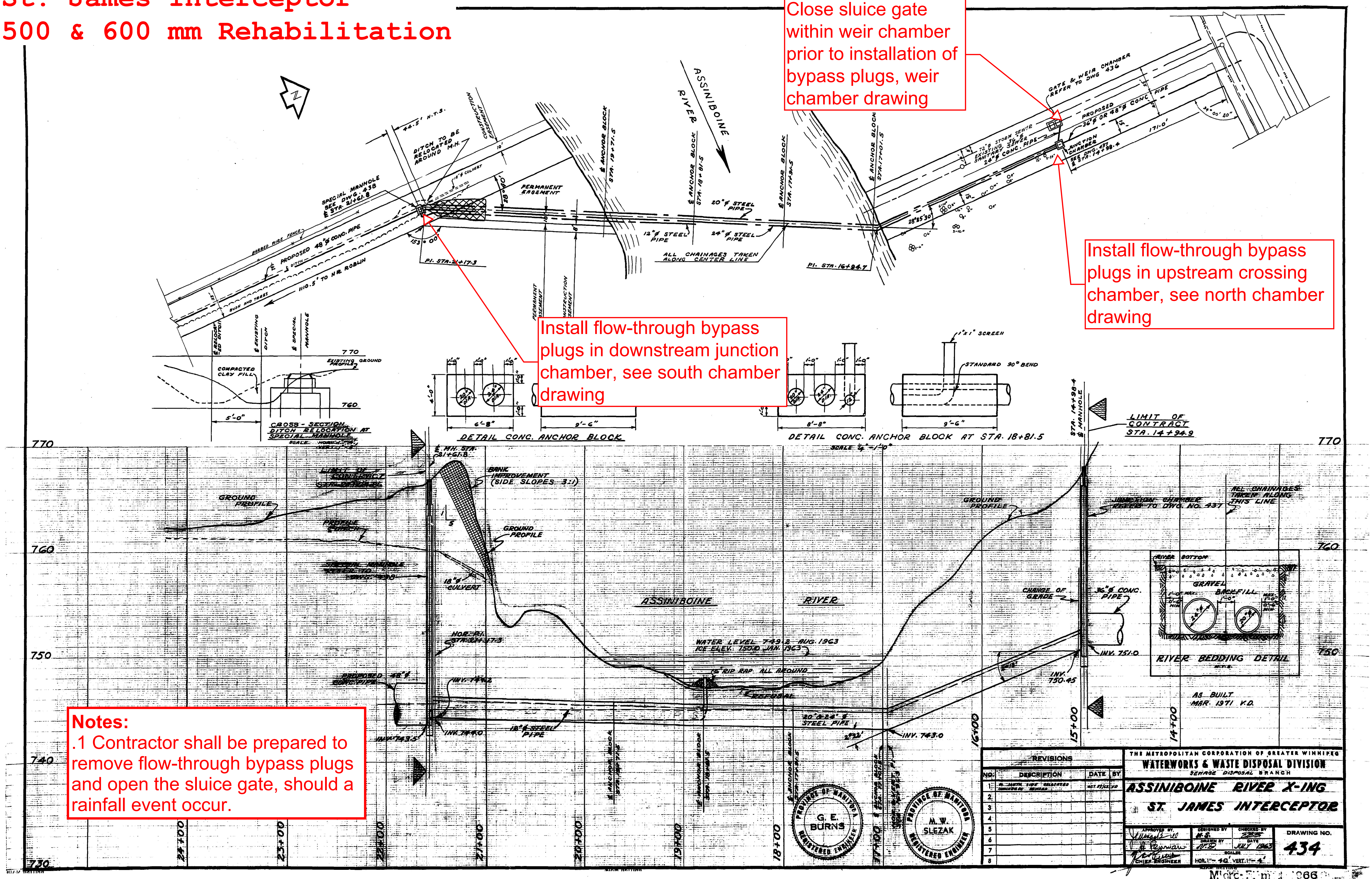
Appendix A

Flow Control Drawings

St. James Interceptor
500 & 600 mm Rehabilitation


Close sluice gate within weir chamber prior to installation of bypass plugs, weir chamber drawing
Install flow-through bypass plugs in upstream crossing chamber, see north chamber drawing
Install flow-through bypass plugs in downstream junction chamber, see south chamber drawing
ASSINIBOINE RIVER
GATE & WEIR CHAMBER REFER TO DWG 436
PROPOSED 36"Ø OR 48"Ø CONC. PIPE
JUNCTION CHAMBER SEE DWG. 437
SPECIAL MANHOLE SEE DWG. 438 STA. 21+61.8
PROPOSED 48"Ø CONC. PIPE
PERMANENT EASEMENT
ALL CHAINAGES TAKEN ALONG CENTER LINE
PI. STA. 21+17.3
PI. STA. 16+94.7
12"Ø STEEL PIPE
20"Ø STEEL PIPE
24"Ø STEEL PIPE
DETAIL CONC. ANCHOR BLOCK
DETAIL CONC. ANCHOR BLOCK AT STA. 18+81.5
CROSS - SECTION DITCH RELOCATION AT SPECIAL MANHOLE
LIMIT OF CONTRACT STA. 14+94.9
GROUND PROFILE
BANK IMPROVEMENT (SIDE SLOPES 3:1)
18"Ø CULVERT
ASSINIBOINE RIVER
WATER LEVEL 749.8 AUG. 1963
ICE ELEV. 750.0 JAN. 1963
INV. 743.0
INV. 751.0
36"Ø CONC. PIPE
RIVER BEDDING DETAIL
AS BUILT MAR. 1971
THE METROPOLITAN CORPORATION OF GREATER WINNIPEG
WATERWORKS & WASTE DISPOSAL DIVISION
SEWAGE DISPOSAL BRANCH
ASSINIBOINE RIVER X-ING
ST. JAMES INTERCEPTOR
DRAWING NO. 434
G. E. BURNS
M. W. SLEZAK
REGISTERED ENGINEER
PROVINCE OF MANITOBA

Notes:
.1 Contractor shall be prepared to remove flow-through bypass plugs and open the sluice gate, should a rainfall event occur.

St. James Interceptor - North Side
500 & 600 mm Rehabilitation

Bypass Plug Installation Procedure:
.1 Close sluice gate in weir chamber.
.2 Install tether lines for all plugs.
.3 Pull flow-through bypass plugs complete with discharge hose into upstream junction chamber pipes and inflate (to be done with live flow). Allow discharge hose to dump into junction chamber.
.4 Install and secure plugs into sewer at upstream manholes and inflate (max 45 minutes)
.6 Install bypass piping and tee in junction chamber.
.7 Deflate upstream sewer plugs and remove from pipe
.8 Removal procedure opposite of installation without installation of upstream plugs

.1 Install 600 mm flow-through plug with 400 mm bypass
.2 Anchor flow-through plug to weir chamber
.3 Recess plug into pipe to reduce curvature of bypass piping

.1 Wall anchors installed in 2014 on north and west walls to anchor tee
.2 Additional anchors may be required to facilitate flow diversions

.1 Insert bypass piping min 1.2 m into siphon pipe
.2 If required, use sandbags to prevent backflow into chamber

.1 Install 400 mm bypass piping c/w 400 mm Tee
.2 Route piping out of way during inspection of 500 mm pipe

Rungs removed in 2012

.1 Install 900 mm flow-through plug with a 400 mm bypass
.2 Anchor flow-through plug to upstream manhole
.3 Recess plug into pipe to reduce curvature of bypass piping

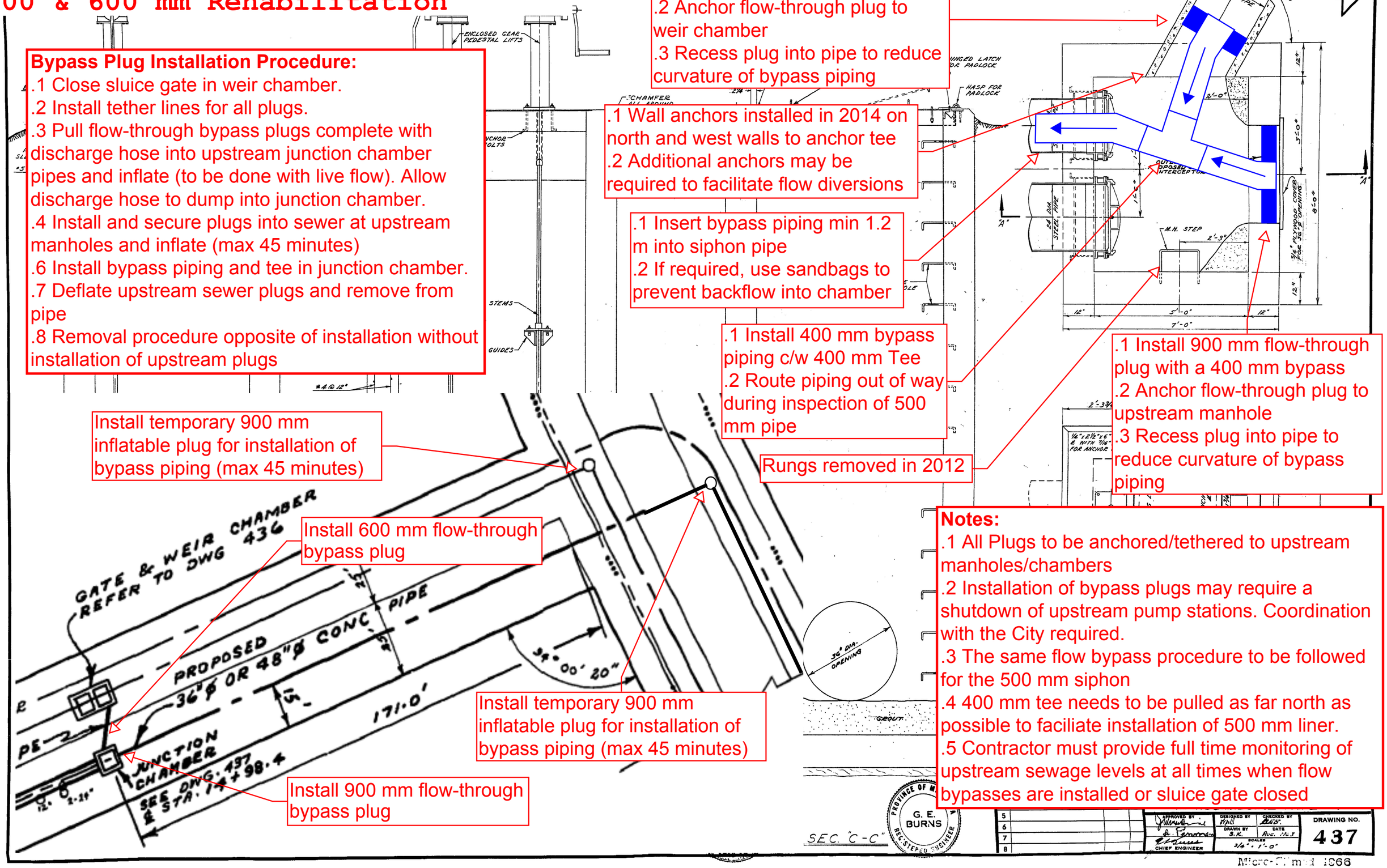
Install temporary 900 mm inflatable plug for installation of bypass piping (max 45 minutes)

Install 600 mm flow-through bypass plug

Install temporary 900 mm inflatable plug for installation of bypass piping (max 45 minutes)

Install 900 mm flow-through bypass plug

Notes:
.1 All Plugs to be anchored/tethered to upstream manholes/chambers
.2 Installation of bypass plugs may require a shutdown of upstream pump stations. Coordination with the City required.
.3 The same flow bypass procedure to be followed for the 500 mm siphon
.4 400 mm tee needs to be pulled as far north as possible to faciliate installation of 500 mm liner.
.5 Contractor must provide full time monitoring of upstream sewage levels at all times when flow bypasses are installed or sluice gate closed



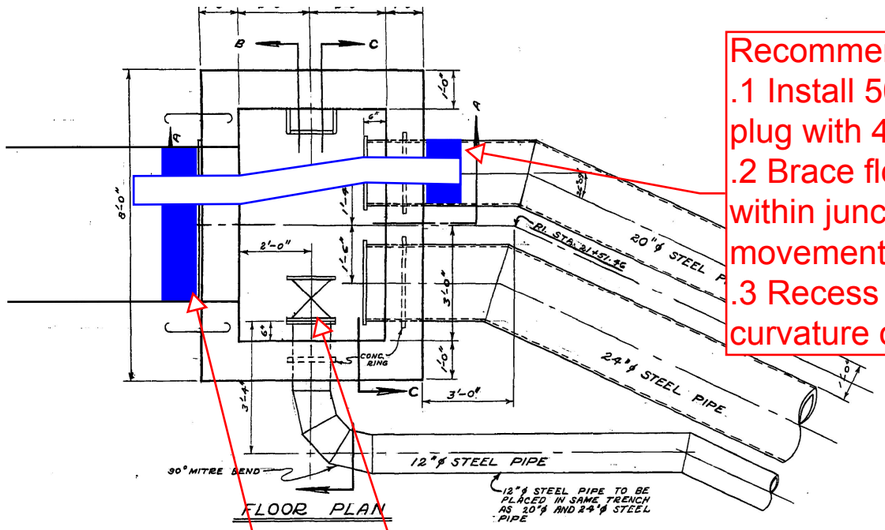
St. James Interceptor - South Side
500 & 600 mm Rehabilitation

Recommended Bypass Procedure:
.1 Install 500/600 mm flow-through plug with 400 mm bypass hose
.2 Brace flow-through plug within junction chamber to prevent movement of plug
.3 Recess plug into pipe to reduce curvature of bypass piping

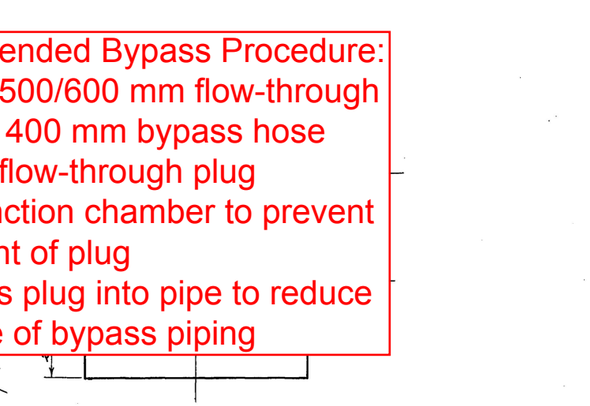
Valve removed and blind flange installed in 2014

Install sandbag weir as required to hold back sewage in downstream trunk

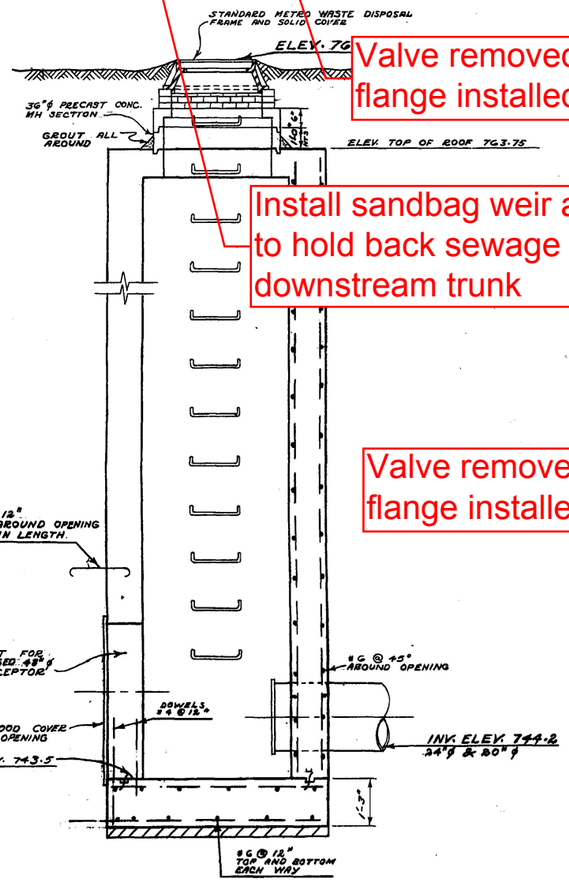
Valve removed and blind flange installed in 2014



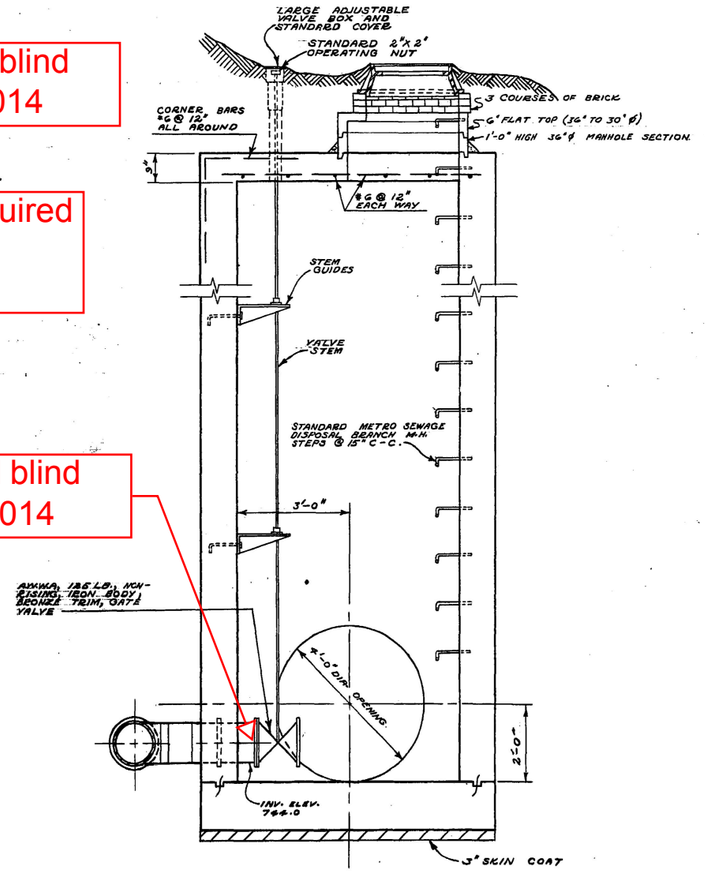
FLOOR PLAN



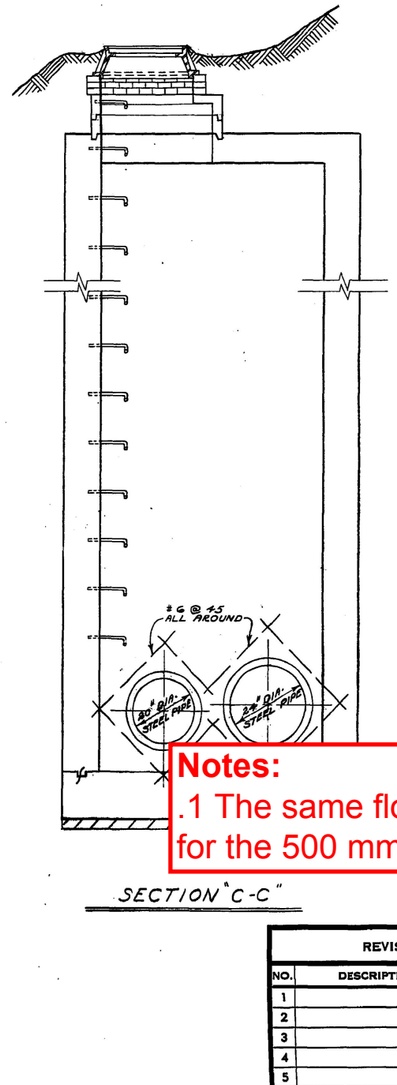
ROOF PLAN



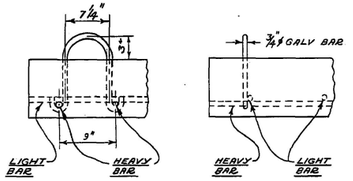
SECTION "A-A"



SECTION "B-B"



SECTION "C-C"



DETAIL OF LIFTING LUG

NOTE:
1. CONTRACTOR TO SUPPLY 1-20"ϕ AND 1-24"ϕ BLIND FLANGES FOR STEEL PIPE.

PROVINCE OF MANITOBA
M. W. SLEZAK
REGISTERED ENGINEER

Notes:
.1 The same flow bypass procedure to be followed for the 500 mm siphon

REVISIONS			
NO.	DESCRIPTION	DATE	BY
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THE METROPOLITAN CORPORATION OF GREATER WINNIPEG
WATERWORKS & WASTE DISPOSAL DIVISION
SEWAGE DISPOSAL BRANCH

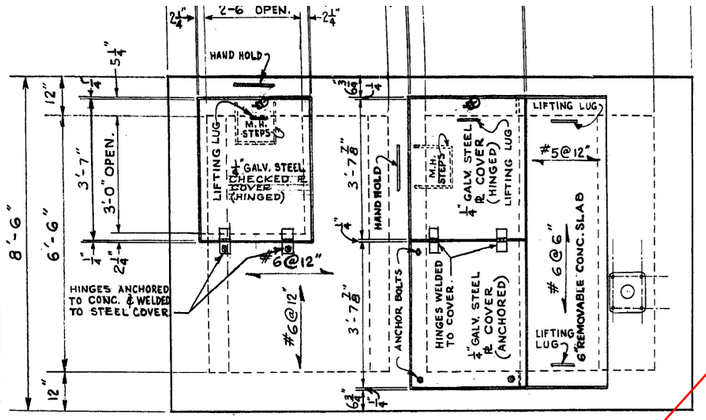
ST. JAMES INTERCEPTOR
SPECIAL MANHOLE ASSINIBOINE RIVER CROSSING

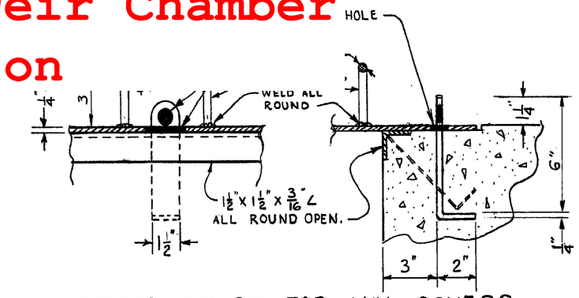
APPROVED BY
CHIEF ENGINEER

DESIGNED BY A.S.
DRAWN BY V.D.
CHECKED BY
DATE JUNE 1963
SCALES ½"=1'-0"

DRAWING NO. 438

St. James Interceptor - Weir Chamber
500 & 600 mm Rehabilitation



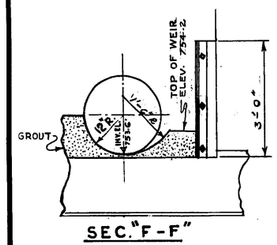


LOCKING DEVICE FOR M.H. COVERS.
SCALE 3"=1'-0"

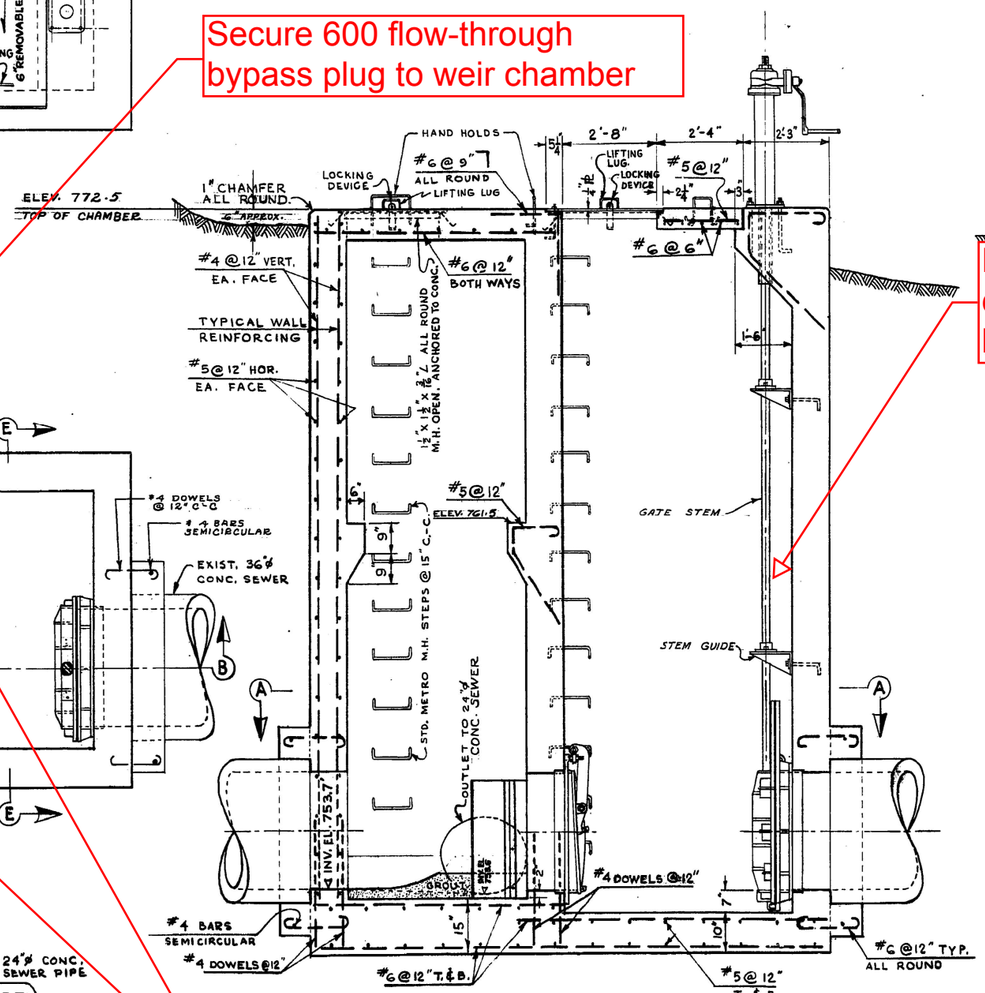
NOTE:
① ALL INVERTS AND ELEVATIONS TO BE CHECKED PRIOR TO CONSTRUCTION.
② SEE DRAWING 438 FOR LIFTING LUG DETAIL

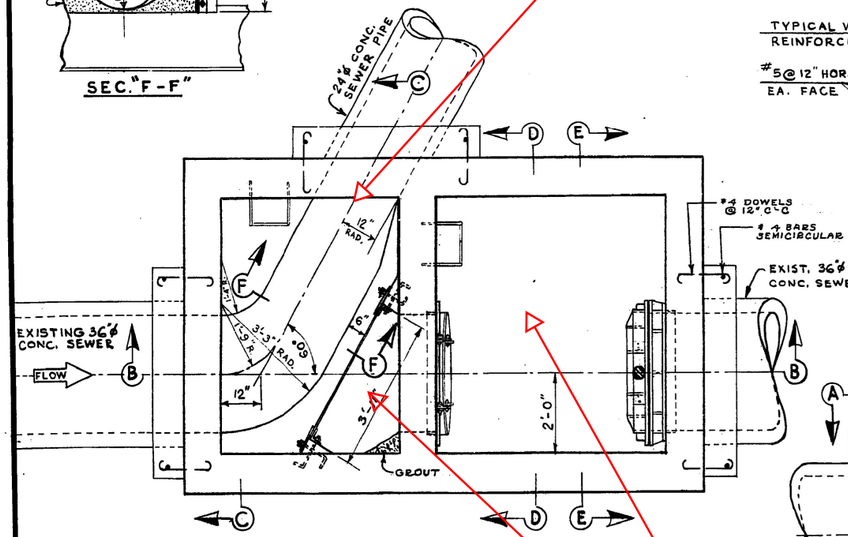
PROVINCE OF MANITOBA — M. W. SLEZAK — REGISTERED ENGINEER

PROVINCE OF MANITOBA — G. E. BURNS — REGISTERED ENGINEER

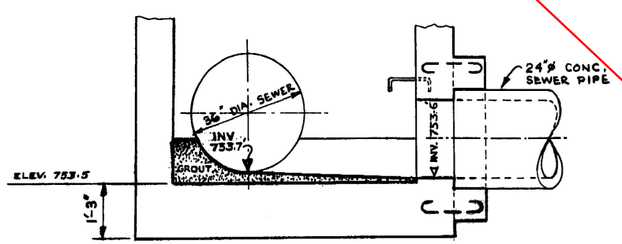


PLAN

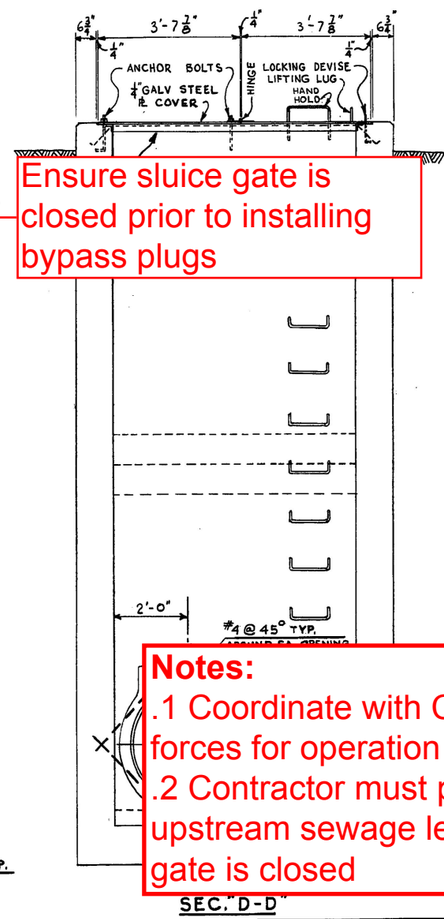




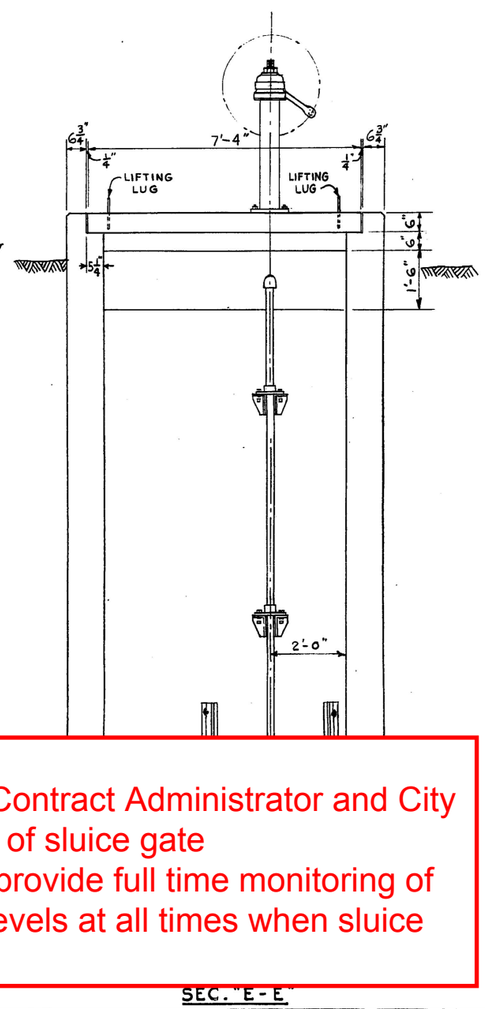
SEC."A-A"



SEC."C-C"



SEC."D-D"



SEC."E-E"

Secure 600 flow-through bypass plug to weir chamber

Ensure sluice gate is closed prior to installing bypass plugs

Contractor is responsible to pump out area between weir and sluice gate if weir is overtopped during work

Notes:
.1 Coordinate with Contract Administrator and City forces for operation of sluice gate
.2 Contractor must provide full time monitoring of upstream sewage levels at all times when sluice gate is closed

REVISIONS			
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THE METROPOLITAN CORPORATION OF GREATER WINNIPEG
WATERWORKS & WASTE DISPOSAL DIVISION
SEWAGE DISPOSAL BRANCH

ST. JAMES INTERCEPTOR PARKDALE GATE AND WEIR CHAMBER

APPROVED BY: J. Penman, CHIEF ENGINEER
DESIGNED BY: M.S.
CHECKED BY:
DRAWN BY: HB
DATE: APR 1963
SCALES: 1/2"=1'-0"
DRAWING NO. 436

Microfilmed 1966