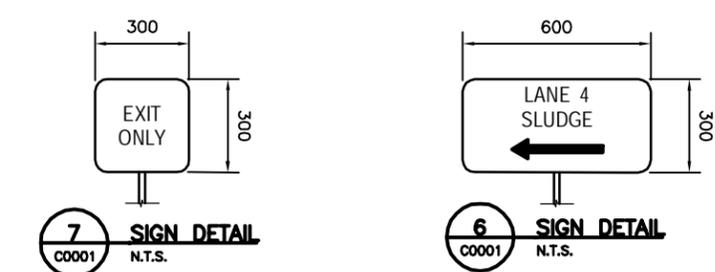
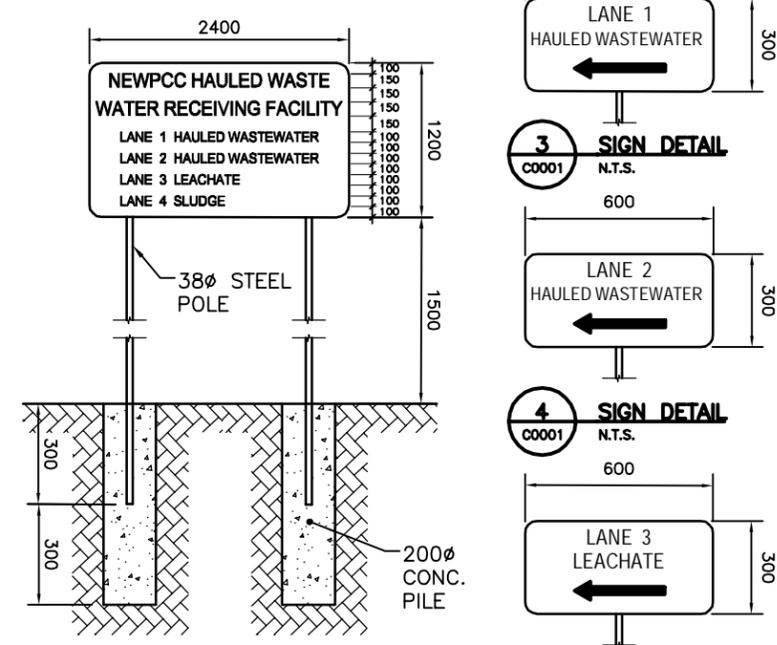
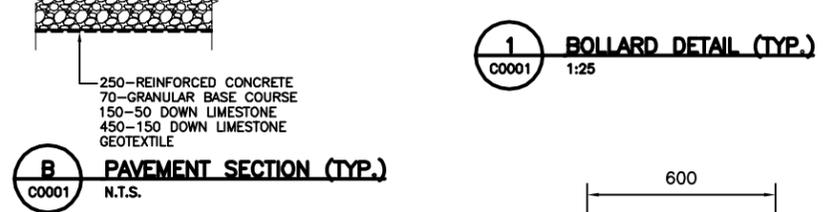
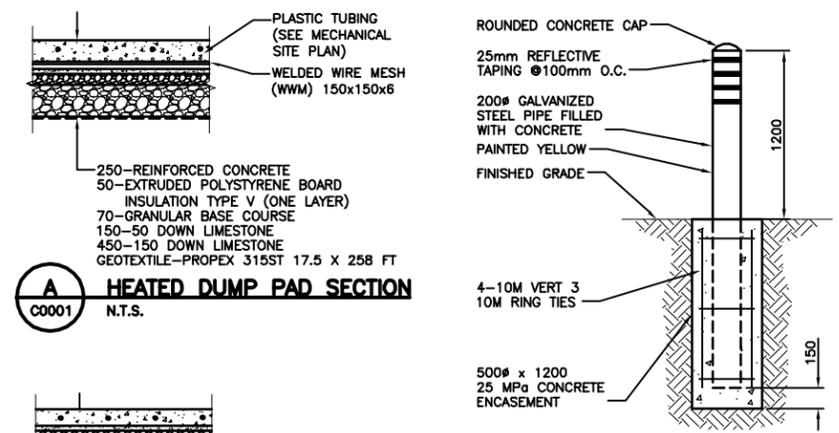
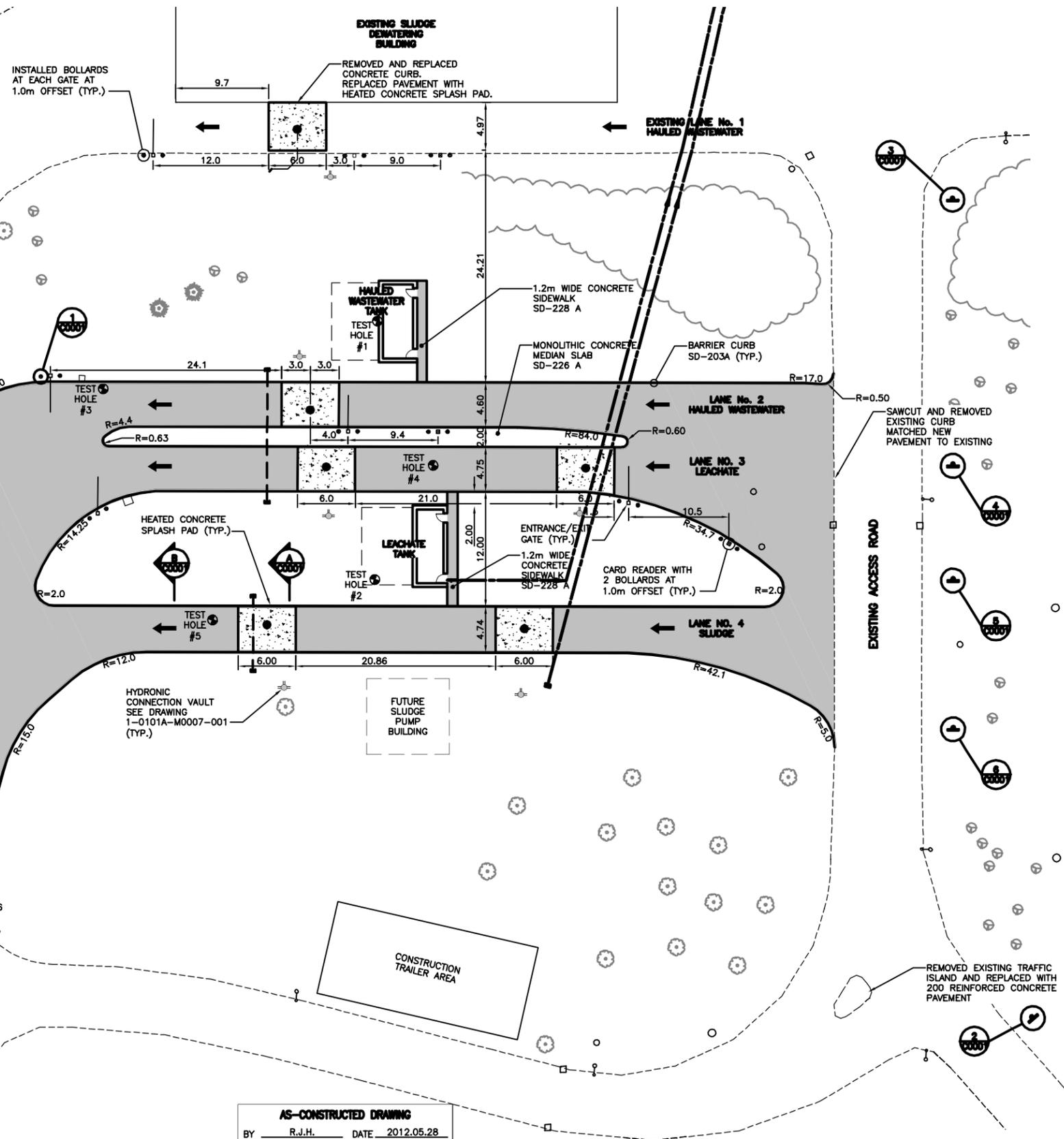


APPENDIX A – DRAWINGS

Item Number	Drawing Number	Drawing Title
1.	1-0101A-C0001-001	Hauled Wastewater Receiving Facilities – Site Plan
2.	1-0101A-C0002-001	Hauled Liquid Waste Receiving Facilities – Underground Services
3.	1-0101A-C0003-001	Hauled Liquid Waste Receiving Facilities – Grading and Drainage Plan
4.	1-0101A-C0007-001	Hauled Liquid Waste Receiving Facilities – Air Vent Manhole
5.	1-0101A-S0003-001	Hauled Wastewater Building – Foundation, Floor and Roof Plan
6.	1-0101A-S0007-001	Leachate Receiving Building – Foundation, Floor and Roof Plan
7.	1-0101A-P0001-001	Hauled Liquid Waste Receiving Building Process Flow Schematic
8.	1-0101A-P0002-001	Hauled Wastewater Receiving Building Sample Room floor Plan and Section
9.	1-0101A-P0003-001	Hauled Wastewater Receiving Building Lower Floor Plan and Details
10.	1-0101A-P0004-001	Leachate Receiving Building Process Flow Schematics
11.	1-0101A-P0005-001	Leachate Receiving Building Sample Room Floor Plan and Sections
12.	1-0101A-P0006-001	Leachate Receiving Building Pump Room Floor Plan and Sections
13.	1-0101A-P0007-001	Leachate Storage Tank Pumping – Gallery 2 &3 Plans and Sections
14.	1-0101A-M0001-001	Hauled Wastewater Receiving Building Mechanical Site Plan
15.	1-0101A-M0002-001	Hauled Wastewater Receiving Building Mechanical Plans
16.	1-0101A-M0003-001	Hauled Wastewater Receiving Building Mechanical Sections
17.	1-0101A-M0004-001	Hauled Wastewater Receiving Building Mechanical Details
18.	1-0101A-M0004-002	Hauled Wastewater Receiving Building Mechanical Details
19.	1-0101A-M0005-001	Hauled Wastewater Receiving Building Mechanical System Schematics
20.	1-0101A-M0007-001	Leachate Receiving Building Mechanical Site Plan
21.	1-0101A-M0008-001	Leachate Receiving Building Mechanical Plans
22.	1-0101A-M0009-001	Leachate Receiving Building Mechanical Sections
23.	1-0101A-M0010-001	Leachate Receiving Building Mechanical Details
24.	1-0101A-M0010-002	Leachate Receiving Building Mechanical Details
25.	1-0101A-M0011-001	Leachate Receiving Building Mechanical System Schematics
26.	1-0101A-E0005-001	Hauled wastewater and Leachate Receiving Buildings – Site Plan, Trench Details
27.	1-0101A-E0006-001	Hauled Wastewater Building Floor Plan and Leachate Building Floor Plan
28.	1-0101A-E0007-001	Hauled Wastewater and Leachate Receiving Buildings Single Line Diagrams, Panel Schedules

29.	1-0101A-E0008-001	Hauled Wastewater and Leachate Receiving Buildings Motor Schedules
30.	1-0101A-A0004-001	Hauled Wastewater Receiving Facilities Digester Gallery – Miscellaneous Wiring Details
31.	1-0101A-A0005-001	Hauled Wastewater and Leachate Receiving Building – Miscellaneous Wiring Details
32.	1-0101A-A0007-001	Hauled Wastewater Receiving Building PLC Panel Network Diagram
33.	1-0101A-A0008-001	Leachate building and Digester Gallery PLC Panel Network Diagram
34.	1-0101D-A0084-001	Process & Instrumentation Diagram - Digester Gallery – Leachate Pumping
35.	1-0101D-A0085-001	Process & Instrumentation Diagram – Digester Gallery – Leachate Discharge
36.	1-0101W-A0011-001	Process & Instrumentation Diagram – Dewatering building Truck Bay – Exhaust Fan W680-EF
37.	1-0101X-A0001-001	Process & Instrumentation Diagram – Leachate Building Receiving Manholes & Holding Tanks
38.	1-0101X-A0002-001	Process & Instrumentation Diagram – Leachate Building - Leachate Pumping System
39.	1-0101X-A0003-001	Process & Instrumentation Diagram Miscellaneous Building Systems
40.	1-0101X-A0004-001	Process & Instrumentation Diagram – Leachate Building Domestic Water System
41.	1-0101X-A0005-001	Process & Instrumentation Diagram Leachate Building Boiler System
42.	1-0101X-A0006-001	Process & Instrumentation Diagram Leachate Building Heat Recovery Ventilator X650-HRV & Heating Pump X640-P
43.	1-0101X-A0007-001	Process & Instrumentation Diagram Leachate Building Heating Pumps X630-P & X635-P
44.	1-0101X-A0008-001	Process & Instrumentation Diagram Leachate building Sump Pump X560-SMP
45.	1-0101Y-A0001-001	Process & Instrumentation Diagram Hauled wastewater Building Receiving Manholes & Holding Tanks
46.	1-0101Y-A0002-001	Process & Instrumentation Diagram Miscellaneous Building Systems
47.	1-0101Y-A0003-001	Process & Instrumentation Diagram Hauled Wastewater Building Domestic Water System
48.	1-0101Y-A0004-001	Process & Instrumentation Diagram Hauled Wastewater Building Boiler System
49.	1-0101Y-A0005-001	Process & Instrumentation Diagram Hauled Wastewater Building Heat Recovery Ventilator Y650-HRV & Heating Pump Y640-P
50.	1-0101Y-A0006-001	Process & Instrumentation Diagram Hauled Wastewater Building Heating Pumps Y630-P & Y635-P
51.	1-0101Y-A0007-001	Process & Instrumentation Diagram Hauled Wastewater Building Sump Pump Y560-SMP



AS-CONSTRUCTED DRAWING
 BY R.J.H. DATE 2012.05.28
 CHECKED BY H.A.K.

W. side Main St. on the grounds of the North End Treatment Plant, Tbit. on top of Conc. pit in front of the Main Bldg., 22.3m E. of line of most Ely. wall & 32.8m S. of most Nly. wall of Main Bldg. (Ties to Tbit.).

CONSTRUCTION COMPLETION DATE - SEPTEMBER 2011

METRIC
 WHOLE NUMBERS INDICATE MILLIMETRES
 DECIMALIZED NUMBERS INDICATE METRES



150 MM	WATERMAIN	150 MM	M.T.S.
+	HYDRANT	+	CONCRETE
+	VALVE	+	ASPHALT
300 LDS	LAND DRAINAGE SEWER	300 LDS	SIDEWALK
250 WWS	WASTE WATER SEWER	250 WWS	PROPERTY LINE
—	VENT PIPING	—	SURVEY BAR
○	MANHOLE	○	DITCH
□	CATCH BASIN	■	ELEVATION
—	GAS	—	TEST HOLES
—	HYDRO	—	HYDRONIC CONNECTION VAULT

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

N.O.	REVISIONS	DATE	BY
1	RECORD DRAWING	12.05.31	R.J.H.
A	ISSUED FOR TENDER	10.02.16	H.A.K.

Stantec Consulting Ltd.
 905 Waverley Street, Winnipeg, Manitoba
 Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY B.J.R. CHECKED BY H.A.K.
 DRAWN BY W.R.A. APPROVED BY B.J.R.

HOR. SCALE: 1:250
 VERTICAL: N.T.S.

RELEASED FOR CONSTRUCTION: DATE 09.10.30

ENGINEER'S SEAL
ORIGINAL SEALED BY B.J. RANSOM P. ENG. 2010-02-24

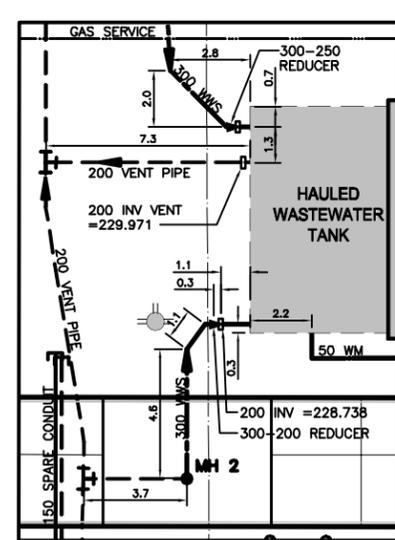
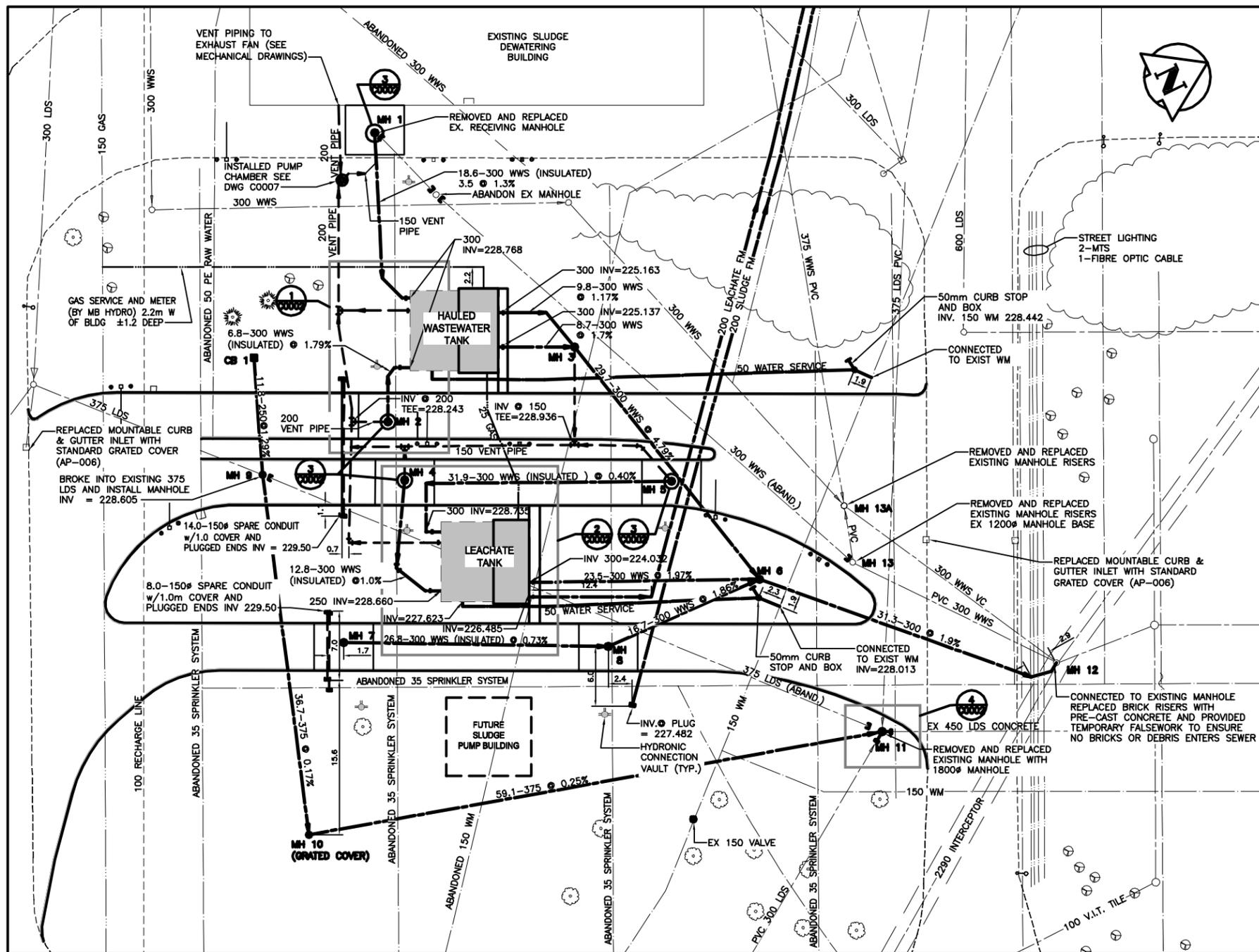
THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

Winnipeg

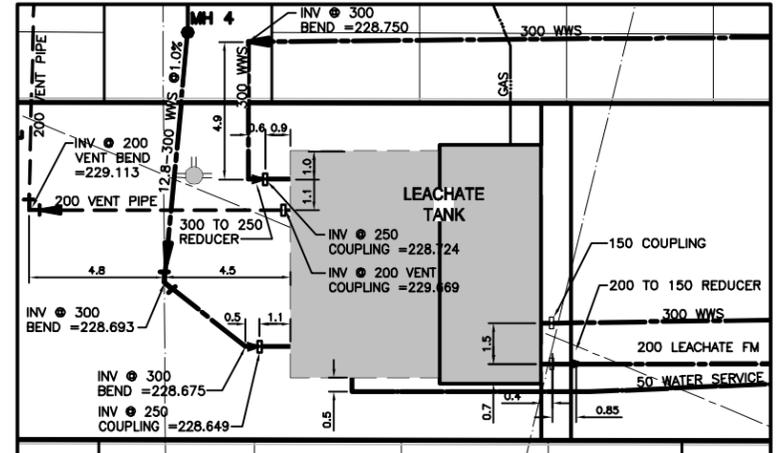
NORTH END WATER POLLUTION CONTROL CENTRE HAULED WASTEWATER RECEIVING FACILITIES

SITE PLAN

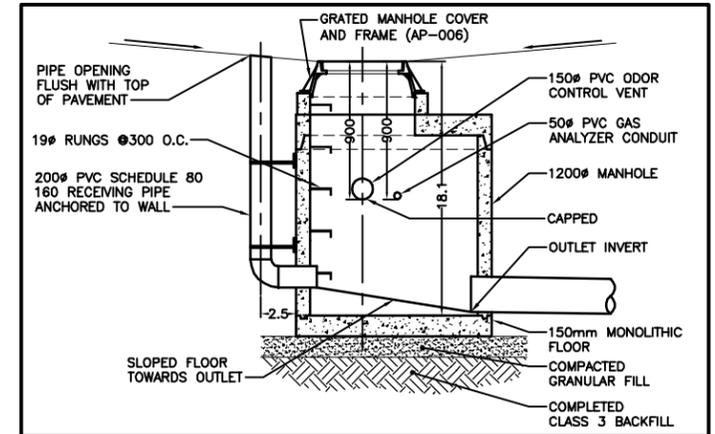
BID OPPORTUNITY NO. 822-2009
 CITY DRAWING NUMBER 1-0101A-C0001-001
 SHEET 1 OF 1



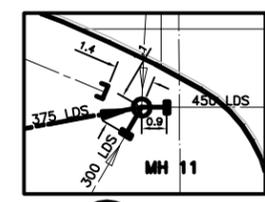
1 DETAIL
C0002 1:125



2 DETAIL
C0002 1:125



3 RECEIVING MANHOLE (TYP.)
C0002 N.T.S.



4 DETAIL
C0002 1:125

MANHOLE DATA				
MH#	TYPE	COVER	RM ELEV.	INVERT
MH1	RECEIVING	AP-006	230.941	300E=229.185
MH2	RECEIVING	AP-006	230.685	300S=228.849 200W=229.200
MH3	SD-010	AP-004	230.929	300E=225.021 300S=225.010 300W=225.048
MH4	RECEIVING	AP-006	230.636	300E=228.886
MH5	RECEIVING	AP-006	230.424	300S=228.968
MH6	SD-010	AP-004	230.929	300W=223.558 300W=223.598 300S=223.568 300E=228.289
MH7	SD-010	AP-006	230.763	300N=228.967
MH8	SD-010	AP-006	230.556	300N=228.583 300S=228.600
MH9	SD-010	AP-004	230.796	EX 375S=228.605
MH10	SD-010	AP-006	230.267	375W&N=228.537
MH11	SD-010	AP-004	231.116	EX 375S=ABANDONED EX 300E=228.329 EX 450N=227.739 EX W=227.729 375S=228.196
MH12	SD-010	AP-004	RIM=230.669	EX 300S=226.080 300S=222.961
MH13	SD-010	AP-004	230.779	375W=228.812 300N=226.652
MH13A			230.723	375W=226.664 375E=226.584 300S=226.534 300N=226.514

ITEM	MANUFACTURER	SPECIFICATIONS	SPECIAL FEATURES
WATER			
150, 300 GATE VALVES	CLOW VALVE	F-6112	RESILIENT WEDGE
VALVE BOX CASING AND COVER	TITAN FOUNDRY		FORCEMAIN VALVE AND WATER SERVICES
51 CONNECTION PIPING	WOLVERINE		COPPER
REDUCER BUSHING	FORD METER BOX	BBAA	51x19-51x38
51 CORPORATION STOP	A.Y. McDONALD	4701WP	COPPER FLARE OUTLET
51 CURB VALVE	FORD METER BOX	822-777M	
51 CURB VALVE BOX	TITAN FOUNDRY		
ANODE	INTERPROVINCIAL CORR.		10.9KG GALVANIZED ZINC
SEWER			
150, 200 FORCEMAIN	IPEX	DR9	RING-TITE
250, 375 SEWER PIPE	IPEX	SDR35 PVC	RING-TITE INJECTION MOULDED
SEWER FITTINGS	IPEX	SDR35 PVC	FLEX-SEAL
450 FLEXIBLE SEWER COUPLING	MISSION RUBBER		ALL PRE-CAST COMPONENTS
MANHOLE	LAFARGE		
MANHOLE FRAME	TITAN FOUNDRY	TF-101-9	
MANHOLE SOLID COVER	TITAN FOUNDRY	TF-101-9	
MANHOLE SLOTTED COVER	TITAN FOUNDRY	TF-101-9	
38 MANHOLE LIFTER RING	W.D. VALVES BOXES	WD-5	
51 MANHOLE LIFTER RING	W.D. VALVES BOXES	WD-6	
CATCH BASIN	INLAND PIPE		
CATCH BASIN FRAME & COVER	TITAN FOUNDRY	TF-102	ALL PRE-CAST COMPONENTS
JOINT SEALANT	INLAND PIPE		MOUNTABLE CURB & GUTTER INLET
VENT PIPING	IPEX	KENT SEAL 2	

CONTRACTOR: GATEWAY CONSTRUCTION (SUB CONTRACTOR: RED RIVER CONSTRUCTION)

- NOTES:**
- UNDERGROUND VENT PIPING INSTALLED WITH MINIMUM 1.0m COVER BELOW FINISHED GRADE AND WITH POSITIVE DRAINAGE TO MANHOLES.
 - EXISTING WATERMAIN LOCATED BY HAND EXCAVATION DURING INSTALLATION OF 300 WWS.

W. side Main St. on the grounds of the North end Treatment Plant, Tbt. on top of Conc. pit in front of the Main Bldg., 22.3m E. of line of most Ely. wall & 32.8m S. of most Nly. wall of Main Bldg. (Ties to Tbt.).

CATCHBASIN DATA		
CB#	RM ELEV.	INVERT
CB1	230.361	250E=228.855 BTM ELEV.=228.000



METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

AS-CONSTRUCTED DRAWING
BY R.J.H. DATE 2012.05.29
CHECKED BY H.A.K.

150 WM	WATERMAIN	150 WM	---	M.T.S.	---
+	HYDRANT	+	---	CONCRETE	---
+	VALVE	+	---	ASPHALT	---
+	LAND DRAINAGE SEWER	+	---	SIDEWALK	---
+	WASTE WATER SEWER	+	---	PROPERTY LINE	---
+	VENT PIPING	+	---	SURVEY BAR	---
+	MANHOLE	+	---	DITCH	---
+	CATCH BASIN	+	31.334	ELEVATION	32.23
+	GAS	+	---	HYDRONIC CONNECTION VAULT	---
+	HYDRO	+	---		---

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

B.M.	ELEV.	DATE	BY
13-027	231.261		
3	RECORD DRAWING	12.05.29	R.J.H.
2	REVISED MANHOLE AND CATCH-BASIN CO-ORDINATES		
1	ADDED SPARE CONDUITS AND GAS SERVICE-ADDENDUM 3	10.03.23	B.J.R.
A	ISSUED FOR TENDER	10.02.16	H.A.K.
N/L	REVISIONS		

Stantec Consulting Ltd.
905 Waverley Street, Winnipeg, Manitoba
Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY B.J.R. CHECKED BY H.A.K.
DRAWN BY W.R.A. APPROVED BY B.J.R.

HOR. SCALE: 1:250
VERTICAL: 1:250

RELEASED FOR CONSTRUCTION: DATE

DATE 09.10.30

ENGINEER'S SEAL

ORIGINAL SEALED BY B.J. RANSOM P. ENG. 2010-02-16

BID OPPORTUNITY NO. 822-2009

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

Winnipeg

NORTH END WATER POLLUTION CONTROL CENTRE
HAULED LIQUID WASTE RECEIVING FACILITIES

UNDERGROUND SERVICES

CITY DRAWING NUMBER **1-0101A-C0002-001** SHEET 1 OF 1

CONSTRUCTION COMPLETION DATE - SEPTEMBER 2011



MATERIAL LIST

ITEM	MANUFACTURER	SPECIFICATIONS	SPECIAL FEATURES
ROAD CONCRETE	CITY MIX		
ASPHALT	MAPLE LEAF		
GRANULAR	INLAND		
PIT RUN	GLACIAL AGGREGATES		
REINFORCING STEEL	MID CANADA REINFORCING STEEL		
SEPARATION FABRIC	BROCK WHITE CANADA PROPEX 315ST		WOVEN GEOTEXTILE

CONTRACTOR: GATEWAY CONSTRUCTION (SUB CONTRACTOR: BAYVIEW)

AS-CONSTRUCTED DRAWING
 BY R.J.H. DATE 2012.05.28
 CHECKED BY K.R.

NOTES
 1. ALL EXCESS EXCAVATED MATERIAL REMAINED ON SITE TO IMPROVE DRAINAGE UNLESS OTHERWISE DIRECTED BY CONTRACT ADMINISTRATOR.

W. side Main St. on the grounds of the North end Treatment Plant, Tbit. on top of Conc. pit in front of the Main Bldg., 22.3m E. of line of most Ely. wall & 32.8m S. of most Nly. wall of Main Bldg. (Ties to Tbit.).

CONSTRUCTION COMPLETION DATE - SEPTEMBER 2011

METRIC
 WHOLE NUMBERS INDICATE MILLIMETRES
 DECIMALIZED NUMBERS INDICATE METRES



150 MM	WATERMAIN	150 MM	M.T.S.
+	HYDRANT	+	CONCRETE
+	VALVE	+	ASPHALT
300 LDS	LAND DRAINAGE SEWER	300 LDS	SIDEWALK
250 WWS	WASTE WATER SEWER	250 WWS	PROPERTY LINE
—	VENT PIPING	+	SURVEY BAR
○	MANHOLE	●	DITCH
□	CATCH BASIN	■	ELEVATION
—	GAS	—	HYDRONIC CONNECTION VAULT
—	HYDRO	—	

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES DATE COMMITTEE

NOTE:
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B.M.	13-027	ELEV.	231.261
1	RECORD DRAWING	12.05.28	R.J.H.
A	ISSUED FOR TENDER	10.02.16	H.A.K.
NO.	REVISIONS	DATE	BY

Stantec Consulting Ltd.
 905 Waverley Street, Winnipeg, Manitoba
 Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY B.J.R. CHECKED BY H.A.K.
 DRAWN BY W.R.A. APPROVED BY B.J.R.

HOR. SCALE: 1:250
 VERTICAL: 1:250

RELEASSED FOR CONSTRUCTION: DATE

ENGINEER'S SEAL
ORIGINAL SEALED BY B.J. RANSOM P. ENG. 2010-02-24

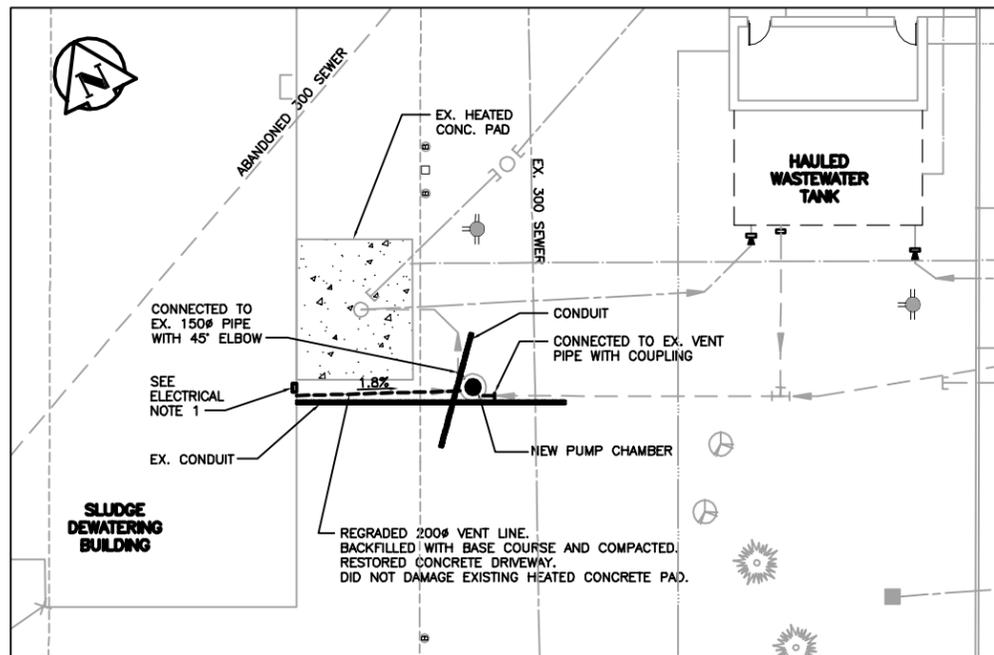
THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

Winnipeg

NORTH END WATER POLLUTION CONTROL CENTRE HAULED WASTEWATER RECEIVING FACILITIES

GRADING AND DRAINAGE PLAN

BID OPPORTUNITY NO. 822-2009 CITY DRAWING NUMBER 1-0101A-C0003-001 SHEET 1 OF 1



SITE PLAN
1:150

GENERAL NOTES

1. LOCATED UNDERGROUND SERVICES AND PROTECTED THEM AT ALL TIMES DURING THE CONSTRUCTION.
2. MOUNTED JUNCTION BOX OPPOSITE LADDER AND WITHIN 600mm FROM TOP OF MANHOLE.

RIGID INSULATION

1. INSTALLED TO MAINTAIN CONTINUITY OF THERMAL BARRIER, FIT TIGHT TO PENETRATIONS

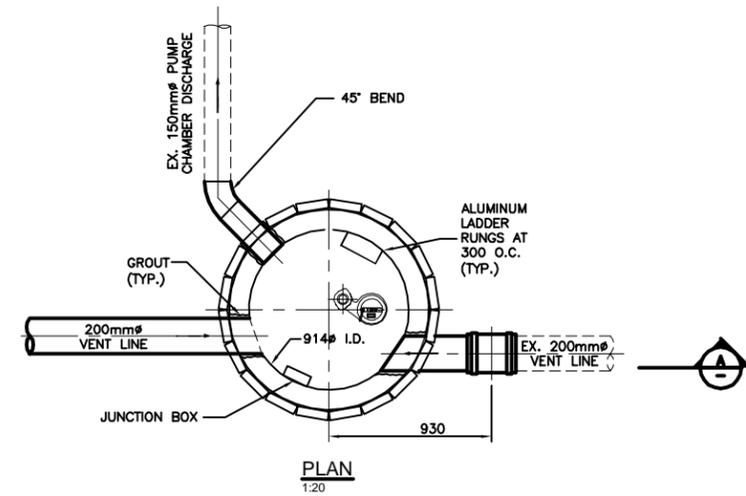
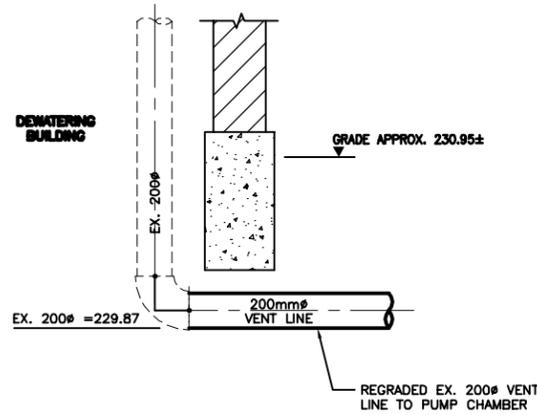
ELECTRICAL NOTES

1. INSTALLED NEW 200 X 200 X 100 PVC JUNCTION BOX IN DEWATERING FACILITY.
2. INSTALLED NEW 200 X 200 X 100 PVC JUNCTION BOX IN NEW PUMP CHAMBER.
3. CONNECTED TO EXISTING CONDUIT WITH WYE FOR PVC JUNCTION BOX IN CHAMBER AND DEWATERING FACILITY.

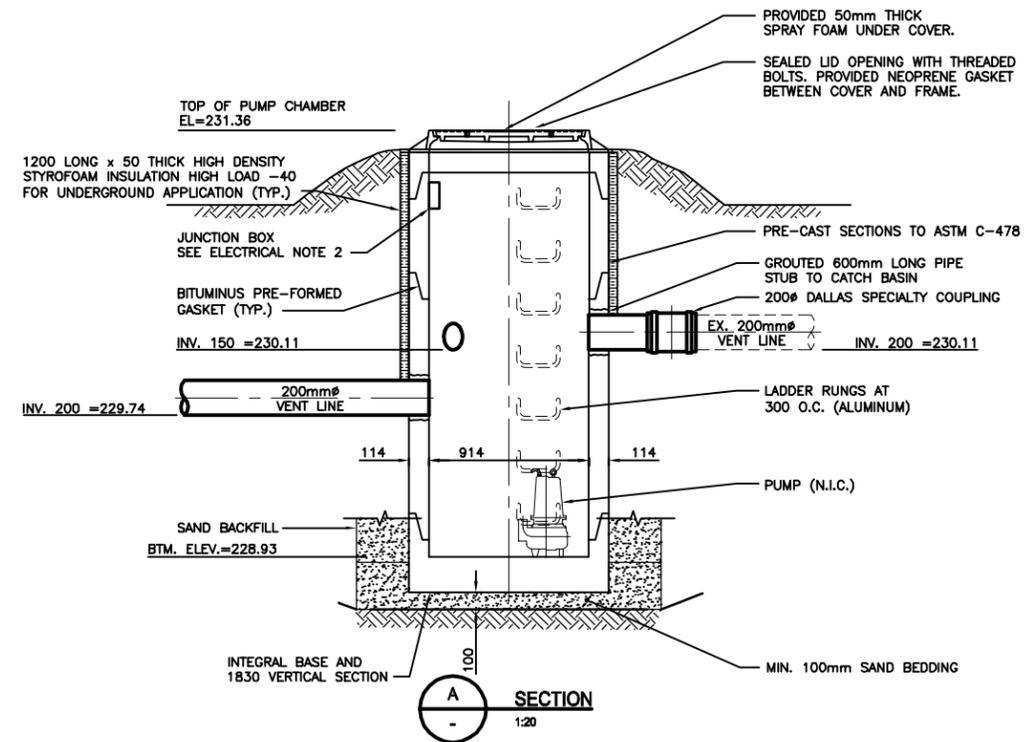
SEWER MATERIAL LIST

ITEM	MANUFACTURER	SPECIFICATIONS	SPECIAL FEATURES
150, 200 SEWER PIPE	IPEX	ASTM D3034	RING-TITE
150 - 45° BEND	IPEX	PVC SDR-35	RING-TITE
200 COUPLING	DALLAS SPECIALTY		
INSULATION	DOW	HIGLOAD 40	
PUMP CHAMBER BASE	LAFARGE		ALL PRE-CAST COMPONENTS
MANHOLE FRAME & COVER	TITAN FOUNDRY	TF-113-5	127mm HIGH FRAME & SOLID-BLANK COVER

CONTRACTOR: MAPLE LEAF CONSTRUCTION



PLAN
1:20



SECTION
1:20

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

AS-CONSTRUCTED DRAWING
BY O.S. DATE 2014/07/22
CHECKED BY H.A.K.

150 MM	WATERMAIN	150 MM	M.T.S.
+	HYDRANT	+	CONCRETE
+	VALVE	+	ASPHALT
300 LDS	LAND DRAINAGE SEWER	300 LDS	SIDEWALK
250 WWS	WASTE WATER SEWER	250 WWS	PROPERTY LINE
—	VENT PIPING	+	SURVEY BAR
○	MANHOLE	●	DITCH
□	CATCH BASIN	■	ELEVATION
—	GAS	●	TEST HOLES
—	HYDRO	—	HYDRONIC CONNECTION VAULT

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.	NO.	REVISIONS	DATE	BY
	1	RECORD DRAWING	14.07.22	O.S.

Stantec
905 Waverley St., Winnipeg MB Canada
www.stantec.com

DESIGNED BY S.A.B. CHECKED BY H.A.K.
DRAWN BY K.R. APPROVED BY S.A.B.

HOR. SCALE: AS NOTED
VERTICAL: —

RELEASSED FOR CONSTRUCTION: DATE

DATE 2013-12-10

ENGINEER'S SEAL
ORIGINAL SEALED BY S.A.BEZAK P. ENG. yy/mm/dd

CONSTRUCTION COMPLETION DATE - JULY 2014

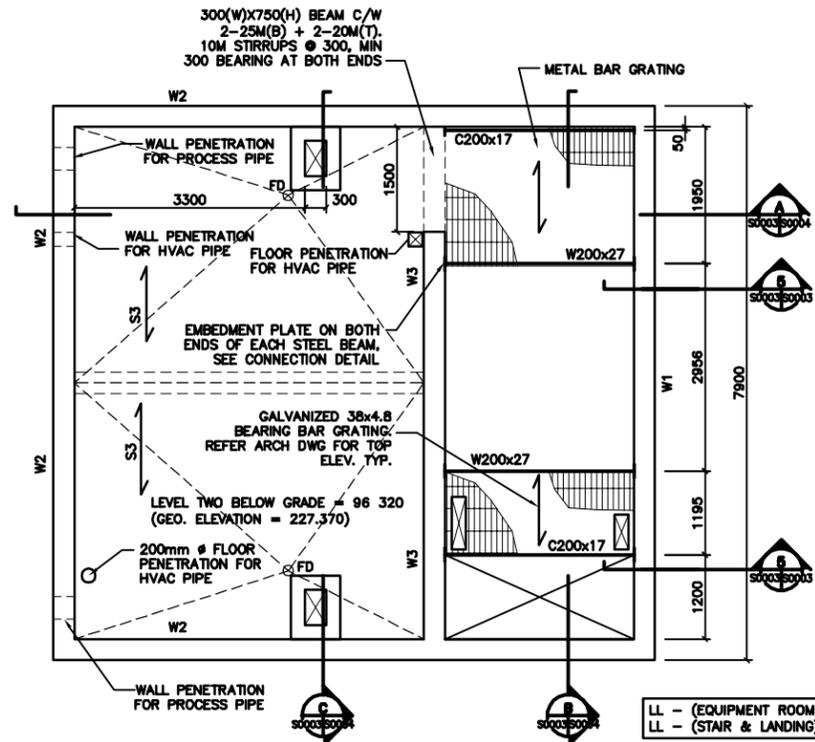
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

Winnipeg

**NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES**

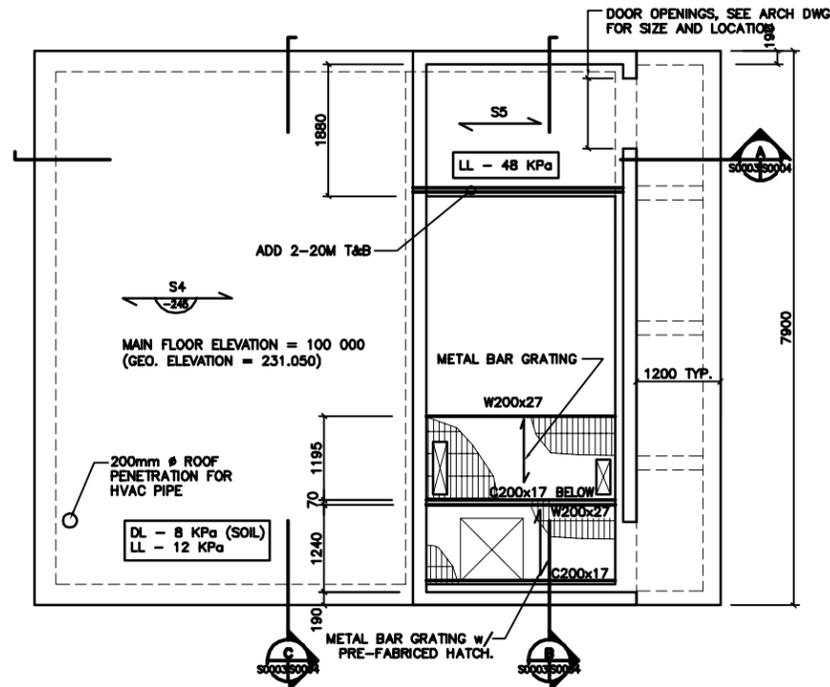
AIR VENT MANHOLE

BID OPPORTUNITY NO. CITY DRAWING NUMBER **1-0101A-C0007-001** SHEET 1 OF 1

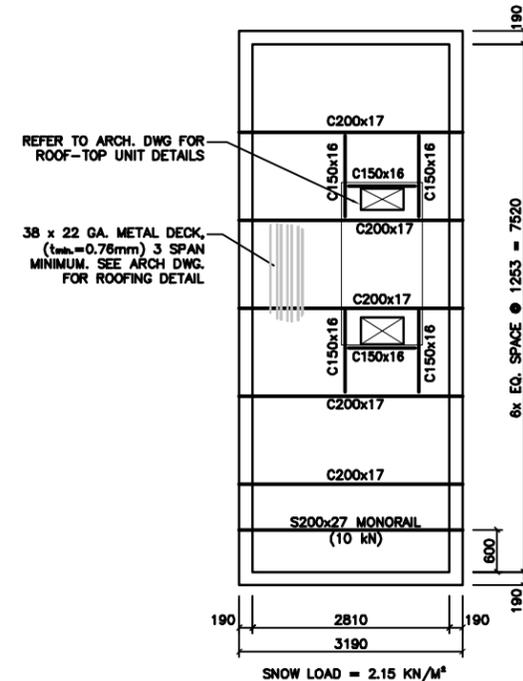


NOTE:
REFER TO PROCESS/MECHANICAL DRAWINGS FOR PIPE PENETRATION
TYPE - CORE DRILLED OR EMBEDDED FLANGE TYPES.
PROVIDED ADDITIONAL REBAR AROUND PIPE PENETRATION AS SHOWN ON
TYPICAL DETAIL DRAWING.

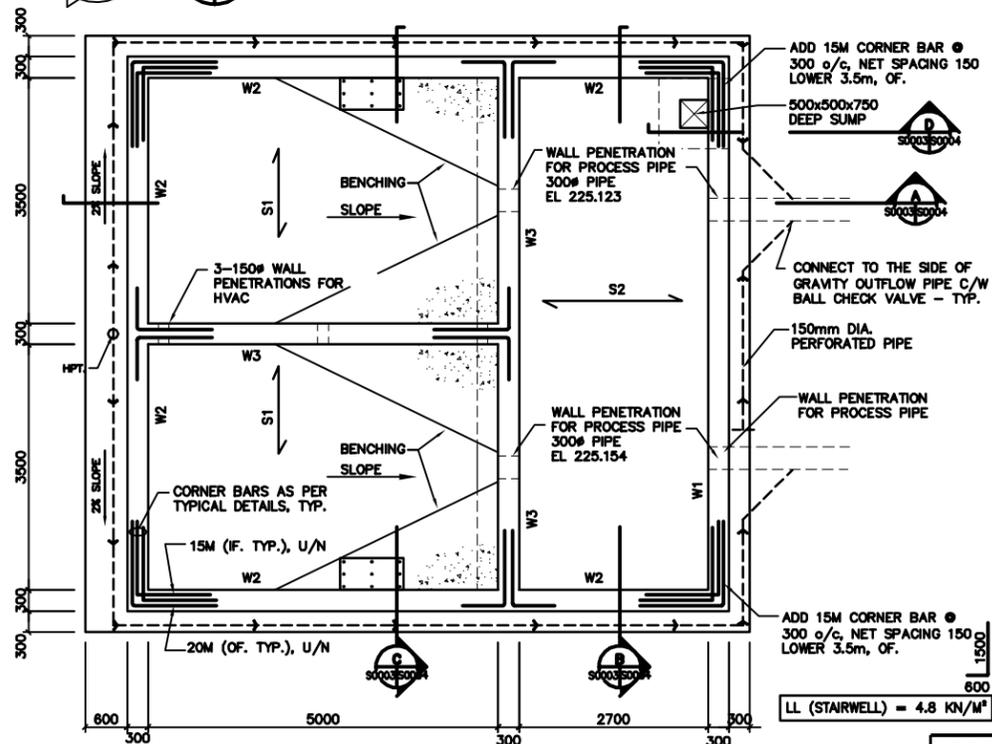
1 LEVEL 2 - BELOW GRADE
S0003/S0003 1:50



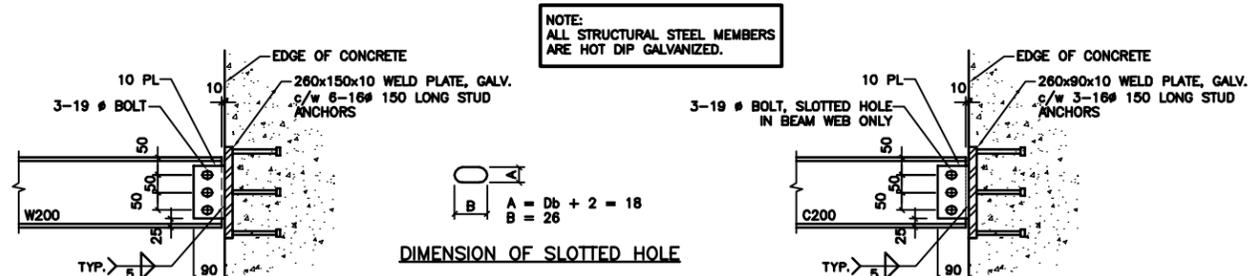
2 LEVEL 1 - GRADE
S0003/S0003 1:50



3 ROOF PLAN
S0003/S0003 1:50



4 FOUNDATION PLAN
S0003/S0003 1:50



5 SECTION DETAIL - STEEL BEAM CONNECTION
S0003/S0003 1:10

AS-CONSTRUCTED DRAWING
BY R.J.H. DATE 2012.06.08
CHECKED BY B.F.

APEGN
Certificate of Authorization
Stantec Consulting Ltd.
No. 1301

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CONSTRUCTION COMPLETION DATE - SEPTEMBER 2011

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE DATE

NOTE:
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NO.	REVISIONS	DATE	BY
2	RECORD DRAWING	12.06.08	RJH
1	ADDENDUM #3 - WEeping TILE	10.03.19	MH
A	ISSUED FOR TENDER	10.02.16	WO

Stantec Consulting Ltd. 905 Waverley Street, Winnipeg, Manitoba Tel 204-489-5900 Fax 204-453-9012	
DESIGNED BY M.H.	CHECKED BY T.D.
DRAWN BY W.O.	APPROVED BY M.H.
HOR. SCALE: AS NOTED	RELEASED FOR CONSTRUCTION:
VERTICAL:	DATE 09.11.23

ENGINEER'S SEAL	ORIGINALLY SEALED BY:
MOHAMMAD HOQUE	OCT. 9, 2009
BID OPPORTUNITY NO. 822-2009	CITY DRAWING NUMBER 1-0101A-S0003-001

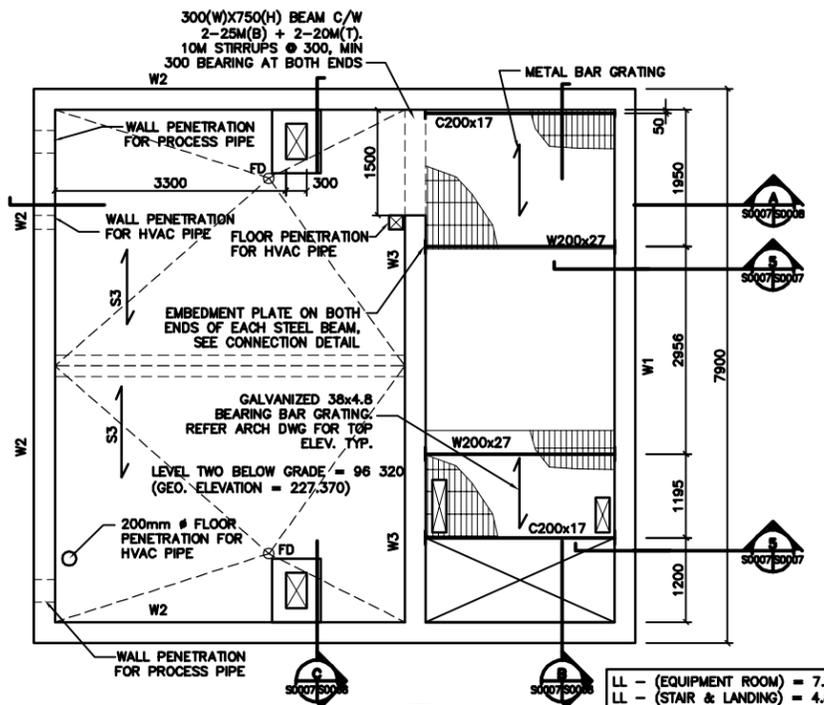
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

Winnipeg

NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
HAULED WASTEWATER BUILDING
FOUNDATION, FLOOR AND ROOF PLAN

SHEET 3 OF 4

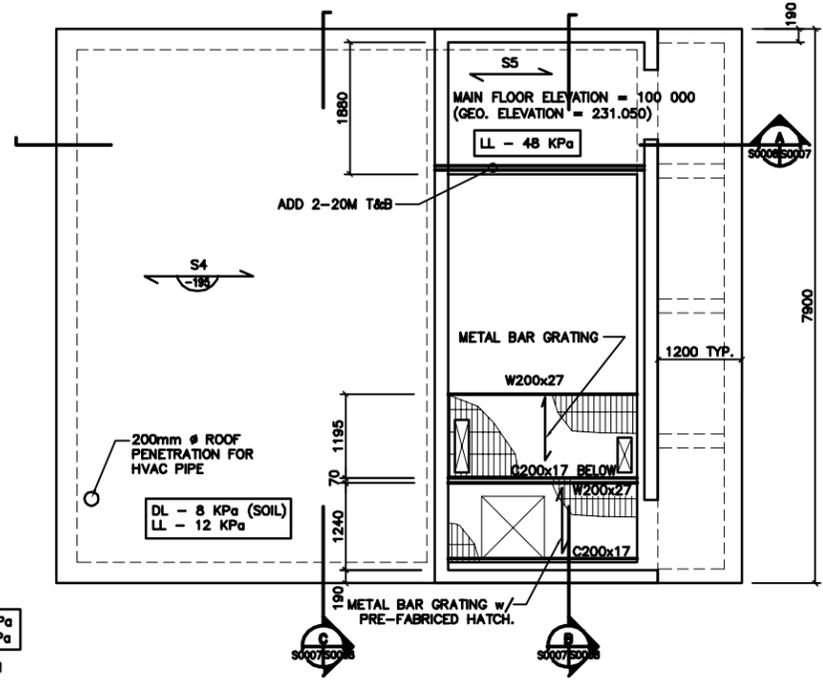
METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES



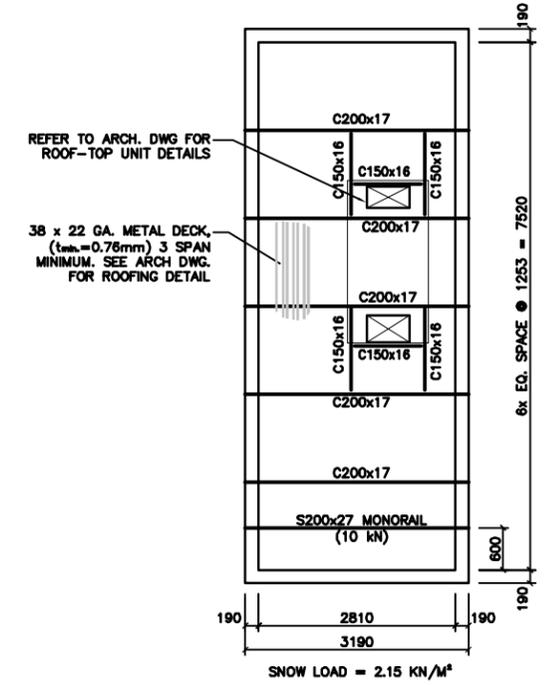
NOTE:
REFER TO PROCESS/MECHANICAL DRAWINGS FOR PIPE PENETRATION TYPE - CORE DRILLED OR EMBEDDED FLANGE TYPES. PROVIDED ADDITIONAL REBAR AROUND PIPE PENETRATION AS SHOWN ON TYPICAL DETAIL DRAWING.

LL - (EQUIPMENT ROOM) = 7.2 KPa
LL - (STAIR & LANDING) = 4.8 KPa

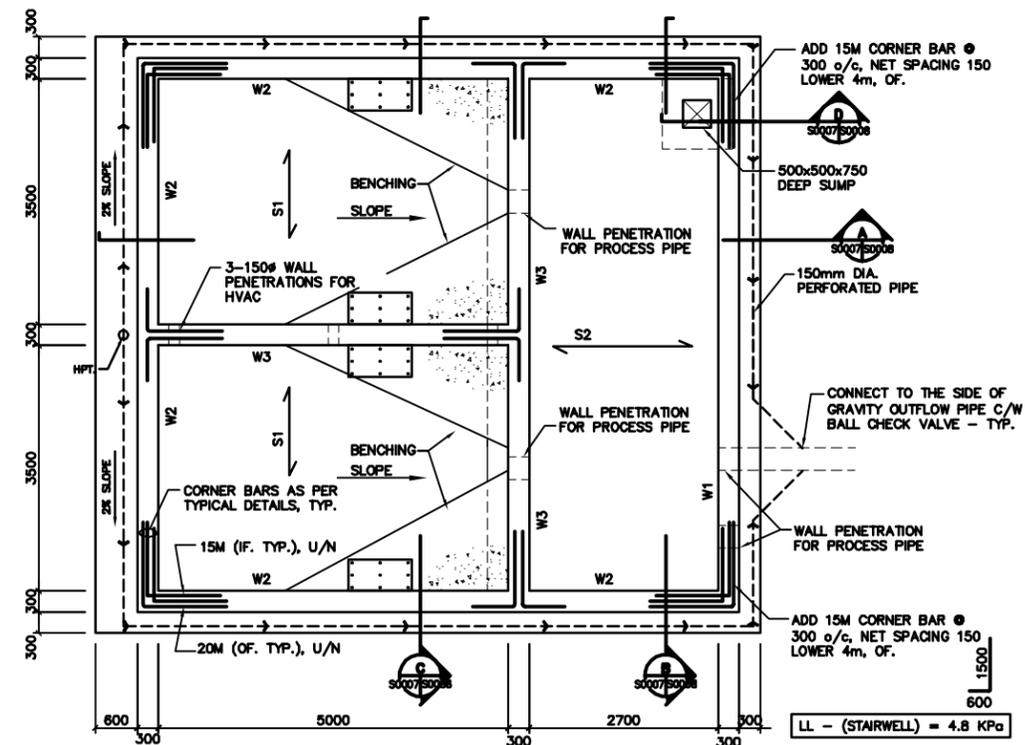
1 LEVEL 2 - BELOW GRADE
S0007/S0007 1:50



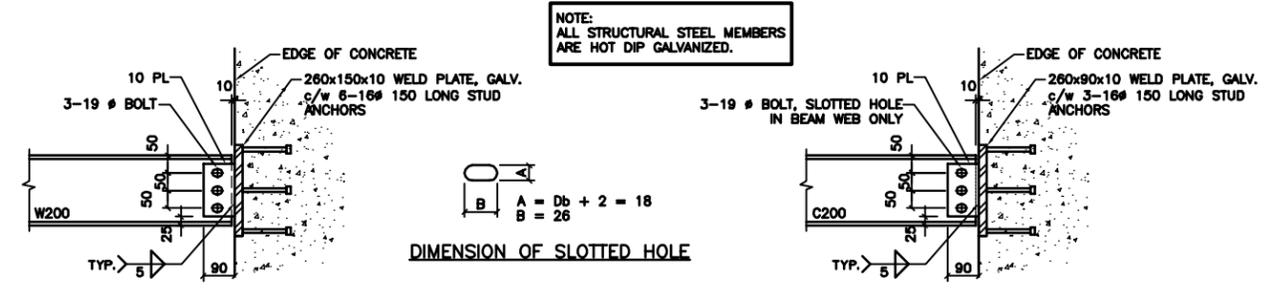
2 LEVEL 1 - GRADE
S0007/S0007 1:50



3 ROOF PLAN
S0007/S0007 1:50



4 FOUNDATION PLAN
S0007/S0007 1:50



5 SECTION DETAIL - STEEL BEAM CONNECTION
S0007/S0007 1:10

AS-CONSTRUCTED DRAWING
BY R.J.H. DATE 2012.06.08
CHECKED BY B.F.

APEGN
Certificate of Authorization
Stantec Consulting Ltd.
No. 1301

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CONSTRUCTION COMPLETION DATE - SEPTEMBER 2011

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE DATE

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NO.	REVISIONS	DATE	BY
3	RECORD DRAWING	12.06.08	R.J.H.
2	ADDENDUM #3 - WEEPING TILE	10.03.19	
1	ISSUED FOR TENDER	10.02.16	W.O.

Stantec Consulting Ltd.
905 Waverley Street, Winnipeg, Manitoba
Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY	M.H.	CHECKED BY	T.D.
DRAWN BY	W.O.	APPROVED BY	M.H.
HOR. SCALE:	AS NOTED	RELEASED FOR CONSTRUCTION:	
VERTICAL:		DATE	

ENGINEER'S SEAL

ORIGINALLY SEALED BY:

MOHAMMAD HOQUE
OCT. 9, 2009

BID OPPORTUNITY NO.
822-2009

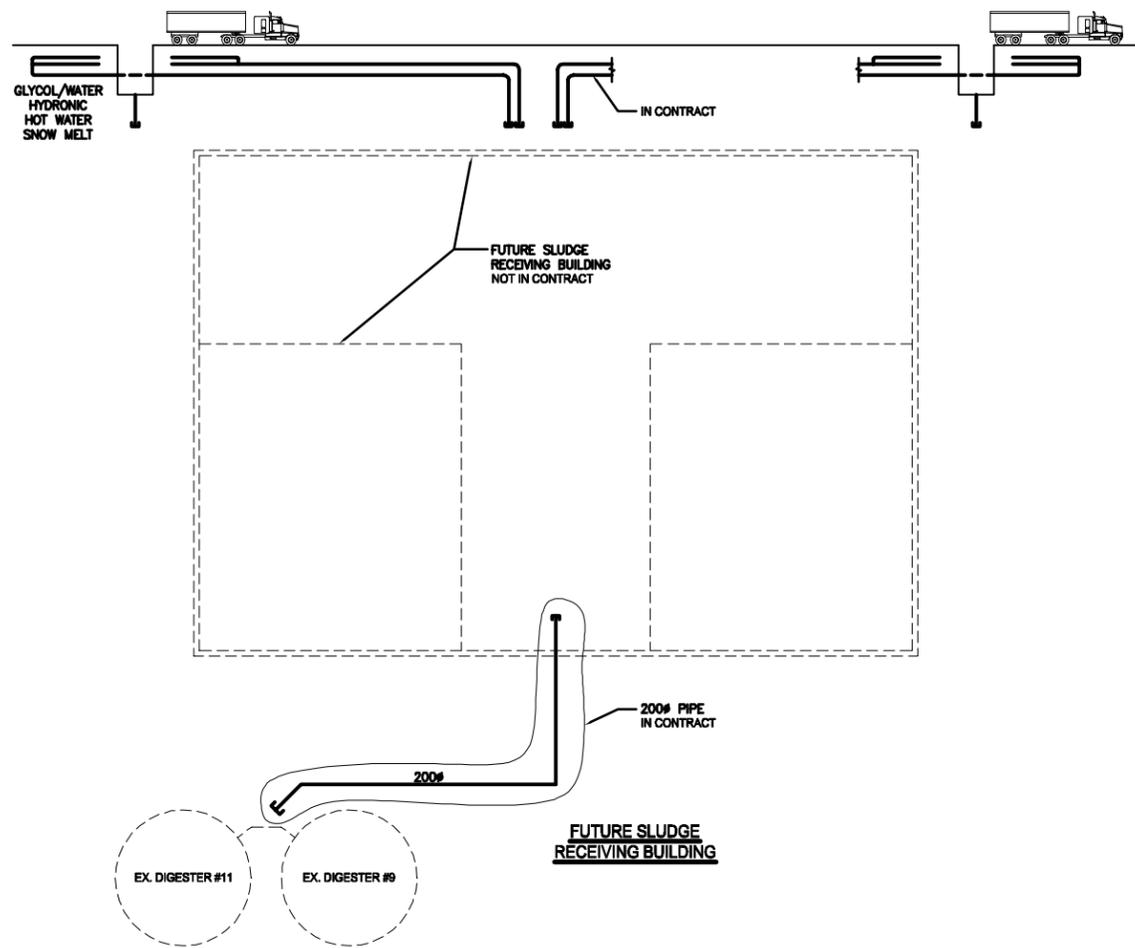
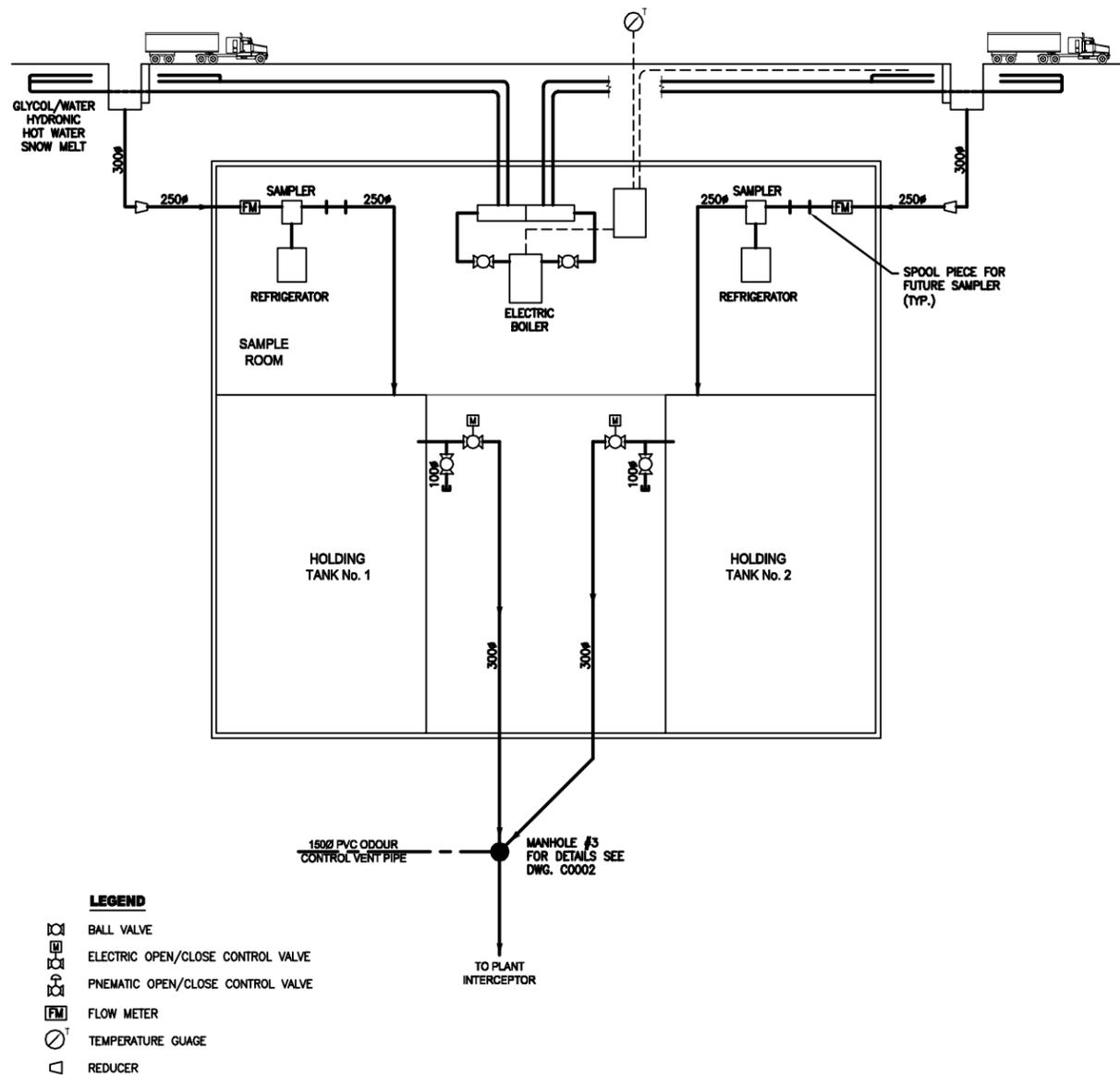
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

Winnipeg

NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
LEACHATE RECEIVING BUILDING
FOUNDATION, FLOOR AND ROOF PLAN

CITY DRAWING NUMBER
1-0101A-S0007-001

SHEET OF
3 OF **4**



LEGEND

- BALL VALVE
- ELECTRIC OPEN/CLOSE CONTROL VALVE
- PNEUMATIC OPEN/CLOSE CONTROL VALVE
- FLOW METER
- TEMPERATURE GAUGE
- REDUCER

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

AS-CONSTRUCTED DRAWING
BY G.L. DATE 2012.04.17
CHECKED BY A.H.B.

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE DATE

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NO.	REVISIONS	DATE	BY
2	RECORD DRAWING	12.04.17	G.L.
1	ISSUED FOR TENDER	10.02.16	A.H.B.

Stantec Consulting Ltd.
905 Waverley Street, Winnipeg, Manitoba
Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY A.H.B. CHECKED BY J.A.
DRAWN BY K.R. APPROVED BY A.H.B.

HOR. SCALE: AS NOTED
VERTICAL: RELEASED FOR CONSTRUCTION: DATE 09.09.21

ENGINEER'S SEAL
ORIGINAL SEALED BY
A.H. BEGHIN
P. ENG.
10/02/24

TENDER NO. 822-2009

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

Winnipeg

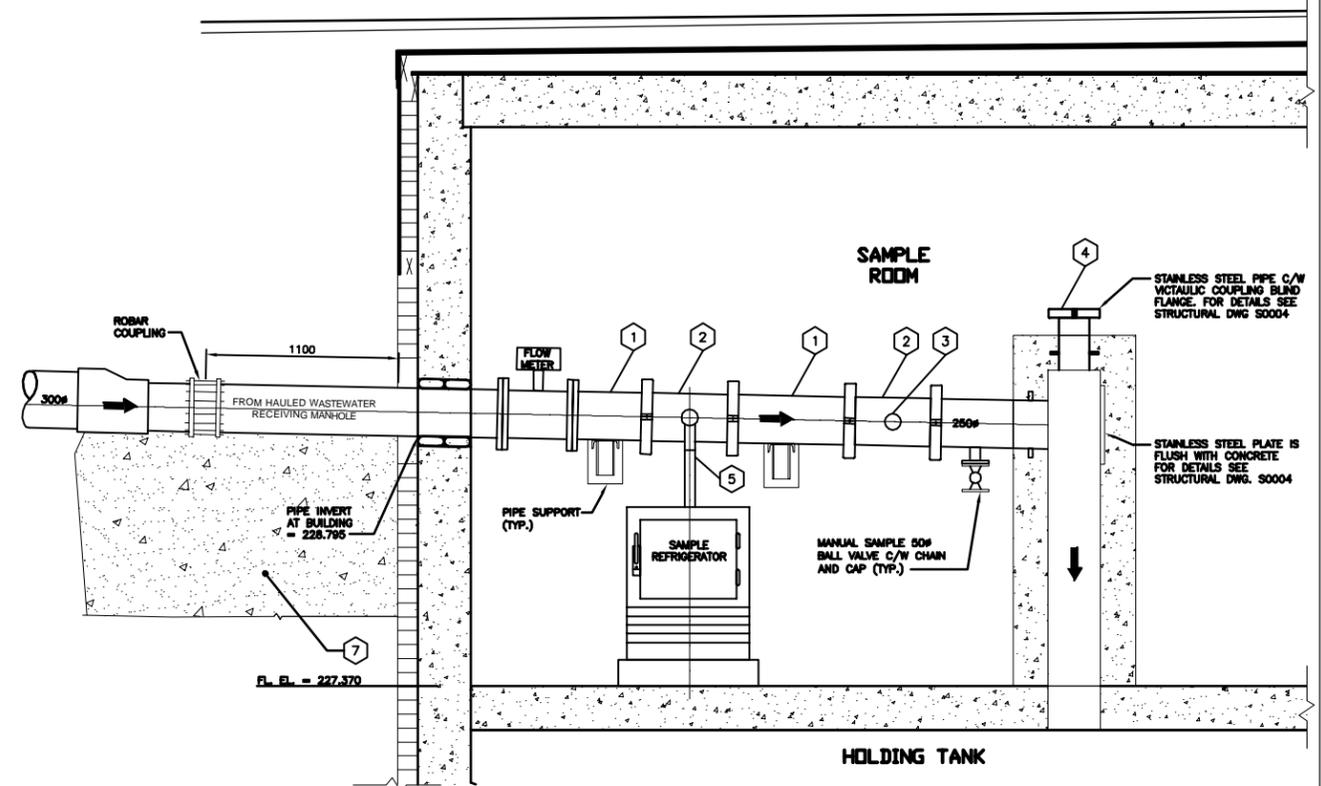
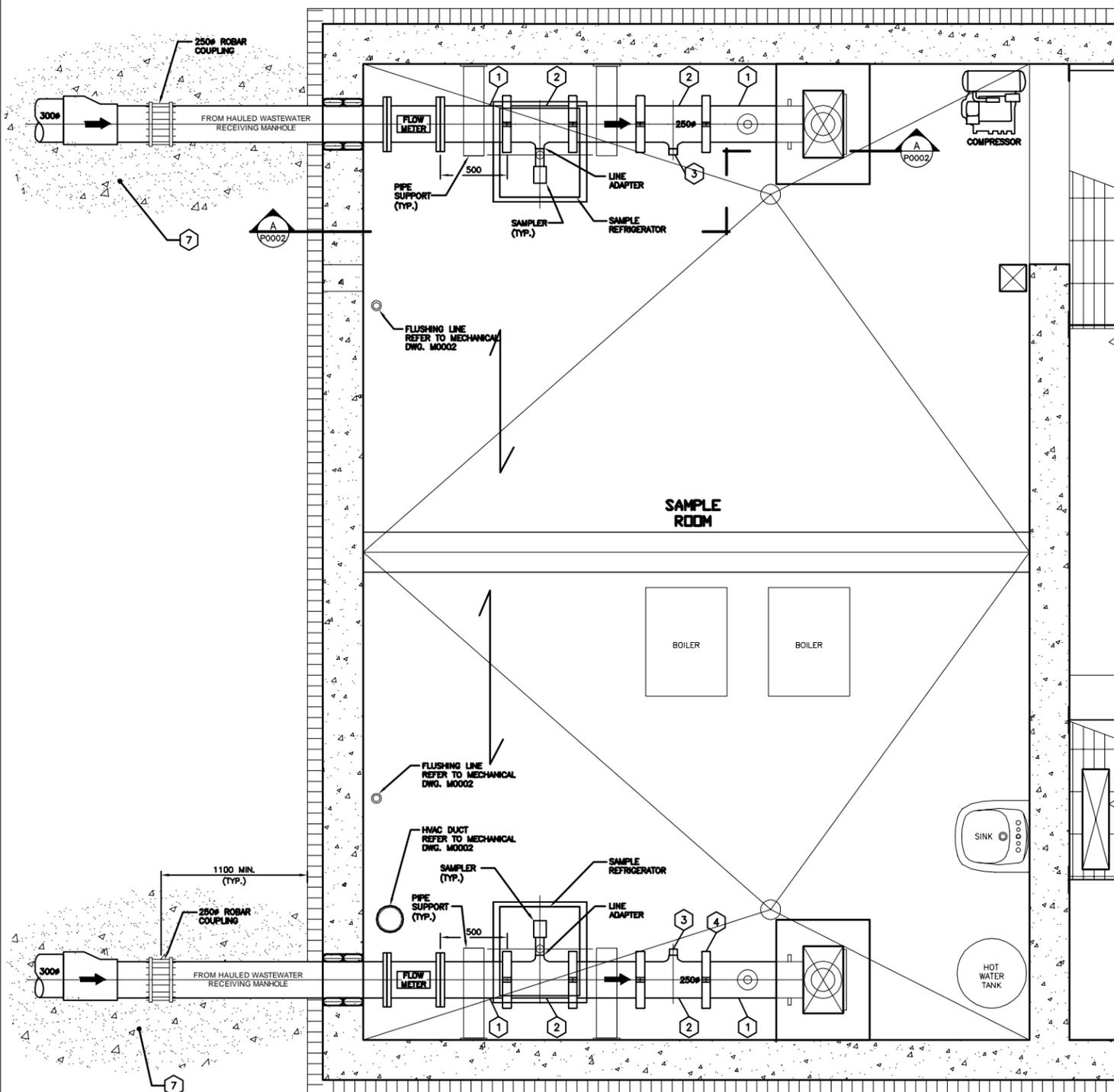
**NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
HAULED WASTEWATER RECEIVING BUILDING
PROCESS FLOW SCHEMATIC**

CITY DRAWING NUMBER 1-0101A-P0001-001 SHEET 1 OF 8



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CONSTRUCTION COMPLETION DATE - SEPTEMBER 2011



A SECTION
P0002 1:20

- NOTE:
- 1 ALL PIPE TO BE IPS TYPE 316L STAINLESS STEEL - SCHEDULE 10S AS PER ASTM A778
 - 2 MANUFACTURED IPS TYPE 316L STAINLESS STEEL SPOOL PIECE WITH ADAPTER SADDLE FOR ISOLOK SAMPLING INSTRUMENT
 - 3 PROVIDE GASKETED CAP FOR SPOOL PIECE
 - 4 VICTAULIC STEEL RIGID COUPLING
 - 5 CLEAR POLYVINYL TUBING
 - 6 LEAN MIX CONCRETE FILL REFER TO STRUCTURAL DRAWING S0007

1 PLAN
P0002 1:20

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CONSTRUCTION COMPLETION DATE - APRIL 2011

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

RECORD DRAWING
BY G.L. DATE 2012.04.17
CHECKED BY A.H.B.

APEGM
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Stantec Consulting Ltd.
No. 1301

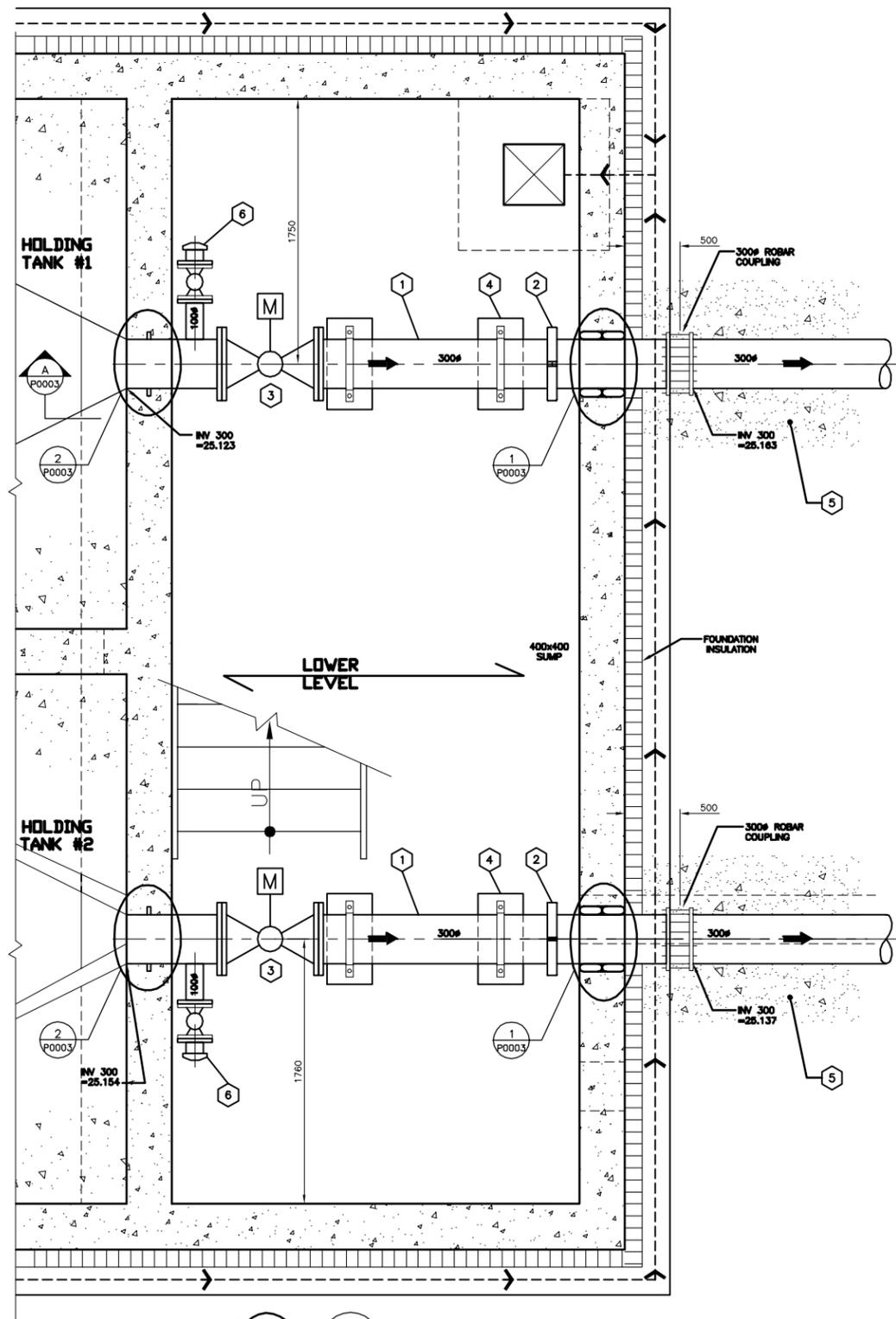
LOCATION APPROVED UNDERGROUND STRUCTURES
SUPV. U/G STRUCTURES COMMITTEE DATE
NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CORROBORATION OF EXISTENCE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

NO.	REVISIONS	DATE	BY
C	RECORD DRAWING	2.04.17	G.L.
B	REVISED AS PER ADDENDUM #4	0.03.26	A.H.B.
A	ISSUED FOR TENDER	0.02.16	A.H.B.

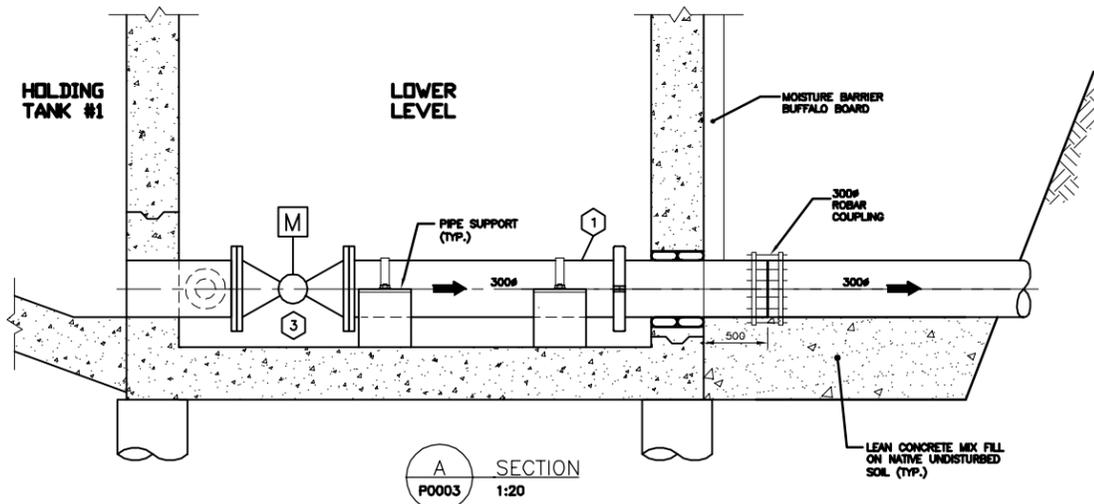
Stantec Consulting Ltd. 905 Waverley Street, Winnipeg, Manitoba Tel 204-489-5900 Fax 204-453-9012		ENGINEER'S SEAL ORIGINAL SEALED BY A.H. BEGHIN P. ENG. 10/02/24
DESIGNED BY A.H.B. DRAWN BY K.R.	CHECKED BY E.W. APPROVED BY A.H.B.	TENDER NO. 822-2009
HOR. SCALE: AS NOTED VERTICAL:	RELEASED FOR CONSTRUCTION:	CITY DRAWING NUMBER 1-0101A-P0002-001
DATE 09.11.10	DATE	SHEET 2 OF 8

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

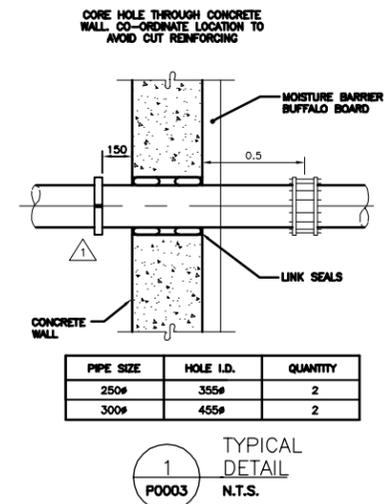
NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
HAULED WASTEWATER RECEIVING BUILDING
SAMPLE ROOM FLOOR PLAN AND SECTION



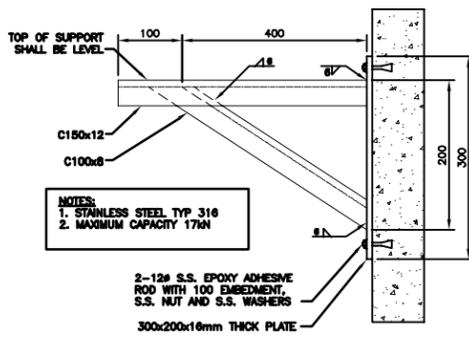
1 PLAN
P0003 1:20



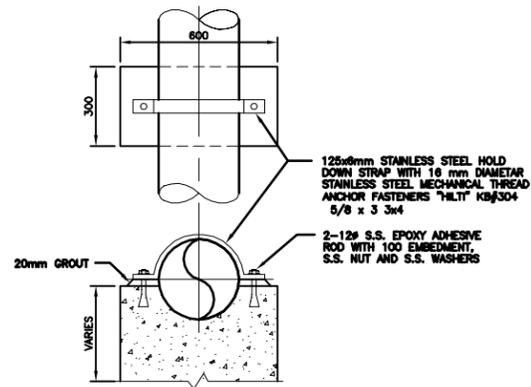
A SECTION
P0003 1:20



1 TYPICAL DETAIL
P0003 N.T.S.



TYPICAL PIPE SUPPORT DETAILS
N.T.S.



2 TYPICAL DETAIL
P0003 1:20

- NOTE:
- 1 ALL PIPE IS IPS TYPE 316L STAINLESS STEEL -SCHEDULE 10S
 - 2 VICTAULIC STEEL RIGID COUPLING
 - 3 ELECTRIC ACTUATED BALL VALVE
 - 4 CONCRETE PIPE SUPPORT
 - 5 LEAN MIX CONCRETE FILL REFER TO STRUCTURAL DRAWING S0007
 - 6 ALUMINUM BAYCO FITTING C/W CAP

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CONSTRUCTION COMPLETION DATE - APRIL 2

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

RECORD DRAWING
BY G.L. DATE 2012.04.17
CHECKED BY A.H.B.

APEGM
Certificate of Authorization
Stantec Consulting Ltd.
No. 1301

LOCATION APPROVED UNDERGROUND STRUCTURES
SUPV. U/G STRUCTURES COMMITTEE DATE
NOTE:
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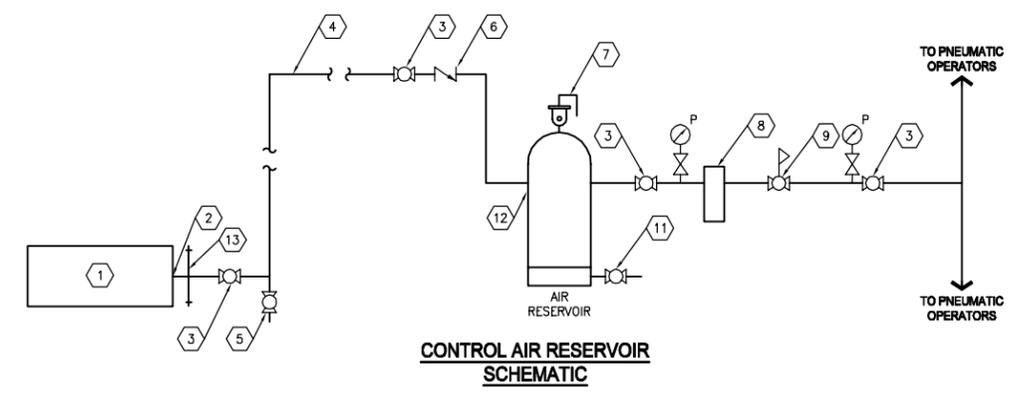
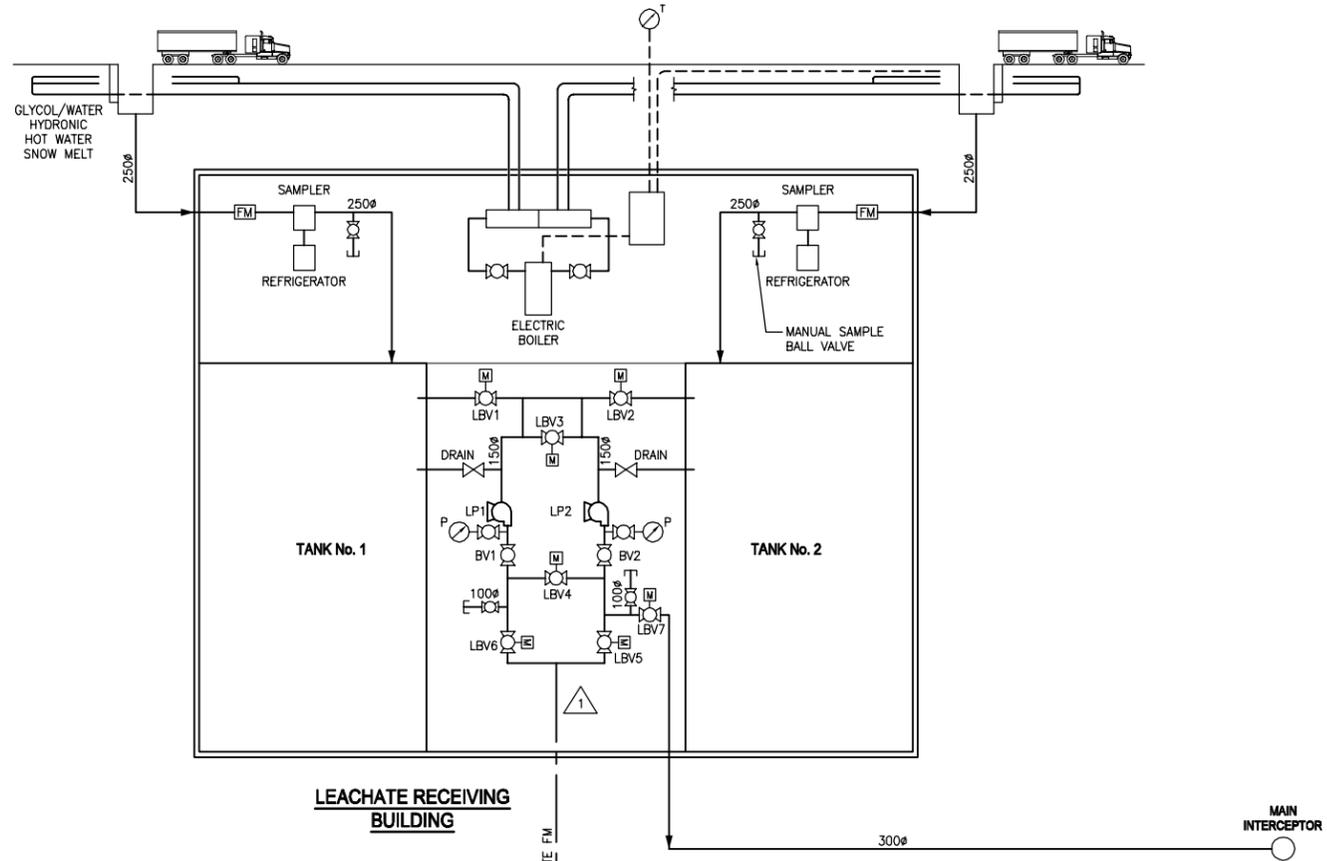
NO.	REVISIONS	DATE	BY
C	RECORD DRAWING	10.04.17	G.L.
B	REVISED AS PER ADDENDUM #4	0.03.26	A.H.B.
A	ISSUED FOR TENDER	0.02.16	A.H.B.

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

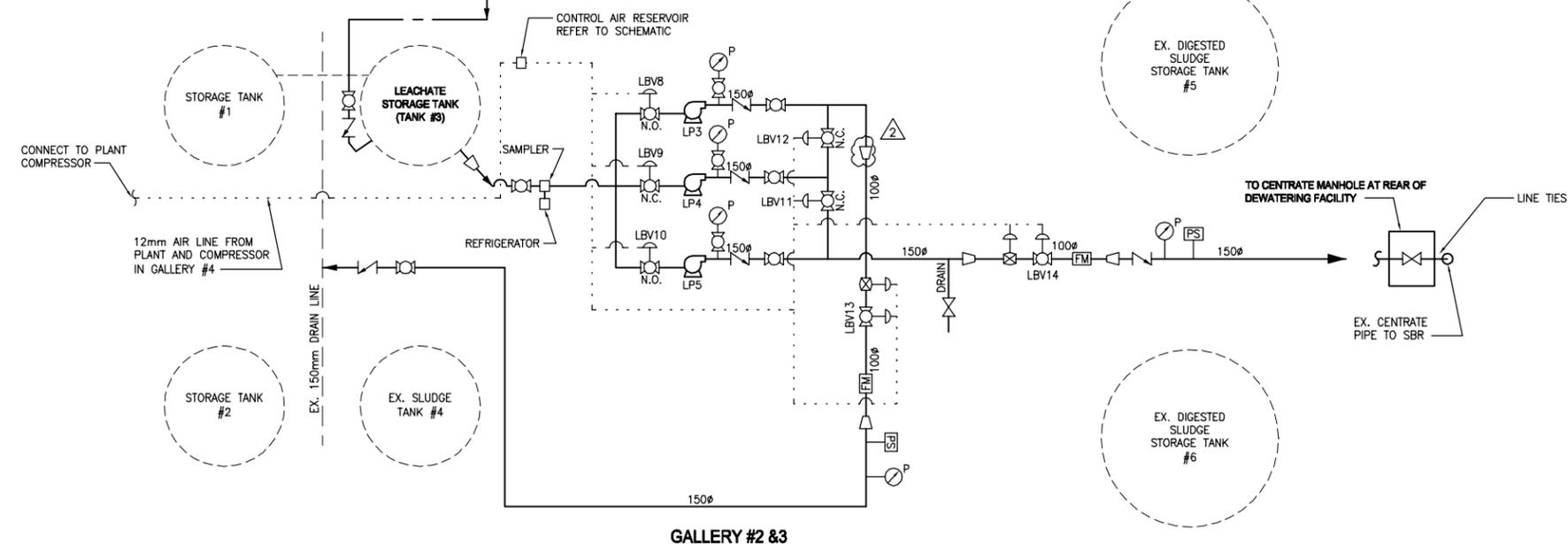
DESIGNED BY A.H.B.	CHECKED BY E.W.
DRAWN BY K.R.	APPROVED BY A.H.B.
HOR. SCALE: VERTICAL: AS NOTED	RELEASED FOR CONSTRUCTION: DATE

ENGINEER'S SEAL
ORIGINAL SEALED BY
A.H.BEGHIN
P. ENG.
10/02/24
TENDER NO.
822-2009

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
Winnipeg
NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
HAULED WASTEWATER RECEIVING BUILDING
LOWER FLOOR PLAN AND DETAILS
CITY DRAWING NUMBER
1-0101A-P003-001
SHEET 3 OF 8



- 1 EXISTING AIR COMPRESSOR IN GALLERY 4
- 2 CONNECTED TO EXISTING AIR SUPPLY PIPING
- 3 ISOLATION BRONZE BALL VALVE
- 4 RAN COPPER PIPE FROM EXISTING COMPRESSORS TO AIR RESERVOIR IN GALLERY #2
- 5 PROVIDED DRAIN DRIP BRONZE BALL VALVE AND CAP AT PIPING LOW AREAS
- 6 PROVIDED BRONZE CHECK VALVE ORIENTATED TO PREVENT BACKFLOW OF AIR FROM NEW RESERVOIR
- 7 BRONZE PRESSURE RELIEF VALVE FOR (150 PSI) 1,034kPa
- 8 EXTRACTOR FILTER / DRYER
- 9 AIR PRESSURE REGULATOR FOR 0-150 PSI
- 10 140 LITRE AIR RESERVOIR
- 11 DRAIN VALVE
- 12 226L ASME STEEL AIR RESERVOIR
- 13 CONNECTED TO EXISTING COMPRESSOR HEADER



- LEGEND**
- GATE VALVE
 - CHECK VALVE
 - BALL VALVE
 - ELECTRIC OPEN/CLOSE CONTROL BALL VALVE
 - PNEUMATIC OPEN/CLOSE CONTROL VALVE
 - PNEUMATIC MODULATING OPEN/CLOSE FLOW CONTROL PNCH VALVE
 - FLOW METER
 - REDUCER
 - NO NORMALLY OPEN
 - NC NORMALLY CLOSED
 - TEMPERATURE GAUGE
 - PUMP
 - PRESSURE GAUGE
 - PRESSURE SWITCH
 - PRESSURE / VACUUM GAUGE
 - CAPPED PIPE END

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CONSTRUCTION COMPLETION DATE - APRIL 2011

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

AS-CONSTRUCTED DRAWING
BY G.L. DATE 2012.04.17
CHECKED BY A.H.B.

APEGM
Certificate of Authorization
Stantec Consulting Ltd.
No. 1301

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE DATE

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NO.	REVISIONS	DATE	BY
3	RECORD DRAWING	12.04.17	G.L.
2	REVISED AS F.O. #1		
1	REVISED AS PER ADDENDUM #4		
A	ISSUED FOR TENDER	10.02.16	A.H.B.

Stantec Consulting Ltd.
905 Waverley Street, Winnipeg, Manitoba
Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY A.H.B.	CHECKED BY E.W.
DRAWN BY W.A.	APPROVED BY A.H.B.
HOR. SCALE: VERTICAL:	RELEASED FOR CONSTRUCTION: DATE

DATE 09.09.21

ENGINEER'S SEAL

ORIGINAL SEALED BY
A.H.BEGHIN
P. ENG.
100224

TENDER NO.
822-2009

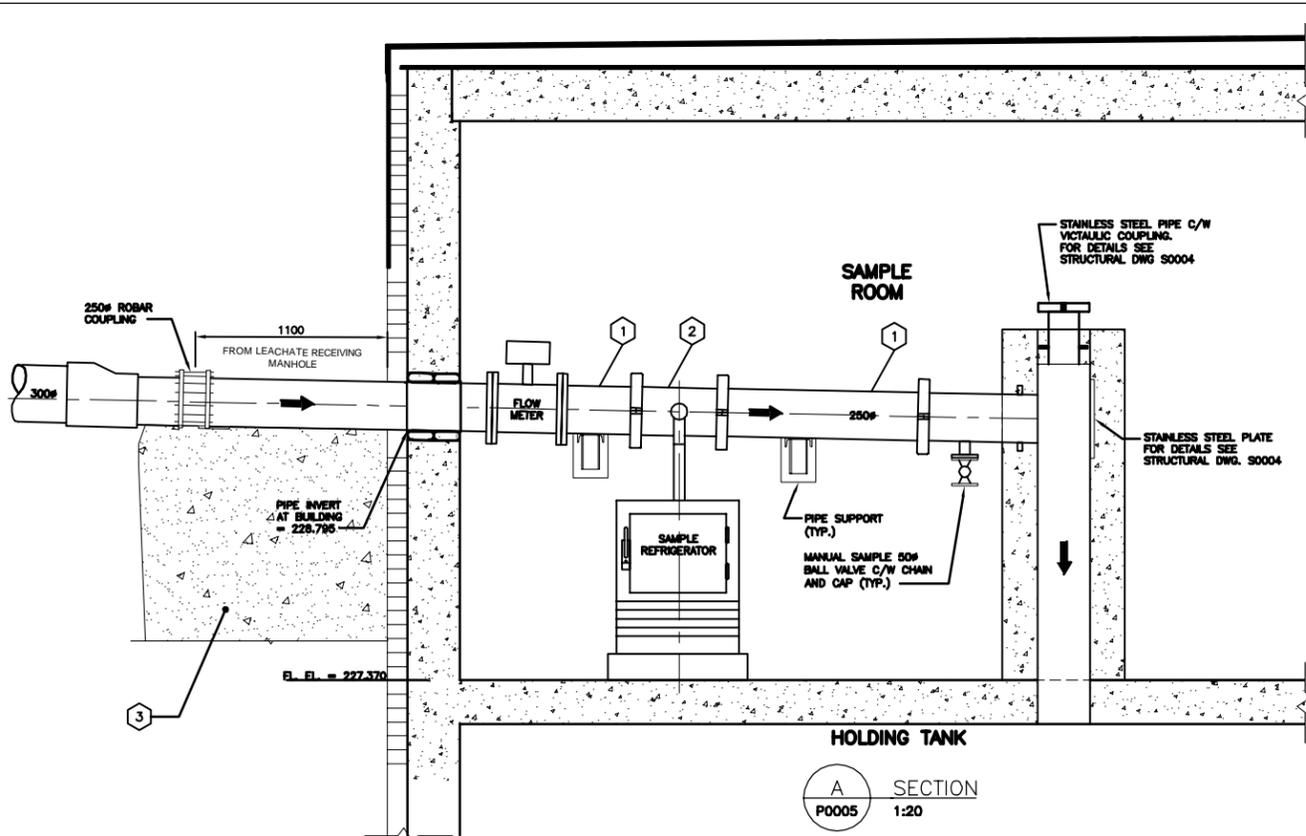
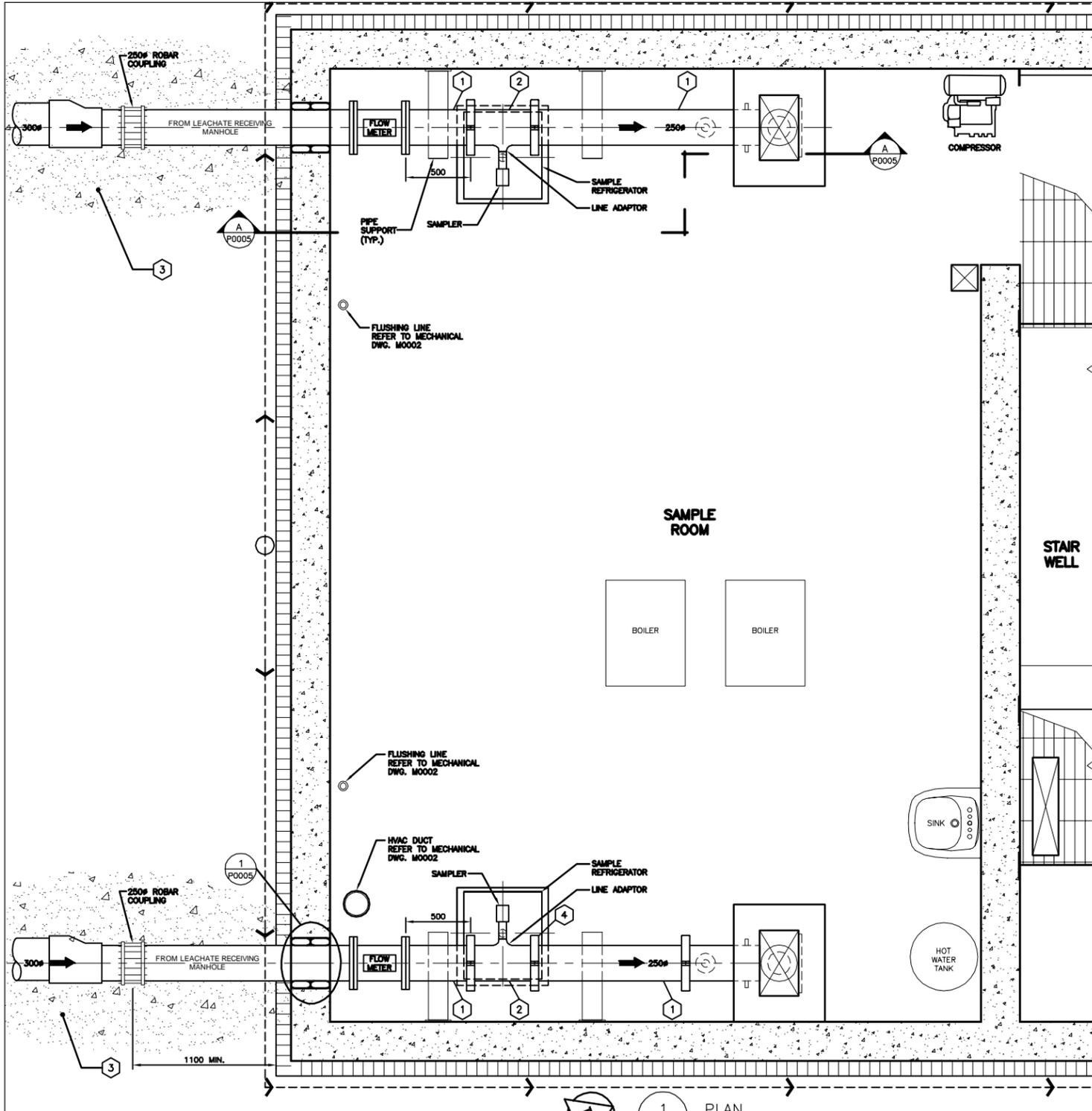
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

Winnipeg

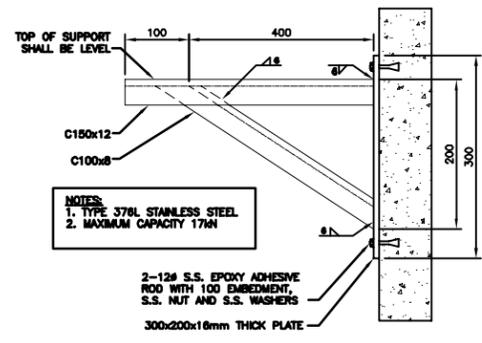
**NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
LEACHATE RECEIVING BUILDING
PROCESS FLOW SCHEMATICS**

CITY DRAWING NUMBER
1-0101A-P0004-001

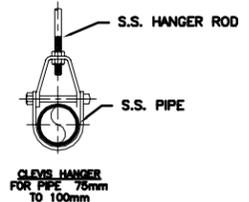
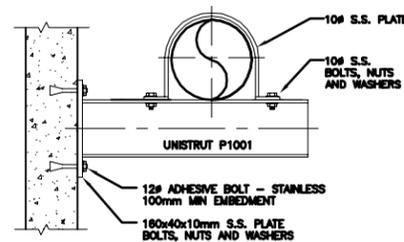
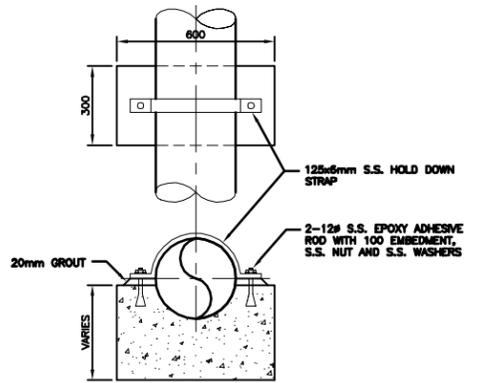
SHEET 4 OF 8



A SECTION
P0005 1:20



NOTES:
1. TYPE 376L STAINLESS STEEL
2. MAXIMUM CAPACITY 17kN

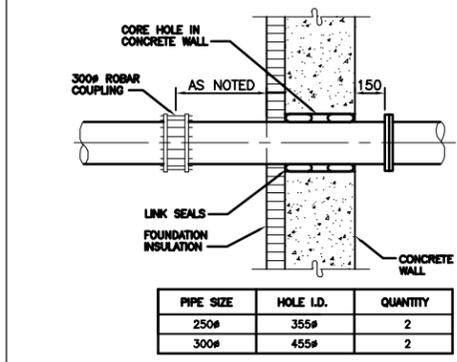


MAXIMUM LOAD OF BEAM LOADED @ CENTER (kg)	LENGTH OF SUPPORT L (mm)
8,800	750
10,000	450
10,000	300

TYPICAL PIPE SUPPORT DETAILS
N.T.S.

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CONSTRUCTION COMPLETION DATE - APRIL



1 DETAIL
P0005 N.T.S.

- NOTE:**
- ① ALL PIPE IS IPS TYPE 316L STAINLESS STEEL
 - ② MANUFACTURED SPOOL PIECE
 - ③ LEAN MIX CONCRETE FILL REFER TO STRUCTURAL DRAWING S0006
 - ④ VICTAULIC STEEL RIGID COUPLING

PIPE SIZE	HOLE I.D.	QUANTITY
250#	355#	2
300#	455#	2

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES



RECORD DRAWING
BY G.L. DATE 2012.04.17
CHECKED BY A.H.B.

LOCATION APPROVED UNDERGROUND STRUCTURES
SUPV. U/G STRUCTURES COMMITTEE DATE
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NO.	REVISIONS	DATE	BY
2	RECORD DRAWING	2.04.17	G.L.
1	REVISED ELEVATION		
A	ISSUED FOR TENDER	0.02.16	A.H.B.

Stantec Consulting Ltd.
905 Waverley Street, Winnipeg, Manitoba
Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY A.H.B. CHECKED BY E.W.
DRAWN BY K.R. APPROVED BY A.H.B.

HOR. SCALE: AS NOTED
VERTICAL: RELEASED FOR CONSTRUCTION:
DATE 09.11.10

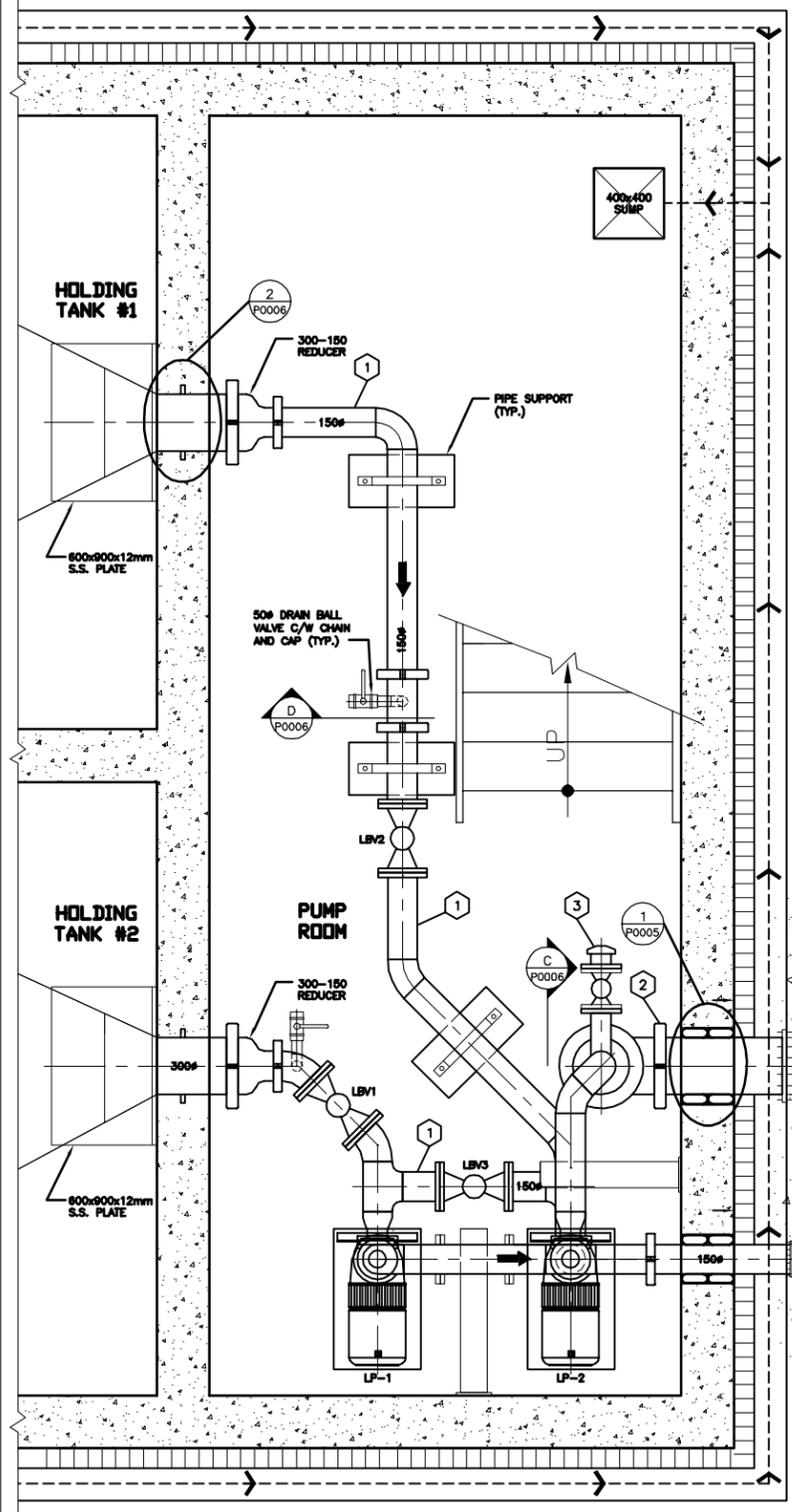
ENGINEER'S SEAL
ORIGINAL SEALED BY A.H.BEGHIN P. ENG. 10/02/24
TENDER NO. 822-2009

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

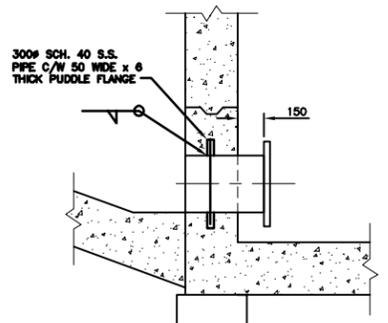
Winnipeg

**NORTH END WATER POLLUTION CONTROL FACILITIES
HAULED WASTEWATER RECEIVING BUILDING
LEACHATE RECEIVING BUILDING
SAMPLE ROOM FLOOR PLAN AND SECTIONS**

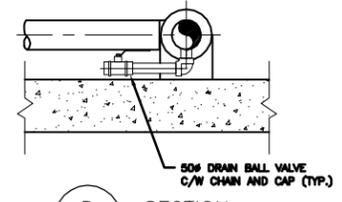
CITY DRAWING NUMBER 1-0101A-P0005-001
SHEET 5 OF 8



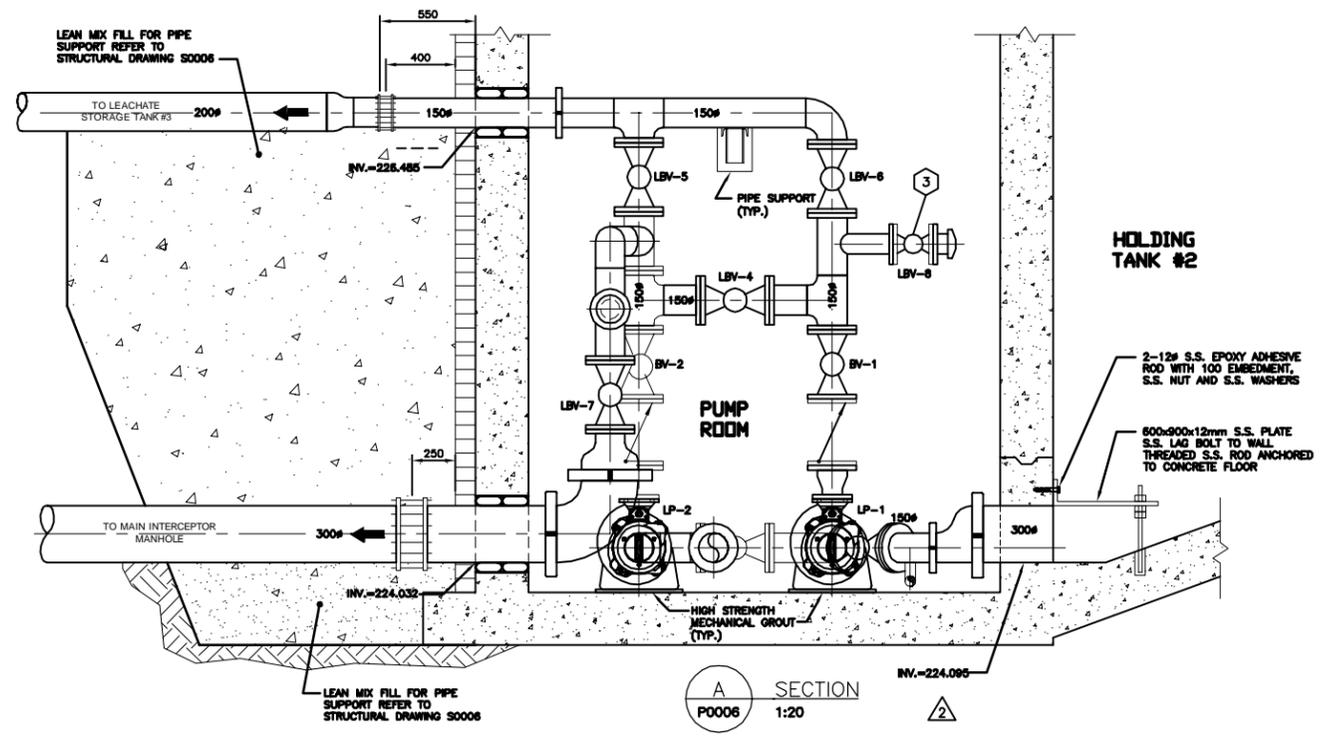
1 PLAN
P0006 1:20



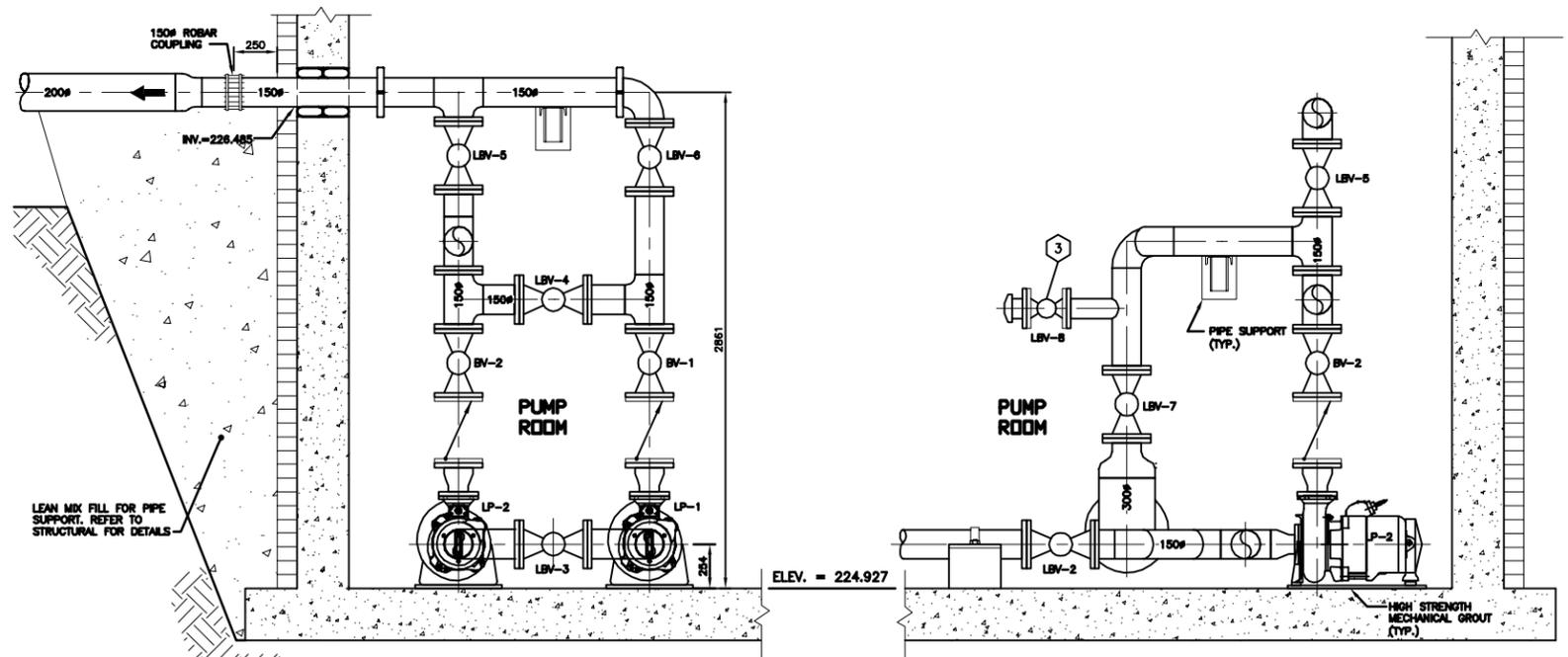
2 DETAIL
P0006 1:20



D SECTION
P0006 1:20



A SECTION
P0006 1:20



B SECTION
P0006 1:20

C SECTION
P0006 1:20

- NOTE:
- 1 ALL PIPE TO BE STAINLESS STEEL
 - 2 VICTAULIC STEEL RIGID COUPLING
 - 3 ALUMINUM BAYCO FITTING C/W CAP

- LEGEND
- LP - LEACHATE PUMP
 - LBV - MOTORIZED LEACHATE BALL VALVE
 - BV - BALL VALVE

RECORD DRAWING
 BY G.L. DATE 2012.04.17
 CHECKED BY A.H.B.

METRIC
 WHOLE NUMBERS INDICATE MILLIMETRES
 DECIMALIZED NUMBERS INDICATE METRES

APEGM
 Certificate of Authorization
 Stantec Consulting Ltd.
 No. 1301

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE	DATE

NOTE:
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NO.	REVISIONS	DATE	BY
3	RECORD DRAWING	12.04.17	G.L.
2	REVISED ELEVATIONS		
1	REVISED AS PER ADDENDUM #4	0.03.26	A.H.B.
A	ISSUED FOR TENDER	0.02.16	A.H.B.

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 Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY A.H.B.	CHECKED BY E.W.
DRAWN BY K.R.	APPROVED BY A.H.B.
HOR. SCALE: AS NOTED	RELEASED FOR CONSTRUCTION: DATE
VERTICAL: DATE 09.09.21	DATE

ENGINEER'S SEAL

ORIGINAL SEALED BY
 A.H.BEGHIN
 P. ENG.
 10/02/24

TENDER NO. 822-2009

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

Winnipeg

**NORTH END WATER POLLUTION CONTROL CENTRE
 HAULED WASTEWATER RECEIVING FACILITIES
 LEACHATE RECEIVING BUILDING
 PUMP ROOM FLOOR PLAN AND SECTIONS**

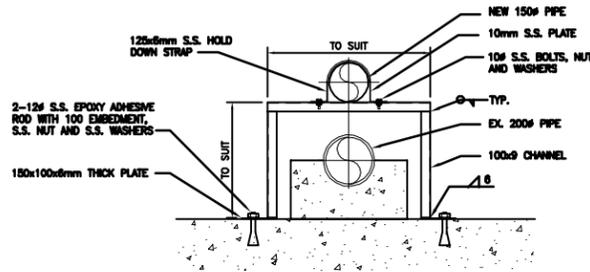
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SHEET 6 OF 8

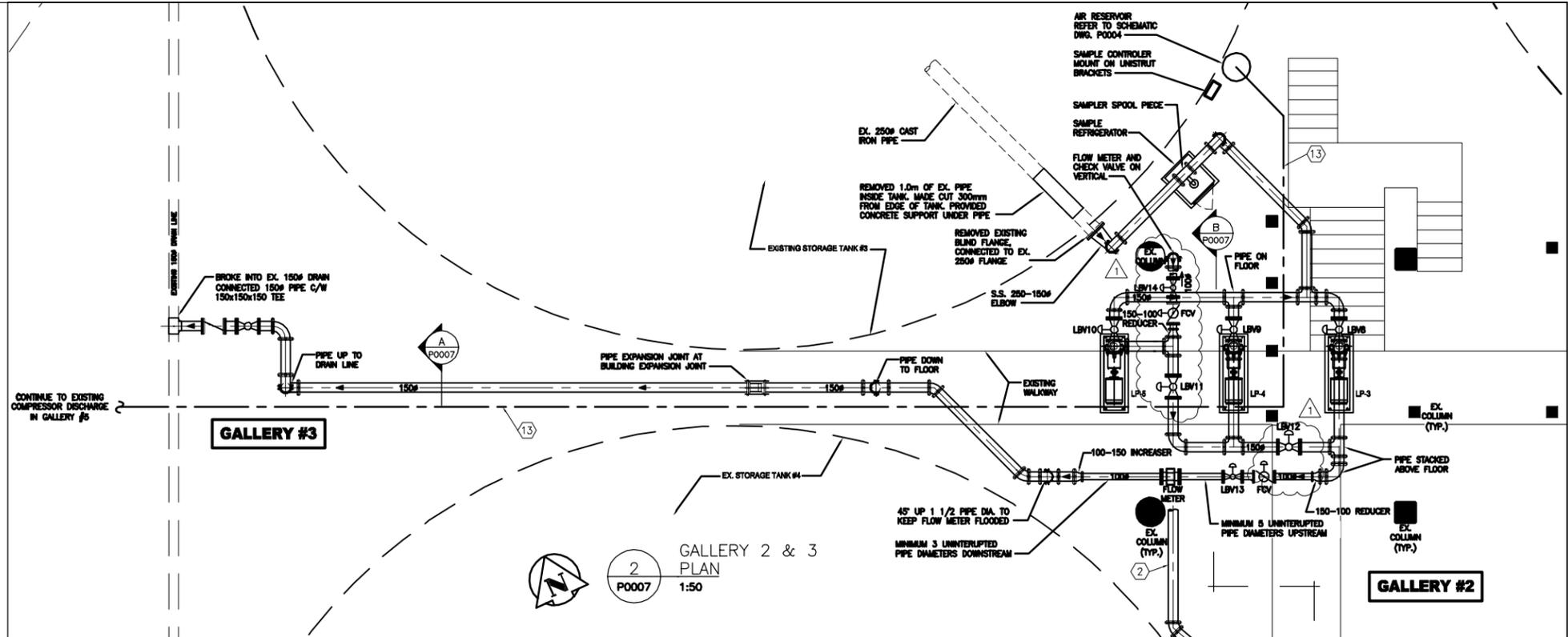
CONSTRUCTION COMPLETION DATE - APRIL 2011

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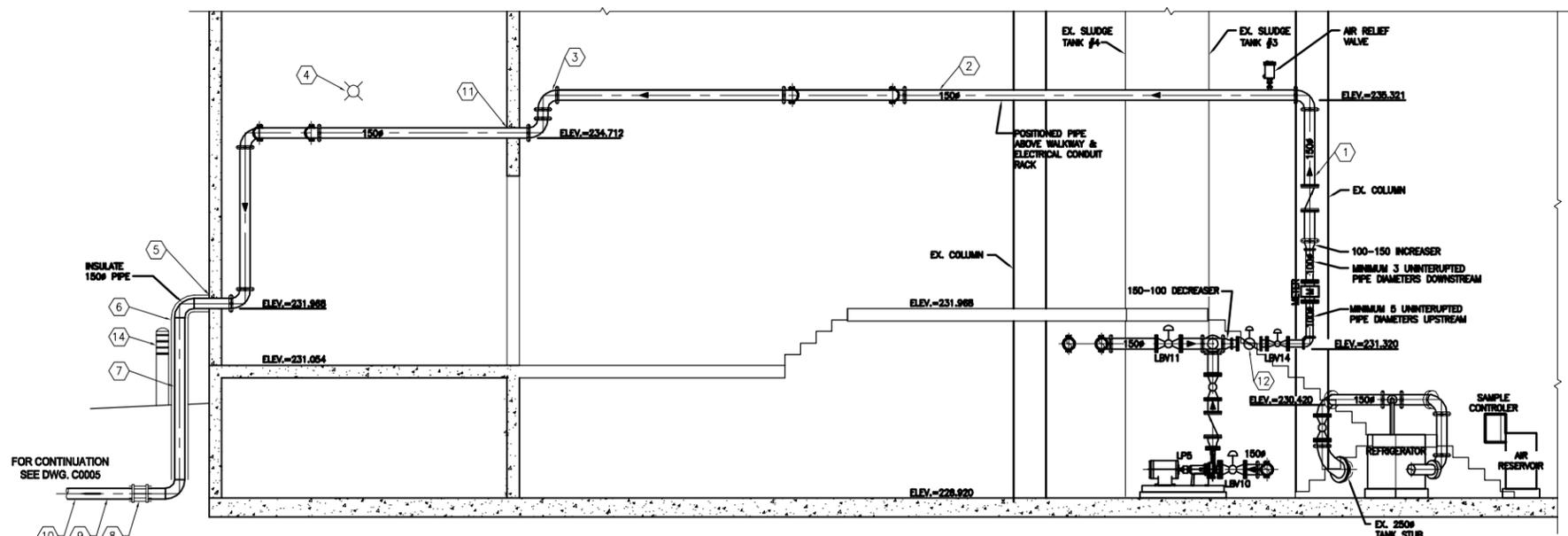
- 1 EXTENDED 150mm# ASTM A 3R SCHEDULE 40S PIPE FROM PUMPS UP ALONG COLUMN
- 2 SUPPORTED 150mm# STAINLESS STEEL PIPE FROM STRUCTURAL BEAM WITH STAINLESS STEEL BRACKET, RODS NUTS AND WASHERS. ANCHOR POINT TO BE POSITIONED AT BEAM MID HEIGHT.
- 3 EXTENDED 150mm DOWN ALONG CONCRETE WALL, CROSS WALL USING EXISTING OPENING. KEEP PIPE AT HIGH ELEVATION.
- 4 ELECTRICAL RELOCATED LIGHT TO REDUCE SHADOWS CAUSED BY PIPE.
- 5 RAN PIPE DOWN AND EXTENDED THROUGH EXTERIOR WALL USING EXISTING OPENING THROUGH EXTERIOR BRICK WALL.
- 6 PROVIDED 24 GAUGE ALUMINUM PROTECTIVE COVER OVER INSULATION. INSULATION IS 50MM THICK EXPANDED POLYSTYRENE IPS PIPE INSULATION.
- 7 RAN PIPE DOWN TO 2.7M BELOW GRADE. INSULATED PIPE FROM WALL OPENING TO 2.7M BELOW GRADE.
- 8 FORCED BALANCED EXPANSION JOINT
- 9 150MM HIGH DENSITY POLYETHYLENE IPS PIPE
- 10 PIPE EXTENDED TO CENTRATE MANHOLE LOCATED NEAR SLUDGE DEWATERING FACILITY. REFER TO SITE PLAN.
- 11 CORED 200mm HOLE THROUGH EXISTING CONCRETE WALL
- 12 FLOW CONTROL VALVE IS LOCATED ABOVE MEZZANINE FOR SERVICING FROM MEZZANINE.
- 13 12mm COPPER AIR LINE FROM EXISTING COMPRESSOR IN GALLERY #5 TO NEW AIR RESERVOIR IN GALLERY #2
- 14 PROVIDED BOLLARDS SEE CIVIL DRAWING C0001



A SECTION
P0007 1:20



2 GALLERY 2 & 3
P0007 1:50



B GALLERY 2
SECTION
P0007 1:50

FOR CONTINUATION
SEE DWG. C0005

FOR CONTINUATION

AS-CONSTRUCTED DRAWING
BY G.L. DATE 2012.04.17
CHECKED BY A.H.B.

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LOCATION APPROVED UNDERGROUND STRUCTURES
SUPV. U/G STRUCTURES DATE COMMITTEE
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NOL.	REVISIONS	DATE	BY
2	RECORD DRAWING	12.04.17	G.L.
1	REVISED AS PER F.O. #1		
A	ISSUED FOR TENDER	10.02.16	A.H.B.

Stantec Consulting Ltd.
905 Waverley Street, Winnipeg, Manitoba
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DESIGNED BY A.H.B. CHECKED BY A.H.B.
DRAWN BY K.R. APPROVED BY A.H.B.

HOR. SCALE: AS NOTED
VERTICAL: AS NOTED

RELEASED FOR CONSTRUCTION: DATE

ENGINEER'S SEAL
ORIGINAL SEALED BY A.H. BEGHIN P. ENG. 10/02/24
TENDER NO. 822-2009

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

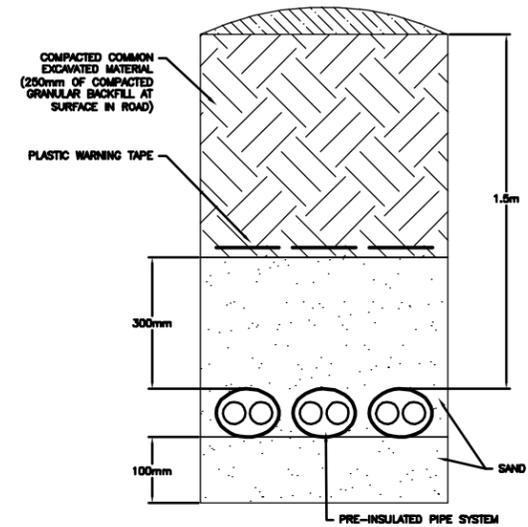
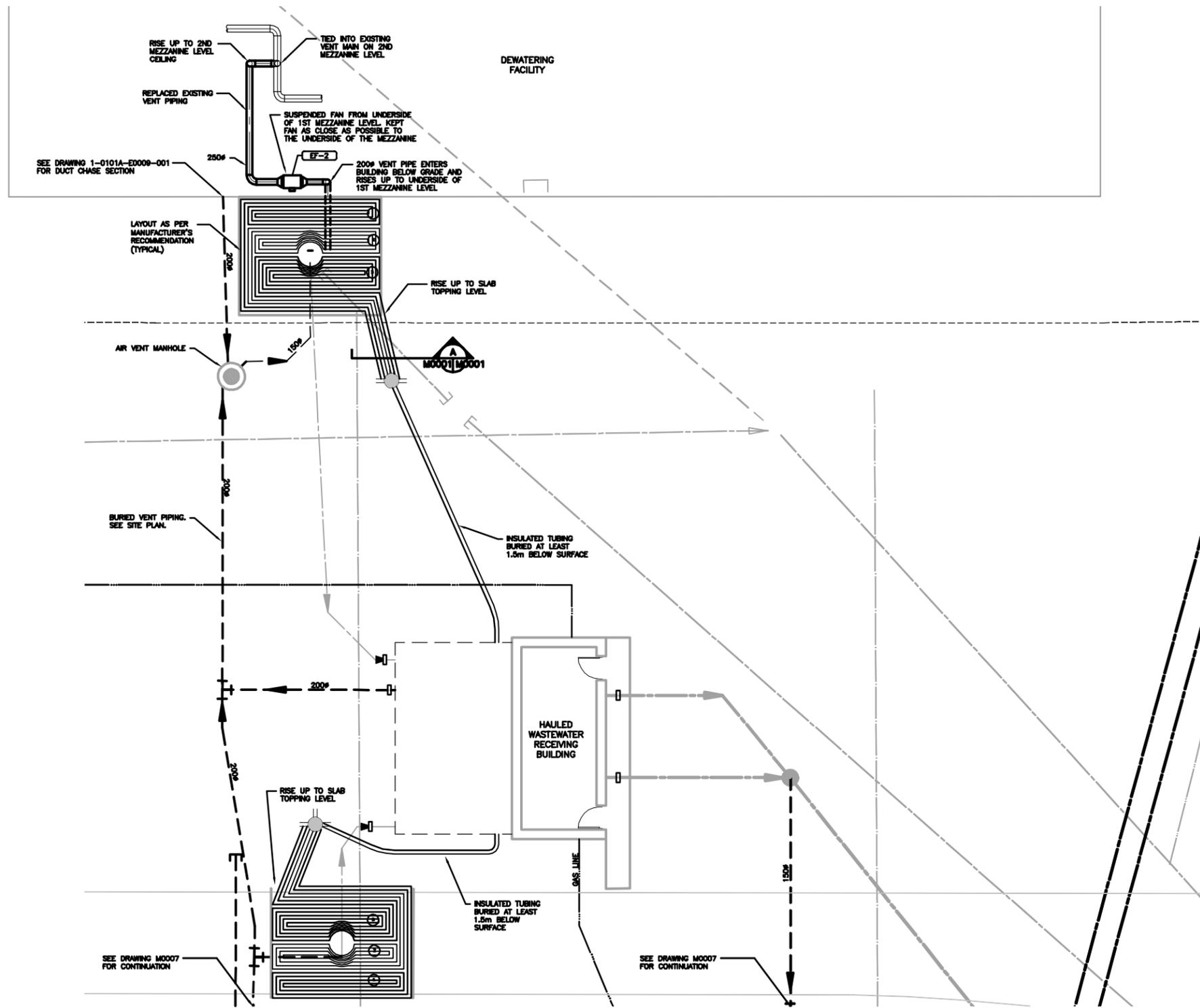
Winnipeg

NORTH END WATER POLLUTION CONTROL CENTRE
HAULED LIQUID WASTE RECEIVING FACILITIES
LEACHATE STORAGE TANK PUMPING
GALLERY 2 & 3 PLANS AND SECTIONS

CITY DRAWING NUMBER 1-0101A-P0007-001
SHEET 7 OF 8

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
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CONSTRUCTION COMPLETION DATE - APRIL 2011



A BURIED HYDRONIC PIPING
M0001 NTS

1 MECHANICAL SITE PLAN
M0001 1:100

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BY GL DATE 2012.04.17
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1	RECORD DRAWING	2.04.17	G.L.
A	ISSUED FOR TENDER	0.02.16	L.W.

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

DESIGNED BY	L.W.	CHECKED BY	A.B.
DRAWN BY	J.L.T.	APPROVED BY	A.B.

HOR. SCALE: AS NOTED
VERTICAL: AS NOTED
DATE 09.11.13

ENGINEER'S SEAL
ORIGINAL SEALED BY
L. WANG
P. ENG.
10/02/16

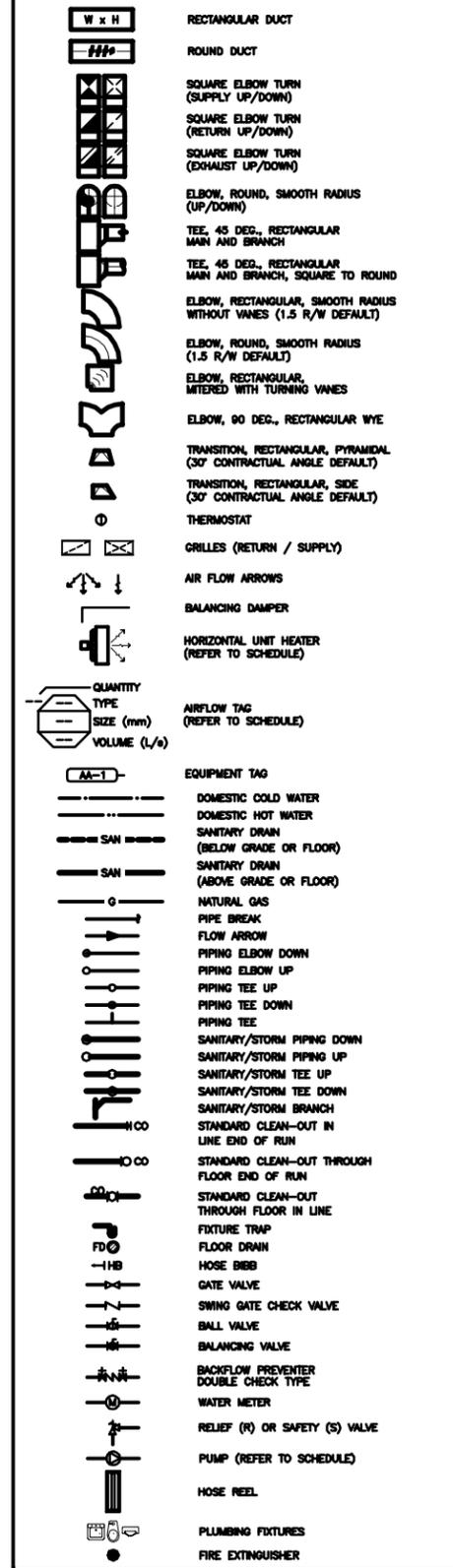
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

Winnipeg

NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
HAULED WASTEWATER RECEIVING BUILDING
MECHANICAL SITE PLAN

BID OPPORTUNITY NO. **822-2009**
CITY DRAWING NUMBER **1-0101A-M0001-001**
SHEET **1** OF **1**

MECHANICAL SYMBOLS

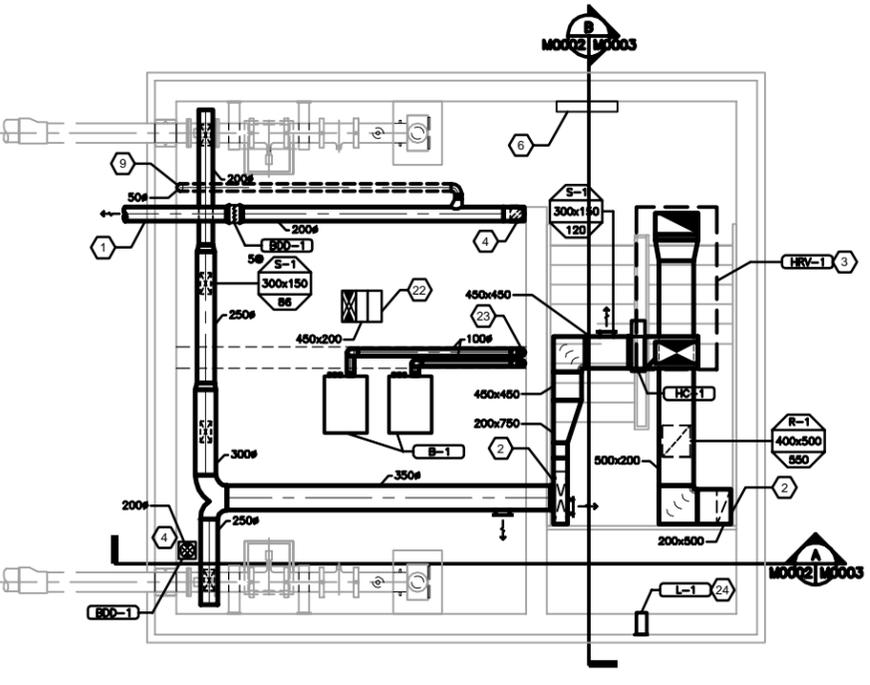


GENERAL NOTES

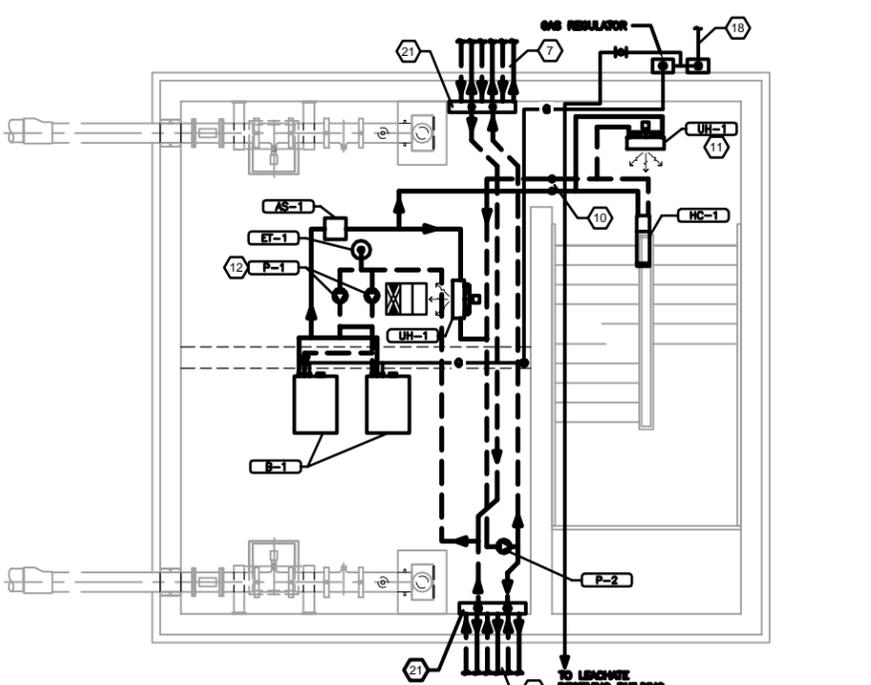
- COORDINATED WITH OTHER TRADES.
- CONFORMED TO SPECIFICATIONS FOR DUCTWORK, MATERIALS, AND INSTALLATION.
- SEE DRAWINGS 9,10,11/M0004-02 FOR DUCTWORK MOUNTING DETAILS.
- PROVIDED 25mm THERMAL INSULATION FOR ALL SUPPLY AIR AND OUTSIDE AIR DUCTWORK.
- PROVIDED 50mm THERMAL INSULATION FOR ALL DUCTWORK EXPOSED TO OUTSIDE.
- SEE ARCHITECTURAL AND STRUCTURAL FOR ALL WALL AND ROOF PENETRATIONS.
- SUPPORTED ALL HYDRONIC AND DOMESTIC WATER PIPING FROM WALL AT HIGH LEVEL. MAINTAINED APPROPRIATE HEAD CLEARANCES WHEN CROSSING WALKWAYS.
- SEE DRAWING M0005 FOR HEAT RECOVERY VENTILATOR, DOMESTIC WATER, AND HYDRONIC SYSTEM SCHEMATIC DIAGRAMS (INCL. PIPE SIZES).
- INSTALLED ONE O/A TEMPERATURE SENSOR ON NORTH WALL.
- PROVIDED PLUMBING VENTS AND CLEANOUTS AS PER CODE.
- INSTALLED FIRE EXTINGUISHERS IN ACCORDANCE WITH NFPA 10-STANDARD FOR PORTABLE FIRE EXTINGUISHERS.
- ALL SANITARY PIPE GREATER THAN 75# @1% SLOPE. UNLESS SPECIFIED.
- ALL SANITARY PIPE EQUAL OR SMALLER THAN 75# @2% SLOPE. UNLESS SPECIFIED.
- PROVIDED BALANCING DAMPERS TO ALL SUPPLY/RETURN DIFFUSERS.
- ALL HANGING RODS, BRACKETS, FLOOR SUPPORTS, AND SUPPORT ACCESSORIES ARE TYPE 316L STAINLESS STEEL.

MECHANICAL KEYNOTES

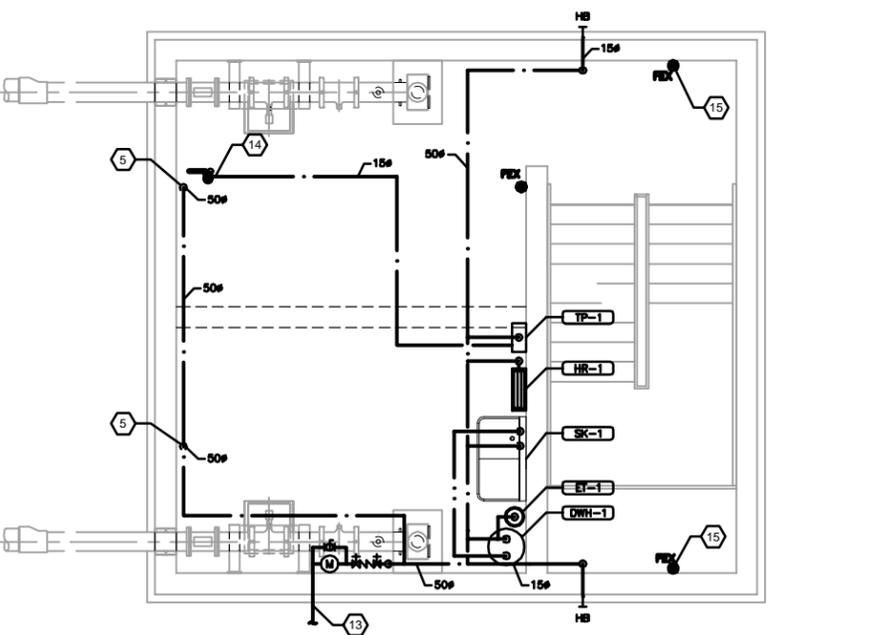
- CONNECTED EXHAUST TO BURIED VENT PIPING. SEE SITE PLAN FOR CONTINUATION.
- DUCTWORK RISER EXTENDED TO ROOF LEVEL. SEE DRAWING M0003 FOR SECTION VIEWS.
- LOCATED HEAT RECOVERY VENTILATOR ON ROOF CURB PROVIDED BY ARCHITECTURAL. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.
- PROVIDED MANUALLY-OPERATED DAMPER TO BE CLOSED WHEN SERVICING EXHAUST FAN. WELDED 15x15 WIRE MESH AT END OF DUCT INSIDE HOLDING TANK.
- PROVIDED FLUSHING PIPE FOR HOLDING TANK. SEE DRAWING 7/M0004-01 FOR DETAILS.
- LOCATED HRV-1 CONTROL PANEL AT TOP LEVEL OF STAIRCASE, INSIDE ENTRY DOOR.
- HYDRONIC PIPING TO MANHOLE PADS. SEE MECHANICAL SITE PLAN, DRAWING 1/M0001, FOR CONTINUATION.
- SLOPED FLOOR TO FLOOR DRAINS.
- CONNECTED SANITARY VENT TO HOLDING TANK EXHAUST DUCT.
- HYDRONIC PIPING RISERS UP TO ROOF LEVEL TO SERVE UNIT HEATER (UH-1) AND HEATING COIL (HC-1).
- UNIT HEATER SUSPENDED FROM ROOF AT TOP LEVEL OF STAIRCASE.
- SEE DRAWING 4/M0004-01 FOR PUMP INSTALLATION DETAILS.
- CONNECTED TO DOMESTIC WATER SERVICE. SEE SITE PLAN FOR CONTINUATION. SEE DRAWING 6/M0004-01 FOR WATER SERVICE ENTRY DETAIL.
- CONNECTED WATER LINE FROM TRAP PRIMER (TP-1) TO COMMON SANITARY TRAP. SEE DRAWINGS 1,5/M0004-01 FOR DETAILS.
- LOCATED FIRE EXTINGUISHER AT TOP LEVEL OF STAIRCASE ADJACENT TO EXTERIOR DOOR.
- SANITARY LINE DRAINED INTO HOLDING TANK. SEE DRAWING 1/M0004-01 FOR DETAILS.
- PIPING FROM SUMP PIT PENETRATED LOWER WALL INTO HOLDING TANK AT HIGH LEVEL FOR SUMP DRAINAGE. SEE DRAWING M0003 FOR SECTION VIEWS.
- NATURAL GAS METER PROVIDED BY MANITOBA HYDRO TO SERVE BOTH LEACHATE AND HAULED WASTEWATER BUILDINGS. SEE CIVIL SITE PLAN FOR CONTINUATION.
- PROVIDED 25mm# DRAINAGE PIPING FROM HEATING COIL (HC-1) AND HEAT RECOVERY VENTILATOR (HRV-1) TO FUNNEL FLOOR DRAIN (FD-2) AT TOP LEVEL OF STAIRCASE. SEE DRAWING M0003 FOR SECTION VIEWS.
- 500x500x700 SUMP PIT LOCATED AT BOTTOM LEVEL OF STAIRCASE. SEE DRAWING 15/M0004-02 FOR DETAILS.
- HYDRONIC MANFOLD.
- COMBUSTION AIR INTAKE PENETRATED ROOF. CONFORMED TO CURRENT MANITOBA GAS CODE. SEE DRAWING M0003 FOR SECTION VIEWS.
- BOILER FLUE VENTS PENETRATED ROOF. PIPED CONDENSATE FROM VENT CLEANOUT THROUGH NEUTRALIZER KIT TO NEAREST FLOOR DRAIN. CONFORMED TO CURRENT MANITOBA GAS CODE. SEE DRAWING M0003 FOR SECTION VIEWS.
- PROVIDED LOUVER FOR VENTILATION AIR. CONFORMED TO CURRENT MANITOBA GAS CODE.



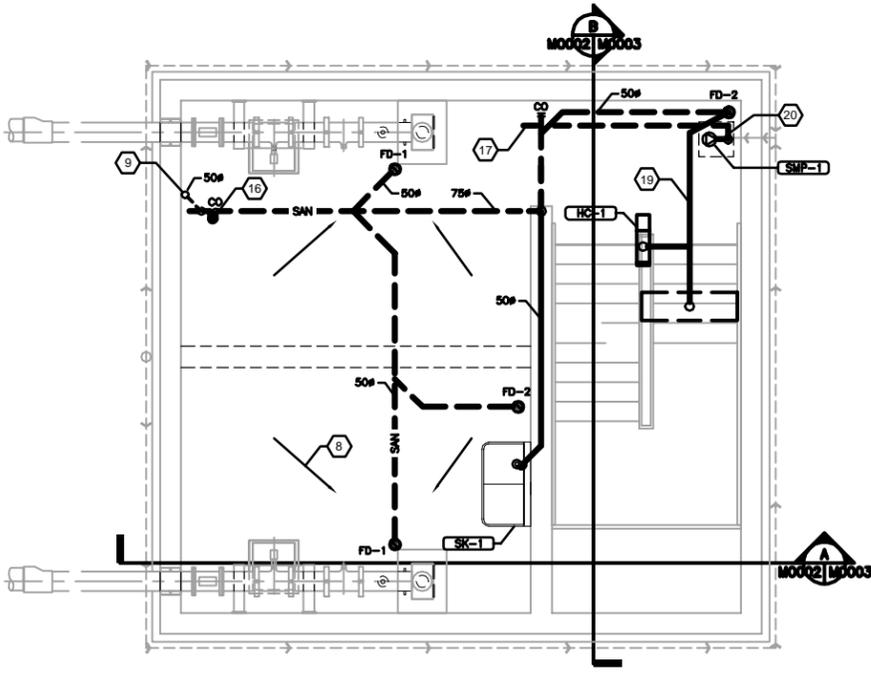
1 HVAC PLAN
M0002 1:50



2 HYDRONIC PLAN
M0002 1:50



3 PLUMBING & FIRE PROTECTION PLAN
M0002 1:50



4 SANITARY PLAN
M0002 1:50

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CONSTRUCTION COMPLETION DATE - SEPTEMBER 2011

METRIC
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DECIMALIZED NUMBERS INDICATE METRES

AS-CONSTRUCTED DRAWING
BY GL DATE 2012.04.17
CHECKED BY A.H.B.

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No. 1301

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1	ISSUED FOR TENDER	0.02.16	L.W.

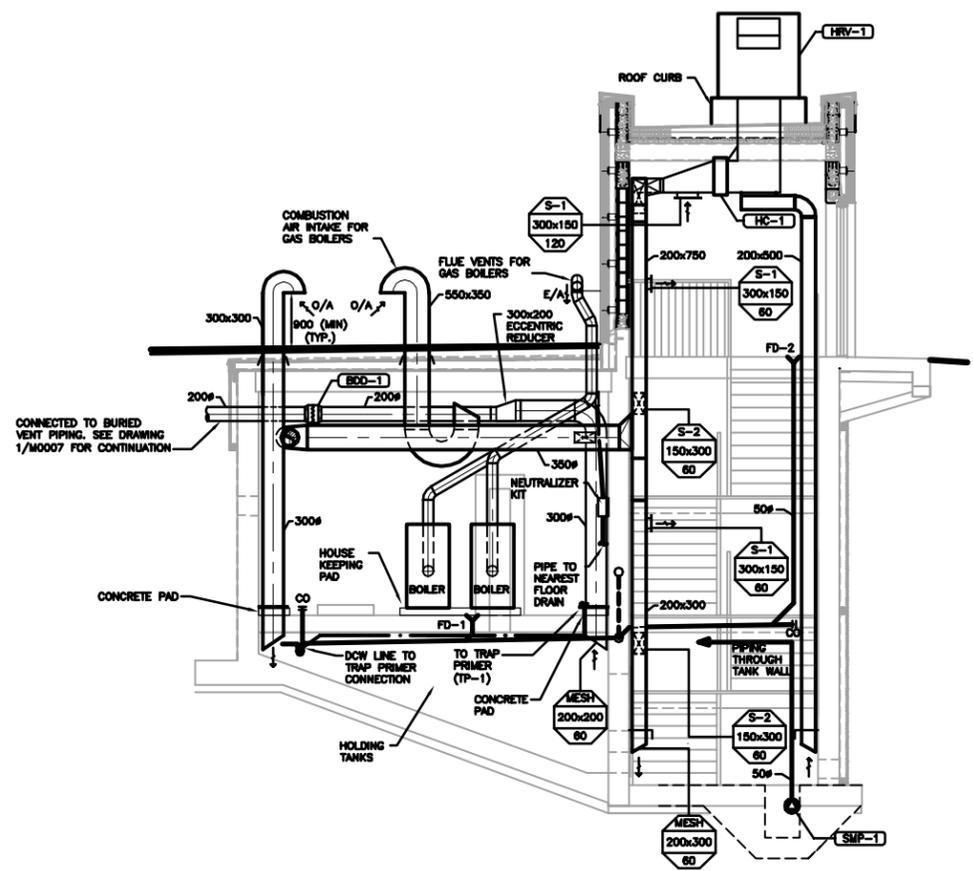
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905 Waverley Street, Winnipeg, Manitoba
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DRAWN BY	J.L.T.	APPROVED BY	A.B.
HOR. SCALE:	AS NOTED	RELEASED FOR CONSTRUCTION:	
VERTICAL:		DATE	09.11.13

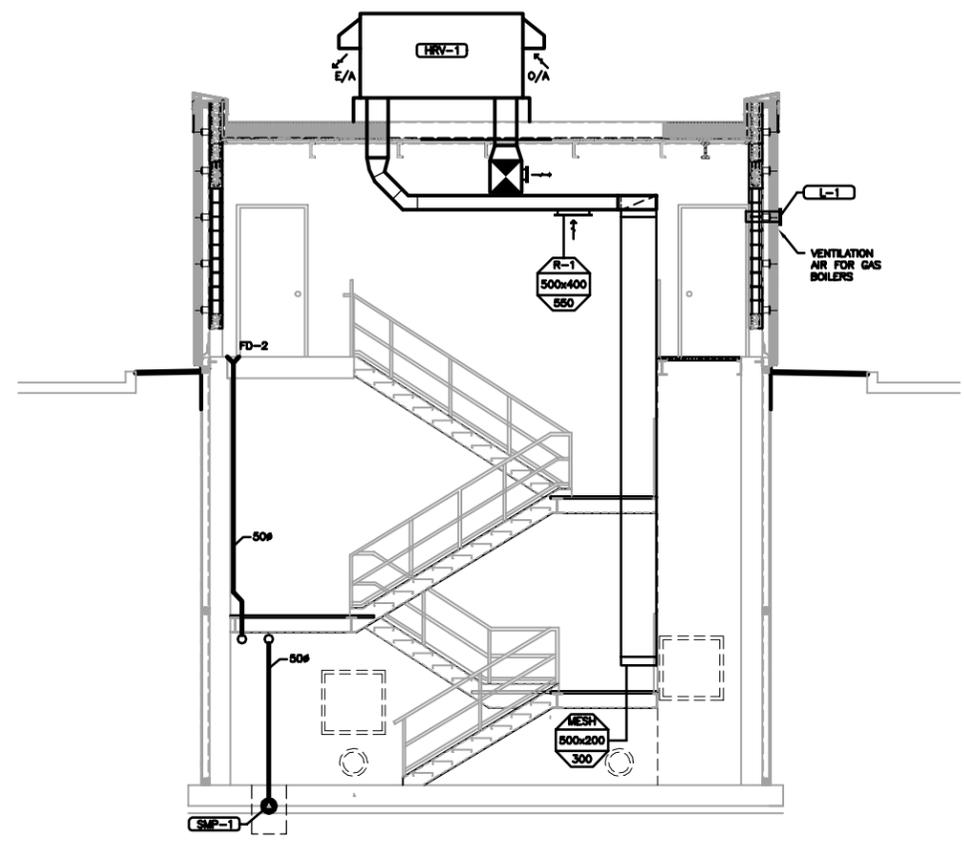
ENGINEER'S SEAL
ORIGINAL SEALED BY
L. WANG
P. ENG.
10/02/16

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
Winnipeg
NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
HAULED WASTEWATER RECEIVING BUILDING
MECHANICAL PLANS

BID OPPORTUNITY NO. **822-2009**
CITY DRAWING NUMBER **1-0101A-M0002-001**
SHEET **1** OF **1**



A SECTION
M0002 | M0003 1:50



B SECTION
M0002 | M0003 1:50

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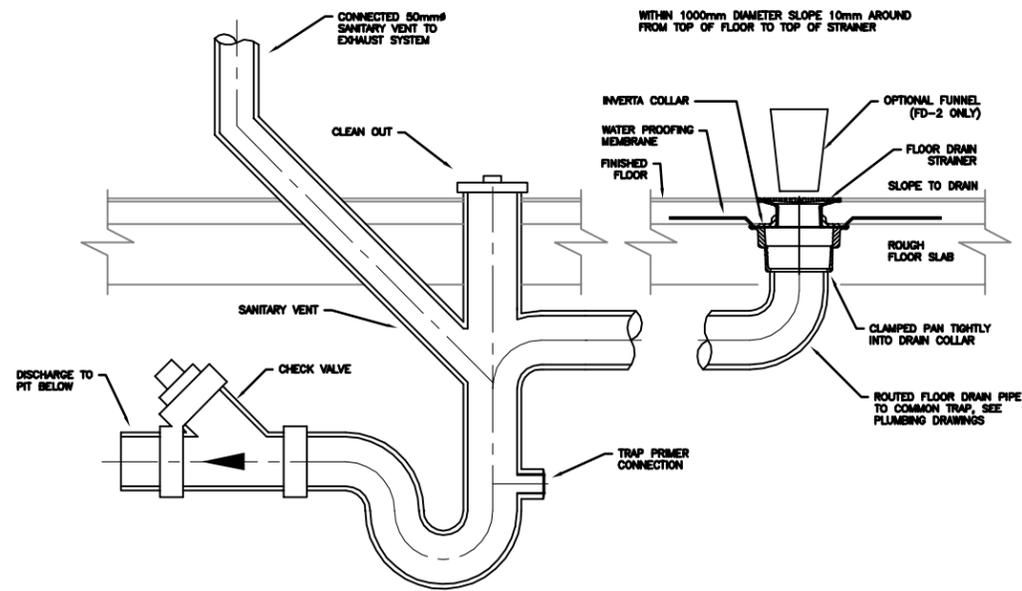
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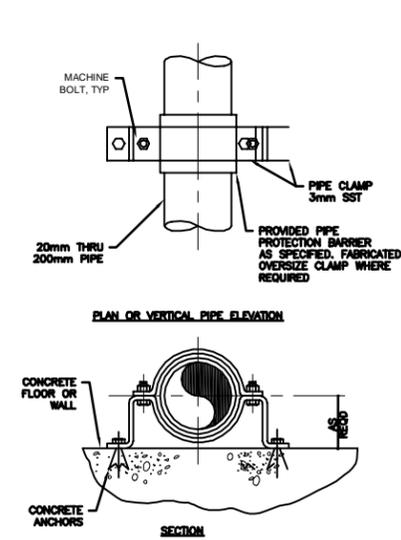
ENGINEER'S SEAL
ORIGINAL SEALED BY
L. WANG
P. ENG.
10/02/16

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
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HAULED WASTEWATER RECEIVING FACILITIES
HAULED WASTEWATER RECEIVING BUILDING
MECHANICAL SECTIONS

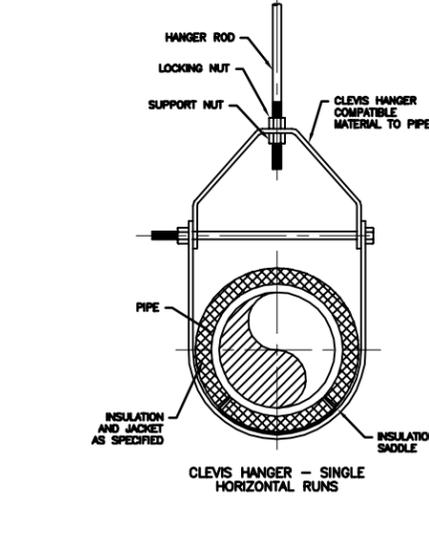
BID OPPORTUNITY NO. **822-2009**
CITY DRAWING NUMBER **1-0101A-M0003-001**
SHEET **1** OF **1**



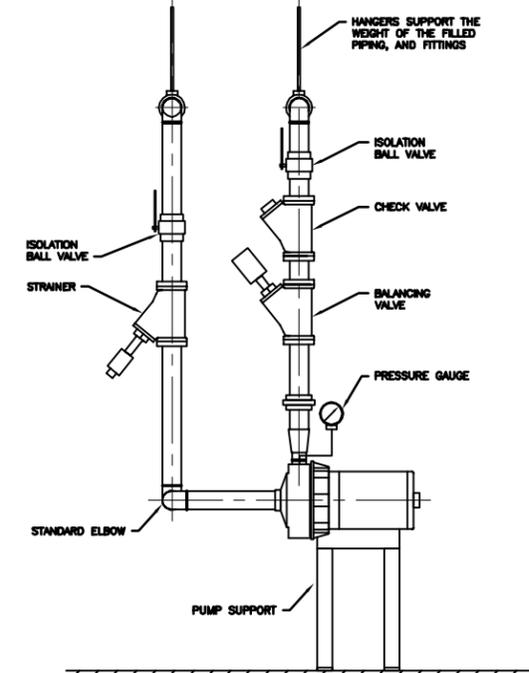
1 FLOOR DRAIN INSTALLATION DETAIL
M0002 M0004 NTS



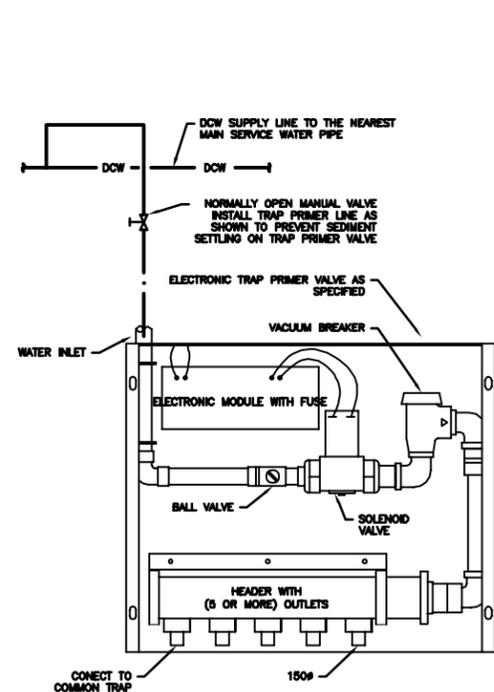
2 WALL/FLOOR MOUNTED PIPE SUPPORT DETAIL
M0002 M0004 NTS



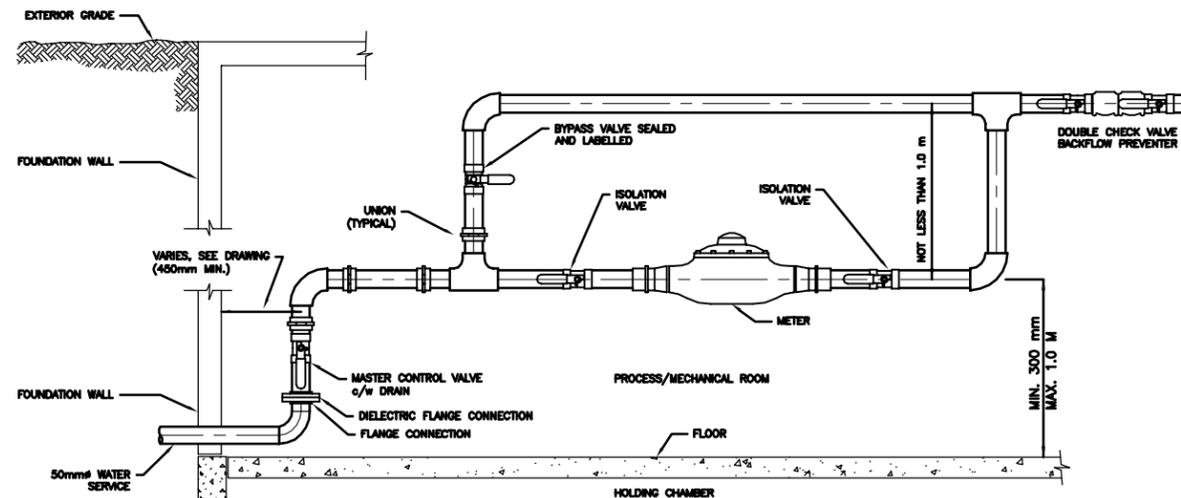
3 PIPE CLEVIS HANGER (LOWER ATTACHMENT) DETAIL
M0002 M0004 NTS



4 HYDRONIC CIRCULATING PUMP DETAIL
M0002 M0004 NTS

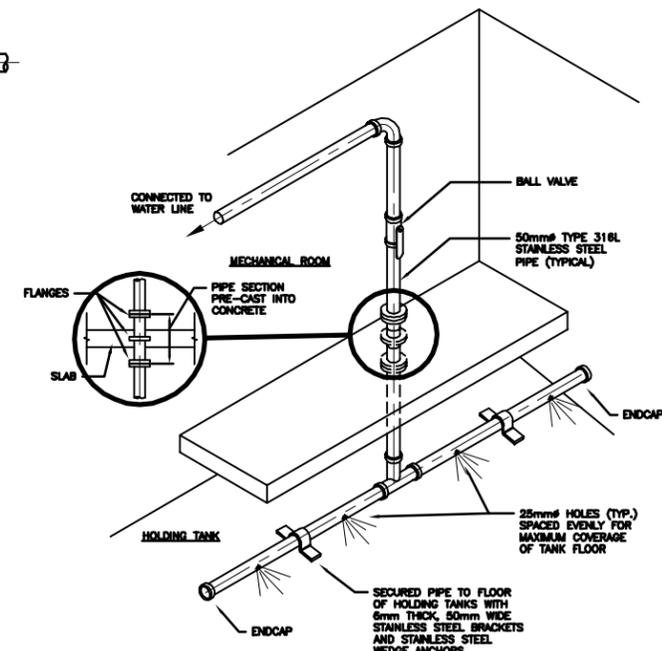


5 FLOOR DRAIN TRAP PRIMER DETAIL
M0002 M0004 NTS



- NOTES:**
1. PIPING ON EACH SIDE OF METER IS ADEQUATELY SUPPORTED TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR.
 2. PIPING FOR METER IS ON A HORIZONTAL PLANE.
 3. MINIMUM DISTANCE OF 300mm BETWEEN ANY WALL AND A METER OR METER TREE.
 4. VALVES ARE ADJACENT TO METERS.
 5. THE AREA FOR 800mm IN FRONT OF THE METER IS FREE OF OBSTRUCTION TO ALLOW FOR CONVENIENT READING AND SERVICING OF THE METER.
 6. METERS ARE INSTALLED IN THE MECHANICAL ROOM AND WITHIN REASONABLE DISTANCE OF A FLOOR DRAIN. METER LOCATIONS WERE APPROVED BY THE WATERWORKS DIVISION.
 7. EXCEPT WHERE NOTED, ALL FITTINGS AND PIPE ARE SOLDERED COPPER.
 8. ALL VALVES SHOWN ARE FULL PORT BALL VALVES.
 9. AN APPROVED BACKFLOW PREVENTION ASSEMBLY WAS INSTALLED IMMEDIATELY AFTER THE WATER METER SETTING.

6 WATER SERVICE ENTRY DETAIL
M0002 M0004 NTS



7 HOLDING TANK FLUSHING PIPE DETAIL
M0002 M0004 NTS

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BY G.L. DATE 2012.04.17
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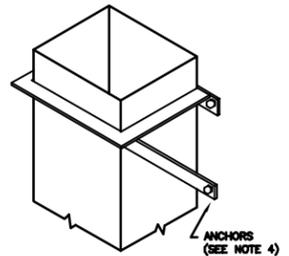
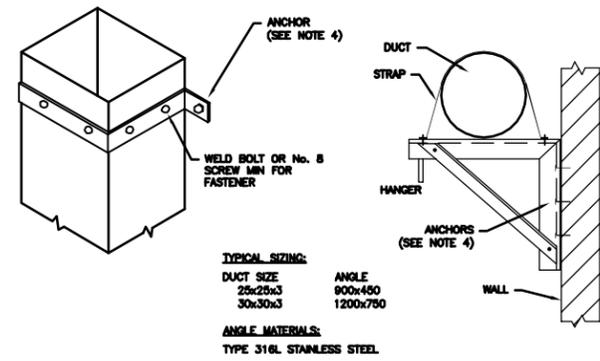
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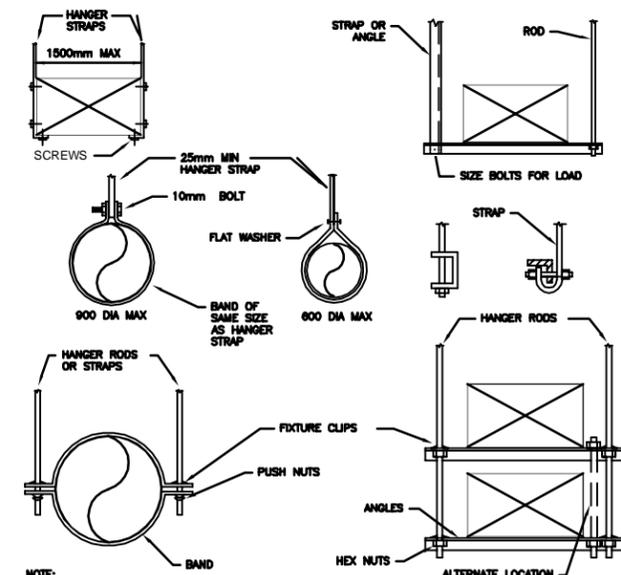
NO.	REVISIONS	DATE	BY
1	RECORD DRAWING	2.04.17	G.L.
A	ISSUED FOR TENDER	0.02.16	L.W.

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905 Waverley Street, Winnipeg, Manitoba Tel 204-489-5900 Fax 204-453-9012		ORIGINAL SEALED BY L. WANG P. ENG. 10/02/16	
DESIGNED BY L.W.	CHECKED BY A.B.	THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT Winnipeg NORTH END WATER POLLUTION CONTROL CENTRE HAULED WASTEWATER RECEIVING FACILITIES HAULED WASTEWATER RECEIVING BUILDING MECHANICAL DETAILS	
DRAWN BY J.L.T.	APPROVED BY A.B.		
HOR. SCALE: VERTICAL: AS NOTED	RELEASED FOR CONSTRUCTION: DATE	BID OPPORTUNITY NO. 822-2009	CITY DRAWING NUMBER 1-0101A-M0004-001
DATE 09.11.13	DATE	SHEET 1	OF 2



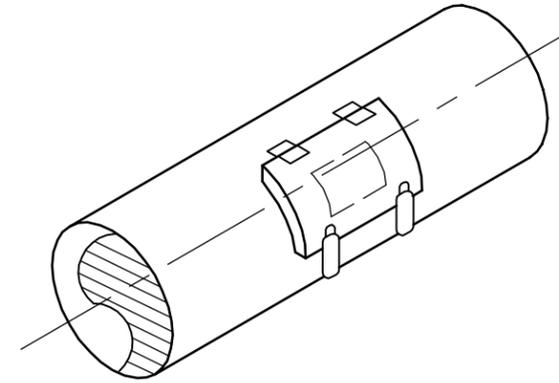
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9 DUCT SUPPORT FROM WALL DETAIL
 M0002 M0004 NTS

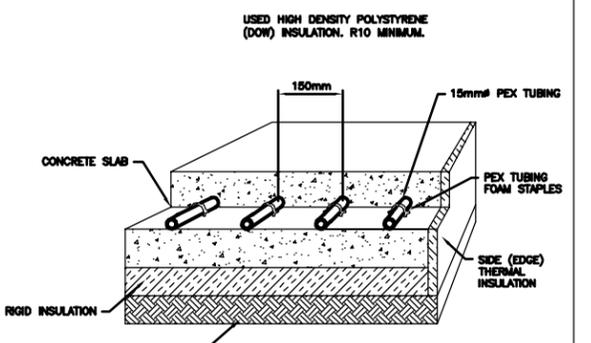


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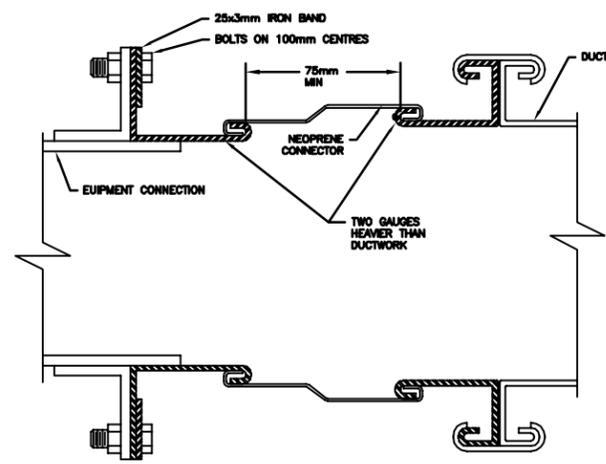
10 DUCT HANGER DETAIL
 M0002 M0004 NTS



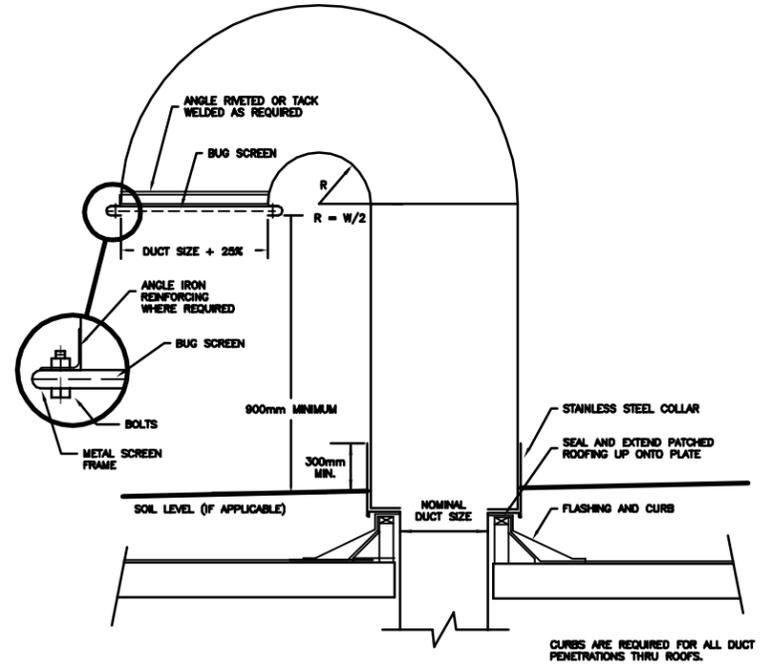
11 ACCESS DOOR (ROUND DUCT) DETAIL
 M0002 M0004 NTS



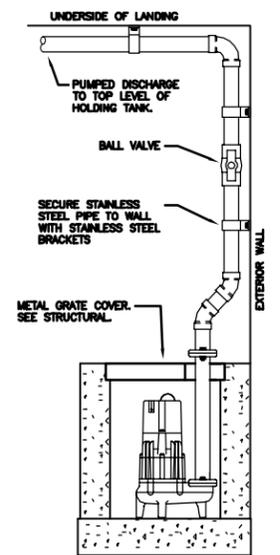
12 IN-SLAB HEATING DETAIL
 M0002 M0004 NTS



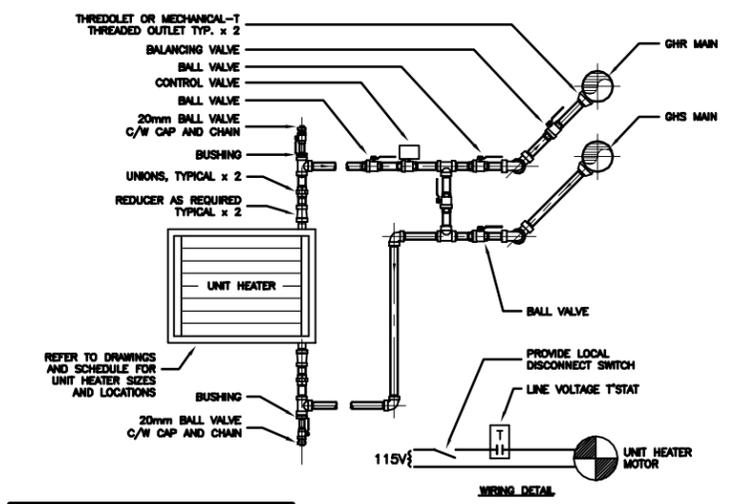
13 FLEXIBLE DUCT CONNECTION DETAIL
 M0002 M0004 NTS



14 TYPICAL GOOSENECK DETAIL
 M0002 M0004 NTS



15 SUMP PUMP DETAIL
 M0002 M0004 NTS



- NOTES:**
- REFER TO HYDRONIC SYSTEM SCHEMATIC FOR PIPE SIZES.
 - REFER TO UNIT HEATER SHOP DRAWINGS FOR SIZE OF EQUIPMENT CONNECTION.

16 TYPICAL HYDRONIC UNIT HEATER DETAIL
 M0002 M0004 NTS

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METRIC
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 DECIMALIZED NUMBERS INDICATE METRES

AS-CONSTRUCTED DRAWING
 BY G.L. DATE 2012.04.17
 CHECKED BY A.H.B.

APEGN
 Certificate of Authorization
 Stantec Consulting Ltd.
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LOCATION APPROVED UNDERGROUND STRUCTURES
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 Tel 204-489-5900 Fax 204-453-9012

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 DRAWN BY J.L.T. APPROVED BY A.B.

HOR. SCALE: AS NOTED RELEASED FOR CONSTRUCTION: DATE
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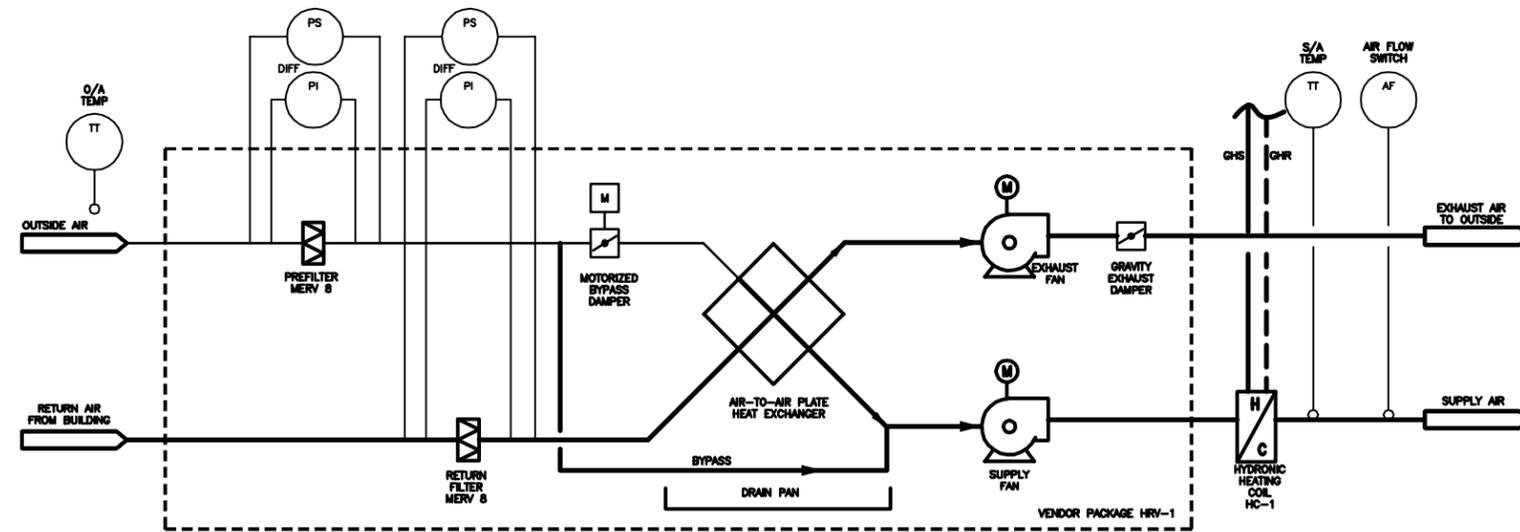
ENGINEER'S SEAL
 ORIGINAL SEALED BY L. WANG P. ENG. 10/02/16
 BID OPPORTUNITY NO. 822-2009

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

Winnipeg

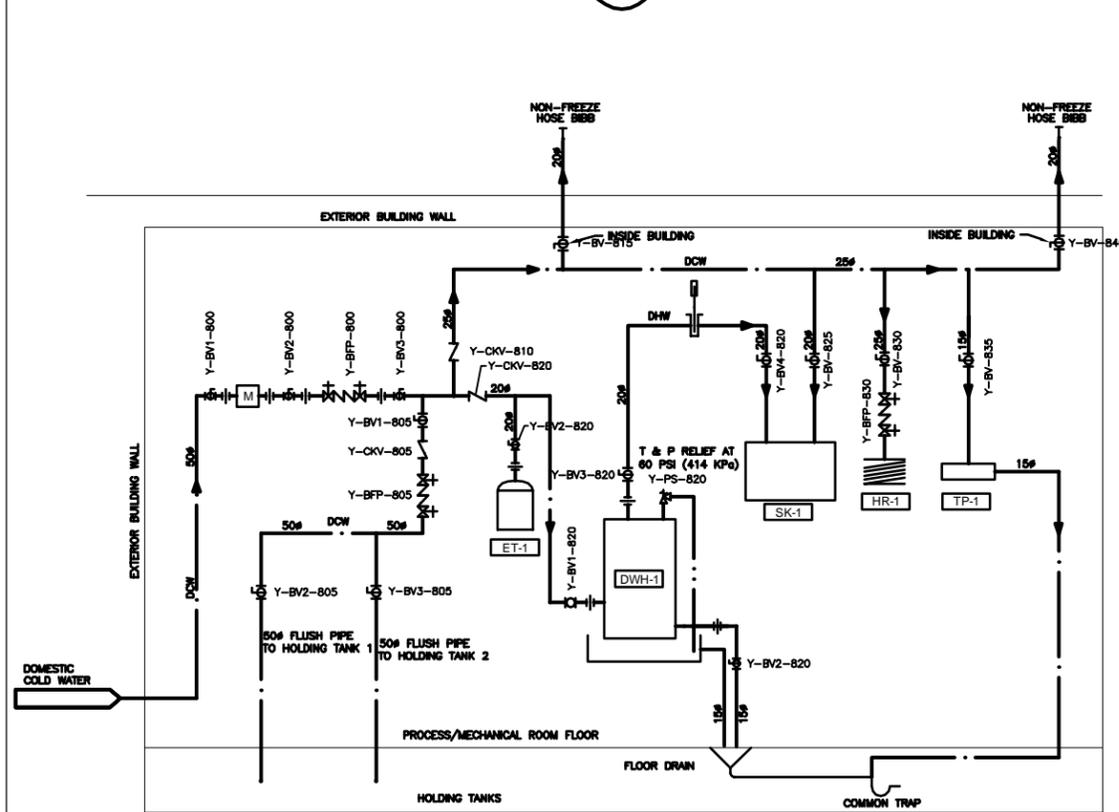
NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
HAULED WASTEWATER RECEIVING BUILDING
MECHANICAL DETAILS

CITY DRAWING NUMBER 1-0101A-M0004-002 SHEET 2 OF 2



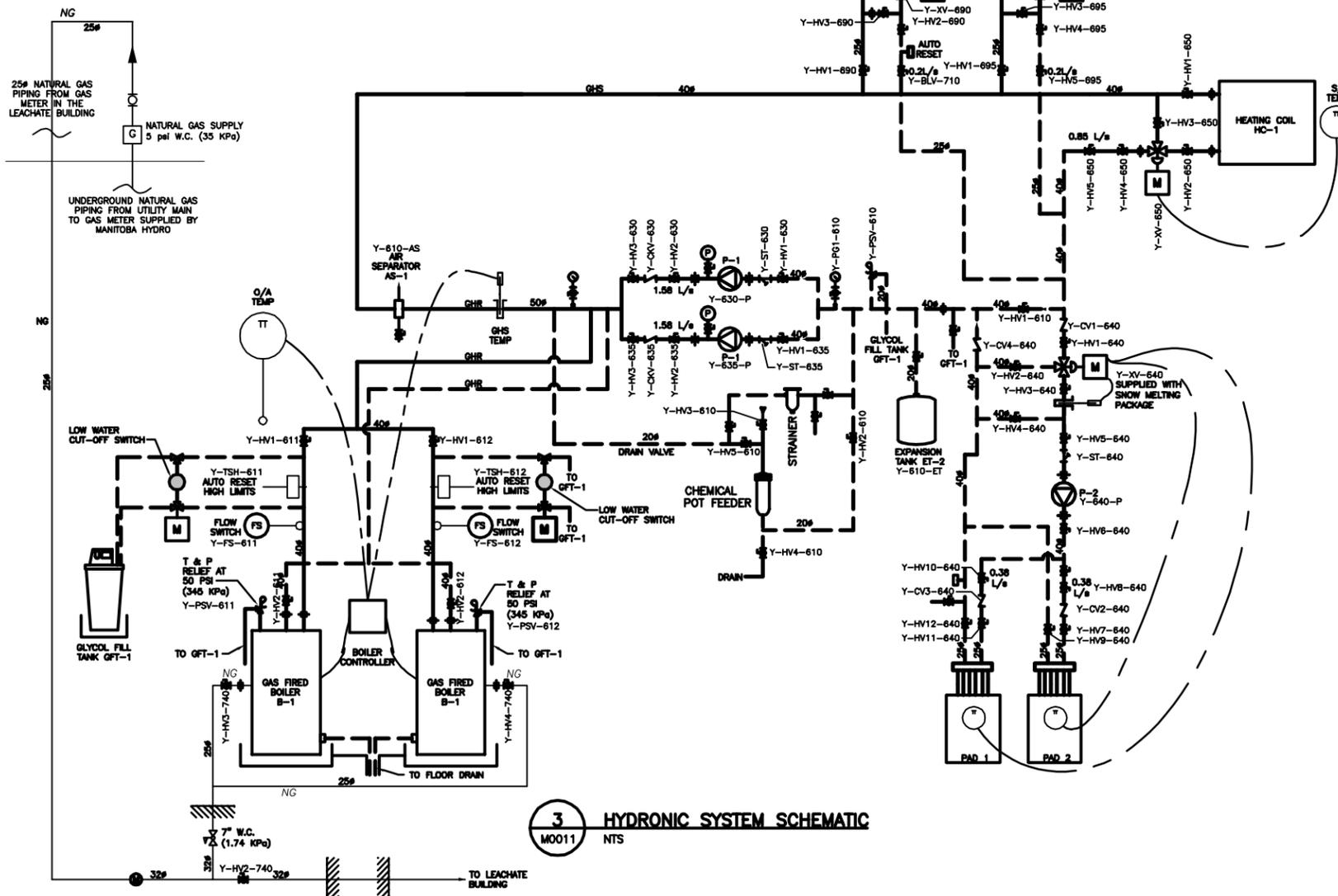
LEGEND	
BV	BALL VALVE
BFP	BACKFLOW PREVENTER
BLV	BALANCE VALVE
CV	CONTROL VALVE
CKV	CHECK VALVE
FS	FLOW SWITCH
HL	HIGH LIMIT
PS	PRESSURE SAFETY VALVE
PG	PRESSURE GAUGE
PRV	GAS PRESSURE REGULATOR
ST	STRAINER
---	SUPPLY LINE
- - -	RETURN LINE

1 HEAT RECOVERY VENTILATOR SYSTEM SCHEMATIC
M0005 NTS



NOTES: SUPPLY AND INSTALL ALL INDICATED FITTINGS

2 DOMESTIC WATER SYSTEM SCHEMATIC
M0011 NTS



3 HYDRONIC SYSTEM SCHEMATIC
M0011 NTS

AS-CONSTRUCTED DRAWING
BY GL DATE 2012.04.17
CHECKED BY A.H.R.

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DRAWN BY J.L.T. APPROVED BY A.B.
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ENGINEER'S SEAL
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P. ENG. 10/02/16
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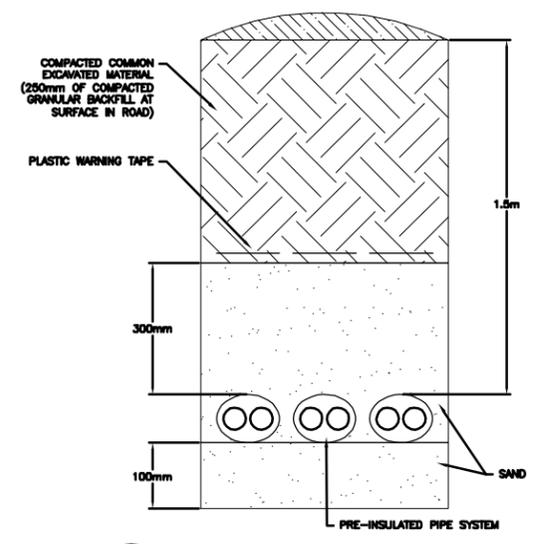
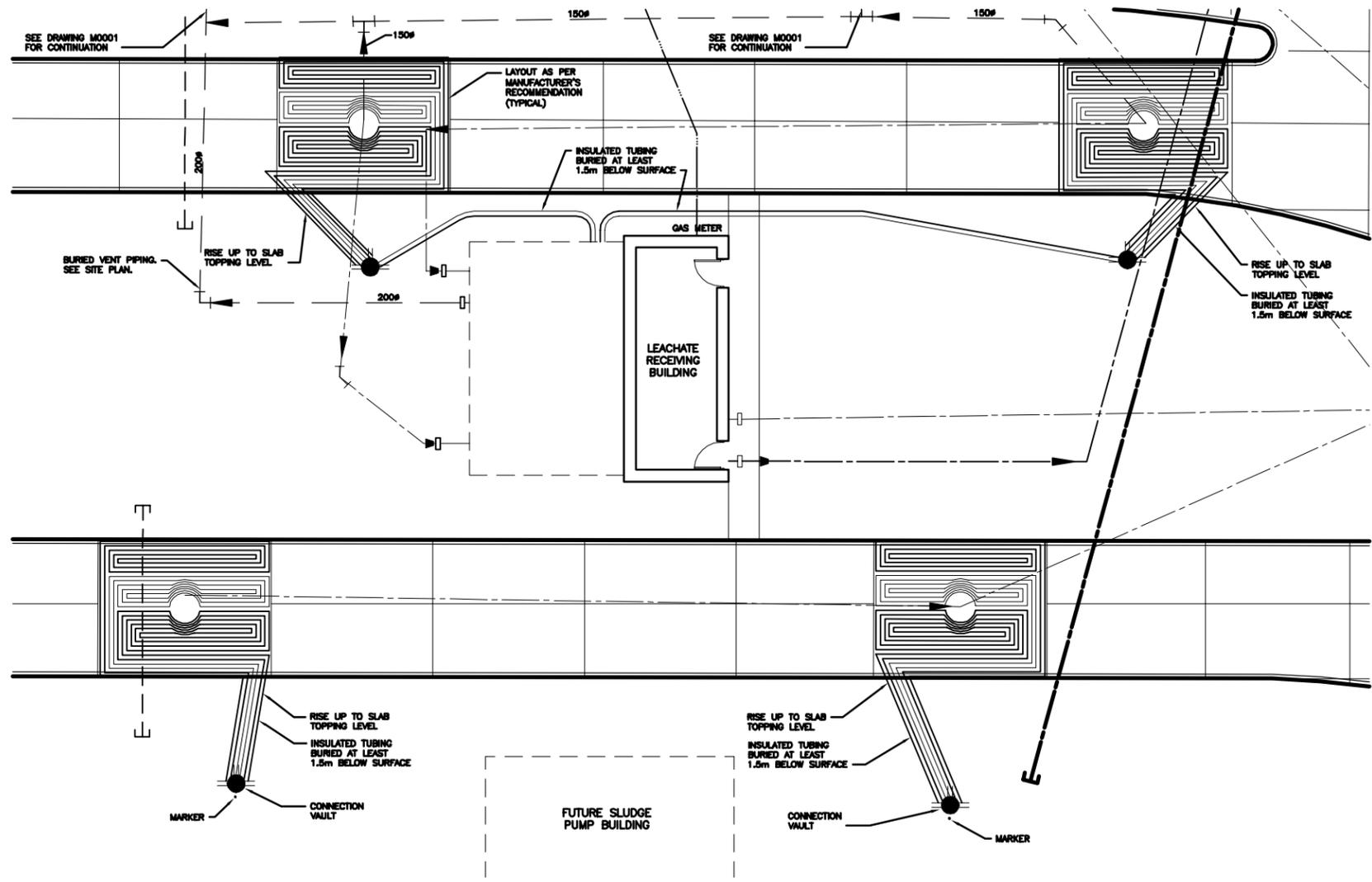
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

Winnipeg
NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
HAULED WASTEWATER RECEIVING BUILDING
MECHANICAL SYSTEM SCHEMATICS

CITY DRAWING NUMBER **1-0101A-M0005-001** SHEET **1** OF **1**

METRIC
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CONSTRUCTION COMPLETION DATE - APRIL 2011



A BURIED HYDRONIC PIPING
M0007 NTS

1 MECHANICAL SITE PLAN
M0007 1:100

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ORIGINAL SEALED BY L. WANG P. ENG. 10/02/16

BID OPPORTUNITY NO. 822-2009

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

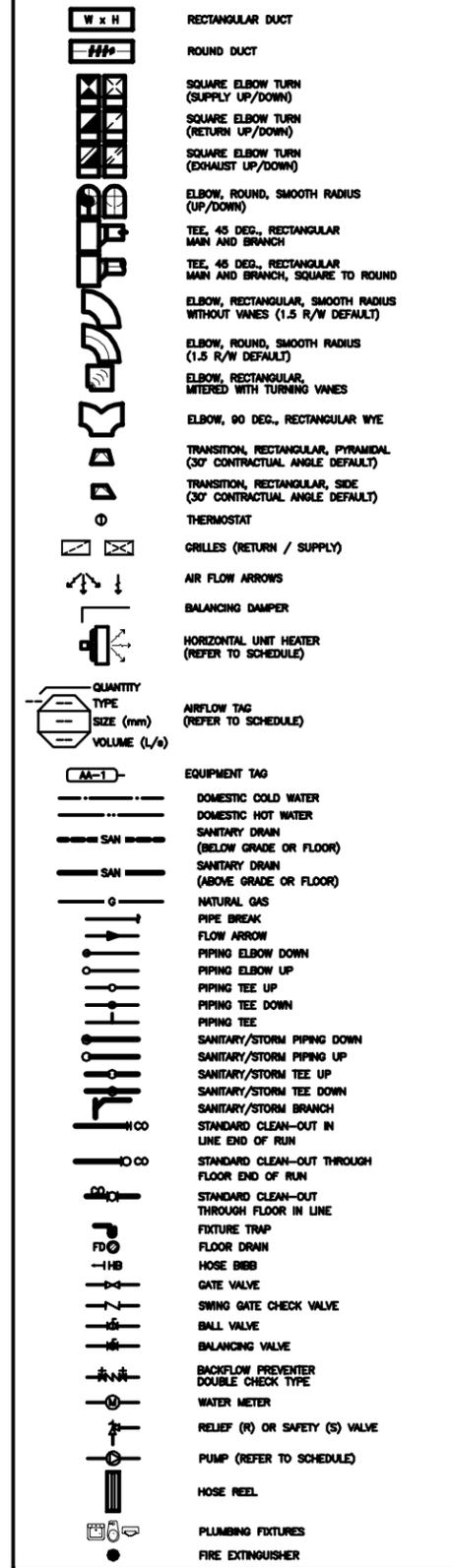
Winnipeg

NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
LEACHATE RECEIVING BUILDING
MECHANICAL SITE PLAN

CITY DRAWING NUMBER 1-0101A-M0007-001

SHEET 1 OF 1

MECHANICAL SYMBOLS

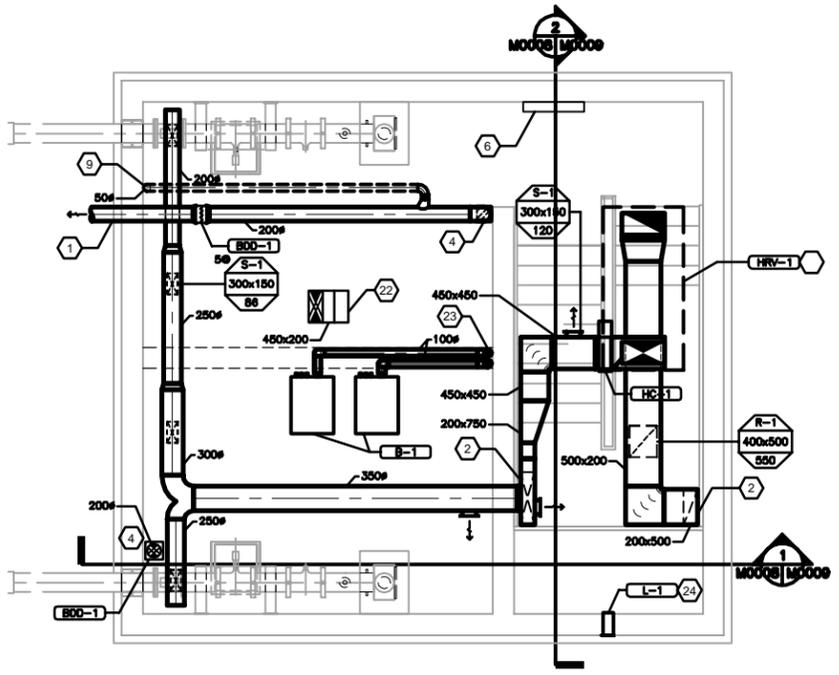


GENERAL NOTES

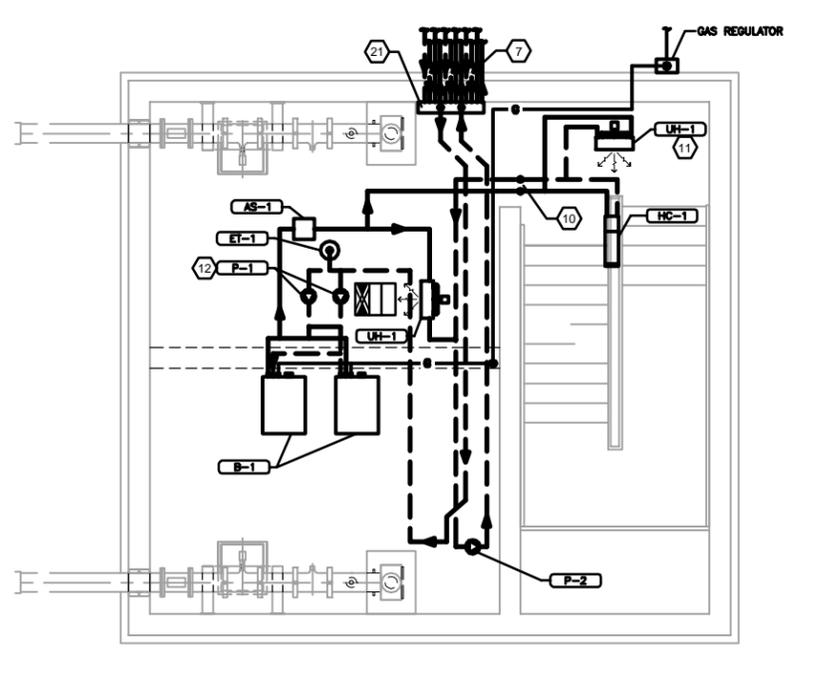
- COORDINATED WITH OTHER TRADES.
- CONFORMED TO SPECIFICATIONS FOR DUCTWORK, MATERIALS, AND INSTALLATION.
- SEE DRAWINGS 9,10,11/M0004-02 FOR DUCTWORK MOUNTING DETAILS.
- PROVIDED 25mm THERMAL INSULATION FOR ALL SUPPLY AIR AND OUTSIDE AIR DUCTWORK.
- PROVIDED 50mm THERMAL INSULATION FOR ALL DUCTWORK EXPOSED TO OUTSIDE.
- SEE ARCHITECTURAL AND STRUCTURAL FOR ALL WALL AND ROOF PENETRATIONS.
- SUPPORTED ALL HYDRONIC AND DOMESTIC WATER PIPING FROM WALL AT HIGH LEVEL. MAINTAINED APPROPRIATE HEAD CLEARANCES WHEN CROSSING WALKWAYS.
- SEE DRAWING M0005 FOR HEAT RECOVERY VENTILATOR, DOMESTIC WATER, AND HYDRONIC SYSTEM SCHEMATIC DIAGRAMS (INCL. PIPE SIZES).
- INSTALLED ONE O/A TEMPERATURE SENSOR ON NORTH WALL.
- PROVIDED PLUMBING VENTS AND CLEANOUTS AS PER CODE.
- INSTALLED FIRE EXTINGUISHERS IN ACCORDANCE WITH NFPA 10-STANDARD FOR PORTABLE FIRE EXTINGUISHERS.
- ALL SANITARY PIPE GREATER THAN 75# @1% SLOPE. UNLESS SPECIFIED.
- ALL SANITARY PIPE EQUAL OR SMALLER THAN 75# @2% SLOPE. UNLESS SPECIFIED.
- PROVIDED BALANCING DAMPERS TO ALL SUPPLY/RETURN DIFFUSERS.
- ALL HANGING ROOFS, BRACKETS, FLOOR SUPPORTS, AND SUPPORT ACCESSORIES ARE TYPE 316L STAINLESS STEEL.

MECHANICAL KEYNOTES

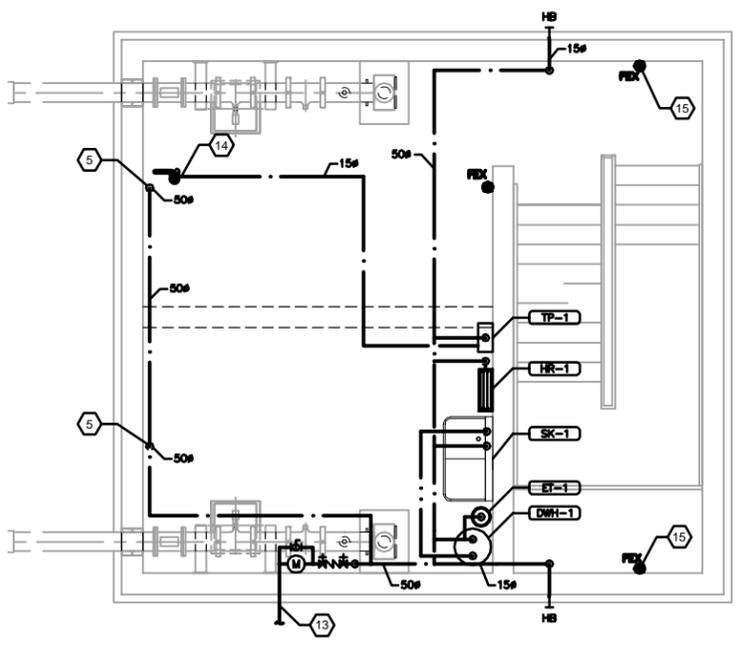
- CONNECTED EXHAUST TO BURIED VENT PIPING. SEE SITE PLAN FOR CONTINUATION.
- DUCTWORK RISER EXTENDED TO ROOF LEVEL. SEE DRAWING M0003 FOR SECTION VIEWS.
- LOCATED HEAT RECOVERY VENTILATOR ON ROOF CURB PROVIDED BY ARCHITECTURAL. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.
- PROVIDED MANUALLY-OPERATED DAMPER TO BE CLOSED WHEN SERVICING EXHAUST FAN. WELDED 15x15 WIRE MESH AT END OF DUCT INSIDE HOLDING TANK.
- PROVIDED FLUSHING PIPE FOR HOLDING TANK. SEE DRAWING 7/M0004-01 FOR DETAILS.
- LOCATED HRV-1 CONTROL PANEL AT TOP LEVEL OF STAIRCASE, INSIDE ENTRY DOOR.
- HYDRONIC PIPING TO MANHOLE PADS. SEE MECHANICAL SITE PLAN, DRAWING 1/M0001, FOR CONTINUATION.
- SLOPED FLOOR TO FLOOR DRAINS.
- CONNECTED SANITARY VENT TO HOLDING TANK EXHAUST DUCT.
- HYDRONIC PIPING RISERS UP TO ROOF LEVEL TO SERVE UNIT HEATER (UH-1) AND HEATING COIL (HC-1).
- UNIT HEATER SUSPENDED FROM ROOF AT TOP LEVEL OF STAIRCASE.
- SEE DRAWING 4/M0004-01 FOR PUMP INSTALLATION DETAILS.
- CONNECTED TO DOMESTIC WATER SERVICE. SEE SITE PLAN FOR CONTINUATION. SEE DRAWING 6/M0004-01 FOR WATER SERVICE ENTRY DETAIL.
- CONNECTED WATER LINE FROM TRAP PRIMER (TP-1) TO COMMON SANITARY TRAP. SEE DRAWINGS 1,5/M0004-01 FOR DETAILS.
- LOCATED FIRE EXTINGUISHER AT TOP LEVEL OF STAIRCASE ADJACENT TO EXTERIOR DOOR.
- SANITARY LINE DRAINED INTO HOLDING TANK. SEE DRAWING 1/M0004-01 FOR DETAILS.
- PIPING FROM SUMP PIT PENETRATED LOWER WALL INTO HOLDING TANK AT HIGH LEVEL FOR SUMP DRAINAGE. SEE DRAWING M0003 FOR SECTION VIEWS.
- NATURAL GAS SERVICE. SEE CIVIL SITE PLAN FOR CONTINUATION.
- PROVIDED 25mm# DRAINAGE PIPING FROM HEATING COIL (HC-1) AND HEAT RECOVERY VENTILATOR (HRV-1) TO FUNNEL FLOOR DRAIN (FD-2) AT TOP LEVEL OF STAIRCASE. SEE DRAWING M0003 FOR SECTION VIEWS.
- 500x500x700 SUMP PIT LOCATED AT BOTTOM LEVEL OF STAIRCASE. SEE DRAWING 15/M0004-02 FOR DETAILS.
- HYDRONIC MANIFOLD.
- COMBUSTION AIR INTAKE PENETRATED ROOF. CONFORMED TO CURRENT MANITOBA GAS CODE. SEE DRAWING M0003 FOR SECTION VIEWS.
- BOILER FLUE VENTS PENETRATED ROOF. PIPED CONDENSATE FROM VENT CLEANOUT THROUGH NEUTRALIZER KIT TO NEAREST FLOOR DRAIN. CONFORMED TO CURRENT MANITOBA GAS CODE. SEE DRAWING M0003 FOR SECTION VIEWS.
- PROVIDED LOUVER FOR VENTILATION AIR. CONFORMED TO CURRENT MANITOBA GAS CODE.



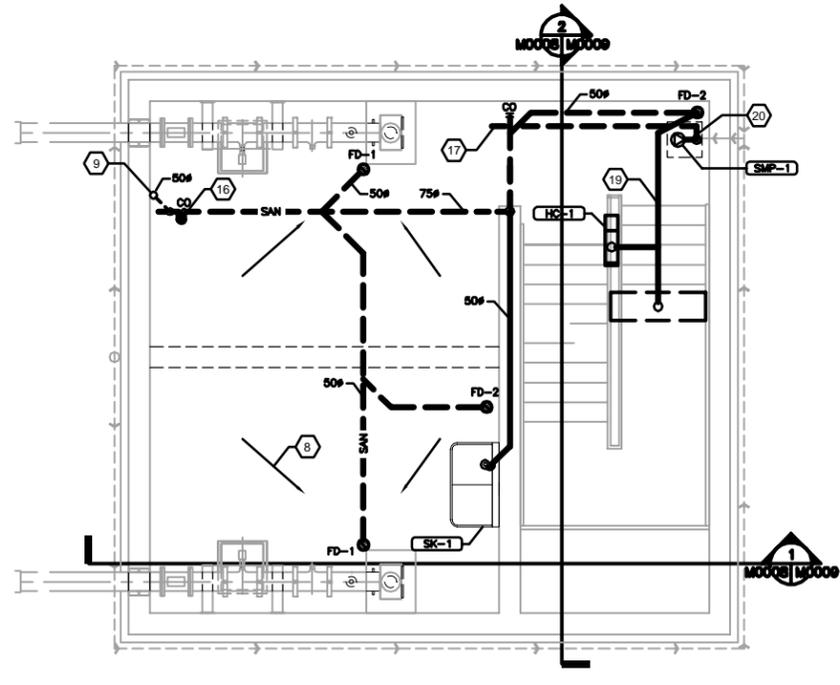
1 HVAC PLAN
M0008 1:50



2 HYDRONIC PLAN
M0008 1:50



3 PLUMBING & FIRE PROTECTION PLAN
M0008 1:50



4 SANITARY PLAN
M0008 1:50

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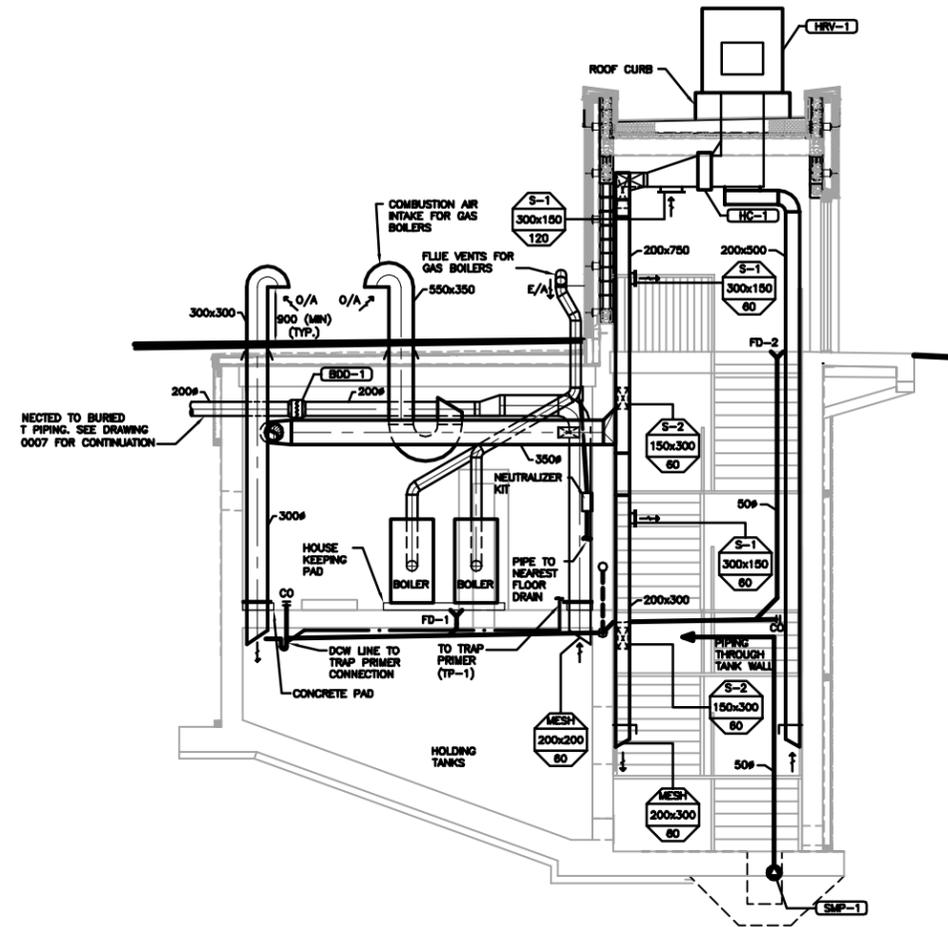
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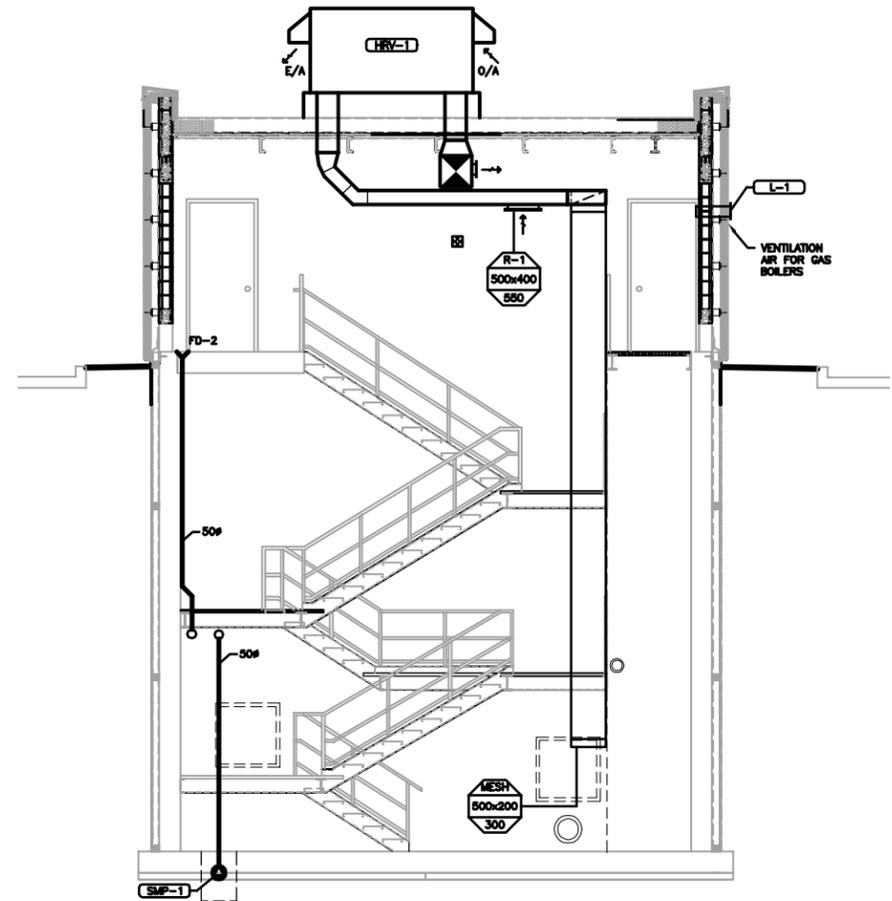
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10/02/16

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
Winnipeg
NORTH END WATER POLLUTION CONTROL FACILITIES
HAULED WASTEWATER RECEIVING FACILITIES
LEACHATE RECEIVING BUILDING
MECHANICAL PLANS

BID OPPORTUNITY NO. **822-2009**
CITY DRAWING NUMBER **1-0101A-M0008-001**
SHEET **1** OF **1**



SECTION 1
M0008 | M0009 1:50



SECTION 2
M0008 | M0009 1:50

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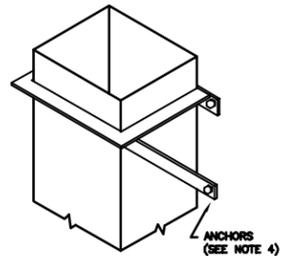
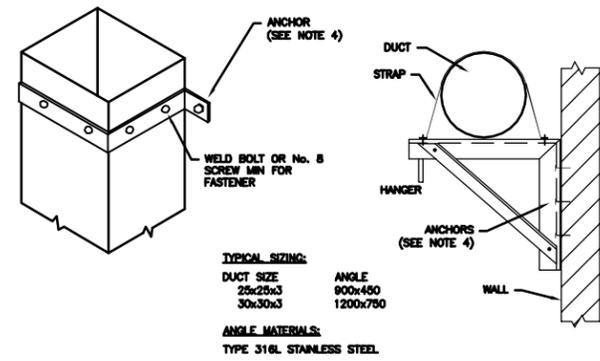
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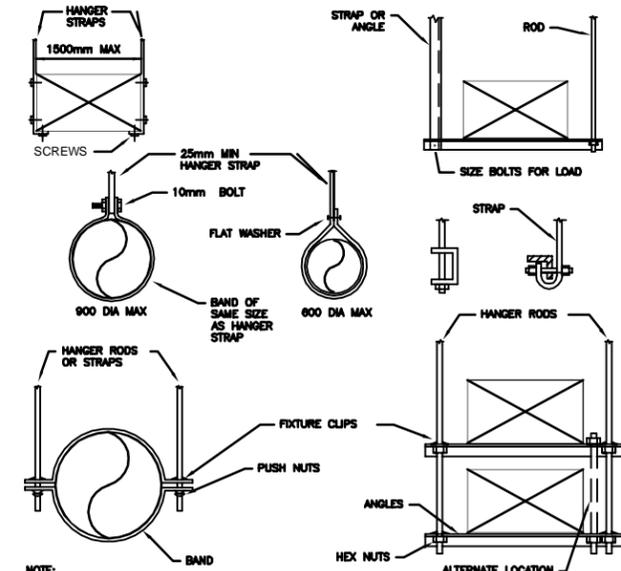
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NORTH END WATER POLLUTION CONTROL CENTRE HAULED WASTEWATER RECEIVING FACILITIES LEACHATE RECEIVING BUILDING MECHANICAL SECTIONS
CITY DRAWING NUMBER 1-0101A-M0009-001
SHEET 1 OF 1



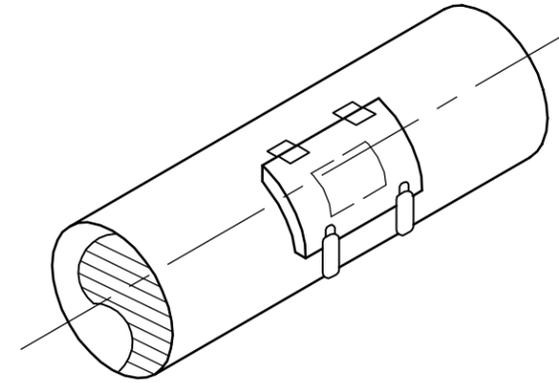
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9 DUCT SUPPORT FROM WALL DETAIL
 M0008 M0010 NTS

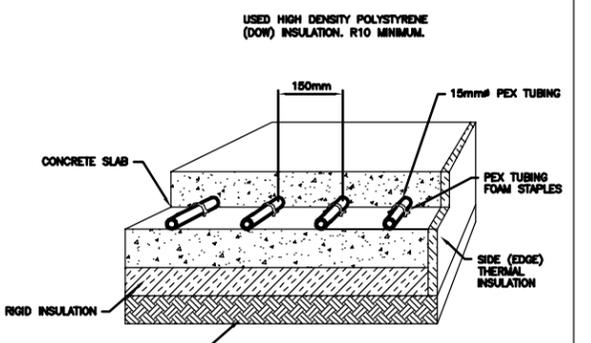


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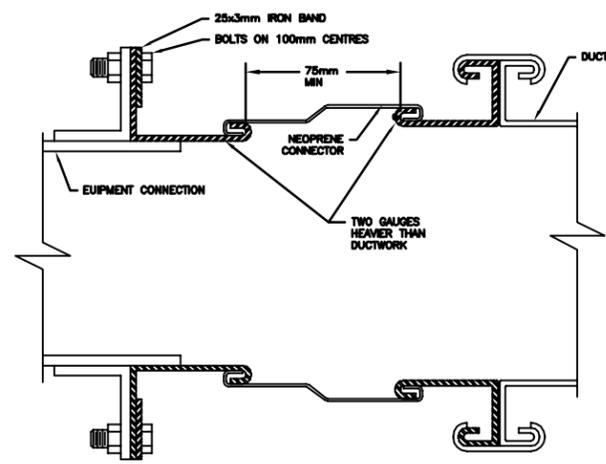
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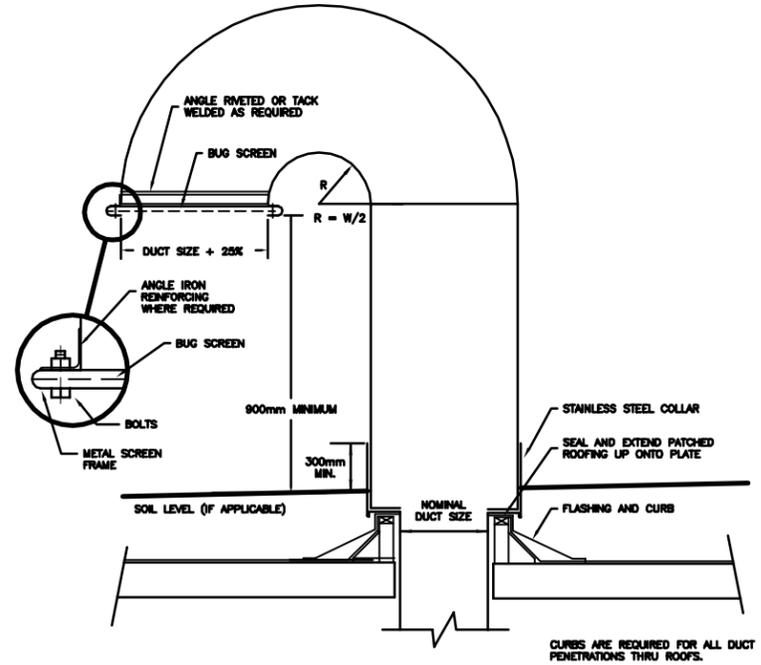
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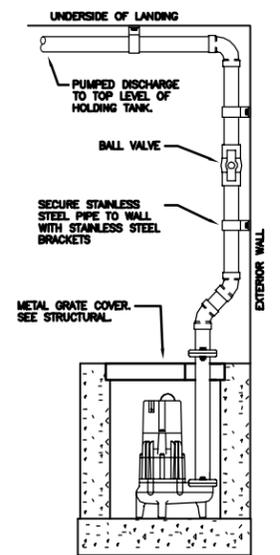
12 IN-SLAB HEATING DETAIL
 M0008 M0010 NTS



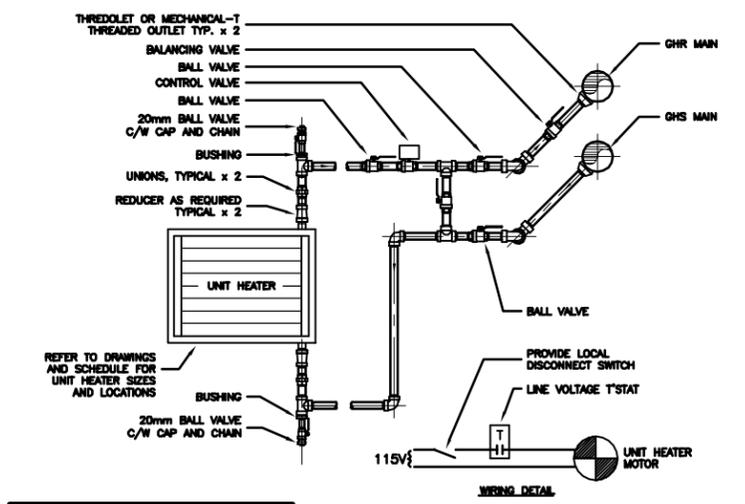
13 FLEXIBLE DUCT CONNECTION DETAIL
 M0008 M0010 NTS



14 TYPICAL GOOSENECK DETAIL
 M0008 M0010 NTS



15 SUMP PUMP DETAIL
 M0008 M0010 NTS



- NOTES:**
- REFER TO HYDRONIC SYSTEM SCHEMATIC FOR PIPE SIZES.
 - REFER TO UNIT HEATER SHOP DRAWINGS FOR SIZE OF EQUIPMENT CONNECTION.

16 TYPICAL HYDRONIC UNIT HEATER DETAIL
 M0008 M0010 NTS

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CONSTRUCTION COMPLETION DATE - APRIL 2018

METRIC
 WHOLE NUMBERS INDICATE MILLIMETRES
 DECIMALIZED NUMBERS INDICATE METRES

AS-CONSTRUCTED DRAWING
 BY GL DATE 2012.04.17
 CHECKED BY A.H.B.

APECA
 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. CORROBORATION 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	2.04.17	G.L.
A	ISSUED FOR TENDER	0.02.16	L.W.

Stantec Consulting Ltd.
 905 Waverley Street, Winnipeg, Manitoba
 Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY L.W. CHECKED BY A.B.
 DRAWN BY J.L.T. APPROVED BY A.B.

HOR. SCALE: AS NOTED RELEASED FOR CONSTRUCTION: DATE
 VERTICAL: AS NOTED

DATE 09.11.13

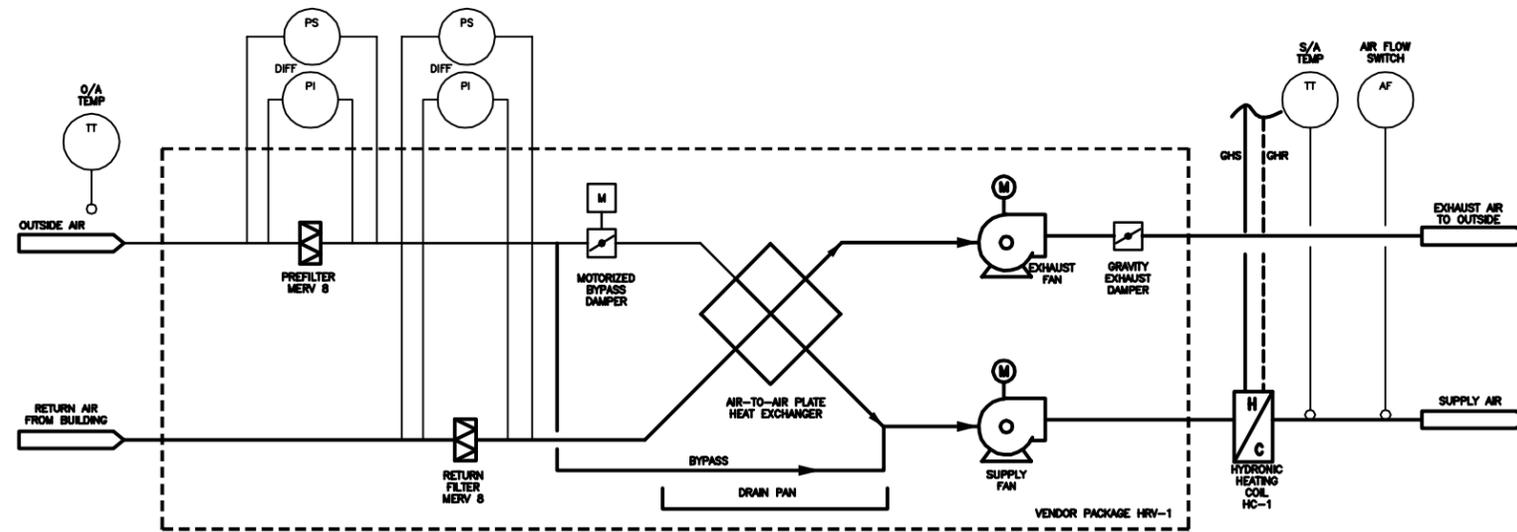
ENGINEER'S SEAL
 ORIGINAL SEALED BY
 L. WANG
 P. ENG.
 10/02/16

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

Winnipeg

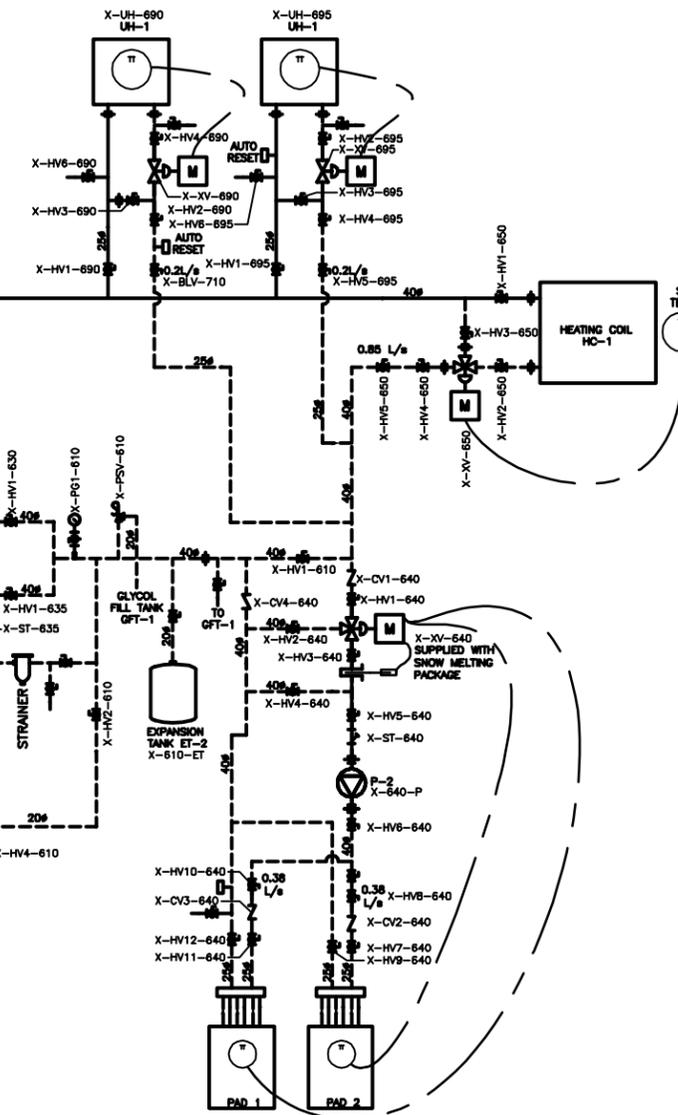
NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
 LEACHATE RECEIVING BUILDING
MECHANICAL DETAILS

BID OPPORTUNITY NO. **822-2009** CITY DRAWING NUMBER **1-0101A-M0010-002** SHEET **2** OF **2**

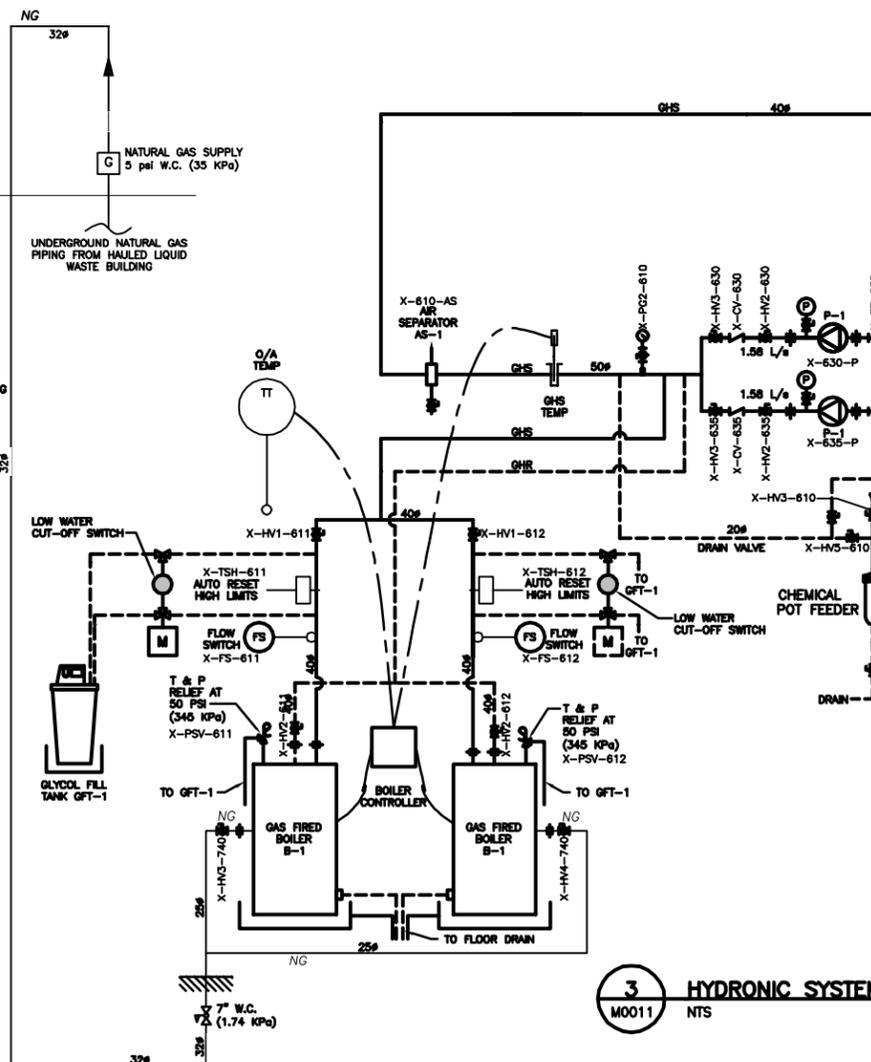


LEGEND	
BV	BALL VALVE
BFP	BACKFLOW PREVENTER
BLV	BALANCE VALVE
CV	CONTROL VALVE
CKV	CHECK VALVE
FS	FLOW SWITCH
HL	HIGH LIMIT
PS	PRESSURE SAFETY VALVE
PG	PRESSURE GAUGE
PRV	GAS PRESSURE REGULATOR
ST	STRAINER
— SUPPLY LINE	
- - - RETURN LINE	

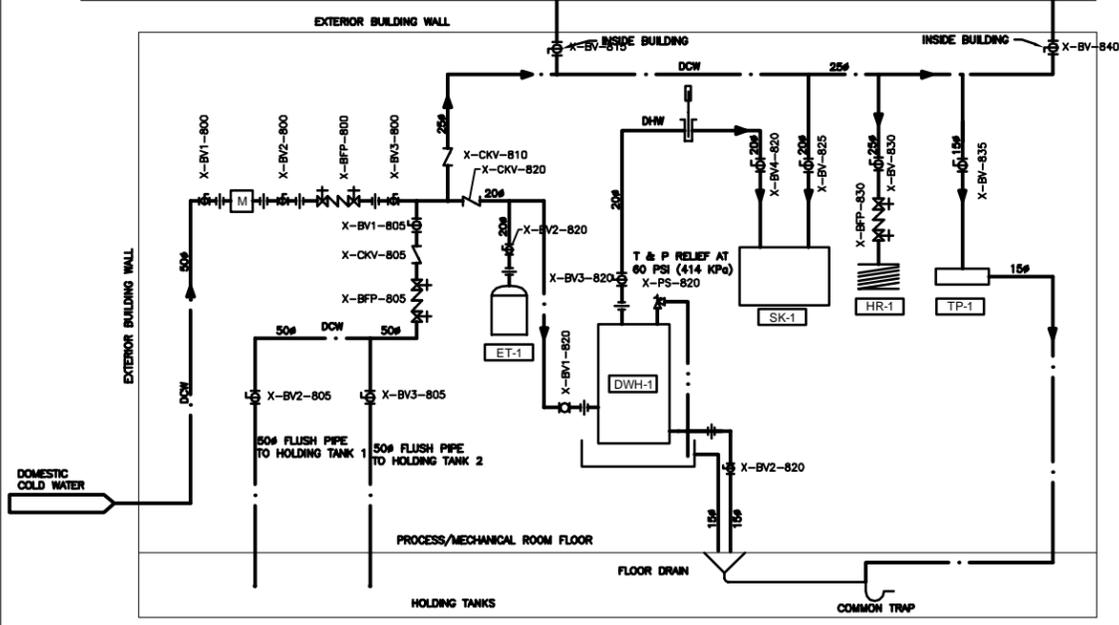
1 HEAT RECOVERY VENTILATOR SYSTEM SCHEMATIC
M0005 NTS



3 HYDRONIC SYSTEM SCHEMATIC
M0011 NTS



2 DOMESTIC WATER SYSTEM SCHEMATIC
M0011 NTS



NOTES: SUPPLY AND INSTALL ALL INDICATED FITTINGS

2 DOMESTIC WATER SYSTEM SCHEMATIC
M0011 NTS

AS-CONSTRUCTED DRAWING
BY GL DATE 2012.04.17
CHECKED BY A.H.B.

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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. CORROBORATION 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	2.04.17	G.L.
A	ISSUED FOR TENDER	0.02.16	L.W.

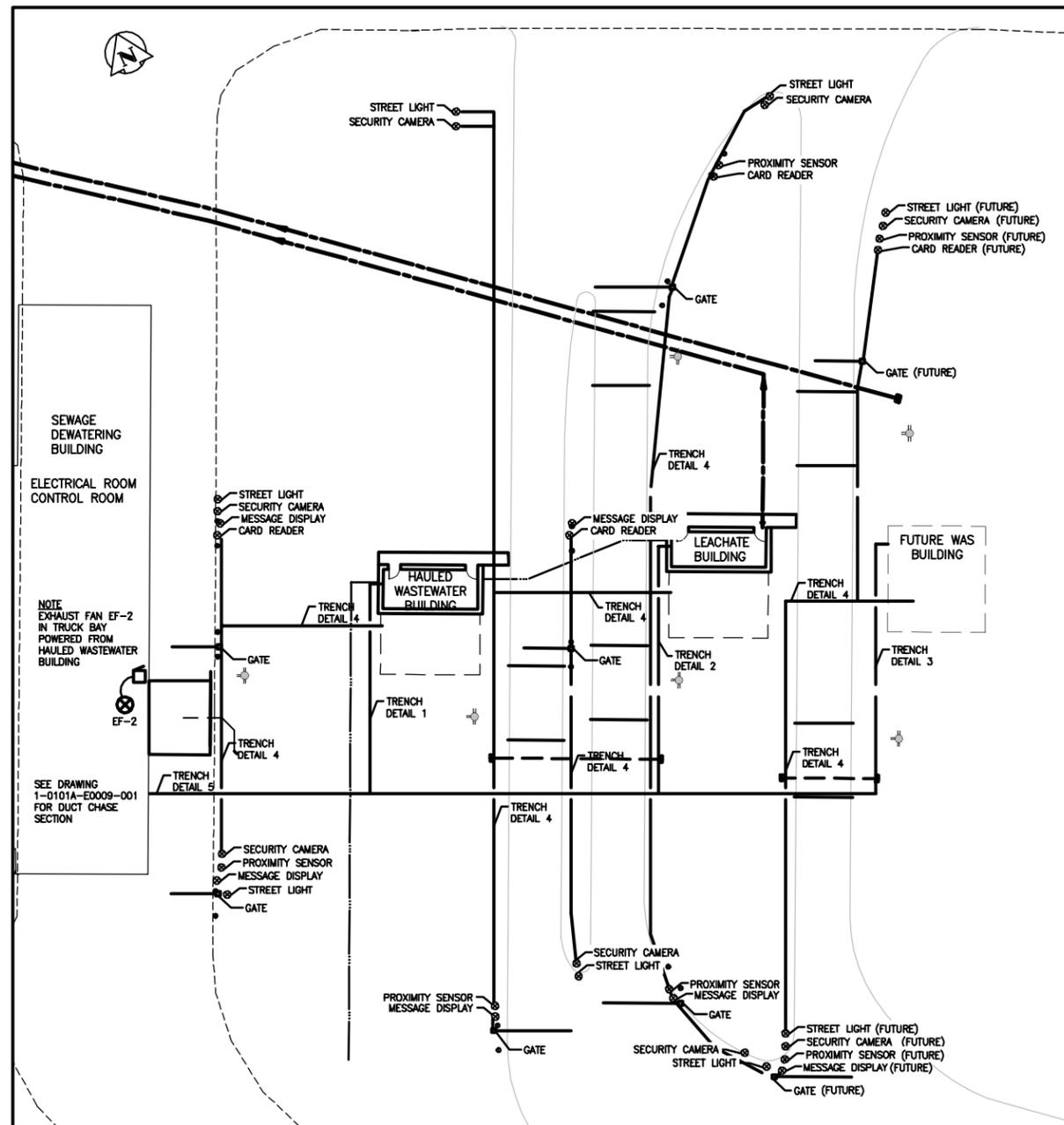
Stantec Consulting Ltd.
905 Waverley Street, Winnipeg, Manitoba
Tel 204-489-5900 Fax 204-453-9012
DESIGNED BY L.W. CHECKED BY A.B.
DRAWN BY J.L.T. APPROVED BY A.B.
HOR. SCALE: AS NOTED
VERTICAL: AS NOTED
RELEASED FOR CONSTRUCTION: DATE

ENGINEER'S SEAL
ORIGINAL SEALED BY L. WANG P. ENG. 10/02/16
BID OPPORTUNITY NO. 822-2009

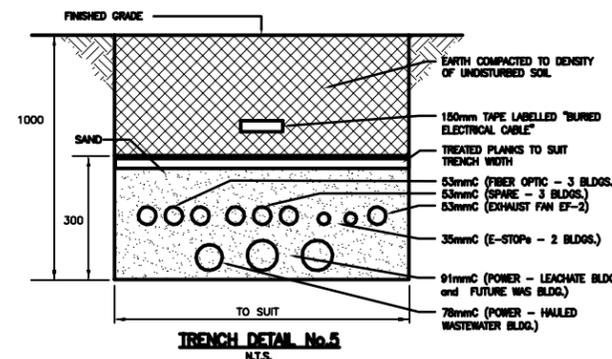
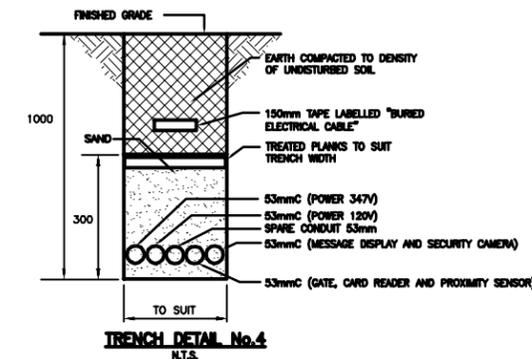
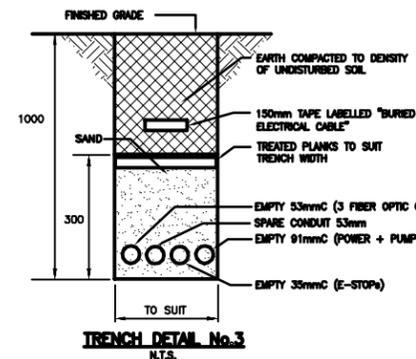
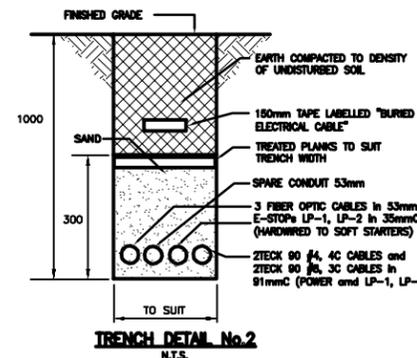
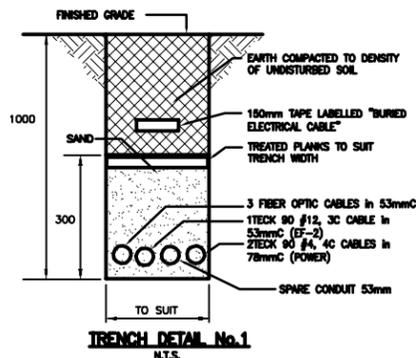
THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT
Winnipeg
NORTH END WATER POLLUTION CONTROL FACILITIES HAULED WASTEWATER RECEIVING CENTRE LEACHATE RECEIVING BUILDING MECHANICAL SYSTEM SCHEMATICS
CITY DRAWING NUMBER 1-0101A-M0011-001
SHEET 1 OF 1

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

CONSTRUCTION COMPLETION DATE - APRIL 2011



SITE PLAN
N.T.S.



- LEGEND**
- 1) 3 FIBER OPTIC CABLES (HAULED WASTEWATER BLDG.)
 - 2) 3 FIBER OPTIC CABLES (LEACHATE BLDG.)
 - 3) 3 FIBER OPTIC CABLES (FUTURE WAS BLDG.)
 - 4) REDUNDANT FIBER OPTIC CABLE (HAULED WASTEWATER BLDG.)
 - 5) REDUNDANT FIBER OPTIC CABLE (LEACHATE BLDG.)
 - 6) REDUNDANT FIBER OPTIC CABLE (FUTURE WAS BLDG.)
 - 7) LEACHATE PUMPS LP-1; LP-2 E-STOP CABLE (LEACHATE BLDG.)
 - 8) LEACHATE PUMP LP-X; LP-Y E-STOP CABLE (FUTURE WAS BLDG.)
 - 9) LEACHATE PUMP LP-X POWER CABLE (FUTURE WAS BLDG.)
 - 10) LEACHATE PUMP LP-Y POWER CABLE (FUTURE WAS BLDG.)
 - 11) LEACHATE PUMP LP-1 POWER CABLE (LEACHATE BLDG.)
 - 12) LEACHATE PUMP LP-2 POWER CABLE (LEACHATE BLDG.)
 - 13) EXHAUST FAN EF-2 POWER CABLE (DEWATERING BLDG. TRUCK BAY)
 - 14) FUTURE WAS BLDG. POWER CABLE #1
 - 15) FUTURE WAS BLDG. POWER CABLE #2
 - 16) LEACHATE BLDG. POWER CABLE #1
 - 17) LEACHATE BLDG. POWER CABLE #2
 - 18) HAULED WASTEWATER BLDG. POWER CABLE #1
 - 19) HAULED WASTEWATER BLDG. POWER CABLE #2

DEWATERING BUILDING
CABLE TRAY 24"x3" DETAIL
N.T.S.

- NOTES**
- 1) SECURITY CAMERAS ARE MOUNTED ON STREET LIGHT POLES (TOP OF LOWER SECTION OF POLE).
 - 2) ONE LIGHTING FIXTURE 400W, 347V, 1P, HPS TO BE MOUNTED ON TOP OF POLE.
 - 3) SIX NEW POLES NEEDED AS PER SPEC.
 - 4) FOR FUTURE WAS BLDG. INSTALLED CONDUITS ONLY.
 - 5) INSTALLED REDUNDANT FIBER OPTIC CABLES IN SPARE CONDUITS.
 - 6) INSTALLED NEW CABLE TRAY 24"x3" FROM POINT WHERE CABLES/CONDUITS ENTER DEWATERING BUILDING TO ELECTRICAL AND CONTROL ROOM. APPROXIMATE LENGTH SOM.

The Issued for Construction version of this drawing was prepared by Stantec Consulting Ltd. This As-Constructed drawing has been prepared based on information provided by others for which Stantec assumes no responsibility.

CONSTRUCTION COMPLETION DATE - SEPTEMBER 2011

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

AS-CONSTRUCTED DRAWING
BY GL DATE 2012.04.17
CHECKED BY S.T.

APECM
Certificate of Authorization
Stantec Consulting Ltd.
No. 1301

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE	DATE

NOTE:
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NO.	REVISIONS	DATE	BY
3	RECORD DRAWING	12.04.17	GL
2	REVISED AS PER ADDENDUM #3		
1	REVISED AS PER ADDENDUM #2	10.03.11	S.T.
A	ISSUED FOR TENDER	10.02.16	S.T.

Stantec Consulting Ltd.		ENGINEER'S SEAL	
905 Waverley Street, Winnipeg, Manitoba Tel 204-489-5900 Fax 204-453-9012			
DESIGNED BY	S.T.	CHECKED BY	D.D.
DRAWN BY	S.T.	APPROVED BY	
HOR. SCALE:	-	RELEASED FOR CONSTRUCTION:	
VERTICAL:		DATE	
DATE	09.11.20		

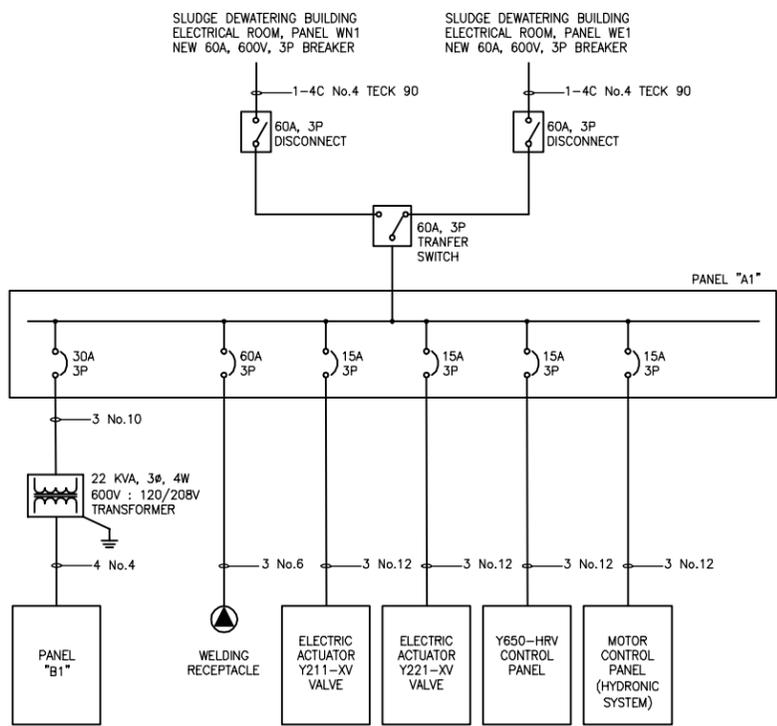
ORIGINAL SEALED BY	S. TREBIC
P. ENG.	10/02/16
TENDER NO.	822-2009

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

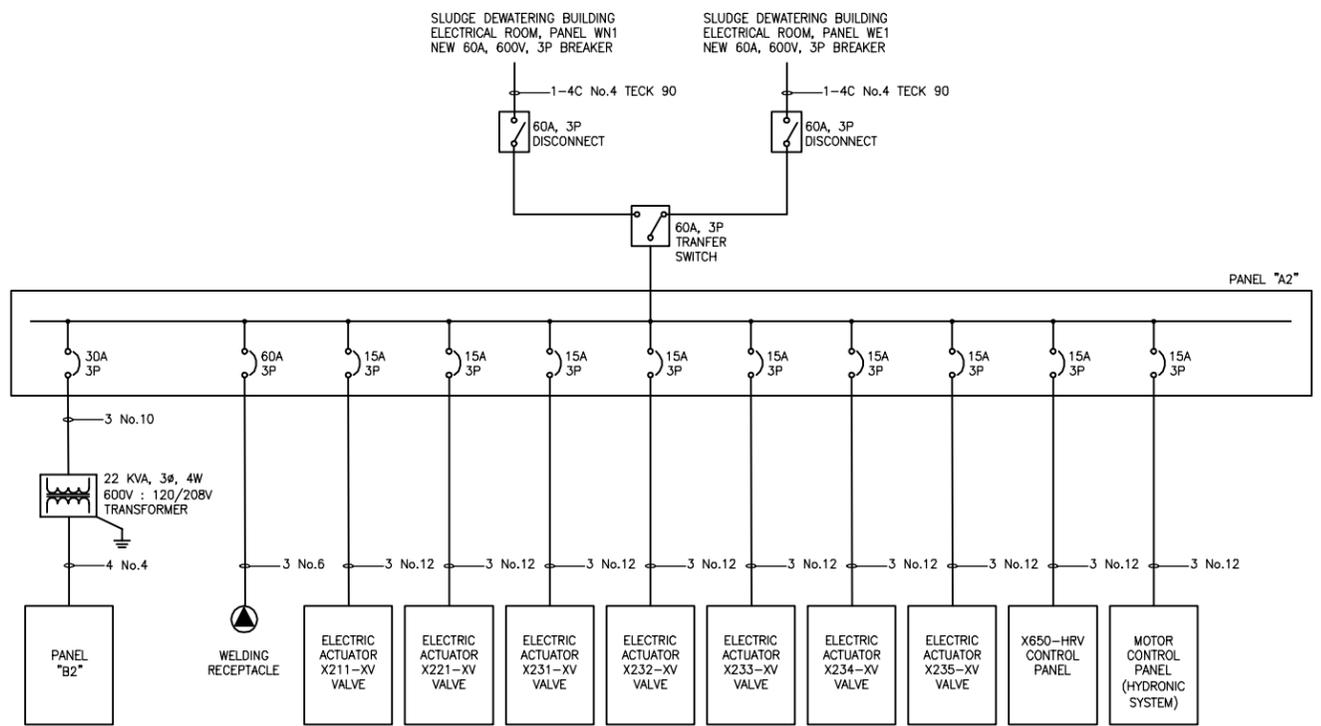
Winnipeg

NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
HAULED WASTEWATER AND LEACHATE RECEIVING BUILDINGS
SITE PLAN, TRENCH DETAILS

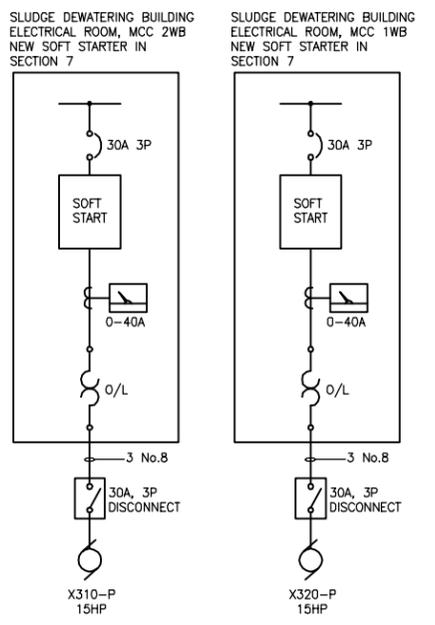
CITY DRAWING NUMBER **1-0101A-E0005-001** SHEET **1** OF **1**



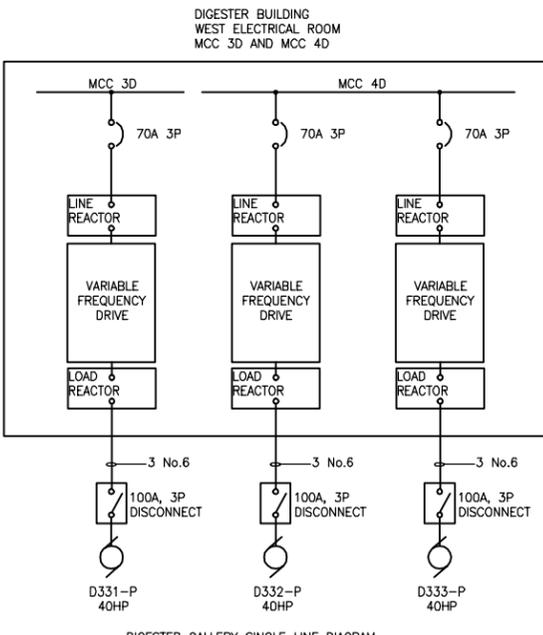
HAULED WASTEWATER BUILDING SINGLE LINE DIAGRAM



LEACHATE BUILDING SINGLE LINE DIAGRAM



NOTE: ELECTRICIAN TO CONFIRM ON SITE EXACT LOCATION OF EXISTING MCC.



DIGESTER GALLERY SINGLE LINE DIAGRAM

PANEL "A1"		347/600V, 3Ø, 4W			100 MAINS	
DESCRIPTION	CCT.	BRK AMP	A B C	BRK AMP	CCT.	DESCRIPTION
TRANSFORMER 22kVA, 600/120-208V	1	30	•••	15	2	VALVE Y211-XV ELECTRIC ACTUATOR
VALVE Y211-XV ELECTRIC ACTUATOR	3	15	•••	15	4	VALVE Y221-XV ELECTRIC ACTUATOR
MOTOR CONTROL PANEL (HYDRONIC SYSTEM)	7	15	•••	15	8	MOTOR CONTROL PANEL (HYDRONIC SYSTEM)
HEAT RECOVERY VENTILATOR Y650-HRV CONTROL PANEL	9	15	•••	15	10	WELDING RECEPTACLE
STREET LIGHTS	11	15	•••	15	12	STREET LIGHTS
	13	15	•••	15	14	
	15	15	•••	15	16	
	17	15	•••	15	18	
	19	15	•••	15	20	
	21	15	•••	15	22	
	23	15	•••	15	24	
	25	15	•••	15	26	
	27	15	•••	15	28	
	29	15	•••	15	30	

PANEL "A1" SCHEDULE

PANEL "A2"		347/600V, 3Ø, 4W			100A MAINS	
DESCRIPTION	CCT.	BRK AMP	A B C	BRK AMP	CCT.	DESCRIPTION
TRANSFORMER 22kVA, 600/120-208V	1	30	•••	15	2	VALVE X211-XV ELECTRIC ACTUATOR
VALVE X221-XV ELECTRIC ACTUATOR	3	15	•••	15	4	VALVE X231-XV ELECTRIC ACTUATOR
VALVE X232-XV ELECTRIC ACTUATOR	7	15	•••	15	8	VALVE X233-XV ELECTRIC ACTUATOR
VALVE X234-XV ELECTRIC ACTUATOR	9	15	•••	15	10	VALVE X235-XV ELECTRIC ACTUATOR
HEAT RECOVERY VENTILATOR X650-HRV CONTROL PANEL	13	15	•••	15	14	WELDING RECEPTACLE
STREET LIGHTS	15	15	•••	15	16	STREET LIGHTS
	17	15	•••	15	18	
	19	15	•••	15	20	
	21	15	•••	15	22	
	23	15	•••	15	24	
	25	15	•••	15	26	
	27	15	•••	15	28	
	29	15	•••	15	30	
	31	15	•••	15	32	
	33	15	•••	15	34	
	35	15	•••	15	36	
	37	15	•••	15	38	
	39	15	•••	15	40	
	41	15	•••	15	42	

PANEL "A2" SCHEDULE

PANEL "B1"		120/208V, 3Ø, 4W			100A MAINS	
DESCRIPTION	CCT.	BRK AMP	A B C	BRK AMP	CCT.	DESCRIPTION
INDOOR LIGHTING	1	15	•••	15	2	INDOOR LIGHTING
HOIST	3	15	•••	15	4	EMERGENCY / EXIT LIGHTS
RECEPTACLES	5	15	•••	15	6	RECEPTACLES
SAMPLER Y910-S REFRIGERATOR	7	15	•••	15	8	SAMPLER Y920-S REFRIGERATOR
SAMPLER Y910-S CONTROL PANEL	9	15	•••	15	10	SAMPLER Y920-S CONTROL PANEL
SPARE	11	15	•••	15	12	BOILER Y611-B CONTROL PANEL
TERMINATION PANEL DCS	13	15	•••	15	14	BOILER Y612-B CONTROL PANEL
SNOW MELTING CONTROL PANEL	15	15	•••	15	16	SAMPLE ROOM RECEPTACLE
HYDRONIC UNIT HEATER Y690-UH, Y695-UH	17	15	•••	30	18	SUMP PUMP Y560-P
AIR COMPRESSOR	19	30	•••	15	20	EXHAUST FAN W680-EF
ELECTRIC WATER HEATER Y820-HWT (3kW)	21	15	•••	15	22	SAMPLE ROOM RECEPTACLE
SPARE	23	15	•••	15	24	TRAP PRIMER
GLYCOL TANK RECEPTACLE	25	15	•••	15	26	GATES (LANE #1)
	27	15	•••	15	28	GATES (LANE #2)
	29	15	•••	15	30	CARD READER + MONITOR (LANE #1)
	31	15	•••	15	32	CARD READER + MONITOR (LANE #2)
	33	15	•••	15	34	
	35	15	•••	15	36	
	37	15	•••	15	38	
	39	15	•••	15	40	
	41	15	•••	15	42	

PANEL "B1" SCHEDULE

PANEL "B2"		120/208V, 3Ø, 4W			100A MAINS	
DESCRIPTION	CCT.	BRK AMP	A B C	BRK AMP	CCT.	DESCRIPTION
INDOOR LIGHTING	1	15	•••	15	2	INDOOR LIGHTING
HOIST	3	15	•••	15	4	EMERGENCY / EXIT LIGHTS
RECEPTACLES	5	15	•••	15	6	RECEPTACLES
SAMPLER X910-S REFRIGERATOR	7	15	•••	15	8	SAMPLER X920-S REFRIGERATOR
SAMPLER X910-S CONTROL PANEL	9	15	•••	15	10	SAMPLER X920-S CONTROL PANEL
AIR COMPRESSOR	11	15	•••	15	12	BOILER X611-B CONTROL PANEL
TERMINATION PANEL DCS	13	15	•••	15	14	BOILER X612-B CONTROL PANEL
SNOW MELTING CONTROL PANEL	15	15	•••	15	16	SAMPLE ROOM RECEPTACLE
HYDRONIC UNIT HEATER X690-UH, X695-UH	17	15	•••	30	18	SUMP PUMP X560-P
ELECTRIC WATER HEATER X820-HWT (3kW)	19	30	•••	15	20	EXHAUST FAN X680-EF
SPARE	21	15	•••	15	22	SAMPLE ROOM RECEPTACLE
CARD READER + MONITOR (LANE #3)	23	15	•••	15	24	TRAP PRIMER
GATES (LANE #3)	25	15	•••	15	26	GLYCOL TANK RECEPTACLE
	27	15	•••	15	28	
	29	15	•••	15	30	
	31	15	•••	15	32	
	33	15	•••	15	34	
	35	15	•••	15	36	
	37	15	•••	15	38	
	39	15	•••	15	40	
	41	15	•••	15	42	

PANEL "B2" SCHEDULE

NOTE: REPLACE 15A BREAKER FROM CCT'S 19,21,23 AND REPLACE WITH 30A BREAKER FOR NEW AIR COMPRESSOR. TURN OVER 15A BREAKER TO OWNER.

CONSTRUCTION COMPLETION DATE - SEPTEMBER 20

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

AS-CONSTRUCTED DRAWING
BY G.L. DATE 2012.04.17
CHECKED BY S.T.

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APEGM
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.

NO.	REVISIONS	DATE	BY
3	PANEL "B1" MODIFICATIONS	13.01.11	K.B.
2	RECORD DRAWING	12.04.17	G.L.
1	REVISED AS PER ADDENDUM #3		
A	ISSUED FOR TENDER	10.02.16	S.T.

Stantec Consulting Ltd.
905 Waverley Street, Winnipeg, Manitoba
Tel 204-489-5900 Fax 204-453-9012
DESIGNED BY S.T. CHECKED BY D.D.
DRAWN BY S.T. APPROVED BY -
HOR. SCALE: -
VERTICAL: -
DATE 09.11.20

ENGINEER'S SEAL
ORIGINAL SEALED BY S. TREBIC P. ENG. 1002/16
RELEASED FOR CONSTRUCTION: DATE
TENDER NO. 822-2009

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
Winnipeg
NORTH END WATER POLLUTION CONTROL FACILITIES
HAULED WASTEWATER AND LEACHATE RECEIVING BUILDINGS
SINGLE LINE DIAGRAMS, PANEL SCHEDULES
CITY DRAWING NUMBER 1-0101A-E0007-001
SHEET 1 OF 1

MOTOR SCHEDULE							
No.	HP	DESCRIPTION	VOLTS	#	STARTER TYPE	STARTER LOCATION	FEEDER
Y211-XV	F.R.	VALVE Y211-XV ACTUATOR	600	3	-	-	3 No.12
Y221-XV	F.R.	VALVE Y221-XV ACTUATOR	600	3	-	-	3 No.12
Y690-XV	F.R.	CONTROL VALVE Y690-XV ACTUATOR	24	1	-	-	2 No.12
Y695-XV	F.R.	CONTROL VALVE Y695-XV ACTUATOR	24	1	-	-	2 No.12
Y650-XV	F.R.	CONTROL VALVE Y650-XV ACTUATOR	24	1	-	-	2 No.12
Y650-HRV	1.5	Y650-HRV SUPPLY FAN	600	3	FVNR	Y650-HRV PANEL	3 No.12
Y650-HRV	1	Y650-HRV RETURN FAN	600	3	FVNR	Y650-HRV PANEL	3 No.12
Y630-P	0.75	BOILER PUMP Y630-P	600	3	FVNR	MOTOR CTR'L PANEL	3 No.12
Y635-P	0.75	BOILER PUMP Y635-P	600	3	FVNR	MOTOR CTR'L PANEL	3 No.12
Y640-P	0.75	PAD LOOP PUMP Y640-P	600	3	FVNR	MOTOR CTR'L PANEL	3 No.12
Y560-P	0.5	SUMP PUMP Y560-P	120	1	-	-	2 No.12
Y690-UH	0.25	HYDRONIC UNIT HEATER Y690-UH	120	1	-	-	2 No.12
Y695-UH	0.25	HYDRONIC UNIT HEATER Y695-UH	120	1	-	-	2 No.12
Y820-HWT	3kW	ELECTRIC WATER HEATER Y820-HWT	208	1	-	-	2 No.12
Y680-EF	0.5	EXHAUST FAN Y680-EF	208	3	-	-	3 No.12
W680-EF	1.5	EXHAUST FAN W680-EF	208	3	-	-	3 No.12

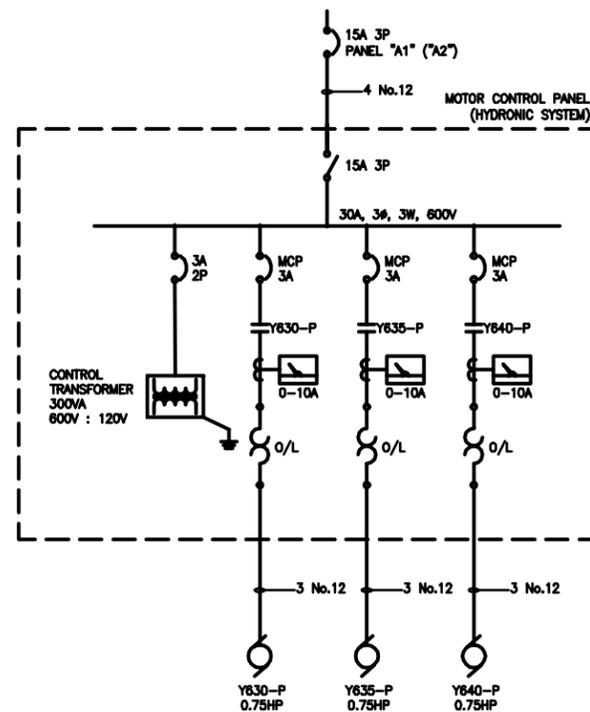
NEWPCC HAULED WASTEWATER BUILDING MOTOR SCHEDULE

MOTOR SCHEDULE							
No.	HP	DESCRIPTION	VOLTS	#	STARTER TYPE	STARTER LOCATION	FEEDER
X310-P	15	LEACHATE PUMP X310-P	600	3	SOFT STARTER	DEW. BLDG. MCC	3 No.8
X320-P	15	LEACHATE PUMP X320-P	600	3	SOFT STARTER	DEW. BLDG. MCC	3 No.8
X211-XV	F.R.	VALVE X211-XV ACTUATOR	600	3	-	-	3 No.12
X221-XV	F.R.	VALVE X221-XV ACTUATOR	600	3	-	-	3 No.12
X231-XV	F.R.	VALVE X231-XV ACTUATOR	600	3	-	-	3 No.12
X232-XV	F.R.	VALVE X232-XV ACTUATOR	600	3	-	-	3 No.12
X233-XV	F.R.	VALVE X233-XV ACTUATOR	600	3	-	-	3 No.12
X234-XV	F.R.	VALVE X234-XV ACTUATOR	600	3	-	-	3 No.12
X235-XV	F.R.	VALVE X235-XV ACTUATOR	600	3	-	-	3 No.12
X690-XV	F.R.	CONTROL VALVE X690-XV ACTUATOR	24	1	-	-	2 No.12
X695-XV	F.R.	CONTROL VALVE X695-XV ACTUATOR	24	1	-	-	2 No.12
X650-XV	F.R.	CONTROL VALVE X650-XV ACTUATOR	24	1	-	-	2 No.12
X650-HRV	1.5	X650-HRV SUPPLY FAN	600	3	FVNR	X650-HRV PANEL	3 No.12
X650-HRV	1	X650-HRV RETURN FAN	600	3	FVNR	X650-HRV PANEL	3 No.12
X630-P	0.75	BOILER PUMP X630-P	600	3	FVNR	MOTOR CTR'L PANEL	3 No.12
X635-P	0.75	BOILER PUMP X635-P	600	3	FVNR	MOTOR CTR'L PANEL	3 No.12
X640-P	0.75	PAD LOOP PUMP X640-P	600	3	FVNR	MOTOR CTR'L PANEL	3 No.12
X560-P	0.5	SUMP PUMP X560-P	120	1	-	-	2 No.12
X690-UH	0.25	HYDRONIC UNIT HEATER X690-UH	120	1	-	-	2 No.12
X695-UH	0.25	HYDRONIC UNIT HEATER X695-UH	120	1	-	-	2 No.12
X820-HWT	3kW	ELECTRIC WATER HEATER X820-HWT	208	1	-	-	2 No.12
X680-EF	0.5	EXHAUST FAN X680-EF	208	3	-	-	3 No.12

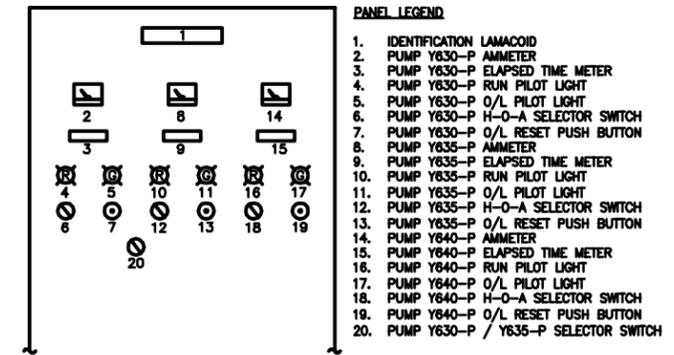
NEWPCC LEACHATE BUILDING MOTOR SCHEDULE

MOTOR SCHEDULE							
No.	HP	DESCRIPTION	VOLTS	#	STARTER TYPE	STARTER LOCATION	FEEDER
D331-P	40	LEACHATE PUMP D331-P	600	3	VFD	DIG. GAL. MCC	3 No.6
D332-P	40	LEACHATE PUMP D332-P	600	3	VFD	DIG. GAL. MCC	3 No.6
D333-P	40	LEACHATE PUMP D333-P	600	3	VFD	DIG. GAL. MCC	2 No.6

NEWPCC DIGESTER GALLERY MOTOR SCHEDULE



HYDRONIC SYSTEM SINGLE LINE DIAGRAM



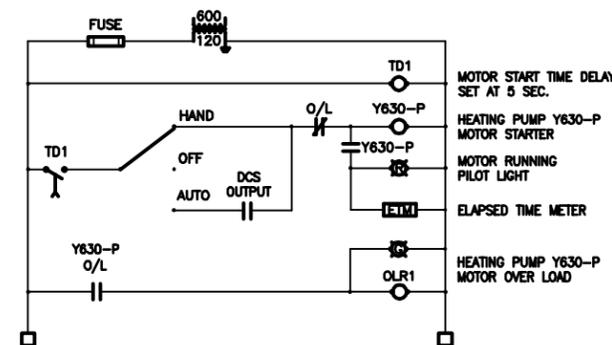
MOTOR CONTROL PANEL TO CONTAIN:

- 1) MOTOR STARTERS FOR PUMPS Y630-P, Y635-P AND Y640-P.
- 2) TRANSFORMERS 120V/24V FOR BELIMO ACTUATORS FOR Y690-XV, Y695-XV AND Y650-XV.

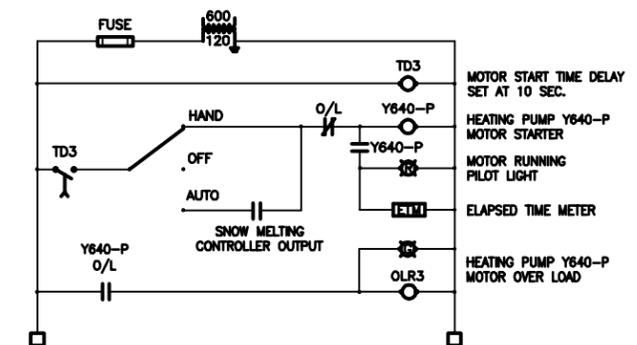
NOTES:

- 1) ON-OFF BELIMO ACTUATORS Y630-XV AND Y635-XV CONTROLLED BY Y690-UH AND Y695-UH THERMOSTATS.
- 2) MODULATING BELIMO ACTUATOR Y650-XV CONTROLLED BY DCS.

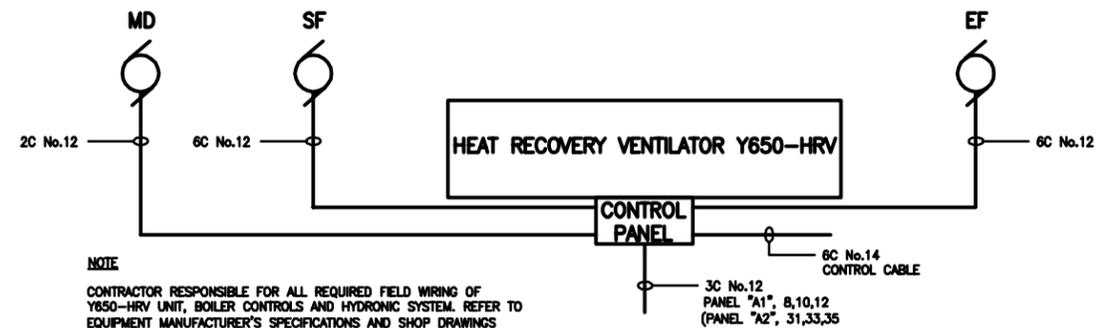
MOTOR CONTROL PANEL (HYDRONIC SYSTEM) PROPOSED LAYOUT



HEATING PUMP Y630-P MOTOR WIRING DIAGRAM (TYP. OF 4)



HEATING PUMP Y640-P MOTOR WIRING DIAGRAM (TYP. OF 2)



NOTE
CONTRACTOR RESPONSIBLE FOR ALL REQUIRED FIELD WIRING OF Y650-HRV UNIT, BOILER CONTROLS AND HYDRONIC SYSTEM. REFER TO EQUIPMENT MANUFACTURER'S SPECIFICATIONS AND SHOP DRAWINGS FOR SPECIFIC FIELD WIRING REQUIREMENTS.

HEAT RECOVERY VENTILATOR Y650-HRV DETAIL (TYP. OF 2)



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CONSTRUCTION COMPLETION DATE - SEPTEMBER 20

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

AS-CONSTRUCTED DRAWING
BY S.T. DATE 11.12.06
CHECKED BY D.W.D.

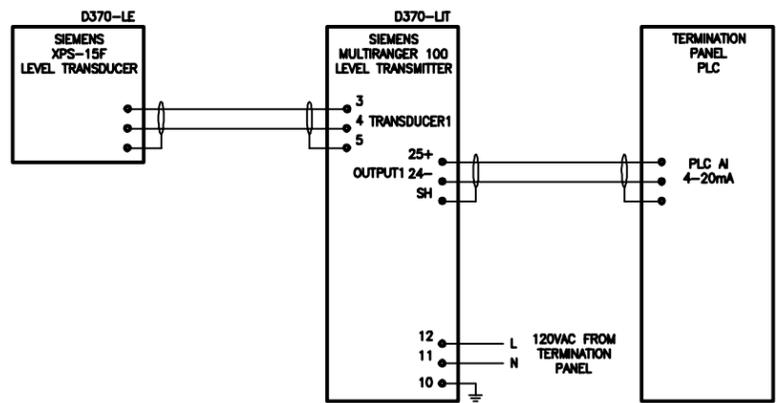
LOCATION APPROVED UNDERGROUND STRUCTURES
SUPV. U/G STRUCTURES COMMITTEE DATE
NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND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

NO.	REVISIONS	DATE	BY
3	RECORD DRAWING	11.12.06	S.T.
2	REVISED AS PER ADDENDUM #2		
1	ISSUED FOR TENDER	10.02.16	S.T.

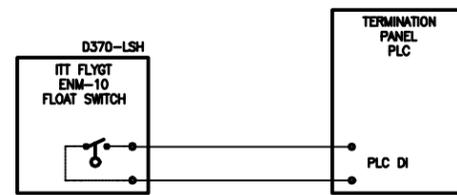
Stantec Consulting Ltd.
905 Waverley Street, Winnipeg, Manitoba
Tel 204-489-5900 Fax 204-453-9012
DESIGNED BY S.T. CHECKED BY D.D.
DRAWN BY S.T. APPROVED BY -
HOR. SCALE: -
VERTICAL: -
RELEASED FOR CONSTRUCTION: -
DATE 10.02.10

ENGINEER'S SEAL
ORIGINALLY SIGNED BY:
SLOBODAN TREBIC
FEB 16, 2010
TENDER NO. 822-2009

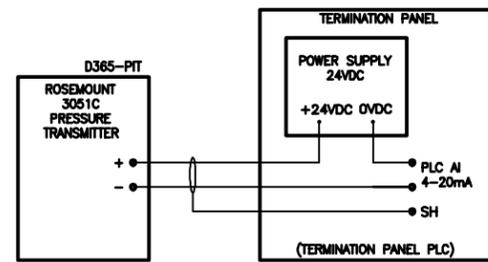
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
Winnipeg
NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
HAULED WASTEWATER AND LEACHATE RECEIVING BUILDINGS
MOTOR SCHEDULES
CITY DRAWING NUMBER 1-0101A-E0008-001
SHEET 1 OF 1



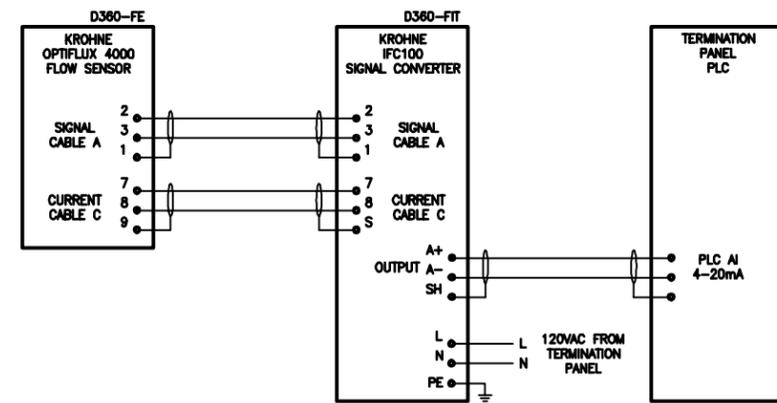
LEVEL TRANSMITTER WIRING DIAGRAM
(TYPICAL FOR D370-LIT)



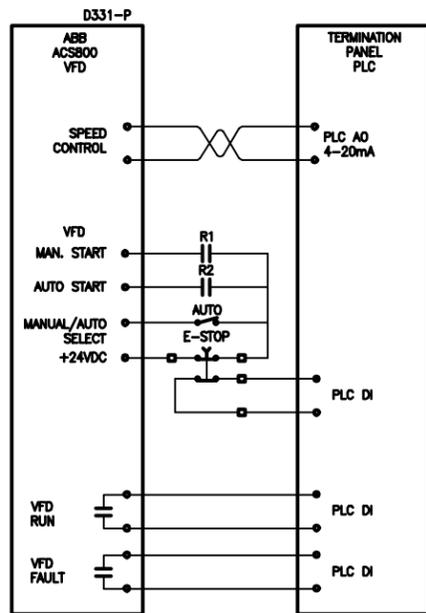
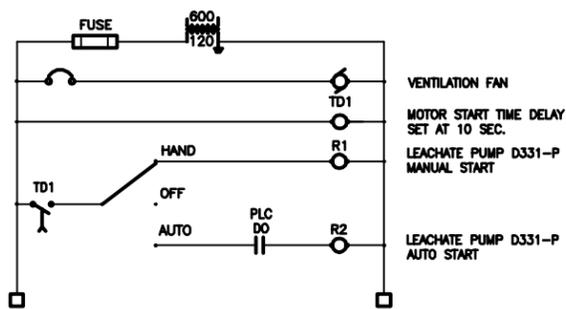
FLOAT SWITCH WIRING DIAGRAM
(TYPICAL FOR D370-LSH; D370-LSL)



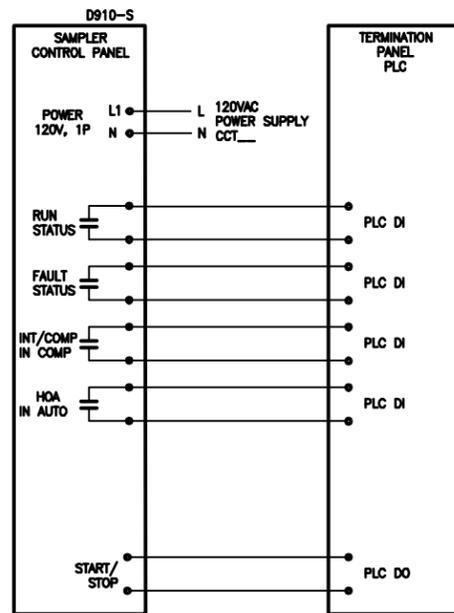
PRESSURE TRANSMITTER WIRING DIAGRAM
(TYPICAL FOR D365-PIT; D366-PIT)



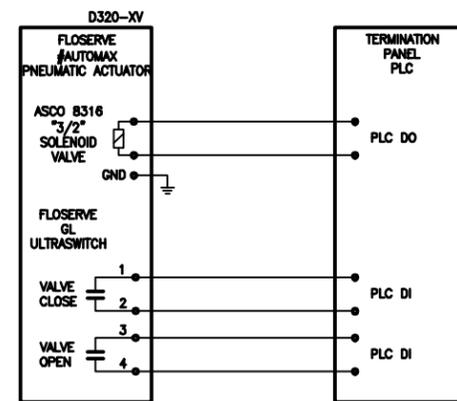
FLOW METERS WIRING DIAGRAM
(TYPICAL D360-FIT; D361-FIT)



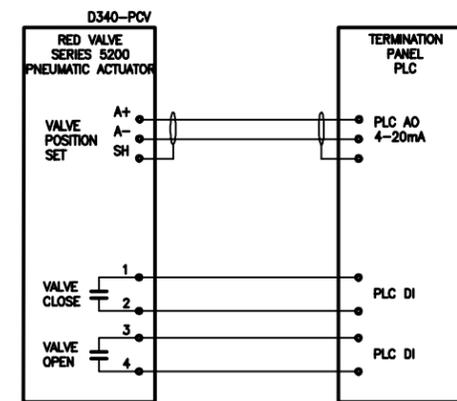
LEACHATE PUMP VFD WIRING DIAGRAM
(TYPICAL FOR D331-P, D332-P, D333-P)



SAMPLER WIRING DIAGRAM
(TYPICAL FOR D910-S)



DIGESTER BUILDING PNEUMATIC ACTUATORS WIRING DIAGRAM
(TYPICAL FOR D320-XV; D321-XV; D322-XV;
D323-XV; D324-XV; D345-XV; D346-XV)



DIGESTER BUILDING PNEUMATIC MODULATING ACTUATORS WIRING DIAGRAM
(TYPICAL FOR D340-PCV; D341-PCV)

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CONSTRUCTION COMPLETION DATE - SEPTEMBER 20

AS-CONSTRUCTED DRAWING
BY S.T. DATE 11.12.21
CHECKED BY D.W.D.

APEGN
Certificate of Authorization
Stantec Consulting Ltd.
No. 1301

LOCATION APPROVED UNDERGROUND STRUCTURES
SUPV. U/G STRUCTURES COMMITTEE DATE
NOTE:
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NO.	REVISIONS	DATE	BY
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1	REVISED AS PER ADDENDUM #3		
A	ISSUED FOR TENDER	10.02.16	S.T.

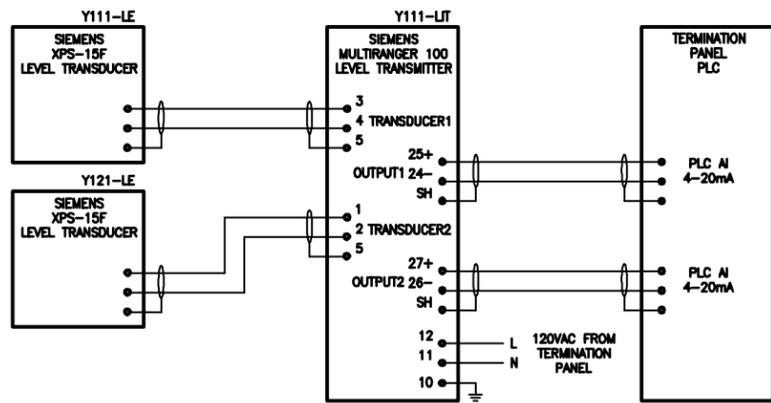
Stantec Consulting Ltd.
905 Waverley Street, Winnipeg, Manitoba
Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY S.T. CHECKED BY D.D.
DRAWN BY S.T. APPROVED BY -
HOR. SCALE: -
VERTICAL: -
DATE 09.11.20

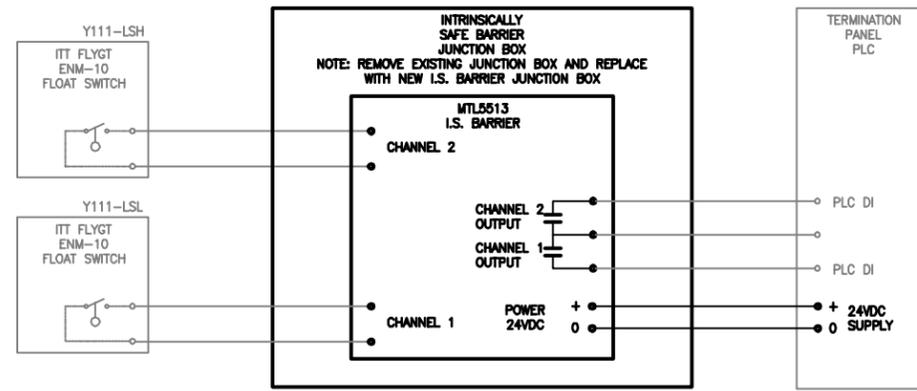
ENGINEER'S SEAL
ORIGINAL SEALED BY SLOBODAN TREBIC P. ENG. 10/02/16

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
Winnipeg
**NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
DIGESTER GALLERY**
MISCELLANEOUS WIRING DETAILS
TENDER NO. 822-2009
CITY DRAWING NUMBER 1-0101A-A0004-001
SHEET 1 OF 1

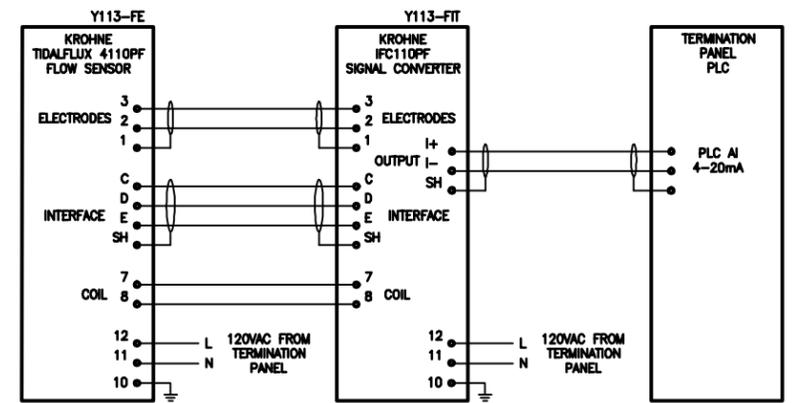
METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES



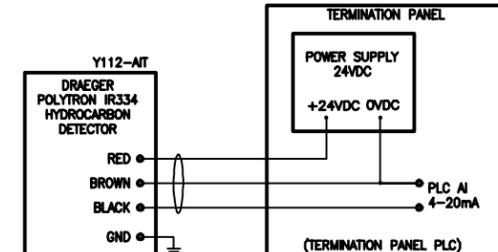
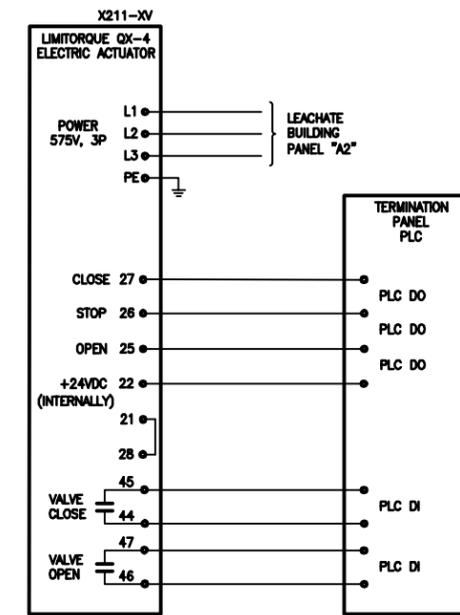
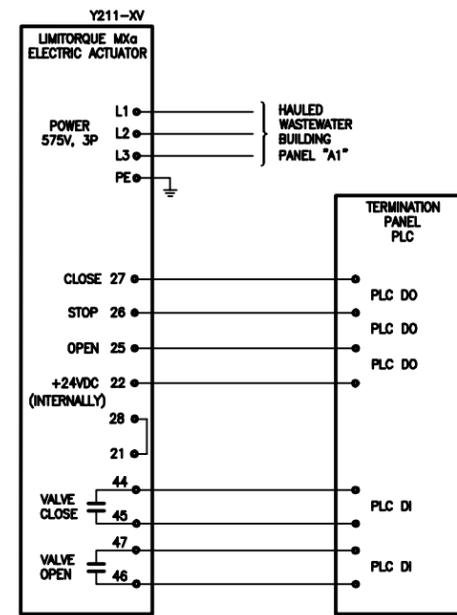
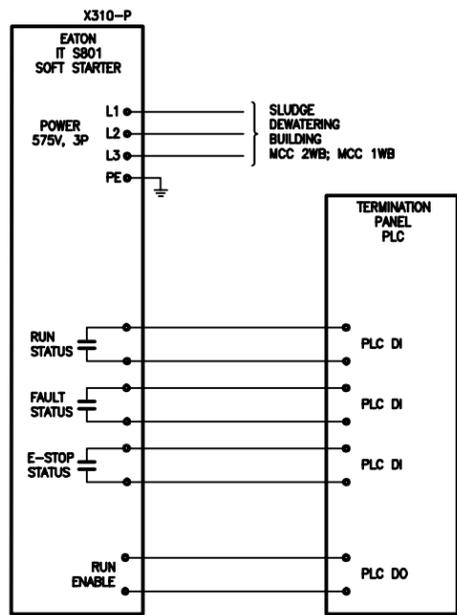
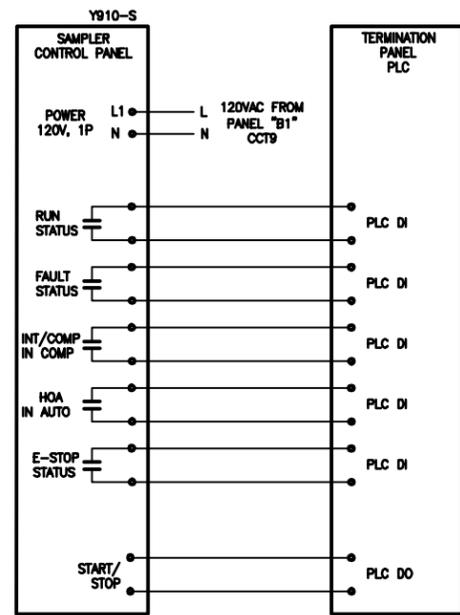
LEVEL TRANSMITTER WIRING DIAGRAM
(TYPICAL FOR Y111-LT; Y121-LT; X111-LT; X121-LT)



FLOAT SWITCH WIRING DIAGRAM
(TYPICAL FOR Y111-LSH; Y111-LSL; Y121-LSH; Y121-LSL; X111-LSH; X111-LSL; X121-LSH; X121-LSL)



FLOW METERS FOR PARTIALLY FILLED PIPES WIRING DIAGRAM
(TYPICAL FOR Y113-FIT; Y123-FIT; X113-FIT; X123-FIT)

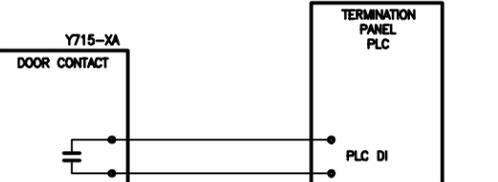
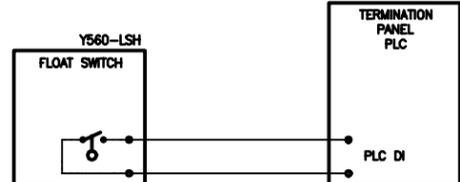
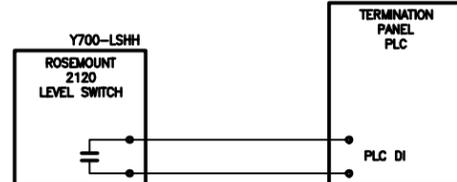
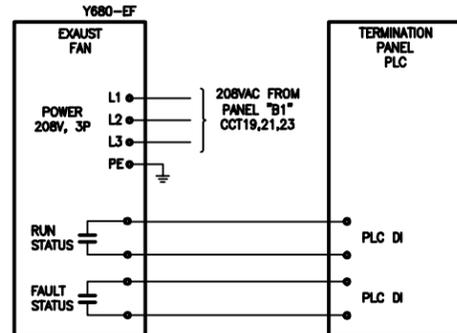
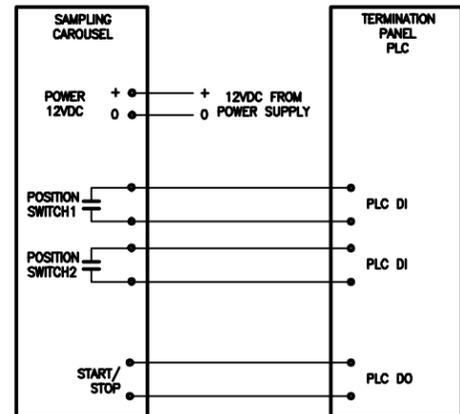


LEACHATE BUILDING LEACHATE PUMPS WIRING DIAGRAM
(TYPICAL FOR X310-P; X320-P)

HAULED WASTEWATER BUILDING ELECTRIC ACTUATORS WIRING DIAGRAM
(TYPICAL FOR Y211-XV; Y221-XV)

LEACHATE BUILDING ELECTRIC ACTUATORS WIRING DIAGRAM
(TYPICAL FOR X211-XV; X221-XV; X231-XV; X232-XV; X233-XV; X234-XV; X235-XV)

HYDROCARBON DETECTOR WIRING DIAGRAM
(TYPICAL FOR Y112-AIT; Y122-AIT; X112-AIT; X122-AIT)



SAMPLER WIRING DIAGRAM
(TYPICAL FOR Y910-S; Y920-S; X910-S; X920-S)

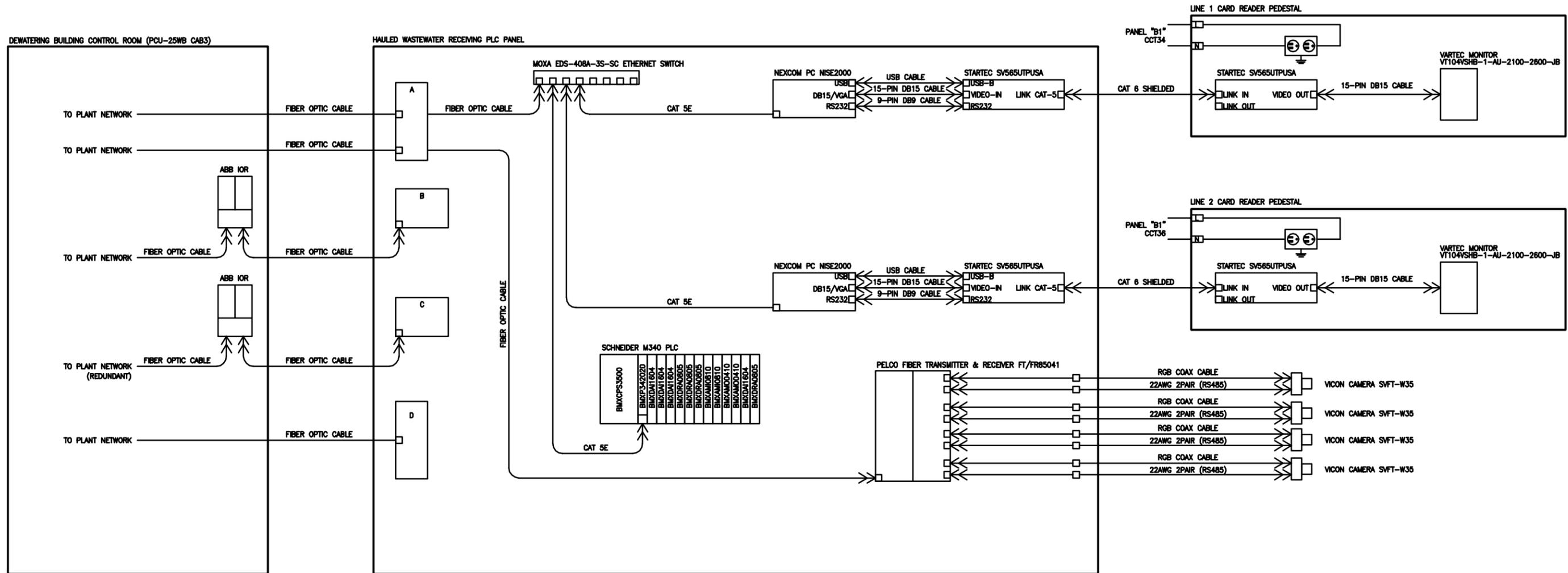
EXHAUST FAN WIRING DIAGRAM
(TYPICAL FOR Y680-EF; X680-EF; W680-EF)

FLOOD ALARM WIRING DIAGRAM
(TYPICAL FOR Y700-LSHH; X700-LSHH)

SUMP PIT HIGH LEVEL ALARM WIRING DIAGRAM
(TYPICAL FOR Y560-LSH; X560-LSH)

INTRUSION ALARM WIRING DIAGRAM
(TYPICAL FOR Y715-XA; X715-XA)

<p>AS-CONSTRUCTED DRAWING BY _____ S.T. DATE 11.12.21 CHECKED BY _____ D.W.D.</p>		<p>APEGN Certificate of Authorization Stantec Consulting Ltd. No. 1301</p>		<p>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. CORROBORATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.</p>		<p>Stantec Consulting Ltd. 905 Waverley Street, Winnipeg, Manitoba Tel 204-489-5900 Fax 204-453-9012</p>		<p>ENGINEER'S SEAL DESIGNED BY S.T. CHECKED BY D.D. DRAWN BY S.T. APPROVED BY - HOR. SCALE: - RELEASED FOR CONSTRUCTION: VERTICAL: - DATE</p>		<p>THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT Winnipeg NORTH END WATER POLLUTION CONTROL CENTRE HAULED WASTEWATER RECEIVING FACILITIES HAULED WASTEWATER AND LEACHATE RECEIVING BUILDING MISCELLANEOUS WIRING DETAILS</p>	
<p>METRIC WHOLE NUMBERS INDICATE MILLIMETRES DECIMALIZED NUMBERS INDICATE METRES</p>		<p>CONSTRUCTION COMPLETION DATE - SEPTEMBER 2011</p>		<p>NO. REVISIONS DATE BY</p>		<p>DATE 09.11.20</p>		<p>TENDER NO. 822-2009</p>		<p>CITY DRAWING NUMBER 1-0101A-A0005-001 SHEET 1 OF 1</p>	



HAULED WASTEWATER PLC PANEL NETWORK DIAGRAM



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CONSTRUCTION COMPLETION DATE - SEPTEMBER 20

AS-CONSTRUCTED DRAWING
 BY S.T. DATE 11.12.20
 CHECKED BY D.W.D.

METRIC
 WHOLE NUMBERS INDICATE MILLIMETRES
 DECIMALIZED NUMBERS INDICATE METRES

LOCATION APPROVED UNDERGROUND STRUCTURES
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NO.	REVISIONS	DATE	BY
2	RECORD DRAWING	11.12.20	S.T.
1	REVISED AS PER ADDENDUM #3		
A	ISSUED FOR TENDER	10.02.16	S.T.

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

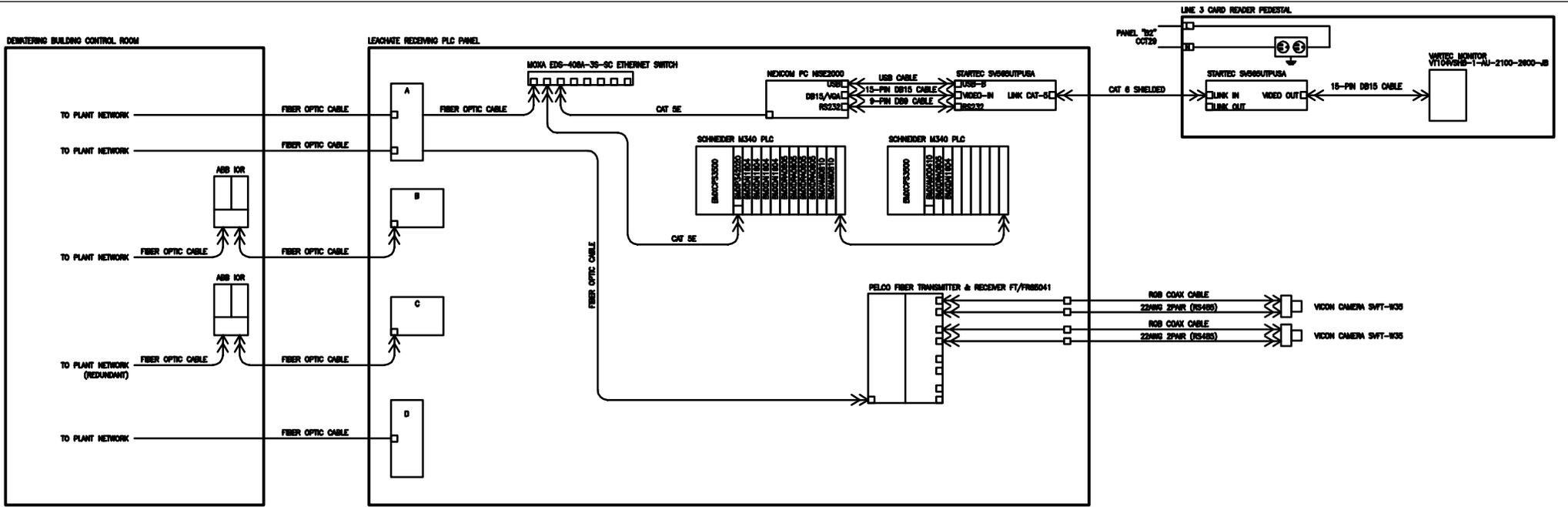
DESIGNED BY S.T. CHECKED BY D.D.
 DRAWN BY S.T. APPROVED BY -
 HOR. SCALE: -
 VERTICAL: -
 DATE 09.11.20

ENGINEER'S SEAL
 ORIGINAL SEALED BY SLOBODAN TREBIC P. ENG. 10/02/16
 TENDER NO. 822-2009

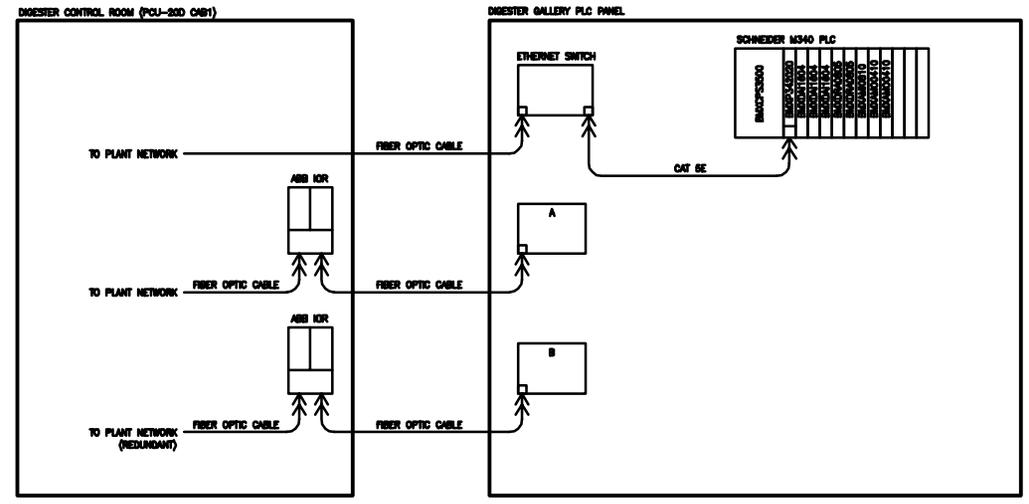
THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 Winnipeg

**NORTH END WATER POLLUTION CONTROL CENTRE
 HAULED WASTEWATER RECEIVING FACILITIES
 HAULED WASTEWATER RECEIVING BUILDING**

PLC PANEL NETWORK DIAGRAM
 CITY DRAWING NUMBER 1-0101A-A0007-001
 SHEET 1 OF 1



LEACHATE PLC PANEL NETWORK DIAGRAM



DIGESTER PLC PANEL NETWORK DIAGRAM



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CONSTRUCTION COMPLETION DATE - SEPTEMBER 2016

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

AS-CONSTRUCTED DRAWING
BY S.T. DATE 11.12.19
CHECKED BY D.W.D.

LOCATION APPROVED UNDERGROUND STRUCTURES COMMITTEE

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NO.	REVISIONS	DATE	BY	DATE
1	ISSUED FOR TENDER	10.02.16	S.T.	
2	RECORD DRAWING	11.12.19	S.T.	

DESIGNED BY	CHECKED BY	APPROVED BY
S.T.		
S.T.		

DESIGNED BY	CHECKED BY	APPROVED BY
S.T.		
S.T.		

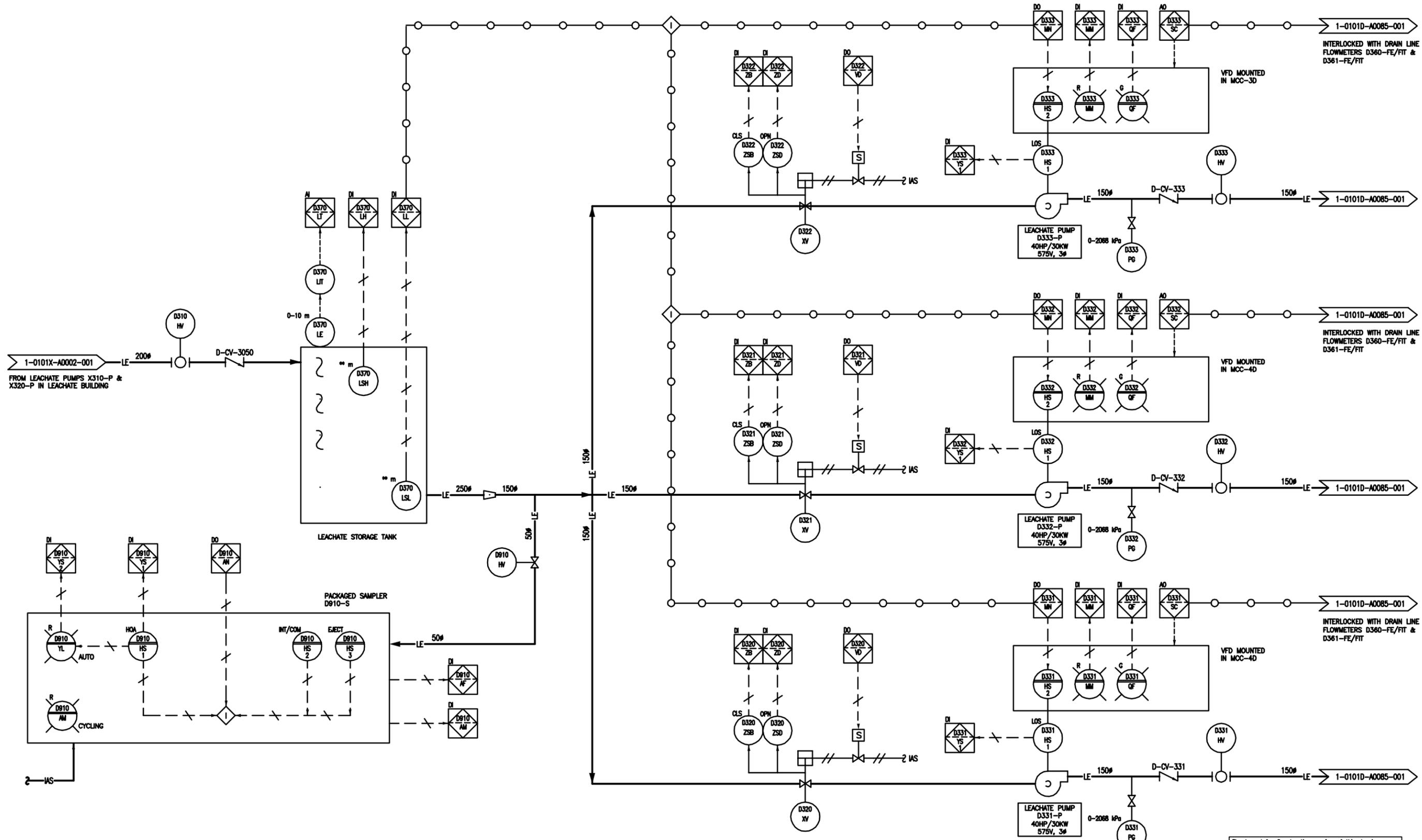
Stantec Consulting Ltd.
905 Waverley Street, Winnipeg, Manitoba
Tel 204-468-5900 Fax 204-463-5012

PROWEN'S SEAL
ORIGINAL SEALED BY SLOBODAN TREBIC P. ENG. 10/02/16

THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT

NORTH END WATER POLLUTION CONTROL CENTRE HAULED WASTEWATER RECEIVING FACILITIES LEACHATE RECEIVING BUILDING AND DIGESTER GALLERY

PLC PANEL NETWORK DIAGRAM
TENDER NO. 822-2000 CITY DRAWING NUMBER 1-0101A-AC008-001 SHEET 1 OF 1



1-0101X-A0002-001
FROM LEACHATE PUMPS X310-P & X320-P IN LEACHATE BUILDING

LEACHATE STORAGE TANK

PACKAGED SAMPLER D810-S

LEACHATE PUMP D333-P
40HP/30KW
575V, 3Ø

LEACHATE PUMP D332-P
40HP/30KW
575V, 3Ø

LEACHATE PUMP D331-P
40HP/30KW
575V, 3Ø

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APEGM
Certificate of Authorization
Stantec Consulting Ltd.
No. 1301

AS-CONSTRUCTED DRAWING
BY S.T. DATE 11.12.16
CHECKED BY D.W.D.

METRIC
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DECIMALIZED NUMBERS INDICATE METRES

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SHPV. U/G STRUCTURES COMMITTEE DATE
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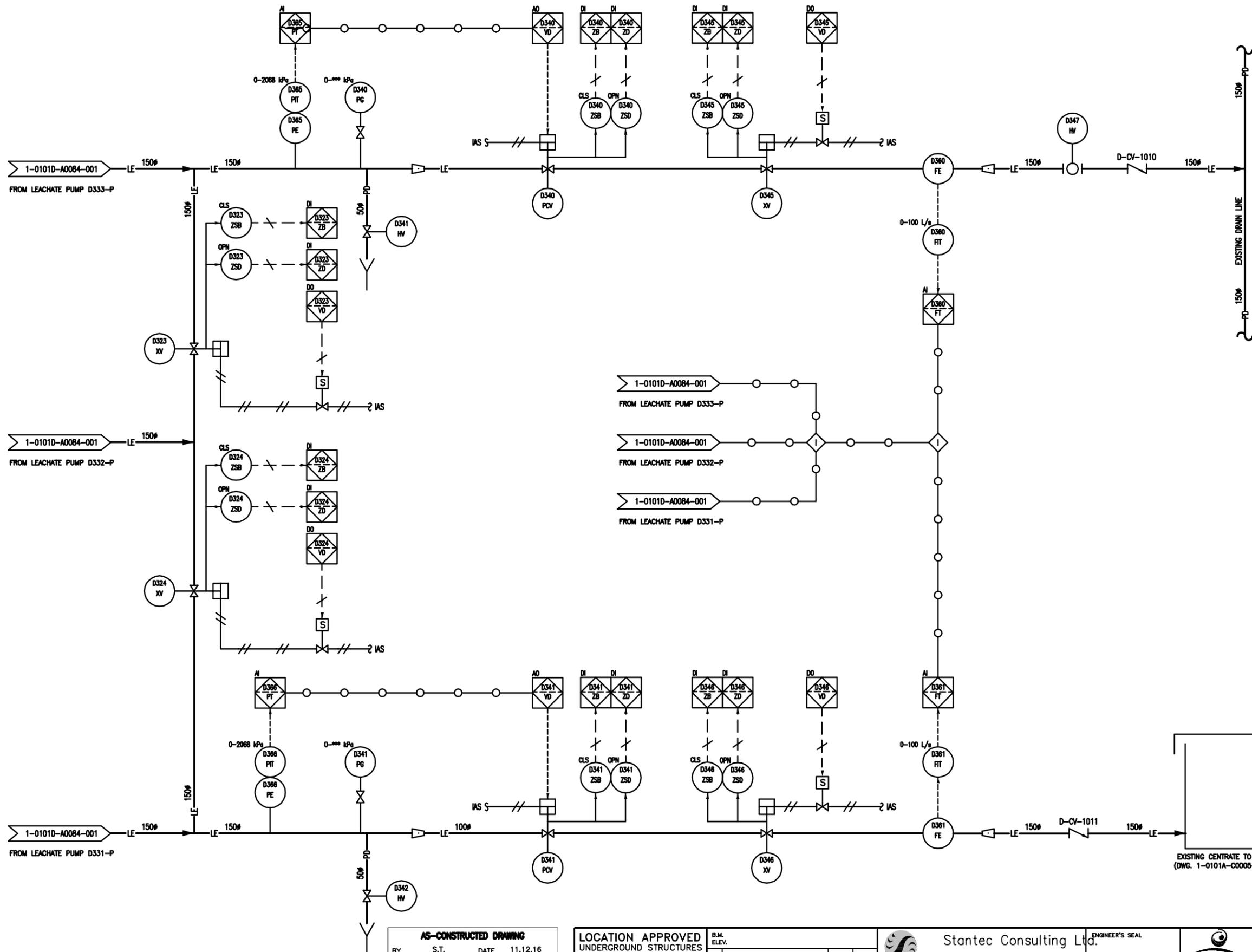
NO.	REVISIONS	DATE	BY
8	REVISED DRAWING NUMBER	12.09.25	ST
7	RECORD DRAWING	11.12.16	ST
6	REISSUED PER COMMISSIONING	11.10.28	DWD
5	REISSUED PER COW COMMENTS	11.09.06	DWD
4	REISSUED PER CONTROLS NARRATIVE	11.06.20	DWD
3	REISSUED FOR CONSTRUCTION	11.04.25	DWD
2	ISSUED FOR CONSTRUCTION	11.02.24	DWD
1	ISSUED FOR PRELIMINARY REVIEW	11.02.07	DWD

Stantec Consulting Ltd.
905 Waverley Street, Winnipeg, Manitoba
Tel 204-489-5900 Fax 204-453-9012
DESIGNED BY D.W.D. CHECKED BY D.W.D.
DRAWN BY D.G. APPROVED BY -
HOR. SCALE: -
VERTICAL: -
DATE 11.10.28

ENGINEER'S SEAL
ORIGINAL SEALED BY
D.W. DOWHAN
P. ENG.
11/02/07
TENDER NO. 822-2009

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
Winnipeg
NORTH END WATER POLLUTION CONTROL FACILITIES
HAULED WASTEWATER RECEIVING FACILITIES
PROCESS & INSTRUMENTATION DIAGRAM
DIGESTER GALLERY
LEACHATE PUMPING
CITY DRAWING NUMBER 1-0101D-A0084-001
SHEET 1 OF 1

CONSTRUCTION COMPLETION DATE - SEPTEMBER 20



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CONSTRUCTION COMPLETION DATE - SEPTEMBER 20

AS-CONSTRUCTED DRAWING
 BY S.T. DATE 11.12.16
 CHECKED BY D.W.D.

LOCATION APPROVED UNDERGROUND STRUCTURES
 SUPV. U/G STRUCTURES DATE COMMITTEE
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8	REVISED DRAWING NUMBER	12.09.25	ST
7	RECORD DRAWING	11.12.16	ST
6	REISSUED PER COMMISSIONING	11.10.28	DWD
5	REISSUED PER COW COMMENTS	11.09.06	DWD
4	REISSUED PER CONTROLS NARRATIVE	11.06.20	DWD
3	REISSUED FOR CONSTRUCTION	11.04.25	DWD
2	ISSUED FOR CONSTRUCTION	11.02.24	DWD
1	ISSUED FOR PRELIMINARY REVIEW	11.02.07	DWD

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 P. ENG.
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 TENDER NO. 822-2009

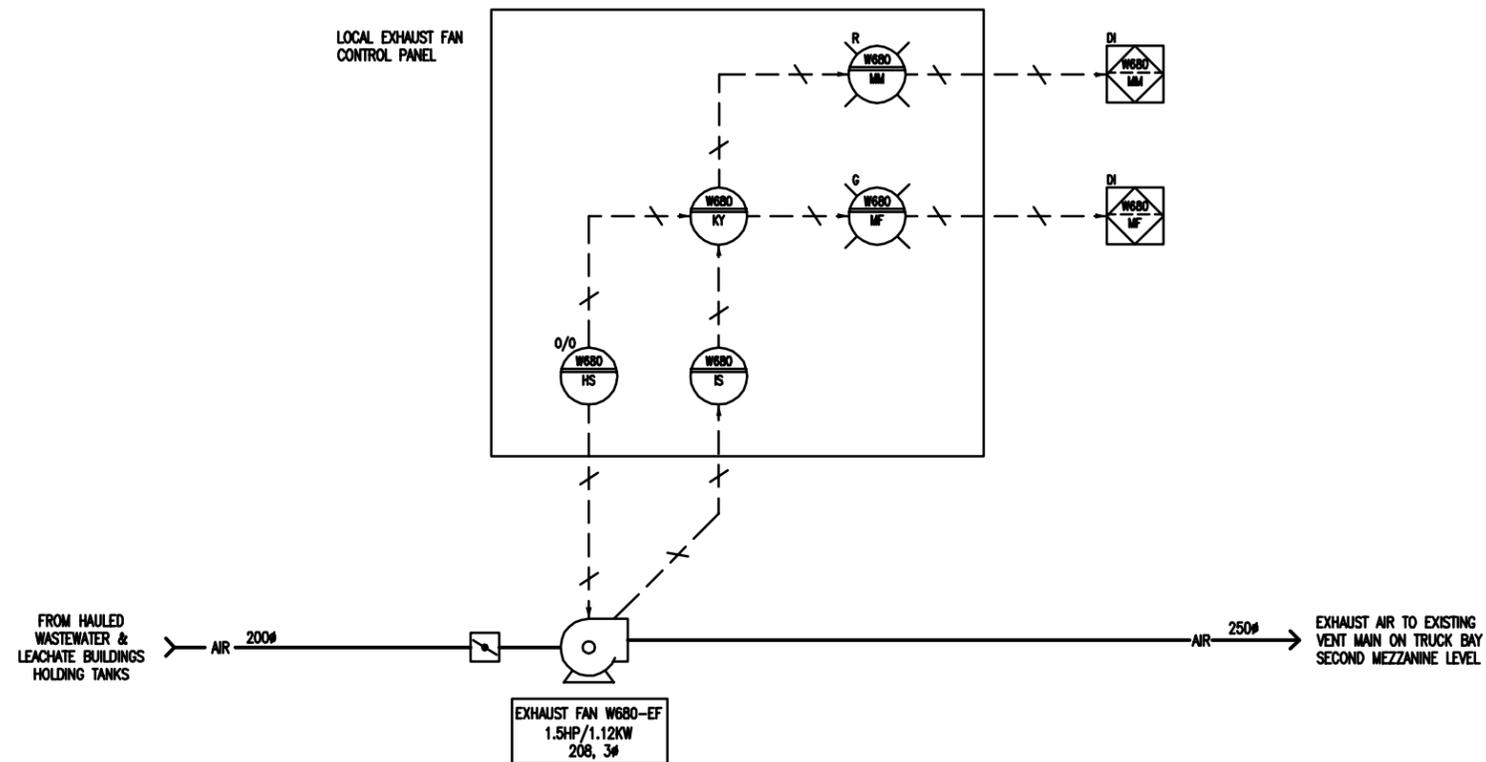
THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

Winnipeg

NORTH END WATER POLLUTION CONTROL CENTRE
 HAULED WASTEWATER RECEIVING FACILITIES
 PROCESS & INSTRUMENTATION DIAGRAM
 DIGESTER GALLERY
 LEACHATE DISCHARGE

CITY DRAWING NUMBER **1-0101D-A0085-001** SHEET 1 OF 1

METRIC
 WHOLE NUMBERS INDICATE MILLIMETRES
 DECIMALIZED NUMBERS INDICATE METRES



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TENDER NO. **822-2009**

THE CITY OF WINNIPEG
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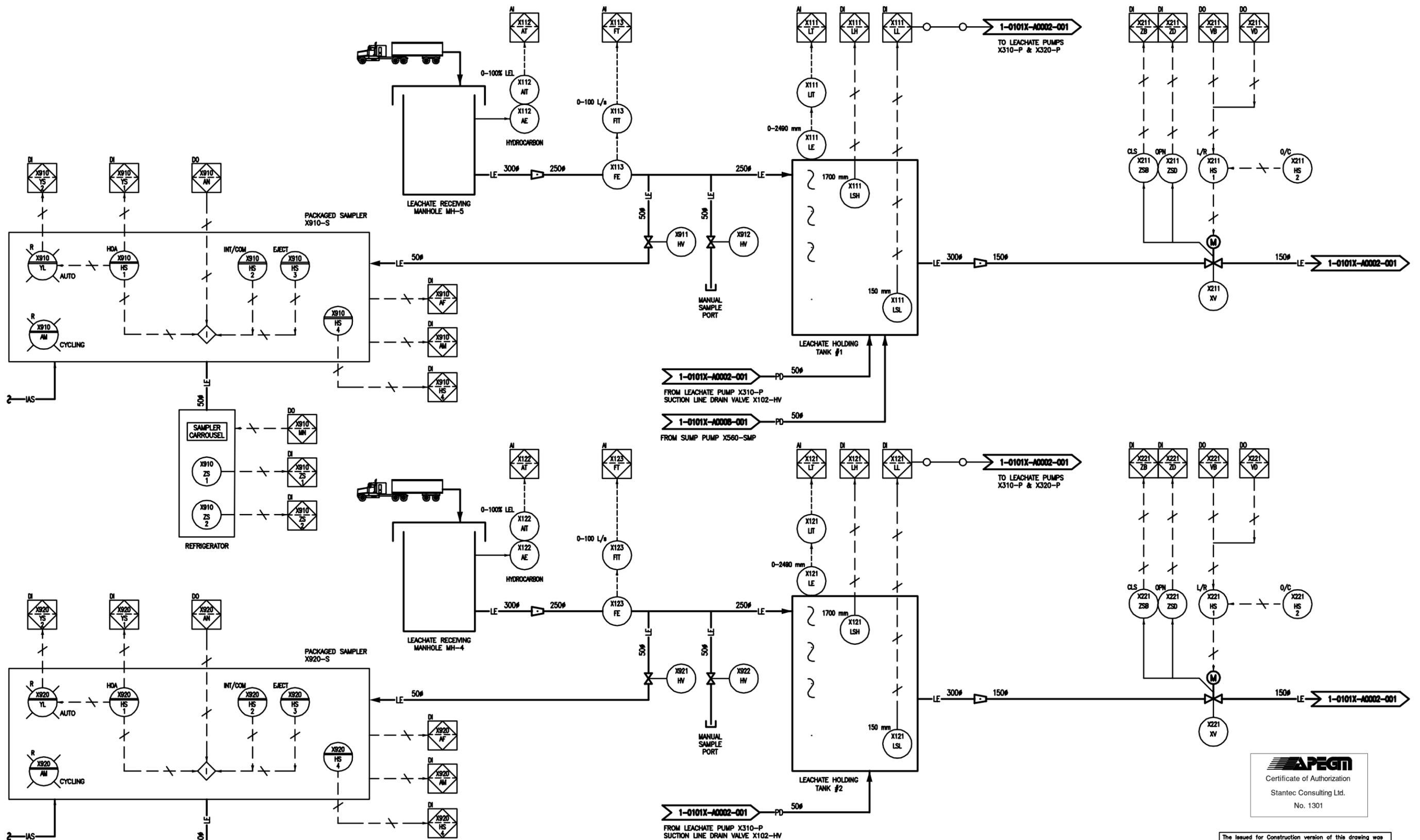
Winnipeg

NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
PROCESS & INSTRUMENTATION DIAGRAM
DEWATERING BUILDING TRUCK BAY
EXHAUST FAN W680-EF

CITY DRAWING NUMBER **1-0101W-A0011-001**

SHEET **1** OF **1**

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 DECIMALIZED NUMBERS INDICATE METRES



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AS-CONSTRUCTED DRAWING
BY S.T. DATE 11.12.15
CHECKED BY D.W.D.

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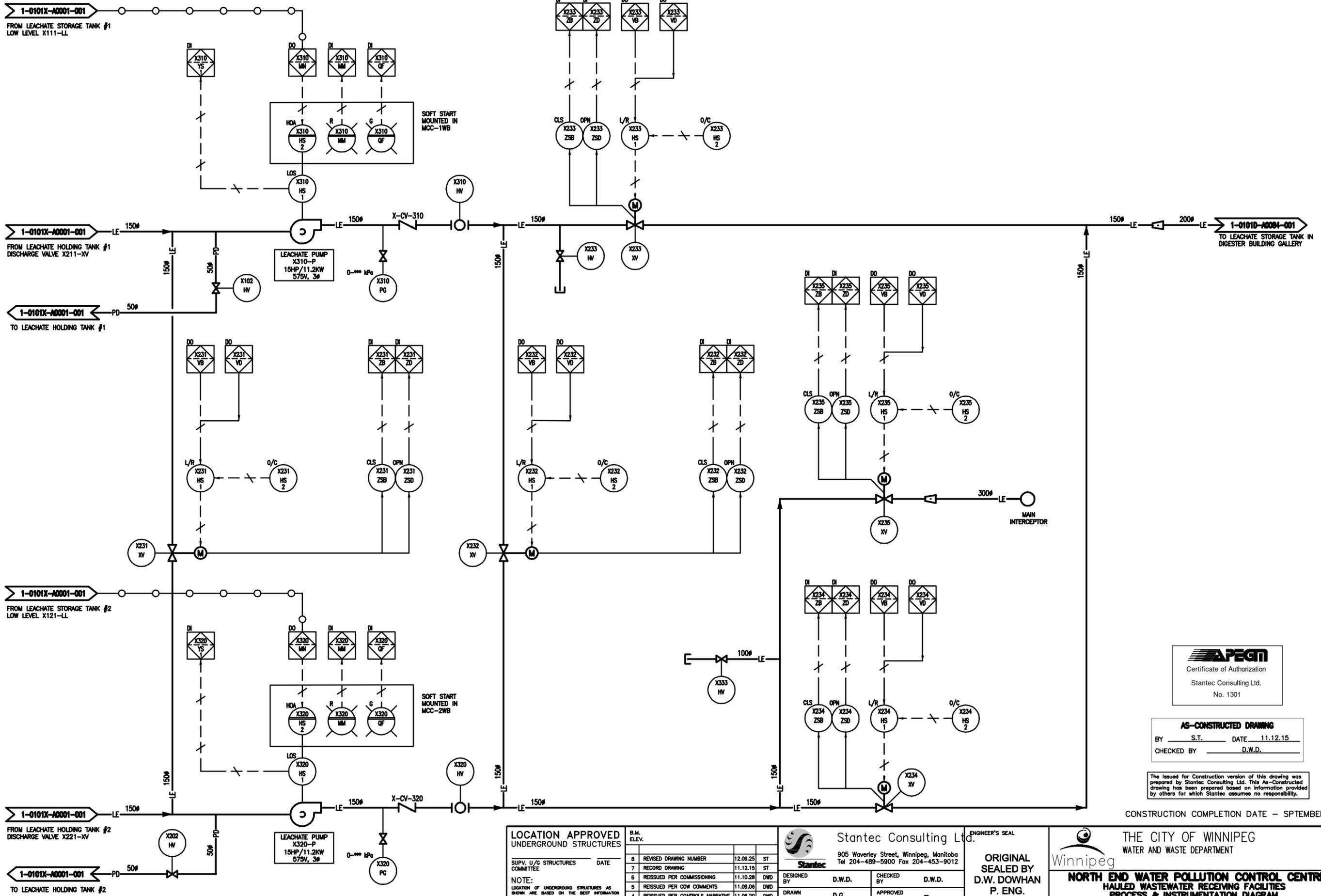
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TENDER NO. 822-2009

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

Winnipeg

NORTH END WATER POLLUTION CONTROL FACILITIES
HAULED WASTEWATER RECEIVING FACILITIES
PROCESS & INSTRUMENTATION DIAGRAM
LEACHATE BUILDING
RECEIVING MANHOLES & HOLDING TANKS

CITY DRAWING NUMBER **1-0101X-A001-001** SHEET 1 OF 1



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 No. 1301

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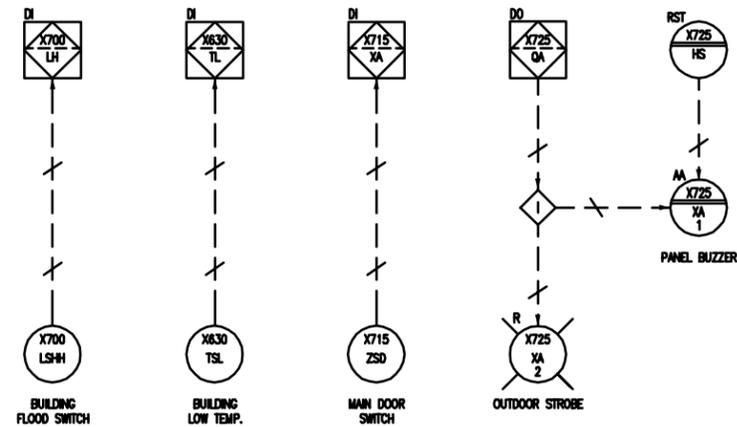
THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

Winnipeg

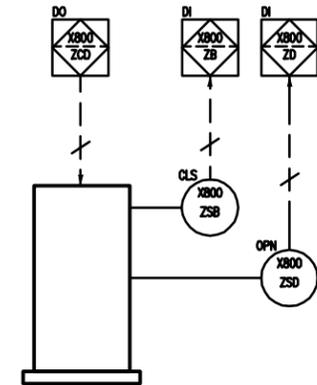
NORTH END WATER POLLUTION CONTROL CENTRE
 HAULED WASTEWATER RECEIVING FACILITIES
 PROCESS & INSTRUMENTATION DIAGRAM
 LEACHATE BUILDING
 LEACHATE PUMPING SYSTEM

TENDER NO. **822-2009**
 CITY DRAWING NUMBER **1-0101X-A002-001**
 SHEET **1** OF **1**

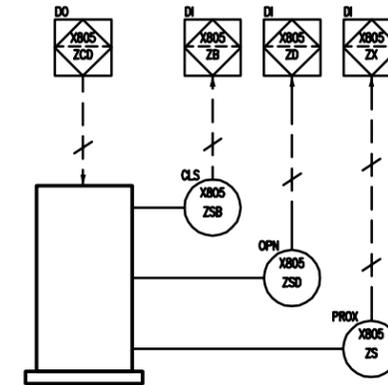
METRIC
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 DECIMALIZED NUMBERS INDICATE METRES



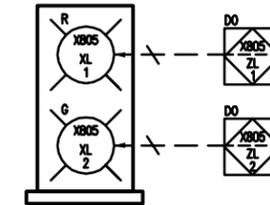
MISCELLANEOUS ALARMS



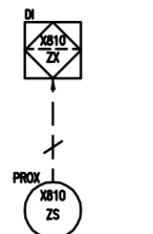
LANE No.3 ENTRANCE GATE X800-XZ



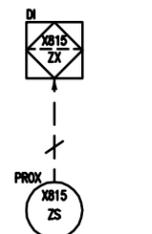
LANE No.3 EXIT GATE X805-XZ



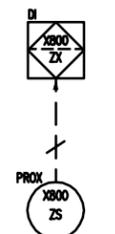
LANE No.3 EXIT TWO-STATE DISPLAY



LANE No.3 RECEIVING MANHOLE
MH-5 PROXIMITY SENSOR



LANE No.3 RECEIVING MANHOLE
MH-4 PROXIMITY SENSOR



LANE No.3 BARRIER
PROXIMITY SENSOR

2 LEACHATE RECEIVING BUILDING MISCELLANEOUS



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CONSTRUCTION COMPLETION DATE - SEPTEMBER 20

AS-CONSTRUCTED DRAWING
BY S.T. DATE 11.12.16
CHECKED BY D.W.D.

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LOCATION APPROVED UNDERGROUND STRUCTURES

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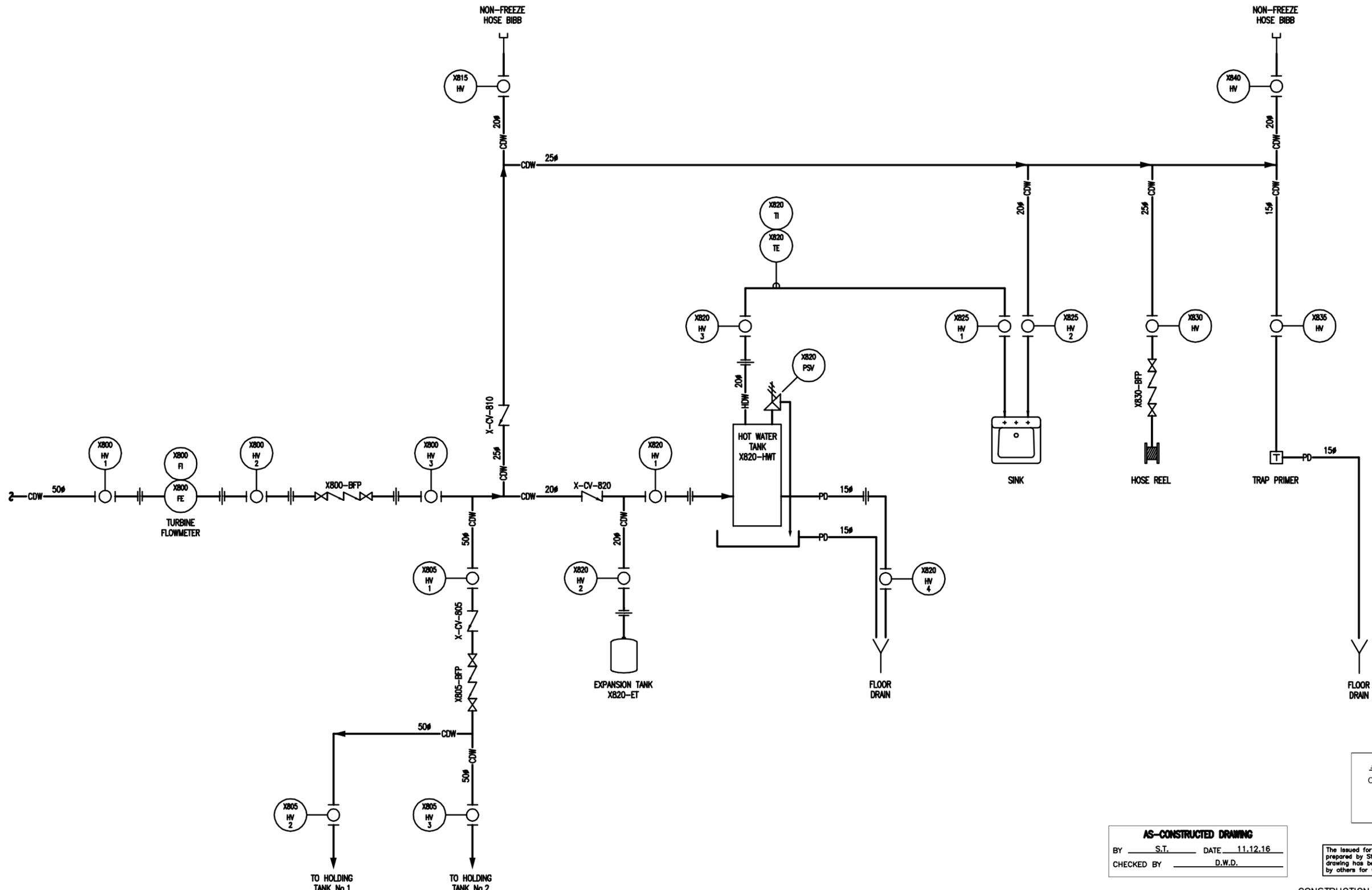
ENGINEER'S SEAL
ORIGINAL SEALED BY D.W. DOWHAN P. ENG. 11/02/07
TENDER NO. **822-2009**

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

Winnipeg

**NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
PROCESS & INSTRUMENTATION DIAGRAM
MISCELLANEOUS BUILDING SYSTEMS**

CITY DRAWING NUMBER **1-0101X-A0003-001** SHEET OF **1 1**



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 BY S.T. DATE 11.12.16
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11/02/22

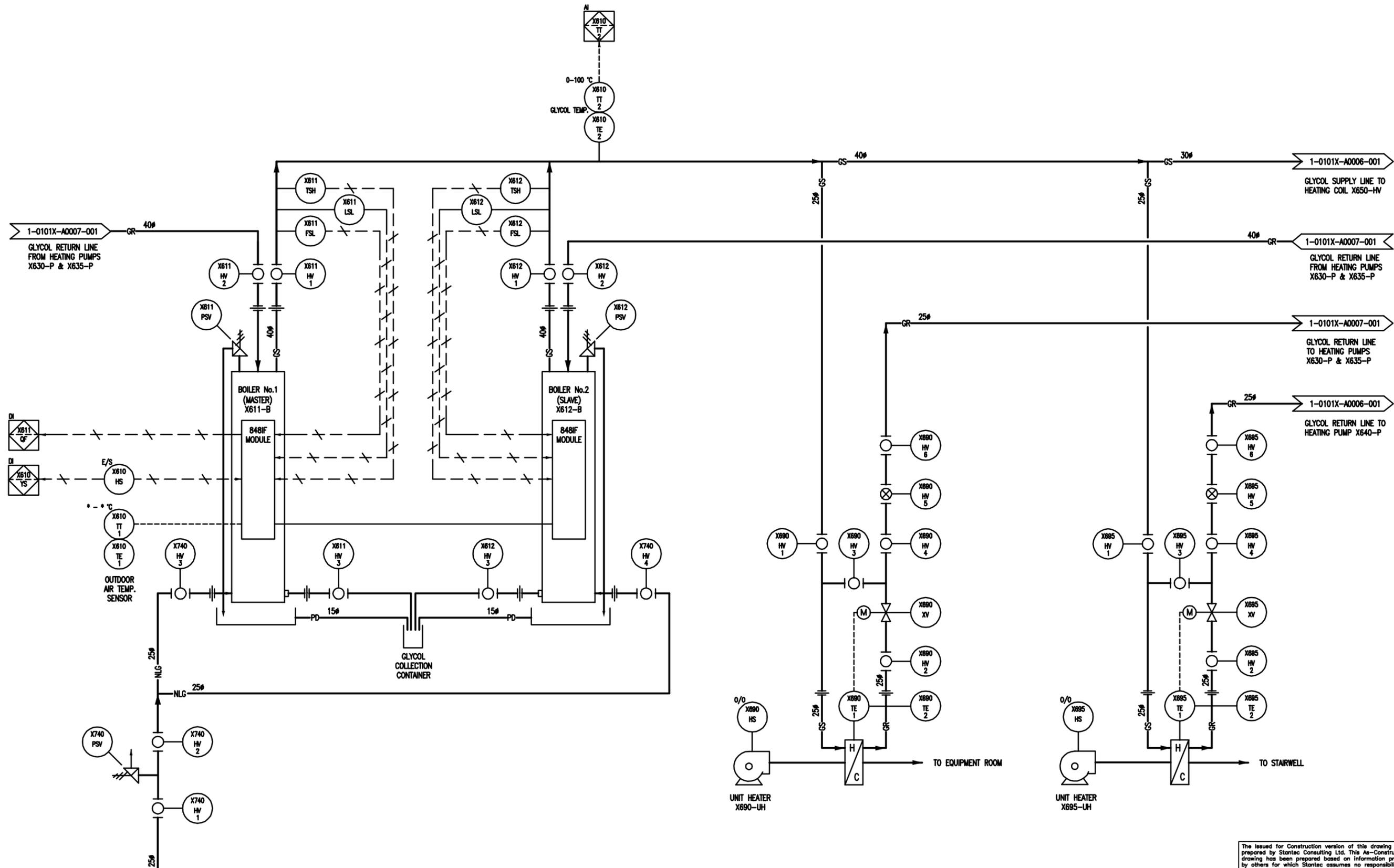
TENDER NO. **822-2009**

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

Winnipeg

NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
PROCESS & INSTRUMENTATION DIAGRAM
LEACHATE BUILDING
DOMESTIC WATER SYSTEM

CITY DRAWING NUMBER **1-0101X-A0004-001** SHEET **1** OF **1**



25# NATURAL GAS PIPING FROM METER IN LEACHATE BUILDING

APEGM
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Stantec Consulting Ltd.
No. 1301

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BY _____ S.T. DATE 11.12.16
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THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

Winnipeg

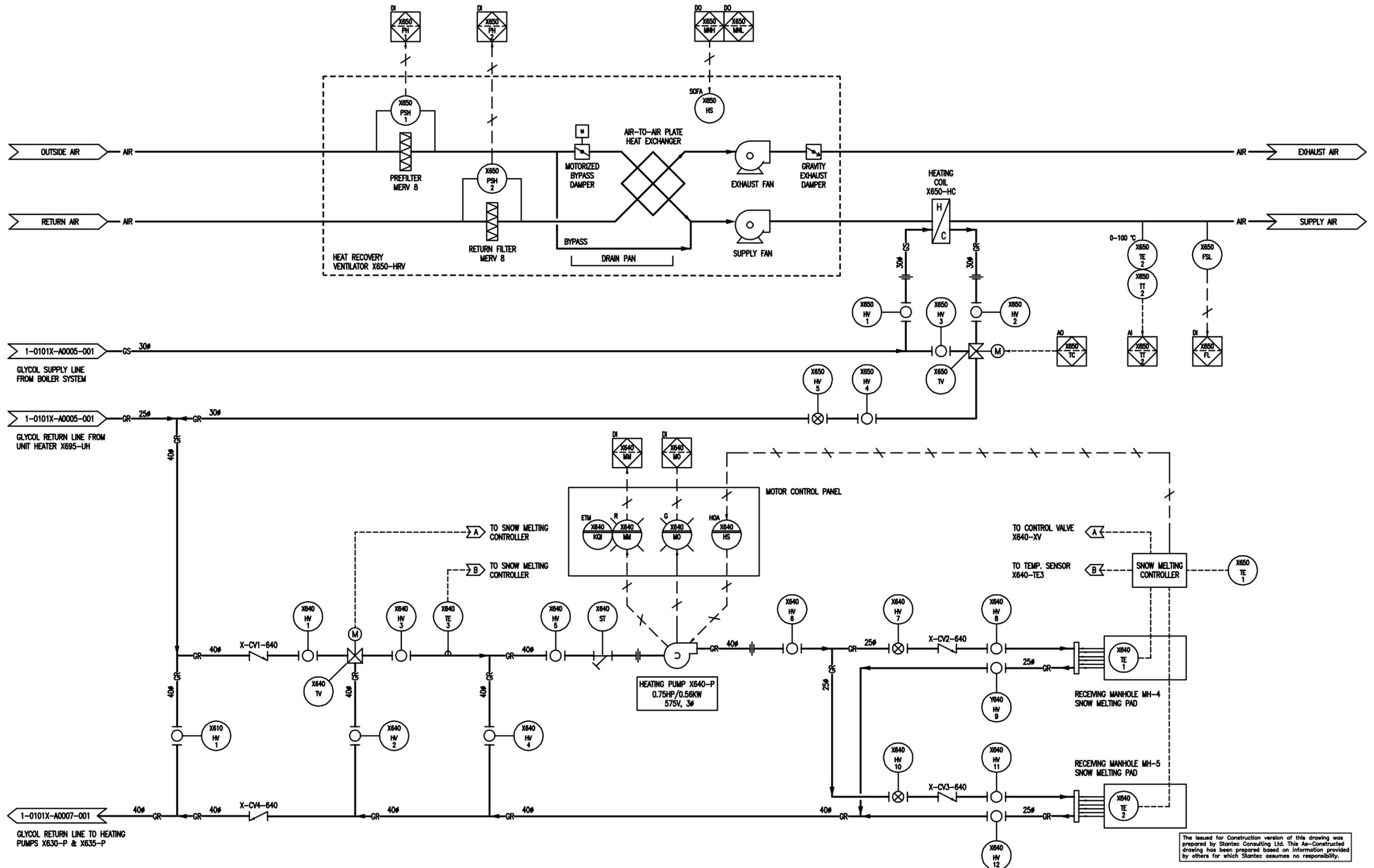
NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
PROCESS & INSTRUMENTATION DIAGRAM
LEACHATE BUILDING
BOILER SYSTEM

CITY DRAWING NUMBER **1-0101X-A0005-001** SHEET 1 OF 1

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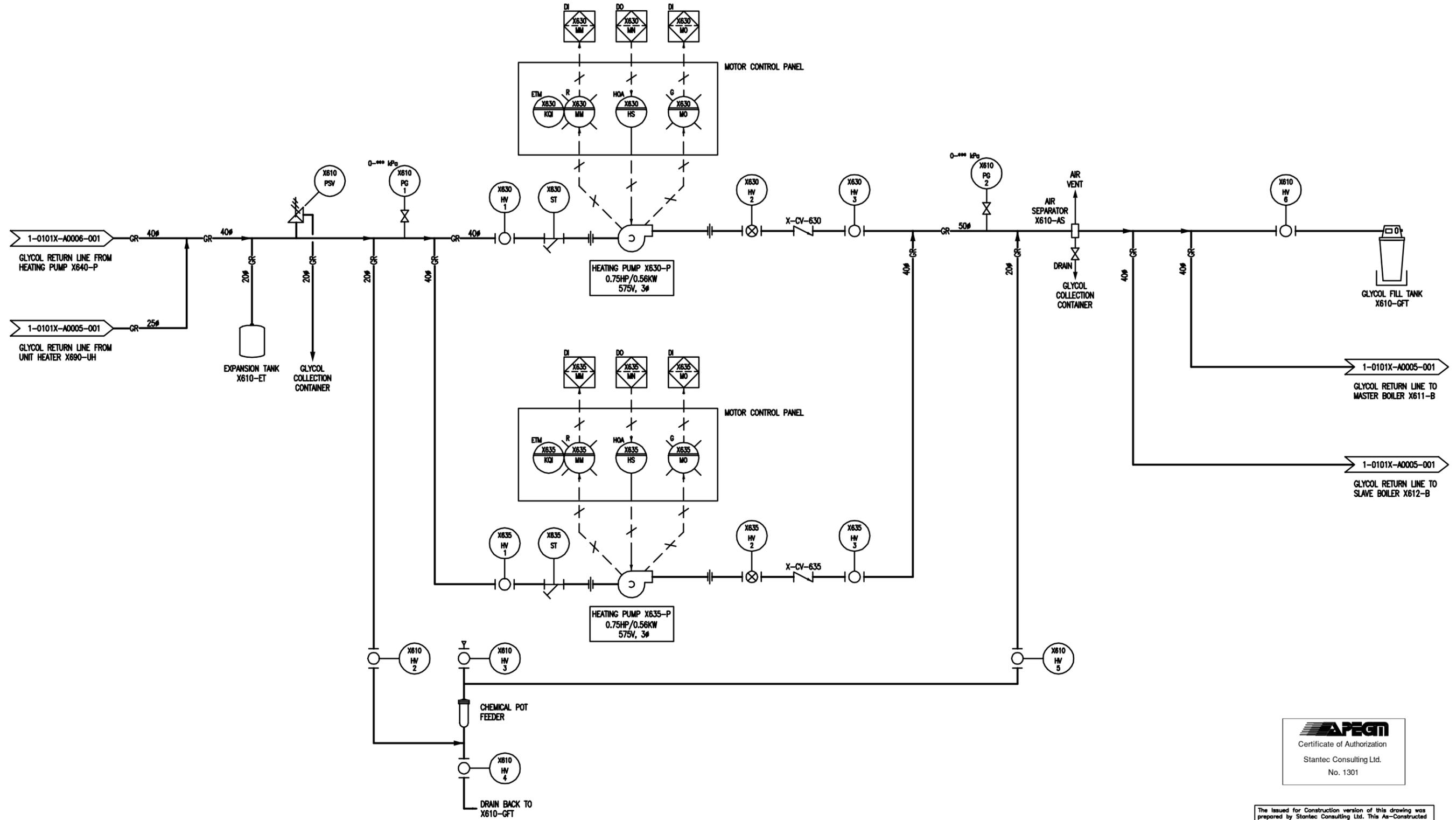
THE CITY OF WINNIPEG
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Winnipeg

NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
PROCESS & INSTRUMENTATION DIAGRAM
LEACHATE BUILDING
HEAT RECOVERY VENTILATOR X650-HRV & HEATING PUMP X640-P

CITY DRAWING NUMBER **1-0101X-A0006-001** SHEET 1 OF 1

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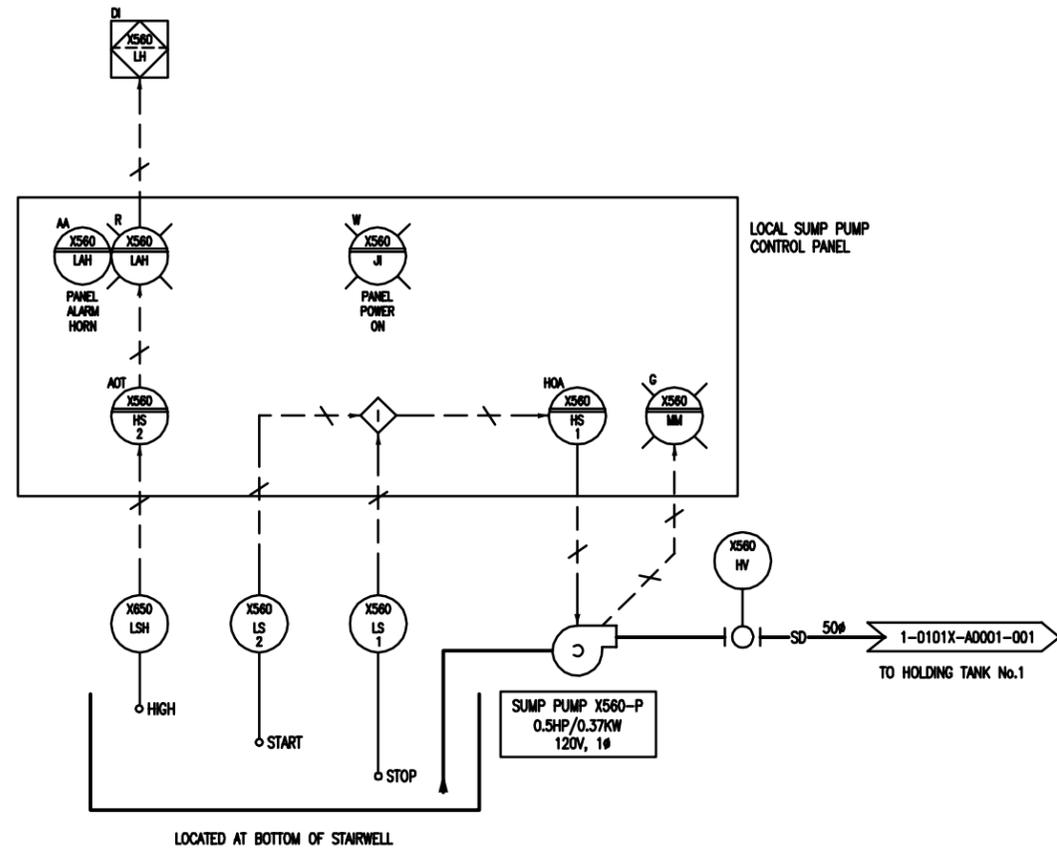
THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

Winnipeg

NORTH END WATER POLLUTION CONTROL CENTRE
 HAILED WASTEWATER RECEIVING FACILITIES
 PROCESS & INSTRUMENTATION DIAGRAM
 LEACHATE BUILDING
 HEATING PUMPS X630-P & X635-P

CITY DRAWING NUMBER **1-0101X-A0007-001** SHEET OF 1 1

METRIC
 WHOLE NUMBERS INDICATE MILLIMETRES
 DECIMALIZED NUMBERS INDICATE METRES



1 SUMP PUMP X560-SMP



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CONSTRUCTION COMPLETION DATE - SEPTEMBER 20

AS-CONSTRUCTED DRAWING
 BY S.T. DATE 11.12.16
 CHECKED BY D.W.D.

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE	DATE

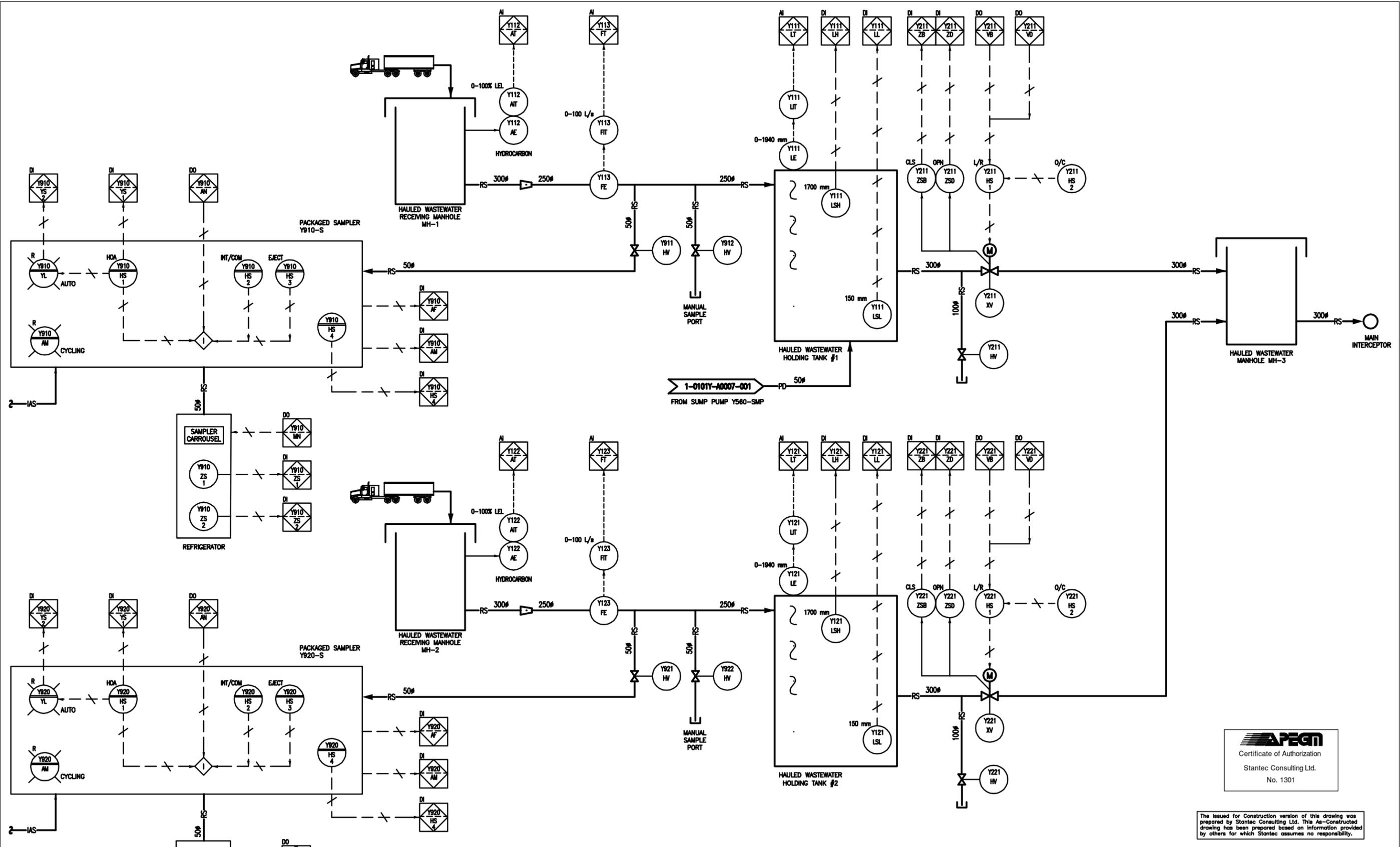
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4	REISSUED PER CONTROLS NARRATIVE	11.09.06	DWD
3	REISSUED FOR CONSTRUCTION	11.04.25	DWD
2	ISSUED FOR CONSTRUCTION	11.03.24	DWD
1	ISSUED FOR PRELIMINARY REVIEW	11.02.22	DWD

Stantec Consulting Ltd. 905 Waverley Street, Winnipeg, Manitoba Tel 204-489-5900 Fax 204-453-9012		ENGINEER'S SEAL ORIGINAL SEALED BY D.W. DOWHAN P. ENG. 11/02/22
DESIGNED BY D.W.D. CHECKED BY D.W.D. DRAWN BY S.T. APPROVED BY -	HOR. SCALE: - VERTICAL: - DATE 11.10.28	RELEASED FOR CONSTRUCTION: DATE

THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT	NORTH END WATER POLLUTION CONTROL CENTRE HAULED WASTEWATER RECEIVING FACILITIES PROCESS & INSTRUMENTATION DIAGRAM LEACHATE BUILDING SUMP PUMP X560-SMP
TENDER NO. 822-2009	CITY DRAWING NUMBER 1-0101X-A0008-001
SHEET 1 OF 1	

METRIC
 WHOLE NUMBERS INDICATE MILLIMETRES
 DECIMALIZED NUMBERS INDICATE METRES



APEGN
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 BY S.T. DATE 11.12.15
 CHECKED BY D.W.D.

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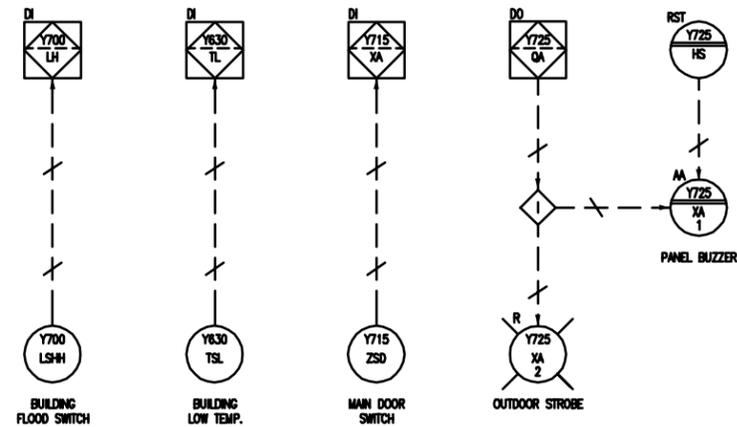
DESIGNED BY	D.W.D.	CHECKED BY	D.W.D.
DRAWN BY	D.G.	APPROVED BY	-
HOR. SCALE:	-	RELEASED FOR CONSTRUCTION:	
VERTICAL:		DATE	

ENGINEER'S SEAL
ORIGINAL SEALED BY
D.W. DOWHAN
P. ENG.
 11/02/07
 TENDER NO. **822-2009**

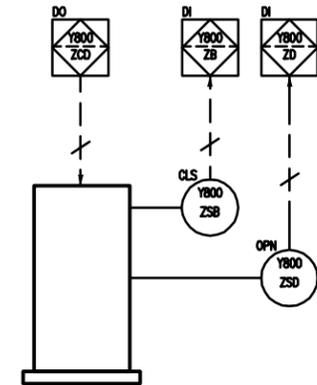
THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
Winnipeg

NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
PROCESS & INSTRUMENTATION DIAGRAM
HAULED WASTEWATER BUILDING
RECEIVING MANHOLES & HOLDING TANKS

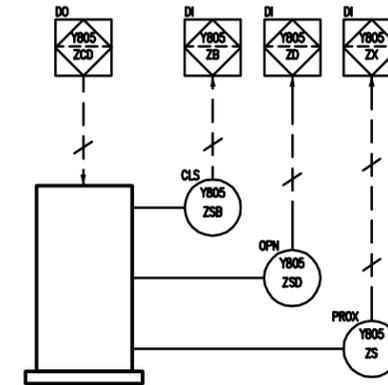
CITY DRAWING NUMBER **1-0101Y-A001-001** SHEET **1** OF **1**



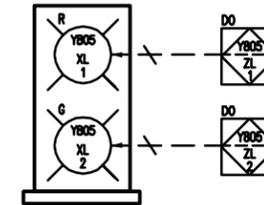
MISCELLANEOUS ALARMS



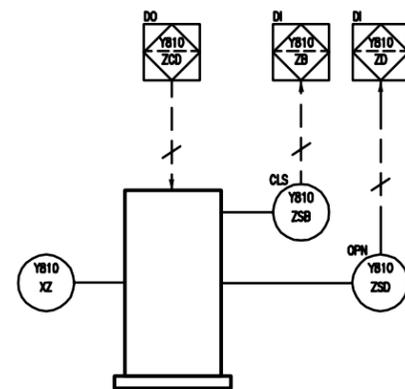
LANE No.1 ENTRANCE GATE Y800-XZ



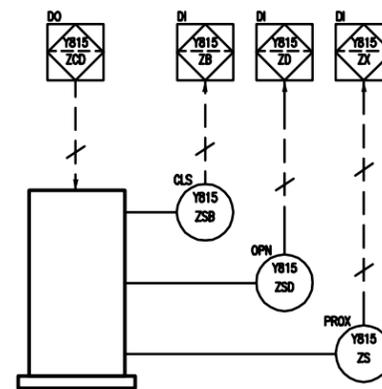
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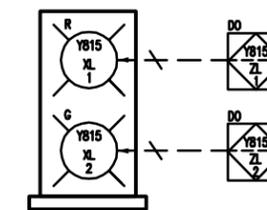
LANE No.1 EXIT TWO-STATE DISPLAY



LANE No.2 ENTRANCE GATE Y810-XZ



LANE No.2 EXIT GATE Y815-XZ



LANE No.2 EXIT TWO-STATE DISPLAY

1 HAILED WASTEWATER RECEIVING BUILDING MISCELLANEOUS



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CONSTRUCTION COMPLETION DATE - SEPTEMBER 20

METRIC
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DECIMALIZED NUMBERS INDICATE METRES

AS-CONSTRUCTED DRAWING
BY S.T. DATE 11.12.16
CHECKED BY D.W.D.

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES DATE COMMITTEE

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Stantec Consulting Ltd.
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Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY D.W.D. CHECKED BY D.W.D.
DRAWN BY D.G. APPROVED BY -
HOR. SCALE: -
VERTICAL: -
DATE 11.10.28

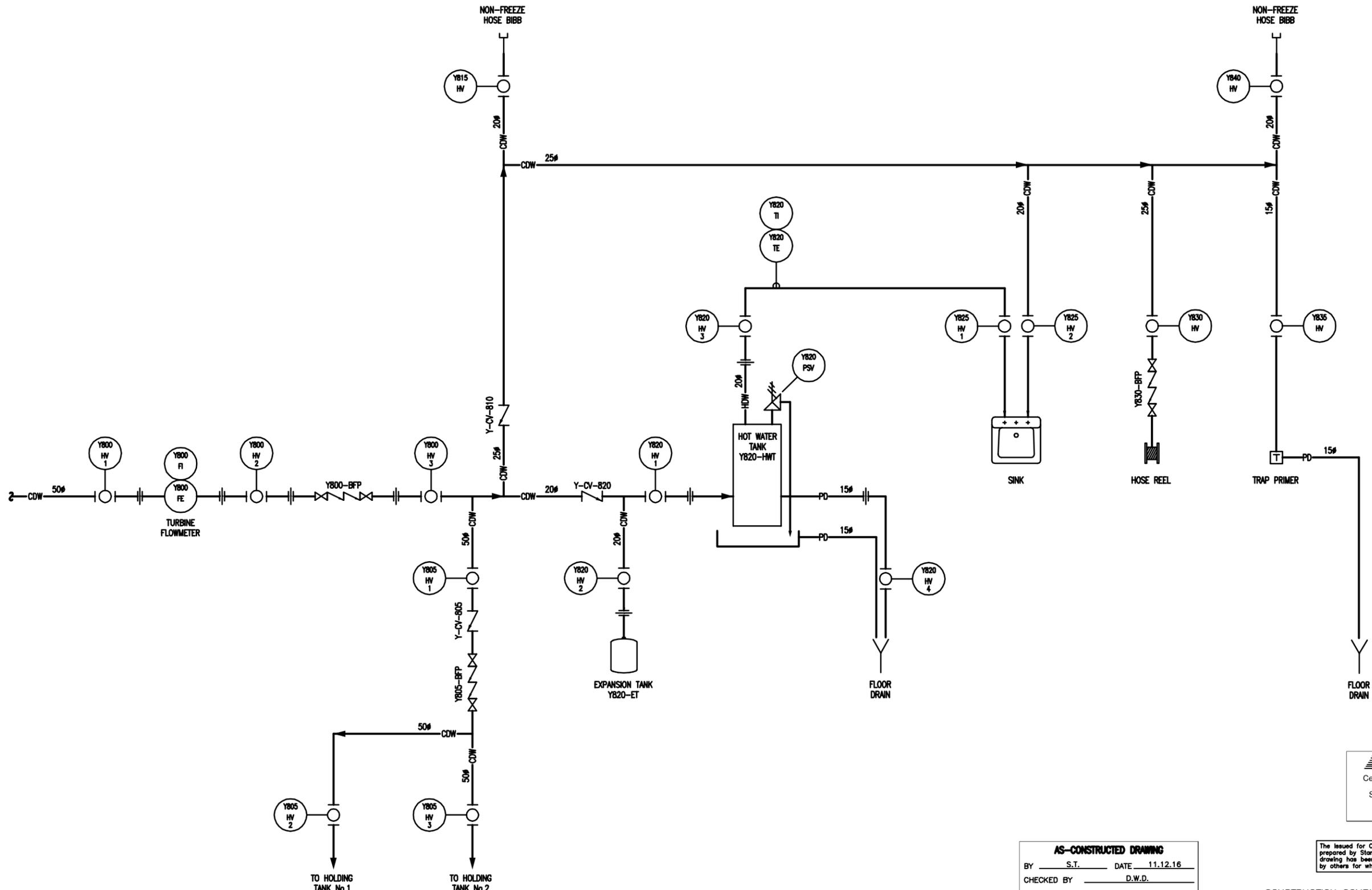
ENGINEER'S SEAL
ORIGINAL SEALED BY
D.W. DOWHAN
P. ENG.
11/02/07
TENDER NO. 822-2009

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

Winnipeg

**NORTH END WATER POLLUTION CONTROL CENTRE
HAILED WASTEWATER RECEIVING FACILITIES
PROCESS & INSTRUMENTATION DIAGRAM
MISCELLANEOUS BUILDING SYSTEMS**

CITY DRAWING NUMBER 1-0101Y-A0002-001
SHEET 1 OF 1



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 No. 1301

AS-CONSTRUCTED DRAWING
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 DRAWN BY S.T. APPROVED BY -
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 VERTICAL: -
 DATE 11.09.06

ORIGINAL SEALED BY
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 P. ENG.
 11/02/22

TENDER NO. 822-2009

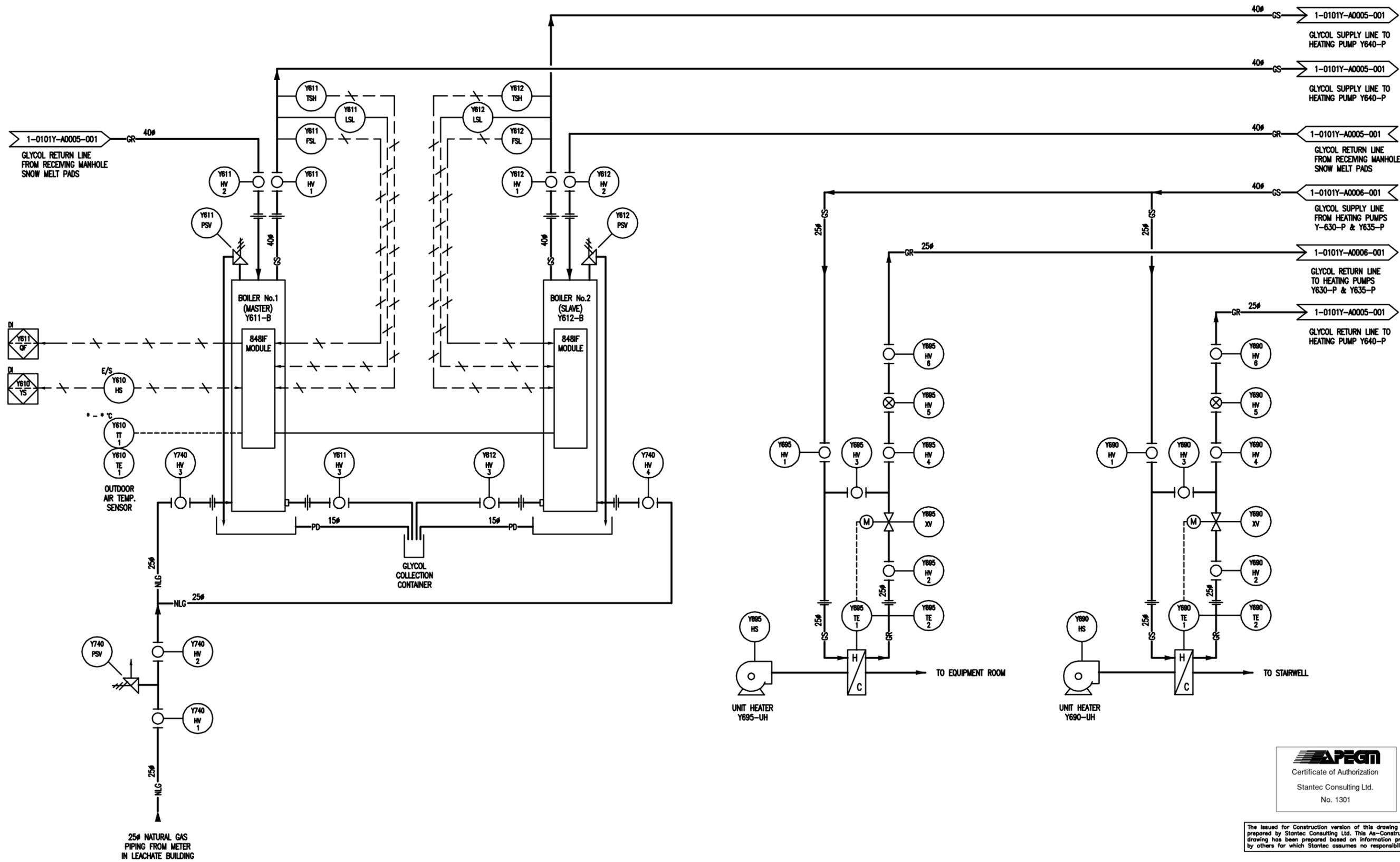
THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

Winnipeg

NORTH END WATER POLLUTION CONTROL CENTRE
 HAULED WASTEWATER RECEIVING FACILITIES
 PROCESS & INSTRUMENTATION DIAGRAM
 HAULED WASTEWATER BUILDING
 DOMESTIC WATER SYSTEM

CITY DRAWING NUMBER 1-0101Y-A0003-001

SHEET 1 OF 1



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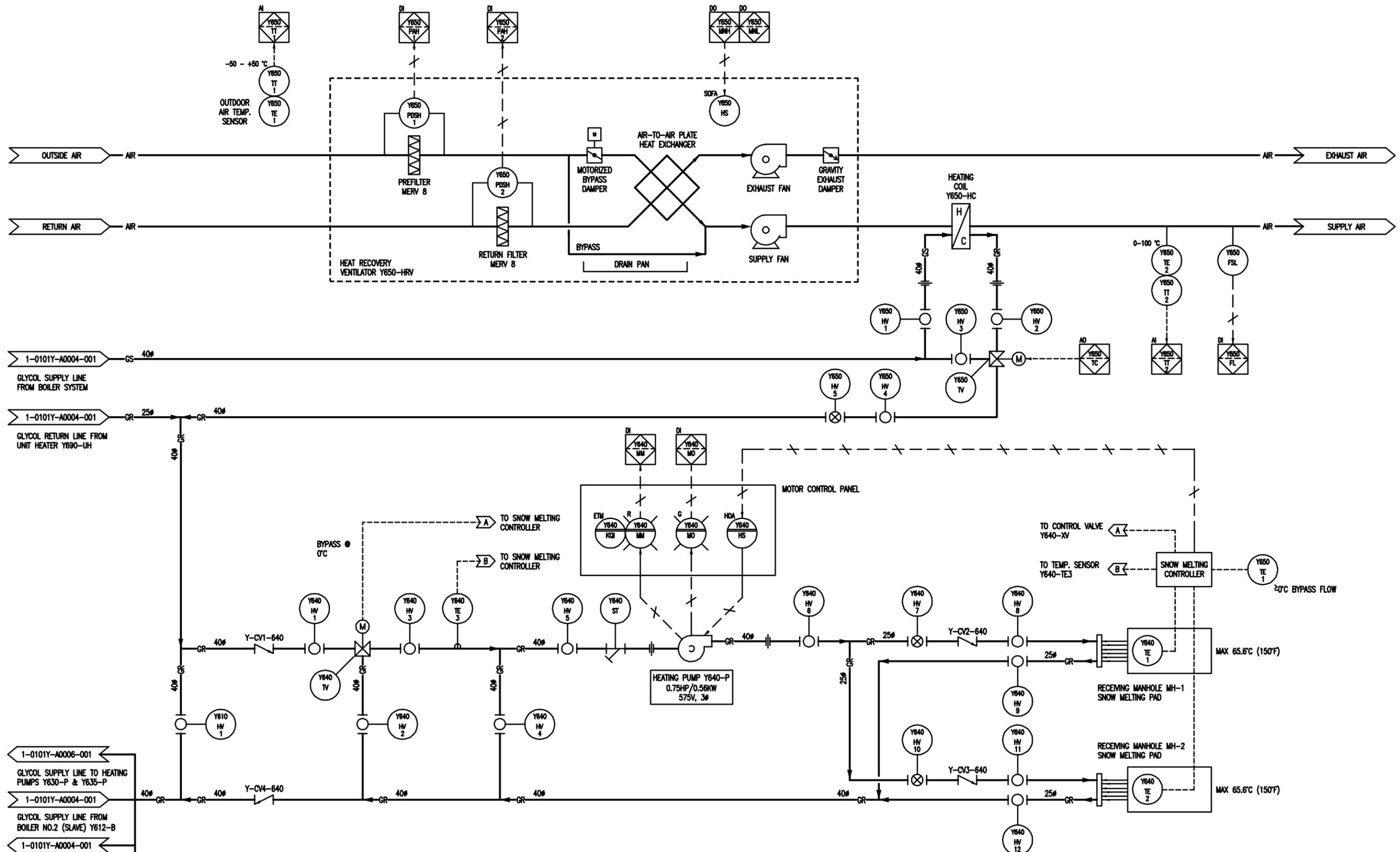
THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

Winnipeg

NORTH END WATER POLLUTION CONTROL CENTRE
 HAULED WASTEWATER RECEIVING FACILITIES
 PROCESS & INSTRUMENTATION DIAGRAM
 HAULED WASTEWATER BUILDING
 BOILER SYSTEM

CITY DRAWING NUMBER **1-0101Y-A0004-001** SHEET 1 OF 1

METRIC
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 DECIMALIZED NUMBERS INDICATE METRES



- 1-0101Y-A0006-001
GLYCOL SUPPLY LINE TO HEATING PUMPS Y630-P & Y635-P
- 1-0101Y-A0004-001
GLYCOL SUPPLY LINE FROM BOILER NO.2 (SLAVE) Y612-B
- 1-0101Y-A0004-001
GLYCOL RETURN LINE TO BOILER NO.2 (SLAVE) Y612-B
- 1-0101Y-A0004-001
GLYCOL SUPPLY LINE FROM BOILER NO.1 (MASTER) Y611-B
- 1-0101Y-A0004-001
GLYCOL RETURN LINE TO BOILER NO.1 (MASTER) Y611-B



RECORD DRAWING
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THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

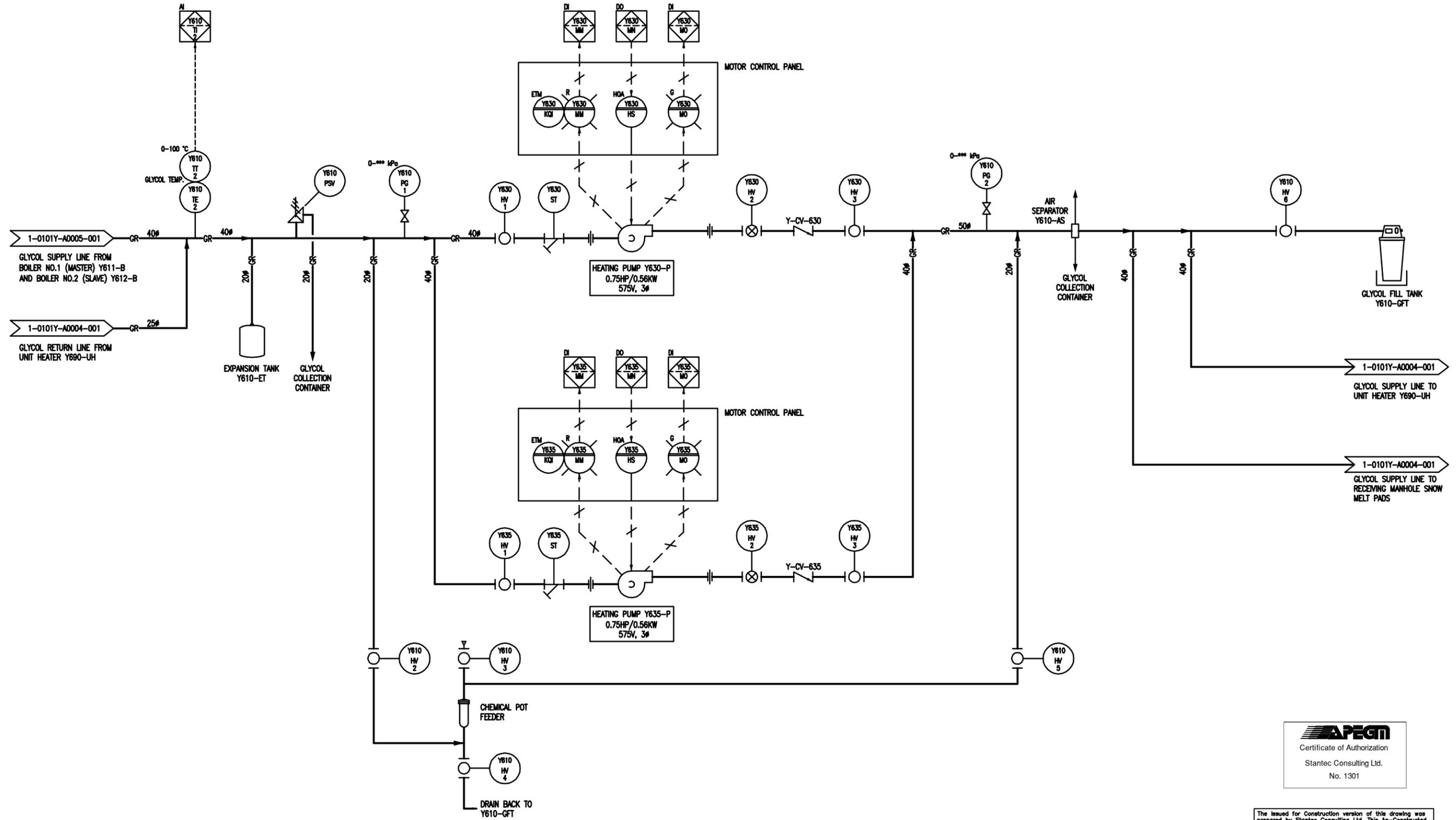
Winnipeg

NORTH END WATER POLLUTION CONTROL CENTRE
 HAULED WASTEWATER RECEIVING FACILITIES
 PROCESS & INSTRUMENTATION DIAGRAM
 HAULED WASTEWATER BUILDING
 HEAT RECOVERY VENTILATOR Y650-HRV & HEATING PUMP Y640-P

CITY DRAWING NUMBER **1-0101Y-A0005-001** SHEET 1 OF 1

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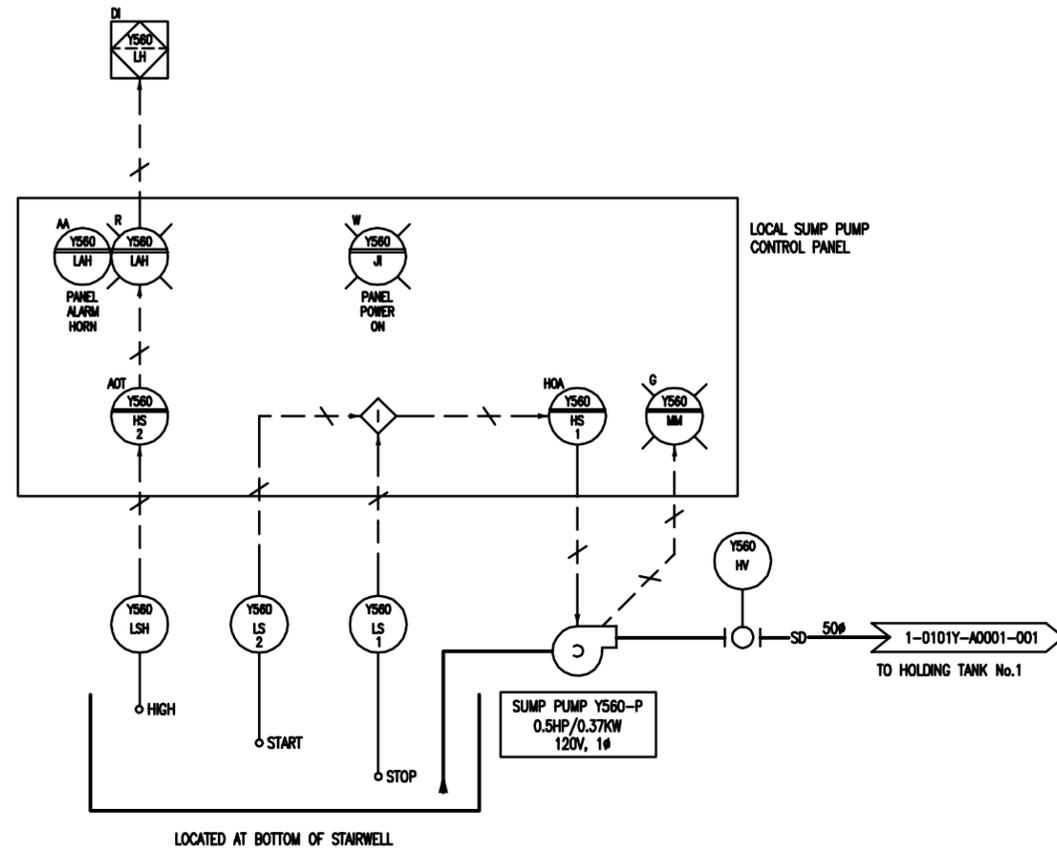
THE CITY OF WINNIPEG
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Winnipeg

NORTH END WATER POLLUTION CONTROL CENTRE
 HAULED WASTEWATER RECEIVING FACILITIES
 PROCESS & INSTRUMENTATION DIAGRAM
 HAULED WASTEWATER BUILDING
 HEATING PUMPS Y630-P & Y635-P

CITY DRAWING NUMBER **1-0101Y-A0006-001** SHEET 1 OF 1

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1 SUMP PUMP Y560-SMP



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THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

Winnipeg

NORTH END WATER POLLUTION CONTROL CENTRE
 HAULED WASTEWATER RECEIVING FACILITIES
 PROCESS & INSTRUMENTATION DIAGRAM
 HAULED WASTEWATER BUILDING
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