

- NOTE:
- CONTRACTOR SHALL SUPPLY DETAILED SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION OF PIPES. LOCATION OF FIELD WELDS MUST BE CLEARLY SHOWN.
 - STEEL TO CONFORM TO ASTM A-283 GRADE B OR C.
 - FINISH:
 - ALL PIPES TO BE CLEANED BY SAND BLASTING UPON COMPLETION OF SHOP FABRICATION
 - PORTIONS OF PIPES NOT ENCASED IN CONCRETE SHALL BE PAINTED WITH TWO COATS OF LIQUID NEOPRENE
 - PIPES ENCASED IN CONCRETE TO BE PRIMED AND PAINTED AS SPECIFIED
 - FIELD SPACES SHALL BE WRAPPED WITH POLYKON NO. 900, 2\"/>
 - HANDLING, BARE CABLES, CHAINS, HOOKS, METAL BARS, OR NARROW SPIDS SHALL NOT BE PERMITTED TO COME IN CONTACT WITH THE FINISHED PIPE. ANY DAMAGE SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER BEFORE PIPE IS LOWERED INTO THE TRENCH.

Originally approved
 Dec 14/62
 for approval
 METROPOLITAN CORPORATION OF GREATER WINNIPEG
 STREETS AND TRANSIT DIVISION
 APPROVED
 DIRECTOR

DATE	ISSUE NO.	REV. NO.	DESCRIPTION	DRAWN BY
MAR 4/63	3	2	PIPE COATING & CONC. GRADE DEPTH REVISED	R.M.
FEB 12/63	2		FOR CONSTRUCTION	R.M.
FEB 12/63	1		CONCRETE IN PIPE GRADE 2500 P.S.I.	A.M.
JAN 15/63	1		FOR TENDER	A.M.

ISSUE OR REVISION

METROPOLITAN CORPORATION OF GREATER WINNIPEG
 STREETS AND TRANSIT DIVISION

ST. JAMES BRIDGE AND INTERCHANGE

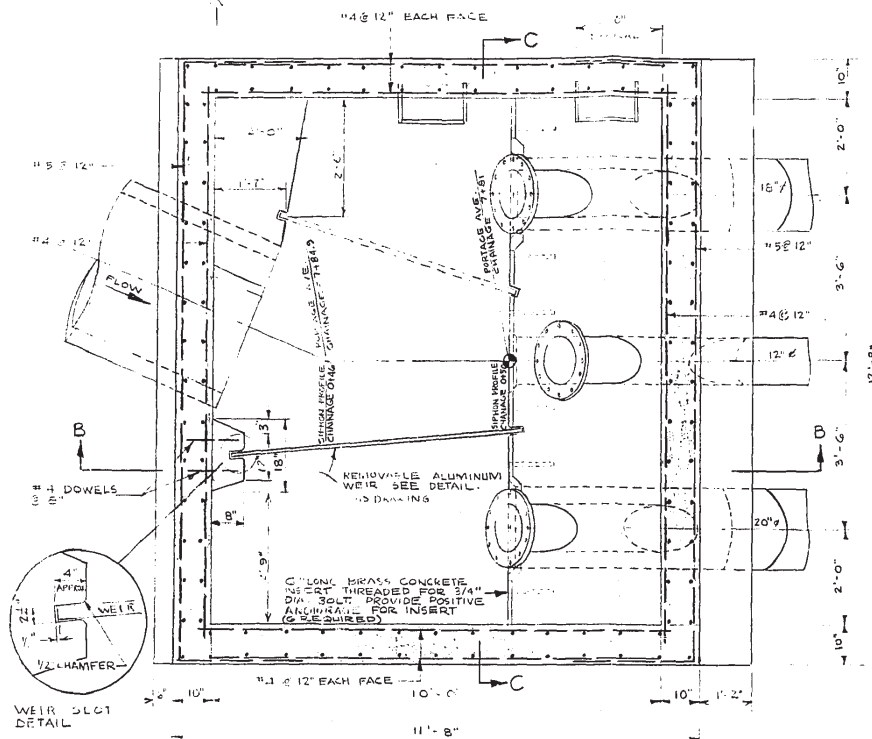
INVERTED SIPHON
 GENERAL ARRANGEMENT AND PIPE DETAILS

TEMPLETON ENGINEERING COMPANY
 PROFESSIONAL ENGINEERS
 WINNIPEG, MANITOBA

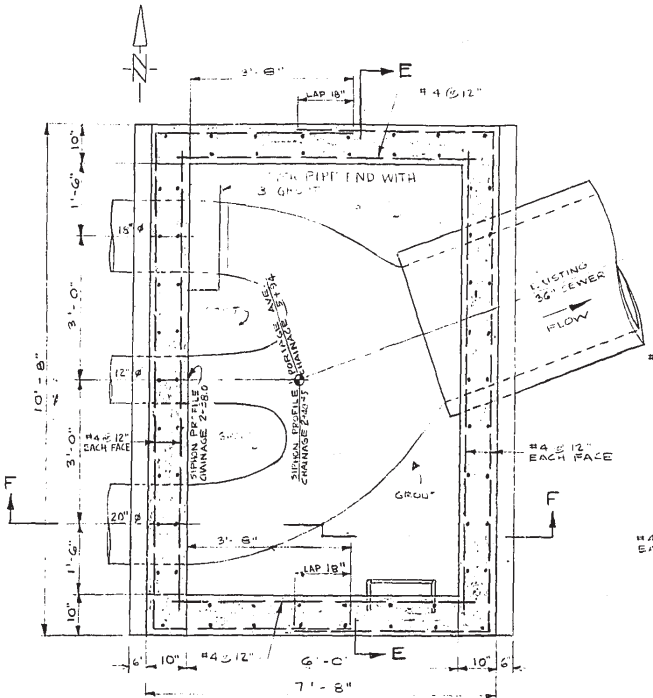
IN ASSOCIATION WITH
 A. D. MARGISON AND ASSOCIATES LIMITED
 CONSULTING PROFESSIONAL ENGINEERS
 TORONTO, CANADA

APPROVED: [Signature]
 CHECKED: A.M.
 L.C. DIRECTOR OF STREETS AND TRANSIT

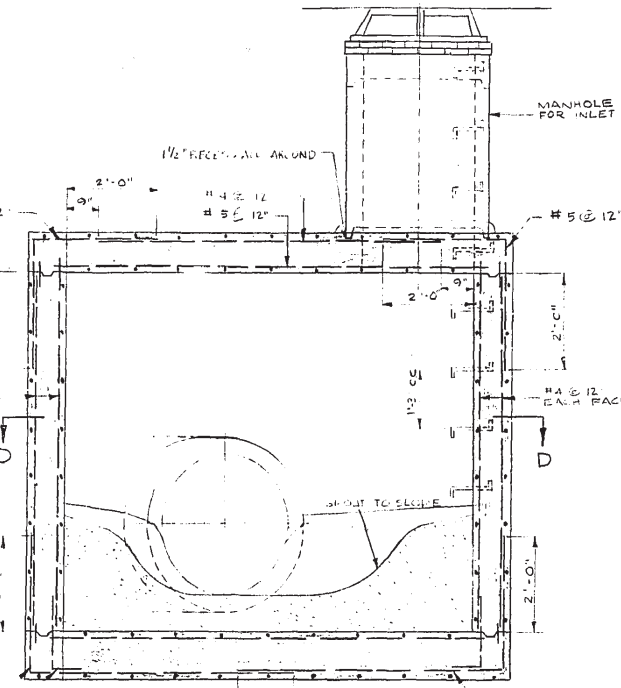
DRAWN BY: R.M.
 DATE: NOVEMBER, 1962
 SCALE: AS SHOWN
 FILE No. B-5000-158
 SHEET No. 296-B



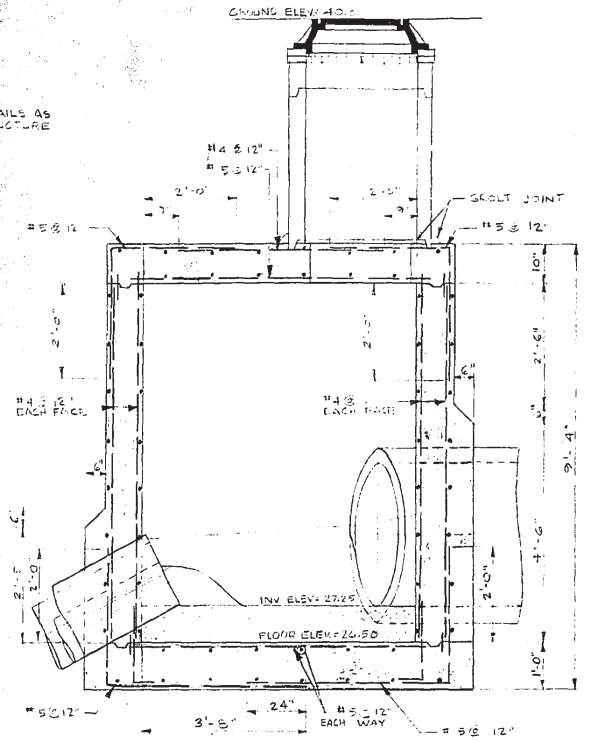
SECTION A-A



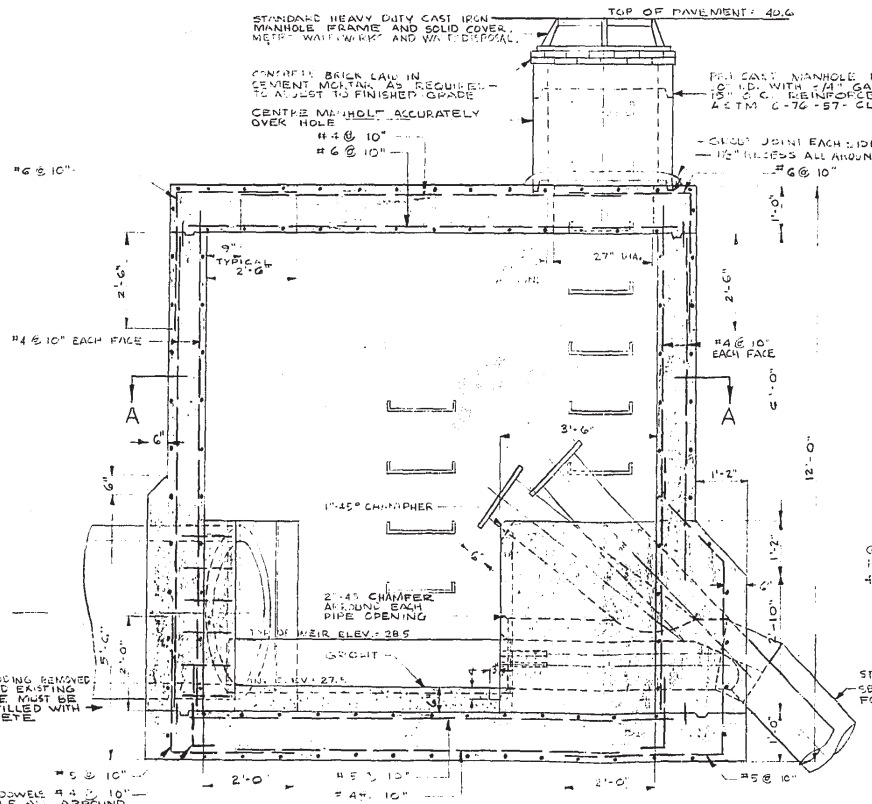
SECTION D-D
(INLET STRUCTURE)



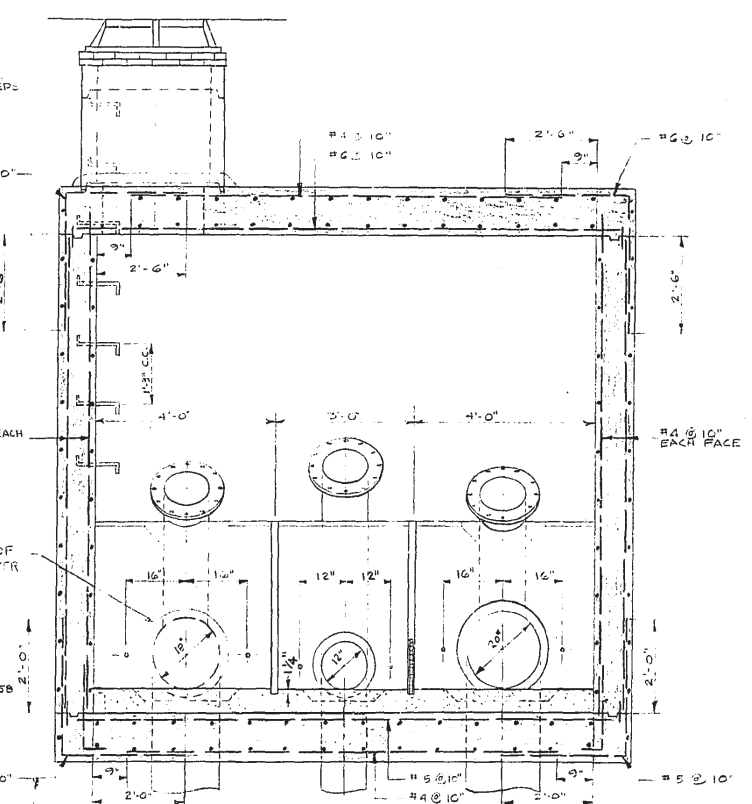
SECTION E-E
OUTLET STRUCTURE



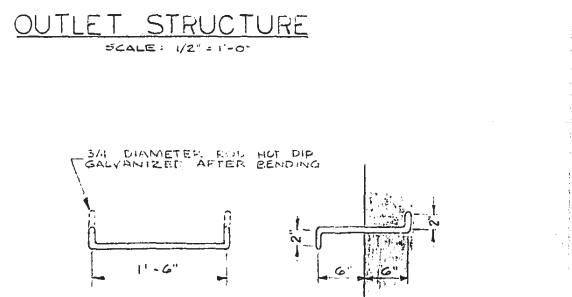
SECTION F-F



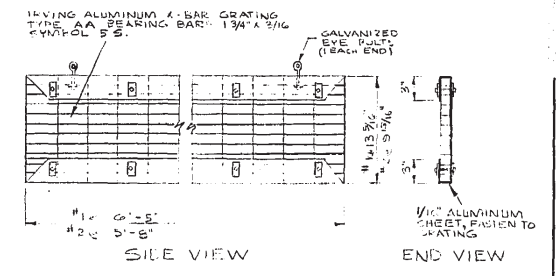
SECTION B-B



SECTION C-C



DETAIL OF CAST IN PLACE STEPS
SCALE: 1/2\"/>



DETAIL OF REMOVABLE WEIRS (2 REQ'D)
SCALE: 1/2\"/>

- NOTES:
1. ALL CONCRETE 3000 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS. CALCARETE CEMENT SHALL BE USED FOR ALL CONCRETE.
 2. ALL REINFORCING STEEL INTERMEDIATE GRADE DEFORMED BARS #4, 20000 P.S.I.
 3. CONCRETE COVER FOR REINFORCING STEEL 2\"/>

THE METROPOLITAN CORPORATION OF GREATER WINNIPEG
WATERWORKS AND WASTE DISPOSAL DIVISION
APPROVED
[Signature]
DIRECTOR

DATE	ISSUE NO.	REV. NO.	DESCRIPTION	AM DRAWN BY
FEB. 17/63	2		FOR CONSTRUCTION	R.M.
JAN 15/63	1		FOR TENDER	AM

METROPOLITAN CORPORATION OF GREATER WINNIPEG
STREETS AND TRANSIT DIVISION

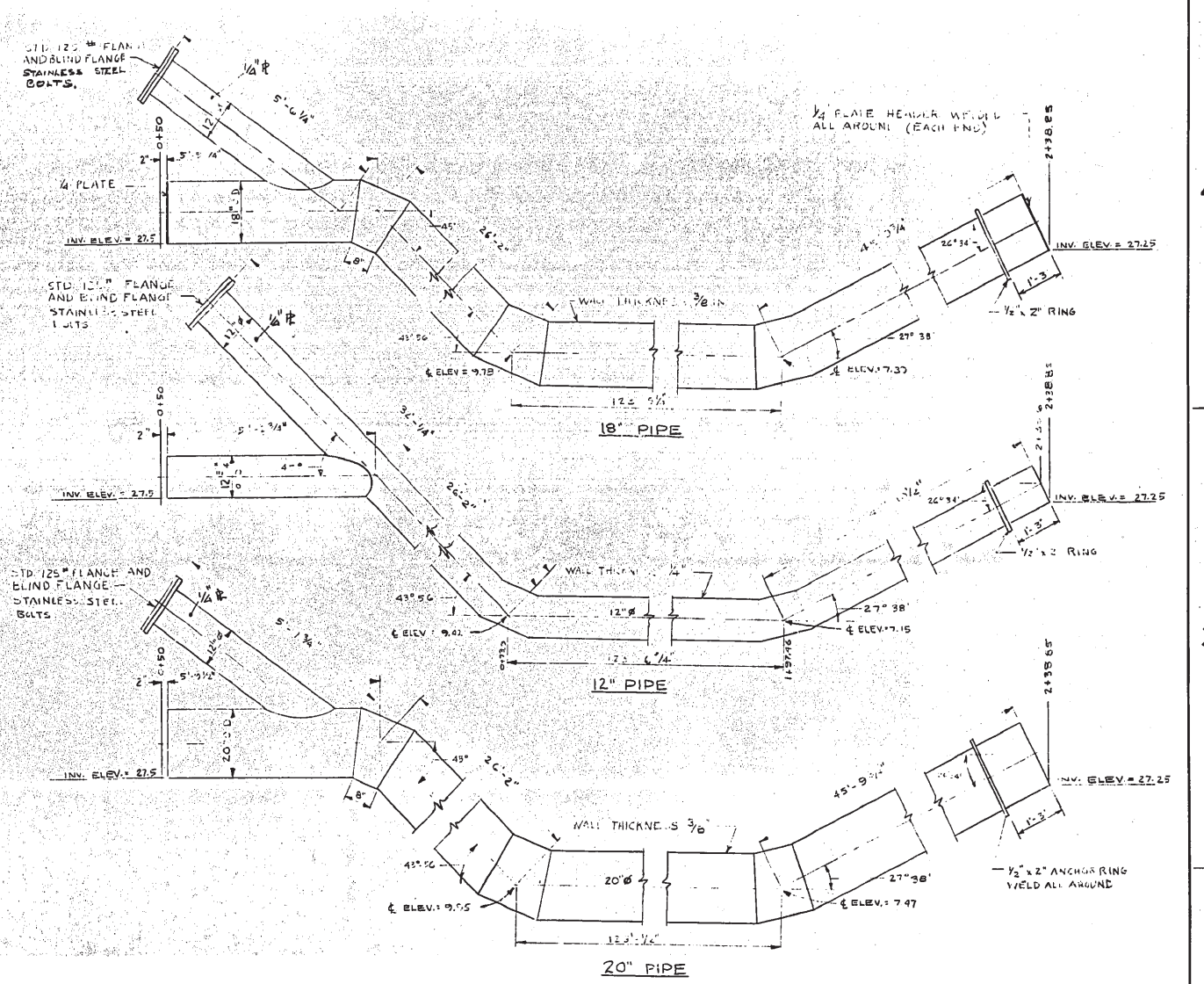
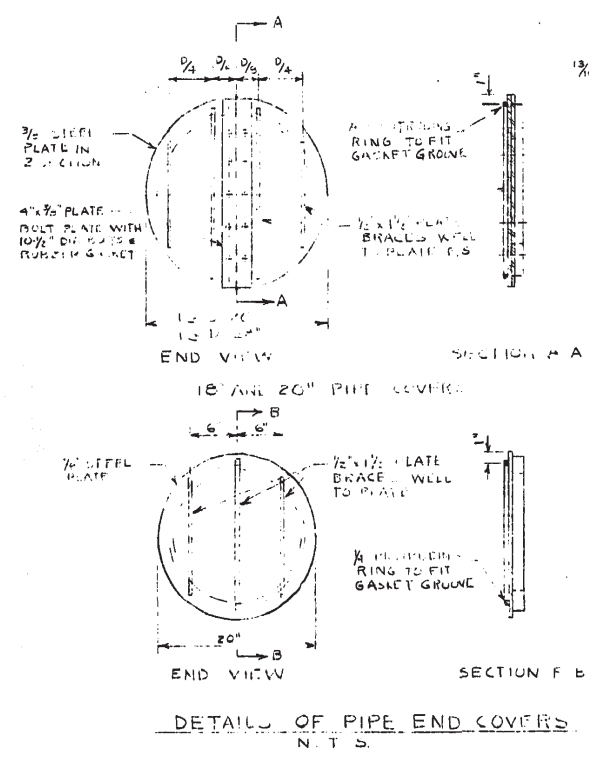
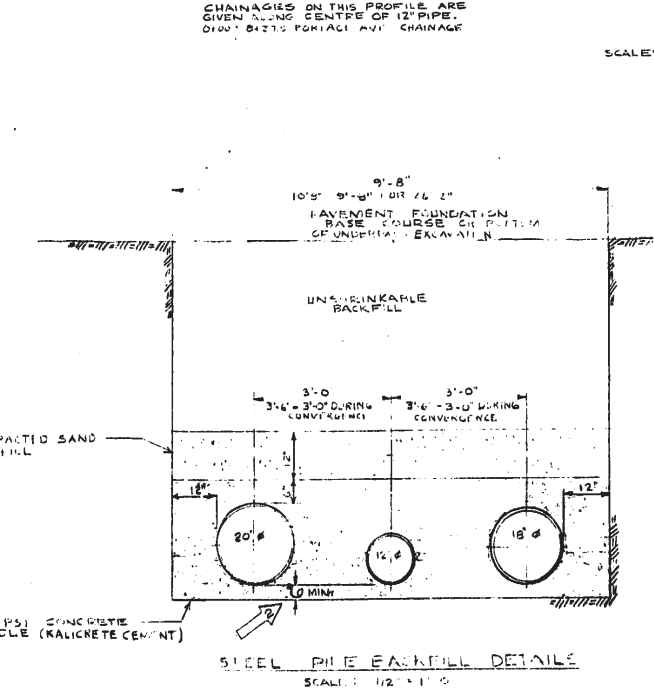
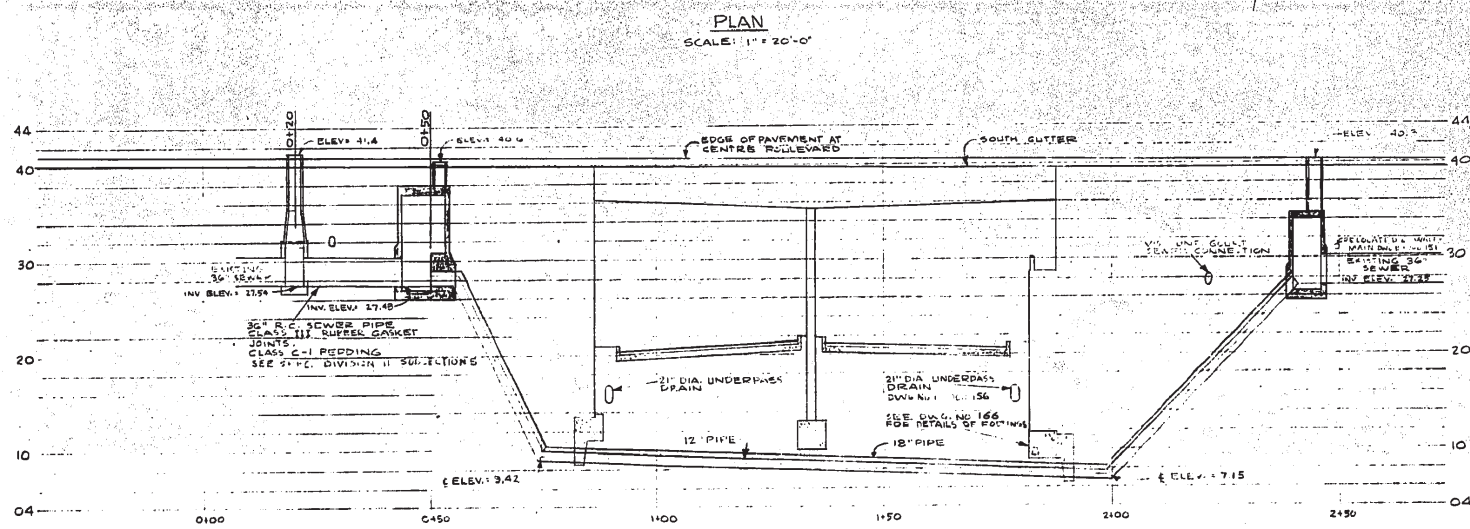
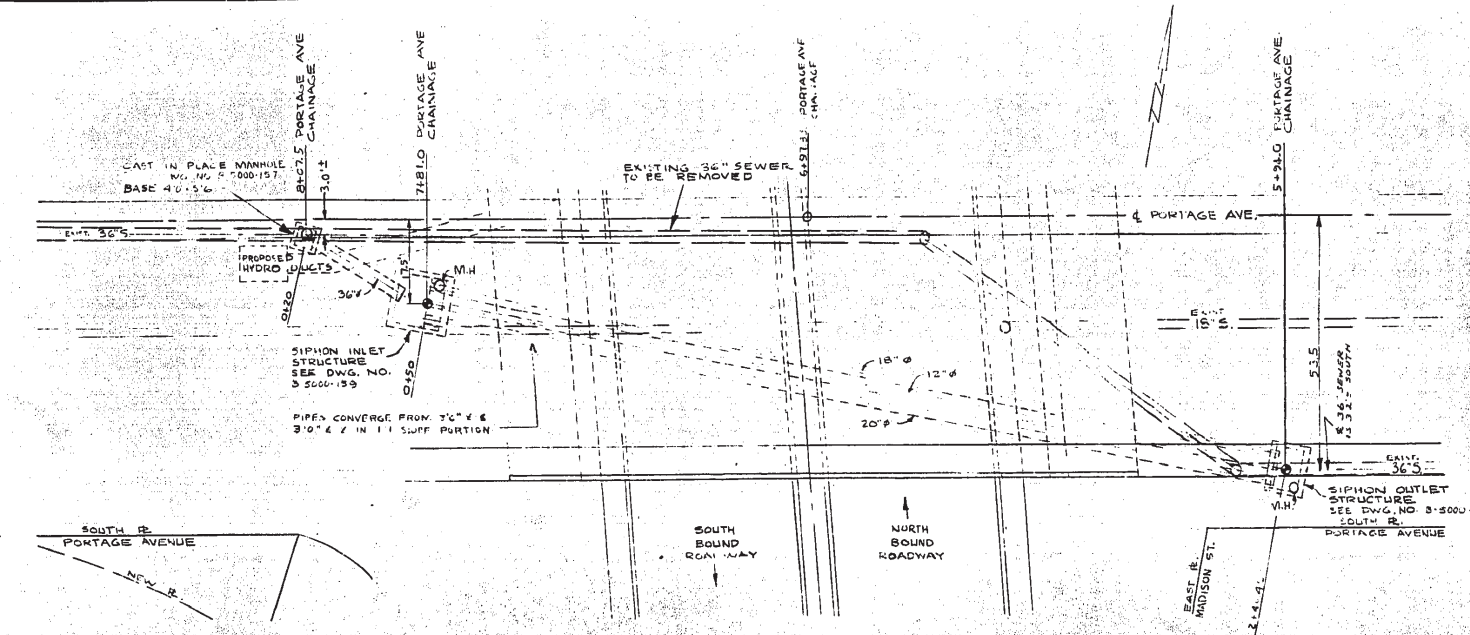
ST. JAMES BRIDGE AND INTERCHANGE

INVERTED SIPHON
INLET AND OUTLET STRUCTURES

TEMPLETON ENGINEERING COMPANY
PROFESSIONAL ENGINEERS
WINNIPEG, MANITOBA

IN ASSOCIATION WITH
A. D. MARGISON AND ASSOCIATES LIMITED
CONSULTING PROFESSIONAL ENGINEERS
TORONTO, CANADA

APPROVED	DRAWN BY R.M.	DATE NOVEMBER, 1962
CHECKED A.M.	SCALE AS SHOWN	
DIRECTOR OF STREETS AND TRANSIT	TITLE No. B-5000-159	DWG. No. 296-C
	SHEET No.	



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 - PIPES ENCASED IN CONCRETE TO BE PRIMED AND PAINTED AS SPECIFIED
 - FIELD SPICES SHALL BE WRAPPED WITH ROBINSON HARD-WIDE TAPE TAPE TO BE LAPPED 1/2" AND TO EXTEND TO COVER A MIN. OF 2" OF PAINTED PIPE ON EITHER SIDE OF JOINT.
 - HANDLING BARE CABLES, CHAINS, HOOKS, METAL BARS, OR NARROW SKIDS SHALL NOT BE PERMITTED TO COME IN CONTACT WITH THE FINISHED PIPE. ANY DAMAGE SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER BEFORE PIPE IS LOWERED INTO THE TRENCH.

DATE	ISSUE No.	REV. No.	DESCRIPTION	DRAWN BY
22 JAN 63			AS-BUILT	G.S.S.
MAR 9 63	3	2	PIPE COATING & CONC. CRADLE DEPTH REVISED	R.M.
FEB 2/63	2		FOR CONSTRUCTION	R.M.
FEB 17/63	1		CONCRETE IN PIPE CRADLE 28'00 P.S.I.	A.M.
JAN 15/63			FOR TENDER	A.M.

ISSUE OR REVISION		
METROPOLITAN CORPORATION OF GREATER WINNIPEG STREETS AND TRANSIT DIVISION		
ST. JAMES BRIDGE AND INTERCHANGE		
INVERTED SIPHON GENERAL ARRANGEMENT AND PIPE DETAILS		
TEMPLETON ENGINEERING COMPANY PROFESSIONAL ENGINEERS WINNIPEG, MANITOBA	IN ASSOCIATION WITH	A. D. MARGISON AND ASSOCIATES LIMITED CONSULTING PROFESSIONAL ENGINEERS TORONTO CANADA
APPROVED <i>[Signature]</i> DIRECTOR OF STREETS AND TRANSIT	DRAWN BY R.M. CHECKED A.M. FILE No. SHEET No.	DATE NOVEMBER, 1962 SCALE AS SHOWN DWG. No. B-5000-158



281-C