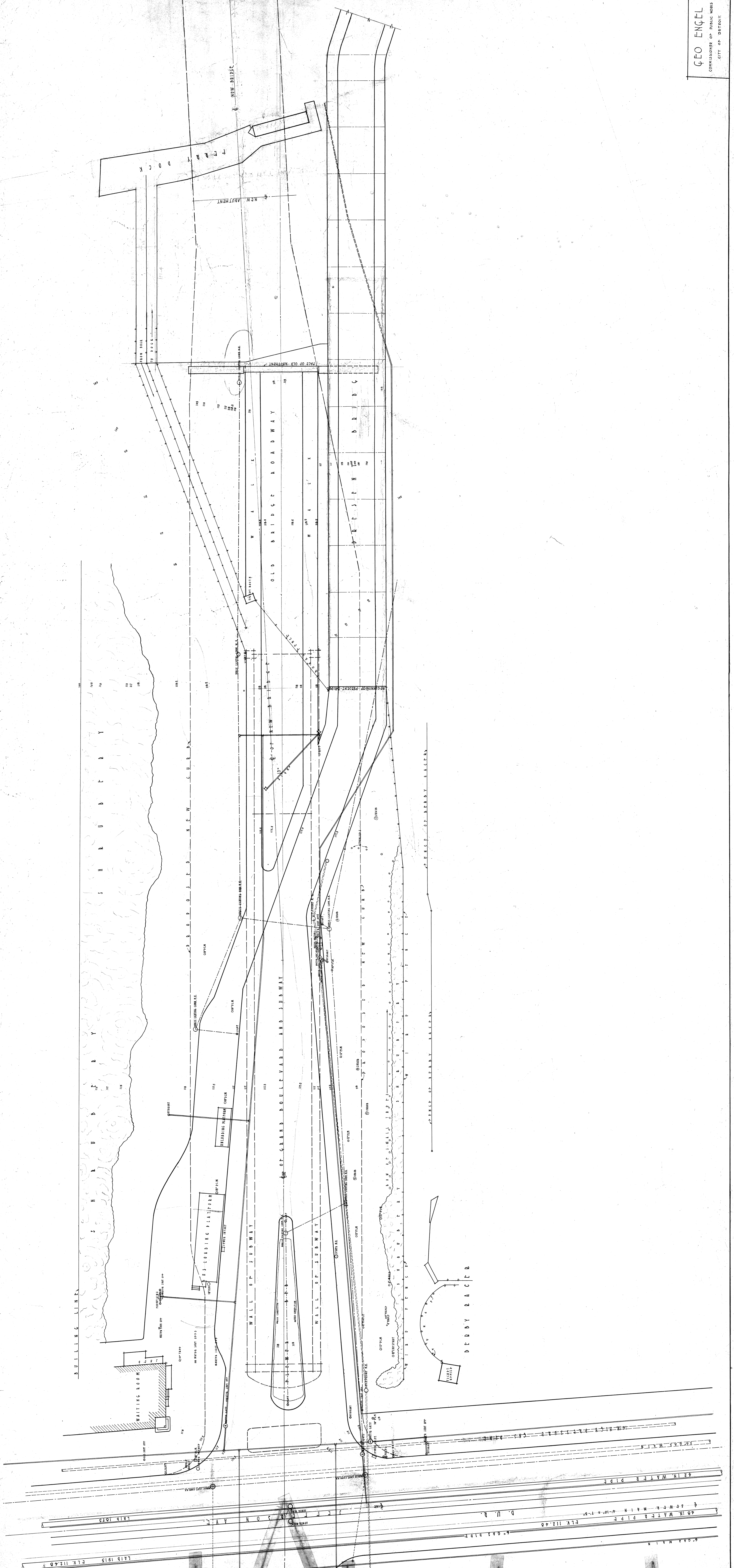


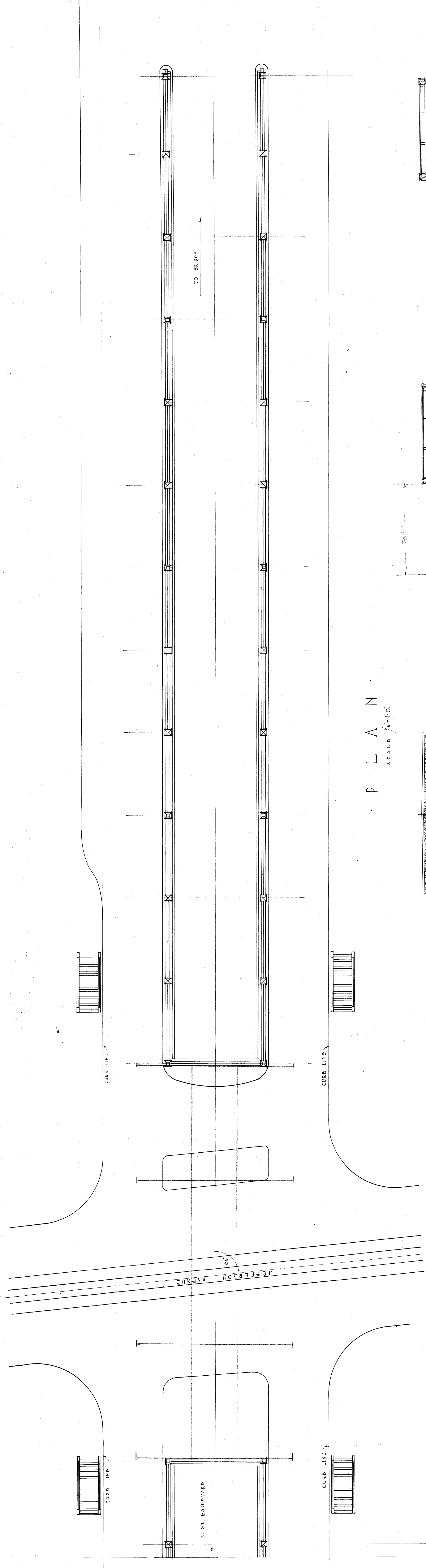


**BEULIE ISLE BRIDGE**  
 PLAN  
 STATE OF MICHIGAN  
 DEPARTMENT OF HIGHWAYS  
 EAST LANSING, MICHIGAN  
 J. W. COLEMAN, ENGINEER  
 J. W. COLEMAN ARCHITECTS  
 1225 W. WASHINGTON  
 LANSING, MICHIGAN

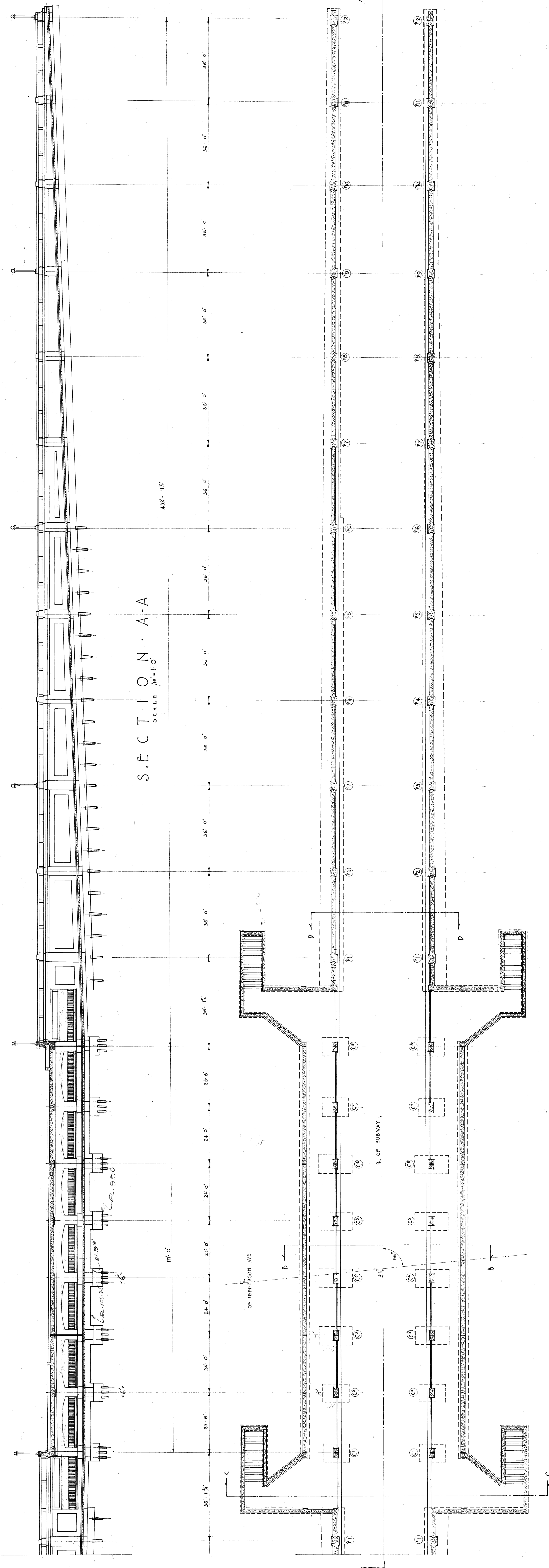
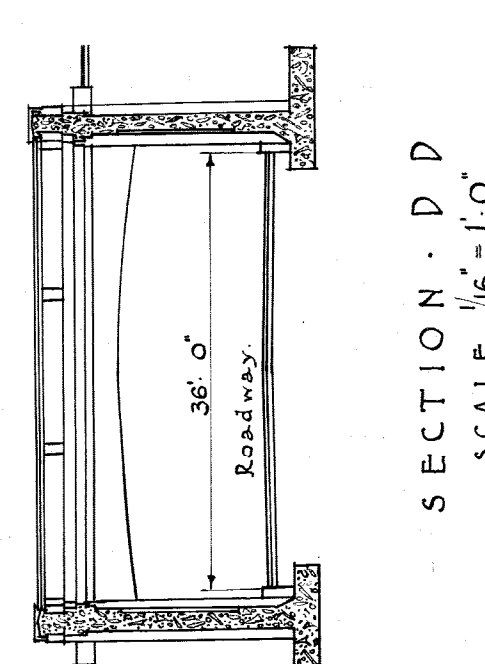
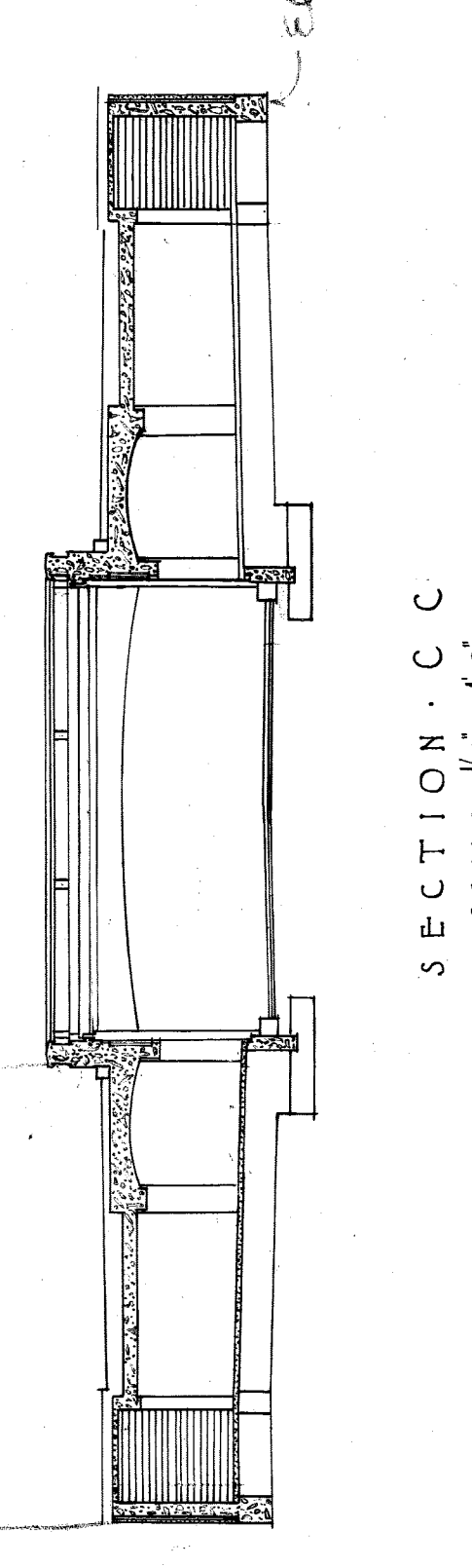
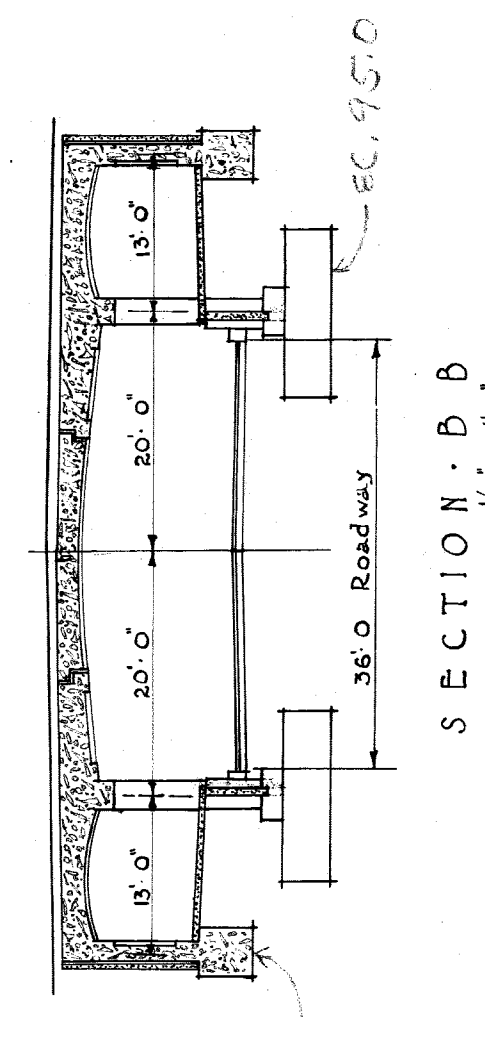
**GEO ENGEL**  
 COMMISSIONER OF PUBLIC WORKS  
 CITY OF DETROIT







PLAN  
SCALE 1/8" = 1'-0"



PLAN SECTION  
SCALE 1/8" = 1'-0"

GEO. ENGEL,  
COMMISSIONER OF PUBLIC WORKS,  
CITY OF DETROIT.

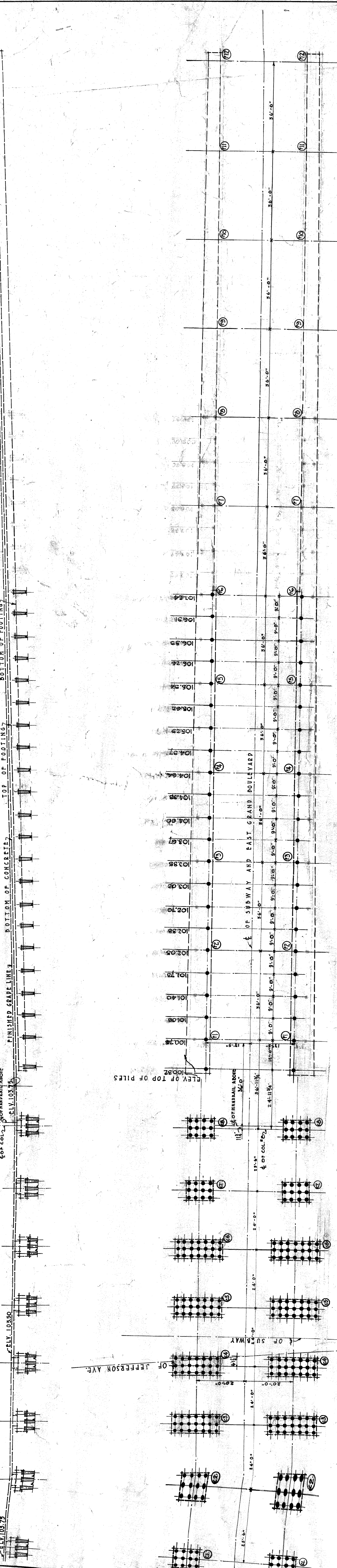
**BELLE ISLE BRIDGE**  
GRADE, SEPARATION,  
GENERAL PLANS AND ELEVATION.

ESSLESTYN, MURPHY AND HANFORD  
ENGINEERS AND ARCHITECTS  
LEWIS W. GRAM, ASSOCIATE ENGINEER

REVISIONS - CHARACTER -

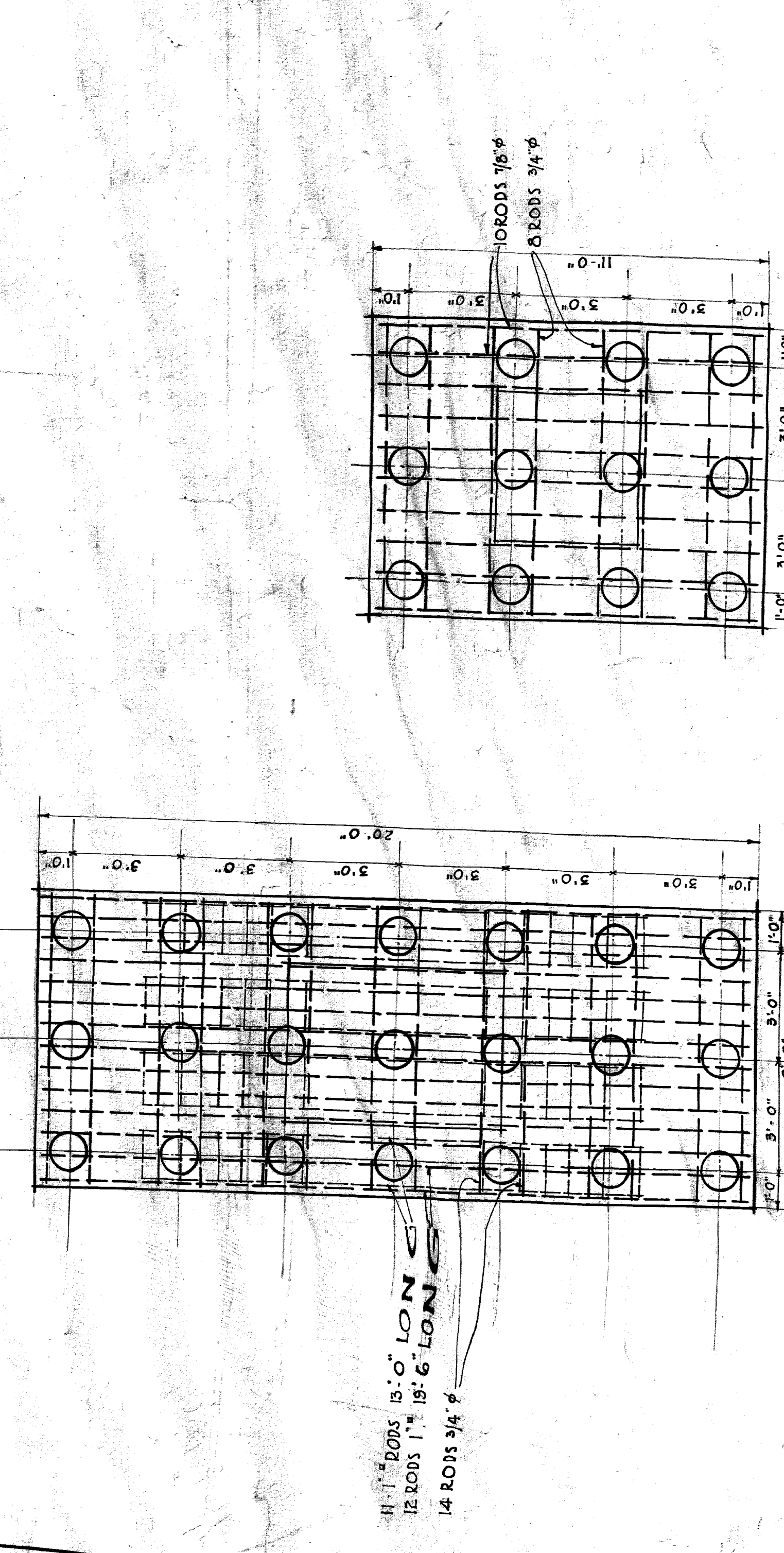
NO.	DATE	BY	REASON
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			

ELV. 118.957  
 FINISHED GRADE LINES  
 TOP OF FOOTINGS  
 BOTTOM OF FOOTINGS  
 BOTTOM OF CONCRETE  
 BOTTOM OF PILES



SOUTH PORTION OF SUBWAY AND RAMPS SHOWING LOCATION OF PILES  
 NORTH PORTION SIMILAR  
 SCALE 1/16"=1'-0"

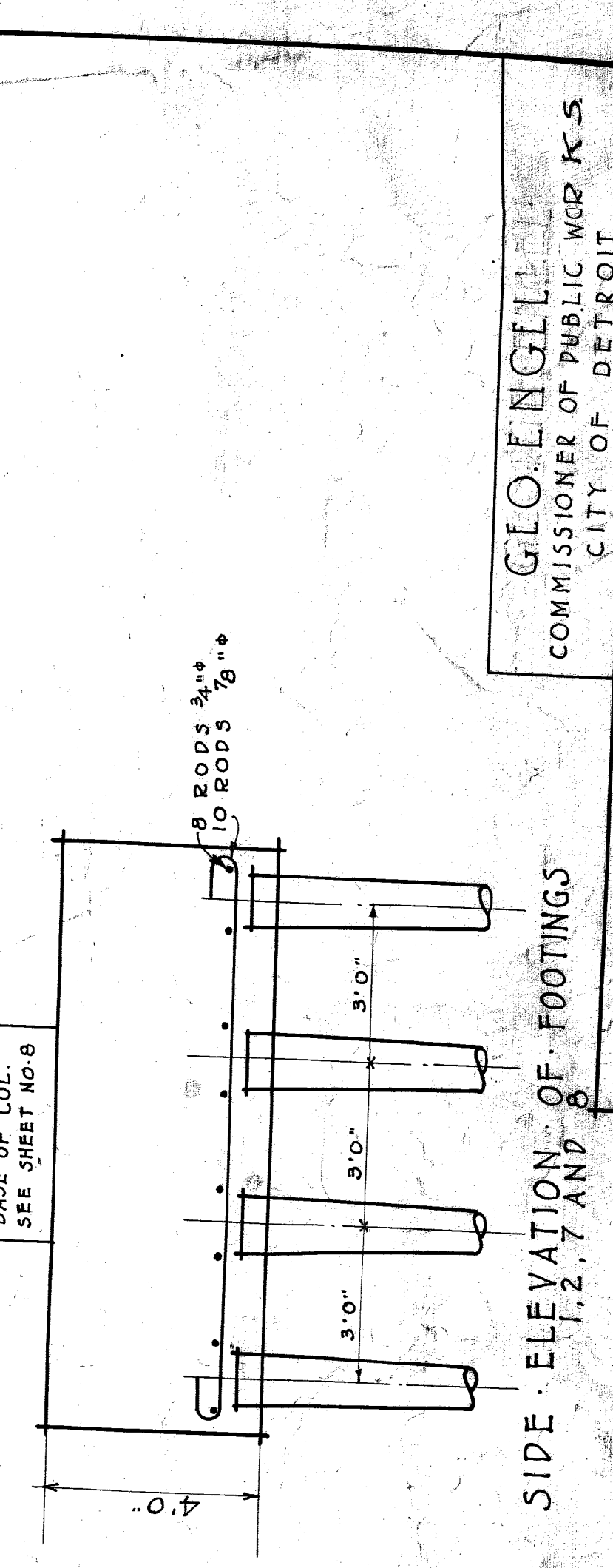
NOTES-  
 ELEVATIONS ARE GIVEN FROM THE CITY DATUM  
 CONCRETE IS 1:2:4 MIX. MAX. AGGREGATE  
 FOOTINGS 12" x 18" x 18" LONG  
 REINFORCING STEEL - PLAIN RODS OF STRUCTURAL  
 STEEL GRADE.



DETAIL OF FOOTINGS  
 3, 4, 5 AND 6  
 SCALE 3/16"=1'-0"



DETAIL OF FOOTINGS  
 7, 8 AND 9  
 SCALE 3/16"=1'-0"



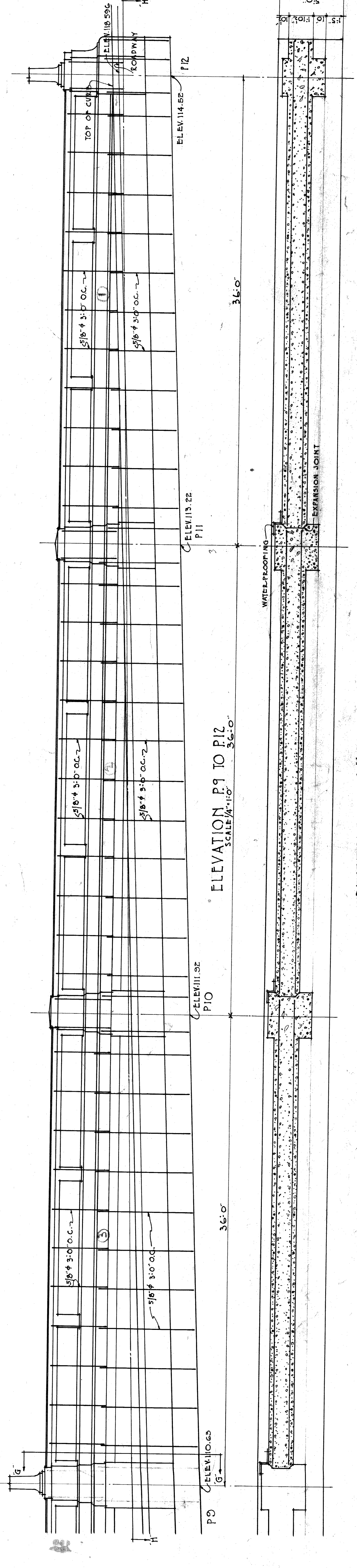
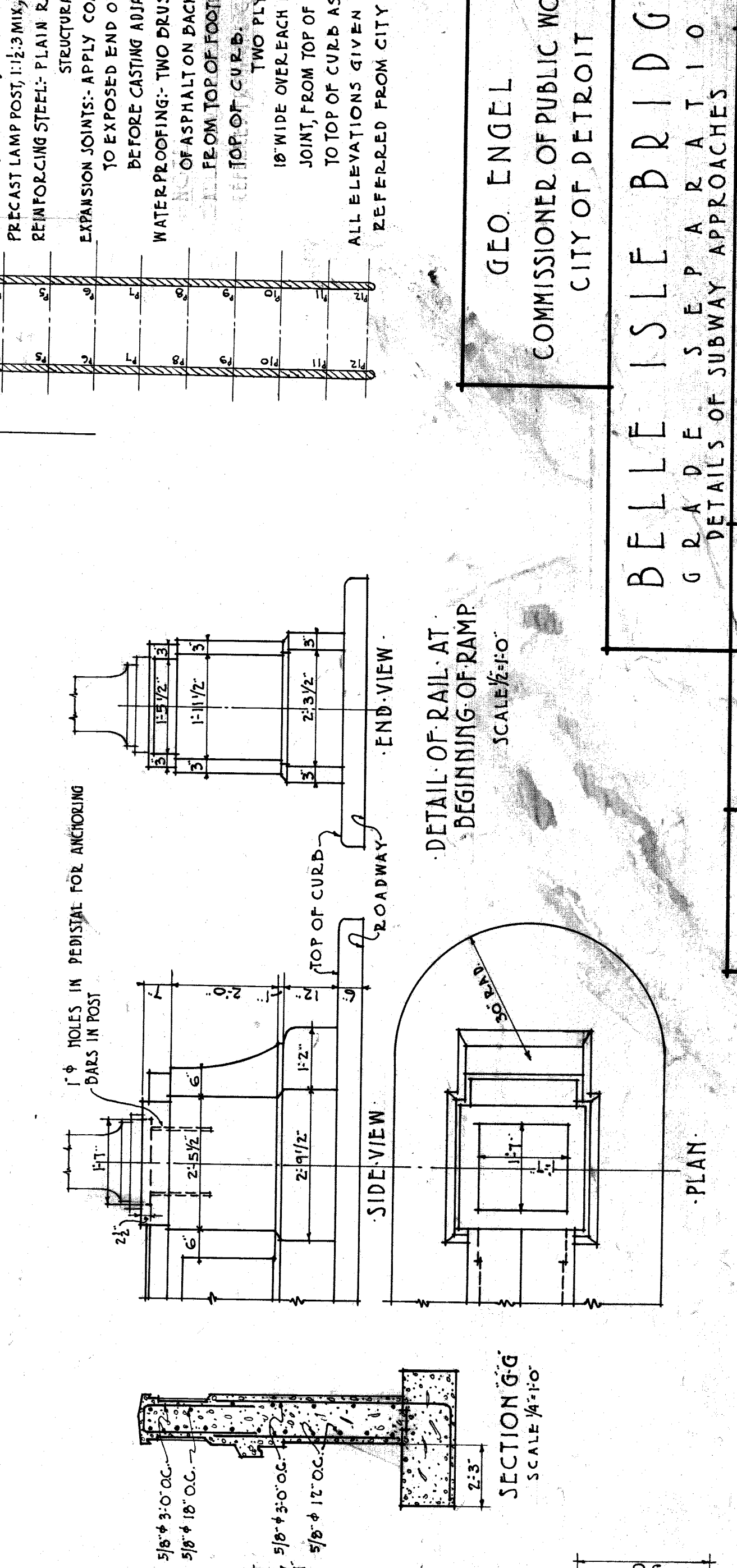
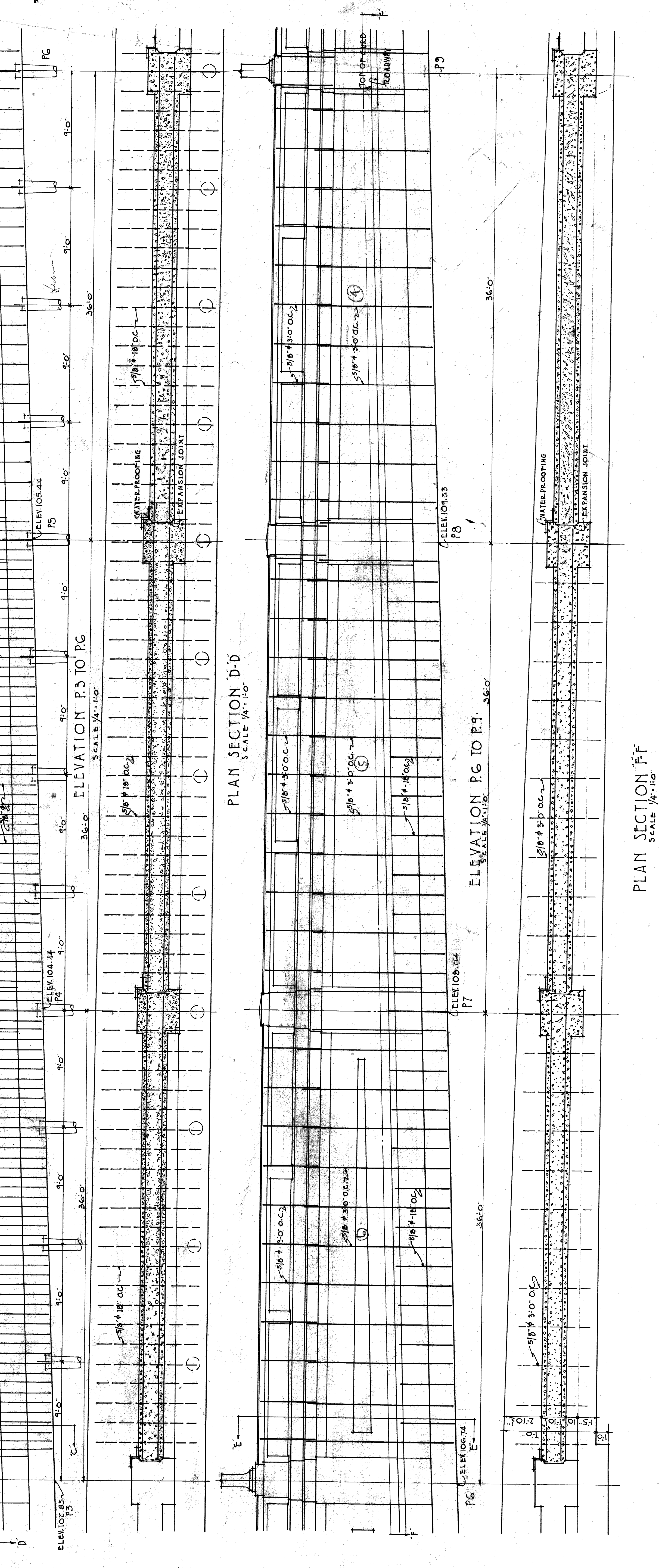
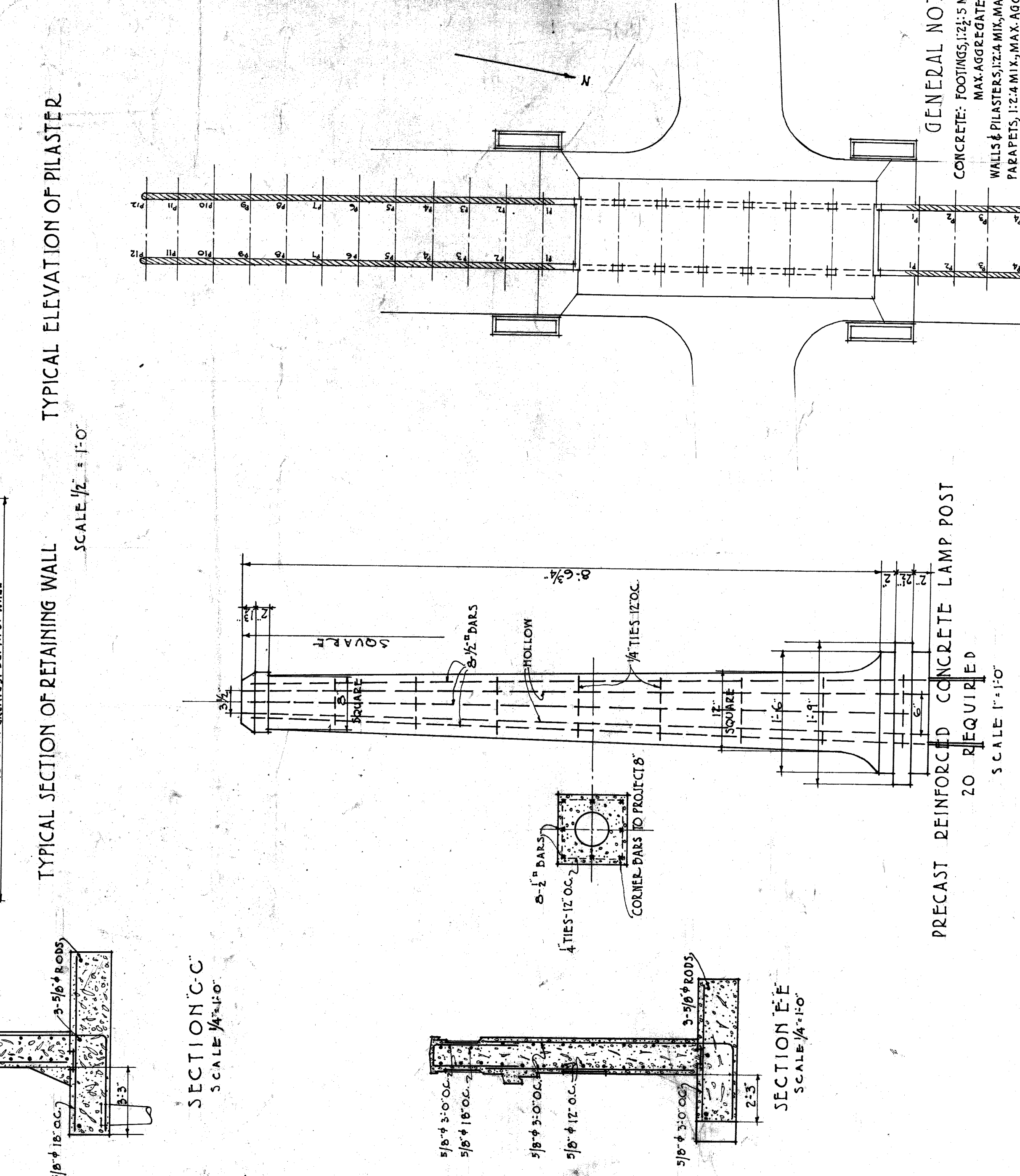
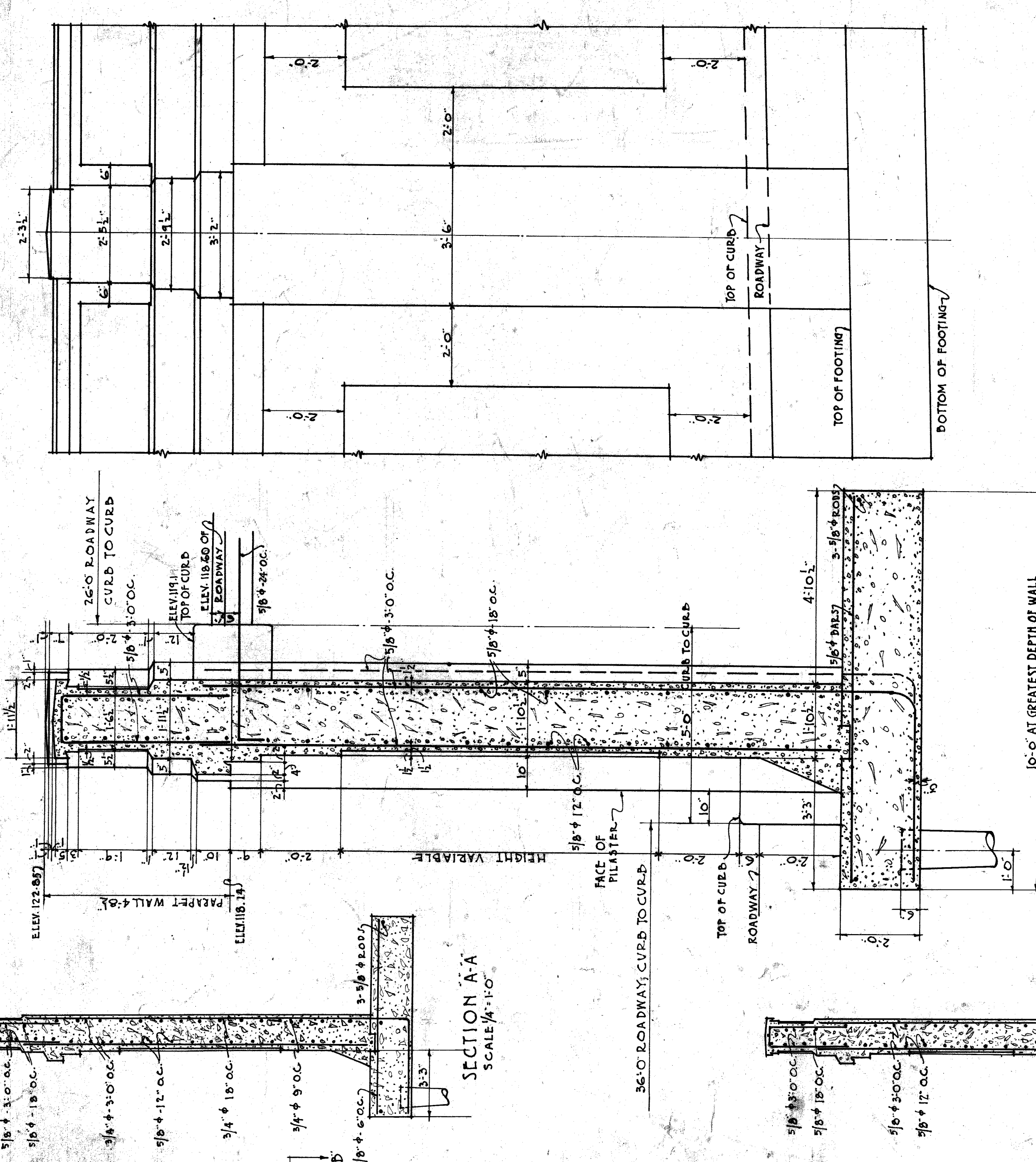
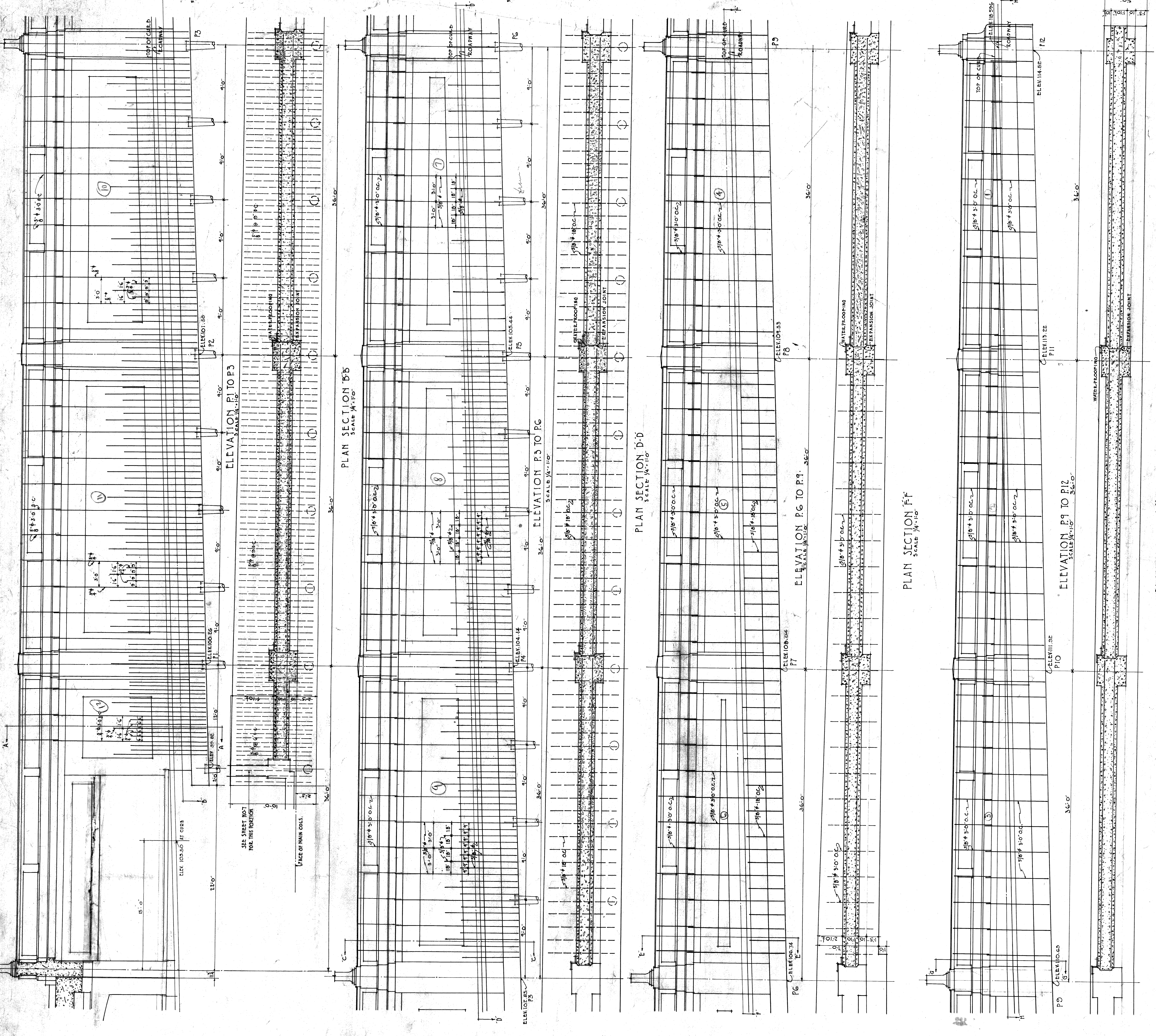
SIDE ELEVATION OF FOOTINGS  
 12, 13 AND 14  
 SCALE 3/16"=1'-0"

GEO. ENGLISH  
 COMMISSIONER OF PUBLIC WORKS  
 CITY OF DETROIT

BELLE ISLE BRIDGE  
 SEPARATION  
 ESSELSTYN MURPHY AND HANFORD  
 ENGINEERS AND ARCHITECTS  
 LEWIS M. GRAY ASSOCIATE ENGINEER  
 DETROIT

REVISIONS - CHARACTER - DRAWN - KEEN  
 REVISIONS - CHARACTER - CHECKED - KEEN  
 REVISIONS - CHARACTER - CHECKED - KEEN

JOB NO. 10010  
 SHEET NO. 5  
 DATE 1910



GENERAL NOTES:  
 CONCRETE: FOOTINGS: 225 MIX  
 WALLS & PILLARS: 225 MIX, MAX. AGGREGATE 2 1/2"  
 PARAPETS, 125 MIX, MAX. AGGREG. 1"  
 REINFORCING STEEL: 2 # 10'S PER SQUARE FOOT  
 EXPANSION JOINTS: APPLY COAL TAR PAINT TO EXPOSED END OF WALL  
 BEFORE CASTING ADJACENT WALL  
 WATER PROOFING: TWO DRUMS COATS OF ASPHALT FLOOR TOP OF FOOTING TO FACE OF CURB  
 TWO PLY FABRIC WITH ONE EACH EXPANSION JOINT FROM TOP OF FOOTING TO TOP OF CURB  
 ALL ELEVATIONS GIVEN ARE REFERRED FROM CITY DATUM

GEO ENGEL  
 COMMISSIONER OF PUBLIC WORKS  
 CITY OF DETROIT

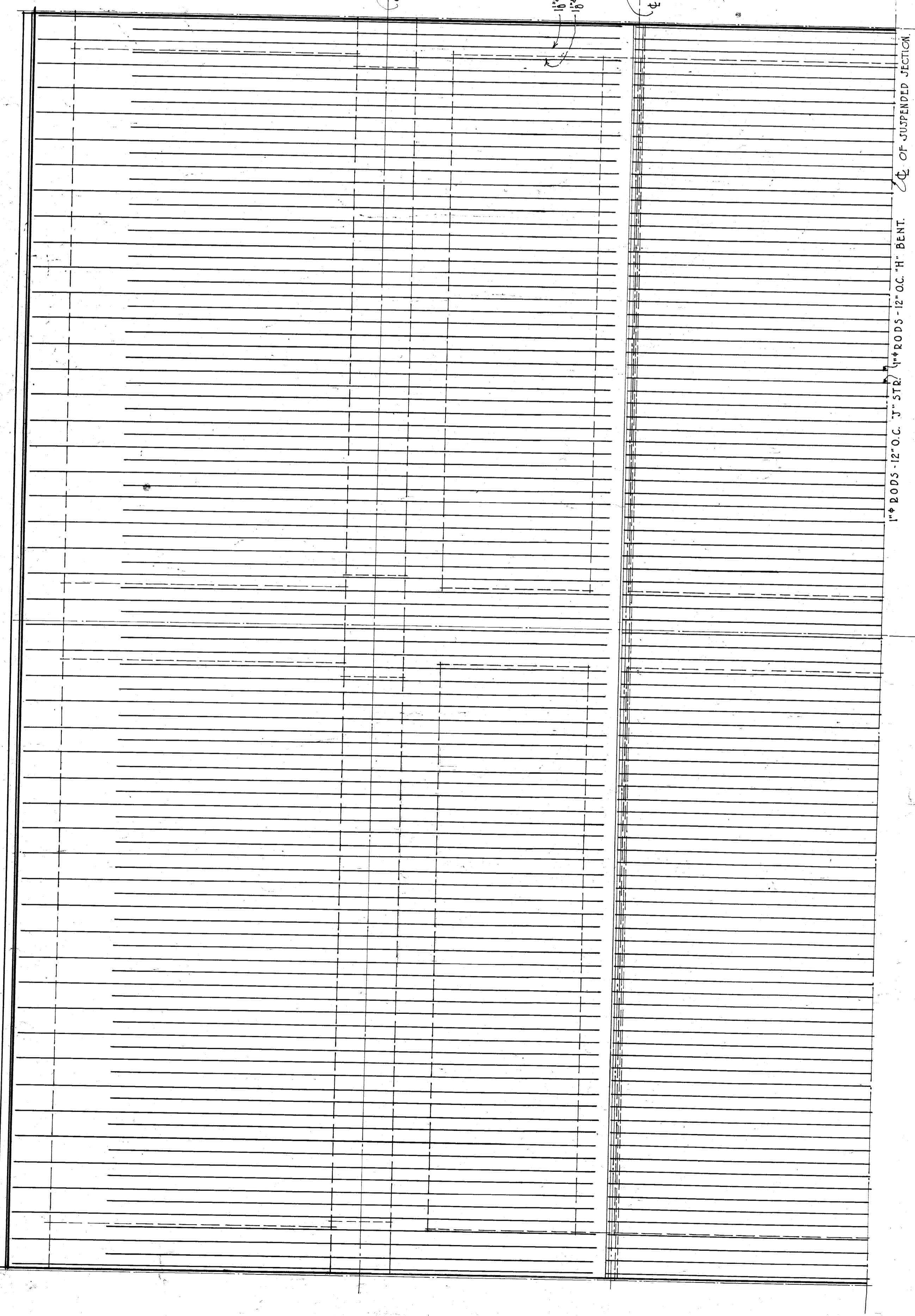
BELLE ISLE BRIDGE  
 GRADE SEPARATION  
 DETAILS OF SUBWAY APPROACHES

ESSELSTYNE, MURPHY AND HANFORD  
 ENGINEERS AND ARCHITECTS  
 LEWIS M. DEAN, ASSOCIATE ENGINEER

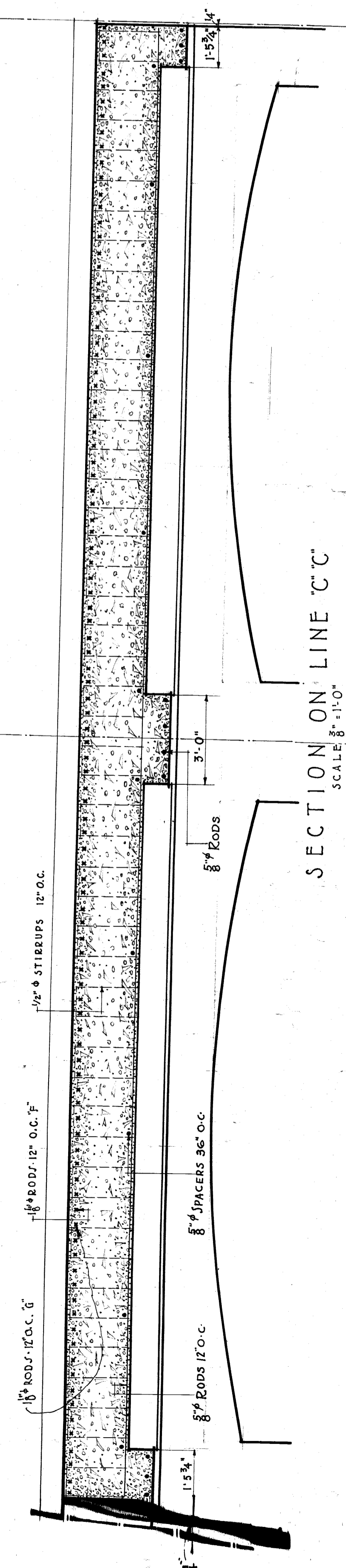
DRAWN: KERN  
 CHECKED: KERN  
 TRACED: KERN

JOB NO. 720  
 SHEET NO. 6  
 DATE: 12-4-15  
 MICHTIGAN

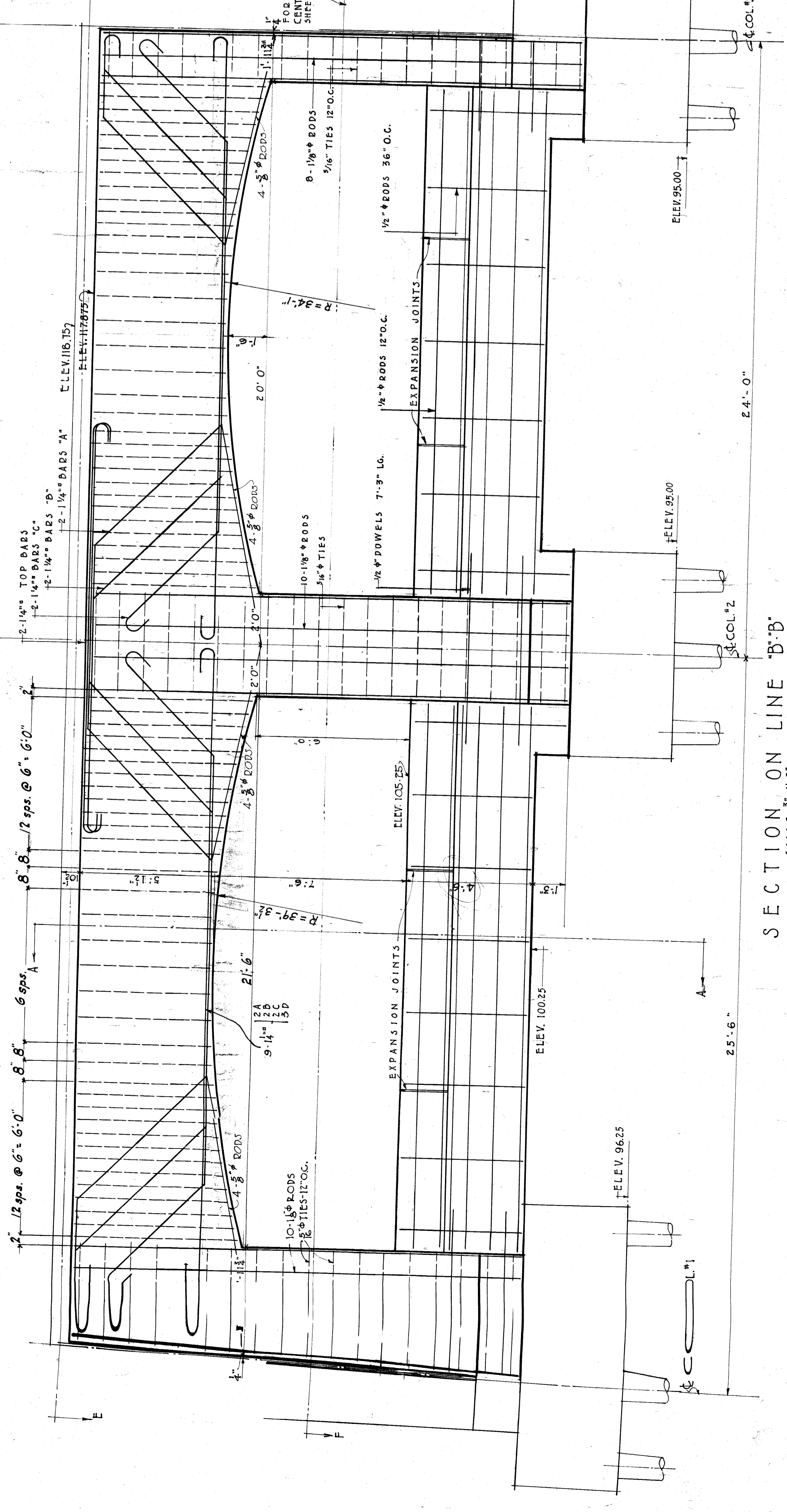




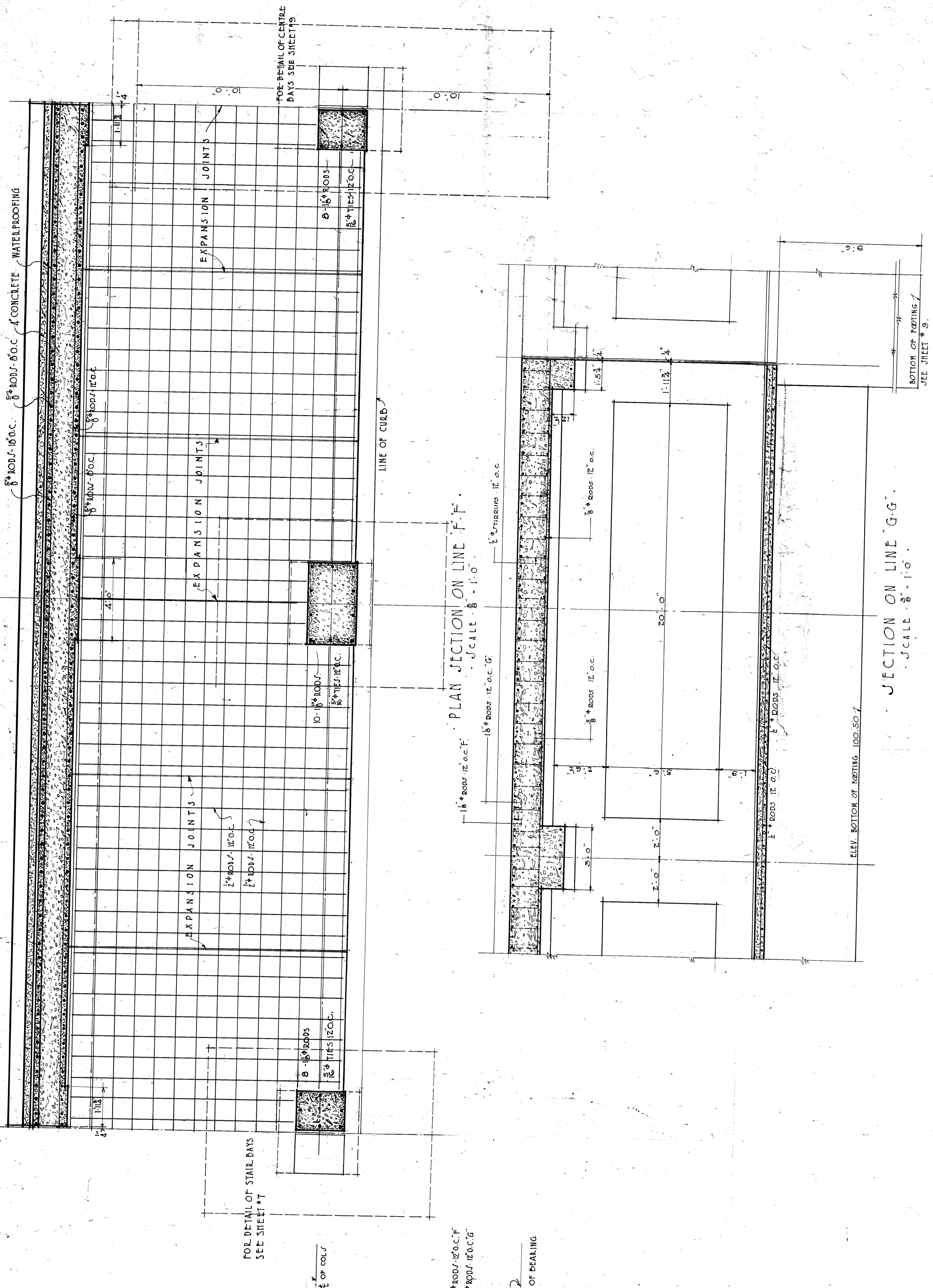
PLAN SECTION ON LINE "E-E"  
SCALE 3/16"



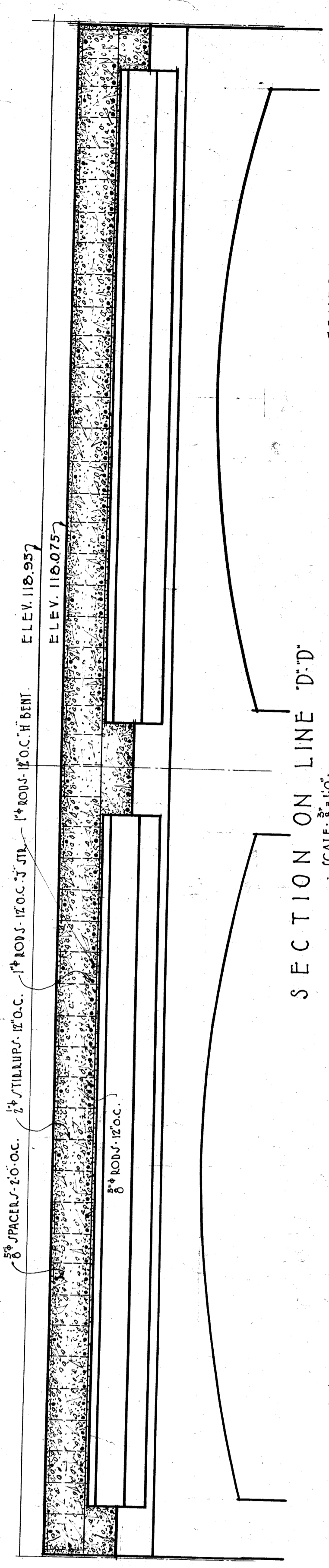
SECTION ON LINE "C-C"  
SCALE 3/16"



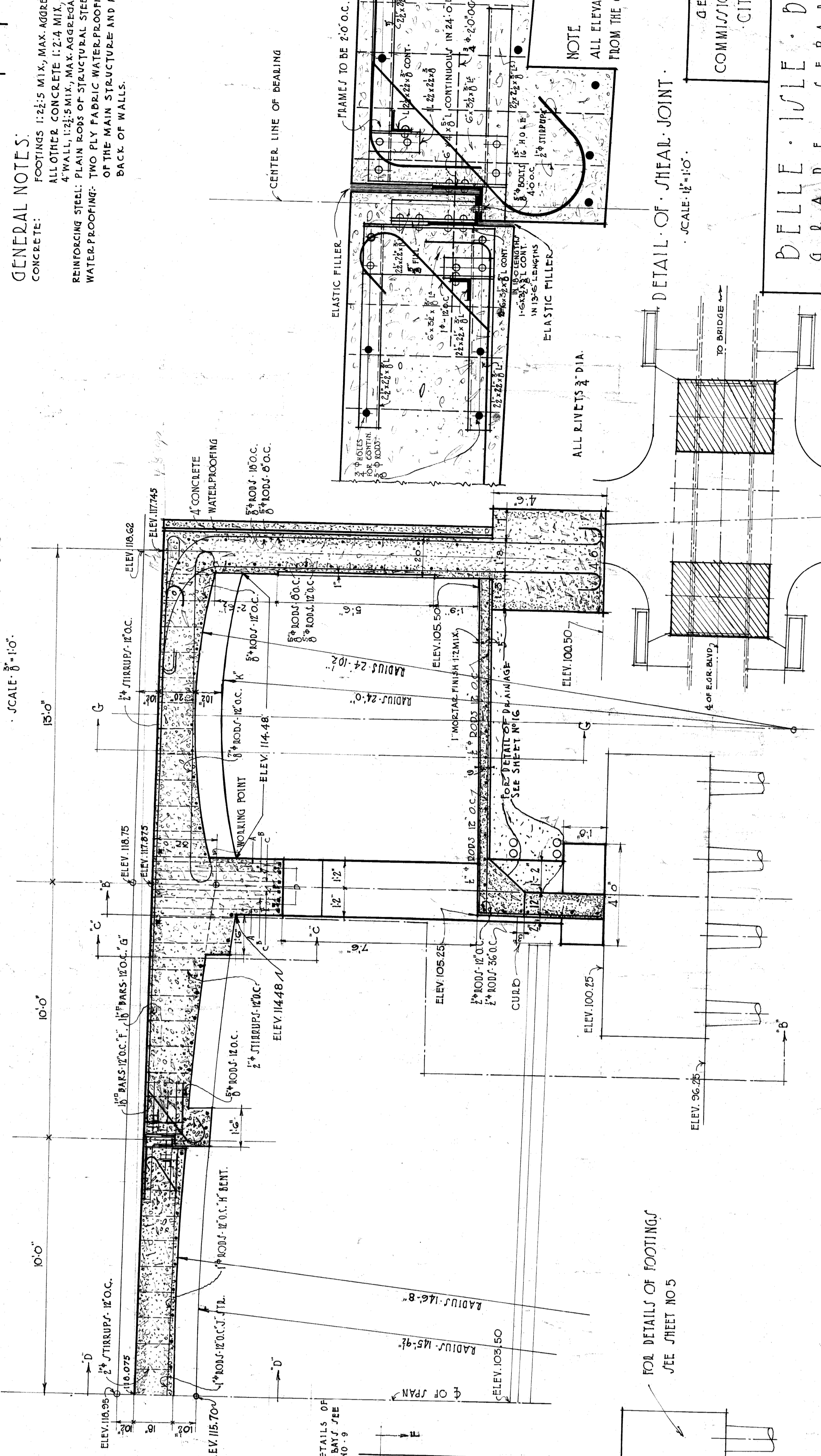
SECTION ON LINE "B-B"  
SCALE 3/16"



PLAN SECTION ON LINE "F-F"  
SCALE 3/16"

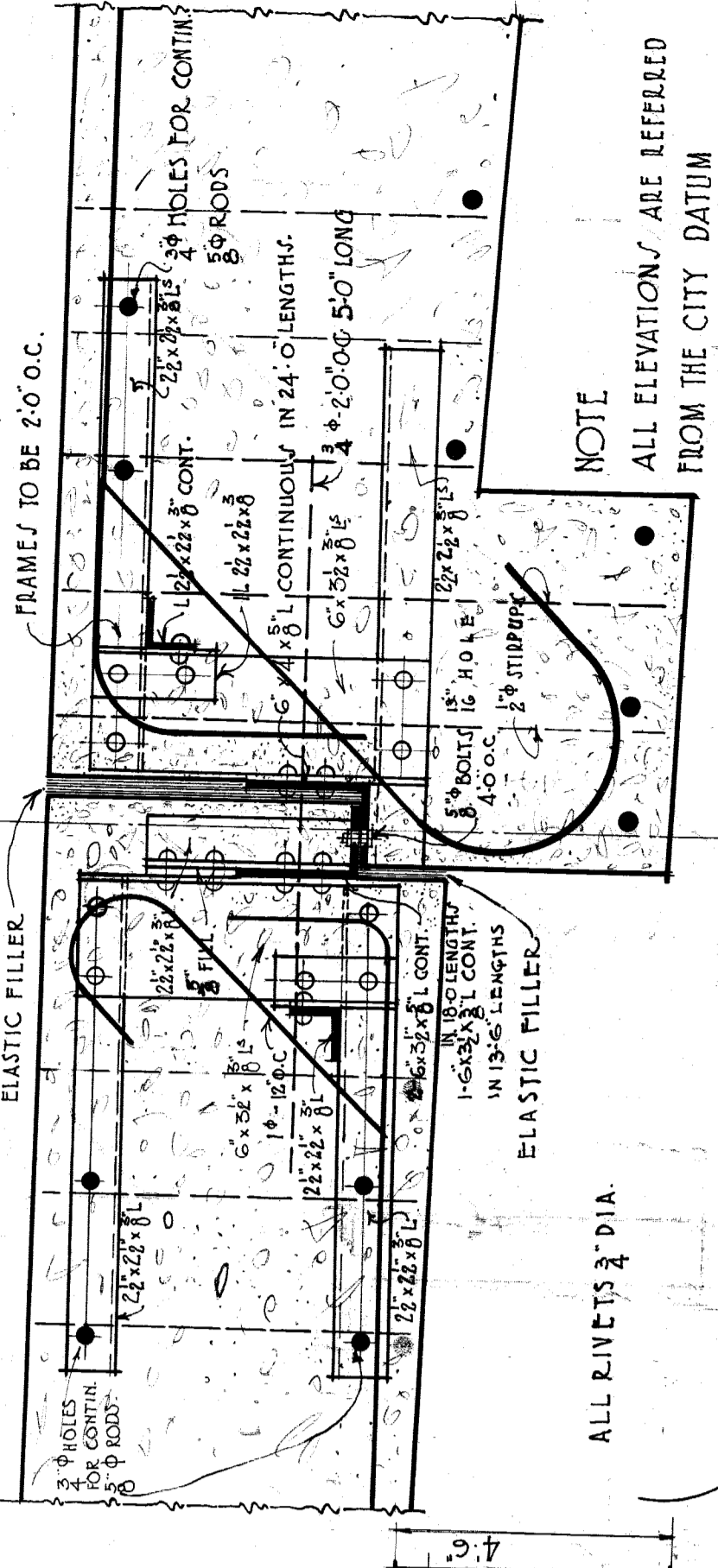


SECTION ON LINE "G-G"  
SCALE 3/16"



SECTION ON LINE "D-D"  
SCALE 3/16"

GENERAL NOTES:  
FOOTINGS 12x15, MAX. AGGREGATE 2"  
CONCRETE  
4" WALL, 12x15 MAX. AGGREGATE 2"  
REINFORCING STEEL: PLAIN BARS OF STRUCTURAL STEEL GRADE.  
WATERPROOFING: 20 MILY FABRIC WATERPROOFING OVER THE TOP  
BACK OF WALLS. CUTS ARE AS SHOWN ON  
BACK OF WALLS.



DETAIL OF SHEAR JOINT  
SCALE 3/16"

REVISION	CHARACTER	DATE
NO. 1	AS SHOWN	JUNE 10, 1920
NO. 2	AS SHOWN	JUNE 10, 1920
NO. 3	AS SHOWN	JUNE 10, 1920
NO. 4	AS SHOWN	JUNE 10, 1920
NO. 5	AS SHOWN	JUNE 10, 1920
NO. 6	AS SHOWN	JUNE 10, 1920
NO. 7	AS SHOWN	JUNE 10, 1920
NO. 8	AS SHOWN	JUNE 10, 1920
NO. 9	AS SHOWN	JUNE 10, 1920
NO. 10	AS SHOWN	JUNE 10, 1920

DELE WILE BRIDGE  
C. A. B. E. SEPARATION  
ENGINEERS AND ARCHITECTS  
LEWIS W. GRAM ASSOCIATE ENGINEER  
DETROIT MICHIGAN

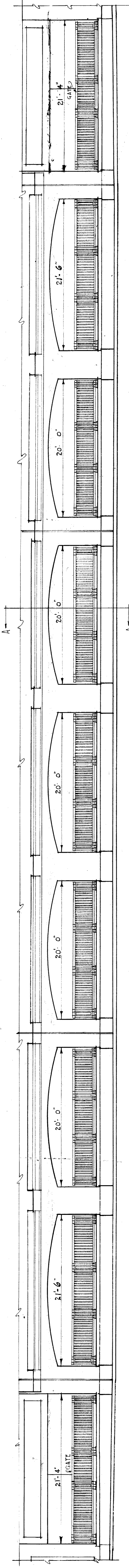
SECTION ON LINE "A-A"  
SCALE 3/16"

LOCATION DIAGRAM  
NO. SCALE

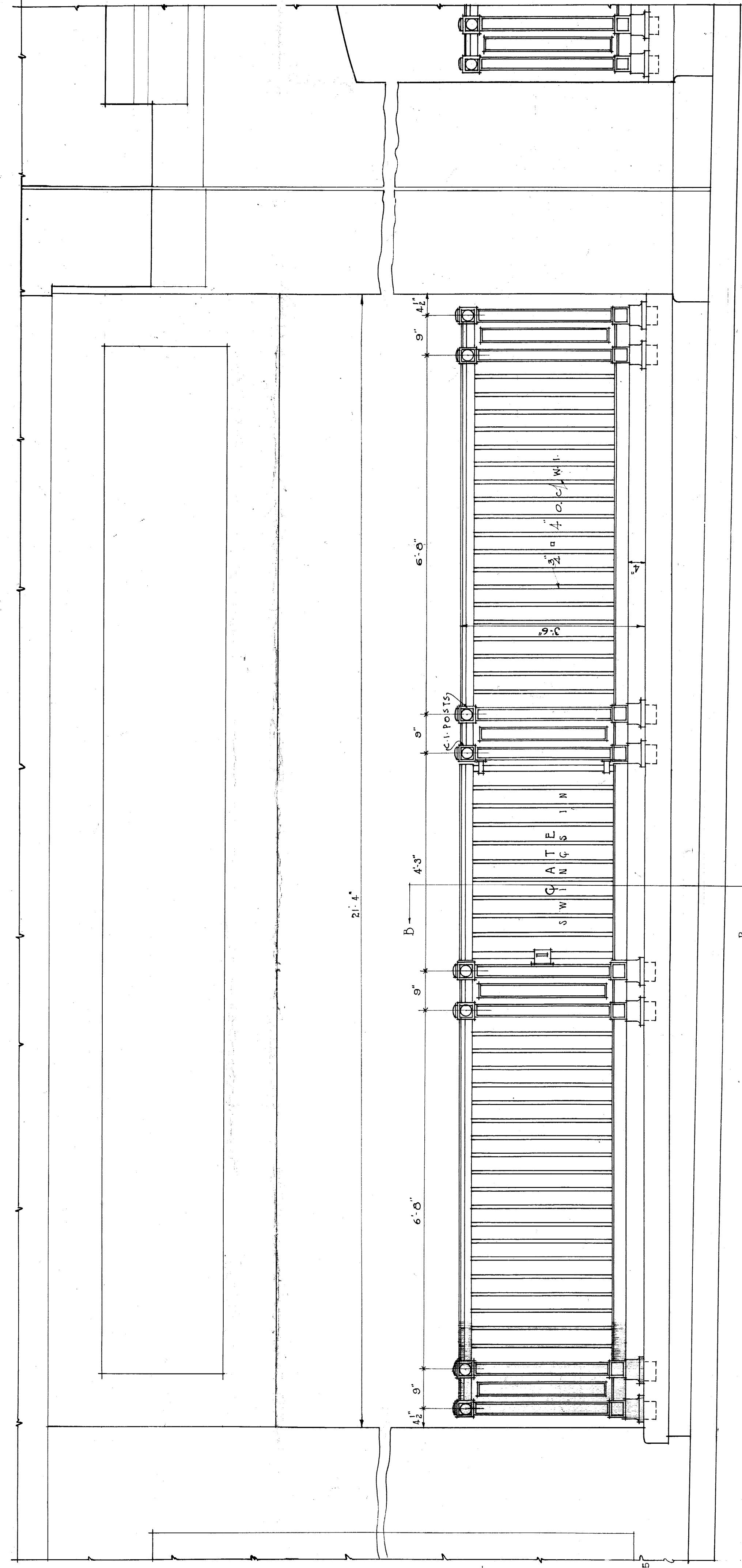
COMMISSIONER OF PUBLIC WORKS  
CITY OF DETROIT



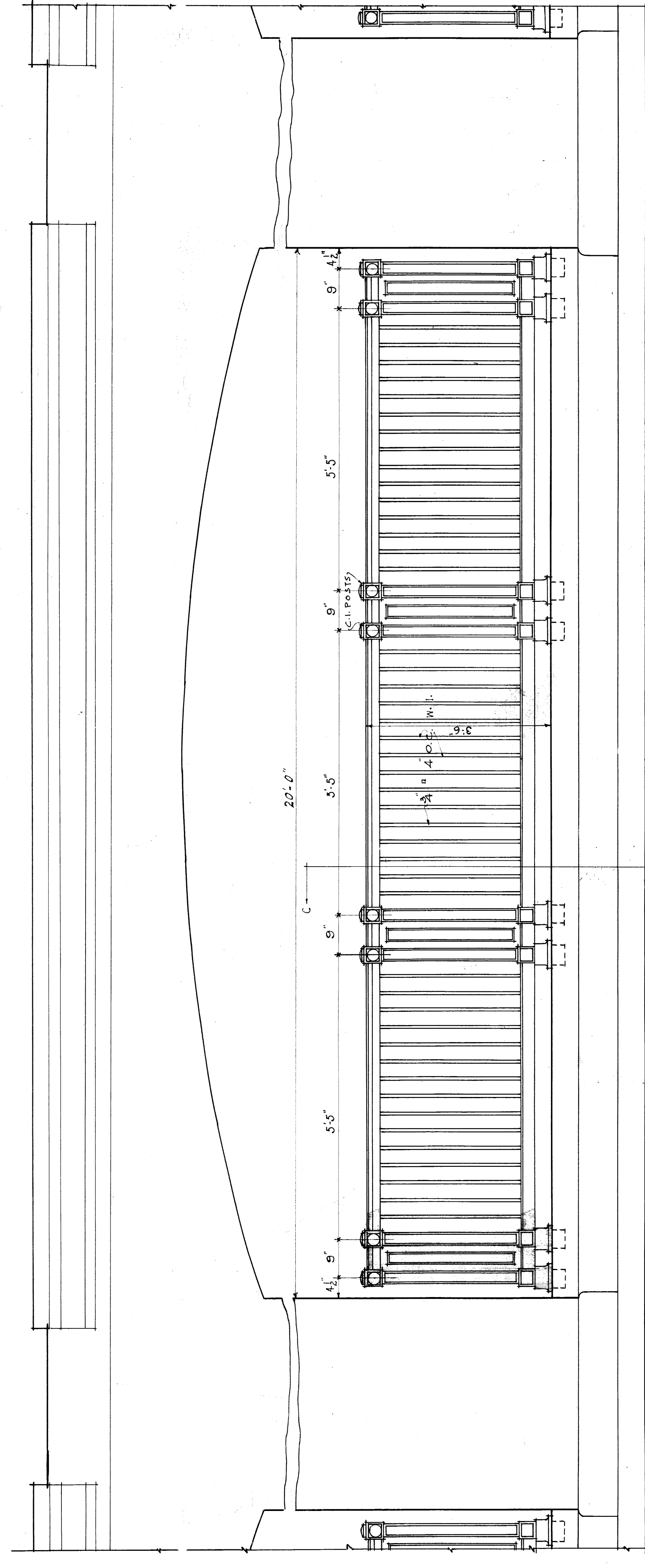




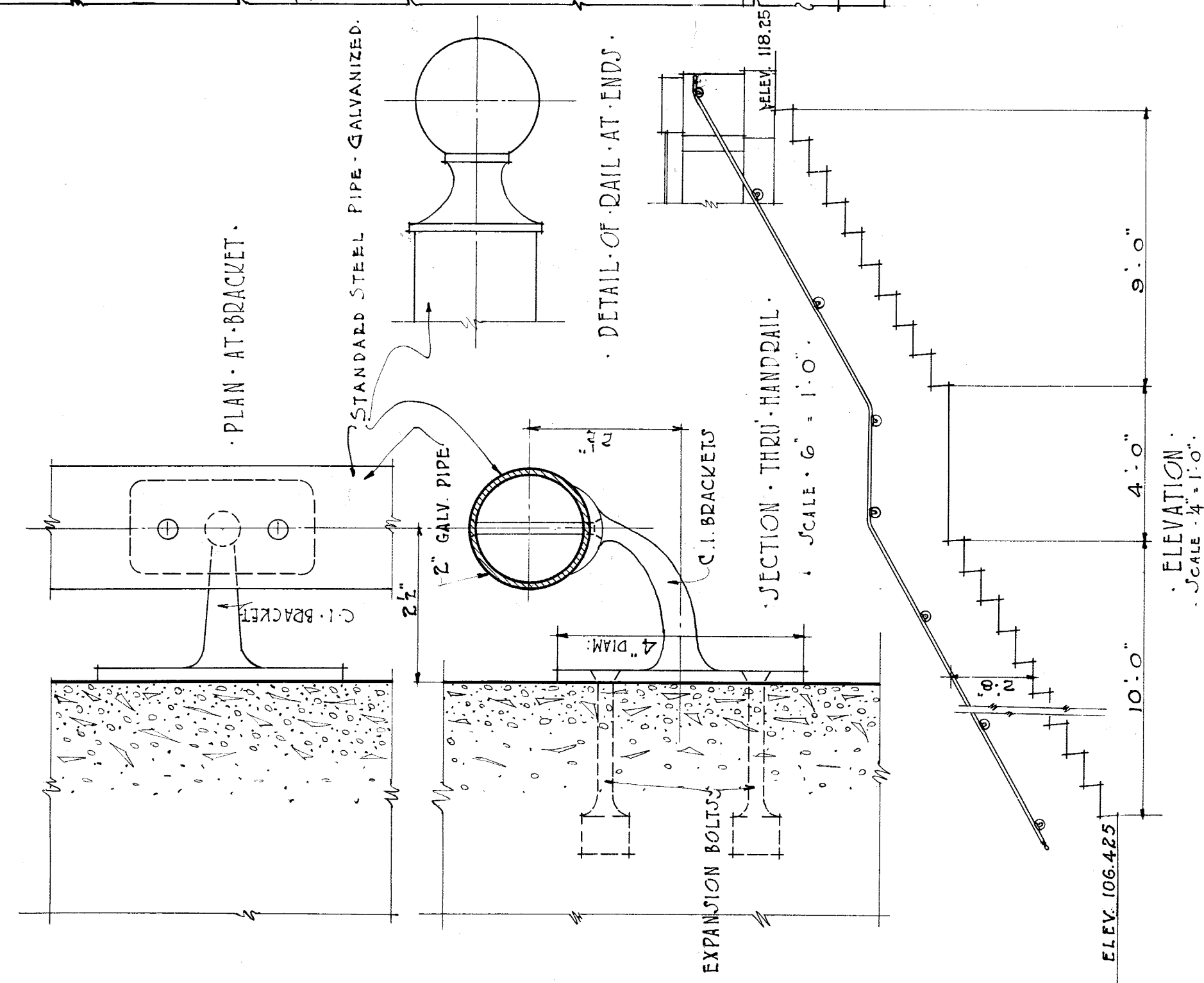
ELEVATION  
SCALE 1/8" = 1'-0"



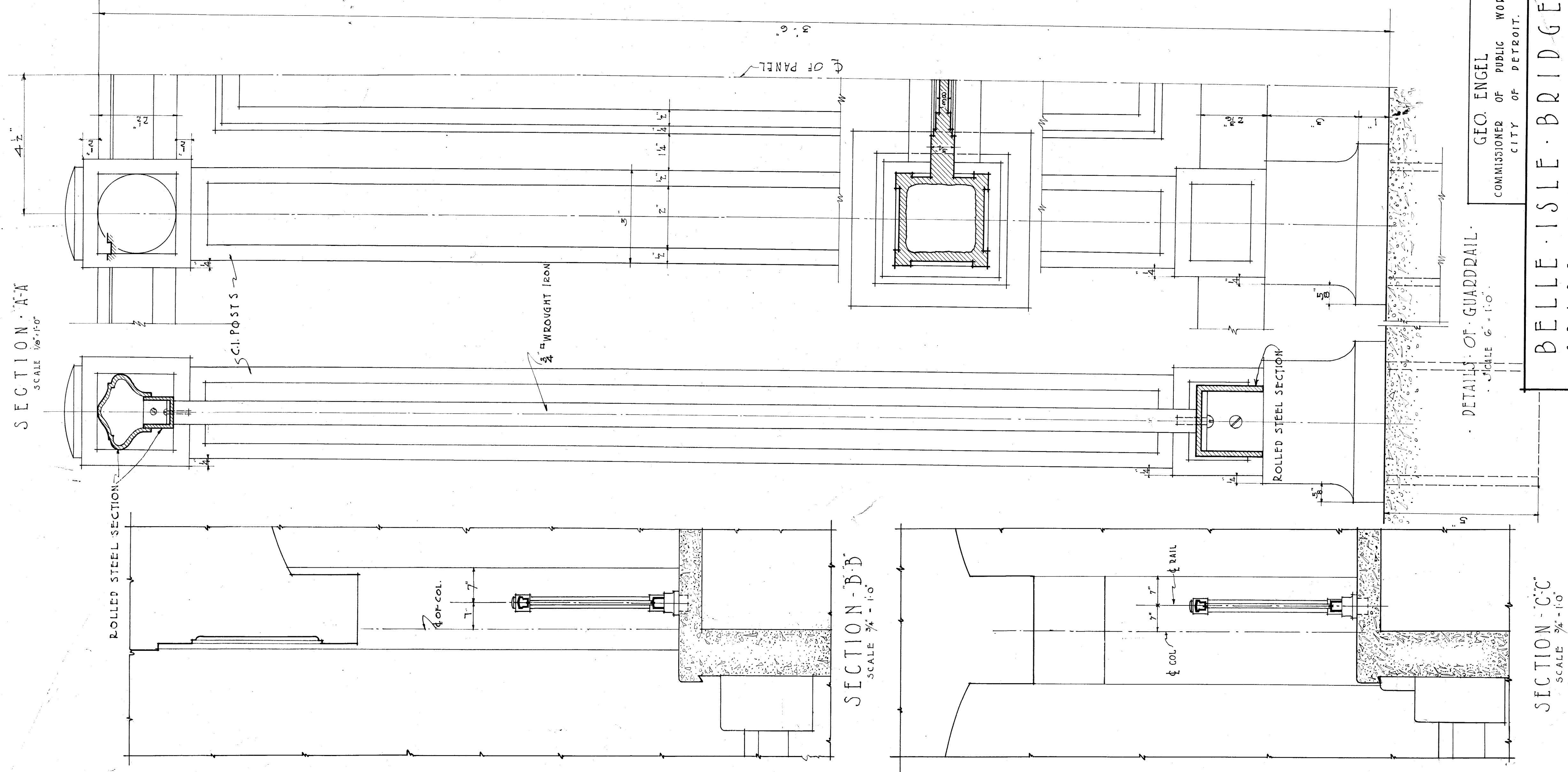
ELEVATION OF GUARDRAIL - END BAYS  
SCALE 3/4" = 1'-0"



ELEVATION OF GUARDRAIL - TYPICAL BAY  
SCALE 3/4" = 1'-0"



DETAIL OF STAIRWAY HANDRAIL ON BOTH SIDES (as required).



GENERAL NOTES:  
PAINT - AS SHOWN ON DRAWING  
TWO FIELD COATS TO BE SPECIFIED

REVISIONS: CHARACTER

NO. 1  
NO. 2  
NO. 3  
NO. 4  
NO. 5

DATE

BY

APPROVED

CHARACTER

NO. 1  
NO. 2  
NO. 3  
NO. 4  
NO. 5

DATE

BY

APPROVED

COMMISSIONER OF PUBLIC WORKS  
CITY OF DETROIT

GEO. ENGEL

ENGINEERS AND ARCHITECTS

DETROIT

ESTLIN MURPHY AND HANFORD

ENGINEERS AND ARCHITECTS

DETROIT

DETAILED BY SUBWAY GUARDRAIL

NO. 1  
NO. 2  
NO. 3  
NO. 4  
NO. 5

DATE

BY

APPROVED

BELE ISLE BRIDGE

DETROIT

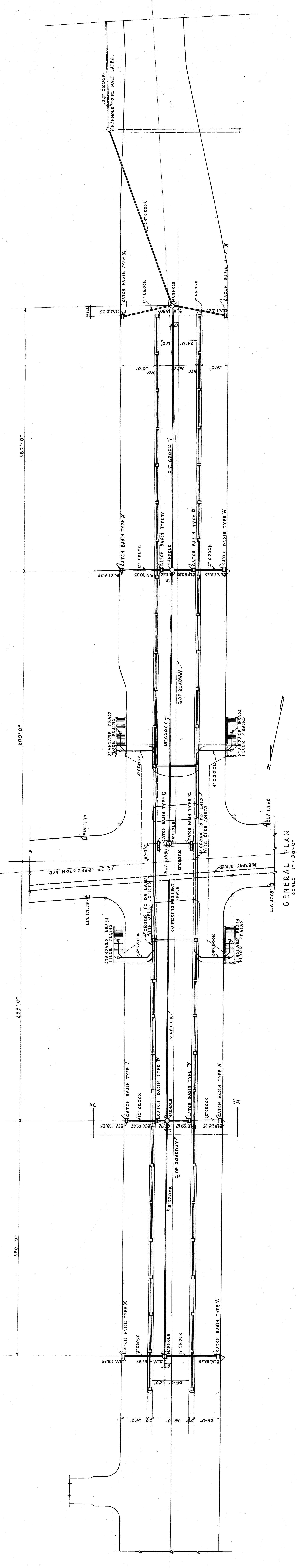
NO. 1  
NO. 2  
NO. 3  
NO. 4  
NO. 5

DATE

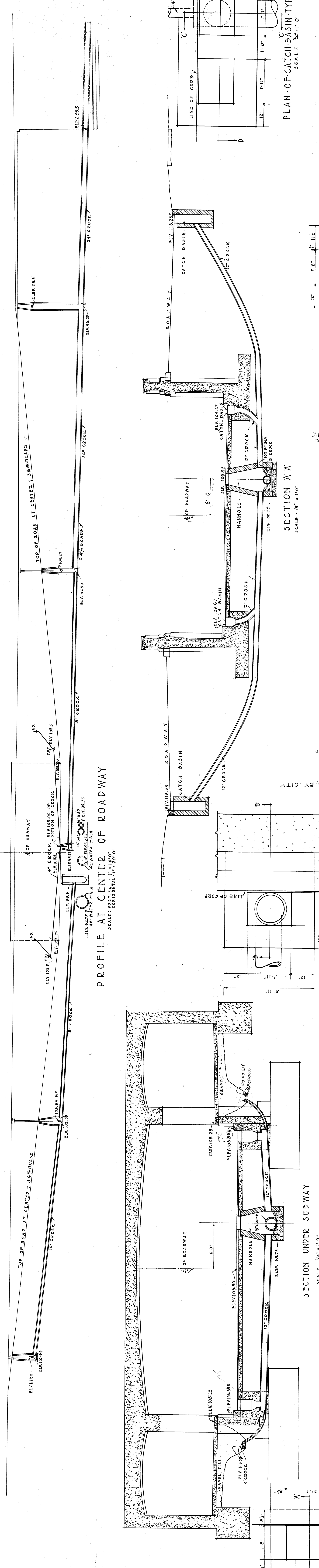
BY

APPROVED

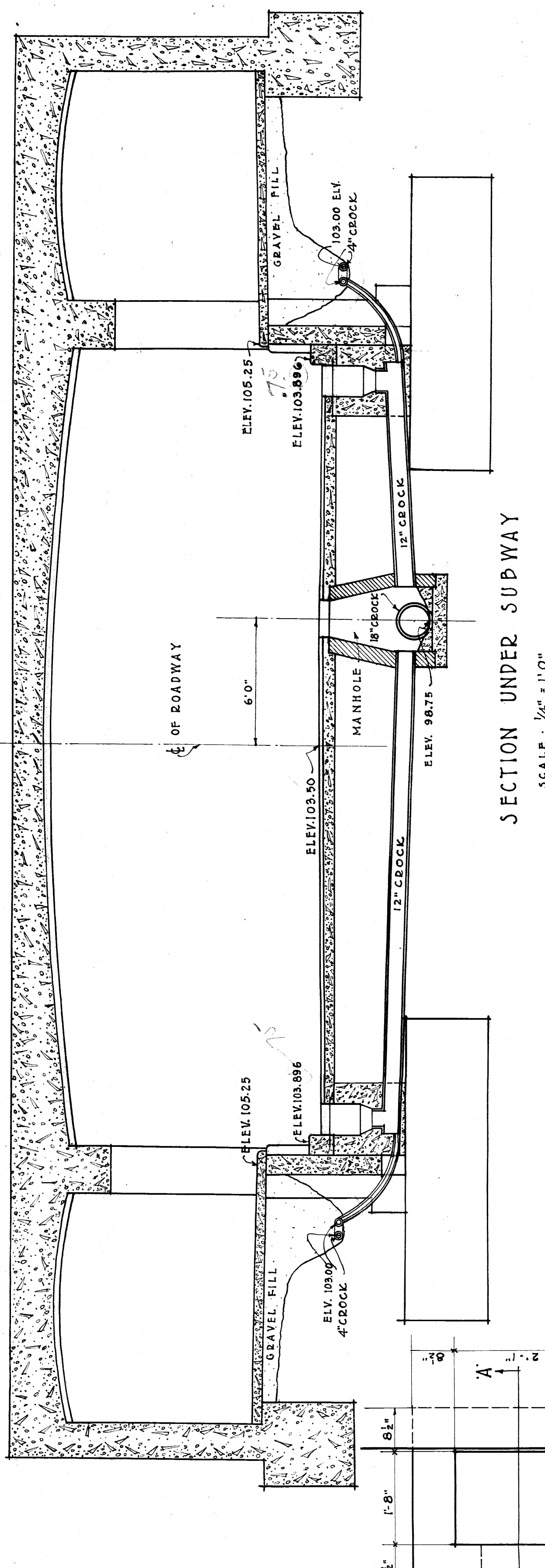




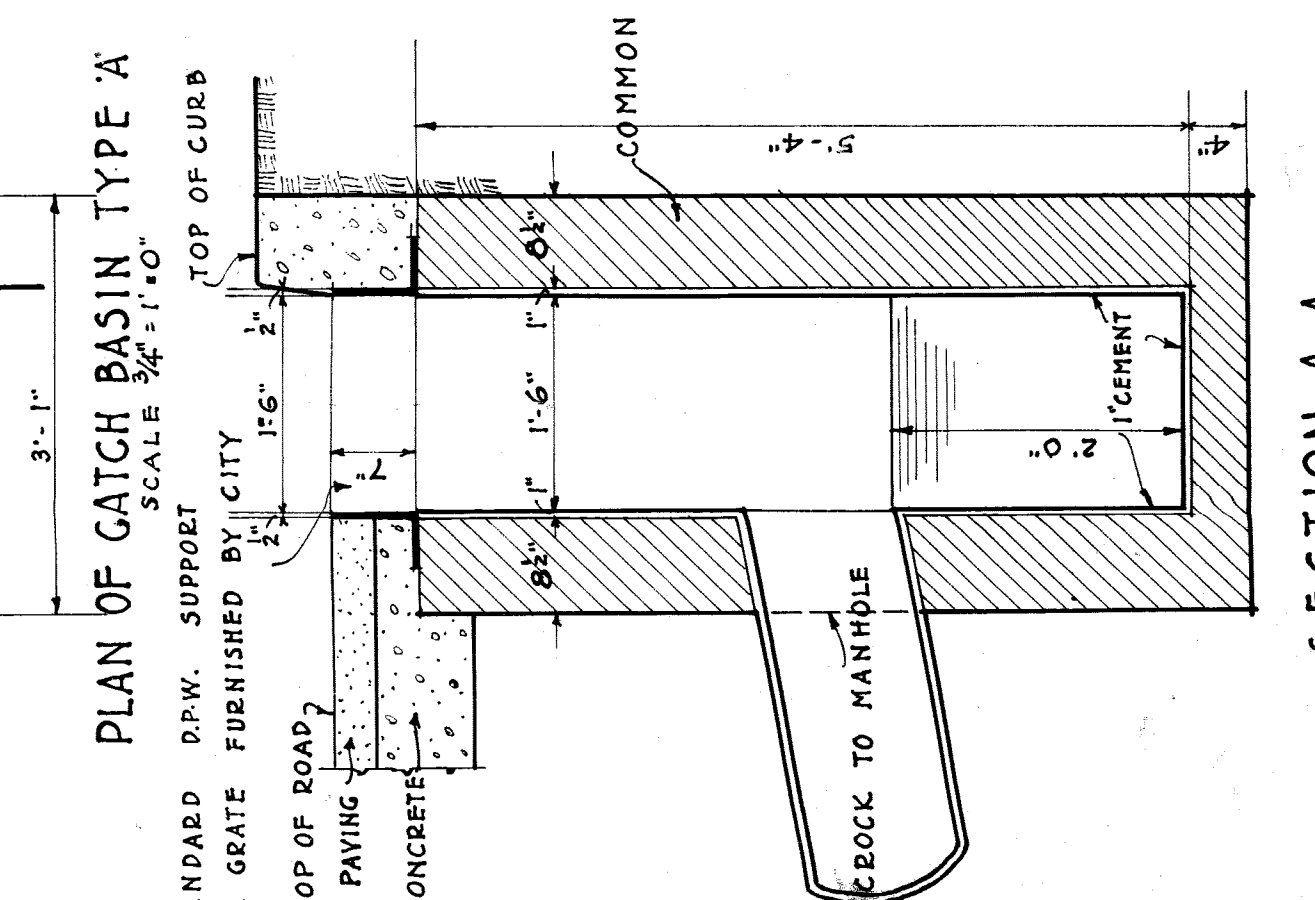
GENERAL PLAN  
SCALE 1" = 30' 0"



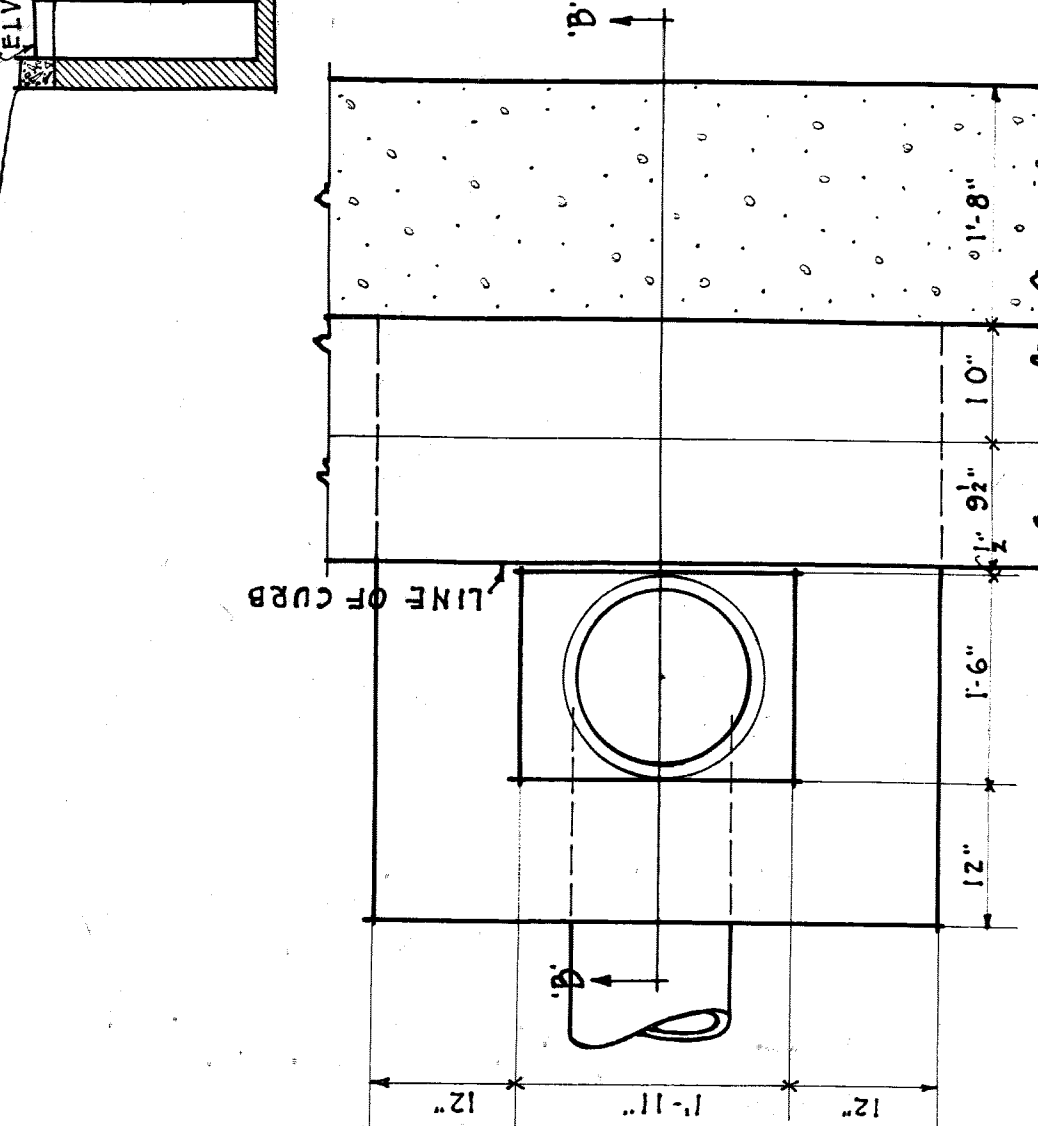
PROFILE AT CENTER OF ROADWAY  
SCALE: HORIZONTAL 1" = 30' 0"



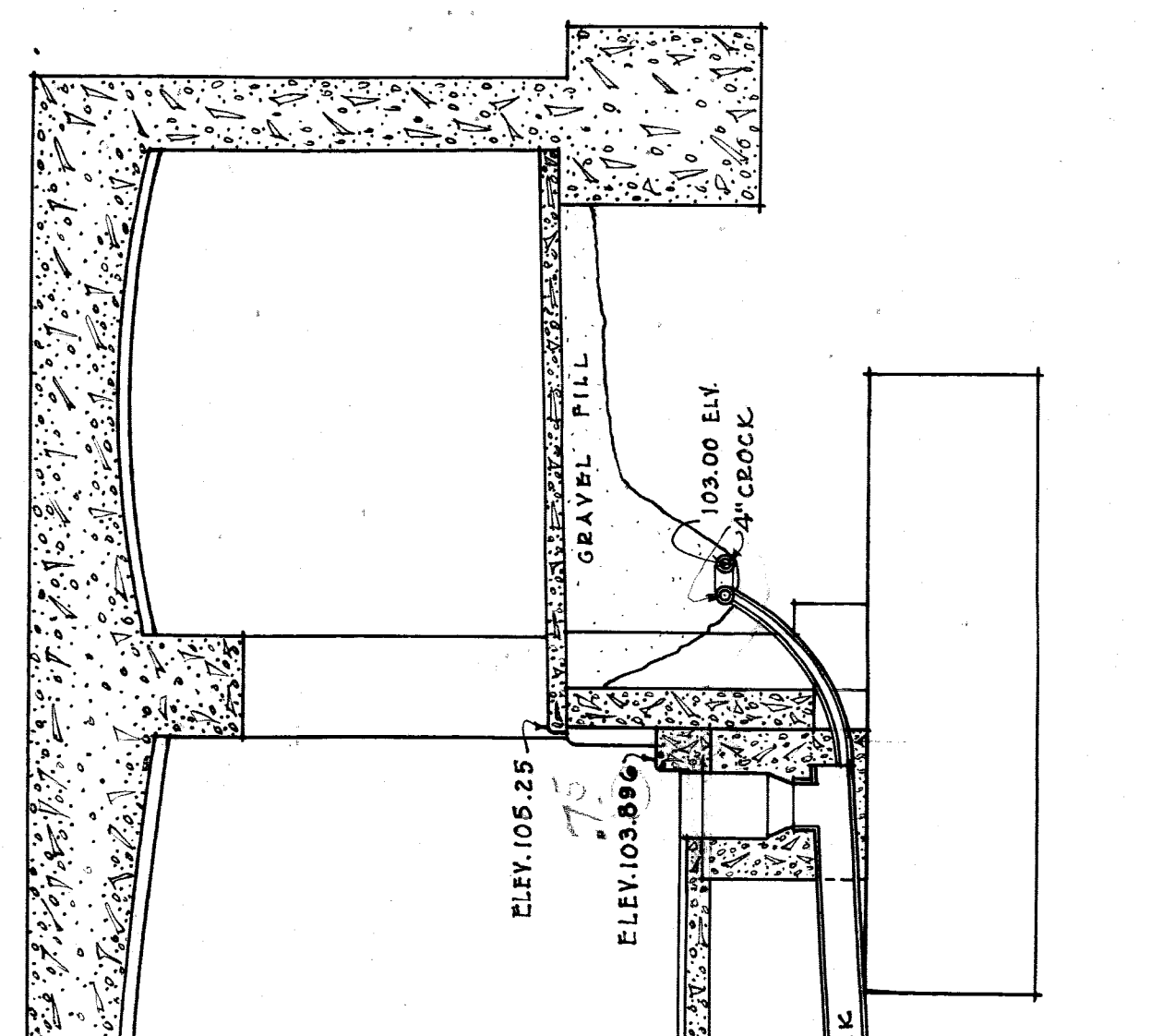
SECTION UNDER SUBWAY  
SCALE: 1/2" = 1' 0"



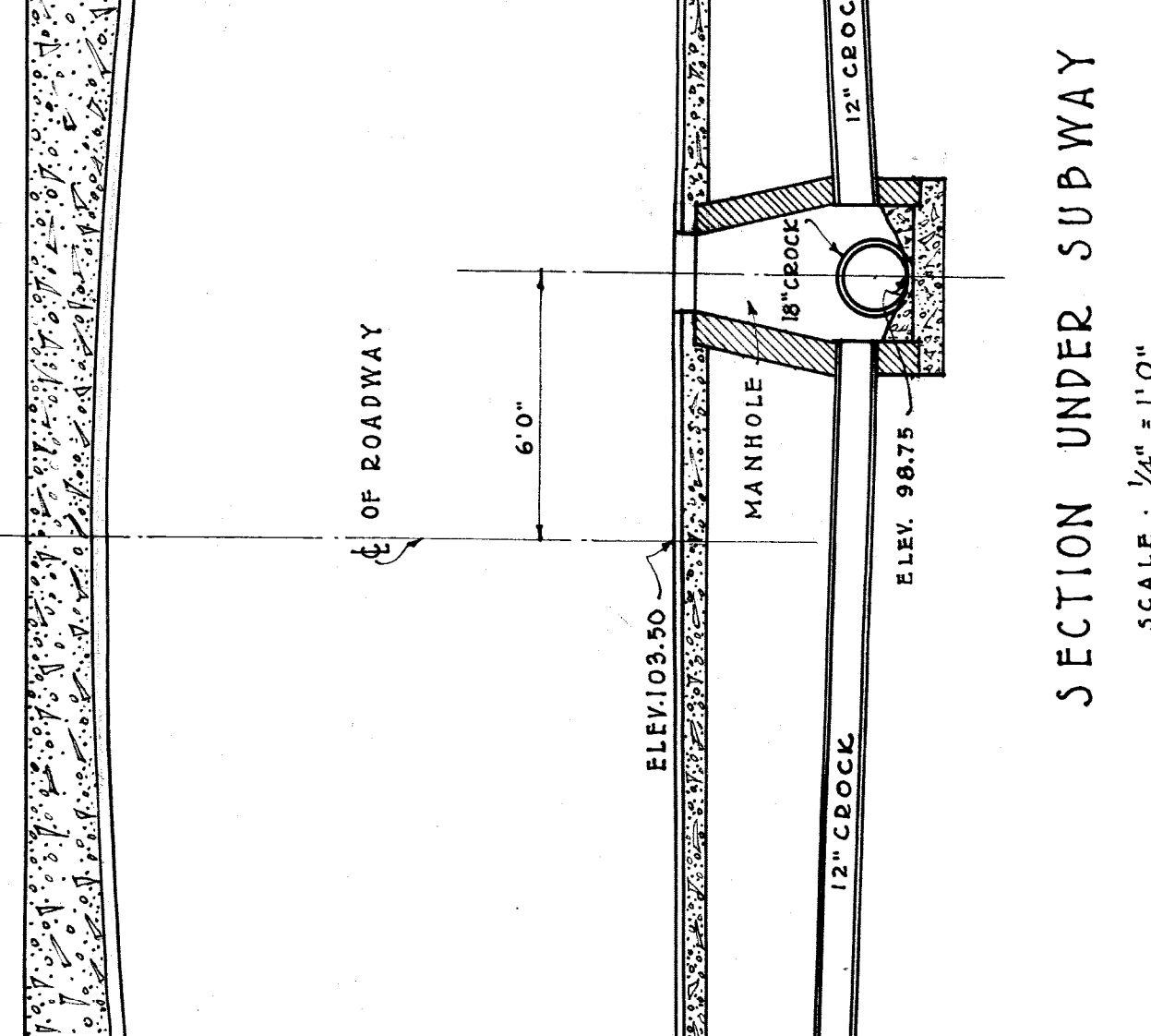
SECTION A-A



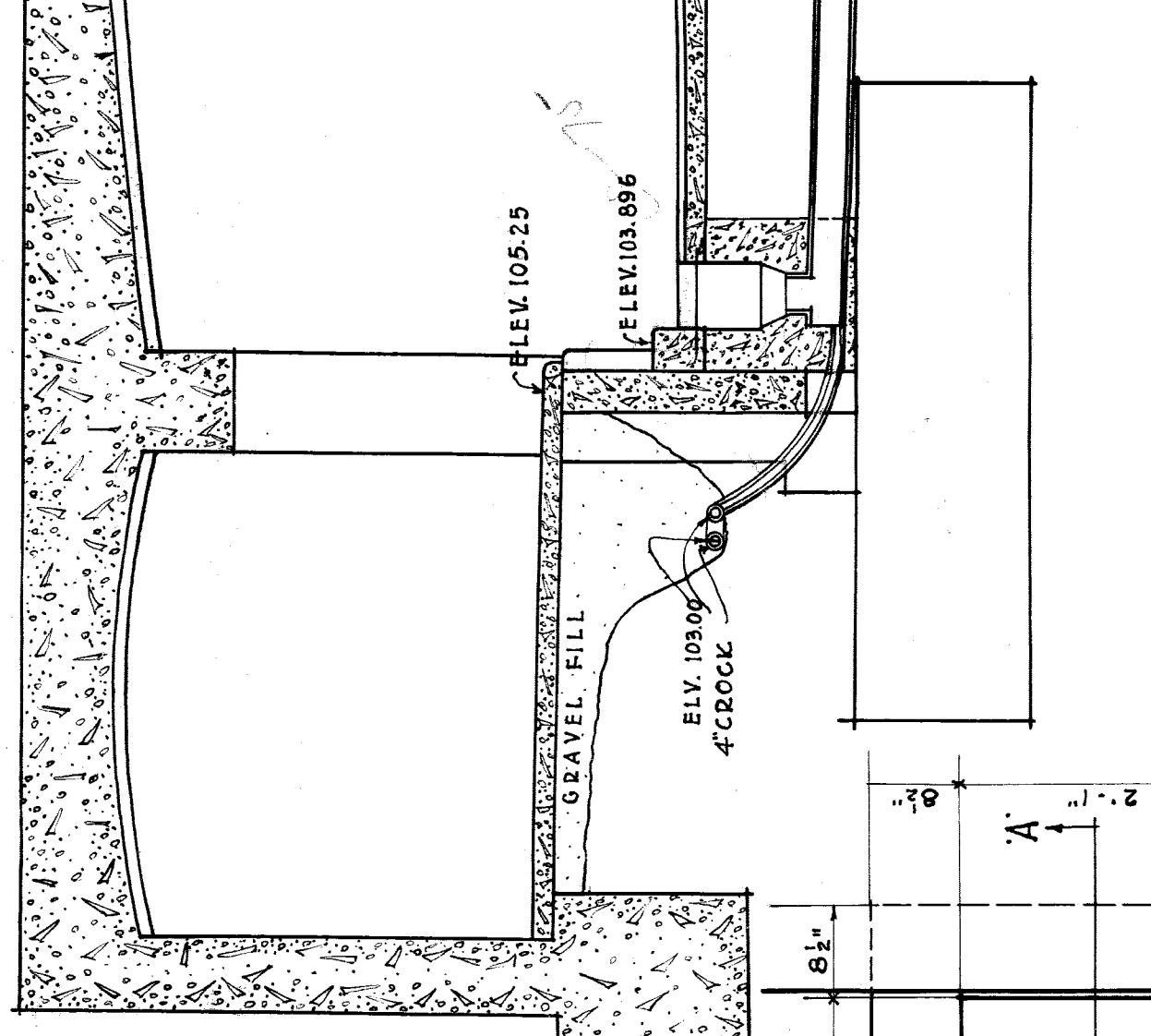
PLAN OF CATCH BASIN TYPE B  
SCALE 3/4" = 1' 0"



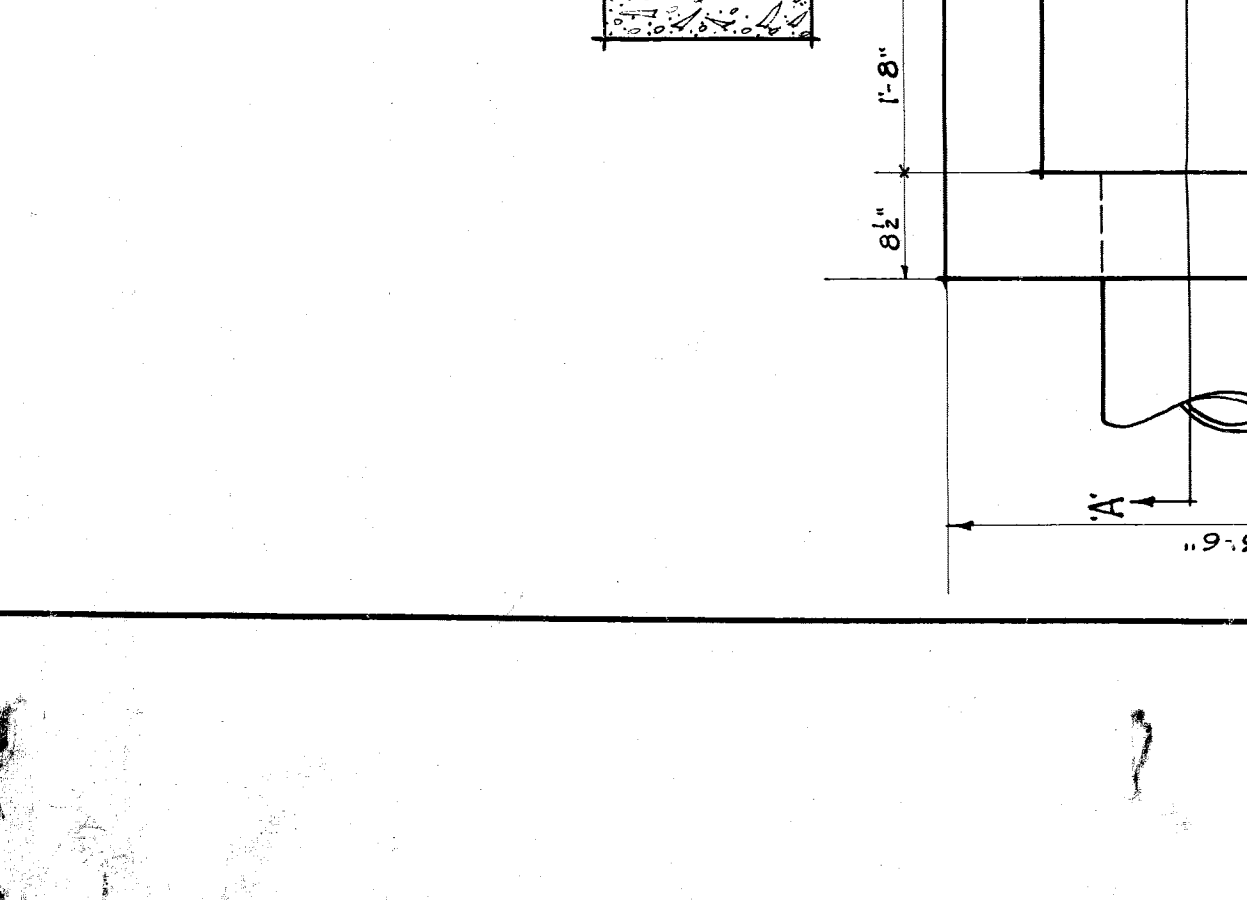
SECTION UNDER SUBWAY  
SCALE: 1/2" = 1' 0"



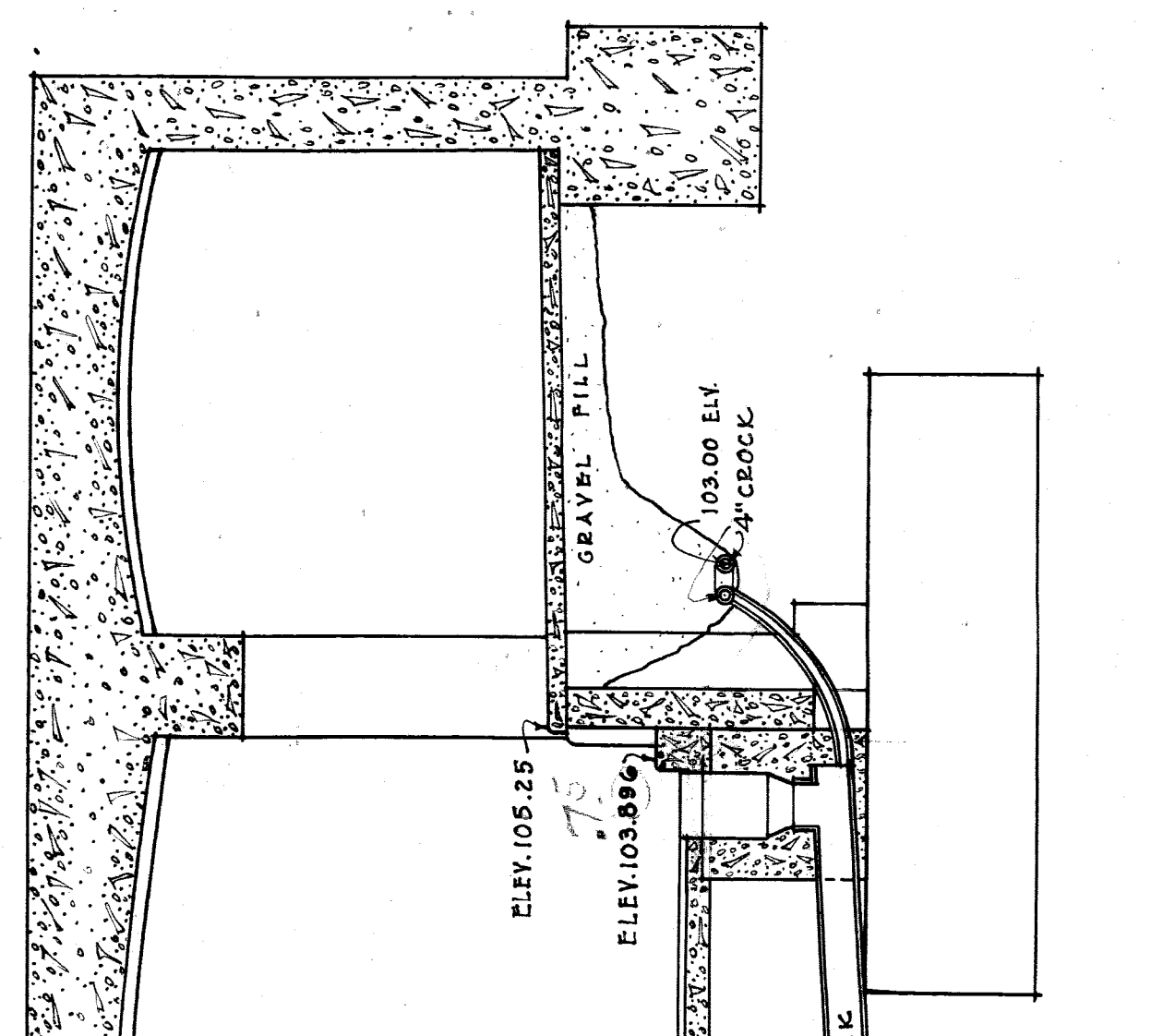
SECTION UNDER SUBWAY  
SCALE: 1/2" = 1' 0"



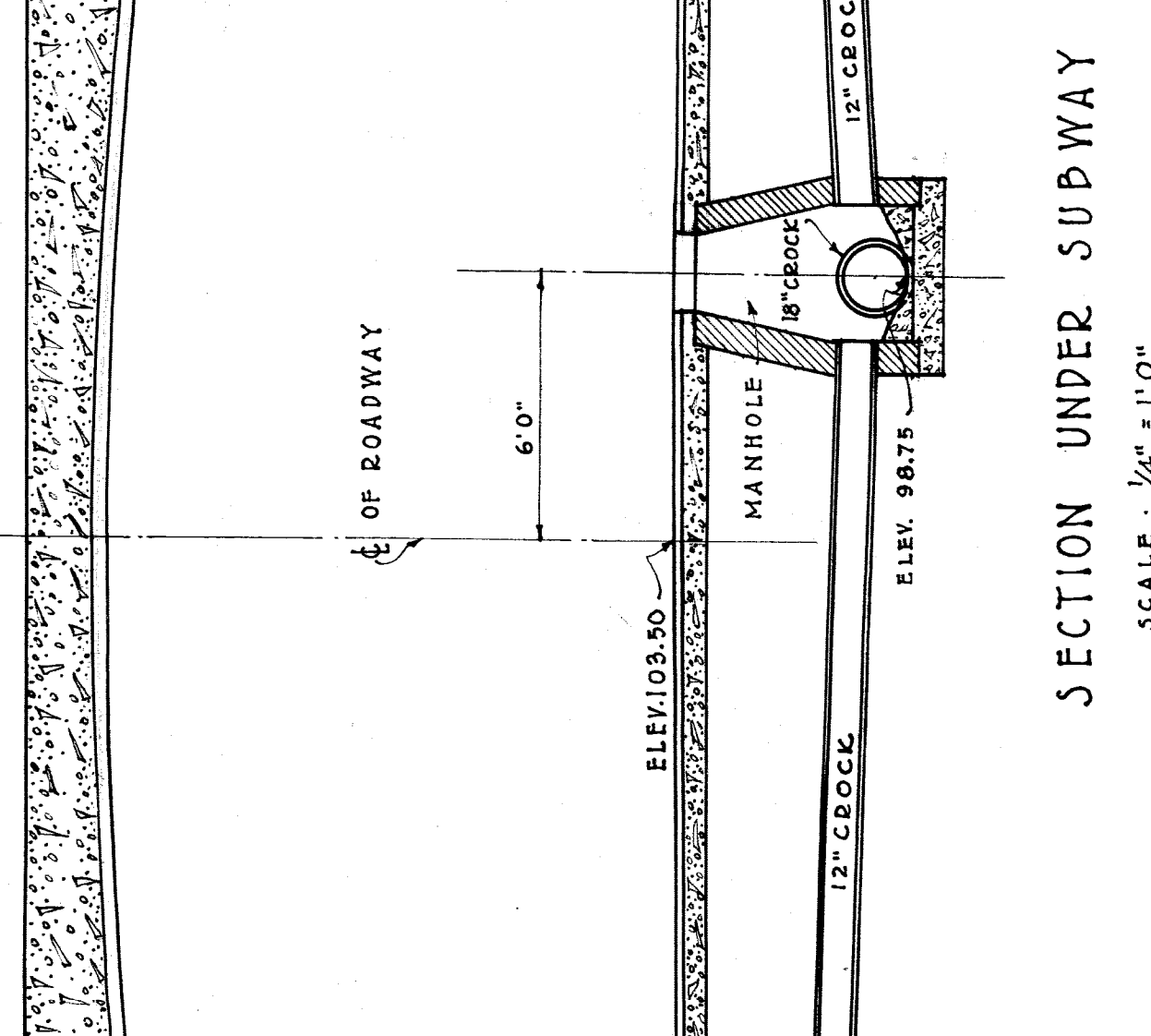
SECTION UNDER SUBWAY  
SCALE: 1/2" = 1' 0"



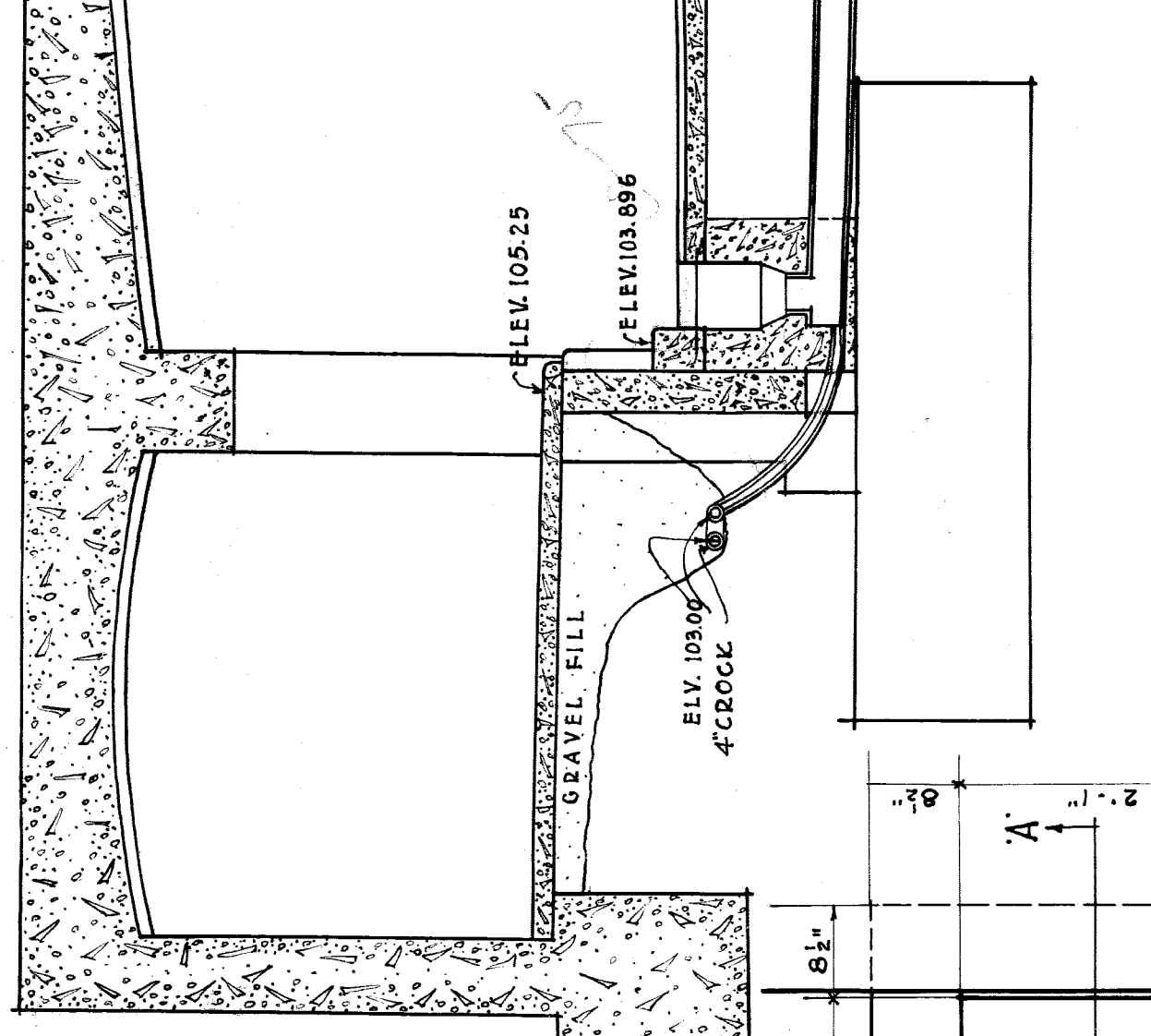
SECTION UNDER SUBWAY  
SCALE: 1/2" = 1' 0"



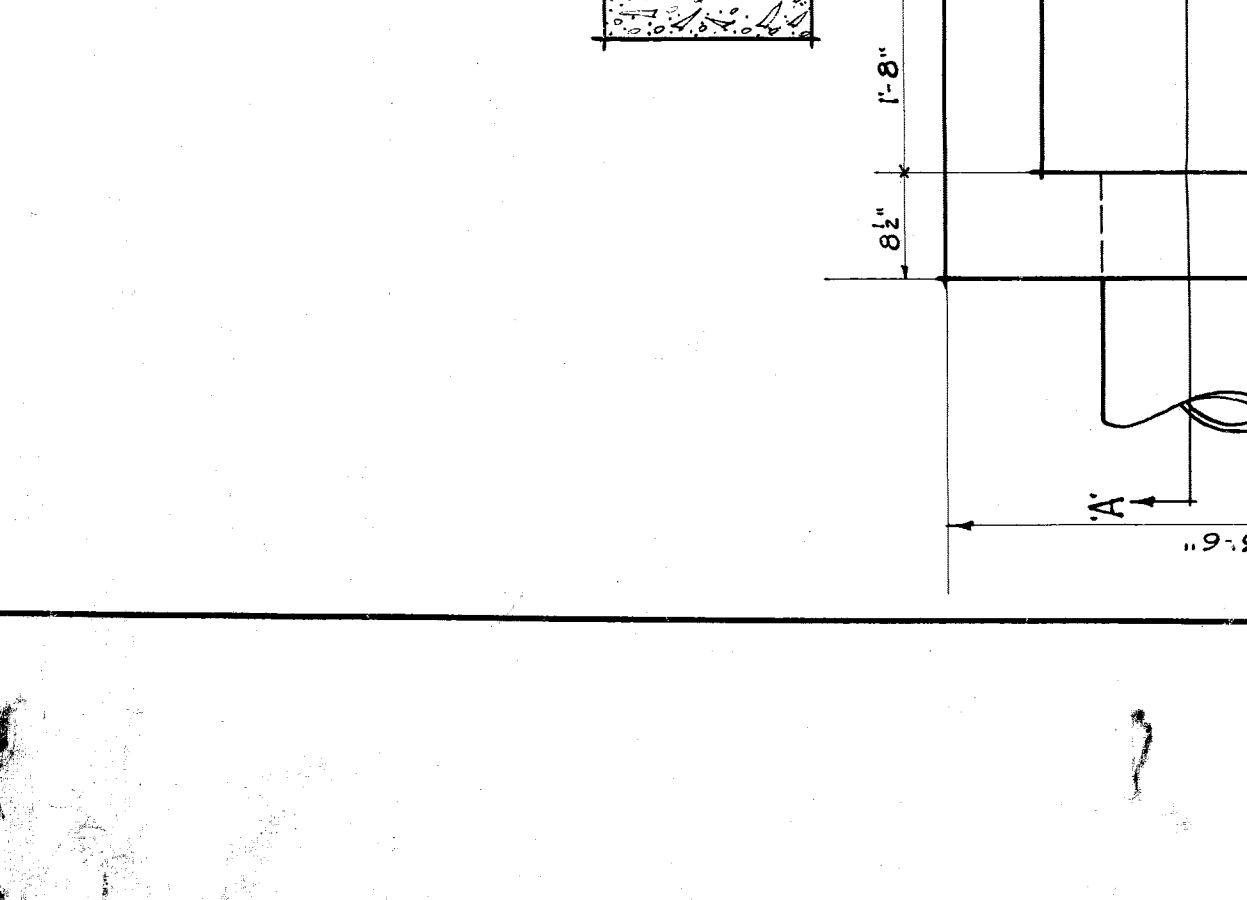
SECTION UNDER SUBWAY  
SCALE: 1/2" = 1' 0"



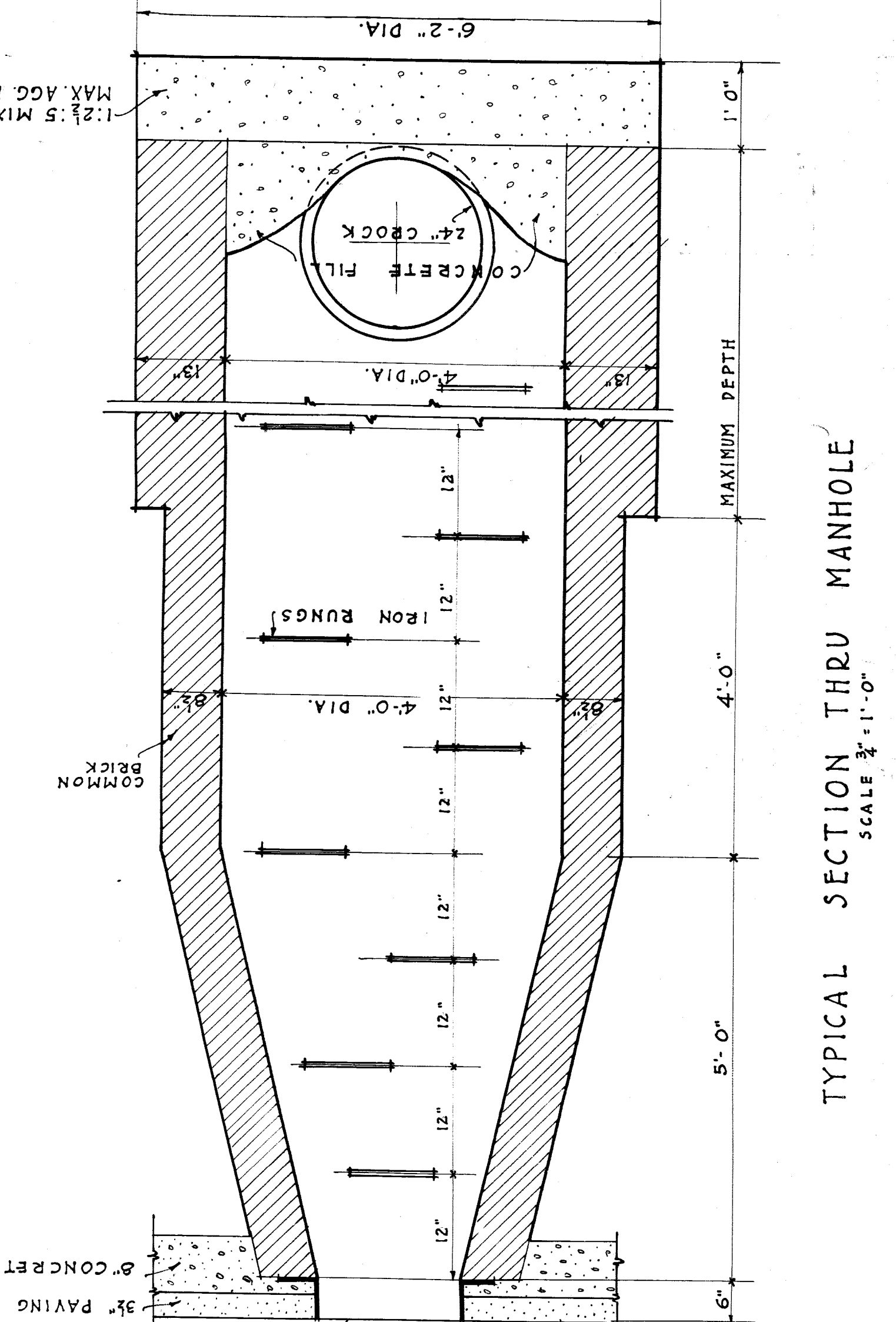
SECTION UNDER SUBWAY  
SCALE: 1/2" = 1' 0"



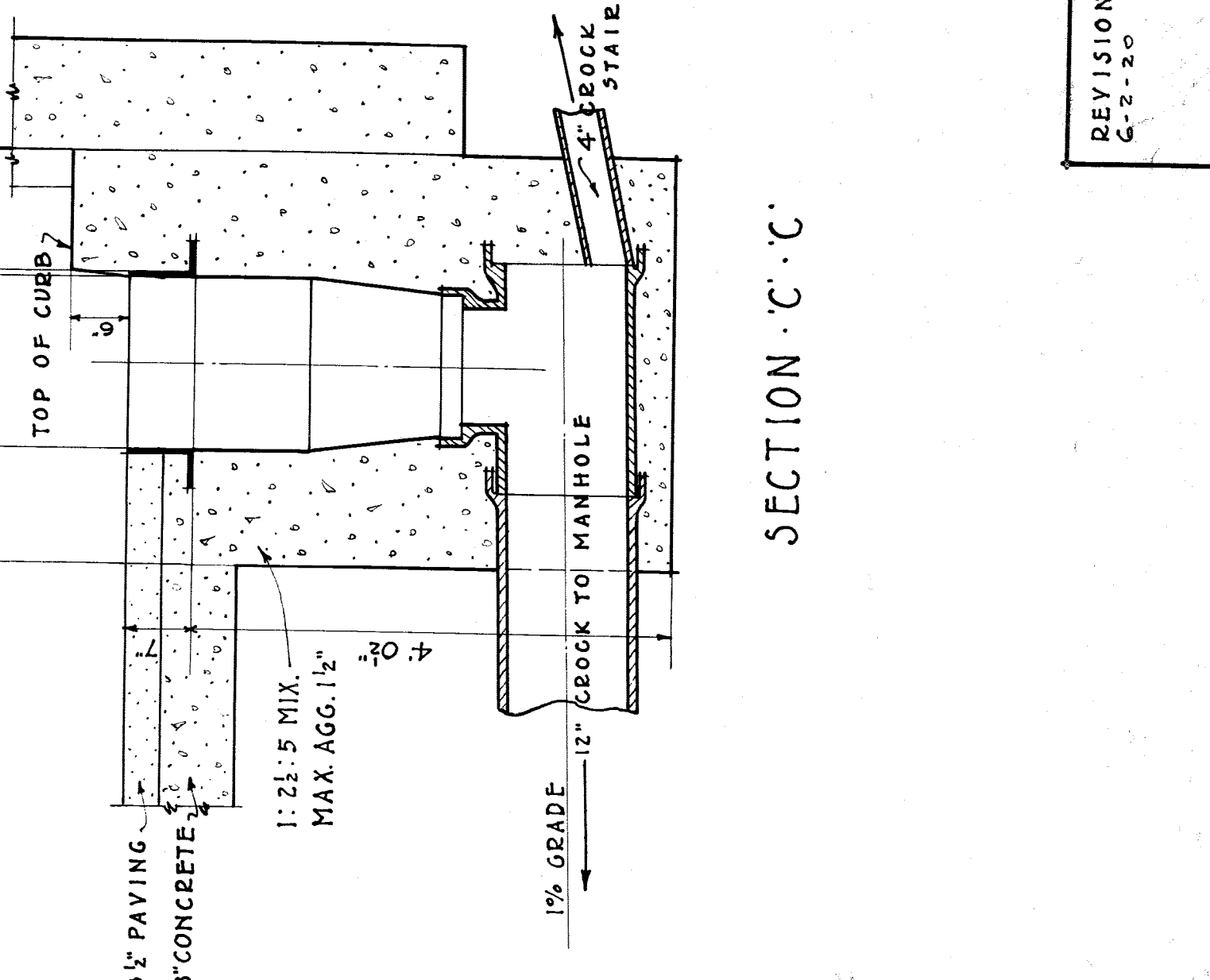
SECTION UNDER SUBWAY  
SCALE: 1/2" = 1' 0"



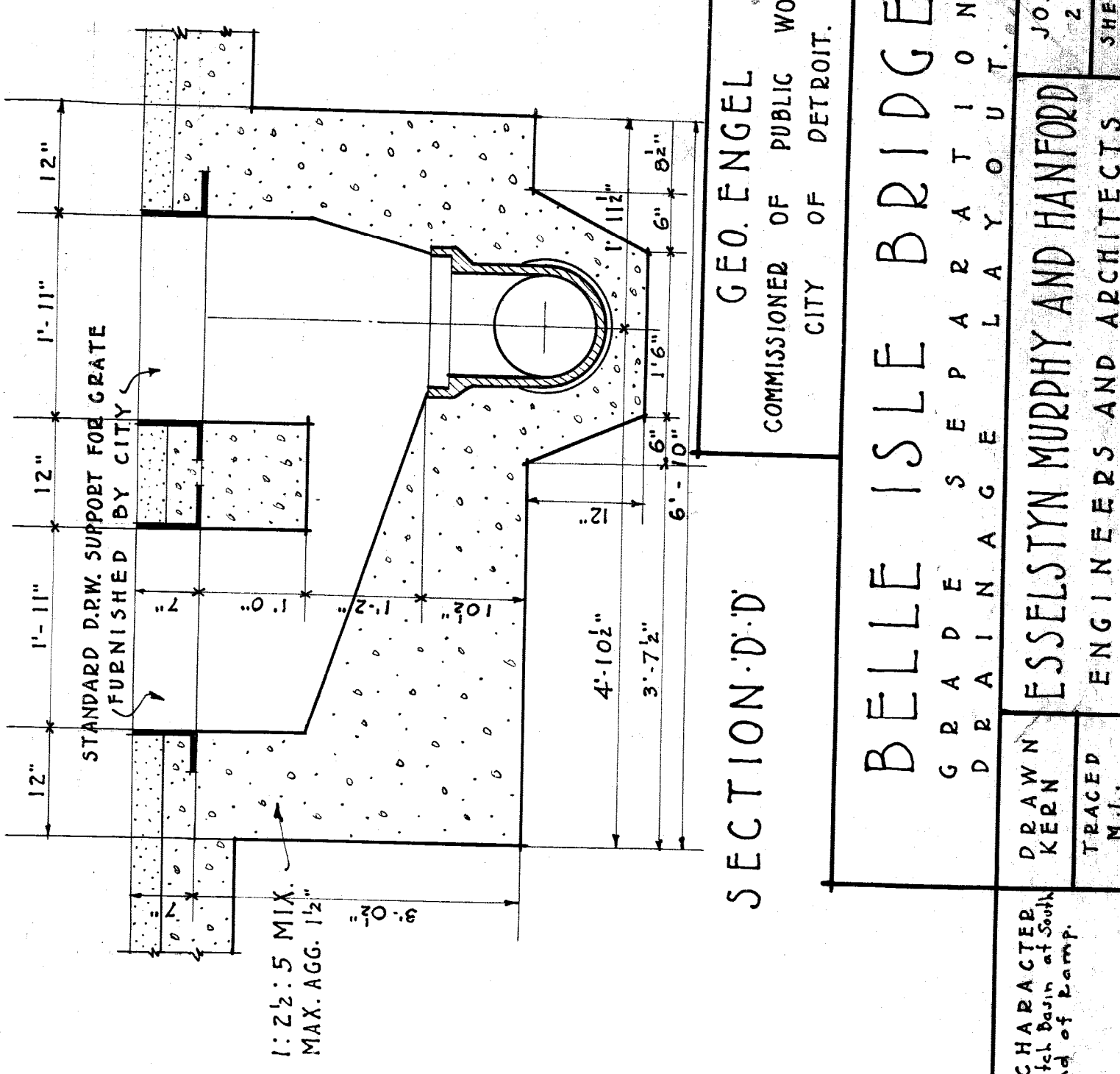
SECTION UNDER SUBWAY  
SCALE: 1/2" = 1' 0"



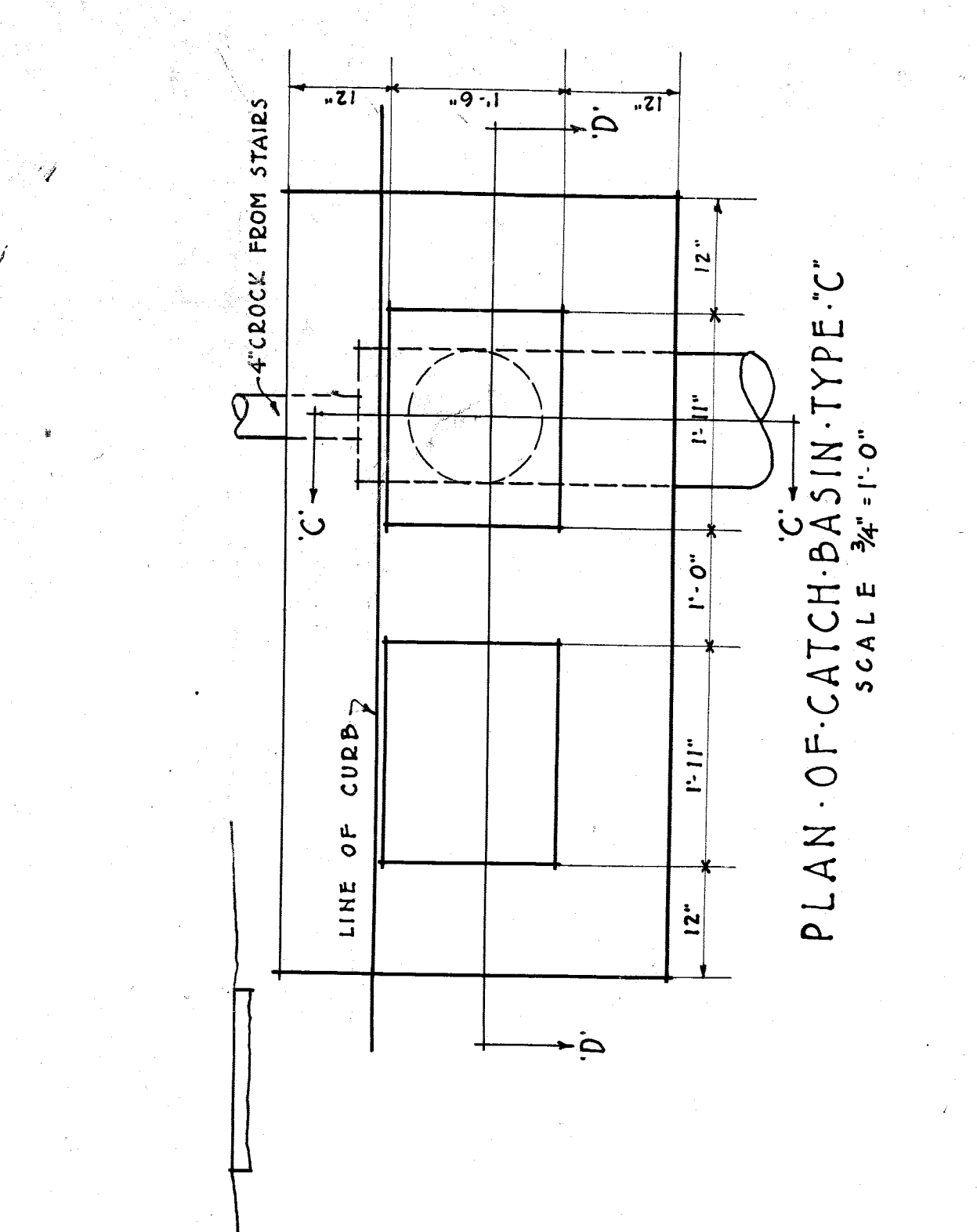
TYPICAL SECTION THRU MANHOLE  
SCALE 3/4" = 1' 0"



SECTION C-C



SECTION D-D

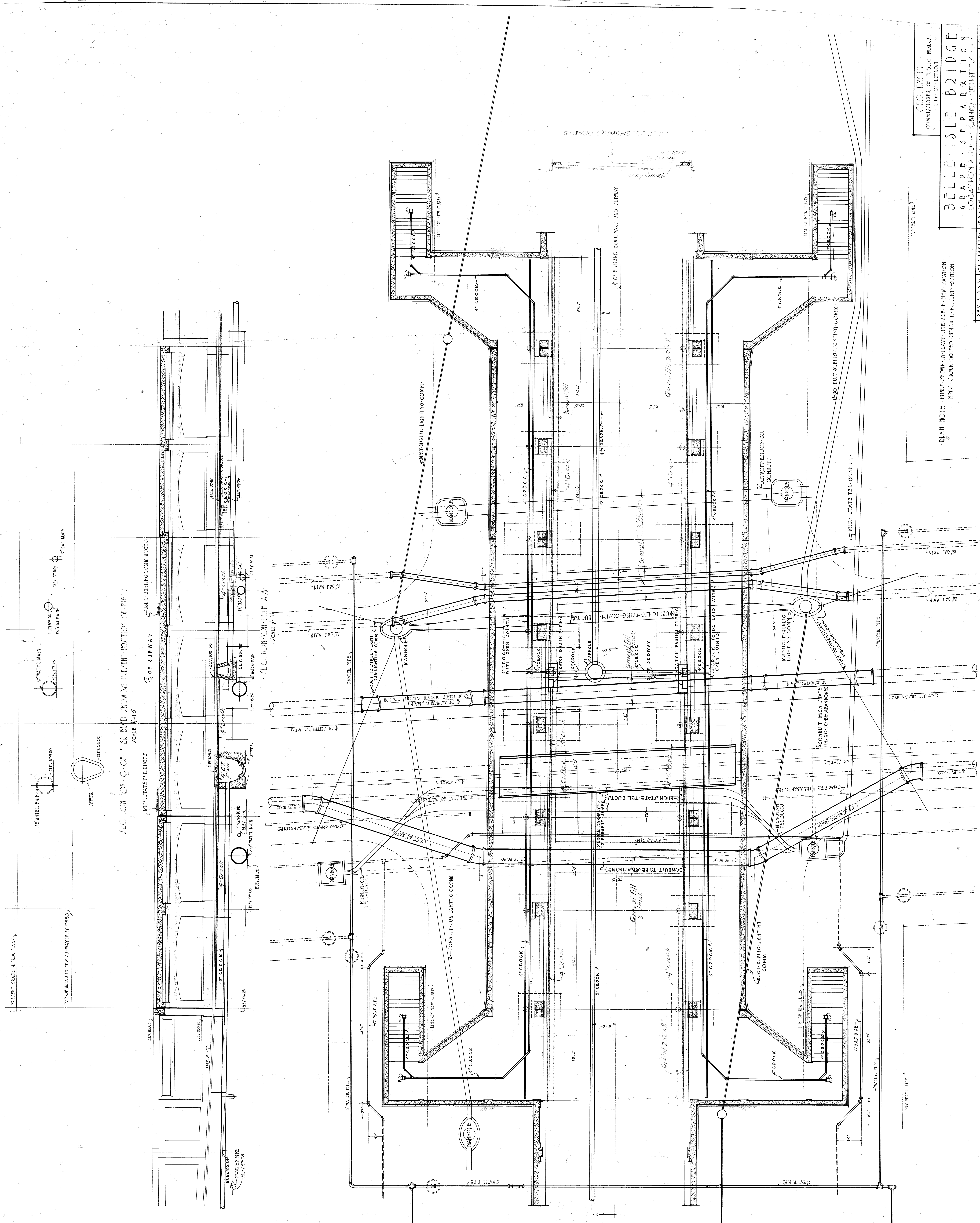


PLAN OF CATCH BASIN TYPE C  
SCALE 3/4" = 1' 0"

REVISIONS C-2-20 C-2-20		CHARACTER 1/2" DIA.	DRAWN KEEN	CHECKED LEWIS M. GRAM	DATE 12-12-20
REVISIONS C-2-20 C-2-20		CHARACTER 1/2" DIA.	DRAWN KEEN	CHECKED LEWIS M. GRAM	DATE 12-12-20
REVISIONS C-2-20 C-2-20		CHARACTER 1/2" DIA.	DRAWN KEEN	CHECKED LEWIS M. GRAM	DATE 12-12-20
REVISIONS C-2-20 C-2-20		CHARACTER 1/2" DIA.	DRAWN KEEN	CHECKED LEWIS M. GRAM	DATE 12-12-20
REVISIONS C-2-20 C-2-20		CHARACTER 1/2" DIA.	DRAWN KEEN	CHECKED LEWIS M. GRAM	DATE 12-12-20
REVISIONS C-2-20 C-2-20		CHARACTER 1/2" DIA.	DRAWN KEEN	CHECKED LEWIS M. GRAM	DATE 12-12-20
REVISIONS C-2-20 C-2-20		CHARACTER 1/2" DIA.	DRAWN KEEN	CHECKED LEWIS M. GRAM	DATE 12-12-20
REVISIONS C-2-20 C-2-20		CHARACTER 1/2" DIA.	DRAWN KEEN	CHECKED LEWIS M. GRAM	DATE 12-12-20
REVISIONS C-2-20 C-2-20		CHARACTER 1/2" DIA.	DRAWN KEEN	CHECKED LEWIS M. GRAM	DATE 12-12-20
REVISIONS C-2-20 C-2-20		CHARACTER 1/2" DIA.	DRAWN KEEN	CHECKED LEWIS M. GRAM	DATE 12-12-20

BELLE ISLE BRIDGE  
 COMMISSIONER OF PUBLIC WORKS  
 CITY OF DETROIT  
 GEORGE ENGEL  
 ENGINEERS AND ARCHITECTS  
 1215 W. WABASH AVE.  
 DETROIT, MICHIGAN





SECTION ON C-C OF E. GRAND BLVD. SHOWING PRESENT POSITION OF PIPES  
SCALE 1/8"=1'-0"

SECTION ON LINE AA  
SCALE 1/8"=1'-0"

GEO. ENGEL  
 COMMISSIONER OF PUBLIC WORKS  
 CITY OF DETROIT  
**BELLE ISLE BRIDGE**  
 GRADUATE SEPARATION  
 LOCATION OF PUBLIC UTILITIES  
 ESSELSTYNN, MURPHY AND HANFORD  
 ENGINEERS AND ARCHITECTS  
 LEWIS M. GEAR, ASSOCIATE ENGINEER  
 DETROIT, MICHIGAN

PLAN NOTE: PIPES SHOWN IN HEAVY LINE ARE IN NEW LOCATION.  
 PIPES SHOWN IN DOTTED LINE INDICATE PRESENT POSITION.

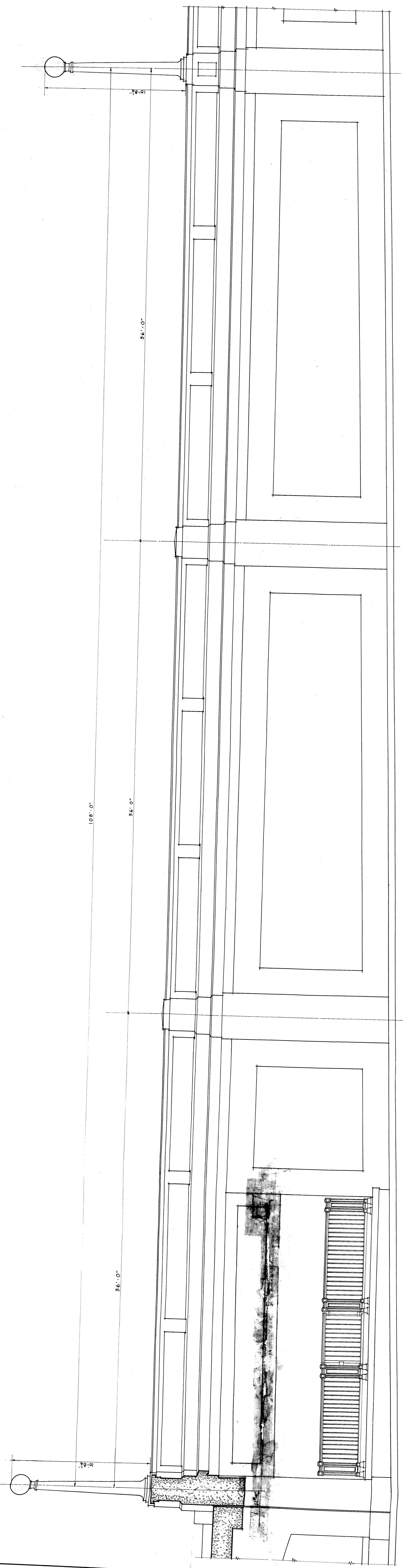
REVISIONS	CHARACTER	DATE
1	AS SHOWN	10-24-20
2	AS SHOWN	10-24-20
3	AS SHOWN	10-24-20
4	AS SHOWN	10-24-20
5	AS SHOWN	10-24-20
6	AS SHOWN	10-24-20
7	AS SHOWN	10-24-20
8	AS SHOWN	10-24-20
9	AS SHOWN	10-24-20
10	AS SHOWN	10-24-20

DRAWN BY: [Name]  
 CHECKED BY: [Name]  
 DATE: 10-24-20

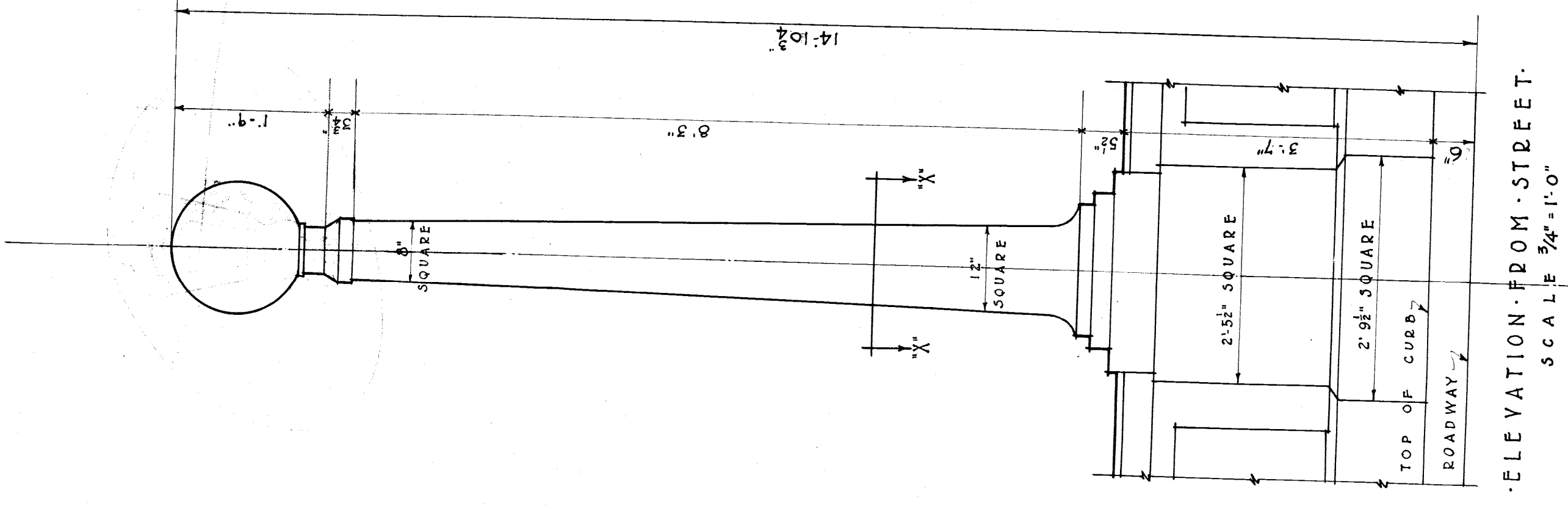
JOB NO. 14  
 SHEET 14  
 DATE 10-24-20

PROJECT LINE  
 PROPERTY LINE

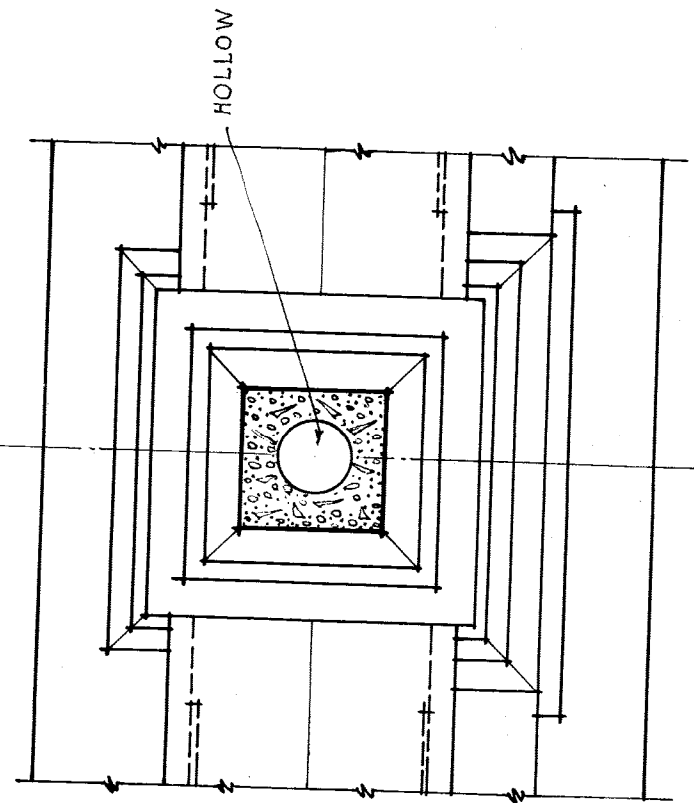




ELEVATION FROM INCLINE  
SCALE 3/8"=1'-0"



ELEVATION FROM STREET  
SCALE 3/8"=1'-0"



PLAN SECTION XX  
SCALE 3/8"=1'-0"

GEO. ENGEL  
COMMISSIONER OF PUBLIC WORKS  
CITY OF DETROIT

BELLE ISLE BRIDGE		JOB NO.	1114-15
GRADE SEPARATION		SHEET NO.	10
ARCHITECTURAL DETAILS		DATE	11-14-15
DRAWN	ESSELSTYN MURPHY AND HANFORD	CHECKED	LEWIS M. GRAM
TRACED	ENGINEERS AND ARCHITECTS	APPROVED	LEWIS M. GRAM
DESIGNED	DETROIT	ENGINEER	MICHAEL GAN

REVISIONS	CHARACTER	DRAWN	CHECKED	DATE