

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

U-687(8)

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO	U-687(8)	POST WAR

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY - PART 3
SUM-5-12.62

THIS IMPROVEMENT 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.

AKRON EXPRESSWAY SYSTEM

SUM-5-12.62
SUMMIT COUNTY
CITY OF AKRON

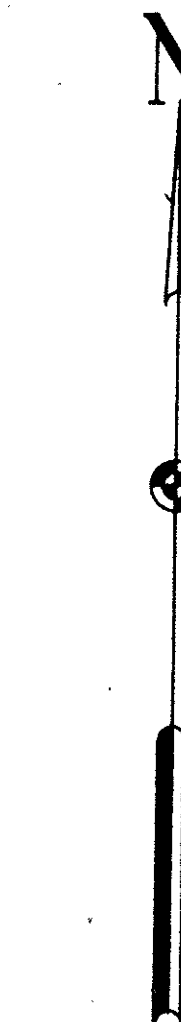
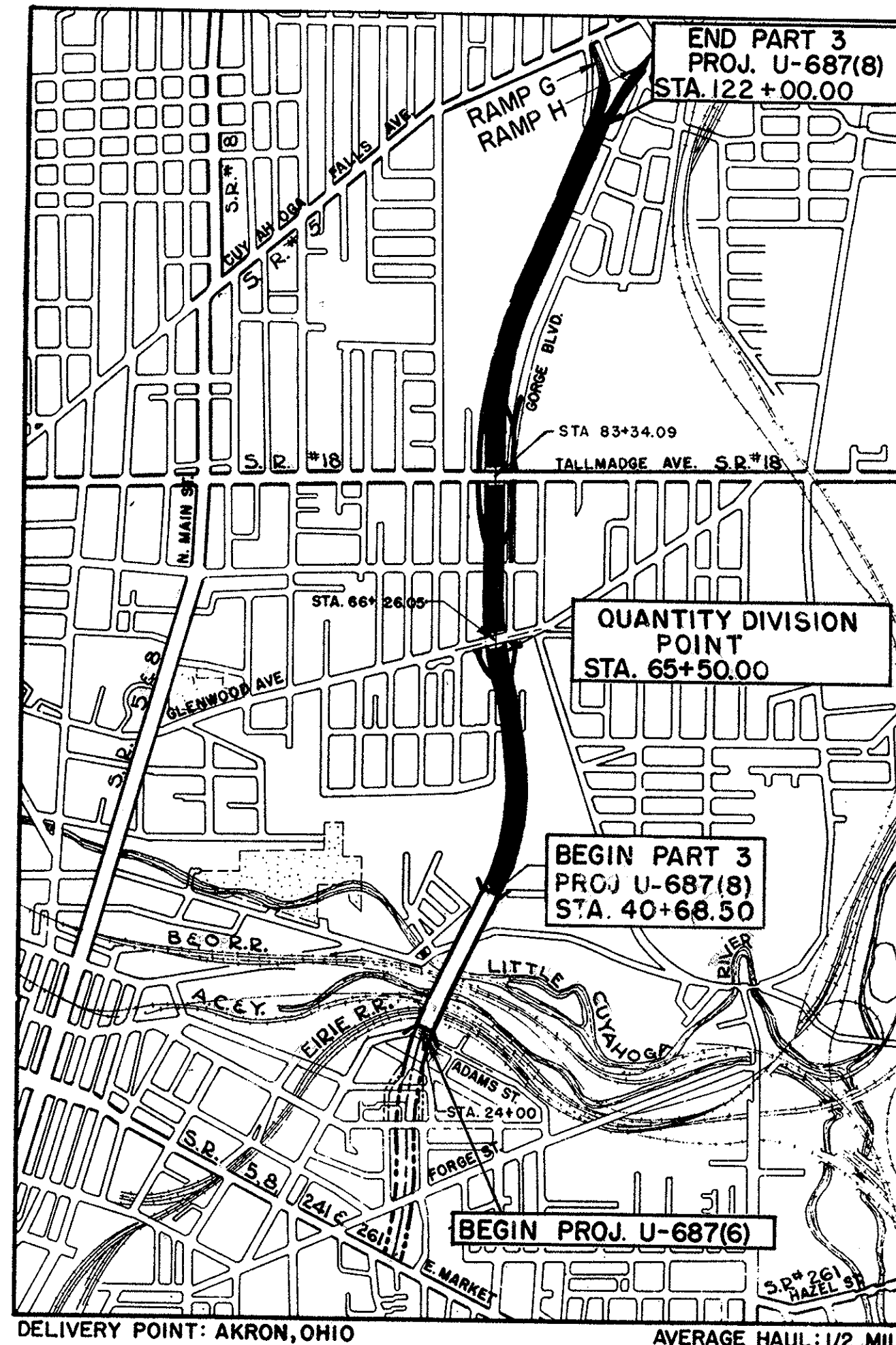
PART 3 - EXPRESSWAY - MAIN VIADUCT NORTH ABUTMENT TO CUYAHOGA FALLS AVENUE

INDEX OF SHEETS

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NOTE:

THIS SET OF PLANS, THE EXPRESSWAY FROM THE NORTH ABUTMENT OF THE MAIN VIADUCT TO CUYAHOGA FALLS AVE., COVERS ONLY PART 3 OF THIS PROJECT. PART 1 THE SUBSTRUCTURE AND PART 2 THE SUPERSTRUCTURE OF THE MAIN VIADUCT ARE IN EARLIER CONTRACTS AND PART 4, THE EXPRESSWAY FROM EAST MARKET STREET TO THE SOUTH ABUTMENT OF THE MAIN VIADUCT, WILL BE LET LATER.



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 IN THE PLANS AND ESTIMATE.

THE RIGHT OF WAY FOR THIS IMPROVEMENT WILL BE PROVIDED BY THE STATE OF OHIO.

APPROVED
DATE 9/14/50 _____
DIRECTOR OF PUBLIC SERVICE, CITY OF AKRON

APPROVED
DATE 9/14/50 _____
DIVISION DEPUTY DIRECTOR

APPROVED
DATE _____
CHIEF ENGINEER, BUREAU OF MAINTENANCE

APPROVED
DATE 9-18-50 _____
CHIEF ENGINEER, BUREAU OF BRIDGES & R.R. CROSSINGS

APPROVED
DATE 9-21-50 _____
CHIEF ENGINEER, BUREAU OF LOCATION & DESIGN

APPROVED
DATE 9-21-50 _____
FIRST ASSISTANT DIRECTOR & CHIEF ENGINEER

APPROVED
DATE 9-21-50 _____
DIRECTOR OF HIGHWAYS

CONSTRUCTION BUREAU
OCT 27 1955
GROUND PHOTOLAB

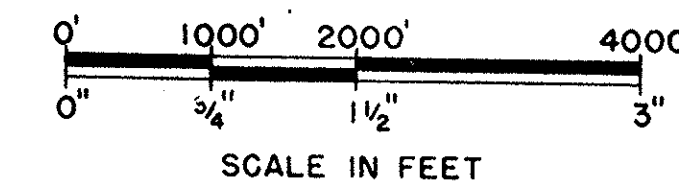
LINE DATA

BEGIN PROJECT STA. 40+68.50 EXPRESSWAY
END PROJECT STA. 122+00.00 EXPRESSWAY
NET LENGTH PROJECT 8131.50 LIN. FT. OR 1.540 MILES
ADD. FOR RAMP G APPROACH 806.79 LIN. FT.
ADD. FOR RAMP H APPROACH 879.25 LIN. FT.
ADD. FOR VIADUCT DRAIN (35+75 to 40+68.50) 493.50 LIN. FT.
NET LENGTH OF WORK 10311.04 LIN. FT. OR 1.952 MILES

PREPARED AND RECOMMENDED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

SUPPLEMENTAL SPECIFICATIONS			
NUMBER	DATE	NUMBER	DATE
L-109-12 Rev	7-15-50	30	5-28-48
T-171-19 Rev	7-31-50		
5	5-28-48		
19	3-20-50		
M-110-23 Rev	1-3-47		

LOCATION PLAN



PORTION TO BE IMPROVED
STATE HIGHWAYS
OTHER HIGHWAYS

STANDARD DRAWINGS

NUMBER	DATE	NUMBER	DATE
B.T.50-7071E NO.1	10-1-47	TJN#1	7-1-50
B-T-71R	2-1-47	TJN#2	7-1-50
B-T-71R	5-22-50	TJN#3	7-1-50
		LJN#1	7-1-50
I-8 C.B. NO.3-A	12-15-41	I-1,2,3,4&5	2-20-45
I-8 M.H. NO.1	5-1-47	S-27-PC-3	2-20-45
I-8 M.H. NO.2	5-1-47	I-8N#2-2A&B	12-15-41
I-12	3-15-48	L-3	4-1-50
I-15 NO.1	3-1-47	L-3-A	4-1-50
I-15 NO.2	6-17-49		
G-8.07	2-7-50		

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

RECOMMENDED FOR APPROVAL

DISTRICT ENGINEER _____ DATE _____

APPROVED

DIVISION ENGINEER _____ DATE _____

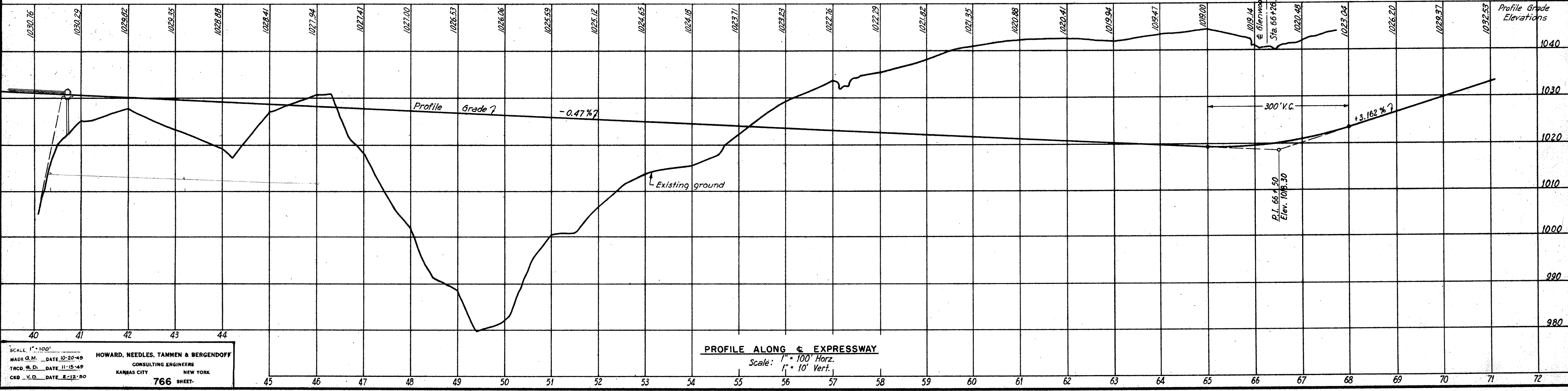
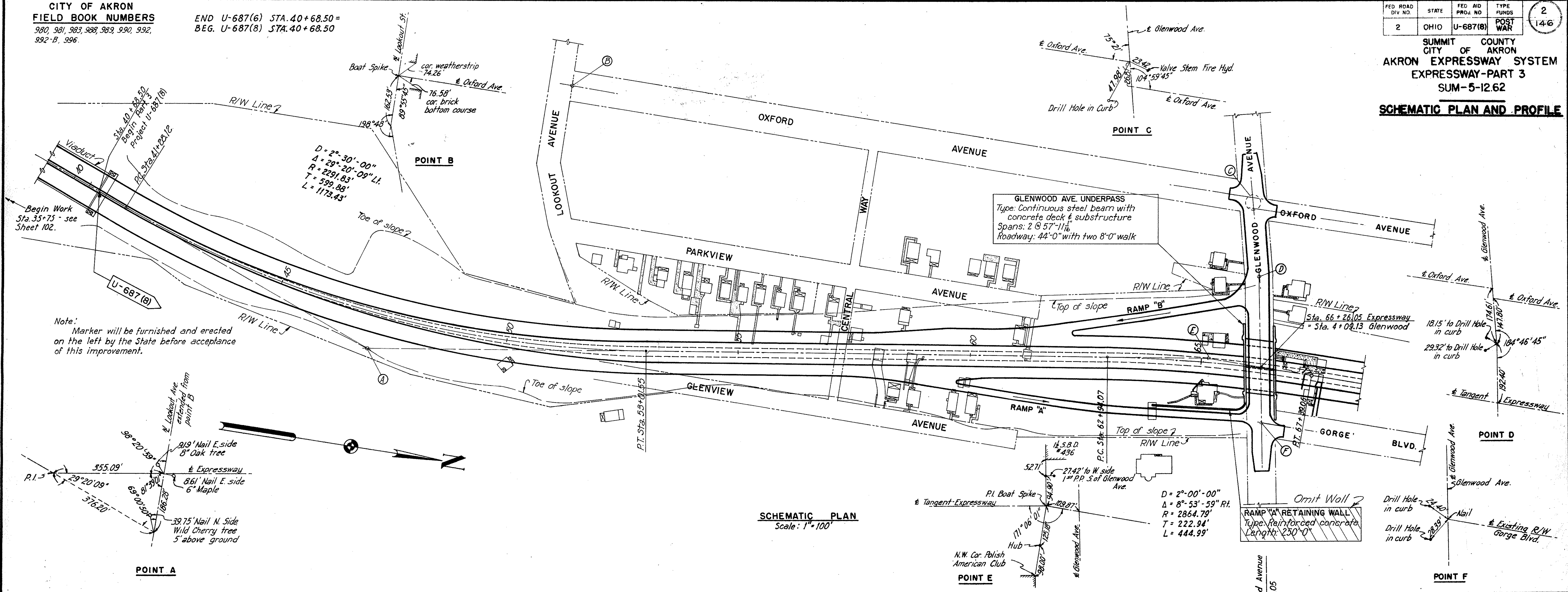
FILE NO.	SUMMIT COUNTY
	SEC. SUM-5-12, PART
	DATE OF LETTING _____, 195__
	CONTRACT NO. _____

CITY OF AKRON
FIELD BOOK NUMBERS
980, 981, 982, 983, 984, 985, 990, 992,
992-B, 996.

END U-687(6) STA. 40+68.50 =
BEG. U-687(8) STA. 40+68.50

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	2
2	OHIO	U-687(8)	POST WAR	146

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
SCHEMATIC PLAN AND PROFILE



SCALE: 1" = 100'
MADE O.M. DATE 10-20-49
TRCD O.D. DATE 11-15-49
CHK V.E. DATE 3-12-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

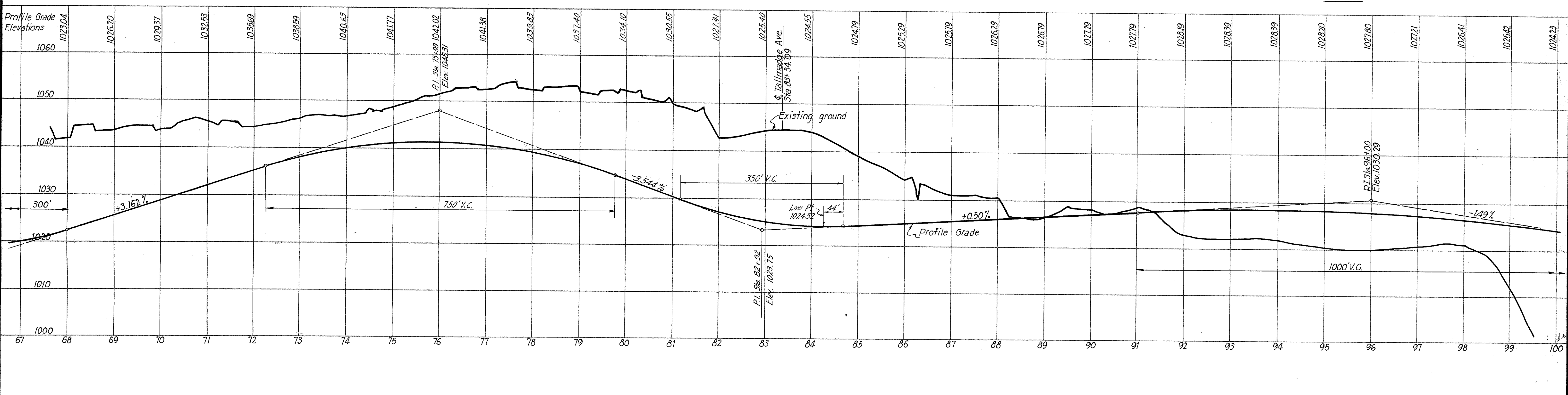
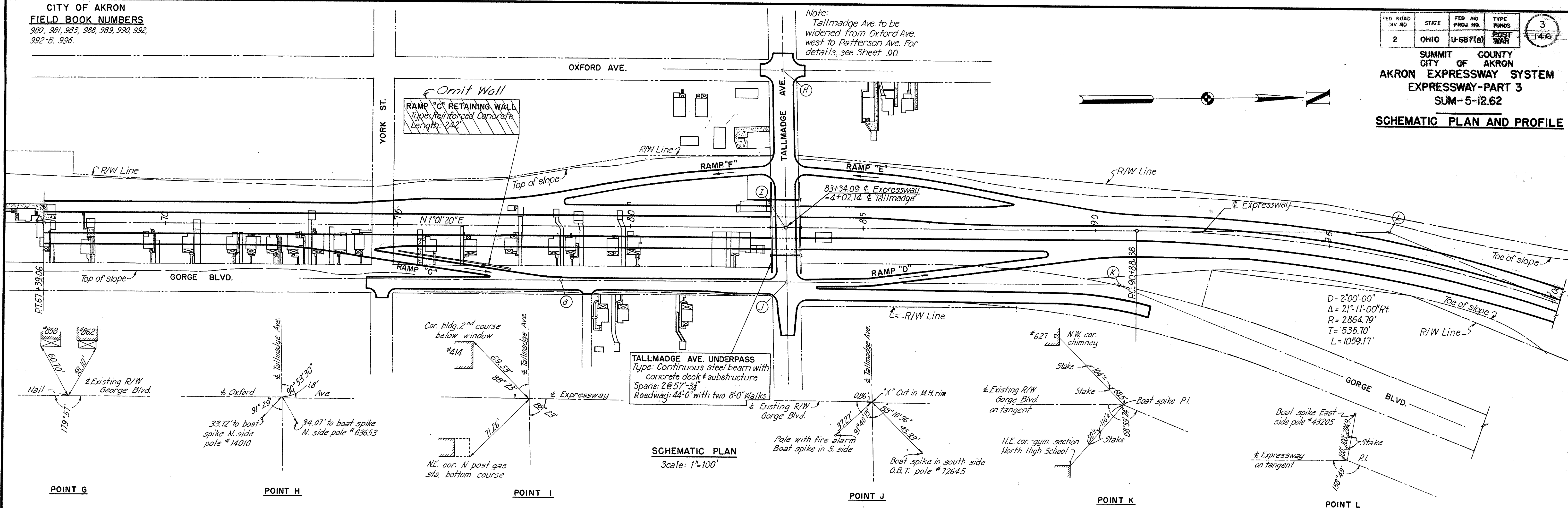
766 SHEET

CITY OF AKRON
 FIELD BOOK NUMBERS
 980, 981, 983, 988, 989, 990, 992,
 992-B, 996.

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	3
2	OHIO	U-58718	POST WAR	146

SUMMIT COUNTY
 CITY OF AKRON
 AKRON EXPRESSWAY SYSTEM
 EXPRESSWAY-PART 3
 SUM-5-12.62
 SCHEMATIC PLAN AND PROFILE

Note:
 Tallmadge Ave. to be
 widened from Oxford Ave.
 west to Patterson Ave. For
 details, see Sheet 90.



SCALE 1"=100'
 MADE A.R. DATE 6-21-50
 TRCD. R.R. DATE 7-8-50
 CKD. G.M. DATE 7-10-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY, NEW YORK
 766 SHEET

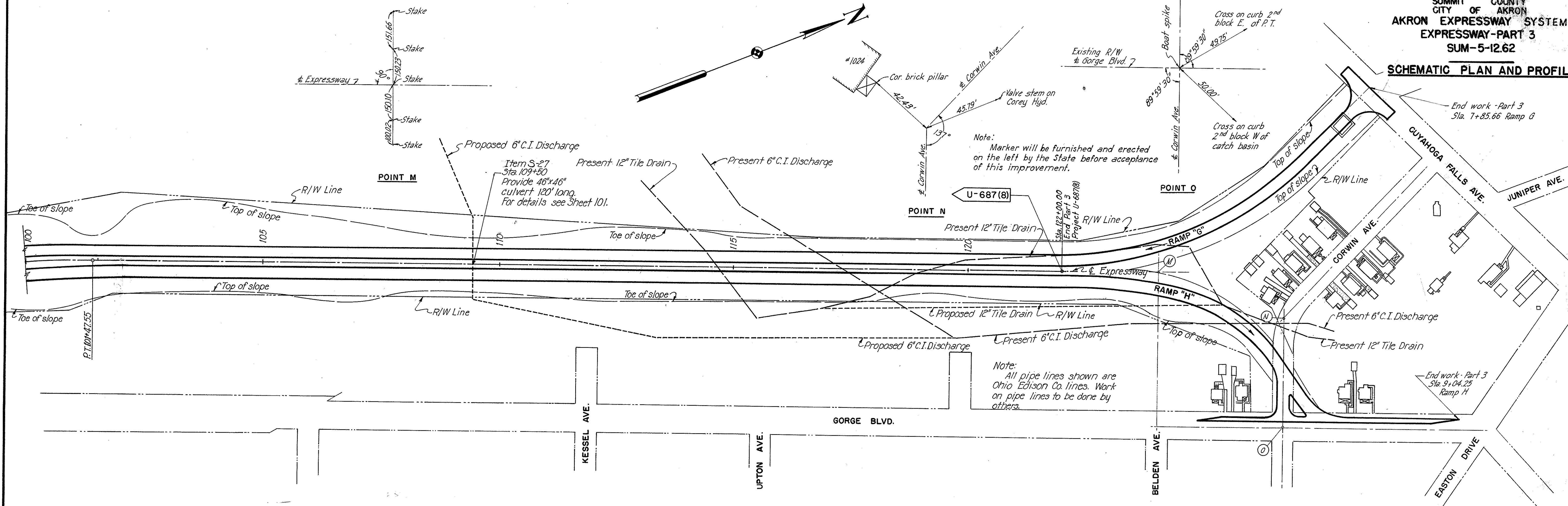
Revised 4-16-51
 Rev. 9-27-50

CITY OF AKRON
FIELD BOOK NUMBERS
980, 981, 982, 983, 989, 990, 992,
992-B, 996.

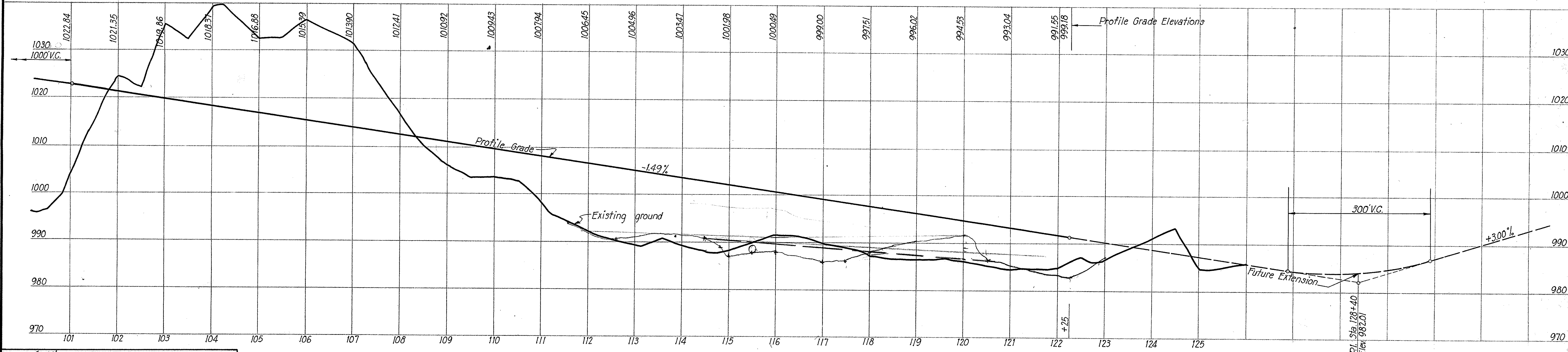
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2	OHIO	U-687(8)	POST WAR	146

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

SCHEMATIC PLAN AND PROFILE



SCHEMATIC PLAN
Scale: 1" = 100'



PROFILE ALONG EXPRESSWAY
Scale: 1" = 100' Horz.
1" = 10' Vert.

SCALE 1" = 100'
MADE A.R. DATE 5-23-50
TRCD R.R. DATE 7-10-50
CRD G.M. DATE 7-12-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

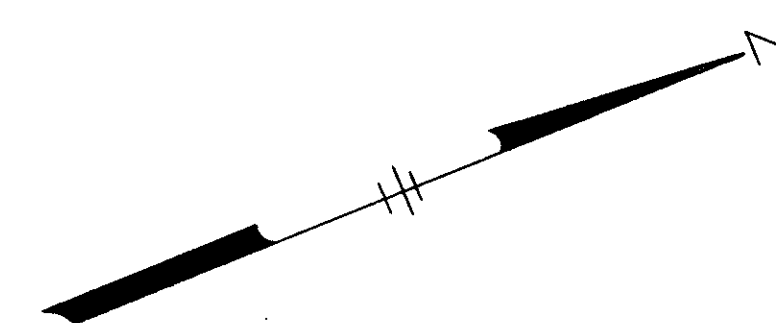
766 SHEET

245

Fed. Rd. Division	State	Fed. Aid Project	Type Funds
2	Ohio	U-687(8)	POST WAR

4-A
146

SUM-5-12.62



TRACT 7

BLOCK 37
PERKINS ADDITION
BK. 1 PG. 13

PENNA. & OHIO CANAL
B. & O. R.R.

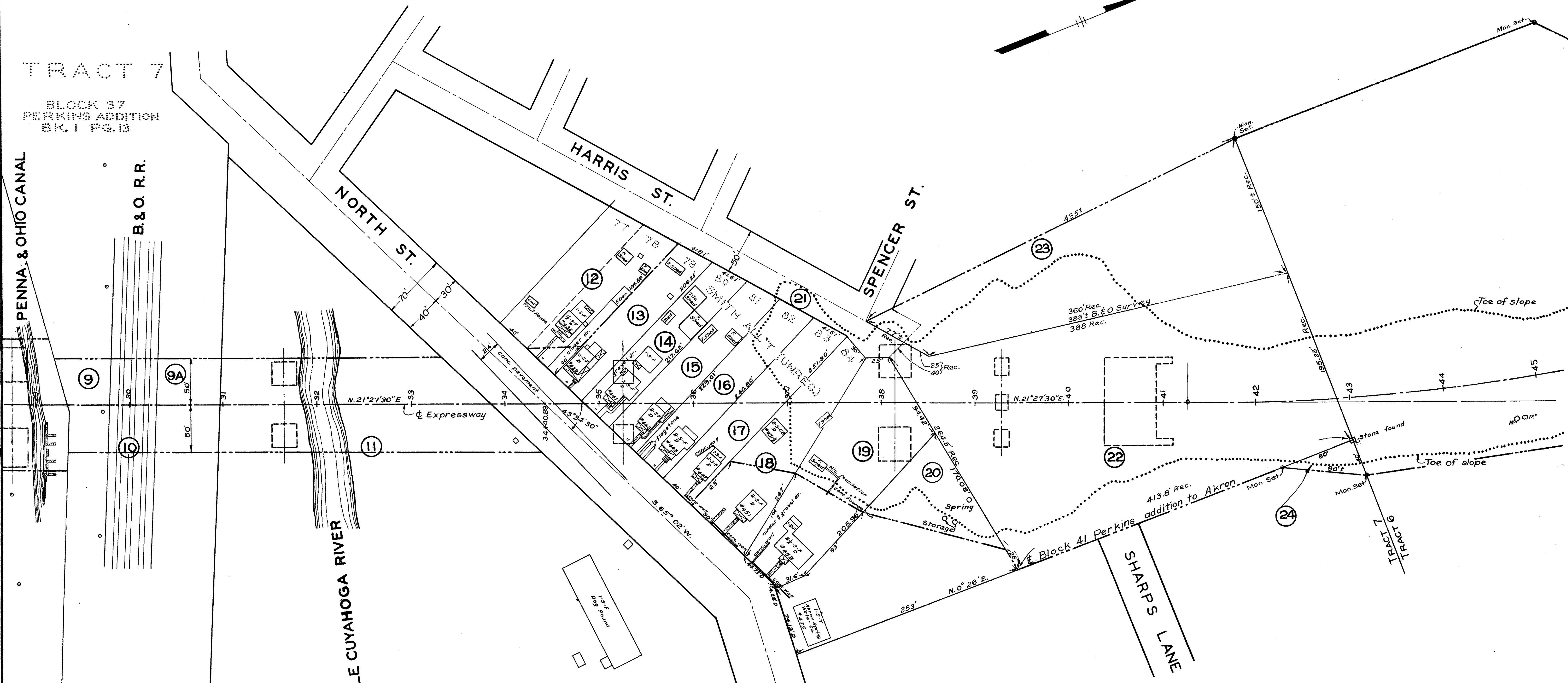
NORTH ST.

HARRIS ST.

SPENCER ST.

LITTLE CUYAHOGA RIVER

SHARPS LANE



LEGEND

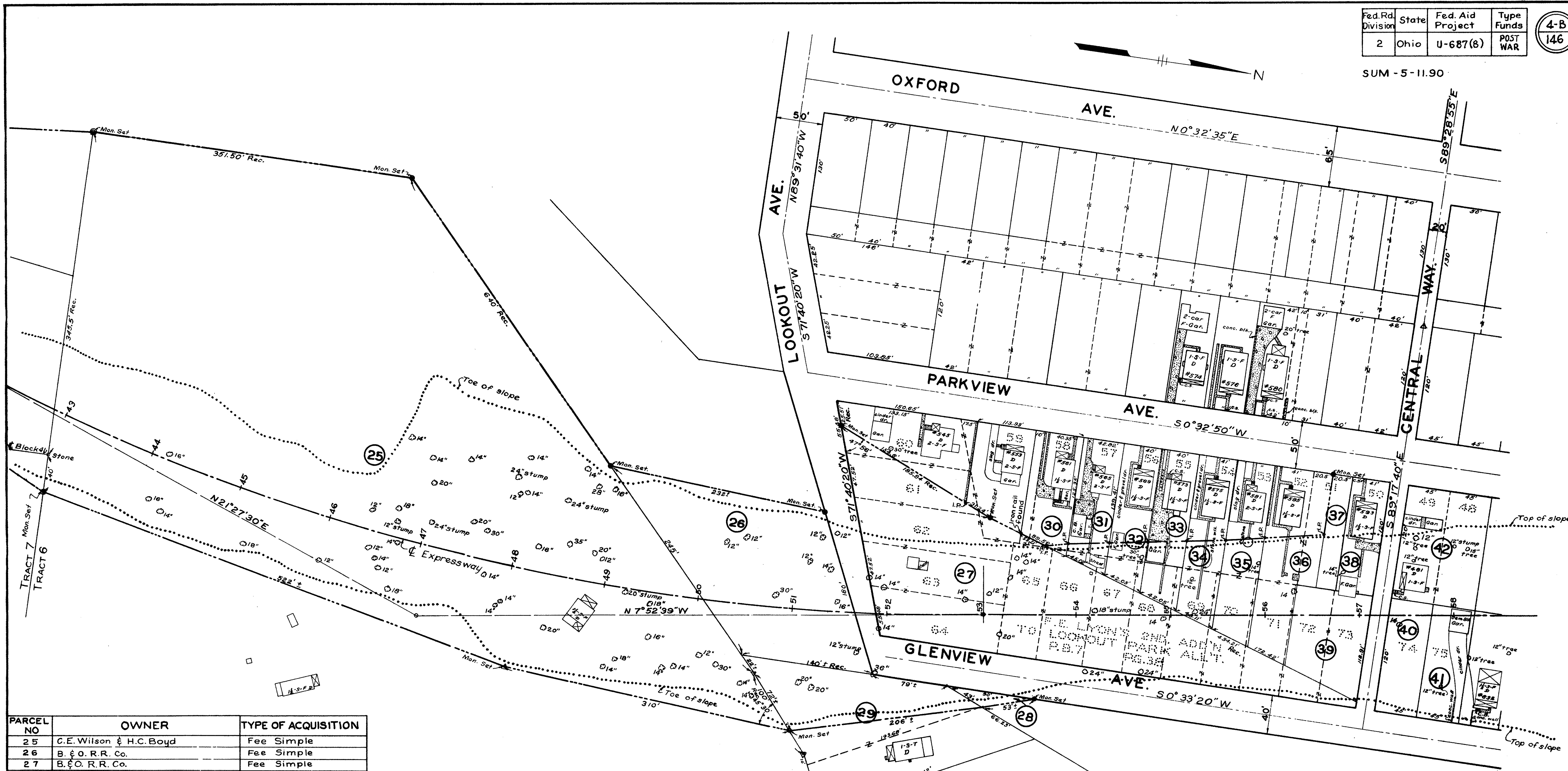
- Pole
- ⊙ Tree
- Iron pin
- ⊙ Mon. Leaded iron pipe set in concrete.

PARCEL NO.	OWNER	TYPE OF ACQUISITION
9 & 9A	Real Estate & Impr. Co. of Balt. City	Easement
10	B. & O. R.R. Co.	Easement
11	Board of Education	Easement
12	V. Wallyn	Fee Simple
13	E. M. Wood & I. M. College	Fee Simple
14	M. Jones	Fee Simple
15	Sarah Yates	Fee Simple
16	J. W. Costa	Fee Simple
17	M. A. Black	Fee Simple
18	F. & L. Stewart	Fee Simple
19	W. & D. M ^c Clain	Fee Simple
20	Mary E. Nichols	Fee Simple
21	Harris Street	Fee Simple
22	Botzum Brothers Co.	Fee Simple
23	Real Estate & Impr. Co. of Balt. City	Fee Simple
24	F. G. Zeller & C. Z. Campbell	Fee Simple

SCALE - 1" = 50'

RIGHT OF WAY PLAN STA. 30+00 TO STA. 45+00

SUM - 5 - 11.90



PARCEL NO	OWNER	TYPE OF ACQUISITION
25	C.E. Wilson & H.C. Boyd	Fee Simple
26	B. & O. R.R. Co.	Fee Simple
27	B. & O. R.R. Co.	Fee Simple
28	Real Estate & Impr. Co. of Balt. City	Fee Simple
29	G.O. & M.G. Brady	Fee Simple
30	F.M. Firth & J. Elgin	Fee Simple
31	V. & M. Rasicci	Fee Simple
32	F.W. & M.C. Bruce	Fee Simple
33	G. & C.C. Petrunonis	Fee Simple
34	E. Charno	Fee Simple
35	P. Rowlett	Fee Simple
36	K.R. & G.E. Richter	Fee Simple
37	C.C. Hibinger	Fee Simple
38	C.C. & H.E. Hibinger	Fee Simple
39	C. & H.E. Hibinger	Fee Simple
40	E.L. Marting Co.	Fee Simple
41	G.C. Stoltz	Fee Simple
42	C.H. Zindel	Fee Simple

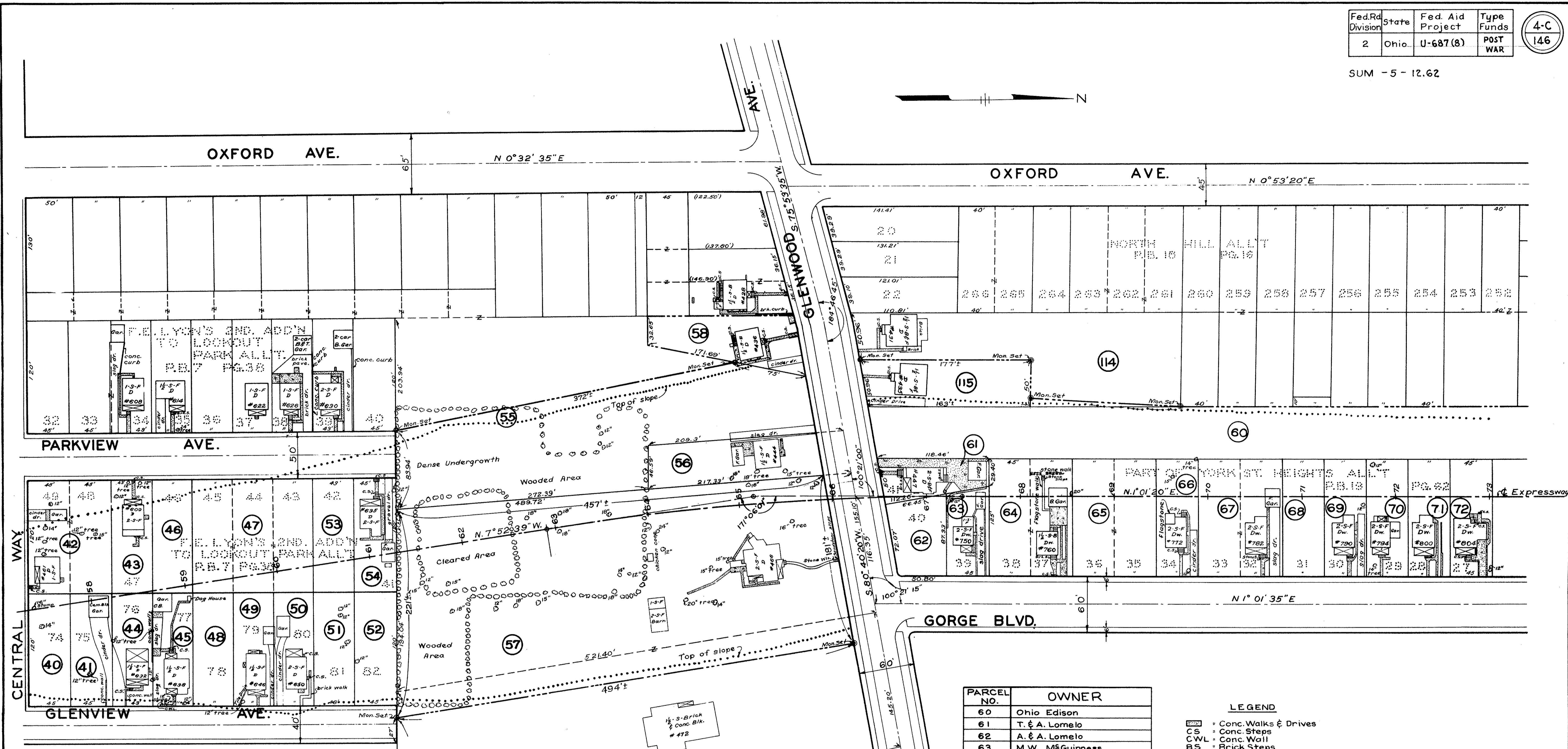
LEGEND

- ▭ = Conc. Walks & Drives
- CS = Conc. Steps
- = Tree
- I.P. = Iron pin
- ⊙ Mon. = Leaded iron pipe set in concrete.

Fed. Rd. Division	State	Fed. Aid Project	Type Funds
2	Ohio	U-687(8)	POST WAR

4-C
146

SUM - 5 - 12.62



PARCEL NO.	OWNER	TYPE OF ACQUISITION
40	E.L. Marting Co.	Fee Simple
41	G.C. Stoltz	Fee Simple
42	C.H. Zindel	Fee Simple
43	P.A. & R.A. March	Fee Simple
44	M. Stoltz	Fee Simple
45	S.D. Hansen	Fee Simple
46	E.V. March	Fee Simple
47	E.L. Marting Co.	Fee Simple
48	R.B. & S.D. Hansen	Fee Simple
49	W. Novak	Fee Simple
50	T.M. & M.J. Sisson	Fee Simple
51	E. Fretcher	Fee Simple
52	F.A. Quinton	Fee Simple
53	T.H. Plour	Fee Simple
54	P. & L. Plour	Fee Simple
55	Ohio Edison Co.	Fee Simple
56	F.M. Amer Co.	Fee Simple
57	Polish America Citizens Club	Fee Simple
58	H.R. & A.M. Jordan	Fee Simple

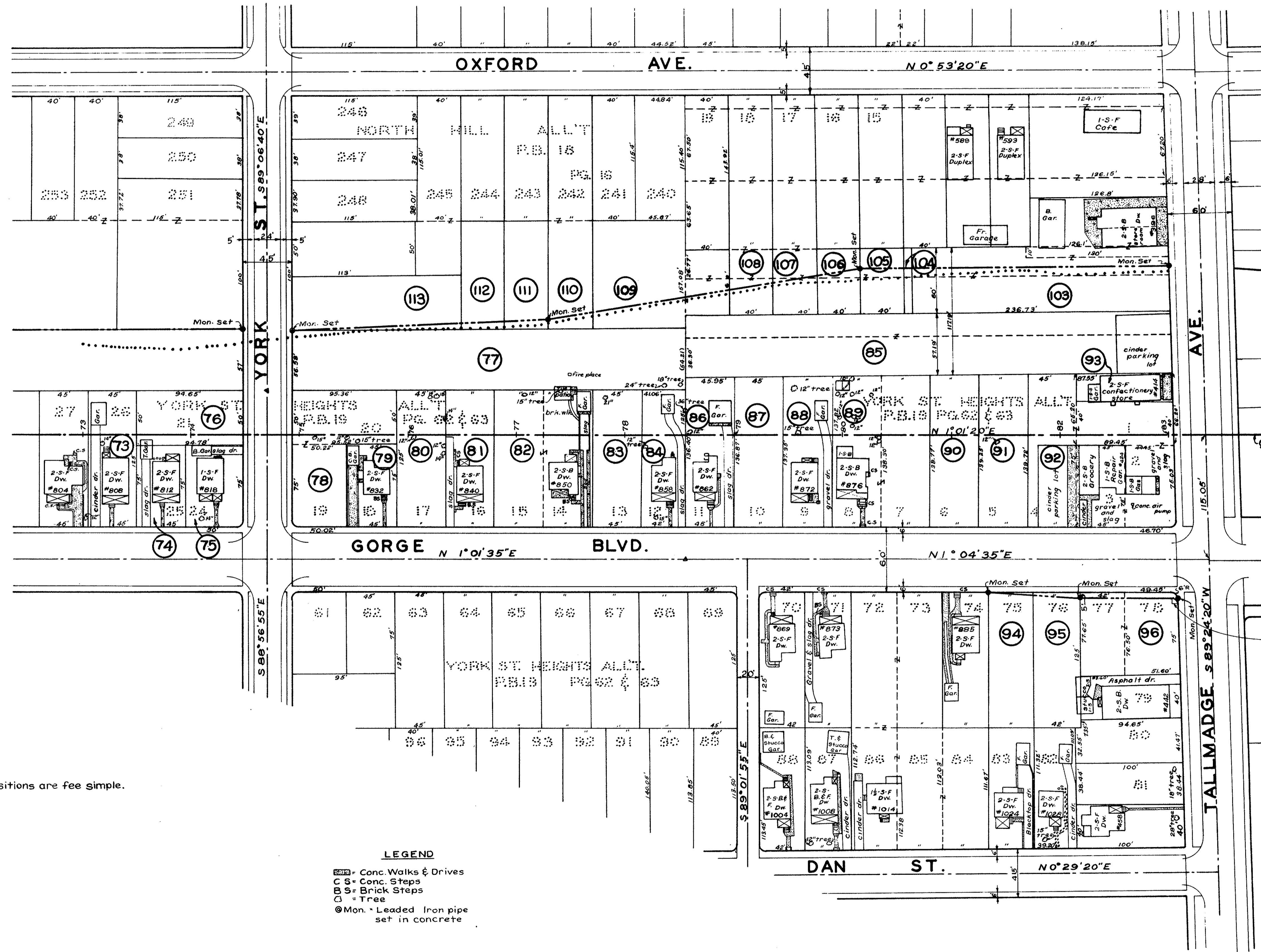
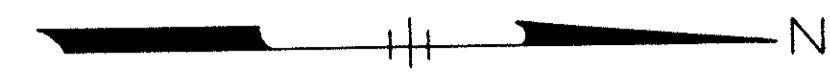
PARCEL NO.	OWNER
60	Ohio Edison
61	T. & A. Lomelo
62	A. & A. Lomelo
63	M.W. McGuinness
64	L.P. & A.S. D'Alessio
65	G. & I.M. Joyce
66	L.H. Schneider
67	M.A. & V.J. DeJacimo
68	E.J. De Rosa
69	J. & J. Fetchu
70	J.W. Oledzki
71	M.A. Richards
72	C.E. & M. Clark
114	D.J. & R.R. Burson
115	F.C. & L.J. Phillips

LEGEND
 CS = Conc. Walks & Drives
 CS = Conc. Steps
 CWL = Conc. Wall
 BS = Brick Steps
 T = Tree

NOTE:
All acquisitions are fee simple.

SCALE - 1" = 50'

STA. 58+00 TO STA. 73+00
RIGHT OF WAY PLAN



Expressway

PROP. LINE
CURVE DATA
A = 88°19'45"
R = 5'
T = 4.86'
L = 7.71'

PARCEL NO.	OWNER
73	J. H. & E. C. Ebner
74	M. E. & M. L. Reder
75	R. Gilletly
76	R. E. Gilletly
77	Ohio Edison Company
78	E. Oledski
79	A. L. & E. L. Case
80	State of Ohio
81	W. J. & E. G. Breth
82	M. A. Volpe
83	L. Paradise
84	C. W. & N. M. Seadler
85	Ohio Edison Company
86	G. E. L. M. Cafferty
87	H. R. Smith
88	M. B. Sadler
89	R. & T. Kolodziejczak
90	E. G. Hammack
91	Huntington Land Company
92	M. Desantis
93	J. S. & S. P. Miller
94	J. & J. Eastman
95	H. I. Amstutz
96	J. C. Klug
103	H. I. Albright
104	Amer Company
105	F. Micale
106	Amer Co.
107	A. B. & C. Scaduto
108	W. C. Boehringer
109	Amer Co.
110	C. M. Henterly
111	R. & M. Quattraro
112	Amer Company
113	I. Kinn

NOTE:
All acquisitions are fee simple.

LEGEND
 - Conc. Walks & Drives
 - Conc. Steps
 - Brick Steps
 - Tree
 - Mon. - Leaded Iron pipe set in concrete

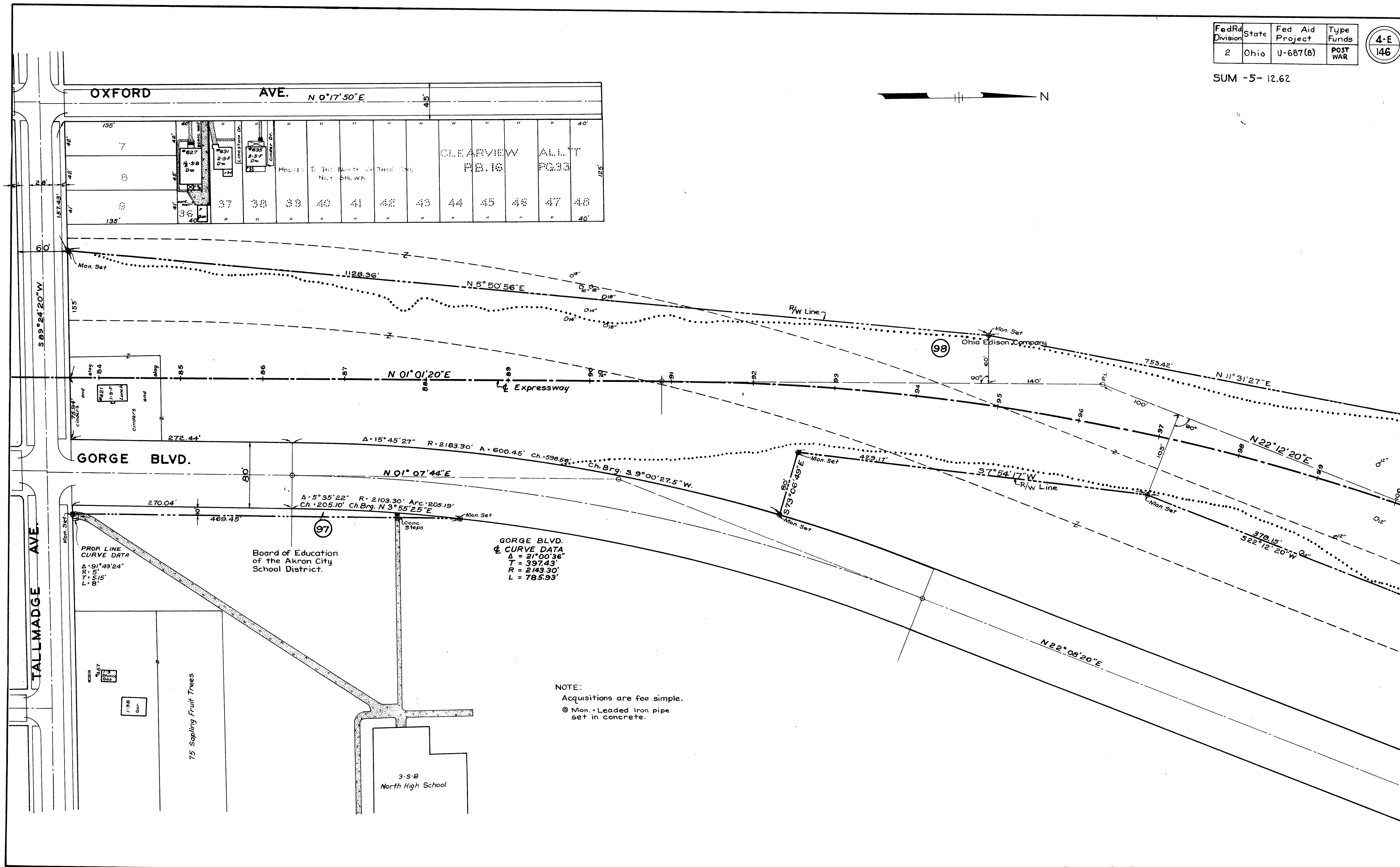
SCALE 1" = 50'

RIGHT OF WAY PLAN STA. 73+00 TO STA. 83+00

Fed Rd Division	State	Fed Aid Project	Type Funds
2	Ohio	U-687(8)	POST WAR

4-E
146

SUM -5- 12.62

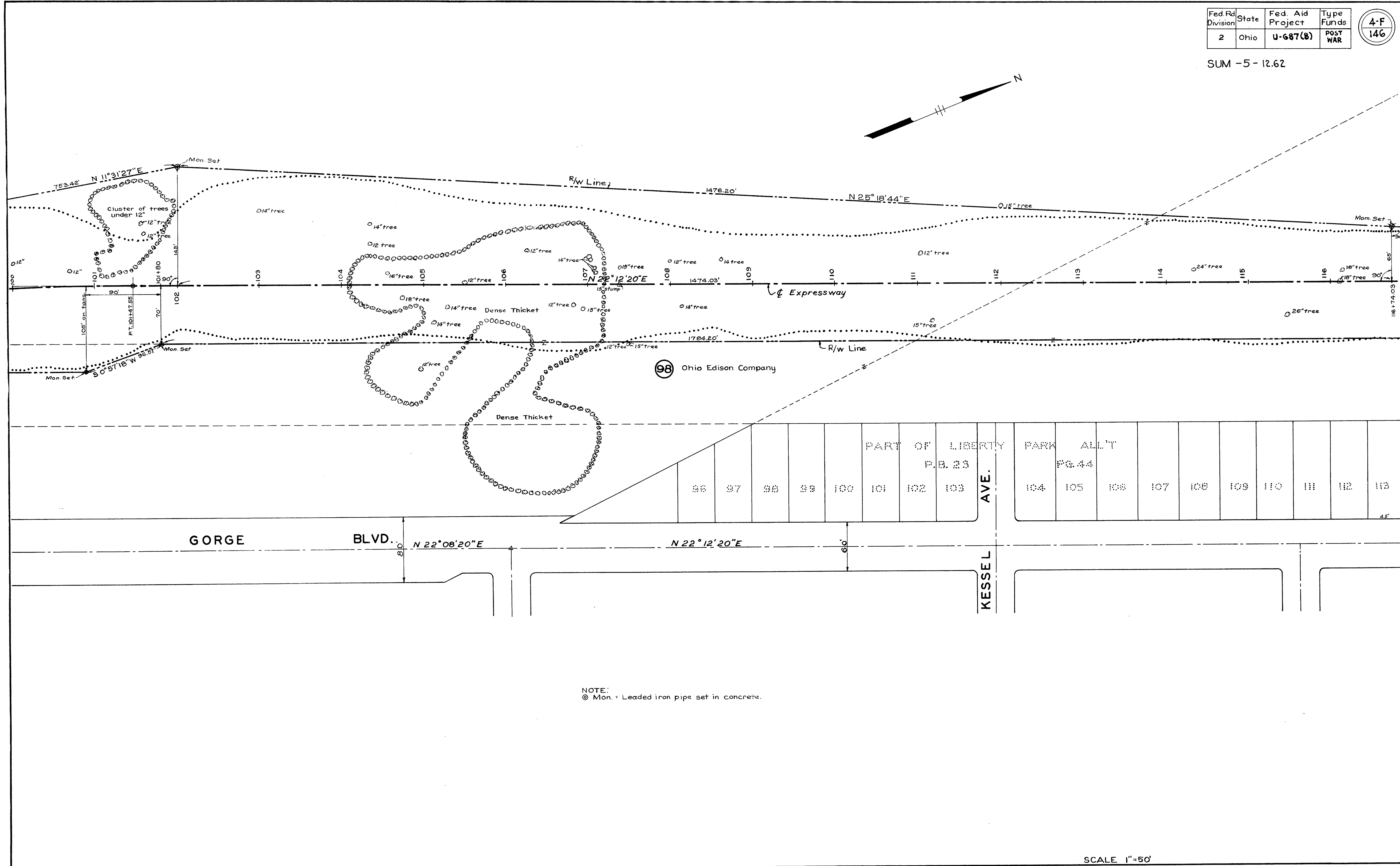
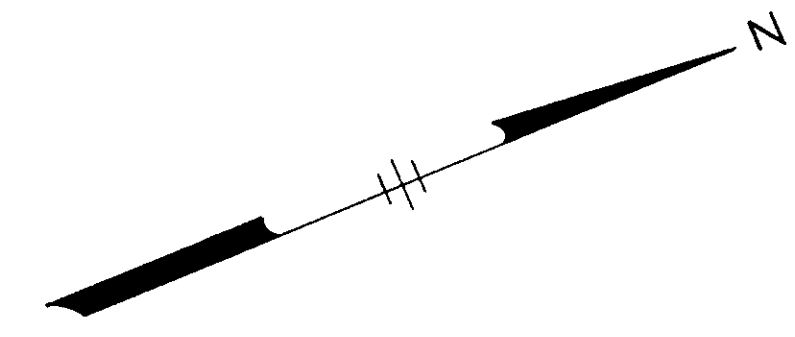


NOTE:
Acquisitions are fee simple.
© Mon. Leaded iron pipe set in concrete.

Fed. Rd. Division	State	Fed. Aid Project	Type Funds
2	Ohio	U-687(8)	POST WAR

4-F
146

SUM -5 - 12.62

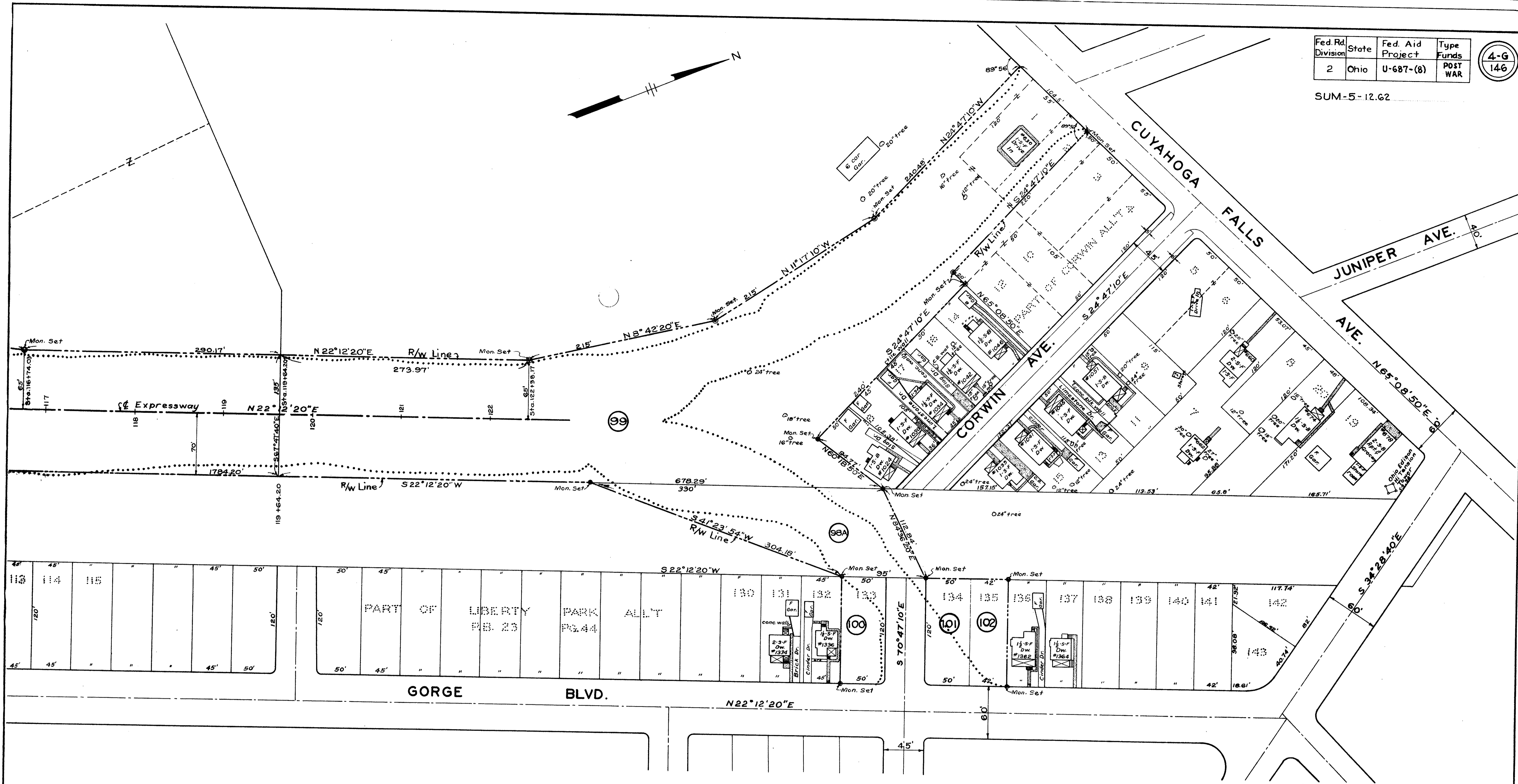
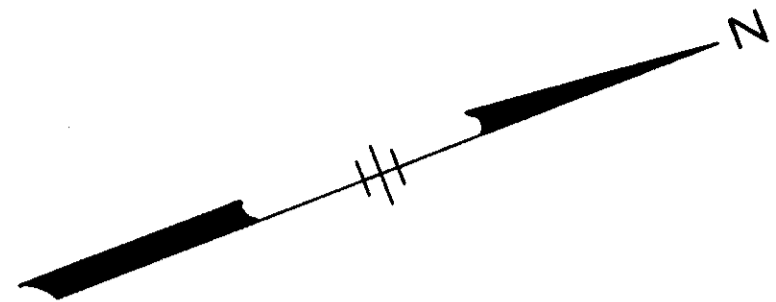


NOTE:
 Ⓞ Mon. - Leaded iron pipe set in concrete.

Fed. Rd. Division	State	Fed. Aid Project	Type Funds
2	Ohio	U-687-(8)	POST WAR

4-G
146

SUM-5-12.62



PARCEL NO.	OWNER
99	Mrs. Gerald B. Smith
100	M. Pusateri
101	F.A. & E.E. Roth
102	Huntington Land Company
98A	Ohio Edison Co.

NOTE:
All acquisitions are fee simple
⊙ Mon. = Leaded iron pipe set in concrete.

SCALE 1"=50'

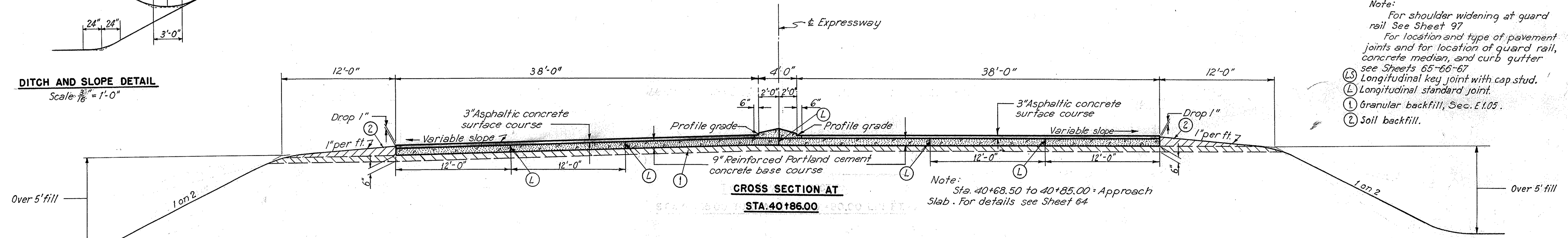
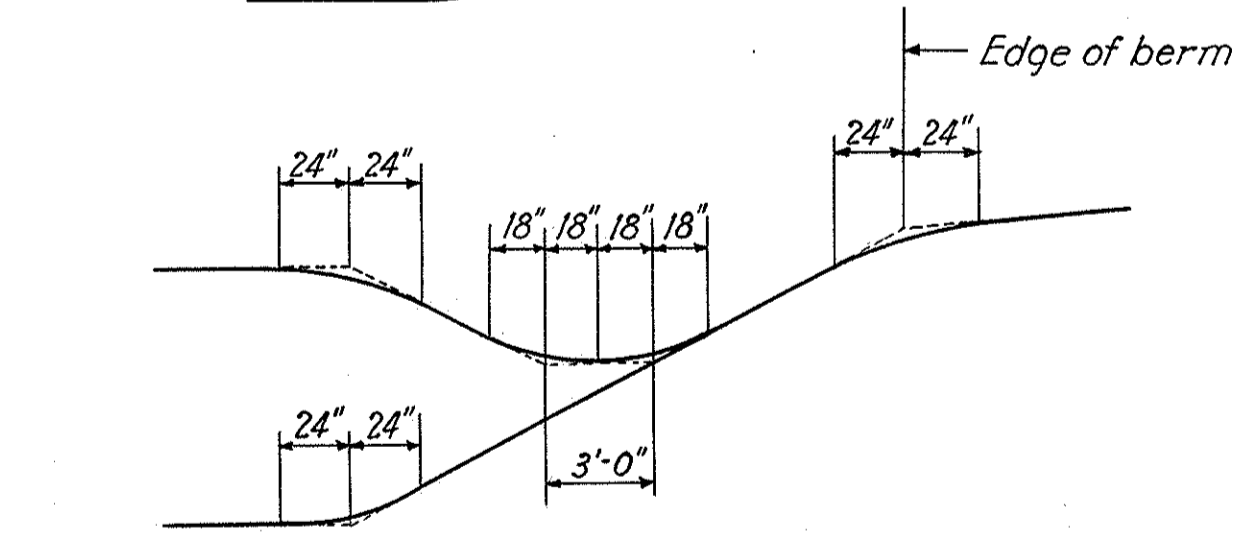
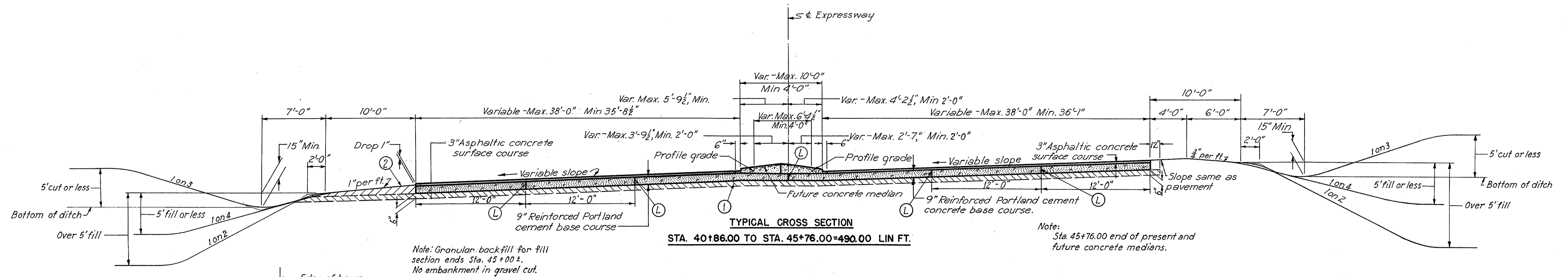
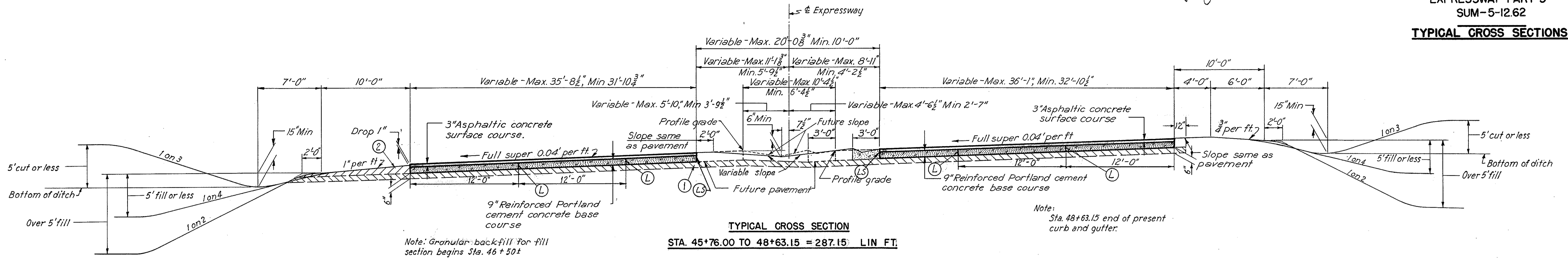
STA. 116+00 TO STA. 123+00±
RIGHT OF WAY PLAN

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	5
2	OHIO	U-687(8)	POST WAR	146

SUMMIT COUNTY CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
 EXPRESSWAY-PART 3
 SUM-5-12.62
TYPICAL CROSS SECTIONS

TYPE T 50
 Scale $\frac{3}{16}'' = 1'-0''$

Task coat will not be required on the concrete base on any of this project.



- Note:
- For shoulder widening at guard rail See Sheet 97
 - For location and type of pavement joints and for location of guard rail, concrete median, and curb gutter see Sheets 65-66-67
 - (L) Longitudinal key joint with cap stud.
 - (L) Longitudinal standard joint.
 - (1) Granular backfill, Sec. E.1.05.
 - (2) Soil backfill.

SCALE $\frac{3}{16}'' = 1'-0''$
 MADE C.M. DATE 11-3-49
 TRCD M.H.G. DATE 1-12-50
 CHK. V.F.D. DATE 2-15-50

HOWARD, NEEDLES, TAMMEN & BERGENOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK
 766 SHEET

Revised 9-27-50

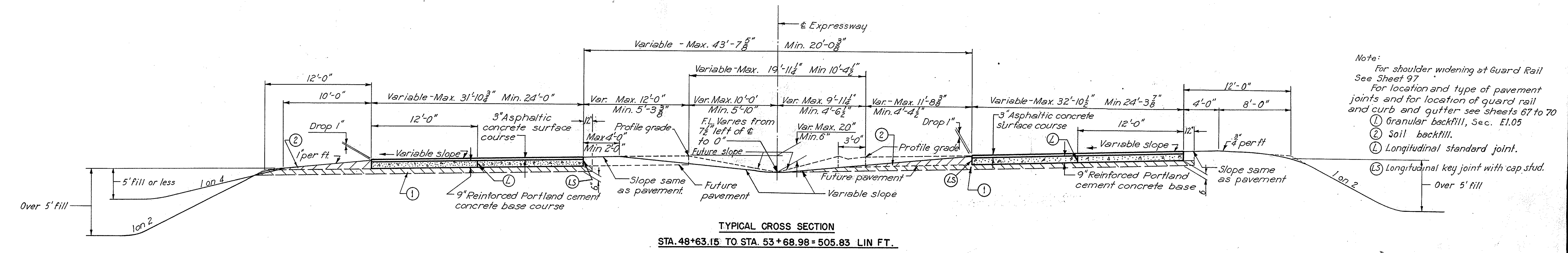
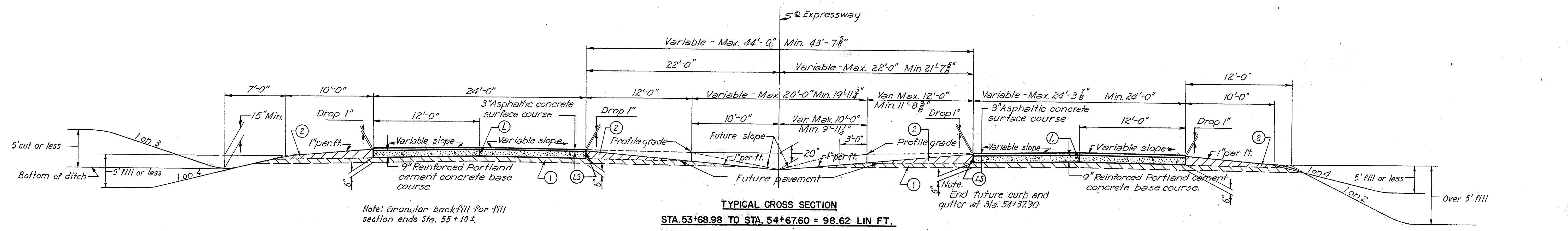
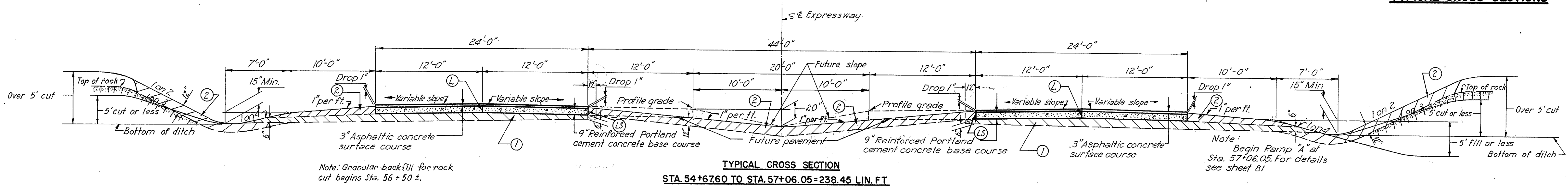
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	SHEET NO.
2	OHIO	U-687(8)	POST WAR	6

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

TYPICAL CROSS SECTIONS

TYPE T 50

Scale: 3/8" = 1'-0"



- Note:
For shoulder widening at Guard Rail See Sheet 97
For location and type of pavement joints and for location of guard rail and curb and gutter see sheets 67 to 70
- ① Granular backfill, Sec. E1.05
 - ② Soil backfill.
 - ③ Longitudinal standard joint.
 - ④ Longitudinal key joint with cap stud.

SCALE: 3/8" = 1'-0"
MADE G.M. DATE: 11-5-49
TRCD: H.G. DATE: 1-15-50
CKD: H.D. DATE: 2-20-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

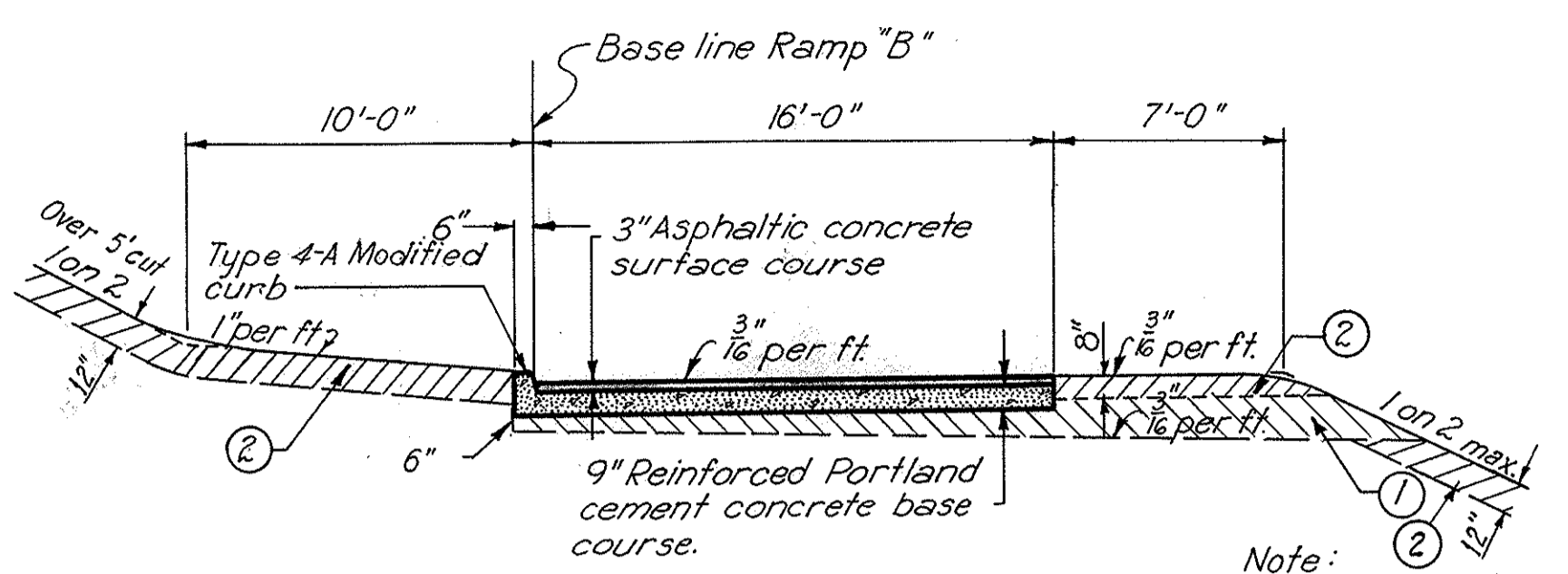
766 SHEET

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	POST WAR
2	OHIO	U687(8)	POST WAR	7

TYPE T 50

Scale $\frac{3}{8}'' = 1'-0''$

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
TYPICAL CROSS SECTIONS

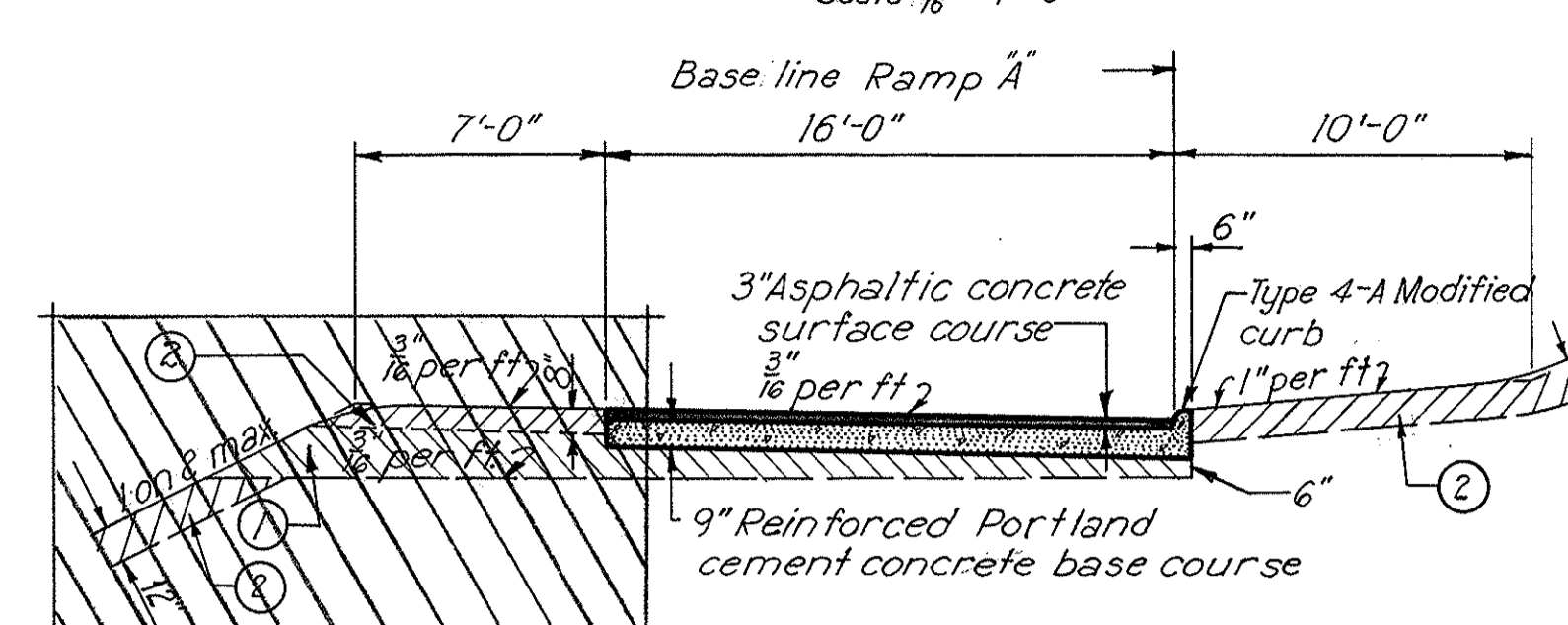


TYPICAL CROSS SECTION
STA. 4+18.70 TO STA. 7+38.49 = 319.79 LIN. FT.

TYPICAL CROSS SECTION - RAMP B

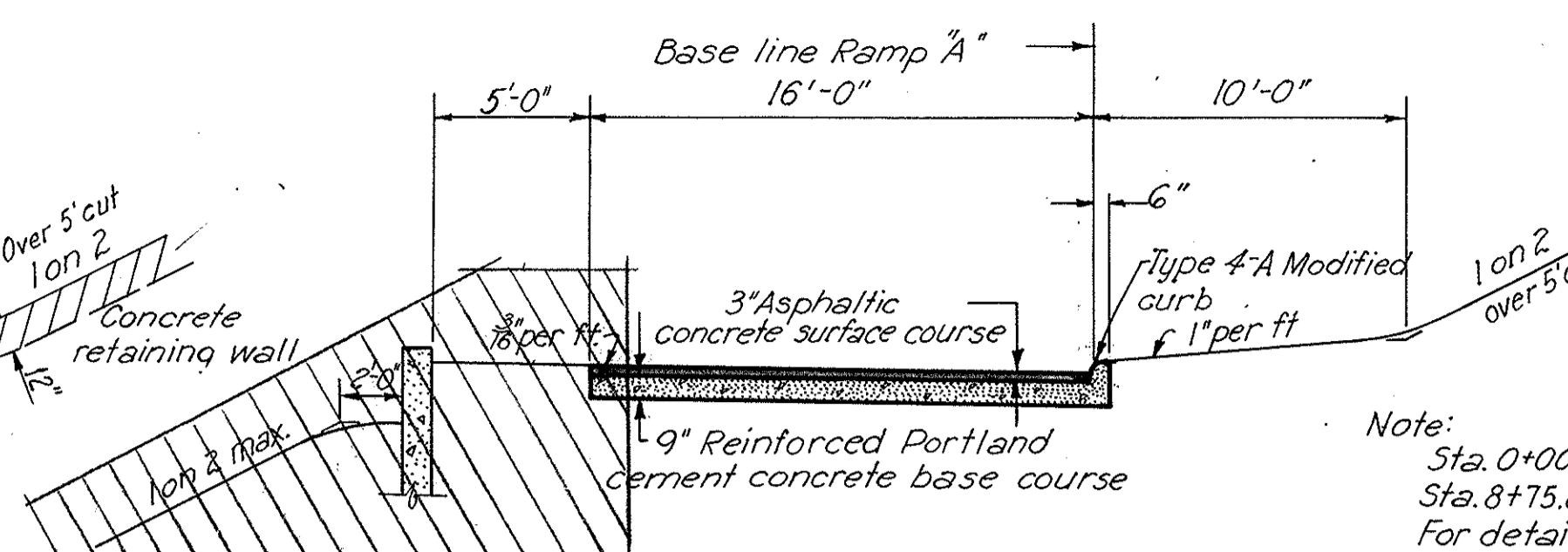
Note:
Sta. 0+00 to Sta. 4+18.70 = Approach
Sta. 7+38.49 to Sta. 8+07.96 = Approach
For details of Approaches and location of guard rail see Sheet 82.
Granular backfill to be placed in rock cuts only.

Note:
For variable width of Ramp B approach slab from Sta. 58+00.00 to Sta. 62+21.08 see sheet 82.



TYPICAL CROSS SECTION
STA. 2+65.42 TO STA. 6+54.52 = 389.10 LIN. FT.

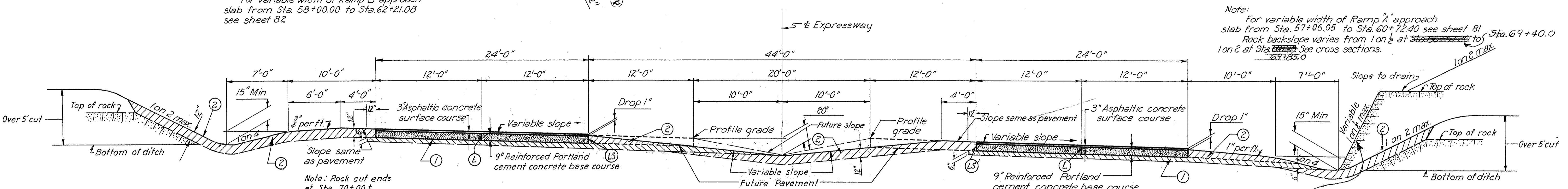
TYPICAL CROSS SECTIONS - RAMP A



TYPICAL CROSS SECTION
STA. 6+54.52 TO STA. 8+75.82 = 221.30 LIN. FT.

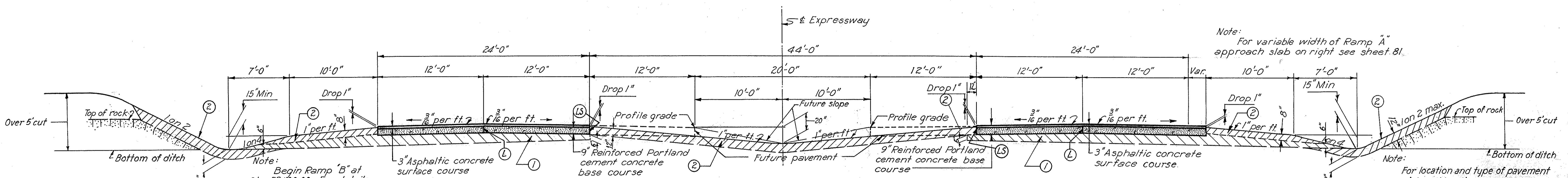
Note:
Sta. 0+00 to Sta. 2+65.42 = Approach
Sta. 8+75.82 to Sta. 9+08.90 = Approach
For details of Approaches and location of guard rail see sheet 81.
Granular backfill to be placed in rock cuts only.

Note:
For variable width of Ramp A approach slab from Sta. 57+06.05 to Sta. 60+72.40 see sheet 81.
Rock back-slope varies from 1 on 2 at Sta. 60+72.40 to 1 on 2 at Sta. 69+40.0.
See cross sections.



TYPICAL CROSS SECTION
STA. 58+00.00 TO STA. 71+00.00 = 1300.00 LIN. FT.

This section applies from Sta. 64+00 to Sta. 65+46.81 and from Sta. 66+57.2 to Sta. 69+40.0.

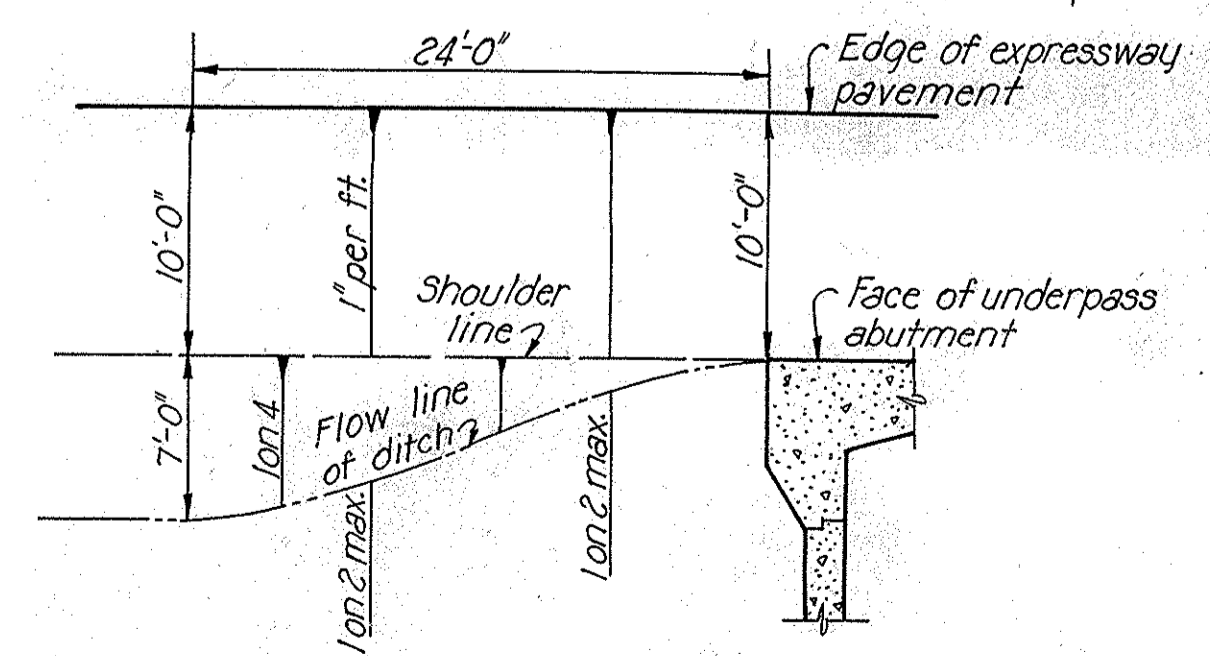


TYPICAL CROSS SECTION
STA. 57+06.05 TO STA. 58+00.00 = 93.95 LIN. FT.

Note:
For variable width of Ramp A approach slab on right see sheet 81.

Note:
Begin Ramp 'B' at Sta. 58+00.00. For details see sheet 82.

Note:
For location and type of pavement joints and location of curb see sheet 70-71.



PLAN OF DITCH TREATMENT AT UNDERPASS STRUCTURES
Scale $\frac{3}{8}'' = 1'-0''$

- ① Granular backfill - Sec. E-105
- ② Soil backfill
- Ⓛ Longitudinal standard joint
- ⓁⓈ Longitudinal key joint with cap stud

SCALE: $\frac{3}{8}'' = 1'-0''$
MADE G.M. DATE 11-7-49
TRCD J.H.G. DATE 1-19-50
CKD V.F.D. DATE 2-20-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
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KANSAS CITY NEW YORK
766 SHEET-

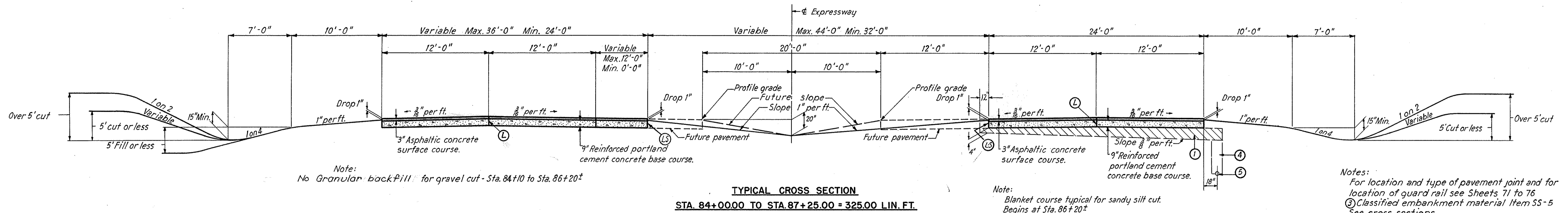
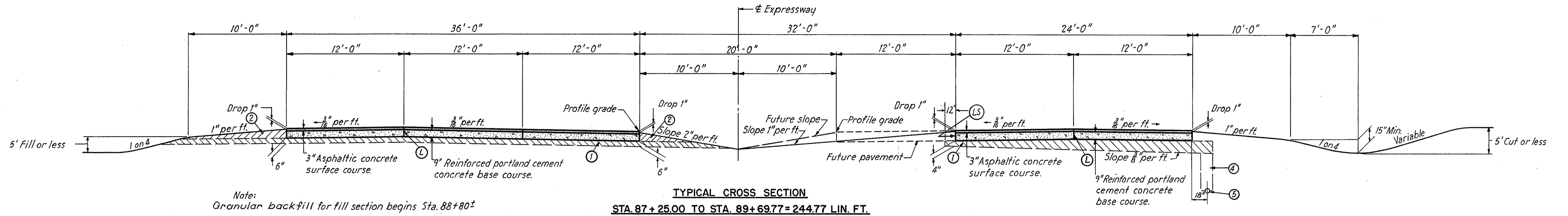
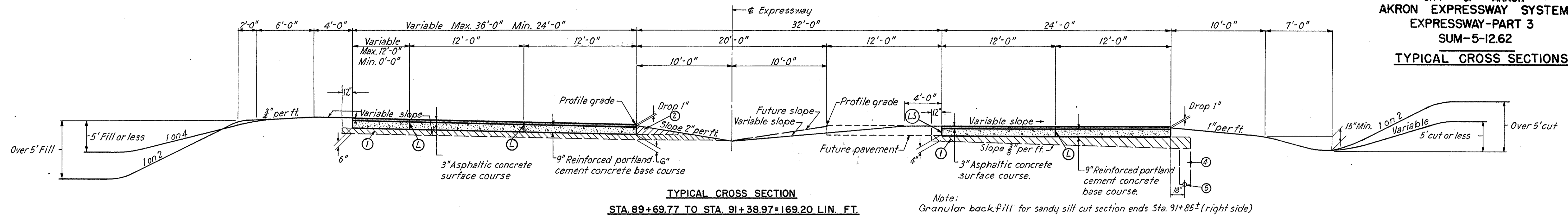
Revised 4-16-57
Revised 9-27-50

TYPE T 50

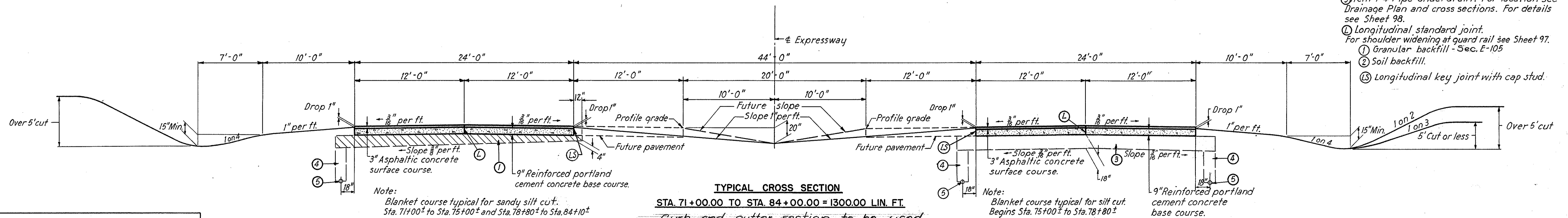
Scale $\frac{3}{16}'' = 1'-0''$

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	8 146
2	OHIO	U-687(8)	POST WAR	

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
TYPICAL CROSS SECTIONS



- Notes:
- For location and type of pavement joint and for location of guard rail see Sheets 71 to 76
 - Classified embankment material Item SS-5 See cross sections
 - Porous backfill
 - Item 1-4 Pipe Underdrain. For location see Drainage Plan and cross sections. For details see Sheet 98.
 - Longitudinal standard joint. For shoulder widening at guard rail see Sheet 97.
 - Granular backfill - Sec. E-105
 - Soil backfill.
 - Longitudinal key joint with cap stud.



Curb and gutter section to be used along east side from Sta. 74+55.78 to Sta. 77+46.0. See Revision Sheet No. 81A.

SCALE $\frac{3}{16}'' = 1'-0''$
MADE R.P.M. DATE 9-4-50
TRCD V.F.D. DATE 9-12-50
HOWARD, NEEDLES, TAMMEN & BERGENOFF
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KANSAS CITY NEW YORK
766 SHEET.

Revised 4-16-51
Revised 9-27-50

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO	U-687(8)	POST WAR

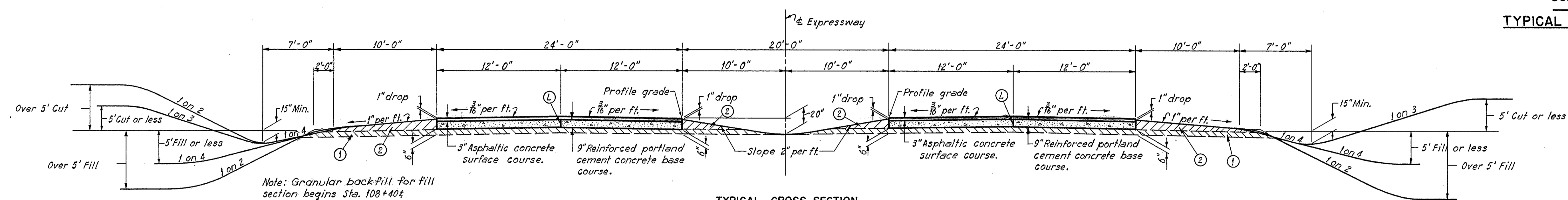
9
146

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

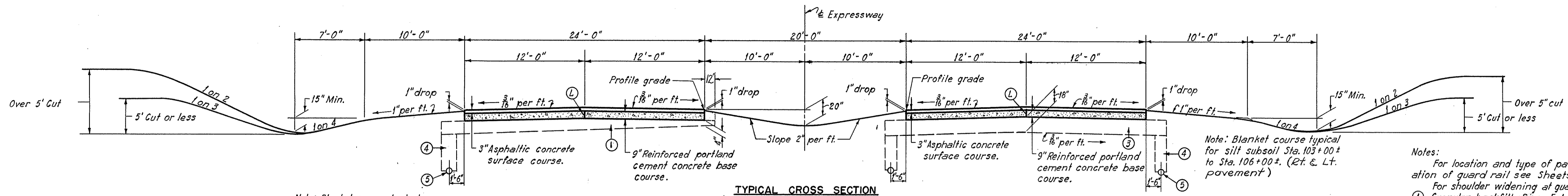
TYPICAL CROSS SECTIONS

TYPE T 50

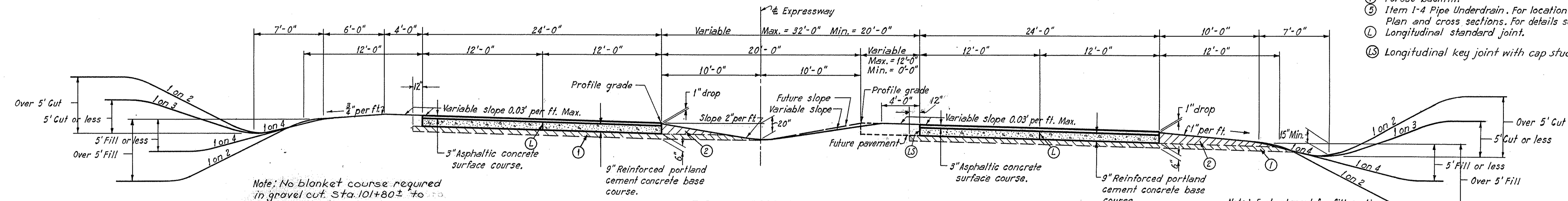
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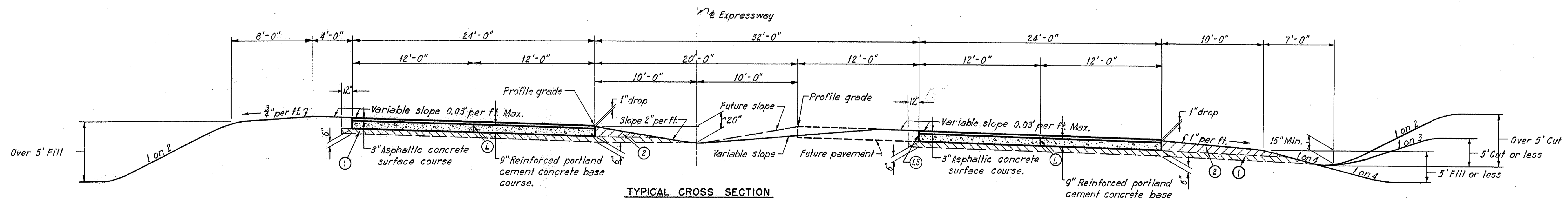
TYPICAL CROSS SECTION
STA. 108+00.00 TO STA. 121+78.87 = 1378.87 LIN. FT.



TYPICAL CROSS SECTION
STA. 102+45.63 TO STA. 108+00.00 = 554.37 LIN. FT.



TYPICAL CROSS SECTION
STA. 94+50 TO STA. 102+45.63 = 795.63 LIN. FT.



TYPICAL CROSS SECTION
STA. 91+38.97 TO STA. 94+50 = 311.03 LIN. FT.

- Notes:
- For location and type of pavement joint and for location of guard rail see Sheets 73 to 78.
 - For shoulder widening at guard rail see Sheet 97.
 - ① Granular backfill - Sec. E-1.05.
 - ② Soil backfill.
 - ③ Classified embankment material Item SS-5. See cross sections.
 - ④ Porous backfill.
 - ⑤ Item I-4 Pipe Underdrain. For location see Drainage Plan and cross sections. For details see Sheet 98.
 - Ⓛ Longitudinal standard joint.
 - Ⓜ Longitudinal key joint with cap stud.

SCALE 1/8" = 1'-0"
MADE P.R.M. DATE 9-2-50
TRCD G.D. DATE 9-12-50
CKD G.M. DATE 9-2-50

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KANSAS CITY NEW YORK

766 SHEET

Revised 9-27-50

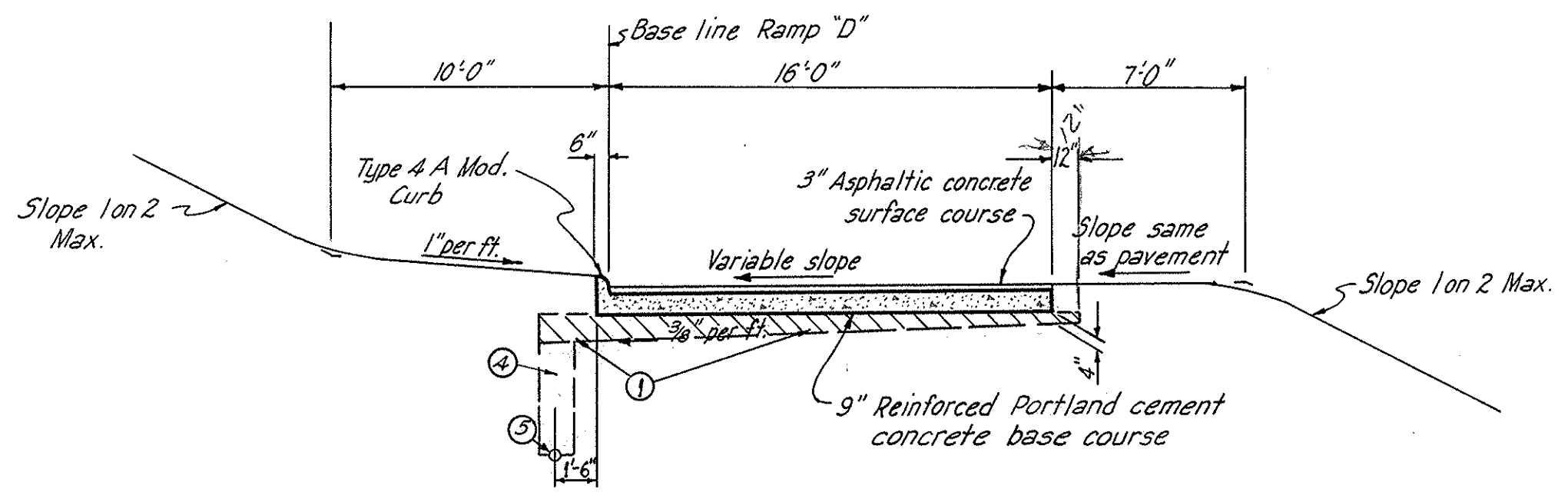
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	10
2	OHIO	U-687(8)	POST WAR	146

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

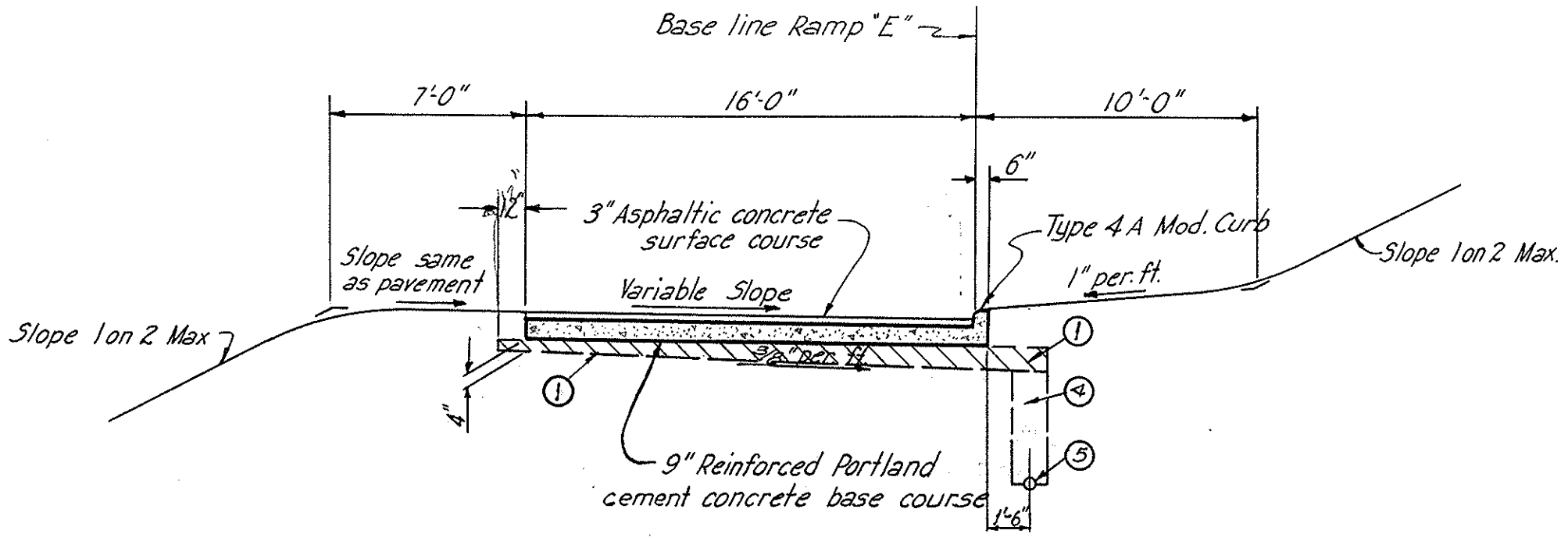
TYPICAL CROSS SECTIONS

TYPE-T50

Scale: $\frac{3}{16}'' = 1'-0''$

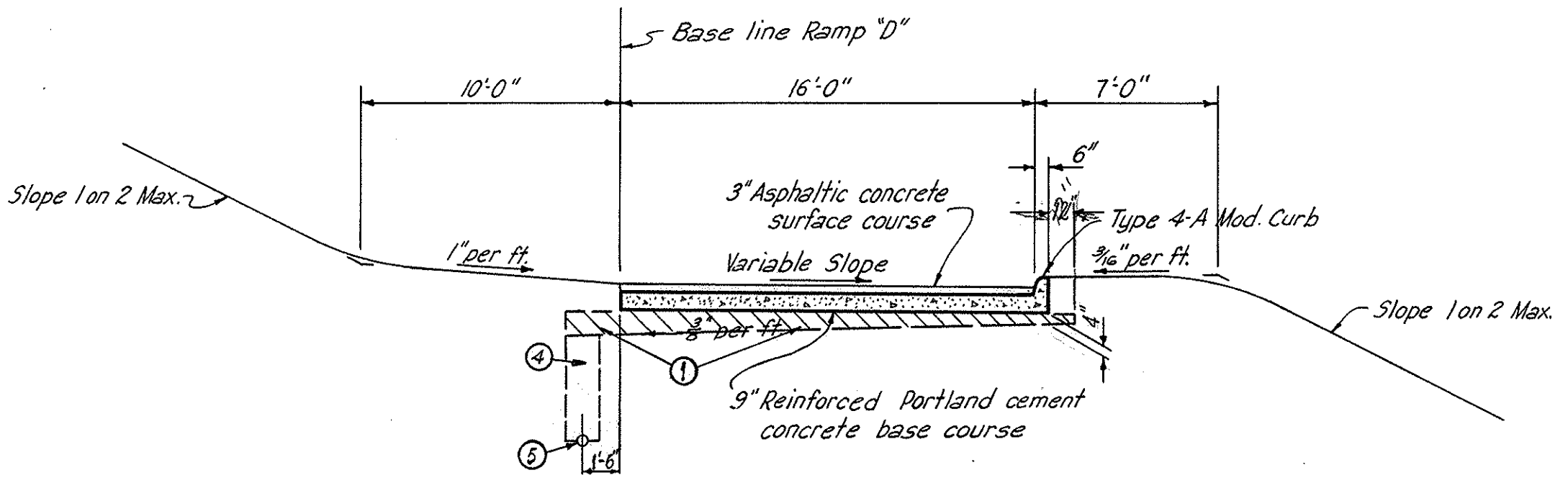


TYPICAL CROSS SECTION
STA. 4+30.62 TO STA. 6+12.50 = 181.88 LIN. FT.

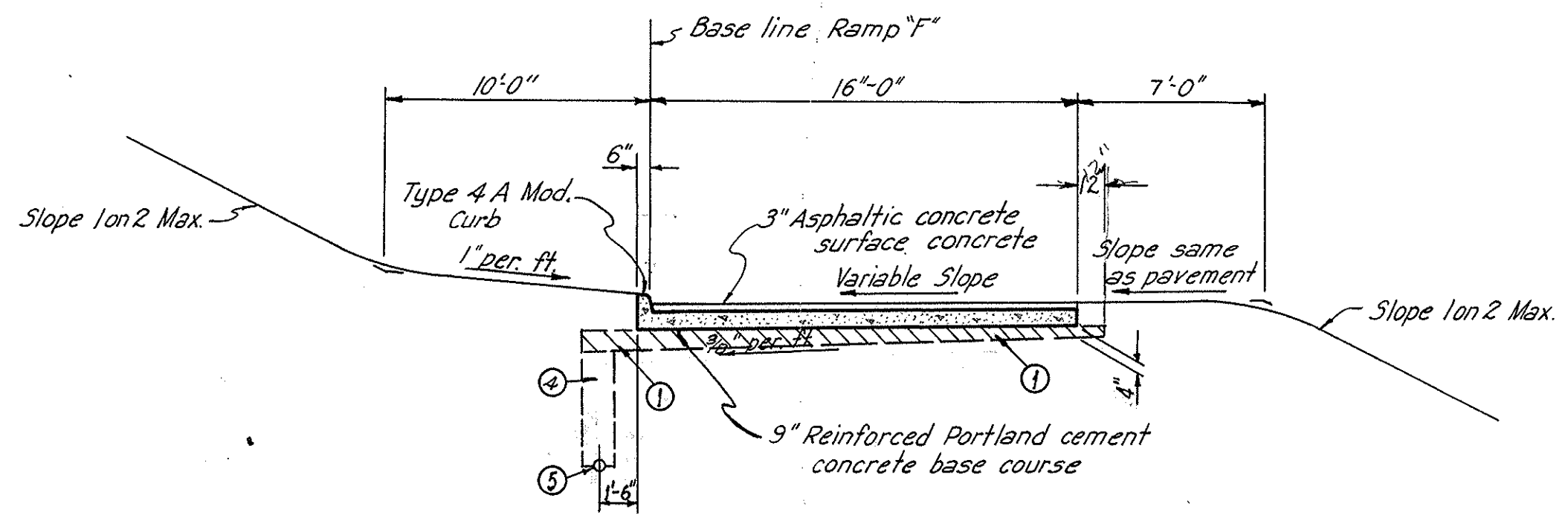


TYPICAL CROSS SECTION - RAMP "E"
STA. 2+57.36 TO STA. 7+09.32 = 451.96 LIN. FT.

Note:
From Sta. 0+00 to Sta. 2+57.36 and from Sta. 7+09.82 to Sta. 7+39.51 are the Approaches.
For details of Approaches and location of Guard Rail see sheet 85.

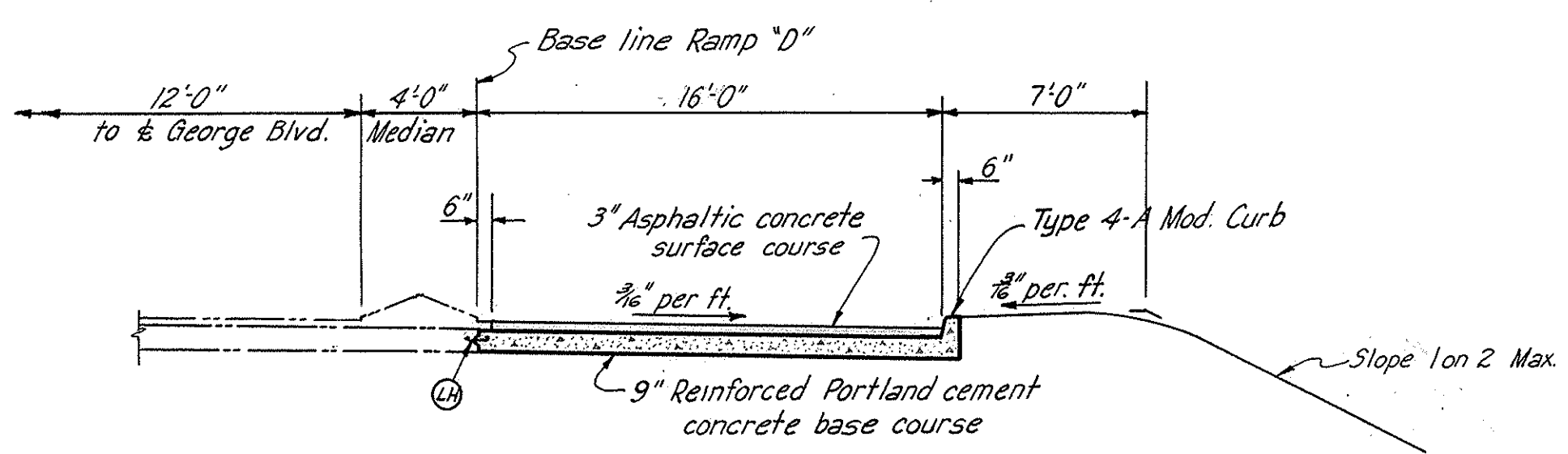


TYPICAL CROSS SECTION
STA. 6+12.50 TO STA. 8+73.42 = 260.92 LIN. FT.

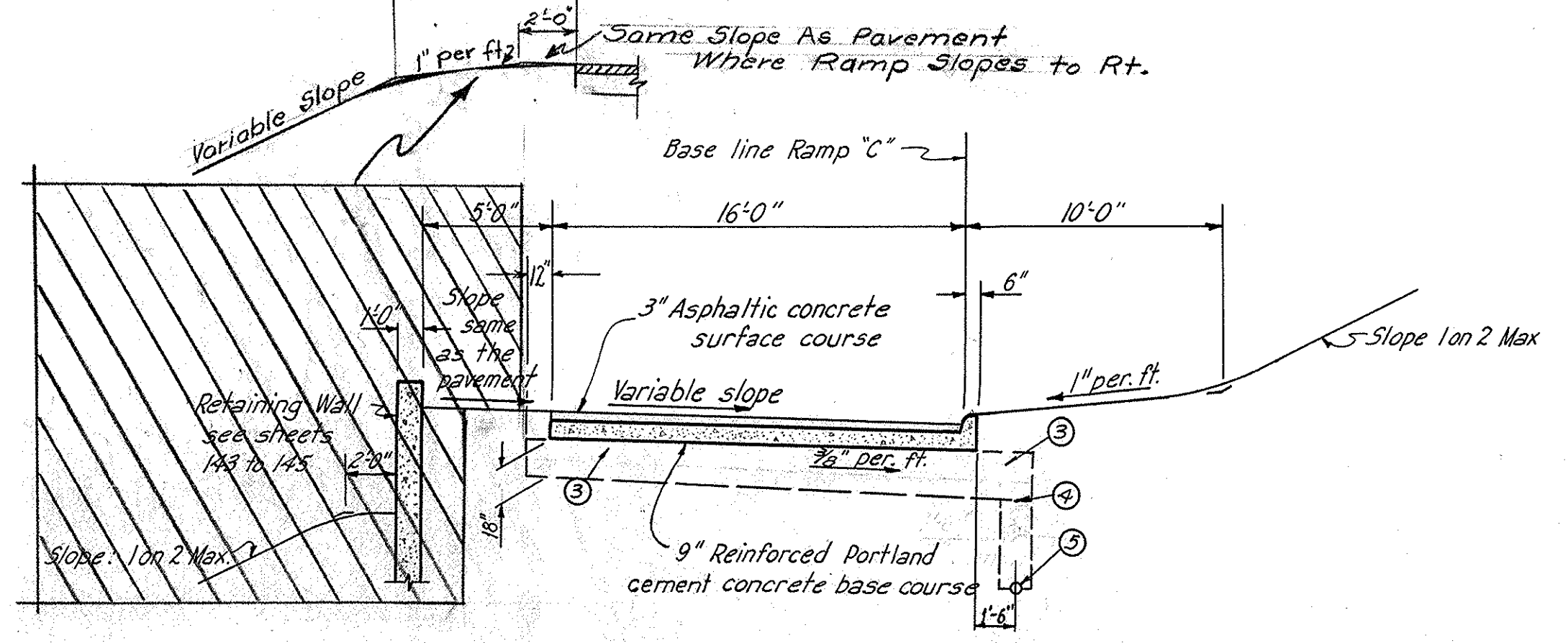


TYPICAL CROSS SECTION - RAMP "E"
STA. 4+61.40 TO STA. 8+85.80 = 424.40 LIN. FT.

Note:
From Sta. 0+00 to Sta. 4+61.40 and from Sta. 8+85.80 to Sta. 9+17.02 are the approaches.
For details of Approaches and location of Guard Rail see sheet 86.



TYPICAL CROSS SECTION
STA. 8+73.42 TO STA. 9+50.79 = 77.37 LIN. FT.



TYPICAL CROSS SECTION - RAMP "C"
STA. 3+00 TO STA. 5+01.87 = 201.87 LIN. FT.

Note:
From Sta. 2+54.85 to Sta. 3+00 cross section is similar to above.
From Sta. 0+00 to Sta. 2+54.85 and from Sta. 5+01.87 to Sta. 6+77.85 are Approaches.
For details of Approaches see sheet 83.
For location of guard rail see Revision Sheet No. 81A.

- Notes:
- ① Granular backfill-E-1.05.
 - ② Classified embankment material - Item 55-5
 - ③ Porous backfill.
 - ④ Pipe underdrain - Item I-4. For location and details see sheets 98 to 100.
 - ⑤ For type of pavement joints and for location of guard rail, see sheet 84.
 - ⑥ For details of curbs see sheet 97.

TYPICAL CROSS SECTIONS - RAMP "D"

Note:
From Sta. 0+00 to Sta. 4+30.62 and from Sta. 9+50.79 to Sta. 9+72.72 are the Approaches.
For details of Approaches and for location of Guard Rail see sheet 84.

SCALE: $\frac{3}{16}'' = 1'-0''$
MADE P.H.L. DATE 5-27-50
TRCD 21.31 DATE 7-8-50
CKD F.E. DATE 7-9-50

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Revised 4-16-51

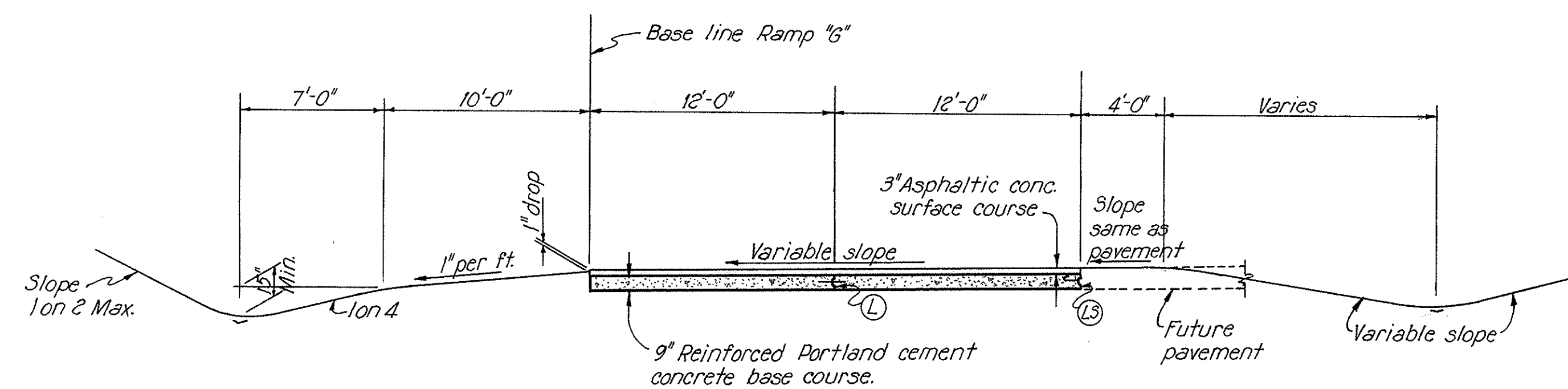
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	II
2	OHIO	U-687(8)	POST WAR	14.6

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

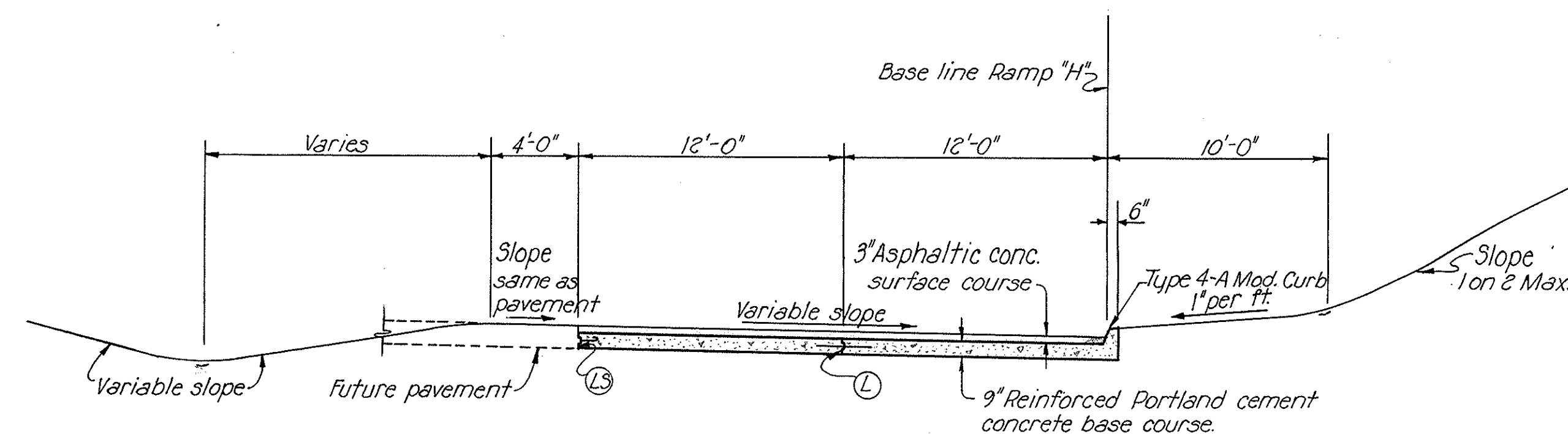
TYPICAL CROSS SECTIONS

TYPE-T50

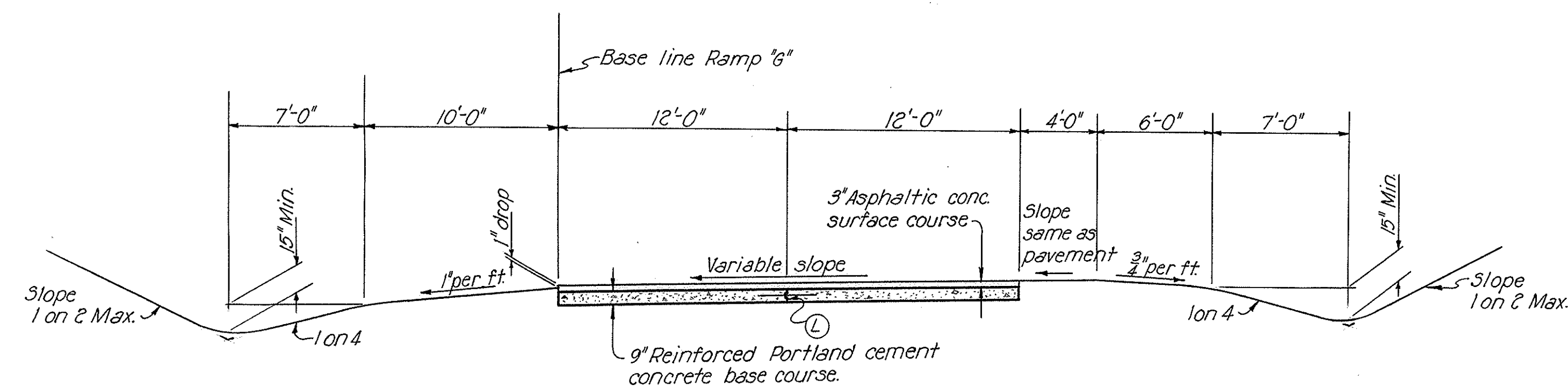
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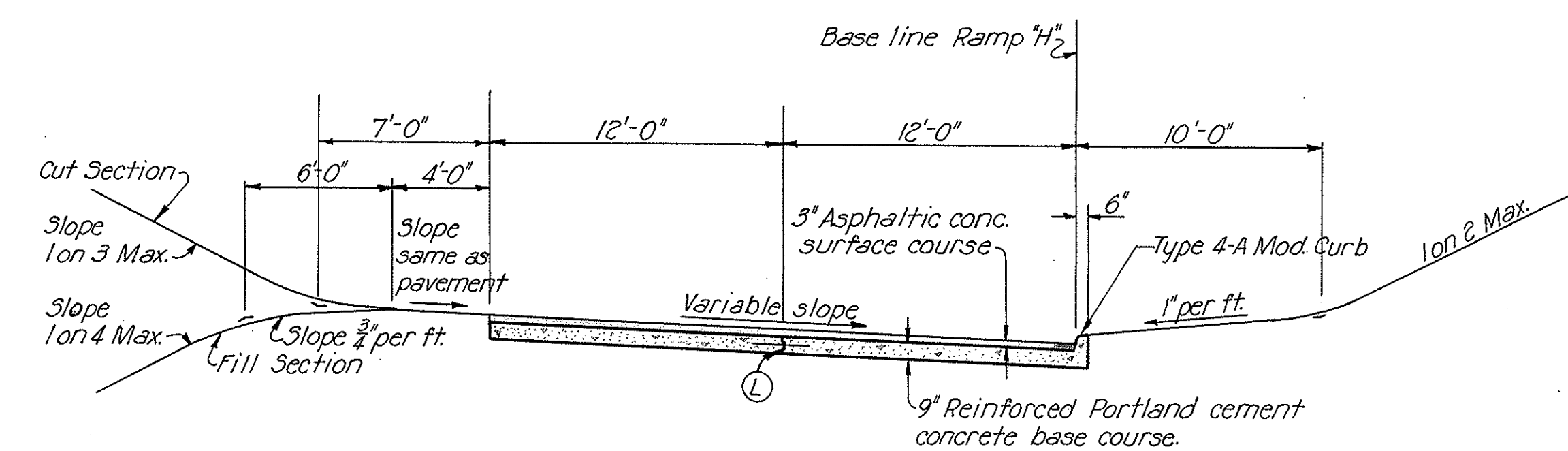
TYPICAL CROSS SECTION
STA. 0+00 TO STA. 2+29.38 = 229.38 LIN. FT.



TYPICAL CROSS SECTION
STA. 2+56.96 TO STA. 2+56.96 = 256.96 LIN. FT.



TYPICAL CROSS SECTION
STA. 2+29.38 TO STA. 7+12.41 = 483.03 LIN. FT.



TYPICAL CROSS SECTION
STA. 2+56.96 TO STA. 4+74.22 = 217.26 LIN. FT.

TYPICAL CROSS SECTIONS - RAMP "G"

Note:
From Sta. 7+12.41 to Sta. 7+85.41 is an Approach, for details see sheet 87

TYPICAL CROSS SECTIONS - RAMP "H"

Note:
From Sta. 4+74.22 to Sta. 6+67.42 is an Approach, for details see sheet 88

Note:
Ⓞ For type and details of pavement joints and for location and details of guard rail see pavement details.

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO	U-687(8)	POST WAR

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146

ROADWAY

SUMMIT COUNTY
CITY OF AKRON
**AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3**

SUM-5-12.62

NOTES

FIELD OFFICE

THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE IN ACCORDANCE WITH SEC. 5-0.01(b) HAVING A MINIMUM OF 200 SQ. FT. OF FLOOR SPACE. THE CONTRACTOR SHALL HAVE A TELEPHONE INSTALLED AND MAINTAINED DURING CONSTRUCTION OF THIS PROJECT.

LOCATION AND SIZE OF EXISTING PIPE

THE LOCATION, TYPE, DEPTH AND SIZE OF ALL EXISTING PIPES ARE SHOWN AS ACCURATELY AS THE AVAILABLE INFORMATION WILL PERMIT. THE STATE OF OHIO WILL NOT BE RESPONSIBLE FOR ANY VARIATIONS FOUND DURING CONSTRUCTION.

PAYMENT FOR PIPE REMOVED WILL BE MADE ACCORDING TO THE LISTING SHOWN ON THESE PLANS.

COMPACTION OF BLANKET COURSE

SPECIAL CARE SHALL BE TAKEN TO PROPERLY COMPACT BLANKET COURSE MATERIAL PLACED ADJACENT TO AN EXISTING PAVEMENT EDGE.

IN CUT SECTIONS, IF THE MATERIAL IN SUBGRADE IS DETERMINED (BY LABORATORY TESTS) AS BEING SUITABLE FOR USE AS BLANKET COURSE MATERIAL THE MATERIAL NEED NOT BE REMOVED AND BLANKET COURSE MATERIAL, ITEM S.S.-5 OR E-1.05, GRANULAR MATERIAL, WILL BE NON-PERFORMED.

RESETTING MANHOLES

RESETTING MANHOLES, ITEM 1-8, REPRESENTS THE REMOVAL (WHEN DEEMED NECESSARY BY THE ENGINEER) OF PORTIONS OF THE EXISTING MANHOLE AND THE REBUILDING AND ADJUSTING TO GRADE. THE AMOUNT OF THE EXISTING MANHOLE TO BE REMOVED SHALL BE DETERMINED BY THE ENGINEER. IF THE EXISTING CASTING IS DEEMED UNSATISFACTORY BY THE ENGINEER THE CASTING SHALL BE REPLACED BY A SATISFACTORY CASTING OBTAINED FROM THE ABANDONMENT OF MANHOLES ON OTHER PORTIONS OF THE PROJECT.

L-9 SEEDING AND PROTECTING TYPE "A"

QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS BETWEEN LINES TEN (10) FEET 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. TOTAL QUANTITY SHOWN INCLUDES 12,000 SQ. YDS. FOR SEEDING UNDER MAIN VIADUCT FROM STA. 36+25 TO STA. 40+90.

ALL AREAS OUTSIDE THESE LIMITS WHERE THE VEGETATIVE GROWTH HAS BEEN INJURIOUSLY DISTURBED OR DESTROYED BY THE CONTRACTOR SHALL BE RESTORED AND SEEDING IN ACCORDANCE WITH THE PROVISIONS OF ITEM L-9, BY THE CONTRACTOR AT HIS OWN EXPENSE.

FERTILIZING AREAS TO BE SEEDED OR SODDED

ALL AREAS TO BE SEEDED OR SODDED IN ACCORDANCE WITH ITEM L-9 AND ITEM L-10, RESPECTIVELY, SHALL HAVE COMMERCIAL FERTILIZER (10-6-4 MIX) OR ANY FORMULA APPROVED BY THE ENGINEER, APPLIED AT THE RATE OF TWENTY (20) POUNDS PER 1000 SQUARE FEET.

EMBANKMENT AND SILT

EXCAVATED MATERIAL SHALL BE PLACED IN THE EMBANKMENT IN ACCORDANCE WITH ITEM E-1 AND AS DIRECTED BY THE ENGINEER. MATERIAL OF WHICH THE GRAIN SIZE OF SOX OR MORE IS BETWEEN 0.074 M.M. AND 0.005 M.M. (STATE HIGHWAY TESTING LABORATORY METHOD OF TESTING) SHALL BE PLACED AT LEAST THREE (3) FEET BELOW THE PAVEMENT WHEN USED IN EMBANKMENT.

BLANKET COURSE

IN THE FINAL FINISHING OF SLOPES AND DITCHES, CARE SHALL BE EXERCISED THAT THE EXPOSED EDGE OF THE BLANKET COURSE BE LEFT FREE OF EARTH COVER THAT WOULD IMPEDE FREE DRAINAGE.

PLACING SOD

SPECIAL CARE SHALL BE TAKEN IN PLACING ALL SOD SO THAT THE TOP OF THE SOD COINCIDES WITH THE FINISHED SURFACE AS SHOWN ON THE CROSS SECTIONS. ALL EARTHWORK NECESSARY TO ACCOMPLISH THE ABOVE IS INCLUDED IN THE UNIT PRICE BID PER SQUARE YARD OF SOD.

WATER MAINS

A NEW 36-IN. CAST IRON WATER MAIN SHALL BE PLACED 4.8 FT 2 IN. SOUTH OF THE CENTER LINE OF TALLMAGE AVENUE AS SHOWN ON THE PLANS. THE CITY OF AKRON WILL PROVIDE 9 LENGTHS OF 36-IN. CAST IRON PIPE 12 FT LONG COMPLETE WITH ALL JOINT MATERIALS. THE MAIN SHALL BE INSTALLED BY THE CONTRACTOR. THE ENDS OF THE PIPE SHALL BE PLUGGED. CONNECTION TO THE EXISTING DISTRIBUTION SYSTEM WILL BE BY OTHERS. EXCAVATION FOR THE PIPE SHALL BE PAID FOR UNDER ITEM E-2, EXCAVATION FOR STRUCTURES - UNCLASSIFIED, AND ITEM E-2, EXCAVATION FOR STRUCTURES - ROCK AND SHALE, AS APPLICABLE. INSTALLATION OF THE PIPE INCLUDING FURNISHING AND PLACING SAND CUSHION, BACK-FILLING, DISPOSAL OF SURPLUS MATERIAL AND ALL INCIDENTALS WILL BE PAID FOR UNDER ITEM "SPECIAL", INSTALLING 36" WATER MAIN.

STRUCTURES

FOR GENERAL NOTES PERTAINING TO UNDERPASS STRUCTURES AND RETAINING WALLS SEE SHEET 119.

OTHER NOTES

FOR OTHER GENERAL NOTES SEE SHEETS NO 97 AND 99.

NOTES

PAVEMENT

DRIVES

THE LOCATION AND GRADE OF PAVEMENT AT DRIVES MAY BE ADJUSTED BY THE ENGINEER.

ASPHALTIC CONCRETE SURFACE COURSE

THE ASPHALTIC SURFACE COURSE SHALL CONSIST OF A 1-1/2" THICK TYPE "B" WEARING COURSE ON A 1-1/2" THICK NO. 4 BINDER COURSE, CONFORMING TO SECTION T-50 OF THE SPECIFICATIONS AND SPREAD AND FINISHED AS DESCRIBED UNDER METHOD "B".

WHITE CONCRETE REFLECTING MEDIAN STRIP

THE MEDIAN STRIP SHALL BE OF WHITE CEMENT CONCRETE CONSTRUCTED IN A REFLECTING RIBBED PATTERN AS SHOWN ON THE PLANS AND AS DESCRIBED IN SUPPLEMENTAL SPECIFICATION NO. 19. FULL PAYMENT FOR WHITE CONCRETE SHALL BE INCLUDED IN PRICE BID PER SQ. YD. FOR ITEM 1-21.

PAYMENT FOR MEDIAN STRIP WILL BE MADE AT THE PRICE PER SQUARE YARD OF MEDIAN STRIP. SEPARATE PAYMENT WILL BE MADE UNDER ITEM B-71 FOR PAVEMENT SLAB UNDER THE RAISED MEDIAN.

ROADWAY

SEWAGE

THE CONTRACTOR SHALL SO CONDUCT HIS OPERATIONS THAT THE FLOW OF ALL EXISTING SEWERS WILL BE MAINTAINED AT ALL TIMES.

ANY ADDITIONAL LABOR OR COST INVOLVED IN MAINTAINING THIS FLOW, BY PUMPING SEWAGE OR BY ANY OTHER APPROVED METHOD WHICH IS NECESSARY FOR THE CONSTRUCTION OF THE WORK SHALL BE INCLUDED IN THE PRICE BID PER LINEAL FOOT OF STORM SEWERS, ITEM 1-2.

DISPOSAL OF SURPLUS EXCAVATION

THE CONTRACTOR SHALL UTILIZE A PART OF THE EXCESS EXCAVATION MATERIAL FOR THE FILLING OF LOCAL DEPRESSIONS AND IMPROVEMENT OF SURFACE DRAINAGE ON THE AVAILABLE RIGHT-OF-WAY ADJACENT TO THE NORTHERLY END OF THE PROJECT AND ELSEWHERE AS MAY BE DIRECTED BY THE ENGINEER.

ALL REMAINING SURPLUS EXCAVATION RESULTING FROM ANY ITEMS OF THE CONTRACT SHALL BE DISPOSED OF BY THE CONTRACTOR IN THE GENERAL AREA LYING BETWEEN THE EXPRESSWAY AND CUYAHOGA FALLS AVENUE IMMEDIATELY SOUTH OF RAMP "G". THE EXACT LOCATION OF THE AREA FOR WASTING TO BE DESIGNATED BY THE ENGINEER.

DISPOSAL OF PAVEMENT

PAVEMENT REMOVED UNDER ITEM E-8 MAY BE PLACED IN EMBANKMENT IN ACCORDANCE WITH SECTION E-1.05 AND WILL BE CONSIDERED RANDOM MATERIAL EXCEPT WHERE USED IN THE PART OF THE EMBANKMENT MORE THAN THREE (3) FEET BELOW THE NEW PAVEMENT, IN WHICH CASE IT WILL BE CONSIDERED ROCK. ANY STEEL PROTRUDING FROM THE REMOVED PAVEMENT SHALL BE CUT OR BURNED SO THAT IT WILL NOT PROJECT MORE THAN ONE (1) INCH FROM ANY SIDE. THE QUANTITY OF PAVEMENT REMOVAL MAY BE ADJUSTED IN THE FIELD.

REMOVAL OF REFUSE AND DEBRIS

ANY EXISTING REFUSE, DEBRIS OR ANY OTHER UNSUITABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR IN THE AREA DESCRIBED UNDER "DISPOSAL OF SURPLUS EXCAVATION". THE YARDAGE OF REFUSE OR DEBRIS, OR OTHER UNSUITABLE MATERIAL REMOVED AND DISPOSED OF WILL BE DETERMINED BY FINAL CROSS SECTIONS, AND THE YARDAGE SO DETERMINED WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR ROADWAY EXCAVATION, ITEM E-1.

REMOVAL (MISCELLANEOUS)

THE REMOVAL AND DISPOSAL OF ANY EXISTING PAVEMENT, SIDEWALK, BUILDING FOUNDATIONS, STEPS, CELLAR FLOORS, WELL COVERS, CISTERN COVERS, SEPTIC TANKS, CONCRETE BASES, WALLS, CURB, CURB AND GUTTER, RAILS, TIES, POLE STUBS, HEADWALLS, PIPES, DRIVEWAYS AND GARAGE FLOORS, OR OTHER MASONRY LYING WITHIN THE LIMITS OF RIGHT-OF-WAY (AND NOT SPECIFICALLY PAID FOR UNDER A SEPARATE ITEM) ARE CLASSIFIED AS EXCAVATION AND PAID FOR UNDER THE EXCAVATION ITEM OF WHICH THEY ARE A PART. WHERE ANY PAVEMENT OR SIDEWALK LYING WITHIN, OR BELOW, THE LIMITS OF ROADWAY EXCAVATION, ITEM E-1, OR EXCAVATION FOR STRUCTURES, ITEM E-2, ARE PAID FOR UNDER A SEPARATE ITEM, THE PAY LIMITS FOR EXCAVATION, ITEM E-1 OR E-2, SHALL BE THE BOTTOM OF PAVEMENT OR SIDEWALK.

PAVEMENTS, SIDEWALKS, STEPS, CELLAR FLOORS OR OTHER MASONRY SHALL BE EXCAVATED TO A DEPTH OF THREE (3) FEET BELOW THE PROPOSED PAVEMENT SUBGRADE, IF LOCATED WITHIN THE PROPOSED PAVEMENT AREA, AND TO A DEPTH OF THREE (3) FEET BELOW THE PROPOSED FINISHED SURFACE IF LOCATED WITHOUT THE LIMITS OF THE PROPOSED PAVEMENT AREA.

PAVEMENTS, SIDEWALKS, CELLAR FLOORS, OR OTHER MASONRY BELOW THE ABOVE LIMITS SHALL BE BROKEN UP INTO PORTIONS WHOSE AREA DOES NOT EXCEED ONE (1) SQUARE FOOT, BUT NEED NOT BE REMOVED.

BACKFILLING SHALL BE PERFORMED ACCORDING TO SECTION E-1.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS. WELLS, CISTERNS AND SEPTIC TANKS SHALL BE FILLED WITH BROKEN FOUNDATION MASONRY OR ROCK PLACED AS ROCK EMBANKMENT ACCORDING TO SECTION E-1.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

PAYMENT FOR ALL OF THE ABOVE OPERATIONS SHALL BE INCLUDED IN CONTRACT UNIT PRICE BID FOR ROADWAY EXCAVATION, ITEM E-1, AND EXCAVATION FOR STRUCTURES, ITEM E-2.

ADDITIONAL EXCAVATION NECESSARY TO PERFORM ANY OF THE ABOVE OPERATIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER CUBIC YARD FOR ROADWAY EXCAVATION, ITEM E-1, AND EXCAVATION FOR STRUCTURES, ITEM E-2.

INLETS, MANHOLES AND PIPES

THE PROPOSED ELEVATIONS AND LOCATIONS OF CATCH BASINS, MANHOLES AND PIPES AND THE ESTIMATED LENGTHS OF PIPES MAY BE ADJUSTED BY THE ENGINEER DURING CONSTRUCTION.

PLASTERING MANHOLES AND INLETS

THE PLASTERING OF THE INSIDE OF MANHOLES AND INLETS AS REQUIRED UNDER ITEM 1-8 SHALL BE OMITTED. INSIDE MORTAR JOINTS SHALL BE NEATLY STRUCK.

LENGTH OF PIPE SPECIALS

THE NUMBER OF LINEAL FEET OF PIPE TO BE PAID FOR SHALL BE THE LENGTH OF THE PIPE LINE LESS THE ASSUMED LENGTHS (3 FEET) OF SPECIALS, REGARDLESS OF THE ACTUAL LENGTH OF PIPE SPECIAL USED.

IF ACTUAL LENGTH OF PIPE SPECIAL IS LESS THAN THREE (3) FEET, THE CONTRACTOR SHALL FURNISH ENOUGH EXTRA PIPE TO MAKE UP THE DIFFERENCE BETWEEN THE ASSUMED AND ACTUAL LENGTHS, AT THE PRICE BID FOR EACH SPECIAL. IF THE ACTUAL LENGTH OF THE PIPE SPECIAL USED IS GREATER THAN THREE (3) FEET, THE EXTRA LENGTH OF EACH PIPE SPECIAL, OVER AND ABOVE THE ASSUMED LENGTH, SHALL BE PAID FOR AS LINEAL FEET OF PIPE.

GUARD RAIL

WHERE ODD LENGTHS OF GUARD RAIL ARE NECESSITATED BY THE LOCATION OF LUMINAIRE POLES, RETAINING WALLS, ETC., THE END PANELS ADJACENT TO THE LUMINAIRE POLES, WALLS ETC., SHALL BE CUT AND THE GUARD RAIL POSTS SO ARRANGED THAT THE MINIMUM POST SPACING IS 6'-3".

THE STATIONS SHOWN FOR THE BEGINNING OR END OF A GUARD RAIL RUN MAY BE ADJUSTED, SUBJECT TO THE APPROVAL OF THE ENGINEER, SO AS TO OBTAIN THE STANDARD POST SPACING OF 12'-6".

ANY CUTTING, FABRICATING, AND ADDITIONAL PARTS AND MATERIAL REQUIRED TO ACCOMPLISH THE ABOVE SHALL BE INCLUDED IN THE PRICE BID PER LIN. FT. OF GUARD RAIL, ITEM I-15.

THE MINIMUM ALLOWABLE RADIUS FOR CURVED SECTIONS OF GUARD RAIL SHALL BE 20 FT.

GENERAL

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 THE PLANS.

WORK BY THE CITY OF AKRON

WITHIN THE CORPORATE LIMITS OF THE CITY OF AKRON THE CITY WILL PERFORM ANY WORK (NOT INCORPORATED IN THESE PLANS) NECESSARY TO PROPERLY JOIN THE NEW AND EXISTING PAVEMENTS AND WALKS AT THE TERMINI OF THE NEW PAVEMENTS AND WALKS. THE CITY WILL PERFORM ANY PAVEMENT REPAIR BEYOND THE LIMITS OF PROPOSED PAVEMENT DUE TO SEWER CONSTRUCTION AND WILL SEAL AND FILL (BY MUD JACK) THE EXISTING SEWERS THAT ARE TO BE ABANDONED.

THE CITY WILL ALSO WRECK AND REMOVE ALL EXISTING BUILDINGS WITHIN THE LIMITS OF THE EASEMENT LINES. THE CITY WILL WRECK THE BUILDINGS TO THE TOP OF THE EXISTING CELLAR FOUNDATIONS AND REMOVE ALL THE RESULTING DEBRIS.

TRAFFIC

PORTIONS OF THIS PROJECT SHALL BE CONSTRUCTED UNDER TRAFFIC, AND THE CONTRACTOR, TO THE SATISFACTION OF THE ENGINEER, SHALL PLAN AND CONDUCT HIS OPERATIONS SO THAT TRAFFIC SHALL BE MAINTAINED AS DESCRIBED BELOW.

GLENWOOD AVENUE

TWO-WAY TRAFFIC WILL BE MAINTAINED AT ALL TIMES.

TALLMAGE AVENUE

TWO-WAY TRAFFIC WILL BE MAINTAINED AT ALL TIMES.

GORGE BOULEVARD (BELODEN AVENUE TO EASTON DRIVE)

TWO-WAY TRAFFIC WILL BE MAINTAINED AT ALL TIMES.

CUYAHOGA FALLS AVENUE

TWO-WAY TRAFFIC WILL BE MAINTAINED AT ALL TIMES.

TEMPORARY ROADWAYS, CROSSING THE EXPRESSWAY ON PLUGS LEFT IN THE EXPRESSWAY EXCAVATION NEAR THE GLENWOOD AND TALLMAGE UNDERPASS STRUCTURES, SHALL BE CONSTRUCTED, MAINTAINED AND REMOVED BY THE CONTRACTOR AND AS DIRECTED BY THE ENGINEER.

ITEM T-10 AND ITEM M-10, ESTIMATED AND PAID FOR UNDER SEPARATE ITEMS SHALL BE APPLIED IN THE AMOUNT SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. ALL OTHER WORK, SUCH AS GRADING AND DRAINAGE, NECESSARY FOR THE CONSTRUCTION AND MAINTENANCE OF THESE TEMPORARY ROADWAYS SHALL BE PAID FOR UNDER THE ITEM, "MAINTAINING TRAFFIC".

IN ADDITION TO THE REQUIREMENTS OF SECTION G-9.07, "BARRICADES", "DANGER" AND "WARNING" SIGNS, THE CONTRACTOR SHALL DISPLAY ONE "PLEASE - MEN WORKING ON ROAD" SIGN FURNISHED BY THE STATE AT EACH END OF EACH ZONE WHERE WORK IS IN PROGRESS AND IN SUCH A POSITION AS TO BE VISIBLE TO THE TRAFFIC APPROACHING THE ZONE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESERVATION OF THESE SIGNS, SHALL ADVANCE THE SIGNS AS WORK PROGRESSES AND SHALL RETURN THE SIGNS TO THE STATE AT THE COMPLETION OF THE WORK.

IN ADDITION TO THE ABOVE, SECTION G-4.05 (MAINTENANCE OF LOCAL TRAFFIC) WILL BE IN FORCE DURING THE ENTIRE LIFE OF THE CONTRACT.

IN ADDITION TO THE ABOVE, THE ITEM OF "MAINTAINING TRAFFIC" SHALL INCLUDE FURNISHING LIGHTS, SIGNS (OTHER THAN THOSE MENTIONED ABOVE), BARRICADES AND WATCHMEN, PLUS THE DISPLAYING AND ADVANCING OF THE "PLEASE - MEN WORKING ON ROAD" SIGNS TO ASSURE THE FLOW OF TRAFFIC TWENTY-FOUR (24) HOURS DAILY.

ALL OF THE ABOVE EXCEPT TRAFFIC BOUND SURFACE COURSE, ITEM T-10 AND CALCIUM CHLORIDE, ITEM M-10 ARE INCLUDED IN THE LUMP SUM BID FOR "MAINTAINING TRAFFIC".

DESIGN SPEED: 50 M.P.H.

BLANKET COURSE (E-1.05 GRANULAR MATERIAL)

GRANULAR MATERIAL SHALL BE AS DEFINED IN SECTION E-1.05 OF THE OHIO DEPARTMENT OF HIGHWAY CONSTRUCTION AND MATERIAL SPECIFICATIONS. THE E-1.05 GRANULAR MATERIAL (GRAVEL AND SAND) BLANKET COURSE SPECIFIED THROUGHOUT THE PLANS SHALL BE OBTAINED FROM ROADWAY EXCAVATIONS. THIS MATERIAL SHALL BE PLACED AS INDICATED ON THE PLANS. COST SHALL BE INCLUDED IN THE PRICE BID PER CUBIC YARD FOR ROADWAY EXCAVATION.

PROVIDE 6" MINIMUM THICK BLANKET COURSE OF E-1.05 GRANULAR MATERIAL ACROSS ALL FILLS BELOW THE CONCRETE SLAB.

BLANKET COURSE (S.S.-5)

IN THE EVENT THAT S.S.-5 BLANKET MATERIAL IS OBTAINED FROM ROADWAY EXCAVATION, SUCH QUANTITY OF S.S.-5 MATERIAL PAID FOR AS CLASSIFIED EMBANKMENT SHALL BE DEDUCTED FROM THE PAY QUANTITY FOR ITEM E-1.

PAVEMENT

PLACING AND FINISHING CONCRETE PAVEMENT

HAND-FINISHING AS PER SECTION T-71.211 OF THE GENERAL SPECIFICATIONS WILL BE PERMITTED AT THE FOLLOWING LOCATIONS:

- INTERSECTIONS.
- RAMPS WHERE SHARP CURVATURE PREVENTS THE USE OF A FINISHING MACHINE.
- SECTIONS WHERE THE MAINTENANCE OF TRAFFIC REQUIRES HAND-FINISHING.
- VARIABLE WIDTH LANES WHICH IN THE OPINION OF THE ENGINEER REQUIRE HAND-FINISHING.

SUPERELEVATION

SUPERELEVATED CURVES SHALL BE BUILT WITHOUT CROWN. THE CROWN SHALL BE WORKED OUT OF THE PAVEMENT IN THE AREA INDICATED ON THE PAVEMENT DETAILS.

PAVEMENT JOINTS

THE LOCATION OF CONSTRUCTION JOINTS NOT INDICATED ON THE PLANS SHALL BE LOCATED BY THE CONTRACTOR SUBJECT TO THE APPROVAL OF THE ENGINEER.

FLEXIBLE FORMS

APPROVED FLEXIBLE FORMS MAY BE USED FOR CONSTRUCTION OF CIRCULAR PAVEMENT EDGES, CIRCULAR CONCRETE CURBS AND CONCRETE CURB TRANSITIONS OF SHORT RADIUS.

REINFORCEMENT

ALL PAVEMENT REINFORCEMENT SHALL BE IN ACCORDANCE WITH STANDARD DRAWING B-7-71R, 5-22-50 EXCEPT WHERE TYPE "D" STANDARD DRAWING B-7-71R, 2-1-47 IS SPECIFIED. IN THE EVENT THAT TYPE "D" IS NOT AVAILABLE THE REINFORCEMENT SHOWN IN STANDARD DRAWING B-7-71R, 5-22-50 SHALL BE USED.

SCALE: None
 MADE: 8/12 DATE: 9-9-50
 TRCD: DATE: _____
 CHKD: DATE: _____

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK
 766 SHEET

GENERAL SUMMARY ESTIMATED QUANTITIES

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	POST WAR
2	OHIO	U-687(B)		

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
QUANTITIES

CODE TYPE 6708

ITEM NO.	DESCRIPTION	UNIT	NORTH OF GLENWOOD STA. 65+50	SOUTH OF GLENWOOD STA. 65+50	TOTAL
PAVEMENT					
B-71	9" REINFORCED PORTLAND CEMENT CONCRETE BASE COURSE	SO. YDS.	51,190	18,535	69,725
1-7	REINFORCED CONCRETE APPROACH SLABS	SO. YDS.	294	147	441
1-12	TYPE 2 CONCRETE CURB and GUTTER	LIN. FT.	303		303
1-12	COMBINATION CONCRETE CURB AND GUTTER (3'-0" WIDE)	LIN. FT.		275	275
1-12	TYPE 2-A CONCRETE CURB	LIN. FT.	461		461
1-12	TYPE 2-A MODIFIED CONCRETE CURB	LIN. FT.	5,532		5,532
1-12	TYPE 4-A MODIFIED CONCRETE CURB	LIN. FT.	2,383	861	3,244
1-21	WHITE PORTLAND CEMENT CONCRETE MEDIAN PAVEMENT, AS PER PLAN	SO. YDS.	22	320	342
T-50	3" HOT-MIXED, HOT-LAID ASPHALTIC CONCRETE SURFACE COURSE, TYPE "B" (60-70)	SO. YDS.	50,532	18,133	68,665
T-71	7" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT	SO. YDS.	156		156
T-71	8" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT	SO. YDS.	483		483
ROADWAY					
E-1	ROADWAY EXCAVATION	CU. YDS.	294,197	156,800	450,997
E-2	EXCAVATION FOR STRUCTURES	CU. YDS.	36		36
* E-2	EXCAVATION FOR STRUCTURES (ROCK AND SHALE)	CU. YDS.	176		176
E-8	REMOVAL AND DISPOSAL OF EXISTING SANDSTONE CURB	LIN. FT.	3,714		3,714
E-8	REMOVAL AND DISPOSAL OF EXISTING CONCRETE PAVEMENT	SO. YDS.	5,803		5,803
E-8	REMOVAL AND DISPOSAL OF EXISTING SIDEWALK	SO. FT.	21,852	1,200	23,052
E-8	REMOVAL AND DISPOSAL OF CONCRETE CURB AND GUTTER	LIN. FT.	25		25
E-8	REMOVAL AND DISPOSAL OF EXISTING BRICK GUTTER	SO. FT.	1,318		1,318
E-11	WATER	M. GALS.	540	660	1,200
* E-12	6" PIPE REMOVED AND STORED (WATER MAIN)	LIN. FT.	180	180	360
E-12	10" PIPE REMOVED AND DISPOSED OF	LIN. FT.	222		222
E-12	12" PIPE REMOVED AND DISPOSED OF	LIN. FT.	425		425
E-12	15" PIPE REMOVED AND DISPOSED OF	LIN. FT.		180	180
E-12	20" PIPE REMOVED AND DISPOSED OF	LIN. FT.	519		519
E-12	24" PIPE REMOVED AND DISPOSED OF	LIN. FT.	218		218
1-2	8" STANDARD STRENGTH VITRIFIED SEWER PIPE, SEC. M-6.8(a) FOR STORM SEWERS	LIN. FT.	133	10	143
1-2	12" STANDARD STRENGTH VITRIFIED SEWER PIPE, SEC. M-6.8(a) FOR STORM SEWERS	LIN. FT.	4224	1,494	5718
1-2	15" STANDARD STRENGTH VITRIFIED SEWER PIPE, SEC. M-6.8(a) FOR STORM SEWERS	LIN. FT.	127		127
1-2	18" STANDARD STRENGTH VITRIFIED SEWER PIPE, SEC. M-6.8(a) FOR STORM SEWERS	LIN. FT.	327	63	390
1-2	24" STANDARD STRENGTH VITRIFIED SEWER PIPE, SEC. M-6.8(a) FOR STORM SEWERS	LIN. FT.	678	44	722
1-2	27" STANDARD REINFORCED CONCRETE SEWER PIPE, SEC. M-6.6(g) WITH VITRIFIED HALF LINER FOR STORM SEWERS	LIN. FT.	289	623	912
1-2	33" STANDARD REINFORCED CONCRETE SEWER PIPE, SEC. M-6.6(g) WITH VITRIFIED HALF LINER FOR STORM SEWERS	LIN. FT.		287	287
1-2	36" STANDARD REINFORCED CONCRETE SEWER PIPE, SEC. M-6.6(g) WITH VITRIFIED HALF LINER FOR STORM SEWERS	LIN. FT.		1,068	1,068
1-2	42" STANDARD REINFORCED CONCRETE SEWER PIPE, SEC. M-6.6(g) WITH VITRIFIED HALF LINER FOR STORM SEWERS	LIN. FT.	2,733		2,733
1-2	27" STANDARD REINFORCED CONCRETE SEWER PIPE, SEC. M-6.6(g) FOR STORM SEWERS	LIN. FT.		60	60
1-4	6" PIPE UNDERDRAINS	LIN. FT.	8,256		8,256
1-5	8" PIPE SPECIAL FOR STORM SEWERS	EA.	1		1
1-5	27" PIPE SPECIAL WITH VITRIFIED HALF LINER FOR STORM SEWERS	EA.		1	1
1-8	MANHOLE TYPE "A", AS PER PLAN	EA.		6	6
1-8	MANHOLE TYPE "B", AS PER PLAN	EA.	11	4	15
1-8	MANHOLE TYPE "C" - STANDARD NO. 1	EA.	3	4	7

ITEM NO.	DESCRIPTION	UNIT	NORTH OF GLENWOOD STA. 65+50	SOUTH OF GLENWOOD STA. 65+50	TOTAL
ROADWAY					
1-8	MANHOLE TYPE "D" - STANDARD NO. 2	EA.	2	3	5
1-8	MANHOLE TYPE "E", AS PER PLAN	EA.	9		9
1-8	MANHOLES ADJUSTED TO GRADE (RAISED)	EA.	12		12
1-8	DROP INLETS, AS PER PLAN	EA.		2	2
1-8	WINGWALL INLET, AS PER PLAN	EA.		1	1
1-8	CATCH BASIN, STANDARD NO. 3-A	EA.	5		5
SPECIAL	INLET APRON, TYPE "A"	EA.	10	7	17
SPECIAL	INLET APRON, TYPE "B"	EA.	10		10
SPECIAL	SPECIAL APRON, AS PER PLAN	EA.		2	2
1-8	SIDE DITCH INLETS, AS PER PLAN	EA.	15	3	18
SPECIAL	RAMP FLUME, AS PER PLAN	EA.	4	2	6
1-8	INLET, AKRON STANDARD NO. 3	EA.	21		21
1-8	MANHOLE ADJUSTED TO GRADE (LOWERED)	EA.	1		1
1-13	4" PORTLAND CEMENT CONCRETE SIDEWALK	SO. FT.	556 7212		556 7212
1-15	GUARD RAIL, STEEL BEAM TYPE (DEEP), AS PER PLAN	LIN. FT.	6281	2503	8784
1-15	GUARD RAIL, STEEL BEAM TYPE (DEEP) WITH WOOD POSTS	LIN. FT.	5734		5734
1-16	MANHOLE ABANDONED	EA.	1		1
1-16	CATCH BASINS ABANDONED	EA.	11		11
1-16	FLUME ABANDONED	EA.	1		1
L-9	SEEDING AND PROTECTING, TYPE "A"	SO. YDS.	93,393	56,032	149,425
L-9	COMMERCIAL FERTILIZER (10-6-4)	TONS	8.88	5.12	14.00
L-10	SODDING	SO. YDS.	5,327	888	6,215
S-25	ELECTRICAL EQUIPMENT	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM
S-27	46" x 46" REINFORCED CONCRETE PIPE, AS PER PLAN	LIN. FT.	120		120
* SPECIAL	INSTALLING 36" WATER MAIN, AS PER PLAN	LIN. FT.	108		108
SS-5	CLASSIFIED EMBANKMENT MATERIAL	CU. YDS.	2,517		2,517
T-10	TRAFFIC BOUND SURFACE COURSE FOR MAINTAINING TRAFFIC	CU. YDS.	378		378
M-10	CALCIUM CHLORIDE FOR MAINTAINING TRAFFIC	TONS	8		8
Special	JUNCTION CHAMBER FOR STORM SEWERS	EA.	1	1	2
Special	MAINTAINING TRAFFIC	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM
RETAINING WALLS <i>← Omitted</i>					
FOR ESTIMATED QUANTITIES FOR RETAINING WALLS SEE SHEET 115					
STRUCTURES					
FOR ESTIMATED QUANTITIES FOR STRUCTURES OVER 20' SEE SHEET 119					

SCALE None HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 DESIGNED BY DATE 2/22/50 SURVEILLING ENGINEERS
 TRACED BY DATE 2/22/50 KANSAS CITY NEW YORK
 CHKD. BY DATE 2/14/50 766 SHEET

* FEDERAL AND STATE FUNDS DO NOT PARTICIPATE IN THESE ITEMS.

DETAIL SUMMARY

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	SOUTH OF GLENWOOD STA. 65+50					NORTH OF GLENWOOD STA. 65+50															GRAND TOTAL	
			EXPRESSWAY STA. 40+68.50 TO STA. 65+50	RAMP "A" SHEET 81 & SH. 81A	RAMP "B" SHEET 82	CENTRAL WAY SHEET 98	SUB TOTAL	EXPRESSWAY STA. 65+50 TO STA. 122+00	RAMP "A" SHEET 81 & SH. 81A	RAMP "B" SHEET 82	RAMP "C" SHEET 83 & SH. 81A	RAMP "D" SHEET 84	RAMP "E" SHEET 85	RAMP "F" SHEET 86	RAMP "G" SHEET 87	RAMP "H" SHEET 88	GLENWOOD AVENUE SHEET 89	YORK STREET SHEET 98	GORGE BLVD. STA. 7+91.44 TO STA. 16+91.53 SHEETS 93 & 94	GORGE BLVD. STA. 16+92.17 TO STA. 24+68.15 SHEET 94	TALLMADGE AVENUE SHEET 90	GORGE BLVD. STA. 0+87.00 TO STA. 6+40.00 SHEET 96		SUB TOTAL
PAVEMENT																								
B-71	9" REINFORCED PORTLAND CEMENT CONCRETE BASE COURSE	SO. YDS.	15,965	1,367	1,203		18,535	30,731	174	227	1,081	1,502	1,150	1,408	2,562	2,214	2,805		2,506	2,167	2,282	381	51,190	69,725
I-7	REINFORCED CONCRETE APPROACH SLAB	SO. YDS.	147				147												147				294	441
I-12	TYPE 2 CONC. CURB and GUTTER	LIN. FT.						303															303	303
I-12	COMBINATION CONCRETE CURB AND GUTTER (3'-0" WIDE)	LIN. FT.	275				275																	275
I-12	TYPE 2-A CONCRETE CURB	LIN. FT.																					461	461
I-12	TYPE 2-A MODIFIED CONCRETE CURB	LIN. FT.							85		189				183	301	822		1,639		1,425	551	337	5,532
I-12	TYPE 4-A MODIFIED CONCRETE CURB	LIN. FT.		511	350		861		43	115	314	528	508	391		484							2,383	3,244
I-21	WHITE PORTLAND CEMENT CONCRETE MEDIAN PAVEMENT	SO. YDS.	320				320													22			22	342
T-50	3" HOT-MIXED, HOT-LAID ASPHALTIC SURFACE COURSE	SO. YDS.	15,639	1,326	1,168		18,133	30,731	169	220	1,050	1,454	1,115	1,365	2,485	2,170	2,760		2,356	2,040	2,255	362	50,532	68,665
T-71	7" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT	SO. YDS.								9							10		30			67	40	156
T-71	8" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT	SO. YDS.																				483	483	483
ROADWAY																								
E-2	EXCAVATION FOR STRUCTURES (ROCK AND SHALE)	CU. YDS.						176															176	176
E-8	REMOVAL AND DISPOSAL OF EXISTING SANDSTONE CURB	LIN. FT.													142		1,371	485			1,653	63	3,714	3,714
E-8	REMOVAL AND DISPOSAL OF EXISTING CONCRETE PAVEMENT	SO. YDS.													367		2,485	781			2,170		5,803	5,803
E-8	REMOVAL AND DISPOSAL OF EXISTING SIDEWALK	SO. FT.				1,200	1,200								958		6,110	1,750	6,204		6,050	780	21,852	23,052
E-8	REMOVAL AND DISPOSAL OF CONCRETE CURB AND GUTTER	LIN. FT.																			25	25	25	25
E-8	REMOVAL AND DISPOSAL OF EXISTING BRICK GUTTER	SO. FT.																			1,318		1,318	1,318
E-11	WATER	W. GALS.					660																540	1,200
I-13	PORTLAND CEMENT CONCRETE SIDEWALK (4" THICK)	SO. FT.								206			152	164	332	335	2,610		1,121		2,292		7,212	7,212
I-15	GUARD RAIL	LIN. FT.	1,800	420	238	45	2,503	4,087	50	50	294	345	329	337	50	47		48	644				6,281	8,784
L-9	SEEDING AND PROTECTING OR SEEDING ROADWAY AREAS (INCLUDES 25,000 LB. YAC UNDER NORTH END OF MAIN DIABRECT)	SO. YDS.					56,032																93,393	149,425
L-9	COMMERCIAL FERTILIZER (10-6-4)	TONS					5.12																8.88	14.00
L-10	SODDING	SO. YDS.					888																5,327	6,215
S-25	ELECTRICAL EQUIPMENT	LUMP SUM																						
S-27	PIPE FOR ROADWAY CULVERT (48" x 46")	LIN. FT.						120															120	120
SPECIAL	INSTALLING 36" WATER MAIN (SEE SHEETS 12 AND 131)	LIN. FT.						108															108	108
T-10	TRAFFIC BOUND SURFACE COURSE	CU. YDS.																			189		378	378
SPECIAL	MAINTAINING TRAFFIC	LUMP SUM																						
M-10	CALCIUM CHLORIDE	TONS																			4		4	8

RETAINING WALLS *is Omitted*
FOR ESTIMATED QUANTITIES FOR RETAINING WALLS SEE SHEET 119

STRUCTURES
FOR ESTIMATED QUANTITIES FOR STRUCTURES OVER 20' SEE SHEET 119

* EXCAVATION FOR 36" WATER MAIN. SEE SHEETS 12 AND 131

EARTHWORK QUANTITIES

ITEM	SOUTH OF GLENWOOD STA. 65+50	NORTH OF GLENWOOD STA. 65+50	GRAND TOTAL
TOTAL EXCAVATION	156,800	294,197	450,997
TOTAL EMBANKMENT	129,936	107,543	237,479
TOTAL EMBANKMENT X 1.15	149,426	123,674	273,100
TOTAL WASTE	7,374	170,523	177,897

SCALE None HOWARD, NEEDLES, TAMMEN & BERGENDOFF
MADE D.W.K. DATE 9-11-60 CONSULTING ENGINEERS
TRCD. K.C. DATE 9-12-60 KANSAS CITY NEW YORK
CHKD. G.M. DATE 9-13-60 766 SHEET

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	13-B 146
2	OHIO	U-687(8)	POST WAR	

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
QUANTITIES

DETAIL SUMMARY OF ESTIMATED DRAINAGE QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	SOUTH OF GLENWOOD STA. 65+50										NORTH OF GLENWOOD STA. 65+50											GRAND TOTAL							
			VIADUCT N-ABUT. SEWER SHEET 102	EXP 45+88 TO 65+50 SHEET 99	LOOKOUT OUTFALL SEWER SHEET 99	WINGWALL INLET SHEET 99	CENTRAL WAY SHEET 99	RAMP A SHEET 99	RAMP B SHEET 99	GLENWOOD AVE. SHEET 99	SUB TOTAL	EXPRESSWAY			GLENWOOD AVE. SHEET 99	YORK ST. SHEET 100	RAMP C SHEET 100	RAMP F SHEET 100	TALLMADGE AVE. SHEET 100	RAMP D SHEET 100	RAMP E SHEET 100	GORGE BLVD. SHEET 100	RAMP H SHEET 101		RAMP G SHEET 101	SUB TOTAL					
												65+50 TO 71+00 SHEET 99	71+00 TO 99+00 SHEET 100	99+00 TO 125+63.85 SHEET 101																	
												71+00	99+00	125+63.85																	
E-2	EXCAVATION FOR STRUCTURES	CU. YD.																							36	36					
E-12	6" PIPE REMOVED AND STORED (WATER MAIN)	LIN. FT.						180							180											180	360				
E-12	10" PIPE REMOVED AND DISPOSED OF	LIN. FT.																								222	222				
E-12	12" PIPE REMOVED AND DISPOSED OF	LIN. FT.																								425	425				
E-12	15" PIPE REMOVED AND DISPOSED OF	LIN. FT.						180																			180	180			
E-12	20" PIPE REMOVED AND DISPOSED OF	LIN. FT.																								519	519				
E-12	24" PIPE REMOVED AND DISPOSED OF	LIN. FT.																								218	218				
1-2	8" VITRIFIED PIPE FOR SEWERS	LIN. FT.																								133	143				
1-2	12" VITRIFIED PIPE FOR SEWERS	LIN. FT.	586	415	113			174	108	98		1,494	665	747	1,246		252	62	224	114					346	241	90	76	161	422	5
1-2	15" VITRIFIED PIPE FOR SEWERS	LIN. FT.											127														127	127			
1-2	18" VITRIFIED PIPE FOR SEWERS	LIN. FT.		10									117		52												327	390			
1-2	24" VITRIFIED PIPE FOR SEWERS	LIN. FT.					44								576												678	722			
1-2	27" REINFORCED CONCRETE PIPE FOR SEWERS - WITH VITRIFIED CLAY LINER	LIN. FT.			623								623		140				149								289	912			
1-2	33" REINFORCED CONCRETE PIPE FOR SEWERS - WITH VITRIFIED CLAY LINER	LIN. FT.		287									287														287	287			
1-2	36" REINFORCED CONCRETE PIPE FOR SEWERS - WITH VITRIFIED CLAY LINER	LIN. FT.		1,068									1,068															1,068	1,068		
1-2	42" REINFORCED CONCRETE PIPE FOR SEWERS - WITH VITRIFIED CLAY LINER	LIN. FT.													1,448		1,285											2,733	2,733		
1-2	27" REINFORCED CONCRETE PIPE FOR SEWERS - WITHOUT VITRIFIED CLAY LINER	LIN. FT.								60			60														60	60			
1-4	6" PIPE UNDERDRAINS	LIN. FT.																													
1-5	PIPE SPECIAL - .8" x 60° BEND	EA.																													
1-5	27" PIPE SPECIAL WITH VITRIFIED HALF LINER FOR STORM SEWER	EA.																													
1-8	MANHOLE TYPE "A", AS PER PLAN	EA.		6									6																		
1-8	MANHOLE TYPE "B" AS PER PLAN	EA.		3									4	3	4		4											11	15		
1-8	MANHOLE TYPE "C" STANDARD NO. 1	EA.	4										4															3	7		
1-8	MANHOLE TYPE "D" STANDARD NO. 2	EA.																													
1-8	MANHOLE TYPE "E", AS PER PLAN	EA.																													
1-8	MANHOLES ADJUSTED TO GRADE (RAISED)	EA.																													
1-8	DROP INLETS	EA.																													
1-8	WINGWALL INLET - AS PER PLAN	EA.																													
1-8	CATCH BASIN - STANDARD NO. 3-A	EA.																													
1-8	INLET - AKRON STANDARD NO. 3	EA.																													
SPECIAL	INLET APRON - TYPE "A"	EA.																													
SPECIAL	INLET APRON - TYPE "B"	EA.																													
SPECIAL	SPECIAL APRON - AS PER PLAN	EA.																													
1-8	SIDE DITCH INLETS - AS PER PLAN	EA.																													
SPECIAL	RAMP FLUME - AS PER PLAN	EA.																													
1-8	MANHOLE ADJUSTED TO GRADE (LOWERED)	EA.																													
1-16	MANHOLE - ABANDON	EA.																													
1-16	CATCH BASIN - ABANDON	EA.																													
1-16	FLUME - ABANDON	EA.																													
S-27	PIPE FOR ROADWAY CULVERT 46" x 46"	LIN. FT.																													
Special	JUNCTION CHAMBER FOR SEWERS	EA.																													

SCALE None
 MADE B.M.N. DATE 9-11-50
 TRCD V.C. DATE 9-22-50
 CHKD. B.H.R. DATE 9-13-50
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK
 766 SHEET

Revised 4-16-51

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO	U-697(B)	POST WAR

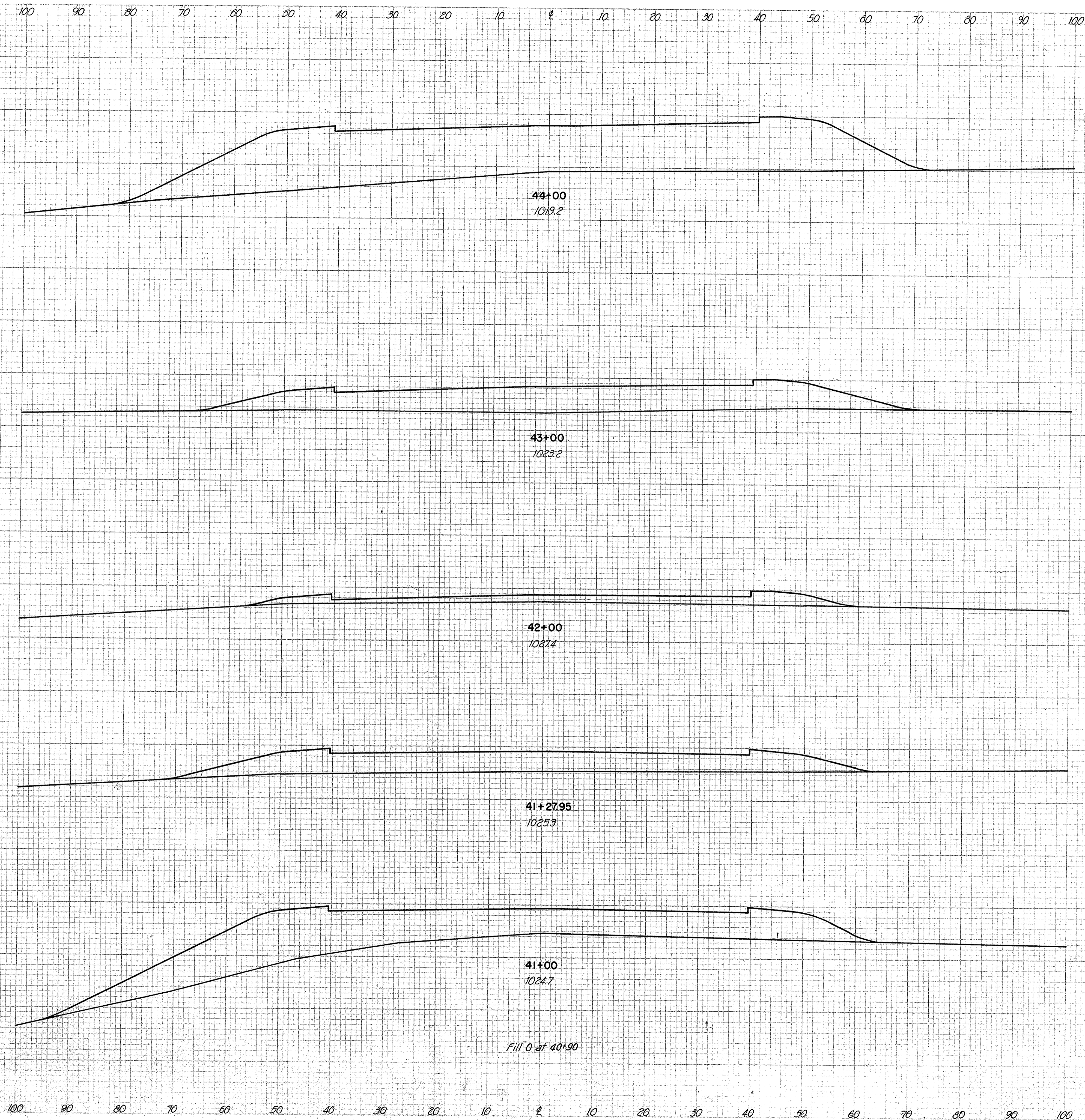
14
146

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

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

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

SEEDING	SODDING
Width Area Lin. Ft. Sq. Yds.	Width Area Lin. Ft. Sq. Yds.
98	0
956	0
74	0
722	0
56	0
505	0
70	0
267	0
102	0
102	0
102	0



END AREA	VOLUME	
	CUT	FILL
0	1255	
0		3306
0	530	
0		1278
0	160	
0		820
0	455	
0		686
0	870	
0		1161

SCALE: 1"=10'
 MADE P.R.M. DATE 6-1-50
 TRCD. A.E.R. DATE 6-2-50
 CKD. B.H.R. DATE 7-10-50

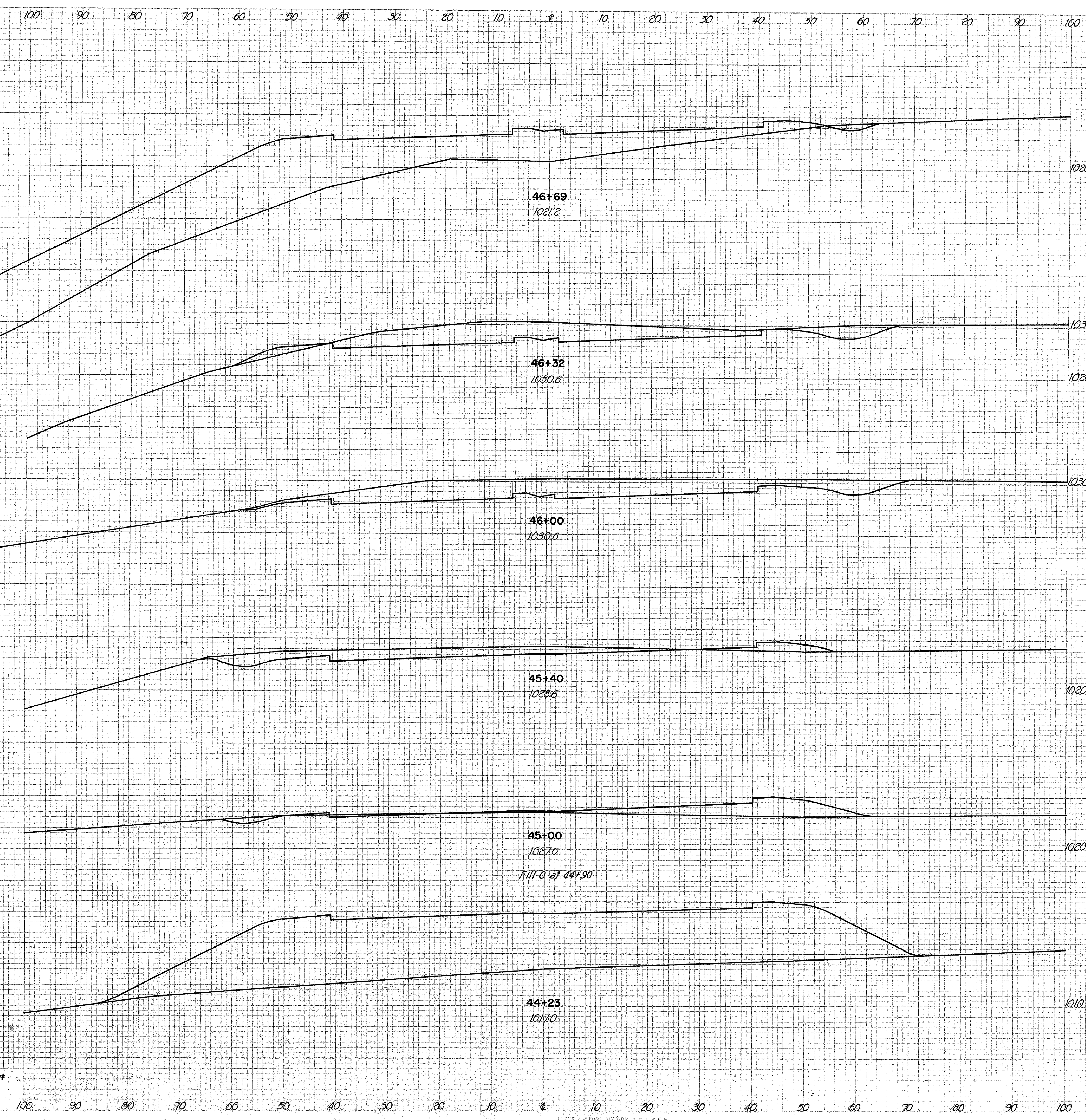
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK

PLATE 5 - CROSS SECTION 3, P. 4, C. 1, L.
 CHARLES BRUNNER COMPANY, INC.

DATE _____
 BY _____
 CHECKED _____
 NO. _____

DATE _____
 BY _____
 CHECKED _____
 NO. _____

SEEDING	SODDING	
	Width Lin. Ft.	Area Sq. Yds.
204	0	
581	0	
79	0	
276	0	
76	0	
460	0	
62	0	
280	0	
64	0	
702	0	
100	0	
253	0	

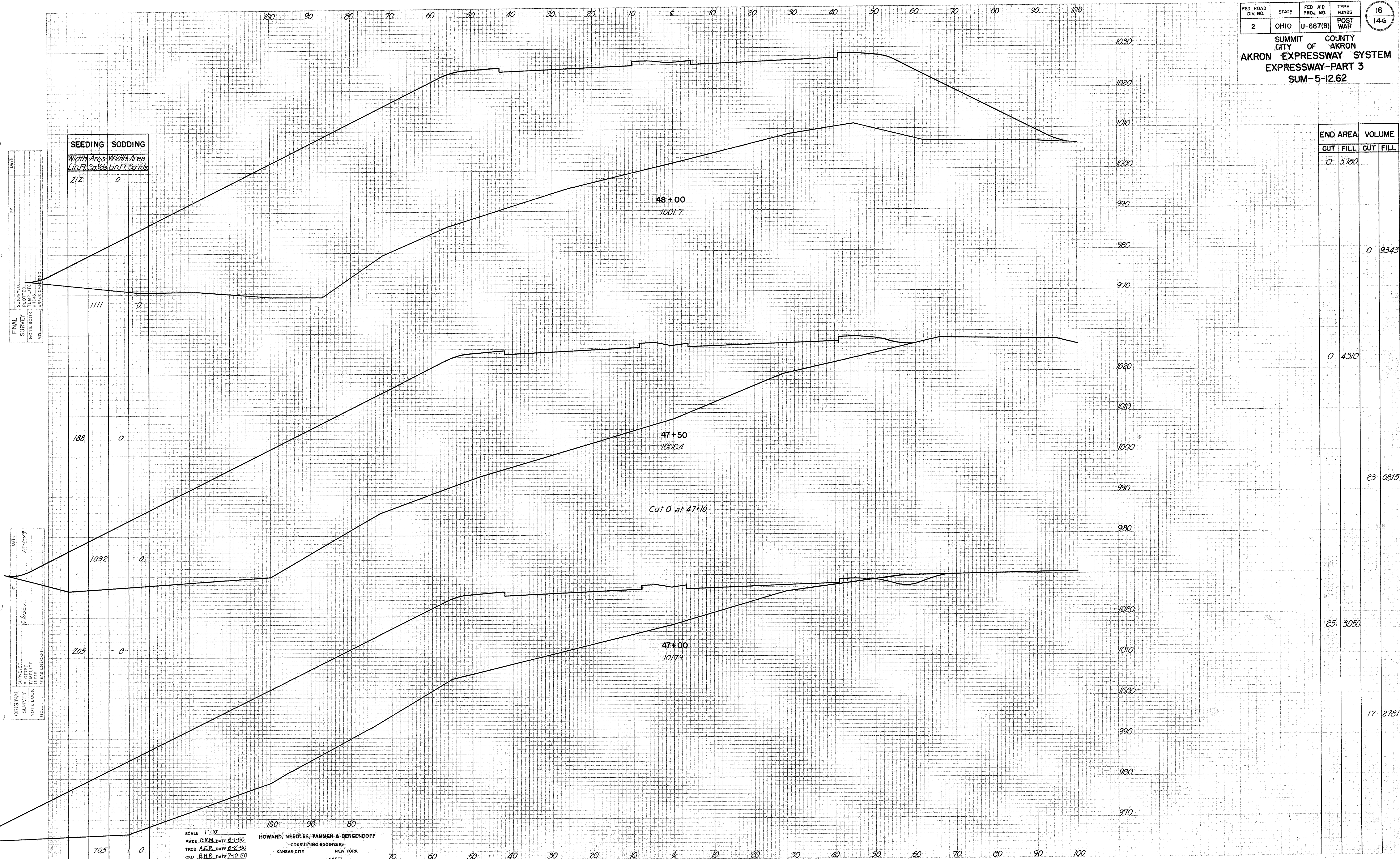


END AREA	VOLUME	
	CUT	FILL
5	1795	
		185
265	15	
		350
235	0	
		511
135	25	
		108
10	120	
		2
0	1465	
		0
		1159

SCALE 1"=10'
 MADE R.R.M. DATE 6-1-50
 TRCD A.E.R. DATE 6-2-50
 CKD B.H.R. DATE 7-10-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK

PLATE 5-CROSS SECTION S. P. A. & D. E.
 CHARLES BRIDGES & COMPANY, INC.



SEEDING		SODDING	
Width	Area	Width	Area
Lin Ft	Sq Yds	Lin Ft	Sq Yds
212		0	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	5780		

		0	9343
--	--	---	------

		0	4310
--	--	---	------

		23	6815
--	--	----	------

		25	3050
--	--	----	------

		17	2781
--	--	----	------

FINAL SURVEY
NOTE BOOK NO. _____
AREAS CHECKED _____

ORIGINAL SURVEY
NOTE BOOK NO. _____
AREAS CHECKED _____

SCALE 1"=10'
MADE R.P.M. DATE 6-1-50
TRCD A.E.R. DATE 6-2-50
CKD B.H.R. DATE 7-10-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

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

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

SEEDING	SODDING
Width Area Lin. Ft. Sq. Yds.	Width Area Lin. Ft. Sq. Yds.

190	0
850	0
183	0
1170	0
207	0
1072	0

SCALE 1"=10'
MADE B.R.M. DATE 6-1-50
TRCD. A.E.R. DATE 6-2-50
CKD. S.H.R. DATE 7-10-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

49+41
979.5

49+00
988.9

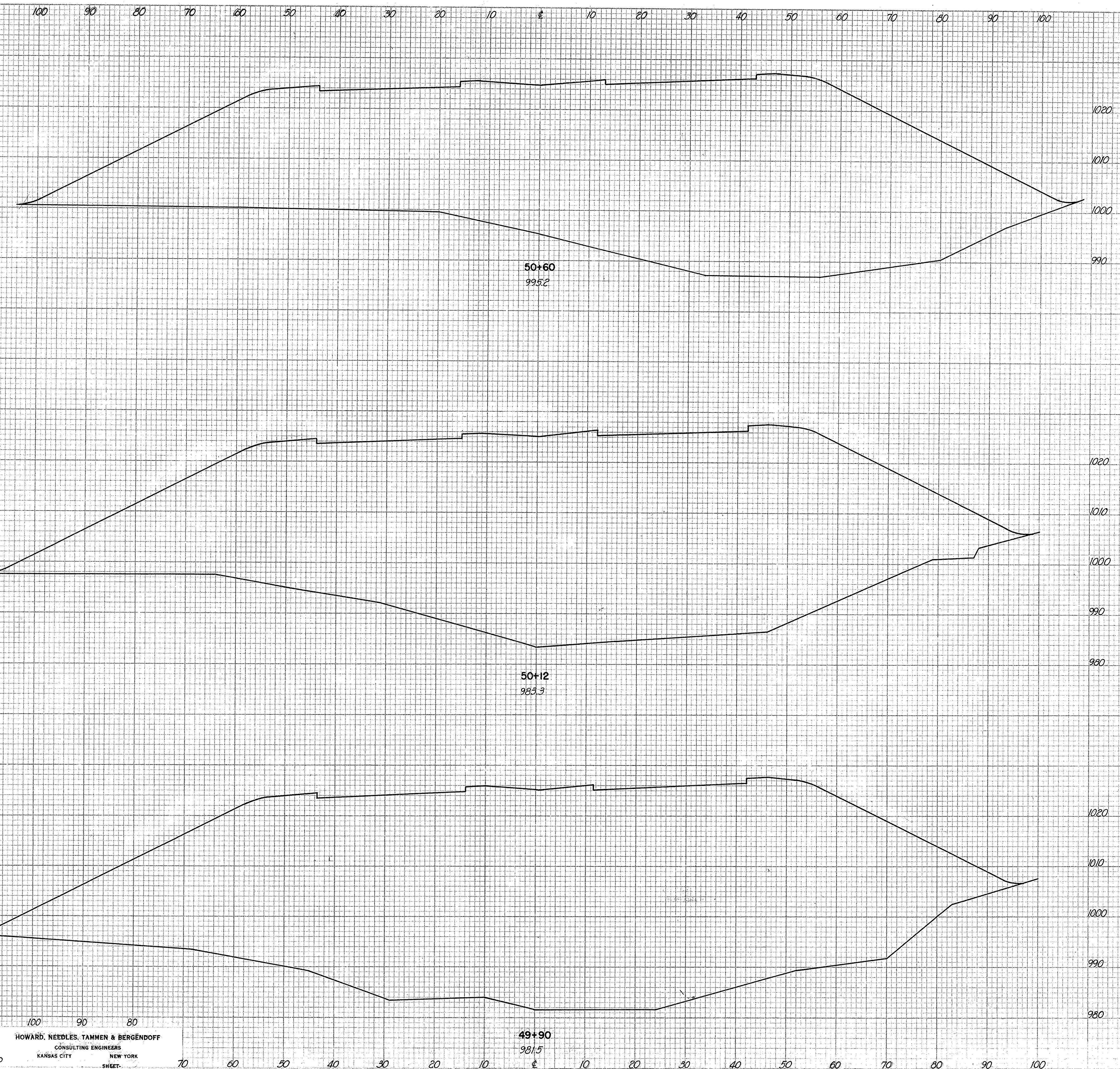
48+46
991.1

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	6540		
		0	9741
0	6290		
		0	12,760
0	6470		
		0	10,435

DATE _____ BY _____
FINAL SURVEY NOTE BOOK NO. _____
PLANNED PLANTING AREAS CHECKED _____

DATE 12-1-59 BY MRS. O. J. _____
ORIGINAL SURVEY NOTE BOOK NO. _____
PLANNED PLANTING AREAS CHECKED _____

SEEDING	SODDING
Width Area Lin. Ft. Sq. Yds.	Width Area Lin. Ft. Sq. Yds.
132	0
993	0
130	0
438	0
178	0
1001	0



END AREA	VOLUME	
	CUT	FILL
0	5010	
0	9315	
0	5470	
0	4712	
0	6095	
0	11,465	

SCALE 1"=10'
MADE P.R.M. DATE 6-1-50
TRCD. A.E.R. DATE 6-2-50
CRD. B.H.R. DATE 7-10-50

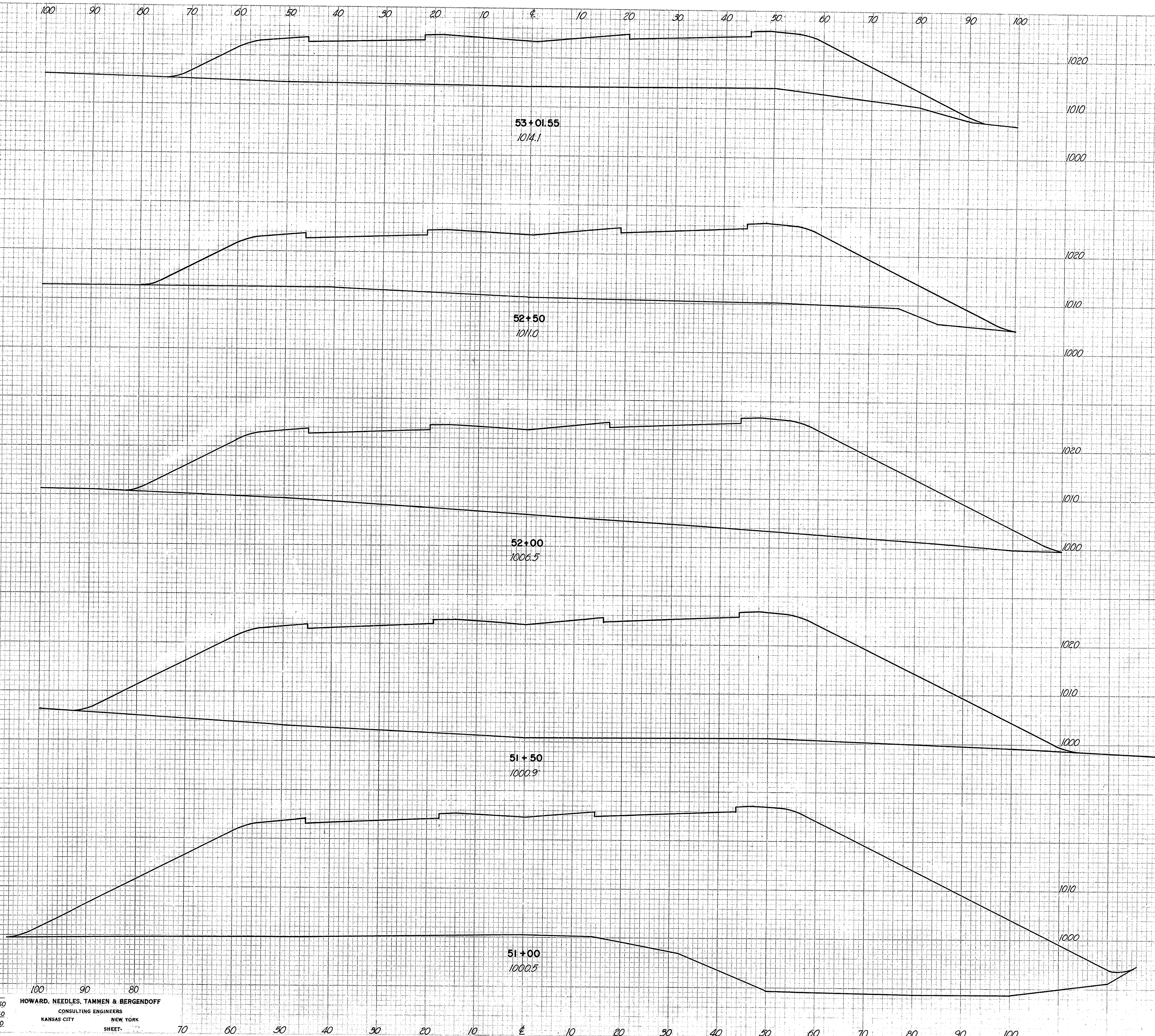
HOWARD, NEEDLES, TAMMEN & BERGENOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET _____

49+90
981.5

FINAL SURVEY BY
DATE
NO.

ORIGINAL SURVEY BY
DATE
NO.

SEEDING	SODDING	
	Width Area Lin Ft Sq Yds	Width Area Lin Ft Sq Yds
143	0	0
859	0	0
167	0	0
923	0	0
175	0	0
987	0	0
180	0	0
1083	0	0
210	0	0
871	0	0



END AREA	VOLUME	
	CUT	FILL
0	1380	
0		3136
0	1905	
0		4334
0	2775	
0		5898
0	3525	
0		7857
0	4890	
0		7333

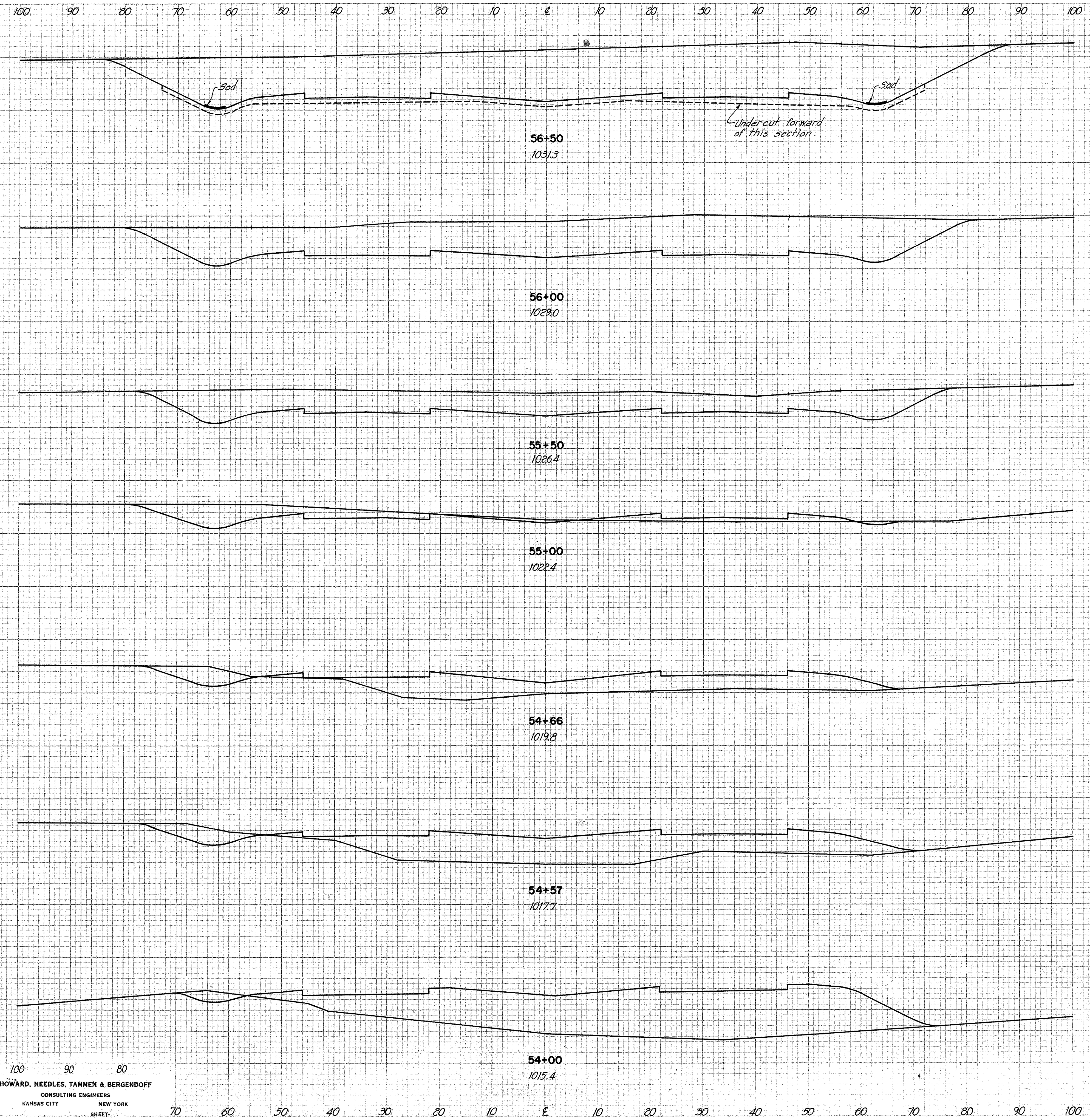
SCALE 1"=10'
MADE P.R.M. DATE 6-2-50
TRCD. A.E.R. DATE 6-5-50
CKD B.H.R. DATE 7-11-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET-

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

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

SEEDING	SODDING	Width Area		Width Area	
		Lin Ft	Sq Yds	Lin Ft	Sq Yds
144	8				
152	0	806	0	0	0
138	0				
750	0				
132	0				
700	0				
120	0				
449	0				
118	0				
119	0				
120	0				
954	0				
118	0				
1427	0				



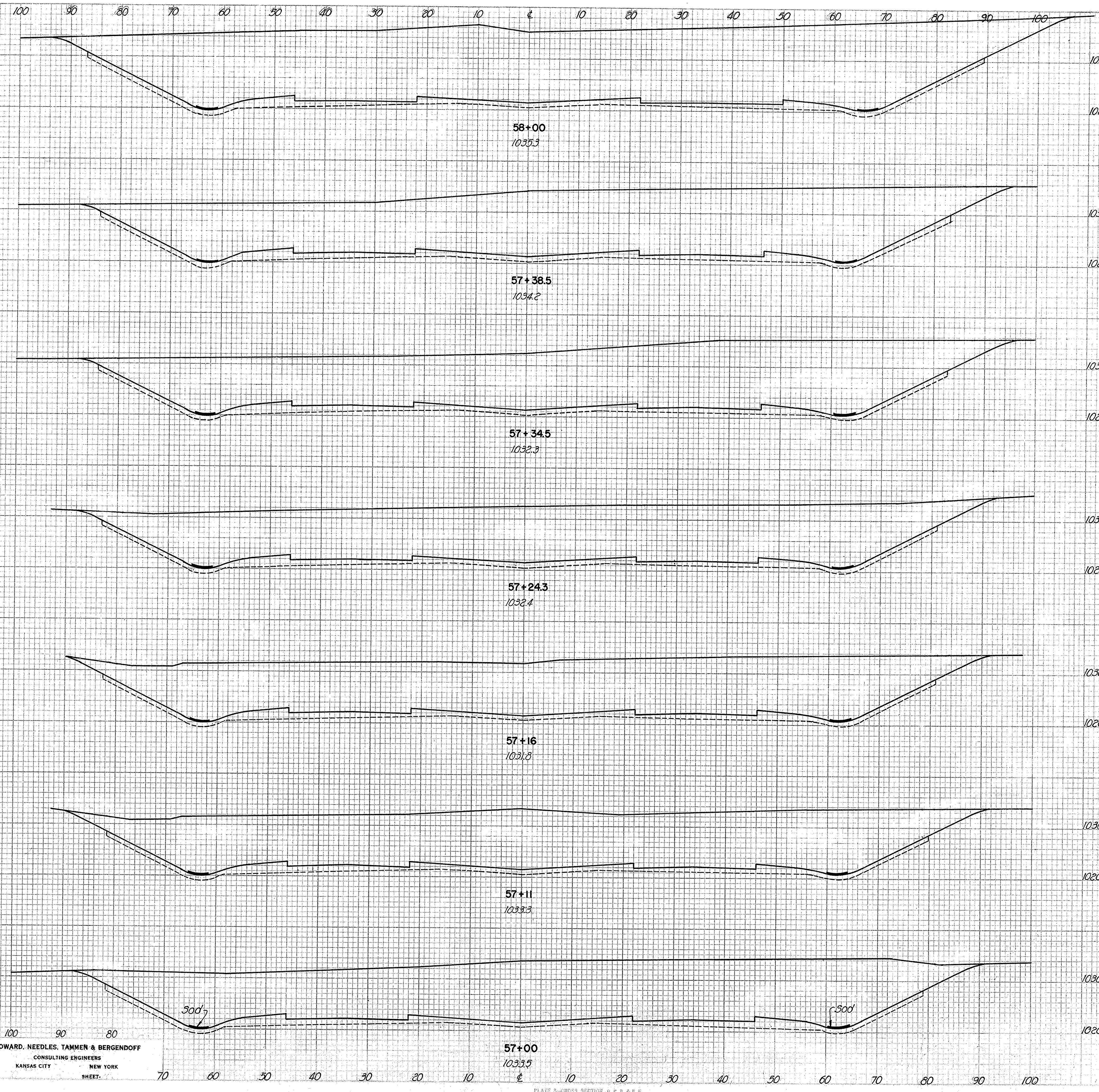
END AREA	VOLUME	
	CUT	FILL
1365	0	
	2153	0
960	0	
	1435	0
590	0	
	675	7
140	40	
	113	227
40	320	
	13	132
40	470	
	53	1367
15	825	
	8	4025

SCALE: 1"=10'
 MADE P.M. DATE 6-2-50
 TRCD. A.E.R. DATE 6-5-50
 CKD. B.H.R. DATE 7-11-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK

DATE: _____ BY: _____
 FINAL SURVEY NOTEBOOK NO. _____
 REVISIONS: _____

DATE: 11-1-49 BY: M. J. D. O. L.
 ORIGINAL SURVEY NOTEBOOK NO. _____
 REVISIONS: _____

SEEDING	SODDING	
	Width Lin. Ft.	Area Sq. Yds.
167	8	55
132	8	4
153	8	9
171	8	7
149	8	8
138	7	4
150	8	10
84	4	8
152	8	10
183	10	8
148	8	44



CLASS. EMB. MATERIAL	END AREA		VOLUME	
	AREA	VOL.	CUT	FILL
	2528	193		
			3276	430
	2040	185		
			300	27
			1983	183
			715	69
			1805	182
			555	56
			1826	181
			340	33
			1846	178
			760	72
			1887	177
			3755	308

SCALE 1"=10'
 MADE R.E.M. DATE 6-2-50
 TRCD A.E.R. DATE 6-5-50
 CKD B.H.R. DATE 7-11-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK

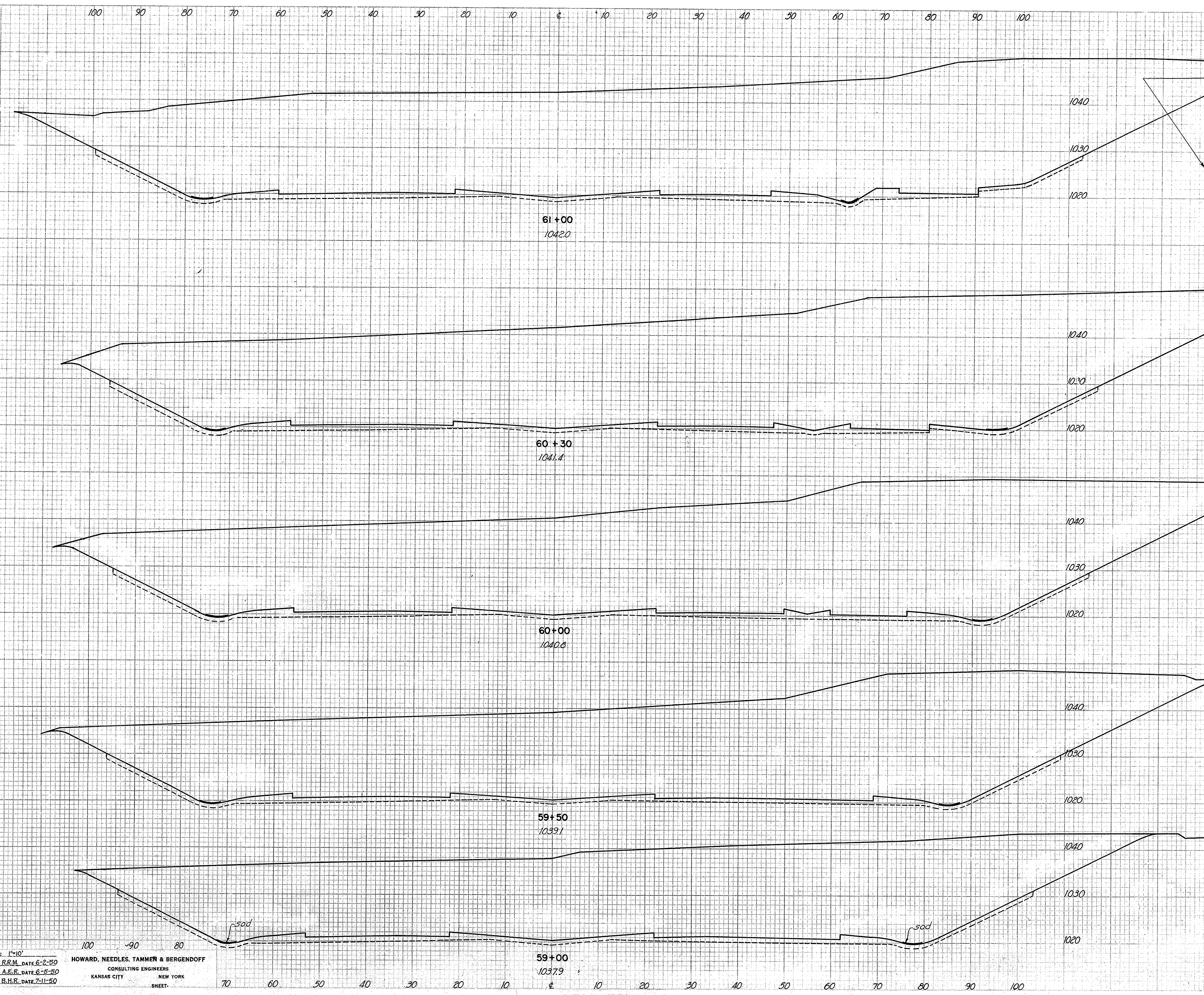
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	22 14G
2	OHIO	U-687(8)	POST WAR	

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

DATE
BY
FINAL SURVEY
SURVEY
NOTE BOOK
NO.

DATE
BY
ORIGINAL SURVEY
SURVEY
NOTE BOOK
NO.

SEEDING	SODDING	SEEDING		SODDING	
		Width	Area	Width	Area
		Lin. Ft.	Sq. Yds.	Lin. Ft.	Sq. Yds.
214	8				
1654	62				
211	8				
698	27				
208	8				
1107	44				
190	8				
1018	44				
176	8				
1908	89				



CLASS. EMB. MATERIAL	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	5383	225		
			13845	577
	5295	220		
			5815	246
	5173	223		
			8980	396
	4525	205		
			7650	376
	3741	201		
			11735	730

SCALE 1"=10'
MADE P.R.M. DATE 6-2-50
TRCD. A.E.R. DATE 6-8-50
CKD. B.H.R. DATE 7-11-50

HOWARD, NEEDLES, TAMMEN & BERGENOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

PLATE 3-CROSS SECTION 3-P.A. & A. 21
CHAS. H. BROWN COMPANY

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	23 146
2	OHIO	U-687(B)	POST WAR	

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

SEEDING		SODDING	
Width	Area	Width	Area
Lin. Ft.	Sq. Yds.	Lin. Ft.	Sq. Yds.
259	10		
1435	56		
257	10		
2766	111		
241	10		
2621	111		
231	10		
2555	111		
229	10		
2460	100		

CLASS. EMB. MATERIAL	END AREA		VOLUME	
	AREA	VOL.	CUT	FILL
	5565	175	10350	366
	5560	220		
	5561	211	20670	798
	5340	240	20090	1020
	5692	227	20430	865
	5692	227	20450	836

SCALE 1"=10'
MADE R.E.M. DATE 6-2-50
TRCD. A.E.R. DATE 8-2-50
CKD. B.H.R. DATE 7-1-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

NOTE: CROSS-HATCHED PORTIONS SUPERSEDED BY PARTIAL SECTIONS SHOWN ON SHEET 25A

Revised 4-16-51

STA. 62+00 TO STA. 65+50

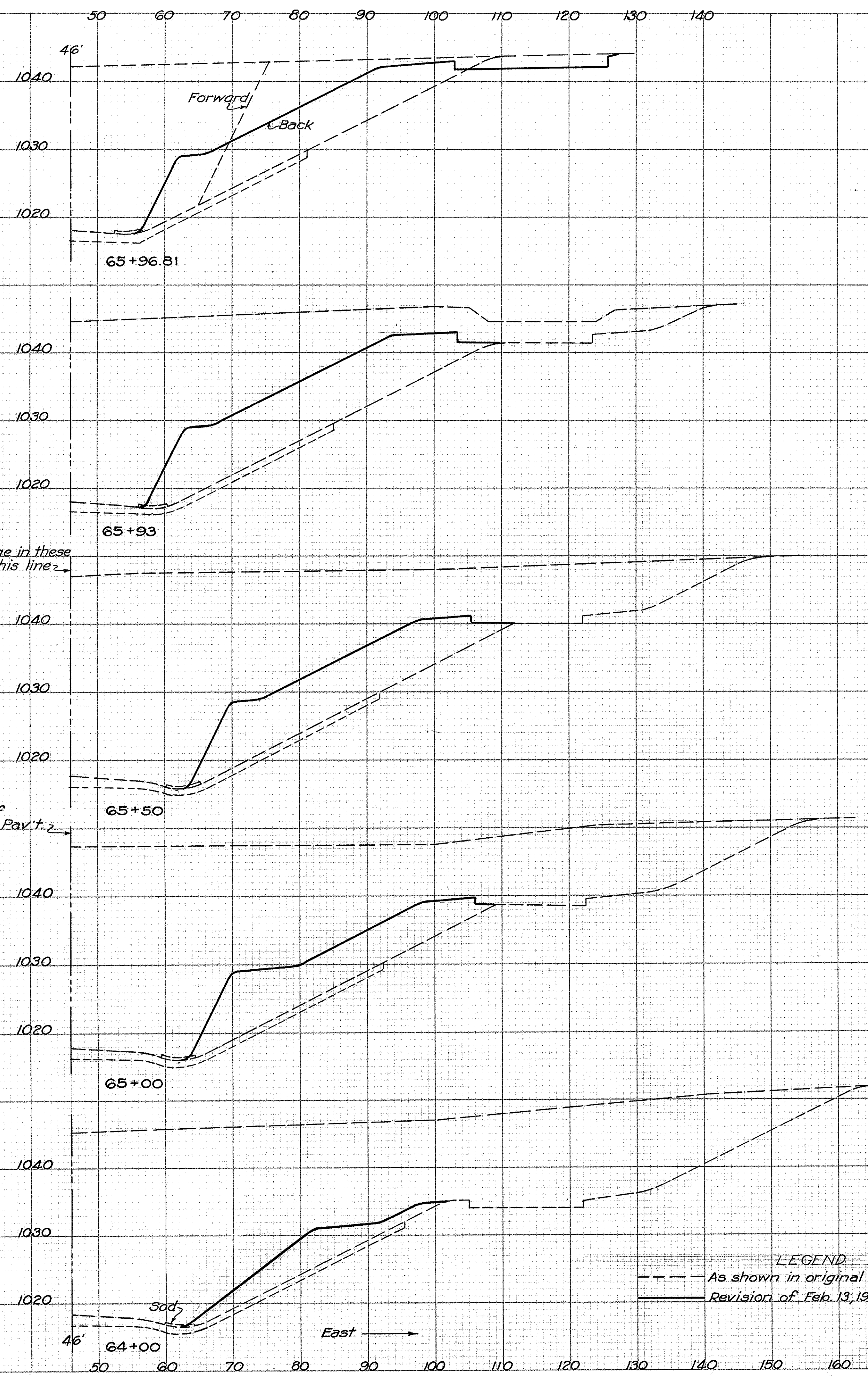
PLATE 5 - CROSS SECTION W.P.R.A.P.E.
GEARLESS PRINTING COMPANY, INC.

DATE: 7-1-51
BY: W. E. SCOTT
NO. 1725077
FINAL SURVEY PLOTTED
NOTE BOOK AREAS CHECKED

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO	U-687(8)	POST WAR

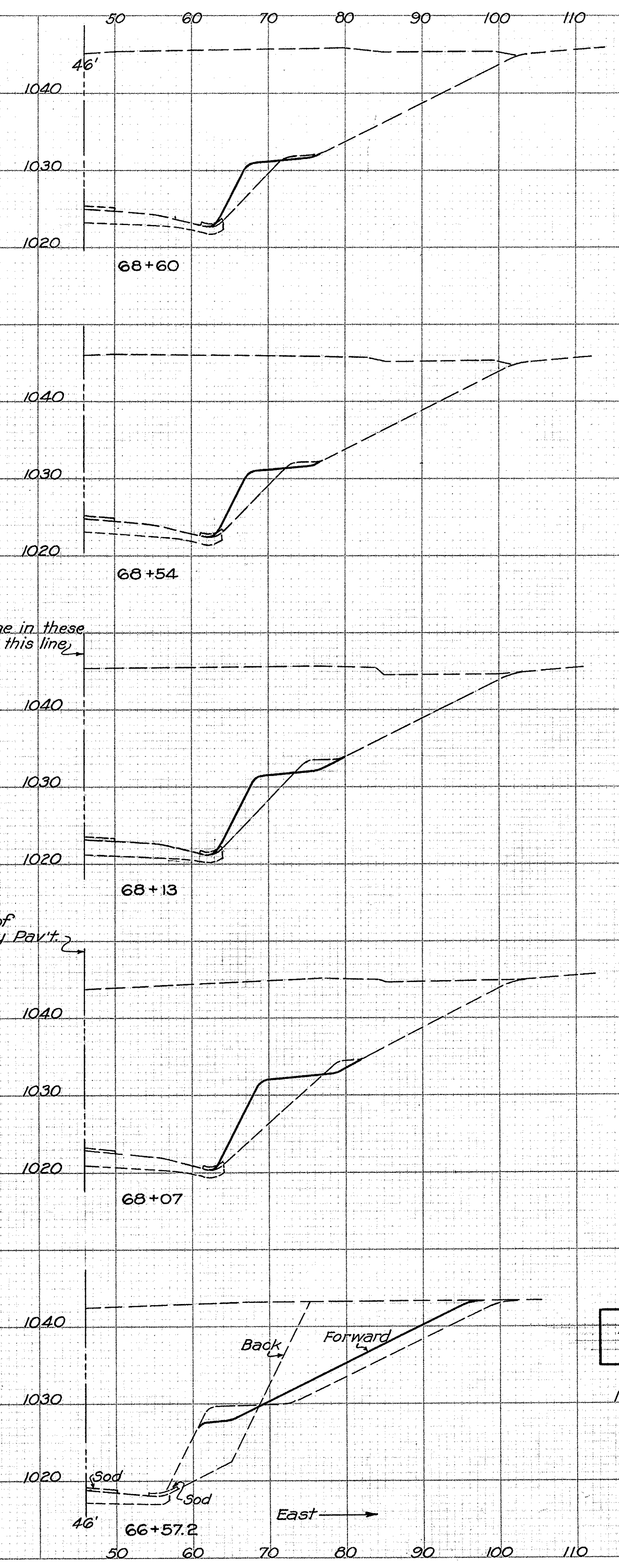
23A
14G

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY PART 3
SUM-5-12.62



Note:
There is no change in these sections west of this line

Note:
There is no change in these sections west of this line



NOTE: This sheet supplements Sheets 23, 24, 25 & 26

Note:
These are revisions to various sections shown on original Sheets 23, 24, 25 & 26

LEGEND
 - - - - - As shown in original contract drawings
 _____ Revision of Feb. 13, 1951

7611 500 sq.

DATE: _____
BY: _____
NO. _____

FINAL SURVEY SURVEYED
NOTE BOOK PLOTTED
NO. _____ DATE _____
AREAS CHECKED

DATE: 12-8-49
BY: W.G.O.
NO. _____

ORIGINAL SURVEY SURVEYED
NOTE BOOK PLOTTED
NO. _____ DATE _____
AREAS CHECKED

SEEDING	SODDING	
	Width Lin.Ft.	Area Sq.Yds.
48	18	
81	30	
48	18	
85	32	
48	18	
84	22	
58 177	10 10	
86	4	
230	10	
1169	48	

CLASS. EMB. MATERIAL	END AREA		VOLUME	
	AREA	VOL.	CUT	FILL
			2972	102
			1683	56
			3009	98
			1771	61
			2967	109
			1590	57
			3044	110
			3742	156
			614	23
			4958	173
			8380	277

SCALE 1"=10'
MADE P.R.M. DATE 2-5-50
TRCD. A.E.R. DATE 8-6-50
CKD. B.H.R. DATE 7-12-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

NOTE: CROSS-HATCHED PORTIONS SUPERSEDED BY PARTIAL SECTIONS SHOWN ON SHEET 23A.

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO	U-687(8)	POST WAR

25
146

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

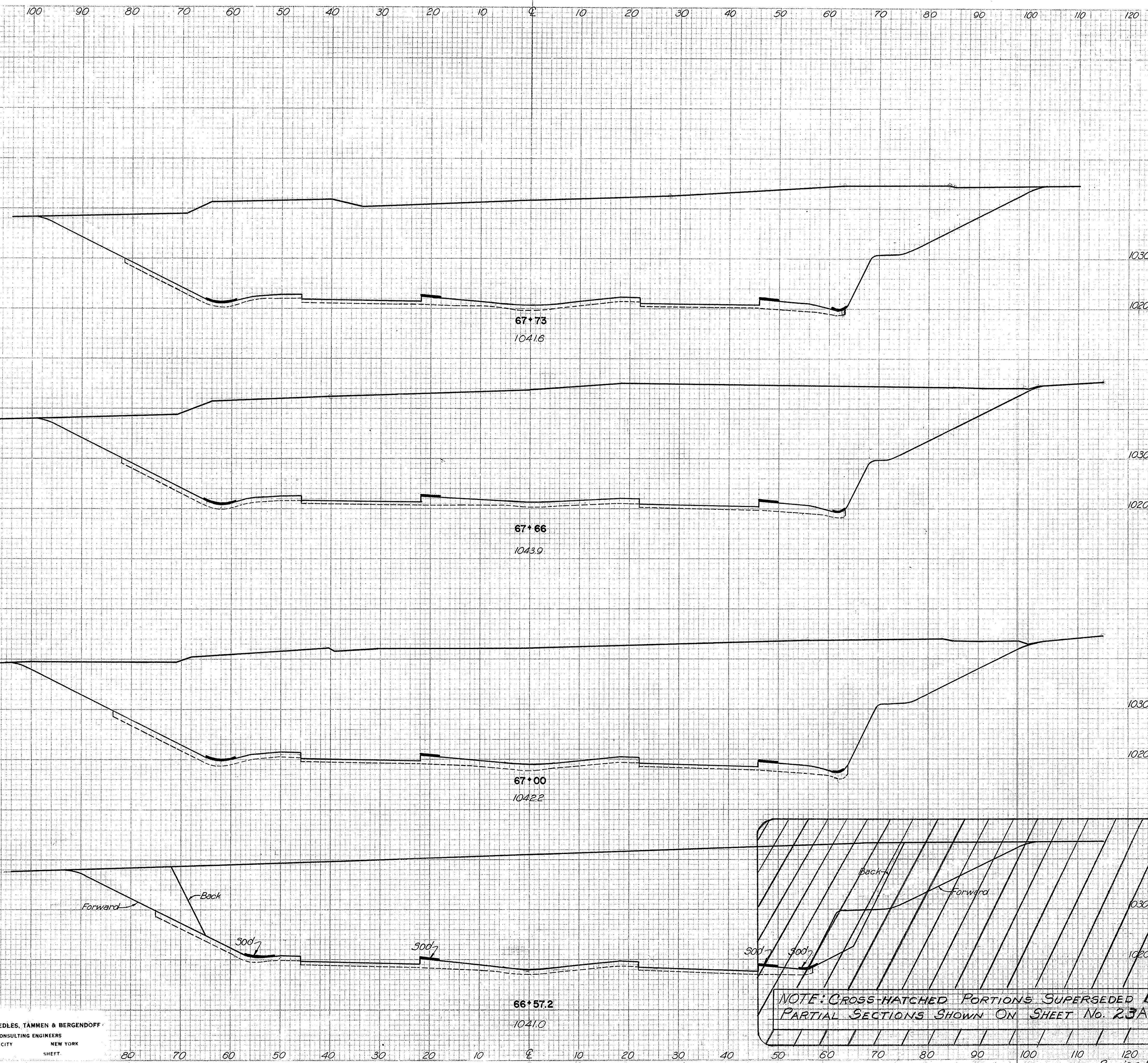
SEEDING		SODDING	
Width Lin Ft	Area Sq Yds	Width Lin Ft	Area Sq Yds
144	27		
113	21		
147	27		
1075	198		
146	27		
654	131		
129 37	28 28		
71	38		

FINAL SURVEY BY
REVIEWED BY
DATE

ORIGINAL SURVEY BY
PLOTTER
NOTE BOOK NO.
AREAS CHECKED

SCALE 1"=10'
MADE R.R.M. DATE 6-5-50
TRCD A.E.R. DATE 6-5-50
CKD B.H.R. DATE 7-12-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK



CLASS. EMB. MATERIAL	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	3456	139		
			925	36
	3663	138		
			9130	338
	3804	139		
			5675	208
	3355 3070	123 102		
			1680	57

NOTE: CROSS-HATCHED PORTIONS SUPERSEDED BY PARTIAL SECTIONS SHOWN ON SHEET No. 23A.

Revised 4-16-51

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	26 146
2	OHIO	U-6871(B)	POST WAR	

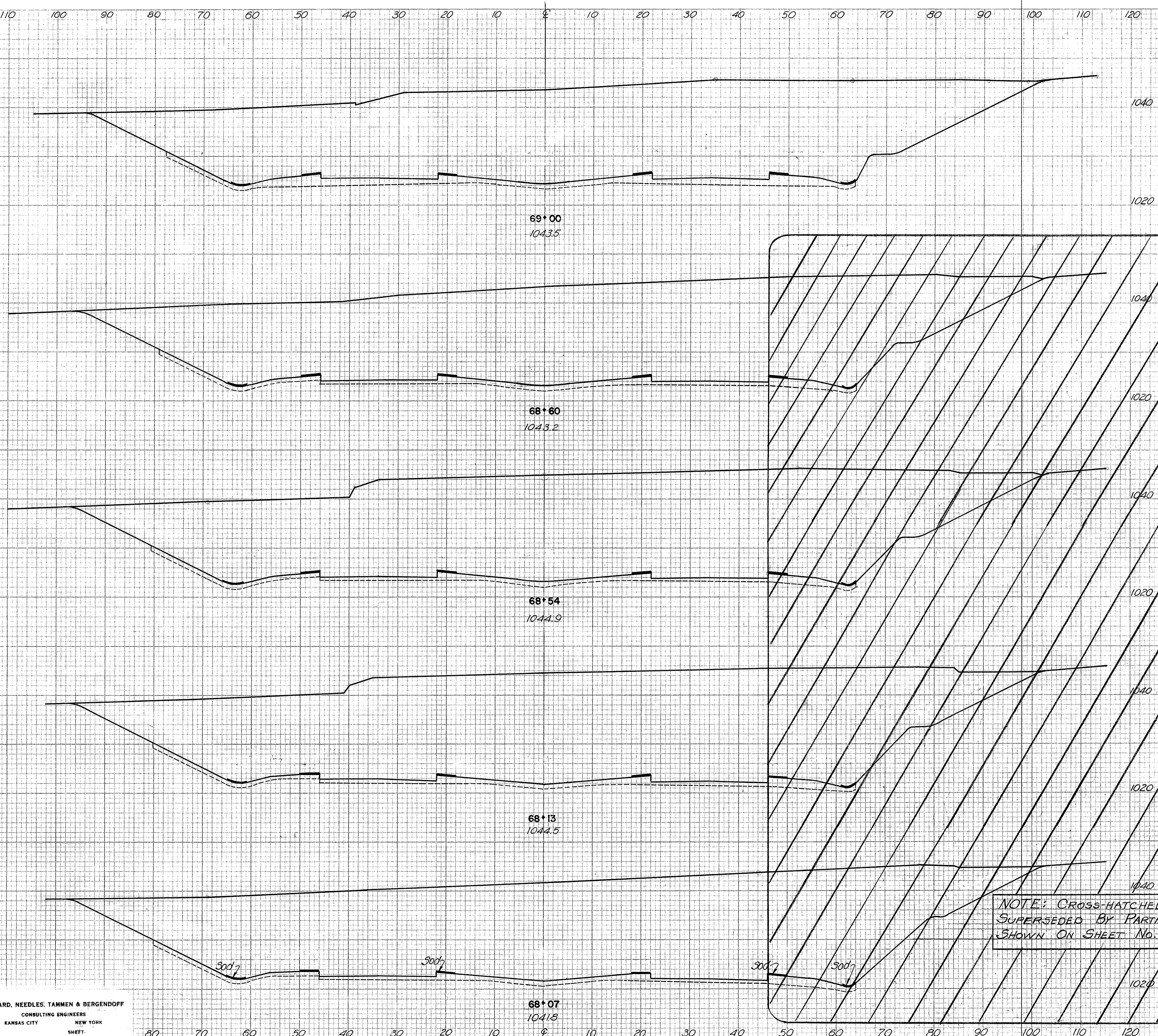
SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

DATE: _____
BY: _____
FINAL SURVEY PLOTTED _____
NOTE BOOK NO. _____
AREAS CHECKED _____

DATE: _____
BY: _____
ORIGINAL SURVEY PLOTTED _____
NOTE BOOK NO. _____
AREAS CHECKED _____

STATION	SEEDING		SODDING	
	Width Lin Ft	Area Sq Yds	Width Lin Ft	Area Sq Yds
149	17	056	76	
146	17	98	11	
147	17	645	96	
136	25	90	17	
135	25	527	98	

CLASS. EMB. MATERIAL	END AREA		VOLUME	
	AREA	VOL.	CUT	FILL
			3102	180
			4650	238
			3176	138
			730	31
			3386	138
			5195	248
			3453	89
			148	42
			3275	189
			4246	217



NOTE: CROSS-HATCHED PORTIONS
SUPERSEDED BY PARTIAL SECTIONS
SHOWN ON SHEET NO. 23A.

SCALE 1"=10'
MADE R.R.M. DATE 6-5-50
TRCD. A.E.R. DATE 6-6-50
CND. B.H.R. DATE 7-12-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET

PLATE 3-CROSS SECTION O. P. R. & B. C.
CHARLES BRUSH COMPANY, INC.

Revised 4-16-51

STA. 68+07 TO STA. 69+00

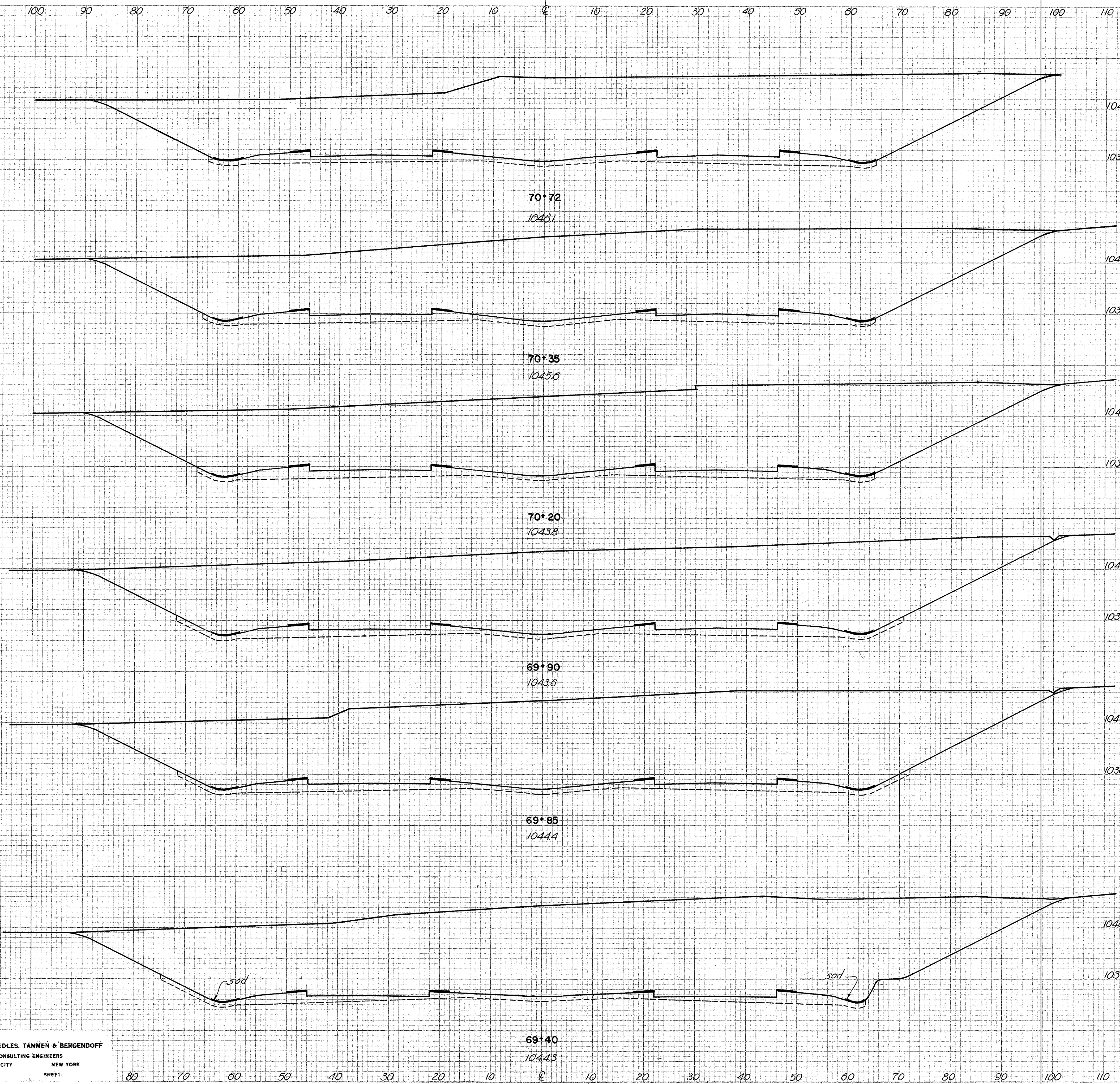
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	27
2	OHIO	U-697(8)	POST WAR	14.6

SUMMIT COUNTY CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
 EXPRESSWAY-PART 3
 SUM-5-12.62

FINAL SURVEY NOTE BOOK NO. _____
 SURVEYED BY _____
 PLOTTED BY _____
 AREAS CHECKED _____

ORIGINAL SURVEY NOTE BOOK NO. _____
 SURVEYED BY _____
 PLOTTED BY _____
 AREAS CHECKED _____

SEEDING		SODDING	
Width	Area	Width	Area
Lin Ft	Sq Yds	Lin Ft	Sq Yds
146	22	22	91
604	91		
148	22	37	248
248	37		
150	22	67	512
512	67		
157	18	10	87
87	10		
158	18	88	778
778	88		
153	17	76	672
672	76		



CLASS. EMB. MATERIAL	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	2438	168	3410	231
	2539	169	1413	94
	2549	169	2870	193
	2618	178	501	33
	2799	179	4740	276
	2891	152	4440	246

SCALE 1"=10'
 MADE P.R.M. DATE 6-5-50
 TRCD. A.E.R. DATE 6-6-50
 CKD. B.H.R. DATE 7-12-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	28 146
2	OHIO	U-687(8)	POST WAR	

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

FINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED

ORIGINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED

SEEDING	SODDING	
	Width Lin Ft	Area Sq Yds
137	22	
683	115	
142	22	
348	54	
149	22	
450	68	

CLASS. EMB. MATERIAL	END AREA		VOLUME		
	AREA VOL.	CUT	FILL	CUT	FILL
		1930	40		
				3165	65
		1956	40		
				1652	33
		2110	40		
				170	
				2335	175

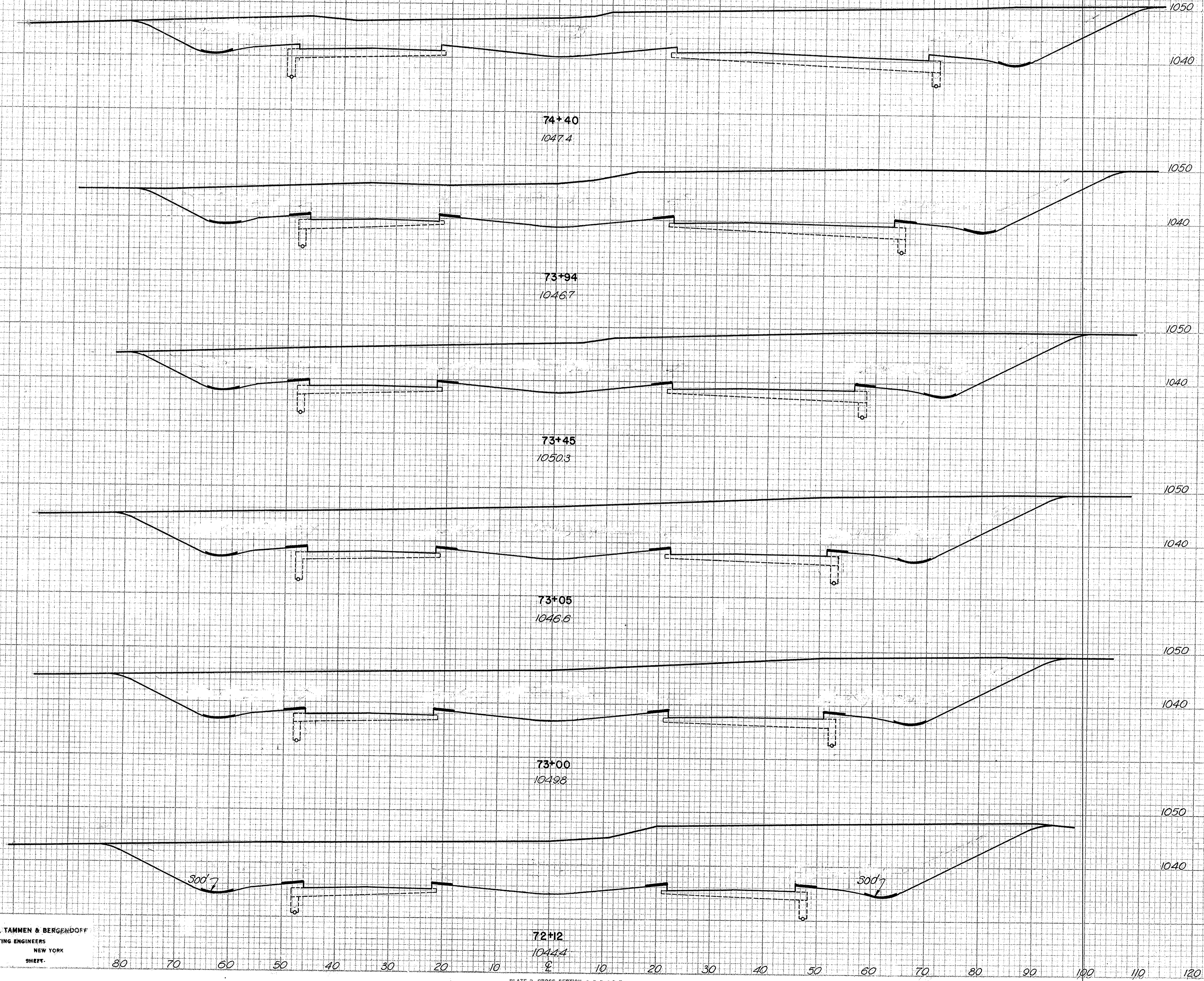


Under cut for rock & embankment ends at sta. 71+00

1"=10'
R.R.M. 6-5-50
A.E.R. 6-6-50
B.H.R. 7-12-50
J. J. FARMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

SEEDING	SODDING	
	Width Lin Ft	Area Sq Yds
121	22	
	624	112
123	22	
	670	120
123	22	
	558	90
128	22	
	72	12
130	22	
	1286	215
133	22	
	689	112



CLASS. EMB. MATERIAL	END AREA		VOLUME	
	AREA	VOL.	CUT	FILL
	1440	72		
			2514	108
	1510	55		
			2726	93
	1498	47		
			2228	68
	1510	45		
			280	8
	1510	42		
			5160	134
	1654	40		
			3050	68

ORIGINAL SURVEYED, PLOTTED, AND CHECKED BY: _____
 DATE: _____
 FINAL SURVEY NOTE BOOK NO. _____
 AREAS CHECKED: _____

ORIGINAL SURVEYED, PLOTTED, AND CHECKED BY: _____
 DATE: _____
 FINAL SURVEY NOTE BOOK NO. _____
 AREAS CHECKED: _____

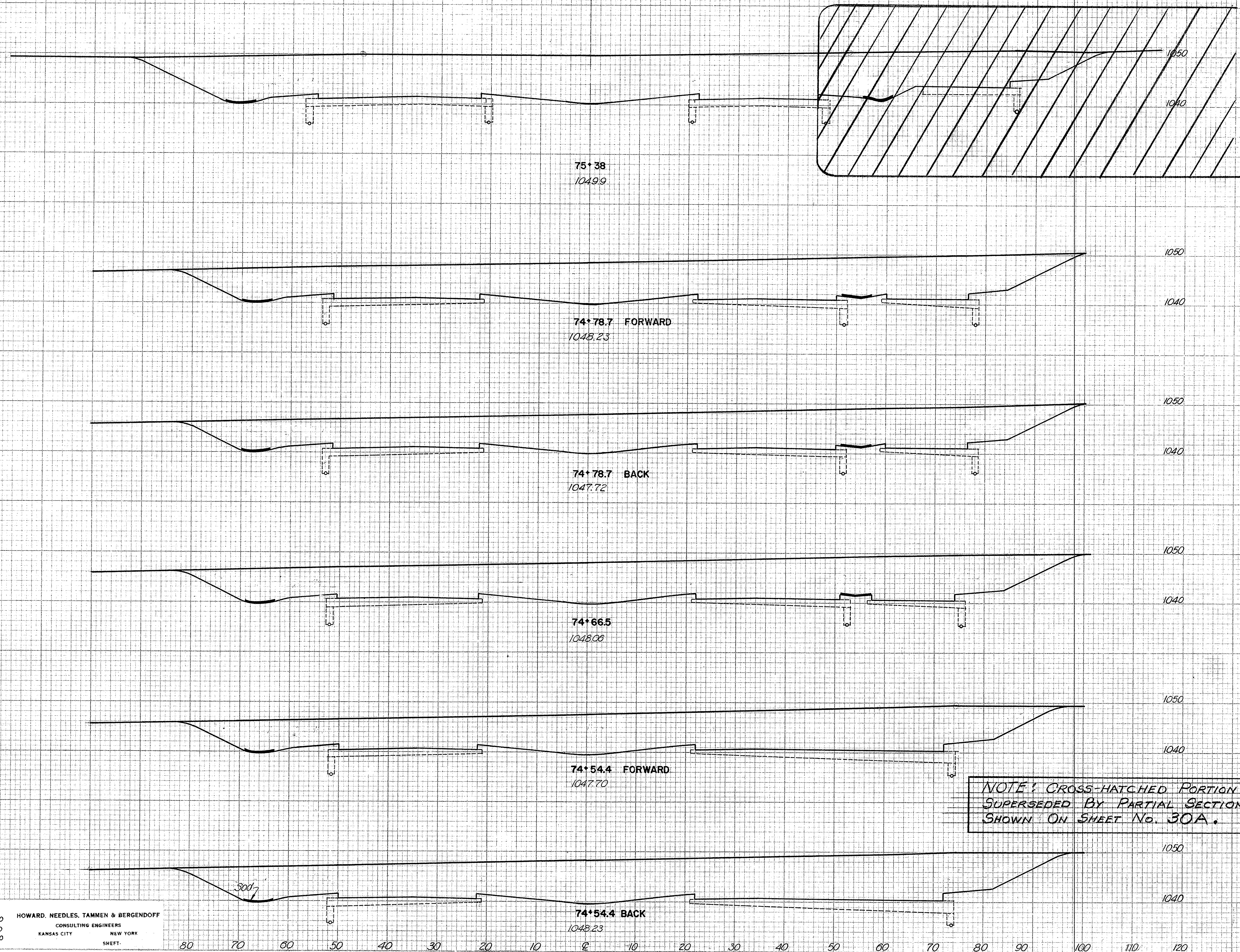
SCALE 1"=10'
 MADE R.R.M. DATE 6-6-50
 TRCD. A.E.R. DATE 6-7-50
 CWD. B.H.R. DATE 7-13-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK
 SHEET _____

PLATE 3-CROSS SECTION O.P.R.A.R.E.
 CHARLES BRUNING COMPANY, INC.

DATE _____ BY _____
 FINAL SURVEY PLOTTED _____
 NOTE BOOK NO. _____
 AREAS CHECKED _____

DATE _____ BY _____
 ORIGINAL SURVEY PLOTTED _____
 NOTE BOOK NO. _____
 AREAS CHECKED _____

SEEDING	SODDING	SEEDING		SODDING	
		Width Area Lin Ft Sq Yds	Width Area Lin Ft Sq Yds	Width Area Lin Ft Sq Yds	Width Area Lin Ft Sq Yds
126	22				
784	148				
112	22				
0	0				
111	22				
151	30				
112	22				
148	26				
108	16				
0	0				
112	16				
187	30				



CLASS. EMB. MATERIAL	END AREA	VOLUME	
		CUT	FILL
126	1666	0	
180		3310	43
	1350	55	
	0	0	0
	1255	55	
		585	25
	1340	55	
		594	27
	1312	65	
	0	0	0
	1400	65	
		756	36

NOTE: CROSS-HATCHED PORTION SUPERSEDED BY PARTIAL SECTION SHOWN ON SHEET NO. 30A.

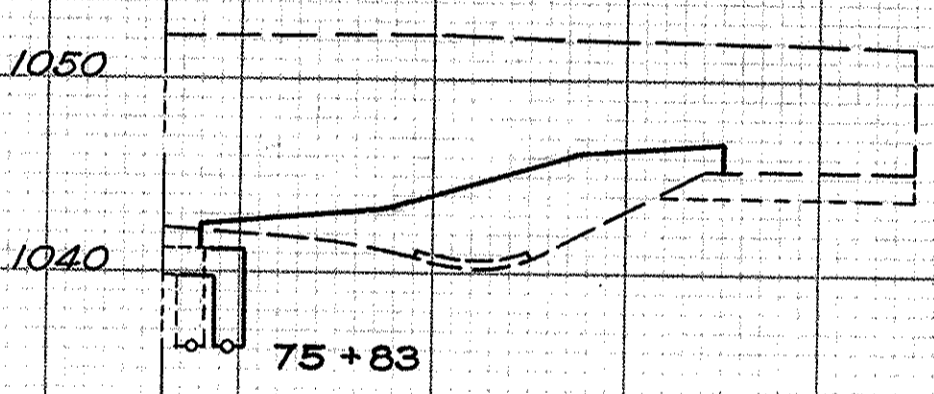
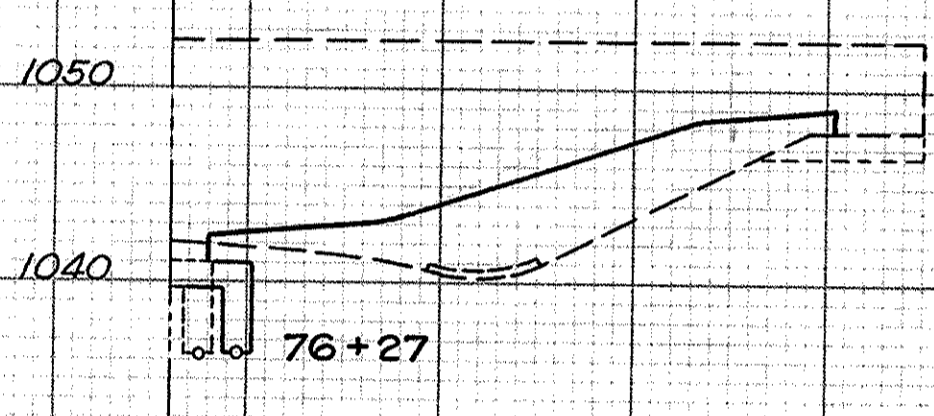
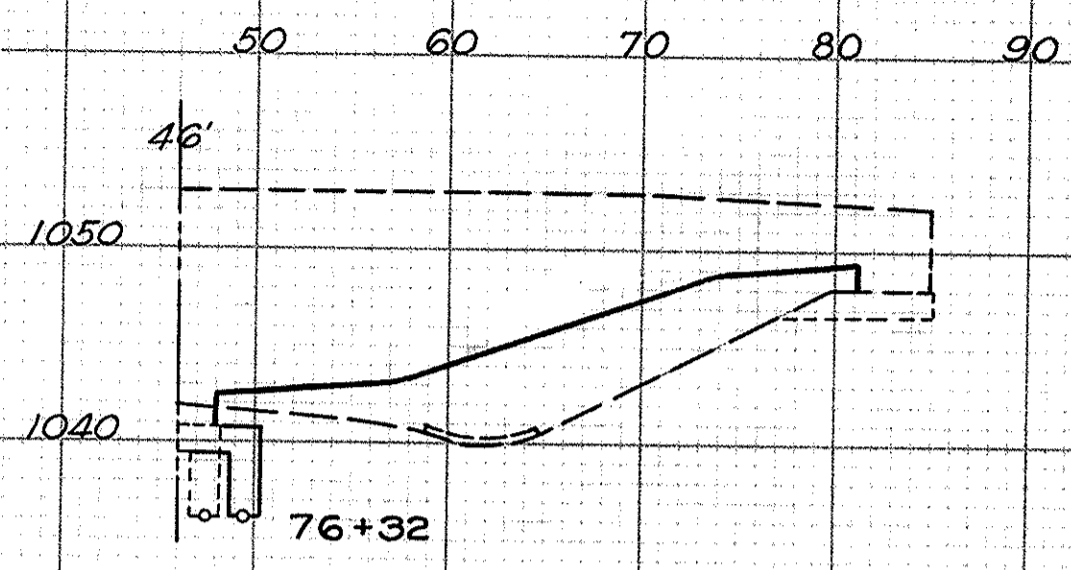
SCALE 1"=10'
 MADE P.R.M. DATE 6-6-50
 TRCD A.E.R. DATE 6-7-50
 CKD B.H.R. DATE 7-13-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK

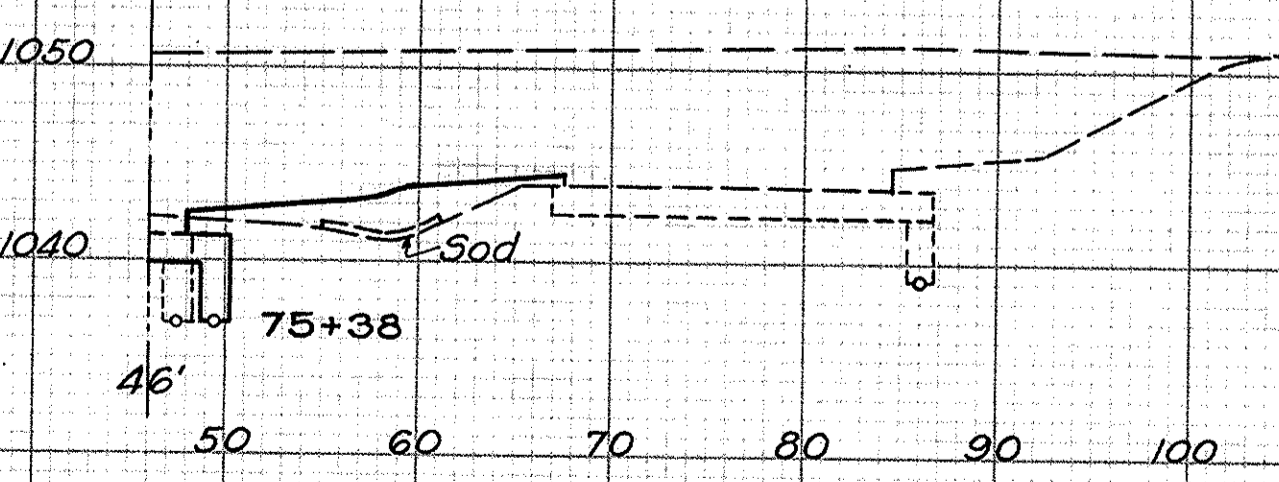
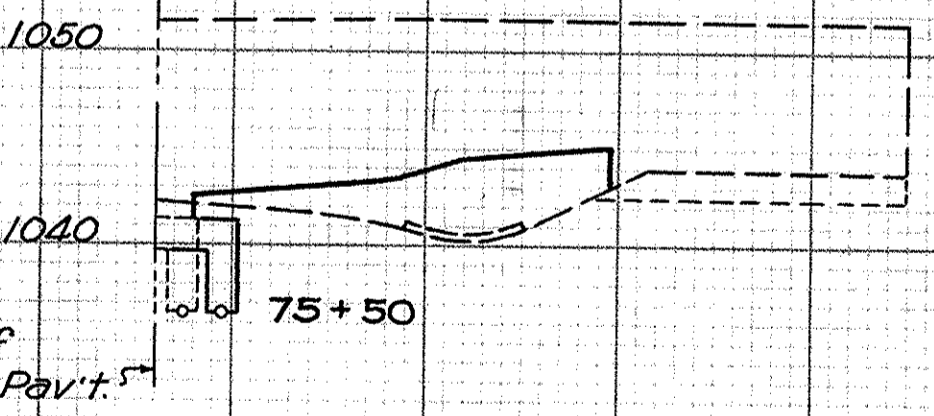
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO	U-687(8)	POST WAR

30A
146

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

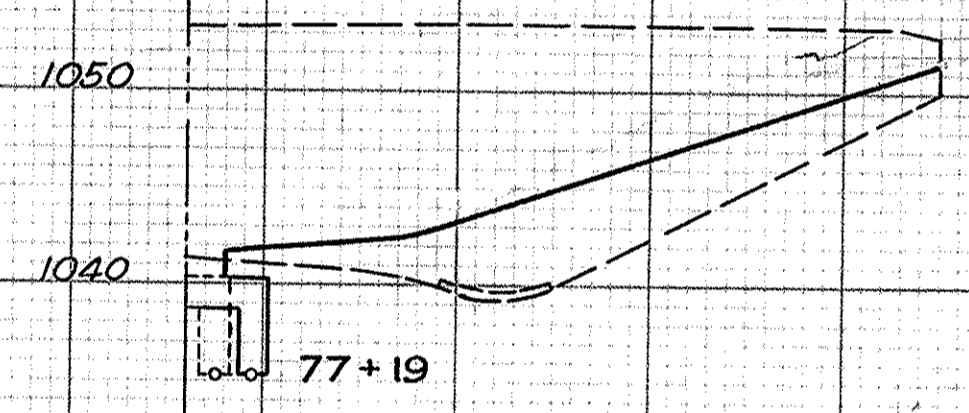
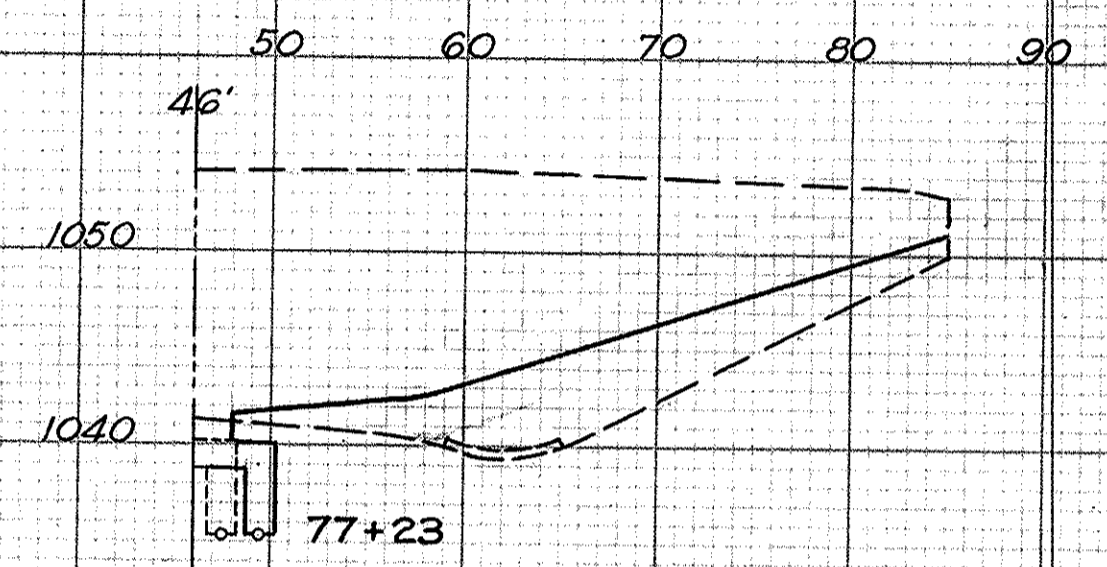


Note:
There is no change in these sections west of this line

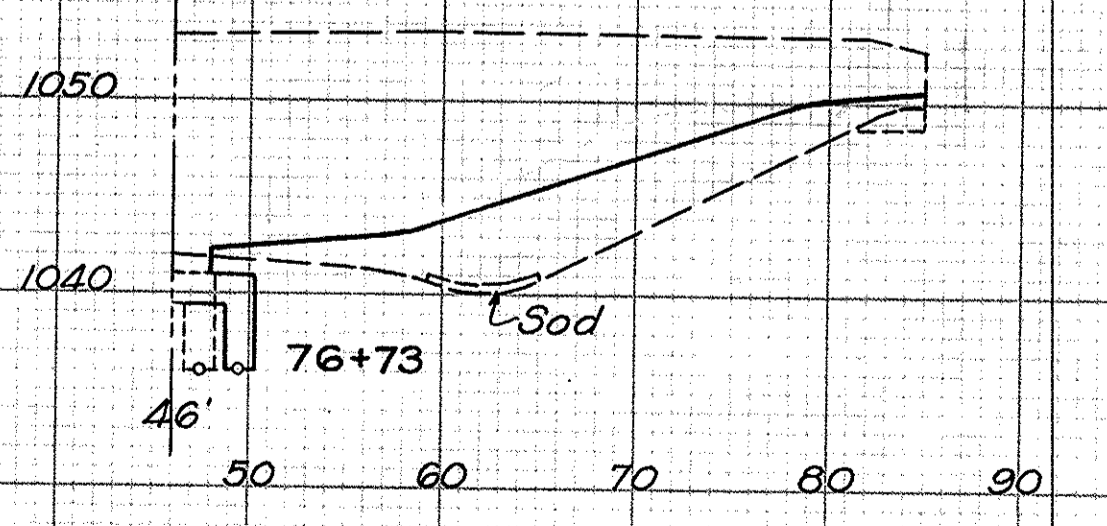
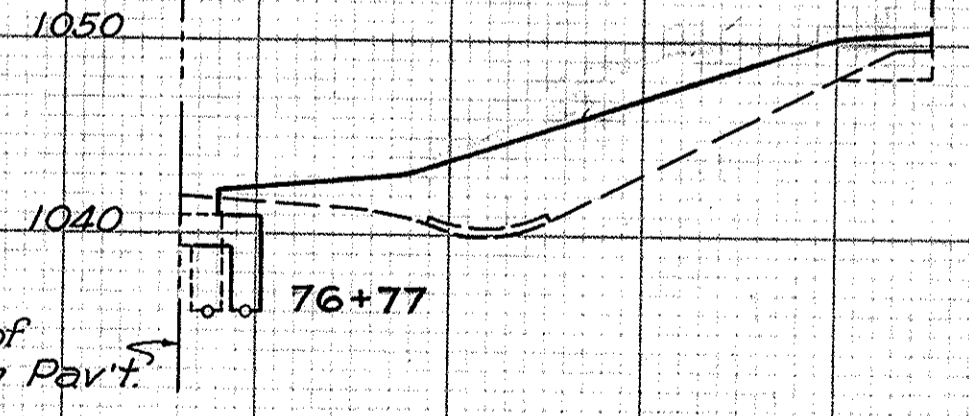


East →

--- As shown in original contract drawings
— Revision of Feb. 13, 1951



Note:
There is no change in these sections west of this line



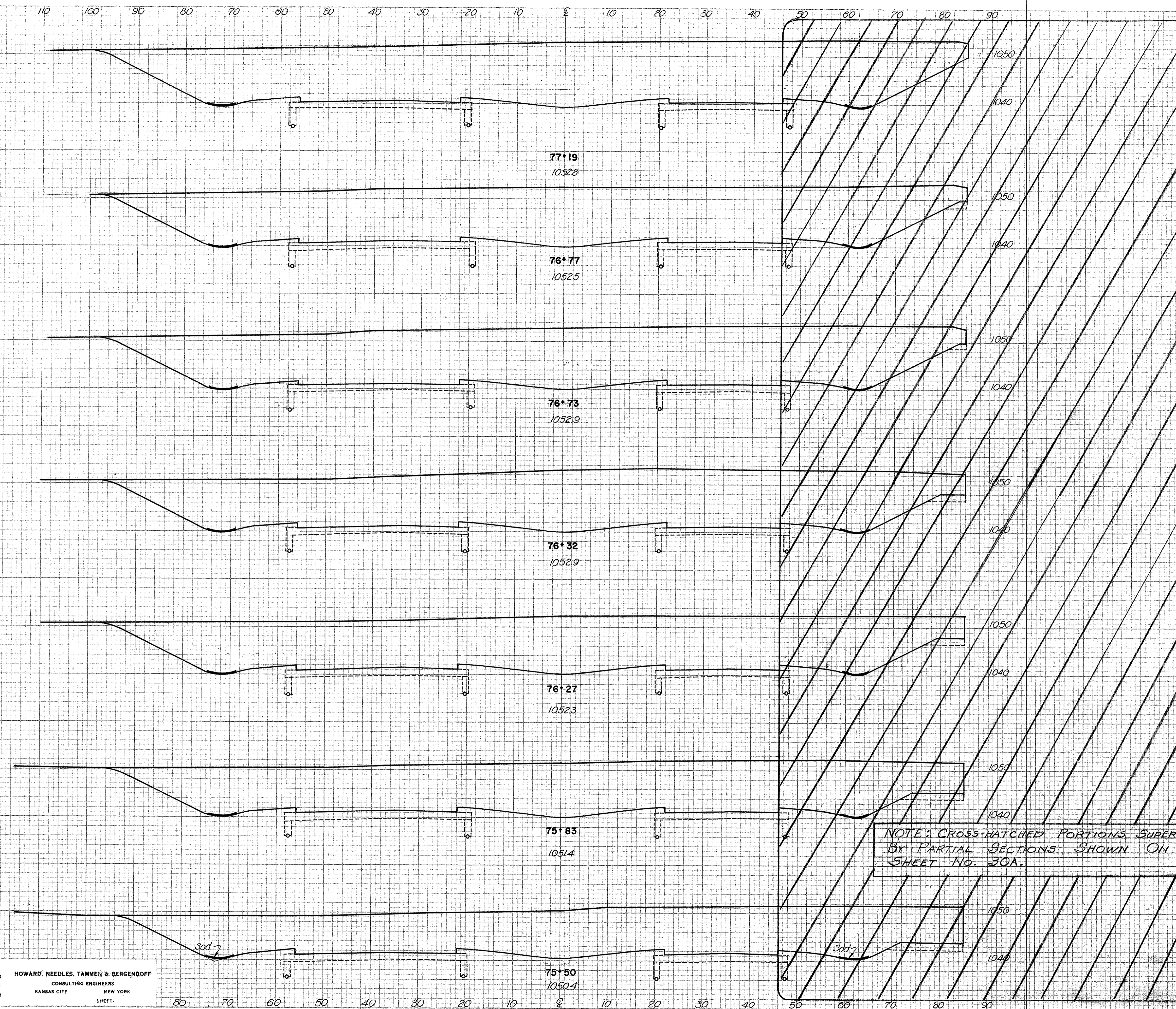
East →

Note: This sheet supplements Sheets 30, 31 & 32

Note:
These are revisions to various sections shown on original Sheets 30, 31 & 32

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

SEEDING	SODDING
Width Area Lin. Ft. Sq. Yds.	Width Area Lin. Ft. Sq. Yds.
120	22
556	103
118	22
52	10
117	22
524	100
113	22
63	12
113	22
531	108
104	22
374	81
100	22
150	29



CLASS. EMB. MATERIAL AREA VOL.	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
99	2144	0		
158			3161	0
104	1990	0		
15			290	0
104	1684	0		
162			2965	0
109	1620	0		
120			349	0
110	1850	0		
185			2975	0
117	1780	0		
145			2080	0
120	1624	0		
55			750	0

NOTE: CROSS-HATCHED PORTIONS SUPERSEDED BY PARTIAL SECTIONS SHOWN ON SHEET NO. 30A.

SCALE 1"=10'
 MADE R.R.M. DATE 6-6-50
 TRCO A.E.R. DATE 6-7-50
 CHD B.H.R. DATE 7-13-50

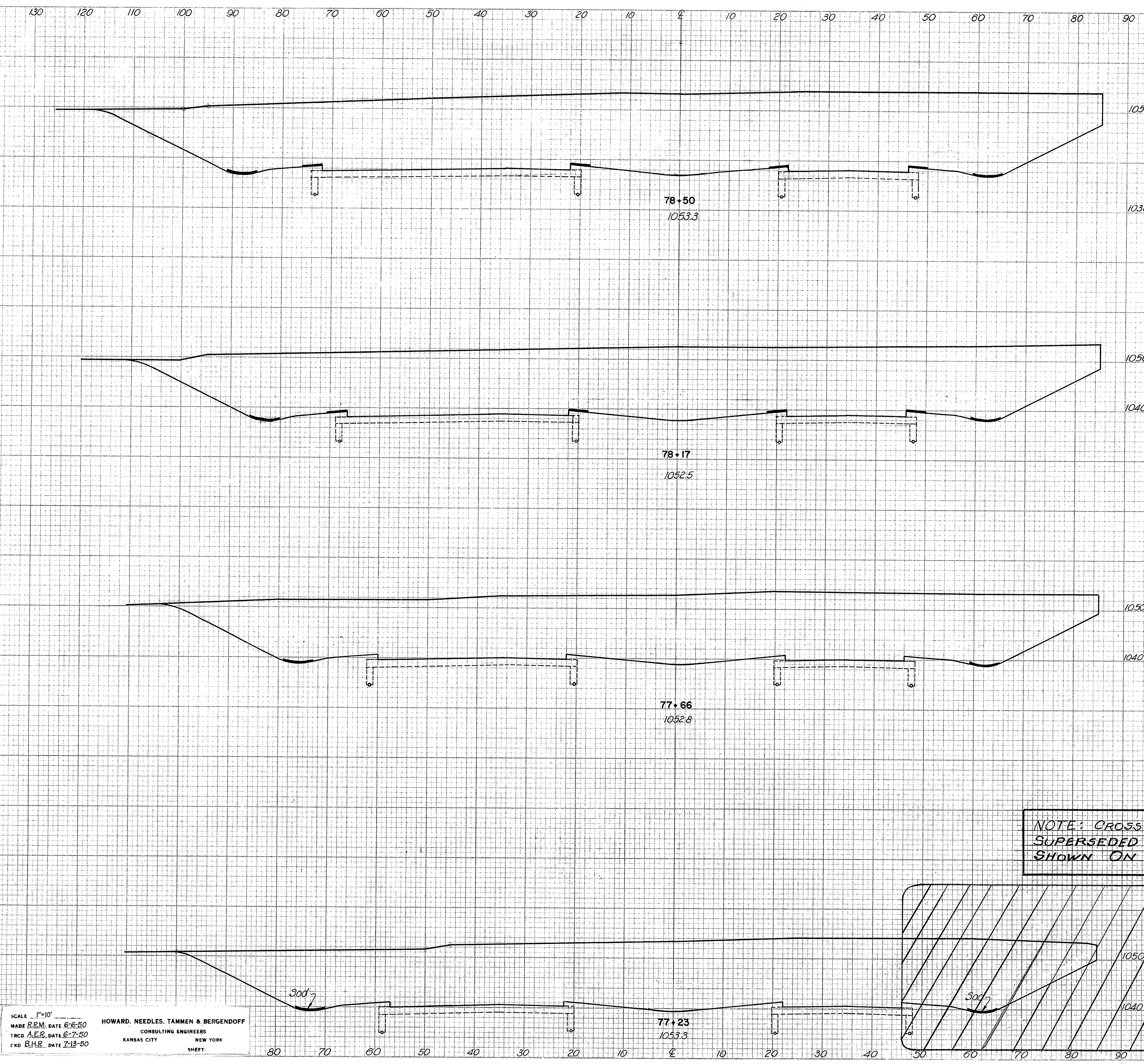
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK

Revised 4-16-51

FINAL SURVEY PLOTTED. DATE: _____ BY: _____
 SURVEY PLOTTED. DATE: _____ BY: _____
 NOTE BOOK NO. _____ AREAS CHECKED.

ORIGINAL SURVEY PLOTTED. DATE: _____ BY: _____
 SURVEY PLOTTED. DATE: _____ BY: _____
 NOTE BOOK NO. _____ AREAS CHECKED.

SEEDING	SODDING	
	Width Lin. Ft.	Area Sq. Yds.
123	22	
	451	81
123	22	
	695	125
122	28	
	580	105
121	22	
	54	10



CLASS. EMB. MATERIAL	END AREA		VOLUME	
	AREA	VOL.	CUT	FILL
120	2880	0		
	141		3298	0
110	2514	0		
	204		4530	0
105	2280	0		
	163		3590	0
	4		324	0

NOTE: CROSS-HATCHED PORTION SUPERSEDED BY PARTIAL SECTION SHOWN ON SHEET No. 30A.

SCALE 1"=10'
 MADE P.R.M. DATE 6-8-50
 TRCD A.E.R. DATE 6-7-50
 CAD B.H.R. DATE 7-13-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK

Revised 4-16-51

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	33 146
2	OHIO	U-687(B)	POST WAR	

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

FINAL SURVEY
NOTE BOOK
NO. _____
DATE _____
BY _____
AREAS CHECKED _____

ORIGINAL SURVEY
NOTE BOOK
NO. _____
DATE _____
BY _____
AREAS CHECKED _____

SEEDING	SODDING
Width Lin. Ft.	Area Sq. Yds.

154	22
-----	----

650	95
-----	----

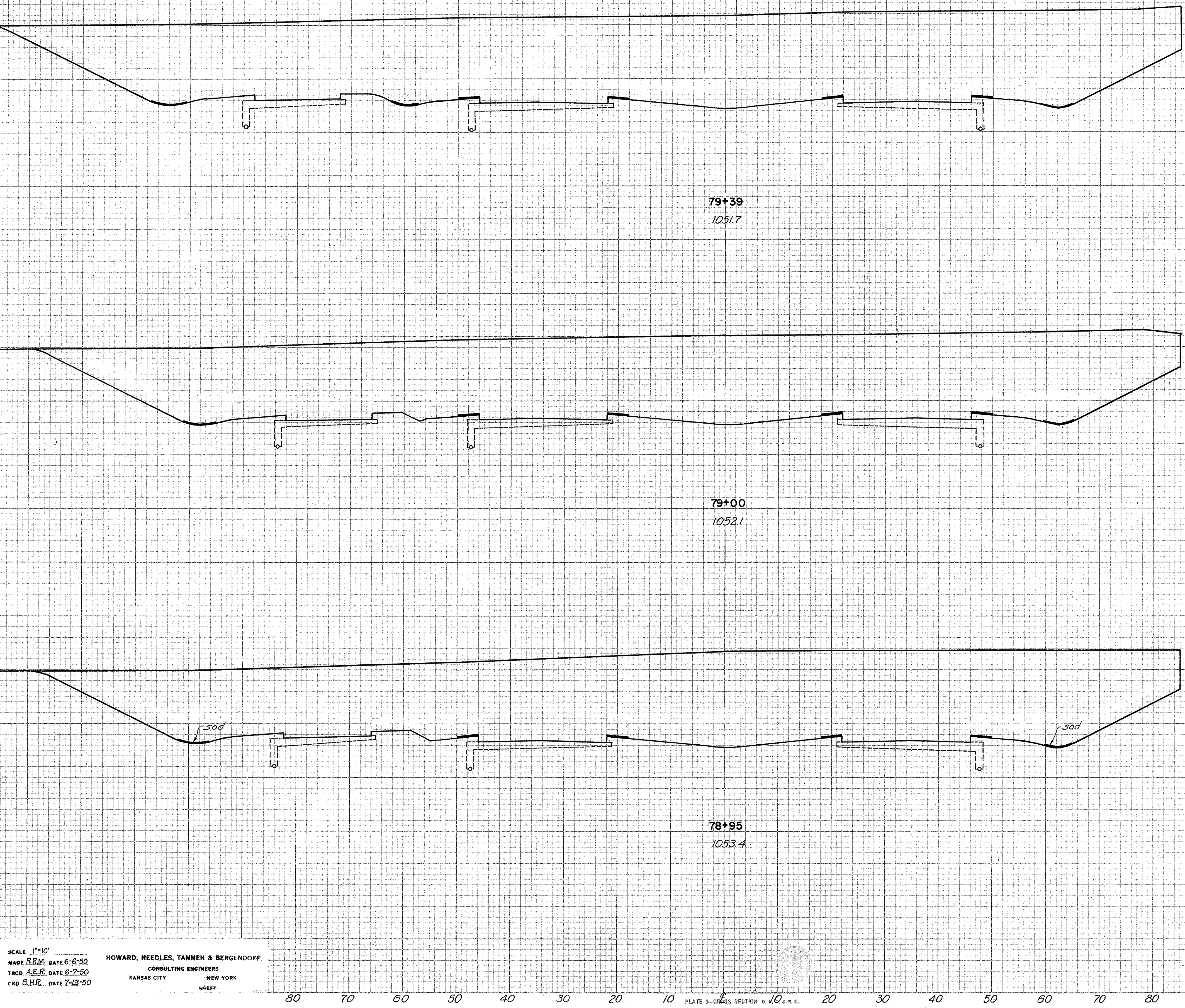
145	22
-----	----

80	12
----	----

143	22
-----	----

665	110
-----	-----

CLASS. EMBR. MATERIAL	END AREA	VOLUME	
		CUT	FILL
55	3320	0	4585
55	3020	0	566
		3008	55
78+80	55		1980
120			33
133			



SCALE 1"=10'
MADE R.R.M. DATE 6-6-50
TRCD. A.E.B. DATE 6-7-50
CND. B.H.R. DATE 7-12-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET

PLATE 3-CROSS SECTION 0 1/4 R.E.
CHARLES BRUNING COMPANY, INC.

STA. 78+95 TO STA. 79+39

ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO	U-687(8)	POST WAR

3.4
146

SUMMIT COUNTY OF AKRON
 CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
 EXPRESSWAY-PART 3
 SUM-5-12.62

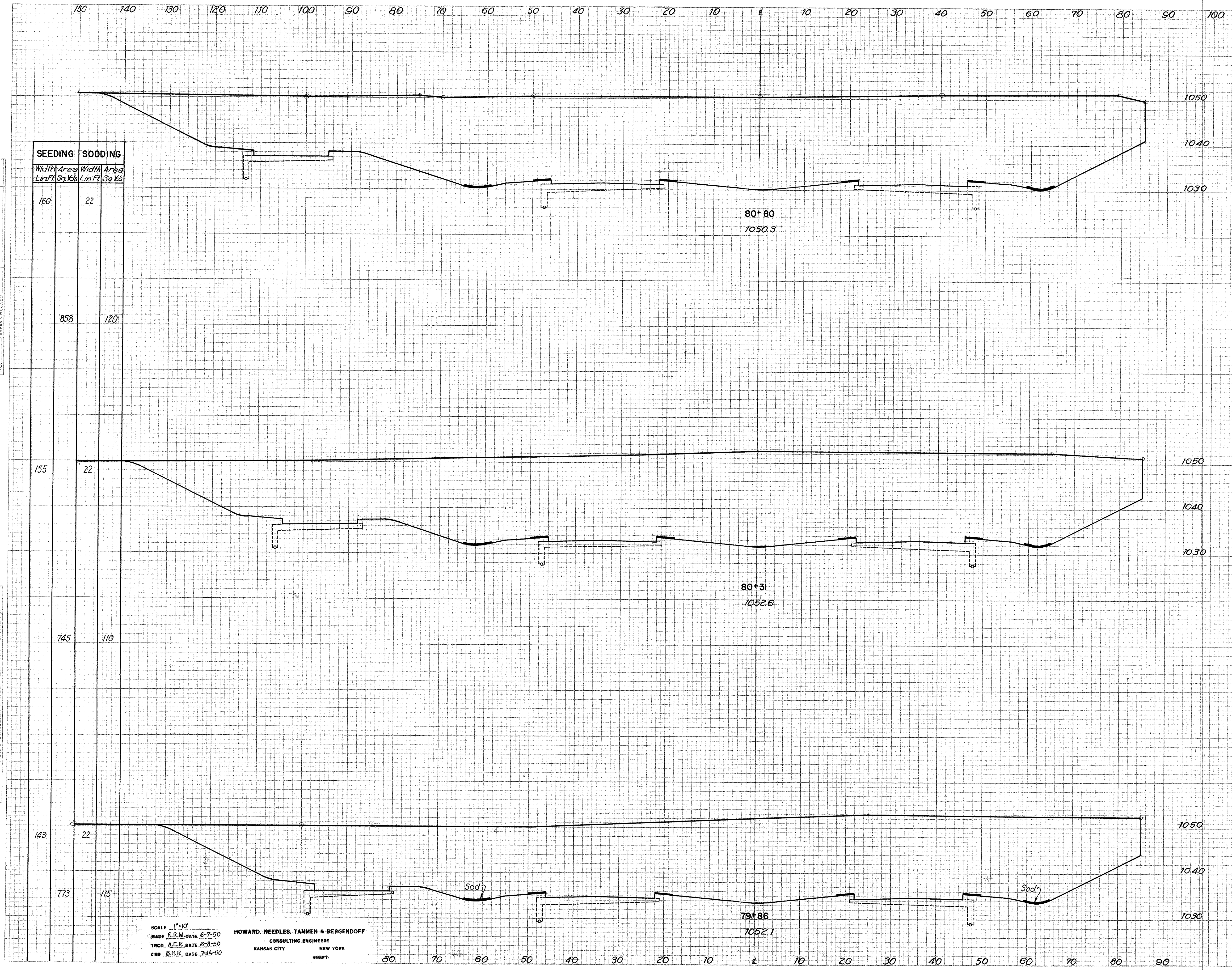
DATE _____ BY _____
 SURVEYED _____
 PLOTTED _____
 FINAL SURVEY NOTE BOOK NO. _____
 TEMPLATES _____
 AREAS CHECKED _____

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

SEEDING		SODDING	
Width Lin Ft	Area Sq. Yds	Width Lin Ft	Area Sq. Yds

160	22		
858	120		
155	22		
745	110		
143	22		
773	115		

CLASS. MATERIAL	EMB. AREA	END AREA		VOLUME	
		CUT	FILL	CUT	FILL
		3900	55		
				6940	100
		3770	55		
				5950	91
		3365	55		
				5830	95



SCALE 1"=10'
 MADE R.R.M. DATE 6-7-50
 TRCS A.E.R. DATE 6-8-50
 CHD B.H.R. DATE 7-14-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK

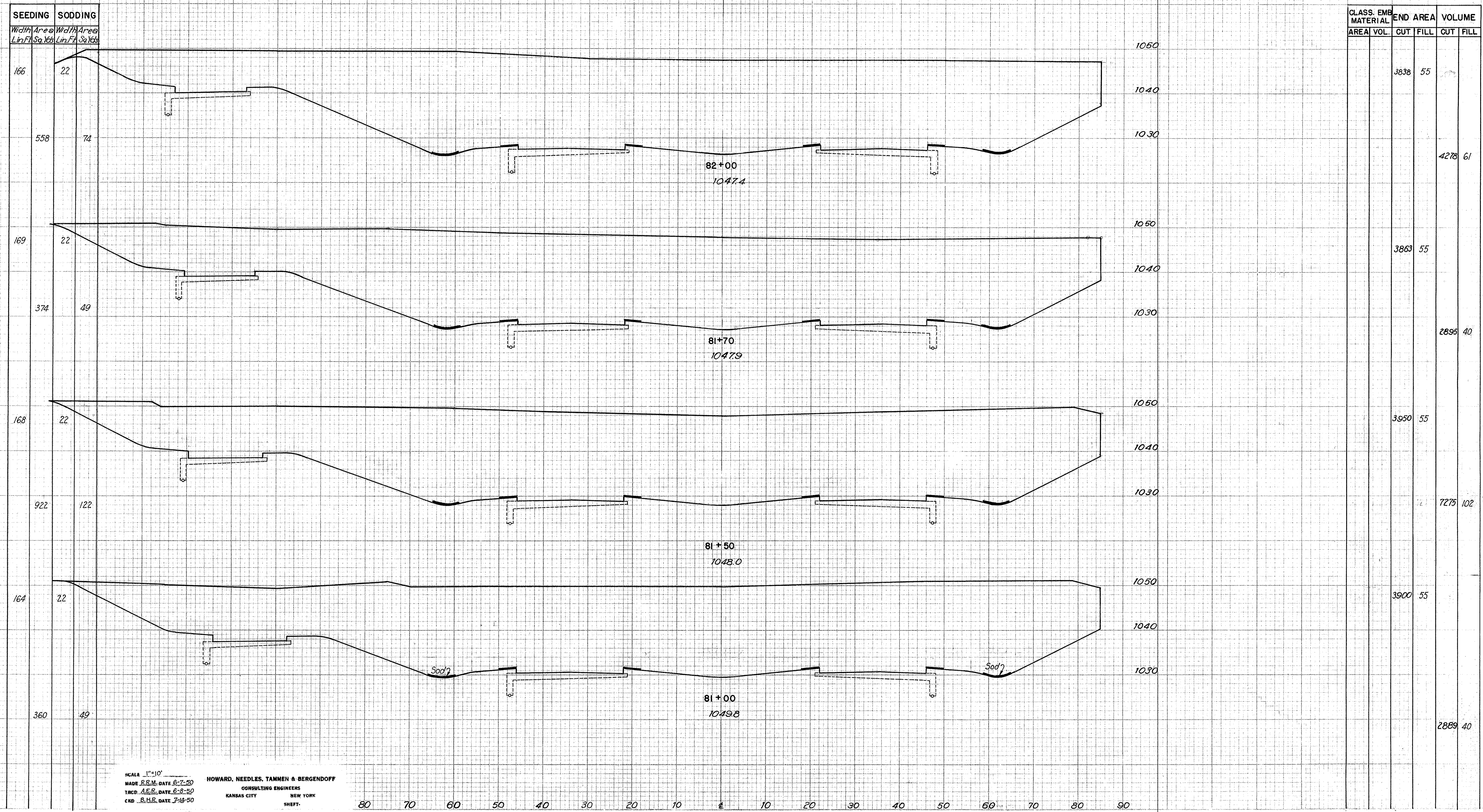
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO	U-687(8)	POST WAR

35
146

SUMMIT COUNTY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

DATE _____ BY _____
FINAL SURVEY NOTE BOOK NO. _____
REVISIONS: _____
PLOTTED _____
TEMPLATE _____
AREAS _____
CHECKED _____

DATE _____ BY _____
ORIGINAL SURVEY NOTE BOOK NO. _____
REVISIONS: _____
PLOTTED _____
TEMPLATE _____
AREAS _____
CHECKED _____



SCALE 1"=10'
MADE R.R.M. DATE 6-7-50
TRCD A.E.R. DATE 6-8-50
CHD B.H.R. DATE 7-14-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET _____

FED ROAD DIV NO.	STATE	FED AID PROJ NO.	TYPE FUNDS	37 146
2	OHIO	U-687(8)	POST WAR	

SUMMIT COUNTY OF AKRON
AKRON EXPRESSWAY SYSTEM
 EXPRESSWAY-PART 3
 SUM-5-12.62

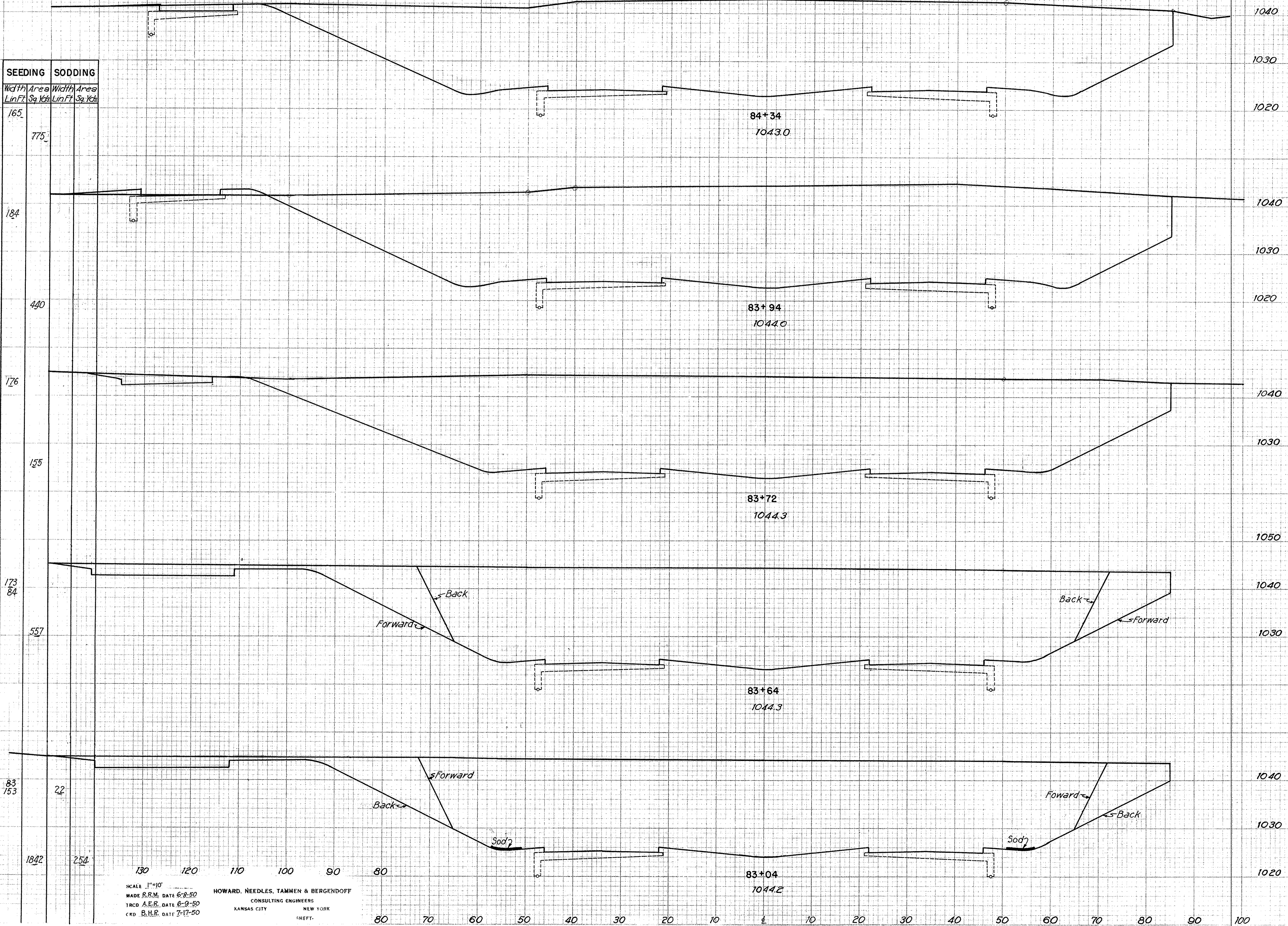
FINAL SURVEY NOTE BOOK NO. _____
 SURVEYED BY _____
 DATE _____
 PLOTTED BY _____
 DATE _____
 AREAS CHECKED _____

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

SEEDING		SODDING	
Width Lin Ft	Area Sq Yds	Width Lin Ft	Area Sq Yds

165	775		
184	440		
176	155		
173 84	557		
83 153	22	1842	254

CLASS. EMB. MATERIAL	END AREA	VOLUME	
		CUT	FILL
	3145	55	
	3347	77	4800
	440		2705
	3294	40	
	155		955
	3145	40	
	2690		5930
	22		
	2640	40	
	1842		13250
	254		183



SCALE 1"=10'
 MADE R.R.M. DATE 6-8-50
 TRCD A.E.R. DATE 6-9-50
 CKD B.H.R. DATE 7-17-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK
 SHEET

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	38 146
2	OHIO	U-687(B)	POST WAR	

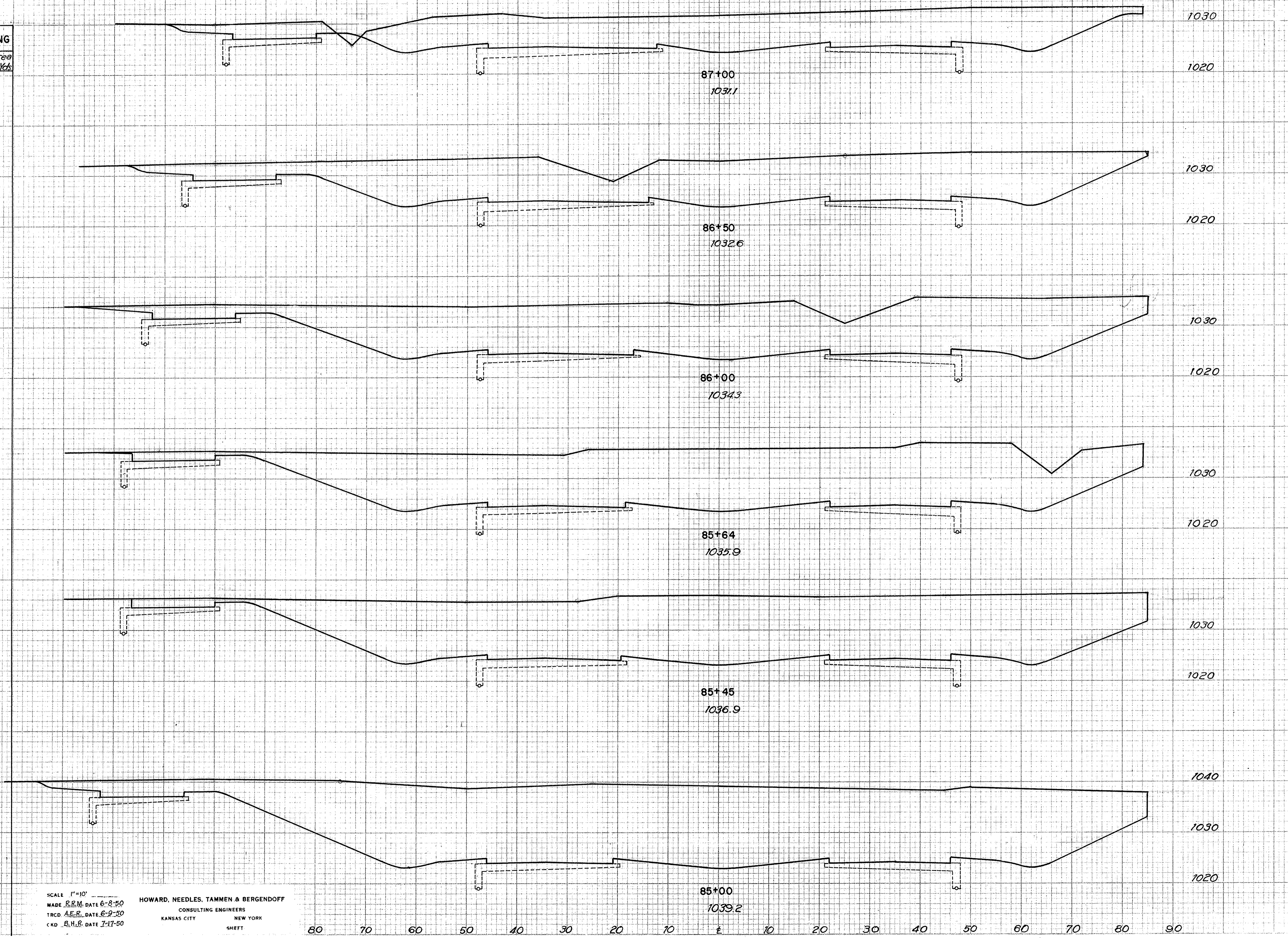
SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

DATE _____ BY _____
FINAL SURVEY
SURVEY BOOK _____
NOTE BOOK _____
AREAS CHECKED _____
NO. _____

DATE _____ BY _____
ORIGINAL SURVEY
SURVEY BOOK _____
NOTE BOOK _____
AREAS CHECKED _____
NO. _____

SEEDING	SODDING
Width Lin Ft	Area Sq Yds

134	767
142	822
154	610
151	319
151	800
170	1225



CLASS. EMB MATERIAL	END AREA		VOLUME	
	AREA	VOL.	CUT	FILL
	1135	78		
			2420	135
	1480	68		
			2964	118
	1725	60		
			2402	77
	1880	56		
			1390	38
	2076	55		
			3945	91
	2660	55		
			7100	134

SCALE 1"=10'
MADE P.R.M. DATE 6-8-50
TRCD A.E.R. DATE 6-9-50
CKD B.H.R. DATE 7-17-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET

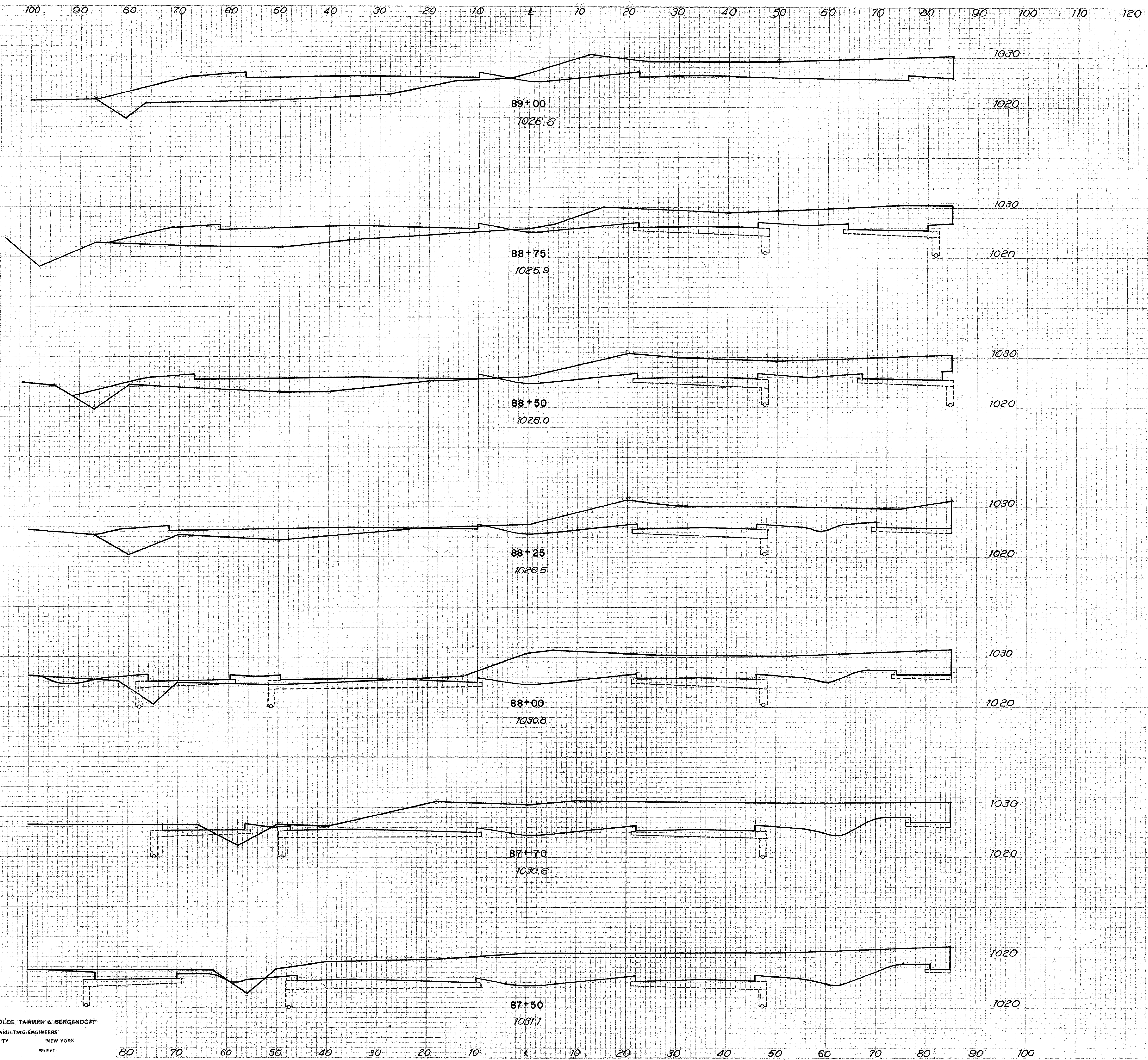
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	40 146
2	OHIO	U-687(18)	POST WAR	

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

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

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

SEEDING	SODDING	Width Lin	Area Sq. Yds	Width Lin	Area Sq. Yds
84			236		
86			242		
88			234		
80			254		
103			350		
95			229		
111					
272					



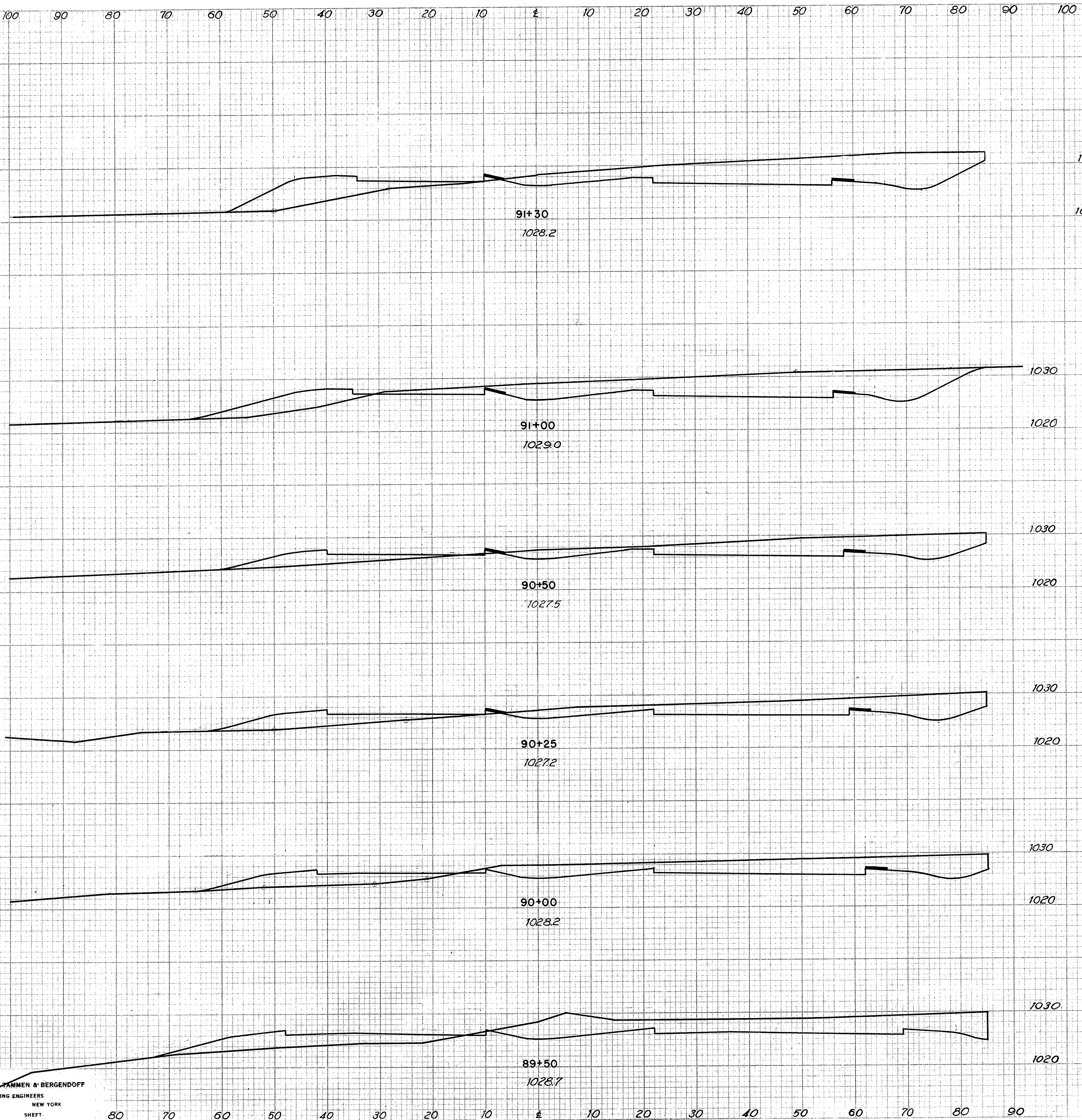
CLASS. EMB. MATERIAL	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	289	310		
			318	256
	396	243		
			348	206
	354	203		
			361	166
	425	154		
			430	99
		59		
	505			
		113		
			689	115
	736	94		
			568	64
	795	78		
			1785	143

SCALE 1"=10'
MADE R.R.M. DATE 6-8-50
TRCD A.E.R. DATE 6-9-50
CRD B.H.R. DATE 7-17-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

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

SEEDING	SODDING	
	Width Area Lin. Ft. Sq. Yds.	Width Area Lin. Ft. Sq. Yds.
89	8	
	317	27
101	8	
	503	44
80	8	
	225	22
82	8	
	246	17
87	4	
	470	
82		
	462	



CLASS. EMB. MATERIAL	END AREA		VOLUME	
	AREA	VOL.	CUT	FILL
		360	125	
				389 191
		340	93	
				520 153
		222	72	
				200 76
		210	92	
				153 140
		120	212	
				380 304
		290	116	
				535 394

SCALE 1"=10'
 MADE R.R.M. DATE 8-8-50
 TRCD. A.E.R. DATE 6-9-50
 CND. B.H.R. DATE 7-17-50

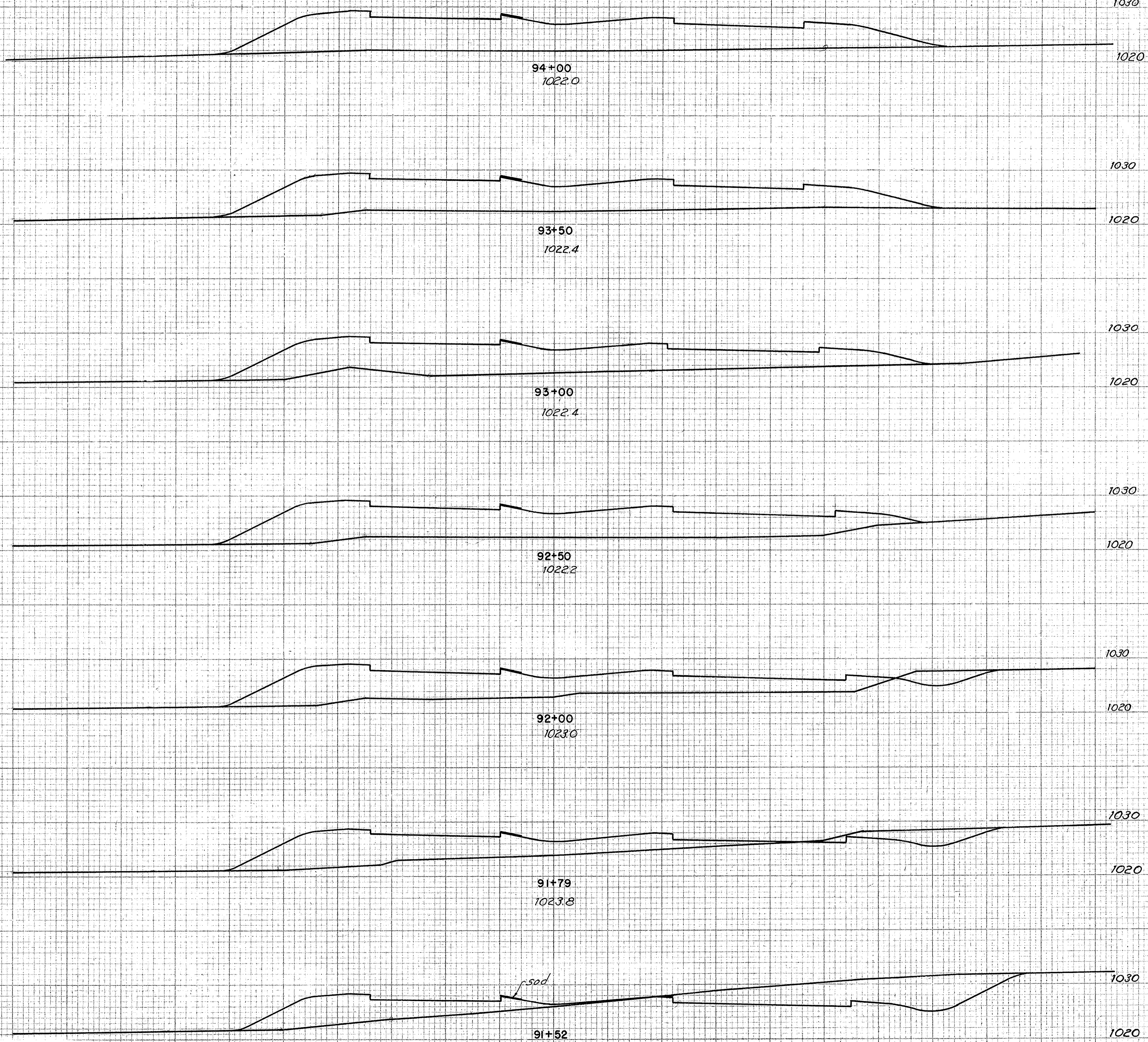
HOWARD, NEEDLES TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO	U-687(8)	POST WAR

43
146

SUMMIT COUNTY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

100 90 80 70 60 50 40 30 20 10 1 10 20 30 40 50 60 70 80 90 100



SEEDING	SODDING	
	Width Area Lin Ft Sq Yds	Width Area Lin Ft Sq Yds
97	336	45
96	520	45
91	494	45
87	525	45
102	238	19
102	306	24
102	234	20

CLASS. EMB. MATERIAL	END AREA	VOLUME	
		CUT	FILL
	0	623	
	0	593	1125
	0	530	1040
	0	577	1024
	0	577	29 970
	37	471	
	30	317	
	46	345	
	148	266	
	250	189	
	248	128	

DATE: _____
BY: _____
FINAL SURVEY PLOTTED: _____
NOTE BOOK NO. _____
AREAS CHECKED: _____

DATE: _____
BY: _____
ORIGINAL SURVEY PLOTTED: _____
NOTE BOOK NO. _____
AREAS CHECKED: _____

SCALE 1"=10'
MADE R.P.M. DATE 8-8-50
TRCD. A.E.R. DATE 8-2-50
CKD. B.H.R. DATE 7-17-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

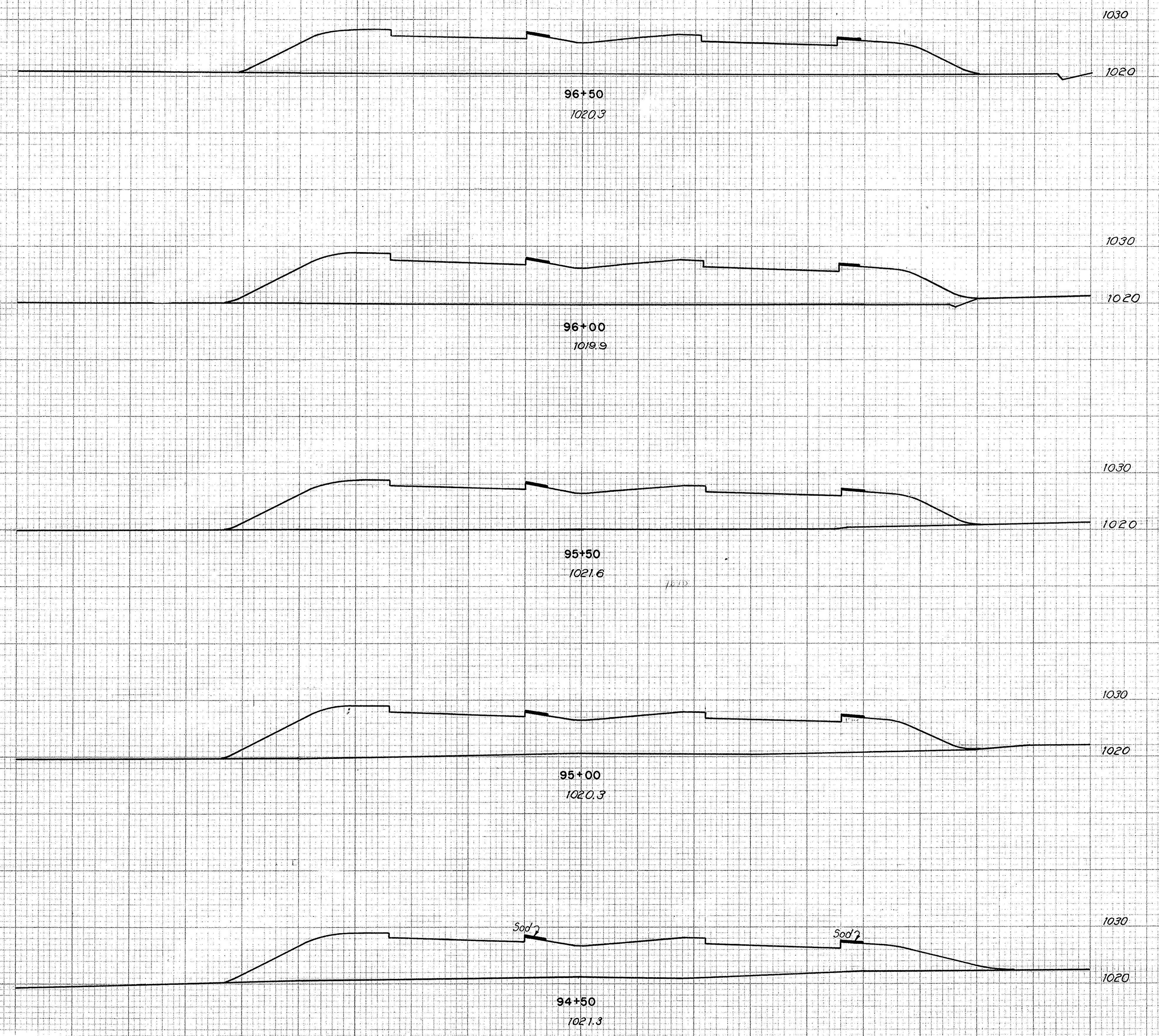
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO	U-687(B)	POST WAR

44
196

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

SEEDING	SODDING	
	Width Lin Ft.	Area Sq. Yds.
95	8	
	530	45
96	8	
	533	45
96	8	
	536	45
97	8	
	550	45
101	8	
	550	45



CLASS. EMB. MATERIAL	END AREA		VOLUME	
	AREA	VOL.	CUT	FILL
	0	725		
	0	828	0	1437
	0	821	0	1528
	0	803	0	1500
	0	729	0	1415
	0	725	0	1250

DATE _____
BY _____
FINAL SURVEY NOTE BOOK NO. _____

DATE _____
BY _____
ORIGINAL SURVEY NOTE BOOK NO. _____

SCALE 1"=10'
MADE P.R.M. DATE 6-9-50
TRCR. A.E.R. DATE 6-12-50
CVD B.H.R. DATE 7-18-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET _____

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

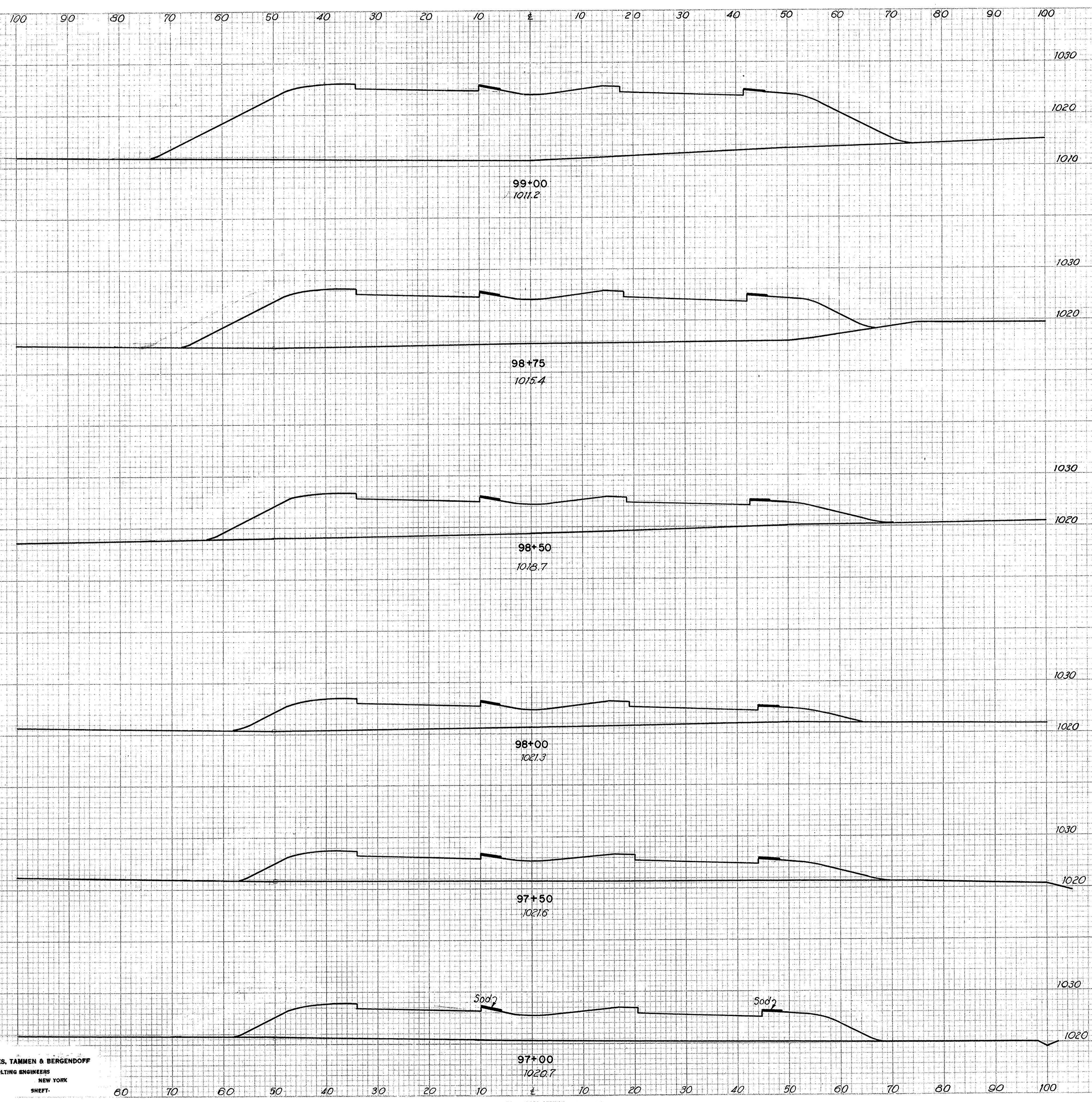
PLATE 3-CROSS SECTION O. P. R. & R. E.
CHARLES BRUNING COMPANY, INC.

STA. 94+50 TO STA. 96+50

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

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

SEEDING		SODDING	
Width Lin Ft	Area Sq Yds	Width Lin Ft	Area Sq Yds
112	8		
297	45		
102	8		
277	45		
97	8		
502	45		
84	8		
483	45		
90	8		
497	45		
89	8		
511	45		



CLASS. EMB. MATERIAL	END AREA	VOLUME	
		CUT	FILL
0	0	1526	0
0	0	0	1246
0	0	1159	0
0	0	0	863
0	0	707	0
0	0	0	1076
0	0	457	0
0	0	0	874
0	0	488	0
0	0	0	1054
0	0	652	0
0	0	0	1272

SCALE 1"=10'
MADE R.R.M. DATE 6-9-50
TRCD A.E.R. DATE 6-12-50
CRD B.H.R. DATE 7-18-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET-

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	46
2	OHIO	U-687(8)	POST WAR	146

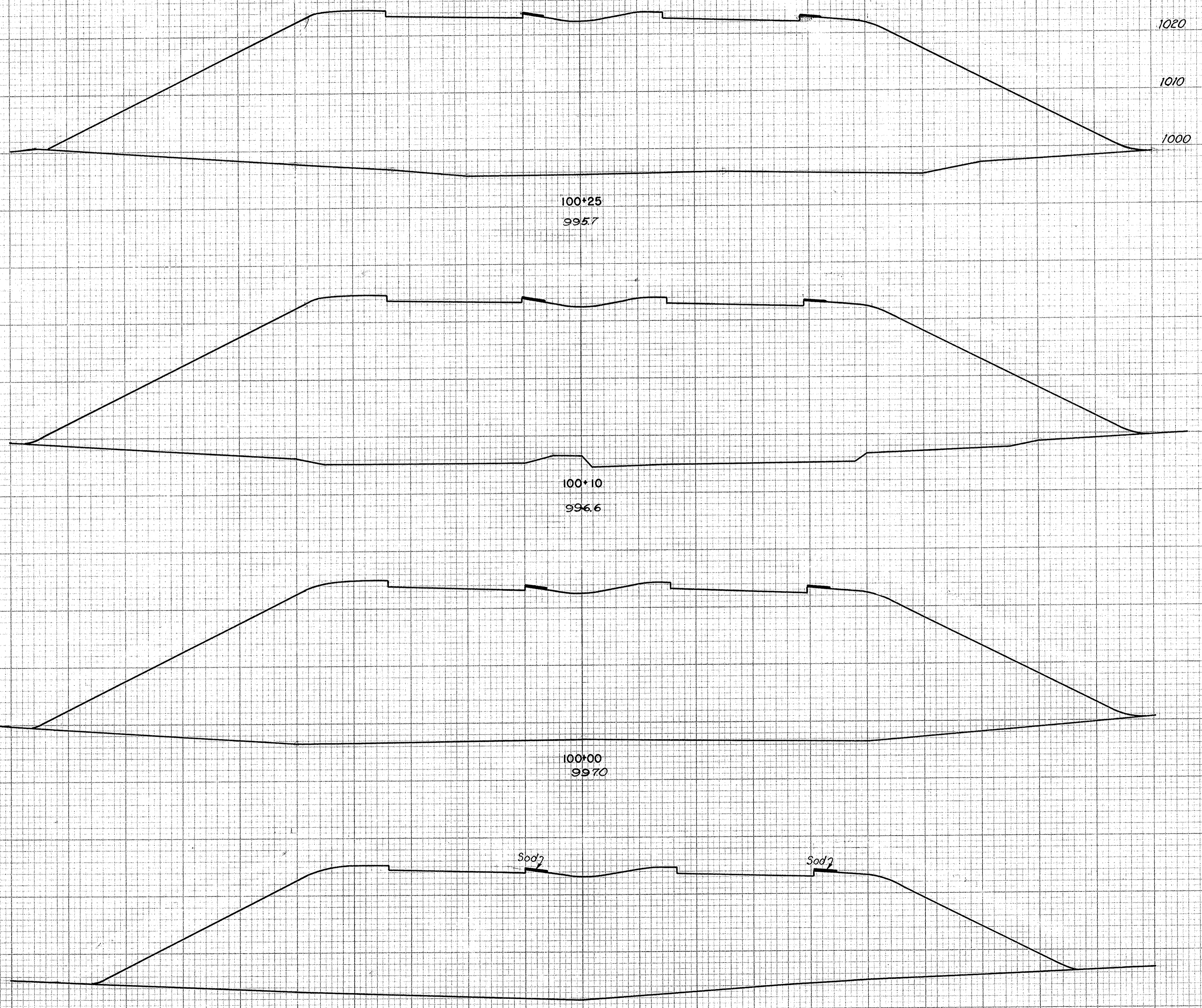
SUMMIT COUNTY OF AKRON
 AKRON EXPRESSWAY-PART 3
 EXPRESSWAY-PART 3
 SUM-5-12.62

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

SEEDING		SODDING	
Width	Area	Width	Area
Lin	Sq. Yds.	Lin	Sq. Yds.
165	8		
277	13		
167	8		
186	9		
167	8		
867	45		
145	8		
714	45		

DATE: _____ BY: _____
 ORIGINAL SURVEY: _____
 SURVEY PLOTTED: _____
 NOTE BOOK: _____
 AREAS CHECKED: _____
 NO. _____

DATE: _____ BY: _____
 ORIGINAL SURVEY: _____
 SURVEY PLOTTED: _____
 NOTE BOOK: _____
 AREAS CHECKED: _____
 NO. _____



CLASS. EMB. MATERIAL	END AREA	VOLUME	
		CUT	FILL
0	0	3900	
0	0	2201	
0	0	4026	
0	0	1461	
0	0	3867	
0	0	6181	
0	0	2809	
0	0	4013	

SCALE 1"=10'
 MADE R.E.M. DATE 6-9-50
 TRCO A.E.R. DATE 6-12-50
 CKD B.H.R. DATE 7-18-50
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK
 SHEET

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

PLATE 3-CROSS SECTION O. P. N. & R. E.
 CHARLES BRIDGING COMPANY, INC.

STA. 99+50 TO STA. 100+25

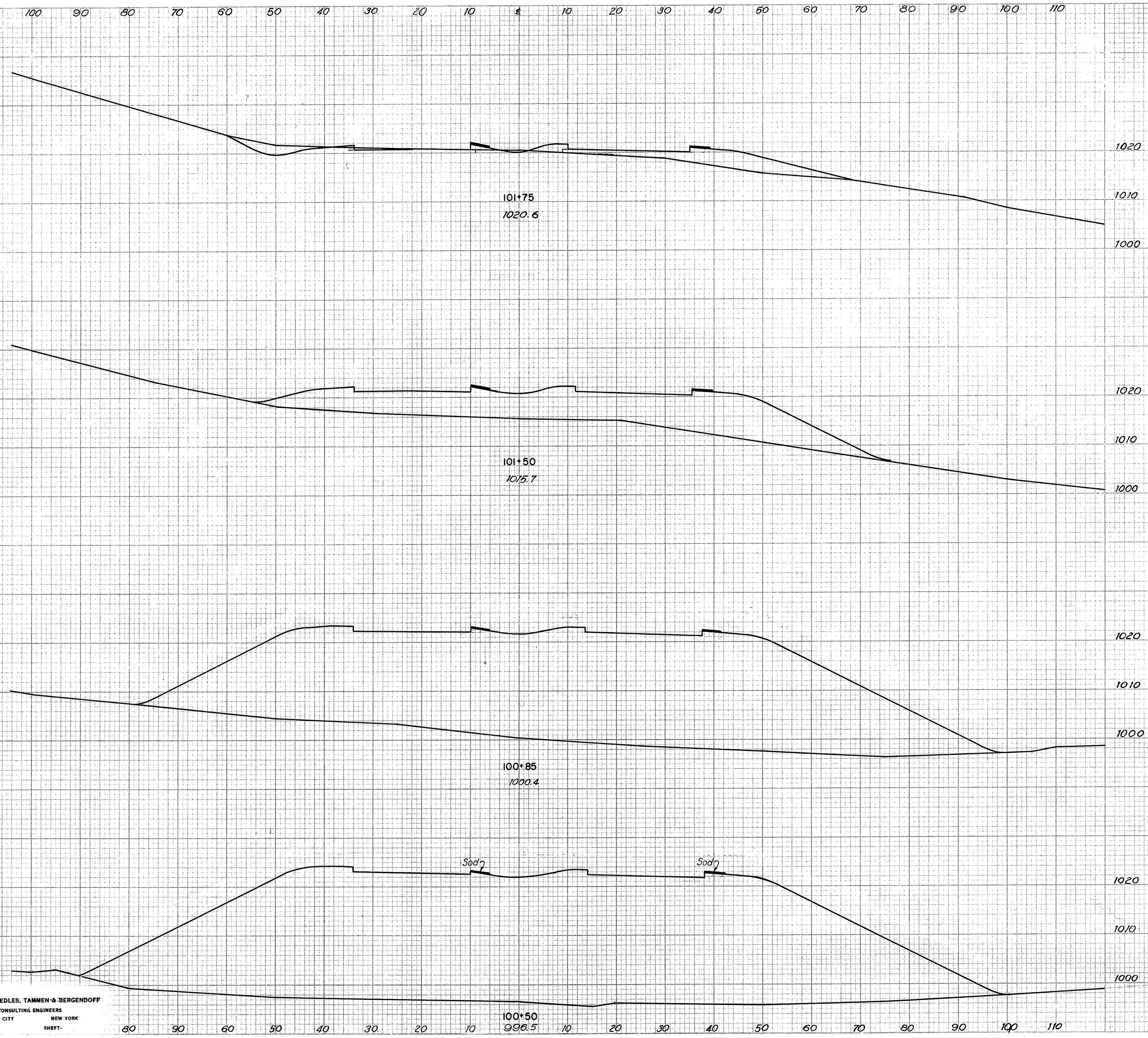
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	47 146
2	OHIO	U-687(8)	POST WAR	

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

DATE _____ BY _____
FINAL SURVEY
SURVEY BOOK _____
NOTE BOOK _____
TEMPLATE _____
AREAS _____
AREAS CHECKED _____
NO. _____

DATE _____ BY _____
ORIGINAL SURVEY
SURVEY BOOK _____
NOTE BOOK _____
TEMPLATE _____
AREAS _____
AREAS CHECKED _____
NO. _____

SEEDING		SODDING	
Width Lin. Ft.	Area Sq. Yds.	Width Lin. Ft.	Area Sq. Yds.
91	8		
259	22		
95	8		
872	58		
149	8		
605	31		
162	8		
454	22		



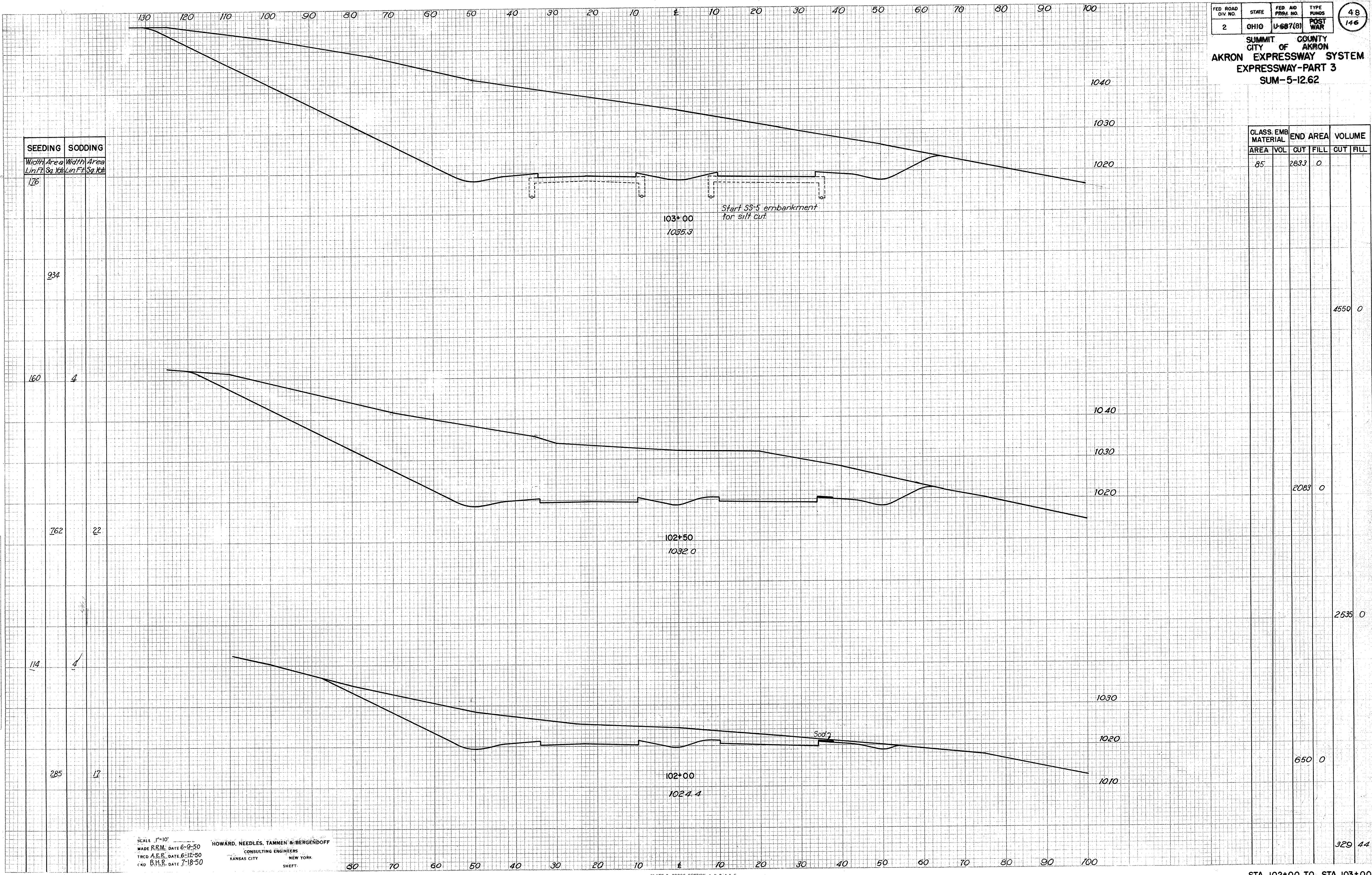
CLASS. EMB. MATERIAL	END AREA	VOLUME	
		CUT	FILL
	67	95	
0		28	356
0	0	675	
0		0	4360
0	0	2950	
0		0	4328
0	0	3727	
0		0	3531

SCALE 1"=10'
MADE P.R.M. DATE 6-2-50
TRCD A.E.R. DATE 6-12-50
CRD B.H.R. DATE 7-18-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET-

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

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

SEEDING	SODDING
Width Area Lin Ft Sq Yds	Width Area Lin Ft Sq Yds
176	
934	
160	4
762	22
114	4
285	17



CLASS. EMB. MATERIAL	END AREA	VOLUME	
		CUT	FILL
85	2833	0	
			4550
	2089	0	
			2535
	650	0	
			329
			44

SCALE 1"=10'
MADE R.R.M. DATE 6-9-50
TRCD A.E.R. DATE 6-12-50
CND B.H.R. DATE 7-18-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO	U-687(B)	POST WAR

49
146

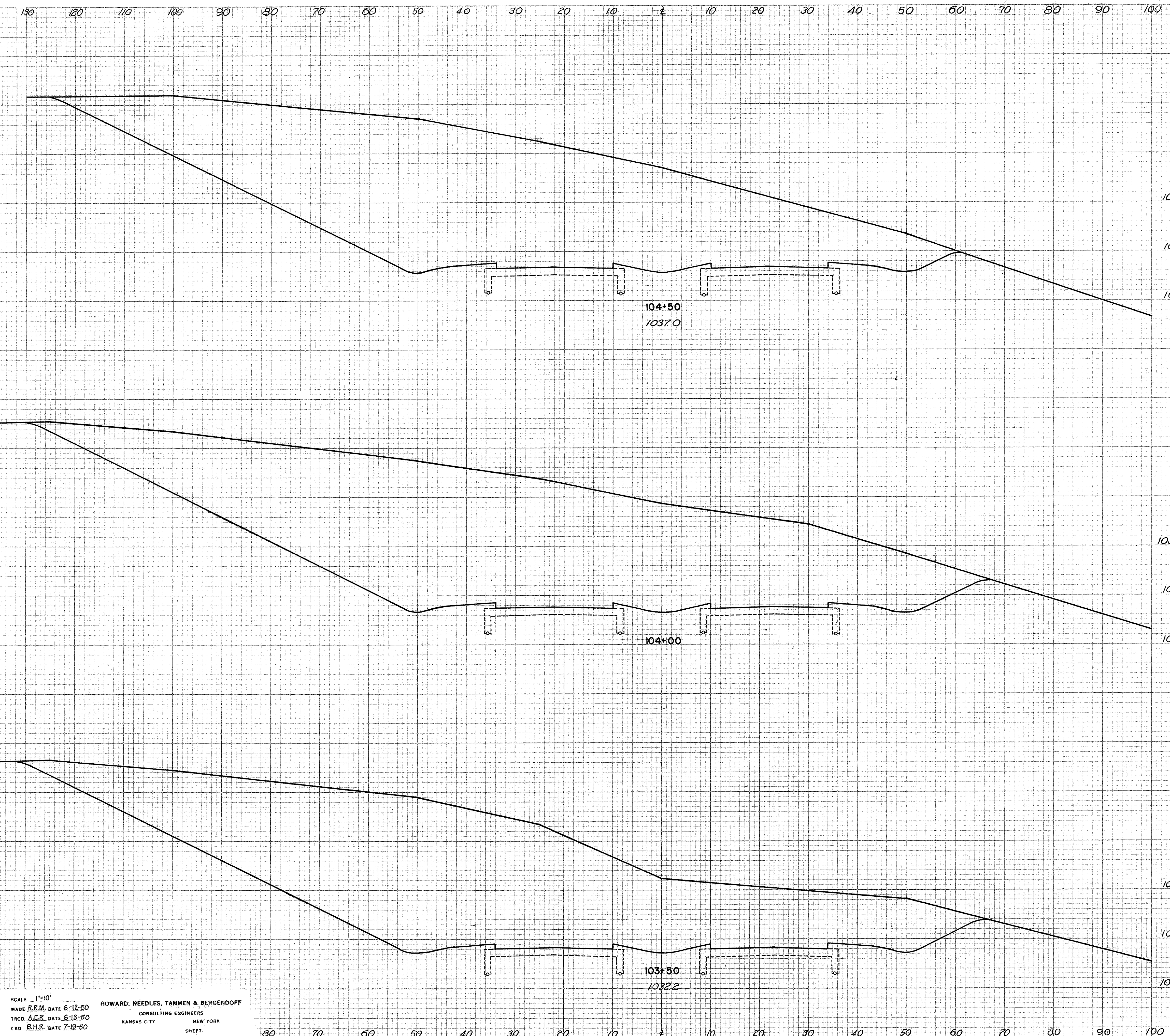
SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

DATE _____ BY _____
FINAL SURVEY _____
SURVEY _____
NOTE BOOK _____
TEMPLATE _____
AREAS _____
CHECKED _____
NO. _____

DATE _____ BY _____
ORIGINAL SURVEY _____
SURVEY _____
NOTE BOOK _____
TEMPLATE _____
AREAS _____
CHECKED _____
NO. _____

Sta.	SEEDING		SODDING	
	Width Area Lin. Ft. Sq. Yds.	Width Area Lin. Ft. Sq. Yds.	Width Area Lin. Ft. Sq. Yds.	Width Area Lin. Ft. Sq. Yds.
168				
960				
178				
993				
180				
988				

CLASS. EMB. MATERIAL	END AREA		VOLUME	
	AREA	VOL.	CUT	FILL
85	3364	0		
157			6480	0
83	3630	0		
157			6460	0
85	3338	0		
				5715



SCALE 1"=10'
MADE P.R.M. DATE 6-12-50
TRCD A.E.R. DATE 6-13-50
CND B.H.R. DATE 7-19-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET

DATE _____ BY _____
 ORIGINAL SURVEY PLOTTED _____
 SURVEY NOTE BOOK NO. _____
 FINAL SURVEY PLOTTED _____
 NOTE BOOK NO. _____
 AREAS CHECKED _____

DATE _____ BY _____
 ORIGINAL SURVEY PLOTTED _____
 SURVEY NOTE BOOK NO. _____
 FINAL SURVEY PLOTTED _____
 NOTE BOOK NO. _____
 AREAS CHECKED _____

SEEDING		SODDING	
Width Lin Ft	Area Sq Yds	Width Lin Ft	Area Sq Yds

156					
855					
152					
833					
148					
841					
155					
896					

CLASS. EMB. MATERIAL	END AREA	VOLUME	
		CUT	FILL
	2738	40	
			5185
85	2880	40	
			4950
85	2400	0	
			4625
85	2512	0	
			5450

SCALE 1"=10'
 MADE R.E.M. DATE 6-12-50
 TRCD A.E.R. DATE 6-13-50
 CKD B.H.R. DATE 7-19-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

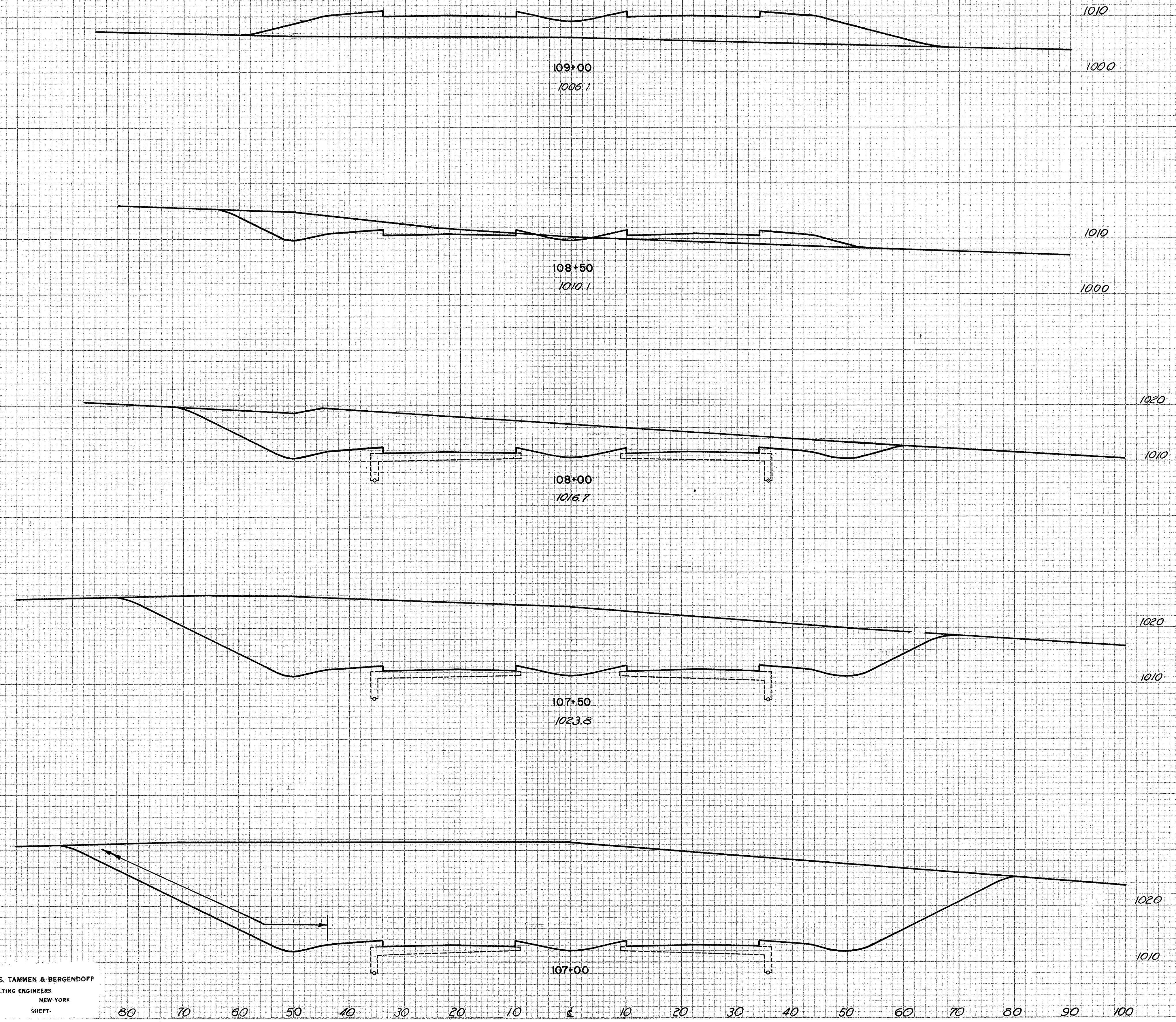
SUMMIT COUNTY
 CITY OF AKRON
AKRON EXPRESSWAY-PART 3
 EXPRESSWAY-PART 3
 SUM-5-12.62

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

DATE _____ BY _____
 FINAL SURVEY SURVEYED _____
 NOTE BOOK _____
 NO. _____ AREAS CHECKED _____

SEEDING		SODDING	
Width Lin/ft	Area Sq. Yds	Width Lin/ft	Area Sq. Yds
525			
89			
543			
106			
650			
128			
782			
154			
860			

DATE _____ BY _____
 ORIGINAL SURVEY SURVEYED _____
 NOTE BOOK _____
 NO. _____ AREAS CHECKED _____



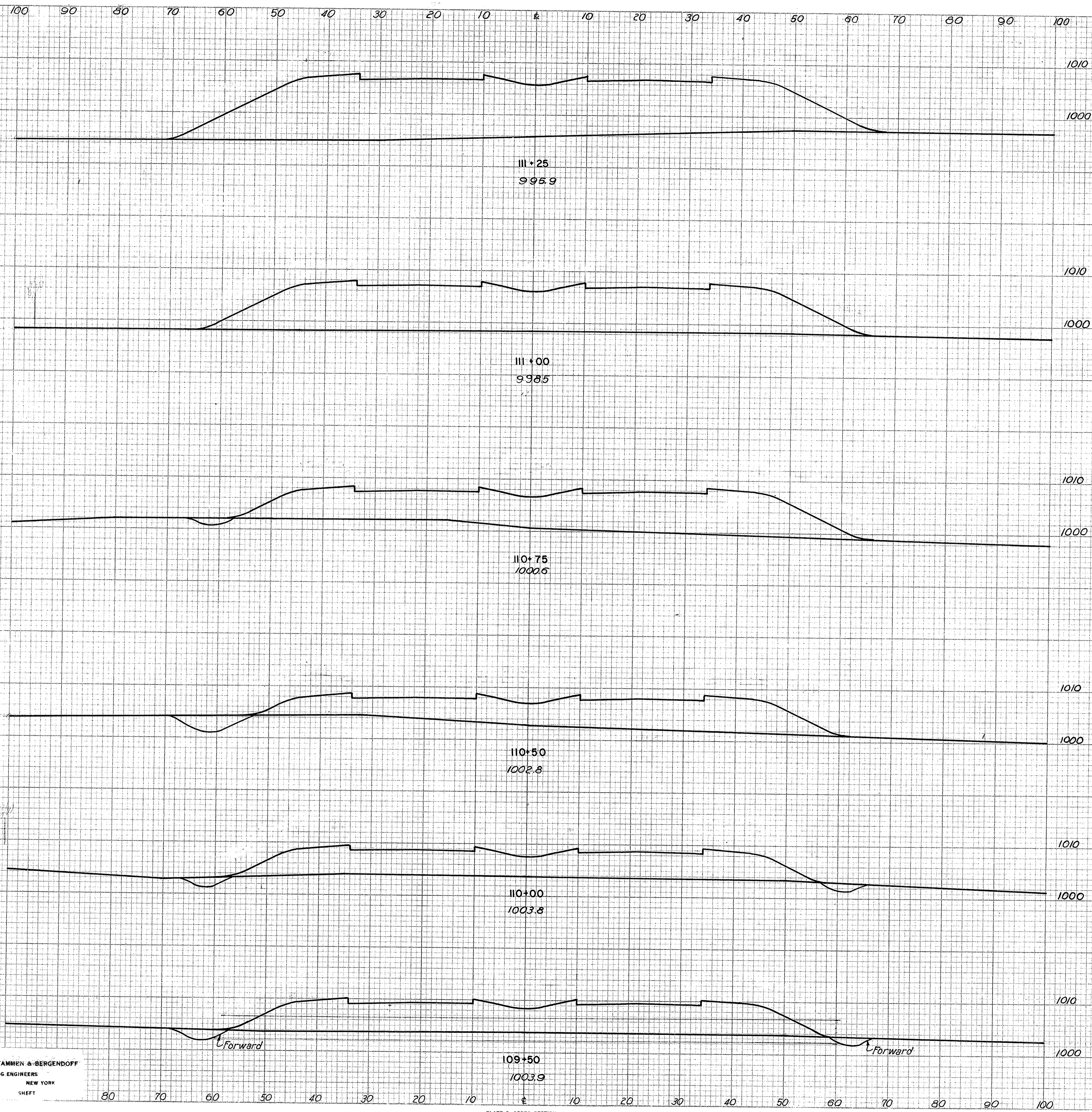
CLASS. EMB. MATERIAL	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
0	0	436		
0			105	457
0	114	58		
0			735	54
	680	40		
			2000	74
	1480	40		
			3695	74
	2510	40		
			4870	

SCALE 1"=10'
 MADE P.R.M. DATE 6-12-50
 TRCD. A.E.R. DATE 6-13-50
 C&D B.H.R. DATE 7-19-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK
 SHEET _____

DATE _____
 BY _____
 ORIGINAL SURVEY PLOTTED _____
 SURVEY PLOTTED _____
 NOTE BOOK _____
 AREAS CHECKED _____

DATE _____
 BY _____
 ORIGINAL SURVEY PLOTTED _____
 SURVEY PLOTTED _____
 NOTE BOOK _____
 AREAS CHECKED _____

SEEDING	SODDING	
	Width Area Lin ² 3a 16s	Width Area Lin ² 3a 16s
114		
305		
106		
284		
99		
260		
89		
496		
90		
508		
43		
536		



CLASS. EMB. MATERIAL	END AREA		VOLUME	
	AREA VOL.	CUT FILL	CUT FILL	CUT FILL
0	0	1250		
0	0	0	1008	
0	0	926		
0	0	0	761	
0	7	716		
0	0	16	564	
0	27	500		
0	0	43	916	
0	19	490		
0	0	36	982	
0	20	570		
0	0	0	932	

SCALE 1"=10'
 MADE R.E.M. DATE 6-12-50
 TRCD. A.E.R. DATE 6-13-50
 C.K.D. B.H.R. DATE 7-19-50

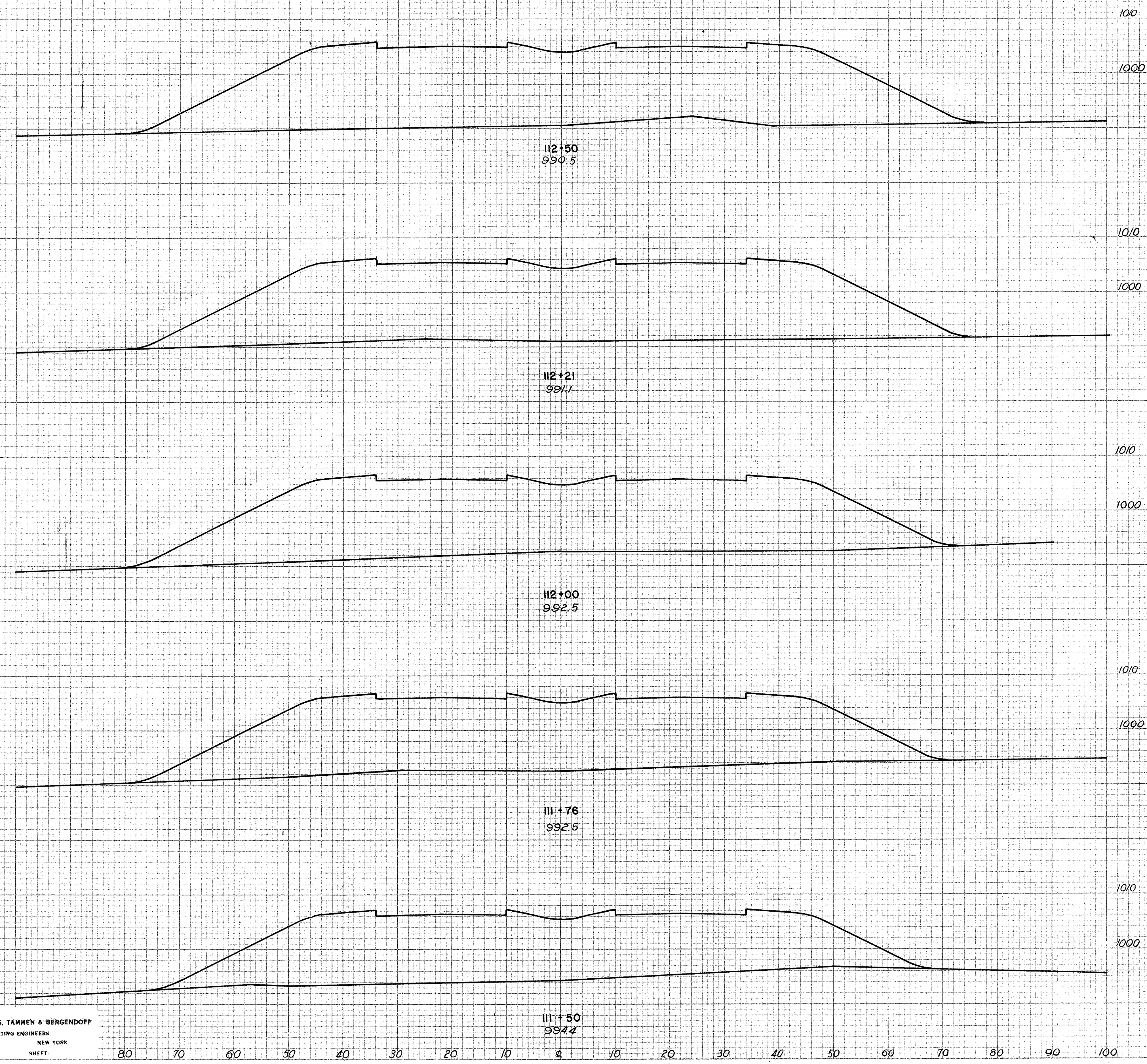
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	53
2	OHIO	U-687(B)	POST WAR	146

SUMMIT COUNTY OF AKRON
 CITY OF AKRON
AKRON EXPRESSWAY-PART 3
 EXPRESSWAY-PART 3
 SUM-5-12.62

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

SEEDING		SODDING	
Width Lin Ft	Area Sq Yds	Width Lin Ft	Area Sq Yds
136			
429			
130			
302			
129			
339			
126			
354			
119			
324			



CLASS. EMB. MATERIAL	END AREA		VOLUME	
	AREA VOL.	CUT	FILL	CUT
0	0	1766		
0	0		1870	
0	0	1716		
0	0		1305	
0	0	1640		
0	0		1438	
0	0	1596		
0	0		1373	
0	0	1360		
0	0		1208	

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

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

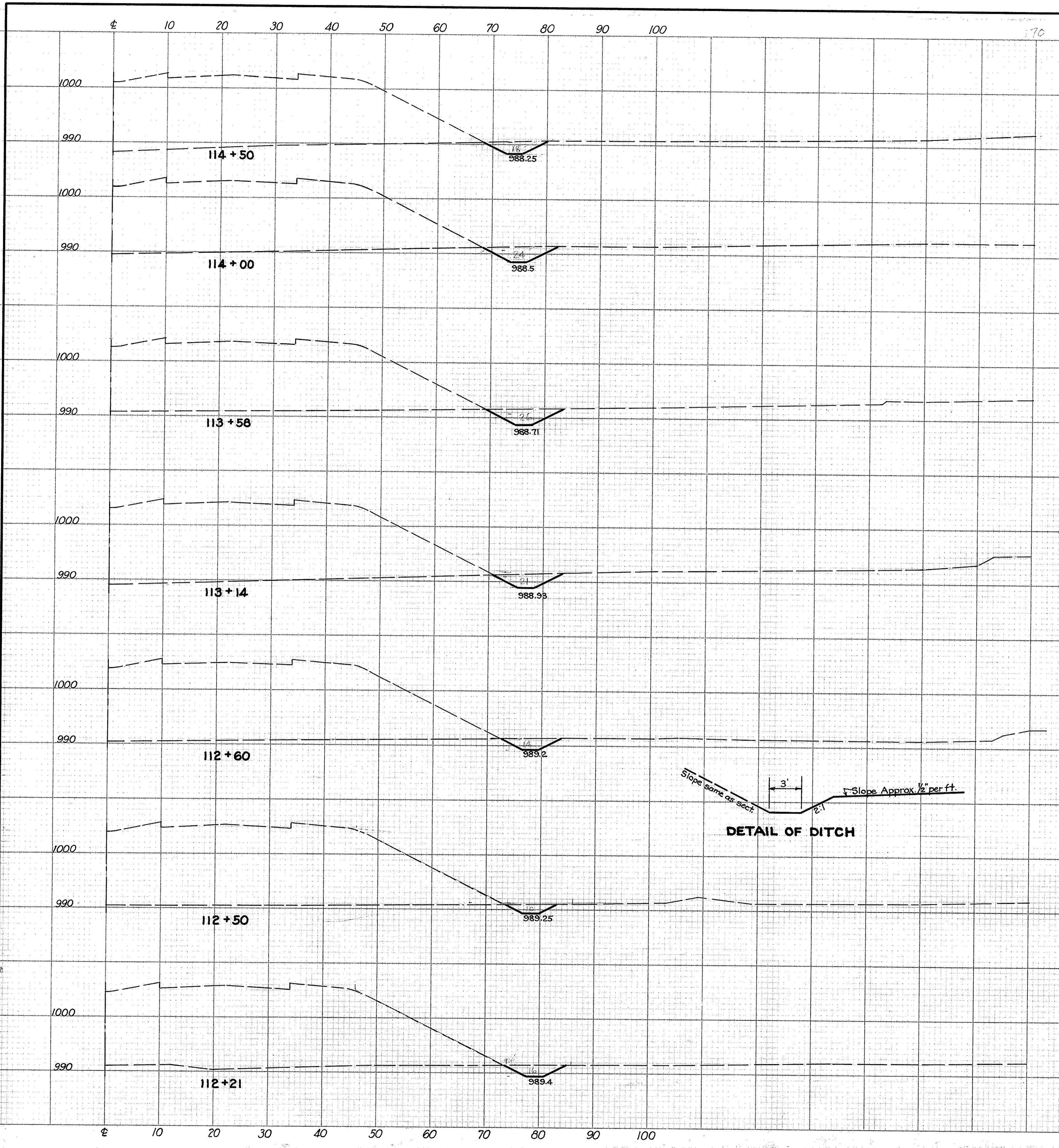
SCALE 1"=10'
 MADE R.E.M. DATE 6-12-50
 TRCD A.E.R. DATE 6-13-50
 CKD B.H.R. DATE 7-19-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK
 SHEET

111+50
 994.4

PLATE 3-CROSS SECTION O.P.R. & R.E.
 CHARLES BRUNING COMPANY, INC.

STA. 111+50 TO STA. 112+50

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	53A 146
2	OHIO	U-687(6)	POST WAR	
SUMMIT COUNTY CITY OF AKRON AKRON EXPRESSWAY SYSTEM EXPRESSWAY-PART 3 SUM-5-12.62				



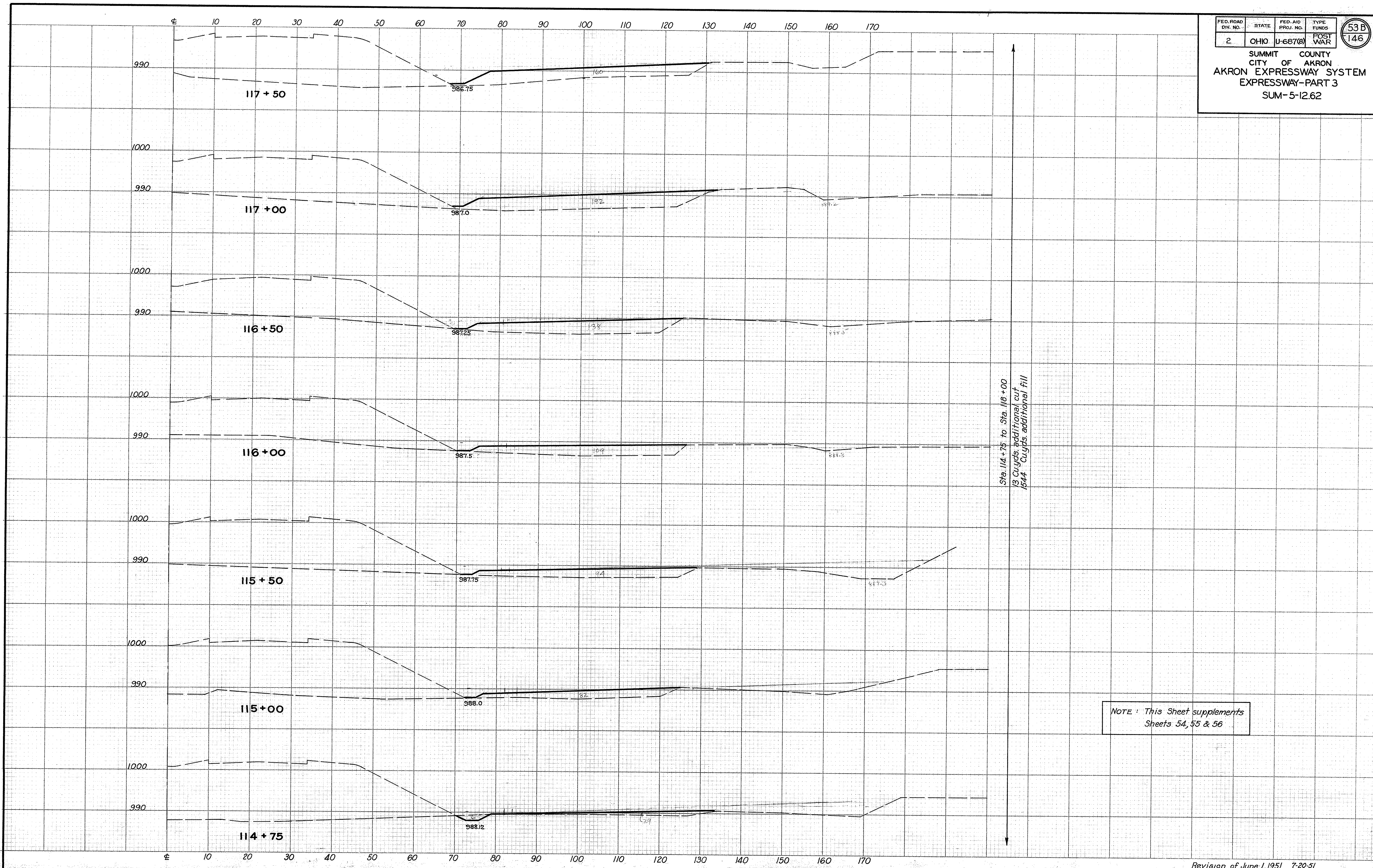
Note: Contrary To General Note on Sheet #12
 L-9 Seeding and Protecting, Type 'A'
 is to be carried to a point 5'-0" east of
 ditch between Stations 112+00 to 122+00.
 Additional L-9 Seeding Sta. 112+00 to 122+00 = 610 Sq. Yds.
 " L-9 Fertilizer " " " " = 0.06 Tons

NOTE: This Sheet supplements
 Sheets 53 & 54.

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO	U-687(B)	POST WAR

SUMMIT COUNTY
 CITY OF AKRON
 AKRON EXPRESSWAY SYSTEM
 EXPRESSWAY-PART 3
 SUM-5-12.62

53 B
146



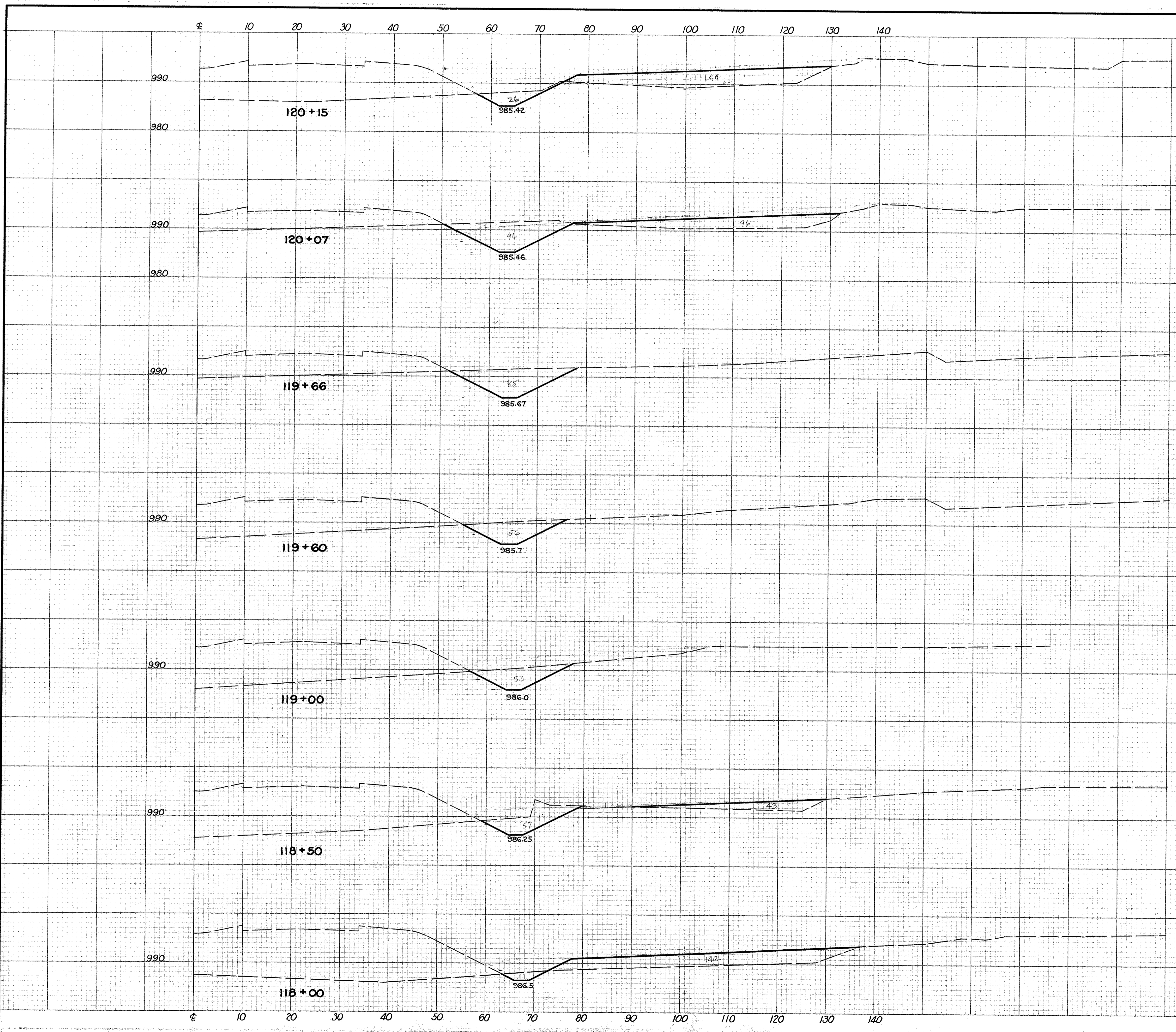
NOTE: This Sheet supplements Sheets 54, 55 & 56

Revision of June 1, 1951 7-20-51

REVISED SECTIONS STA. 114+75 TO STA. 117+50

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	53C 146
2	OHIO	U-687(8)	POST WAR	

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62



Sta. 118+00 to Sta. 120+50
479 Cu. Yds. additional cut
615 Cu. Yds. additional fill

Note: This sheet supplements
Sheets 56 and 57

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUND.	54 146
2	OHIO	U-687(B)	POST WAR	

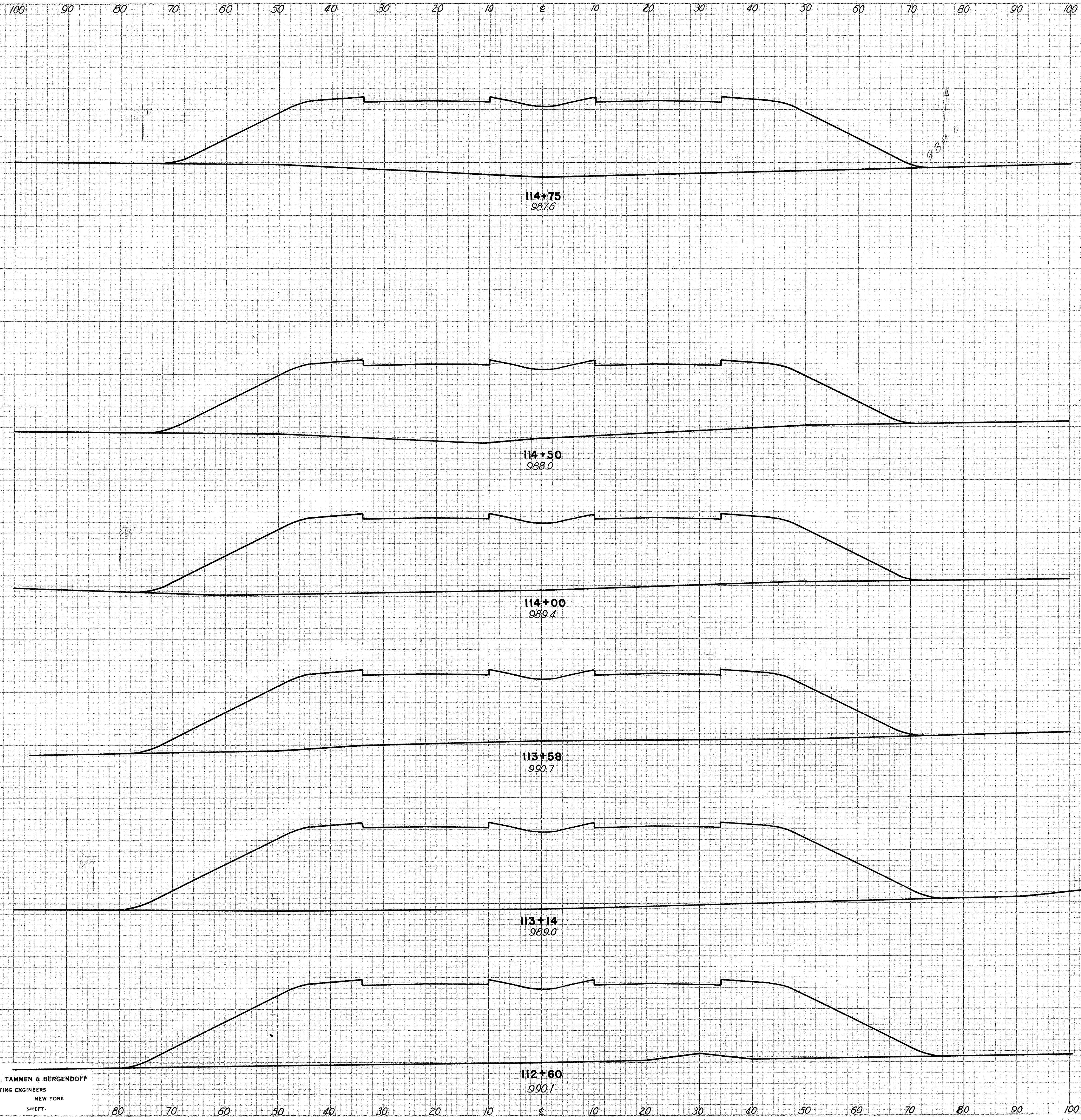
SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

DATE	BY
FINAL SURVEY NOTE BOOK NO.	BURNING PLOTTED AREAS CHECKED

DATE	BY
ORIGINAL SURVEY NOTE BOOK NO.	BURNING PLOTTED AREAS CHECKED

SEEDING	SODDING
Width Area Lin. Ft. Sq. Yds.	Width Area Lin. Ft. Sq. Yds.

120	333
120	675
123	578
125	628
132	789
131	148



CLASS. EMB. MATERIAL	END AREA		VOLUME	
	AREA	VOL.	CUT	FILL
0	0	1546		
0	0		0	1421
0	0	1524		
0	0		0	2880
0	0	1588		
0	0		0	2395
0	0	1500		
0	0		0	2745
0	0	1870		
0	0		0	3630
0	0	1760		
0	0		0	653

SCALE 1"=10'
MADE P.R.M. DATE 6-13-50
TRCD A.E.R. DATE 6-14-50
CKD B.H.R. DATE 7-20-50

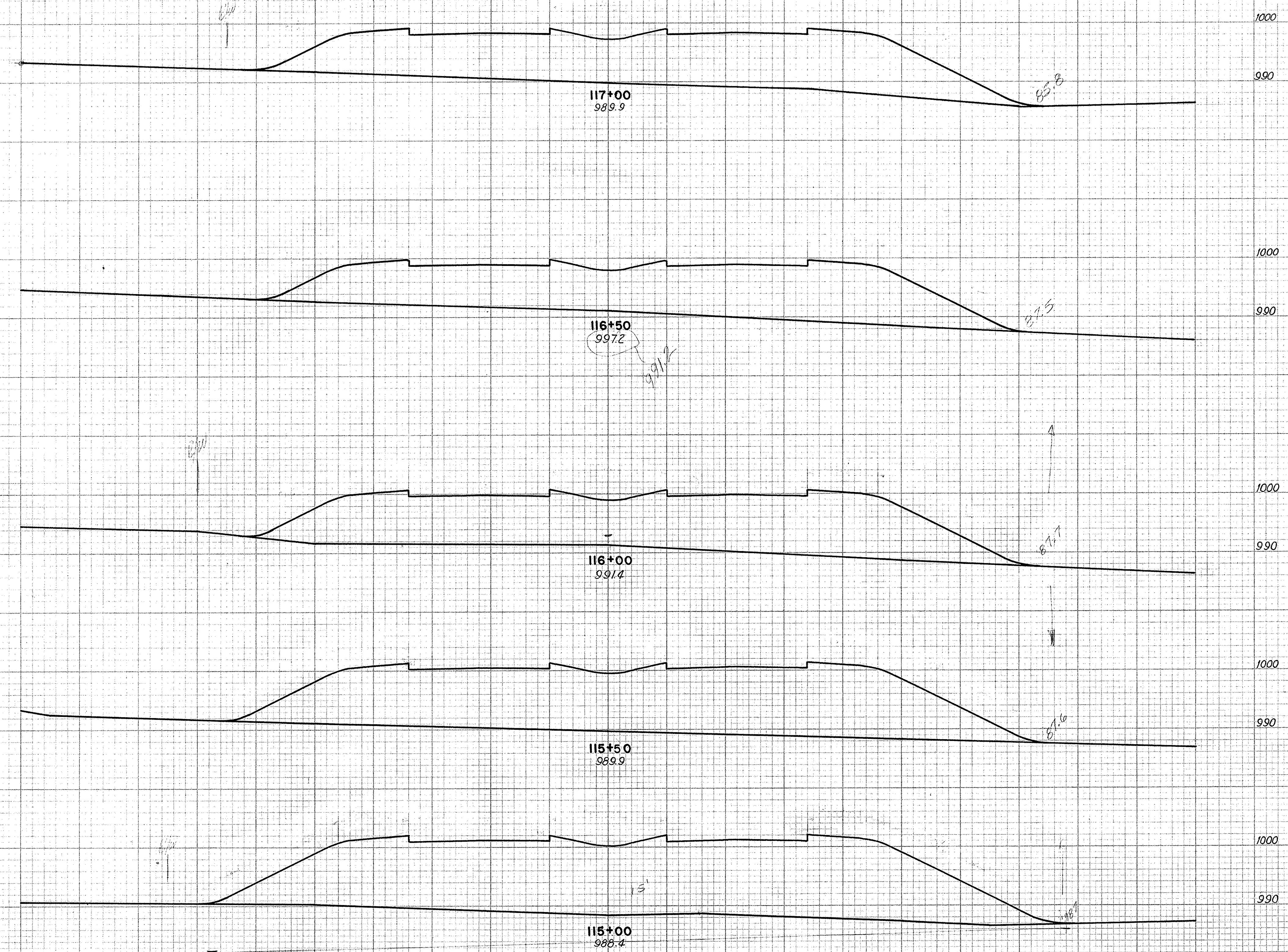
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET

FINAL SURVEYED
DATE: _____
SURVEY NUMBER: _____
NOTE BOOK NO. _____
AREAS CHECKED: _____

ORIGINAL SURVEYED
DATE: _____
SURVEY NUMBER: _____
NOTE BOOK NO. _____
AREAS CHECKED: _____

SEEDING	SODDING	
	Width Lin. Ft.	Area Sq. Yds.
119		
597		
106		
597		
109		
619		
114		
652		
121		
334		

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100



CLASS. EMB. MATERIAL	END AREA		VOLUME	
	AREA	CUT	FILL	CUT FILL
	0	0	928	
	0	0	1675	
	0	0	885	
	0	0	1745	
	0	0	1004	
	0	0	2060	
	0	0	1220	
	0	0	2461	
	0	0	1440	
	0	0	1380	

SCALE 1"=10'
MADE R.E.M. DATE 8-13-50
TRCR A.E.R. DATE 8-14-50
CKD B.H.R. DATE 7-20-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEFT.

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FINANCING	56 146
2	OHIO	U-687(8)	STATE	

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

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

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

SEEDING		SODDING	
Width Lin. Ft.	Area Sq. Yds.	Width Lin. Ft.	Area Sq. Yds.

95			
	.541		
100			
	.566		
104			
	.281		
107			
	.309		
107			
	.600		

CLASS	EMB. MATERIAL	END AREA		VOLUME	
		AREA	VOL.	CUT	FILL
0	0	0	786	0	1570
0	0	0	910	0	1750
0	0	0	976	0	903
0	0	0	1056	0	1001
0	0	0	1050	0	1830

SCALE 1"=10'
MADE R.R.M. DATE 6-13-50
TRCD A.E.R. DATE 6-14-50
CVD B.H.R. DATE 7-20-50

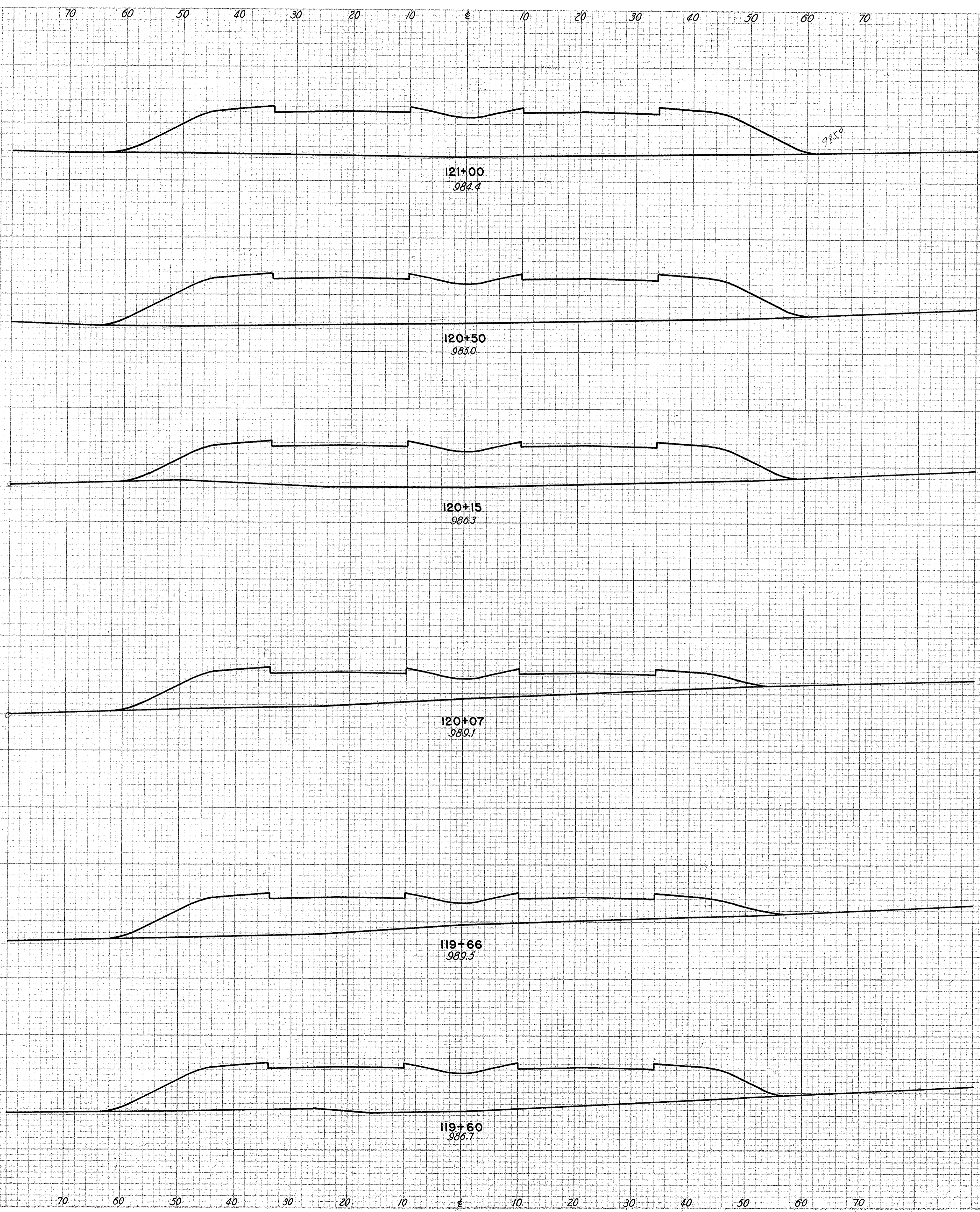
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

FINAL SURVEYED BY DATE
SURVEY REPORT NO.
NOTE BOOK TEMP. LOG
AREAS AREAS CHECKED
NO.

ORIGINAL SURVEYED BY DATE
SURVEY REPORT NO.
NOTE BOOK TEMP. LOG
AREAS AREAS CHECKED
NO.

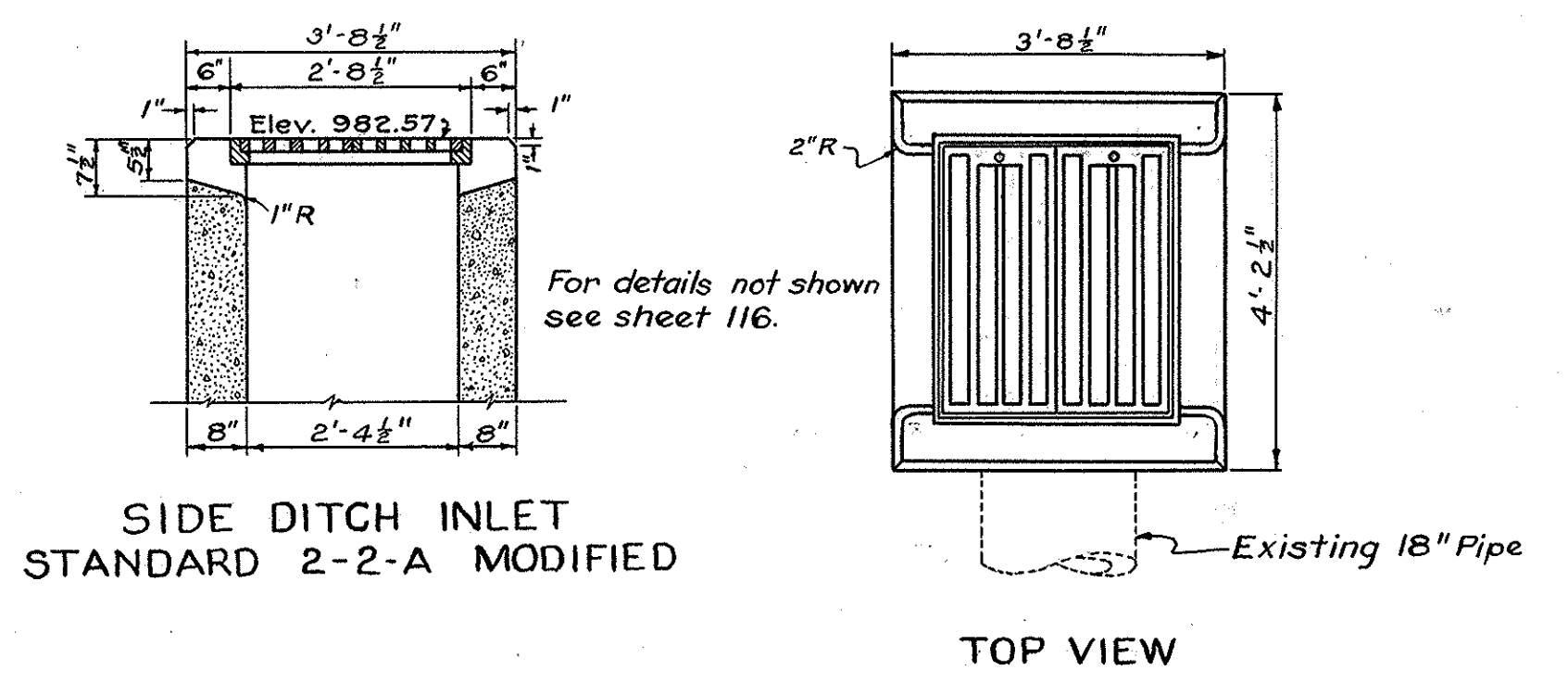
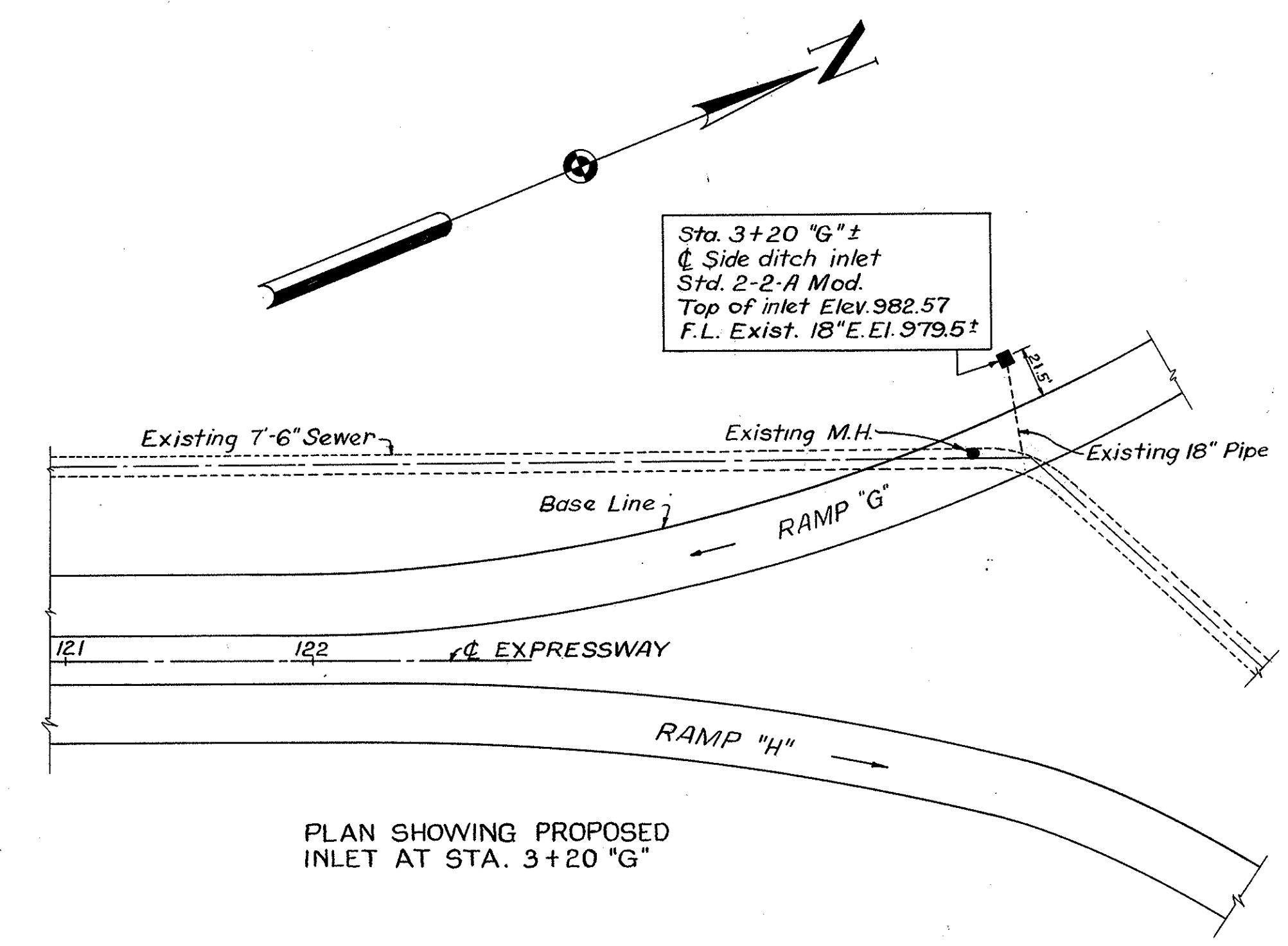
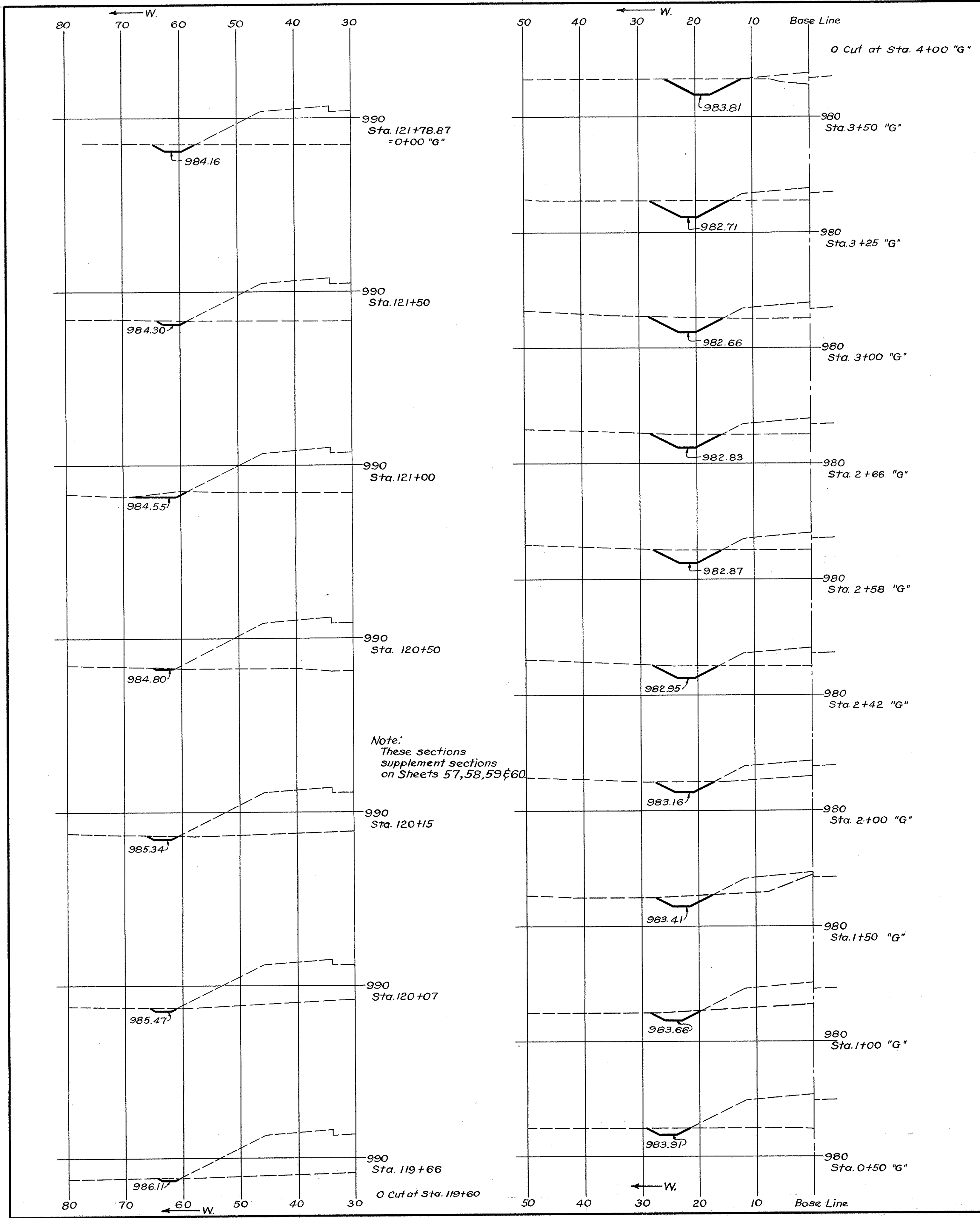
SEEDING	SODDING
Width Area Lin. Ft. Sq. Yds.	Width Area Lin. Ft. Sq. Yds.
98	
544	
98	
373	
94	
80	
86	
405	
92	
62	
94	
630	



CLASS. EMB. MATERIAL	END AREA		VOLUME	
	AREA	VOL.	CUT	FILL
0	0	802		
0	0	832	0	1511
0	0	995		
0	0	702		
0	0	775		
0	0	480		
0	0	762		
0	0	524		
0	0	739		
0	0	724		
0	0	1675		

SCALE 1"=10'
MADE R.R.M. DATE 6-13-50
TRCD A.E.R. DATE 6-14-50
CRD B.H.R. DATE 7-20-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK



ADDITIONAL QUANTITIES			
ITEM	DESCRIPTION	UNIT	QUANTITY
E-7	Roadway Excavation	Cu. Yds.	2.5
I-8	Std. No. 2-2-A Catch Basin Modified	Each	1

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO	U-687(8)	POST WAR

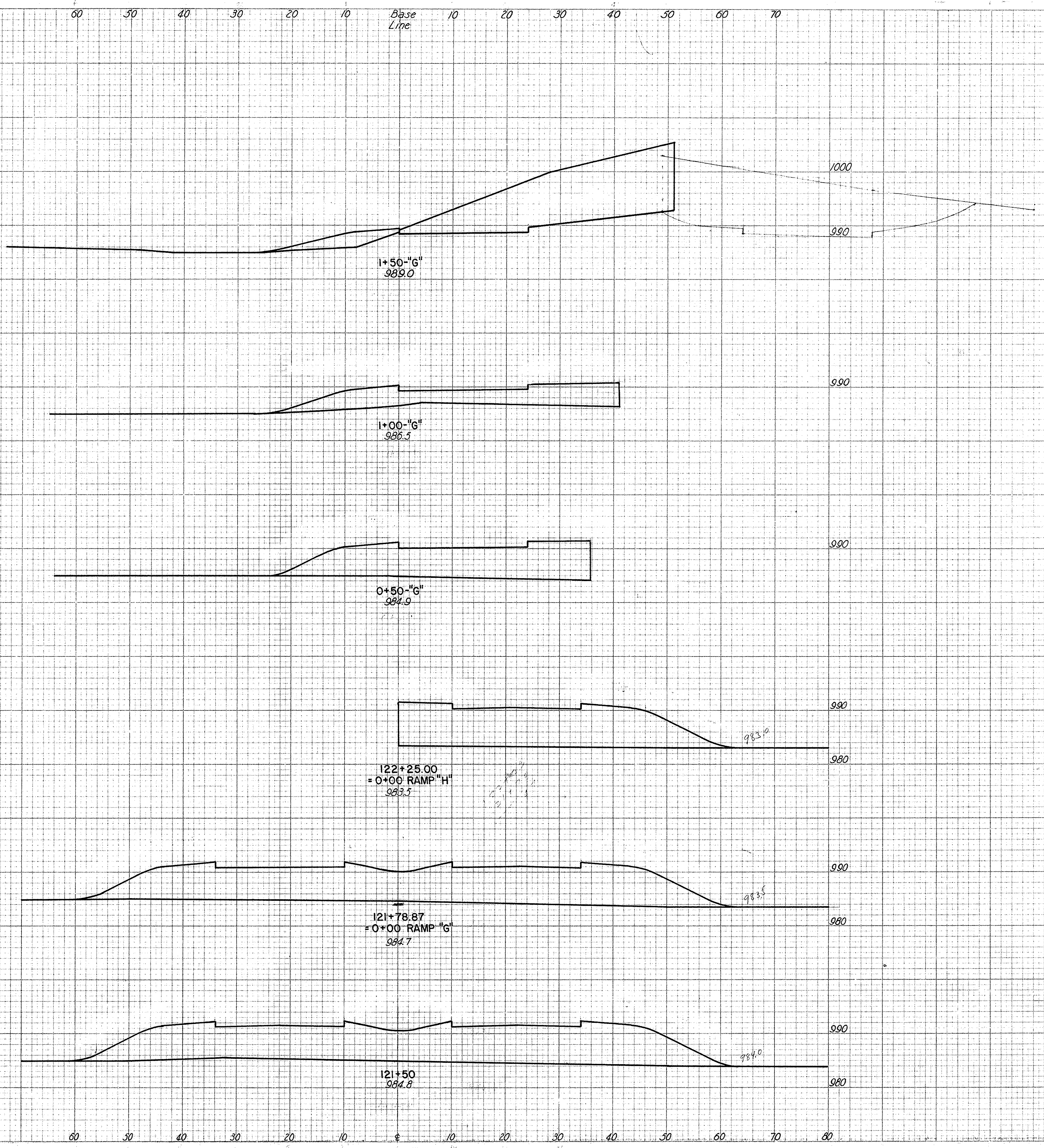
58
146

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

DATE _____ BY _____
FINAL SURVEY NOTE BOOK NO. _____
SUPERSEDED SURVEY NOTE BOOK NO. _____
TEMPLATES AREAS CHECKED

DATE _____ BY _____
ORIGINAL SURVEY NOTE BOOK NO. _____
PLOTTED AREAS CHECKED

STATION	SEEDING		SODDING	
	Width Lin. Ft.	Area Sq. Yds.	Width Lin. Ft.	Area Sq. Yds.
63				
319				
52				
275				
47				
150				
113				
50				
89				
167				
98				
313				
97				
542				

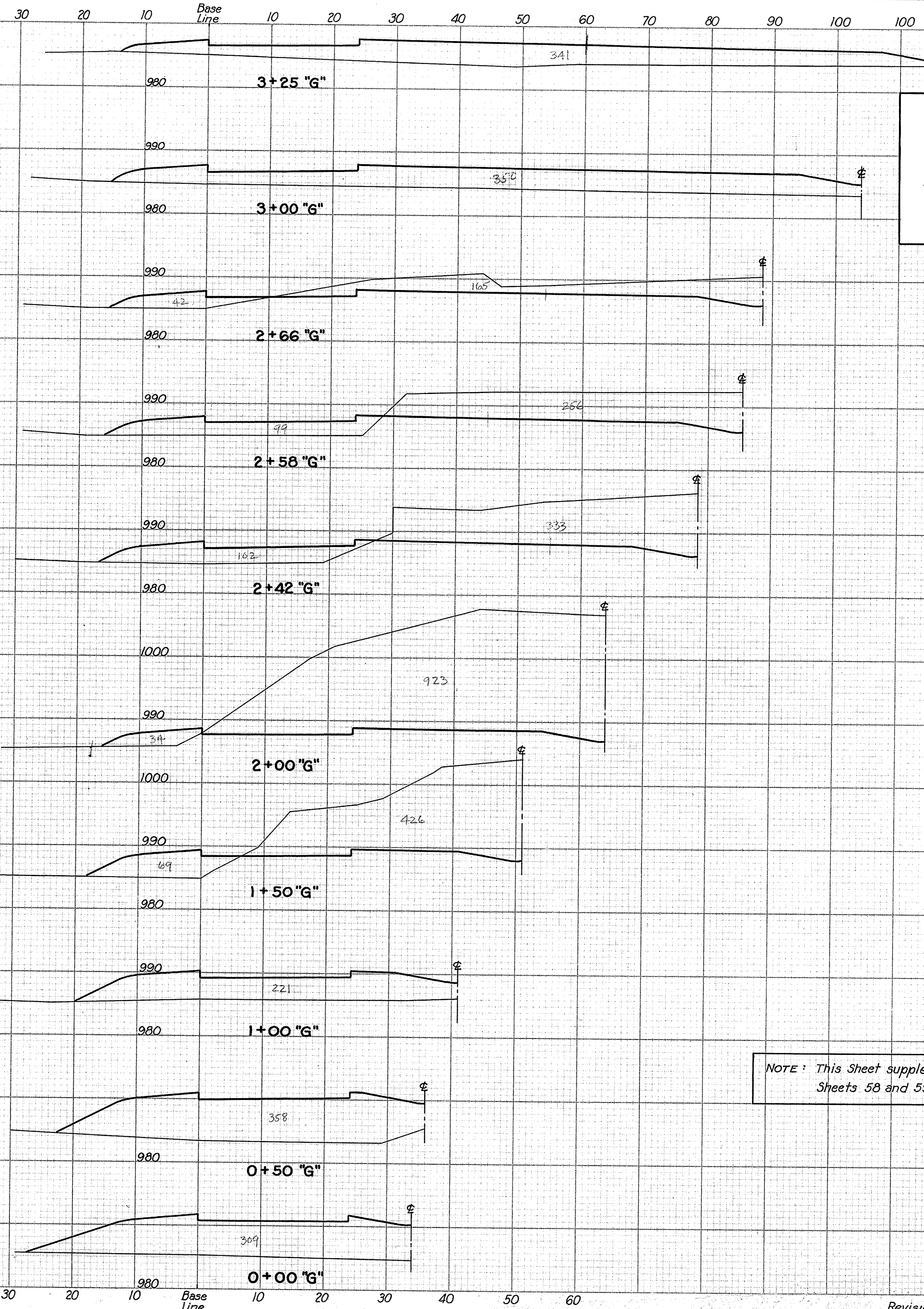


CLASS. EMB. MATERIAL	END AREA		VOLUME	
	AREA	VOL.	CUT	FILL
0	410	40		
0			380	213
0	0	190		
0			0	464
0	0	310		
0			0	584
0	0	376		
0			0	629
0	0	680		
0			0	741
0	0	706		
0			0	1400

SCALE 1"=10'
MADE P.R.M. DATE 6-13-50
TRCD A.E.R. DATE 6-14-50
CWD B.H.R. DATE 7-20-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET

PLATE 3-CROSS SECTION O.P.R. & R.E.
CHARLES BRUNNEN COMPANY, INC.

STA. 121+50 TO STA. 1+50-"G"



Sta. 0+00'G" to Sta. 3+50'G"
 1349 Cu.Yds. additional cut
 809 Cu.Yds. additional fill
 L-9 Seeding 557 Sq.Yds. additional
 L-9 Fertilizer 0.085 Tons

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO	U-687(8)	POST WAR

SUMMIT COUNTY
 CITY OF AKRON
 AKRON EXPRESSWAY SYSTEM
 EXPRESSWAY-PART 3
 SUM-5-12.62

58A
 146

NOTE: This Sheet supplements Sheets 58 and 59

Revision of June 1, 1951 7-20-51

REVISED SECTIONS STA. 0+00'G" TO STA. 3+25'G"

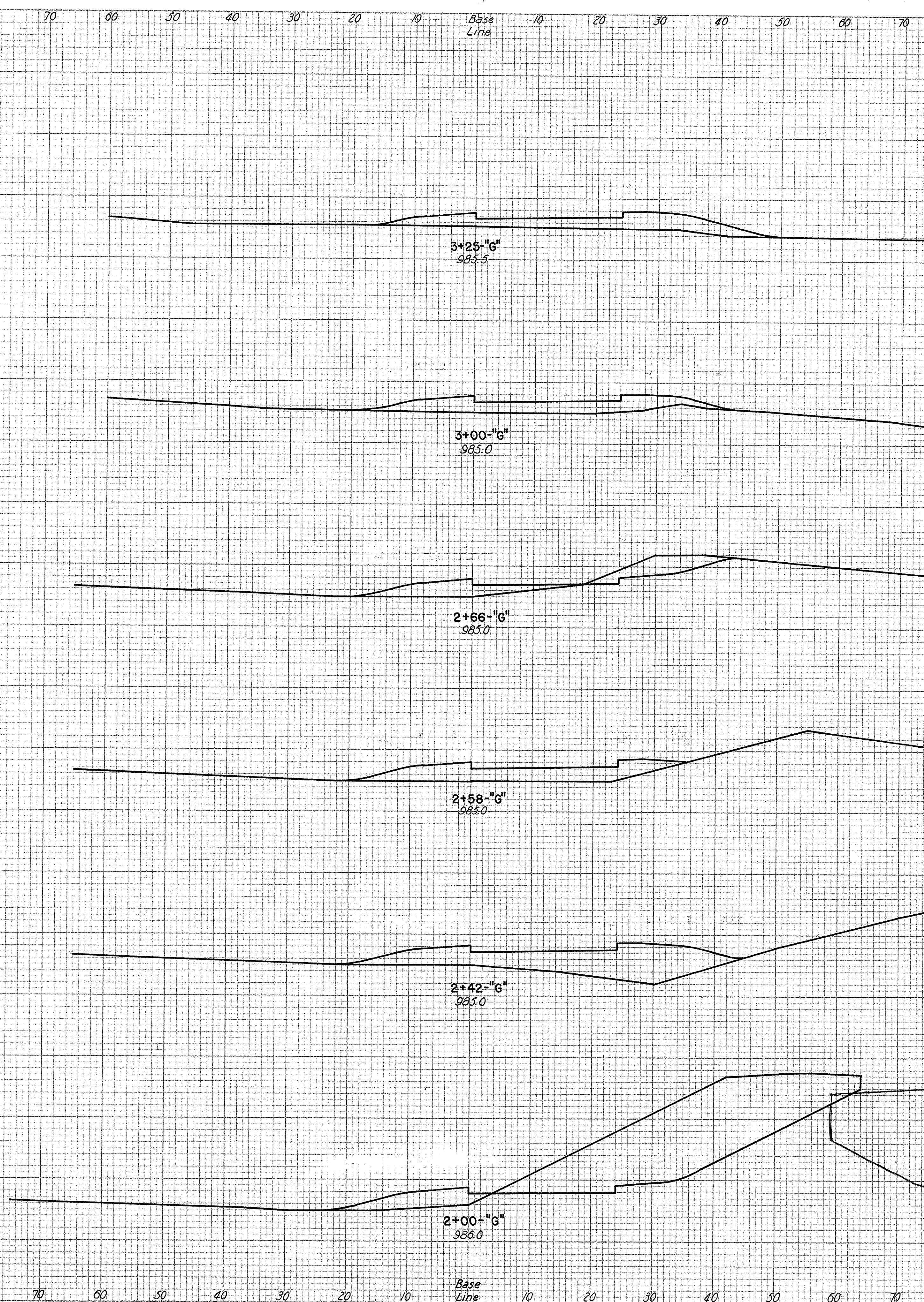
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDING	59
2	OHIO	U-687(8)	POST WAR	146

SUMMIT COUNTY OF AKRON
 CITY OF AKRON
 AKRON EXPRESSWAY SYSTEM
 EXPRESSWAY-PART 3
 SUM-5-12.62

DATE	BY
FINAL SURVEY NO.	SURVEY NO.
NOTE BOOK NO.	PLATE NO.
	AREAS CHECKED

SEEDING	SODDING
Width Area Lin. Ft. Sq. Yds.	Width Area Lin. Ft. Sq. Yds.

61	165
58	217
57	48
52	99
62	326
70	392



CLASS. EMB. MATERIAL	END AREA		VOLUME	
	AREA	CUT	FILL	
0	0	112		
0	0	105	0	100
0	0	30	100	
0	48	54		
0	0	7	25	
0	0	114		
0	0	0	96	
0	0	210		
0	0	373	204	
0	0	480	52	
0	0	823	65	

SCALE 1"=10'
 MADE R.M. DATE 6-14-50
 TRCD A.E.R. DATE 6-15-50
 CKD B.H.R. DATE 7-21-50

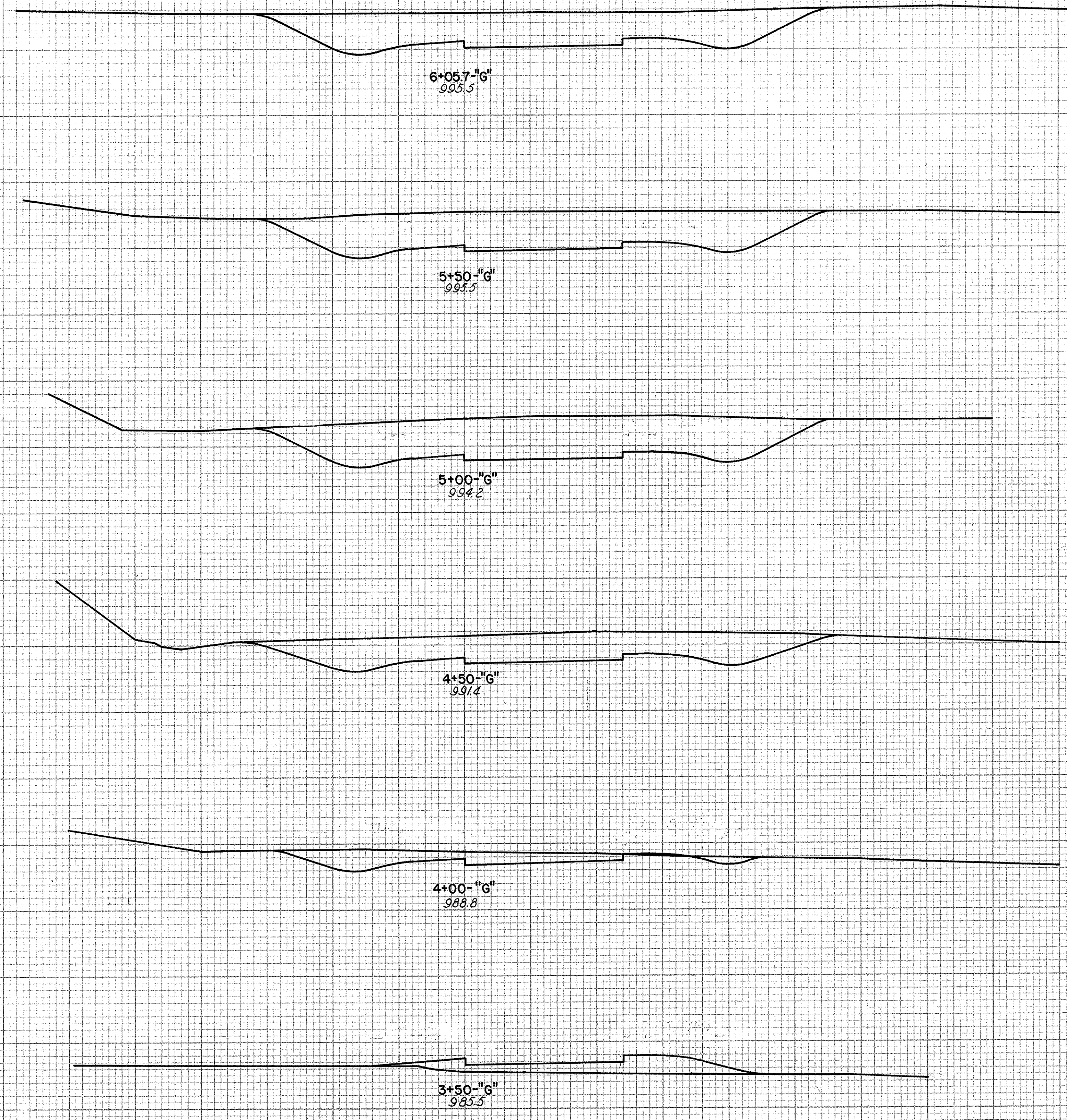
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK

DATE _____ BY _____
FINAL SURVEY PLOTTED _____
NOTE BOOK _____
AREAS CHECKED _____
NO. _____

DATE _____ BY _____
ORIGINAL SURVEY PLOTTED _____
NOTE BOOK _____
AREAS CHECKED _____
NO. _____

STATION	SEEDING		SODDING	
	Width Lin. Ft.	Area Sq. Yds.	Width Lin. Ft.	Area Sq. Yds.
84				
86	526			
86		477		
86				
86		477		
86				
86				
72		352		
61				
161				

60 50 40 30 20 10 Base Line 10 20 30 40 50 60 70 80



CLASS. EMB. MATERIAL	END AREA	VOLUME	
		CUT	FILL
0	358 0		
0		782	0
0	400 0		
0		789	0
0	452 0		
0		693	0
0	296 0		
0		352	0
0	90 0		
0		83	63
0	0 90		
0		0	93

SCALE 1"=10'
MADE R.E.M. DATE 6-14-50
TRCD A.E.R. DATE 6-15-50
CKD B.H.R. DATE 1-21-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

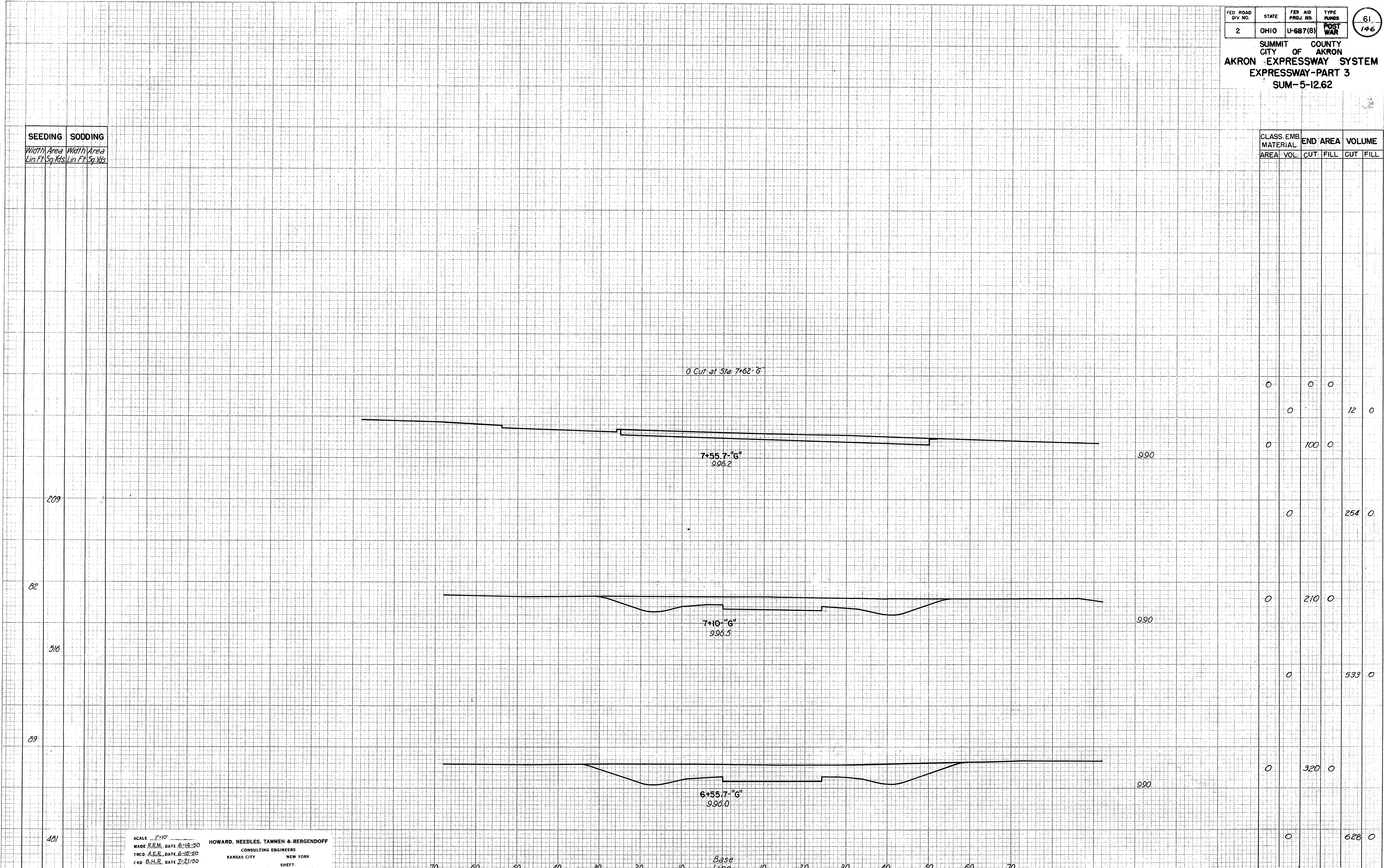
SHEET _____

FINAL SURVEY DATE
BY
CORRECTED SURVEY BOOK NO.
TEMP. PLATE AREAS CHECKED

ORIGINAL SURVEY DATE
BY
CORRECTED SURVEY BOOK NO.
TEMP. PLATE AREAS CHECKED

SEEDING		SODDING	
Width	Area	Width	Area
Lin. Ft.	Sq. Yds.	Lin. Ft.	Sq. Yds.

CLASS. EMB. MATERIAL	END AREA		VOLUME	
	CUT	FILL	CUT	FILL



CLASS. EMB. MATERIAL	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	0	0	0	0
	0	0	12	0
	0	100	0	0
	0	0	254	0
	0	210	0	0
	0	0	533	0
	0	320	0	0
	0	0	628	0

SCALE 1"=10'
MADE R.R.M. DATE 6-14-50
TRCD. A.E.R. DATE 6-15-50
CKD B.H.R. DATE 7-21-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET

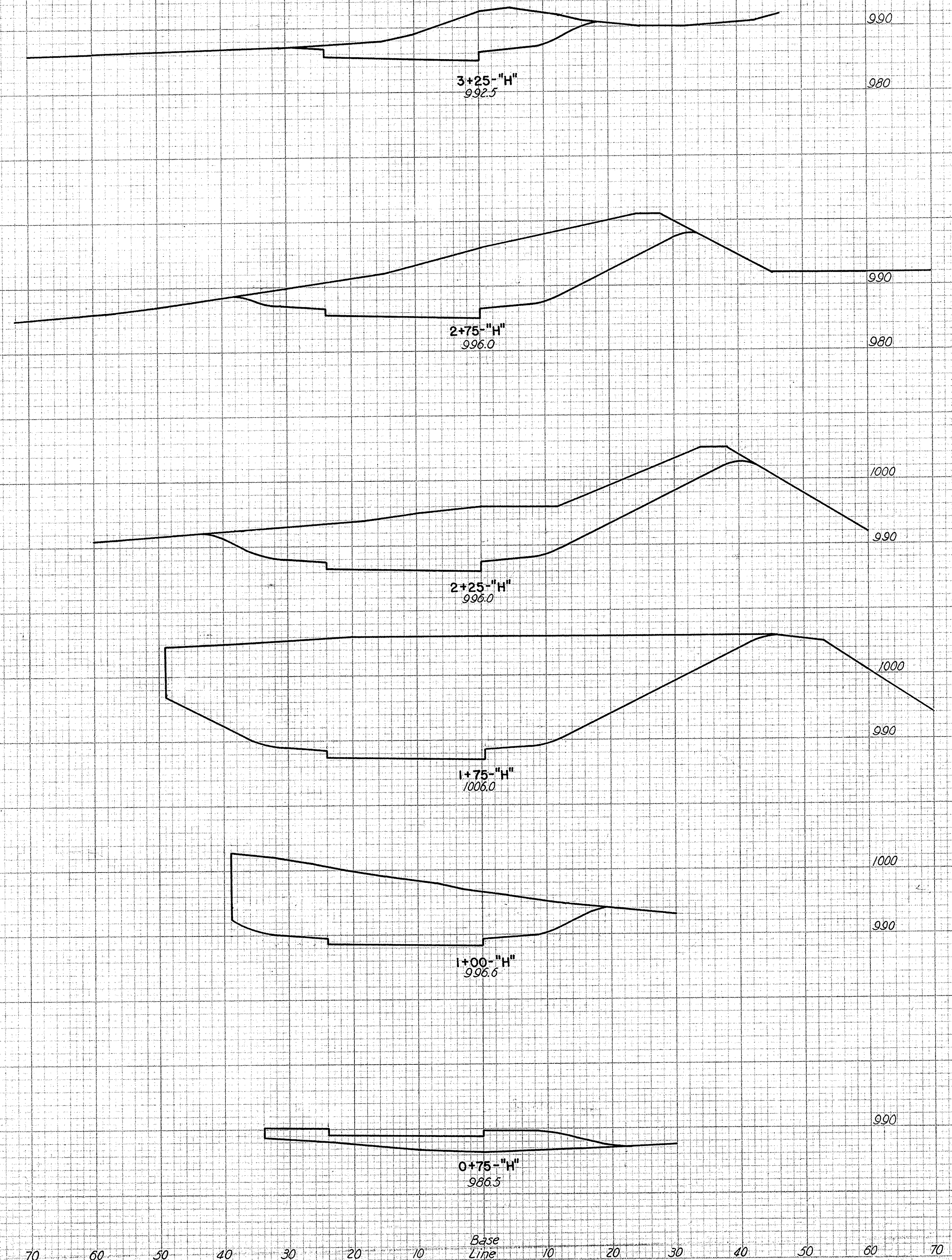
SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

70 60 50 40 30 20 10 Base Line 10 20 30 40 50 60 70

DATE	SEEDING		SODDING	
	Width Lin. Ft.	Area Sq. Yds.	Width Lin. Ft.	Area Sq. Yds.
44				
3/7				
70				
431				
85				
475				
86				
554				
47				
125				
43				
388				

FINAL SURVEY PLOTTED
NOTE BOOK NO. _____
AREAS CHECKED

ORIGINAL SURVEY PLOTTED
NOTE BOOK NO. _____
AREAS CHECKED



CLASS. EMB. MATERIAL	END AREA		VOLUME	
	AREA	VOL.	CUT	FILL
0	170	0		
0			600	0
0	480	0		
0			920	0
0	514	0		
0			1651	0
0	1272	0		
0			2442	0
0	492	0		
0			228	51
0	0	112		
0			0	678

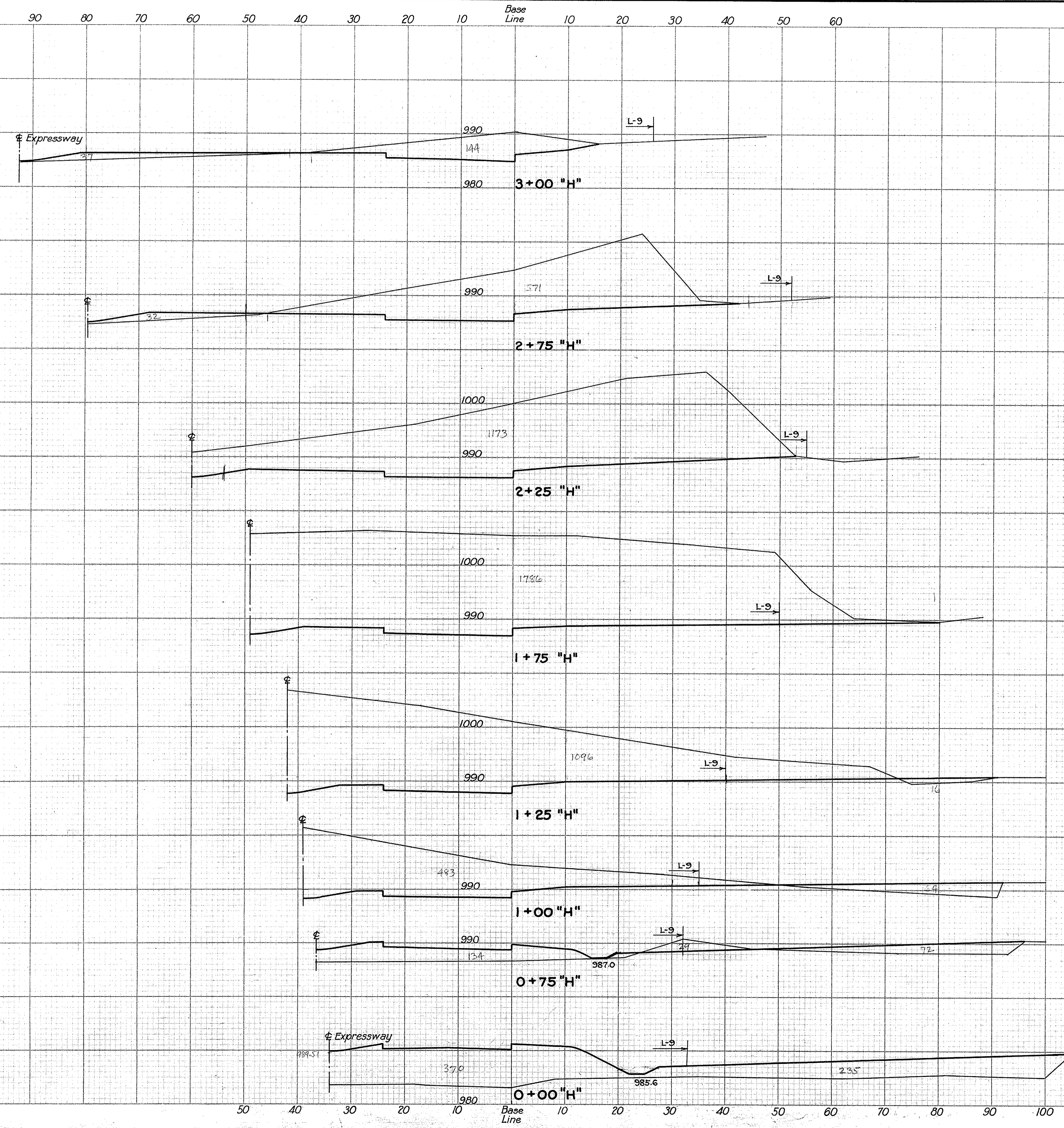
SCALE 1"=10'
MADE R.B.M. DATE 6-14-50
TRCD A.E.R. DATE 6-15-50
CKD B.H.R. DATE 7-21-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET

PLATE 3 - CROSS SECTION O.P.R. & R.E. PRECISE

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	62A 146
2	OHIO	U-687(b)	POST WAR	

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62



Sta. 0+00"H" to Sta. 3+25"H"
2667 Cu. Yds. additional cut
637 Cu. Yds. additional fill
L-9 Seeding 260 Sq. Yds. additional
L-9 Fertilizer 0.02 Tons

Note: This Sheet supplements
Sheets 58 & 62

0 Cut at Sta. 6+15 "H"

SEEDING	SODDING
Width Area	Width Area
Lin. Ft. Sq. Yds.	Lin. Ft. Sq. Yds.

CLASS. EMB. MATERIAL	END AREA		VOLUME	
	CUT	FILL	CUT	FILL

49	135	48	236	37	231	46	286	57	126	34	217
----	-----	----	-----	----	-----	----	-----	----	-----	----	-----

0	80	0		
0			79	3
0	90	6		
0			146	5
0	68	0		
0			192	0
0	140	0		
0			269	4
0	150	4		
0			104	2
0	75	0		
0			227	0

5+75-"H"
987.0

5+50-"H"
987.5

5+00-"H"
988.0

4+50-"H"
991.0

4+00-"H"
991.0

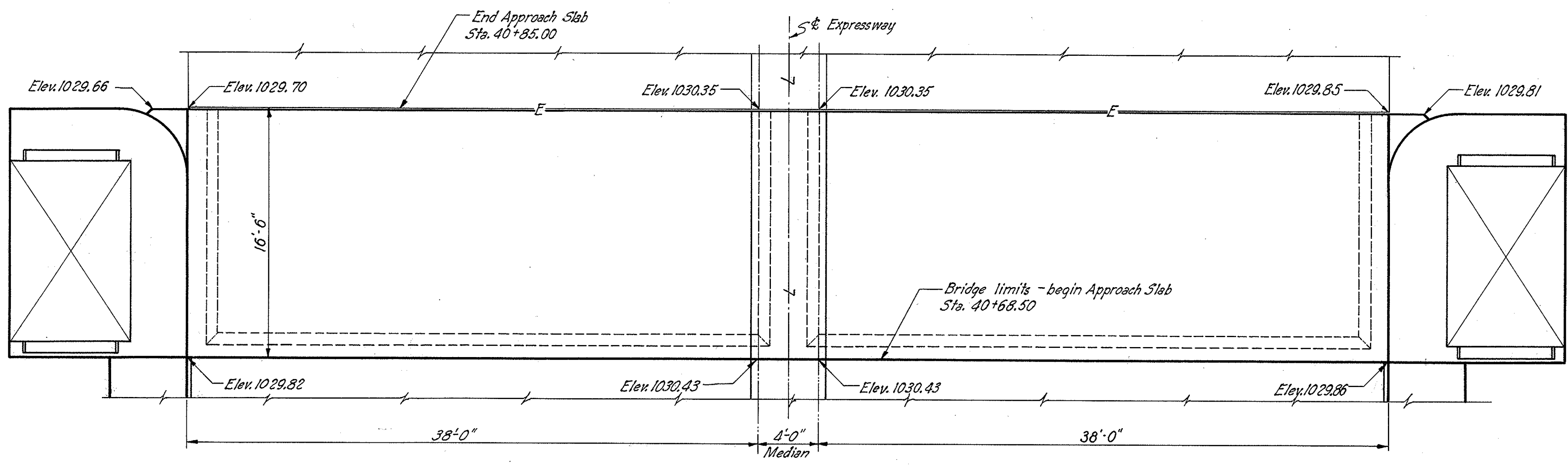
3+75-"H"
988.0

SCALE 1"=10'
 MADE R.E.M. DATE 6-14-50
 TRCD. A.E.R. DATE 6-15-50
 CND. B.H.R. DATE 7-21-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK
 SHEET

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

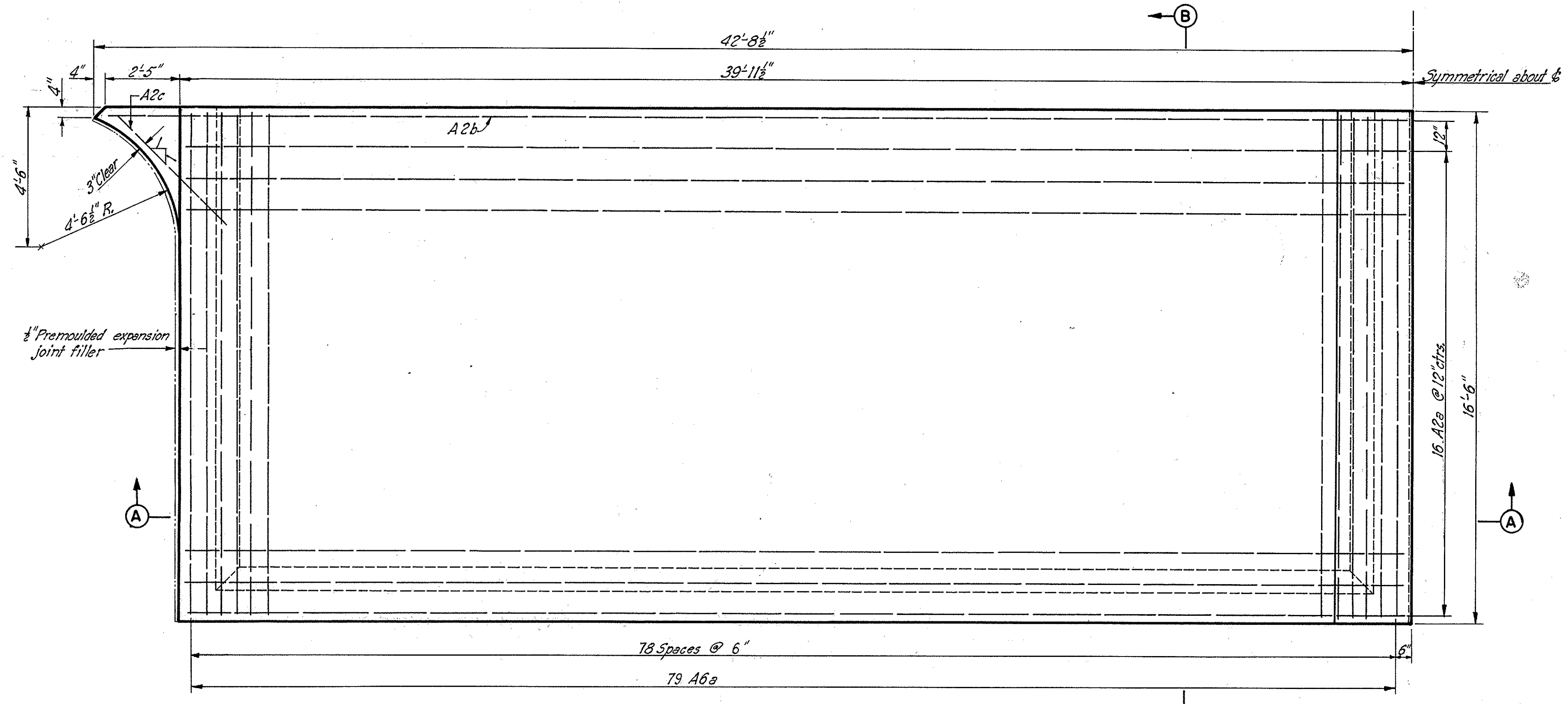
VIADUCT APPROACH SLAB



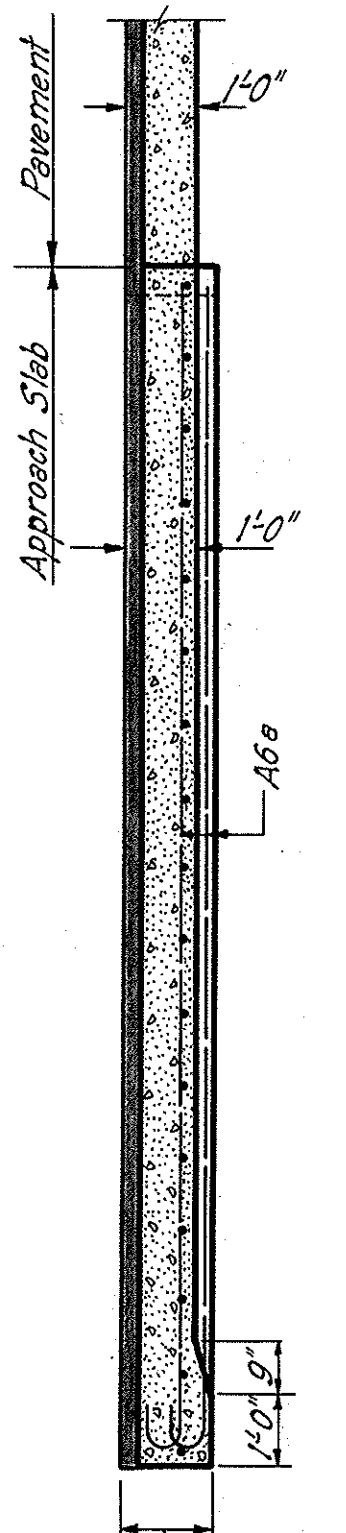
GENERAL PLAN
Scale: 1/8" = 1'-0"

ESTIMATED QUANTITIES		
Description	Unit	Total
Asphaltic concrete surface course	Sq. Yds.	136
Reinforced portland cement concrete median	Sq. Yds.	92
Reinforced concrete Approach Slab	Sq. Yds.	147

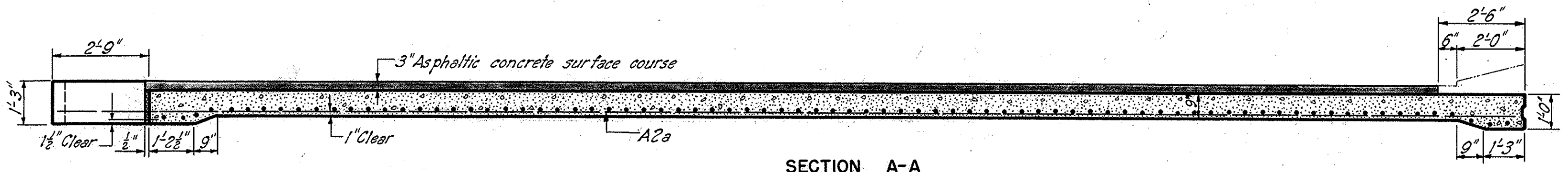
STEEL LIST						
Mark	Size	Shape	Spacing	No. Req'd	Length	Weight
A2a	1/2"	Straight	12" ctrs.	32	39'-6"	84.4
A2b	3/8"	Straight	As shown	2	42'-2"	56
A2c	1/2"	Straight	As shown	2	5'-0"	7
A6a	3/8"	C	As shown	158	16'-10"	54.36
Total						634.3



HALF PLAN
Scale: 3/8" = 1'-0"



SECTION B-B
Scale: 3/8" = 1'-0"



SECTION A-A
Scale: 3/8" = 1'-0"

Notes:
Pavement joint dowel bars not shown. For pavement joint legend and details see sheet 97.
Concrete median not shown. For median details see sheet 97.
Pre-molded expansion joint filler shall be included with the Approach Slab for payment.

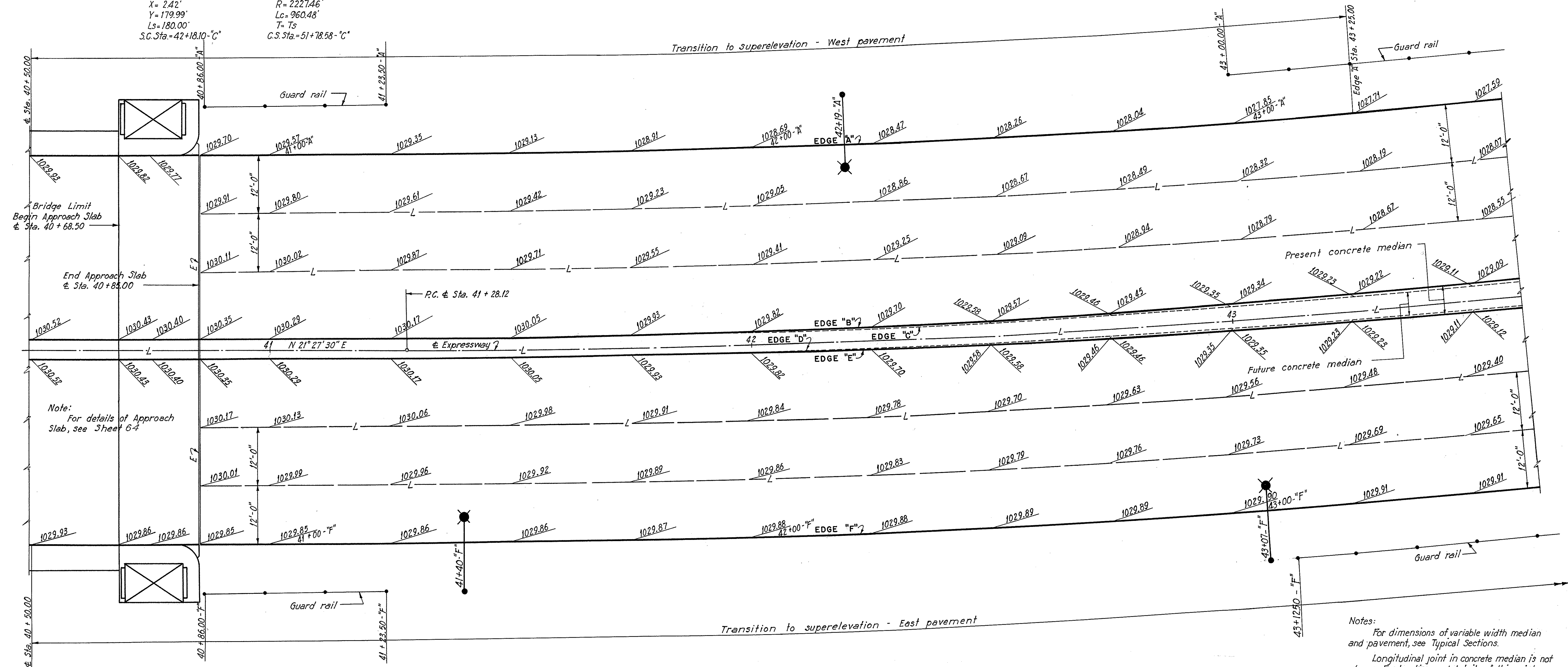
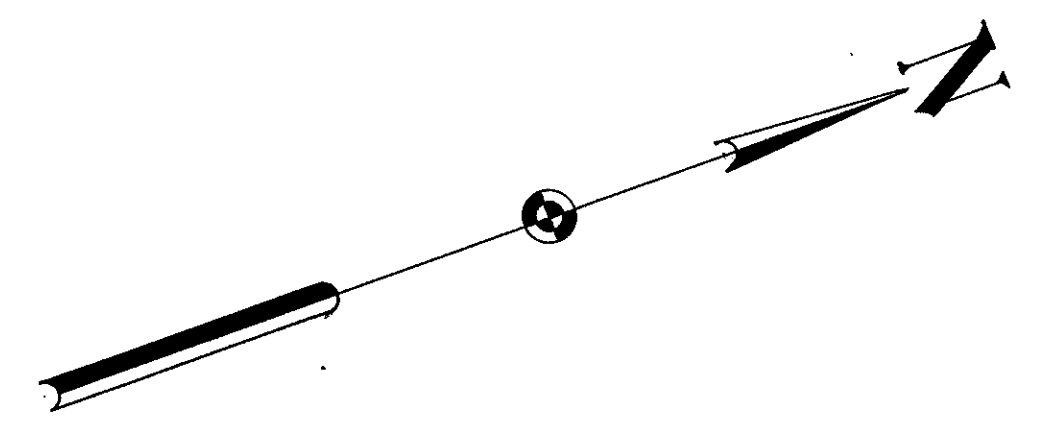
SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

PAVEMENT DETAILS
STA. 40+85 TO STA. 43+50

EDGE "A" CURVE DATA		EDGE "B" CURVE DATA	
<i>Spiral</i> T.S. Sta. = 40+38.10-"A" Δs = 2° 20' 19" Lt Ts = 667.34' X = 2.45' Y = 180.00' Ls = 180.00' S.C. Sta. = 42+18.10-"A"	<i>Circular</i> S.C. Sta. = 42+18.10-"A" D = 2° 35' 54" Δc = 24° 39' 31" Lt R = 2205.03' Lc = 948.98' T = Ts C.S. Sta. = 51+67.08-"A"	<i>Spiral</i> T.S. Sta. = 40+38.10-"B" Δs = 2° 25' 00" Lt Ts = 648.72' X = 2.53' Y = 179.99' Ls = 180.00' S.C. Sta. = 42+18.10-"B"	<i>Circular</i> S.C. Sta. = 42+18.10-"B" D = 2° 41' 06" Δc = 24° 30' 09" Lt R = 2133.90' Lc = 912.56' T = Ts C.S. Sta. = 51+30.66-"B"

EDGE "C" CURVE DATA	
<i>Spiral</i> T.S. Sta. = 40+38.10-"C" Δs = 2° 18' 54" Lt Ts = 673.21' X = 2.42' Y = 179.99' Ls = 180.00' S.C. Sta. = 42+18.10-"C"	<i>Circular</i> S.C. Sta. = 42+18.10-"C" D = 2° 34' 20" Δc = 24° 42' 21" Lt R = 2227.46' Lc = 960.48' T = Ts C.S. Sta. = 51+78.58-"C"

EXPRESSWAY CURVE DATA	
P.C. Sta. = 41+28.12 D = 2° 30' 00" Δ = 29° 20' 09" Lt R = 2291.83' T = 599.88' L = 1173.43' P.T. Sta. = 53+01.55	



Note:
For details of Approach Slab, see Sheet 6-4

Notes:
For dimensions of variable width median and pavement, see Typical Sections.
Longitudinal joint in concrete median is not shown. For location and details of this joint, see Sheet 97.
For pavement joint legend and details of guard rail and lighting see sheet 97.

For details of Approach Slab, see Sheet 6-4. Elevations for edges "A", "B", "C", "D", "E", and "F" are given each 25 on the corresponding edge stationing. Elevations shown on the longitudinal pavement joints for the West and East pavements are on radial lines of edges "A" and "F" respectively.

EDGE "D" CURVE DATA		EDGE "E" CURVE DATA	
<i>Spiral</i> T.S. Sta. = 40+38.10-"D" Δs = 2° 11' 19" Lt Ts = 706.90' X = 2.29' Y = 180.00' Ls = 180.00' S.C. Sta. = 42+18.10	<i>Circular</i> S.C. Sta. = 42+18.10-"D" D = 2° 25' 54" Δc = 24° 57' 31" Lt R = 2356.21' Lc = 1026.38' T = Ts C.S. Sta. = 52+44.48-"D"	<i>Spiral</i> T.S. Sta. = 40+38.10-"E" Δs = 2° 06' 18" Lt Ts = 731.37' X = 2.20' Y = 179.99' Ls = 180.00' S.C. Sta. = 42+18.10-"E"	<i>Circular</i> S.C. Sta. = 42+18.10-"E" D = 2° 20' 20" Δc = 25° 07' 33" Lt R = 2449.77' Lc = 1074.29' T = Ts C.S. Sta. = 52+92.39-"E"

EDGE "F" CURVE DATA	
<i>Spiral</i> T.S. Sta. = 40+38.10-"F" Δs = 2° 10' 04" Lt Ts = 712.77' X = 2.27' Y = 179.99' Ls = 180.00' S.C. Sta. = 42+18.10-"F"	<i>Circular</i> S.C. Sta. = 42+18.10-"F" D = 2° 24' 32" Δc = 25° 00' 01" Lt R = 2378.63' Lc = 1037.88' T = Ts C.S. Sta. = 52+55.98-"F"

SCALE: 1" = 10'
MADE BY: DATE: 9-25-49
TRCD: RR: DATE: 2-17-50
CKD: KR: DATE: 6-22-50

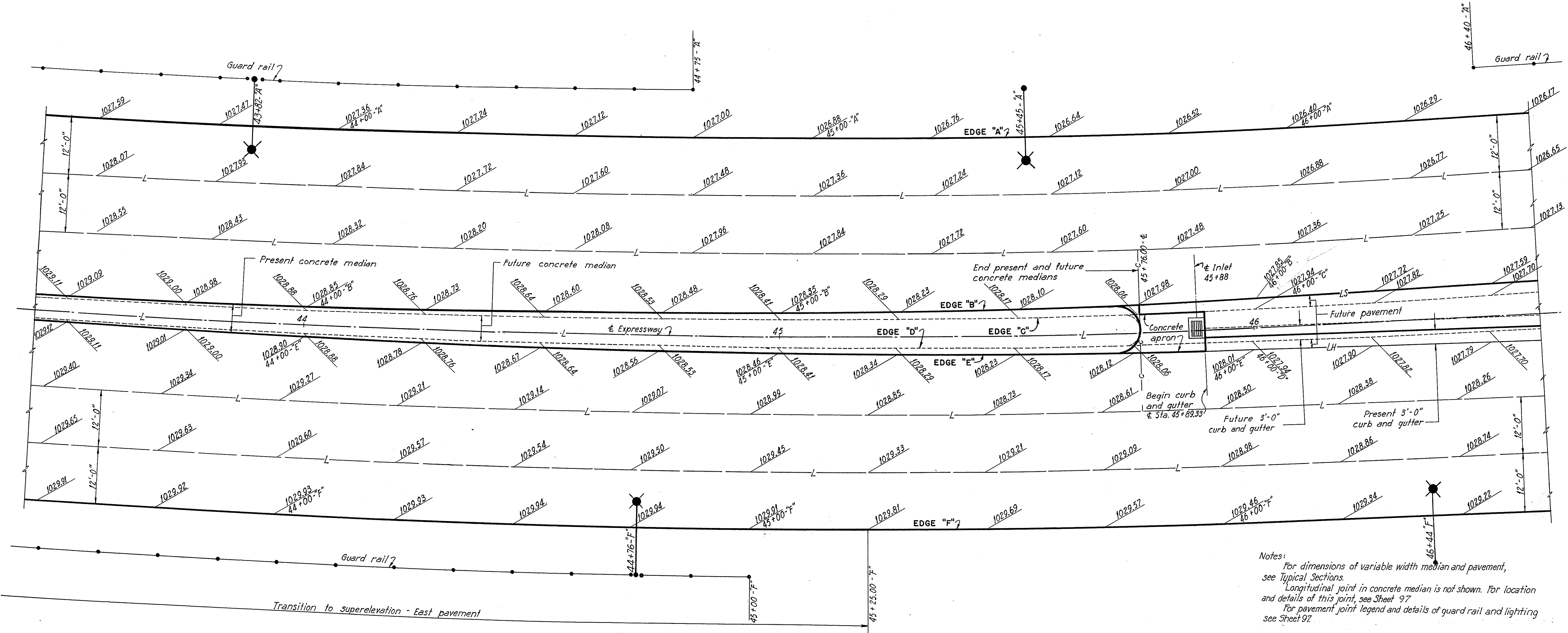
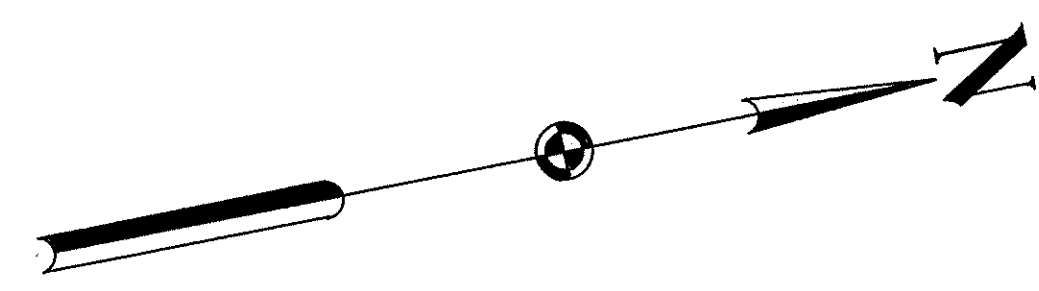
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
766 SHEET

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
PAVEMENT DETAILS
STA.43+50 TO STA.46+50

EXPRESSWAY CURVE DATA

PC Sta. 41+28.12
D=2°30'-00"
Δ=29°-20'-09" Lt
R=2291.83'
T=599.88'
L=1173.43'
PT Sta. 53+01.55

Note: For curve data for edges "A", "B", "C", "D", "E" and "F", see Sheets 65 & 69



Notes:
For dimensions of variable width median and pavement, see Typical Sections.
Longitudinal joint in concrete median is not shown. For location and details of this joint, see Sheet 97.
For pavement joint legend and details of guard rail and lighting see Sheet 97.
Elevations for edges "A", "B", "C", "D", "E" and "F" are given each 25' on the corresponding edge stationing.
Elevations shown on the longitudinal pavement joints for the West and East pavements are on radial lines of edges "A" and "F" respectively.
For details of 3'-0" curb and gutter, see Sheet 97.

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	67
2	OHIO	U-687(8)	POST WAR	146

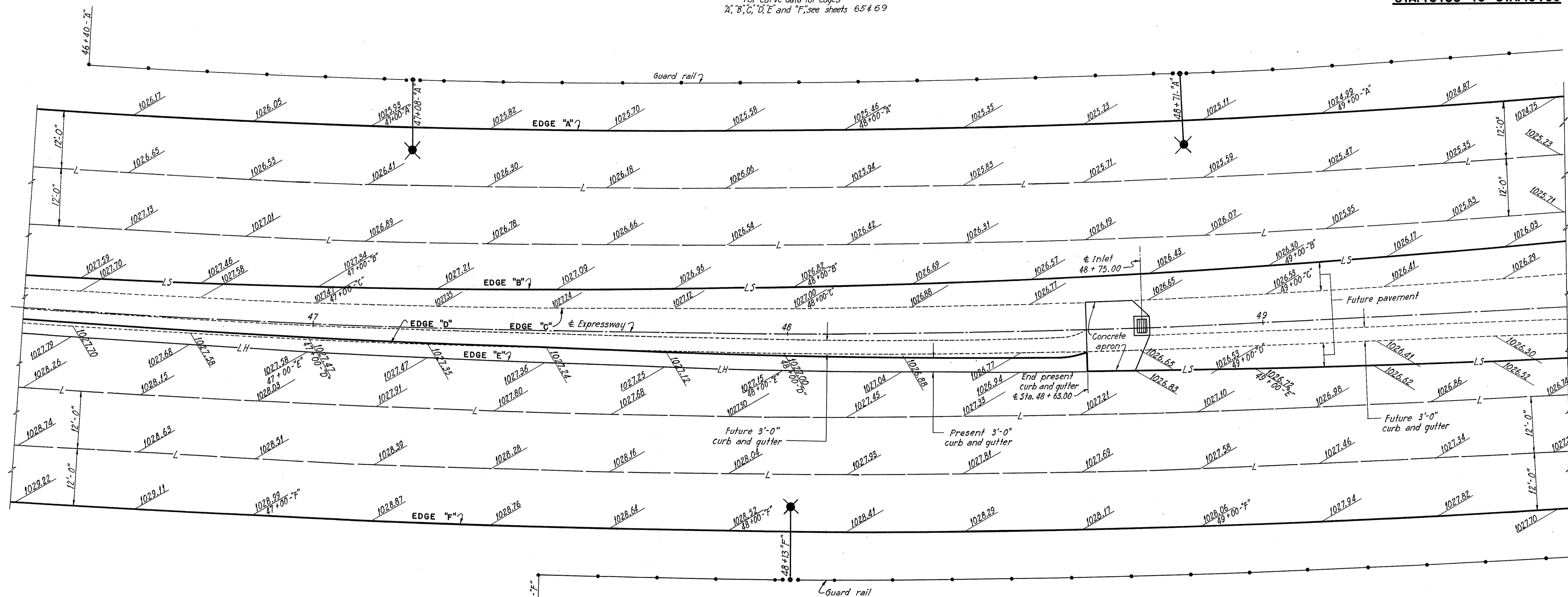
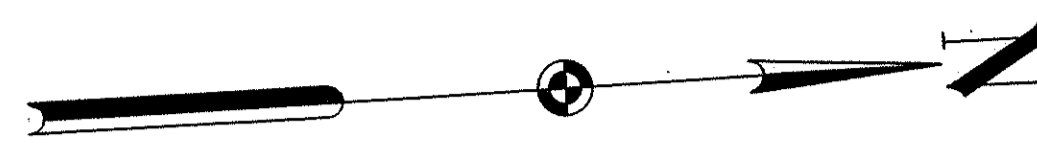
SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

PAVEMENT DETAILS
STA. 46+50 TO STA. 49+50

EXPRESSWAY CURVE DATA

PC Sta. 41+28.12
D = 2° 30' 00"
Δ = 29° 20' 09" Lt.
R = 2291.83'
T = 599.68'
L = 1173.43'
PT Sta. 53 + 01.55

Note:
For curve data for edges
"A", "B", "C", "D", "E" and "F", see sheets 65 & 69



Notes:
For dimensions of variable width median and pavement, see Typical Sections.
For pavement joint legend and details of guard rail and lighting see Sheet 97.
For details of 3'-0" curb and gutter, see Sheet 97.
Elevations for edges "A", "B", "C", "D", "E" and "F" are given each 25' on the corresponding edge stationing.
Elevations shown on the longitudinal pavement joints for the West and East pavements are on radial lines of edges "A" and "F" respectively.

SCALE 1" = 10'
MADE BY DATE 10-3-49 HOWARD, NEEDLES, TAMMEN & BERGENDOFF
TRCD, CR DATE 8-2-50 CONSULTING ENGINEERS
CKD, V.D. DATE 2-22-50 KANSAS CITY NEW YORK
766 SHEET

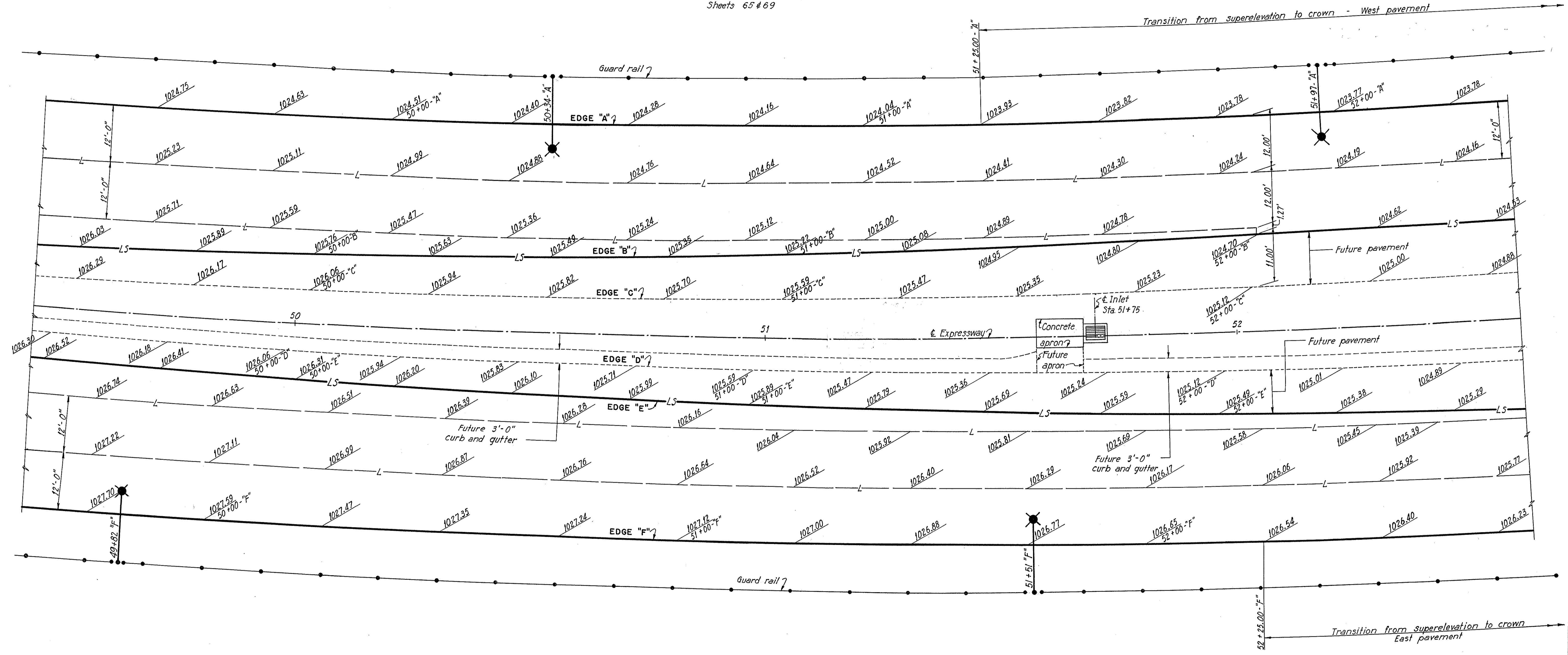
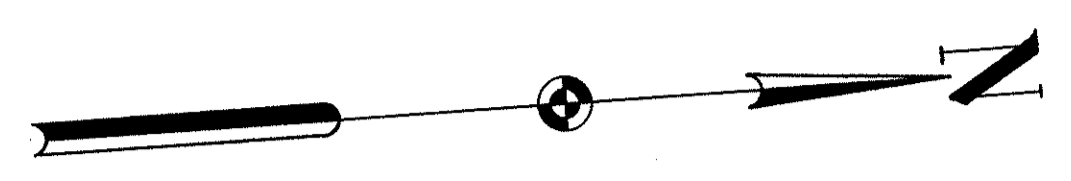
SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

PAVEMENT DETAILS
STA.49+50 TO STA.52+50

EXPRESSWAY CURVE DATA

PC Sta. 41+28.12
D=2°30'00"
Δ=29°20'09" Lt.
R=2291.83'
T=599.88'
L=1173.43'
PT. Sta. = 53+01.55

Note:
For curve data for edges "A", "B", "C", "D", "E" and "F", see Sheets 65 & 69



Notes:
For dimensions of variable width median and pavement, see Typical Sections.
For pavement joint legend and details of guard rail and lighting see Sheet 97.
For details of 3'-0" curb and gutter, see Sheet 97.

Elevations for edges "A", "B", "C", "D", "E" and "F" are given each 25' on the corresponding edge stationing.
Elevations shown on the longitudinal pavement joints for the West and East pavements are on radial lines of edges "A" and "F" respectively.

SCALE 1"=10'
MADE G.M. DATE 10-5-49 HOWARD, NEEDLES, TAMMEN & BERGENDOFF
TRCD. R.R. DATE 2-22-50 CONSULTING ENGINEERS
CRD. V.2. DATE 2-22-50 KANSAS CITY NEW YORK
766 SHEET

EXPRESSWAY CURVE DATA
 P.C. Sta = 41+28.12
 D = 2°-30'-00"
 Δ = 29°-20'-09" Lt.
 R = 2291.83'
 T = 599.88'
 L = 1173.43'
 P.T. Sta = 53+01.55

EDGE "A" CURVE DATA
 Circular
 S.C. Sta = 42+18.10 - "A"
 D = 2°-35'-54"
 Δ = 24°-39'-31" Lt.
 R = 2205.03'
 Lc = 948.98'
 T = Ts
 C.S. Sta = 51+67.08 - "A"
 Spiral
 C.S. Sta = 51+67.08 - "A"
 Δs = 2°-20'-19" Lt.
 Ts = 667.34'
 X = 2.45'
 Y = 180.00'
 Ls = 180.00'
 S.T. Sta = 53+47.08 - "A"
 = 53+68.98 - E

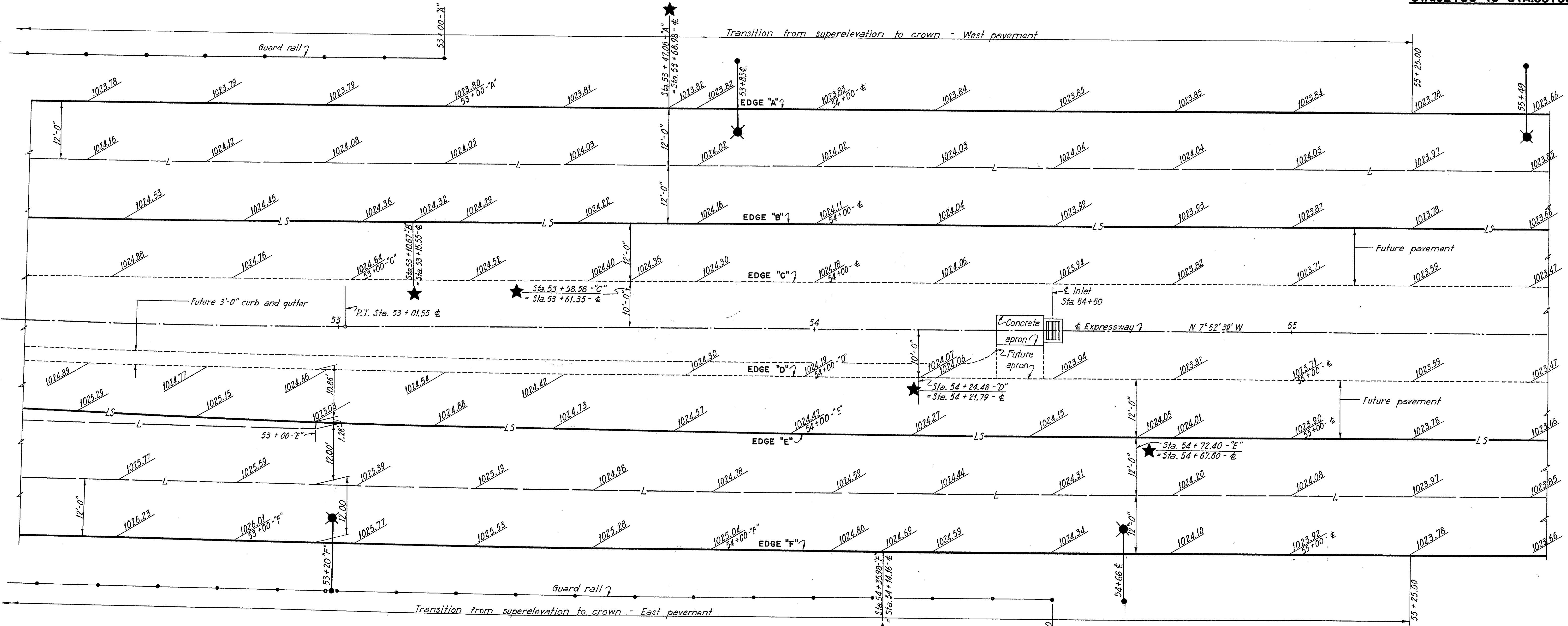
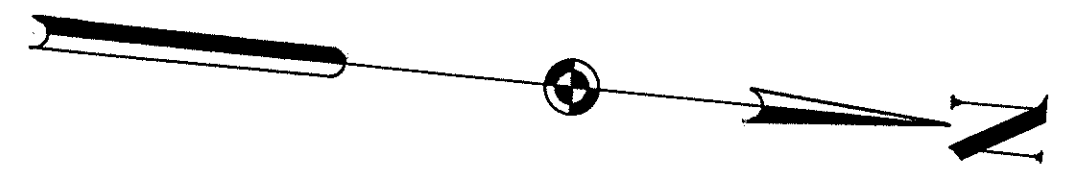
EDGE "B" CURVE DATA
 Circular
 S.C. Sta = 42+18.10 - "B"
 D = 2°-41'-06"
 Δ = 24°-30'-09" Lt.
 R = 2133.90'
 Lc = 912.56'
 T = Ts
 C.S. Sta = 51+30.66 - "B"
 Spiral
 C.S. Sta = 51+30.66 - "B"
 Δs = 2°-25'-00" Lt.
 Ts = 648.72'
 X = 2.53'
 Y = 179.99'
 Ls = 180.00'
 S.T. Sta = 53+10.66 - "B"
 = 53+15.55 - E

EDGE "C" CURVE DATA
 Circular
 S.C. Sta = 42+18.10 - "C"
 D = 2°-34'-20"
 Δ = 24°-42'-21" Lt.
 R = 2227.46'
 Lc = 960.48'
 T = Ts
 C.S. Sta = 51+78.58 - "C"
 Spiral
 C.S. Sta = 51+78.58 - "C"
 Δs = 2°-18'-54" Lt.
 Ts = 673.21'
 X = 2.42'
 Y = 179.99'
 Ls = 180.00'
 S.T. Sta = 53+58.58 - "C"
 = 53+61.35 - E

EDGE "D" CURVE DATA
 Circular
 S.C. Sta = 42+18.10 - "D"
 D = 2°-25'-54"
 Δ = 24°-57'-31" Lt.
 R = 2356.21'
 Lc = 1026.38'
 C.S. Sta = 52+44.48 - "D"
 Spiral
 C.S. Sta = 52+44.48 - "D"
 Δs = 2°-11'-19" Lt.
 Ts = 706.90'
 X = 2.29'
 Y = 180.00'
 Ls = 180.00'
 S.T. Sta = 54+24.48 - "D"
 = 54+21.79 - E

EDGE "E" CURVE DATA
 Circular
 S.C. Sta = 42+18.10 - "E"
 D = 2°-20'-20"
 Δ = 25°-07'-33" Lt.
 R = 2449.77'
 Lc = 1074.29'
 T = Ts
 C.S. Sta = 52+92.39 - "E"
 Spiral
 C.S. Sta = 52+92.39 - "E"
 Δs = 2°-06'-18" Lt.
 Ts = 731.37'
 X = 2.20'
 Y = 179.99'
 Ls = 180.00'
 S.T. Sta = 54+72.39 - "E"
 = 54+67.60 - E

EDGE "F" CURVE DATA
 Circular
 S.C. Sta = 42+18.10 - "F"
 D = 2°-24'-32"
 Δ = 25°-00'-01" Lt.
 R = 2378.63'
 Lc = 1037.88'
 T = Ts
 C.S. Sta = 52+55.98 - "F"
 Spiral
 C.S. Sta = 52+55.98 - "F"
 Δs = 2°-10'-04" Lt.
 Ts = 712.77'
 X = 2.27'
 Y = 179.99'
 Ls = 180.00'
 S.T. Sta = 54+35.98 - "F"
 = 54+14.16 - E

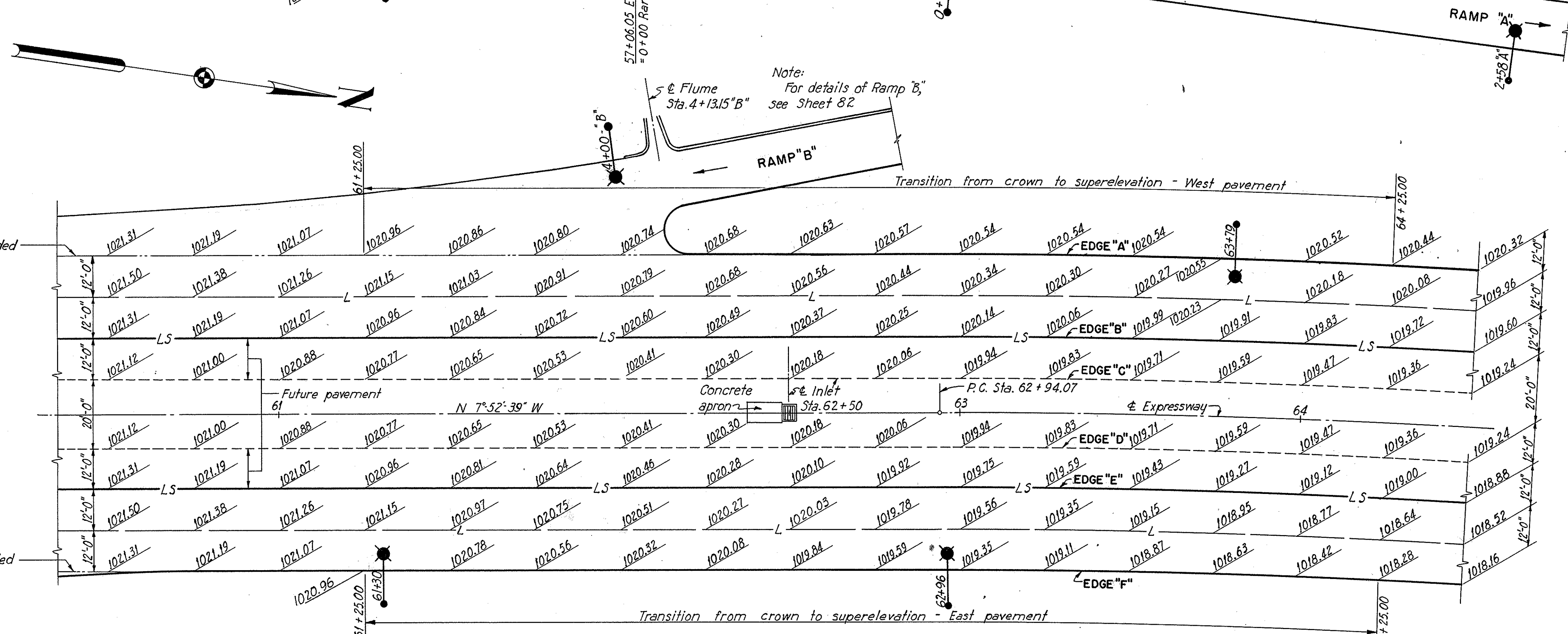
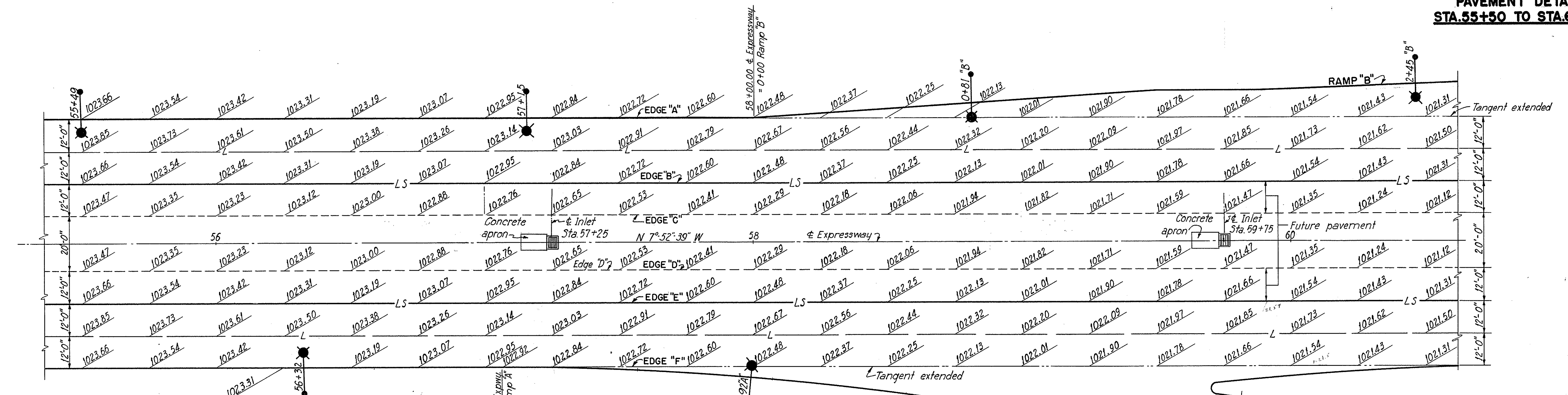


Notes:
 For dimensions of variable width median and pavement, see Typical Sections.
 For pavement joint legend and details of guard rail and lighting see Sheet 97.

For details of 3'-0" curb and gutter, see Sheet 97.
 Back of the Sta. equations shown for edges "A", "B", "C", "D", "E" and "F" elevations are given each 25' on the respective edge stationing. Forward of the Sta. equations elevations are given each 25' on the CL stationing.

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	70 146
2	OHIO	U-687 (8)	POST WAR	

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
PAVEMENT DETAILS
STA. 55+50 TO STA. 64+50



EXPRESSWAY CURVE DATA:
P.C. Sta. 62+94.07
D=2°-00'-00"
A=8°-53'-59" Rt.
R=2864.79'
T=222.94'
L=444.99'
P.T. Sta. 67+39.06

Note:
For details of Ramp "A" see Sheet 81

Note:
For details of Ramp "B",
see Sheet 82

Notes:
For pavement joint legend and details of lighting
see Sheet 97

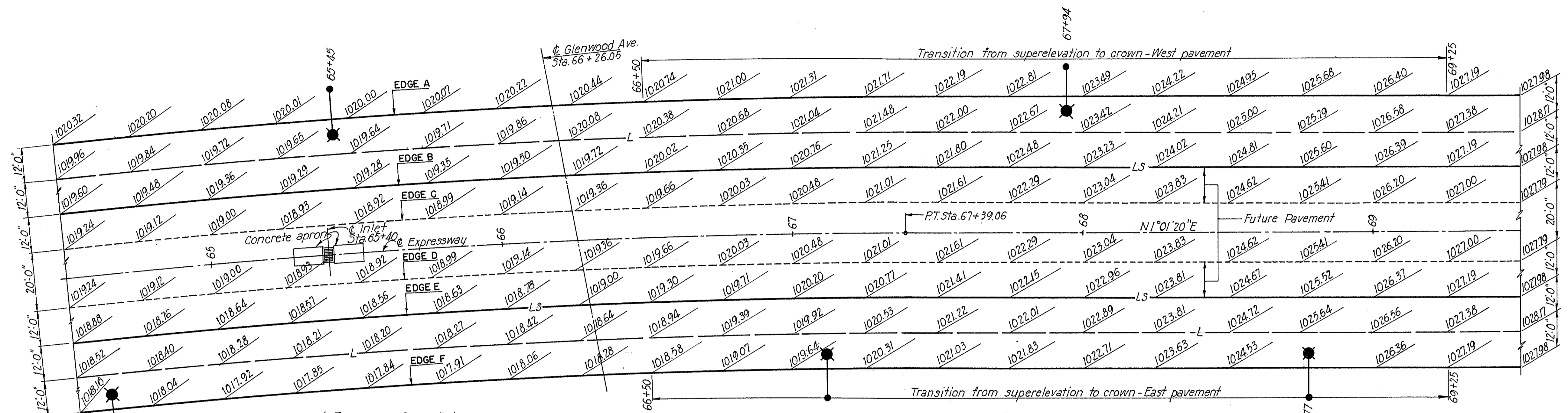
SCALE: 1"=20'
MADE G.M. DATE 10-9-49
TRCD R.R. DATE 2-10-50
CKD D.W. DATE 2-13-50
HOWARD, NEEDLES, TAMMEN & BERGENOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
766 SHEET-

MADE G.M. DATE 8-10-49
CHKD DJW DATE 2-10-50
TRCD G.P. DATE 2-13-50

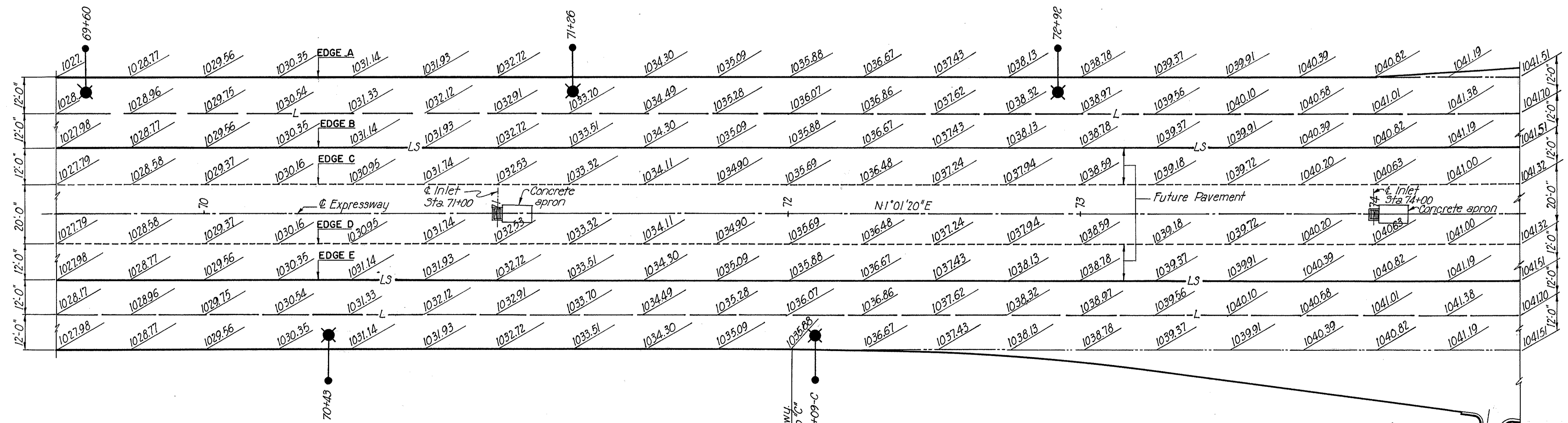
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	71
2	OHIO	U-687(6)	POST WAR	146

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

**PAVEMENT DETAILS
STA.64+50 TO STA.74+50**



Expressway Curve Data
 PC = Sta. 62 + 94.07
 D = 2°00'00"
 Δ = 8°53'59" Rt.
 R = 2864.79
 T = 222.94
 L = 444.99
 P.T. = 67 + 39.06



Notes:
For pavement joint legend and details of lighting see Sheet 97.

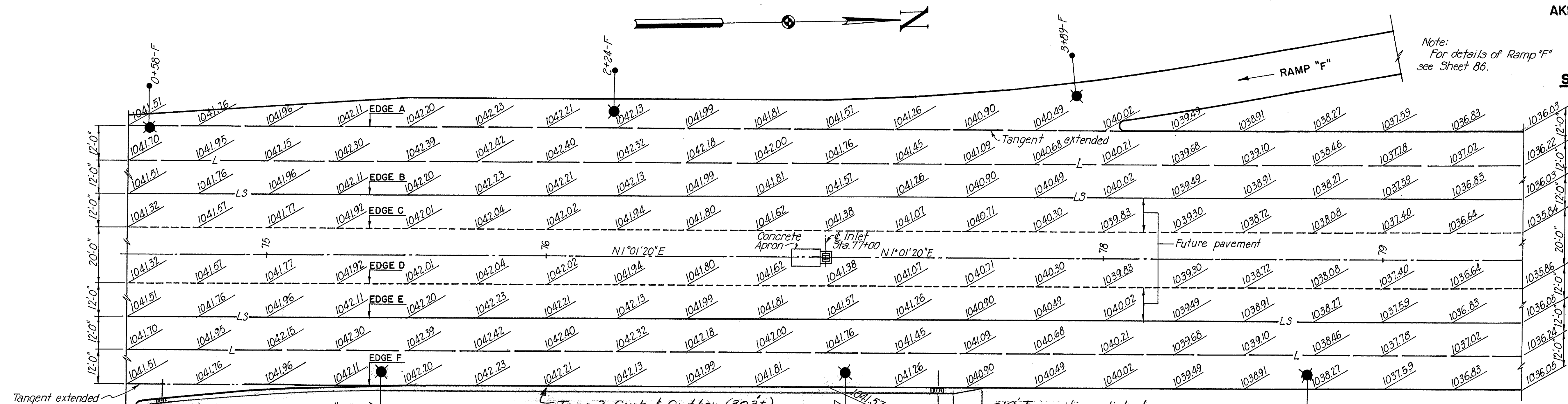
SCALE: 1" = 20'
 MADE PER DATE: 5-8-50
 TRCD. P.P. DATE: 6-12-50
 CKD. G.M. DATE: 6-30-50

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 KANSAS CITY NEW YORK
 766 SHEET-

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	72 146
2	OHIO	U-687(8)	POST WAR	

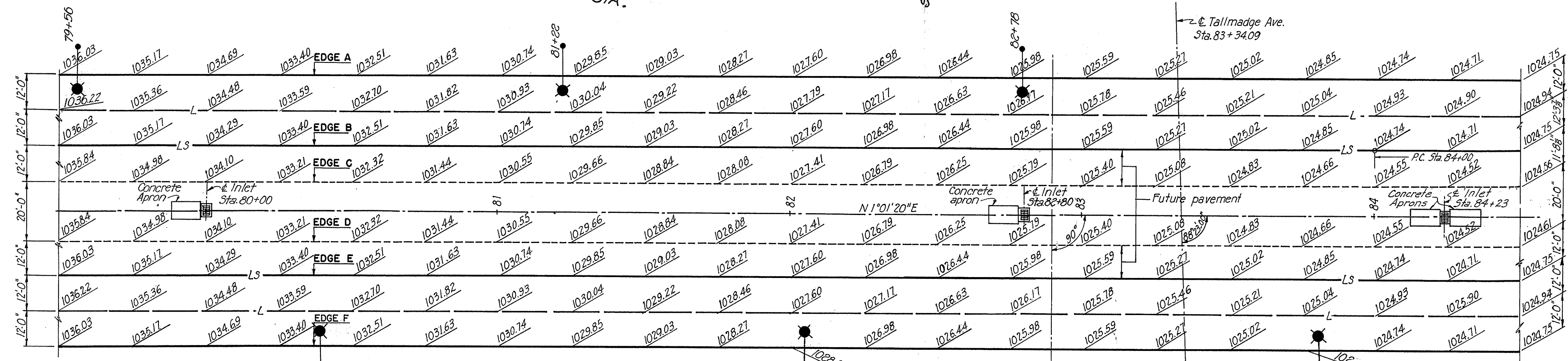
SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

PAVEMENT DETAILS
STA. 74+50 TO STA. 84+50



Note:
For details of Ramp "F"
see Sheet 86.

Note:
For details of
Ramp "C" see Sheet 83 and Sheet 81A.



Note:
For pavement joint legend and details of lighting
see Sheet 97.

SCALE 1"=20'
MADE PERM. DATE 5-6-50
TRCD. P. R. DATE 6-13-50
CKD. G.M. DATE 6-5-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
766 SHEET-

Revised 4-16-51

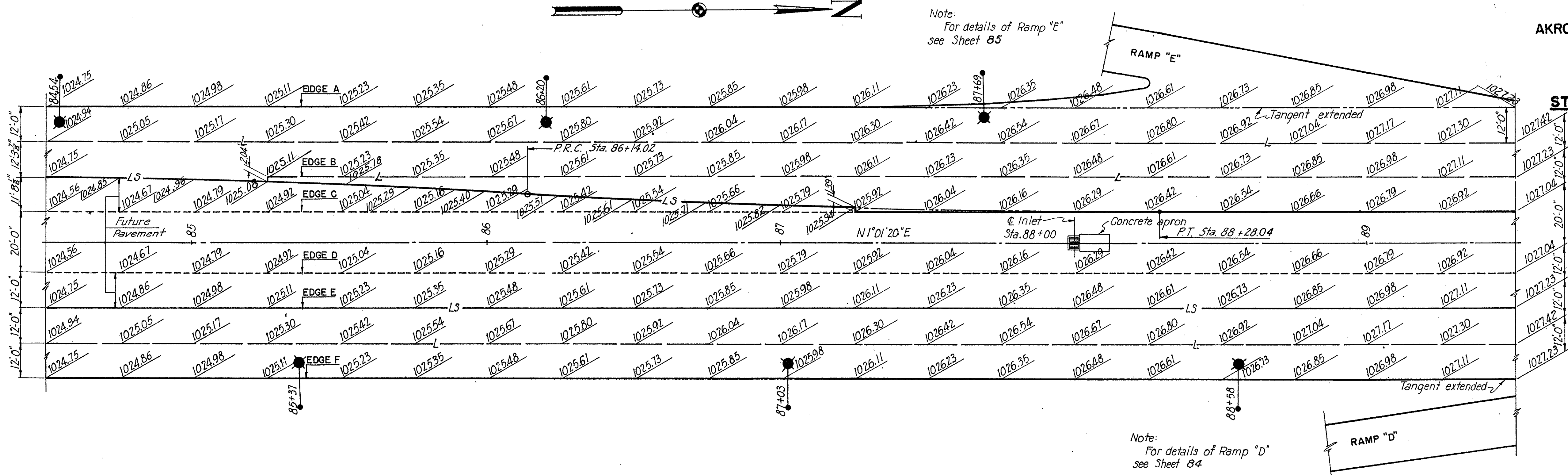
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	73
2	OHIO	U-687(B)	POST WAR	146

SUMMIT COUNTY CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
 EXPRESSWAY-PART 3
 SUM-5-12.62

PAVEMENT DETAILS
STA. 84+50 TO STA. 94+50

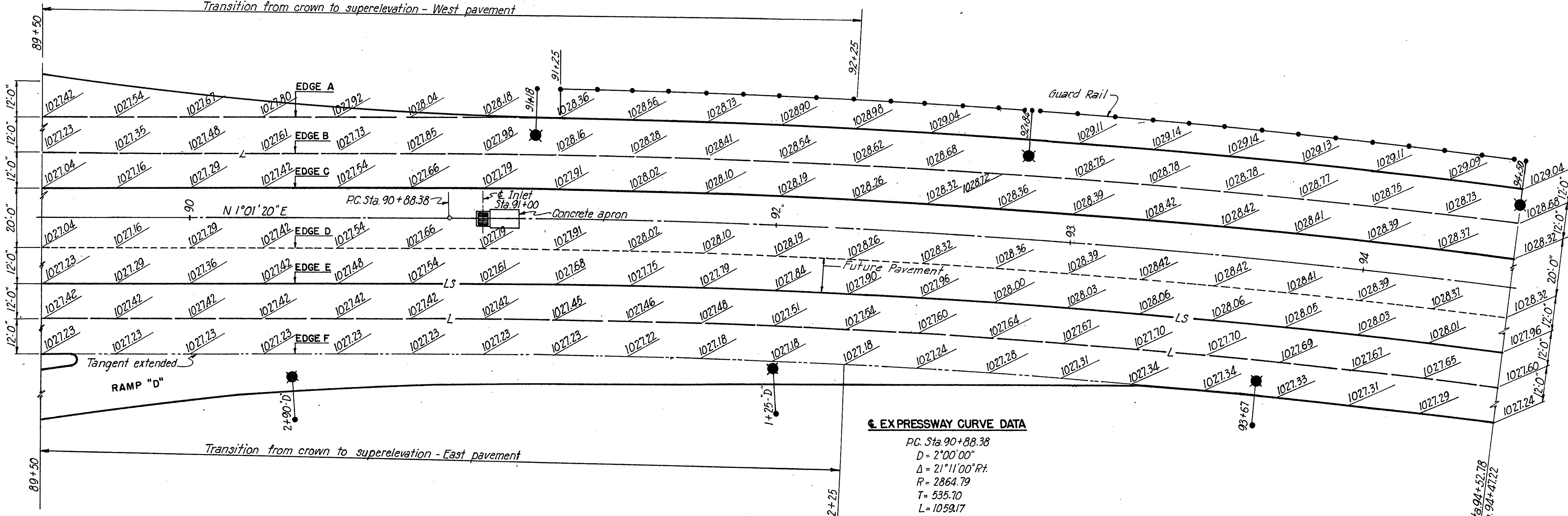
REVERSE CURVE DATA
EDGE B' TO EDGE C

P.C. Sta. 84+00
 D = 1°30'00"
 Δ = 3°12'43"
 R = 3819.72'
 T = 107.09'
 L = 214.13'
 P.C.C. = Sta. 86+14.02
 P.T. = Sta. 88+28.04



Note:
 For details of Ramp "E"
 see Sheet 85

Note:
 For details of Ramp "D"
 see Sheet 84



EXPRESSWAY CURVE DATA

P.C. Sta. 90+88.38
 D = 2°00'00"
 Δ = 21°11'00"Rt.
 R = 2864.79
 T = 535.70
 L = 1059.17
 P.T. Sta. 101+47.55

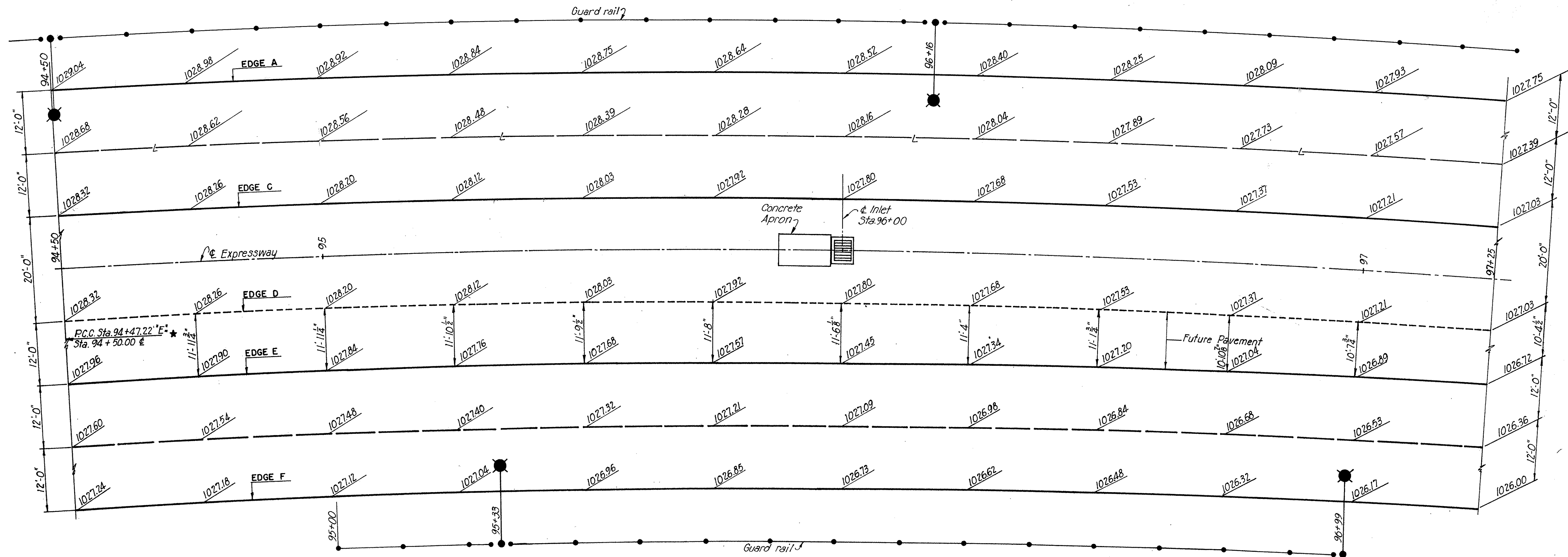
P.C.C. Edge B Sta. 94+52.78
 P.C.C. Edge E Sta. 94+47.22
 & Sta. 94+50

Notes:
 For pavement joint legend and
 details of guard rail and lighting
 see Sheet 97.

SCALE: 1" = 20'
 MADE P.R. DATE: 5-2-50
 TRCD. P.R. DATE: 6-28-50
 CRO. G.M. DATE: 6-30-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK

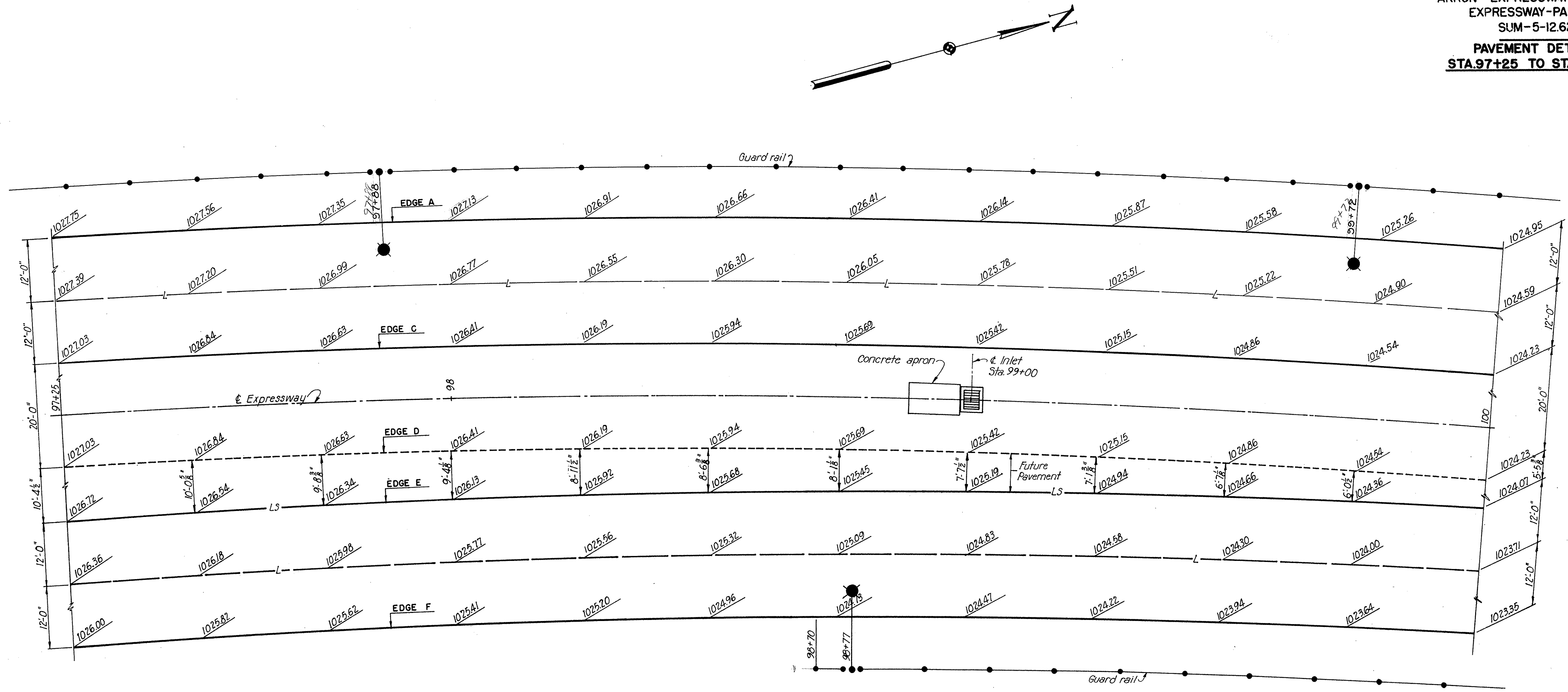
766 SHEET



EXPRESSWAY CURVE DATA

P.C. = Sta. 90+88.38
 D = 2°00'00"
 Δ = 21°11'00" Rt.
 R = 2864.79'
 T = 535.70
 L = 1059.17
 P.T. = Sta. 101+47.55

Notes:
For pavement joint legend and details of guard rail and lighting see Sheet 97.



EXPRESSWAY CURVE DATA
 P.C. = Sta. 90+88.38
 D = 2°00'00"
 Δ = 21°11'00" P.
 R = 2864.79'
 T = 535.70'
 L = 1059.17'
 P.T. = Sta. 101+47.55

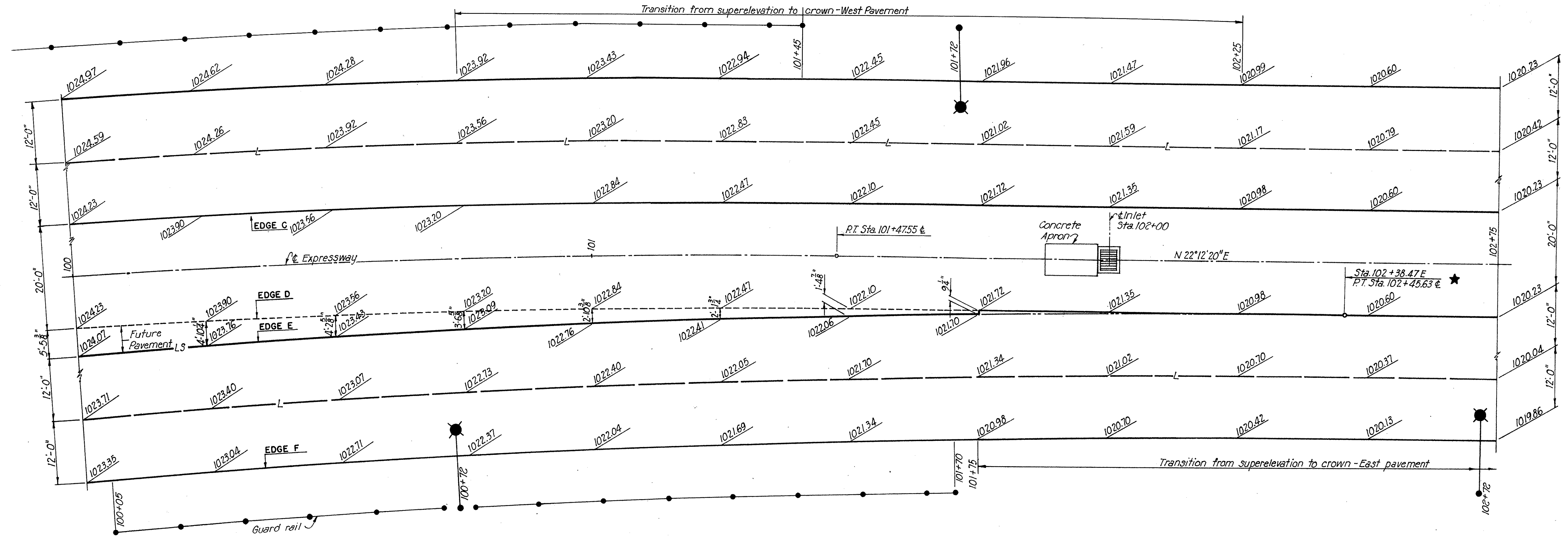
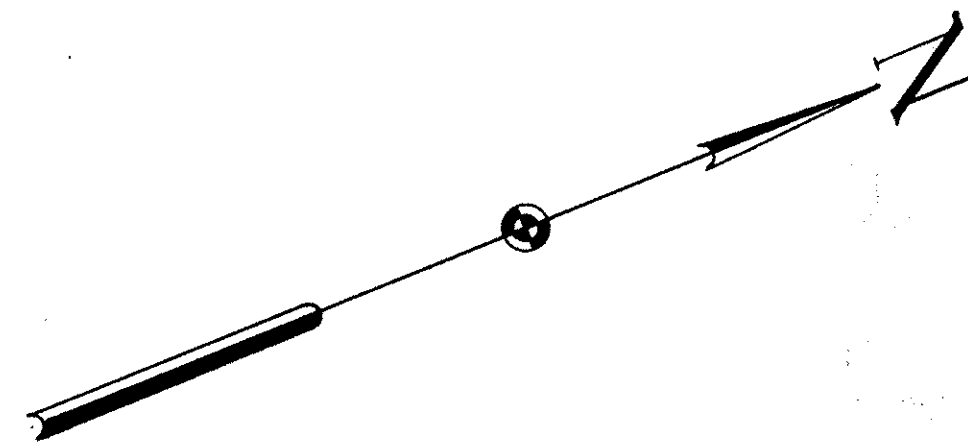
Notes:
 For pavement joint legend and details of guard rail and lighting see Sheet 97.

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FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	76
2	OHIO	U-687(8)	POST WAR	146

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

**PAVEMENT DETAILS
STA. 100+00 TO STA. 102+75**



EXPRESSWAY CURVE DATA
 P.C. = Sta. 90+88.38
 D = 2°00'00"
 Δ = 21°11'00" Rt.
 R = 2864.79'
 T = 535.70'
 L = 1069.17'
 P.T. = Sta. 101+47.55

Notes:
 For pavement joint legend and details of guard rail and lighting see Sheet 97.

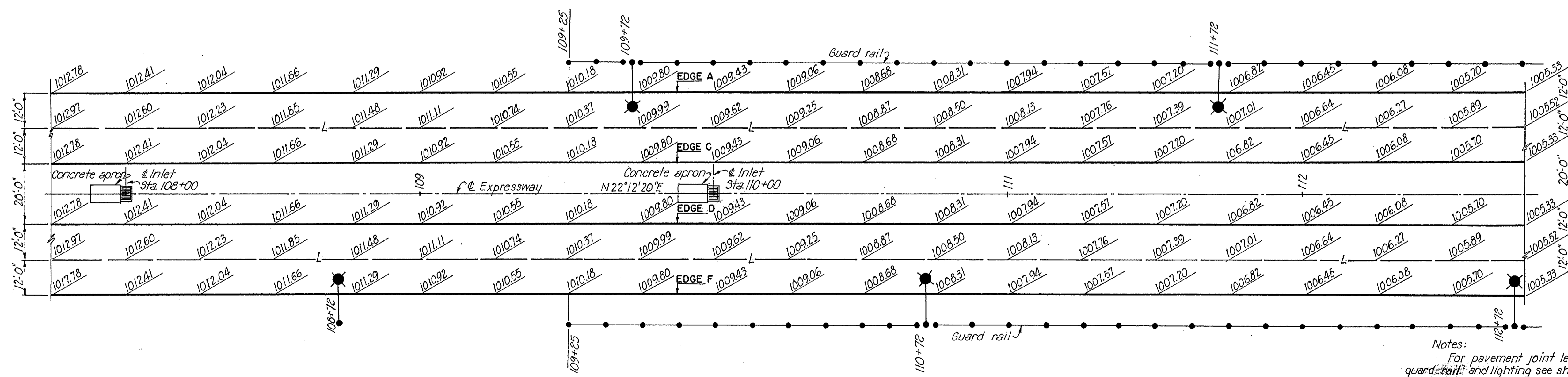
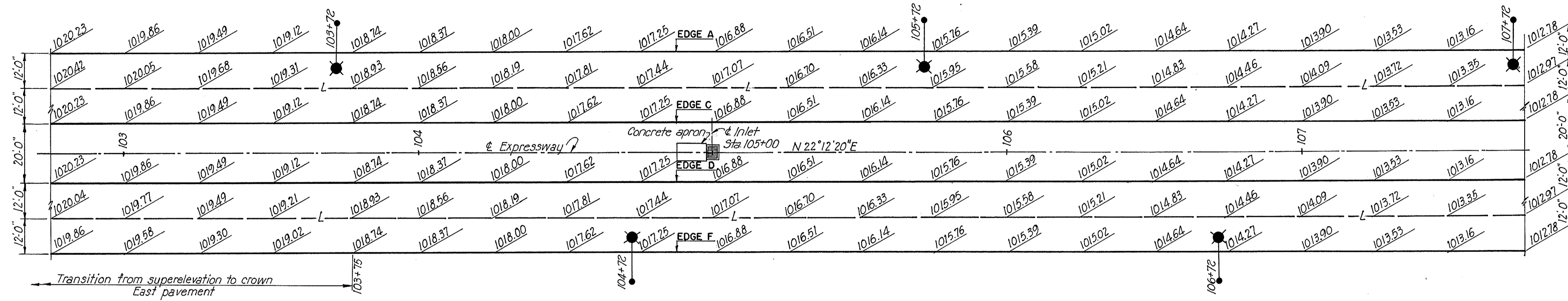
SCALE 1" = 10'
 MADE R.R.M. DATE 3-24-50
 TRCD. P.P. DATE 6-16-50
 CRD. G.M. DATE 6-3-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
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766 SNE: J-

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	77 146
2	OHIO	U-687(8)	POST WAR	

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
PAVEMENT DETAILS
STA.102+75 TO STA.112+75



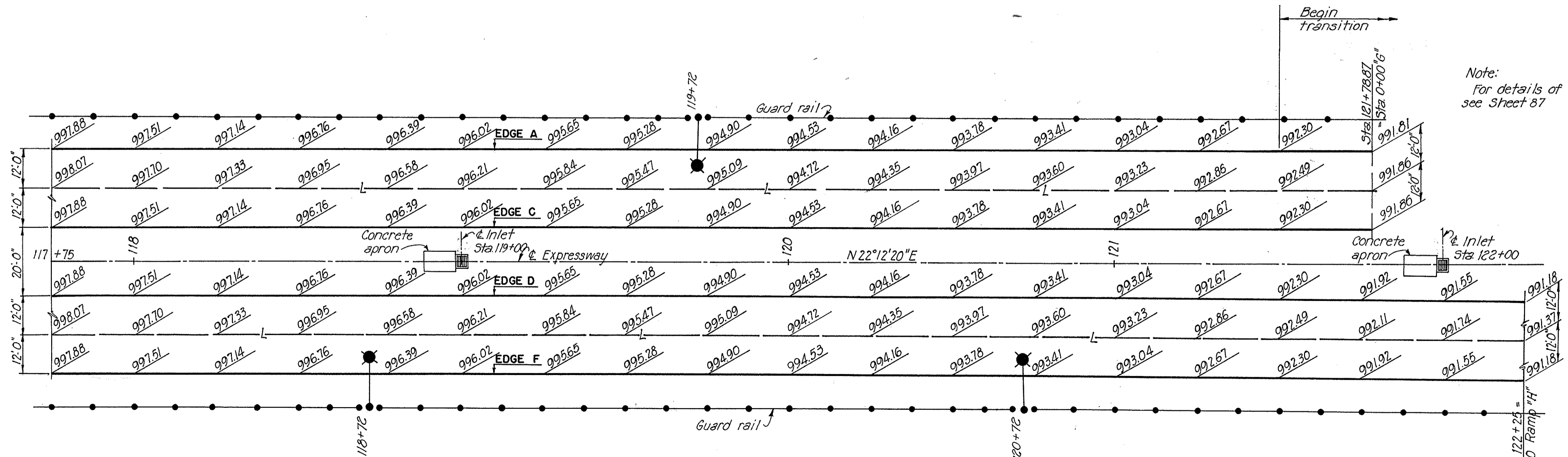
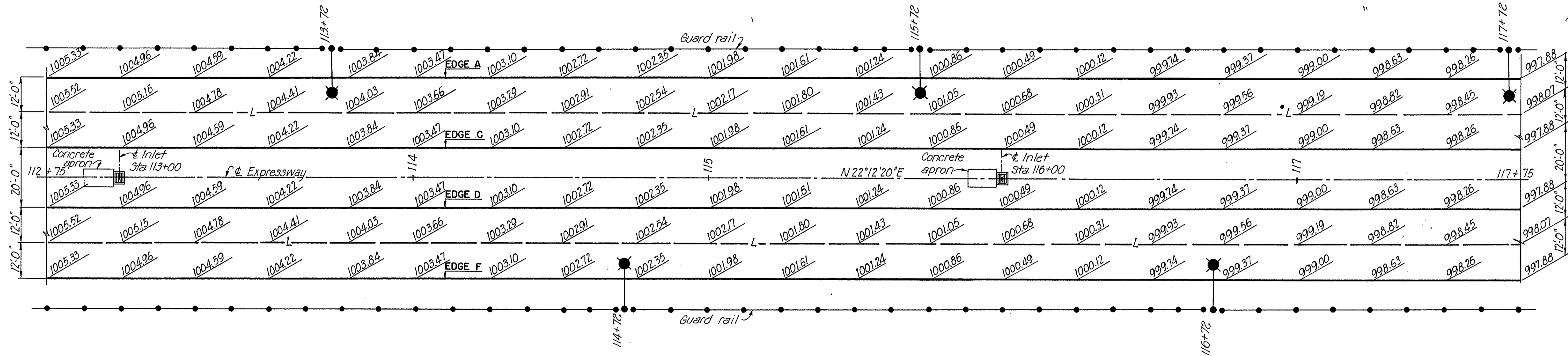
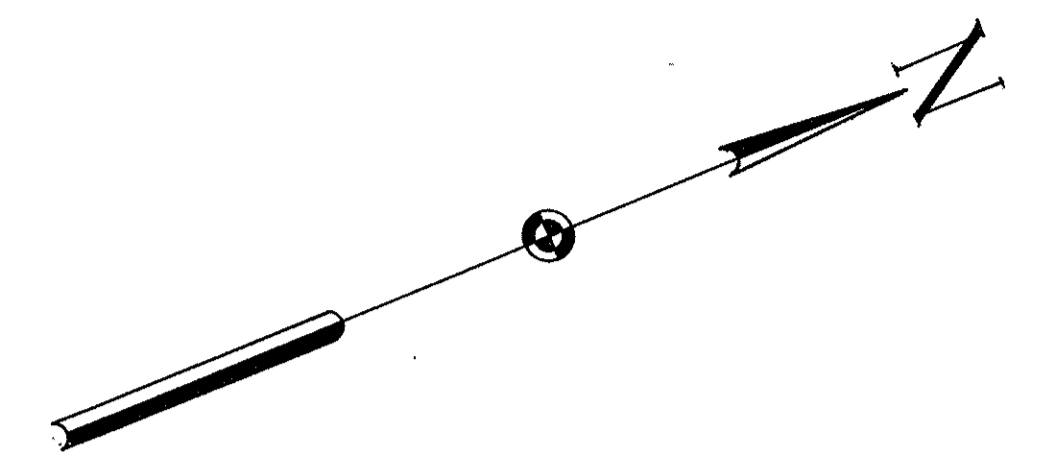
Notes:
For pavement joint legend and details of guard rail and lighting see sheet 97.

SCALE 1"=20'
MADE R.R.M. DATE 5-1-50
TRCD R.R. DATE 6-12-50
CKD G.M. DATE 7-1-50

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CONSULTING ENGINEERS
KANSAS CITY NEW YORK
766 SHEET-

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	78
2	OHIO	U-687(8)	POST WAR	146

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
PAVEMENT DETAILS
STA. 112+75 TO STA. 122+25



Note:
For details of Ramp "G"
see Sheet 87

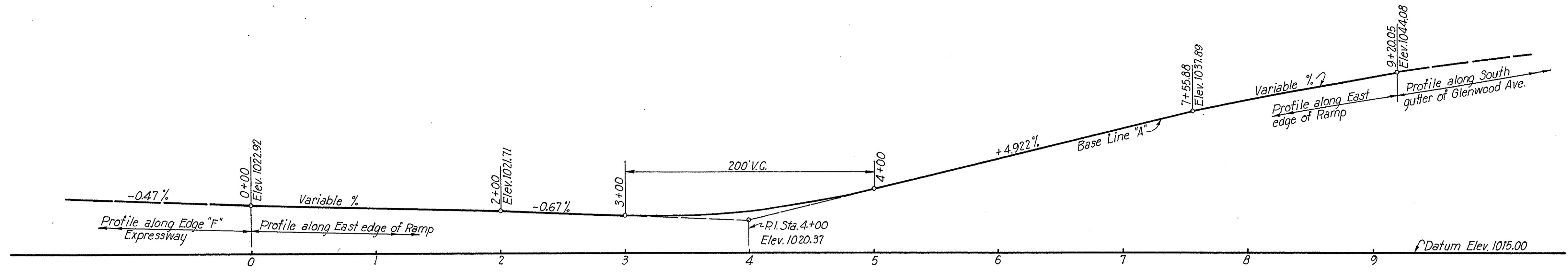
Note:
For details of Ramp "H"
see Sheet 88

Notes:
For pavement joint legend and details of
guard rail and lighting see sheet 97.

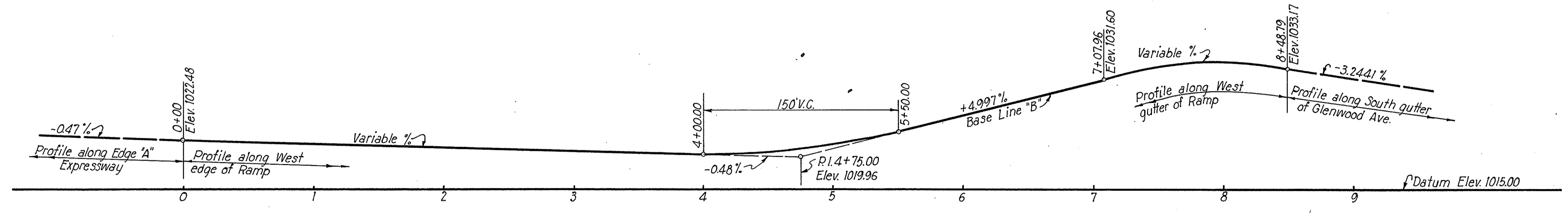
SCALE 1" = 20'
MADE P.E.M. DATE 5-5-50 HOWARD, NEEDLES, TAMMEN & BERGENDOFF
TBCD. P.E. DATE 6-13-50 CONSULTING ENGINEERS
CKD. F.E. DATE 6-29-50 KANSAS CITY NEW YORK
766 SHEET-

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	79 146
2	OHIO	U-687(9)	POST WAR	

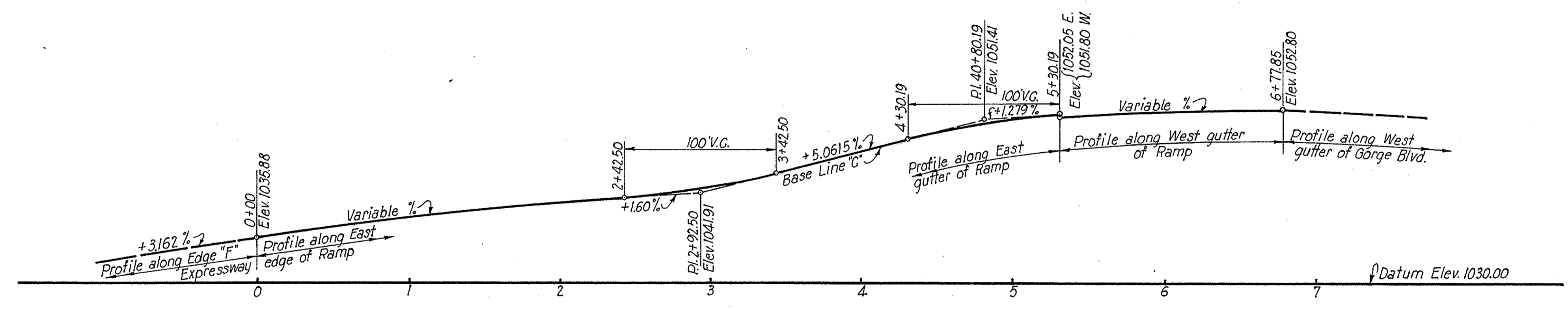
SUMMIT COUNTY CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
RAMP PROFILES



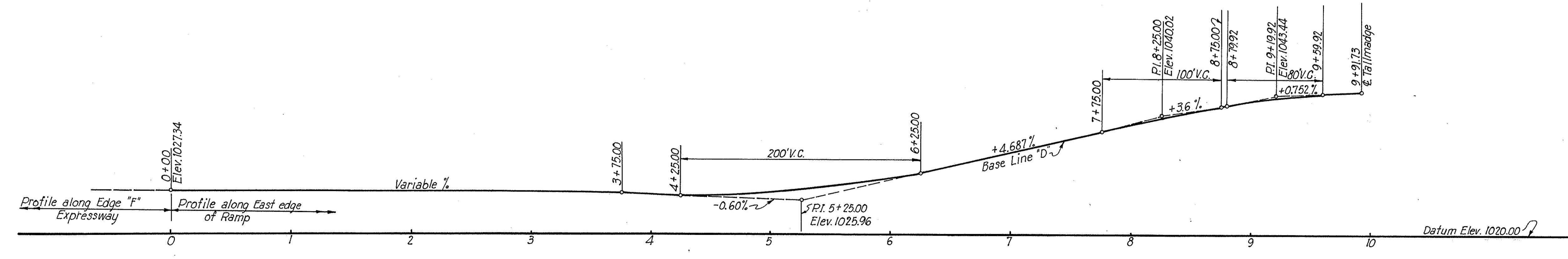
RAMP "A" PROFILE



RAMP "B" PROFILE



RAMP "C" PROFILE



RAMP "D" PROFILE

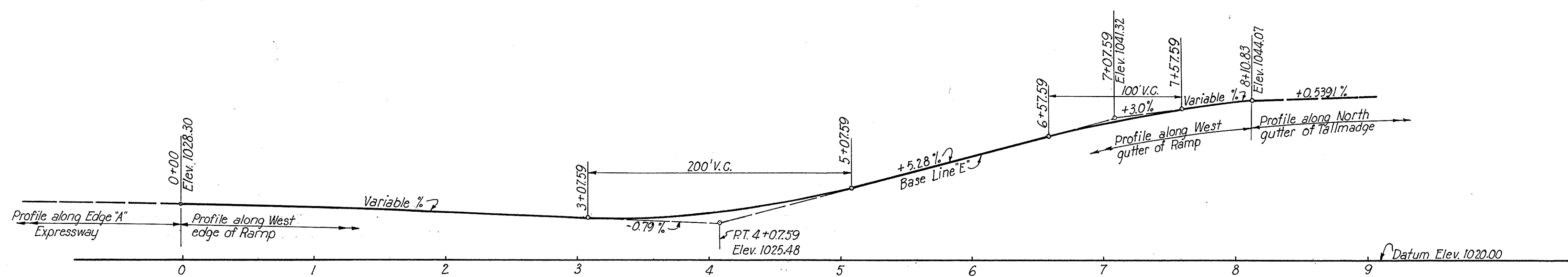
1" = 50' Horiz.
 1" = 10' Vert.
 MADE G.M. DATE 6-7-50
 TRCD. R.P. DATE 6-20-50
 CKD. F.E. DATE 6-21-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK

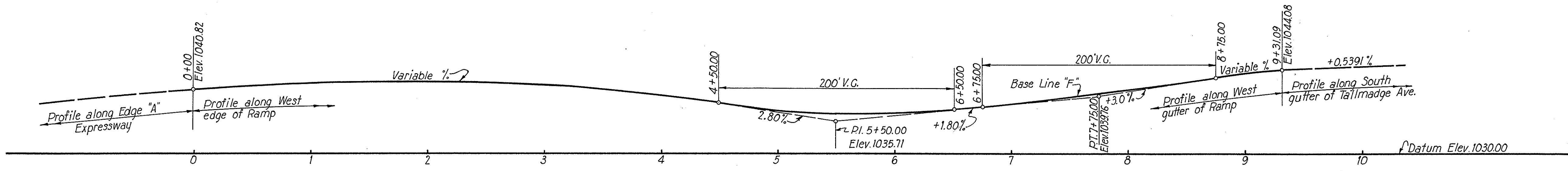
766 SHEET

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	80 14.6
2	OHIO	U-687(8)	POST WAR	

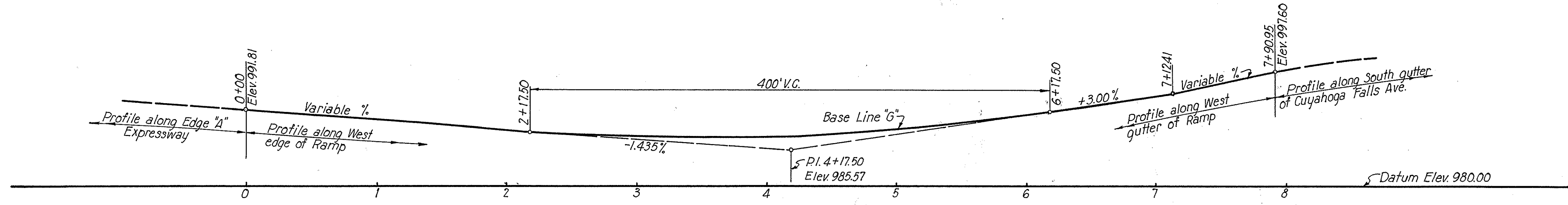
SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
RAMP PROFILES



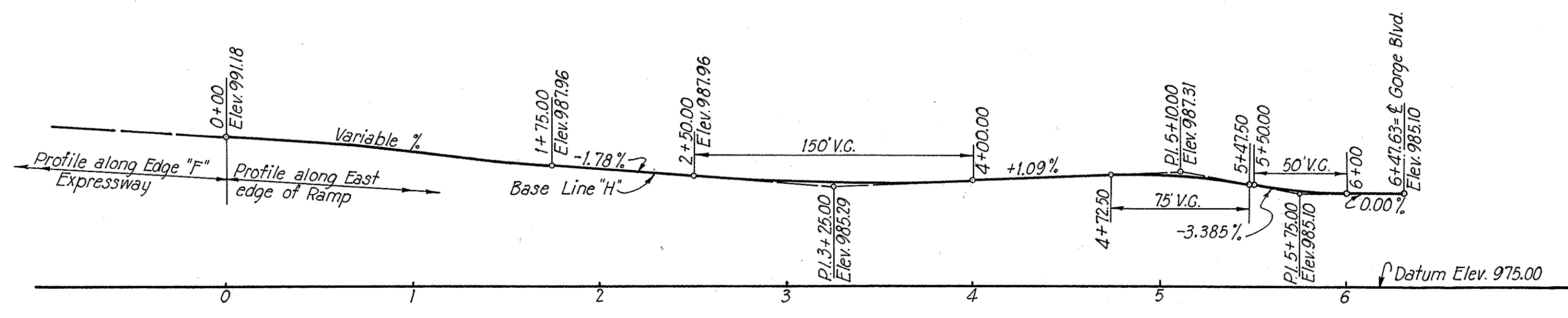
RAMP "E" PROFILE



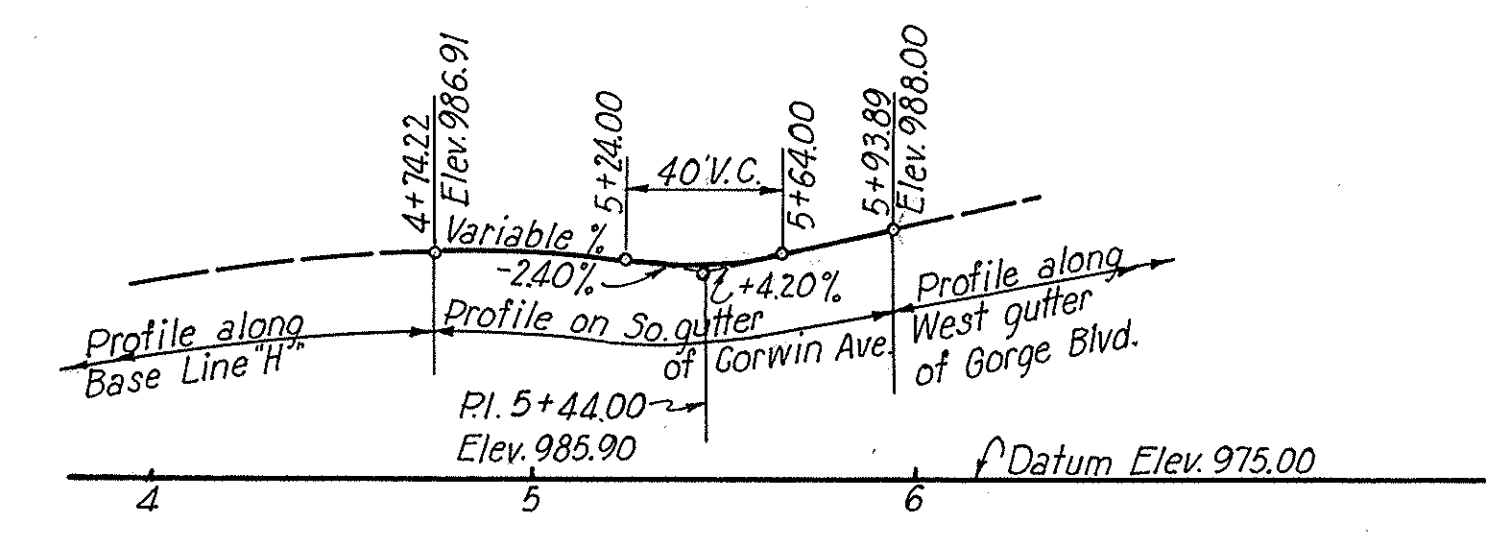
RAMP "F" PROFILE



RAMP "G" PROFILE



BASE LINE "H" PROFILE



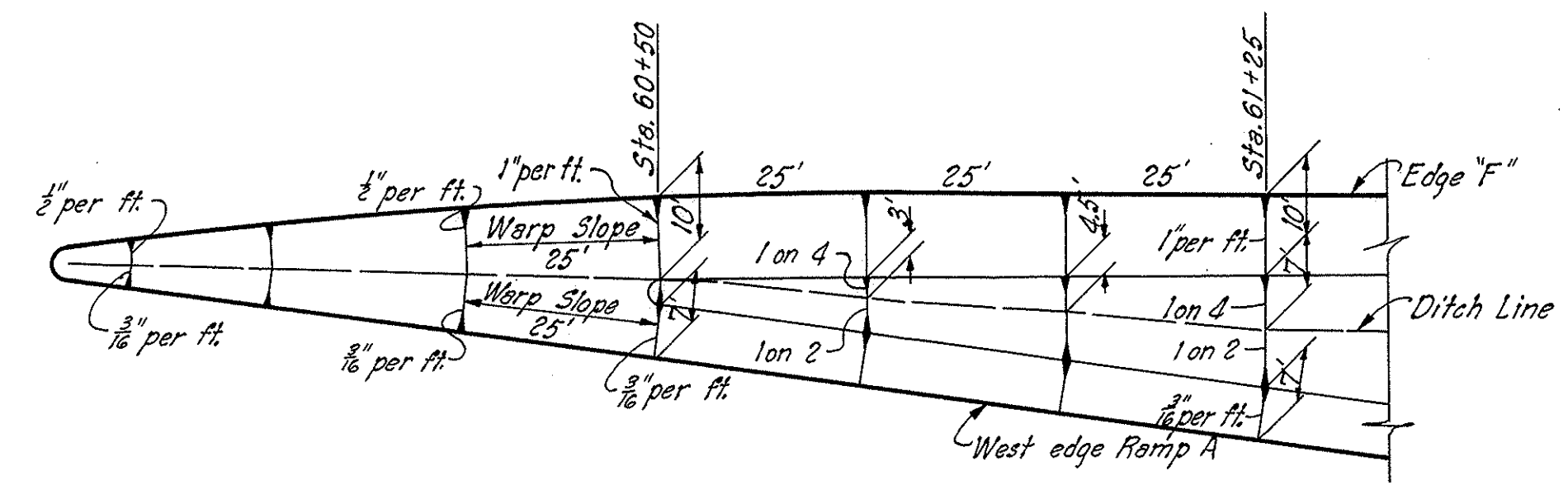
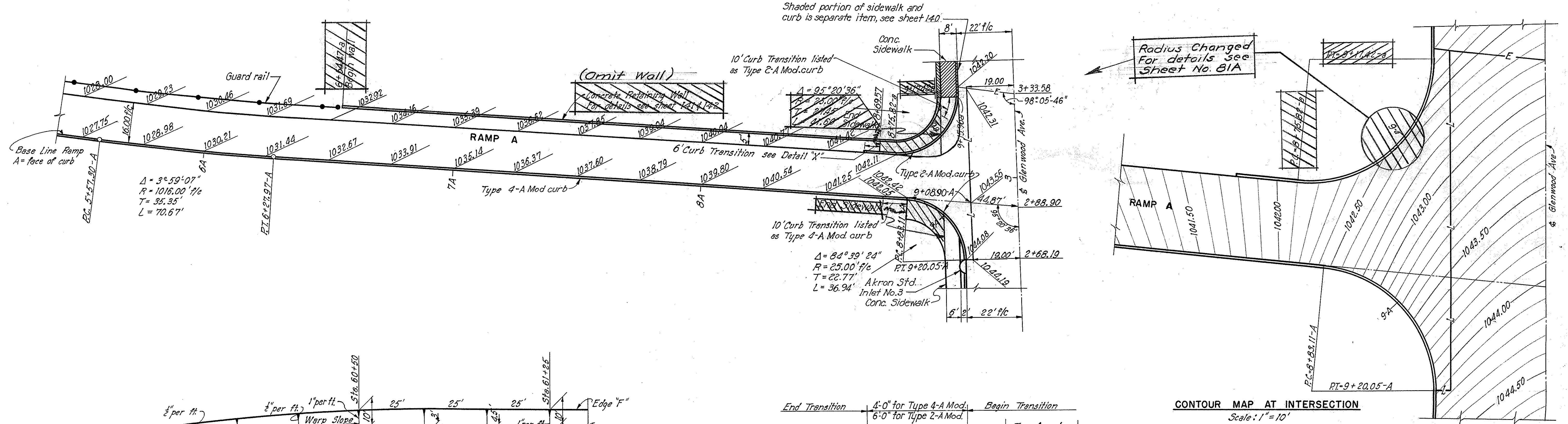
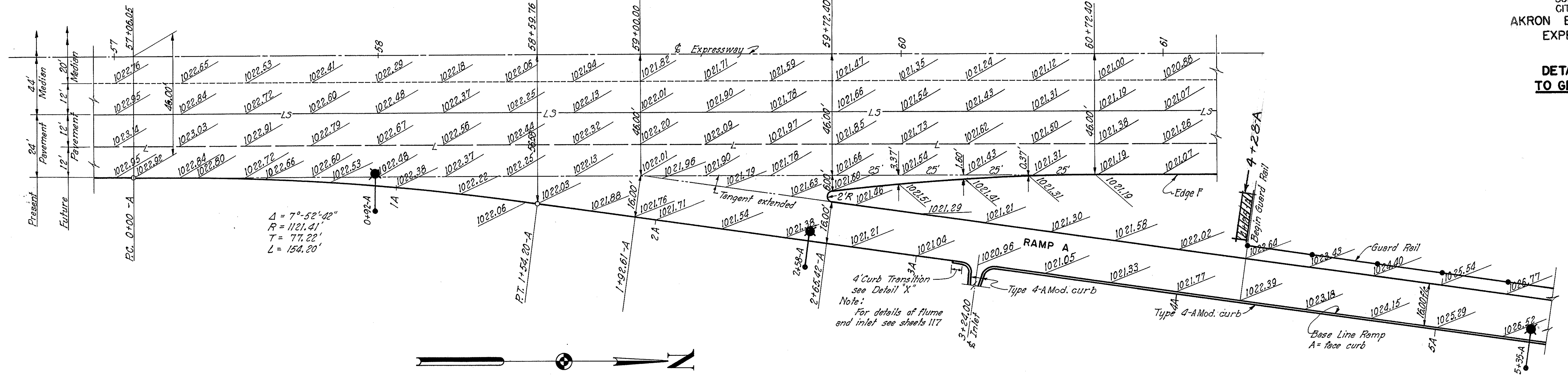
CORWIN STREET PROFILE

RAMP "H" PROFILE

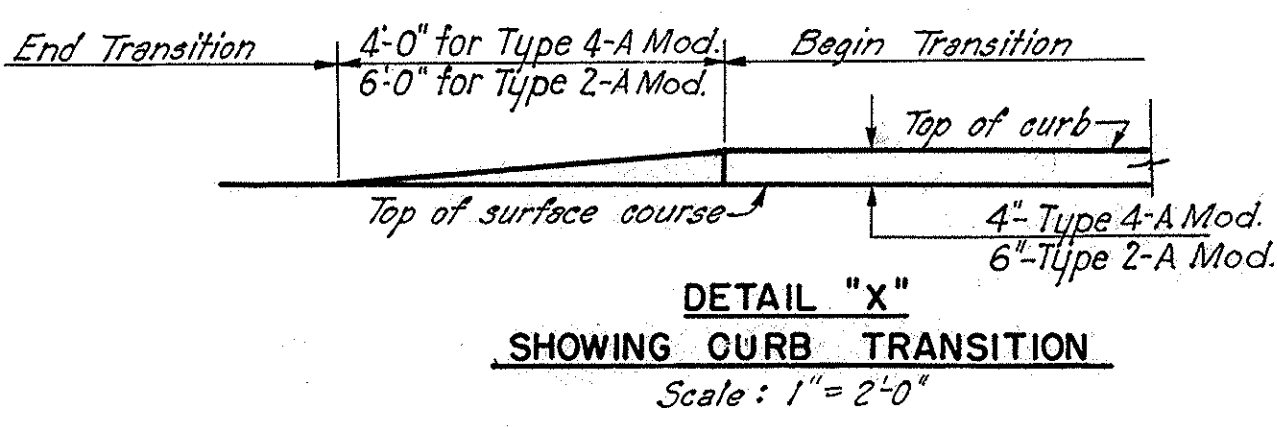
SCALE: 1" = 50' Horiz.
1" = 10' Vert.
MADE G.M. DATE 6-2-50
TRCD. P.P. DATE 6-20-50
CHK. F.E. DATE 6-21-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
766 SHEET

306

SUMMIT COUNTY CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
 EXPRESSWAY-PART 3
 SUM-5-12.62
DETAILS OF RAMP 'A' TO GLENWOOD AVENUE



GRADING PLAN AT INTERSECTION OF RAMP A AND EXPRESSWAY



DETAIL "x" SHOWING CURB TRANSITION
 Scale: 1" = 2'-0"

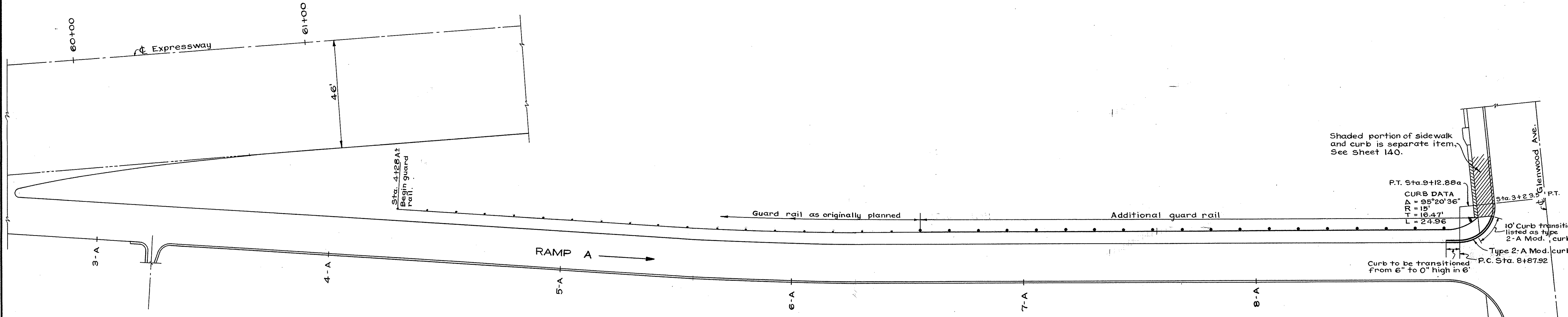
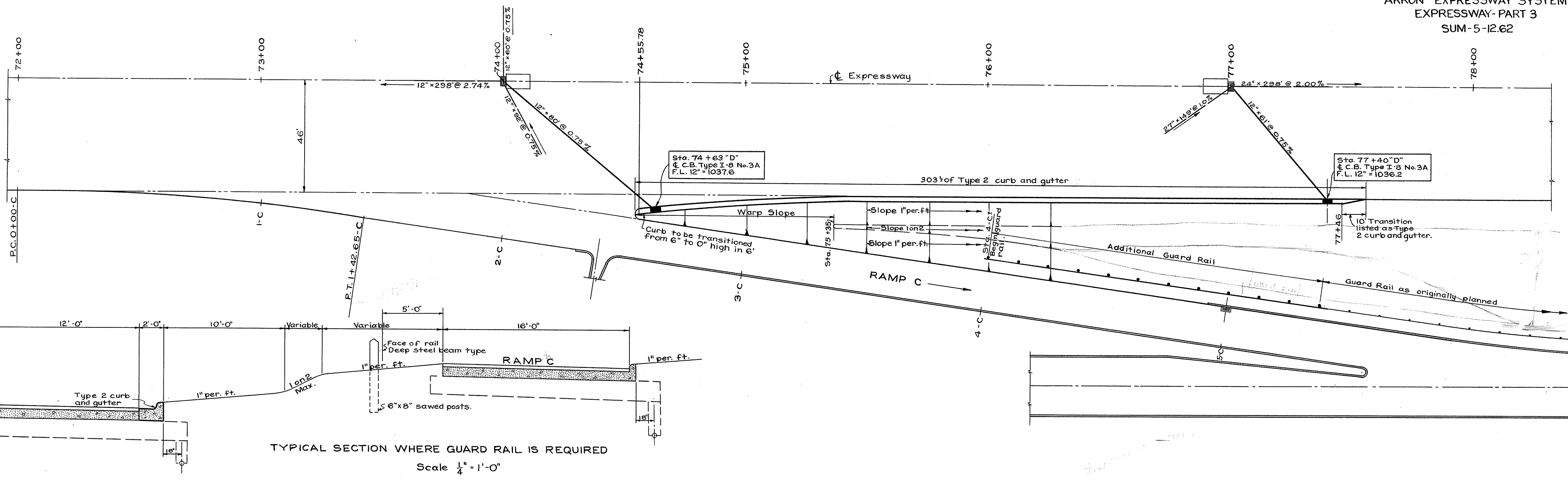
CONTOUR MAP AT INTERSECTION
 Scale: 1" = 10'

Note:
 For pavement joint legend and details of guard rail and lighting see sheet 97.
 For details of Glenwood Ave. repavement see sheets 89 and 92.

NOTE: For details circled and cross-hatched see sheet 81A.

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	B1A 146
2	OHIO	U-687(8)	POST WAR	

SUMMIT COUNTY CITY OF AKRON
 AKRON EXPRESSWAY SYSTEM
 EXPRESSWAY - PART 3
 SUM-5-12.62



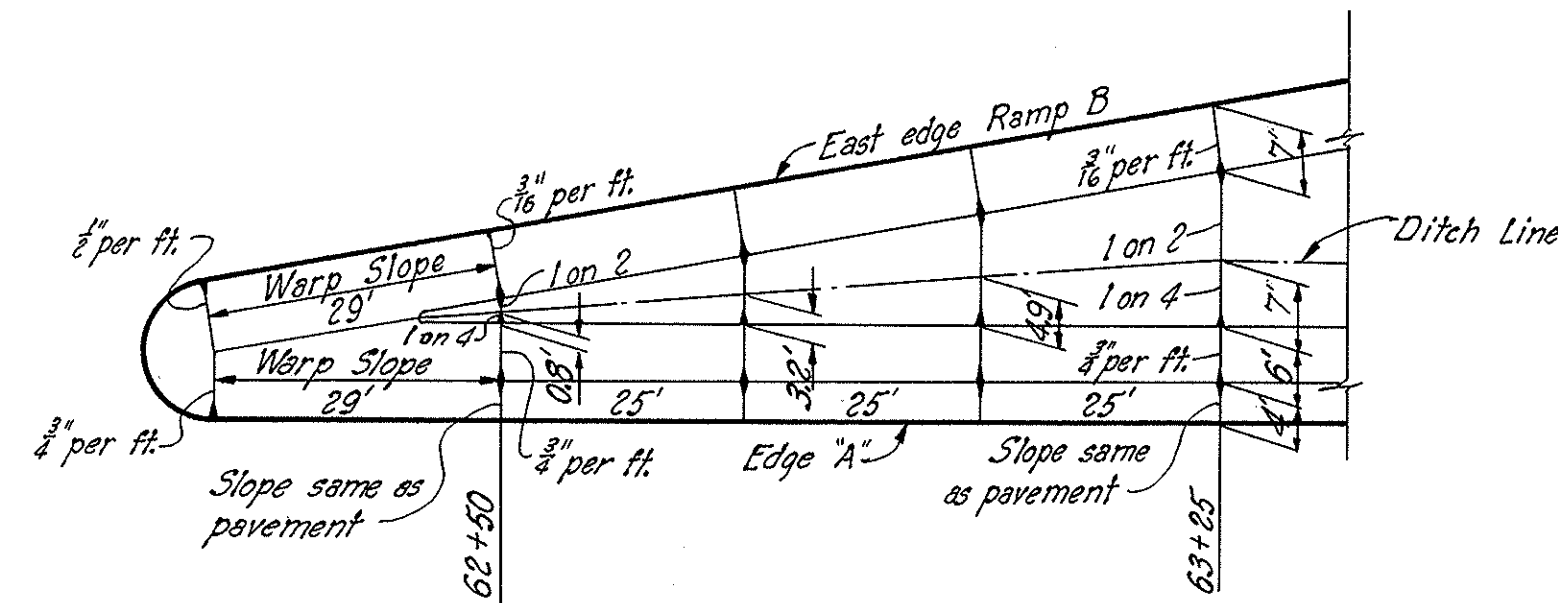
Revisions to contract drawings as shown on this sheet are as follows:
 Added Catch Basins, Type I-8 No. 3 A in Type 2 curb and gutter at Sta. 74+63 and Sta. 77+40 with 12" connections to Type B Manholes at Sta. 74+00 and 77+00 respectively. Added Type 2 curb and gutter from Sta. 74+55.78 to Sta. 77+46. Revised cross-section slopes (See Typical section.)

Omitted retaining walls along Ramps A and C, and added guard rail as shown. Substituted a curb radius of 15' instead of 25' at Glenwood Ave. west side of Ramp A.

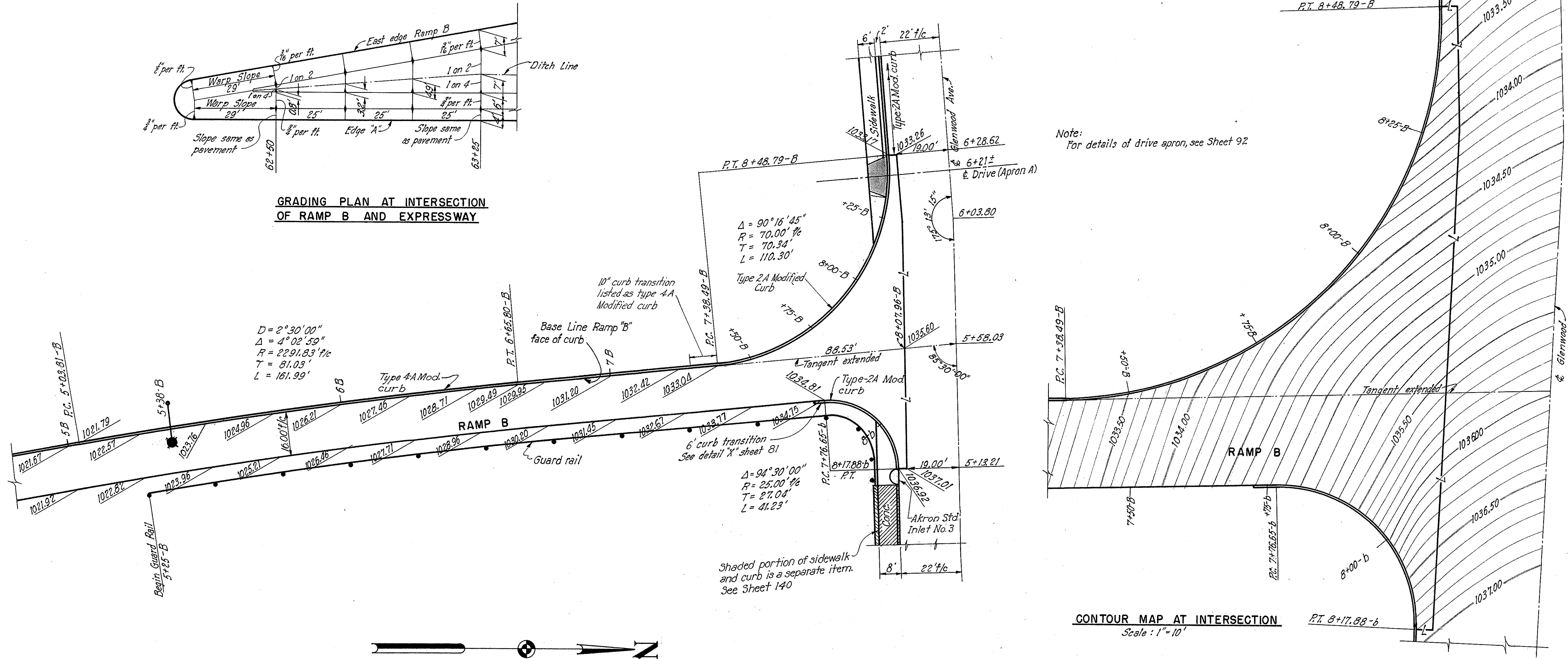
Note: Any information not shown, but pertaining to this sheet will be found on original contract drawings, Sheets 70, 71, 72, 81 and 83.

Note: This sheet supplements Sheets 72, 81 & 83

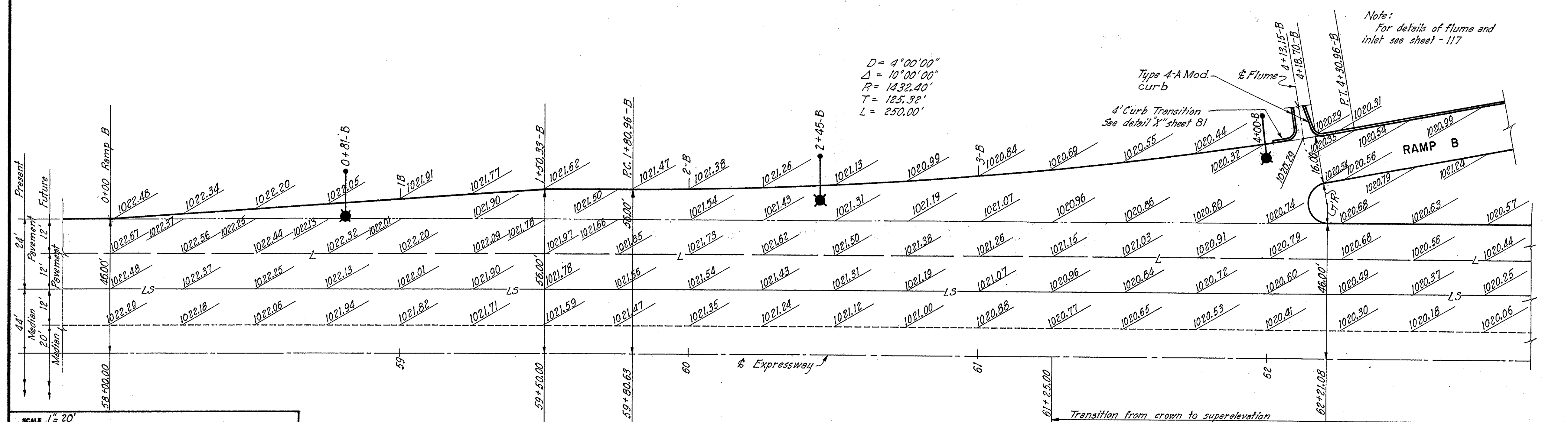
**DETAILS OF RAMP "B"
FROM GLENWOOD AVE.**



**GRADING PLAN AT INTERSECTION
OF RAMP B AND EXPRESSWAY**

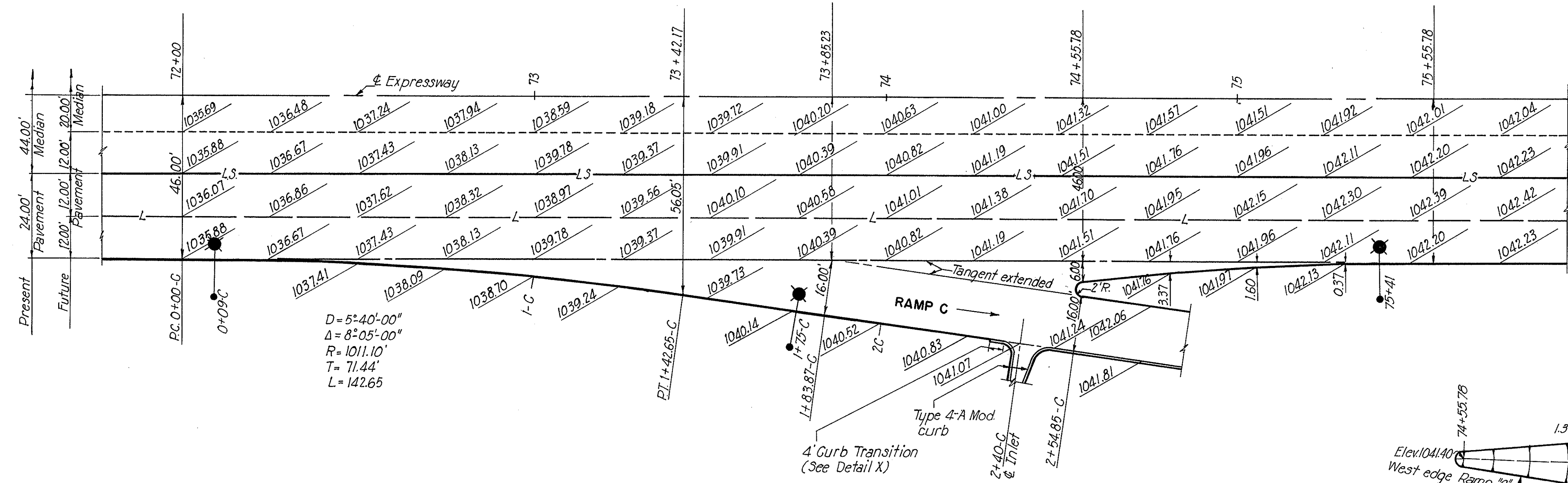


CONTOUR MAP AT INTERSECTION
Scale: 1" = 10'

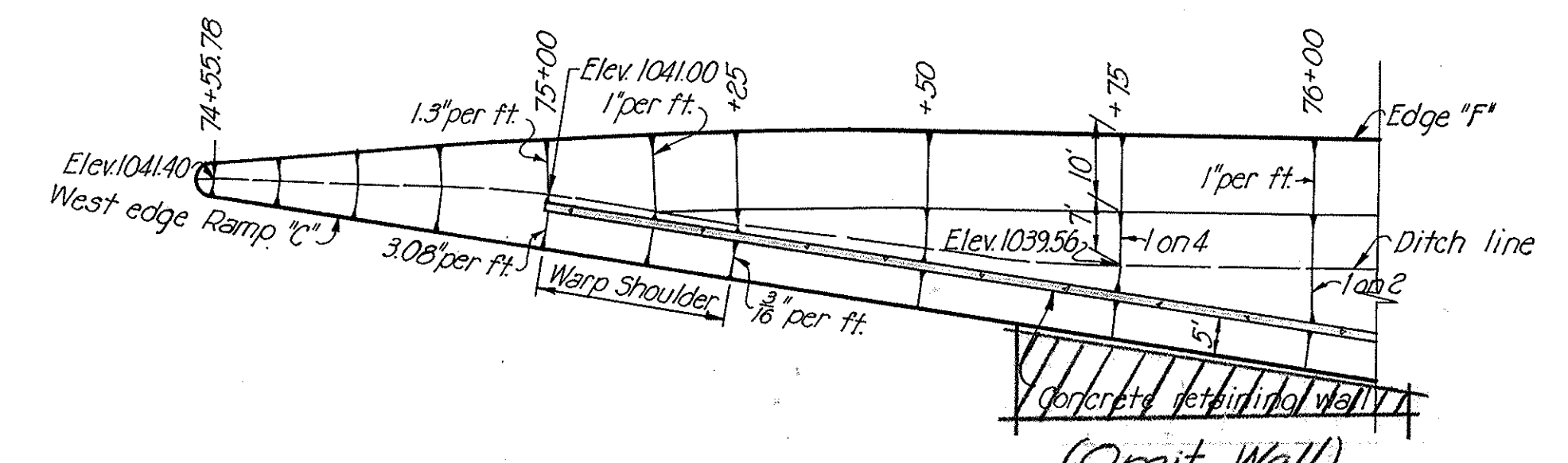


Note:
For pavement joint legend and details of guard rail
and lighting see sheet 97.
For details of Glenwood Ave. repavement see sheets 89 & 92.

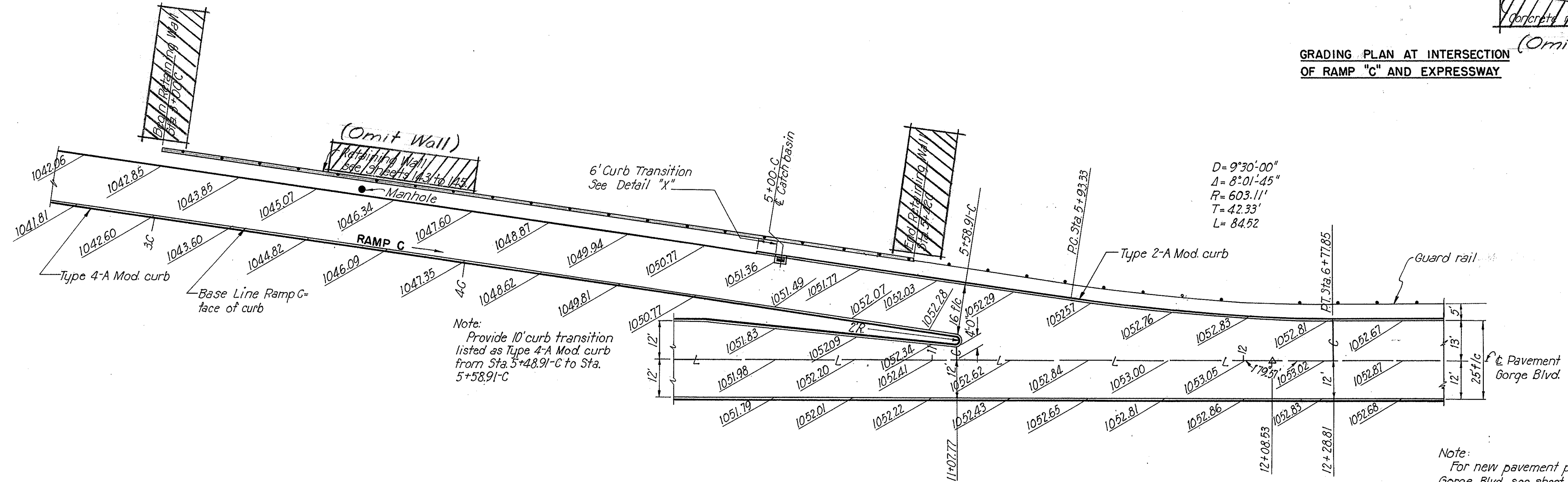
SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
**DETAILS OF RAMP "C"
TO GORGE BLVD.**



Note:
For details of flume and inlet, see sheet 117.



GRADING PLAN AT INTERSECTION
OF RAMP "C" AND EXPRESSWAY
(Omit Wall)

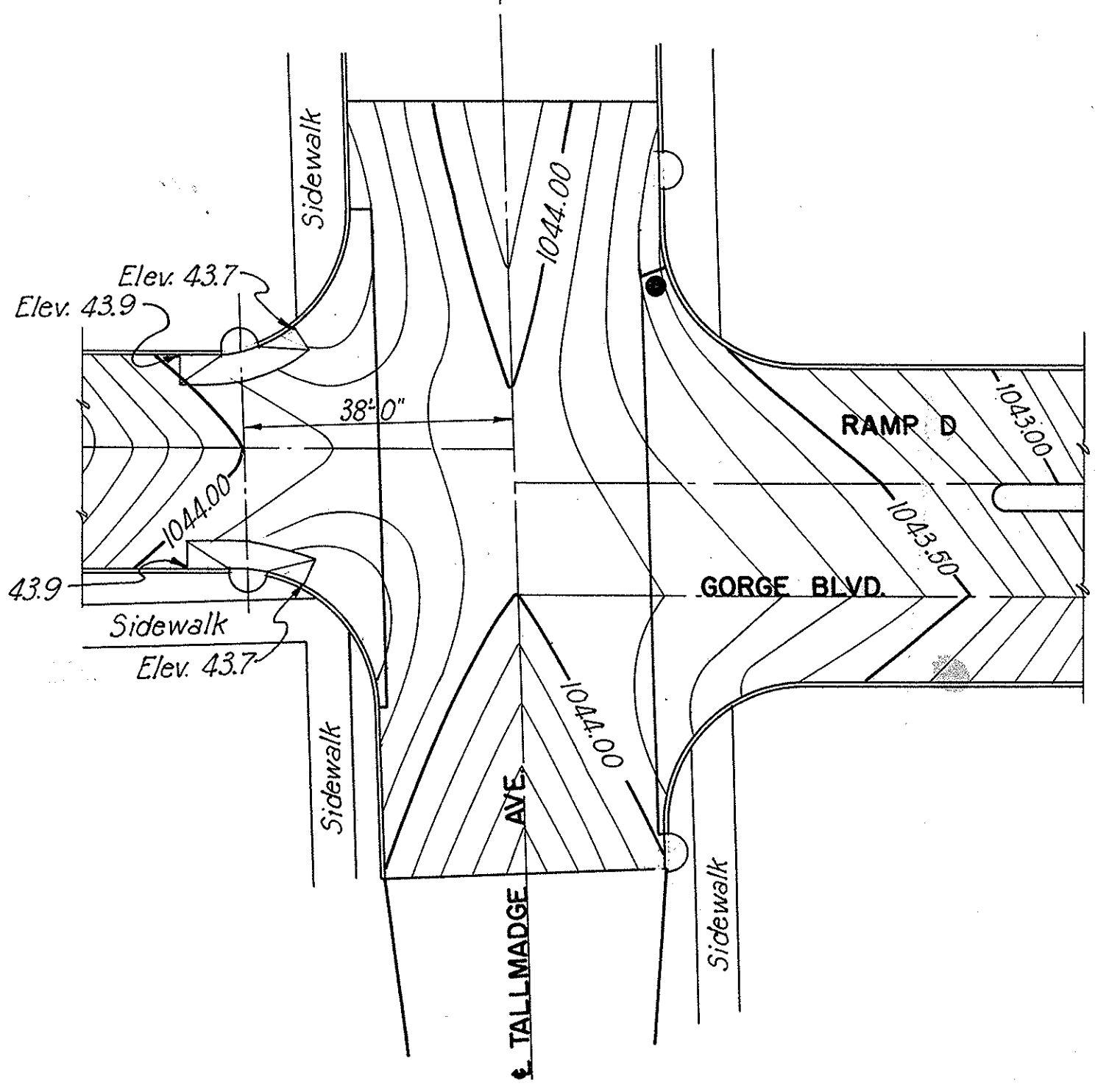
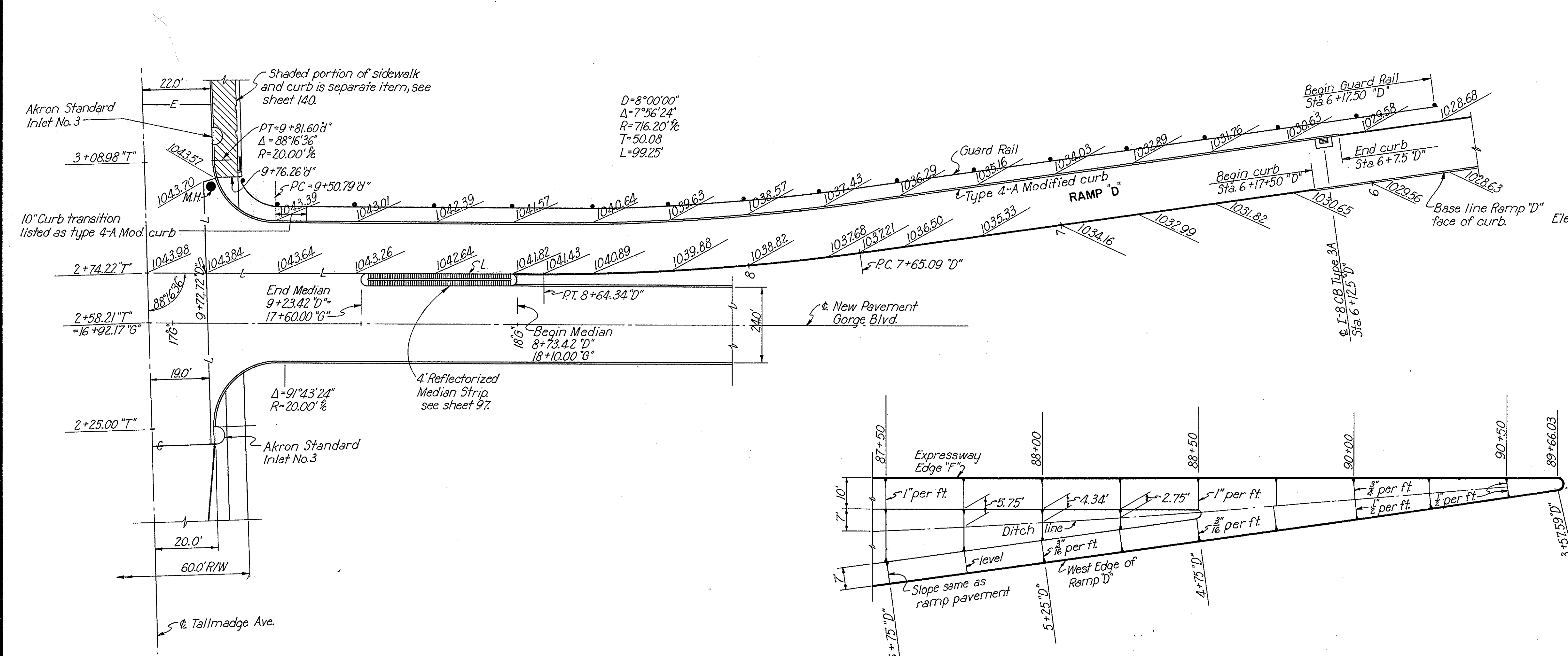
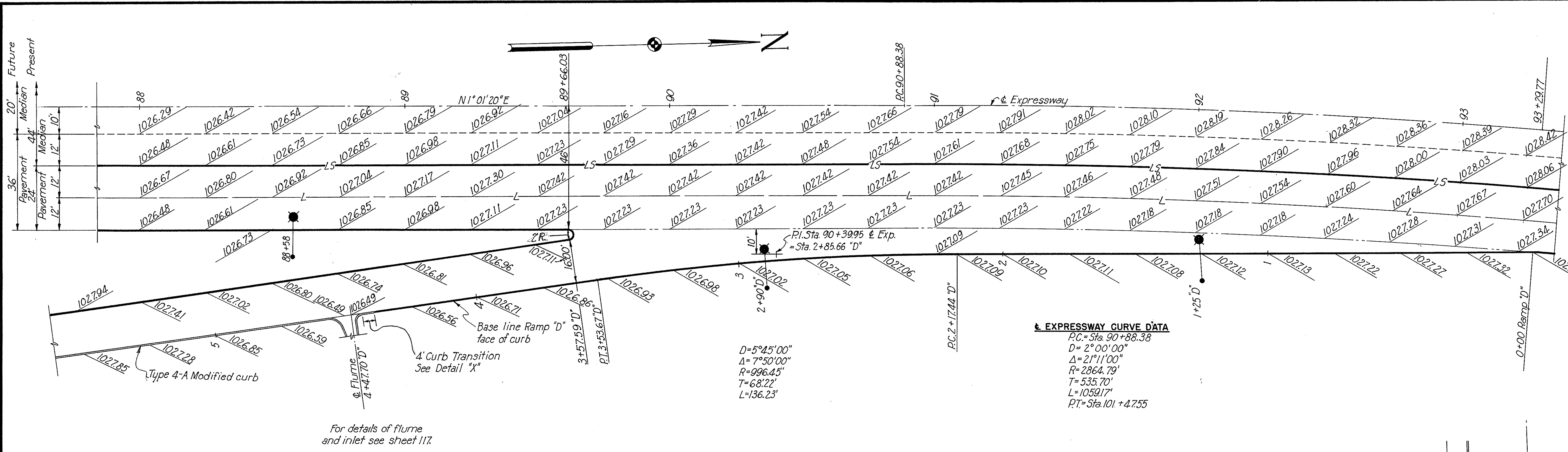


Note:
Provide 10' curb transition listed as Type 4-A Mod. curb from Sta. 5+48.91-C to Sta. 5+58.91-C

Note:
For new pavement plan for Gorge Blvd. see sheet 93.
For pavement joint legend and details of guard rail and lighting see sheet 97.
Catch basin at Sta. 5+00 to be I-8 No. 3-A. For details see Standard.

NOTE: FOR DETAILS CIRCLED and CROSS-HATCHED SEE SHEET 81A.

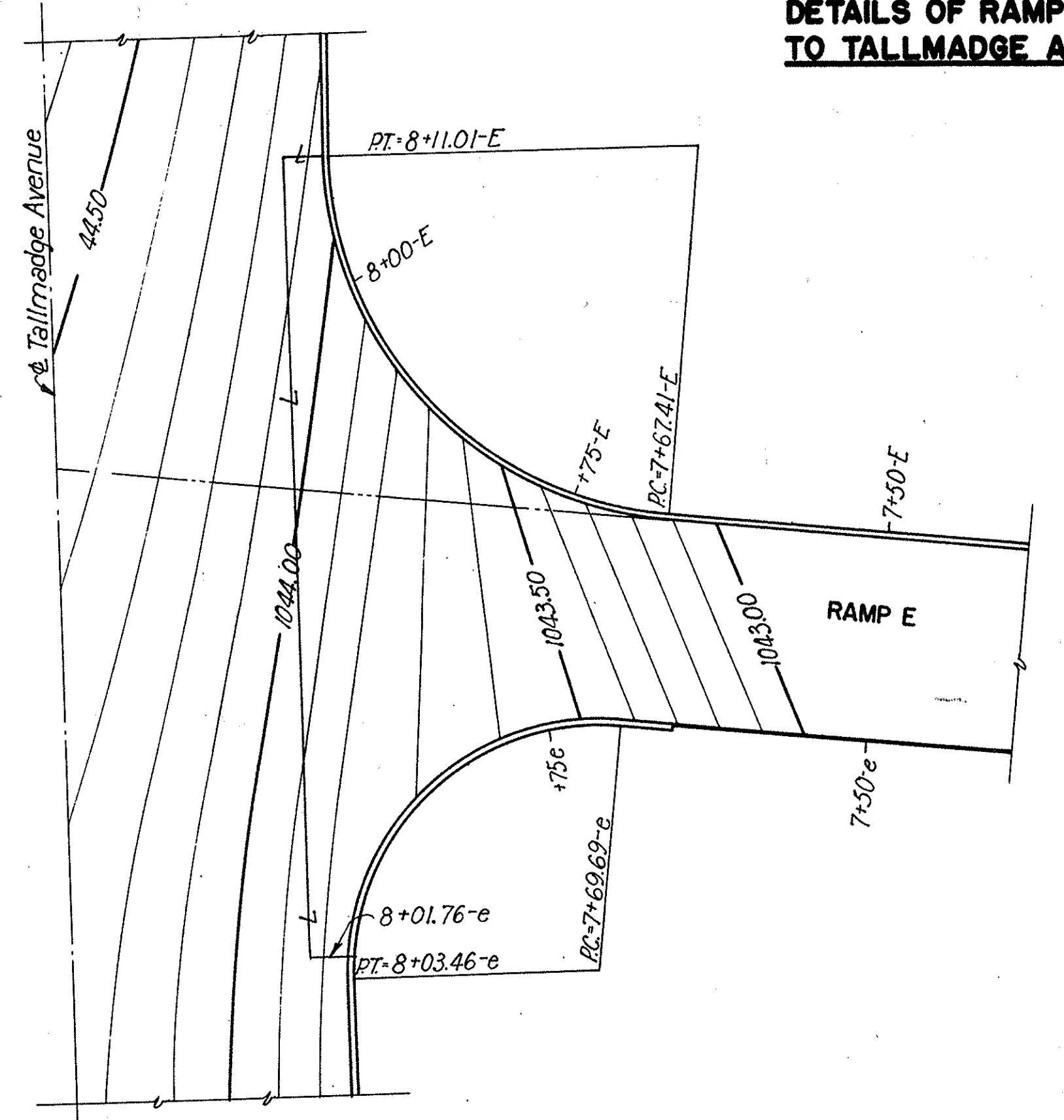
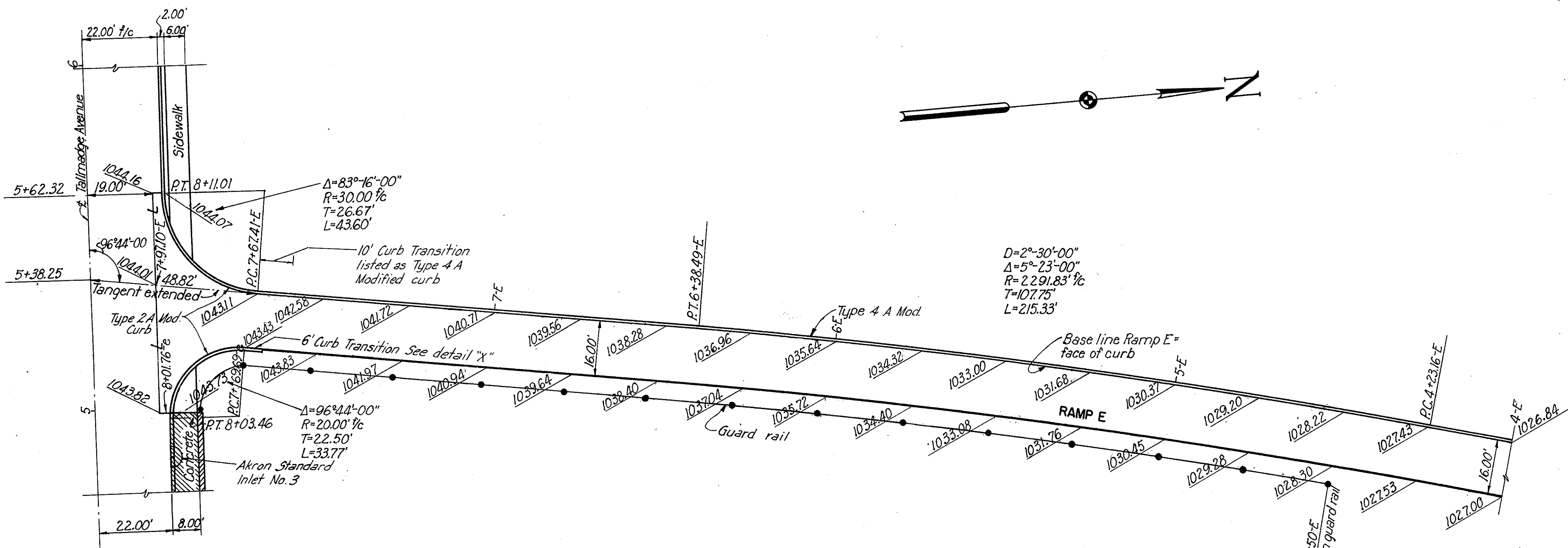
SUMMIT COUNTY OF AKRON
AKRON EXPRESSWAY SYSTEM
 EXPRESSWAY-PART 3
 SUM-5-12.62
DETAILS OF RAMP "D" FROM TALLMADGE



Note:
 For pavement joint legend and details of guard rail and lighting see sheet 97.
 For details of Tallmadge Ave. repavement, see Sheet 90.
 For details of Gorge Blvd. repavement, see Sheet 94.

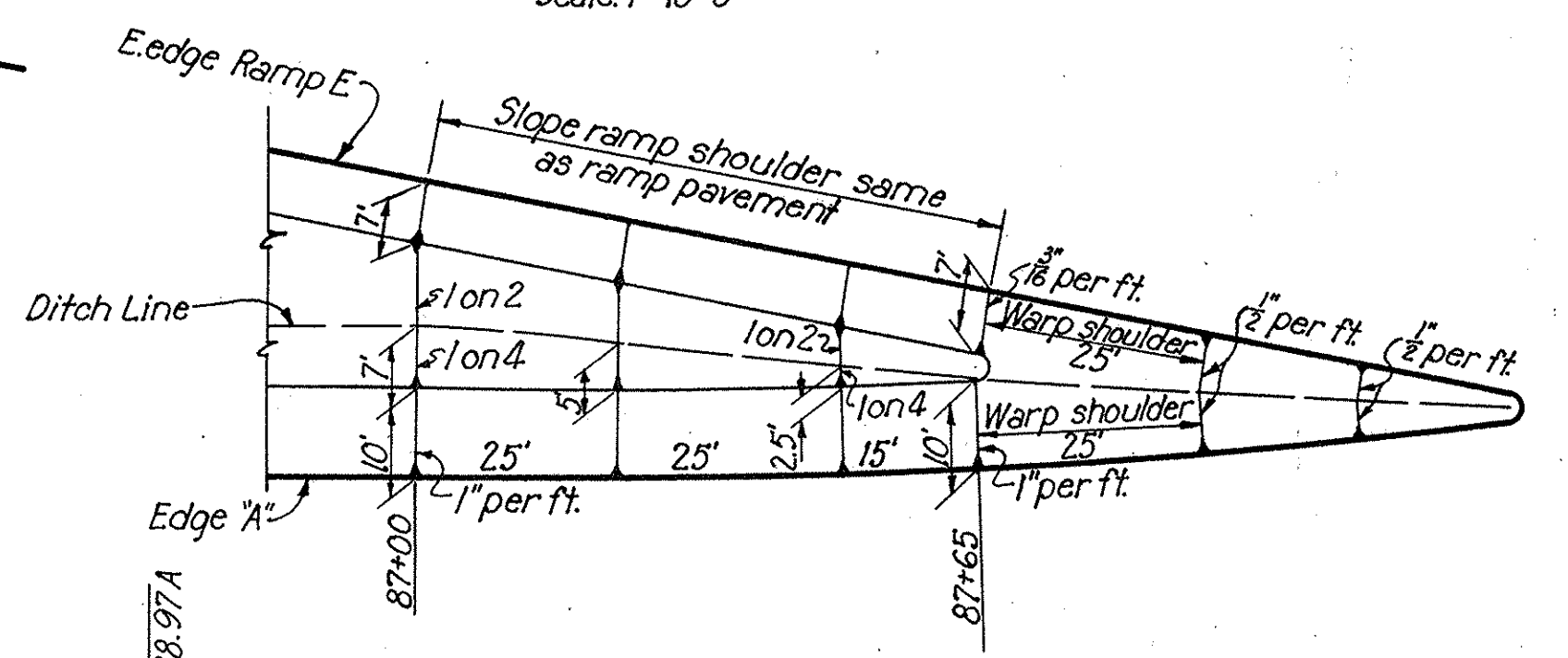
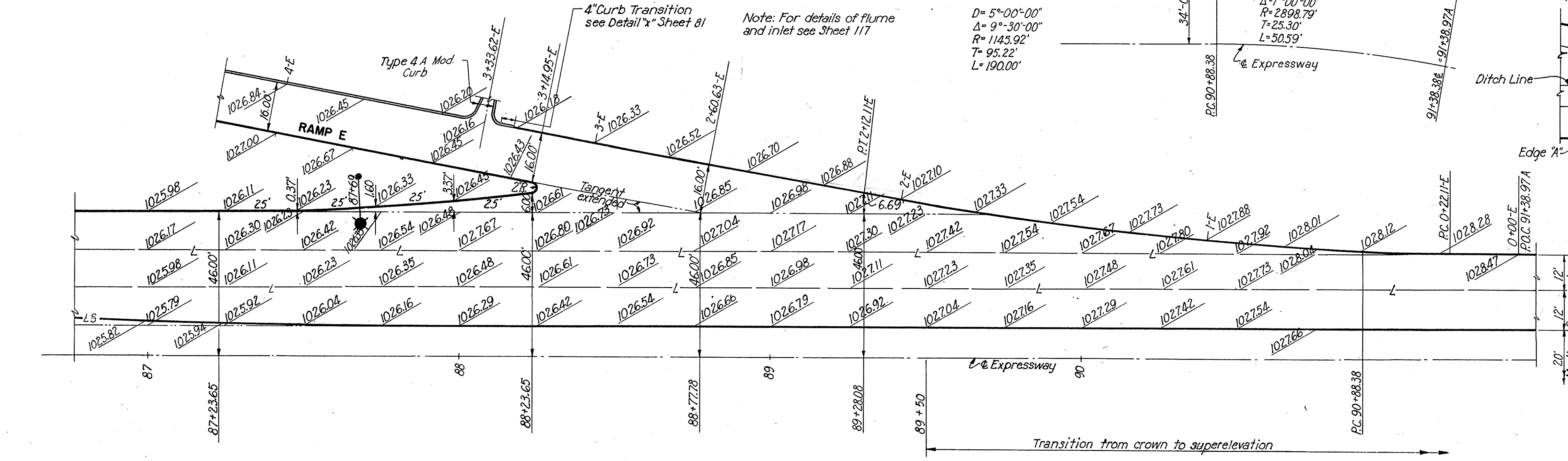
SUMMIT COUNTY OF AKRON
AKRON EXPRESSWAY SYSTEM
 EXPRESSWAY-PART 3
 SUM-5-12.62

DETAILS OF RAMP 'E' TO TALLMADGE AVE



CONTOUR MAP OF INTERSECTION
 Scale: 1"=10'-0"

Shaded portion of sidewalk and curb is a separate item see Sheet 140

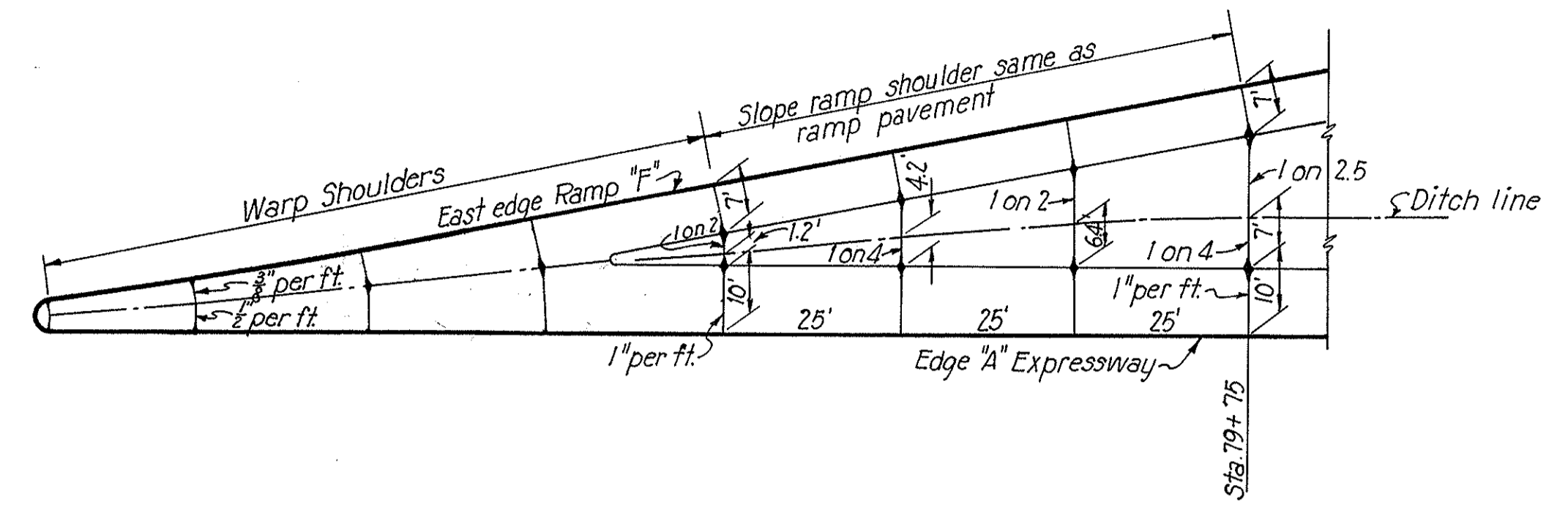


GRADING PLAN AT INTERSECTION OF RAMP E AND EXPRESSWAY

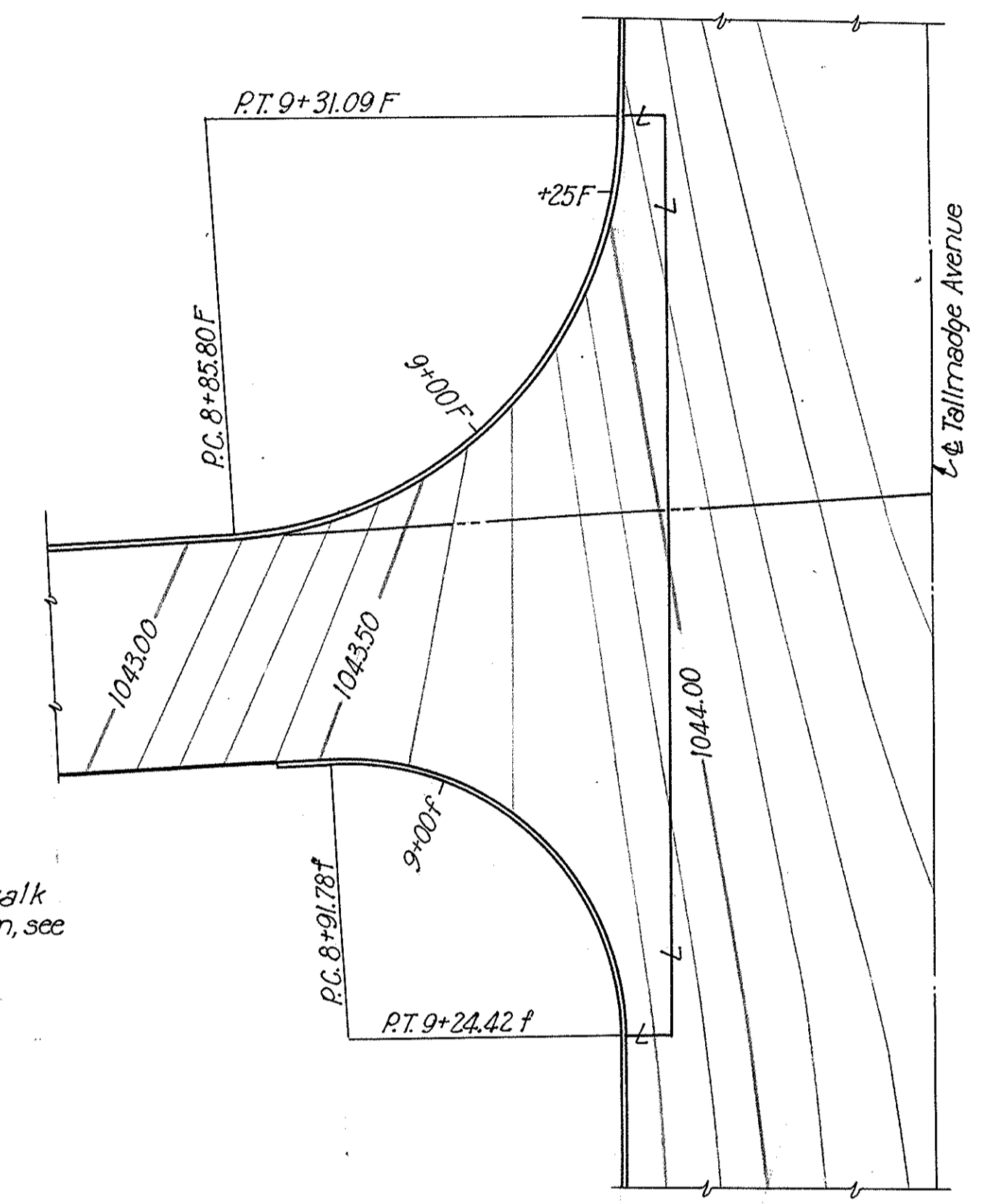
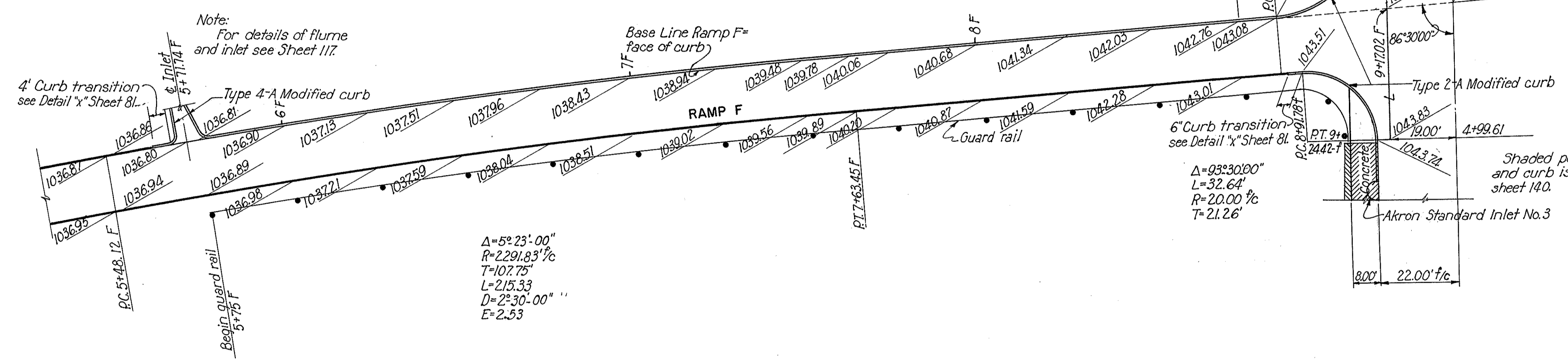
Note:
 For pavement joint legend and details of guard rail and lighting see Sheet 97.
 For details of Tallmadge Avenue repavement see Sheet 90 and 92.

SUMMIT COUNTY
CITY OF AKRON
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SUM-5-12.62

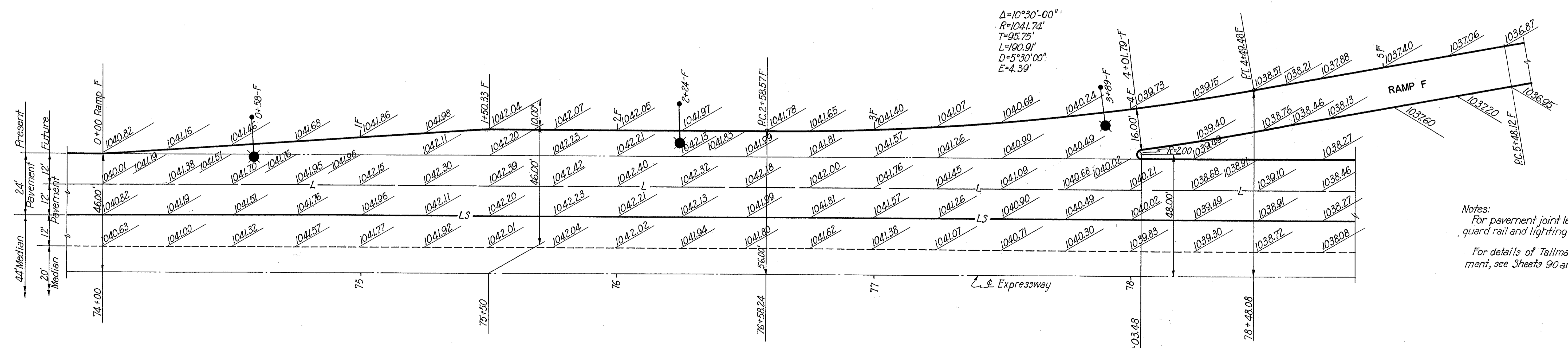
**DETAILS OF RAMP "F"
FROM TALLMADGE AVE**



**GRADING PLAN AT INTERSECTION
OF RAMP F AND EXPRESSWAY**



CONTOUR MAP OF INTERSECTION
Scale: 1"=10'



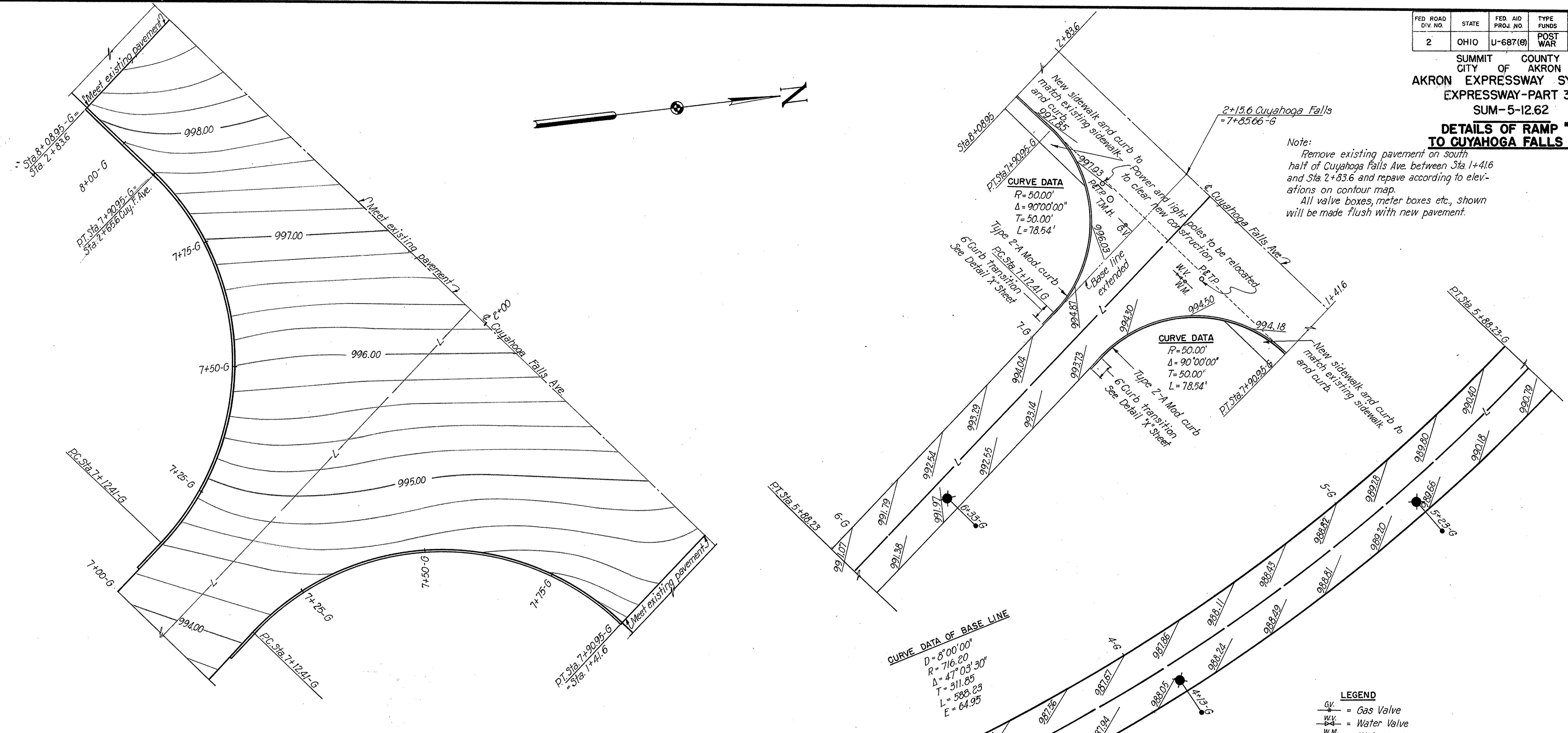
Notes:
For pavement joint legend and details of guard rail and lighting see sheet 97.
For details of Tallmadge Avenue repave-ment, see Sheets 90 and 92.

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	POST WAR
2	OHIO	U-687(9)		

87
146

SUMMIT COUNTY CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
 EXPRESSWAY-PART 3
 SUM-5-12.62
DETAILS OF RAMP "G" TO CUYAHOGA FALLS AVE.

Note:
 Remove existing pavement on south half of Cuyahoga Falls Ave. between Sta 1+416 and Sta 2+83.6 and repave according to elevations on contour map.
 All valve boxes, meter boxes etc., shown will be made flush with new pavement.

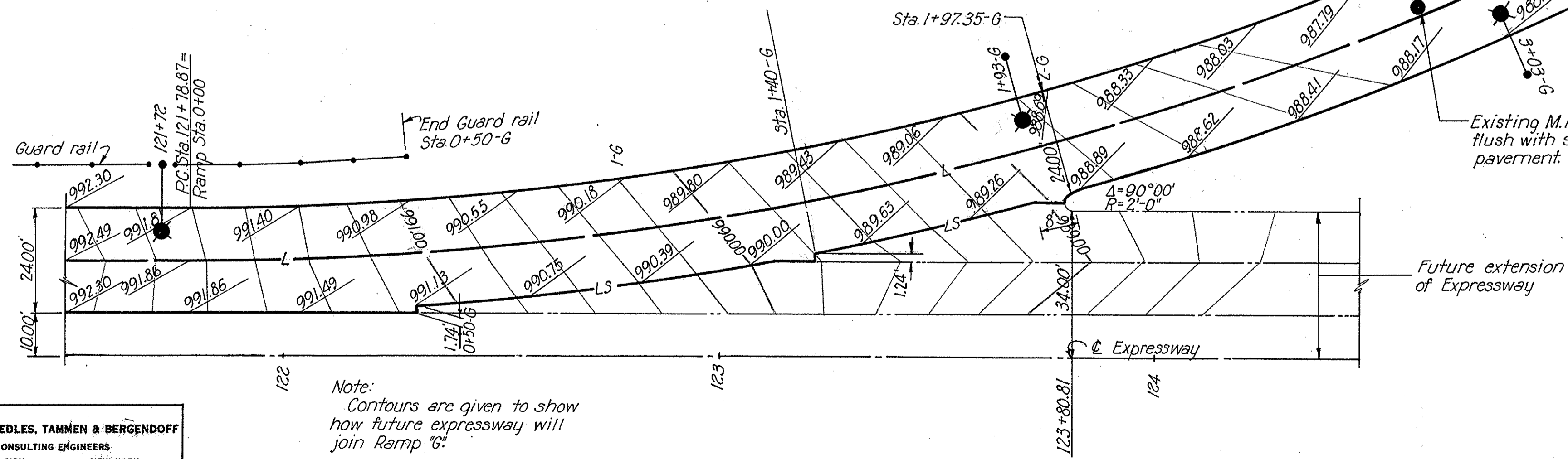


CONTOUR MAP OF INTERSECTION
 Scale: 1"=10'

LEGEND

	= Gas Valve
	= Water Valve
	= Water Meter
	= Power & Telephone Pole
	= Telephone Manhole

Notes:
 For pavement joint legend and details of guard rails and lighting see sheet 97.



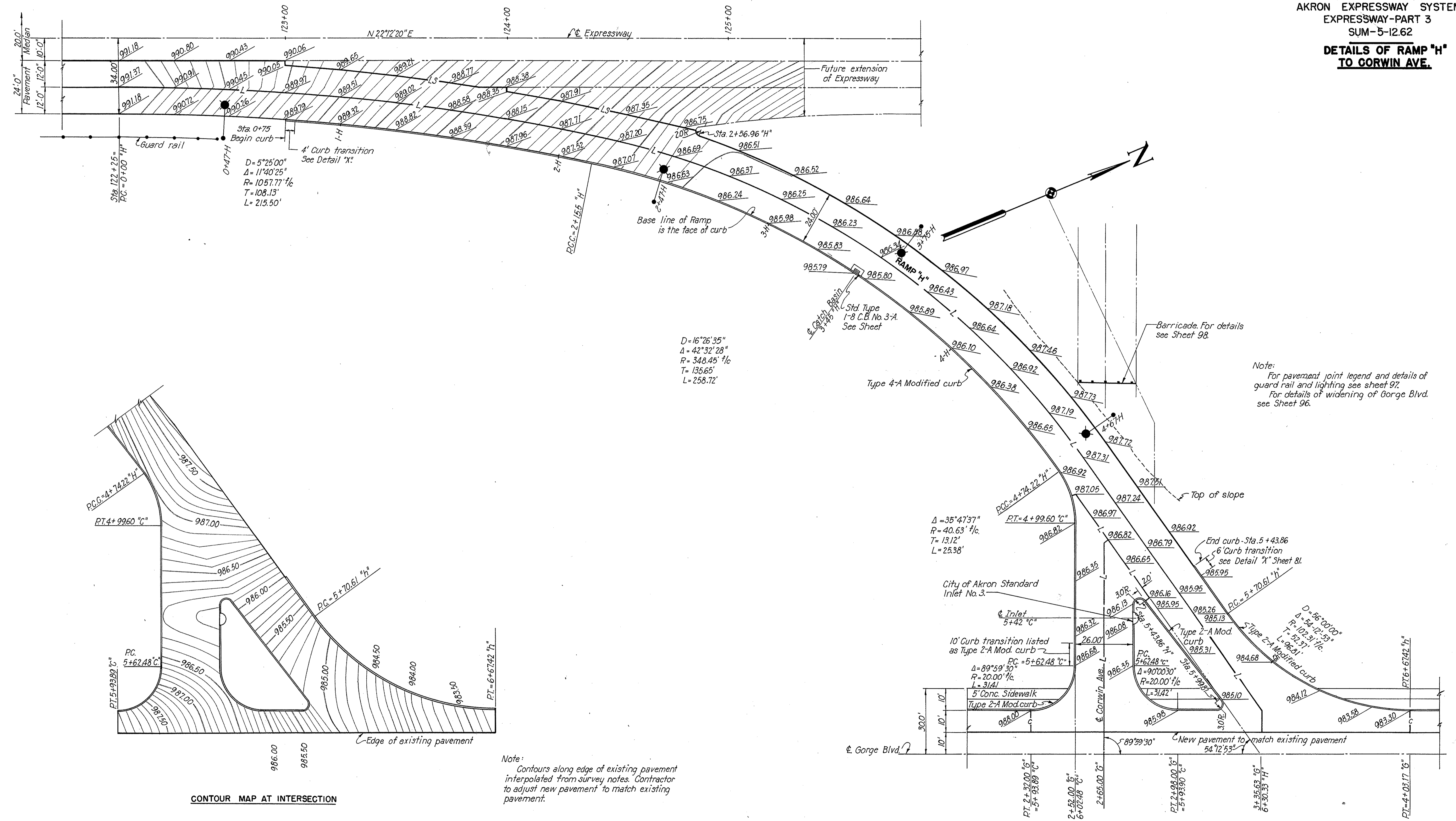
Note:
 Contours are given to show how future expressway will join Ramp 'G'

SCALE: 1"=20'
 MADE P.R.M. DATE 5-10-50
 TRCD P.R. DATE 6-16-50
 CKD G.M. DATE 7-3-50
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DETAILS OF RAMP "H" TO CORWIN AVE.

Contours show how future Expressway extension joins Ramp pavement.



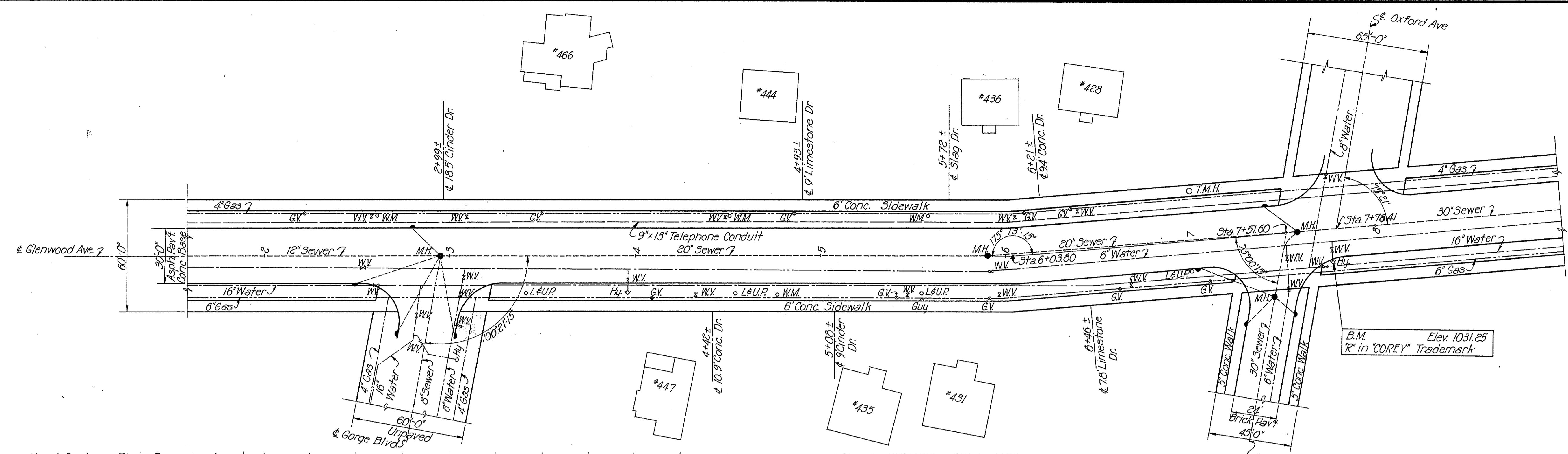
Note:
 For pavement joint legend and details of guard rail and lighting see sheet 97.
 For details of widening of Gorge Blvd. see Sheet 96.

Note:
 Contours along edge of existing pavement interpolated from survey notes. Contractor to adjust new pavement to match existing pavement.

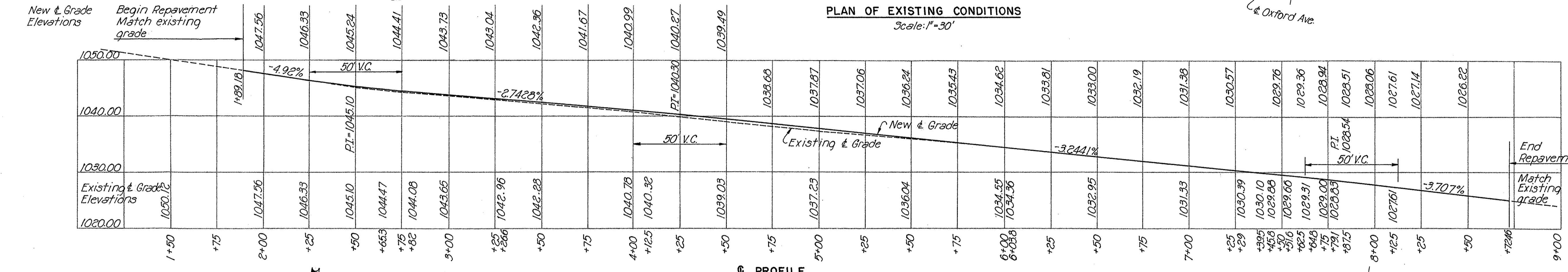
CONTOUR MAP AT INTERSECTION

SUMMIT COUNTY CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
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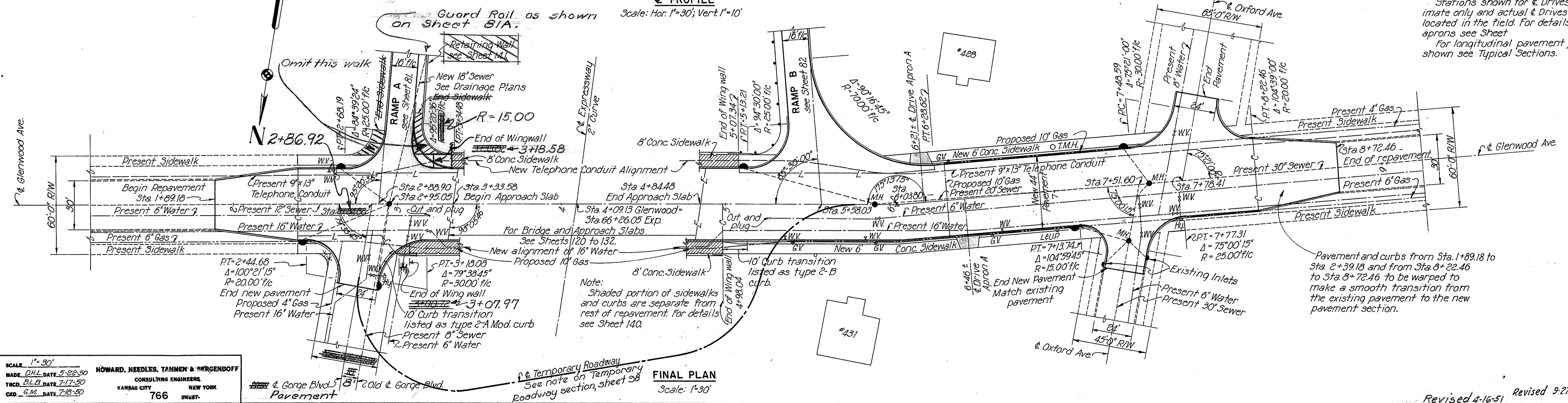
PLAN-PROFILE OF GLENWOOD AVENUE REPAVEMENT



- LEGEND**
- GV = Gas Valve
 - WV = Water Valve
 - WM = Water Meter
 - Hy = Hydrant
 - T.M.H. = Telephone Manhole
 - L&U.P. = Light and Utilities Pole
 - M.H. = Sewer Manhole
 - = Sewer Inlets



Notes:
 For pavement Cross Sections, see Sheet 140.
 All existing valve boxes, meter boxes, etc. on present water and gas lines shown on Final Plan to be made flush with pavement.
 All existing sewer manholes to be made flush with new pavement.
 Hydrants to be relocated as shown on Final Plan.
 Light and Utilities poles to be relocated as shown on Final Plan.
 Inlets to be Akron Standard No. 3 located as shown on Final Plans. For details see Standard Drawings.
 For grade and invert elevations of new inlet stubs see Drainage Plans.
 Stations shown for Drives are approximate only and actual Drives are to be located in the field. For details of drive aprons see Sheet 140.
 For longitudinal pavement joints not shown see Typical Sections.



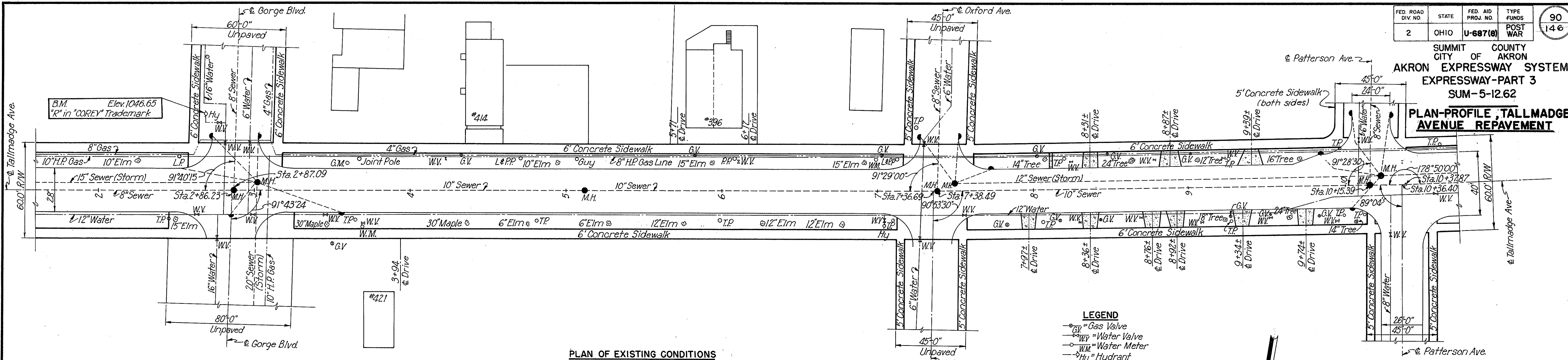
SCALE: 1" = 30'
 MADE: 5-22-50
 TRCD: 7-17-50
 CRD: 7-18-50
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Revised 4-16-51 Revised 9-27-50

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	90
2	OHIO	U-687(9)	POST WAR	146

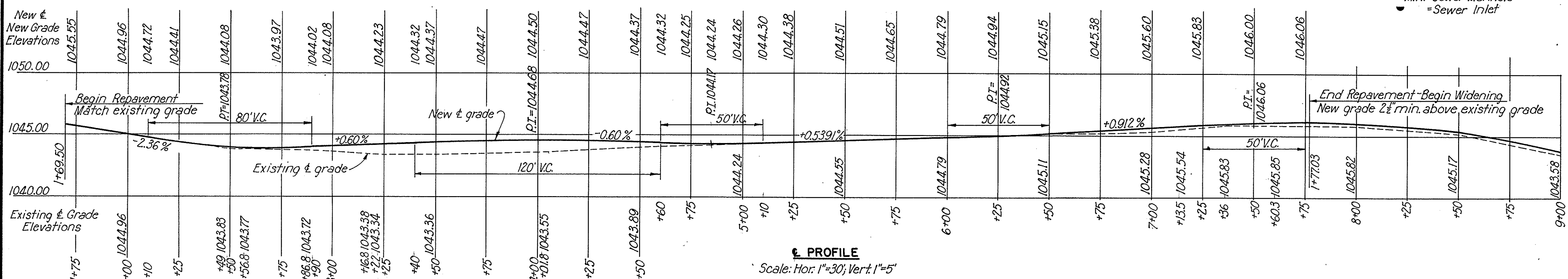
SUMMIT COUNTY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

PLAN-PROFILE TALLMADGE AVENUE REPAVEMENT



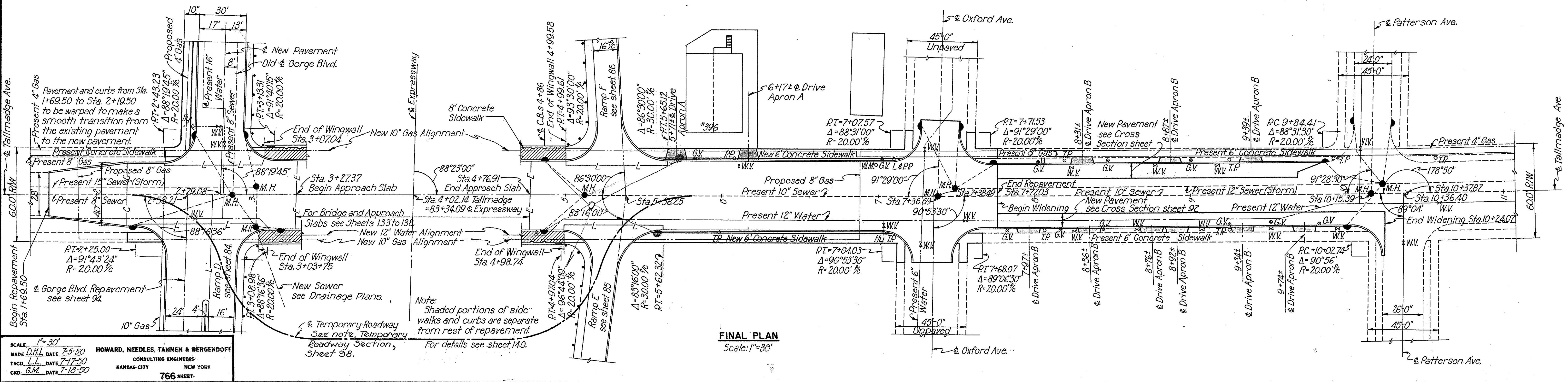
PLAN OF EXISTING CONDITIONS
 Scale: 1"=30'

- LEGEND**
- = Gas Valve
 - = Water Valve
 - = Water Meter
 - = Hydrant
 - = Light and Power Pole
 - = Telephone Pole
 - = Sewer Manhole
 - = Sewer Inlet



PROFILE
 Scale: Hor: 1"=30'; Vert: 1"=5'

Notes:
 For pavement Cross Section see Sheet 92.
 All existing valve boxes, meter boxes, etc. on present water and gas lines shown on Final Plan to be made flush with pavement.
 All existing sewer manholes to be made flush with new pavement.
 Hydrant to be relocated as shown on Final Plan.
 Lights and Utilities poles to be relocated as shown on Final Plan.
 Inlets to be Akron Standard No. 3 located as shown on Final Plan. For details see Standard drawings.
 For grade and invert elevations of new inlet stubs see Drainage Plans.
 Stations shown for & Drives are approximate only and actual & Drives are to be located in the field. For details of drive aprons see sheet 92.
 For longitudinal pavement joints not shown see Typical Sections.



FINAL PLAN
 Scale: 1"=30'

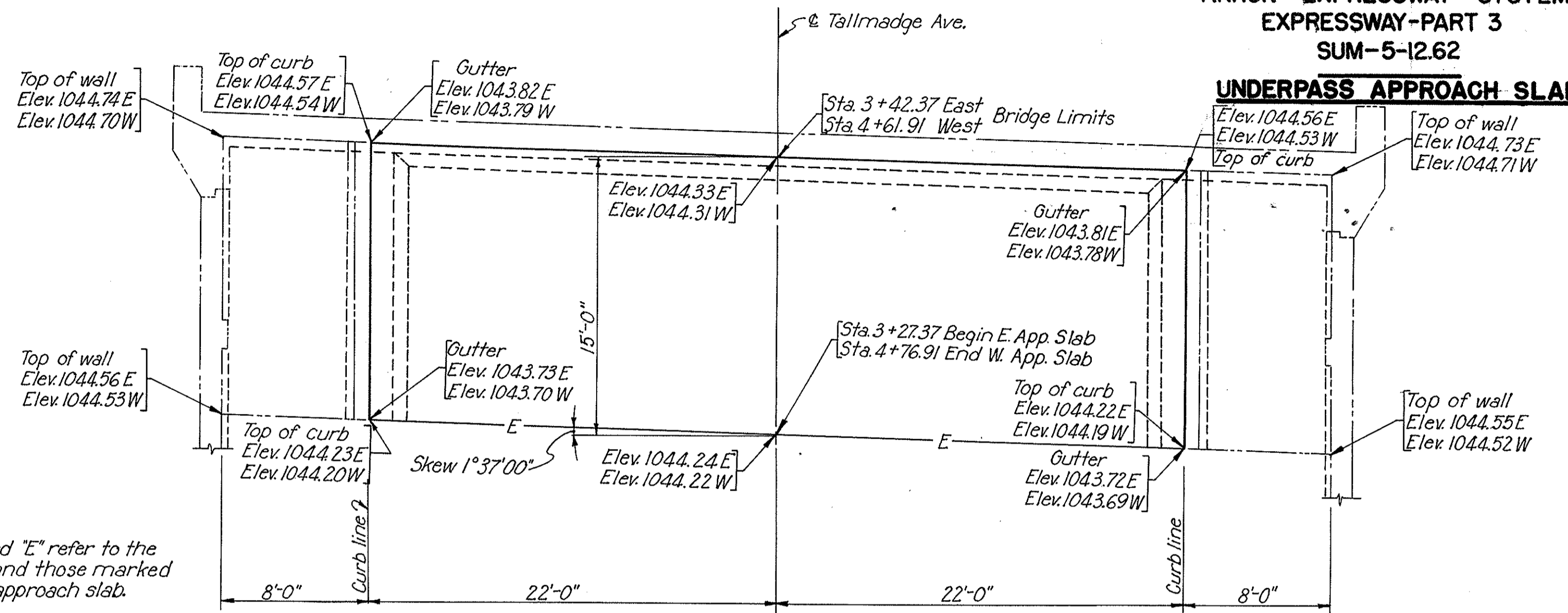
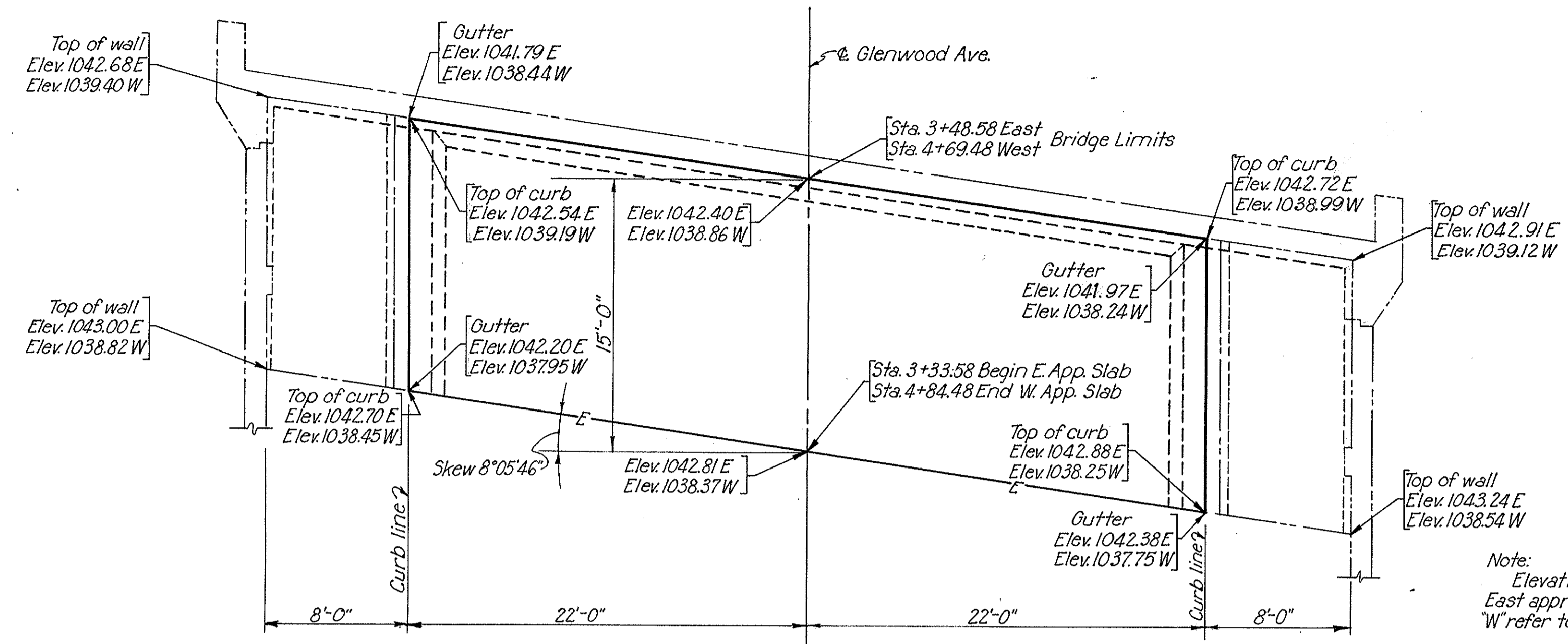
SCALE: 1"=30'
 MADE: D.H.L. DATE: 7-5-50
 TRCD: L.L. DATE: 7-7-50
 CRD: G.M. DATE: 7-18-50

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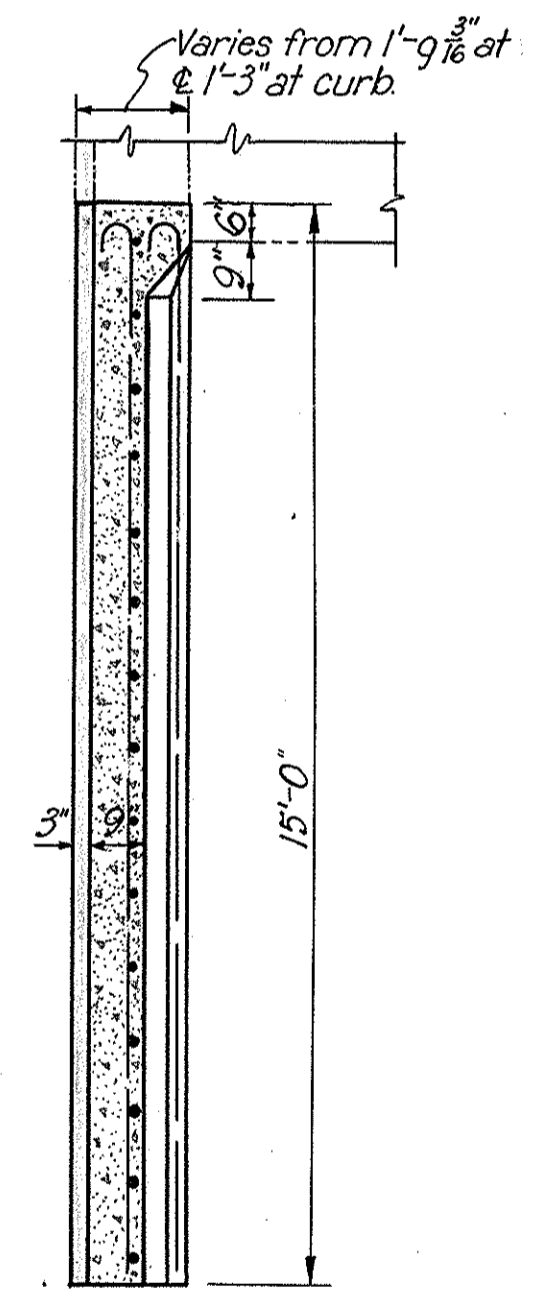
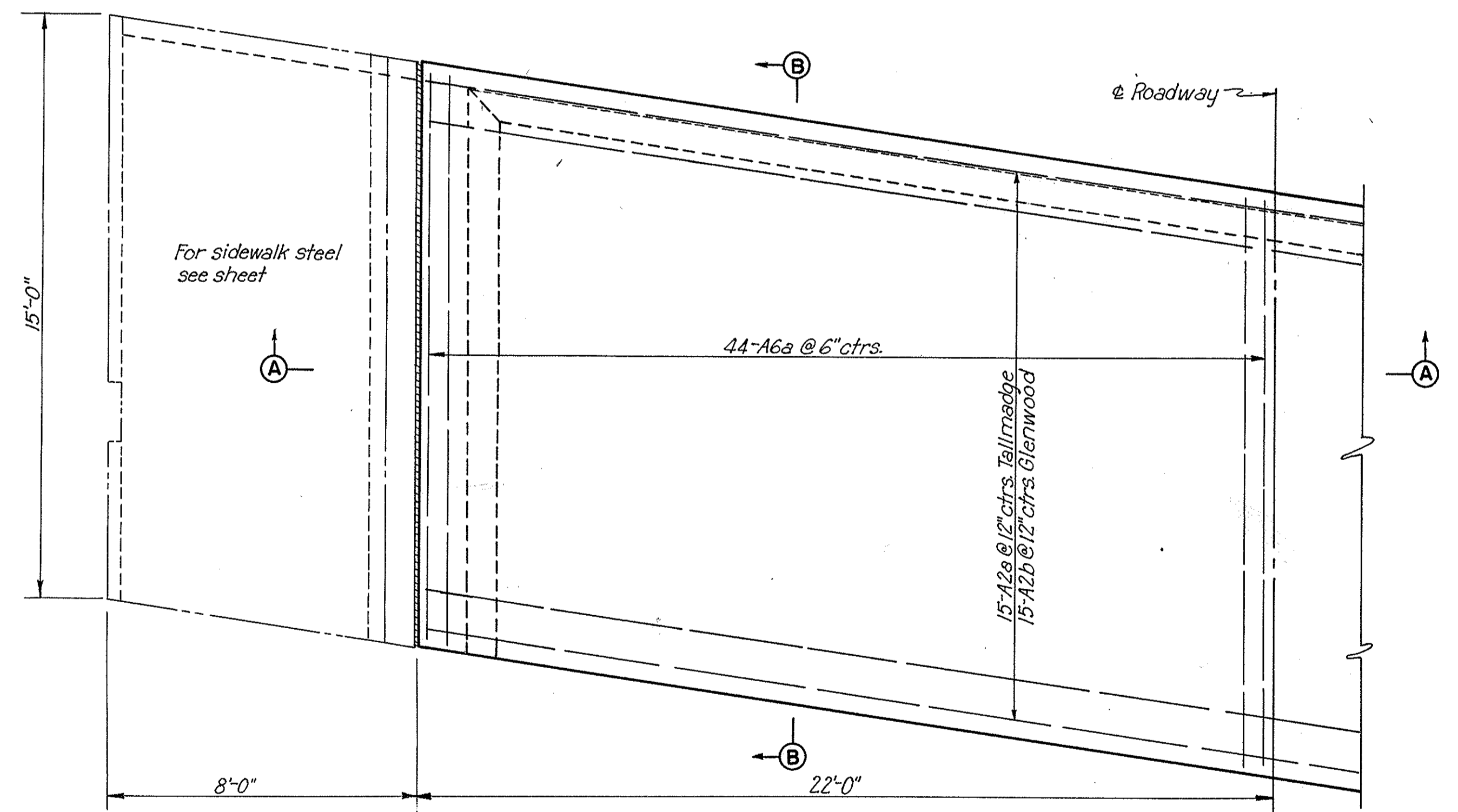
766 SHEET-

SUMMIT COUNTY CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

UNDERPASS APPROACH SLABS

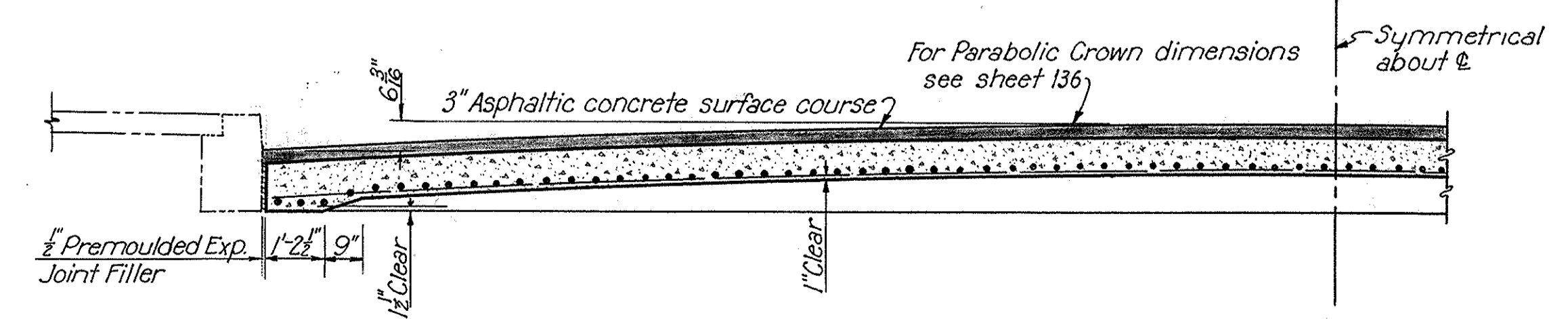


Note:
 Elevations marked "E" refer to the East approach slab and those marked "W" refer to the West approach slab.



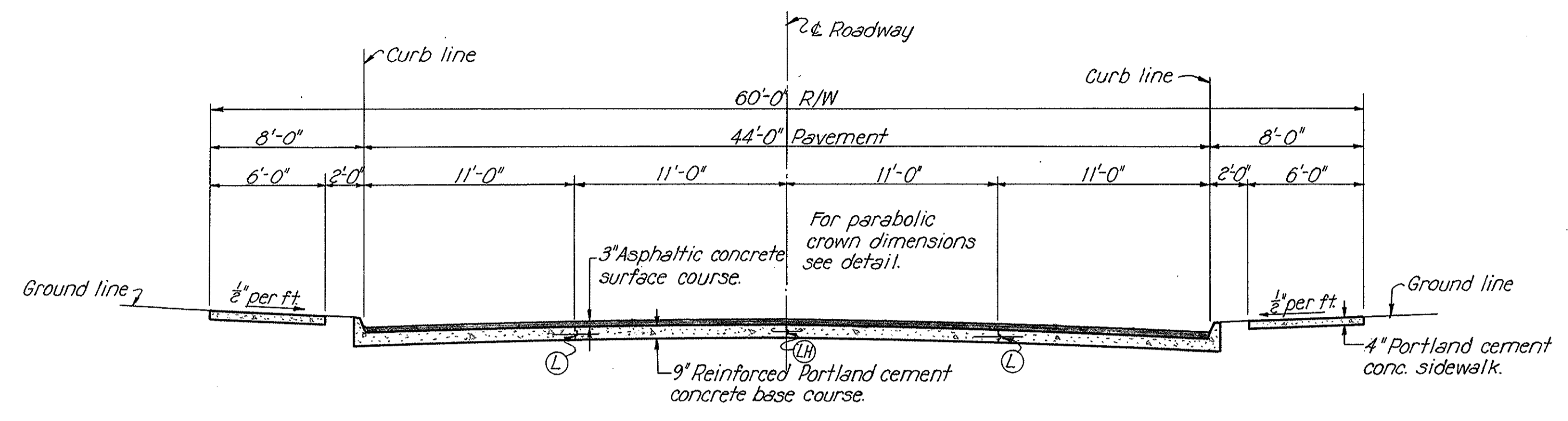
ESTIMATED QUANTITIES			
Description	Unit	Glenwood Tallmadge	
		Total	Total
Asphaltic concrete surface course	Sq. Yds.	147	147
Reinforced concrete approach slab	Sq. Yds.	147	147

STEEL LIST							
Mark	Size	Shape	Spacing	No. Req.	Length	Glenwood Tallmadge	
						Weight	Weight
A2a	1/2 φ	Str.	12" ctrs.	15	43'-6"	441.0	436.0
A2b	1/2 φ	Str.	12" ctrs.	15	44'-0"	2763.0	2763.0
A6a	3/8 φ	Str.	6" ctrs.	88	15'-4"	3204.0	3199.0
Total for one approach						3204.0	3199.0
Total for both approaches						6408.0	6398.0

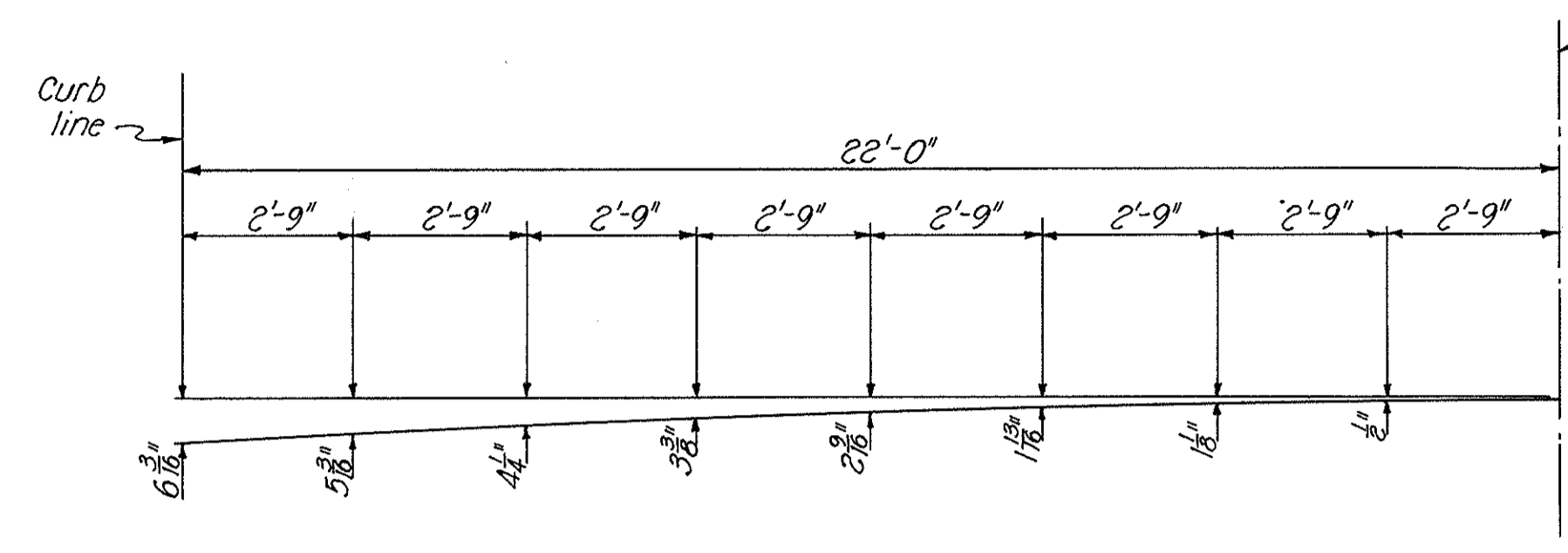


Notes:
 Pavement joint dowel bars not shown. For pavement joint legend and details see sheet 97.
 Premoulded expansion joint filler shall be included with the Approach Slab for pavement.

TYPE T-50

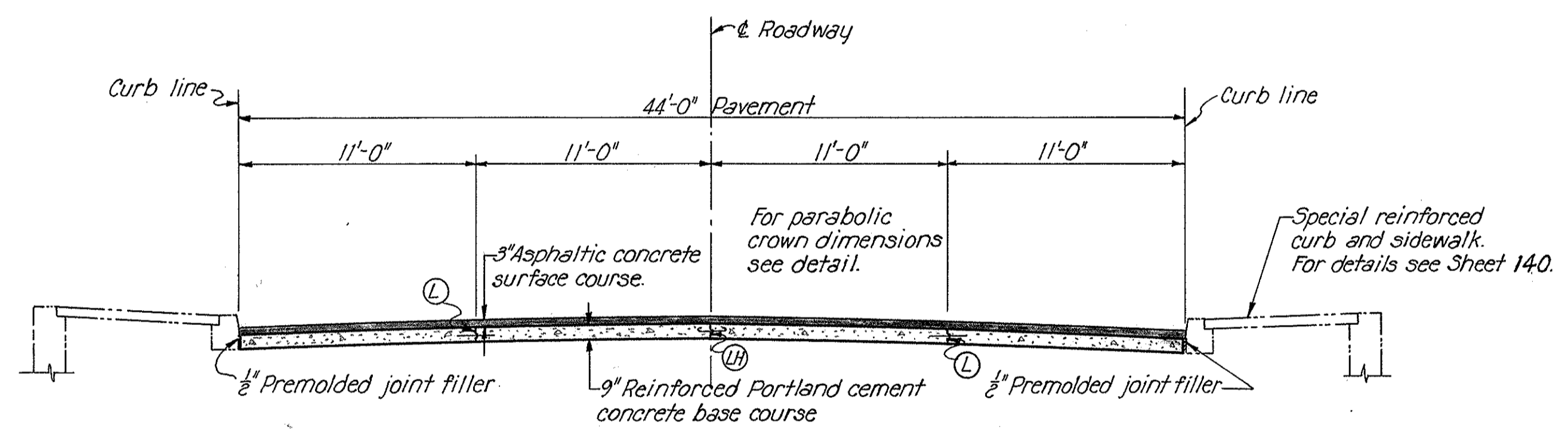


**TYPICAL CROSS SECTION
GLENWOOD AND TALLMADGE AVENUES**
Scale: $\frac{3}{8}$ " = 1'-0"

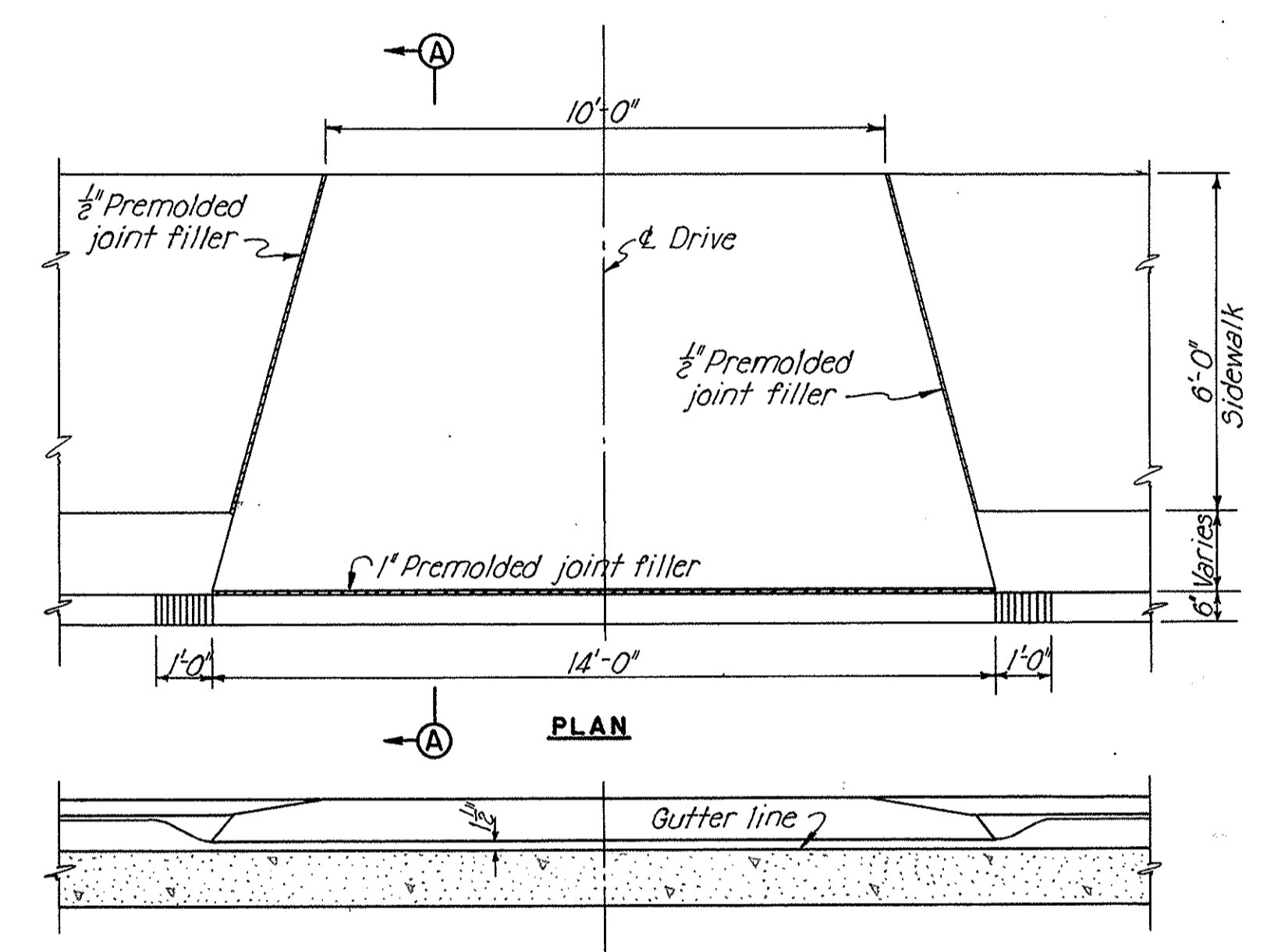


PARABOLIC CROWN DETAIL
No Scale

Note:
For additional details of parabolic crown see City of Akron Standards.

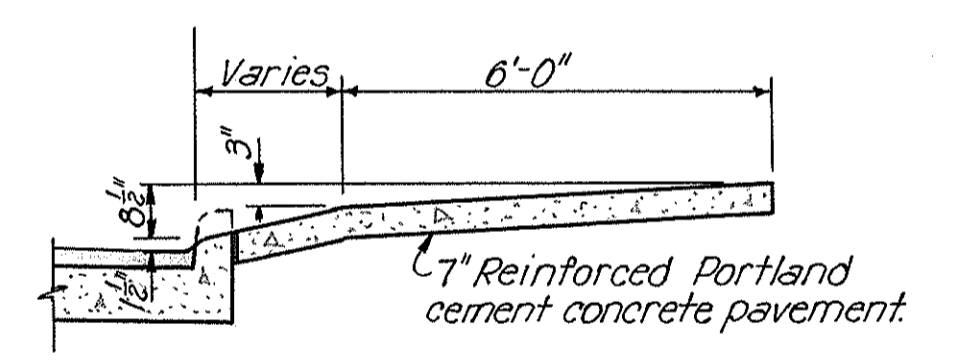


**CROSS SECTION AT WINGWALLS
GLENWOOD AND TALLMADGE AVENUES**
Scale: $\frac{3}{8}$ " = 1'-0"

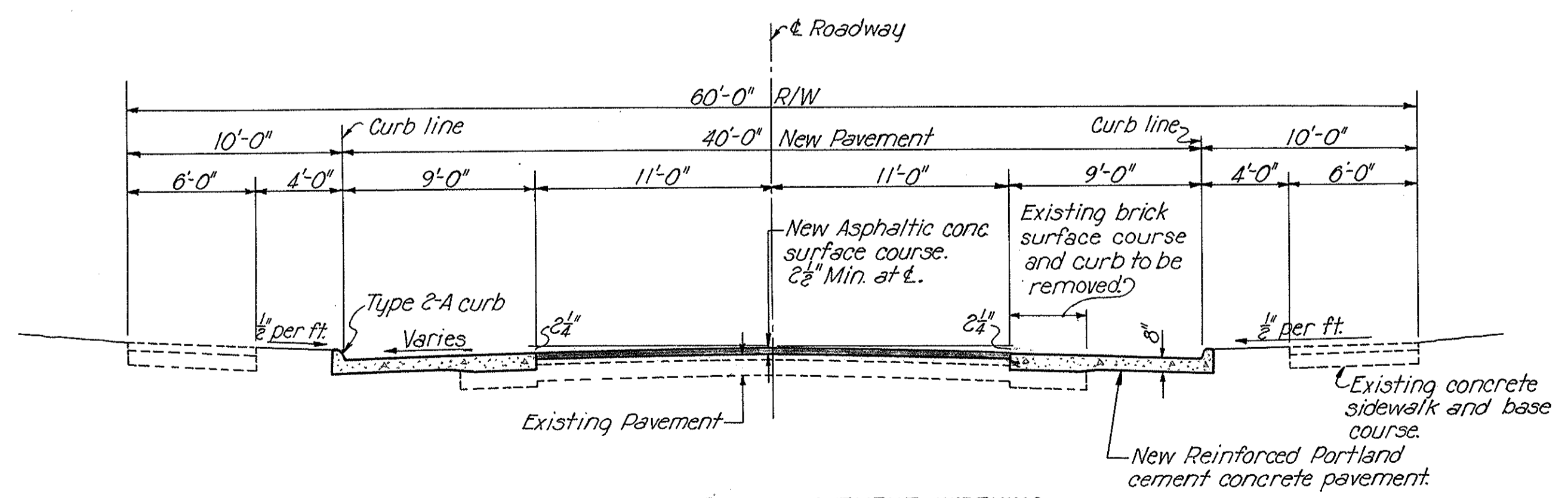


FRONT ELEVATION

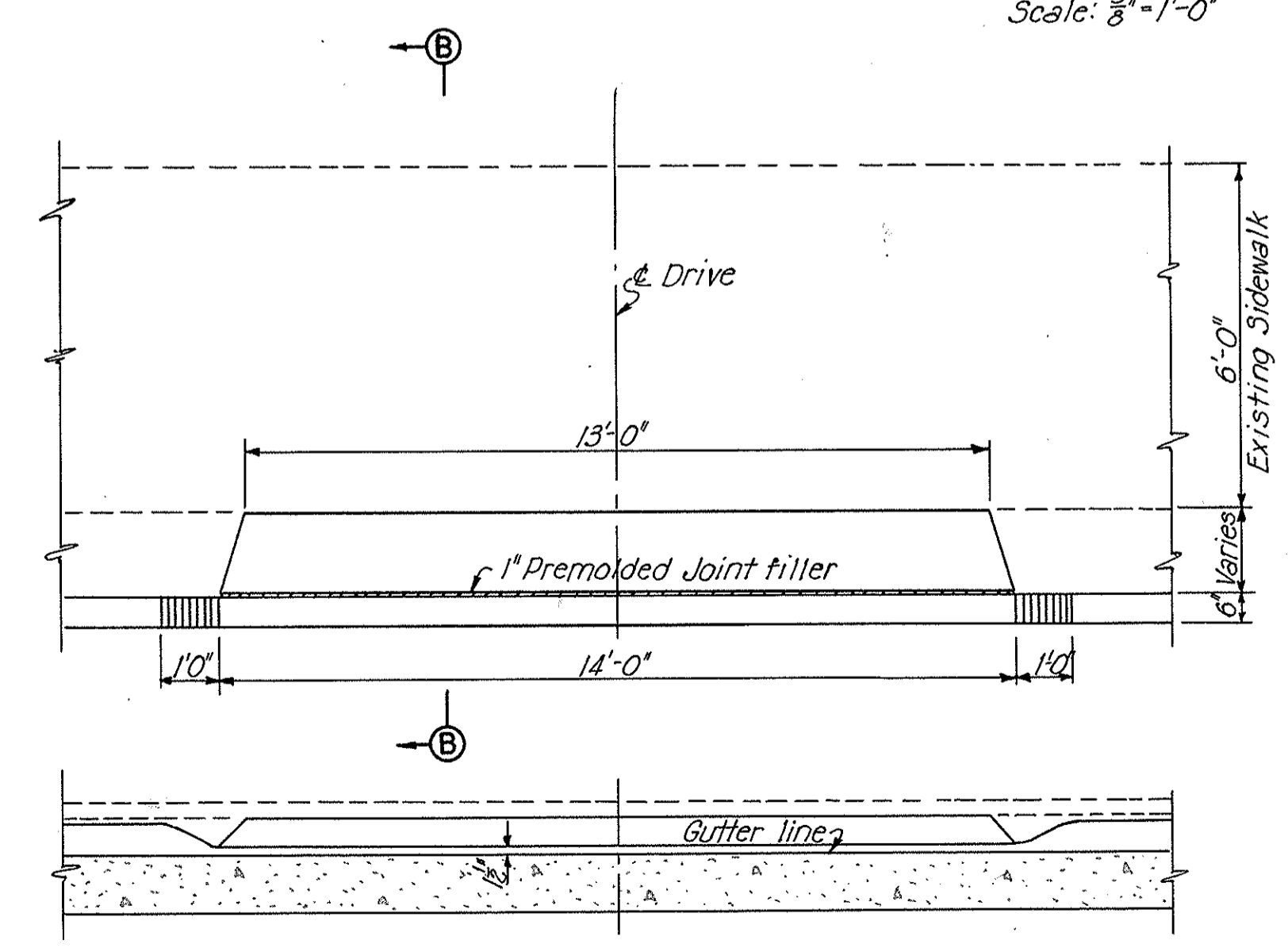
DETAIL OF DRIVE APRON "A"
Scale: $\frac{3}{8}$ " = 1'-0"



SECTION A-A

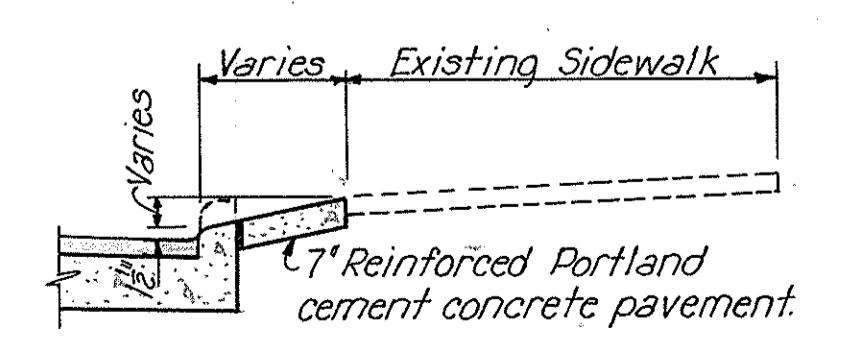


**CROSS SECTION THROUGH PAVEMENT WIDENING
TALLMADGE AVENUE ONLY**
Scale: $\frac{3}{8}$ " = 1'-0"



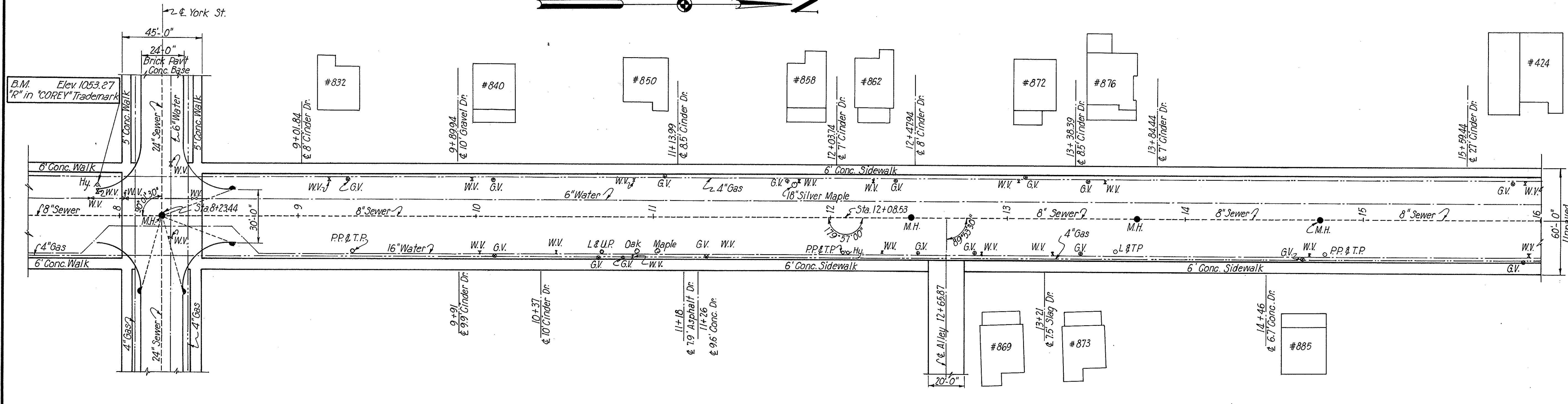
FRONT ELEVATION

DETAIL OF DRIVE APRON "B"
Scale: $\frac{3}{8}$ " = 1'-0"

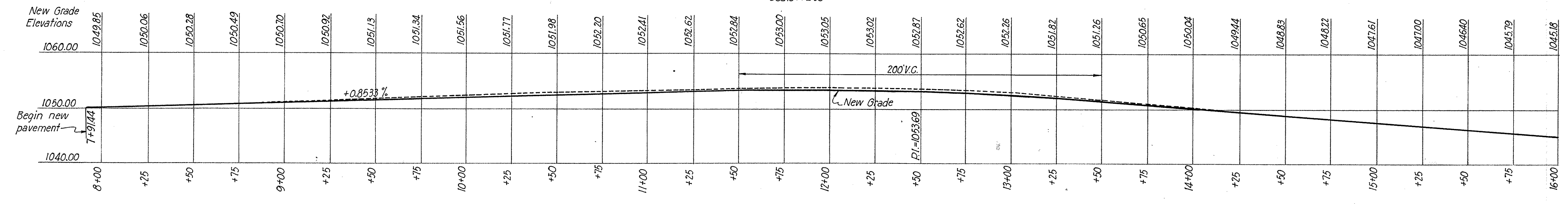


SECTION B-B

Note:
The widths of aprons shown are to be used at all drives unless otherwise shown on the plans.
Premolded joint filler to be included in the bid price for Drive aprons.
For reinforcement see Type 'D' Standard Drawing B-T-71R, dated 2-1-47



PLAN OF EXISTING CONDITIONS
Scale: 1" = 30'



PROFILE
Scale: Hor. 1" = 30'; Vert. 1" = 10'

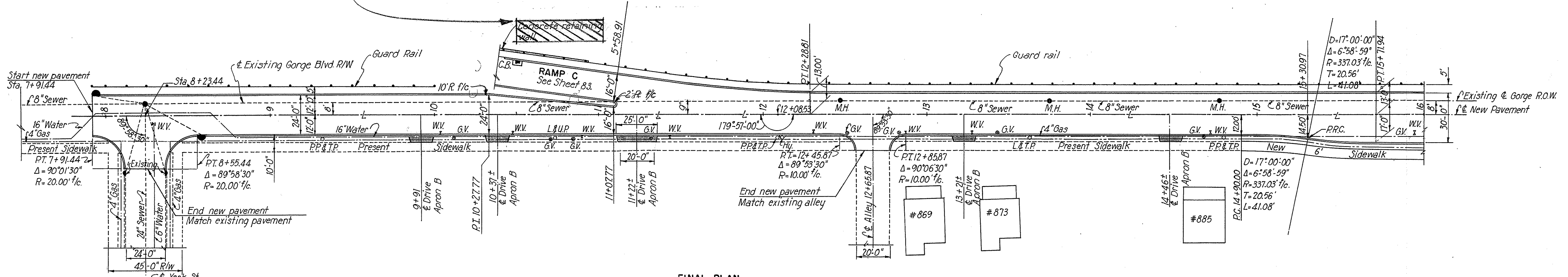
LEGEND

- GV = Gas Valve
- WV = Water Valve
- WM = Water Meter
- Hyd = Hydrant
- T.M.H. = Telephone Manhole
- L&UP = Light and Utilities Pole
- M.H. = Sewer Manhole
- SI = Sewer Inlet

Notes:

- For pavement cross sections, see Sheet 95.
- All existing valve boxes, meter boxes, etc. on present water and gas lines shown on Final Plan to be made flush with pavement.
- All existing sewer manholes are to be made flush with pavement.
- Hydrants to be relocated as shown on Final Plan.
- Light and Utilities poles to be relocated as shown on Final Plan.
- Inlets to be Akron Standard No. 3 located as shown on Final Plan. For details see Standard Drawings.
- For grade and invert elevations of new inlet stubs see Drainage Plans.
- The Stations shown for the Drives are approximate only and actual drives are to be located in the field.
- For details of drive aprons see Sheet 92.
- For longitudinal pavement joints not shown see Typical Sections.

Omit retaining wall and extend guard rail as shown on sheet B1A.

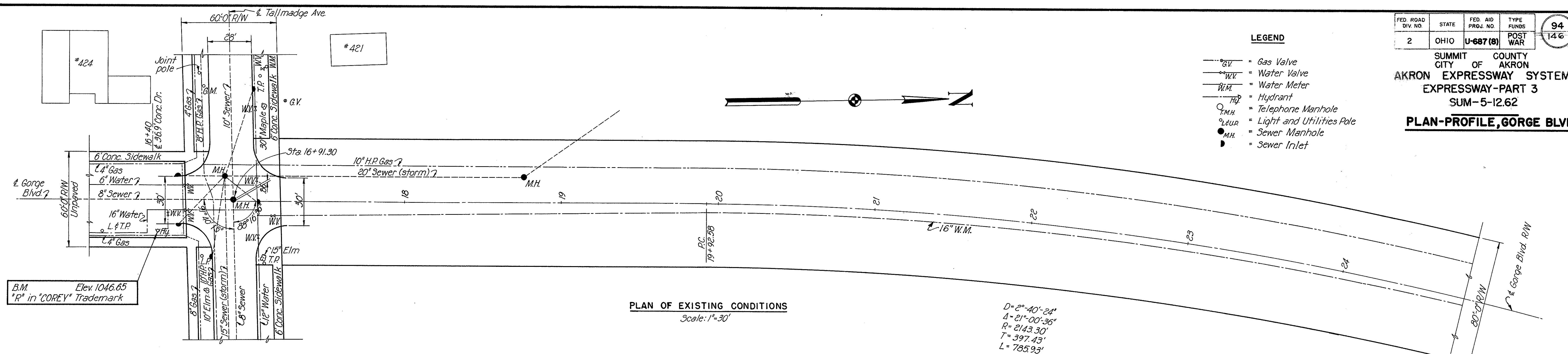


FINAL PLAN
Scale: 1" = 30'

SCALE: 1" = 30'
MADE B.C. DATE 5-23-50
TRCD R.E. DATE 6-22-50
CKD D.H.L. DATE 7-5-50

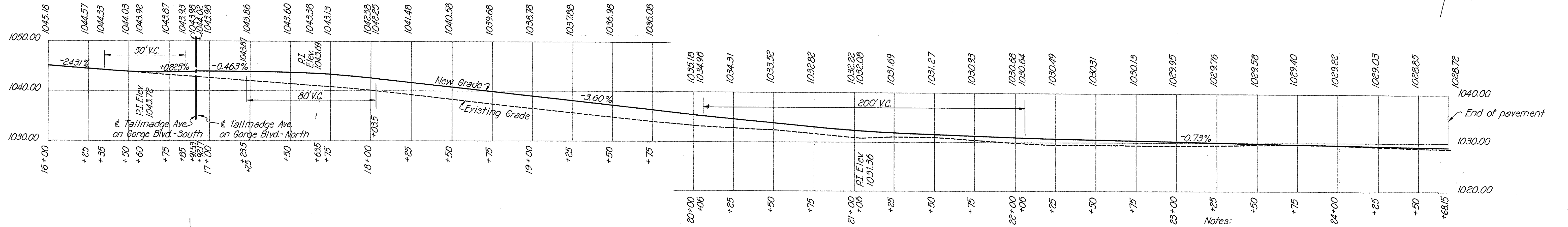
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- LEGEND**
- GV = Gas Valve
 - WV = Water Valve
 - WM = Water Meter
 - HD = Hydrant
 - TMH = Telephone Manhole
 - LUP = Light and Utilities Pole
 - MH = Sewer Manhole
 - SI = Sewer Inlet



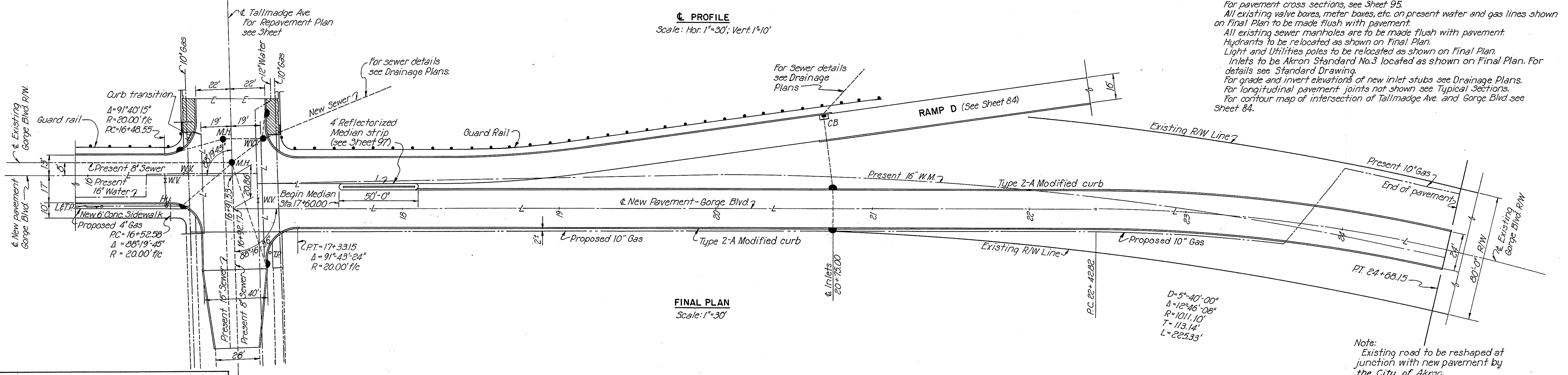
PLAN OF EXISTING CONDITIONS
 Scale: 1"=30'

$D=2^{\circ}-40'-24"$
 $\Delta=21^{\circ}-00'-36"$
 $R=2143.30'$
 $T=397.43'$
 $L=785.93'$



PROFILE
 Scale: Hor. 1"=50'; Vert. 1"=10'

Notes:
 For pavement cross sections, see Sheet 95.
 All existing valve boxes, meter boxes, etc. on present water and gas lines shown on Final Plan to be made flush with pavement.
 All existing sewer manholes are to be made flush with pavement.
 Hydrants to be relocated as shown on Final Plan.
 Light and Utilities poles to be relocated as shown on Final Plan. For details see Standard Drawing.
 Inlets to be Akron Standard No.3 located as shown on Final Plan. For details see Standard Drawing.
 For grade and invert elevations of new inlet stubs see Drainage Plans.
 For longitudinal pavement joints not shown see Typical Sections.
 For contour map of intersection of Tallmadge Ave. and Gorge Blvd. see Sheet 84.



FINAL PLAN
 Scale: 1"=30'

$D=5^{\circ}-40'-00"$
 $\Delta=12^{\circ}-46'-08"$
 $R=1011.10'$
 $T=113.14'$
 $L=225.33'$

Note:
 Existing road to be reshaped at junction with new pavement by the City of Akron.

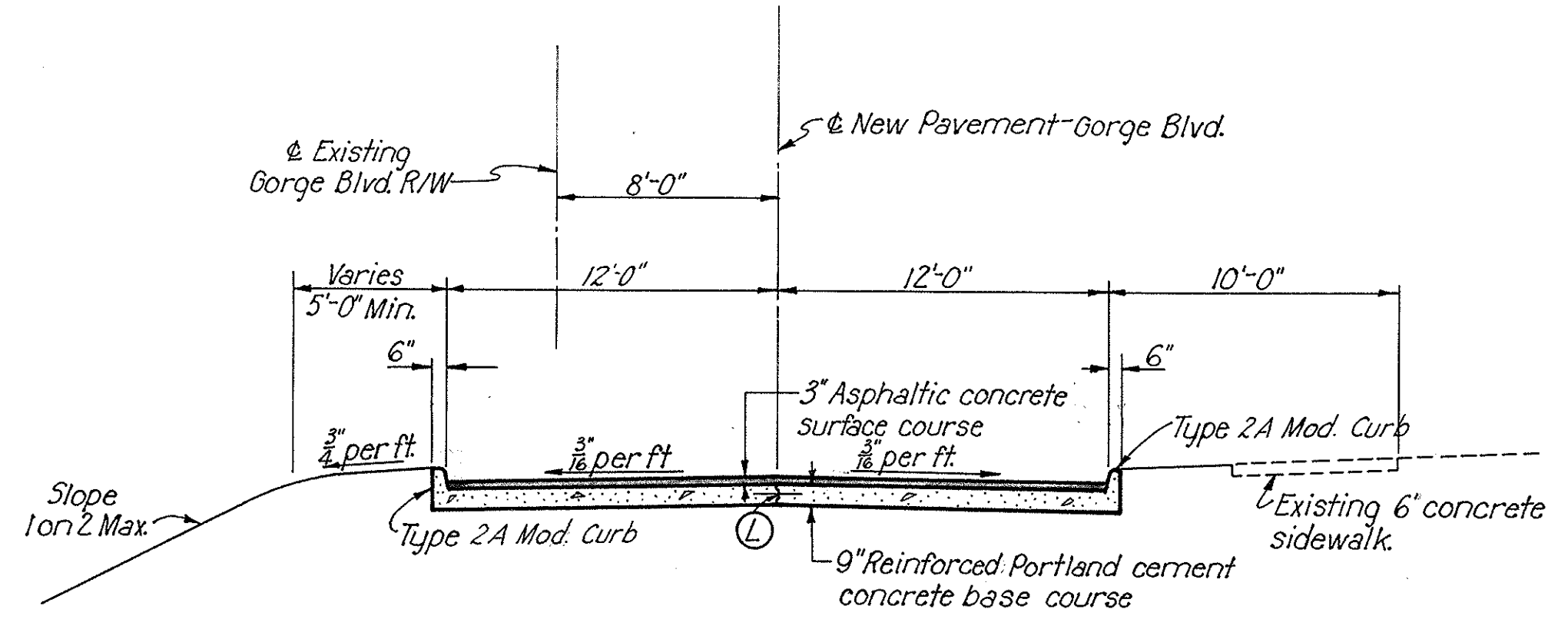
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	95
2	OHIO	U-687 (8)	POST WAR	146

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

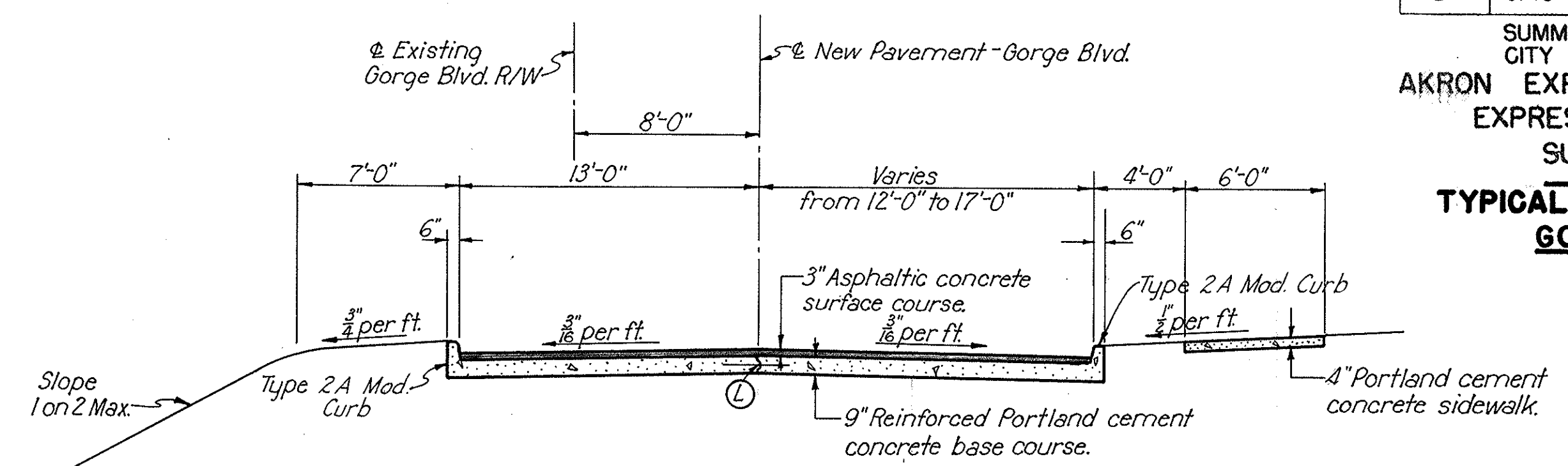
**TYPICAL CROSS SECTIONS
GORGE BLVD.**

TYPE T 50

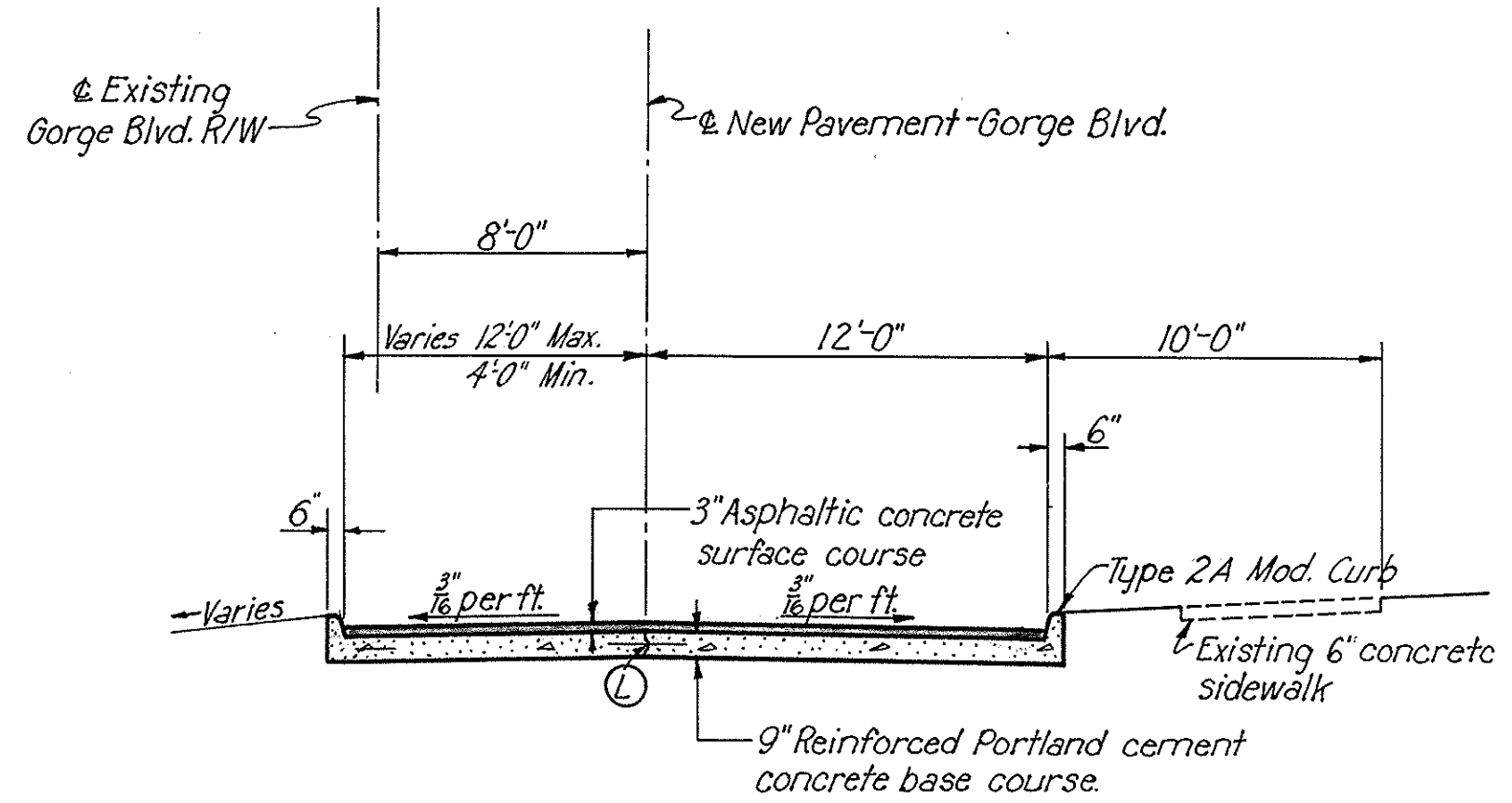
Scale: 3/8"=1'-0"



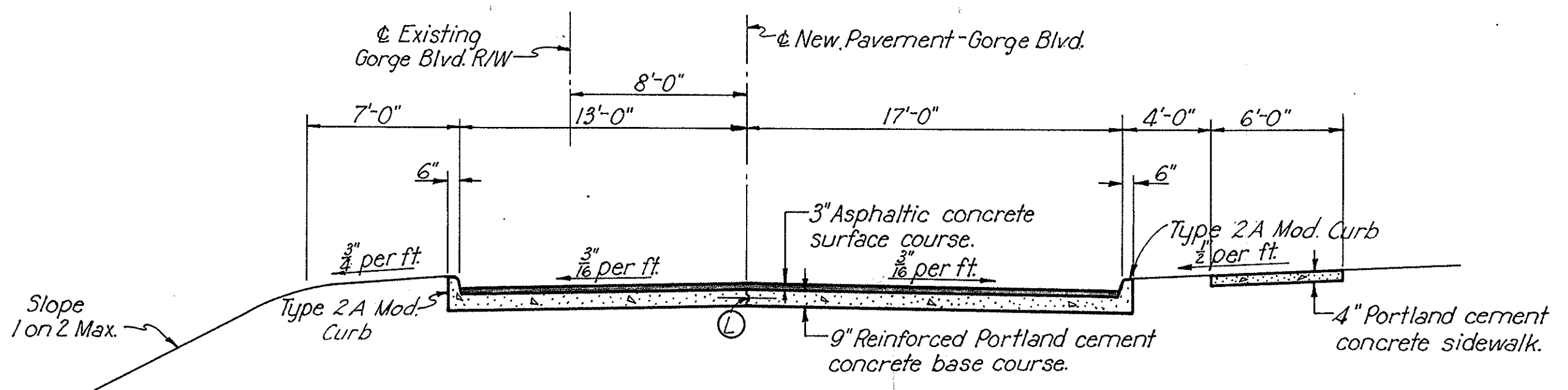
TYPICAL CROSS SECTION
STA. 7+91.44 TO STA. 10+27.77 = 236.33 LIN. FT.



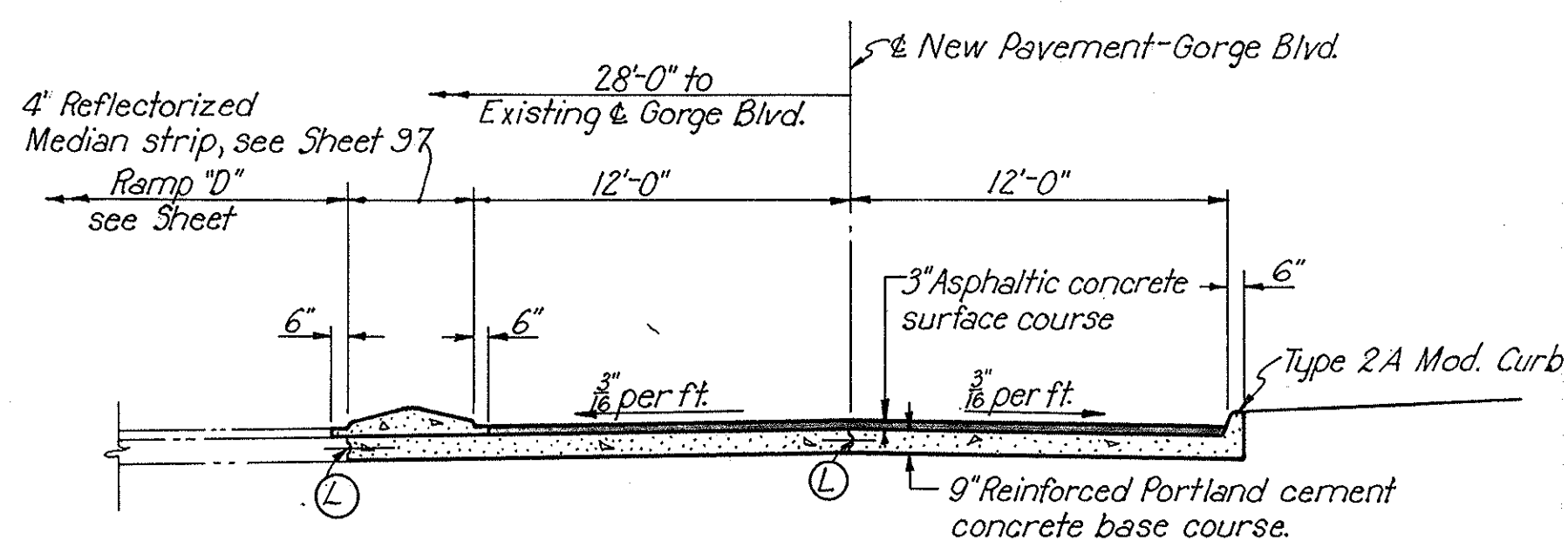
TYPICAL CROSS SECTION
STA. 14+90.00 TO STA. 15+71.94 = 81.94 LIN. FT.



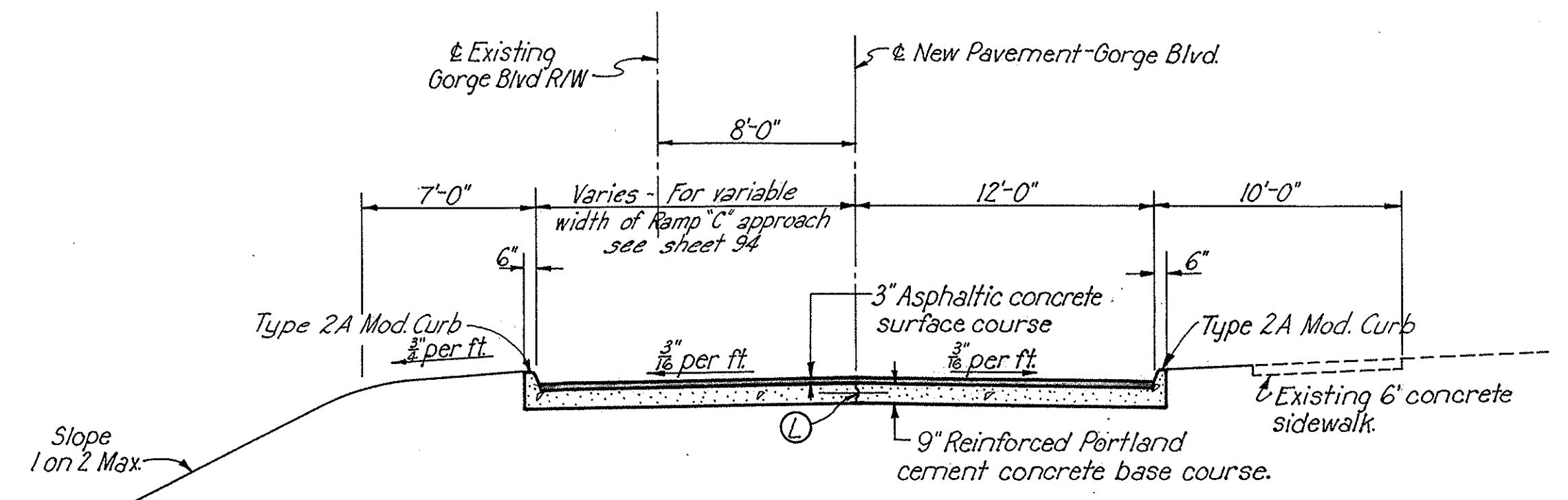
TYPICAL CROSS SECTION
STA. 10+27.77 TO STA. 11+07.77 = 80.00 LIN. FT.



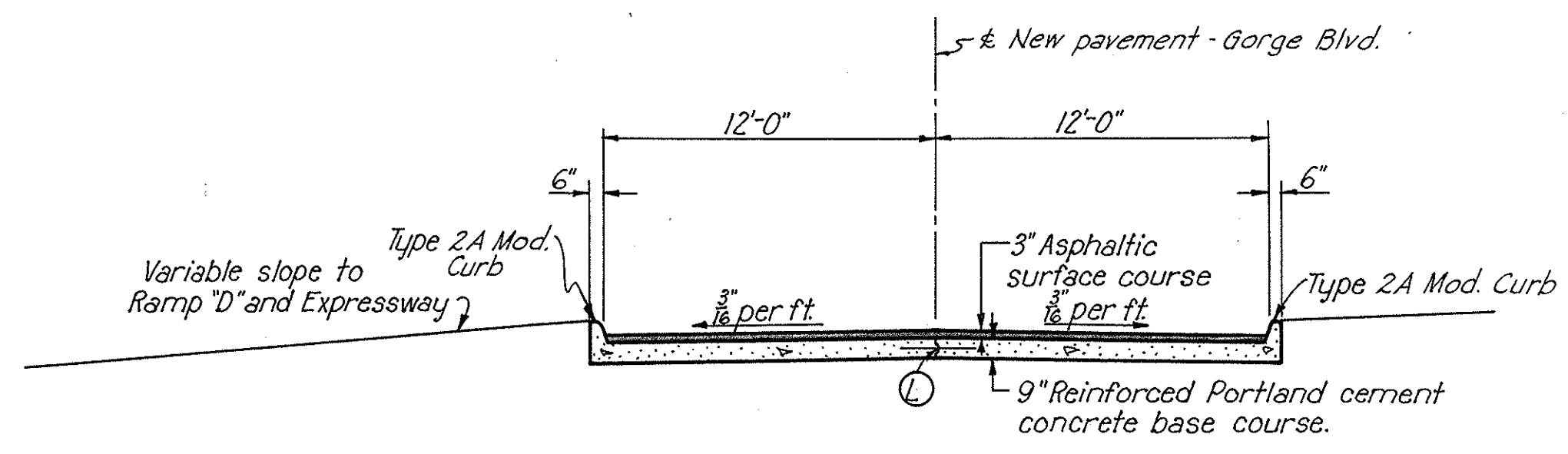
TYPICAL CROSS SECTION
STA. 15+71.94 TO STA. 16+48.55 = 76.61 LIN. FT.



TYPICAL CROSS SECTION
STA. 17+33.15 TO STA. 18+10.00 = 76.85 LIN. FT.



TYPICAL CROSS SECTION
STA. 11+07.77 TO STA. 14+90.00 = 382.23 LIN. FT.



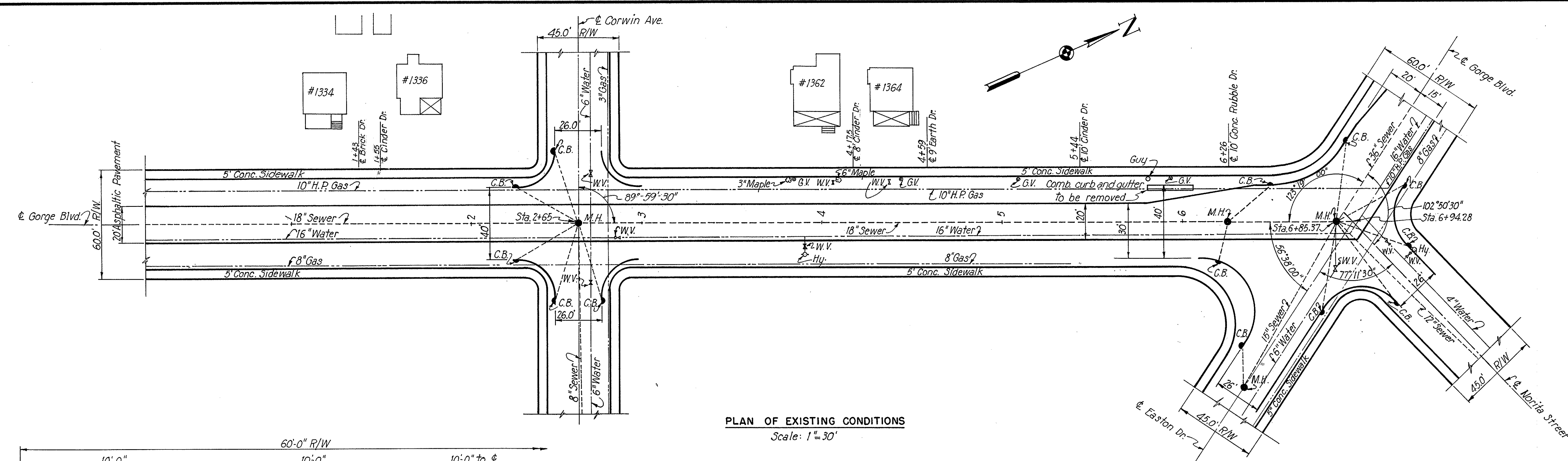
TYPICAL CROSS SECTION
STA. 18+10.00 TO STA. 24+68.15 = 658.15 LIN. FT.

GORGE BLVD. CROSS SECTIONS

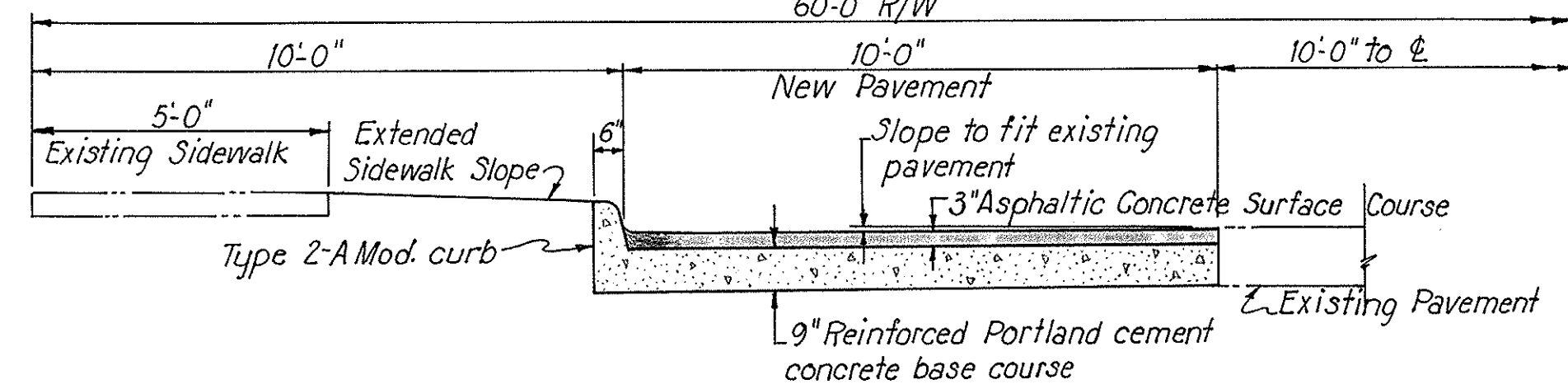
For Sta. 16+48.55 to 17+33.15 see Sheet 94
For type and detail of pavement joint (L) and
for location and details of guard rail see Sheet 97

SCALE 3/8"=1'-0"
MADE Q.H.L. DATE 6-29-50
TRCD L.L. DATE 7-11-50
CKD R.R.H. DATE 7-12-50
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CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
GORGE BLVD. WIDENING
CORWIN TO EASTON

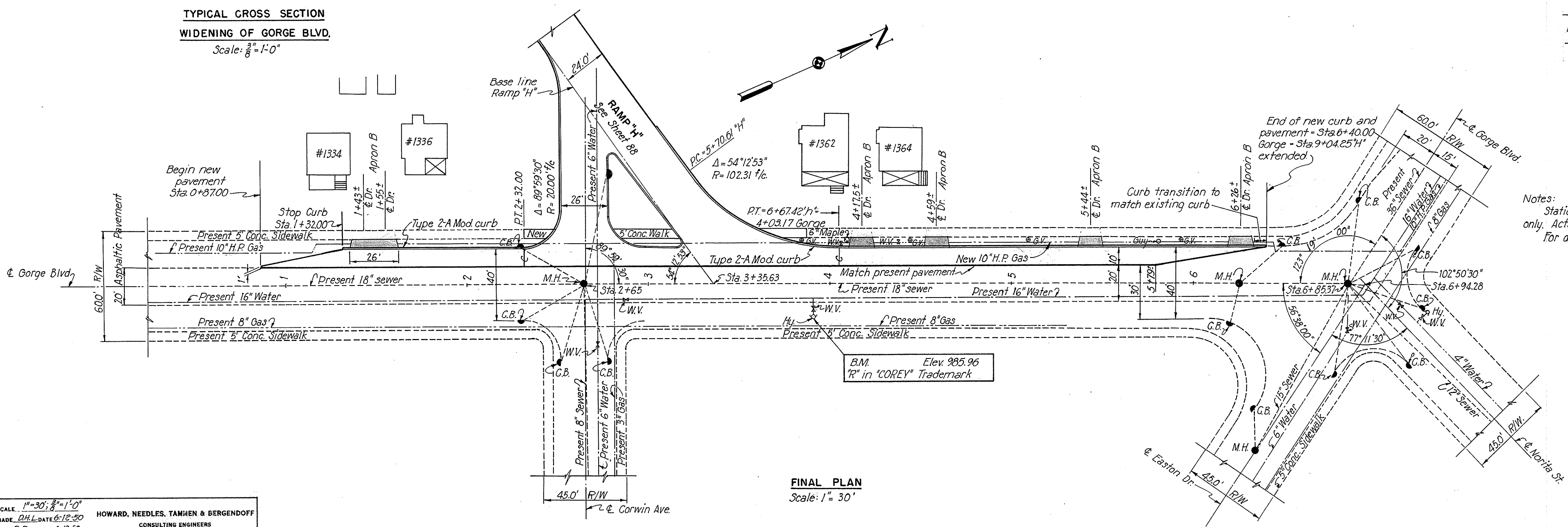


PLAN OF EXISTING CONDITIONS
Scale: 1" = 30'



TYPICAL CROSS SECTION
WIDENING OF GORGE BLVD.
Scale: 3/8" = 1'-0"

- LEGEND**
- G.V. Gas Valve
 - W.V. Water Valve
 - Hy. Hydrant
 - M.H. Sewer Manhole
 - Sewer Inlet

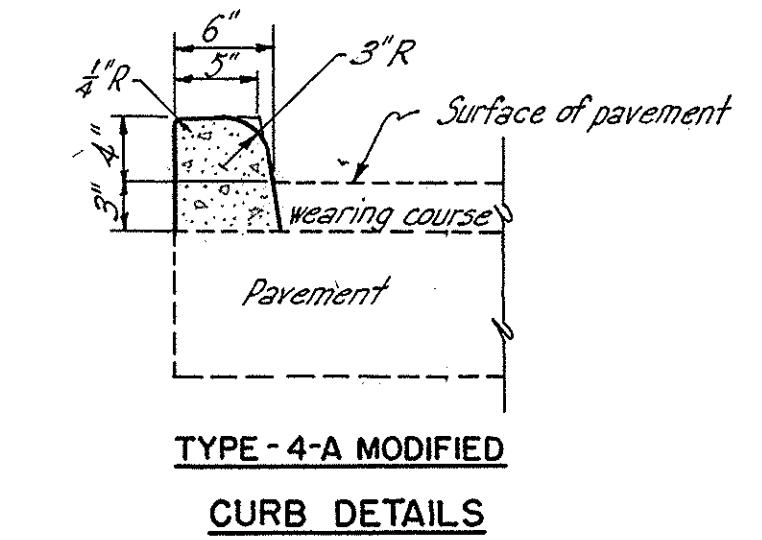
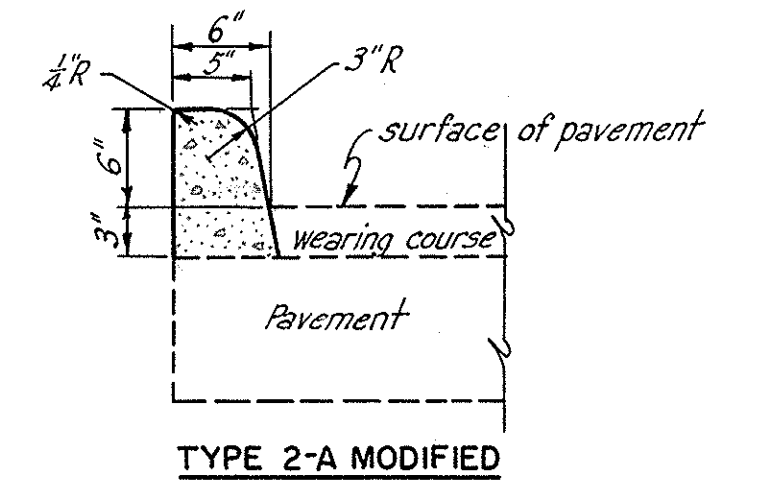
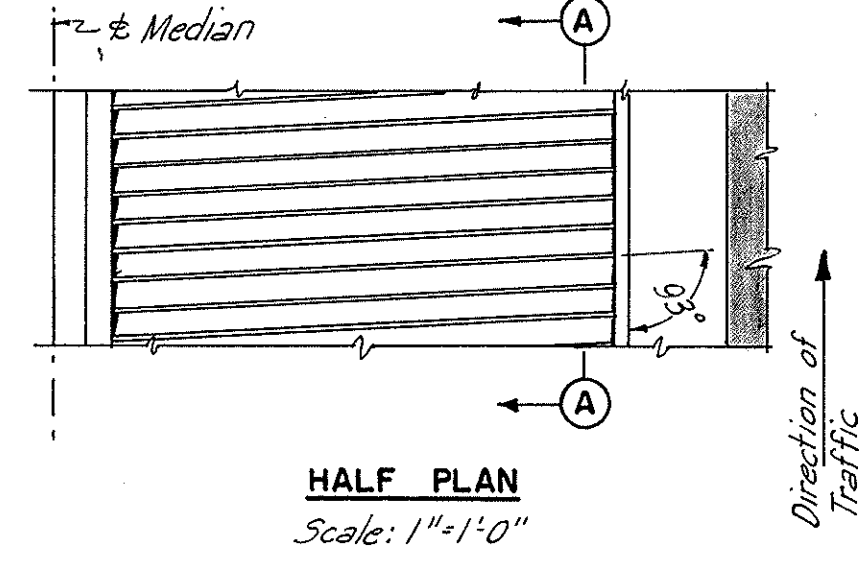


FINAL PLAN
Scale: 1" = 30'

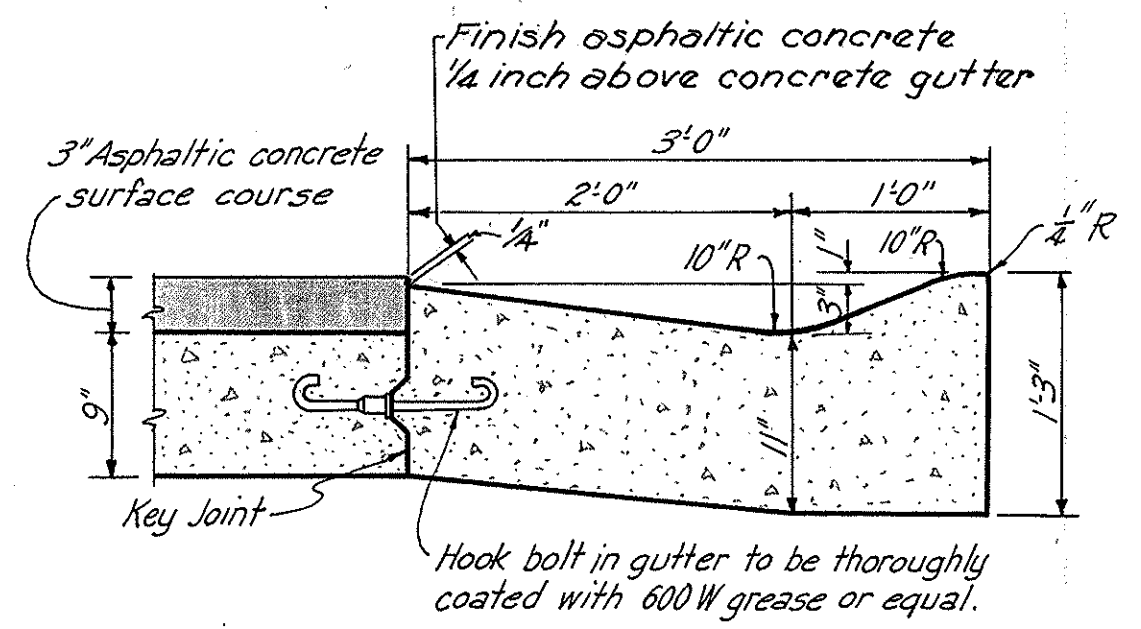
Notes:
Stations shown for & Drives are approximate only. Actual & to be located in the field.
For details of Drive Aprons see sheet 92.

**SUMMIT COUNTY CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY - PART 3
SUM-5-12.62**

MISCELLANEOUS DETAILS



Notes:
For location of median see Pavement Details.
The \pm of present concrete median shall be centered between edges "B" and "E". The \pm of the future median shall be centered between edges "C" and "D".
The circular nose at the median terminus shall be a smooth surface.



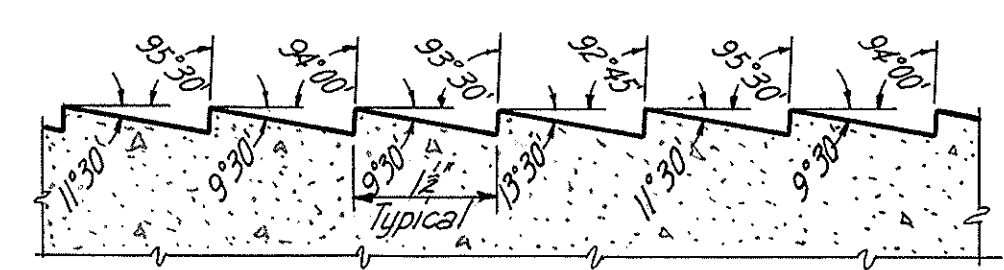
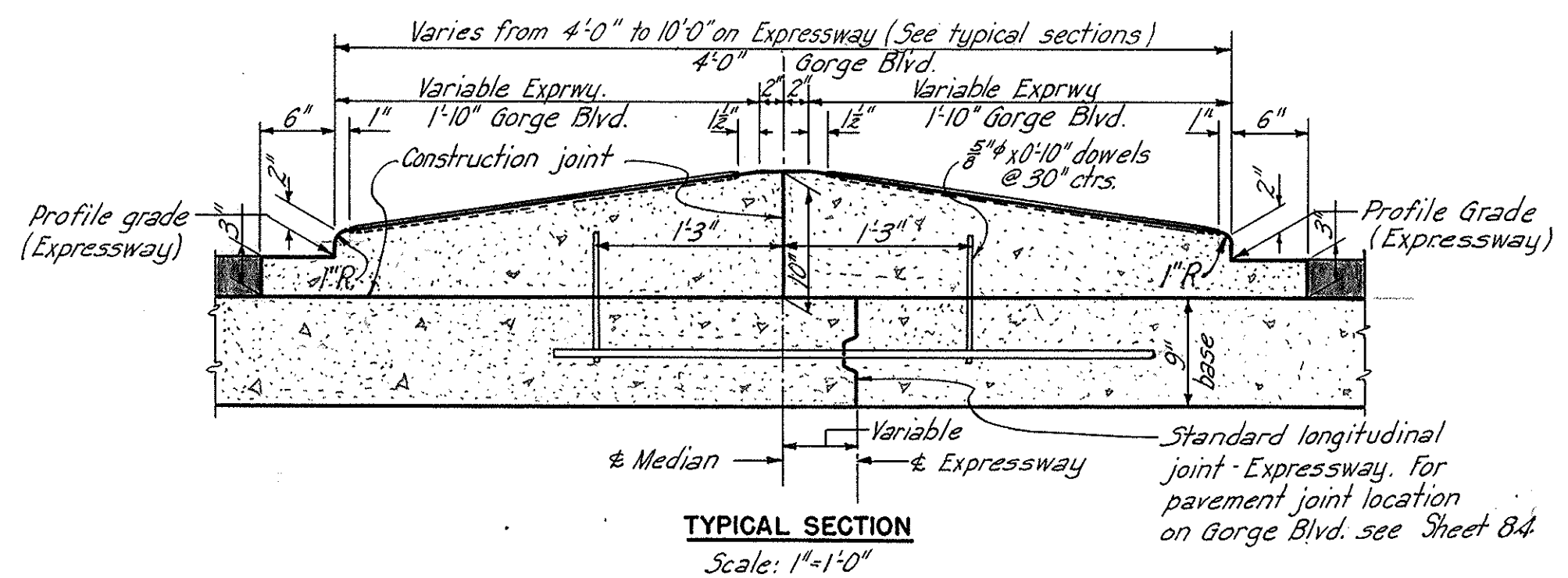
Note:
Curbs and gutter detail as shown applies to present construction only. Future curb and gutter to be similar in dimensions but hook bolt assembly is to be replaced by $\frac{3}{8}$ " deformed tie bars.

CURB AND GUTTER DETAILS
Scale: 1"=1'-0"

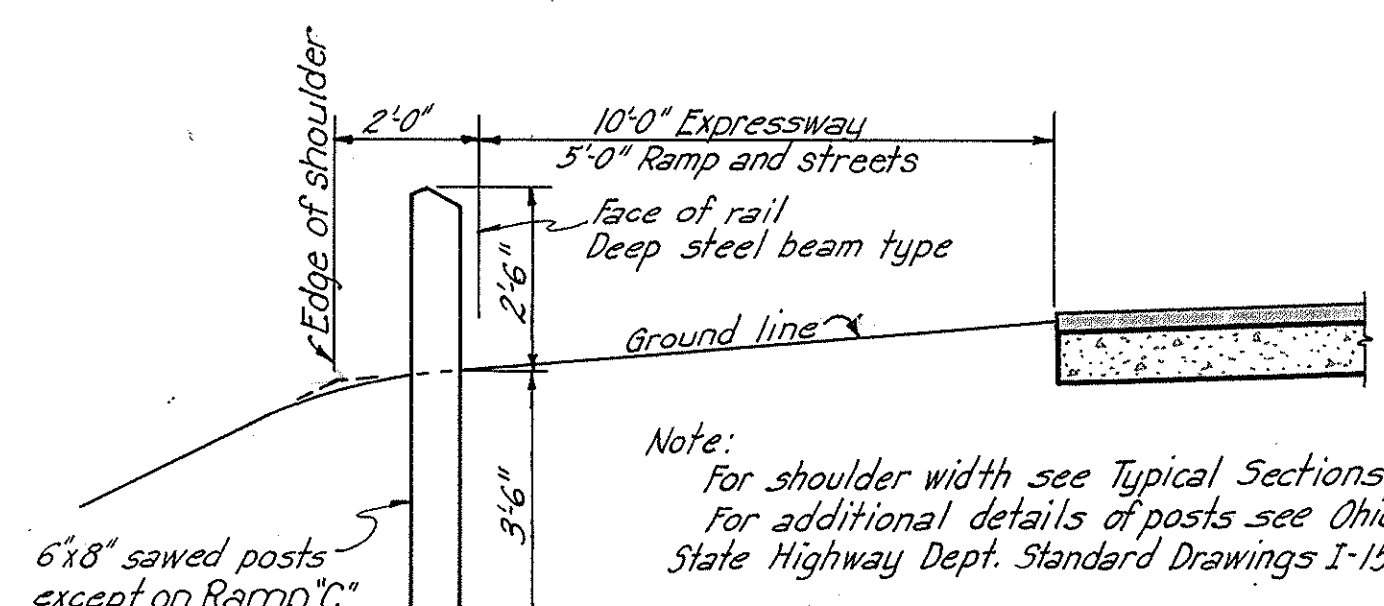
PAVEMENT JOINT LEGEND

- Longitudinal key joint with tie bar _____ L
- Longitudinal key joint with hook bolts _____ LH
- Longitudinal key joint with cap stud _____ LS
- Transverse expansion joint _____ E
- Transverse construction joint _____ C

Note: For details of joints see Standard Drawings.



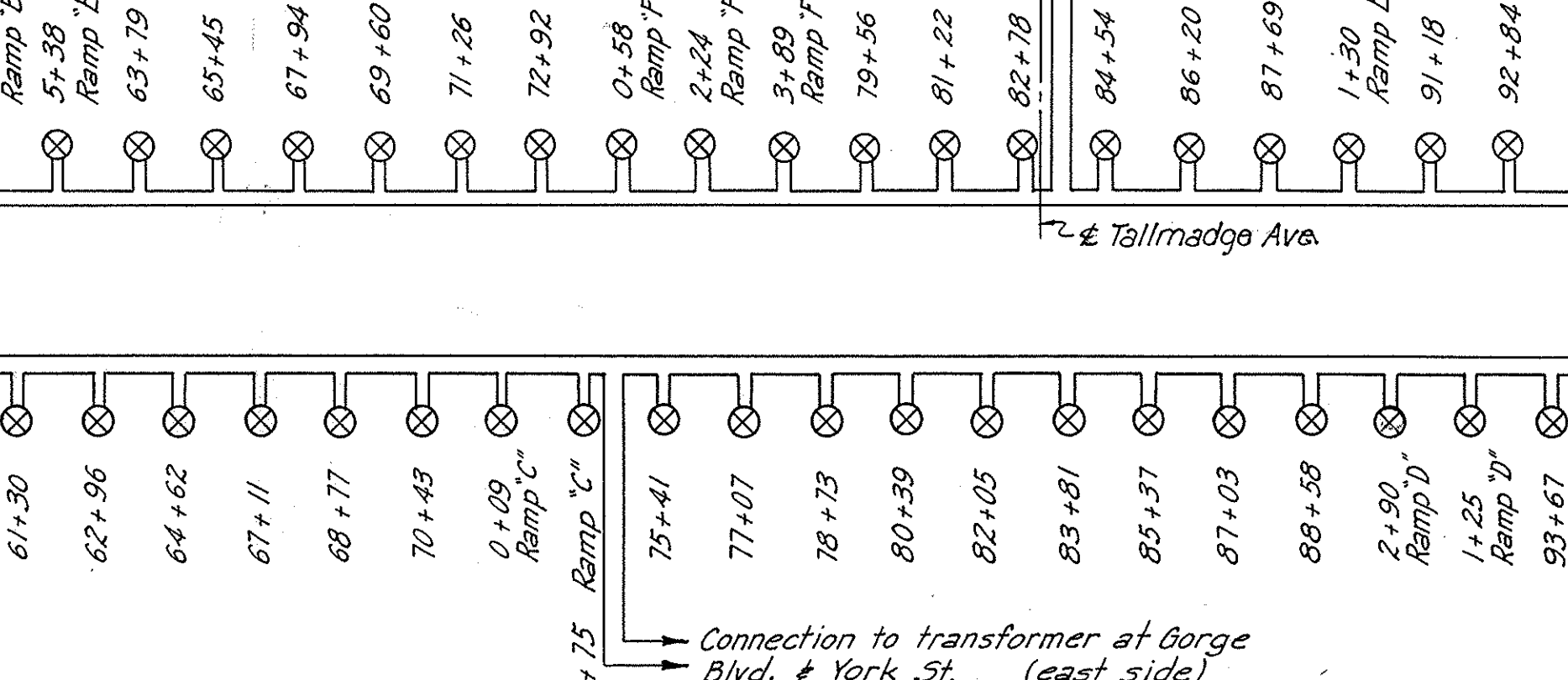
MEDIAN DETAILS



Note:
For shoulder width see Typical Sections
For additional details of posts see Ohio State Highway Dept. Standard Drawings I-15 No. 1
For additional details of rail see Ohio State Highway Dept. Standard Drawing I-15 No. 2

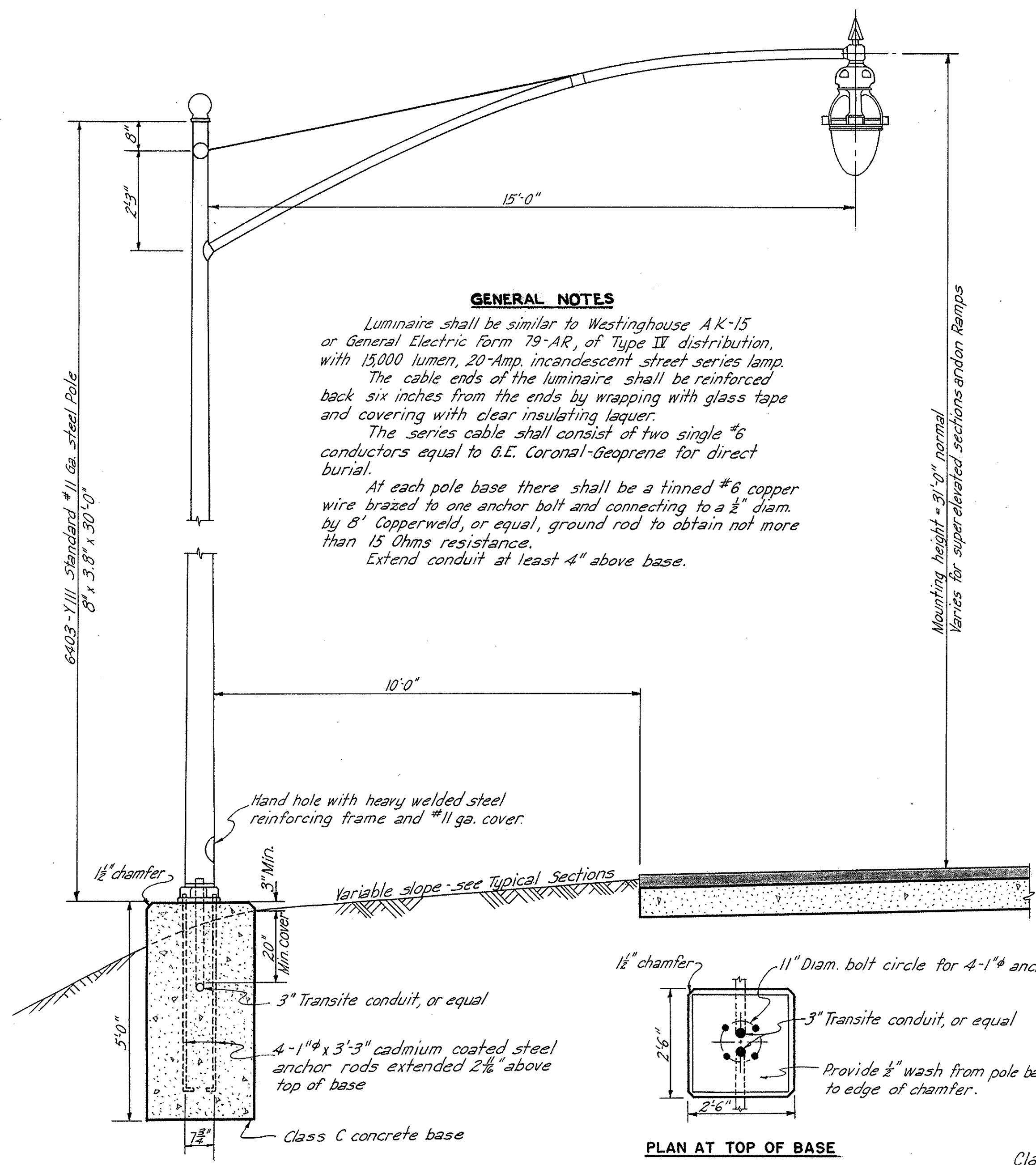
GUARD RAIL SECTION
Scale: 3/8"=1'-0"

SECTION OF CONDUIT RUN UNDER PAVEMENT
Scale: 1 1/2"=1'-0"



ROADWAY LIGHTING WIRING DIAGRAM
Not to scale

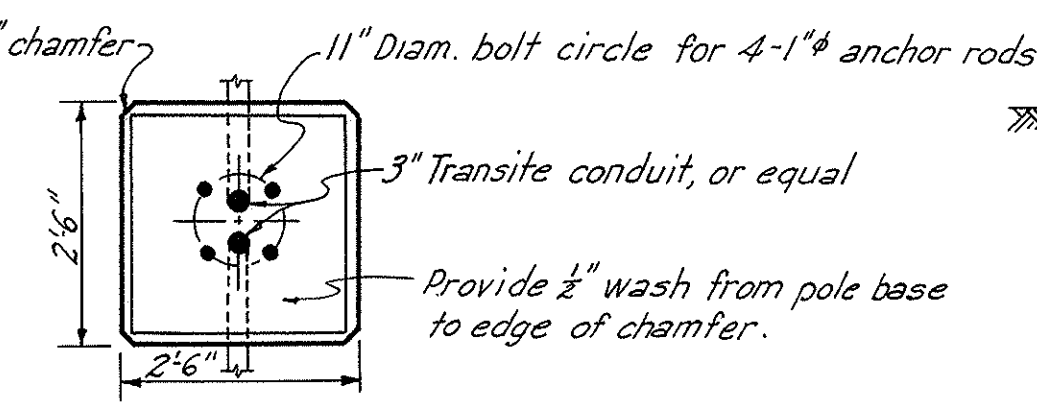
TYPICAL ROADWAY LIGHTING UNIT
Scale: 1/2"=1'-0"



GENERAL NOTES

Luminaire shall be similar to Westinghouse AK-15 or General Electric Form 79-AR, of Type II distribution, with 15,000 lumen, 20-Amp. incandescent street series lamp.
The cable ends of the luminaire shall be reinforced back six inches from the ends by wrapping with glass tape and covering with clear insulating lacquer.
The series cable shall consist of two single #6 conductors equal to G.E. Coronal-Geoprene for direct burial.
At each pole base there shall be a tinned #6 copper wire brazed to one anchor bolt and connecting to a 1/2" diam. by 8' Copperweld, or equal, ground rod to obtain not more than 15 Ohms resistance.
Extend conduit at least 4" above base.

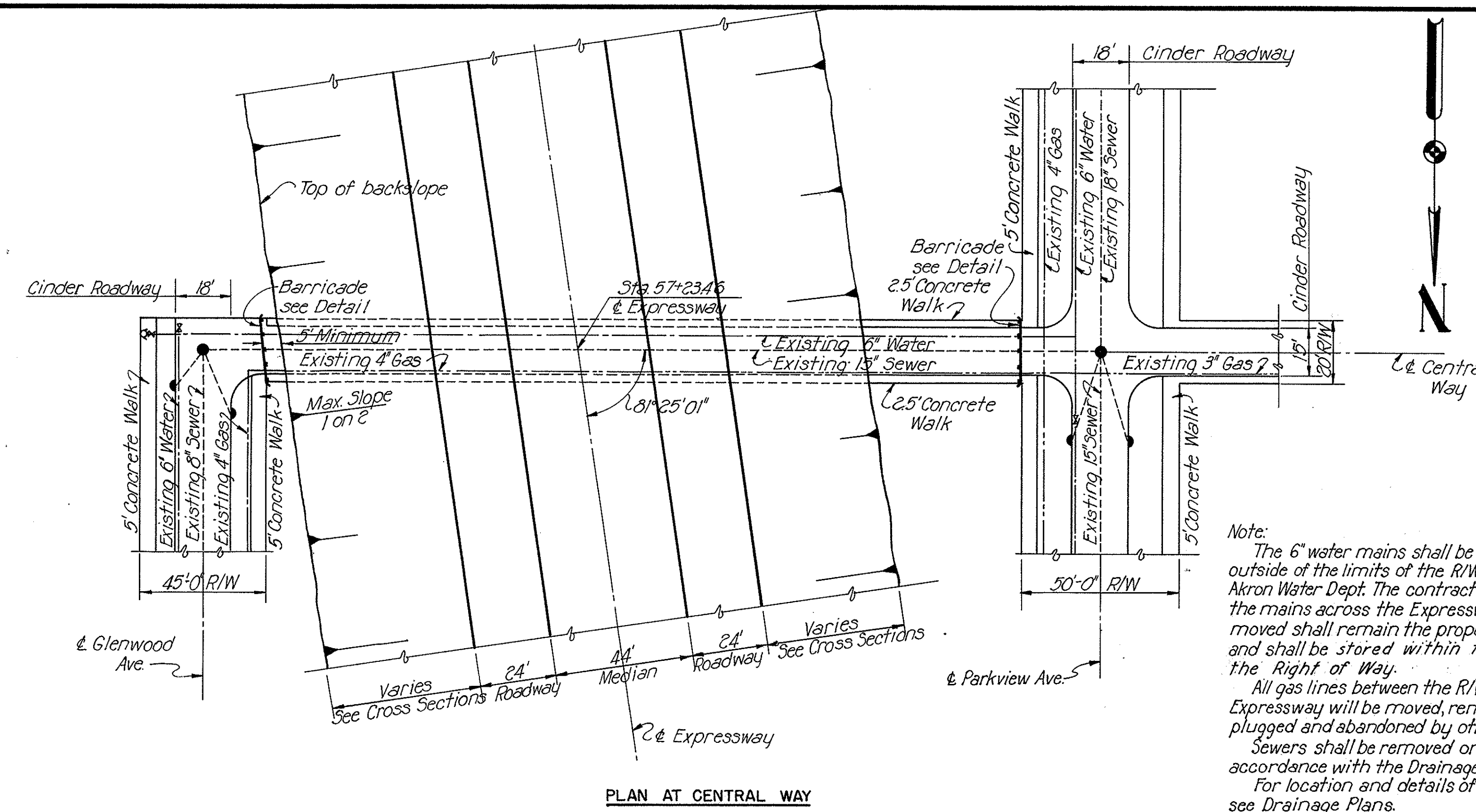
PLAN AT TOP OF BASE



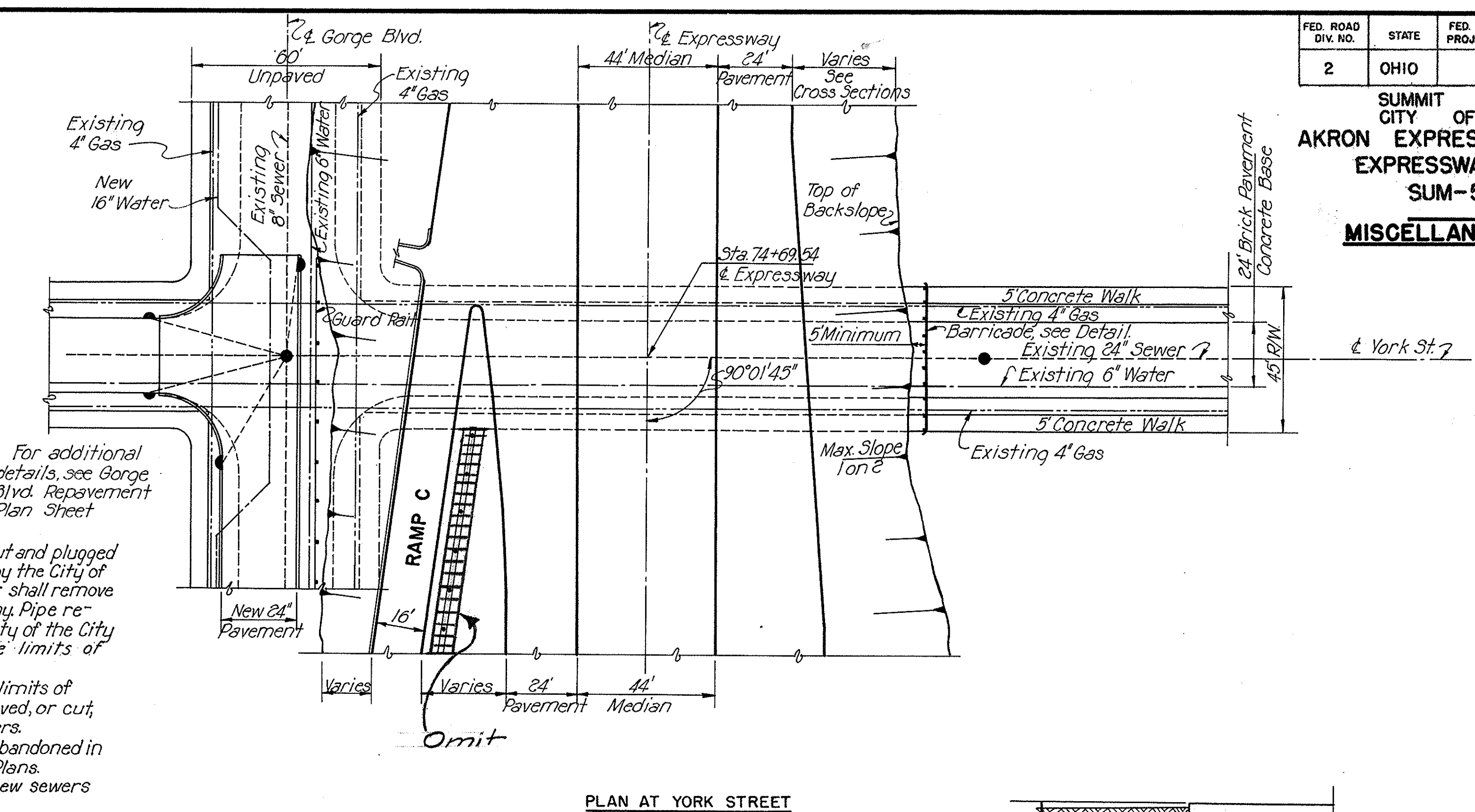
Note:
Conduit and concrete encasement shall extend one foot beyond pavement edge and be sloped to drain from center of run.

SCALE: as noted
MADE: 6-5-50
TRCD: SWF: 7-10-50
CED: F.R.M.: 7-12-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
766 SHEET



PLAN AT CENTRAL WAY

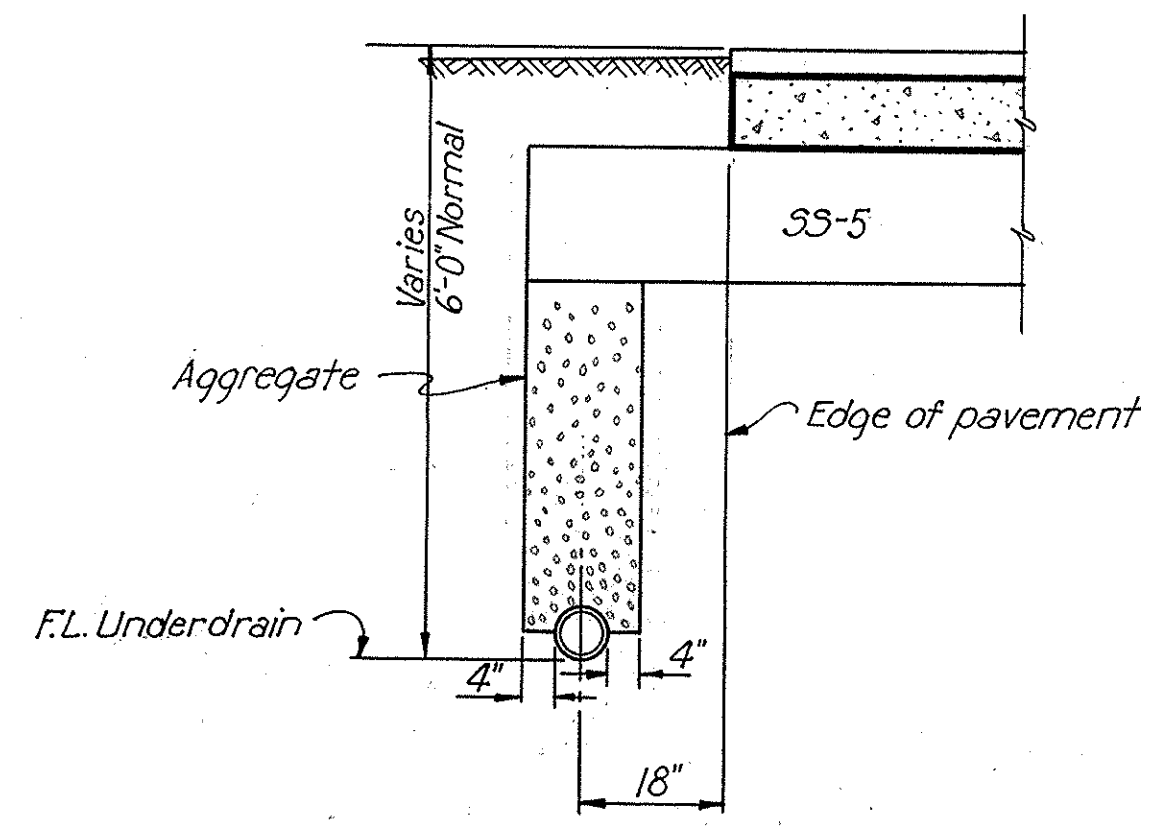


PLAN AT YORK STREET

Note:
 The 6" water mains shall be cut and plugged outside of the limits of the R/W by the City of Akron Water Dept. The contractor shall remove the mains across the Expressway. Pipe removed shall remain the property of the City and shall be stored within the limits of the Right of Way.
 All gas lines between the R/W limits of Expressway will be moved, removed, or cut, plugged and abandoned by others.
 Sewers shall be removed or abandoned in accordance with the Drainage Plans.
 For location and details of new sewers see Drainage Plans.

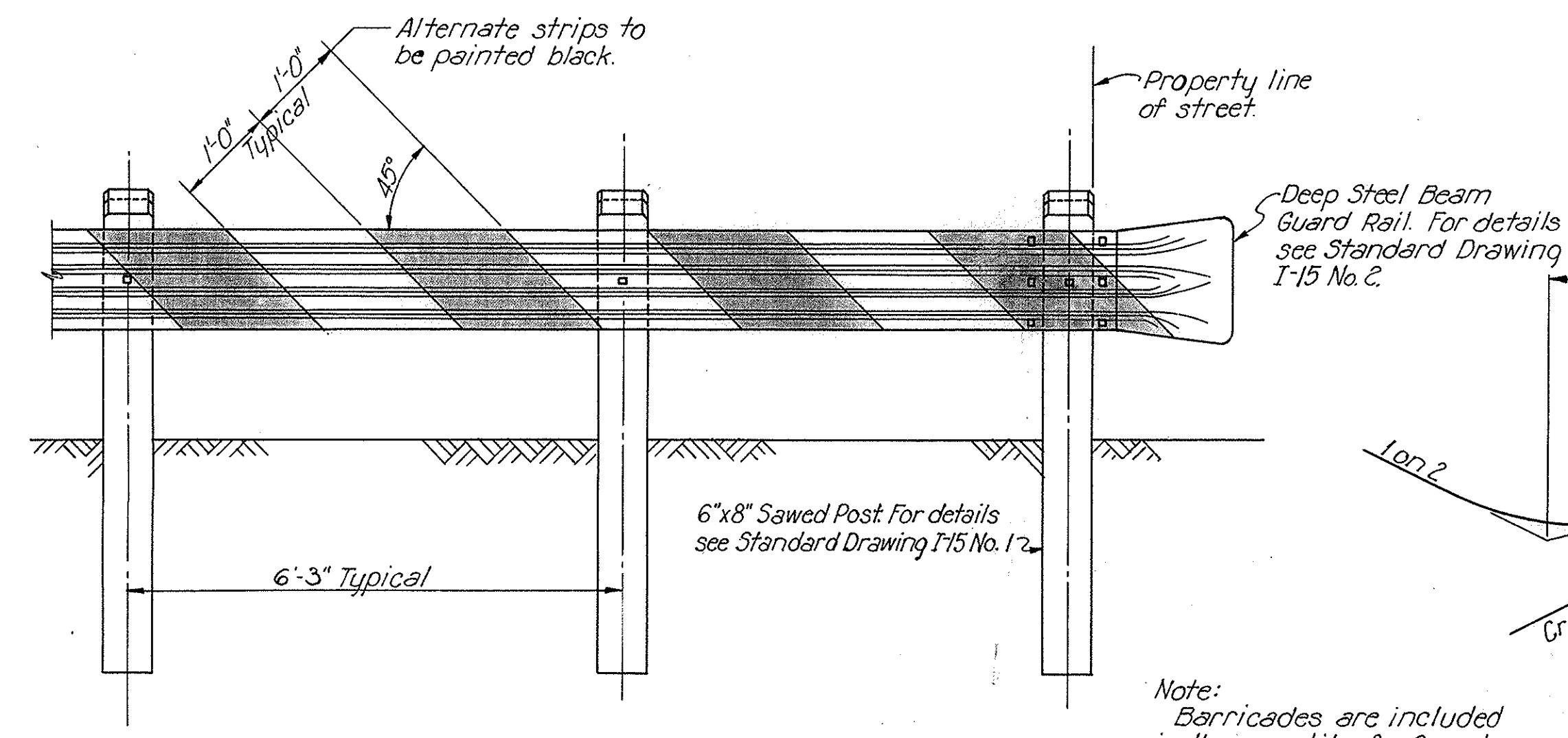
UTILITIES AND BARRICADES AT ABANDONED STREETS

Scale: 1"=30'
 (For barricade of Corwin Avenue see Sheet 88)



DETAILS OF PIPE UNDERDRAINS

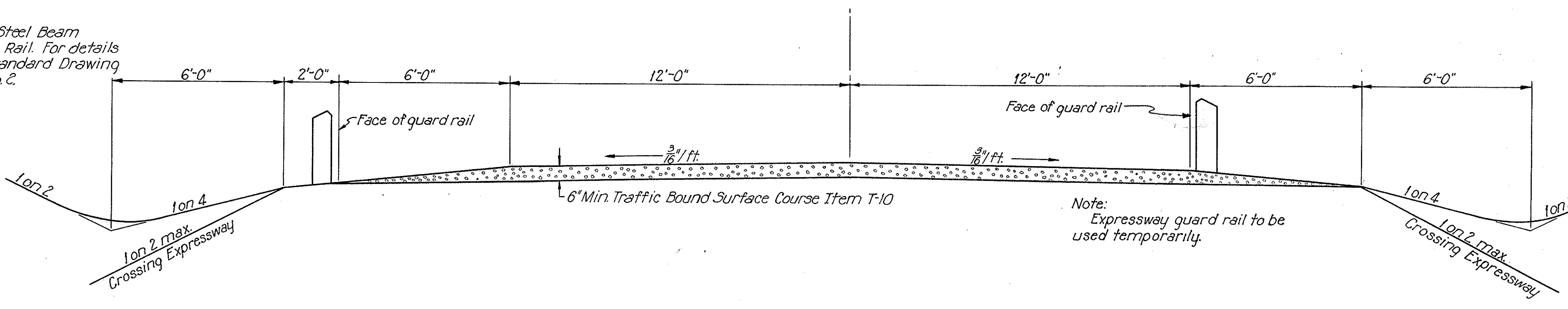
Scale: 1/2"=1'-0"
 For location see Drainage Plans



BARRICADE

Scale: 3/4"=1'-0"

Note:
 Barricades are included in the quantity for Guard Rail, Item I-15.



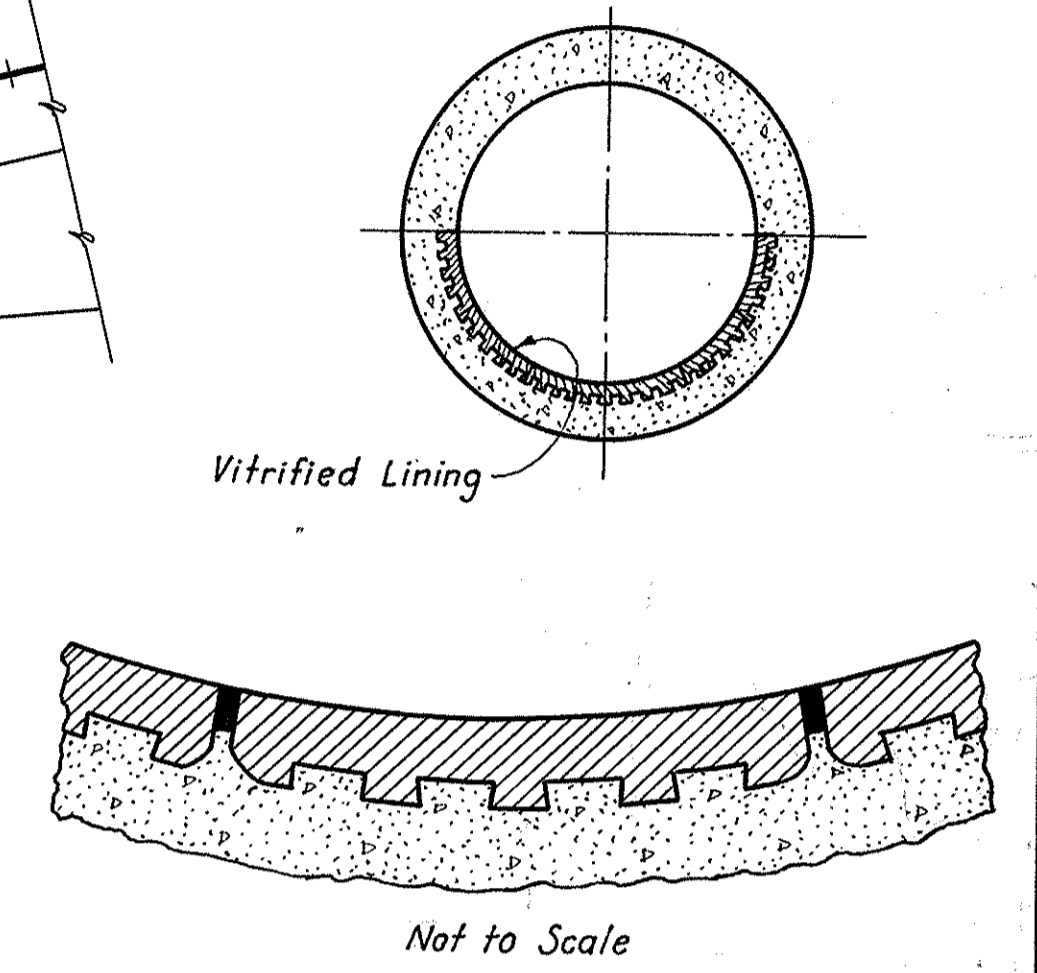
TYPICAL CROSS SECTION-TEMPORARY ROADWAY

Scale: 3/8"=1'-0"

Note:
 The cost of all materials for Temporary Roadway except Items T-10 and M-10 shall be paid for as "Maintaining Traffic."

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	99
2	OHIO	U-687(8)	POST WAR	146

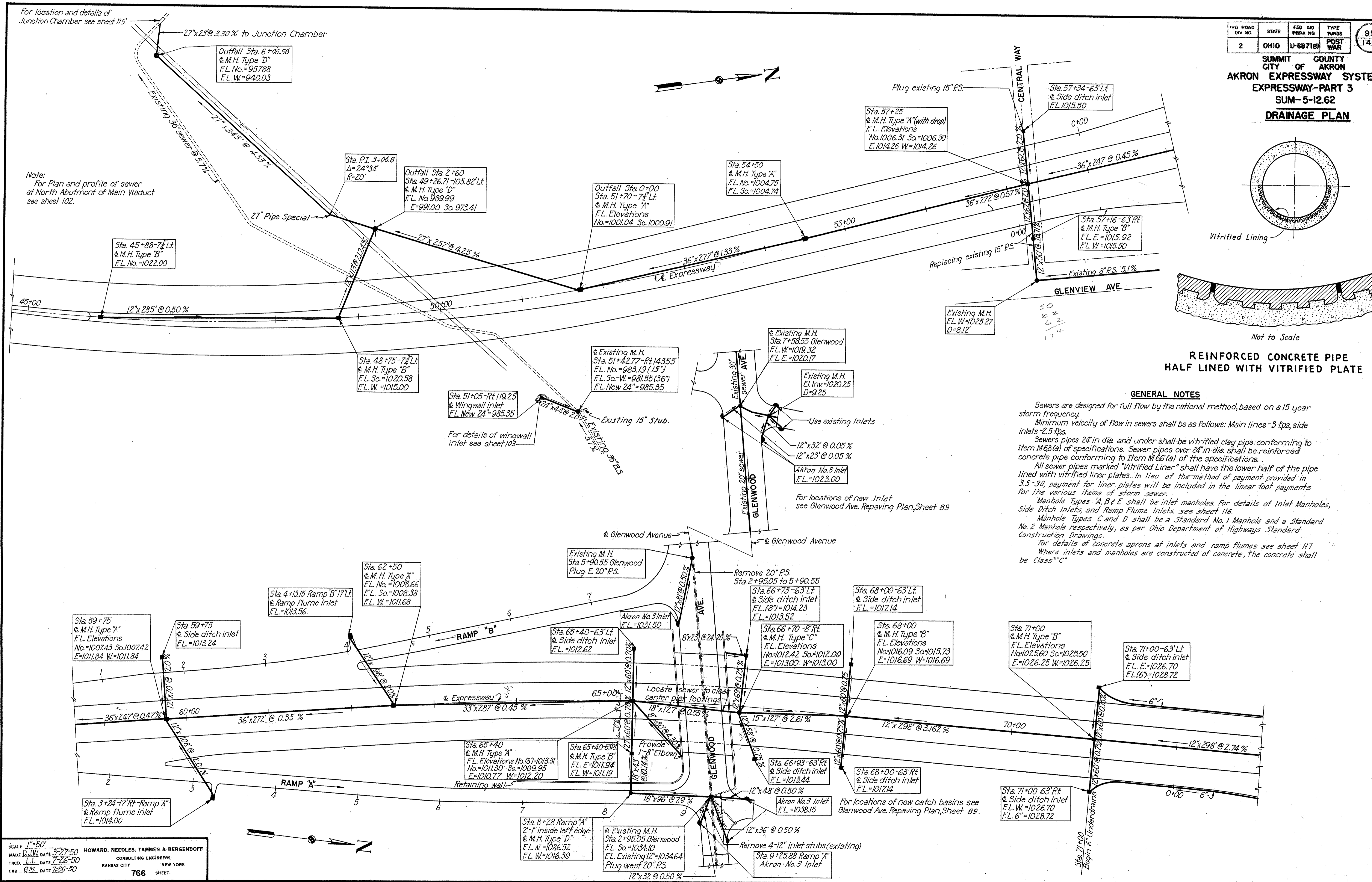
SUMMIT COUNTY CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
DRAINAGE PLAN



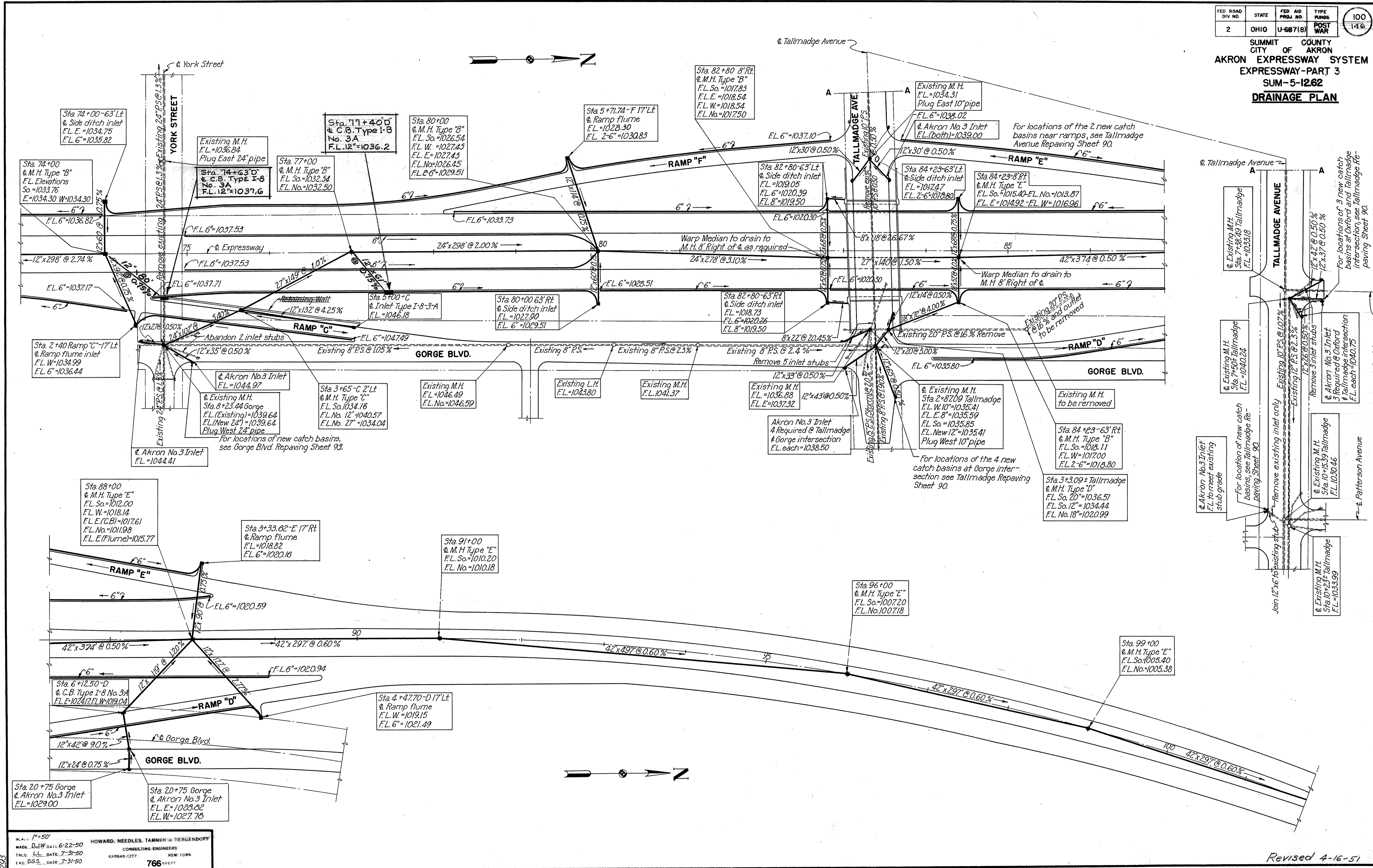
Not to Scale
REINFORCED CONCRETE PIPE
HALF LINED WITH VITRIFIED PLATE

GENERAL NOTES

Sewers are designed for full flow by the rational method, based on a 15 year storm frequency.
 Minimum velocity of flow in sewers shall be as follows: Main lines - 3 fps, side inlets - 2.5 fps.
 Sewers pipes 24" in dia. and under shall be vitrified clay pipe conforming to Item M 68(a) of specifications. Sewer pipes over 24" in dia. shall be reinforced concrete pipe conforming to Item M 66(a) of the specifications.
 All sewer pipes marked "Vitrified Lining" shall have the lower half of the pipe lined with vitrified liner plates. In lieu of the method of payment provided in S.S. 30, payment for liner plates will be included in the linear foot payments for the various items of storm sewer.
 Manhole Types A, B & E shall be inlet manholes. For details of Inlet Manholes, Side Ditch Inlets, and Ramp Flume Inlets, see sheet 116.
 Manhole Types C and D shall be a Standard No. 1 Manhole and a Standard No. 2 Manhole respectively, as per Ohio Department of Highways Standard Construction Drawings.
 For details of concrete aprons at inlets and ramp flumes see sheet 117
 Where inlets and manholes are constructed of concrete, the concrete shall be Class "C"



SCALE 1"=50'
 MADE D.W. DATE 3-27-50
 TRCD. L.L. DATE 7-26-50
 CND. G.M. DATE 7-26-50
HOWARD, NEEDLES, TAMMEN & BERGENOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK
766 SHEET

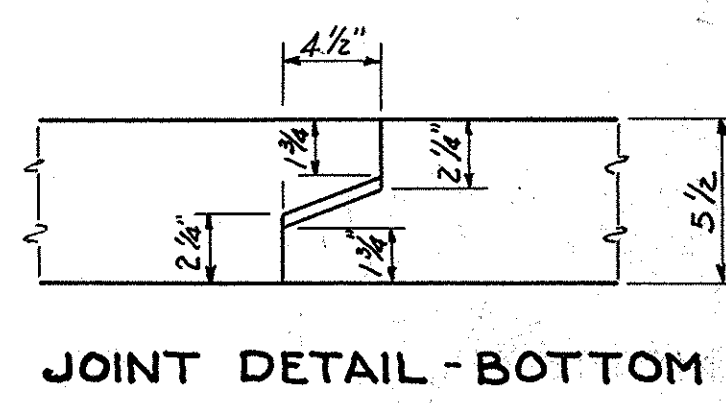
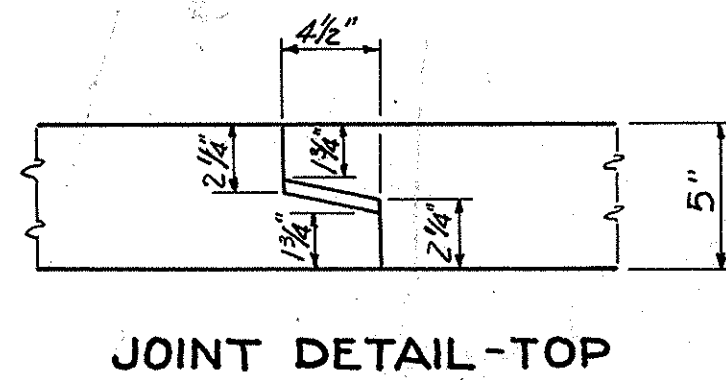
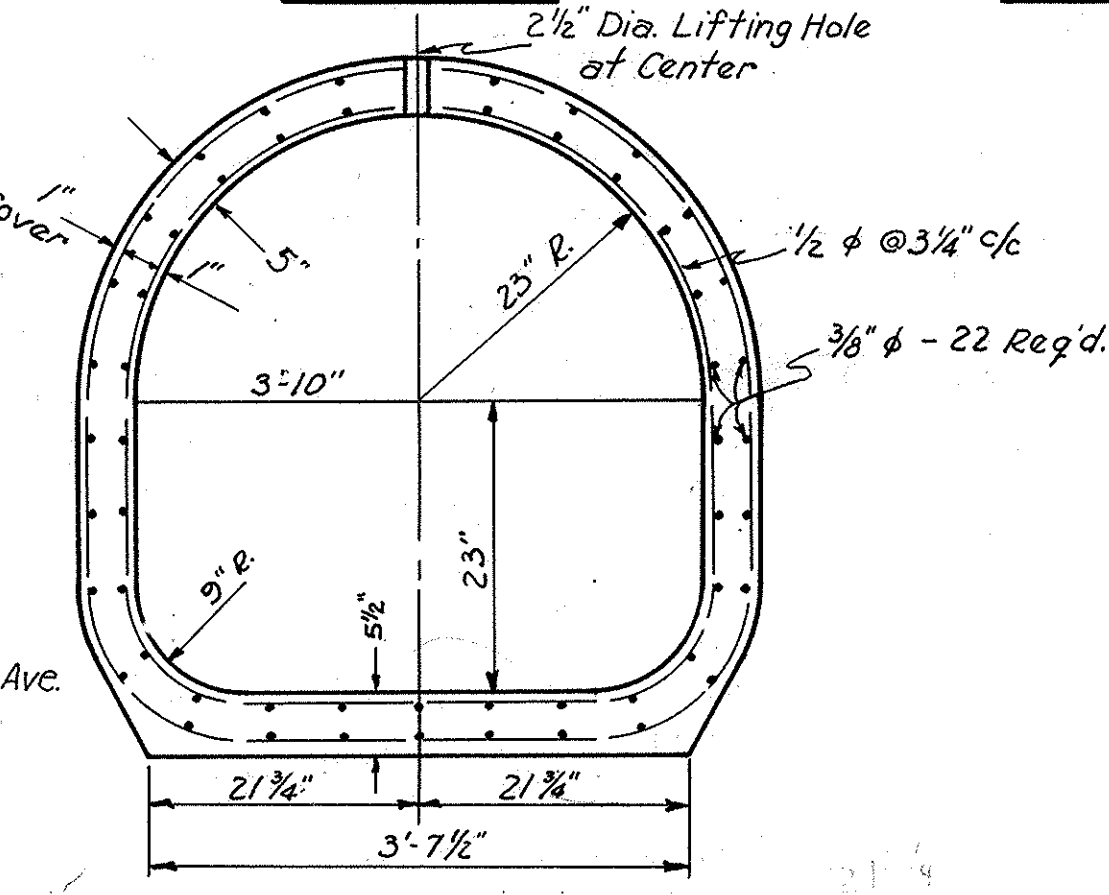
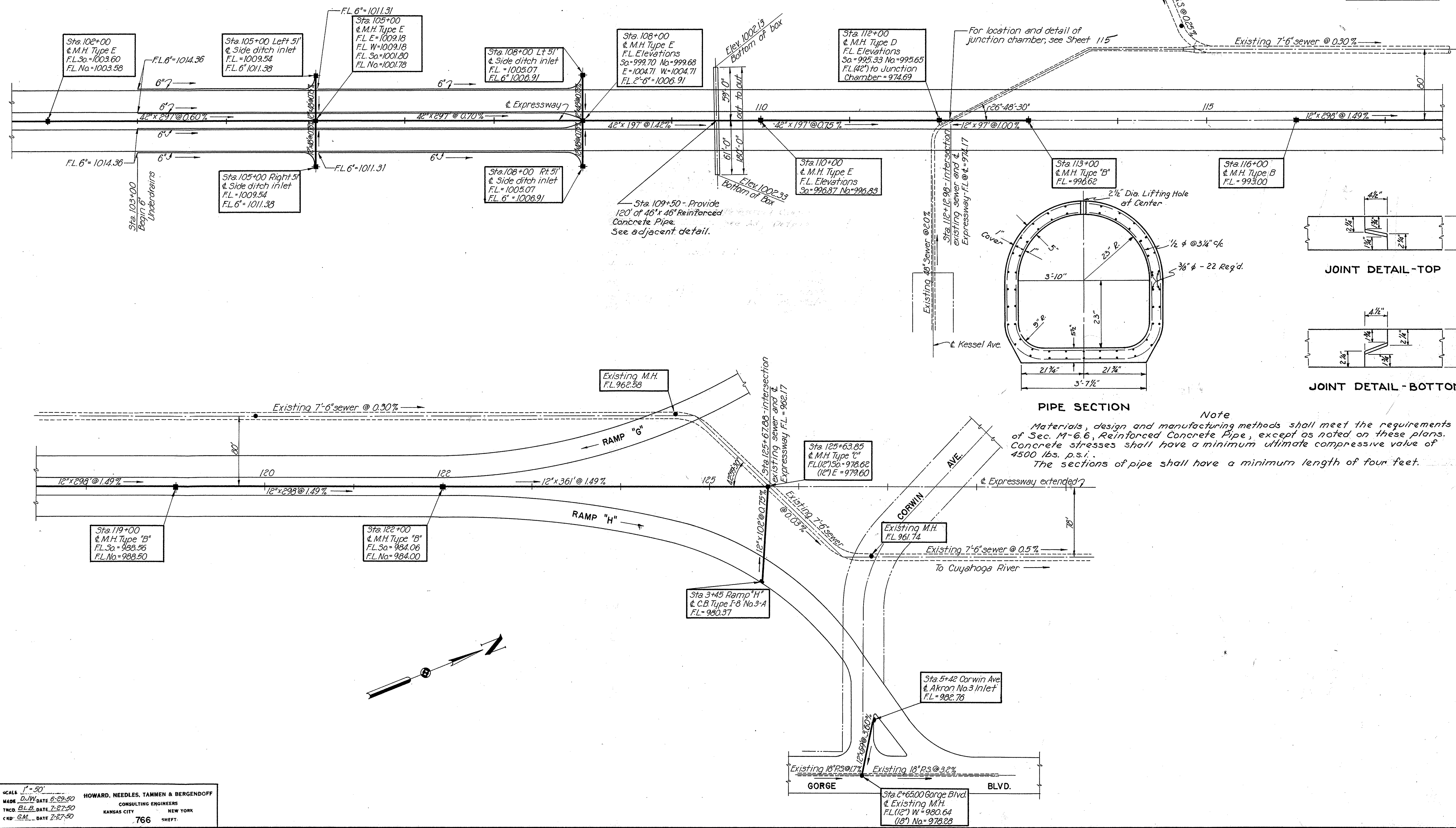


Scale: 1"=50'
 MADE BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 DATE: 6-22-50
 CONSULTING ENGINEERS
 INC. DATE: 7-31-50
 KARLSBURG, MISSOURI
 NEW YORK
 766 SHEET

Revised 4-16-51

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	POST WAR
2	OHIO	U-687(8)	POST WAR	101/146

SUMMIT COUNTY CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
DRAINAGE PLAN



Note
 Materials, design and manufacturing methods shall meet the requirements of Sec. M-6.6, Reinforced Concrete Pipe, except as noted on these plans. Concrete stresses shall have a minimum ultimate compressive value of 4500 lbs. p.s.i. The sections of pipe shall have a minimum length of four feet.

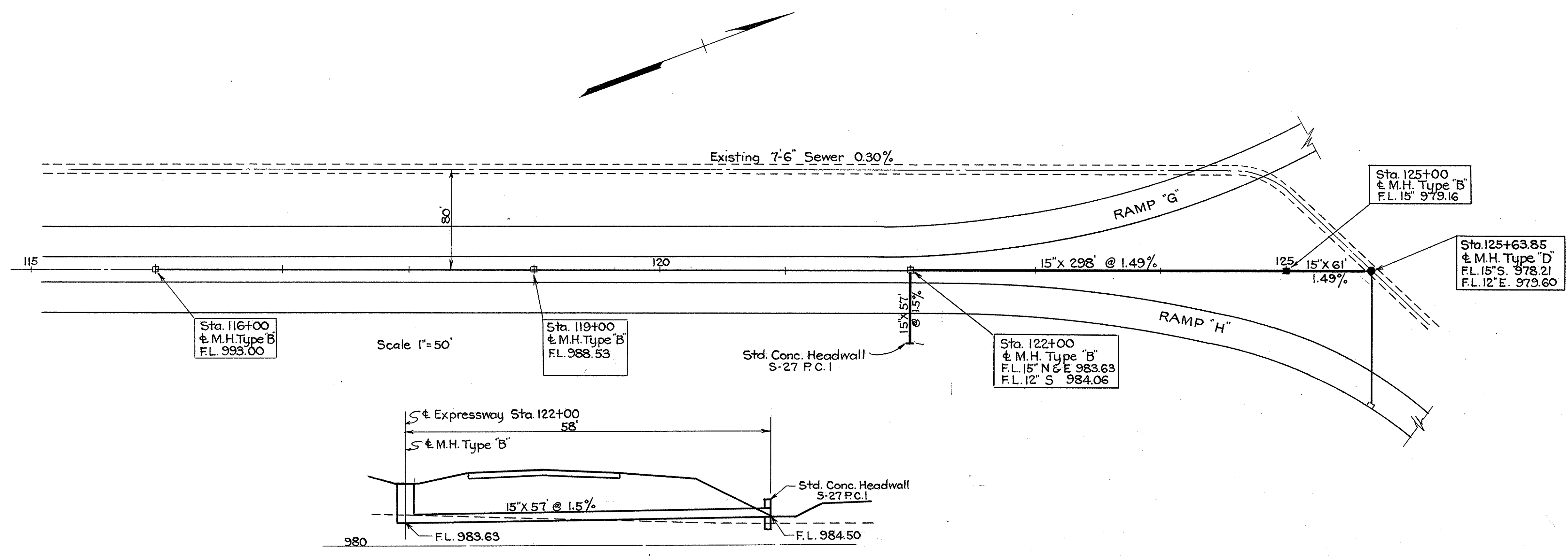
SCALE 1" = 50'
 MADE D.W. DATE 6-22-50
 TRCD B.L.B. DATE 7-27-50
 CHD G.M. DATE 7-27-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK
 766 SHEET

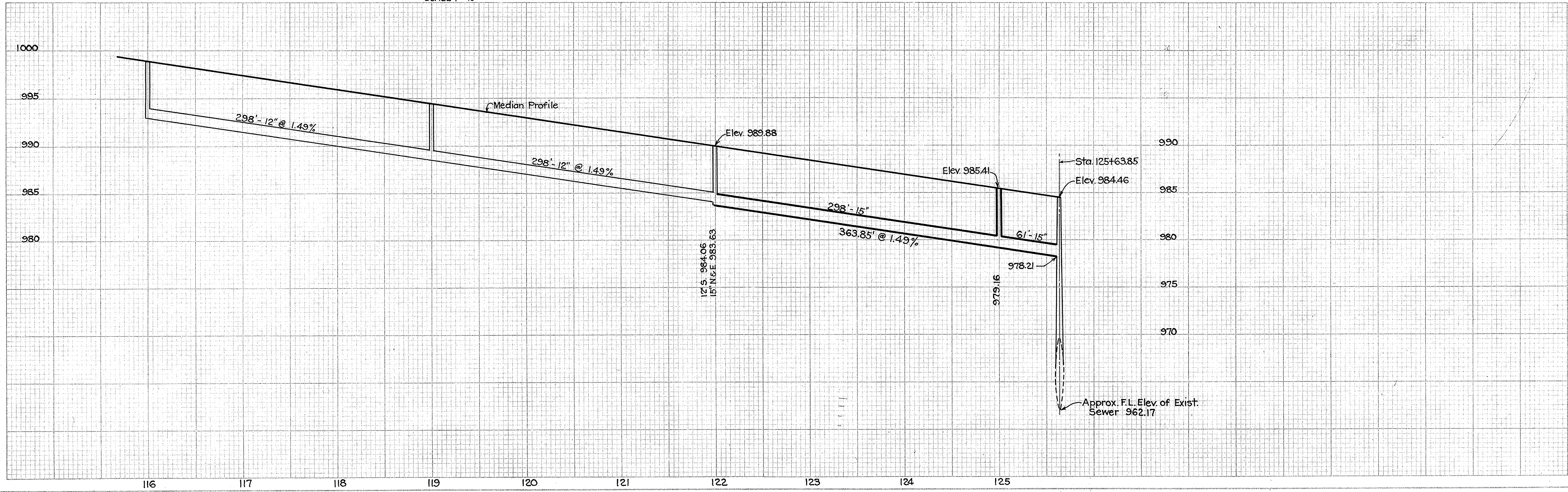
204

SUMMIT COUNTY
CITY OF AKRON
**AKRON EXPRESSWAY SYSTEM
EXPRESSWAY PART 3
SUM-5-12.62**

DRAINAGE REVISIONS



DRAINAGE SECTION STA. 122+00
SCALE 1" = 10'

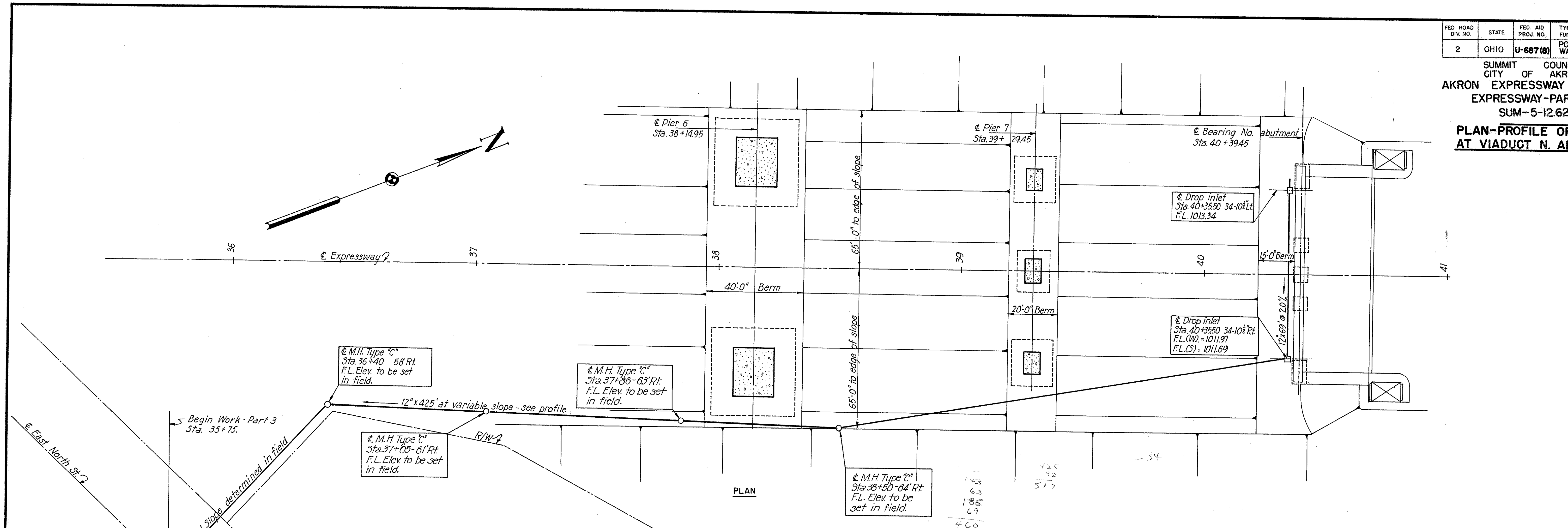


FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	POST WAR
2	OHIO	U-687(8)		

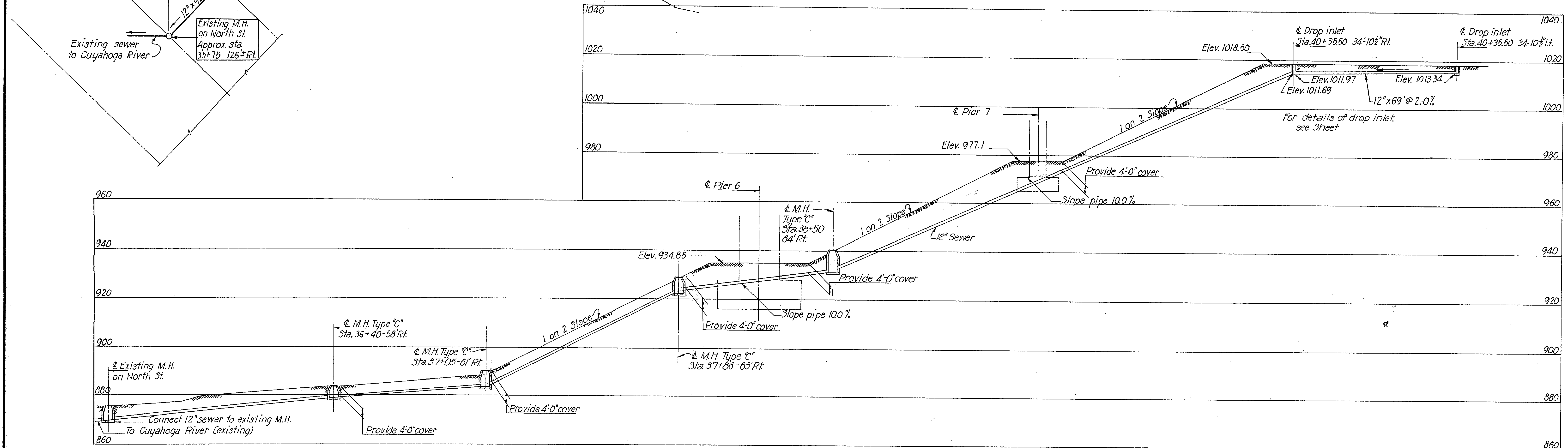
102
146

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

PLAN-PROFILE OF SEWER AT VIADUCT N. ABUTMENT



PLAN



ELEVATION

SEWER FOR BRIDGE DRAINAGE

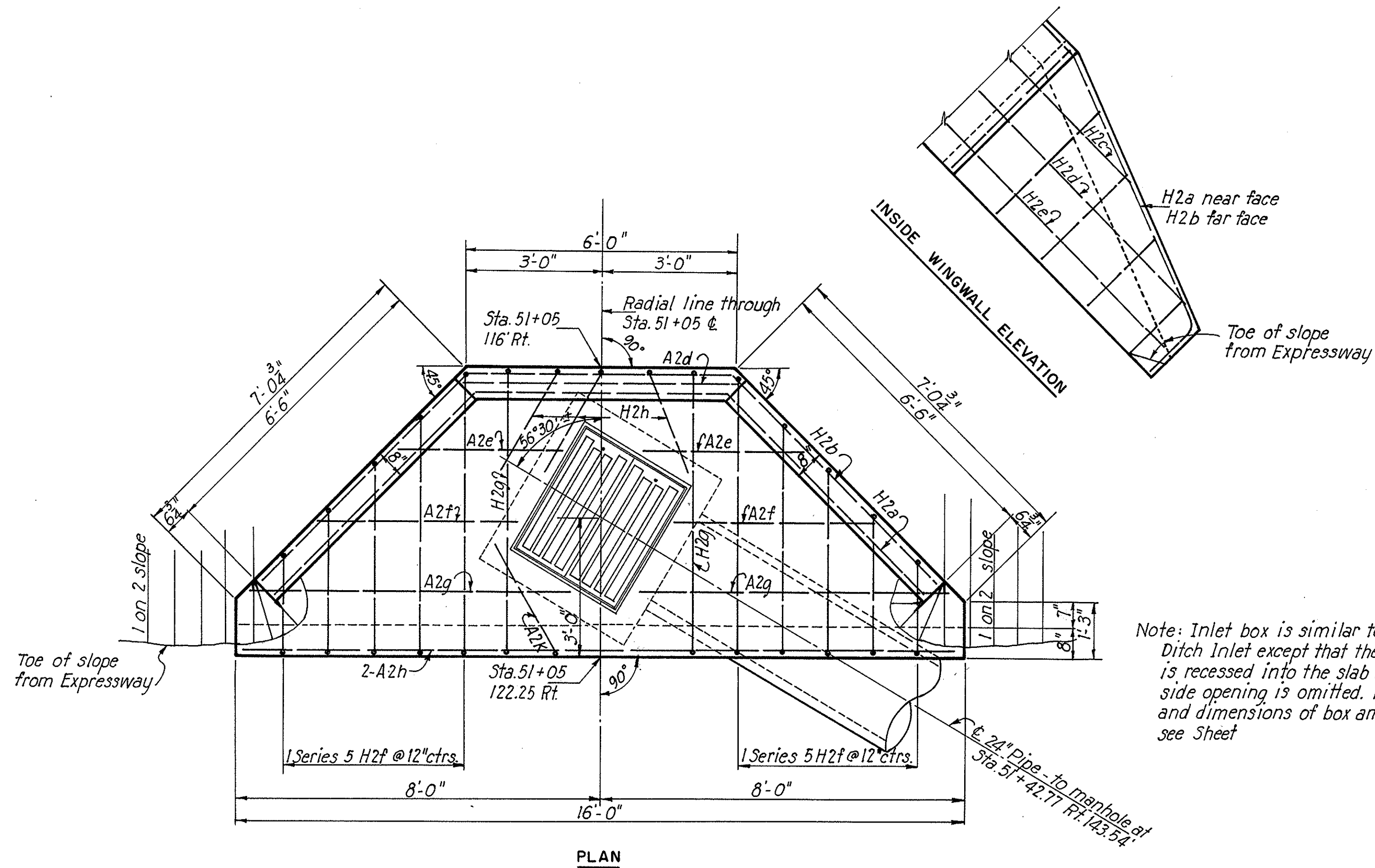
Scale: 1" = 20'

SCALE: 1" = 20'
MADE BY DATE: 5/11/50
TRCD. P.R. DATE: 6/30/50
CKD. B.R. DATE: 7/17/50

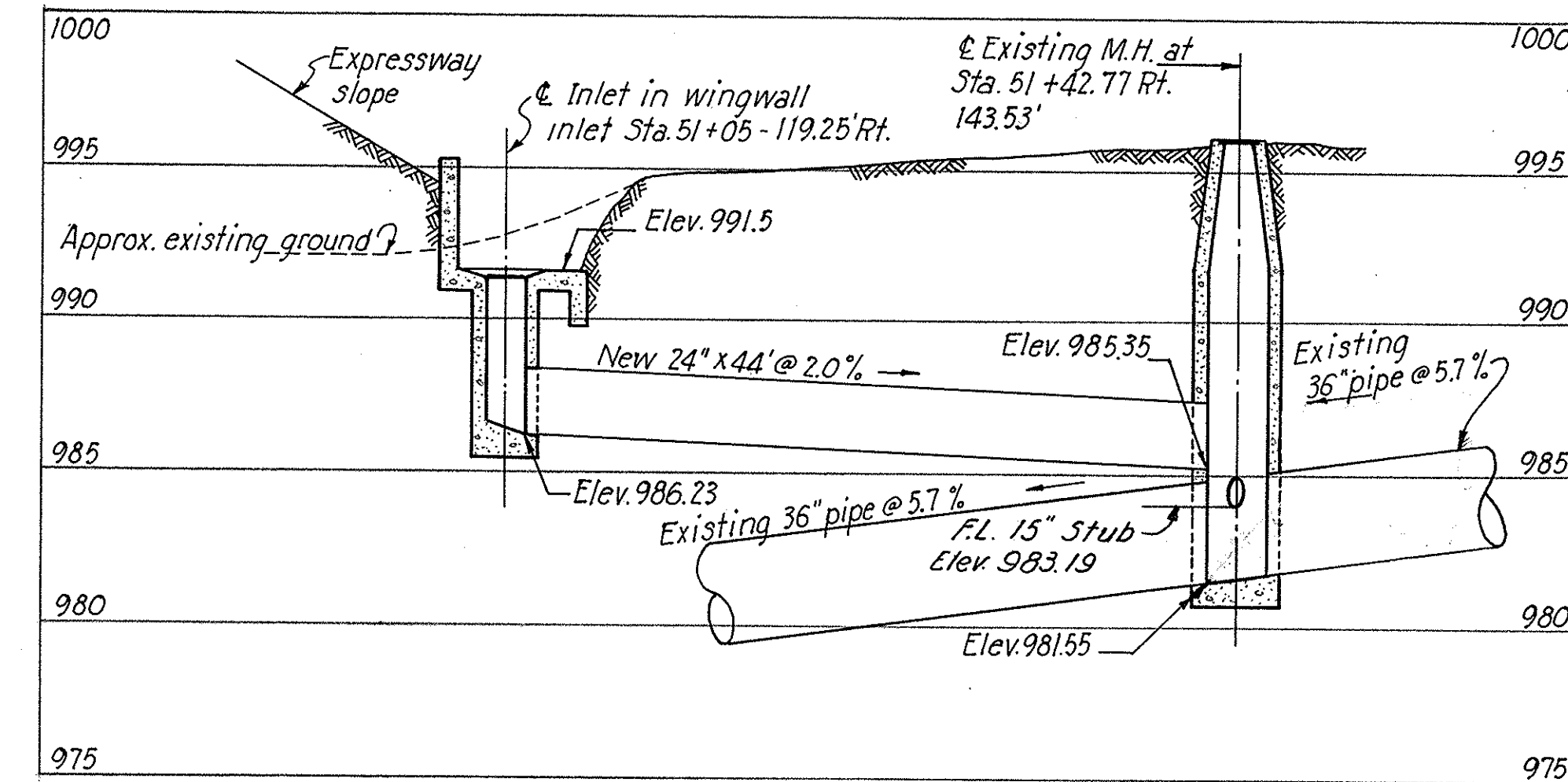
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
766 SHEET

238

WINGWALL INLET DETAILS

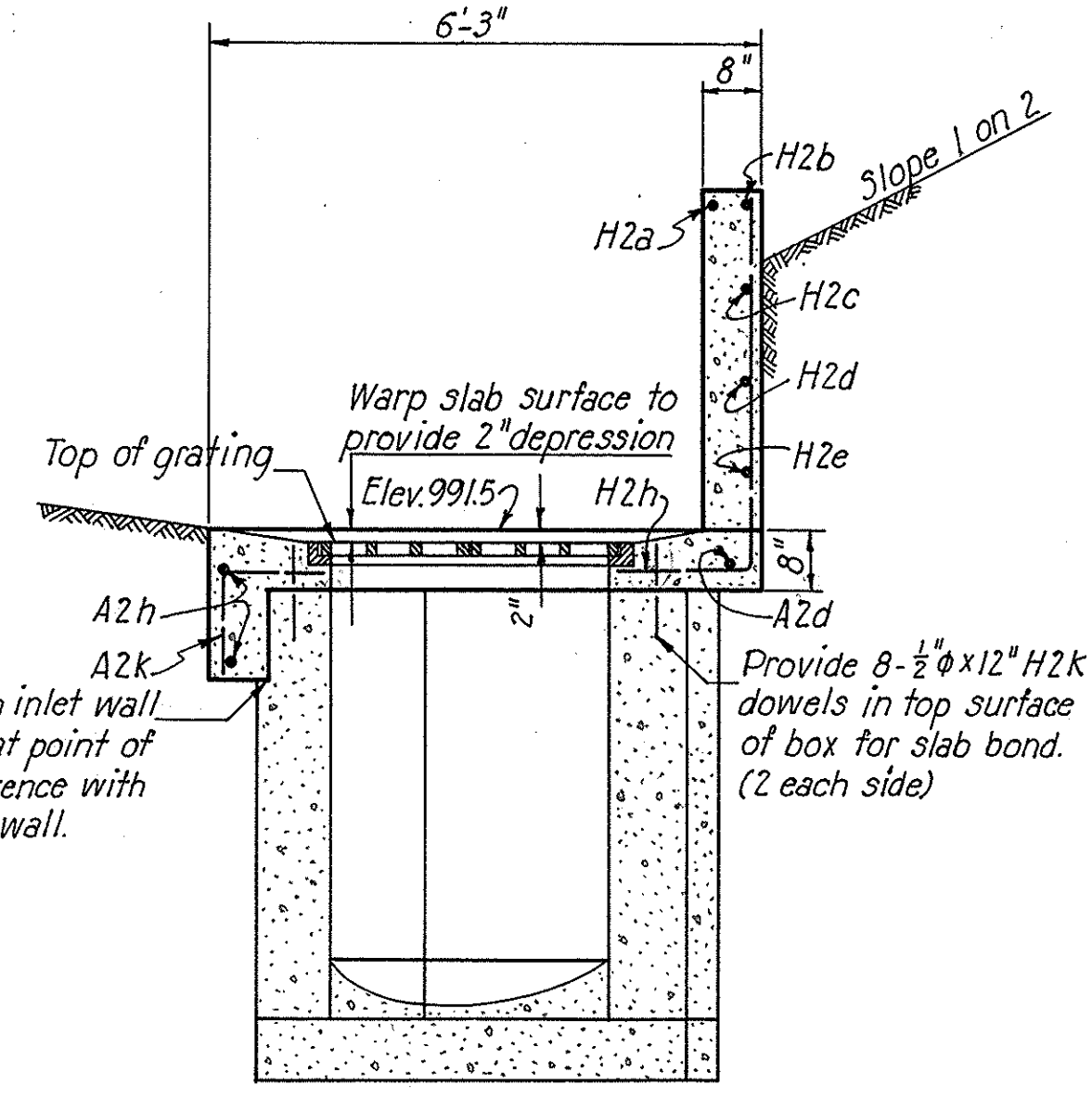
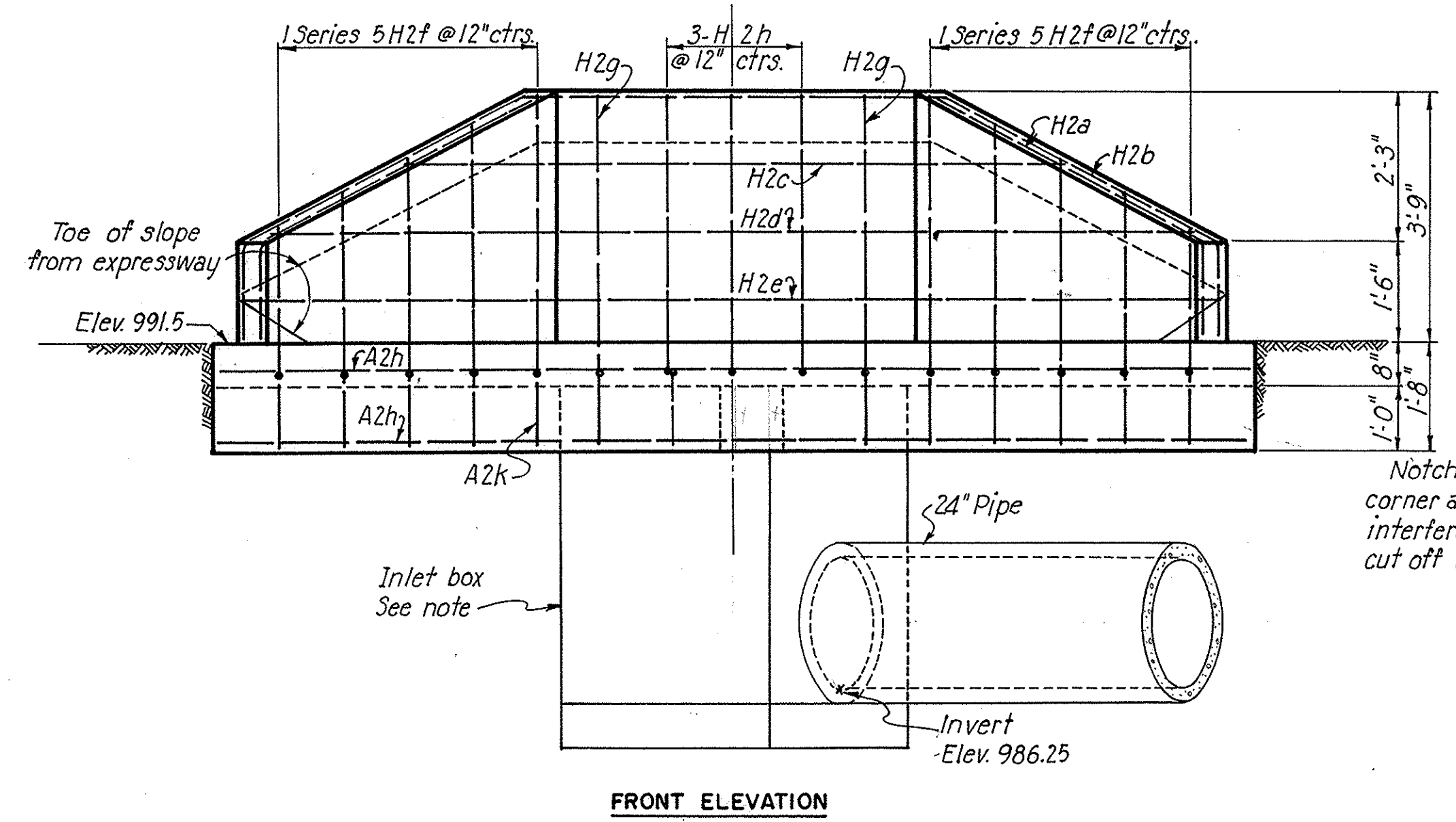


Note: Inlet box is similar to Side Ditch Inlet except that the grating is recessed into the slab and the side opening is omitted. For details and dimensions of box and grating, see Sheet



PROFILE OF WINGWALL INLET SEWER
STA. 51+05-119.25 RT.
Scale: 1"=10' Horiz. 1"=5' Vertical

STEEL LIST						
Mark	Size	Shape	Spacing	Number	Length	Weight
A2d	1/2"	Straight	As shown	1	6'-3"	4
A2e	1/2"	Straight	As shown	2	3'-6"	5
A2f	1/2"	Straight	As shown	2	4'-3"	6
A2g	1/2"	Straight	As shown	2	7'-0"	9
A2h	1/2"	Straight	As shown	2	15'-6"	21
A2k	1/2"	Field bend	As shown	1	3'-6"	2
H2a	1/2"	Field bend	As shown	1	21'-0"	14
H2b	1/2"	Field bend	As shown	1	21'-9"	15
H2c	1/2"	Field bend	As shown	1	12'-3"	8
H2d	1/2"	Field bend	As shown	1	17'-3"	12
H2e	1/2"	Field bend	As shown	1	18'-6"	12
H2f	1/2"	Field bend	5 at 12" ctrs.	2 Series of 5	4'-9" to 10'-3"	50
H2g	1/2"	Field bend	As shown	2	10'-6"	14
H2h	1/2"	Field bend	3 at 12" ctrs.	3	6'-0"	12
H2k	1/2"	Straight	As shown	8	1'-0"	5
					Total Weight	189#

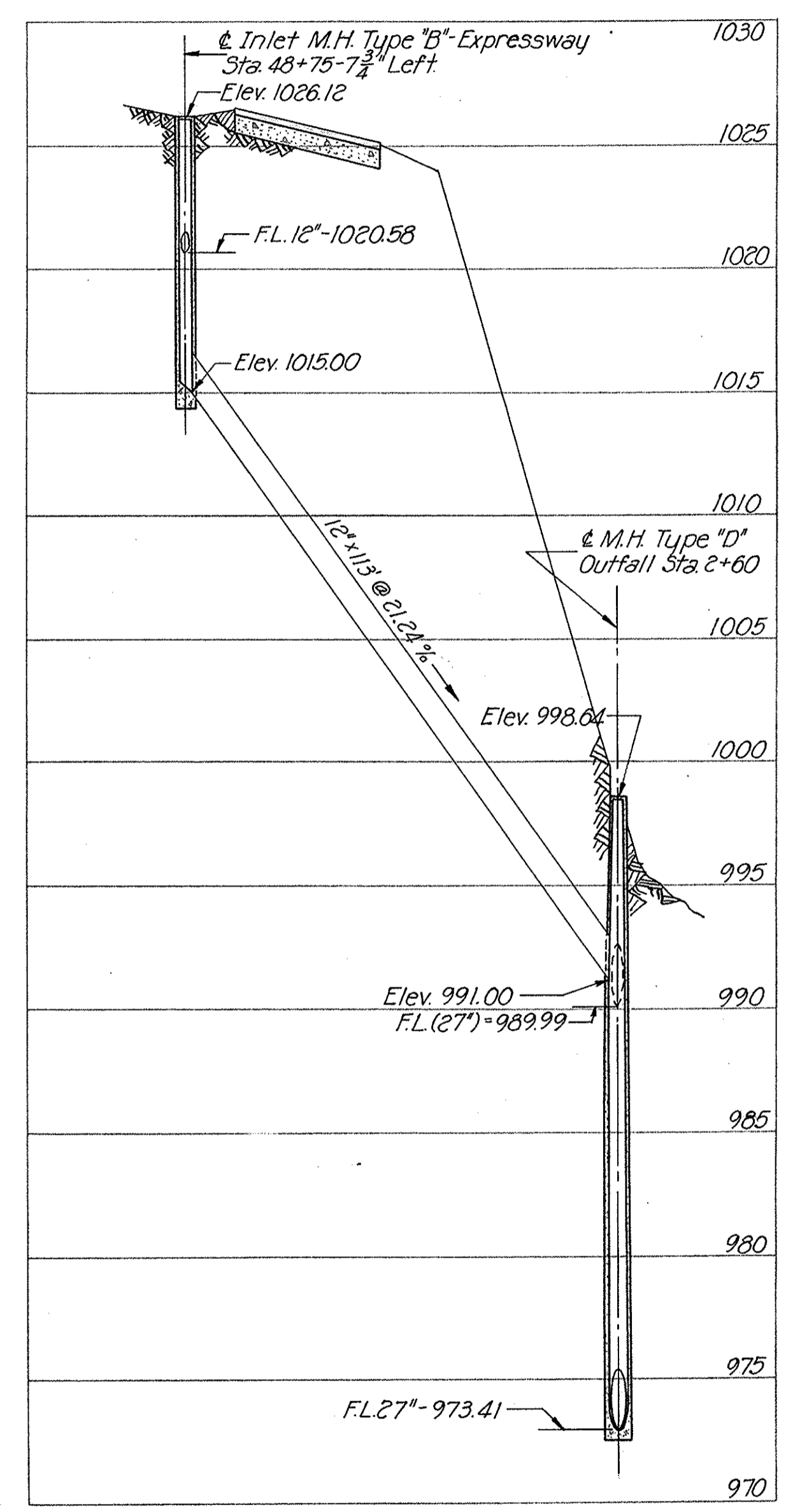
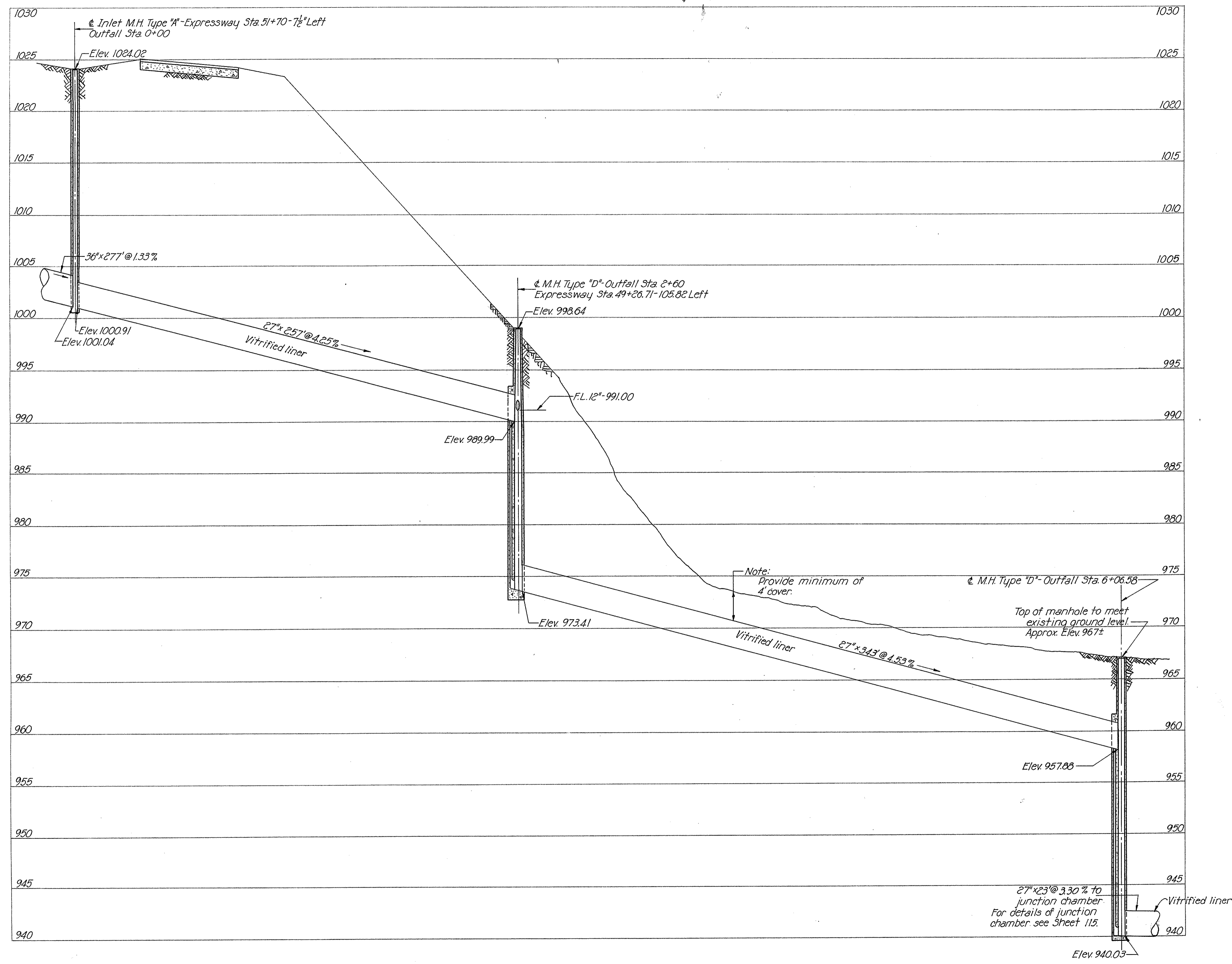


WINGWALL INLET AT STATION 51+05
Scale: 1/2"=1'-0"

ESTIMATED QUANTITIES		
Description	Unit	Total
Excavation for structures	Cu. Yd.	10
Concrete for structures - Class C	Cu. Yd.	6.0
Reinforcing steel	Lbs	189

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE	PLANS	SHEET NO.
2	OHIO	U-687(B)	POST WAR		104

SUMMIT COUNTY
 CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
 EXPRESSWAY-PART 3
 SUM-5-12.62
OUTFALL SEWER PROFILES

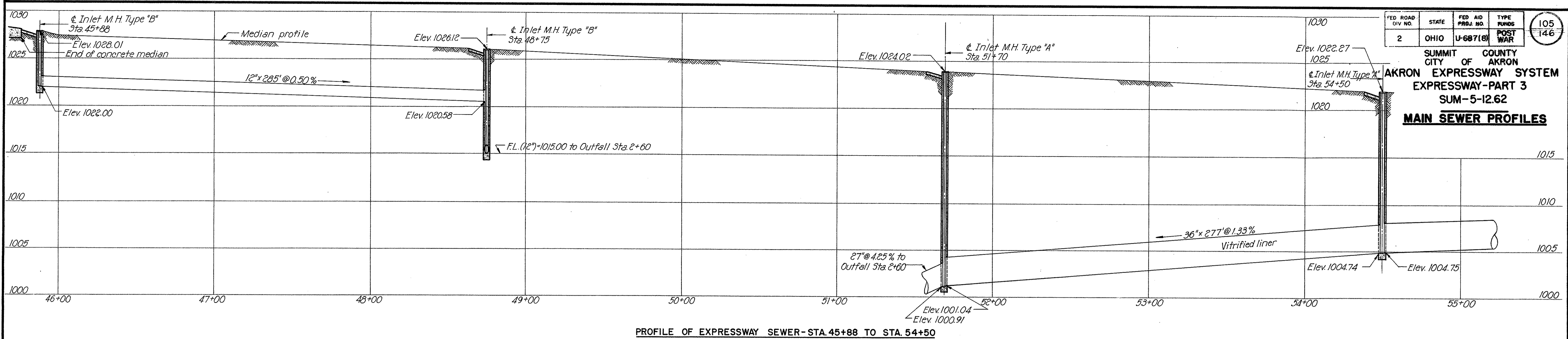


PROFILE OF OUTFALL - EXPRESSWAY STA. 48+75.00

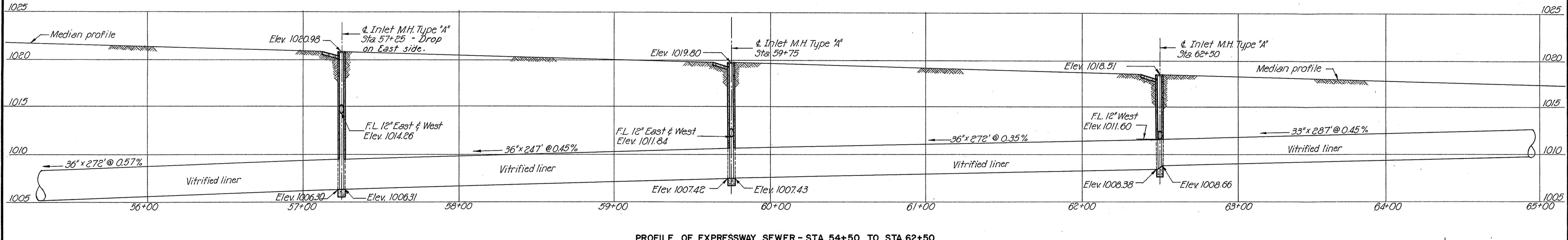
PROFILE OF LOOKOUT AVENUE OUTFALL

SCALE 1"=30' HORIZ. 1"=5' VERT.
 MADE B.H.R. DATE 7-6-50
 TRACED BY: B.L.B. DATE 7-28-50
 C.H.D. G.M. DATE 7-29-50
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK
 766 SHEET

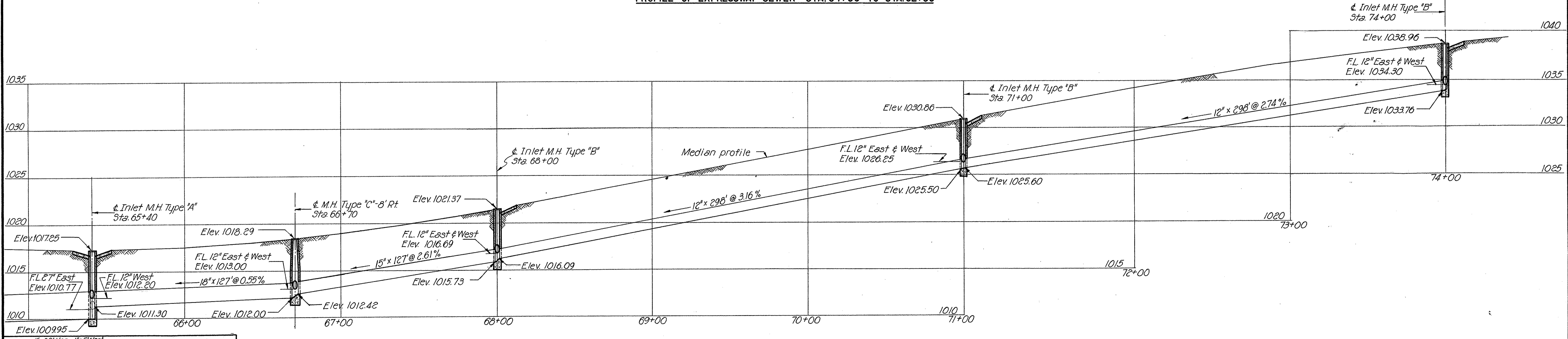
316



PROFILE OF EXPRESSWAY SEWER - STA. 45+88 TO STA. 54+50



PROFILE OF EXPRESSWAY SEWER - STA. 54+50 TO STA. 62+50



PROFILE OF EXPRESSWAY SEWER - STA. 62+50 TO STA. 74+00

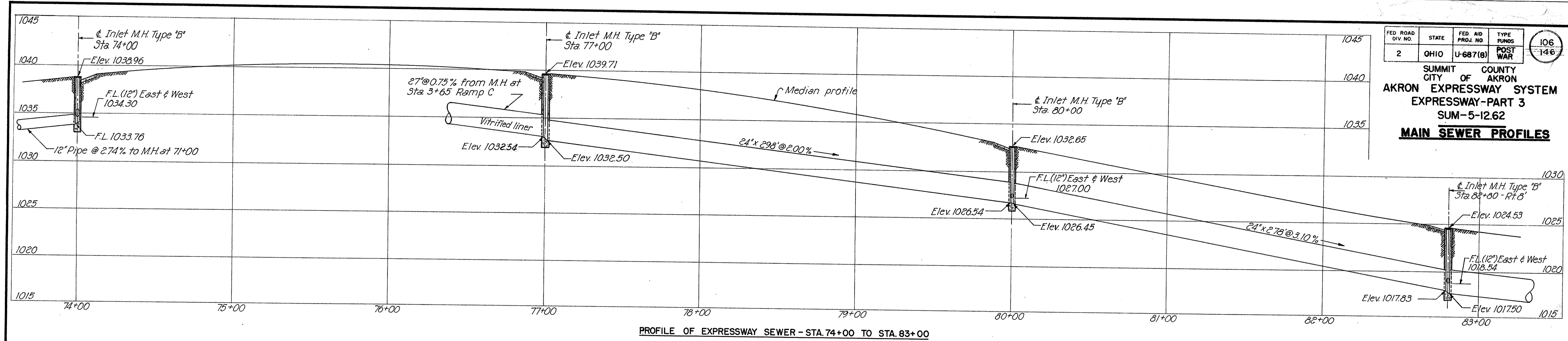
SCALE: 1"=30' Hor.; 1"=5' Vert.
 MADE: D.W. DATE: 3-22-50
 TRCD: B.L.B. DATE: 7-25-50
 CKD: G.M. DATE: 7-26-50

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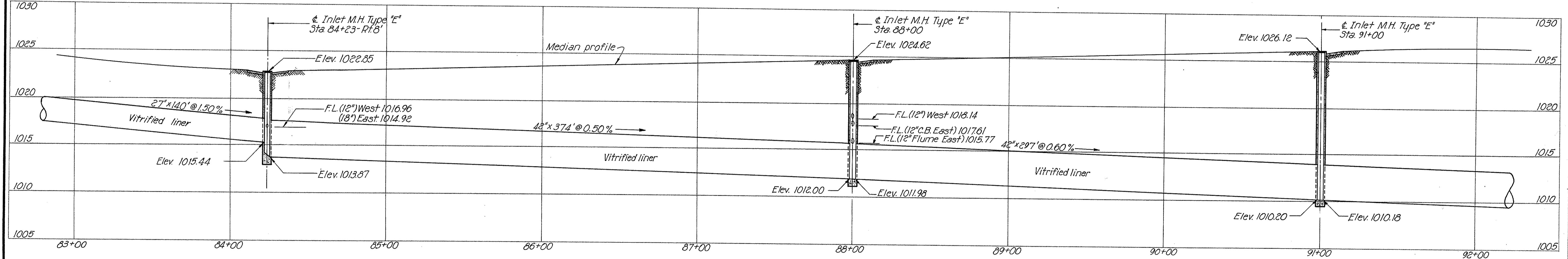
766 SHEET

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	106 146
2	OHIO	U-687(8)	POST WAR	

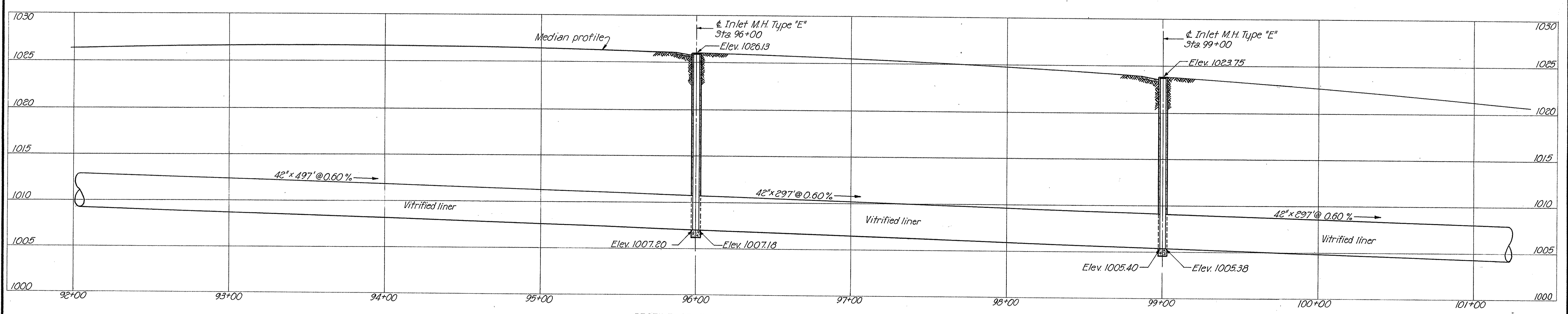
SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
MAIN SEWER PROFILES



PROFILE OF EXPRESSWAY SEWER - STA. 74+00 TO STA. 83+00



PROFILE OF EXPRESSWAY SEWER - STA. 83+00 TO STA. 92+00



PROFILE OF EXPRESSWAY SEWER - STA. 92+00 TO STA. 101+00

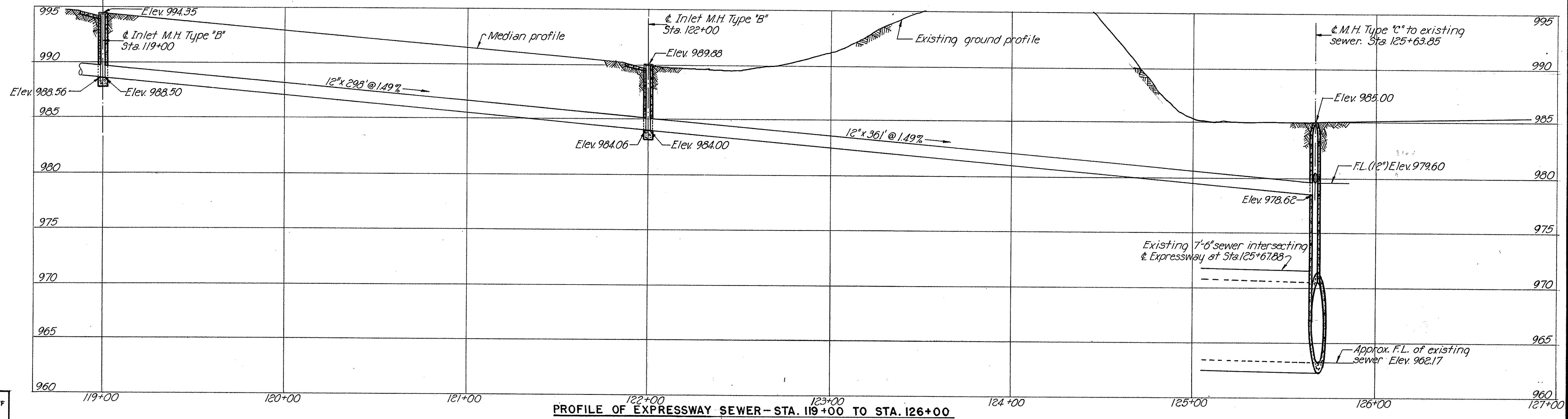
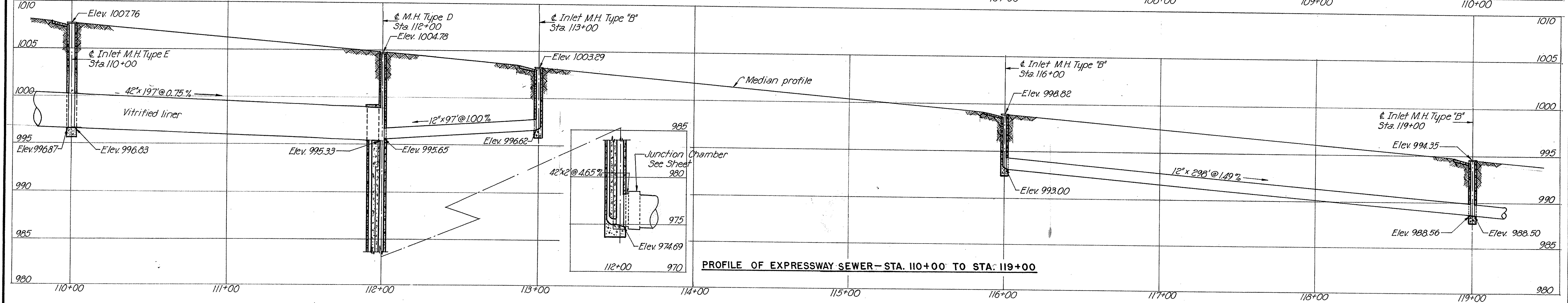
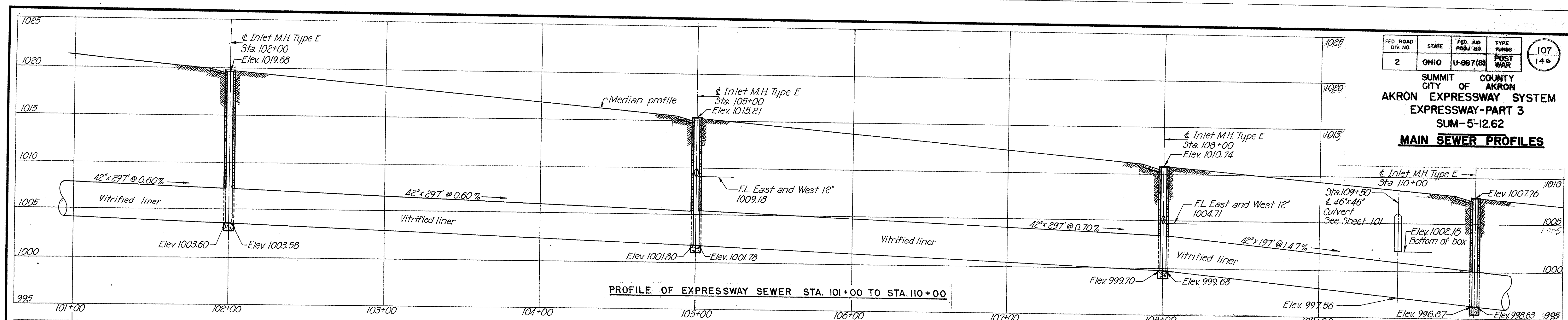
SCALE 1"=30' HOR.; 1"=5' VERT.
 MADE D.W. DATE 6-23-50
 TRCD. B.B. DATE 6-26-50
 CKD G.M. DATE 7-26-50

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 KANSAS CITY NEW YORK
 766 SHEET

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FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	POST WAR
2	OHIO	U-687(B)	POST WAR	146

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
MAIN SEWER PROFILES

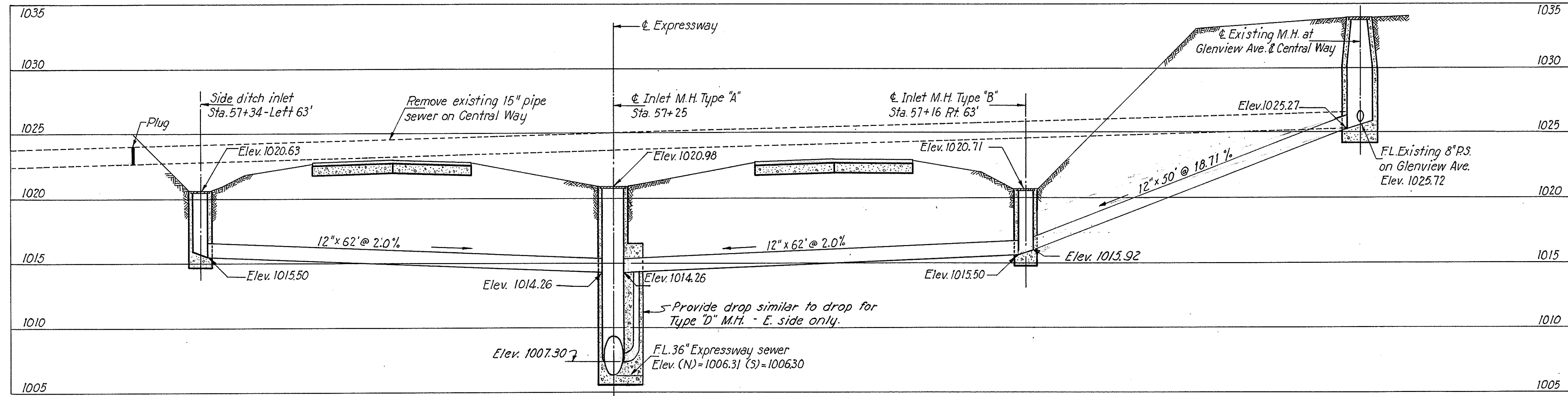


SCALE 1"=30' Horiz. 1"=5' Vert.
MADE BY DATE
TRCS W-8-88 DATE 7-28-90
CER DATE

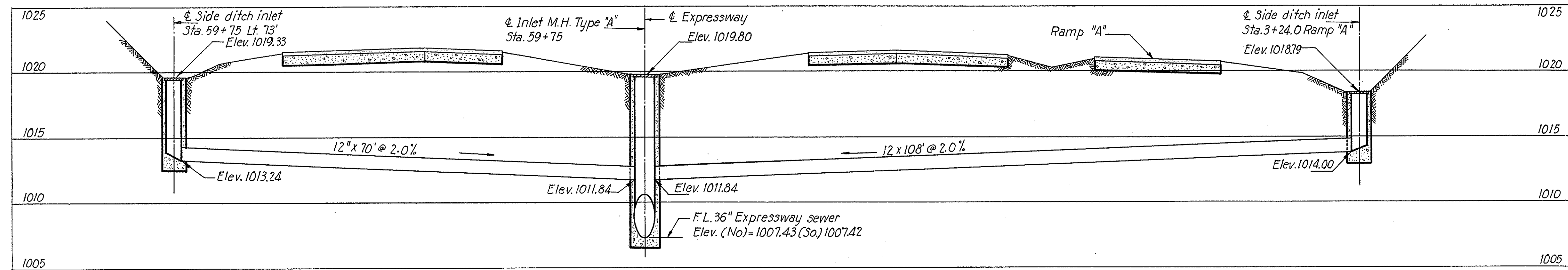
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
766 SHEET

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	108 146
2	OHIO	U-687(8)	POST WAR	

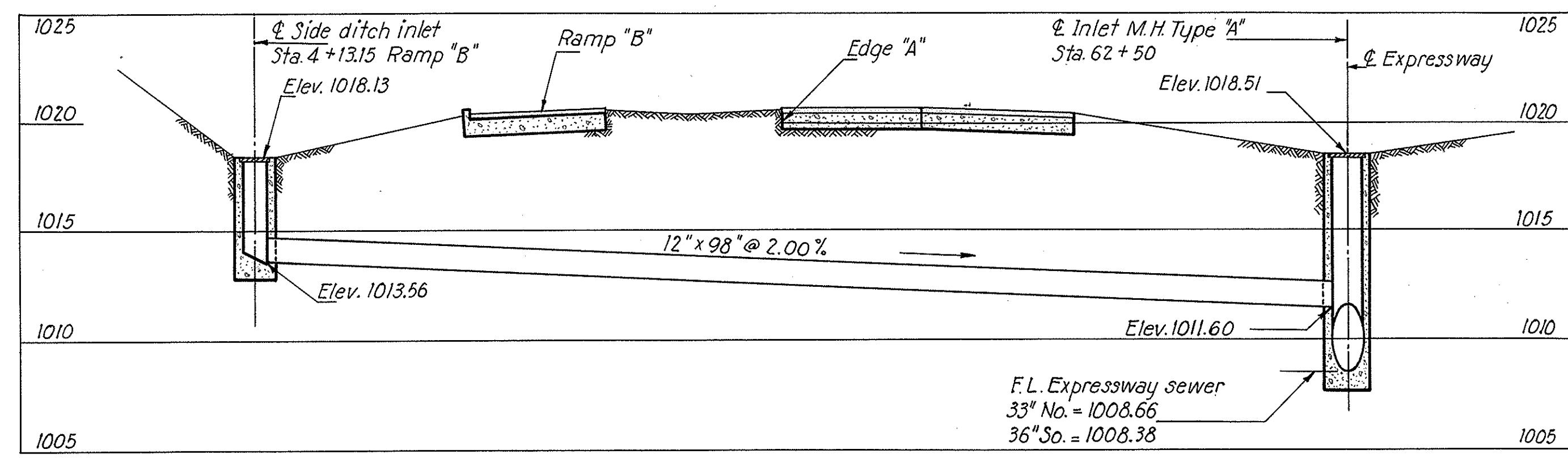
SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
LATERAL PROFILES



PROFILE OF RELOCATED SEWER AT CENTRAL WAY-STA. 57+25



PROFILE OF SIDE DITCH AND RAMP FLUME LATERALS - STA. 59+75

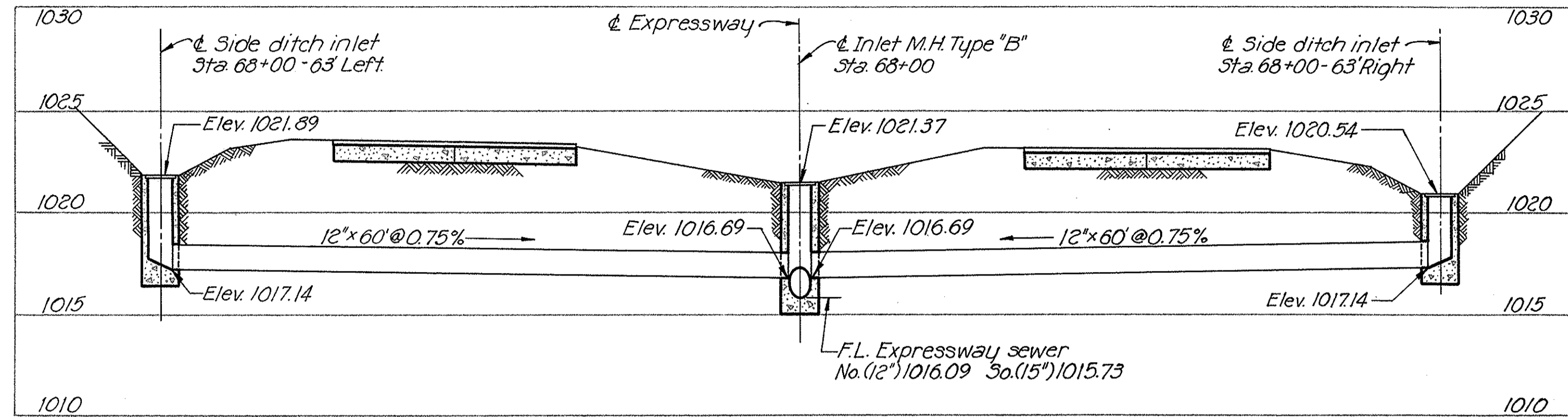


PROFILE OF RAMP FLUME LATERAL - STA. 62+50

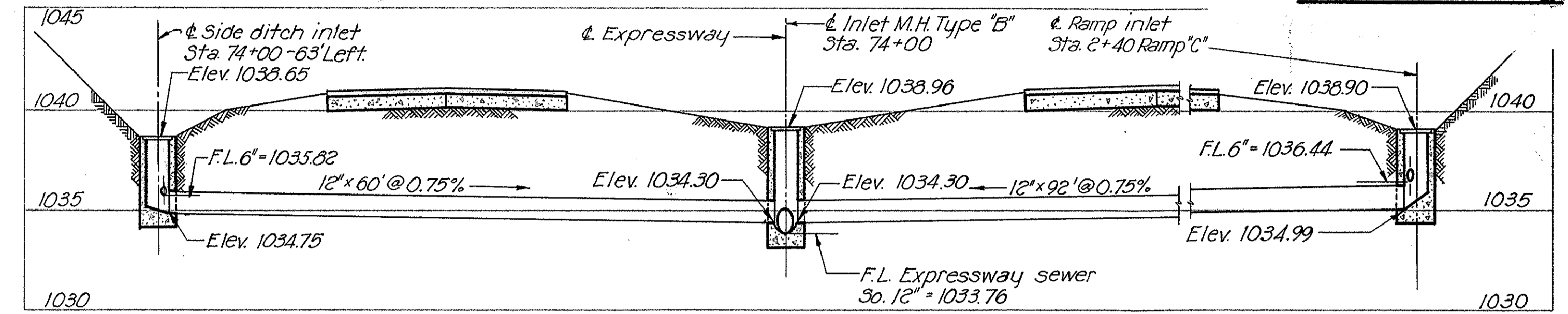
SCALE: 1"=10' Hor.; 1"=5' Vert.
MADE: D.L.W. DATE 3-30-50
TRCD: R.R. DATE 6-7-50
CKD: R.R. DATE 8-2-50
HOWARD, NEEDLES, TAMMEN & BERGENOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
766 SHEET-

233

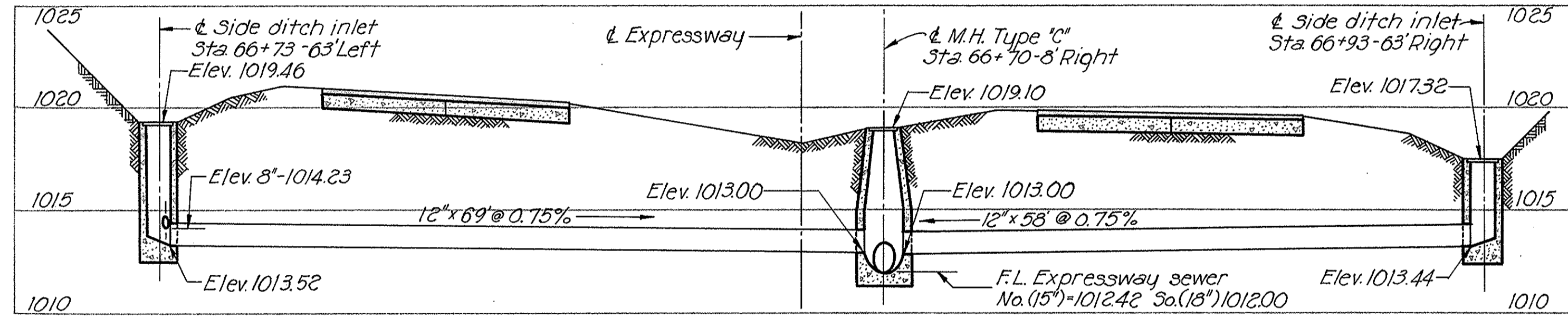
LATERAL PROFILES



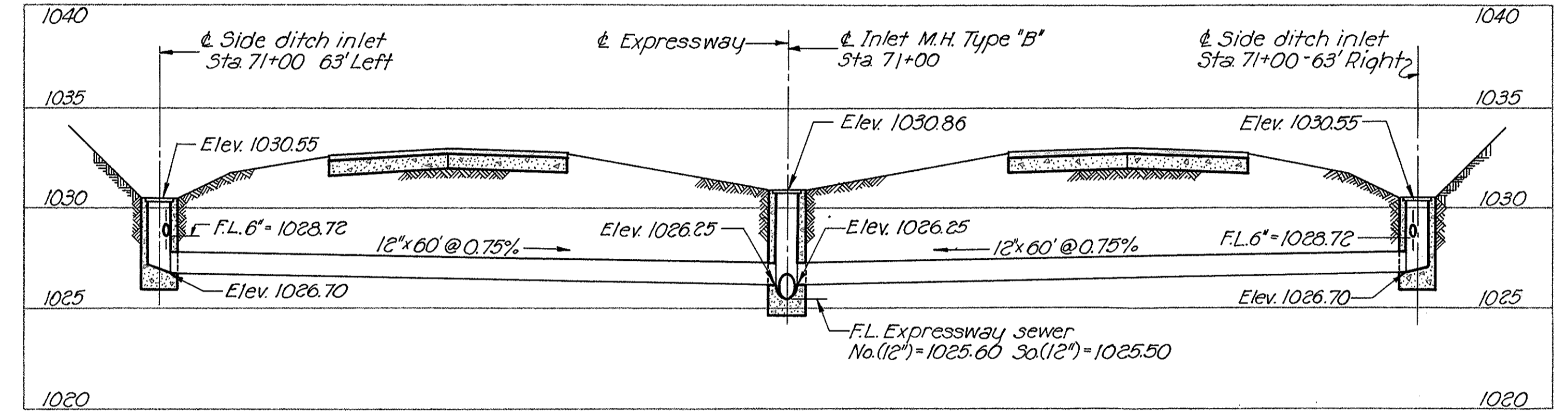
PROFILE OF SIDE DITCH LATERALS - STA. 68+00



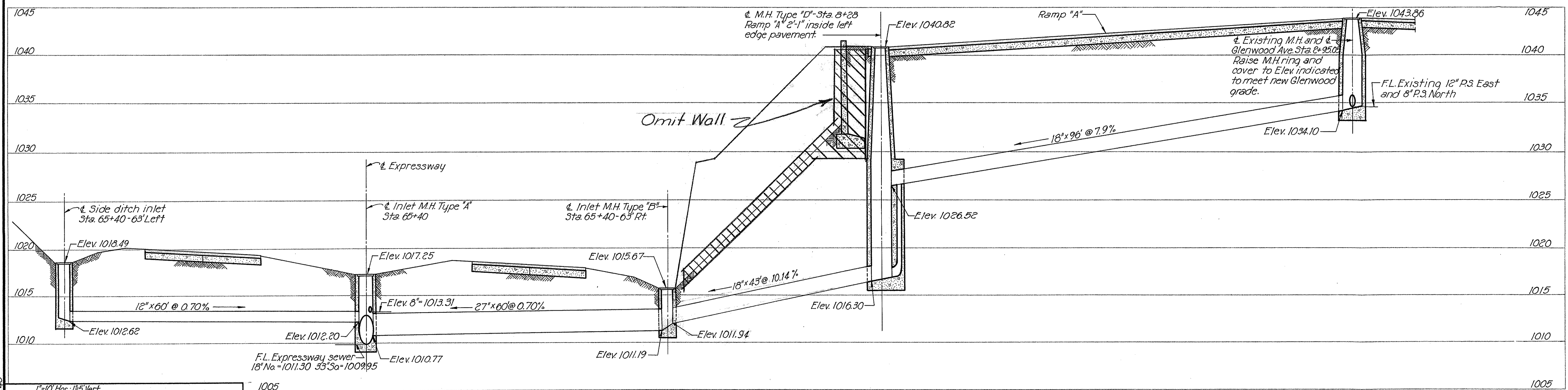
PROFILE OF SIDE DITCH LATERALS - STA. 74+00



PROFILE OF SIDE DITCH LATERALS - STA. 66+70



PROFILE OF SIDE DITCH LATERALS - STA. 71+00



PROFILE OF SIDE DITCH LATERALS AND INTERCEPTED GLENWOOD AVENUE SEWER - STA. 65+40

SCALE: 1"=10' Hor.; 1"=5' Vert.
 MADE: D.J.W. DATE: 4-3-50
 TRCD: B.L.B. DATE: 7-20-50
 CKD: G.M. DATE: 7-21-50

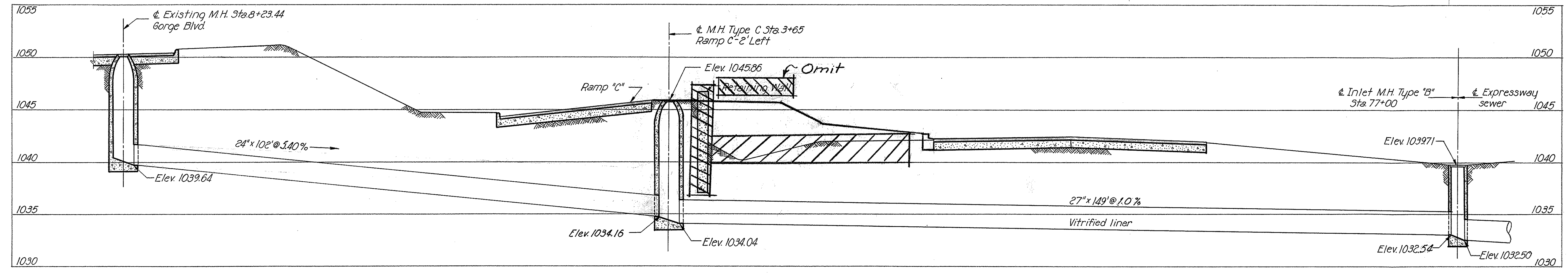
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK

766 SHEET

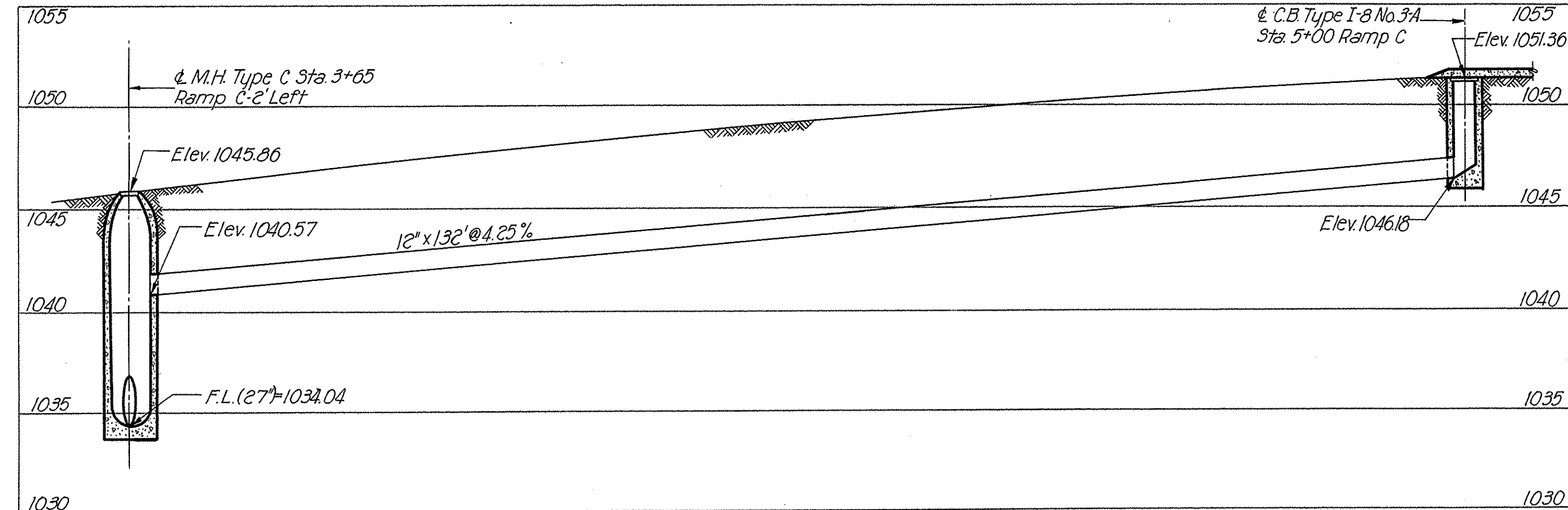
Revised 4-16-51

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	110
2	OHIO	U-687(B)	POST WAR	146

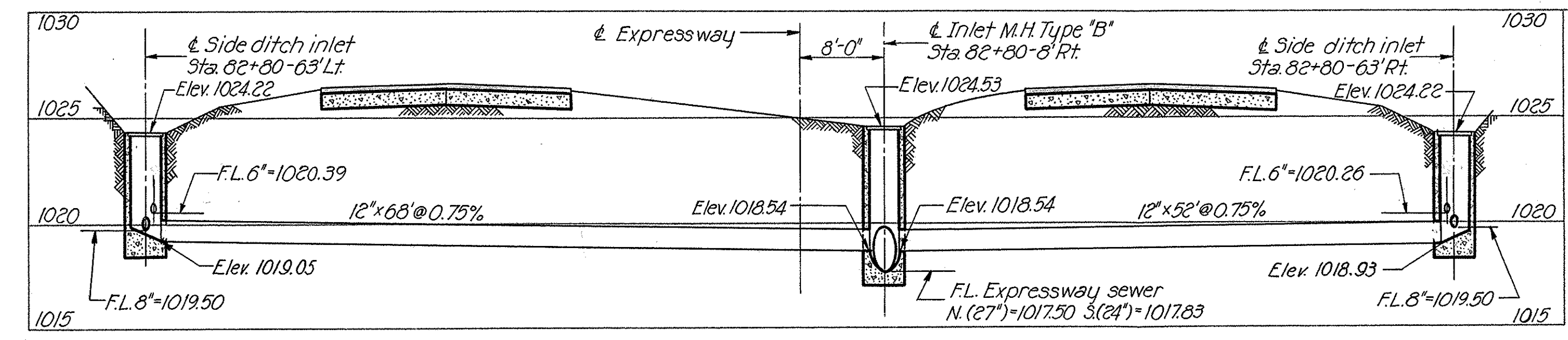
SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
LATERAL PROFILES



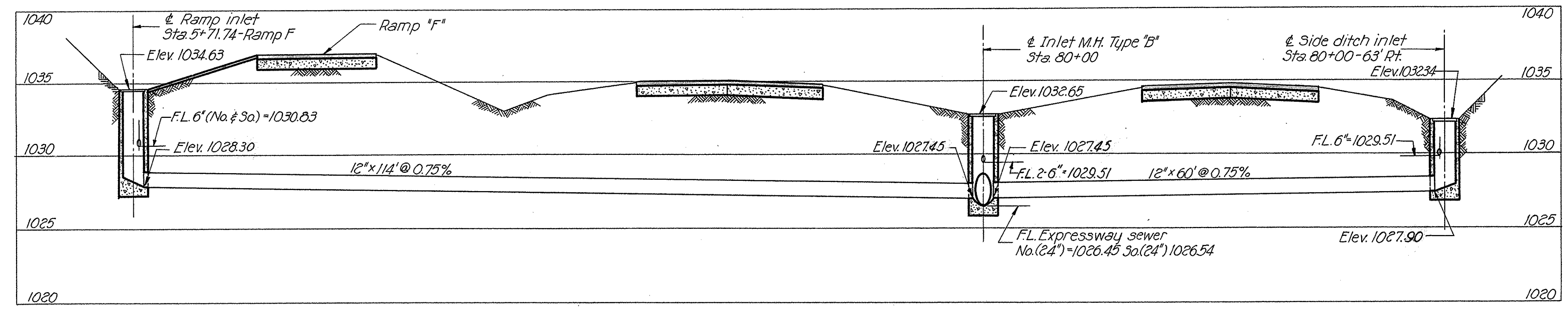
PROFILE OF INTERCEPTED GORGE BLVD. SEWER - STA. 77+00



PROFILE OF RAMP "C" LATERAL - STA. 3+65



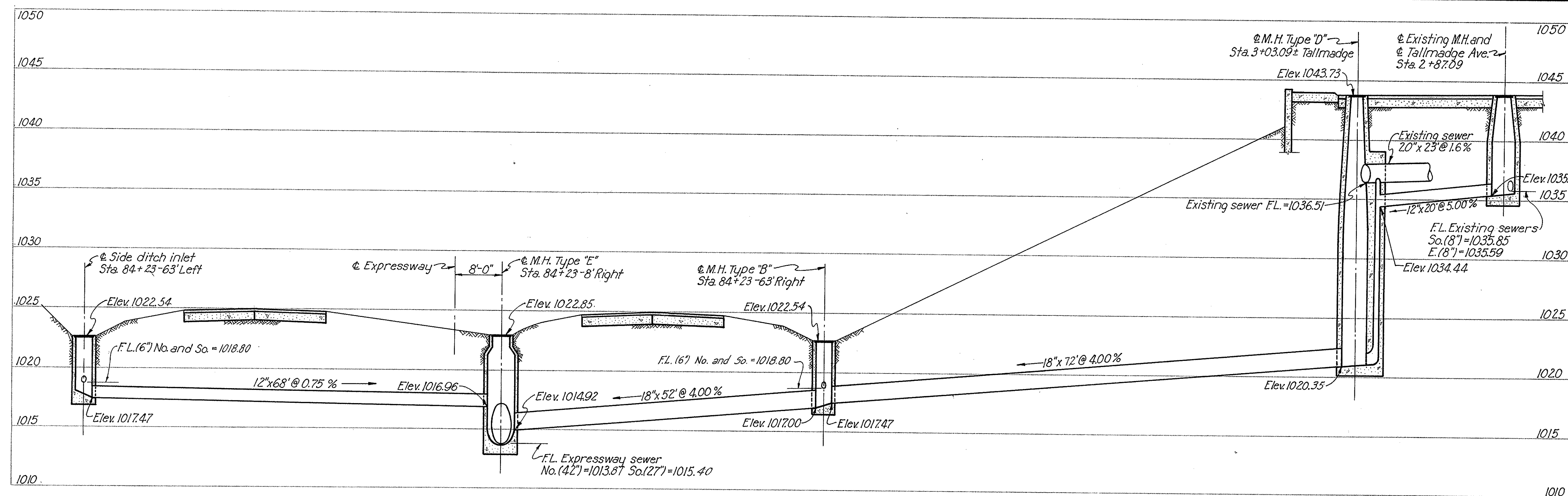
PROFILE OF SIDE DITCH LATERALS - STA. 82+80



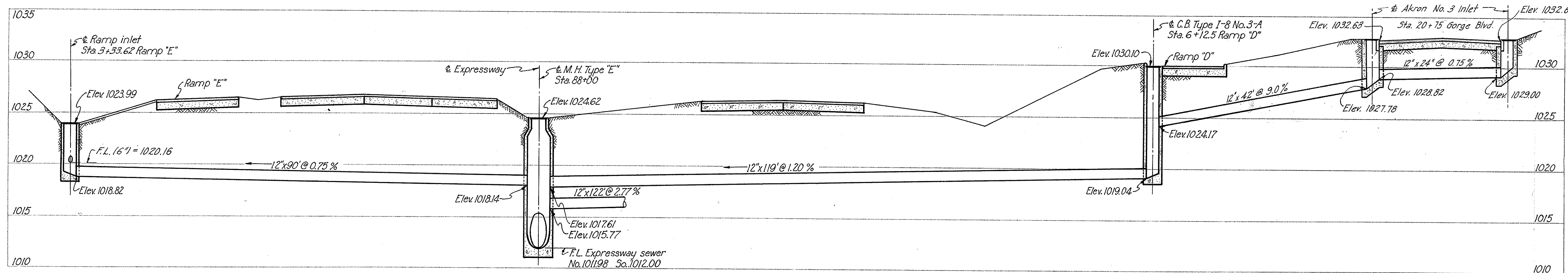
PROFILE OF SIDE DITCH AND RAMP "F" LATERALS - STA. 80+00

SCALE: 1"=10' Hor.; 1"=5' Vert.
MADE B.M. DATE 6-28-50
TRCD B.L. DATE 7-21-50
C.K.D. G.M. DATE 7-22-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
766 SHEET

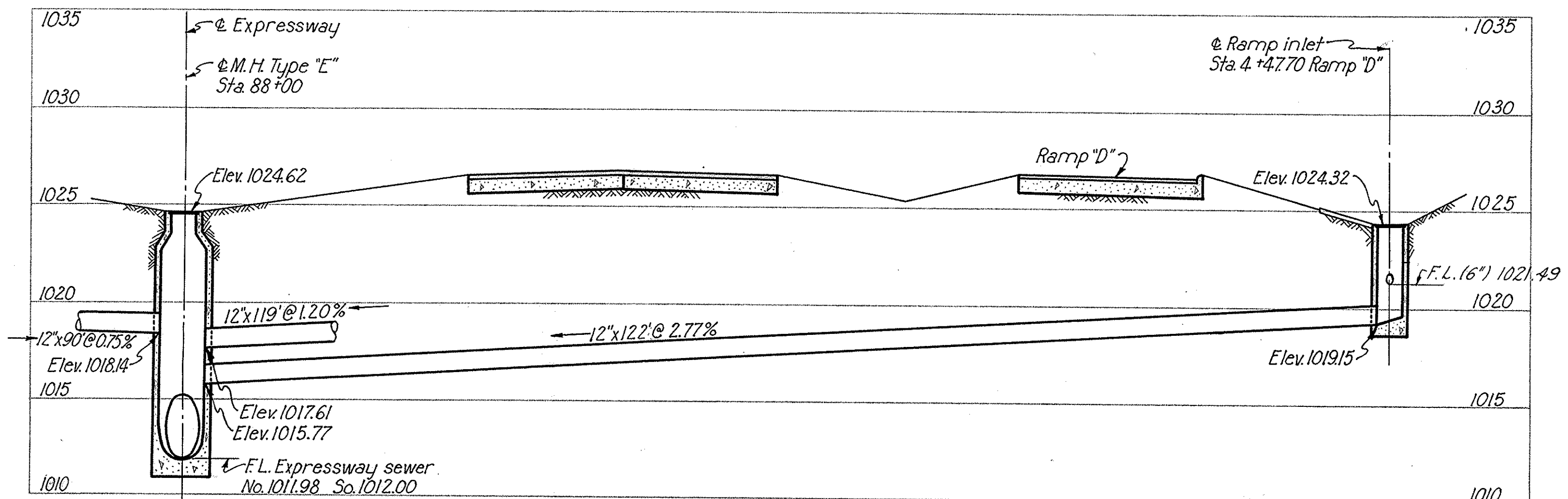
Revised 4-16-51



PROFILE OF SIDE DITCH LATERALS AND INTERCEPTED TALLMADGE AVENUE SEWER-STA. 84+23



PROFILE OF RAMP AND GORGE BOULEVARD LATERALS-STA. 88+00



PROFILE OF RAMP "D" FLUME LATERAL-STA. 88+00

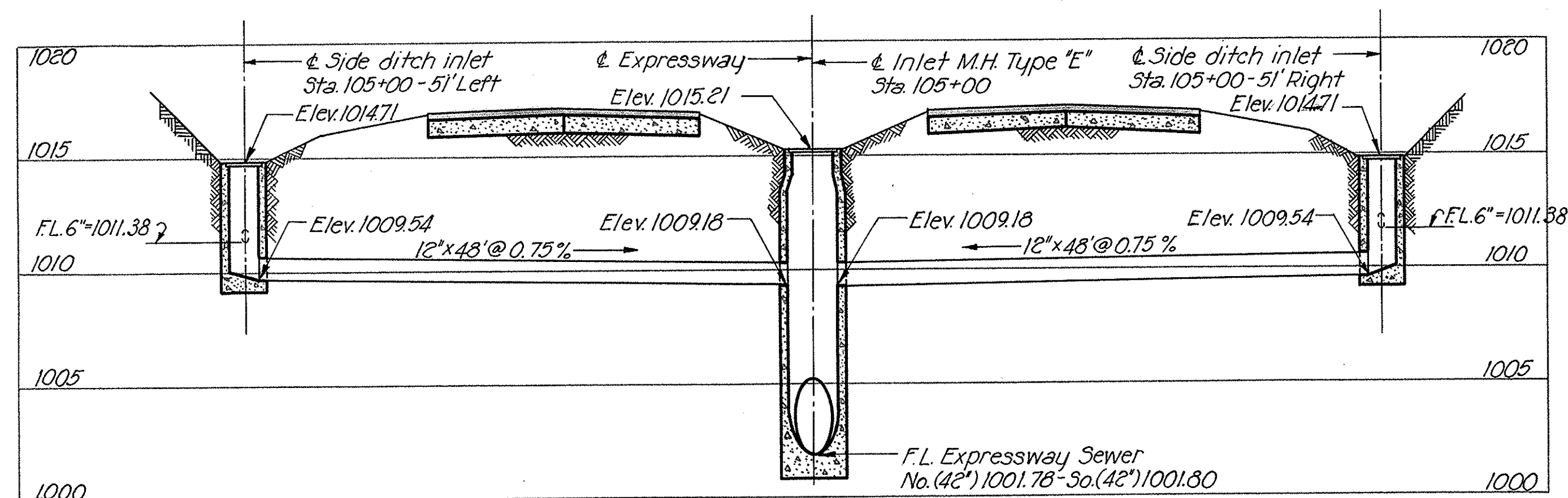
SCALE 1"=10' Horiz., 5" Vert.
MADE B.H.R. DATE 6-30-50
TRCD. I.L. DATE 7-21-50
CKD. K.D. DATE 7-21-50

HOWARD, NEEDLES, TAMMEN & BERGENOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

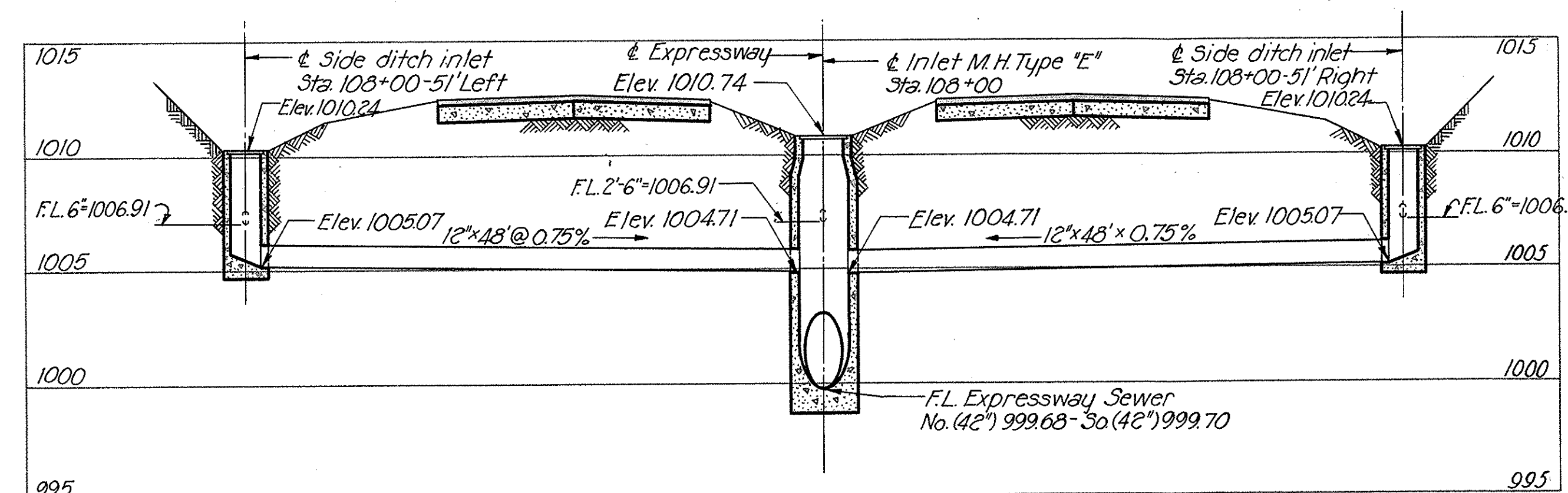
766 SHEET

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	112
2	OHIO	U-687(8)	POST WAR	146

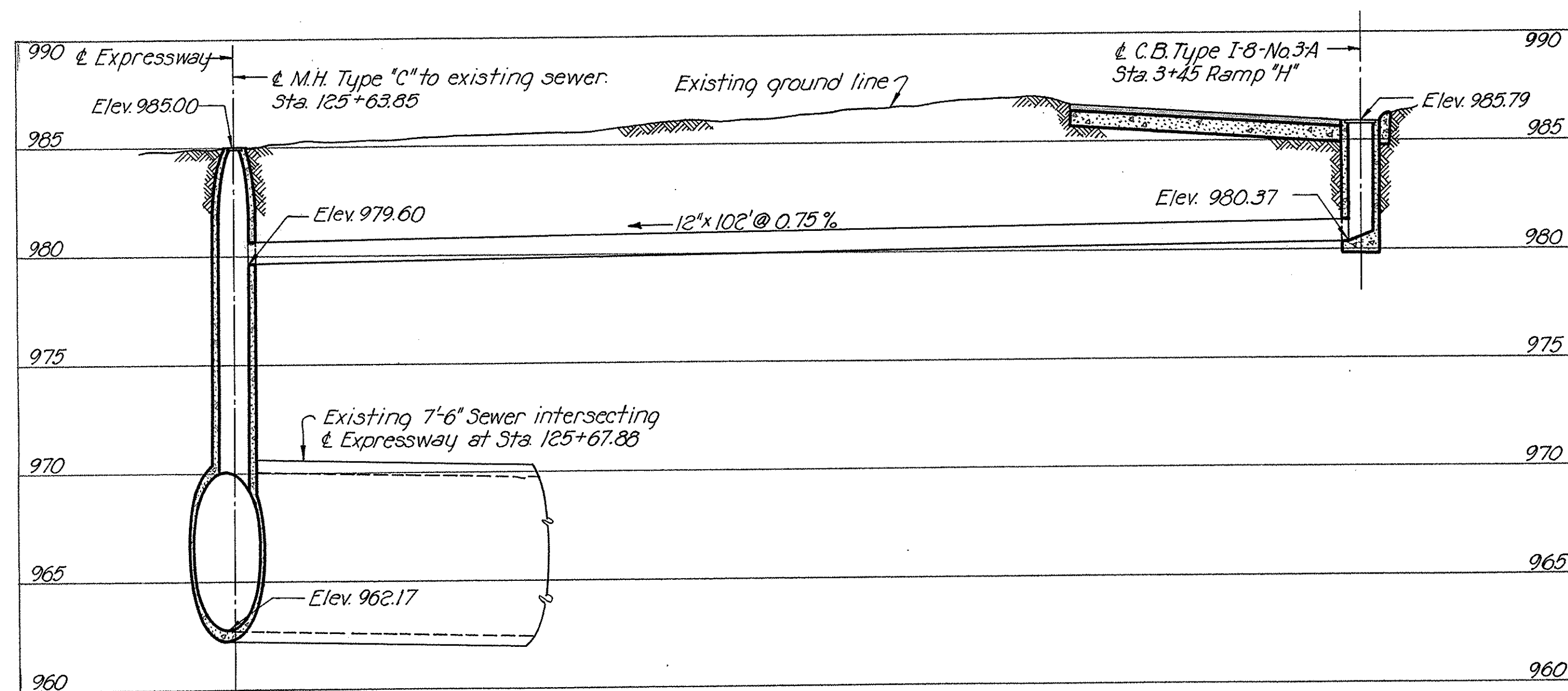
SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
LATERAL PROFILES



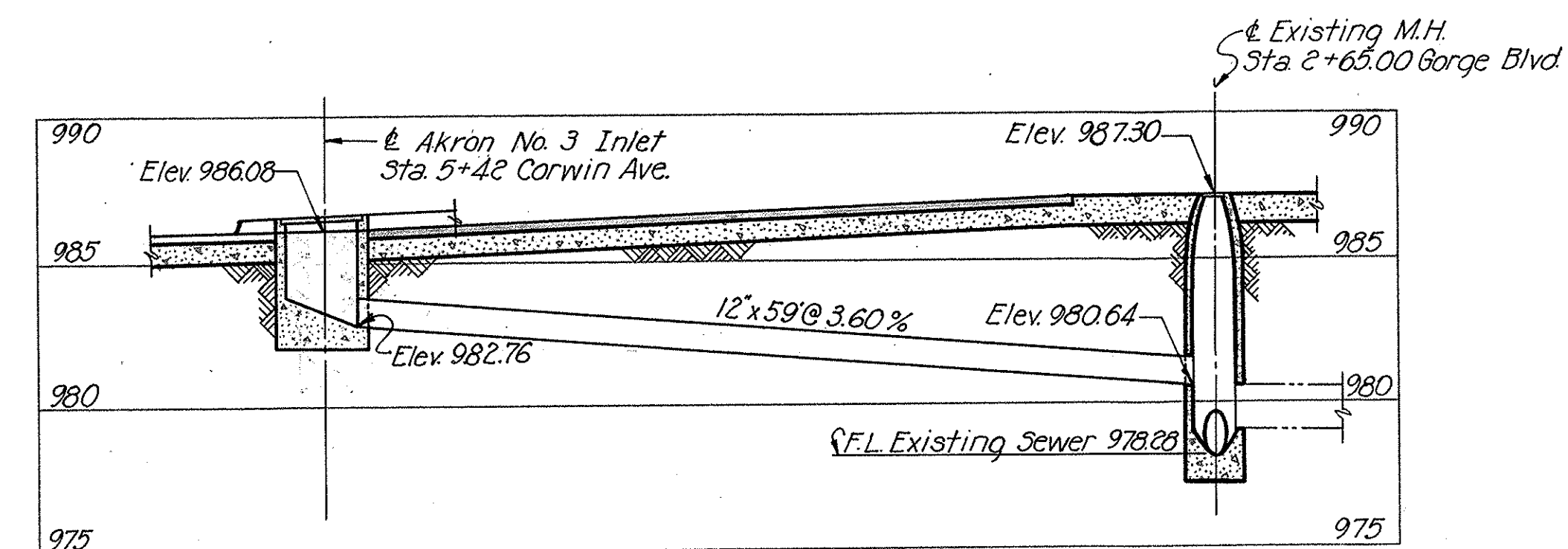
PROFILE OF SIDE DITCH LATERALS - STA. 105+00



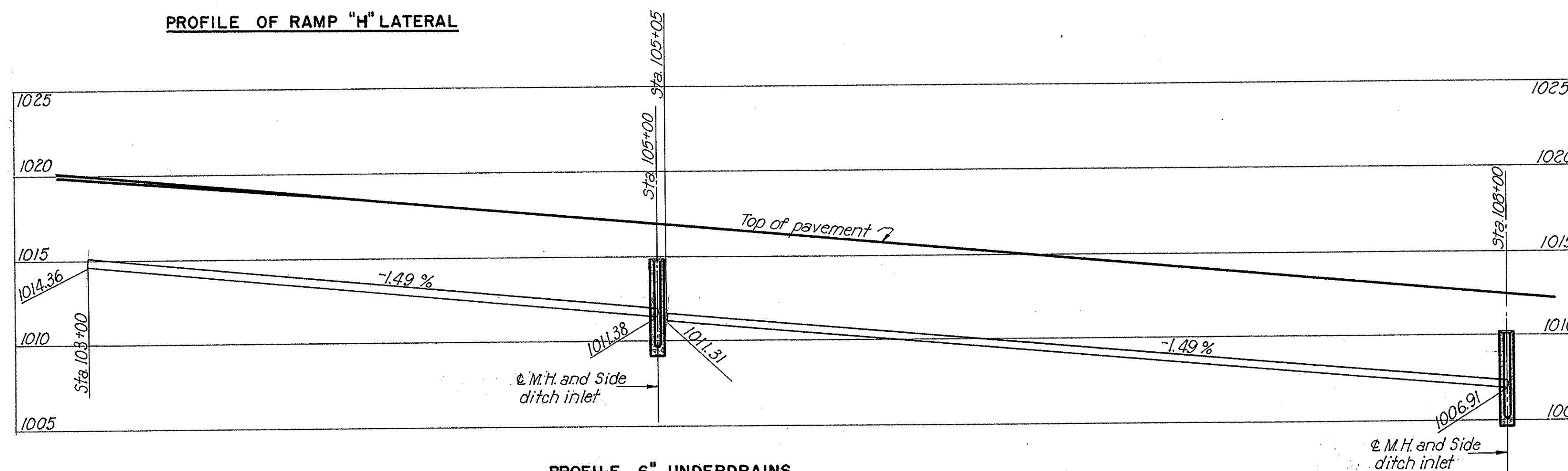
PROFILE OF SIDE DITCH LATERALS - STA. 108+00



PROFILE OF RAMP "H" LATERAL



PROFILE OF C.B. AT STA. 5+42 CORWIN AVE.



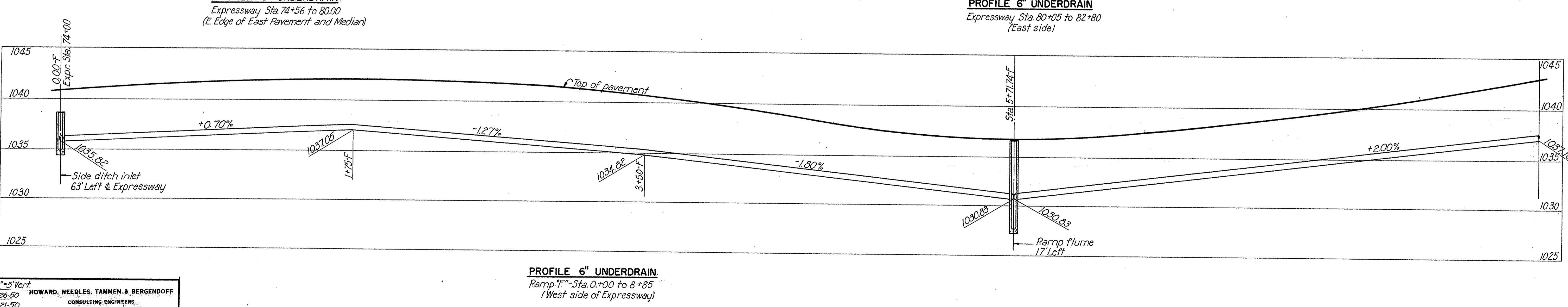
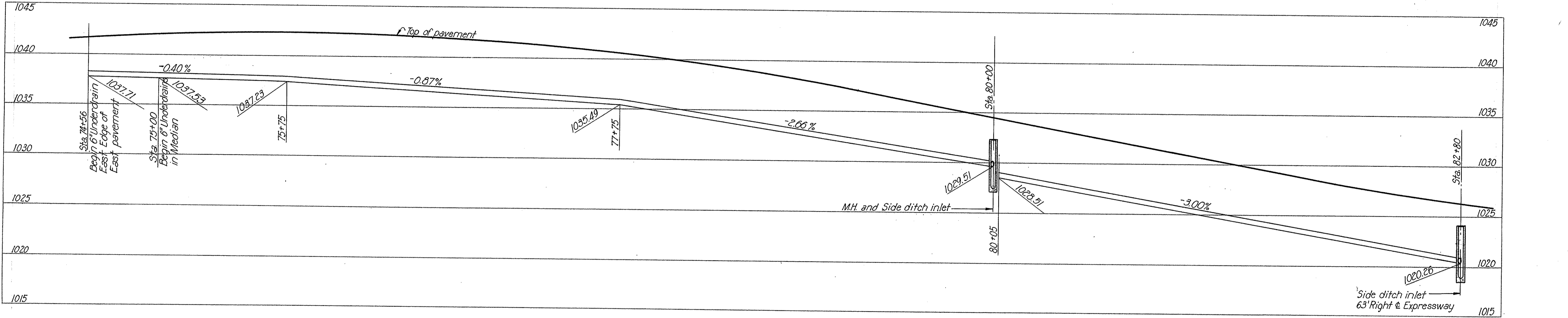
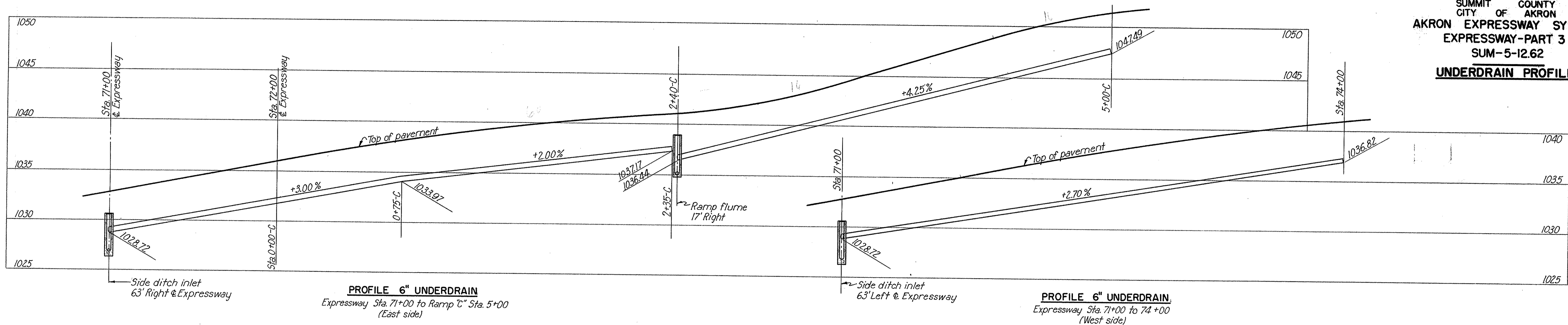
PROFILE 6" UNDERDRAINS
Expressway Sta. 103+00 to 108+00
(Both Sides)

SCALE: 1"=10' HORIZ., 1"=5' VERT.
MADE G.M. DATE 7-8-50
TRCD B.B. DATE 7-25-50
CKD G.M. DATE 7-26-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
766 SHEET

519 & 321

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	113 146
2	OHIO	U-687(8)	POST WAR	

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
UNDERDRAIN PROFILES



SCALE 1"=30' Hor.; 1"=5' Vert.
MADE C.M.M. DATE 6-26-50
TRCD. L.L. DATE 7-21-50
CKD G.M. DATE 7-22-50

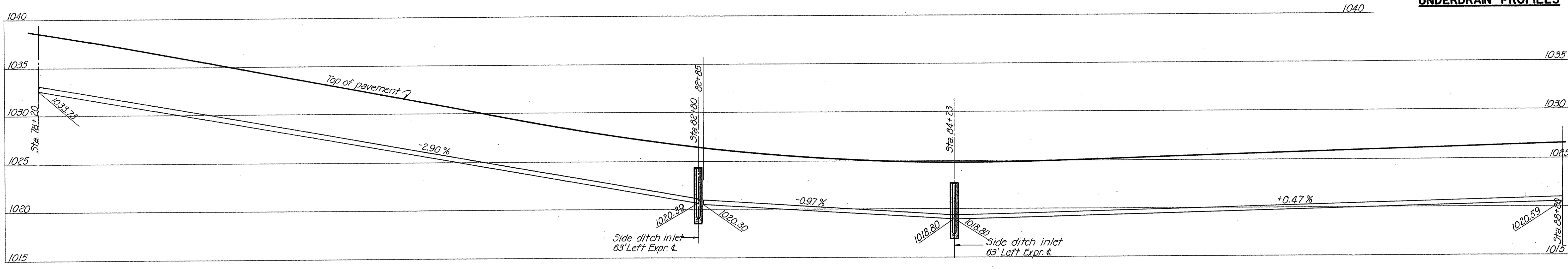
HOWARD, NEEDLES, TAMMEN & BERGENOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

766 SHEET

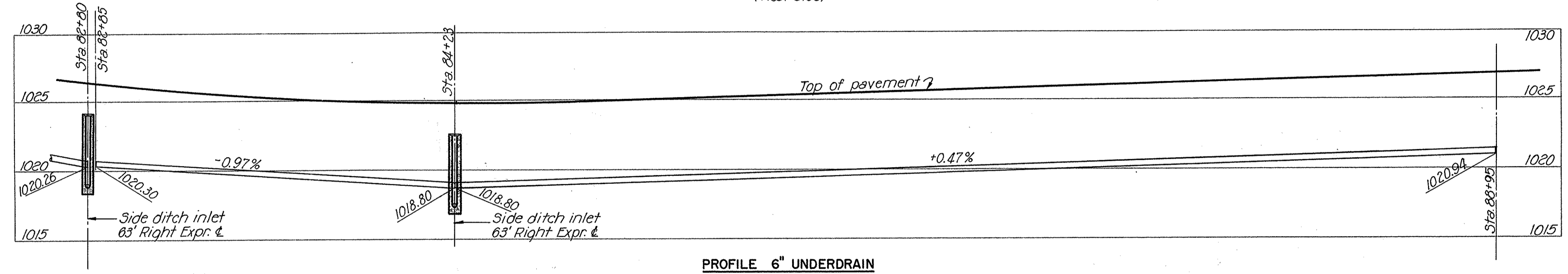
317

FED ROAD DIV NO.	STATE	FED AID PROJ NO.	TYPE FUNDS	114
2	OHIO	U-687(8)	POST WAR	146

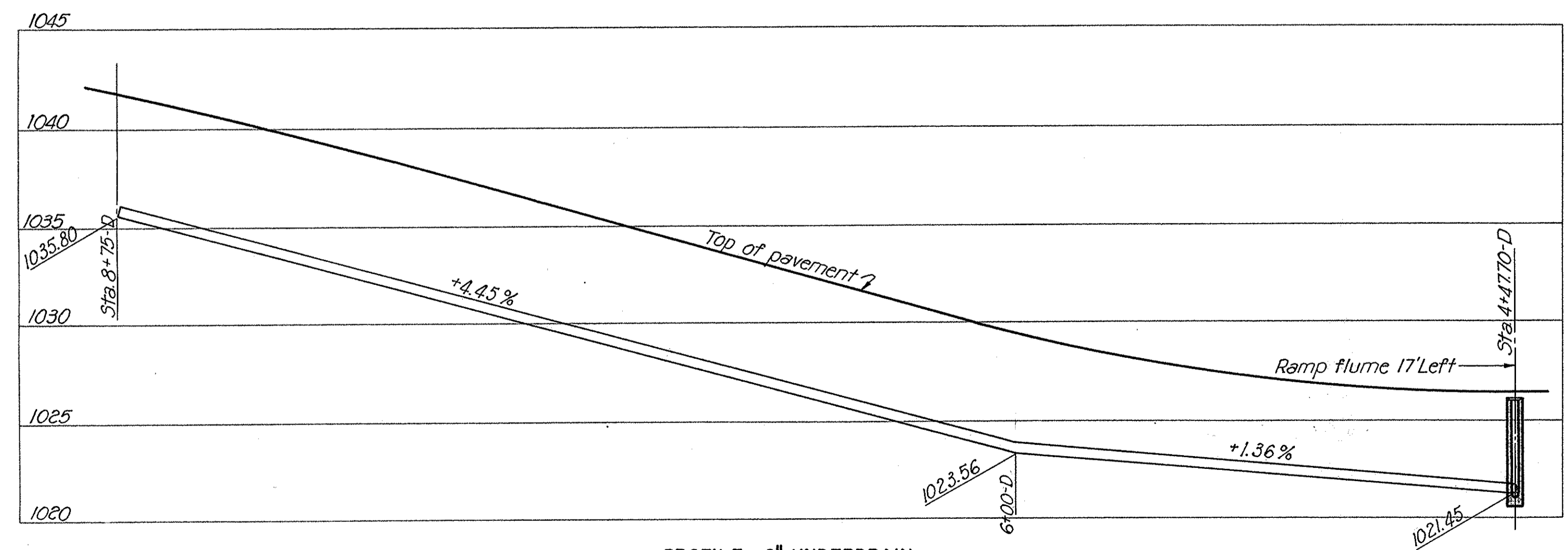
SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY - PART 3
SUM-5-12.62
UNDERDRAIN PROFILES



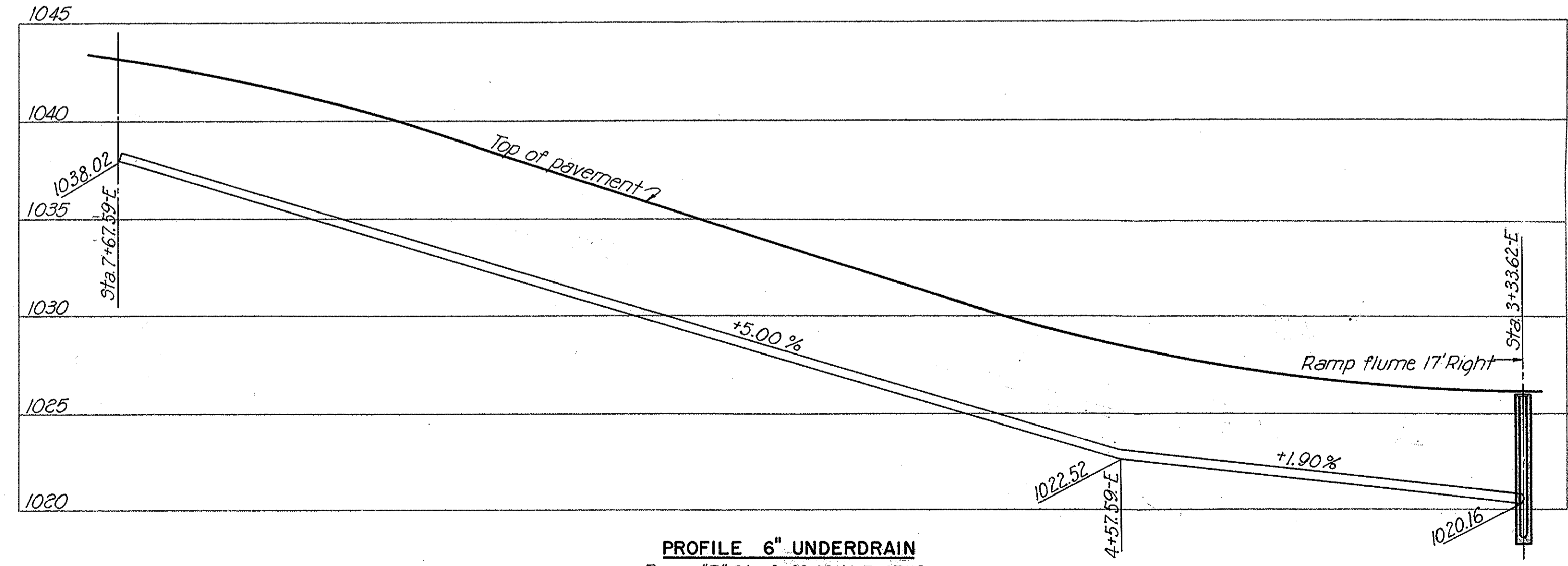
PROFILE 6" UNDERDRAIN
Expressway Sta. 78+20 to 88+20
(West Side)



PROFILE 6" UNDERDRAIN
Expressway Sta. 82+85 to 88+95
(East Side)



PROFILE 6" UNDERDRAIN
Ramp "D" Sta. 4+47.70 to 8+75

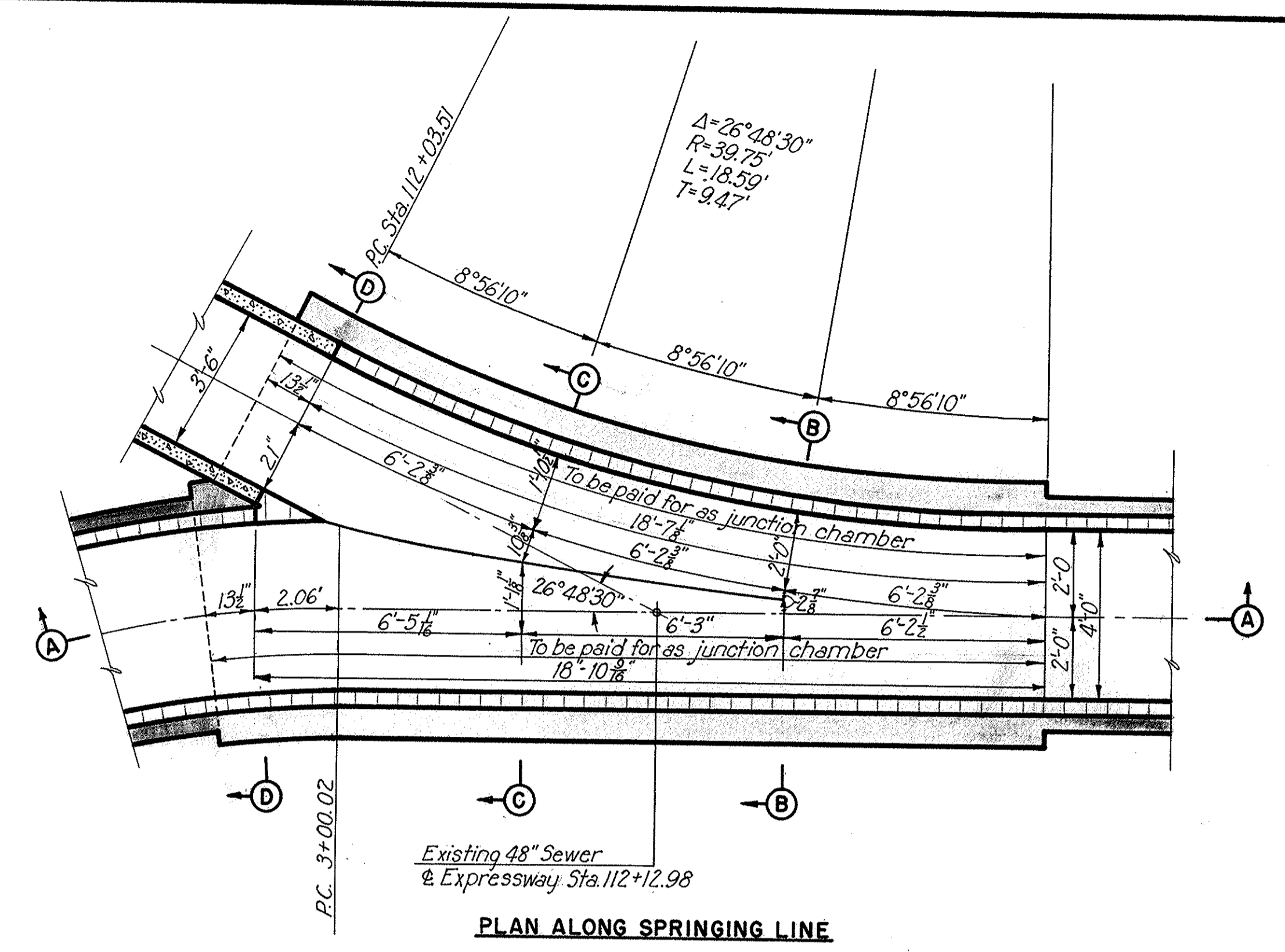


PROFILE 6" UNDERDRAIN
Ramp "E" Sta. 3+33.62 to 7+67.59

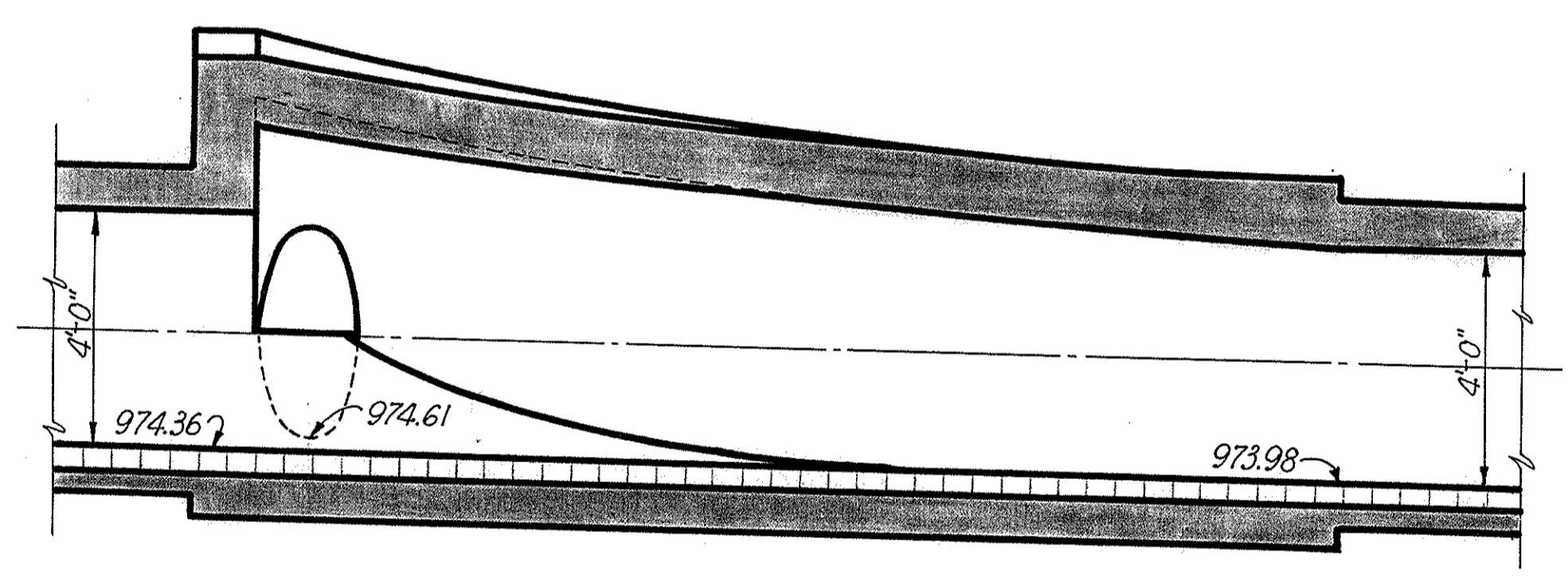
SCALE: 1"=30' Hor.; 1"=5' Vert.
MADE: M.N.L. DATE 6-27-50
TRCD: B.L.B. DATE 7-26-50
CHK: G.M. DATE 7-26-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
766 SHEET

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	115
2	OHIO	U-687(B)	POST WAR	146

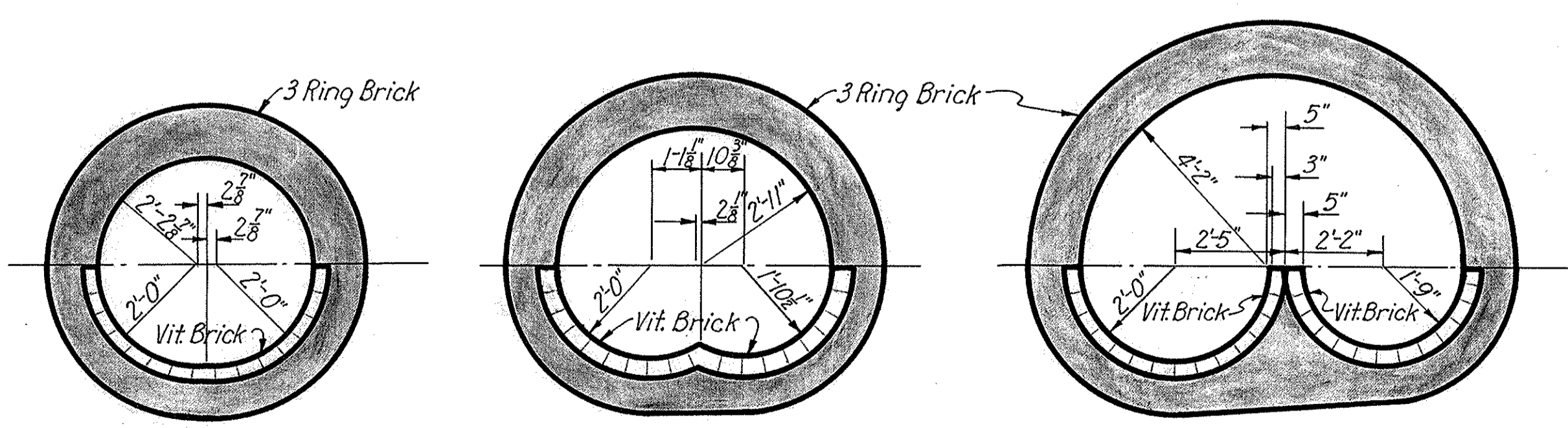
SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
JUNCTION CHAMBER DETAILS



PLAN ALONG SPRINGING LINE



SECTION A-A



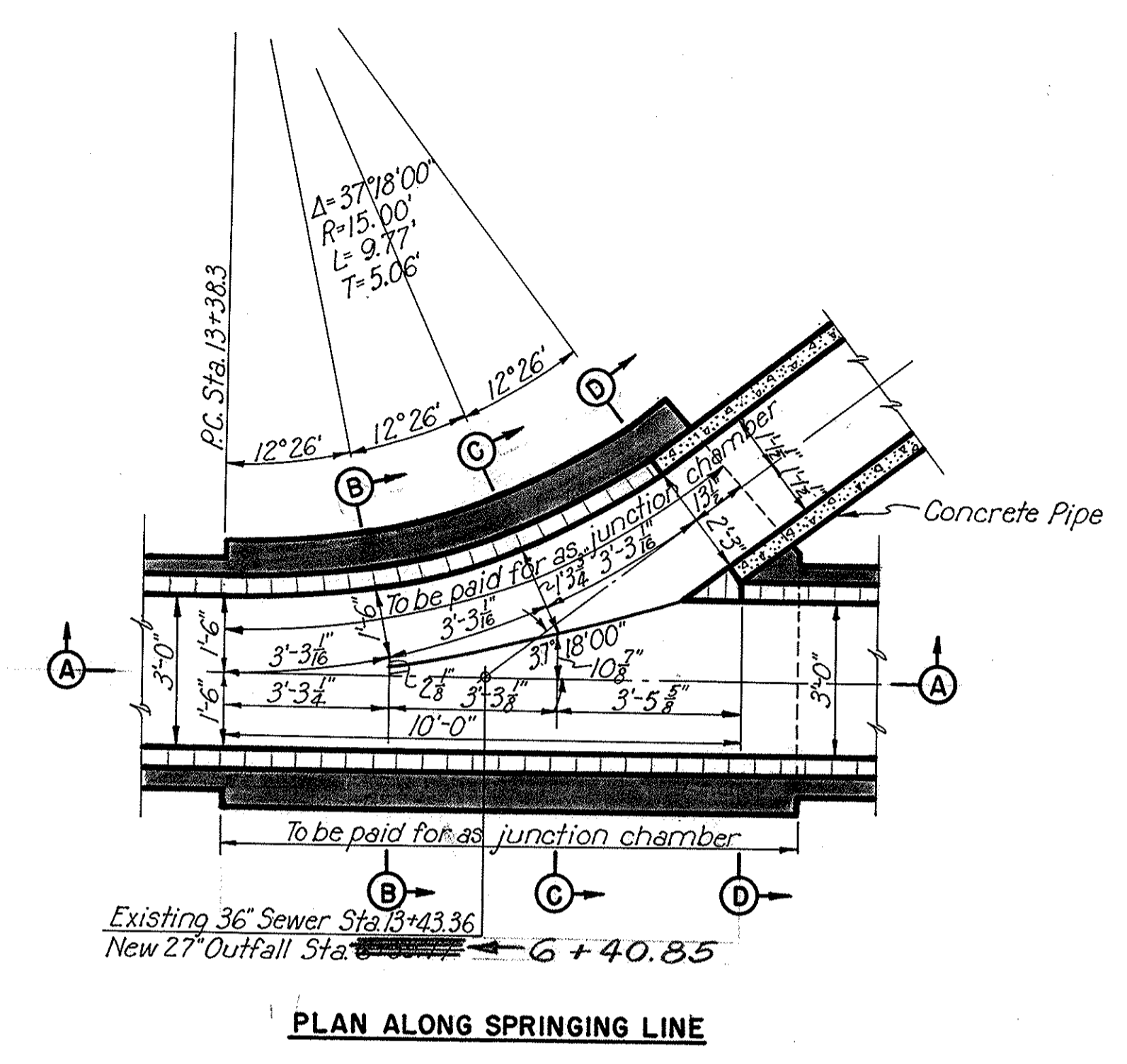
SECTION B-B

SECTION C-C

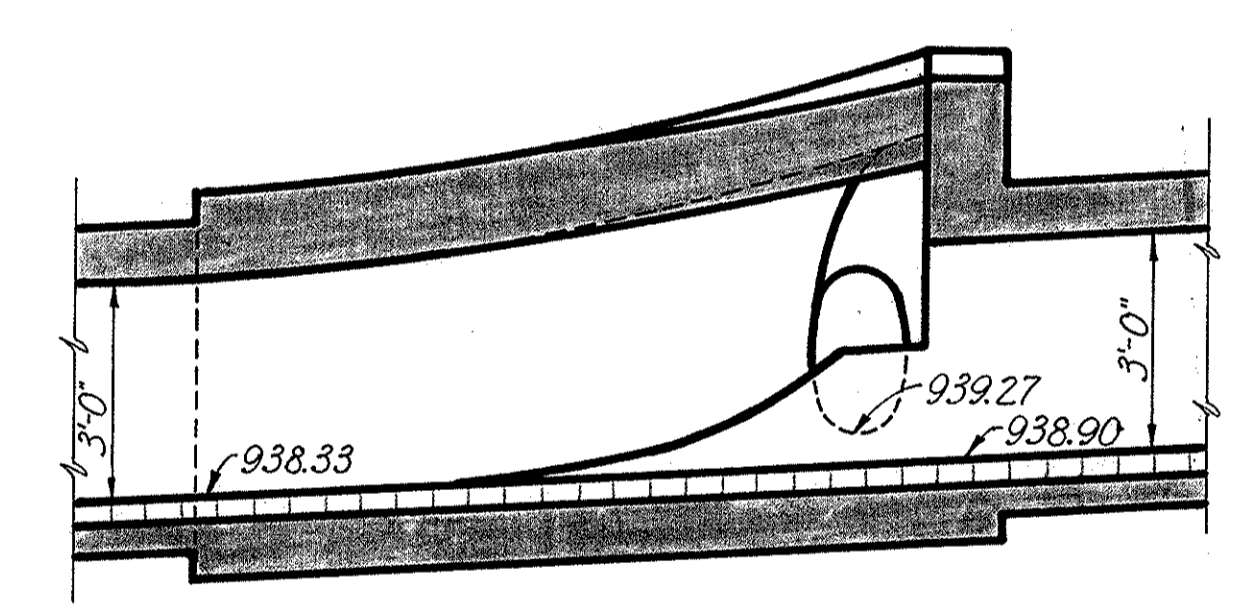
SECTION D-D

JUNCTION CHAMBER AT EXPRESSWAY STA. 112+12.98

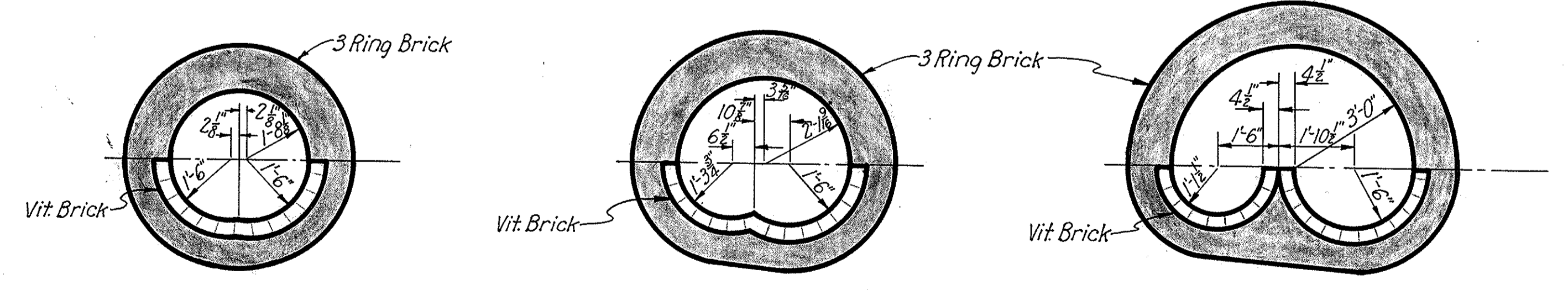
Scale: 3/8"=1'-0"



PLAN ALONG SPRINGING LINE



SECTION A-A



SECTION B-B

SECTION C-C

SECTION D-D

JUNCTION CHAMBER FOR LOOKOUT AVENUE OUTFALL

Scale: 3/8"=1'-0"

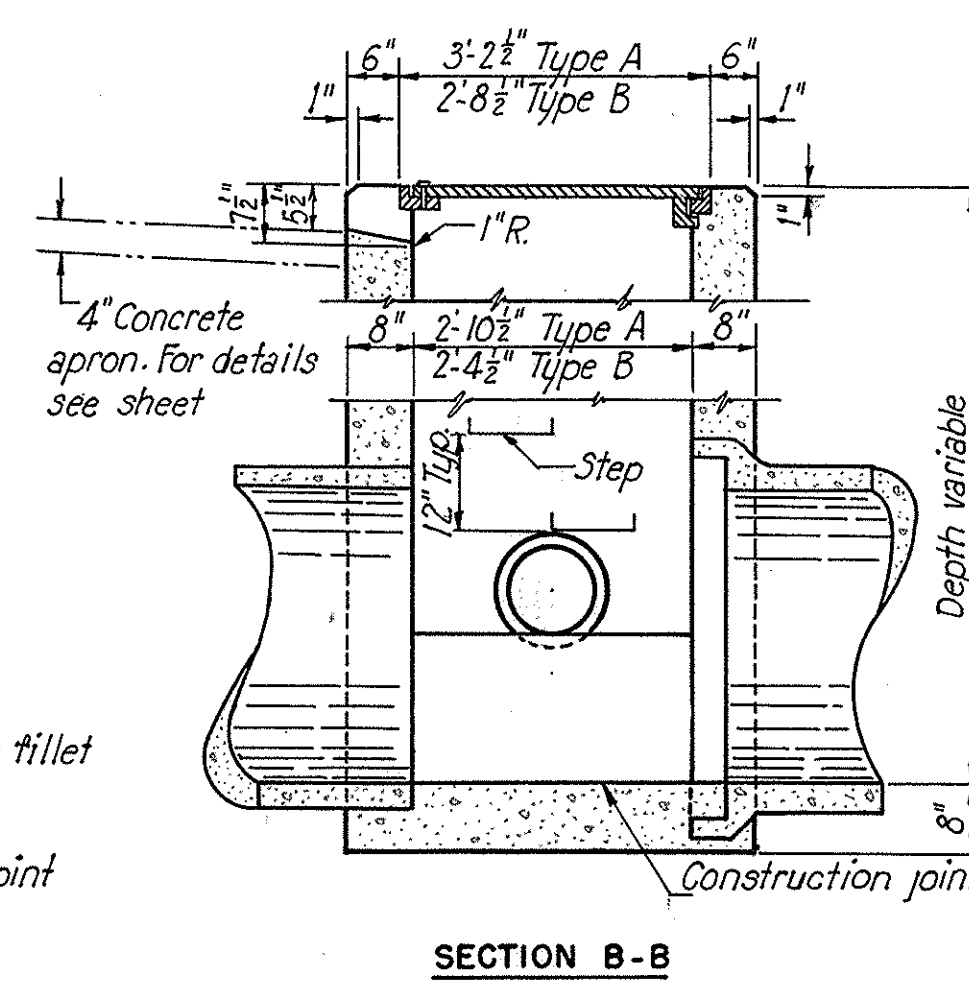
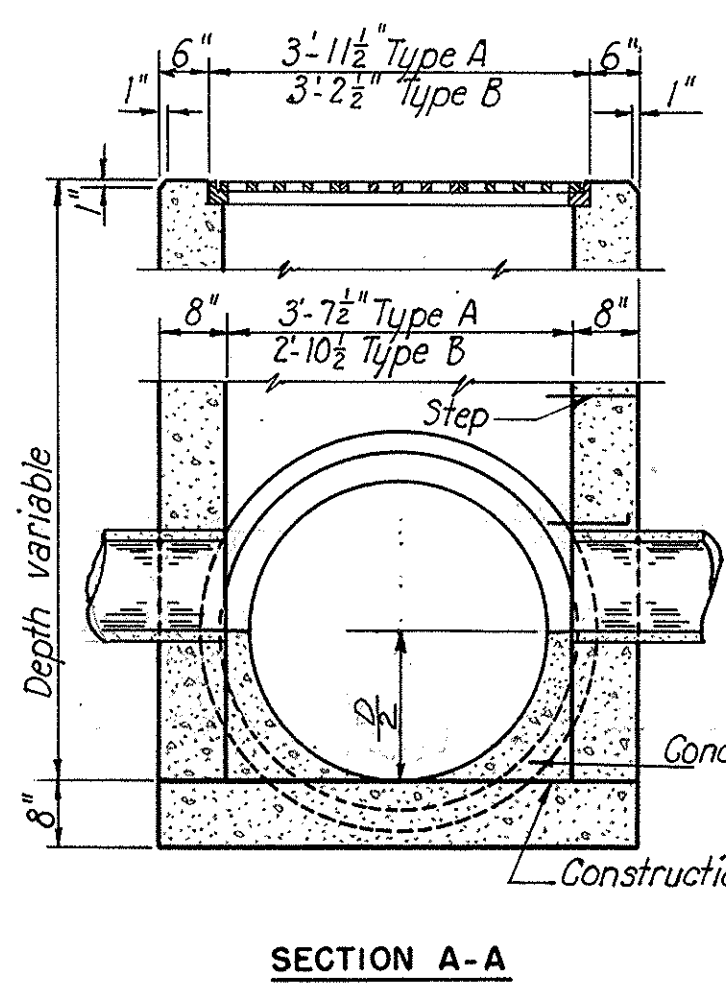
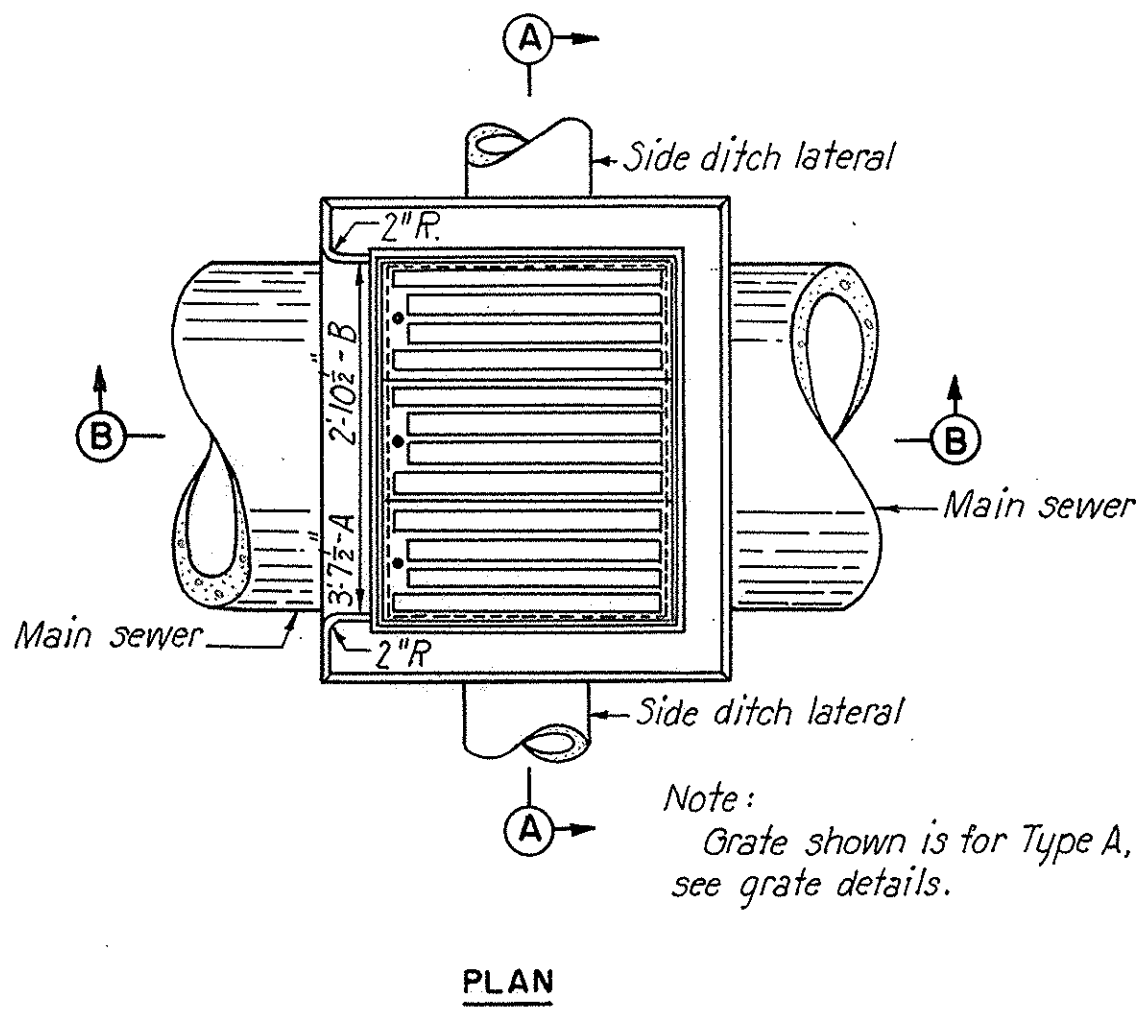
SCALE: 3/8"=1'-0"
MADE: _____ DATE: _____
TRCD: LL DATE: 7-19-50
CKD: _____ DATE: _____
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
766 SHEET

Revised 4-16-51

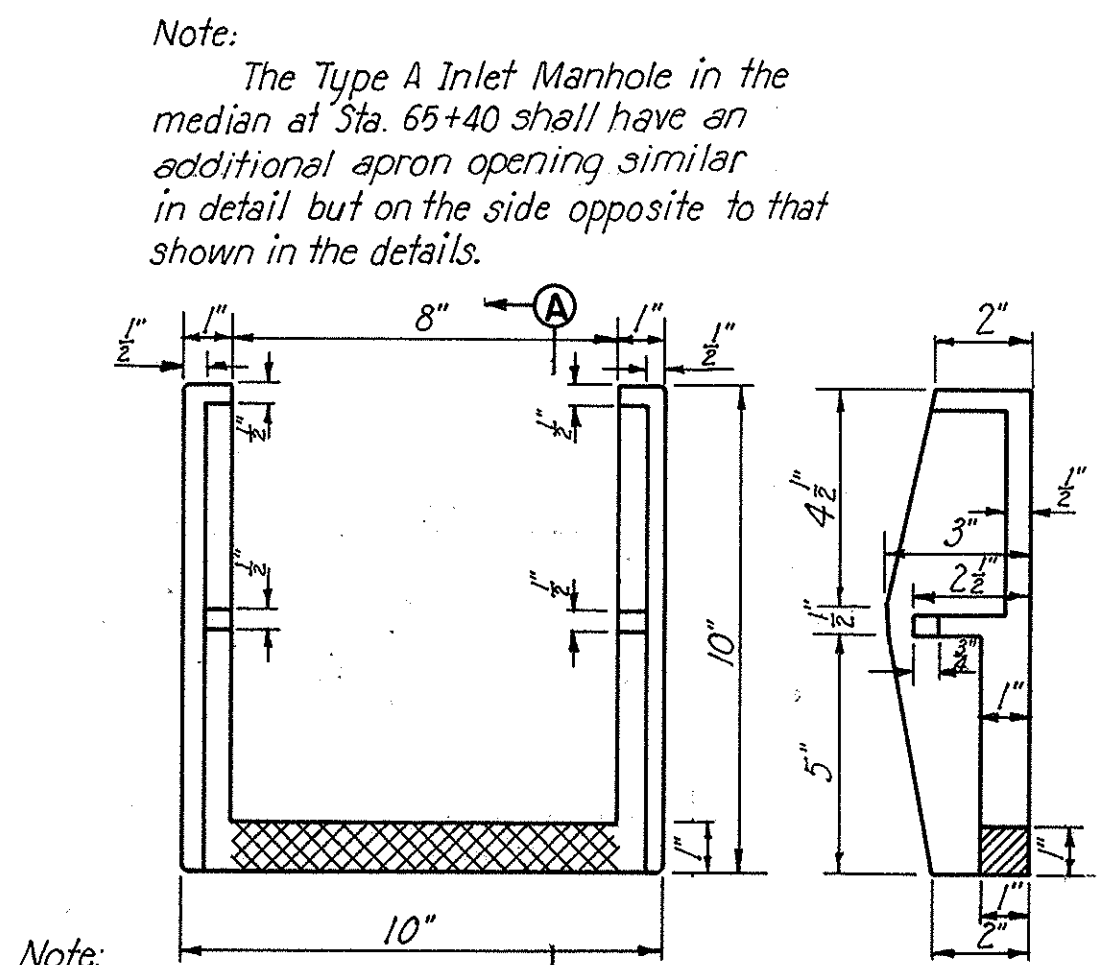
SUMMIT COUNTY OF AKRON
AKRON EXPRESSWAY SYSTEM
 EXPRESSWAY-PART 3
 SUM-5-12.62

INLET DETAILS

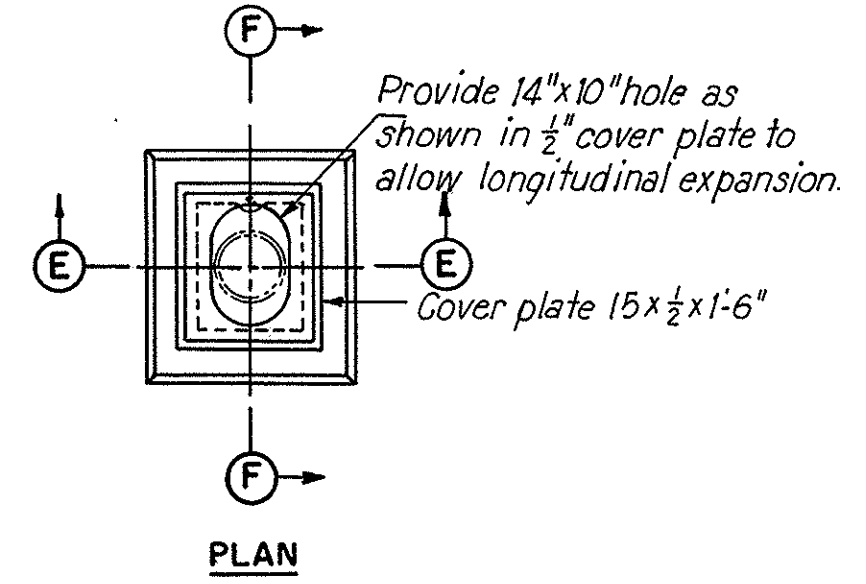
For frame dimensions not shown and for bolt details see frame and grate details.



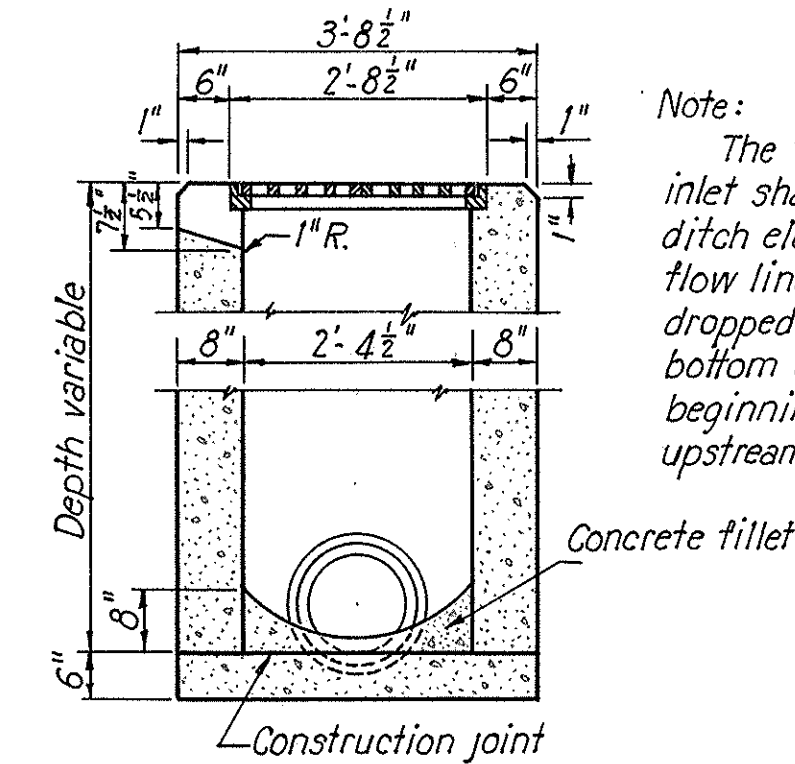
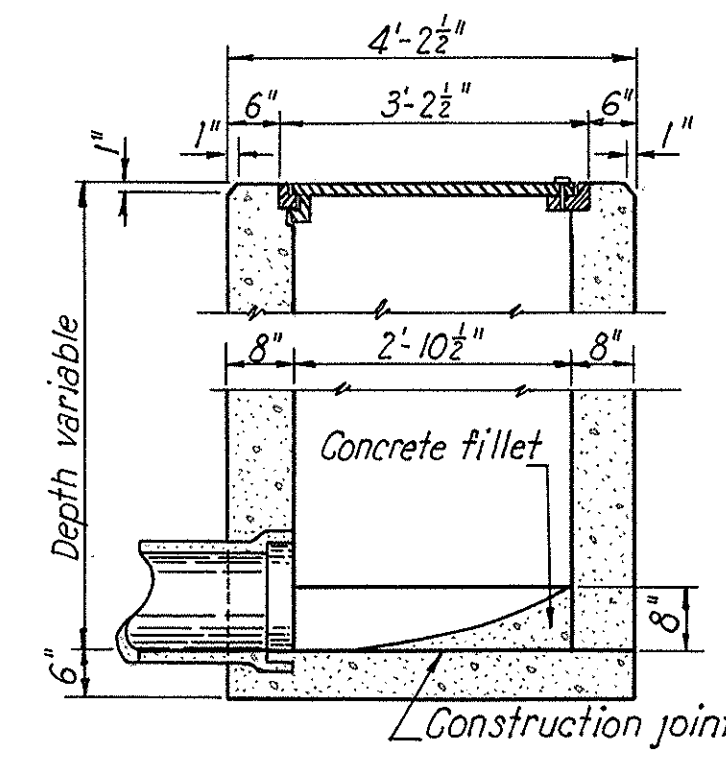
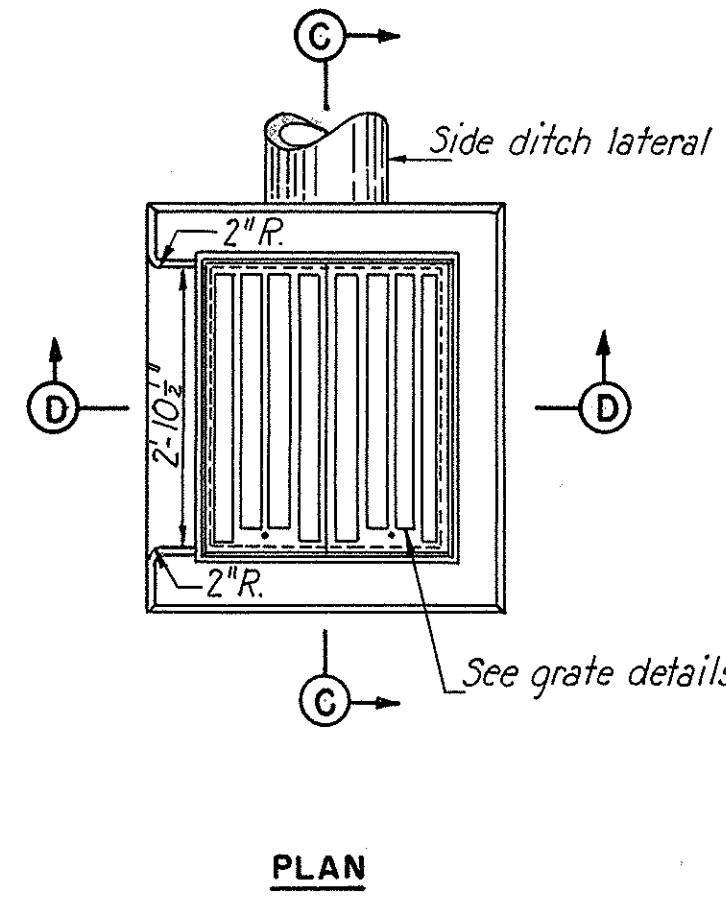
INLET MANHOLES-STANDARD 2-2-A MODIFIED
TYPES A AND B
 Scale: 1/2"=1'-0"



Note: Steps to be grey iron castings.
SCALE: 1/2"=1'-0"

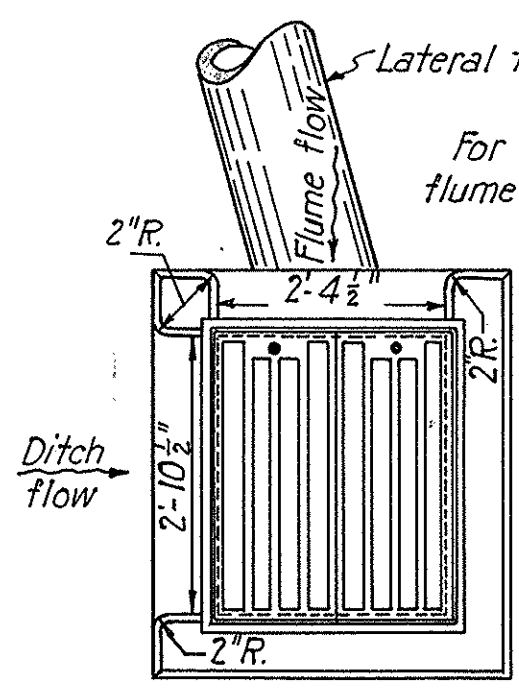


DETAIL B
 Scale: 1/2"=1'-0"

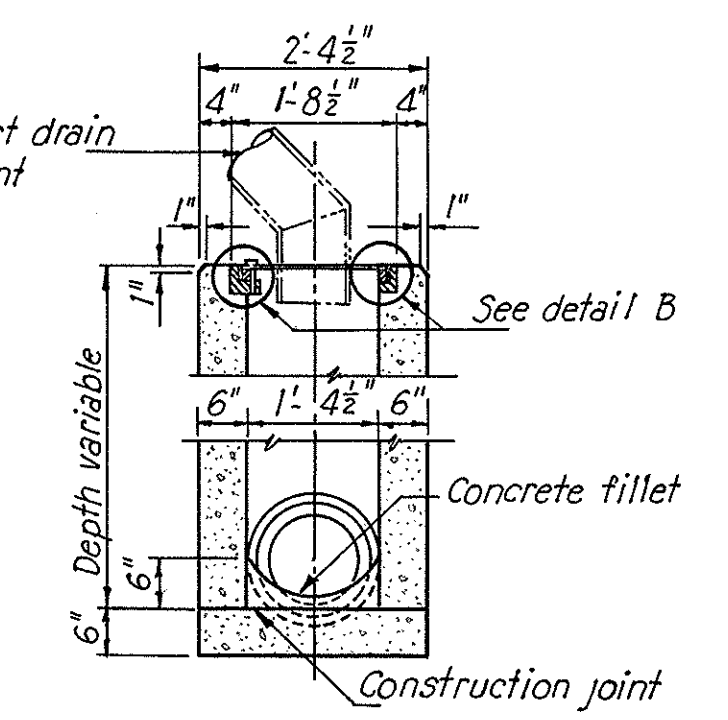
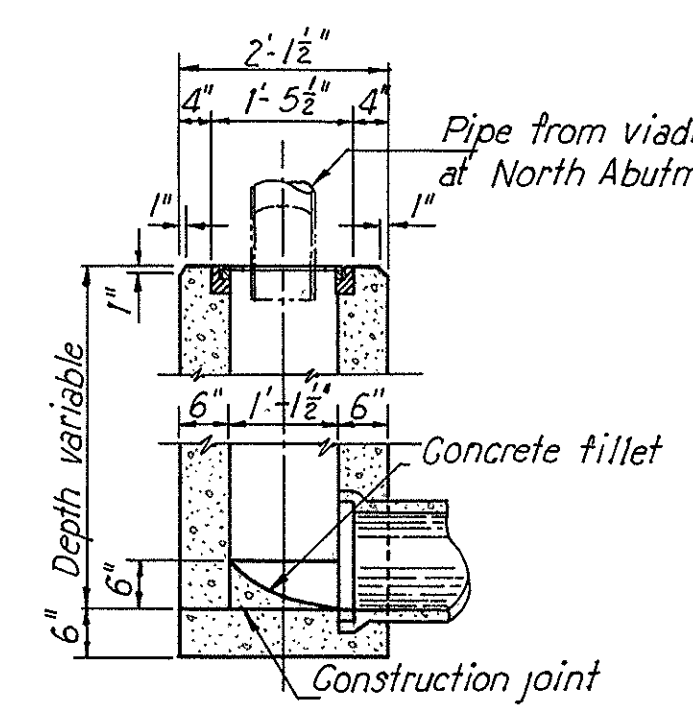


SIDE DITCH INLET-STANDARD 2-2-A MODIFIED
 Scale: 1/2"=1'-0"

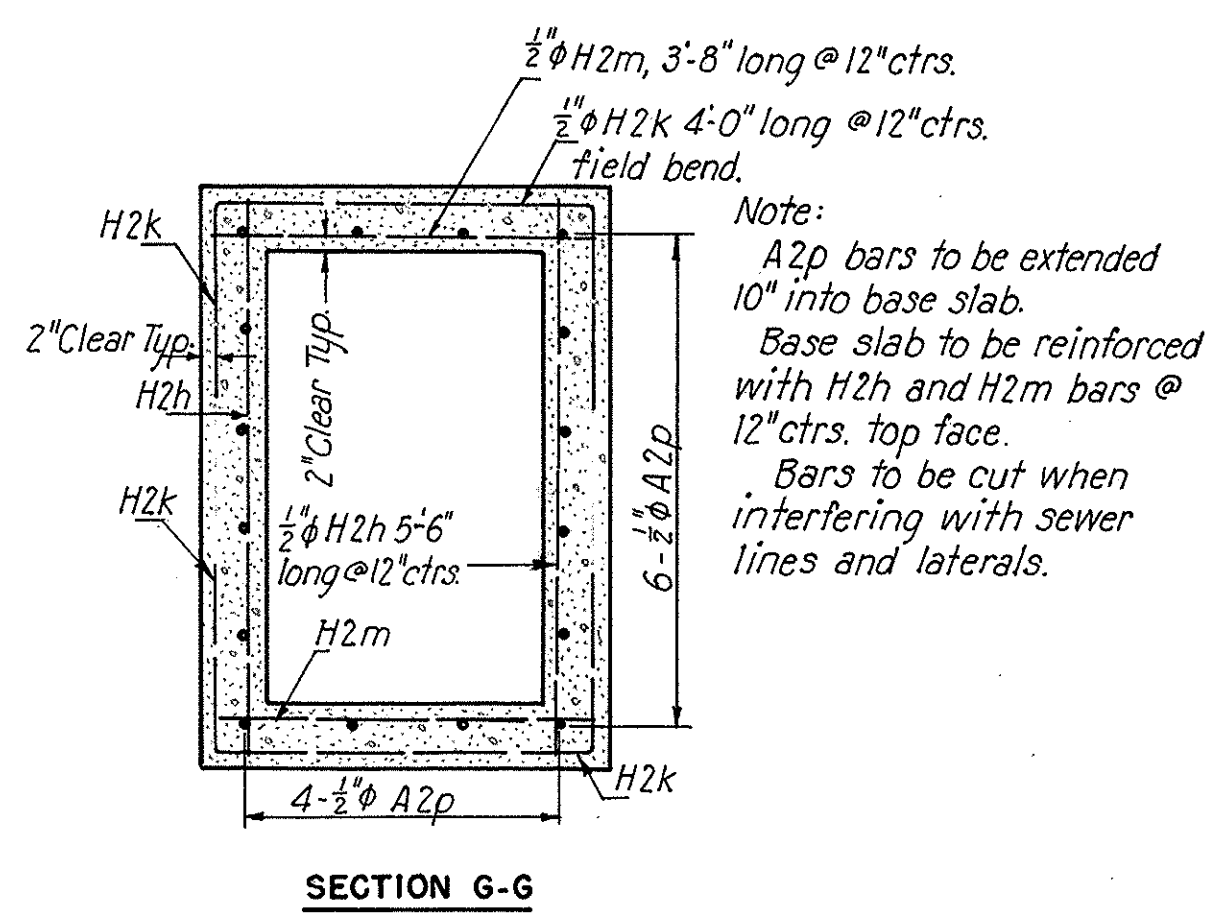
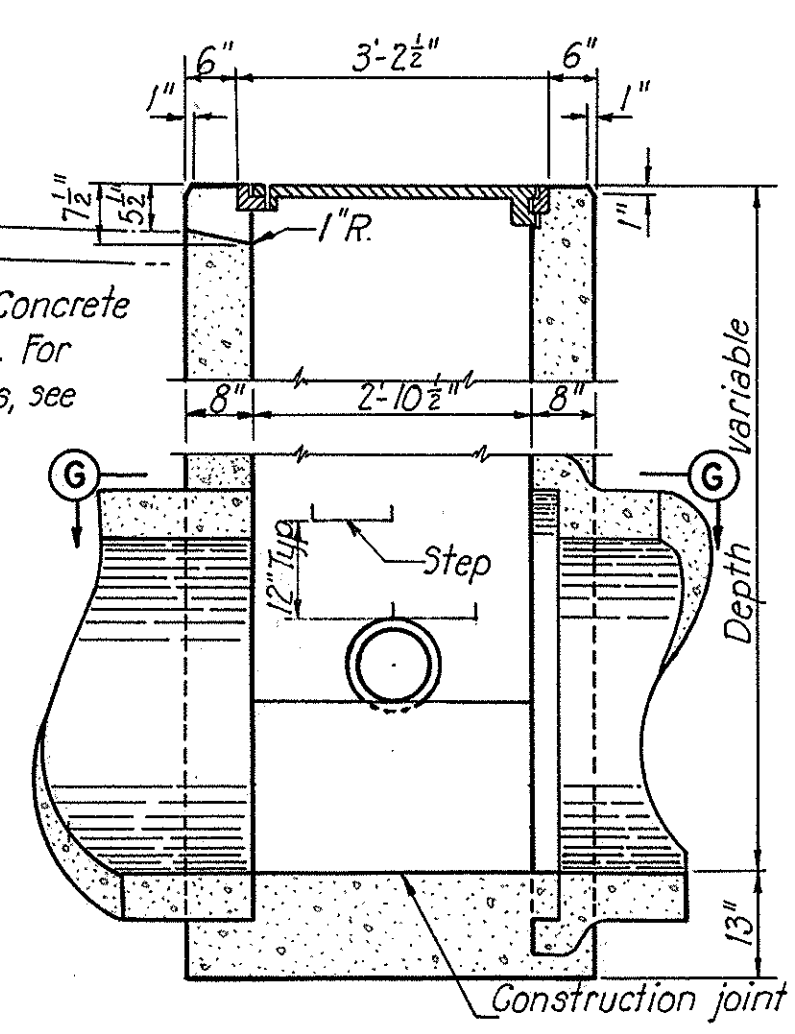
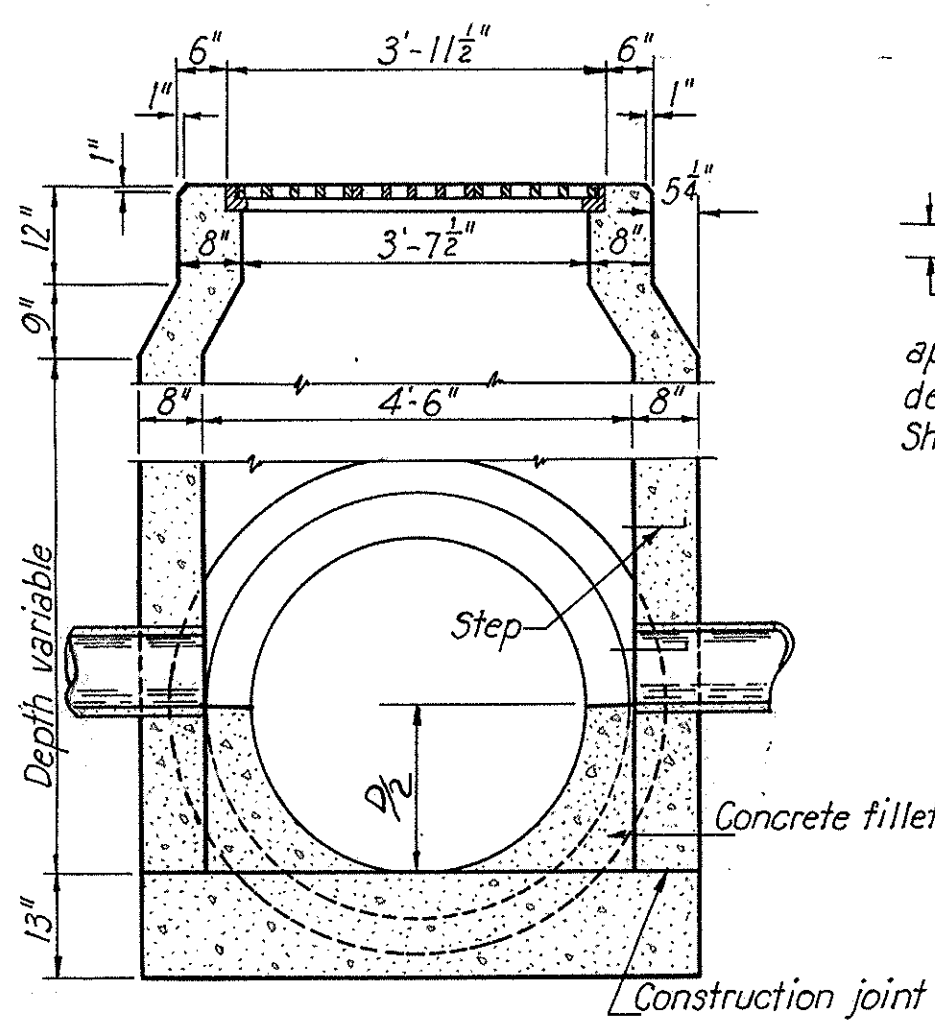
Note: The top of the side ditch inlet shall be set at normal ditch elevation and the actual flow line of the ditch shall be dropped to the elevation of the bottom of the vertical opening beginning 10' upstream from the upstream face of the inlet.



RAMP FLUME INLET
 Scale: 1/2"=1'-0"

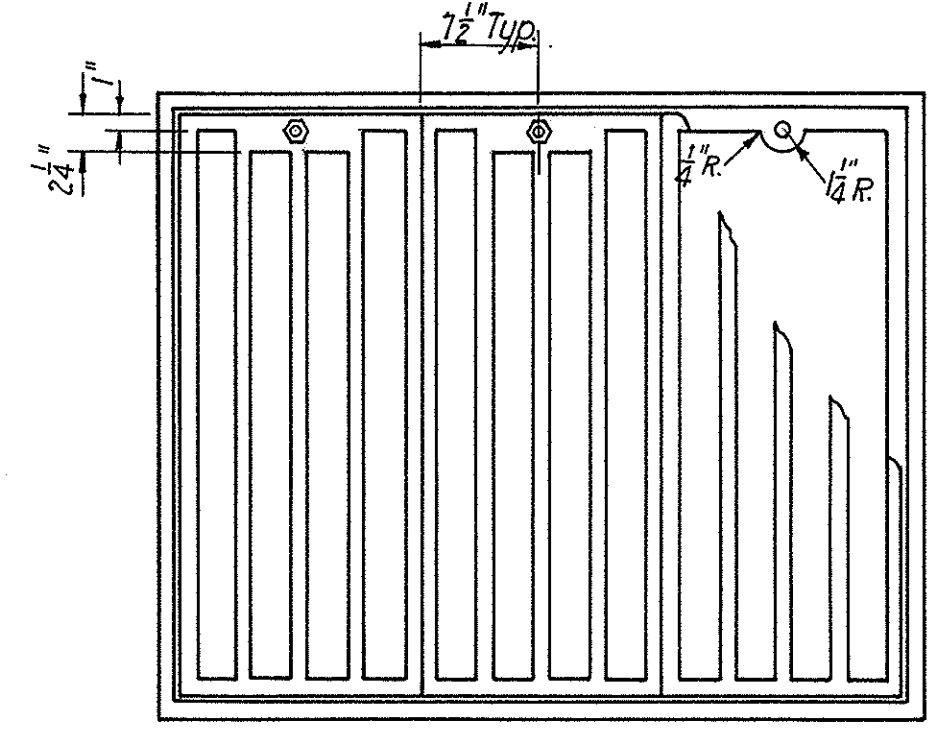


DROP INLET AT NORTH ABUTMENT
MAIN VIADUCT
 Scale: 1/2"=1'-0"

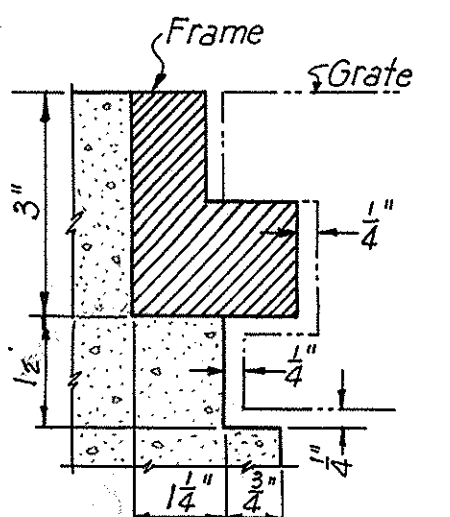
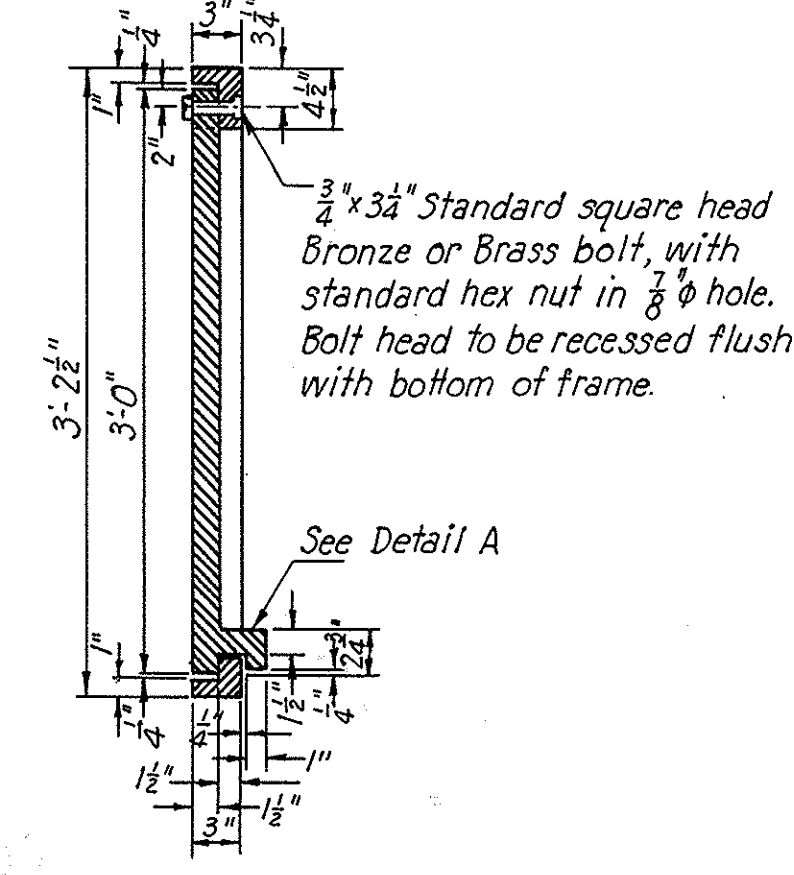


SECTION I-I
 This section shows reinforcement to be used for Type E Inlet Manholes over 15' in depth. The wall reinforcement shown shall extend down from the 15' depth point to the base.

INLET MANHOLE-STANDARD 2-2-A MODIFIED
TYPE E
 Scale: 1/2"=1'-0"



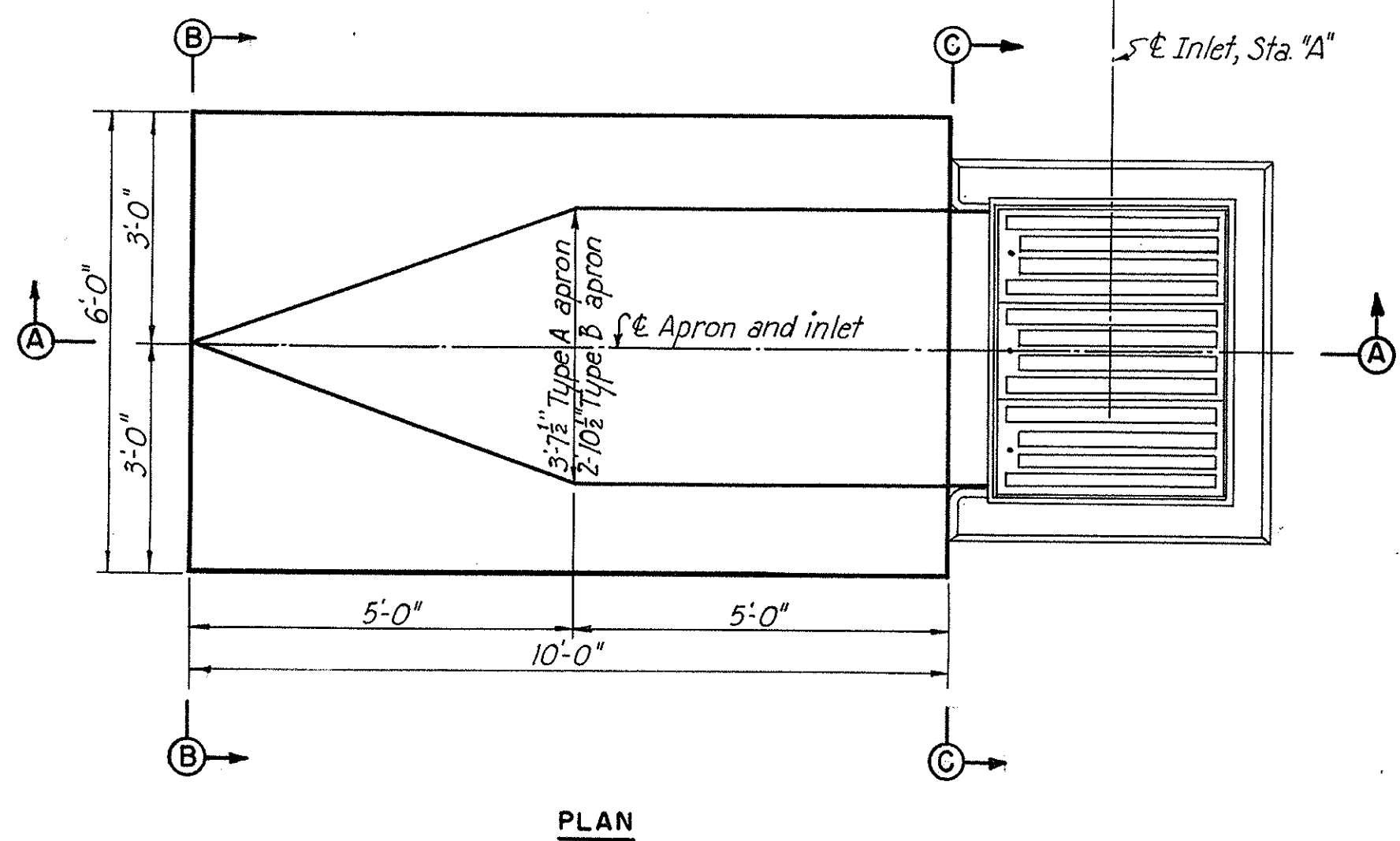
FRAME AND GRATE DETAIL
 Scale: 1/2"=1'-0"



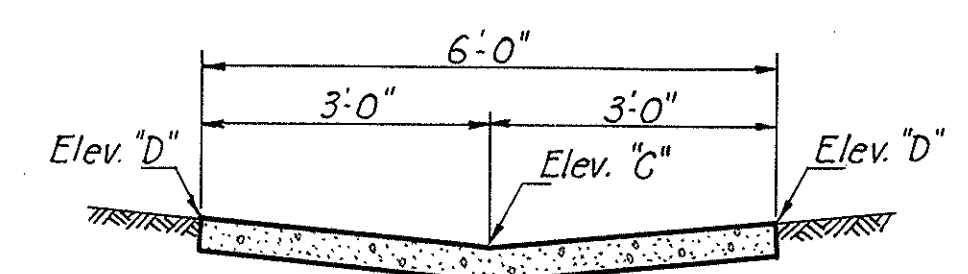
DETAIL A
 Scale: 3/8"=1"

TYPE OF INLET OR MANHOLE	FRAME NUMBER	NUMBER OF GRATINGS	WT. OF FRAME IN LBS.	WT. OF GRATINGS IN LBS.	TOTAL WT. IN LBS.
Type A M.H.	No.1	3	208	234	442
Type E M.H.	No.1	3	208	234	442
Type B M.H.	No.2	2	170	156	326
Side ditch inlet	No.2	2	170	156	326
Ramp flume inlet	No.2	2	170	156	326

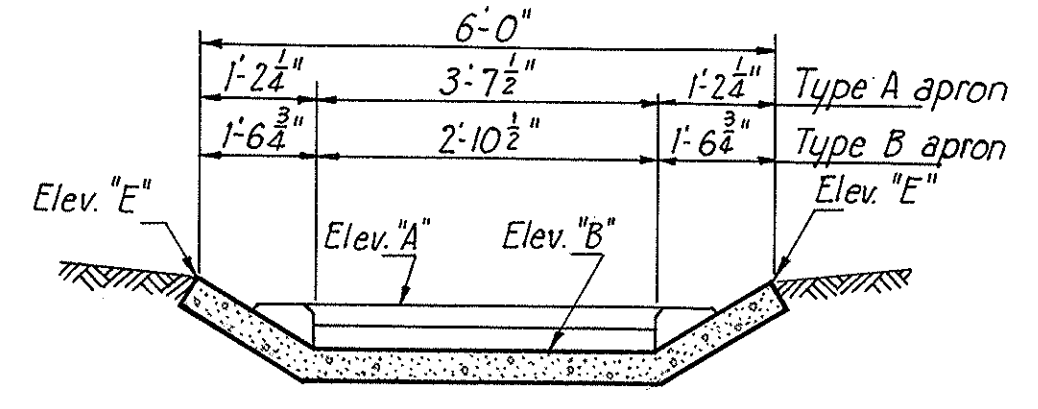
SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
APRON AND FLUME DETAILS



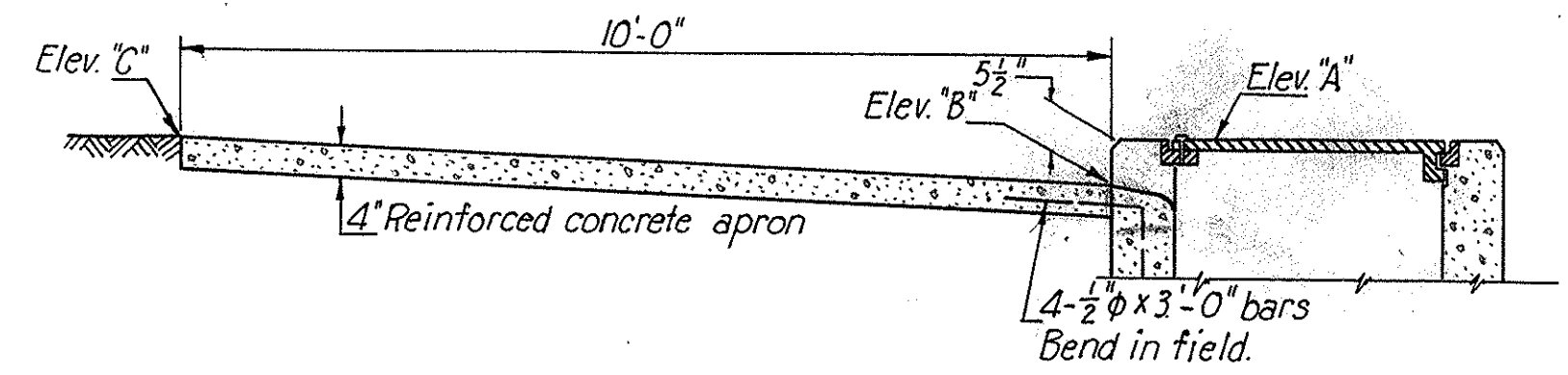
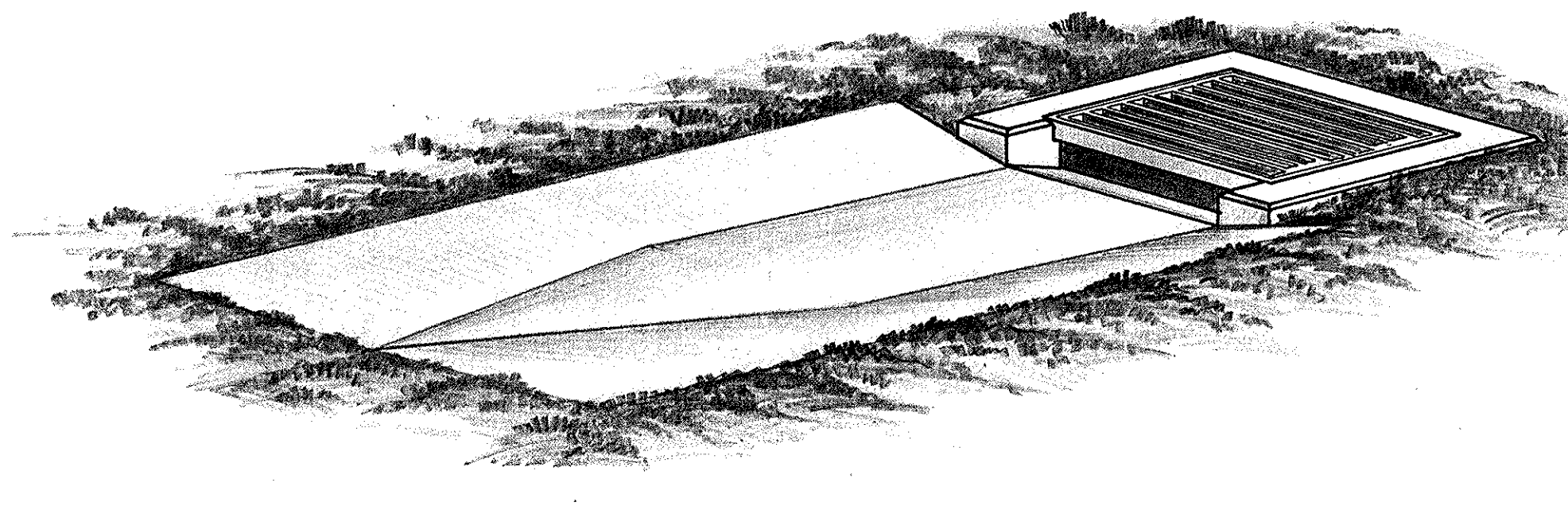
PLAN



SECTION B-B



SECTION C-C



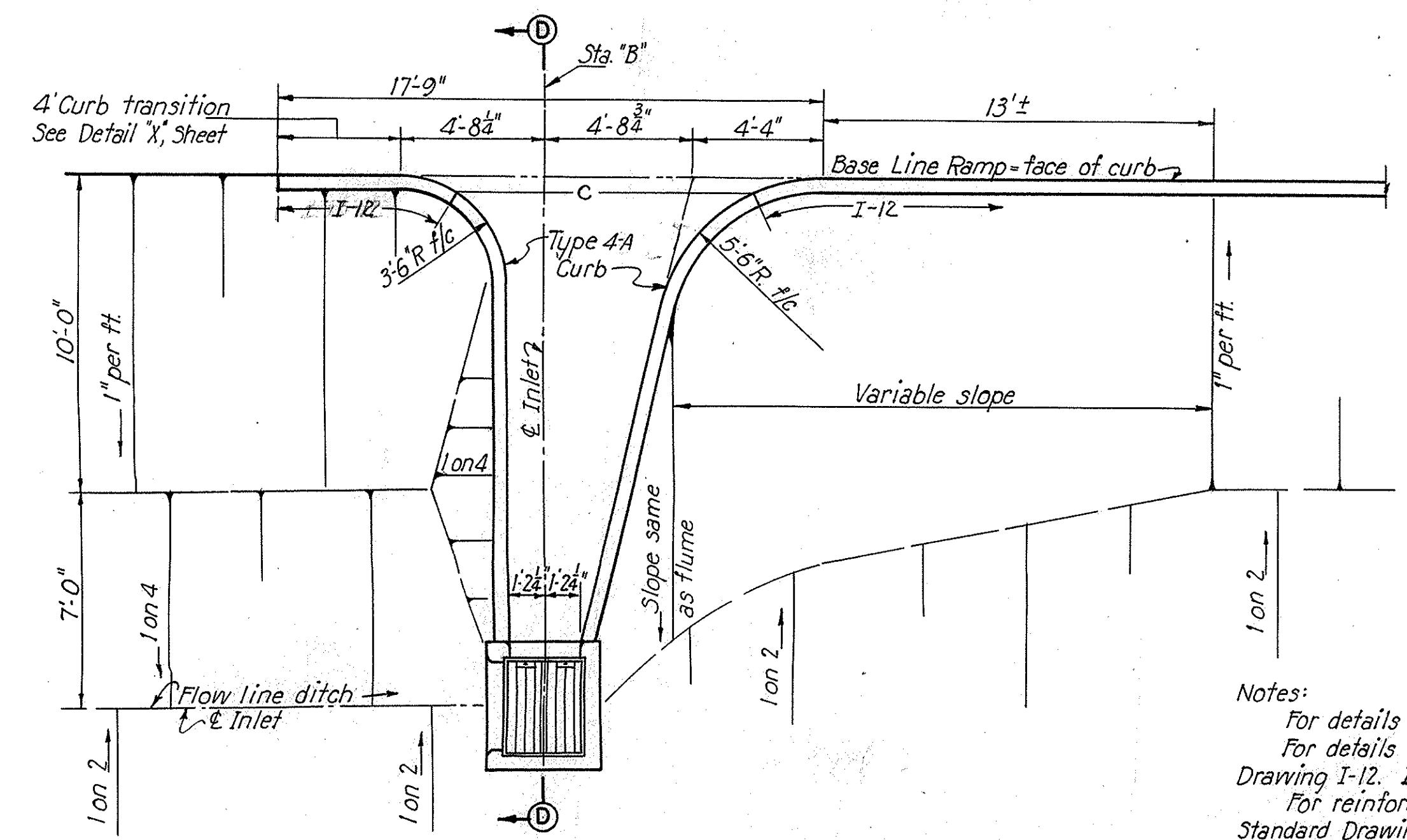
SECTION A-A

Notes:
The Type A aprons shall be used with Type A and Type E inlet manholes.
The Type B aprons shall be used with Type B inlet manholes.
The apron details shown apply to the inlet manholes in the median at the following Stations: 51+70, 54+50, 57+25, 59+75, 62+50, 68+00, 71+00, 74+00, 77+00, 80+00, 82+80, 88+00, 91+00, 96+00, 99+00, 102+00, 105+00, 108+00, 110+00, 113+00, 116+00, 119+00, 122+00.
The Type A inlet manhole in the median at Sta. 65+40 and the Type E inlet manhole in the median at Sta. 84+23 shall have an additional Type A apron on the side opposite that shown in the details.
For details of aprons for inlet manholes at Sta. 45+88 and Sta. 48+75, see Sheet 116.
For inlet manhole details, see sheet 116.
For reinforcement of 4" concrete apron, see Type "D" Standard Drawing B-T-71 R, dated 2-1-47.

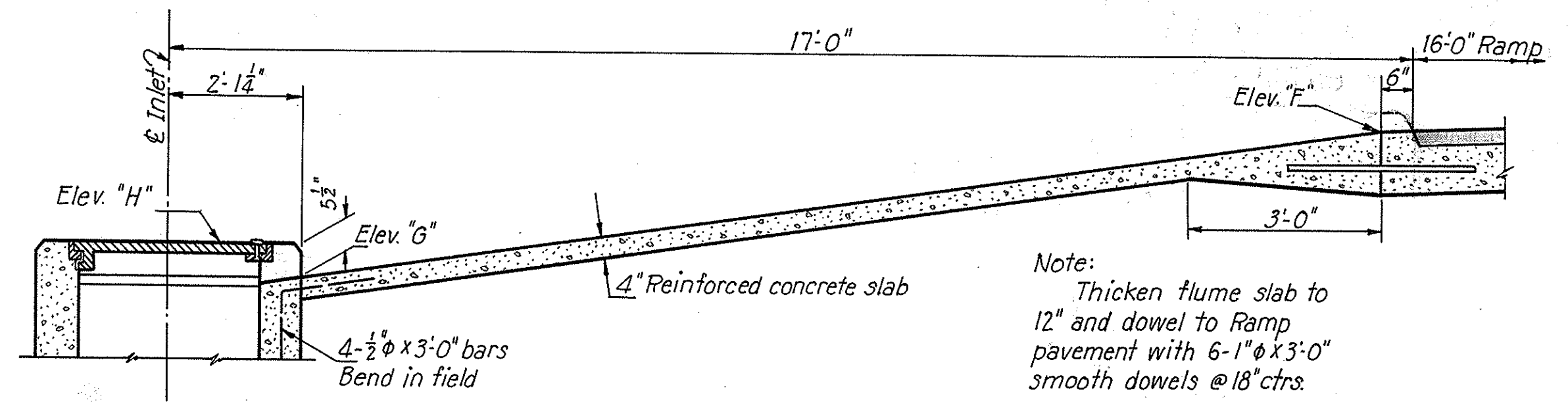
STATION "A"	ELEV. "A"	ELEV. "B"	ELEV. "C"	ELEV. "D"	ELEV. "E"
51+70	1024.02	1023.56	1024.08	1024.14	1024.08
54+50	1022.27	1021.81	1022.33	1022.39	1022.33
57+25	1020.98	1020.52	1021.03	1021.09	1021.04
59+75	1019.80	1019.34	1019.86	1019.92	1019.86
62+50	1018.51	1018.05	1018.57	1018.63	1018.57
65+40 So.	1017.25	1016.79	1017.26	1017.32	1017.31
65+40 No.	1017.25	1016.79	1017.26	1017.32	1017.31
68+00	1021.37	1020.91	1021.74	1021.80	1021.43
71+00	1030.86	1030.40	1031.23	1031.29	1030.92
74+00	1038.96	1038.50	1039.14	1039.20	1039.02
77+00	1039.71	1039.25	1039.82	1039.88	1039.77
80+00	1032.65	1032.19	1033.01	1033.07	1032.71
82+80	1024.53	1024.07	1024.77	1024.83	1024.59
84+23 So.	1022.85	1022.39	1022.86	1022.92	1022.91

STATION "A"	ELEV. "A"	ELEV. "B"	ELEV. "C"	ELEV. "D"	ELEV. "E"
84+23 No.	1022.85	1022.39	1022.84	1022.90	1022.91
88+00	1024.62	1024.16	1024.68	1024.74	1024.68
91+00	1026.12	1025.66	1026.18	1026.24	1026.18
96+00	1026.13	1025.67	1026.19	1026.25	1026.19
99+00	1023.75	1023.29	1023.88	1023.94	1023.81
102+00	1019.68	1019.22	1019.86	1019.92	1019.74
105+00	1015.21	1014.75	1015.39	1015.45	1015.27
108+00	1010.74	1010.28	1010.92	1010.98	1010.80
110+00	1007.76	1007.30	1007.94	1008.00	1007.82
113+00	1003.29	1002.83	1003.47	1003.53	1003.35
116+00	998.82	998.36	999.00	999.06	998.88
119+00	994.35	993.89	994.53	994.59	994.41
122+00	989.88	989.42	990.06	990.12	989.94

STANDARD MEDIAN INLET MANHOLE APRONS
Scale: 1/2" = 1'-0"



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



SECTION D-D
Scale: 1/2" = 1'-0"

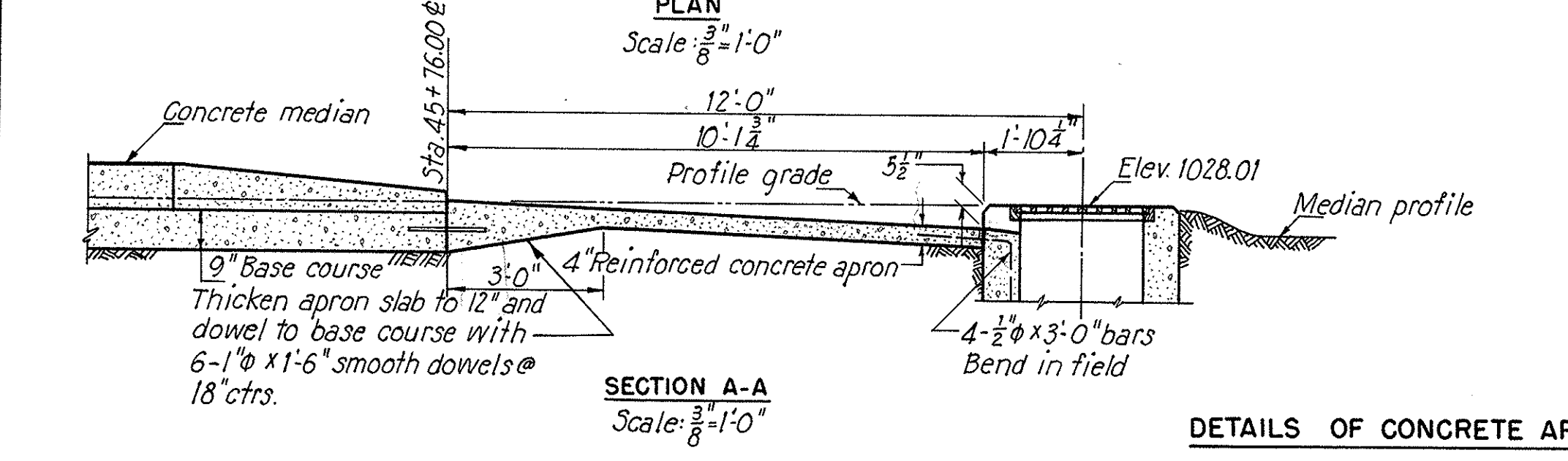
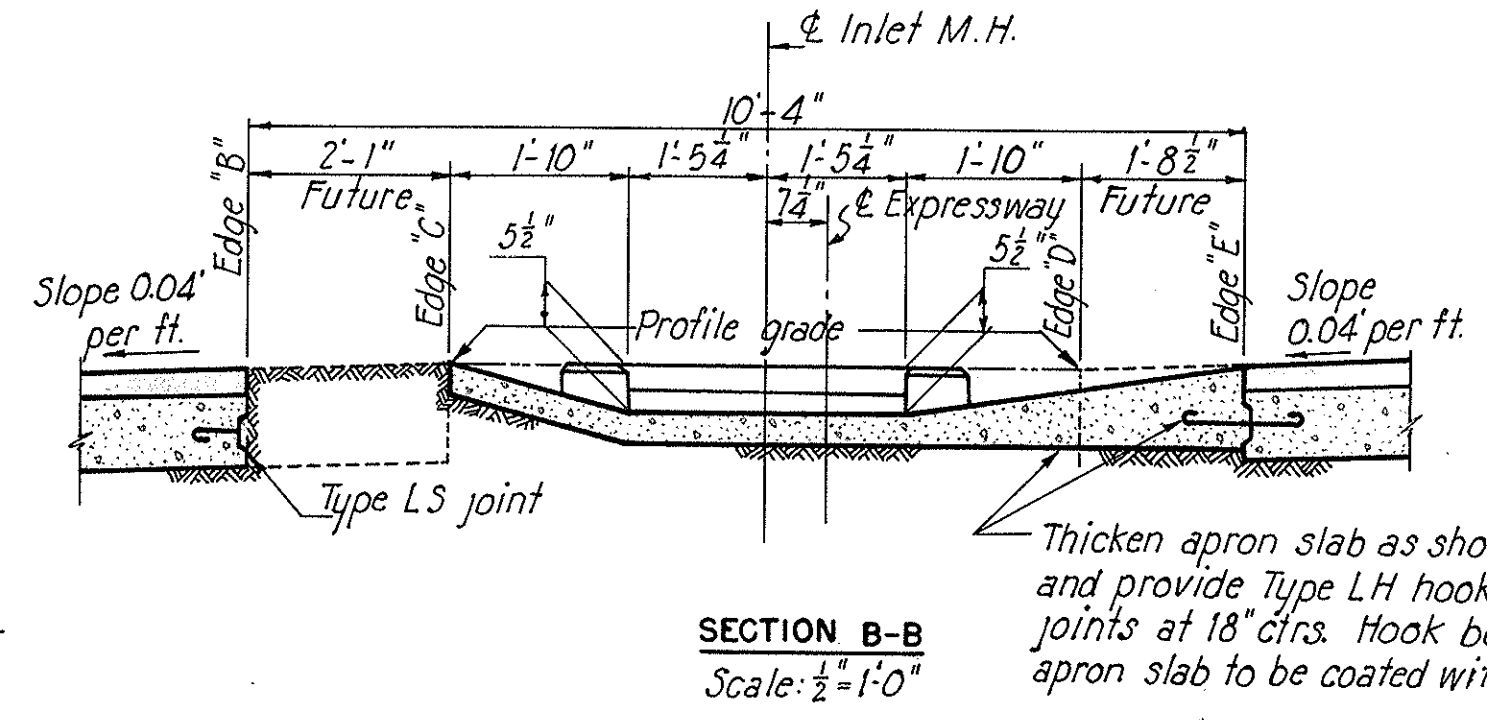
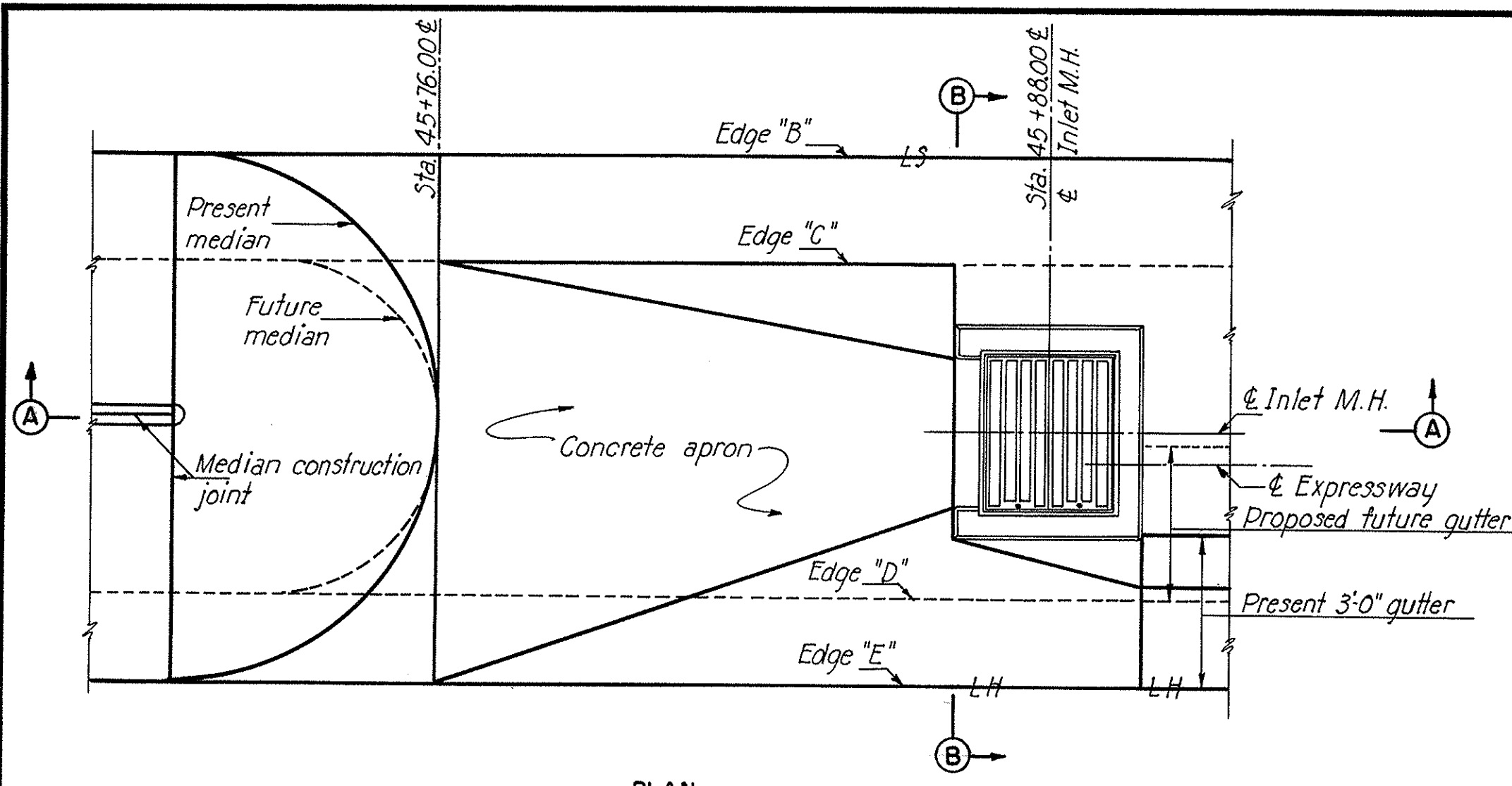
Notes:
For details of Inlet, see Sheet 116.
For details of Type 4-A curb, see Standard Drawing I-12. Included with ramp flume.
For reinforcement of 4" slab, see Type "D" Standard Drawing B-T-71 R, dated 2-1-47.

RAMP	STATION "B"	ELEV. "F"	ELEV. "G"	ELEV. "H"
A	3+24.00-A	1020.96	1018.33	1018.79
B	4+13.15-B	1020.29	1017.66	1018.12
C	2+40.00-C	1041.07	1038.44	1038.90
D	4+47.70-D	1026.49	1023.86	1024.32
E	3+33.62-E	1026.16	1023.53	1023.99
F	5+71.74-F	1036.80	1034.17	1034.63

RAMP FLUMES

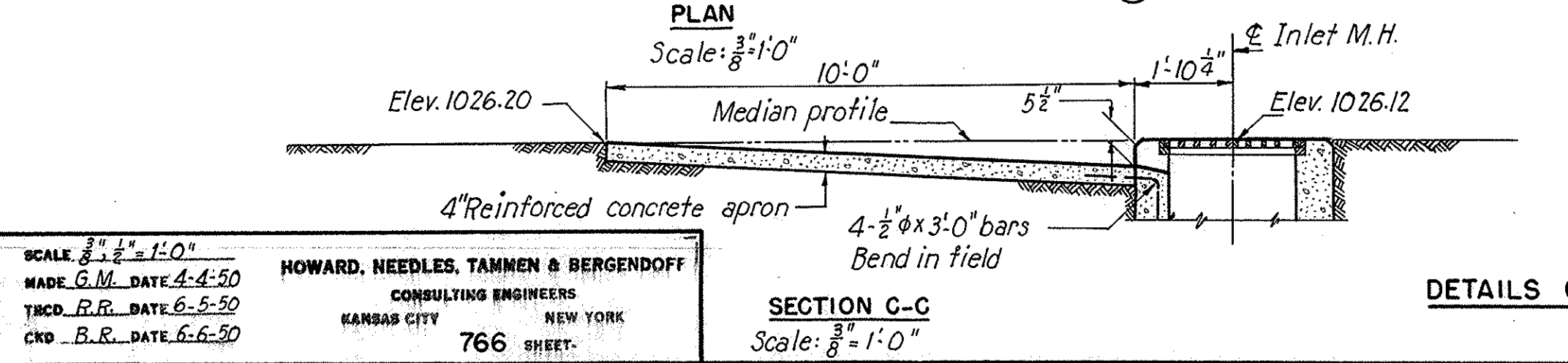
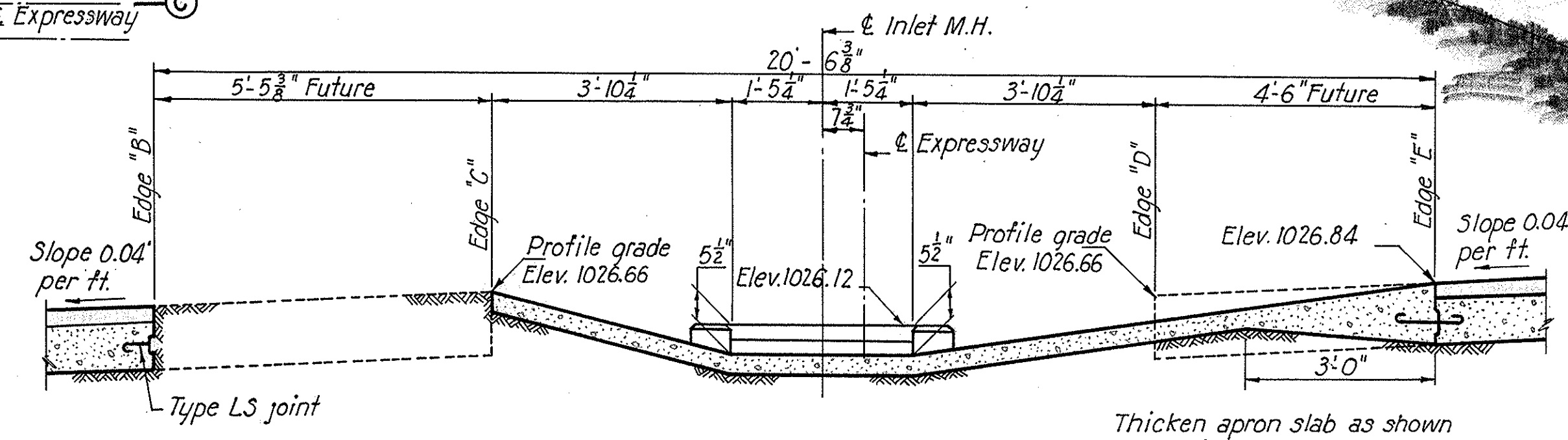
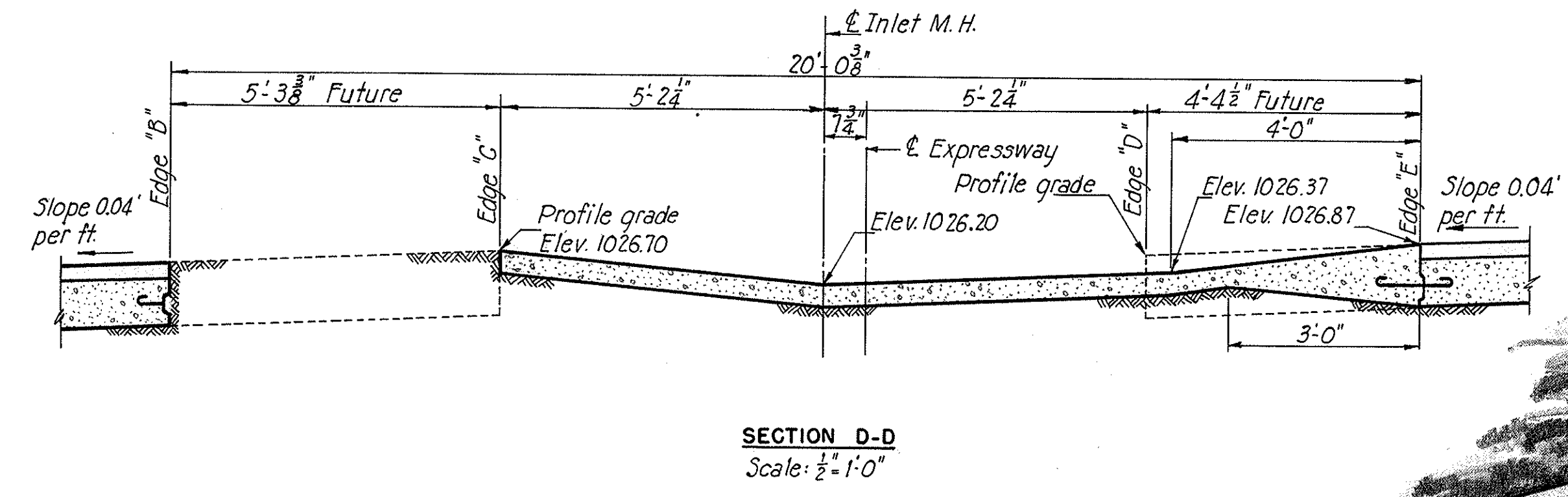
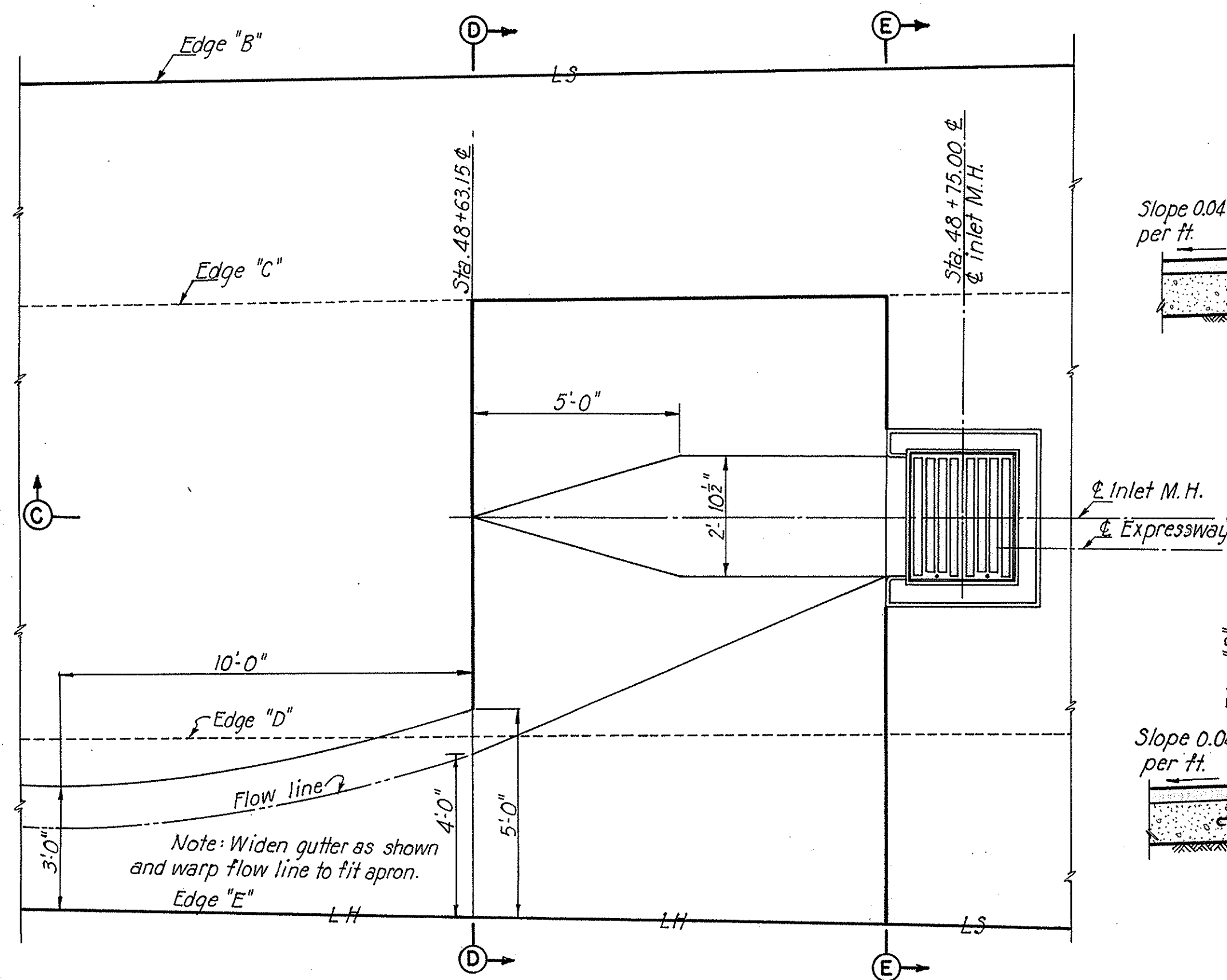
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	118
2	OHIO	U-687(B)	POST WAR	

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
APRON DETAILS



DETAILS OF CONCRETE APRON FOR MEDIAN INLET
STA. 45 + 88.00

Notes:
For details of Inlet Manhole, see sheet 116.
For reinforcement of 4" apron, see Type "D", Ohio State Highway Department Standard Drawing B-T-71R, dated 2-1-47.
For pavement joint legend and details of median nose, see sheet 97.



DETAILS OF CONCRETE APRON FOR MEDIAN INLET
STA. 48 + 75.00

Thicken apron slab as shown and provide Type LH hook bolts at 18" centers. Hook bolt in apron slab to be coated with grease.

Notes:
For details of Inlet Manhole, see sheet 116.
For reinforcement of 4" apron, see Type "D", Ohio State Highway Department Standard Drawing B-T-71R, dated 2-1-47.
For pavement joint legend and details, see sheet 97.

SCALE: 3/8" = 1'-0"
MADE G.M. DATE 4-4-50
TRCD. P.R. DATE 6-5-50
CKD. B.R. DATE 6-6-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
766 SHEET

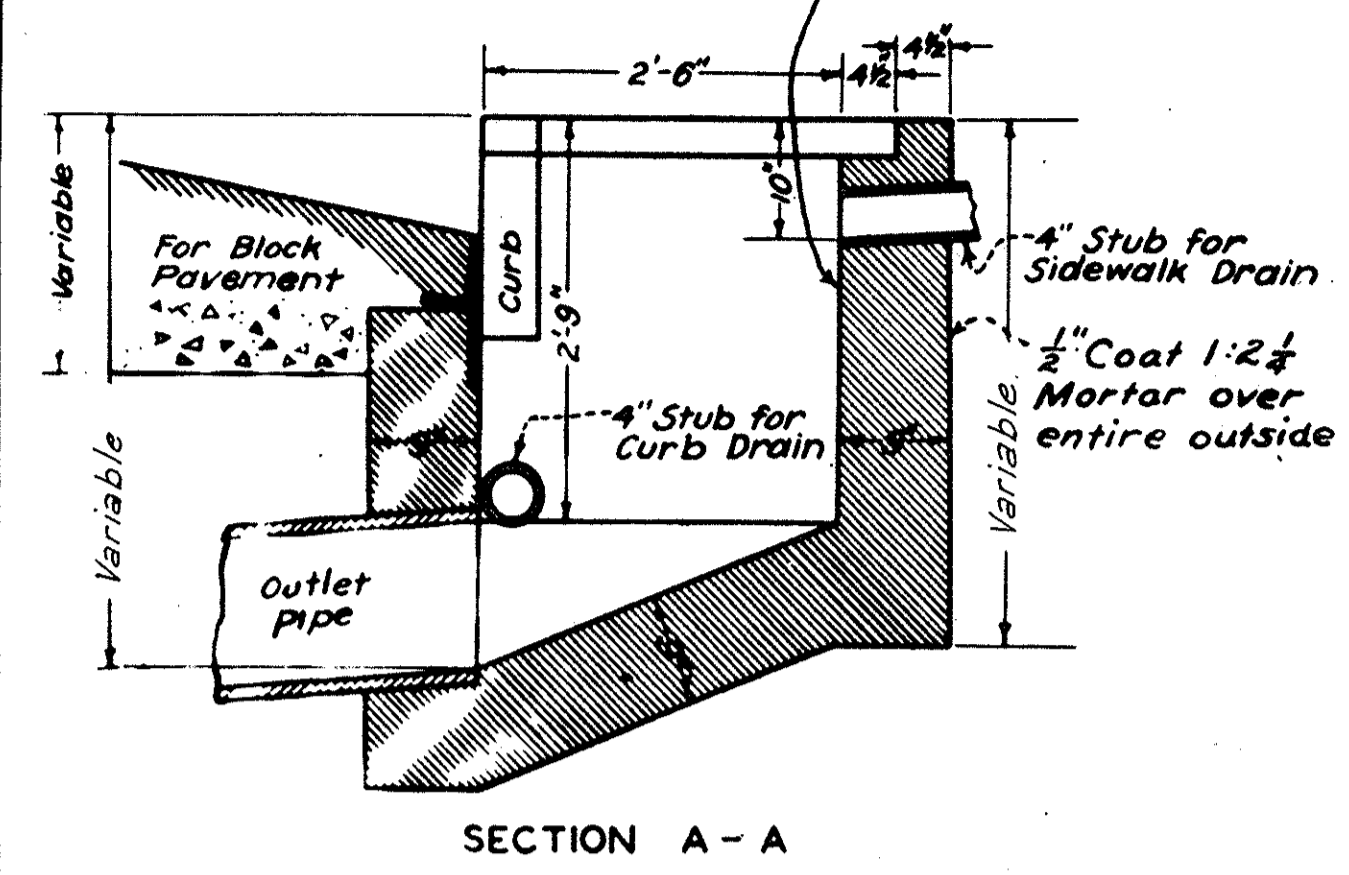
SECTION C-C
Scale: 3/8" = 1'-0"

FED. DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO	U-687(8)	POST WAR

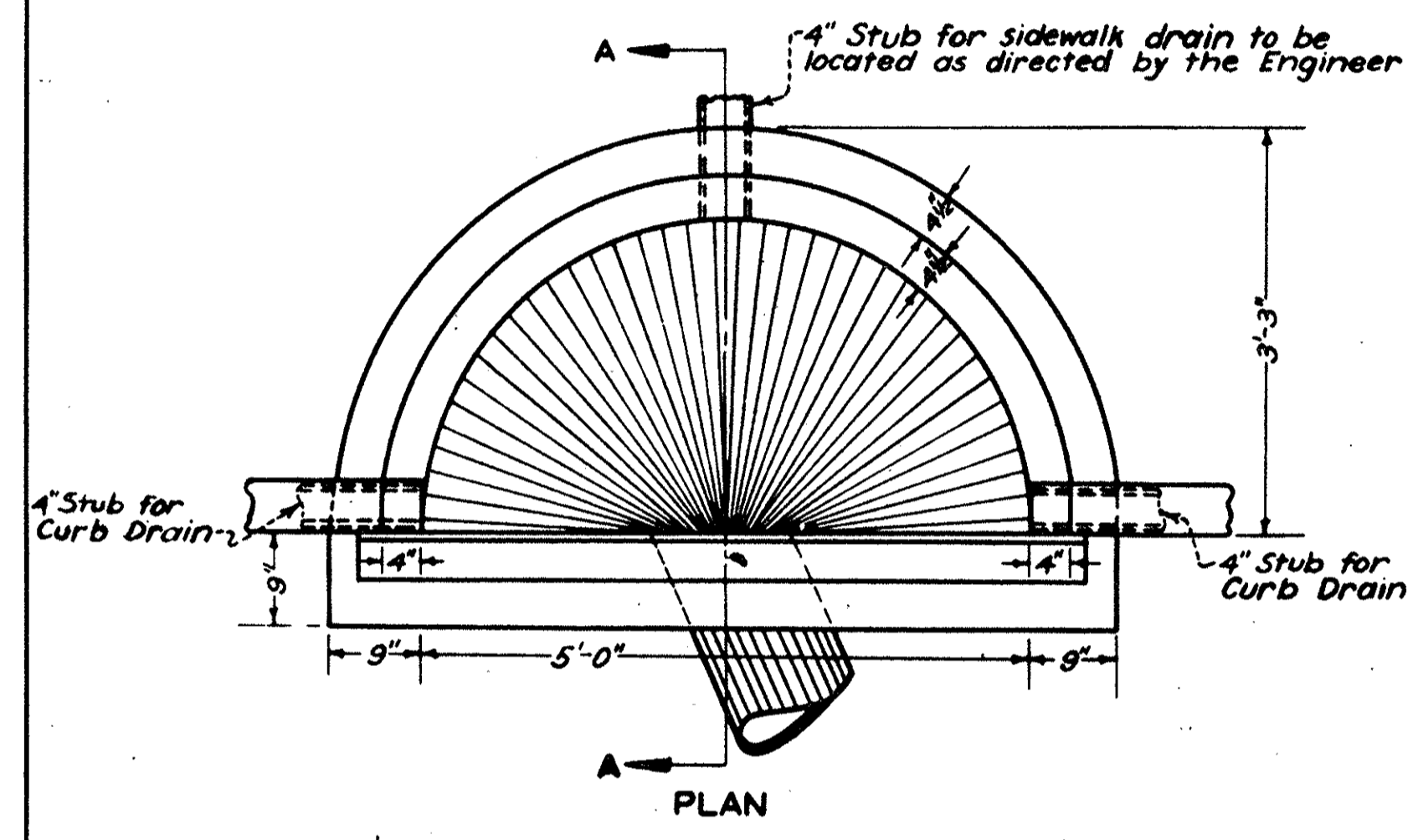
118-A
146

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
AKRON NO. 3 INLET

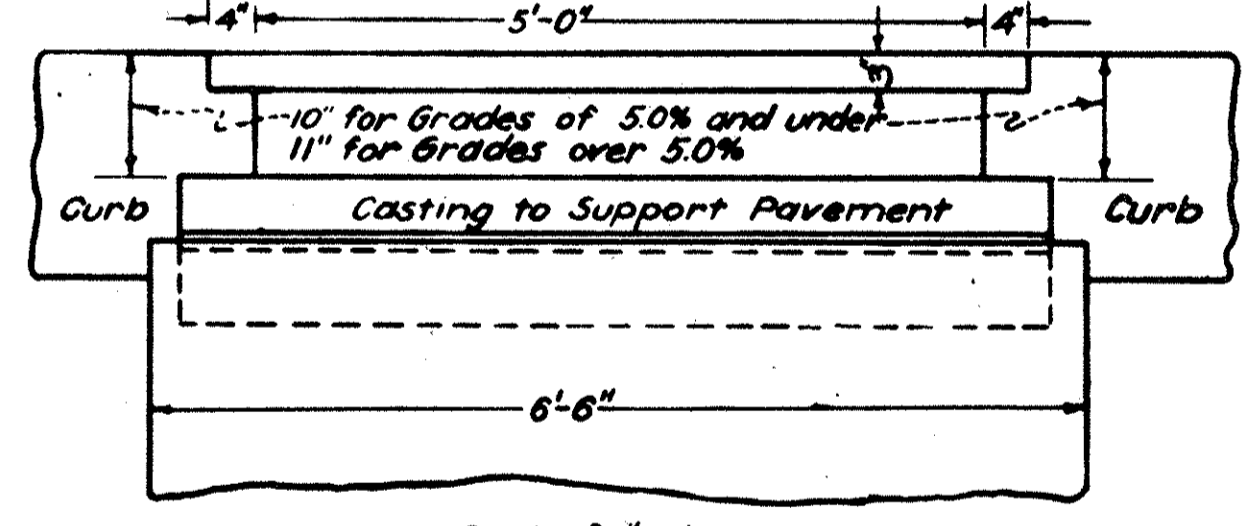
Note: Do not plaster inside of inlet.



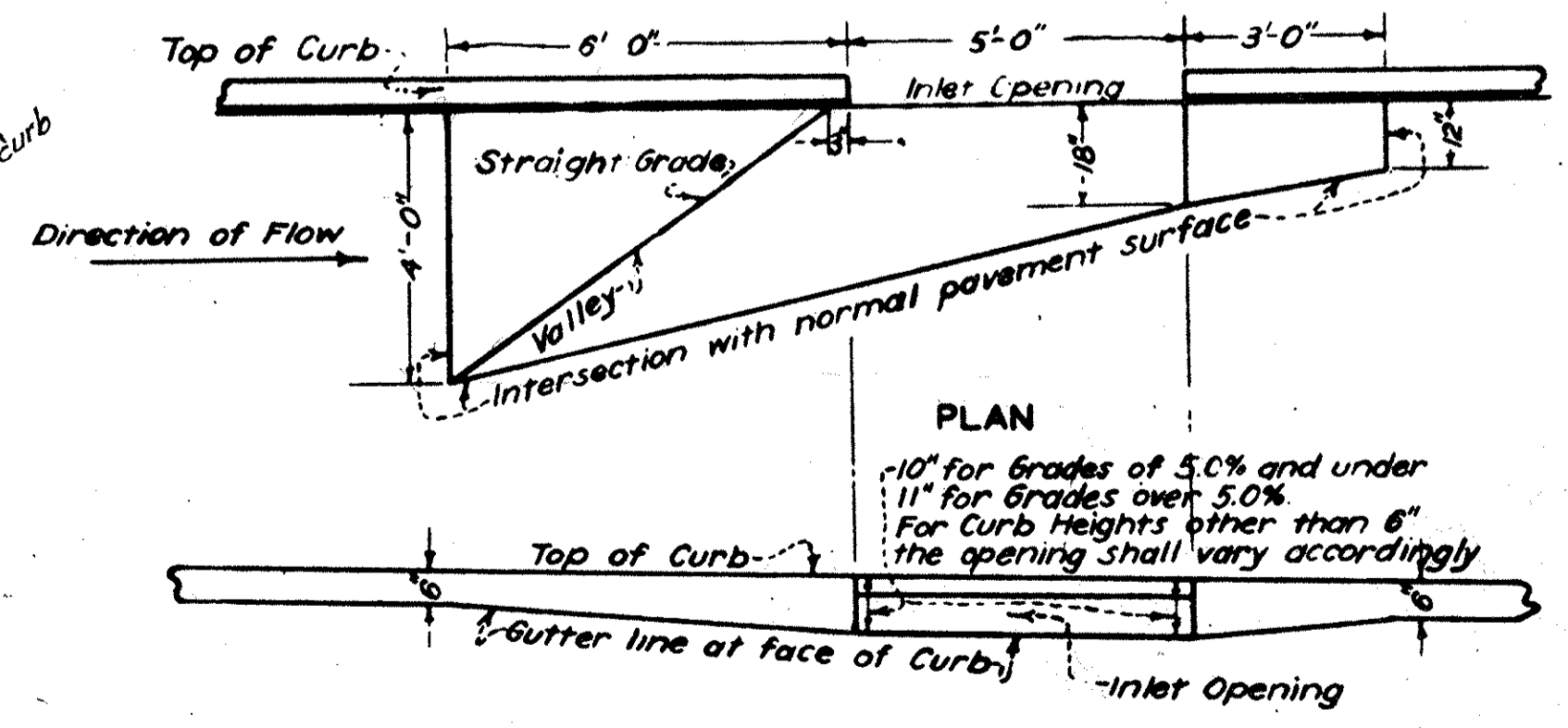
SECTION A - A



PLAN

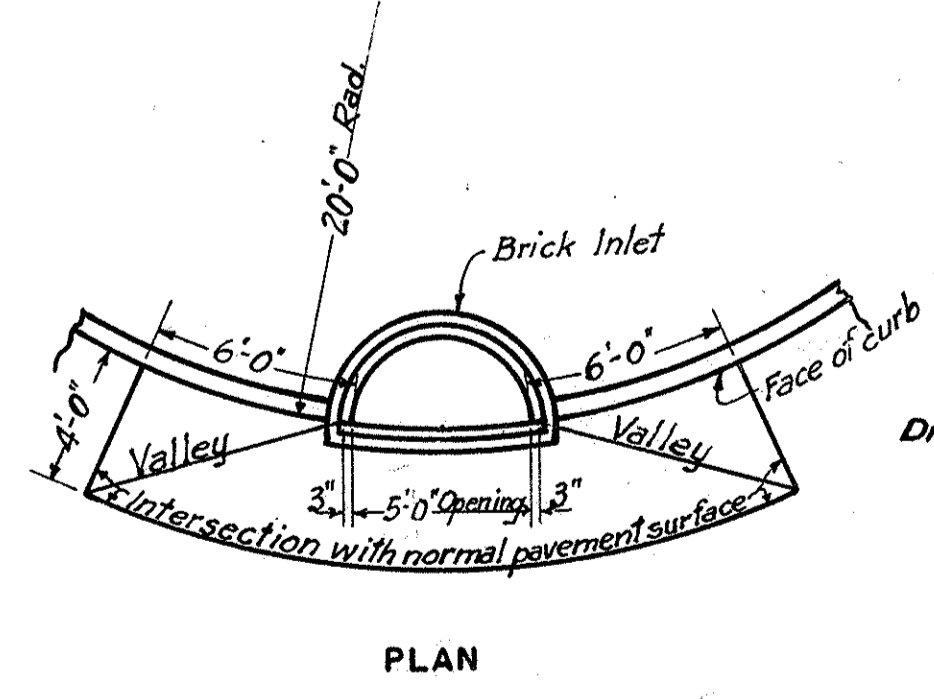


Scale - 3/4" = 1'

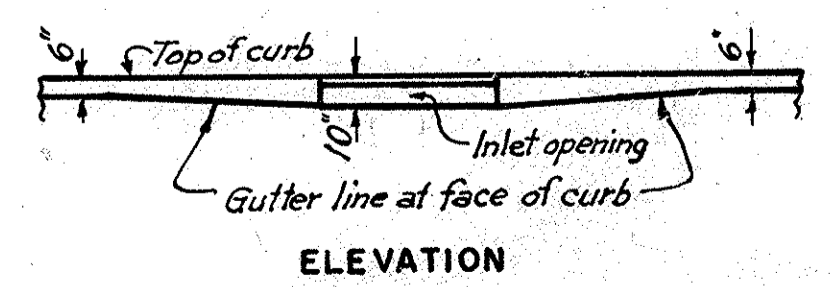


PLAN

ELEV. SHOWING GUTTER DEPRESSION IN PAVEMENT FOR INLET
Scale - 3/8" = 1'

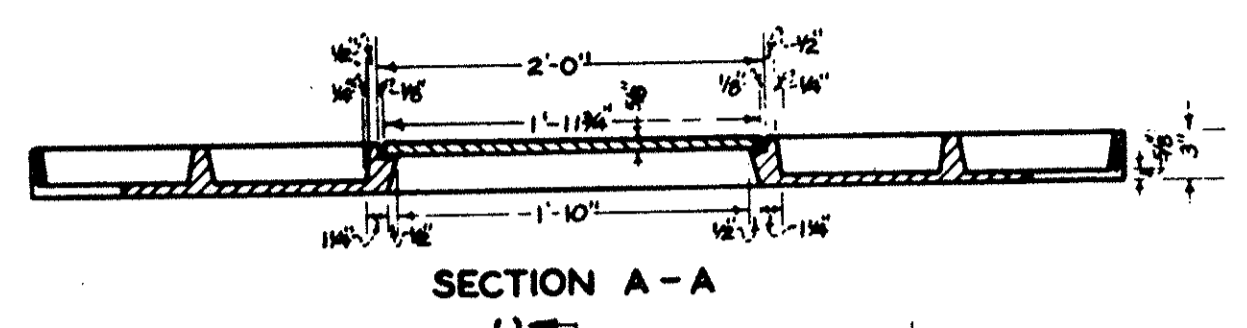


PLAN

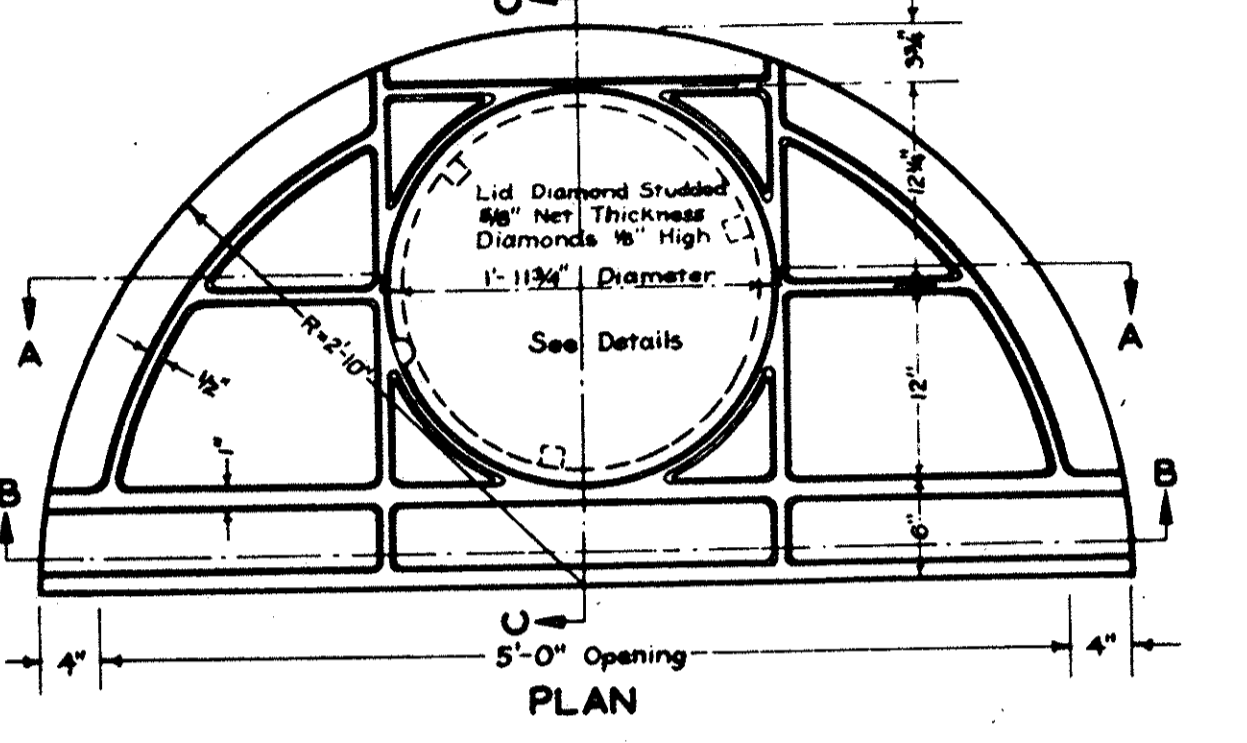


ELEVATION

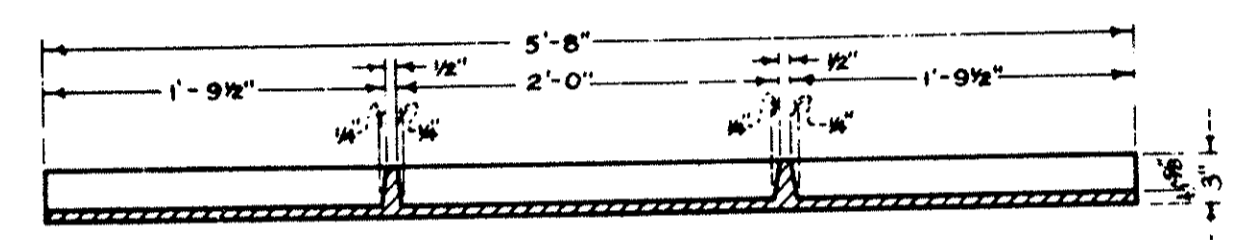
DETAIL OF GUTTER DEPRESSION FOR NEW INLETS SOUTH SIDE OF TALLMADGE AVE. AT GORGE BLVD.
Scale - 3/8" = 1'-0"



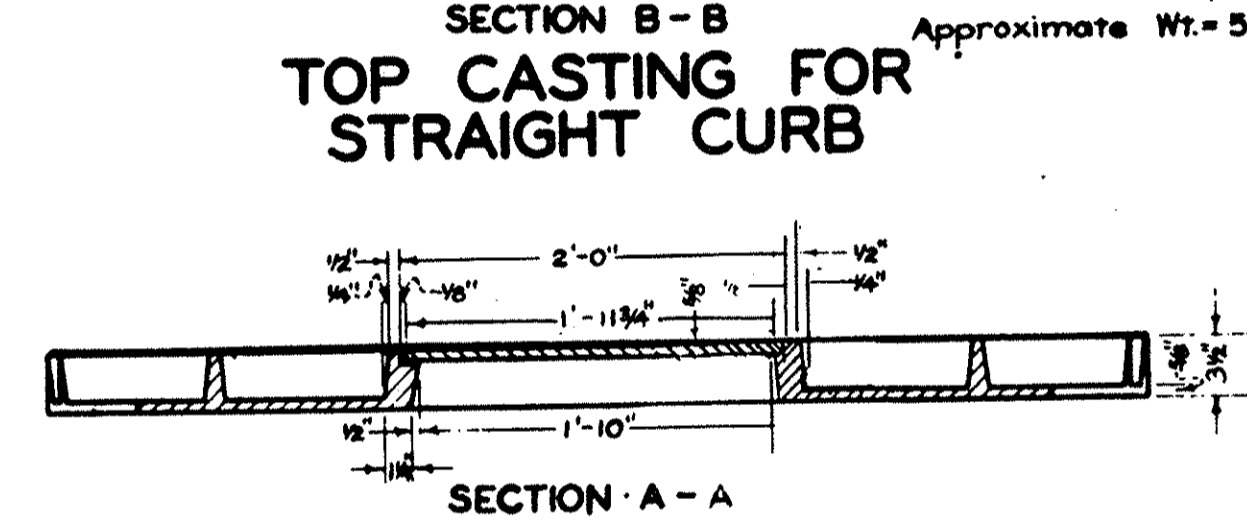
SECTION A - A



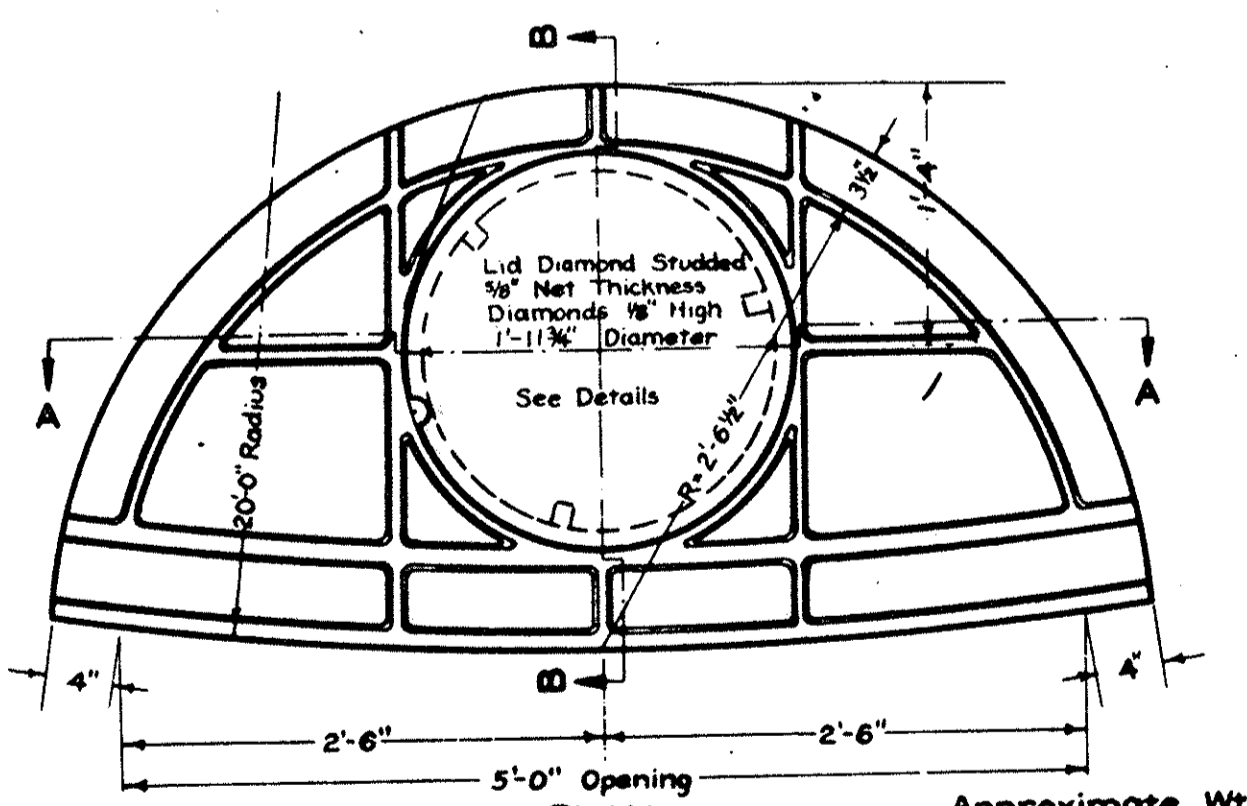
PLAN



SECTION B - B
TOP CASTING FOR STRAIGHT CURB
Approximate Wt. = 515 lbs.

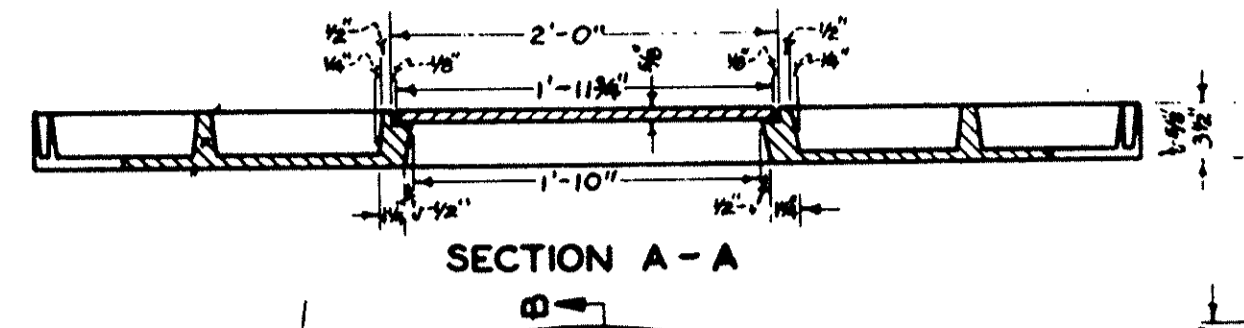


SECTION A - A

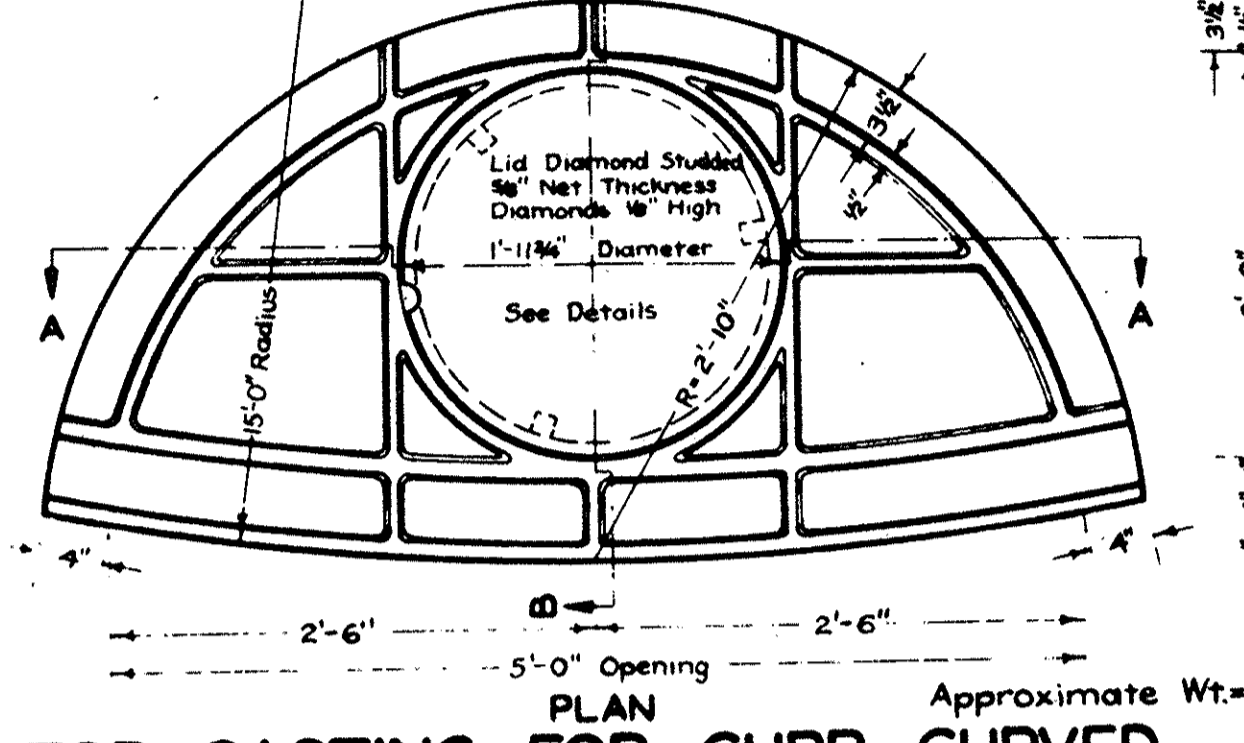


PLAN

TOP CASTING FOR CURB CURVED TO 20'-0" RADIUS
Approximate Wt. = 550 lbs.

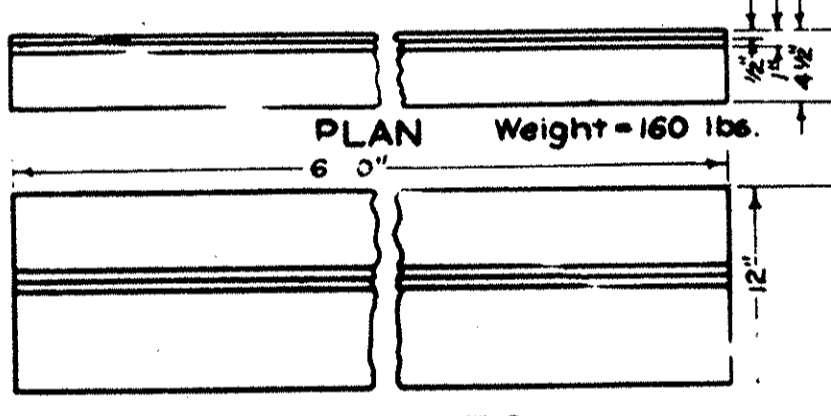


SECTION A - A



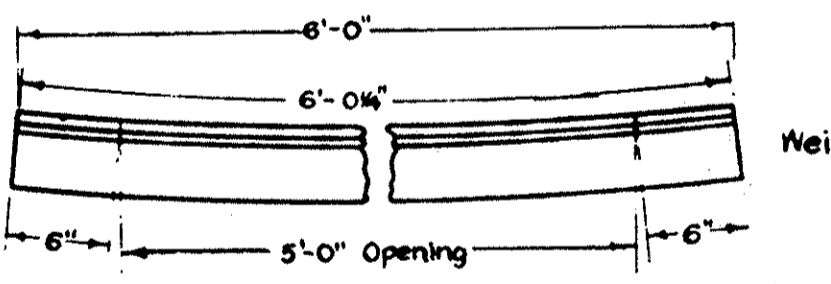
PLAN

TOP CASTING FOR CURB CURVED FOR 15'-0" RADIUS
Approximate Wt. = 550 lbs.

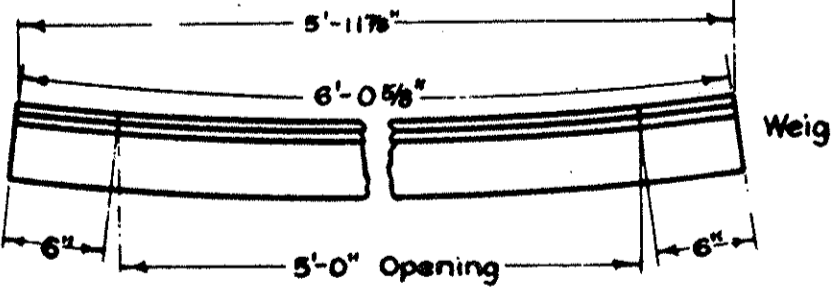


FRONT ELEVATION STRAIGHT CURB
Weight = 160 lbs.

TYPICAL SECTION



PLAN FOR CURB CURVED TO 20'-0" RADIUS
Weight = 165 lbs.



PLAN FOR CURB CURVED TO 15'-0" RADIUS
Weight = 165 lbs.

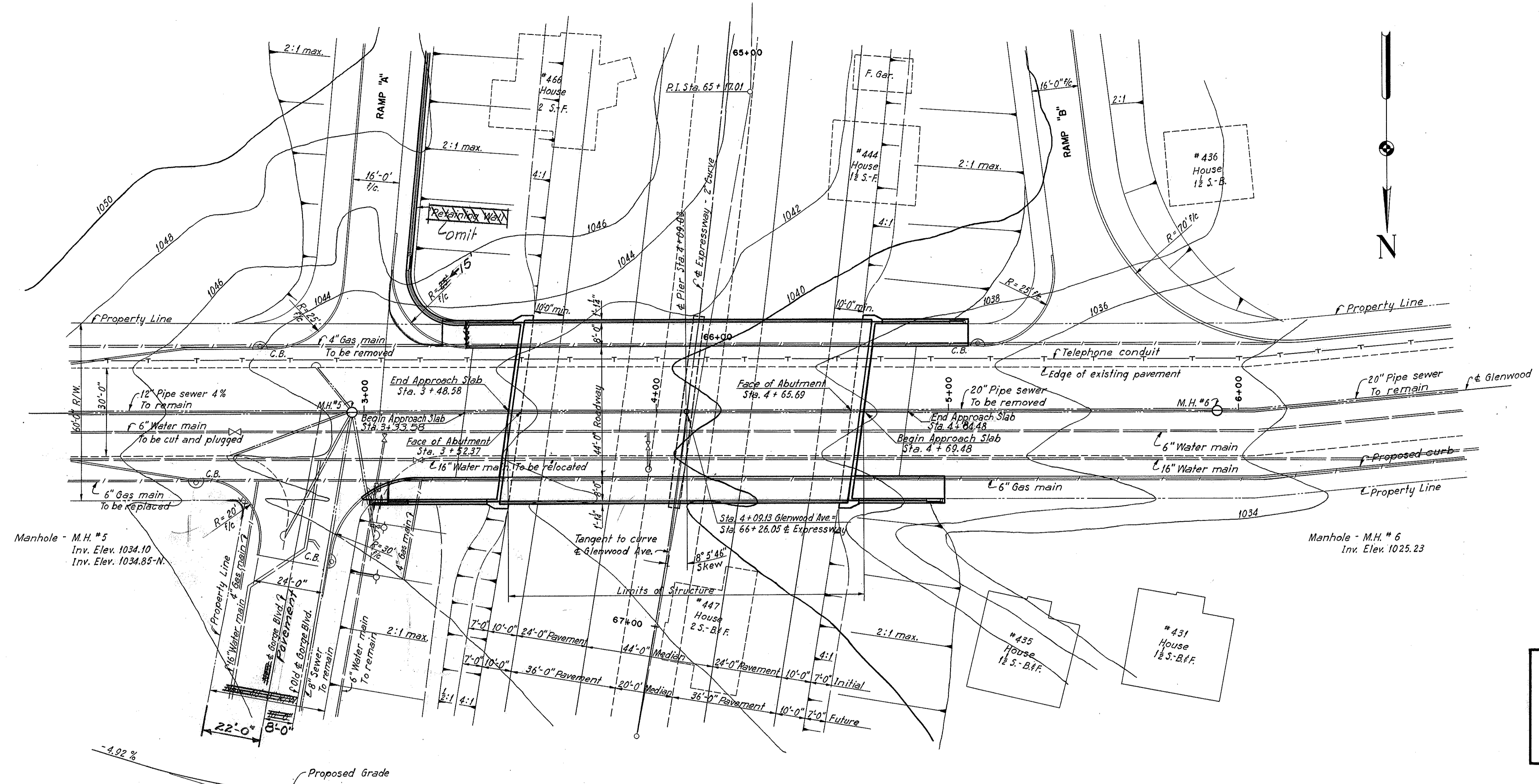
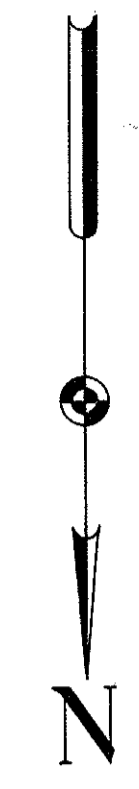
CASTING TO SUPPORT PAVEMENT AT OPENINGS

When casting is set, the space between the webs is to be filled with 1:2 mortar.

Notes -
Inlet is to be built of Brick laid up in Portland Cement Mortar, corners boarded, and with every fifth course a stretch course.
Tile stubs to be placed in inlets as indicated on the plan and sealed when directed by the Engineer. The stubs shall be paid for as Inlet Complete.
On unpaved streets and wherever there is no existing curb, standard curbs of a minimum length of two (2) feet to be furnished on each side of inlet, notched as shown and where there is no bid price on curb, the curb shall be paid for as Inlet Complete.
Where inlet is constructed in existing pavement all reshaping of pavement, within the limits shown on the plan, shall be paid for as Inlet Complete.

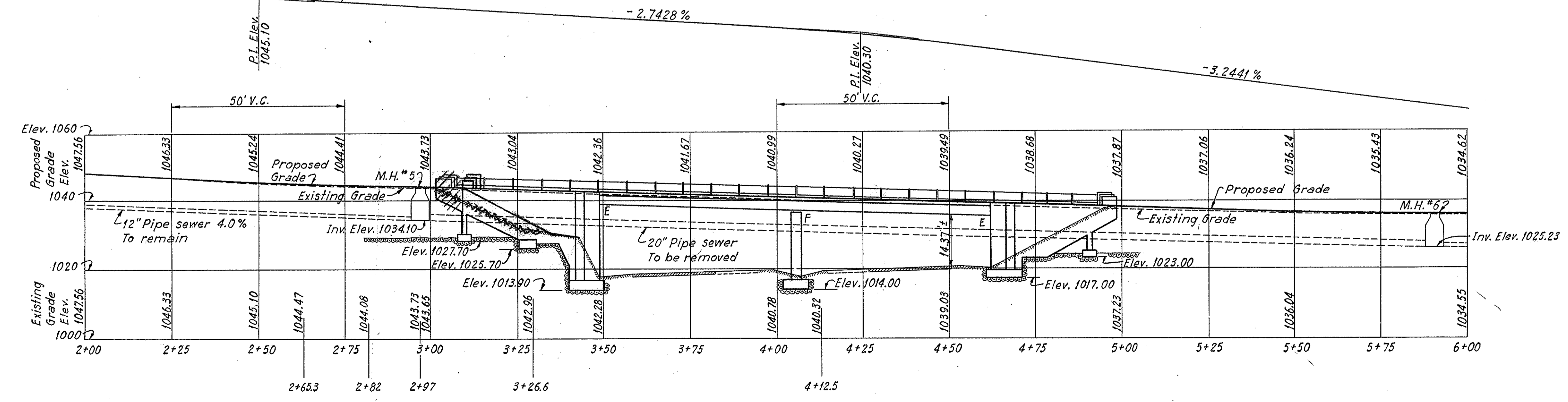
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE	POST WAR	120
2	OHIO	U-687(8)	EXPRESSWAY		146

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62



PROPOSED STRUCTURE
 Type: Continuous steel beam with concrete deck and substructure.
 Spans: 2 @ 57'-11 1/2"
 Roadway: 44'-0" with two 8'-0" sidewalks.
 Loading: 5-20-46
 Skew: 8°05'46"
 Surface Course: 2 1/2" asphaltic concrete surface course

Note:
 For additional details of new and existing utilities, see Sheet 89.



STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 BUREAU OF BRIDGES

AKRON EXPRESSWAY SYSTEM
 (EAST MARKET STREET TO EAST CUYAHOGA FALLS AVENUE)
GLENWOOD UNDERPASS
 BR. NO. SU-5-131
SITE PLAN

AKRON, SUMMIT COUNTY, OHIO

SCALE: 1" = 20'
 MADE P.O.D. DATE 2-4-50
 TRCD. G.D. DATE 2-11-50
 CKD. 1.6 DATE 7-25-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK

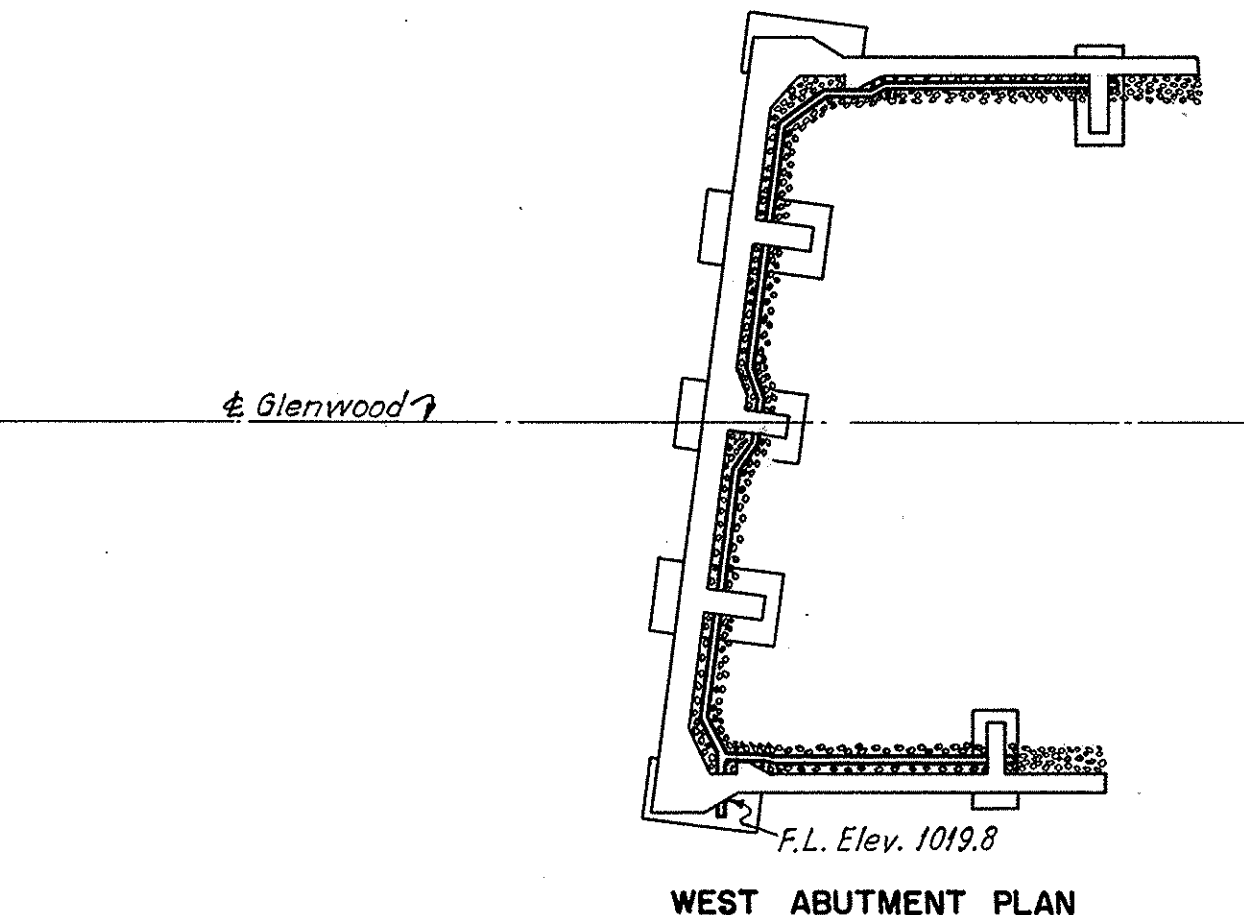
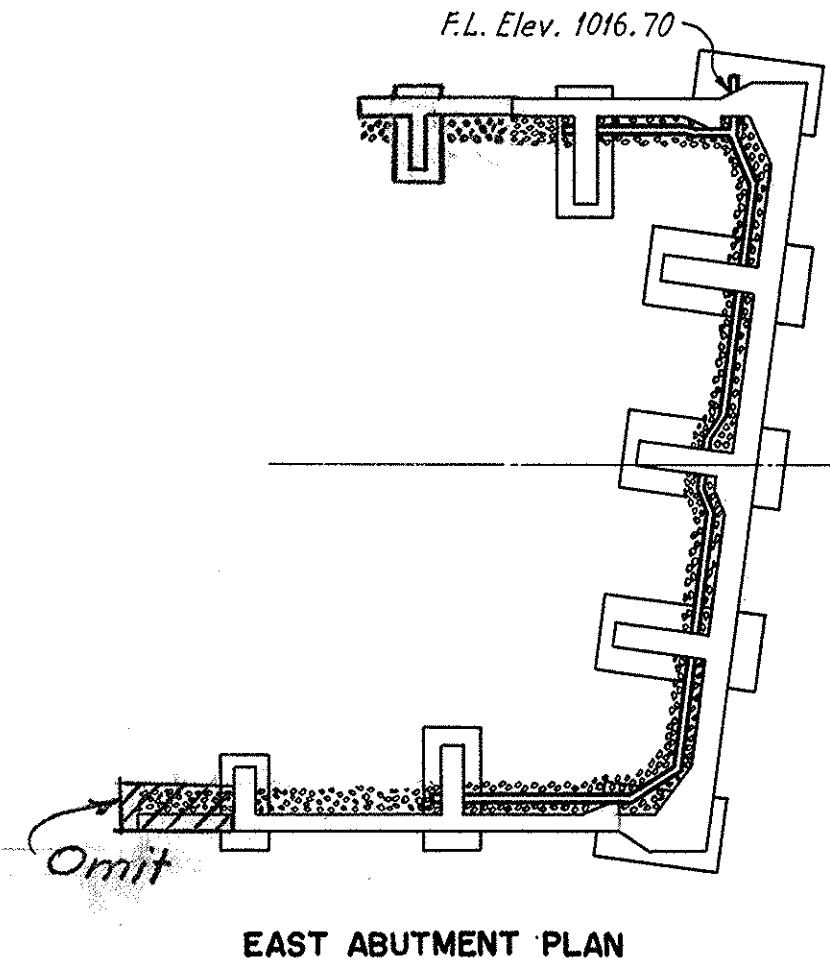
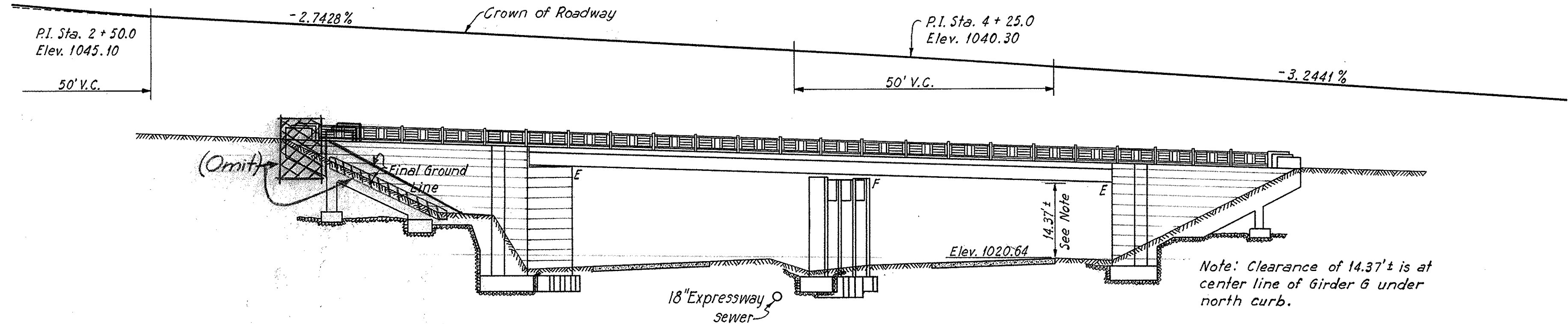
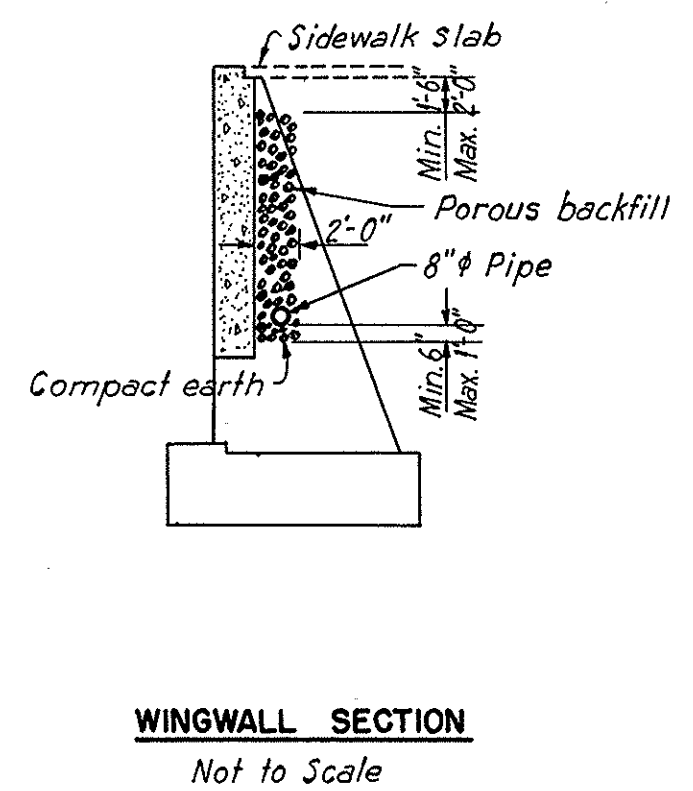
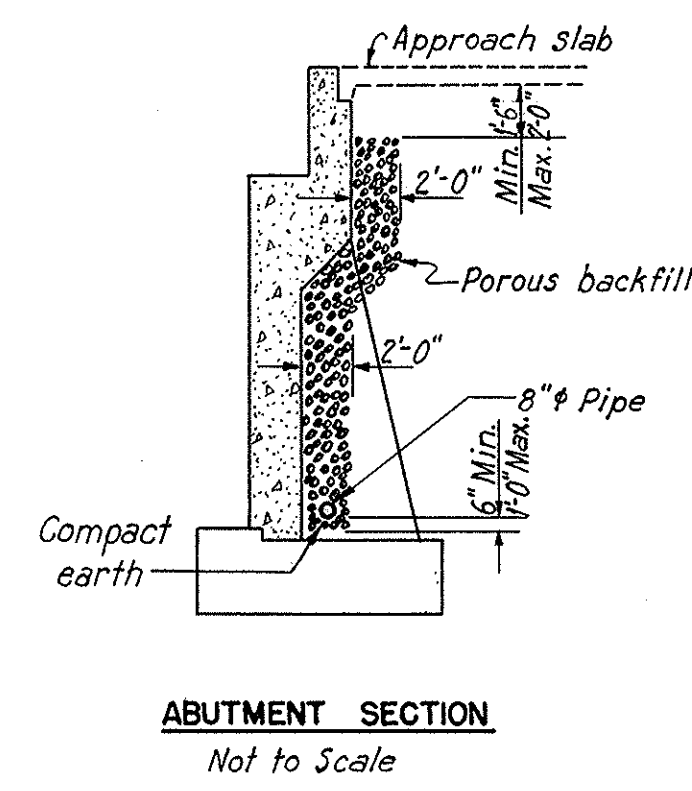
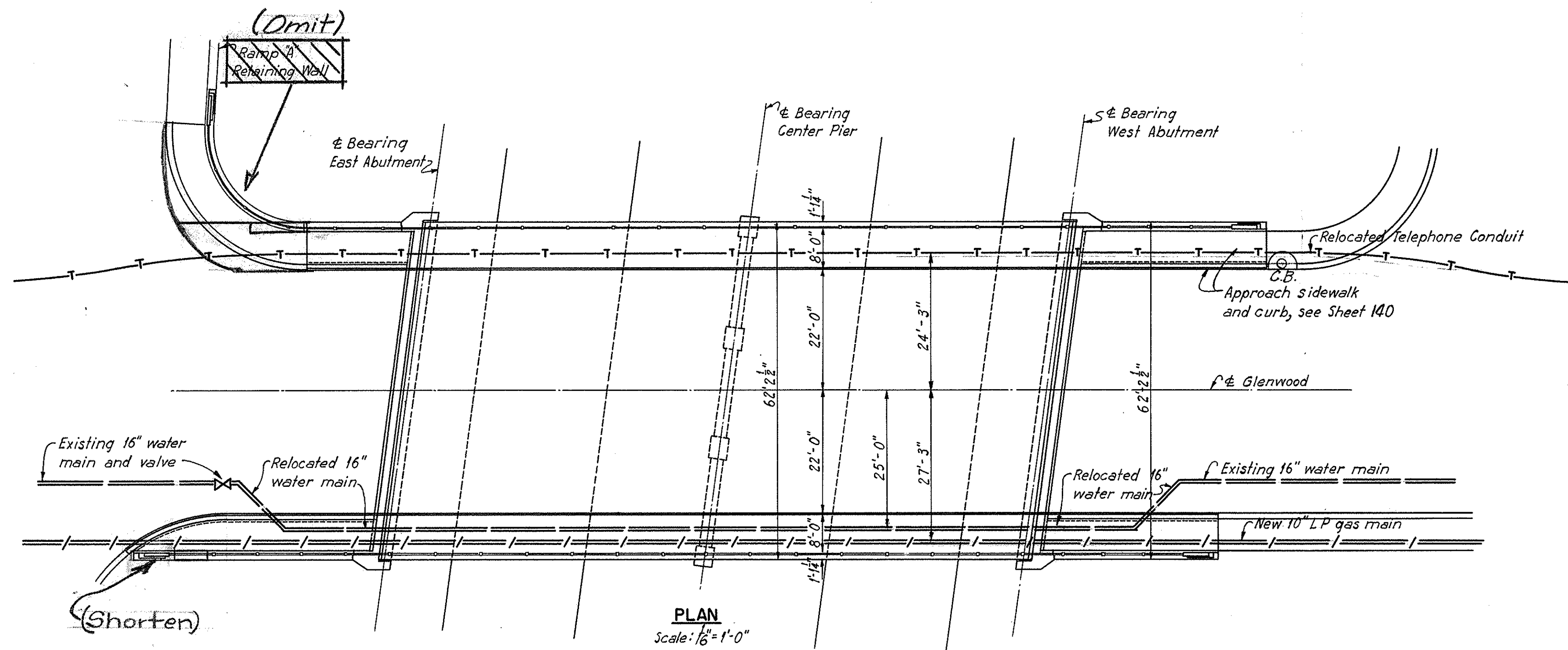
766 SHEET

Revised 4-16-51
 Revised 9-18-50

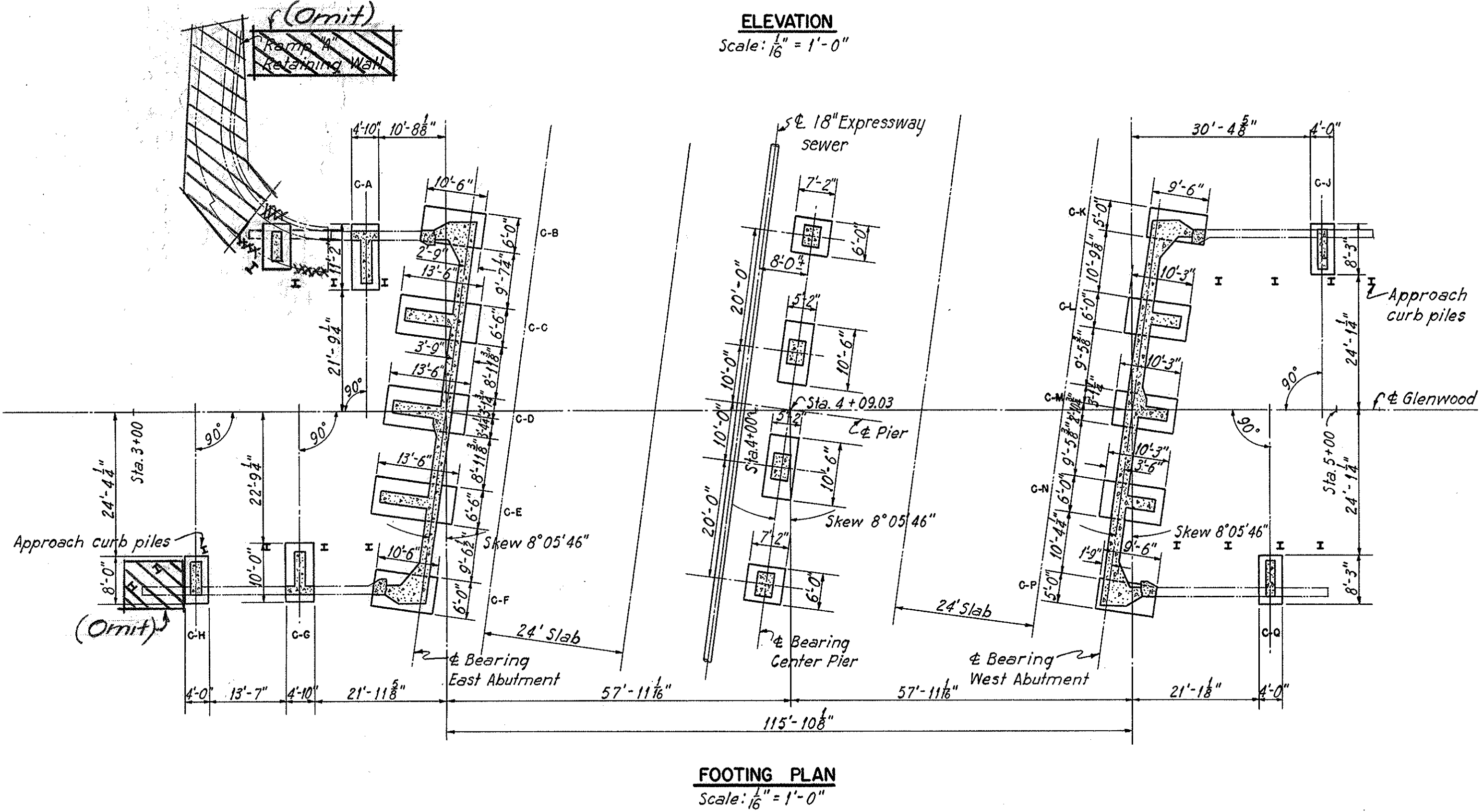
502

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	121 146
2	OHIO	U-687(S)	POST WAR	

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62



Note: Porous backfill shall conform to Items S-29.02 and S-29.04.
Pipe shall be 8" bituminous coated perforated c.m.p. conforming to Sec. M64 (b)(c), with necessary fittings. At one end of each abutment where shown on the Abutment Plans the pipe shall project 1'-0" to permit connecting 8" vitrified sewer pipe of the Expressway sewer system. See Drainage Plans. Upper ends of pipes shall be tightly closed with permanent headers made of No. 16 gauge sheet metal.



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

AKRON EXPRESSWAY SYSTEM
(EAST MARKET STREET TO EAST CUYAHOGA FALLS AVENUE)

GLENWOOD UNDERPASS
BR. NO. SU-5-131

GENERAL PLAN & ELEVATION

AKRON, SUMMIT COUNTY, OHIO

SCALE
MADE J.H.G. DATE 6-1-50
TRCD L.E.R. DATE 7-20-50
CKD D.M.D. DATE 7-12-50

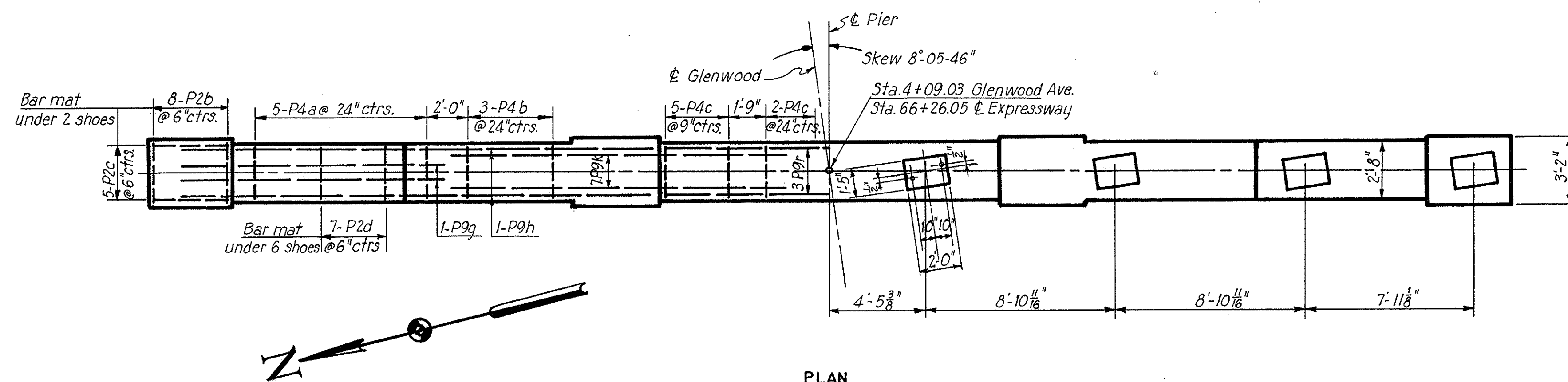
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

Revised 4-16-51
Revised 3-18-50

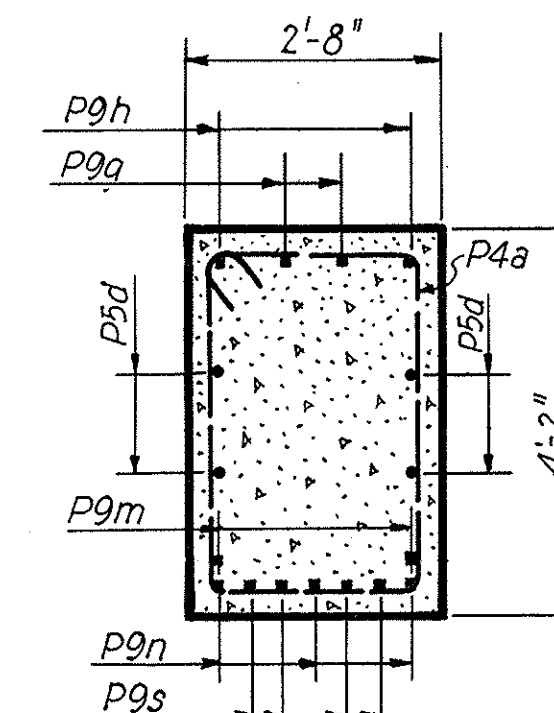
766 SHEET.

FED ROAD DIV. NO.	STATE	FED AID PROJ. NO.	TYPE FUNDS	122
2	OHIO	U-687(8)	POST WAR	146

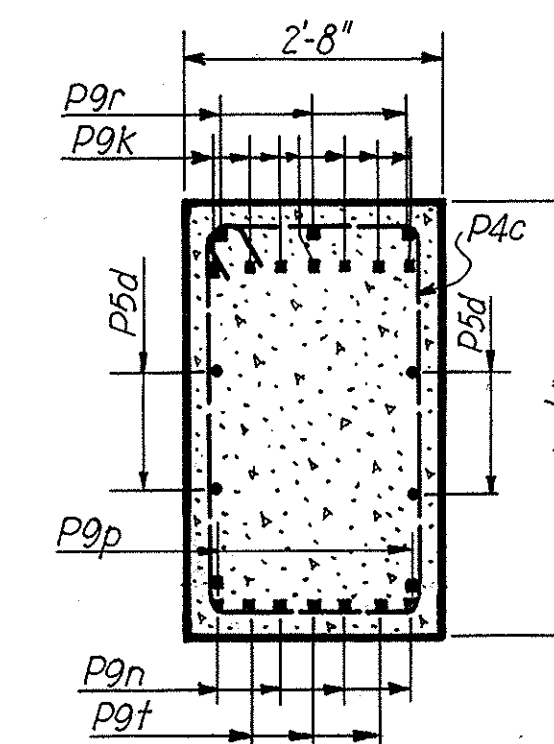
SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62



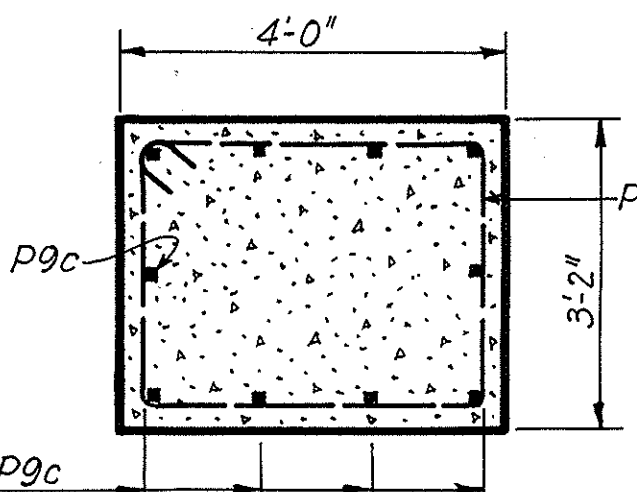
Note:
Special care shall be taken in placing top reinforcing steel so that it will not interfere with drilling for anchor bolt holes.



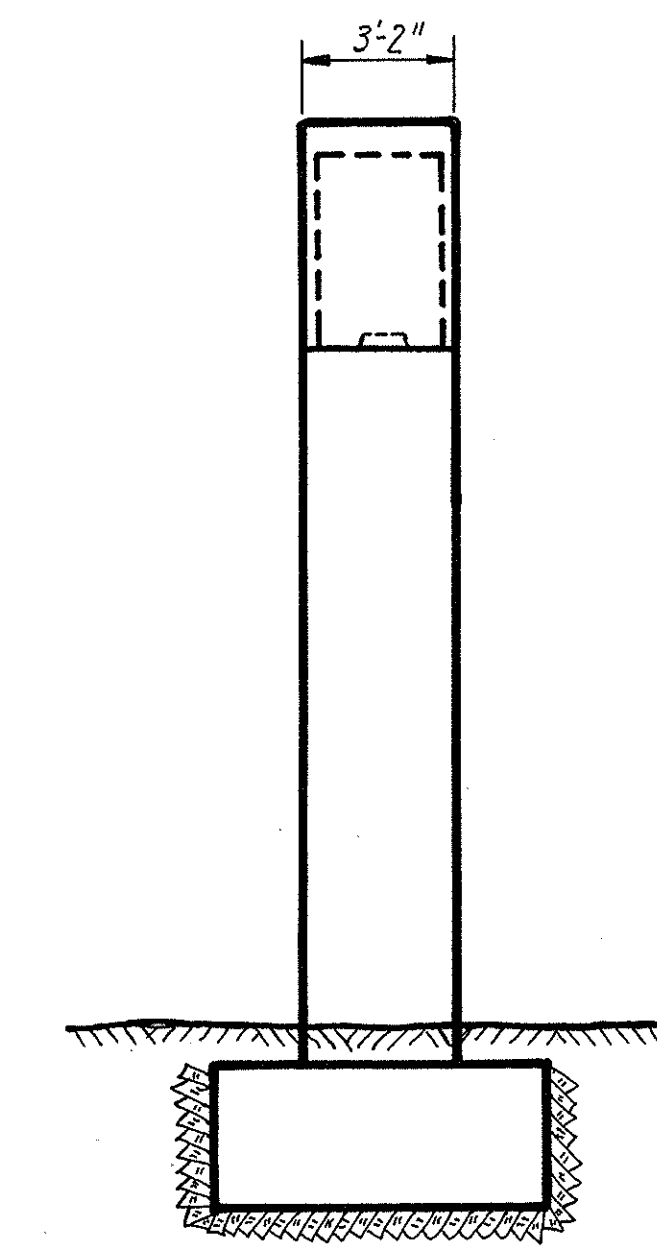
SECTION A-A
Scale: 1/2" = 1'-0"



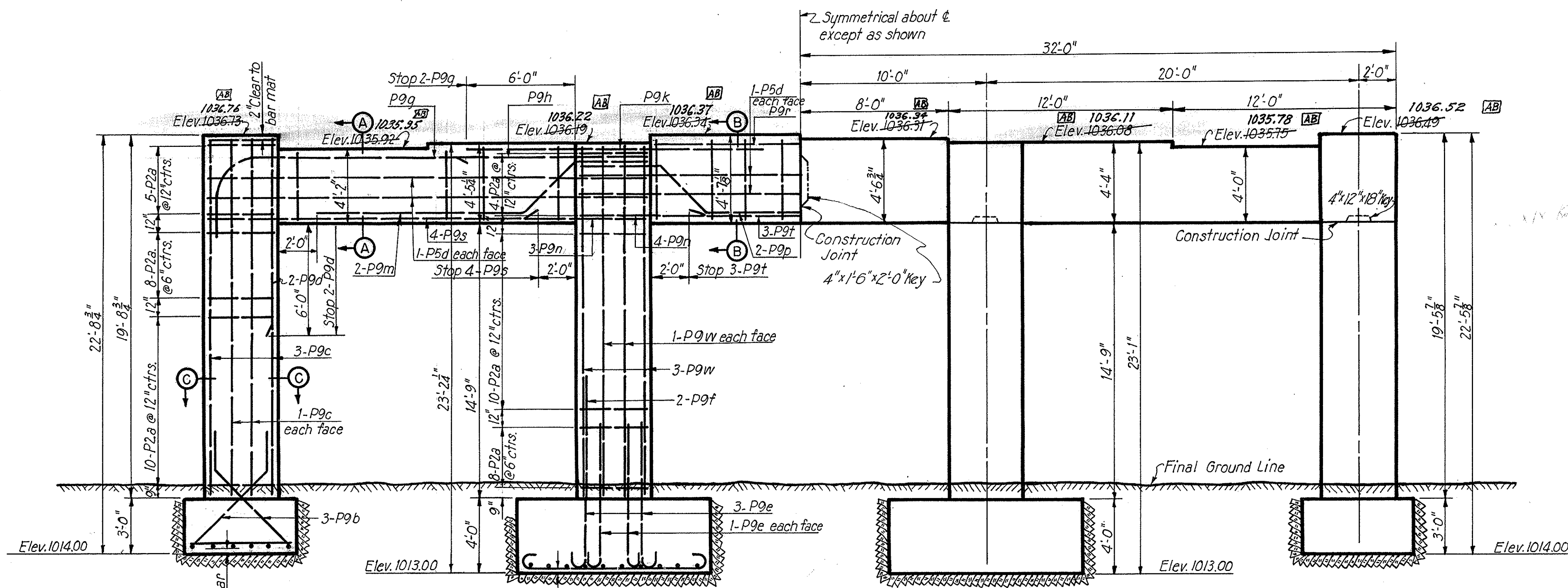
SECTION B-B
Scale: 1/2" = 1'-0"



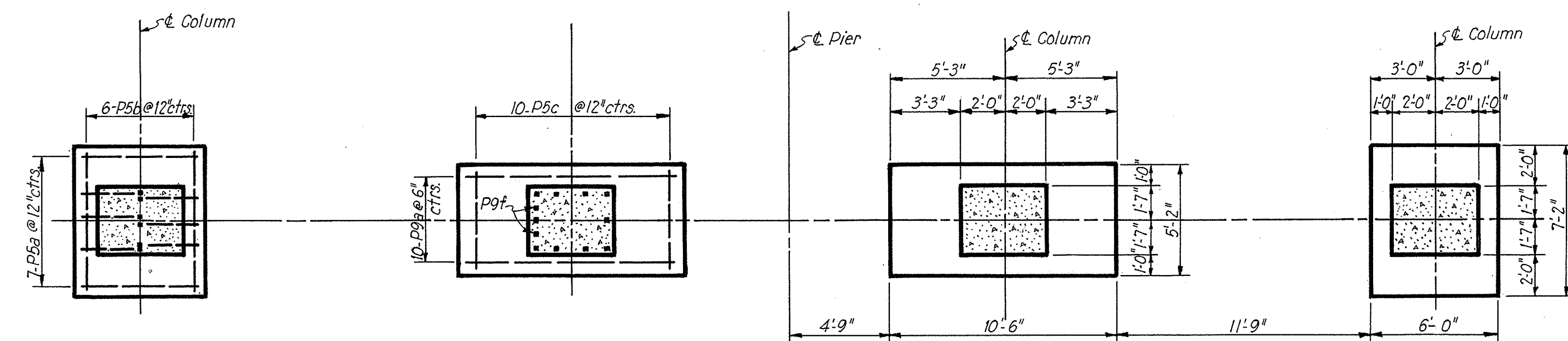
SECTION C-C
Scale: 1/2" = 1'-0"



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



ELEVATION
Scale: 3/4" = 1'-0"



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

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

AKRON EXPRESSWAY SYSTEM
(EAST MARKET STREET TO EAST CUYAHOGA FALLS AVENUE)

GLENWOOD UNDERPASS
BR. NO. SU-5-131
CENTER PIER

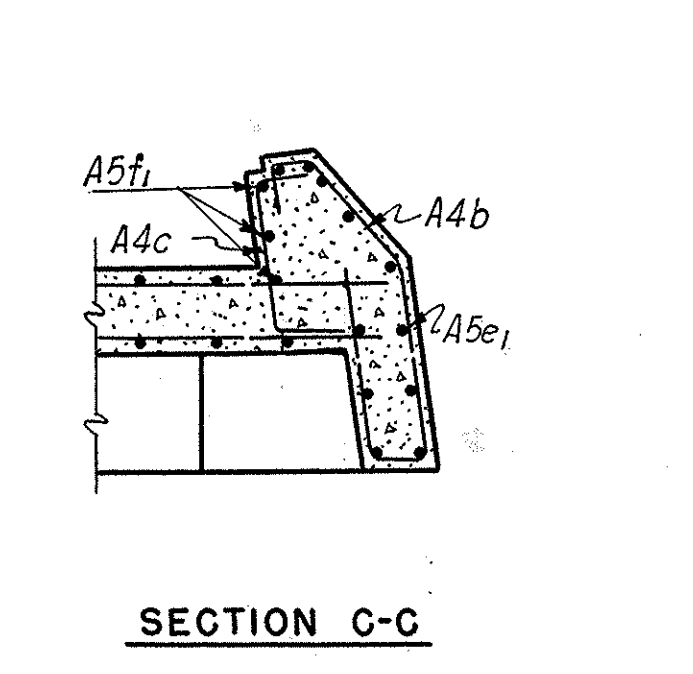
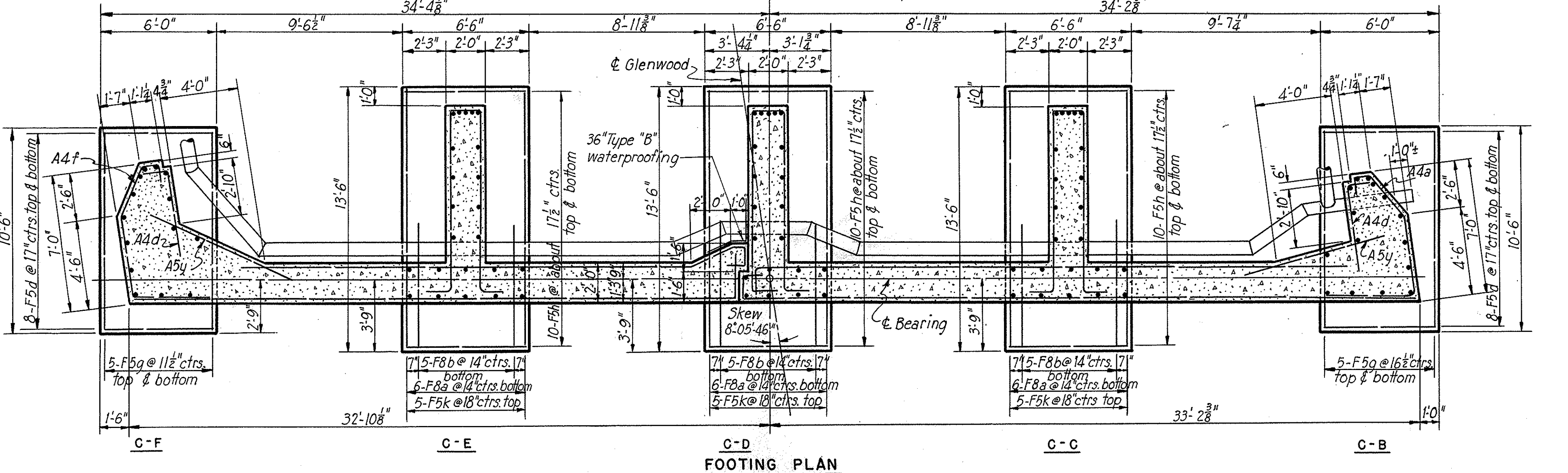
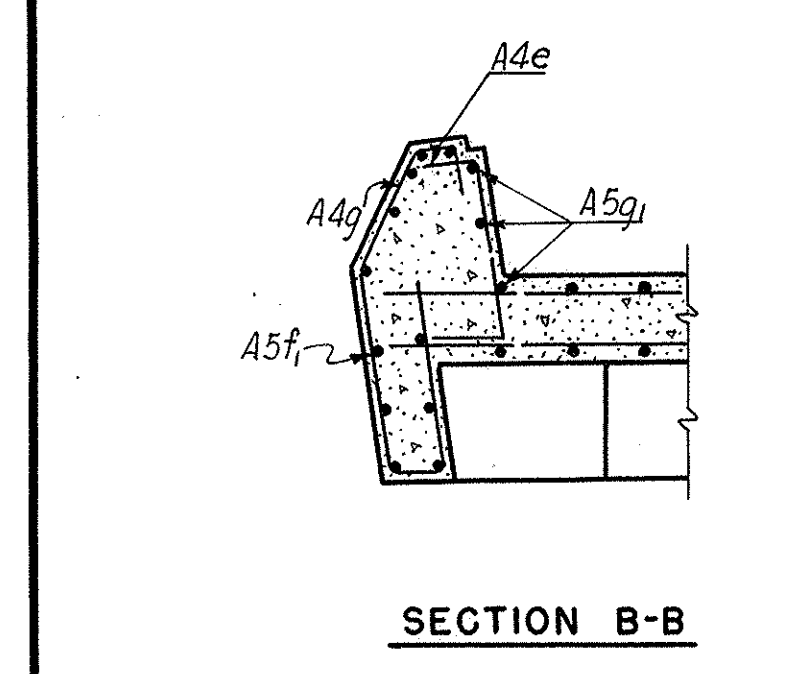
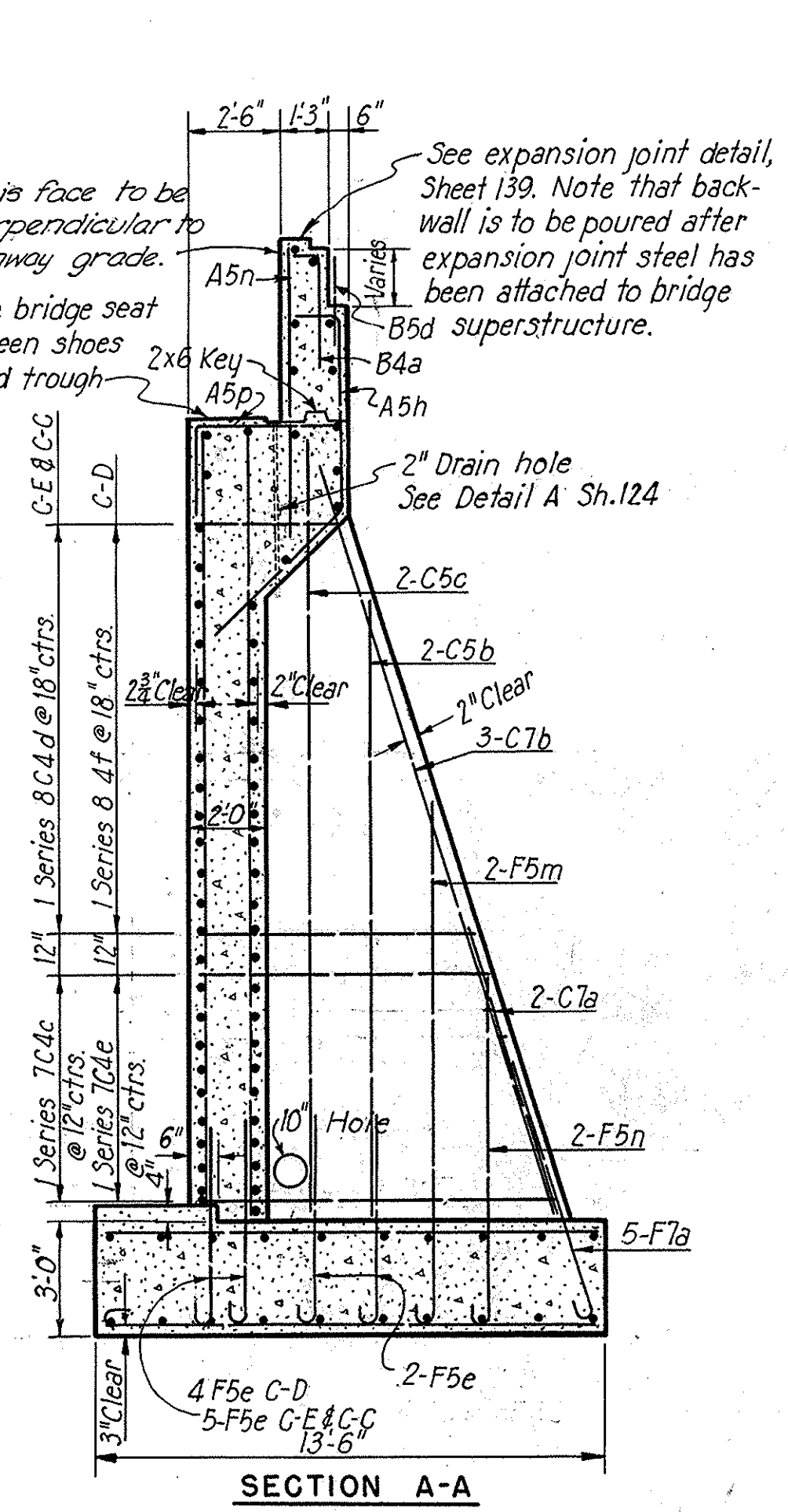
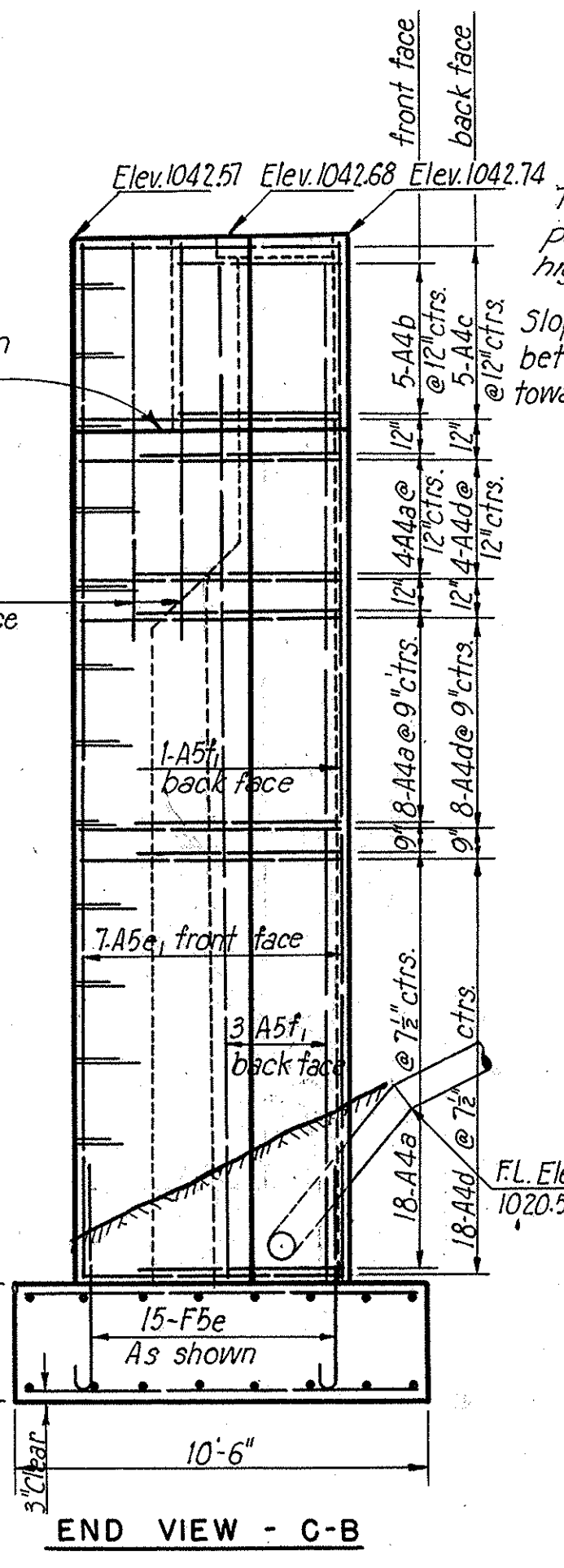
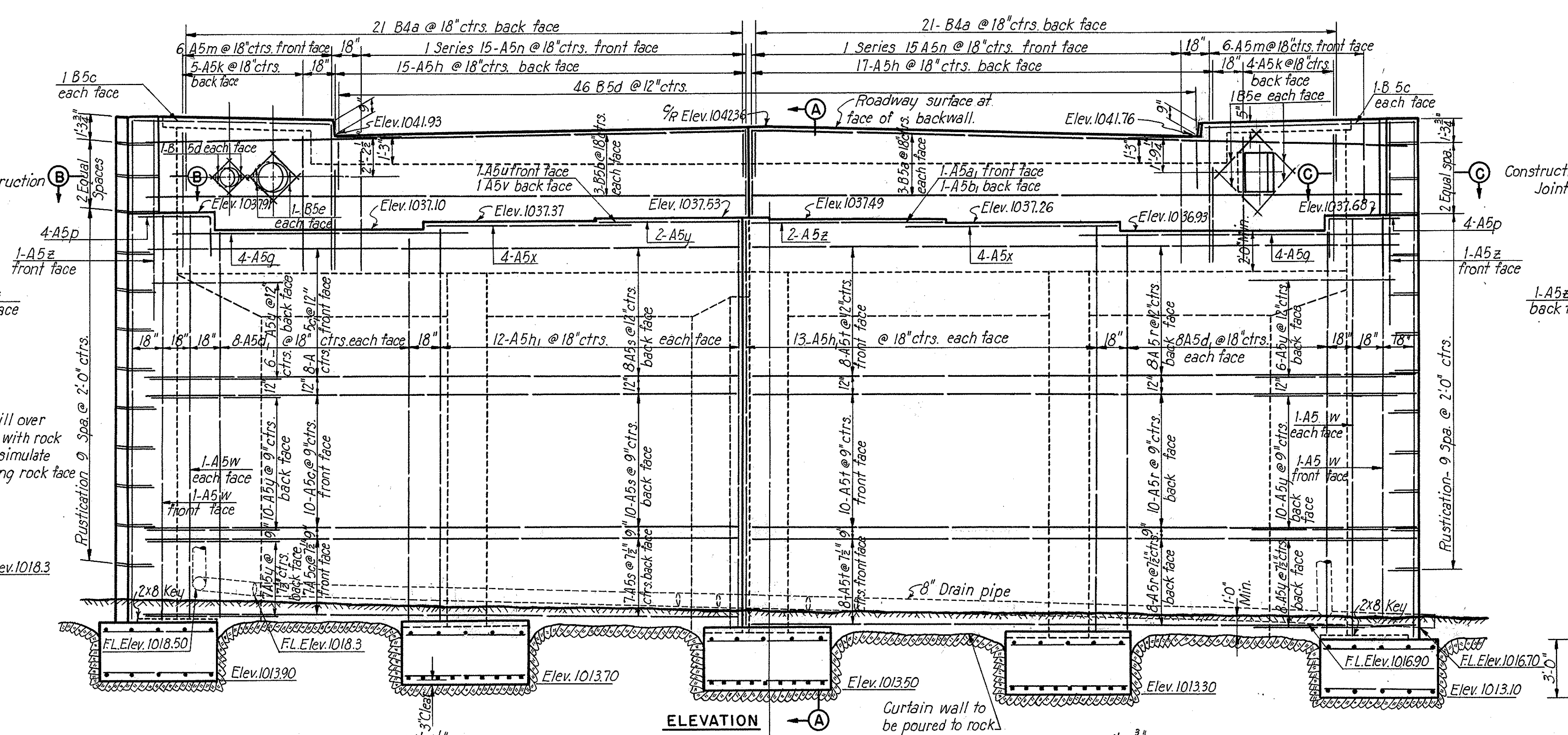
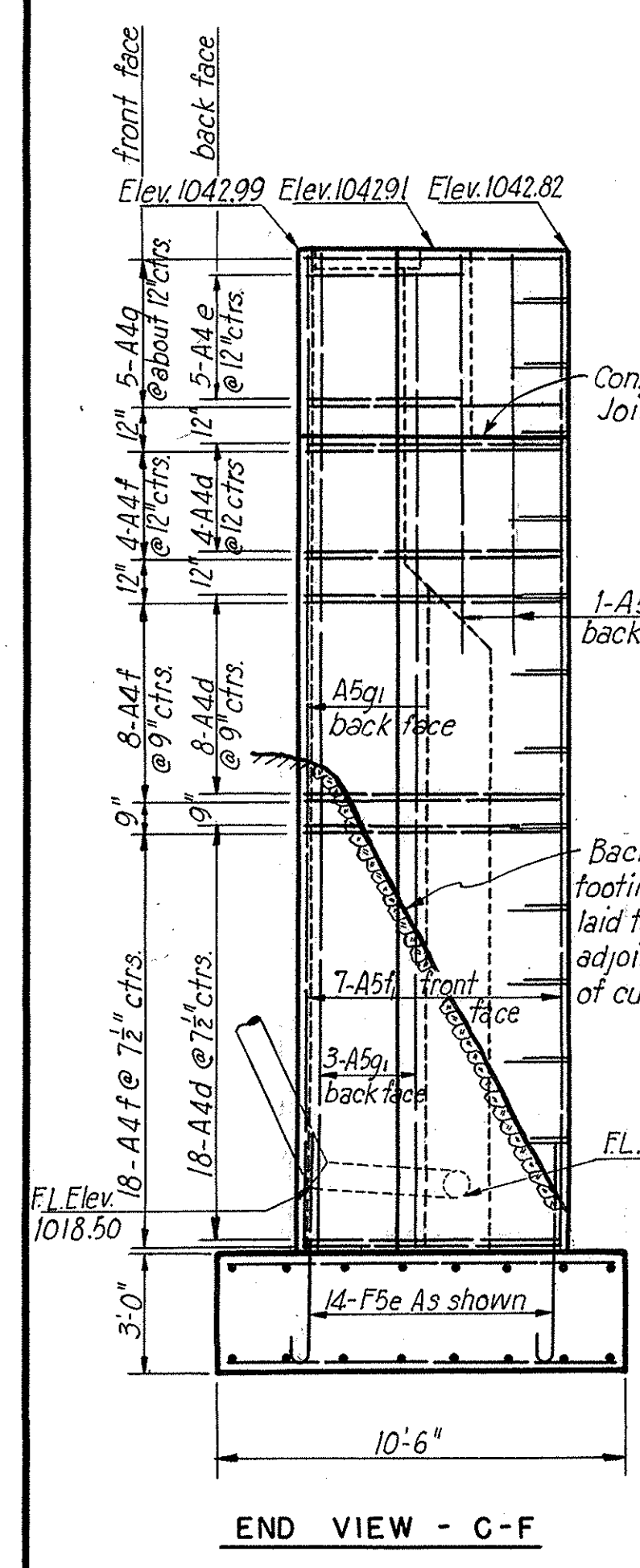
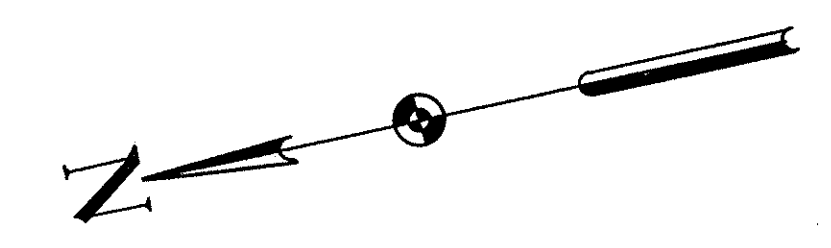
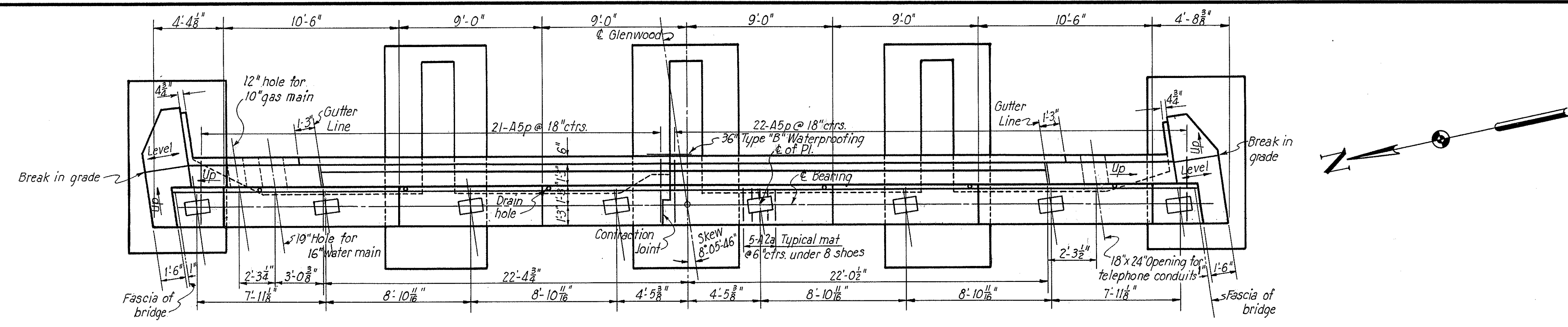
AKRON SUMMIT COUNTY OHIO
SCALE: 3/4" = 1'-0"
MADE G.M.N. DATE 5-16-50 HOWARD, NEEDLES, TAMMEN & BERGENDOFF
TRCD. W.C.P. DATE 6-30-50 CONSULTING ENGINEERS.
KANSAS CITY NEW YORK
CHKD. D.M.D. DATE 6-16-50

Revised 3-18-50

Revised AS-Built 6-11-54 J.V.P.

FED ROAD DIV NO.	STATE	FED AID PROJ NO.	TYPE FUNDS	123
2	OHIO	U-687(B)	POST WAR	146

**SUMMIT COUNTY CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62**



Note: For details of contraction joint, rustication and drain channel see Sheet 124.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

AKRON EXPRESSWAY SYSTEM
(EAST MARKET STREET TO EAST CUYAHOGA FALLS AVENUE)
GLENWOOD UNDERPASS
BR. NO. SU-5-131
EAST ABUTMENT

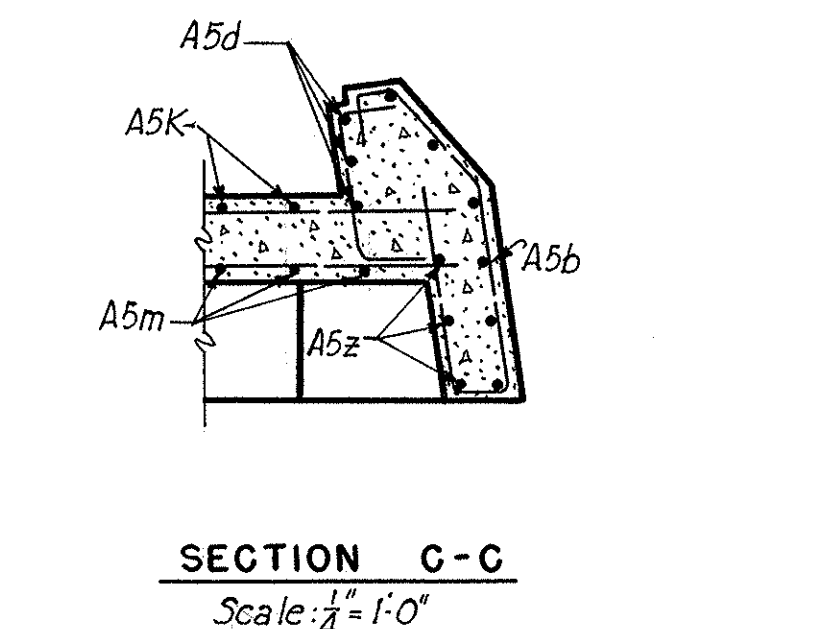
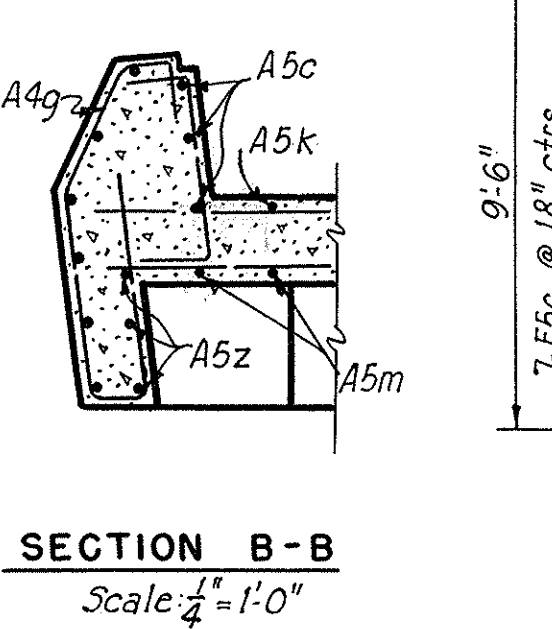
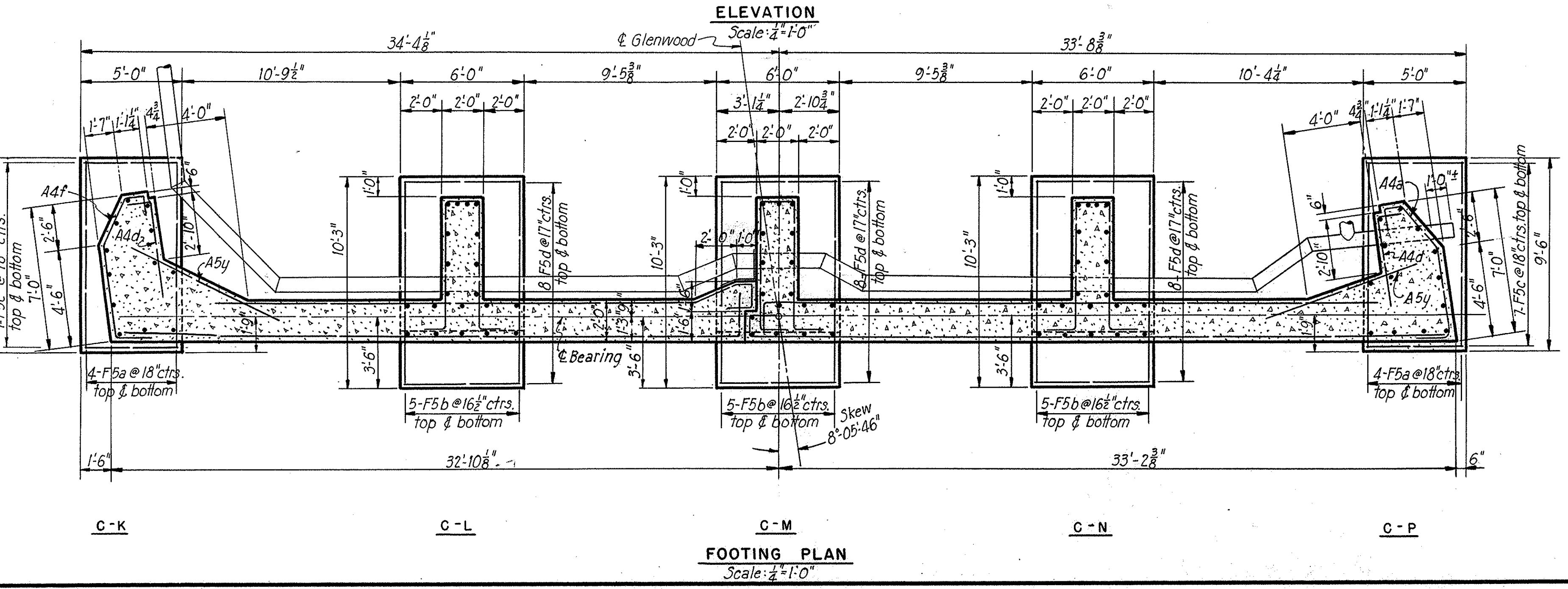
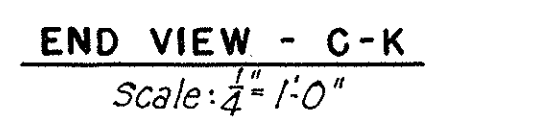
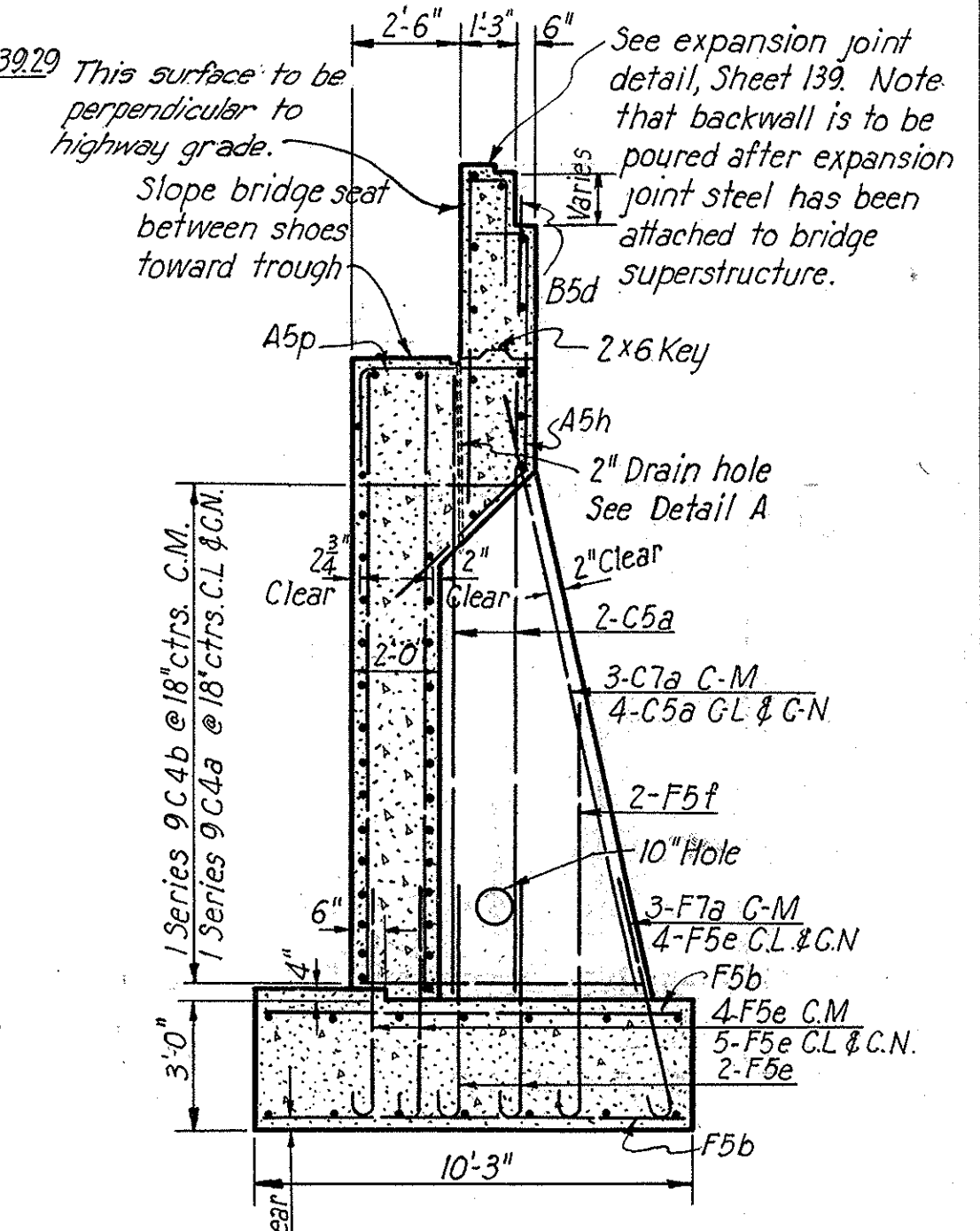
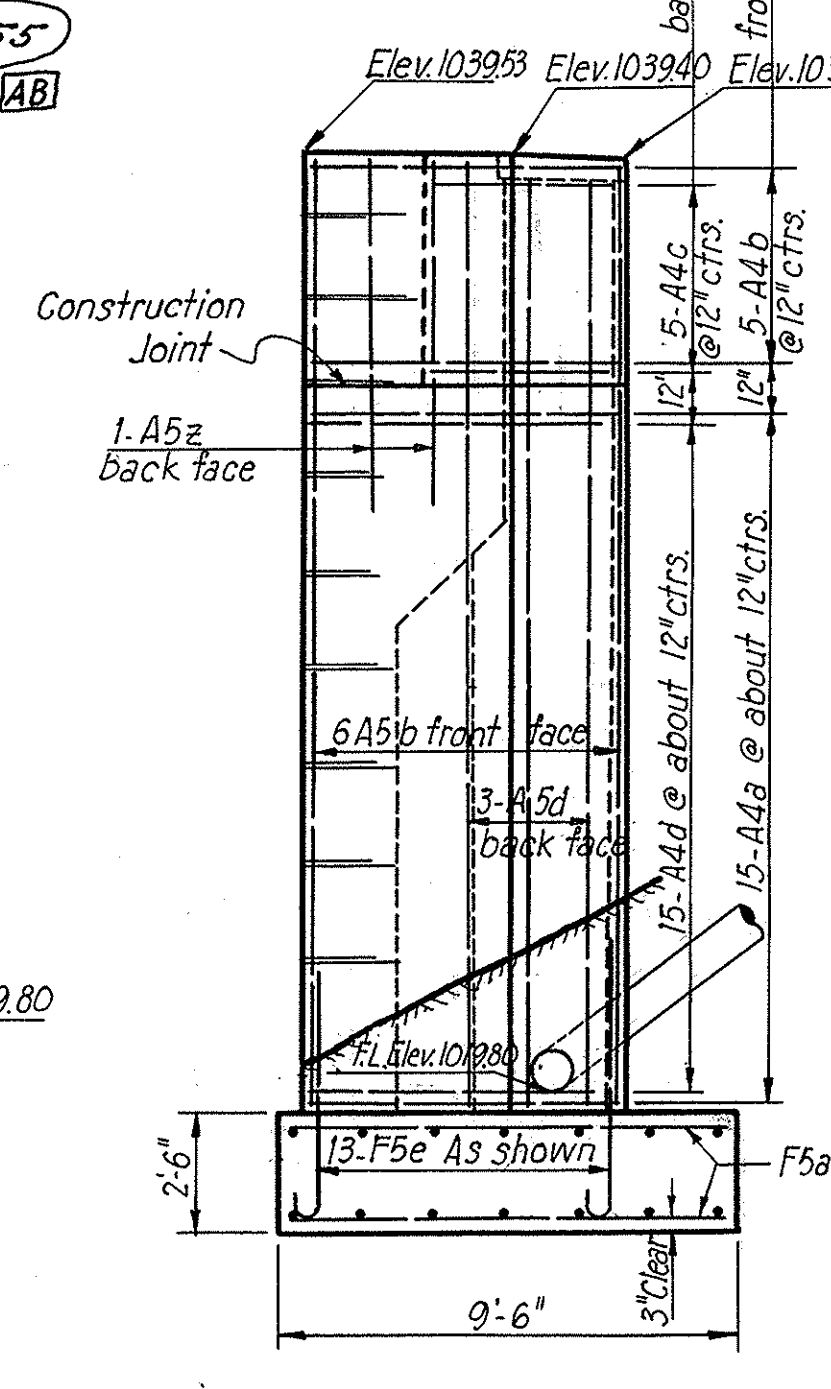
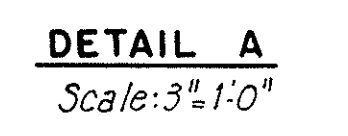
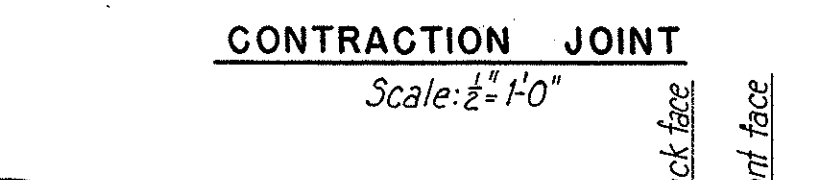
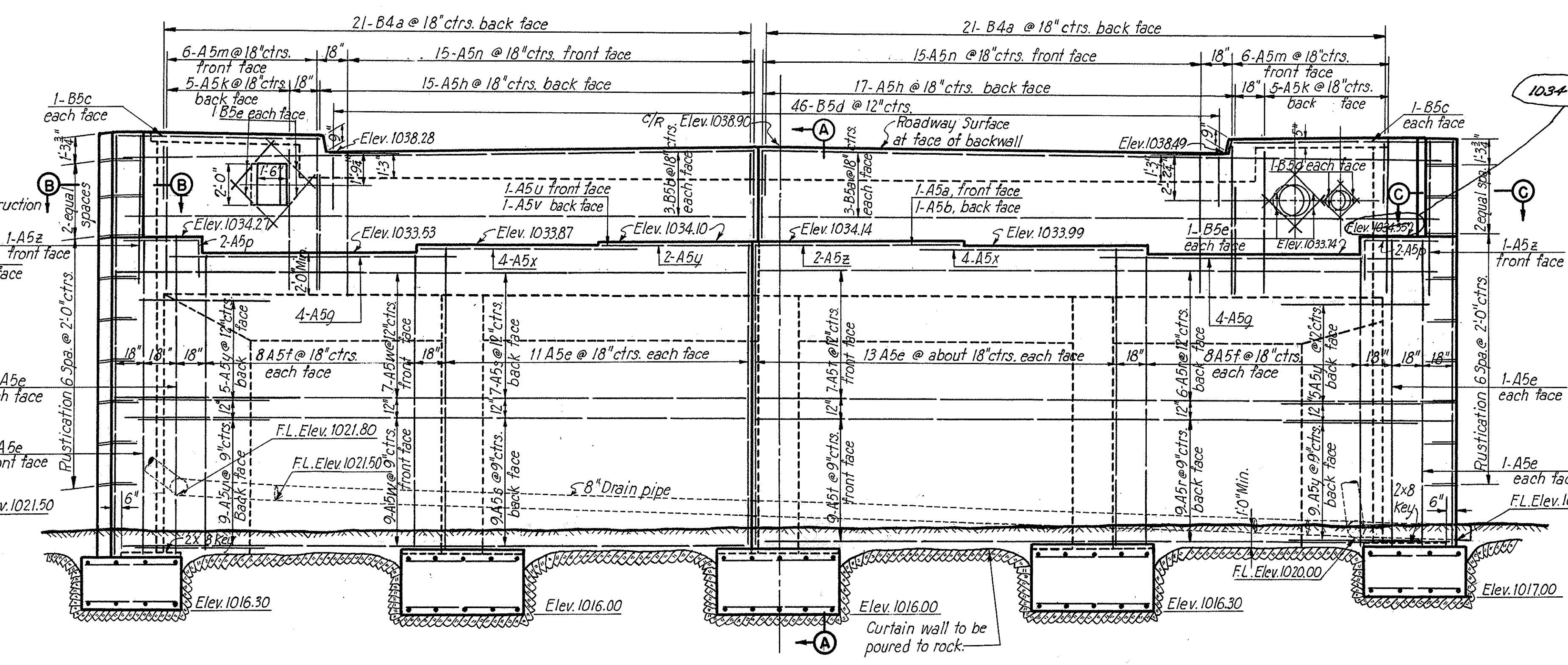
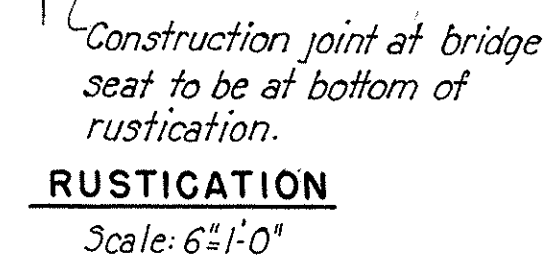
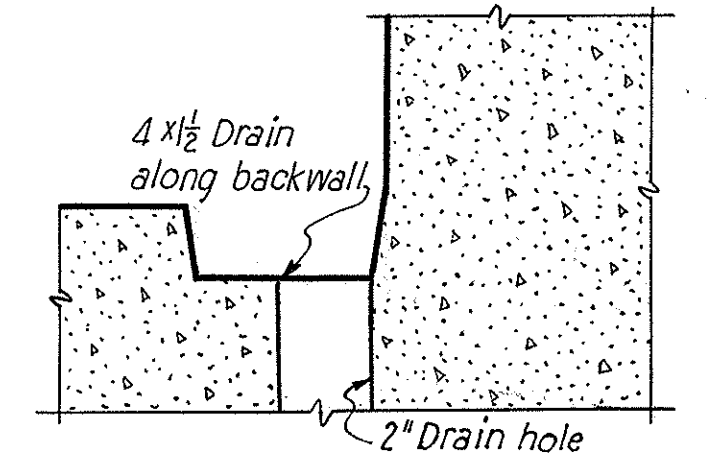
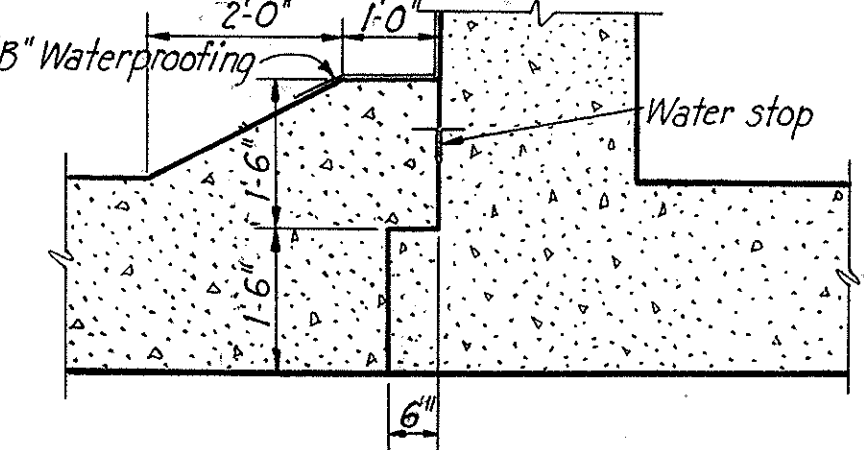
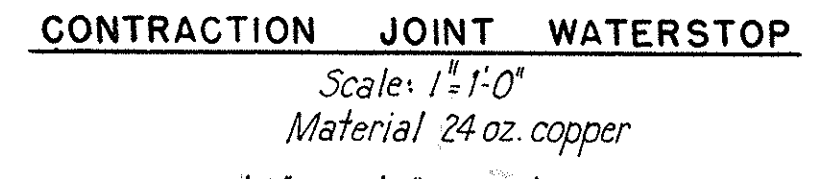
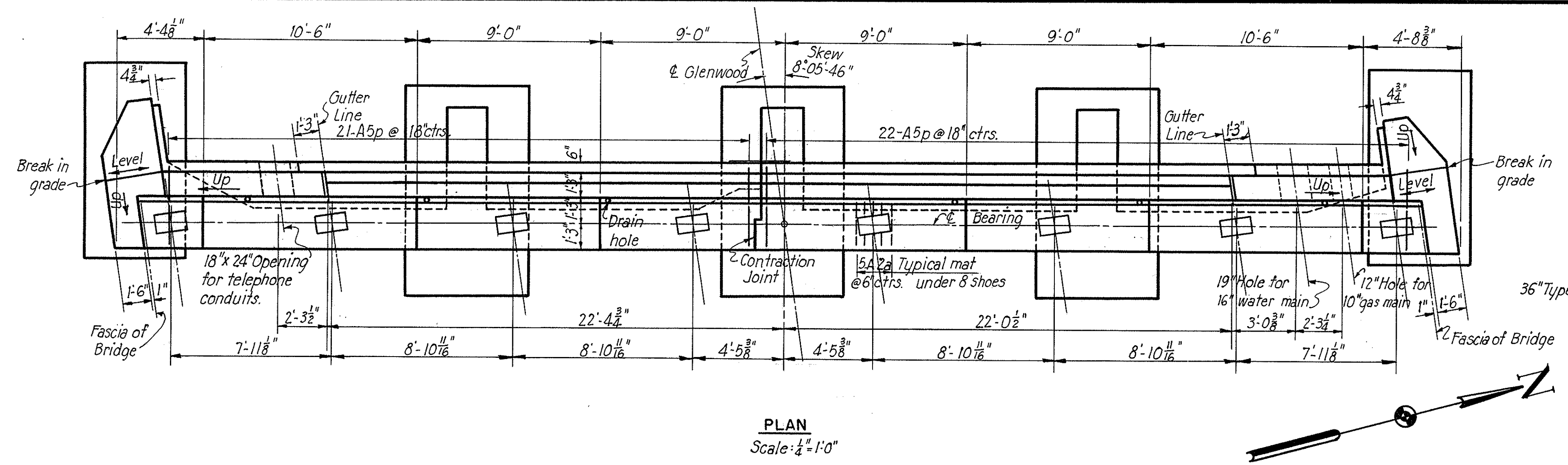
AKRON, OHIO
SUMMIT COUNTY, OHIO

SCALE 1/4" = 1'-0"
MADE I.G. DATE 5-31-50
TRCN W.R. DATE 6-30-50
CRD D.M.D. DATE 6-16-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

766 SHEET

Revised 9-18-50



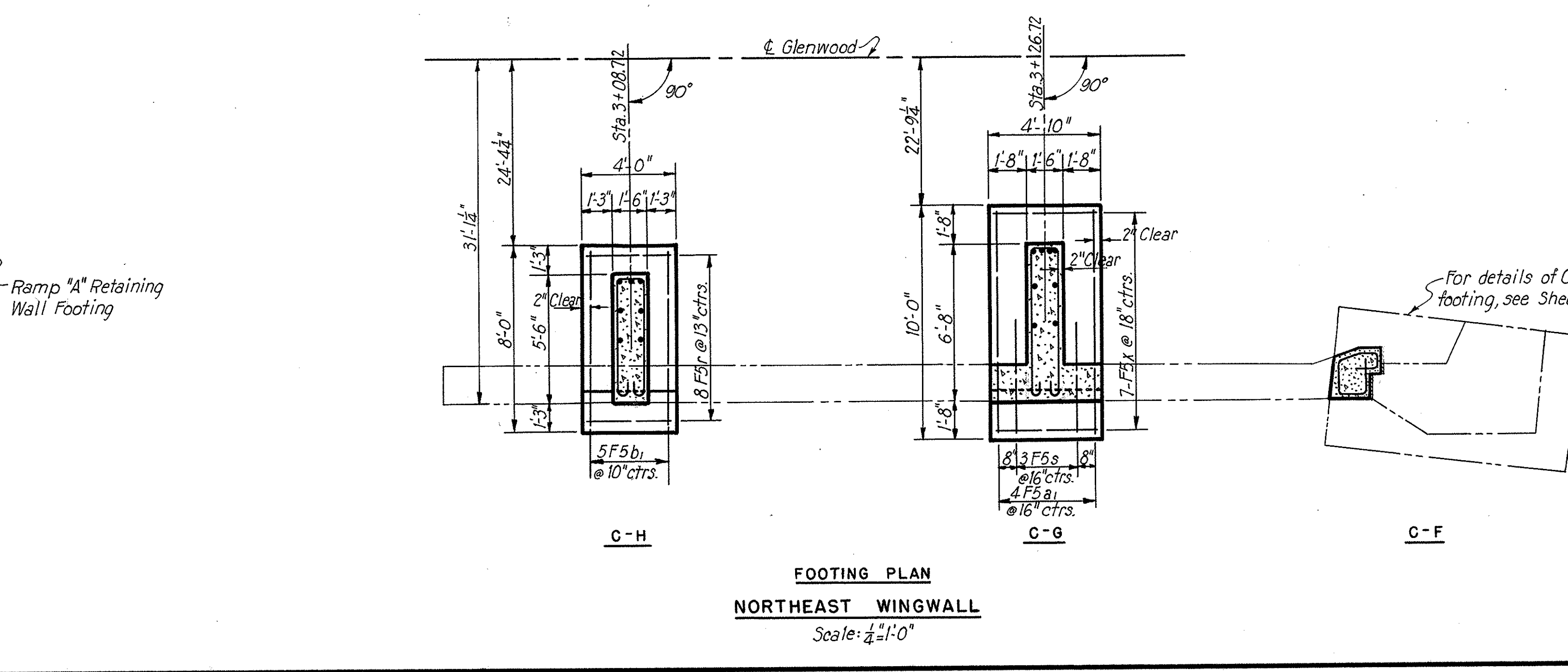
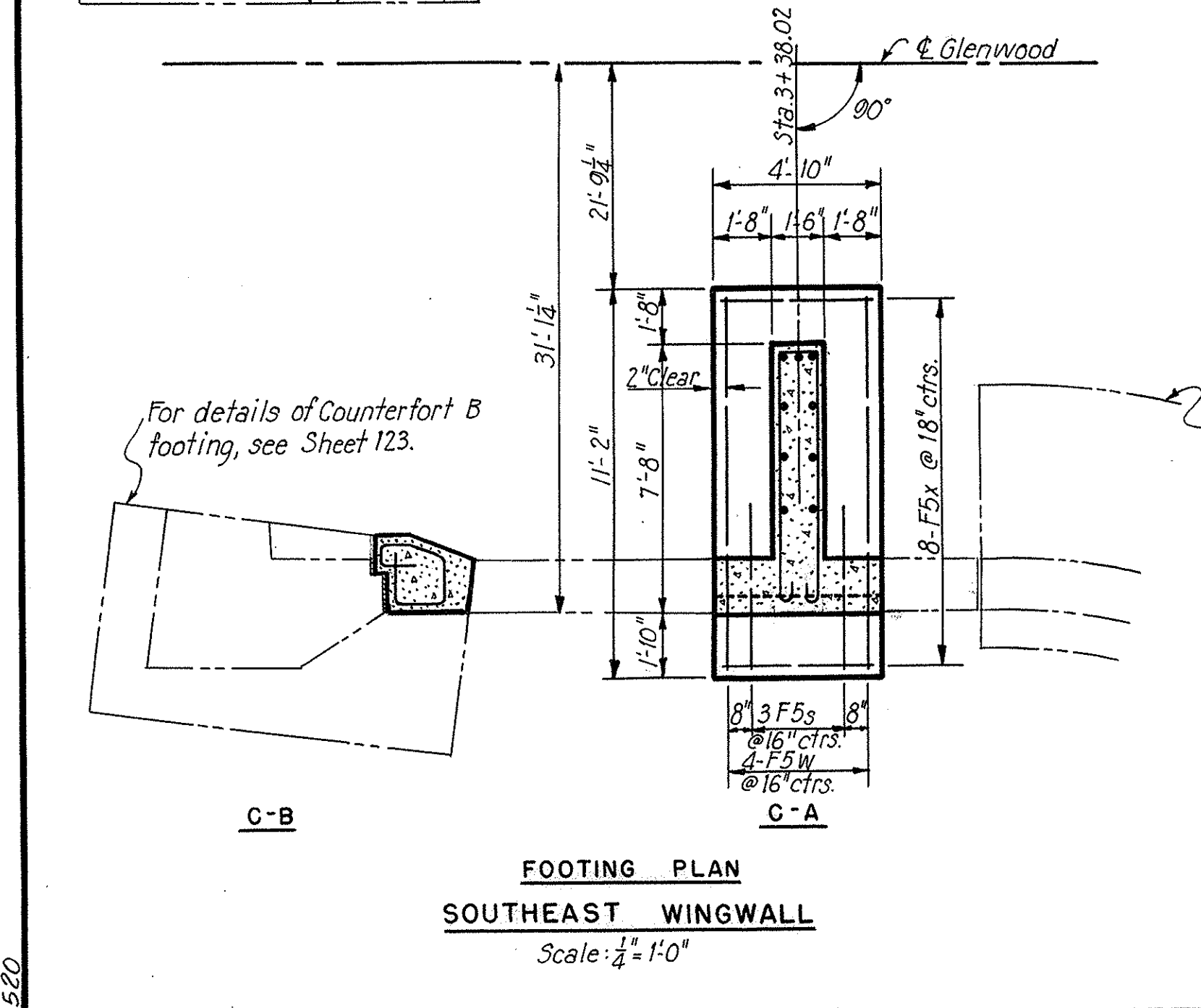
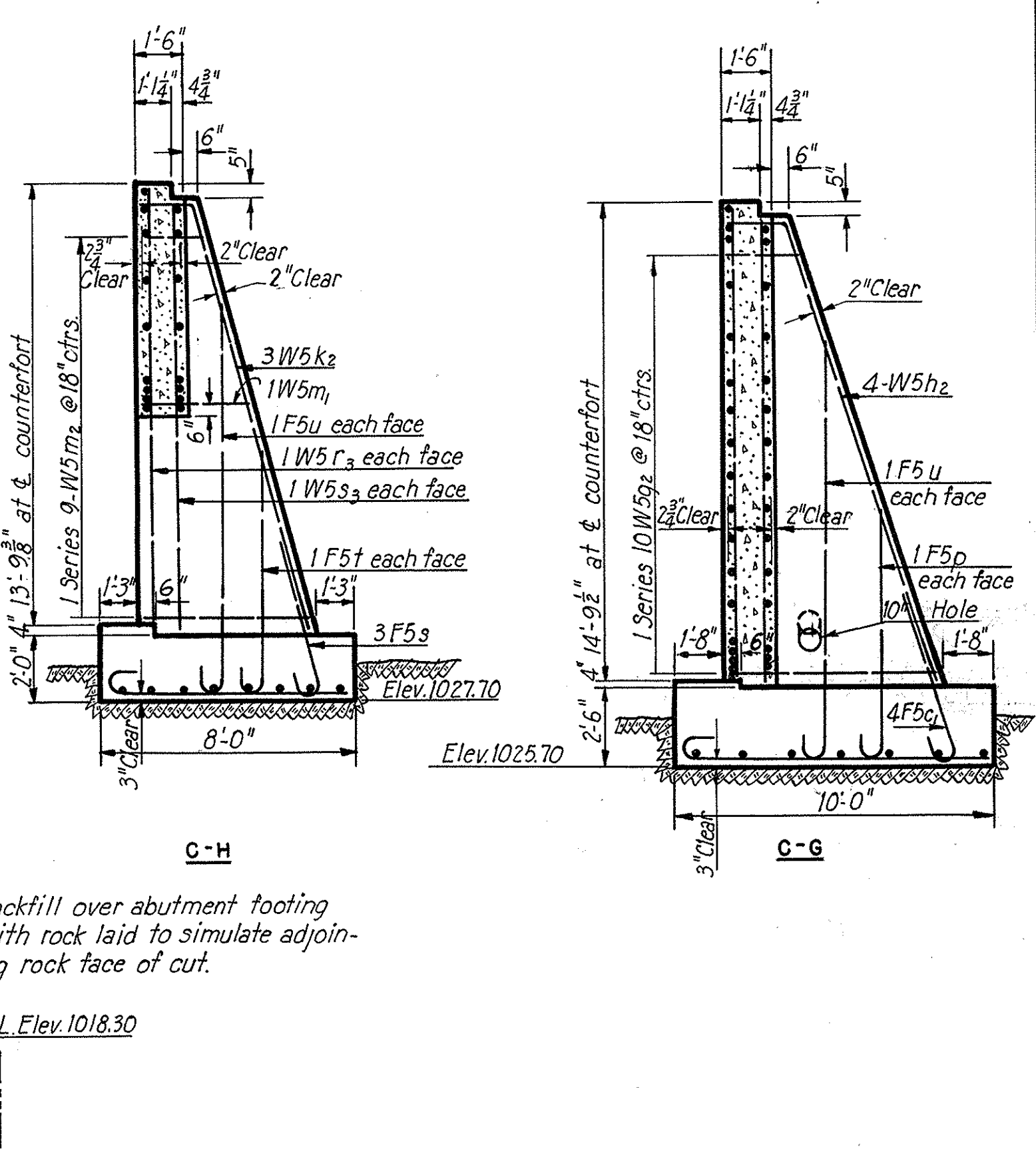
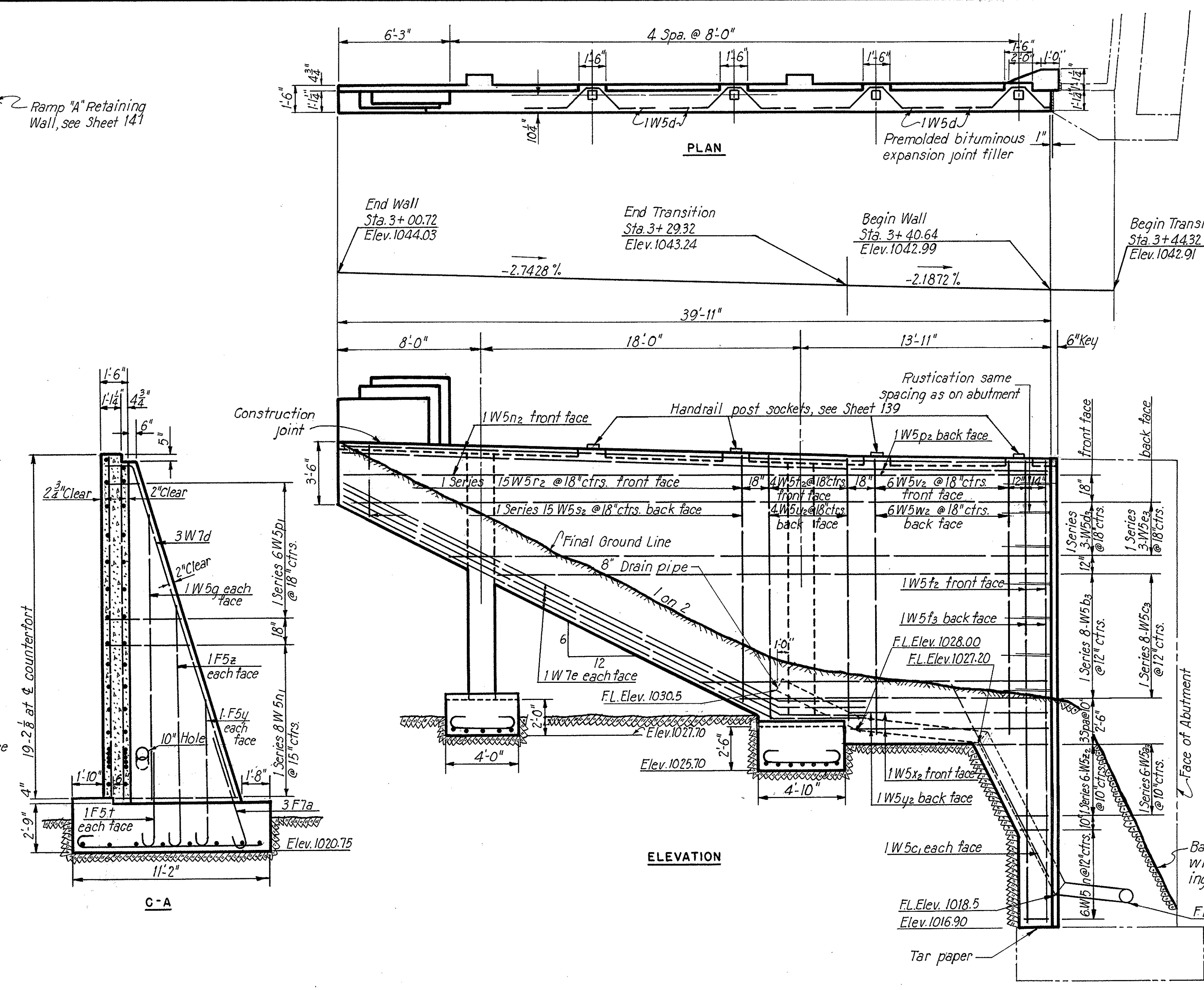
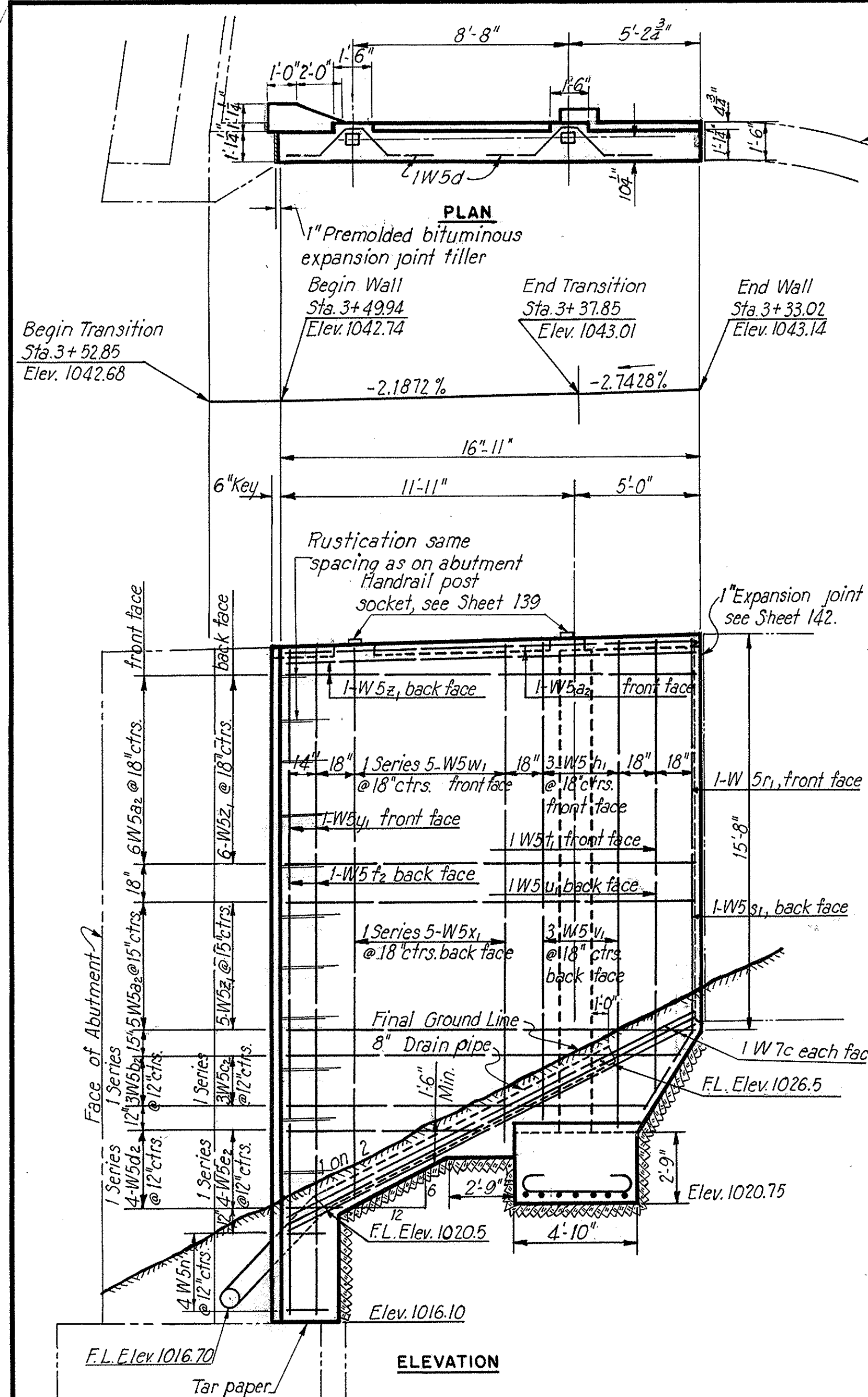
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

AKRON EXPRESSWAY SYSTEM
(EAST MARKET STREET TO EAST GUYAROGA FALLS AVENUE)

GLENWOOD UNDERPASS
BR. NO. SU-5-131
WEST ABUTMENT

AKRON SUMMIT COUNTY, OHIO
SCALE: 1/4", 1/2", 3/4", 1'-0"
MADE: 1/2/50 DATE: _____ HOWARD, NEEDLES, TAMMEN & BERGENDOFF
TRCD: 11/2/50 DATE: _____ CONSULTING ENGINEERS
CKD: D.M.D. DATE: _____ KANSAS CITY NEW YORK

Revised 9-18-50
766 SHEET
Revised As-Built 6-12-54 J.V.S.



Note:
For end post details, see Sheet 139.
For drainage details, see Sheet 121.

NOTE: THIS SHEET SUPERSEDED BY SHEET 125A

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

AKRON EXPRESSWAY SYSTEM
(EAST MARKET STREET TO EAST CUYAHOGA FALLS AVENUE)
GLENWOOD UNDERPASS
BR. NO. SU-5-131
EAST WINGWALLS

AKRON, SUMMIT COUNTY, OHIO

SCALE: 3/4" = 1'-0"
MADE J.H.G. DATE 6-17-50
TRCD J.W.G. DATE 2-20-50
CKD D.M.D. DATE 6-26-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

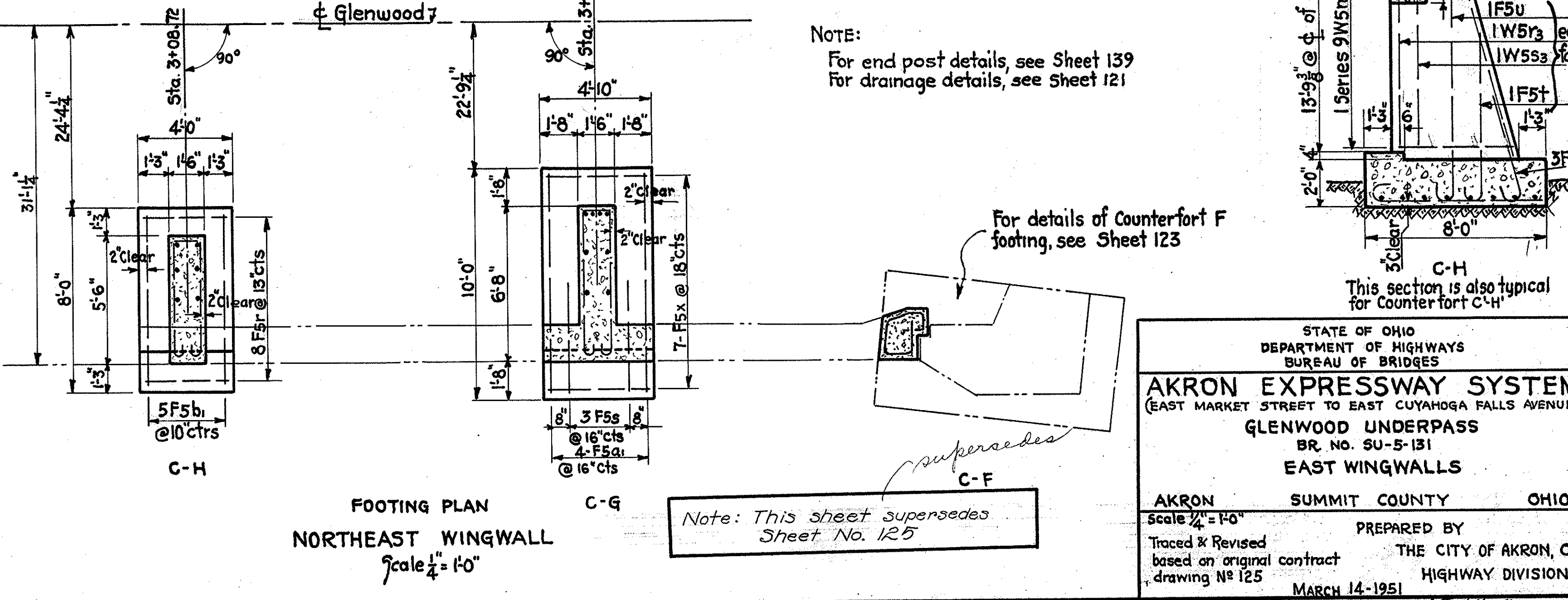
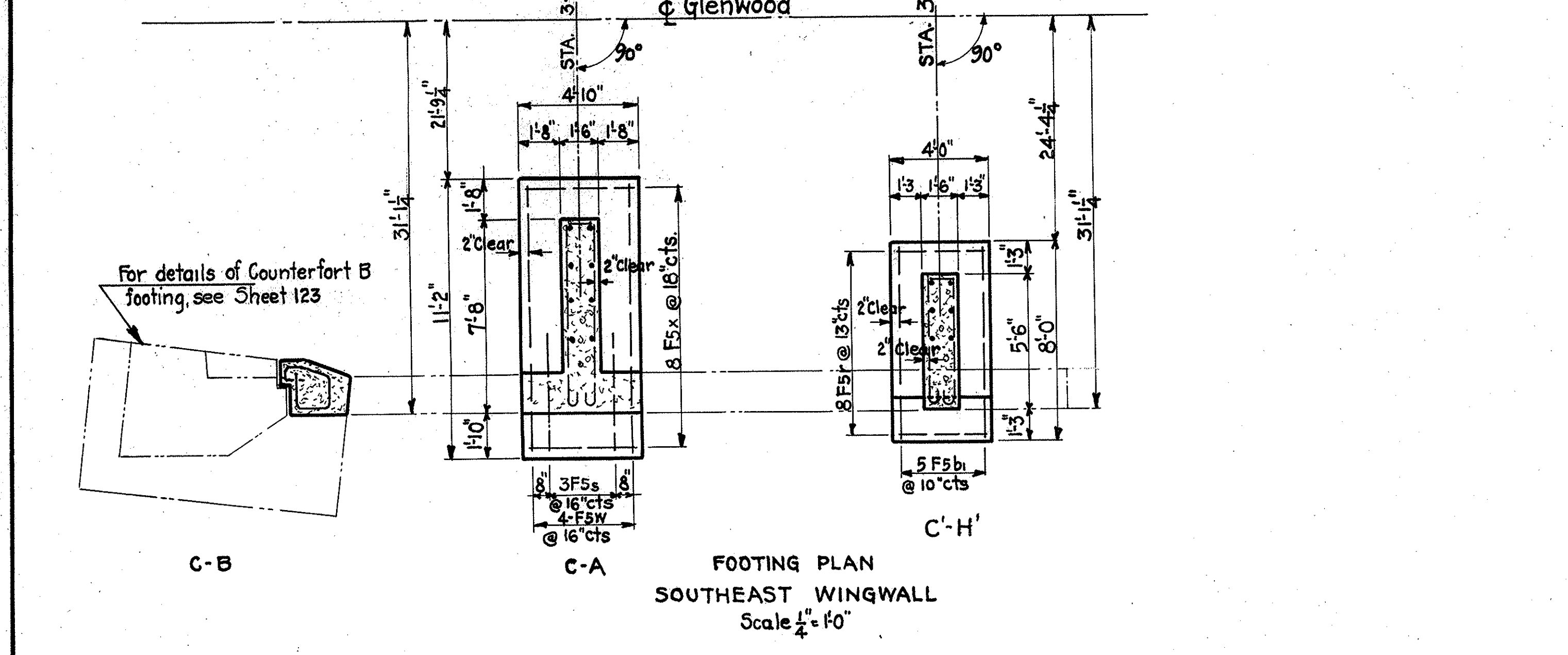
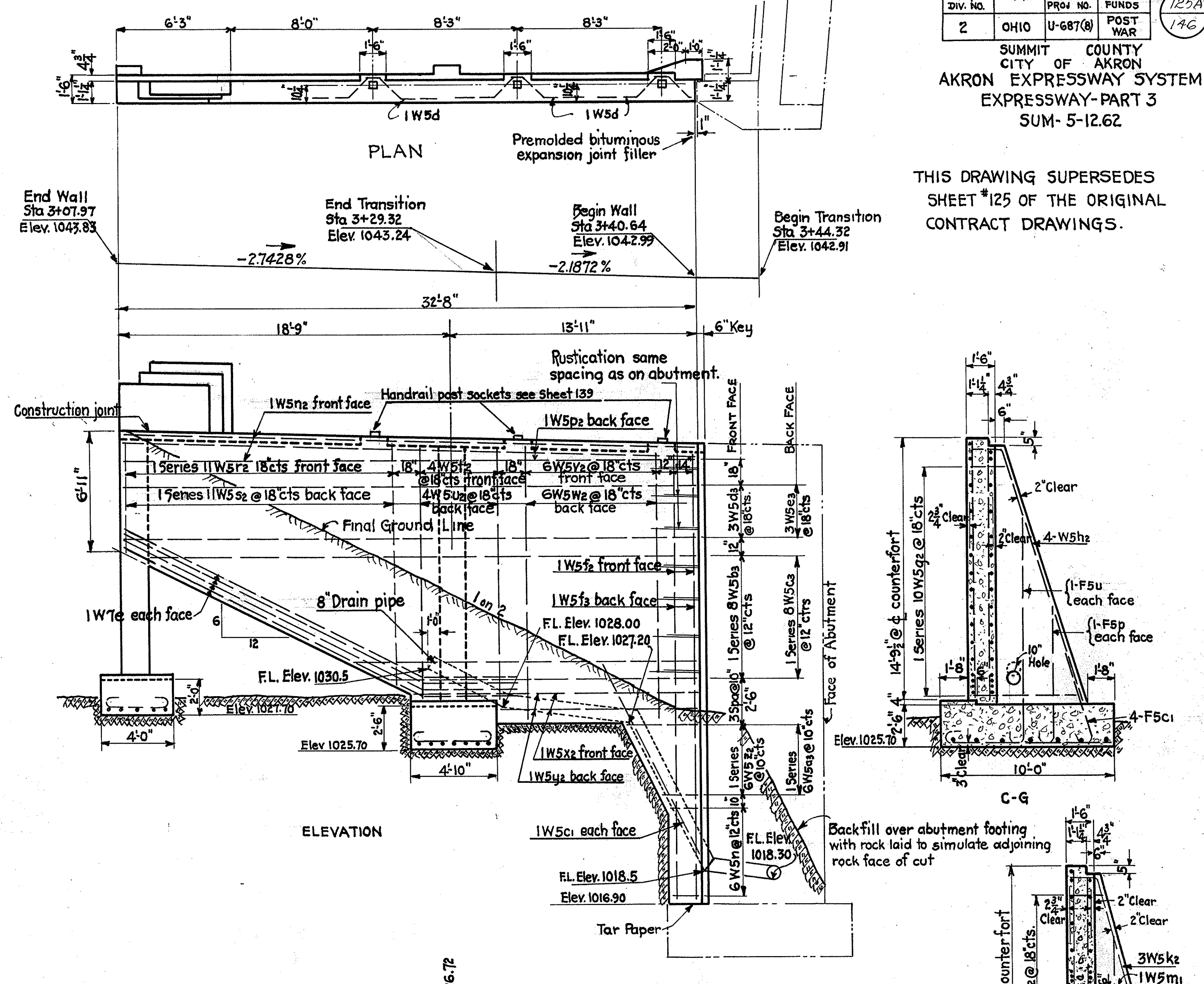
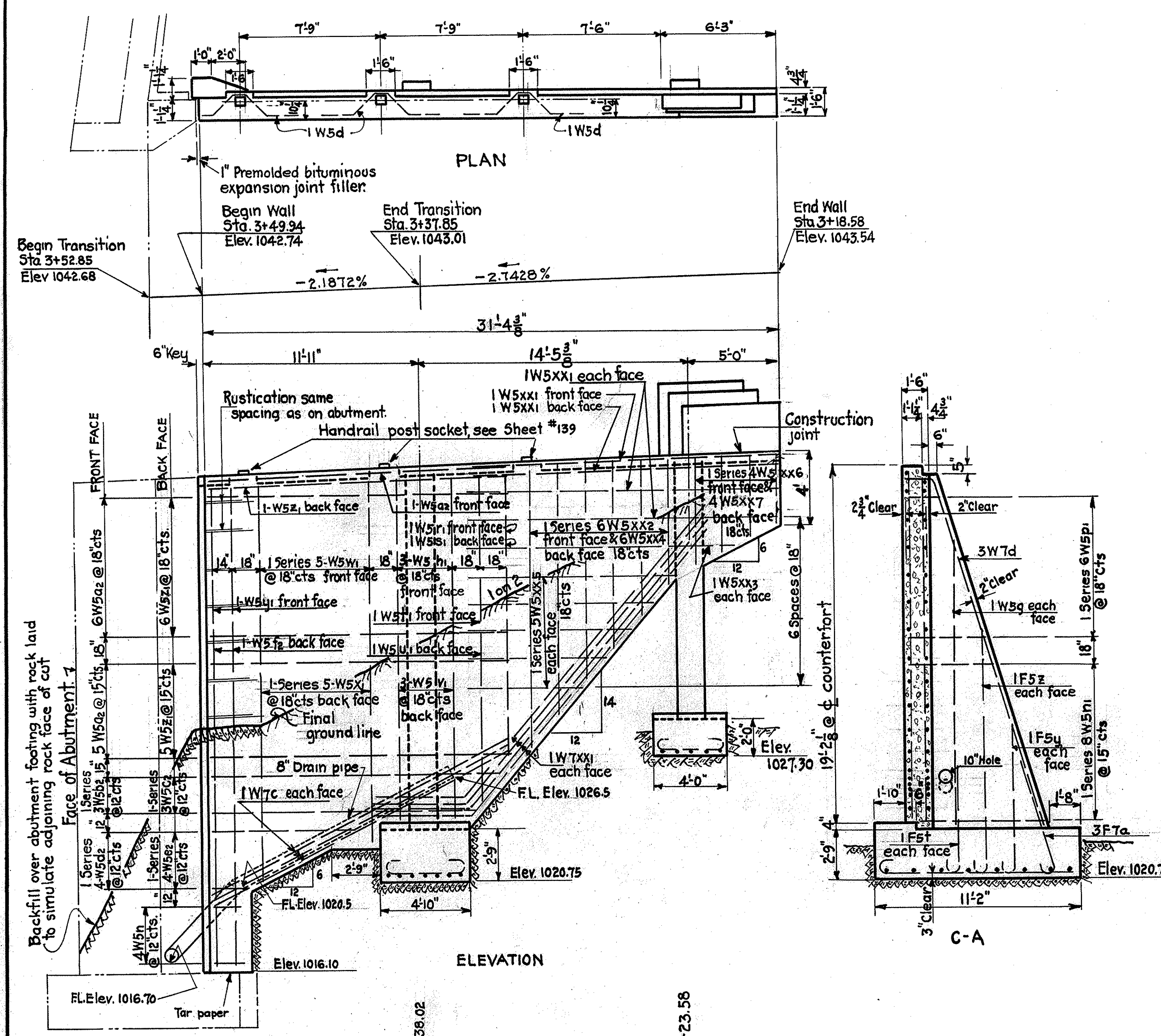
766 SHEET

Revised 4-16-51

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	125A
2	OHIO	U-687(8)	POST WAR	146

SUMMIT COUNTY CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

THIS DRAWING SUPERSEDES SHEET #125 OF THE ORIGINAL CONTRACT DRAWINGS.



NOTE:
For end post details, see Sheet 139
For drainage details, see Sheet 121

Note: This sheet supersedes Sheet No. 125

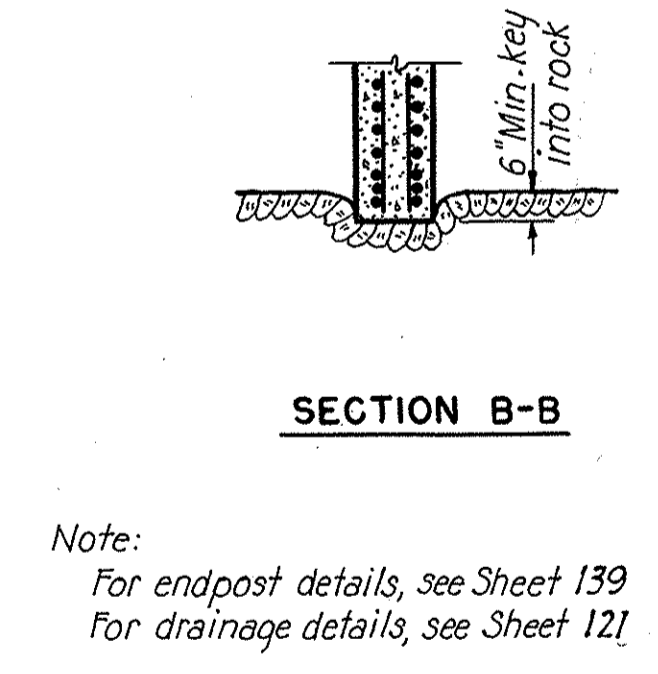
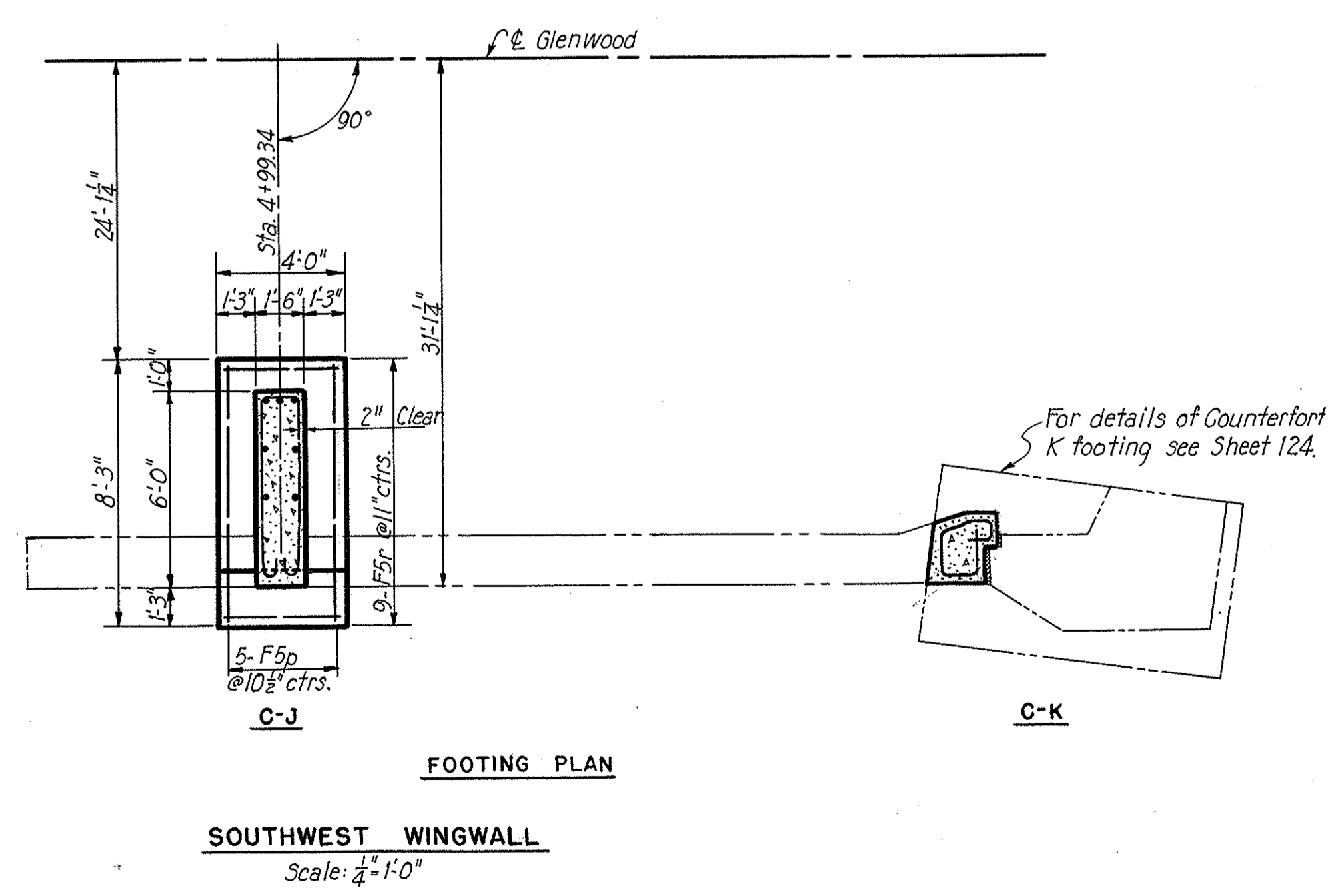
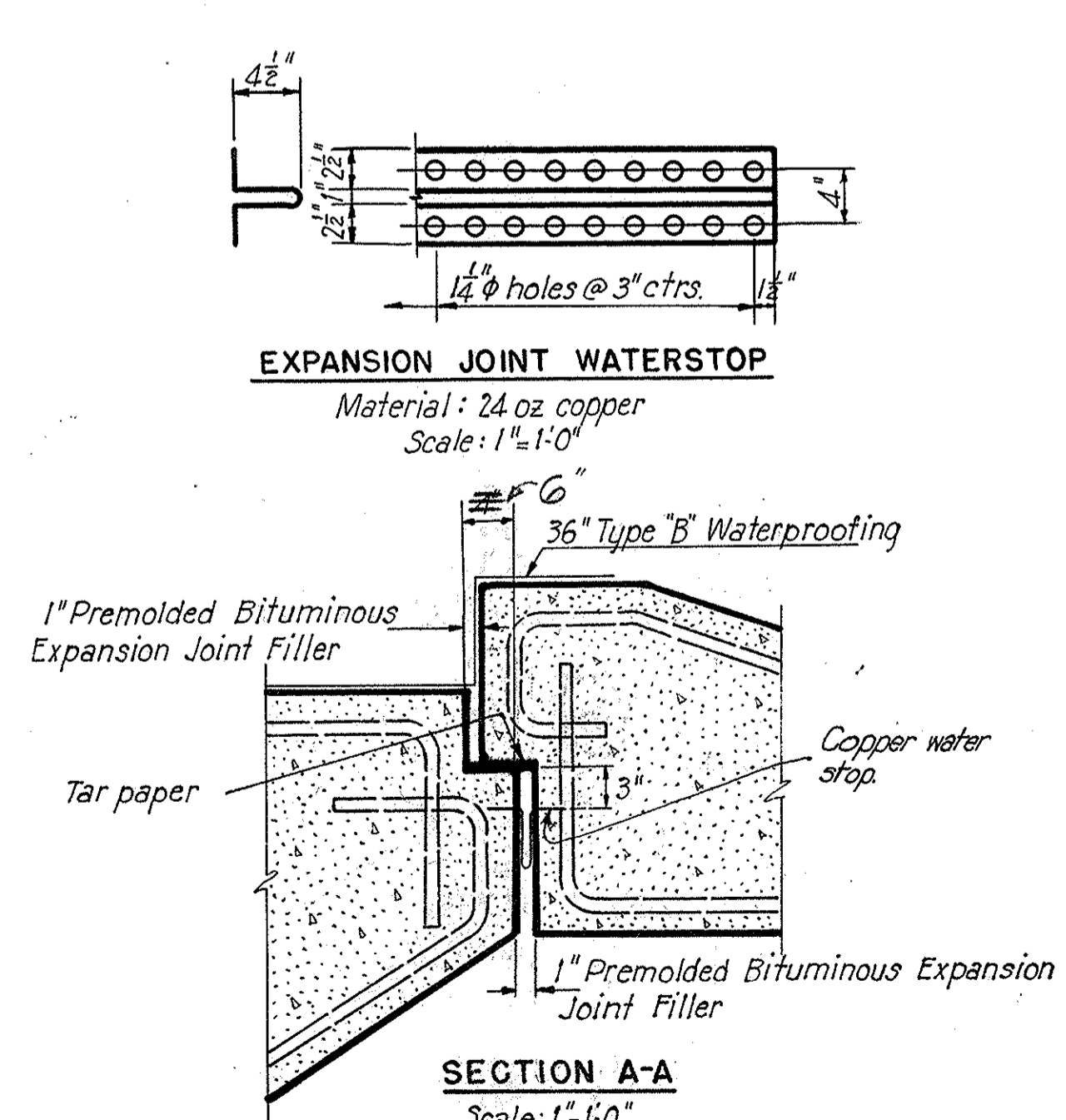
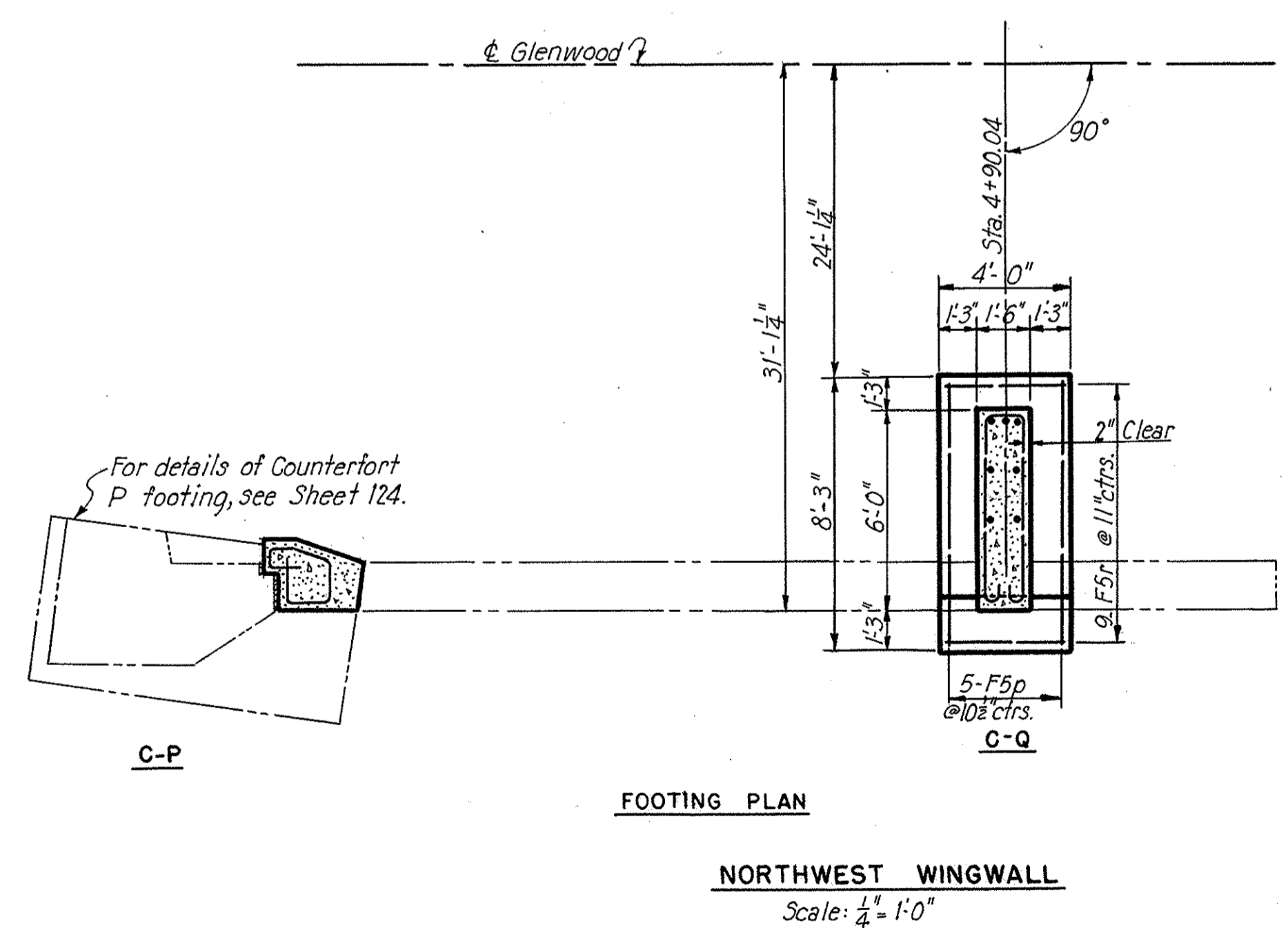
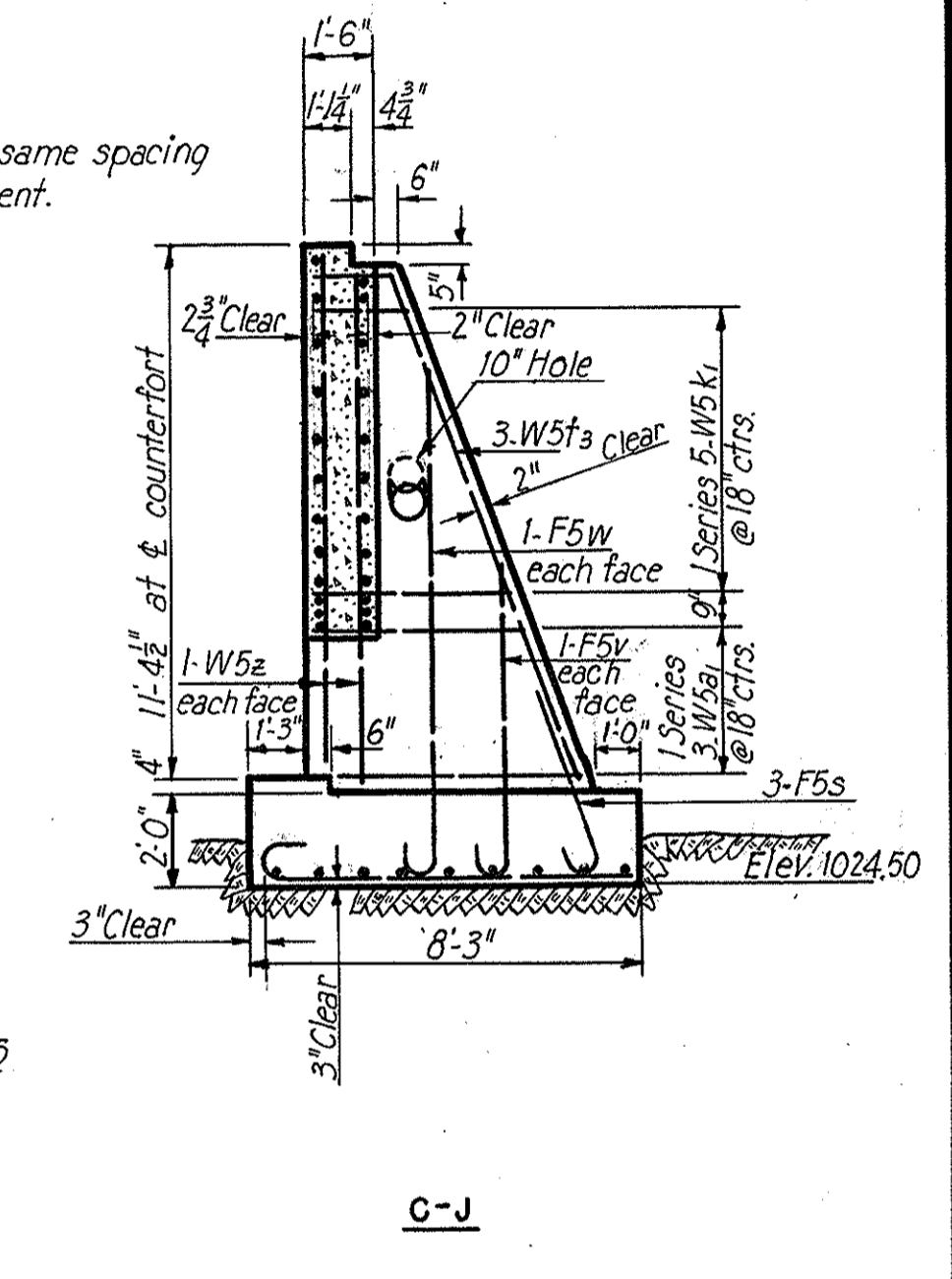
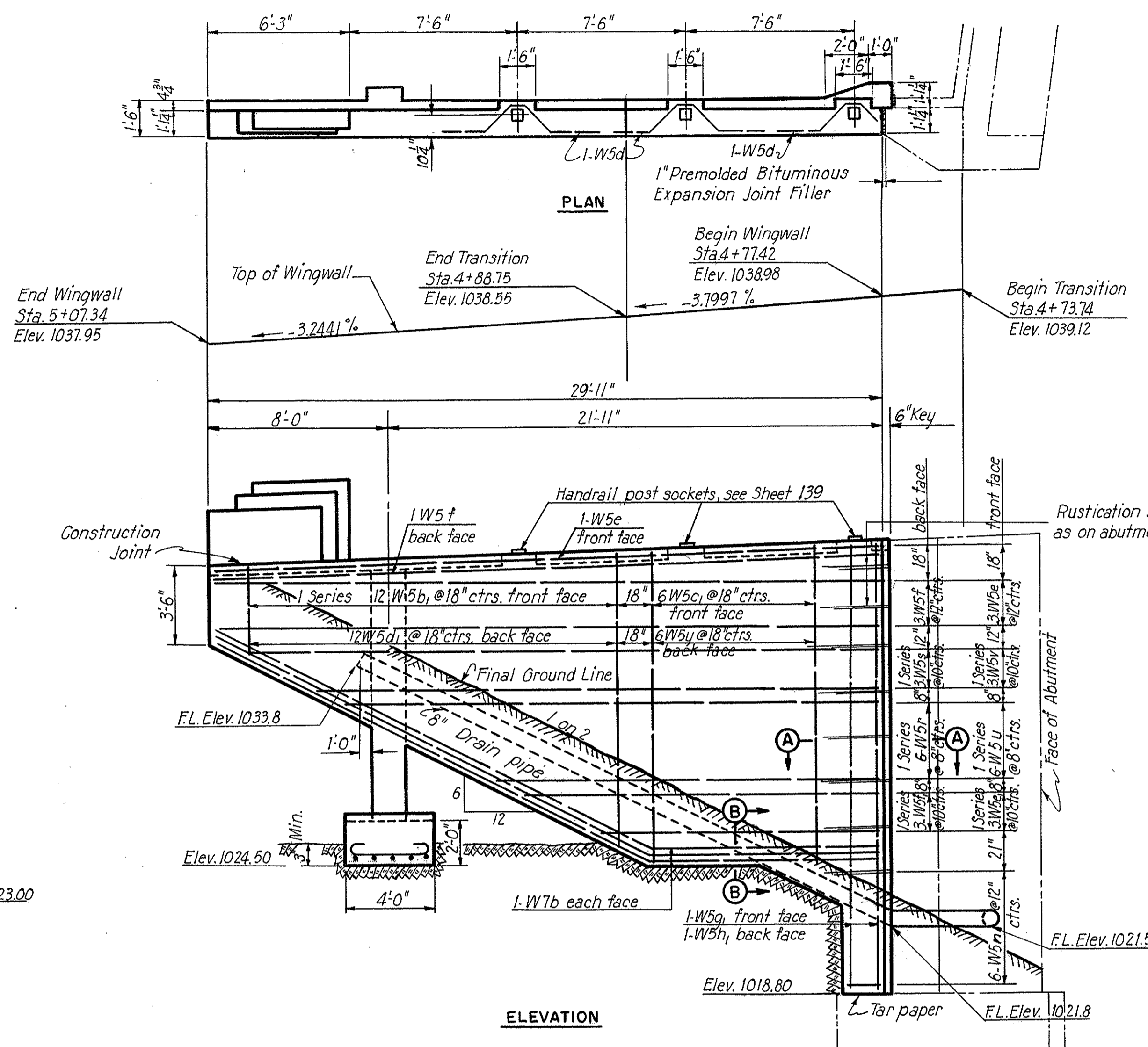
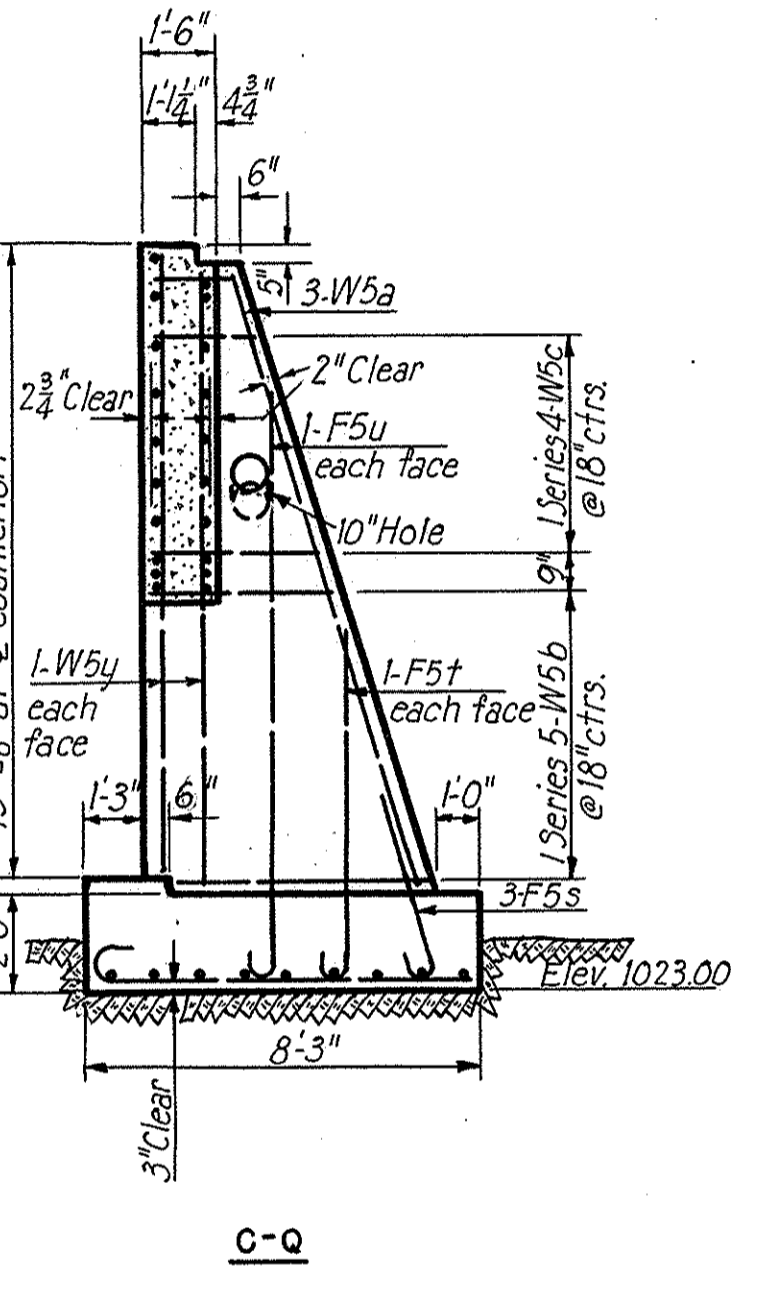
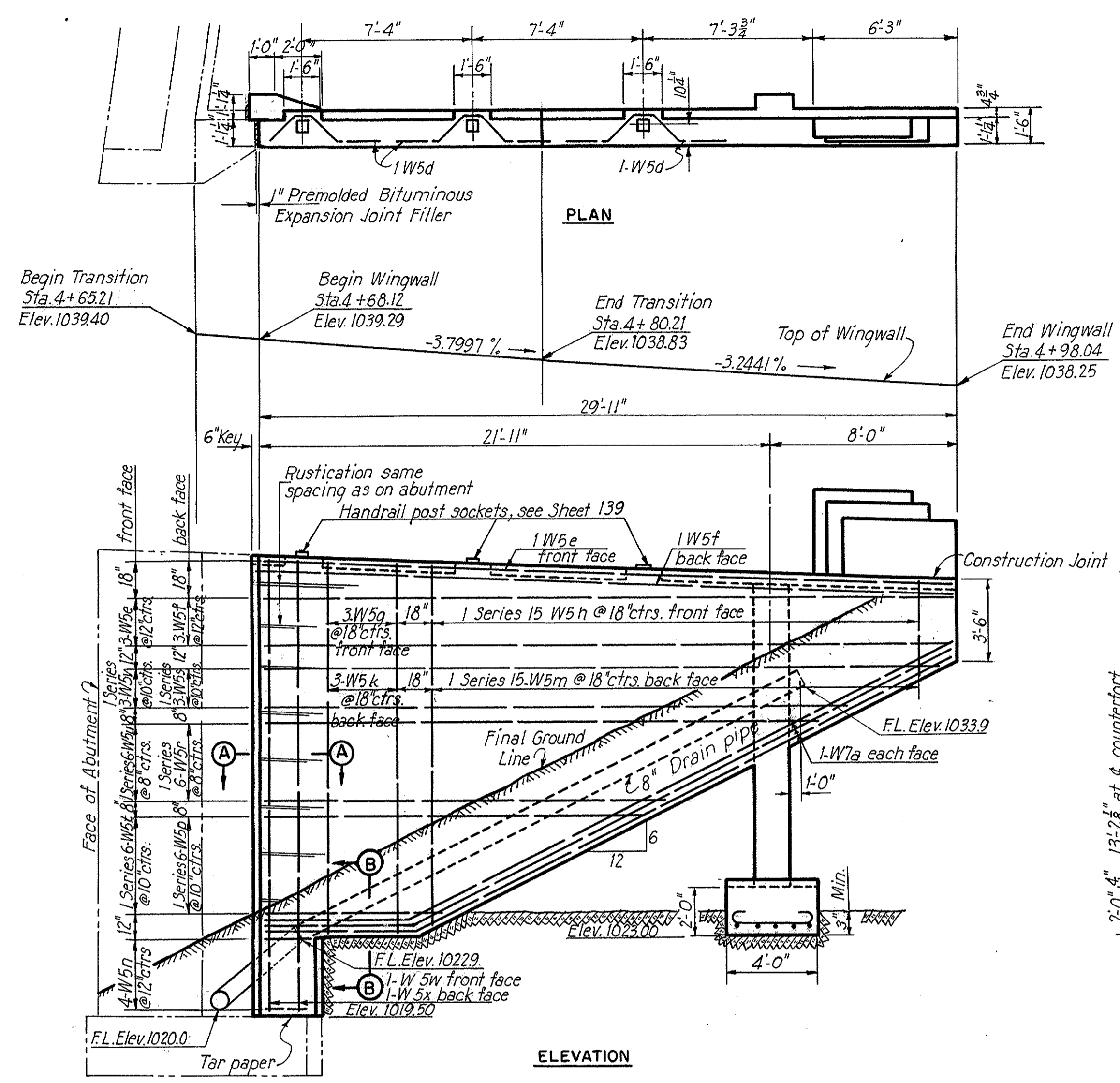
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

AKRON EXPRESSWAY SYSTEM
(EAST MARKET STREET TO EAST CUYAHOGA FALLS AVENUE)

GLENWOOD UNDERPASS
BR. NO. SU-5-131
EAST WINGWALLS

AKRON SUMMIT COUNTY OHIO
Scale 1/4" = 1'-0"
Traced & Revised based on original contract drawing No. 125
PREPARED BY THE CITY OF AKRON, OHIO
HIGHWAY DIVISION
MARCH 14-1951

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62



Note:
For endpost details, see Sheet 139
For drainage details, see Sheet 121

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

AKRON EXPRESSWAY SYSTEM
(EAST MARKET STREET TO EAST GUYAHOGA FALLS AVENUE)

GLENWOOD UNDERPASS
BR. NO. SU-5-131
WEST WINGWALLS

AKRON, SUMMIT COUNTY, OHIO
SCALE: 1/4" = 1'-0"
MADE P.O.D. DATE 6-14-50
TRCD. DATE 2-7-50
CKD. DATE 6-26-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

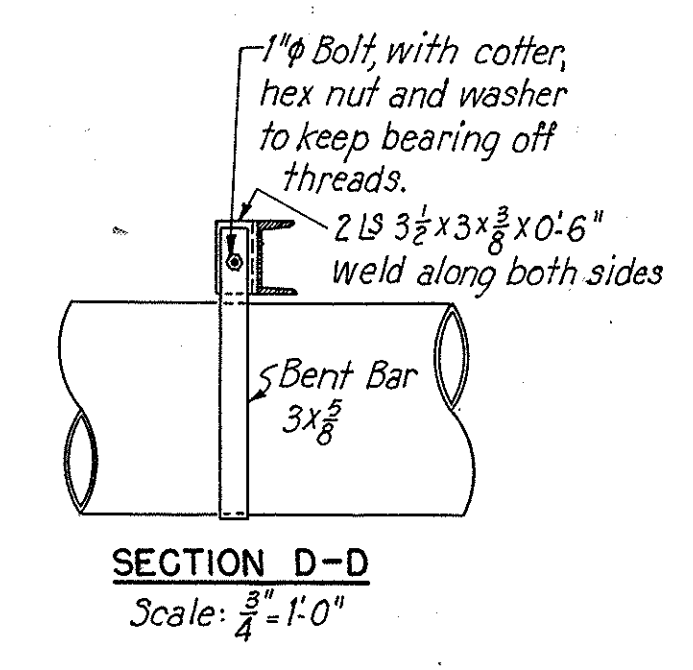
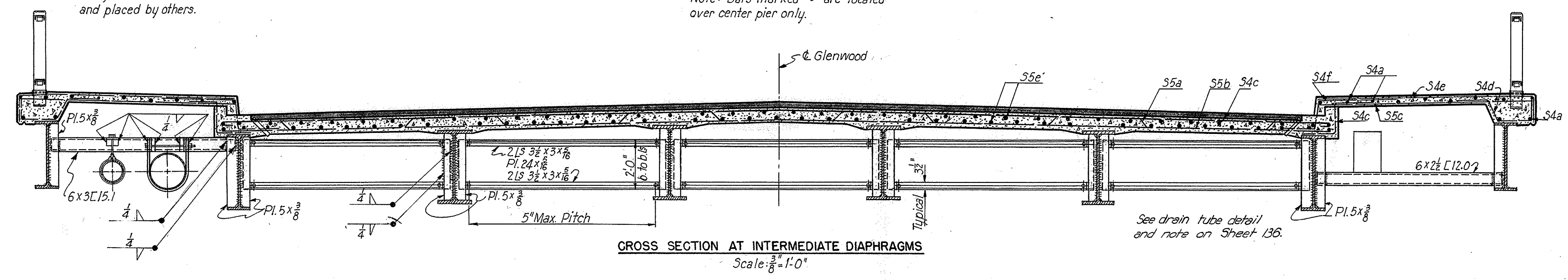
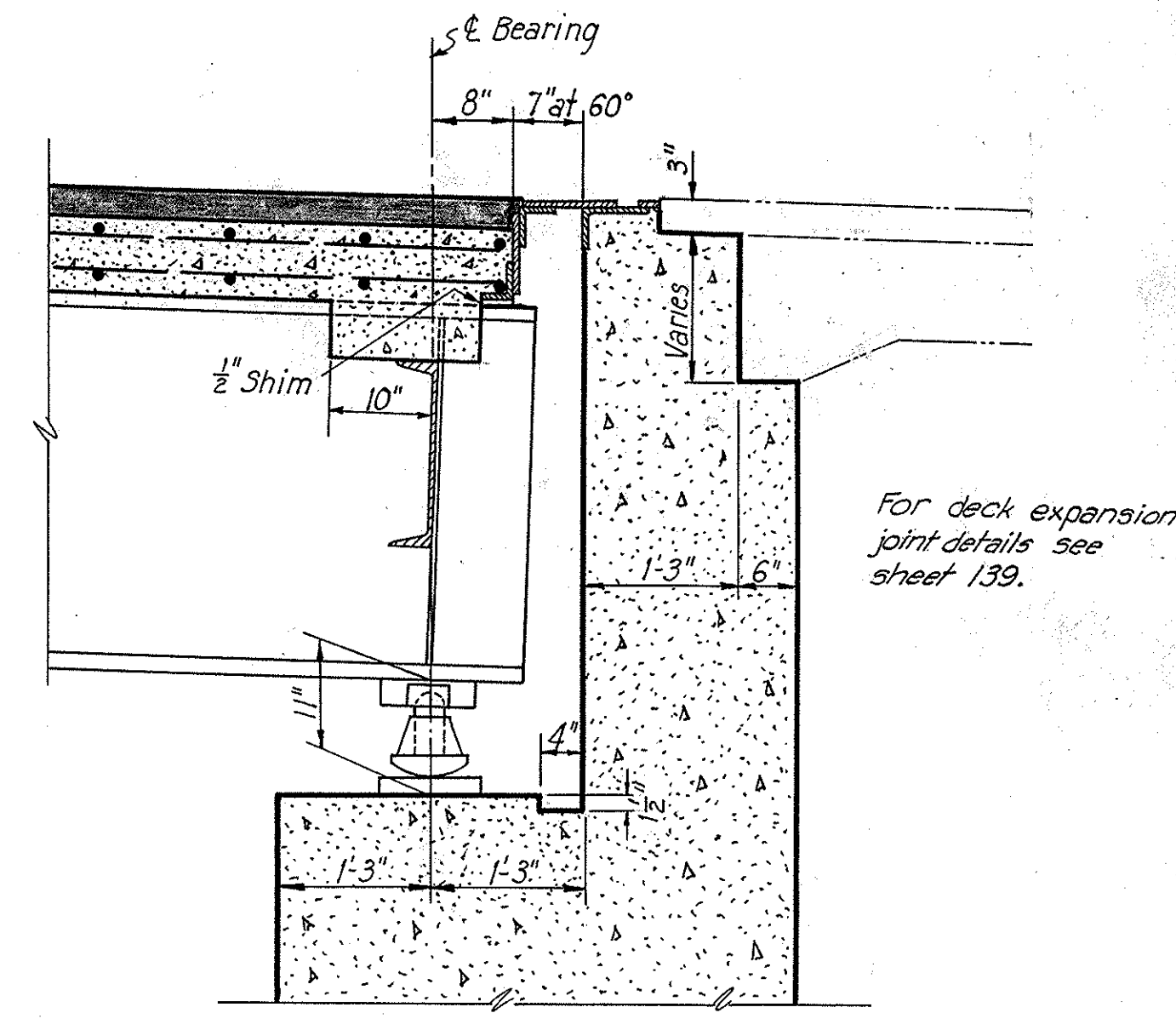
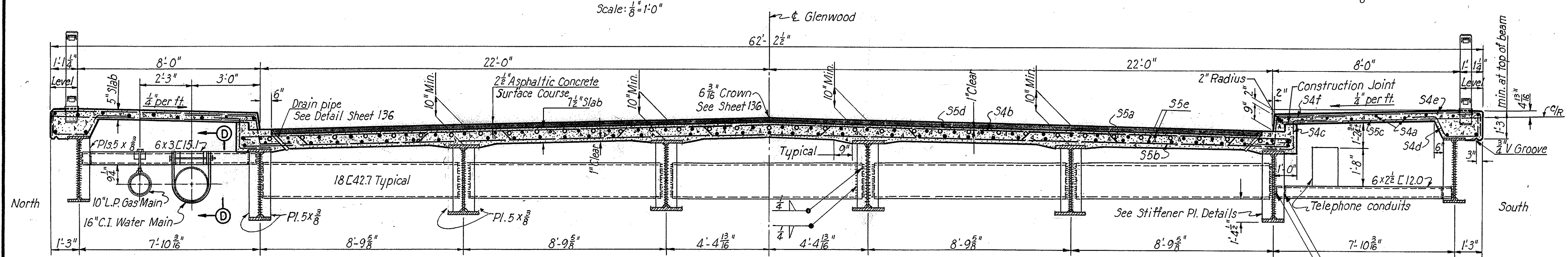
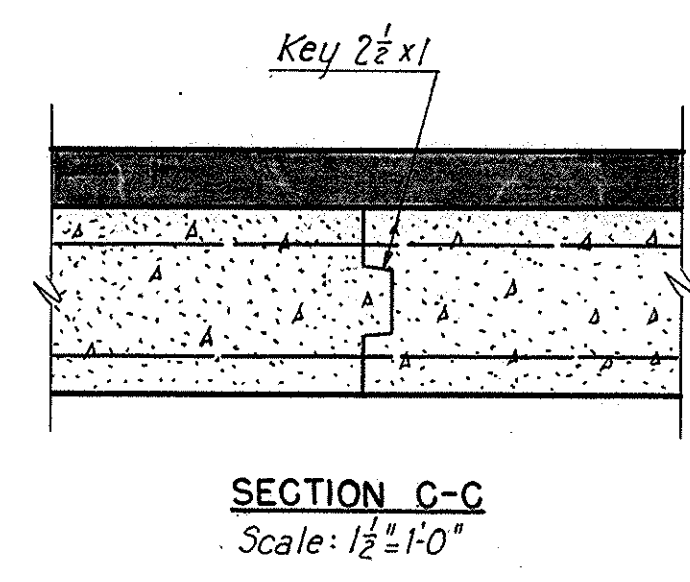
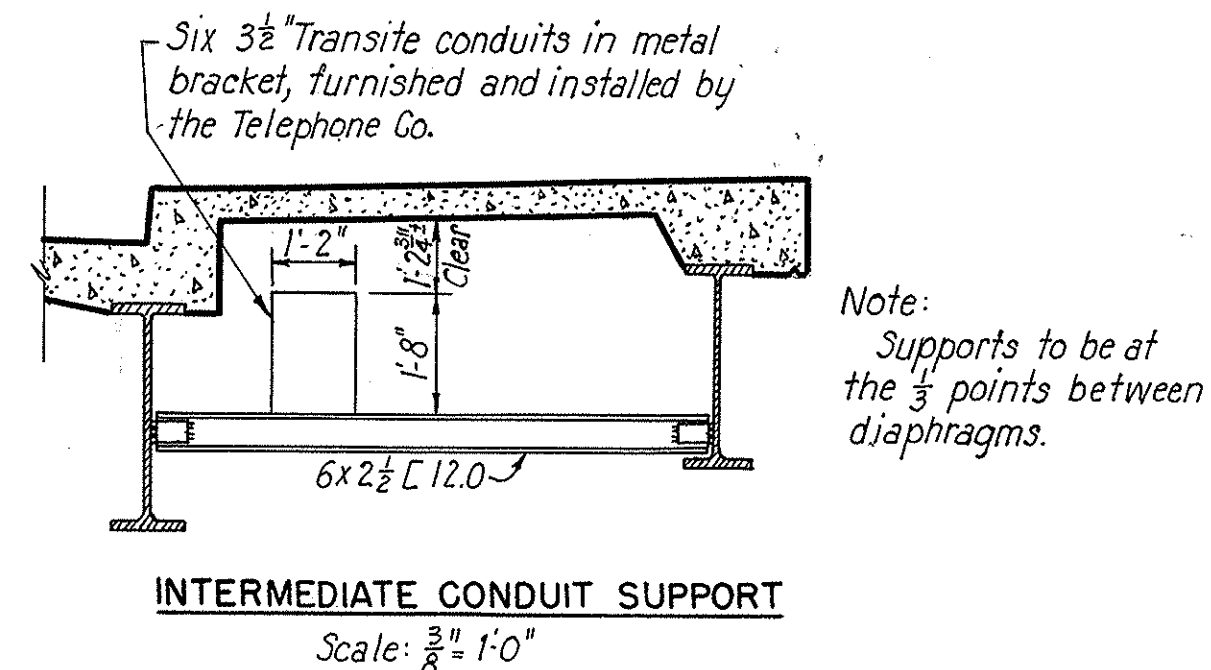
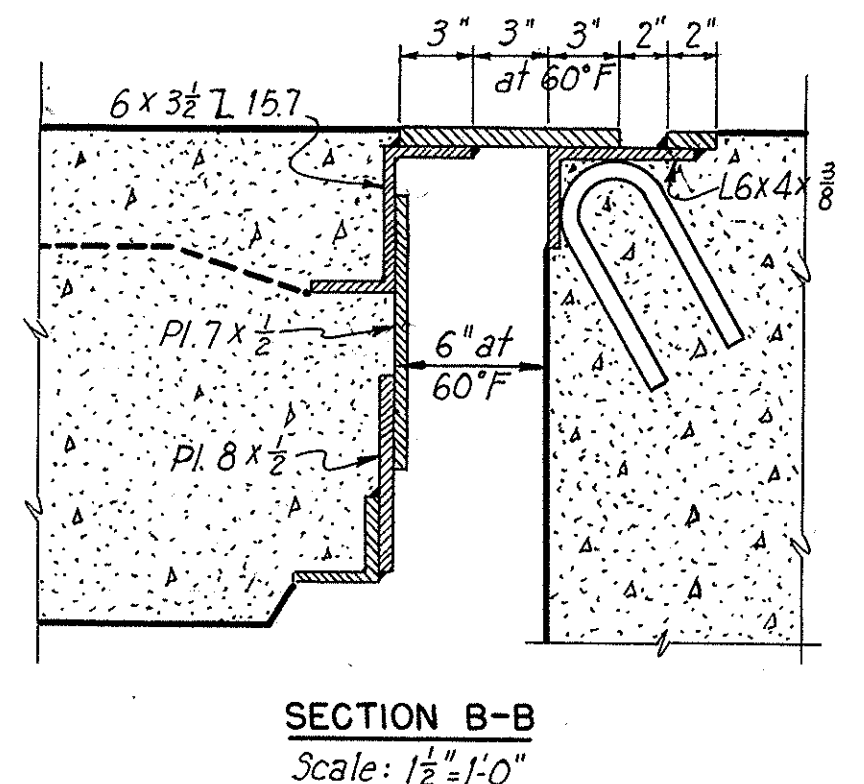
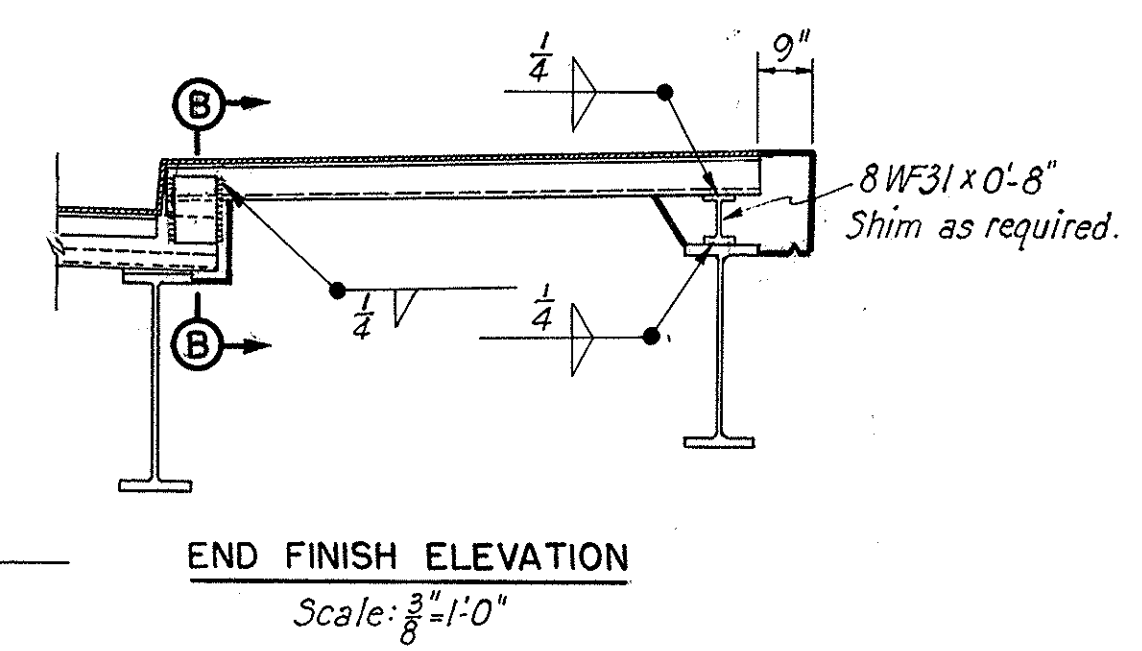
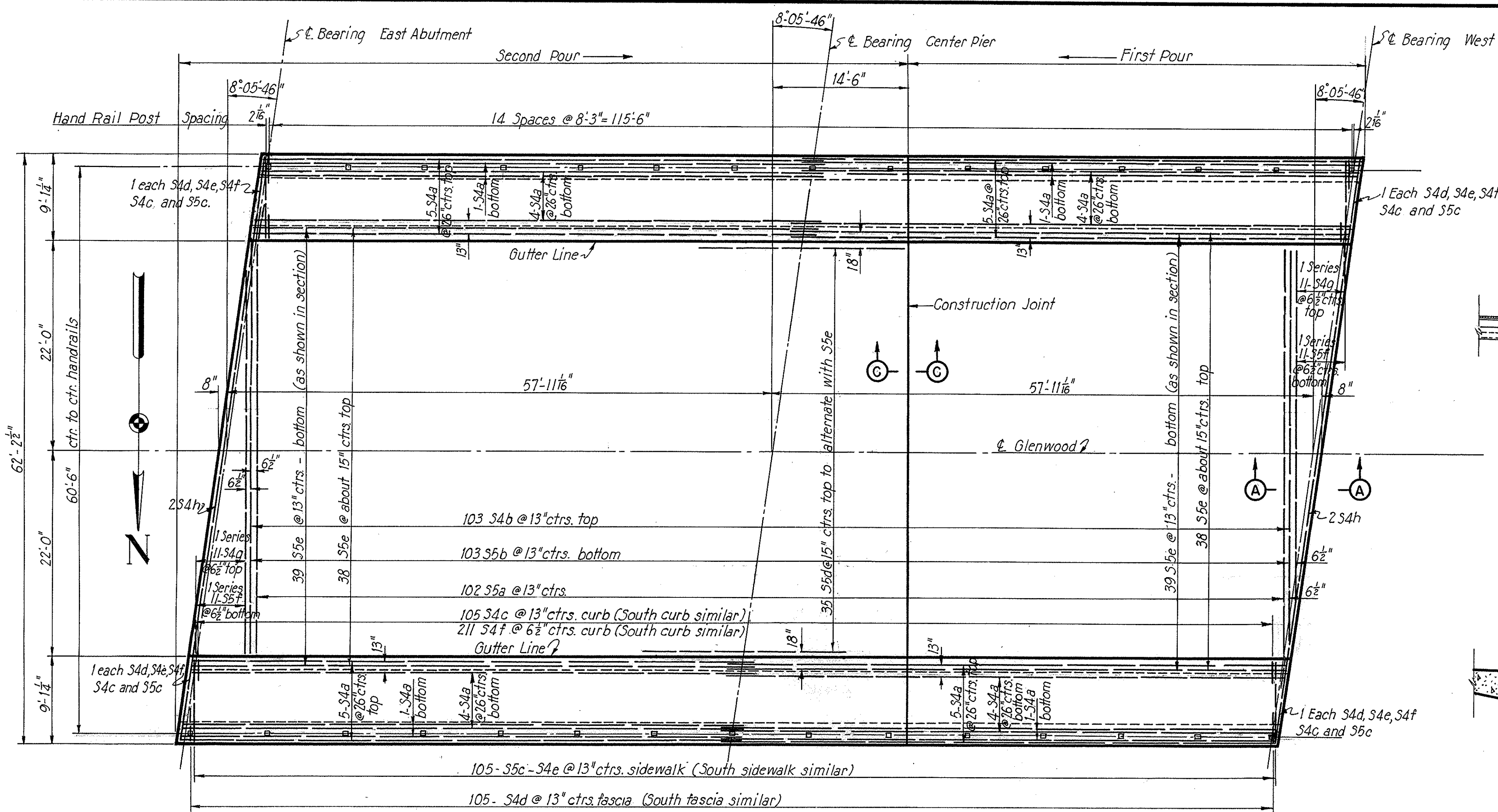
Revised 4-16-51
Revised 9-18-50

766 SHEET

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SUMMIT COUNTY OF AKRON
AKRON EXPRESSWAY SYSTEM
 EXPRESSWAY-PART 3
 SUM-5-12.62

Note: Deck slab shall be placed in two sections in the order and in the direction indicated on the slab plan.



STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 BUREAU OF BRIDGES

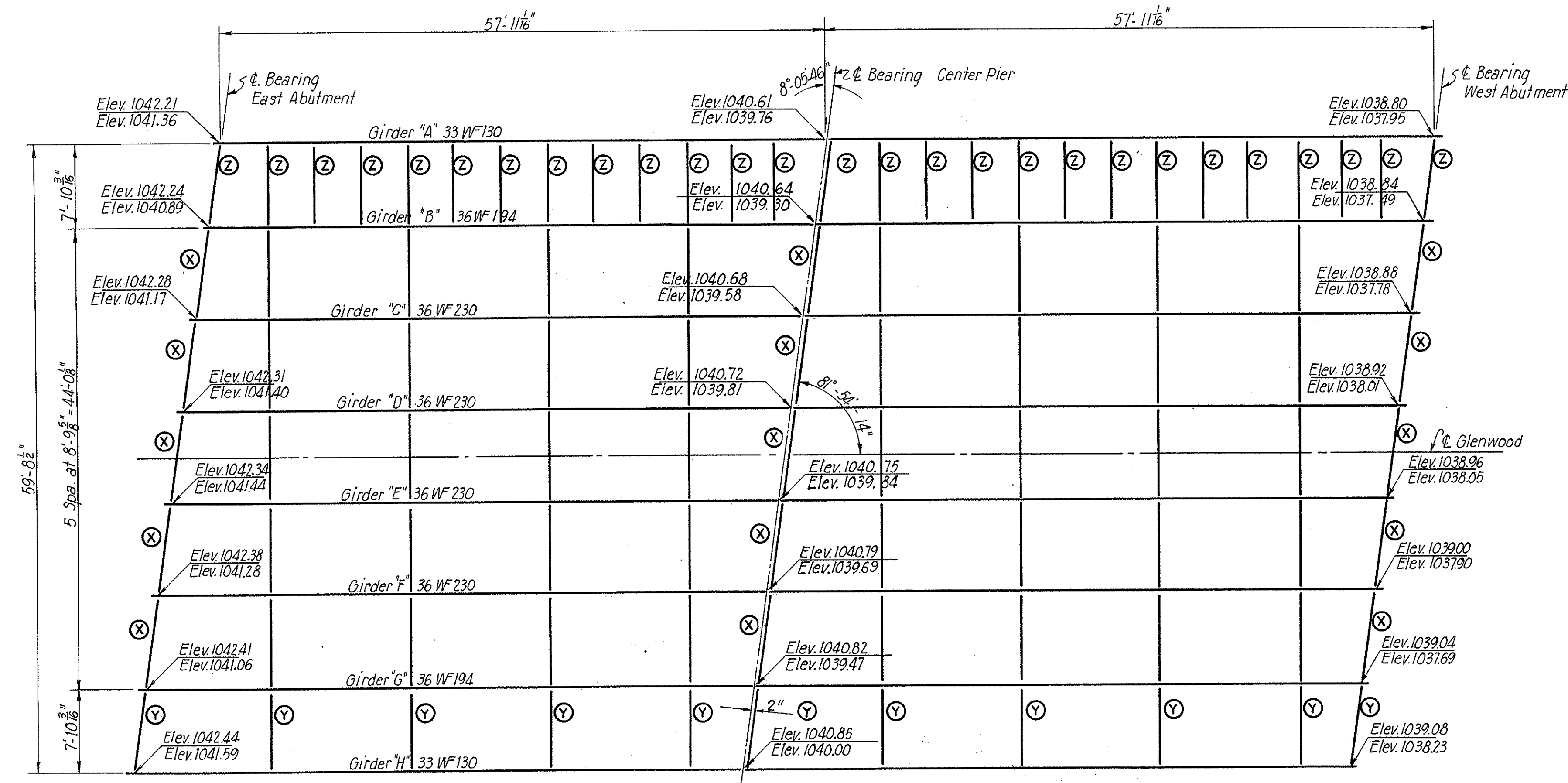
AKRON EXPRESSWAY SYSTEM
 (EAST MARKET STREET TO EAST CUYAHOGA FALLS AVENUE)
GLENWOOD UNDERPASS
 BR. NO. SU-5-131

SLAB PLAN & CROSS SECTIONS

AKRON	SUMMIT COUNTY	OHIO
SCALE: $\frac{3}{8}'' = 1'-0''$	HOWARD, NEEDLES, TAMMEN & BERGENDOFF	CONSULTING ENGINEERS
MADE H.S.G. M. DATE 5-23-50	KANSAS CITY	NEW YORK
TRCD H.M.R. DATE 7-12-50		
CND D.M.D. DATE 6-23-50		

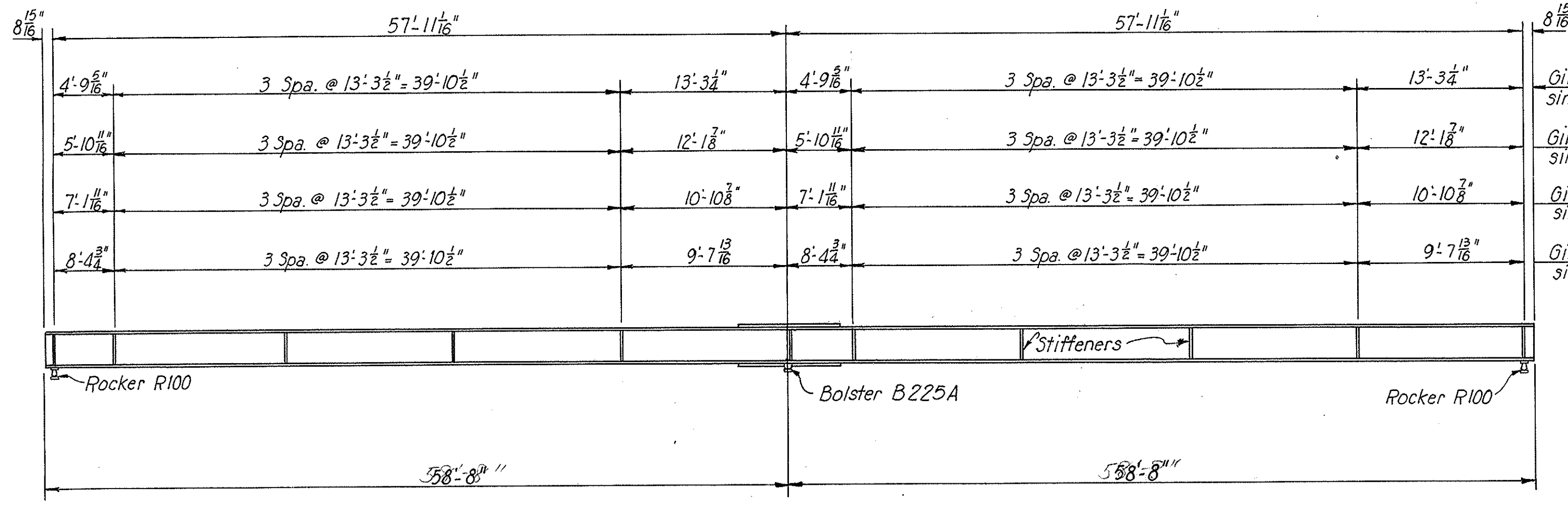
766 SHEET

Revised 9-18-50

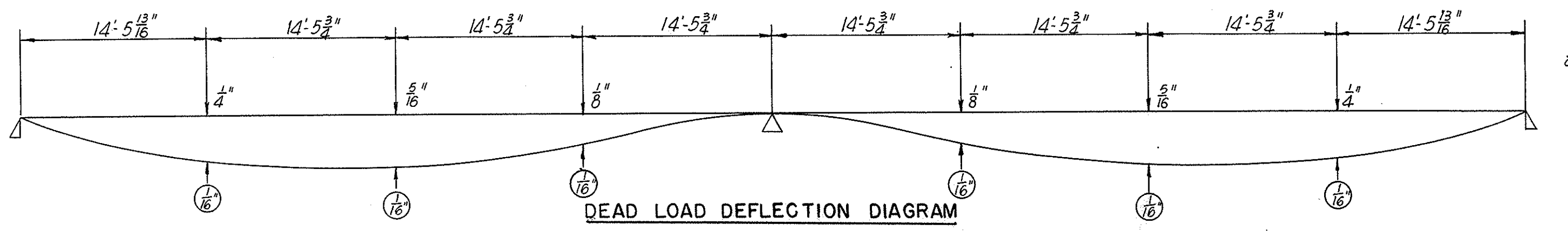


FRAMING PLAN
Scale: $\frac{1}{8}'' = 1'-0''$

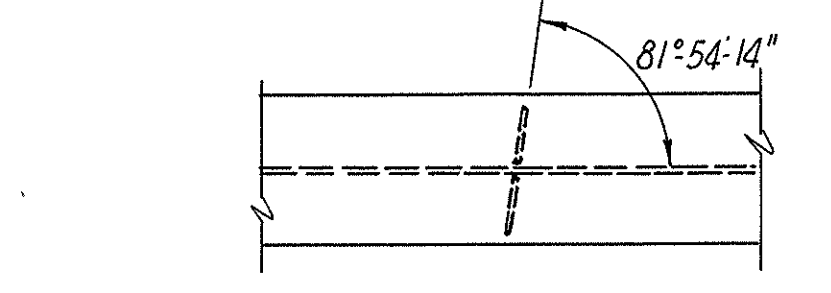
Diaphragms marked (X) are 18 @ 42.7
Diaphragms marked (Y) are 6 x 3 @ 15.1 pipe supports
Diaphragms marked (Z) are 6 x 2 1/2 @ 12.0 telephone conduit supports
All other diaphragms are 4 @ 3 1/2 x 3 x 5/16 with 24 x 5/16 web pl.



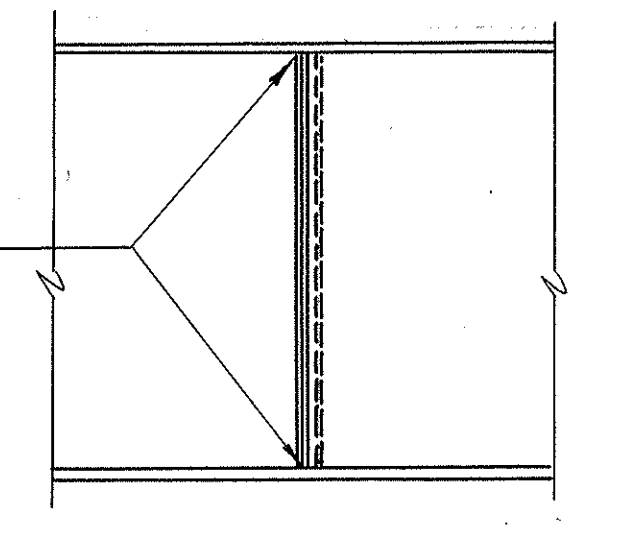
GIRDER ELEVATION
Scale: $\frac{1}{8}'' = 1'-0''$



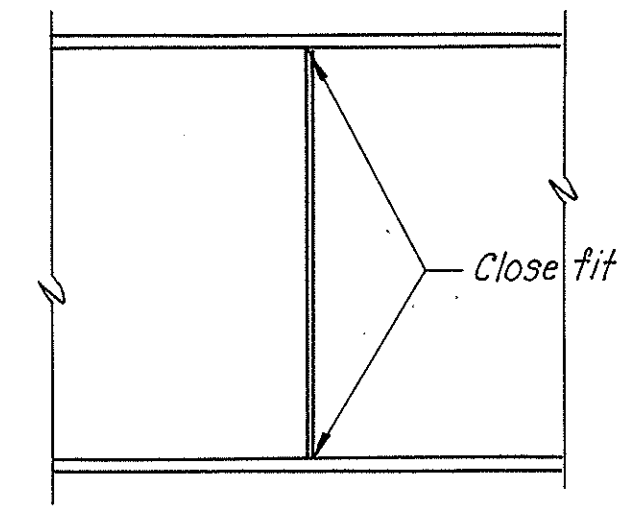
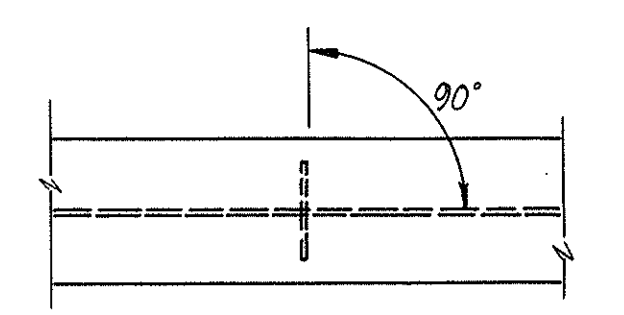
DEAD LOAD DEFLECTION DIAGRAM



Close fit

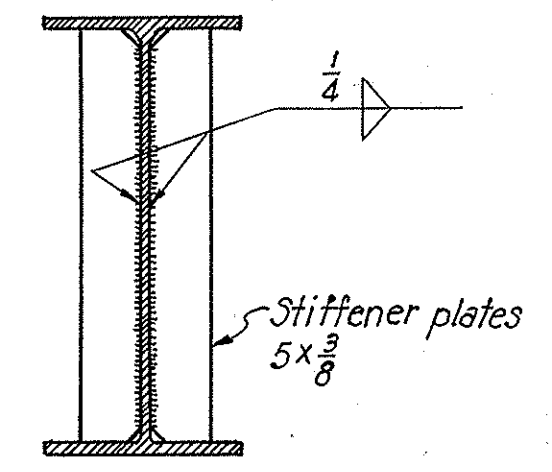


AT BEARINGS



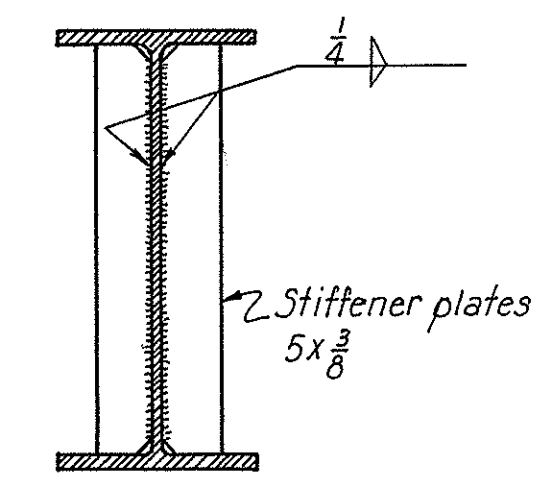
INTERMEDIATE

STIFFENER DETAILS
Scale: $\frac{3}{8}'' = 1'-0''$



Stiffener plates
5 x 3/8

Stiffeners to be omitted on outside face of girders A & H.



2 Stiffener plates
5 x 3/8

See Sheet 139 for splice plate details.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

AKRON EXPRESSWAY SYSTEM
(EAST MARKET STREET TO EAST CUYAHOGA FALLS AVENUE)

GLENWOOD UNDERPASS
BR. NO. SU-5-131

FRAMING PLAN AND GIRDER ELEVATIONS

AKRON, SUMMIT COUNTY, OHIO

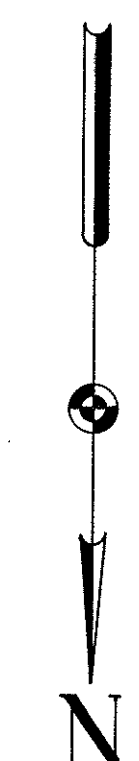
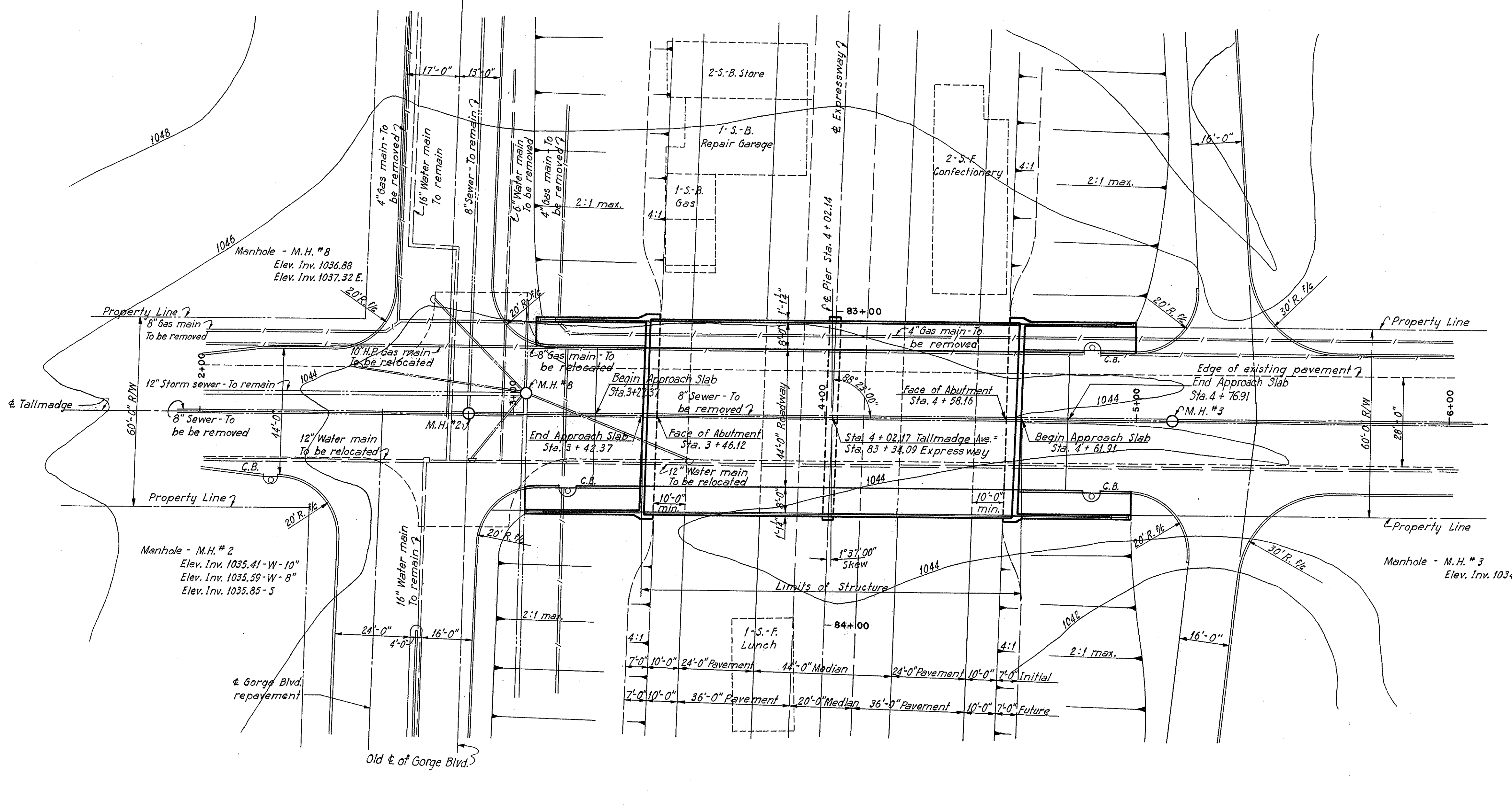
SCALE: $\frac{3}{8}'' = 1'-0''$ MADE I.G. DATE 5-16-50 HOWARD, NEEDLES, TAMMEN & BERGENOFF CONSULTING ENGINEERS KANSAS CITY NEW YORK

TRC NUMBER DATE 6-30-50 CND D.M.D. DATE 6-23-50

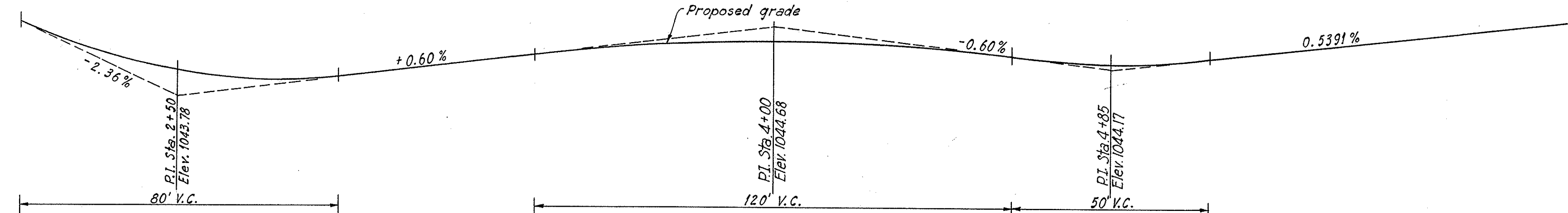
766 SHEET

Revised 9-18-50

506



PROPOSED STRUCTURE
 Type: Continuous steel beam with concrete deck and substructure.
 Spans: 2 @ 57'-3 1/4"
 Roadway: 44'-0" with two 8'-0" sidewalks.
 Loading: S-20-46
 Skew: 1°37'00"
 Surface Course: 2 1/2" asphaltic concrete surface course.



Note: For additional details of new and existing utilities, see Sheet 90.

STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 BUREAU OF BRIDGES

AKRON EXPRESSWAY SYSTEM
 (EAST MARKET STREET TO EAST CUYAHOGA FALLS AVENUE)
 TALLMADGE UNDERPASS
 BR. NO. SU-5-135
SITE PLAN

AKRON, SUMMIT COUNTY, OHIO

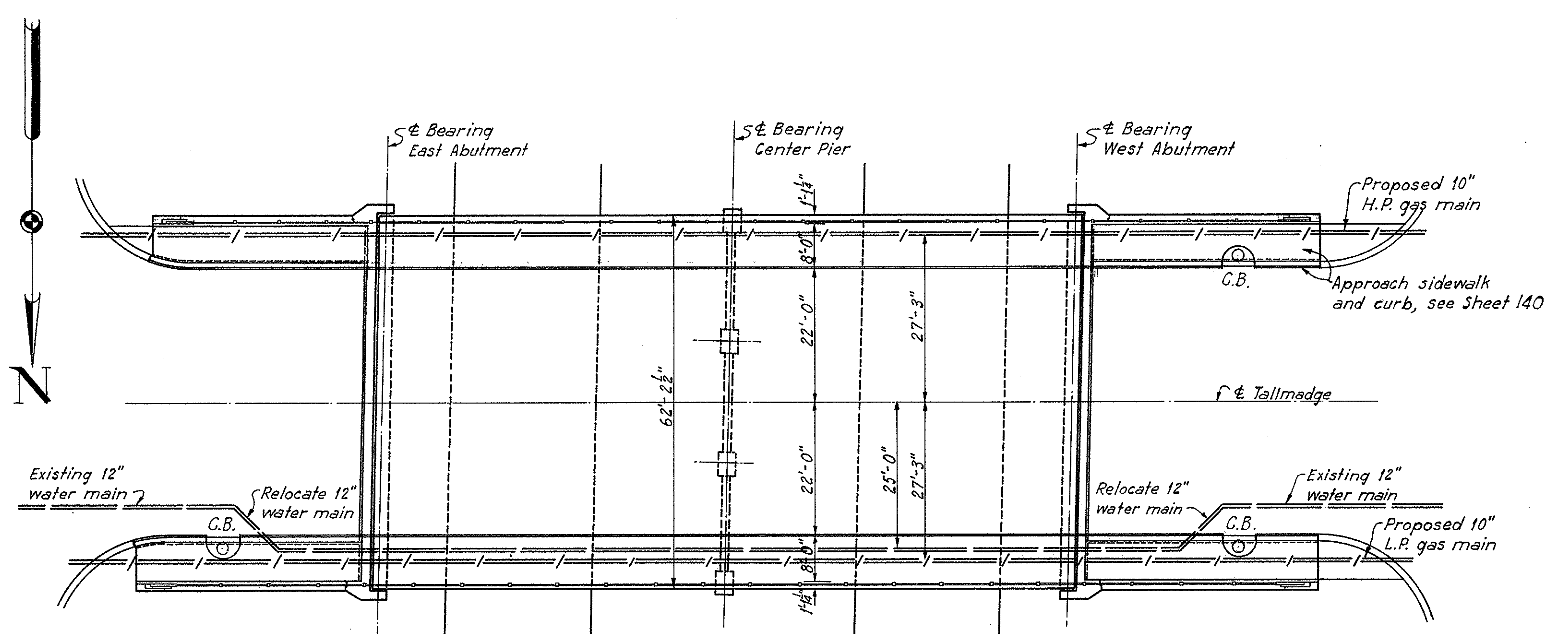
SCALE: 1" = 20'
 MADE P.O.D. DATE 7-11-50
 TRCD G.D. DATE 7-18-50
 CKD E.H.B. DATE 8-2-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK

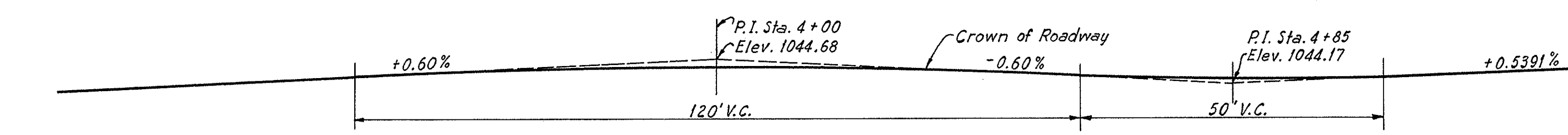
766 SHEET

Revised 9-18-50

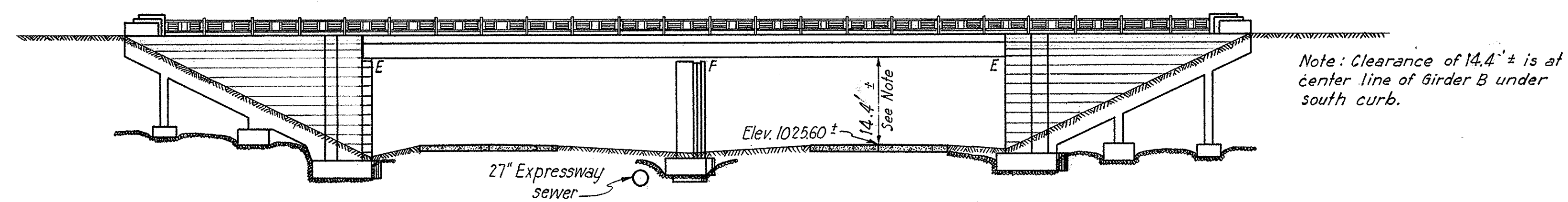
511



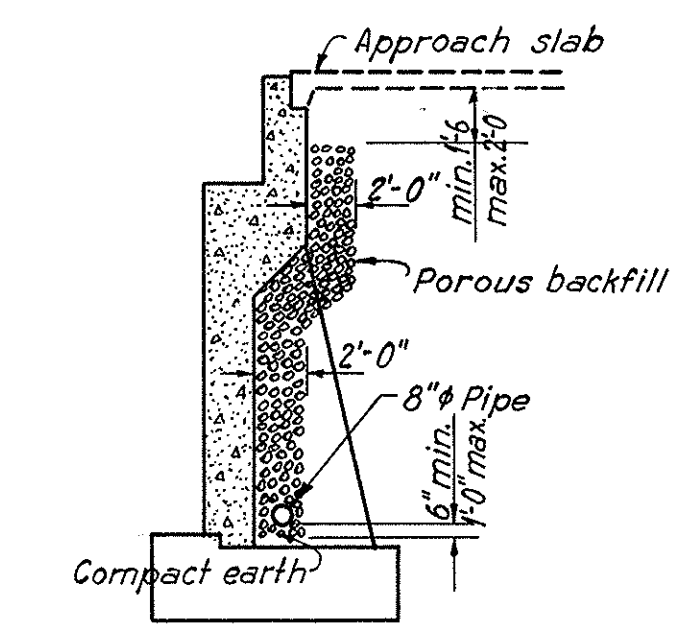
PLAN
Scale: 1/8" = 1'-0"



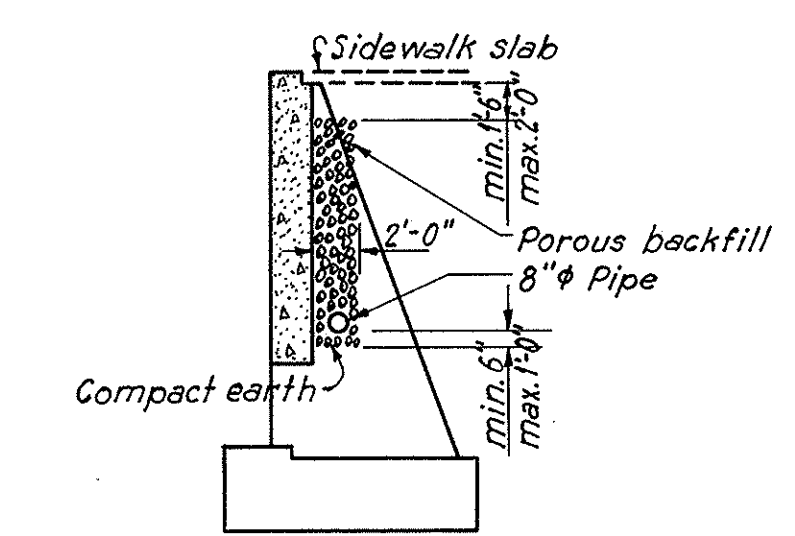
ELEVATION
Scale: 1/8" = 1'-0"



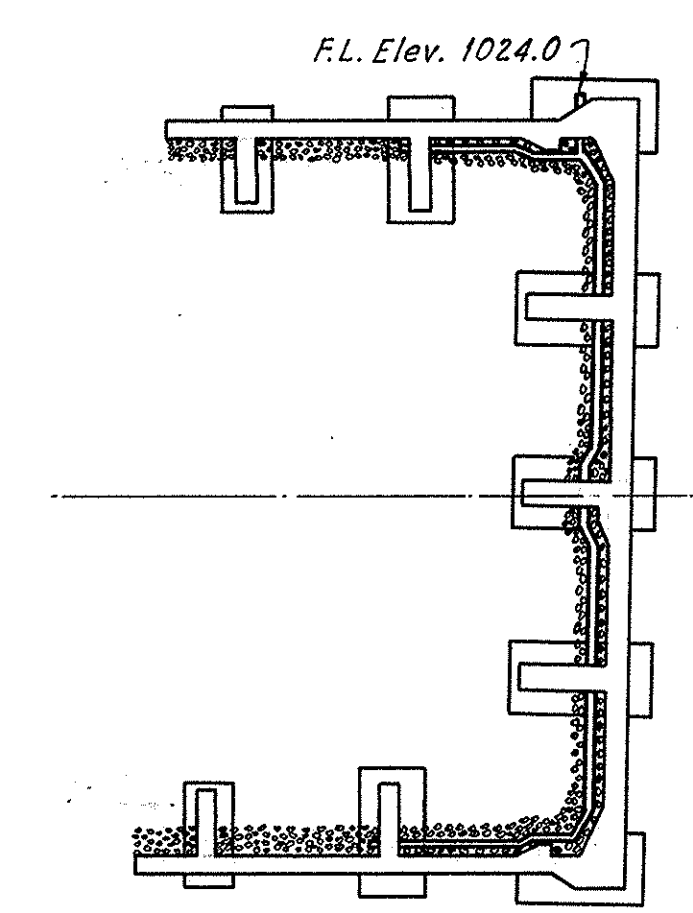
Note: Clearance of 14.4' ± is at center line of Girder B under south curb.



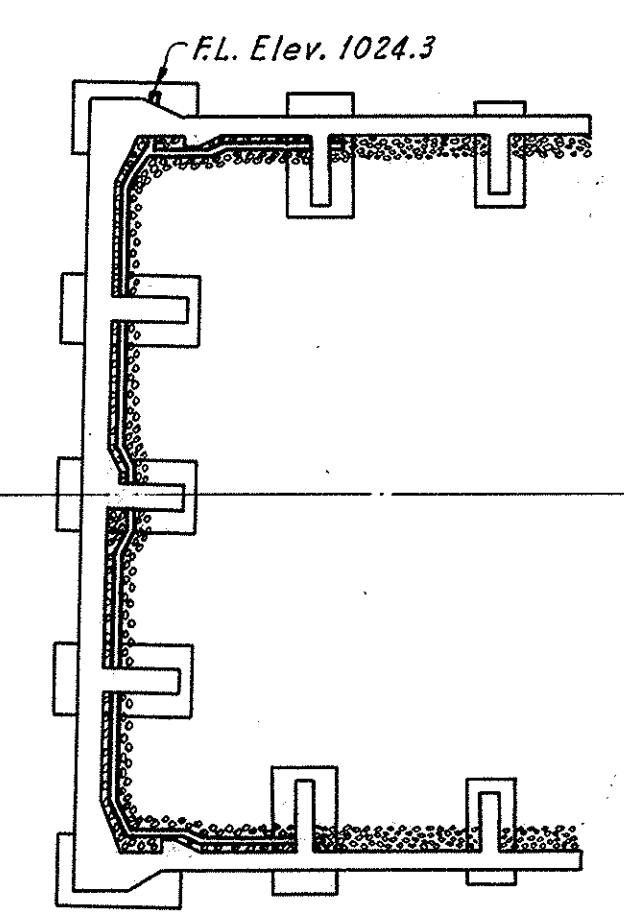
ABUTMENT SECTION
Not to Scale



WINGWALL SECTION
Not to Scale



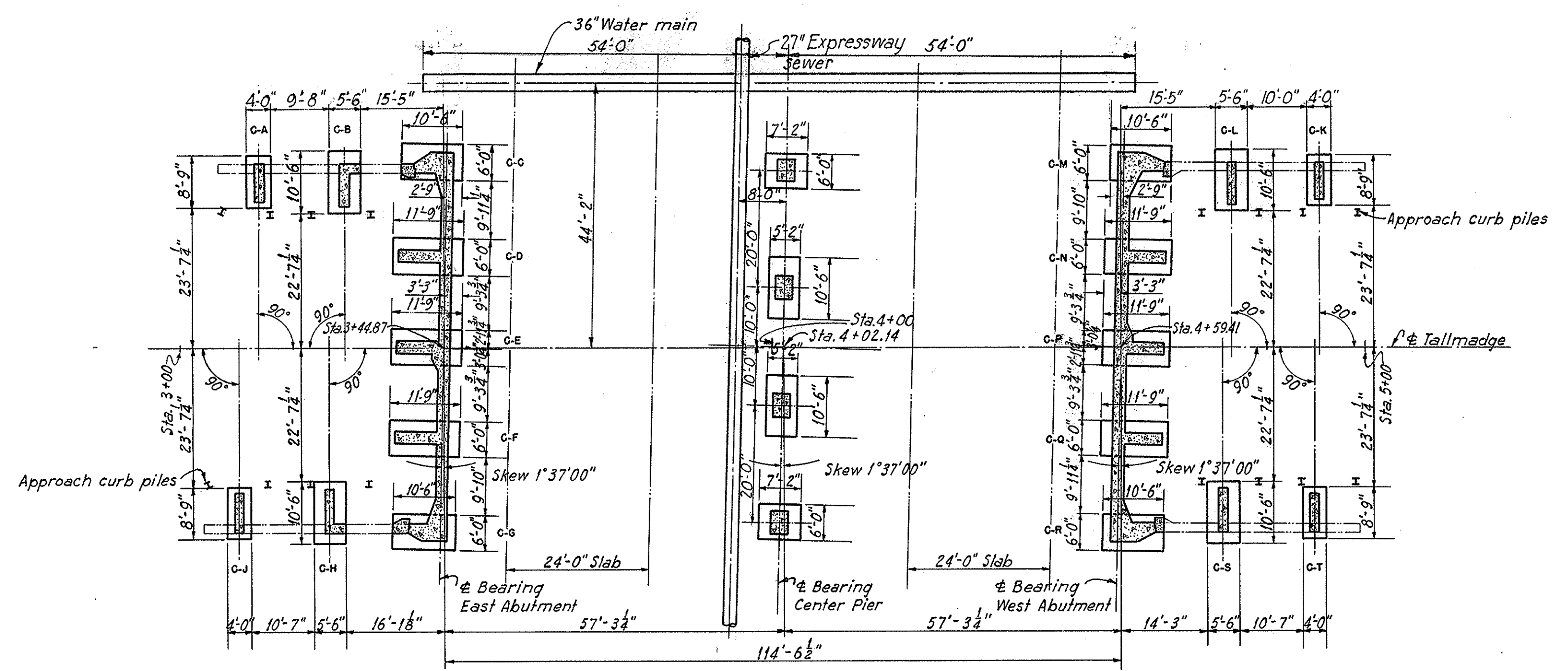
EAST ABUTMENT PLAN



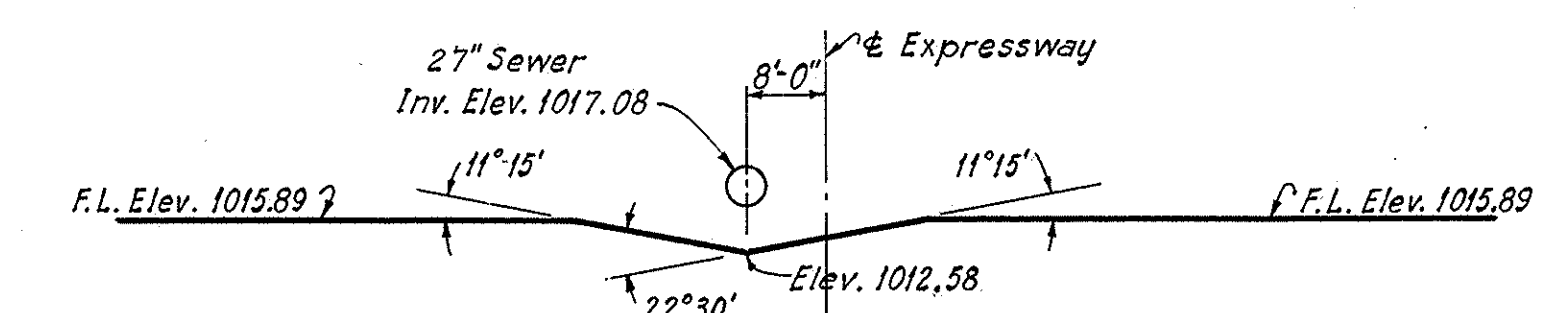
WEST ABUTMENT PLAN

SUBSTRUCTURE DRAINAGE
Not to Scale

Note: Porous backfill shall conform to items S-29.02 and S-29.04.
Pipe shall be 8" bituminous coated perforated c.m.p. conforming to Sec. M-6.4(b) with necessary fittings. At one end of each abutment where shown on the Abutment Plans the pipe shall project 1'-0" ± to permit connecting 8" vitrified sewer pipe of the Expressway sewer system. See Drainage Plans. Upper ends of pipes shall be tightly closed with permanent headers made of No. 16 gauge sheet metal.



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



FLOW LINE-36" WATER MAIN
Not to Scale

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

AKRON EXPRESSWAY SYSTEM
(EAST MARKET STREET TO EAST CUYAHOGA FALLS AVENUE)
TALLMADGE UNDERPASS
BR. NO. SU-5-135
GENERAL PLAN AND ELEVATION

AKRON, SUMMIT COUNTY, OHIO

SCALE: 1/8" = 1'-0"
MADE J.H.G. DATE 5-8-50
TRCD A.E.R. DATE 7-15-50
CKD D.M.D. DATE 7-17-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY, NEW YORK

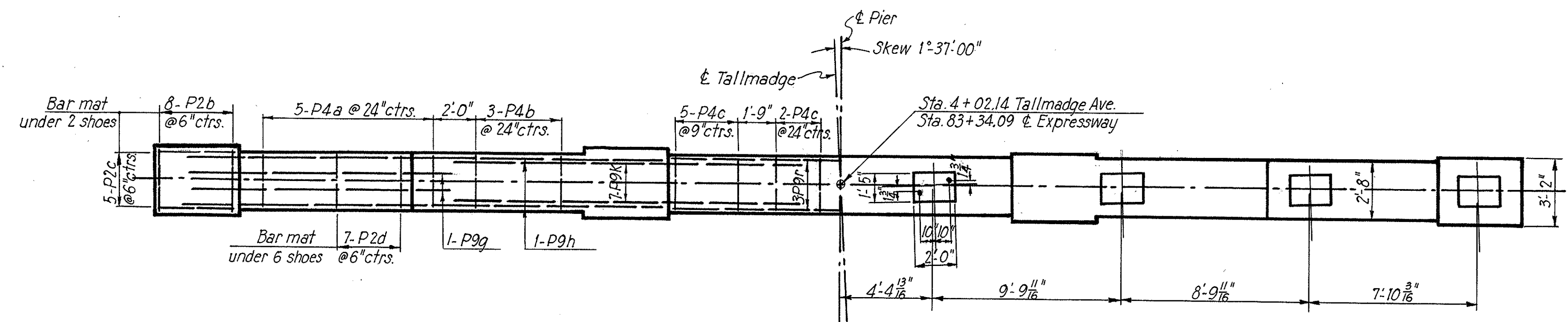
Revised 9-27-50
Revised 9-18-50

766 SHEET

510

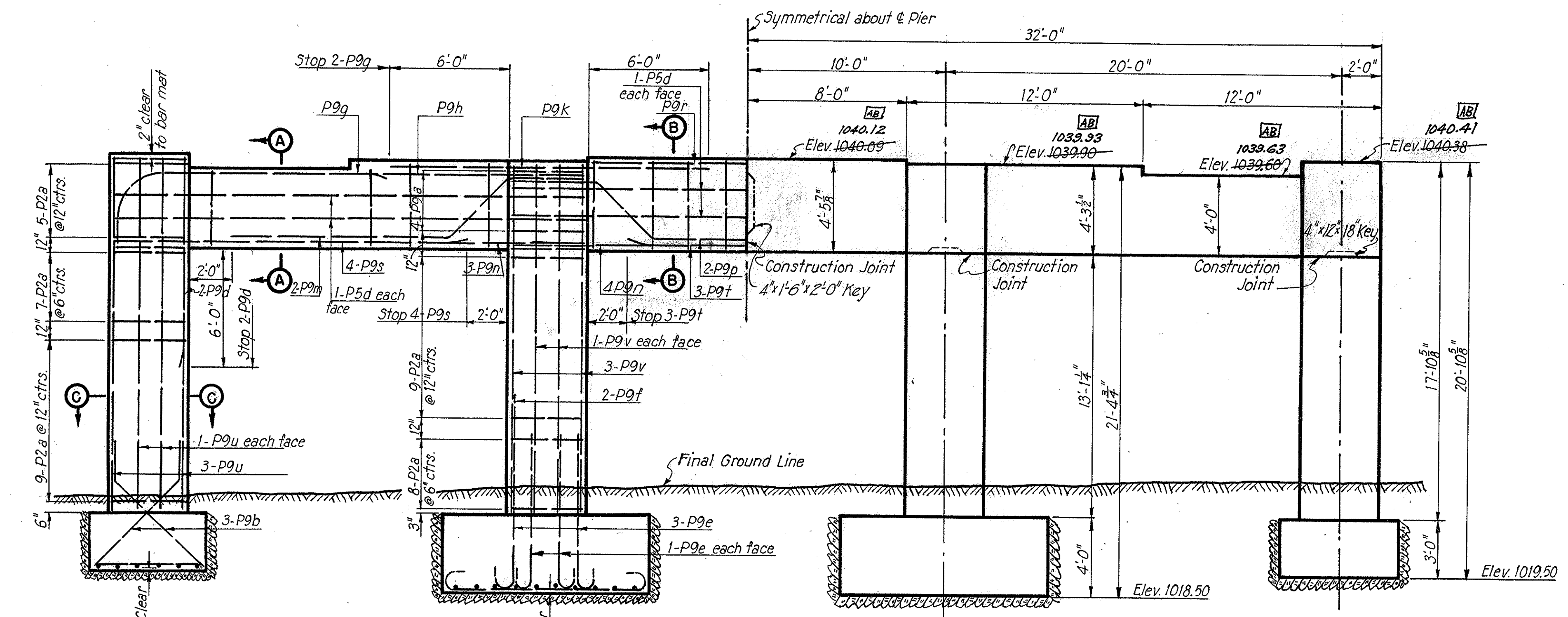
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	132
2	OHIO	U-687(8)	POST WAR	146

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

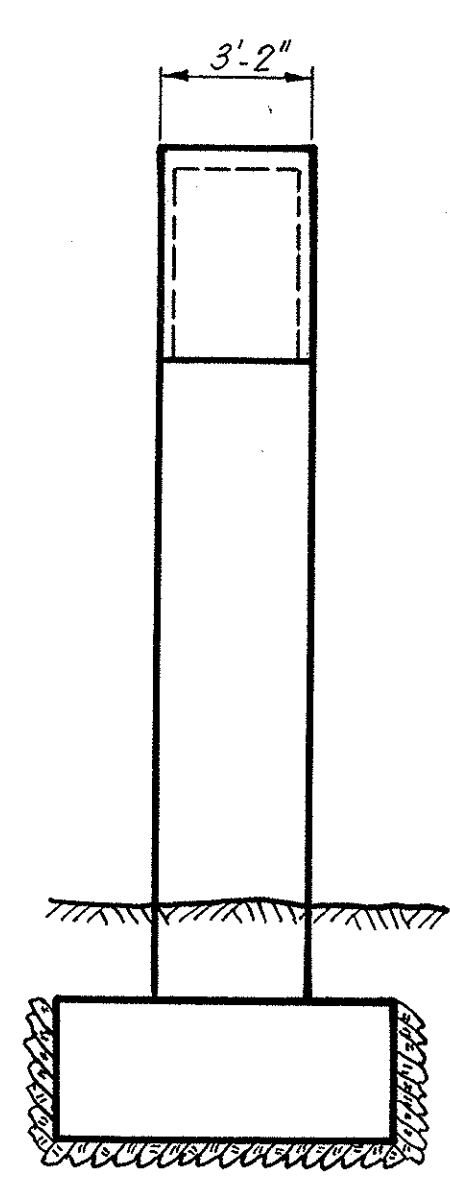


PLAN
Scale: 1/4" = 1'-0"

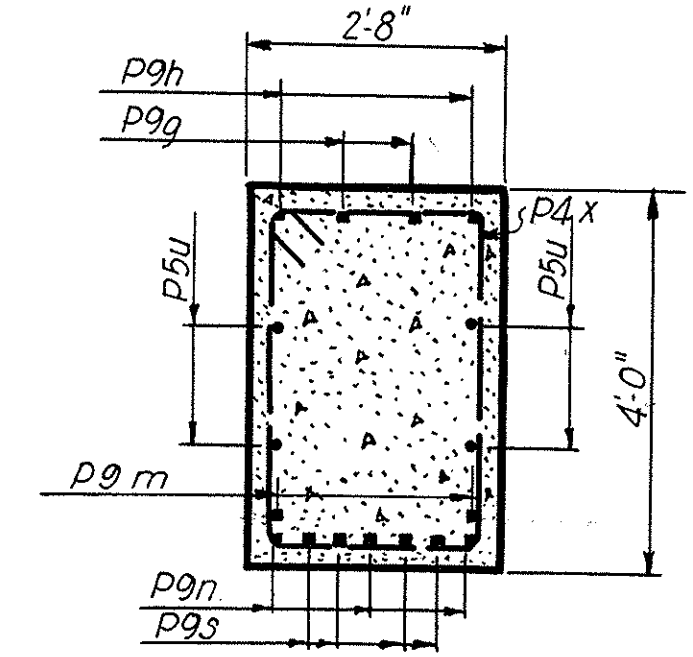
Note:
Special care shall be taken in placing top reinforcing steel so that it will not interfere with drilling for anchor bolt holes.



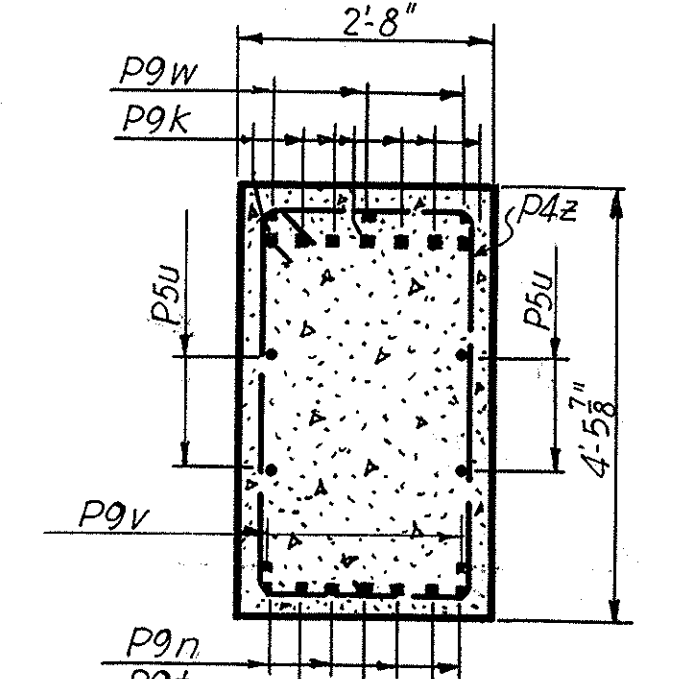
ELEVATION
Scale: 1/4" = 1'-0"



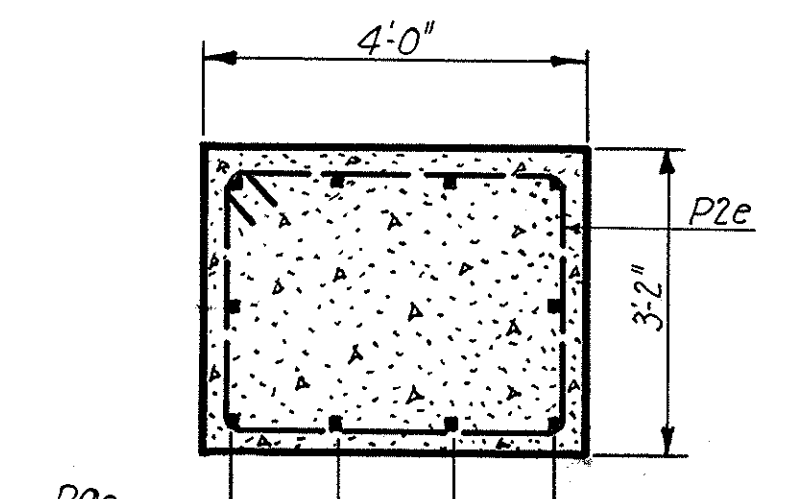
END ELEVATION
Scale: 1/4" = 1'-0"



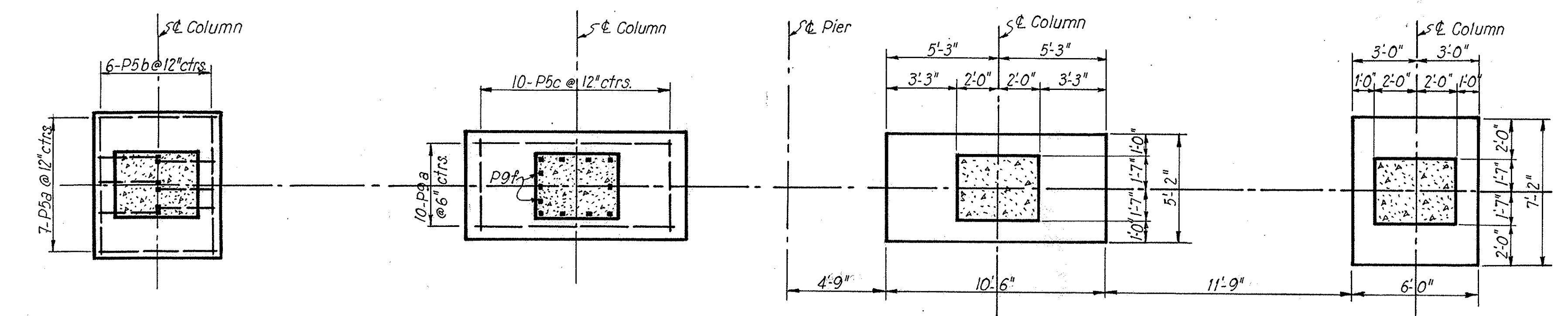
SECTION A-A
Scale: 1/2" = 1'-0"



SECTION B-B
Scale: 1/2" = 1'-0"



SECTION C-C
Scale: 1/2" = 1'-0"



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

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

AKRON EXPRESSWAY SYSTEM
(EAST MARKET STREET TO EAST CUYAHOGA FALLS AVENUE)

TALLMADGE UNDERPASS
BR. NO. SU-5-135
CENTER PIER

AKRON, SUMMIT COUNTY, OHIO

SCALE: 1/4" = 1'-0"
MADE G.M.M. DATE 5-17-50
TRCD H.A.M. DATE 8-2-50
CKD D.M.D. DATE 7-27-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

766 SHEET

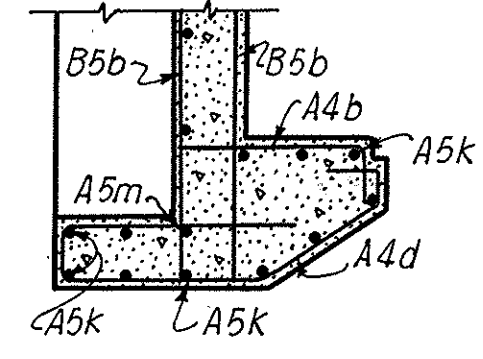
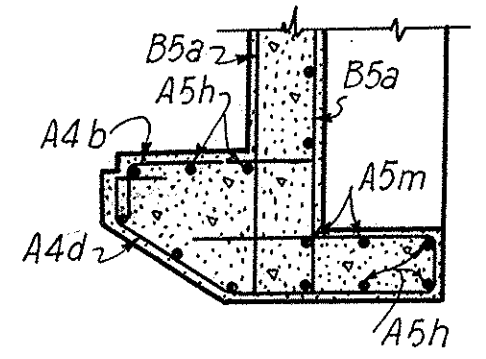
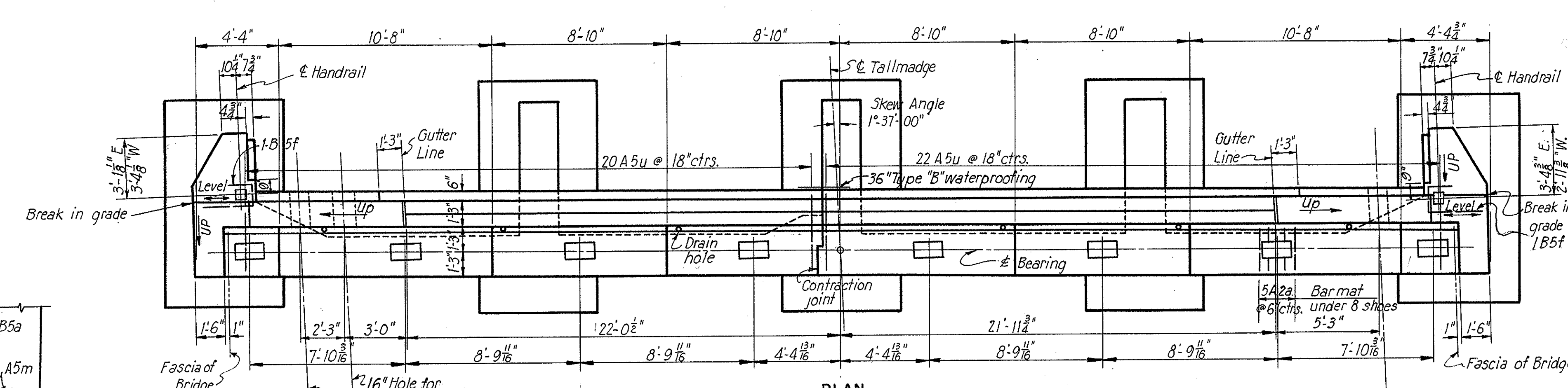
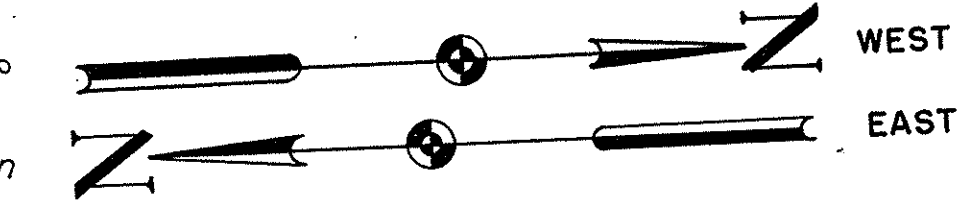
Revised 9-18-50

Revised As-Built 6-12-57 J.K.S.

512

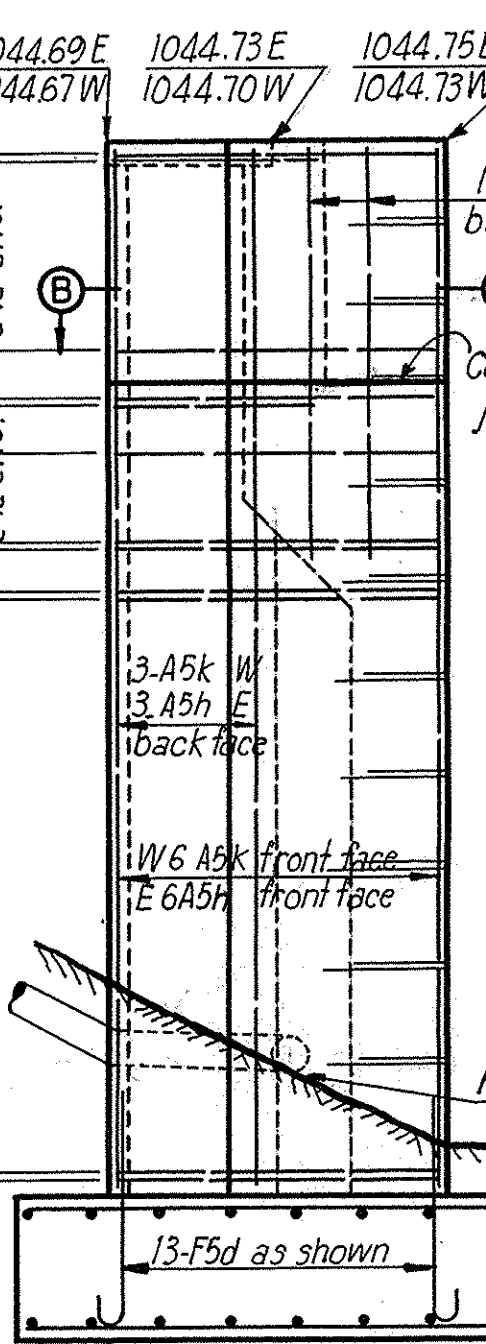
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	133
2	OHIO	U-687(8)	POST WAR	146

SUMMIT COUNTY CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

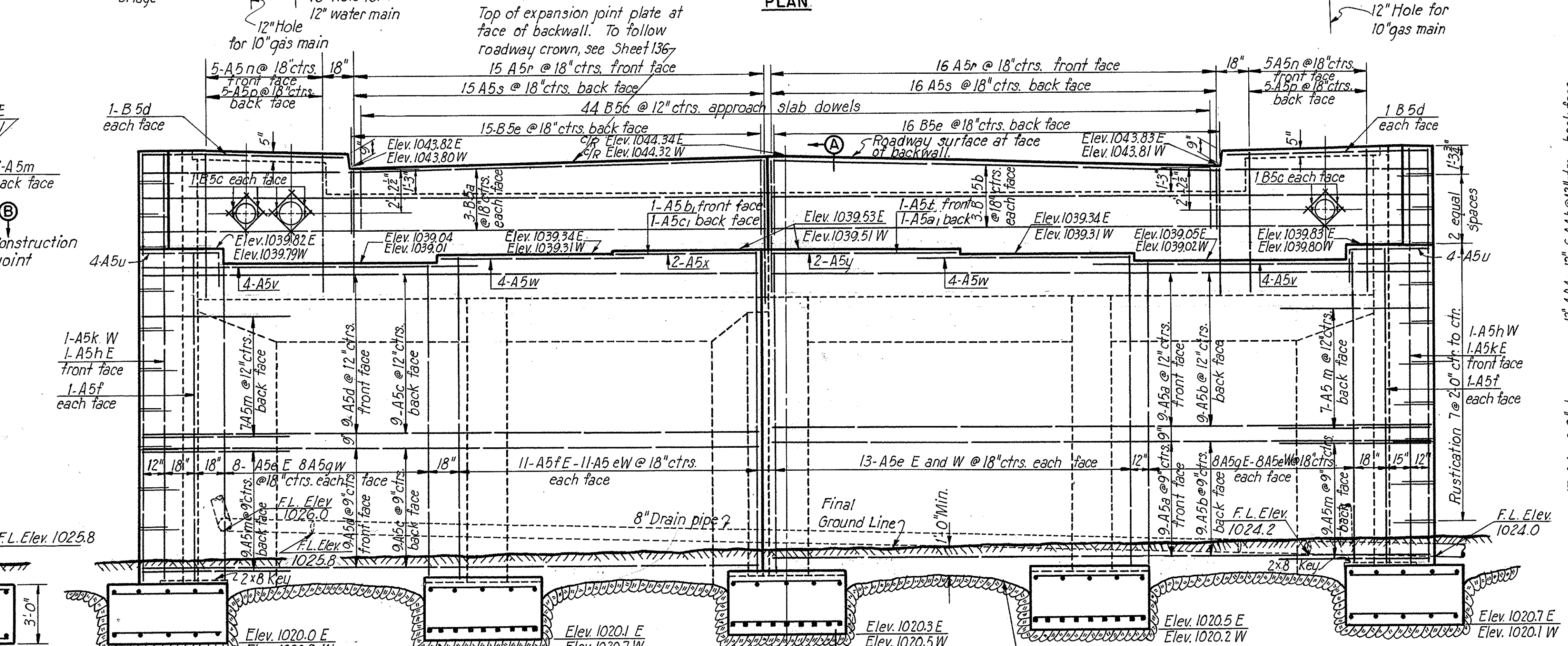


SECTION B-B

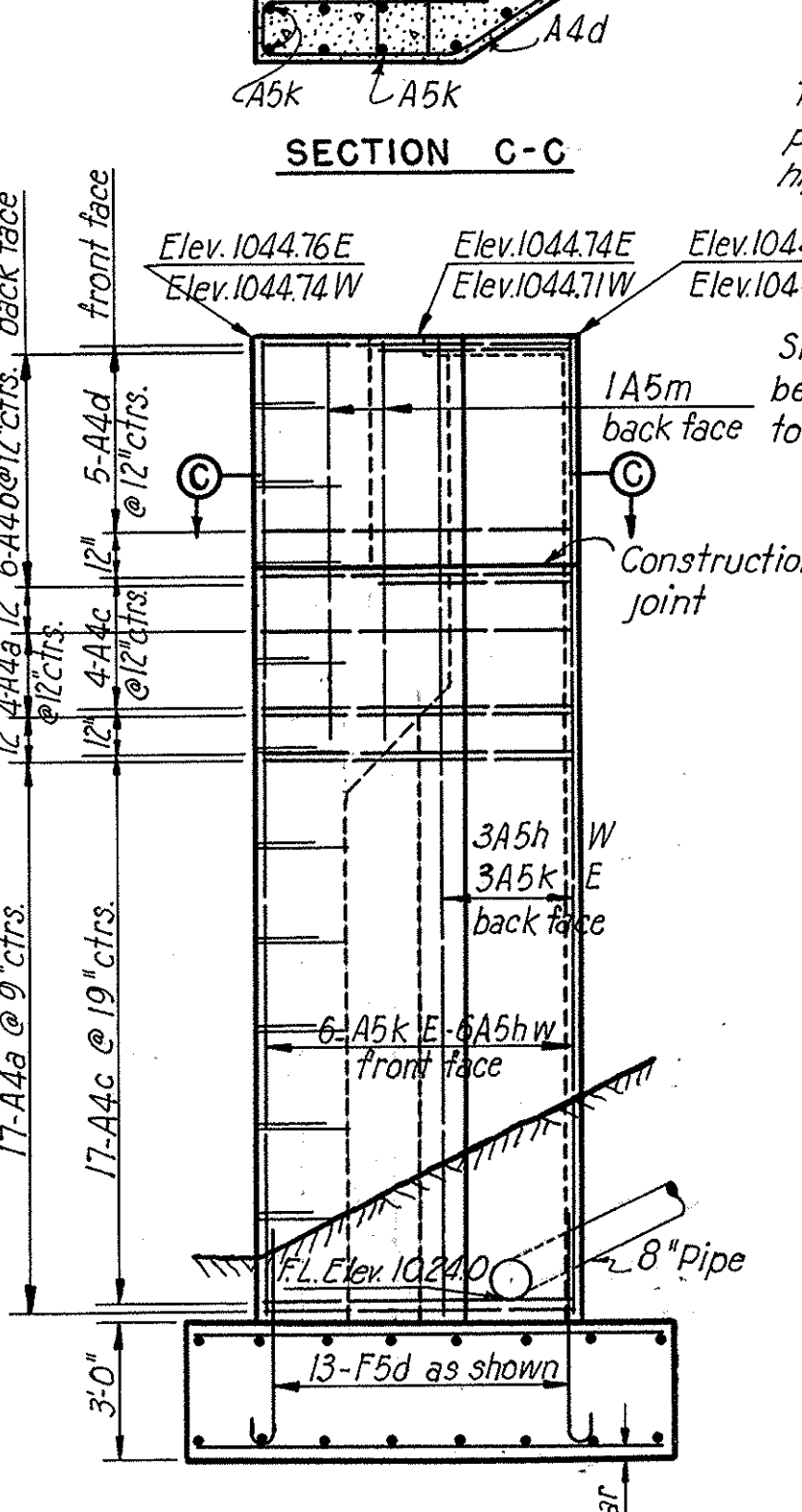
SECTION C-C



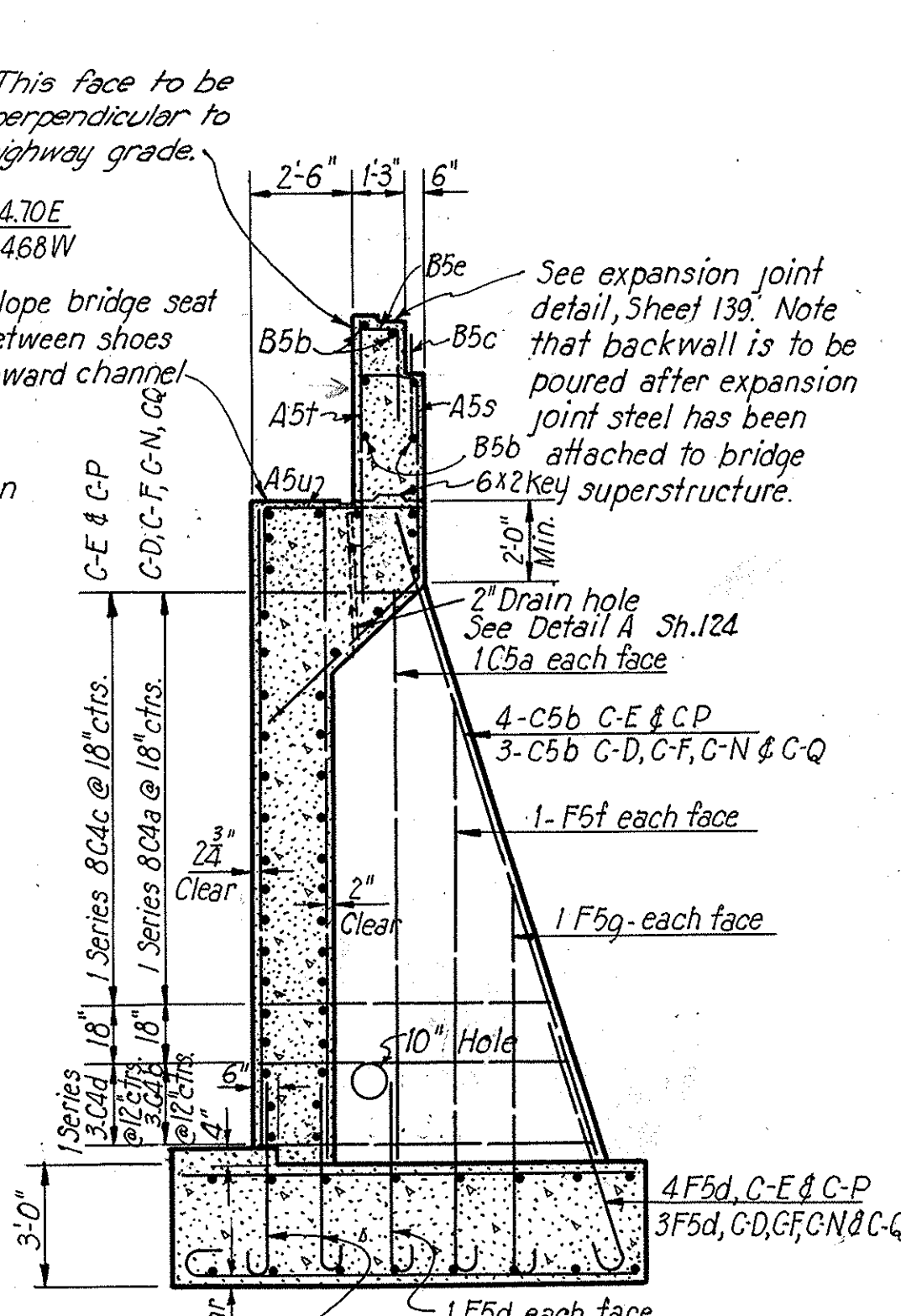
END VIEW



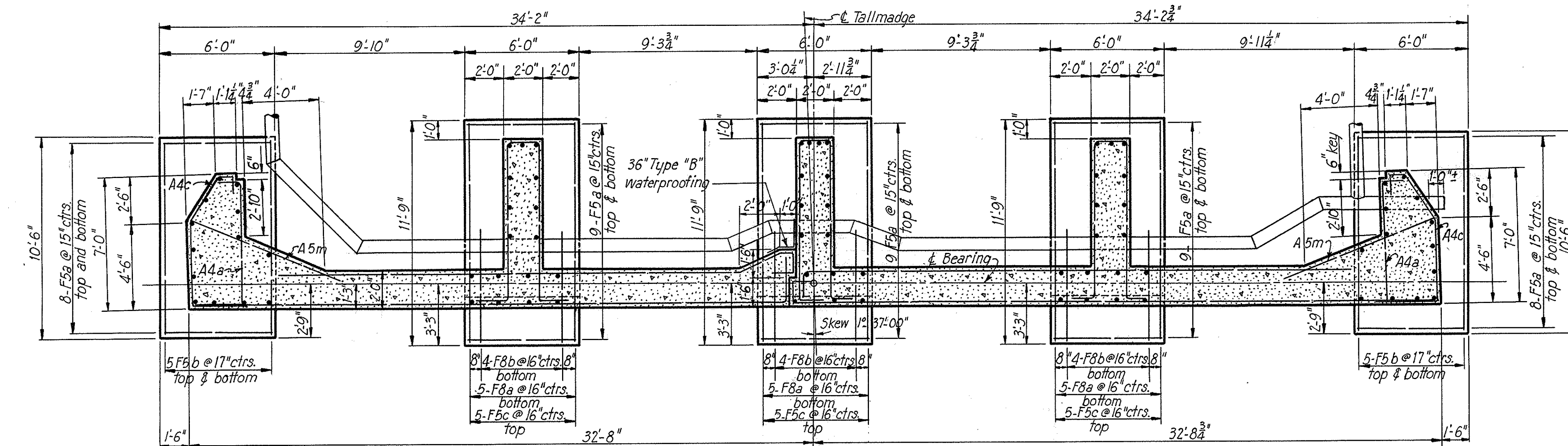
ELEVATION



END VIEW



SECTION A-A



FOOTING PLAN

Note: East abutment shown, west abutment similar except as noted.
 Drainage is shown for the east abutment only. For drainage of west abutment, see Sheets 134 & 135.
 Pipe sleeves in backwall are shown for east abutment. At west abutment pipe sleeves will be opposite hand.
 For detail of Contraction Joint, Rustication and Drain Channels, see Sheet 124.

STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 BUREAU OF BRIDGES

AKRON EXPRESSWAY SYSTEM
 (EAST MARKET STREET TO EAST CUYAHOGA FALLS AVENUE)
TALLMADGE UNDERPASS
BR. NO. SU-5-135
ABUTMENTS

AKRON, SUMMIT COUNTY, OHIO

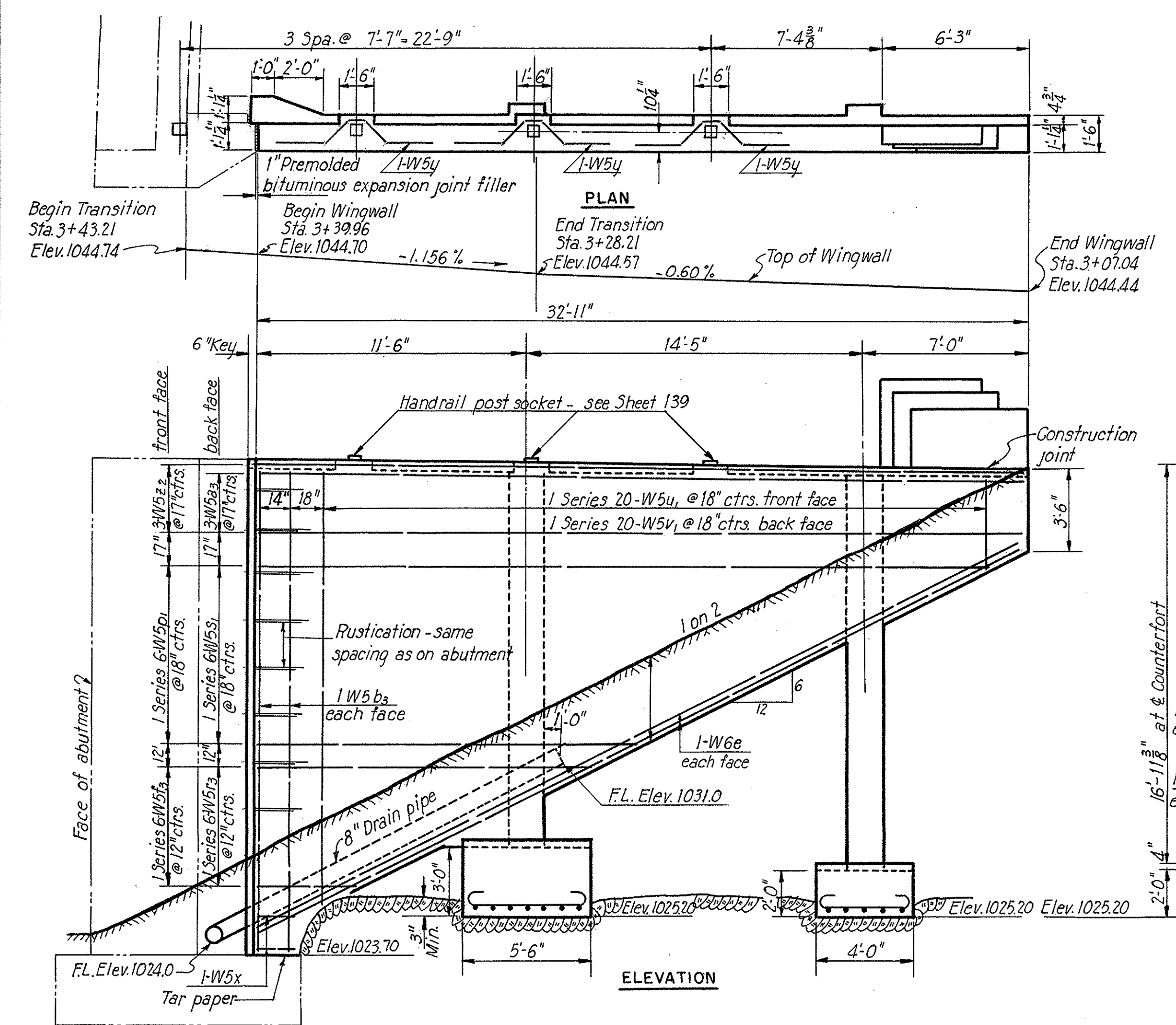
SCALE: 1/4" = 1'-0"
 MADE G.M.N. DATE 5-29-50
 TRC: JWC: RBE DATE 8-2-50
 CKD: D.M. DATE 7-19-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY NEW YORK

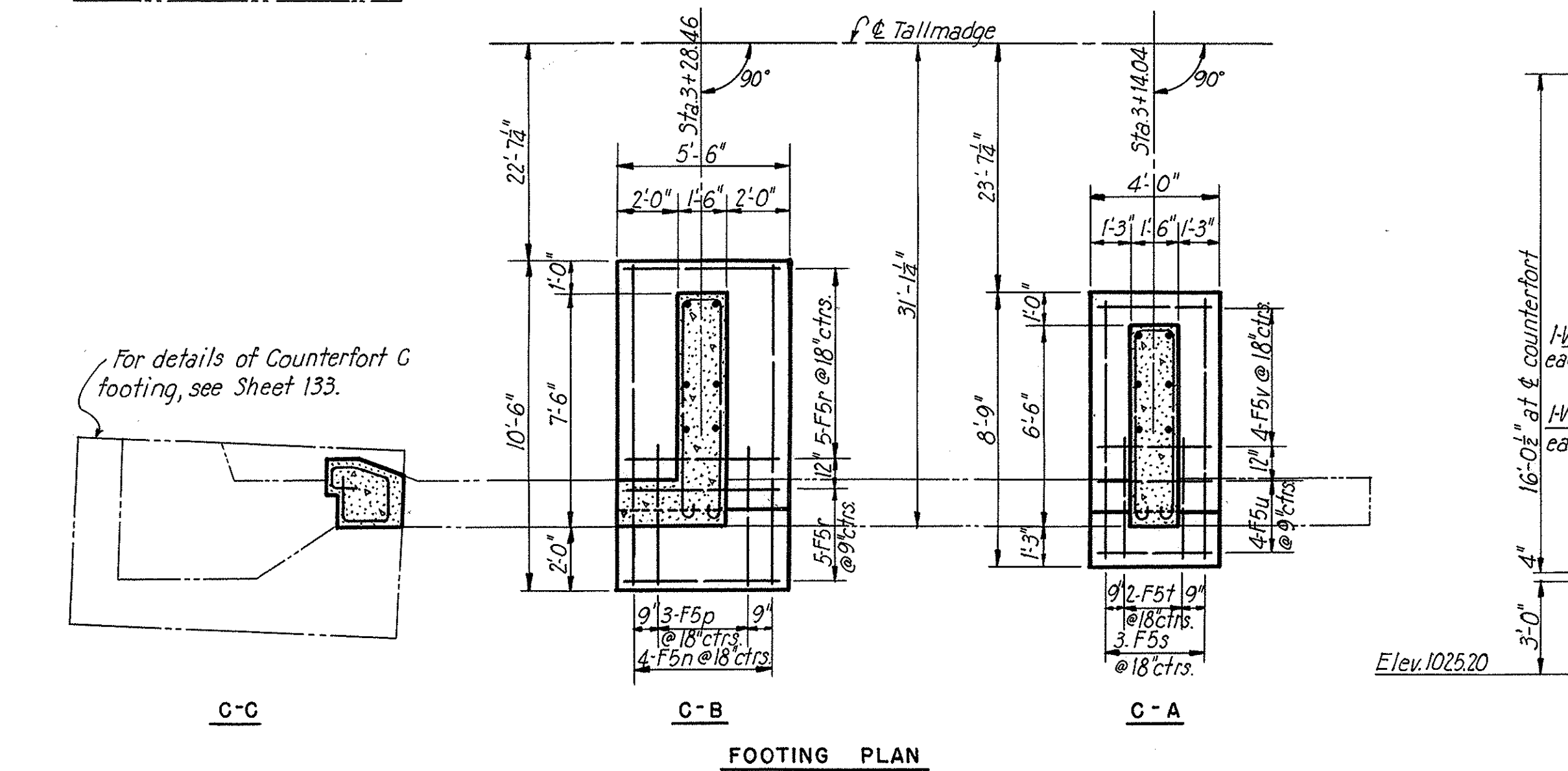
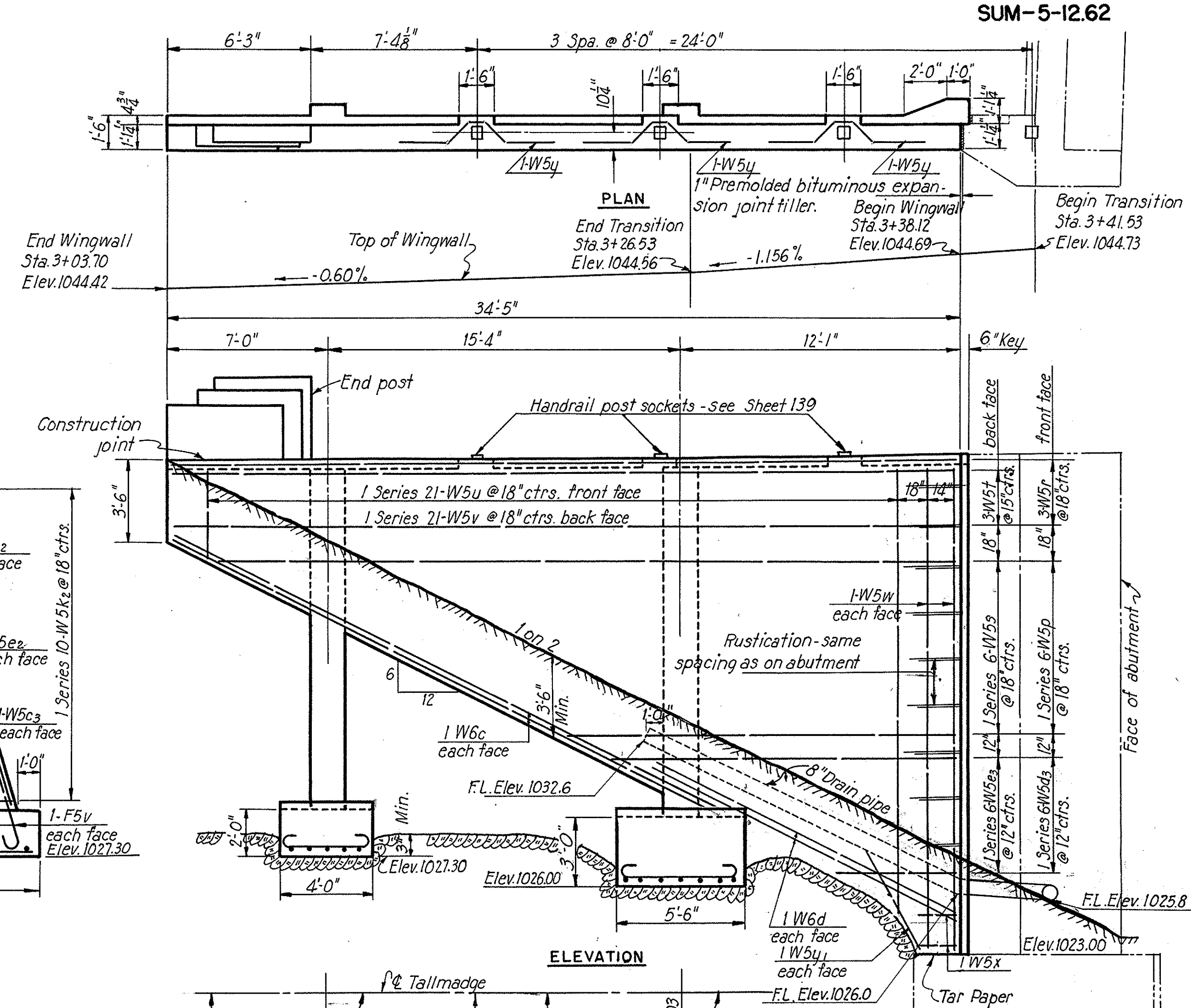
766 SHEET

Revised 9-18-50

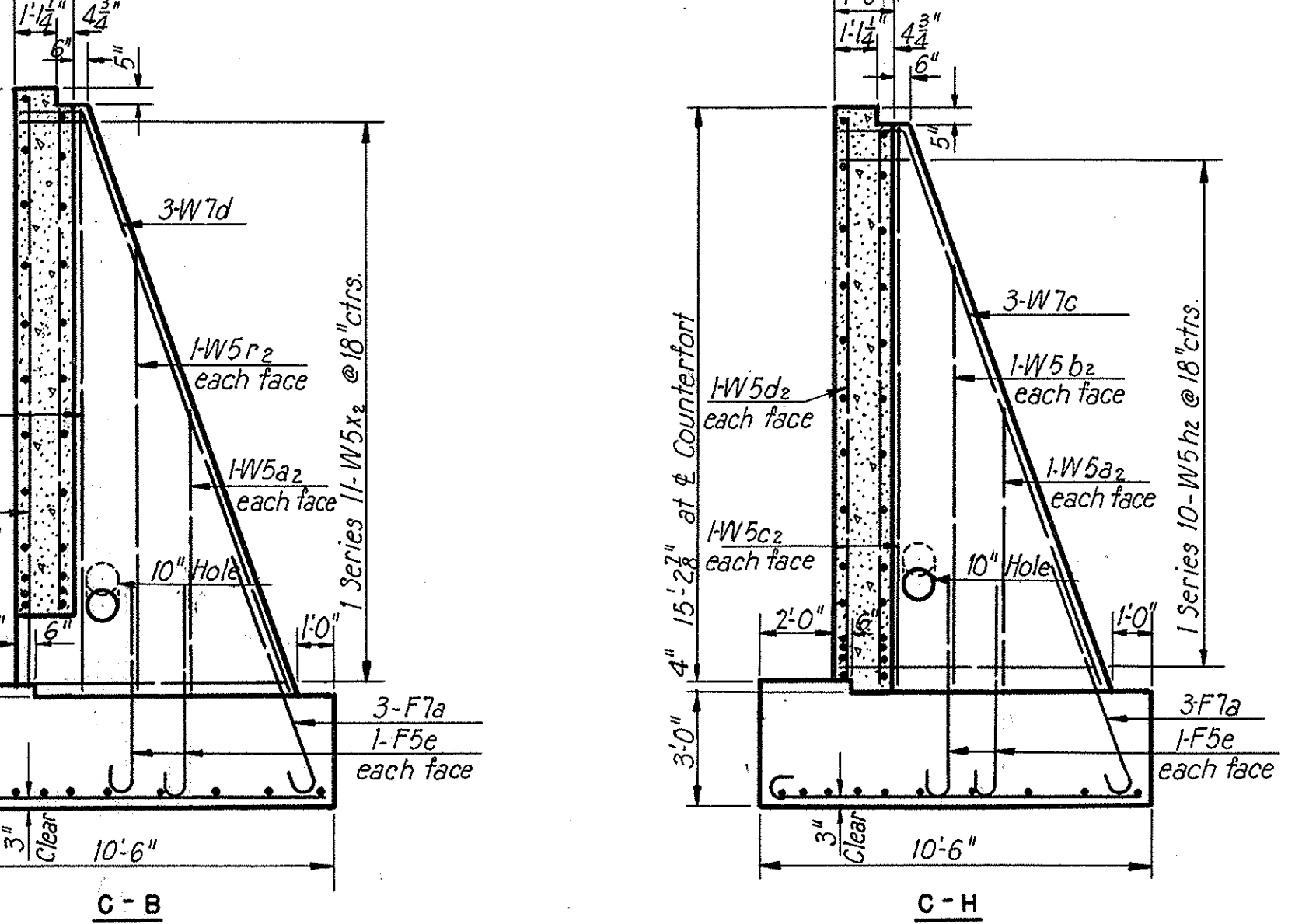
5/3



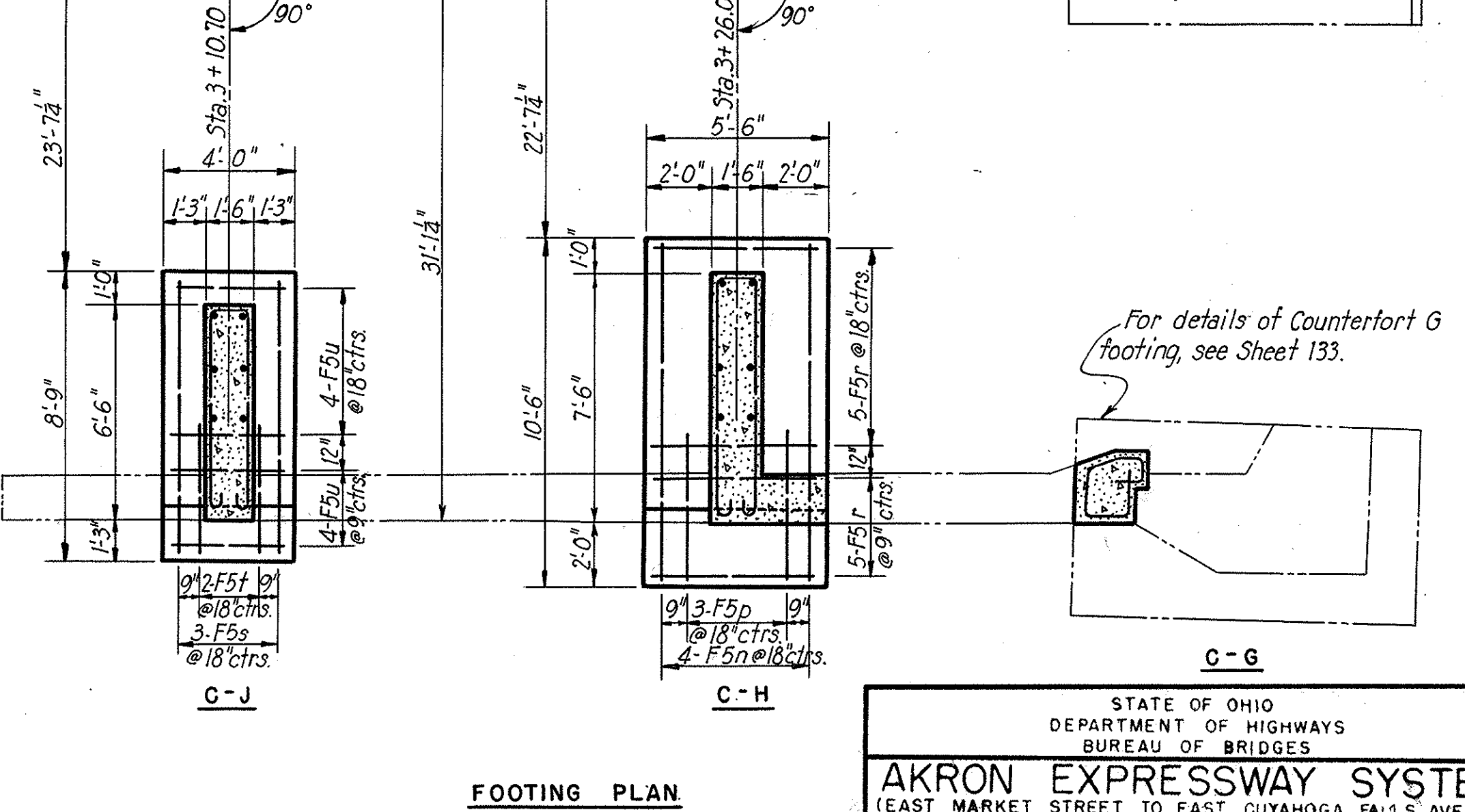
Note: For endpost details, see Sheet 139.



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



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



FOOTING PLAN

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

AKRON EXPRESSWAY SYSTEM
(EAST MARKET STREET TO EAST CUYAHOGA FALLS AVENUE)

TALLMADGE UNDERPASS
BR. NO. SU-5-135
EAST WINGWALLS

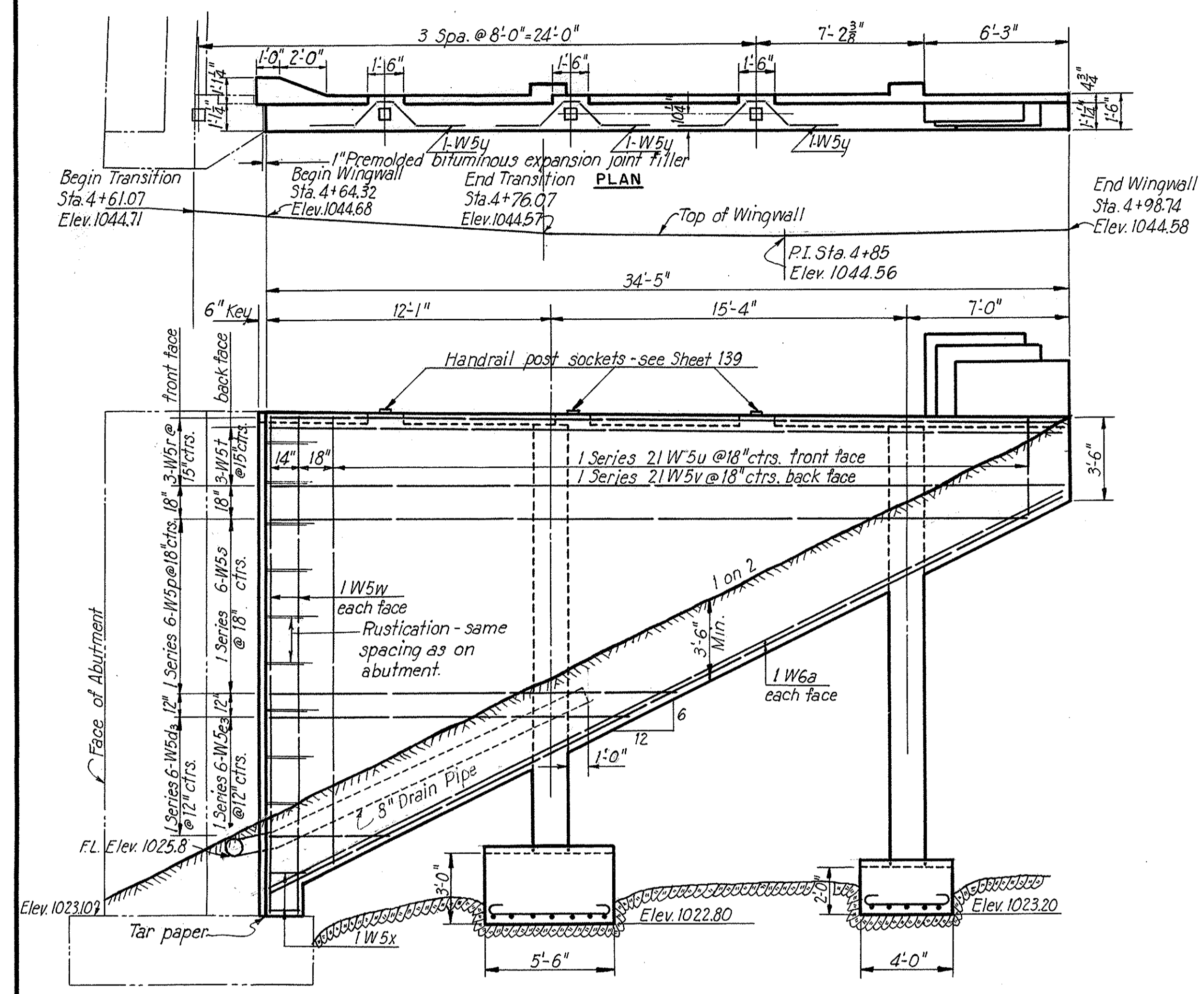
AKRON, SUMMIT COUNTY, OHIO

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

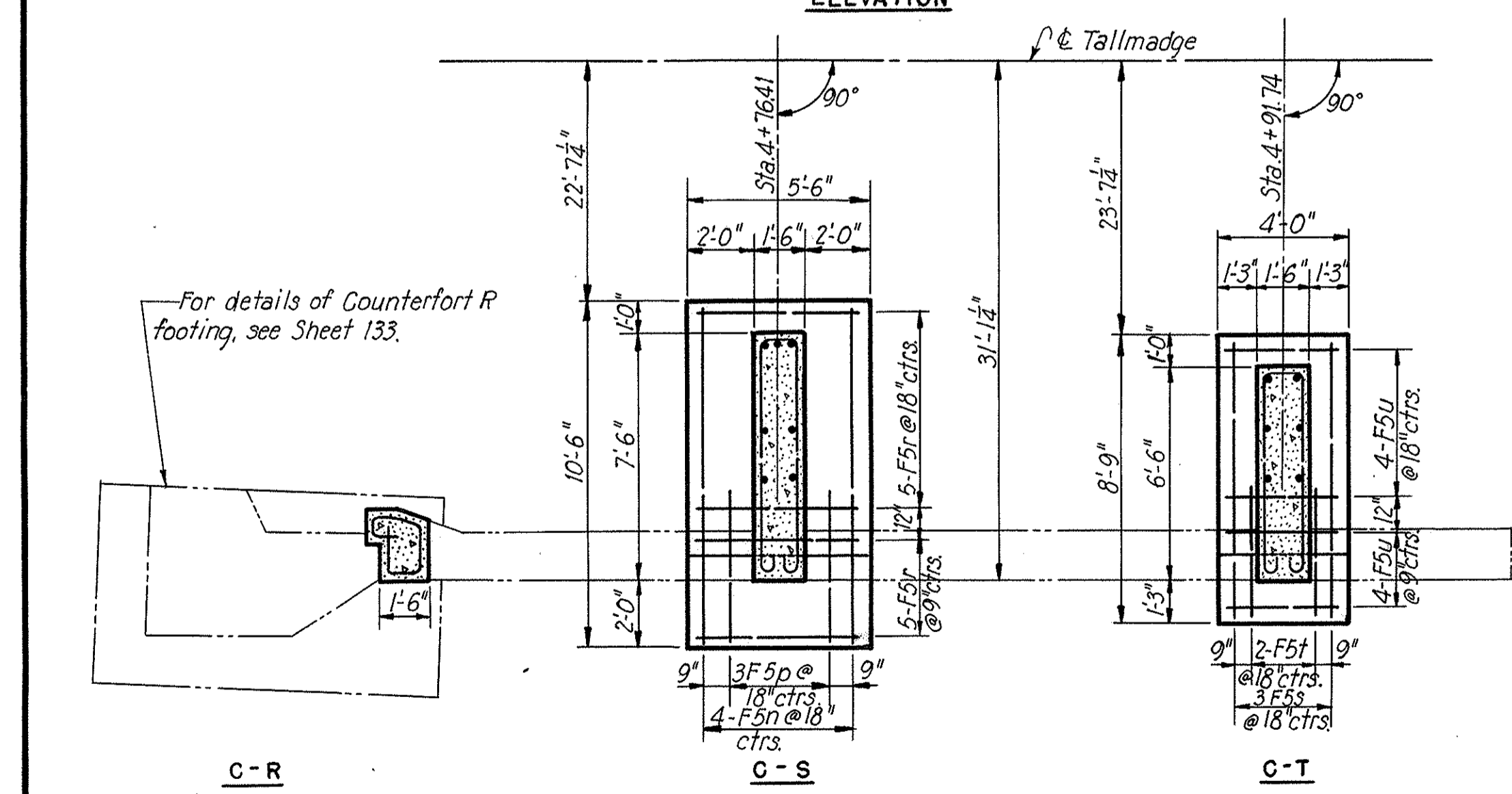
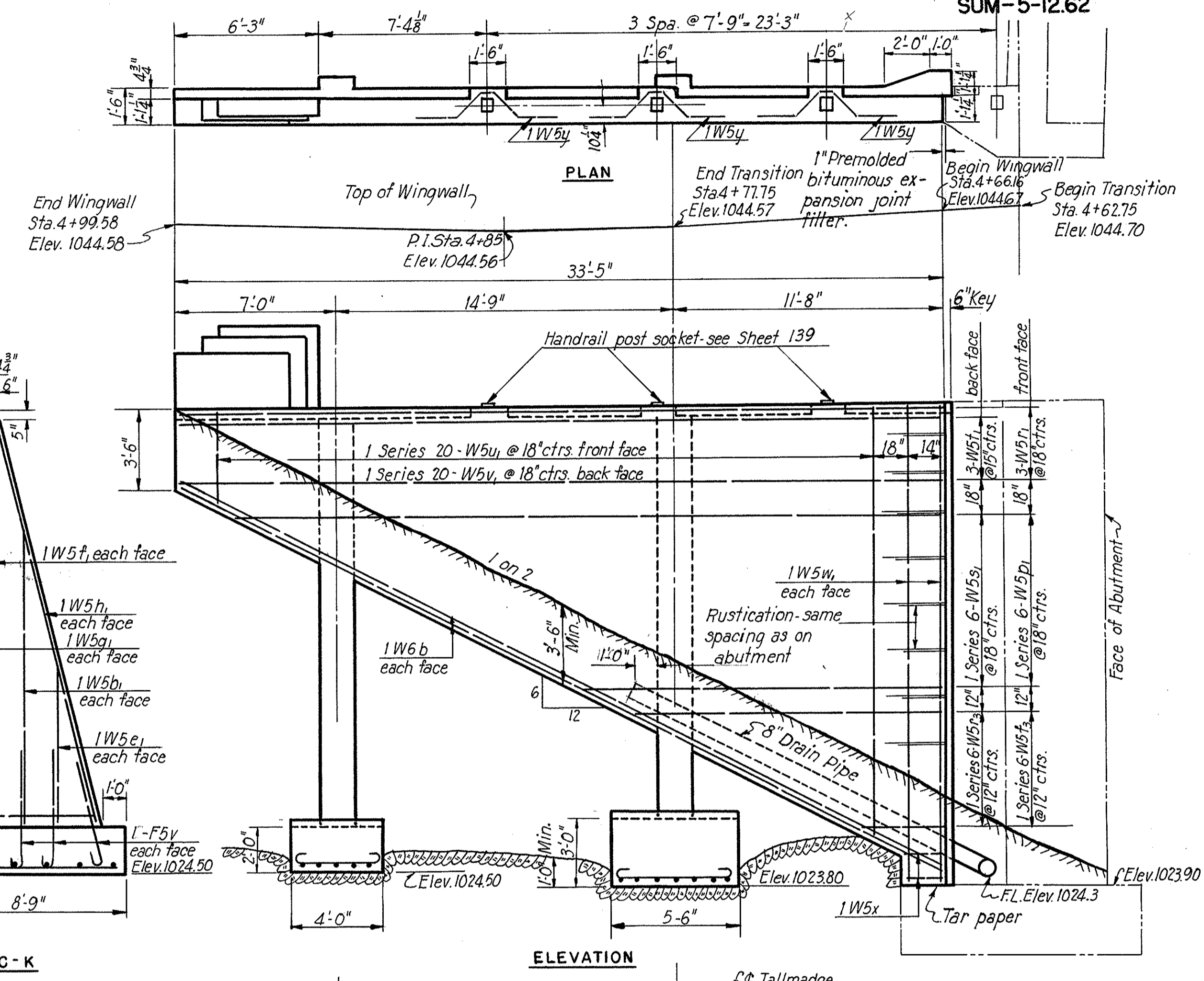
MADE 1.6 DATE 6-13-50
TRCD: JWC/RB DATE 7-21-50
CKD: D.M.D. DATE 7-14-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY, NEW YORK

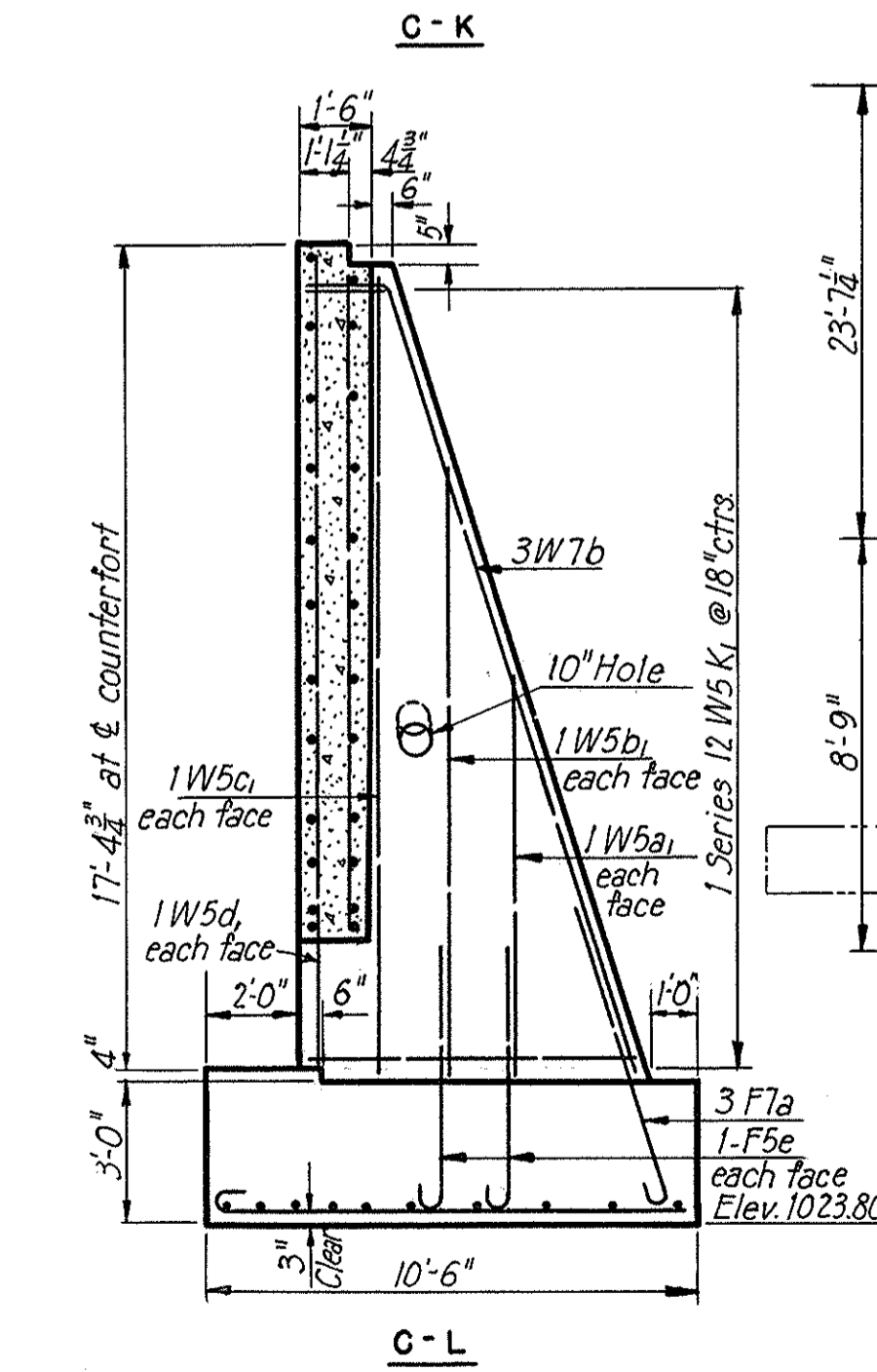
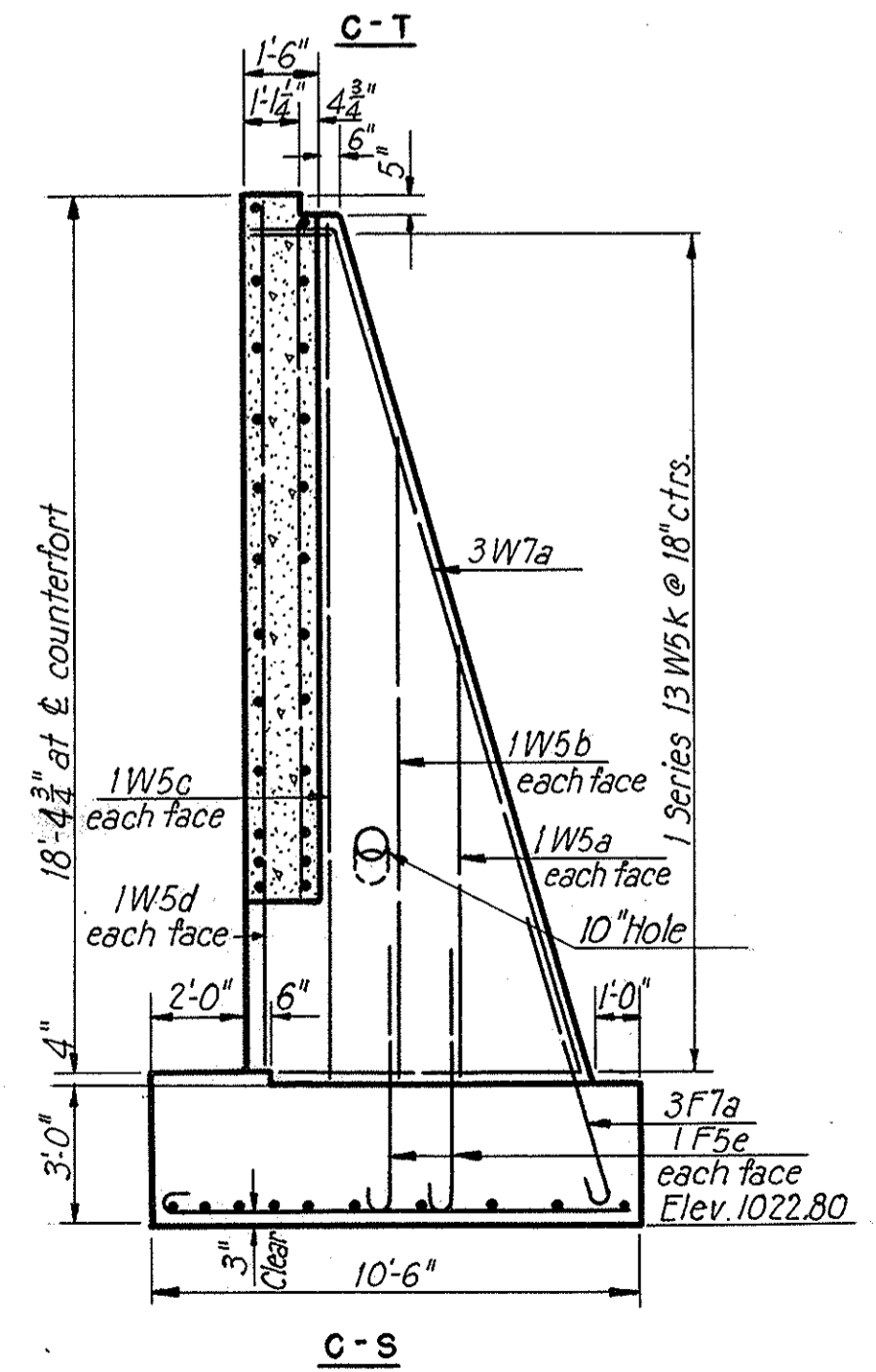
766 SHEET



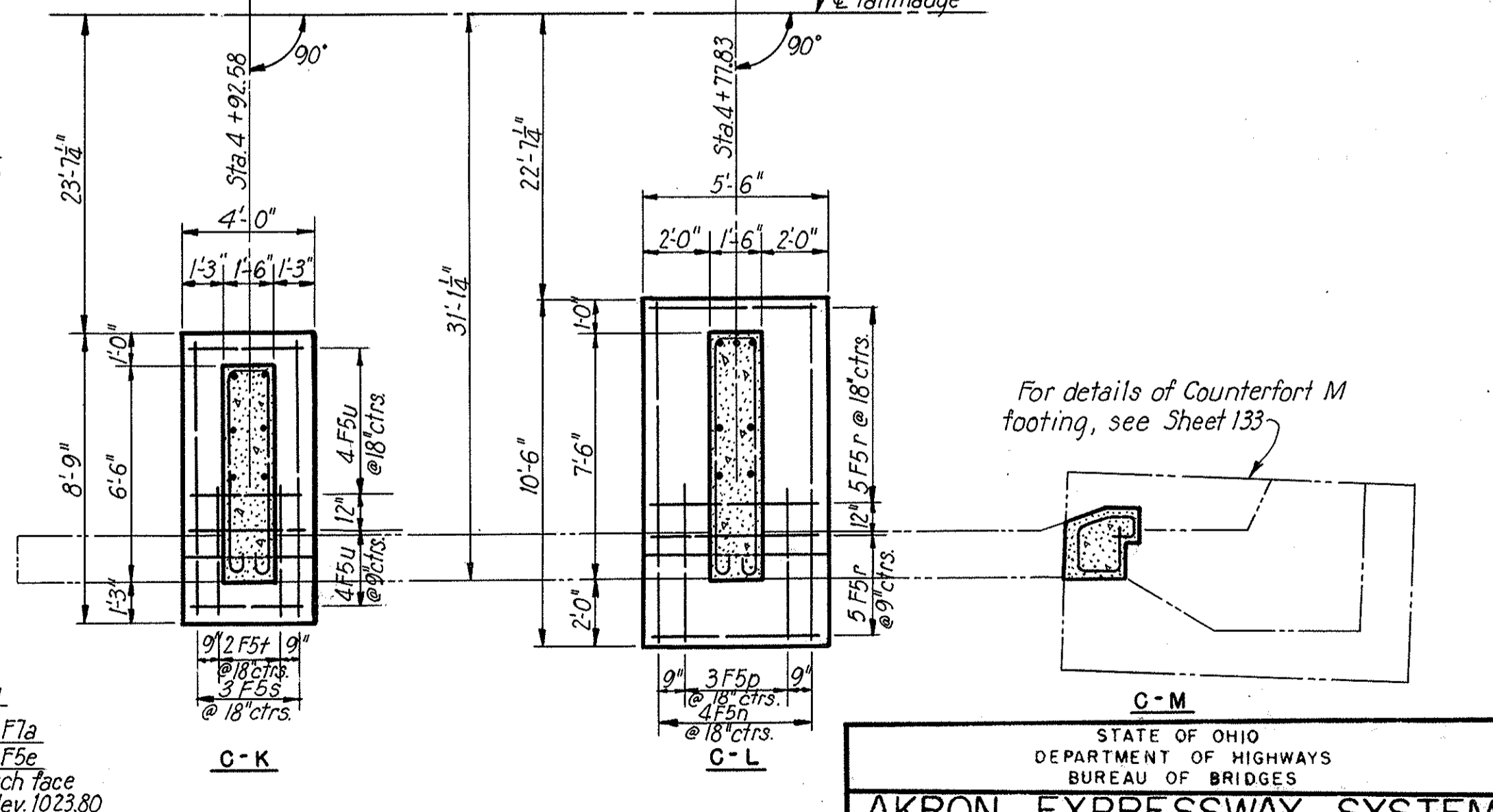
Notes:
For end post details, see Sheet 139.



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



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



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

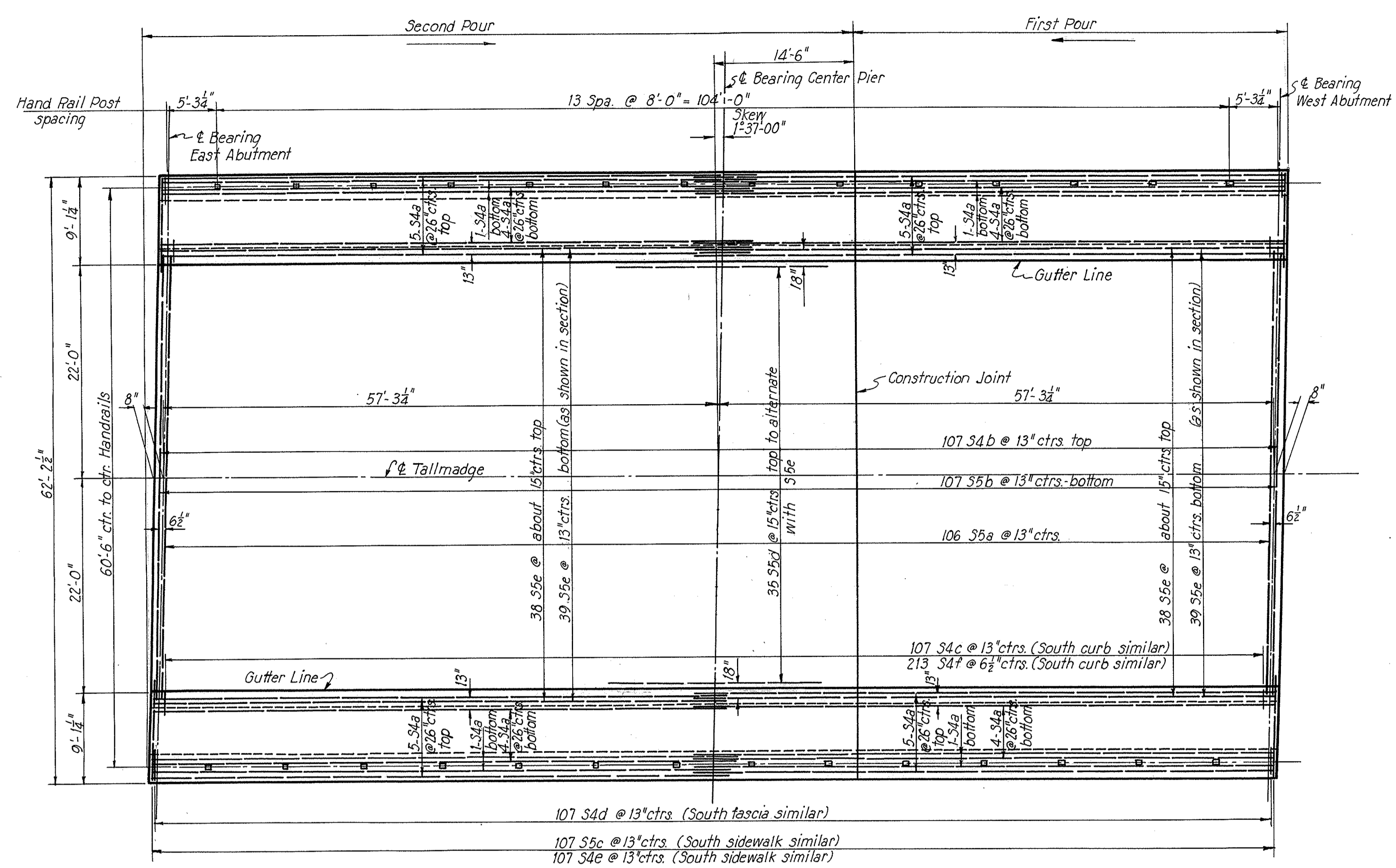
AKRON EXPRESSWAY SYSTEM
(EAST MARKET STREET TO EAST CUYAHOGA FALLS AVENUE)
TALLMADGE UNDERPASS
BR. NO. SU-5-135
WEST WINGWALLS

AKRON SUMMIT COUNTY OHIO

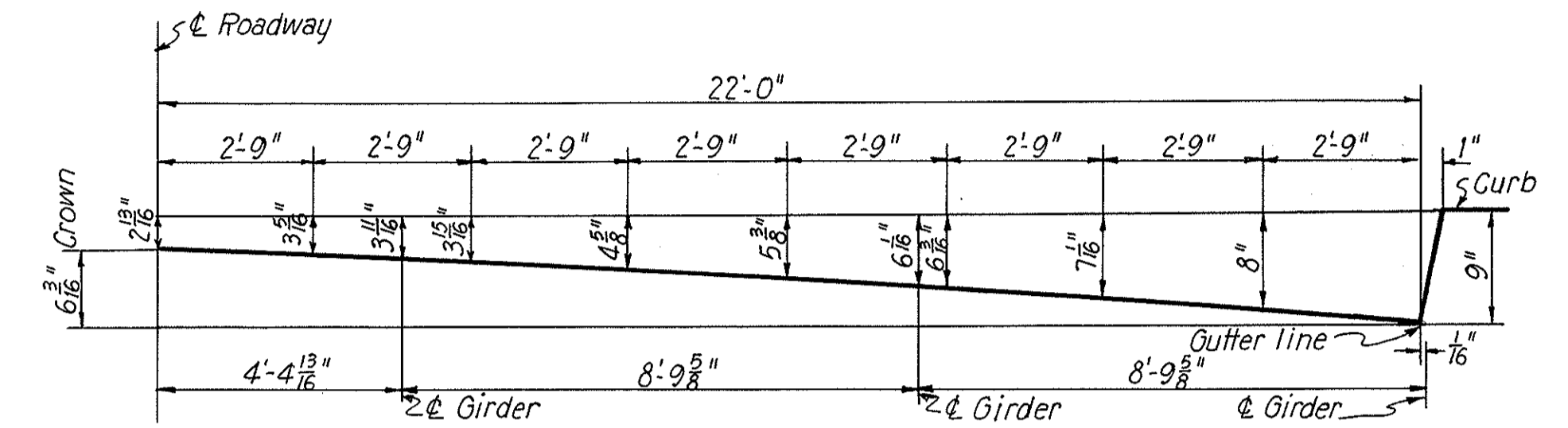
SCALE: 1/4"=1'-0"
MADE I.G. DATE 6-8-50
TRCD W.C. DATE 7-28-50
CKD D.M.D. DATE 7-14-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

766 SHEET

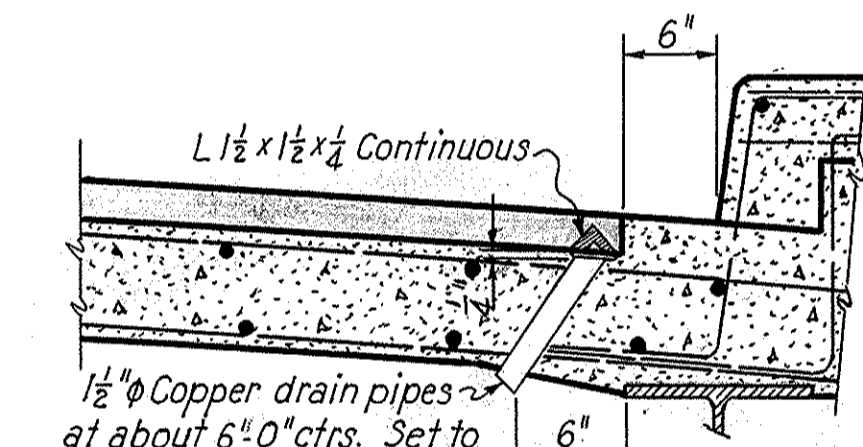


SLAB PLAN
 Scale: $\frac{1}{8}'' = 1'-0''$

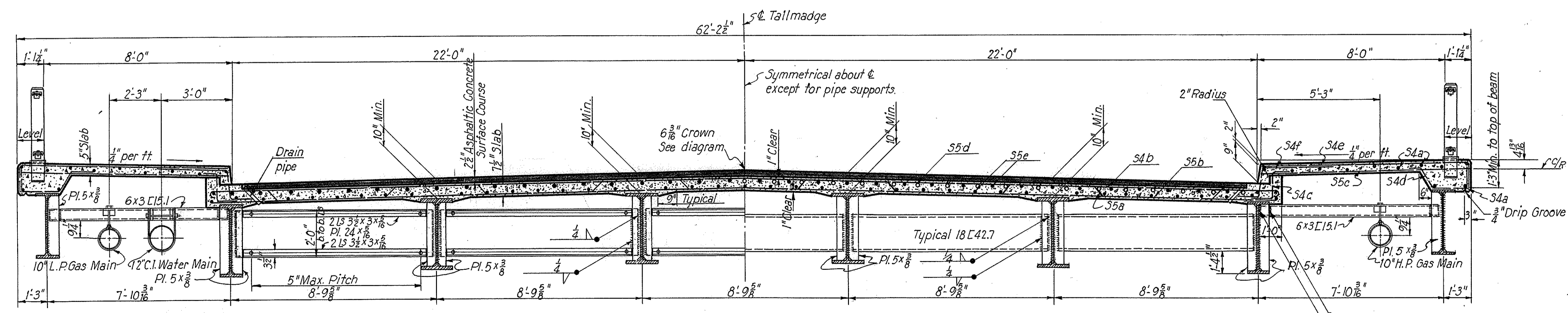


ROADWAY CROWN DIAGRAM

Not to scale
 Note: Information taken from: City of Akron, Ohio, Division of Highways Standard Crowns for Pavements File Number A5401 Date 7-23-45. Ordinates at 2'-9" intervals were taken from table "Standard Crown for All Types of Pavement." Ordinates at girders were calculated by the Akron formulas.



DRAIN PIPE DETAIL
 Scale: $1'' = 1'-0''$



HALF SECTION AT INTERMEDIATE DIAPHRAGMS
 Scale: $\frac{3}{8}'' = 1'-0''$

HALF SECTION AT BEARINGS
 Scale: $\frac{3}{8}'' = 1'-0''$

Note: Bars marked \circ are located over center pier only.

Note: Deck slab shall be placed in two sections in the order and in the direction indicated on the slab plan. For detail of slab construction joint, see Sheet 127.

STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 BUREAU OF BRIDGES

AKRON EXPRESSWAY SYSTEM
 (EAST MARKET STREET TO EAST CUYAHOGA FALLS AVENUE)

TALLMADGE UNDERPASS
 BR. NO. SU-5-135

SLAB PLAN AND CROSS SECTIONS

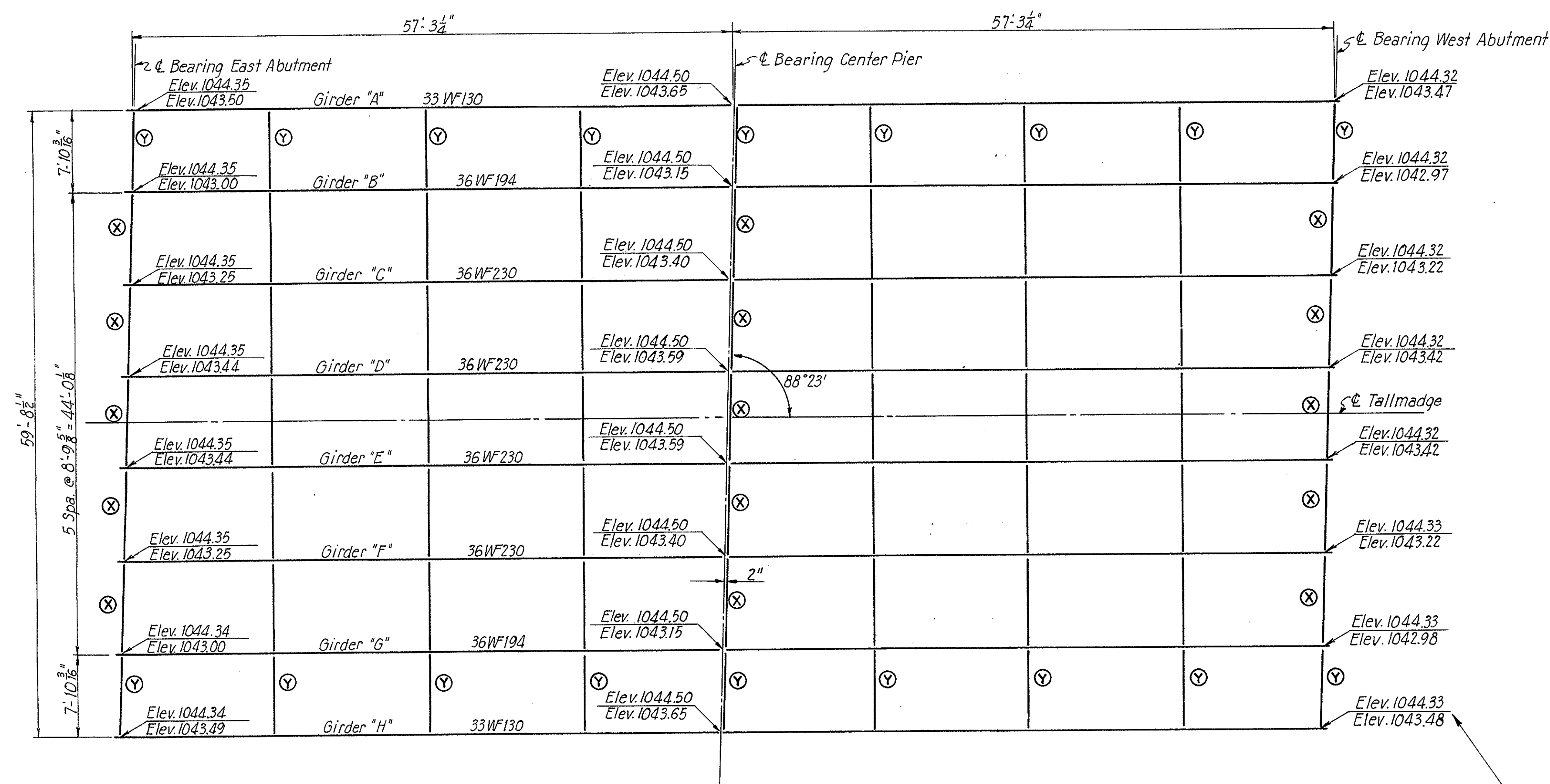
AKRON, SUMMIT COUNTY, OHIO

SCALE: $\frac{3}{8}'' = 1'-0''$
 MADE G.M. DATE 6-28-50
 TRCD/ANG. P.B. DATE 7-15-50
 CKD D.M.D. DATE 7-15-50

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 CONSULTING ENGINEERS
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Revised 9-27-50
 Revised 9-18-50

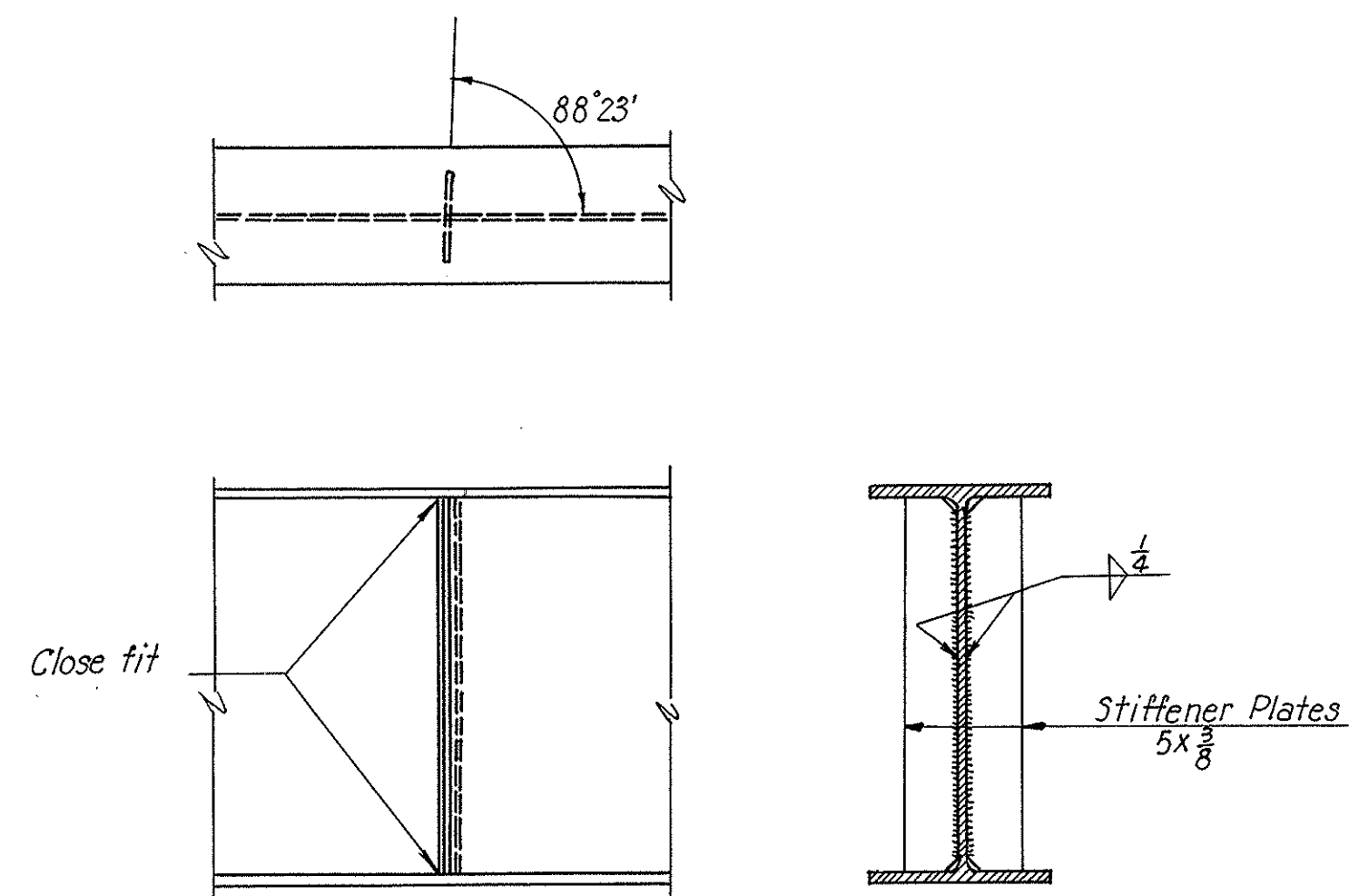
766 SHEET



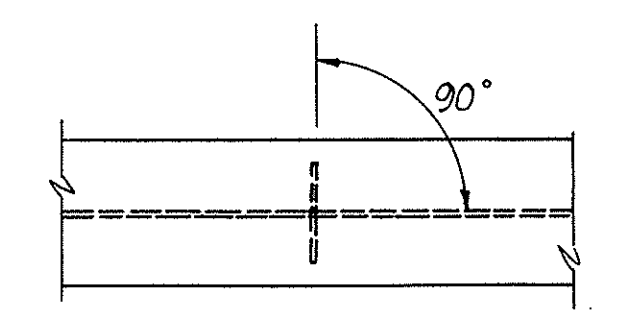
FRAMING PLAN
Scale: $\frac{1}{8}'' = 1'-0''$

Diaphragms marked (X) are 18 E42.7
Diaphragms marked (Y) are 6x3 L15.1 pipe supports.
All other diaphragms are 4 L3 3 1/2 x 3 x 3/8 with 24 x 1/2 web pl.

Top elevations given for *Ch*
Bottom elevation given for top of WF.



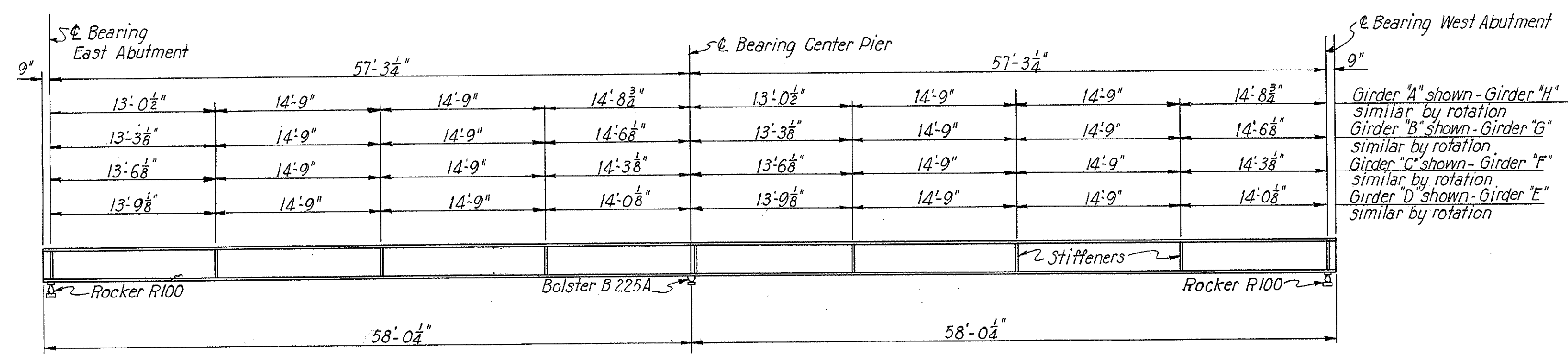
AT BEARINGS



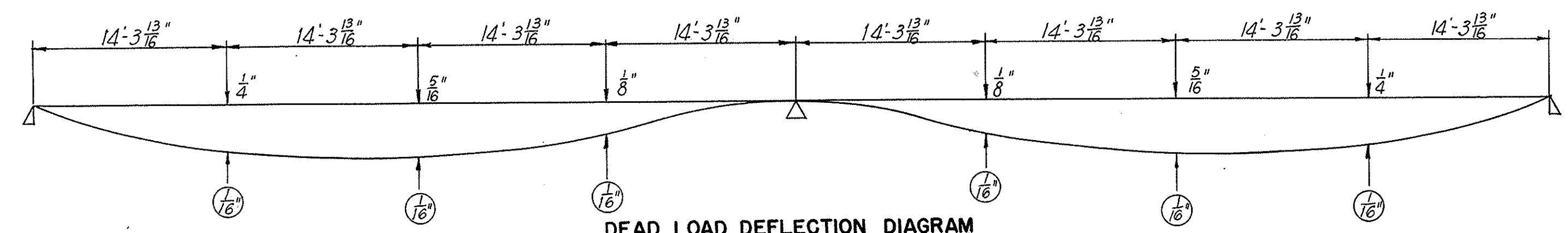
INTERMEDIATE STIFFENER DETAILS
Scale: $\frac{3}{4}'' = 1'-0''$

Stiffeners to be omitted on outside face of girder A & H.

See Sheet 139 for splice plate details.



GIRDER ELEVATIONS
Scale: $\frac{1}{8}'' = 1'-0''$



DEAD LOAD DEFLECTION DIAGRAM

Note:
Dimensions in (O) are deflections which may be expected in the steel beams when in place.
Dimensions above base line are additional deflections to be expected when concrete is in place.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

AKRON EXPRESSWAY SYSTEM
EAST MARKET STREET TO EAST CUYAHOGA FALLS AVENUE

TALLMADGE UNDERPASS
BR. NO. SU-5-135

FRAMING PLAN AND GIRDER ELEVATIONS

AKRON SUMMIT COUNTY OHIO

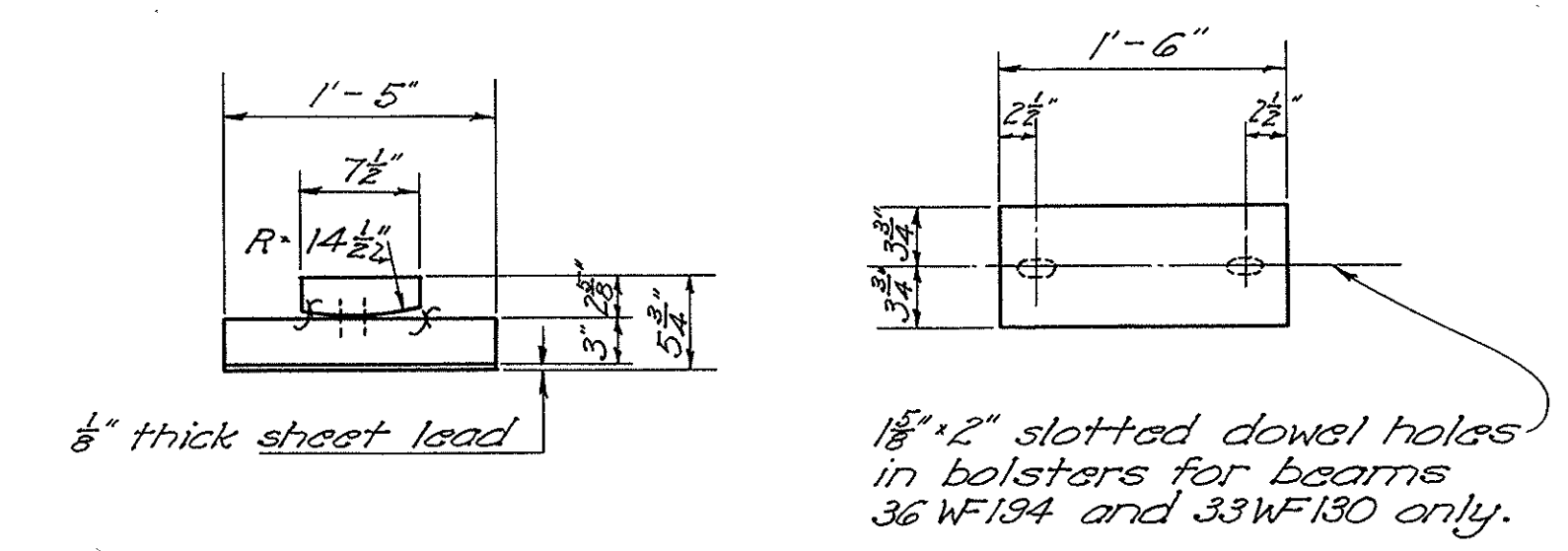
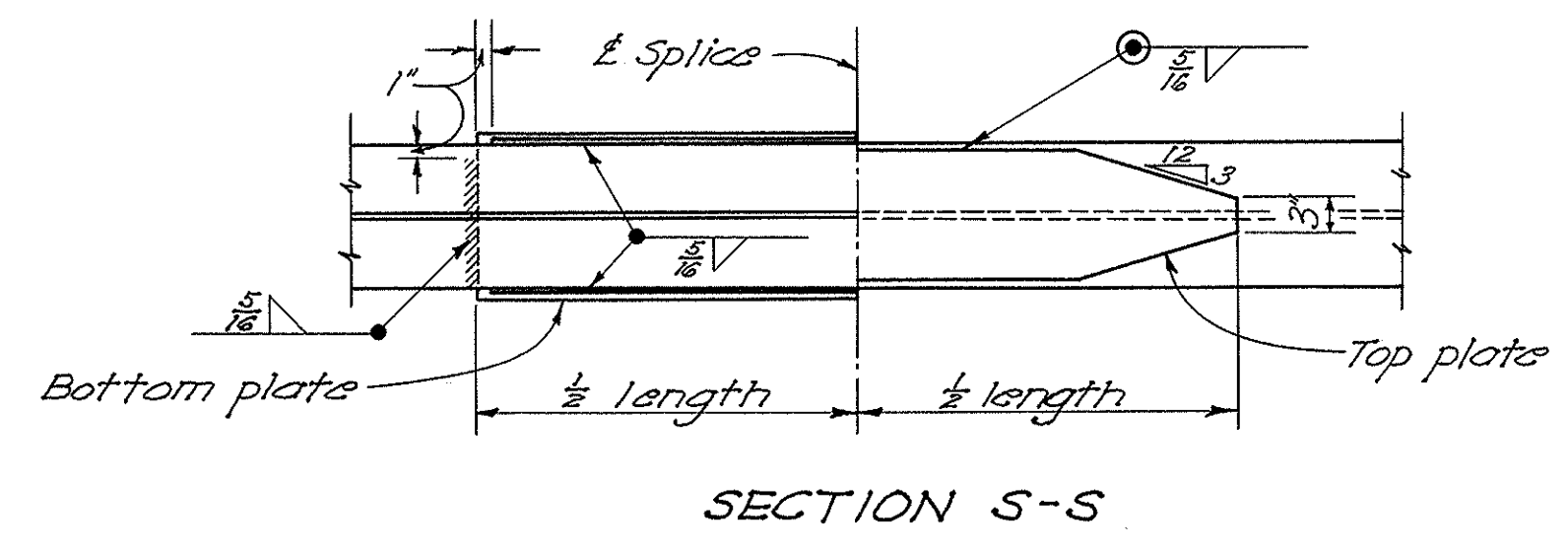
SCALE: $\frac{3}{4}'' = 1'-0''$
MADE R.O.D. DATE 5-22-50
TRCD. H.A.M.P. DATE 7-27-50
CRD. D.M.D. DATE 7-13-50

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766 SHEET

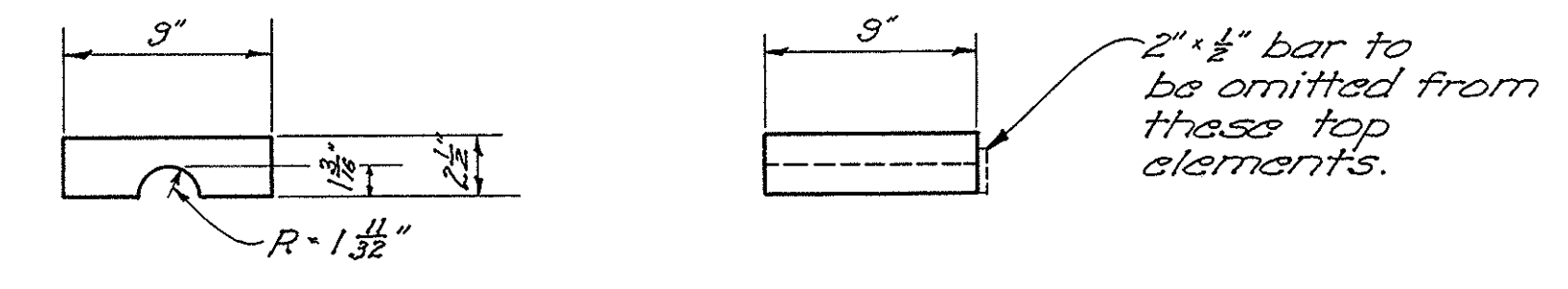
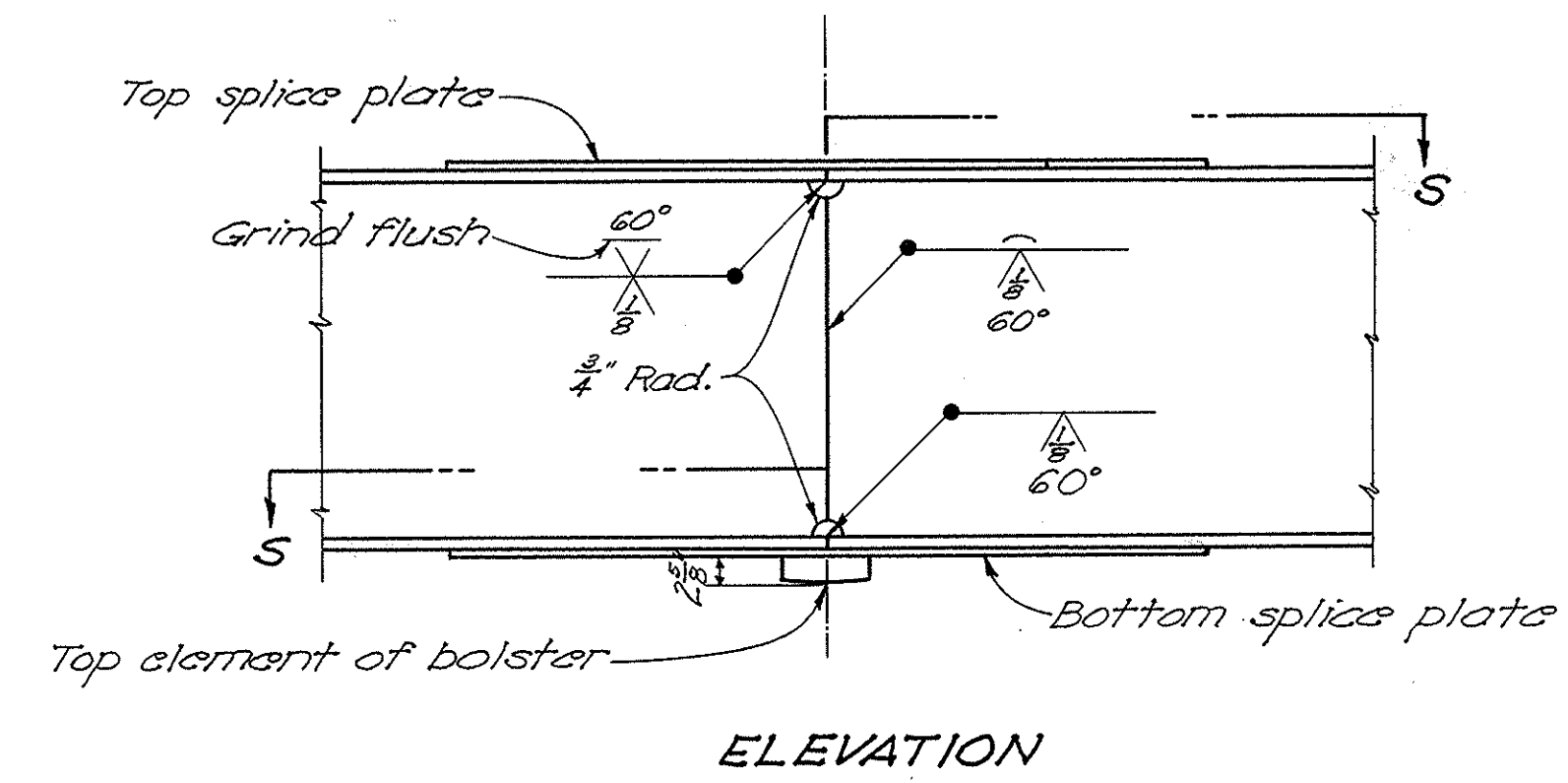
Revised 9-18-50

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
PART 3
SUM-5-12.62



END VIEW OF BOLSTER PLAN OF TOP ELEMENT

BOLSTER DETAILS
Details not shown are to be same as given on Sheet No. 139.



DETAILS OF ROCKER TOP ELEMENT
At beams 36 WF194 and 33 WF130 only.

BRIDGE	BEAM	TOP SPLICE PL	BOTT. SPLICE PL
SU-5-131	36 WF 230	15 1/2" x 3/8" x 5'-0"	17 1/2" x 3/8" x 4'-0"
	36 WF 194	11" x 3/8" x 9'-0"	13" x 3/8" x 9'-0"
	33 WF 130	10 1/2" x 3/8" x 5'-0"	12 1/2" x 3/8" x 4'-0"
SU-5-135	36 WF 230	15 1/2" x 3/8" x 5'-0"	17 1/2" x 3/8" x 4'-0"
	36 WF 194	11" x 3/8" x 5'-0"	13" x 3/8" x 4'-0"
	33 WF 130	10 1/2" x 3/8" x 5'-0"	12 1/2" x 3/8" x 4'-0"

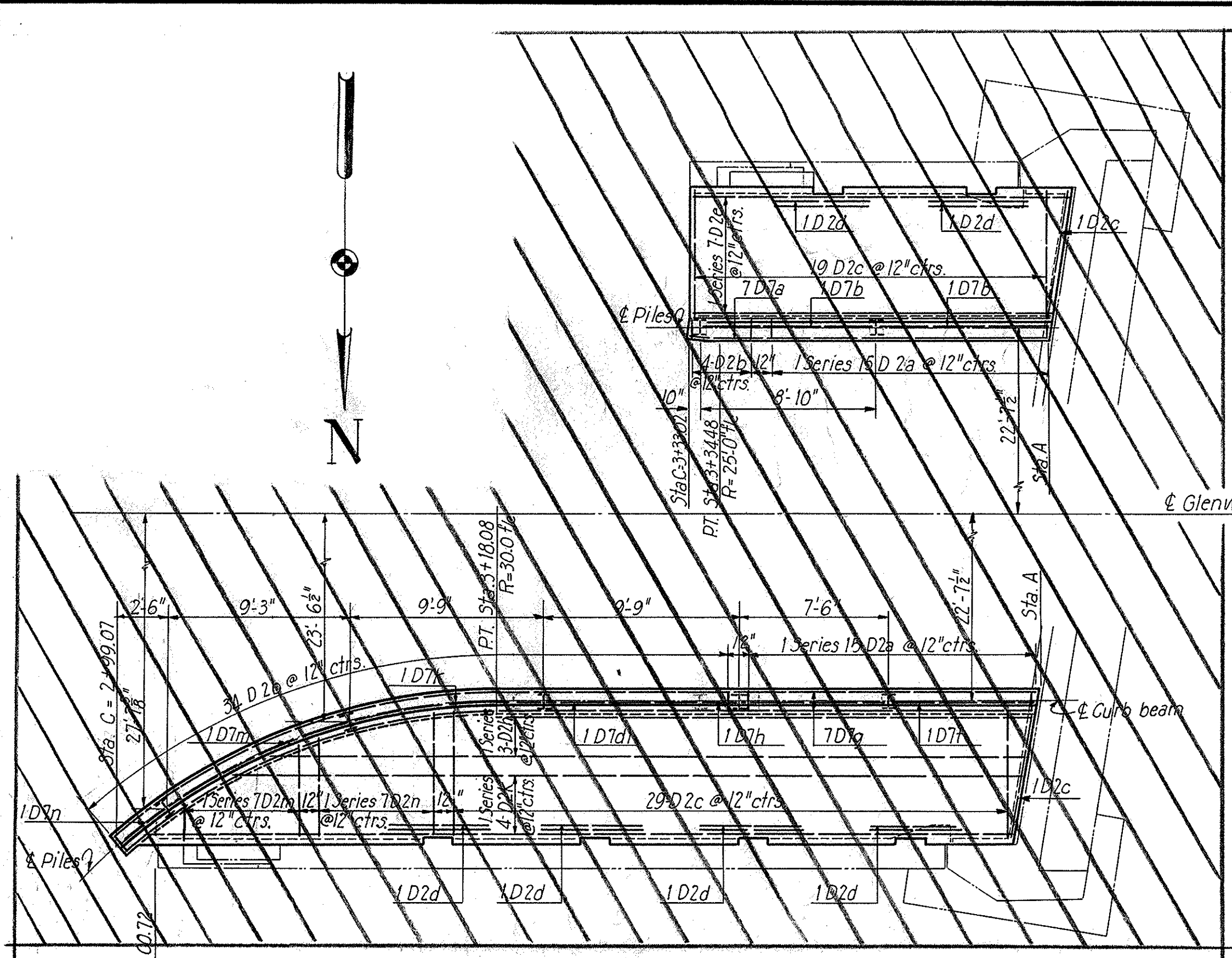
BEAM SPLICE DETAILS

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

REVISION OF SPLICE, BOLSTER & ROCKER DETAILS AS-BUILT (SHEET No. 139)

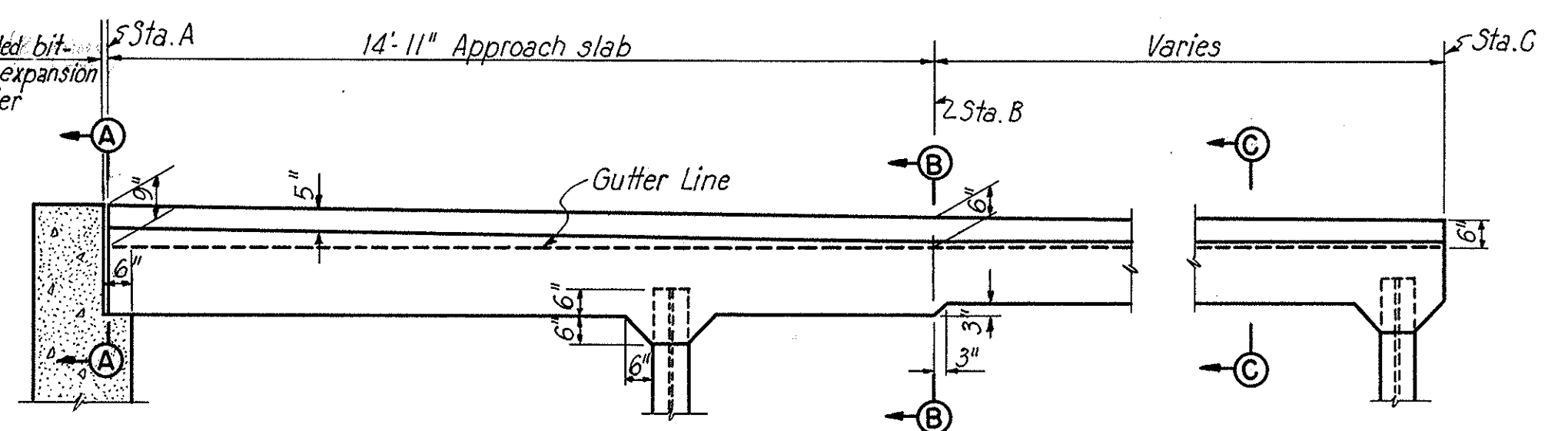
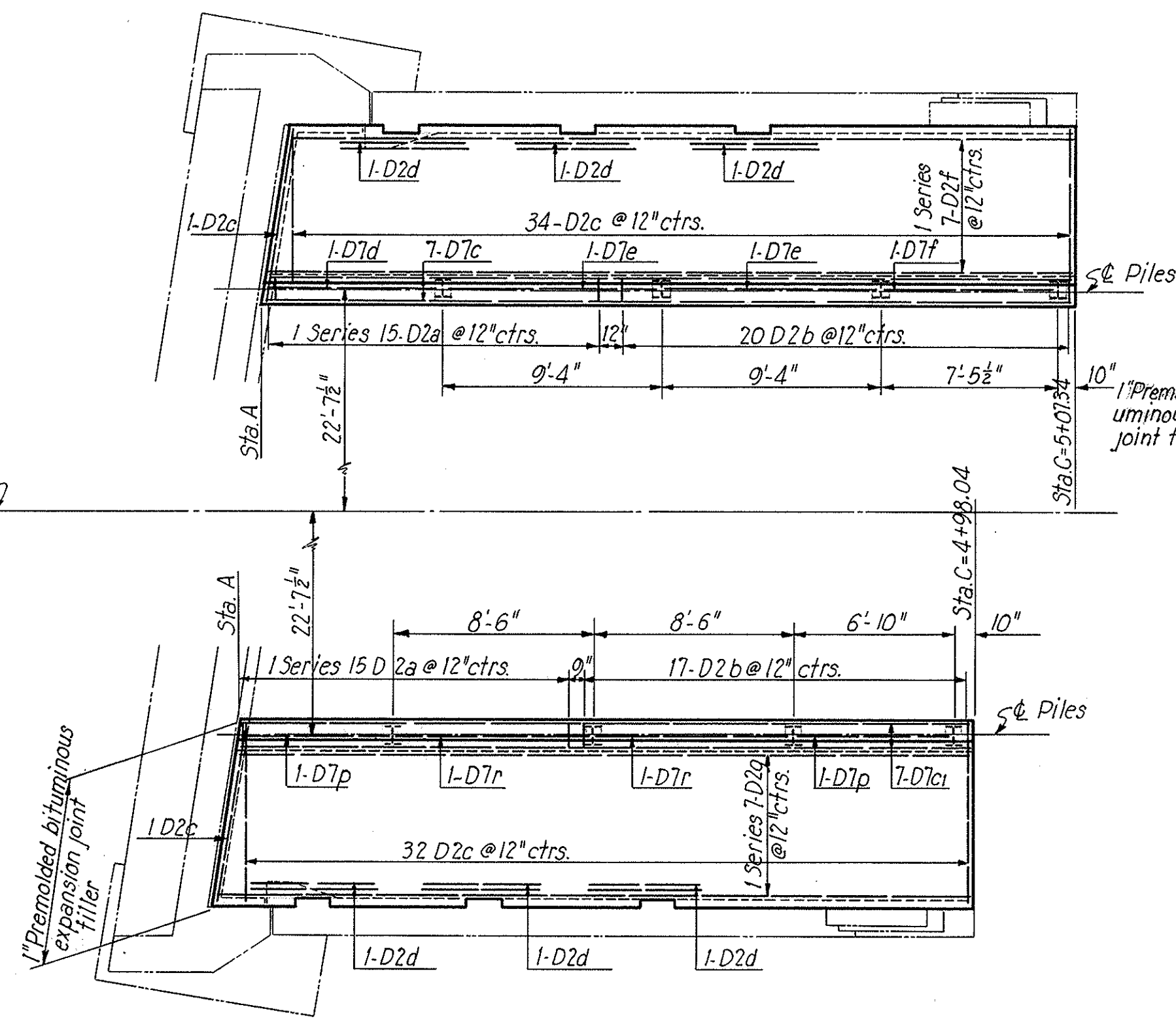
AKRON EXPRESSWAY SYSTEM - PART 3
BRIDGE Nos. SU-5-131 & SU-5-135
Summit County
Sec. SUM-5-12.62

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

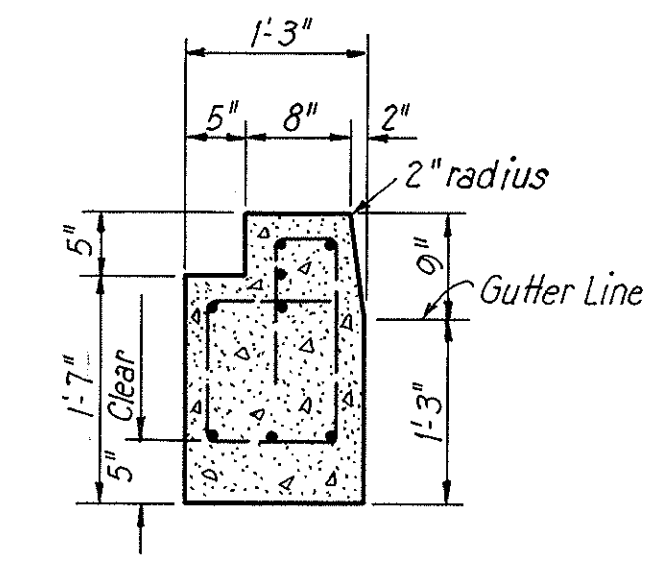


SEE REVISED DETAILS ON SHEET 140A

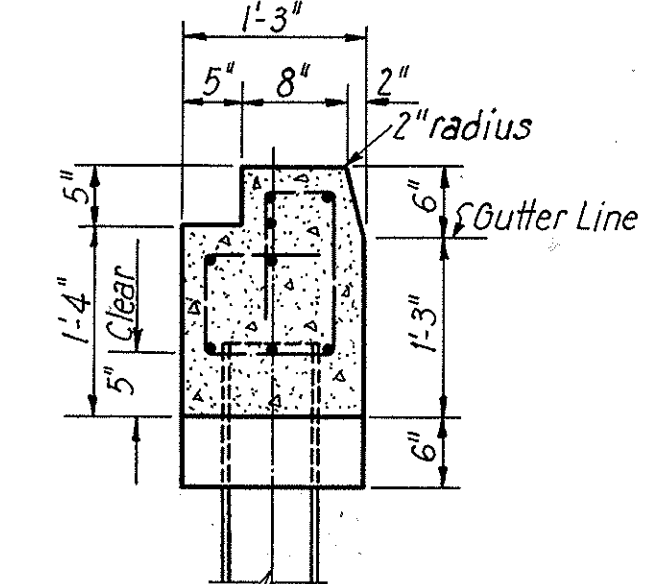
GLENWOOD PLAN
Scale: $\frac{3}{16}'' = 1'-0''$



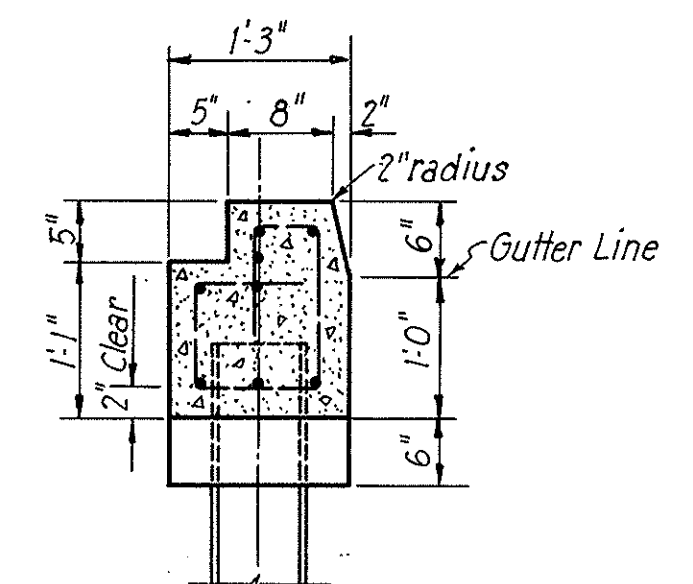
TYPICAL ELEVATION
Scale: $\frac{3}{8}'' = 1'-0''$



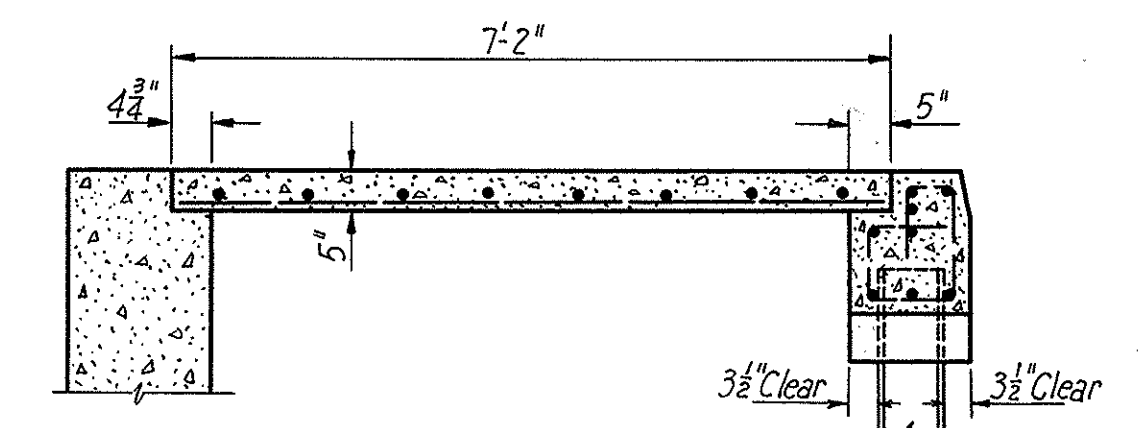
SECTION A-A
Scale: $\frac{3}{8}'' = 1'-0''$



SECTION B-B
Scale: $\frac{3}{8}'' = 1'-0''$

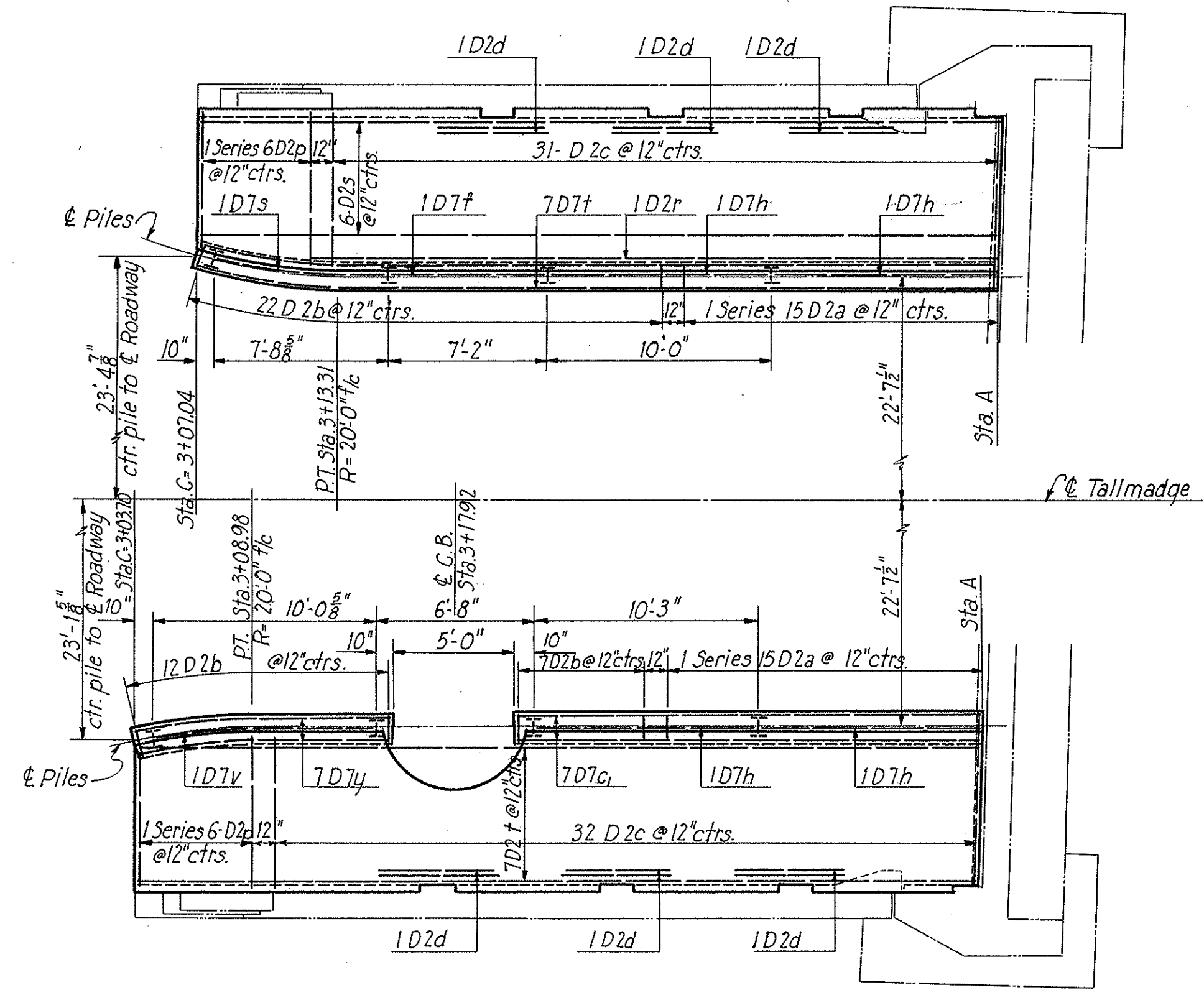


SECTION C-C
Scale: $\frac{3}{8}'' = 1'-0''$

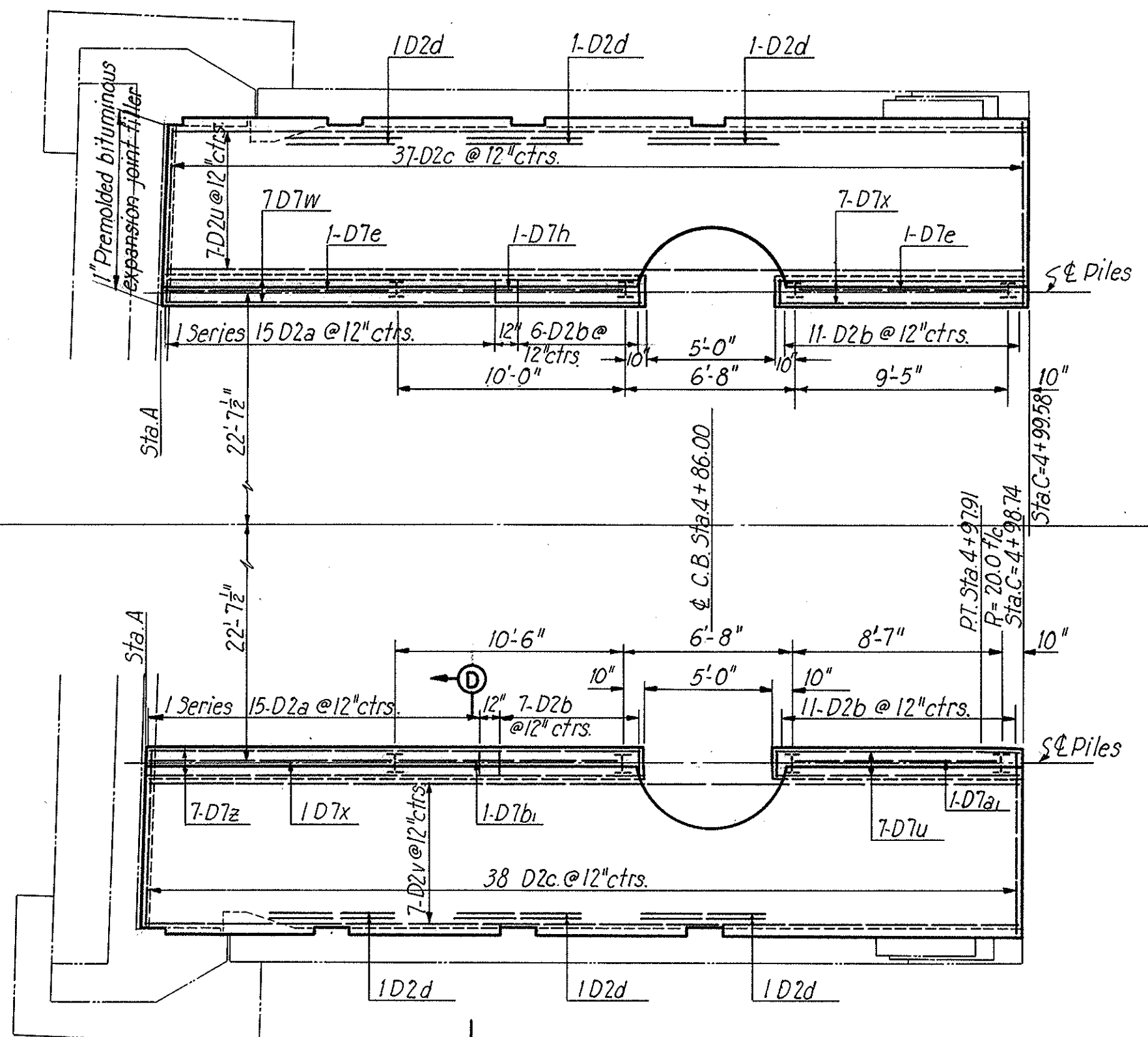


SECTION D-D
Scale: $\frac{1}{2}'' = 1'-0''$

Notes: All piles are 8 BP36 driven to rock.
Use tar paper between sidewalk slab and supporting members.
Sidewalk steel shall be cut around catch basin.



TALLMADGE PLAN
Scale: $\frac{3}{16}'' = 1'-0''$



TOP OF CURB ELEVATIONS					
Wall	Sta. A	Sta. B	Elev. A	Elev. B	Elev. C
Glenwood					
NE	3+4536	3+3044	104271	104287	104404
NW	4+6642	4+8134	103919	103845	103791
SE	3+5164	3+3672	104254	104270	104281
SW	4+7270	4+8762	103898	103825	103761
Tallmadge					
NE	3+4167	3+2675	104456	104422	104412
NW	4+6137	4+7629	104454	104420	104424
SE	3+4291	3+2799	104457	104423	104414
SW	4+6261	4+7753	104453	104419	104423

Elevations given are at the face of curb. Station C is given at each end of a wingwall, except Glenwood N.E.

Revised 4-16-51
Revised 9-18-50

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

AKRON EXPRESSWAY SYSTEM
(EAST MARKET STREET TO EAST CUYAHOGA FALLS AVENUE)

BR. NO. SU-5-131 & SU-5-135
APPROACH SIDEWALKS AND CURBS

AKRON SUMMIT COUNTY OHIO

SCALE: $\frac{3}{16}'' = 1'-0''$
MADE P.O.D. DATE 7-3-50
TRCD & E.R. DATE 8-19-50
CKD J.W.C. DATE 8-1-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

766 SHEET

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY PART 3
SUM. 5-12.62

REVISION OF STEEL LIST SHOWN ON SHEET 146 FOR GLENWOOD APPROACH SIDEWALKS AND CURBS

Mark	Size	No.	Length	Type	Dimensions			Wgt. Pounds
					A	B	C	
D7a	1/4"	7	18'-3"	Str.				342
D7b	1/4"	2	8'-6"	Str.				45
D7c	1/4"	7	34'-6"	Str.				645
D7d	1/4"	1	7'-6"	Str.				20
D7e	1/4"	2	9'-0"	Str.				48
D7f	1/4"	3	7'-3"	Str.				58
D7g	1/4"	7	37'-3"	132	30'-0"	10'-3"	27'-0"	626
D7h	1/4"	1	9'-6"	133	9'-6"	30'-0"		25
D7i	1/4"	1	2'-6"	133	2'-6"	30'-0"		8
D7j	1/4"	2	7'-6"	Str.				40
D7k	1/4"	2	8'-3"	Str.				45
D7l	1/4"	7	31'-3"	Str.				584
D7m	1/4"	1	9'-6"	Str.				25
D7n	1/4"	7	19'-0"	132	15'-0"	5'-0"	14'-0"	355
D7o	1/4"	1	7'-0"	Str.				19
D7p	1/4"	1	7'-0"	132	15'-0"	4'-0"	3'-0"	19
D2a	1/4"	4 of 15	4'-6" to 4'-9"	112	0'-8" to 0'-11"			135
D2b	1/4"	79	4'-6"	112	0'-8"			237
D2c	1/4"	128	7'-0"	Str.				599
D2d	1/4"	24	5'-0"	Str.				80
D2e	1/4"	1 of 7	18'-3" to 19'-3"	Str.				87
D2f	1/4"	1 of 7	33'-3" to 34'-3"	Str.				159
D2g	1/4"	1 of 7	31'-3" to 32'-3"	Str.				149
D2h	1/4"	1	32'-6"	Str.				22
D2i	1/4"	1 of 5	36'-3" to 36'-9"	Str.				122
D2j	1/4"	1	36'-0"	Str.				24
D2k	1/4"	1 of 8	3'-3" to 6'-10"	Str.				33
D2l	1/4"	1 of 4	6'-3" to 6'-11"	Str.				18
D2m	1/4"	7	16'-6"	Str.				77

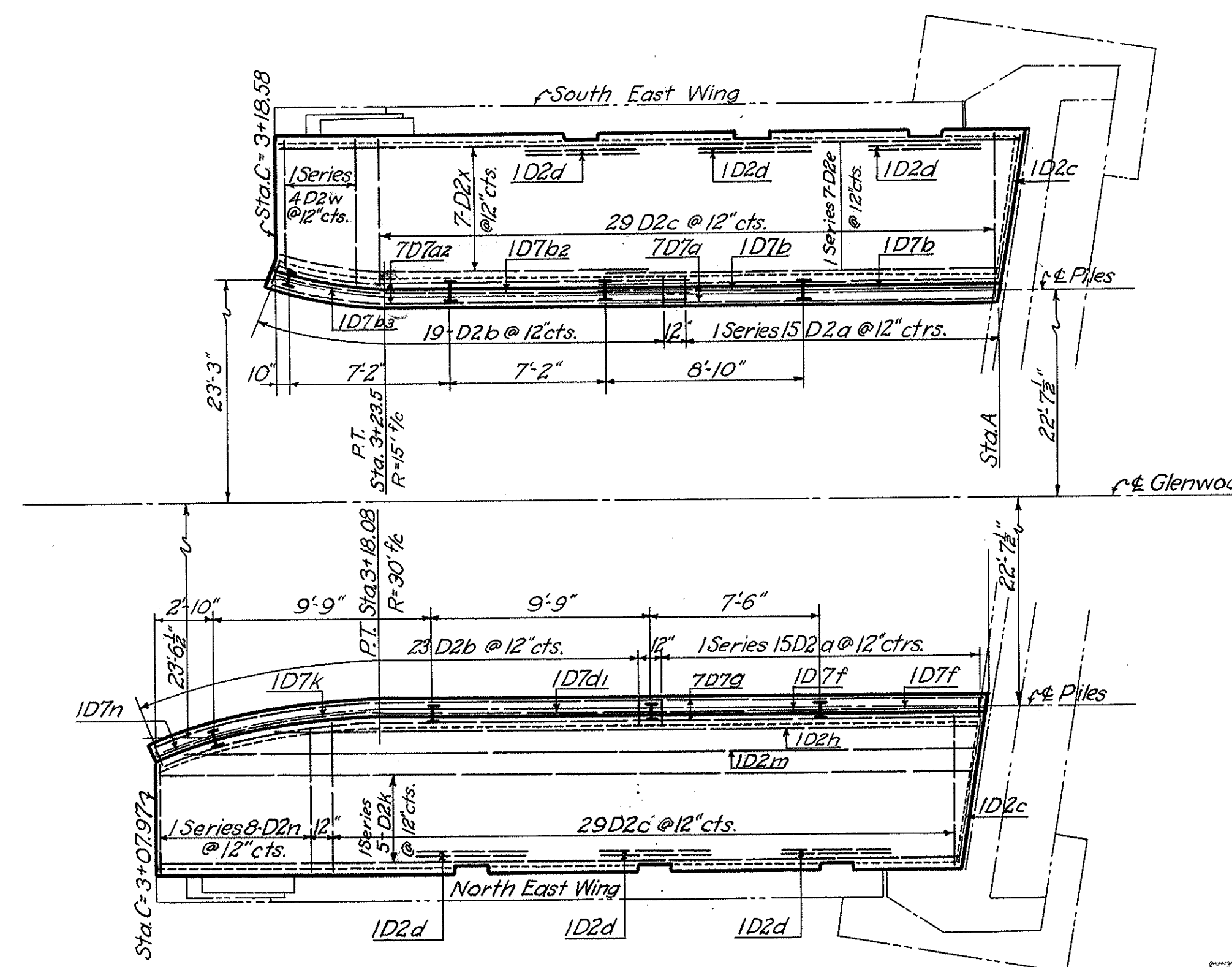
ADDITIONS & CHANGES NECESSARY IN THE REINFORCEMENT SCHEDULE. (See Sheet #129) DUE TO REVISIONS MADE IN DESIGN & LENGTH OF SOUTHEAST & NORTHEAST WINGWALLS OF THE GLENWOOD UNDERPASS SHOWN ON REVISED SHEET #125A WHICH SUPERSEDES SHEET #125

ADDITIONAL REINFORCING STEEL REQUIRED IN THE SOUTHEAST WINGWALL

MARK	SIZE	No. REQ'D	LENGTH	TYPE	DIMENSIONS				WEIGHT IN POUNDS
					A	B	C	D	
F5b1	3/4"	5	8'-3"	101	7'-5"				62
F5r	3/4"	8	4'-9"	100	3'-6"				57
F5s	3/4"	3	5'-6"	101	4'-10"				25
F5t	3/4"	2	7'-9"	101	7'-1"				23
F5u	3/4"	2	13'-9"	101	13'-1"				42
W5m2	3/4"	1 of 9	6'-3" to 10'-6"	110	1'-2"				126
W5m1	3/4"	1	9'-0"	110	3'-2"				13
W5k2	3/4"	3	15'-3"	108	13'-9"	1'-6"	4	12	69
W5r3	3/4"	2	13'-6"	Str.					41
W5s3	3/4"	2	13'-0"	Str.					39
W7AA1	1"	8	26'-0"	108	20'-6"	5'-6"	14	12	555
W5xx1	3/4"	6	17'-0"	Str.					153
W5xx2	3/4"	1 of 6	6'-7" to 14'-11"	Str.					97
W5xx3	3/4"	2	14'-9"	Str.					44
W5xx4	3/4"	1 of 6	6'-1" to 14'-5"	Str.					92
W5xx5	3/4"	2 of 5	6'-6" to 16'-6"	Str.					135
W5xx6	3/4"	1 of 4	3'-6" to 5'-9"	Str.					28
W5xx7	3/4"	1 of 4	3'-0" to 5'-3"	Str.					25

CHANGES IN CERTAIN RODS AS ORIGINALLY LISTED IN THE NORTHEAST WINGWALL

MARK	SIZE	No. REQ'D	LENGTH	TYPE	DIMENSIONS				WEIGHT IN POUNDS
					A	B	C	D	
W7e	1"	8	24'-0"	108	19'-0"	5'-0"	12"	6	513
W5d	3/4"	3	7'-6"	115	2'-0"	8"	11"		34
W5n2	3/4"	2	33'-0"	104	32'-0"	1'-0"			99
W5p2	3/4"	2	34'-0"	124	29'-6"	8"	7"		102
W5r2	3/4"	1 of 11	6'-6" to 13'-7"	Str.					186
W5s2	3/4"	1 of 11	6'-0" to 18'-1"	Str.					158
W5d3	3/4"	3	33'-0"	104	32'-0"	1'-0"			149
W5e3	3/4"	3	34'-0"	124	29'-6"	8"	7"		153



SIDEWALK AND CURB DETAILS - EAST APPROACH OF STRUCTURE SU-5-131 (for Typical Elevation and Sections see sheet 140)

THIS SHEET SUPPLEMENTS SHEETS 129 & 140

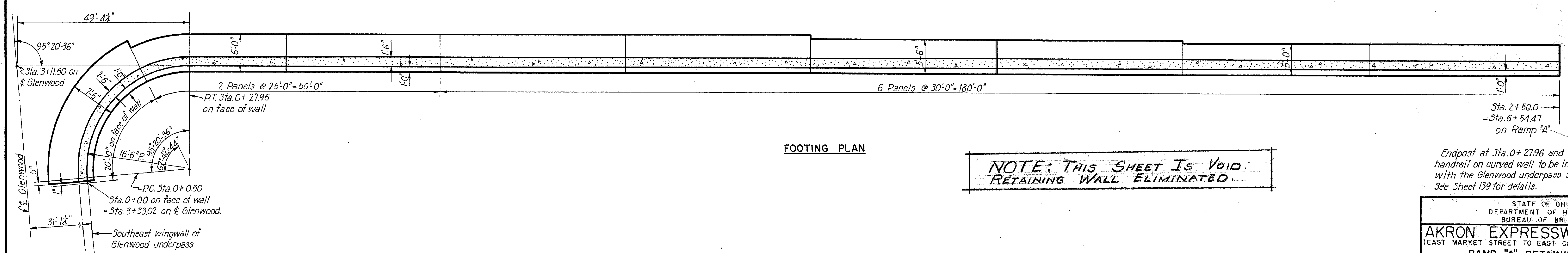
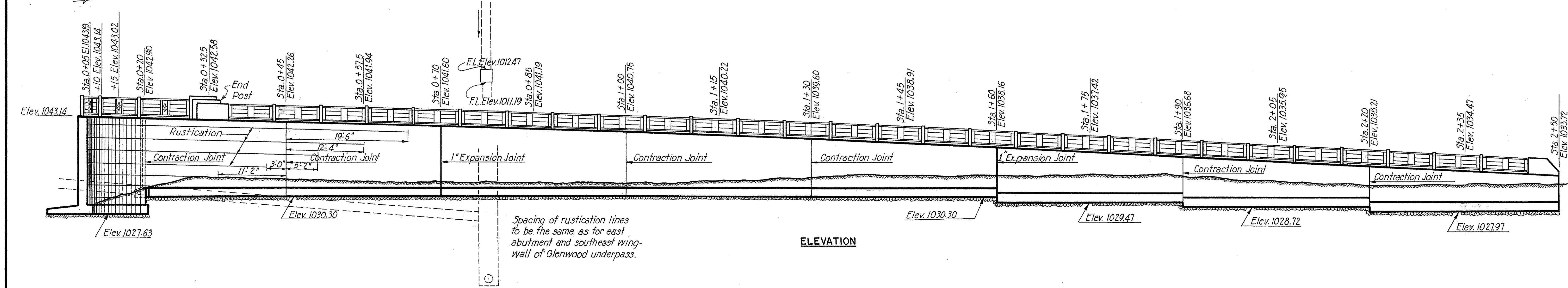
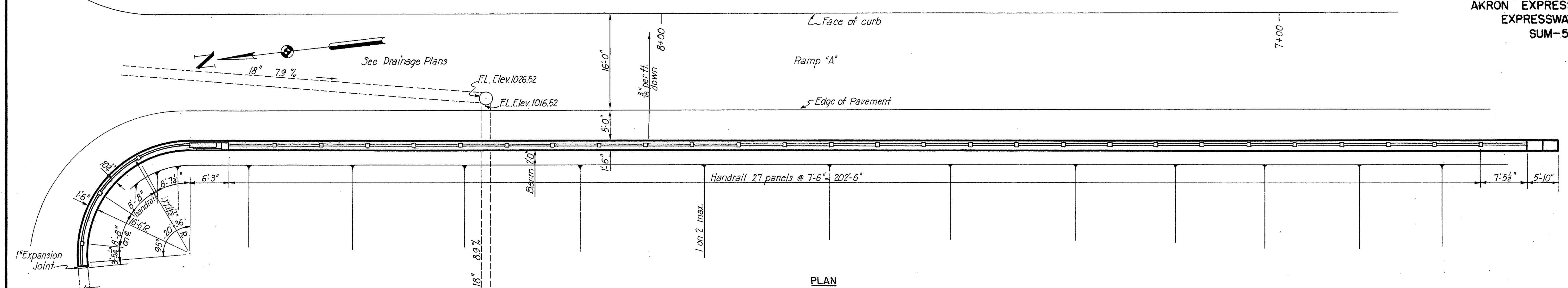
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

AKRON EXPRESSWAY SYSTEM
(EAST MARKET STREET CUYAHOGA FALLS AVENUE)
REVISIONS TO REINFORCING STEEL LIST AND REVISED APPROACH SIDEWALK & CURB DETAILS AT S.E. & N.E. WINGS
BRIDGE No. SU-5-131
AKRON SUMMIT COUNTY OHIO

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	R.E.J.			a.g.f.	4-16-57	

FED ROAD DIV NO.	STATE	FED AID PROJ NO.	TYPE FUNDS	SHEET NO.
2	OHIO	U-687(8)	POST WAR	141

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62



**NOTE: THIS SHEET IS VOID.
RETAINING WALL ELIMINATED.**

Endpost at Sta. 0+27.96 and handrail on curved wall to be included with the Glenwood underpass structure. See Sheet 139 for details.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

AKRON EXPRESSWAY SYSTEM
(EAST MARKET STREET TO EAST CUYAHOGA FALLS AVENUE)
RAMP "A" RETAINING WALL

GENERAL PLAN AND ELEVATION

AKRON SUMMIT COUNTY OHIO

SCALE 1" = 10'
MADE 2/18 DATE 7-7-50
TRCD 2/18 RR DATE 7-15-50
CKD H.A.M. DATE 8-1-50

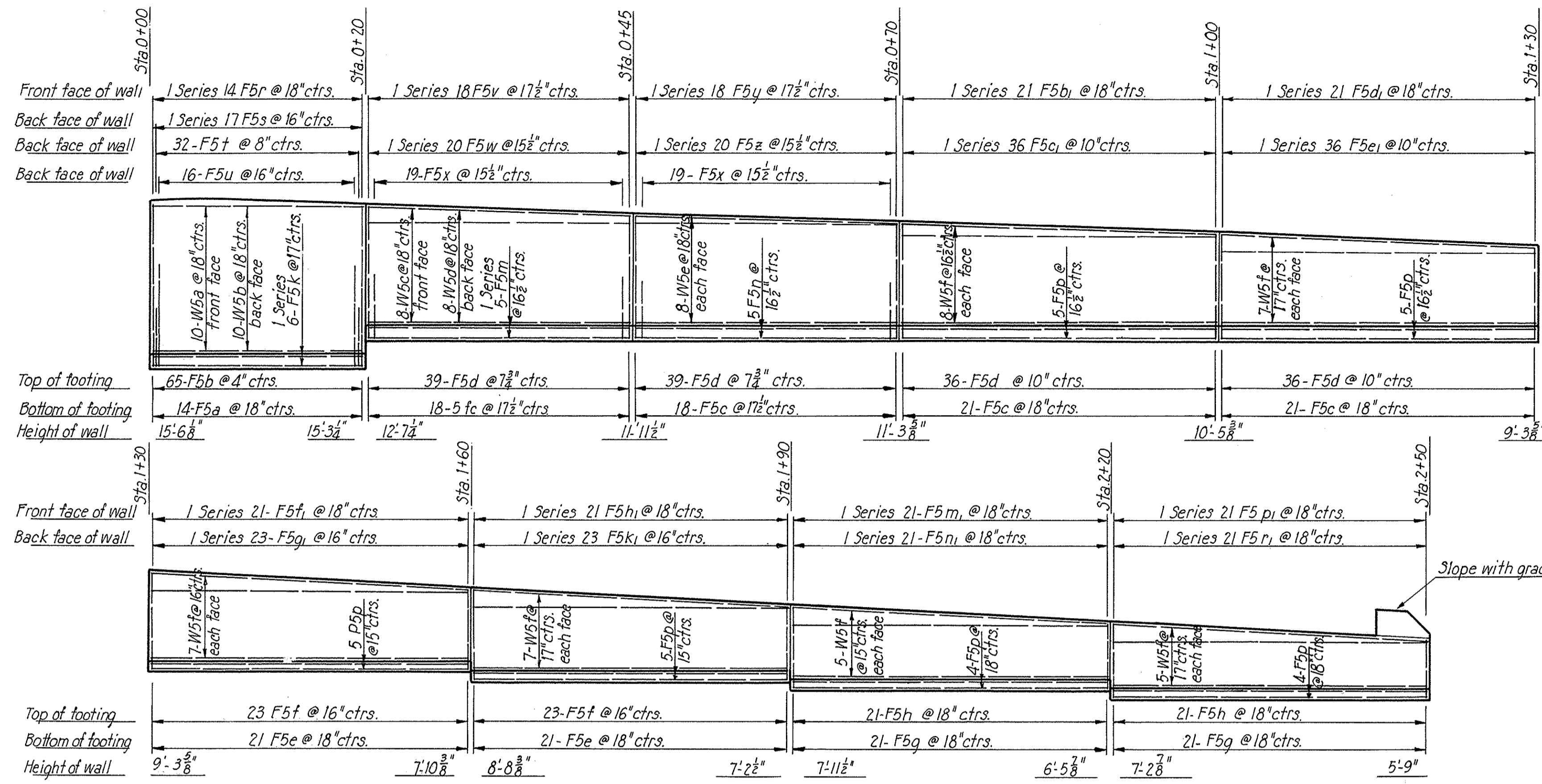
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KANSAS CITY NEW YORK

766 SHEET

Revised 4-16-51

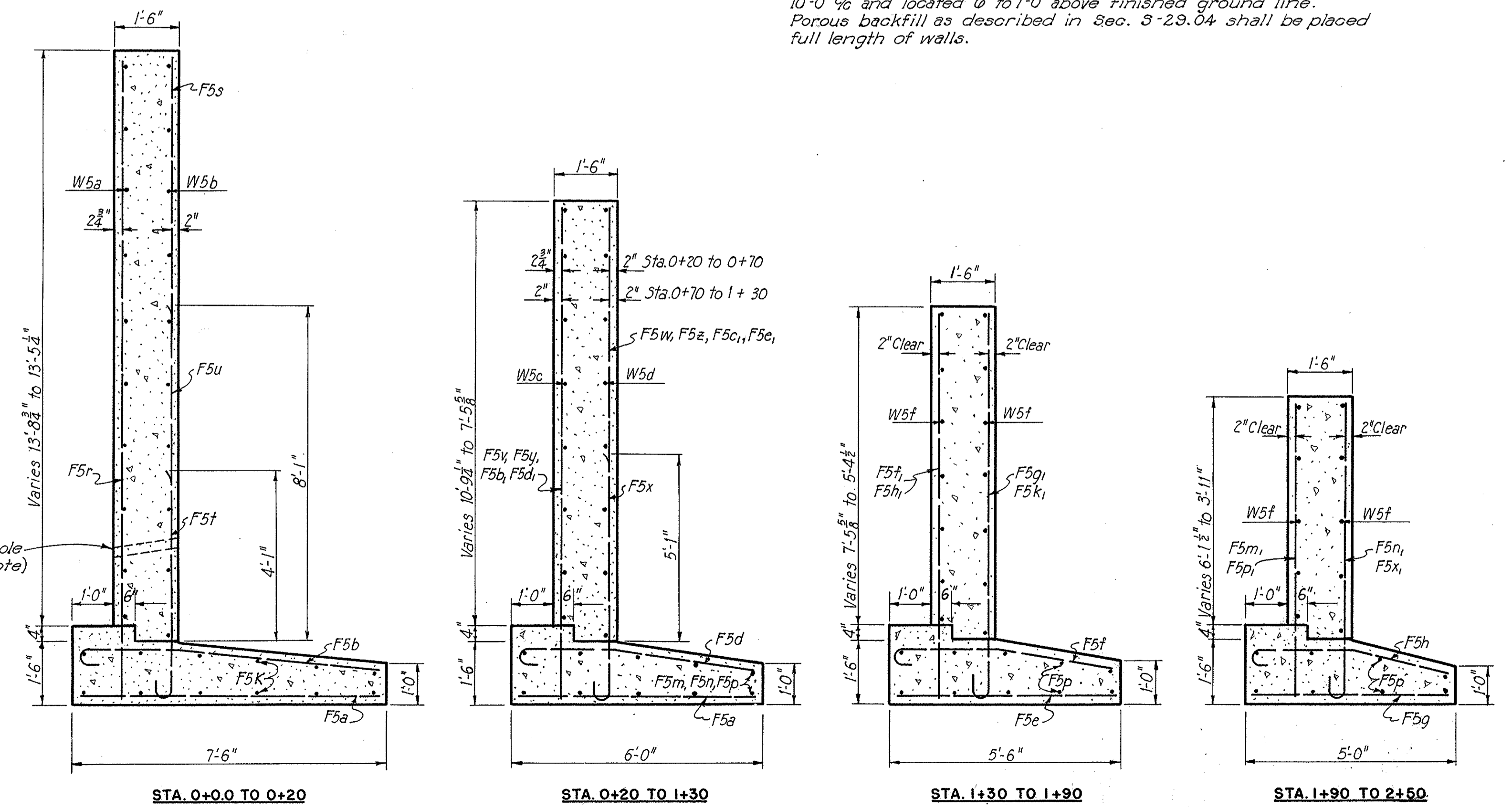
508

SUMMIT COUNTY CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

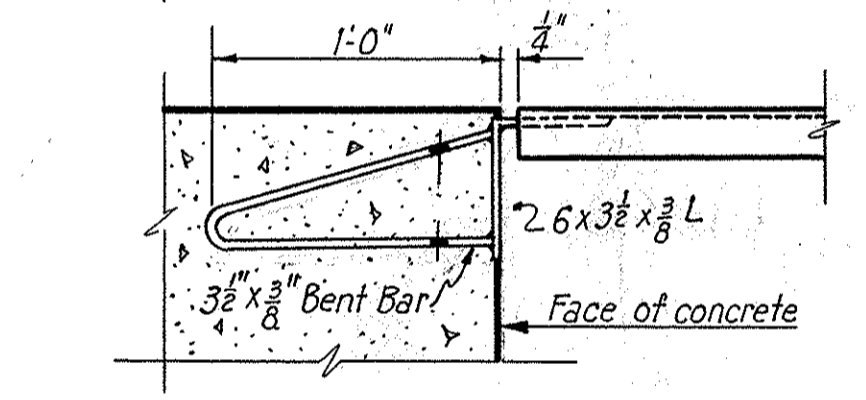
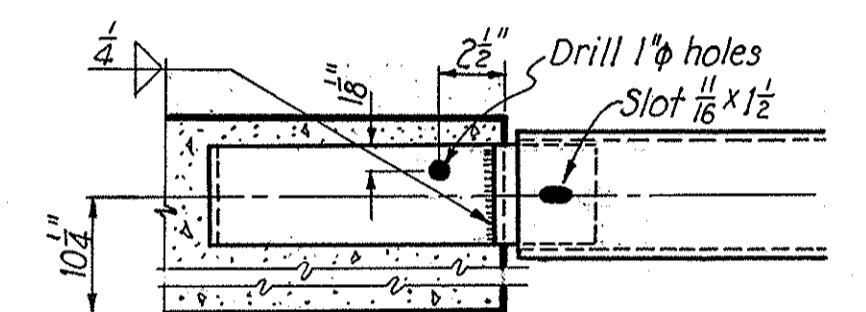
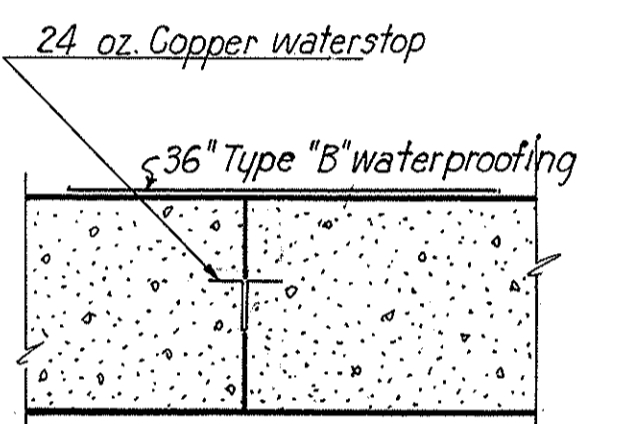
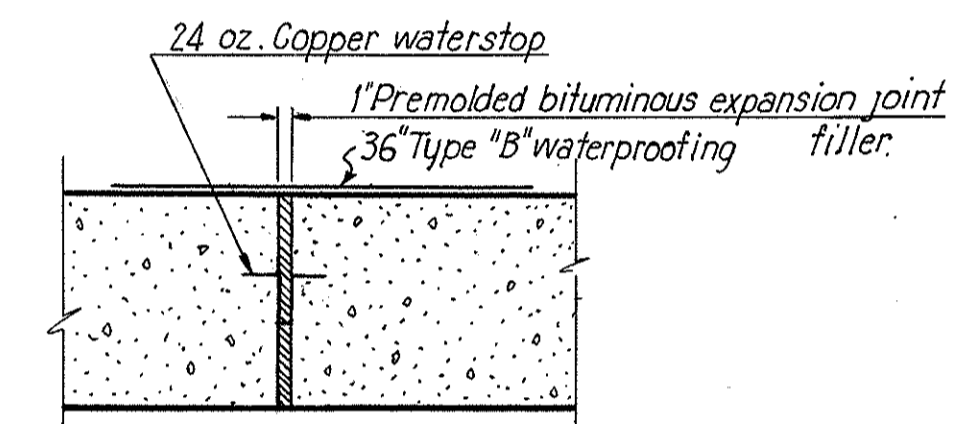
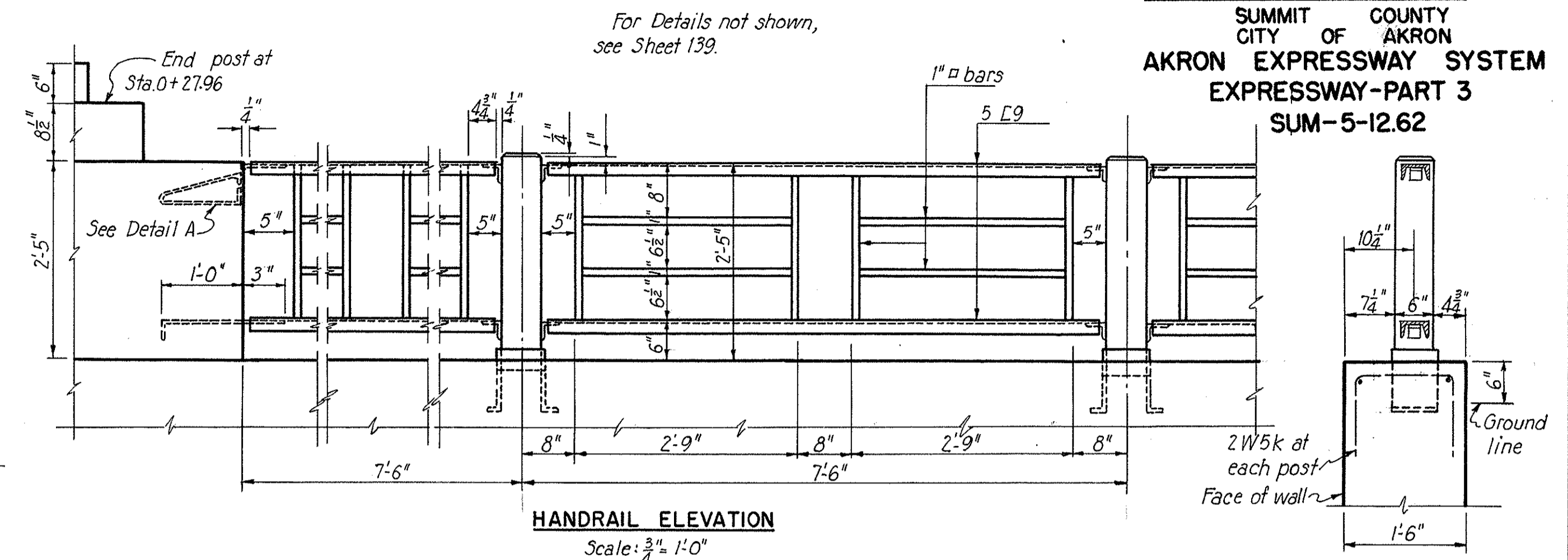


ELEVATION
 Scale: $\frac{1}{8}'' = 1'-0''$

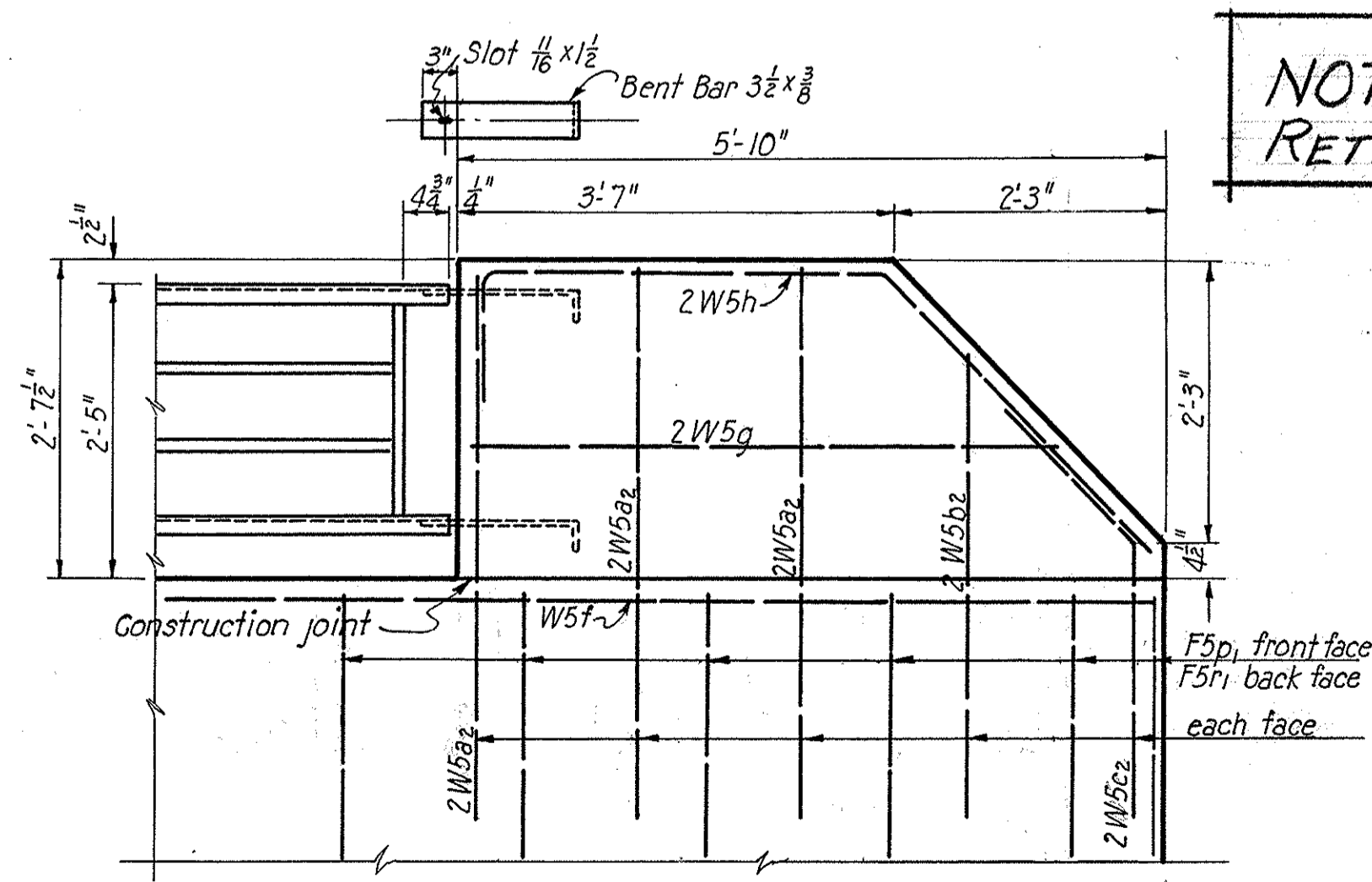
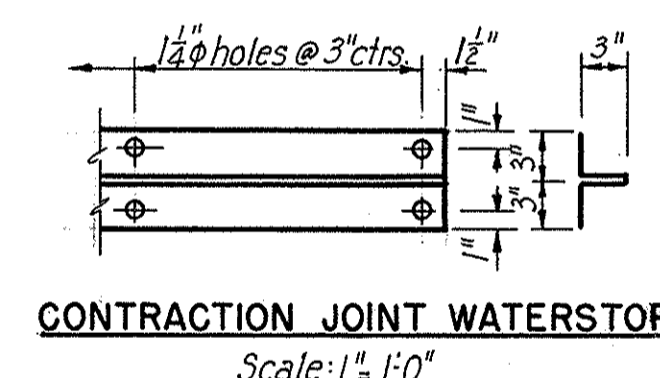
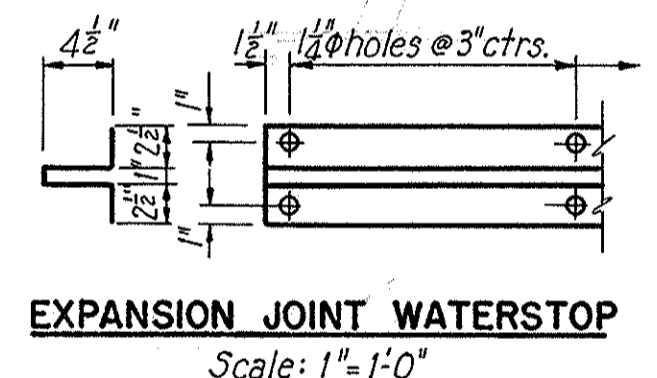
Walls shall be provided with 3" dia. weep holes spaced approximately 10'-0" and located 6" to 1'-0" above finished ground line. Porous backfill as described in Sec. 3-29.04 shall be placed full length of walls.



WALL SECTIONS
 Scale: $\frac{1}{2}'' = 1'-0''$



DETAIL "A"
 Scale: $1\frac{1}{2}'' = 1'-0''$



ENDPOST
 Scale: $\frac{3}{4}'' = 1'-0''$

NOTE: THIS SHEET IS VOID. RETAINING WALL ELIMINATED.

STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 BUREAU OF BRIDGES

AKRON EXPRESSWAY SYSTEM
 (EAST MARKET STREET TO EAST CUYAHOGA FALLS AVENUE)
RAMP "A" RETAINING WALL

ELEVATION AND SECTIONS

AKRON, SUMMIT COUNTY, OHIO

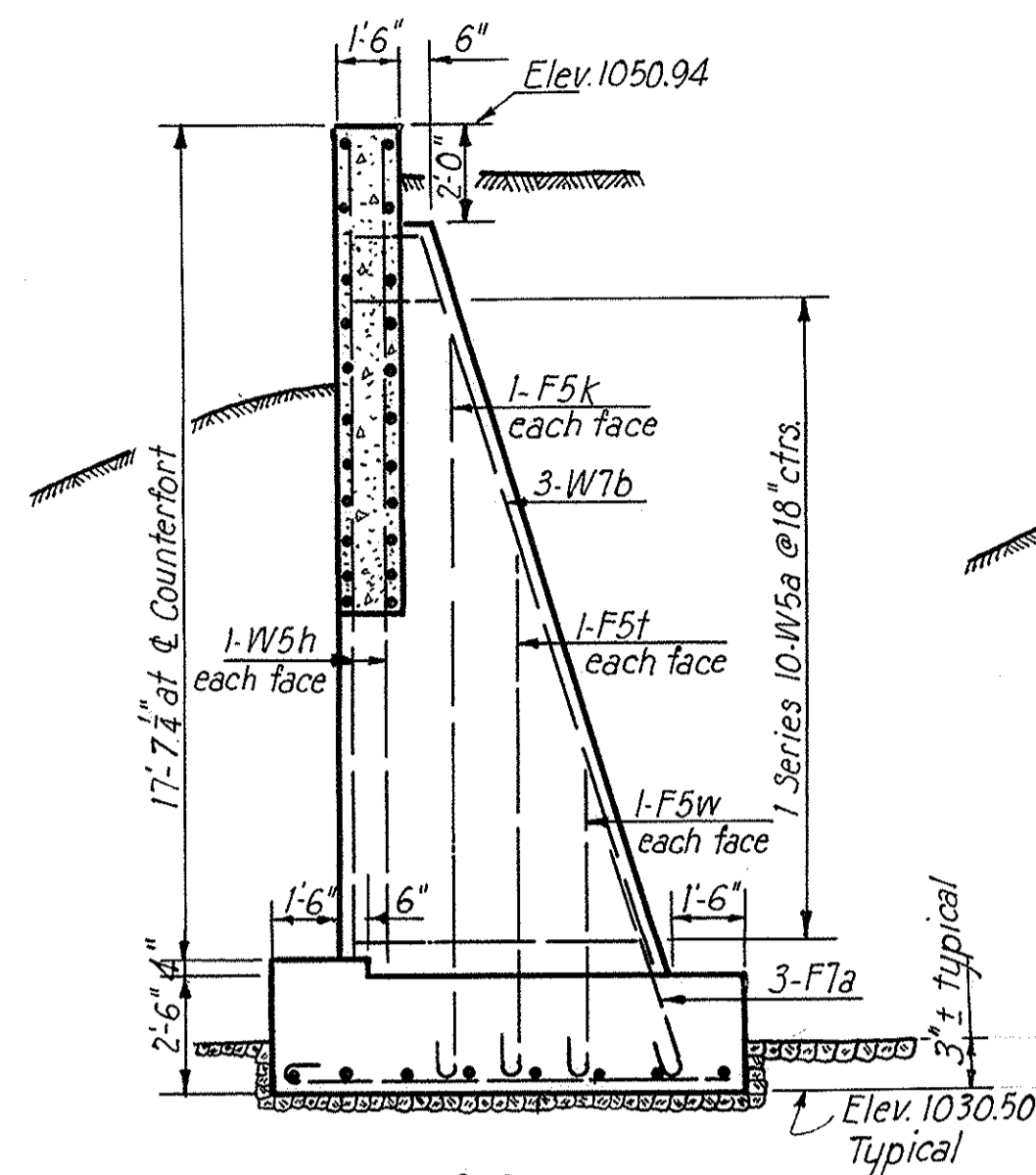
SCALE: 1/8" = 1'-0"
 MADE: 7-10-50
 TRCD: 8-15-50
 CKD: H.A.M. DATE: 8-1-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY, NEW YORK

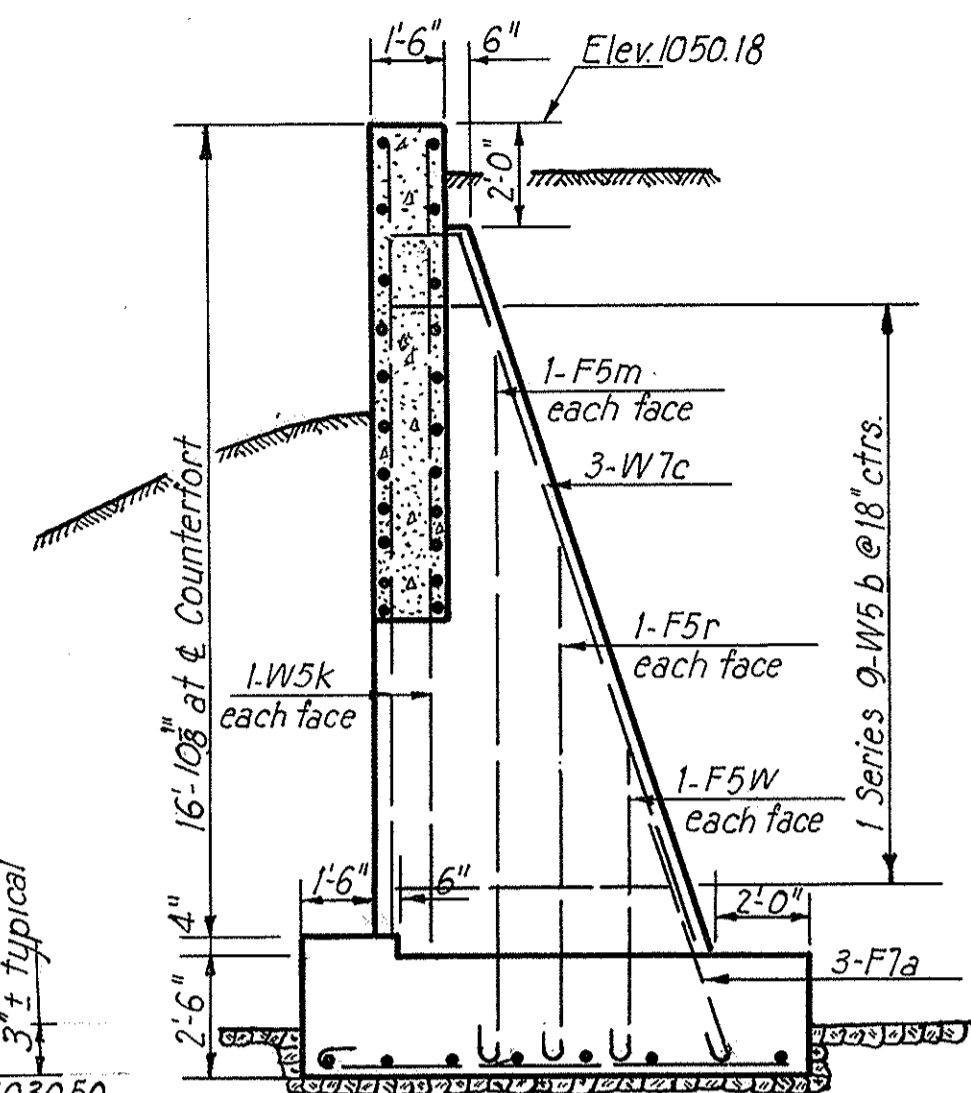
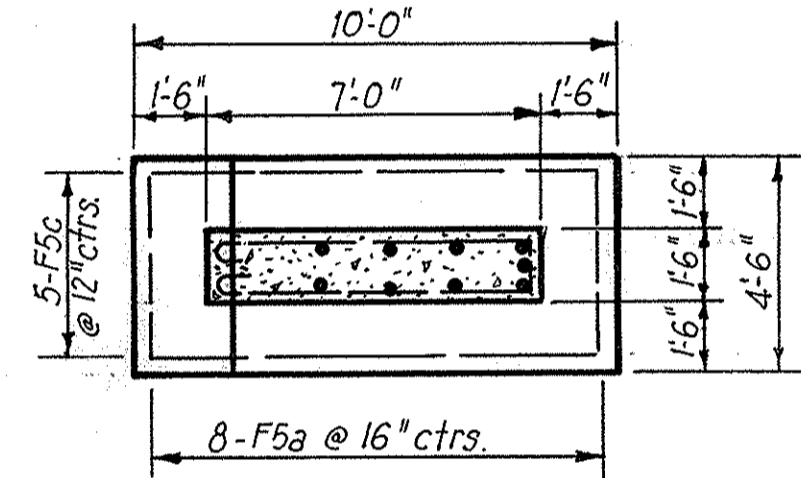
766 SHEET

Revised 4-16-51
 Revised 9-18-50

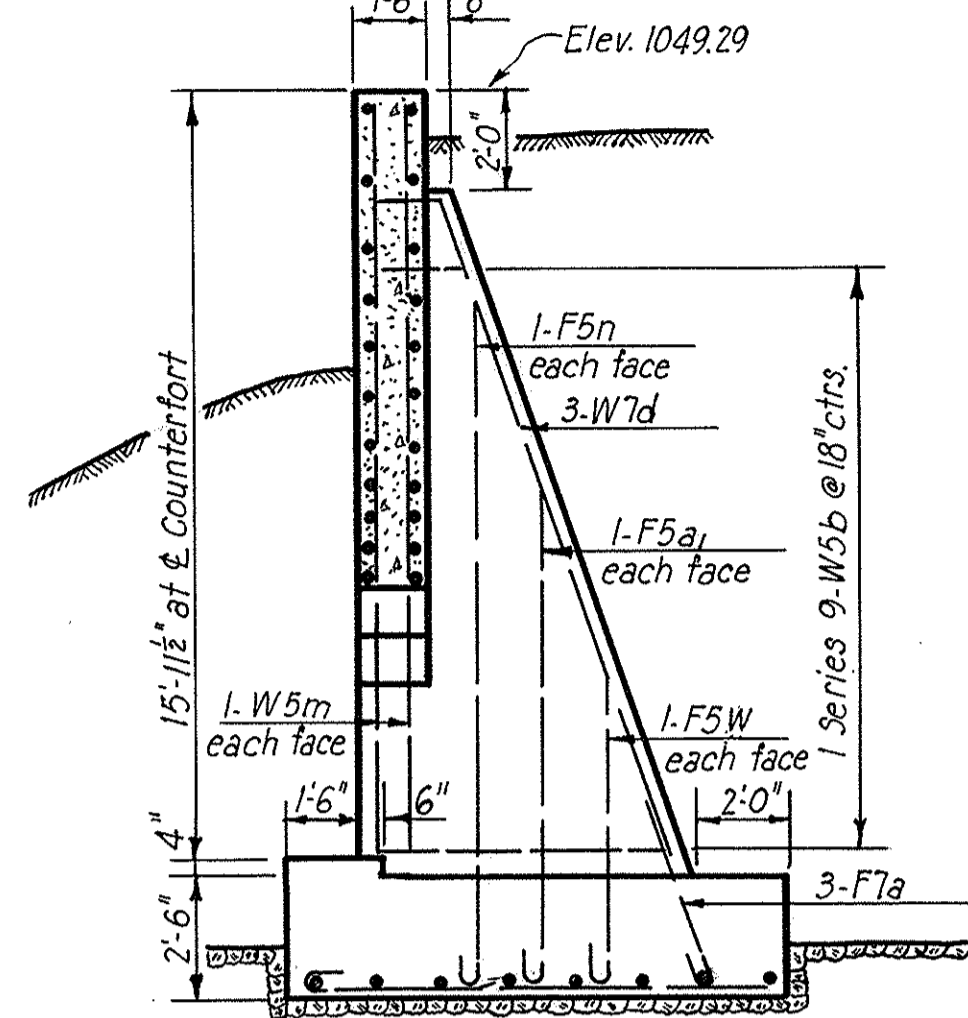
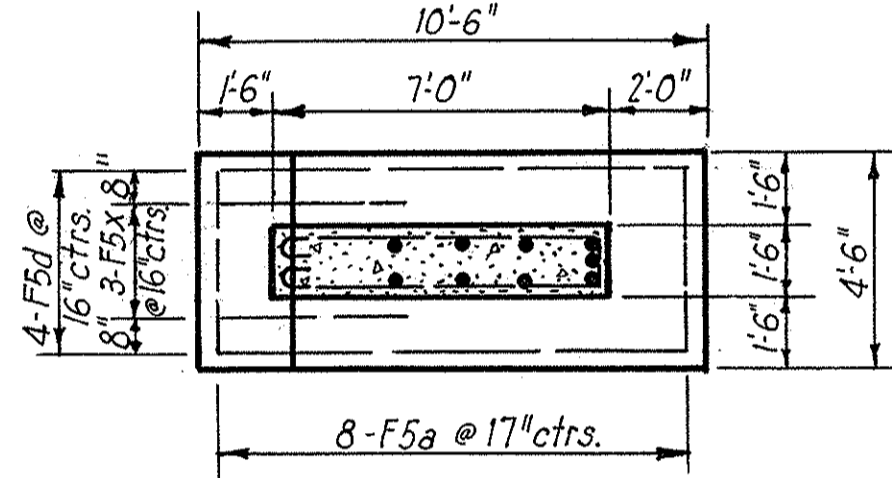
SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62



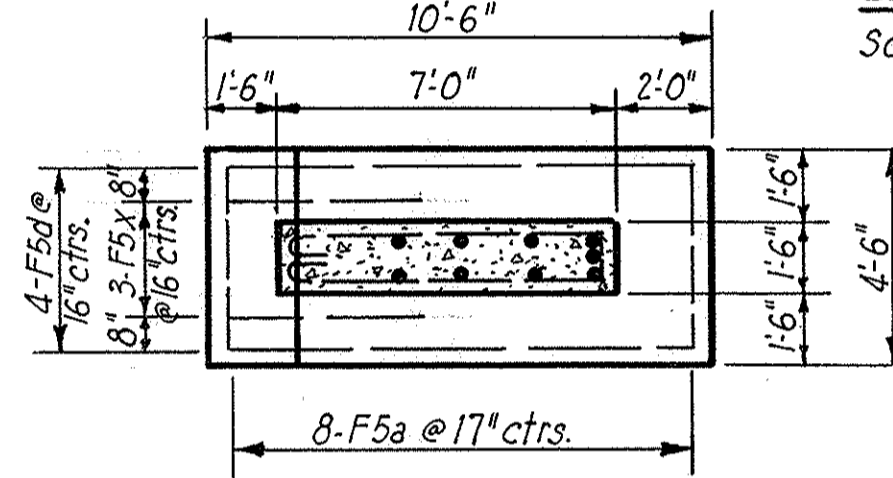
C - A



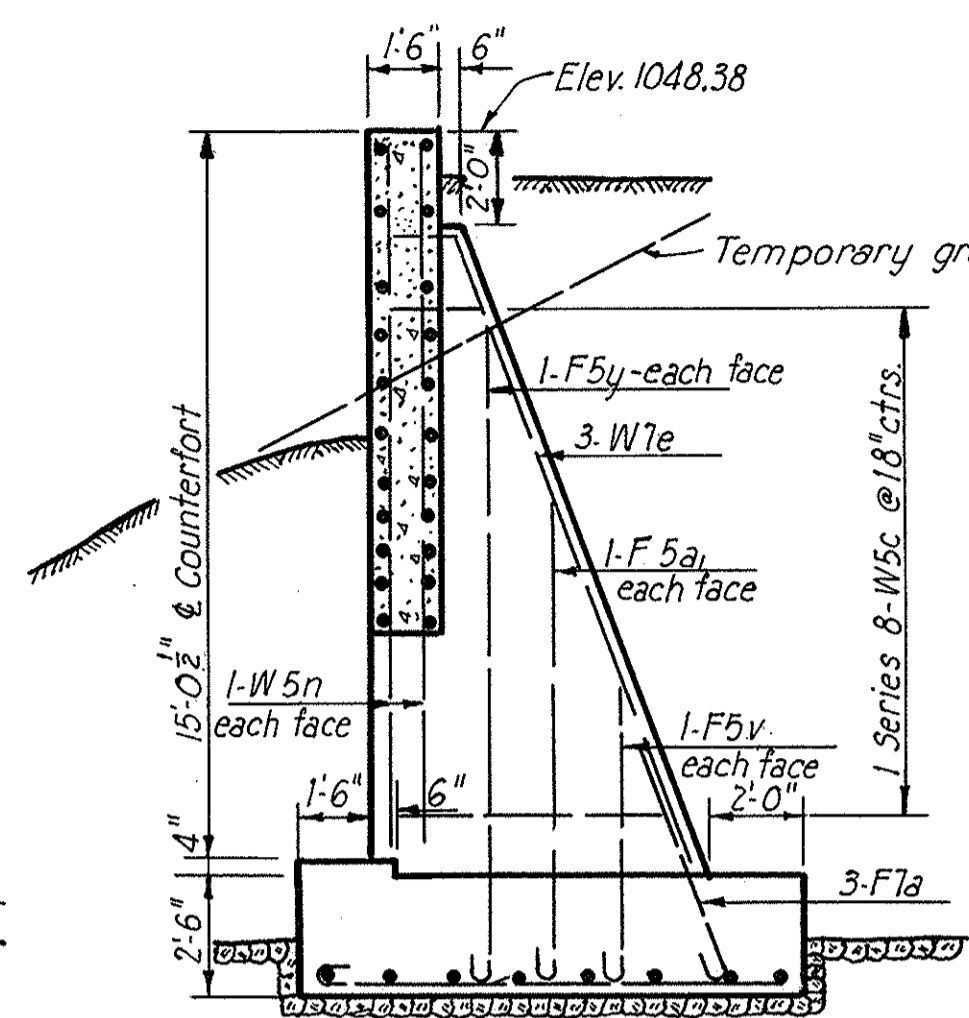
C - B



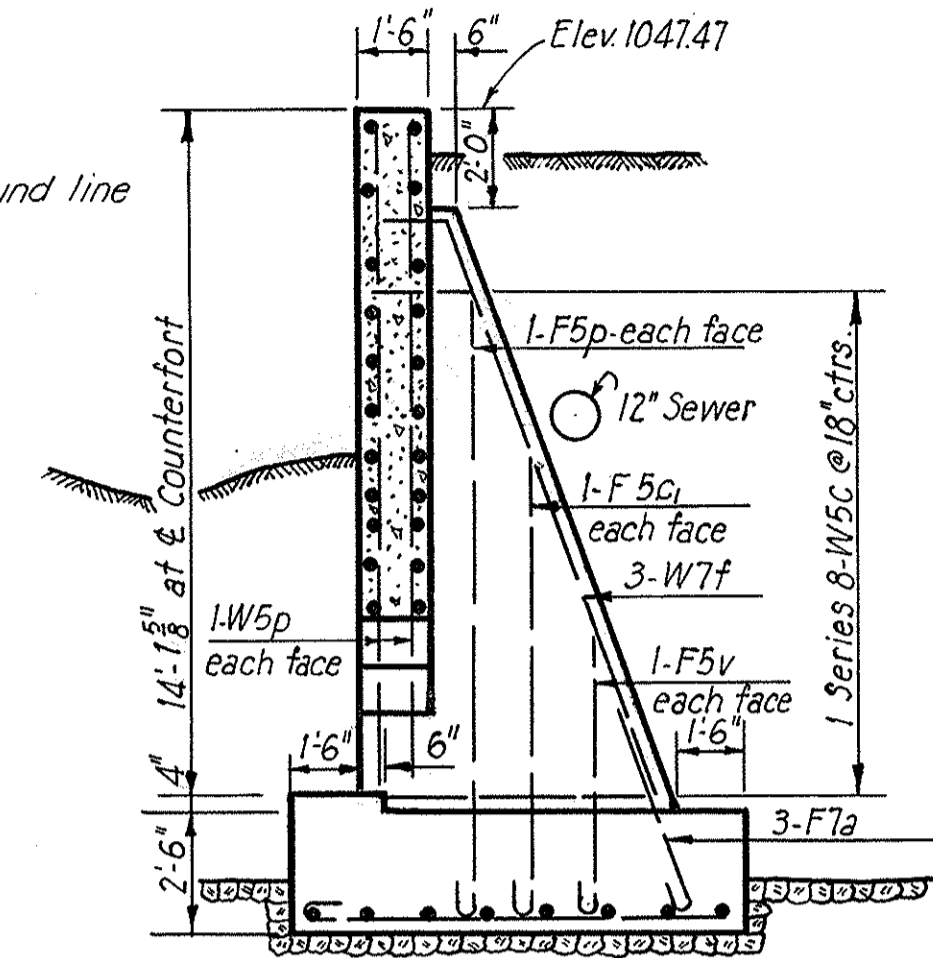
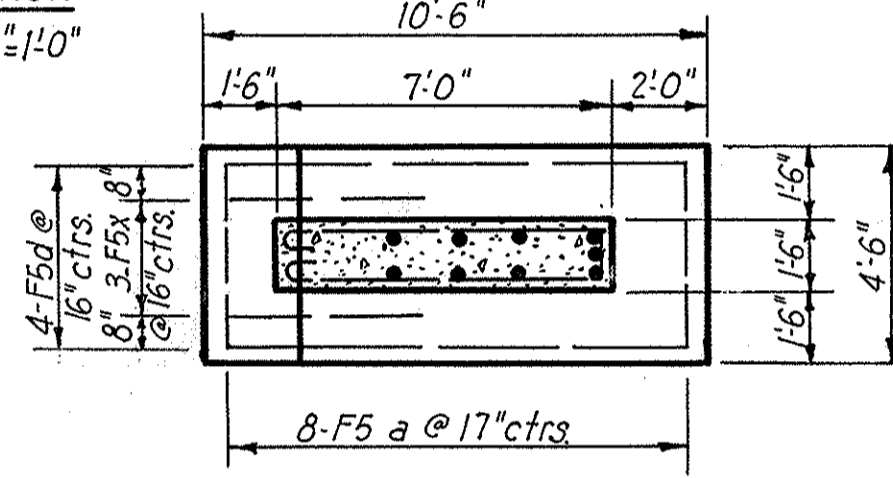
C - C



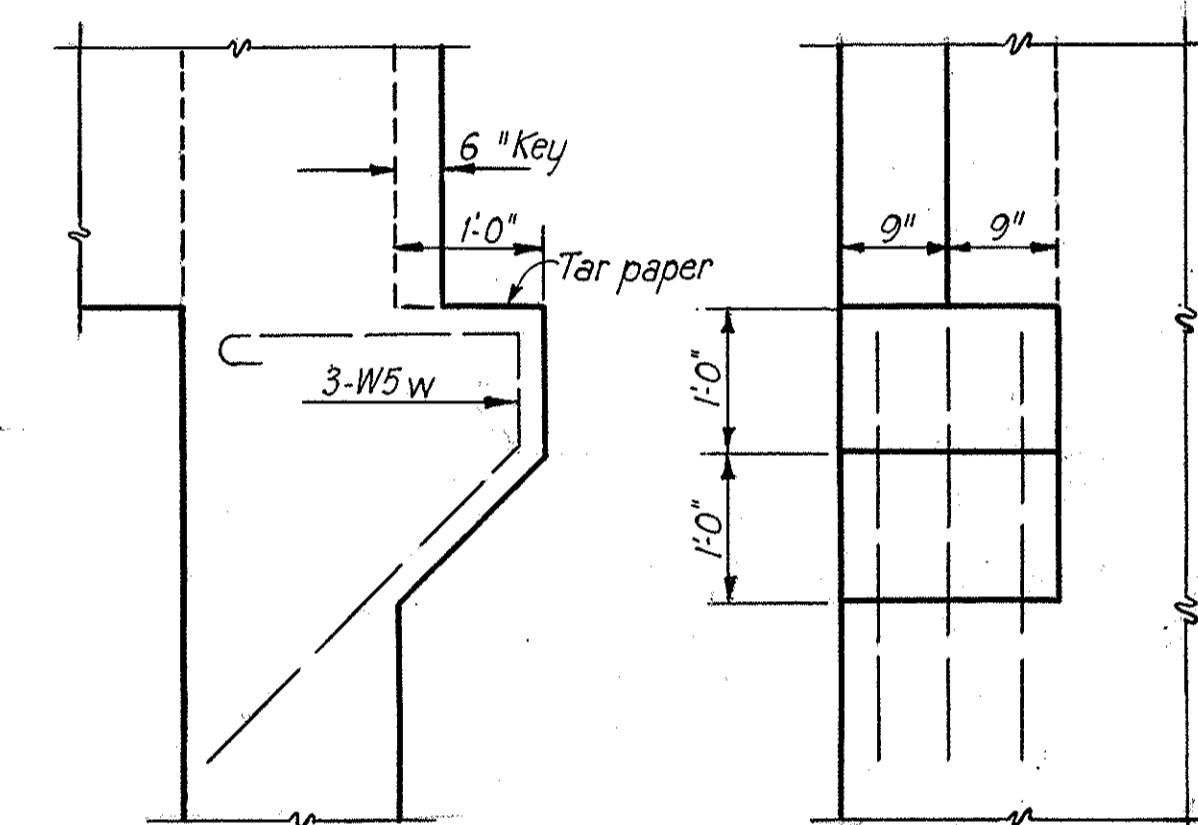
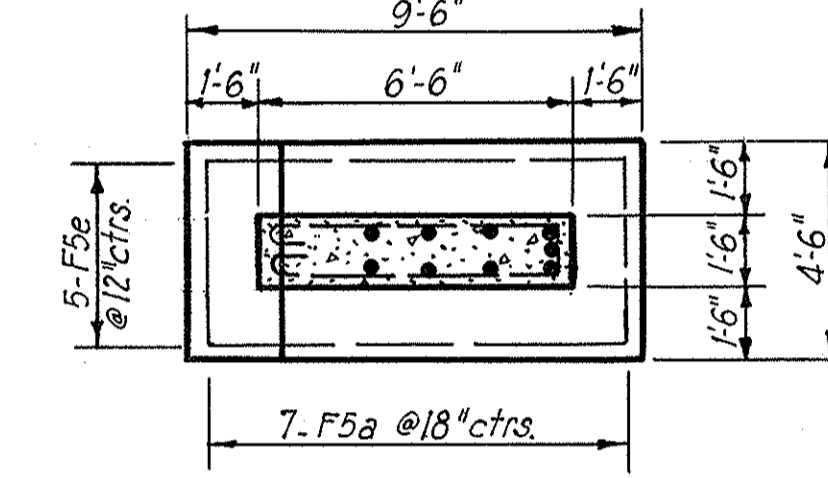
ELEVATION
Scale: 1/4" = 1'-0"



C - D

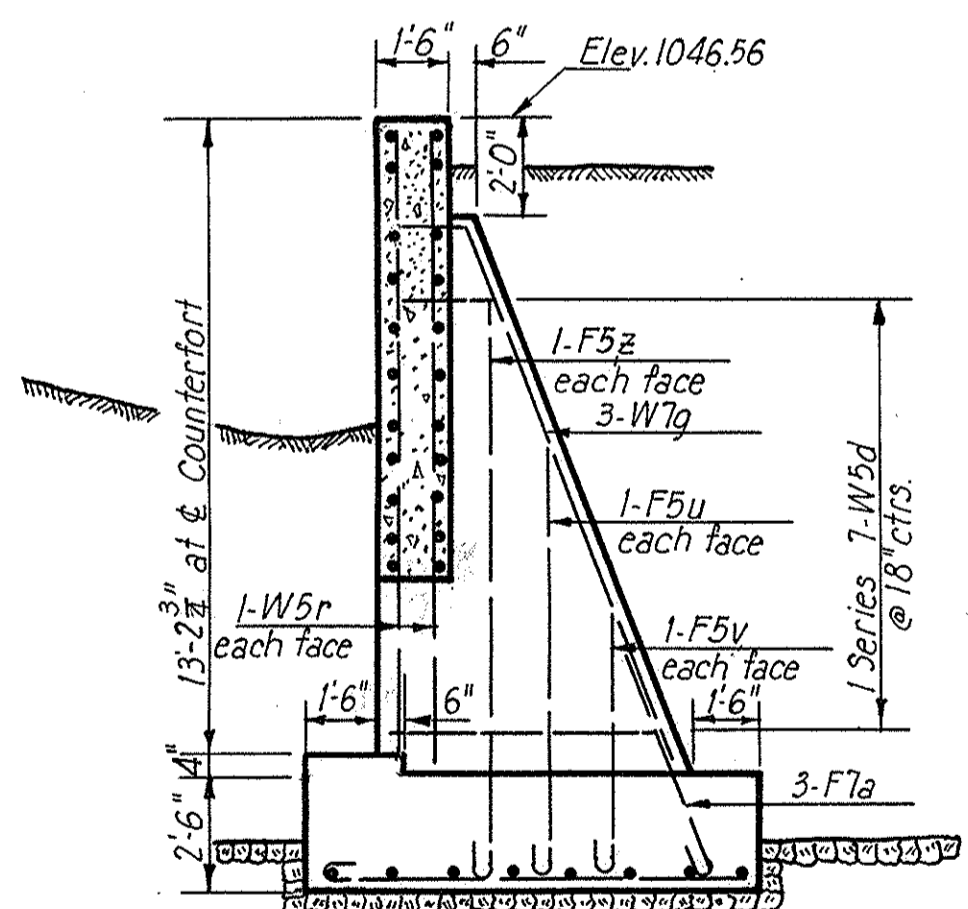


C - E

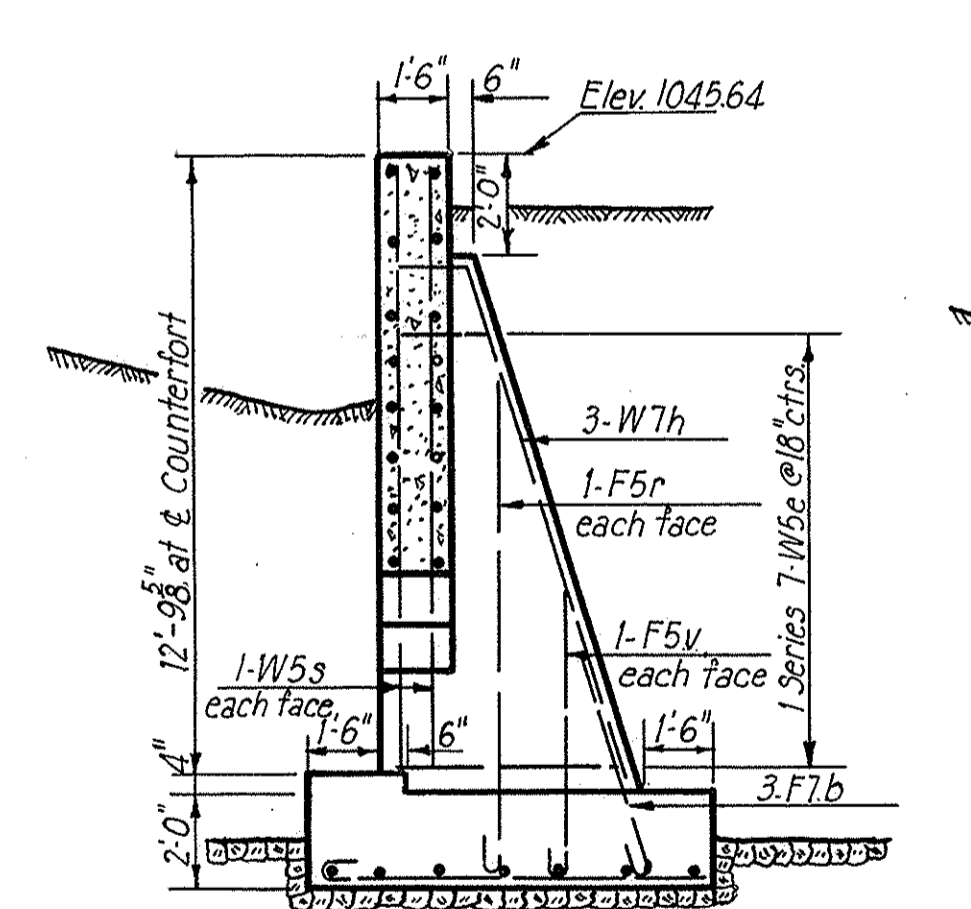
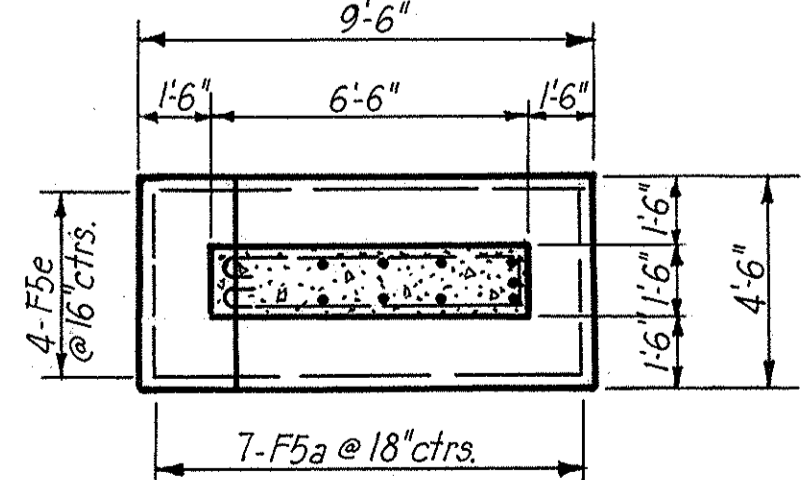


WALL SEAT
Scale: 3/4" = 1'-0"

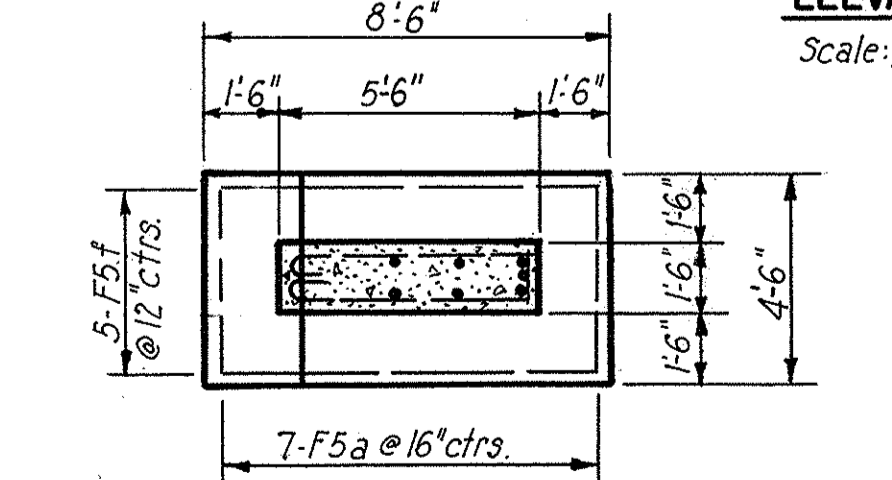
**NOTE: THIS SHEET IS VOID.
RETAINING WALL ELIMINATED.**



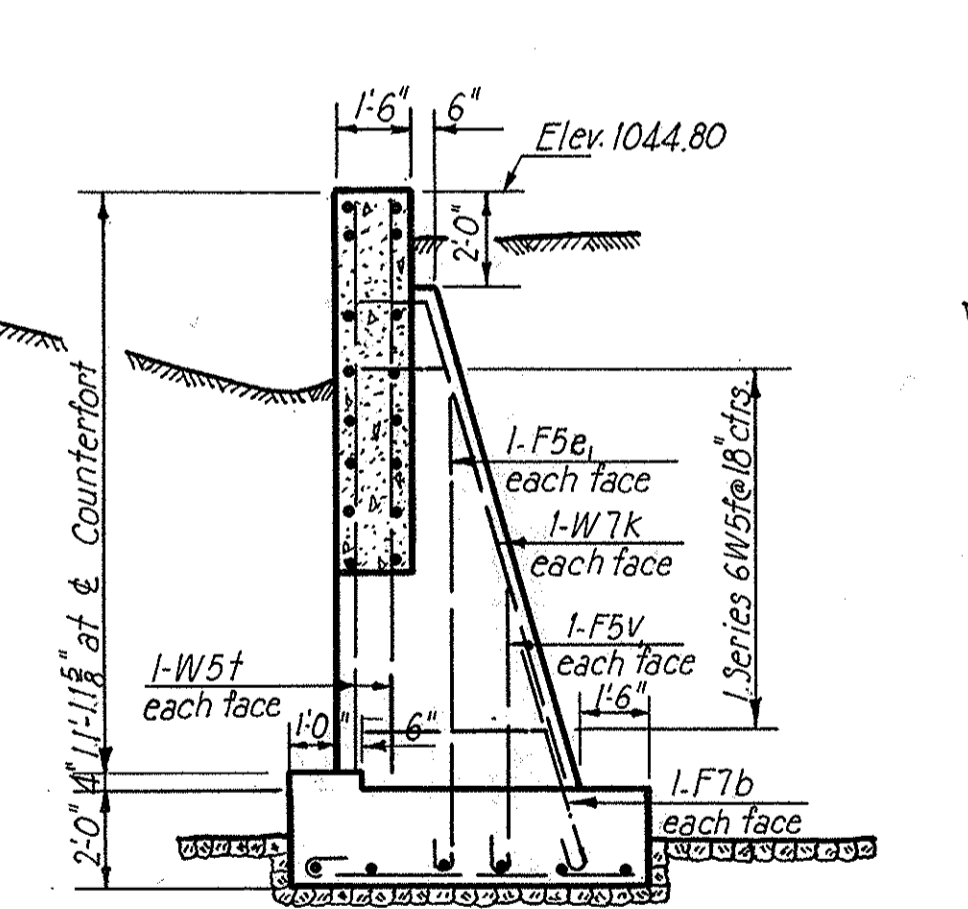
C - F



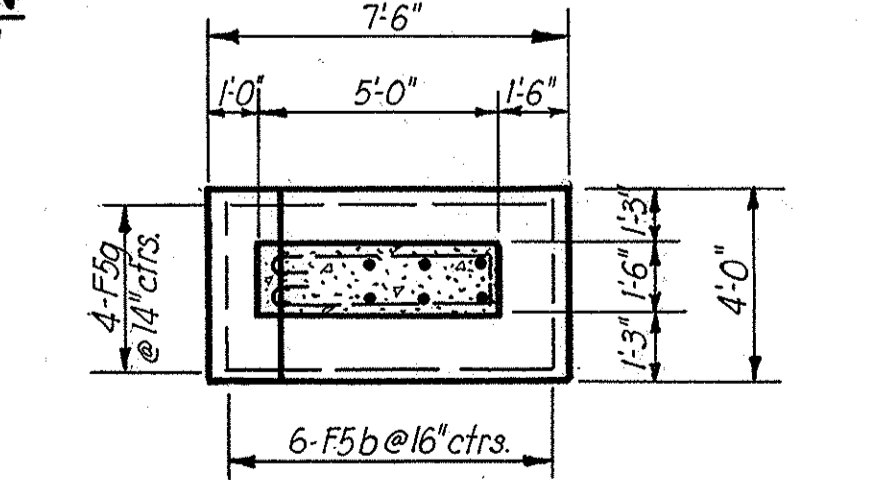
C - G



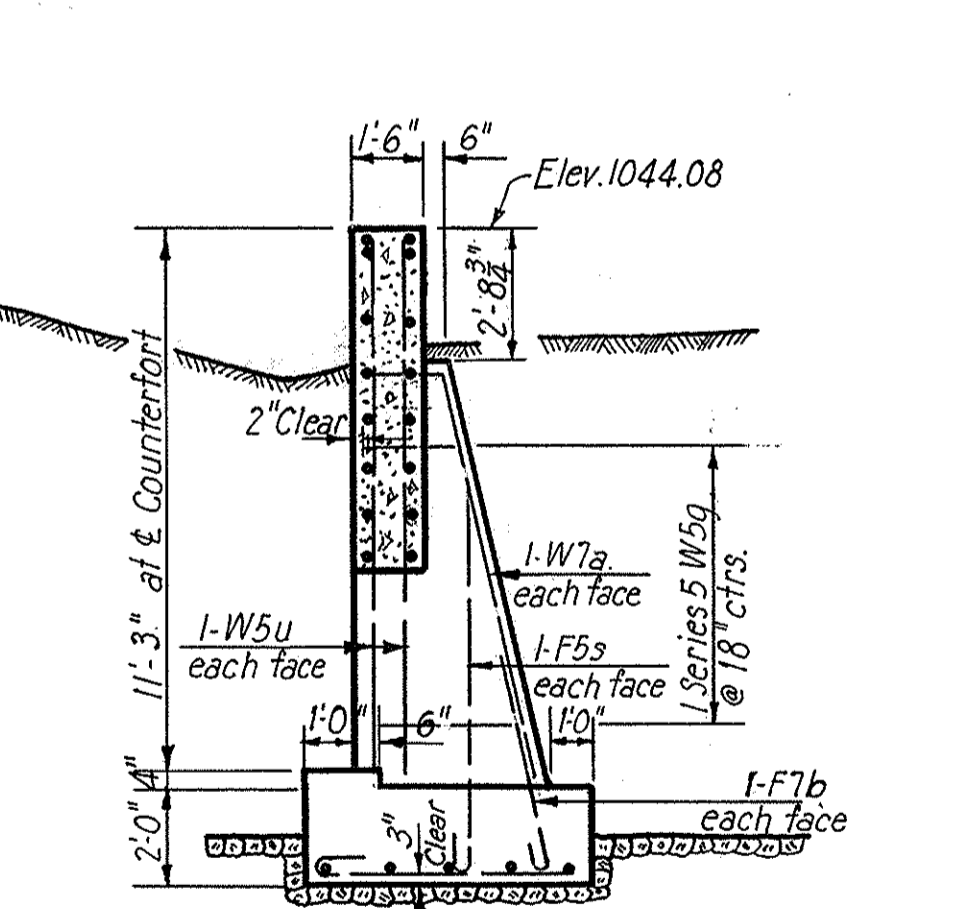
ELEVATION
Scale: 1/4" = 1'-0"



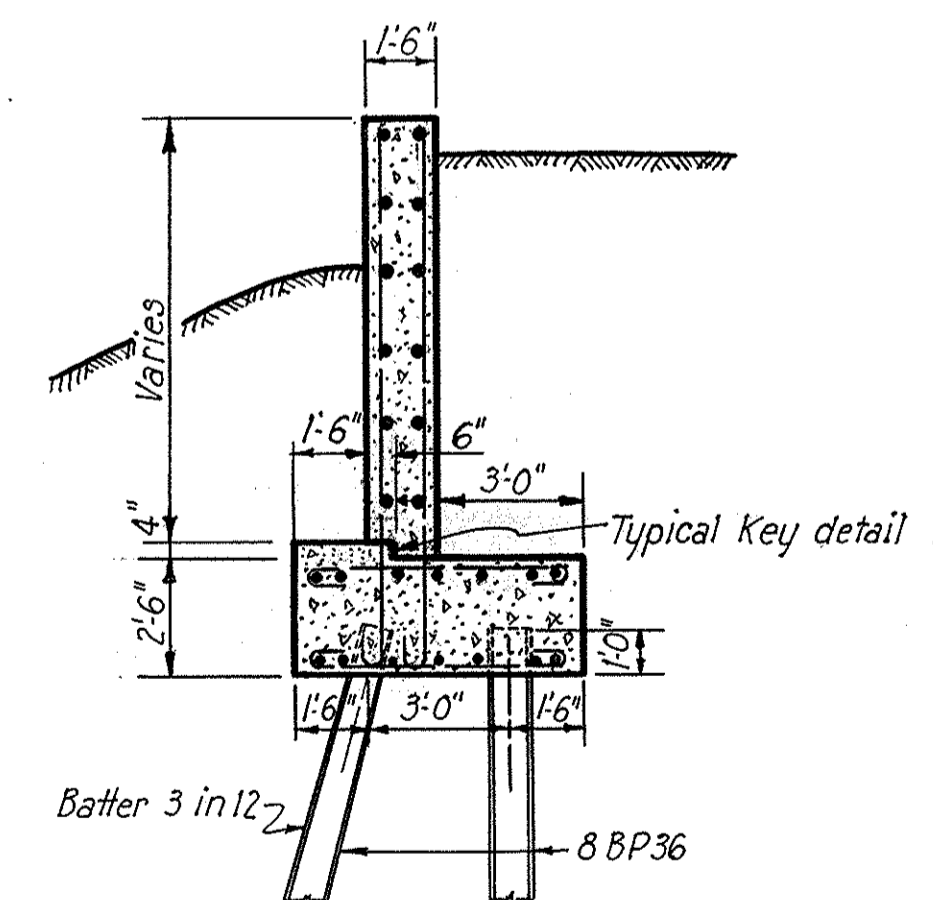
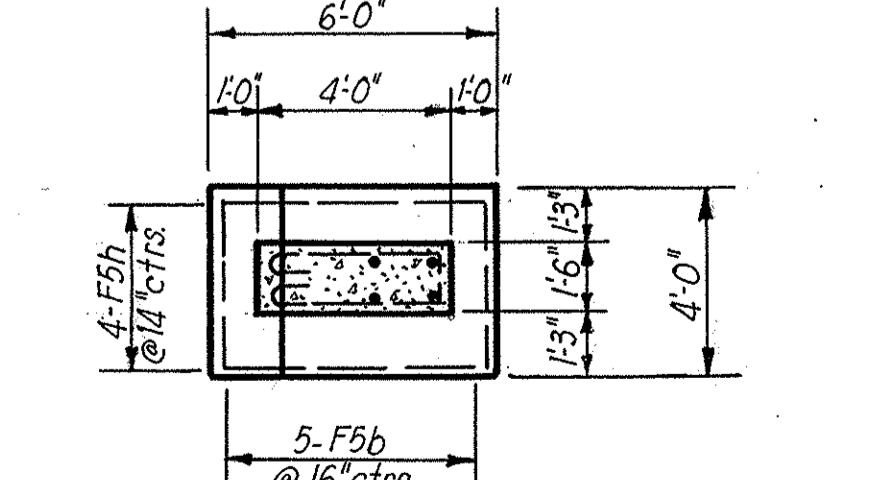
C - H



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



C - K



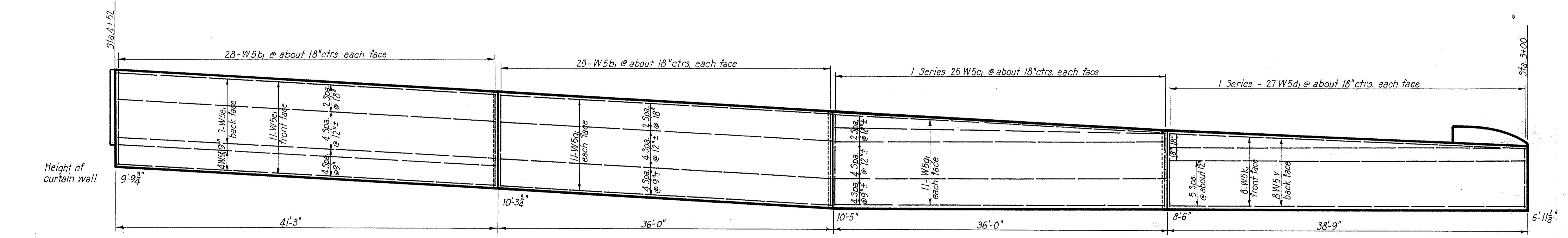
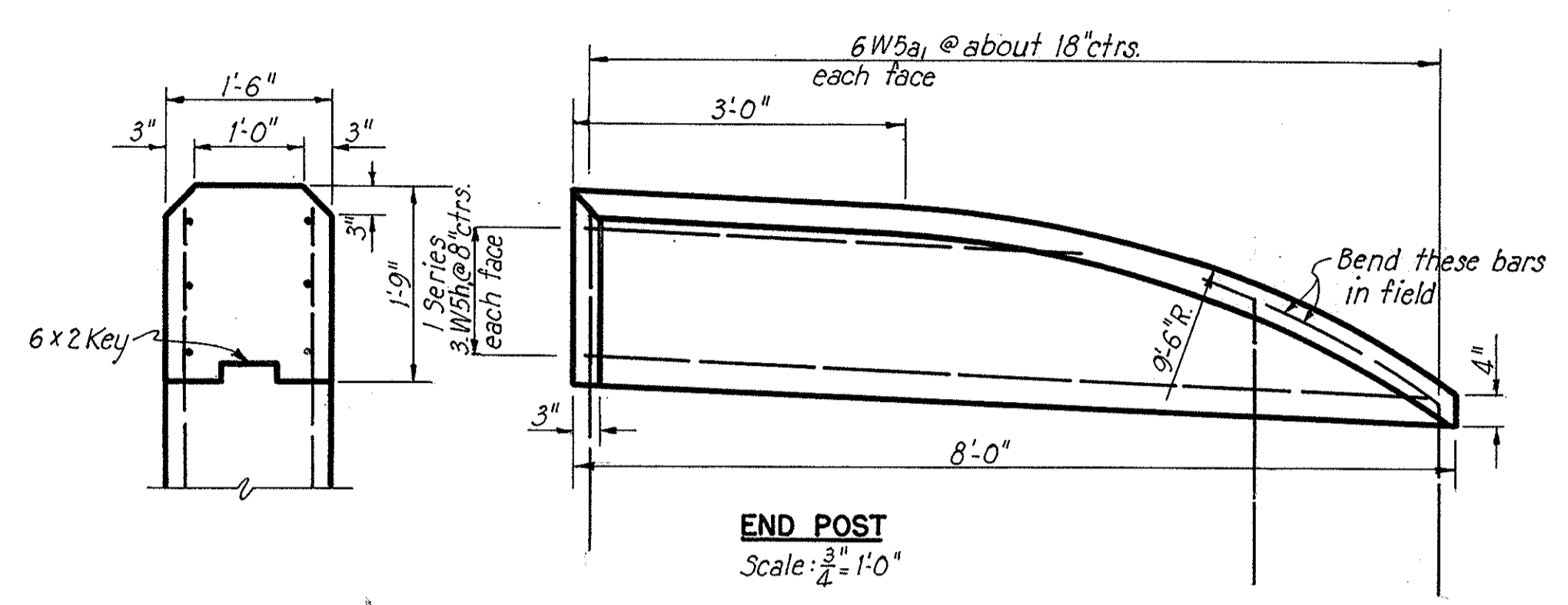
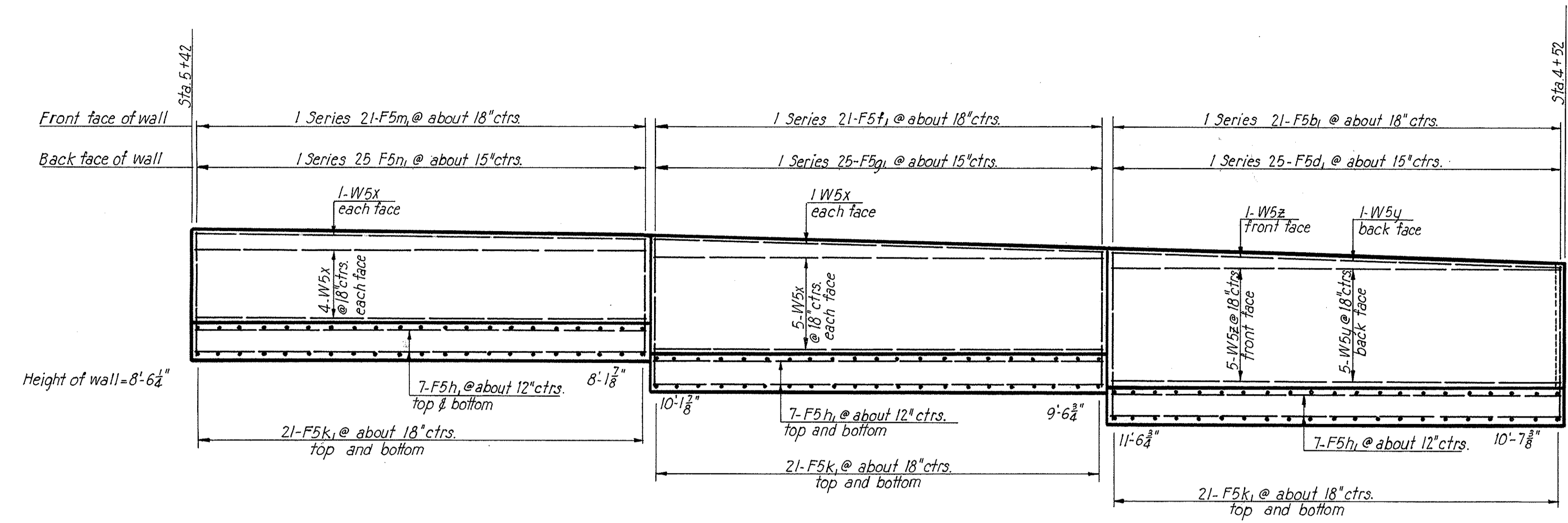
CANTILEVER WALL

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

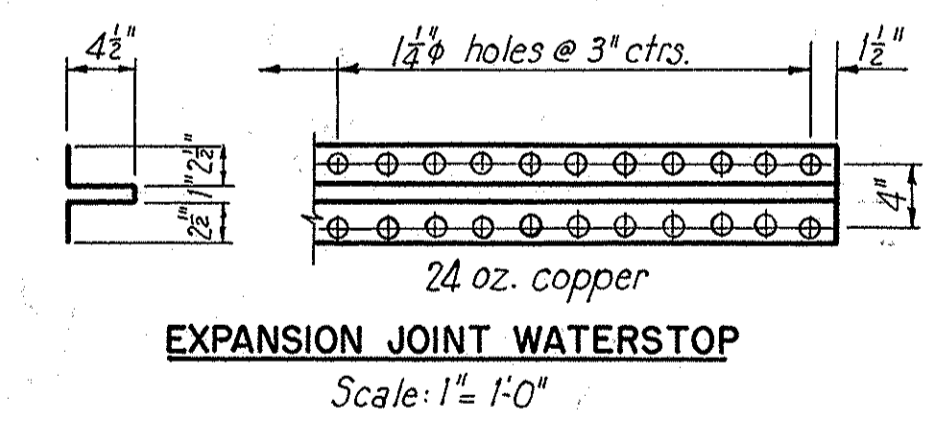
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES
AKRON EXPRESSWAY SYSTEM
(EAST MARKET STREET TO EAST CUYAHOGA FALLS AVENUE)
RAMP "C" RETAINING WALL

COUNTERFORTS
AKRON, SUMMIT COUNTY, OHIO
SCALE: 1/4" = 1'-0"
MADE IN O.A. DATE 7-10-50
TRC 018 A.R. DATE 7-15-50
CKD D.W.K. DATE 7-22-50
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
766 SHEET

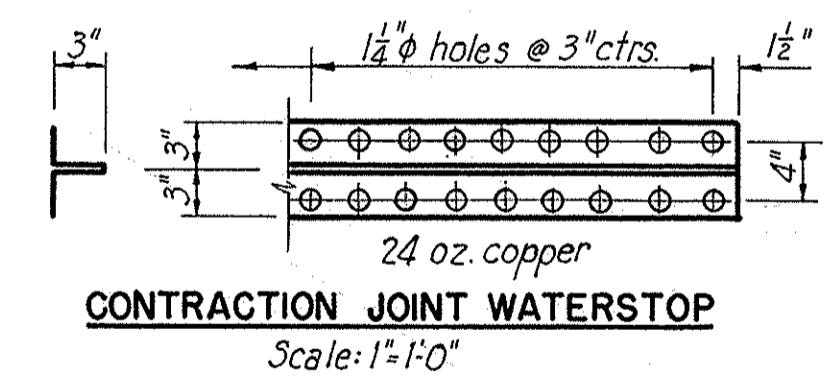
Revised 4-18-51



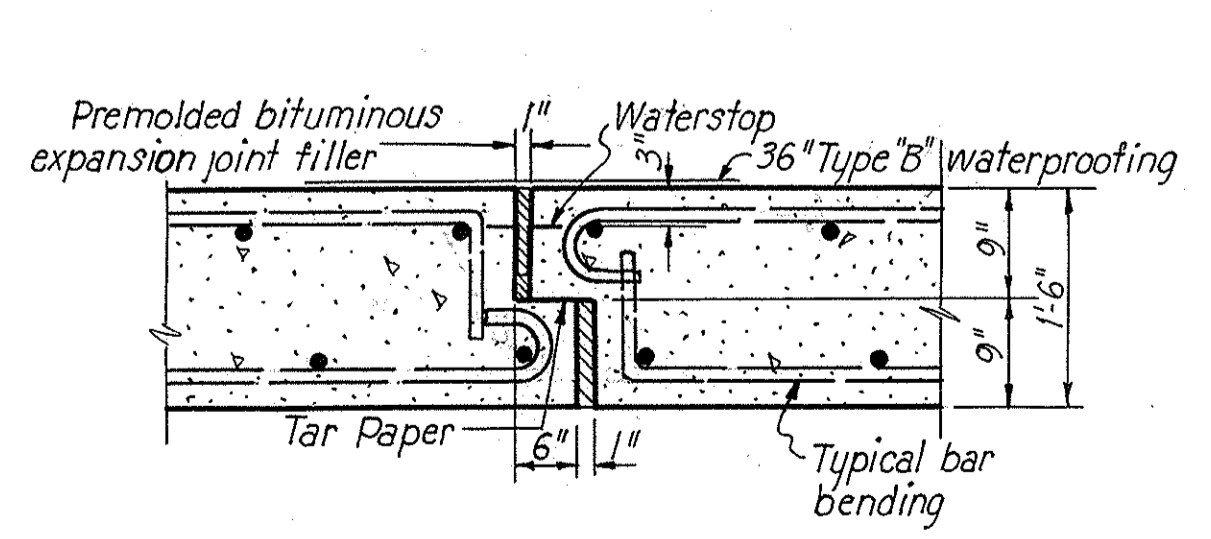
ELEVATION
Scale: $\frac{3}{16}'' = 1'-0''$



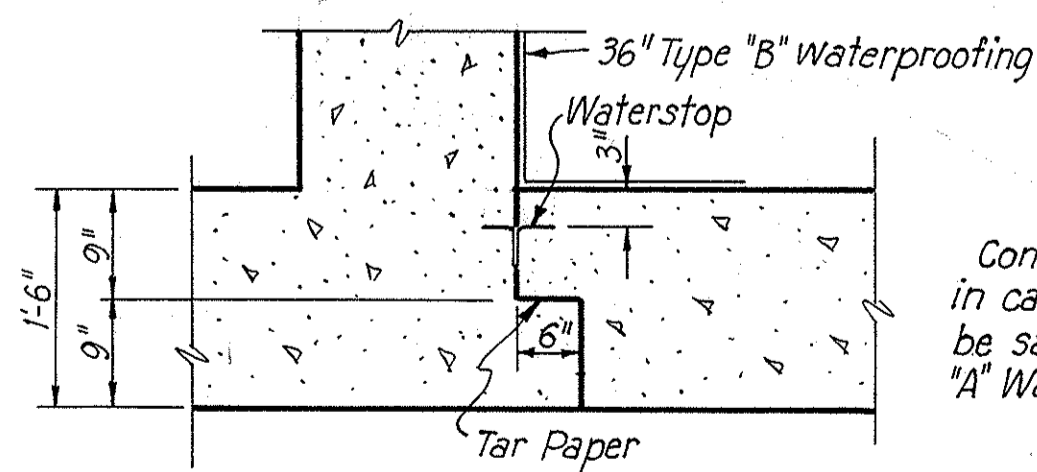
EXPANSION JOINT WATERSTOP
Scale: $1'' = 1'-0''$



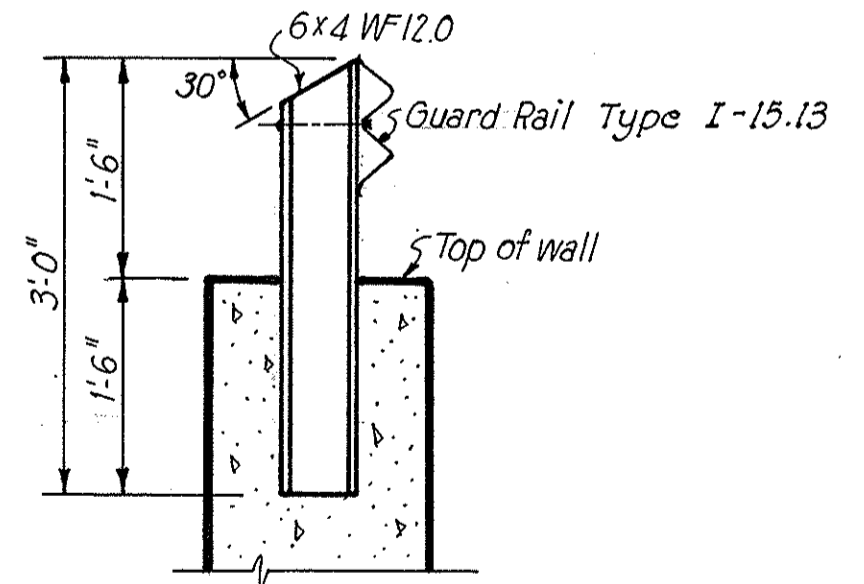
CONTRACTION JOINT WATERSTOP
Scale: $1'' = 1'-0''$



EXPANSION JOINT
Scale: $\frac{3}{4}'' = 1'-0''$
Sta. 4+52 and 3+75.91



CONTRACTION JOINT
Scale: $\frac{3}{4}'' = 1'-0''$
Sta. 4+10.75 and 3+38.75



GUARD RAIL POST
Scale: $\frac{3}{4}'' = 1'-0''$

**NOTE: THIS SHEET IS VOID.
RETAINING WALL ELIMINATED.**

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

AKRON EXPRESSWAY SYSTEM
(EAST MARKET STREET TO EAST CUYAHOGA FALLS AVENUE)
RAMP "C" RETAINING WALL

ELEVATIONS

AKRON, SUMMIT COUNTY, OHIO

SCALE: $\frac{3}{16}'' = 1'-0''$
MADE H.B.A. DATE 7-10-50
TRCD H.B.A. DATE 7-25-50
CKD D.W.K. DATE 7-18-50

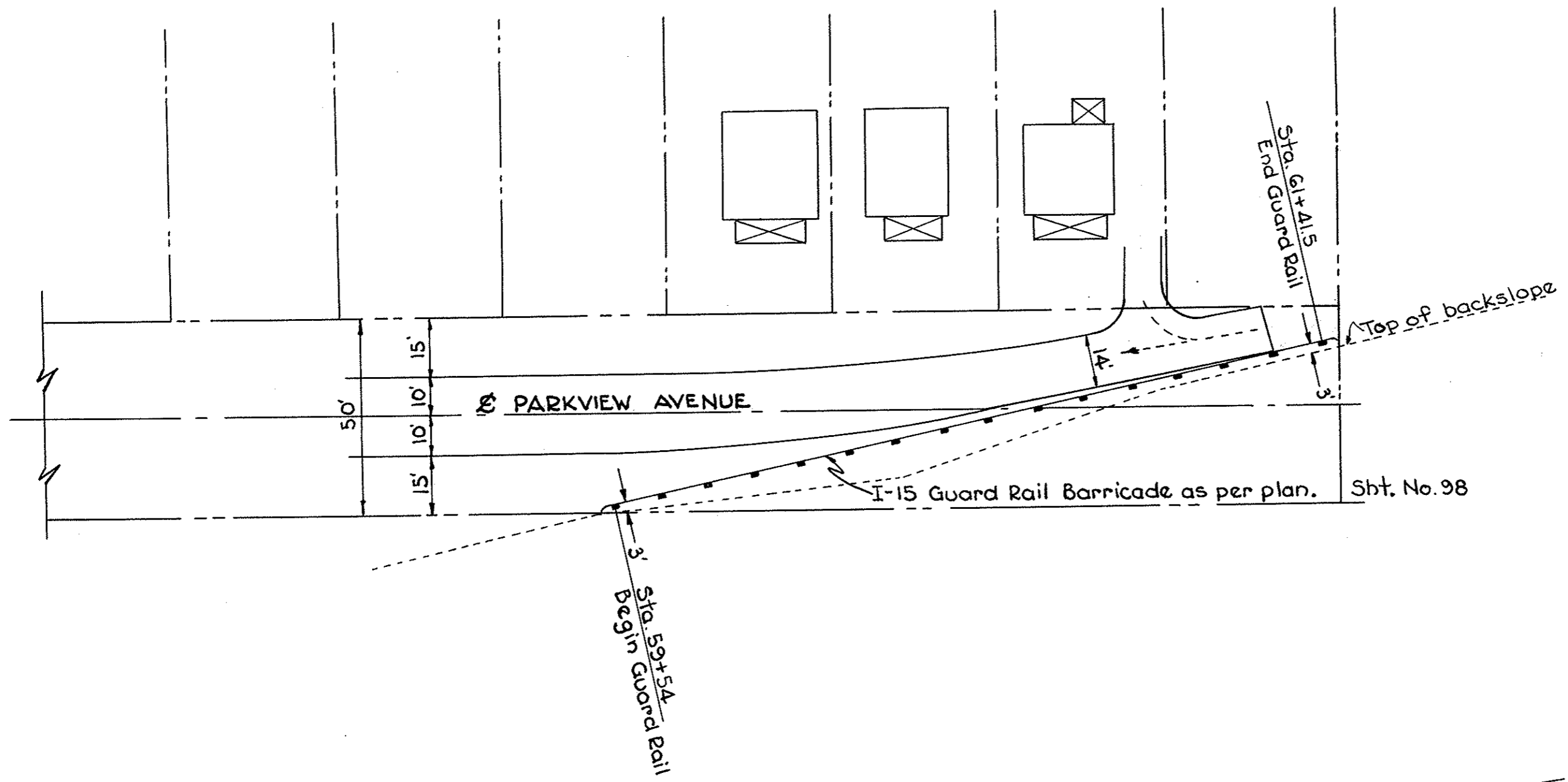
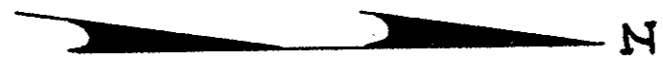
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

Revised 4-16-51
Revised 9-18-50

766 SHEET

525

ADDITIONAL QUANTITIES FOR CHANGE ORDER
I-15 Guard Rail, Steel Beam Type (Deep) As Per Plan 187.50 L.F.



Sht. No. 98

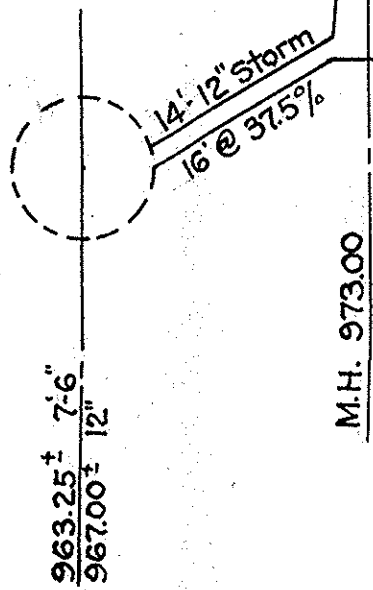
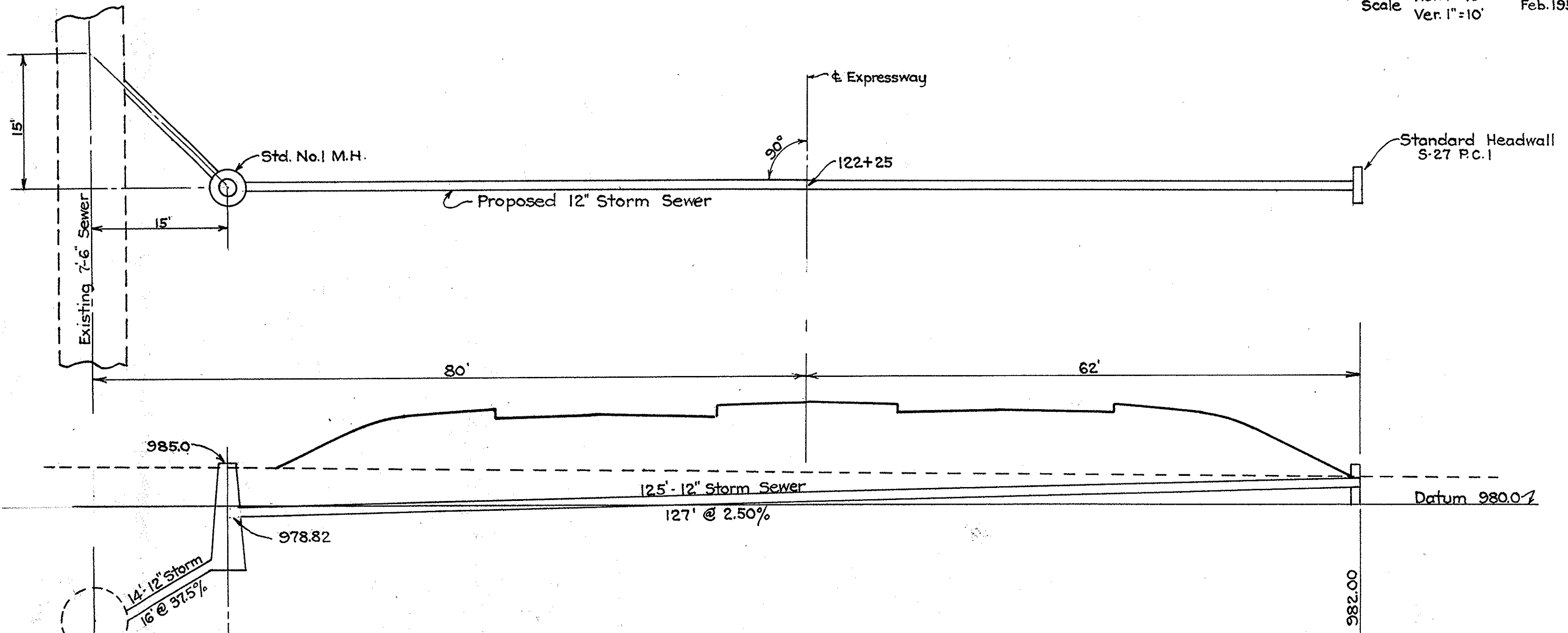
59+00 EXPRESSWAY 60+00 61+00

SKETCH FOR CHANGE ORDER
AKRON EXPRESSWAY PART-3
BARRICADE AT PARKVIEW AVE.
SCALE 1" = 30'-0" SEPT. 1951

FILE 551C *large*

SKETCH FOR CHANGE ORDER AT STA. 122+25

Scale Hor. 1"=10'
Ver. 1"=10' Feb. 1951



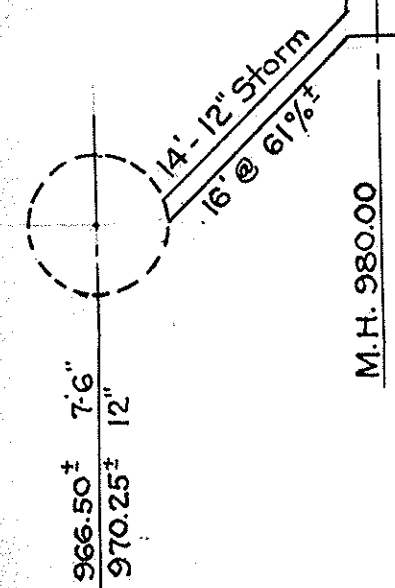
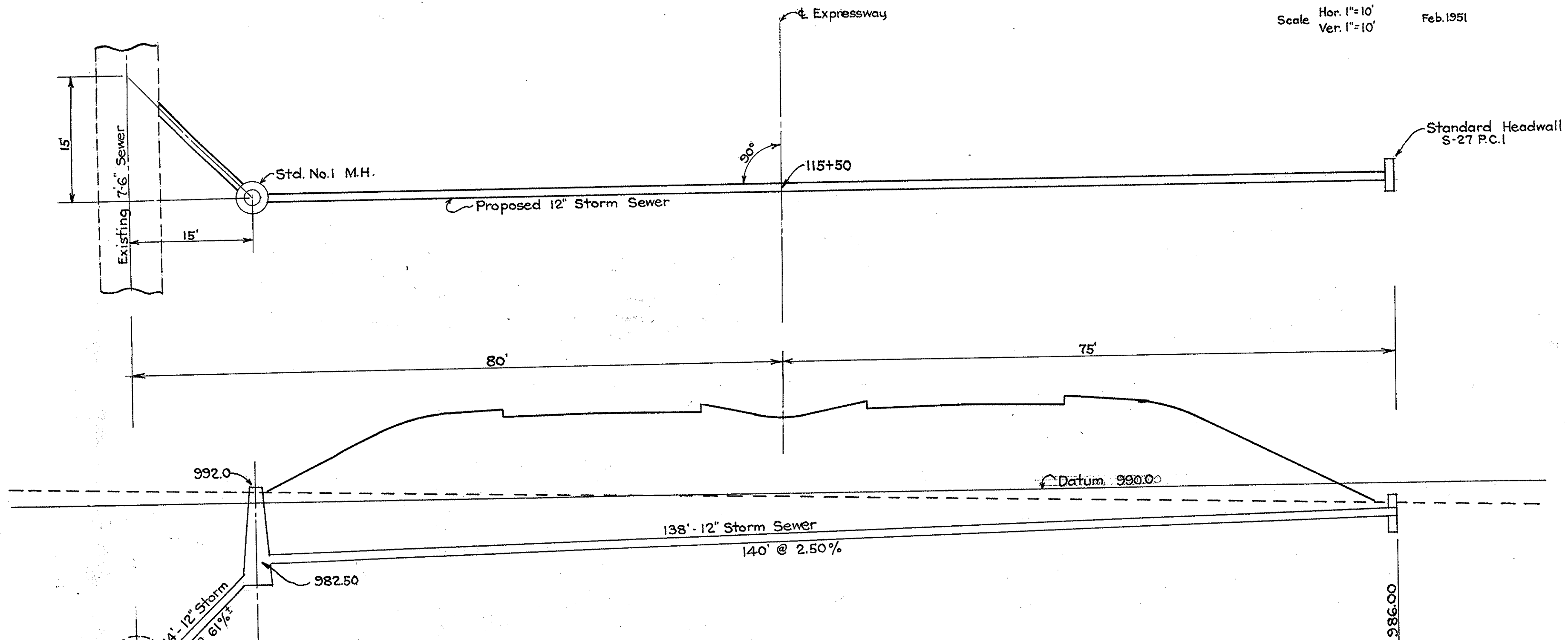
QUANTITIES				
Item	Description	Total	Unit	
I-2	12" Pipe for Storm Sewers	139	Lin.Ft.	
I-8	Standard Manhole No.1	1	Each	
E-2	Excavation for Structures	2	Cu.Yds.	
S-1	Concrete for Structures Class "C"	.65	Cu.Yds.	
S-4	Reinforcing Steel	20	Lbs.	

SKETCH FOR CHANGE ORDER AT STA. 115+50

AKRON EXPRESSWAY PART 3
SUM-5-12.62

Scale Hor. 1"=10'
Ver. 1"=10'

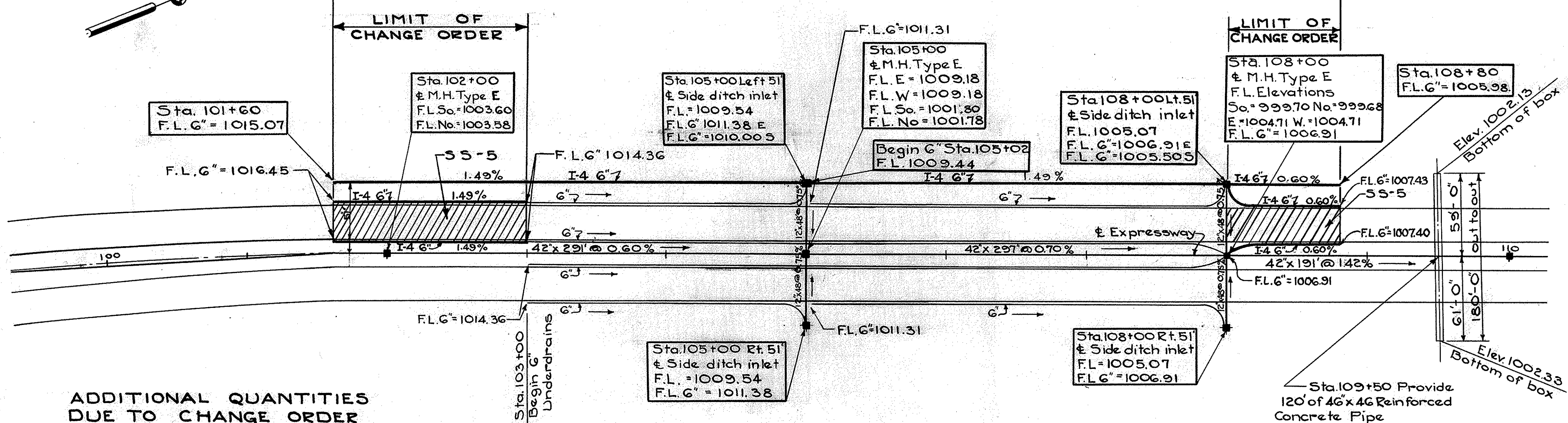
Feb. 1951



QUANTITIES			
Item	Description	Total	Unit
I-2	12" Pipe for Storm Sewers	152	Lin.Ft.
I-8	Standard Manhole No.1	1	Each
E-2	Excavation for Structures	3	Cu.Yds.
S-1	Concrete for Structures Class "C"	.65	Cu.Yds.
S-4	Reinforcing Steel	20	Lbs.

AKRON EXPRESSWAY PART 3
SUM - 5 - 1262
 Date 8-8-51

LIMIT OF CHANGE ORDER



**ADDITIONAL QUANTITIES
 DUE TO CHANGE ORDER**

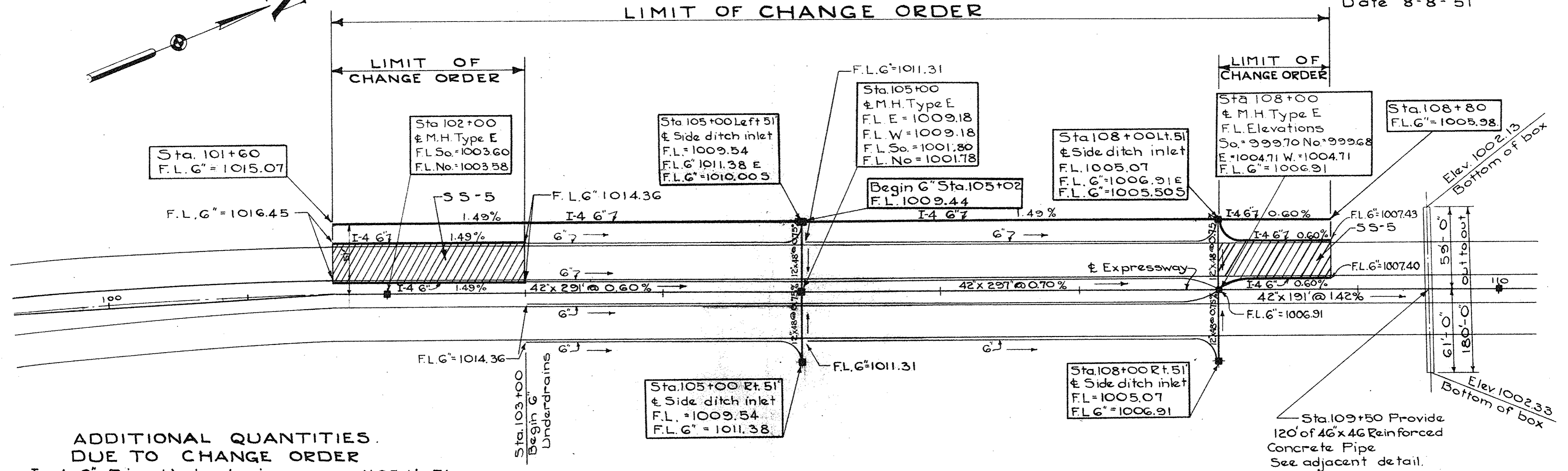
I-4 6" Pipe Underdrain	1165 Lin. Ft.
Classified Embankment Mat. SS-5	342 C. Y.
E-1 Excavation	342 C. Y.

Sta. 109+50 Provide
 120' of 46" x 46" Reinforced
 Concrete Pipe
 See adjacent detail.

AKRON EXPRESSWAY PART 3

SUM - 5 - 1262

Date 8-8-51

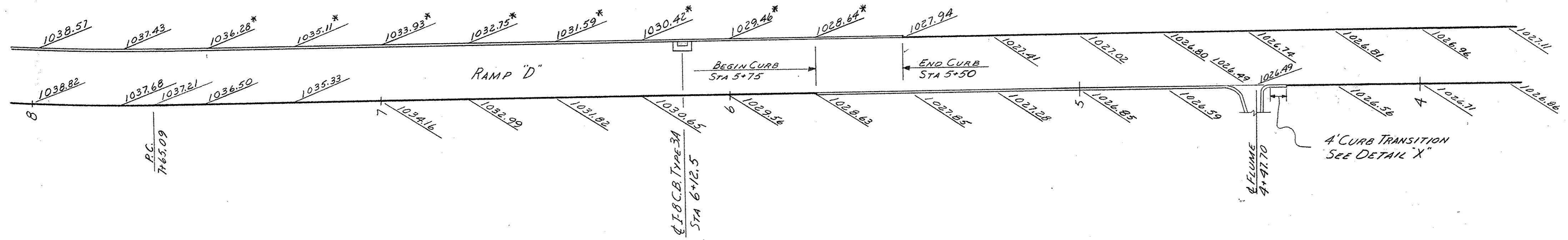
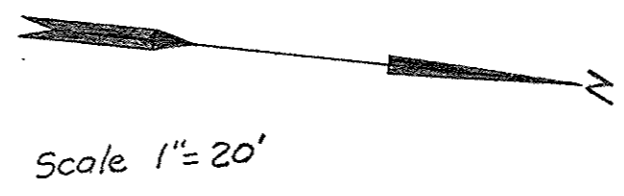


ADDITIONAL QUANTITIES DUE TO CHANGE ORDER

I-4 6" Pipe Underdrain	1165 Lin. Ft.
Classified Embankment Mat. SS-5	342 C. Y.
E-1 Excavation	342 C. Y.

SUMMIT COUNTY
 CITY OF AKRON
 AKRON EXPRESSWAY SYSTEM
 EXPRESSWAY-PART 3
 SUM-5-12.62
 Dec. 1950

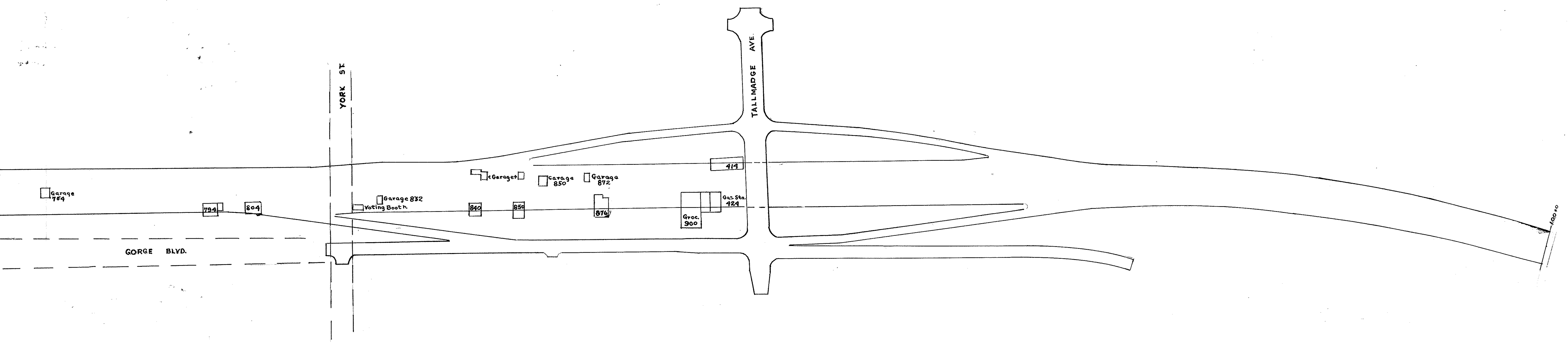
SKETCH FOR CHANGE ORDER ON RAMP "D"



* Denotes elev. that have been changed.

ADDITIONAL QUANTITIES DUE TO CHANGE ORDER
 I-12 15 LIN. FT. TYPE A-A MODIFIED CONCRETE CURB

7



Garage 774

794

804

Garage 832
Voting Booth

810

850

Garage 850

Garage 872

876

900

Gas Sta. 424

414

YORK ST.

TALLMADGE AVE.

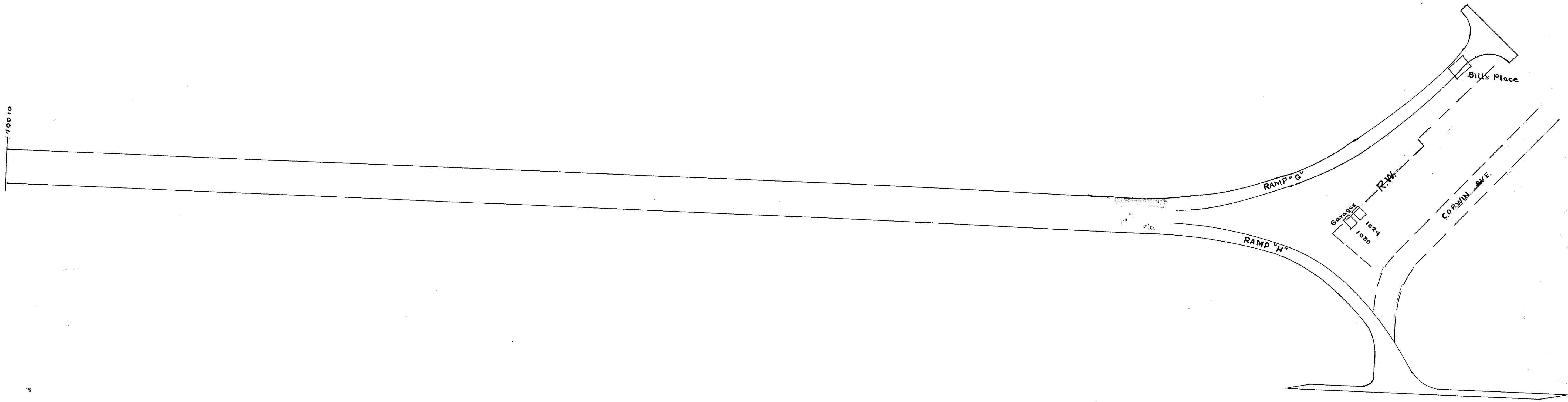
GORGE BLVD.

BLVD.

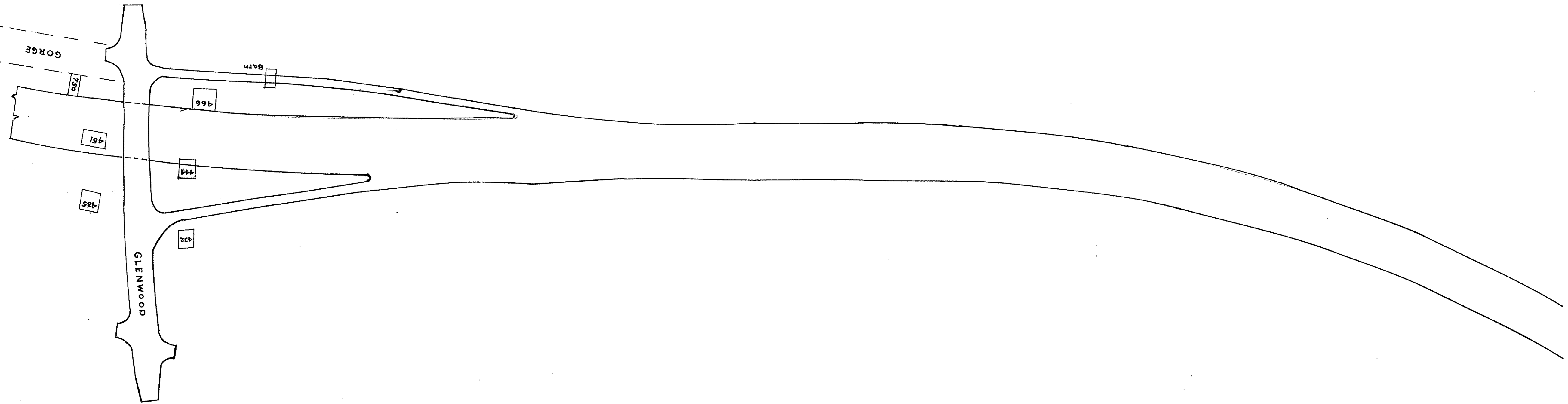
1000

Expressway Part III

Property Location
Where houses have not been moved
Feb. 1, 1951



0+00.0

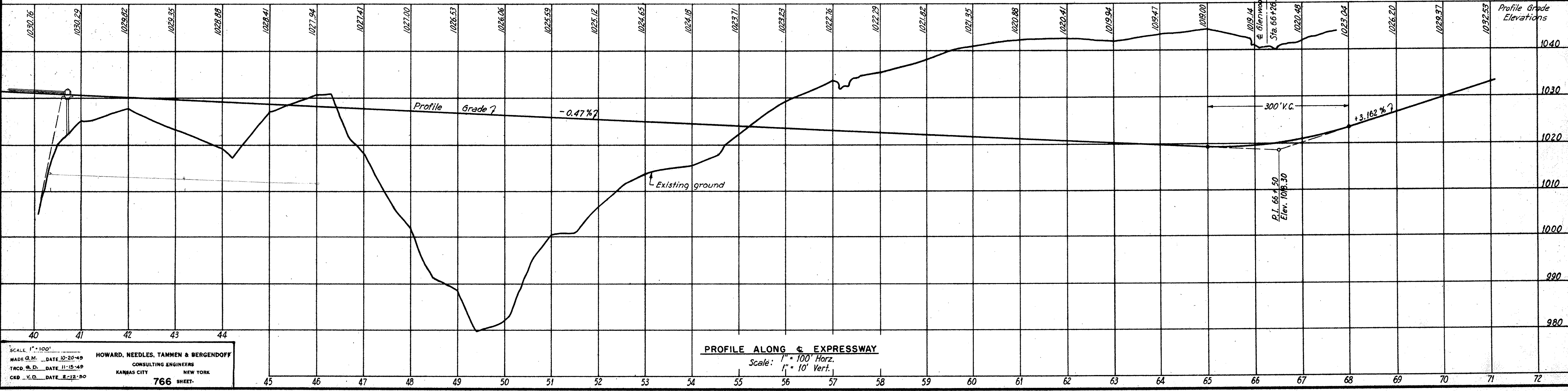
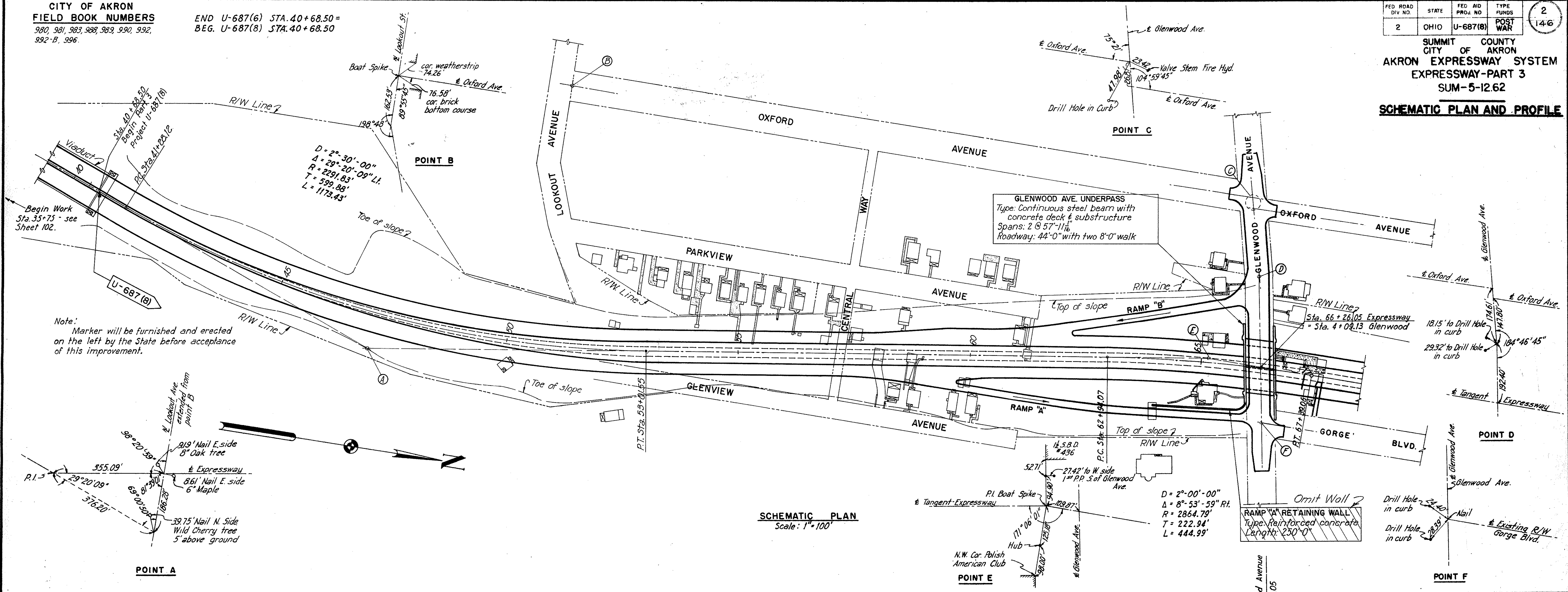


CITY OF AKRON
FIELD BOOK NUMBERS
980, 981, 983, 988, 989, 990, 992,
992-B, 996.

END U-687(6) STA. 40+68.50 =
BEG. U-687(8) STA. 40+68.50

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	2
2	OHIO	U-687(8)	POST WAR	146

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62
SCHEMATIC PLAN AND PROFILE



SCALE: 1" = 100'
MADE O.M. DATE 10-20-49
TRCD. O.D. DATE 11-15-49
CHK. V.E. DATE 3-12-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

766 SHEET.

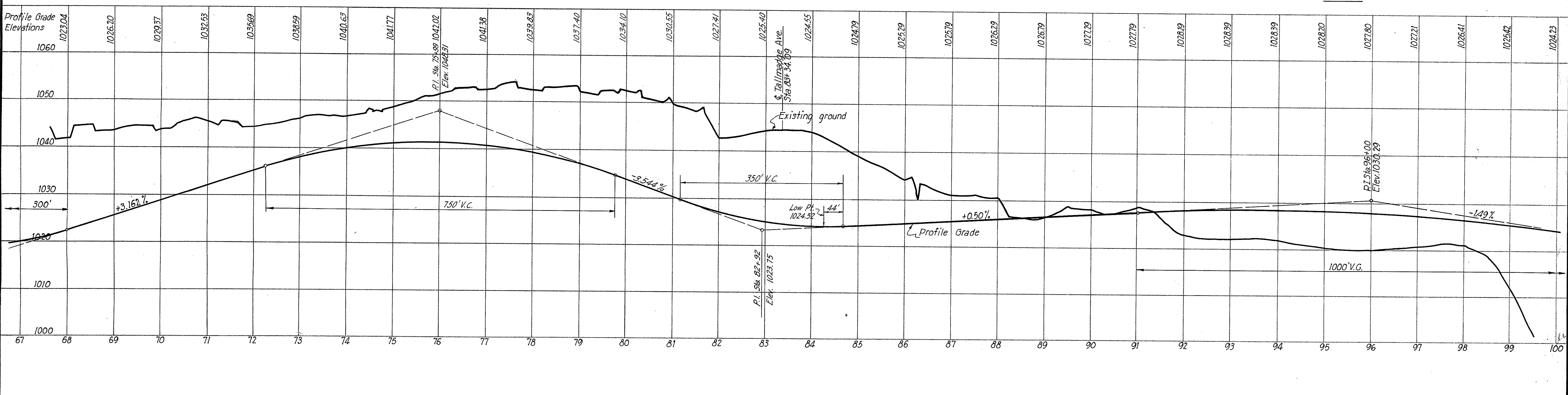
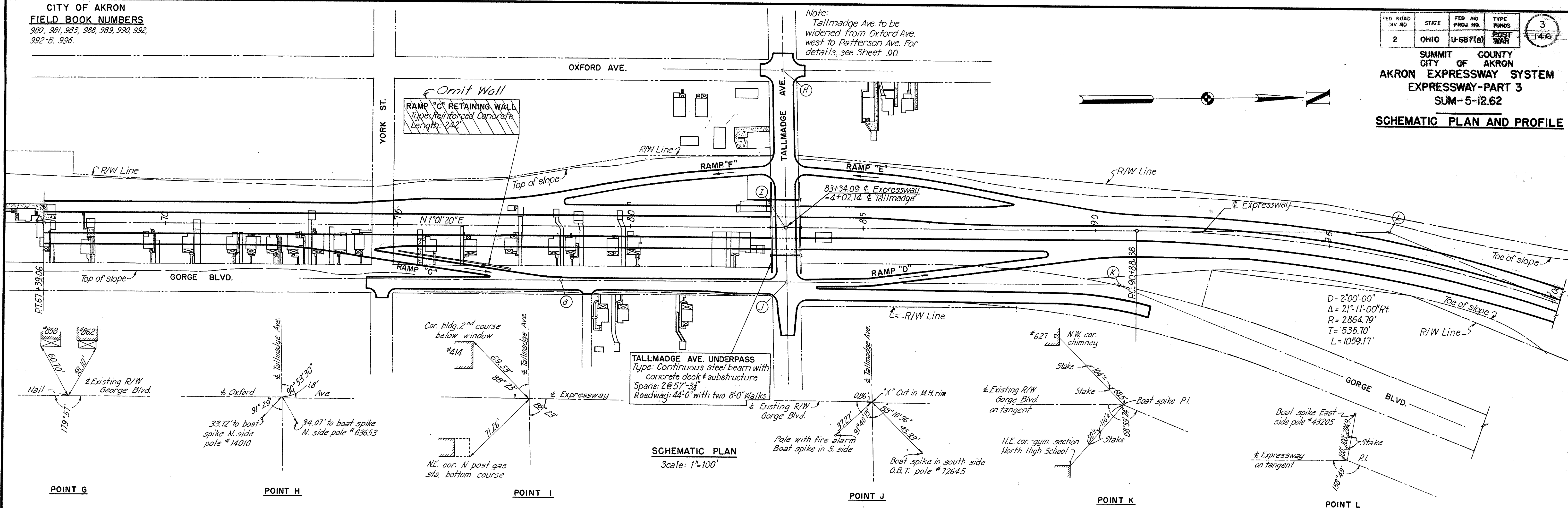
Revised 4-16-51

CITY OF AKRON
 FIELD BOOK NUMBERS
 980, 981, 983, 988, 989, 990, 992,
 992-B, 996.

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS	3
2	OHIO	U-58718	POST WAR	146

SUMMIT COUNTY
 CITY OF AKRON
 AKRON EXPRESSWAY SYSTEM
 EXPRESSWAY-PART 3
 SUM-5-12.62
 SCHEMATIC PLAN AND PROFILE

Note:
 Tallmadge Ave. to be
 widened from Oxford Ave.
 west to Patterson Ave. For
 details, see Sheet 90.



SCALE 1"=100'
 MADE A.R. DATE 6-21-50
 TRCD. R.R. DATE 7-8-50
 CKD. G.M. DATE 7-10-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY, NEW YORK
 766 SHEET

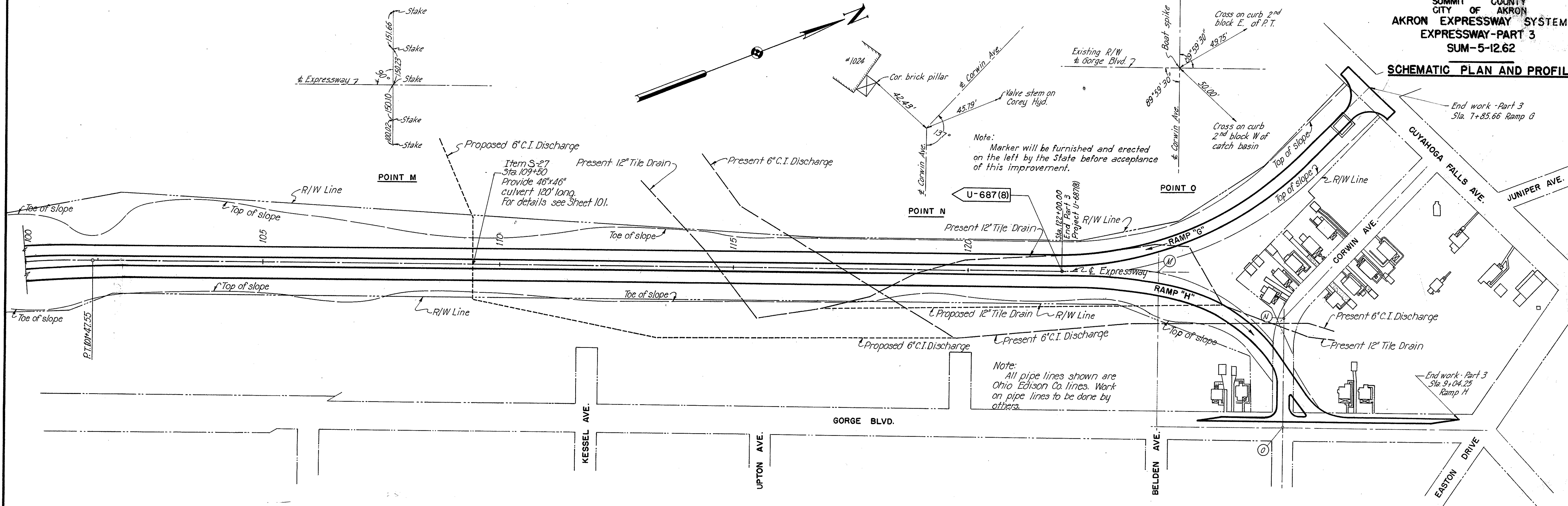
Revised 4-16-51
 Rev. 9-27-50

CITY OF AKRON
FIELD BOOK NUMBERS
980, 981, 982, 983, 989, 990, 992,
992-B, 996.

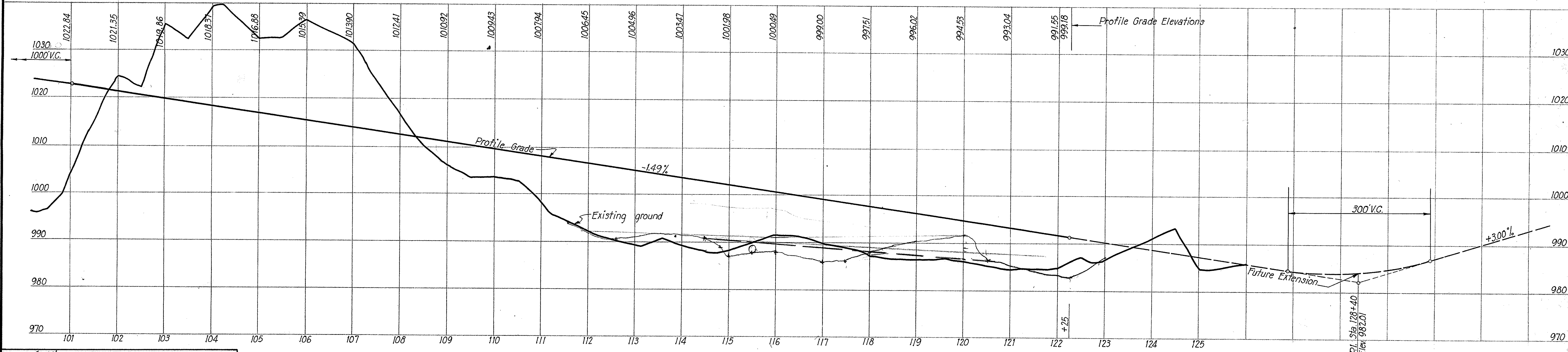
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE PUMPS	4
2	OHIO	U-687(8)	POST WAR	146

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
EXPRESSWAY-PART 3
SUM-5-12.62

SCHEMATIC PLAN AND PROFILE



SCHEMATIC PLAN
Scale: 1" = 100'



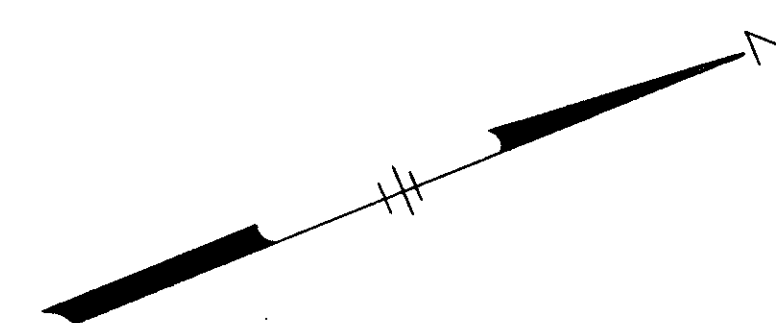
PROFILE ALONG EXPRESSWAY
Scale: 1" = 100' Horz.
1" = 10' Vert.

SCALE 1" = 100'
MADE A.R. DATE 5-23-50
TRCD R.R. DATE 7-10-50
CRD G.M. DATE 7-12-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

766 SHEET

245



TRACT 7

BLOCK 37
PERKINS ADDITION
BK. 1 PG. 13

PENNA. & OHIO CANAL
B.&O. R.R.

NORTH ST.

HARRIS ST.

SPENCER ST.

LITTLE CUYAHOGA RIVER

SHARPS LANE

Expressway

Block 41 Perkins addition to Akron

TRACT 6

PARCEL NO.	OWNER	TYPE OF ACQUISITION
9 & 9A	Real Estate & Impr. Co. of Balt. City	Easement
10	B. & O. R. R. Co.	Easement
11	Board of Education	Easement
12	V. Wallyn	Fee Simple
13	E. M. Wood & I. M. Collage	Fee Simple
14	M. Jones	Fee Simple
15	Sarah Yates	Fee Simple
16	J. W. Costa	Fee Simple
17	M. A. Black	Fee Simple
18	F. & L. Stewart	Fee Simple
19	W. & D. M ^c Clain	Fee Simple
20	Mary E. Nichols	Fee Simple
21	Harris Street	Fee Simple
22	Botzum Brothers Co.	Fee Simple
23	Real Estate & Impr. Co. of Balt. City	Fee Simple
24	F. G. Zeller & C. Z. Campbell	Fee Simple

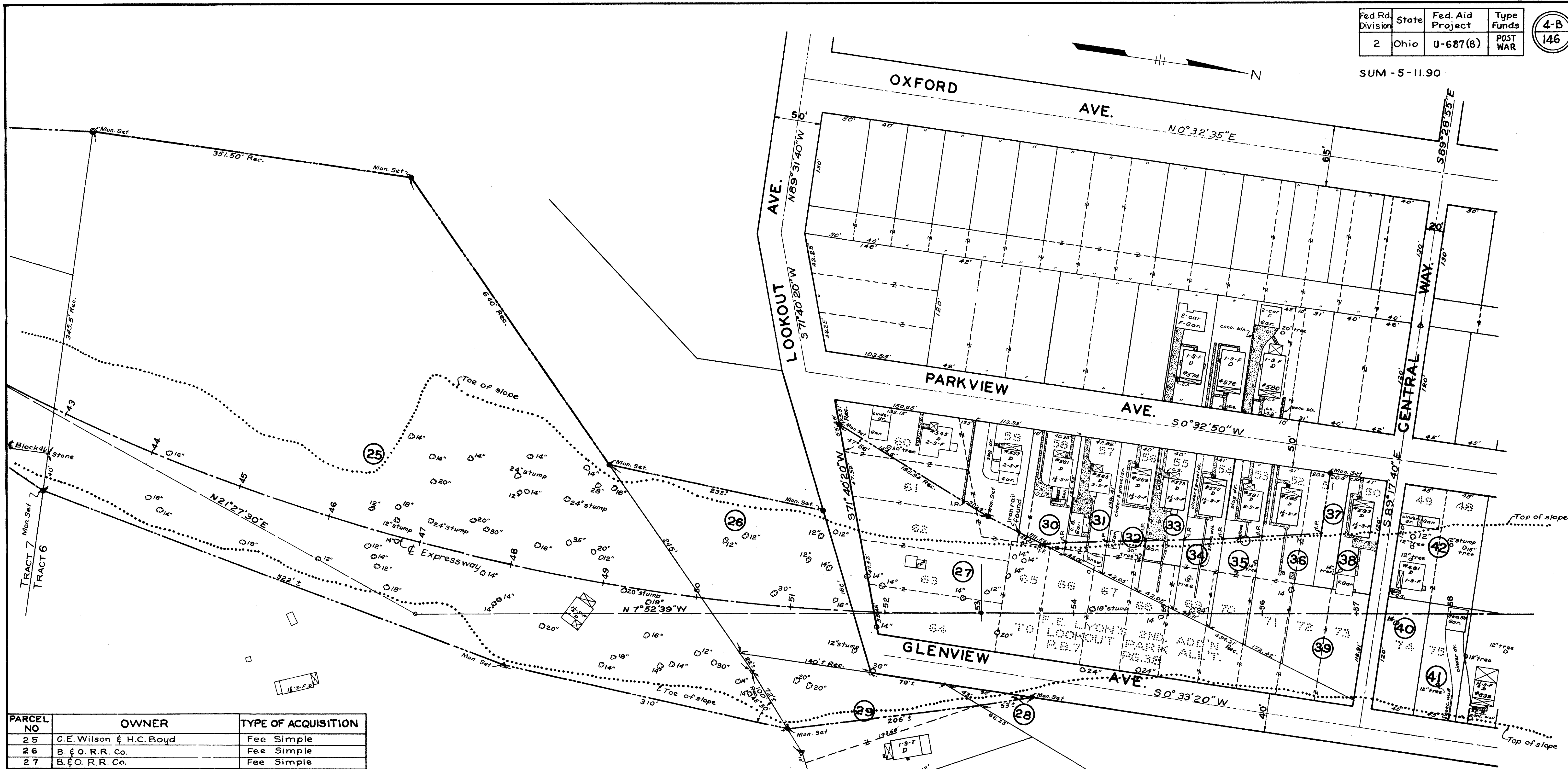
LEGEND

- Pole
- ⊙ Tree
- Iron pin
- ⊙ Mon. Leaded iron pipe set in concrete.

SCALE - 1" = 50'

RIGHT OF WAY PLAN STA. 30+00 TO STA. 45+00

SUM - 5 - 11.90



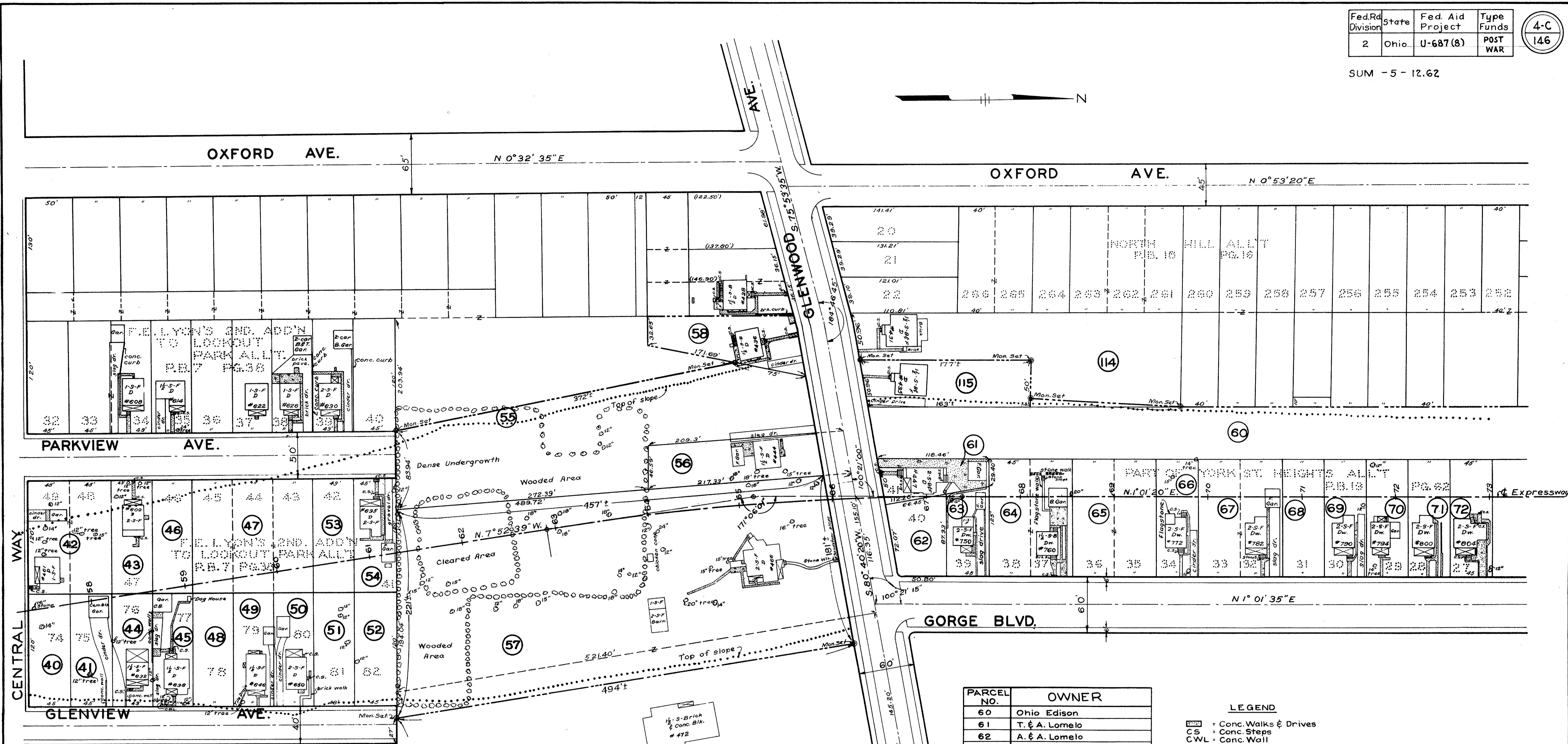
PARCEL NO	OWNER	TYPE OF ACQUISITION
25	C.E. Wilson & H.C. Boyd	Fee Simple
26	B. & O. R.R. Co.	Fee Simple
27	B. & O. R.R. Co.	Fee Simple
28	Real Estate & Impr. Co. of Balt. City	Fee Simple
29	G.O. & M.G. Brady	Fee Simple
30	F.M. Firth & J. Elgin	Fee Simple
31	V. & M. Rasicci	Fee Simple
32	F.W. & M.C. Bruce	Fee Simple
33	G. & C.C. Petrunonis	Fee Simple
34	E. Charno	Fee Simple
35	P. Rowlett	Fee Simple
36	K.R. & G.E. Richter	Fee Simple
37	C.C. Hibinger	Fee Simple
38	C.C. & H.E. Hibinger	Fee Simple
39	C. & H.E. Hibinger	Fee Simple
40	E.L. Marting Co.	Fee Simple
41	G.C. Stoltz	Fee Simple
42	C.H. Zindel	Fee Simple

LEGEND
 [Symbol] = Conc. Walks & Drives
 CS = Conc. Steps
 O = Tree
 *I.P. = Iron pin
 @Mon. = Leaded iron pipe set in concrete.

Fed. Rd. Division	State	Fed. Aid Project	Type Funds
2	Ohio	U-687(8)	POST WAR

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SUM - 5 - 12.62



PARCEL NO.	OWNER	TYPE OF ACQUISITION
40	E.L. Marting Co.	Fee Simple
41	G.C. Stoltz	Fee Simple
42	C.H. Zindel	Fee Simple
43	P.A. & R.A. March	Fee Simple
44	M. Stoltz	Fee Simple
45	S.D. Hansen	Fee Simple
46	E.V. March	Fee Simple
47	E.L. Marting Co.	Fee Simple
48	R.B. & S.D. Hansen	Fee Simple
49	W. Novak	Fee Simple
50	T.M. & M.J. Sisson	Fee Simple
51	E. Fretcher	Fee Simple
52	F.A. Quinton	Fee Simple
53	T.H. Plour	Fee Simple
54	P. & L. Plour	Fee Simple
55	Ohio Edison Co.	Fee Simple
56	F.M. Amer Co.	Fee Simple
57	Polish America Citizens Club	Fee Simple
58	H.R. & A.M. Jordan	Fee Simple

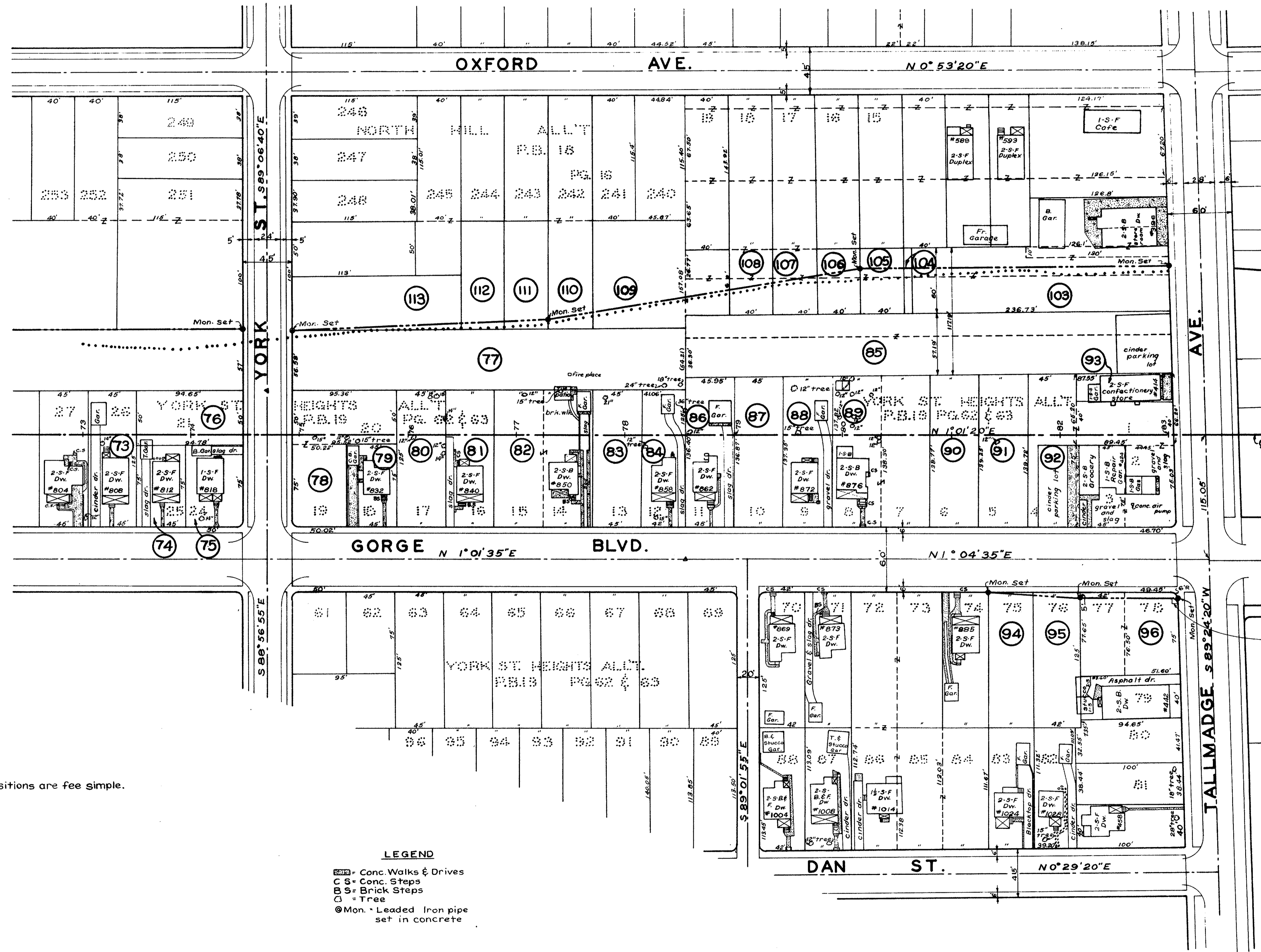
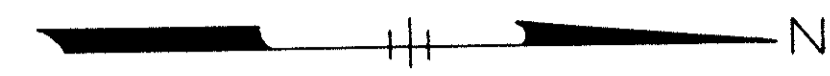
PARCEL NO.	OWNER
60	Ohio Edison
61	T. & A. Lomelo
62	A. & A. Lomelo
63	M.W. McGuinness
64	L.P. & A.S. D'Alessio
65	G. & I.M. Joyce
66	L.H. Schneider
67	M.A. & V.J. DeJacimo
68	E.J. De Rosa
69	J. & J. Fetchu
70	J.W. Oledzki
71	M.A. Richards
72	C.E. & M. Clark
114	D.J. & R.R. Burson
115	F.C. & L.J. Phillips

LEGEND
 CS = Conc. Walks & Drives
 CS = Conc. Steps
 CWL = Conc. Wall
 BS = Brick Steps
 T = Tree

NOTE:
All acquisitions are fee simple.

SCALE - 1" = 50'

STA. 58+00 TO STA. 73+00
RIGHT OF WAY PLAN



PROP. LINE
CURVE DATA
A = 88°19'45"
R = 5'
T = 4.86'
L = 7.71'

PARCEL NO.	OWNER
73	J.H. & E.C. Ebner
74	M.E. & M.L. Reder
75	R. Gilletly
76	R.E. Gilletly
77	Ohio Edison Company
78	E. Oledski
79	A.L. & E.L. Case
80	State of Ohio
81	W.J. & E.G. Breth
82	M.A. Volpe
83	L. Paradise
84	C.W. & N.M. Seadler
85	Ohio Edison Company
86	G. & L. Mc Cafferty
87	H.R. Smith
88	M.B. Sadler
89	R. & T. Kolodziejczak
90	E.G. Hammack
91	Huntington Land Company
92	M. Desantis
93	J.S. & S.P. Miller
94	J. & J. Eastman
95	H.I. Amstutz
96	J.C. Klug
103	H.I. Albright
104	Amer Company
105	F. Micale
106	Amer Co.
107	A.B. & C. Scaduto
108	W.C. Boehringer
109	Amer Co.
110	C.M. Henterly
111	R. & M. Quattraro
112	Amer Company
113	I. Kinn

NOTE:
All acquisitions are fee simple.

LEGEND
 - Conc. Walks & Drives
 - Conc. Steps
 - Brick Steps
 - Tree
 - Mon. - Leaded Iron pipe set in concrete

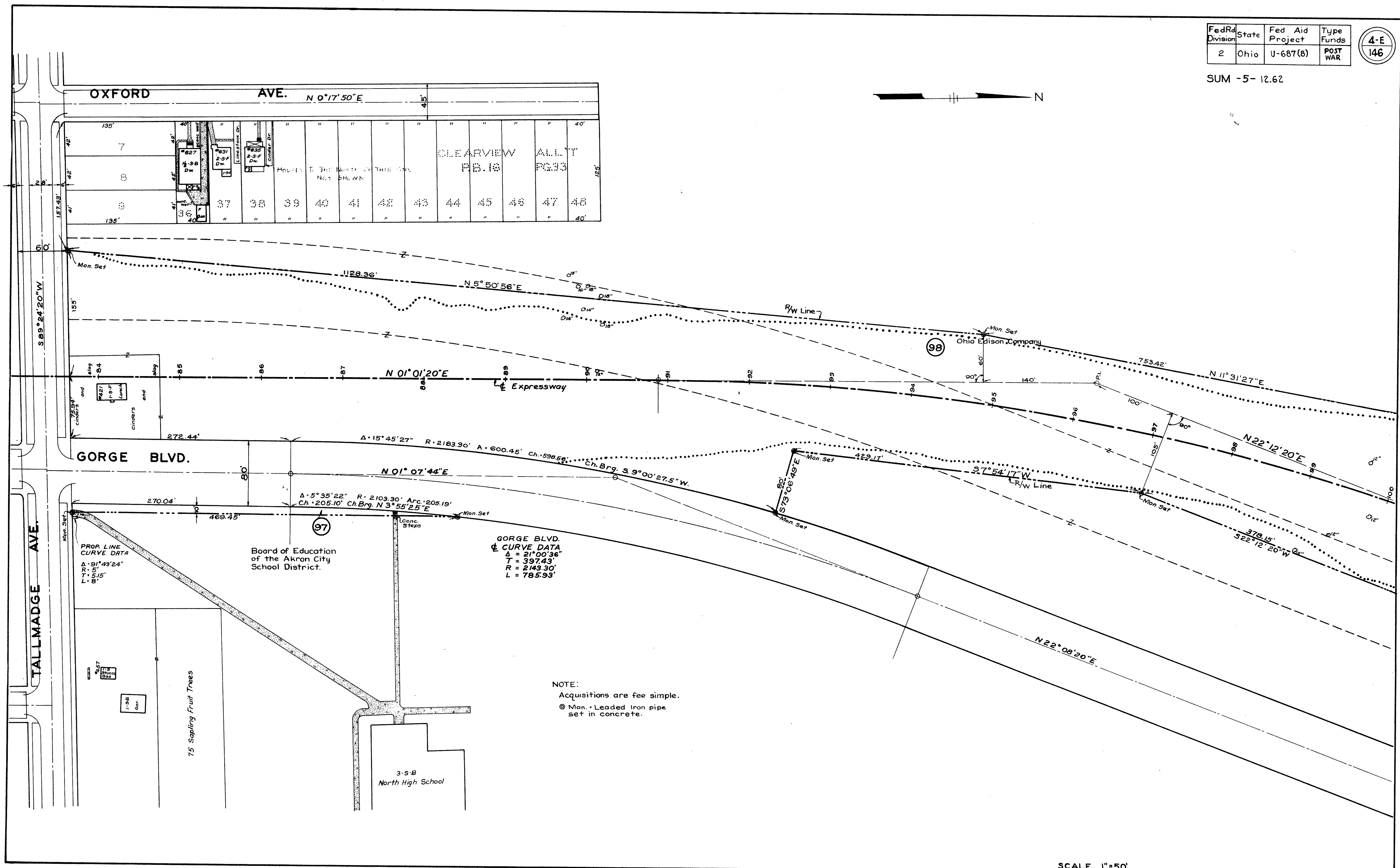
SCALE 1"=50'

RIGHT OF WAY PLAN STA. 73+00 TO STA. 83+00

Fed Rd Division	State	Fed Aid Project	Type Funds
2	Ohio	U-687(8)	POST WAR

4-E
146

SUM -5- 12.62

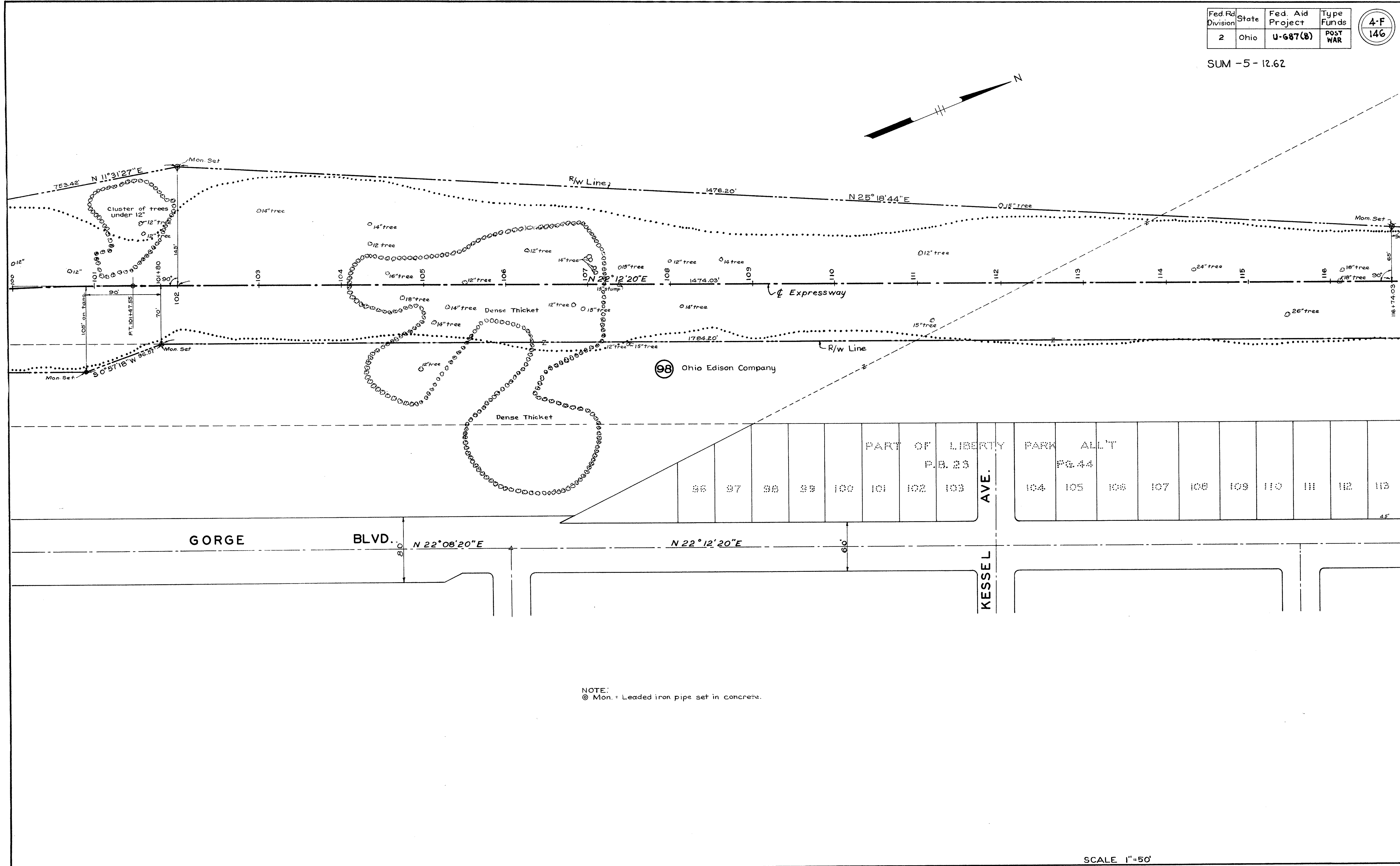
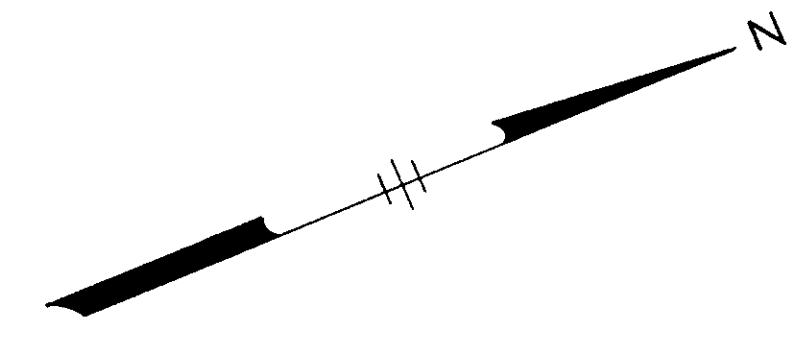


NOTE:
Acquisitions are fee simple.
© Mon. Leaded iron pipe set in concrete.

Fed. Rd. Division	State	Fed. Aid Project	Type Funds
2	Ohio	U-687(8)	POST WAR

4-F
146

SUM -5 - 12.62

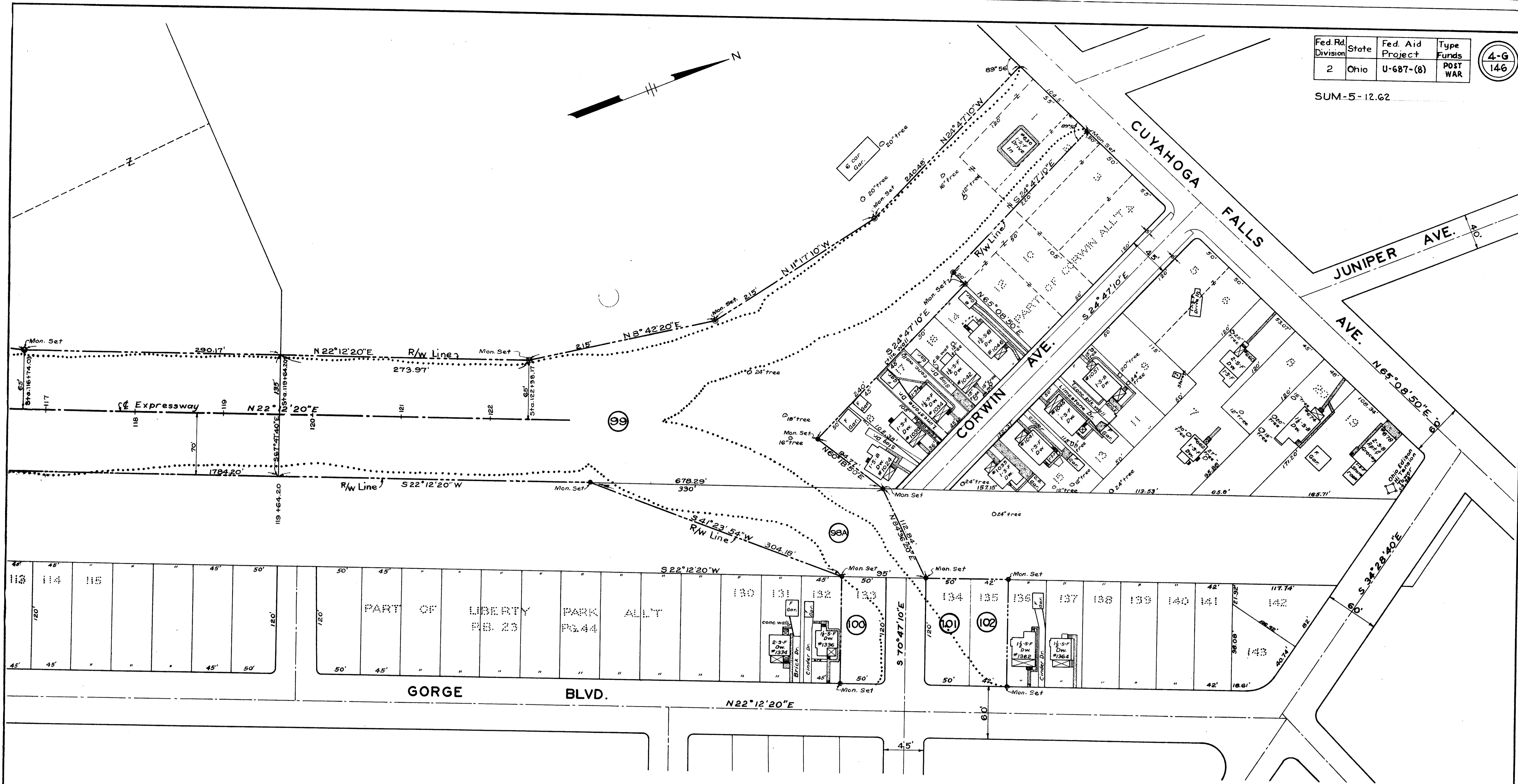
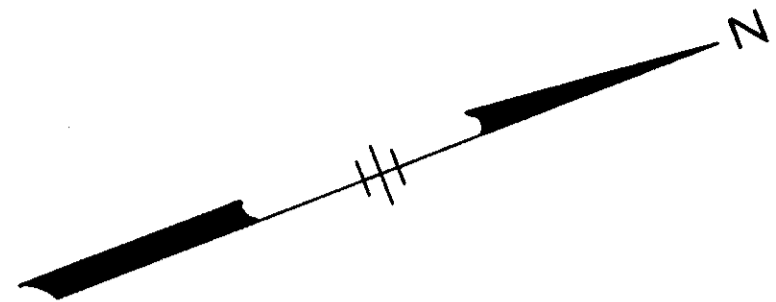


NOTE:
 Ⓞ Mon. - Leaded iron pipe set in concrete.

Fed. Rd. Division	State	Fed. Aid Project	Type Funds
2	Ohio	U-687-(8)	POST WAR

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SUM-5-12.62



PARCEL NO.	OWNER
99	Mrs. Gerald B. Smith
100	M. Pusateri
101	F.A. & E.E. Roth
102	Huntington Land Company
98A	Ohio Edison Co.

NOTE:
All acquisitions are fee simple
⊙ Mon. = Leaded iron pipe set in concrete.

SCALE 1"=50'

STA. 116+00 TO STA. 123+00±
RIGHT OF WAY PLAN