

	UPWARD AND DOWNWARD SUPPLY DUCT
	UPWARD AND DOWNWARD RETURN OR EXHAUST DUCT
	SUPPLY DUCT UPWARD
	SUPPLY DUCT DOWNWARD
	RETURN OR EXHAUST DUCT UPWARD
	RETURN OR EXHAUST DUCT DOWNWARD
	DUCT OFFSET
	MANUAL DAMPER (WITH ACCESS DOOR)
	MOTORIZED DAMPER (WITH ACCESS DOOR)
	FIRE DAMPER (WITH ACCESS DOOR)
	RECTANGULAR TO ROUND TRANSFORMATION
	FLEXIBLE COUPLING (CANVAS)
	GRILLES AND DIFFUSERS IDENTIFICATION TYPE (SEE SPECIFICATION) CAPACITY
	SIZE LITRES PER SECOND

	PIPE RISE		VACUUM BREAKER
	PIPE DROP		SAFETY VALVE
	PIPE TOP TAKE-OFF		FLOW SWITCH
	PIPE BOTTOM TAKE-OFF		THREE WAY MOTORIZED VALVE
	SIMPLE CONNECTION		TWO WAY MOTORIZED VALVE
	PIPE CAP		PRESSURE GAUGE
	PIPE CONTINUATION		AUTOMATIC AIR VENT
	DRAIN ABOVE SLAB		MANUAL AIR VENT
	DRAIN BELOW SLAB		THERMOMETER
	SANITARY DRAIN		BALANCING VALVE (CIBV VALVE)
	CHECK VALVE		CIRCULATOR OR PUMP
	CLEAN-OUT WITH FLOOR ACCESS		FLOOR DRAIN
	INTERIOR HOSE BIB		DOMESTIC COLD WATER
	UNION TYPE JOINT		DOMESTIC HOT WATER
	FLEXIBLE JOINT		VENT
	STRAINER		GLYCOL SUPPLY
	BALL VALVE (OPEN)		GLYCOL RETURN
	BALL VALVE (CLOSE)		FUEL OIL SUPPLY
	BUTTERFLY VALVE (OPEN)		FUEL OIL RETURN
	BUTTERFLY VALVE (CLOSED)		FUEL OIL VENT
			FIRE EXTINGUISHER

M1	MECHANICAL – LEGENDS AND DRAWING LIST
M2	MECHANICAL – DETAILS
M3	MECHANICAL – DOMESTIC WATER AND SANITARY PLUMBING LAYOUT
M4	MECHANICAL – HEATING PLUMBING AND EQUIPMENT LAYOUT
M5	MECHANICAL – VENTILATION LAYOUT
M6	MECHANICAL – VENTILATION SECTION VIEWS
M7	MECHANICAL – CONTROLS SCHEMATICS AND HYDRAULIC DIAGRAMS
M8	MECHANICAL – CONTROLS SCHEMATICS AND HYDRAULIC DIAGRAMS

SECTION "A" ON THIS DRAWING

ELEVATION "1" ON THIS DRAWING

SECTION "B" ON THIS DRAWING

ELEVATION "2" ON THIS DRAWING

DETAIL "1" ON THIS DRAWING

DETAIL "2" ON THIS DRAWING

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
N.C.	NORMALLY CLOSE		TRANSFORMER WITH FUSE AND GROUND ON SECONDARY
N.O.	NORMALLY OPEN		NORMALLY OPEN CONTACT
TR	TRANSFORMER		NORMALLY CLOSE CONTACT
MD-X	MOTORIZED DAMPER		OVERLOAD RELAY
FAD	FRESH AIR DAMPER		NORMALLY OPEN PUSH-BUTTON
EAD	EXHAUST AIR DAMPER		"HAND-OFF-AUTO" SELECTOR
RAD	RECYCULADON AIR DAMPER		MANUAL STARTER
VLY	VALVE		GREEN PILOT LIGHT
ASC	APPLICATION SPECIFIC CONTROLLER		RED PILOT LIGHT
	FAN		ELECTRICAL RELAY
	PUMP		CURRENT TRANSMITTER
	DAMPER		ELECTRICAL MOTOR
	ELECTRIC MOTOR ACTUATOR		FLOW SWITCH
	HEATING COIL		ELECTRONIC THERMOSTAT
	FILTER		ELECTRICAL THERMOSTAT
	ELECTRICITY BY CONTROLS DIVISION		DUCT TEMPERATURE SENSOR
	ELECTRICITY BY ELECTRICAL DIVISION		

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31-03-2011

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Consulting Engineers

1	ISSUED FOR CONSTRUCTION	06/04/10	WBPB P.S.O.					
0	ISSUED FOR TENDER	06/10/09	WBPB P.S.O.					
No.	DESCRIPTION	DATE	BY	AFF'D				

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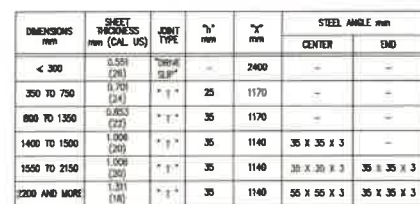
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Ottawa, Ont. K2E 7J5
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CITY OF IQALUIT

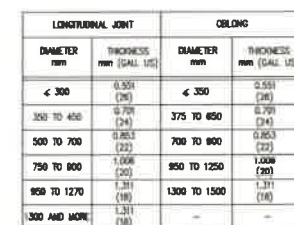
PROJECT LIFT STATION No. 2
MODIFICATIONS

TITLE	MECHANICAL LEGENDS AND DRAWING LIST
-------	--

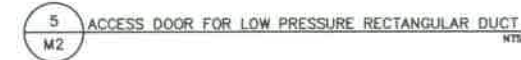
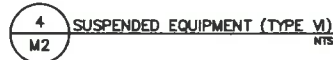
image by	L.P.	project no	OTCD00019365A
drawn by	L.P.	drawing no	M1
checked by	G.M.		
date	05/04/2010		
note	NOT TO SCALE		



2 CROSS JOINT AND REINFORCEMENT
M2 FOR LOW PRESSURE RECTANGULAR DUCT
MTS



3 AIR TIGHT JOINT CIRCULAR
M2 AND OBLONG DUCT - LOW PRESSURE NTS



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31-03-2011

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0	ISSUED FOR TENDER	06/18/09	WBSP	P.S.O.
No.	DESCRIPTION	DATE	BY	APP'D
R E V I S I O N S				

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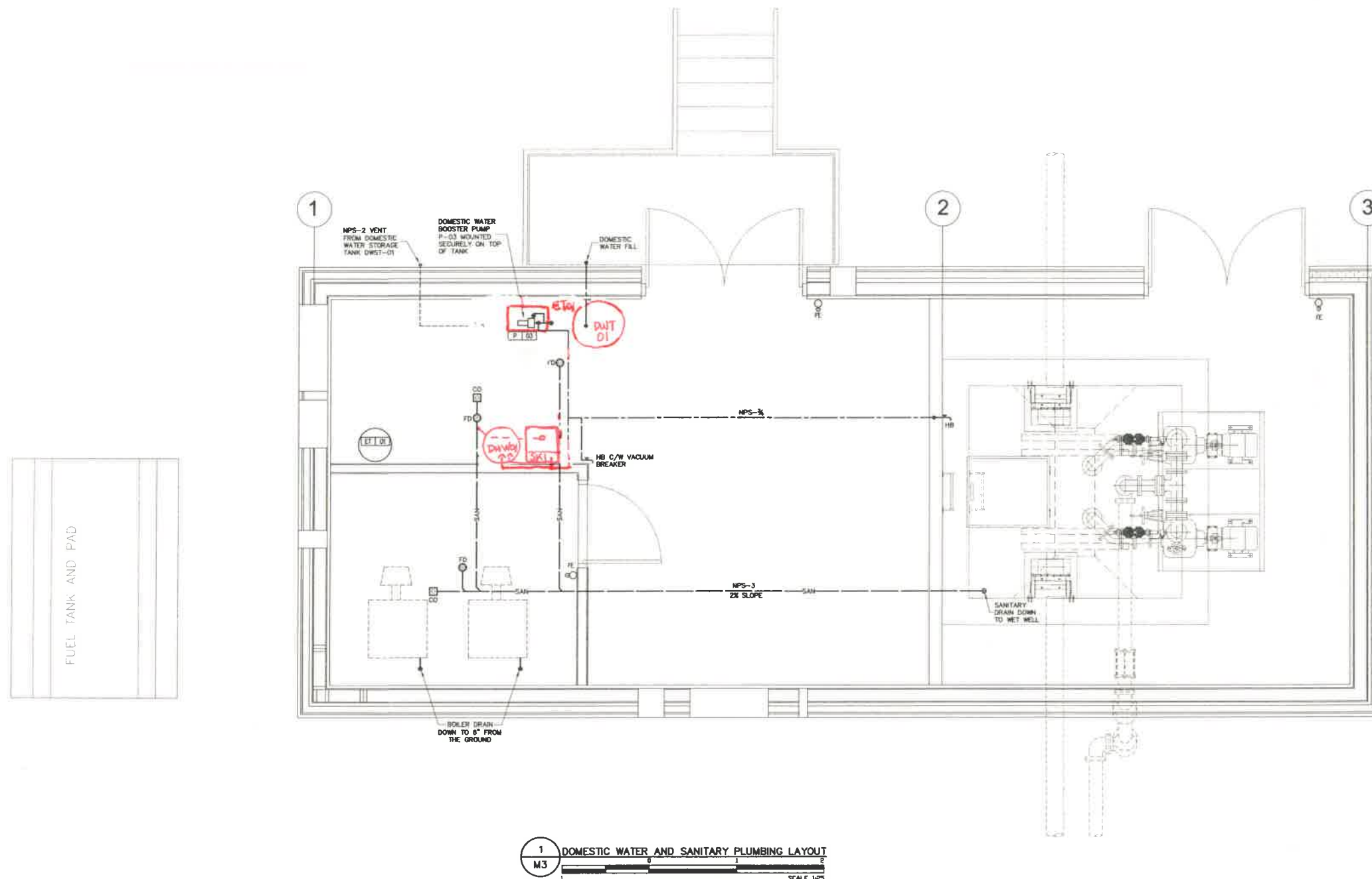
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Fax: (613) 225-7337

CITY OF IQALUIT

PROJECT LIFT STATION No. 2
MODIFICATIONS

TITLE	MECHANICAL DETAILS
-------	-----------------------

designed by	L.P.	project no. 01CD000019385A drawing no. M2
drawn by	L.P.	
(checked by)	G.M.	
date	05/04/10	
NOT TO SCALE		



1 DOMESTIC WATER AND SANITARY PLUMBING LAYOUT
M3
SCALE 1:25

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31-03-2011

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1	ISSUED FOR CONSTRUCTION	05/04/10	WBEP P.S.O.	
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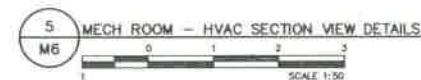
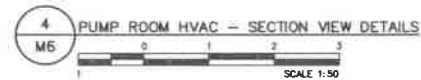
CLIENT
CITY OF IQUALUIT

PROJECT
LIFT STATION No. 2
MODIFICATIONS

TITLE
MECHANICAL
DOMESTIC WATER AND
SANITARY PLUMBING LAYOUT

designed by	J.F.	project no.	OTCD00019385A
drawn by	J.F.	drawing no.	
checked by	G.M.		
date	05/04/2010		
status	AS SHOWN		

M3



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31-03-2011

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No	DESCRIPTION	DATE	BY APP'D
R E V I S I O N S			



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62

CITY OF IQALUIT

PROJECT LIFT STATION No. 2
MODIFICATIONS

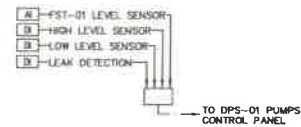
TITLE	MECHANICAL VENTILATION SECTION VIEWS
-------	--------------------------------------

design by	L.P./G.M.	project no. OTC000019365A drawing no. M6
drawn by	L.P.	
checked by	G.M.	
date	05/04/2010	
scale	A3/1:250000	

FUEL SYSTEM SCHEMATICS

PIPING AND CONTROLS SCHEMATICS

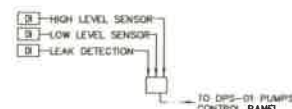
FST-01 CONTROLS



NOTES:

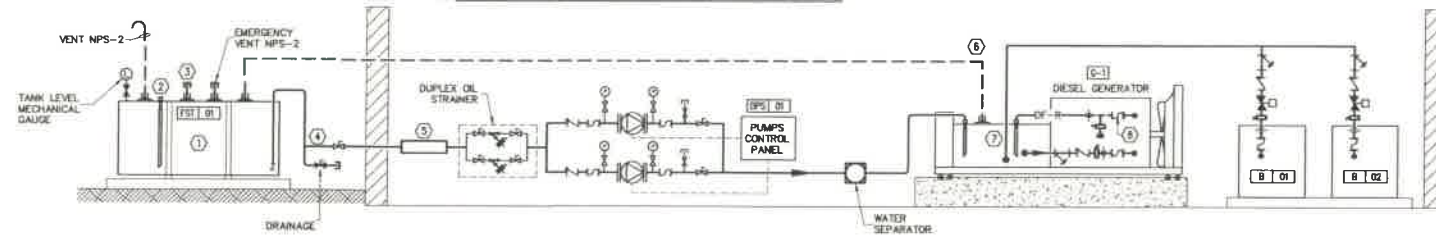
- 1 DOUBLE WALL MAIN FUEL STORAGE TANK
- 2 FST-01 FILL/VENT CONNECTION C/W LOCKING CAP (NPS-2)
- 3 FST-01 INSPECTION PORT
- 4 FUEL SUPPLY LINE TO GENERATOR'S DAY TANK (ALL NPS-2)
- 5 FUEL OIL WARMING PIPE
- 6 FUEL VENT LINE FROM GENERATOR'S DAY TANK (ALL NPS-1)
- 7 GENERATOR'S DAY TANK
- 8 STAINLESS STEEL FLEXIBLE CONNECTION, CONNECT TO FUEL SUPPLY AND RETURN CONNECTIONS ON ENGINE.

DAY TANK CONTROLS

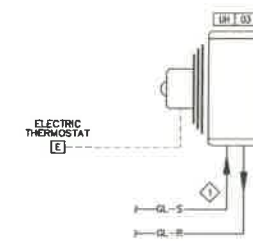


GENERAL NOTE:

THE SCHEMATIC DRAWING SHOWS DETAILS OF THE CONTROLS LAYOUT, EQUIPMENT CONNECTIONS AND PIPING COMPONENTS OF THE SYSTEM. REFER TO DRAWING M3 FOR DETAILS ON THE PIPING LAYOUT AND LOCATION OF EQUIPMENT.



MISC. CONTROLS

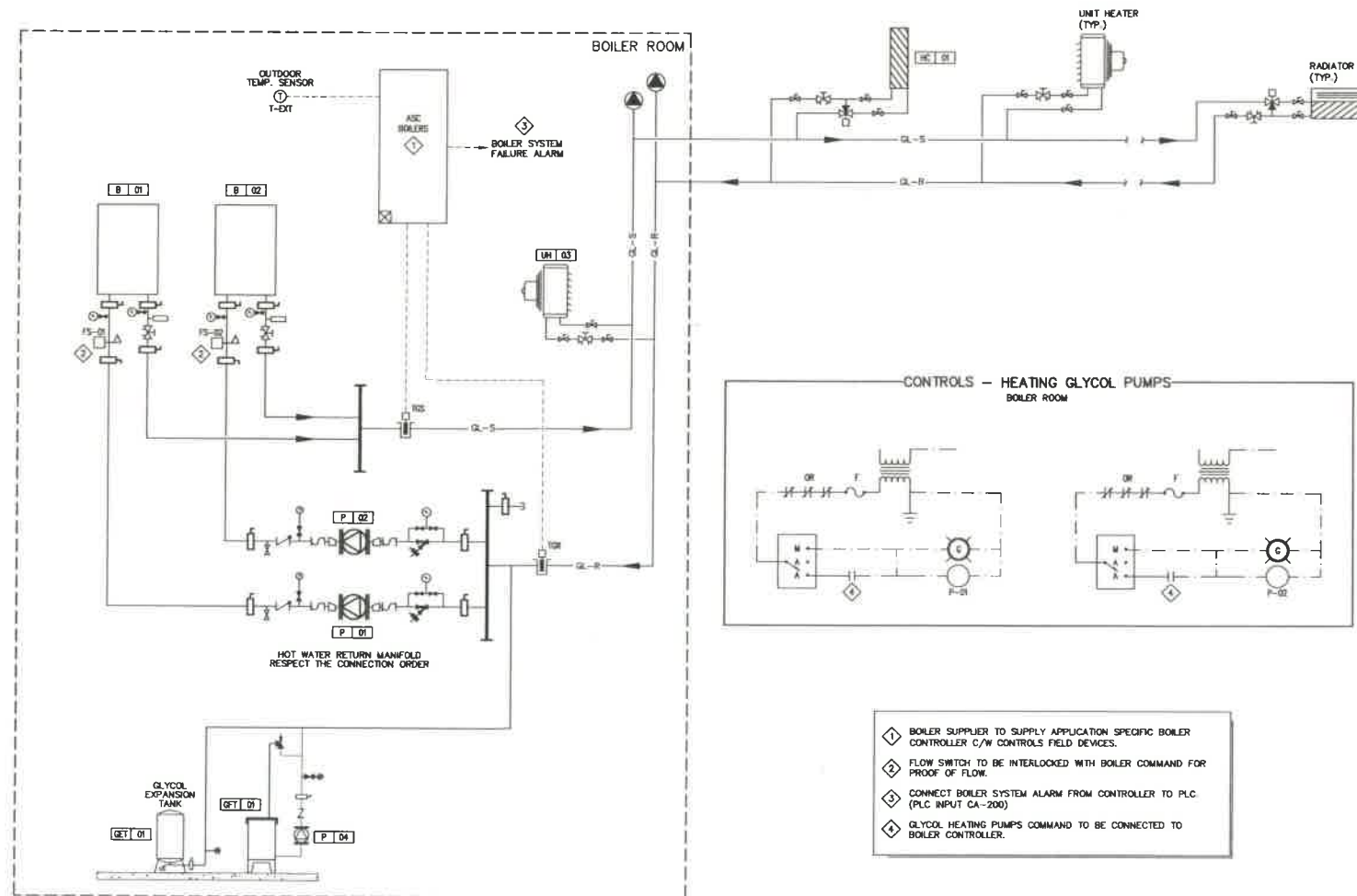


BOILER ROOM CONTROL - UNIT HEATER
REFER TO MECHANICAL PLANS AND SPECIFICATIONS FOR LOCATION

1 REFER TO THE HEATING GLYCOL SYSTEM'S HYDRAULIC DIAGRAM ON DRAWING M7 FOR DETAILS ON THE CONNECTION OF THE UNIT TO THE HEATING GLYCOL SYSTEM.

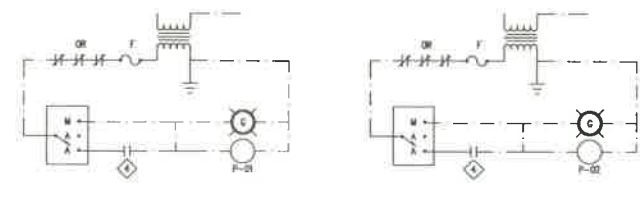
HEATING GLYCOL SYSTEM

HYDRAULIC DIAGRAM



CONTROLS - HEATING GLYCOL PUMPS

BOILER ROOM



- 1 BOILER SUPPLIER TO SUPPLY APPLICATION SPECIFIC BOILER CONTROLLER C/W CONTROLS FIELD DEVICES.
- 2 FLOW SWITCH TO BE INTERLOCKED WITH BOILER COMMAND FOR PROOF OF FLOW.
- 3 CONNECT BOILER SYSTEM ALARM FROM CONTROLLER TO PLC (PLC INPUT CA-200)
- 4 GLYCOL HEATING PUMPS COMMAND TO BE CONNECTED TO BOILER CONTROLLER.

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31-03-2011

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REV	DESCRIPTION	DATE	BY	APP'D
1	ISSUED FOR CONSTRUCTION	05/04/10	WEBP P.S.O.	
0	ISSUED FOR TENDER	06/19/09	WEBP P.S.O.	
	DESCRIPTION	DATE	BY	APP'D



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CITY OF IQALUIT

LIFT STATION No. 2
MODIFICATIONS

MECHANICAL
CONTROLS SCHEMATICS
AND HYDRAULIC DIAGRAMS

Design by	L.P.	Project No.	OTCD00019365A
Drawn by	L.P.	Issued on	
Checked by	G.M.		
Date	05/04/2010		
Scale	NOT TO SCALE		

M7

EXHAUST AIR

N.C. FAD

MD-2

MD-1

FRESH AIR

N.C. FAD

SUPPLY TO MECH. ROOM

RETURN FROM MECH. ROOM

T-STAT NO.1

T-STAT NO.1

UNIT HEATERS CONTROL

VENTILATION

EF-01 CONTROL

T-STAT NO.2 DAMPER CONTROL (ONLY WHEN GENERATOR IS ON)

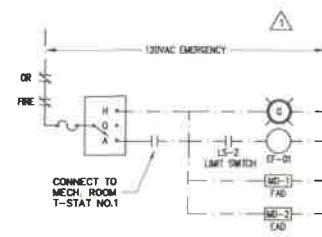
T-STAT CONTROL

ON

OFF

ROOM TEMP.

100% FRESH AIR



MD-3
N.O. CAD
N.C. FAD
MD-4
MECH. ROOM T-STAT NO.2
MD-5
N.C. EAD
MD-6
N.O. RAD

FRESH AIR

SUPPLY TO MECH. ROOM

EXHAUST AIR

REGULATE TO MECH. ROOM

120VAC EMERGENCY

IR

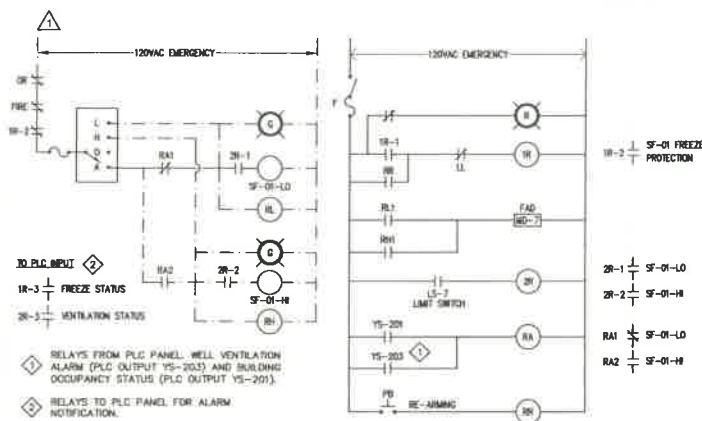
24V

IR-1

FAD MD-4
EAD MD-3
RAD MD-2

◇ NORMALLY OPEN CONTACT CONNECTED DIRECTLY TO GENERATOR STATUS FOR COMBUSTION AIR DAMPER INTERLOCK

The diagram illustrates a pump room ventilation system. It includes components such as Fresh Air, N.C. FAD, PD-F, SF 1.0, SC 1.0, LL, MIN. 3m, REMOTE SENSOR, PS, and T-STAT. The system is designed to supply air to the pump room and wet well, and to exhaust air from the wet well. A T-STAT control is shown with a graph of room temperature (100% to 0%) and a legend for pump room radiator valves control.



VENT NPS-2

D.W. FILL NPS-2

DWST 01

P 03

EXPANSION TANK

ET 01

DOMESTIC COLD WATER TO BUILDING

DOMESTIC HOT WATER TO BUILDING

WATER HEATER

WHT 01

◇ PUMP P-03 TO BE INTERLOCKED WITH LOW-LEVEL FLOAT SWITCH IN DWST-01

AS BUILT
31-03-2011

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0	ISSUED FOR TENDER	06/10/09	WBBP	P.S.
No.	DESCRIPTION	DATE	BY	APP

THE STAMP COLOUR IS RED FOR



A circular professional engineer stamp. The outer ring contains the text "REGISTERED PROFESSIONAL ENGINEER" at the top and "NWT / NS" at the bottom. The center of the stamp features a stylized geometric design consisting of a triangle within a circle, with the text "P. E. 81-1-2000" and "LICENSEE" below it.

THE ORIGINAL SIGNED DRAWING

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Fax: (613) 225-7333

CITY OF IQALUIT

PROJECT LIFT STATION No. 2
MODIFICATIONS

MECHANICAL
CONTROLS SCHEMATICS
AND HYDRAULIC DIAGRAMS

designer by	L.P.	project no.	OTCD00019365
drawn by	L.P.	drawing no.	
checked by	G.M.		M8
date	05/04/2010		
scale	1:100		