



CUY-90-14.90

PID 77332/85531

APPENDIX EX-62

CUY-090-1545 PID 0.687

(Reference Document)

State of Ohio
Department of Transportation
Jolene M. Molitoris, Director

**Innerbelt Bridge
Construction Contract Group 1 (CCG1)**

6-0

CUY-90-15.45

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

UI-1057(4)

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO	UI 1057 (4)	

1
43

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY - 42R - 17.50

PART 2

INNER BELT FREEWAY - CENTRAL VIADUCT

BR. NO. CU-42R-175
CUYAHOGA COUNTY
CITY OF CLEVELAND

PART 2 SUBSTRUCTURE

MAR 15 1952
GROUND PHOTO LAB

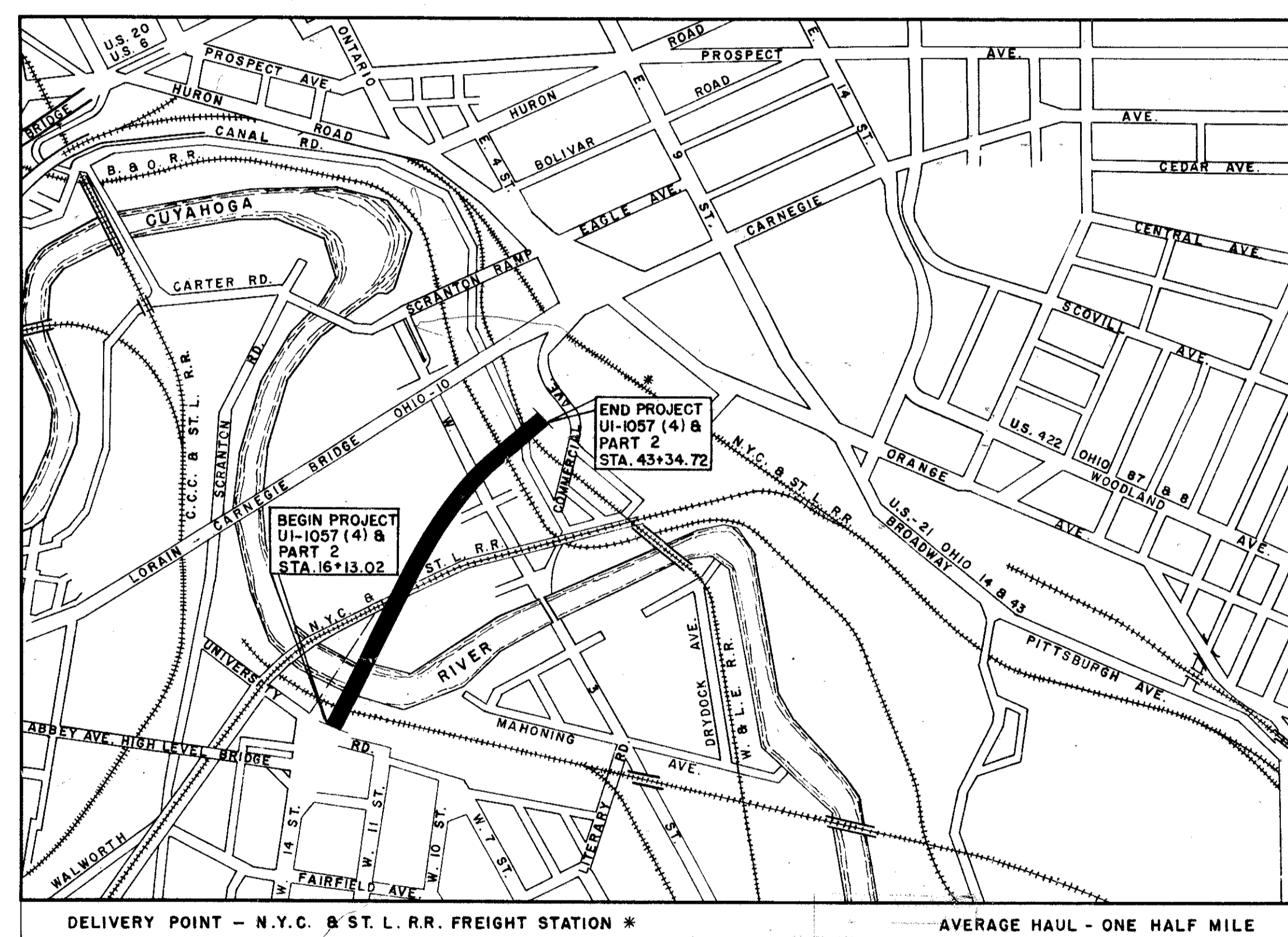
THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR OF HIGHWAYS IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 REVISED CODE OF OHIO.

INDEX OF SHEETS

1	TITLE SHEET	23-28	PIER SHAFT DETAILS
2	QUANTITIES	29	ANCHOR BOLT PLAN AND DETAILS
3	GENERAL NOTES	30-32	REINFORCEMENT SCHEDULES
4,5	GENERAL PLAN AND ELEVATION	33-37	STORM SEWER AND DRAINAGE DETAILS
6-9	GENERAL LAYOUT, TEST HOLE BORINGS, EXISTING CONDITIONS	38,39	DOCK WALL
10,11	RAILROAD TRACK MODIFICATIONS	40-43	CONSTRUCTION IN ERIE RAILROAD YARD
12,13	EXISTING CONDITIONS AT PIER LOCATIONS	10,11,35	R. R. FORCE ACCOUNT WORK
14-22	PIER FOOTINGS	36A	REVISED SHEET no. 36

LINE DATA

BEGIN PROJECT	UI-1057 (4)	STA. 16 + 13.02
END PROJECT	UI-1057 (4)	STA. 43 + 34.72
NET LENGTH	UI-1057 (4) AND WORK	2,721.7 LIN. FT. or 0.515 MILES



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.

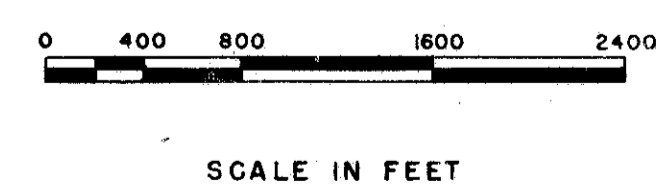
THE RIGHT OF WAY FOR THIS IMPROVEMENT WILL BE PROVIDED BY THE STATE OF OHIO.

- APPROVED _____ DATE 9-2-54 DIRECTOR OF PUBLIC SERVICE, CITY OF CLEVELAND
- APPROVED _____ DATE 9-2-54 DIVISION DEPUTY DIRECTOR
- APPROVED _____ DATE 7/14/54 DEPUTY DIRECTOR OF PLANNING AND PROGRAMMING
- APPROVED _____ DATE 9-8-54 ENGINEER OF BRIDGES
- APPROVED _____ DATE _____ ENGINEER OF LOCATION & DESIGN
- APPROVED _____ DATE 9-10-54 DEPUTY DIRECTOR OF DESIGN & CONSTRUCTION
- APPROVED _____ DATE 9-14-54 FIRST ASSISTANT DIRECTOR
- APPROVED _____ DATE 9-15-54 DIRECTOR OF HIGHWAYS
- PRINT APPROVED BY _____ DATE 8-31-54 CHIEF ENGINEER, ERIE RAILROAD
- PRINT APPROVED BY _____ DATE 8-31-54 CHIEF ENGINEER, NEW YORK CENTRAL SYSTEM
- APPROVED _____ DATE _____ CHIEF ENGINEER, NEW YORK, CHICAGO AND SAINT LOUIS RAILROAD CO.
- PRINT APPROVED BY _____ DATE 9-2-54 CHIEF ENGINEER, BALTIMORE AND OHIO RAILROAD

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

H.G. SOURS
ASSOCIATE
COLUMBUS

LOCATION PLAN



PORTION TO BE IMPROVED

SUPPLEMENTAL SPECIFICATIONS			
NUMBER	DATE	NUMBER	DATE
CE-107	5-21-53		
T-171.19	R.3-19-53		
M-101.7	1-24-53		

STANDARD DRAWINGS			
NUMBER	DATE	NUMBER	DATE
I-B MH No. 1	5-1-52		
G-7.07	1-2-53		
I-B MHV 1-A	6-1-54		
I-1,2,3,4 & 5	2-20-45		

* Accepted. ** Submitted to B.P.R. for approval.

MAR 15 1952
GROUND PHOTO LAB

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED _____

DISTRICT ENGINEER _____ DATE _____

FILE NO.	CUYAHOGA COUNTY
SEC	00077
DATE OF LETTING	_____, 195__
CONTRACT NO.	

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY-42R-17.50

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	TOTAL	UNIT	PIER 1		PIER 2		PIER 3		PIER 4		PIER 5		PIER 6		PIER 7		PIER 8		WEST END PIER		EAST END PIER		STRUCTURE REMOVAL	SEWER SYSTEM	PROJECT IN GENERAL
				IN	IS	2N	2S	3N	3S	4N	4S	5N	5S	6N	6S	7N	7S	8N	8S	WN	WS	EN	ES			
E-2	Cofferdams, Cribbs and Sheeting	20	Each	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
E-2	Unclassified Excavation	17,227	Cu. Yds.	1,395	1,419	829	816	975	1,035	802	975	829	916	829	829	776	975	1,150	776	543	610	355	393			
S-1	Class "E" Concrete, Footings	6,098	Cu. Yds.	395.6	395.6	308.0	351.3	395.4	395.4	308.0	395.7	308.0	395.7	308.2	308.0	308.0	395.7	307.9	307.9	125.1	125.1	123.0	140.4			
S-1	Class "E" Concrete, above Footings	5,171	Cu. Yds.	177.7	177.7	259.8	259.8	267.6	267.6	275.3	273.6	285.9	285.9	270.2	270.2	265.1	265.1	184.6	184.6	288.5	170.6	370.6	370.6			
S-4	Reinforcing Steel	4,393,556	Lbs.	78,627	78,627	79,962	75,499	83,018	83,018	81,411	85,231	82,639	86,592	80,941	80,941	80,532	84,485	74,470	74,470	26,237	16,910	27,980	31,968			
S-7	Structural Steel	29,148	Lbs.	1,649	1,649	1,575	1,575	1,617	1,617	1,617	1,622	1,608	1,608	1,617	1,608	1,608	1,449	1,449	842	847	926	10,57				
S-7	Wrought Iron Ladder Rungs	7,027	Lbs.	280	280	399	399	406	406	413	413	427	427	427	413	413	280	280	224	119	294	294				
S-8	Field Painting of Structural Steel 2 Coats		Lump Sum																							
S-9	1/2" Sponge Rubber Expansion Joint Material Sec. M-10.02	716	Sq. Ft.	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	25.0	25.0	25.0	25.0			
S-17	First Pile Test Load		Lump sum																							Lump Sum
S-17	Subsequent Pile Test Loads	9	Each																							5
S-18	Steel Bearing Piles (12 BP 53)	4,670	Lin. Ft.																	2,400	2,280					
S-18	14" Cast-in-place Reinforced Concrete Piles	125,991	Lin. Ft.	7,740	7,740	7,290	7,200	8,100	8,100	7,290	7,740	6,885	7,310	6,160	6,480	5,670	6,020	4,860	4,860			1,680	1,920			
S-24	Removal of Existing Structure No. 1		Lump sum																							
S-24	Removal of Existing Structure No. 2		Lump sum																							
S-24	Removal of Existing Structure No. 3		Lump sum																							
S-24	Removal of Existing Structure No. 4		Lump sum																							
S-24	Removing Existing Concrete Pedestals which Interfere with New Construction		Lump sum																							Lump Sum
S-25	Electrical Grounds		Lump sum																							Lump Sum
S-29	8" Wrought Iron Pipe, Including Specials	1,036	Lin. Ft.	33	33	59	59	59	59	61	61	63	63	61	61	60	60	45	45	39	22	45	48			
I-2	8" Pipe for Storm Sewers	6	Lin. Ft.																							6
I-2	12" Pipe for Storm Sewers	1,333	Lin. Ft.																							1,333
I-2	12" Pipe for Storm Sewers under Pavement	251	Lin. Ft.																							251
I-2	15" Pipe for Storm Sewers	335	Lin. Ft.																							335
I-2	15" Extra Strength Reinforced Concrete Culvert Pipe Sec. M-6.6 (c) for Storm Sewers	288	Lin. Ft.																							288
I-2	18" Pipe for Storm Sewers under Pavement	80	Lin. Ft.																							80
I-2	21" Pipe for Storm Sewers	142	Lin. Ft.																							142
I-2	24" Pipe for Storm Sewers	932	Lin. Ft.																							932
I-2	24" Extra Strength Reinforced Concrete Pipe Sec. M-6.6 (c) for Storm Sewers	290	Lin. Ft.																							290
I-2	24" Pipe for Storm Sewers Under Pavement	84	Lin. Ft.																							84
I-2	24" Paved Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4 (d) for Storm Sewers	90	Lin. Ft.																							90
I-2	27" Paved Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4 (d) for Storm Sewers	80	Lin. Ft.																							80
I-2	36" Extra Strength Reinforced Concrete Culvert Pipe Sec. M-6.6 (c) for Storm Sewers	30	Lin. Ft.																							30
I-5	Pipe Special, 12" 35° Wye	1	Each																							1
I-5	Pipe Specials, 8" to 12" Increaser	16	Each																							16
I-5	Pipe Specials, 8" to 15" Increaser	2	Each																							2
I-8	Manholes, Standard No. 1	16	Each																							16
Spec.	Outlet Structure "C"		Lump sum																							
I-8	Alteration to Manhole "A"		Lump sum																							
I-8	Alteration to Manhole "B"		Lump sum																							
I-8	Alteration to Manhole "C"		Lump sum																							
I-8	Alteration to Manhole "D"		Lump sum																							
I-8	Alteration to Manhole "F"		Lump sum																							
Spec.	Outlet Structure "A"		Lump sum																							
Spec.	Outlet Structure "B"		Lump sum																							
I-16	Removal of Manhole "E"		Lump sum																							

CONTINUATION OF GENERAL NOTES
(From Sheet 3)

32. PILING (Continued from Sheet 5)

An effort shall be made to avoid great differences in the penetrated length of the individual piles in a footing. In striving for additional penetration, beyond 65 tons, piles of relatively short penetration shall be driven to a greater rate of blows-per-foot than longer piles.

The Contractor shall submit to the Engineer, at least 15 days before the beginning of pile driving, for approval by the Director, a plan showing the order in which he proposes to drive the piles in a footing. It is intended that the piles nearest the middle of the footing be driven first, to insure as great penetration for them as for the outer piles, after which successive outer piles will be driven.

PENCIL REVISIONS
SEPT. 20, 1955

Revised As-Built D.L.M. 12/31/57

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

QUANTITIES

CLEVELAND CUYAHOGA COUNTY OHIO

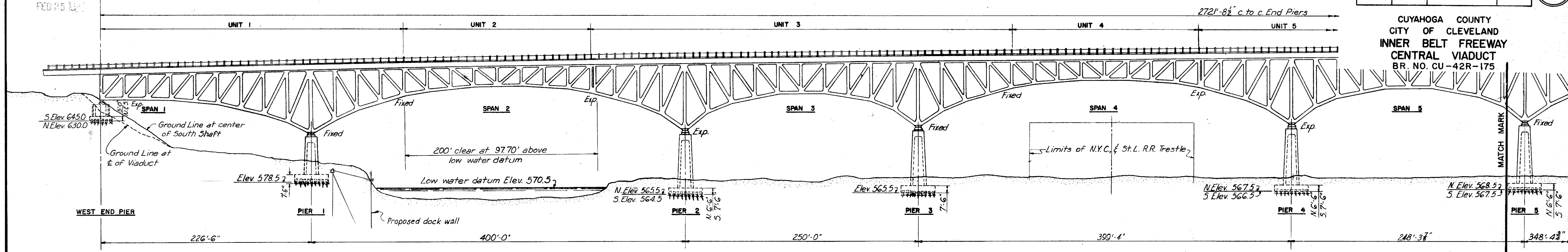
SCALE None
MADE G.A. DATE 6-22-54
TRCD. A.H. DATE 6-22-54
CKD. J.G.S. DATE 7-9-54
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK
914-1A SHEET 1.02

SUPPORT FOR ERIE RAILROAD TRACKS			
ITEM	DESCRIPTION	TOTAL	UNIT
E-1 & Spec.	Roadway Excavation	5,940	Cu. Yds.
E-4 & Spec.	Borrow	3,000	Cu. Yds.
S-1	Class "E" concrete, anchor caps	7.3	Cu. Yds.
S-4	Reinforcing steel in anchor caps	7,900	Pounds

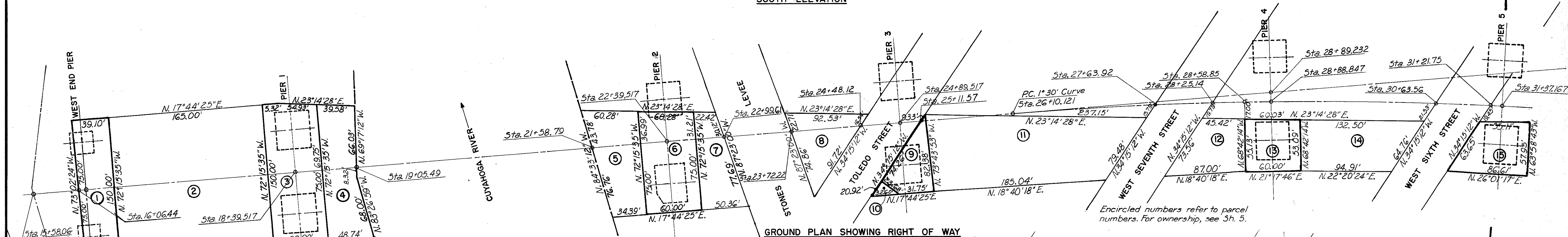
ITEM	DESCRIPTION	TOTAL	UNIT
S-7 & Spec.	Steel sheet piling including reinforcing plate, steel H anchor piles and steel wales, and timber connection angles, for dock wall	847,000	Pounds
S-7 & Spec.	Steel anchor rods, turnbuckles, pipe sleeves and fastenings for dock walls (including payment for necessary excavation, sheeting and bracing)	43,000	Pounds
S-13	Cresosoted timber fenders for dock wall, including hardware	2.40	M.B.M.
Special	Temporary timber crib wall	1,965	Sq. Ft.

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS	4
2	OHIO	UI 1057 (4)		43

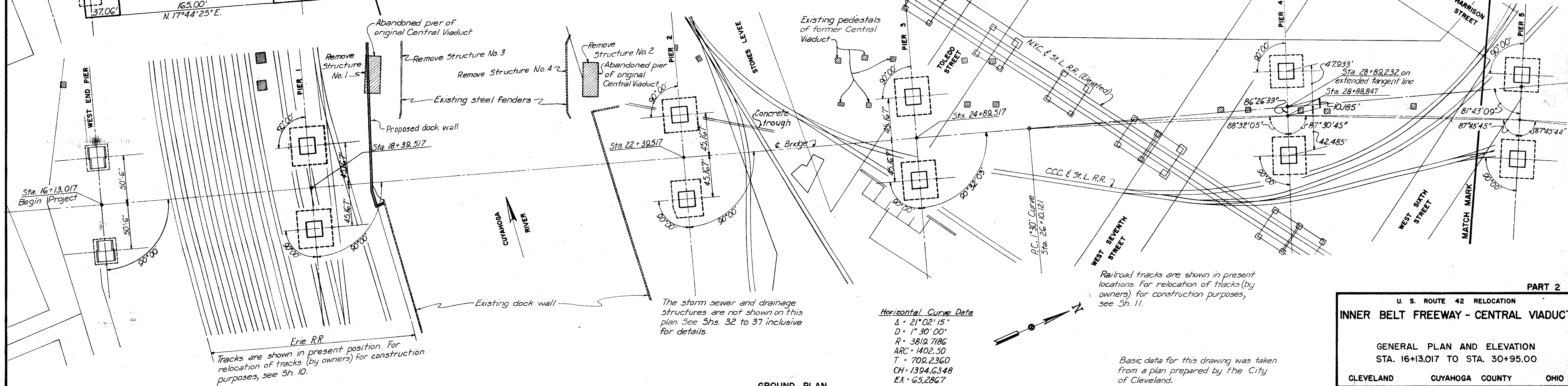
CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
BR. NO. CU-42R-175



SOUTH ELEVATION



GROUND PLAN SHOWING RIGHT OF WAY



GROUND PLAN

Horizontal Curve Data
 Δ = 21°02'15"
 D = 1°30'00"
 R = 3819.7186
 ARC = 1402.250
 T = 700.2360
 CH = 1394.6348
 EA = 65.2867

Basic data for this drawing was taken from a plan prepared by the City of Cleveland.

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

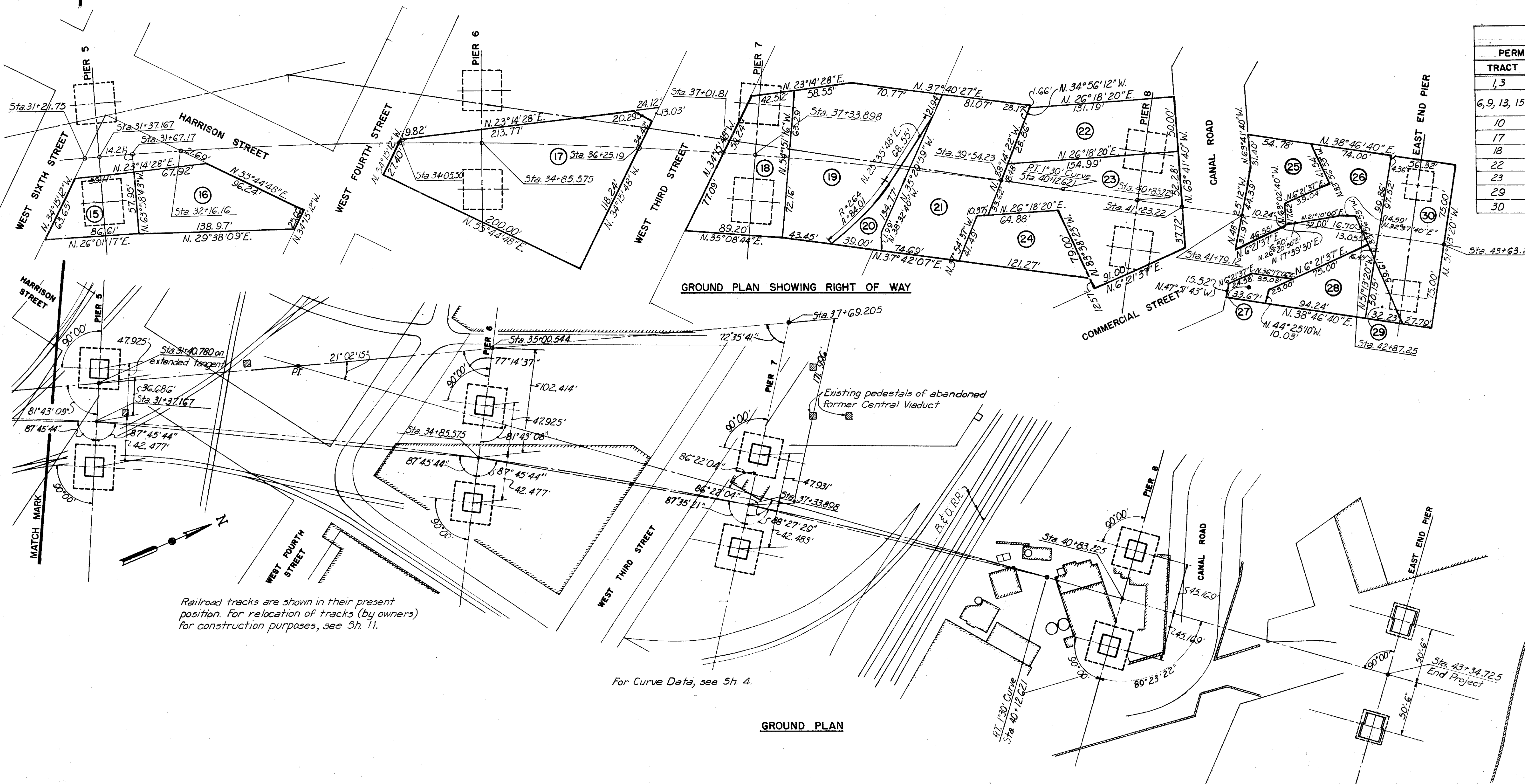
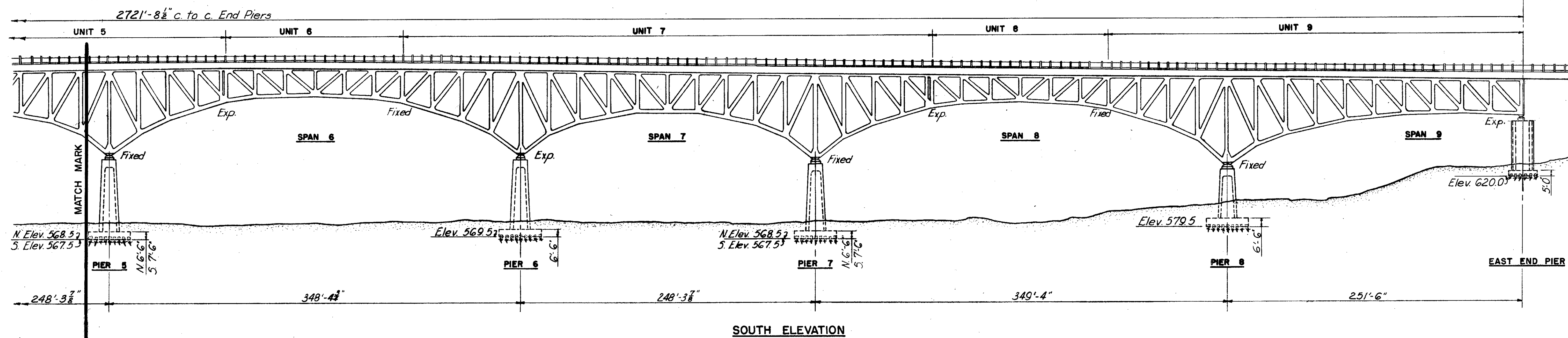
GENERAL PLAN AND ELEVATION
STA. 16+13.017 TO STA. 30+95.00

CLEVELAND CUYAHOGA COUNTY OHIO

SCALE 1" = 50'-0"
 MADE N.A.M. DATE 1-10-54
 TRCD N.A.M. DATE 6-12-54
 CKD G.A. DATE 7-8-54

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK
914-1A SHEET 1.04

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
BR. NO. CU-42R-175



RIGHT OF WAY ACQUISITION REQUIREMENTS			
PERMANENT ACQUISITION		AERIAL RIGHTS ONLY	
TRACT	OWNER	TRACT	OWNER
1, 3	Erie Railroad	2, 4	Erie Railroad
6, 9, 13, 15	C.C.C. & St. L. Railroad	5, 7, 8, 11, 12, 14, 16, 20	C.C.C. & St. L. Railroad
10	C.C.C. & St. L. Railroad	19, 21	B. & O. Railroad
17	United Garage & Service Corp.	24	Sidney C. Brant
18	B. & O. Railroad	25	W. & L. E. Railroad
22	Cleveland Trust Co.	26	Helen C. Lincoln
23	Mildred L. Richards	27	Wilson Terminals, Inc.
29	Louis J. Kaplan	28	Louis J. Kaplan
30	Helen C. Lincoln		

- Work included in this contract:
1. Two end piers
 2. Piers 1 to 8 inclusive
 3. Complete drainage and sewer system
 4. Removal of existing structures 1, 2, 3, and 4 from the Cuyahoga River
 5. Removal of 7 pedestals of former Central Viaduct
 6. Track modifications (force account by railroads)

Railroad tracks are shown in their present position. For relocation of tracks (by owners) for construction purposes, see Sh. 11.

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

GENERAL PLAN AND ELEVATION
STA. 30+95.00 TO STA. 43+34.725

CLEVELAND CUYAHOGA COUNTY OHIO

SCALE 1" = 30'-0"

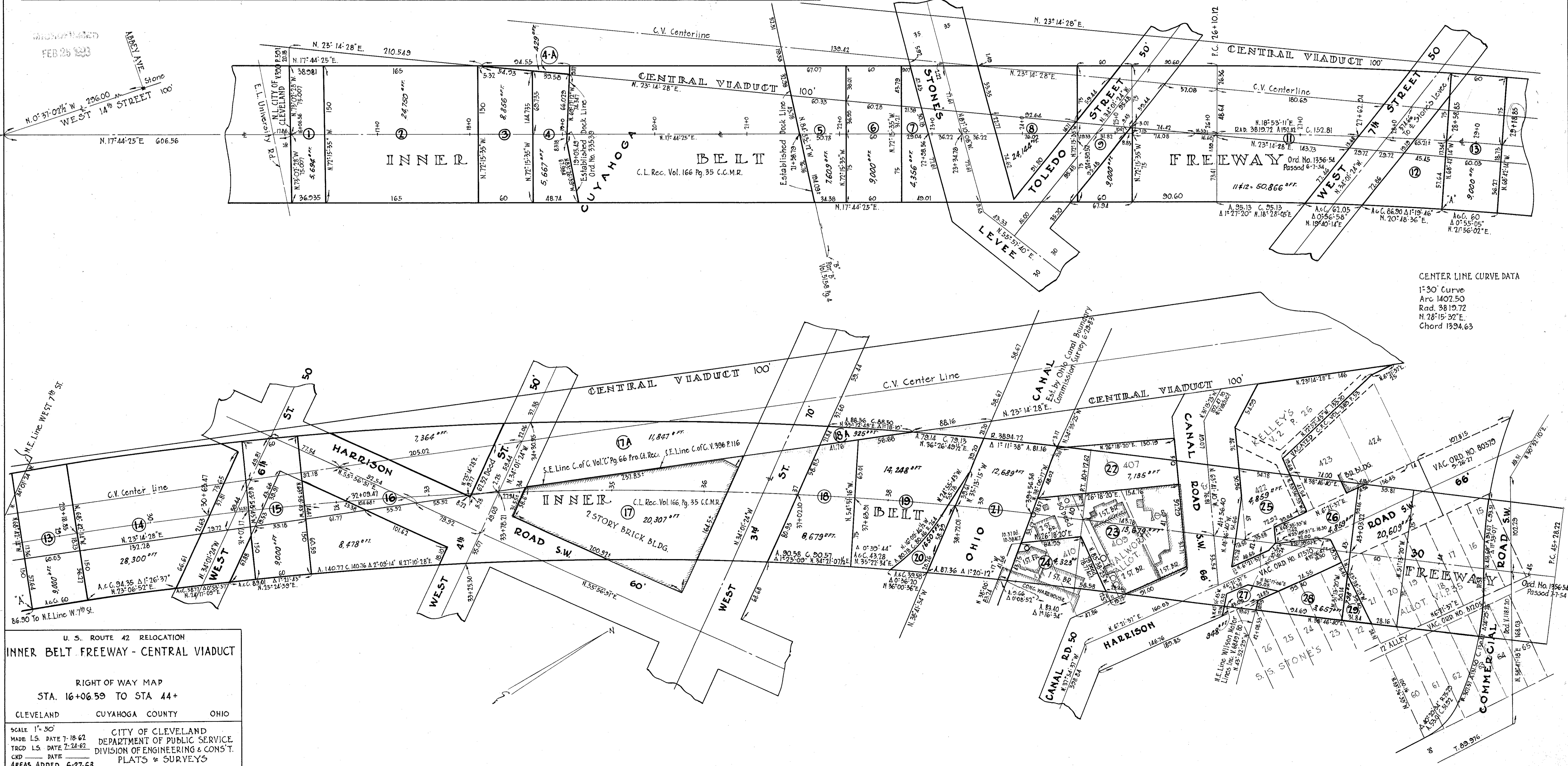
MADE DRAWN DATE 1-10-54
TRCD PLAN DATE 6-12-54
CKD G.A. DATE 7-8-54

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

914-1A SHEET 1.05

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY-42-R-17.50

RIGHT OF WAY ACQUISITION REQUIREMENTS					RIGHT OF WAY ACQUISITION REQUIREMENTS				
PARCEL	GRANTOR	GRANTEE	DEED	RIGHTS	PARCEL	GRANTOR	GRANTEE	DEED	RIGHTS
1	Erie Railroad Company	City of Cleveland	V.8455P.11	Permanent R. of W.	20	C.C.C. & St. L. R.R. Co. & Real Estate Imp. Co.	City of Cleveland	V.8673P.247	Aerial Rights & Sewer Easement
2	Erie Railroad Company	City of Cleveland	Par.2 V.8455P.14	Aerial Rights	21	The Baltimore & Ohio R.R. Co.	City of Cleveland	V.8651P.471	Aerial Rights
3	Erie Railroad Company	City of Cleveland	Par.3 V.8455P.13	Permanent R. of W.	22	The Cleveland Trust Co.	City of Cleveland	V.8723P.239	Permanent acquisition
4	Erie Railroad Company	City of Cleveland	Par.4 V.8455P.15	Aerial Rights	23	Mildred L. Richards	City of Cleveland	V.8455P.40	Permanent acquisition
5-7-8-11-12-14	The C.C.C. & St. L. & N.Y.C. R.R. Co's.	City of Cleveland	V.8673P.235	Aerial Rights	24	Sidney C. Brant	City of Cleveland	V.8441P.613	Permanent acquisition
6	The C.C.C. & St. L. & N.Y.C. R.R. Co's.	City of Cleveland	Par.1 V.8673P.135	Permanent acquisition	25	Wheeling & Lake Erie R.R.	City of Cleveland		Aerial Rights
9	The C.C.C. & St. L. & N.Y.C. R.R. Co's.	City of Cleveland	Par.2 V.8673P.135	Permanent acquisition	26-30	Helen C. Lincoln	City of Cleveland	V.8455P.42	Permanent acquisition
13	The C.C.C. & St. L. & N.Y.C. R.R. Co's.	City of Cleveland	Par.3 V.8673P.135	Permanent acquisition	27	Wilson Terminals Inc.	City of Cleveland	V.8486P.33	Permanent acquisition
15	The C.C.C. & St. L. & N.Y.C. R.R. Co's.	City of Cleveland	Par.4 V.8673P.135	Permanent acquisition	28	Louis J. Kaplan	City of Cleveland	Vol.8439P.128	Permanent acquisition
16	The C.C.C. & St. L. & N.Y.C. R.R. Co's.	City of Cleveland	V.8673P.235	Aerial Rights	29	Louis J. Kaplan	City of Cleveland	V.8439P.128	Permanent acquisition
17	United Garage & Service Corp. dtd	City of Cleveland	V.8068P.460	Permanent acquisition	4A	N.Y. Penna and Ohio R.R.	City of Cleveland	Vol.900P.591	Permanent acquisition
18	The Baltimore & Ohio R.R. Co.	City of Cleveland	V.8835P.126	Permanent acquisition	17A	Margaretta Stone, S.L.M. Barlow, Chas. Day, Stephen Smith	City of Cleveland	V.396P.116 Par.3 V.C.P.66 r. r. r.	Permanent acquisition
19	The Baltimore & Ohio R.R. Co.	City of Cleveland	V.8835P.126	Permanent acquisition	18A	W.J. Gordon	City of Cleveland	Par.4 V.C.P.66 r. r. r.	Permanent acquisition



U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

RIGHT OF WAY MAP
STA. 16+06.59 TO STA. 44+

CLEVELAND CUYAHOGA COUNTY OHIO

SCALE 1" = 50'
MADE L.S. DATE 7-18-62
TRCD L.S. DATE 7-24-62
CND DATE
AREAS ADDED 6-27-63

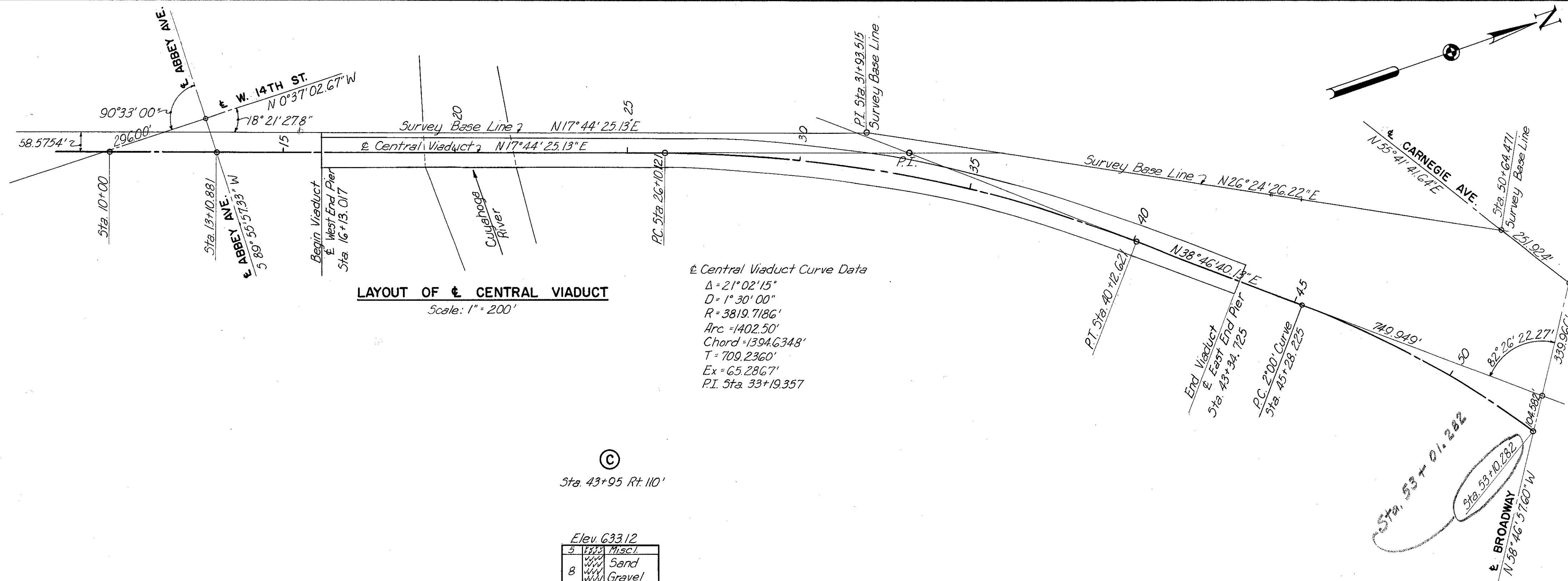
CITY OF CLEVELAND
DEPARTMENT OF PUBLIC SERVICE
DIVISION OF ENGINEERING & CONSTRUCTION
PLATS & SURVEYS

REPRODUCED
FEB 25 1983

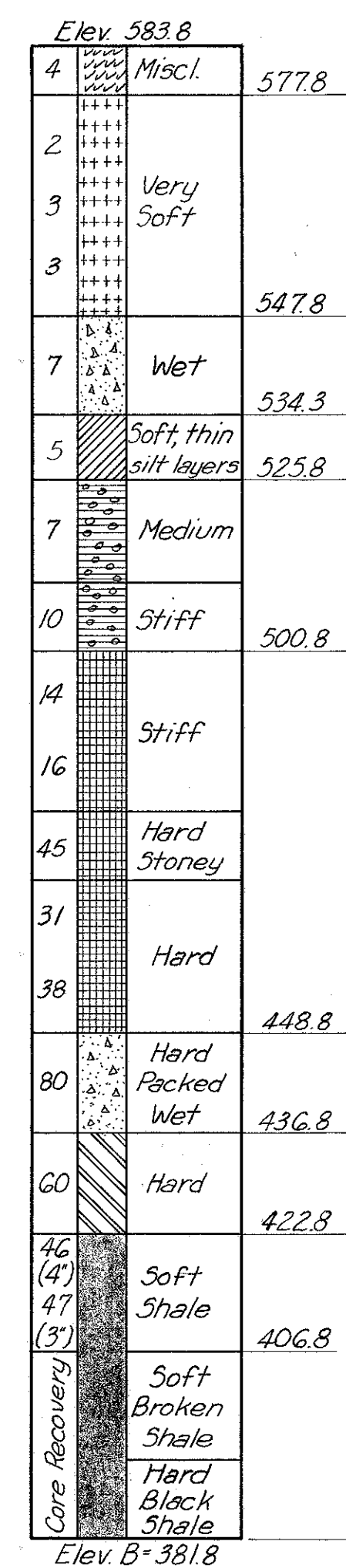
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO	UI 1057 (4)	

6
43

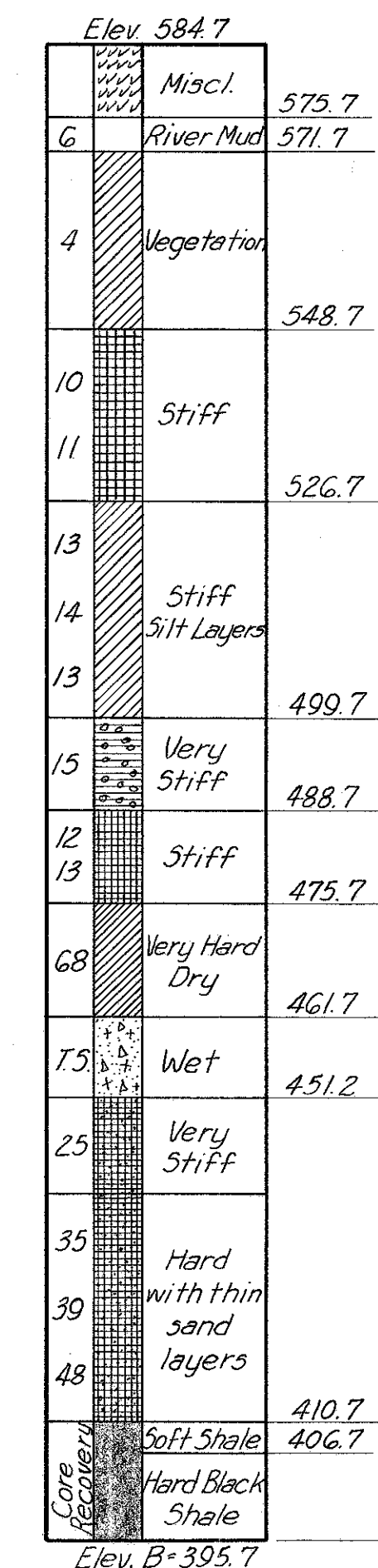
CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY - 42R - 17.50



(A)
Sta. 29+53 Rt. 265

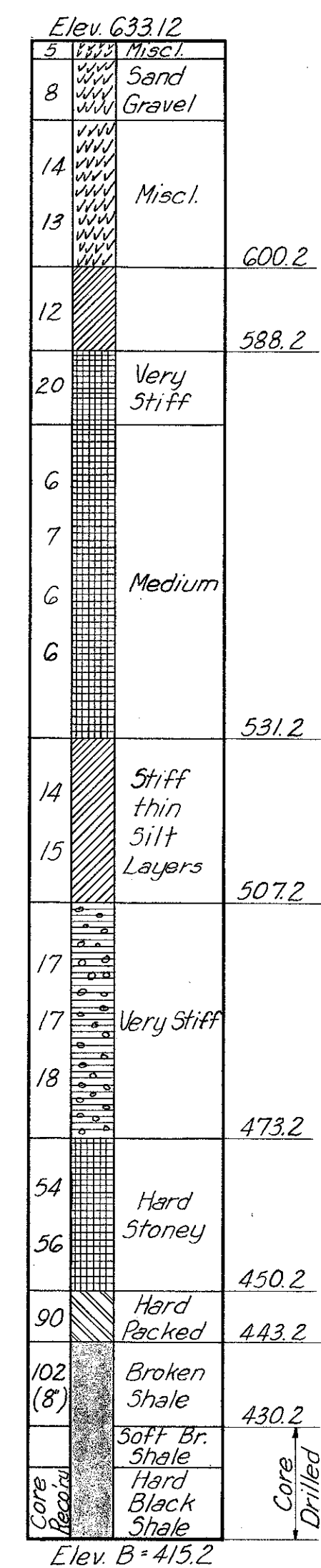


(B)
Sta. 37+10 Rt. 205'



TEST HOLE BORINGS A, B AND C

(C)
Sta. 43+95 Rt. 110'



GENERAL NOTES

SOIL LEGEND

- Misc. [Symbol]
- Fill [Symbol]
- Clay [Symbol]
- Sand [Symbol]
- Silt [Symbol]
- Silty Sand [Symbol]
- Silty Clay [Symbol]
- Sandy Clay [Symbol]
- Pebbly Clay [Symbol]
- Sand and Gravel [Symbol]
- Silt, Sand and Gravel [Symbol]
- Sand, Clay and Gravel [Symbol]
- Rock [Symbol]
- Ground Water [Symbol]
- Trap Sample T.S.
- Auger Sample A.S.
- Tube Trap T.T.

BORING LEGEND

(a) (b) (c) (d)

Elev. 100.0

As	Fill	95.0
3	Soft & Wet	
2	Soft & Wet	
7.5	Soft & Wet	
10	Soft & Wet	
12	Very Stiff	
14	Very Stiff	
20	Fine & Wet	60.0
25	Fine & Wet	55.0
30	Shale	
(8)	Shale	
		Elev. B = 50.0

With reference to above example;
 1. In column (a) the figures 2, 3, etc. are the hammer blows required to advance the casing one foot unless otherwise noted.
 2. Column (b) shows the legend of soil types and ground water elevation.
 3. Column (c) shows soil classification.
 4. Column (d) shows the intermediate elevations of limits of different soil layers.

Misc. Notes: Vertical scale for boring 1" = 20'.
 All samples taken with Split Type Tube, 2" O.D. x 15" I.D. and 4" steel casing unless otherwise noted.
 Hammer wt. 140#. Average Fall 30'.

Revised 1-26-55

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

GENERAL LAYOUT AND
 TEST HOLE BORINGS

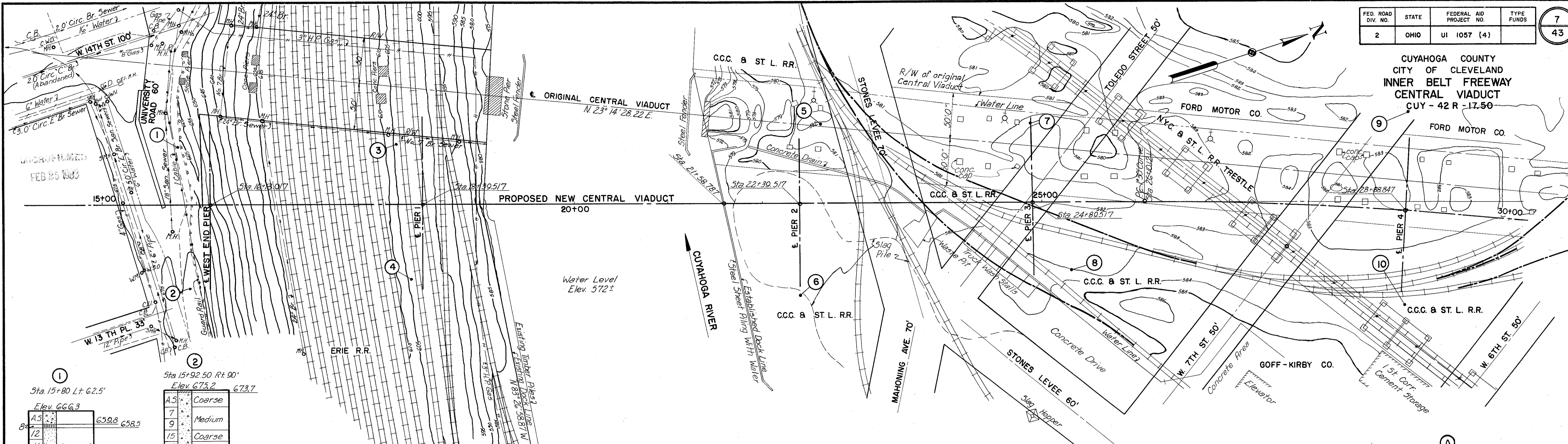
CLEVELAND CUYAHOGA COUNTY OHIO

SCALE: Vertical: 1" = 20'
 MADE: J.G.S. DATE: 1-22-54
 TRCD: H.A.M. DATE: 2-6-54
 CKD: C.L.G. DATE: 2-25-54

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

914-1A SHEET 1.06

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY - 42 R - 17.50



1
Sta 15+80 Lt. 62.5'
Elev. 666.3

8.5	AS	659.8	658.5
12			
11	Compact Med.		
14			
18	Compact Med, Wet		
TS	Compact Fine, Wet		
21		615.0	
11	Stiff		
6	Medium		
16			
18			
15	Very Stiff		
20			

Elev. B = 546.3

2
Sta 15+92.50 Rt. 90'
Elev. 675.2 673.7

7	Coarse		
9	Medium		
15	Coarse		
18	Med, Wet	647.2	
TS			
18	Med Wet		
35	Fine, Wet		
TS	Fine, Wet	617.2	614.2
9	Stiff		
15			
14	Very Stiff		
9	Medium		
16			
18			
15	Very Stiff		
19			

Elev. B = 545.2

3
Sta 18+11.50 Lt. 64'
Elev. 604.0

4	Cinder & Slag	592.0	
7	Fine, Brown		
8		578.0	
6	Fin Grey, Wet	573.0	
6	Med Grey		
14	Very Stiff		
9	Stiff		
7	Medium		
14			
15	Very Stiff		
12			
17	Very Stiff & Stony		
9	Stiff		
7	Medium	482.5	
TS	Coarse & Wet		

Elev. B = 474.0

4
Sta 18+27.50 Rt. 90'
Elev. 604.2

5	Cinder	591.7	
12	Grey	578.0	
8	Medium	572.2	
6	Soft		
7	Medium		
11	Stiff		
11			
17	Very Stiff		
11	Stiff		
25	Hard Stony		
26			
25	Very Stiff	486.2	
TS	Stiff		
TS	Coarse, Wet	475.2	
22	Very Stiff with Thin Silt Layers	461.7	
TS	Wet		

Elev. B = 454.2

5
Sta 22+62 Lt. 85'
Elev. 581.5

3	Misc.	577.5	
4	Wet	574.5	
7	Wet	570.5	
TS			
7	Wet	564.0	
TS	Med. Wet		
TS	Coarse, Wet	548.5	
9	Stiff	538.5	
7	Medium	528.5	
8			
12	Stiff		
15	Very Stiff		
9	Stiff	479.5	
37	Hard	468.0	
9	Medium	457.5	
TS	Coarse, Wet	453.0	
TS	Hard	447.5	446.0
TS	Hard	443.0	
50 (8)	Hard	428.0	

Elev. B = 427.0 Grey Shale

6
Sta 22+40 Rt. 100.5'
Elev. 580.6

AS	Brown Wet	575.1	
AS	Brown Wet	569.6	
2	Soft		
7	Medium	559.1	
8	Coarse	548.1	
TS			
9	Stiff	538.6	
9			
11	Stiff		
12			
18	Very Stiff		

Elev. B = 500.6

7
Sta 24+89 Lt. 85'
Elev. 581.9

3	Sand Under	573.4	
4	Brown Clay	569.9	
2	Wet		
2	Fine, Wet	563.9	
2	Fine, Wet	559.6	
4	Med Wet		
I.T.	Wet	548.9	
12	Stiff with Thin Silt Layers		
13	Stiff with Thin Silt Layers	524.0	
8	Med with Thin Silt Layers	518.9	
9	Medium		
12	Stiff	501.9	
12	Stiff		

8
Sta 25+30 Rt. 75'
Elev. 583.0

4	Slag & Clay	579.0	
4	Loomy Fine, Wet	574.0	
6	Medium	568.0	
2	Fine, Wet	564.0	
5	Fine, Wet	558.0	
TS			
7.5	Wet	544.0	
14	Stiff with Thin Silt Layers		
13	Stiff with Thin Silt Layers	524.0	
20	Very Stiff	514.0	
14	Stiff		

Elev. B = 503.0

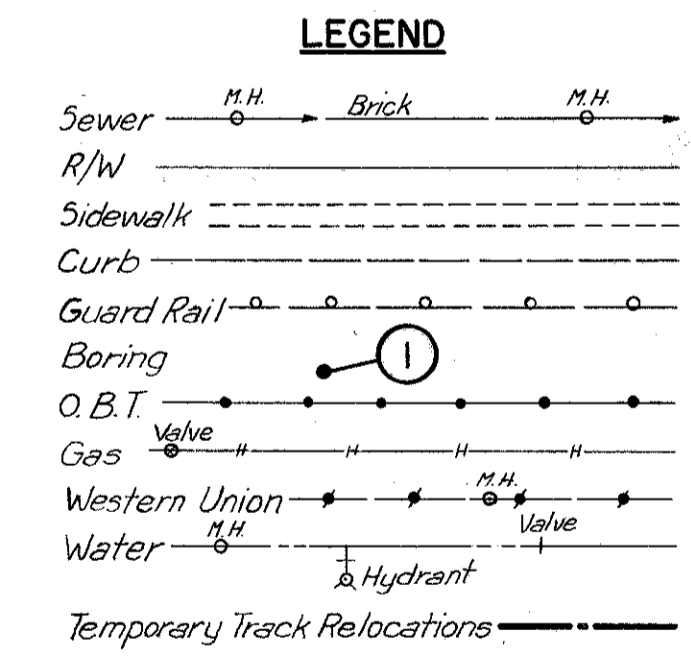
9
Sta 28+85 Lt. 105.5'
Elev. 582.0

4	Misc. (Cinder etc)	576.0	
3	Soft, Wet		
5	Med with vegetation	565.0	
2	Soft	560.0	
2	Soft Little Clay	552.0	
4	Wet & Gravel Loose	533.0	
6			
19			
22	Very Stiff		
19			
13	Stiff		

Elev. B = 502.0

10
Sta 28+94 Rt. 104.5'
Elev. 583.3

4	Misc.	575.3	
6	Brn & Grey		
10	Med Veg.	566.3	
2			
2	Very Soft		
2		548.3	
6			
TS		531.3	
16			
15	Very Stiff		
15		503.3	
15	Very Stiff		



Notes: For general notes on borings and soil and boring legend, see Sheet 6.

PART 2
U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

EXISTING CONDITIONS AND TEST HOLE BORINGS

CLEVELAND CUYAHOGA COUNTY OHIO

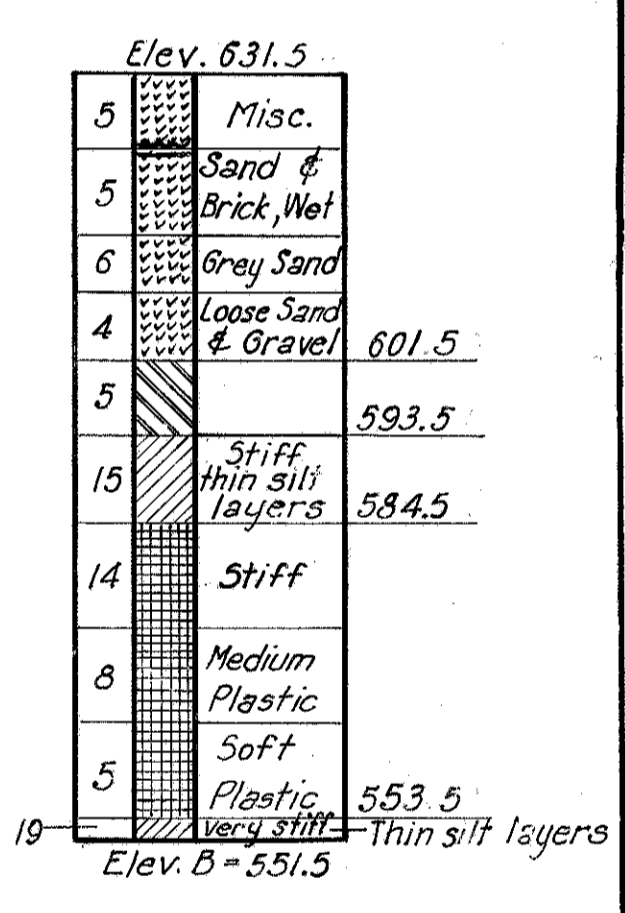
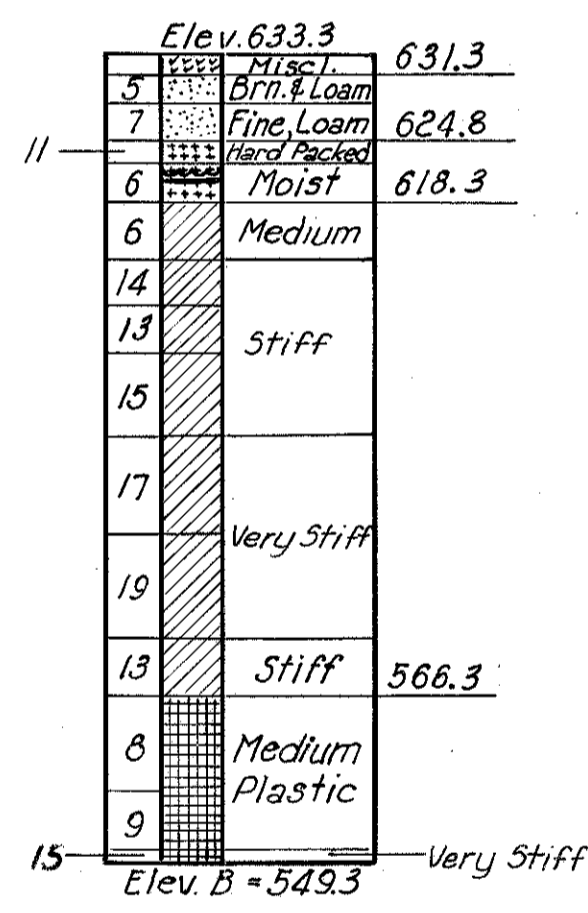
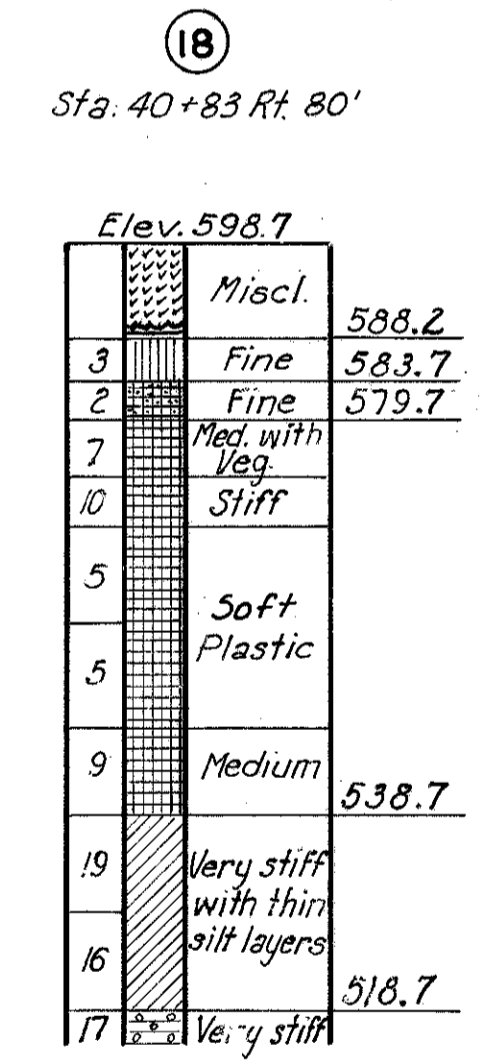
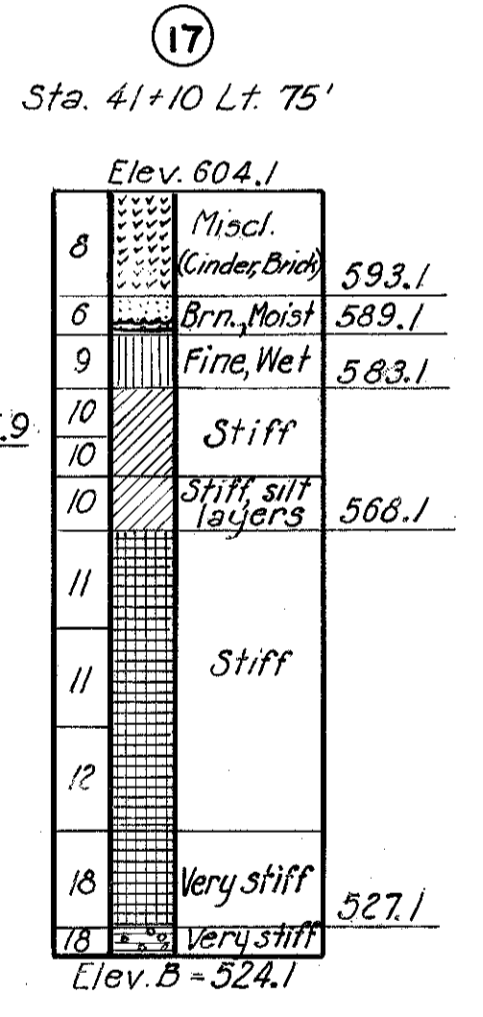
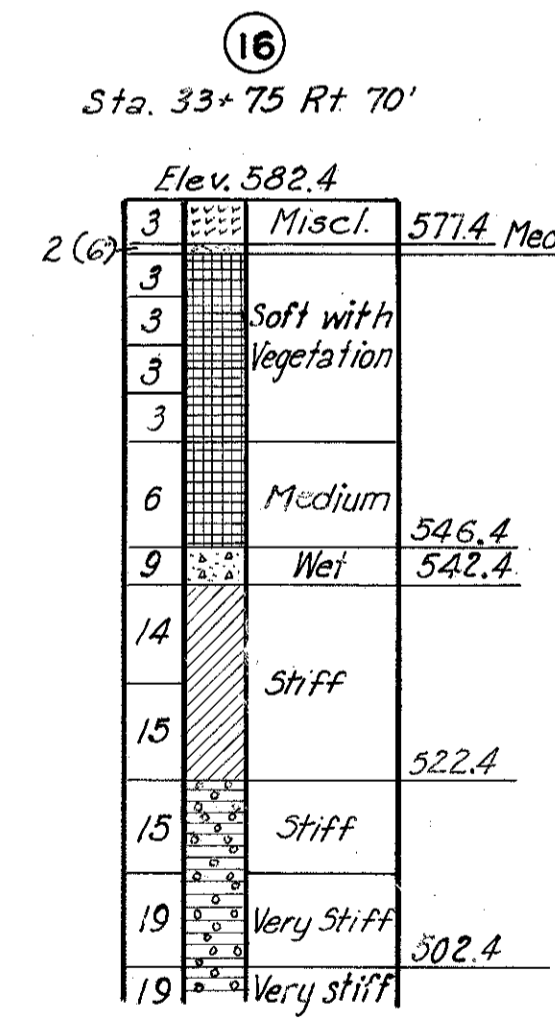
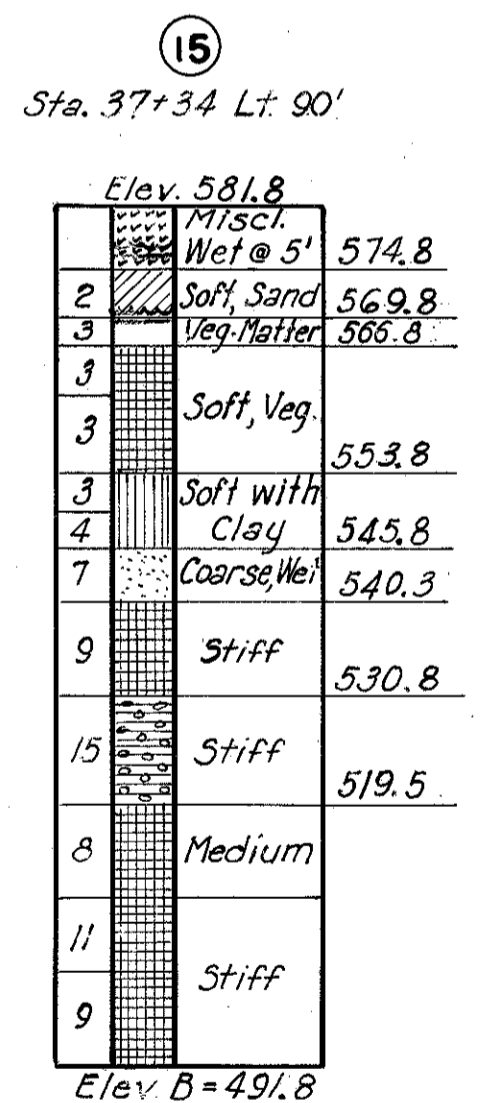
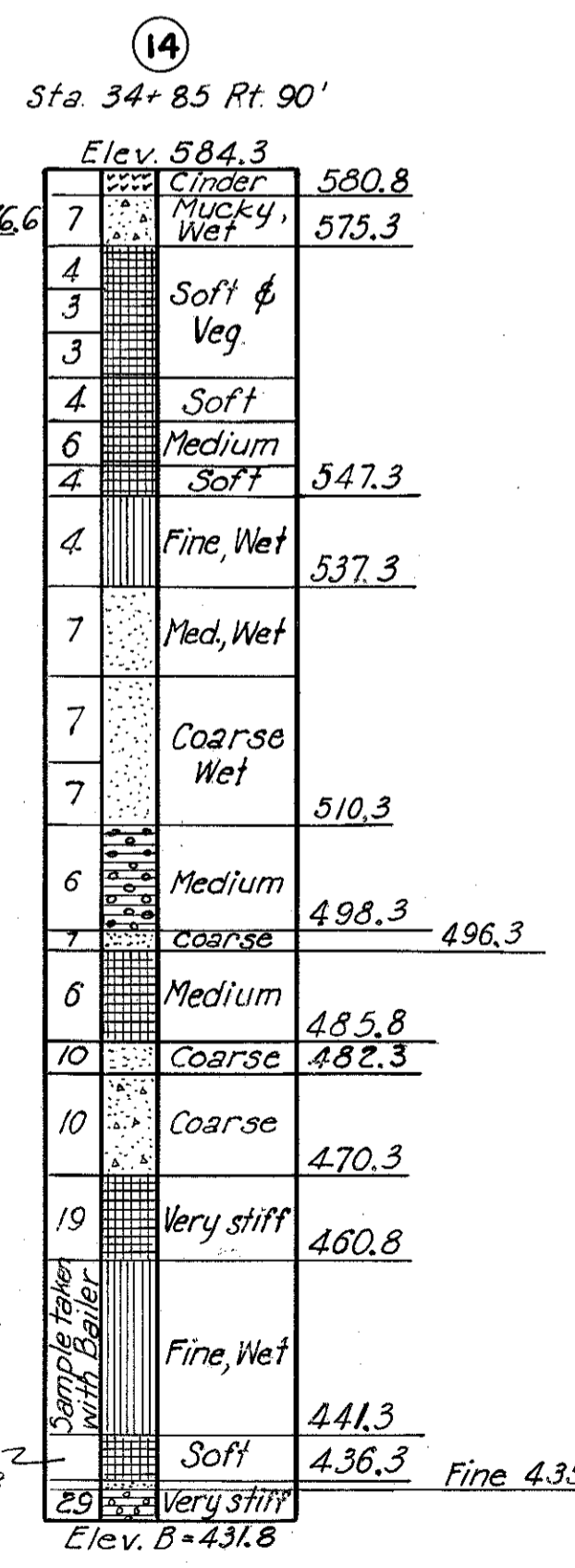
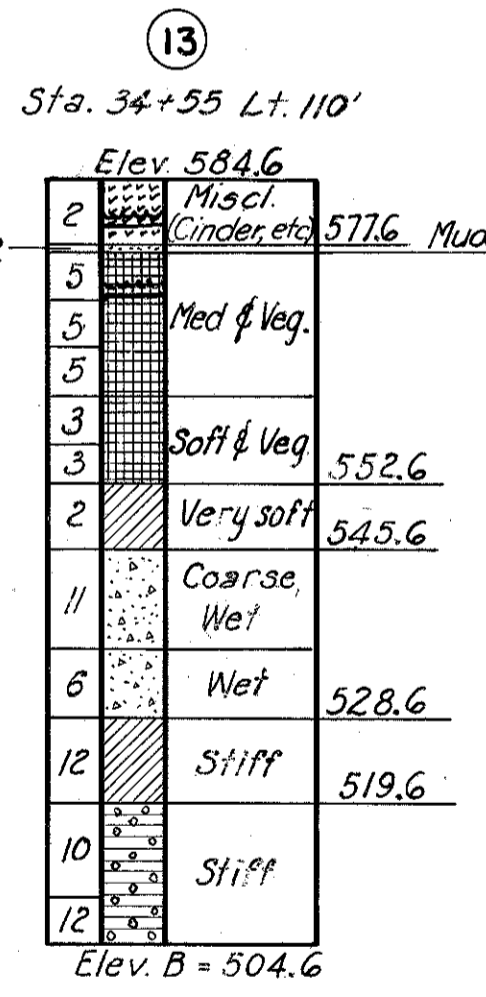
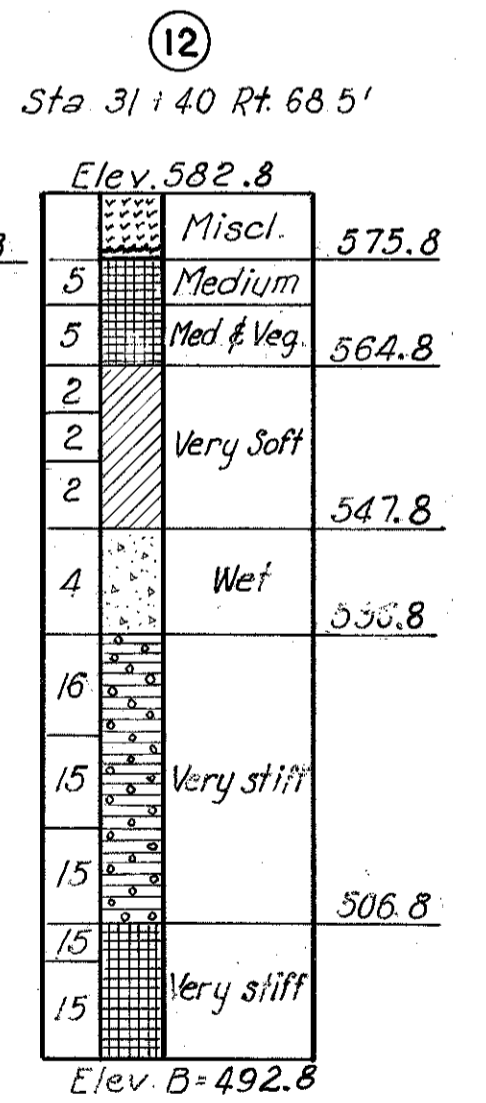
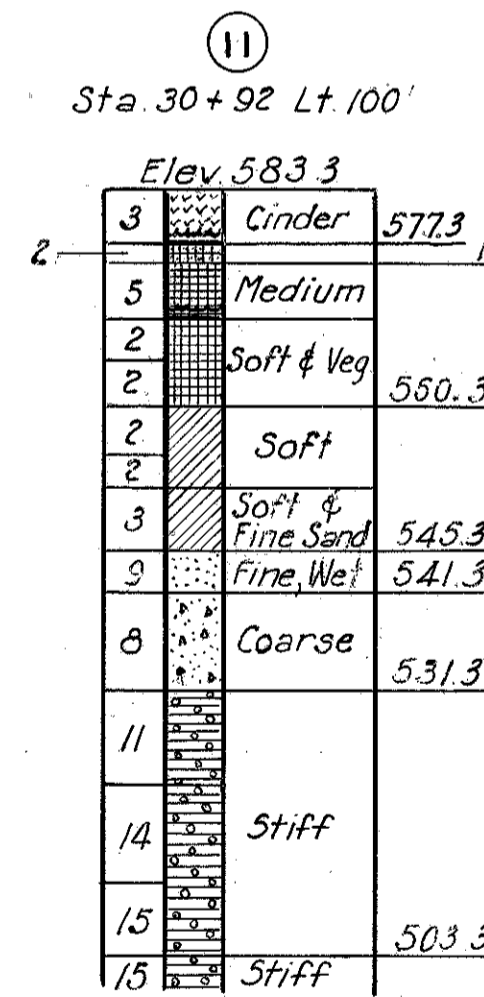
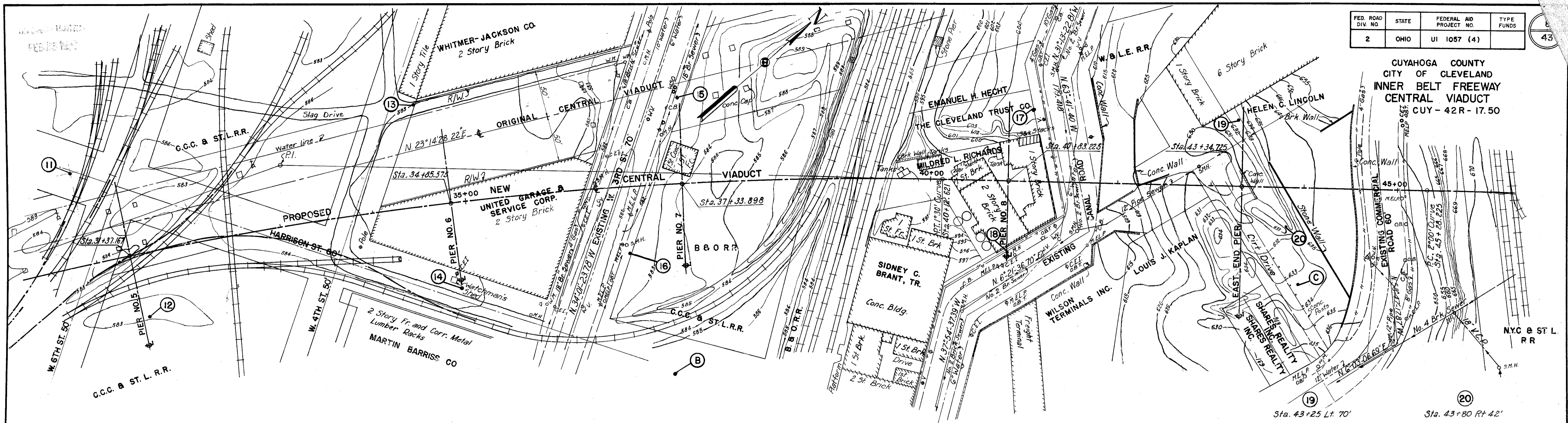
SCALE 1" = 50', 20'
MADE 1/65 DATE 1-12-54
TRCD 1/11 DATE 2-11-54
CKD C.L.C. DATE 2-25-54

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

914-1A SHEET 1 OF 07

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO	UI 1057 (4)	

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY-42R-17.50



Notes: For general notes on borings and soil and boring legend, see Sheet 6.
Vertical scale for borings: 1" = 20'.
For existing conditions legend, see Sheet 7.

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

EXISTING CONDITIONS AND
TEST HOLE BORINGS

CLEVELAND CUYAHOGA COUNTY OHIO

SCALE 1" = 50', 20'
MADE U.G.S. DATE 1-13-54
TRC.R.K. DATE 1-19-54
KND.F.G. DATE 2-26-54

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS,
KANSAS CITY CLEVELAND NEW YORK
914-1A SHEET-1.08

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY - 42 R - 17.50

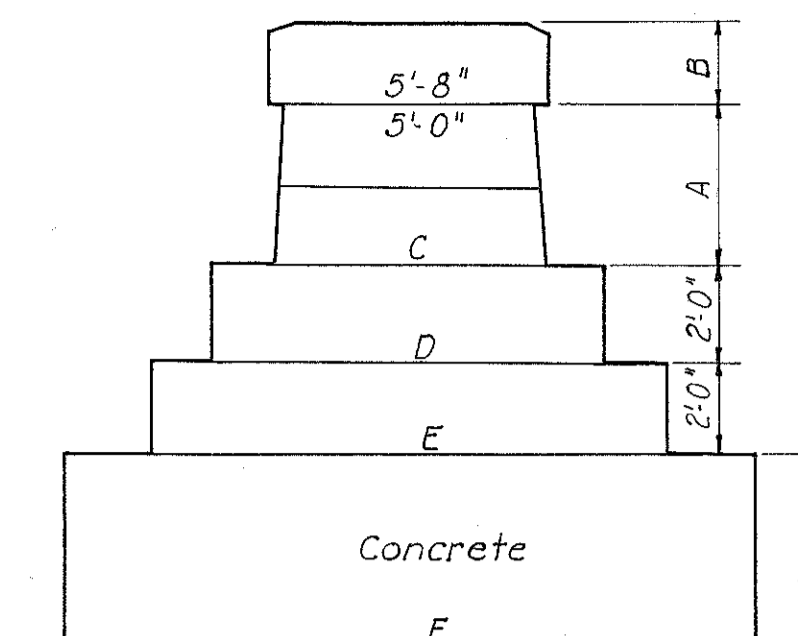
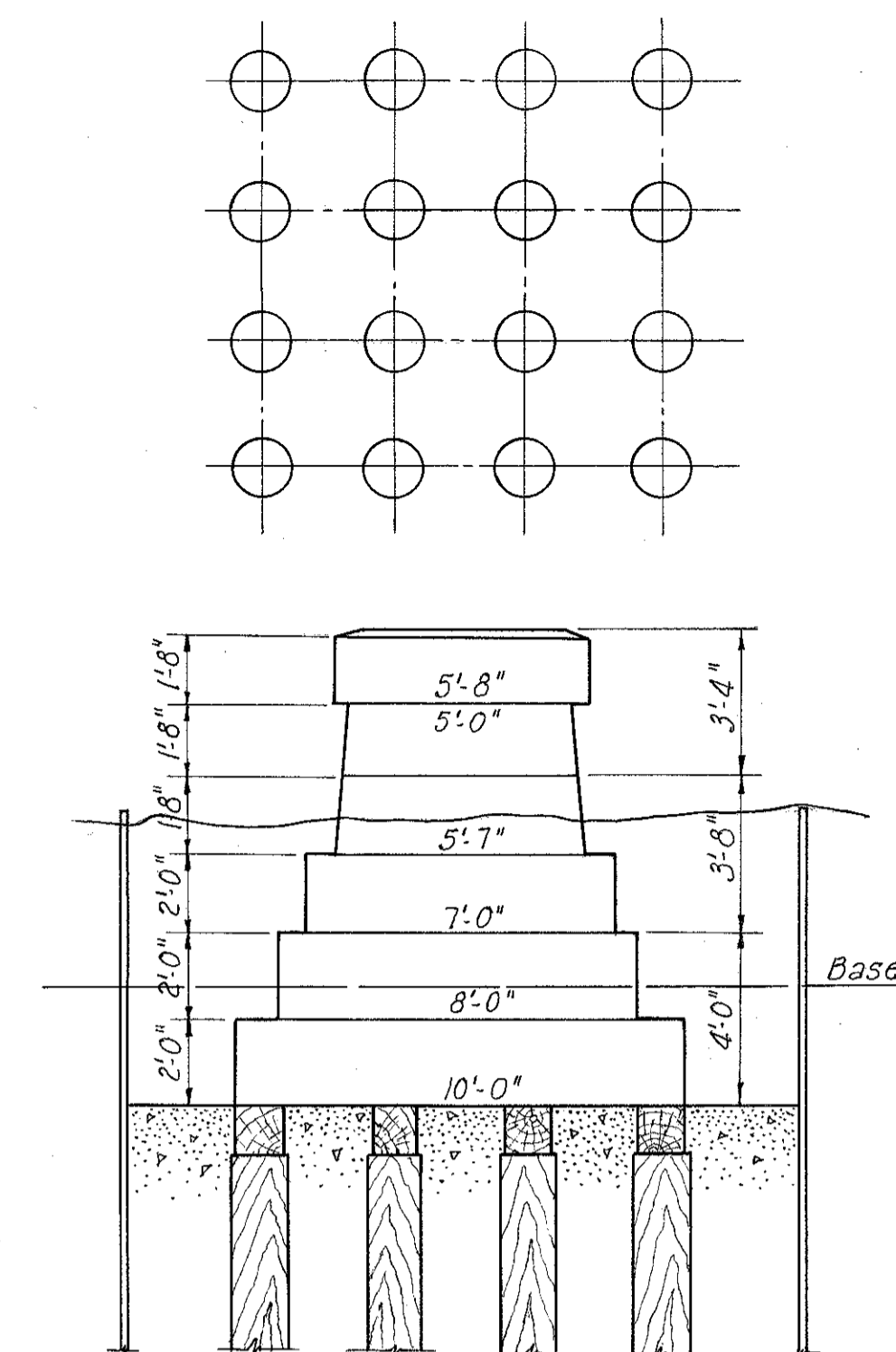
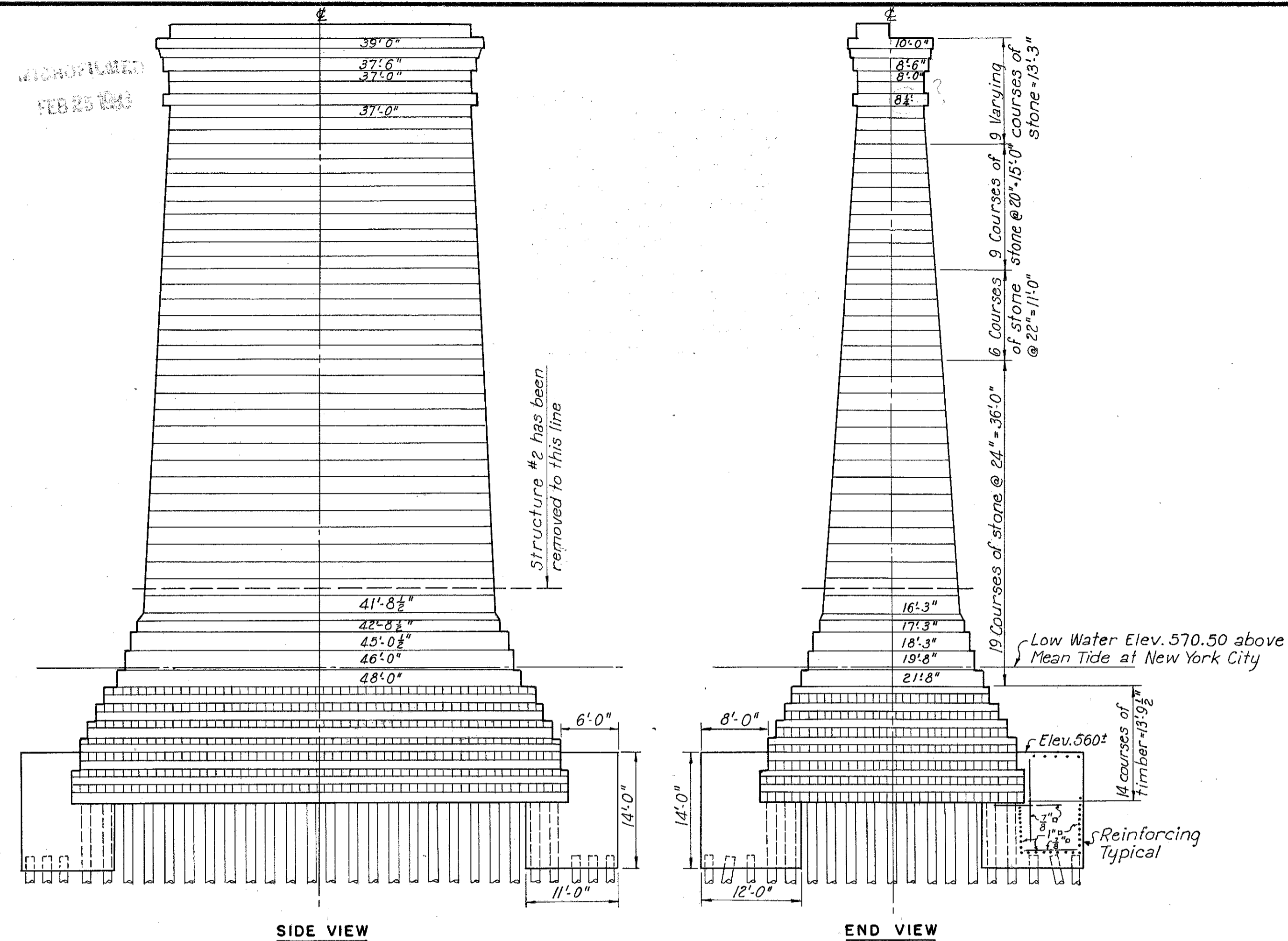
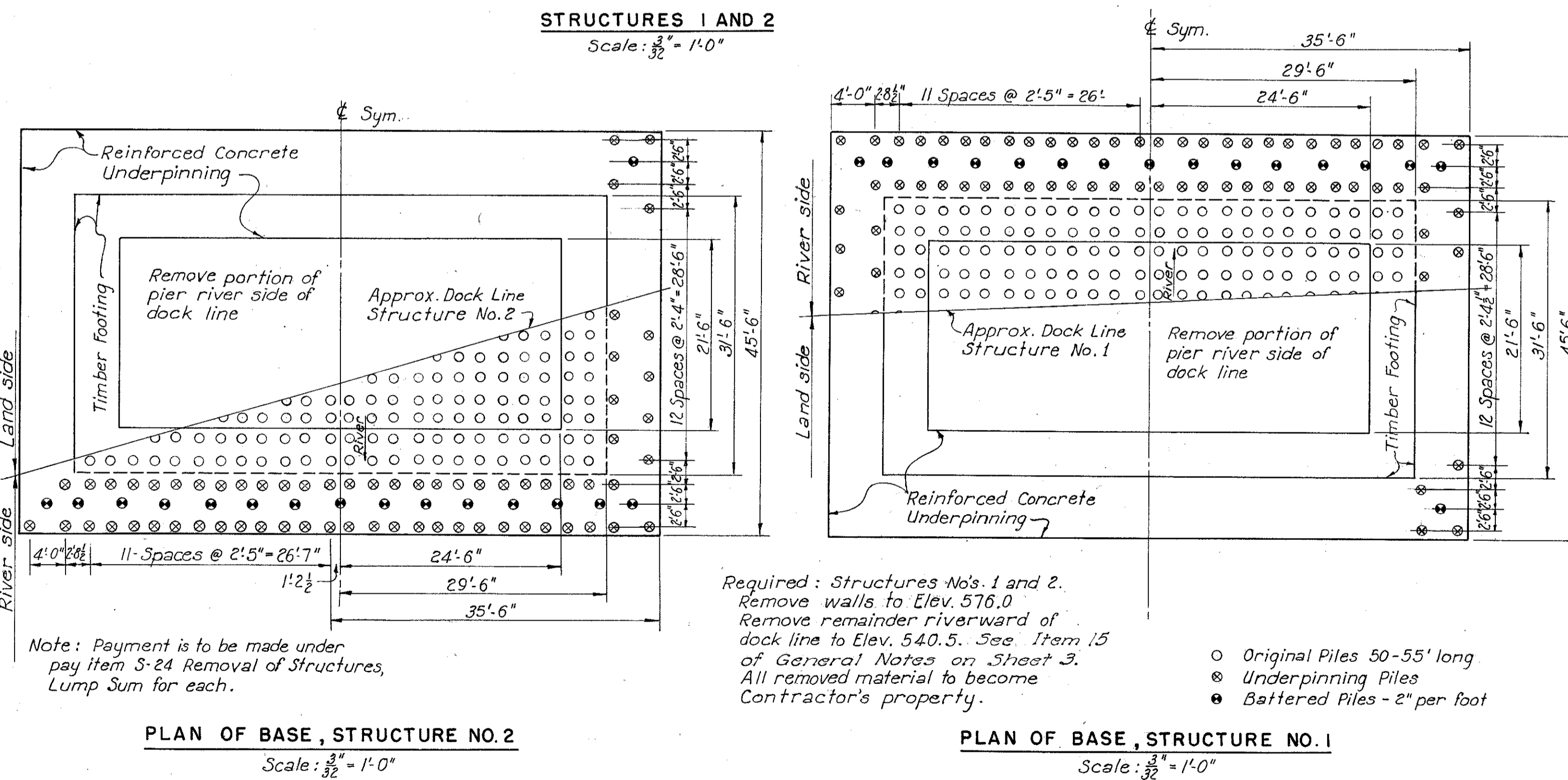


TABLE OF PEDESTAL DIMENSIONS						
Pier	A	B	C	D	E	F
3	3'-0"	1'-6"	5'-6"	7'-0"	9'-0"	11'-0"
4	3'-0"	1'-6"	5'-6"	7'-0"	9'-0"	11'-0"
5	3'-4"	1'-8"	5'-6 1/2"	7'-6"	10'-0"	13'-0"
	3'-0"	1'-6"	5'-6"	7'-0"	9'-0"	11'-0"
6	3'-4"	1'-8"	5'-6 1/2"	8'-0"	10'-6"	14'-0"

Existing pedestals of the old Central Viaduct substructure which interfere with new construction shall be removed as necessary to avoid interference with new construction, including pile driving. Payment for pedestal removal to at least one foot below the surface of the ground shall be made by Item S-24, "Removing existing concrete pedestals which interfere with new construction". That portion of the pedestals beneath one foot below the ground shall be removed by the contractor, payment therefor being included in the bid price per cubic yard under pay item E-2, unclassified excavation.



PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT
OHIO

EXISTING PIERS AND PEDESTALS TO BE REMOVED

CLEVELAND CUYAHOGA COUNTY OHIO

SCALE: As Shown
MADE C.J.C. DATE 3-8-54
TRCD. A.H. DATE 3-20-54
CKD. G.A. DATE 6-15-54

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

914-1A SHEET 1.09

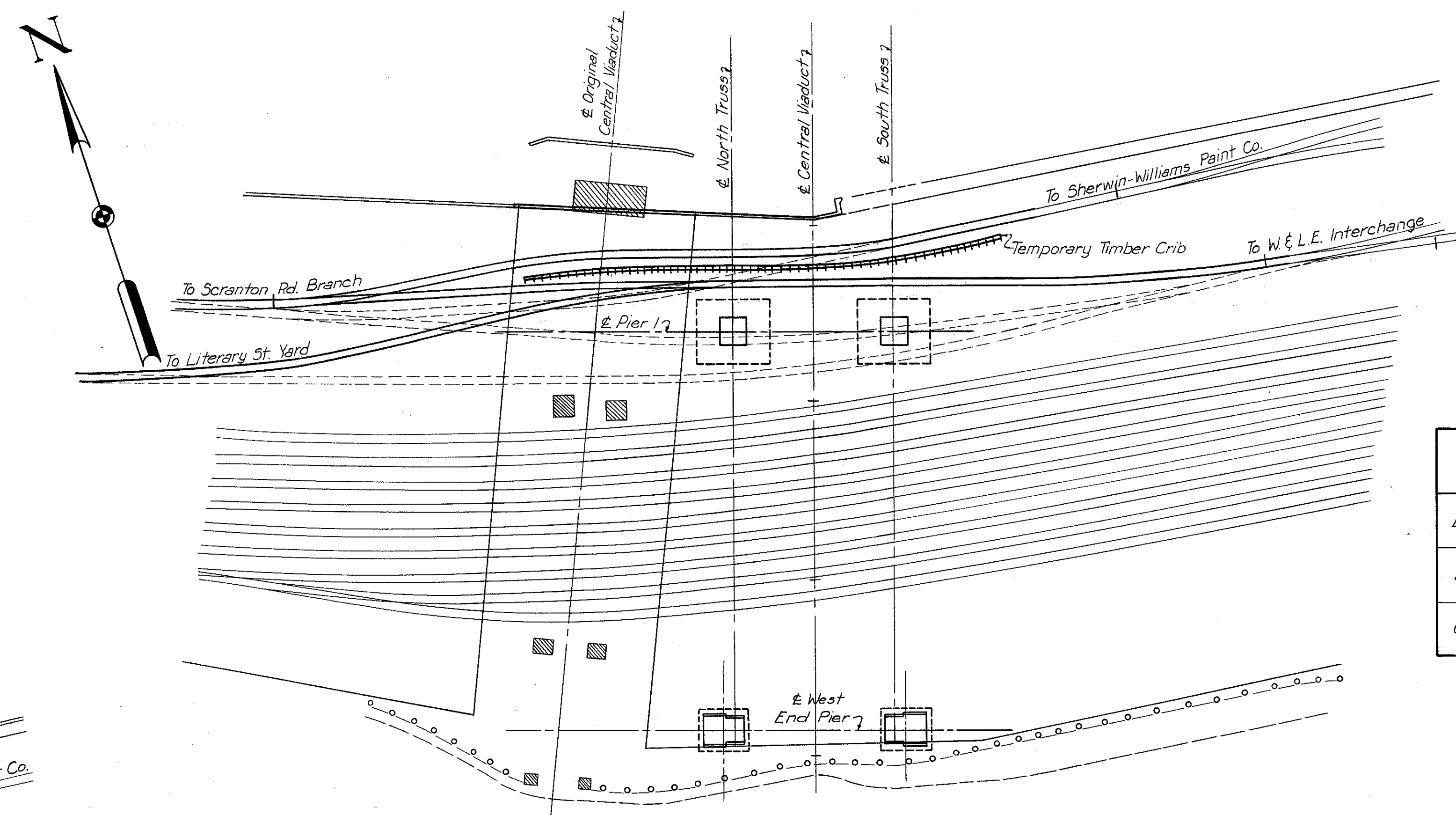
REVISIONS
FEB 25 1954

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO	UI 1057 (4)	

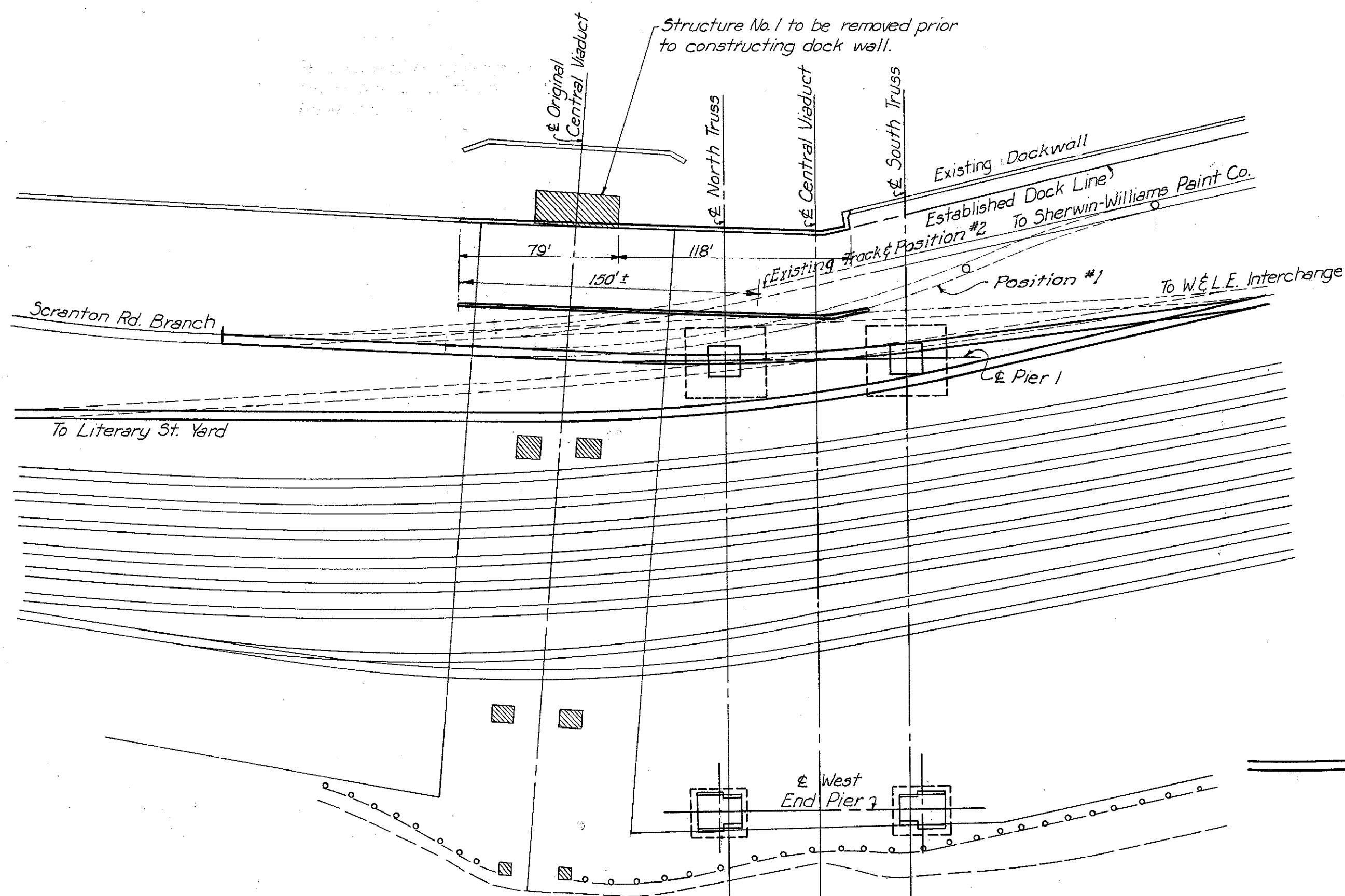
10
43

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY - 42R - 17.50

FORCE ACCOUNT WORK By the Erie Railroad Company	
Engineering and Inspection	Lump Sum
Track Work	Lump Sum
Communication Line Changes	Lump Sum



EXISTING CONDITIONS AND TRACK CHANGES
TO BE MADE FOR CONSTRUCTION OPERATIONS
FOR PIER 1



EXISTING CONDITIONS AND TRACK CHANGES
TO BE MADE FOR CONSTRUCTING
STEEL DOCKWALL



CONSTRUCTION CONDITIONS AND
PERMANENT TRACK RELOCATIONS

The labor and the furnishing of materials in connection with the temporary and permanent track work as shown on sheets 40, 41, 42 and 43 and as called for in the estimate will be performed by the Erie Railroad Company by force account.

LEGEND

- Present tracks to be undisturbed.
- - - Present tracks to be removed.
- Track relocations.

Notes:
For dockwall construction, see sheets 38 and 39.
For profiles of grading for tracks, see sheet 40.
For cross sections parallel to & of proposed Central Viaduct, see sheets 41, 42 and 43.

SPECIAL NOTE
Additional information for track location (shown here and in Phase I of Sheet 40) was received from the Erie Railroad Company on its drawings D-194 and D-196, revised Aug. 31, 1954, too late to be incorporated in the cross sections shown on Sheets 41, 42 and 43. However, revised prints of Sheets 41, 42 and 43 will be furnished to the Contractor before he is ready to begin work.

Information for track location was taken from Erie Railroad Company drawings D-194, D-195, and D-196. Revised Aug. 13, 1954

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

ERIE RAILROAD TRACK MODIFICATIONS

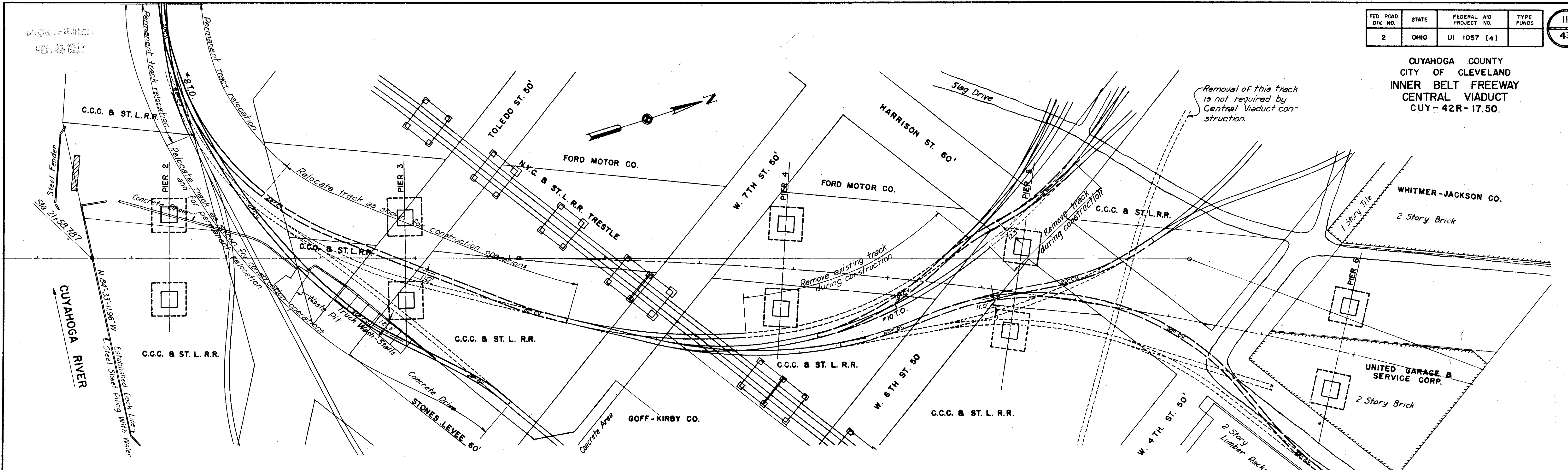
CLEVELAND	CUYAHOGA COUNTY	OHIO
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SCALE: 1" = 50'-0"

MADE A.M. DATE 4-16-54	HOWARD, NEEDLES, TAMMEN & BERGENOFF
TRCD. N.A.M. DATE 4-30-54	CONSULTING ENGINEERS
CKD.G.A. DATE 8-30-54	KANSAS CITY CLEVELAND NEW YORK

914-1A SHEET 1.10

CUYAHOGA COUNTY
CITY OF CLEVELAND
**INNER BELT FREEWAY
CENTRAL VIADUCT**
CUY-42R-17.50

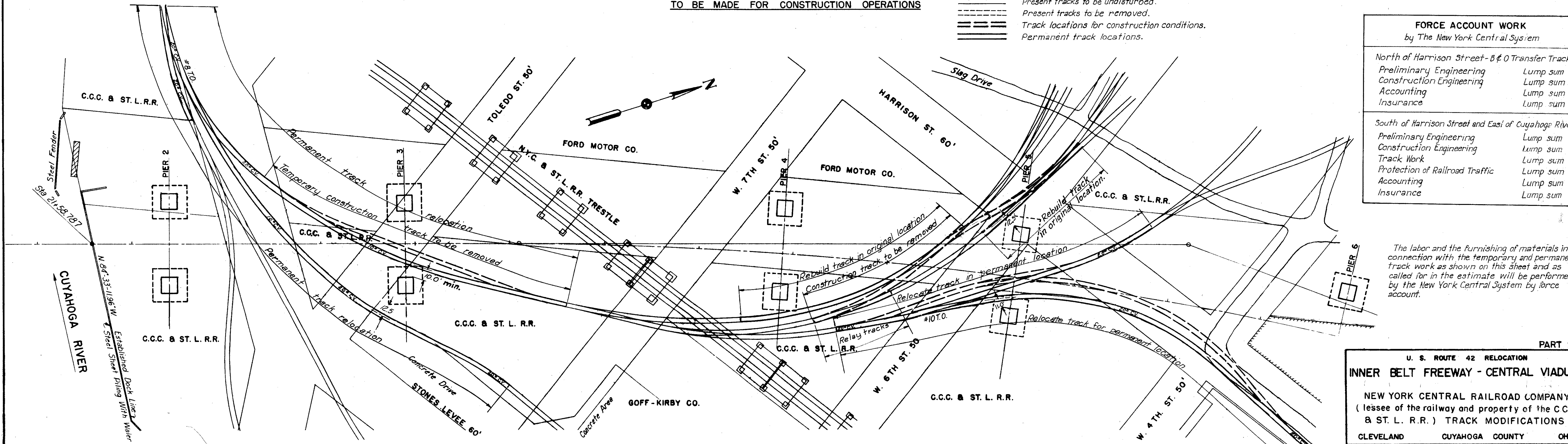


**EXISTING CONDITIONS AND TRACK CHANGES
TO BE MADE FOR CONSTRUCTION OPERATIONS**

LEGEND
 ——— Present tracks to be undisturbed.
 - - - - - Track locations for construction conditions.
 = = = = = Permanent track locations.

FORCE ACCOUNT WORK by The New York Central System	
North of Harrison Street - B & O Transfer Track	
Preliminary Engineering	Lump sum
Construction Engineering	Lump sum
Accounting	Lump sum
Insurance	Lump sum
South of Harrison Street and East of Cuyahoga River	
Preliminary Engineering	Lump sum
Construction Engineering	Lump sum
Track Work	Lump sum
Protection of Railroad Traffic	Lump sum
Accounting	Lump sum
Insurance	Lump sum

The labor and the furnishing of materials in connection with the temporary and permanent track work as shown on this sheet and as called for in the estimate will be performed by the New York Central System by force account.



**CONSTRUCTION CONDITIONS AND
PERMANENT TRACK RELOCATIONS**

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

NEW YORK CENTRAL RAILROAD COMPANY
(lessee of the railway and property of the C.C.C. & ST. L. R.R.) TRACK MODIFICATIONS

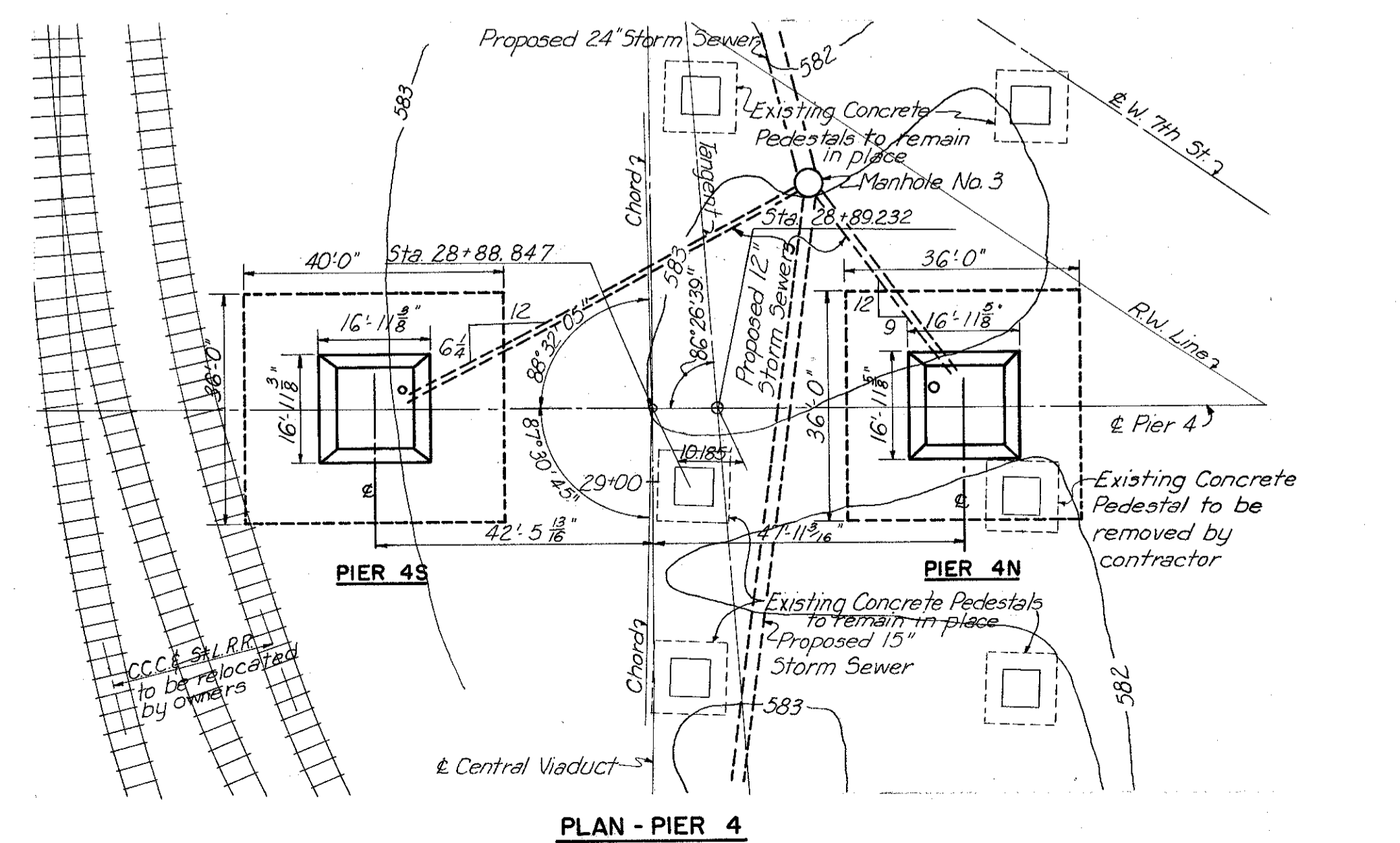
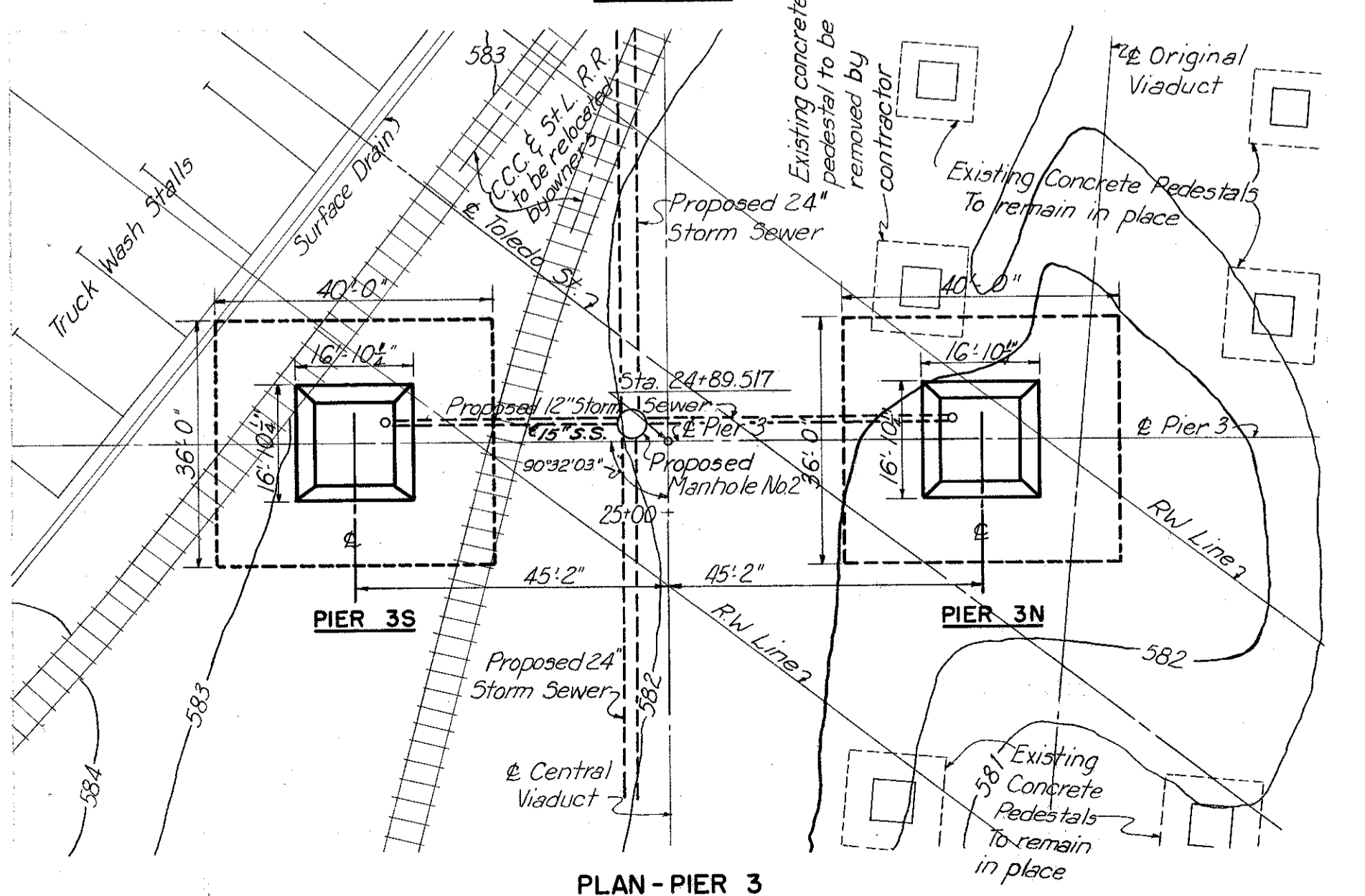
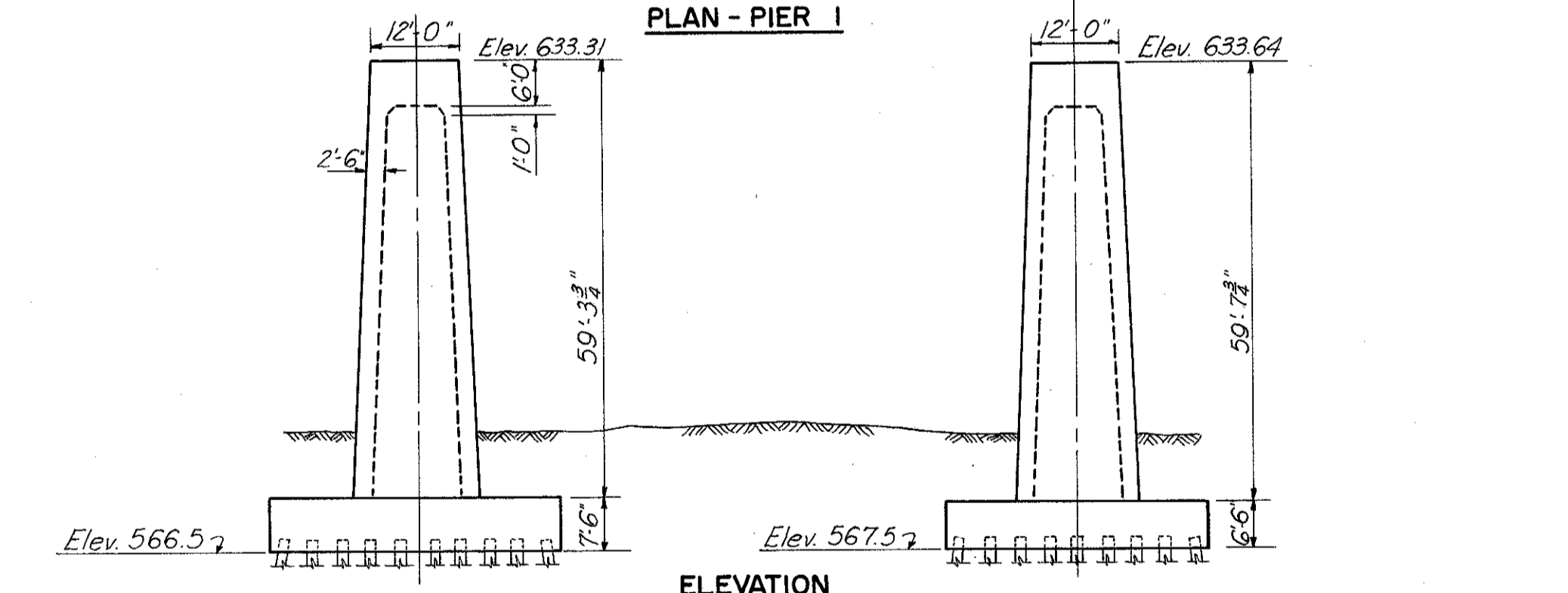
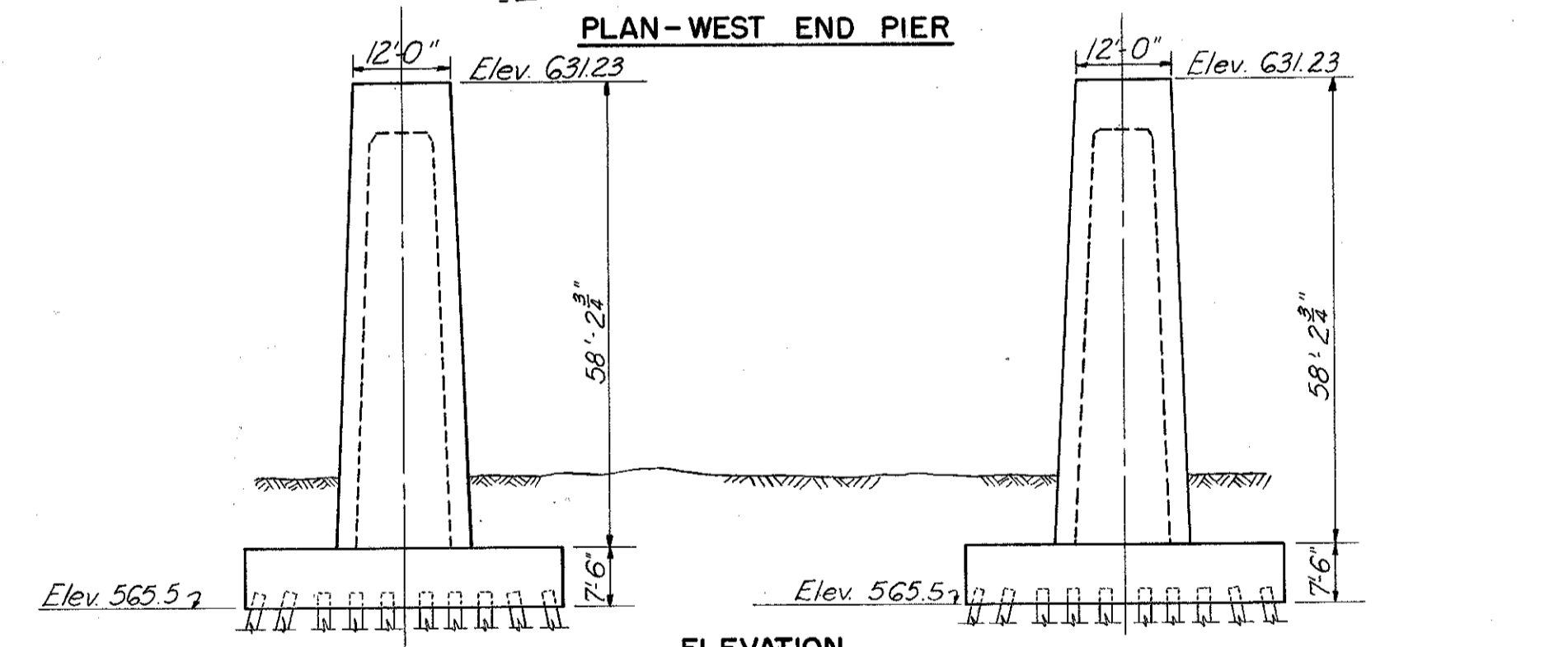
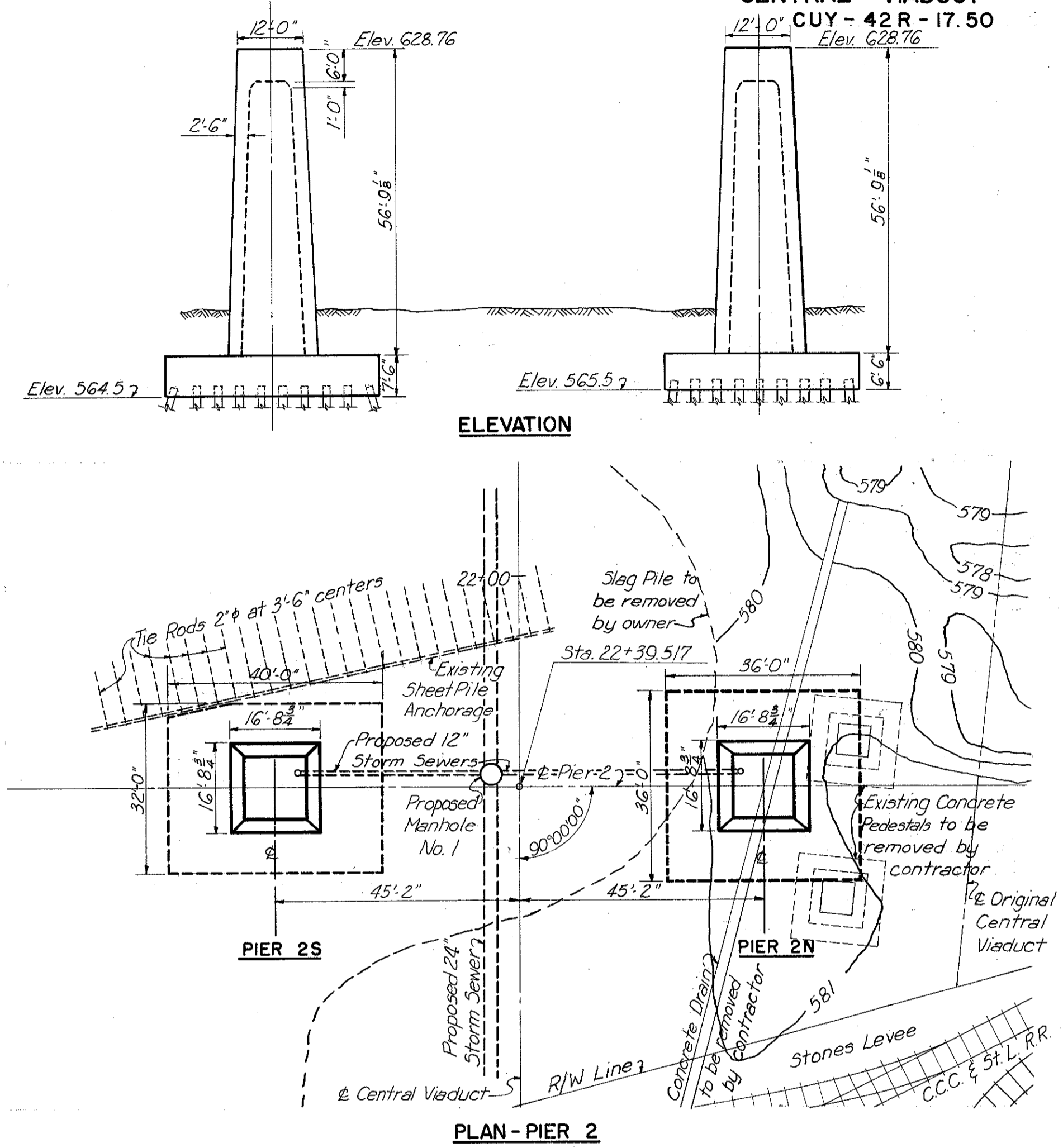
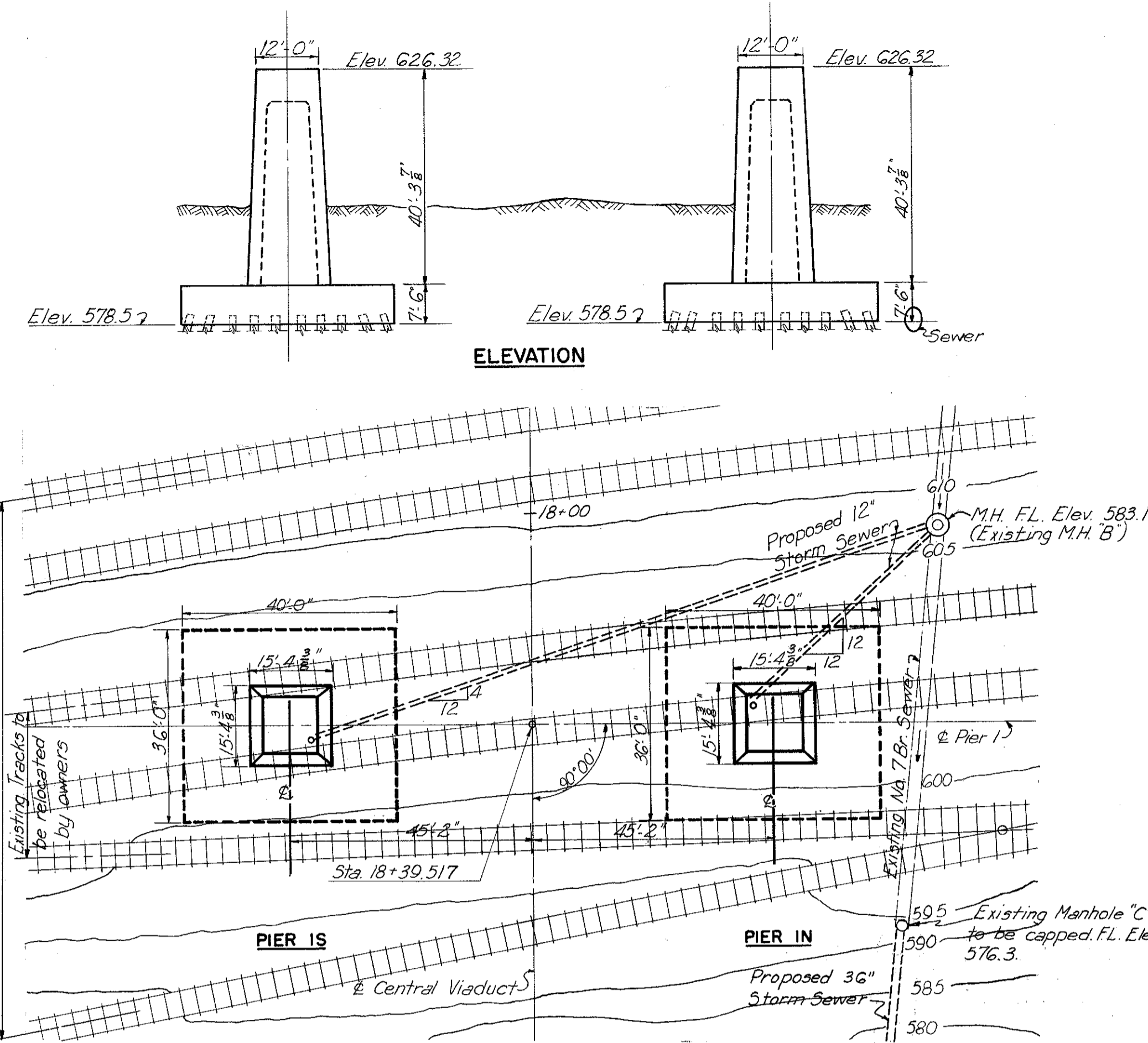
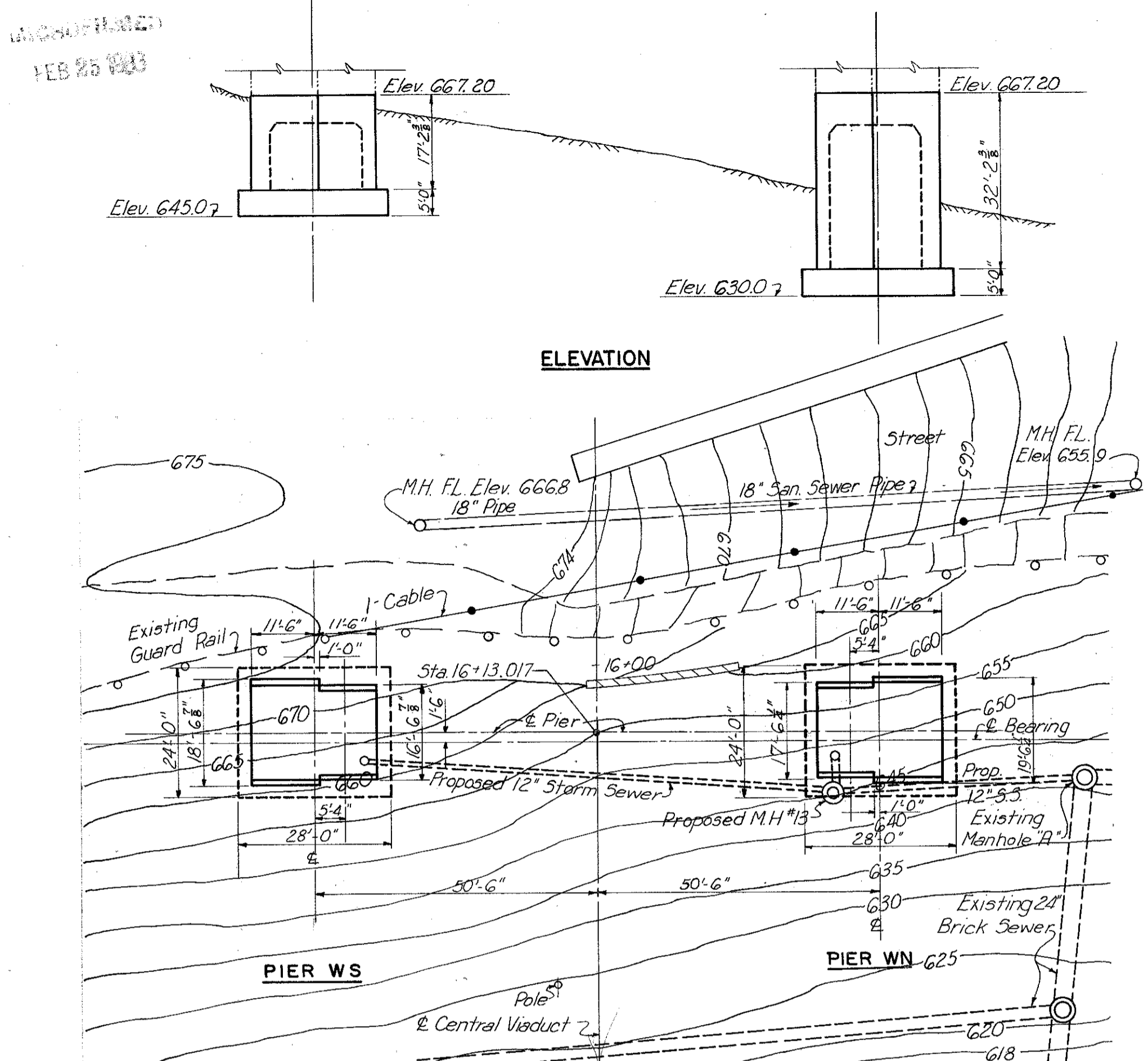
CLEVELAND CUYAHOGA COUNTY OHIO

SCALE 1" = 50'

MADE N.A.M. DATE 4-12-54	HOWARD, NEEDLES, TAMMEN & BERGENDOFF
TRCD N.A.M. DATE 4-13-54	CONSULTING ENGINEERS
CKD S.A. DATE 4-15-54	KANSAS CITY CLEVELAND NEW YORK

914-1A SHEET 111

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
12'-0" CUY - 42 R - 17.50



Note: For storm sewer locations, flow lines and details, see Shs. 33 to 36 inclusive. All railroad tracks are shown in their present locations. For track relocations by the owners before the contractor begins construction of pier footings, see Shs. 10 and 11.

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

EXISTING CONDITIONS AT
WEST END PIER AND PIERS 1 TO 4 INC.

CLEVELAND CUYAHOGA COUNTY OHIO

SCALE: 1" = 20'-0"

MADE R.K. DATE 1-15-54
TRC N.A.M. DATE 6-15-54
C.D. C.L.C. DATE 6-7-54

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

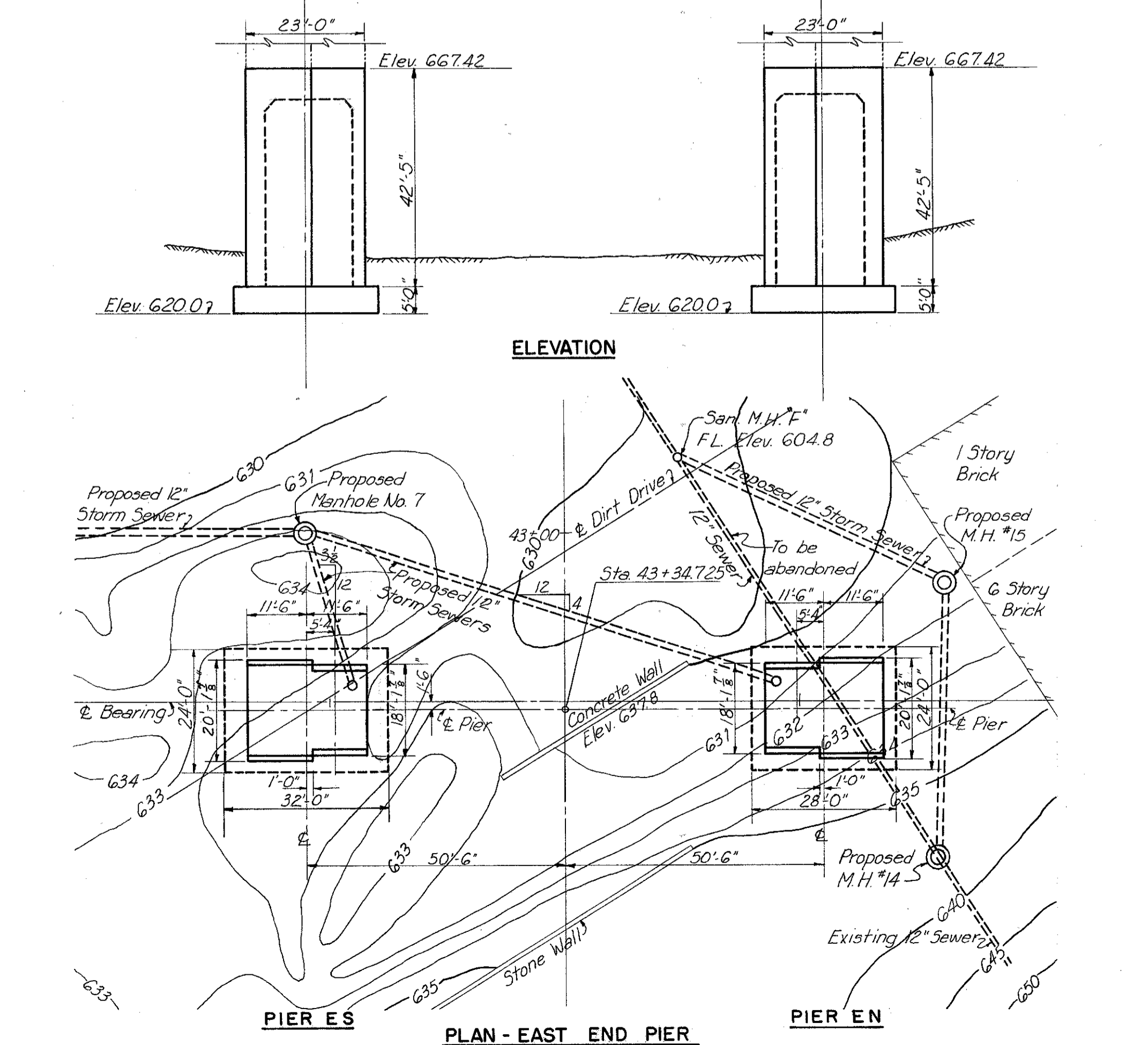
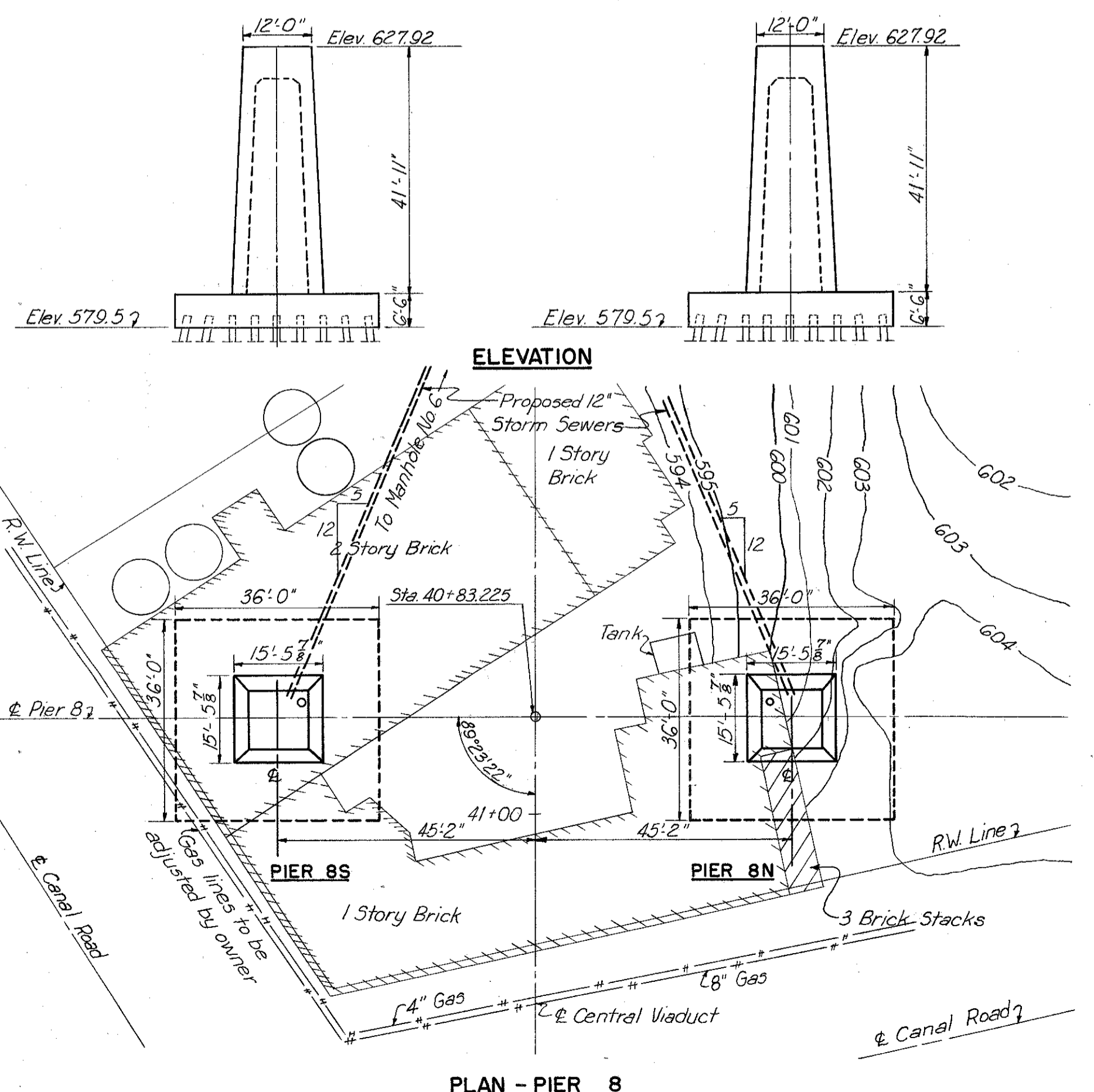
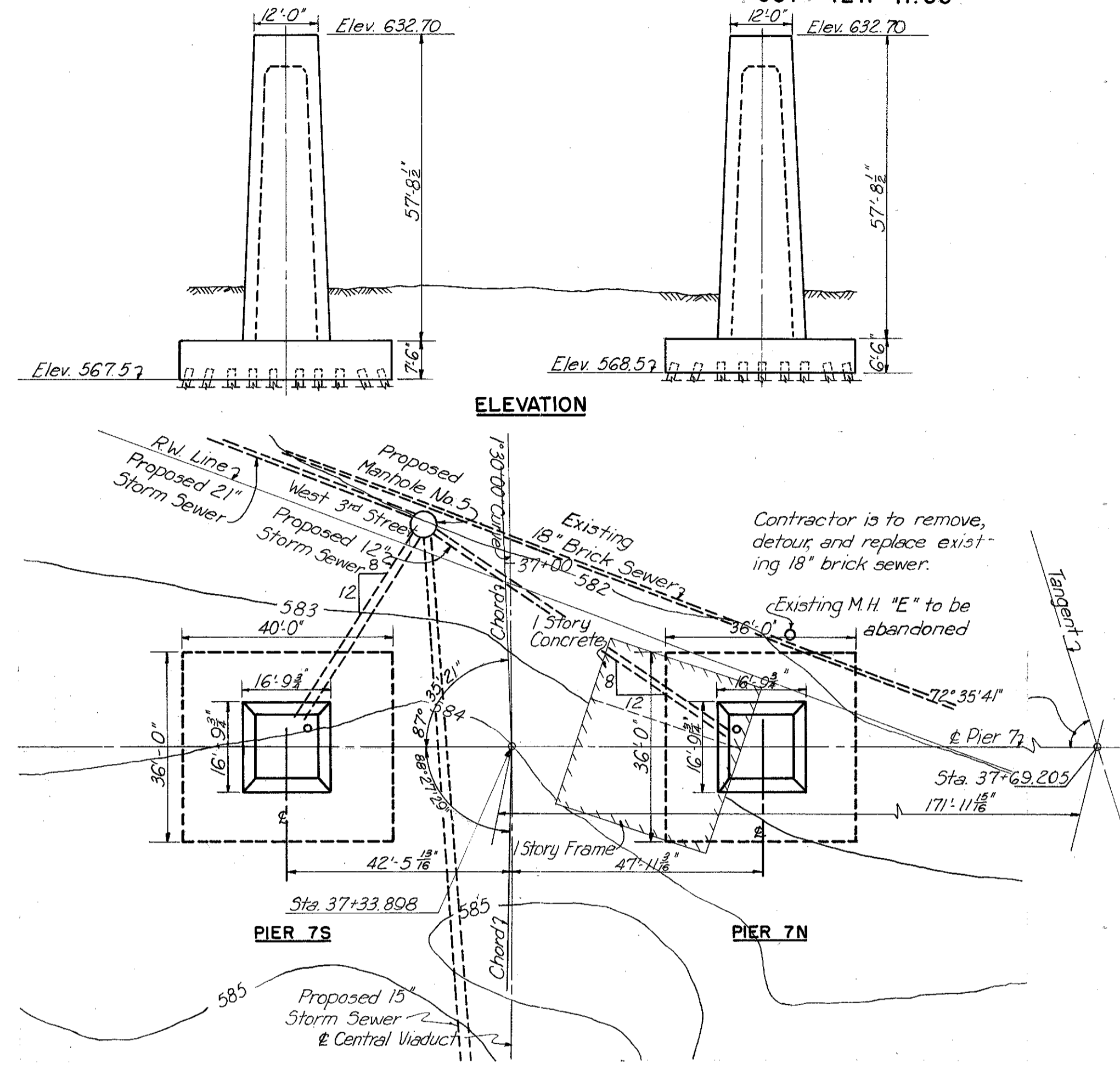
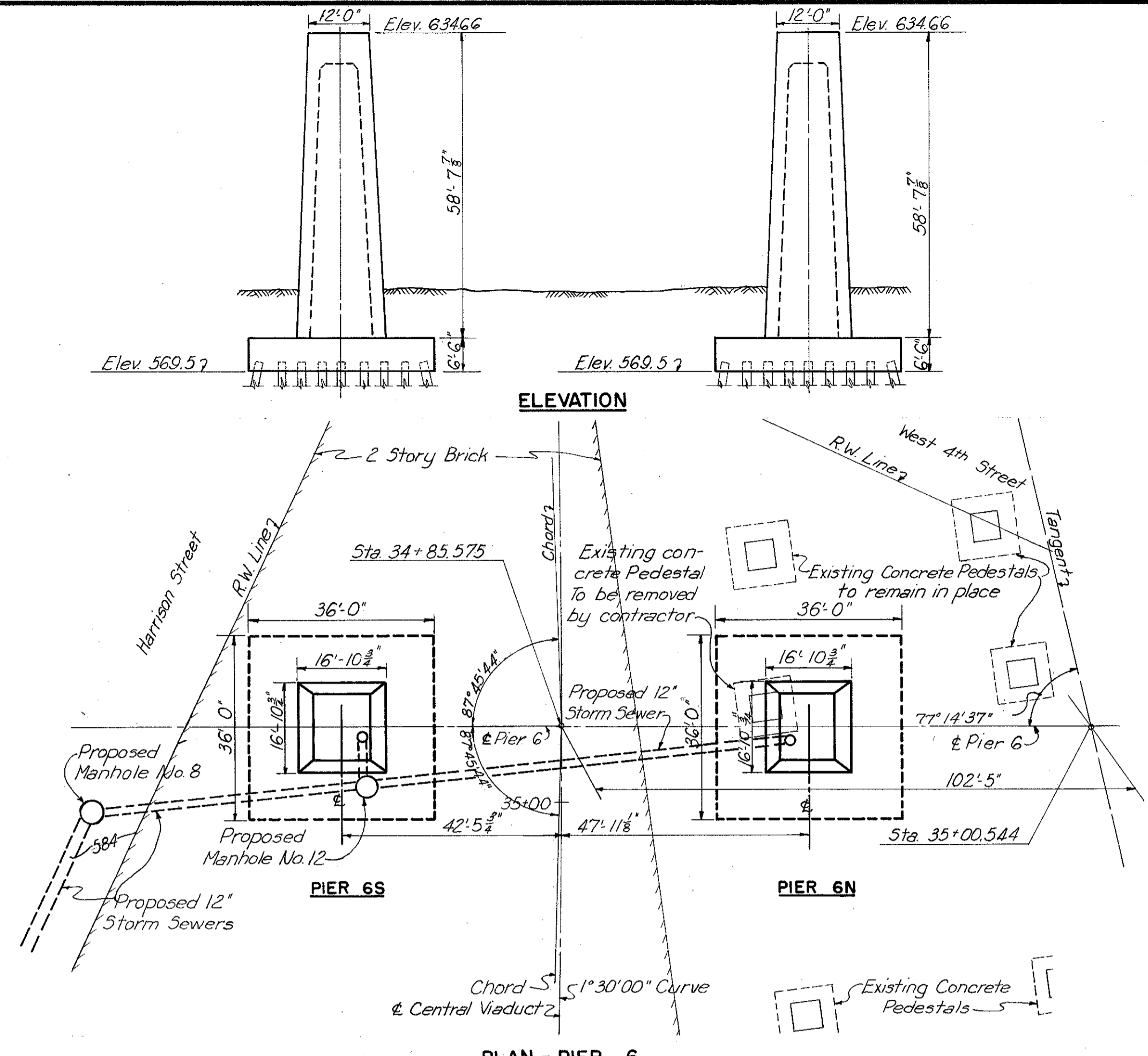
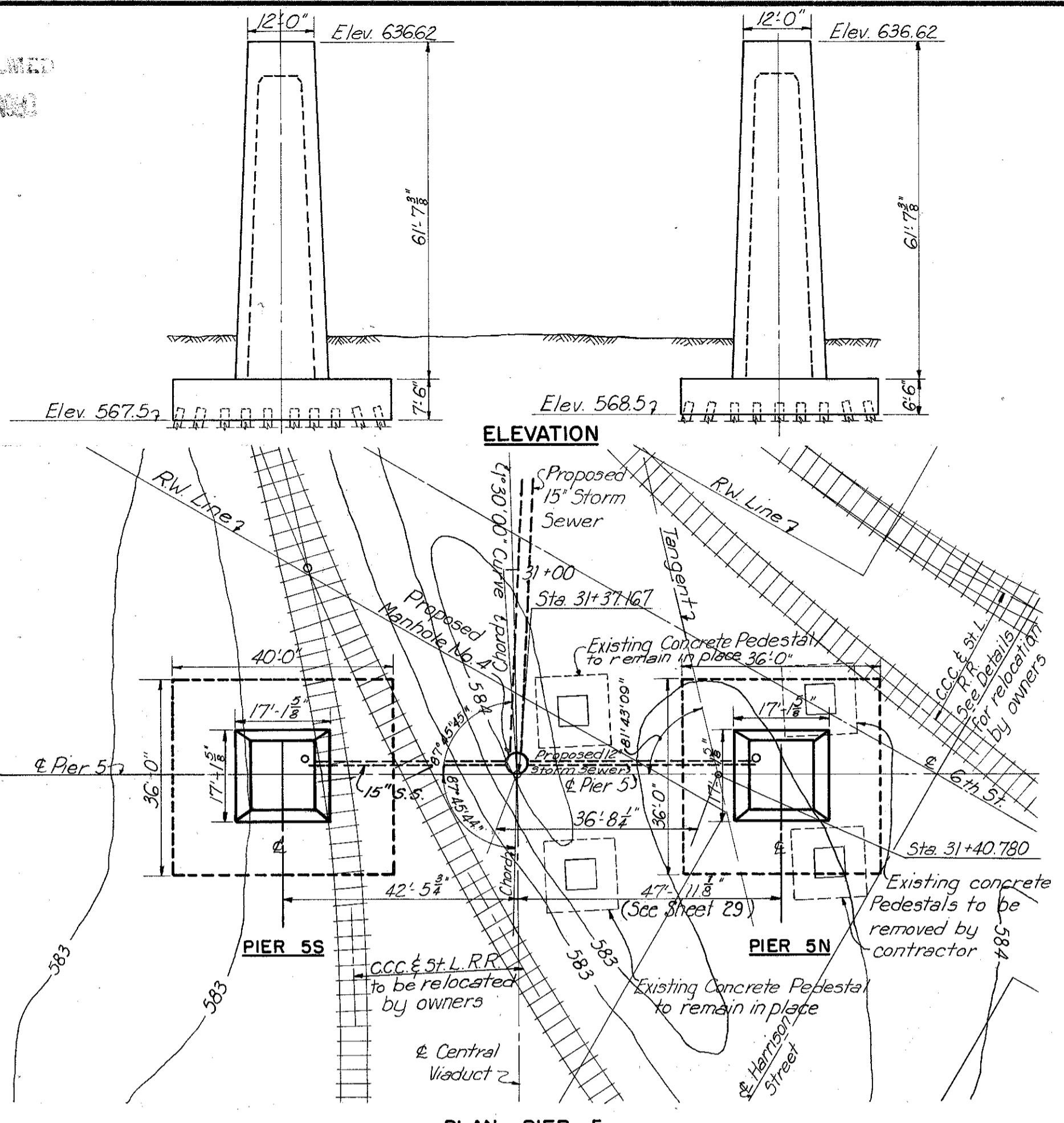
914-1A SHEET-112

UNCORRECTED
FEB 25 1954

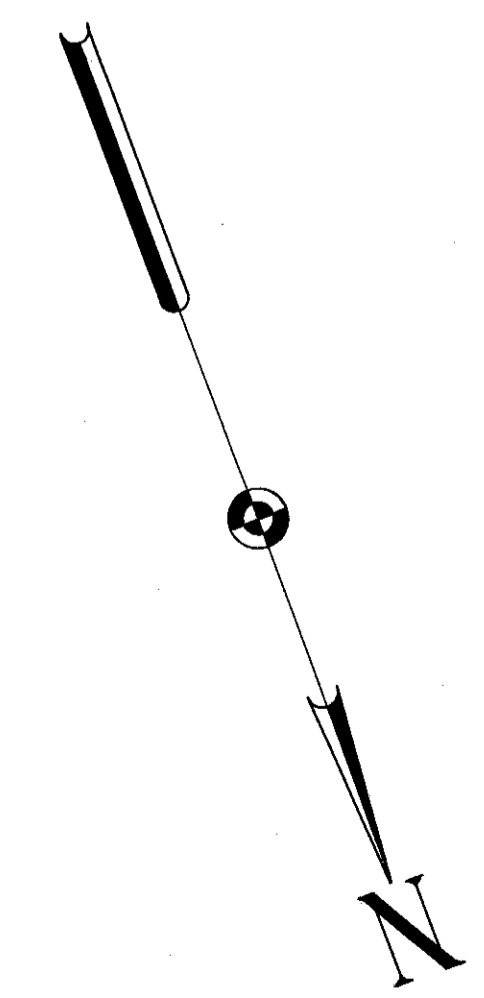
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO	UI 1057 (4)	

13
43

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY - 42 R - 17.50



Note: For storm sewer locations, flow lines, and details, see Shts. 33 to 36 inclusive. All railroad tracks are shown in their present locations for track relocation by the owners before the contractor begins construction of pier footings, see Sht. 11.



PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

EXISTING CONDITIONS AT
PIERS 5 TO 8 INC. AND EAST END PIER
CLEVELAND CUYAHOGA COUNTY OHIO

SCALE: 1" = 20'-0"
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TRCD N.A.M. DATE: 6-15-54
CKD C.J.C. DATE: 6-17-54

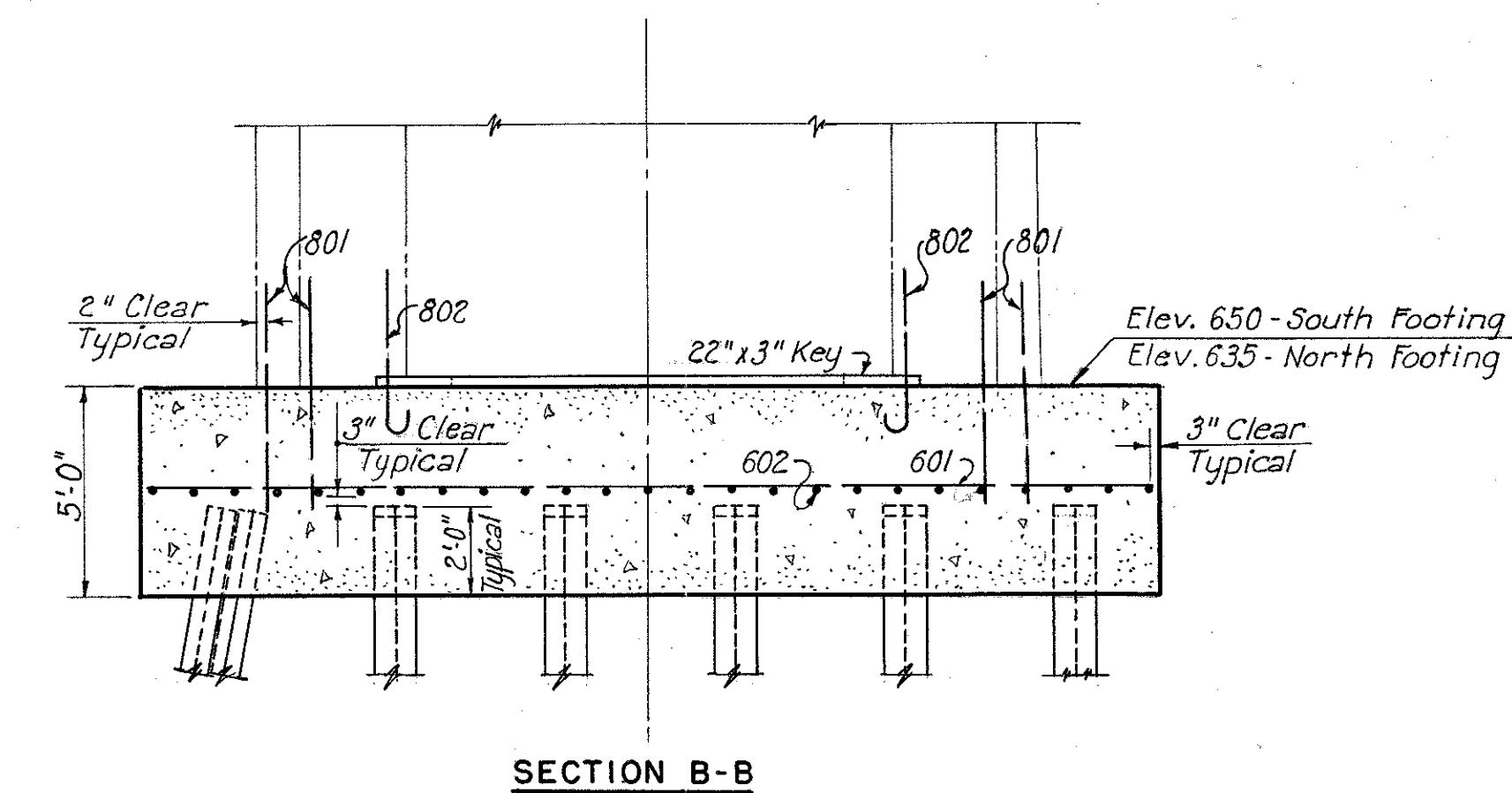
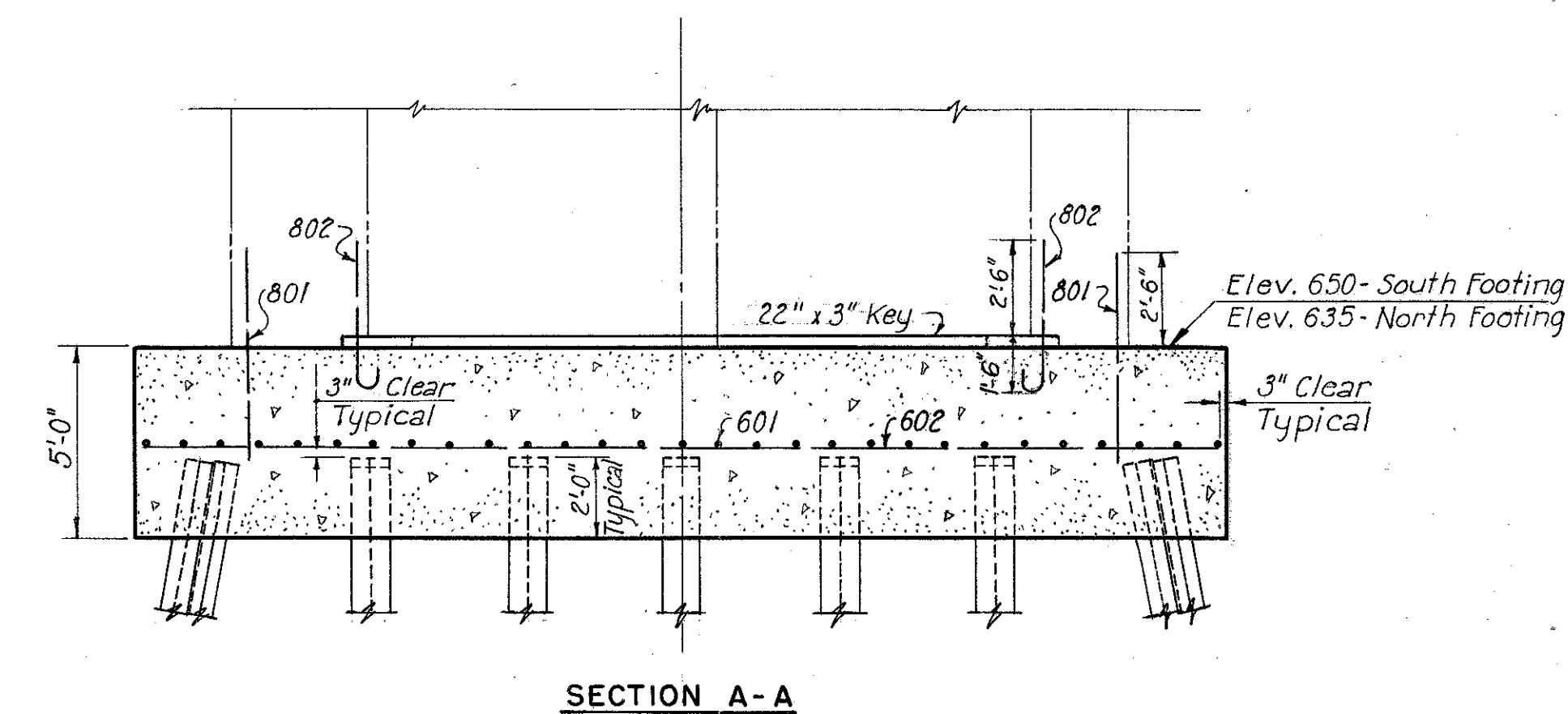
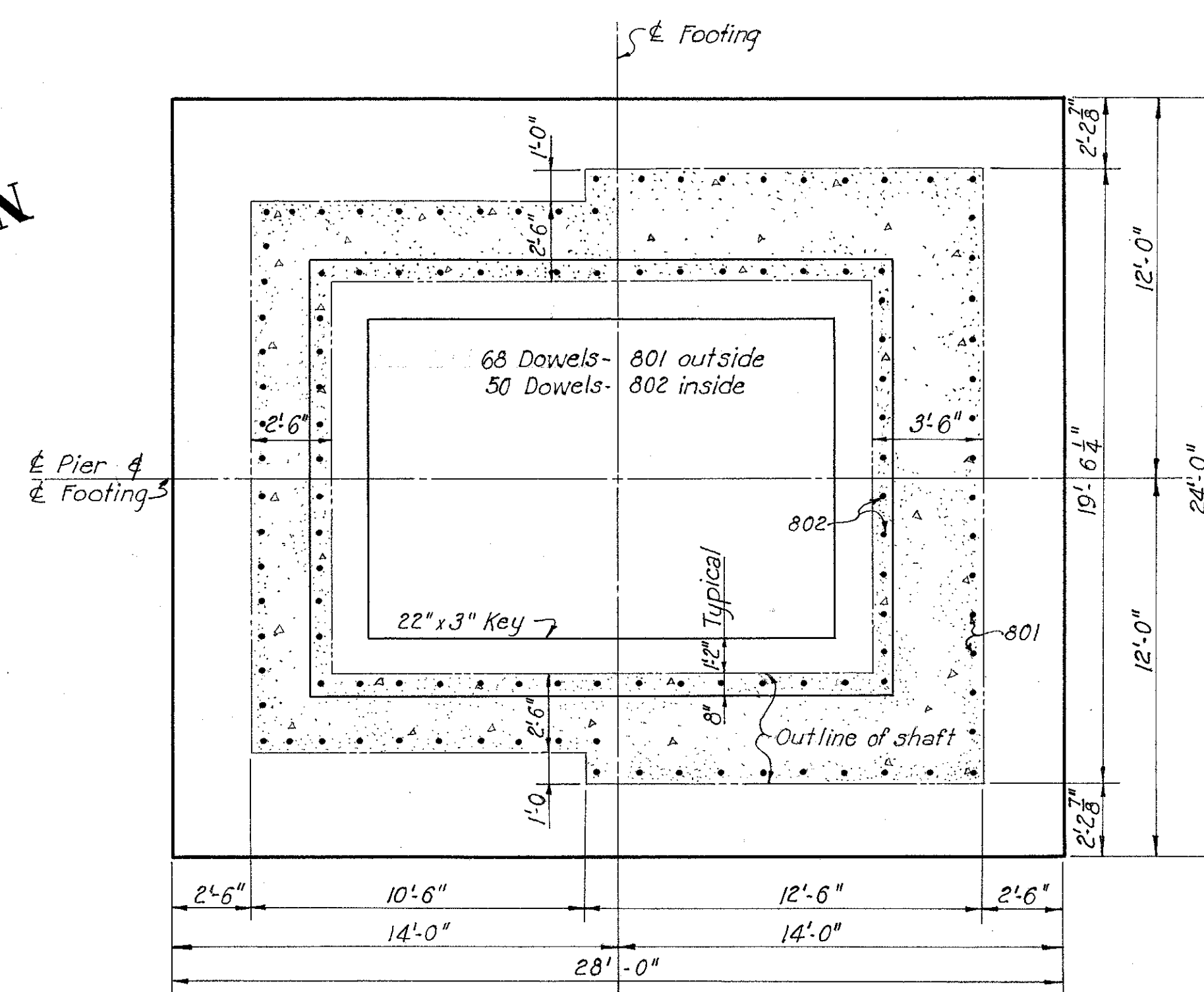
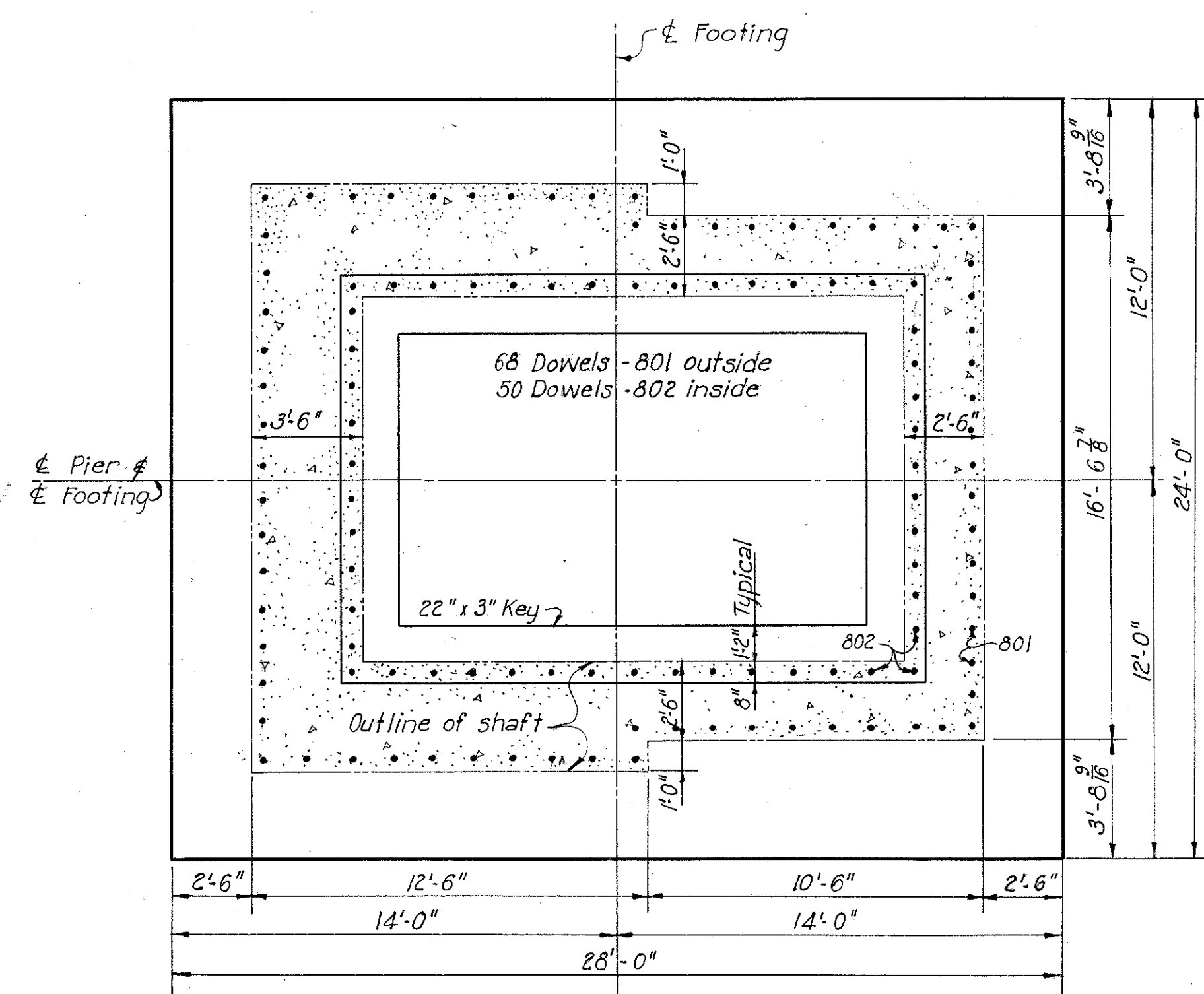
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK
914-1A SHEET 1.13

REPROFILMED
FEB 25 1963

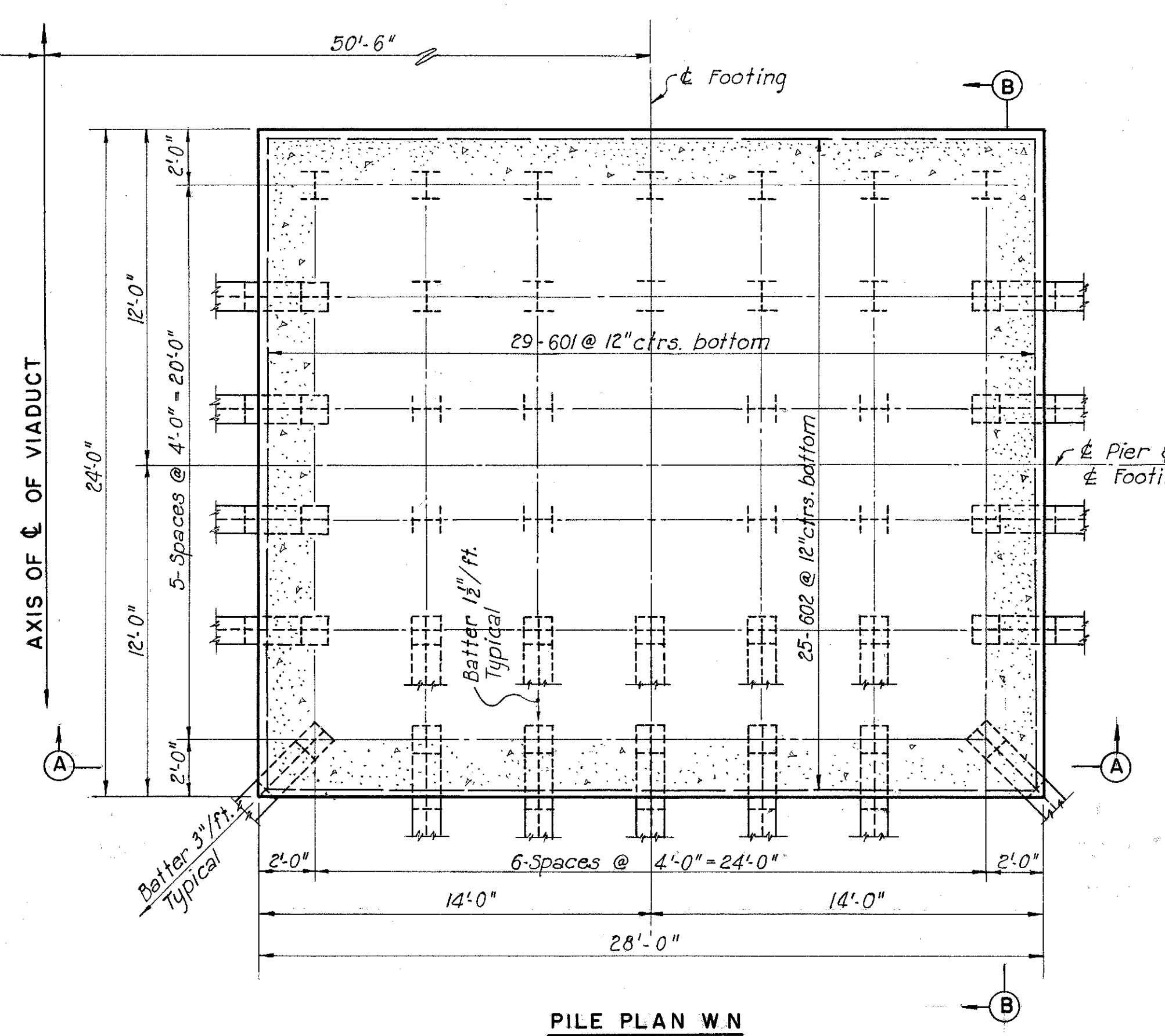
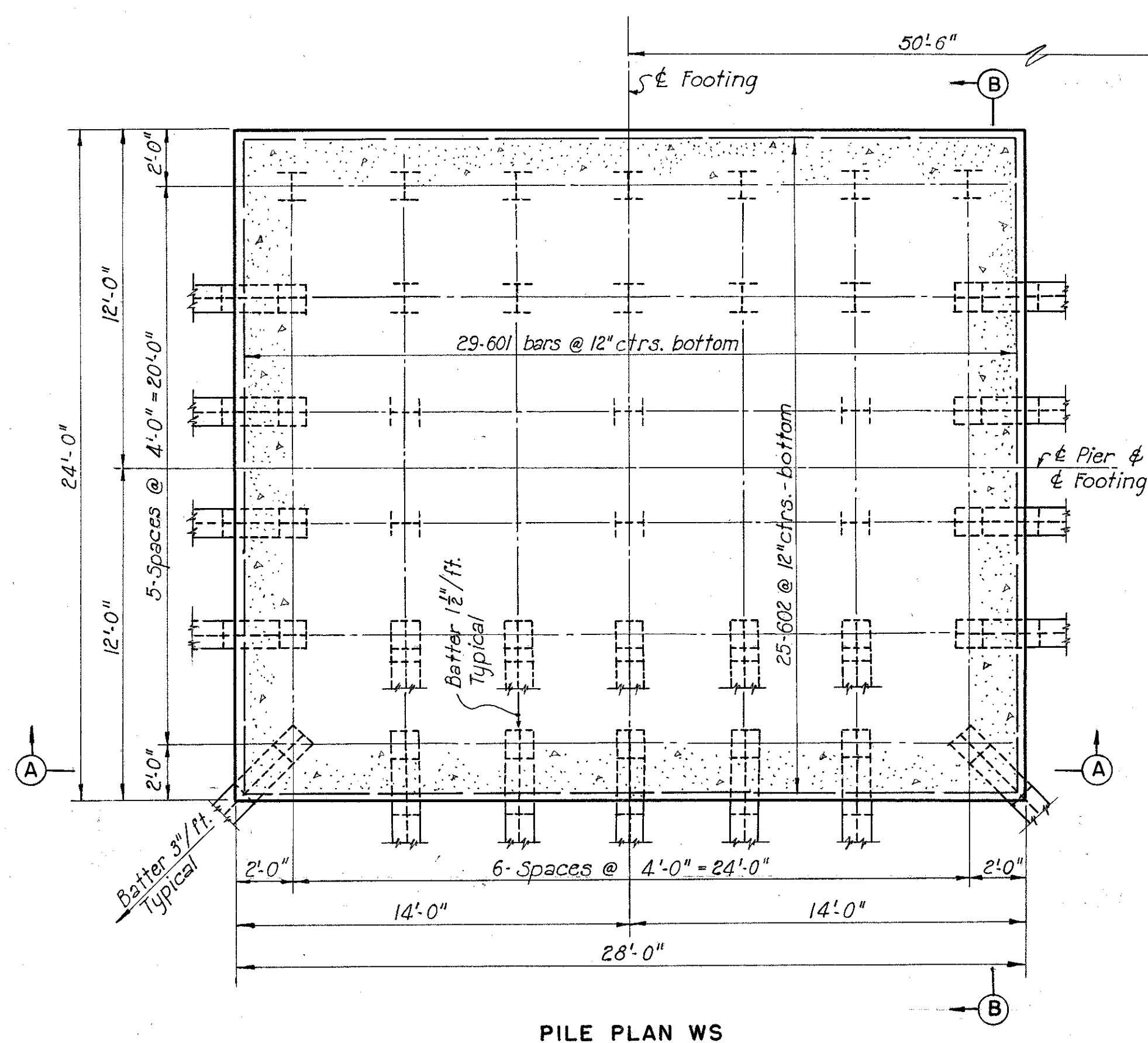
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO	UI 1057 (4)	

14
43

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY - 42R-17.50



Note: 12" B.P. 53 steel piles with a nominal design capacity of 65 tons each.
40 piles, estimated length 60 feet each, for footing WN.
38 piles, estimated length 60 feet each, for footing WS.
Batter 3" per foot and 1 1/2" per foot as shown.
For reinforcing schedule, see Sheet 32.



PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

WEST END PIER FOOTINGS, WN AND WS

CLEVELAND CUYAHOGA COUNTY OHIO

SCALE: 1/4" = 1'-0"

MADE P.K.D. DATE 6-25-54
TRCD. A.H. DATE 6-9-54
CKD. G.J.C. DATE 7-1-54

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

914-1A SHEET 1.14

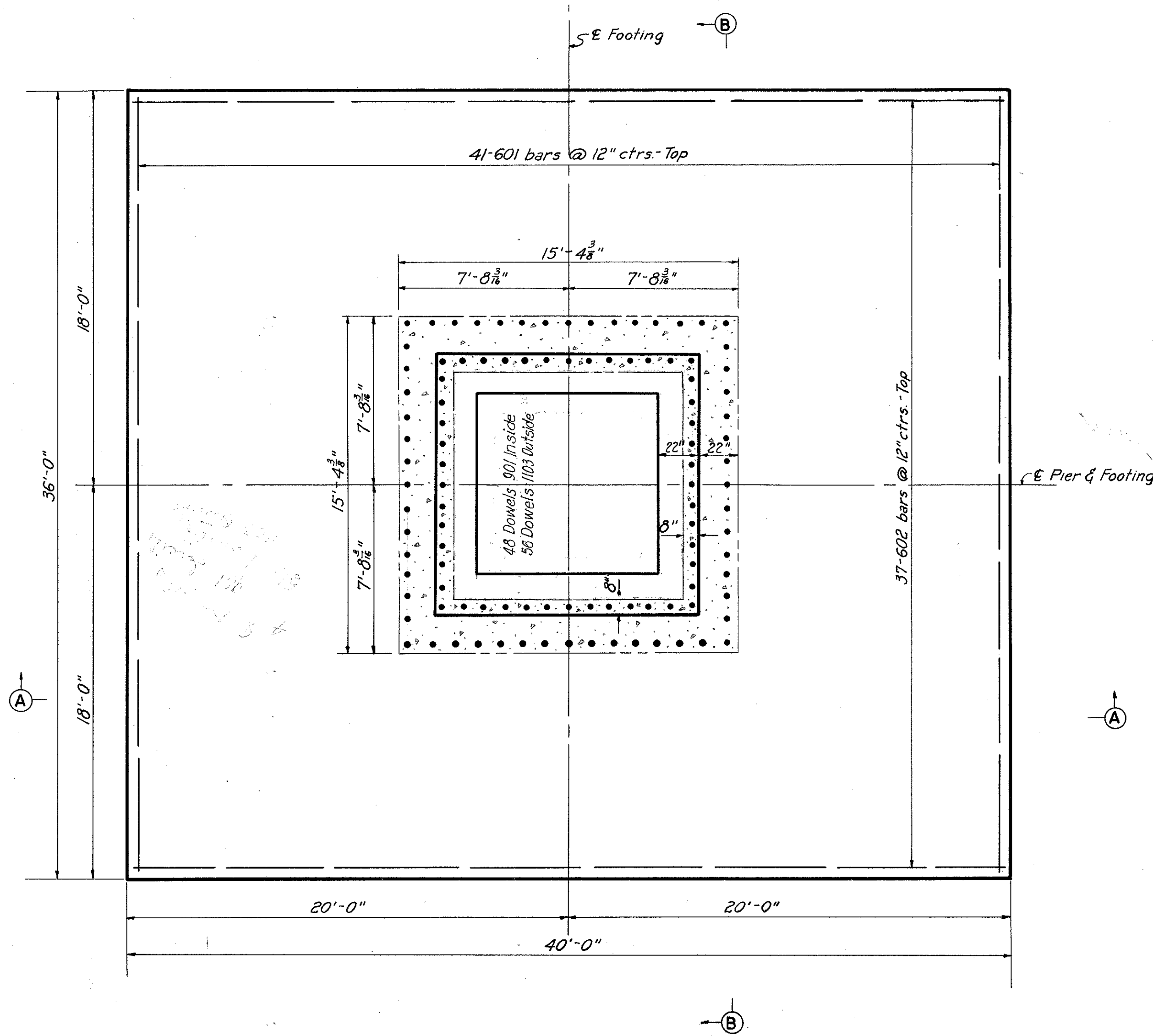
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UNRECORDED
FEB 25 1953

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO	UI 1057 (4)	

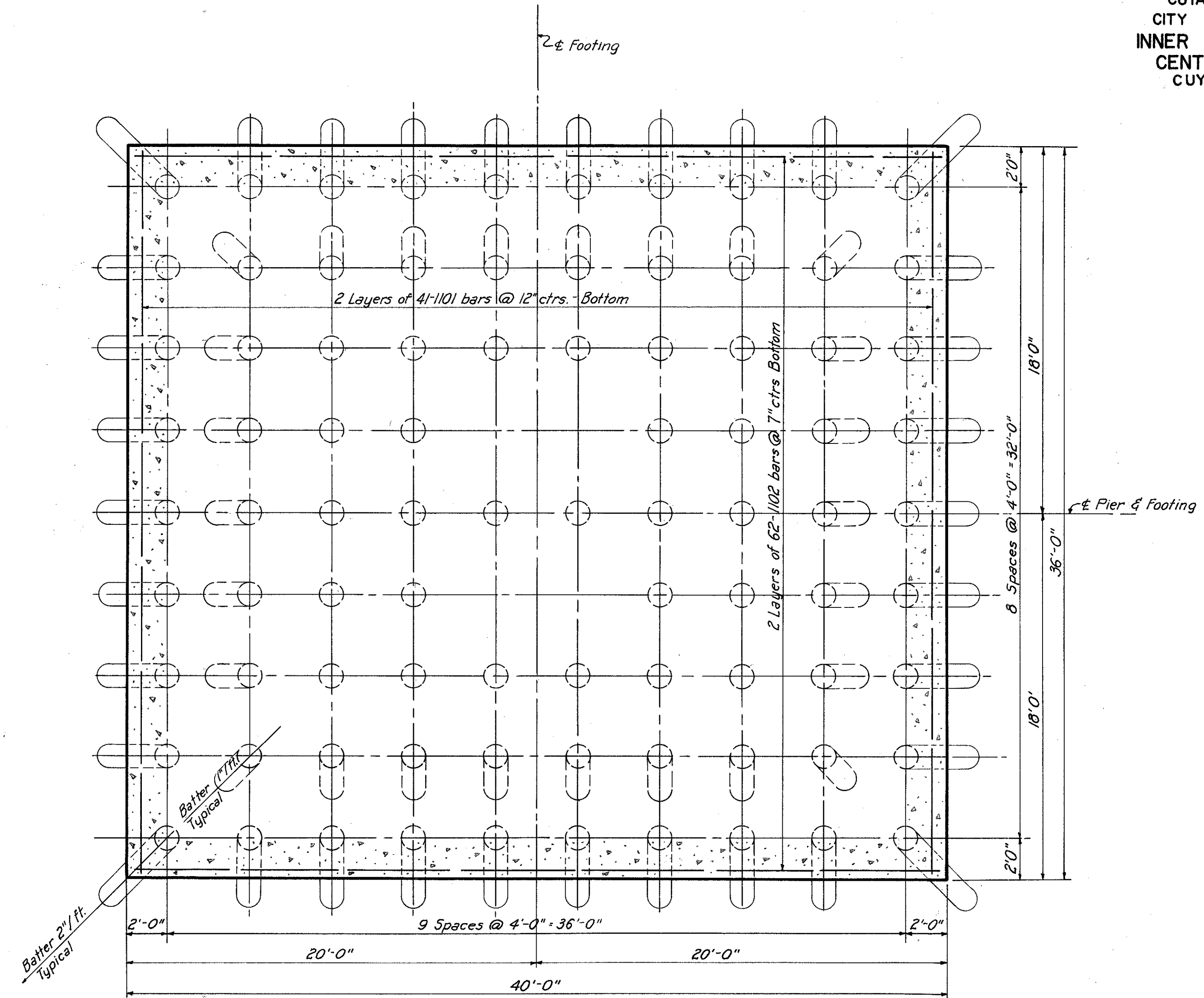
15
43

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY - 42R-17.50

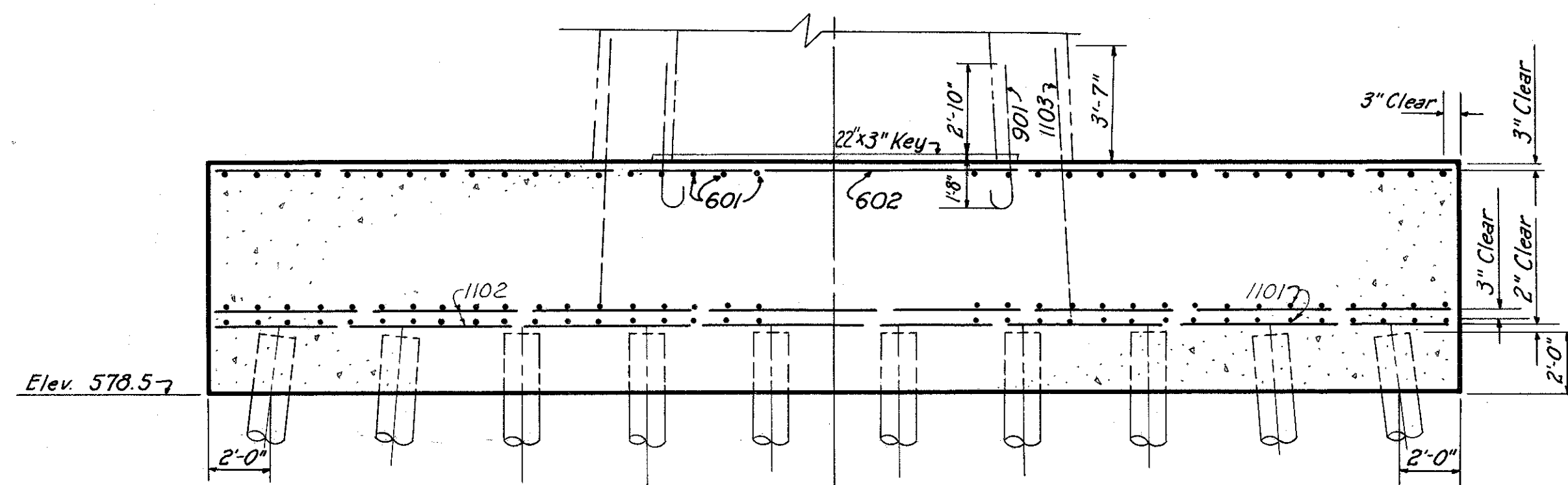


PLAN
Scale: 1/4" = 1'-0"

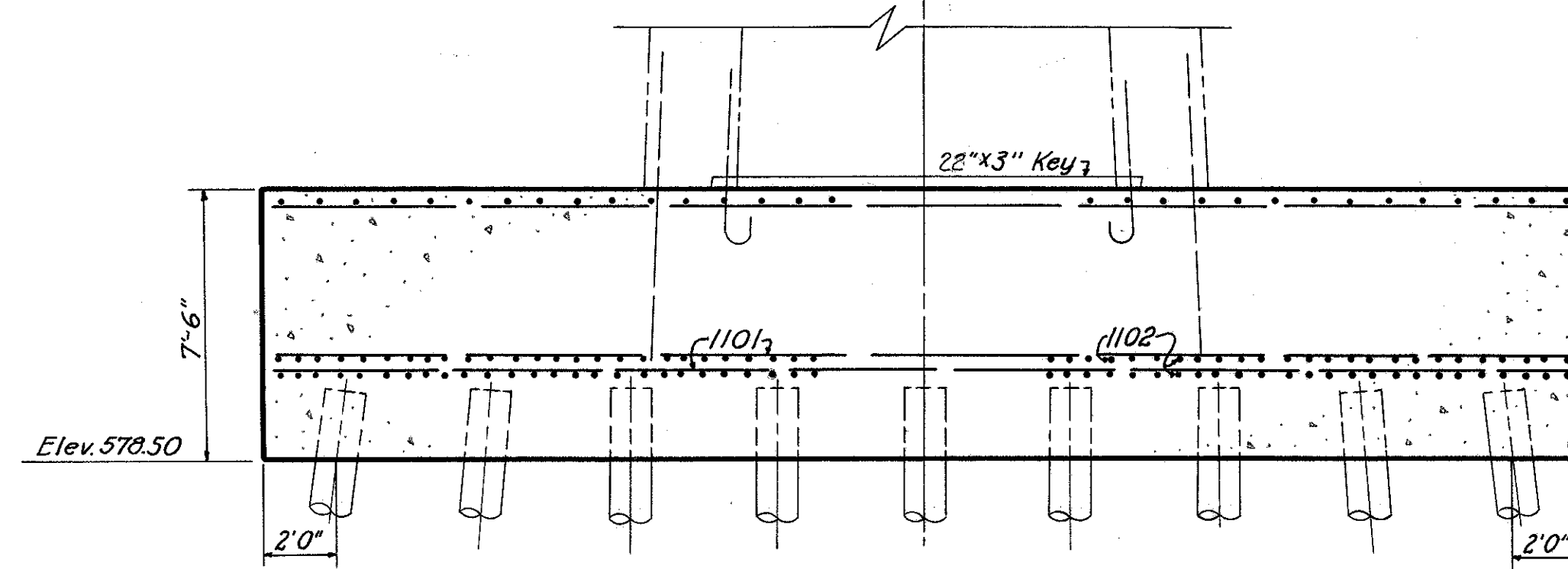
AXIS OF C. OF VIADUCT



PILE PLAN
Scale: 1/4" = 1'-0"



SECTION A-A
Scale: 1/4" = 1'-0"



SECTION B-B
Scale: 1/4" = 1'-0"

Note:
86-14" Cast-in-Place Reinforced Concrete Piles With a Nominal design capacity of 65 Tons. Estimated Length 90 ft. each. Batter Outside Row of Piles 2" per ft. and Batter Second Row of Piles 1" per ft.

For Reinforcement Schedule, See Sheets 30 and 31.
For Footing 1N, batter outside row of piles 2" per foot on East, South & West sides of footing. Batter second row of piles 1" per foot all sides and outside row of piles 1" per foot on North side of footing.

Revised pile batters, GA 2-15-55 PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

PIER FOOTINGS IN, AND IS

CLEVELAND CUYAHOGA COUNTY OHIO

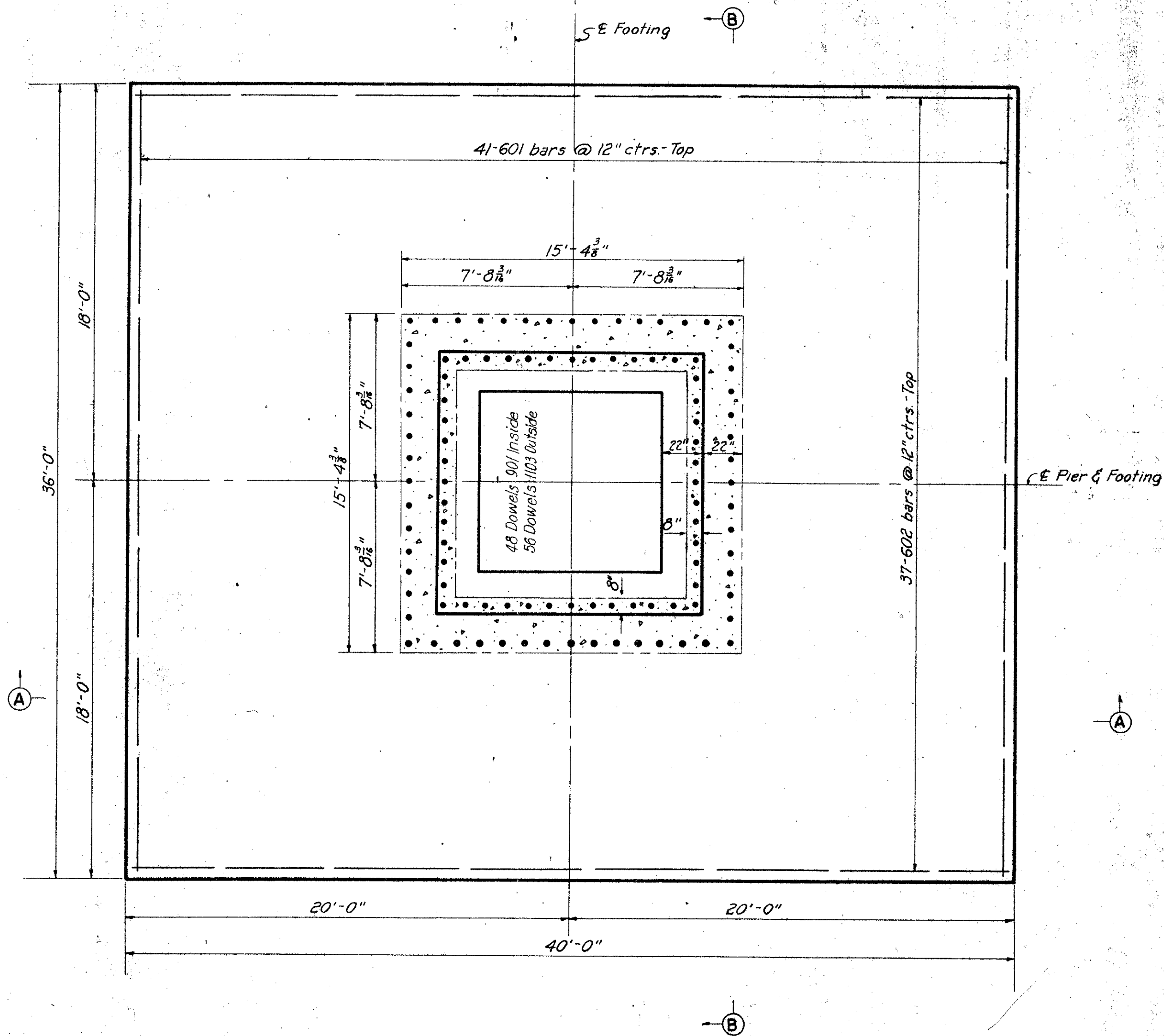
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MADE DER DATE: 2-8-54
TRCD E.J.B. DATE: 5-4-54
CKD C.J.C. DATE: 2-25-54
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK
914-1A SHEET 115

Superseded by Sheet 15A
2-15-55

MICROFILMED
FEB 25 1983

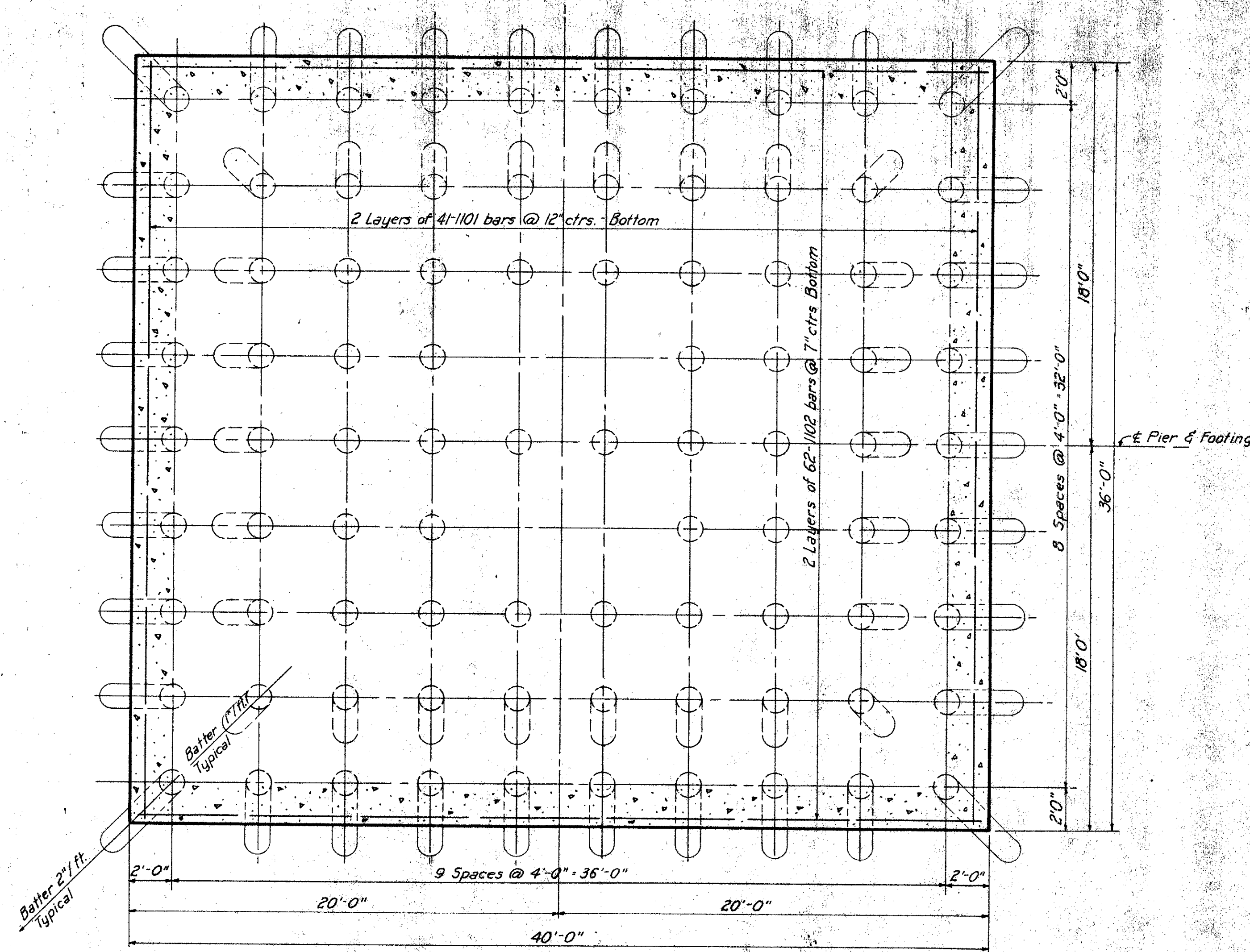
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO	UI 1057 (4)	15A 43

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY - 42 R - 17.50

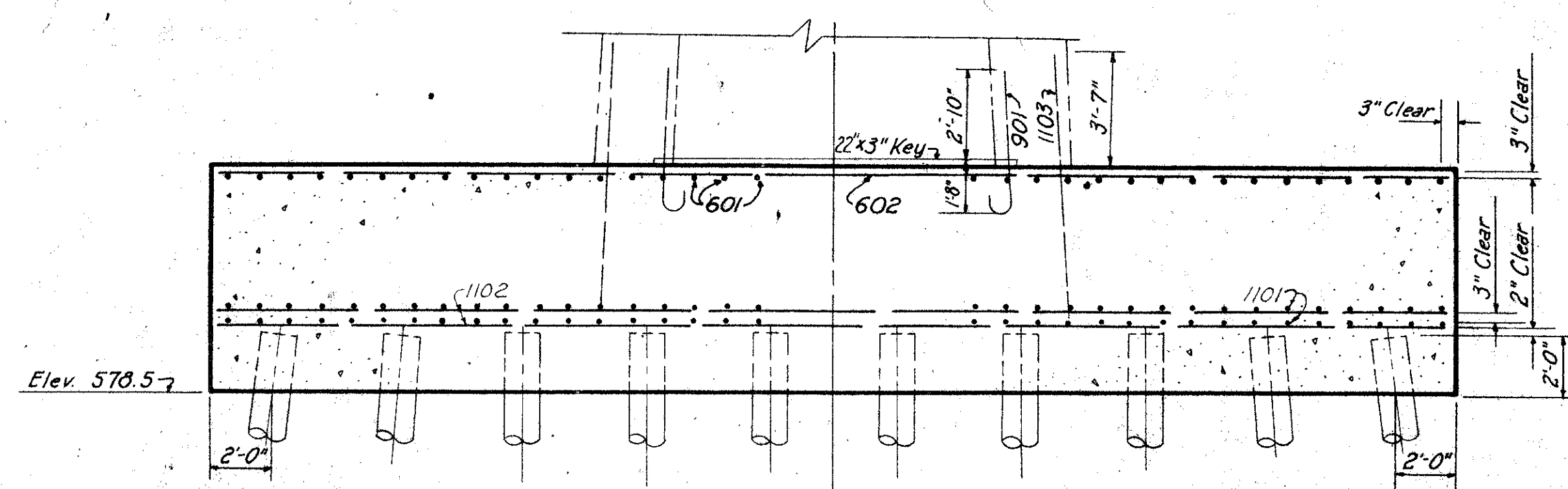


PLAN
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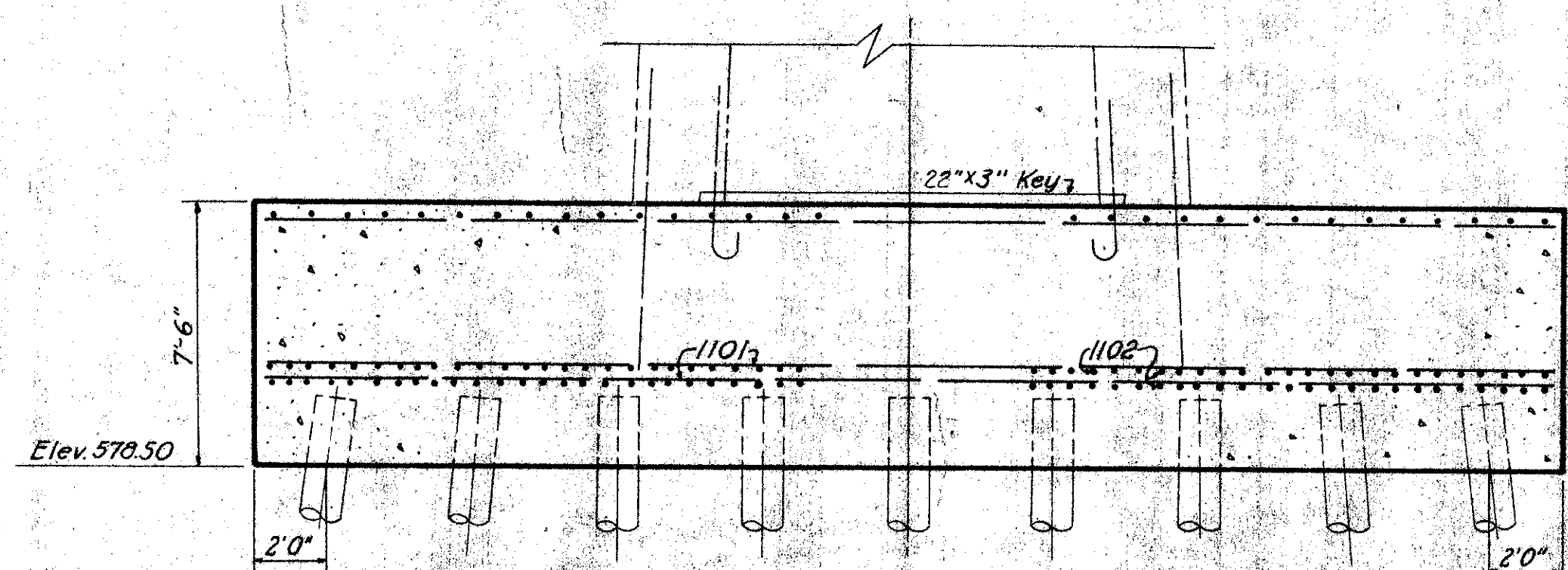
AXIS OF Q. OF VIADUCT



PILE PLAN
Scale: 1/4" = 1'-0"



SECTION A-A
Scale: 1/4" = 1'-0"



SECTION B-B
Scale: 1/4" = 1'-0"

Note:
66-14" Cast-in-Place Reinforced Concrete Piles With a Nominal design capacity of 65 tons. Estimated Length 90 ft. each. Batter Outside Row of Piles 2" per ft. and Batter Second Row of Piles 1" per ft. for Footing 15 only. For Reinforcement Schedule See Sheets 30 and 31.
For Footing 11N, batter outside Row of piles 2" per foot on East, South and West sides of footing. Batter second row of piles 1" per ft. all sides and outside row of piles 1" per ft. on North side of footing.

PART 2
U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT
PIER FOOTINGS IN, AND IS

CLEVELAND	CUYAHOGA COUNTY	OHIO
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SCALE: AS SHOWN
MADE D.E.R. DATE: 2-8-54
TRCD. J.B. DATE: 6-7-54
CHK. C.J.C. DATE: 2-25-54

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK
914-1A SHEET 115

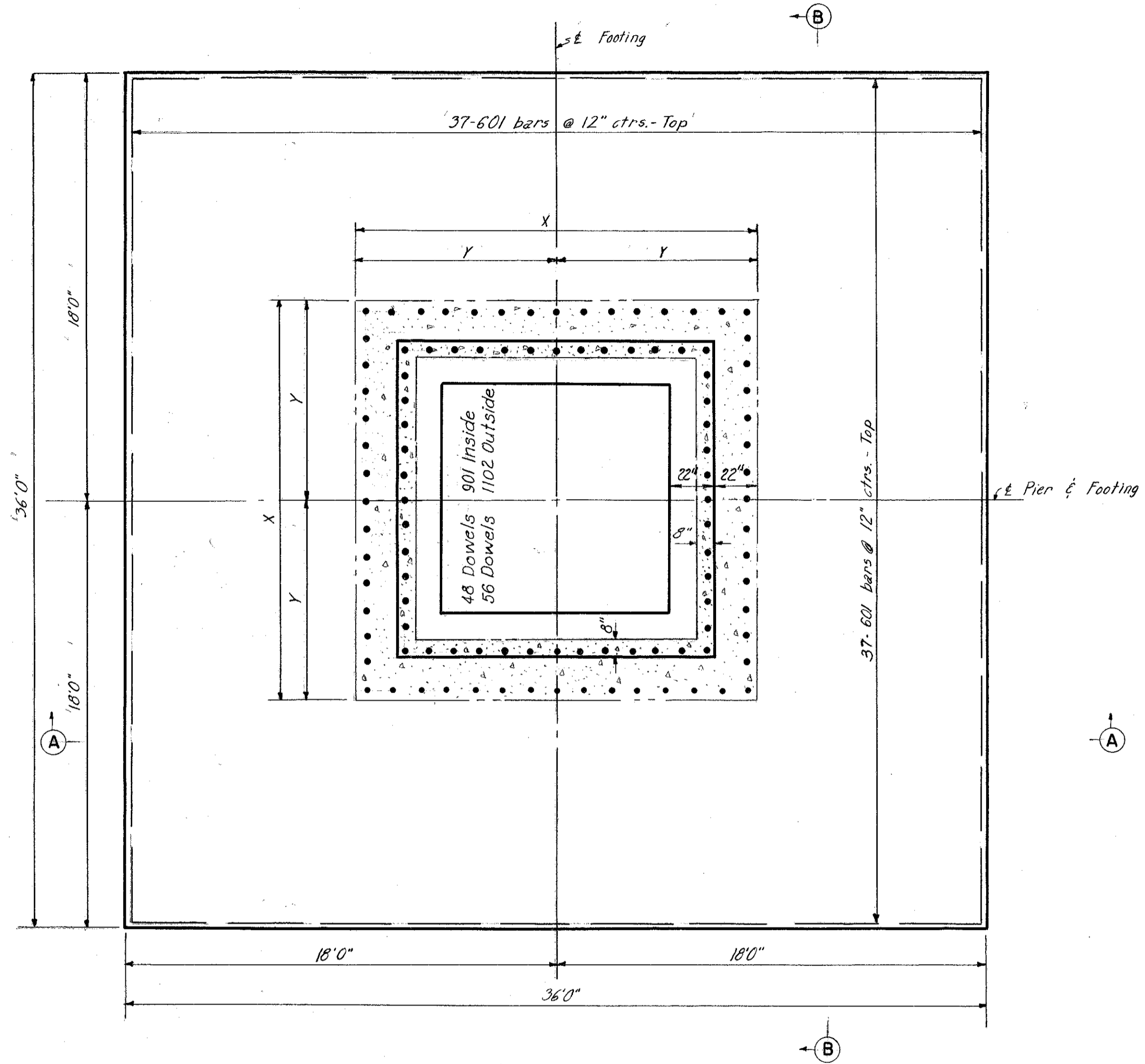
Supersedes Sheet 15
Revised pile batters. GA 2-15-55

MICROFILMED
FEB 25 1983

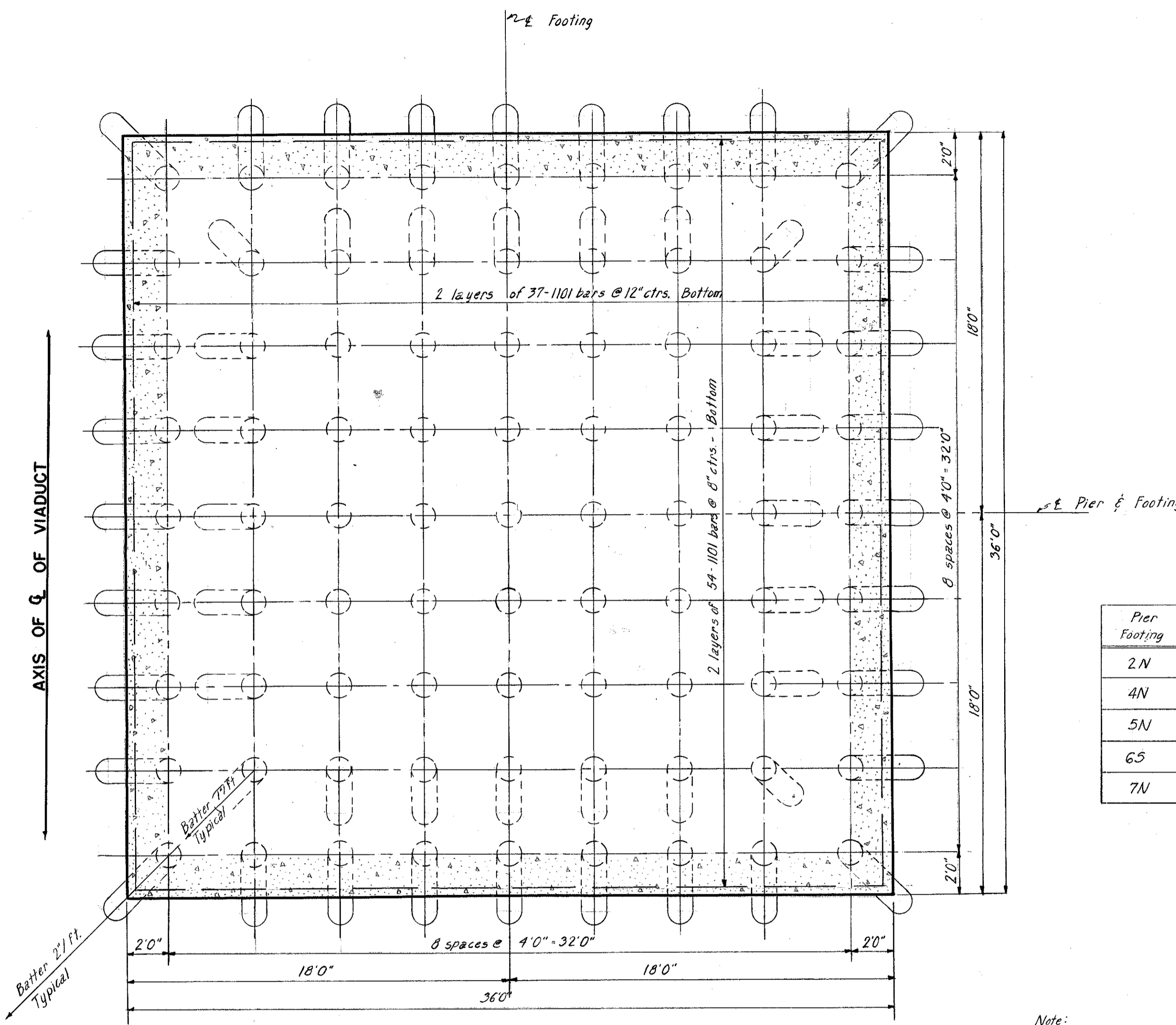
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO	UI 1057 (4)	

16
43

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY - 42 R - 17.50



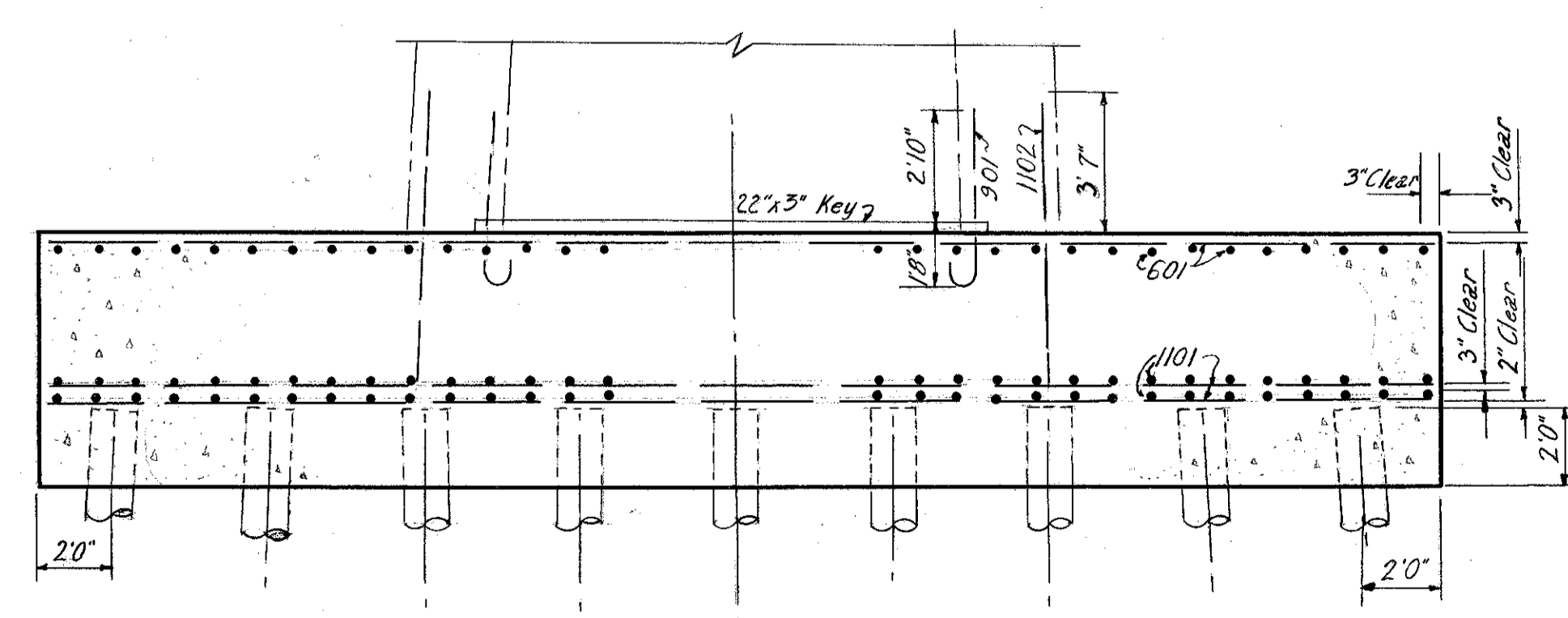
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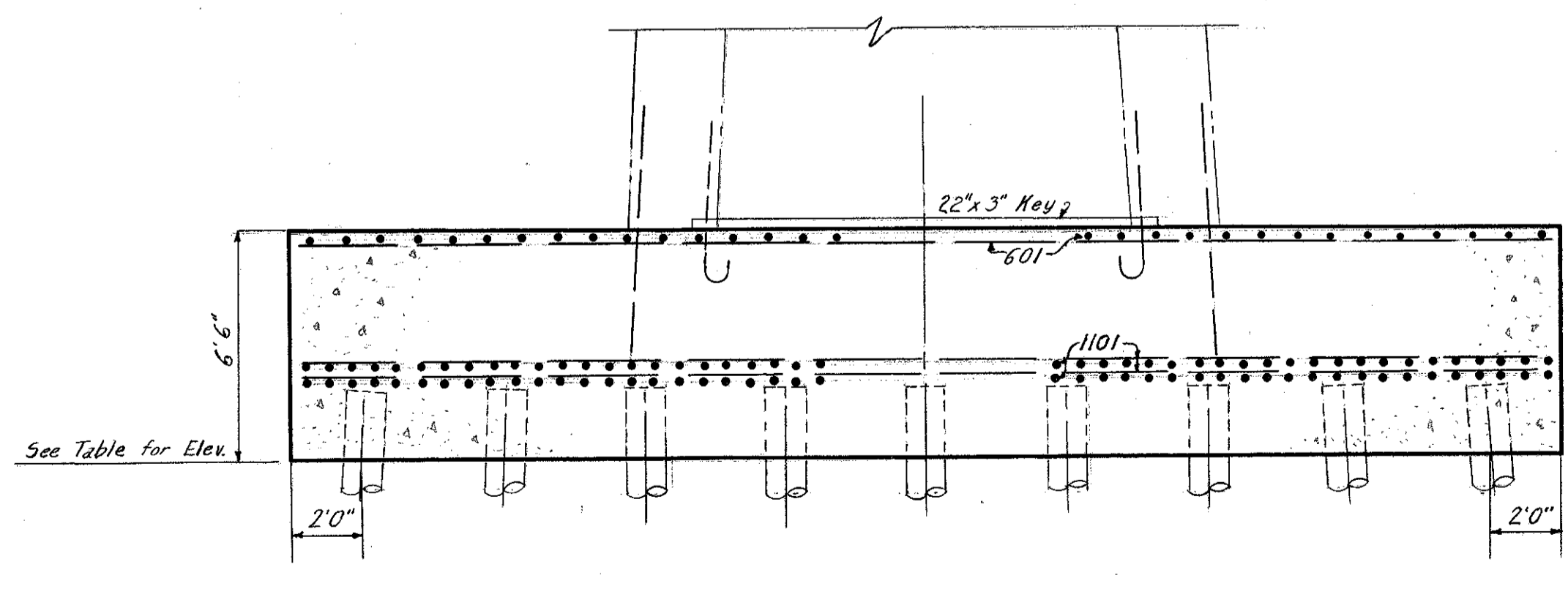
PILE PLAN
Scale 1/4" = 1'-0"

Pier Footing	X	Y	Bottom of Footing Elev.	Estimated Pile Lengths
2N	16'-0 7/8"	8'-1 7/8"	565.5	90'
4N	16'-1 1/8"	8'-5 1/8"	567.5	90'
5N	17'-1 1/8"	8'-6 1/8"	568.5	85'
6S	16'-10 3/8"	8'-5 3/8"	569.5	80'
7N	16'-9 3/8"	8'-4 3/8"	568.5	70'

Note:
81'-14" Cast-In-Place Reinforced Concrete Piles with a nominal design capacity of 65 Tons. Batter outside row of piles 2" per foot, and second row 1" per foot.
For reinforcement schedule, see Sbs. 30 and 31.



SECTION A-A
Scale 1/4" = 1'-0"



SECTION B-B
Scale 1/4" = 1'-0"

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

PIER FOOTINGS 2N, 4N, 5N, 6S, AND 7N

CLEVELAND CUYAHOGA COUNTY OHIO

SCALE AS SHOWN
MADE BY DATE 2-6-59
TRCD. C.B. DATE 5-7-58
CKD. C.W.C. DATE 2-25-58

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

914-1A SHEET 1.16

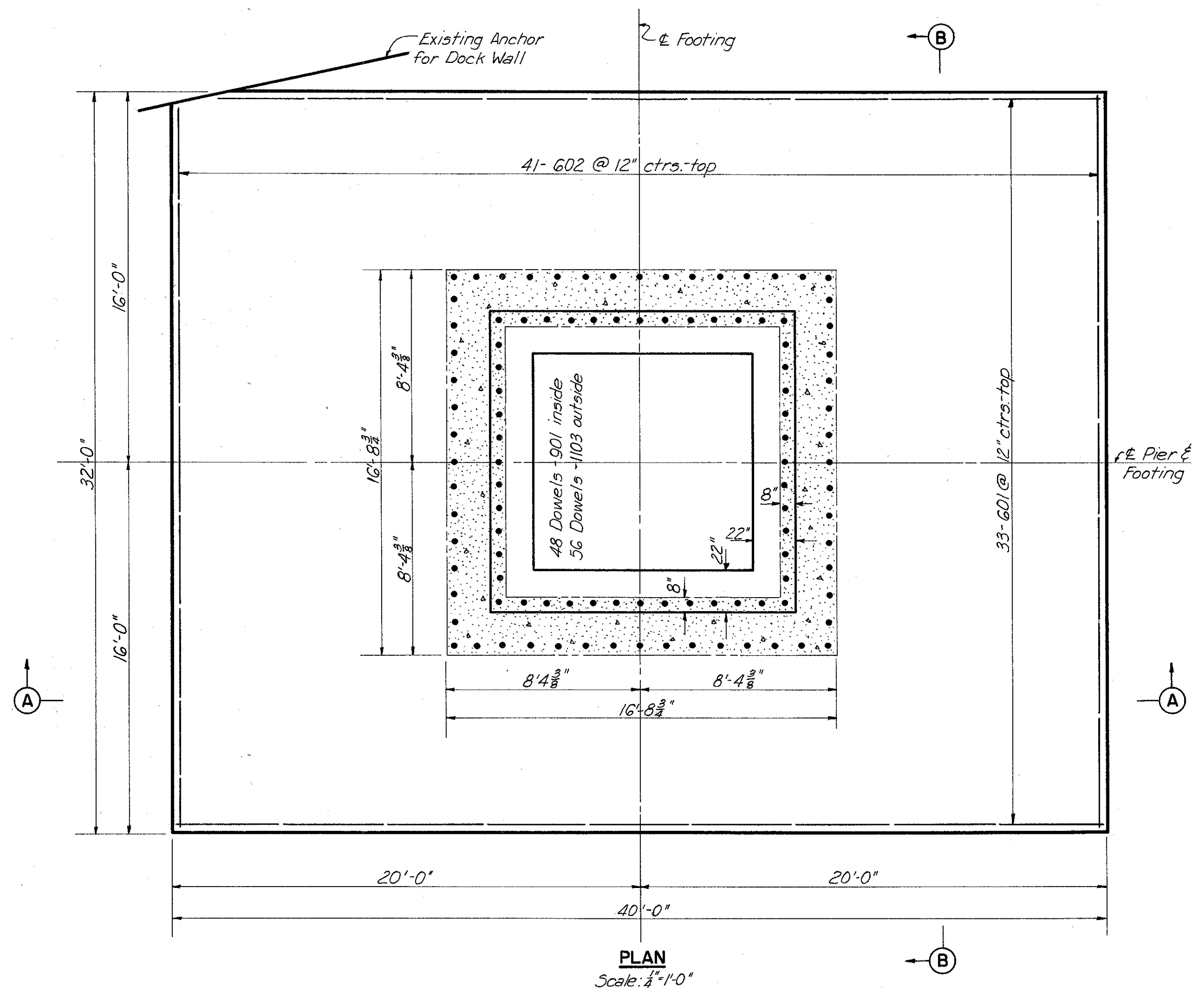
UNRECORDED
FEB 25 1954

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO	UI 1057 (4)	

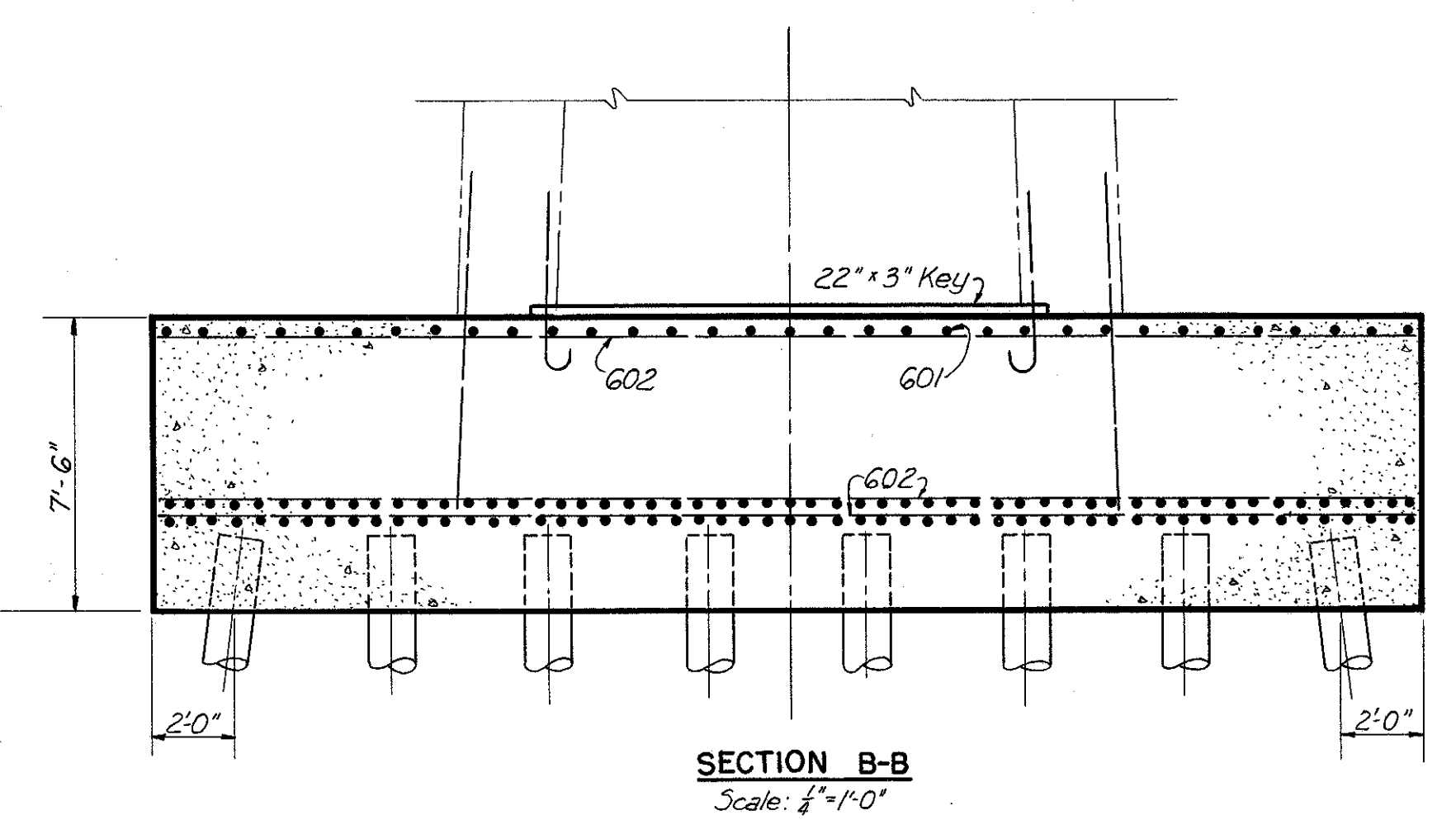
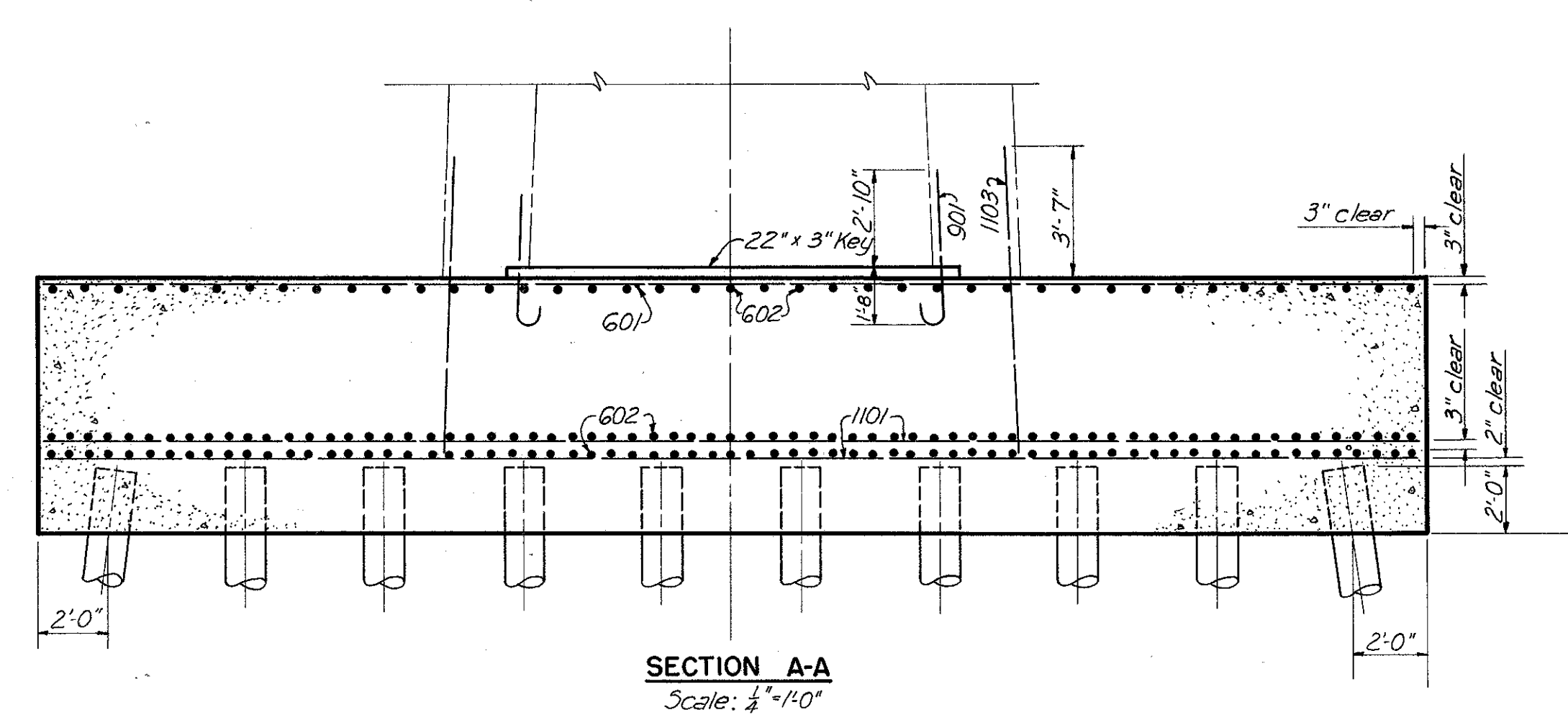
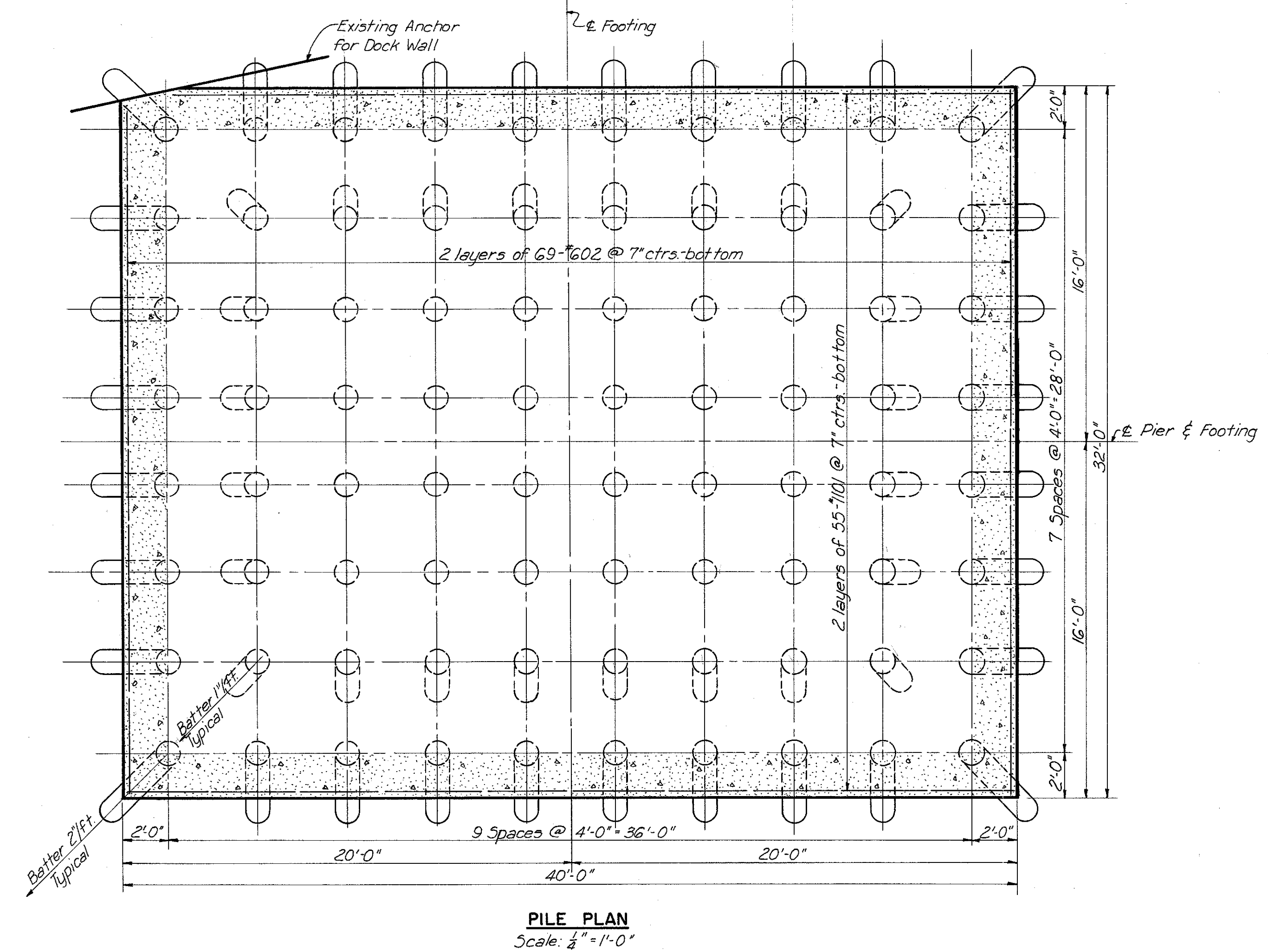
17
43

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY - 42 R - 17.50

Note: Cut or bend reinforcing steel in the field as required to clear the steel pile dock wall.
The exact location of the existing dock wall anchor is not known. After excavation is completed, it may be necessary to move the corner pile in toward the center of the footing. Maintain an edge distance of 1'-9" from the top center of the pile to the surface of concrete poured directly against the dock wall anchor.



AXIS OF ϵ OF VIADUCT



Note: 80-14" cast-in-place reinforced concrete piles with a nominal design capacity of 65 tons each. Estimated length 90 ft each. Batter outside row of piles 2" per ft, and batter second row of piles 1" per ft. For reinforcing schedule, see Shs. 30 and 31.

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

PIER FOOTING 2S

CLEVELAND CUYAHOGA COUNTY OHIO

SCALE: AS SHOWN
MADE D.E.R. DATE 6-9-54
TRCD. M.A.M. DATE 6-25-54
CKD. V.S.S. DATE 6-28-54

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

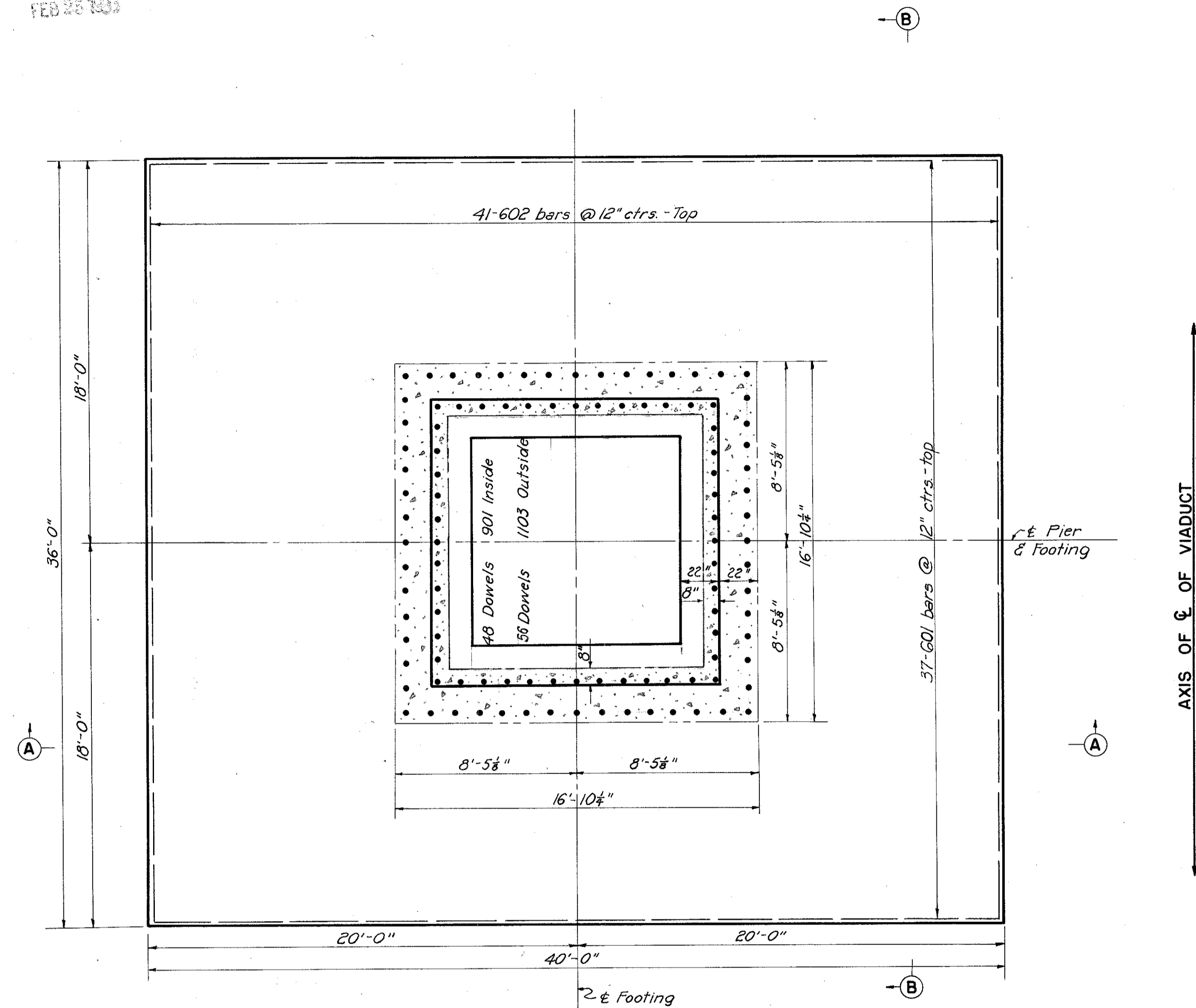
914-1A SHEET 1.17

MICROFILMED
FEB 28 1954

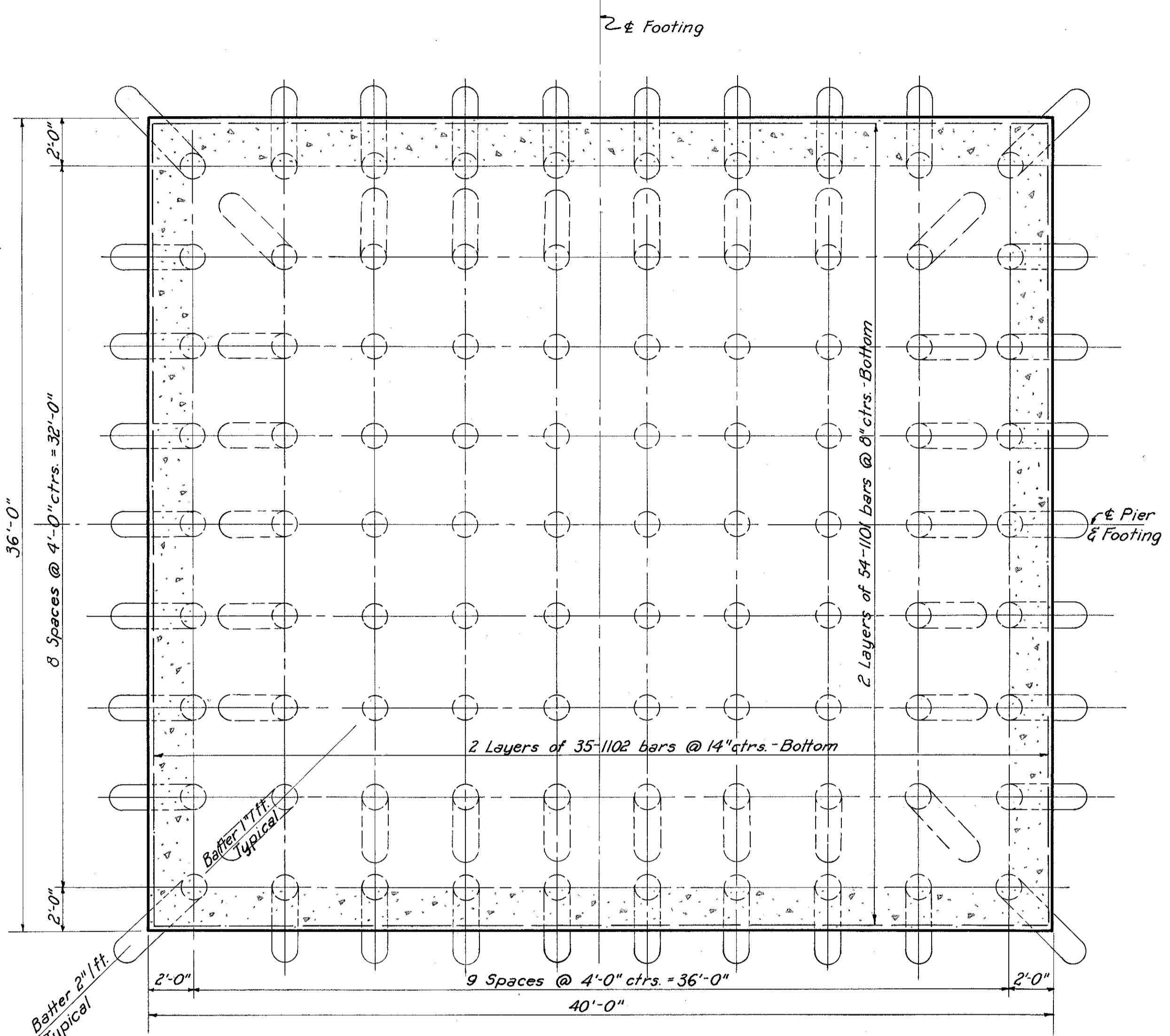
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO	UI 1057 (4)	

18
43

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY - 42 R - 17.50

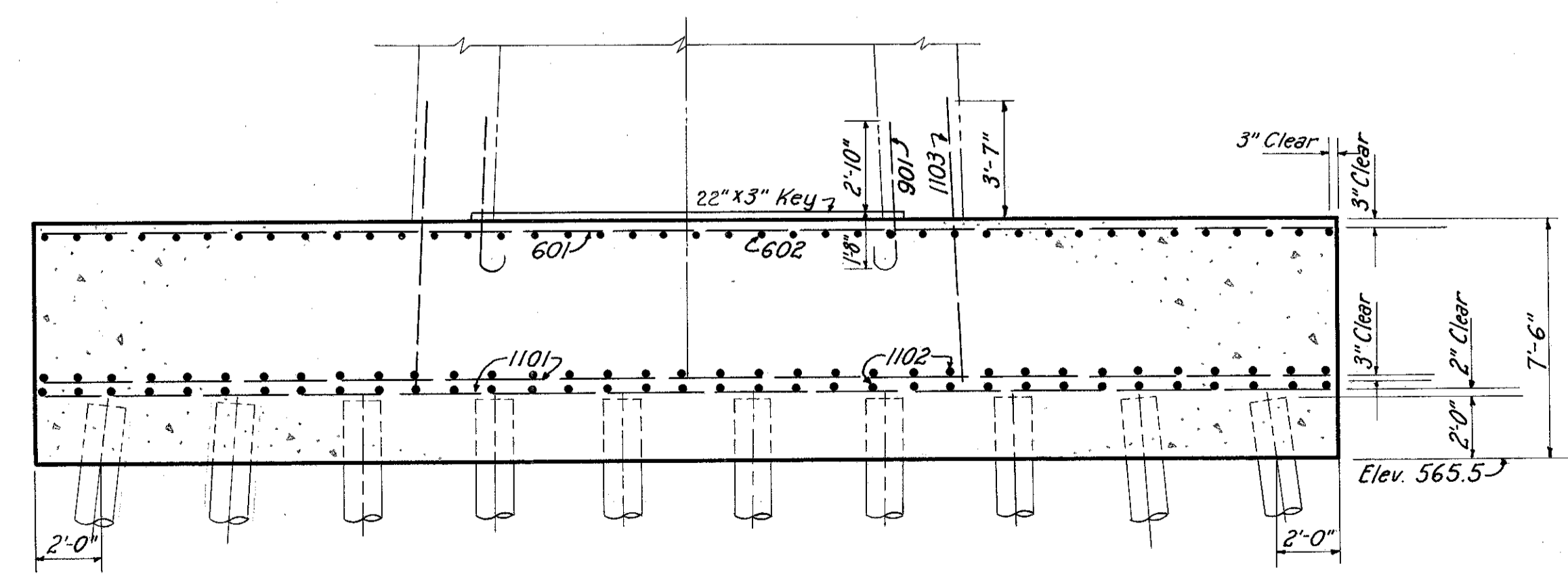


PLAN
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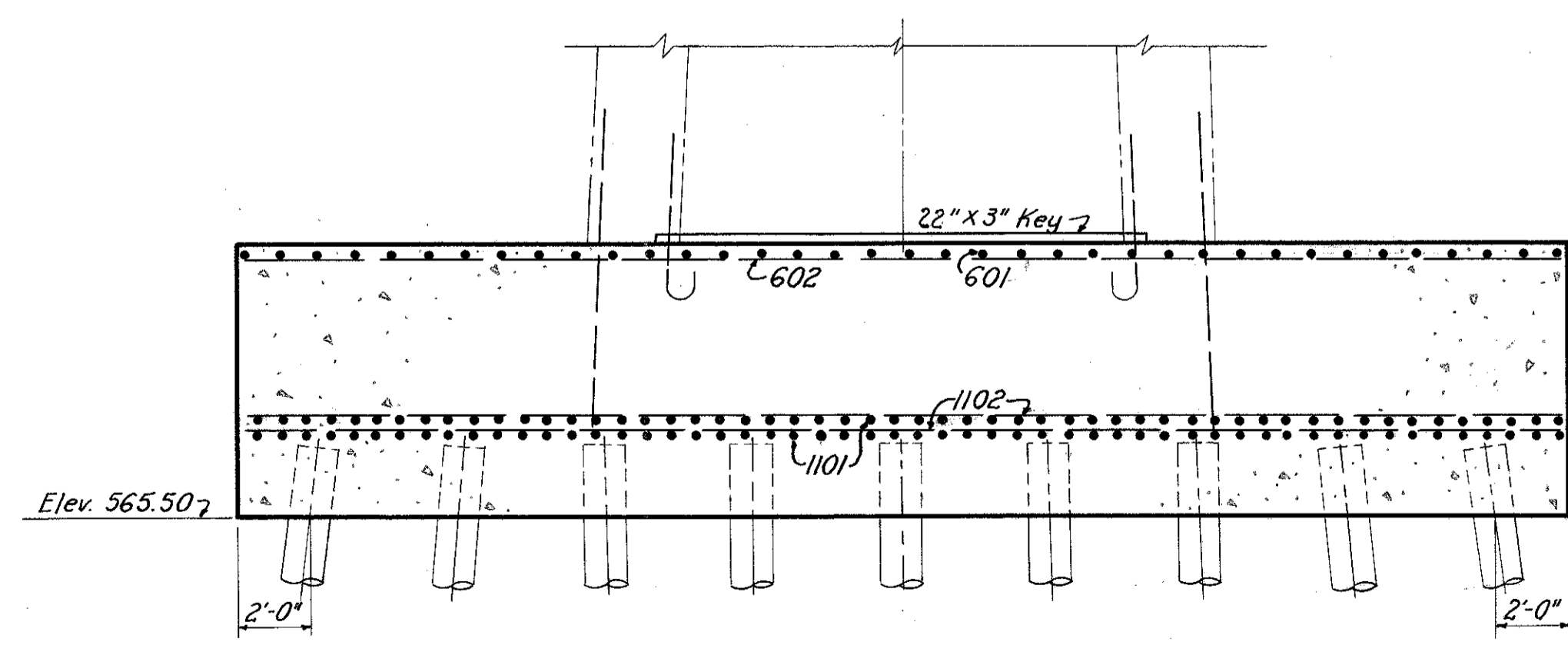


PILE PLAN
Scale: 1/4" = 1'-0"

Note:
90-14" ϕ Cast-in-Place Reinforced Concrete Piles With a Nominal Design Capacity of 65 Tons for Each Footing. Estimated Length 90 ft. Each. Batter Outside Row of Piles 2" per ft. and Batter Second Row 1" per ft. For Reinforcement Schedule, see Shs. 30 and 31.



SECTION A-A
Scale: 1/4" = 1'-0"



SECTION B-B
Scale: 1/4" = 1'-0"

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

PIER FOOTINGS 3N AND 3S

CLEVELAND	CUYAHOGA COUNTY	OHIO
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SCALE: as shown
MADE BY: M.E.G. DATE: 2-9-54
TRCD BY: E.J.B. DATE: 5-7-54
CHKD BY: C.J.C. DATE: 2-25-54

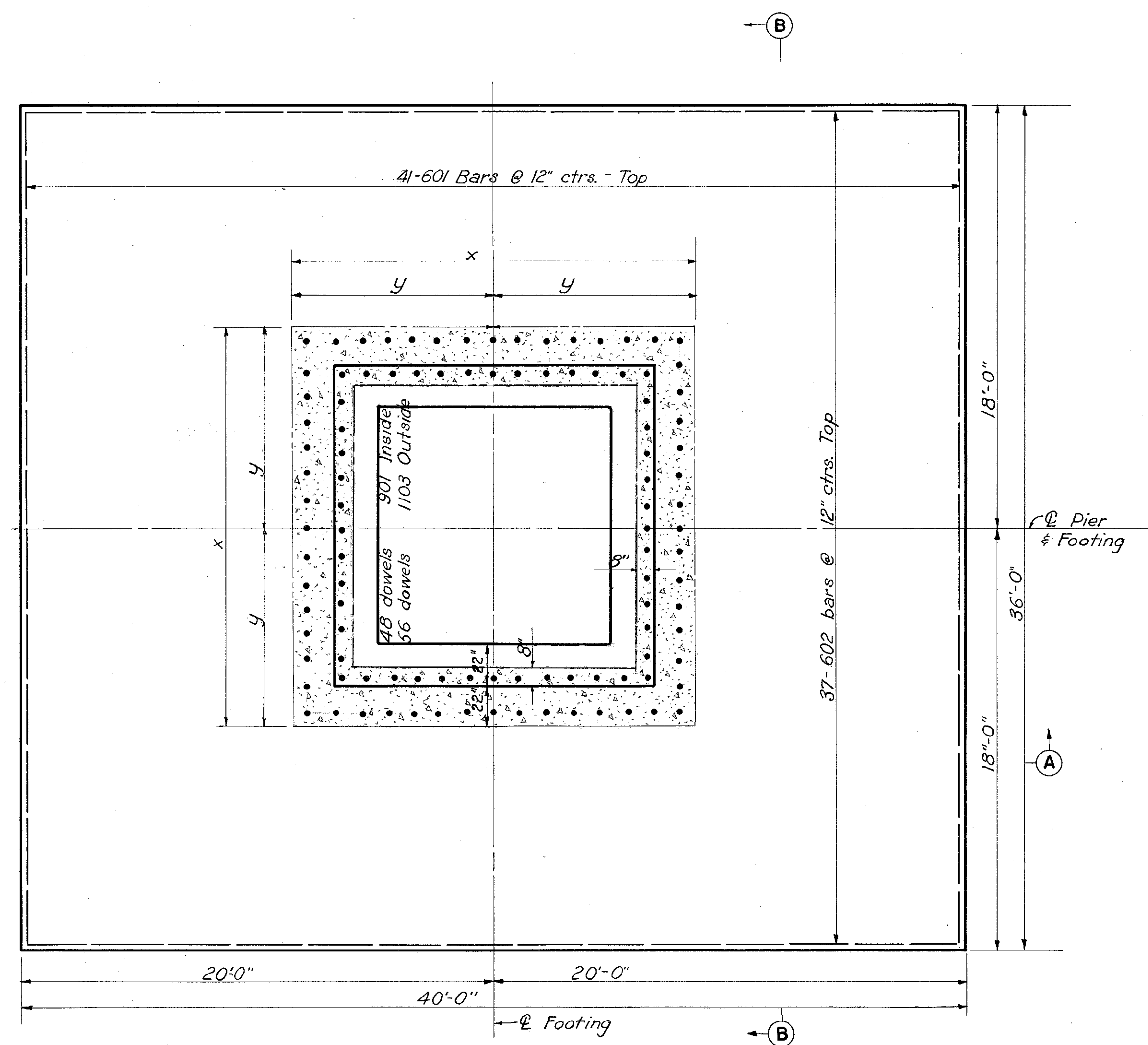
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

914-1A SHEET 1.18

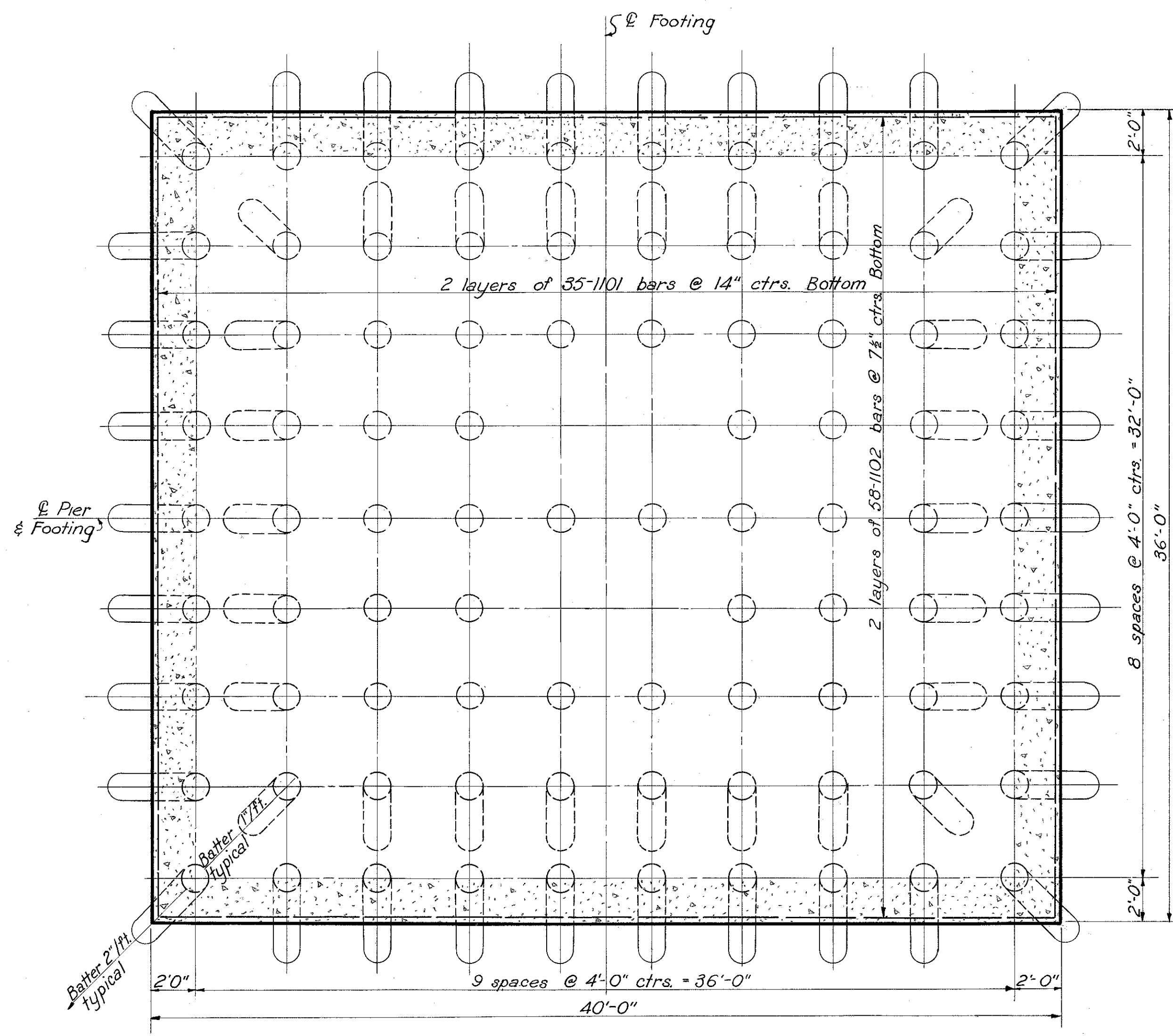
REVISED
FEB 25 1954

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS	19
2	OHIO	UI 1057 (4)		43

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY-42 R-17.50



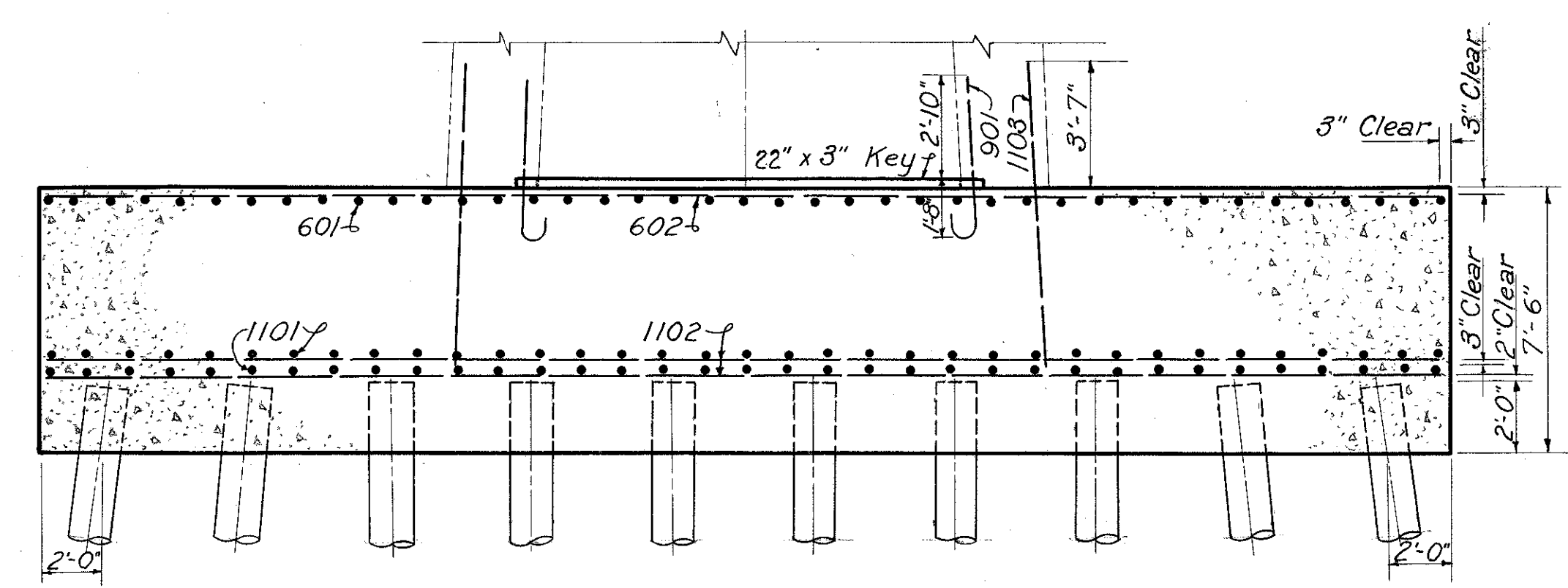
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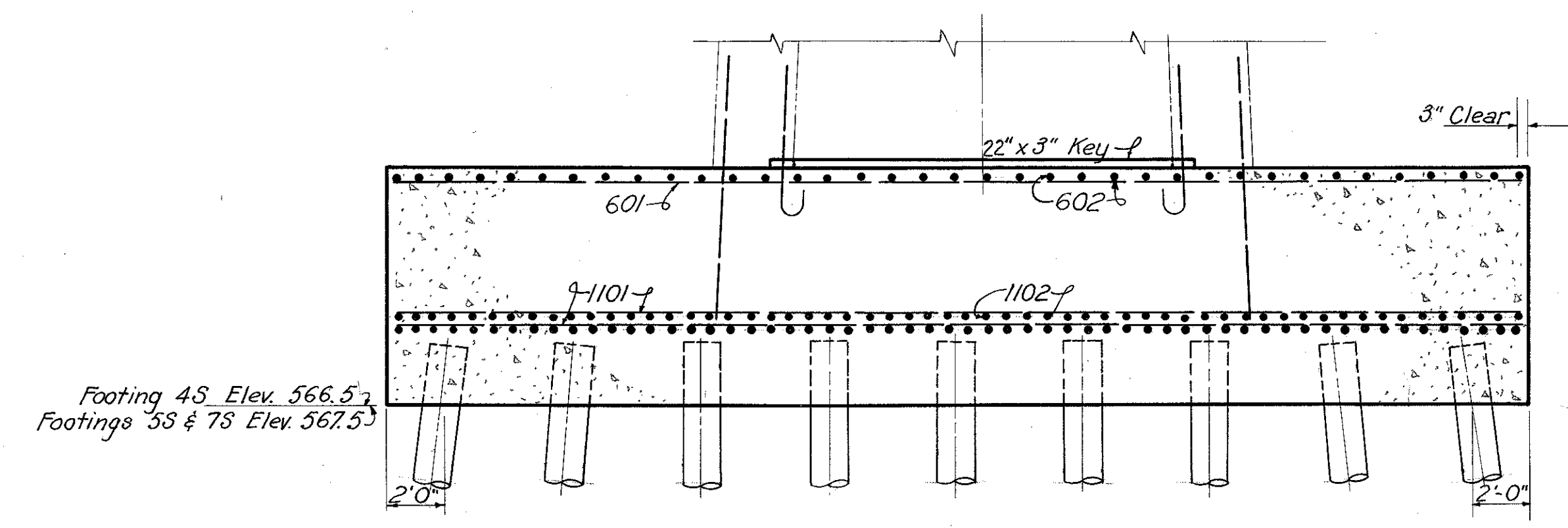
PILE PLAN
Scale: 1/4" = 1'-0"

Pier Footing	x	y	Estimated pile length
4S	16'-11 1/2"	8'-5 1/2"	90ft.
5S	17'-1 1/8"	8'-6 1/2"	85ft.
7S	16'-9 3/4"	8'-4 3/4"	70ft.

Note:
86-14" ϕ cast-in-place reinforced concrete piles with a nominal design capacity of 65 tons for each pile. Batter outside row 2" per foot, and batter second row 1" per foot.
For reinforcing schedule see sheets 30 and 31.



SECTION A-A
Scale: 1/4" = 1'-0"



SECTION B-B
Scale: 1/4" = 1'-0"

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

PIER FOOTINGS 4S, 5S, AND 7S

CLEVELAND CUYAHOGA COUNTY OHIO

SCALE AS NOTED
MADE E.G. DATE 2-5-54
TRCD C.H.B. DATE 6-9-54
CKD C.I.C. DATE 2-22-54

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

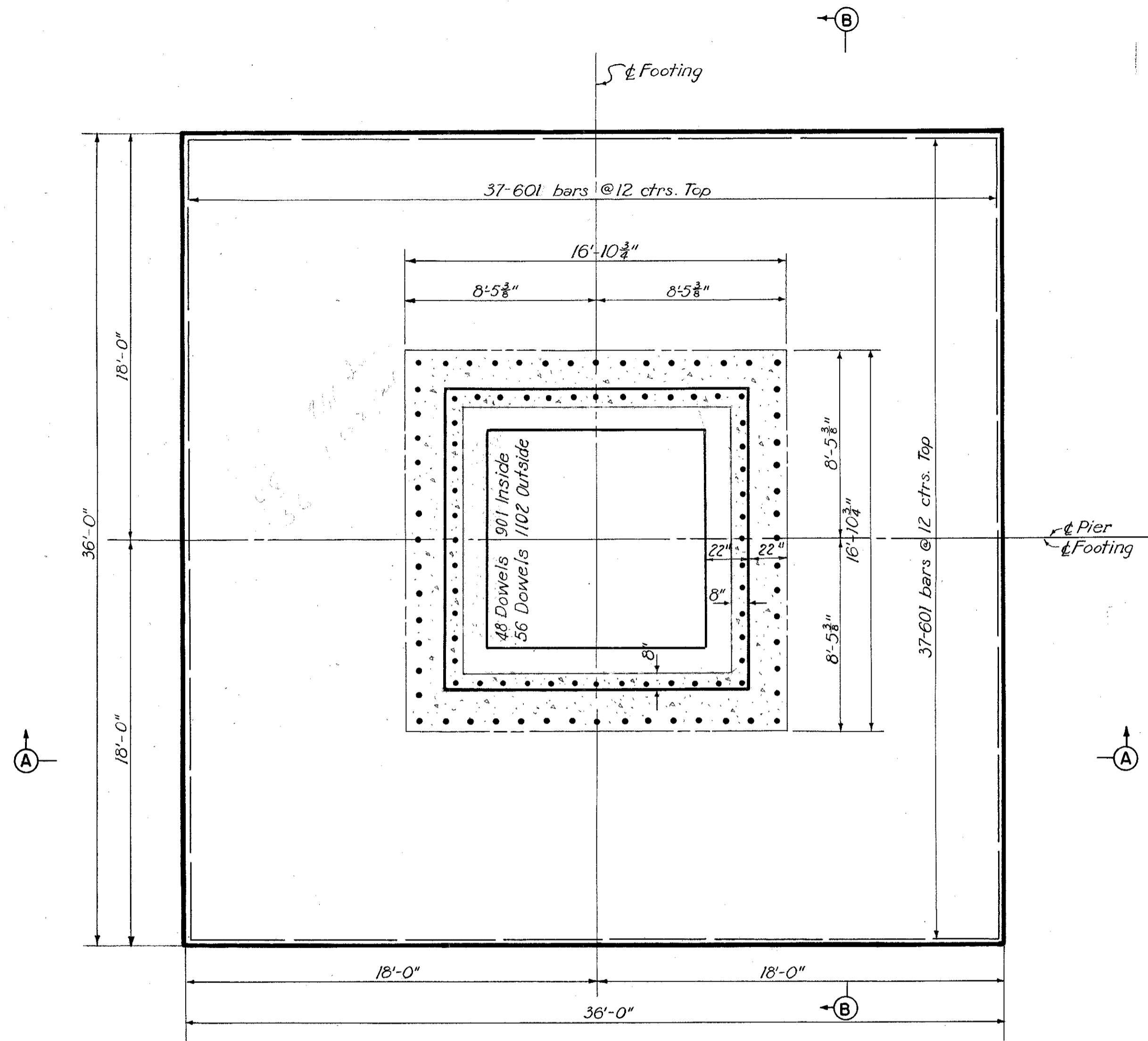
914-1A SHEET-1.19

RECORDED
FEB 25 1954

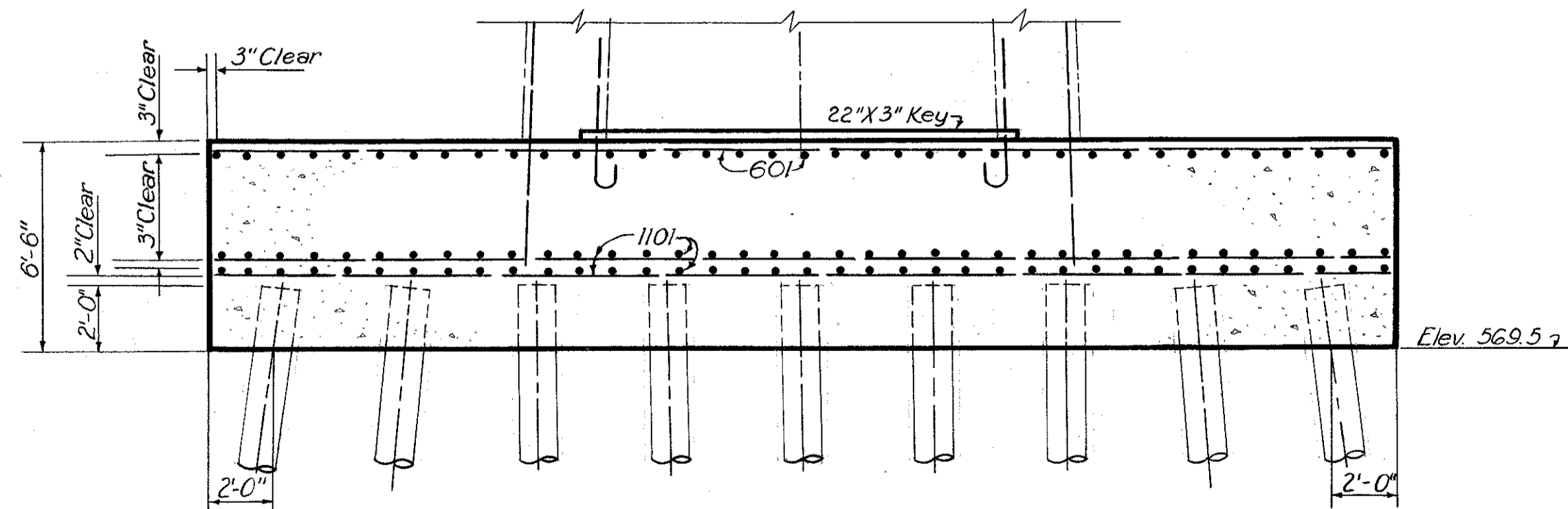
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO	UI 1057 (4)	

20
43

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY - 42R - 17.50

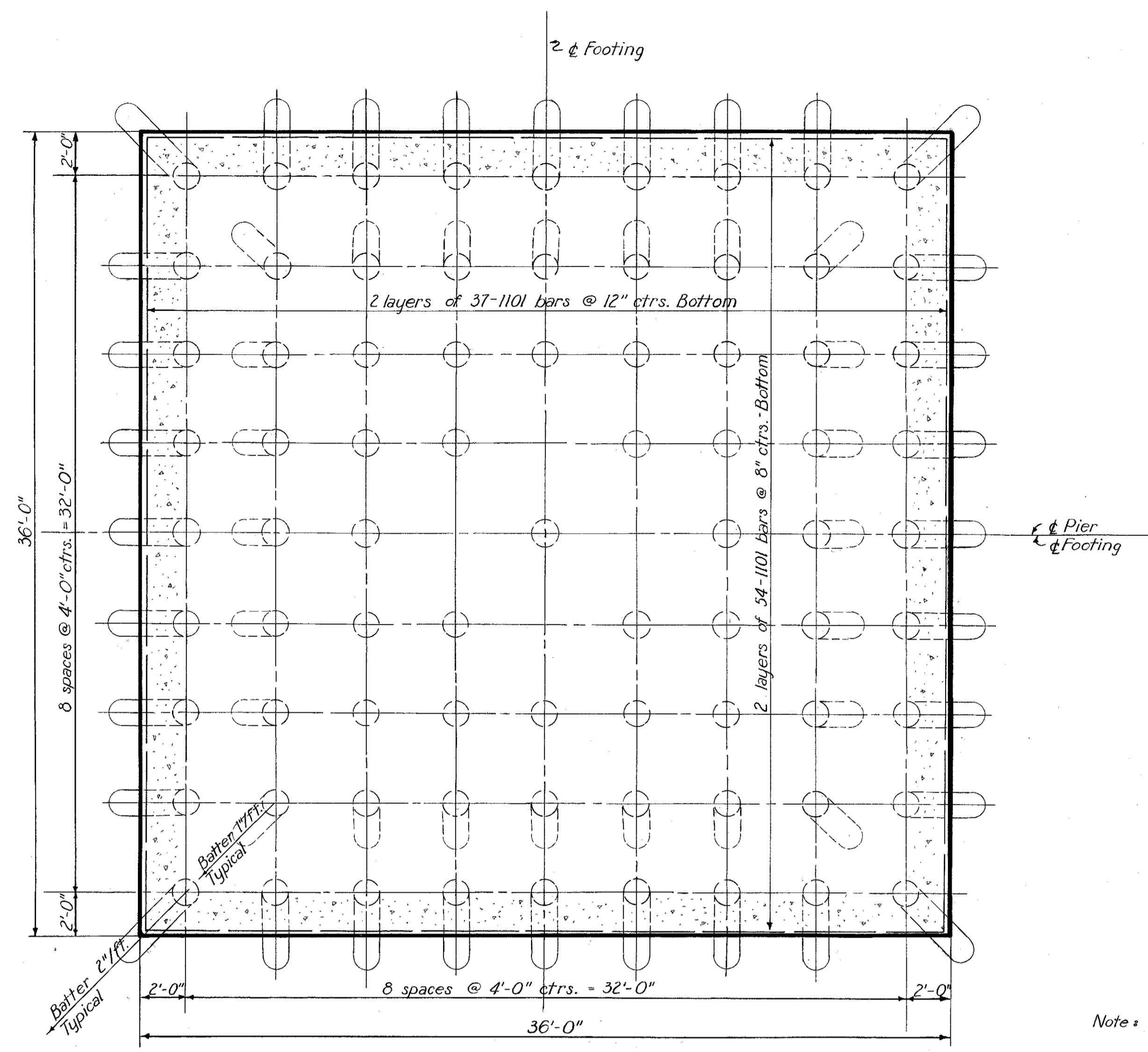


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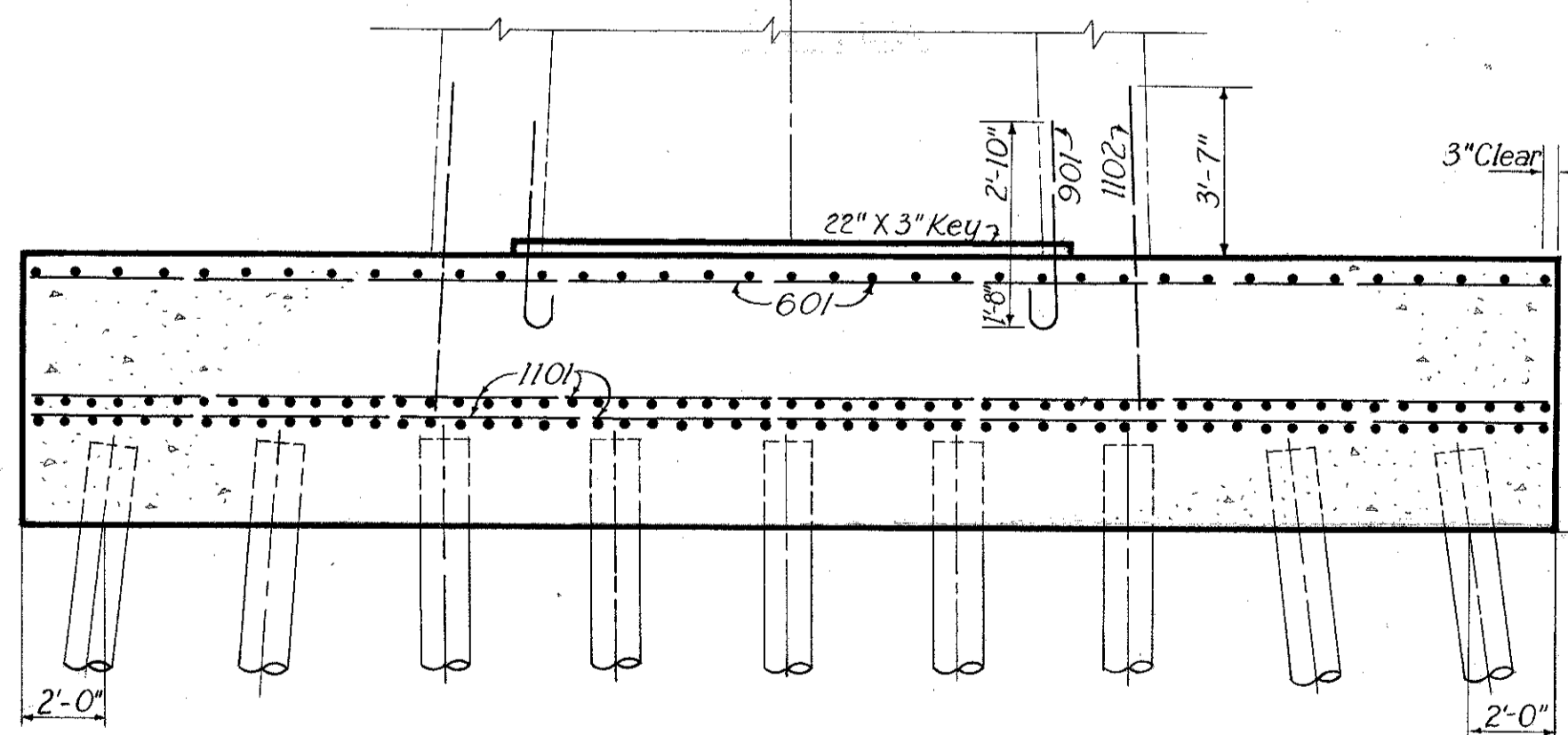


SECTION A-A
Scale: 1/4" = 1'-0"

AXIS OF \bar{E} OF VIADUCT



PILE PLAN
Scale: 1/4" = 1'-0"



SECTION B-B
Scale: 1/4" = 1'-0"

Note:
77-14" ϕ cast-in place reinforced concrete piles with a nominal design capacity of 65 tons. Estimated length 60 ft. each. Batter outside row of piles 2" per foot, and batter second row of piles 1" per foot.
For reinforcing schedule see sheets 30 and 31.

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT
BY R.L.

PIER FOOTING 6N

CLEVELAND CUYAHOGA COUNTY OHIO

SCALE AS SHOWN
MADE W.E.G. DATE 2-5-54
TRCD. J.A.V. DATE 6-9-54
CHKD. C.J.C. DATE 2-25-54

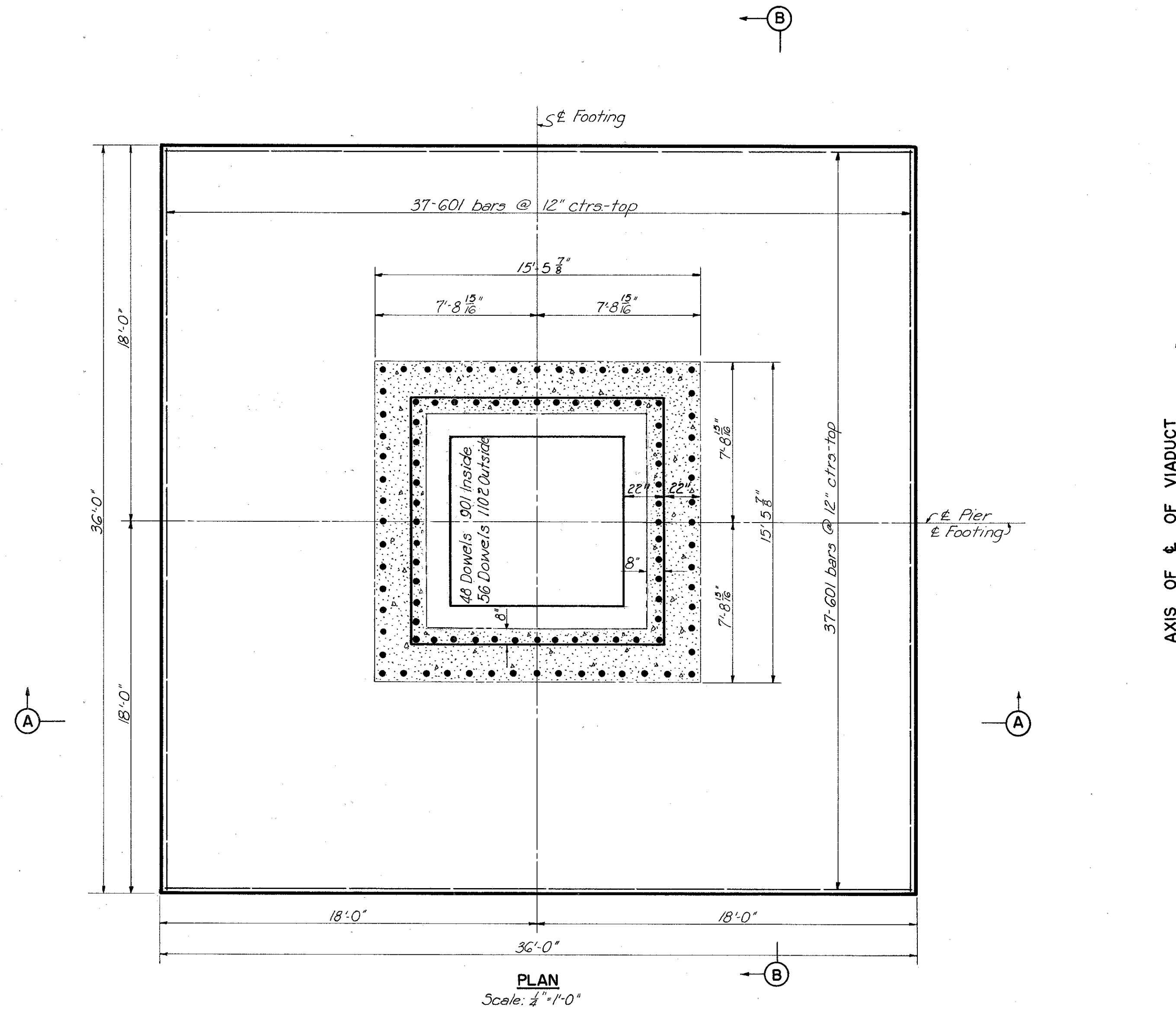
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK
914-1A SHEET 1.20

UNCLASSIFIED
FEB 25 2003

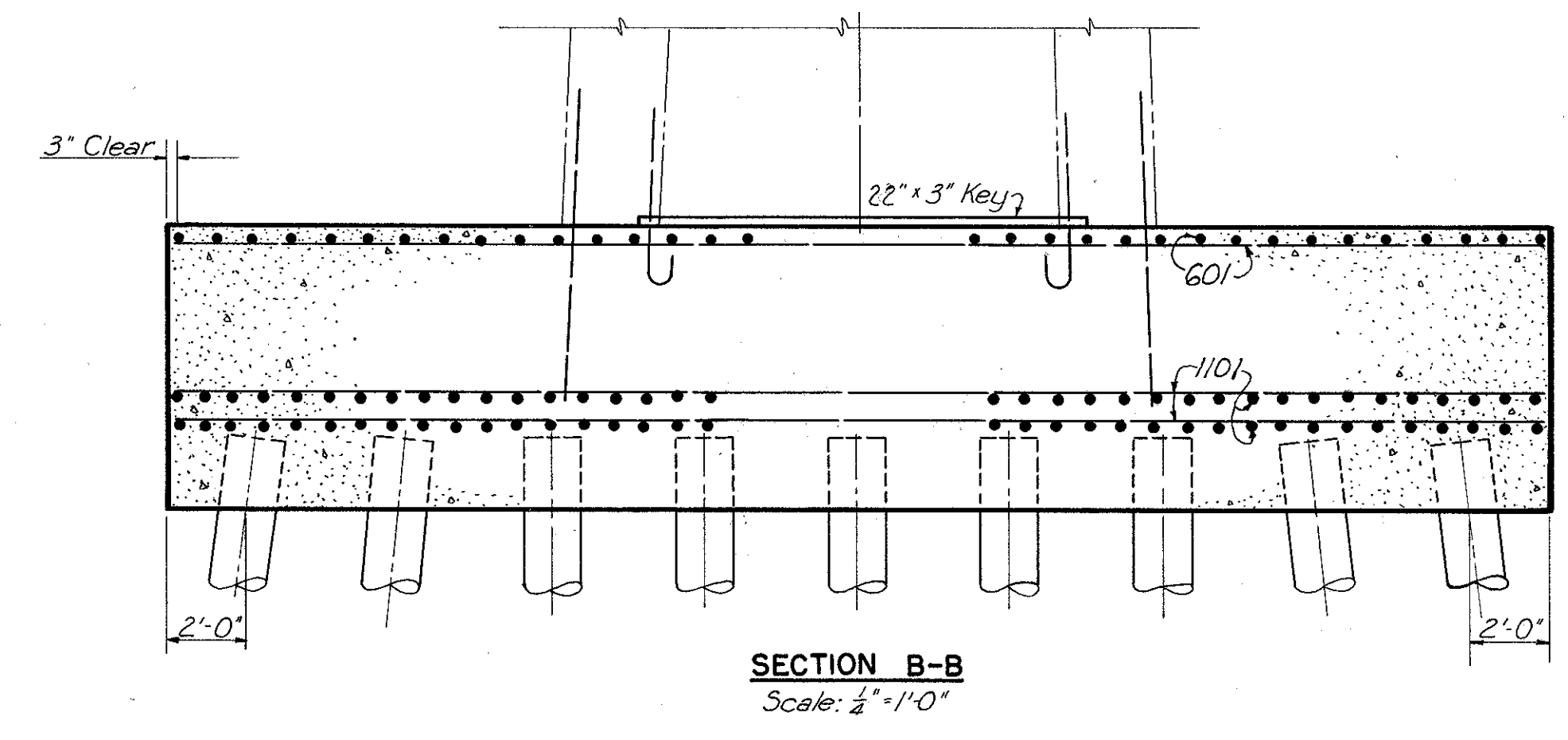
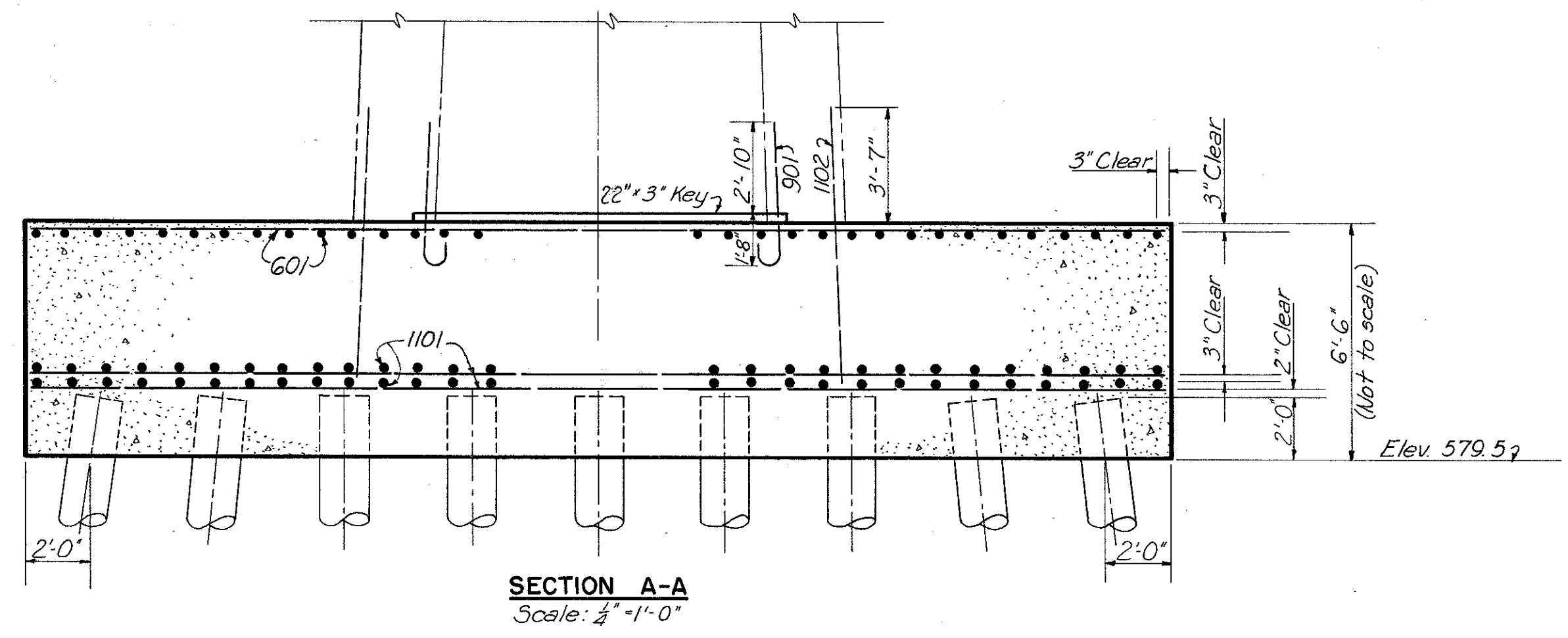
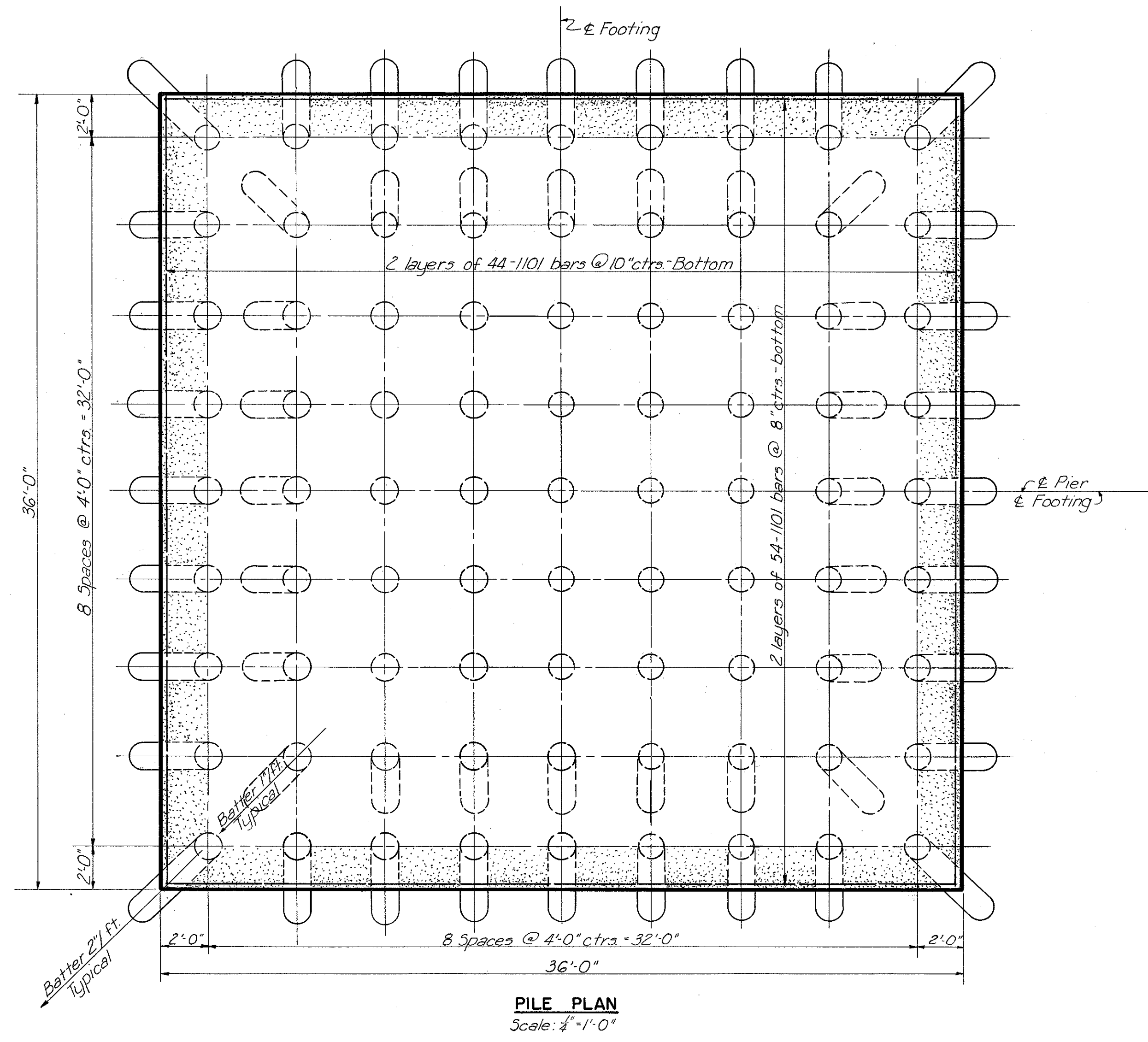
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO	UI 1057 (4)	

21
43

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY - 42 R - 17.50



AXIS OF VIADUCT



Note:
8'-14" cast-in-place reinforced concrete piles required per footing. Nominal design capacity 65 tons per pile. Estimated length 60 feet each. Batter outside row 2" per foot, and batter second row 1" per foot. For Reinforcement Schedule, see 5hs. 30 and 31.

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

PIER FOOTINGS 8N AND 8S

CLEVELAND CUYAHOGA COUNTY OHIO

SCALE 1/4" = 1'-0"
MADE W.E.G. DATE 2-10-54
TRCD W.A.M. DATE 6-7-54
CKD C.J.C. DATE 2-25-54

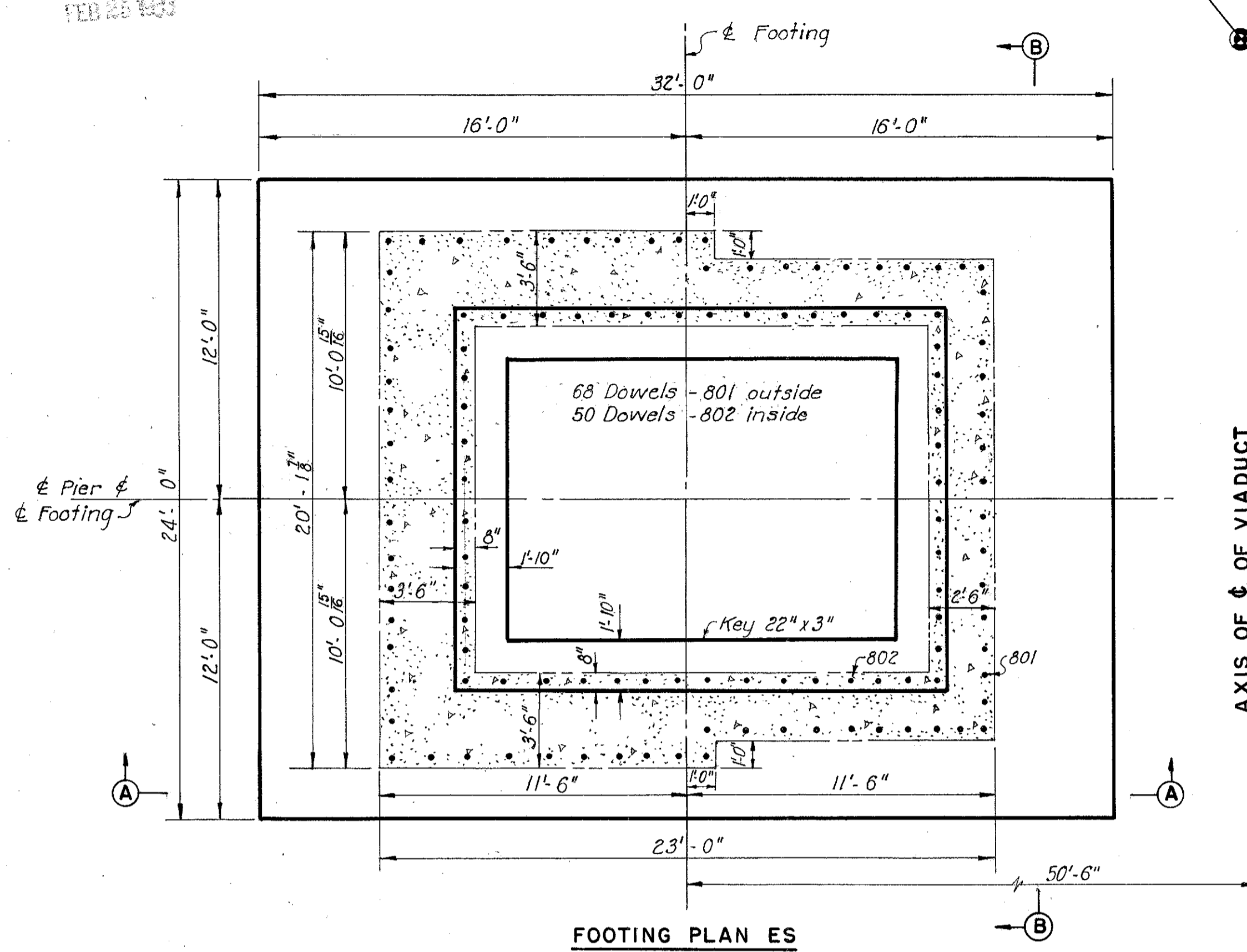
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK
914-IA SHEET-1.21

10

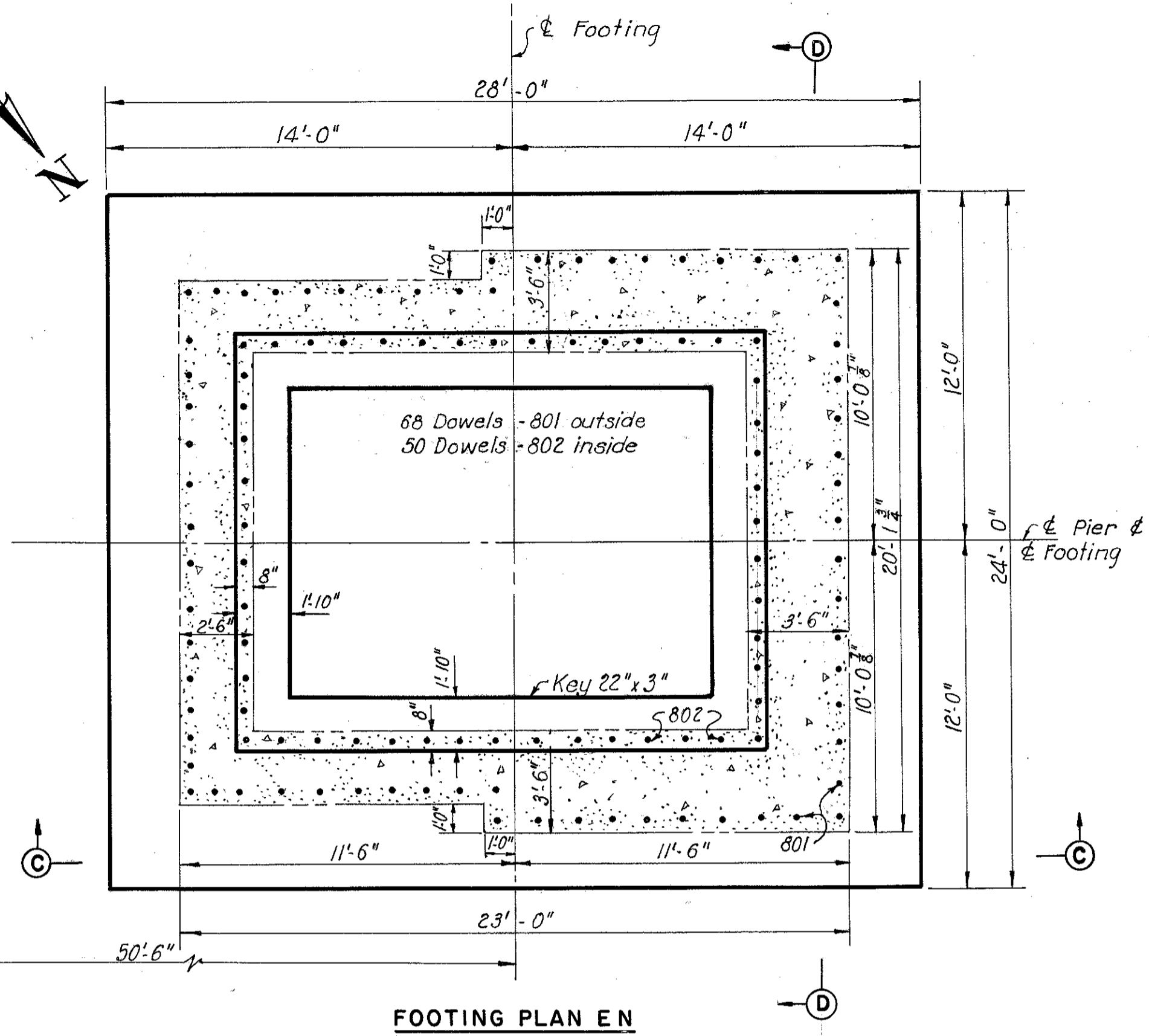
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO	UI 1057 (4)	

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY - 42 R - 17.50

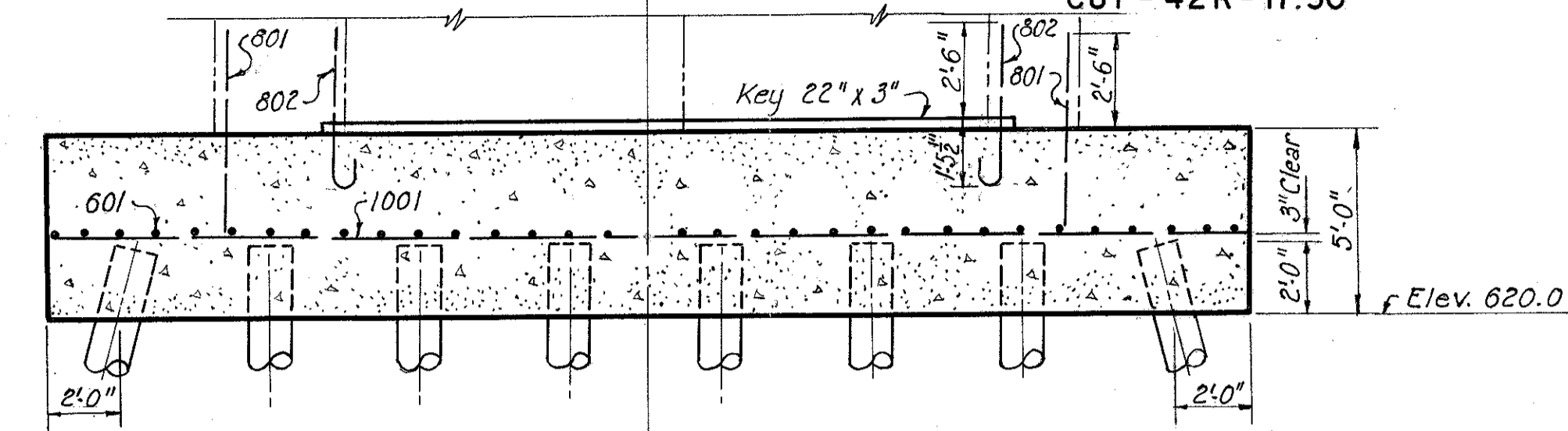
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FEB 28 1953



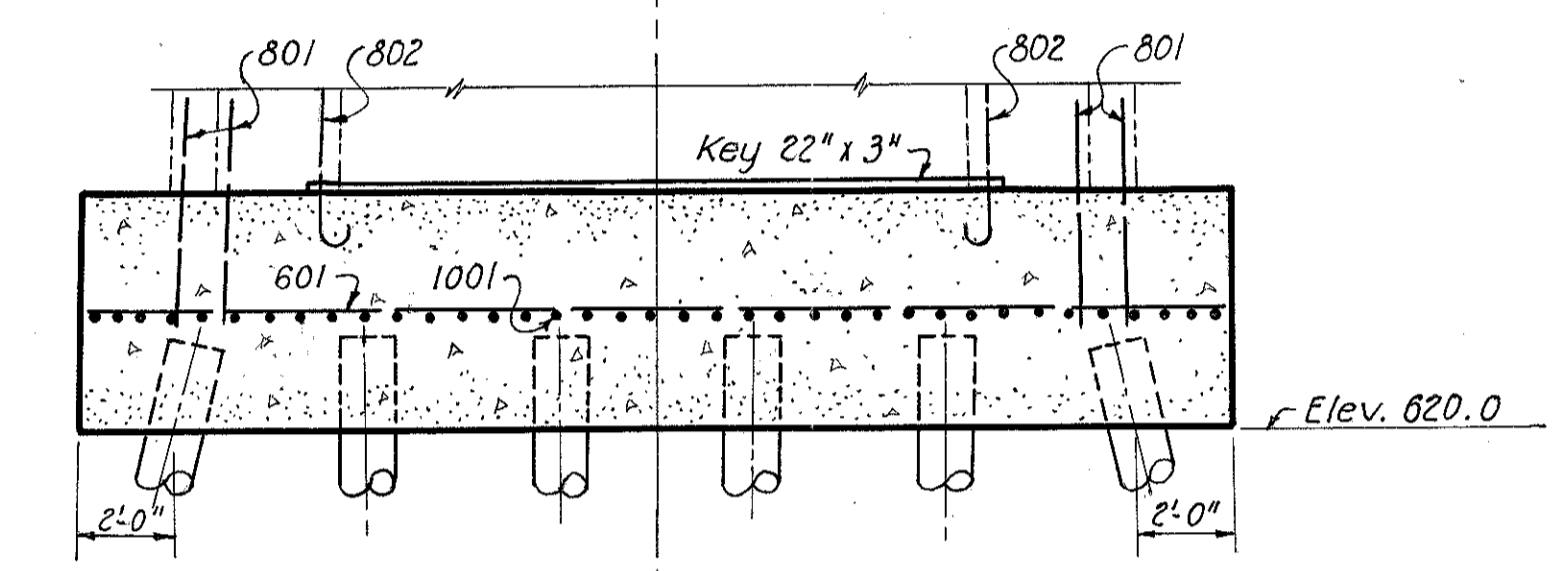
FOOTING PLAN ES



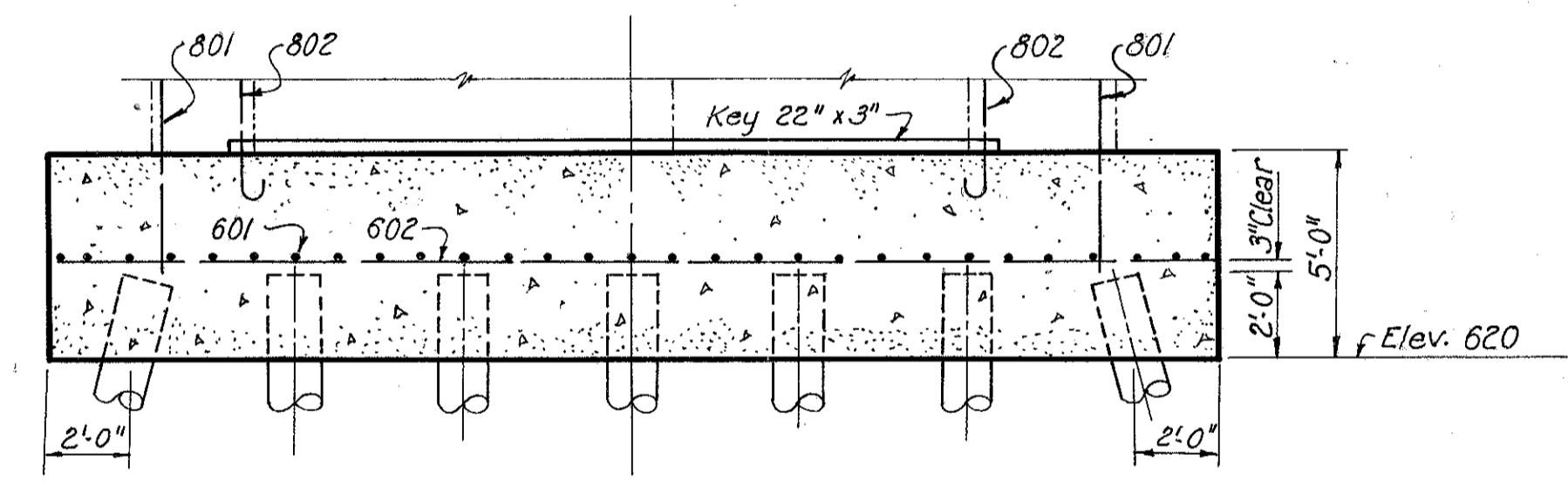
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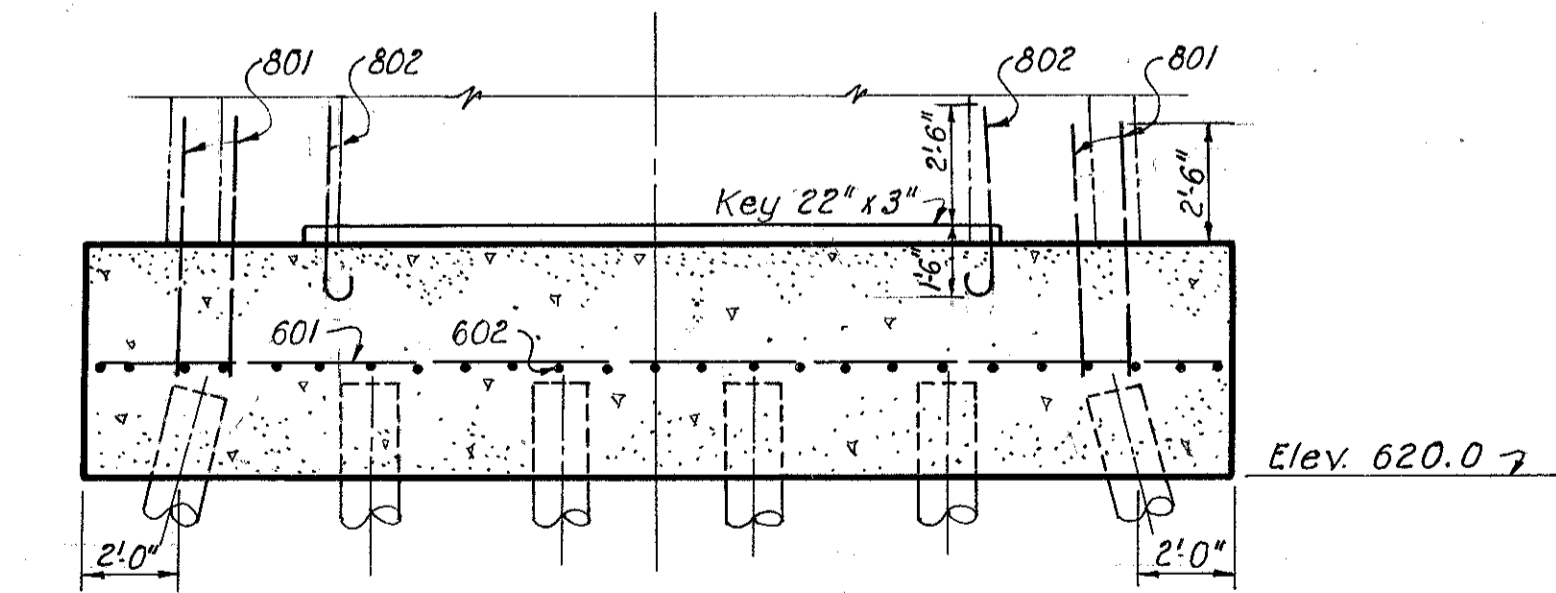
SECTION A-A



SECTION B-B

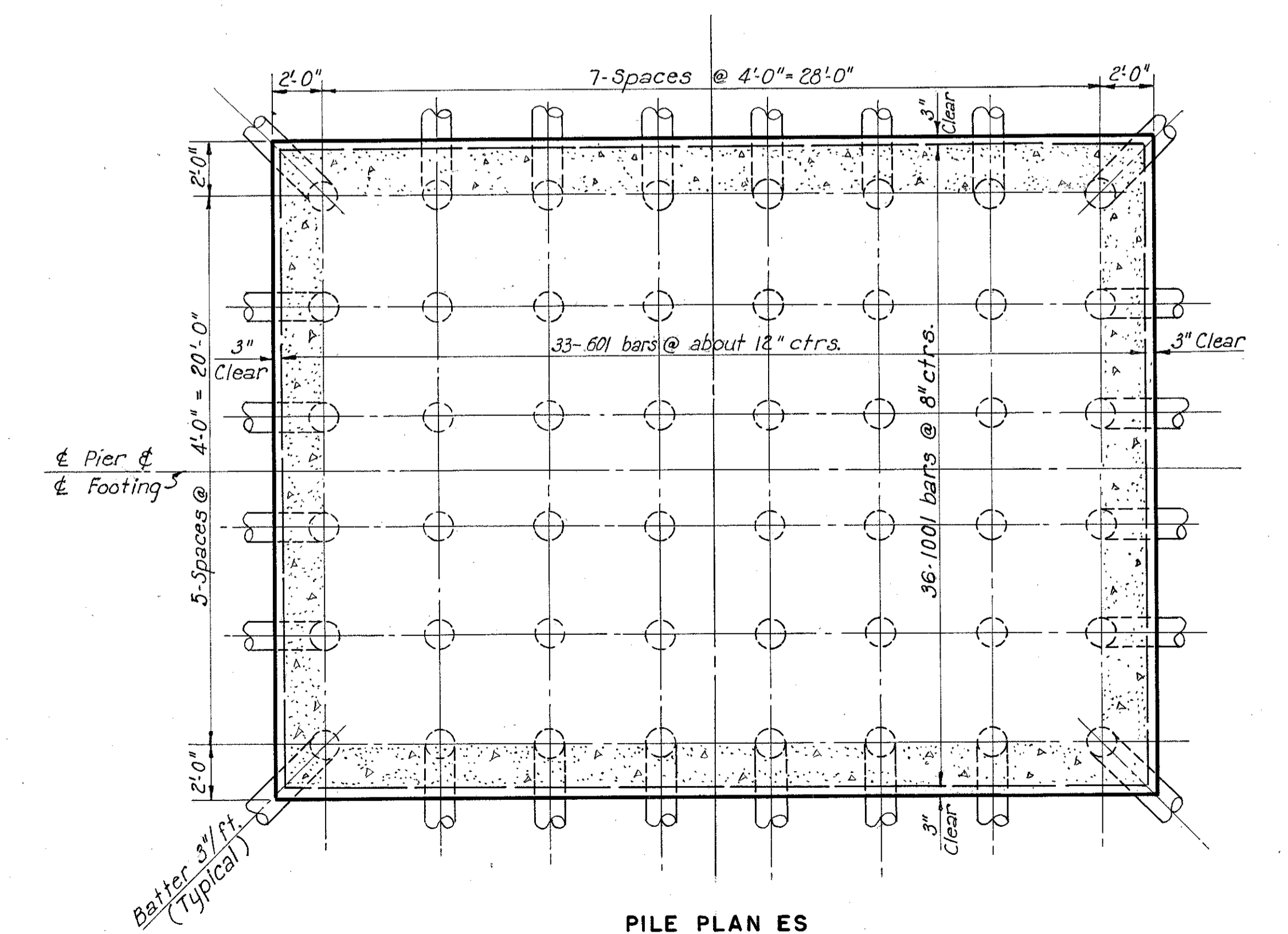


SECTION C-C

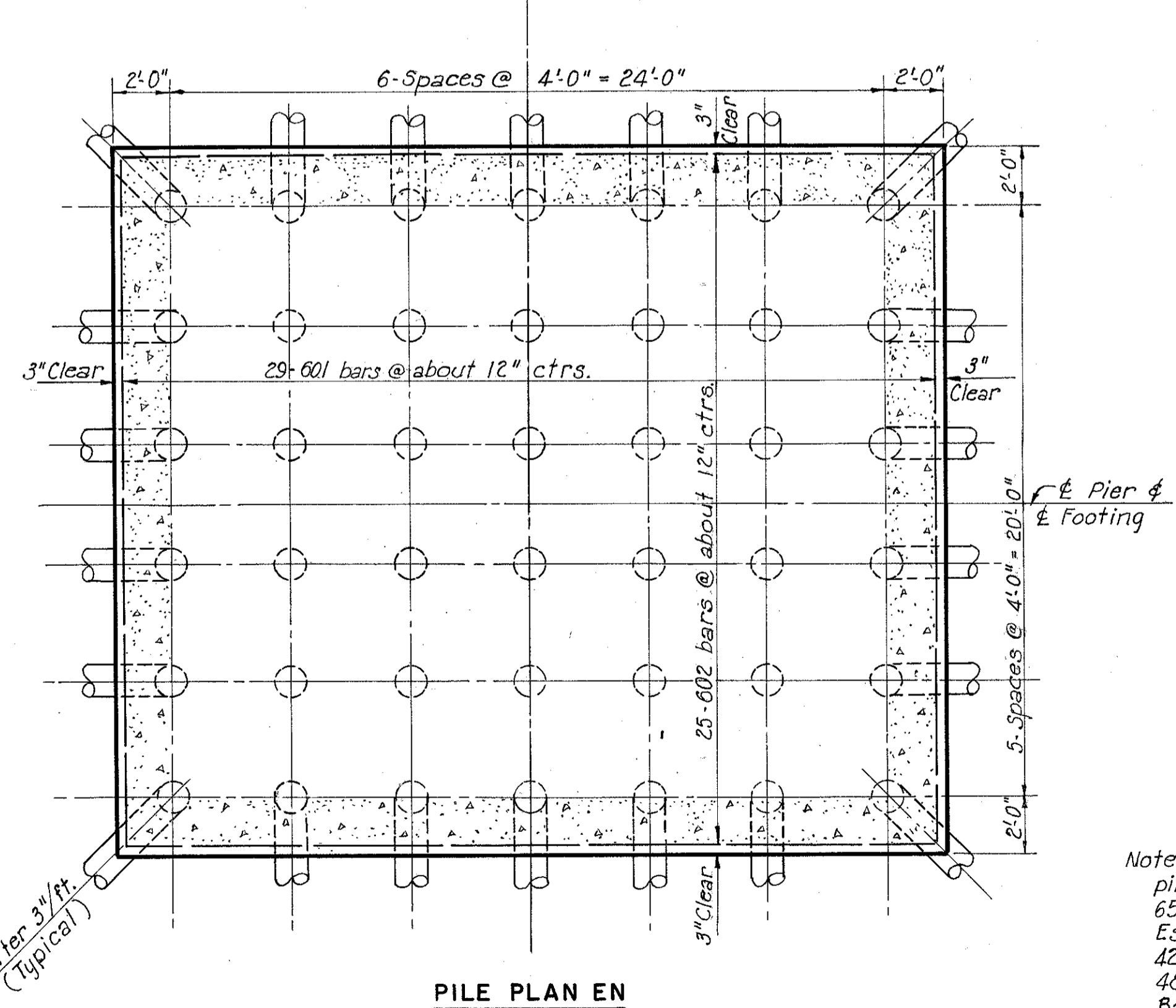


SECTION D-D

Note: 14" cast-in-place reinforced concrete piles with a nominal design capacity of 65 tons each.
Estimated length 40 feet each.
42 piles for footing EN.
48 piles for footing ES.
Batter outside row of piles 3" per foot.
For reinforcing schedule, see Sheet 32.



PILE PLAN ES



PILE PLAN EN

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT
EAST END PIER FOOTINGS, EN AND ES

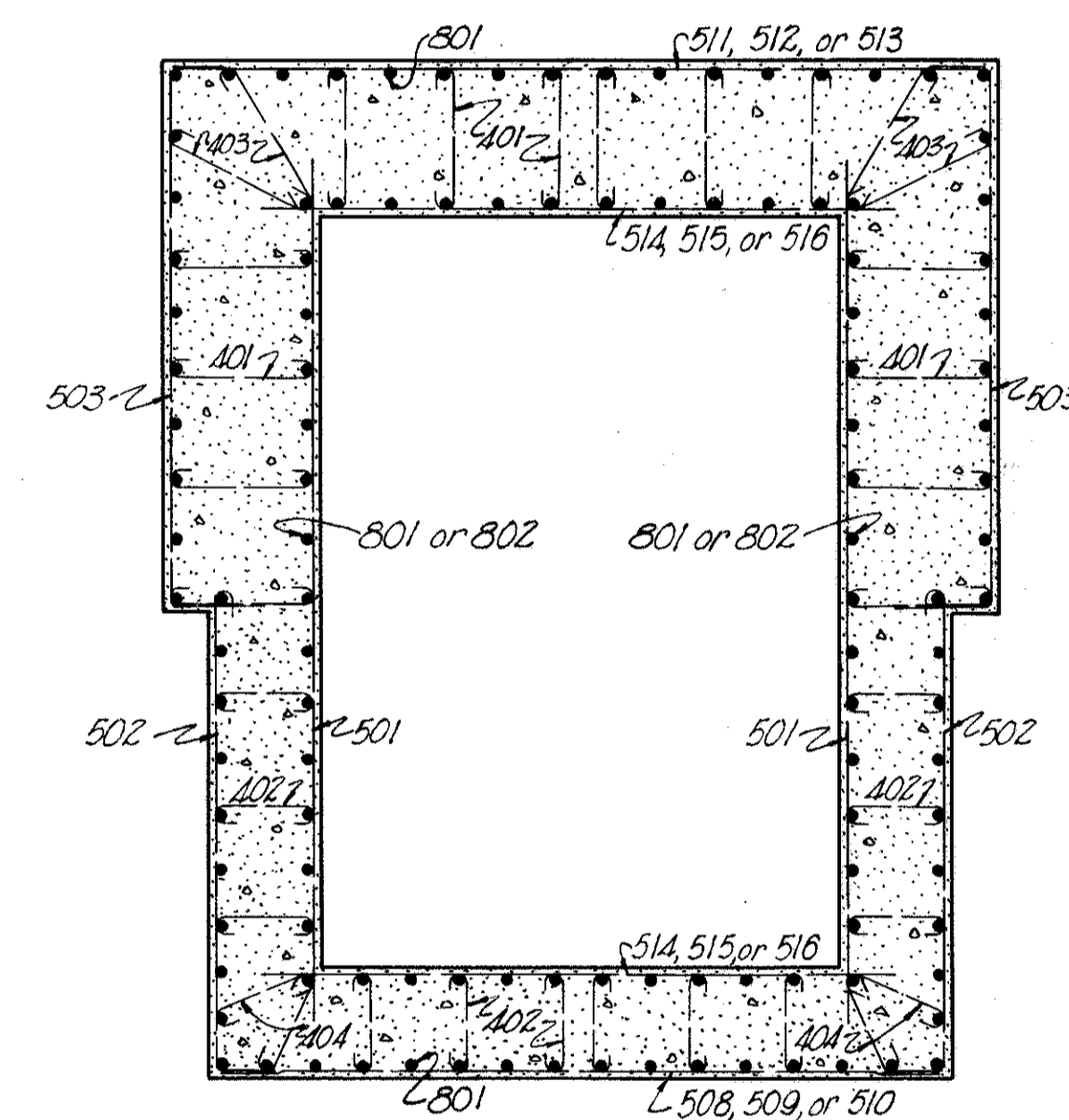
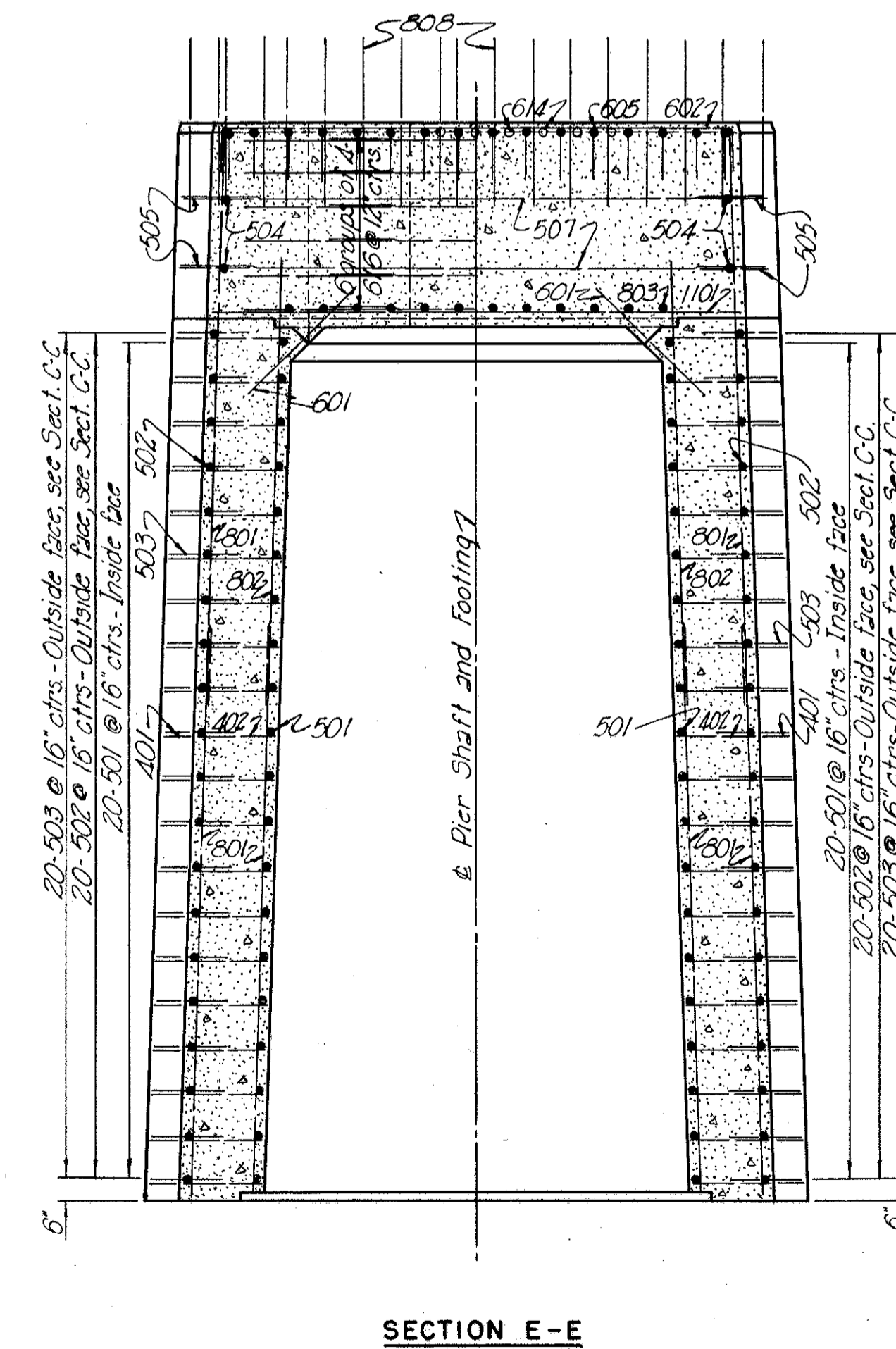
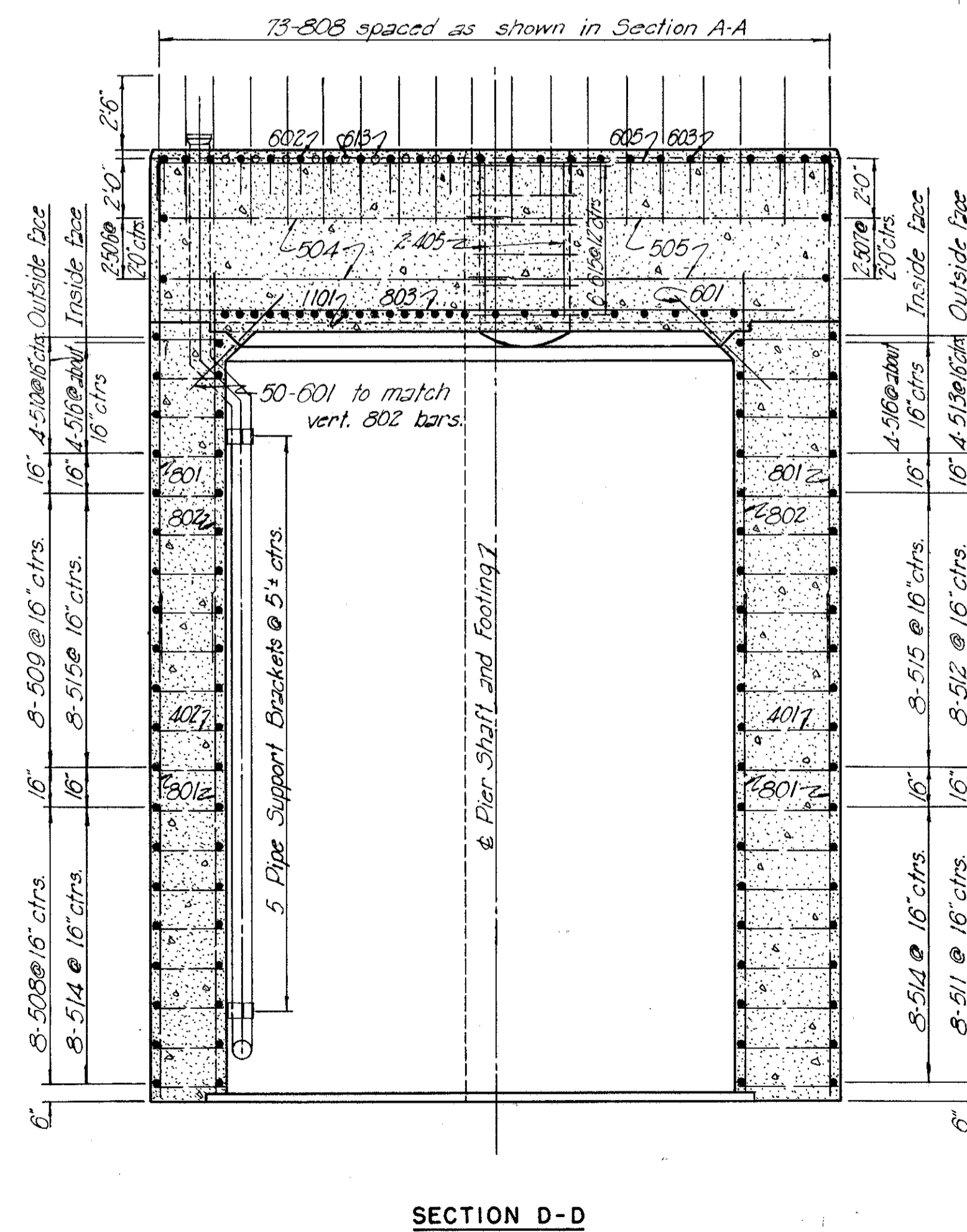
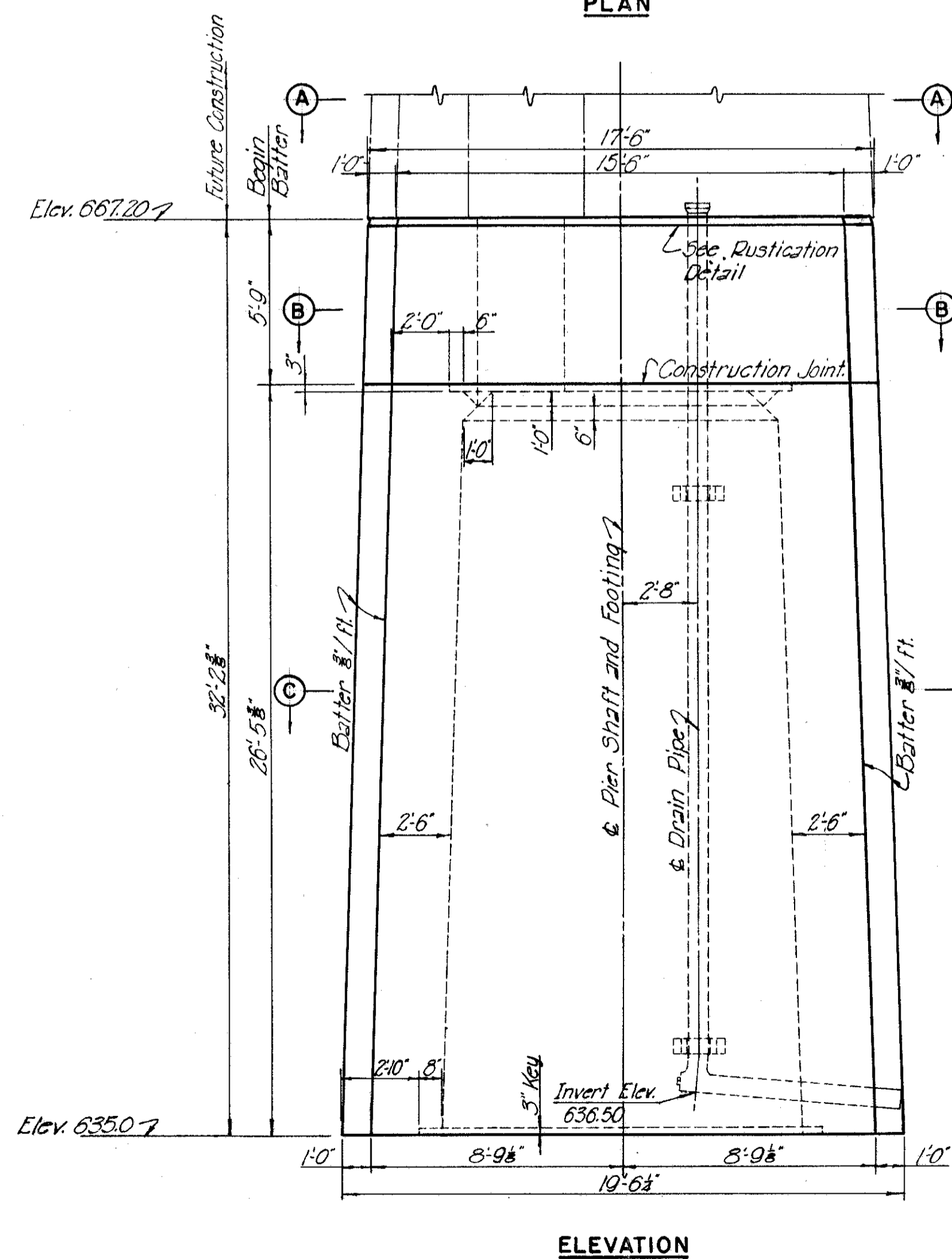
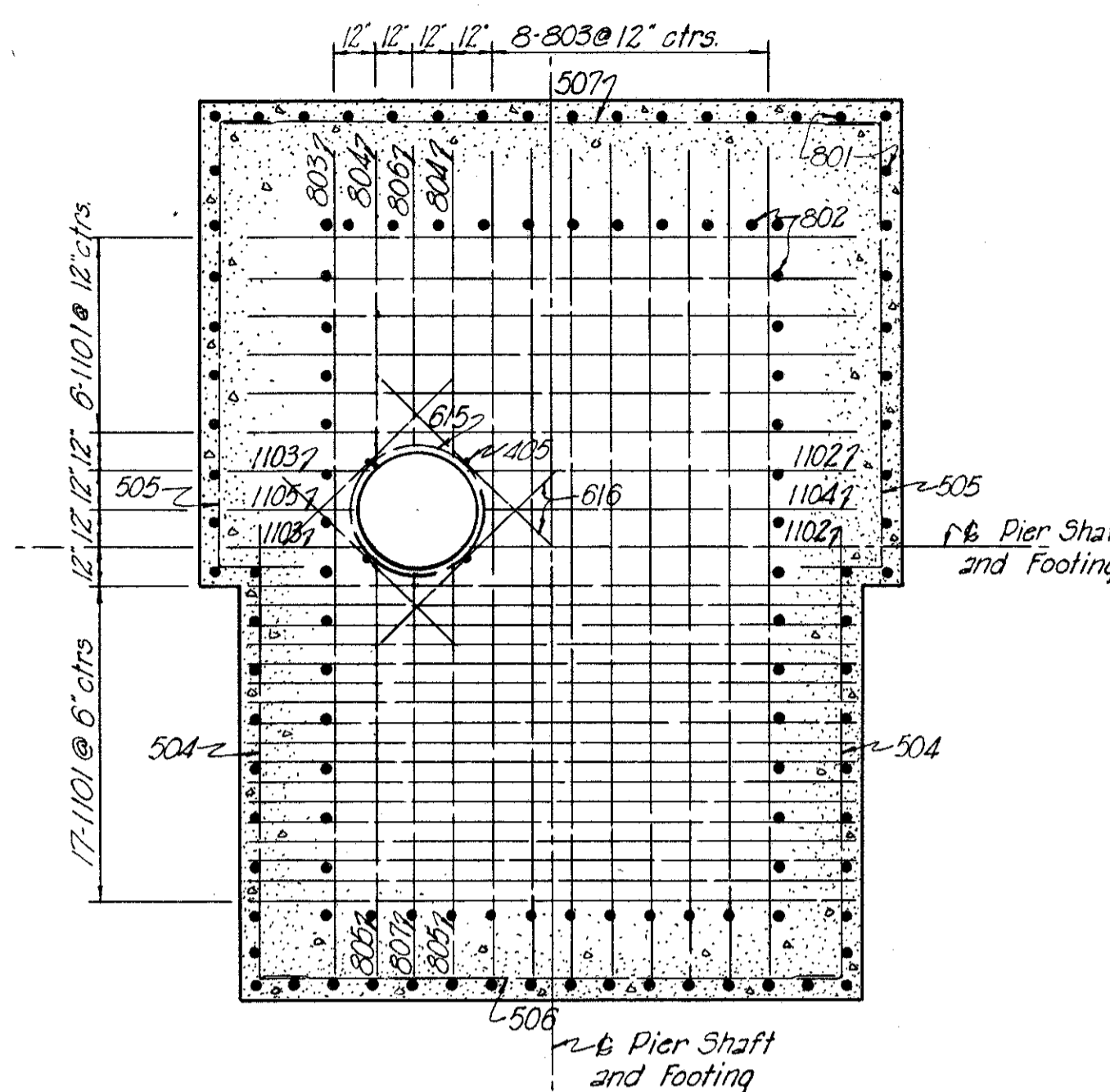
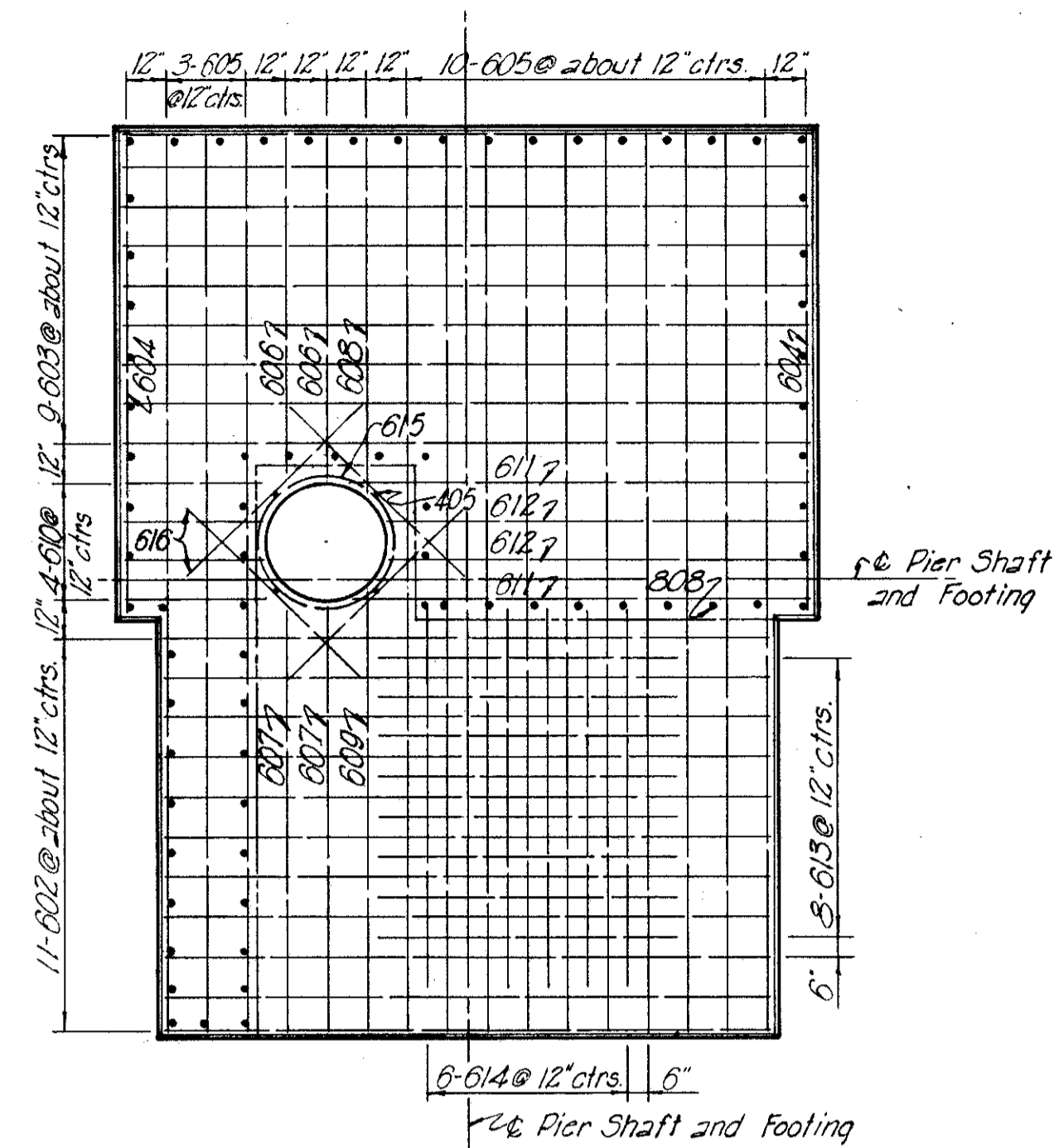
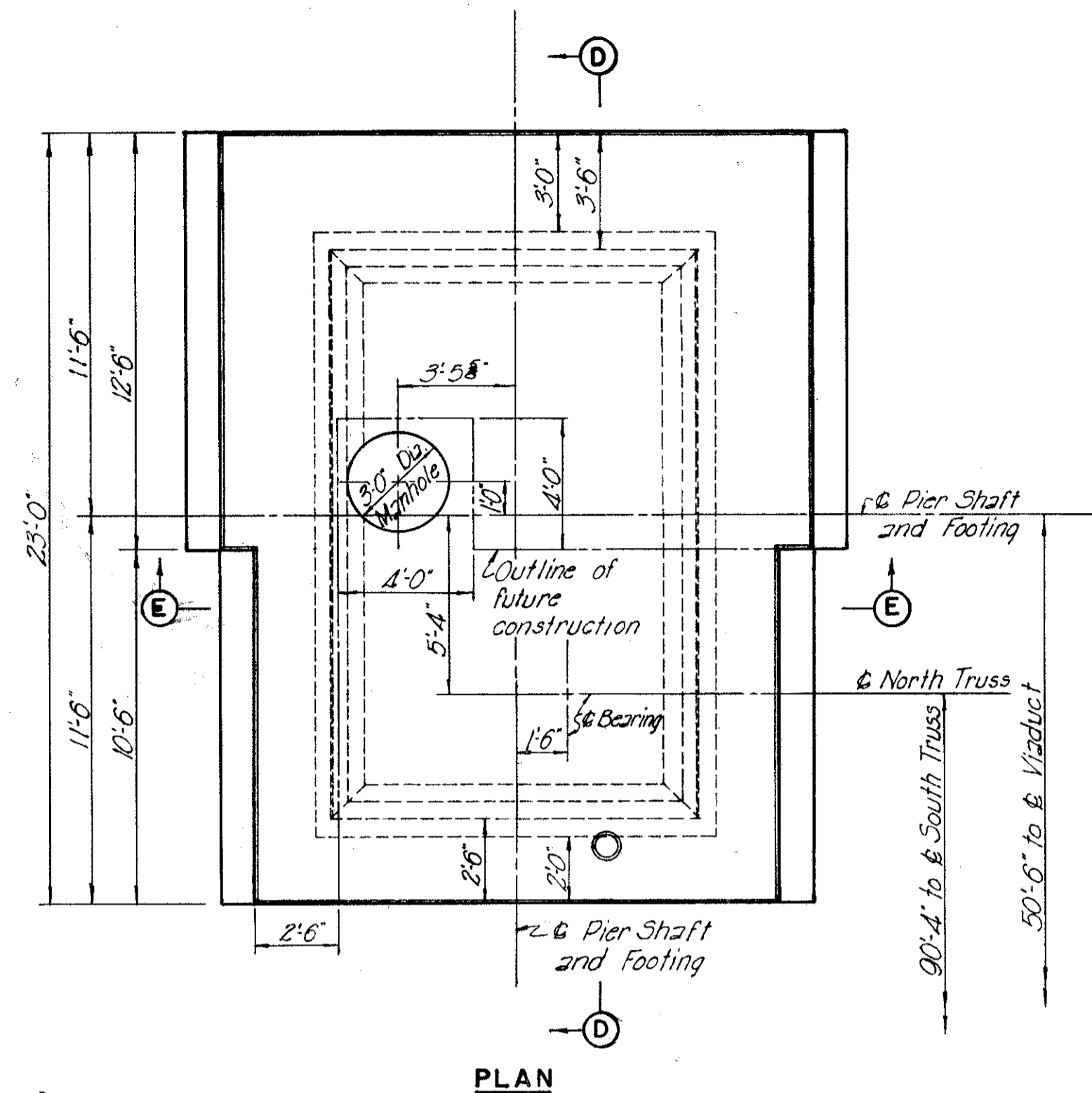
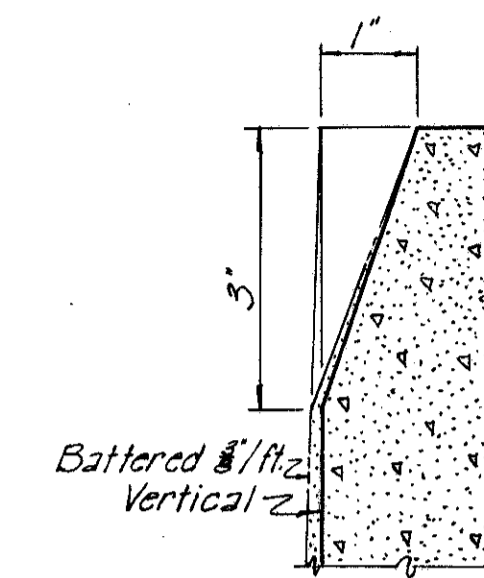
CLEVELAND CUYAHOGA COUNTY OHIO

SCALE: 1/4" = 1'-0"
MADE D.E.R. DATE 6-25-54
TRCD A.H. DATE 6-28-54
CKD D.E.R. DATE 7-6-54

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

914-1A SHEET 1.22

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY - 42R - 17.50



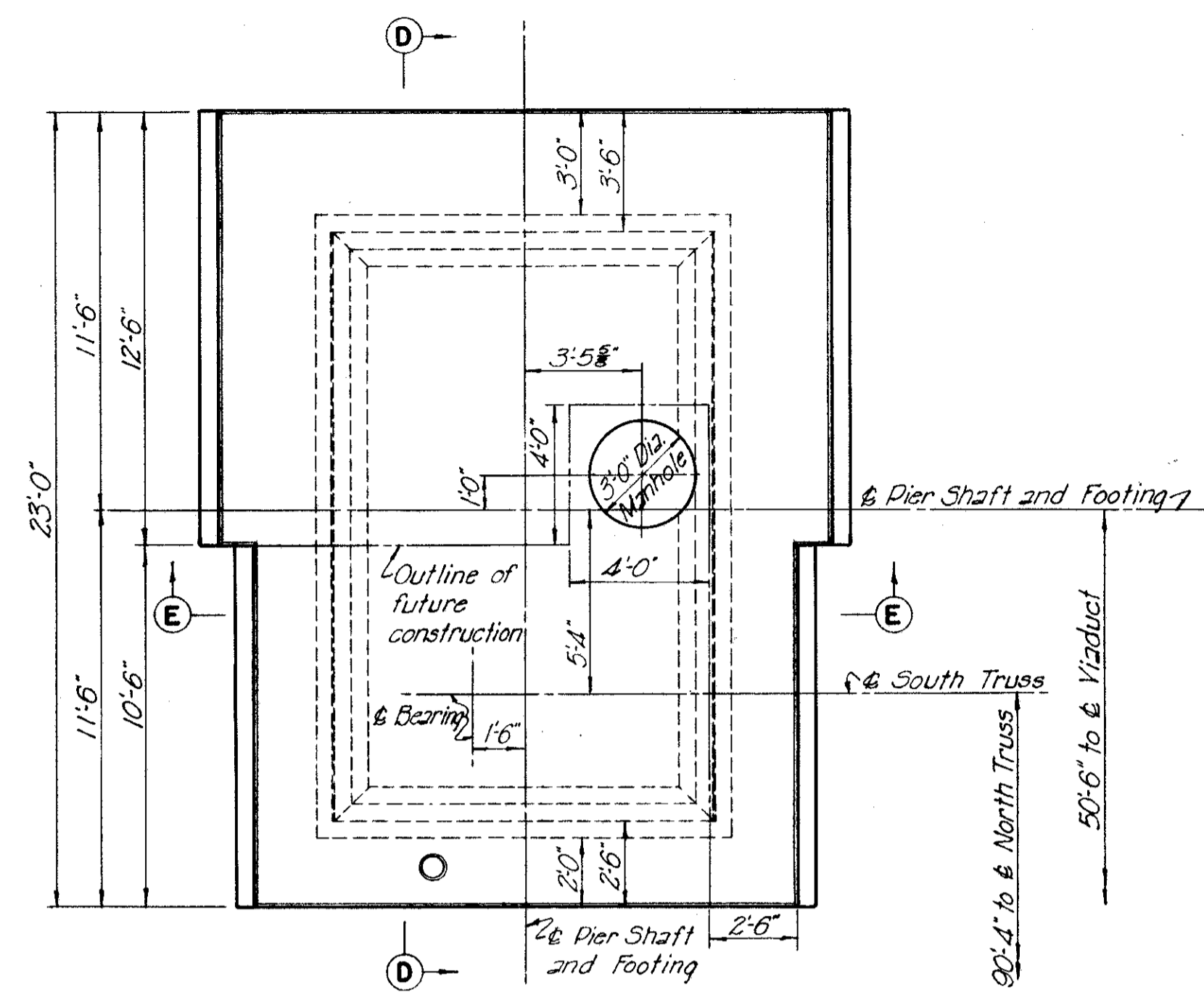
Note:
801 and 802 bars to be spaced as shown above.

Note:
All bars shall have a minimum clearance of 2" from face of concrete.
For location and details of ladder rungs see Sh. 28.
For details of drain pipe and manhole cover see Sh. 28.
For details of Footing see Sh. 14.
For Reinforcement Schedule see Sh. 32.
For Anchor Bolt Detail and Anchor Bolt Spacing see Sh. 29.

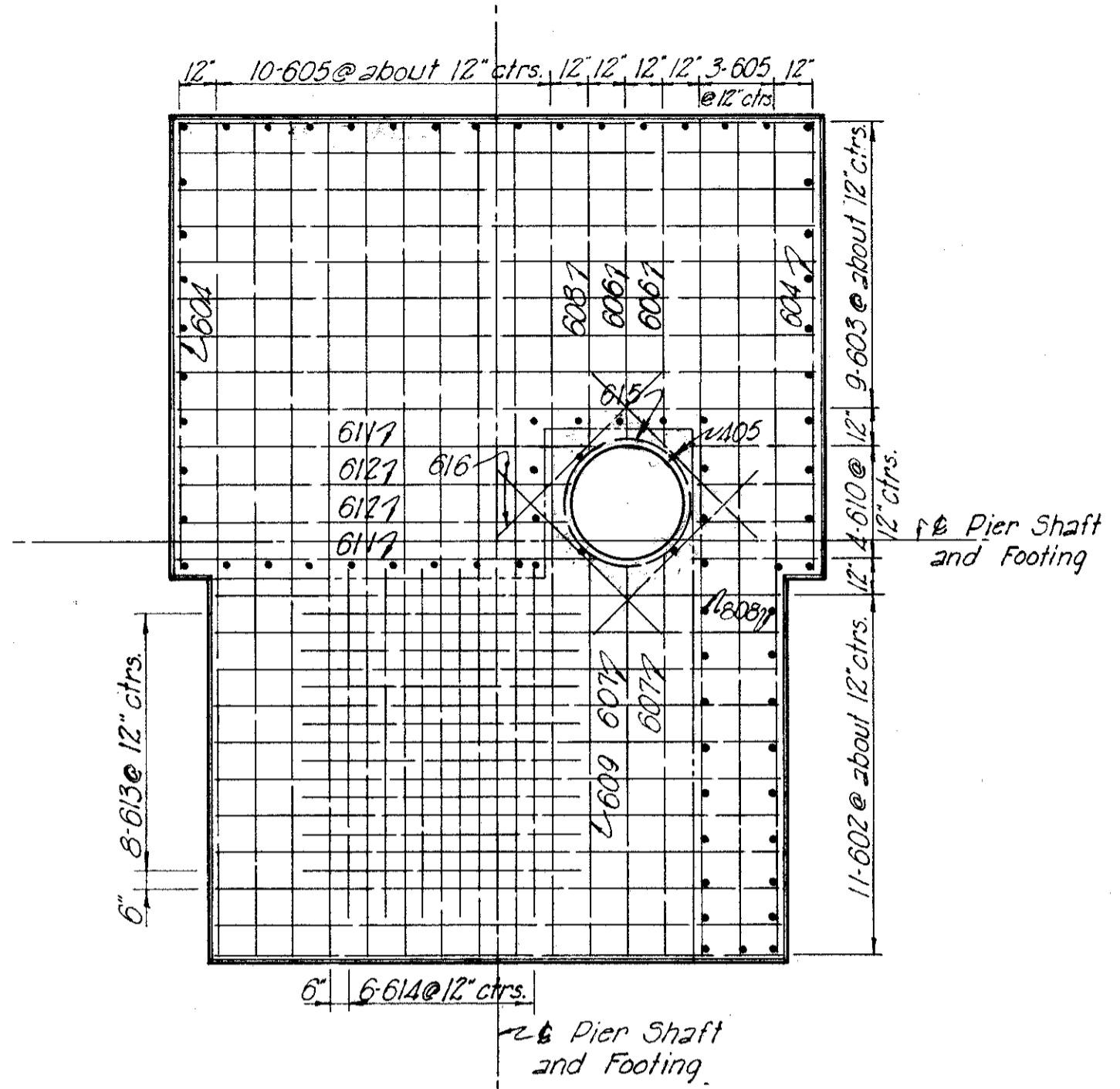
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO	UI 1057 (4)	

24
43

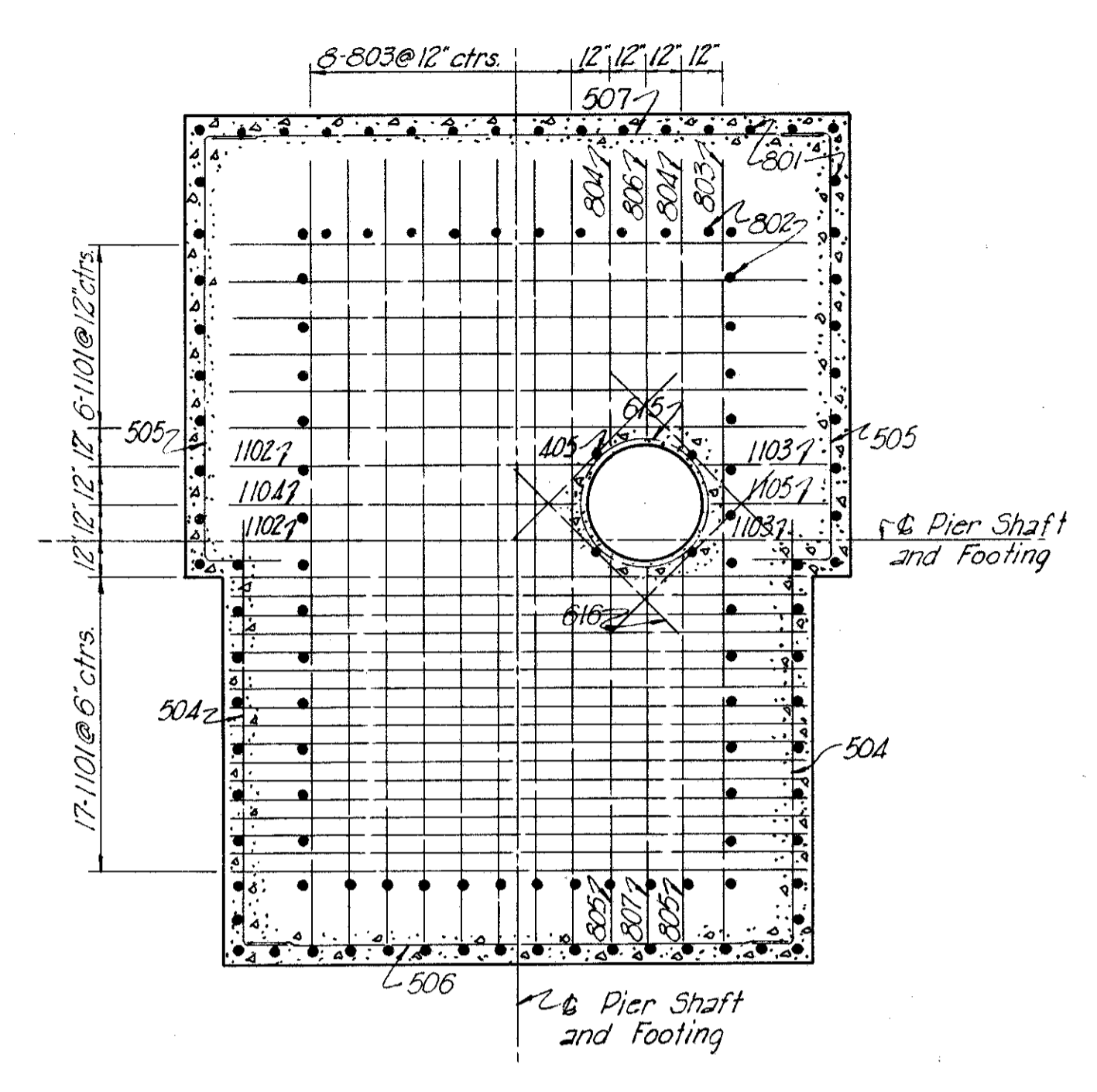
CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY-42R-17.50



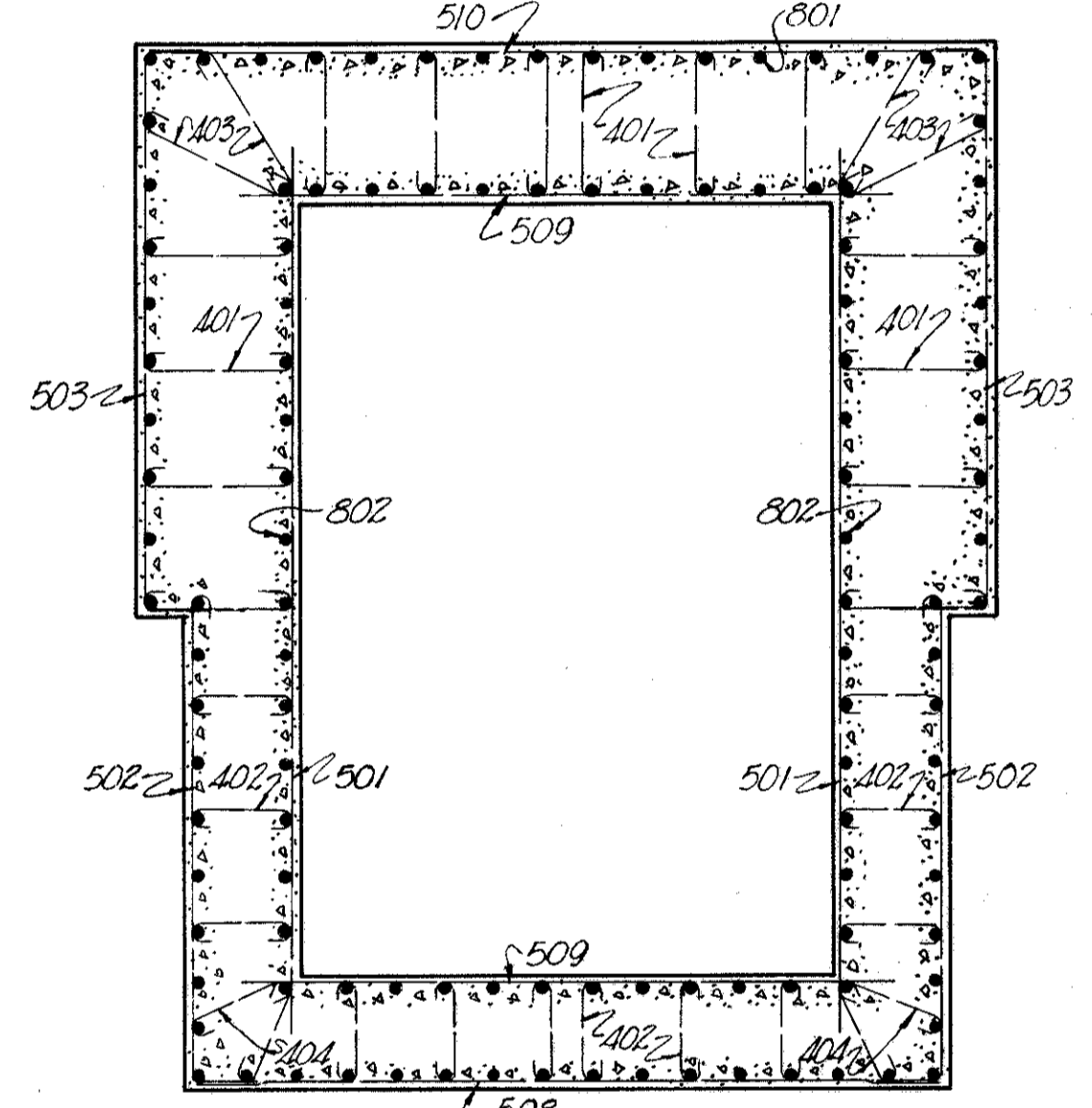
PLAN



SECTION A-A

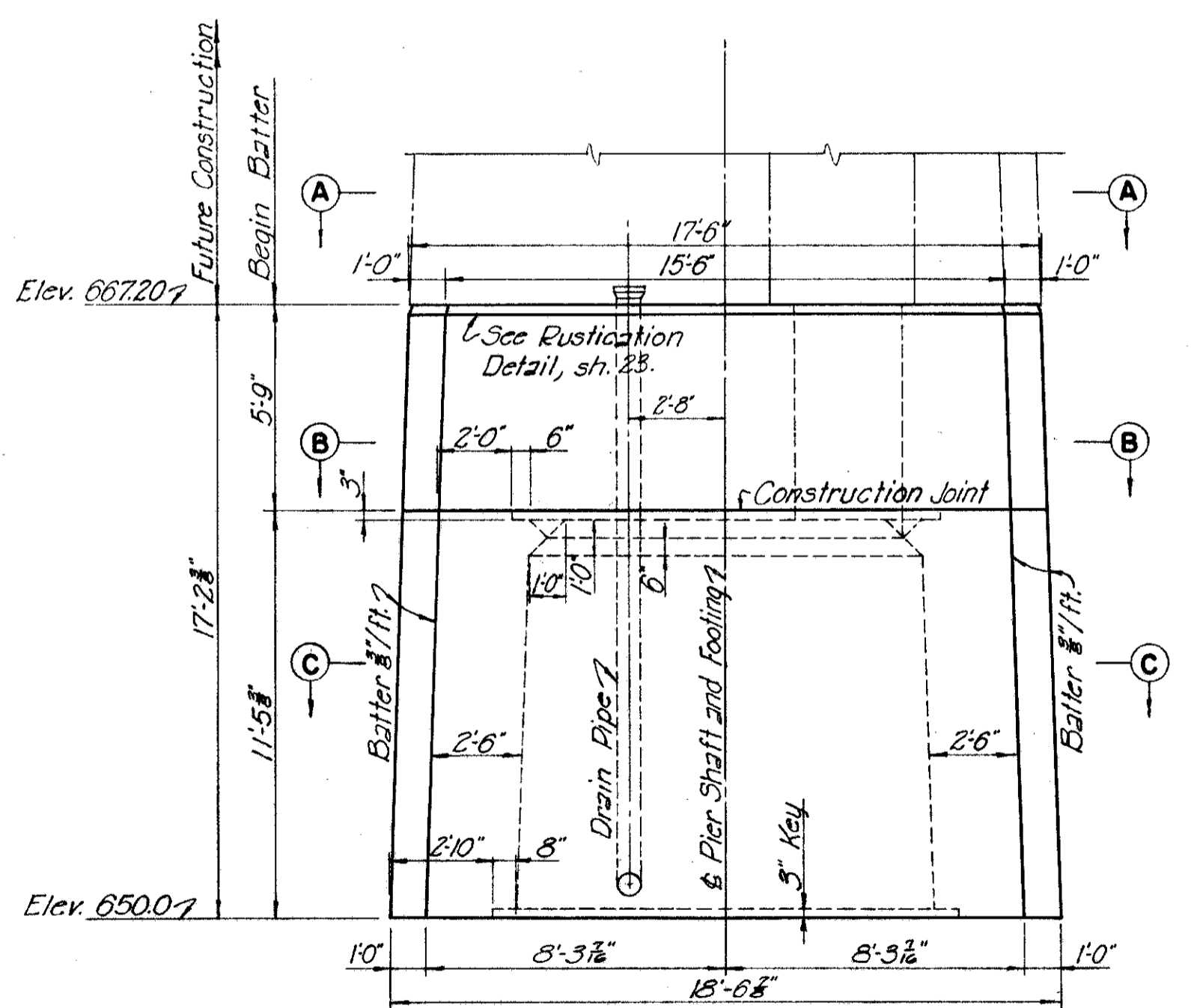


SECTION B-B

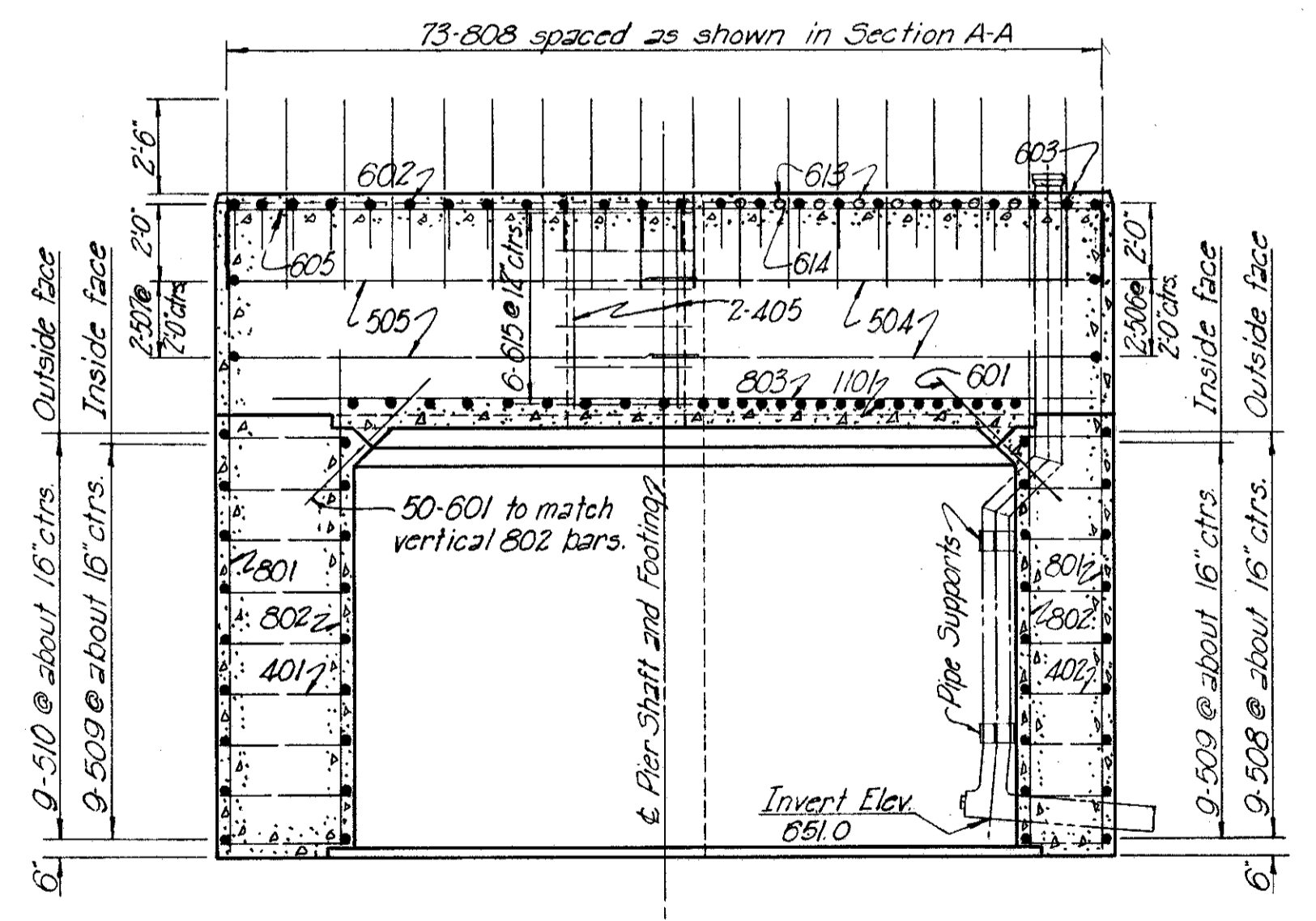


SECTION C-C

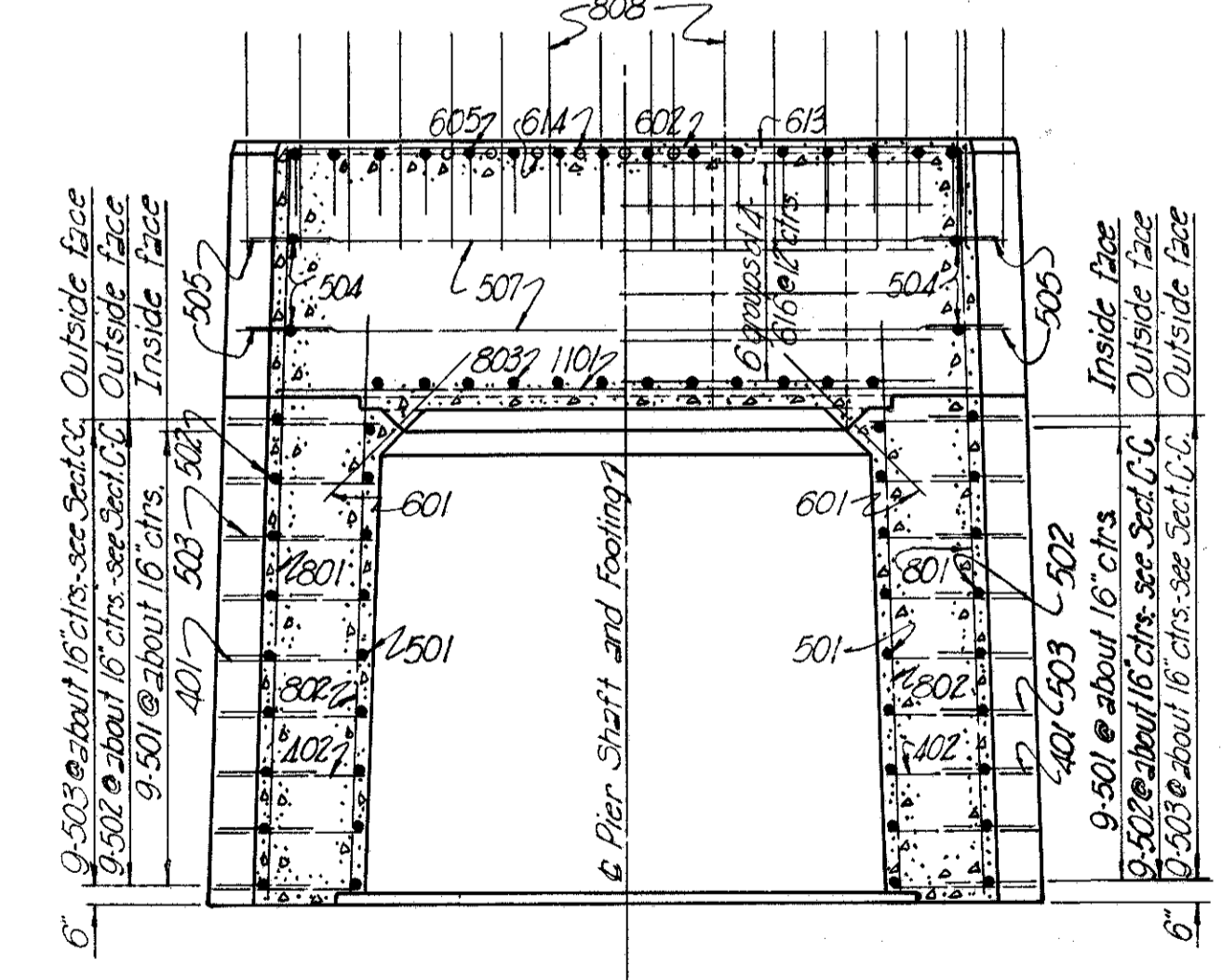
Note:
801 and 802 bars to be spaced as shown above.



ELEVATION



SECTION D-D



SECTION E-E

Note:
All bars shall have a minimum clearance of 2" from face of concrete.
For location and details of ladder rungs see Sh. 28.
For details of drain pipe and manhole cover see Sh. 28.
For details of Footing see Sh. 14.
For Reinforcement Schedule see Sh. 32.
For Anchor Bolt Detail and Anchor Bolt Spacing see Sh. 29.

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

WEST END PIER SHAFT, WS

CLEVELAND	CUYAHOGA COUNTY	OHIO
-----------	-----------------	------

SCALE 1" = 1'-0"

MADE/CHKD DATE 7-6-54

TRCD DATE

CHKD DATE 7-7-54

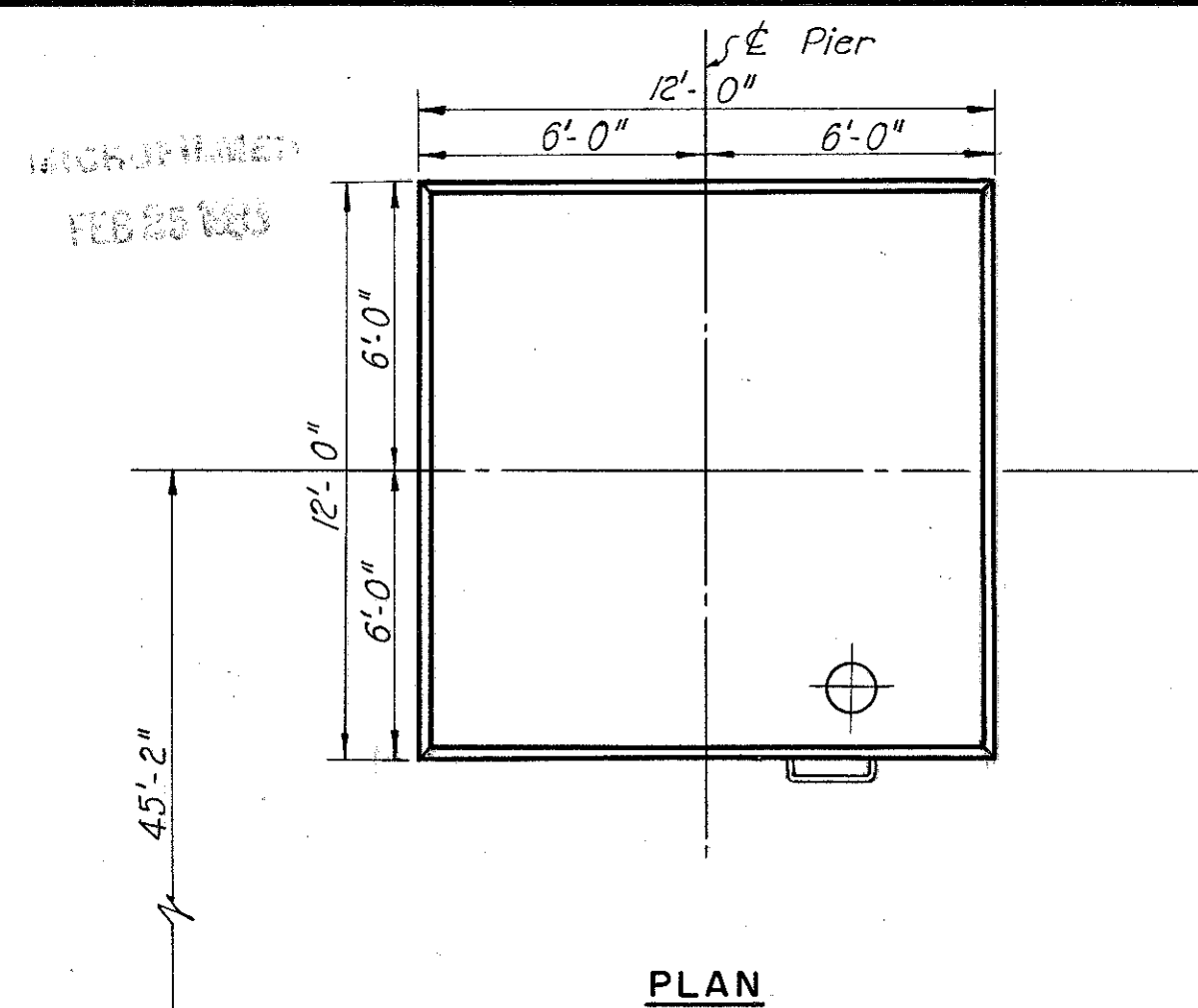
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

914-1A SHEET 124

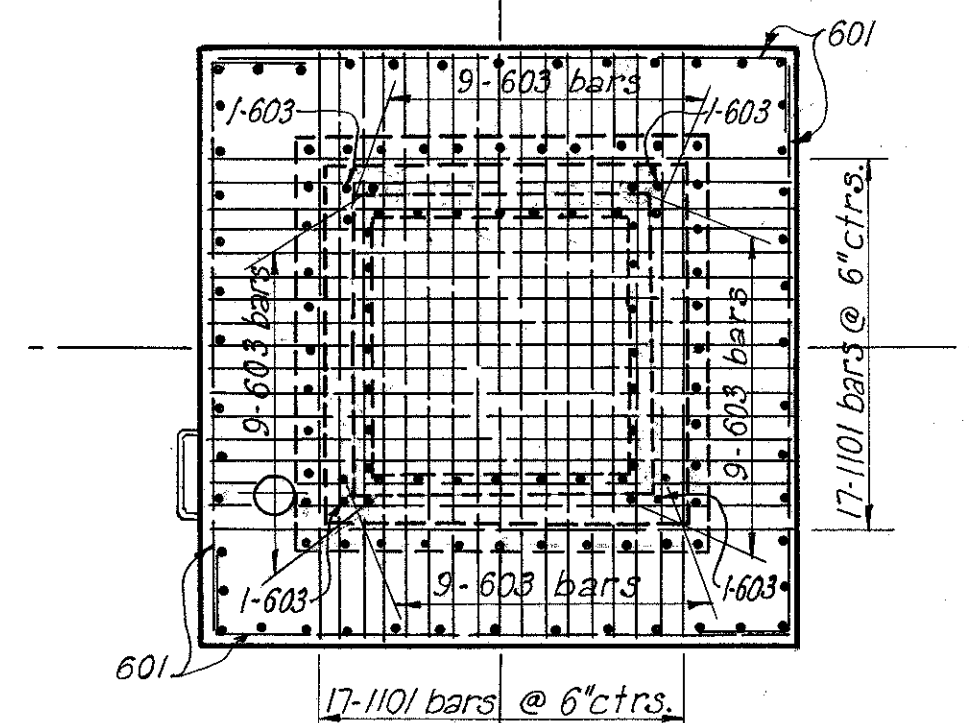
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO	UI 1057 (4)	

25
43

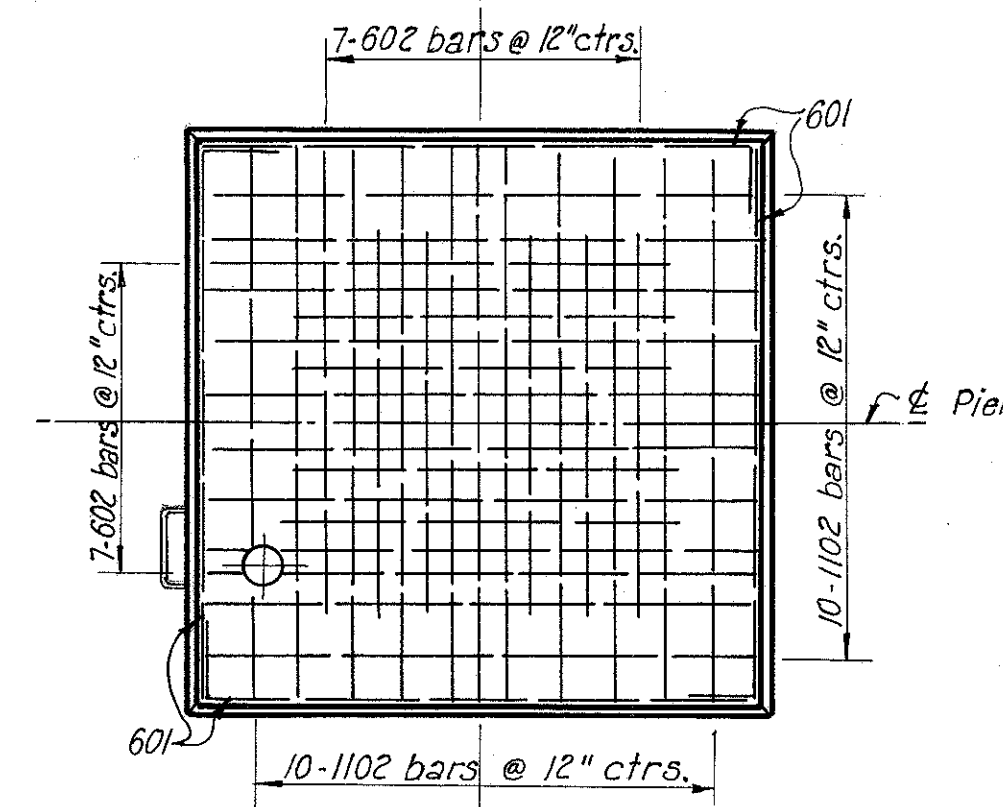
CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY-42R-17.50



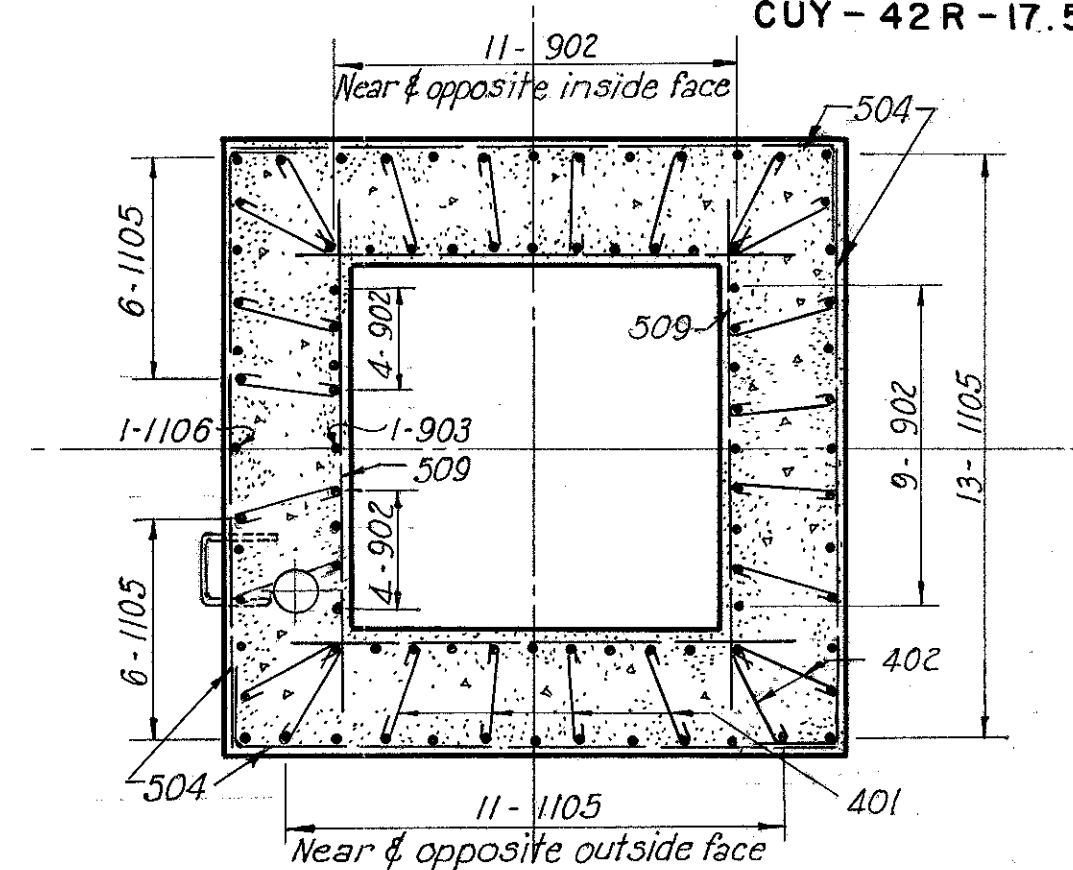
PLAN



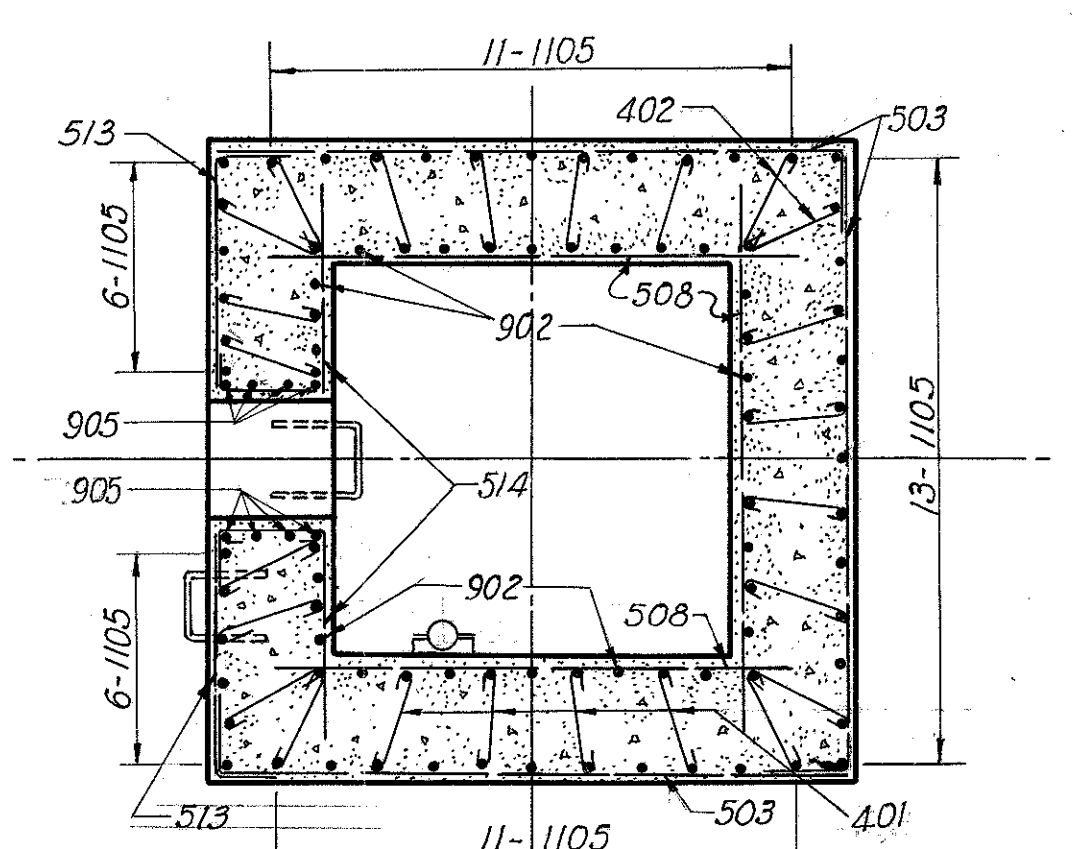
SECTION A-A



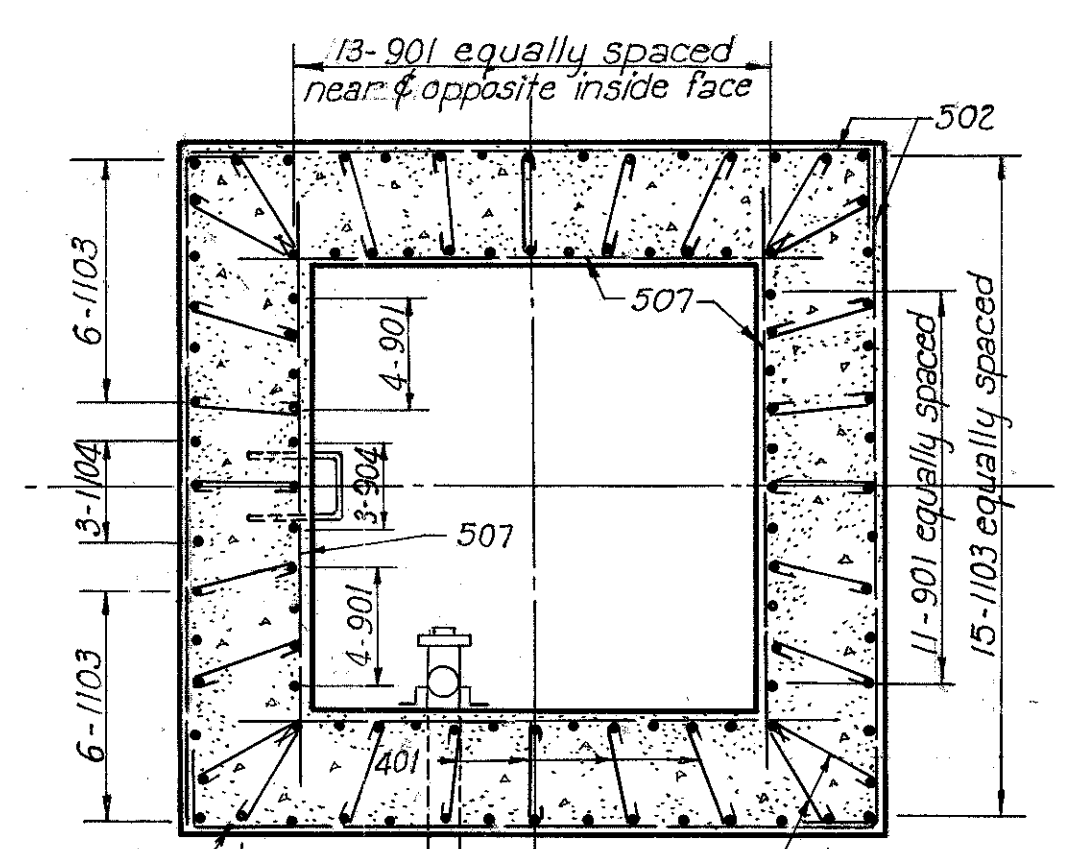
PLAN



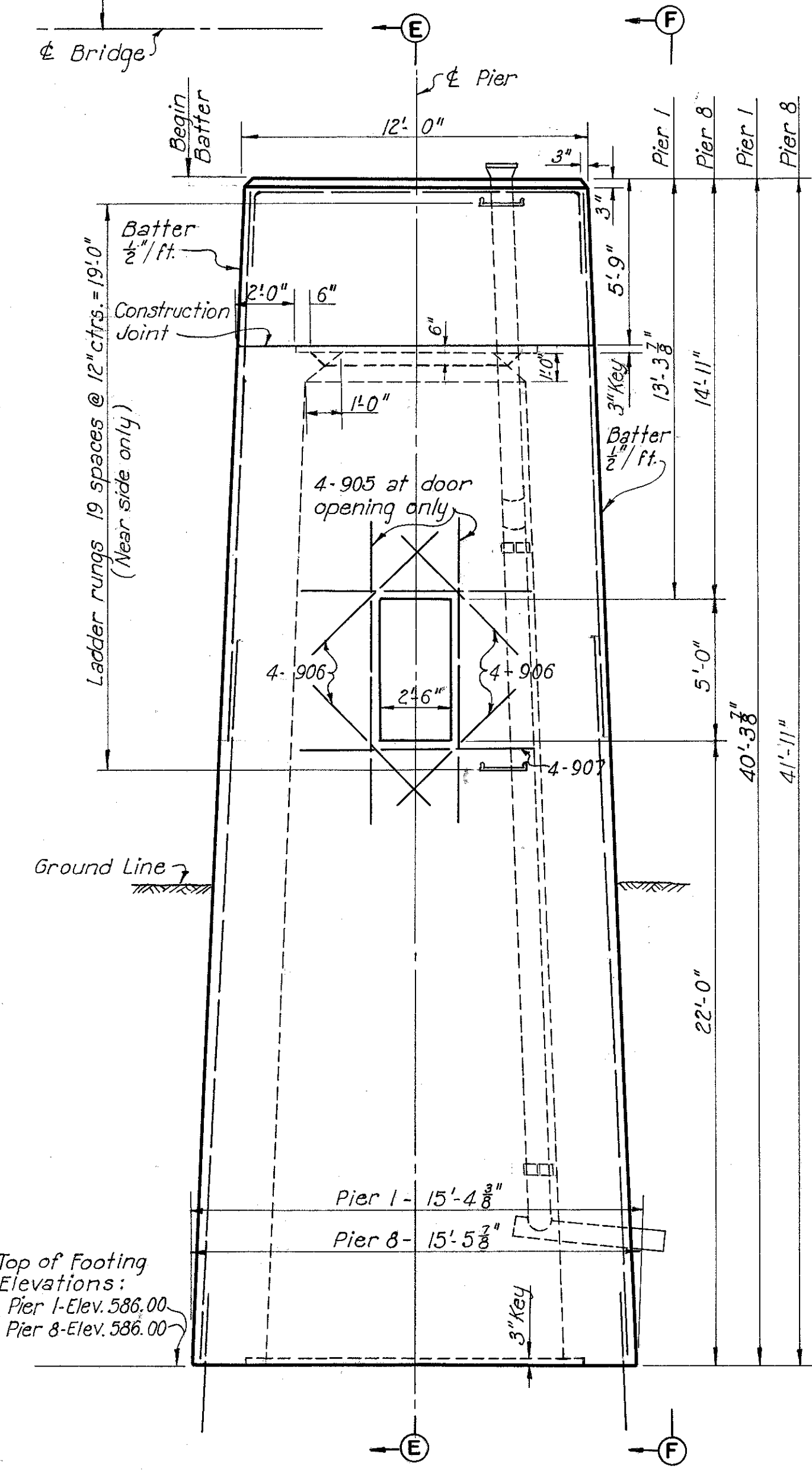
SECTION B-B



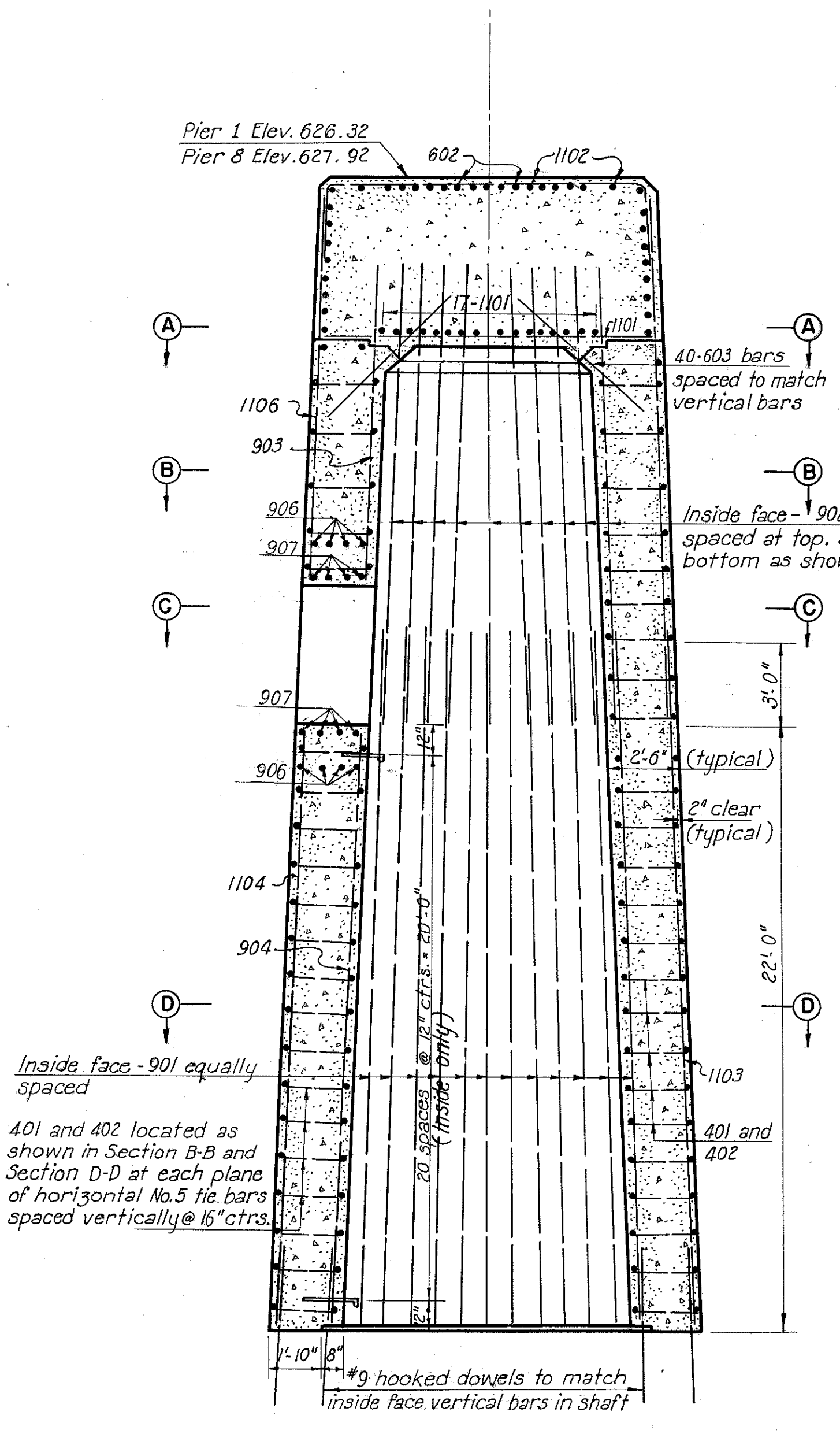
SECTION C-C



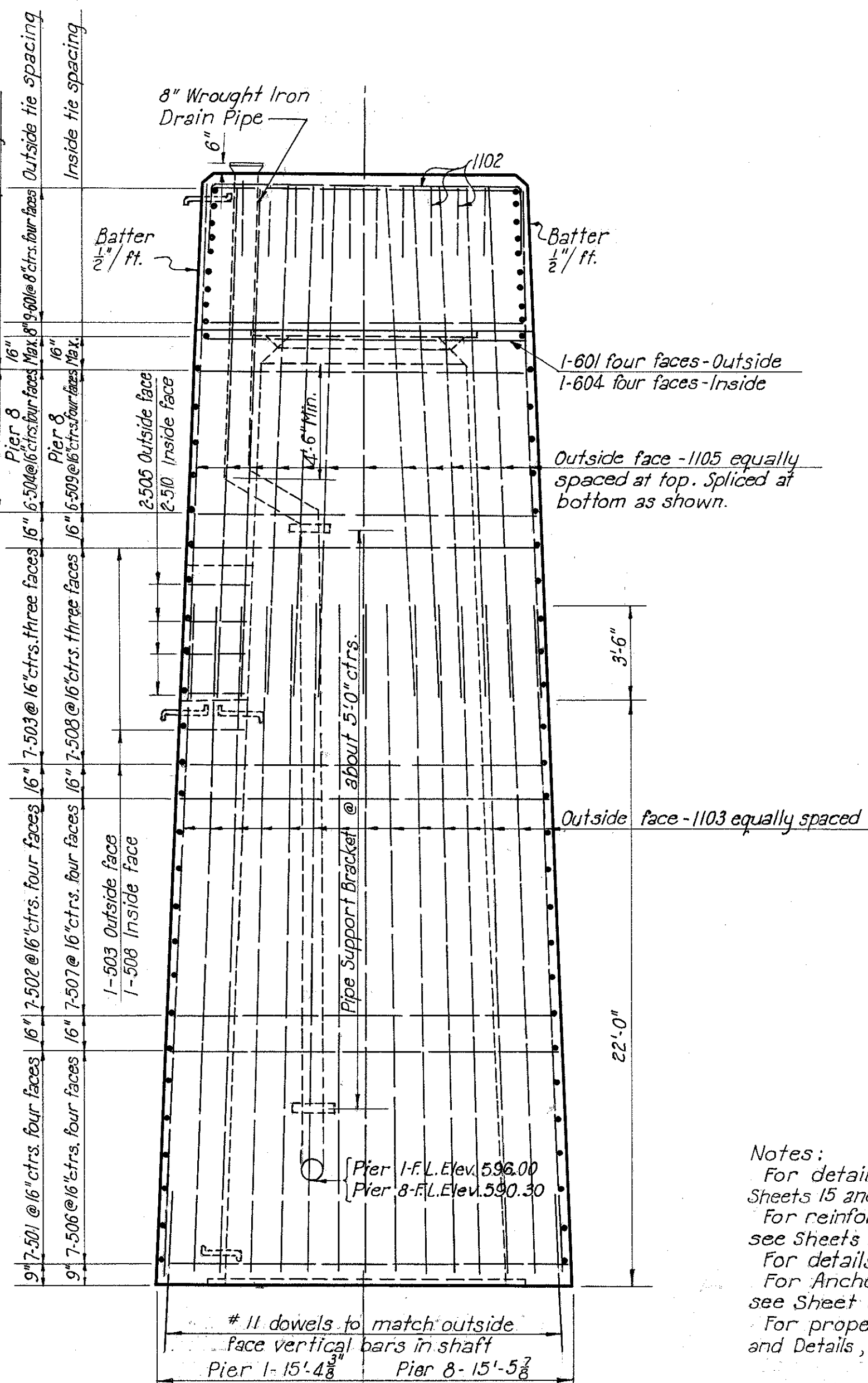
SECTION D-D



ELEVATION
Looking from Bridge



SECTION E-E



SIDE ELEVATION F-F

Notes:
For details of footings, see Sheets 15 and 21.
For reinforcement schedule, see Sheets 30 and 31.
For details of ladder, see Sheet 28.
For Anchor Bolt Plan and Details see Sheet 29.
For proper location of Drain Pipe and Details, see Sheet 28.

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

SHAFTS - PIERS I AND 8

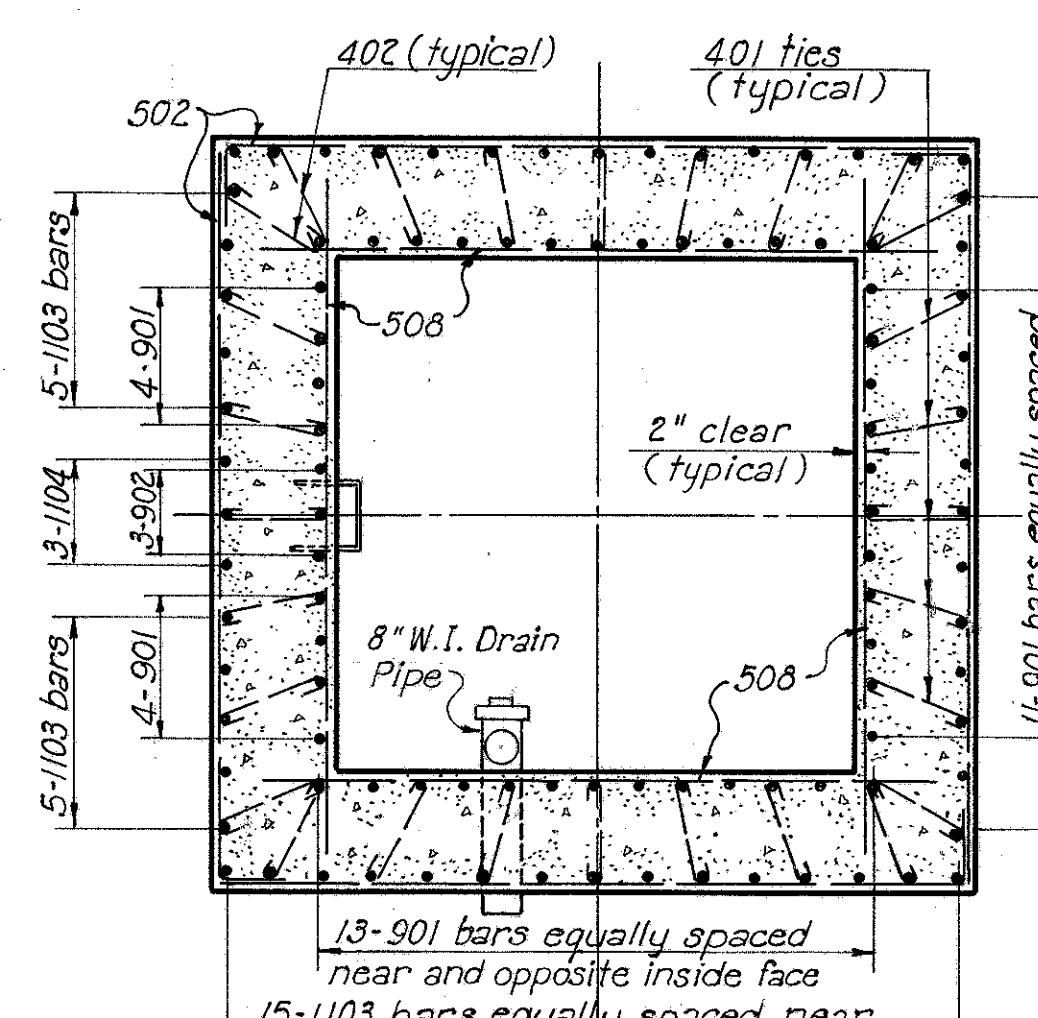
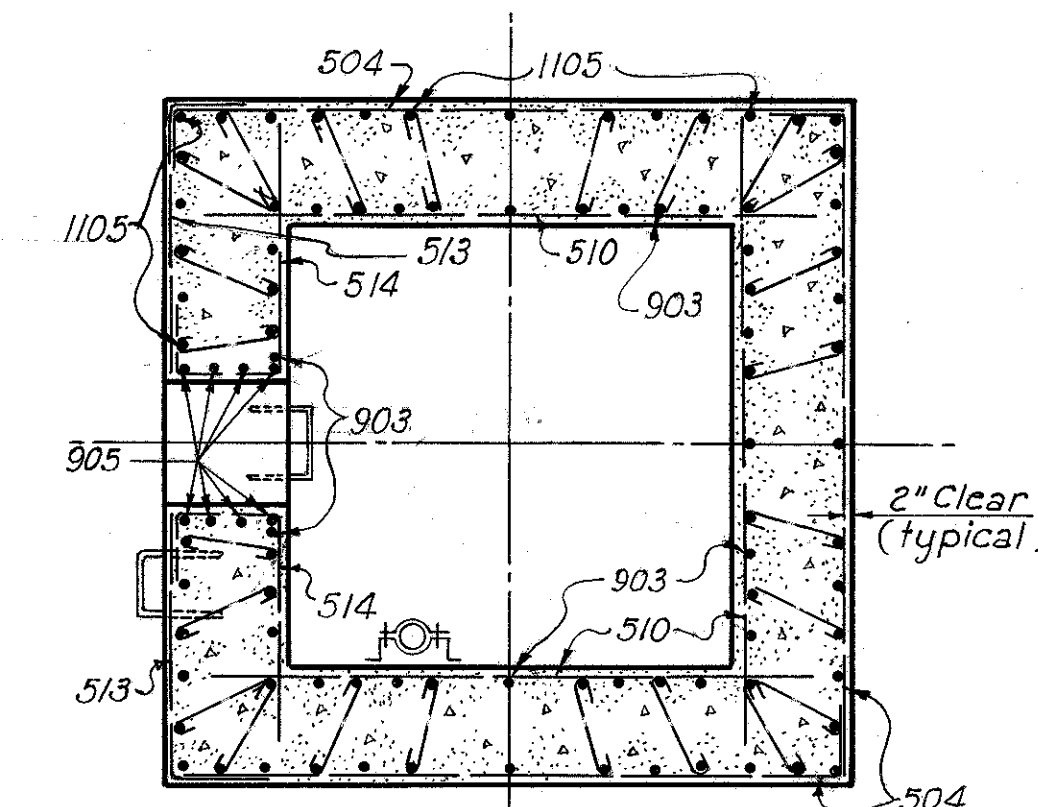
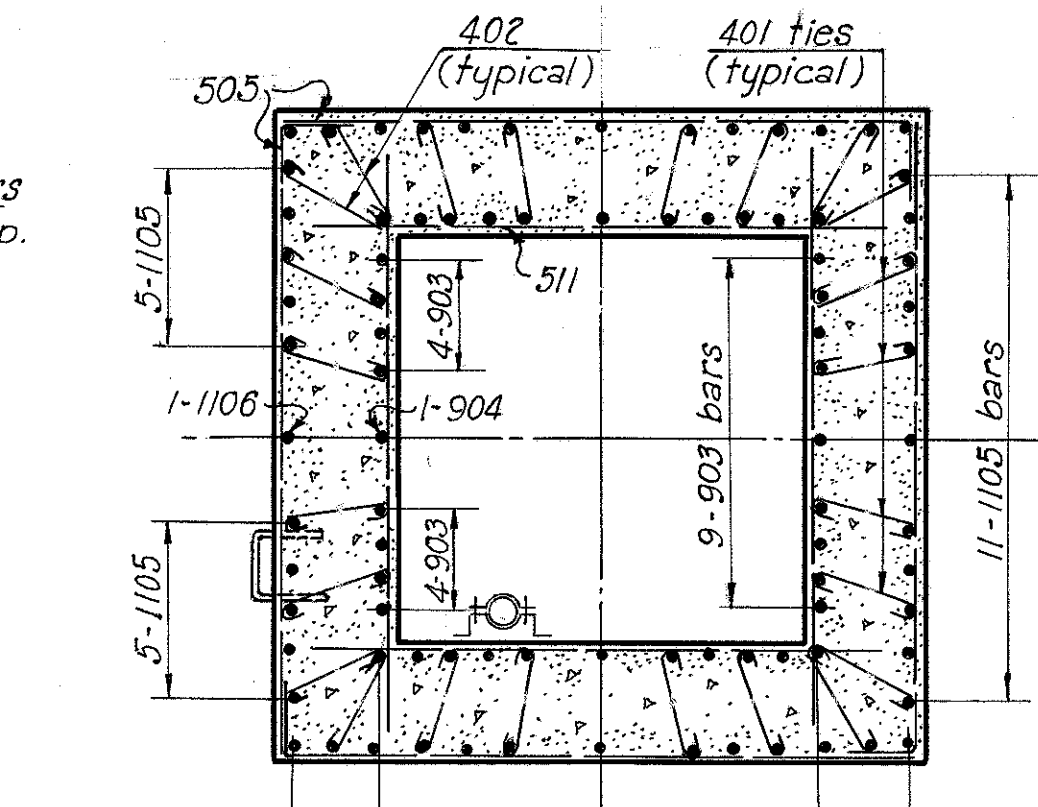
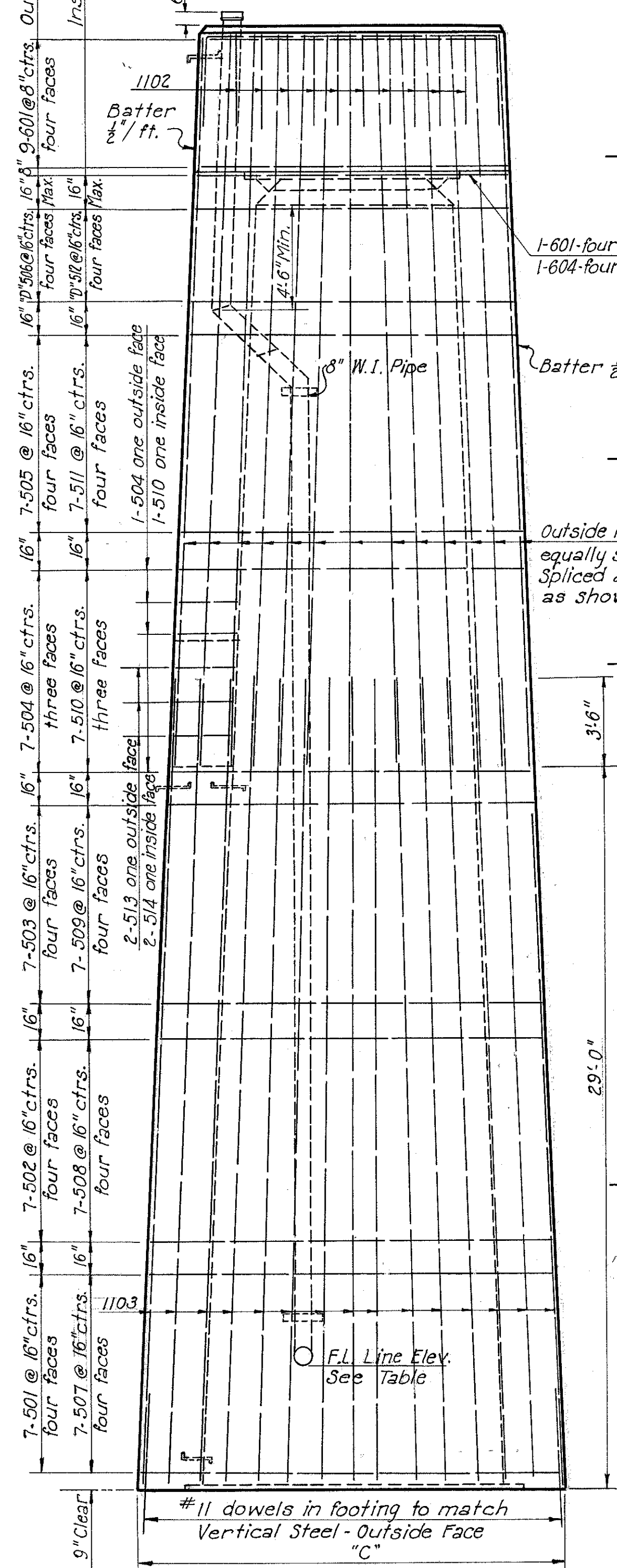
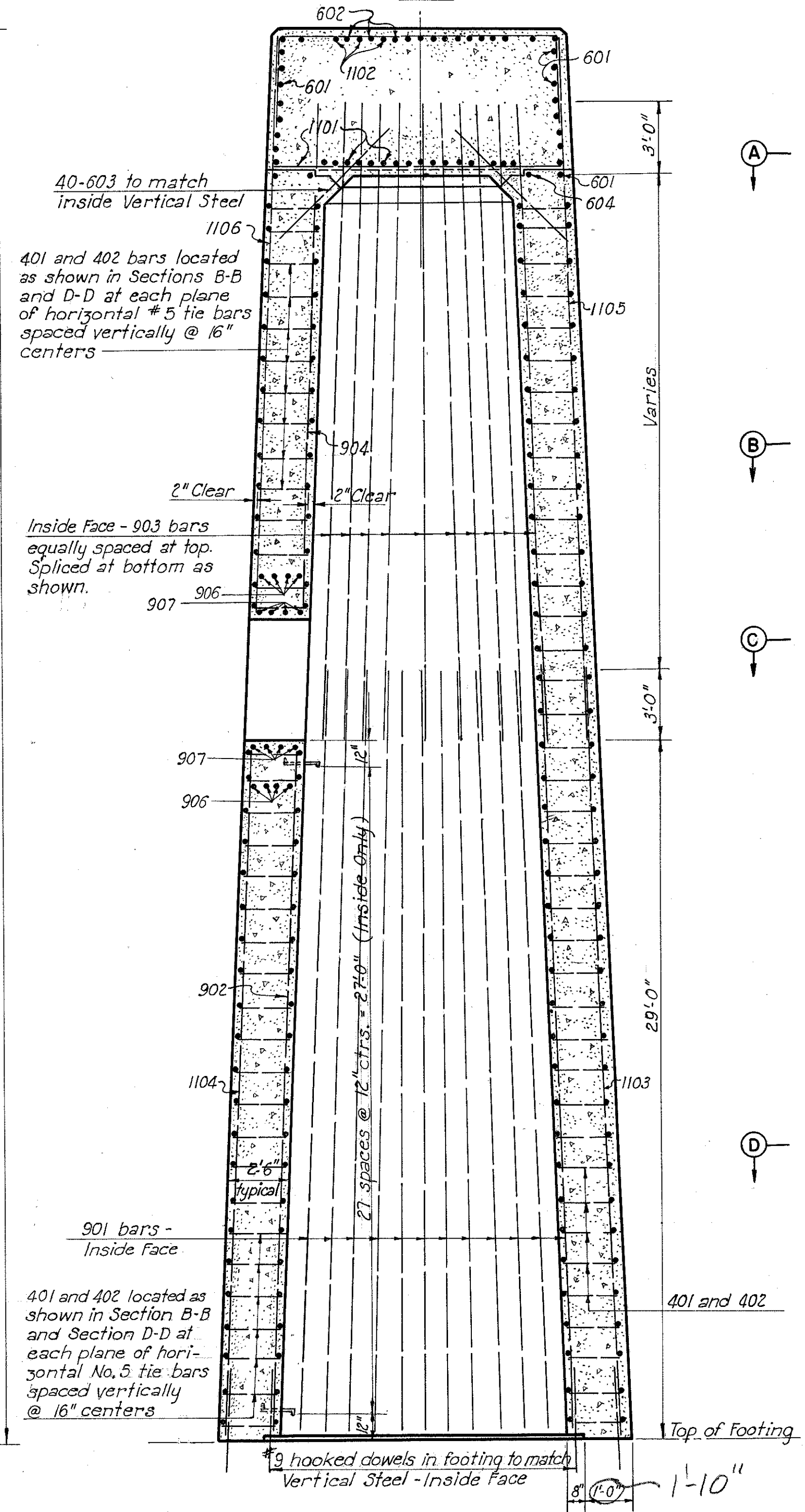
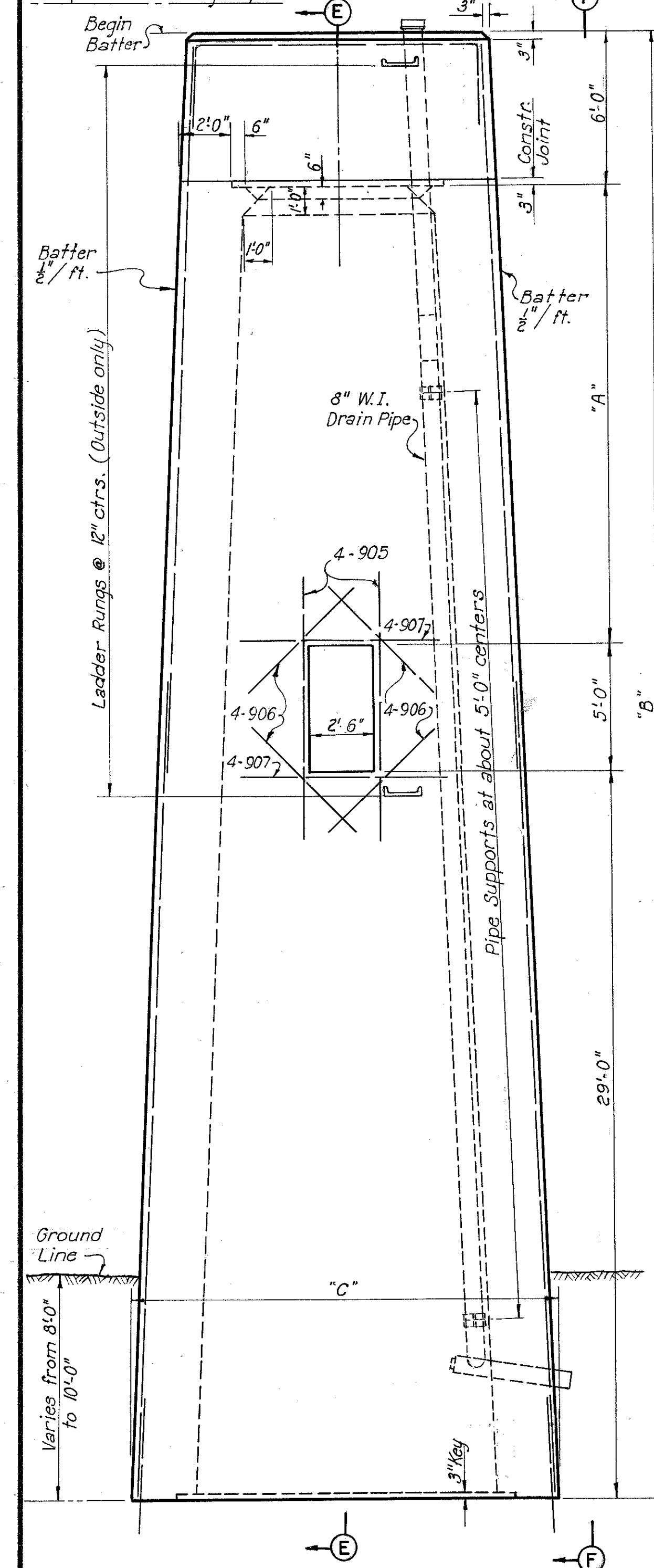
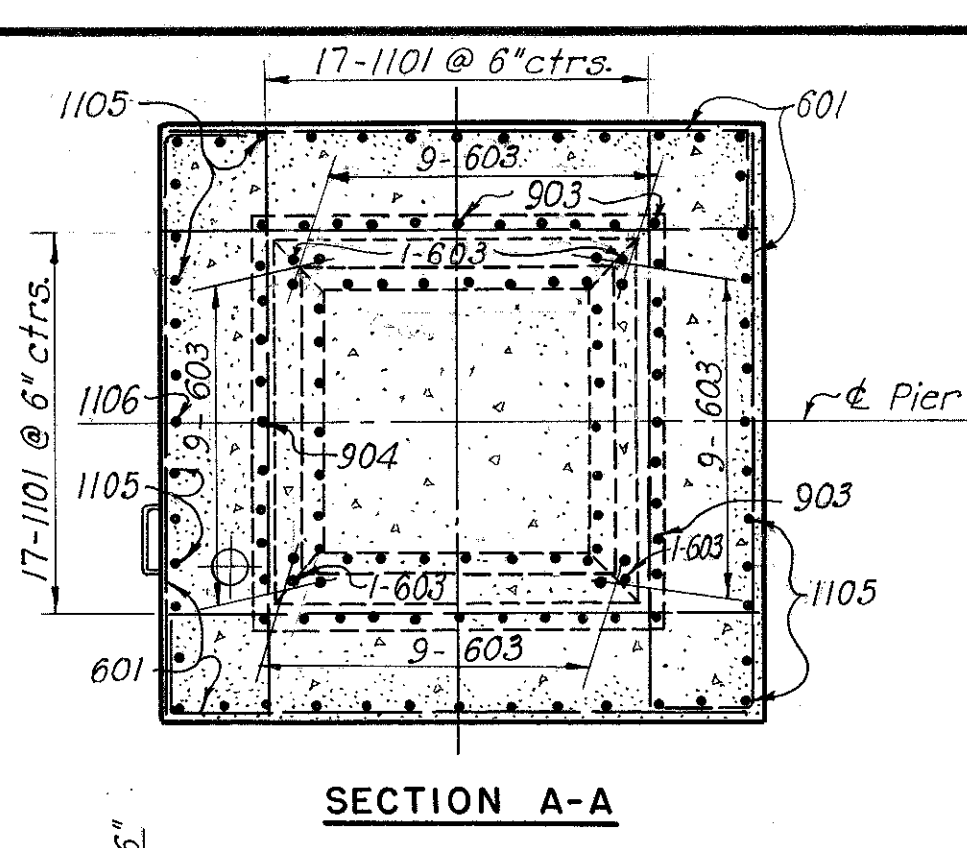
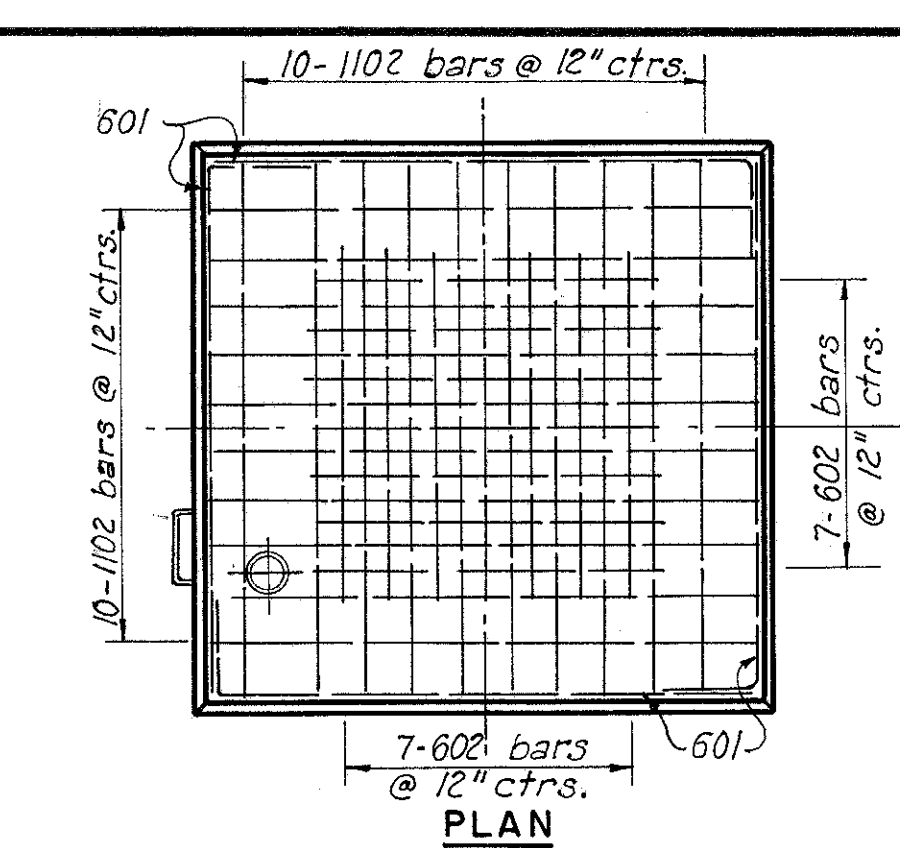
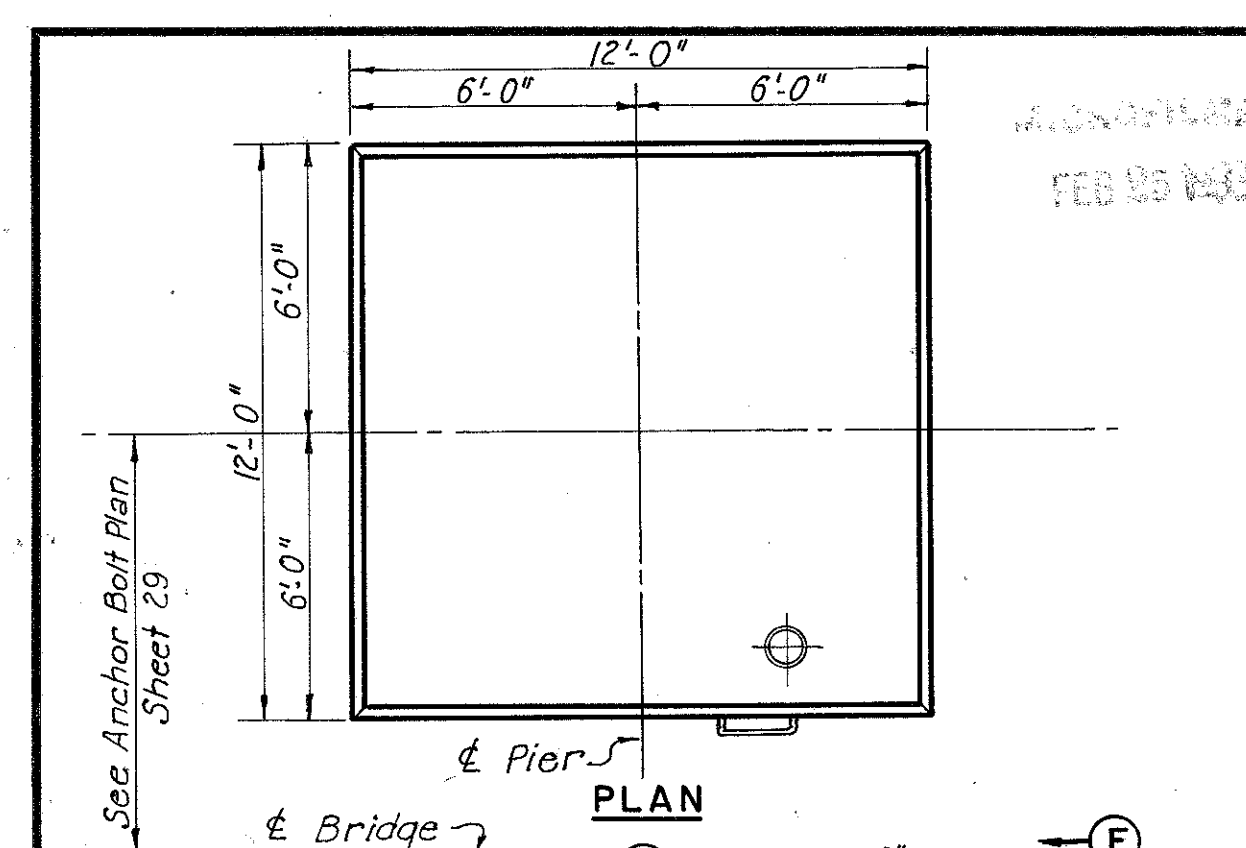
CLEVELAND CUYAHOGA COUNTY OHIO

SCALE: 1/4" = 1'-0"

MADE L.I.B. DATE 3-5-54 HOWARD, NEEDLES, TAMMEN & BERGENOFF CONSULTING ENGINEERS
TRCD. A.H. DATE 6-8-54 KANSAS CITY CLEVELAND NEW YORK
CKD. J.G.S. DATE 6-16-54 914-1A SHEET 1.25

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY-42R-17.50

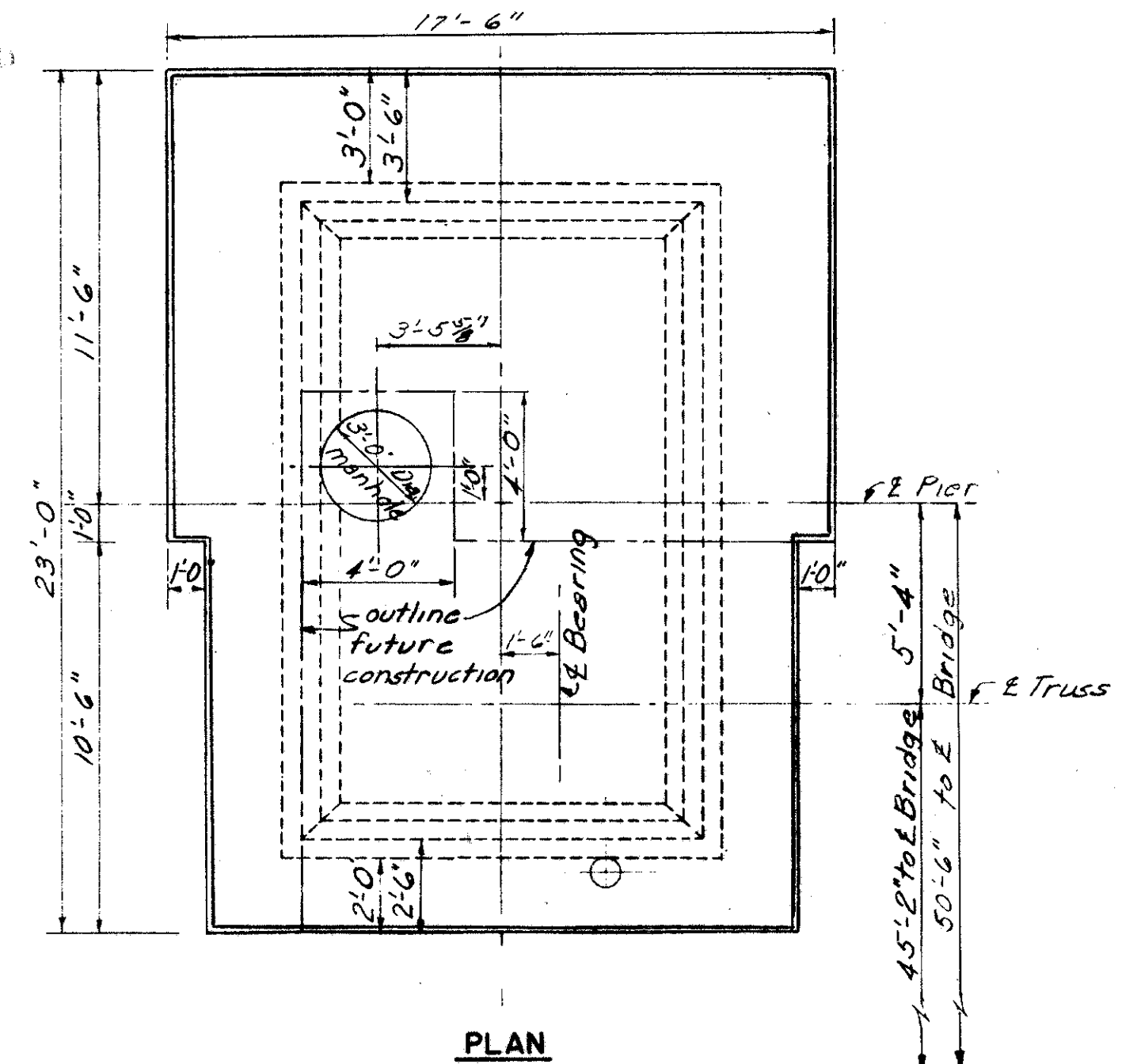
Pier Shafts	Top Footing Elevation	PIER SHAFT DATA			Pier Top Elevation	Ground Elevation	Flow Line Elevation	"D"
		"A"	"B"	"C"				
2 N	572.00	16'-9 3/8"	56'-9 3/8"	16'-8 3/4"	628.76	581.00	576.17	3
2 S	572.00	16'-9 3/8"	56'-9 3/8"	16'-8 3/4"	628.76	581.00	576.17	3
3 N	573.00	18'-2 3/4"	58'-2 3/4"	16'-10 1/4"	631.23	582.00	578.00	4
3 S	573.00	18'-2 3/4"	58'-2 3/4"	16'-10 1/4"	631.23	583.00	578.00	4
4 N	574.00	19'-7 3/4"	59'-7 3/4"	16'-11 3/8"	633.64	582.50	579.00	5
4 S	574.00	19'-3 3/4"	59'-3 3/4"	16'-11 3/8"	633.31	584.00	579.00	5
5 N	575.00	21'-7 3/8"	61'-7 3/8"	17'-1 5/8"	636.62	584.00	580.00	7
5 S	575.00	21'-7 3/8"	61'-7 3/8"	17'-1 5/8"	636.62	584.00	580.00	7
6 N	576.00	18'-7 7/8"	58'-7 7/8"	16'-10 3/4"	634.66	585.00	580.00	4
6 S	576.00	18'-7 7/8"	58'-7 7/8"	16'-10 3/4"	634.66	585.00	580.00	4
7 N	575.00	17'-8 1/2"	57'-8 1/2"	16'-9 3/4"	632.70	583.00	579.52	4
7 S	575.00	17'-8 1/2"	57'-8 1/2"	16'-9 3/4"	632.70	585.00	579.13	4



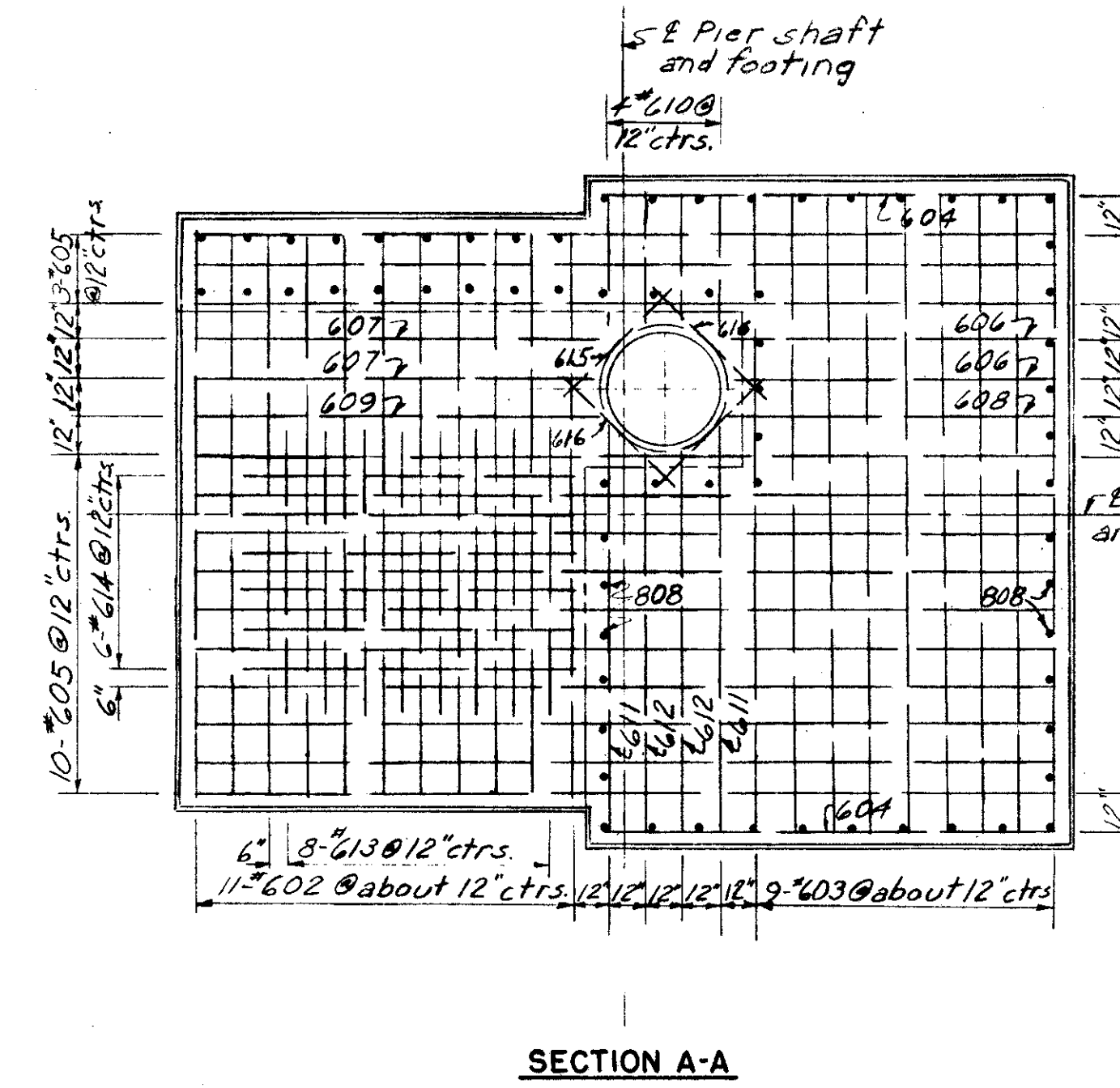
Notes:
For details of footings see Sheets 16 to 20 incl.
For reinforcement schedule, see Sheets 30 & 31.
For details of ladder, see Sheet 28.
For Anchor Bolt Plan and Details, see Sheet 29.
For proper location of Drain Pipe and Details, see Sheet 28.

REVISED, DEC 6 1954 PART 2
U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT
SHAFTS - PIERS 2 THRU 7
CLEVELAND CUYAHOGA COUNTY OHIO
SCALE 1/4" = 1'-0"
MADE W.E.G. DATE 3-1-54 HOWARD, NEEDLES, TAMMEN & BERGENDOFF
TRCD A.H. DATE 6-15-54 CONSULTING ENGINEERS
CKD/LGS DATE 6-17-64 KANSAS CITY CLEVELAND NEW YORK
914-1A SHEET 1.26

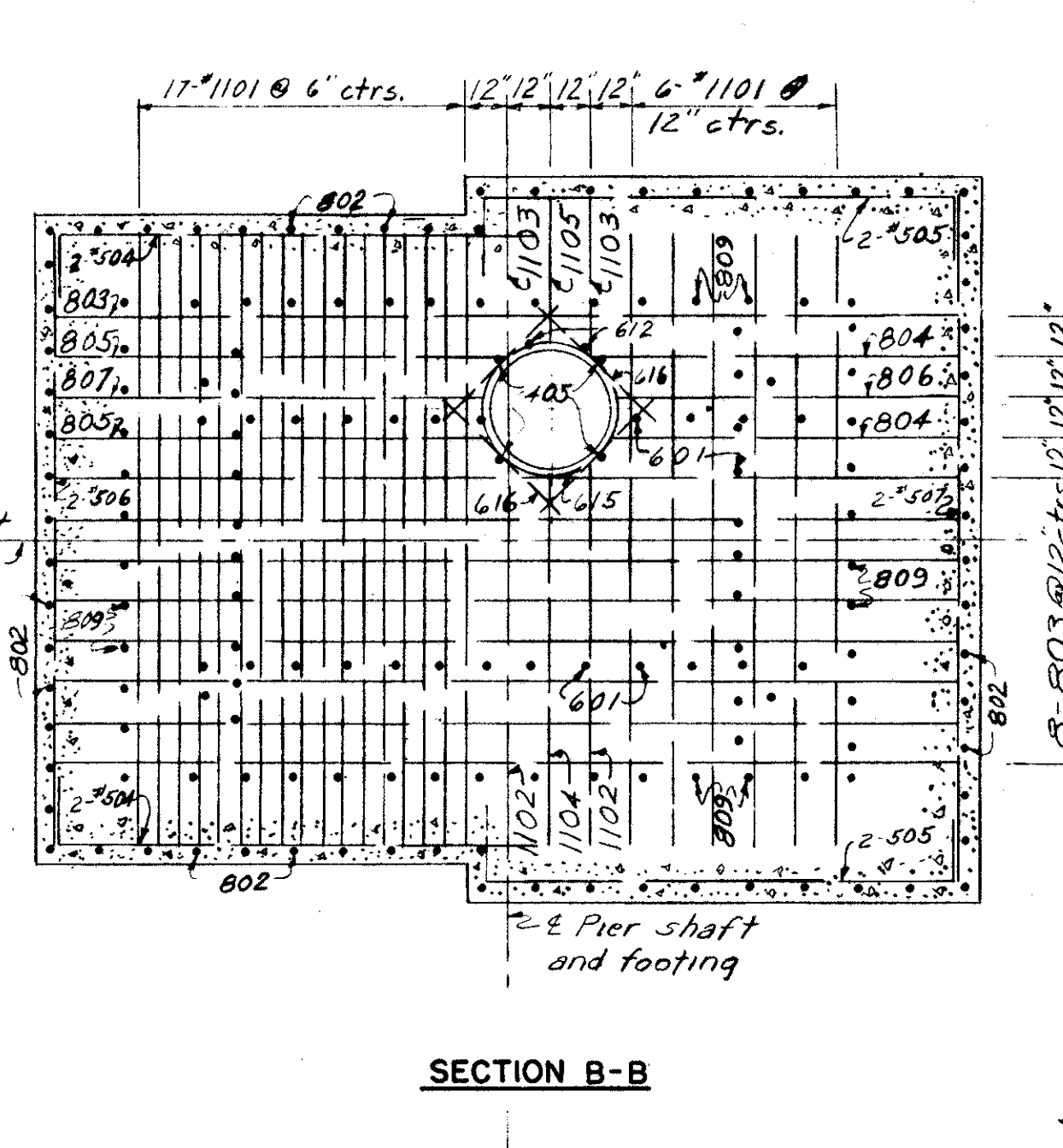
CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY - 42 R - 17.50



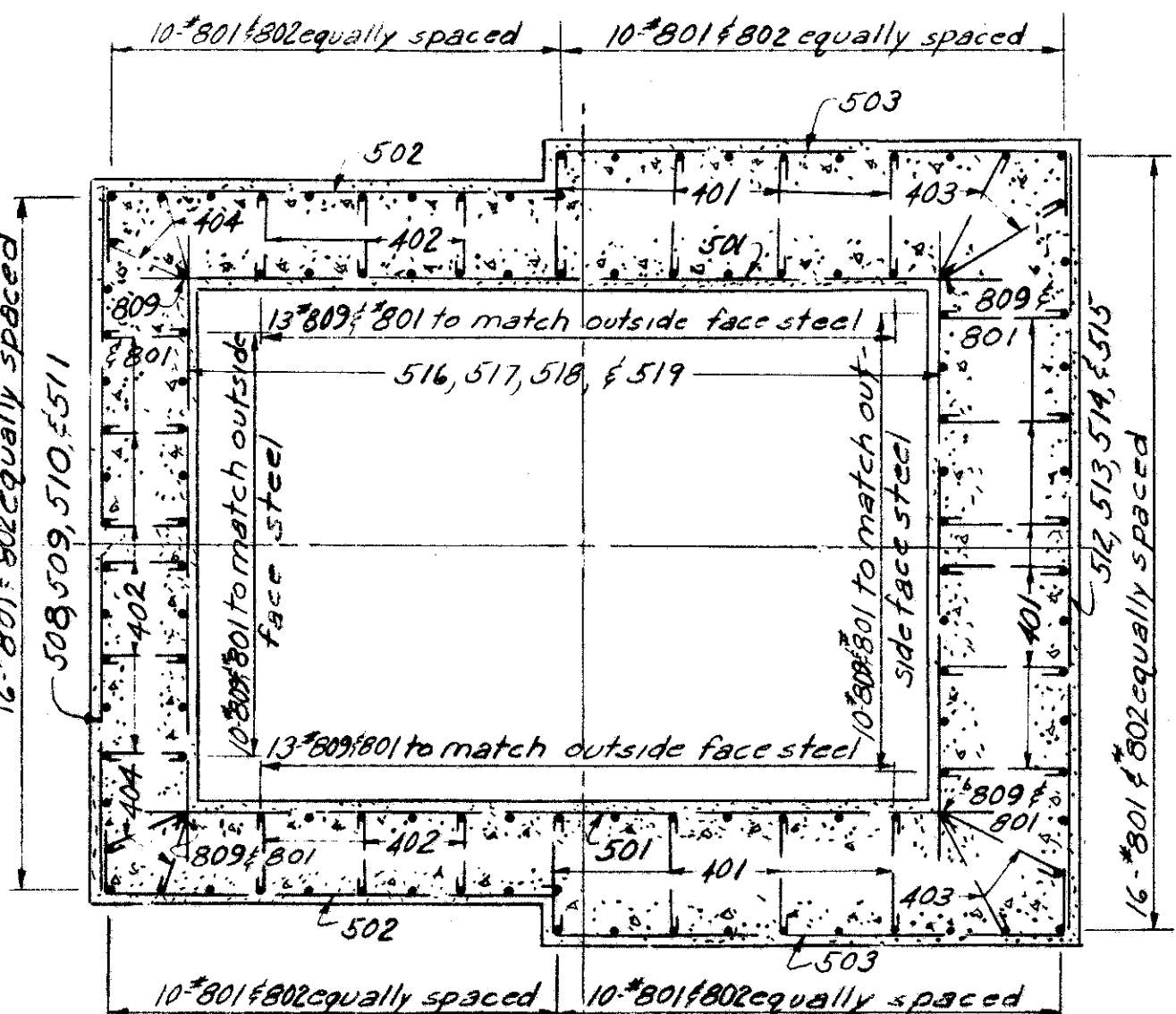
PLAN



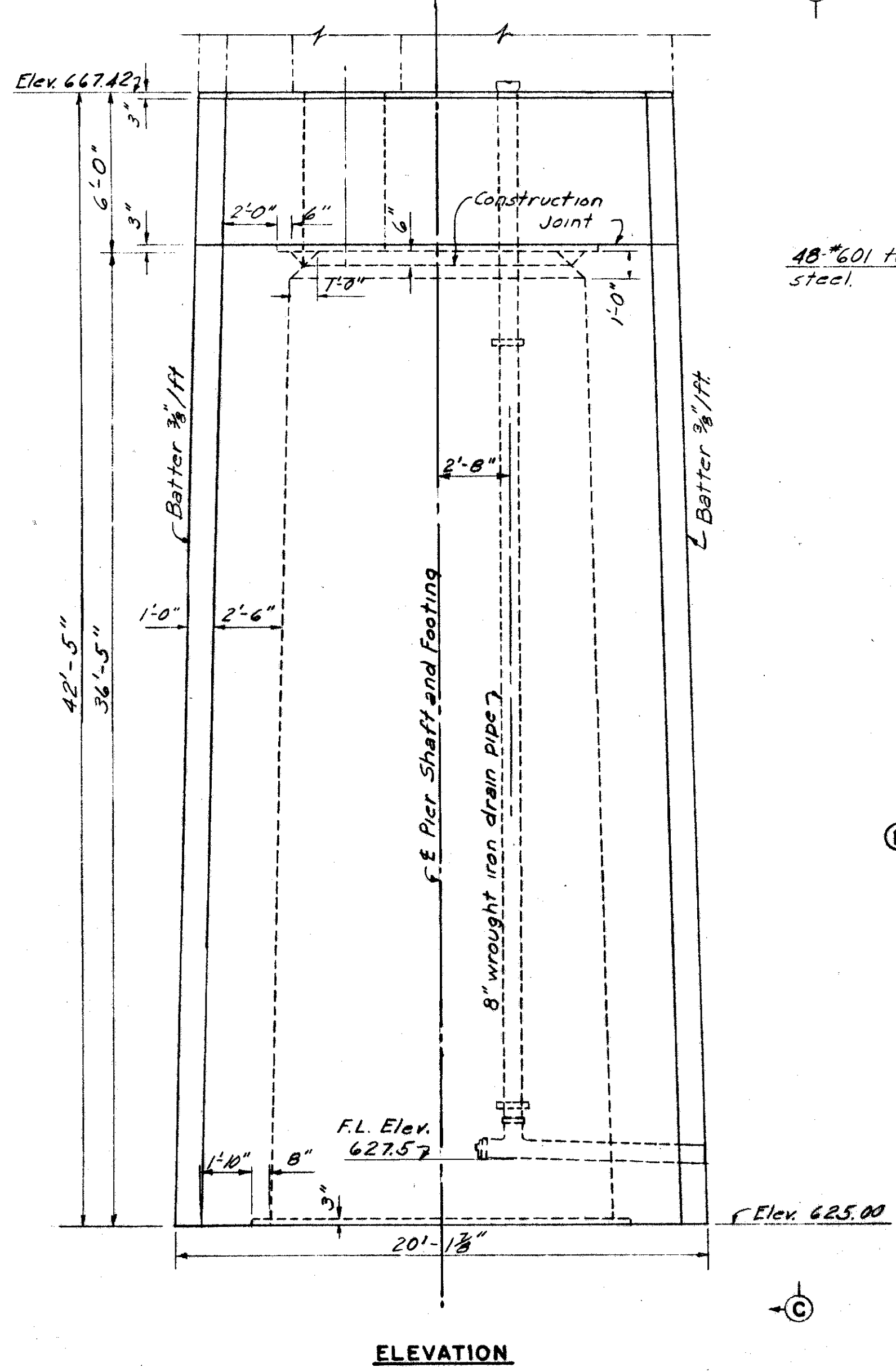
SECTION A-A



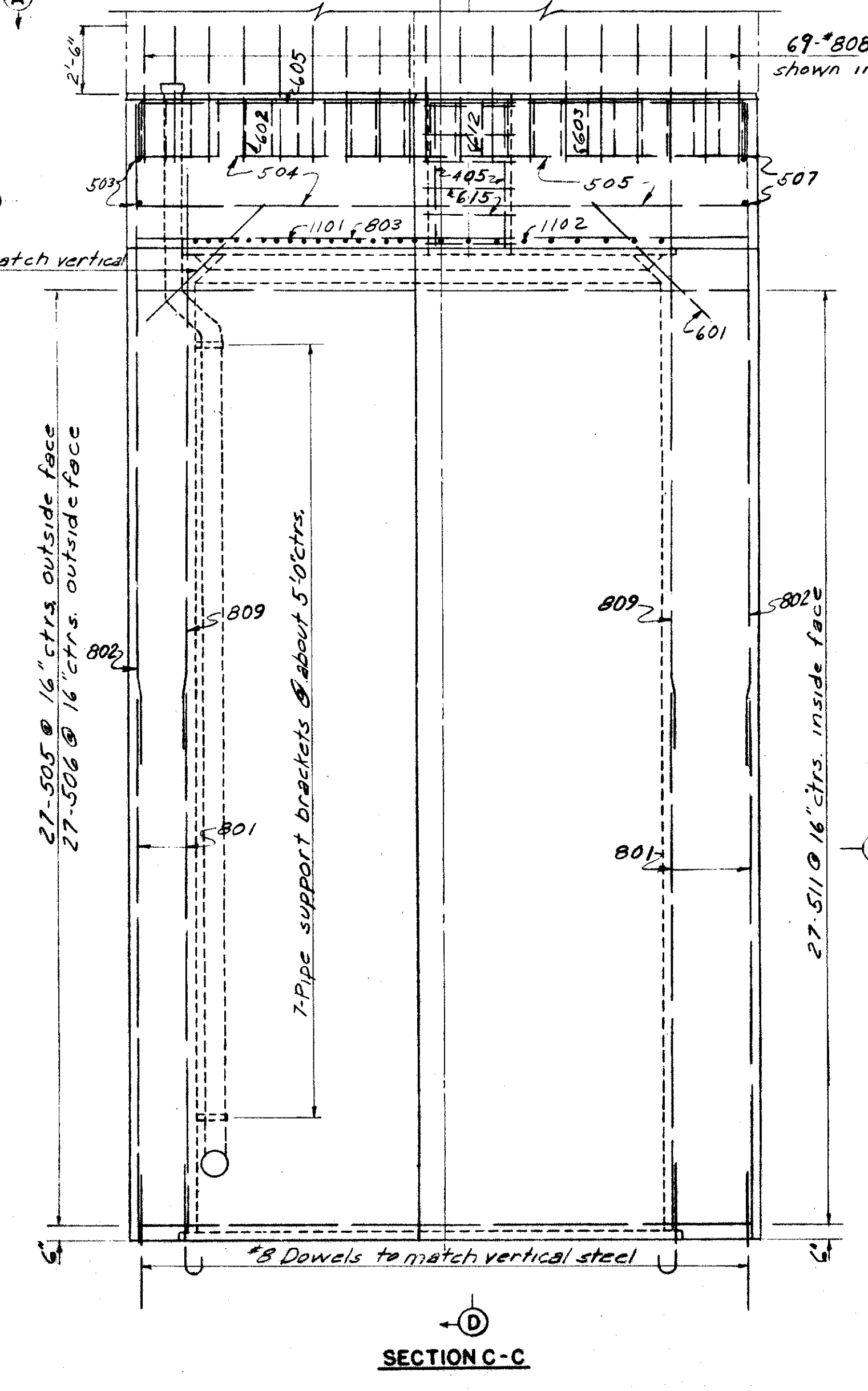
SECTION B-B



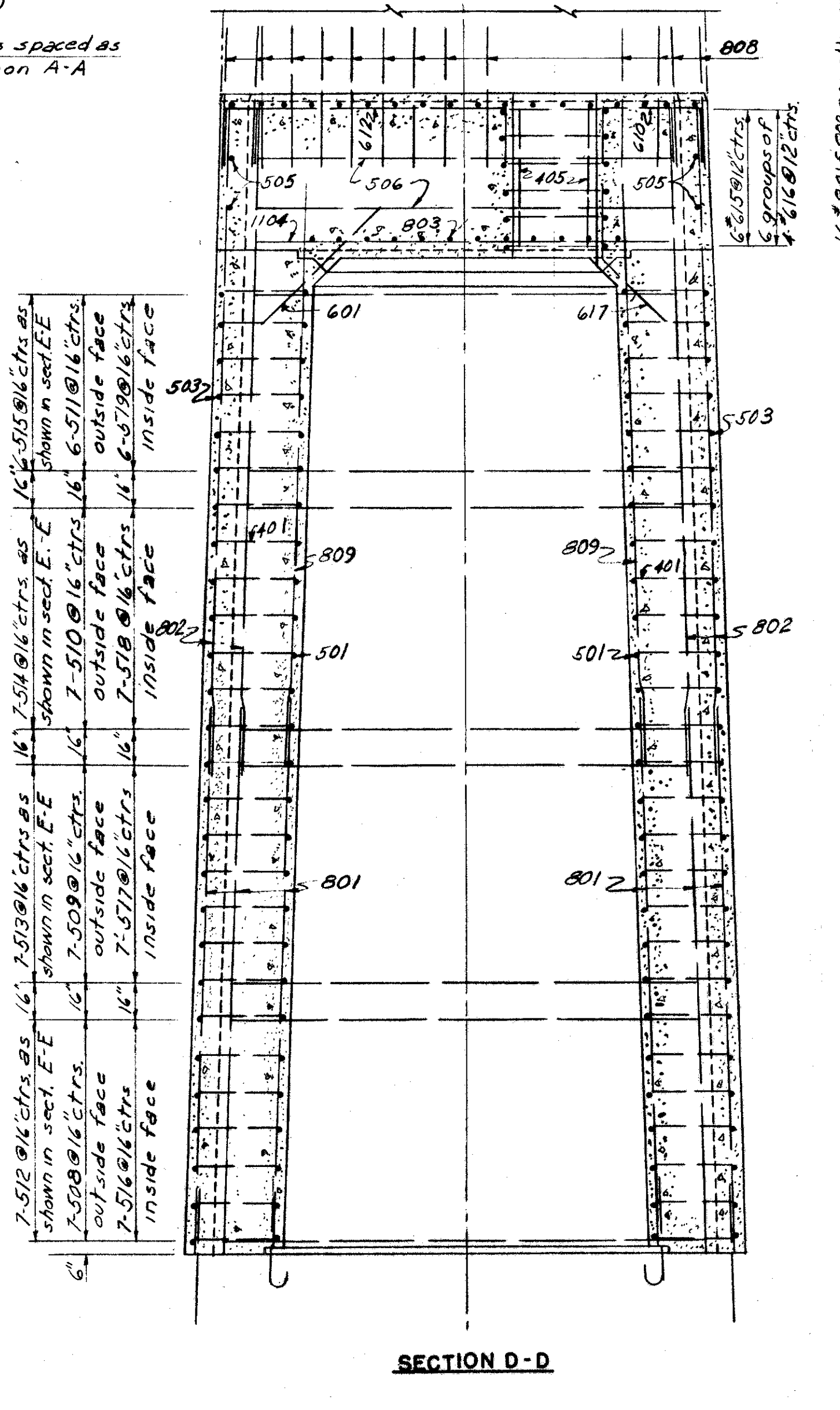
SECTION E-E



ELEVATION



SECTION C-C



SECTION D-D

Notes:
 For details of footings see sheet 22.
 For details of iron rungs see sheet 28.
 For reinforcement schedule see sheet 32.
 For anchor bolt detail and anchor bolt spacing see sheet 29.
 For location and direction of drain pipe, see sheets 28 and 35.
 For detail of manhole cover see sheet 28.
 For location of iron rungs see sheet 28.
 For detail of rustication see sheet 23.

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

EAST END PIER SHAFTS EN AND ES

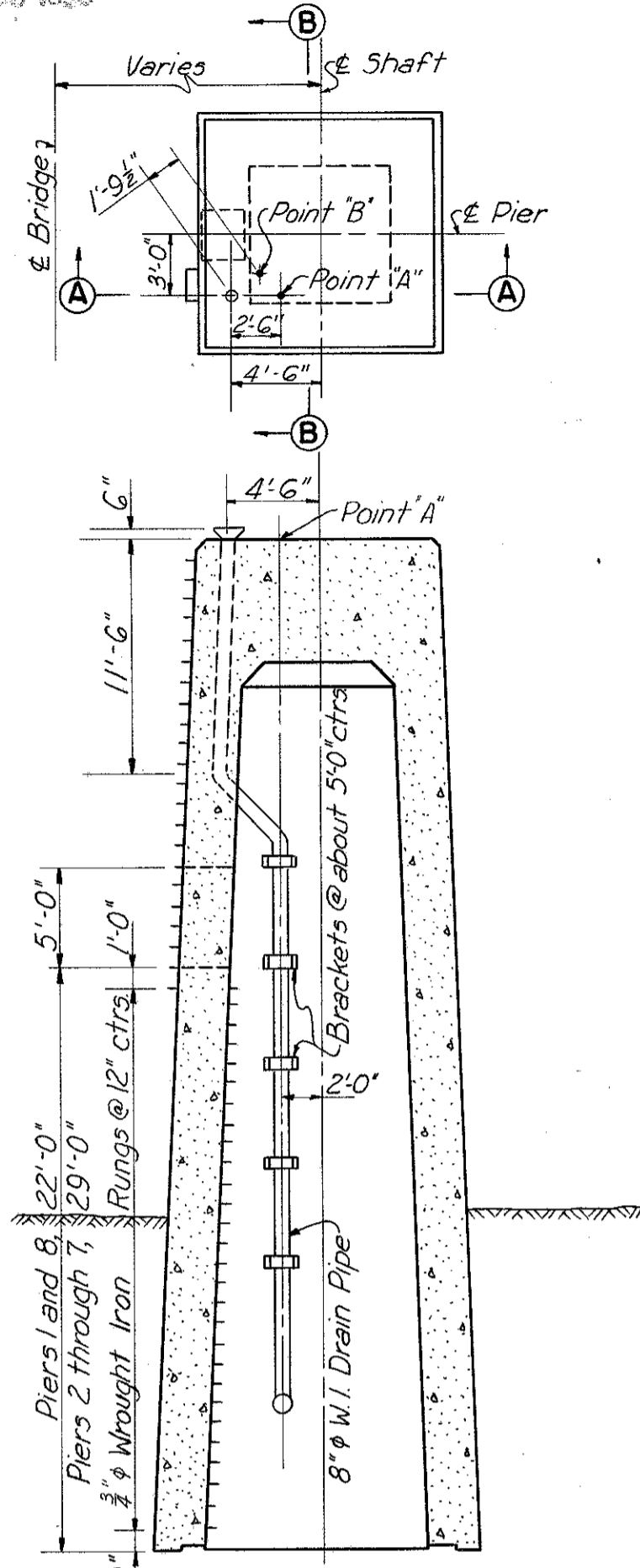
CLEVELAND	CUYAHOGA COUNTY	OHIO
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SCALE: 1/4" = 1'-0"
 MADE PER DATE 7-2-54
 TRCD DATE
 CKD G.I.C. DATE 7-2-54

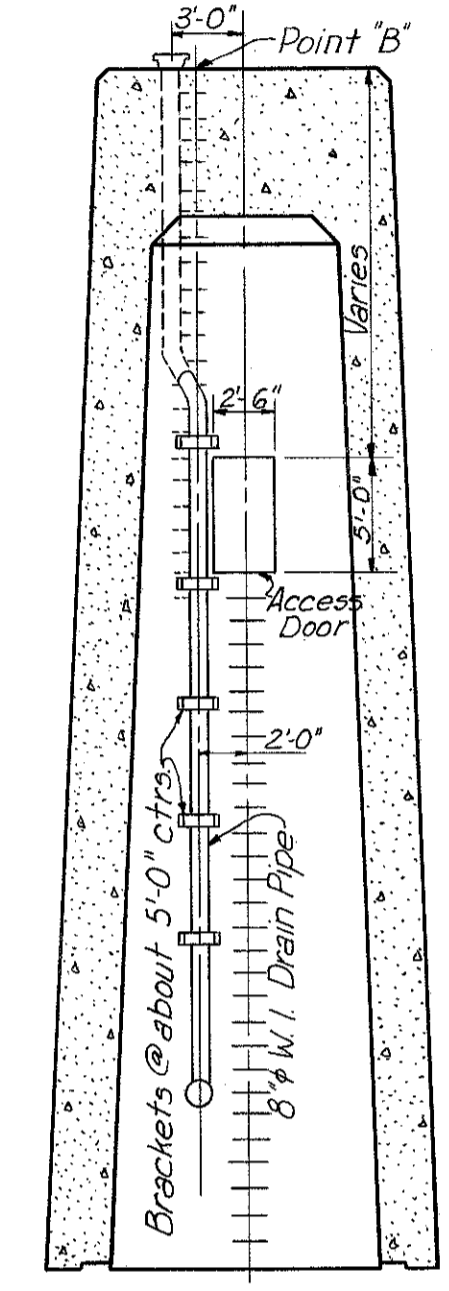
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 KANSAS CITY CLEVELAND NEW YORK
 914-1A SHEET 127

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUI-42R-17.50

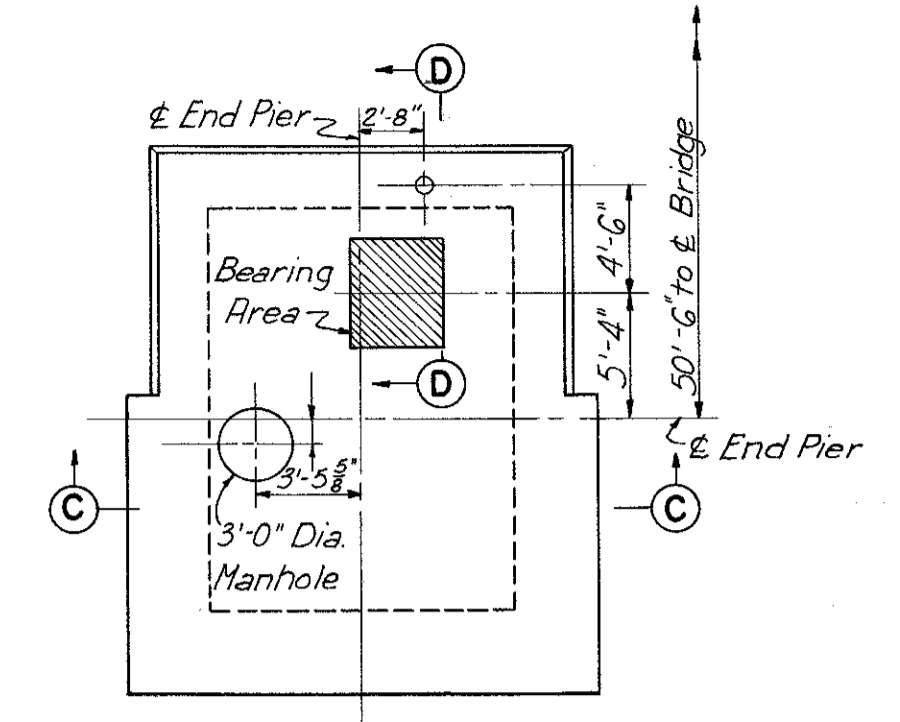
REVISIONS
FEB 25 1954



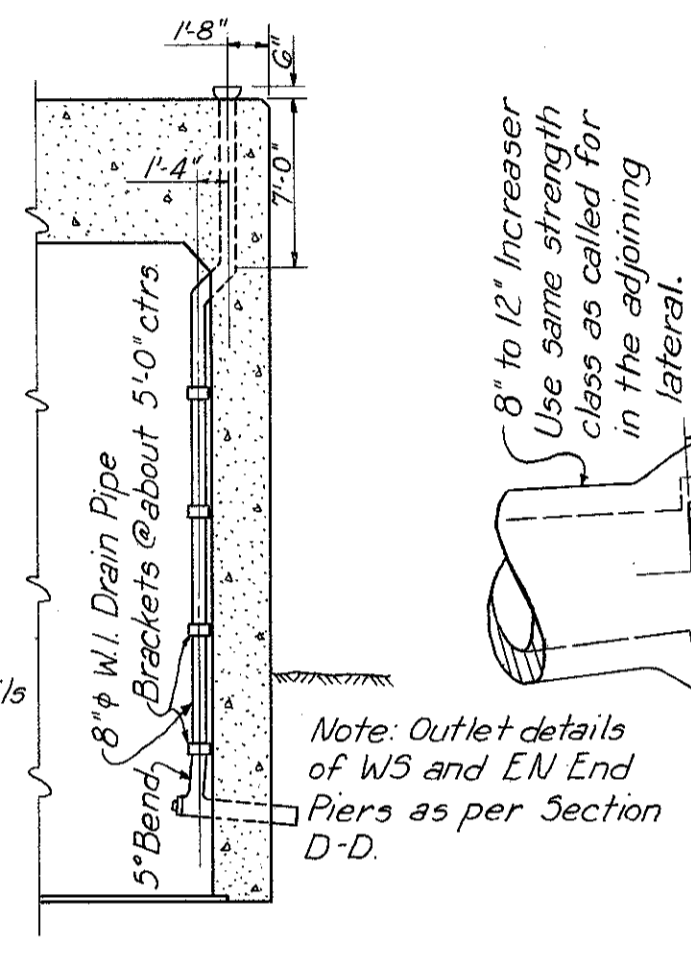
SECTION A-A
CASE 1-PIERS IN, 4N,
6S, 7S, 8S, 8N



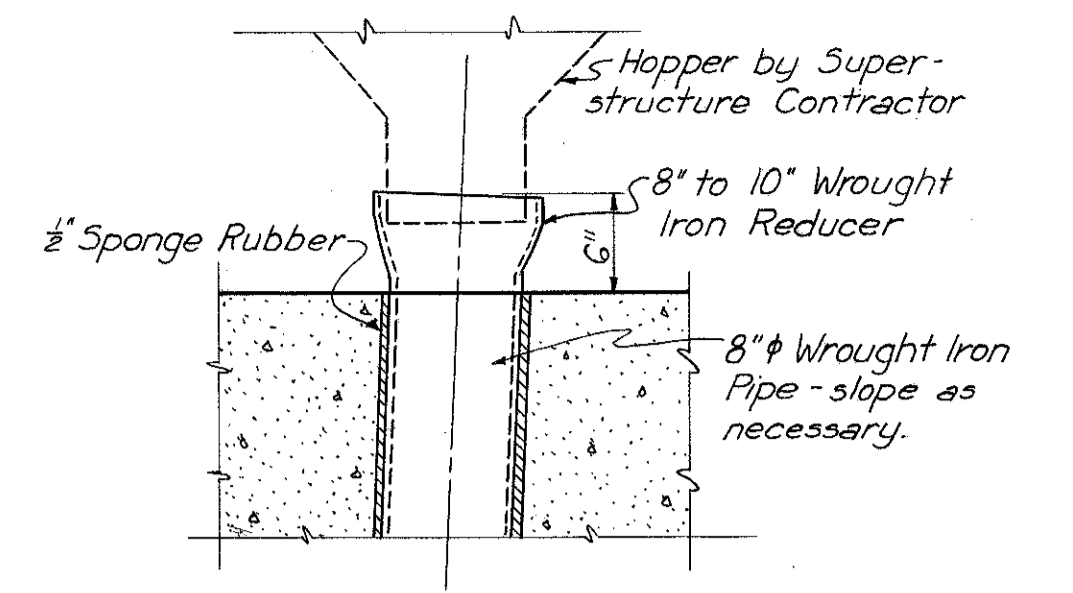
SECTION B-B
CASE 2-PIERS IS, 2S,
2N, 3S, 3N, 4S, 5S,
5N, 6N, 7N



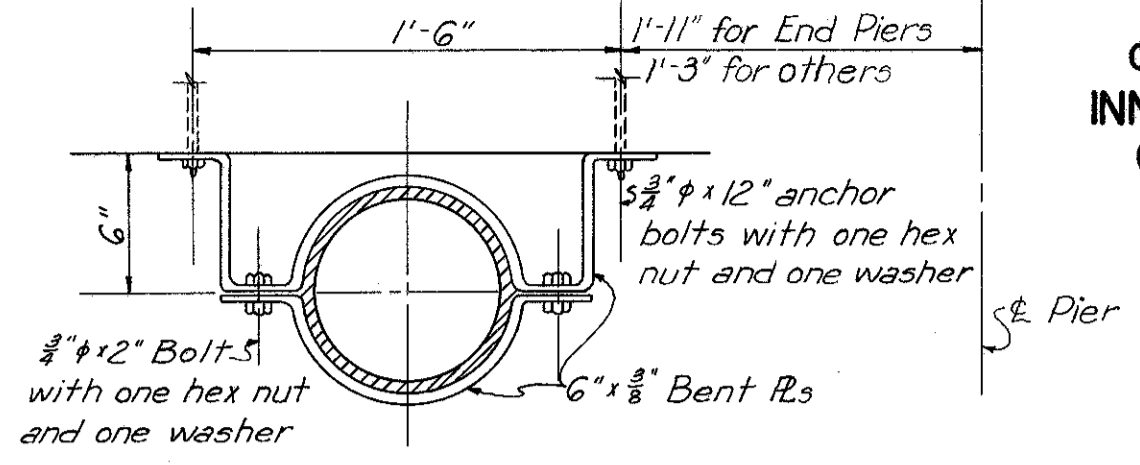
SECTION C-C
LADDER AND DRAIN PIPE DETAILS-END PIERS
No Scale



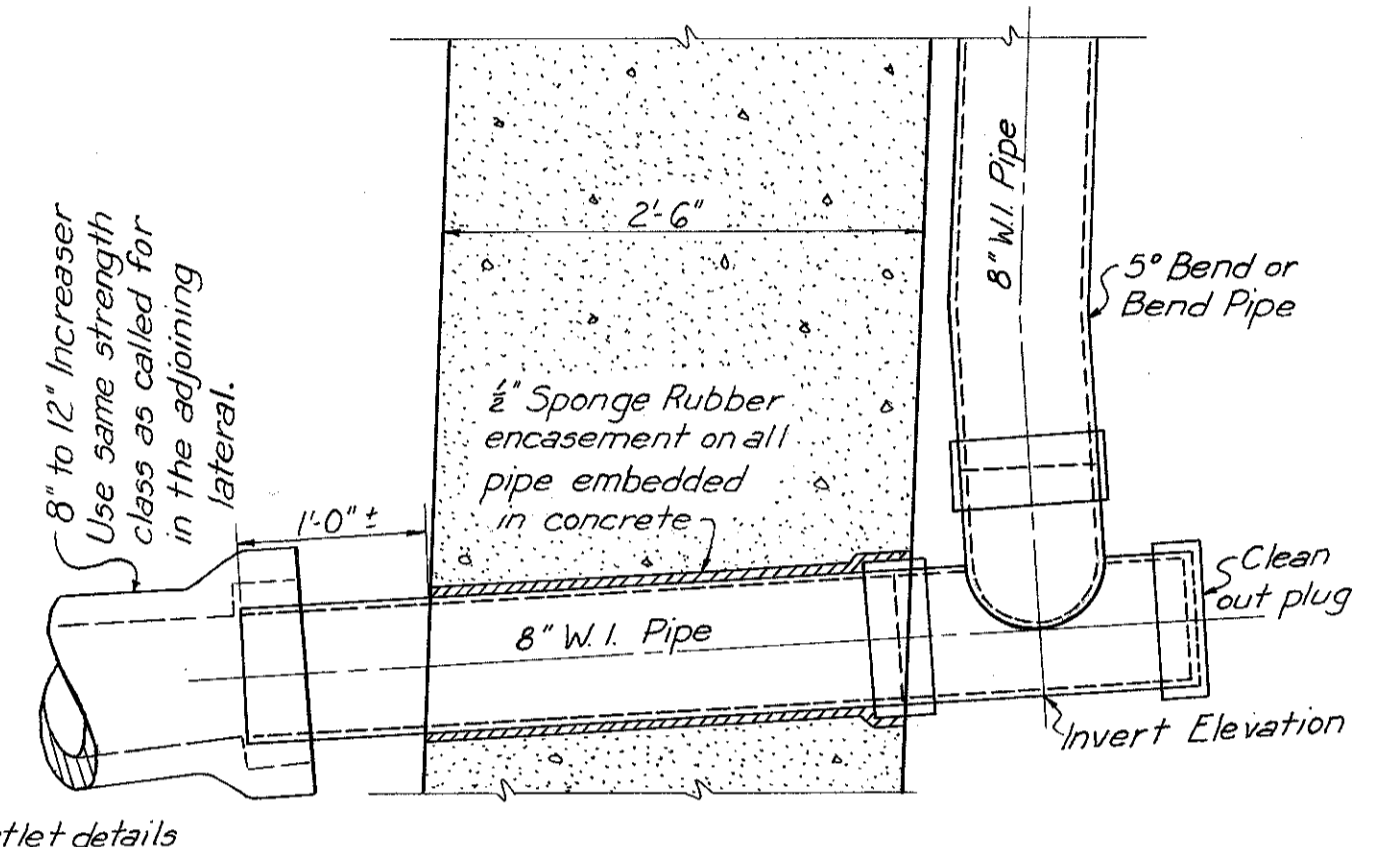
SECTION D-D



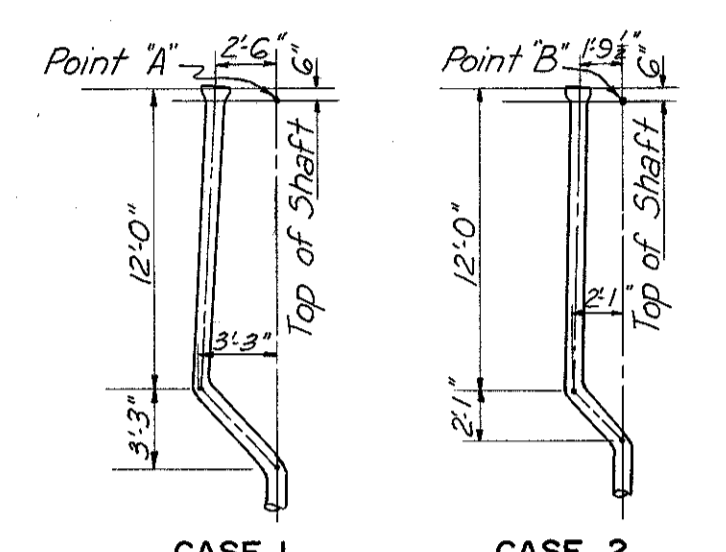
PIPE INLET DETAIL
Scale: 1/2"=1'-0"



PIPE SUPPORT DETAIL
Scale: 1/2"=1'-0"

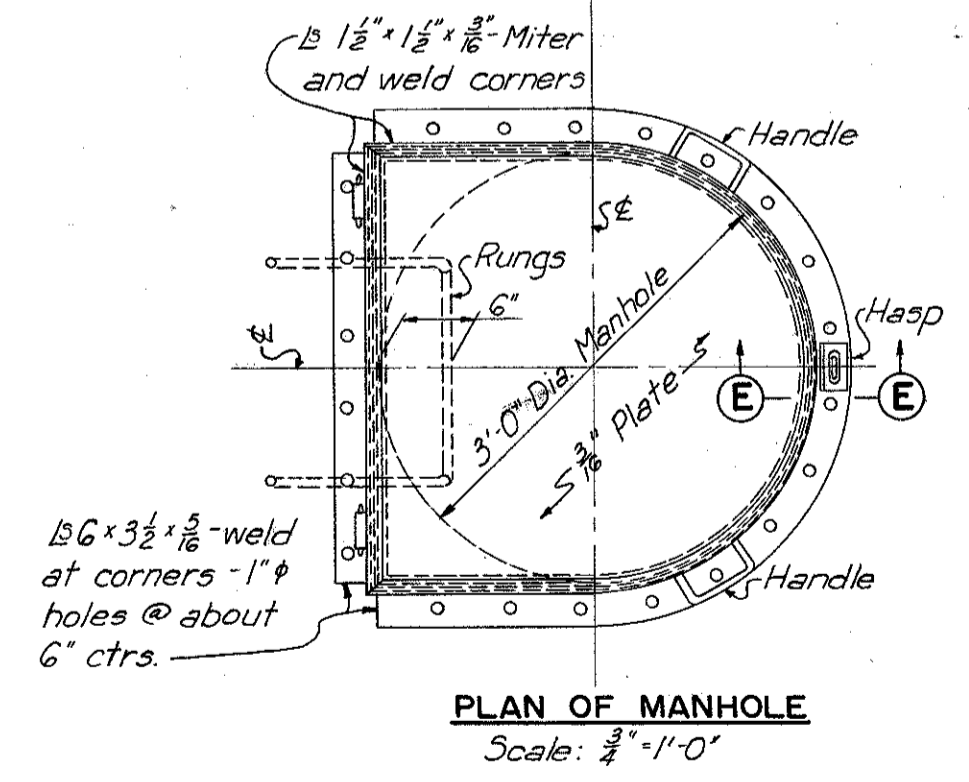


OUTLET DETAIL
Scale: 1/2"=1'-0"

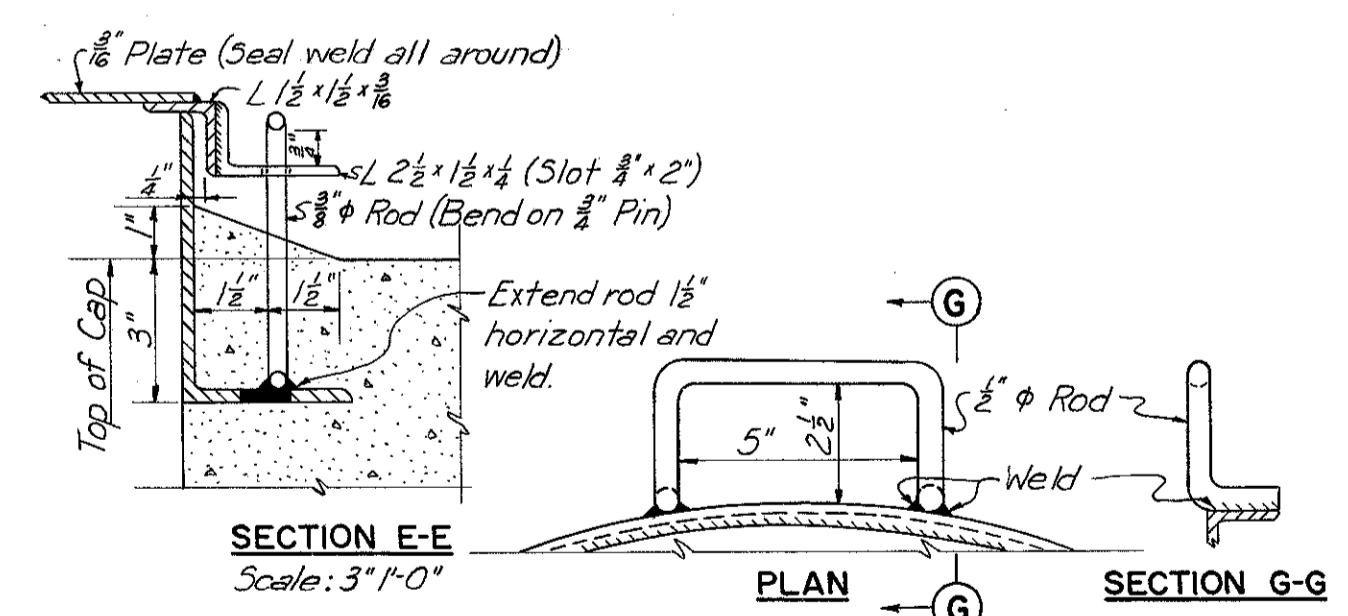


PIPE BENDING DIAGRAMS
Scale: 1/2"=1'-0"

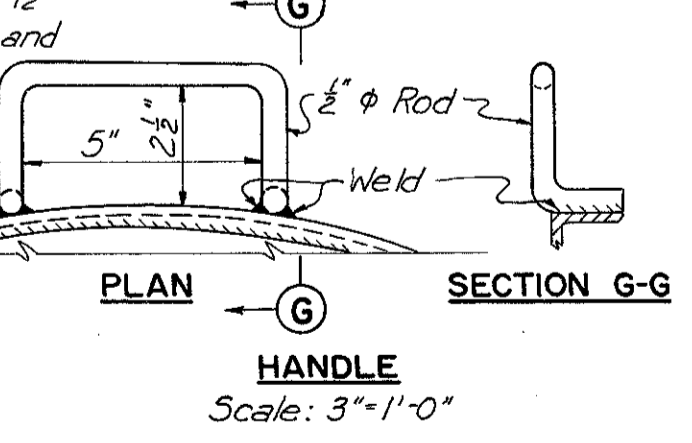
LADDER AND DRAIN PIPE DETAILS
Scale: 3/8"=1'-0"



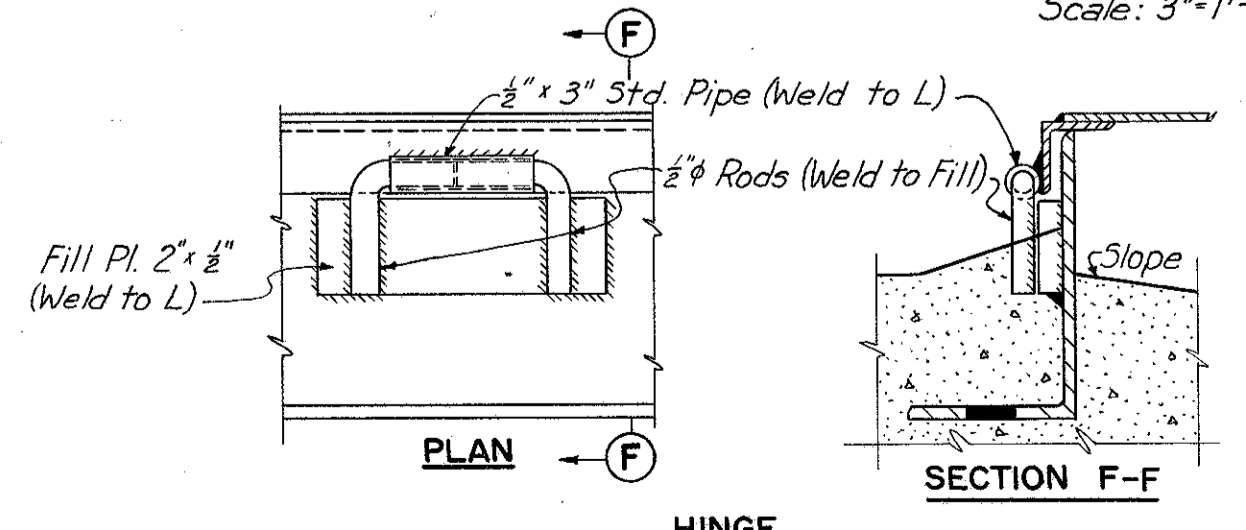
PLAN OF MANHOLE
Scale: 3/4"=1'-0"



SECTION E-E
Scale: 3"=1'-0"

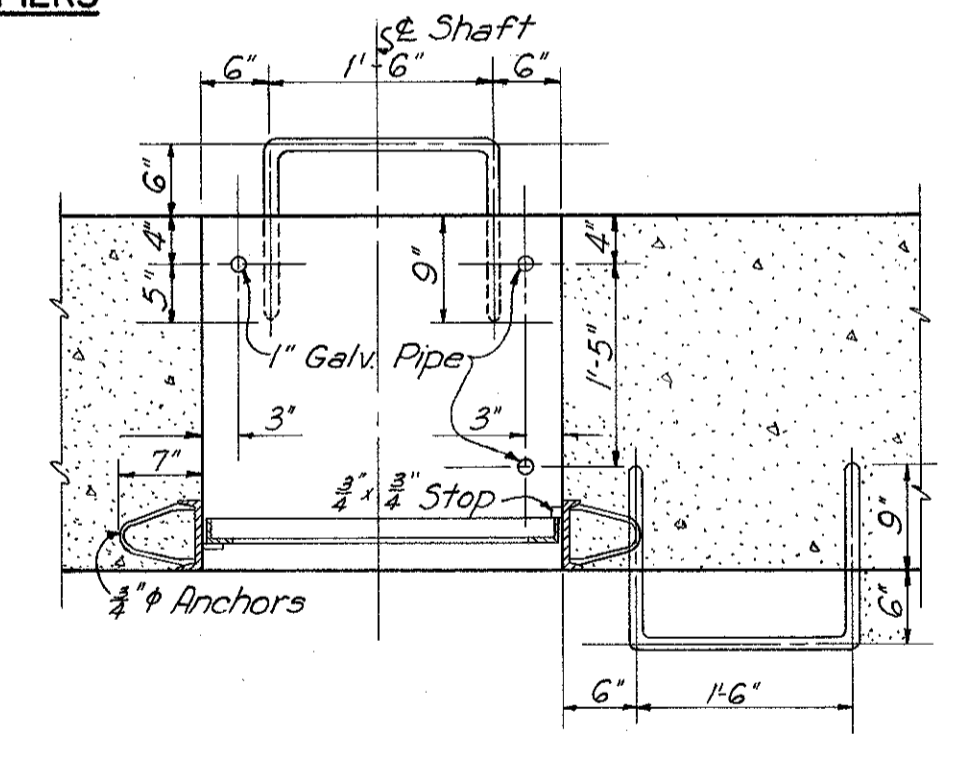


HANDLE
Scale: 3"=1'-0"

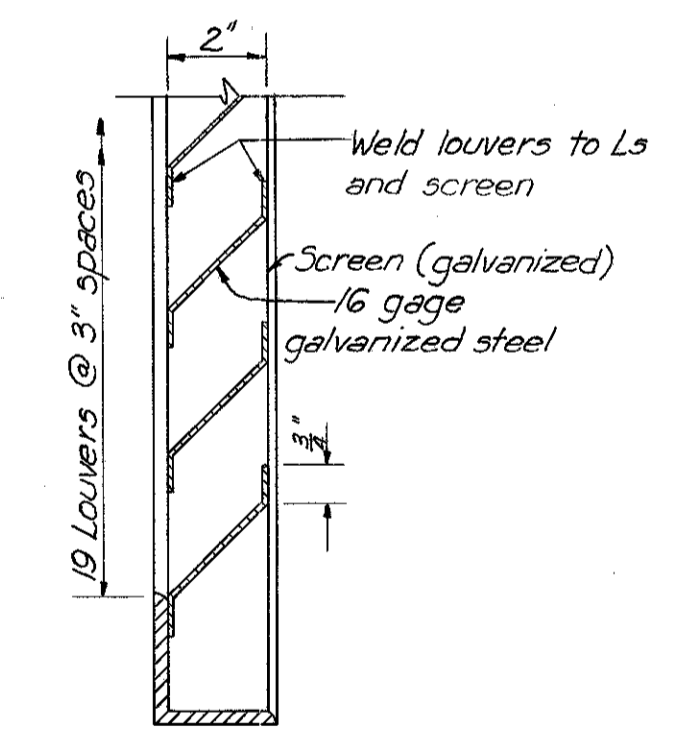


HINGE
Scale: 3"=1'-0"

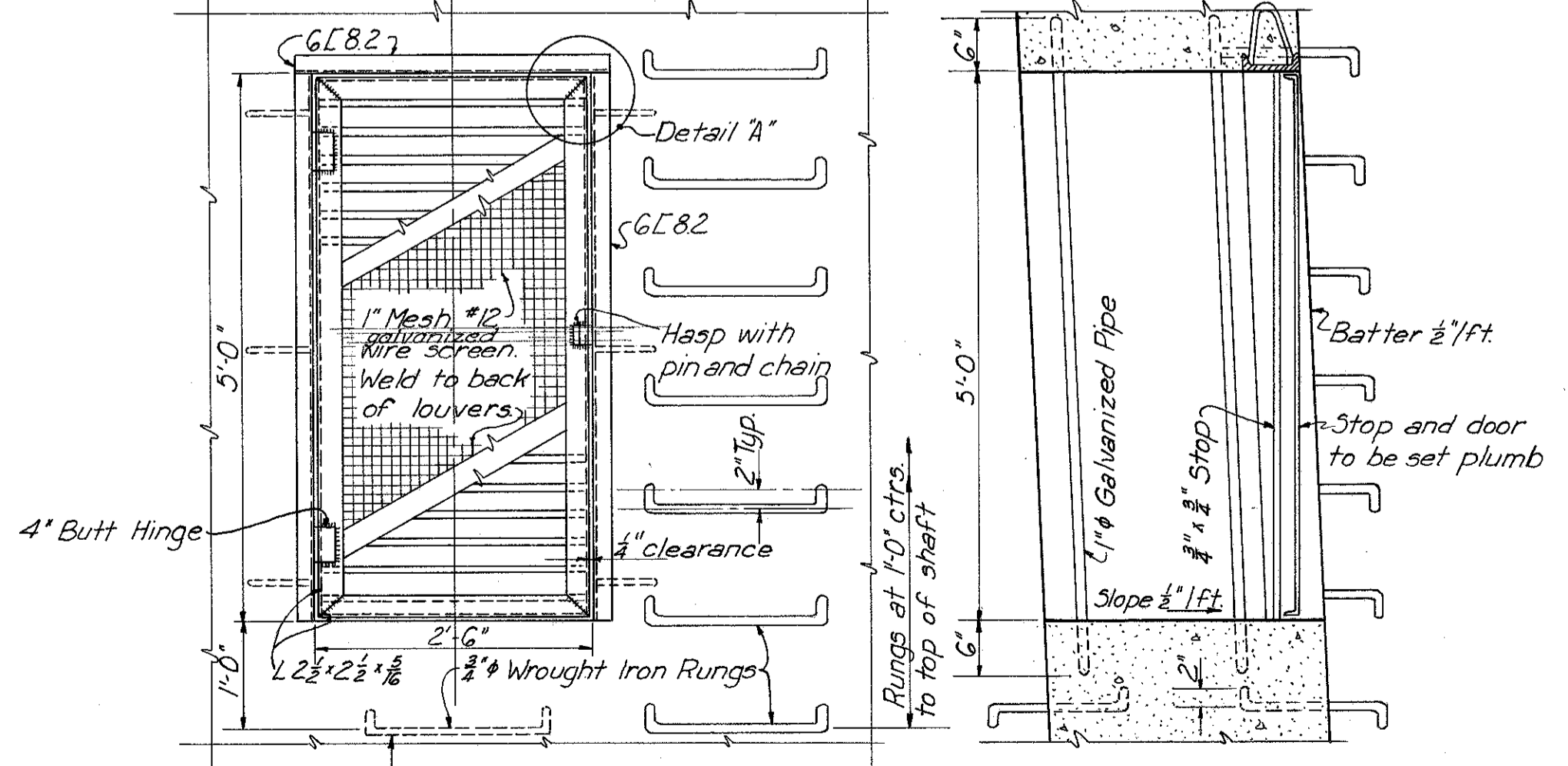
MANHOLE COVER DETAILS
Scale: as shown



DETAIL "A"
Scale: 1/2"=1'-0"



VERTICAL SECTION
THROUGH DOOR
SHOWING LOUVERS
Scale: 3"=1'-0"



ACCESS DOOR DETAIL
Scale: 3/4"=1'-0"

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

MISCELLANEOUS PIER DETAILS

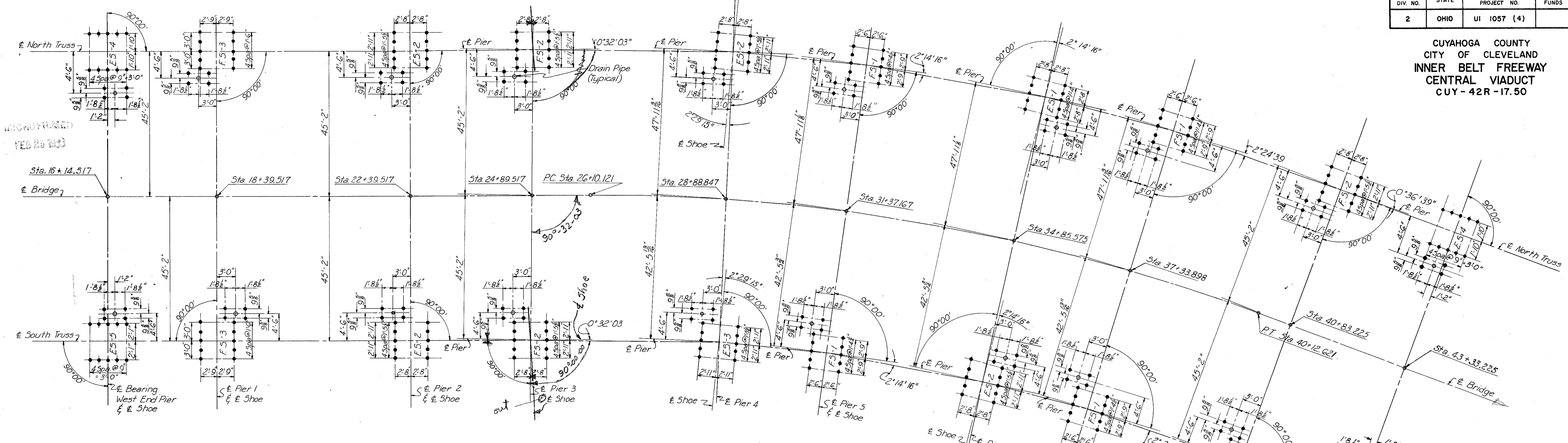
CLEVELAND CUYAHOGA COUNTY OHIO

SCALE as shown
MADE B.C. DATE 3-9-54
TRCD. N.A.M. DATE 7-6-54
CKD. C.I.C. DATE 7-7-54

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

914-1A SHEET 128

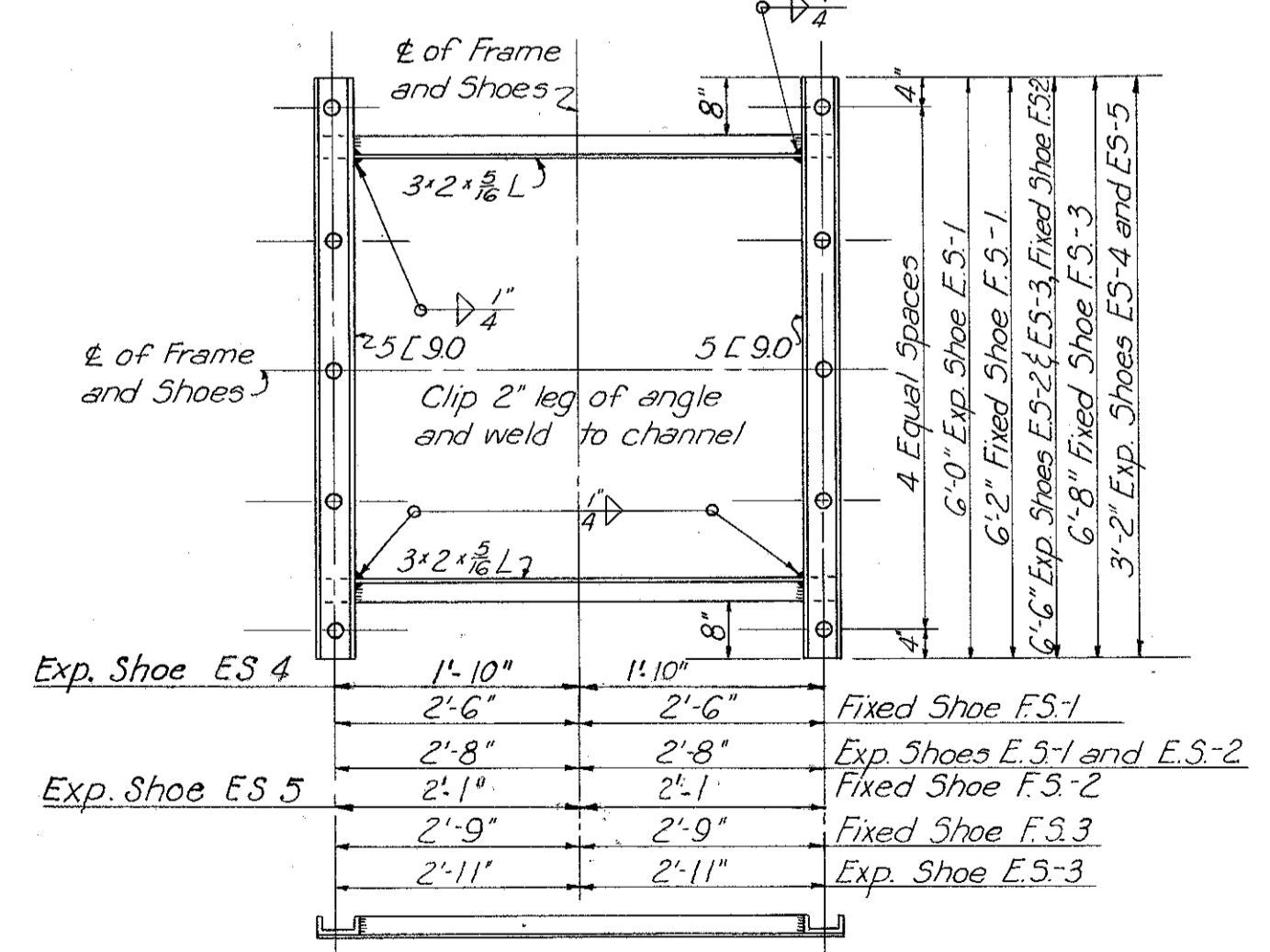
CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY-42R-17.50



ANCHOR BOLT PLAN
No Scale

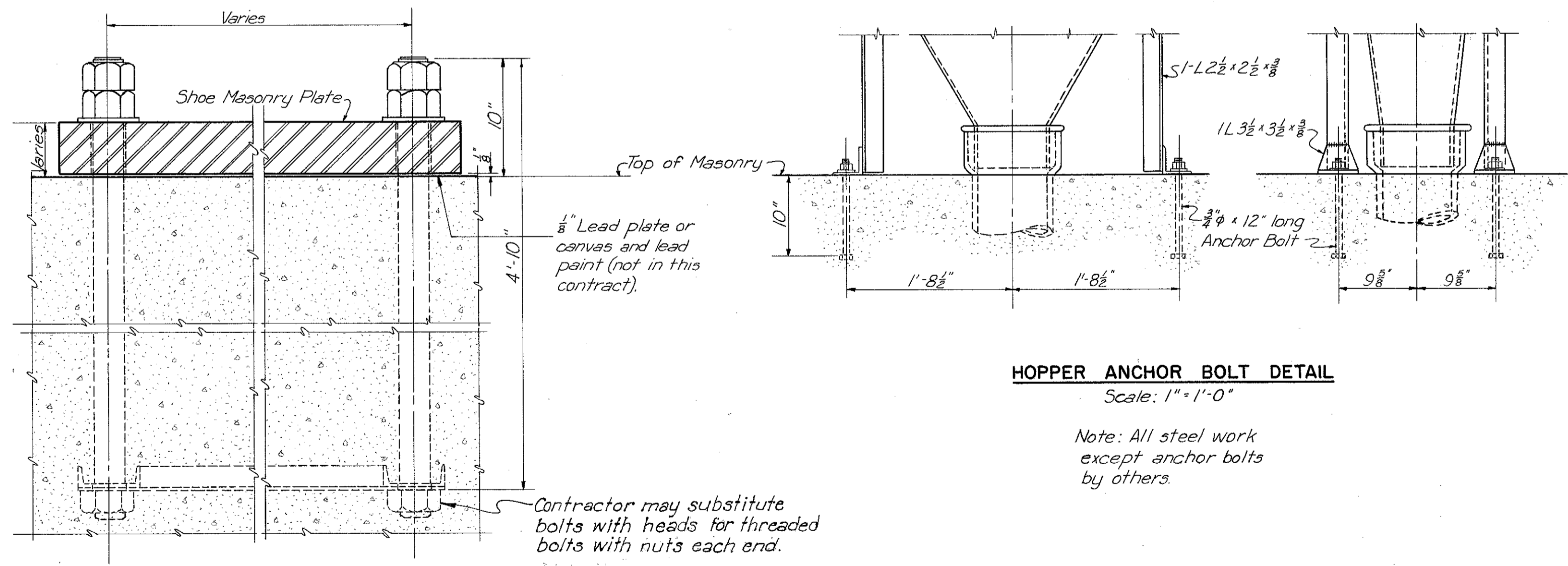
TABULATION OF BOLTS		
Bolt Size	Shoe Mark	Pier Number
1 1/2" φ	ES-4	WN, EN
1 3/8" φ	ES-5	WS, ES
2 1/2" φ	FS-1	5N, 5S, 7N, 7S
2 1/4" φ	FS-2	3N, 3S, 8N, 8S
2 1/2" φ	ES-1	GN
2 1/2" φ	ES-2	2N, 2S, 4N, 4S
2 1/2" φ	ES-3	4S
2 1/2" φ	FS-3	1N, 1S

All shoe anchor bolts to be threaded 8" and provided with lock washer and three hex nuts.



ANCHOR BOLT FRAME

Scale: 1/2" = 1'-0"
Holes in anchor bolt frame to be 1/8" larger than anchor bolt



HOPPER ANCHOR BOLT DETAIL

Scale: 1" = 1'-0"
Note: All steel work except anchor bolts by others.

ANCHOR BOLT DETAIL

Scale: 1 1/2" = 1'-0"

REVISED, DEC. 6, 1954

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

ANCHOR BOLT PLAN AND DETAILS

CLEVELAND CUYAHOGA COUNTY OHIO

SCALE: As Shown
MADE BY: DATE: 3-9-54
TRCD: N.R.M. DATE: 6-4-54
CKD: D.E.R. DATE: 6-28-54

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

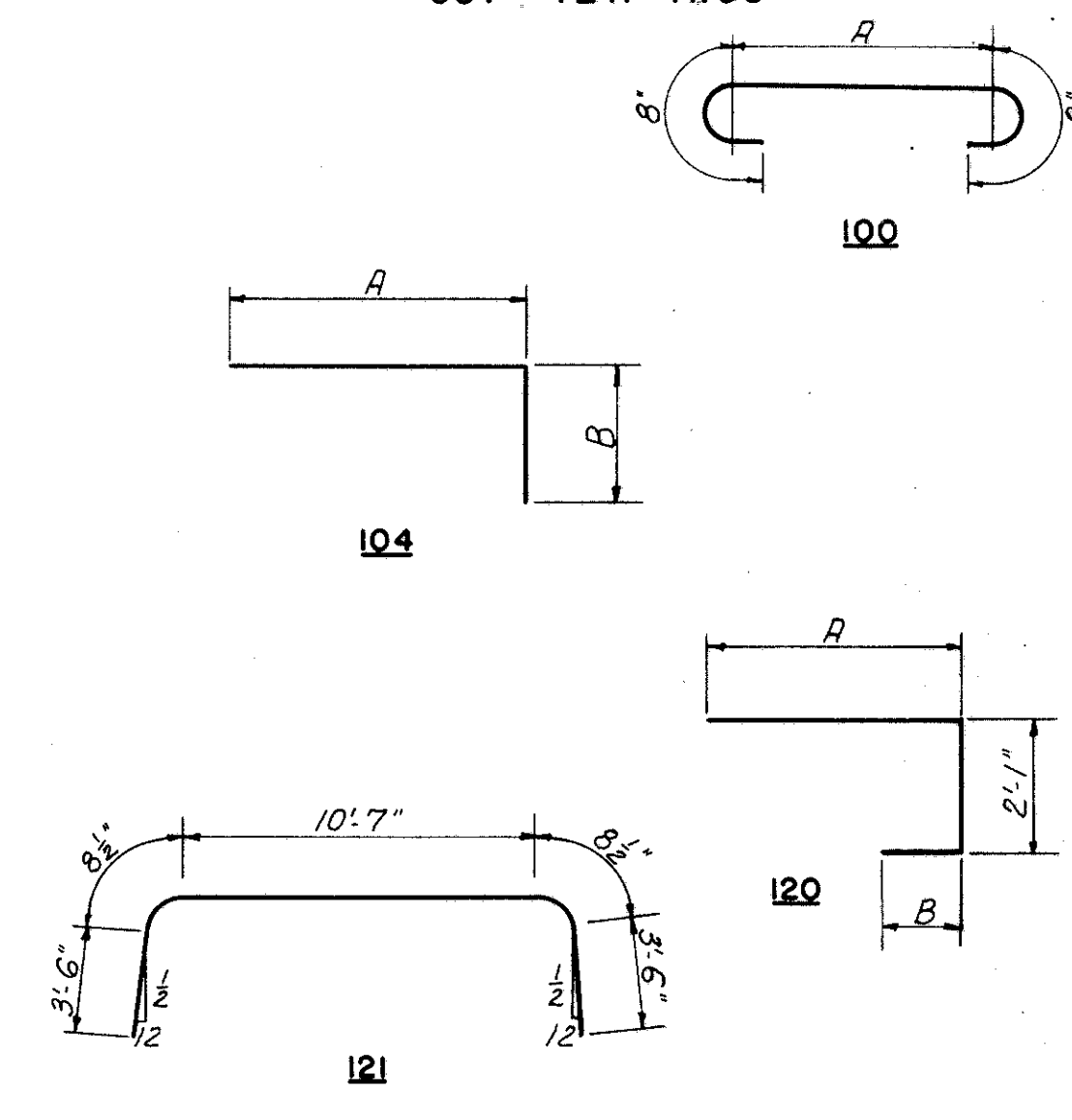
CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY-42 R-17.50

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSION		WEIGHT LBS.
					A	B	
PIER FOOTING 1-N							
601	6	41	35' - 6"	Str.			2,186
602	6	37	39' - 6"	Str.			2,195
901	9	48	5' - 9"	101	4' - 1"	1'-8"	938
1101	11	82	35' - 6"	Str.			15,466
1102	11	124	39' - 6"	Str.			26,023
1103	11	56	9' - 0"	Str.			2,678
PIER FOOTING 1-S							
601	6	41	35' - 6"	Str.			2,186
602	6	37	39' - 6"	Str.			2,195
901	9	48	5' - 9"	101	4' - 1"	1'-8"	938
1101	11	82	35' - 6"	Str.			15,466
1102	11	124	39' - 6"	Str.			26,023
1103	11	56	9' - 0"	Str.			2,678
PIER FOOTING 2-N							
601	6	74	35' - 6"	Str.			3,946
901	9	48	5' - 9"	101	4' - 1"	1'-8"	938
1101	11	182	35' - 6"	Str.			34,327
1102	11	56	8' - 0"	Str.			2,380
PIER FOOTING 2-S							
601	6	33	39' - 6"	Str.			1,958
602	6	179	31' - 6"	Str.			8,469
901	9	48	5' - 9"	101	4' - 1"	1'-8"	938
1101	11	110	39' - 6"	Str.			23,085
1102	11	56	9' - 0"	Str.			2,678
PIER FOOTING 3-N							
601	6	37	39' - 6"	Str.			2,195
602	6	41	35' - 6"	Str.			2,186
901	9	48	5' - 9"	101	4' - 1"	1'-8"	938
1101	11	108	39' - 6"	Str.			22,665
1102	11	70	35' - 6"	Str.			13,203
1103	11	56	9' - 0"	Str.			2,678
PIER FOOTING 3-S							
601	6	37	39' - 6"	Str.			2,195
602	6	41	35' - 6"	Str.			2,186
901	9	48	5' - 9"	101	4' - 1"	1'-8"	938
1101	11	108	39' - 6"	Str.			22,665
1102	11	70	35' - 6"	Str.			13,203
1103	11	56	9' - 0"	Str.			2,678
PIER FOOTING 4-N							
601	6	74	35' - 6"	Str.			3,946
901	9	48	5' - 9"	101	4' - 1"	1'-8"	938
1101	11	182	35' - 6"	Str.			34,327
1102	11	56	8' - 0"	Str.			2,380
PIER FOOTING 4-S							
601	6	41	35' - 6"	Str.			2,186
602	6	37	39' - 6"	Str.			2,195
901	9	48	5' - 9"	101	4' - 1"	1'-8"	938
1101	11	70	35' - 6"	Str.			13,203
1102	11	116	39' - 6"	Str.			24,344
1103	11	56	9' - 0"	Str.			2,678

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSION		WEIGHT LBS.
					A	B	
PIER FOOTING 5-N							
601	6	74	35' - 6"	Str.			3,946
901	9	48	5' - 9"	101	4' - 1"	1'-8"	938
1101	11	182	35' - 6"	Str.			34,327
1102	11	56	8' - 0"	Str.			2,380
PIER FOOTING 5-S							
601	6	41	35' - 6"	Str.			2,186
602	6	37	39' - 6"	Str.			2,195
901	9	48	5' - 9"	101	4' - 1"	1'-8"	938
1101	11	70	35' - 6"	Str.			13,203
1102	11	116	39' - 6"	Str.			24,344
1103	11	56	9' - 0"	Str.			2,678
PIER FOOTING 6-N							
601	6	74	35' - 6"	Str.			3,946
901	9	48	5' - 9"	101	4' - 1"	1'-8"	938
1101	11	182	35' - 6"	Str.			34,327
1102	11	56	8' - 0"	Str.			2,380
PIER FOOTING 6-S							
601	6	74	35' - 6"	Str.			3,946
901	9	48	5' - 9"	101	4' - 1"	1'-8"	938
1101	11	182	35' - 6"	Str.			34,327
1102	11	56	8' - 0"	Str.			2,380
PIER FOOTING 7-N							
601	6	74	35' - 6"	Str.			3,946
901	9	48	5' - 9"	101	4' - 1"	1'-8"	938
1101	11	182	35' - 6"	Str.			34,327
1102	11	56	8' - 0"	Str.			2,380
PIER FOOTING 7-S							
601	6	41	35' - 6"	Str.			2,186
602	6	37	39' - 6"	Str.			2,195
901	9	48	5' - 9"	101	4' - 1"	1'-8"	938
1101	11	70	35' - 6"	Str.			13,203
1102	11	116	39' - 6"	Str.			24,344
1103	11	56	9' - 0"	Str.			2,678
PIER FOOTING 8-N							
601	6	74	35' - 6"	Str.			3,946
901	9	48	5' - 9"	101	4' - 1"	1'-8"	938
1101	11	196	35' - 6"	Str.			36,968
1102	11	56	9' - 0"	Str.			2,678
PIER FOOTING 8-S							
601	6	74	35' - 6"	Str.			3,946
901	9	48	5' - 9"	101	4' - 1"	1'-8"	938
1101	11	196	35' - 6"	Str.			36,968
1102	11	56	9' - 0"	Str.			2,678

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS		WEIGHT LBS.
					A	B	
PIER SHAFT 8N							
401	4	505	3' - 3"	100	1' - 11"		1,097
402	4	216	3' - 4"	100	2' - 0"		481
501	5	28	16' - 7"	104	14' - 2"	2'-5"	484
502	5	28	15' - 11"	104	13' - 6"	2'-5"	464
503	5	24	15' - 1"	104	12' - 8"	2'-5"	378
504	5	24	14' - 4"	104	11' - 11"	2'-5"	359
513	5	8	7' - 4"	104	4' - 11"	2'-5"	61
506	5	28	13' - 6"	104			394
507	5	28	12' - 9"	Str.			372
508	5	24	12' - 0"	Str.			300
509	5	24	11' - 3"	Str.			282
514	5	8	8' - 5"	120	4' - 5"	1'-11"	70
601	6	40	13' - 8"	104	11' - 2"	2'-6"	821
602	6	14	7' - 0"	Str.			147
603	6	40	6' - 0"	Str.			360
604	6	4	11' - 0"	Str.			66
901	9	45	24' - 9"	Str.			3,787
902	9	39	17' - 0"	Str.			2,255
903	9	1	11' - 9"	Str.			40
904	9	3	21' - 6"	Str.			219
905	9	8	11' - 0"	Str.			299
906	9	16	5' - 9"	Str.			313
907	9	8	8' - 6"	Str.			231
1101	11	34	12' - 0"	Str.			2,168
1102	11	20	19' - 0"	121			2,019
1103	11	53	32' - 6"	Str.			7,181
1104	11	3	21' - 9"	Str.			387
1105	11	47	19' - 6"	Str.			4,870
1106	11	1	14' - 3"	Str.			75
PIER SHAFT 8S							
401	4	505	3' - 3"	100	1' - 11"		1,097
402	4	216	3' - 4"	100	2' - 0"		481
501	5	28	16' - 7"	104	14' - 2"	2'-5"	484
502	5	28	15' - 11"	104	13' - 6"	2'-5"	464
503	5	24	15' - 1"	104	12' - 8"	2'-5"	378
504	5	24	14' - 4"	104	11' - 11"	2'-5"	359
513	5	8	7' - 4"	104	4' - 11"	2'-5"	61
506	5	28	13' - 6"	Str.			394
507	5	28	12' - 9"	Str.			372
508	5	24	12' - 0"	Str.			300
509	5	24	11' - 3"	Str.			282
514	5	8	8' - 5"	120	4' - 5"	1'-11"	70
601	6	40	13' - 8"	104	11' - 2"	2'-6"	821
602	6	14	7' - 0"	Str.			147
603	6	40	6' - 0"	Str.			360
604	6	4	11' - 0"	Str.			66
901	9	45	24' - 9"	Str.			3,787
902	9	39	17' - 0"	Str.			2,255
903	9	1	11' - 9"	Str.			40
904	9	3	21' - 6"	Str.			219
905	9	8	11' - 0"	Str.			299
906	9	16	5' - 9"	Str.			313
907	9	8	8' - 6"	Str.			231
1101	11	34	12' - 0"	Str.			2,168
1102	11	20	19' - 0"	121			2,019
1103	11	53	32' - 6"	Str.			7,181
1104	11	3	21' - 9"	Str.			387
1105	11	47	19' - 6"	Str.			4,870
1106	11	1	14' - 3"	Str.			75
PIER SHAFT 7N							
401	4	718	3' - 3"	100	1' - 11"		1,559
402	4	312	3' - 4"	100	2' - 0"		695
501	5	28	17' - 11"	104	15' - 6"	2'-5"	523
502	5	28	17' - 3"	104	14' - 10"	2'-5"	504
503	5	28	16' - 6"	104	14' - 1"	2'-5"	482
504	5	25	15' - 8"	104	13' - 3"	2'-5"	409
505	5	28	14' - 10"	104	12' - 5"	2'-5"	433
506	5	16	14' - 1"	104	11' - 8"	2'-5"	235
507	5	28	15' - 0"	Str.			438
508	5	28	14' - 3"	Str.			416
509	5	28	13' - 6"	Str.			394
510	5	25	12' - 9"	Str.			332
511	5	28	12' - 0"	Str.			350
512	5	16	11' - 3"	Str.			

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY-42 R-17.50



BENDING DIAGRAM

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS		WEIGHT LBS.
					A	B	
PIER SHAFT 1N							
401	4	489	3' - 3"	100	1' - 11"		1,062
402	4	208	3' - 4"	100	2' - 0"		463
501	5	28	16' - 7"	104	14' - 2"	2'-5"	484
502	5	28	15' - 11"	104	13' - 6"	2'-5"	464
503	5	28	16' - 1"	104	12' - 8"	2'-5"	378
504	5	20	14' - 4"	104	11' - 11"	2'-5"	299
505	5	8	7' - 4"	104	4' - 11"	2'-5"	61
506	5	28	13' - 6"	Str.			394
507	5	28	12' - 9"	Str.			372
508	5	24	12' - 0"	Str.			300
509	5	20	11' - 3"	Str.			235
514	5	8	8' - 5"	120	4' - 5"	1'-11"	71
601	6	40	13' - 8"	104	11' - 2"	2'-6"	821
602	6	14	7' - 0"	Str.			147
603	6	40	6' - 0"	Str.			360
604	6	4	11' - 0"	Str.			66
901	9	45	24' - 9"	Str.			3,787
902	9	39	15' - 6"	Str.			2,055
903	9	1	10' - 3"	Str.			35
904	9	3	21' - 6"	Str.			219
905	9	8	11' - 0"	Str.			299
906	9	16	5' - 9"	Str.			313
907	9	8	8' - 6"	Str.			231
1101	11	34	12' - 0"	Str.			2,168
1102	11	20	19' - 0"	121			2,019
1103	11	53	25' - 6"	Str.			7,181
1104	11	3	21' - 9"	Str.			347
1105	11	47	17' - 9"	Str.			4,442
1106	11	1	12' - 9"	Str.			68
PIER SHAFT 1S							
401	4	489	3' - 3"	100	1' - 11"		1,062
402	4	208	3' - 4"	100	2' - 0"		463
501	5	28	16' - 7"	104	14' - 2"	2'-5"	484
502	5	28	15' - 11"	104	13' - 6"	2'-5"	464
503	5	28	16' - 1"	104	12' - 8"	2'-5"	378
504	5	20	14' - 4"	104	11' - 11"	2'-5"	299
505	5	8	7' - 4"	104	4' - 11"	2'-5"	61
506	5	28	13' - 6"	Str.			394
507	5	28	12' - 9"	Str.			372
508	5	24	12' - 0"	Str.			300
509	5	20	11' - 3"	Str.			235
514	5	8	8' - 5"	120	4' - 5"	1'-11"	71
601	6	40	13' - 8"	104	11' - 2"	2'-6"	821
602	6	14	7' - 0"	Str.			147
603	6	40	6' - 0"	Str.			360
604	6	4	11' - 0"	Str.			66
901	9	45	24' - 9"	Str.			3,787
902	9	39	15' - 6"	Str.			2,055
903	9	1	10' - 3"	Str.			35
904	9	3	21' - 6"	Str.			219
905	9	8	11' - 0"	Str.			299
906	9	16	5' - 9"	Str.			313
907	9	8	8' - 6"	Str.			231
1101	11	34	12' - 0"	Str.			2,168
1102	11	20	19' - 0"	121			2,019
1103	11	53	25' - 6"	Str.			7,181
1104	11	3	21' - 9"	Str.			347
1105	11	47	17' - 9"	Str.			4,442
1106	11	1	12' - 9"	Str.			68

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS		WEIGHT LBS.
					A	B	
PIER SHAFT 2N							
401	4	702	3' - 3"	100	1' - 11"		1,524
402	4	304	3' - 4"	100	2' - 0"		677
501	5	28	17' - 11"	104	15' - 6"	2'-5"	523
502	5	28	17' - 2"	104	14' - 9"	2'-5"	501
503	5	28	16' - 5"	104	14' - 0"	2'-5"	480
504	5	25	15' - 8"	104	13' - 3"	2'-5"	409
505	5	28	14' - 11"	104	12' - 6"	2'-5"	436
506	5	12	14' - 0"	104	11' - 7"	2'-5"	175
507	5	28	15' - 0"	Str.			438
508	5	28	14' - 3"	Str.			416
509	5	28	13' - 6"	Str.			394
510	5	25	12' - 9"	Str.			326
511	5	28	11' - 9"	Str.			343
512	5	12	11' - 0"	Str.			138
513	5	6	7' - 9"	104	5' - 4"	2'-5"	48
514	5	6	8' - 9"	120	4' - 9"	1'-11"	55
601	6	40	13' - 8"	104	11' - 2"	2'-6"	821
602	6	14	7' - 0"	Str.			147
603	6	40	6' - 0"	Str.			360
604	6	4	11' - 0"	Str.			66
901	9	45	31' - 9"	Str.			4,858
902	9	3	28' - 6"	Str.			291
903	9	39	25' - 0"	Str.			3,315
904	9	1	19' - 9"	Str.			67
905	9	8	11' - 0"	Str.			299
906	9	16	5' - 9"	Str.			313
907	9	8	8' - 6"	Str.			231
1101	11	34	12' - 0"	Str.			2,168
1102	11	20	19' - 0"	121			2,019
1103	11	53	32' - 6"	Str.			9,152
1104	11	3	28' - 9"	Str.			458
1105	11	47	27' - 3"	Str.			6,805
1106	11	1	22' - 3"	Str.			118
PIER SHAFT 2S							
401	4	702	3' - 3"	100	1' - 11"		1,524
402	4	304	3' - 4"	100	2' - 0"		677
501	5	28	17' - 11"	104	15' - 6"	2'-5"	523
502	5	28	17' - 2"	104	14' - 9"	2'-5"	501
503	5	28	16' - 5"	104	14' - 0"	2'-5"	480
504	5	25	15' - 8"	104	13' - 3"	2'-5"	409
505	5	28	14' - 11"	104	12' - 6"	2'-5"	436
506	5	12	14' - 0"	104	11' - 7"	2'-5"	175
507	5	28	15' - 0"	Str.			438
508	5	28	14' - 3"	Str.			416
509	5	28	13' - 6"	Str.			394
510	5	25	12' - 9"	Str.			326
511	5	28	11' - 9"	Str.			343
512	5	12	11' - 0"	Str.			138
513	5	6	7' - 9"	104	5' - 4"	2'-5"	48
514	5	6	8' - 9"	120	4' - 9"	1'-11"	55
601	6	40	13' - 8"	104	11' - 2"	2'-6"	821
602	6	14	7' - 0"	Str.			147
603	6	40	6' - 0"	Str.			360
604	6	4	11' - 0"	Str.			66
901	9	45	31' - 9"	Str.			4,858
902	9	3	28' - 6"	Str.			291
903	9	39	25' - 0"	Str.			3,315
904	9	1	19' - 9"	Str.			67
905	9	8	11' - 0"	Str.			299
906	9	16	5' - 9"	Str.			313
907	9	8	8' - 6"	Str.			231
1101	11	34	12' - 0"	Str.			2,168
1102	11	20	19' - 0"	121			2,019
1103	11	53	32' - 6"	Str.			9,152
1104	11	3	28' - 9"	Str.			458
1105	11	47	27' - 3"	Str.			6,805
1106	11	1	22' - 3"	Str.			118

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS		WEIGHT LBS.
					A	B	
PIER SHAFT 3N							
401	4	718	3' - 3"	100	1' - 11"		1,559
402	4	312	3' - 4"	100	2' - 0"		695
501	5	28	18' - 1"	104	15' - 8"	2'-5"	528
502	5	28	17' - 4"	104	14' - 11"	2'-5"	506
503	5	28	16' - 7"	104	14' - 2"	2'-5"	484
504	5	25	15' - 9"	104	13' - 4"	2'-5"	411
505	5	28	15' - 0"	104	12' - 7"	2'-5"	438
506	5	16	14' - 2"	104	11' - 9"	2'-5"	236
507	5	28	15' - 0"	Str.			438
508	5	28	14' - 3"	Str.			416
509	5	28	13' - 6"	Str.			394
510	5	25	12' - 9"	Str.			332
511	5	28	12' - 0"	Str.			350
512	5	16	11' - 3"	Str.			188
513	5	6	7' - 10"	104	5' - 5"	2'-5"	49
514	5	6	8' - 11"	120	4' - 11"	1'-11"	56
601	6	40	13' - 8"	104	11' - 2"	2'-6"	821
602	6	14	7' - 0"	Str.			147
603	6	40	6' - 0"	Str.			360
604	6	4	11' - 0"	Str.			66
901	9	45	31' - 9"	Str.			4,858
902	9	3	28' - 6"	Str.			291
903	9	39	26' - 6"	Str.			3,514
904	9	1	21' - 3"	Str.			72
905	9	8	11' - 0"	Str.			299
906	9	16	5' - 9"	Str.			313
907	9	8	8' - 6"	Str.			231
1101	11	34	12' - 0"	Str.			2,168
1102	11	20	19' - 0"	121			2,019
1103	11	53	32' - 6"	Str.			9,152
1104	11	3	28' - 9"	Str.			

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CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY - 42 R - 17.50

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS		WEIGHT LBS.
					A	B	
WEST END PIER FOOTING WN							
601	6	29	23'-6"	Str.			1024
602	6	25	27'-6"	Str.			1033
801	8	68	5'-6"	Str.			999
802	8	50	5'-0"	101			668
WEST END PIER SHAFT							
401	4	280	4'-3"	100	2'-11"		795
402	4	240	3'-2"	100	1'-11"		508
403	4	80	4'-9"	100	3'-5"		254
404	4	80	3'-7"	100	2'-3"		192
405	4	4	5'-3"	Str.			14
501	5	40	19'-6"	Str.			818
502	5	40	12'-9"	103	1'-5"		532
503	5	40	15'-7"	105	1'-5" & 2'-1"	12'-1"	650
504	5	4	12'-8"	104	11'-7"	1'-1"	53
505	5	4	15'-0"	105	1'-1" & 2'-1"	11'-10"	63
506	5	2	15'-0"	Str.			31
507	5	2	17'-0"	Str.			35
508	5	8	16'-6"	Str.			138
509	5	8	15'-9"	Str.			131
510	5	4	15'-6"	Str.			65
511	5	8	18'-6"	Str.			154
512	5	8	17'-9"	Str.			148
513	5	4	17'-6"	Str.			73
514	5	16	15'-0"	Str.			250
515	5	16	14'-3"	Str.			238
516	5	8	14'-0"	Str.			1168
601	6	50	4'-6"	Str.			338
602	6	11	17'-6"	105	1'-3"	15'-0"	289
603	6	9	19'-6"	105	1'-3"	17'-0"	264
604	6	2	14'-6"	105	1'-3"	12'-0"	44
605	6	13	25'-0"	105	1'-3"	22'-6"	488
606	6	2	9'-9"	104	8'-6"	1'-3"	29
607	6	2	11'-9"	104	10'-6"	1'-3"	35
608	6	1	10'-1"	104	8'-10"	1'-3"	15
609	6	1	12'-1"	104	10'-10"	1'-3"	18
610	6	4	4'-6"	104	3'-3"	1'-3"	27
611	6	2	12'-6"	104	11'-3"	1'-3"	38
612	6	2	11'-8"	104	10'-5"	1'-3"	35
613	6	8	7'-6"	Str.			90
614	6	6	9'-6"	Str.			86
615	6	6	12'-0"	120	1'-3"		108
616	6	24	6'-3"	Str.			225
801	8	68	17'-0"	Str.			3087
802	8	50	13'-3"	Str.			1769
803	8	9	21'-3"	Str.			511
804	8	2	8'-0"	Str.			43
805	8	2	10'-9"	Str.			57
806	8	1	7'-9"	Str.			21
807	8	1	10'-6"	Str.			28
808	8	73	5'-0"	Str.			975
1101	11	23	15'-6"	Str.			1894
1102	11	2	10'-0"	Str.			106
1103	11	2	3'-6"	Str.			37
1104	11	1	9'-6"	Str.			50
1105	11	1	3'-0"	Str.			16

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS		WEIGHT LBS.
					A	B	
WEST END PIER FOOTING WS							
601	6	29	23'-6"	Str.			1024
602	6	25	27'-6"	Str.			1033
801	8	68	5'-6"	Str.			999
802	8	50	5'-0"	101			668
WEST END PIER SHAFT							
401	4	126	4'-3"	100	2'-11"		358
402	4	108	3'-3"	100	1'-11"		234
403	4	36	4'-9"	100	3'-5"		114
404	4	36	3'-7"	100	2'-3"		86
405	4	4	5'-3"	Str.			14
501	5	18	19'-6"	Str.			366
502	5	18	12'-9"	103	1'-5"		239
503	5	18	15'-7"	105	1'-5" & 2'-1"	12'-1"	293
504	5	4	12'-8"	104	11'-7"	1'-1"	53
505	5	4	15'-0"	105	1'-1" & 2'-1"	11'-10"	63
506	5	2	15'-0"	Str.			31
507	5	2	17'-0"	Str.			35
508	5	9	15'-6"	Str.			145
509	5	18	14'-3"	Str.			268
510	5	9	17'-6"	Str.			164
601	6	50	4'-6"	Str.			338
602	6	11	17'-6"	105	1'-3"	15'-0"	289
603	6	9	19'-6"	105	1'-3"	17'-0"	264
604	6	2	14'-6"	105	1'-3"	12'-0"	44
605	6	13	25'-0"	105	1'-3"	22'-6"	488
606	6	2	9'-9"	104	8'-6"	1'-3"	29
607	6	2	11'-9"	104	10'-6"	1'-3"	35
608	6	1	10'-1"	104	8'-10"	1'-3"	15
609	6	1	12'-1"	104	10'-10"	1'-3"	18
610	6	4	4'-6"	104	3'-3"	1'-3"	27
611	6	2	12'-6"	104	11'-3"	1'-3"	38
612	6	2	11'-8"	104	10'-5"	1'-3"	35
613	6	8	7'-6"	Str.			90
614	6	6	9'-6"	Str.			86
615	6	6	12'-0"	120	1'-3"		108
616	6	24	6'-3"	Str.			225
801	8	68	17'-0"	Str.			3087
802	8	50	13'-3"	Str.			1769
803	8	9	21'-3"	Str.			511
804	8	2	8'-0"	Str.			43
805	8	2	10'-9"	Str.			57
806	8	1	7'-9"	Str.			21
807	8	1	10'-6"	Str.			28
808	8	73	5'-0"	Str.			975
1101	11	23	15'-6"	Str.			1894
1102	11	2	10'-0"	Str.			106
1103	11	2	3'-6"	Str.			37
1104	11	1	9'-6"	Str.			50
1105	11	1	3'-0"	Str.			16

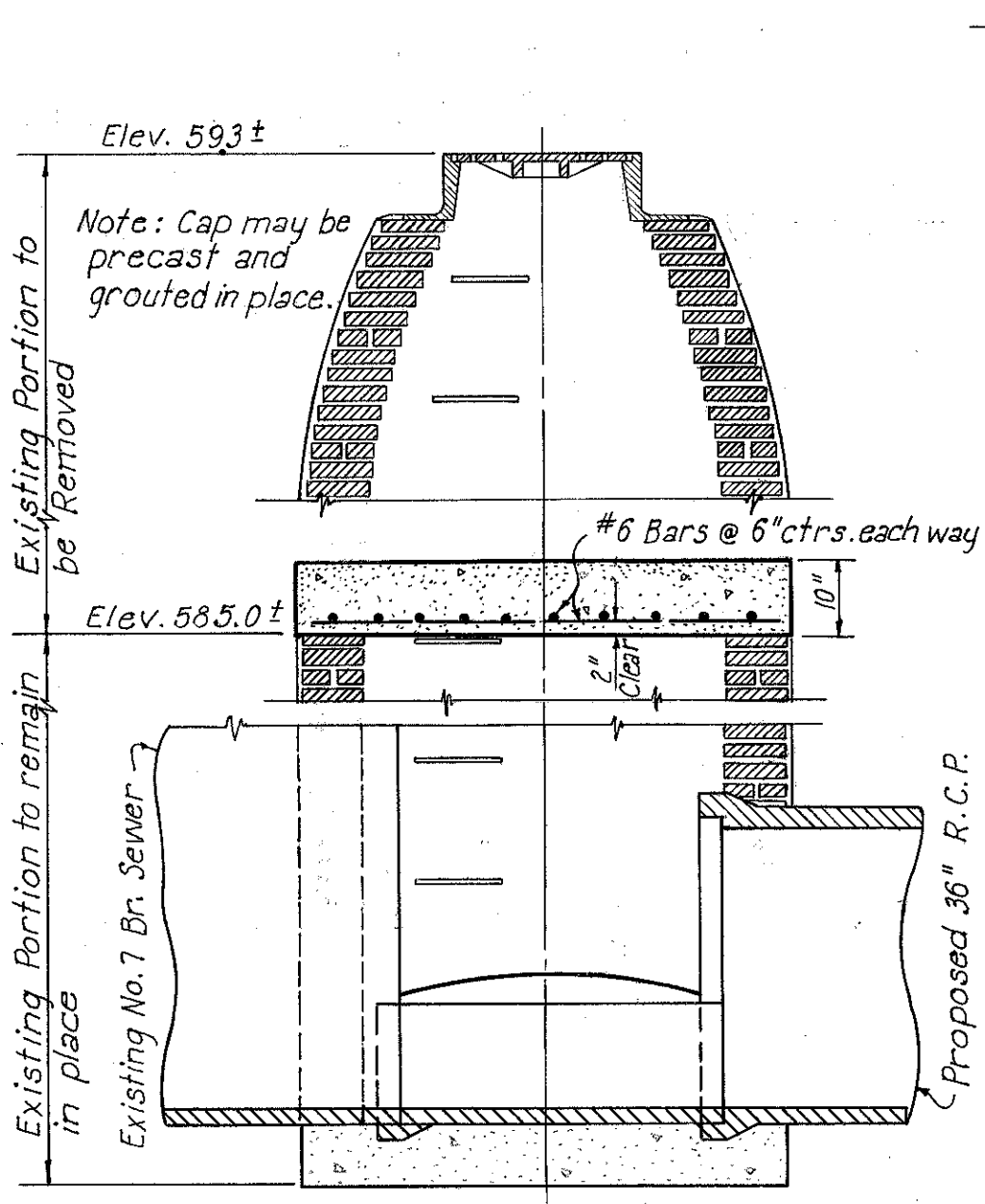
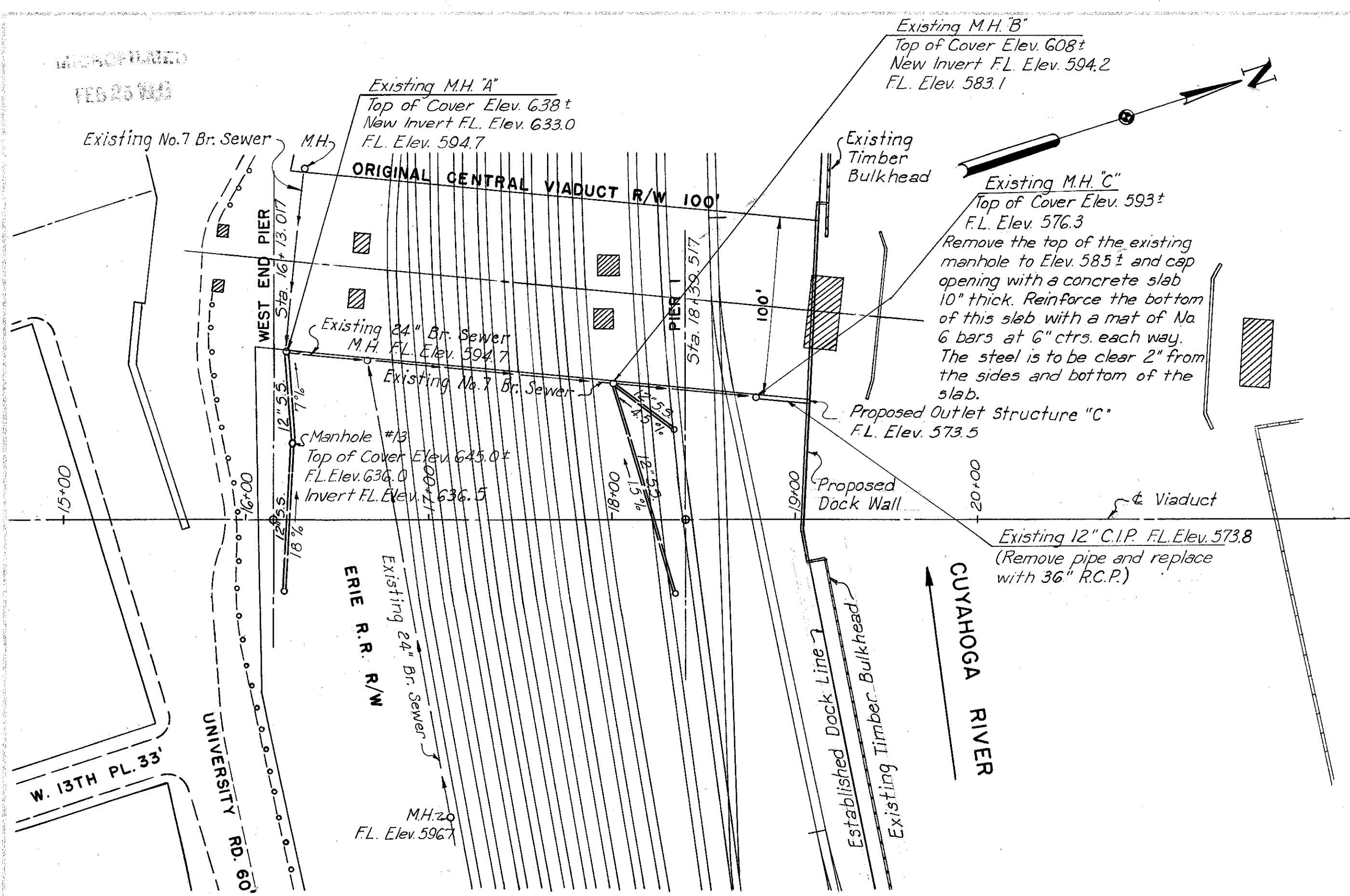
MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS		WEIGHT LBS.
					A	B	
EAST END PIER FOOTING EN							
601	6	29	23'-6"	Str.			1024
602	6	25	27'-6"	Str.			1033
801	8	68	5'-6"	Str.			999
802	8	50	5'-0"	101			668
EAST END PIER SHAFT							
401	4	378	4'-3"	100	2'-11"		1073
402	4	324	3'-3"	100	1'-11"		703
403	4	108	4'-9"	100	3'-5"		343
404	4	108	3'-7"	100	2'-3"		259
405	4	4	5'-3"	Str.			14
501	5	54	20'-3"	Str.			1141
502	5	54	13'-6"	103	2'-2"		760
503	5	54	16'-8"	105	2'-2" & 2'-5"	12'-1"	939
504	5	4	13'-6"	104	11'-9"	1'-9"	56
505	5	4	16'-0"	105	1'-9" & 2'-5"	11'-10"	67
506	5	2	15'-0"	Str.			31
507	5	2	17'-0"	Str.			35
508	5	7	17'-3"	Str.			126
509	5	7	16'-6"	Str.			120
510	5	7	16'-0"	Str.			117
511	5	6	16'-6"	Str.			97
512	5	7	19'-3"	Str.			141
513	5	7	18'-6"	Str.			135
514	5	7	18'-0"	Str.			131
515	5	6	17'-6"	Str.			110
516	5	14	18'-3"	Str.			266
517	5	14	17'-9"	Str.			259
518	5	14	17'-3"	Str.			256
519	5	12	16'-6"	Str.			207
601	6	48	6'-0"	Str.			433
602	6	11	19'-0"	105	2'-0"	15'-0"	314
603	6	9	21'-0"	105	2'-0"	17'-0"	284
604	6	2	16'-0"	105	2'-0"	12'-0"	48
605	6	13	26'-6"	105	2'-0"	22'-6"	517
606	6	2	12'-5"	105	2'-0"	8'-5"	38
607	6	2	14'-5"	105	2'-0"	10'-5"	44
608	6	1	12'-8"	105	2'-0"	8'-8"	19
609	6	1	14'-8"	105	2'-0"	10'-8"	22
610	6	4	7'-5"	105	2'-0"	3'-5"	45
611	6	2	15'-3"	105	2'-0"	11'-3"	46
612	6	2	14'-5"	105	2'-0"	10'-5"	44
613	6	8	7'-6"	Str.			90
614	6	6	8'-6"	Str.			77
615	6	6	12'-9"	120	2'-0"		115
616	6	24	6'-3"	Str.			225
617	6	2	6'-0"	108			18
801	8	118	20'-0"	Str.			6301
802	8	68	24'-9"	Str.			4494
803	8	9	22'-6"	Str.			541
804	8	2	8'-9"	Str.			47
805	8	2	10'-9"	Str.			57
806	8	1	8'-6"	Str.			23
807	8	1	10'-6"	Str.			28
808	8	69	5'-0"	Str.			921
1101	11	23	15'-3"	Str.			1864
1102	11	2	10'-0"	Str.			106
1103	11	2	3'-9"	Str.			40
1104	11	1	9'-6"	Str.			50
1105	11	1	3'-6"	Str.			19

MARK	SIZE	NO.	LENGTH	TYPE	DIMENSIONS		WEIGHT LBS.
					A	B	
EAST END PIER FOOTING ES							
601	6	33	23'-6"	Str.			1165
801	8	68	5'-6"	Str.			999

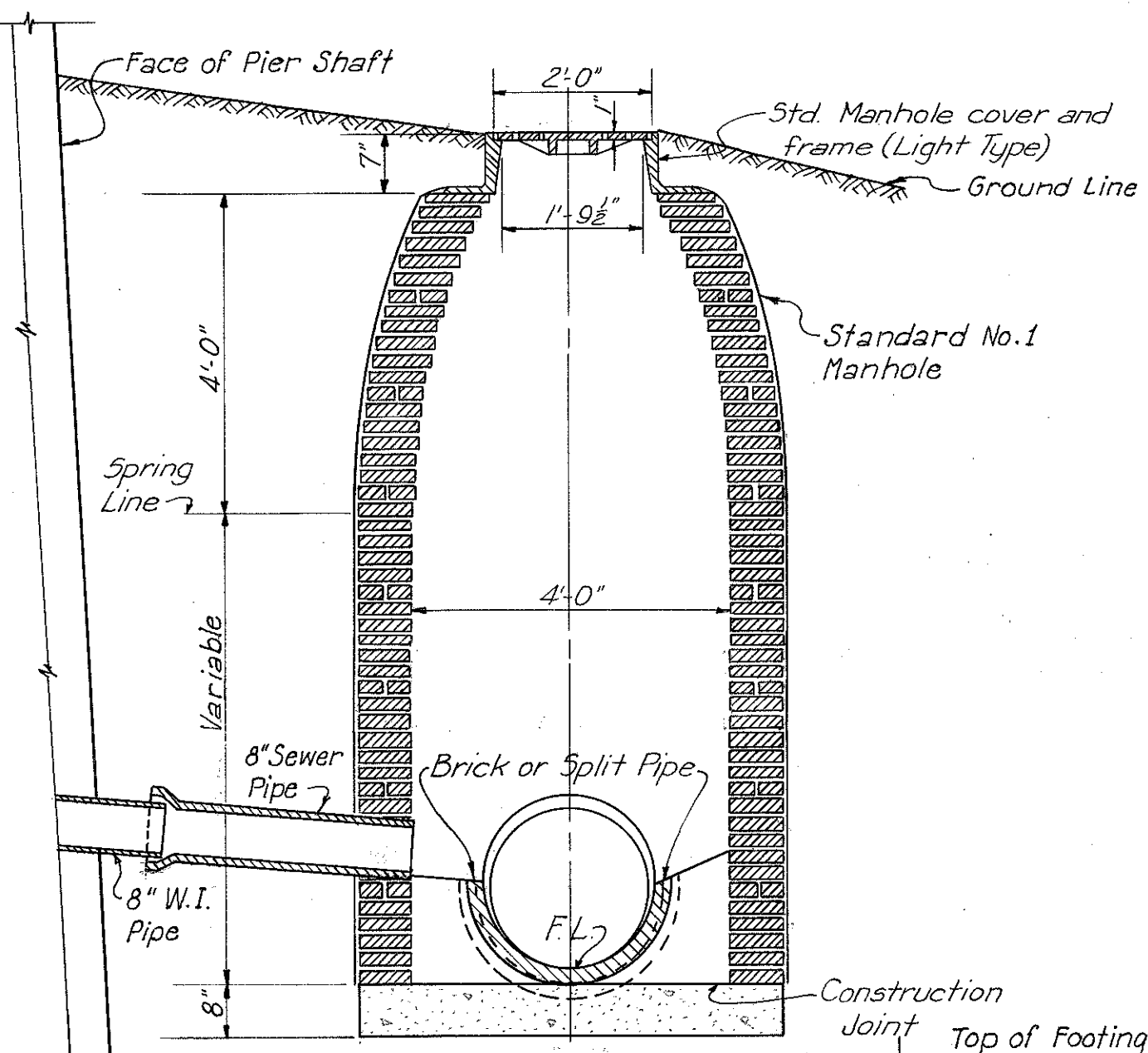
CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY-42R-17.50

STORM SEWER DATA				
Location	Size	Class	Length	
WS End Pier to M.H. #13	12	A	77	
M.H. #13 to M.H. "A"	12	A	50	
Pier 15 to M.H. "B"	12	A	115	
Pier 1N to M.H. "B"	12	A	39	
Manhole "C" to Dock Line	36	C	30	
Outlet, Structure "A" to M.H. #1	27	D	80	
Pier 2N to M.H. #1	12	A	39	
Pier 2S to M.H. #1	12	A	29	
M.H. #1 to M.H. #2	24	C	250	
Pier 3N to M.H. #2	12	A	39	
Pier 3S to M.H. #2	15	C	29	
M.H. #2 to M.H. #3	24	A	370	
Pier 4N to M.H. #3	12	A	30	
Pier 4S to M.H. #3	12	A	71	
M.H. #3 to M.H. #4	15	A	180	
Pier 5N to M.H. #4	12	A	34	
Pier 5S to M.H. #4	15	C	34	
Outlet, Structure "B" to M.H. #11	24	D	60	90
M.H. #11 to M.H. #16	24	B	116	84
M.H. #16 to M.H. #10	24	A	240	
M.H. #10 to M.H. #9	24	A	322	
M.H. #9 to M.H. #8	12	B	140	
M.H. #8 to M.H. #12	12	A	55	
M.H. #12 to Pier 6N	12	A	78	
M.H. #9 to M.H. #5	21	A	142	
M.H. #5 to Pier 7N	12	A	62	
M.H. #5 to Pier 7S	12	A	40	
M.H. #5 to M.H. #6	15	A	175	
M.H. #6 to Pier 8N	12	A	109	
M.H. #6 to Pier 8S	12	A	109	
M.H. "D" to M.H. #7	12	A	240	
M.H. #7 to EN End Pier	12	A	92	
M.H. #7 to ES End Pier	12	A	25	
M.H. #14 to M.H. #15	12	B	54	
M.H. #15 to M.H. "F"	12	B	57	
Replacement at Pier 7N	18	B	80	
WN End Pier to M.H. #13	8	A	3	
Pier 6S to M.H. #12	8	A	3	

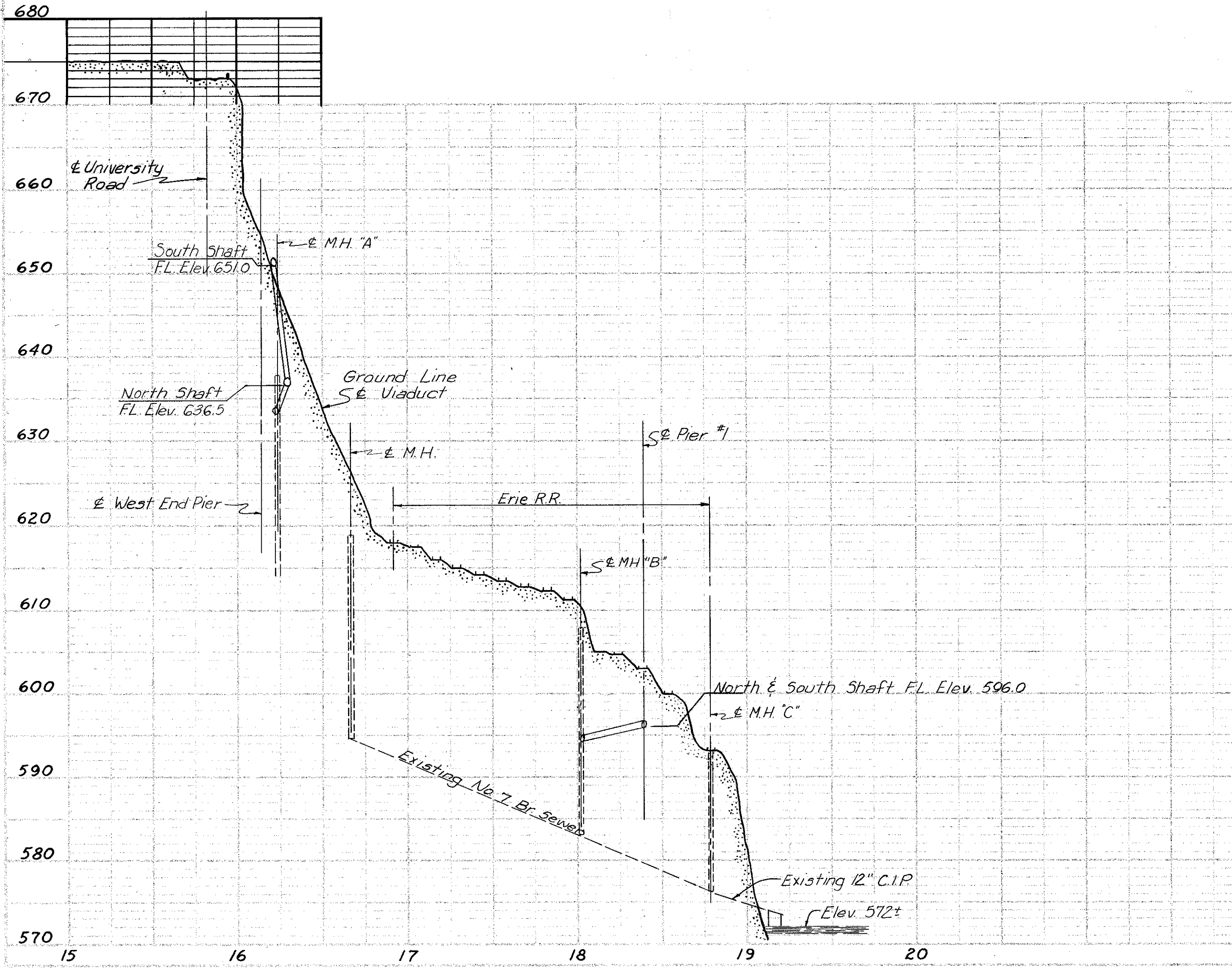
Class "C" Extra Strength Reinforced Concrete Culvert Pipe, Sec. M-6.6(c) for Storm Sewers.
Class "D" Paved Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4(d) for Storm Sewers. 12 Gage for both 24" and 27" diameter.
Class "A" Pipe for Storm Sewers.
Class "B" Pipe for Storm Sewers under Pavement.



DETAILS OF ALTERATIONS TO EXISTING MANHOLE "C"
No scale



DETAILS OF DOWNPIPE CONNECTION AT MANHOLES NO. 12 AND NO. 13
No scale

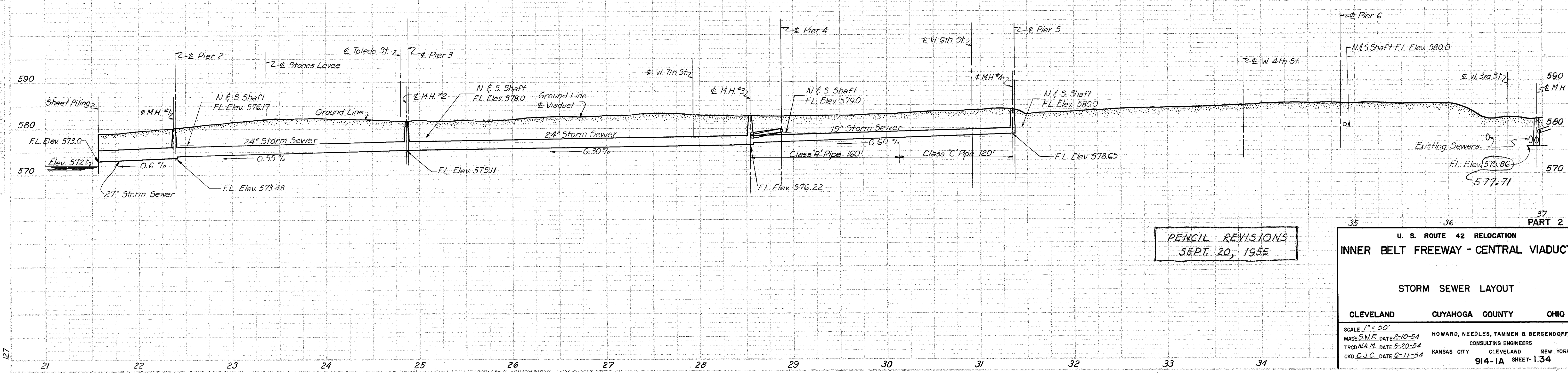
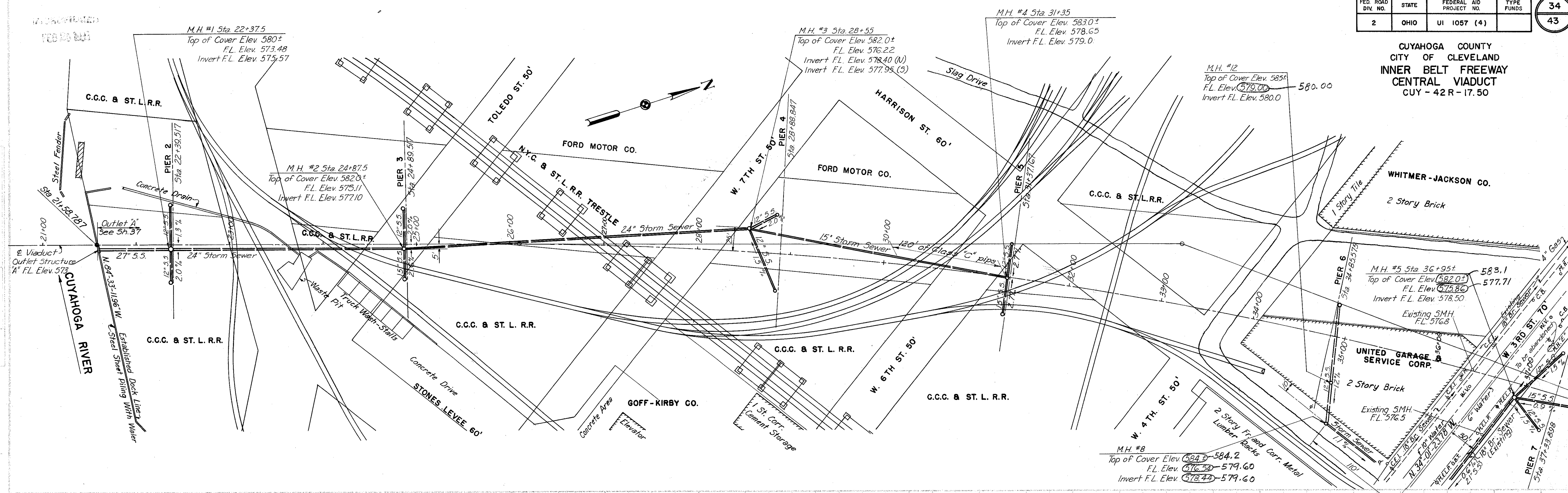


PENCIL REVISIONS
SEPT. 20, 1955

PART 2
U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT
STORM SEWER LAYOUT
CLEVELAND CUYAHOGA COUNTY OHIO
SCALE 1"=50' E & S 1"=10'
MADE S.W.F. DATE 2-9-54 HOWARD, NEEDLES, TAMMEN & BERGENDOFF
TRD DATE DATE 5-25-54 CONSULTING ENGINEERS
CRD DATE DATE 6-24-54 KANSAS CITY CLEVELAND NEW YORK
914 1A SHEET 1.33

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS	34
2	OHIO	UI 1057 (4)		43

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY - 42 R - 17.50



U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

STORM SEWER LAYOUT

CLEVELAND CUYAHOGA COUNTY OHIO

SCALE 1" = 50'

MADE S.W.E. DATE 2-10-54 HOWARD, NEEDLES, TAMMEN & BERGENDOFF
TRCD. N.A.M. DATE 5-20-54 CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK
CKD. C.I.C. DATE 6-11-54 914-1A SHEET-134

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO	UI 1057 (4)	

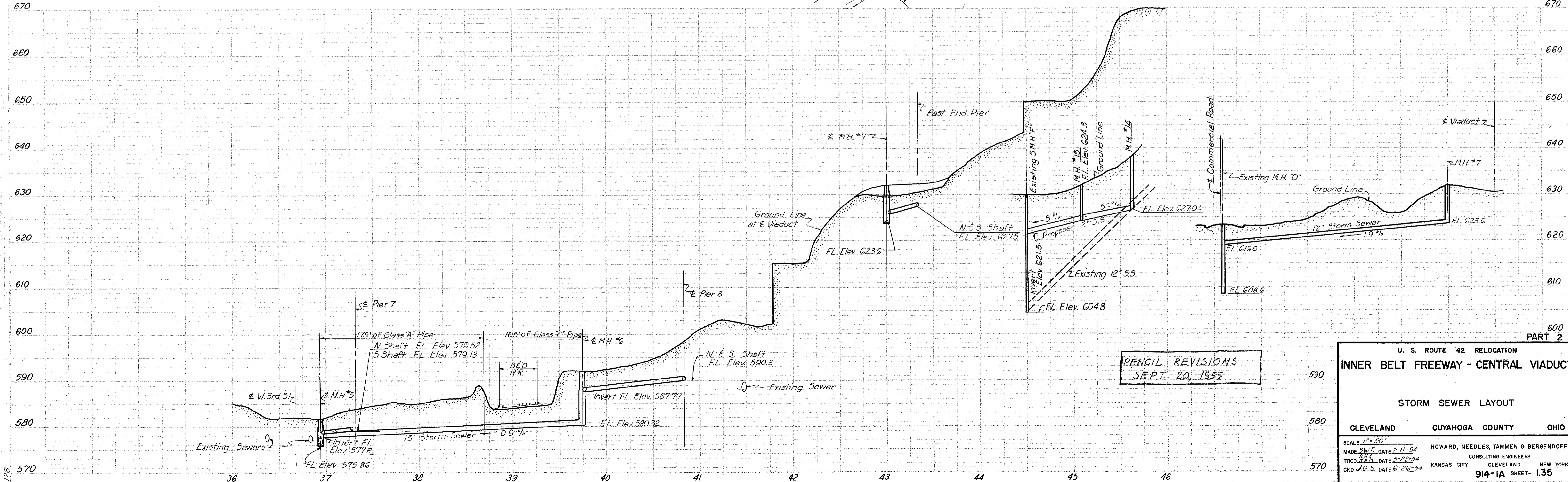
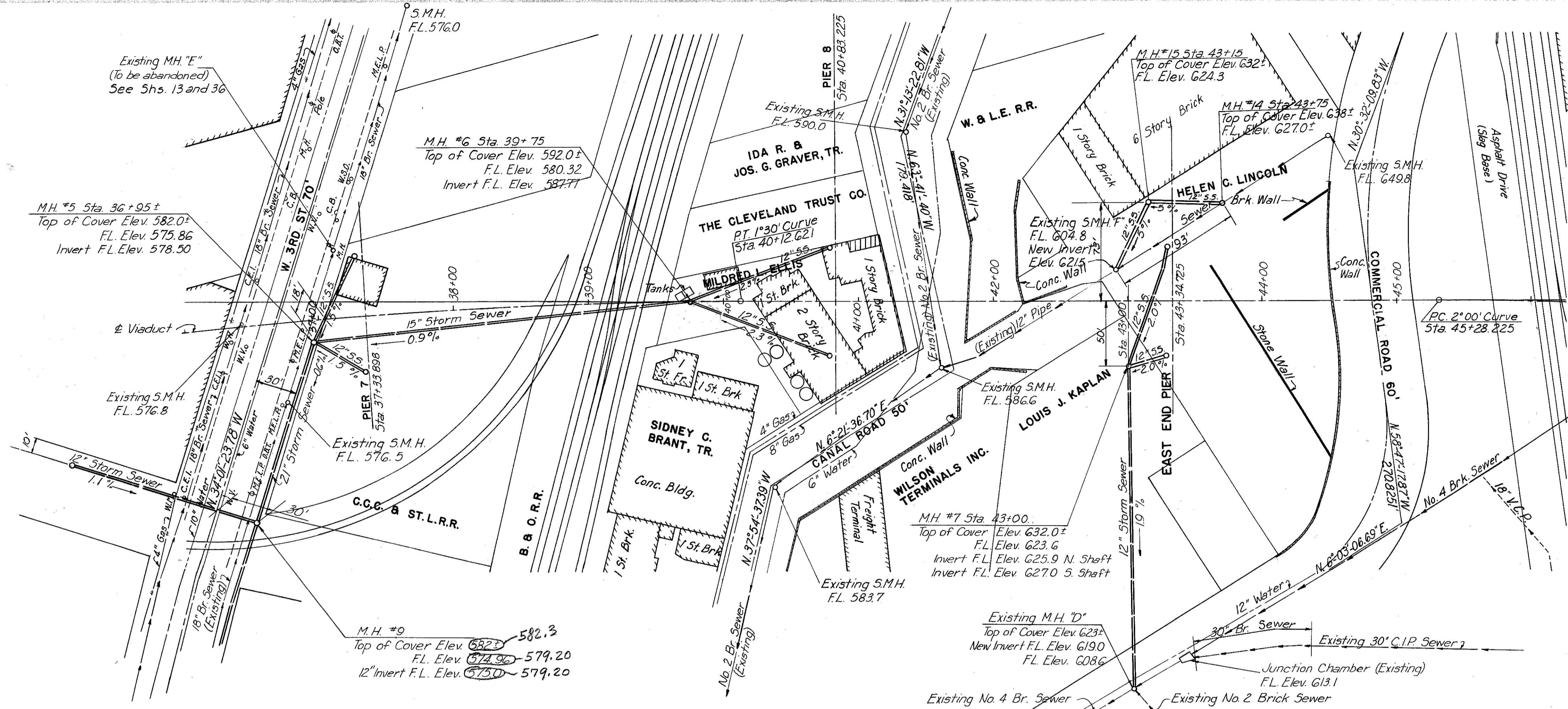
35
43

CUYAHOGA COUNTY
CITY OF CLEVELAND
**INNER BELT FREEWAY
CENTRAL VIADUCT**
CUY - 42 R - 17.50

FORCE ACCOUNT WORK
by The Baltimore and Ohio Railroad Co.

- A. Preliminary Engineering Lump Sum
- B. Construction Engineering Lump Sum
- C. Temporary Supporting Lump Sum

NOTE:
The labor and the furnishing of materials in connection with the temporary and permanent track work as shown on this sheet and as called for in the estimate will be performed by the Baltimore and Ohio Railroad Company by force account.



PENCIL REVISIONS
SEPT. 20, 1955

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

STORM SEWER LAYOUT

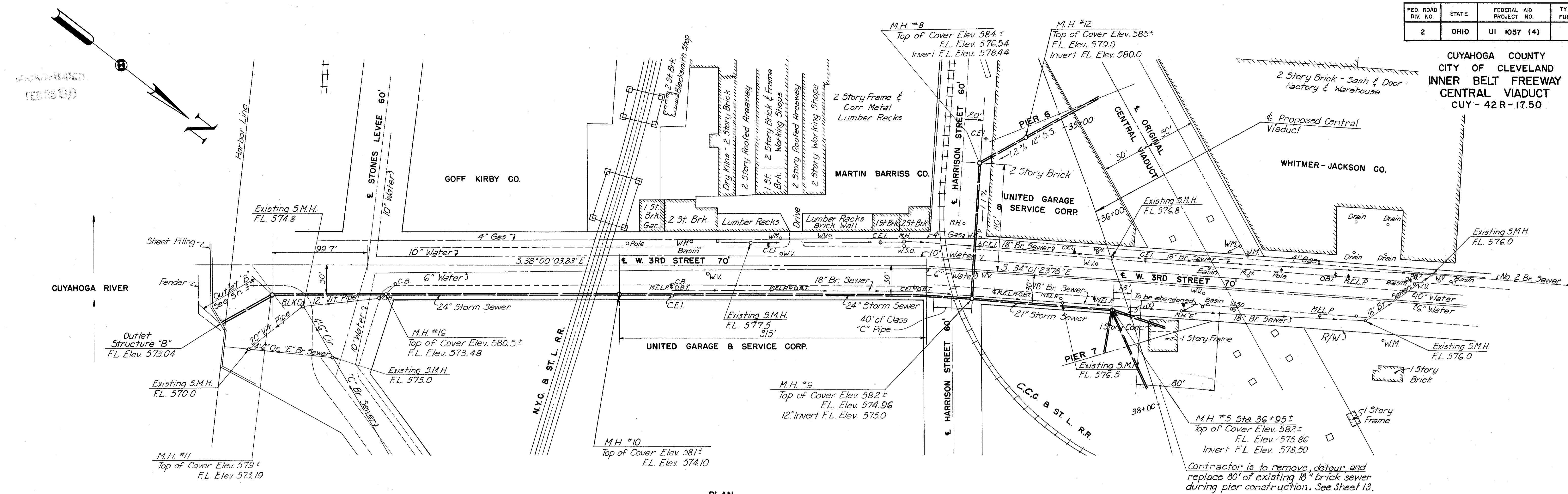
CLEVELAND CUYAHOGA COUNTY OHIO

SCALE 1" = 20'
MADE BY F. DATE 2-11-54
TRD. DATE 5-22-54
CHK. J.G.S. DATE 6-26-54

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

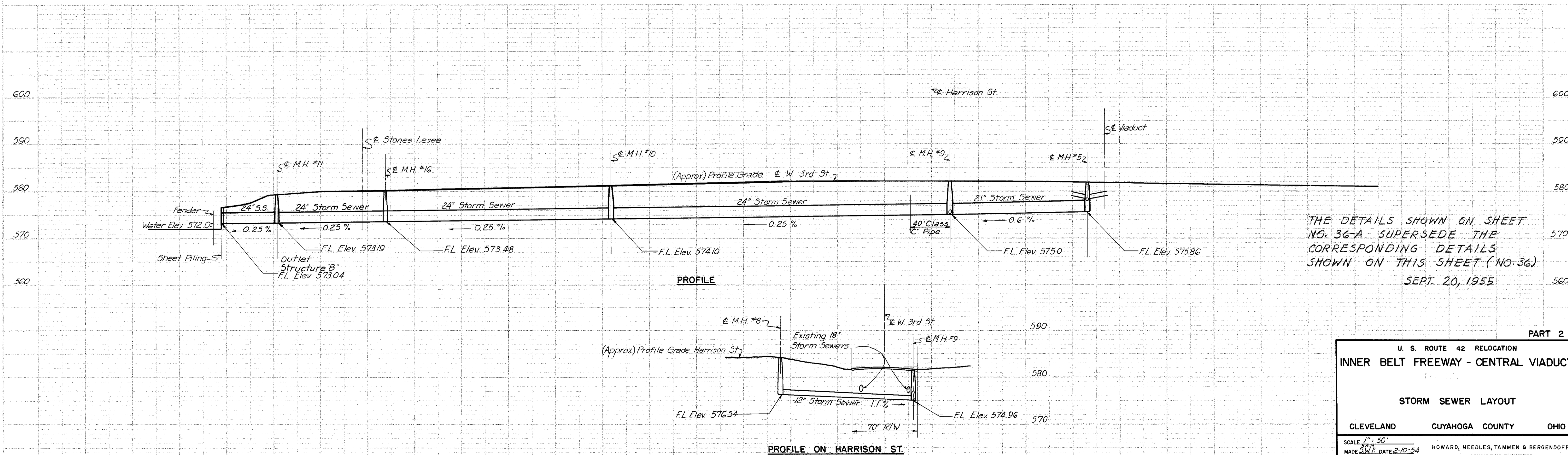
914-1A SHEET-1.35

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY-42R-17.50



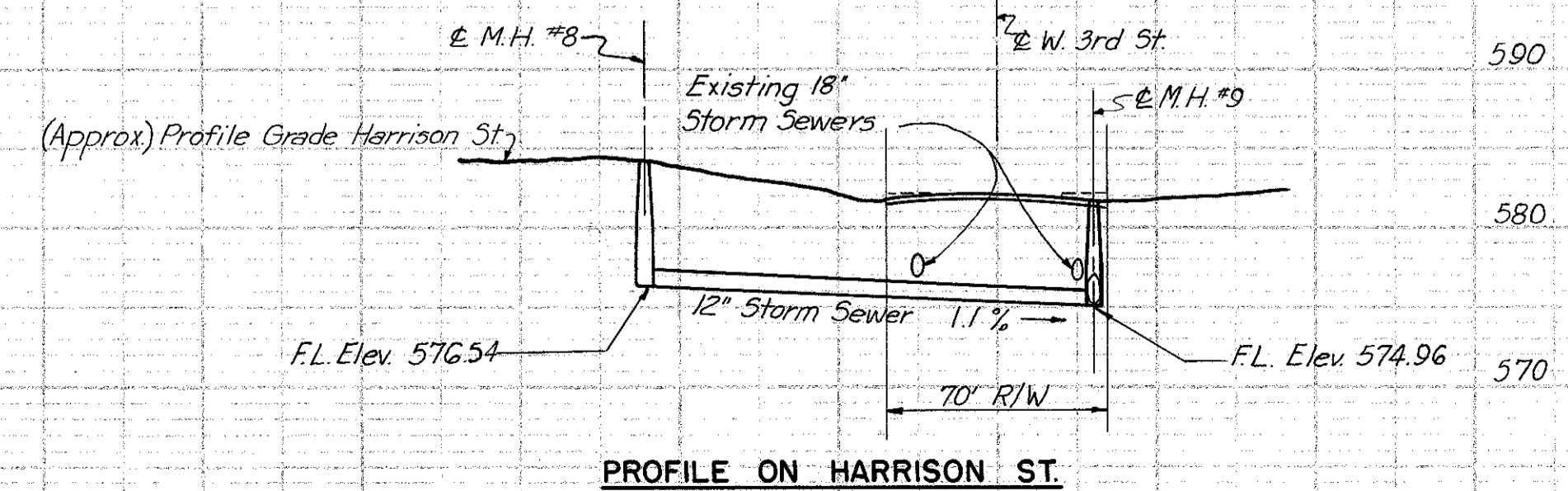
PLAN

Contractor is to remove, detour, and replace 80' of existing 18" brick sewer during pier construction. See Sheet 13.



PROFILE

THE DETAILS SHOWN ON SHEET NO. 36-A SUPERSEDE THE CORRESPONDING DETAILS SHOWN ON THIS SHEET (NO. 36) SEPT. 20, 1955



PROFILE ON HARRISON ST.

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

STORM SEWER LAYOUT

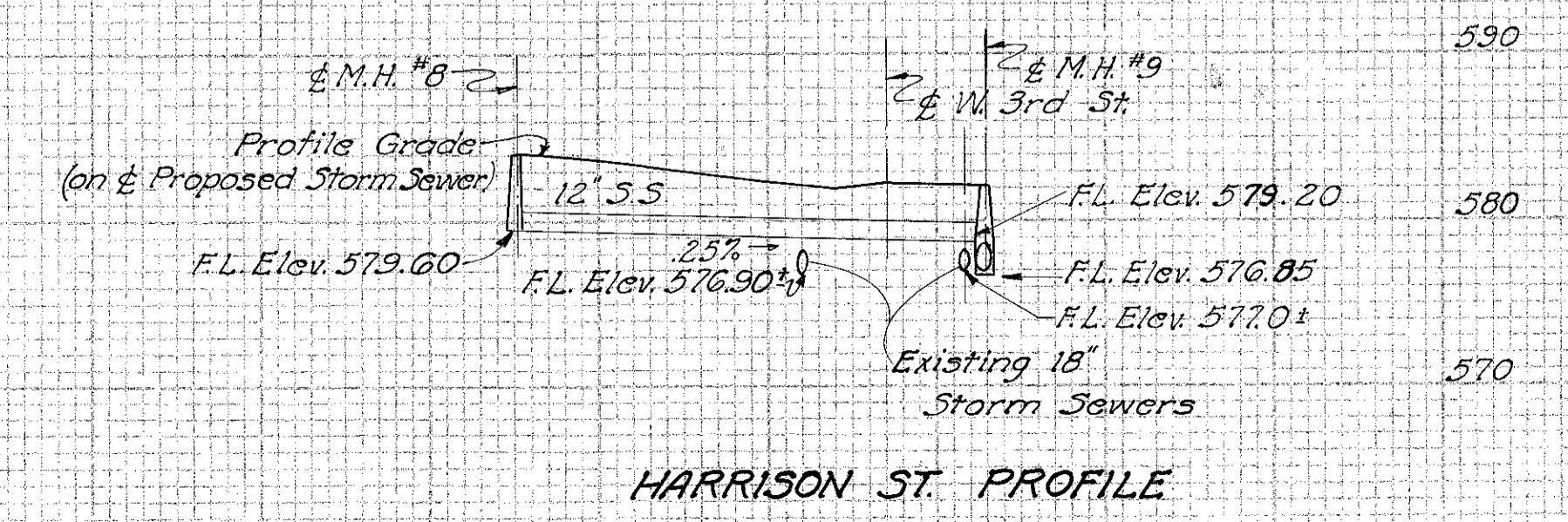
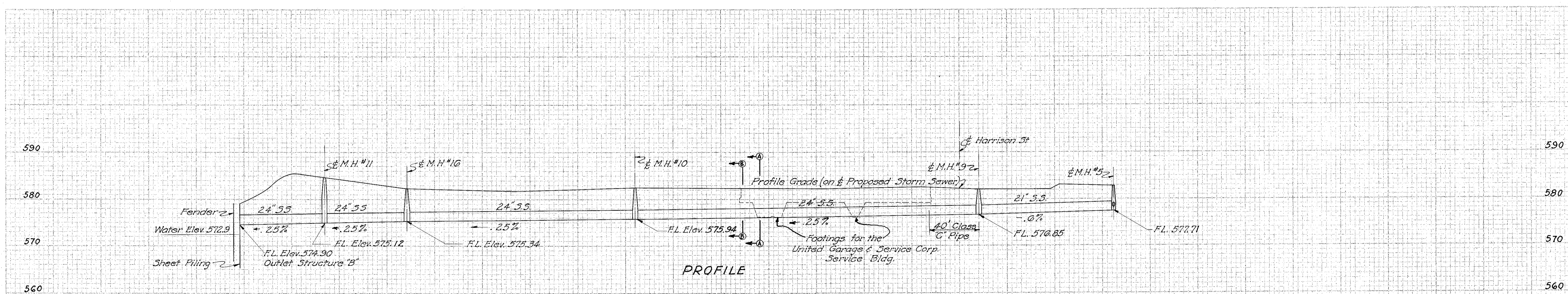
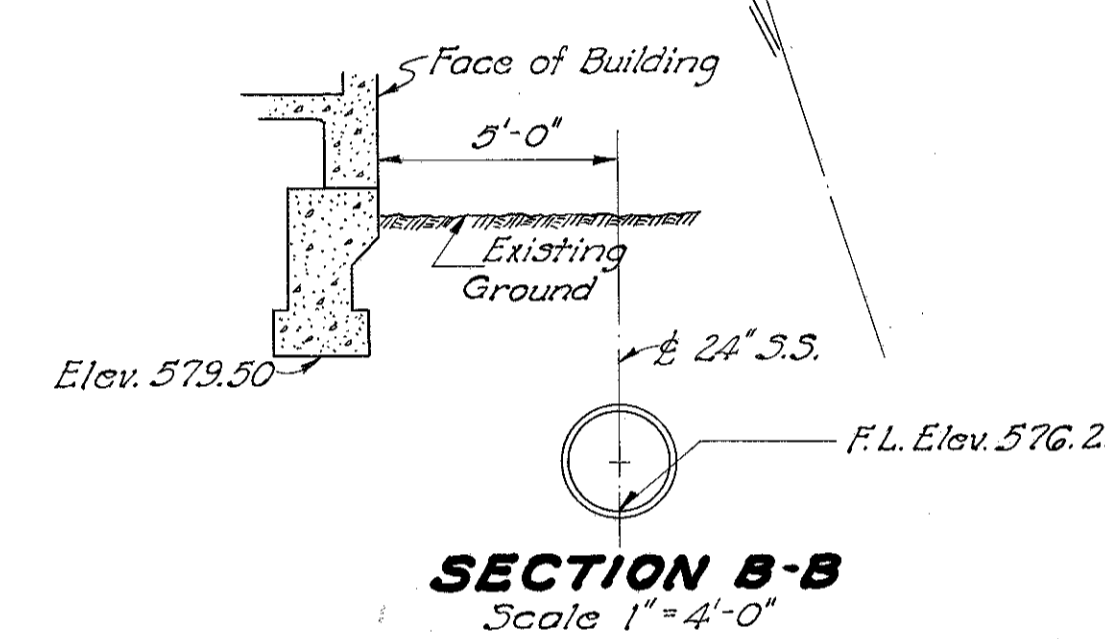
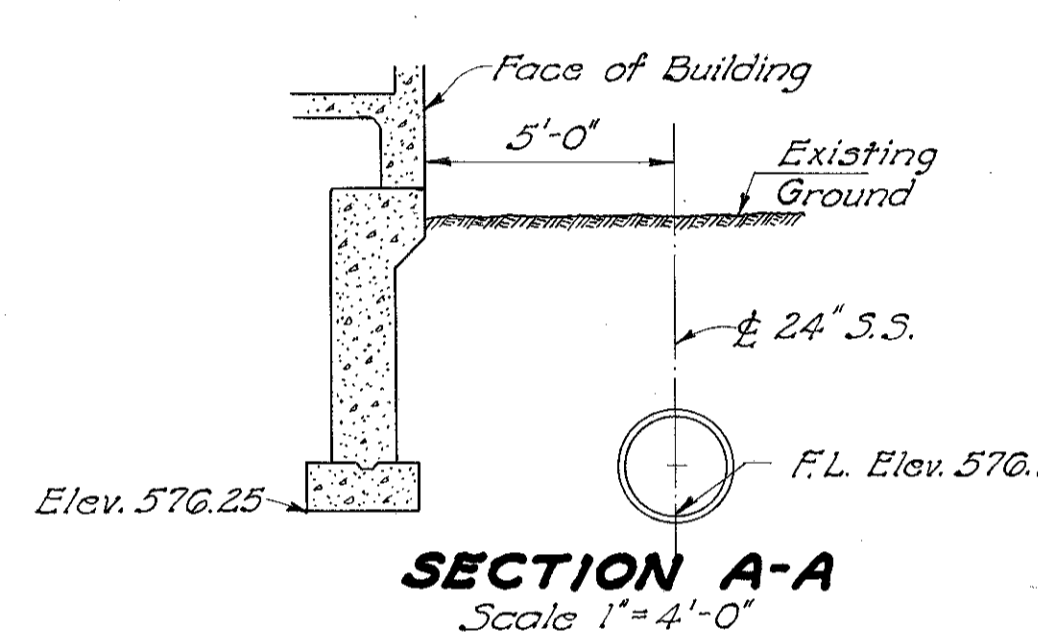
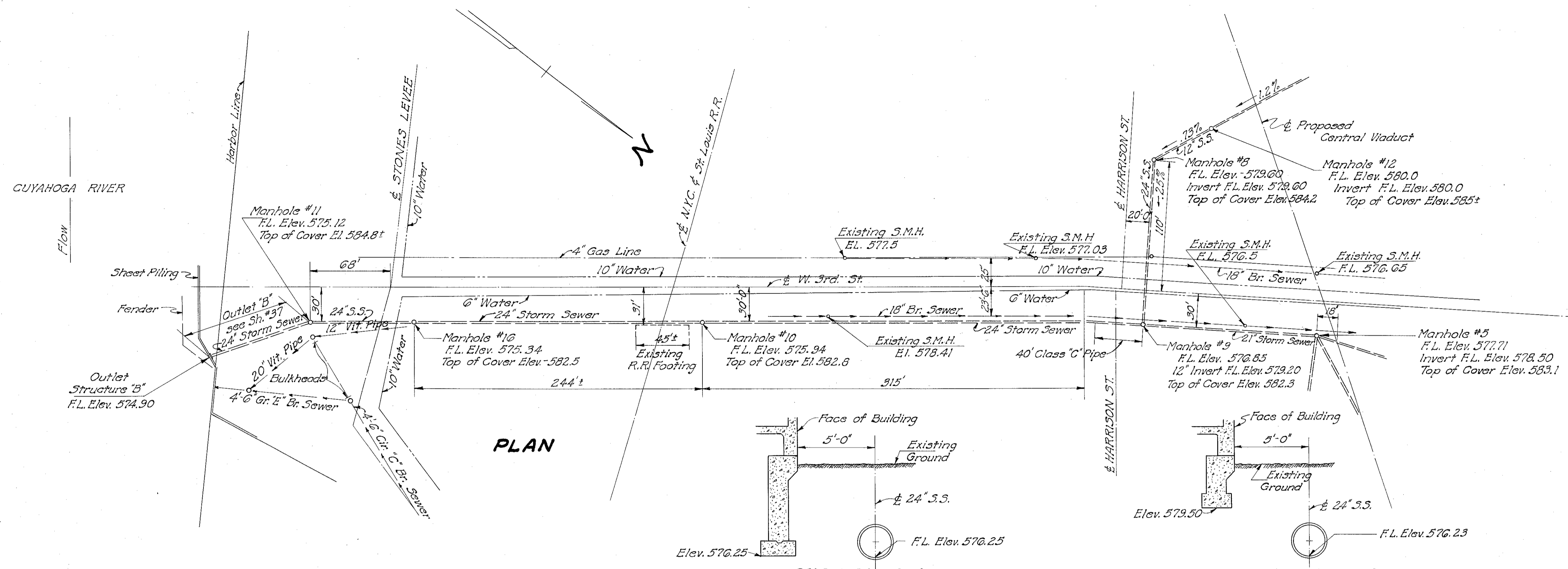
CLEVELAND CUYAHOGA COUNTY OHIO

SCALE 1" = 50'
MADE BY DATE 2-10-54
TRCD N.B.M. DATE 3-18-54
CKD C.J.C. DATE 6-12-54

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
CLEVELAND NEW YORK

914-1A SHEET-136

**CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY-42R-17.50**



The details shown on this sheet (No. 30-A) supersede the corresponding details on Sheet No. 30.

This tracing prepared in the Bureau of Bridges from pencil drawing furnished by Howard, Needles, Tammen & Bergendoff, Consulting Engineers.

Note: For original storm sewer layout see Sheet 130.

PART 2.

**U.S. ROUTE 42 RELOCATION
INNER BELT FREEWAY-CENTRAL VIADUCT**

REVISED STORM SEWER LAYOUT

CLEVELAND CUYAHOGA COUNTY OHIO

Scale: 1"=50'
 MADE: S.C. DATE: 9-20-55
 TRCD. J.D.I. DATE: 10-19-55
 CND. J.C.T. DATE: 9-30-55

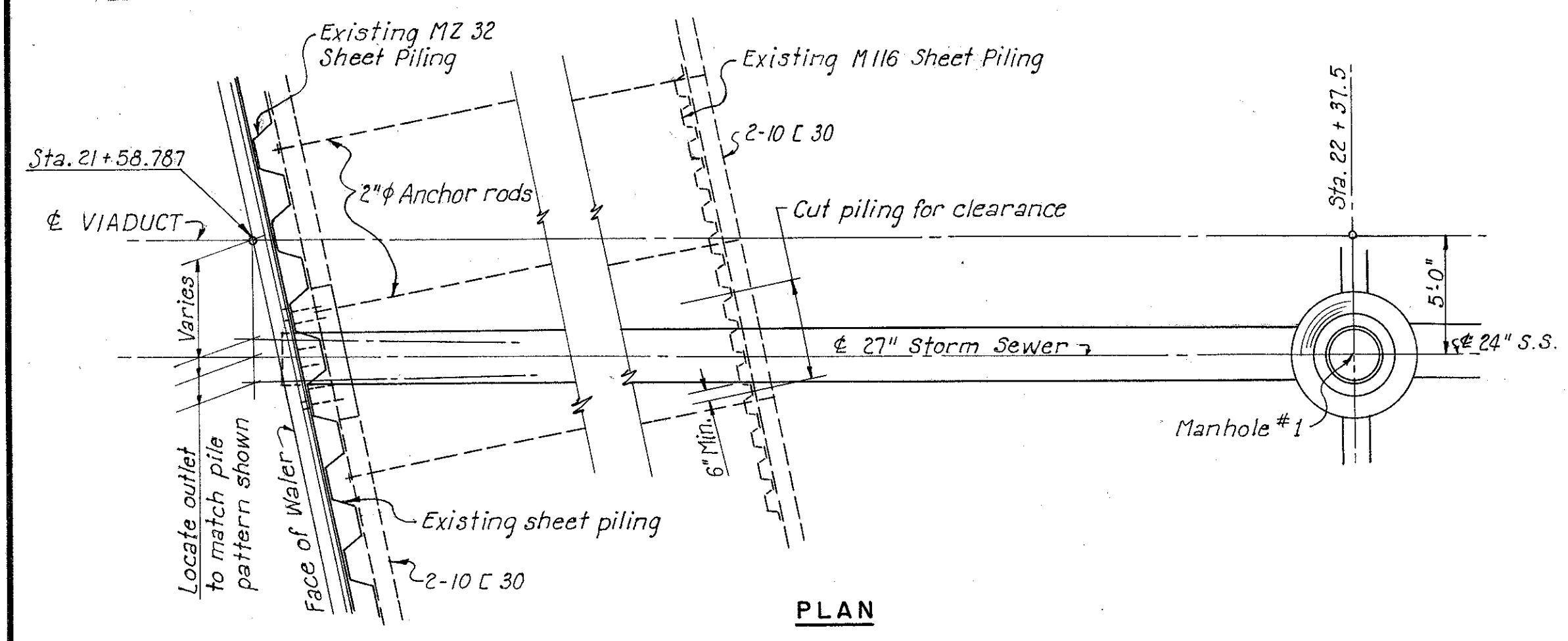
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK
314-1A SHEET 136-A

WACO PLANNED
FEB 25 1955

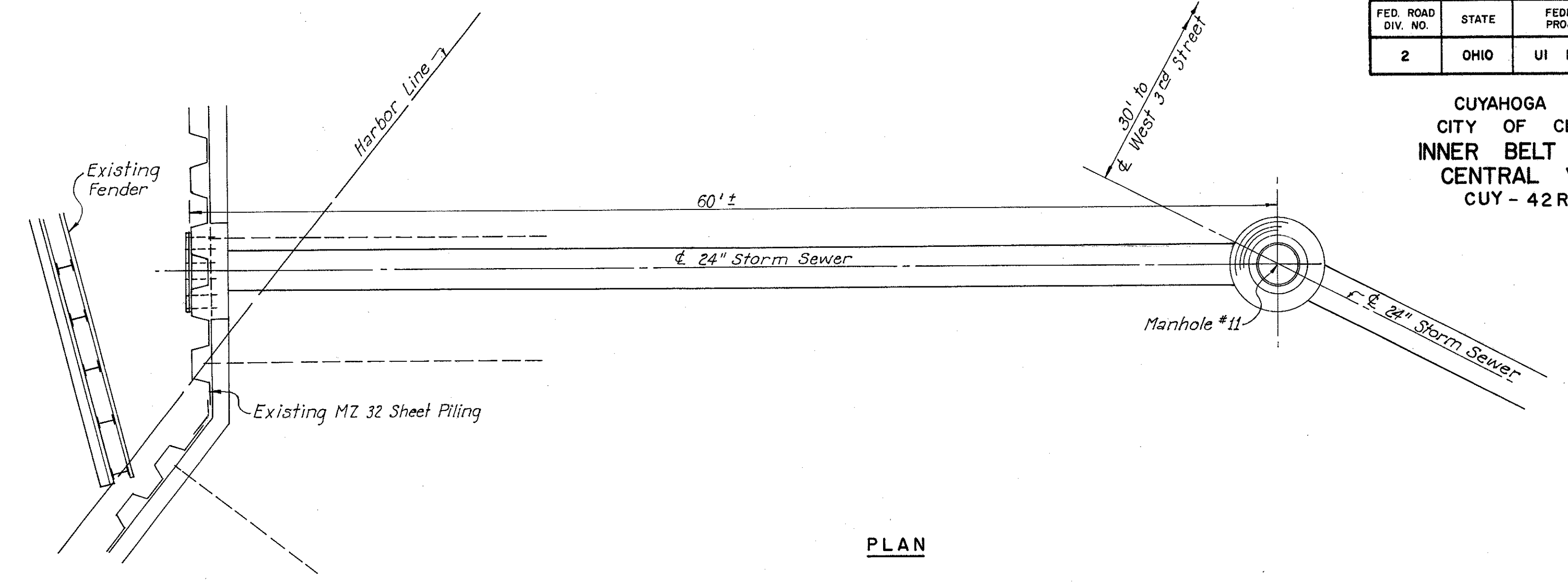
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO	UI 1057 (4)	

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY - 42R-17.50

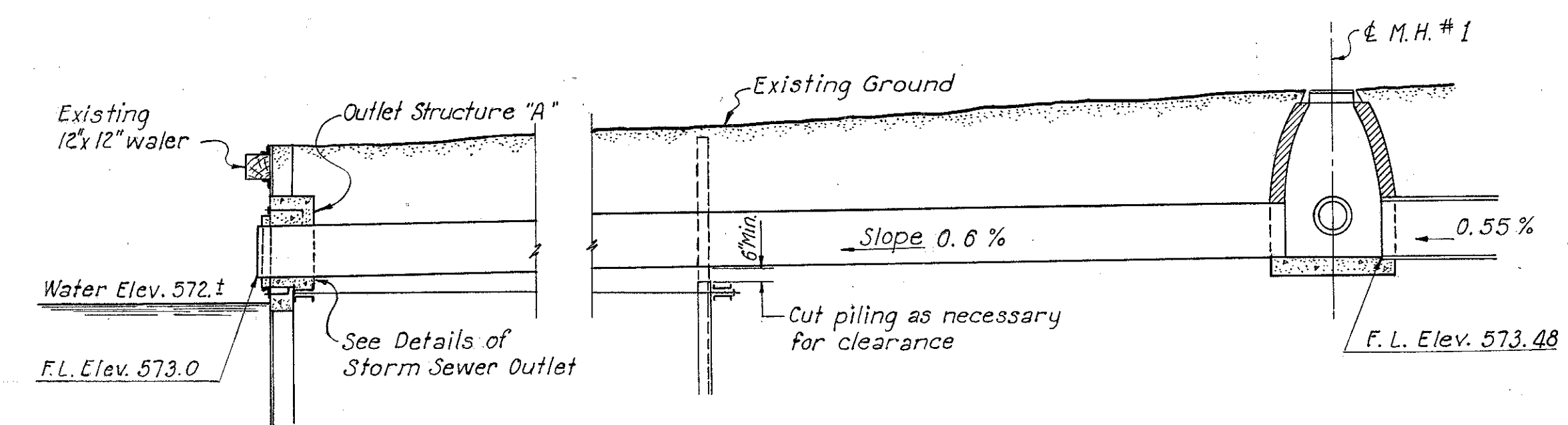
37
43



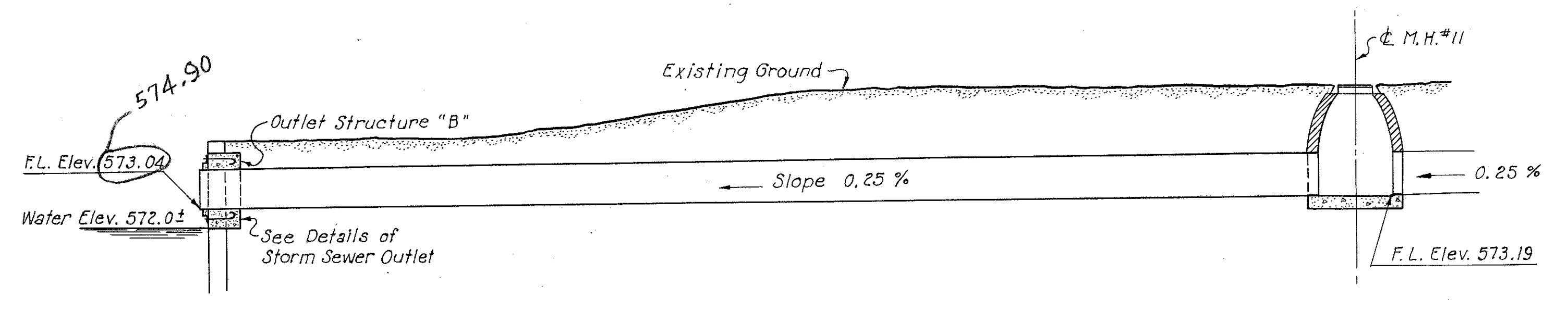
PLAN



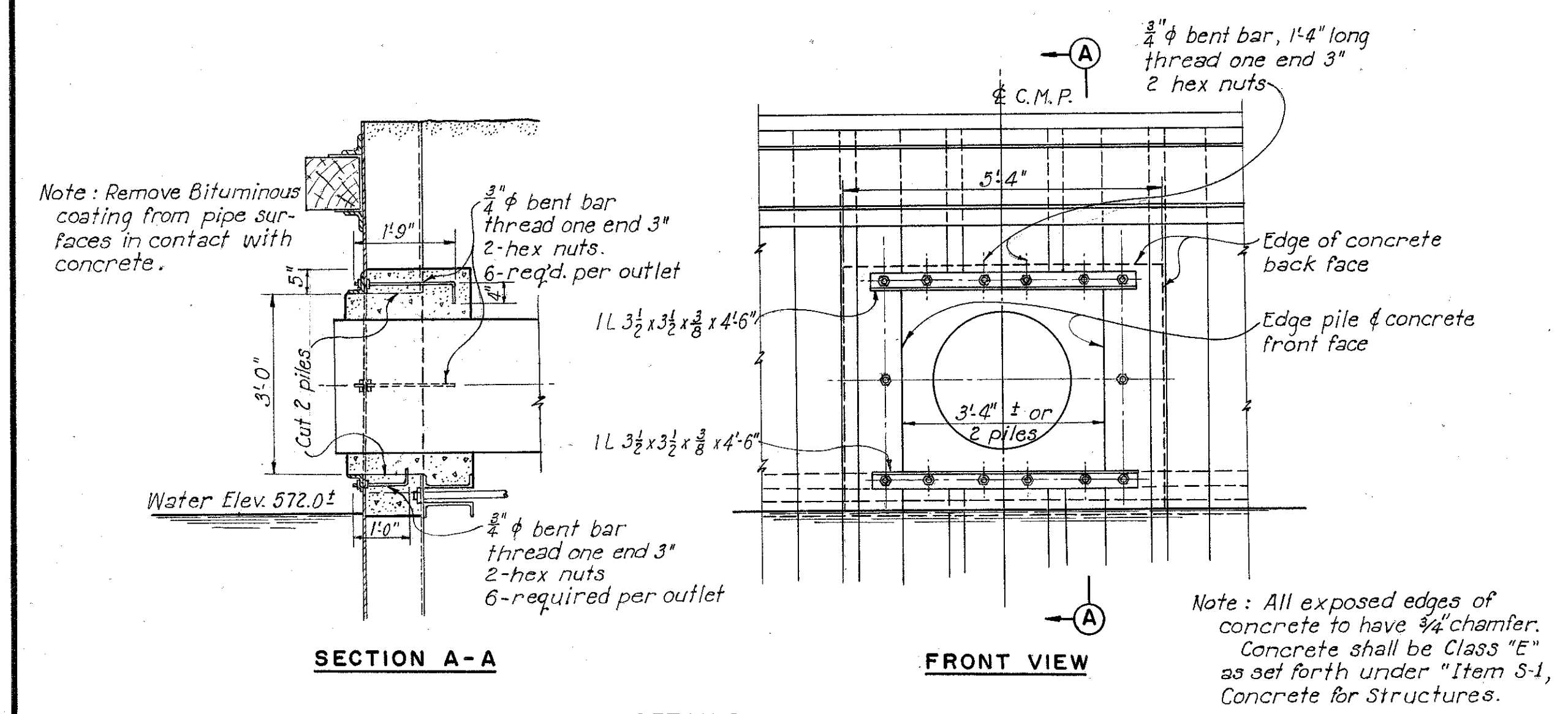
PLAN



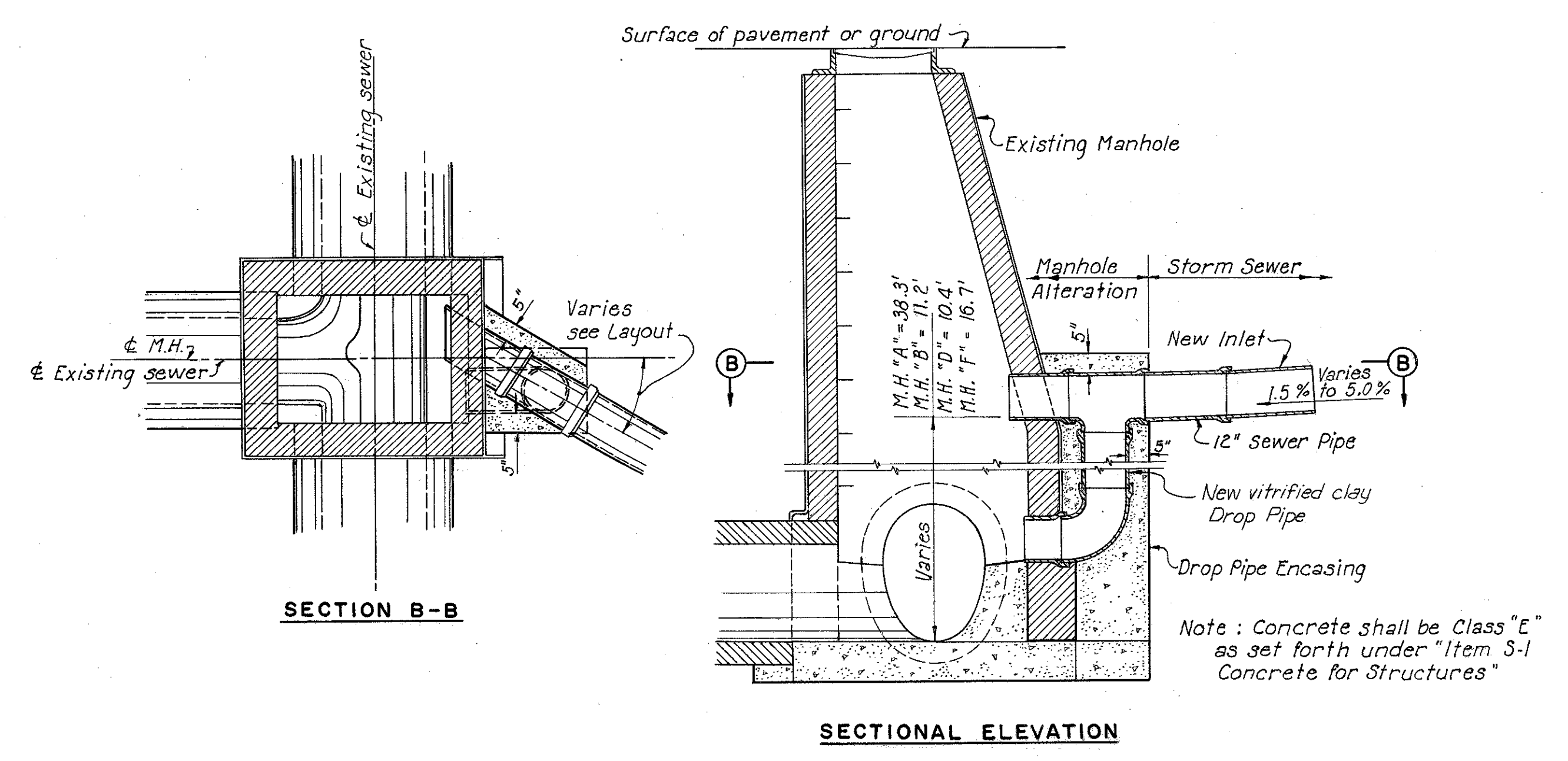
ELEVATION
STORM SEWER OUTLET "A"
Scale: 3/16" = 1'-0"



ELEVATION
STORM SEWER OUTLET "B"
Scale: 3/16" = 1'-0"



DETAILS OF
STORM SEWER OUTLETS "A" AND "B"
Scale: 1/2" = 1'-0"



MANHOLE ALTERATIONS

Manhole "D" shown
A", "B" & "F" similar
Scale: 3/8" = 1'-0"

PENCIL REVISIONS
SEPT. 20, 1955

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

STORM SEWER DETAILS

CLEVELAND CUYAHOGA COUNTY OHIO

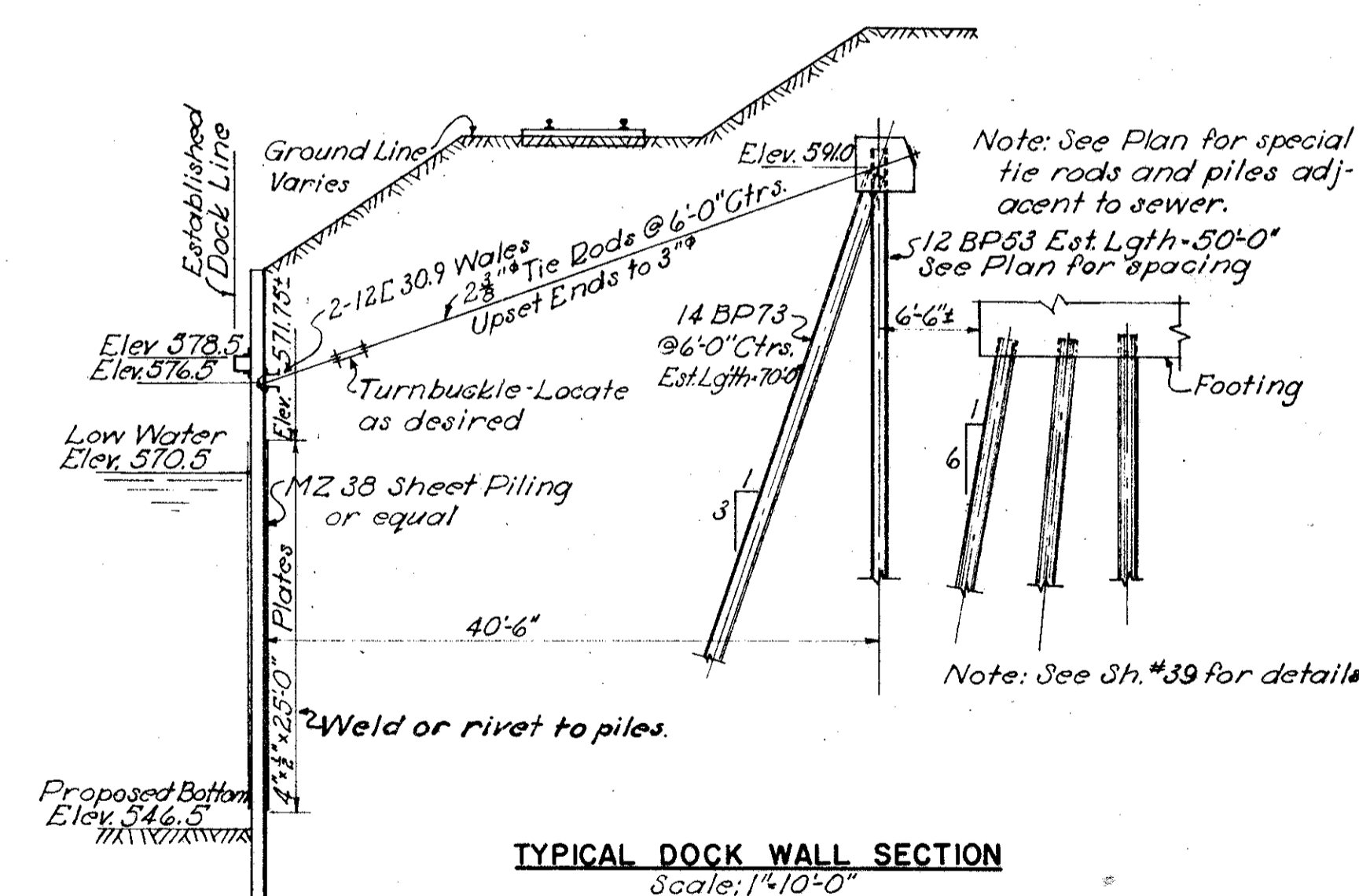
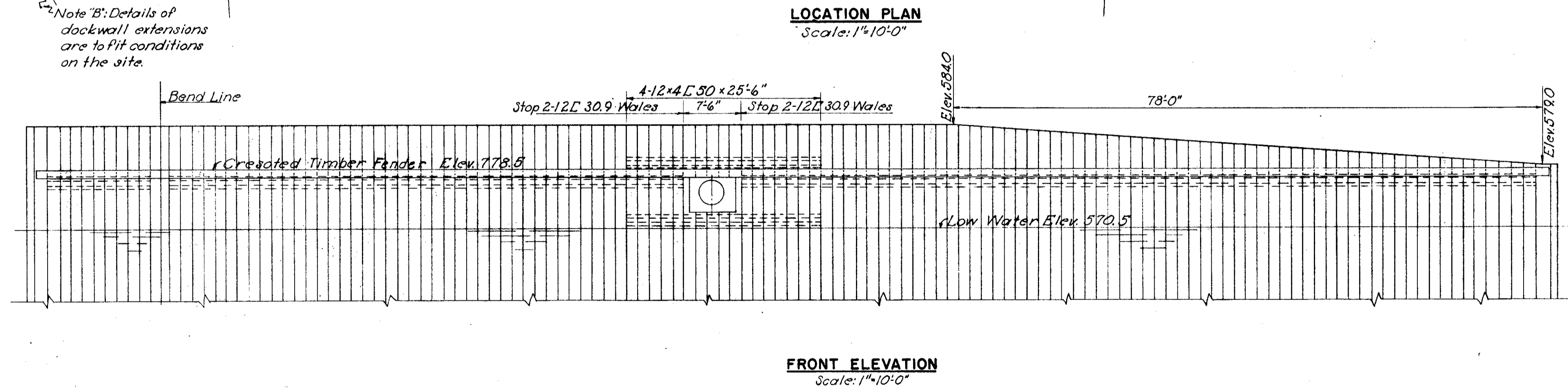
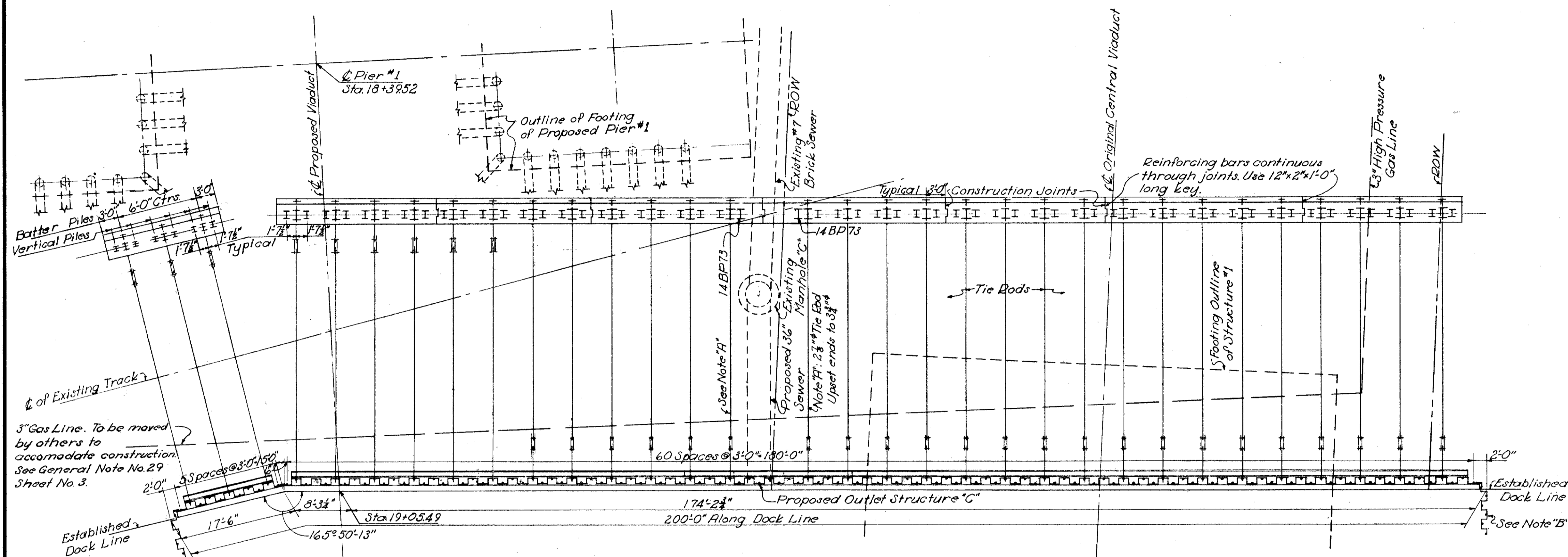
SCALE: As shown
MADE: S.W.F. DATE: 3-19-54
TRCD: A.H. DATE: 6-24-54
CKD: C.V.C. DATE: 6-25-54

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

914-1A SHEET: 1.37

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS	38
2	OHIO	UI 1057 (4)		43

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY-42R-17.50



GENERAL NOTES
All splice plates to be fitted welded in shop to structural members. All bolted connections, including anchor rods, shall have the threads jammed to form a definite lock. The concrete anchor pile cap must be constructed in sections. Bar splices for the six construction joints shown are included in the estimated quantities. Locations may be shifted to any typical position.

3" Gas Line. To be moved by others to accommodate construction. See General Note No. 29 Sheet No. 3.

Note "B": Details of dockwall extensions are to fit conditions on the site.

Note: See Plan for special tie rods and piles adjacent to sewer.

Note: See Sh. #39 for details.

Superseded by Sheet 38 A
2-15-55

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

DOCK WALL
LOCATION PLAN AND TYPICAL SECTION

CLEVELAND CUYAHOGA COUNTY OHIO

SCALE: 1"=10'-0"
MADE C.U.C. DATE: 3-31-54
TRCD C.U.C. DATE: 2-1-54
CKD J.K. DATE: 8-31-54

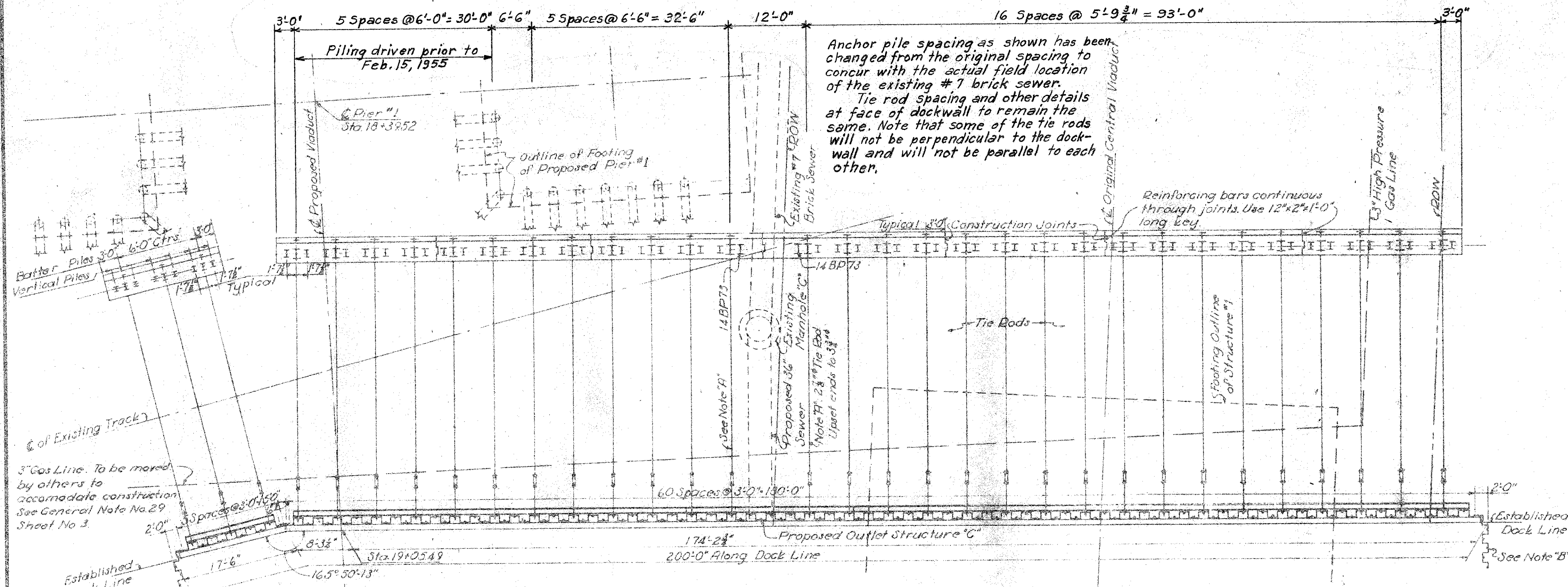
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

914-1A SHEET 1.38

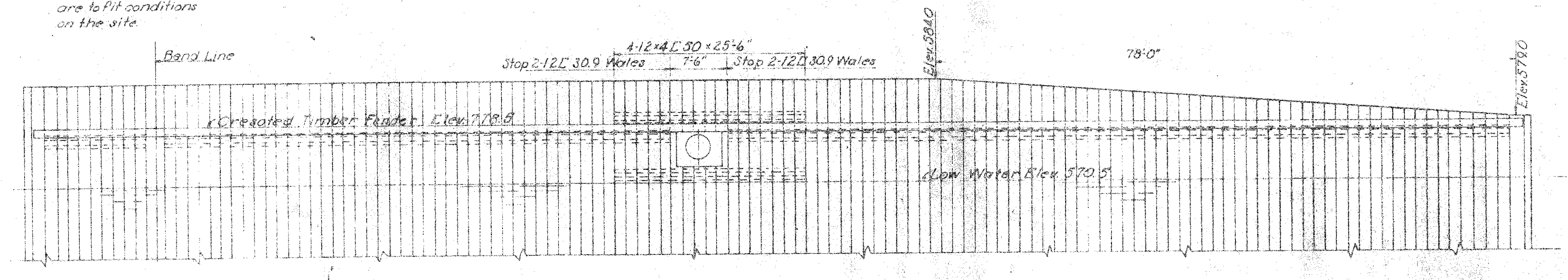
MICROFILMED
FEB 23 1983

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS	38A
2	OHIO	UI 1057 (4)		43

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY-42R-17.50



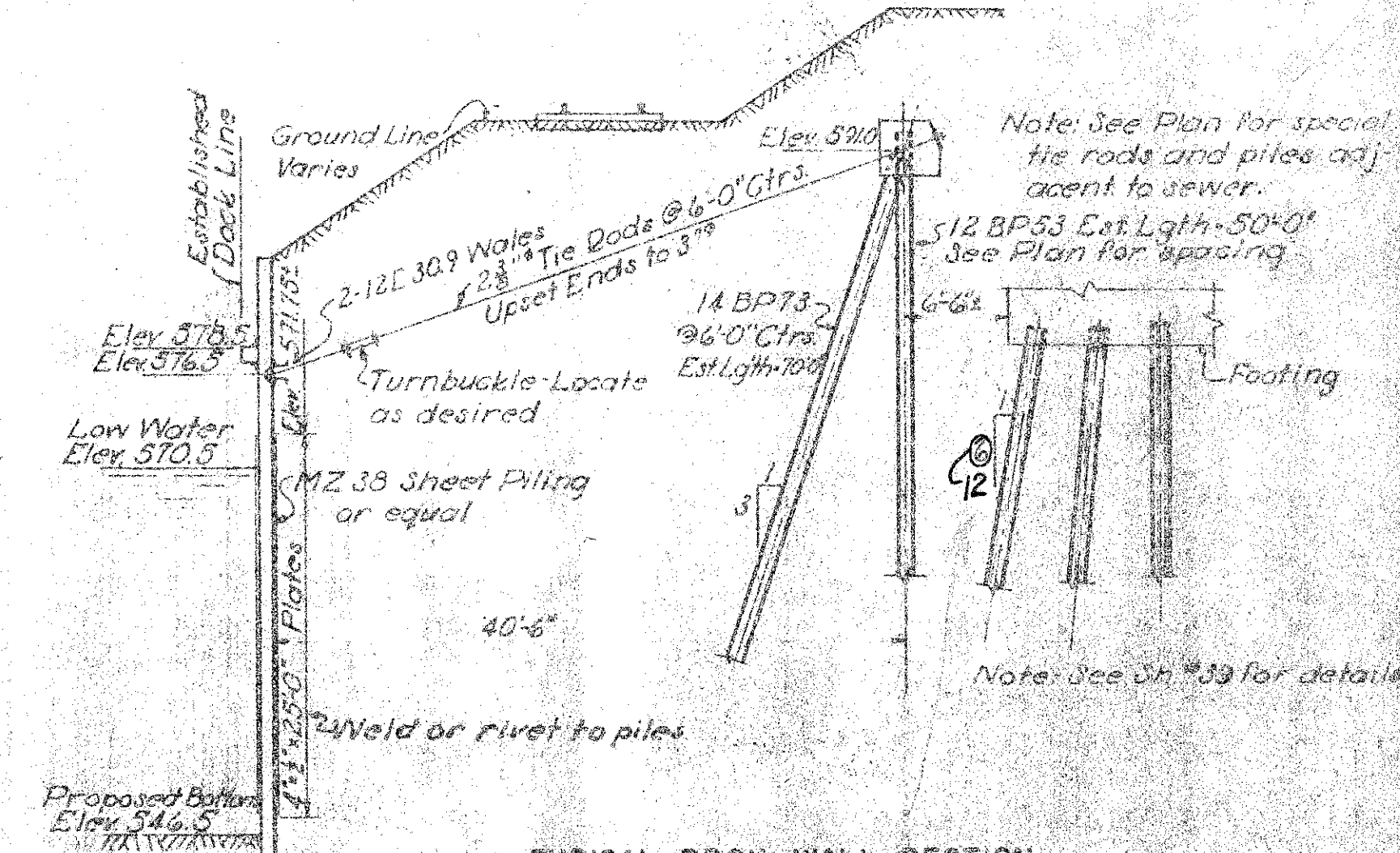
LOCATION PLAN
Scale: 1"=10'-0"



FRONT ELEVATION
Scale: 1"=10'-0"

GENERAL NOTES

All splice plates to be fitted welded in shop to structural members. All bolted connections, including anchor rods, shall have the threads jammed to form a definite lock. The concrete anchor pile cap must be constructed in sections. Bar splices for the six construction joints shown are included in the estimated quantities. Locations may be shifted to any typical position.



TYPICAL DOCK WALL SECTION
Scale: 1"=10'-0"

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT
DOCK WALL
LOCATION PLAN AND TYPICAL SECTION

CLEVELAND CUYAHOGA COUNTY OHIO

SCALE: 1"=10'-0"

DATE: 2/15/54

HOWARD, HERRICK, TOWNSEN & BERGMAN
CONSULTING ENGINEERS
CLEVELAND, OHIO

DATE: 2/15/54

REVISIONS: 1. DATE: 2/15/54

314-13 SHEET 136

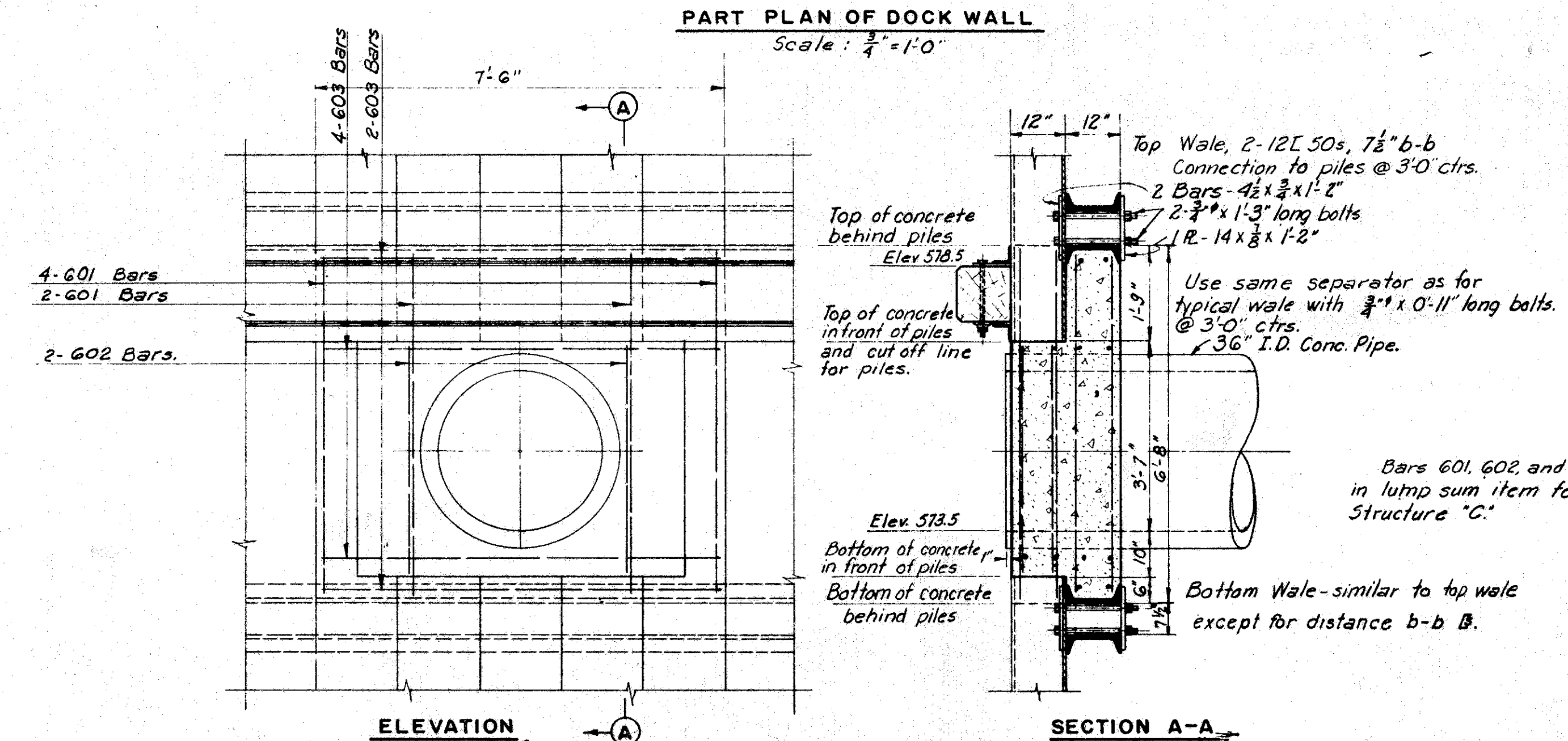
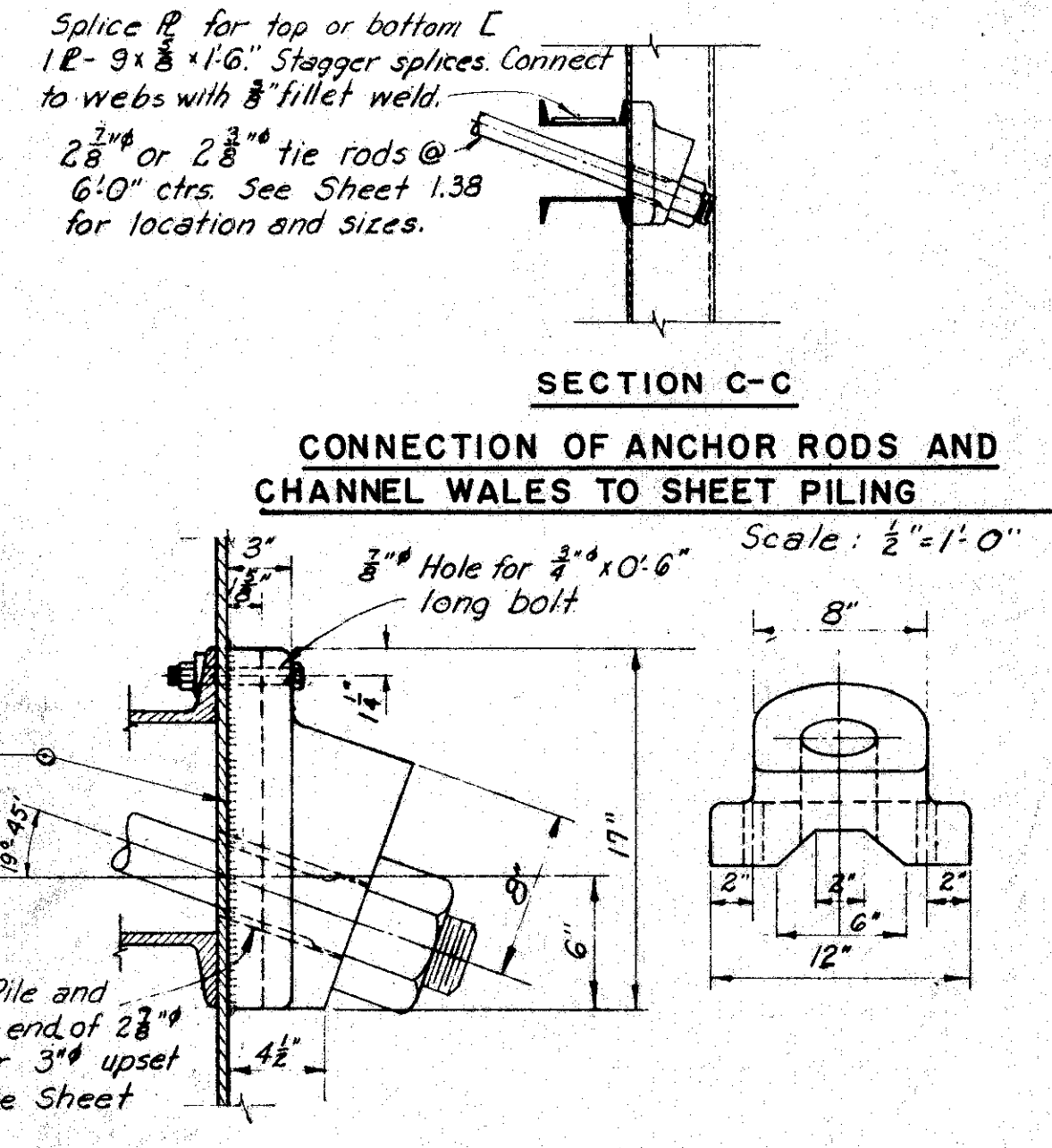
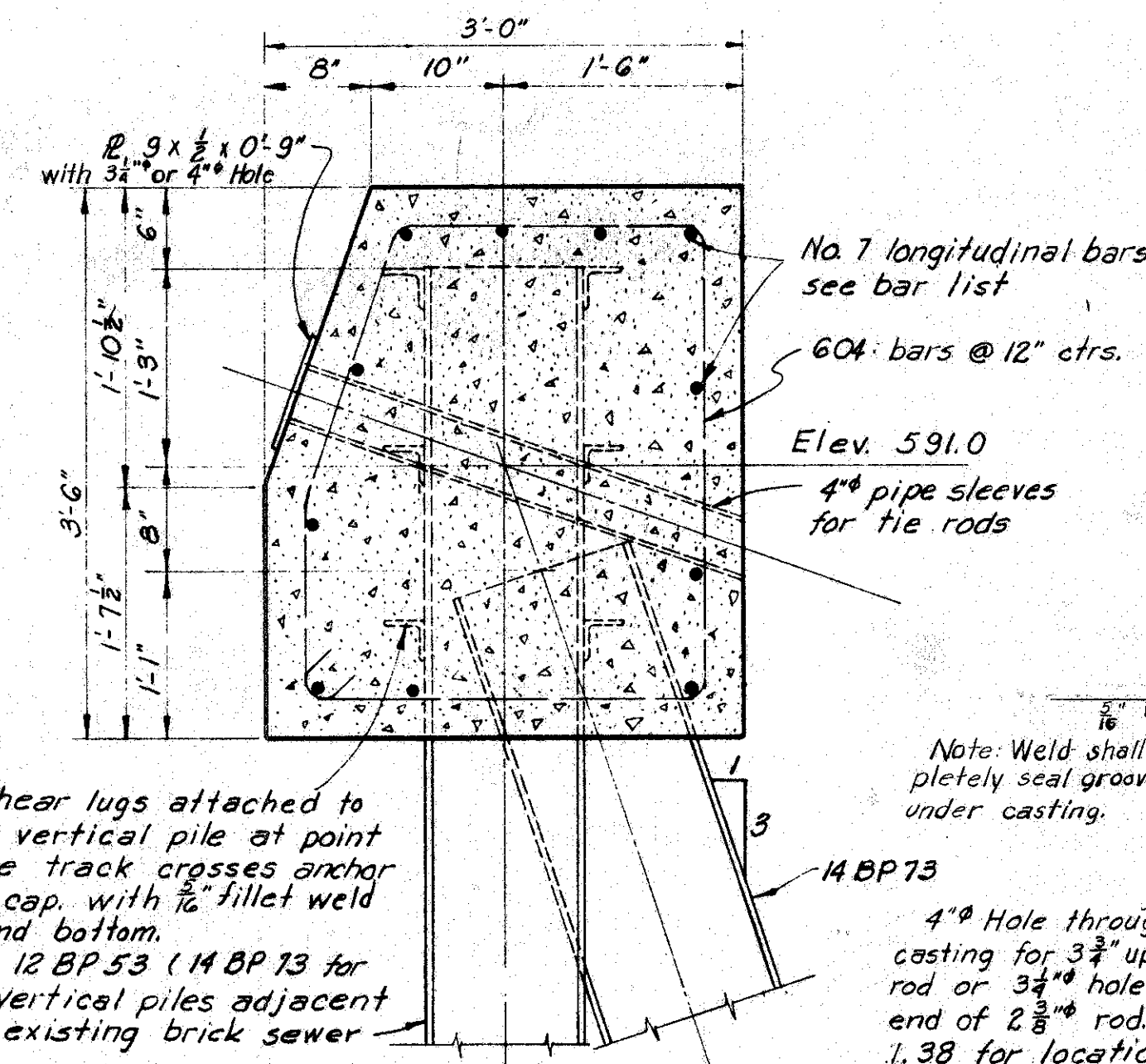
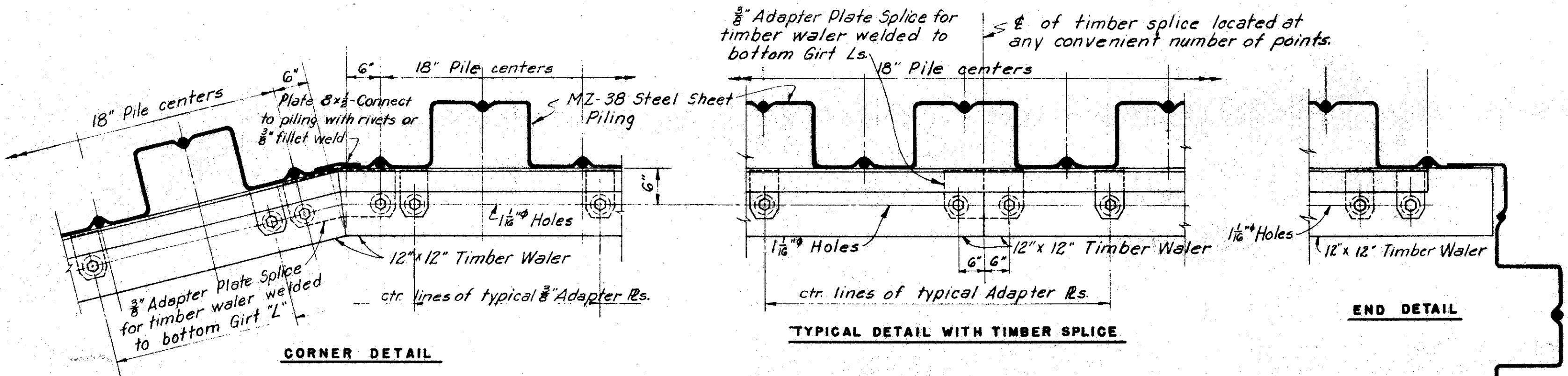
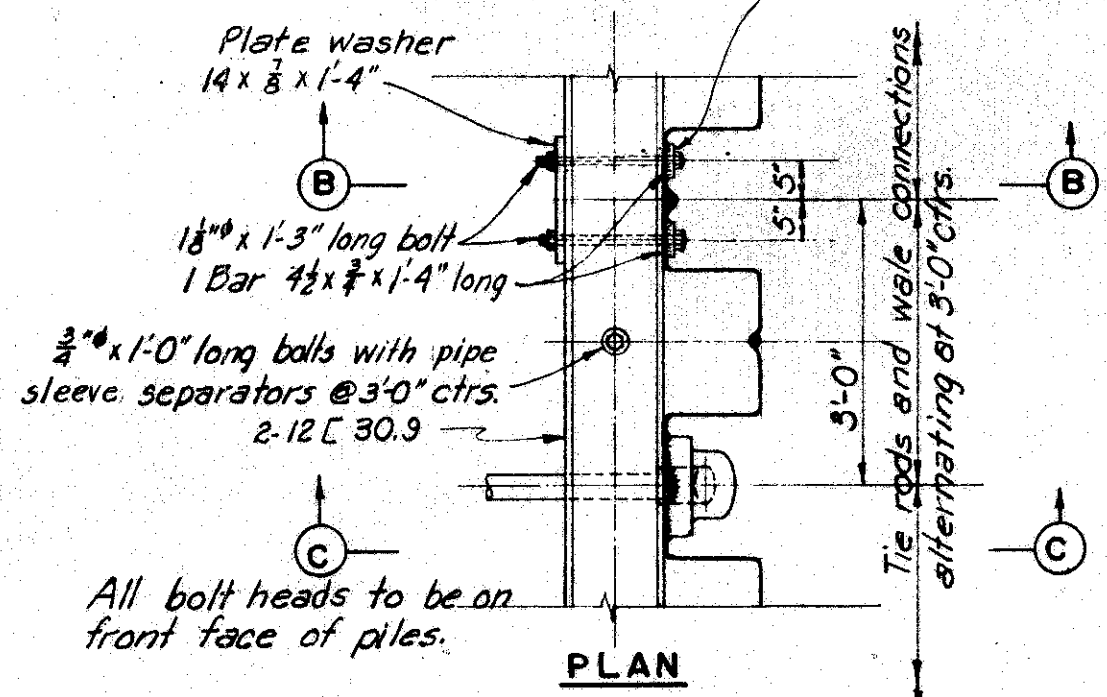
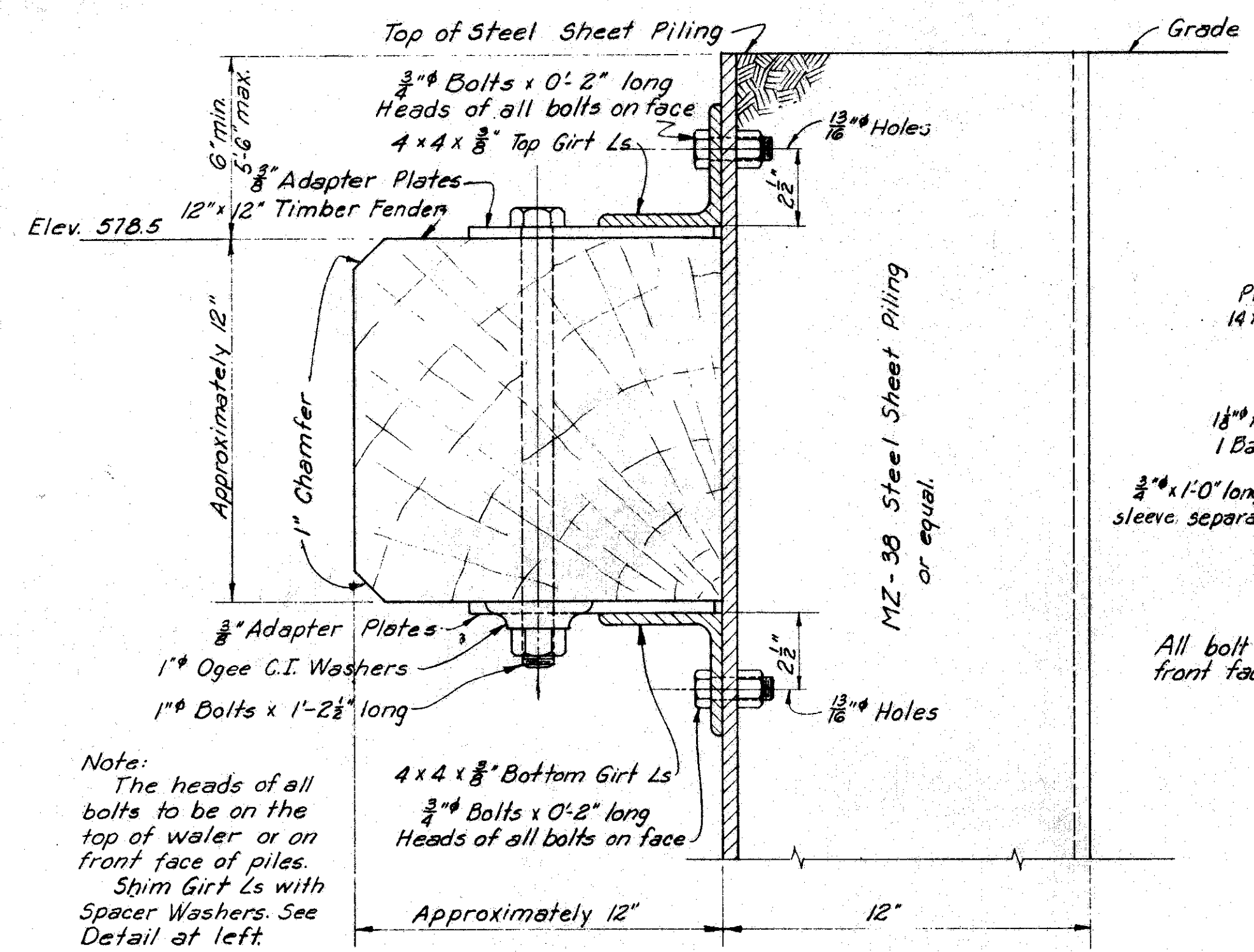
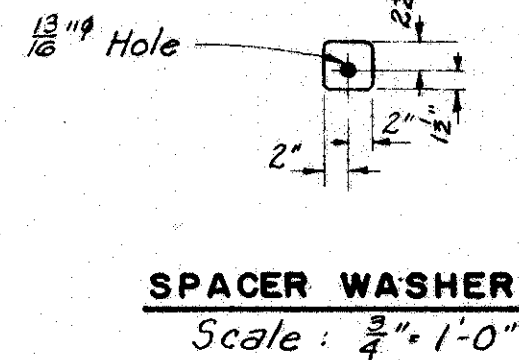
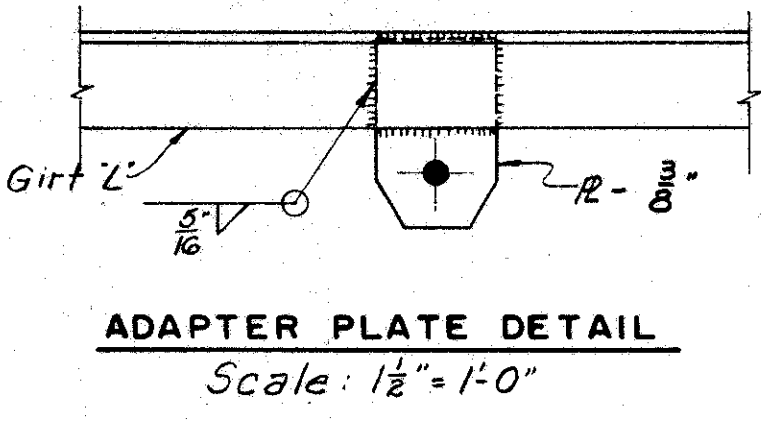
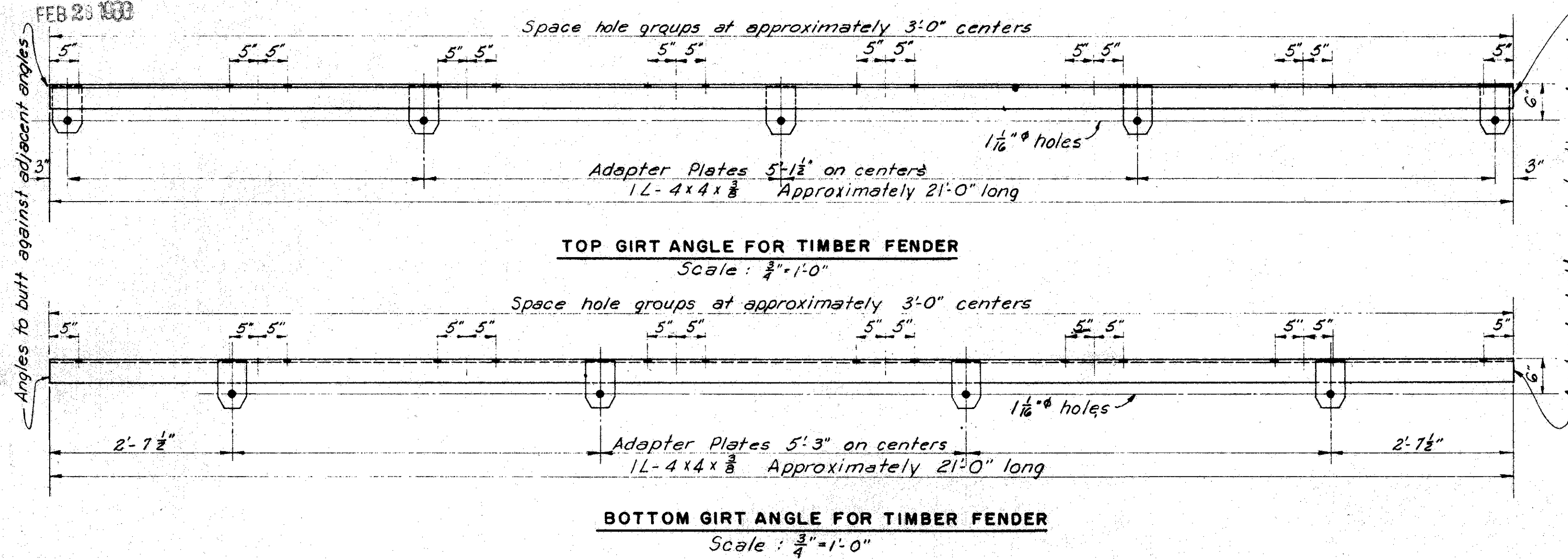
Supersedes Sheet 38
Revised anchor pile spacing - GA 2-15-55



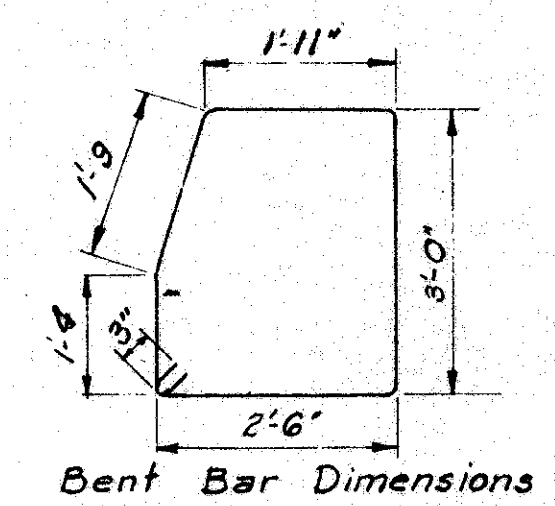
FEB 23 1953

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY-42R-17.50

Connect $\frac{3}{8}$ " Bars to piling with $\frac{3}{8}$ " continuous fillet weld



REINFORCEMENT SCHEDULE					
Mark	Size	Type	Length	No.	Total Weight
601	Str.	6'-0"	12	108	
602	Str.	4'-0"	4	24	
603	Str.	7'-0"	12	126	
604	Bent	11'-0"	198	3268	
701	Str.	17'-6"	11	393	
702	Str.	23'-6"	44	2293	
703	Str.	26'-6"	22	1282	
704	Str.	29'-6"	11	663	



Lengths for bars 701, 702, 703, 704 subject to revision and dependent on location of construction joints in anchor pile cap

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

DOCK WALL DETAILS

CLEVELAND CUYAHOGA COUNTY OHIO

SCALE: As Shown
MADE: DME DATE: 3-31-54
TRCD: DATE: CONSULTING ENGINEERS
CHK: DATE: KANSAS CITY CLEVELAND NEW YORK
914-1A SHEET 139

MICROFILMED
FEB 23 1983

**TIMBER CRIB WALL
INSTALLATION**

PREPARING BASE - The foundation or bed for the cribbing shall be firm and shall be approved by the Engineer before any cribbing is placed.

The foundation shall be sloped at right angles to the finished crib batter face.
FACE TIMBERS OR STRETCHERS - The timbers in the base tier and in alternate tiers above the base shall be as long as practicable. Preferably they shall have a minimum length of 8 feet. Joints in each tier shall stagger with joints in adjacent tiers.

Care shall be exercised in the erection of cribs to produce a true and even face built to line as shown on the plans. All face timbers shall be set parallel to grade.

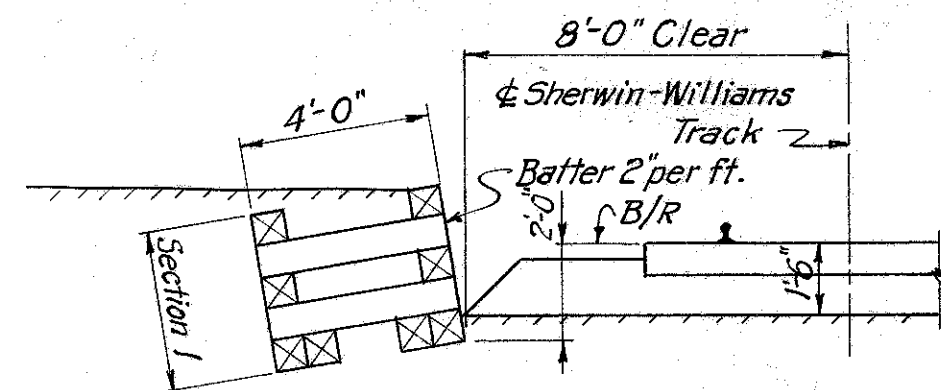
TIES OR HEADERS - Ties shall be anchored to the face by framing, drift bolting or other approved means.

Ties should be anchored in the fill to stretchers fastened to them at right angles by drift bolts or other suitable means.

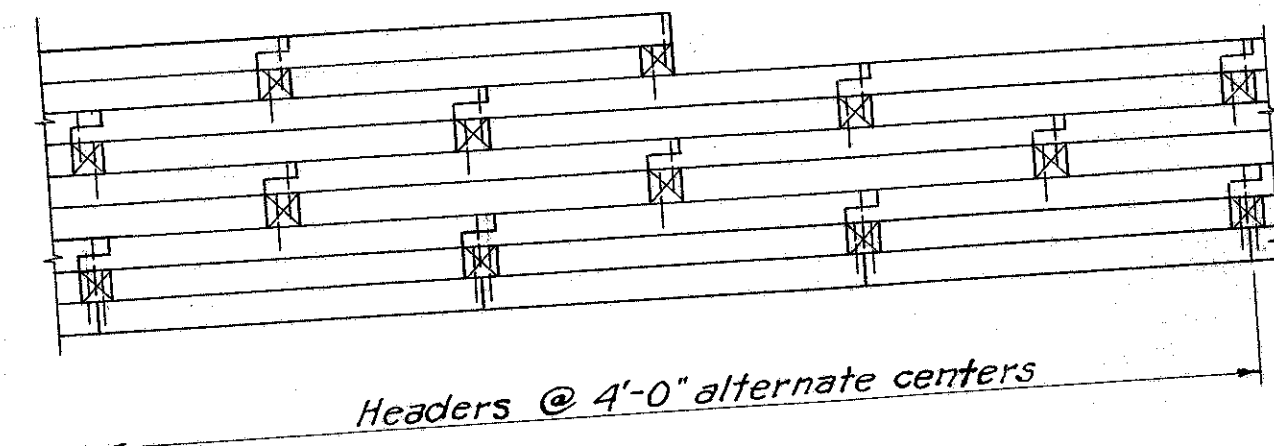
FASTENING - Each successive tier of open face cribbing shall be drift bolted together at each tie, using one 3/4" drift bolt at each intersection where no splice occurs or at lap joints and two 3/4" drift bolts at butt joints. Drift bolts shall be long enough to extend through one tier and at least 3/4 of the distance into the next tier. Stagger drift bolts from tier to tier.

FILLING - The filling of the interior of the crib shall follow closely the erection of the successive tiers of units and at no time shall the wall be laid up higher than 3 feet above the back filled portion.

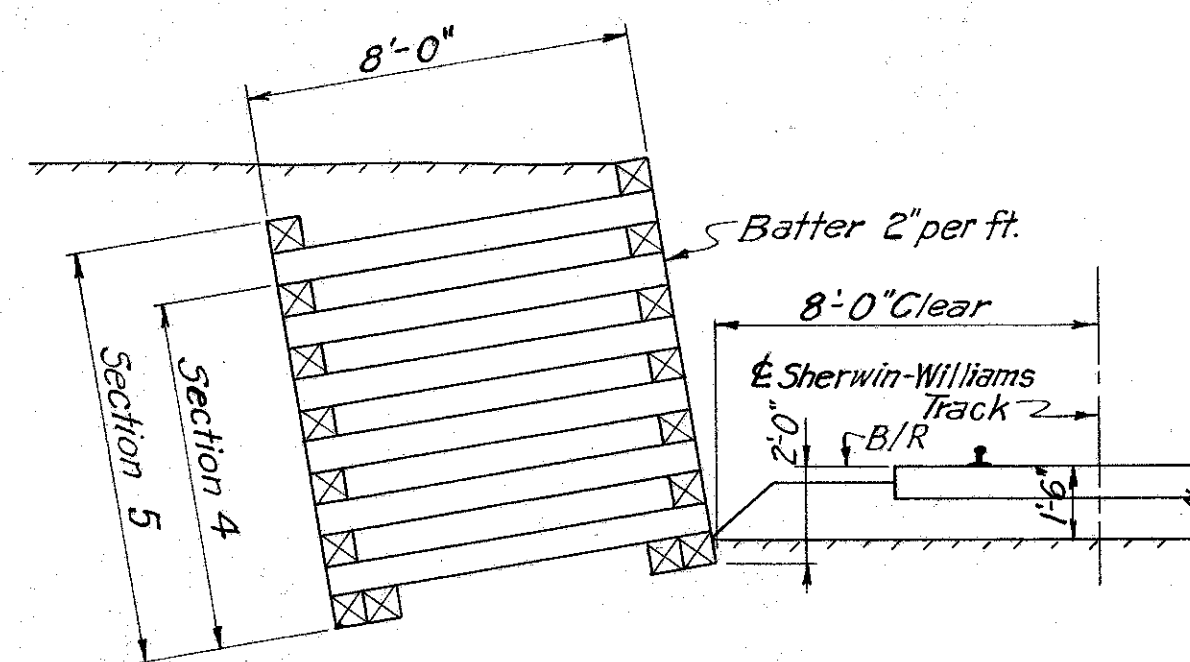
In open face cribbing a layer of hand-placed stone shall be placed in back of the front members of the cribbing to prevent loss of fill material through the openings.



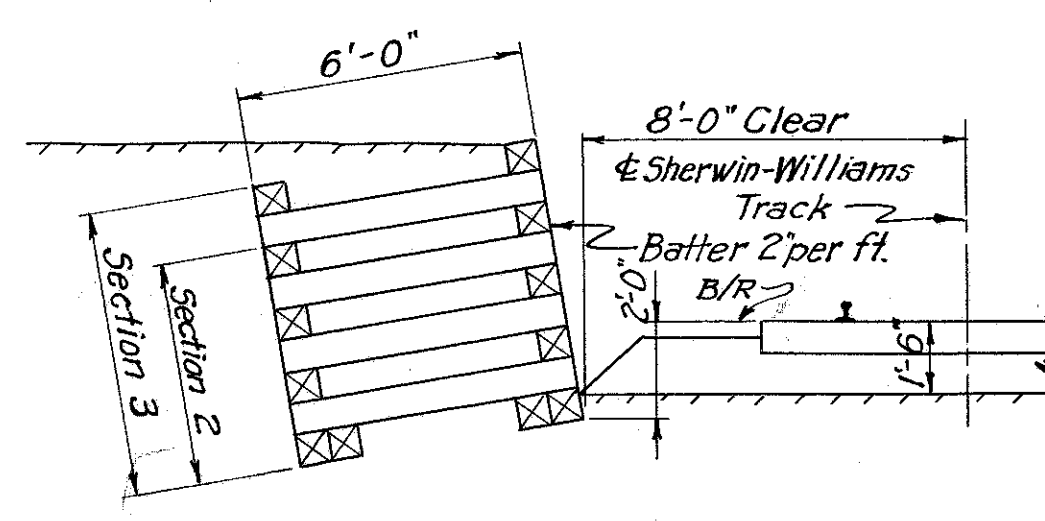
SECTION 1
Scale 1/4" = 1'-0"



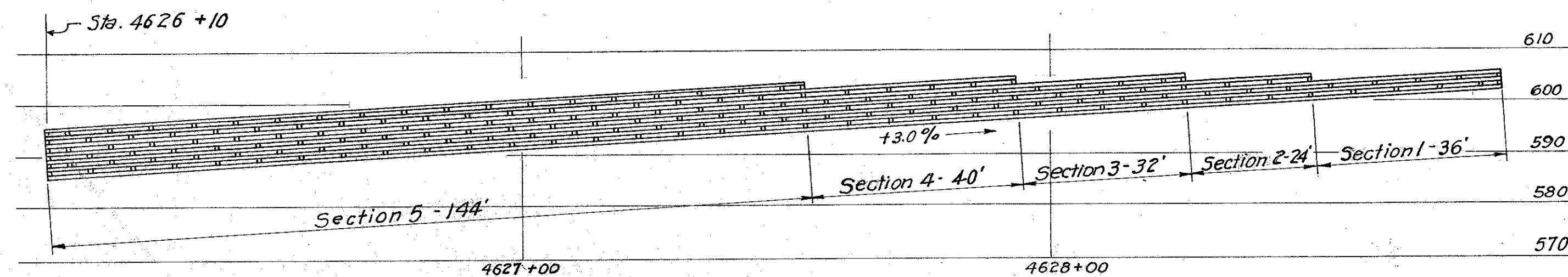
SPlicing DETAIL
Scale 1/4" = 1'-0"



SECTIONS 4 AND 5
Scale 1/4" = 1'-0"



SECTIONS 2 AND 3
Scale 1/4" = 1'-0"



FRONT ELEVATION
Scale 1" = 20'-0"

Note: All timbers are 8" x 8"

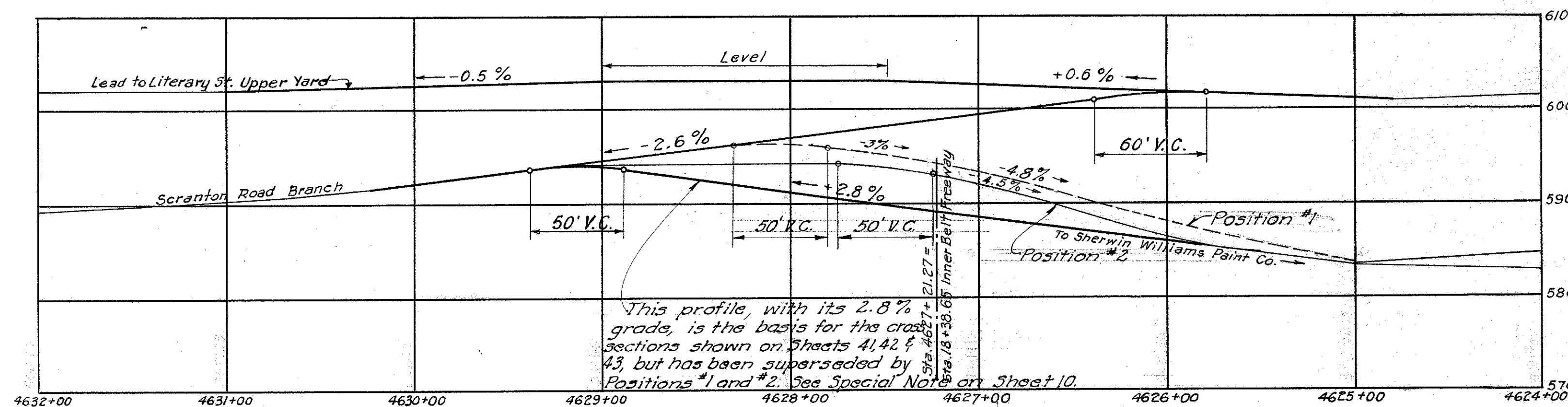
TEMPORARY TIMBER CRIB WALL

For location of crib wall in plan, see Sheet 10.

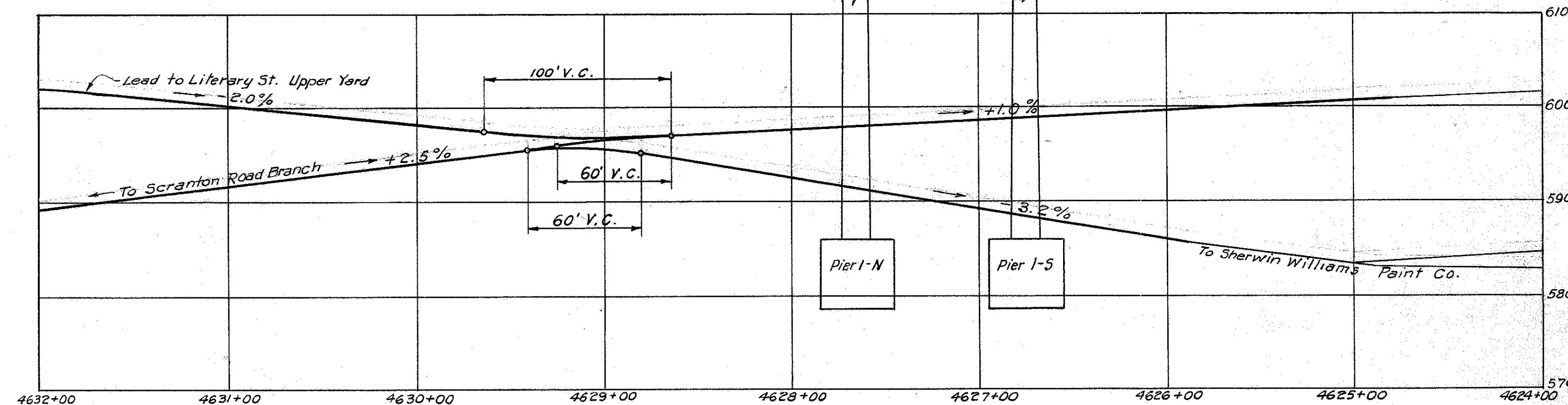
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO	UI 1057 (4)	

40
43

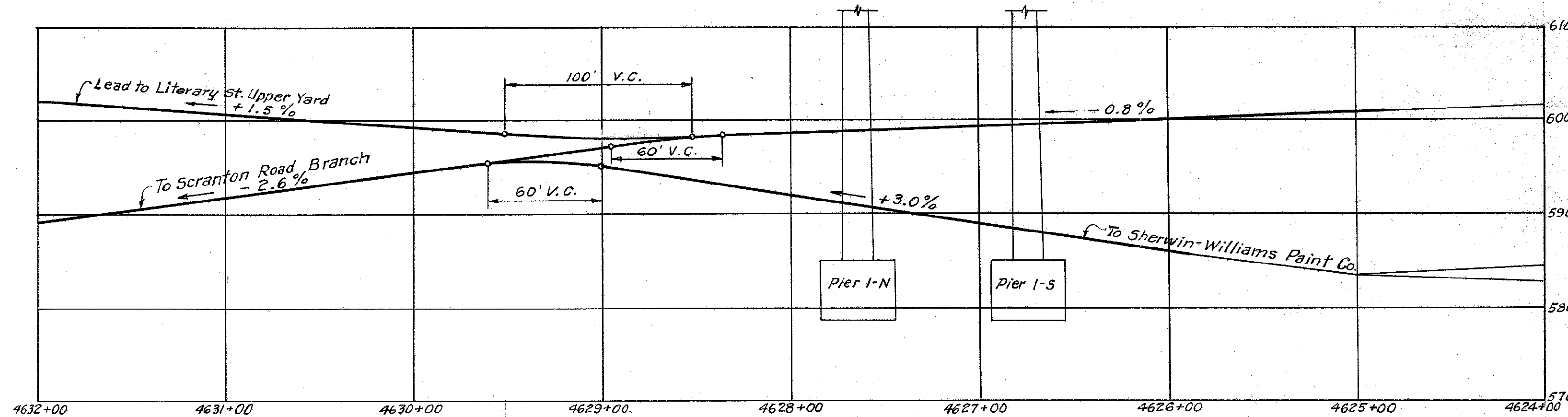
CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
C U Y - 4 2 R - 1 7.50



SUBGRADE PROFILES - PHASE I - CONSTRUCTING DOCKWALL



SUBGRADE PROFILES - PHASE II - CONSTRUCTION OF PIERS I-N AND I-S



SUBGRADE PROFILES - PHASE III - PERMANENT TRACK LOCATIONS

NOTE (Reference Phase I)
With tracks in position #1, construct entire dockwall and westerly 150'± of anchor piles. Install tie rods in easterly 50'± of dockwall to within 10'± of track in position #1.
With tracks in position #2, install easterly 50'± of anchor piles and complete tie rod connections.
If necessary, support the easterly 50'± of dockwall by temporary shoring.

Note:
Subgrade profiles are shown 1'-0" below base of rail elevations given on Erie Railroad Company drawings D-194, D-195 and D-196 revised Aug. 13, 1954.
For track locations in plan see Sheet 10.
For cross sections parallel to & proposed Central Viaduct see Sheets 41, 42 and 43.
Subgrade Profile Scale Hor. 1" = 50'-0" Vert. 1" = 10'-0"

PART 2

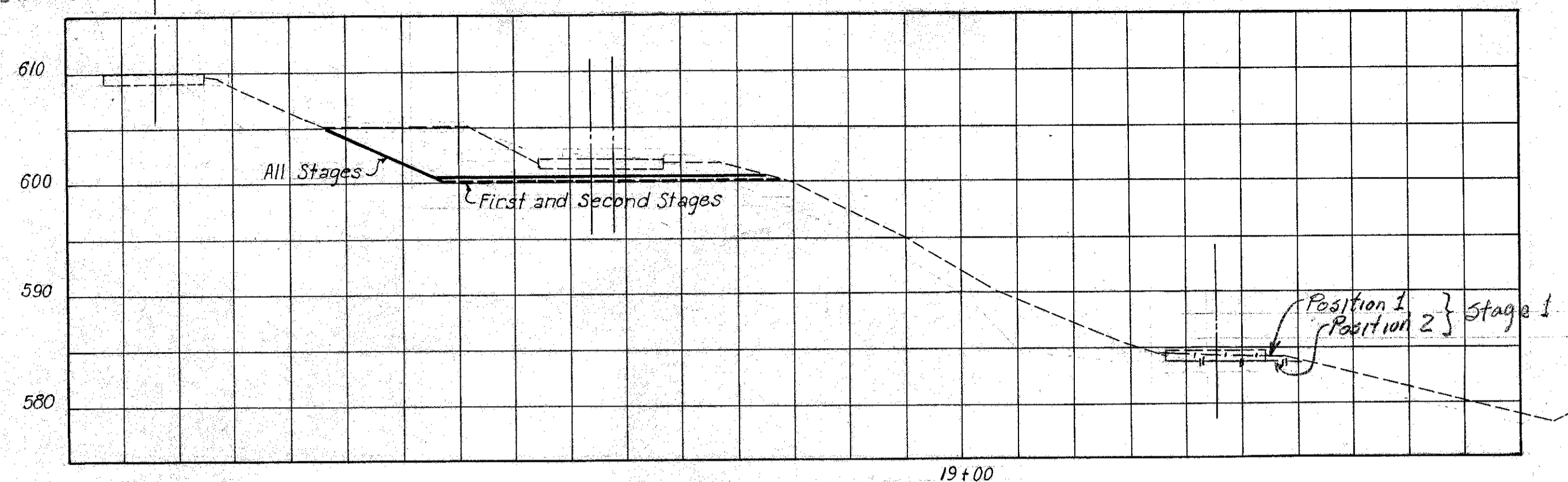
U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT
BR. NO.
SUBGRADE PROFILES AND
TEMPORARY TIMBER CRIB DETAILS
CLEVELAND CUYAHOGA COUNTY OHIO
SCALE: As Shown
MADE D.L.C. DATE 8-30-54
TRCD 273 DATE 8-30-54
CKD J.G.S. DATE 9-1-54
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK
914-IA SHEET 1. 40

MICROFILMED
FEB 23 1983

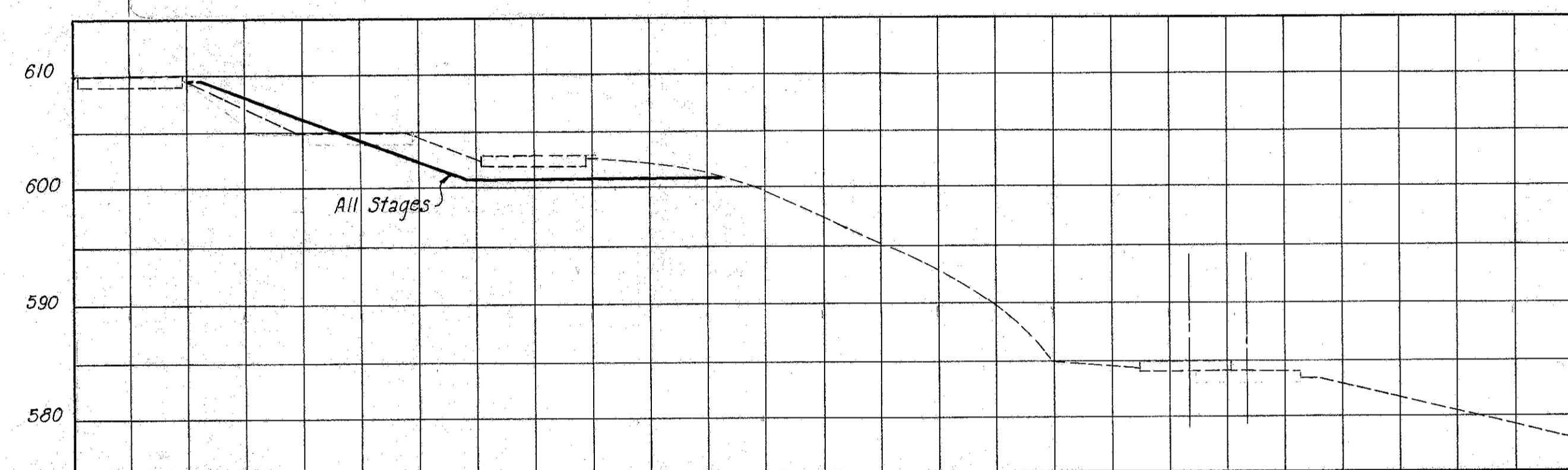
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO	UI 1057 (4)	

41
43

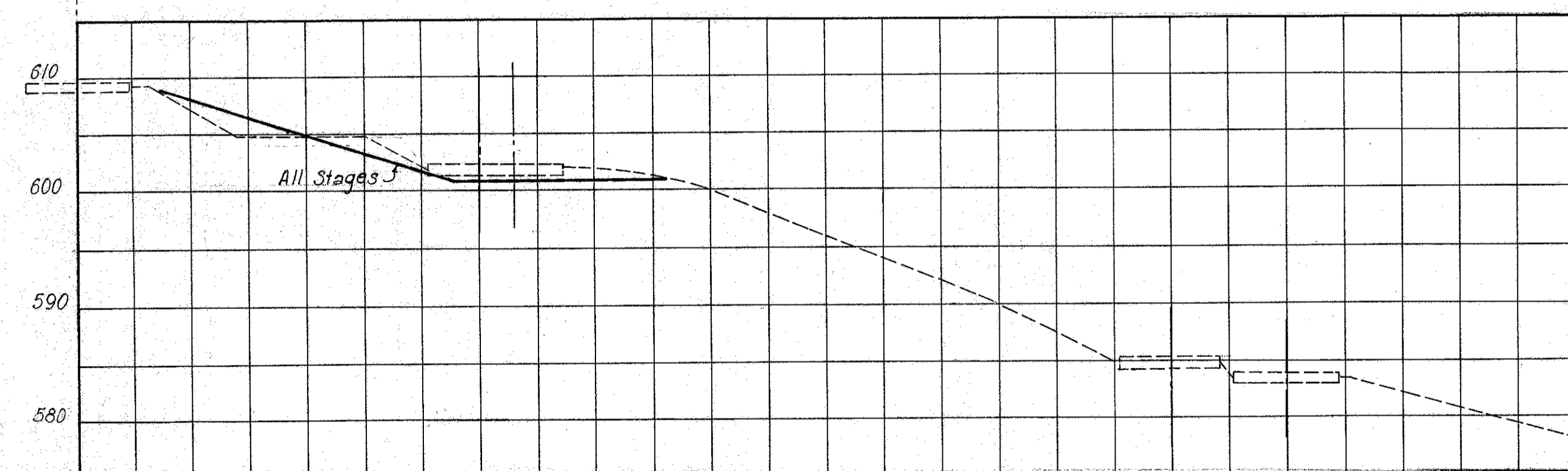
CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUI - 42R - 17.50



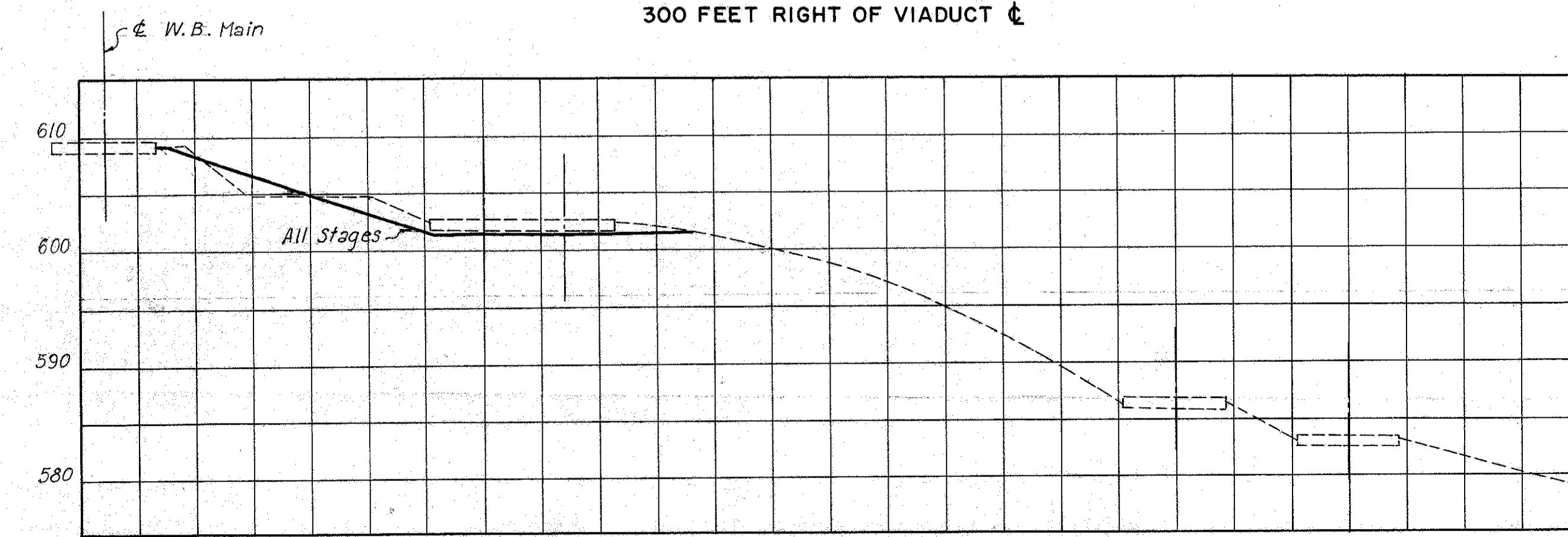
200 FEET RIGHT OF VIADUCT ☉



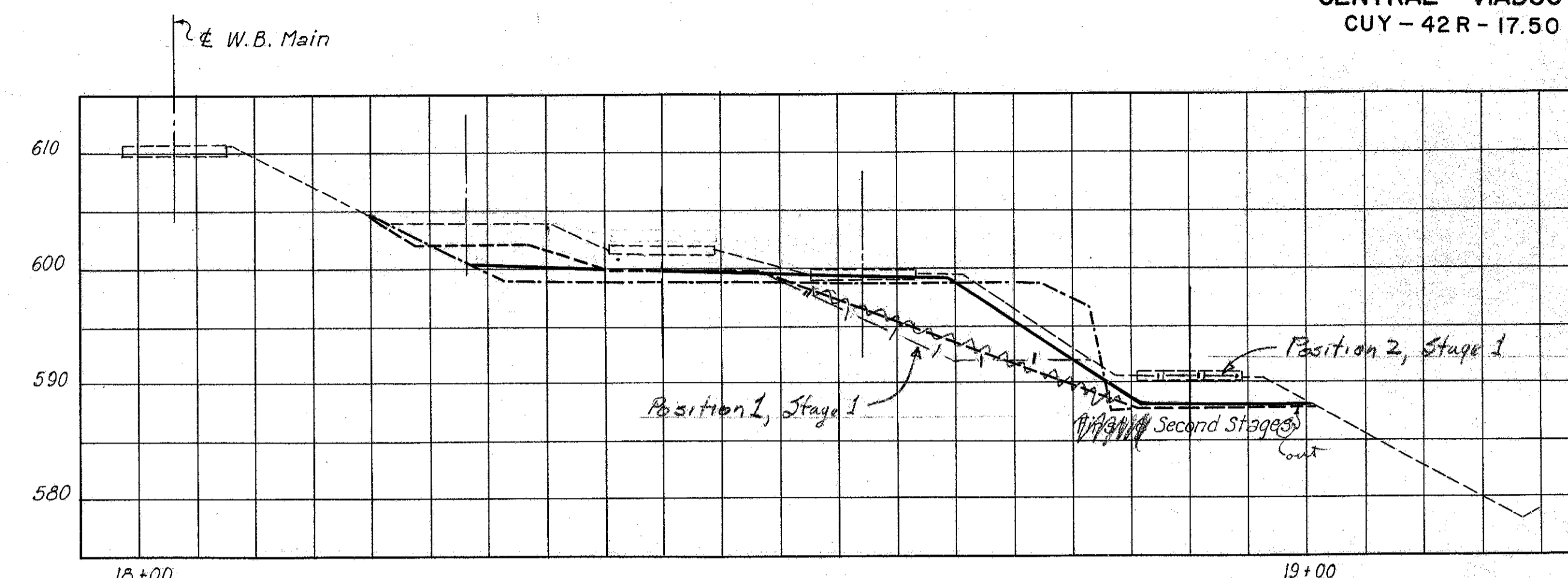
250 FEET RIGHT OF VIADUCT ☉



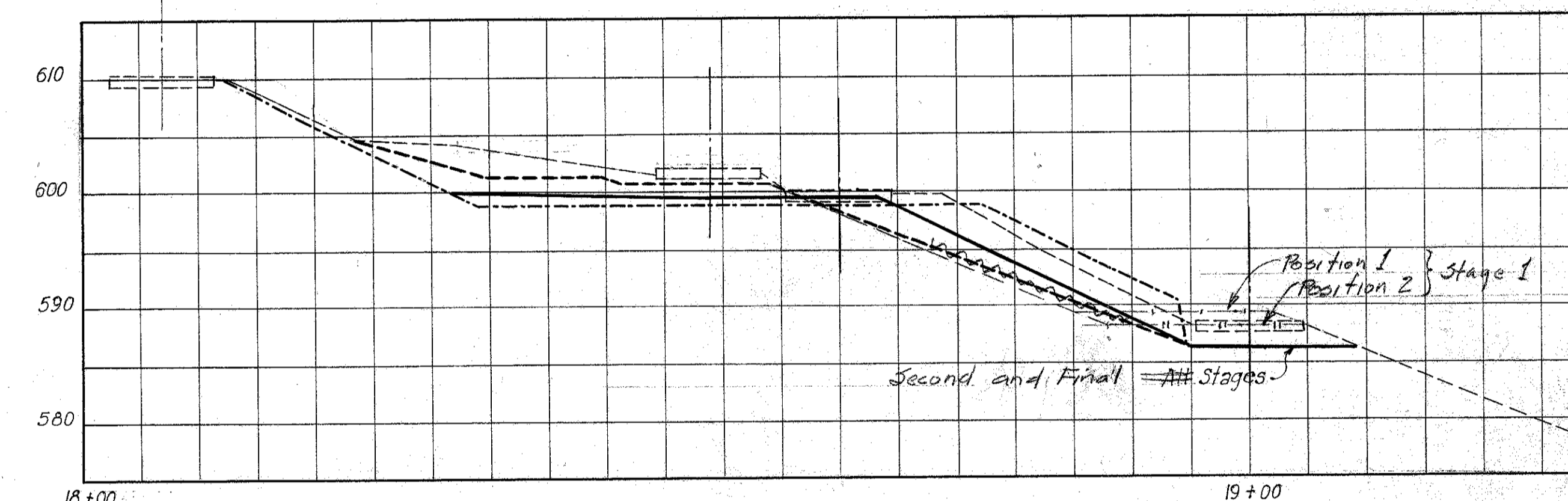
300 FEET RIGHT OF VIADUCT ☉



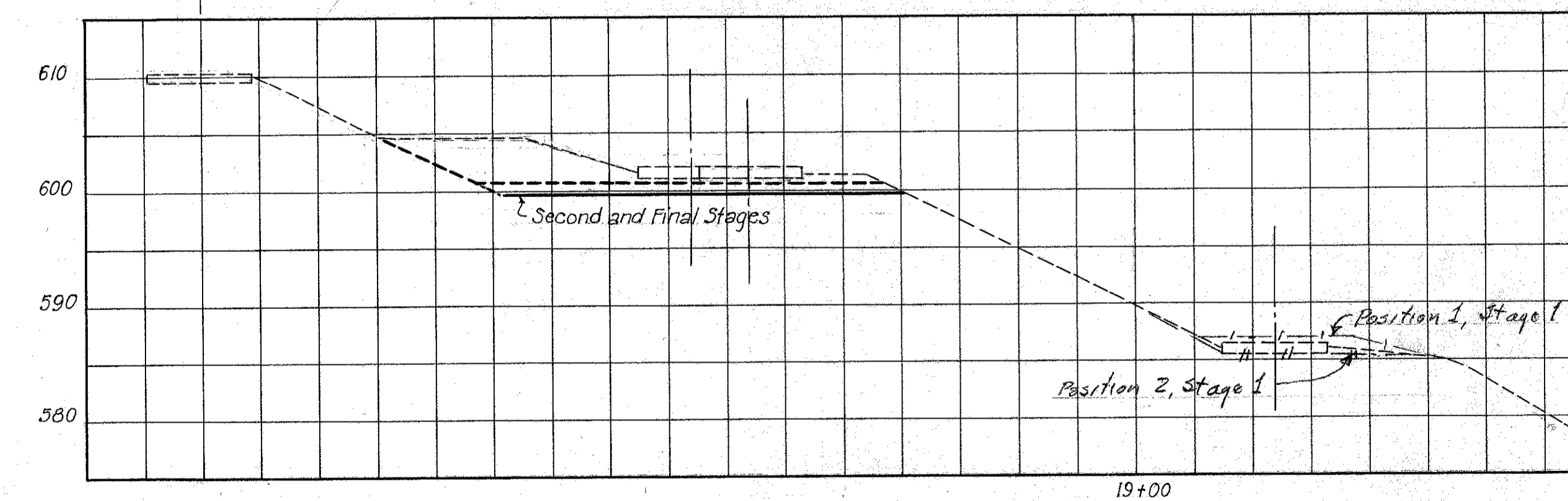
350 FEET RIGHT OF VIADUCT ☉



50 FEET RIGHT OF VIADUCT ☉



100 FEET RIGHT OF VIADUCT ☉



150 FEET RIGHT OF VIADUCT ☉

LEGEND
 Position 1 - - - - - Original ground line
 Position 2 - - - - - First stage - build anchor and dockwall
 - - - - - Second stage - shift tracks to build footing
 ——— Final condition

Note:
 Original ground line as shown by Erie Railroad Co.
 Track Cross Sections Inner Belt Freeway Viaduct
 at M.P. 1.58 July 7, 1954.
 For track locations in plan see Sheet 10.
 For profiles at ☉ of tracks see Sheet 40.

PENCILED REVISIONS 11-15-54

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

CROSS SECTIONS FOR
CONSTRUCTION IN ERIE RAILROAD YARD

CLEVELAND CUYAHOGA COUNTY OHIO

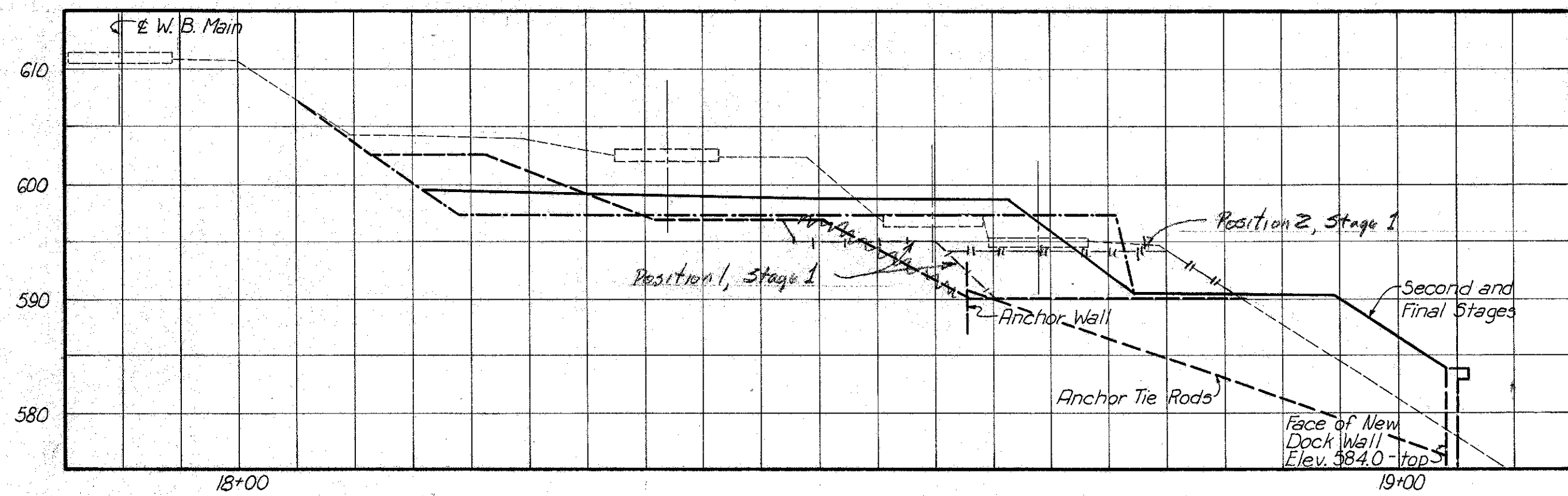
SCALE: 1" = 10' 0"
 MADE U.G.S. DATE 8-25-54 HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 TRCD. A.H. DATE 8-20-54 CONSULTING ENGINEERS
 CKD U.G.S. DATE 8-31-54 KANSAS CITY CLEVELAND NEW YORK
 914-1A SHEET 1.41

MICROFILMED
FEB 25 1963

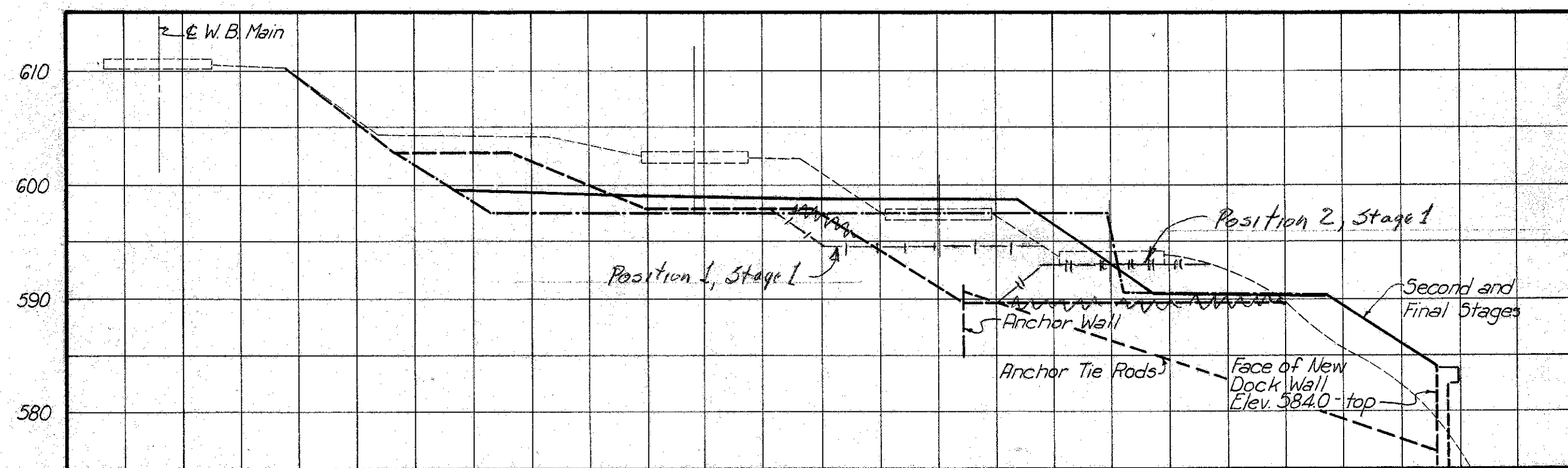
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO	UI 1057 (4)	

42
43

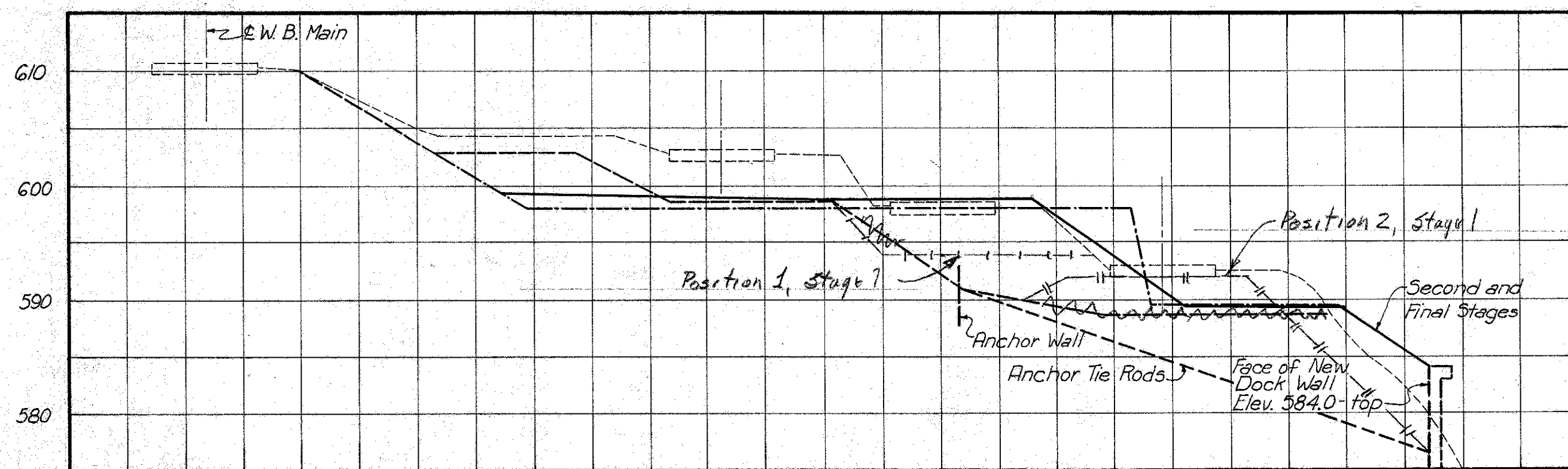
CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY-42R-17.50



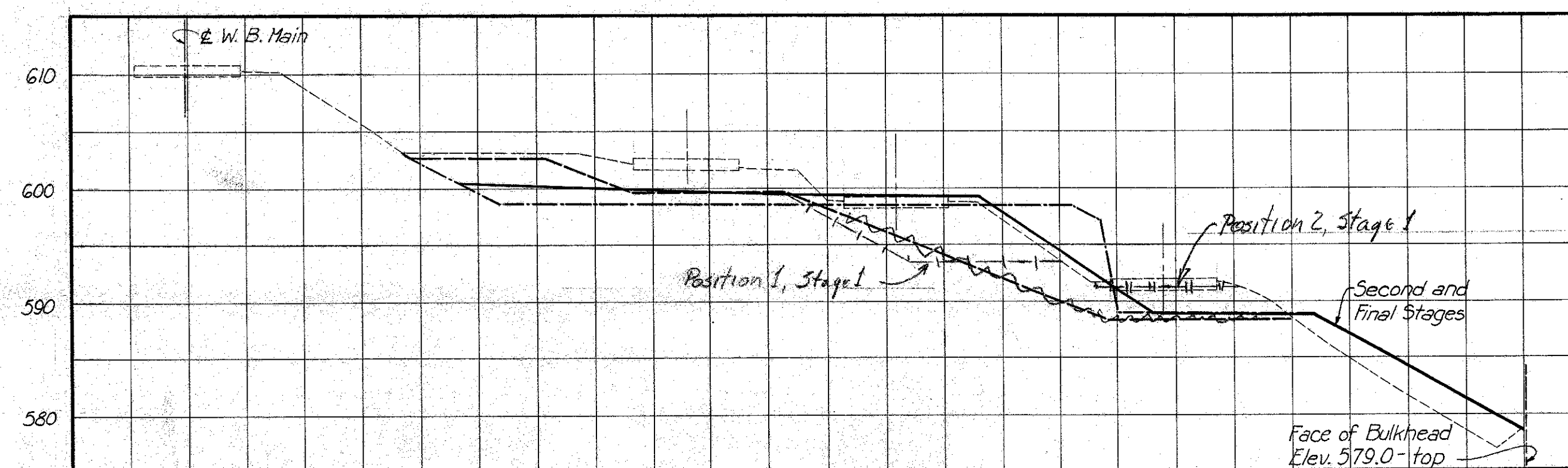
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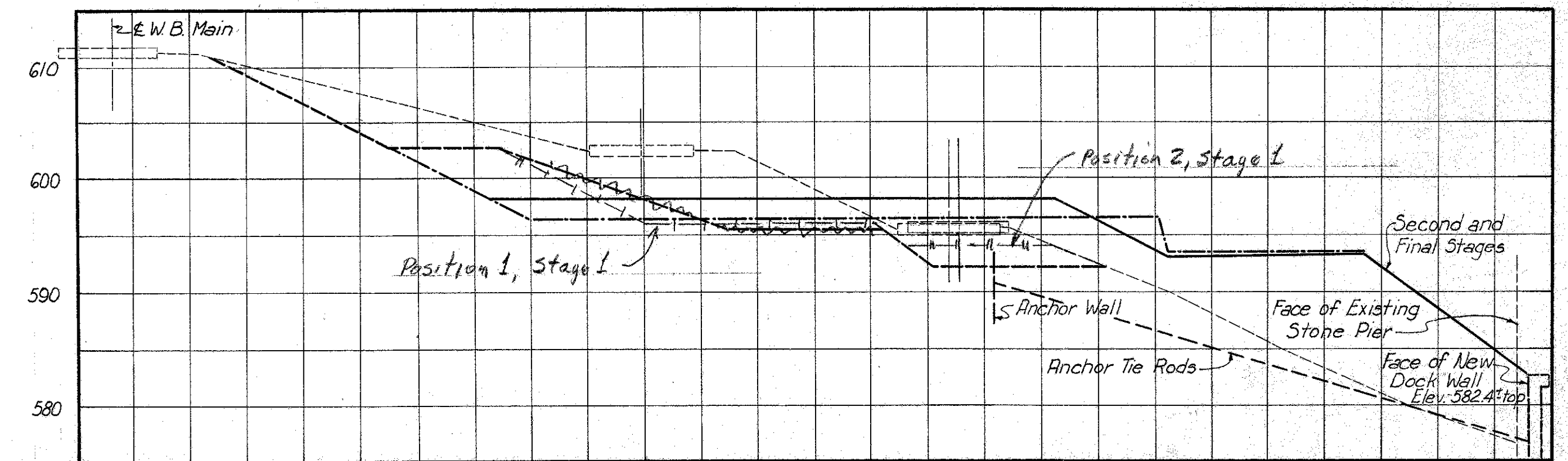
25 FEET LEFT OF VIADUCT



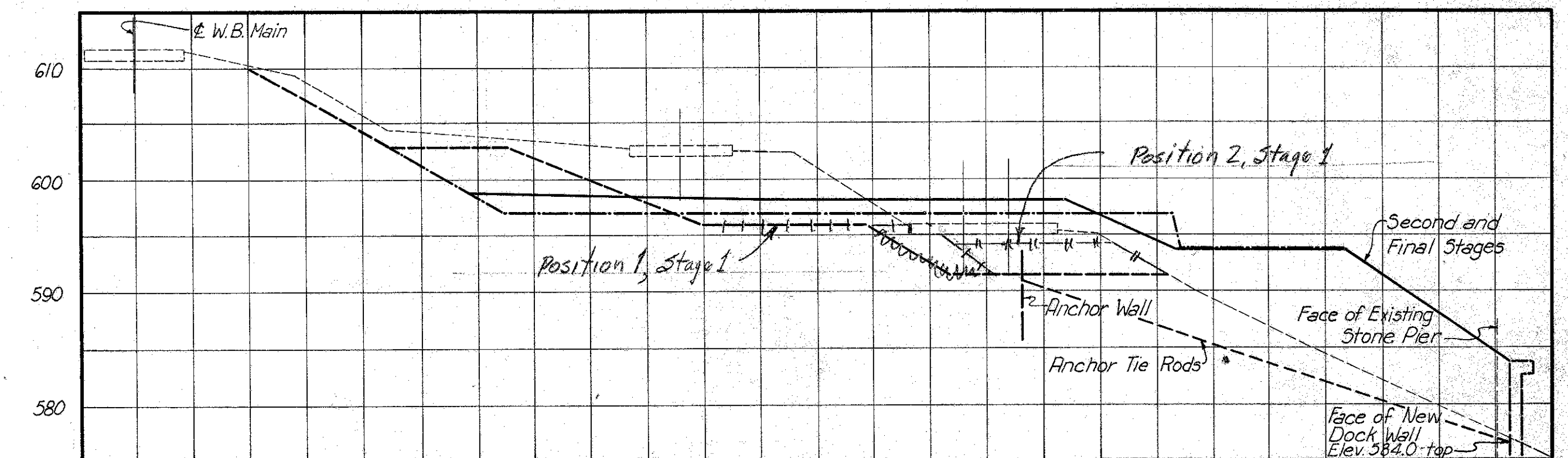
AT VIADUCT



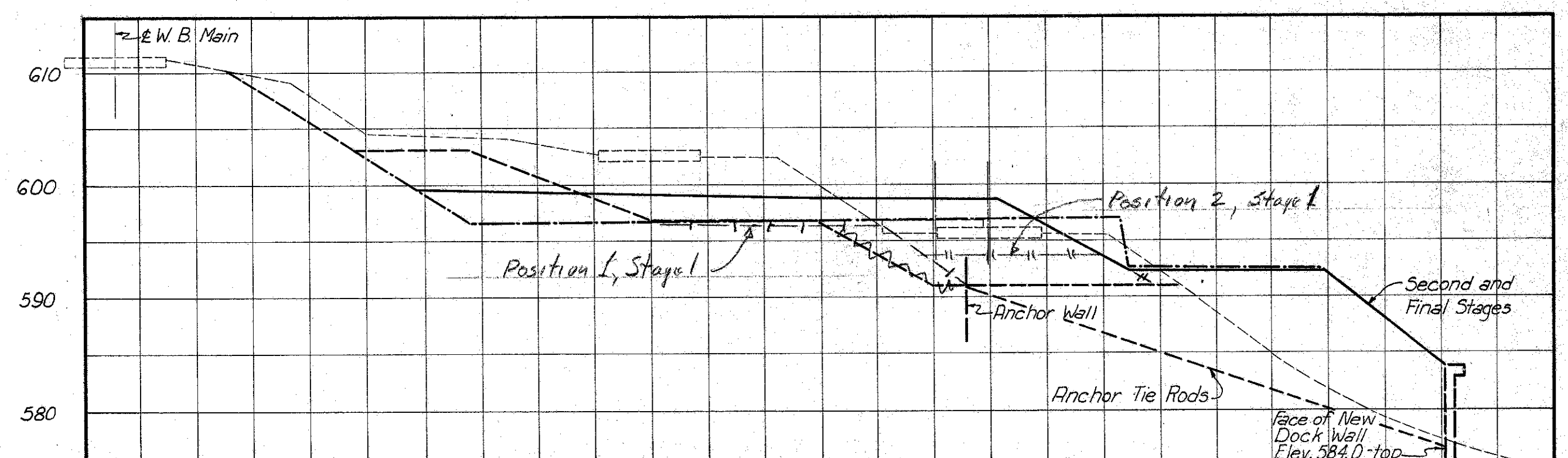
25 FEET RIGHT OF VIADUCT



125 FEET LEFT OF VIADUCT



100 FEET LEFT OF VIADUCT



75 FEET LEFT OF VIADUCT

Position 1 ————
Position 2 ————

LEGEND
Original ground line
First stage - build anchor and dockwall
Second stage - shift tracks to build footing
Final condition

Note: See Sheet 41.

PENCILLED REVISIONS 11-15-54

For detail of Existing Pier, see Sheet 9.

For detail of Existing Pier, see Sheet 9.

PART 2

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

CROSS SECTIONS FOR
CONSTRUCTION IN ERIE RAILROAD YARD

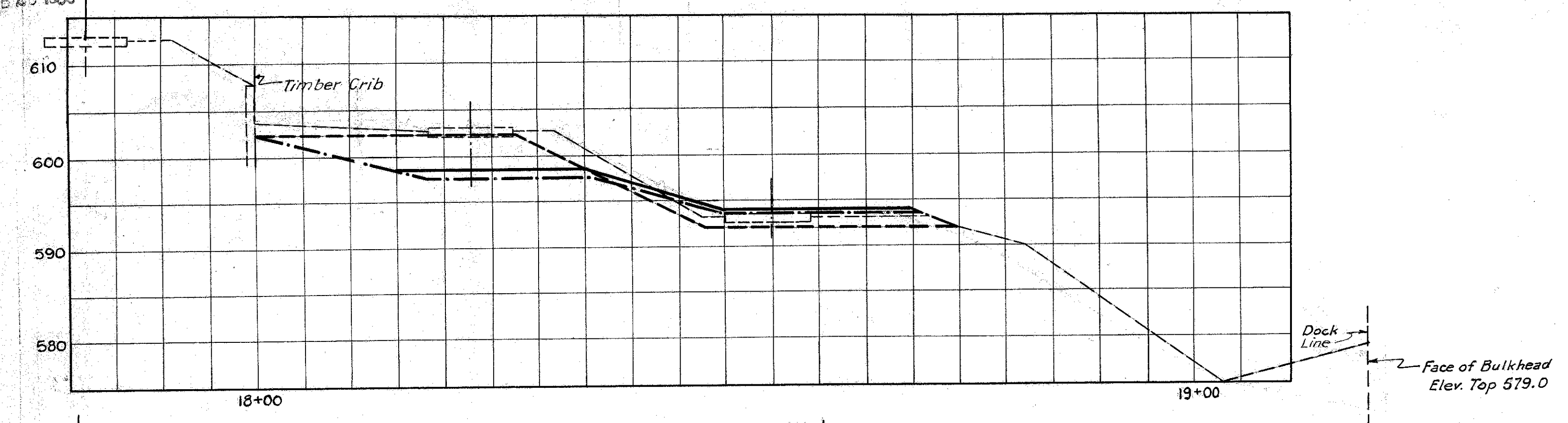
CLEVELAND CUYAHOGA COUNTY OHIO

SCALE 1"=10'-0"
MADE I.G.S. DATE 8-25-54 HOWARD, NEEDLES, TAMMEN & BERGENDOFF
TRCD I.A.M. DATE 8-30-54 CONSULTING ENGINEERS
CKD I.G.S. DATE 8-31-54 KANSAS CITY CLEVELAND NEW YORK
914-1A SHEET 1.42

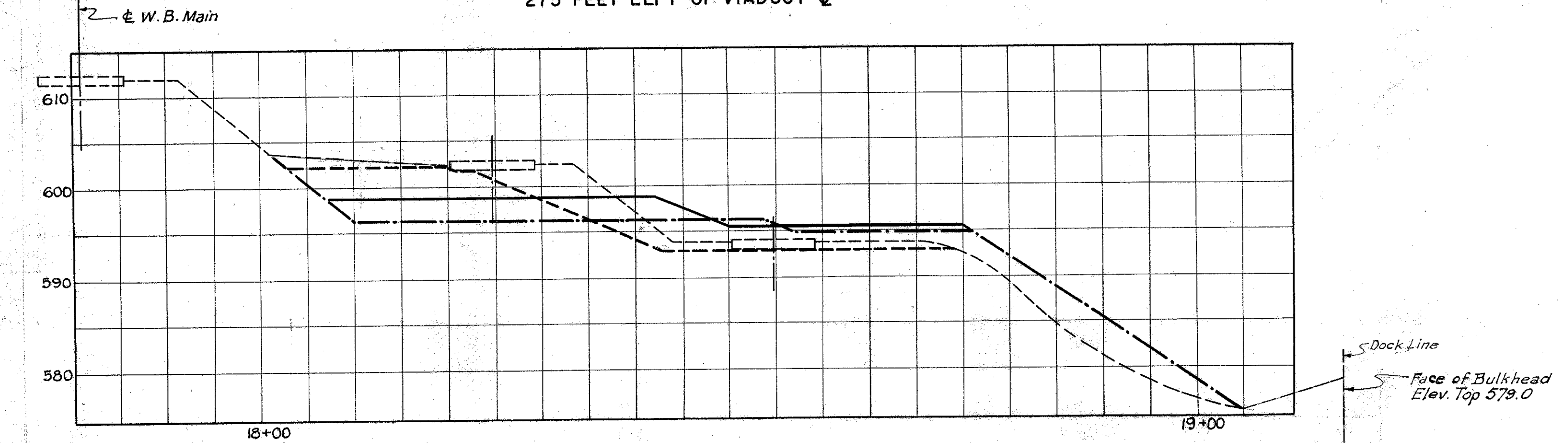
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2	OHIO	UI 1057 (4)		43

CUYAHOGA COUNTY
CITY OF CLEVELAND
INNER BELT FREEWAY
CENTRAL VIADUCT
CUY-42R-17.50

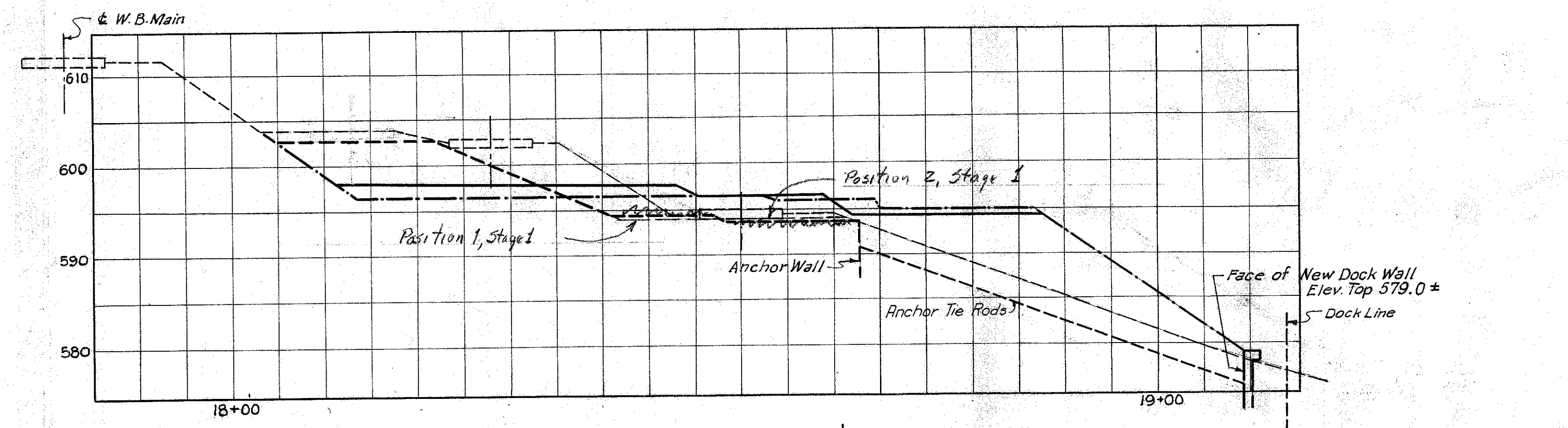
PROFILME
B 23 1953



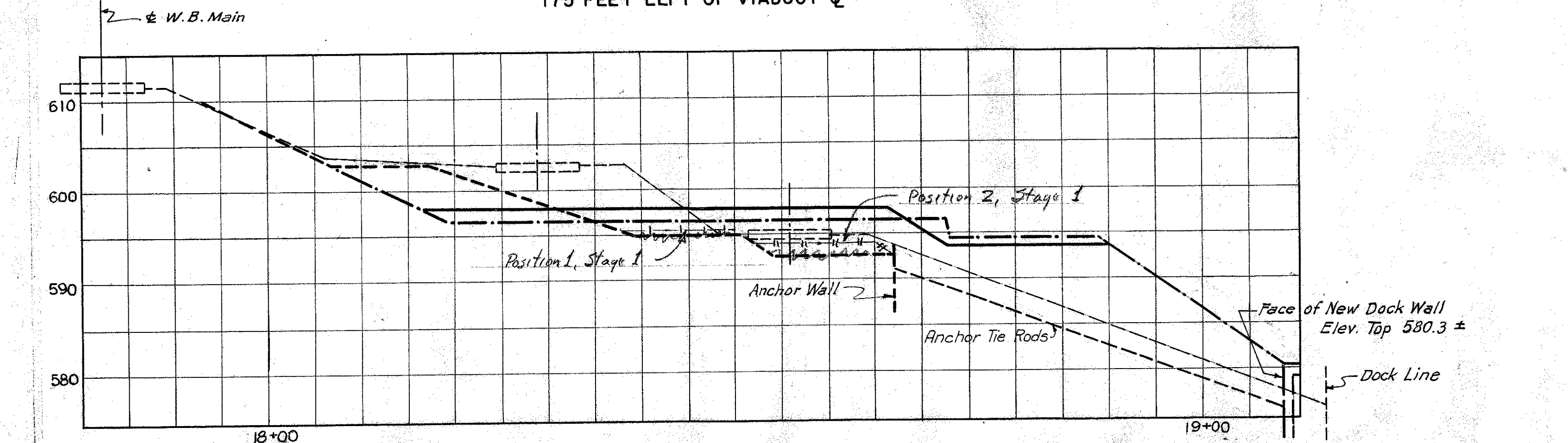
275 FEET LEFT OF VIADUCT CL



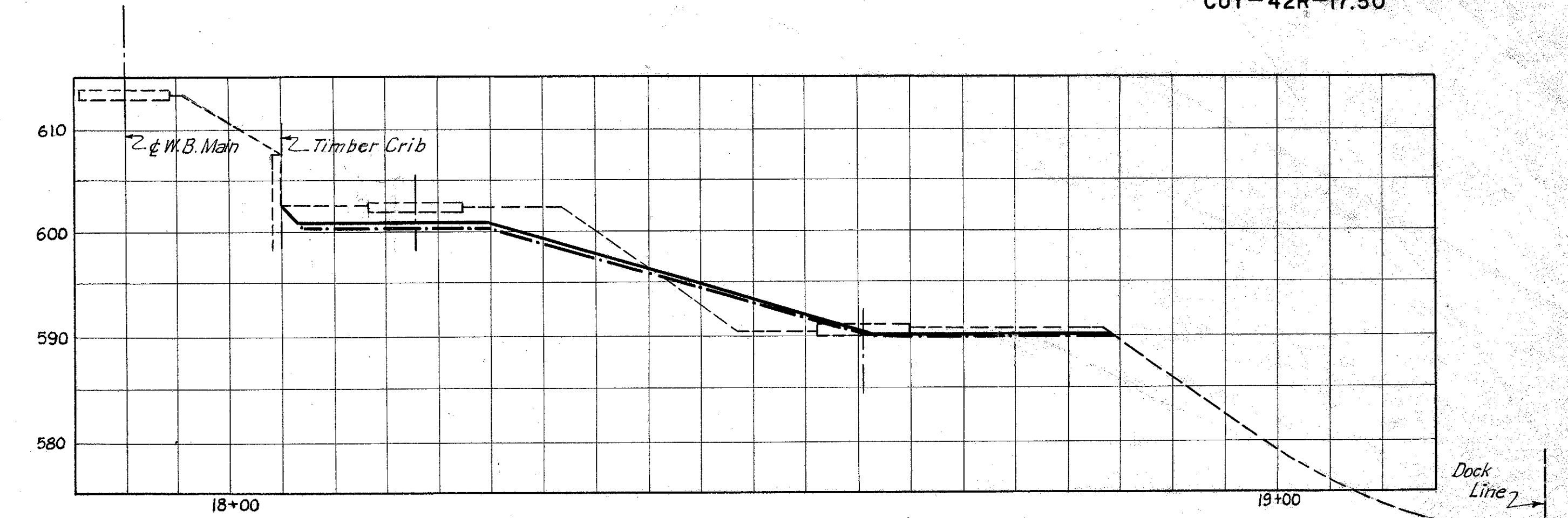
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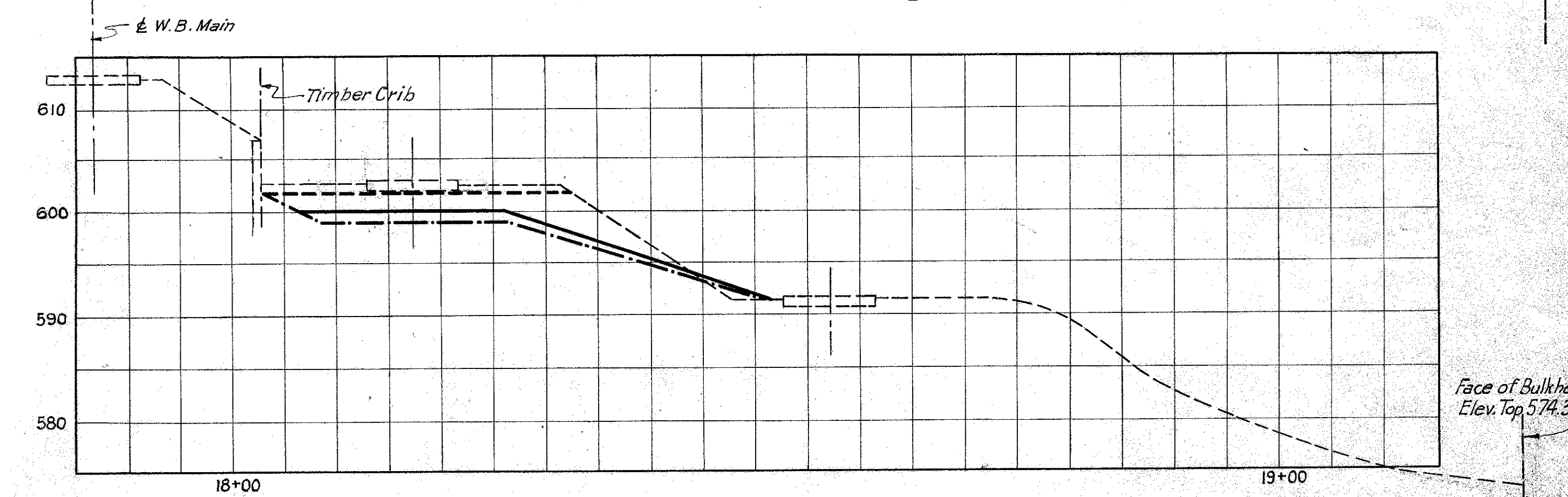
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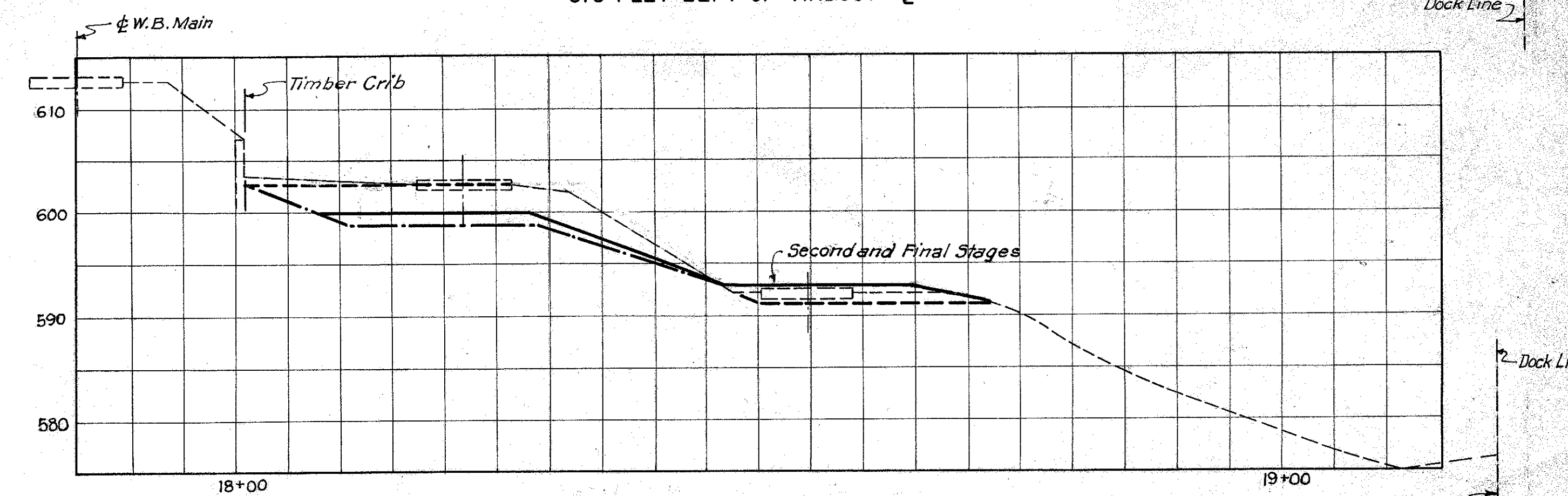
150 FEET LEFT OF VIADUCT CL



425 FEET LEFT OF VIADUCT CL



375 FEET LEFT OF VIADUCT CL



325 FEET LEFT OF VIADUCT CL

- LEGEND**
- Original ground line
 - First Stage - build anchor and dock wall
 - Second Stage - shift tracks to build footing
 - Final condition

PENCILED REVISIONS 11-15-54 Note: See Sheet 41.

U. S. ROUTE 42 RELOCATION
INNER BELT FREEWAY - CENTRAL VIADUCT

CROSS SECTIONS FOR
CONSTRUCTION IN ERIE RAILROAD YARD

CLEVELAND CUYAHOGA COUNTY OHIO

SCALE: 1" = 10'-0"
MADE I.G.S. DATE 8-25-54 HOWARD, NEEDLES, TAMMEN & BERGENDOFF
TRCD 2.7.5 DATE 8-30-54 CONSULTING ENGINEERS
CKO I.G.S. DATE 8-31-54 KANSAS CITY CLEVELAND NEW YORK
914-1A SHEET 1.43