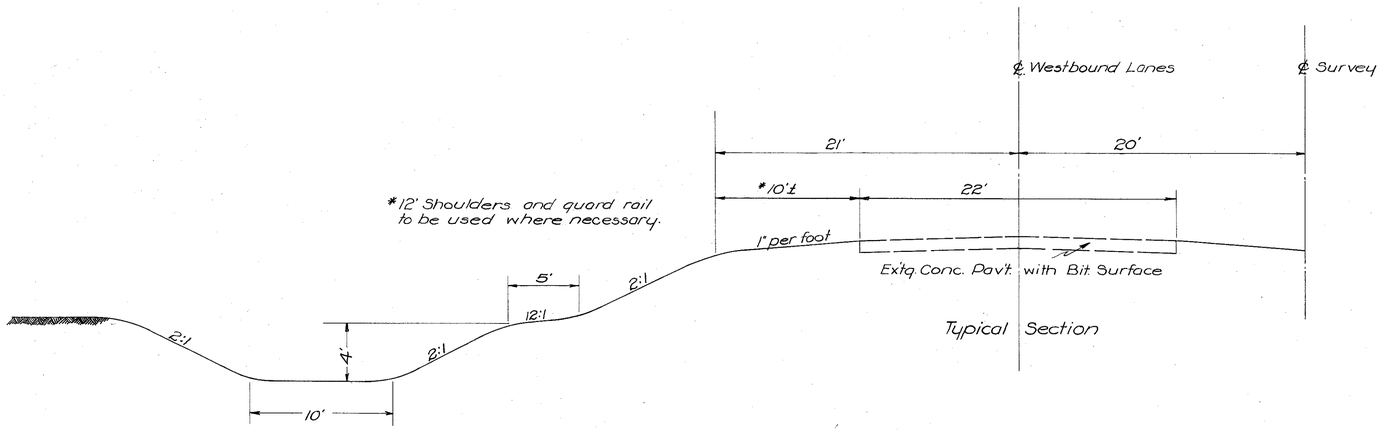
Scale: 1" = 5'

DRAINAGE STRUCTURE NO. MA-40-59 STA. 310+35

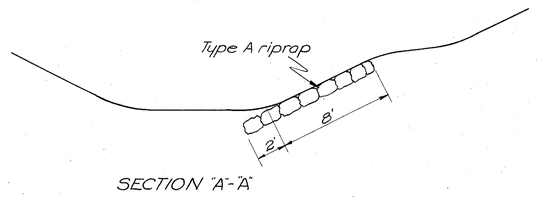
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

167
179

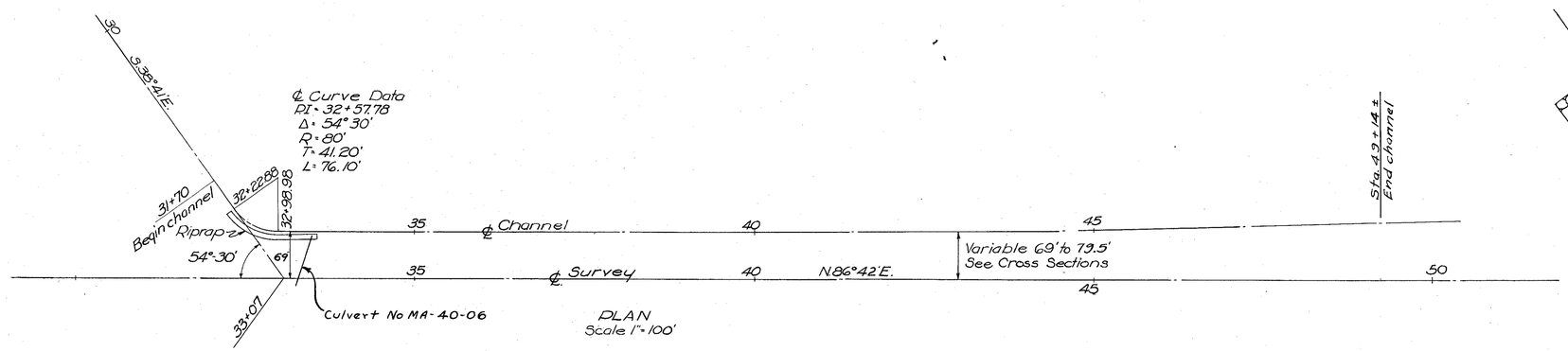
MAD-40-(0.00-6.84)



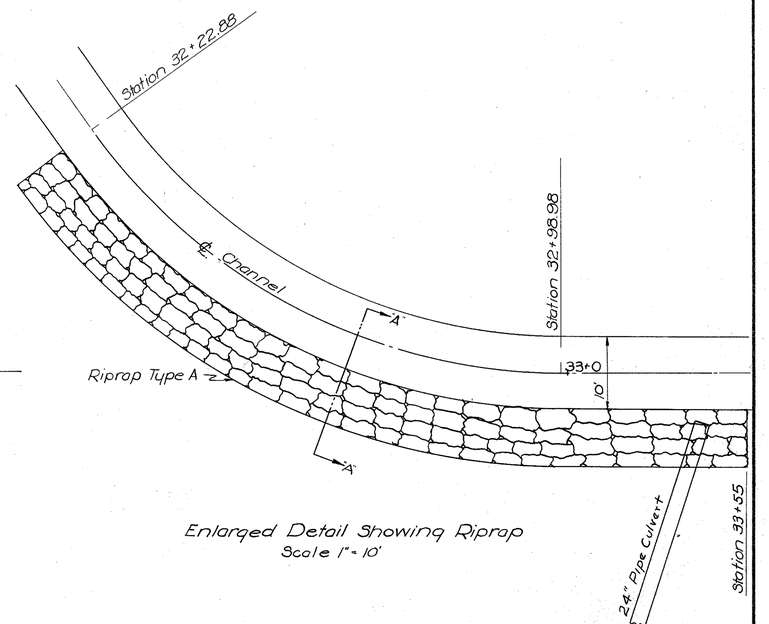
Typical Section



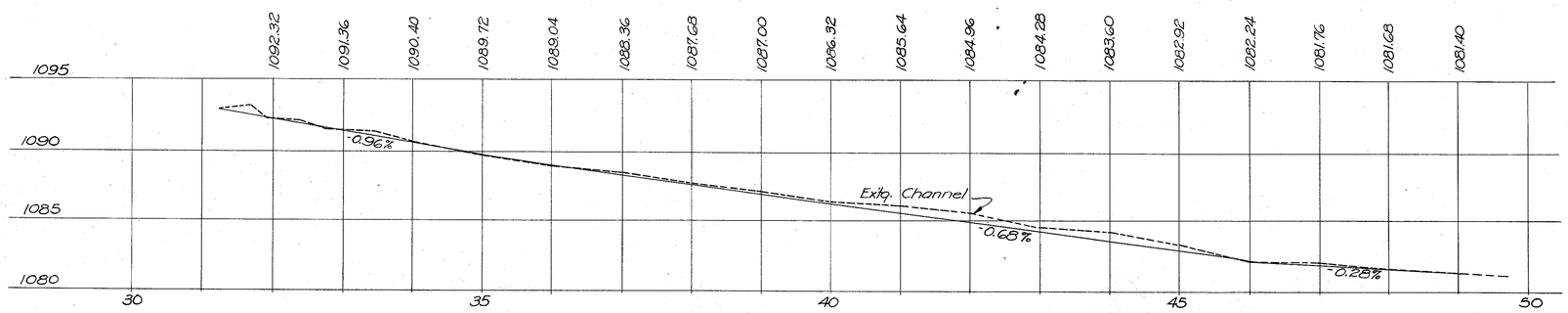
SECTION "A"-"A"
showing riprap



PLAN
Scale 1"-100'



Enlarged Detail Showing Riprap
Scale 1"-10'



ESTIMATED QUANTITIES

Riprap Type A Grouted	150.0 Sq. Yds.

Note: Quantity carried to line sheet
Excavation quantities carried to road cross sections.

DETAIL OF CHANNEL
Station 32± to Station 49±

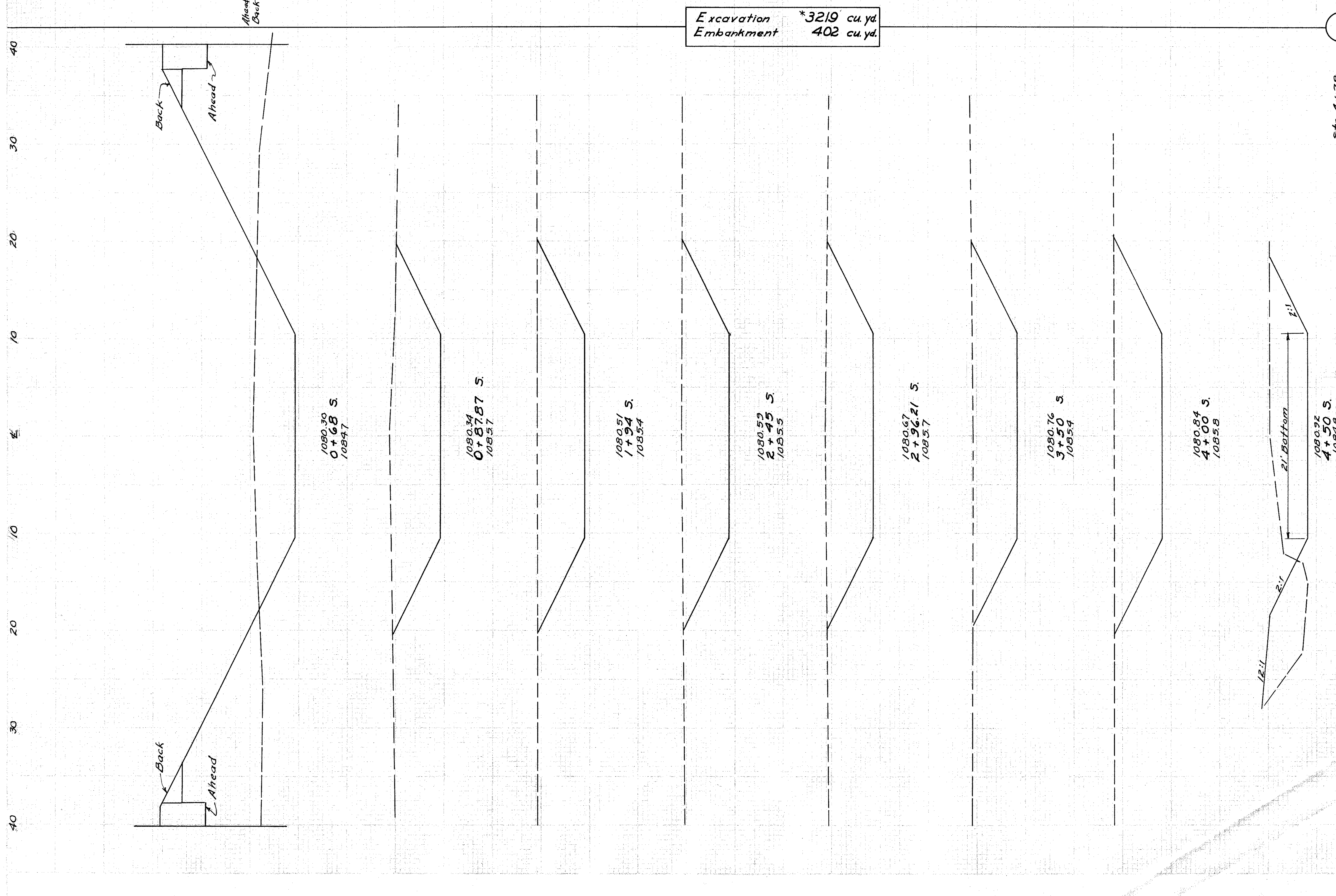
CHANNEL DETAIL STA. 31+70 TO 49+

DIVISION 2	F-24(3) F-190(5)	TYPE FUNDS: POST WAR — 168 / 179

MAD-40-(0.00-6.84)

Station	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
0+68 S.	Ahead 120 / Back 120	Ahead 219 / Back 250		
			101	92
0+87.87 S.	153	0		
			590	0
1+94 S.	147	0		
			277	0
2+45 S.	146	0		
			277	0
2+96.21 S.	146	0		
			283	0
3+50 S.	138	0		
			268	0
4+00 S.	151	0		
			226	0
4+50 S.	93	0		
			48	0
4+78	0	0		

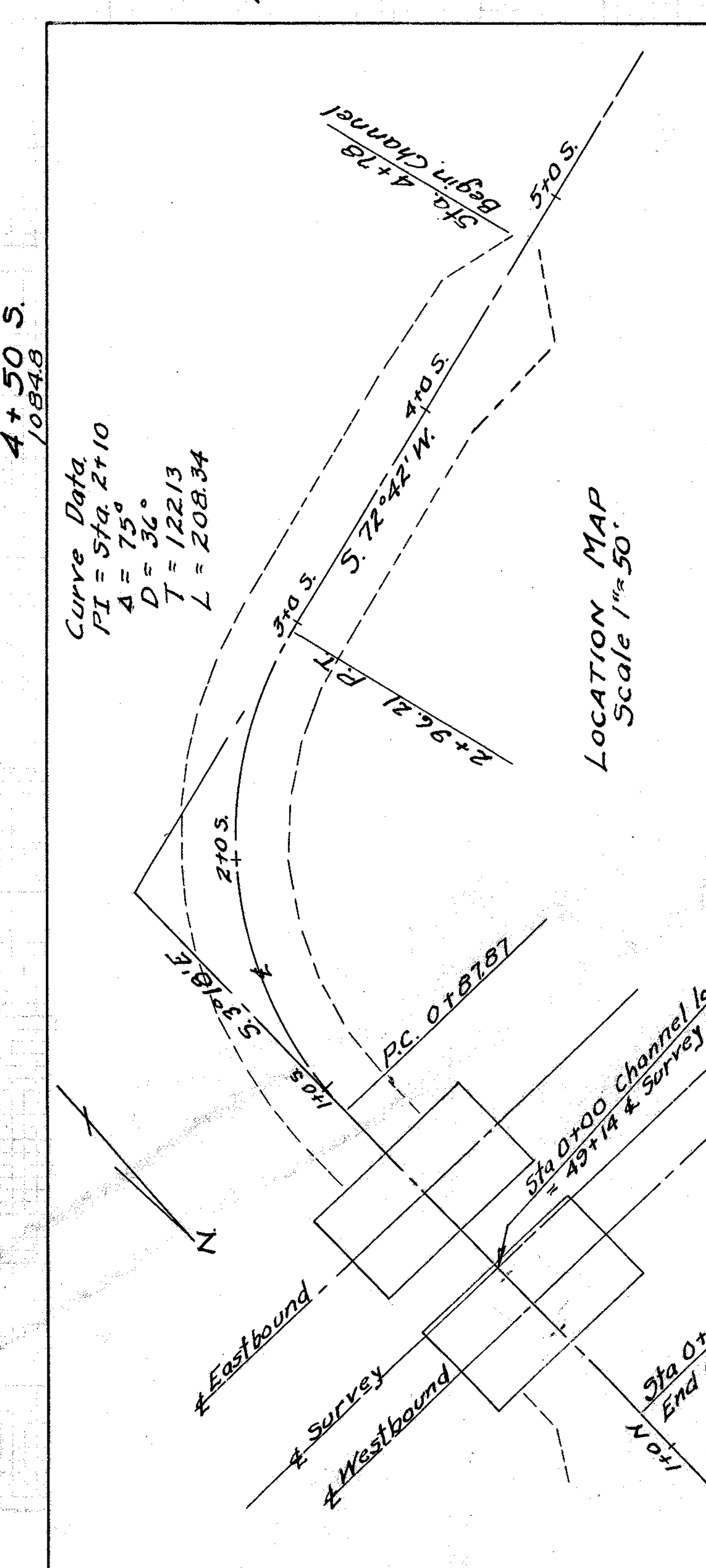
Excavation	*3219 cu. yd.
Embankment	402 cu. yd.



SUMMARY OF QUANTITIES
E-3 Channel excavation = *3219 Cu. Yds.
* Quantity carried to bridge summary

Note: Existing channel from Sta. 4+78 S. to 0+68 S. to be backfilled as directed by the Engineer

Note: Embankment quantities carried to cross section sheet No. 69



LOCATION MAP
Scale 1" = 50'

CHANNEL SECTIONS STA 49+14

	End Area	Cu. Yds.
	Cut / Fill	Cut / Fill
49	0 / 0	4
72	10 / 131	48
14	Ahead 141 / 97 Back 141 / 67	122
0	457 / 0	494
3	495 / 0	143
16	Ahead 205 / 13 Back 205 / 39	73
2	Ahead 98 / 27 Back 98 / 7	60
54	171 / 0	205
0+68 S.	120 / 219	

DIVISION 2 — F-24(3) F-190(5) — TYPE FUNDS POST WAR — 169 179

MAD-40-(0.00-6.84)

Sta. 0+82 N.
End channel

0+62 N.
1080.9

0+45 N.
1081.2

0+34 N.
1081.0

0+06 N.
1080.5

0+05 S.
1081.0

0+18 S.
1080.8

1080.30
0+30 S.
1081.2

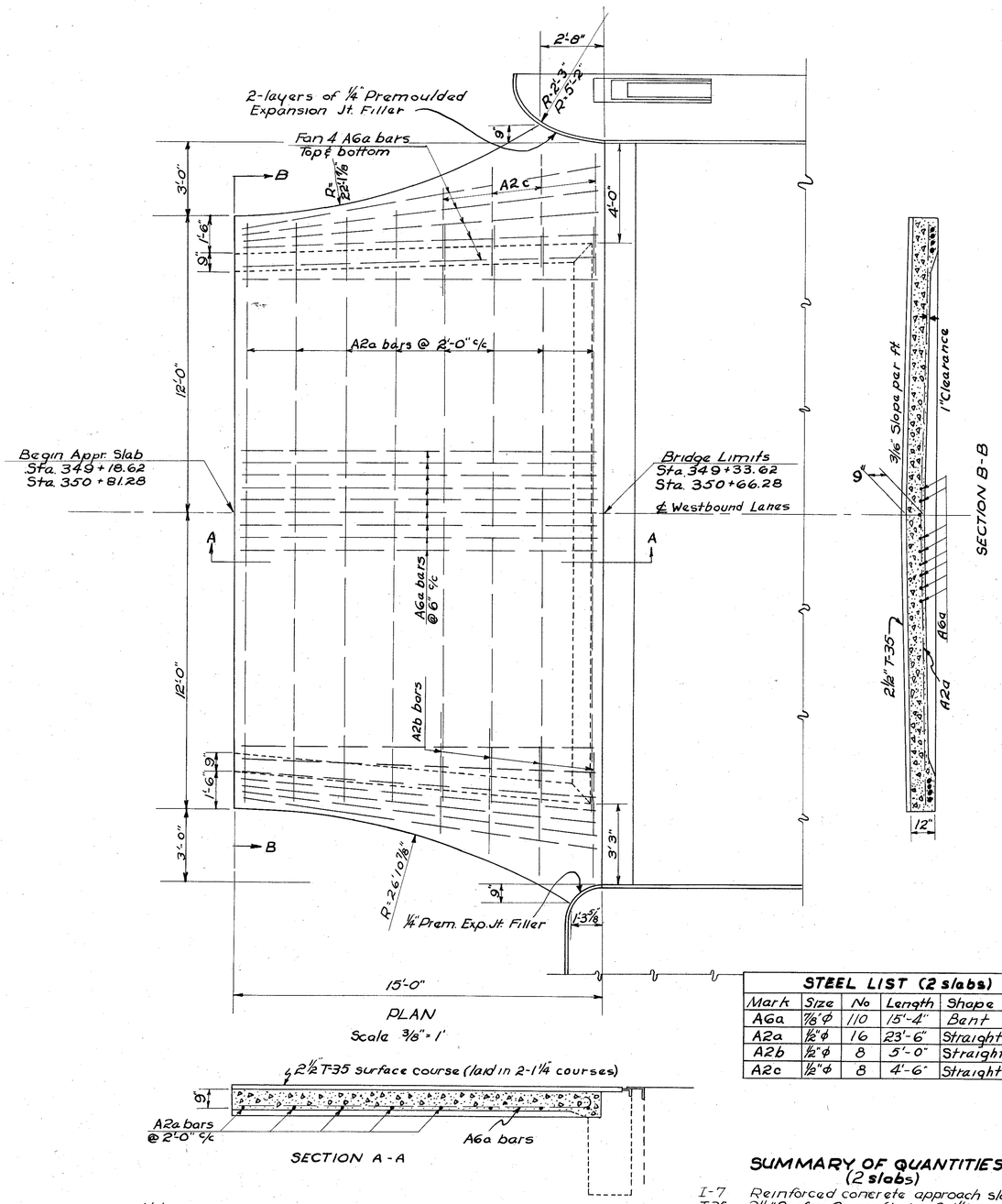
Ahead
Back

CHANNEL SECTIONS STA. 49+14

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

170
179

MAD-40-(0.00-6.84)



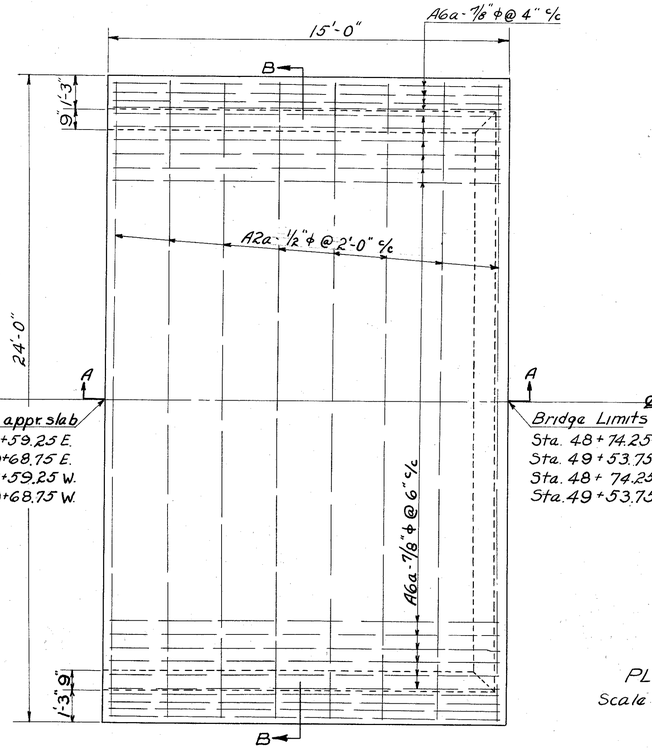
STEEL LIST (2 slabs)					
Mark	Size	No	Length	Shape	Weight
A6a	⅞"ϕ	110	15'-4"	Bent	3448
A2a	½"ϕ	16	23'-6"	Straight	251
A2b	½"ϕ	8	5'-0"	Straight	27
A2c	½"ϕ	8	4'-6"	Straight	24

Note:
Detail of westerly approach slab shown.
Easterly slab is similar

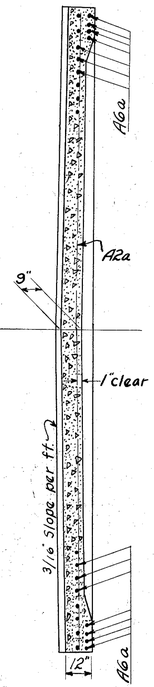
For details not shown see Std. Drwg. No. AS 1-47
Quantities carried to Table AS

SUMMARY OF QUANTITIES (2 slabs)

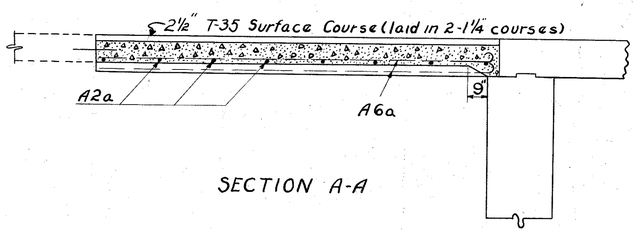
I-7	Reinforced concrete approach slabs	89.94 Sq. Yds.
T-35	2½" Surface Course (laid in 2-1¼ courses)	89.94 Sq. Yds.
S-3	Waterproofing Type C	89.94 Sq. Yds.



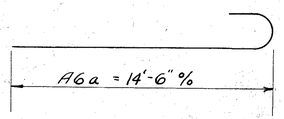
PLAN
Scale 3/8"=1'



SECTION B-B



SECTION A-A



STEEL LIST (4 slabs)					
Mark	Size	No	Length	Shape	Weight
A6a	⅞"ϕ	224	15'-4"	Bent	7019
A2a	½"ϕ	32	23'-6"	Straight	502

Note:
Details of westerly approach slab shown.
Easterly slab is similar.
For details not shown see Std. Drwg. No AS-4-47
Quantities carried to Table AS

SUMMARY OF QUANTITIES (four slabs)

I-7	Reinforced concrete appr slab	160.0 Sq. Yds.
T-35	2½" T-35 (laid in 2-1¼" courses)	160.0 Sq. Yds.
S-3	Waterproofing Type C	160.0 Sq. Yds.

APPROACH SLABS

FED. RD. DIVISION	STATE	PROJECT	TYPE FUND
2	OHIO	F-24(3) F-190(5)	POST WAR

171
179

MAD - 40 - (0.00 - 2.47)

6.1 Mi. West of Lafayette

PROPOSED STRUCTURE

TYPE: Cont. conc. slab with capped pile abuts. (A-1-49) & piers (P-1-49)
SPAN: 24'-30'-24'
ROADWAY: 2 @ 44' f/f guard rails
LOADING: S-20-46
SKEW: None
SURFACE COURSE: Bituminous
APPR. SLABS: As shown

EXISTING BRIDGE DATA

TYPE: Stone Arch
SPAN: 17'0"
ROADWAY: 27'0"
SKEW: 0°
CONDITION: Poor
DATE BUILT:
To Be Removed

STRUCTURES TO BE PARALLEL & ON THE SAME GRADE, WHICH IS THAT OF THE EAST BOUND LANE.

Foundation design and foundation quantities are based on a study of rod soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the State assumes no responsibility for the accuracy thereof.

Stationing shown on ℄ Profile refers to ℄ Survey Stations.

DRAINAGE AREA
3.86 Sq. Mi.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SITE PLAN
BRIDGE No. MA-40-09 OVER DEER CREEK

MADISON COUNTY U.S.R. 40
SEC. MAD-40-(0.00-2.47) F-24(3)
Scale 1"=20 Sta. 49+14.00

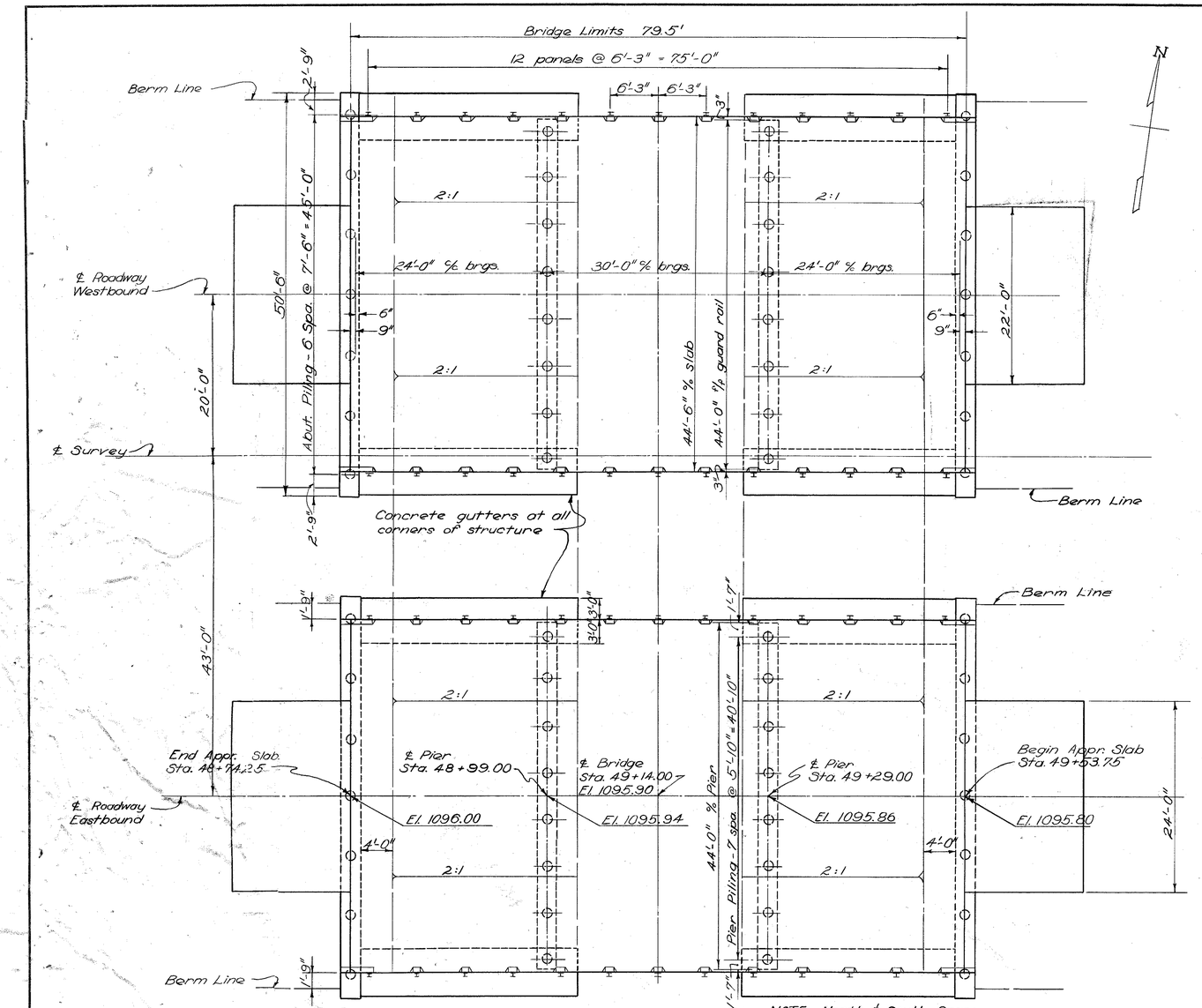
Present Topography			Proposed Work			
Surveyed	Drawn	Traced	Designed	Drawn	Checked	Reviewed
AJ	MBR	MBR	G.U.F.	G.U.F.	C.E.S.	C.T.A.

BFG WHR 3-31-50

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	P-24(3) P-190(5)	POST WAR

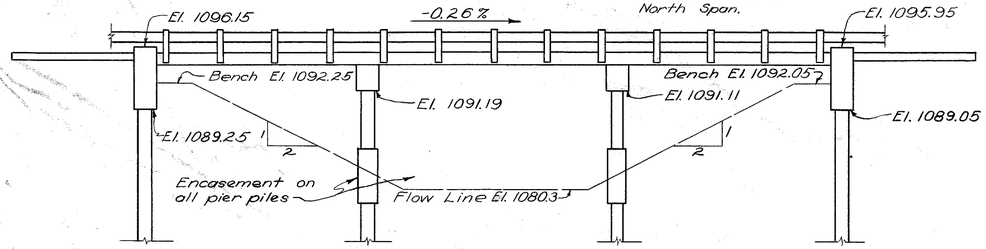
172 / 179

MAD-40-(0.00-2.47)



GENERAL PLAN

NOTE: North & South Spans are alike except as noted. Omit A4b bars in North Span.

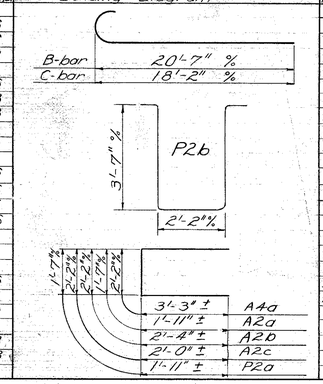


GENERAL ELEVATION

REINFORCING STEEL LIST

Mark	Size	No.	Length	Weight	Shp
SUPERSTRUCTURE					
F	1"□	180	19'-9"	12087	S
G	1"□	88	10'-0"	2992	S
H	1"□	88	6'-3"	1870	S
A	1"ϕ	270	28'-6"	20547	S
B	1"ϕ	88	21'-8"	5091	B
C	1"ϕ	88	19'-3"	4523	B
D	1"ϕ	44	19'-9"	2320	S
E	1"ϕ	44	16'-0"	1880	S
J	3/4"ϕ	92	16'-9"	2315	S
K	3/4"ϕ	46	16'-0"	1105	S
L	3/4"ϕ	352	23'-3"	12292	S
M	3/4"ϕ	216	23'-3"	7543	S
PIERS					
P0a	1 1/4"□	16	23'-11"	2033	S
P7a	1"ϕ	64	23'-6"	4014	S
P2a	1"ϕ	128	5'-3"	449	B
P2b	1"ϕ	128	10'-4"	884	B

Bending Diagram



Mark	Size	No.	Length	Weight	Shp
ABUTMENTS					
A7a	1"ϕ	96	26'-9"	6856	S
A4a	5/8"ϕ	272	8'-5"	2388	B
A4b	5/8"ϕ	30	3'-0"	94	S
A2a	1/2"ϕ	112	5'-3"	395	B
A2b	1/2"ϕ	16	6'-8"	71	B
A2c	1/2"ϕ	16	6'-0"	64	B
A2d	1/2"ϕ	176	3'-6"	411	S
A2e	1/2"ϕ	16	9'-0"	96	S
REPLACEMENT BARS					
RE0	1 1/4"□	1	8'-2"	44	S
RE8	1"□	1	7'-4"	26	S
RE7	1"ϕ	3	7'-4"	60	S
RE5	3/4"ϕ	2	6'-6"	20	S
RE4	5/8"ϕ	1	6'-1"	6	S
RE2	1/2"ϕ	1	5'-8"	4	S

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Superst.	Abuts.	Piers	General	Revised As-Built	
E-2	115	Cu. yds.	Unclassified excavation		115				
E-3	3219	Cu. yds.	Channel excavation				3219		
S-1	369	Cu. yds.	Class "C" concrete, superstructures & pier caps	369					
S-1	102	Cu. yds.	Class "C" concrete, abutments		102				
S-3	784	Sq. yds.	Type "C" waterproofing	784					
S-4	92,480	Lbs	Reinforcing steel	74565	10375	7380	160		
S-9	26	Sq. ft.	1/4" premolded expansion joint filler	26					
S-14	318.0	Lin. ft.	Railing (Type I-15.13 guard rail with steel posts)	318.0					
S-16	Lump	Sum	First test pile				Lump		
S-18	2880	Lin. ft.	14" cast-in-place reinforced concrete piling, including encasement and painting		1344	1536		CO 1&3 +1629.86	4109.86
S-24	Lump	Sum	Removal of existing structure				Lump		
I-14	244	Lin. ft.	Concrete gutter				244		
T-35	56	Cu. yds.	Asphaltic concrete surface course, Type A or C, (70-80)	56					

GENERAL NOTES

REFERENCE shall be made to Standard Drawings CS-1-47, revised 1-20-48; A-1-49, dated 7-27-49; and to P-1-49, dated 7-27-49.

REMOVAL OF EXISTING BRIDGE: Existing structure to be removed and disposed of at the site as directed by the Engineer.

TWO-WAY TRAFFIC to be maintained at all times.

PILING shall be driven to a minimum bearing capacity of 35 tons.

SURFACE FINISH OF CONCRETE: Fascia of deck slab shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item S-1.

CONCRETE GUTTERS shall be 6 ft. wide and 6 in. thick, and shall be depressed 6 in. at the center. They shall extend from face of abutment down to Elev. 1080.3 and shall be centered under edges of deck. Reinforcing bars 2"ϕ @ 1'-6" centers, both directions, included in price per lin. ft.

BITUMINOUS SURFACE COURSE: 2½" Asphaltic concrete surface course, Item T-35, laid in two 1¼" courses.

EXCAVATION quantity includes the removal of fill material between top of earth bench and bottom of abutment crossbeam.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

GENERAL PLAN & ELEVATION NOTES, QUANTITIES & STEEL LIST

BRIDGE NO. MA-40-09
OVER DEER CREEK
MADISON COUNTY P-24(3)
SEC. MAD-40-(0.0-2.47) STA. 49+14.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.W.	C.W.	E.J.S.	J.O.G.	BFG W.H.R.	3-31-50	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUND
2	OHIO	F-24(3) F-190(5)	POST WAR

178
179

MAD - 40 - (0.00 - 2.47)

Approx. 0.4 Mile West of Lafayette

To Lafayette

Transition 4:1 to 2:1

℄ Pier Sta. 349+78.41

End Appr. Slab Sta. 349+33.62

Bridge Sta 349+99.95

1'9" Safety curb

℄ Pier Sta. 350+21.49

Begin Appr. Slab Sta 350+66.28

Transition 2:1 to 4:1

30'-0" Roadway

5'-0"

5'-0"

Type 4 Curb

1'-6" R

℄ Westbound Lanes

℄ 18" drain tile

N. 87° 38' 43" E.

℄ ℄ Survey

N. 86° 13' E

Existing 20' Concrete with Bit. Surface

Sta. 349+34.78

Sta 350+63.78

Variable width median strip

℄ ℄ Survey

N. 86° 48' E.

℄ ℄ Eastbound Lanes

N. 86° 54' 12" E

Open joint of 1" between existing and proposed bridge

℄ 18" drain tile

Foundation design and foundation quantities are based on a study of rod soundings made at the site.

This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the State assumes no responsibility for the accuracy thereof.

Both railings to be removed. South railing is to be replaced.

Remove north wing walls of existing abutments for extension

Flow

Bridge Limits

DEER CREEK

Sta. 349+33.62

℄ Bridge Sta 349+99.95

El. 1004.78

Sta. 350+66.28

Clears 1929 High Water 2.6' ±

PROPOSED STRUCTURE

TYPE: Cont. Steel Beam with concrete deck and concrete substructure
SPAN: 42.54' - 43.08' - 42.54' % bearings
ROADWAY: 30'-0" f/f curbs with variable median to fit present structure: 1'-9" S.C. on left
LOADING: S-20-46
SKEW: None
SURFACE COURSE: Bituminous
APPROACH SLABS: As shown

EXISTING BRIDGE DATA

TYPE: Concrete Beam
SPAN: 3 @ 40'-0"
ROADWAY: 23'-0"
SKEW: 0°
CONDITION: Good
DATE BUILT: 1929
(To remain in place)

DRAINAGE AREA 43.5 Sq. Mi.

Proposed Grade

+1.04 %

- 0.28%

600' V.C.
P.I. = Sta 344+50
El. = 1000.19

200' V.C.
P.I. = Sta 349+14.39
E.I. 1005.02

1929 High Water El. 998.5

℄ Normal Water El. 990.6

Footing El. 981±

Flow Line El. 984.5

Footing El. 978.5±

1002.83 1003.31 1003.83 1004.69 1004.31 1004.49 1004.63 1004.74 1004.62 1004.50 1004.36 1004.22

1002.4 1003.2 1004.0 1004.46 1004.62 1004.15 1003.83

1010 1000 990 980 970

347+00 348+00 349+00 350+00 351+00 352+00

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SITE PLAN

BRIDGE NO. MA. 40-66
OVER DEER CREEK
F-190(5)
MADISON COUNTY U.S.R. 40
SEC. MAD. 40-(0.00-2.47) STA. 349+99.95
SCALE: 1"=20' DATE - Oct. 1949

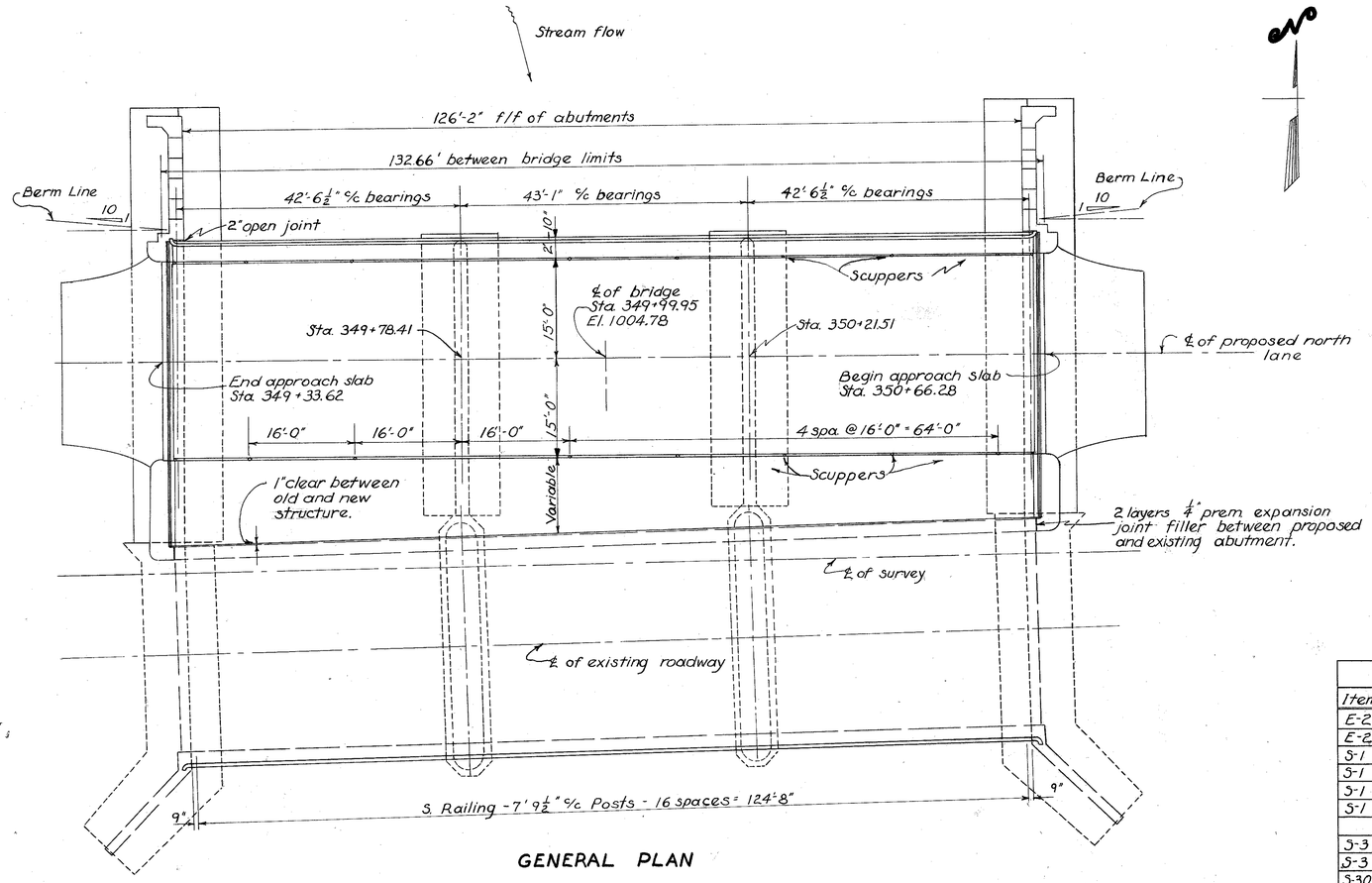
PRESENT TOPOGRAPHY			PROPOSED WORK			
SURVEYED	DRAWN	TRACED	DESIGNED	DRAWN	CHECKED	REVIEWED
Aerial	Aerial & MR	Aerial & MR	RAY	RAY	C.E.S.	C.H.G.

BFG W.H.R. 3-30-50

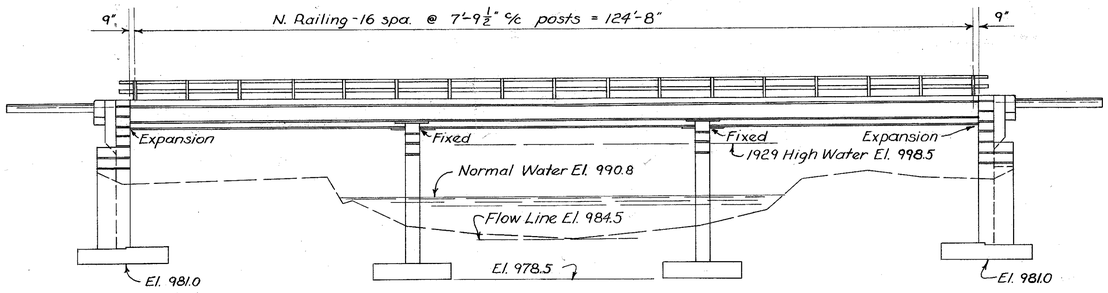
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

174
179

MAD-40-(0.00-2.47)



GENERAL PLAN



NORTH ELEVATION

GENERAL NOTES

REFERENCE shall be made to Standard Drawing CSB-1-47, revised 8-25-49, and to Supplemental Specification S-303, dated 12-20-46.

REMOVAL OF PORTIONS OF EXISTING STRUCTURE: Existing superstructure – Concrete and reinforcing steel shall be removed from north and south railing to top of curb. Tops of curb surfaces shall be finished to produce a smooth even surface.
Existing substructure- Remove northwest and northeast wingwall to the limits as shown on sheets Nos. 175 and 176.

WELDING shall be class "A" except as shown.

SURFACE FINISH OF CONCRETE: Fascias of deck and curb faces shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item S-1.

BITUMINOUS SURFACE COURSE: 2½" Asphaltic concrete surface course, Item T-35, laid in two 1¼" courses.

ESTIMATED QUANTITIES

Item	Quantity	Unit	Description	Superst.	E. Abut.	W. Abut.	E. Pier	W. Pier	General	Revised As-Built	
E-2	Lump Sum	Lump	Cofferdams, cribs and sheeting						Lump		
E-2	1255	Cu. Yd.	Unclassified excavation		400	390	230	235			
S-1	165	Cu. Yd.	Class "C" concrete, superstructure	165							
S-1	203	Cu. Yd.	Class "E" concrete, abutment walls		98	105					
S-1	119	Cu. Yd.	Class "E" concrete, pier walls				59	60			
S-1	226	Cu. Yd.	Class "E" concrete, footings		66	71	44	45			
S-3	12	Sq. Yd.	Type "B" waterproofing		6	6					
S-3	428	Sq. Yd.	Type "C" waterproofing	428							
S-303	144	Lin. Ft.	Waterproofing, premolded sealing strip		70	74					
S-4	70,698	Lbs.	Reinforcing steel	42,565	8192	8782	5460	5621	78		
S-7	130,000	Lbs.	Structural steel	130,000						C.O. 1&2 + 1118	131,118
S-8	130,000	Lbs.	Field painting of structural steel	130,000						C.O. 1&2 + 1118	131,118
S-9	184	Sq. Ft.	¼" premolded expansion joint filler		92	92					
S-14	257.33	Lin. Ft.	Railing (steel)	257.33							
S-22	Lump Sum	Lump	Removal of portions of existing structure						Lump		
S-29	60	Cu. Yd.	Porous backfill						60		
S-29	259	Lin. Ft.	Subdrainage for wearing surface course	259							
T-35	30	Cu. Yd.	Asphaltic concrete surface course, Type "A" or "C" (70 – 80)	30							

WORK 3-23-50

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

GENERAL PLAN & ELEVATION NOTES & ESTIMATED QUANTITIES
BRIDGE NO. MA-40-66 OVER DEER CREEK

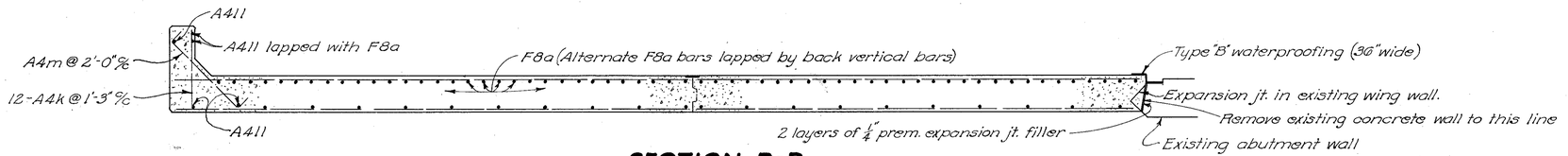
MADISON COUNTY F-190 (5)
SEC. MAD-40-(0.00-2.47) STA. 349+99.95

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAY	RAY	JH	W.C.K.	BFG	3-30-50	

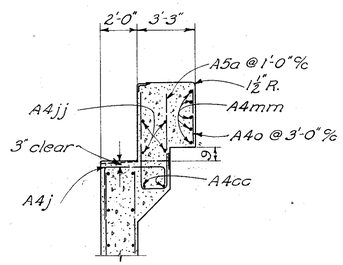
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	Post War

175
179

MAD-40-(0.00-2.47)



SECTION D-D



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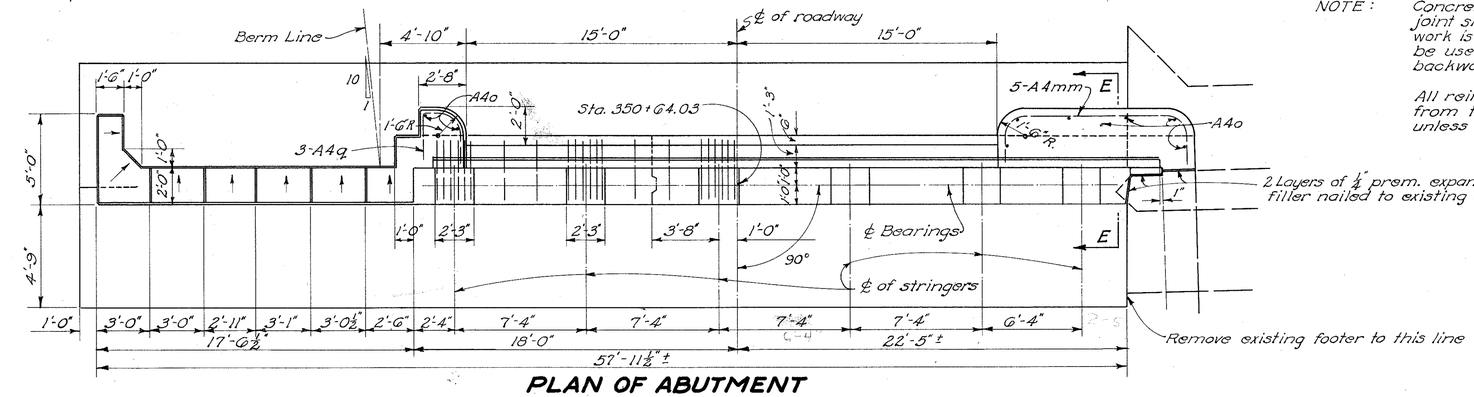
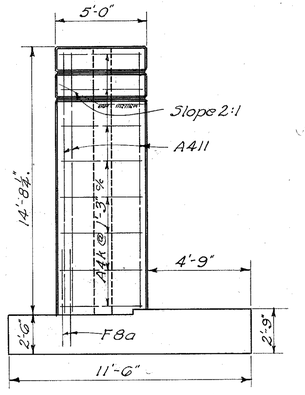


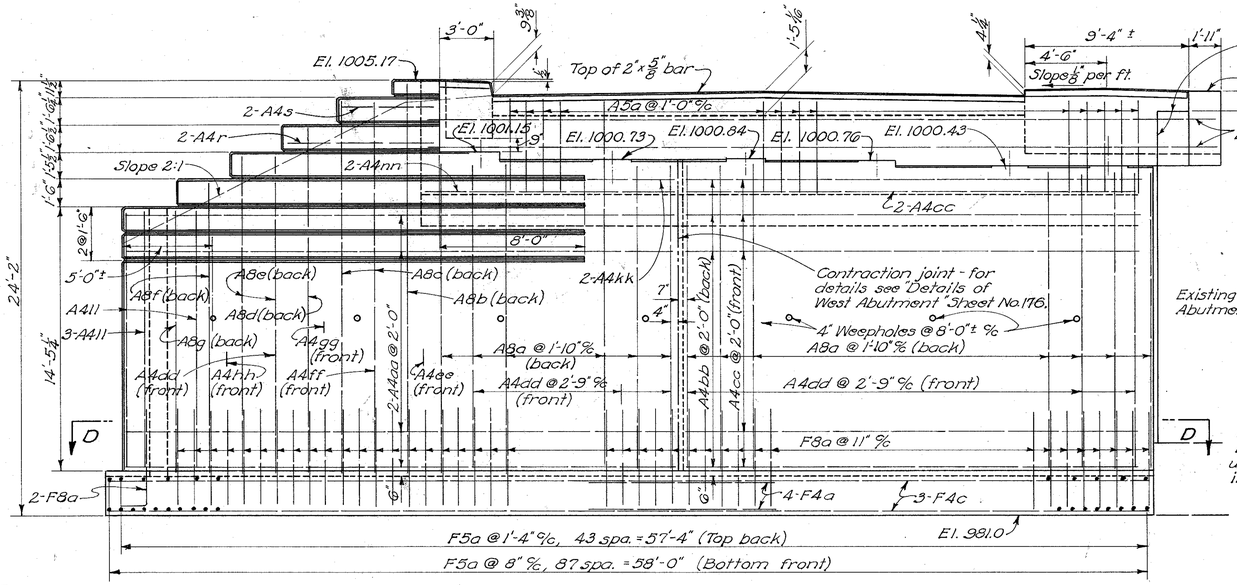
PLAN OF ABUTMENT

NOTE: Concrete above bridge seat construction joint shall not be placed until after steel work is erected. Steel end finish shall be used as a templet for top of backwall.

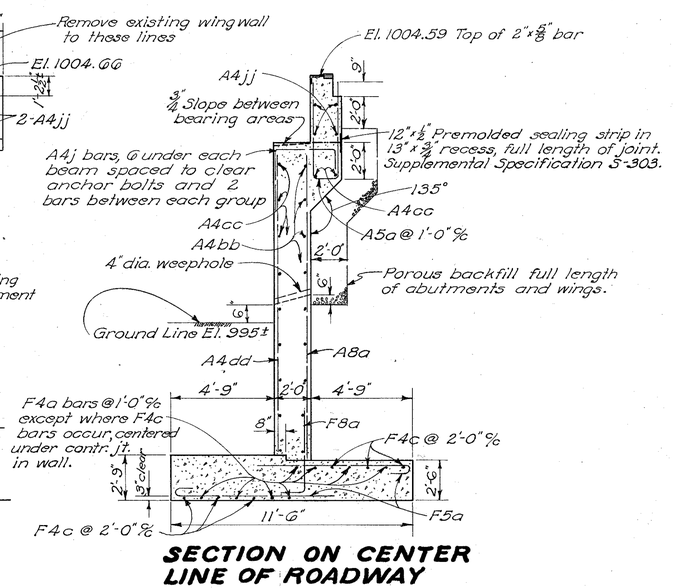
All reinforcement shall be 2" clear from the surface of the concrete unless otherwise noted.



END ELEVATION OF WING



ELEVATION OF ABUTMENT



SECTION ON CENTER LINE OF ROADWAY

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

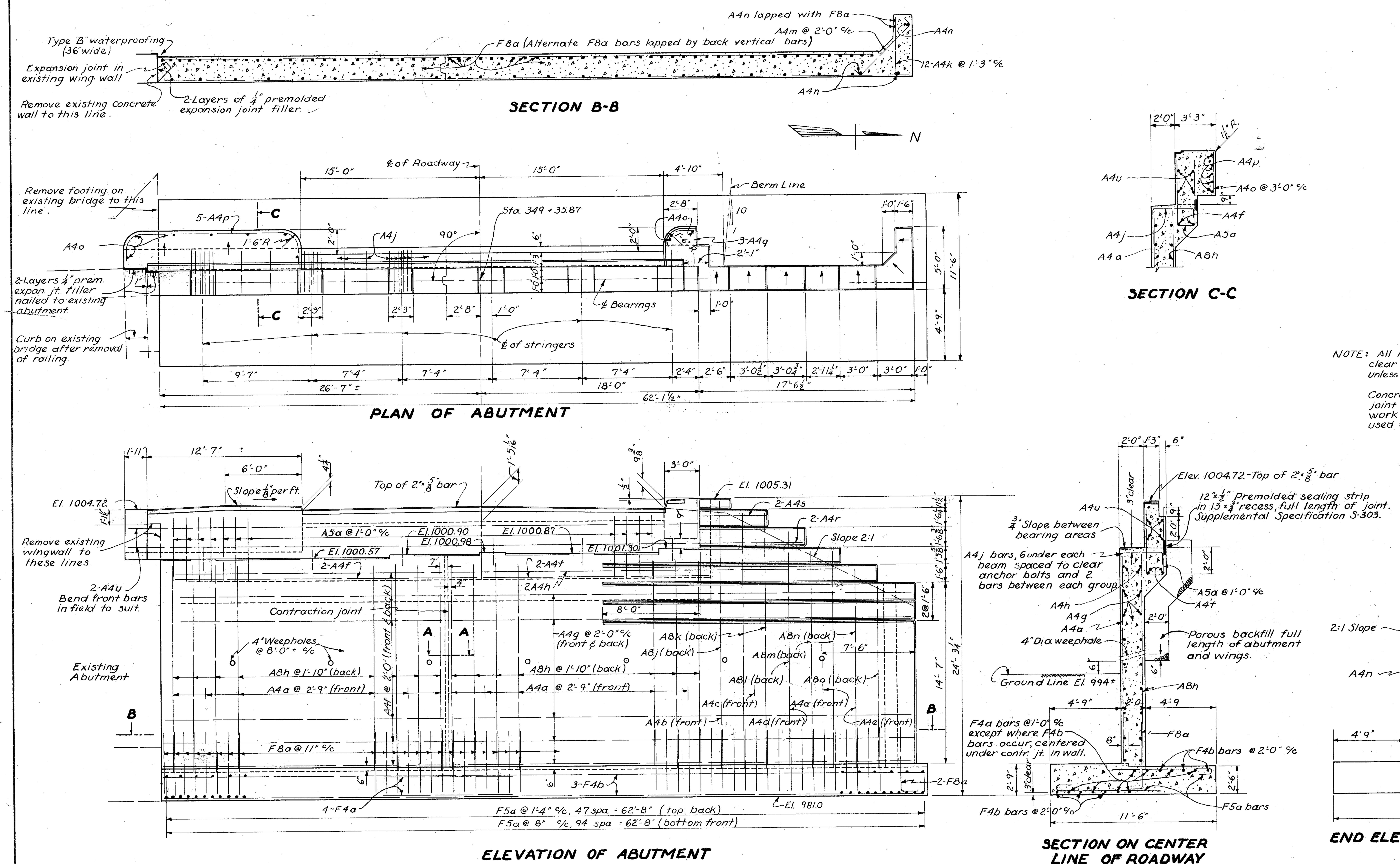
DETAILS OF EAST ABUTMENT

BRIDGE NO. MA-40-66
OVER DEER CREEK
MADISON COUNTY F-190(5)
SEC. MAD-40-(0.00-2.47) STA. 349+99.95

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAY	RAY	J.D.J.	W.C.K.	BFG WHR	3-30-50	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24 (3) F-190(5)	POST WAR

MAD-40-(0.00-2.47)



NOTE: All reinforcement shall be 2" clear from surface of concrete unless otherwise noted.

Concrete above bridge seat construction joint shall not be placed until after steel work is erected. Steel end finish shall be used as a templet for top of backwall.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

DETAILS OF WEST ABUTMENT

BRIDGE NO. MA-40-66
OVER DEER CREEK

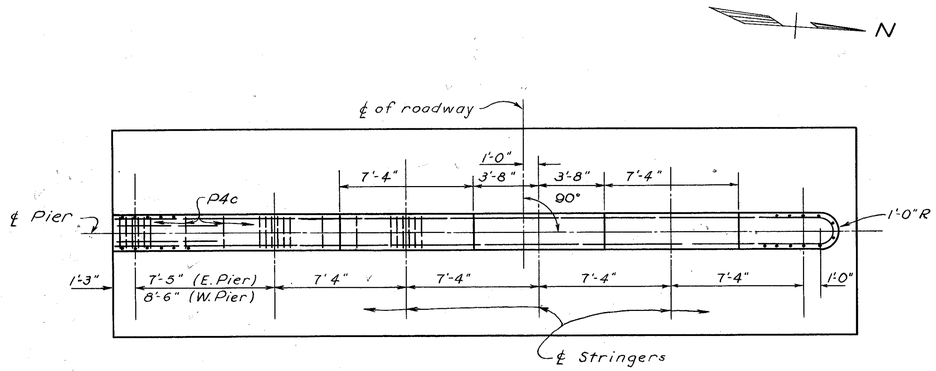
MADISON COUNTY F-190(5)
SEC. MAD-40-(0.00-2.47) STA. 349 + 99.95

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAY	RAY	JH	W.C.K.	BFG WHR	3-30-50	

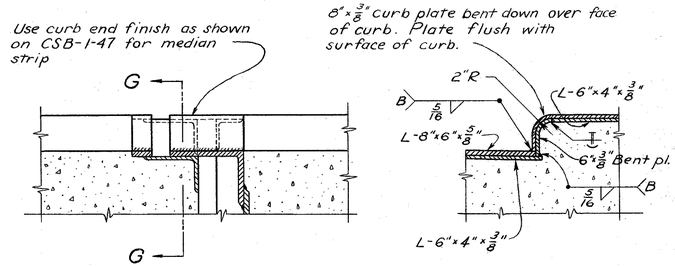
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

177
179

MAD-40-(0.00-2.47)



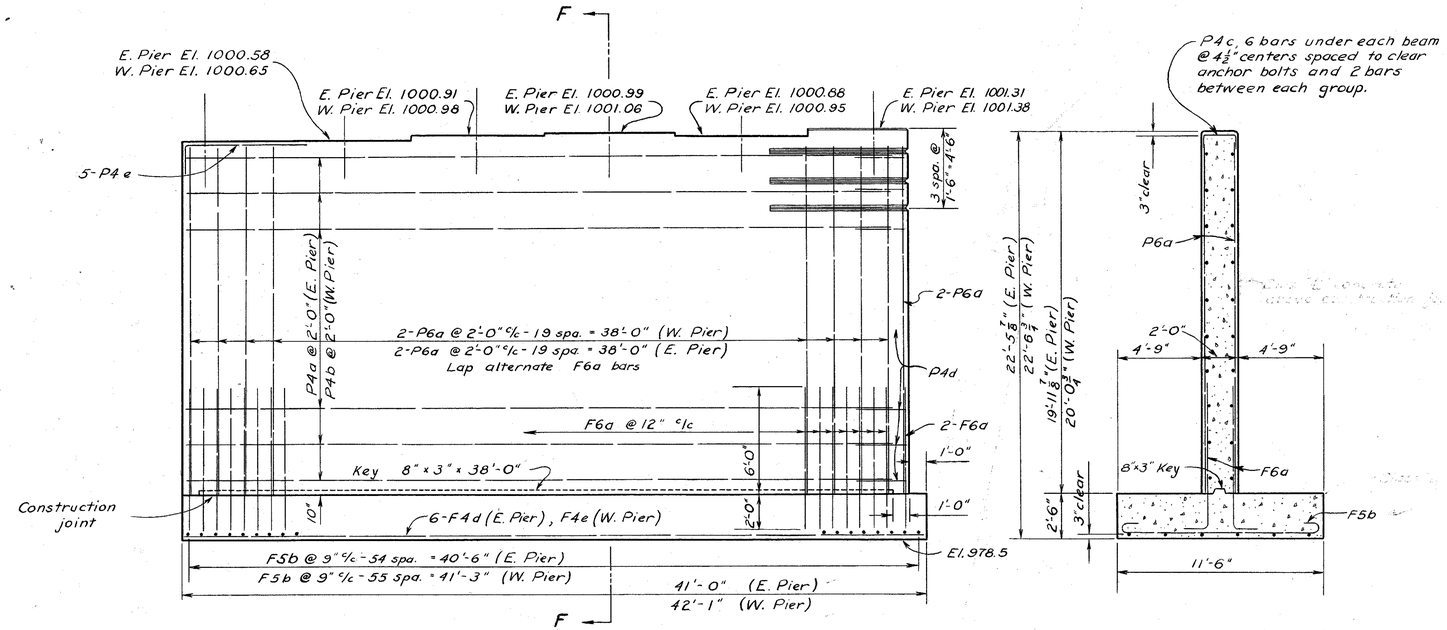
PLAN OF PIER



SECTION H-H
(See sheet no.178)

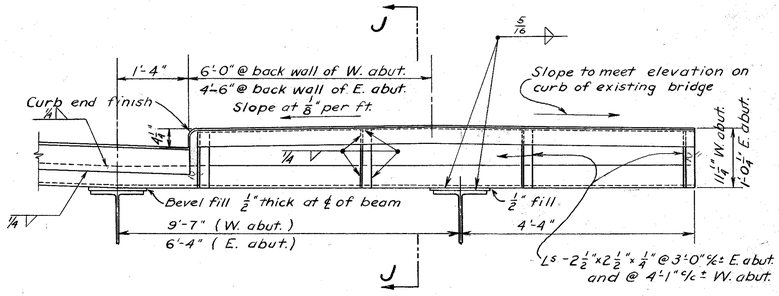
SECTION G-G

DETAILS OF CURB PLATE FOR SOUTH CURB OF PROPOSED STRUCTURE

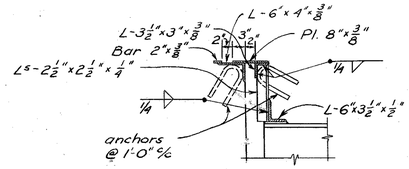


ELEVATION OF PIER

SECTION F-F



DETAILS OF MEDIAN END FINISH SUPPORTS



SECTION J-J

Note: End finish for safety curb on north side of bridge shall be as detailed on Std. Dwg. CSB 1-47 except that it shall extend 2'-9" from face of curb rather than 1'-10".

Note: All reinforcement shall be 2" clear from surface of concrete unless otherwise noted.

Fixed bearing plates shall be used at both piers.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

DETAILS OF PIERS & CURB PLATE FOR SOUTH CURB

BRIDGE NO. MA-40-66
OVER DEER CREEK

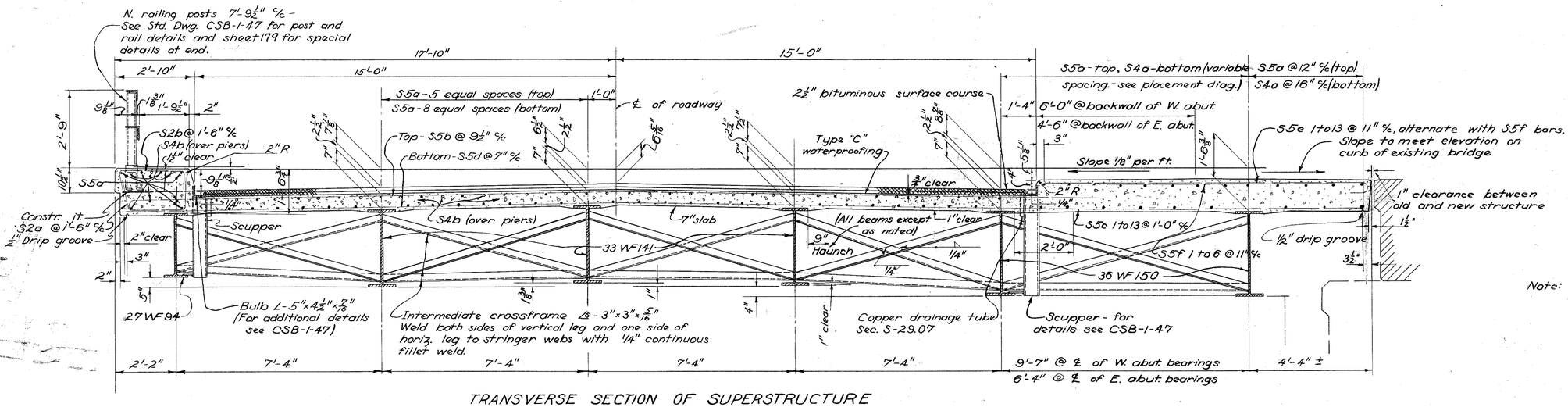
MADISON COUNTY F-190(5)
SEC MAD-40-(0.00-2.47) STA. 349+99.95

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAY	RAY	ER	W.C.K.	DFG WHR	3-30-50	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(5)	POST WAR

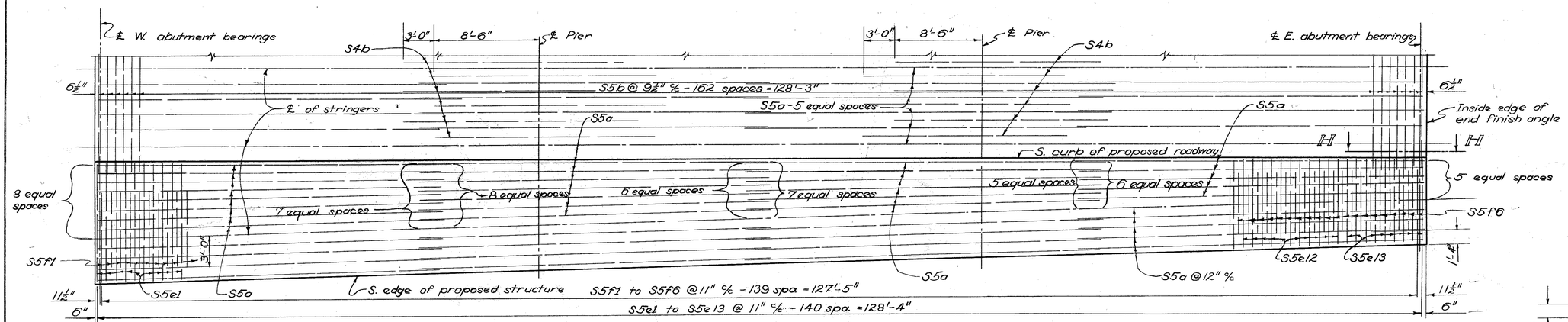
178
179

MAD-40-(0.00-2.47)

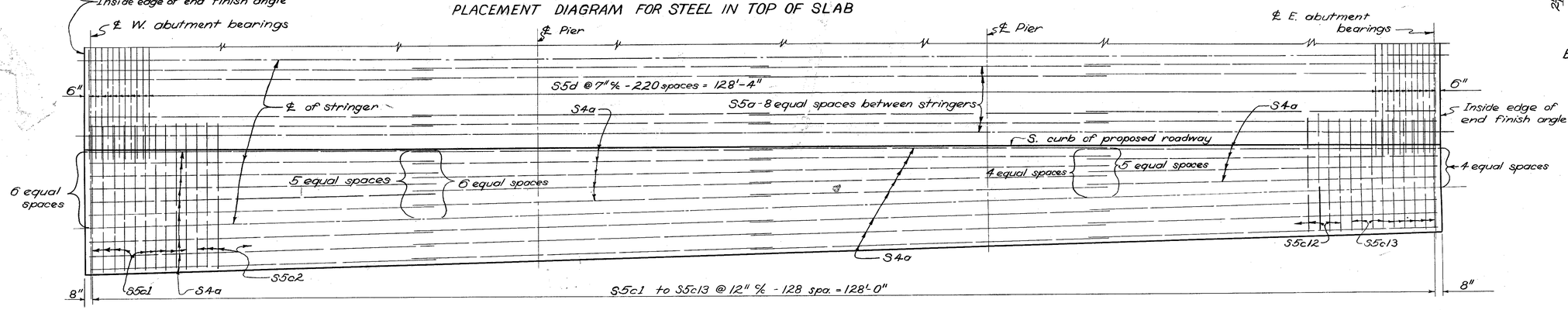


Note: For details not shown see Standard Dwg CSB-1-47

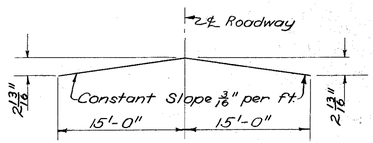
TRANSVERSE SECTION OF SUPERSTRUCTURE



PLACEMENT DIAGRAM FOR STEEL IN TOP OF SLAB



PLACEMENT DIAGRAM FOR STEEL IN BOTTOM OF SLAB



BRIDGE ROADWAY CROWN

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

SUPERSTRUCTURE DETAILS & REINFORCING STEEL PLACEMENT DIAGRAM

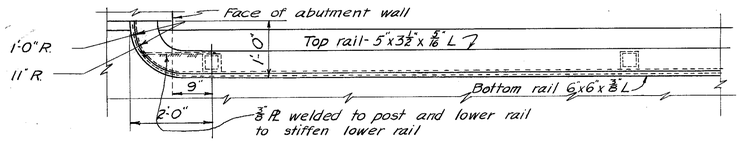
BRIDGE NO. MA-40-66 OVER DEER CREEK
MADISON COUNTY F-190(5)
SEC. MAD-40-(0.00 2.47) STA. 349+99.95

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAY	RAY	EJS	W.C.K.	BFG WHG	3-30-50	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-24(3) F-190(6)	POST WAR

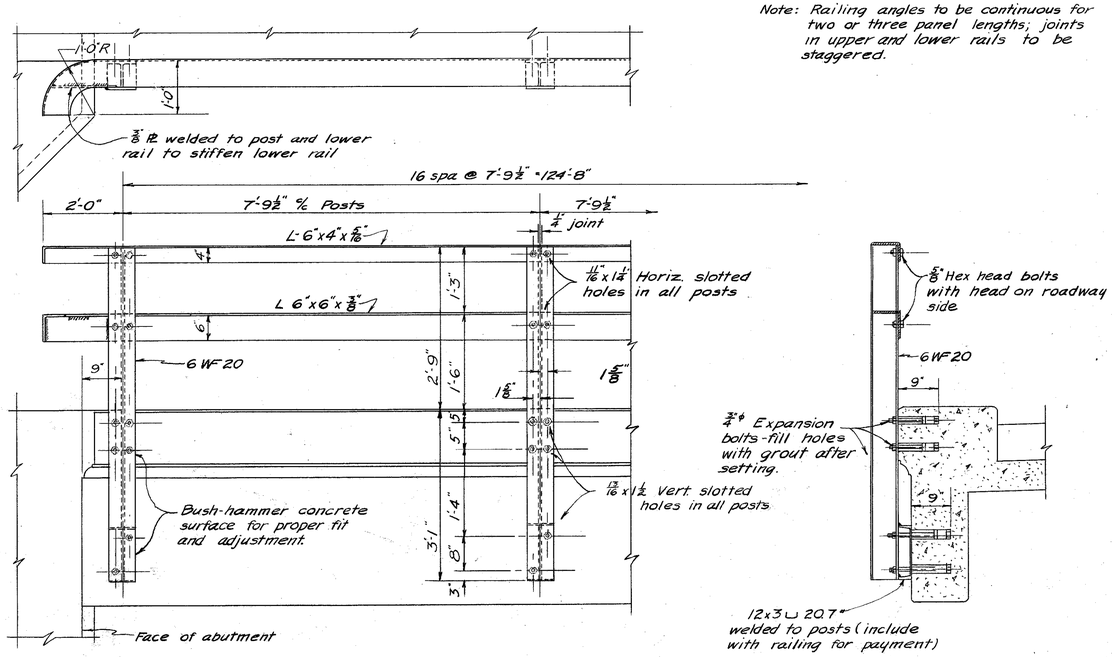
179
173

MAD-40-(0.00-2.47)
C-3

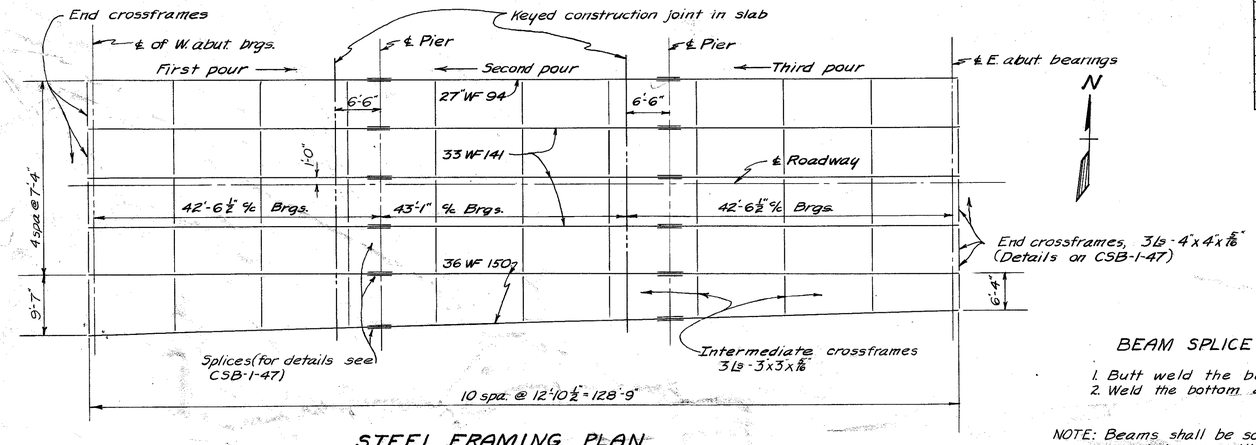


PLAN OF NORTH RAILING AT END

Note: Railing angles to be continuous for two or three panel lengths; joints in upper and lower rails to be staggered.



RAILING DETAILS FOR SOUTH SIDE OF EXISTING BRIDGE



STEEL FRAMING PLAN
℄ Slab pouring sequence

BEAM SPLICE WELDING PROCEDURE

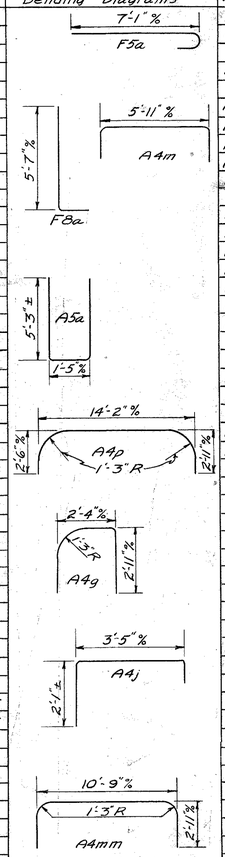
1. Butt weld the beam flanges and web.
2. Weld the bottom and top moment plates.

NOTE: Beams shall be so fabricated that any curved beams will be placed convex flange up.

REINFORCING STEEL LIST

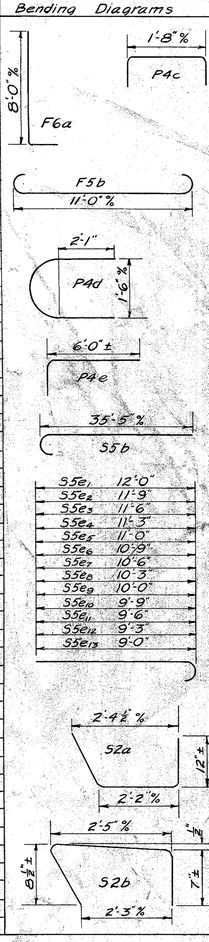
Mark	Size	No.	Length	Weight	Shp
WEST ABUTMENT					
F8a	1"□	67	6'-9"	1531	Bt
F5a	¾" ℓ	143	7'-9"	1664	Bt
F4a	⅝" ℓ	8	10'-0"	83	St
F4b	⅝" ℓ	12	32'-4"	405	St
A8h	1"□	25	16'-9"	1424	St
A8j	1"□	1	21'-7"	73	St
A8k	1"□	2	20'-8"	141	St
A8l	1"□	1	19'-2"	65	St
A8m	1"□	2	17'-7"	120	St
A8n	1"□	1	16'-2"	55	St
A8o	1"□	1	14'-8"	50	St
A5a	¾" ℓ	40	11'-7"	696	Bt
A4a	⅝" ℓ	18	16'-6"	310	St
A4b	⅝" ℓ	1	21'-4"	22	St
A4c	⅝" ℓ	1	20'-5"	21	St
A4d	⅝" ℓ	1	18'-11"	20	St
A4e	⅝" ℓ	1	15'-11"	17	St
A4f	⅝" ℓ	20	23'-5"	488	St
A4g	⅝" ℓ	16	37'-10"	621	St
A4h	⅝" ℓ	2	3'-10"	66	St
A4j	⅝" ℓ	46	6'-0"	288	Bt
A4k	⅝" ℓ	12	4'-8"	58	St
A4m	⅝" ℓ	8	7'-5"	62	Bt
A4n	⅝" ℓ	5	14'-8"	76	St
A4o	⅝" ℓ	9	2'-10"	27	St
A4p	⅝" ℓ	5	18'-6"	96	Bt
A4q	⅝" ℓ	3	7'-5"	23	Bt
A4r	⅝" ℓ	2	8'-2"	17	St
A4s	⅝" ℓ	2	5'-2"	11	St
A4t	⅝" ℓ	2	21'-4"	45	St
A4u	⅝" ℓ	8	24'-1"	201	St
EAST ABUTMENT					
F8a	1"□	62	6'-9"	1423	Bt
F5a	¾" ℓ	132	7'-9"	1536	Bt
F4a	⅝" ℓ	8	10'-0"	83	St
F4c	⅝" ℓ	12	30'-3"	379	St
A8a	1"□	23	16'-9"	1310	St
A8b	1"□	1	21'-6"	73	St
A8c	1"□	2	20'-6"	139	St
A8d	1"□	1	19'-0"	65	St
A8e	1"□	2	17'-6"	119	St
A8f	1"□	1	16'-0"	54	St

Bending Diagrams



Mark	Size	No.	Length	Weight	Shp
EAST ABUTMENT					
A8g	1"□	1	14'-6"	49	St
A5a	¾" ℓ	36	11'-7"	626	Bt
A4aa	⅝" ℓ	16	30'-6"	509	St
A4bb	⅝" ℓ	9	26'-10"	252	St
A4cc	⅝" ℓ	11	26'-7"	305	St
A4dd	⅝" ℓ	16	16'-6"	275	St
A4ee	⅝" ℓ	1	21'-3"	22	St
A4ff	⅝" ℓ	1	20'-3"	21	St
A4gg	⅝" ℓ	1	18'-9"	20	St
A4hh	⅝" ℓ	1	15'-9"	16	St
A4jj	⅝" ℓ	8	23'-6"	196	St
A4kk	⅝" ℓ	2	24'-6"	51	St
A4ll	⅝" ℓ	5	14'-6"	76	St
A4mm	⅝" ℓ	5	15'-6"	81	Bt
A4nn	⅝" ℓ	2	14'-0"	29	St
A4j	⅝" ℓ	46	6'-0"	288	Bt
A4k	⅝" ℓ	12	4'-8"	58	St
A4m	⅝" ℓ	8	7'-5"	62	Bt
A4o	⅝" ℓ	8	2'-10"	24	St
A4q	⅝" ℓ	3	7'-5"	23	Bt
A4r	⅝" ℓ	2	8'-2"	17	St
A4s	⅝" ℓ	2	5'-2"	11	St
EAST PIER					
F6a	⅝" ℓ	78	9'-0"	1435	Bt
F5b	¾" ℓ	55	12'-4"	1019	Bt
F4d	⅝" ℓ	12	21'-6"	269	St
P6a	⅝" ℓ	42	19'-6"	1674	St
P4a	⅝" ℓ	20	38'-9"	808	St
P4c	⅝" ℓ	46	3'-2"	152	Bt
P4d	⅝" ℓ	10	6'-6"	68	Bt
P4e	⅝" ℓ	5	6'-9"	35	Bt
WEST PIER					
F6a	⅝" ℓ	80	9'-0"	1472	Bt
F5b	¾" ℓ	56	12'-4"	1037	Bt
F4e	⅝" ℓ	12	21'-11"	274	St
P6a	⅝" ℓ	44	19'-6"	1754	St
P4b	⅝" ℓ	20	39'-9"	829	St
P4c	⅝" ℓ	46	3'-2"	152	Bt
P4d	⅝" ℓ	10	6'-6"	68	Bt
P4e	⅝" ℓ	5	6'-9"	35	Bt

Bending Diagrams



Mark	Size	No.	Length	Weight	Shp
SUPERSTRUCTURE					
55a	¾" ℓ	266	34'-2"	13,651	St
55b	¾" ℓ	163	36'-1"	8,834	Bt
55c1	¾" ℓ	10	14'-0"	210	St
55c2	¾" ℓ	10	13'-9"	207	St
55c3	¾" ℓ	10	13'-6"	203	St
55c4	¾" ℓ	10	13'-3"	199	St
55c5	¾" ℓ	10	13'-0"	195	St
55c6	¾" ℓ	10	12'-9"	192	St
55c7	¾" ℓ	10	12'-6"	188	St
55c8	¾" ℓ	10	12'-3"	184	St
55c9	¾" ℓ	10	12'-0"	180	St
55c10	¾" ℓ	10	11'-9"	176	St
55c11	¾" ℓ	10	11'-6"	173	St
55c12	¾" ℓ	10	11'-3"	169	St
55c13	¾" ℓ	9	11'-0"	149	St
55d	¾" ℓ	221	33'-9"	11,203	St
55e1	¾" ℓ	11	12'-8"	209	Bt
55e2	¾" ℓ	11	12'-5"	205	Bt
55e3	¾" ℓ	11	12'-2"	201	Bt
55e4	¾" ℓ	11	11'-11"	197	Bt
55e5	¾" ℓ	11	11'-8"	193	Bt
55e6	¾" ℓ	11	11'-5"	189	Bt
55e7	¾" ℓ	11	11'-2"	184	Bt
55e8	¾" ℓ	11	10'-11"	180	Bt
55e9	¾" ℓ	11	10'-8"	176	Bt
55e10	¾" ℓ	11	10'-5"	172	Bt
55e11	¾" ℓ	11	10'-2"	168	Bt
55e12	¾" ℓ	11	9'-11"	164	Bt
55e13	¾" ℓ	9	9'-8"	134	Bt
55f1	¾" ℓ	24	8'-3"	297	St
55f2	¾" ℓ	24	8'-0"	288	St
55f3	¾" ℓ	24	7'-9"	279	St
55f4	¾" ℓ	24	7'-6"	270	St
55f5	¾" ℓ	24	7'-3"	261	St
55f6	¾" ℓ	20	7'-0"	210	St
54a	⅝" ℓ	32	33'-10"	1129	St
54b	⅝" ℓ	44	20'-0"	918	St
52a	½" ℓ	86	4'-0"	230	Bt
52b	½" ℓ	86	3'-6"	201	Bt
REPLACEMENT					
RE-8	1"□	1	7'-4"	25	St
RE-6	⅝" ℓ	1	6'-11"	14	St
RE-5	½" ℓ	3	6'-6"	29	St
RE-4	⅝" ℓ	1	6'-1"	6	St
RE-2	½" ℓ	1	5'-8"	4	St

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

SOUTH RAILING DETAILS, STEEL FRAMING PLAN & REINFORCING STEEL LIST

BRIDGE NO. MA-40-66 OVER DEER CREEK
MADISON COUNTY F-190(5)
SEC. MAD 40 (0.00-2.47) STA 349+99.95

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAY	RAY	RC	W.G.K.	DFG W.G.K.	3-30-50	