

DRAWING INDEX

SHEET NUMBER	CITY OF WINNIPEG DRAWING NUMBER	DRAWING TITLE
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2	1-0110A-D0006-001	2017 COMMUNOTOR CHAMBER PIPING AND VALVE UPGRADES - INDEX PAGE
3	1-0125L-G0001-001	2017 COMMUNOTOR CHAMBER PIPING AND VALVE UPGRADES - CLIFTON PUMPING STATION SITE PLAN - CLIFTON STREET SOUTH AT WOLSELEY AVENUE
4	1-0125L-M0001-001	2017 COMMUNOTOR CHAMBER PIPING AND VALVE UPGRADES - CLIFTON PUMPING STATION - CLIFTON STREET SOUTH AT WOLSELEY AVENUE
5	1-0133L-G0001-001	2017 COMMUNOTOR CHAMBER PIPING AND VALVE UPGRADES - CORNISH PUMPING STATION SITE PLAN - CORNISH AVENUE AT LANGSIDE STREET
6	1-0133L-M0001-001	2017 COMMUNOTOR CHAMBER PIPING AND VALVE UPGRADES - CORNISH PUMPING STATION - CORNISH AVENUE AT LANGSIDE STREET
7	1-0148L-G0001-001	2017 COMMUNOTOR CHAMBER PIPING AND VALVE UPGRADES - JEFFERSON DIVERSION CHAMBER SITE PLAN - JEFFERSON AVENUE AT MAIN STREET
8	1-0148L-M0001-001	2017 COMMUNOTOR CHAMBER PIPING AND VALVE UPGRADES - JEFFERSON DIVERSION CHAMBER - JEFFERSON AVENUE AT MAIN STREET
9	1-0193L-G0001-001	2017 COMMUNOTOR CHAMBER PIPING AND VALVE UPGRADES - TYLEHURST LIFT STATION SITE PLAN - TYLEHURST STREET AT WOLSELEY AVENUE WEST
10	1-0193L-M0001-001	2017 COMMUNOTOR CHAMBER PIPING AND VALVE UPGRADES - TYLEHURST LIFT STATION - TYLEHURST STREET AT WOLSELEY AVENUE WEST

ABBREVIATIONS

WWS	WASTE WATER SEWER
CS	COMBINED SEWER
LDS	LAND DRAINAGE SEWER
ℙ	PROPERTY LINE
℄	CENTER LINE
G.I.S.	GEOGRAPHIC INFORMATION SYSTEM
B.M.	BENCH MARK
TH	TEST HOLE
ELEV	ELEVATION
INV	INVERT
MIN	MINIMUM
MAX	MAXIMUM
SL	STREET LIGHTING
TS	TRAFFIC SIGNALS
ABAND	ABANDONED
BLDG	BUILDING
HSE	HOUSE
CRN	CORNER
OPP	OPPOSITE
C/S OR S/C	CURB STOP
MTS	MANITOBA TELEPHONE SYSTEM
R.O.W.	RIGHT-OF-WAY
WM	WATERMAIN
CULV	CULVERT
MH	MANHOLE
CB	CATCH BASIN
CI	CURB INLET
VERT.	VERTICAL
HORZ.	HORIZONTAL
I.B.	IRON BAR
FIBRE	FIBRE OPTIC
TYP	TYPICAL
X-ING	CROSSING
HYD	HYDRANT
EXIST	EXISTING
N	NORTH
E	EAST
S	SOUTH
W	WEST
W/	WITH
C/W	CONSTRUCTED WITH
CONC	CONCRETE
AC	ASBESTOS CEMENT
VC OR CLAY	VITRIFIED CLAY
CI	CAST IRON
DI	DUCTILE IRON
PVC	POLYVINYL CHLORIDE
HDPE	HIGH DENSITY POLYETHYLENE
PCCP	PRESTRESSED CONCRETE CYLINDER PIPE

LEGEND

DESCRIPTION	PLAN VIEW	
	EXISTING	PROPOSED
WATER PIPE		
FIRE HYDRANT	⊕	⊕
VALVE	⊗	⊗
CURB STOP	⊙	⊙
REDUCER	⊏	⊏
COUPLING OR SLIDDER	X	X
CROSS	⊕	⊕
BEND - 11.25°, 22.5°, 45°, 90°	⌒	⌒
TEE	⌒	⌒
VERTICAL BEND	⌒	⌒
ANODE	⌒	⌒
REPAIR MARKER	⌒	⌒
PLUG	J	J
SEWER PIPE		
MANHOLE	○	●
CATCH BASIN	□	■
CURB INLET	▽	▼
JUNCTION	⌒	⌒
℄ DITCH	⌒	⌒
CULVERT	⌒	⌒
SURVEY BAR	⌒	⌒
SURVEY MONUMENT	⌒	⌒
TREE - DECIDUOUS	⌒	⌒
TREE - CONIFEROUS	⌒	⌒
HYDRO		
HYDRO POLE	⌒	⌒
LAMP STANDARD	⌒	⌒
HYDRO POLE W/STREET LIGHTING	⌒	⌒
POLE	⌒	⌒
GUY ANCHOR	⌒	⌒
M.T.S. POLE	⌒	⌒
PEDESTAL OR BOX	⌒	⌒
CABINET	⌒	⌒
M.T.S., SHAW, OR VIDEON	⌒	⌒
TRAFFIC SIGNALS	⌒	⌒
TRAFFIC LIGHT STANDARD	⌒	⌒
GAS	⌒	⌒
STEAM	⌒	⌒
FIBRE OPTIC	⌒	⌒
FENCE	⌒	⌒
EDGE OF PAVEMENT OR GUTTER	⌒	⌒
EDGE UNPAVED OR GRAVEL ROAD	⌒	⌒
℄	⌒	⌒
PROJECTED ℄	⌒	⌒
LOT LINE	⌒	⌒
SIDEWALK - PATHWAY	⌒	⌒
EASEMENT	⌒	⌒
EDGE OF BUILDING	⌒	⌒
MAILBOX	⌒	⌒
PARKING METER	⌒	⌒
TEST HOLE	⌒	⌒
TREE LINE OR BUSH	⌒	⌒

CONSTRUCTION NOTES

1. ALL DIMENSIONS TO BE CONFIRMED BY CONTRACTOR.
2. ALL MATERIALS SHALL CONFORM TO THE CITY OF WINNIPEG STANDARD CONSTRUCTION SPECIFICATIONS.
3. NOTIFY ALL AFFECTED RESIDENTS AND BUSINESSES 24 HOURS IN ADVANCE OF ANY DISRUPTION OF SERVICE.

HATCH PATTERNS

EXISTING	PROPOSED	DESCRIPTION
⌒	⌒	EARTH OR GROUND ABOVE PIPE
⌒	⌒	SAND OR OTHER FINE MATERIAL
⌒	⌒	CONCRETE
⌒	⌒	WASHED STONE OR GRANULAR MATERIAL
⌒	⌒	INTERLOCKING STONE
⌒	⌒	METAL
⌒	⌒	GRAVEL OR STONE

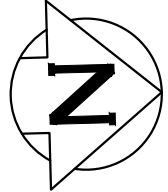
CONTRACTOR: ROCKY ROAD RECYCLING

RECORD DRAWING
WATER AND WASTE DEPARTMENT

CONSTRUCTION COMPLETION
DATE: 18/04/20

LOCATION APPROVED UNDERGROUND STRUCTURES		B.M. ELEV.				ENGINEER'S SEAL	
SUPV. U/G STRUCTURES COMMITTEE		DATE				ORIGINAL MYLAR SIGNED BY S.R.J COURNOYER 19/11/18	
NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.						CONSULTANT DRAWING NUMBER	
				DESIGNED BY TS		CHECKED BY SC	
				DRAWN BY RS		APPROVED BY SC	
				SCALE: HORIZONTAL -		RELEASED FOR CONSTRUCTION	
				VERTICAL -			
1		REVISED TO RECORD DWG		18/08/15		RS	
NO.		REVISIONS		DATE		BY	
				2019 11 19			
				PLOT DATE:		2019 11 18	

2017 COMMUNOTOR CHAMBER PIPING & VALVE UPGRADES		SHEET 2 OF 10	
INDEX PAGE		CITY DRAWING NUMBER	
		1-0110A-D0006-001	



- CONSTRUCTION NOTES:
1. REMOVED AND DISPOSED OF CONSTRUCTION MATERIALS FROM SITE DAILY.
 2. PROVIDED TEMPORARY SECURITY FENCE AROUND CONSTRUCTION INCLUDING EQUIPMENT AND MATERIALS AT ALL TIMES.

- NOTES:
1. THIS DRAWING IS ONLY A SKETCH BASED ON THE EXISTING DRAWINGS. THE LOCATION OF UNDERGROUND STRUCTURES AND DIMENSIONS ARE NOT EXACT.
 2. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING ALL DIMENSIONS AND CONFIRMING, THE LOCATION OF THE BURIED UTILITIES PRIOR TO ASSOCIATED CONSTRUCTION.

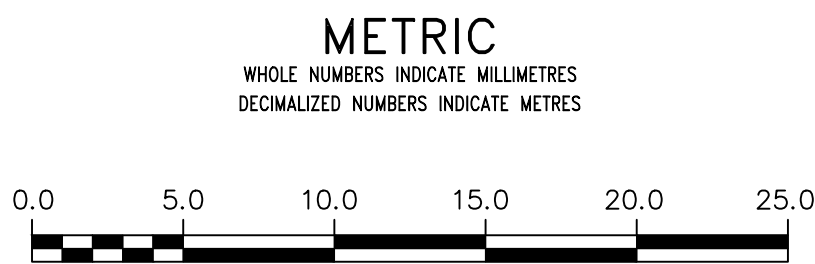
SITE PLAN
NTS

FOR INDEX SEE
1-0110A-D0006-001

CONTRACTOR: ROCKY ROAD RECYCLING

RECORD DRAWING
WATER AND WASTE DEPARTMENT

CONSTRUCTION COMPLETION
DATE: 18/04/20



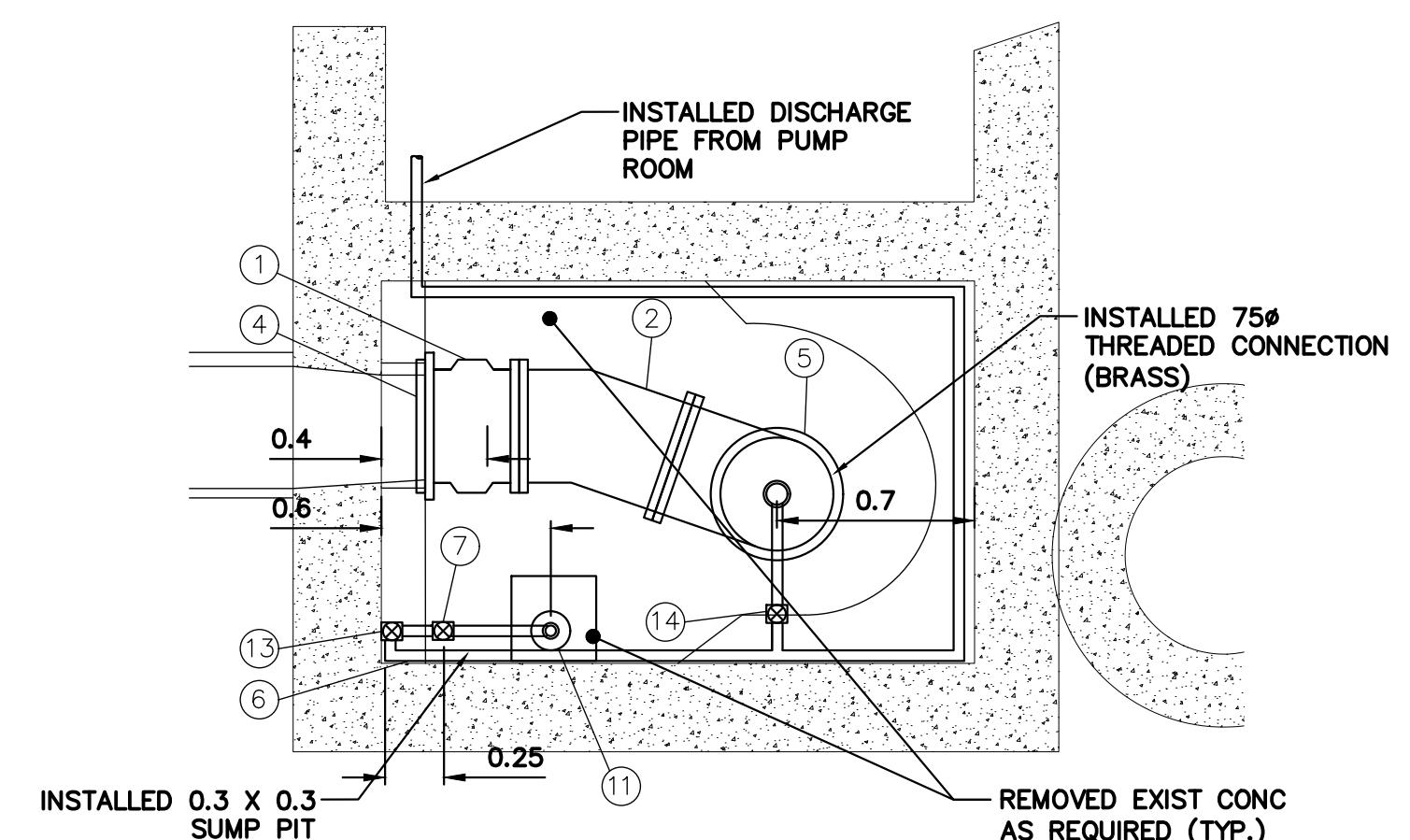
WARNING IF POWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR MUST: 1) NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION. 2) TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS. SEE PROVINCIAL REGULATION 21072 FOR DETAILS		LOCATION APPROVED UNDERGROUND STRUCTURES SUPV. U/G STRUCTURES COMMITTEE DATE NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.				B.M. ELEV. <table><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td>REVISED TO RECORD DWG</td><td>18/08/15</td><td>RS</td><td></td><td></td></tr><tr><td>1</td><td>EXPANDED LAYOUT VIEW</td><td>16/09/29</td><td>RS</td><td></td><td></td></tr><tr><td>NO.</td><td>REVISIONS</td><td>DATE</td><td>BY</td><td></td><td></td></tr></table>																						2	REVISED TO RECORD DWG	18/08/15	RS			1	EXPANDED LAYOUT VIEW	16/09/29	RS			NO.	REVISIONS	DATE	BY			ENGINEER'S SEAL ORIGINAL MYLAR SIGNED BY S.R.J COURNOYER 19/11/18 CONSULTANT DRAWING NUMBER —		Winnipeg THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT ENGINEERING DIVISION 2017 COMMUNUTOR CHAMBER PIPING & VALVE UPGRADES SITE PLAN CORNISH PUMPING STATION CORNISH AVENUE AT LANGSIDE STREET SHEET 5 OF 10 CITY DRAWING NUMBER 1-0133L-G0001-001			
2	REVISED TO RECORD DWG	18/08/15	RS																																																
1	EXPANDED LAYOUT VIEW	16/09/29	RS																																																
NO.	REVISIONS	DATE	BY																																																

BID OPPORTUNITY: 802-2017

FILE PATH: R:\DRAWINGS\SEWER\
FILE NAME: 1-0133L-G0001-001.dwg



1. ALLOWABLE SHUTDOWN TIME: MAX. 9.8 HRS OR AS DETERMINED BY COLLECTIONS STAFF
2. CRITICAL BASEMENT ELEVATION: 226.352
3. REMOVED EXISTING CONCRETE PIPING, VALVES, FITTINGS, AND OTHER MATERIALS
AS REQUIRED. INSTALLED NEW PUMPS, MOTORS, PIPING, VALVES AND FITTINGS AS SHOWN.
4. PROVIDED TEMPORARY BY-PASS PUMPING OF WASTEWATER DURING CONSTRUCTION.
5. INSTALLED MECHANICAL WORKS AS INDICATED AND ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
6. EXCAVATIONS TO BE BACKFILLED WITH CLASS 3 OR CLASS 5 BACKFILL IN ACCORDANCE WITH CW 2030 AND SD-002.
7. FLANGE NUTS & BOLTS ARE ASTM A307.
8. GASKETS ARE FULL FACED, 3 THICK RED RUBBER.
9. CONTRACTOR TO CONFIRMED ALL DIMENSIONS BEFORE ASSEMBLING PIPE.
10. ALL ANCHOR BOLTS ARE ASTM A276 TYPE 316 SS.



TOP VIEW
1:1

RECORD DRAWING
WATER AND WASTE DEPARTMENT

ORIGINAL MYLAR
SIGNED BY
S.R.J
COURNOYER
19/11/18



THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

2017 COMMUNITOR CHAMBER PIPING &
VALVE UPGRADES
CORNISH PUMPING STATION
CORNISH AVENUE AT LANGSIDE STREET

SHEET 6 OF 10

CITY DRAWING NUMBER

1-0133L-M0001-001

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES _____ DATE _____
COMMITTEE

NOTE:

LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

B.M.	ELEV.
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1	REVISED TO RECORD DWG	18/08/15	RS
NO.	REVISIONS	DATE	BY

PLOT DATE: 2019 11 18

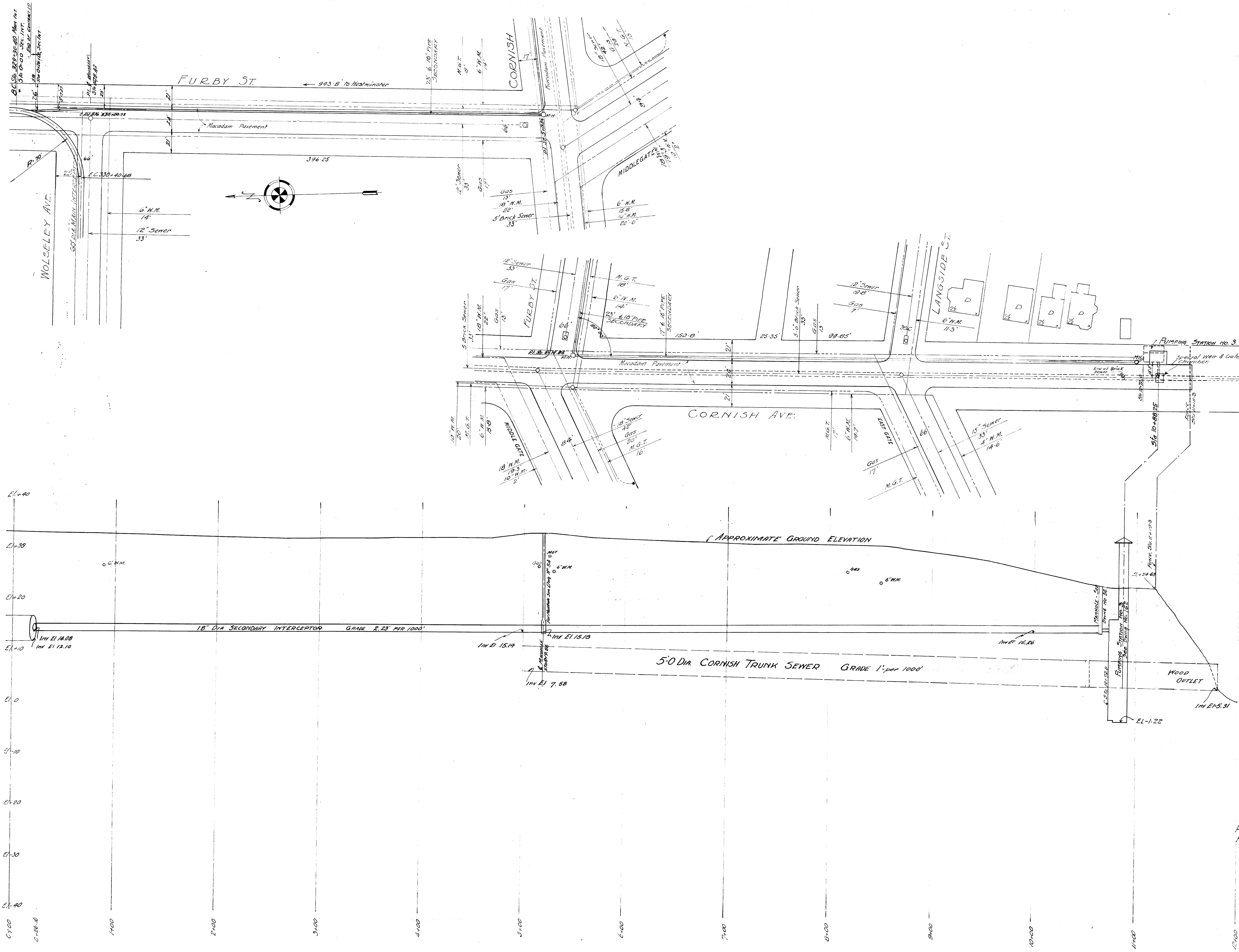
DESIGNED BY	TS
DRAWN BY	RS
SCALE:	
HORIZONTAL	1:1
VERTICAL	1:1
DATE	2019 11 19

ENGINEER'S SEAL

CONSULTANT DRAWING NUMBER	—
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BID OPPORTUNITY: 802-2017

FILE PATH: R:\DRAWINGS\SEWER\
FILE NAME: 1-0133L-M0001-001.dwg



LEGEND:-

- Sewer. _____
- Water Main. _____
- Nat. Gas. Tel. _____
- Gas. _____

HOUSE CONNECTIONS TO EXISTING SEWERS NOT SHOWN

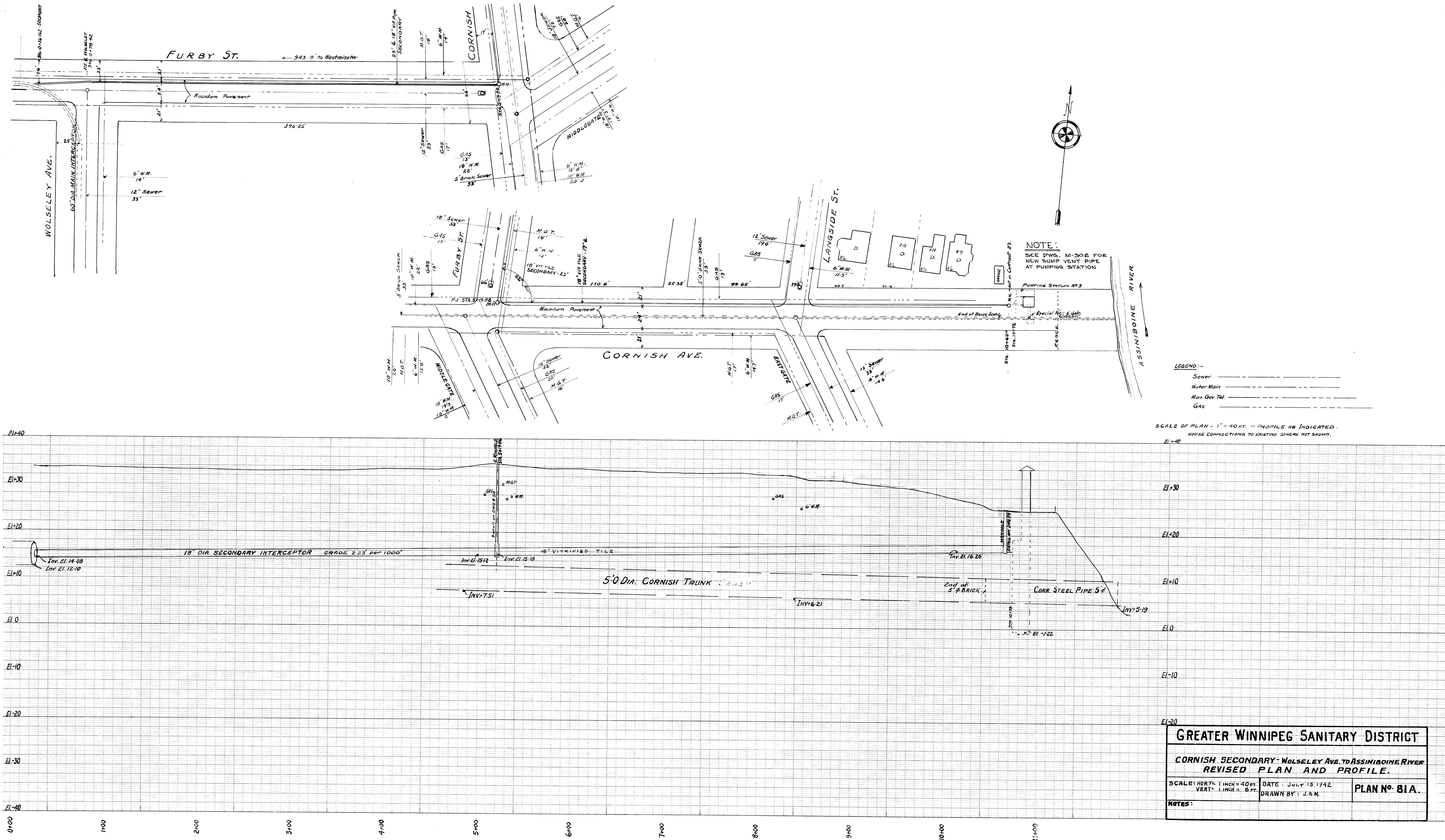
REFERENCE:
Field Book N° 10

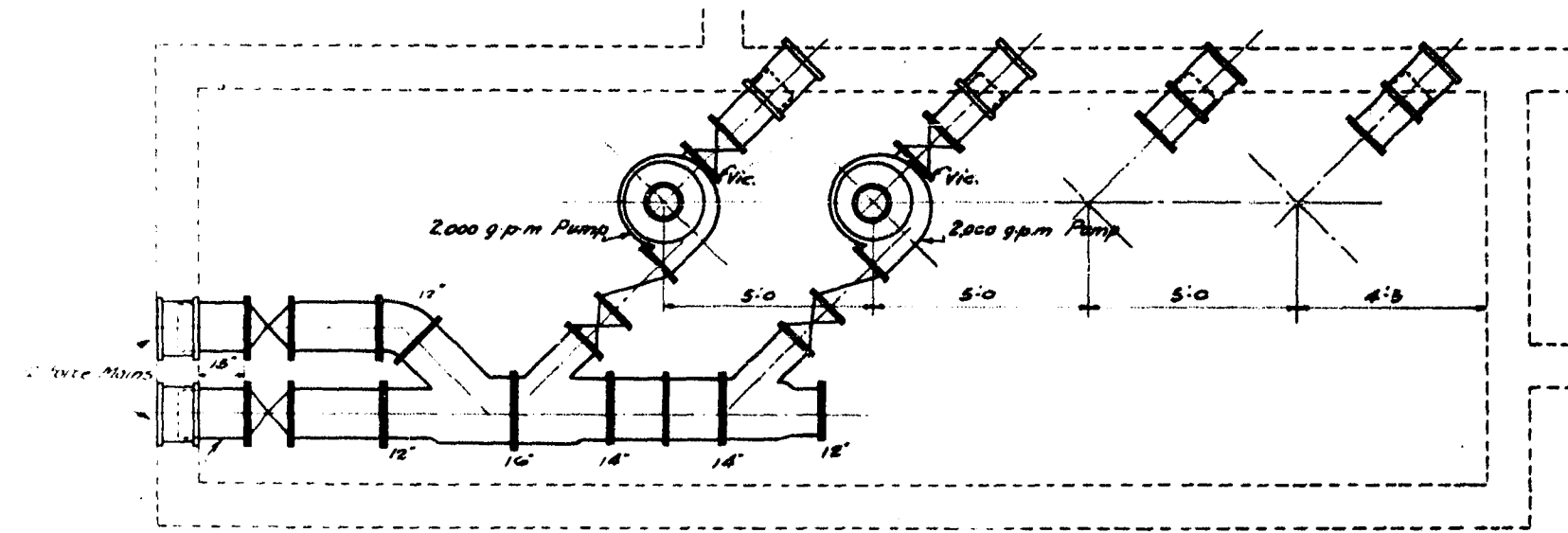
APPROVED

El-40 Consulting Engineer

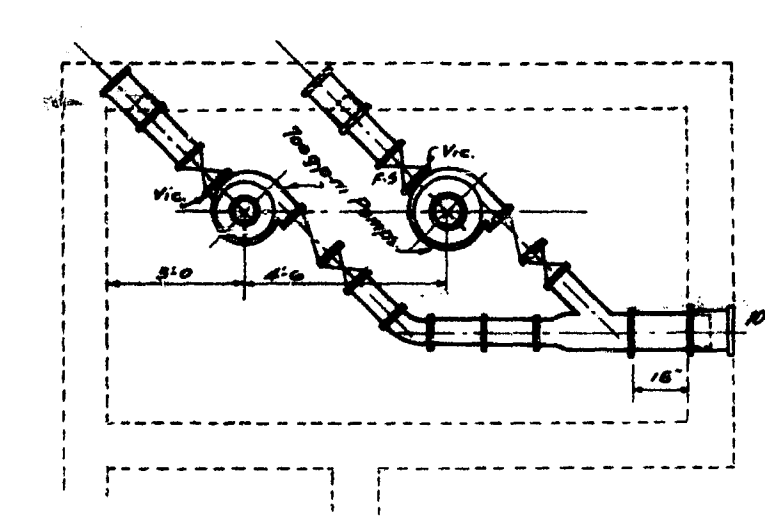
GREATER WINNIPEG SANITARY DISTRICT			
DATE	APPROVED	DATE	TITLE
1935	<i>[Signature]</i>	1935	CORNISH SECONDARY
PLAN AND PROFILE			
WOLSELEY AVE TO ASSINIBOINE RIVER			
Scale 1 in = 40 ft. Date 6-1935			
C. S. London			
NOTES: REV. A May 1935. Pumping Station & M.H. Added. Contract No. Added.			
REV. C June 8th 1935. Special Weir & Gate Chamber added. See Notes.			

26[#] 10057

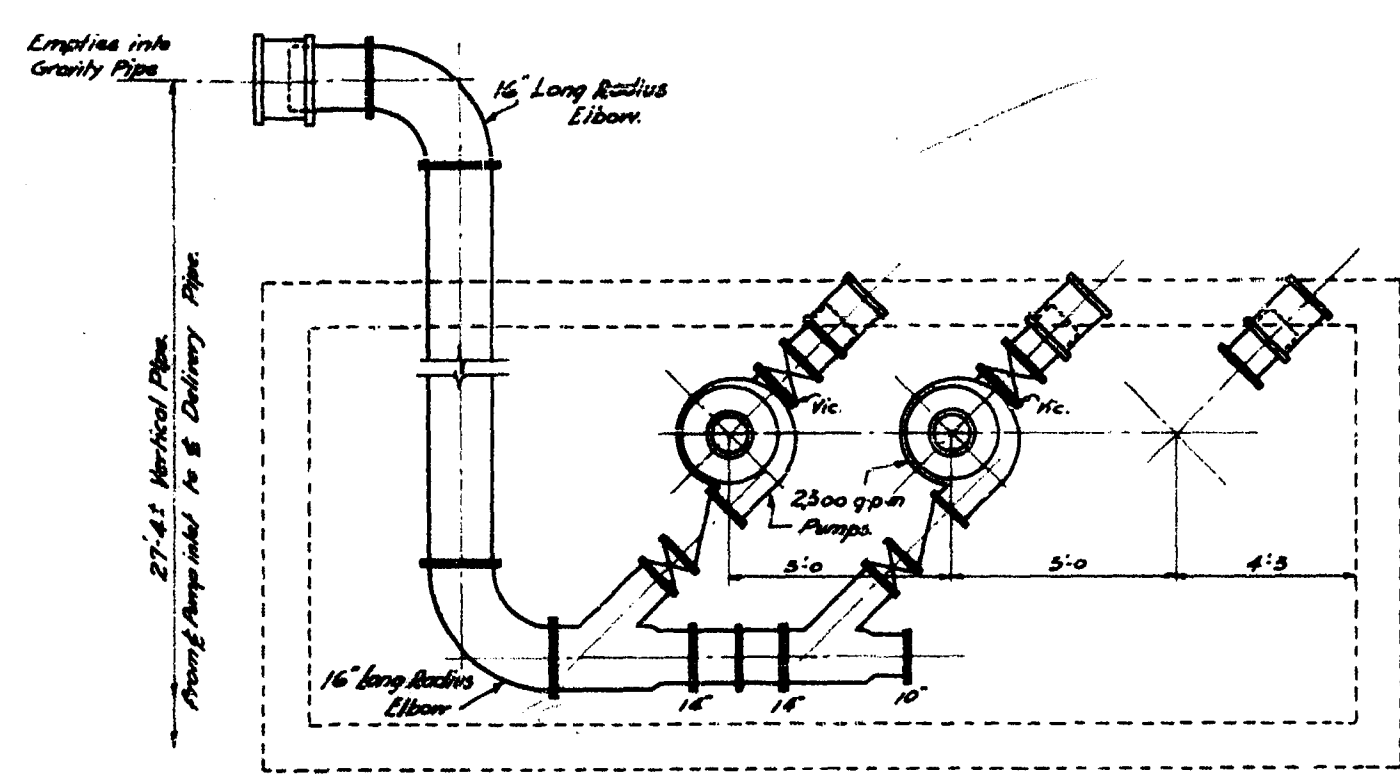




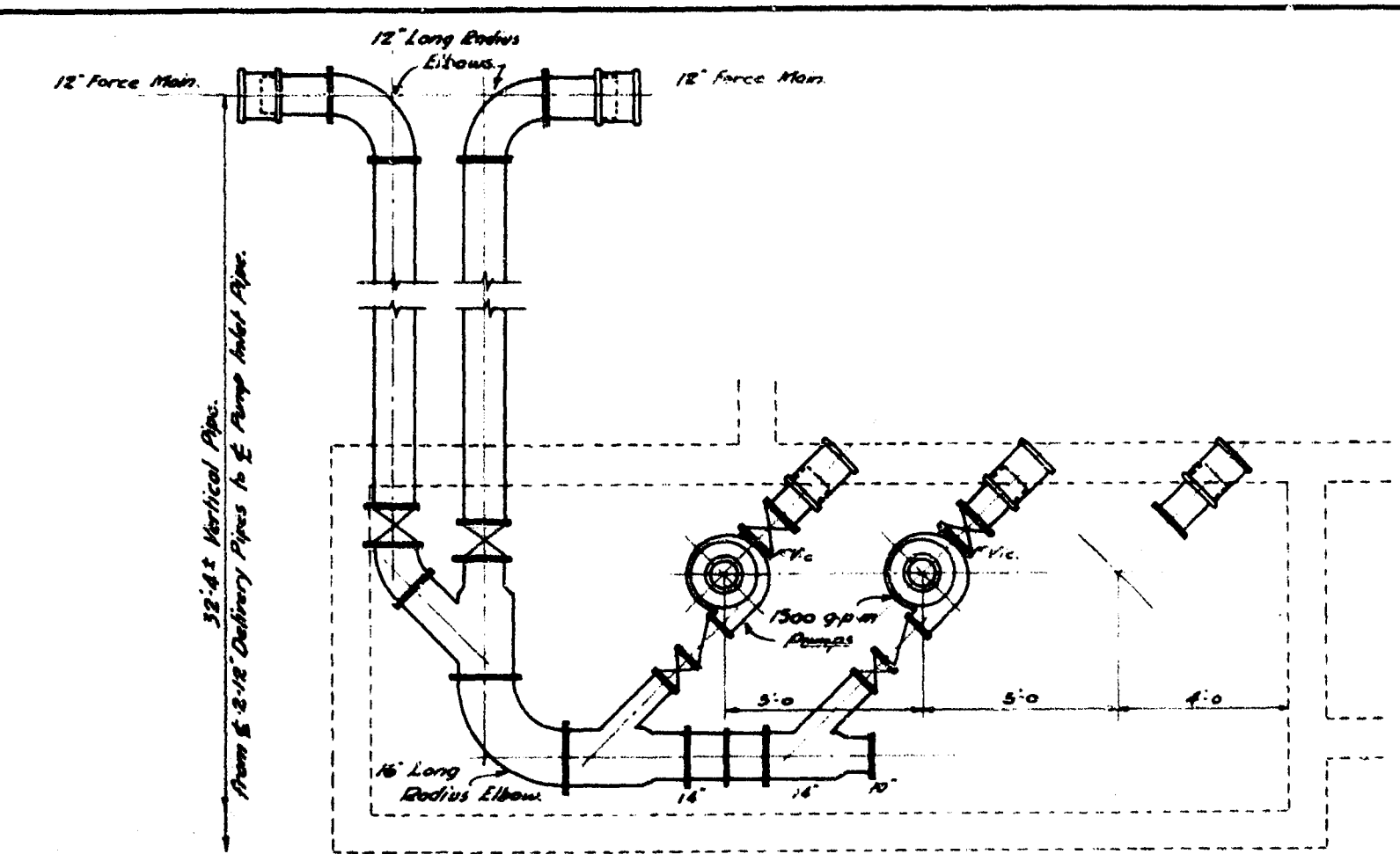
ASH STREET PUMP STATION
No. 1



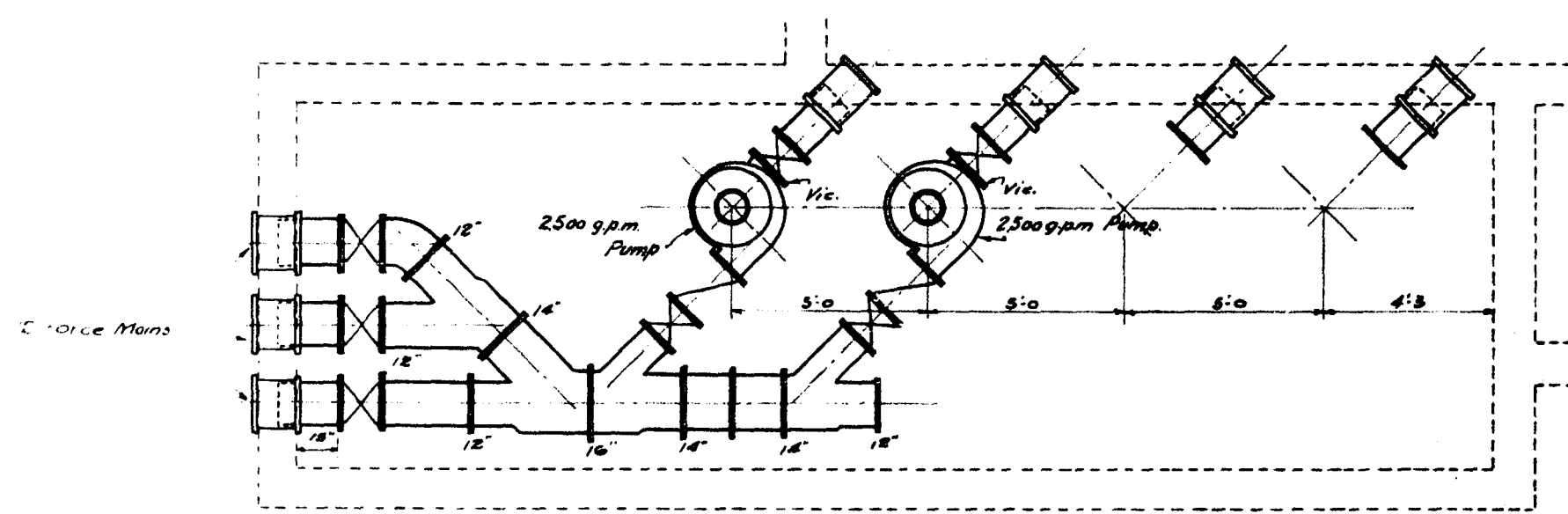
MUNROE AVE. PUMP STATION
No. 12



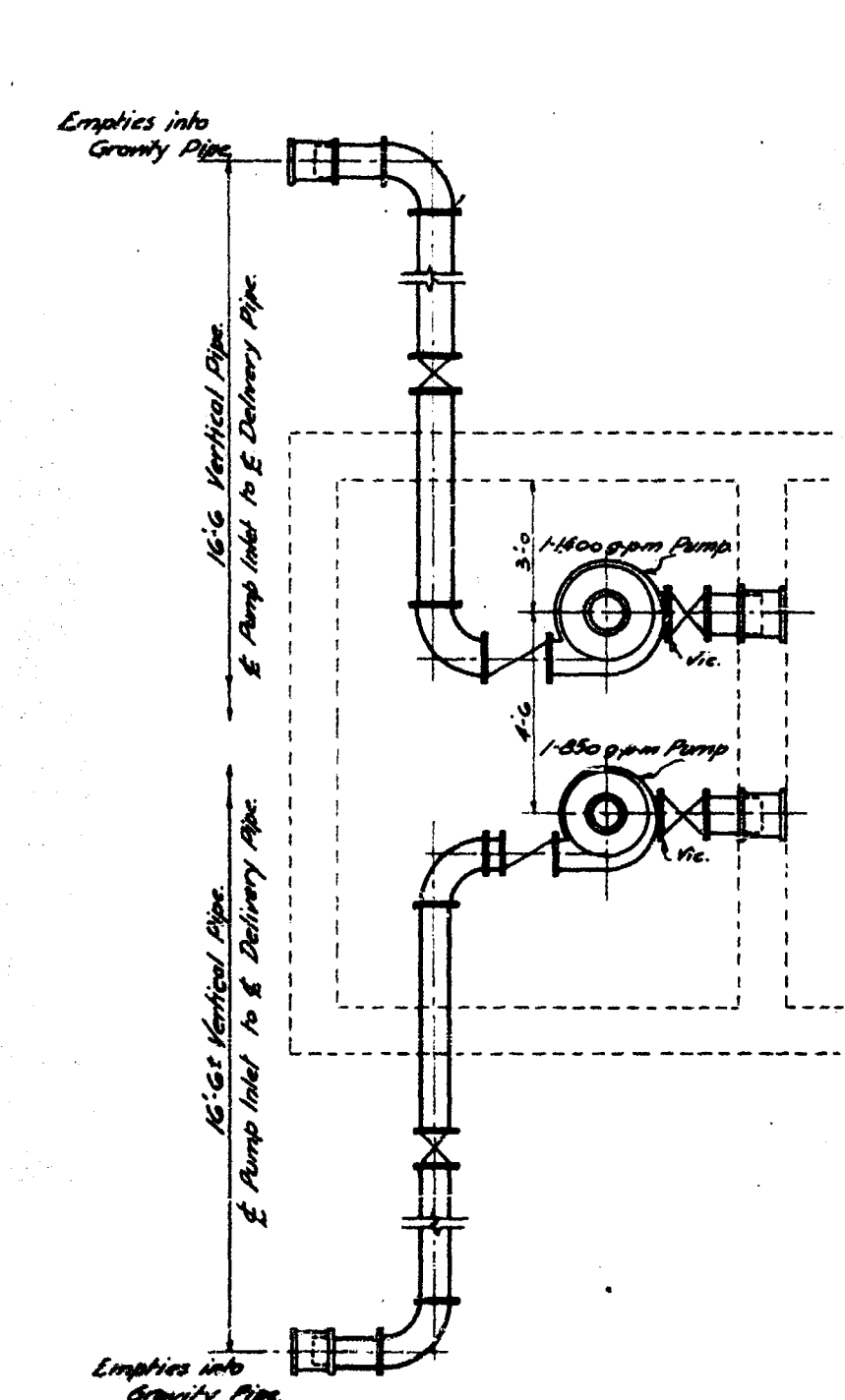
AUBREY STREET PUMP STATION
No. 2



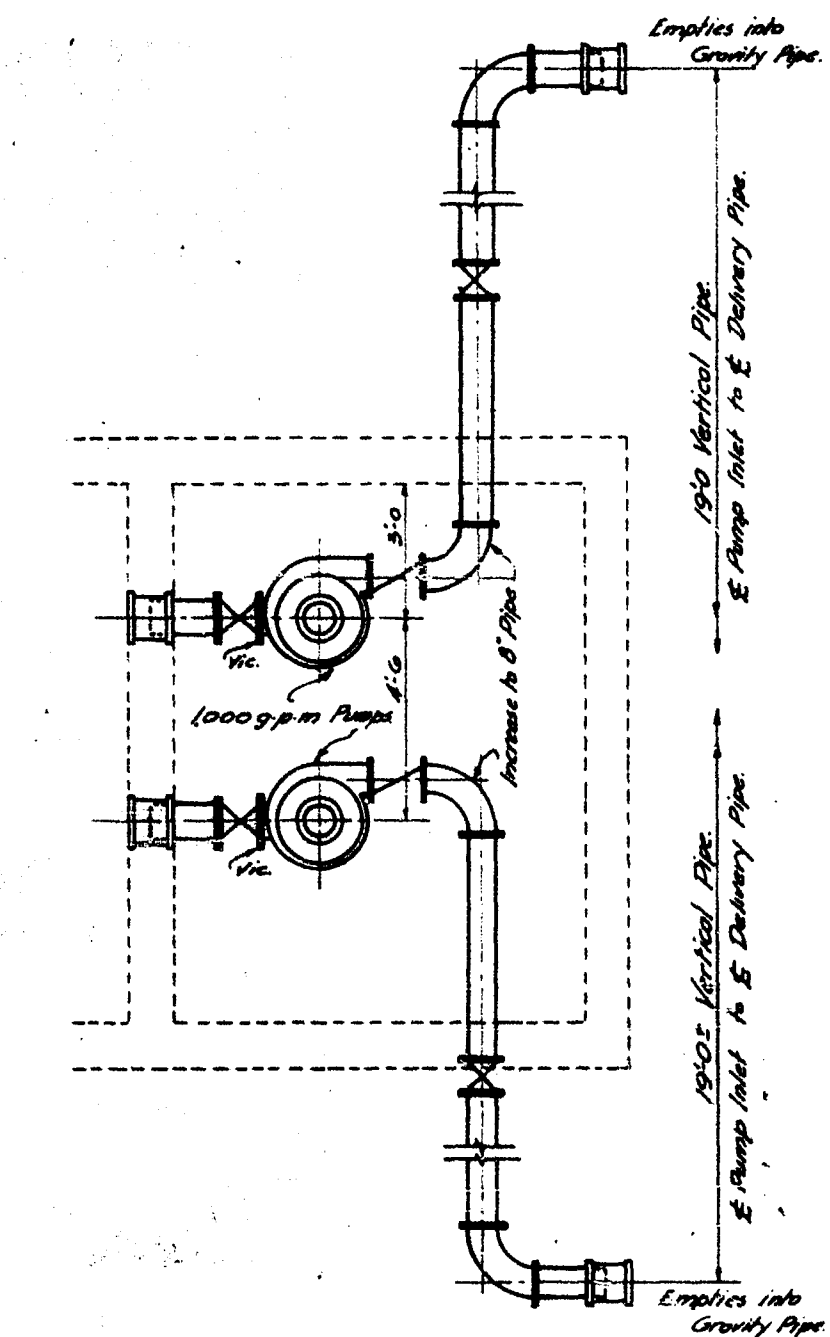
JESSIE AVE. PUMP STATION
No. 4



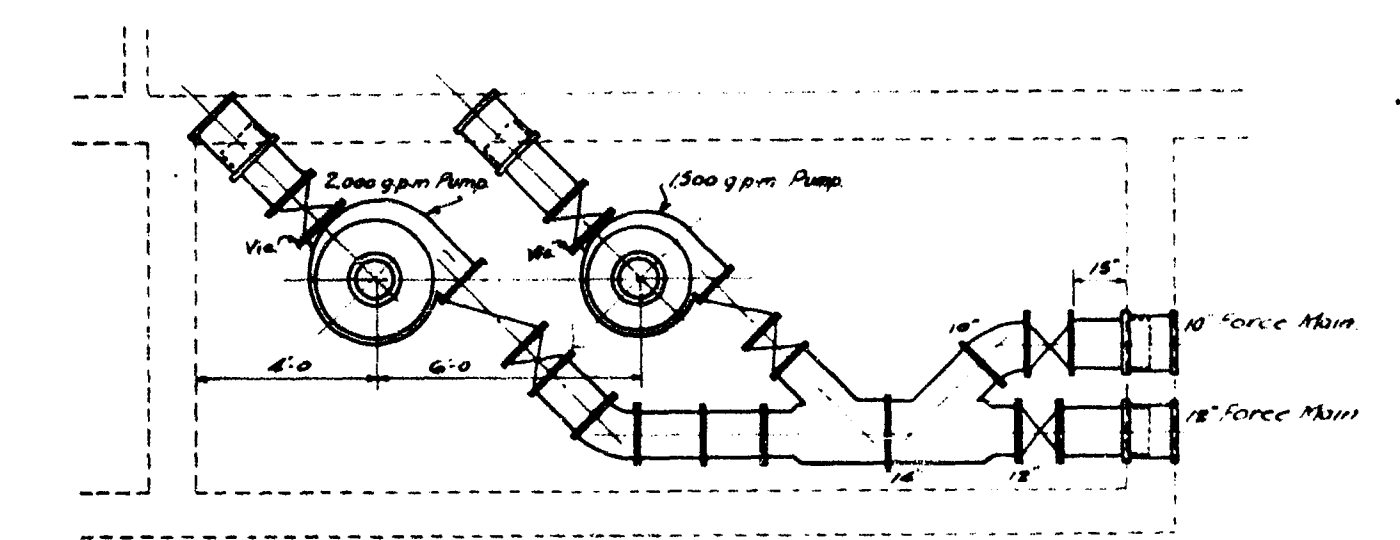
MONTCALM STREET PUMP STATION
No. 10



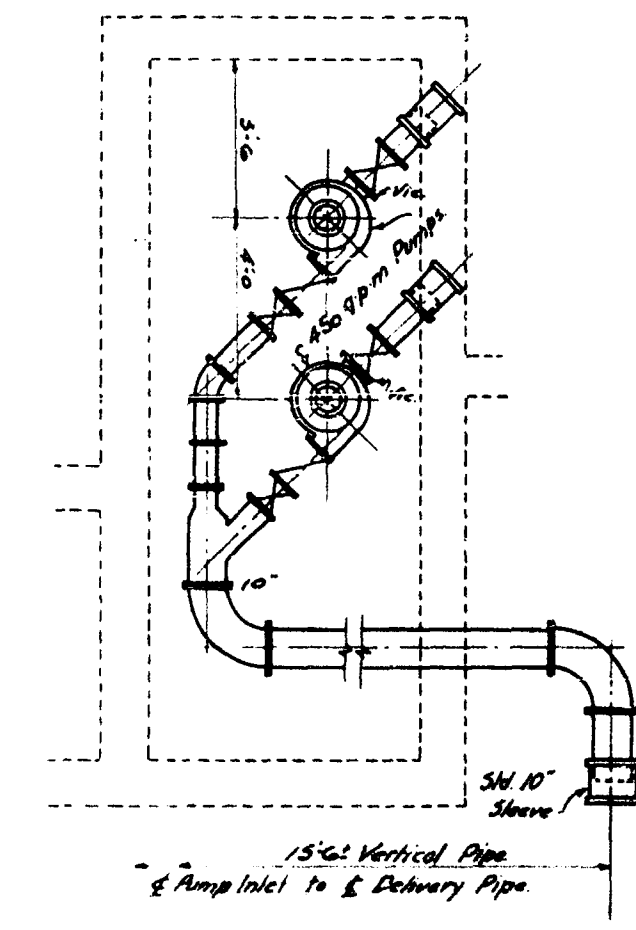
CORNISH AVE. PUMP STATION
No. 3



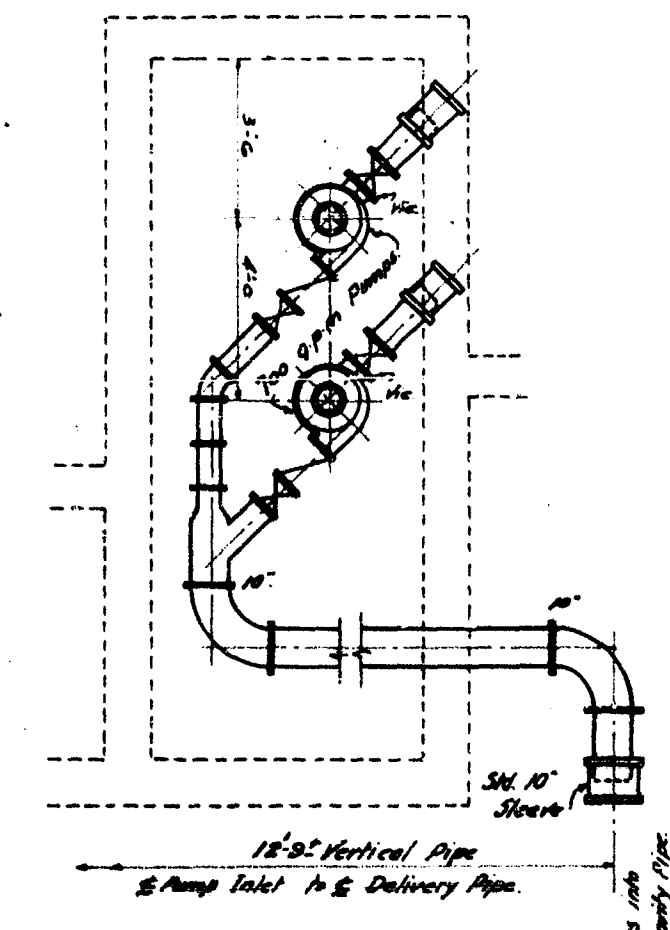
RIVER AVE. PUMP STATION
No. 5



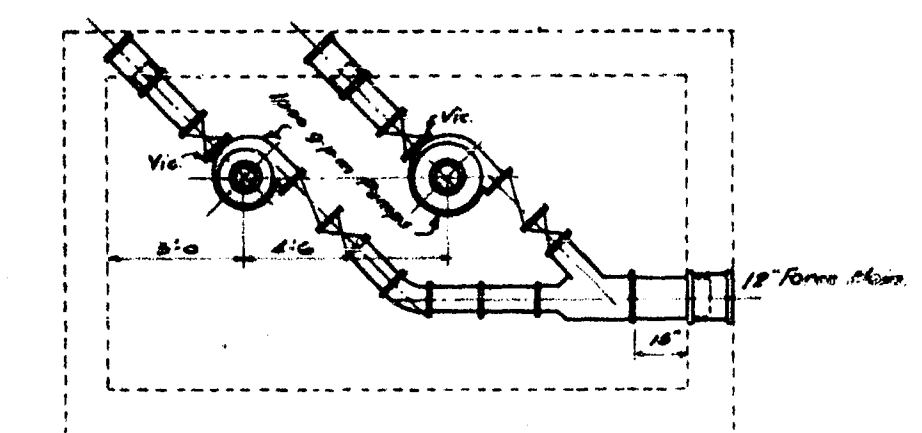
MARION STREET PUMP STATION
No. 6



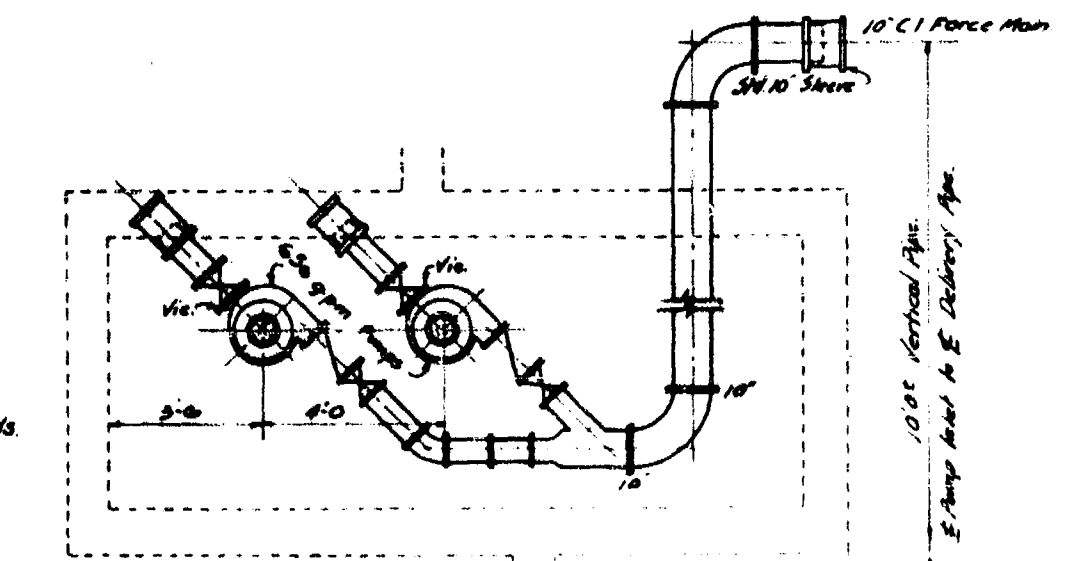
BOYLE STREET PUMP STATION
No. 9



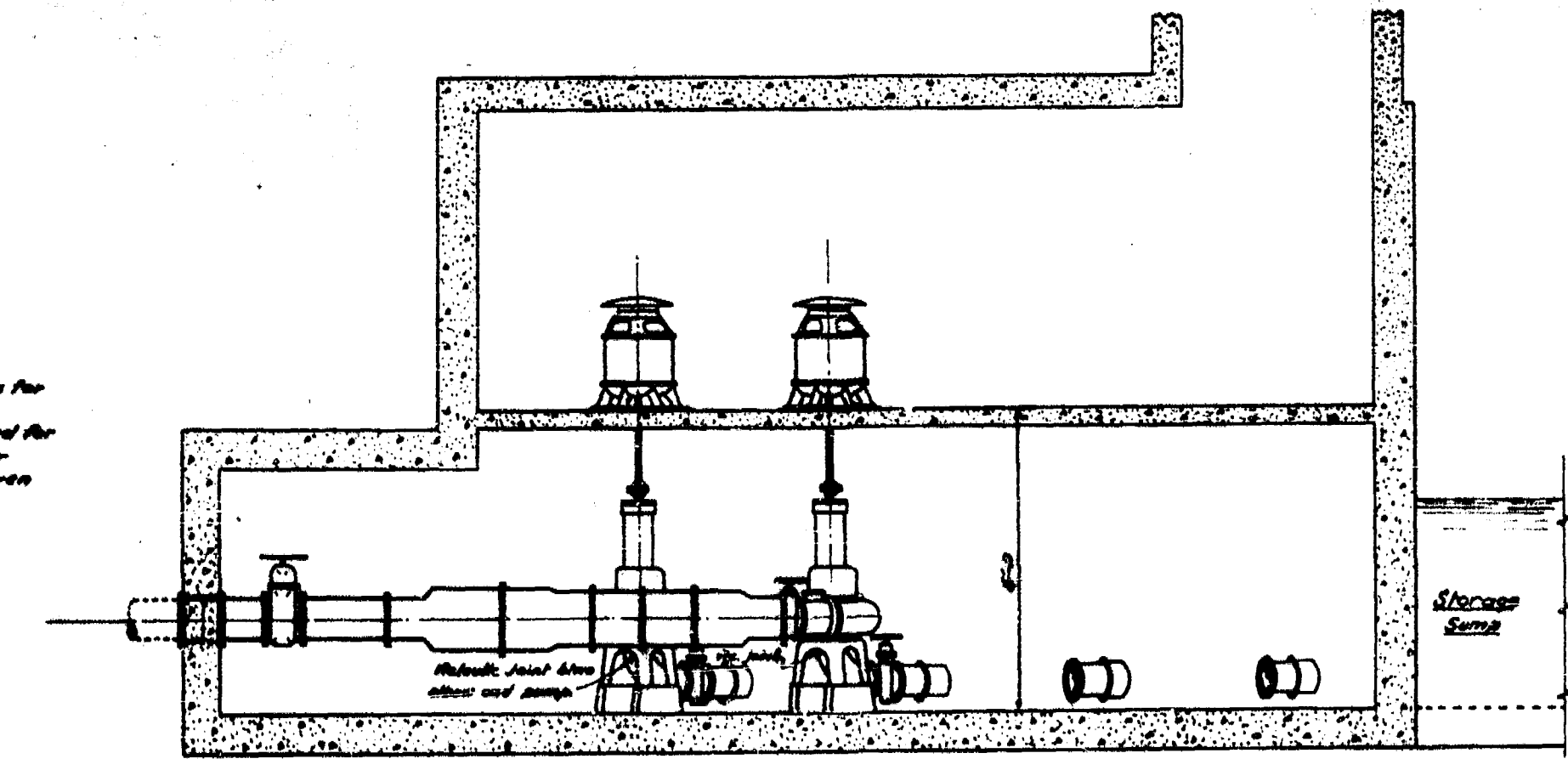
RUE DESPINS PUMP STATION
No. 7



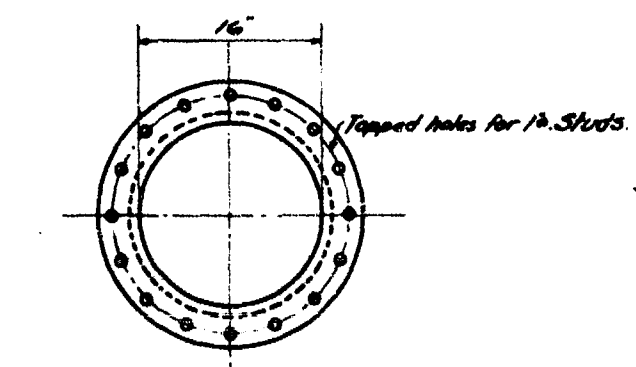
HART AVE. PUMP STATION
No. 11



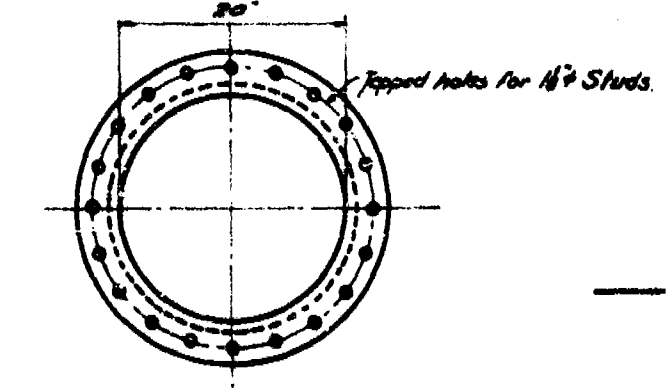
SYNDICATE STREET PUMP STATION
No. 8



SECTION THROUGH TRANSFER OPERATING ROOM
AT PUMP STATIONS



STD. FLANGE FOR 16" PIPE



STD. FLANGE FOR 20" PIPE

DETAIL OF WALL CASTINGS
FOR SECONDARY SEWER CONTROL VALVES

LEGEND

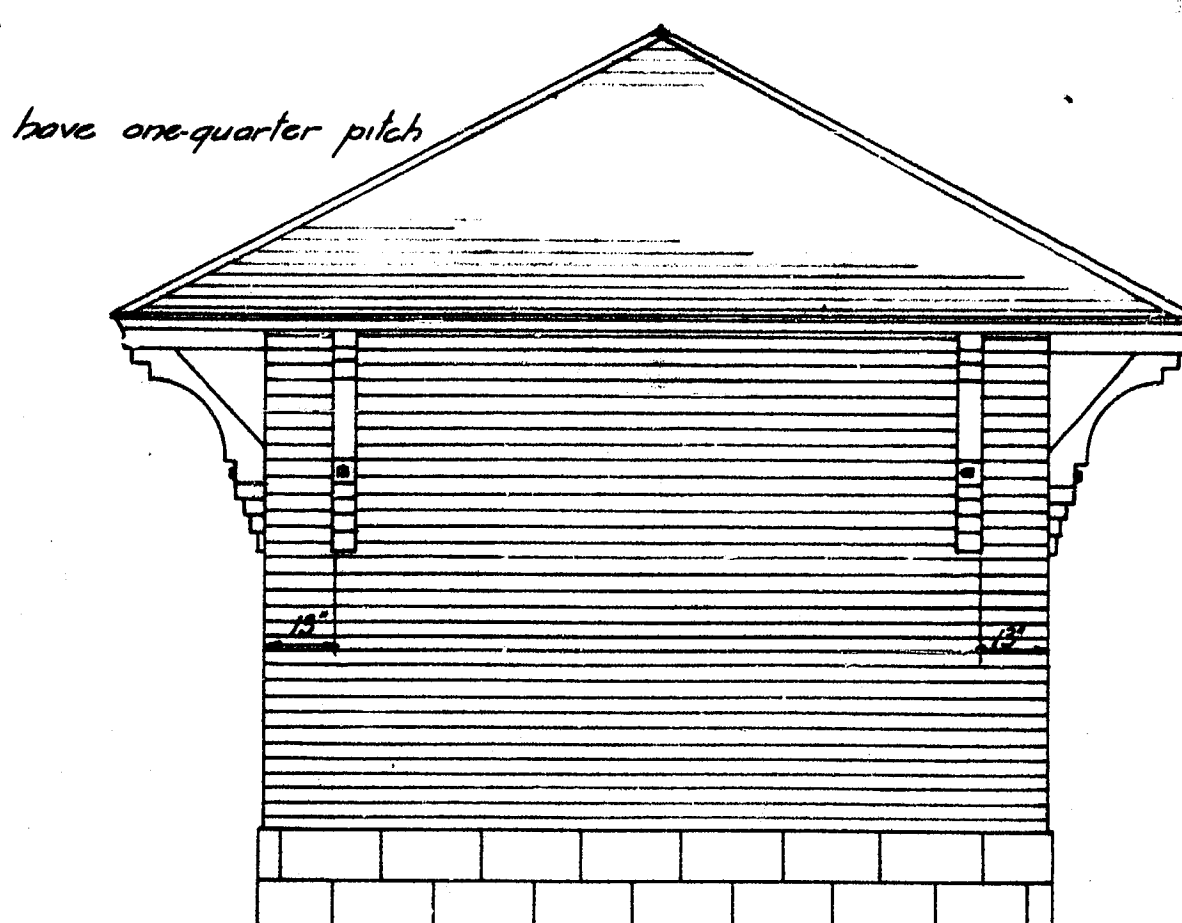
	Gate Valve, non-rising stem, low pressure pattern with handwheel control
	Check Valve, Standard pattern
	Standard lead joint sleeve
	Victaulic coupling
	Standard flange coupling
	Victaulic or Universal coupling

Contractor for Contract 30 to get shores for pipes and anchor bolts for pumps. Piping, sleeves and anchor bolts required for equipment on this drawing supplied under Contract 30. Anchor Bolt location to be given when known.

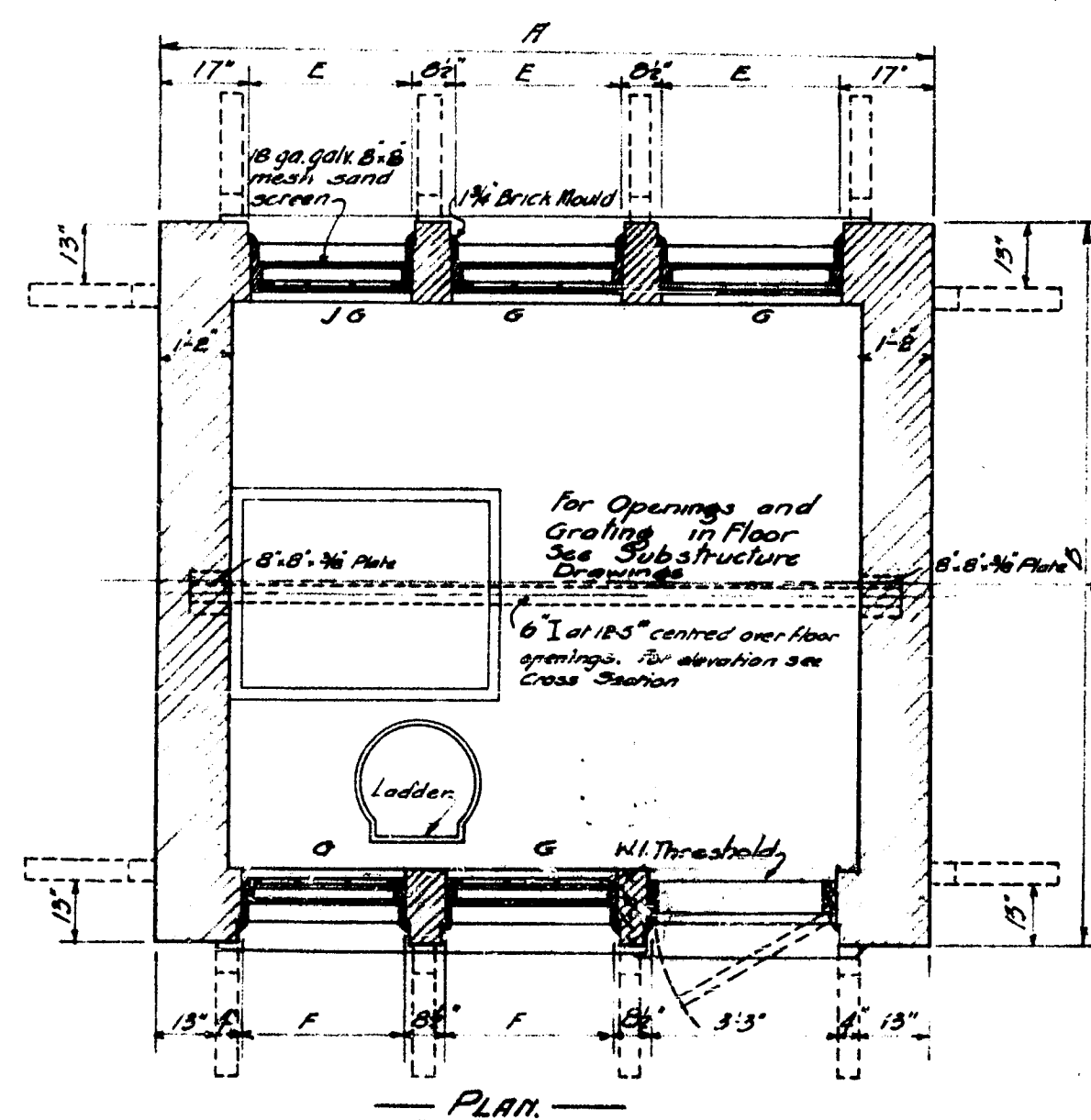
GREATER WINNIPEG SANITARY DISTRICT			
ENGINEERING BOARD	Consulting Engineer	TITLE: DIAGNOSTIC REPORT FOR PUMP STATIONS FOR SECONDARY SEWERS	
APPROVED	DATE	SCALE	UNITS
W. P. DREWSON, Chief Engineer		1" = 10'	Feet
J. W. HARTSHORN			
J. B. DREWSON			
W. D. DREWSON			
NOTED: FOR R. May 16/20. 1070 regarding Shores & Anchor Bolts added.			



— FRONT ELEVATION —

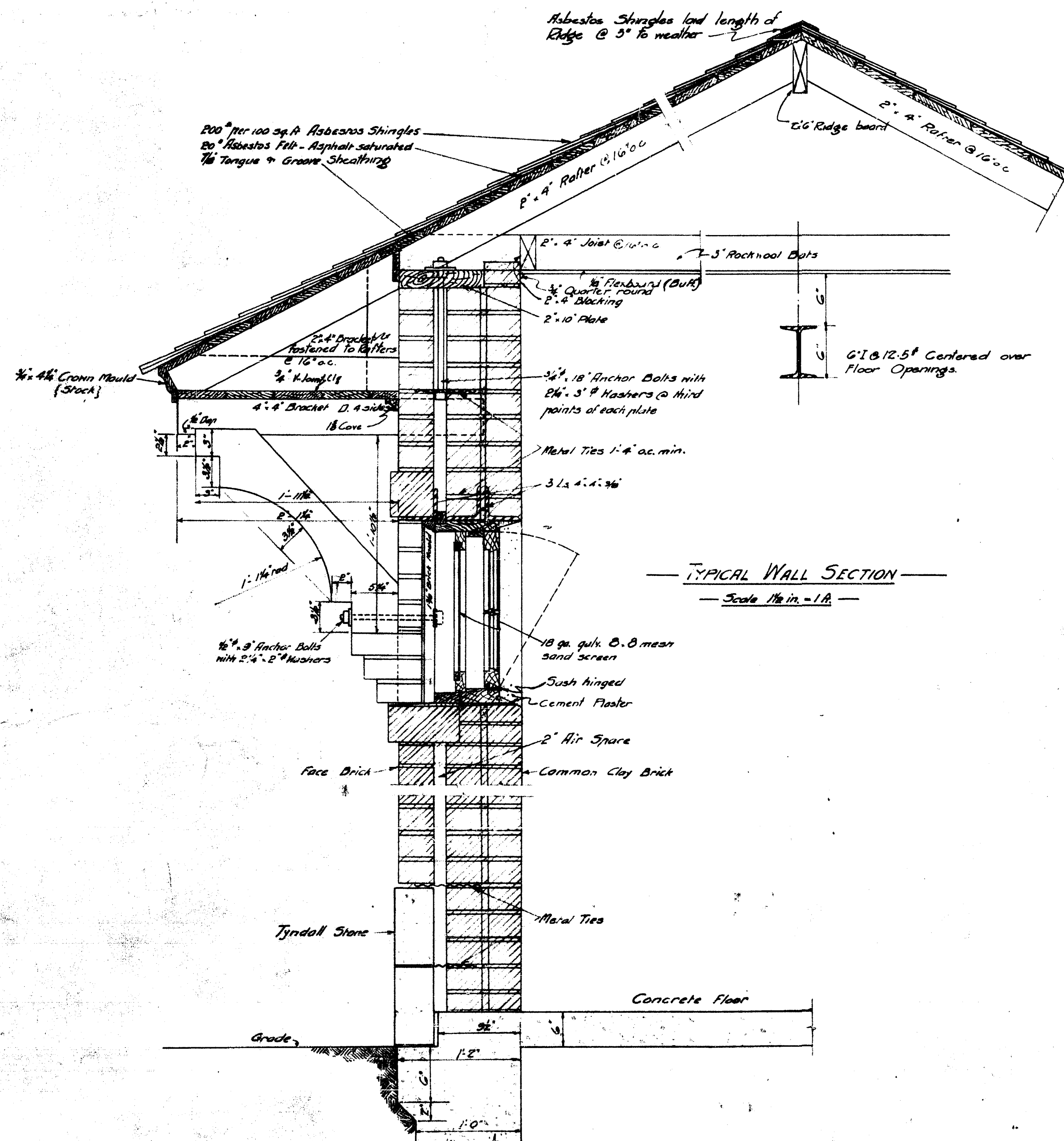


— SIDE ELEVATION —



All J* Sash to have sliding vent in upper left hand as shown.

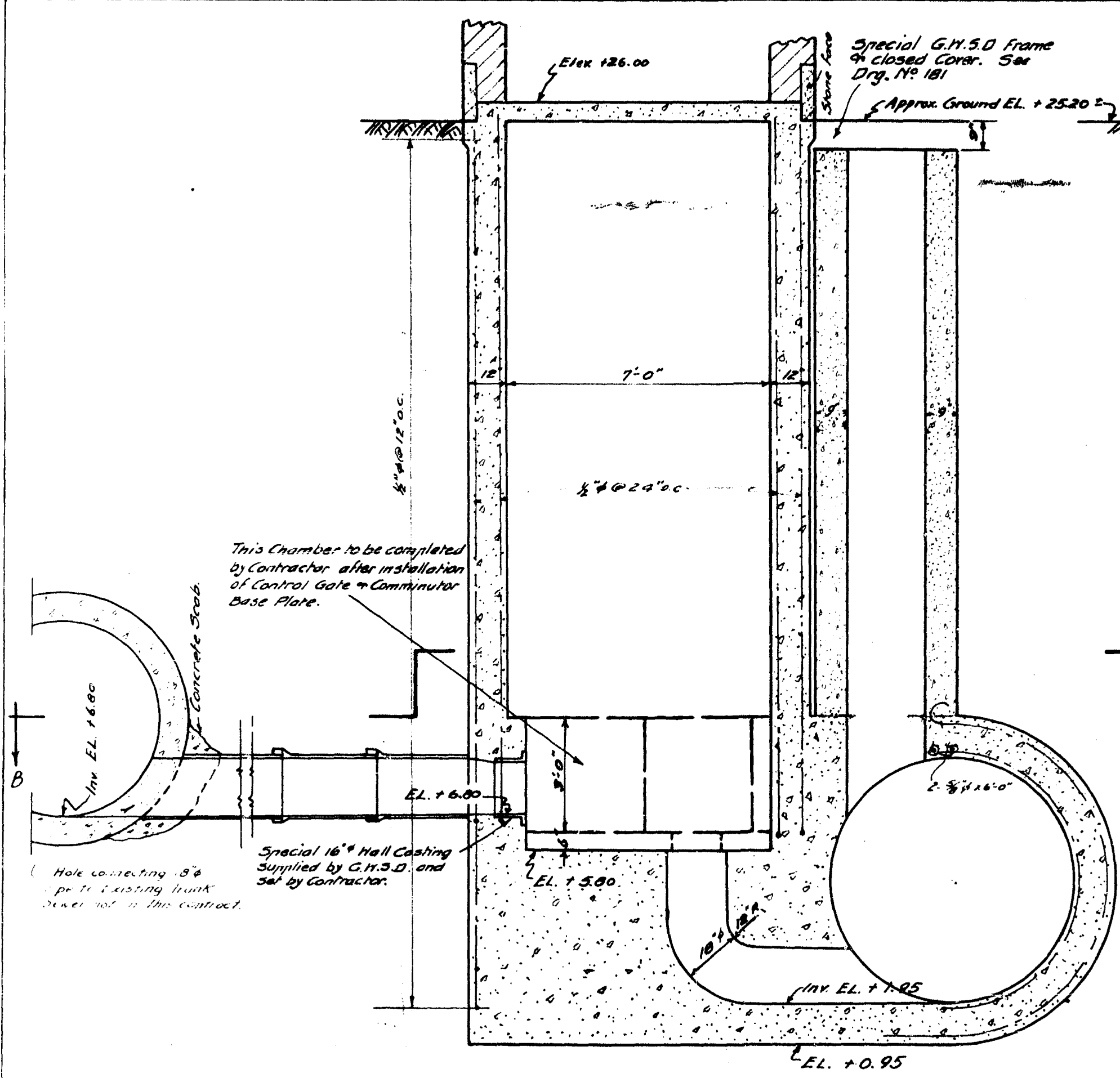
All windows to be hinged at bottom and to be provided with transom catch and chain of solid brass.



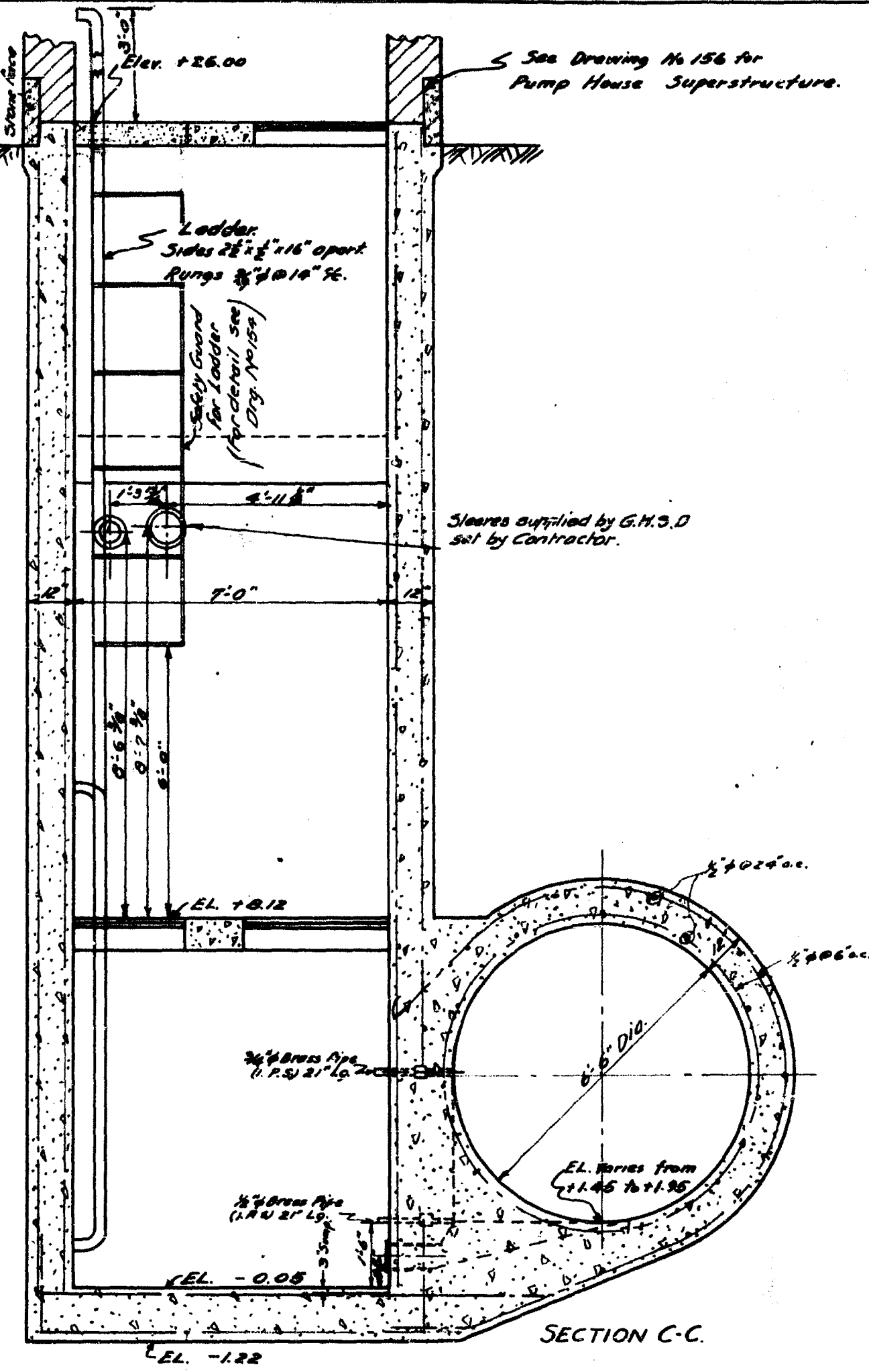
— TYPICAL WALL SECTION —
— Scale $1\frac{1}{2}$ in. = 1 ft. —

SCHEDULE OF PUMPING STATIONS AND SIZES											
Nº	LOCATION	A.	B.	C.	D.	E.	F.	G.	H.	FRONT ELEV.	DOOR
1	FISH ST.	12'-7"	11'-7"	1'-0"	2'-11"	2'-9 1/2"	2'-6 1/2"	2 Lights, Air Frame & Seat	3'-0" x 7'-5" x 1 1/2" 3 panel B.C. for door frame	North West	Opposite Hand
2	RUBREY.	12'-7"	11'-10"	9'	2'-11"	2'-9 1/2"	2'-6 1/2"	do	do	West	No Shown
10	MONTCALM.	12'-7"	11'-10"	9'	2'-11"	2'-9 1/2"	2'-6 1/2"	do	do	South	do
4	JESSIE AVE.	11'-10"	11'-4"	6'	2'-6 1/2"	2'-6 1/2"	2'-2"	do	do	South	do
3	CORNISH.	11'-10"	9'-4"	2'-6"	2'-6 1/2"	2'-6 1/2"	2'-2"	do	do	South	Centre
6	MARION.	11'-10"	9'-10"	2'-0"	2'-6 1/2"	2'-6 1/2"	2'-2"	do	do	South West	Opposite Hand
8	SYNDICATE.	11'-10"	8'-10"	3'-0"	2'-6 1/2"	2'-6 1/2"	2'-2"	do	do	West	Centre
7	RUE DESPINS.	11'-10"	8'-10"	3'-0"	2'-6 1/2"	2'-6 1/2"	2'-2"	do	do	East	do
11	HART AVE.	11'-10"	9'-4"	2'-6"	2'-6 1/2"	2'-6 1/2"	2'-2"	do	do	North	do
12	CLIFTON	11'-10"	9'-4"	2'-6"	2'-6 1/2"	2'-6 1/2"	2'-2"	do	2'-3'-0" x 7'-0" 3 panel B.C. FOR DOOR 3'-0" x		

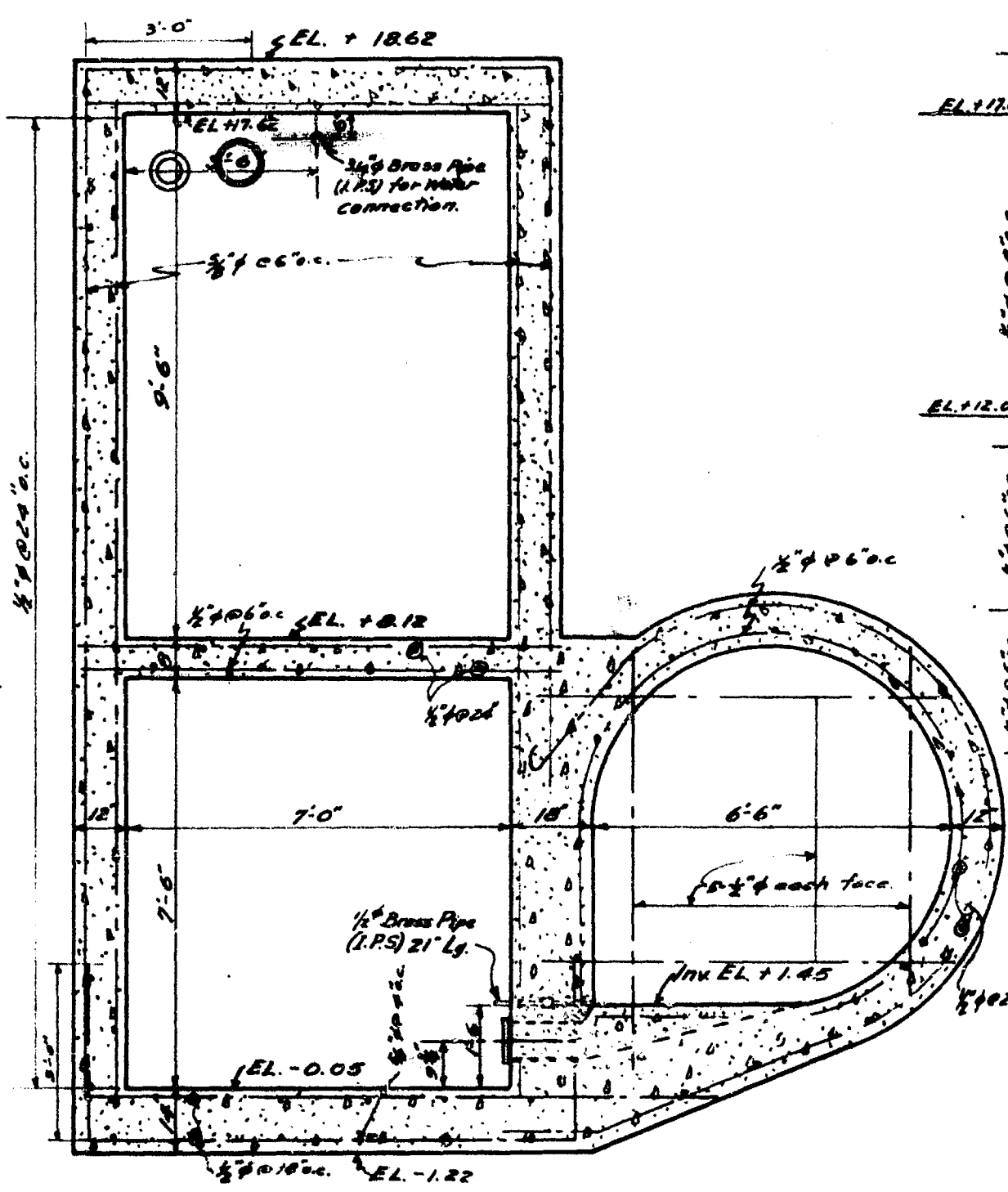
GREATER WINNIPEG SANITARY DISTRICT	
NO. 5412 DATE OF ORDER 1912	DATE 1912
TO: Mr. J. A. [unclear] Mr. J. A. [unclear] Mr. J. A. [unclear] Mr. J. A. [unclear]	TITLE: PUMP HOUSE SUPERSTRUCTURES
BY: Mr. J. A. [unclear] Mr. J. A. [unclear] Mr. J. A. [unclear]	No. 1200 - 13 G.M. 9 7.5 156 1912
Mr. J. A. [unclear]	1912



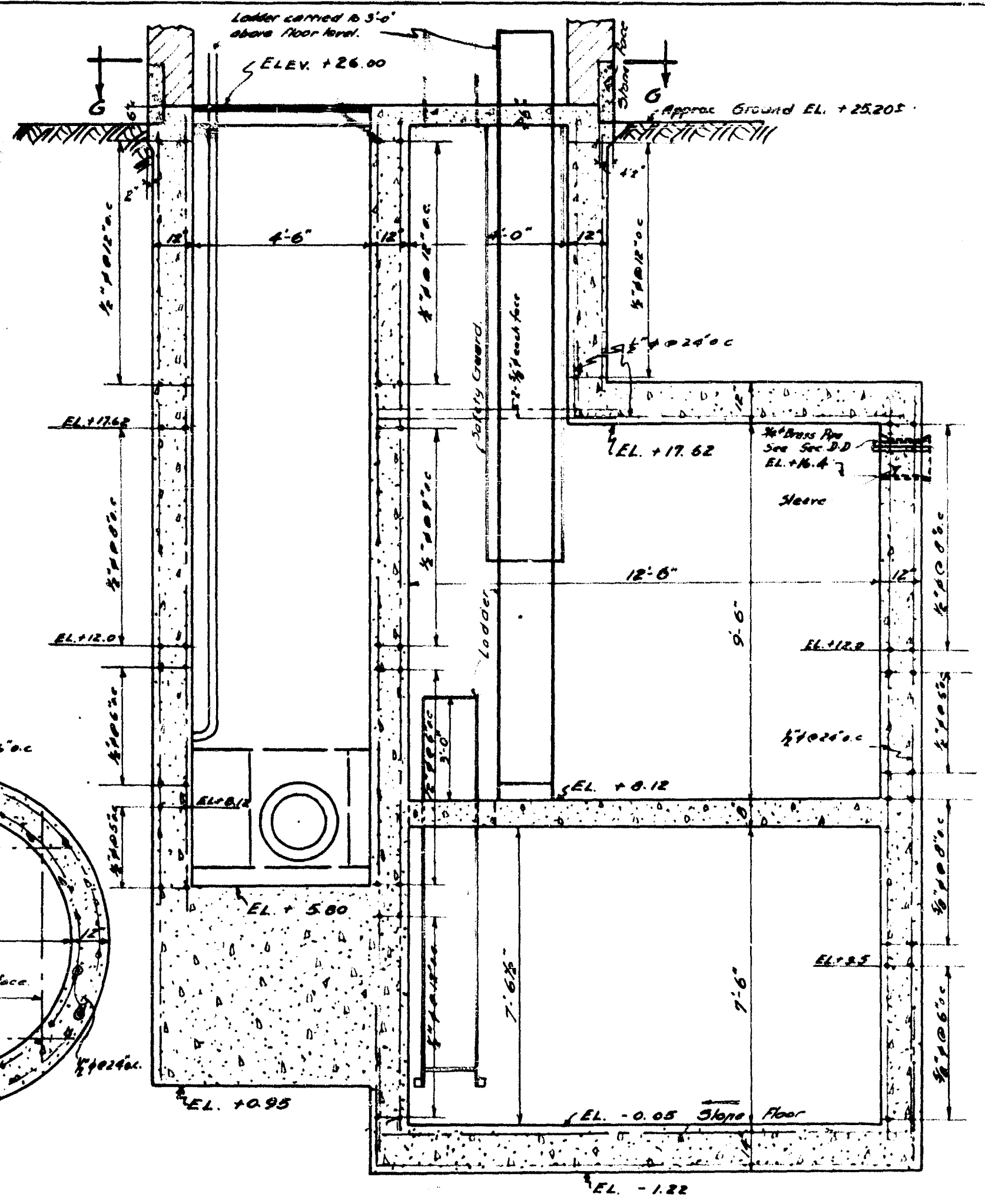
SECTION A-A



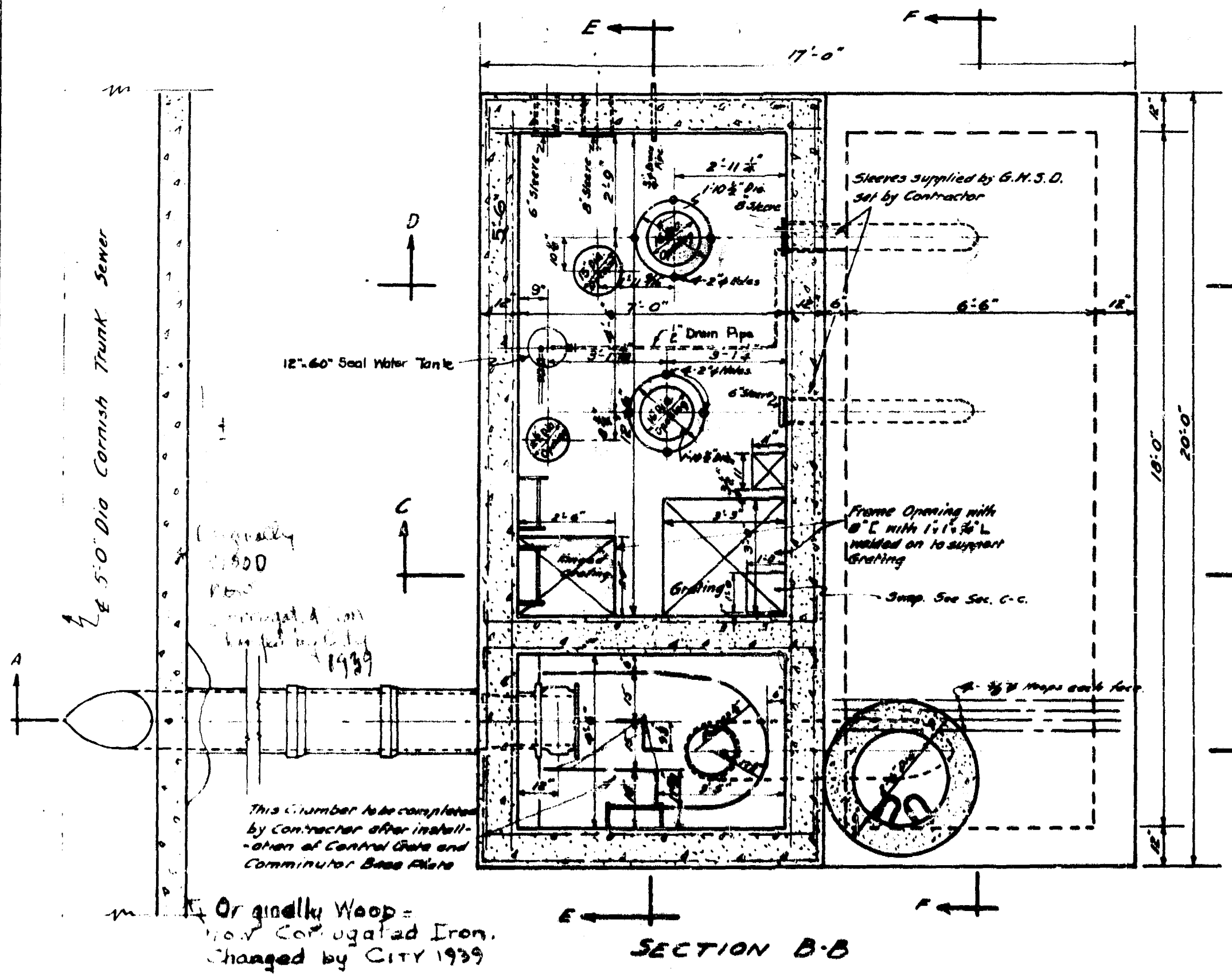
SECTION C-C



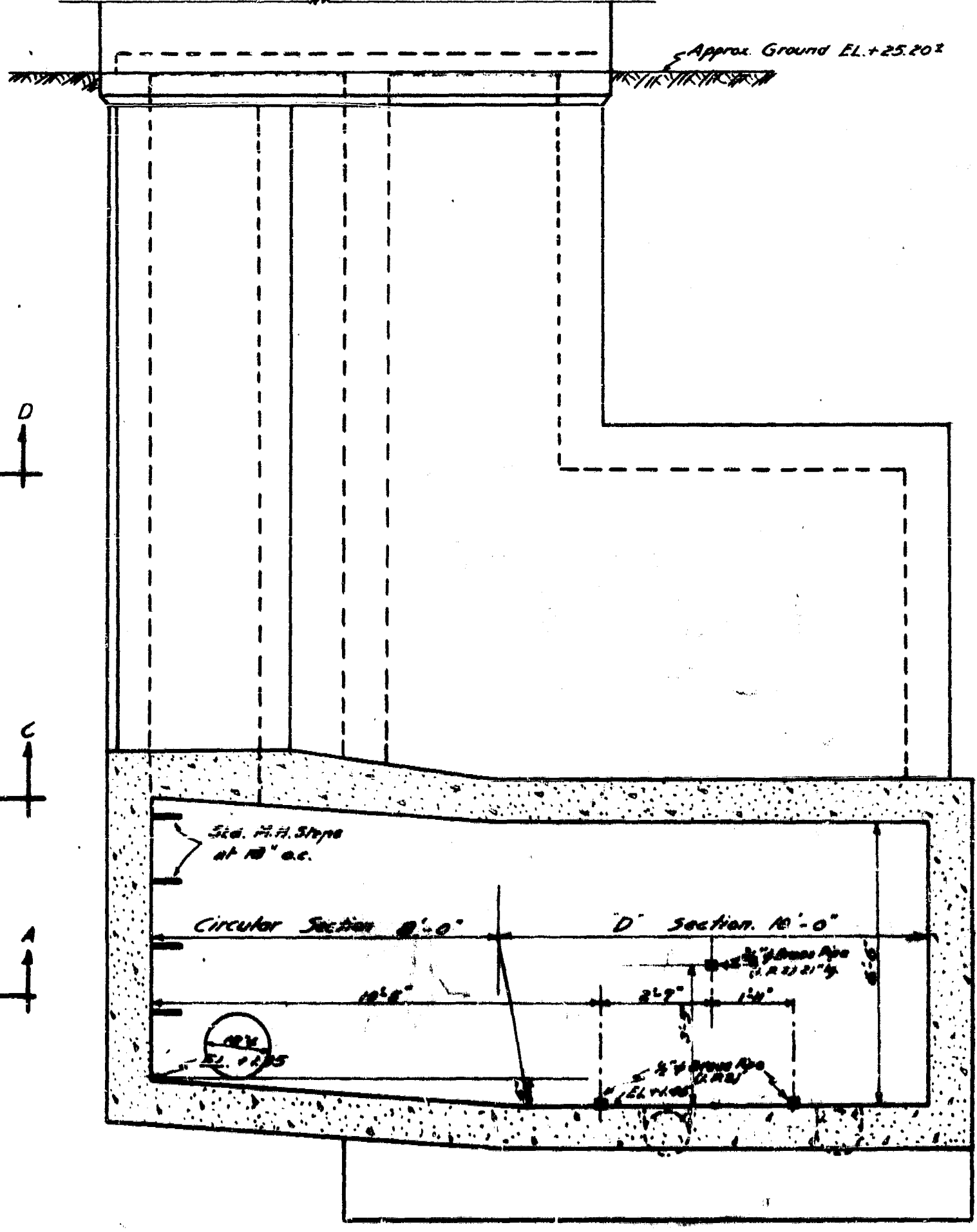
SECTION D-D



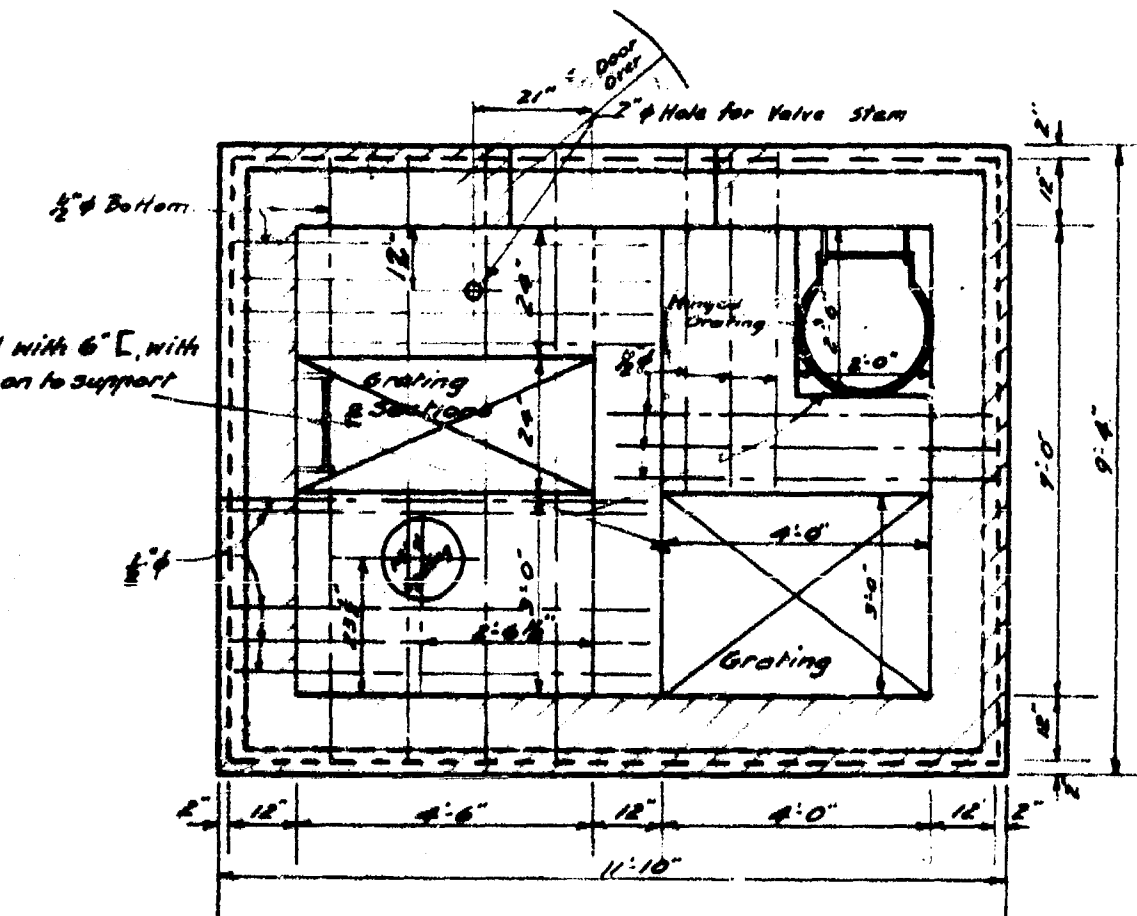
SECTION E-E



SECTION B-B

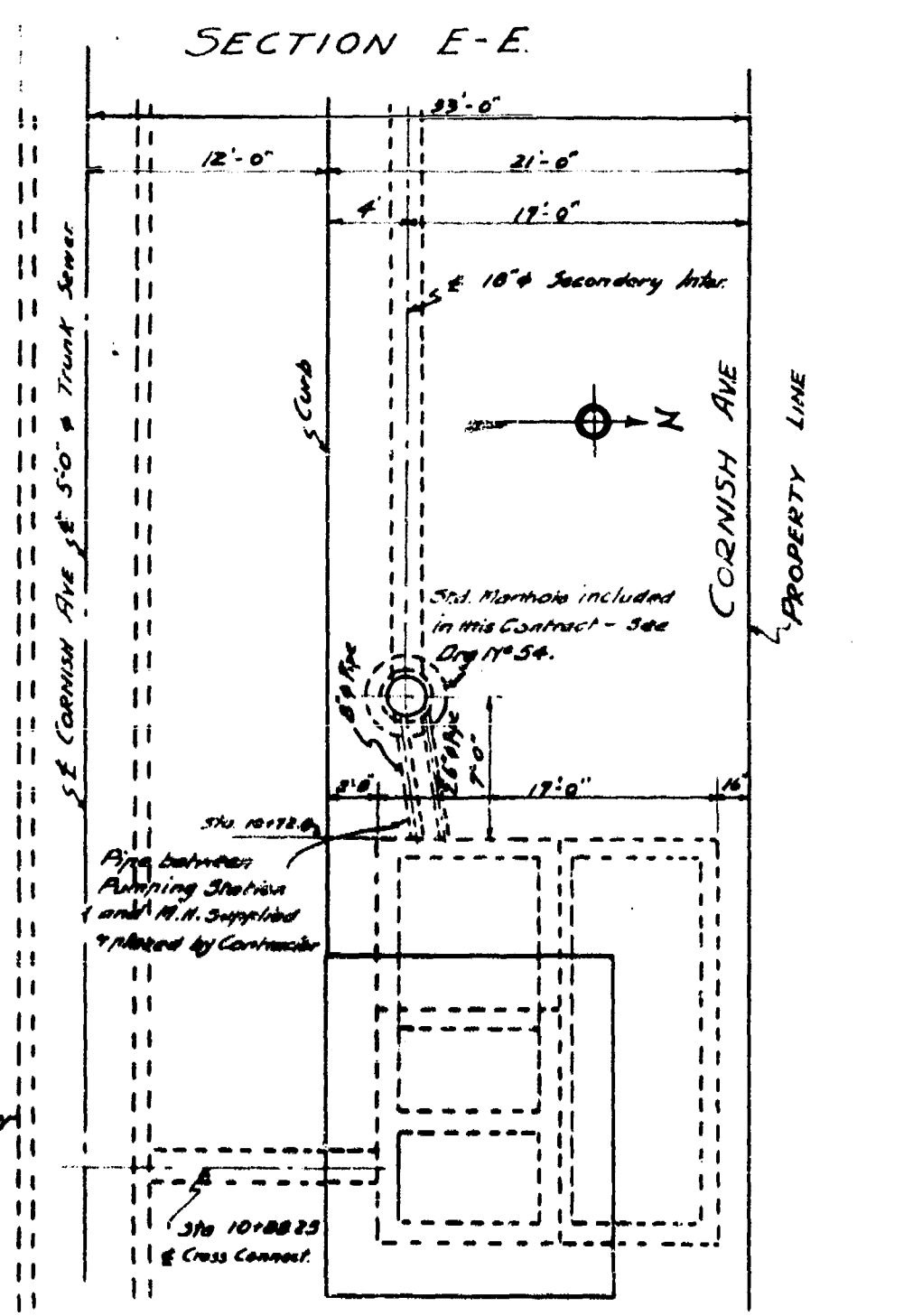


SECTION F-F

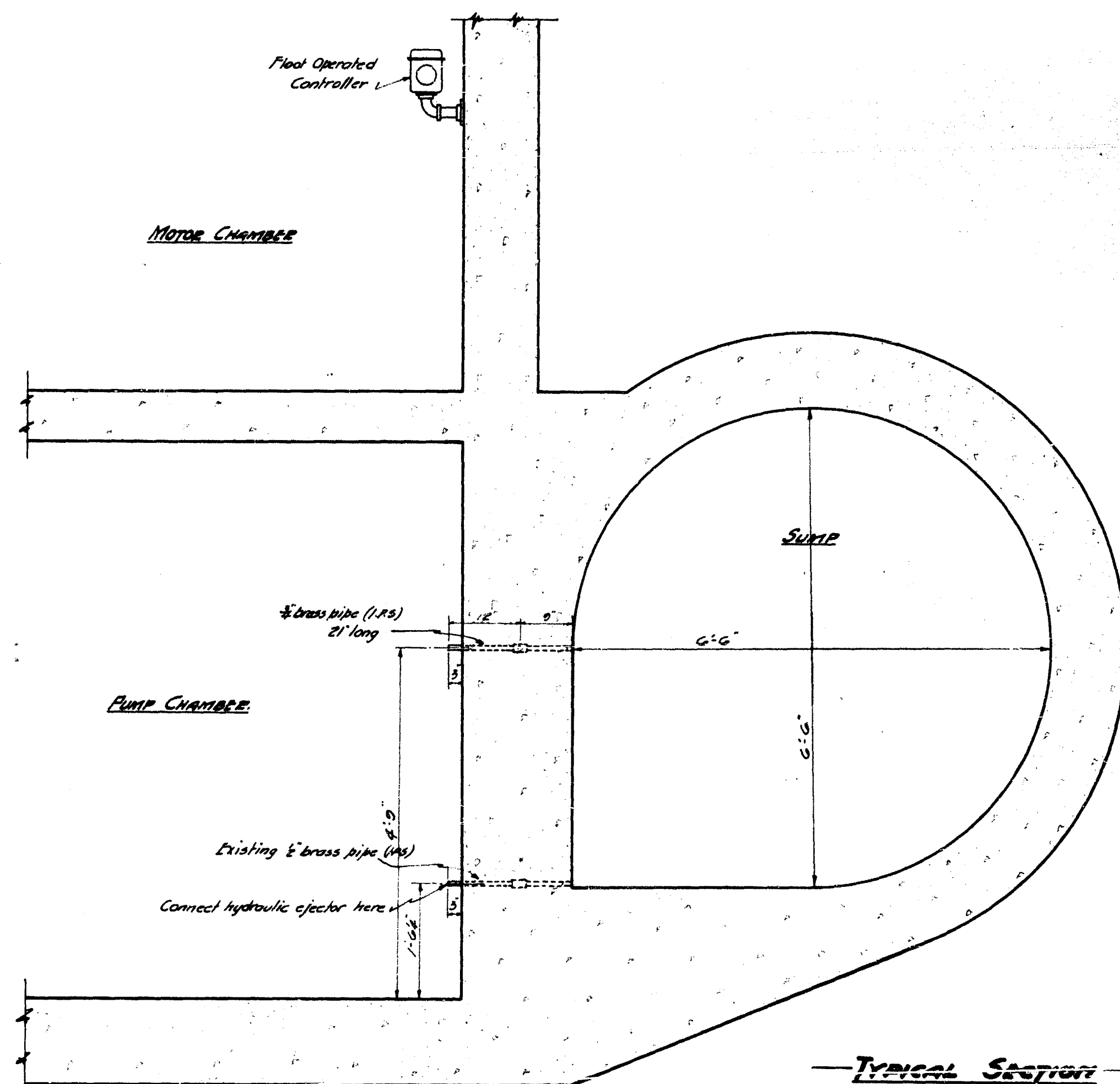


NOTE: SECTION G-G
Material to be supplied and installed by Contractor, where shown, or as directed by Engineer.
Ladders - Verticals 24" x 16" apart. Rungs 3/4" x 10" x 6".
Grating to support 800 lb./sq. ft. live load. Eye bolts - 7/8" eye bolts with 4 x 4 washers, placed as directed.

Safety Guard - See Drawing No. 154 for details.
Control Valve Connection - 2" x 1/2" Brass Pipe (iron pipe size). See Drawing No. 154 for details.
Water Pipe Connection - 1-1/2" Brass Pipe (iron pipe size) 18" long, thread both ends.
Towel Finish on all floors.
Holes for electric conduits to be made by Contractor as directed by Engineer.
See Drg. No. 126 for Details of Seal Water Tank.



CORNISH AVE PUMP STATION NO. 162
JULY 1939
162
30

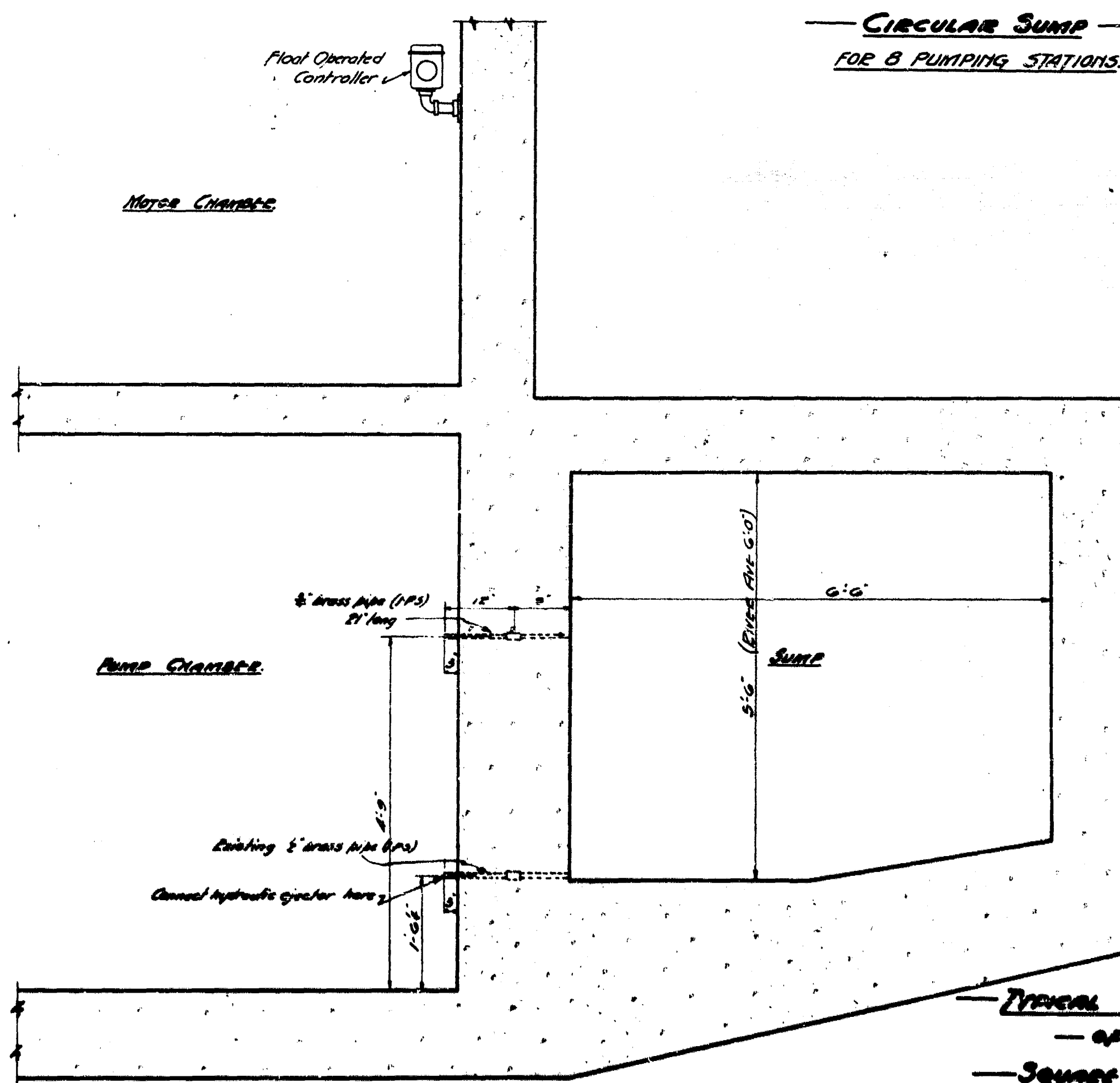


— TYPICAL SECTION —

— OF —

— CIRCULAR SUMP —

FOR 8 PUMPING STATIONS.

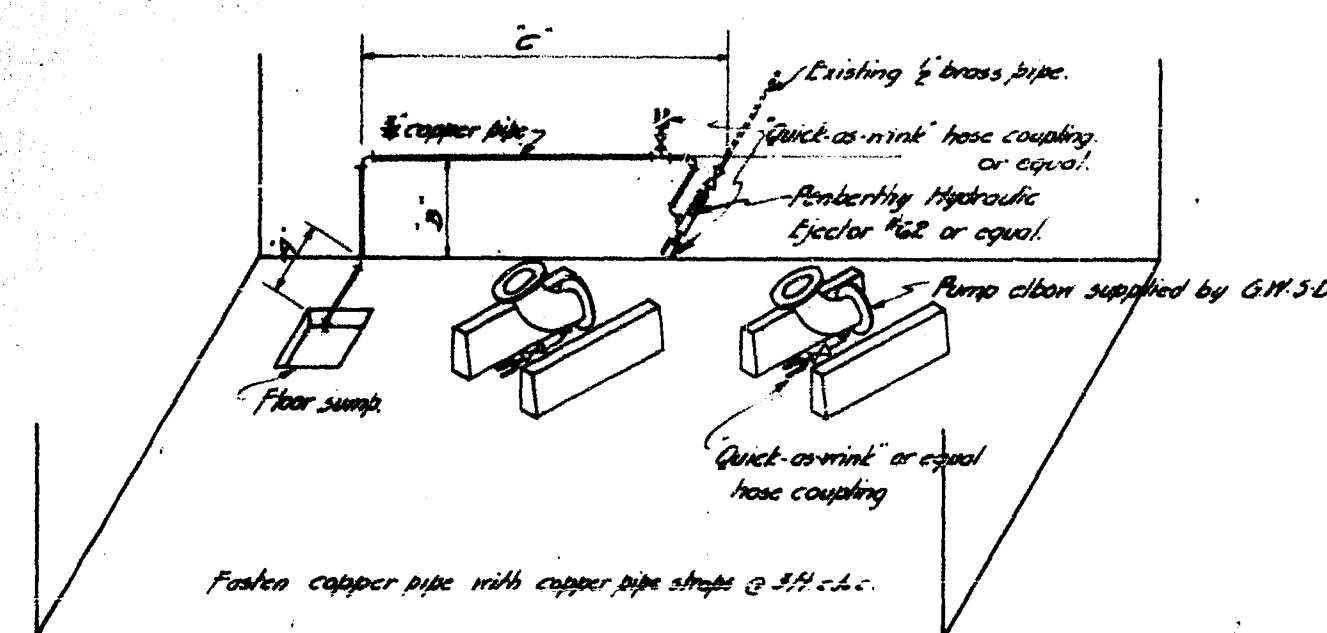


— TYPICAL SECTION —

— OF —

— SQUARE SUMP —

FOR 8 PUMPING STATIONS.



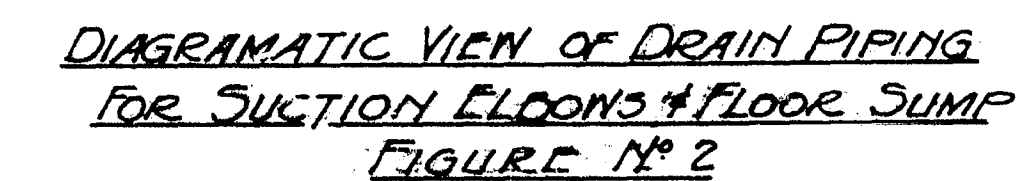
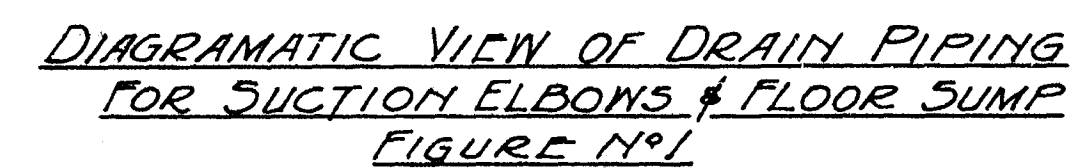
— DIAGRAMMATIC VIEW OF DRAINAGE PIPING —

— FOR FLOOR SUMP —

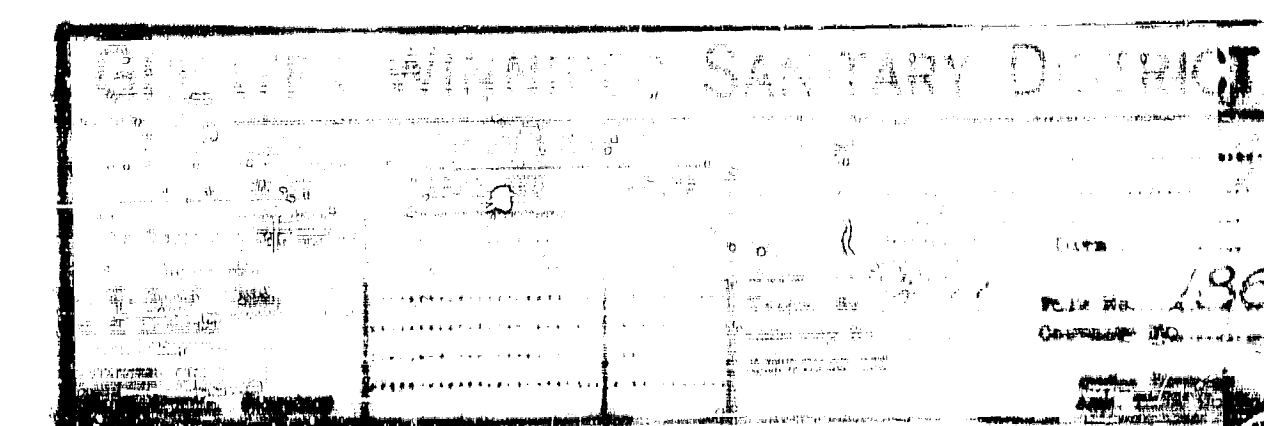
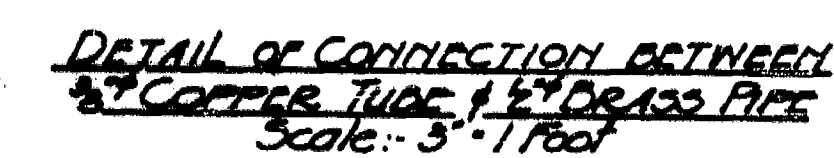
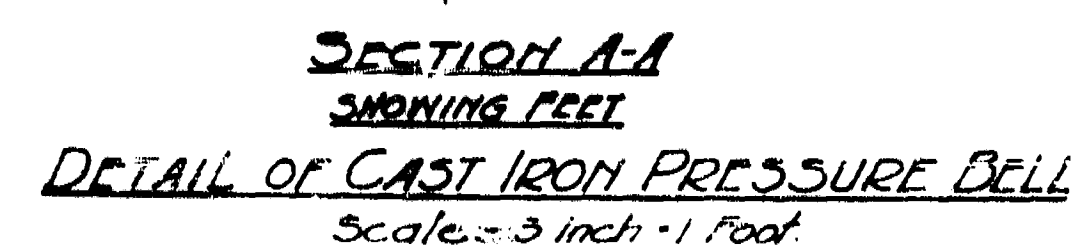
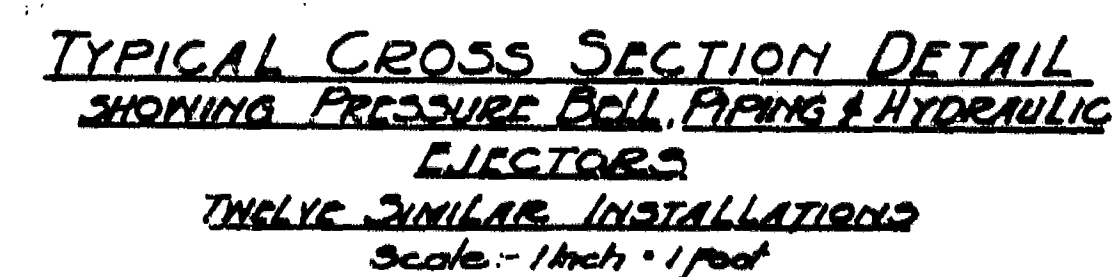
— <u>DIMENSIONS OF DRAINAGE PIPING</u> —			
STATION	"A"	"B"	"C"
N°1 - ASH STREET.	2'-3"	1'-9"	13'-0"
N°2 - AUBREY STREET.	0'	1'-6"	5'-0"
N°3 - CORNHILL AVE.	0'	1'-6"	4'-5"
N°4 - JESSIE AVE.	9"	1'-6"	4'-7"
N°5 - RIVER AVE.	3'	1'-6"	4'-1"
N°6 - MARION ST.	0'	1'-6"	10'-0"
N°7 - RUE DESRINS.	5'	1'-6"	7'-5"
N°8 - SYNDICATE ST.	0'	1'-6"	8'-6"
N°9 - BOYLE STREET.	1'-0"	1'-6"	3'-6"
N°10 - MONTGOMERY ST.	3'	1'-6"	4'-0"
N°11 - HART AVE.	8'	1'-6"	4'-0"
N°12 - MUNROE AVE.	1'-0"	1'-6"	6'-3"

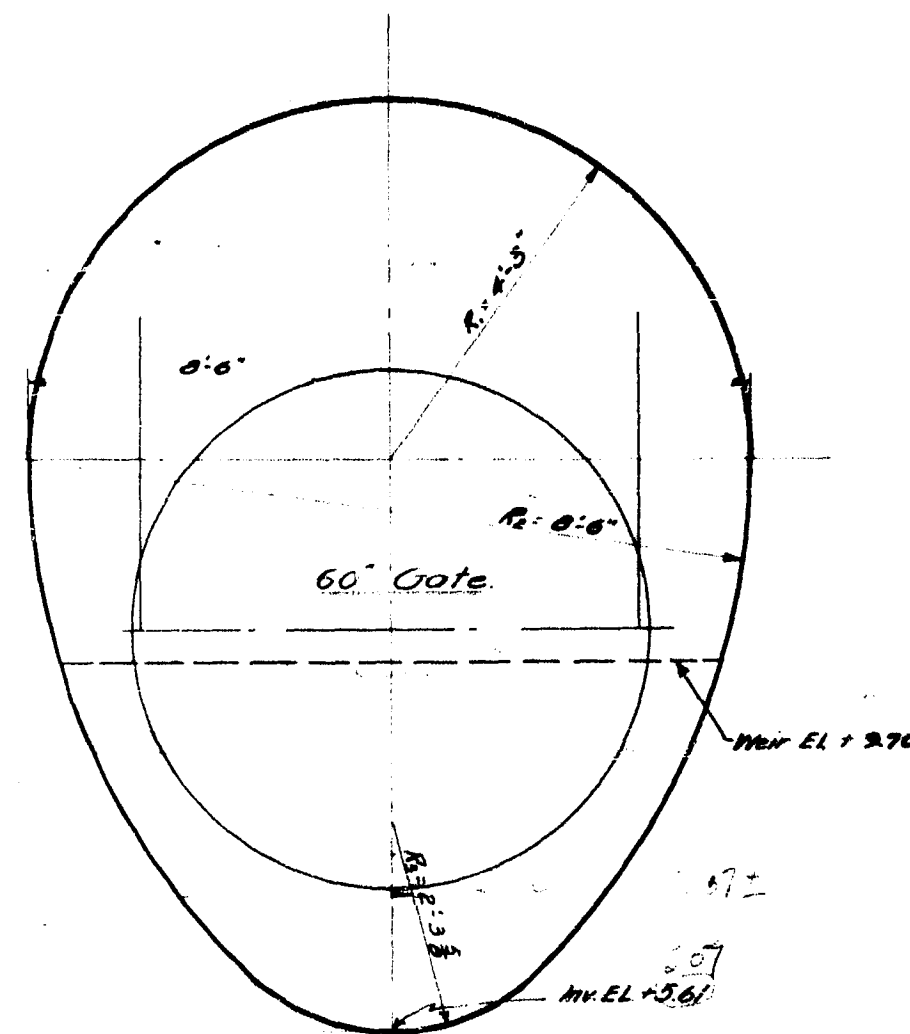
Note: Dimensions are approximate only.

GREATER WINNIPEG SANITARY DISTRICT			
W. B. L. L.	Consulting Engineer	DATE	
ENGINEER	APPROVED	DATE	
P. B. L. L.	APPROVED	DATE	
W. B. L. L.	APPROVED	DATE	
L. B. L. L.	APPROVED	DATE	
TITLE: <u>TYPICAL SECTION SHOWING SUMP AND DRAIN PIPING FOR FLOOR SUMP IN SECONDARY PUMP STATION</u>		DRAWN BY: <u>W. B. L. L.</u>	
CHECKED BY: <u>W. B. L. L.</u>		DATE: <u>1936</u>	
APPROVED BY: <u>W. B. L. L.</u>		DATE: <u>1936</u>	



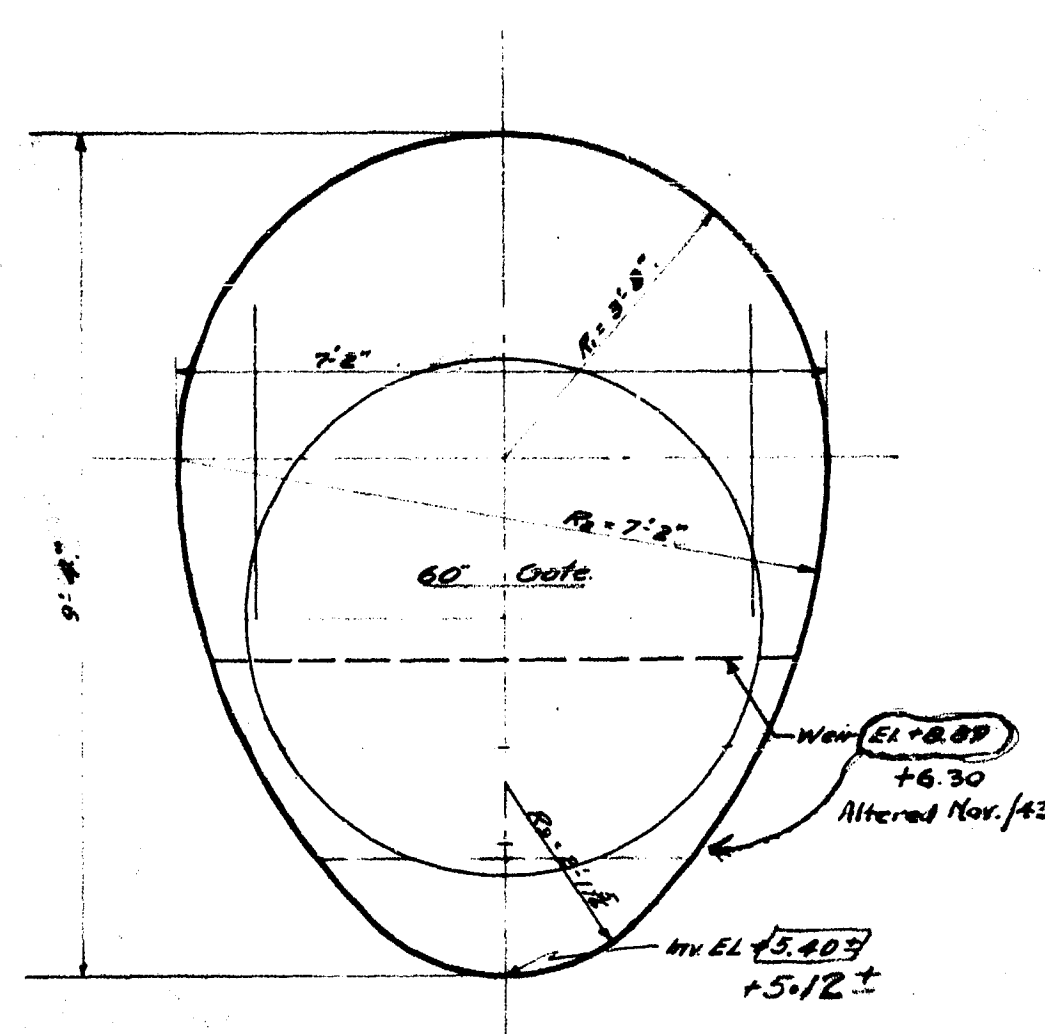
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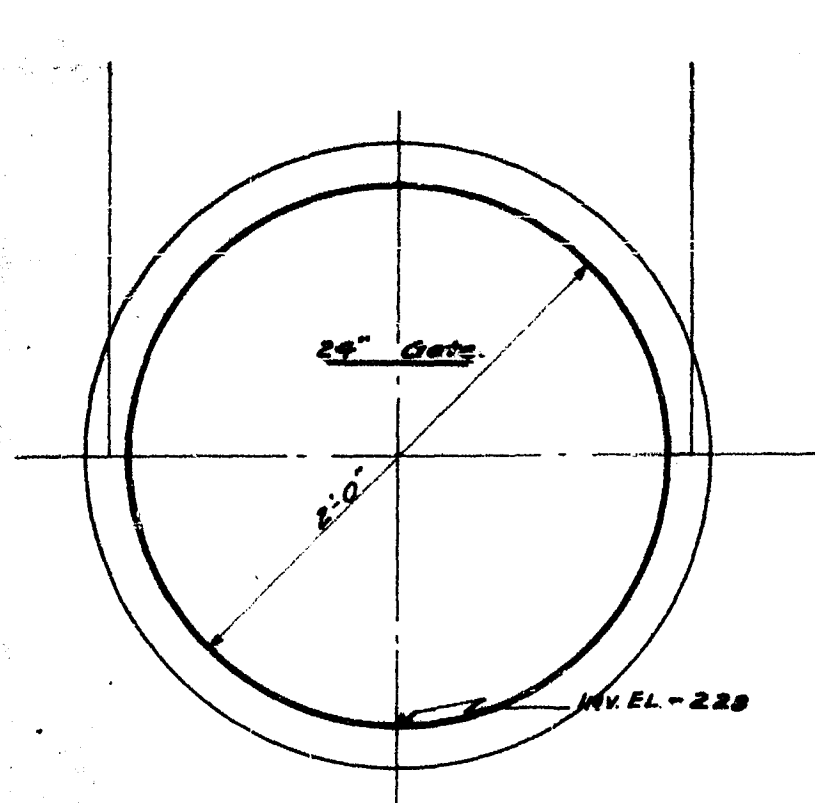


ASH ST.
Scale 1/2" = 1'-0"

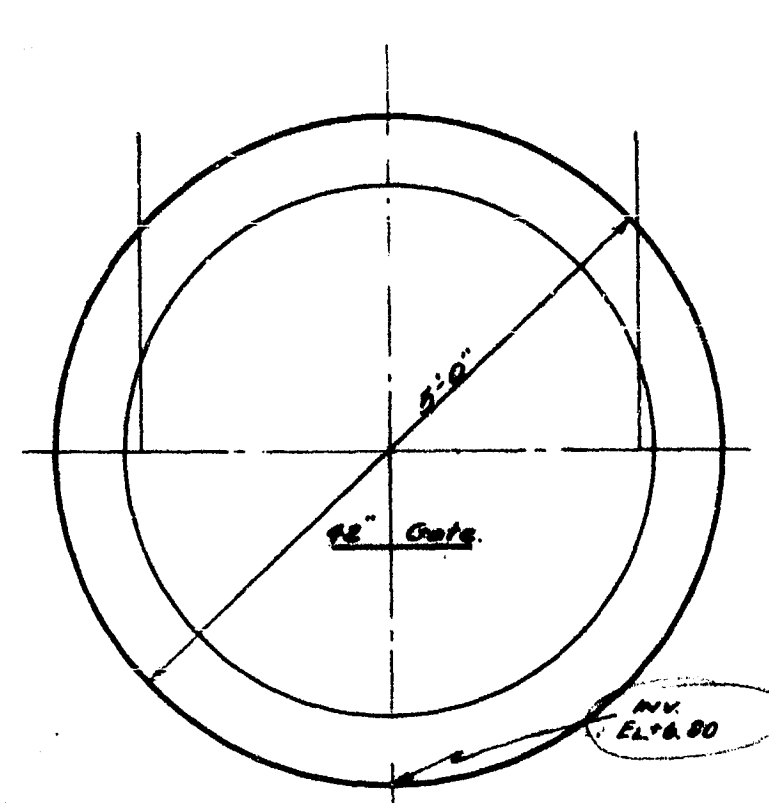
Altered 1942 - see Drawing No. M106



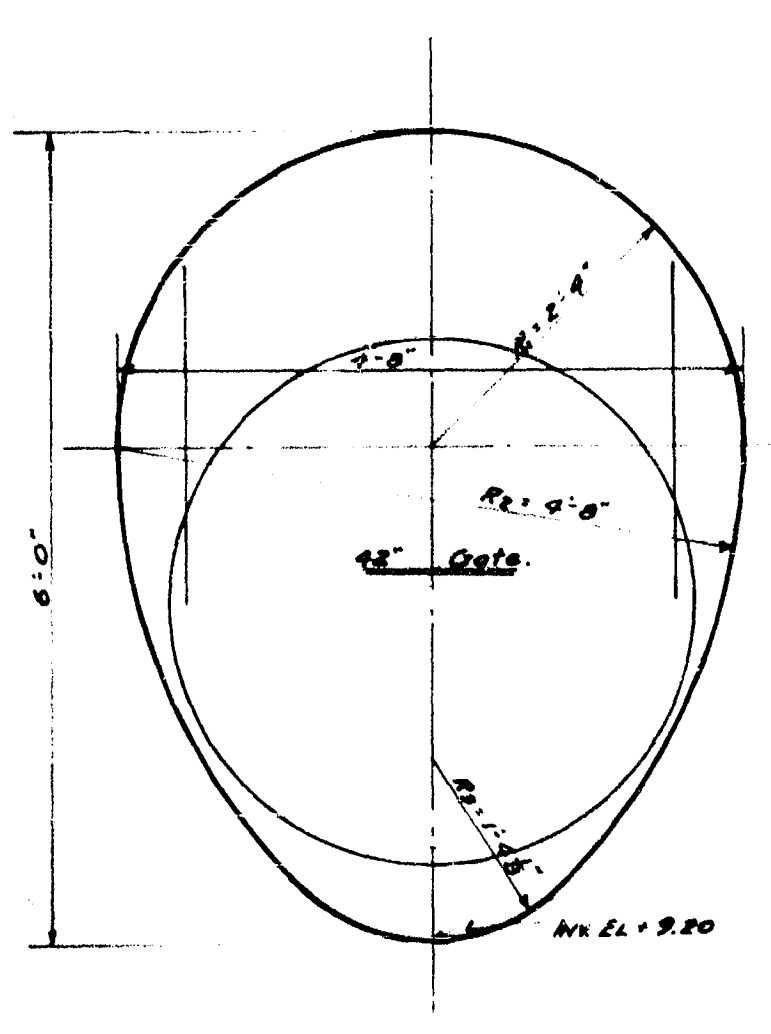
AUBREY ST.
Scale 1/2" = 1'-0"



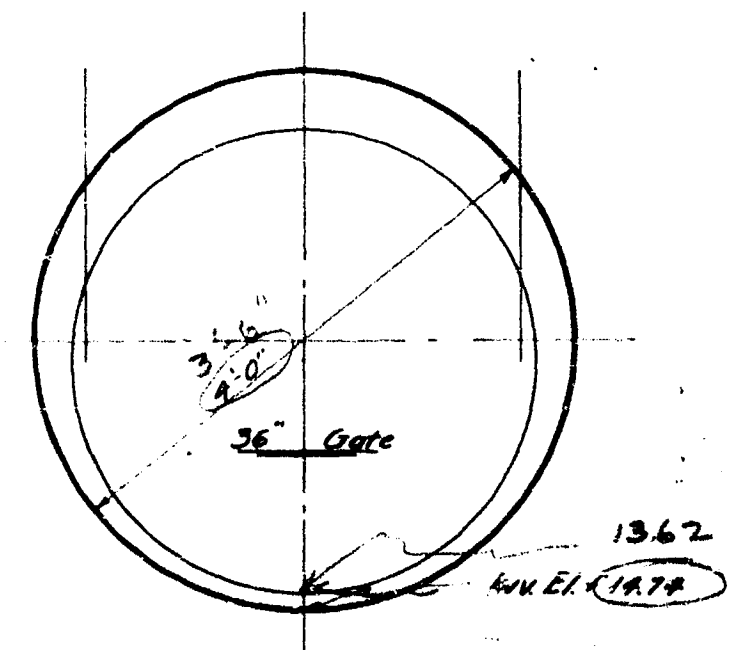
RIVER AVE WEST
Scale 1/8" = 1'-0"



CORNISH AVE
Scale 1/2" = 1'-0"
Special Chamber See Drwg. 200

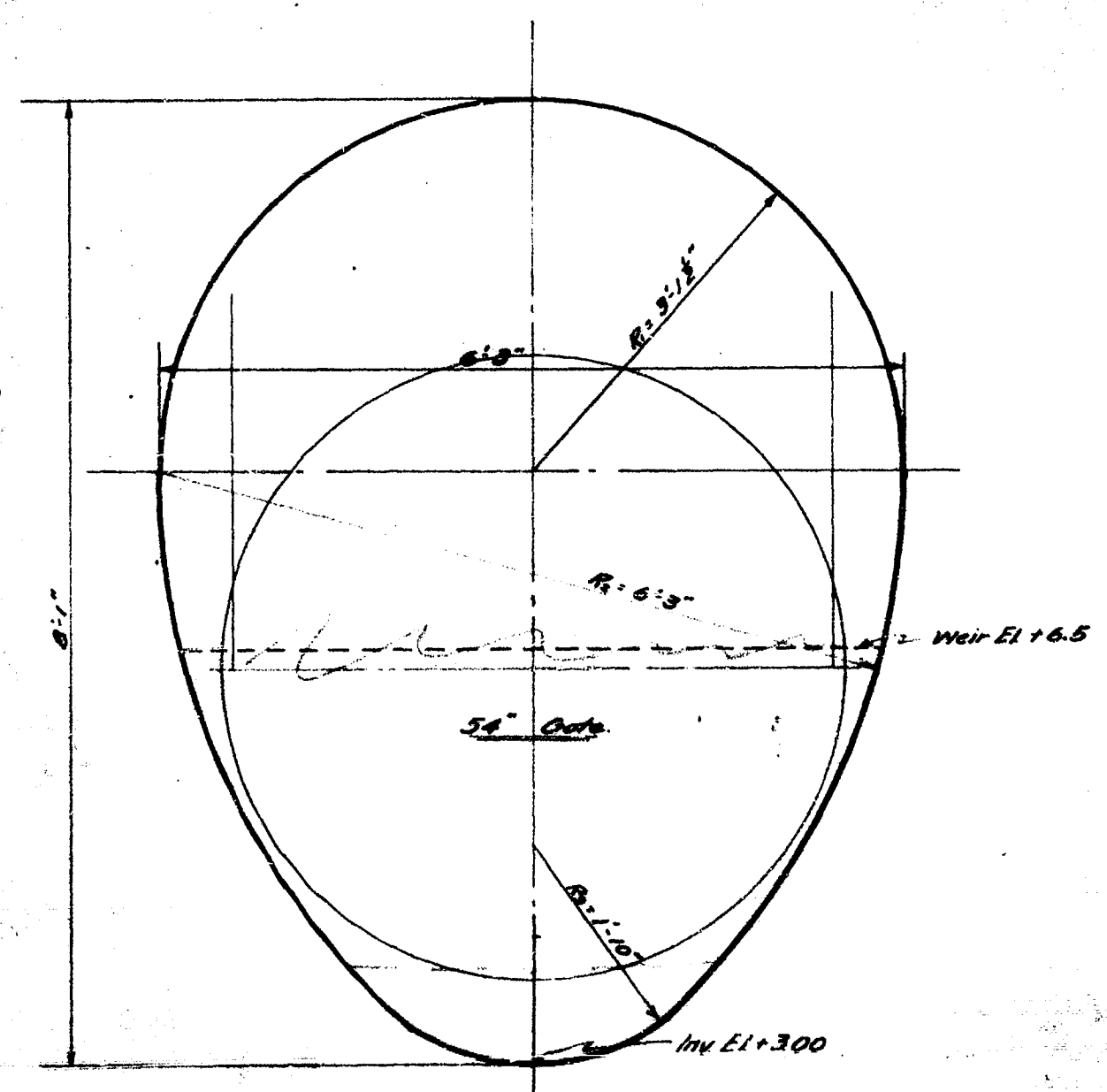


COLONY ST.
Scale 1/2" = 1'-0"
Special Chamber See Drwg. 200
See M.111 for Revised Location of WEIR.
GATE location unchanged, see Plan 77.

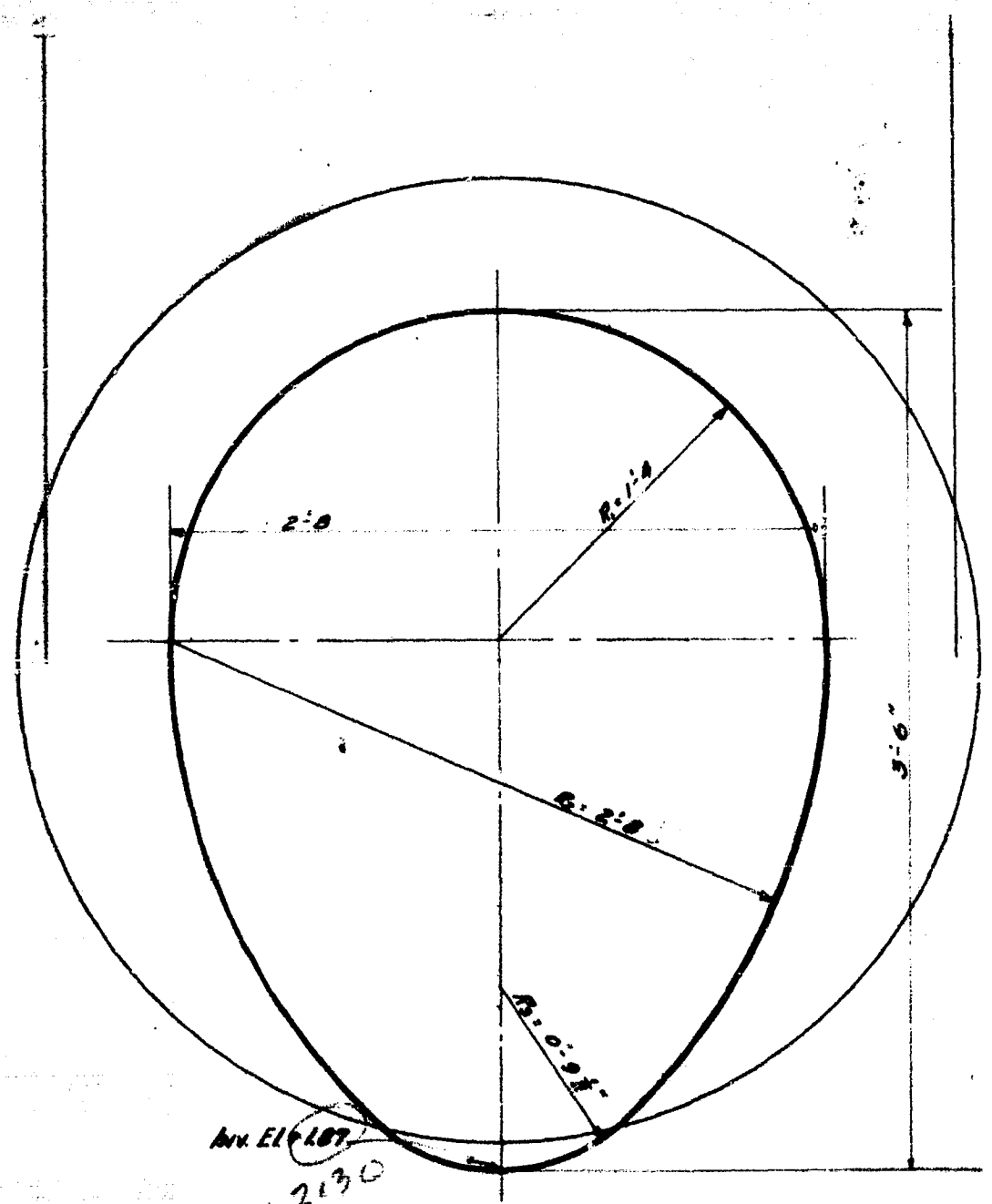


ASSINIBOINE AVE.
Scale 1/2" = 1'-0"

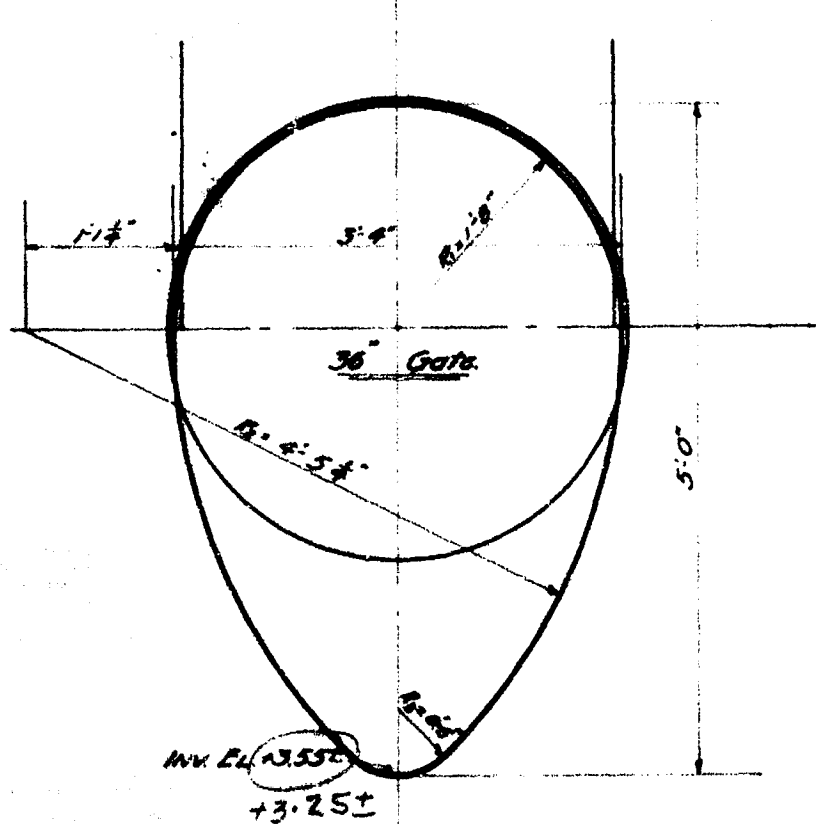
Special Chamber See Drwg. 200
Altered 1942 " " M 67 Revised.



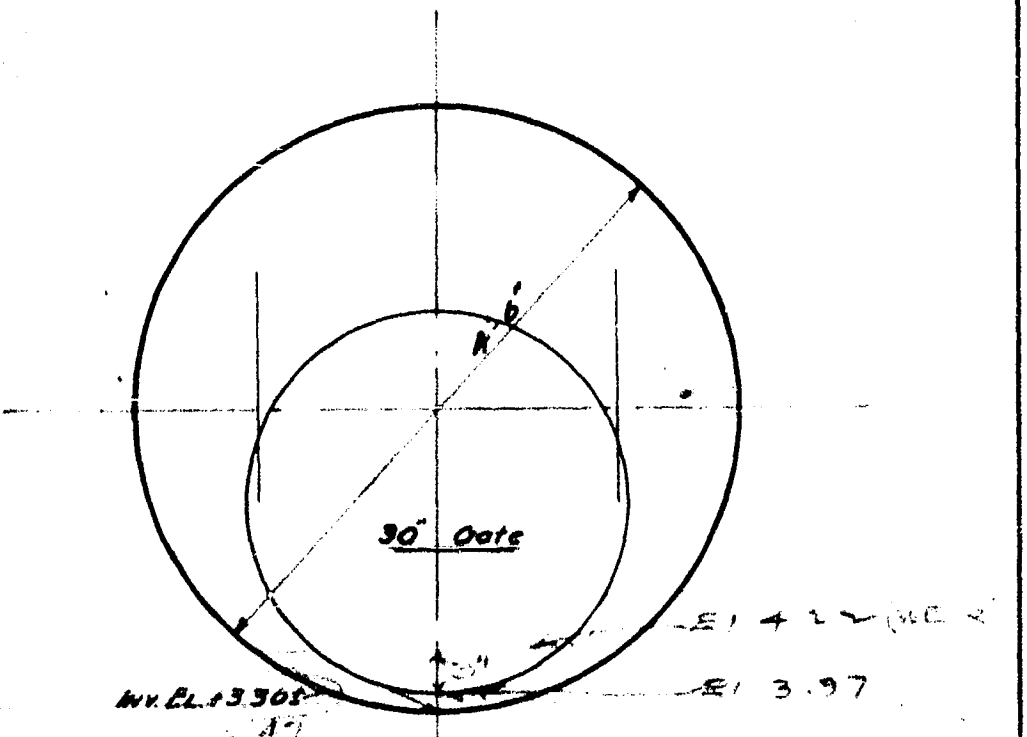
JESSIE AVE.
Scale 1/4" = 1'-0"
Altered 1942 - see Drawing No. M106



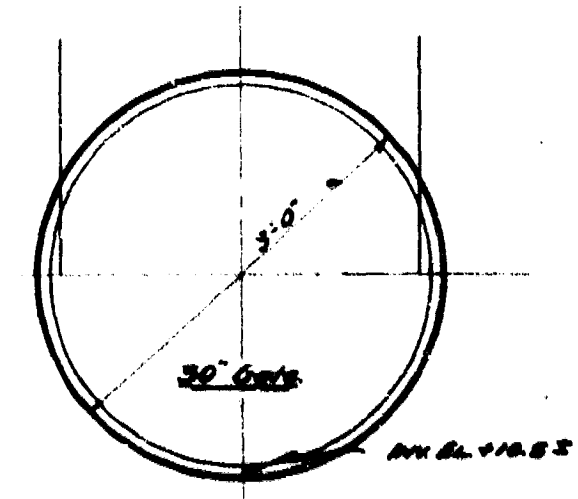
MARION ST.
Scale 1/8" = 1'-0"
Special Chamber See Drwg. 200.
For Alteration see Drawing No. M.96.



RIVER AVE EAST.
Scale 1/2" = 1'-0"
Special Chamber See Drwg. 200.



DES PINES ST.
Scale 1/2" = 1'-0"
Special Chamber See Drwg. 200.
Altered - see Drwg. M.200 notes

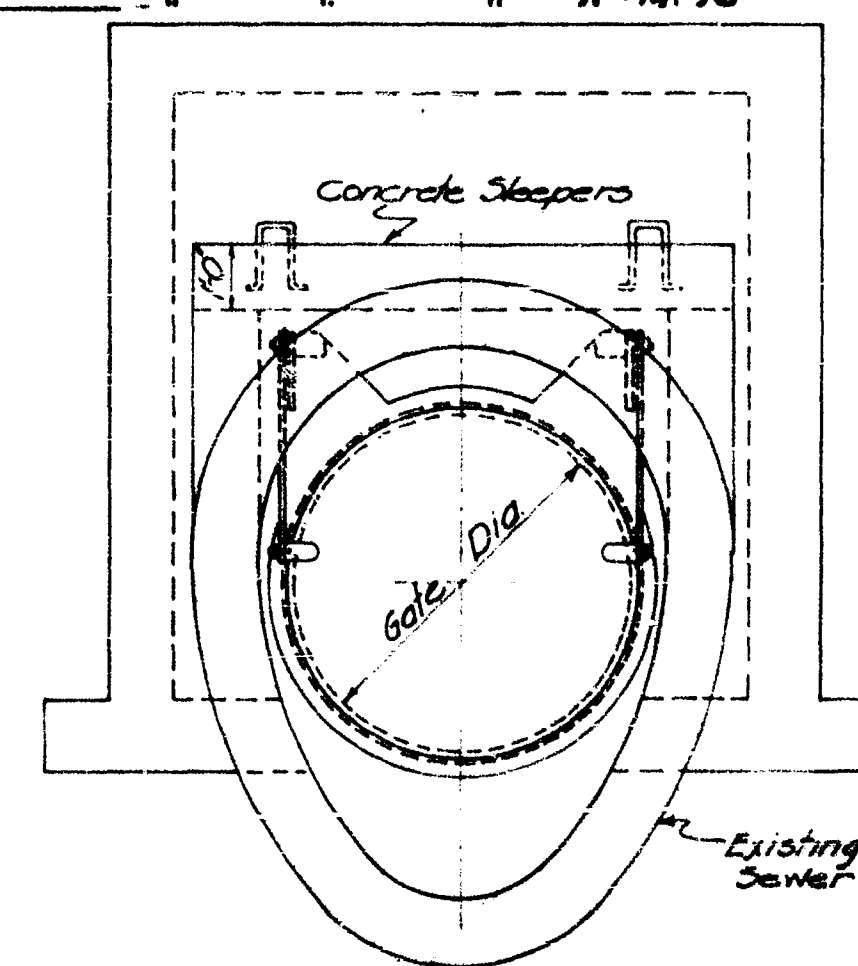
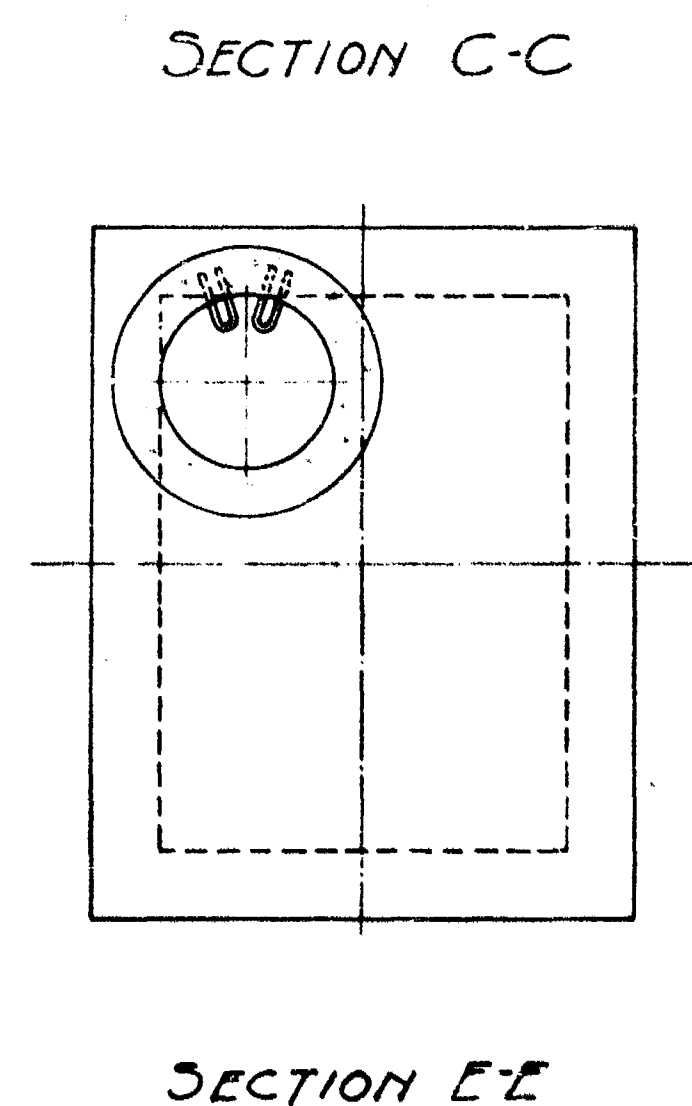
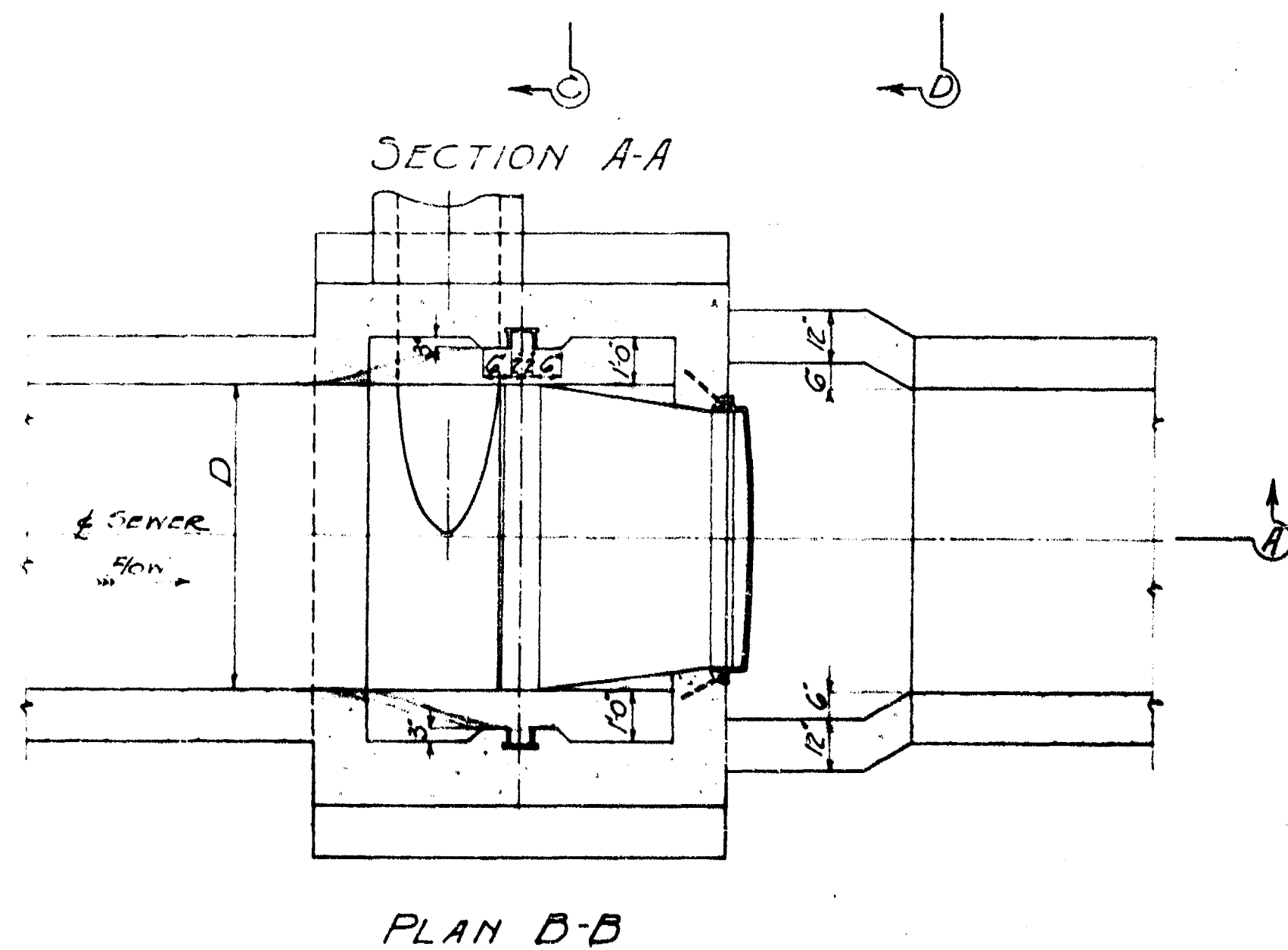


LOMBARD ST.
Scale 1/2" = 1'-0"

Special Chamber See Drwg. 200

REMOVED
W-14-4

CITY OF WINNIPEG SANITARY DISTRICT			
DATE	1942	BY	C. J. L. [Signature]
SECTION OF TRUNK		SEWERS SHOWING POSITION OF	
GATE		FINDING WITH E.L. OF INVERTS	
JAN 25 1942		PLAN No. 188	
C. J. L. [Signature]		[Signature]	



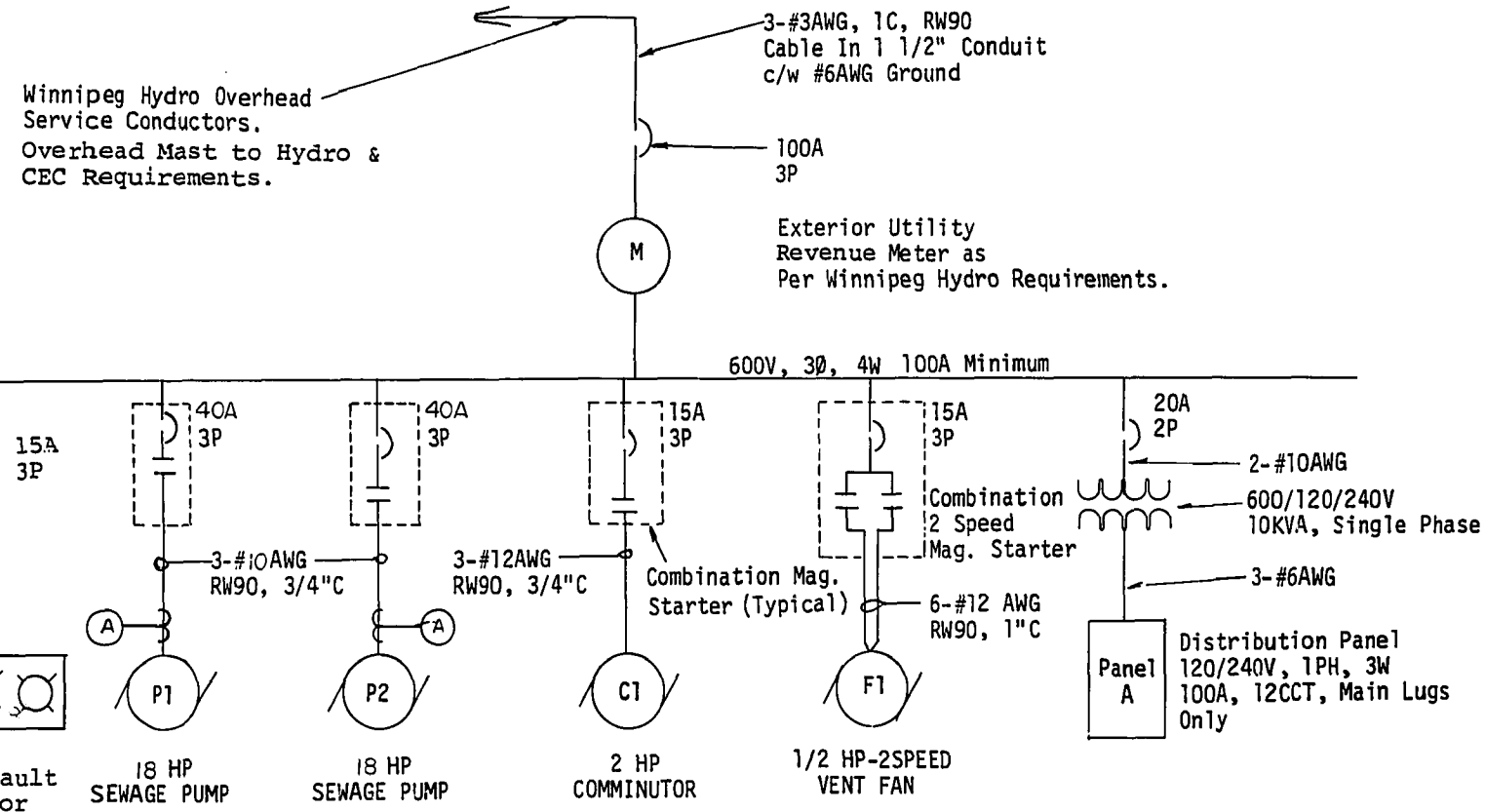
SCHEDULE OF GATES & WEIRS											
TRUNK	SIZE CIRCULAR "D"	TEES SHAPED "H" "D"	CONSTRUCTION	GATE DIAMETER in inches	Approx INVERT ELEVATION	Approx GROUND ELEV.	A	B	3'-6" of CONNECTION TO SECONDARY INTERSECTOR	APPROXIMATE LOCATION of Weir	REMARKS
CORNISH AVE.	5'-0"		Wood	42"	+6.8	+25.20	1'-8"	3'-4"	18"	Opposite East End of Pumping Station	
RIVER AVE E.	5'-0"	3'-4"	Concrete	36"	+3.25	+25.93	1'-8"	3'-4"	18"	15' W of E. Line of Main St. 11' S of N. Line of Ryke	
MARION ST.		3'-6"	do	42"	+2.30	+26.07	0'-5"	3'-6"	24"	15' W of N. H. of Marion Pumping Station	
RUE DESPINS	4'-6"		do	30"	+3.47	+24.54	1'-2"	3'-0"	18"	60' W of M.H. at Despins TIE LINE	Height of Weir Lowered 1' (1942) and "A" changed WEIR NOW 3' higher than INVERT of GATE. ELEV. of WEIR 4.22
SYNDICATE	3'-6"		BRICK	36"	+1.34	+22.50	1'-2"	2'-6"	18"	15' N of Intersection of River & SYNDICATE	
BOYLE ST.	3'-0"		Concrete	30"	+6.91	+26.84	0'-6"	2'-6"	18"	12' S of 3. Line of Dewdney	
MISSION ST.		3'-5"	do	60"	+3.30	+20.40	3'-3"	6'-6"	30"	12' E of N. Line of Main St. 10' N of N. Line of Mission	
COLONY ST.		6'-0"	BRICK	42"	+9.20	+26.75	2'-3"	4'-3"	30"	25' N of 3. L. of WHITEHILL on Colony	
ASSINIBOINE AVE.	3'-6"		BRICK	36"	+13.62	+32.46	1'-4"	3'-1"	18"	20' E of N. L. of Main St. 20' N of M.H. of Chamber	Weir is now Invert of Gate EL. 13.62 April 1942
ROBERT AVE.	5'-0"		BRICK	36"	+0.48	+28.56	1'-8"	4'-1"	24"	At M.H. & Robert E. Line of Transfer Track R. N.	SEE PLAN M III for new location of Weir
SELKIRK AVE.		6'-8"	BRICK	42"	+6.34	+28.84	2'-3"	4'-5"	24"	2' E of Gate & Commu- nitor Chamber	
ST. JOHN'S AVE.		6'-8"	BRICK	48"	+5.59	+30.0	2'-3"	4'-5"	24"	At Regulator Chamber on St. John's E. of Main St	
LOMBARD ST.	3'-0"		Concrete	30"	+10.50	+20.30			NONE	10' E of M.H. at Mill & Lombard St.	No Weir or Stop Log Guides

CHANGED - SEE DRAWING NO. M. 106				
10	10	10	N° M. 111	
20	20	20	N° M. 2 & M. 112 & M. 69 REVISED	
30	30	30	N° M. 111	
40	40	40	N° M. 111	
50	50	50	N° M. 108	
60	60	60	N°	
70	70	70	N° M. 98	

Note:-for Sections of Trunk Sewers showing position of Gate Frames and with Elevations of Inverts, see Drigs 188 & 189

APPROVED

[illegible]

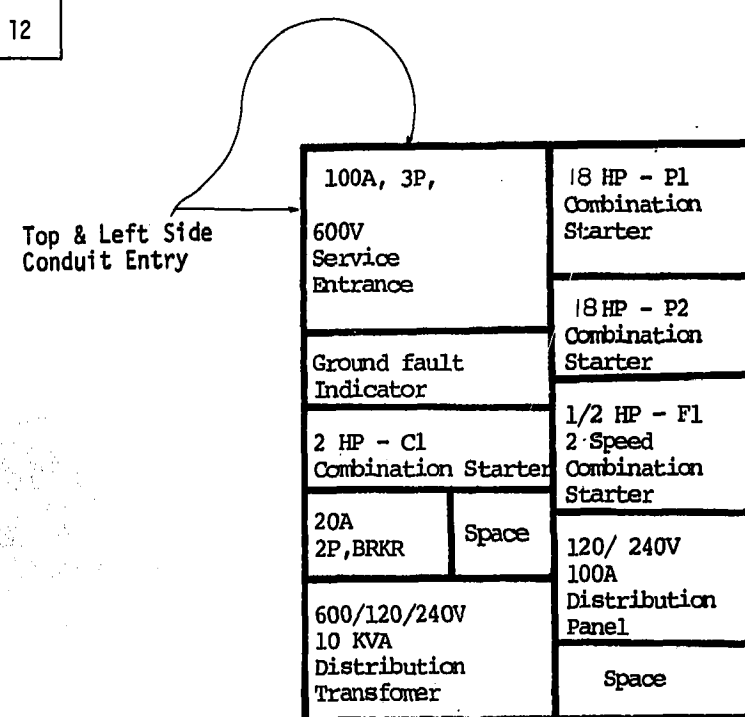


SINGLE LINE DIAGRAM
N.T.S.

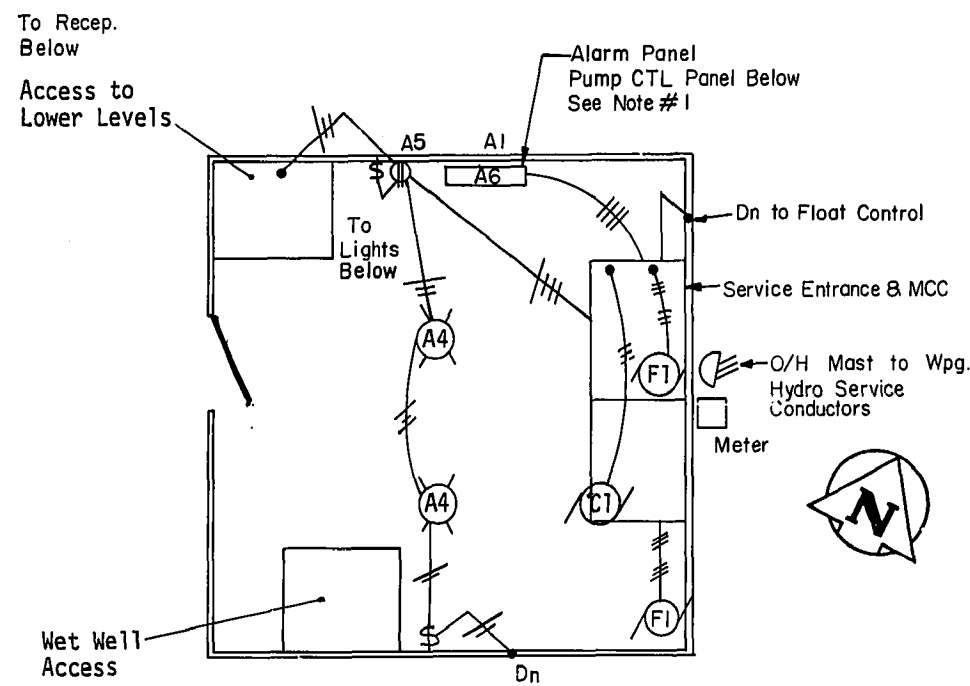
MTR. NO.	DESCRIPTION	LOCATION	H.P.	VOLTS	STARTER & ACCESSORIES					CCT	STARTER	REMARKS
					MAN	MAG	P.L.	CTL	ETM			
P1	Sewage Pump	Pump Well	1/8	600V, 3Ø	-	*	*	HOA	*	Dist'n	MCC	Lock-Off-Stop Pushbutton at Motor. Final Motor connection via Type SOW Flexible Cable. Ammeter on front door of starter. Ammeter CT mounted on B Phase Conductor (Center) only.
P2	Sewage Pump	Pump Well	1/8	600V, 3Ø	-	*	*	HOA	*	Dist'n	MCC	
C1	Comminutor	Main Level	2	600V, 3Ø	-	*	*	On Off	-	Dist'n	MCC	New Wiring to Motor. Final Connection via Flex Armored Conduit
F1	Ventilation	Main Level	1/2	600V, 3Ø	-	*	*	High Off Low	-	Dist'n	MCC	Replaced Fan Motor. Final Motor Connection via Flex Armored Conduit.
-	Sump Pump	Pump Well	1/2	120V, 1Ø	-	-	-	-	-	A2	At Pump	Pump & Float Controls. Single Receptacle.

DISTRIBUTION PANEL A 120/240V, 1Ø, 3W, 100A, Main Lugs Only				
CCT No.	DESCRIPTION	TRIP AMPS	TRIP AMPS	DESCRIPTION
1	Remote Alarm Signal Panel	15A	15A	Sump Pump
3	Lighting Wet Well	15A	15A	Lighting-Main & Lower Levels
5	Receptacles	15A	15A	Pump CTL Panel
7	Spare	15A	15A	Spare
9	Spare	15A	15A	Spare
11	Spare	15A	15A	Spare

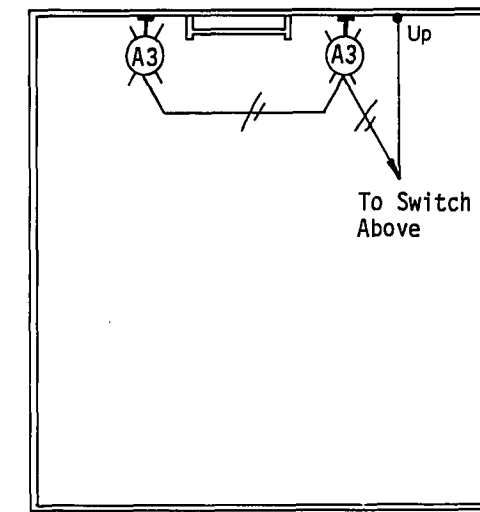
PANEL SCHEDULE



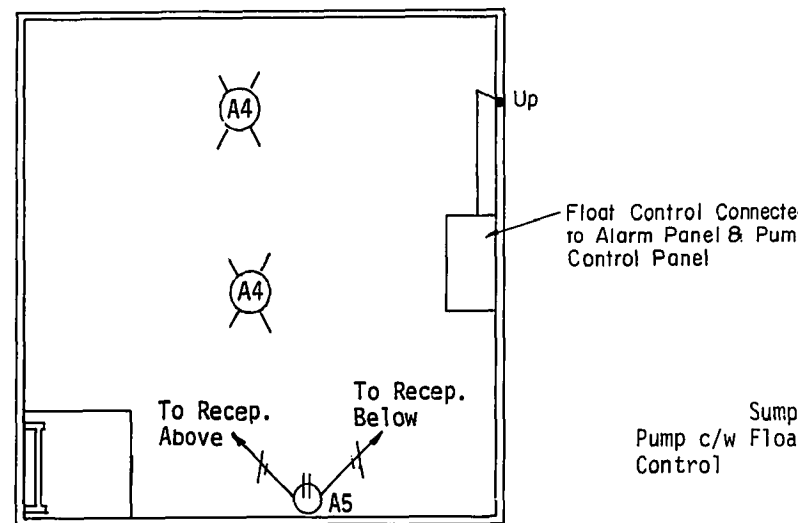
SERVICE ENTRANCE / MCC LAYOUT



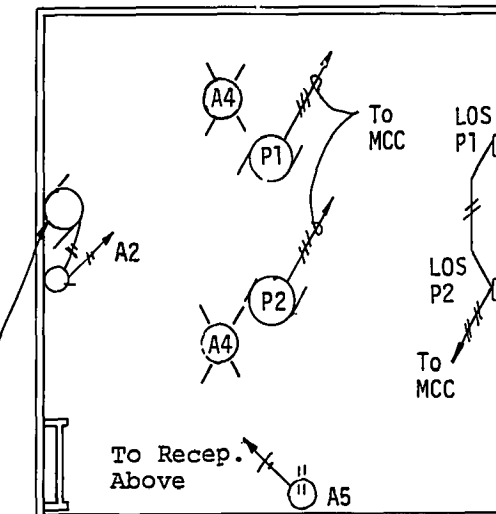
MAIN LEVEL PLAN
N.T.S.



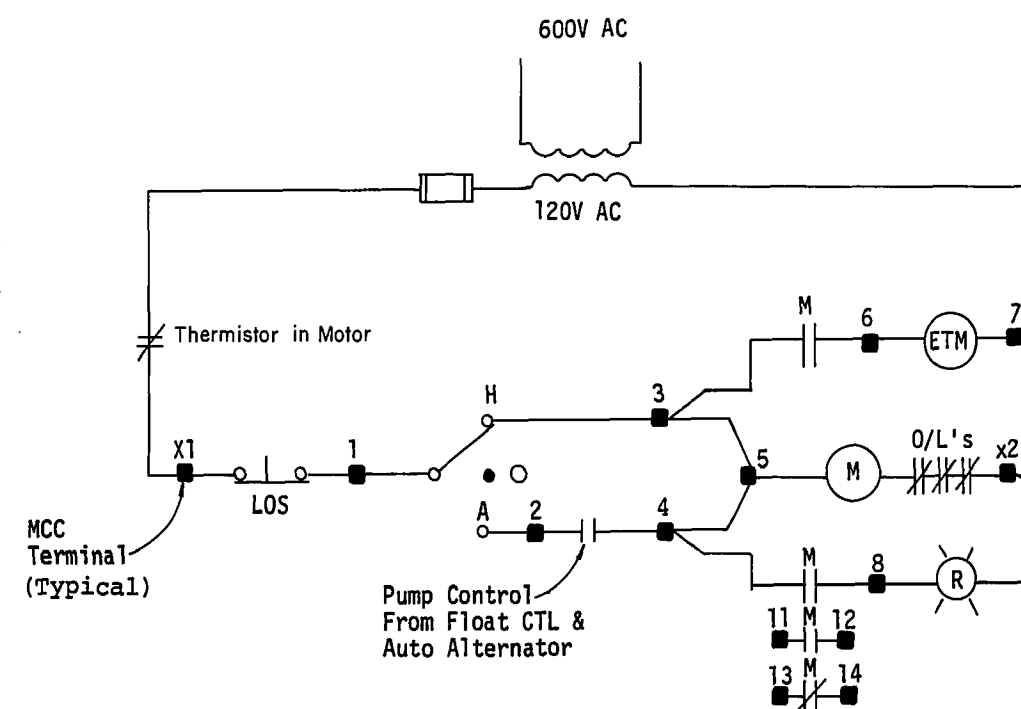
WET WELL PLAN
N.T.S.



2nd LEVEL PLAN
N.T.S.



3rd LEVEL PLAN (PUMP WELL)
N.T.S.



SEWAGE PUMP CONTROL CIRCUIT
N.T.S.

NOTES

- Owner Provided Solid State Alternator (Healy Ruff Model No. 961000-0018-9126A) to Contractor for Installation
- Incandescent Light Fixtures are Vapor Tight c/w Globe & Guard 200W Extended Service Bubs used for all new fixtures.

LEGEND

- Wall Mounted Incandescent Light Fixture
- Ceiling Mounted Incandescent Light Fixture
- Duplex Receptacle
- Single Receptacle
- Single Pole Switch
- Los Pushbutton
- Motor Outlet
- Wiring Run - 2 Wires in Conduit, Surface Mounted

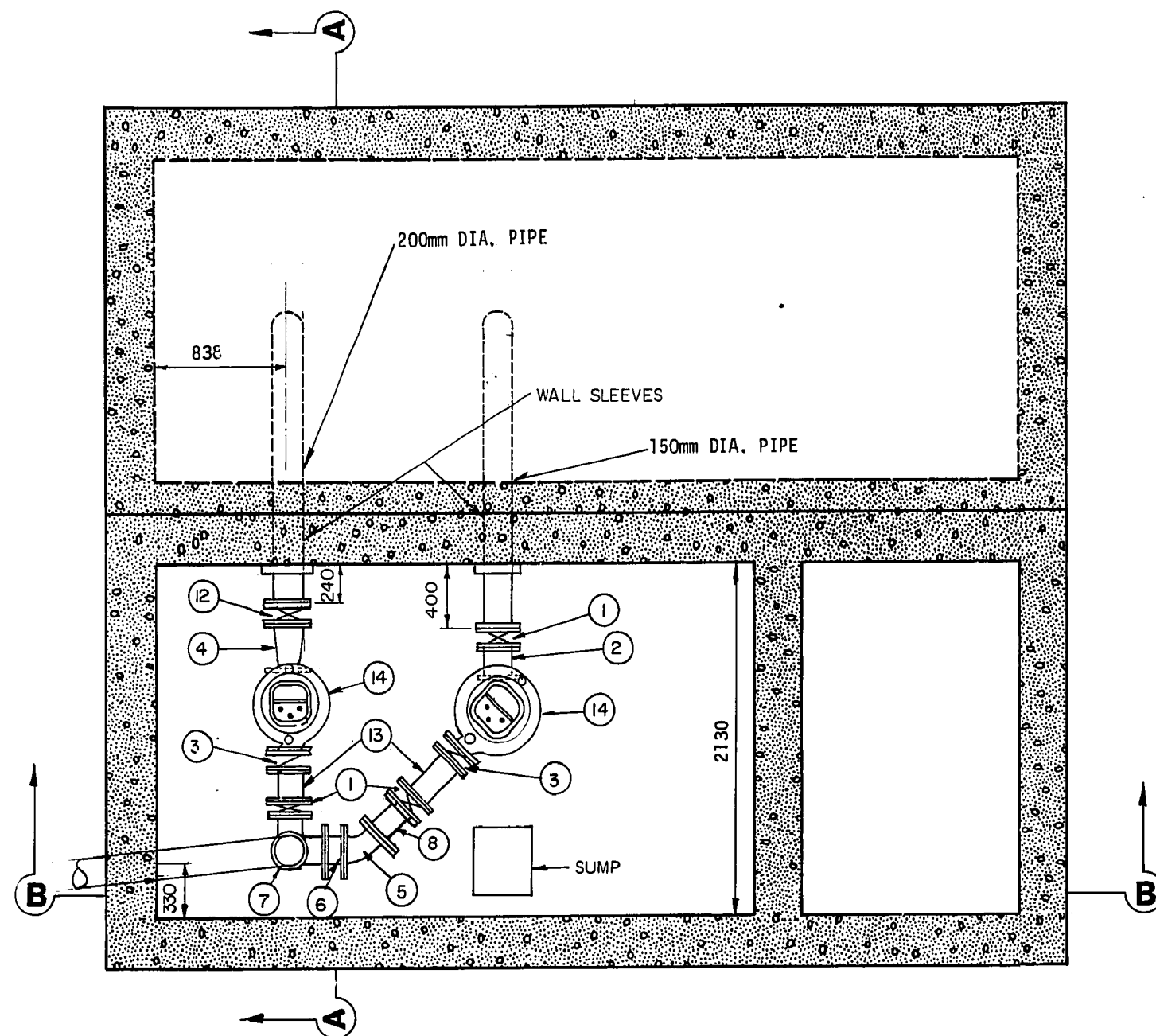
AS-CONSTRUCTED
22/11/87
SURVEY ENGINEERING DATE
WATERWORKS, WASTE & DISPOSAL DEPARTMENT

B.M. ELEV.	DESIGNED BY EMR	CHECKED BY EMR	THE CITY OF WINNIPEG WORKS AND OPERATIONS DIVISION	CORNISH PUMPING STATION (ELECTRICAL UPGRADING)	CITY DRAWING NUMBER SHEET OF 1204
	DRAWN BY MBD	APPROVED BY RMG			
	HOR SCALE VERTICAL N.T.S.	RELEASED FOR CONSTRUCTION	CONSULTANT DRAWING NO.		
1 REV'D TO AS BUILT	JUL 88	EN	DATE SEPT. 24, 1986	DATE April 30, 1987	

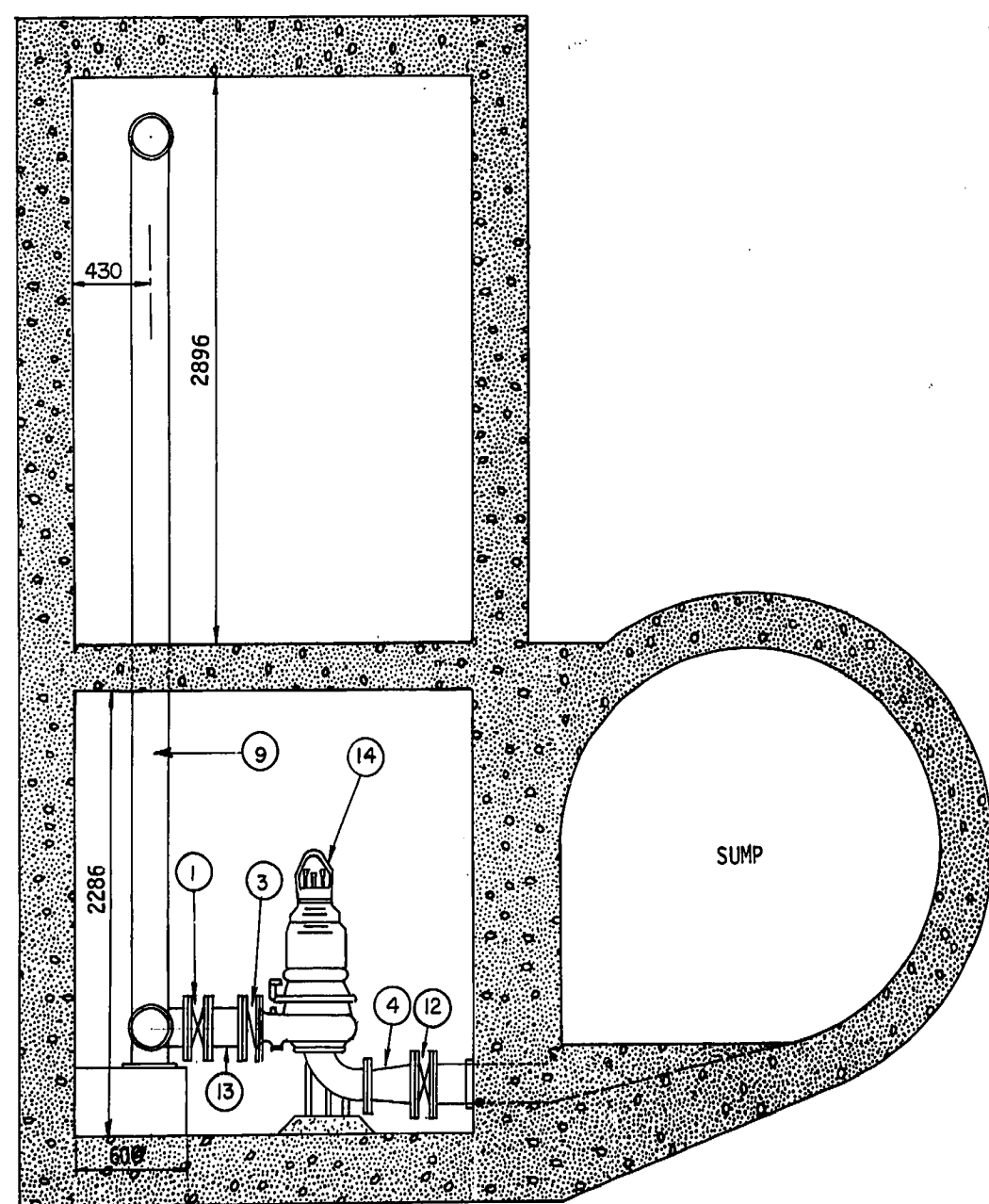
REF. or DRAWING No. **1204** file # **SP10331**

REF. or DRAWING No. **1215** file # **SP 10343**
DETAILS

W0 101-84



PLAN VIEW OF PUMP ROOM



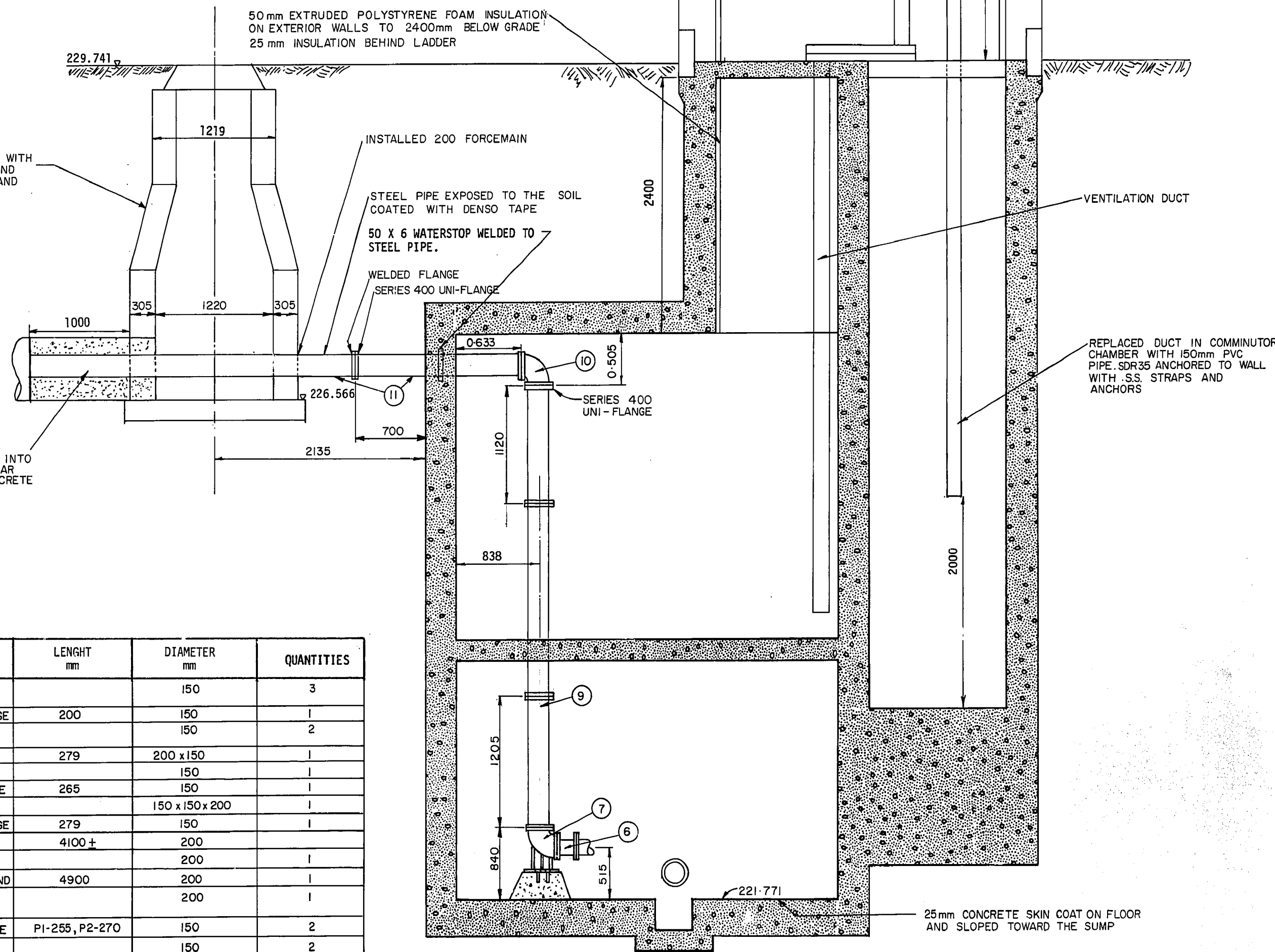
SECTION A-A

FILLED MANHOLE WITH GRANULAR FILL AND REMOVED FRAME AND COVER

FORCEMAIN EXTENDED IN INTO 450 SEWER AND ANULAR SPACE FILLED WITH CONCRETE

ITEM	DISCRITION	LENGHT mm	DIAMETER mm	QUANTITIES
1	CRANE McAVITY S.S. WAFER KNIFE GATE VALVE - FLANGED, 9600 BN		150	3
2	FILLER PIPE WITH SERIES 400 UNI-FLANGE	200	150	1
3	WAFER CHECK VALVE 15 DBZ CHECK-RITE		150	2
4	REDUCER - FLANGED	279	200 x 150	1
5	45° BEND - FLANGED		150	1
6	FILLER PIPE WITH SERIES 400 UNI-FLANGE	265	150	1
7	SIDE OUTLET BASE TEE		150 x 150 x 200	1
8	FILLER PIPE WITH SERIES 400 UNI-FLANGE	279	150	1
9	PIPE - FLANGED	4100 ±	200	
10	90° ELBOW - FLANGED		200	1
11	STEEL PIPE FLANGED AND PLAIN END	4900	200	1
12	CRANE McAVITY S.S. WAFER KNIFE GATE VALVE - FLANGED, 9600 BN		200	1
13	FILLER PIPE WITH SERIES 400 UNI-FLANGE	P1-255, P2-270	150	2
14	PUMPEX PUMPS		150	2

FOR MEASUREMENTS NOT SHOWN
SEE DRAWING 156 AND 162.

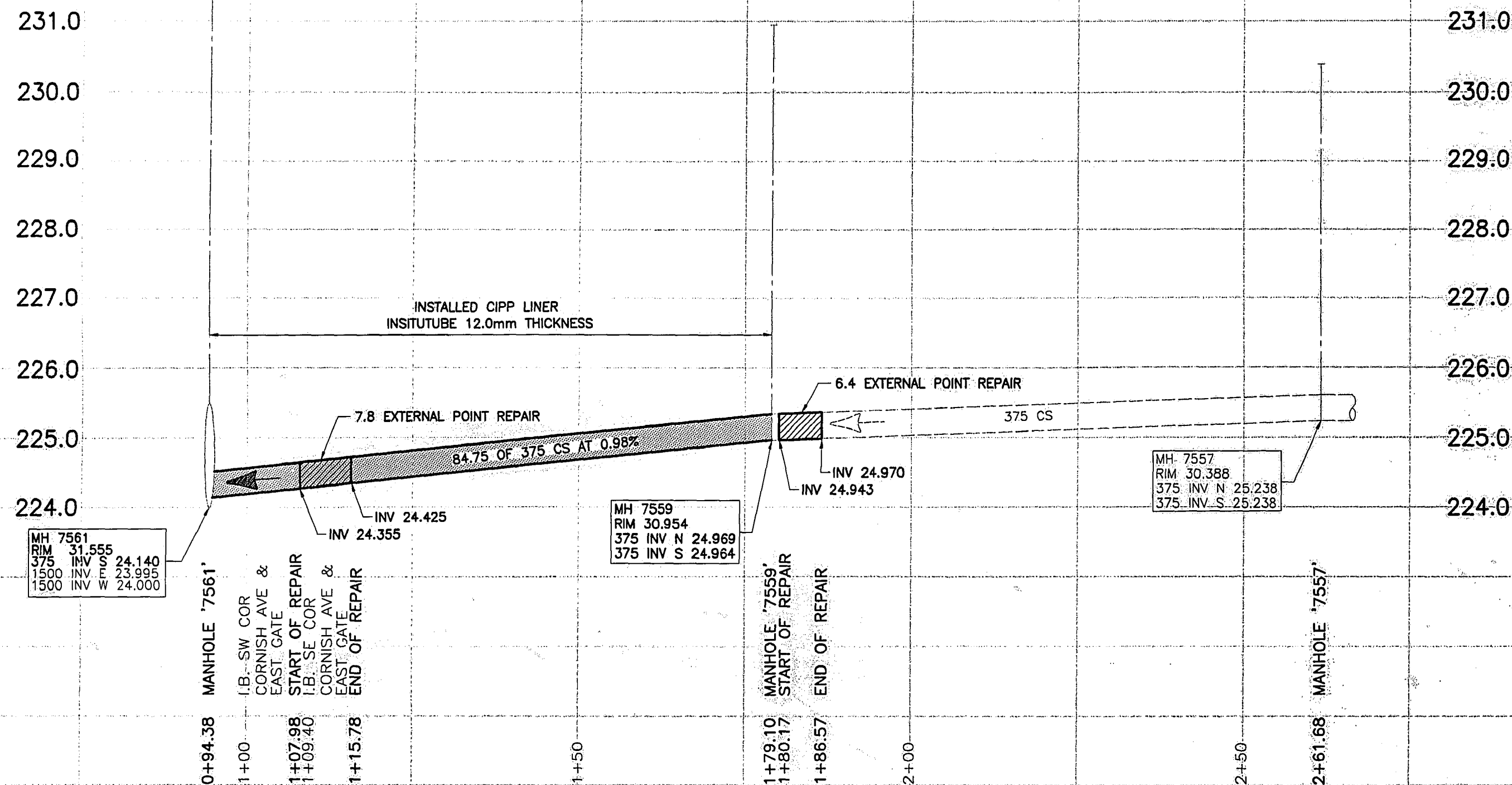


SECTION B-B

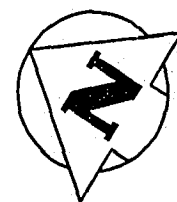
AS-CONSTRUCTED

1215-14/11/88
SURVEY DATE
WATERWORKS, WASTE & DISPOSAL DEPARTMENT

B.M. ELEV.		W		WORKS & OPERATIONS DIVISION WATERWORKS, WASTE & DISPOSAL DEPARTMENT		ENGINEER PROVINCE OF MANITOBA R.M. GIRLING REGISTERED ENGINEER		THE CITY OF WINNIPEG WORKS AND OPERATIONS DIVISION		CITY DRAWING NUMBER	
		DESIGNED BY JE		CHECKED BY RMG				CORNISH PUMPING		SHEET OF	
		DRAWN BY MBD		APPROVED BY RMG				STATION UPGRADING (MECHANICAL)		1215	
		HOR. SCALE: 1:30		RELEASED FOR CONSTRUCTION		CONSULTANT DRAWING NO.					
		VERTICAL 1:30		DATE April 30, 1987							
REV'D TO AS BUILT		JUL 88		EN							
NO. REVISIONS		DATE		BY							



DWG NORTH



NOTE:
CHAINAGE IS ALONG WEST PROPERTY LINE
OF EAST GATE.

SEWER CONNECTION DATA	
ADDRESS	JUNCTION TIE
20 EAST GATE	2.7 S OF MANHOLE 7559
21/23 EAST GATE	1.7 S OF MANHOLE 7559
14 EAST GATE	17.4 N OF MANHOLE 7559
15 EAST GATE	22.9 N OF MANHOLE 7559
6 EAST GATE	38.6 N OF MANHOLE 7559
2 EAST GATE	20.7 S OF MANHOLE 7561

MANHOLE INFORMATION		
MANHOLE NUMBER	MANHOLE TYPE	ADDITIONAL INFORMATION
7561	CONCRETE	NO REPAIRS REQUIRED
7559	CONCRETE	NO REPAIRS REQUIRED
7557	BRICK	MINOR GROUTING COMPLETED AT TOP 1.0m

MATERIAL LIST	
150 PVC PIPE:	IPEX ASTM D3034
375 PVC PIPE:	IPEX ASTM D3034
COUPLING:	MISSION
ASPHALT:	BORLAND
LINER:	12.0mm INSITUFORM
RESIN:	AOC
	CADOX BFF-50
CONCRETE SUPPLIER:	STEFANCHUK CONCRETE-
FOR PIPE CRADLE:	MOBILE SERVICE

CONTRACTORS	
LINER INSTALLATION:	INSITUFORM TECHNOLOGIES LTD.
MANHOLE REPAIRS:	AL-SAN UNDERGROUND LTD.
EXTERNAL POINT REPAIRS:	AL-SAN UNDERGROUND LTD.

CONSTRUCTION COMPLETION DATE	
LINER:	AUGUST 25, 2001
MANHOLE REPAIRS:	AUGUST 17, 2001
EXTERNAL POINT REPAIRS:	JULY 10-13, 2001
	OCTOBER 30, 2001

APEGM
Certificate of Authorization
No. 195
Expires APRIL 30, 2003
Signature: *H.A. Katz*
Date: AUG 23, 2002

RECORD DRAWING	
DATE Y/M/D	02.08.23
DRAFTED BY	B.J.M.
FIELD INFO BY	T.Y.
CHECKED BY	T.Y./G.M.D.

METRIC
WHOLE NUMBERS ARE IN MILLIMETRES
DECIMALIZED NUMBERS ARE IN METRES

150 WM	WATERMAIN			GAS		HYDRO POLE	
HYDRANT				HYDRO		LIGHT STANDARD	
VALVE				M.T.S.		ANCHOR	
LAND DRAINAGE SEWER	300 LDS			CURB		TREE	
WASTEWATER SEWER	250 WWS			SIDEWALK		EXTERNAL REPAIR	
MANHOLE				PROPERTY LINE		CIPP LINER	
CATCHBASIN			15,240	LEGAL UNIT			
CURB INLET			(322)	ADDRESS			
JUNCTIONS							
EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PLAN

LOCATION APPROVED UNDERGROUND STRUCTURES	
SUPV. U/G STRUCTURES COMMITTEE	DATE
NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE. BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.	

B.M. ELEV.	F.B. 1965
1	REVISED TO RECORD DRAWING 02.08.23
-	ISSUED FOR TENDER 01.05.09 DGG
-	ISSUED FOR APPROVAL 01.04.20 DGG
NO.	REVISIONS

WARDROP Engineering Inc.	
DESIGNED BY DGG/THY	CHECKED BY D.G.G./G.M.D.
DRAWN BY THY	APPROVED BY
HOR. SCALE: 1 : 500	RELEASED FOR CONSTRUCTION ORIGINAL SIGNED BY G. IRVING DATED MAY 08, 2001
VERTICAL: 1 : 50	
DATE 01.04.23	DATE

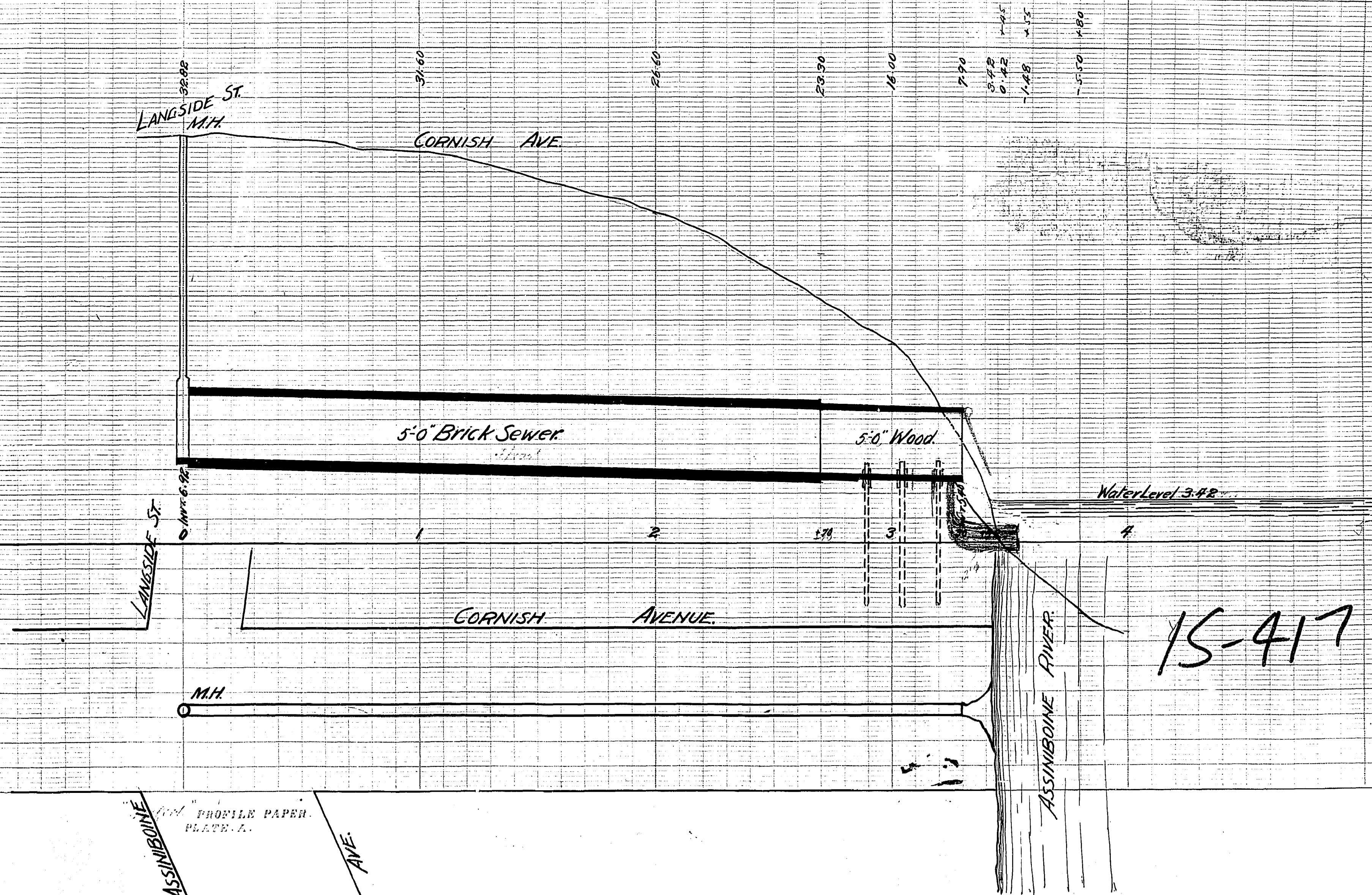


THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT	
2001 COMBINED SEWER RENEWAL FULL SEGMENT RENOVATION BY RELINING EAST GATE 1ST MANHOLE SE OF CORNISH AVE TO MANHOLE AT CORNISH AVE	CITY DRAWING NUMBER 04853 SHEET 3 OF 8 3

SEWER ~ CORNISH AVE. OUTLET.

B.M. FL 32.82 M.H. rim Car of Cornish & Assiniboine Ave

SCALES VER. 8 } FT = 1/4 INCH.
HOR. 40 }

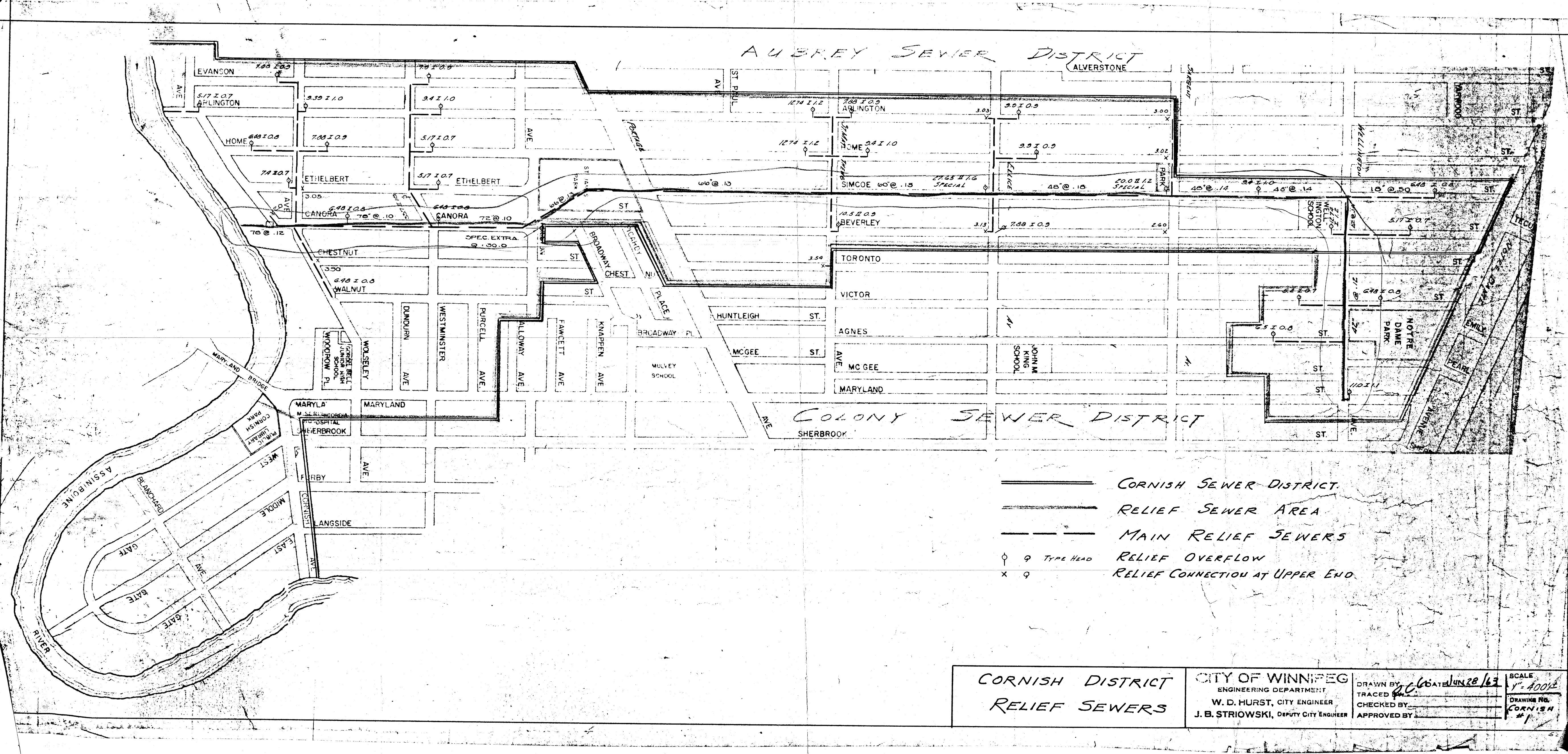


incos Office
in rep. Man.
July 29, 1907.

H.N. RUTTAN
CITY ENGINEER

Nº 3839

~~\$57~~ "Perfect" PROOF
PLATE

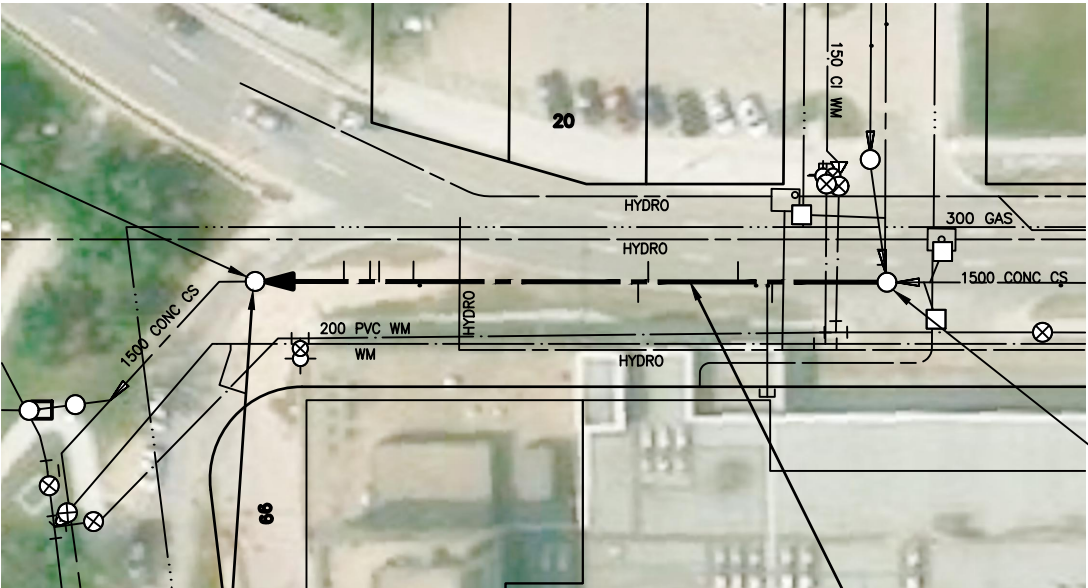


CORNISH DISTRICT RELIEF SEWERS	CITY OF WINNIPEG ENGINEERING DEPARTMENT W. D. HURST, CITY ENGINEER J. B. STRIOWSKI, DEPUTY CITY ENGINEER	DRAWN BY: J. B. STRIOWSKI TRACED BY: J. B. STRIOWSKI CHECKED BY: J. B. STRIOWSKI APPROVED BY: J. B. STRIOWSKI	SCALE 1" = 400' DRAWING NO. CORNISH #1
---	---	--	---

V:\1112\active\111220592\0300_drawing\0305_files_out\external\2024-11-xx_final_rec_dwgs_resubmit\cad\13045.dwg

SEWER JUNCTION INFORMATION FROM SEWER VIDEO INSPECTION		
SEWER ID S-MA20013620		
DISTANCE FROM MH20012340		
DISTANCE	DIAMETER	CLOCK
8.8	250	10:00
11.4	250	10:00
12.3	250	10:00
15.7	250	11:00
38.0	150	12:00
39.0	250	10:00
47.9	250	11:00
51.3	250	1:00

S-MH20012340
RIM 232.671
INV N 224.551
INV S 224.510



S-MH20012339
RIM 232.353
INV W 224.593
INV N 224.393
INV S 224.393

REMOVED AND REPLACED TOP 5.25m
PRECAST CONC RISERS FRAME. INSTALLED
NEW FRAME AND SOLID COVER.

62.6 OF 1500 CONC CS LINED WITH 40.5mm THICK CIPP LINING.
S-MA20013620

MATERIAL LIST

CIPP LINING					
ITEM	MANUFACTURER	MODEL	DIMENSION RATIO	MATERIAL	TYPE
TUBE	INSITUFORM TUBE	INSITUTUBE		POLYPROPYLENE COATED FELT	
RESIN	ALPHA OWENS CORNING	L721-LTI-15		POLYESTER	
SEWER					
750, 1200 MANHOLE RISERS	LAFARGE			PRECAST CONCRETE	
MANHOLE FRAME	KAROH CASTING	KR006		DUCTILE IRON	
MANHOLE COVER	KAROH CASTING	KR007		DUCTILE IRON	

CONTRACTOR: INSITUFORM TECHNOLOGIES LIMITED

NOTE:
1. MANHOLE RIM ELEVATIONS ARE SURVEYED.
2. PIPE INVERT ELEVATIONS ARE SURVEYED AND ADJUSTED TO ACCOUNT FOR THE INSTALLED LINER THICKNESS.

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES



TENDER NO. 212-2022

CONSTRUCTION COMPLETION
DATE: 2023.10.05

RECORD DRAWING

FOR INDEX SEE
13042

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES DATE
COMMITTEE

NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

B.M. ELEV.			
3	RECORD DRAWING	24.11.05	RS
2	ISSUED FOR TENDER	22.05.06	RS
1	ISSUED FOR REVIEW	22.04.29	RS
NO.	REVISIONS	DATE	BY



Stantec
311 Portage Avenue, Winnipeg, Manitoba
Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY	RS	CHECKED BY	RS
DRAWN BY	OS	APPROVED BY	RS
HOR. SCALE:	1:750	RELEASED FOR CONSTRUCTION:	SC
VERTICAL:		DATE	22.05.04
DATE	22.03.15		

ENGINEER'S SEAL

ORIGINAL
SEALED BY
R.M. SHERLOCK
P. ENG.
2024/11/07

CONSULTANT DRAWING NO.
C-103

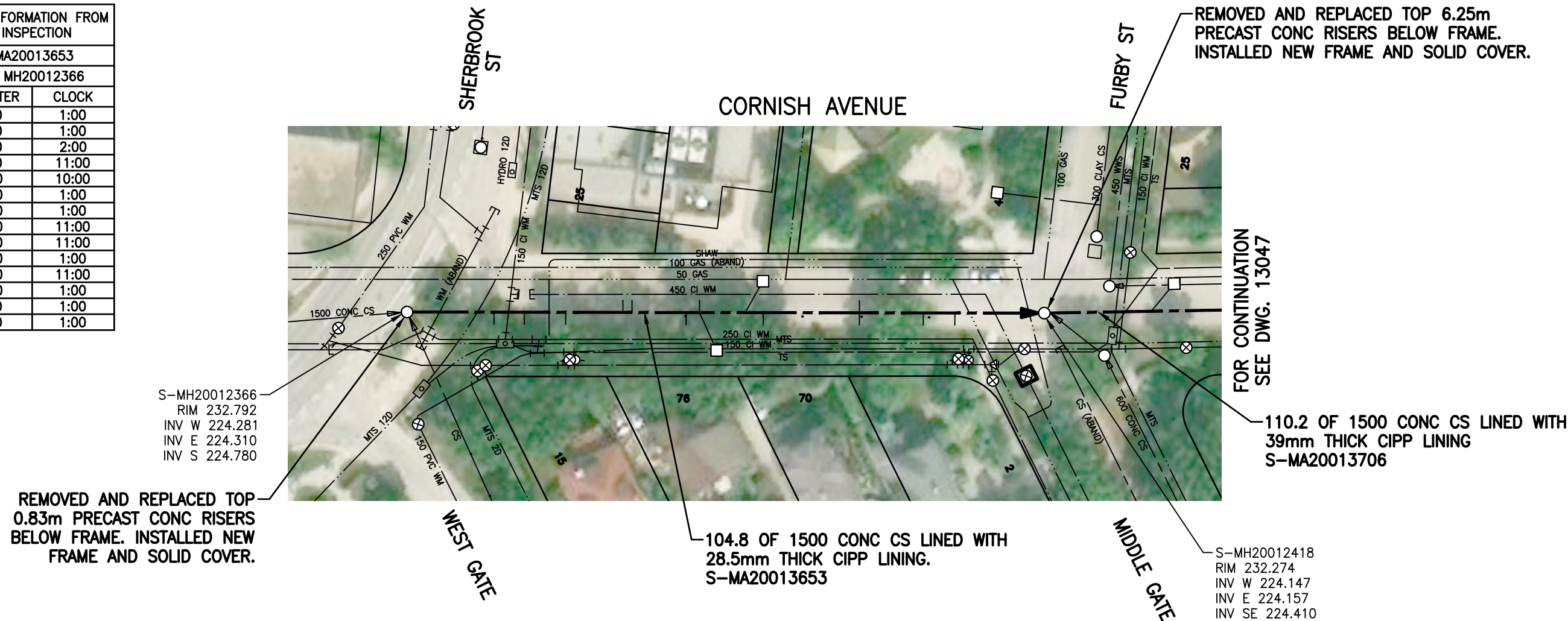


THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

2022 SEWER RENEWALS BY CIPP LINING (LARGE DIAMETER)
CONTRACT 3
MARYLAND STREET
1st MH S OF WOODROW PLACE
TO MH AT WOODROW PLACE

SHEET 05 OF 13
CAD FILE DRAWING NUMBER
13045.dwg
CITY DRAWING NUMBER
13045

SEWER JUNCTION INFORMATION FROM SEWER VIDEO INSPECTION		
SEWER ID S-MA20013653		
DISTANCE FROM MH20012366		
DISTANCE	DIAMETER	CLOCK
14.3	150	1:00
19.3	150	1:00
26.1	150	2:00
35.5	150	11:00
37.0	250	10:00
45.9	250	1:00
48.1	250	1:00
48.1	250	11:00
55.6	250	11:00
58.6	250	1:00
74.4	250	11:00
74.4	250	1:00
84.9	150	1:00
90.1	150	1:00



MATERIAL LIST

METRIC



**CONSTRUCTION COMPLETION
DATE: 2023.10.05**

\\Ca0045-ppfs01\workgroup\1112\active\11120592\0300_drawing\0305_files_out\external\2024-11-xx_final_rec_dwgs\cad\13047.dwg

SEWER JUNCTION INFORMATION FROM SEWER VIDEO INSPECTION		
SEWER ID S-MA20013706		
DISTANCE FROM MH20012418		
DISTANCE	DIAMETER	CLOCK
1.0	300	4:00
17.6	150	12:00
32.3	150	10:00
43.4	150	11:00
56.9	150	11:00
58.4	200	11:00
63.4	200	1:00
75.6	150	1:00
81.2	150	11:00

S-MH20012418
RIM 232.274
INV W 224.147
INV E 224.157
INV SE 224.410

FOR CONTINUATION
SEE DWG. 13046

104.8 OF 1500 CONC CS LINED WITH
28.5mm THICK CIPP LINING.
S-MA20013653

REMOVED AND REPLACED TOP 0.83m
PRECAST CONC RISERS BELOW FRAME.
INSTALLED NEW FRAME AND SOLID COVER.



GROUTED UNDER
MANHOLE FRAME

74.6 OF 1500 CONC CS LINED WITH
36mm THICK CIPP LINING.
S-MA70017431

FOR CONTINUATION
SEE DWG. 13052

S-MH20012417
RIM 231.533
INV W 224.012
INV E 223.962
INV S 224.140

REMOVED MANHOLE STACK FOR LINING.
INSTALLED 5.1m OF 900 RISER. 900
TO 750 REDUCER 150mm BELOW NEW
FRAME AND COVER.

MATERIAL LIST

CIPP LINING					
ITEM	MANUFACTURER	MODEL	DIMENSION RATIO	MATERIAL	TYPE
TUBE	INSITUFORM TUBE	INSITUTUBE		POLYPROPYLENE COATED FELT	
RESIN	ALPHA OWENS CORNING	PE102NA UNFILLED		POLYESTER	
SEWER					
750, 1200 MANHOLE RISERS	LAFARGE			PRECAST CONCRETE	
MANHOLE FRAME	KAROH CASTING	KR006		DUCTILE IRON	
MANHOLE COVER	KAROH CASTING	KR007		DUCTILE IRON	

CONTRACTOR: INSITUFORM TECHNOLOGIES LIMITED

- NOTE:
- MANHOLE RIM ELEVATIONS ARE SURVEYED.
 - PIPE INVERT ELEVATIONS ARE SURVEYED AND ADJUSTED TO ACCOUNT FOR THE INSTALLED LINER THICKNESS.

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES



TENDER NO. 212-2022

CONSTRUCTION COMPLETION
DATE: 2023.10.05

RECORD DRAWING

FOR INDEX SEE
13042

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES DATE
COMMITTEE

NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS
SHOWN ARE BASED ON THE BEST INFORMATION
AVAILABLE BUT NO GUARANTEE IS GIVEN
THAT ALL EXISTING UTILITIES ARE SHOWN OR
THAT THE GIVEN LOCATIONS ARE EXACT.
CONFIRMATION OF EXISTENCE AND EXACT
LOCATION OF ALL SERVICES MUST BE
OBTAINED FROM THE INDIVIDUAL UTILITIES
BEFORE PROCEEDING WITH CONSTRUCTION.

B.M. ELEV.			
3	RECORD DRAWING	24.11.05	RS
2	ISSUED FOR TENDER	22.05.06	RS
1	ISSUED FOR REVIEW	22.04.29	RS
NO.	REVISIONS	DATE	BY



Stantec
311 Portage Avenue, Winnipeg, Manitoba
Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY	RS	CHECKED BY	RS
DRAWN BY	OS	APPROVED BY	RS
HOR. SCALE:	1:750	RELEASED FOR CONSTRUCTION:	SC
VERTICAL:		DATE	22.05.04
DATE	22.03.15		

ENGINEER'S SEAL

ORIGINAL
SEALED BY
R.M. SHERLOCK
P. ENG.
2024/11/07

CONSULTANT DRAWING NO.
C-105



THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

2022 SEWER RENEWALS BY CIPP LINING (LARGE DIAMETER)
CONTRACT 3
CORNISH AVENUE
MH AT MIDDLE GATE
TO MH AT EAST GATE

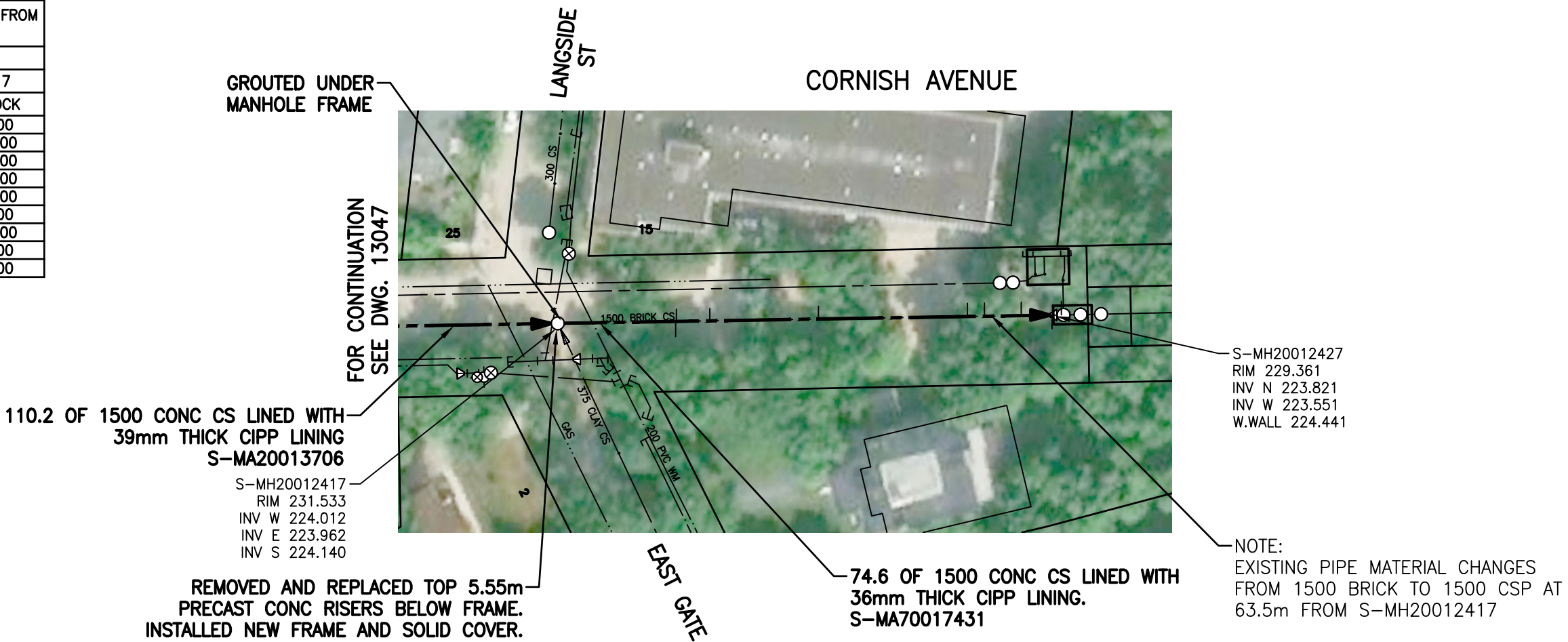
SHEET OF
07 13

CAD FILE DRAWING NUMBER
13047.dwg

CITY DRAWING NUMBER
13047

\\Ca0045-ppfs01\workgroup\1112\active\11120592\0300_drawing\0305_files_out\external\2024-11-xx_final_rec_dwgs\cad\13052.dwg

SEWER JUNCTION INFORMATION FROM SEWER VIDEO INSPECTION		
SEWER ID S-MA70017431		
DISTANCE FROM MH20012417		
DISTANCE	DIAMETER	CLOCK
17.2	150	3:00
17.3	150	10:00
22.2	150	11:00
38.1	150	11:00
59.9	150	11:00
62.4	200	9:00
67.8	150	10:00
72.3	150	3:00
73.7	450	7:00



MATERIAL LIST

CIPP LINING					
ITEM	MANUFACTURER	MODEL	DIMENSION RATIO	MATERIAL	TYPE
TUBE	INSITUFORM TUBE	INSITUTUBE		POLYPROPYLENE COATED FELT	
RESIN	ALPHA OWENS CORNING	PE102NA UNFILLED		POLYESTER	
SEWER					
750, 900 MANHOLE RISERS	LAFARGE			PRECAST CONCRETE	
MANHOLE FRAME	W.D. INDUSTRIAL GROUP	WD-50-F		DUCTILE IRON	
MANHOLE COVER	W.D. INDUSTRIAL GROUP	WD-50-S		DUCTILE IRON	

CONTRACTOR: INSITUFORM TECHNOLOGIES LIMITED

- NOTE:
- MANHOLE RIM ELEVATIONS ARE SURVEYED.
 - PIPE INVERT ELEVATIONS ARE SURVEYED AND ADJUSTED TO ACCOUNT FOR THE INSTALLED LINER THICKNESS.

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES



TENDER NO. 212-2022

CONSTRUCTION COMPLETION
DATE: 2023.10.05

RECORD DRAWING

FOR INDEX SEE
13042

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE DATE

NOTE:
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B.M. ELEV.			
3	RECORD DRAWING	24.11.05	RS
2	ISSUED FOR TENDER	22.05.06	RS
1	ISSUED FOR REVIEW	22.04.29	RS
NO.	REVISIONS	DATE	BY

Stantec
311 Portage Avenue, Winnipeg, Manitoba
Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY	RS	CHECKED BY	RS
DRAWN BY	OS	APPROVED BY	RS
HOR. SCALE:	1:750	RELEASED FOR CONSTRUCTION:	SC
VERTICAL:		DATE	22.05.04
DATE	22.03.15		

ENGINEER'S SEAL

ORIGINAL SEALED BY
R.M. SHERLOCK
P. ENG.
2024/11/07

CONSULTANT DRAWING NO.
C-IIO

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

2022 SEWER RENEWALS BY CIPP LINING (LARGE DIAMETER)
CONTRACT 3
CORNISH AVENUE
MH AT EAST GATE
TO 1st MH EAST OF EAST GATE

SHEET 12 OF 13
CAD FILE DRAWING NUMBER
13052.dwg
CITY DRAWING NUMBER
13052

\\CD1201-F02\work_group\1112\active\111214720\0300_drawing\0302_sheet_files\08_electrical\Phase 1 And Phase 2 New Drawings\Phase 2 Drawings\Cornish\14720e-1001-cor.dwg
2015/04/16 10:09 AM By: Bekker, Kyle

LEGEND

RTU— REMOTE TERMINAL UNIT PANEL
DP — POWER DISTRIBUTION PANEL
TP — TERMINATION PANEL
IS — INTRINSIC SAFETY BARRIER PANEL
JB — JUNCTION BOX
— INSTRUMENTATION CABLE
FT — FLOW METER TRANSMITTER
— FLOW METER SENSOR
— LEVEL TRANSMITTER, INCLINOMETER

LEVEL TRANSMITTER
(LT-S661)
(E&H #FMX167)
PIPE INV.=223.627
SENSOR ELV.=224.007

JBA-S661
ELV.=228.758

600mm PIPE
INV.=223.767

JBA-S851
ELV.=229.951

1500mm ROUND
FLAP GATE
ELV.=223.801

LEVEL TRANSMITTER
(LIT-S951)
(SIEMENS #LR200)
PIPE INV.=223.666
INSTRUMENT ELV.=229.231

1600mmx1450mm CMP
OUTFALL-AS-88
INV.=223.701

WEIR CREST
ELV.=224.442

INCLINOMETER
(ZT-S851)
(RST #ICEX360A)
ELV.=224.442

1.7mX1.7m
POSITIVE GATE
ELV.=223.751

FLOOR
ELV.=223.666

INV.=223.323

ASSINIBOINE
RIVER

NOTES:

ENDRESS+HAUSER #FMX 167
HYDROSTATIC LEVEL TRANSMITTER
RST INSTRUMENTS #ICEX360A
INCLINOMETER
SIEMENS # LR200 RADAR LEVEL
TRANSMITTER
FLOOD LEVEL = 230.14
BOLD ELEVATIONS FROM STANTEC

CITY OF WINNIPEG TO REPLACE
EXISTING INSTRUMENT AND
JUNCTION BOX TAGS TO MATCH
TAGS ON DRAWINGS

TBM Description, Elevation = 231.601
Center Punch on N Rim of MH, 8.8m E of
W PL of Langside ST and 9.8m S of N PL
of Cornish Av

WARNING

IF POWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED
FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR
MUST:
1) NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION
OF EXCAVATION.
2) TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY
INSTALLATIONS.
SEE PROVINCIAL REGULATION 140/92 FOR DETAILS

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES



Certificate of Authorization

Stantec Consulting Ltd.

No. 1301

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE DATE

NOTE:

LOCATION OF UNDERGROUND STRUCTURES AS
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THAT ALL EXISTING UTILITIES ARE SHOWN OR
THAT THE GIVEN LOCATIONS ARE EXACT.
CONFIRMATION OF EXISTENCE AND EXACT
LOCATION OF ALL SERVICES MUST BE
OBTAINED FROM THE INDIVIDUAL UTILITIES
BEFORE PROCEEDING WITH CONSTRUCTION.

B.M.
ELEV.

C	AS-BUILT DRAWING	15.04.16	J.C.
B	ISSUED FOR CLIENT REVIEW	15.02.11	J.C.
A	ISSUED FOR CLIENT REVIEW	14.01.15	J.C.
NO.	REVISIONS	DATE	BY



Stantec Consulting Ltd.

905 Waverley Street, Winnipeg, Manitoba
Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY	S.T.	CHECKED BY	J.C.
DRAWN BY	K.B.	APPROVED BY	J.C.
HOR. SCALE:	N.T.S.	RELEASED FOR CONSTRUCTION:	
VERTICAL:			
DATE	2014.01.06	DATE	

ENGINEER'S SEAL

CONSULTANT DRAWING NO.

E-1001



THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

CSO OUTFALL MONITORING

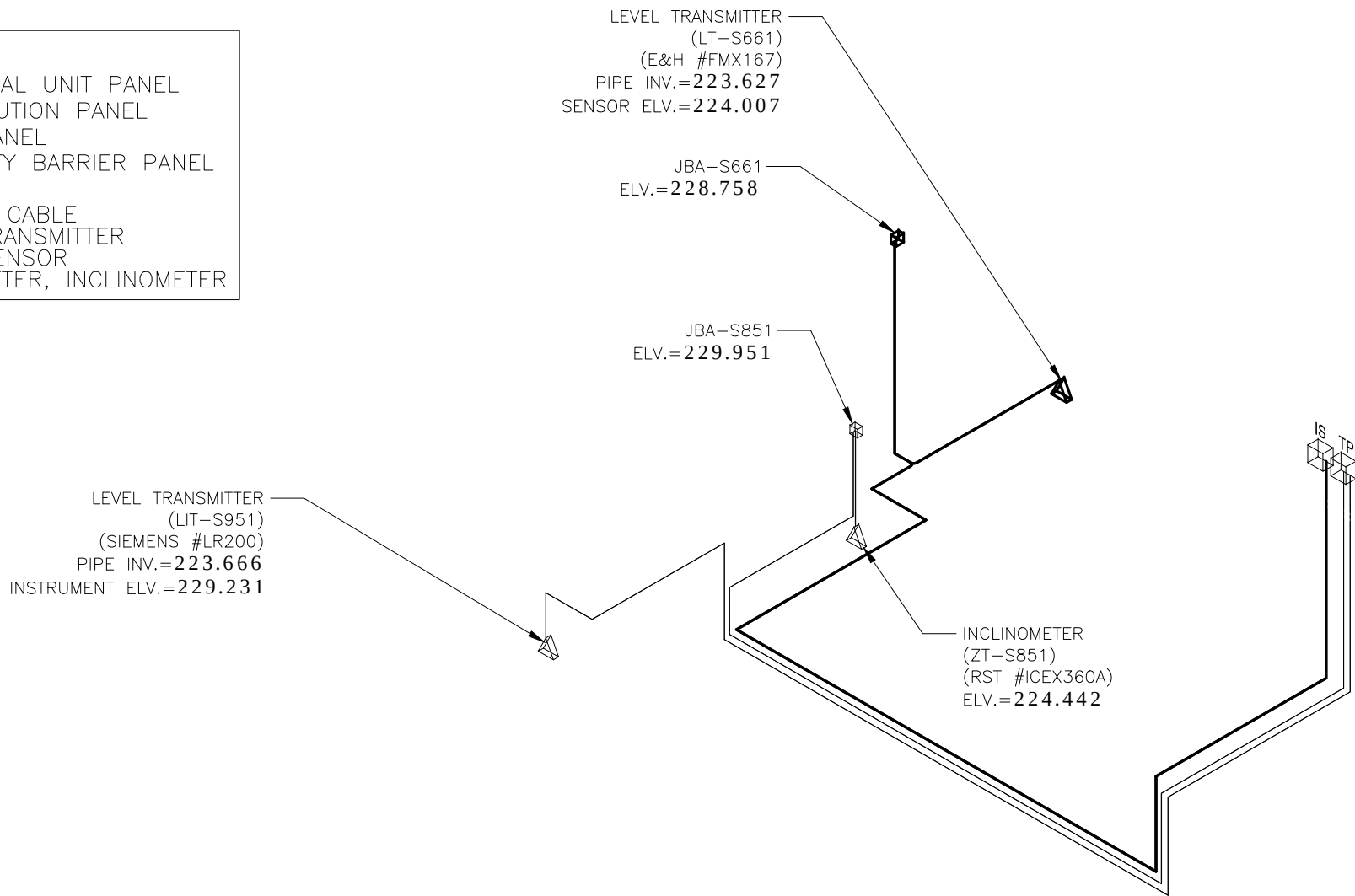
CORNISH
3D ISOMETRIC PLAN

SHEET	OF
1	2
CAD FILE DRAWING NUMBER	
14720e-1001-cor.dwg	
CITY DRAWING NUMBER	
I-0132-A-A0202-001-00	

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2015/04/16 10:09 AM By: Bekker, Kyle

LEGEND

RTU— REMOTE TERMINAL UNIT PANEL
DP — POWER DISTRIBUTION PANEL
TP — TERMINATION PANEL
IS — INTRINSIC SAFETY BARRIER PANEL
JB — JUNCTION BOX
— — INSTRUMENTATION CABLE
FT — FLOW METER TRANSMITTER
▽ — FLOW METER SENSOR
▽ — LEVEL TRANSMITTER, INCLINOMETER



NOTES:

ENDRESS+HAUSER #FMX 167
HYDROSTATIC LEVEL TRANSMITTER
RST INSTRUMENTS #ICEX360A
INCLINOMETER
SIEMENS # LR200 RADAR LEVEL
TRANSMITTER
FLOOD LEVEL = 230.14
BOLD ELEVATIONS FROM STANTEC

CITY OF WINNIPEG TO REPLACE
EXISTING INSTRUMENT AND
JUNCTION BOX TAGS TO MATCH
TAGS ON DRAWINGS

TBM Description, Elevation = 231.601
Center Punch on N Rim of MH, 8.8m E of
W PL of Longside ST and 9.8m S of N PL
of Cornish Av

WARNING

IF POWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED
FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR
MUST:

- 1) NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION
OF EXCAVATION.
- 2) TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY
INSTALLATIONS.

SEE PROVINCIAL REGULATION 140/92 FOR DETAILS

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES



Certificate of Authorization

Stantec Consulting Ltd.

No. 1301

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE DATE

NOTE:

LOCATION OF UNDERGROUND STRUCTURES AS
SHOWN ARE BASED ON THE BEST INFORMATION
AVAILABLE BUT NO GUARANTEE IS GIVEN
THAT ALL EXISTING UTILITIES ARE SHOWN OR
THAT THE GIVEN LOCATIONS ARE EXACT.
CONFIRMATION OF EXISTENCE AND EXACT
LOCATION OF ALL SERVICES MUST BE
OBTAINED FROM THE INDIVIDUAL UTILITIES
BEFORE PROCEEDING WITH CONSTRUCTION.

B.M.
ELEV.

C	AS-BUILT DRAWING	15.04.16	J.C.
B	ISSUED FOR CLIENT REVIEW	15.02.11	J.C.
A	ISSUED FOR CLIENT REVIEW	14.01.15	J.C.
NO.	REVISIONS	DATE	BY



Stantec Consulting Ltd.

905 Waverley Street, Winnipeg, Manitoba
Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY	S.T.	CHECKED BY	J.C.
DRAWN BY	K.B.	APPROVED BY	J.C.
HOR. SCALE:	N.T.S.	RELEASED FOR CONSTRUCTION:	
VERTICAL:			
DATE	2014.01.06	DATE	

ENGINEER'S SEAL

CONSULTANT DRAWING NO.

E-1001



THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT

CSO OUTFALL MONITORING

CORNISH

3D ISOMETRIC PLAN

SHEET OF

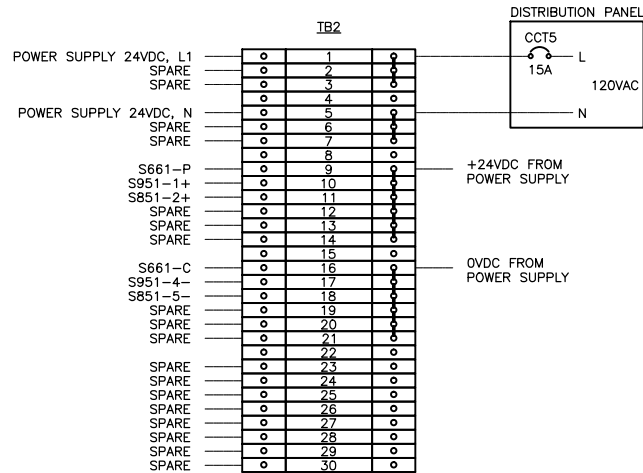
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CAD FILE DRAWING NUMBER
14720e-1001-cor.dwg

CITY DRAWING NUMBER

I-0132-A-A0202-002-00

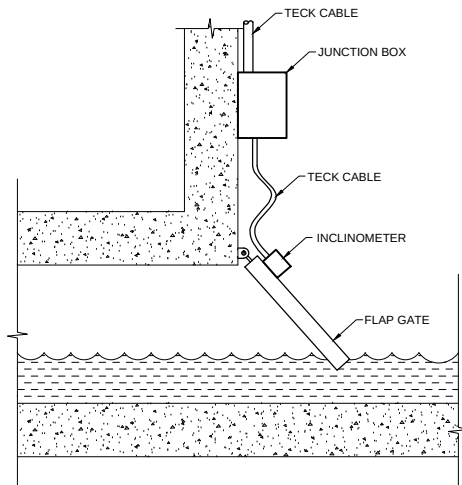
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2015/09/10 10:31 AM By: Bekker, Kyle



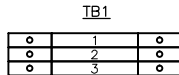
NOTES

- 1) TERMINAL BLOCKS WEIDMULLER #WDU4
- 2) FUSED TERMINAL BLOCKS WEIDMULLER #WSI6:
TERMINAL BLOCK 1, C/W FUSE 1A
TERMINAL BLOCK 2, C/W FUSE 1A
TERMINAL BLOCK 3, C/W FUSE 1A
TERMINAL BLOCK 9, C/W FUSE 500mA
TERMINAL BLOCK 10, C/W FUSE 500mA
TERMINAL BLOCK 11, C/W FUSE 500mA
TERMINAL BLOCK 12, C/W FUSE 500mA
TERMINAL BLOCK 13, C/W FUSE 500mA
TERMINAL BLOCK 14, C/W FUSE 500mA
- 3) JUMPERS: 1-3; 5-7; 9-14; 16-21

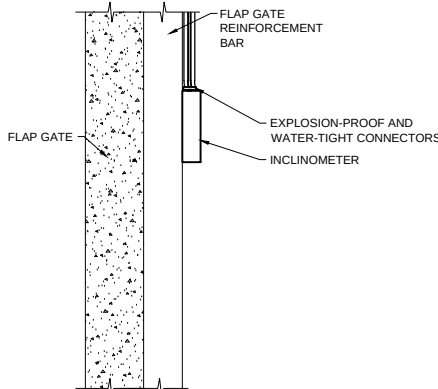
TB2 STRIP DETAIL



ELEVATION VIEW



TB1 STRIP DETAIL

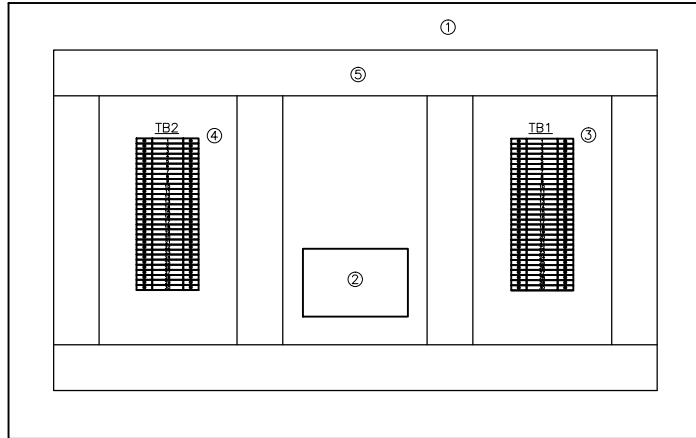


PLAN VIEW

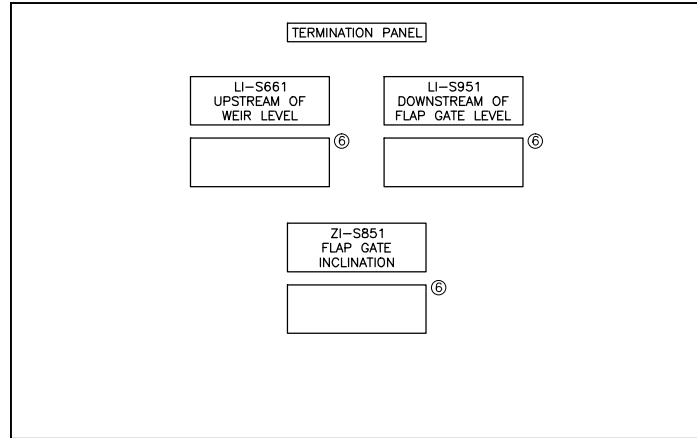
GENERAL NOTES

- 1) CABLE SHALL BE SECURED ON THE FLAP GATE CHAMBER WALL AND FLAP GATE
- 2) EXTRA CABLE SHALL BE PROVIDED TO RELIEVE CABLE STRESS AT THE JUNCTION OF THE FLAP GATE AND THE CHAMBER WALL
- 3) INSTRUMENT AND JUNCTION BOX MOUNTING BRACKET NEED TO BE ADJUSTED ACCORDING TO FLAP GATE DESIGN
- 4) EXPLOSION-PROOF CONNECTOR SHALL BE SEALED WITH EPOXY TO PREVENT GAS MIGRATION

RST INSTRUMENTS INCLINOMETER INSTALLATION DETAIL



TERMINATION PANEL DETAIL



LEGEND

- 1) HOFFMAN #CSD20248 TYPE 12 ENCLOSURE C/W PANEL #CP2024
- 2) WEIDMULLER #9927480024 POWER SUPPLY 24VDC, 2.3A
- 3) TB1 TERMINAL BLOCKS STRIP. SEE DETAIL.
- 4) TB2 TERMINAL BLOCKS STRIP. SEE DETAIL.
- 5) PANDUIT #E1X2LG6 WIRE DUCT C/W COVER #C1LG6
- 6) SIEMENS #7ML5741 DIGITAL INDICATOR

No.	INSTRUMENT TAG	DESCRIPTION	MANUFACTURER	MODEL	PLC I/O TYPE	POWER SUPPLY	LOCATION
1	LT-S661	HYDROSTATIC LEVEL TRANSMITTER	ENDRESS+HAUSER	FMX167	1X AI	24VDC	UPSTREAM OF WEIR
2	ZT-S851	INCLINATION TRANSMITTER	RST INSTRUMENTS	ICEX360A	1X AI	24VDC	FLAP GATE
3	LIT-S951	RADAR LEVEL TRANSMITTER	SIEMENS	LR200	1X AI	24VDC	DOWNSTREAM OF FLAP GATE

INSTRUMENT LIST

No.	CABLE TAG	FROM	TO	DESCRIPTION	MANUFACTURER	CATALOG No.	NOTE
1	CA-S661-1	LT-S661	JBA-S661	#16 AWG, 2-PAIR, TWISTED, SHIELDED	TEXCAN	C3-9326-1602-19	4-20mA
2	CA-S661-2	JBA-S661	LY-S661	#16 AWG, 2-PAIR, TWISTED, SHIELDED	TEXCAN	C3-9326-1602-19	4-20mA
3	CA-S661-3	LY-S661	TERMINATION PANEL	#16 AWG, 2-PAIR, TWISTED, SHIELDED	TEXCAN	C3-9326-1602-19	4-20mA
4	CA-S851-1	ZT-S851	JBA-S851	#16 AWG, 2-PAIR, TWISTED, SHIELDED	TEXCAN	C3-9326-1602-19	4-20mA
5	CA-S851-2	JBA-S851	TERMINATION PANEL	#16 AWG, 2-PAIR, TWISTED, SHIELDED	TEXCAN	C3-9326-1602-19	4-20mA
6	CA-S951-1	LIT-S951	TERMINATION PANEL	#16 AWG, 2-PAIR, TWISTED, SHIELDED	TEXCAN	C3-9326-1602-19	4-20mA
7	C-TP1	DISTRIBUTION PANEL	TERMINATION PANEL	#12 AWG, 2C, TECK 90	TEXCAN	05002-01-010	POWER 120VAC

CABLE LIST

NOTE

CITY OF WINNIPEG TO REPLACE EXISTING INSTRUMENT, JUNCTION BOX, CABLE, WIRE AND DISPLAY LAMACOIDS TO MATCH TAGS ON DRAWINGS.

WARNING

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- 2) TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS.

SEE PROVINCIAL REGULATION 140/92 FOR DETAILS

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES



Certificate of Authorization

Stantec Consulting Ltd.

No. 1301

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE DATE

NOTE:

LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

B.M.
ELEV.

C	AS BUILT DRAWING	15.04.30	J.C.
B	ISSUED FOR CONSTRUCTION	14.07.24	J.C.
A	ISSUED FOR CLIENT REVIEW	14.06.05	J.C.
NO.	REVISIONS	DATE	BY



Stantec Consulting Ltd.

905 Waverley Street, Winnipeg, Manitoba
Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY	S.T.	CHECKED BY	B.J.
DRAWN BY	S.T.	APPROVED BY	B.J.
HOR. SCALE:	N.T.S.	RELEASED FOR CONSTRUCTION:	
VERTICAL:			
DATE	2014.01.28	DATE	

ENGINEER'S SEAL

CONSULTANT DRAWING NO.

E-1002



THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

CSO OUTFALL MONITORING

CORNISH

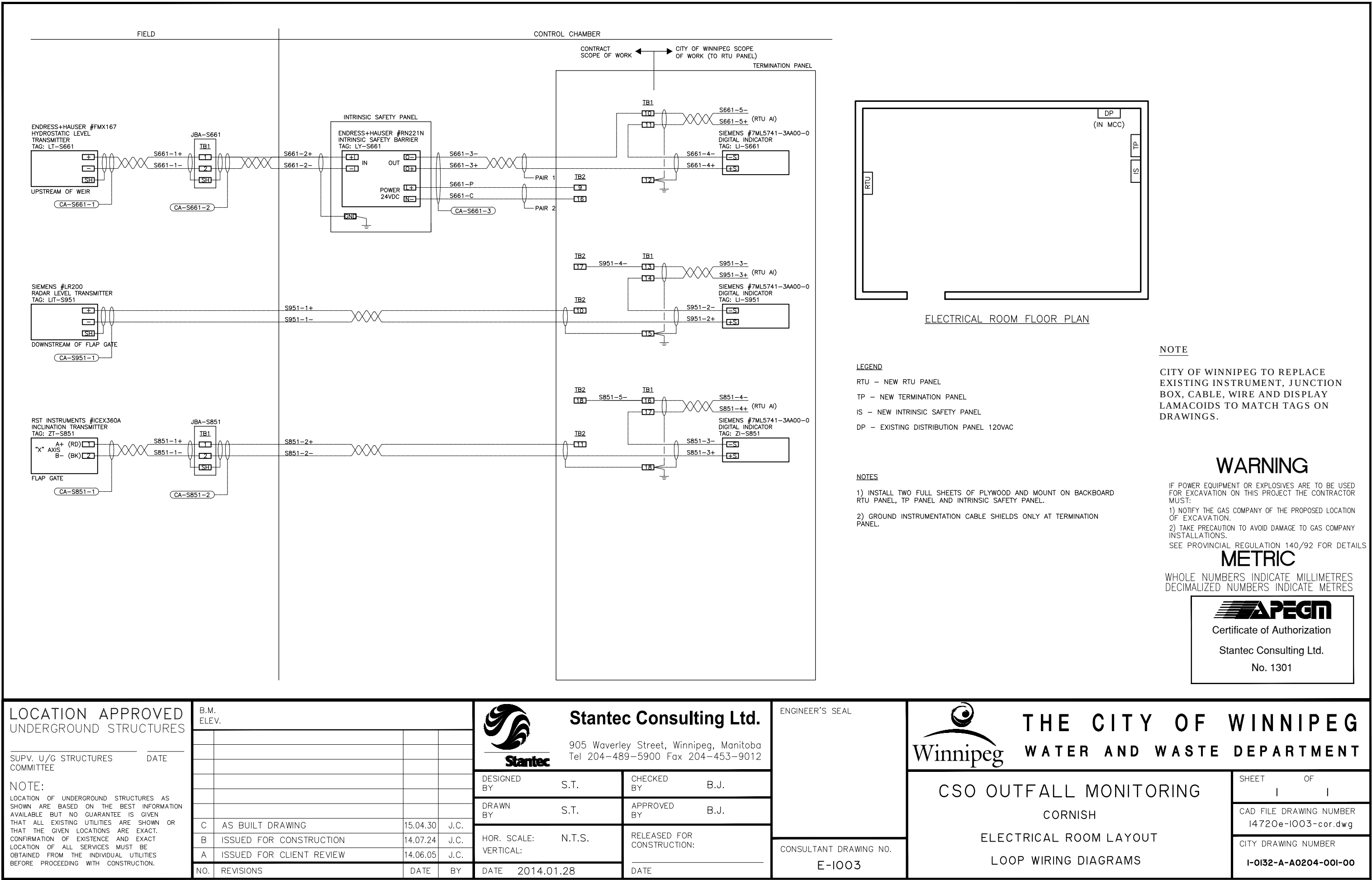
TERMINATION PANEL LAYOUT
INSTRUMENT LIST, CABLE LIST

SHEET OF
I I

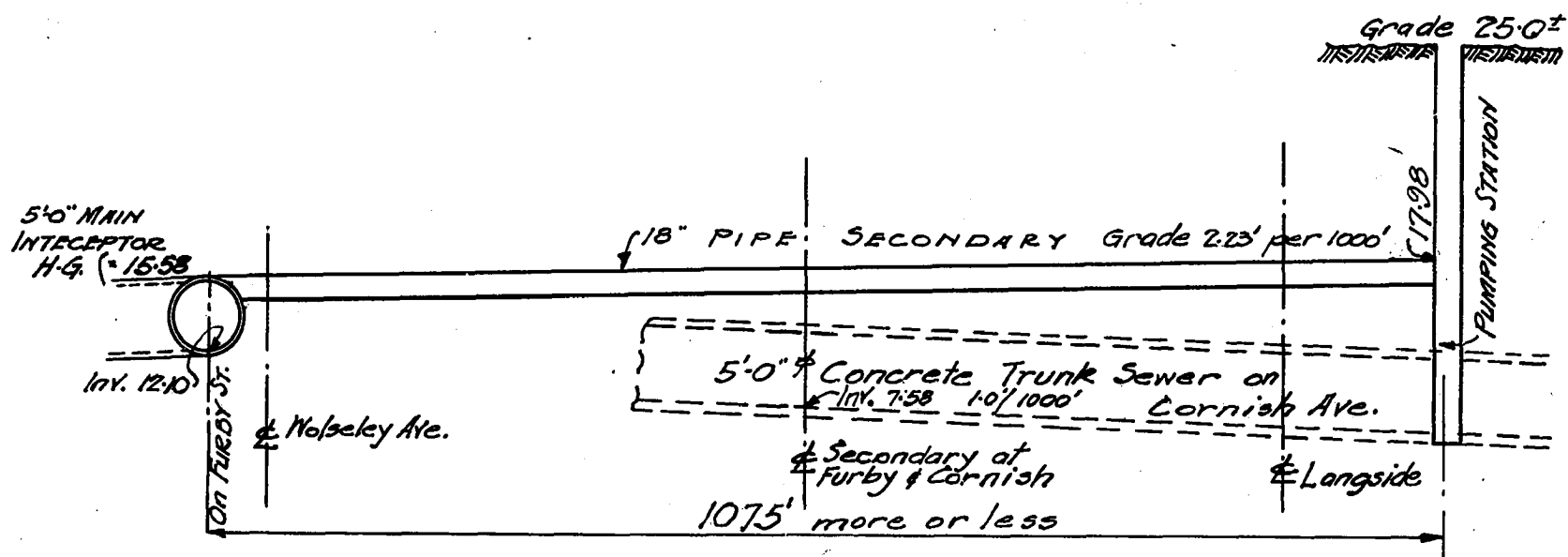
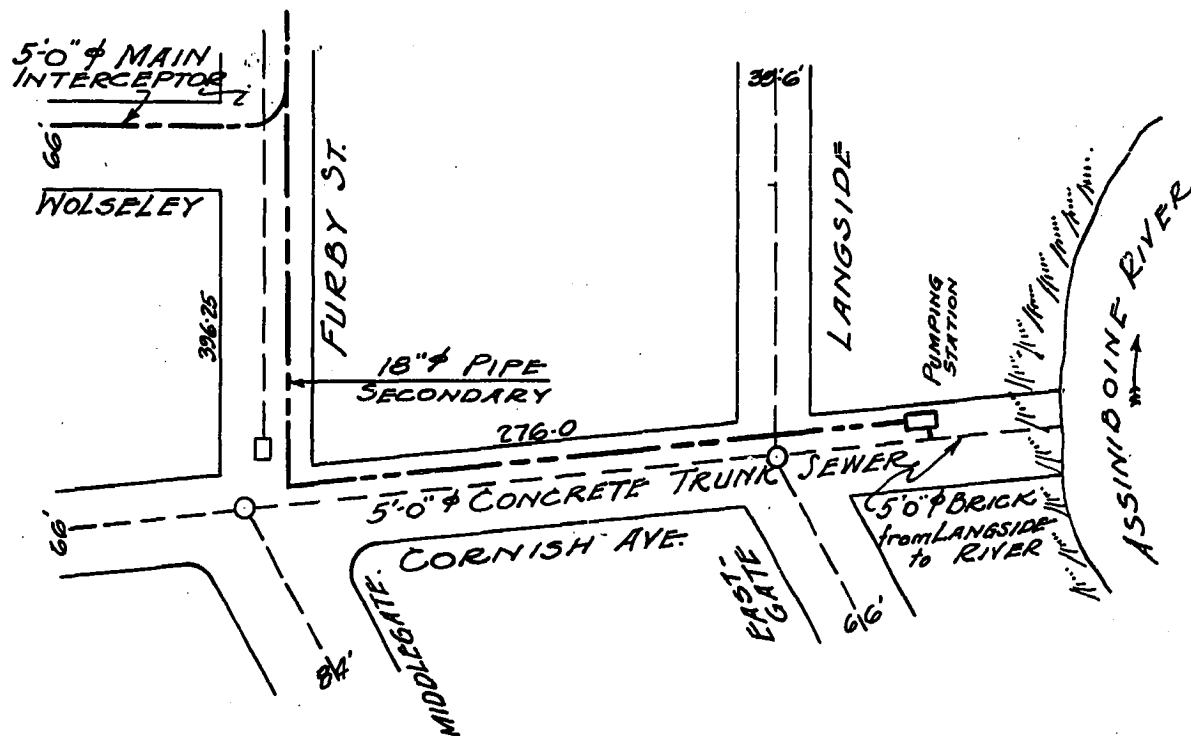
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CITY DRAWING NUMBER
I-0132-A-A0203-001-00

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2015/09/10 10:32 AM By: Bekker, Kyle



POPULATION		M.G.P.D. (us) 90 g.p.c.p.d.	M.G.P.D. (us) 247.5 g.p.c.p.d.
PRESENT	8222	0.74	2.04
ULTIMATE	13120	1.18	3.25



12" PIPE	Q = 3.25	F = 15.5' / 1000'	V = 6.5
15" PIPE	Q = 3.25	F = 5.5' / 1000'	V = 4.2
18" PIPE	Q = 3.25	F = 2.23' / 1000'	V = 2.95

H.G. ELEVATION AT INTERCEPTOR

12" PIPE	15.58
15" PIPE	15.58
18" PIPE	15.58

ELEV. AT PUMPING STATION

32.24
21.49
17.98

$$C = 110$$

GREATER WINNIPEG SANITARY DISTRICT DESIGN OF CORNISH AVE SECONDARY SEWER

Computed by J.C.D.T.
Drawn by *Loam*
Checked by *P.S.D.*

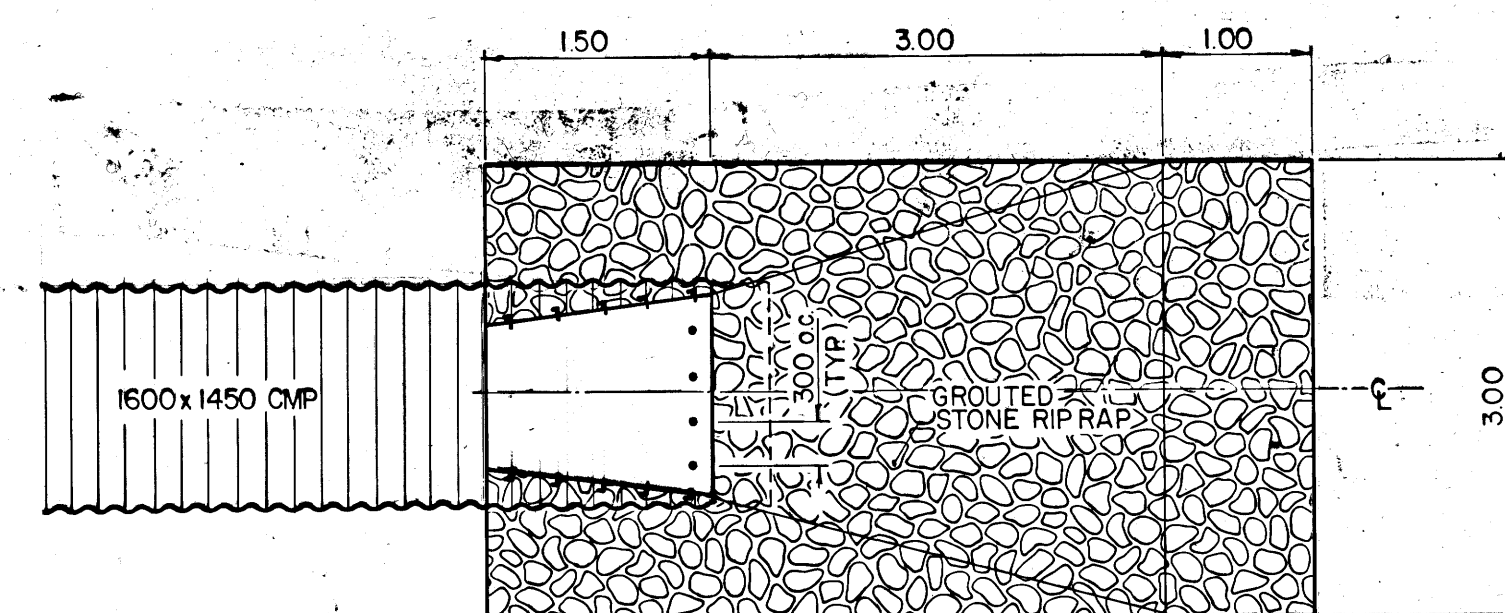
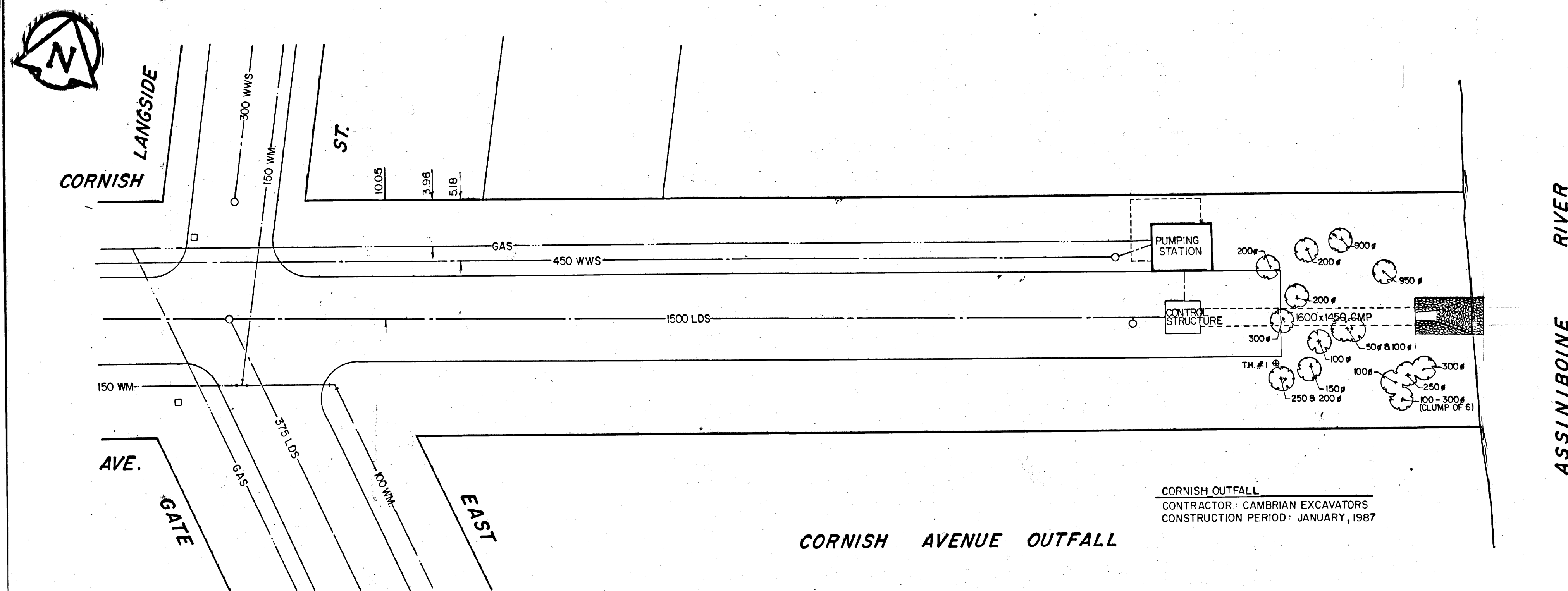
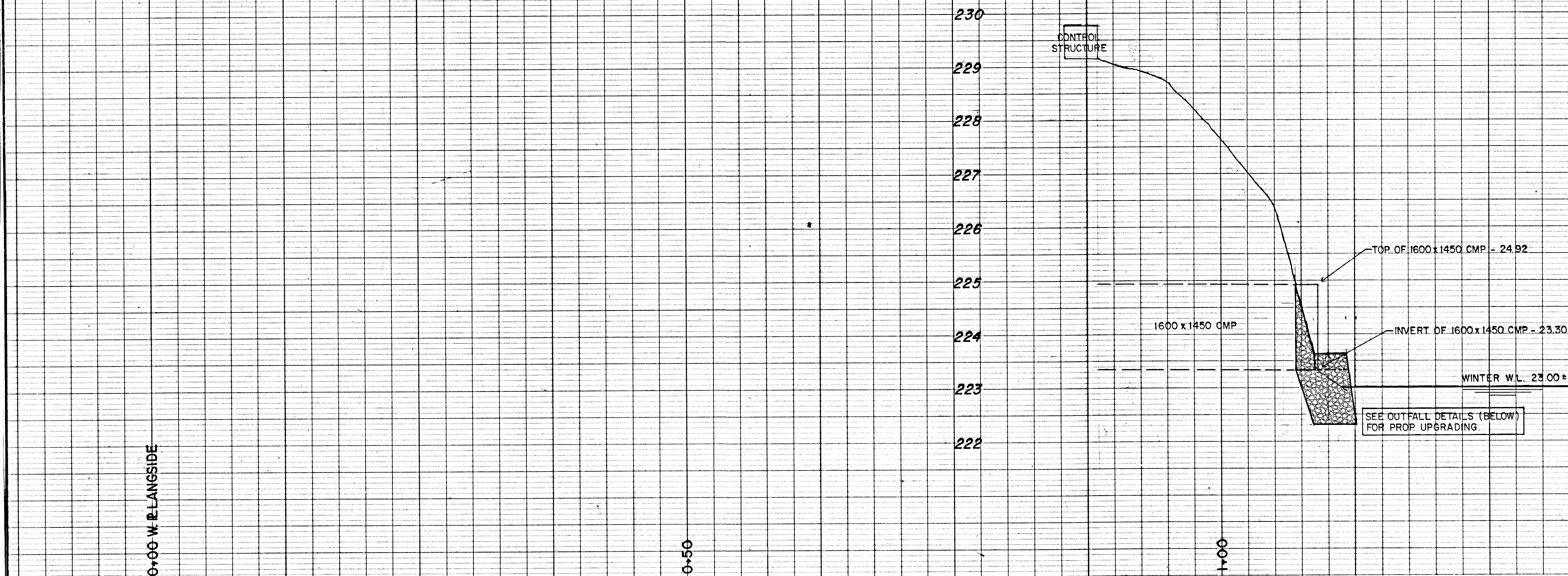
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DECEMBER 2, 1935

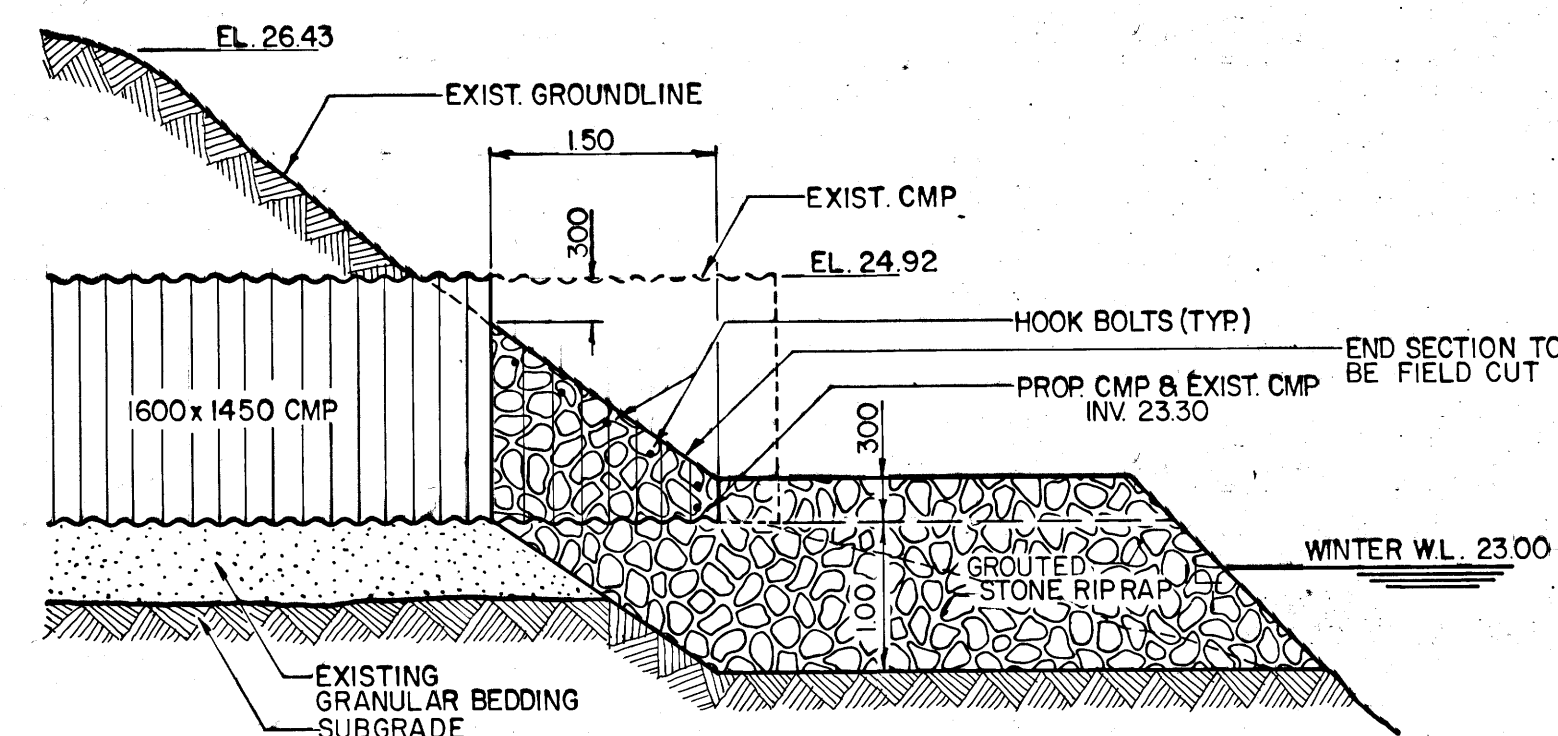
Revised April 20, 1936

REF. or DRAWING No.

DETAILS
File # 0010106



OUTFALL DETAIL - PLAN VIEW



OUTFALL DETAIL - ELEVATION

RECORD DRAWING PD. 86-33

[illegible]

LOCATION	APPROVED
UNDERGROUND	STRUCTURES

SUPV. U/G STRUCTURES _____ DATE _____
COMMITTEE _____

NOTE:

LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

B.M.	37-051
ELEV.	232.197 m



UMA Engineering Ltd
Engineers & Planners
Winnipeg, Manitoba, Canada R3T 1L7

DESIGNED

DRAWN BY: JWT

HOR. SCALE: 1 : 250

DATE _____

CHECKED BY CCM

APPROVED: *Feb 6/66*
BY: *P*

RELEASED FOR
CONSTRUCTION:

DATE 19860320

ENGINEER'S SEAL

PROVINCE OF MANITOBA

06 FEB 84

C.C. MACEY

CCM

REGISTERED ENGINEER

CONSULTANT DRAWING NO.
02-3484-012-01



THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
OPERATIONS DEPARTMENT - DISTRICT 1

CORNISH AVENUE OUTFALL PROPOSED UPGRADING SITE PLAN, PROFILE AND DETAILS

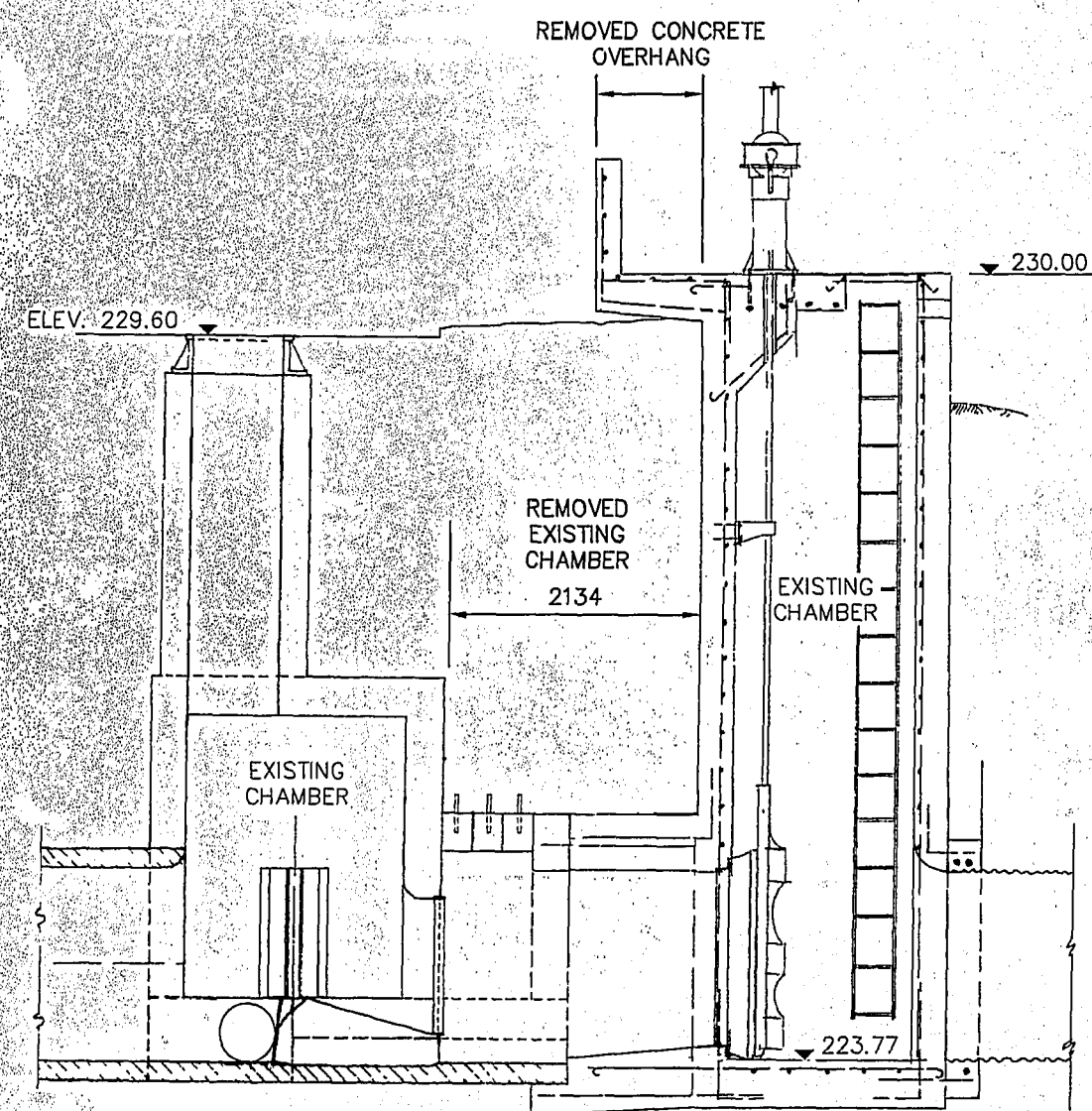
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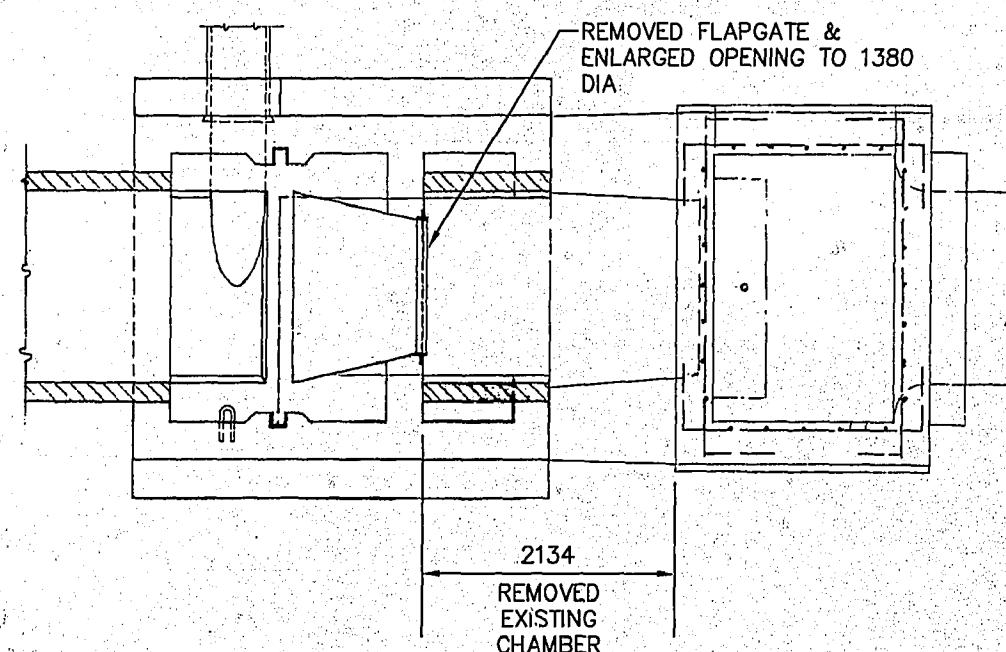
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FILE # 0010106

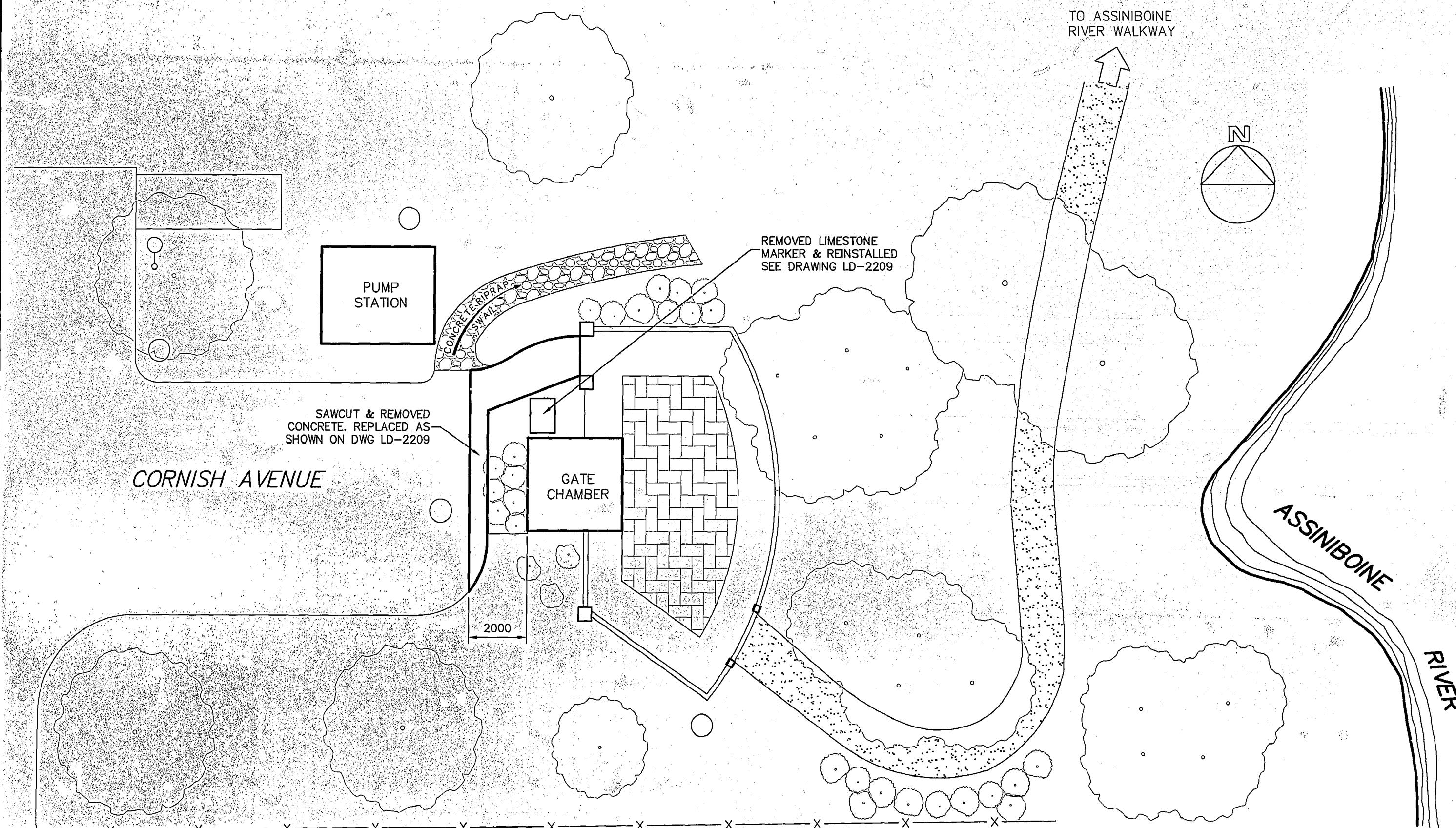
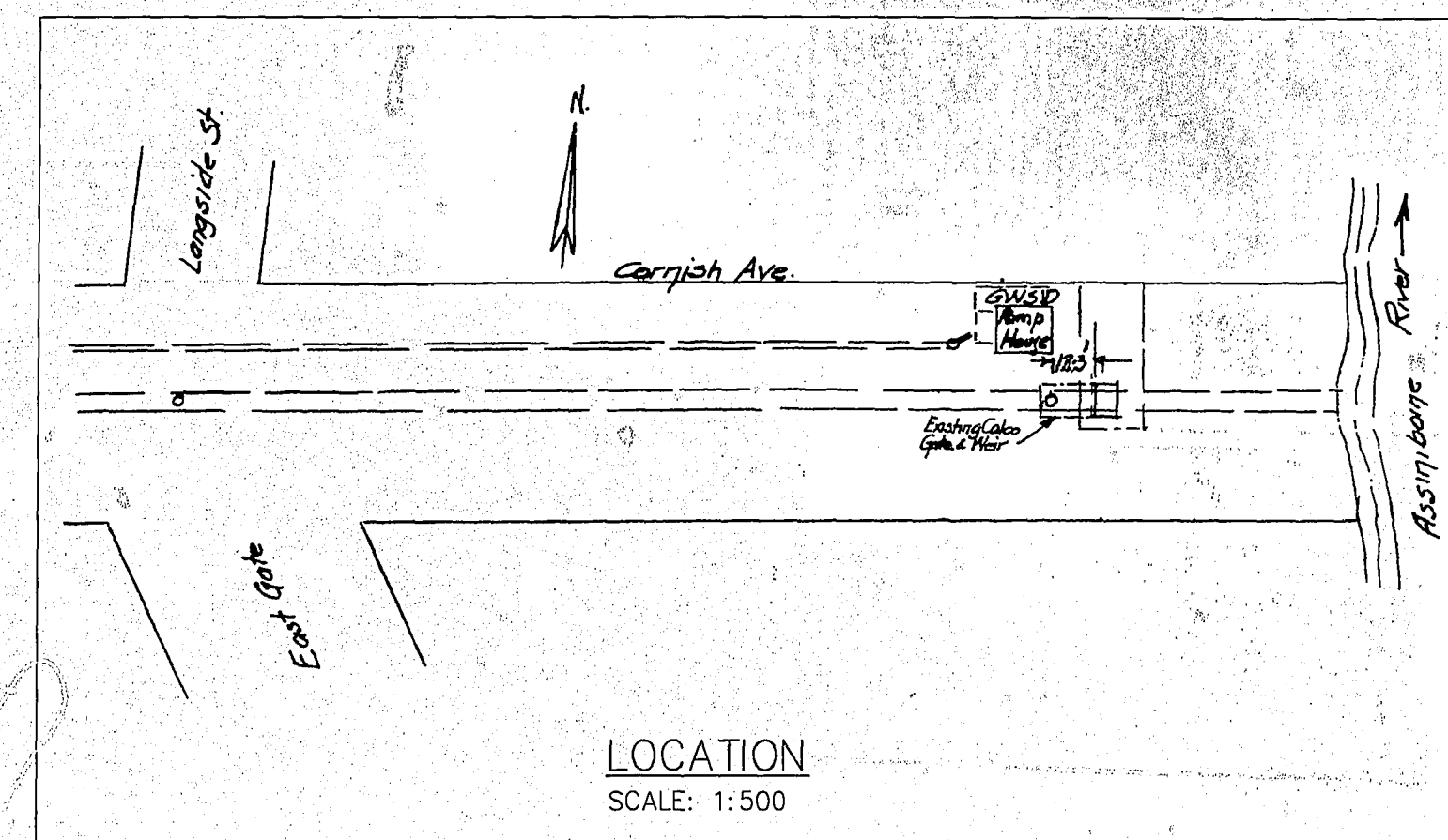
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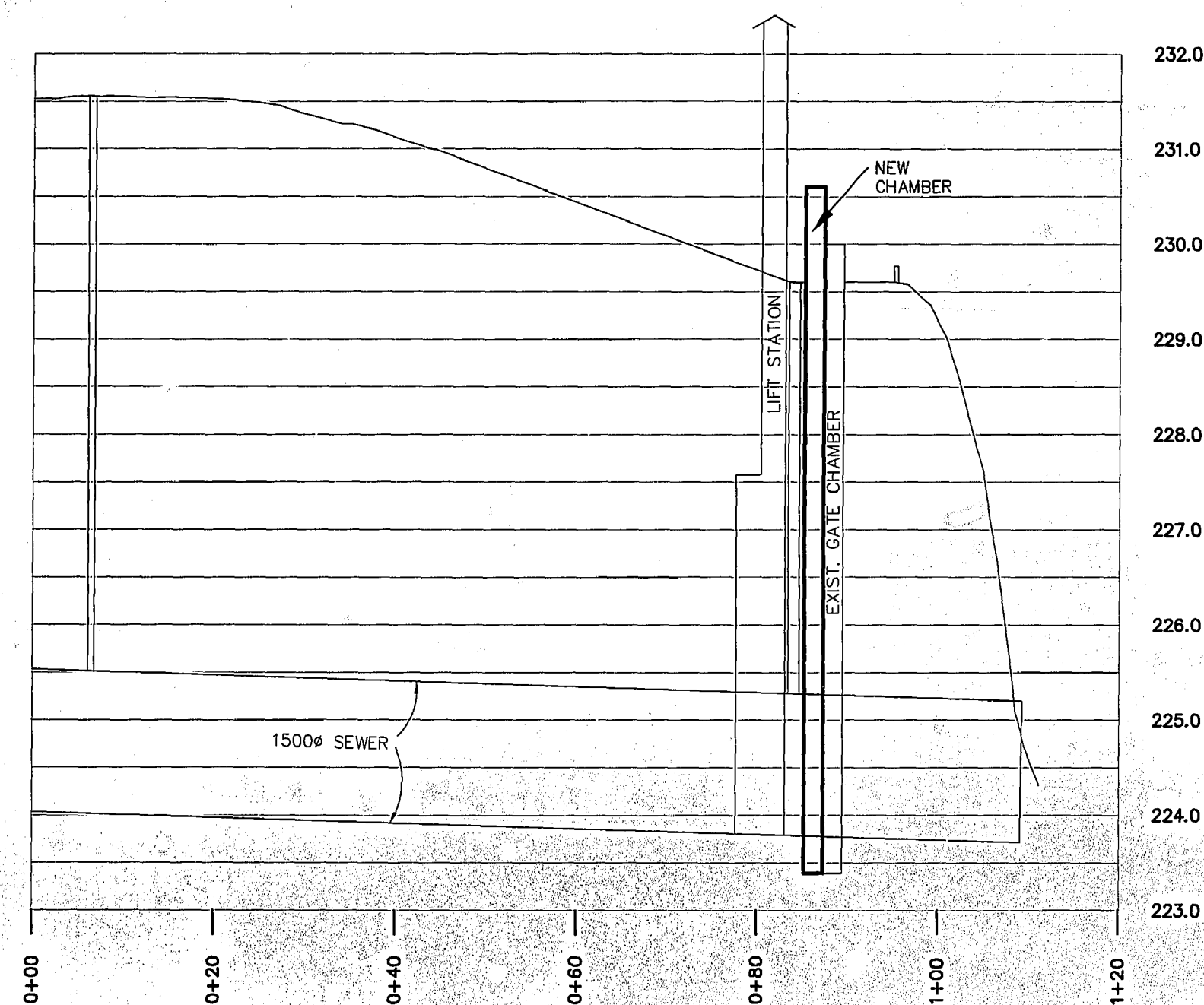
SCALE: 1:50



SCALE: 1:50



SITE PLAN
SCALE: 1:100



PROFILE

HOR. SCALE: 1:500
VER. SCALE: 1:50

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

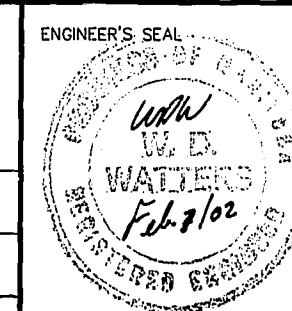
AS-CONSTRUCTED

Leahna K. Dutton 02.01.23
CONTRACT ADMINISTRATION DRAFTING & GRAPHIC SERVICES
WATER AND WASTE DEPARTMENT

B.M. ELEV.		FIELD BOOK #	
POSTED TO LBIS			
1	REVISED TO AS BUILT	01.11.07	MZ
NO.	REVISIONS	DATE	BY

**CITY OF WINNIPEG
WATER AND WASTE
ENGINEERING DIVISION**

DESIGNED BY	JE	CHECKED BY	JE
DRAWN BY	DS	APPROVED BY	WDW
HOR. SCALE AS SHOWN		RELEASED FOR CONSTRUCTION	
VERTICAL AS SHOWN		DATE	
2000 10 18			

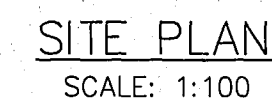
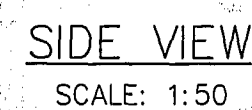
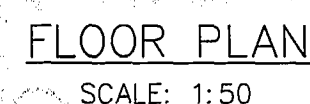


PLOT DATE: 2001 12 04

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

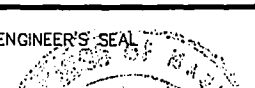
CORNISH GATE CHAMBER
DEMOLITION DRAWING AND
SITE PLAN

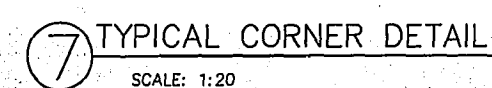
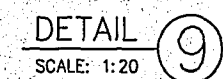
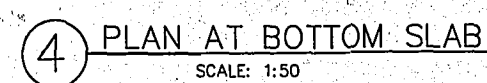
SHEET 1 OF 4
CITY DRAWING NUMBER
LD-2208



METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

Labrie K. Valta 02-01-23
CONTRACT DRAFTING & GRAPHIC DATE
ADMINISTRATION SERVICES
WATER AND WASTE DEPARTMENT

B.M. ELEV.		FIELD BOOK #:		CITY OF WINNIPEG WATER AND WASTE ENGINEERING DIVISION				 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT	
POSTED TO LBIS									
				DESIGNED BY JE	CHECKED BY JE	CORNISH GATE CHAMBER		SHEET 2 OF 4	
				DRAWN BY DS	APPROVED BY WDW				
				HOR. SCALE AS SHOWN	RELEASED FOR CONSTRUCTION	PLAN AND DETAILS		LD-2209	
				VERTICAL AS SHOWN					
1	REVISED TO AS BUILT	01.11.07	MZ	DATE 2000 10 18	DATE	PLOT DATE: 2001 12 04			
NO.	REVISIONS	DATE	BY						

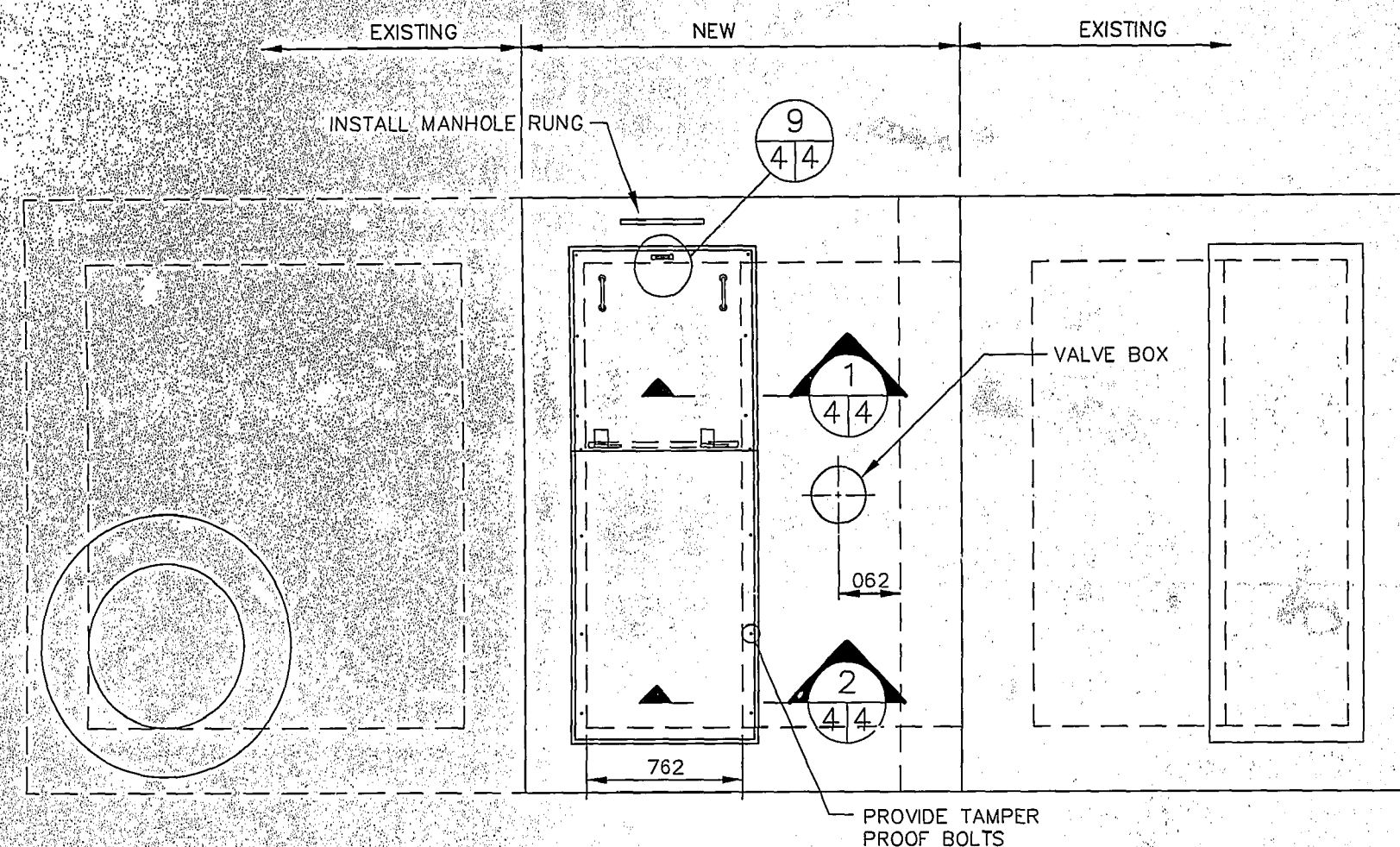


- 1). ALL CONCRETE HAS A MINIMUM COMPRESSIVE STRENGTH OF 30 MPa AT 28 DAYS AND CEMENT IS TYPE 50 SULPHATE RESISTANT.
- 2). REINFORCEMENT IS NEW DEFORMED BILLET STEEL BAR CONFORMING TO CSA G30.18-92M GRADE 400 MPa
- 3). UNLESS NOTED OTHERWISE CLEAR CONCRETE OVER REINFORCING STEEL IS:
 - CONCRETE CAST AGAINST EARTH 75 mm
 - ALL OTHER CONCRETE 50 mm

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

L. L. Smith K. V. Valters 02.01.23
CONTRACT DRAFTING & GRAPHIC DATE
ADMINISTRATION SERVICES
WATER AND WASTE DEPARTMENT

B.M. ELEV.		FIELD BOOK #:		CITY OF WINNIPEG WATER AND WASTE ENGINEERING DIVISION		ENGINEER'S SEAL PROVINCE OF MANITOBA D.H. ROBBINS Dec-18/01 REGISTERED ENGINEER		 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT	
POSTED TO LBIS						CORNISH GATE CHAMBER		SHEET 3 OF 4	
				DESIGNED BY DHR	CHECKED BY DHR			REINFORCING DETAILS	
				DRAWN BY DS	APPROVED BY WDW				
				HOR. SCALE AS SHOWN		RELEASED FOR CONSTRUCTION			
				VERTICAL					
1	REVISED TO AS BUILT		01.11.07	MZ					
NO.	REVISIONS	DATE	BY	DATE	2000 10 18	DATE		PLOT DATE: 2001 12 18	



ROOF ACCESS PLAN

SCALE 1:25

892 X 1344 X 9 ALUMINUM TREAD PLATE HATCH COVER BOLTED TO ALUMINUM FRAME

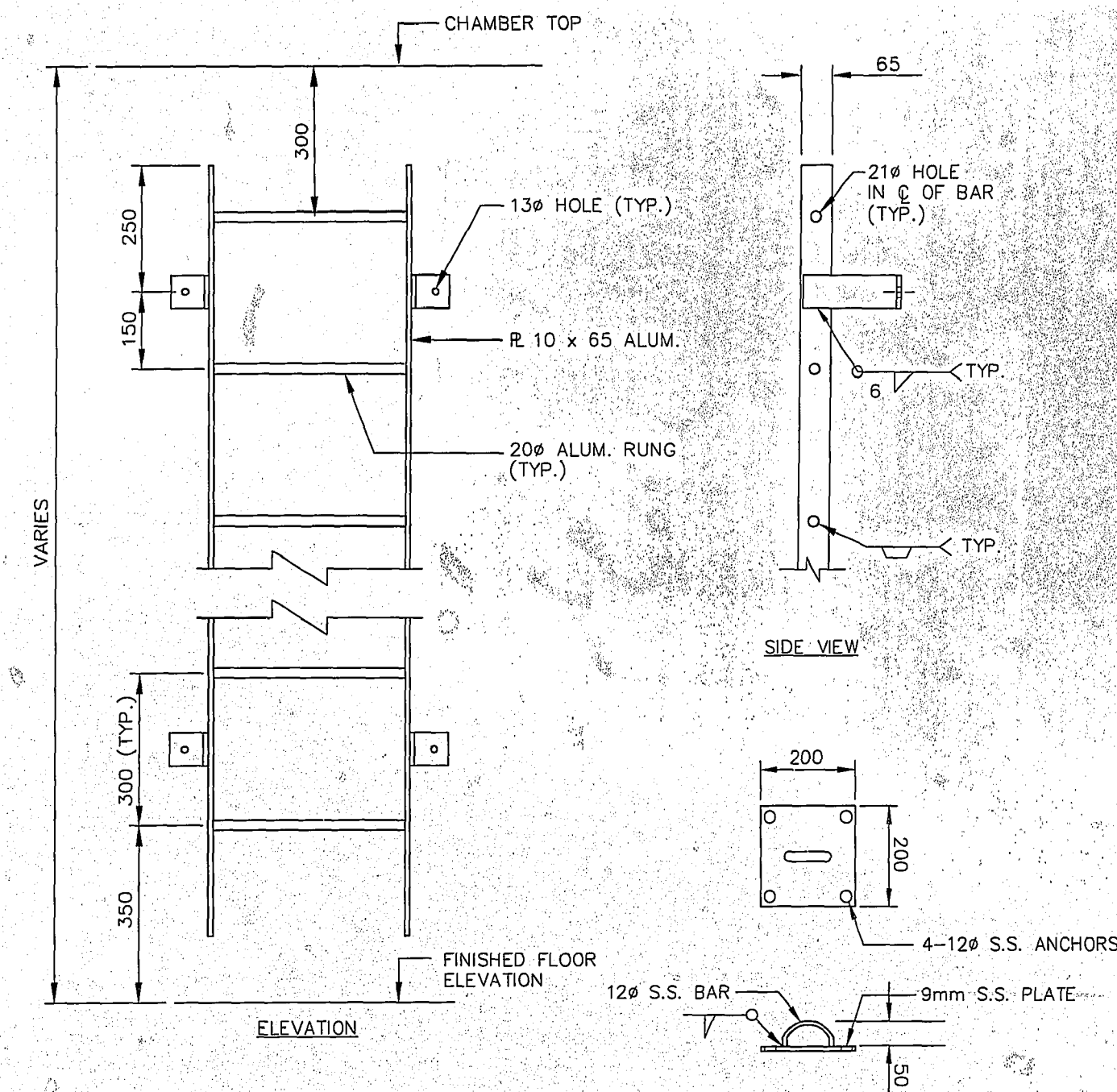
L 75 X 75 X 6 ALUMINUM

892 X 920 X 9 ALUMINUM TREAD PLATE HATCH COVER C/W HASP FOR LOCK

HANDLE (TYP.)

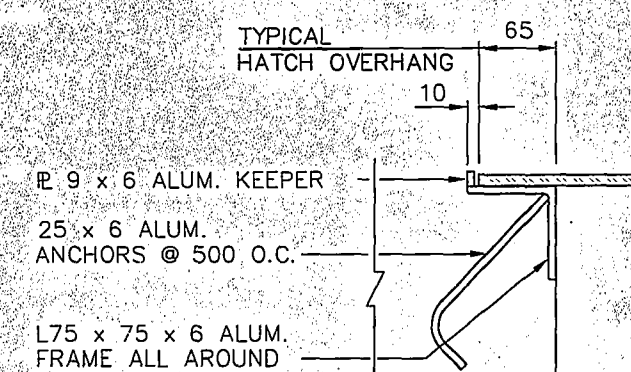
ACCESS HATCH DETAIL

SCALE 1:15



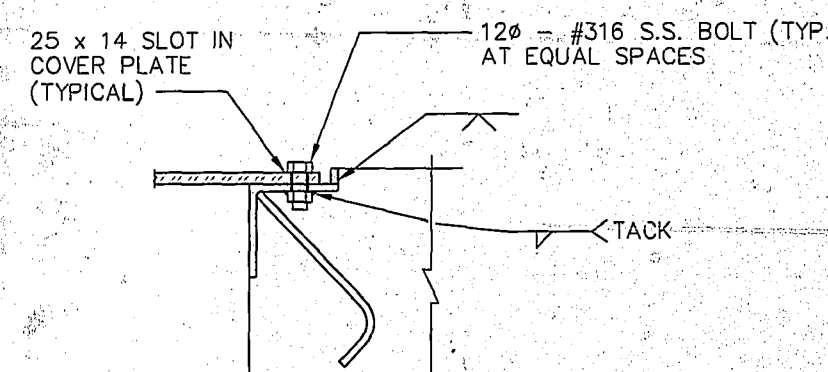
DETAIL 7

SCALE 1:10



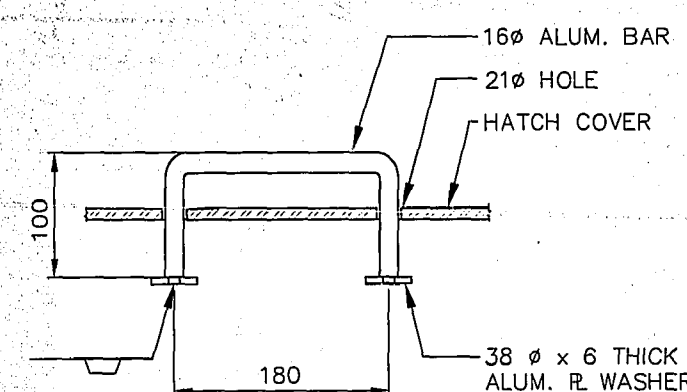
SECTION 1

SCALE 1:5



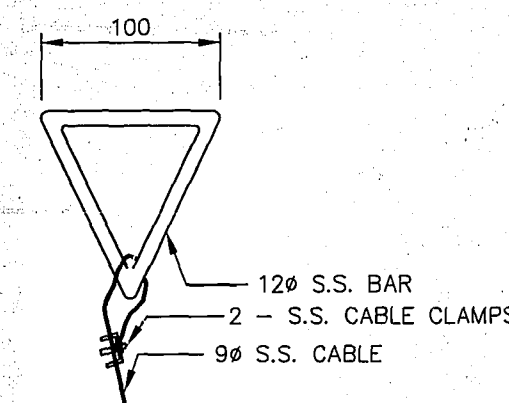
SECTION 2

SCALE 1:5



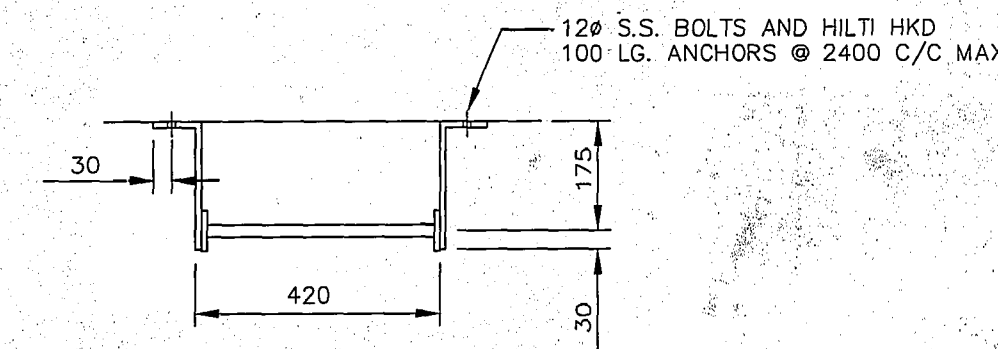
SECTION 4

SCALE 1:5



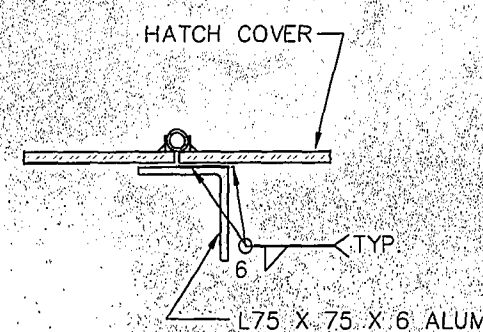
DETAIL 10

SCALE 1:5



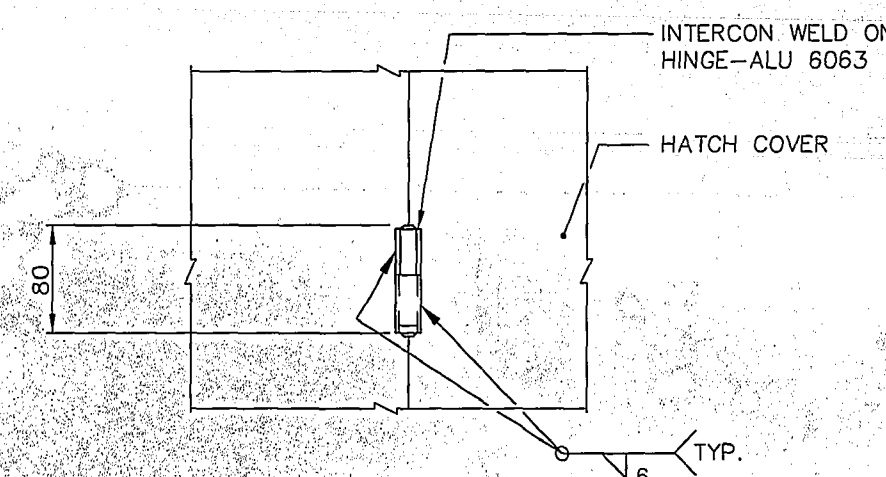
LADDER DETAIL

SCALE 1:10



SECTION 3

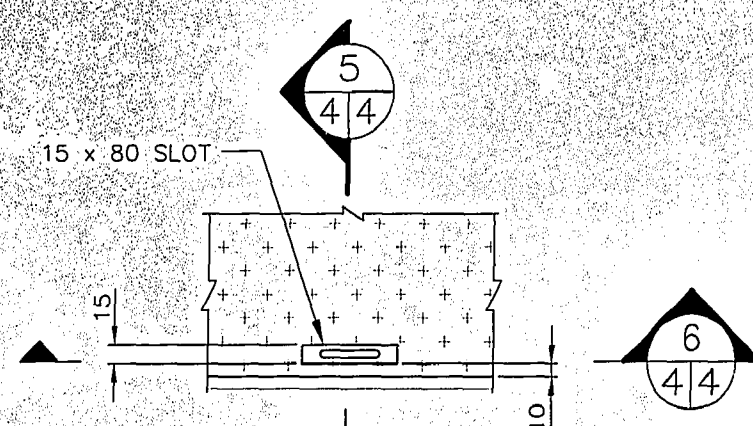
SCALE 1:5



NOTE: HINGE VIEW FROM TOP

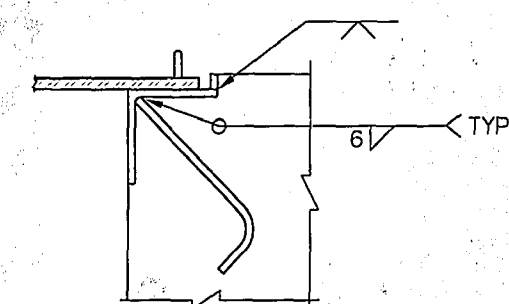
SECTION 8

SCALE 1:5



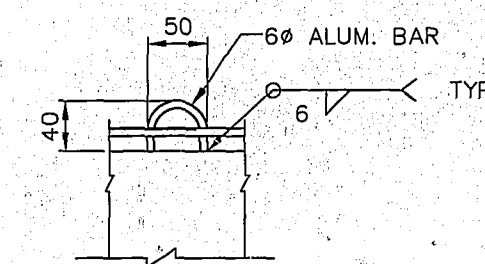
DETAIL 9

SCALE 1:5



SECTION 5

SCALE 1:5

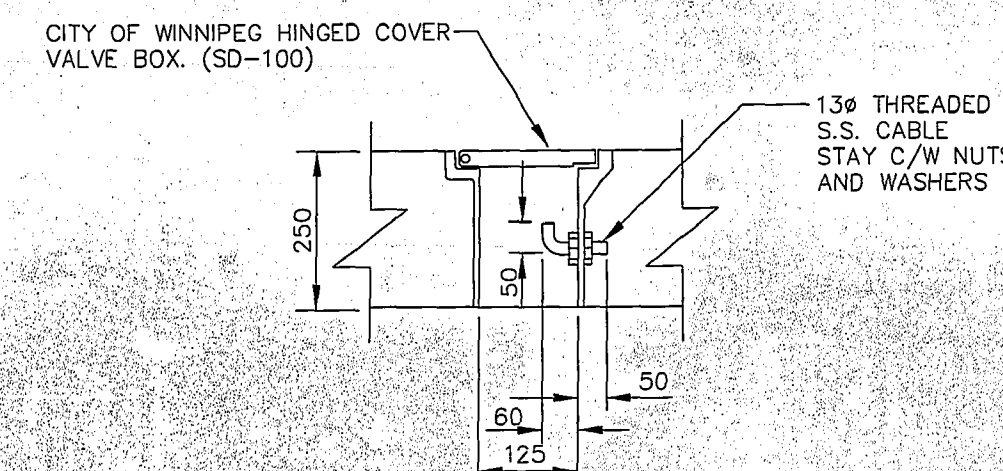


SECTION 6

SCALE 1:5

NOTES:

- ALL ALUMINUM CONFORM TO THE ALUMINUM ASSOCIATION "SPECIFICATIONS FOR ALUMINUM STRUCTURES" - LATEST ADDITION. ALUMINUM FOR PLATES TYPE 5086
- ALL ALUMINUM IN CONTACT WITH CONCRETE OR CAST INTO CONCRETE HAS BITUMINOUS ISOLATION COATING.
- ALL NUTS, BOLTS AND ANCHORS CONFORM TO ASTM A276 TYPE # 316 STAINLESS STEEL.



DETAIL 11

SCALE 1:10

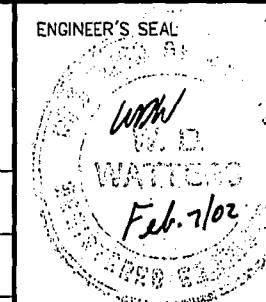
AS-CONSTRUCTED

CONTRACT ADMINISTRATION
DRAFTING & GRAPHIC SERVICES
WATER AND WASTE DEPARTMENT

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

B.M. ELEV.				CITY OF WINNIPEG WATER AND WASTE ENGINEERING DIVISION		ENGINEER'S SEAL	THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT	
				DESIGNED BY	JE	CHECKED BY	JE	CORNISH GATE CHAMBER
				DRAWN BY	DS	APPROVED BY	WDW	MISCELLANEOUS METAL DETAILS
				HOR. SCALE	AS NOTED	RELEASED FOR CONSTRUCTION		SHEET 4 OF 4
				VERTICAL	AS NOTED			LD-2211
2	REVISED TO AS BUILT	01.11.07	MZ	DATE	2000 10 18	DATE		
1	REVISIONS	99.10.01	MZ	DATE		DATE		
	NO. REVISIONS							



Winnipeg

CORNISH GATE CHAMBER

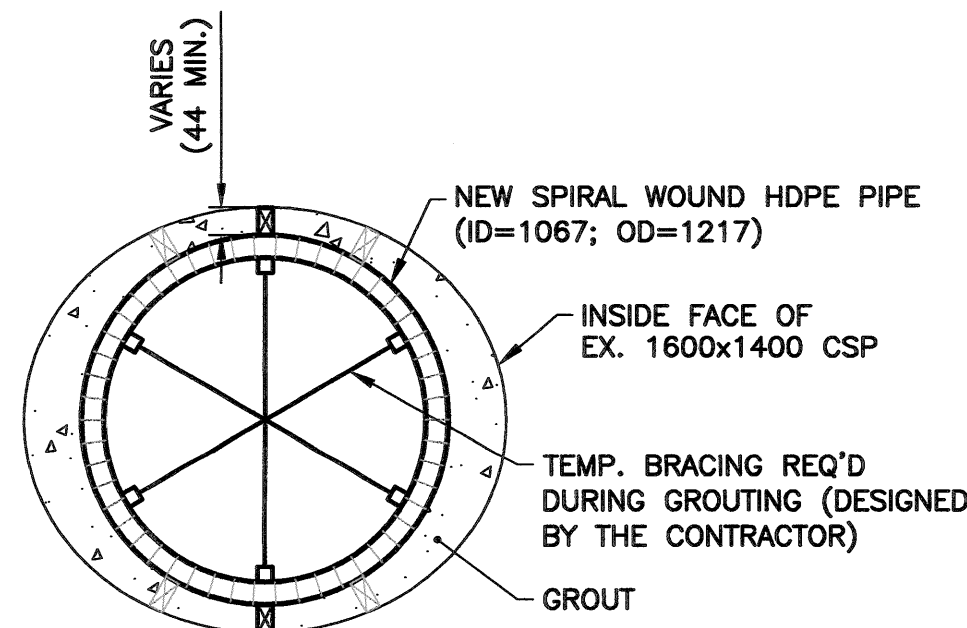
MISCELLANEOUS METAL
DETAILS

SHEET 4 OF 4

LD-2211

PLOT DATE: 2002 01 08

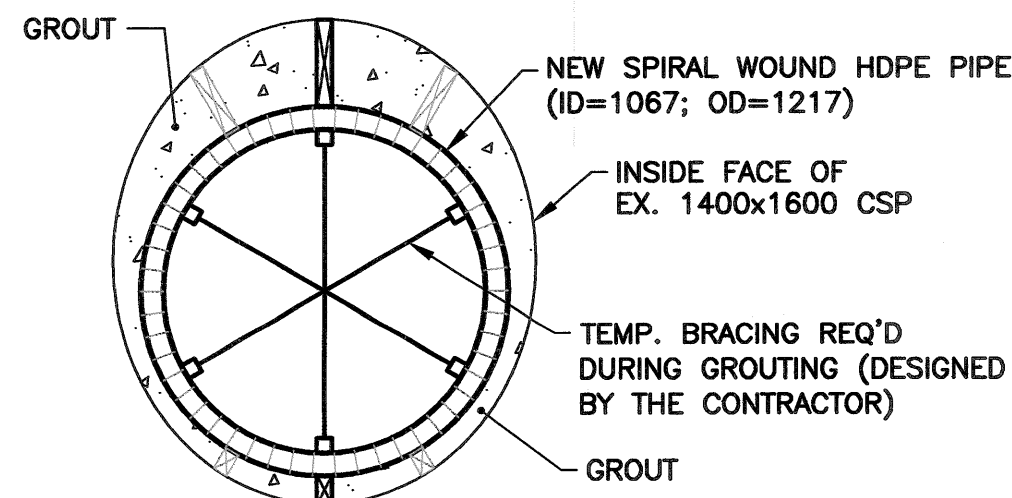
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A1: PLOT SCALE=1:1



SECTION A - A

SCALE: 1:25

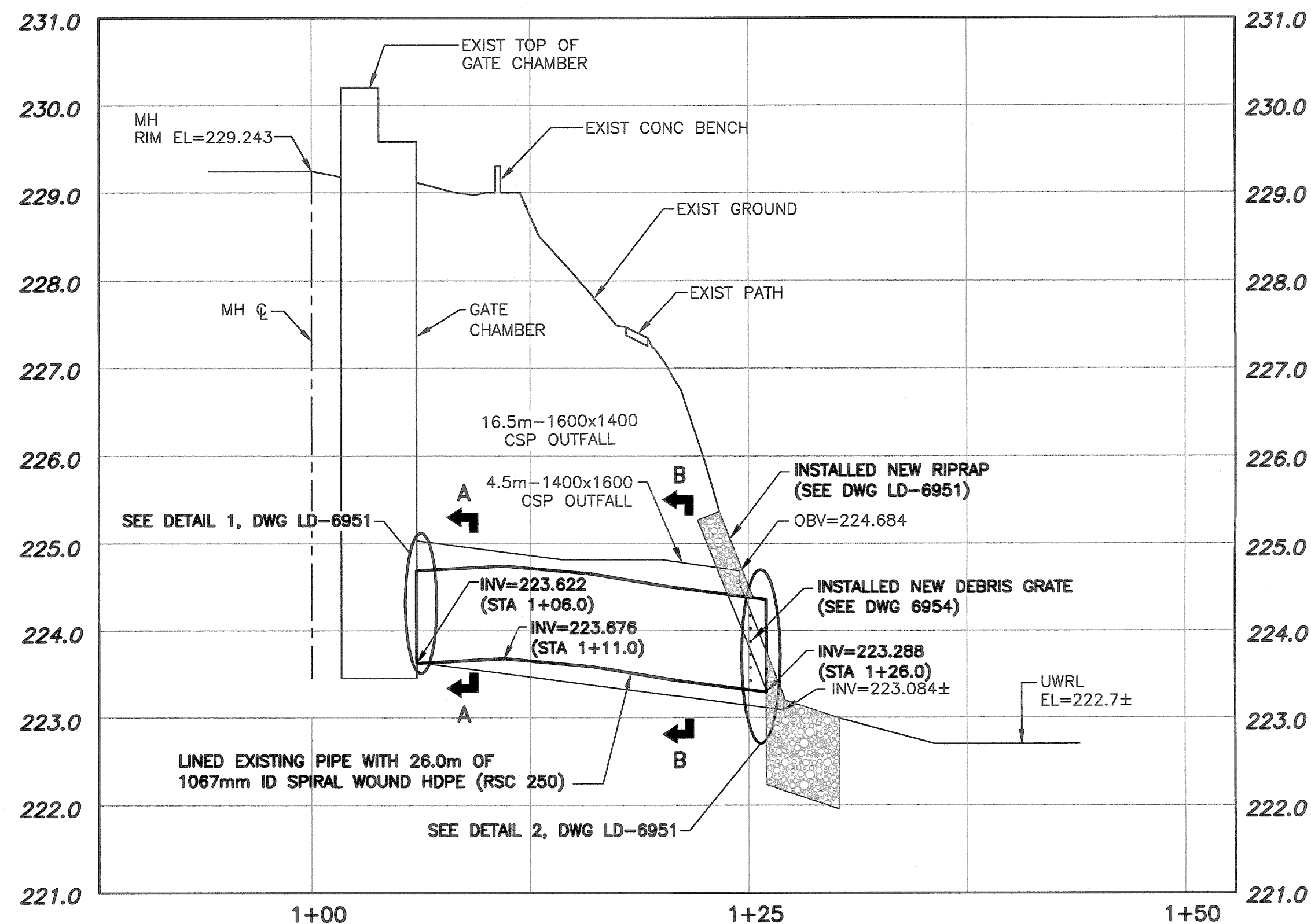
NOTE:
INSTALLATION OF SPIRAL WOUND HDPE REQUIRED SPACERS AND OR WEIGHTS TO ENSURE LINER REMAIN IN DESIGNED POSITION (SPACERS DESIGNED BY THE CONTRACTOR)



SECTION B - B

SCALE: 1:25

MATERIALS LIST						
SEWER						
ITEM	MANUFACTURER	MODEL	DIMENSION RATIO	PRESSURE CLASS	MATERIAL	TYPE
1067 SPIRAL WOUND HDPE	KWH				HDPE	
DEBRIS GRATE	ATLANTIC INDUSTRIAL LTD.					
SAFETY RING	A POST					
CONTRACTOR: TRI-CORE PROJECTS MANITOBA LTD						



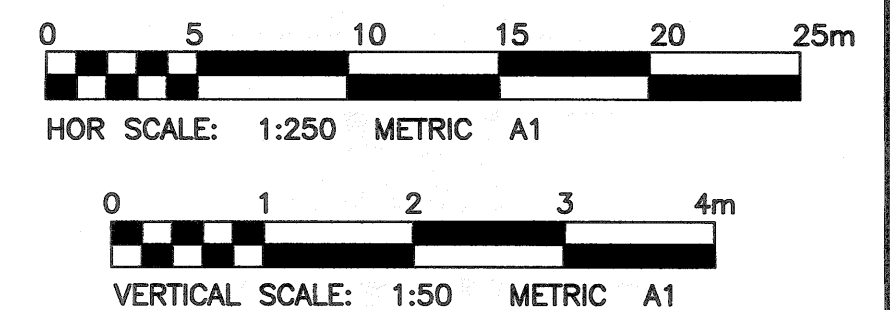
NOTE:
CHAINAGE RUNS ALONG CENTER LINE OF NEW OUTFALL. STATION 1+00 IS CENTER LINE OF EXISTING MANHOLE AT WEST END OF EXISTING GATE CHAMBER

NOTE:

- ALL EXCAVATED MATERIAL REMOVED OFF SITE.
- RIPRAP ABOVE THE UWRL (222.7±) SUBCUT INTO THE BANK.

RECORD DRAWING

PROJECT COMPLETION DATE 13/12/02
CONTRACTOR: TRI-CORE PROJECTS MANITOBA LTD.



METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES



Certificate of Authorization

KGS Group

No. 245



THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

PROJECT TITLE

2012 OUTFALL RENEWAL/
REHABILITATION PROGRAM

CORNISH AVENUE OUTFALL (AS-88)
PLAN AND PROFILE

SHEET OF

5

9

COMPUTER FILE NAME

12-0107-013

CITY DRAWING NUMBER

LD-6950

300 LBS	LAND DRAINAGE SEWER	300 LBS	TEST HOLE			
250 WWS	WASTE WATER SEWER	250 WWS	GUY WIRE			
	GAS		LIGHT STANDARD			
	HYDRO		BACK OF CURB			
	M.T.S.		CONCRETE			
150 WM	WATERMAIN	150 WM	ASPHALT			
	HYDRANT		SIDEWALK			
	VALVE		PROPERTY LINE			
	MANHOLE		SURVEY BAR			
	CATCH BASIN		GEODETIC BENCHMARK			
	CURB INLET		ELEVATION			
	POLES					
	POLES					
EXISTING	LEGEND-PLAN	PROPOSED	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PROFILE

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE DATE

NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

B.M. KGS BASE ELEV. -

DWGS BASED ON C.S.R.S. NAD 83 SYSTEM, UTM GRID

DESIGNED BY RBO CHECKED BY RJH

DRAWN BY DMW APPROVED BY

1 RECORD DRAWING 20/02/05 RBO

0 ISSUED FOR TENDER 12/11/30 RBO

NO. REVISIONS DATE BY



DESIGNED BY RBO

DRAWN BY DMW

1 RECORD DRAWING

0 ISSUED FOR TENDER

NO. REVISIONS

DATE

BY

CHECKED BY RJH

APPROVED BY

RELEASED FOR CONSTRUCTION:

DATE

YY/MM/DD

DATE

DATE

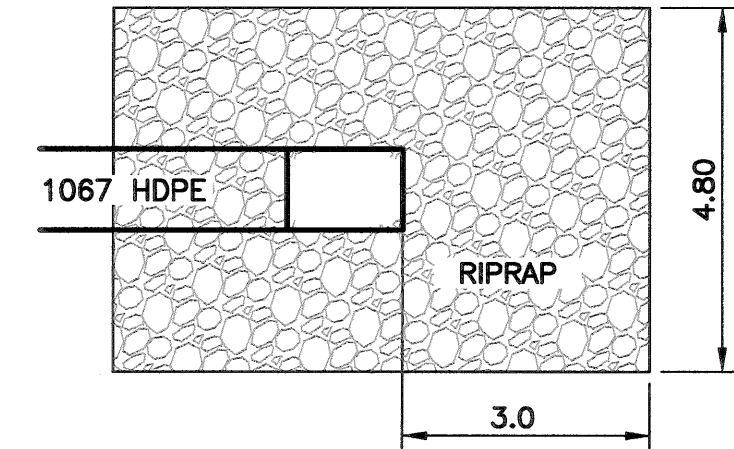
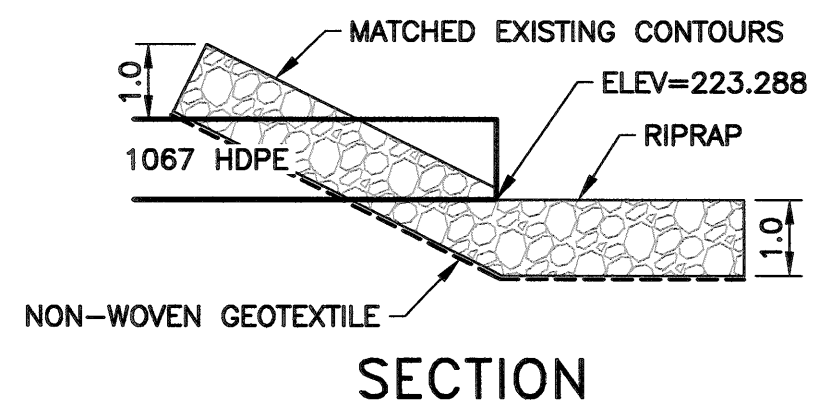
ENGINEER'S SEAL

PROVINCE OF MANITOBA
REGISTERED PROFESSIONAL ENGINEER
R.B. OFFMAN
Member
24701

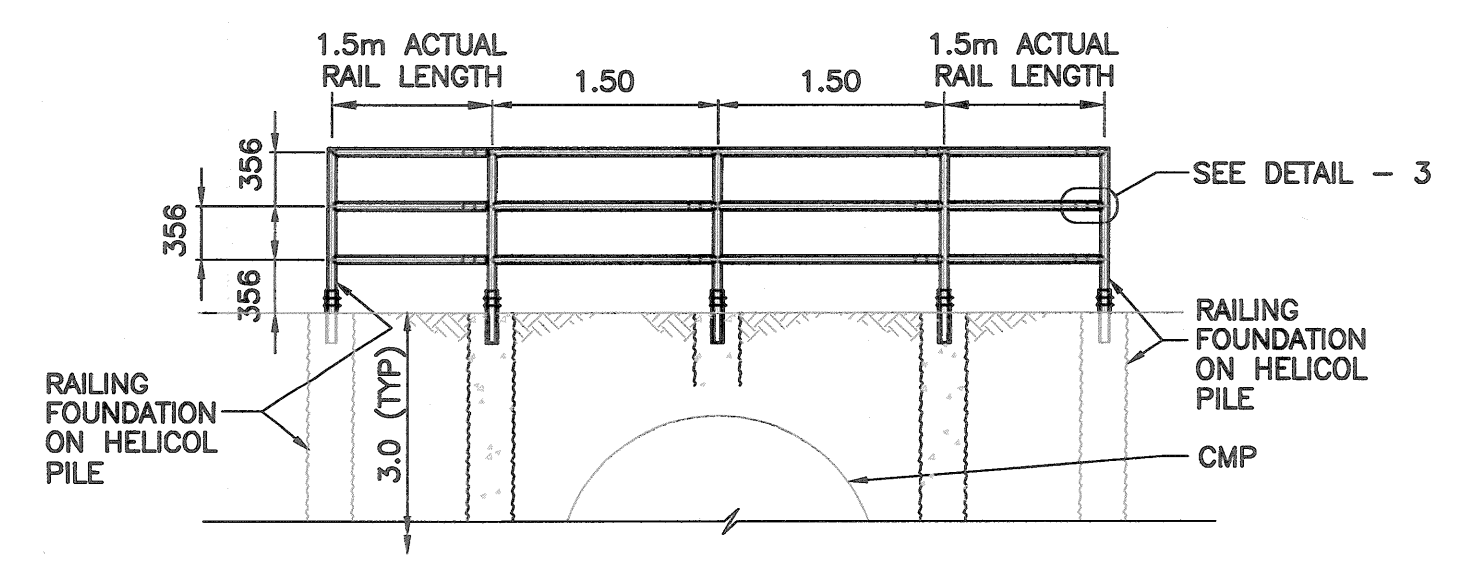
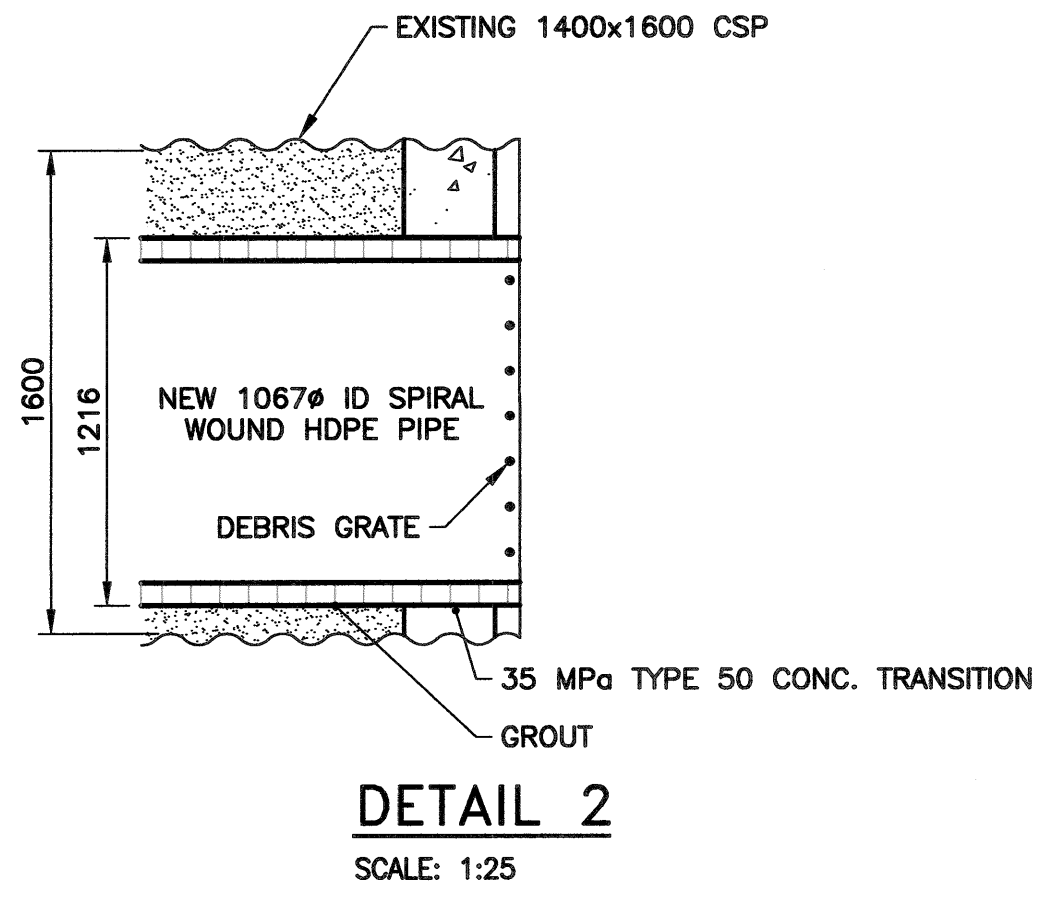
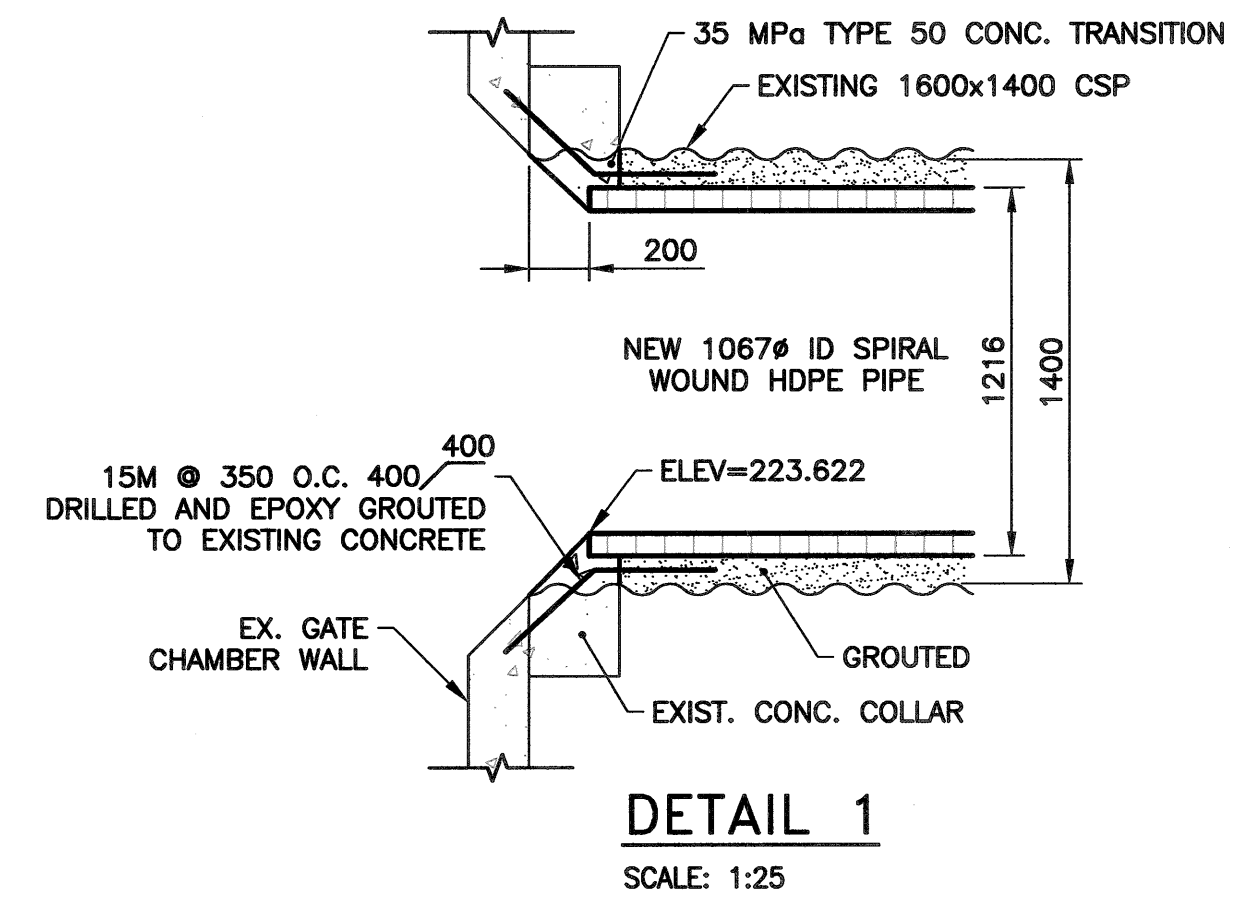
CONSULTANT DRAWING NO.

LD-6950

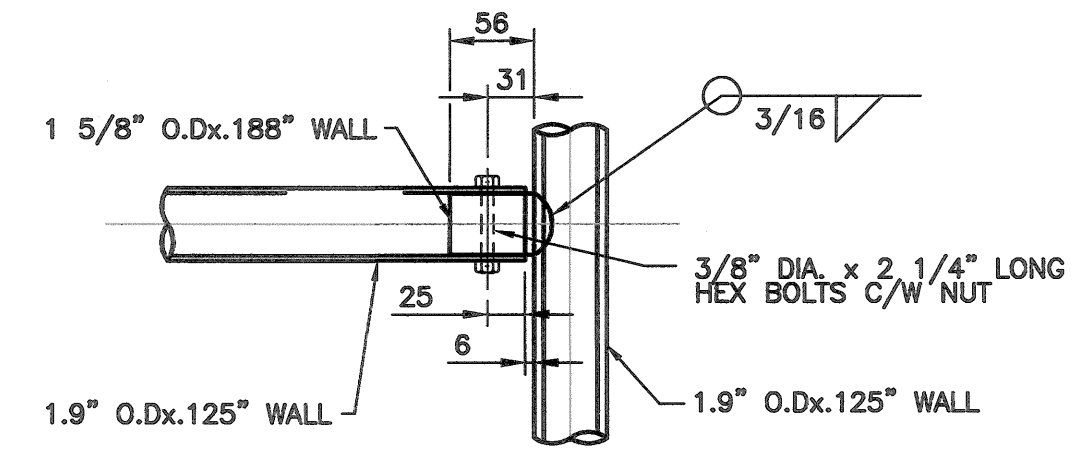
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A11/PLOT SCALE: 1:1



RIPRAP DETAIL
SCALE: 1:100



SAFETY RAILING DETAIL
SCALE: 1:50



DETAIL 3
SCALE: 1:5

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

APEGM

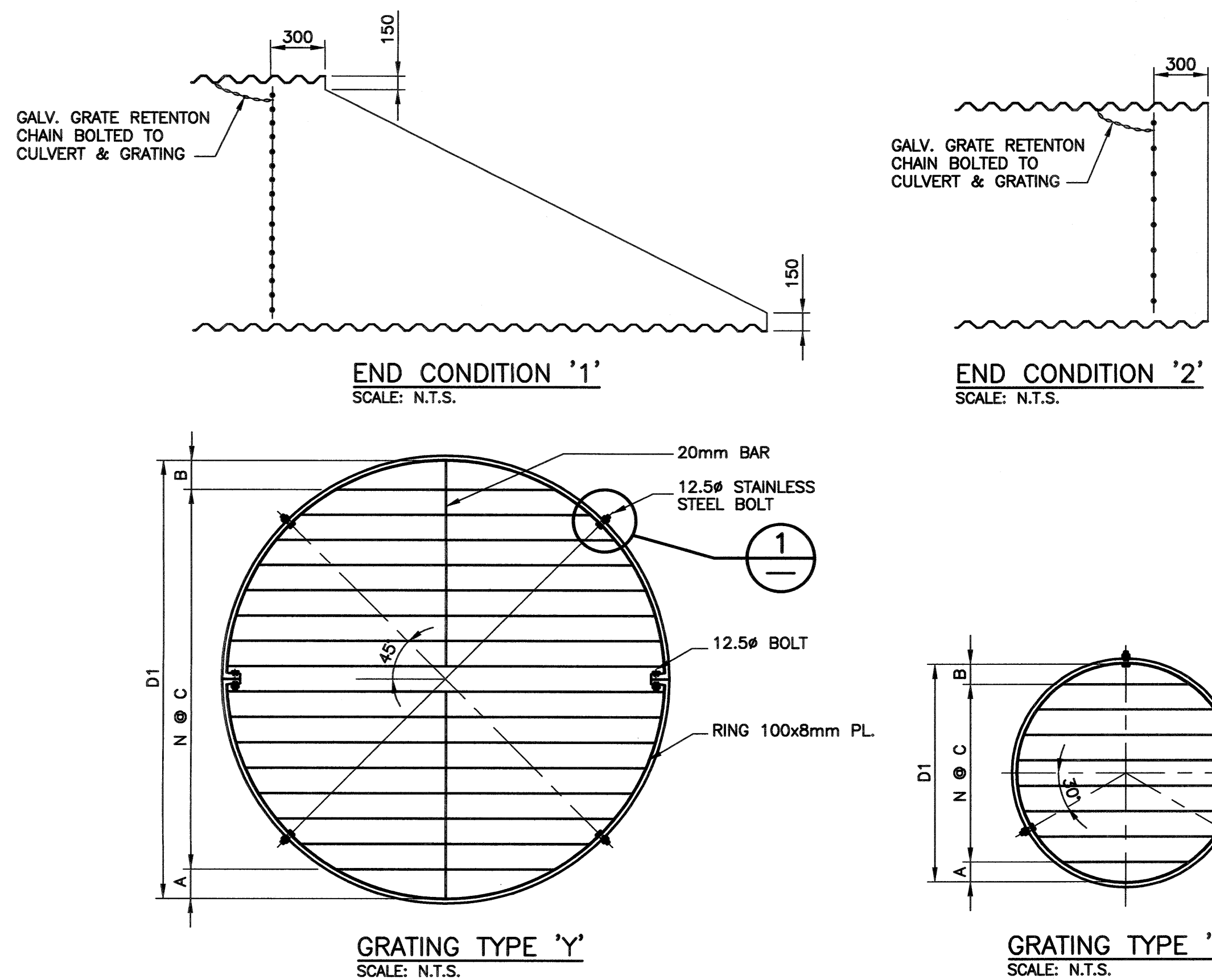
Certificate of Authorization
KGS Group
No. 245

RECORD DRAWING

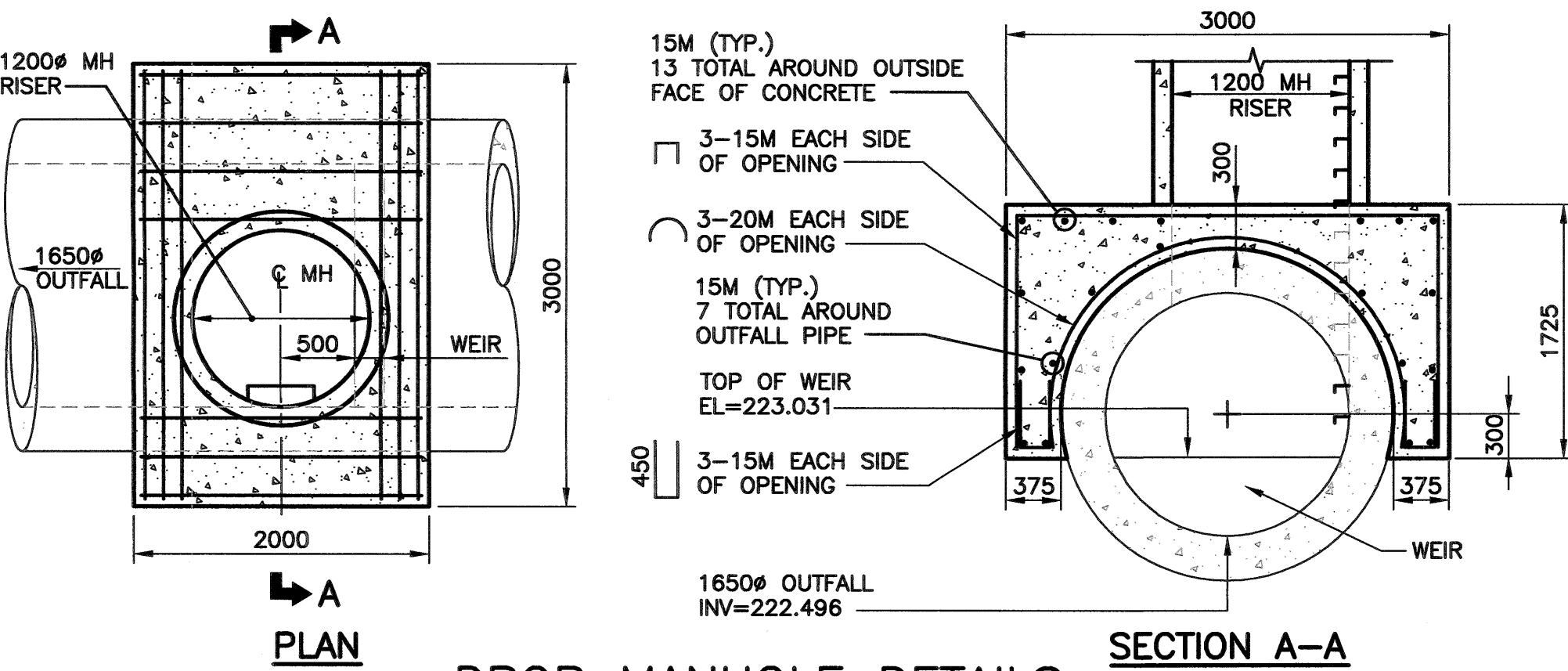
PROJECT COMPLETION DATE 13/12/02
CONTRACTOR: TRI-CORE PROJECTS MANITOBA LTD.

LOCATION APPROVED UNDERGROUND STRUCTURES				B.M. KGS BASE ELEV. -	DWGS BASED ON C.S.R.S. NAD 83 SYSTEM, UTM GRID	KGS GROUP CONSULTING ENGINEERS		ENGINEER'S SEAL	THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT	
SUPV. U/G STRUCTURES COMMITTEE				DATE		DESIGNED BY	RBO	CHECKED BY	RJH	PROJECT TITLE
NOTE:						DRAWN BY	DMW	APPROVED BY		2012 OUTFALL RENEWAL/REHABILITATION PROGRAM
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.						HOR. SCALE: 1:250 VERTICAL: 1:50		RELEASED FOR CONSTRUCTION:		CORNISH AVENUE OUTFALL (AS-88) DETAILS
NO. REVISIONS				DATE	BY	DATE YY/MM/DD		DATE		SHEET 6 OF 9
								CONSULTANT DRAWING NO. LD-6951		COMPUTER FILE NAME 12-0107-013
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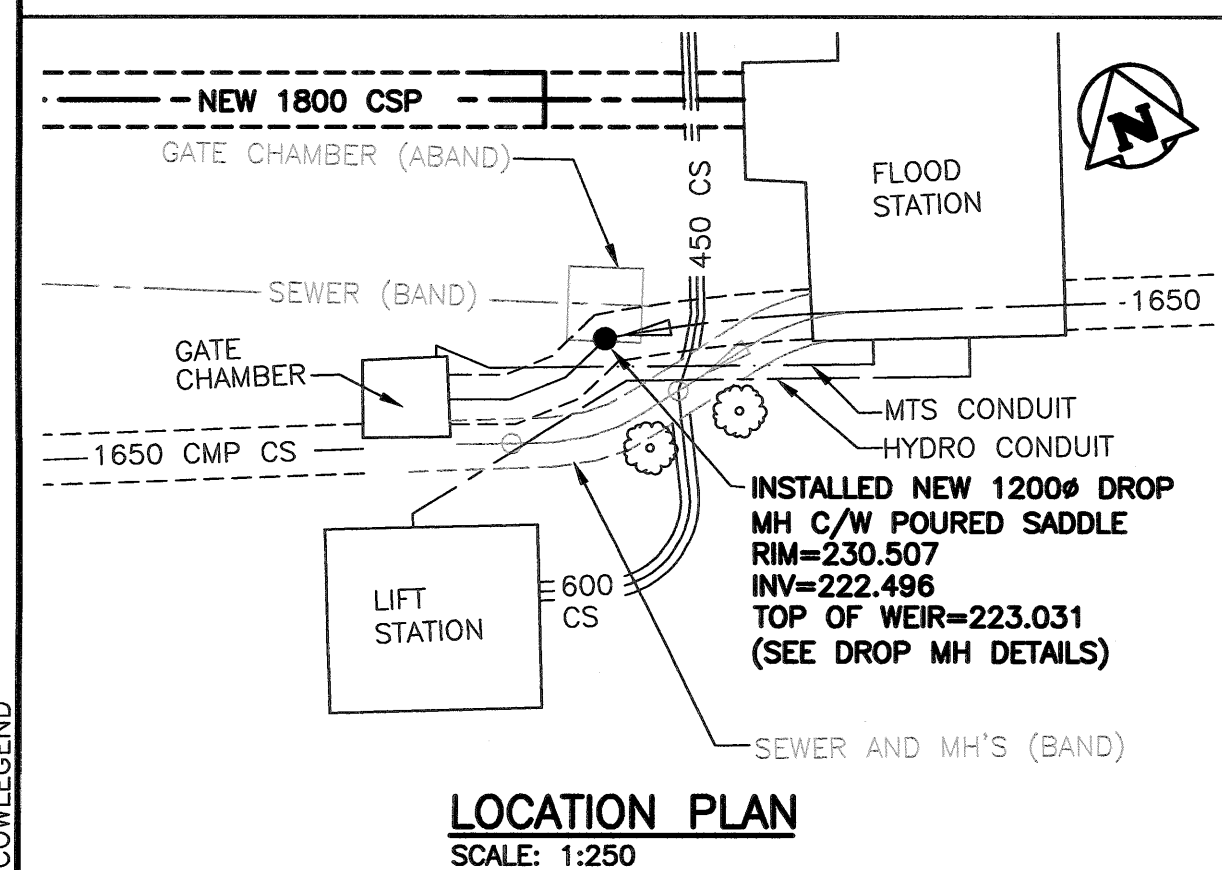
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STANDARD GRATING AND END CONDITION DETAILS



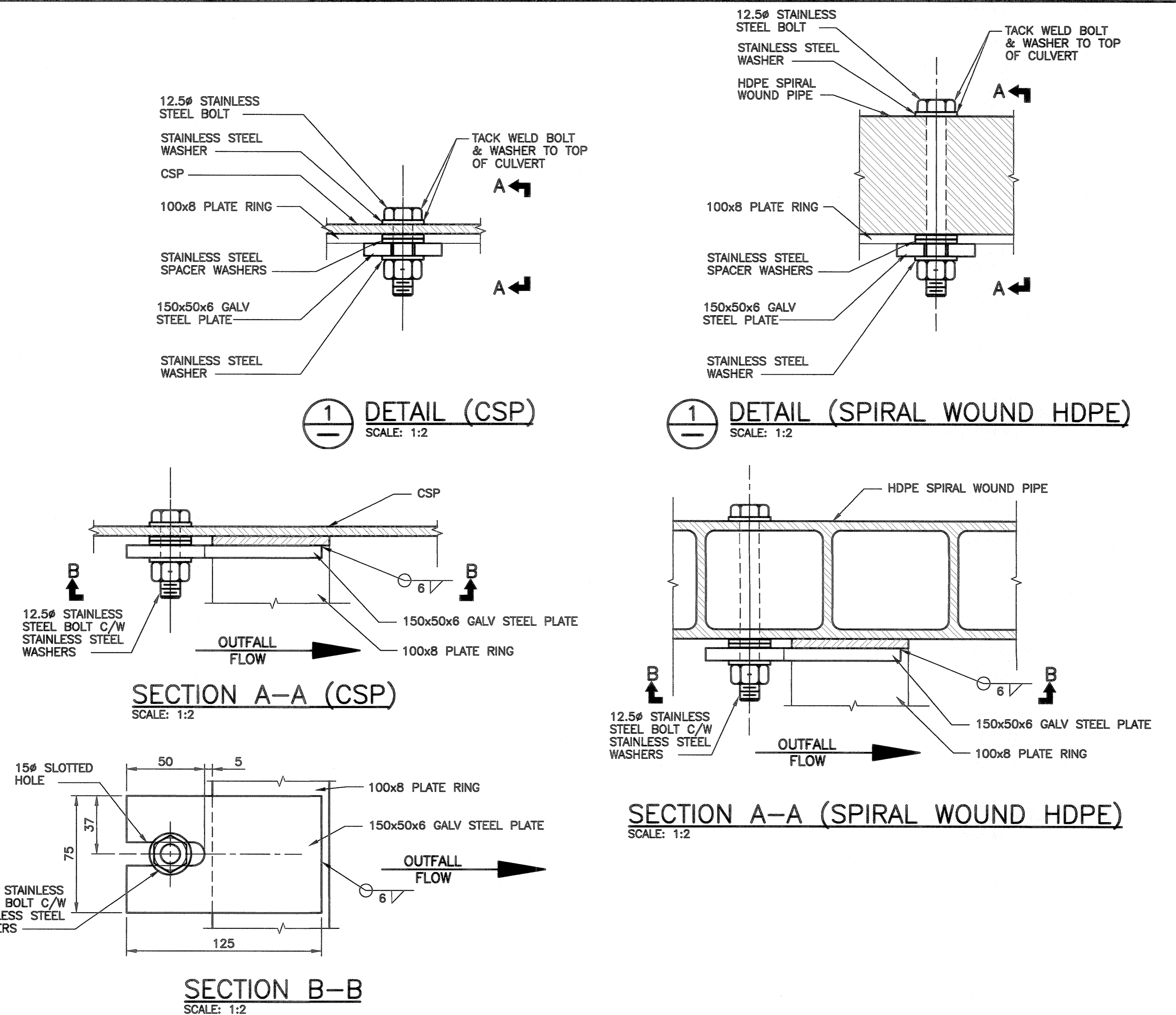
DROP MANHOLE DETAILS



MARION STREET OUTFALL
DROP MANHOLE
SCALE: AS NOTED

MATERIAL LIST		
ITEM	MANUFACTURER	REMARKS
1800 CSP GRATE	ATLANTIC INDUSTRIES	TITON ENVIRONMENTAL
250 CSP VENT	ATLANTIC INDUSTRIES	TITON ENVIRONMENTAL

- NOTE:
1. ALL PLATES AND BARS TO BE CSA G40.21-300W.
 2. ALL COMPONENTS TO BE GALVANIZED.
 3. ALL BOLTS TO BE TYPE 316 STAINLESS STEEL CONFORMING TO ASTM A320 GRADE B8M



INTERNAL SLIP JOINT DETAILS

RECORD DRAWING

PROJECT COMPLETION DATE 13/12/02
CONTRACTOR: TRI-CORE PROJECTS MANITOBA LTD.

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES
COMMITTEE

NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

NO.	REVISIONS	DATE	BY
1	RECORD DRAWING	20/02/05	RBO
0	ISSUED FOR TENDER	12/11/30	RBO

DESIGNED BY	RBO	CHECKED BY	RJH
DRAWN BY	GEL	APPROVED BY	
HOR. SCALE:	AS NOTED	RELEASED FOR CONSTRUCTION:	
VERTICAL:		DATE	

ENGINEER'S SEAL

CONSULTANT DRAWING NO.
LD-6954

THE CITY OF WINNIPEG WATER & WASTE DEPARTMENT	
2012 OUTFALL RENEWAL/ REHABILITATION PROGRAM	SHEET 9 OF 9
MISCELLANEOUS DETAILS	CAD FILE DRAWING NUMBER DETAIL PLOT
	CITY DRAWING NUMBER LD-6954

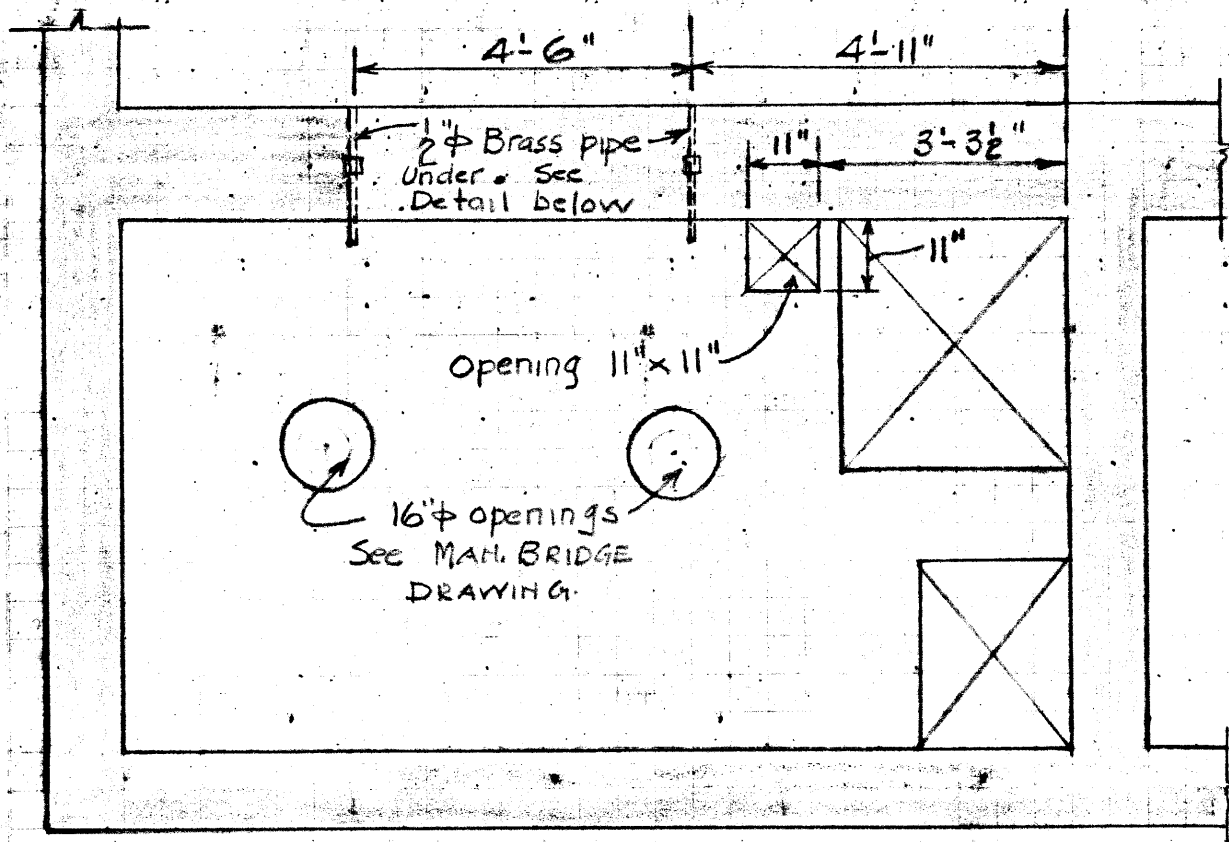
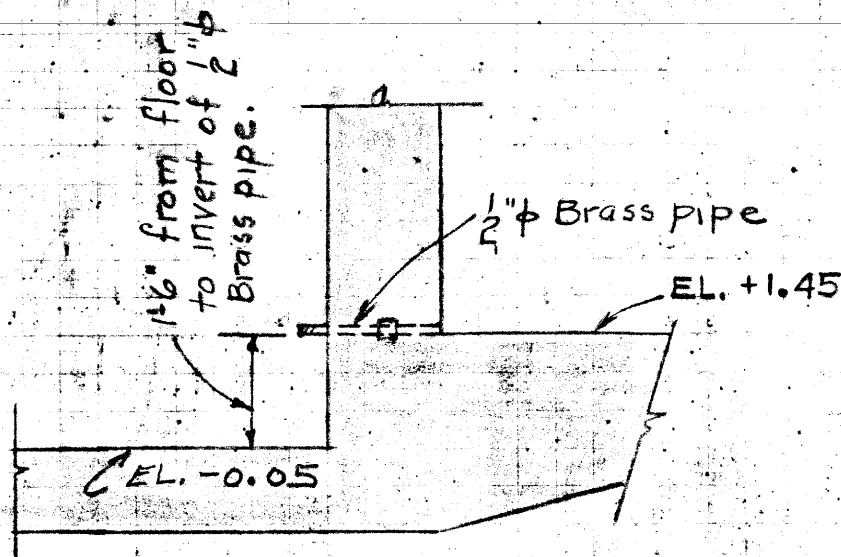
APEGM
Certificate of Authorization
KGS Group
No. 245

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

SUBJECT CORNISH AVE PUMPING STA. No 3DATE July 6 1936SHEETS No. M-34COMPUTED BY F.A.

CHECKED BY

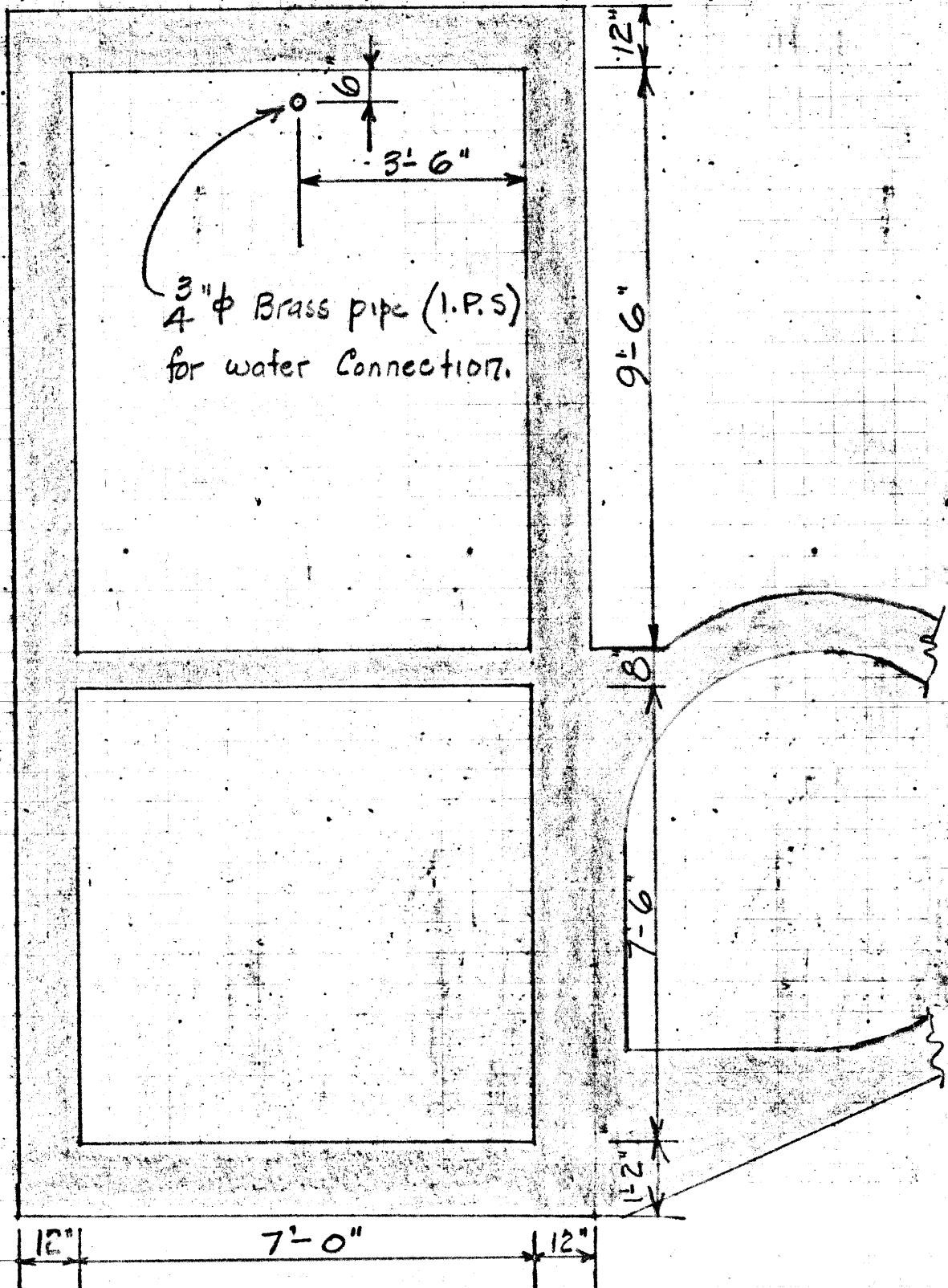
MADE IN CONNECTION WITH

MOTOR ROOM FLOOR PLAN

DETAIL OF 1/2" BRASS PIPE
FROM PUMP CHAMBER TO
STORAGE SUMP.

SUBJECT CORNISH AVE PUMPING STATIONDATE JULY 15 1936SHEETS No. M-38COMPUTED BY Bela

CHECKED BY _____

MADE IN CONNECTION WITH Location of 3" ϕ Water Service Pipe

WEST WALL OF PUMP & MOTOR ROOMS.

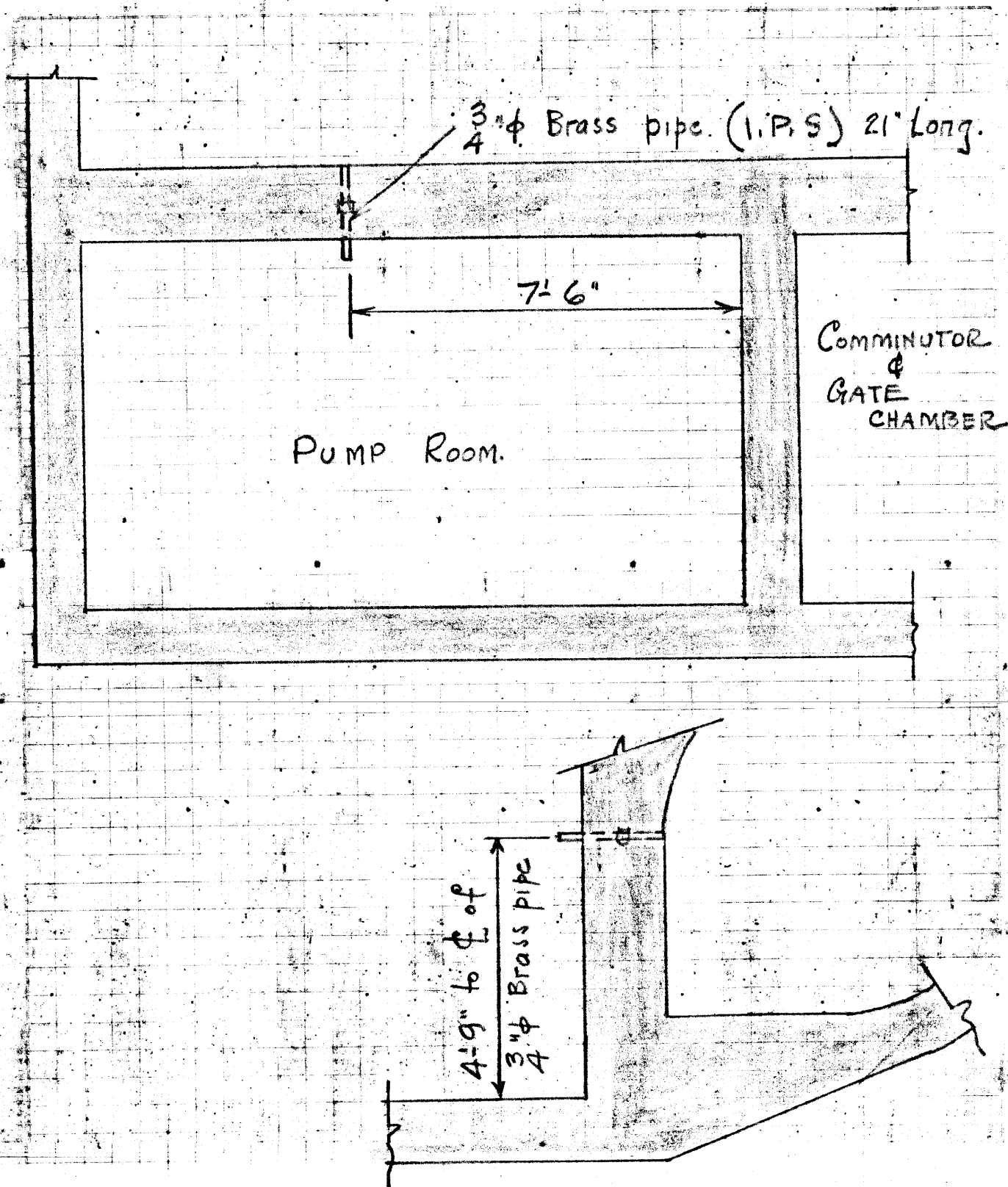
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COMPUTED BY

Lla

CHECKED BY

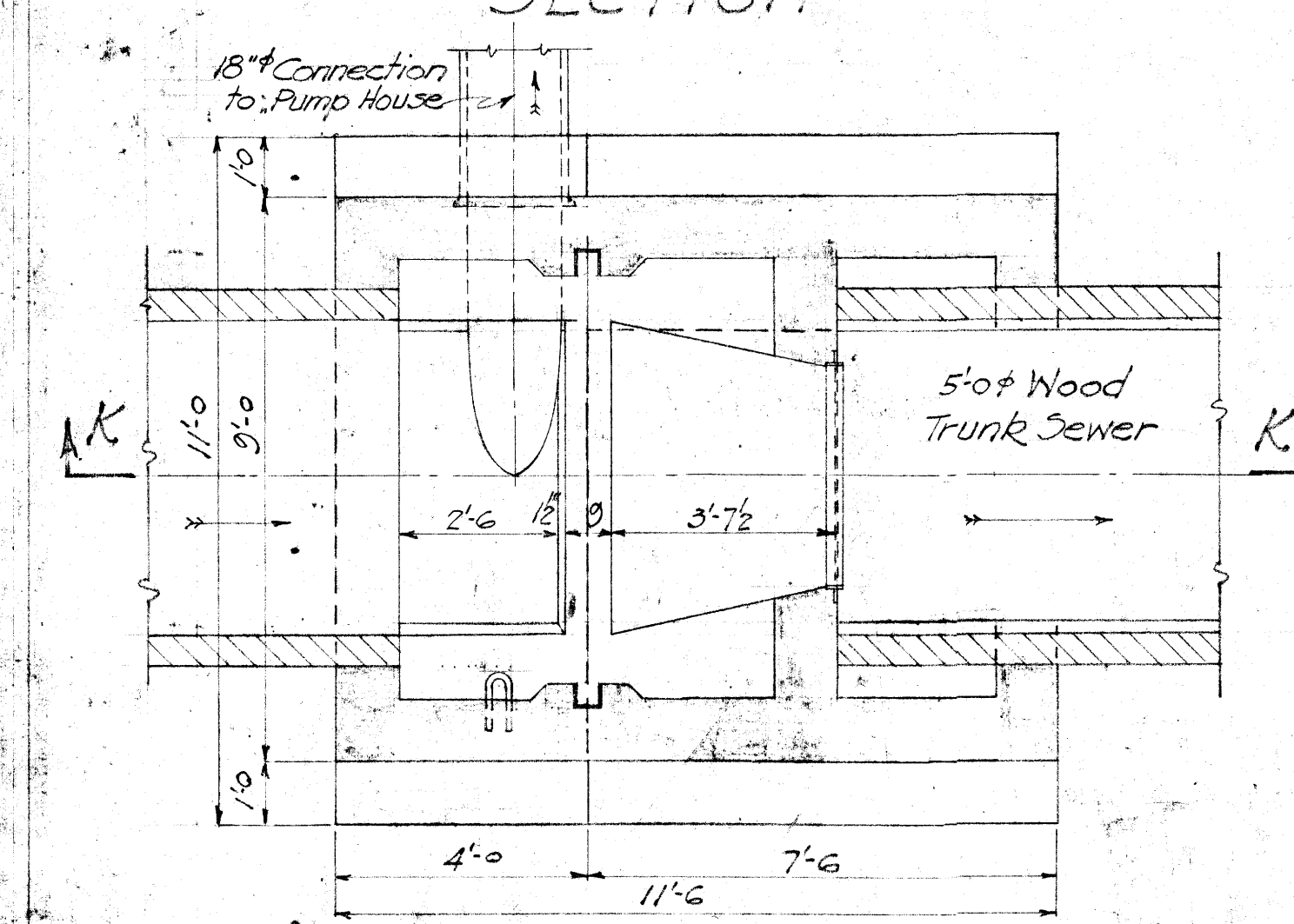
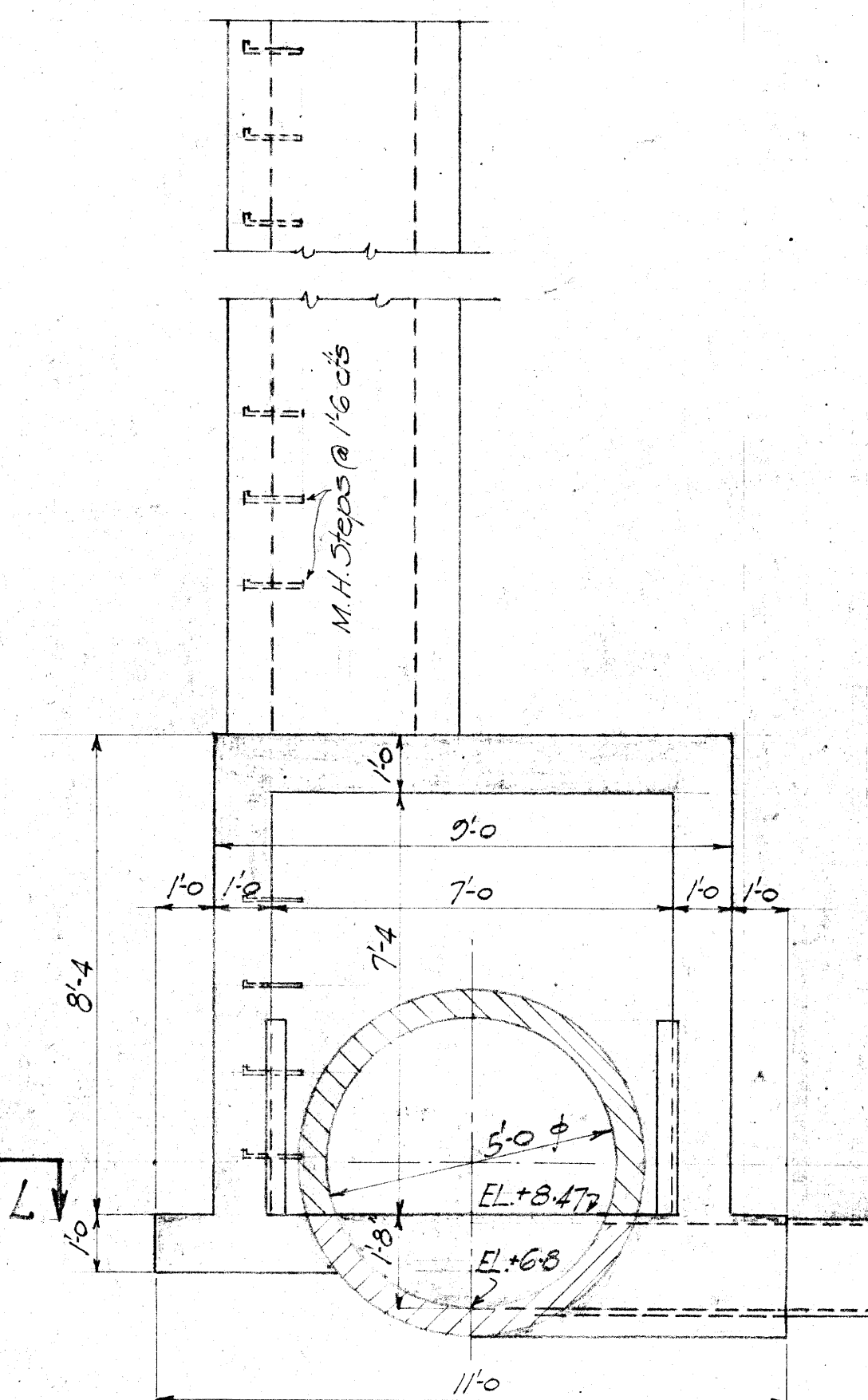
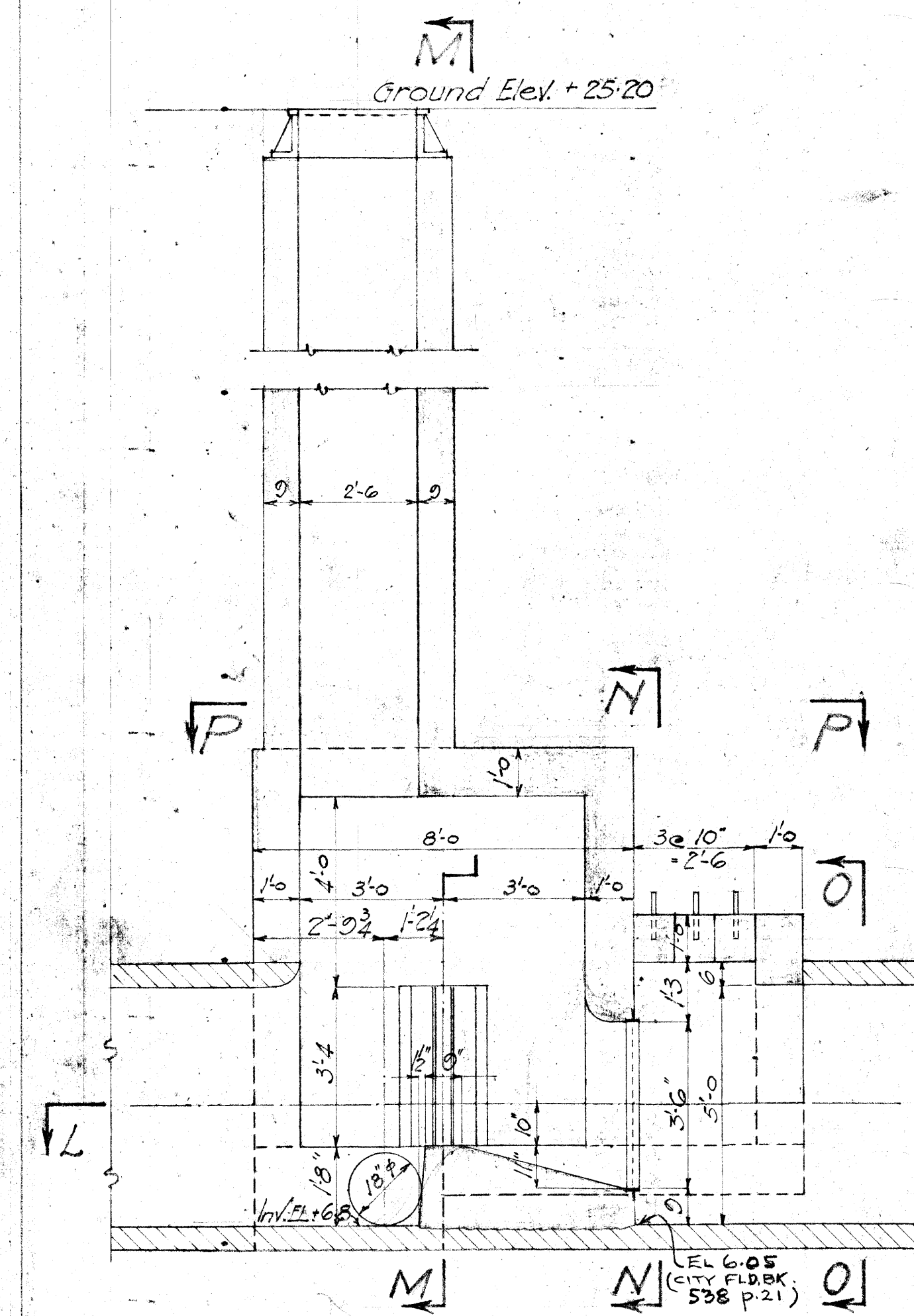
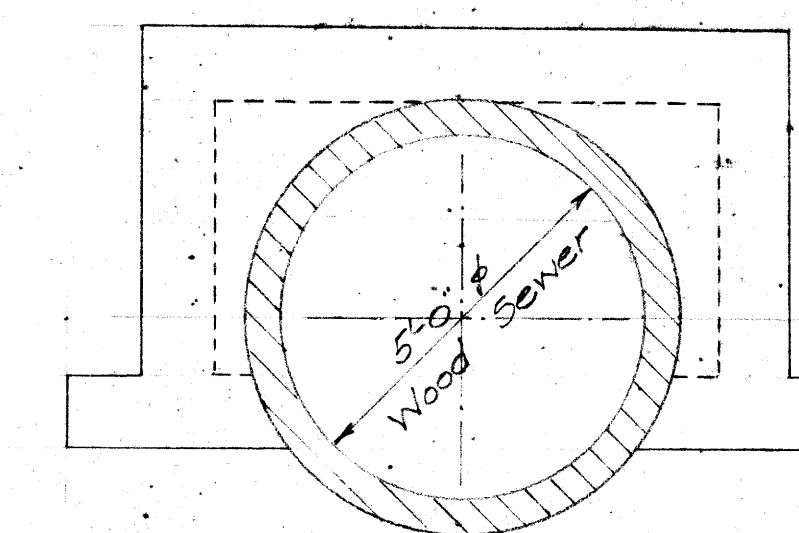
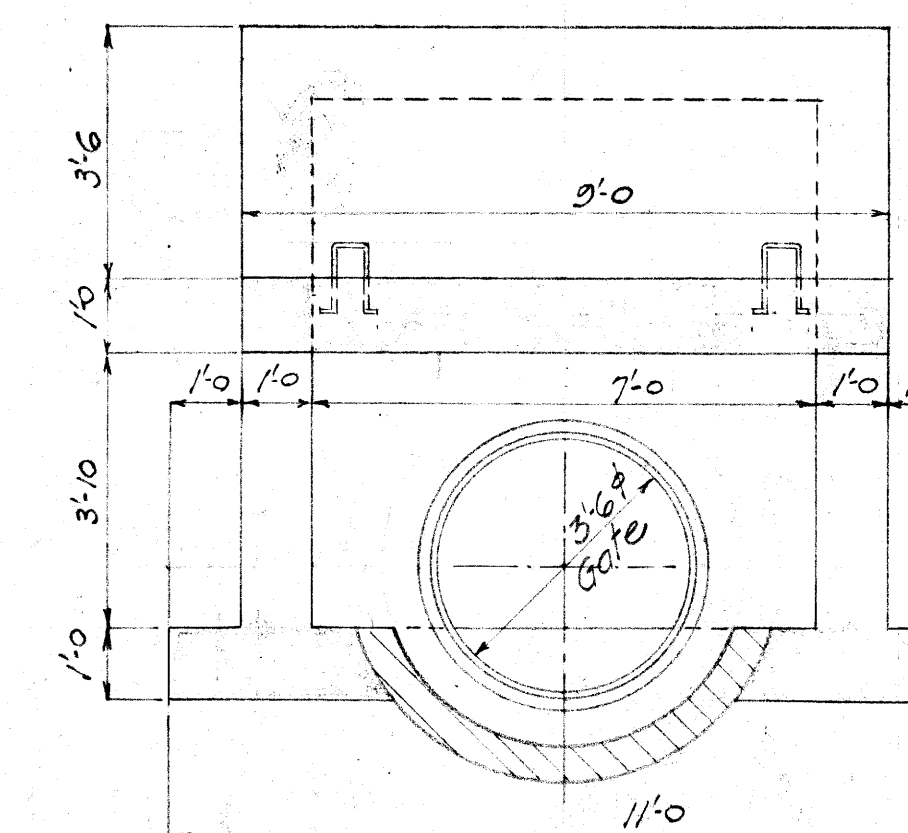
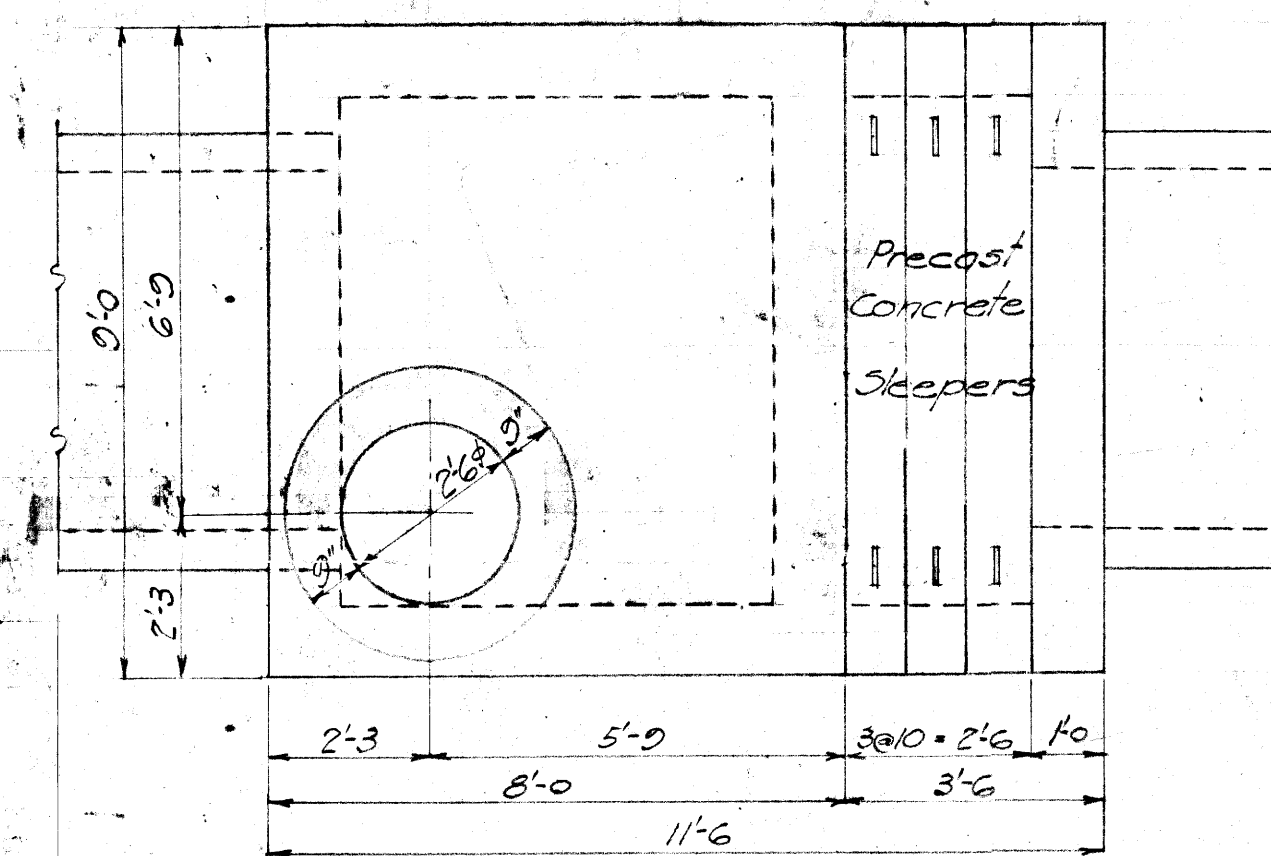
MADE IN CONNECTION WITH Location of $\frac{3}{4}$ " Ejector pipe.

TABULATION OF CIRCUITS FOR SECONDARY PUMPING STATIONS Nos 1, 2, & 3. TABLE

CIRCUIT NUMBER	LOCATION	Dwg No	VOLTAGE	SWITCH SIZE	Breaker or Fuse SIZE	No WIRES	SIZE WIRE	INSULATION	CONDUIT SIZE	Outlets, Boxes Switches or Starters Required Equal to	REMARKS
	ASH ST.	154, 155, 156	PUMPING STATION No 1							2-30 H.P. Motors installed.	
A1	550V. Power Service Entrance	184	550	200	100a.	3	2/0	R.C.	2"	1-200 Amp. Switch in C.I. Case	
A2	Motor No 1 Feeder	184	550		40a.	3	6	R.C.	1 1/4"	1-C.I. Magnetically operated starter for 30 HP. with disconnecting switch in C.I. Case.	
A3	Motor No 2 Feeder	184	550		40a.	3	6	R.C.	1 1/4"	1-C.I. Magnetically operated starter for 30 HP. with disconnecting switch in C.I. Case	
A4	Comminutor	184	550	30	15a. fuse 2-5a.	3	12	R.C.	3/4"	1-30 Amp. Switch in C.I. Case. 1-2 HP Hand Operated Starter in C.I. Case.	
A5	Control Circuit	184	550			6	12	R.C.	1"	1-Float Operated Controller for control of 4 Motors. with 4 "Handoff-automatic" switches on case.	
A6											
A7	Lighting Circuit	184	120	30	15a.	2	12	R.C.	3/4"	9-Vaporproof Fixtures (V2759) with 60 W. Lamps. 1-20 amp. Tumbler Switch with Plate D5 329. 1-Plug Receptacle and Housing BRD 7302	1-Vaporproof Portable Handlamp (Rubber) with 50ft. 2 Cond. R.C. cab. tire cable and Plug B.P. 722
	AUBREY ST.	168 169 156	PUMPING STATION No 2							2-30 H.P. Motors installed	
B1	550V. Power Service Entrance	184	550	200	100a.	3	1/0	R.C.	2"	1-200 Amp. Switch in C.I. Case	
B2	Motor No 1 Feeder	184	550		40a.	3	6	R.C.	1 1/4"	1-C.I. Magnetically operated starter for 30 HP. with disconnecting switch in C.I. Case.	
B3	Motor No 2 Feeder	184	550		40a.	3	6	R.C.	1 1/4"	1-C.I. Magnetically operated starter for 30 HP. with disconnecting switch in C.I. Case	
B4	Comminutor	184	550	30	15a. fuse 2-5a.	3	12	R.C.	3/4"	1-30 Amp. Switch in C.I. Case 1-2 HP Hand Operated Starter in C.I. Case	
B5	Control Circuit	184	550			6	12	R.C.	1"	1-Float Operated Controller for Control of 3 Motors. with 3 "Handoff-automatic" switches on case.	
B6											
B7	Lighting Circuit	184	120	30	15a.	2	12	R.C.	3/4"	7-Vaporproof Fixtures (V2759) with 60 W. Lamps. 1-20 Amp. Tumbler Switch with Plate D5 329. 1-Plug Receptacle & Housing BRD 7302	1-Vaporproof Portable Handlamp (Rubber) with 50ft. 2 Cond. R.C. cab. tire cable and Plug B.P. 722
	CORNISH AVE.	162, 156	PUMPING STATION No 3							1-10 HP. & 1-15 HP. Motors installed	
C1	550V. Power Service Entrance	184	550	60	35a.	3	8	R.C.	1"	1-60 Amp. Switch in C.I. Case.	
C2	Motor No 1 Feeder	184	550		18.75	3	12	R.C.	3/4"	1-C.I. Magnetically operated starter for 15 HP. with disconnecting switch in C.I. Case.	
C3	Motor No 2 Feeder	184	550		13.75	3	12	R.C.	3/4"	1-C.I. Magnetically operated starter for 10 HP. with disconnecting switch in C.I. Case.	
C4	Comminutor	184	550	30	15a. fuse 2-5a.	3	12	R.C.	3/4"	1-30 Amp. Switch in C.I. Case. 1-1 1/2 HP. Hand operated Starter in C.I. Case.	
C5	Control Circuit	184	550			6	12	R.C.	1"	1-Float operated Controller for Control of 2 Motors. with 2 "Handoff-automatic" switches on case.	
C6											
C7	Lighting Circuit	184	120	30	15a.	2	12	R.C.	3/4"	4-Vaporproof Fixtures (V2759) with 60 W. Lamps. 1-20 Amp. Tumbler Switch with Plate D5 329. 1-Plug Receptacle and Housing BRD 7302	1-Vaporproof Portable Handlamp (Rubber) with 50ft. 2 Cond. R.C. cab. tire cable and Plug B.P. 722

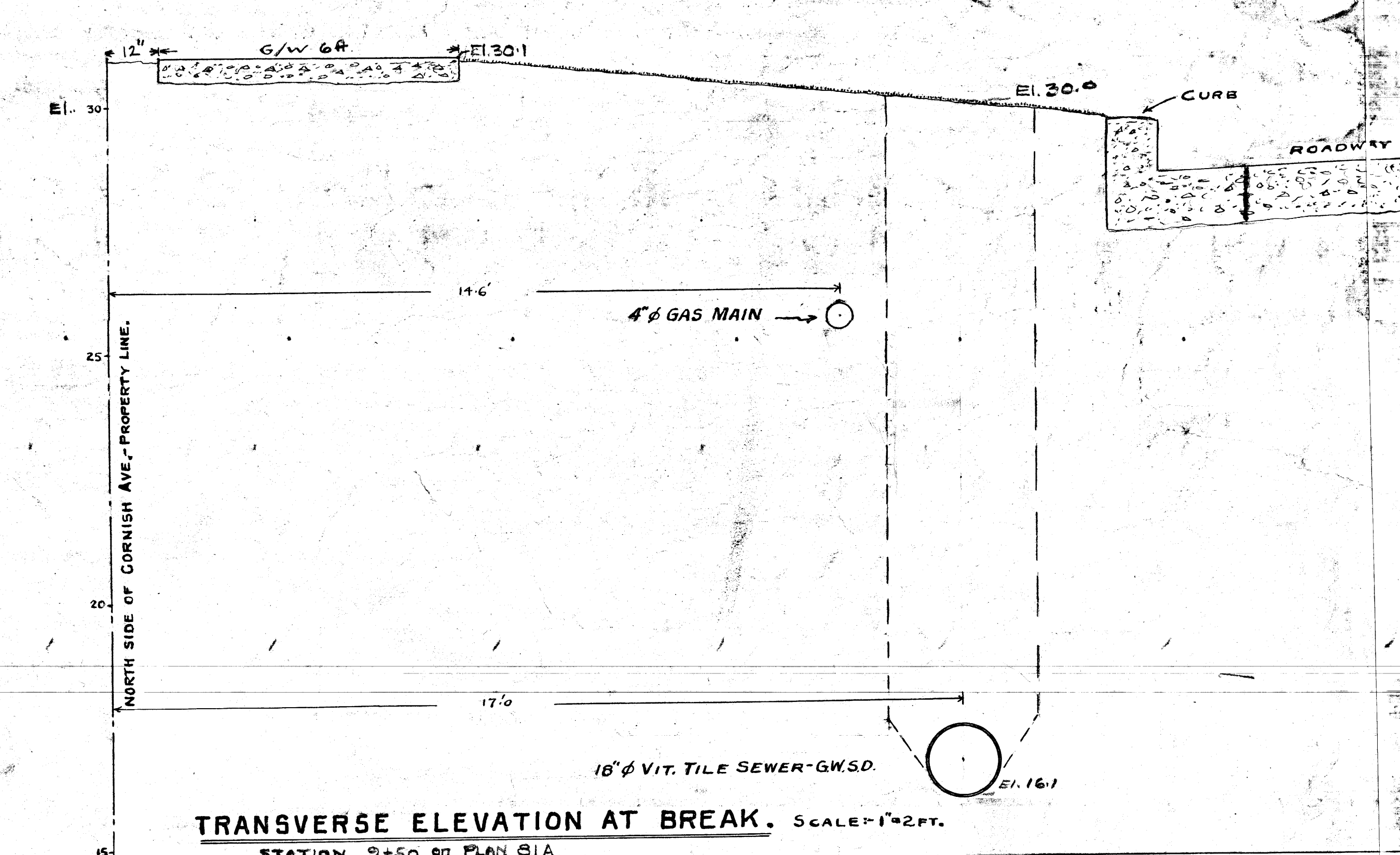
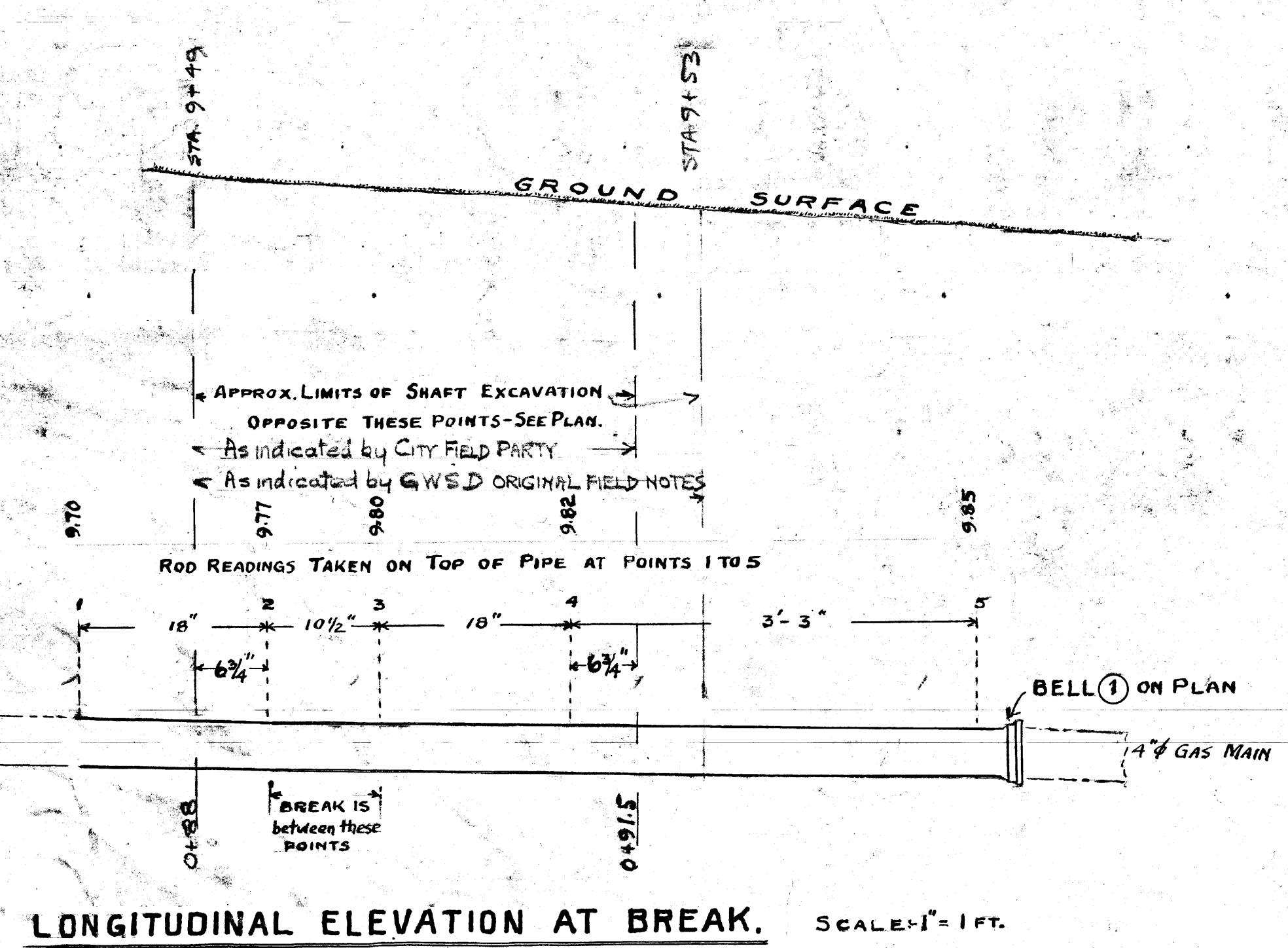
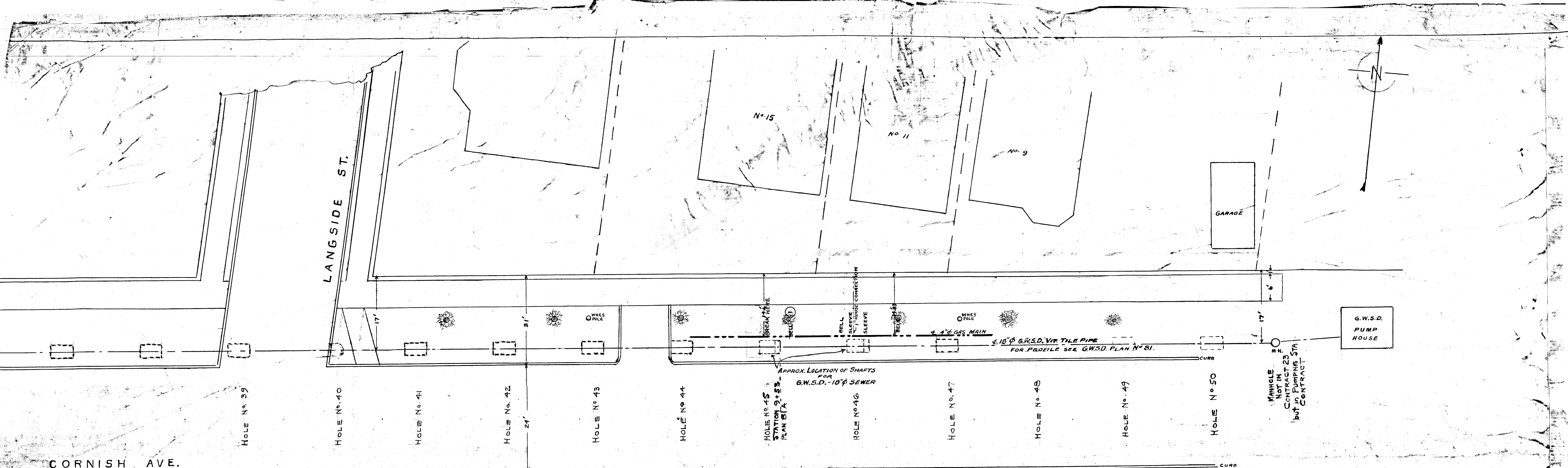
GREATER WINNIPEG SANITARY DISTRICT
DATE DEC. 31-1936 DRAWING No M61
Drawn WRC. Checked WT CONTRACT No 44

Micro-Filmed 1965



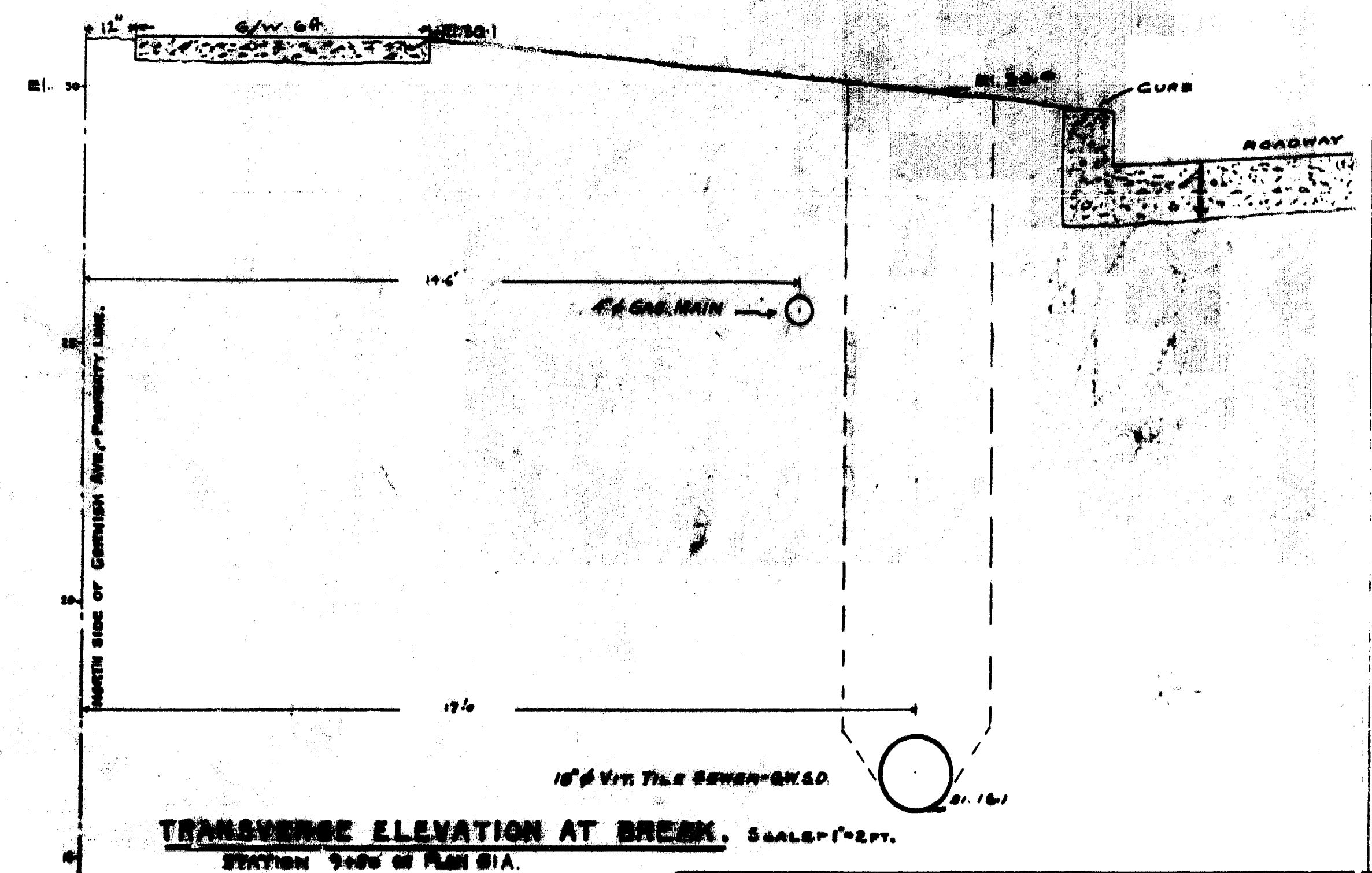
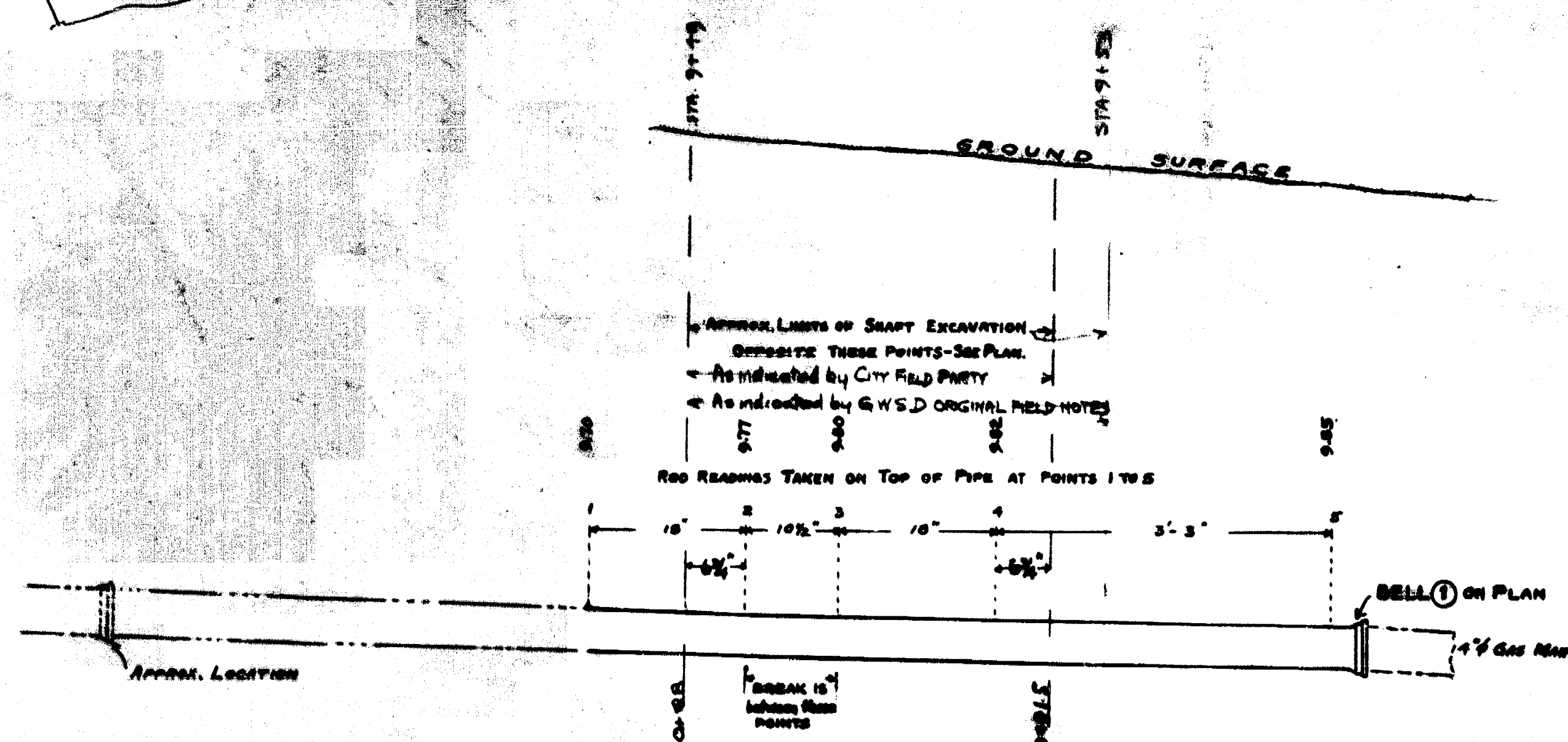
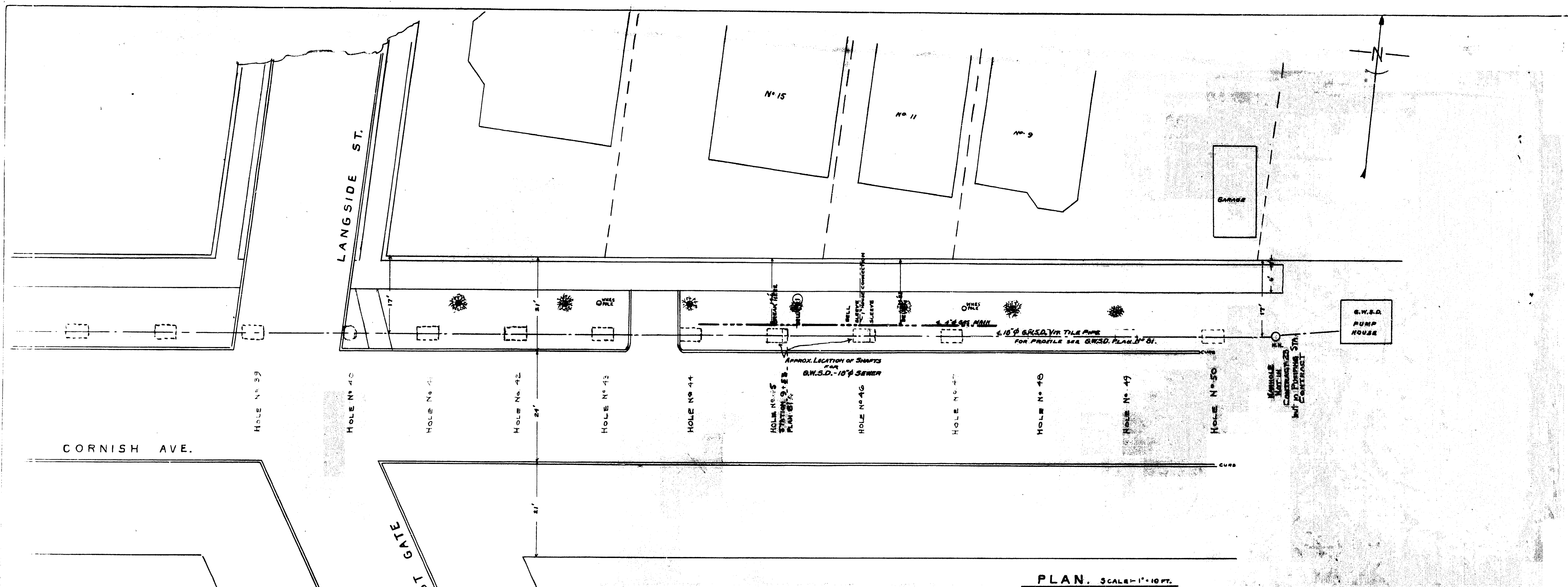
Mirc-Film 1965

GREATER WINNIPEG SANITARY DISTRICT			
W. S. L. E. A.		Contract Engineer	
ENGINEERING WORK	ATTENDED	DATE	
W. F. BURNETT AND OTHERS			FLOOD GATE WEIR for CORNISH AVE. SCALE: 8" = 1' 0" L.H.M. DATE: Feb. 27, 1914 PLAN NO. M75 DESIGNED BY: [Signature] CHECKED BY: [Signature] APPROVED BY: [Signature] Notes: [Blank]
C. W. BATHAM			
J. A. LESTER			
W. D. HUNTER			



EAST END OF CORNISH AVE.
 SHOWING
 W.E.R. GAS MAIN AND G.W.S.D. SEWER
 SCALE: 1" = 10 FT. AND AS SHOWN.
 DATE: OCT. 3-1941.
 DRAWN BY: J.A.M.
 CITY FIELD BOOK NO. 529-142
 PLAN NO. M-105
 Micro-Filmed 1965

M-105

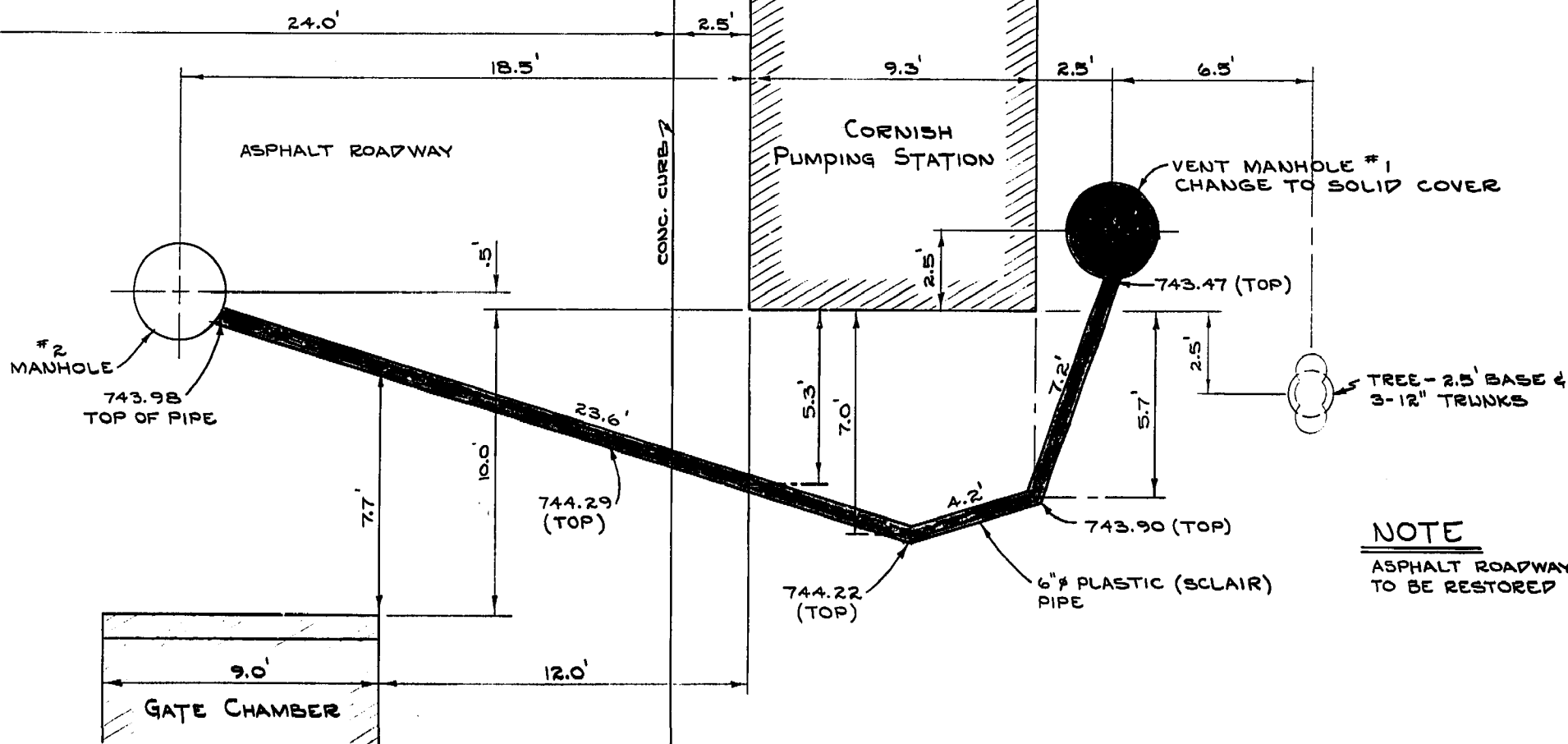
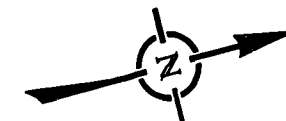


EAST END OF CORNISH AVE.
 SHOWING
 W.E.R. GAS MAIN AND G.W.S.D. SEWER
 SCALE 1"=10 FT. AND AS SHOWN
 DATED OCT. 3-1941.
 DRAWN BY J.A.H.
 CITY FIELD BOOK NO. 829-P.41
 REVISION July 1942 Location Change
 PLAN NO. M.105

CORNISH AVE.

CONC. CURB

TOP STEP @ ENT. TO
PUMP. STA. EL. 752.44



The City of Winnipeg

Waterworks, Waste and Disposal Division

Branch
Operations (Waterworks)

NEW SUMP VENT PIPE FOR
CORNISH PUMPING STATION

DESIGNED BY

DRAWN BY

SCALE

CHECKED BY

DATE
AUG. 8/74

DRAWING NO.

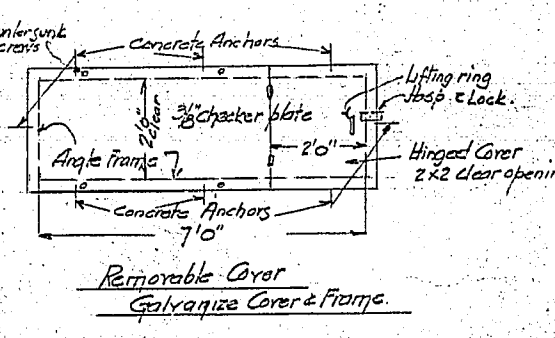
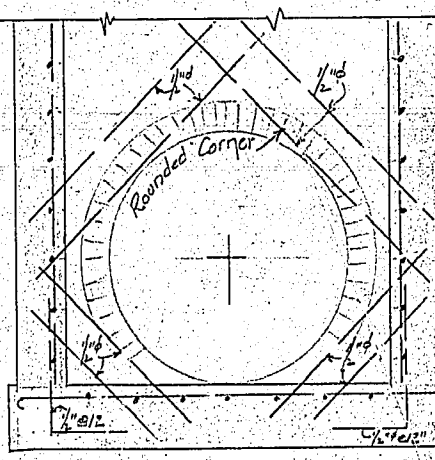
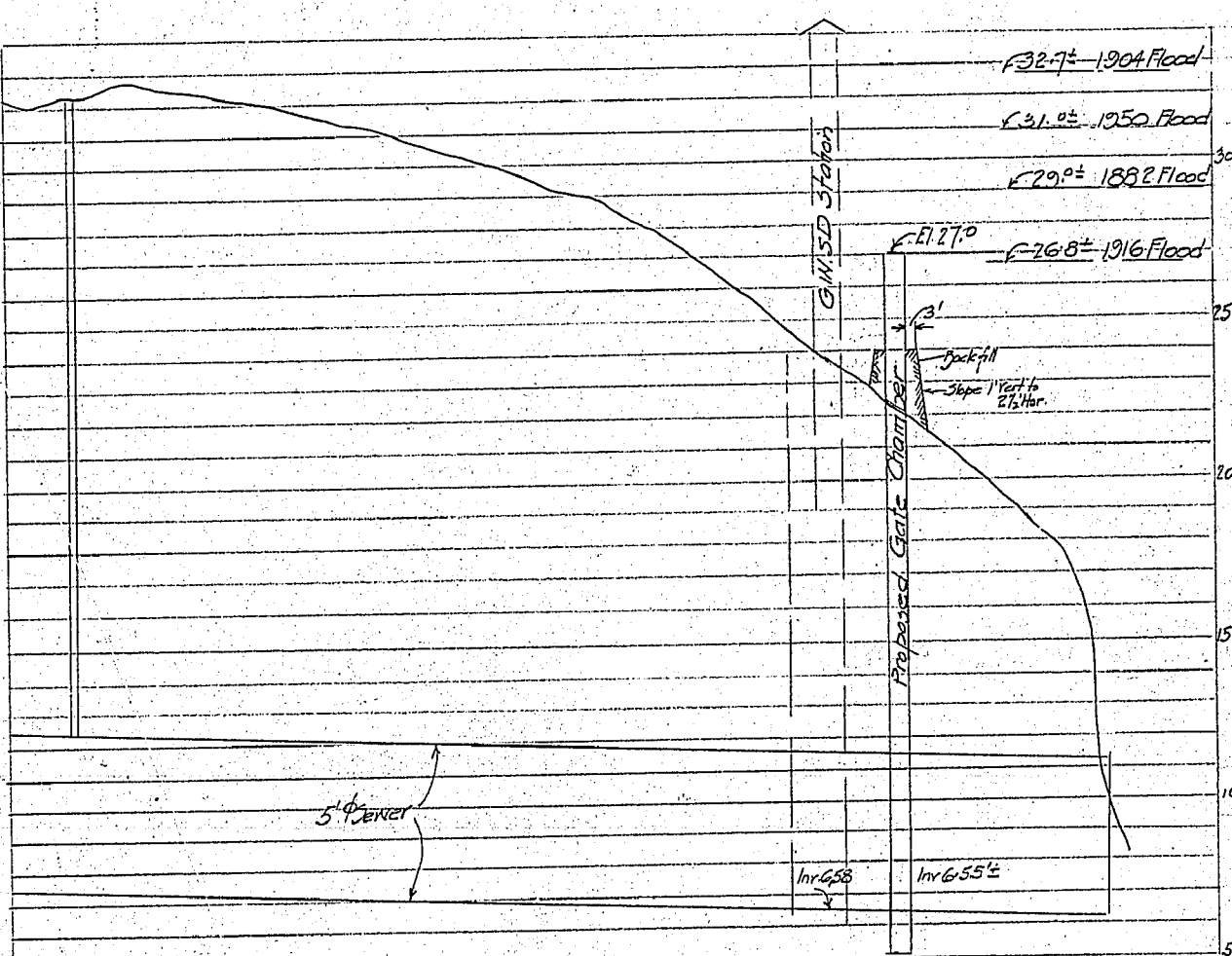
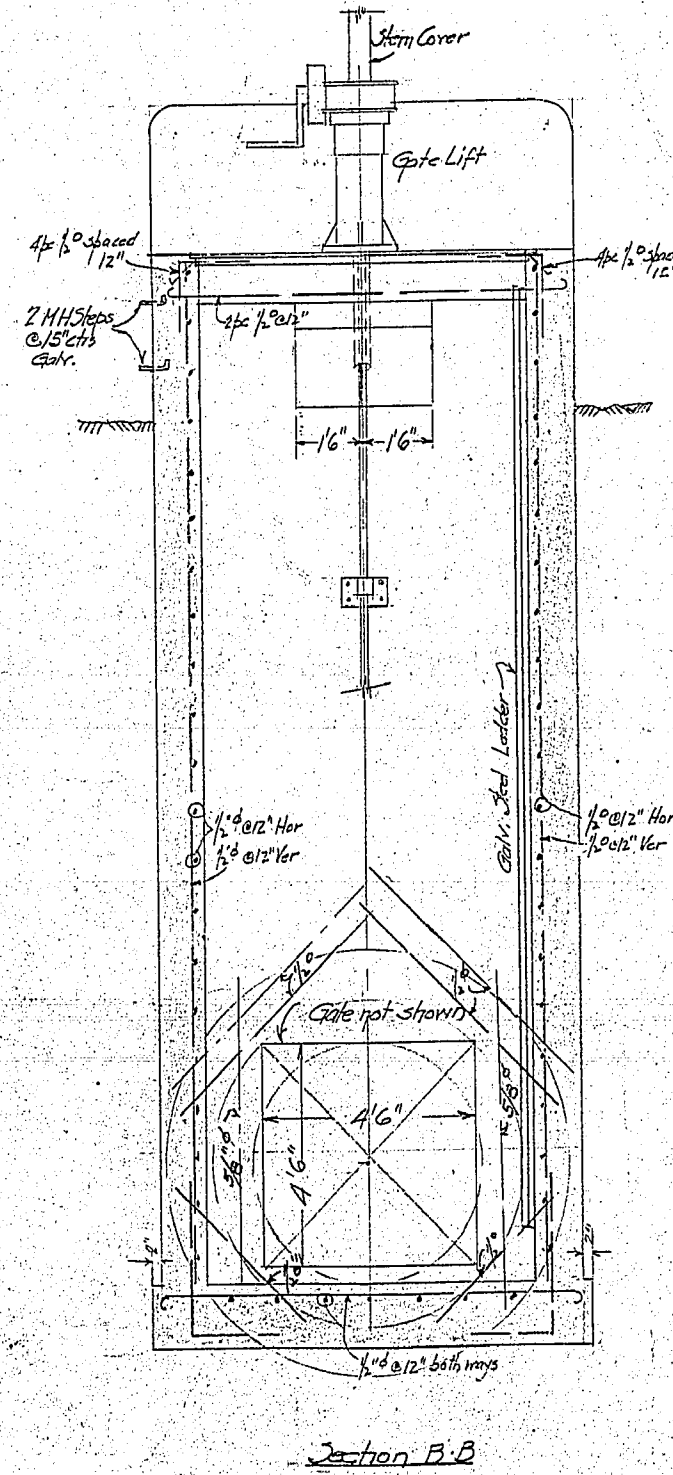
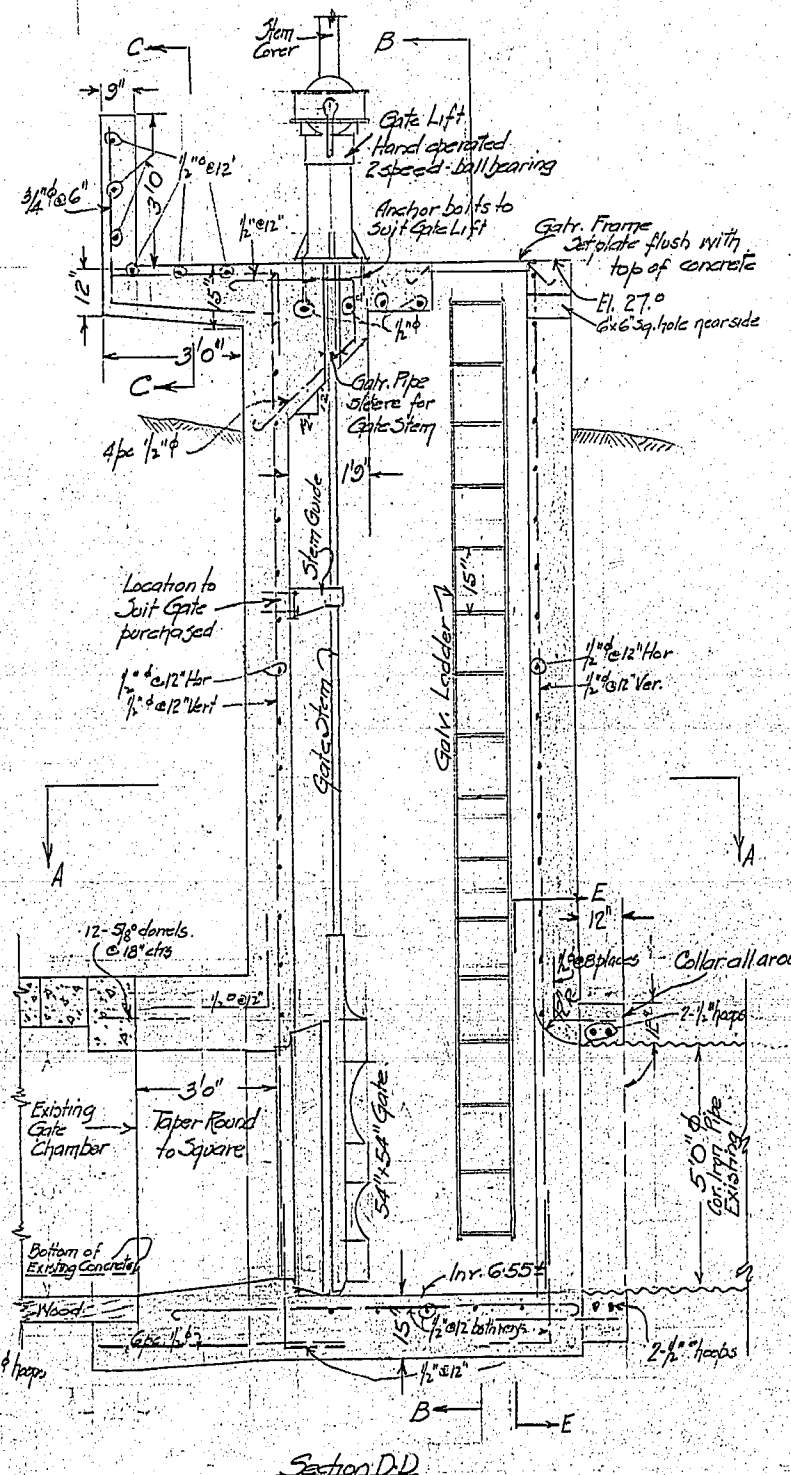
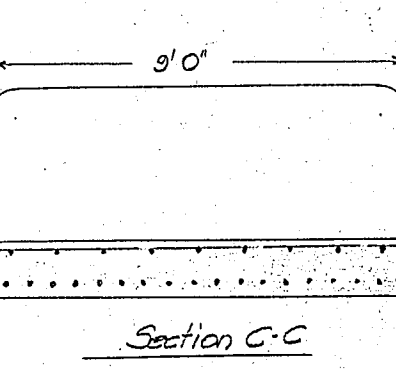
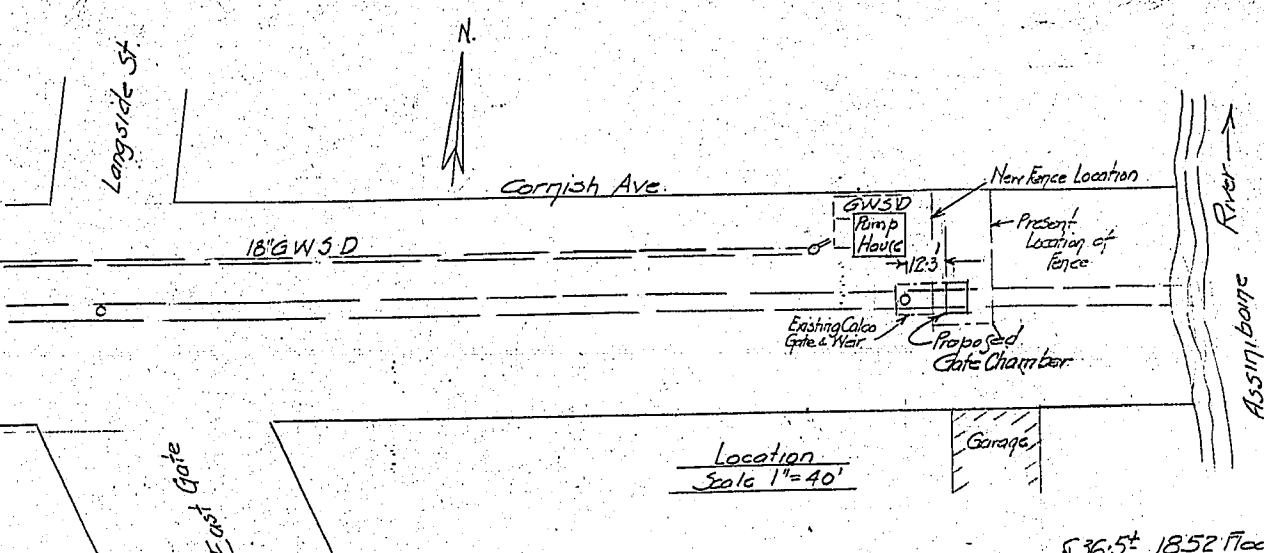
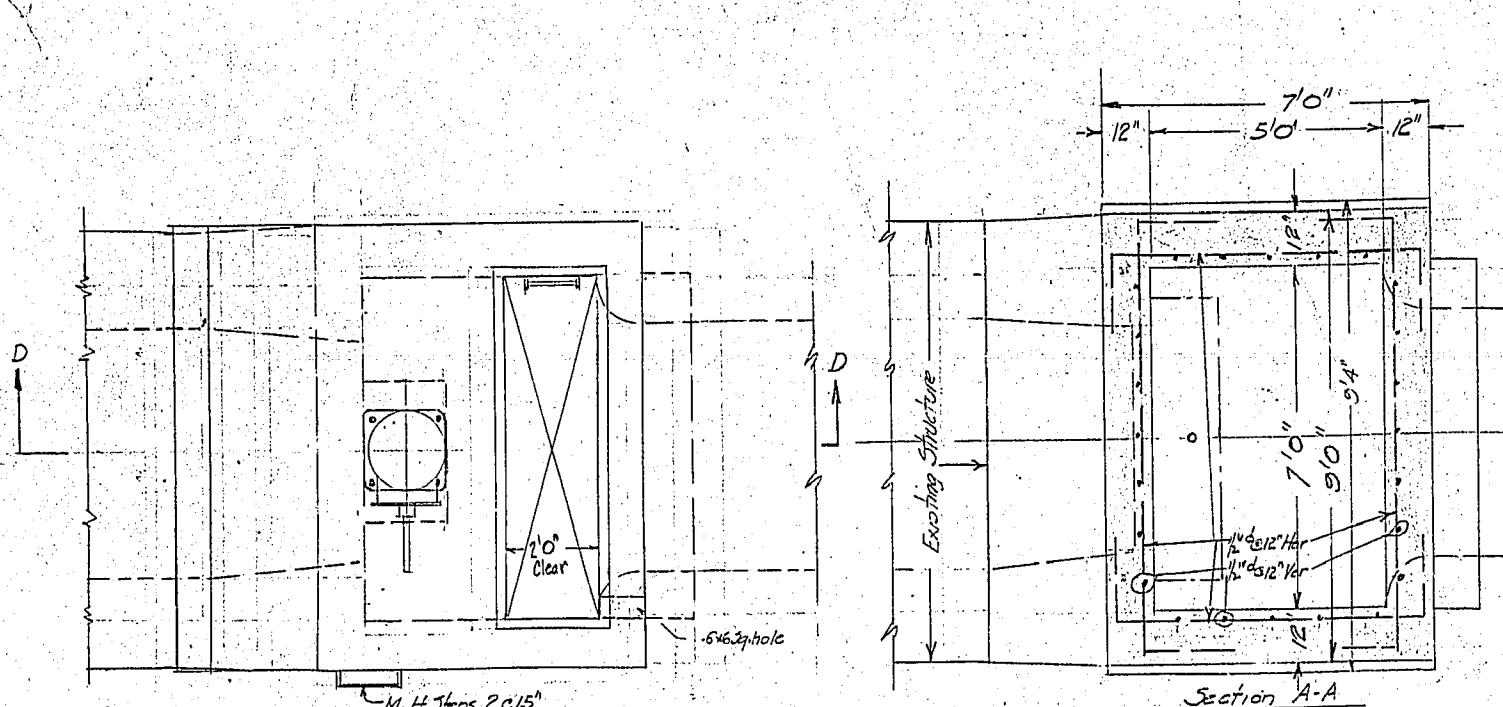
APPROVED BY

Doc 76

M-302

1.	AS CONSTRUCTED - BK. F-311 AGE 6 & 7	AUG. 26/74	RR
NO.	REVISION	DATE	CH'K.

MICROFILMED D.L.C 76



72.547-641

PROVINCE OF MANITOBA
J. C. D.
TAYLOR
REGISTERED ENGINEER

GATE CHAMBER CORNISH AVENUE SEWER	CITY OF WINNIPEG ENGINEERING DEPARTMENT W. B. HURST, CITY ENGINEER A. J. S. TAUNTON, DEPUTY CITY ENGINEER	DRAWN BY: J.C.D. DATE: 11/9/1955 CHECKED BY: J.C.D. APPROVED BY: J.C.D.	SCALE 3/8" = 1'-0" DRAWING NO. 6604
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SUBJECT PUMPING STATION N°3 - CORNISH AVEDATE 29-4-45 194

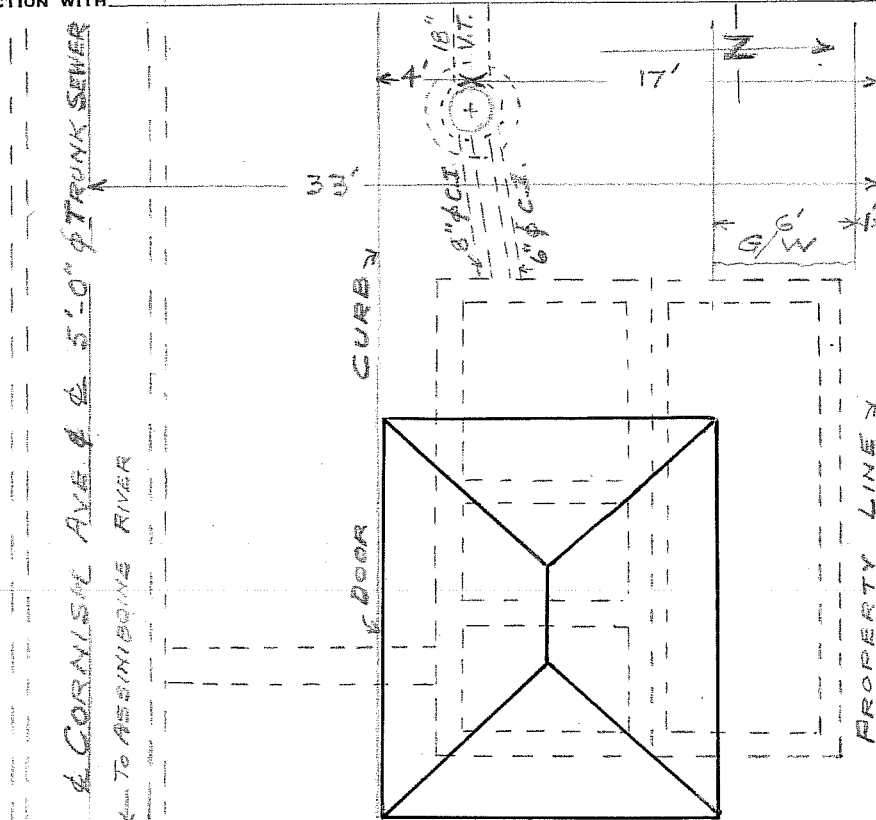
SHEETS NO.

COMPUTED BY

CHECKED BY

Micro Filmed 1965

MADE IN CONNECTION WITH

Scale: $\frac{1}{8}'' = 1'$

LOCATION - ON WINNIPEG STREET - paved and boulevarded.

SUPERSTRUCTURE - 'Rugtex' Face Brick - Tyndall Limestone Trim.

FILE # MS 11405