

BORROW REQUIREMENTS			
WHERE REQUIRED STA. TO STA.	AMOUNT REQUIRED	AMOUNT AVAILABLE	SOILS SERIES

ROUTE	STATE PROJECT	FEDERAL NO	SHEET NO	TOTAL SHEETS
	82112	U 404 (110)	1	

MICHIGAN
STATE HIGHWAY DEPARTMENT
JOHN C MACKIE
 STATE HIGHWAY COMMISSIONER

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN STATE HIGHWAY DEPARTMENT CURRENT STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS.

PLANS FOR PROPOSED

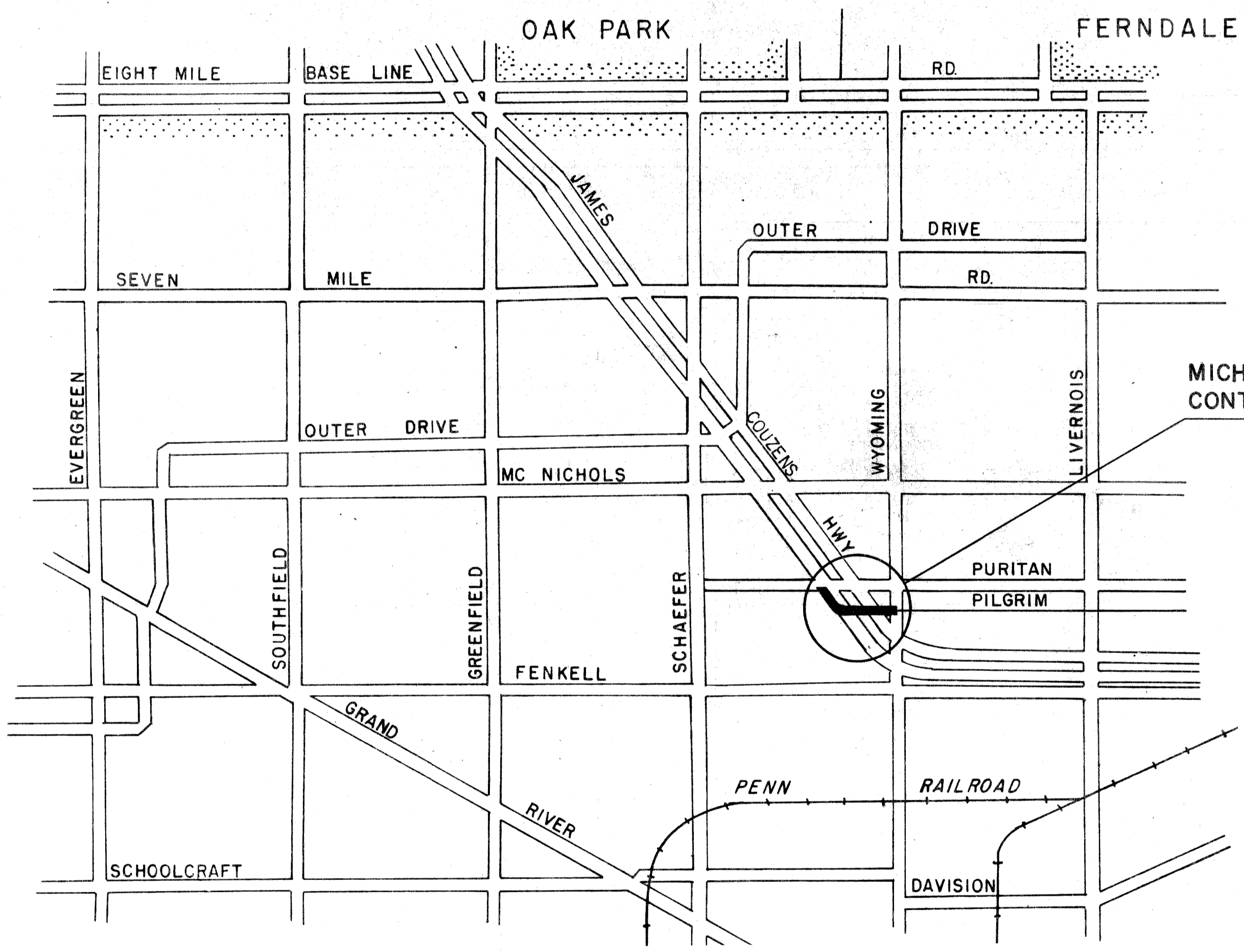
MICHIGAN PROJECT U-404(110)
CONTROL SECTION BU 82112 C10U
JAMES COUZENS EXPRESSWAY

WAYNE COUNTY
 CITY OF DETROIT



INDEX OF SHEETS

- 1 TITLE SHEET
- 2 LOG OF BORINGS, PUMPCRETE SIGNING, AND LIGHTING
- 3-4 PLAN AND PROFILE - PURITAN AVE. SEWER
- 5 DETAILS FOR BARRICADES
- 6 SPECIAL DETAIL OF MANHOLE FRAME AND COVER AD
- 7 SPECIAL MANHOLE DETAILS, TRANSITION, AND QUANTITY LIST



MICHIGAN PROJECT U404(110)
CONTROL SECTION BU 82112 C10U

TITLE SHEET LEGEND

		EXISTING	CONDITION
		GRAVEL	
		BITUMINOUS ON GRAVEL	
		BITUMINOUS	RELOCATION
		PAVED	
PROPOSED PROJECT			
T.L. PAVED			
T.L. BITUMINOUS ON GRAVEL			
T.L. GRAVEL			
T.L. SURFACE TREATMENT ON GRAVEL			
NON T.L. PAVED			
NON T.L. BITUMINOUS			
NON T.L. GRAVEL			
NON T.L. UNIMPROVED			
COUNTY LINE			
CITY OR VILLAGE LIMITS			
TOWNSHIP LINE			
SECTION LINE			
RAILROADS			

CONTRACT FOR RELOCATION OF PURITAN AVE. SEWER

DIVISION APPROVAL

CHECKED FOR APPROVAL	ENGINEER OF DESIGN-CONSULTANTS	DATE
RECOMMENDED FOR APPROVAL	TRAFFIC ENGINEER	DATE
RECOMMENDED FOR APPROVAL	ENGINEER OF BRIDGE AND ROAD DESIGN	DATE

OFFICES OF DESIGN AND CONSTRUCTION

APPROVED	CONSTRUCTION ENGINEER	DATE
APPROVED	CHIEF DESIGN ENGINEER	DATE

STATE HIGHWAY DEPARTMENT APPROVAL

APPROVED JOHN C MACKIE, STATE HIGHWAY COMMISSIONER

BY _____ DIRECTOR OF ENGINEERING-CHIEF ENGINEER DATE _____

PLANS PREPARED BY _____ DEPARTMENT OF COMMERCE BUREAU OF PUBLIC ROADS

CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS

APPROVED _____ DIVISION ENGINEER DATE _____

PROJECT NO BU 82112 C10U

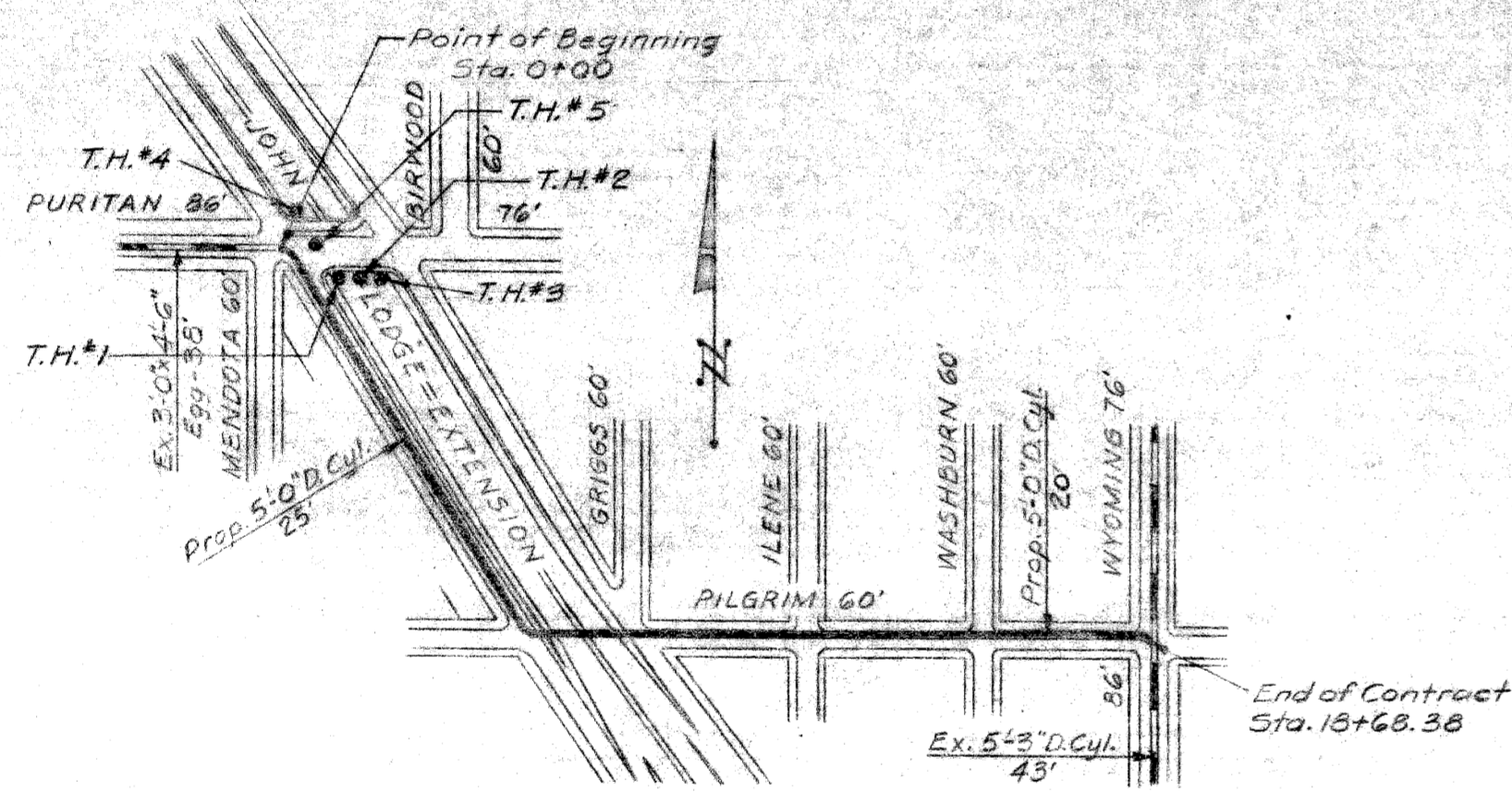
82112 C 10	PROJECT NO	FEDERAL PROJECT	SHEET NO
	82112	U 404 (110)	1

LOG OF BORINGS

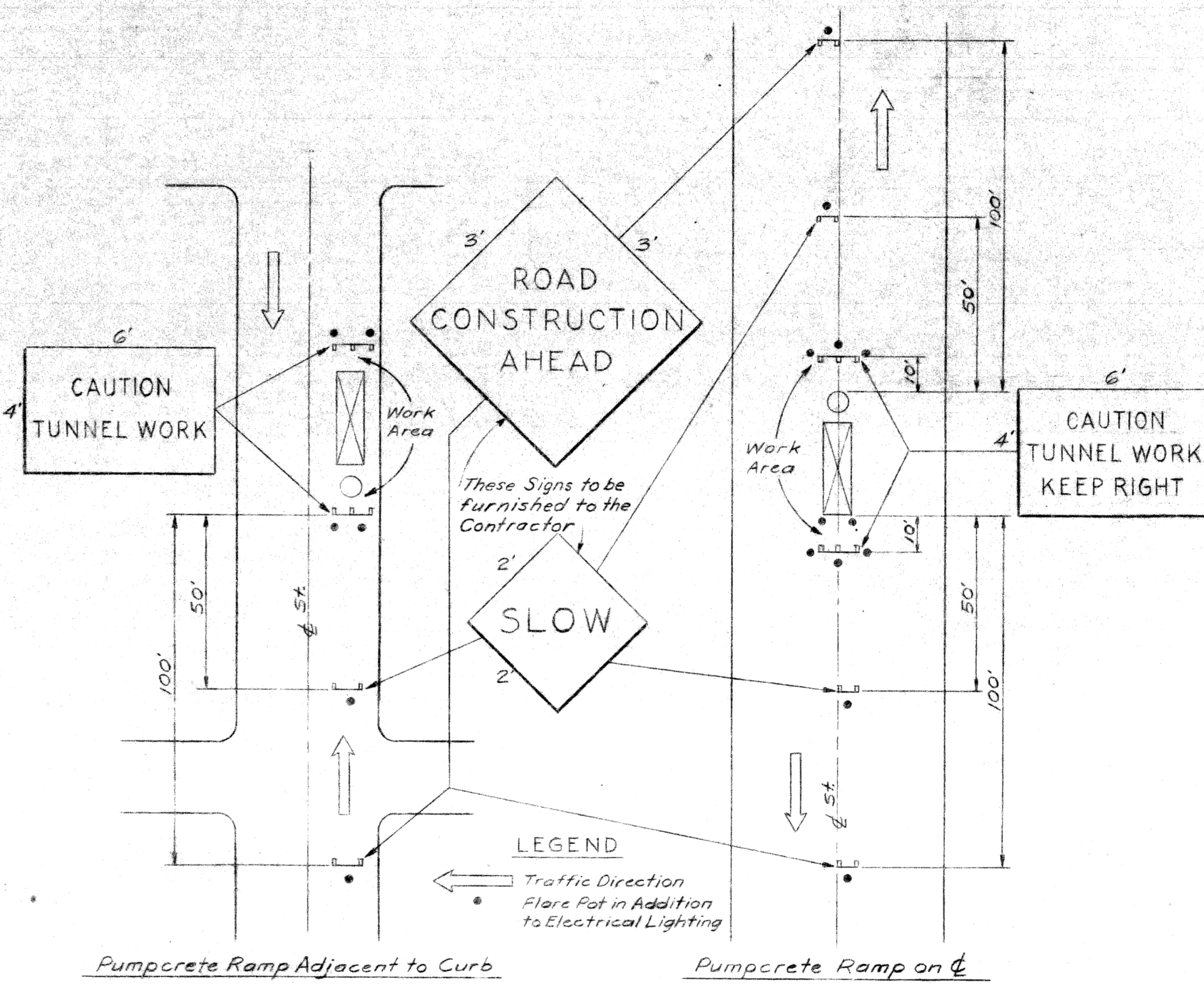
T.H.#1	T.H.#2	T.H.#3	T.H.#4	T.H.#5
El. 181.31 El. 180.31 El. 178.31 Sa.#1, El. 175.31	El. 181.87 El. 179.87 El. 177.87 Sa.#1, El. 175.87	El. 181.18 El. 178.68 El. 177.18 El. 175.18	El. 181.16 El. 179.16 El. 177.16 El. 176.16	El. 181.09 El. 179.09 El. 176.09
Black Loamy Sand Loose Br. Med. Fine Sand Mod. Comp. Granule Pebble Gravel	Brown Loamy Sand Loose Br. Med. Fine Sand Mod. Comp. Granule Pebble Gravel	Black Loamy Sand Loose Br. Med. Fine Sand Mod. Comp. Granule Pebble Gravel	Black Loamy Sand Loose Br. Med. Sand Mod. Comp. Granule Pebble Gravel	Black Loamy Sand Loose Br. Med. Fine Sand
Sa.#2, El. 171.31	Sa.#2, El. 171.87	Sa.#1, El. 171.18	Sa.#1, El. 171.16	Sa.#1, El. 171.09
Stiff Gray Clay, Trace to Heavy Trace of Sand, Trace of Pebbles	Stiff Gray Clay, trace to Heavy trace of Sand, trace of Pebbles	Stiff Gray Clay, trace to Heavy trace of Sand, trace of Pebbles	Stiff Gray Clay, trace to heavy trace of Sand, Trace of Pebbles	Hard Gray Clay, Trace to heavy Trace of Sand & Pebbles
Sa.#3, El. 166.31	Sa.#3, El. 166.87	Sa.#2, El. 166.18	Sa.#2, El. 171.16	Sa.#2, El. 171.09
Stiff Gray Clay, Trace to Heavy Trace of Sand, Trace of Pebbles	Stiff Gray Clay, trace to Heavy trace of Sand, trace of Pebbles	Stiff Gray Clay, trace to Heavy trace of Sand, trace of Pebbles	Stiff Gray Clay, trace to heavy trace of Sand, Trace of Pebbles	Stiff Gray Clay, Trace to heavy Trace of Sand & Pebbles
Sa.#4, El. 161.31	Sa.#4, El. 161.87	Sa.#3, El. 161.18	Sa.#3, El. 166.16	Sa.#3, El. 166.09
Plastic Gray Sandy Silty Clay, Trace of Pebbles	Firm Gray Clay, trace to Heavy trace of sand, trace of Pebbles	Sa.#4, El. 156.18	Sa.#4, El. 161.16	Sa.#4, El. 161.09
El. 157.31 El. 155.31	El. 163.87 El. 156.87 El. 155.87	El. 152.18	El. 164.16	El. 158.09 El. 156.09
Sa.#5, El. 151.31	Sa.#5, El. 151.87	Sa.#5, El. 151.18	Sa.#5, El. 156.16	Sa.#5, El. 156.09
Firm Gray Clay, Trace to Heavy trace of Sand, Trace of Pebbles	Stiff Gray Clay, Heavy trace of Sand, trace of Pebbles	Sa.#6, El. 146.18	Sa.#6, El. 151.16	Sa.#6, El. 151.09
Sa.#6, El. 146.31	Sa.#6, El. 146.87	Sa.#7, El. 141.18	Sa.#7, El. 146.16	Sa.#7, El. 146.09
Firm Gray Clay, Trace to Heavy trace of Sand, Trace of Pebbles	Firm Gray Clay, trace to Heavy trace of Sand, trace of Pebbles	Sa.#8, El. 136.18	Sa.#8, El. 141.16	Sa.#8, El. 141.09
Sa.#7, El. 141.31	El. 144.87	Sa.#9, El. 131.18	Sa.#9, El. 131.16	Sa.#9, El. 131.09
Sa.#8, El. 136.31	Sa.#8, El. 136.87	El. 130.18	El. 130.16	El. 130.09
Sa.#9, El. 131.31	Sa.#9, El. 131.87	End of Boring	End of Boring	End of Boring
El. 130.31	El. 130.87			

NOTE

(B) Denotes number of blows
required to drive a 2" O.D. Split
Spoon Sampler 12" using a 140#
hammer falling 30"



PLAN
Scale: 1" = 300'



TYPICAL SIGNING & PROTECTIVE LIGHTING

Scale: 1" = 30'

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE. DATE 2-7-60

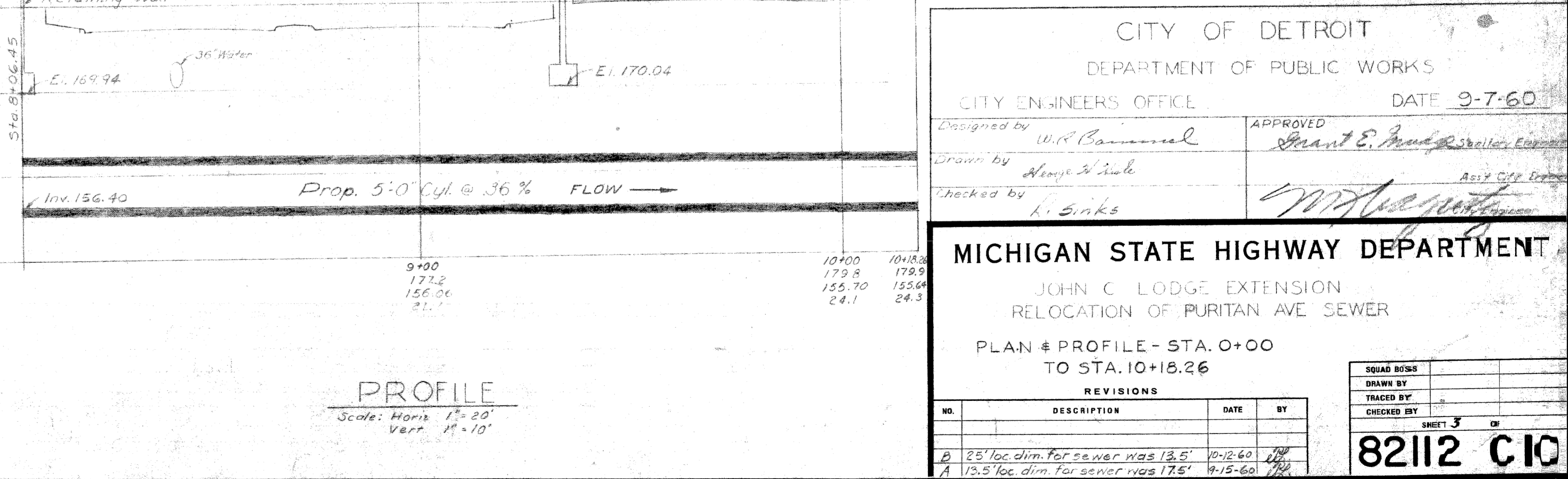
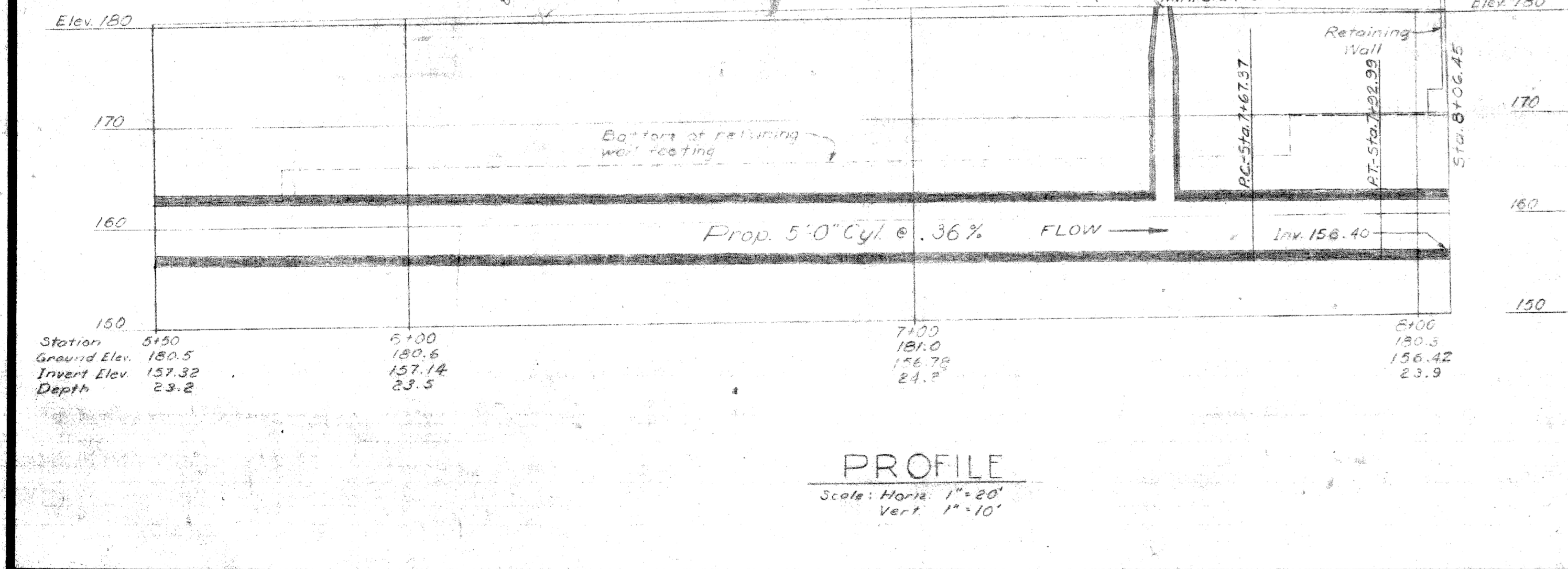
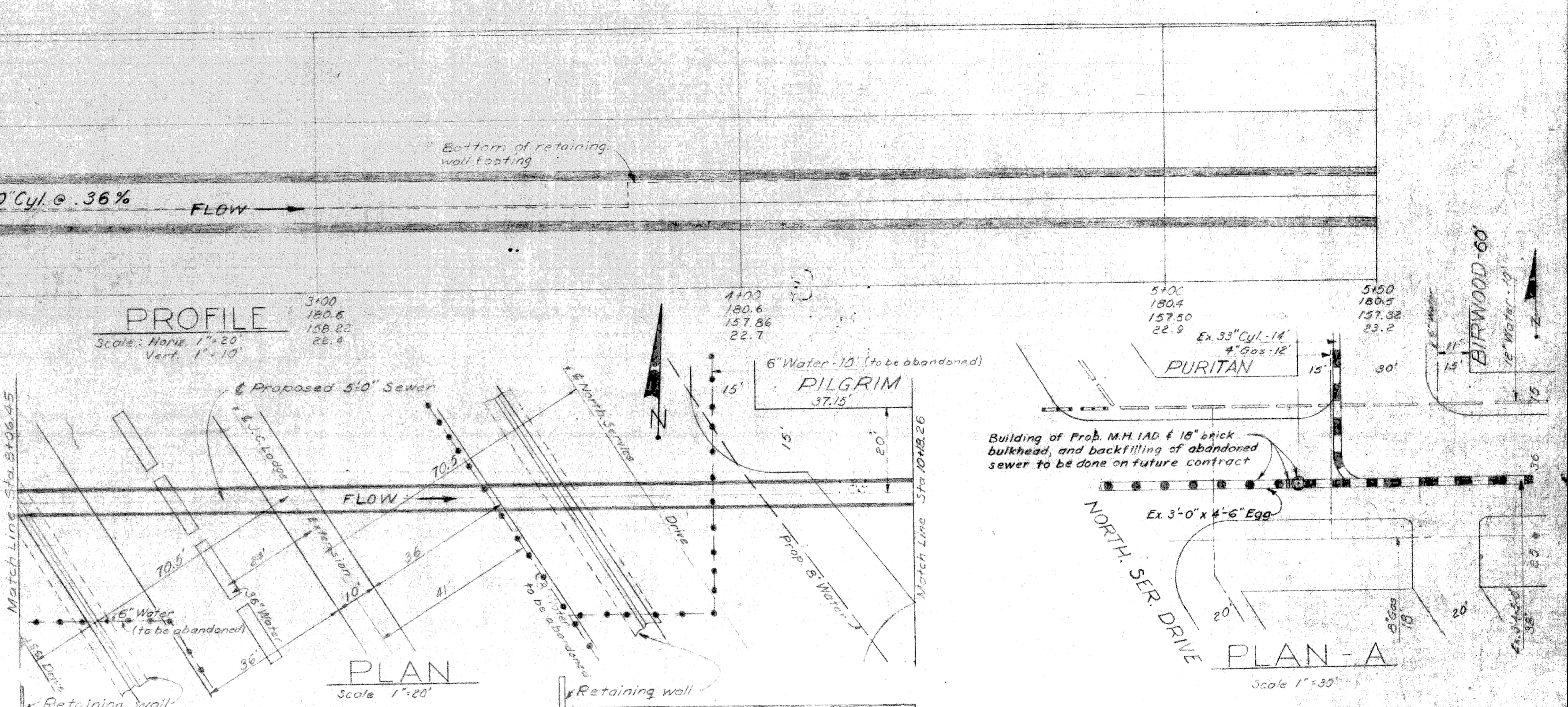
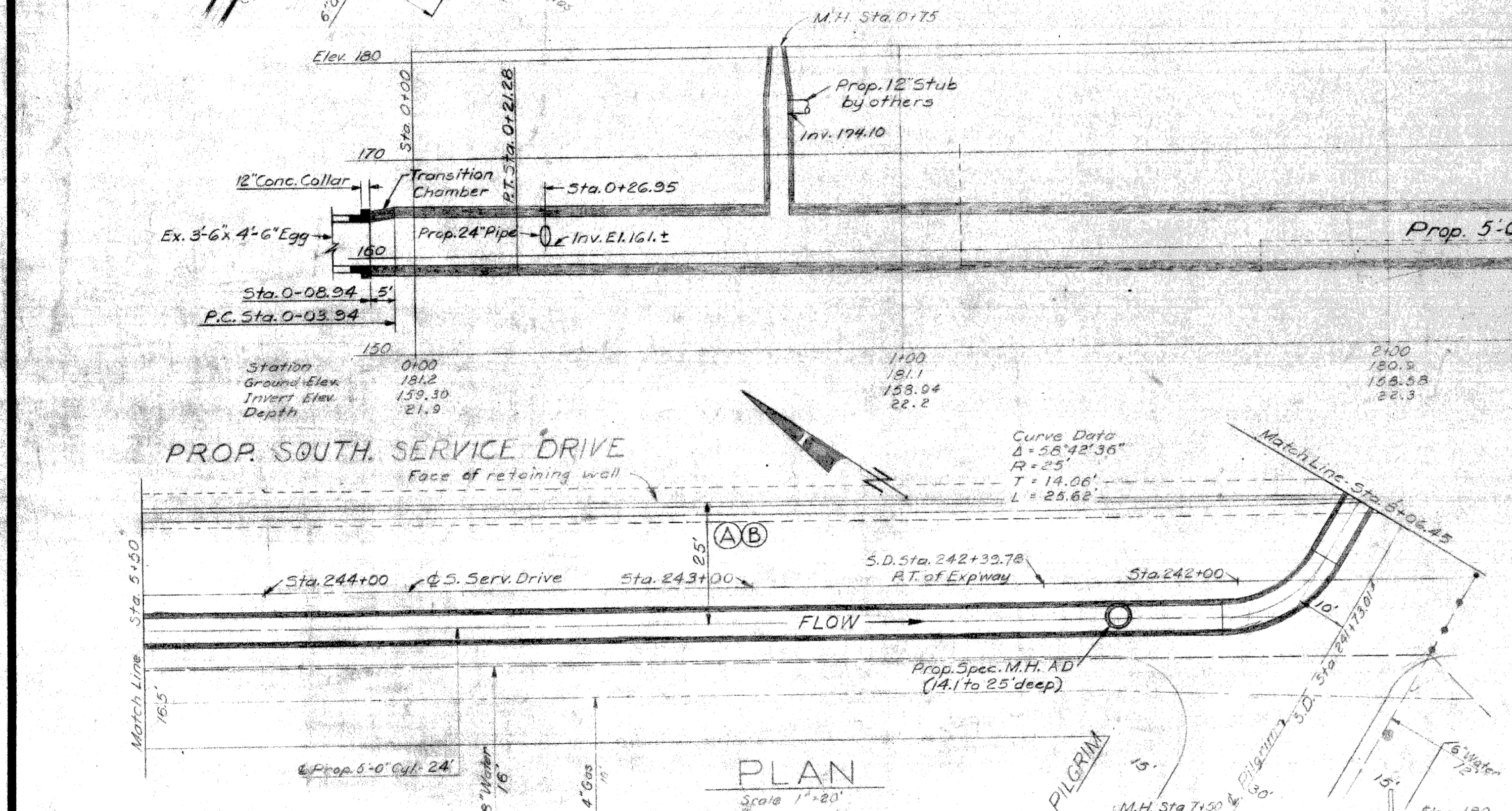
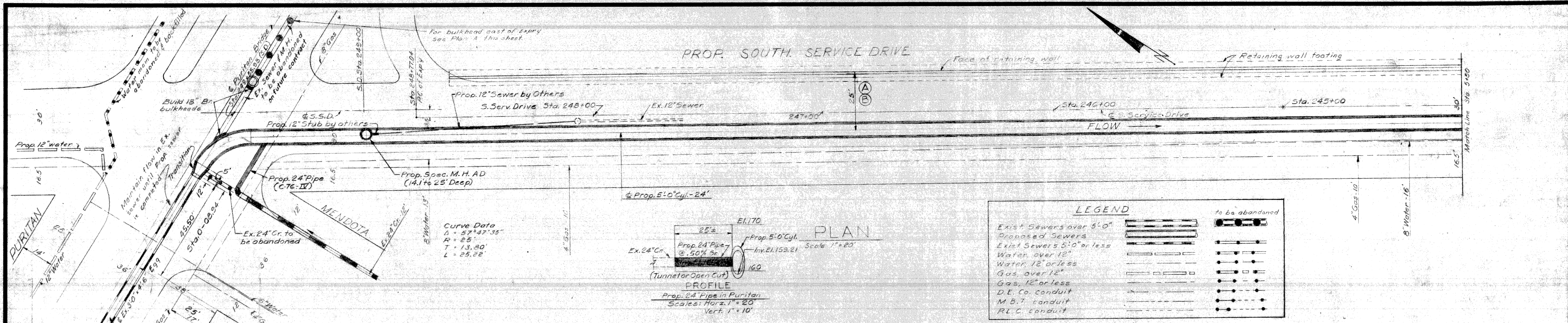
Designed by <i>W.R. Bammel</i>	APPROVED <i>Grant E. Prudge</i> Sanitary Engineer
Drawn by <i>P. Rentsch</i>	Checked by <i>M. H. ...</i> City Engineer

MICHIGAN STATE HIGHWAY DEPARTMENT
JOHN C. LODGE EXTENSION
RELOCATION OF PURITAN AVE. SEWER
LOG OF BORINGS, PUMPCRETE SIGNING AND LIGHTING

REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	
TRACED BY	
CHECKED BY	

82112 C10



CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS

CITY ENGINEERS OFFICE DATE 9-7-60

Designed by *W.R. Bannard* APPROVED *Grant E. ...*

Drawn by *George ...* Checked by *L. Sinks*

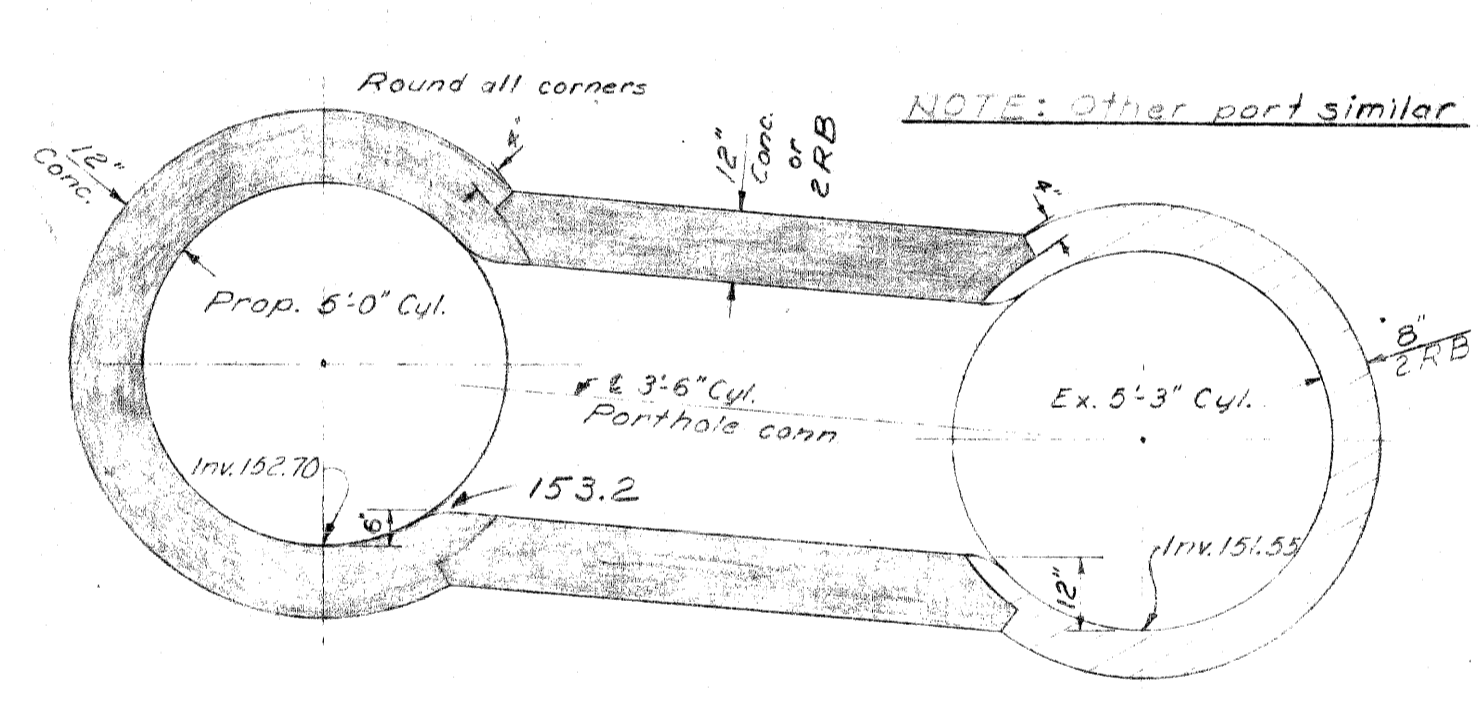
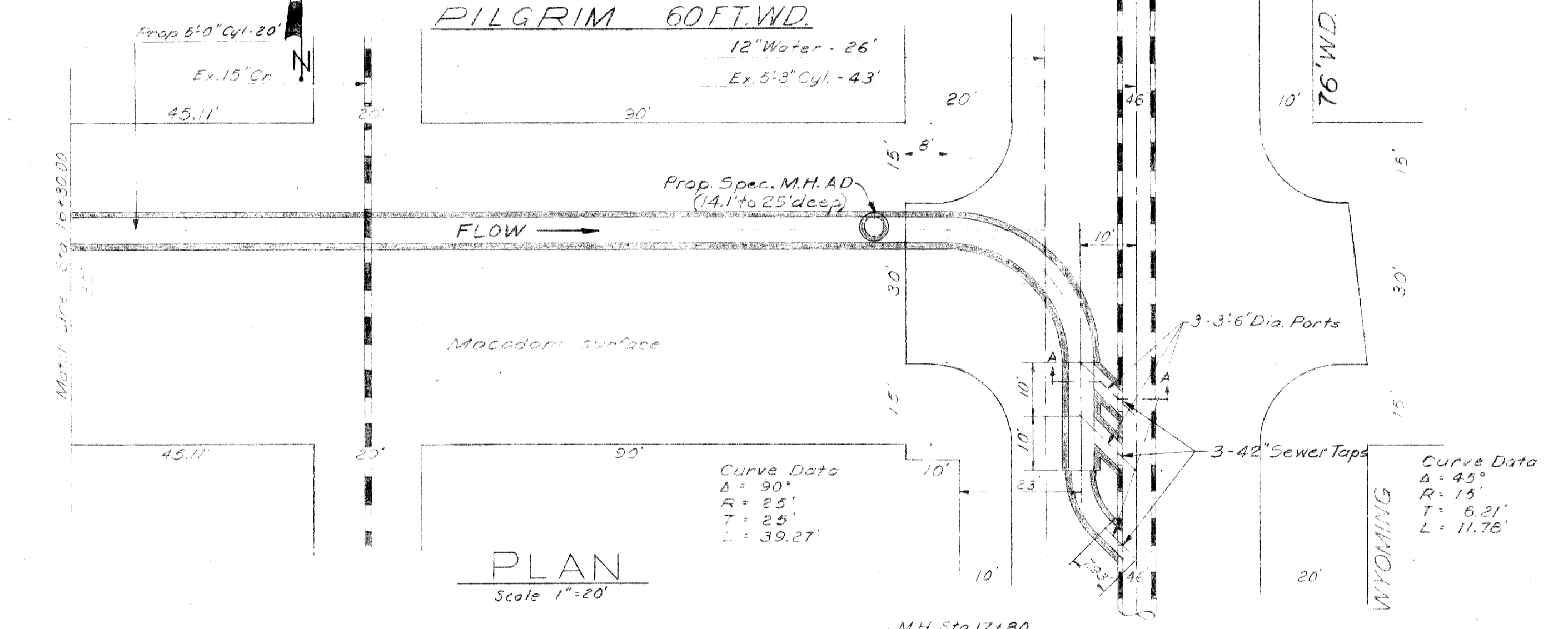
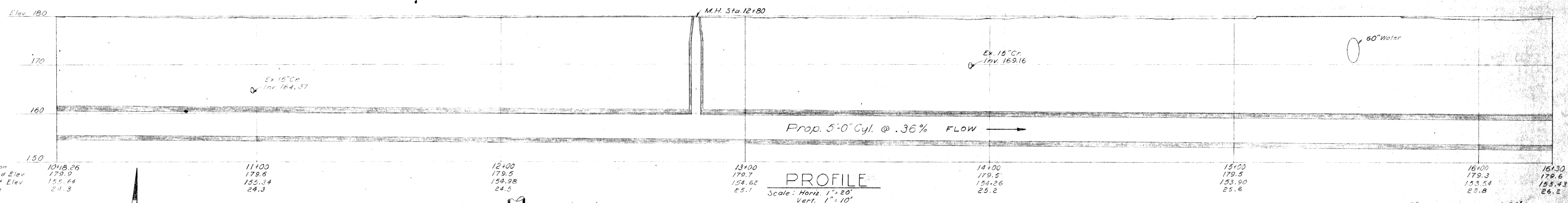
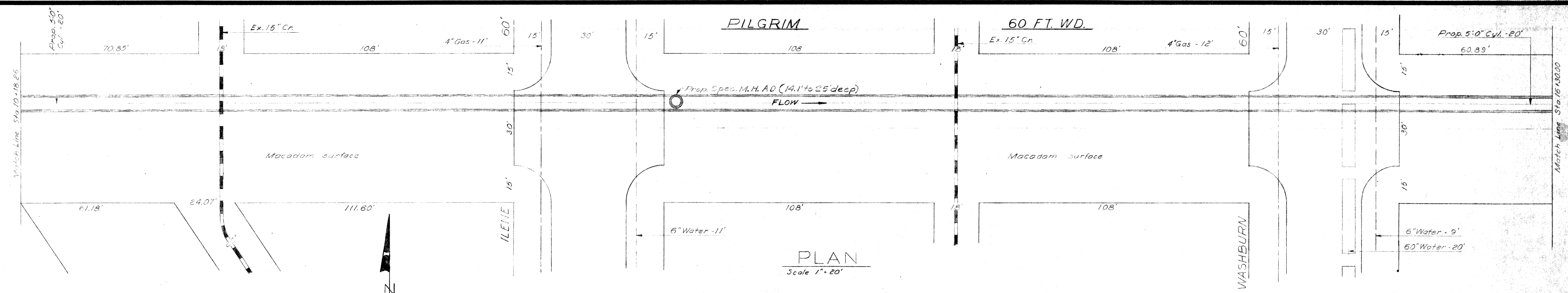
MICHIGAN STATE HIGHWAY DEPARTMENT

JOHN C LODGE EXTENSION
RELOCATION OF PURITAN AVE SEWER

PLAN & PROFILE - STA. 0+00
TO STA. 10+18.26

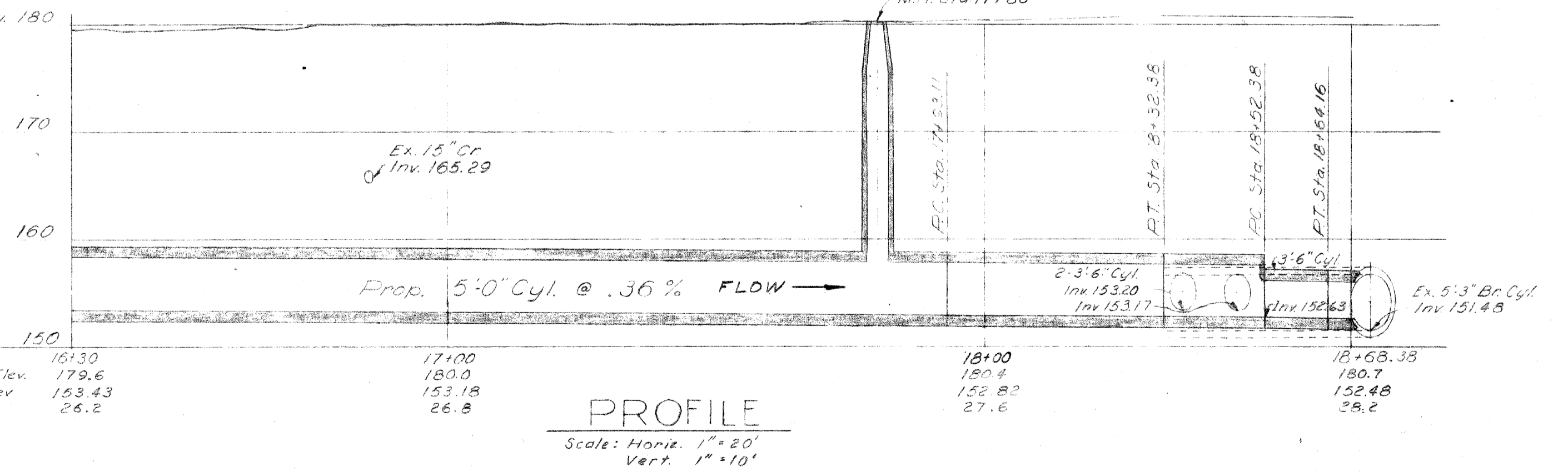
NO.	DESCRIPTION	DATE	BY
1	25' loc. dim. for sewer was 13.5'	10-12-60	...
2	13.5' loc. dim. for sewer was 17.5'	11-15-60	...

82112 C10



LEGEND

- Exist. Sewers over 5'-0"
- Proposed Sewers
- Exist. Sewers 5'-0" or less
- Water, over 12"
- Water, 12" or less
- Gas, over 12"
- Gas, 12" or less
- D.E. Co. conduit
- M.B.T. conduit
- R.L.C. conduit



TYPICAL TUNNEL SECTION
 PROP. 5'-0" CYLINDER
 Scale: 3/8" = 1'-0"

NOTE: Other port similar.

Concrete to be mechanically placed.

Sheet metal strip to be placed in the new concrete at each joint. Before next pour the exposed surface shall be painted with hot "Carbolytic" compound or equal.

Flat dumb-bell type water stop (complete circles) manufactured by Gates Rubber Co., Service Products Corp., Williams Equipment & Supply Co., or equal.

6"-12 gauge sheet steel water stop (complete circle) or rubber strip, min. width 5" min. 1/2" thick.

Outside face of tunnelwork

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

NOTE: This construction joint to be used from Sta. 0+00 to Sta. 11+00

CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE

DATE 9-7-60

Design by *W.R. Bannard*

Drawn by *George H. Wick*

Checked by *R. Zinks*

APPROVED
Grant E. Hodge
 Sanitary Engineer

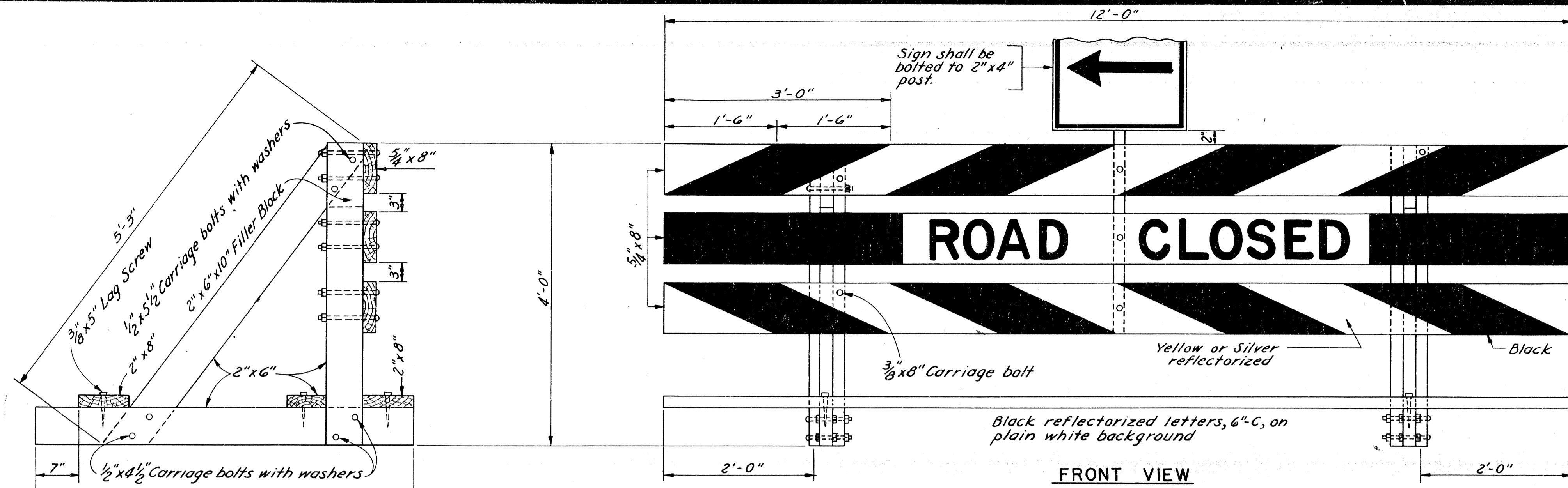
M.J. [Signature]
 Ass'y City Engineer

MICHIGAN STATE HIGHWAY DEPARTMENT
 JOHN C. LODGE EXTENSION
 RELOCATION OF PURITAN AVE SEWER
 PLAN & PROFILE - STA. 10+18.26
 TO END OF CONTRACT

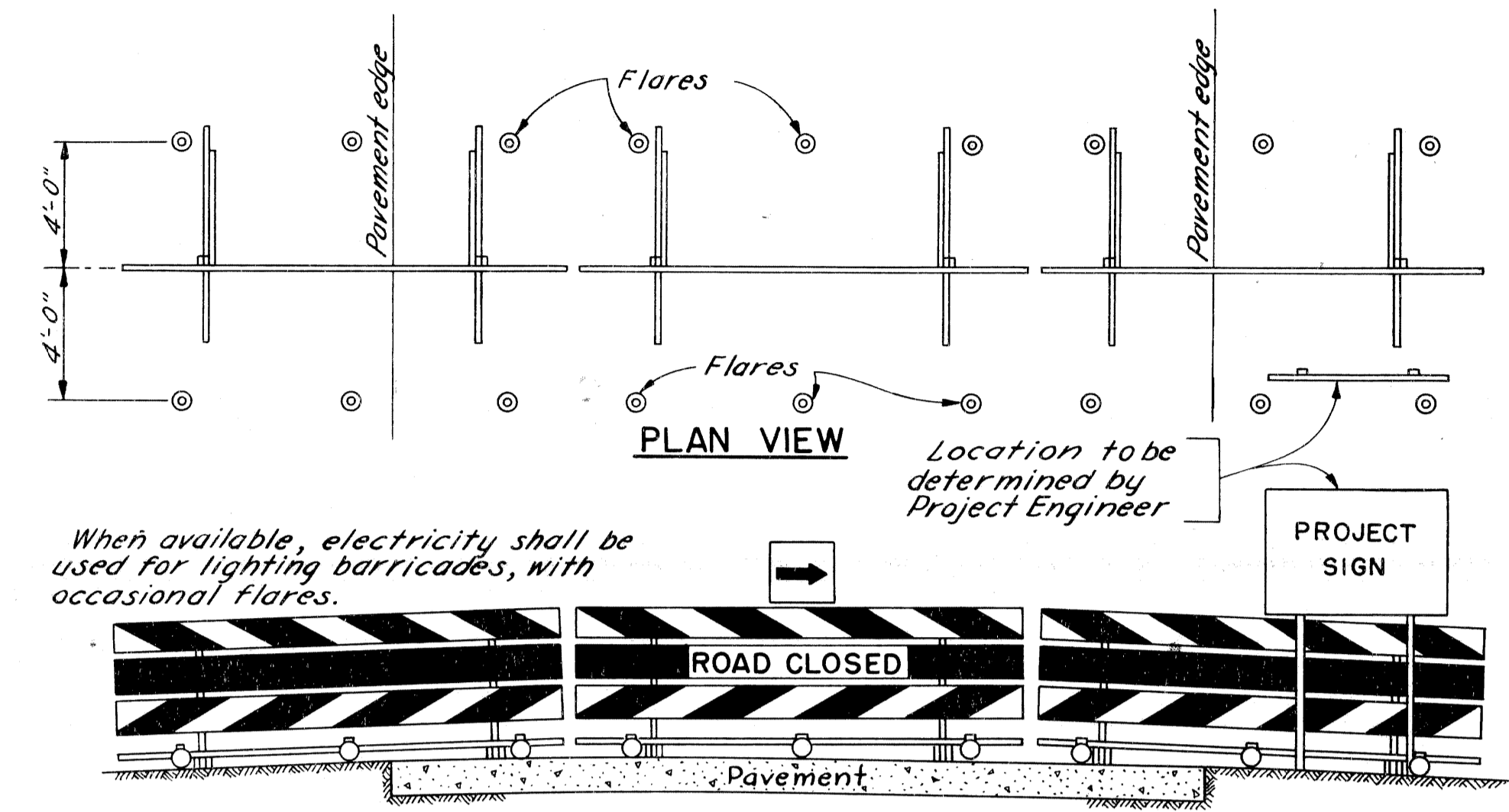
NO.	DESCRIPTION	DATE	BY

82112 C10

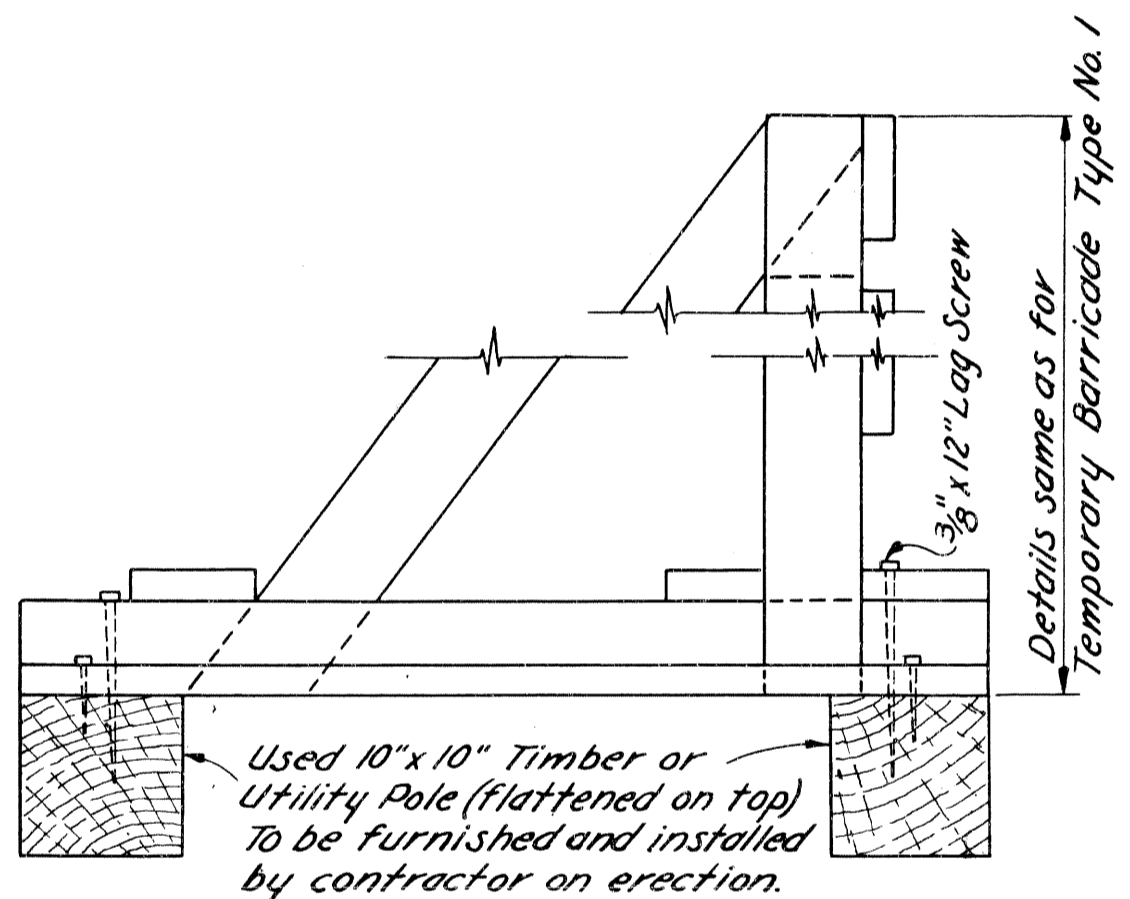
D.P.R. DIV. NO.	STATE	FED. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
82112	Wayne	Detroit	5		
D.P.R. DIV. NO.	STATE	FED. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



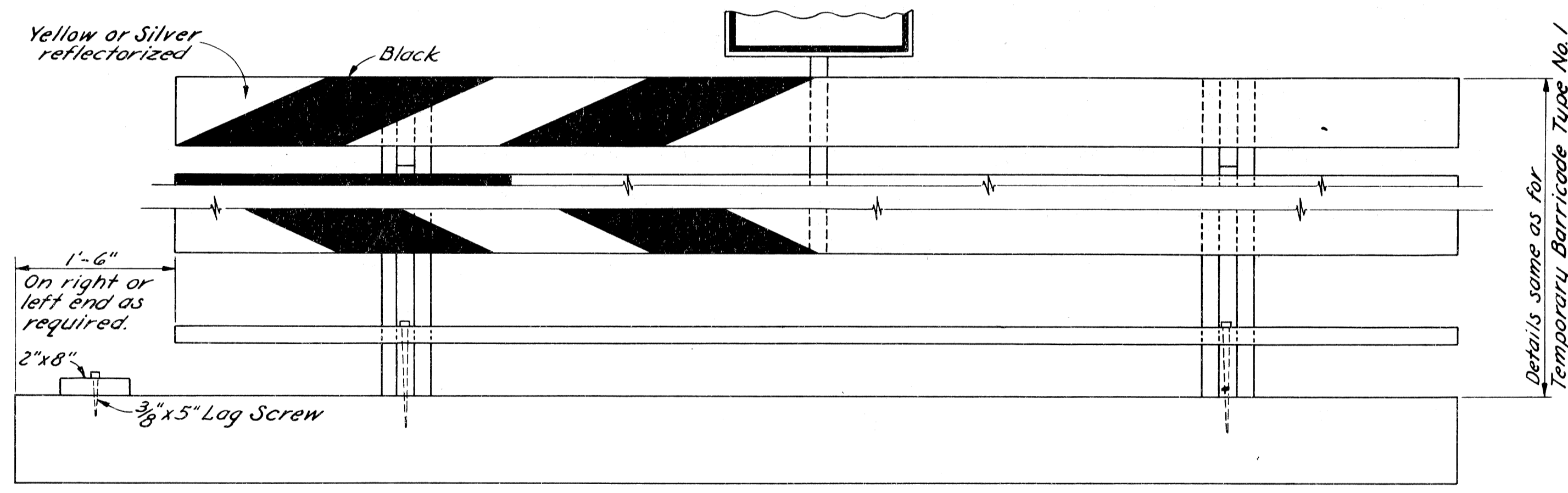
TEMPORARY BARRICADE - TYPE No. 1
Scale: 1" = 1'-0"



TYPICAL BARRICADE UNITS
Scale: 1/4" = 1'-0"

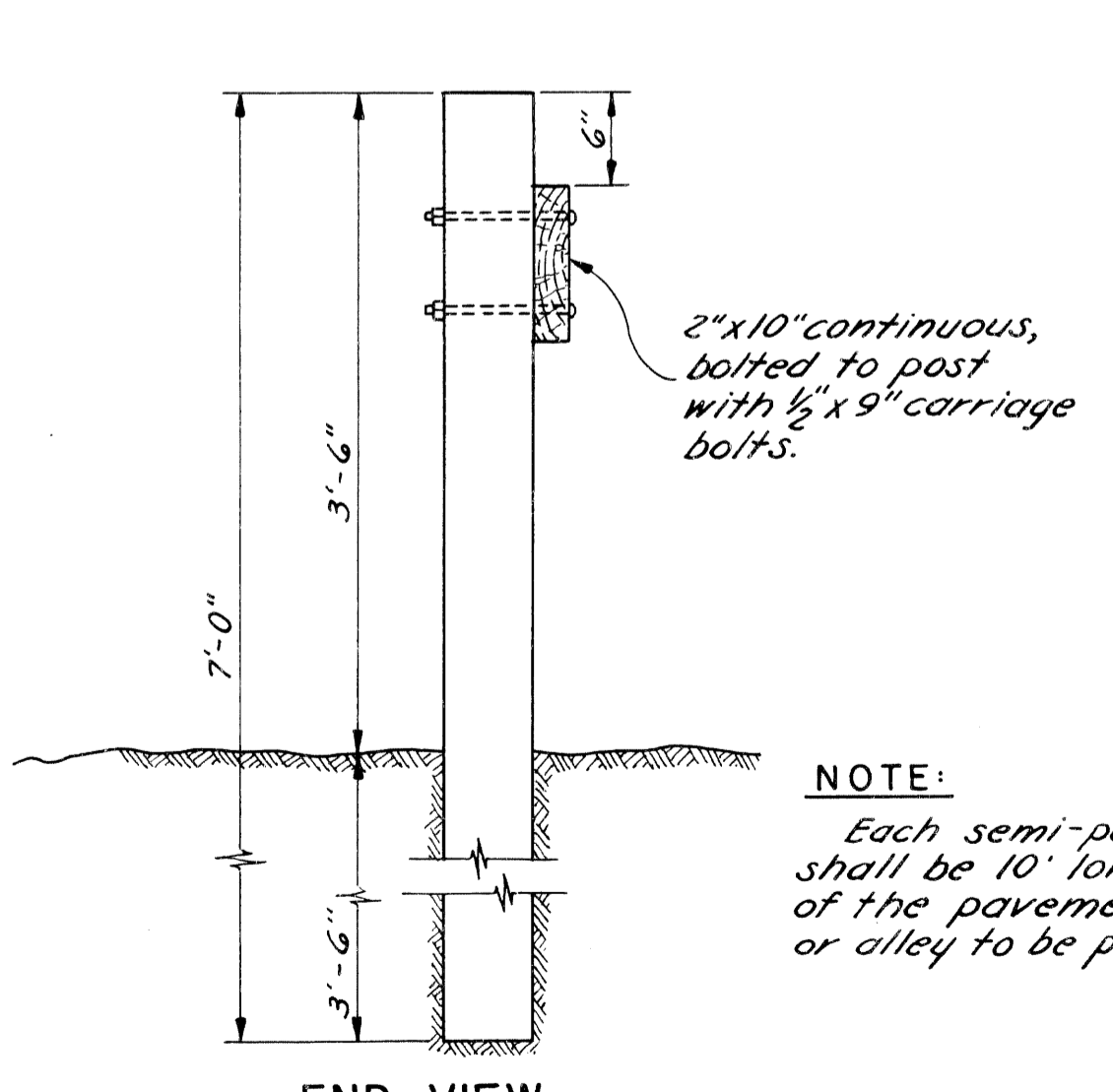


END VIEW

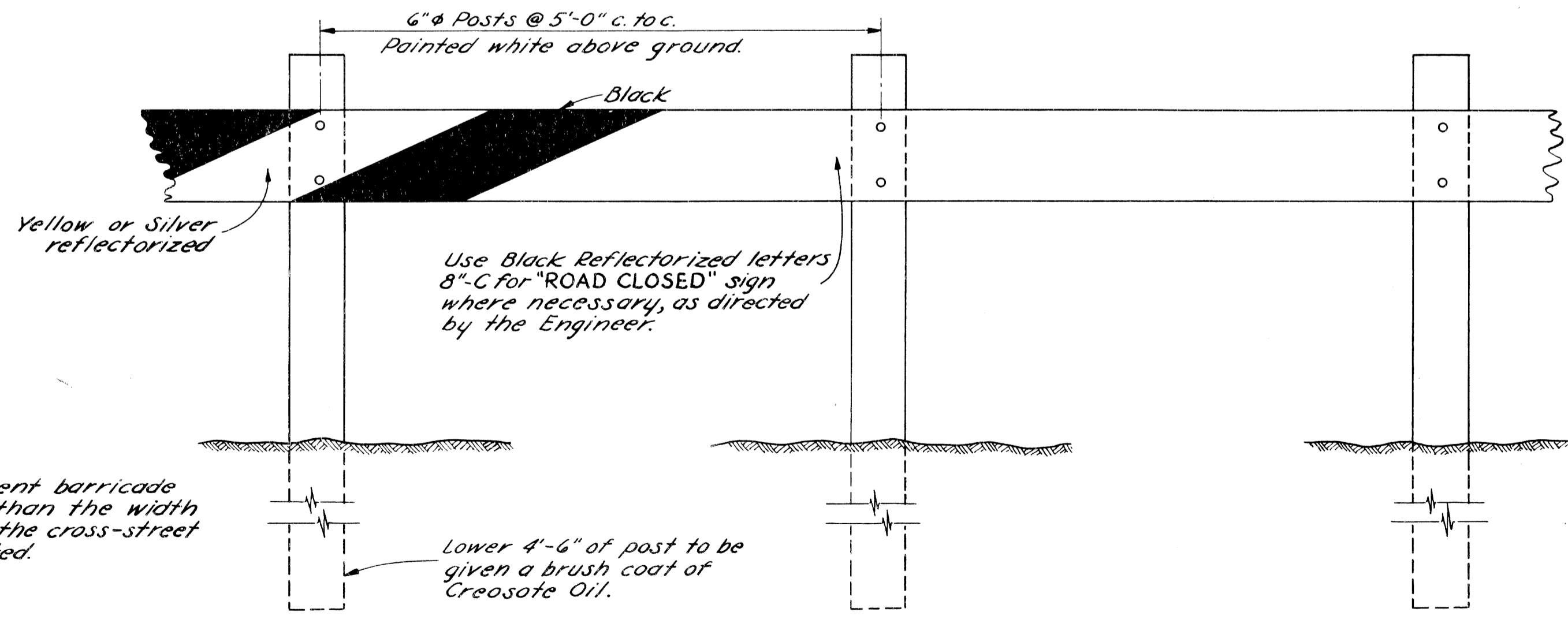


FRONT VIEW

TEMPORARY BARRICADE - TYPE No. 2
Scale: 1" = 1'-0"



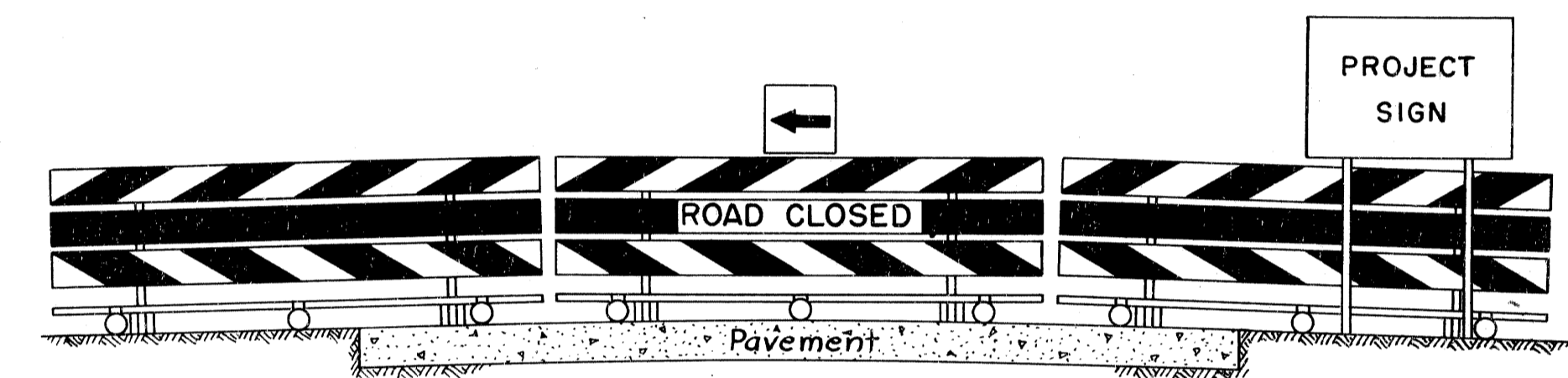
END VIEW



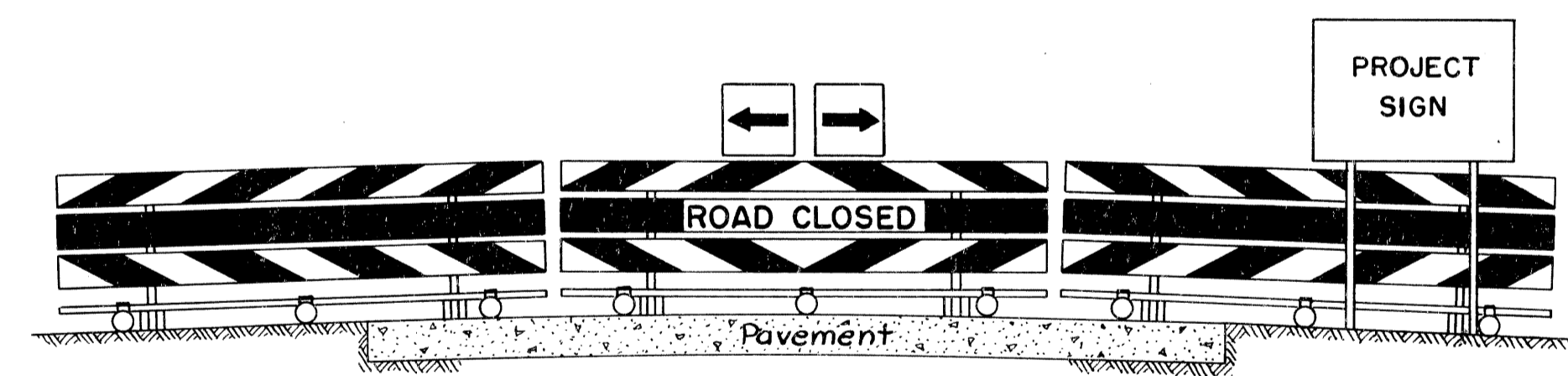
FRONT VIEW

SEMI-PERMANENT BARRICADE
Scale: 1" = 1'-0"

View of barricade when traffic is directed to right



View of barricade when traffic is directed to left



View of barricade when traffic is directed to left and right

TYPICAL BARRICADE UNITS
Scale: 1/4" = 1'-0"

NOTE:
All face boards to be Douglas Fir.
All other boards and posts to be Fir.

DETAILS FOR BARRICADES

FILE NO.	82112 C 10	STATE	FEDERAL	SHEET	
NO. 330		82112	U 404 (rev)	5	

STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MI	82112	1934	6	6
CITY	COUNTY	PROJECT	SHEET NO.	TOTAL SHEETS
DETROIT	WAYNE	RELOCATION	6	6

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE

DATE _____

Designed by *W.R. Bammell* APPROVED *Ernest E. Mudge*
Sanitary Engineer

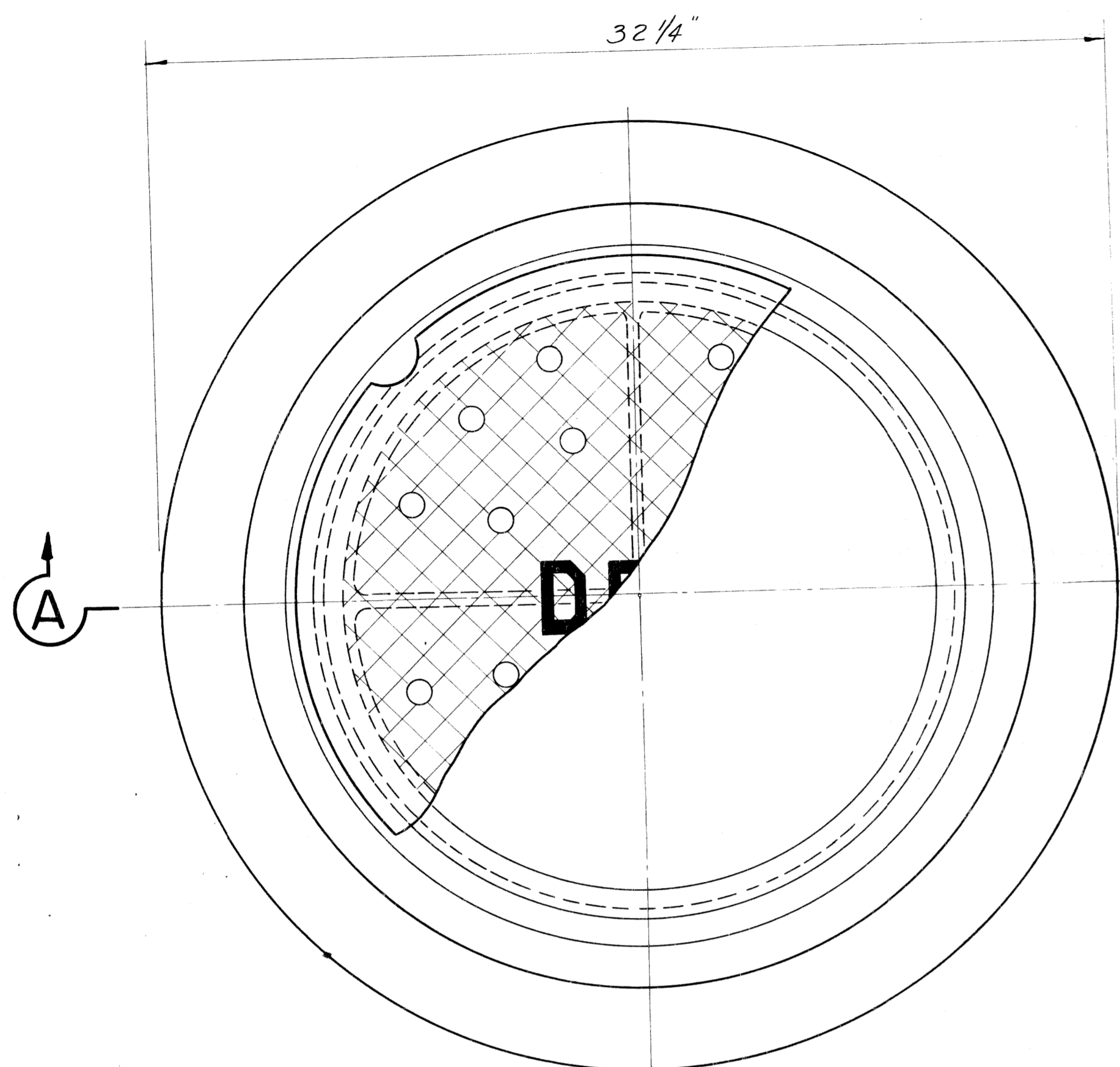
Drawn by *V. Jentich*

Checked by *R. Suko* *M. J. Wray*
City Engineer

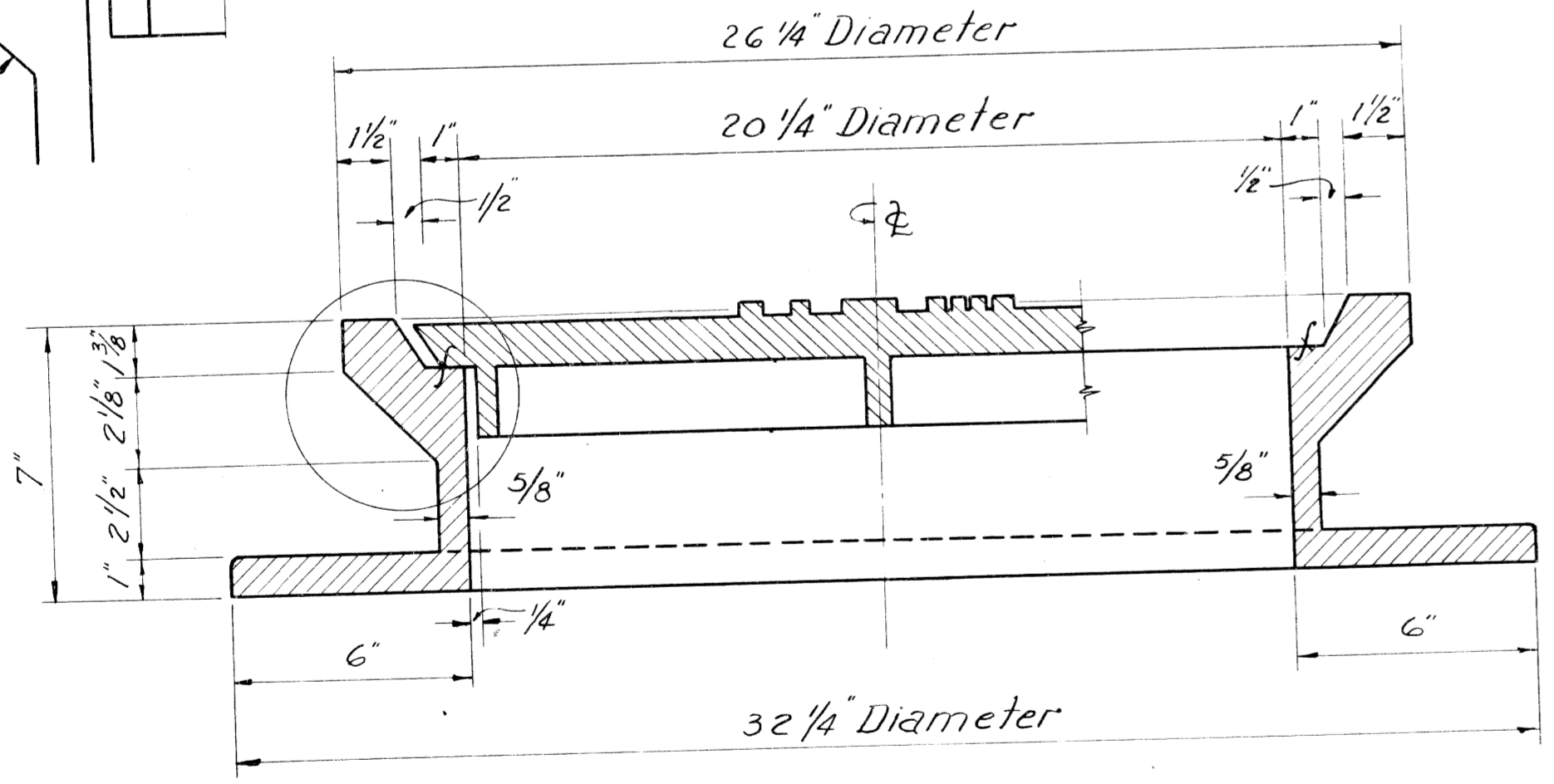
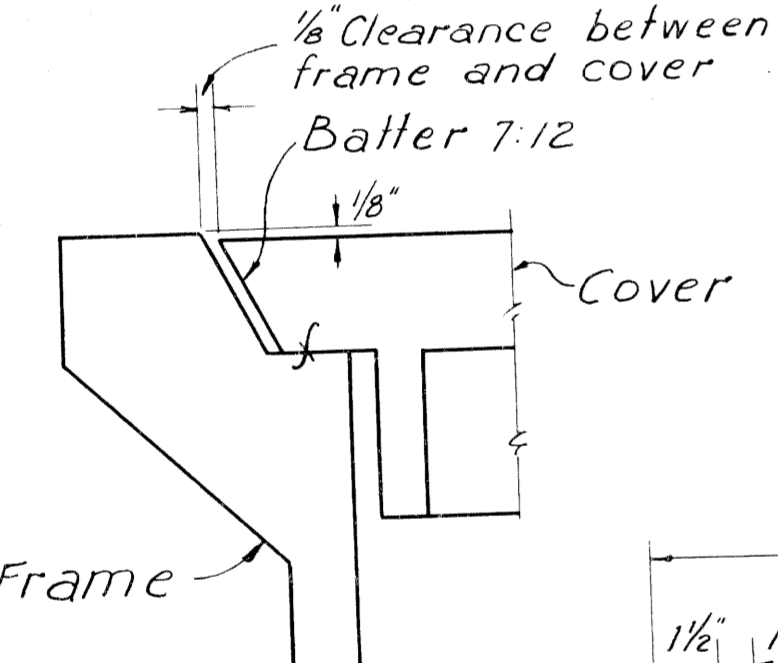
MICHIGAN STATE HIGHWAY DEPARTMENT
JOHN C. LODGE EXTENSION
RELOCATION OF PURITAN AVE. SEWER
MANHOLE FRAME AND COVER AD

NO.	DESCRIPTION	DATE	BY

SHEET 1 OF 4

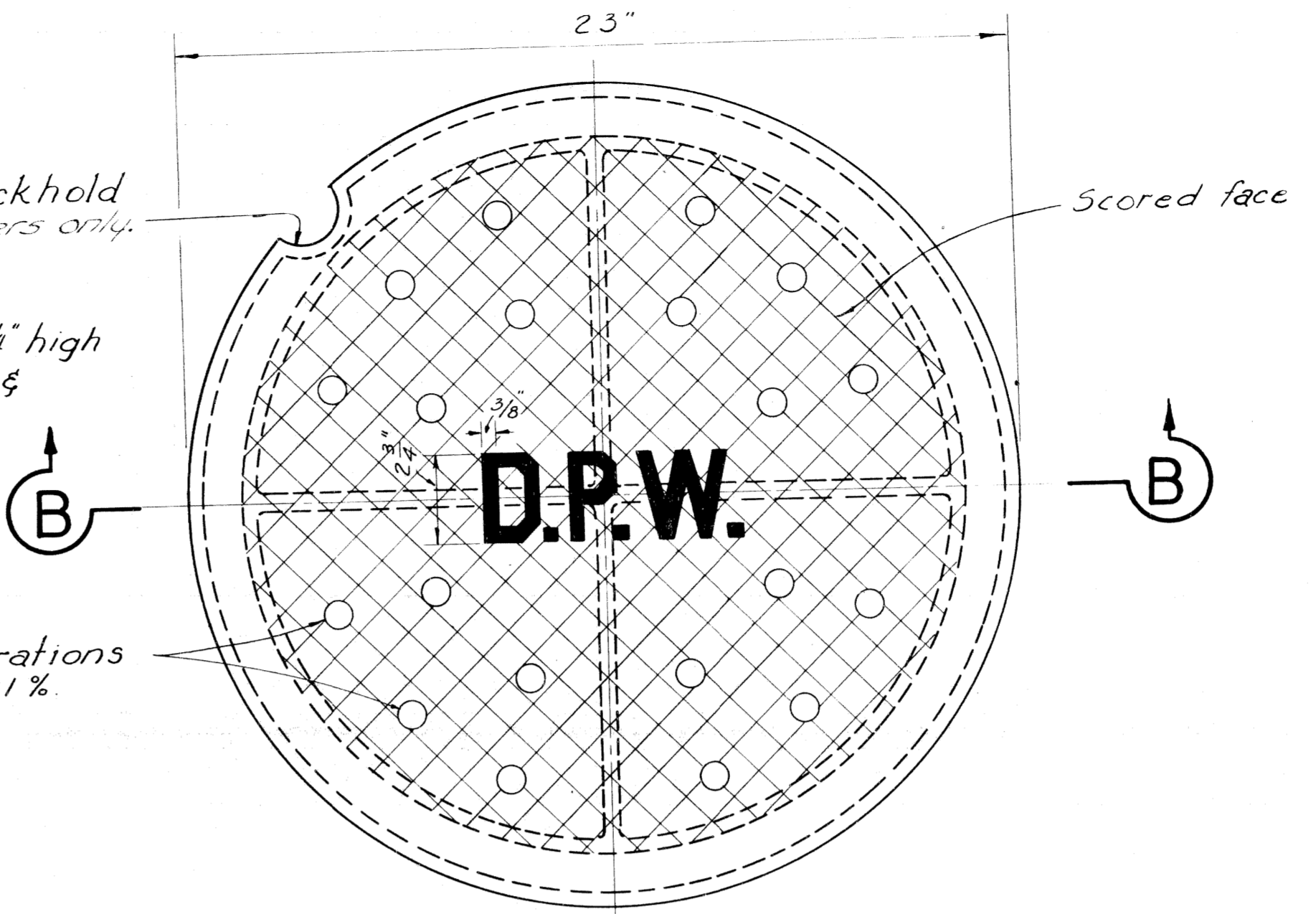


PLAN VIEW OF FRAME



SECTION A-A

SCALE 3" = 1"

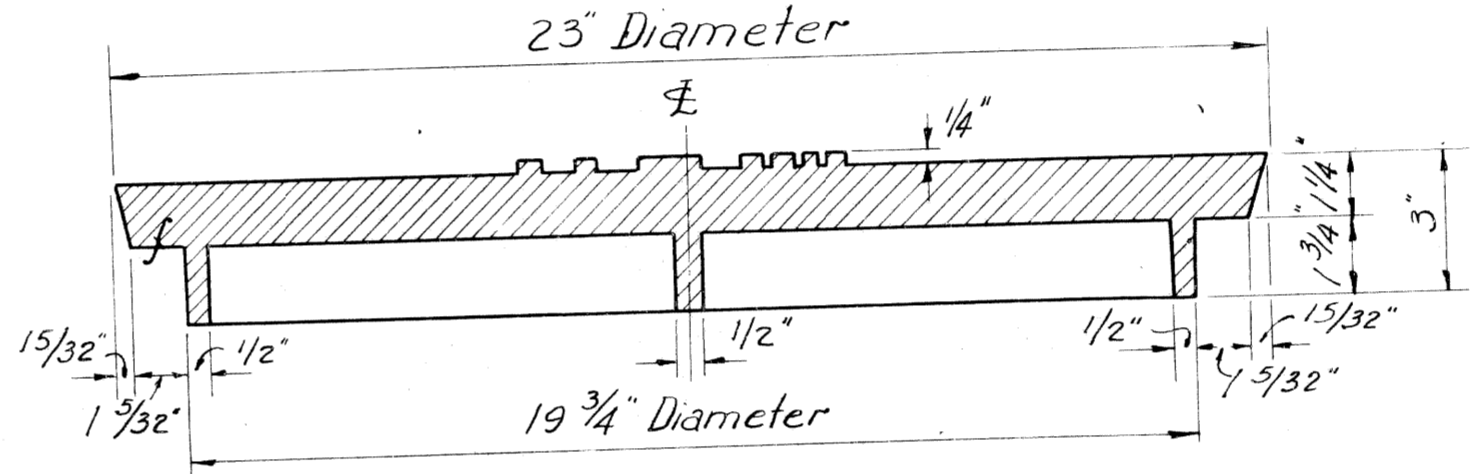


PLAN VIEW OF COVER

1" Radius pickhold
in solid covers only.

Letters to be 3/8" wide 2 3/4" high
and raised 1/4". Location &
spacing as shown.

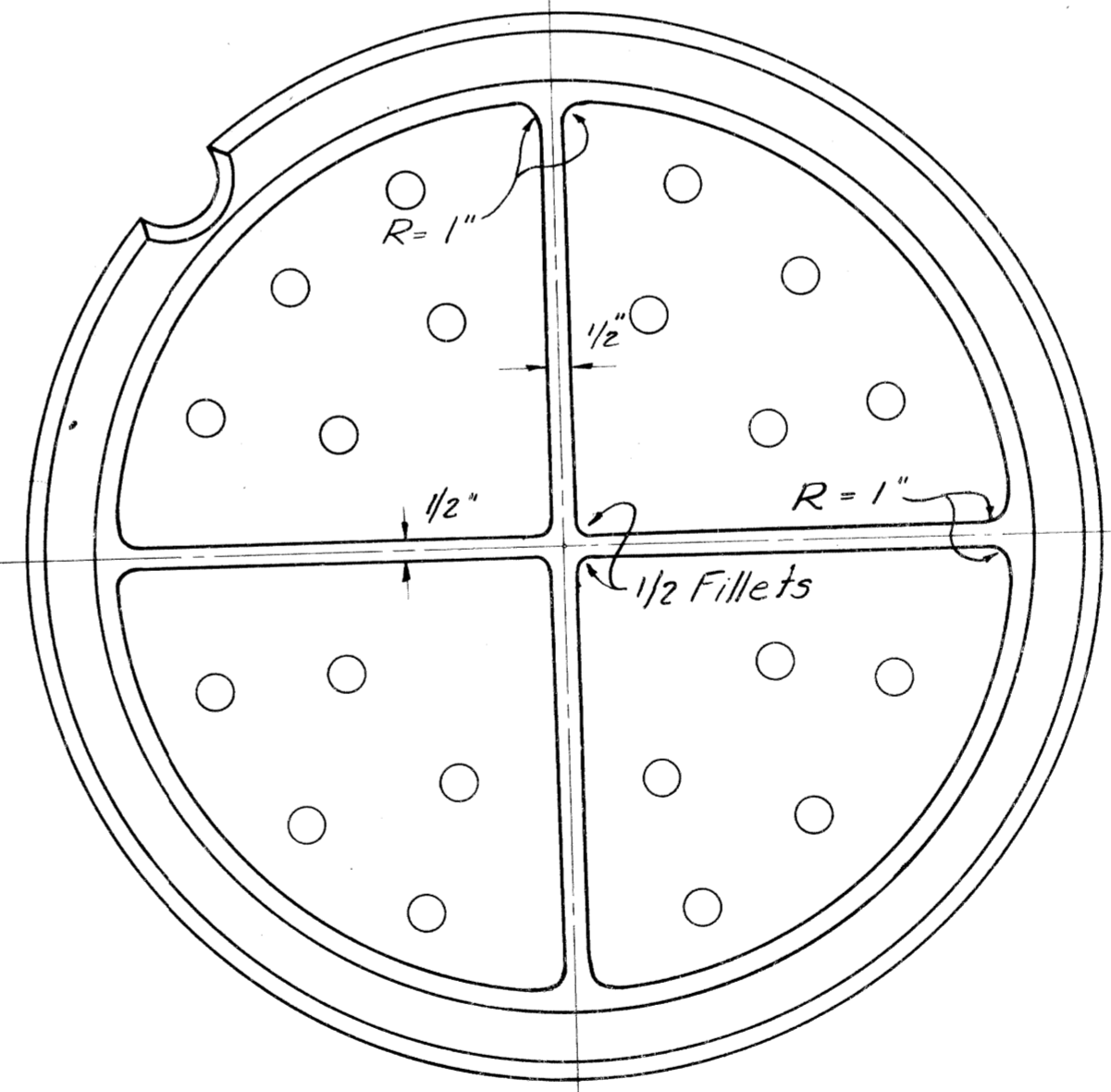
20 - 1/4" Dia perforations
24.54 Sq-in. = 5.91%



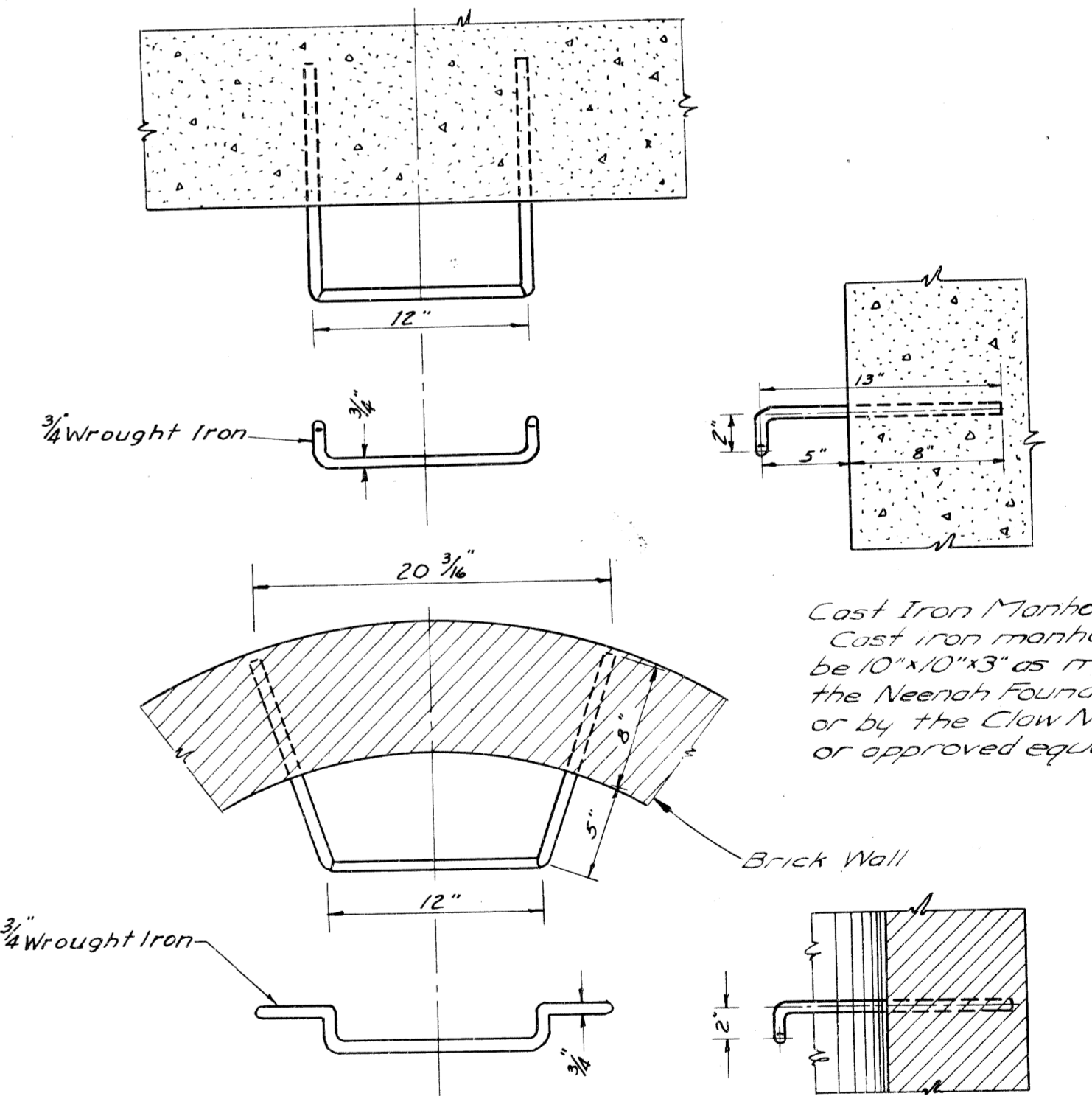
SECTION B-B

NOTES:-
Frame and cover to be gray iron castings
Total weight = 409# (Perf cover)
Manhole frame = 262#
Cover (Perf) = 147#
Cover (Blank) = 157#

The seating face of the cover
and the seat for same on the frame shall
be machine finished so that the cover
shall have an even bearing on its
seat at all points without rocking
or tilting.



BOTTOM VIEW OF COVER



MANHOLE STEP
SCALE 1/2" = 1"

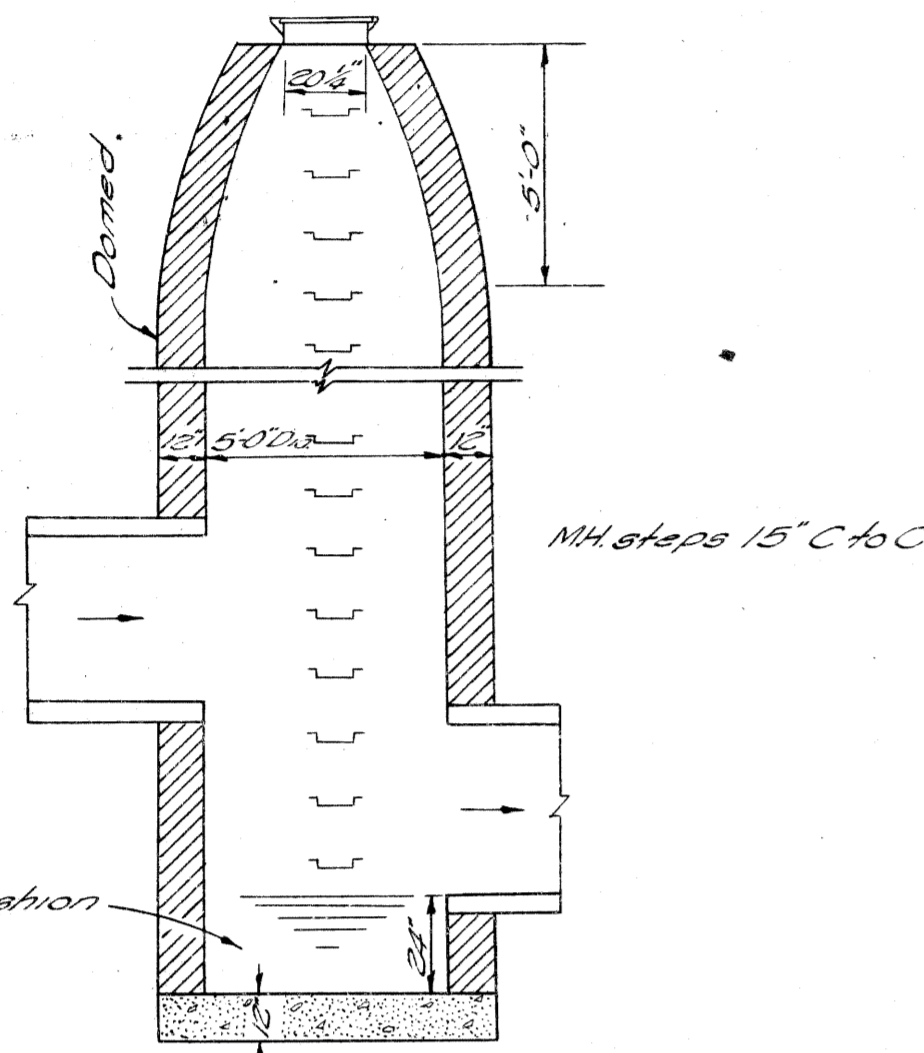
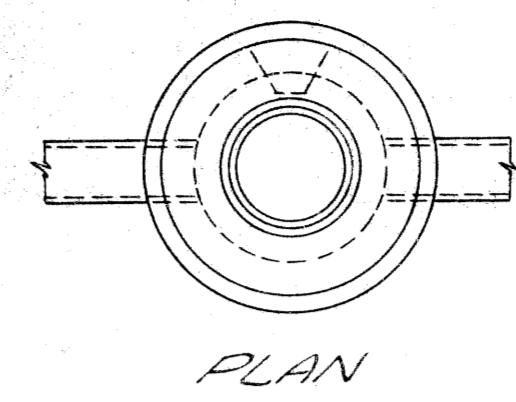
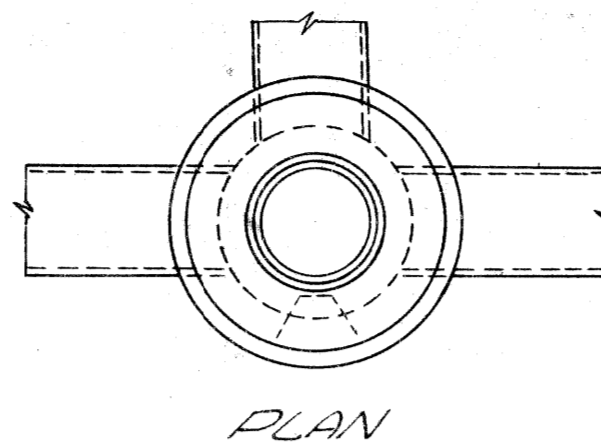
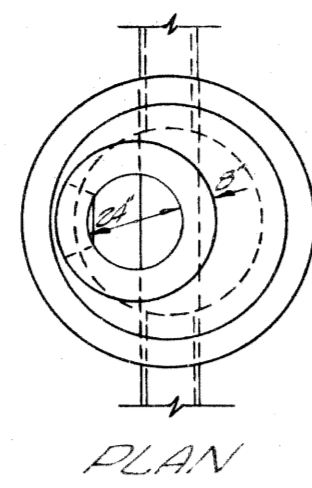
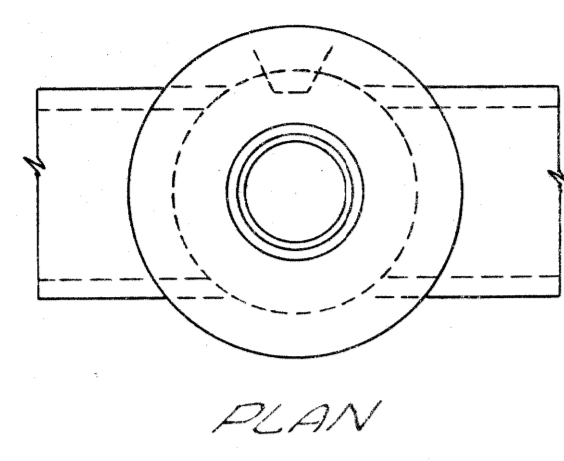
Cast Iron Manhole Steps:
Cast iron manhole steps shall
be 10" x 10" x 3" as manufactured by
the Neenah Foundry Co. R-1980E,
or by the Clow National F-3650,
or approved equal.

NO.	DESCRIPTION	DATE	BY

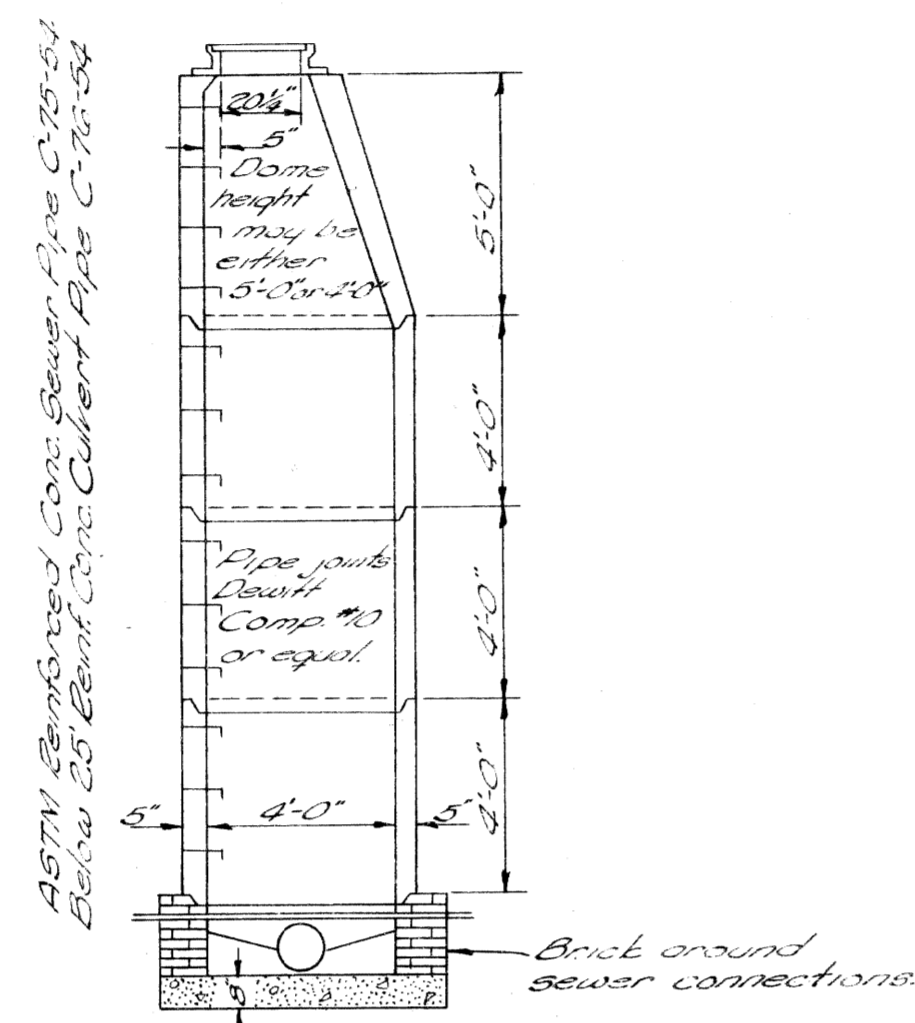
SPECIAL DETAIL OF MANHOLE FRAME AND COVER AD

FILE NO. 82112 C 10

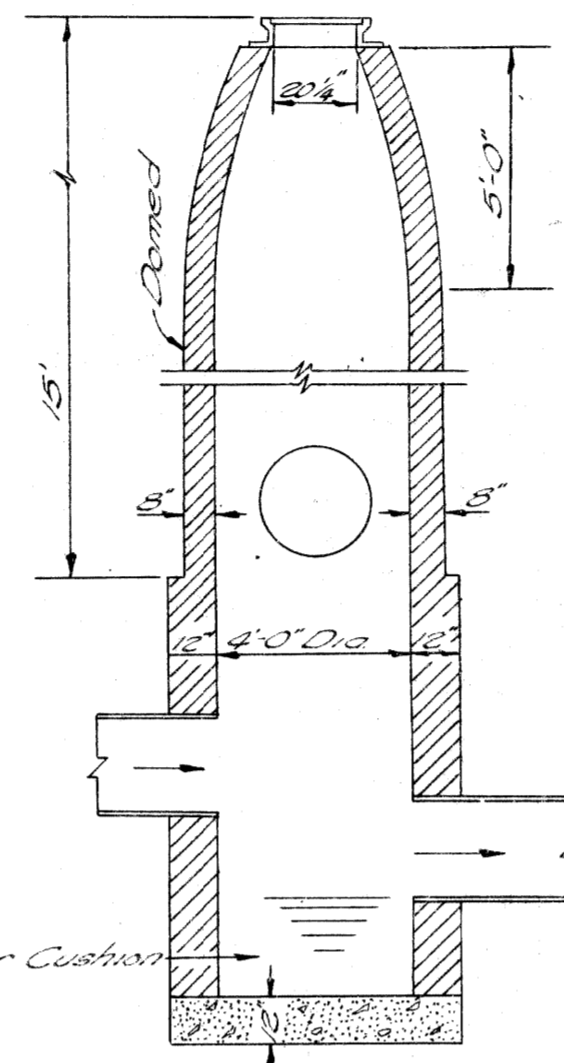
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
4	82112	Wayne	Detroit	7	
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
4	82112	Wayne	Detroit	7	



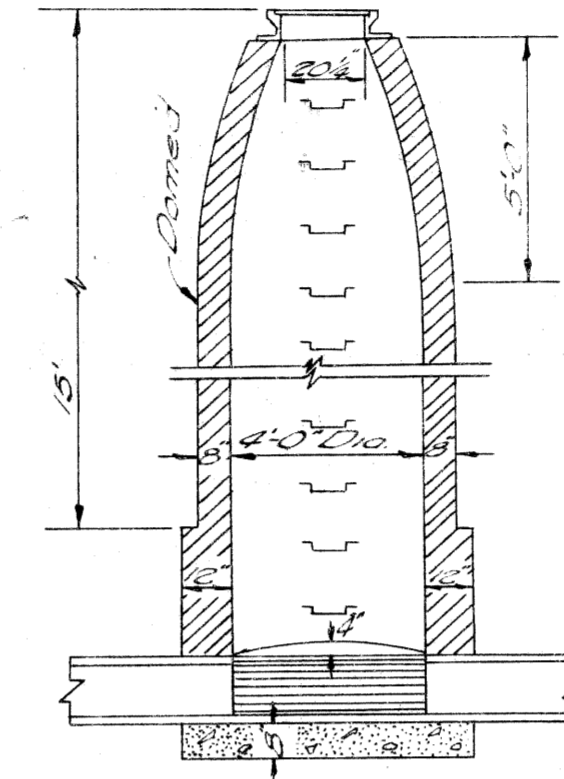
SPECIAL 5FT MANHOLE Scale: 1/4" = 1'-0"



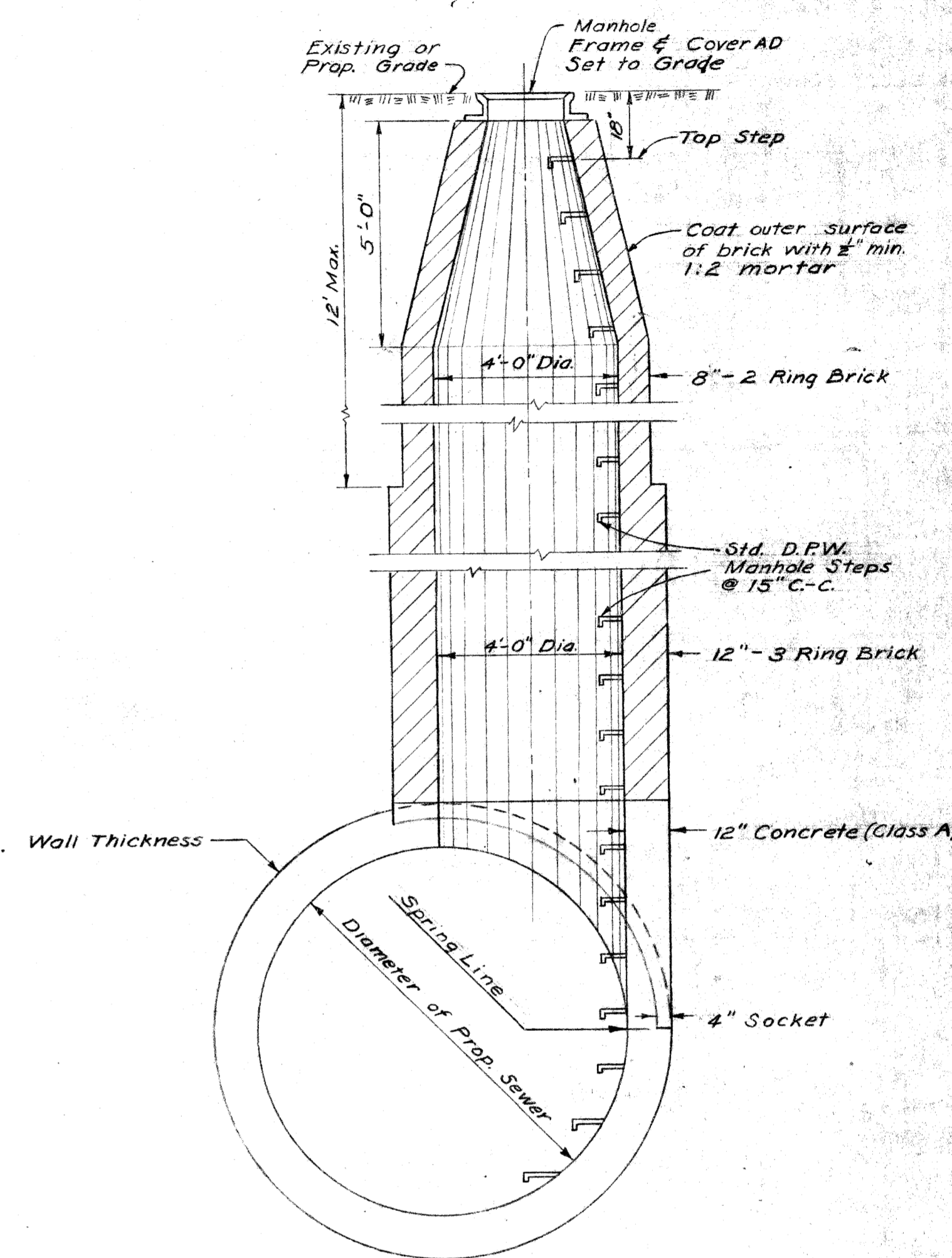
PRECAST MANHOLE Scale: 1/4" = 1'-0"



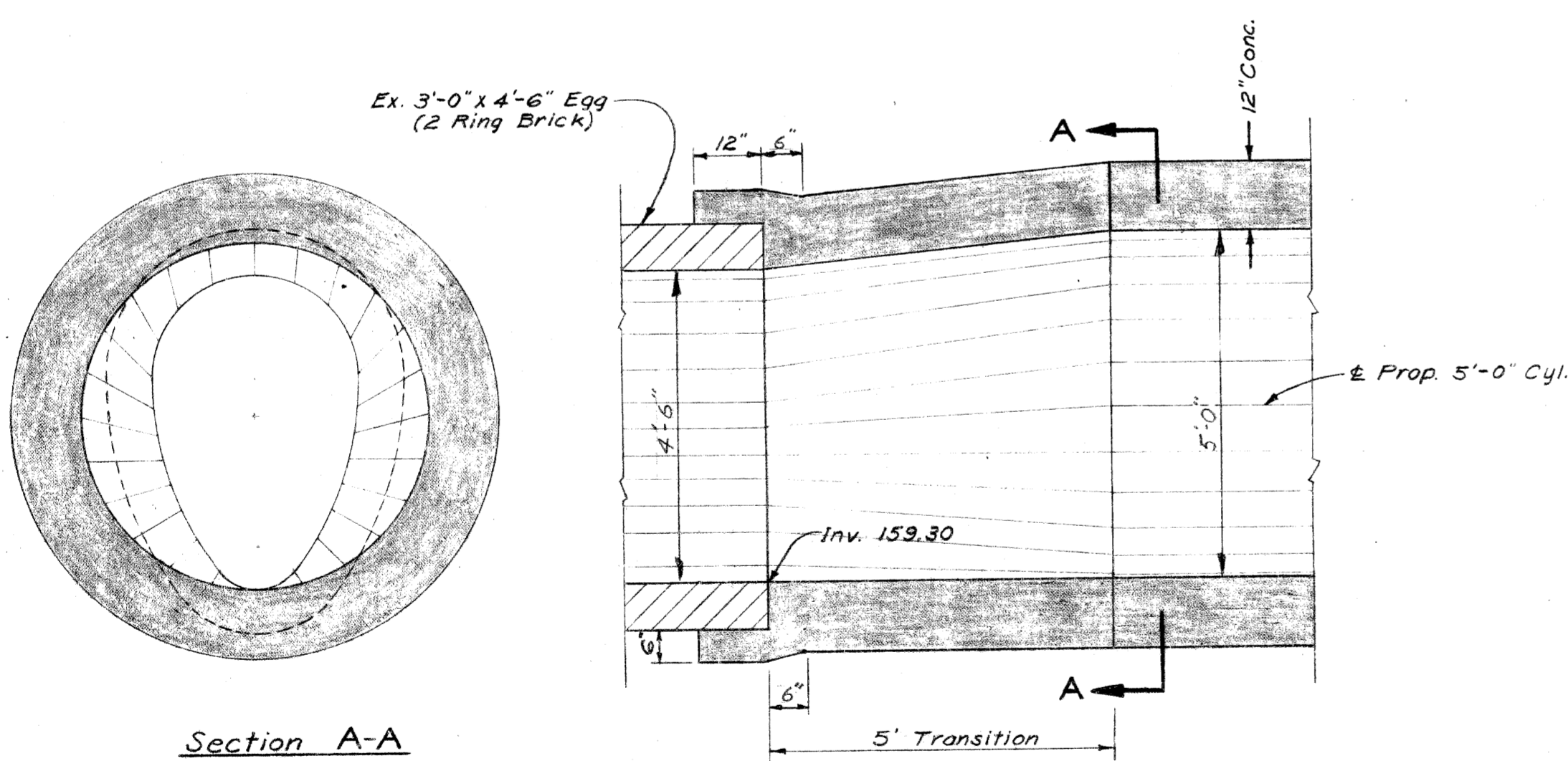
DROP MANHOLE Scale: 1/4" = 1'-0"



Drop Standard Manhole Scale: 1/4" = 1'-0"



SPECIAL MANHOLE ON CIRCULAR SECTION Scale: 3/8" = 1'-0"



TRANSITION — 3'-0" x 4'-6" EGG TO 5'-0" CYLINDER Scale: 1/2" = 1'-0"

QUANTITY LIST				
AS PER PLANS			AS CONST.	
CODE NO.	ITEMS OF WORK	QUANTITY	QUANTITY	REMARKS
	5'-0" Diameter Monolithic Concrete Sewer-In Tunnel	1861 Lin. Ft.		
	3'-6" Diameter Sewer Connections - In Tunnel	30 Lin. Ft.		
	42" Sewer Taps	3 Each		
	Special Manhole AD, (14.1' to 25.0' Deep)	4 Each		
	Maintaining Traffic	Lump Sum		
	24" Sewer C-76-IV, (14.1' to 25.0' Deep)	25 Lin. Ft.		

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE

DESIGNED BY: W. R. Bammel
DRAWN BY: R. D. Beltray
CHECKED BY: L. Sinks

APPROVED: Grant E. Judge
Sanitary Engineer

DATE: _____

City Engineer

MICHIGAN STATE HIGHWAY DEPARTMENT
JOHN C. LODGE EXTENSION
RELOCATION OF PURITAN AVE. SEWER
SPECIAL MANHOLE DETAILS, TRANSITION, &
QUANTITY LIST

NO.	DESCRIPTION	DATE	BY
1	Section of a Precast Manhole	5.5.36	J.L. JMD
2	Top 3 Feet of Manholes to be Domed	5.5.36	J.L. JMD