

MOSHER ENGINEERING LTD.

Document Transmittal 186-69

Electronic Copy

Trow Associates Inc.

154 Colonnade Road South

Ottawa, ON

K2E7J5

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Ph: (613) 225-9940

Fax:(613) 225-7337

Contractor:

Mosher Engineering Ltd.

1869 Upper Water Street

Suite AH202,

Halifax, NS

B3J 1S9

Tel: (902) 429-0272

Fax: (902) 429-7762

Contact: Marc Losier

Date Submitted :

December 23, 2010

Project Title :

Sanikiluaq New Water Truck Fill Station

DESCRIPTION	Section or Drawing	# of Sheets
Record Drawing Mechanical		16

Comments:

PLUMBING AND HEATING

	PIPE RISE		VACUUM BREAKER
	PIPE DROP		PUMP
	PIPE TOP TAKE-OFF		TWO WAY MOTORIZED VALVE
	PIPE BOTTOM TAKE-OFF		PRESSURE GAUGE
	SIMPLE CONNECTION		FLOW METER
	PIPE CAP		FLOOR DRAIN
	PIPE CONTINUATION		SOLENOID VALVE
	DRAIN ABOVE SLAB		DOMESTIC COLD WATER
	DRAIN BELOW SLAB		DOMESTIC HOT WATER
	SANITARY DRAIN		VENT
	CHECK VALVE		FUEL OIL, SUPPLY
	UNION TYPE JOINT		FUEL OIL, RETURN
	FLEXIBLE JOINT		FUEL OIL, VENT
	STRAINER		CHEMICAL FEED, NORMAL OPERATION
	BALL VALVE (OPEN)		CHEMICAL FEED, FIRE OPERATION
	BALL VALVE (CLOSE)		EMERGENCY EYE WASH STATION
	GATE VALVE (OPEN)		FIRE EXTINGUISHER
	GATE VALVE (CLOSE)		CHLORINE CONTROLLER
	FIRE VALVE		ELECTRIC THERMOSTAT
	BUTTERFLY VALVE (NORMALLY OPEN)		
	BUTTERFLY VALVE (NORMALLY CLOSED)		

HVAC

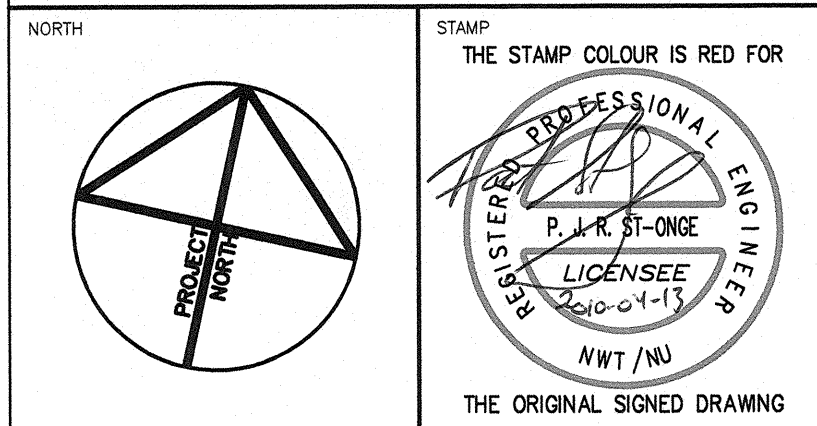
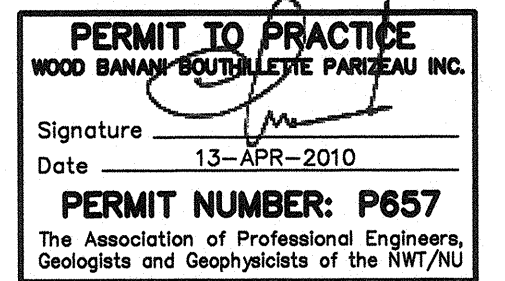
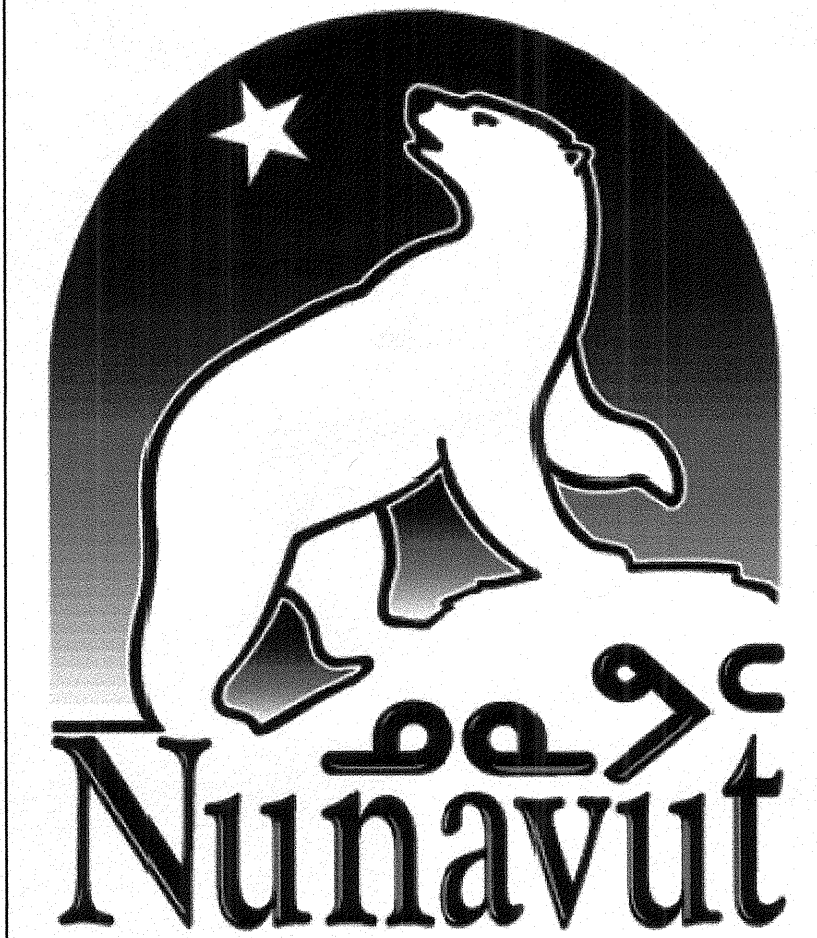
	UPWARD AND DOWNWARD SUPPLY DUCT
	UPWARD AND DOWNWARD RETURN OR EXHAUST DUST
	SUPPLY DUCT UPWARD
	SUPPLY DUCT DOWNWARD
	RETURN OR EXHAUST DUCT UPWARD
	RETURN OR EXHAUST DUCT DOWNWARD
	MANUAL DAMPER (WITH ACCESS DOOR)
	MOTORIZED DAMPER (WITH ACCESS DOOR)
	GRILLES AND DIFFUSERS IDENTIFICATION TYPE (SEE SPECIFICATION) CAPACITY
	SIZE
	LITRES PER SECOND

DRAWING LIST

M1	MECHANICAL - LEGEND AND DRAWING LIST
M2	MECHANICAL - DETAILS
M3	MECHANICAL - NEW VENTILATION LAYOUT
M4	MECHANICAL - NEW FUEL PIPING LAYOUT
M5	MECHANICAL - NEW WATER PIPING LAYOUT
M6	MECHANICAL - FUEL AND WATER PIPING SCHEMATICS
M7	MECHANICAL - CONTROL SCHEMATICS

CONTROLS LEGEND

N.C.	NORMALLY CLOSE		NORMALLY OPEN CONTACT		THERMOSTAT
N.O.	NORMALLY OPEN		NORMALLY CLOSE CONTACT		ELECTRICAL THERMOSTAT
TR	TRANSFORMER		OVERLOAD RELAY		NORMALLY OPEN MOTORIZED BUTTERFLY VALVE
MD-X	MOTORIZED DAMPER		MANUAL SWITCH		NORMALLY CLOSE MOTORIZED BUTTERFLY VALVE
FAD	FRESH AIR DAMPERS		NORMALLY OPEN PUSH-BUTTON		SOLENOID VALVE
EAD	EXHAUST AIR DAMPERS		NORMALLY CLOSE PUSH-BUTTON		
RAD	RETURN AIR DAMPERS		" HAND-OFF-AUTO " SELECTOR		
CAD	COMBUSTION AIR DAMPERS		MANUAL STARTER		
	FAN		GREEN PILOT LIGHT		
	PUMP		RED PILOT LIGHT		
	DAMPER		ELECTRICAL RELAY		
	ELECTRICITY BY CONTROLS DIVISION		CURRENT RELAY		
	ELECTRICITY BY ELECTRICAL DIVISION		ELECTRICAL MOTOR		
	TRANSFORMER WITH FUSE AND GROUND ON SECONDARY		FLOW SWITCH		



NOTES: GENERAL CONTRACTOR TO VERIFY ALL DIMENSIONS WITH FINAL ARCHITECTURAL AND MECHANICAL DRAWINGS. NOTIFY THE ENGINEERS OF ANY ERRORS AND/OR OMISSIONS PRIOR TO CONSTRUCTION FOR DIRECTION. DO NOT SCALE THIS DRAWING.

No.	DESCRIPTION	DATE	BY	APP'D
0	ISSUED FOR TENDER	04/13/2010	C.B.	P.S.O.
REVISIONS				

WOOD-BOURGEOIS-PARISEAU
 Ottawa : 3740 Richmond Road, Suite 100, K2H 5B9
 T:(613) 596.6454 F:(613) 596.3346
 www.WBPEngineering.com
 Gatineau : 430 de l'hôpital bid, suite 210, J8V 1T7
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 Consulting Engineers

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 Fax:(613)225-7337

CLIENT: GOVERNMENT OF NUNAVUT
 DEPARTMENT OF COMMUNITY
 AND GOVERNMENT SERVICES

PROJECT: SANIKILUAQ, NUNAVUT
 WATER TRUCK FILL STATION

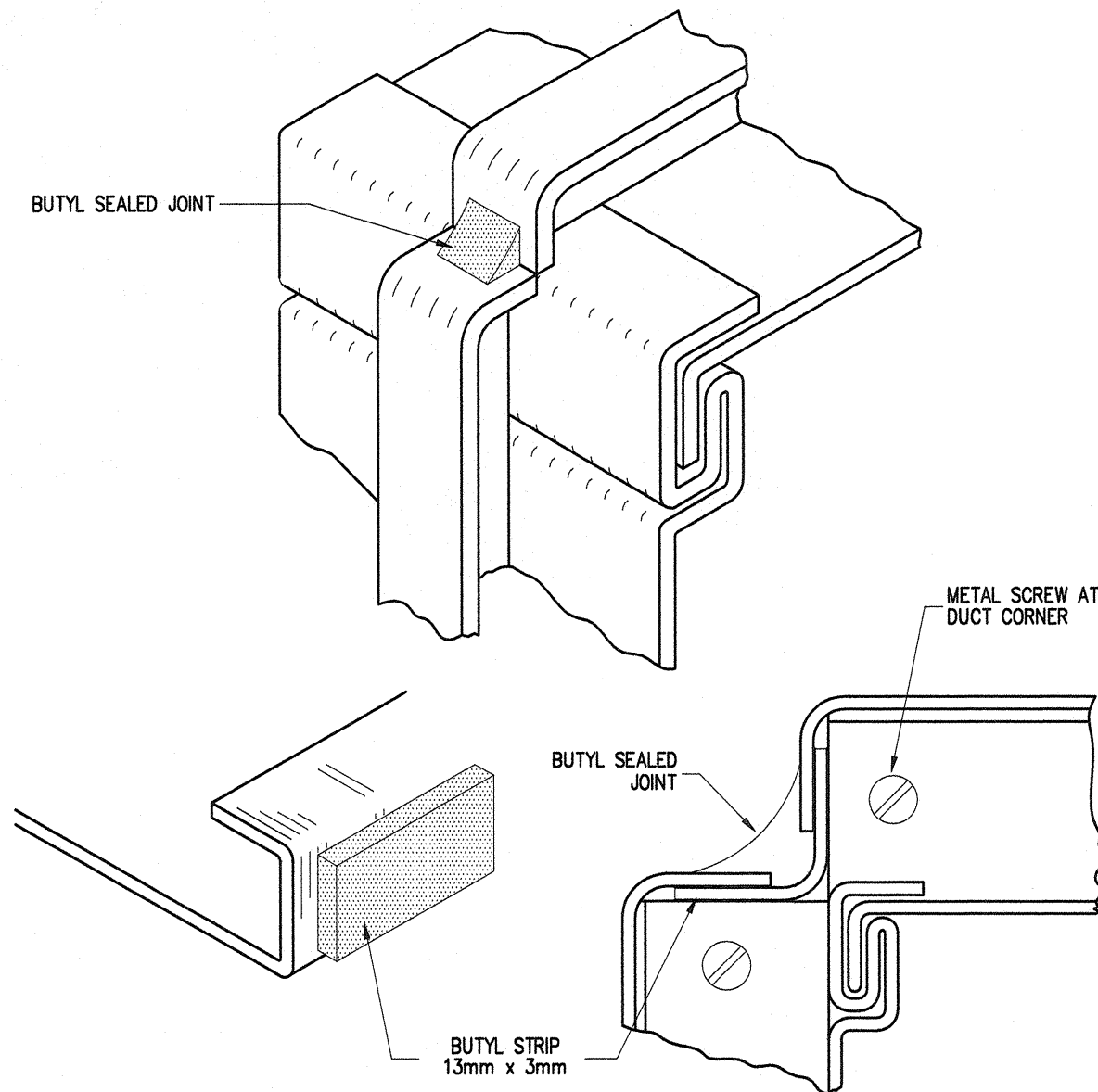
TITLE		MECHANICAL LEGEND AND DRAWING LIST	
design by	C.BOURGOGNE	project no.	08-2019
drawn by	C.BOURGOGNE	drawing no.	
checked by	P.ST-ONGE		
date	APRIL 2010		
scale	AS SHOWN		

M 1

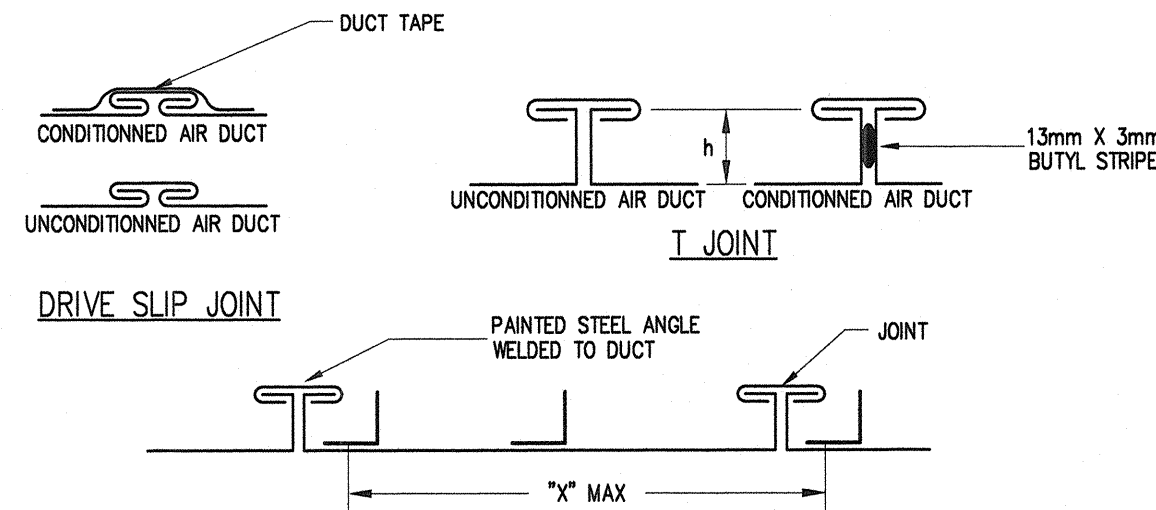
M1

RECORD DRAWING
NO CHANGE

MECHANICAL DETAILS

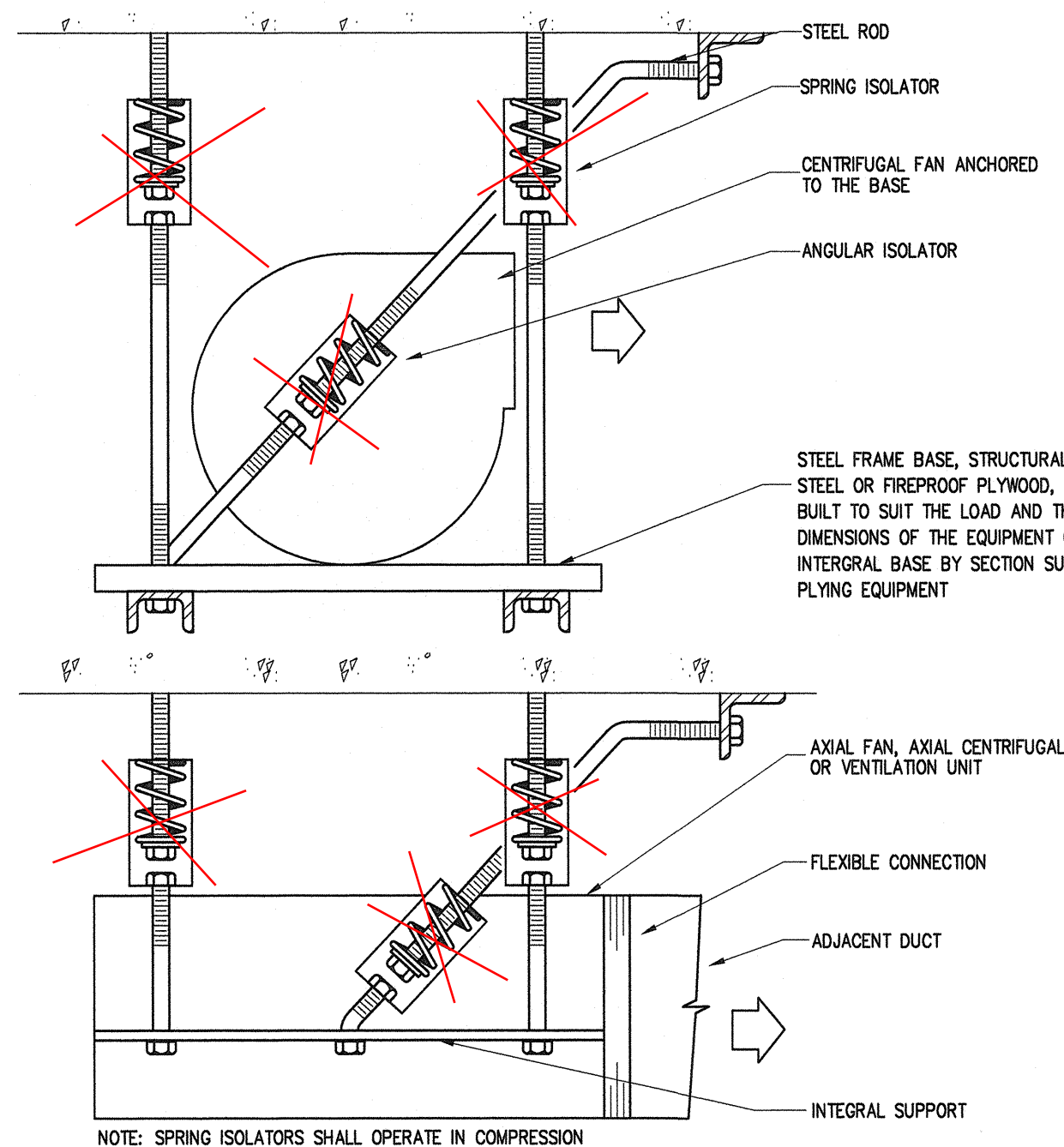


1
M2
SEALED JOINT FOR LOW PRESSURE RECTANGULAR DUCT
NTS

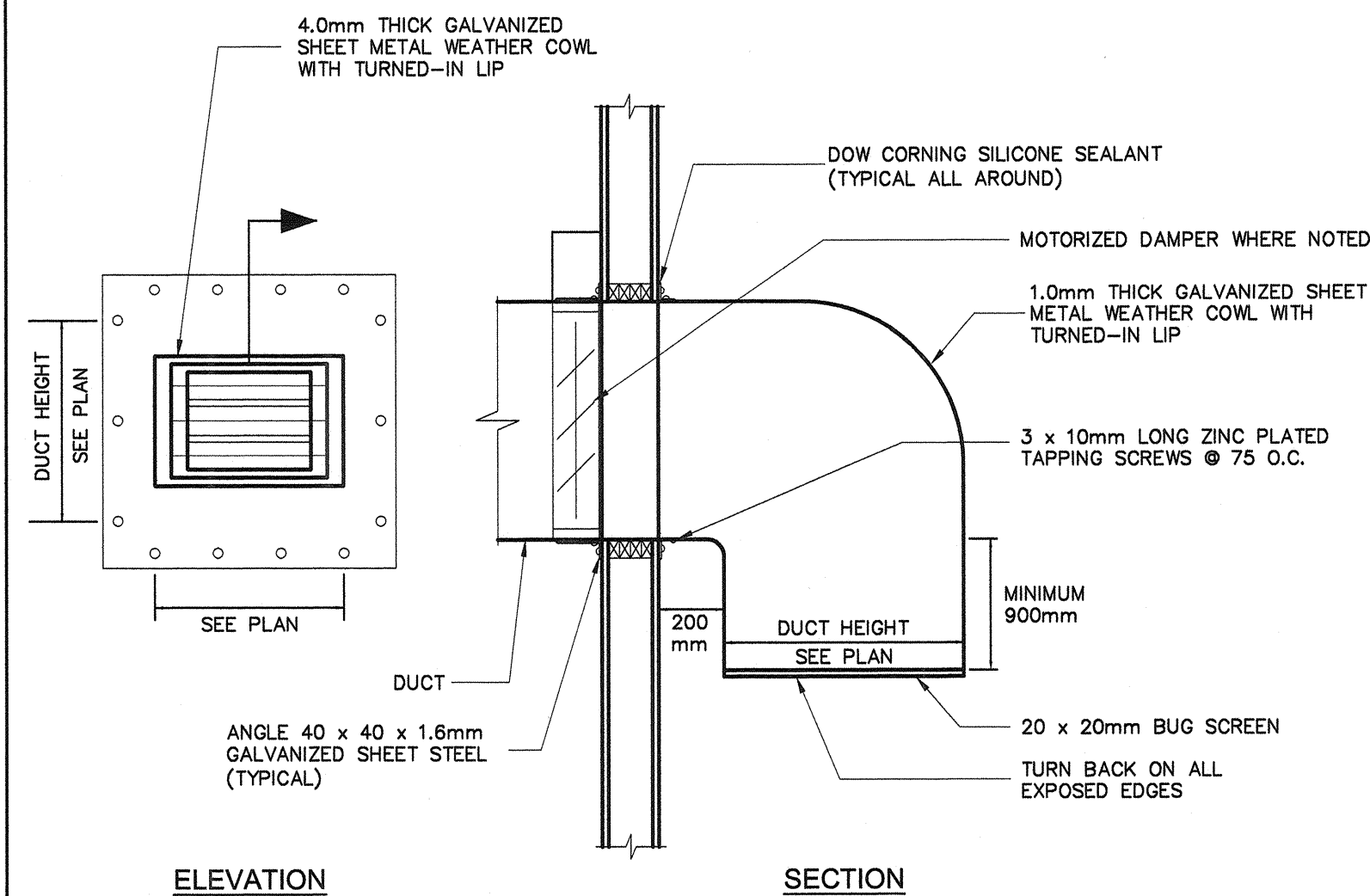


DIMENSIONS mm	SHEET THICKNESS mm (CAL. US)	JOINT TYPE	"h" mm	"x" mm	STEEL ANGLE mm	
					CENTER	END
< 300	0.551 (26)	"DRIVE SLIP"	-	2400	-	-
350 TO 750	0.701 (24)	"T"	25	1170	-	-
800 TO 1350	0.853 (22)	"T"	35	1170	-	-
1400 TO 1500	1.006 (20)	"T"	35	1140	35 X 35 X 3	-
1550 TO 2150	1.006 (20)	"T"	35	1140	35 X 35 X 3	35 X 35 X 3
2200 AND MORE	1.511 (18)	"T"	35	1140	55 X 55 X 3	35 X 35 X 3

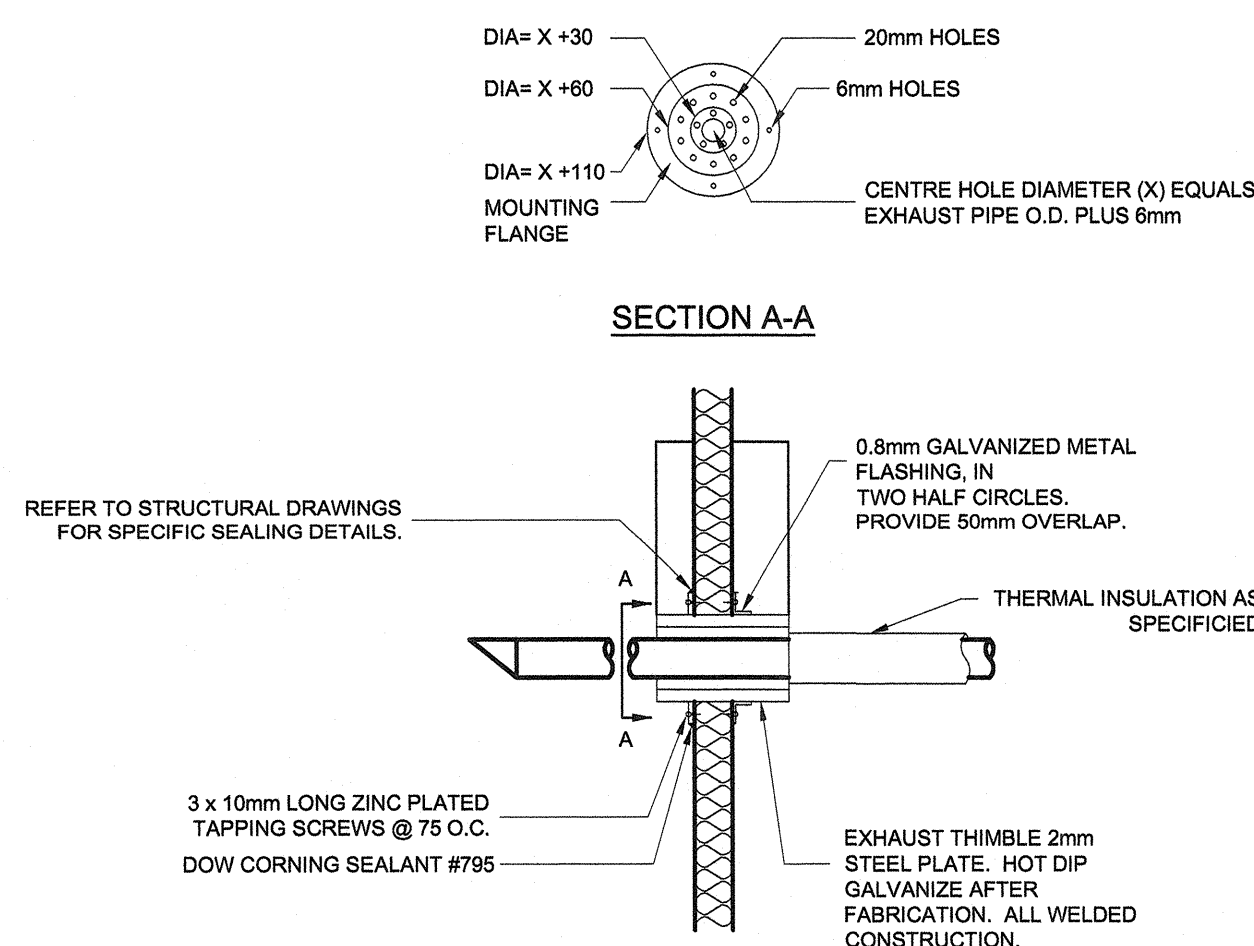
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M2
CROSS JOINT AND REINFORCEMENT
FOR LOW PRESSURE RECTANGULAR DUCT
NTS



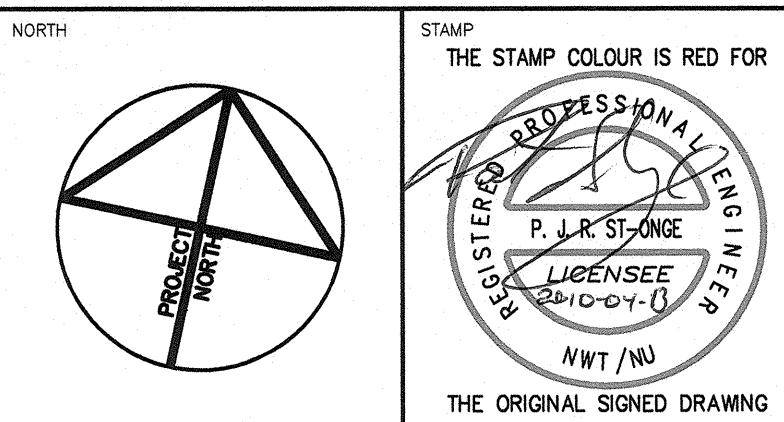
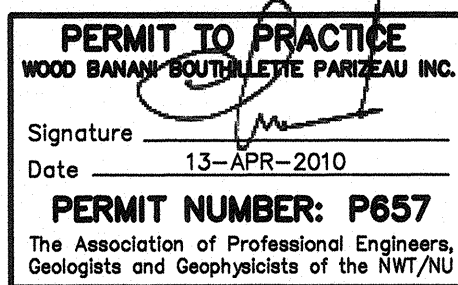
3
M2
SUSPENDED EQUIPMENT (TYPE VI)
NTS



4
M2
TYPICAL WEATHER COWL DETAIL
NTS

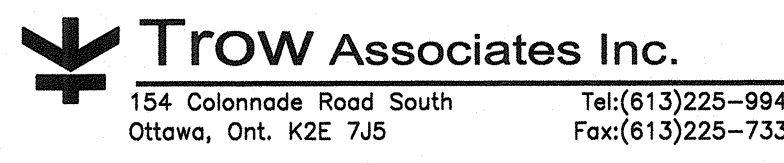


5
M2
THIMBLE DETAILS
NTS



NOTES: GENERAL CONTRACTOR TO VERIFY ALL DIMENSIONS WITH FINAL ARCHITECTURAL AND MECHANICAL DRAWINGS. NOTIFY THE ENGINEERS OF ANY ERRORS AND/OR OMISSIONS PRIOR TO CONSTRUCTION FOR DIRECTION. DO NOT SCALE THIS DRAWING.

REVISIONS				
No.	DESCRIPTION	DATE	BY	APP'D
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CLIENT: GOVERNMENT OF NUNAVUT
DEPARTMENT OF COMMUNITY
AND GOVERNMENT SERVICES

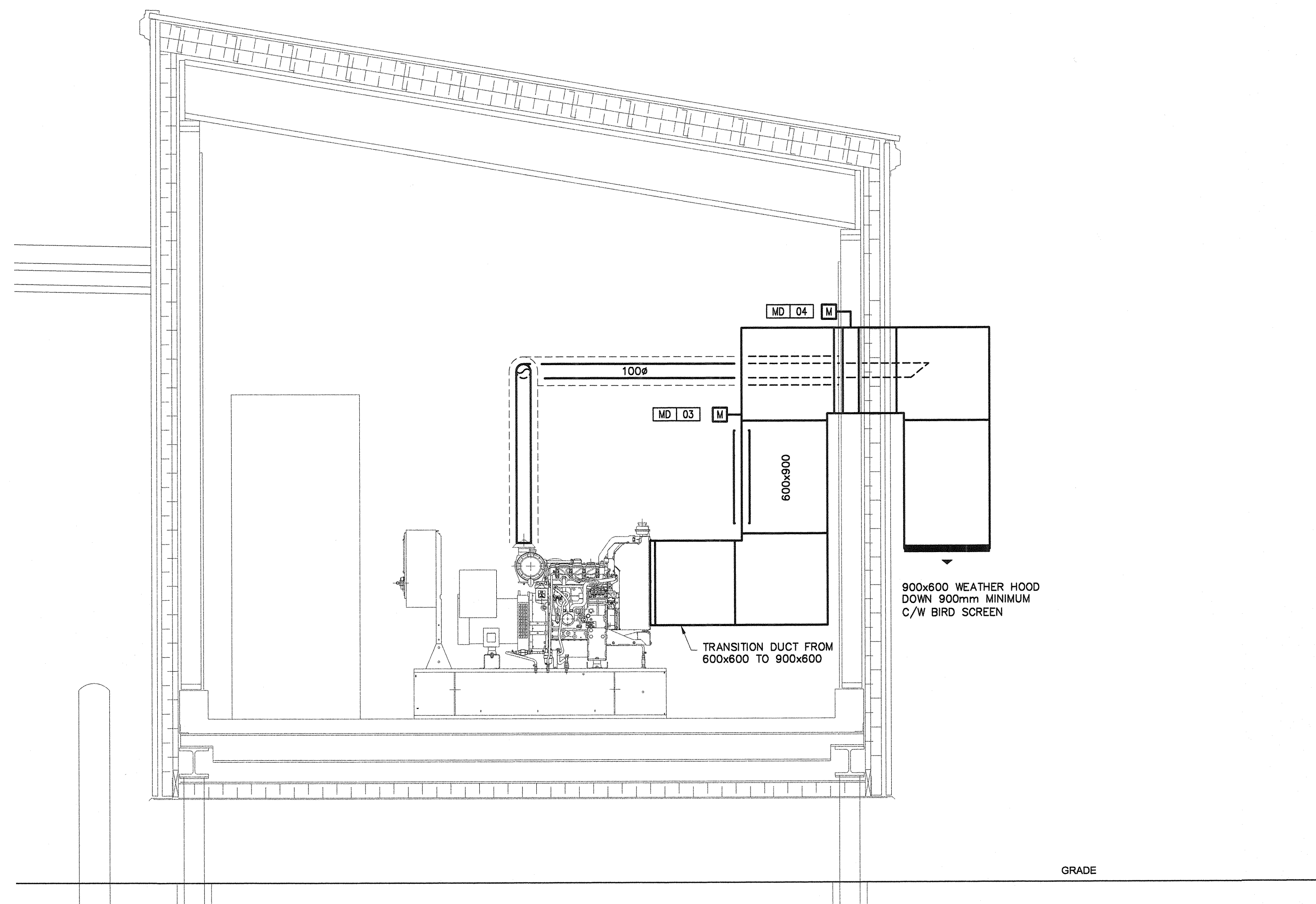
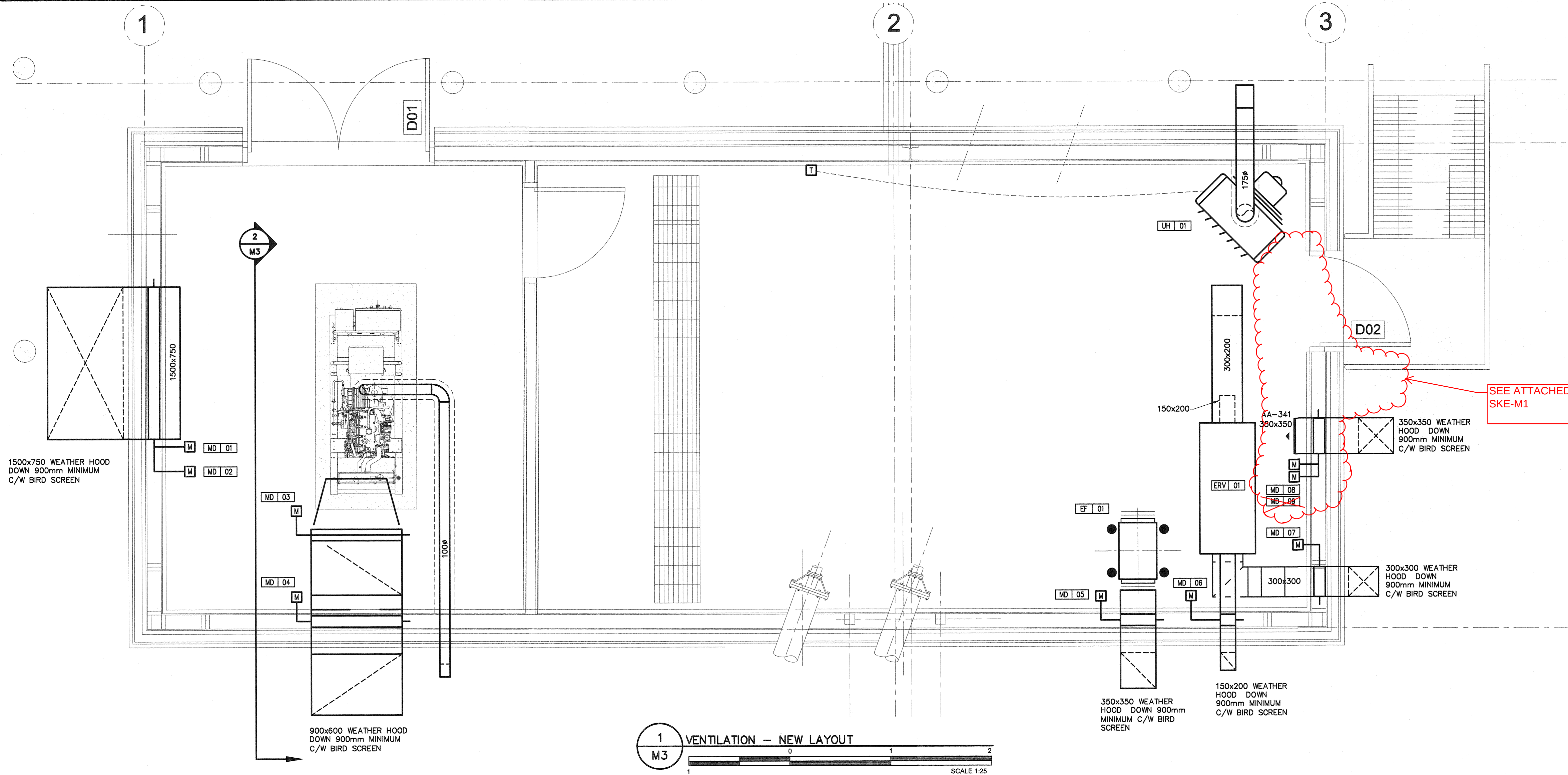
PROJECT: SANIKILUAQ, NUNAVUT
WATER TRUCK FILL STATION

TITLE: MECHANICAL
DETAILS

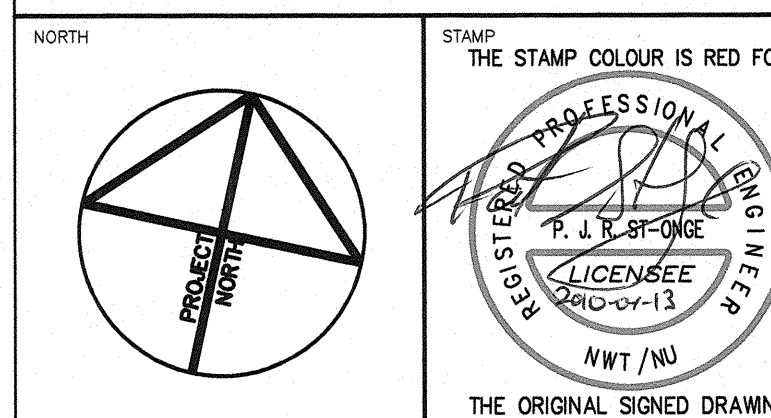
design by	C.BOURGOGNE	project no.	08-2019
drawn by	C.BOURGOGNE	drawing no.	
checked by	P.ST-ONGE		
date	APRIL 2010		
scale	AS SHOWN		

M2

RECORD DRAWING



PERMIT TO PRACTICE
WOOD BARNY BOUTALLETTE PARIZEAU INC.
Signature _____
Date 13-APR-2010
PERMIT NUMBER: P657
The Association of Professional Engineers,
Geologists and Geophysicists of the NWT/NL



NOTES: GENERAL CONTRACTOR TO VERIFY ALL DIMENSIONS
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3740 Richmond Road, Suite 100, K2H 5B9
T.(613) 596.6454 F.(613) 596.3346
www.WBBPengineering.com
Gatineau :
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Consulting Engineers

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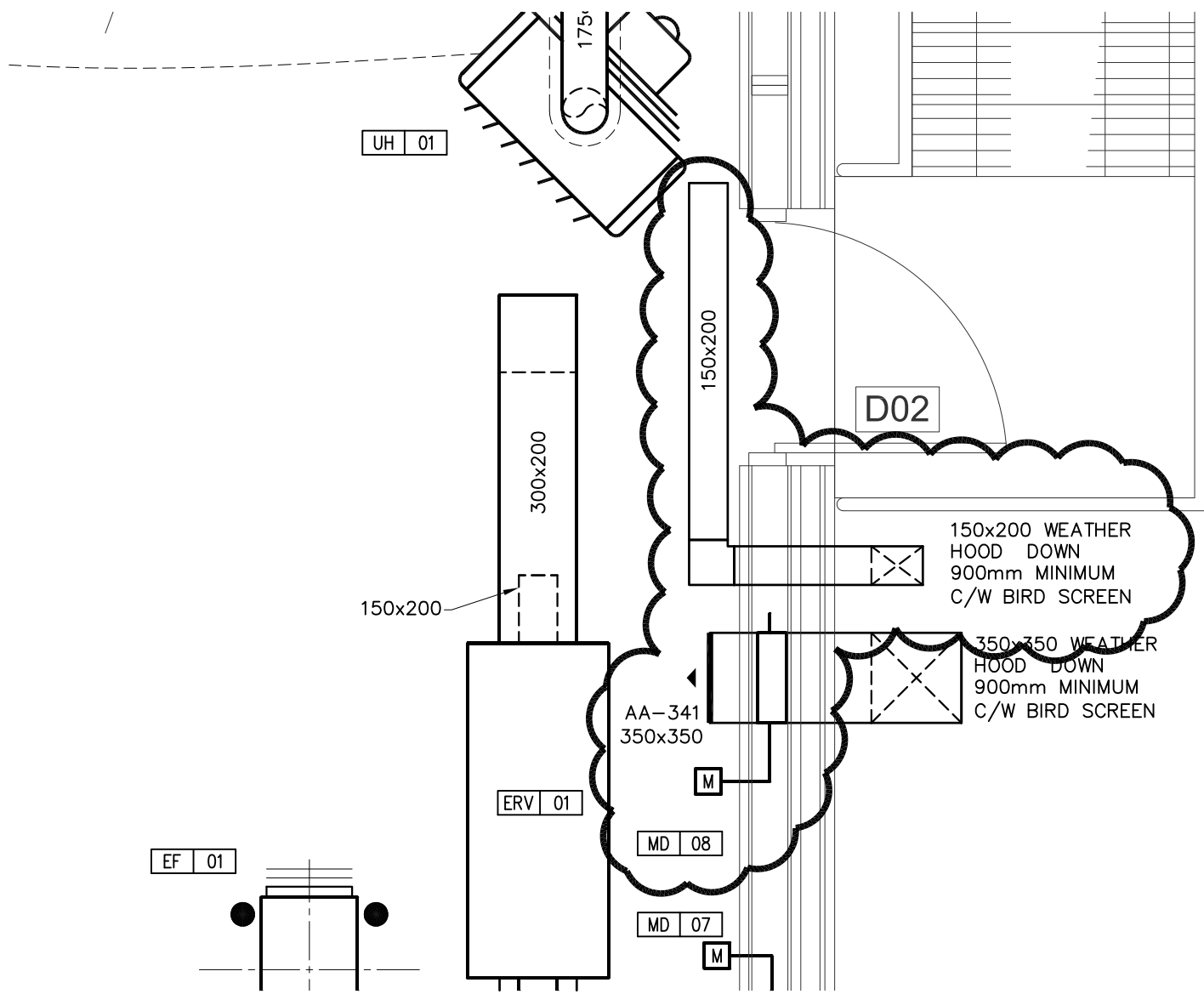
CLIENT
**GOVERNMENT OF NUNAVUT
DEPARTMENT OF COMMUNITY
AND GOVERNMENT SERVICES**

PROJECT
**SANIKILUAQ, NUNAVUT
WATER TRUCK FILL STATION**

TITLE
**MECHANICAL
NEW VENTILATION LAYOUT**

design by	C.BOURGOGNE	project no.	08-2019
drawn by	C.BOURGOGNE	drawing no.	
checked by	P.ST-ONGE		
date	APRIL 2010		
scale	AS SHOWN		

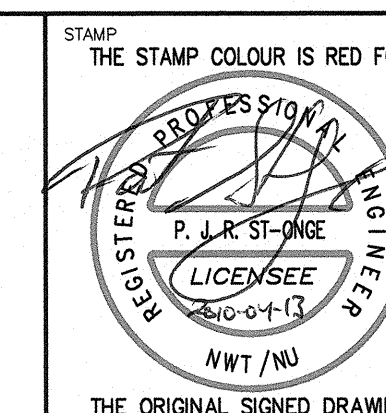
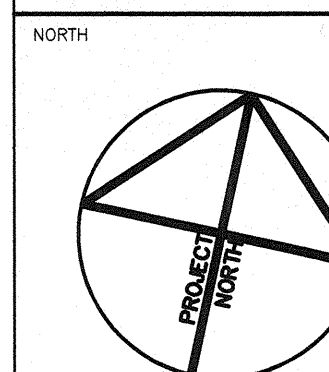
M3



PROJECT: SANIKILUAQ, NUNAVUT WATER TRUCK FILL STATION	TITLE: MECHANICAL NEW VENTILATION LAYOUT	DESIGNED BY:	DRAWN BY:	SCALE:	ISSUED FOR:
		C.B.	C.B.	1:50	CCN M1
		DATE: 09/06/2010		PROJ.NO.: 08-2019	DWG. No.: SKE-M1



PERMIT TO PRACTICE
WOOD BARNUM BOUTHALETTE PARIZEAU INC.
Signature _____
Date 13-APR-2010
PERMIT NUMBER: P657
The Association of Professional Engineers,
Geologists and Geophysicists of the NWT/NU



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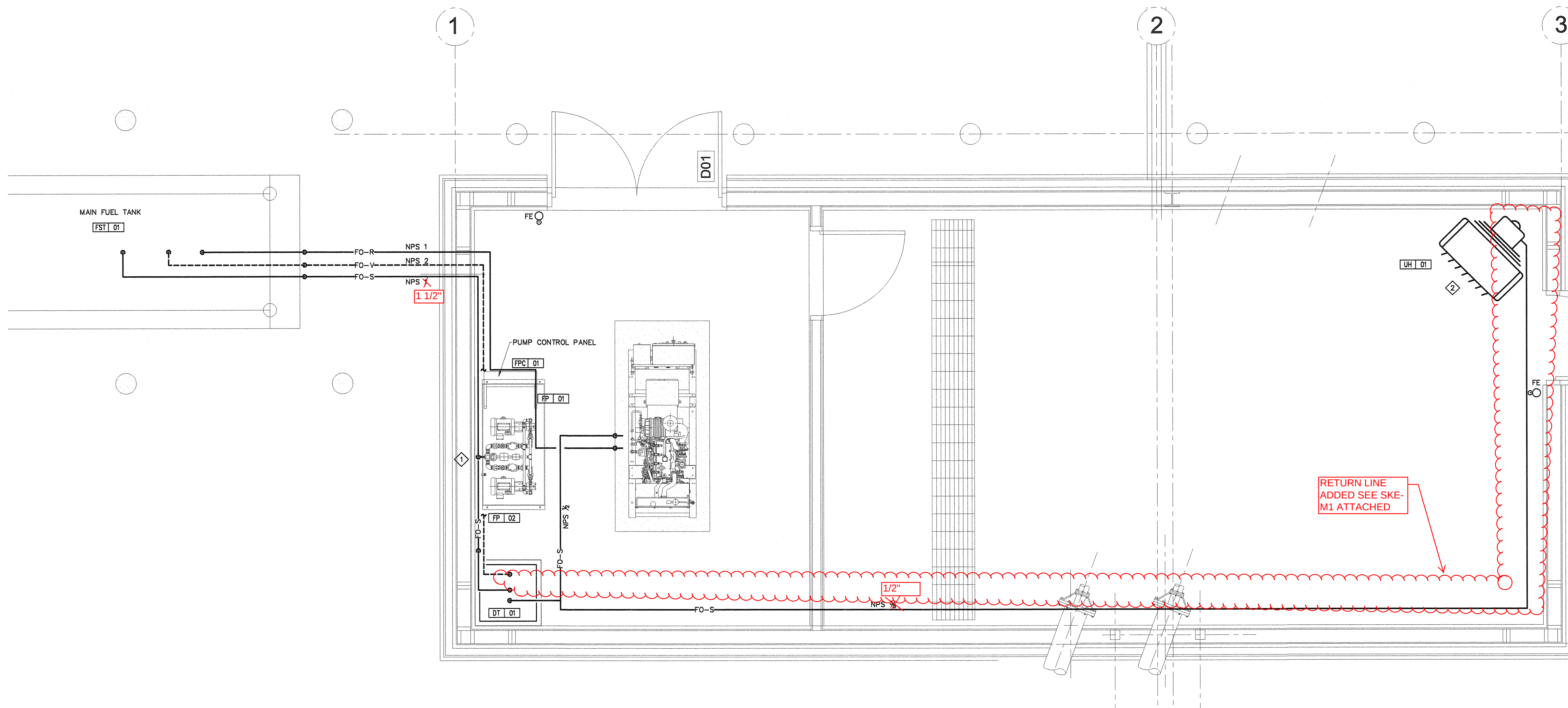
Trow Associates Inc.
154 Colonnade Road South
Ottawa, Ont. K2E 7J5
Tel:(613)225-8940
Fax:(613)225-7337

CLIENT
**GOVERNMENT OF NUNAVUT
DEPARTMENT OF COMMUNITY
AND GOVERNMENT SERVICES**

PROJECT
**SANIKILUAQ, NUNAVUT
WATER TRUCK FILL STATION**

TITLE
**MECHANICAL
NEW FUEL PIPING LAYOUT**

design by	C.BOURGOGNE	project no.	08-2019
drawn by	C.BOURGOGNE	drawing no.	M4
checked by	P.ST-ONGE		
date	APRIL 2010		
scale	AS SHOWN		

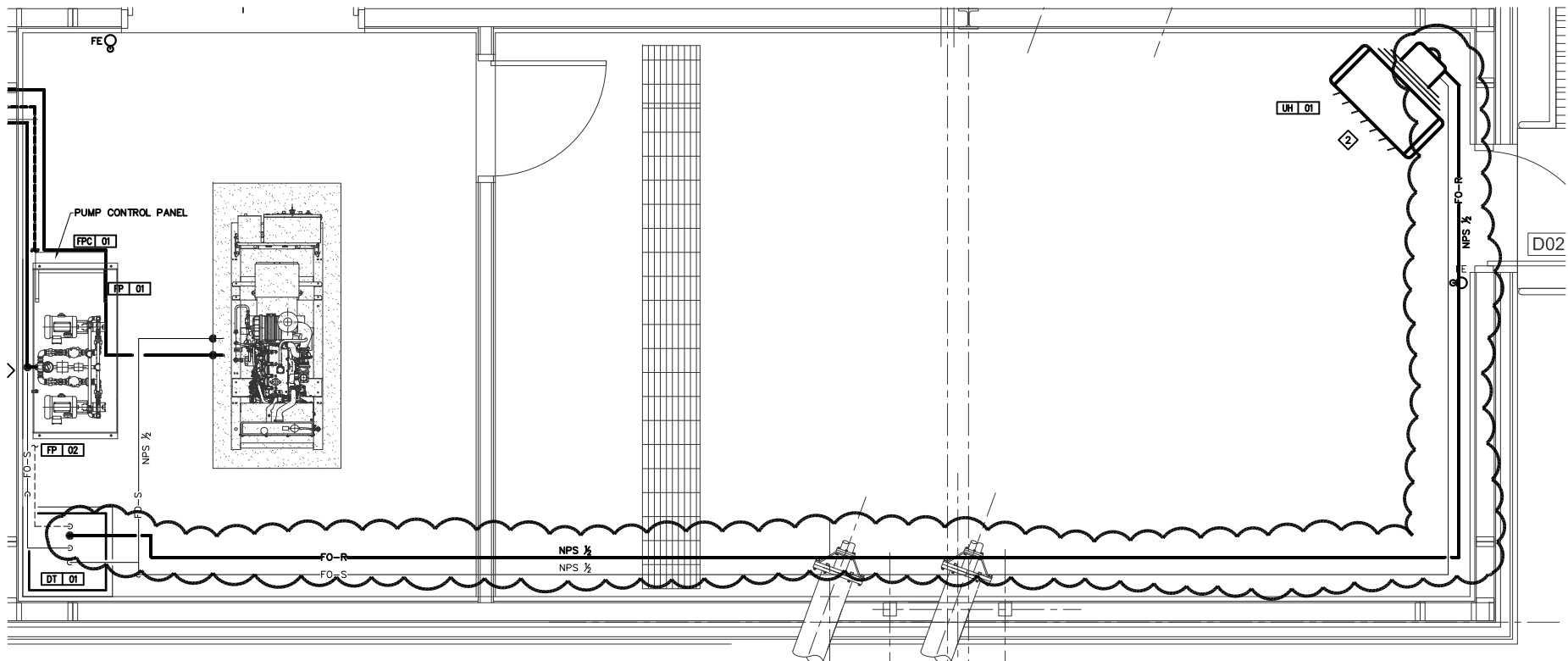


GENERAL NOTES:
- REFER TO M6 FOR PIPING DIAGRAM.

DRAWING NOTES:
◇ PUMP SUCTION INLET LOCATED BELOW OUTLET.
◇ INSTALL UNIT HEATER SUSPENDED FROM
CEILING

1
M4
FUEL PIPING - NEW LAYOUT
SCALE 1:25

RECORD DRAWING
SEE DRAWING 186-M11
AS BUILT



1
M4

FUEL PIPING - NEW LAYOUT

0 1 2 3

1 SCALE 1:50

RECORD
DRAWING



PROJECT:
SANIKILUAQ, NUNAVUT
WATER TRUCK FILL STATION

TITLE:
MECHANICAL
NEW FUEL PIPING LAYOUT

DESIGNED BY:
C.B.

DRAWN BY:
C.B.

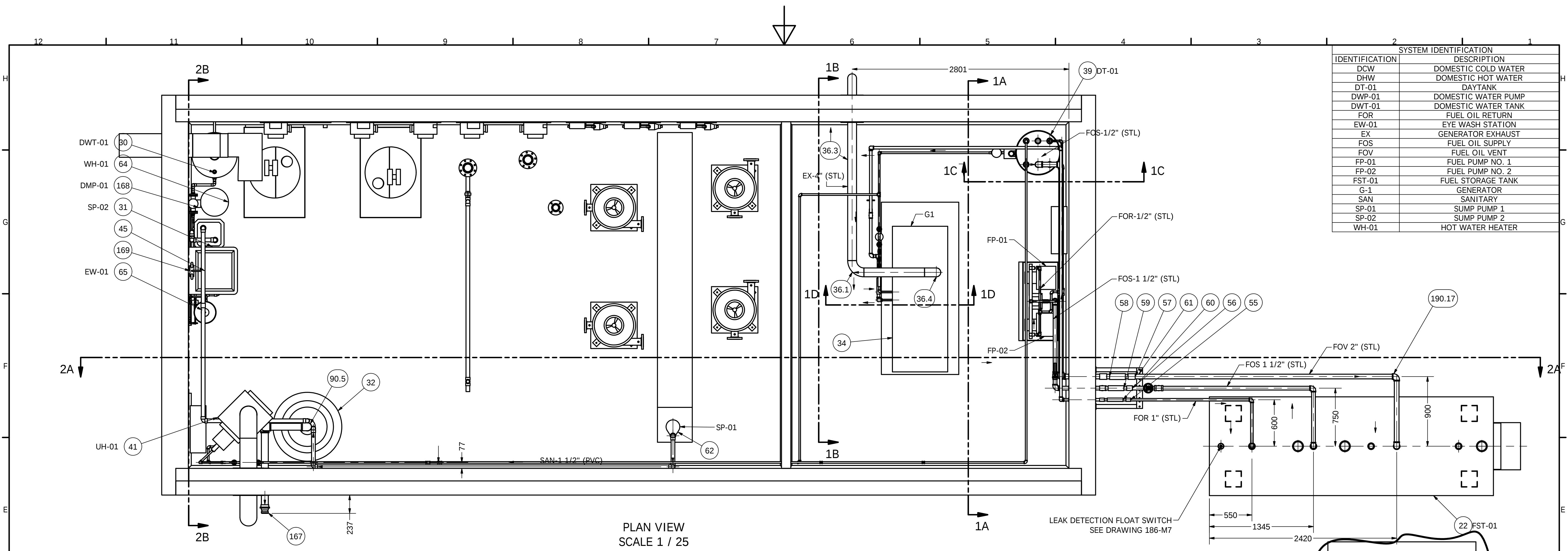
SCALE:
AS SHOWN

ISSUED FOR:
CCN M4

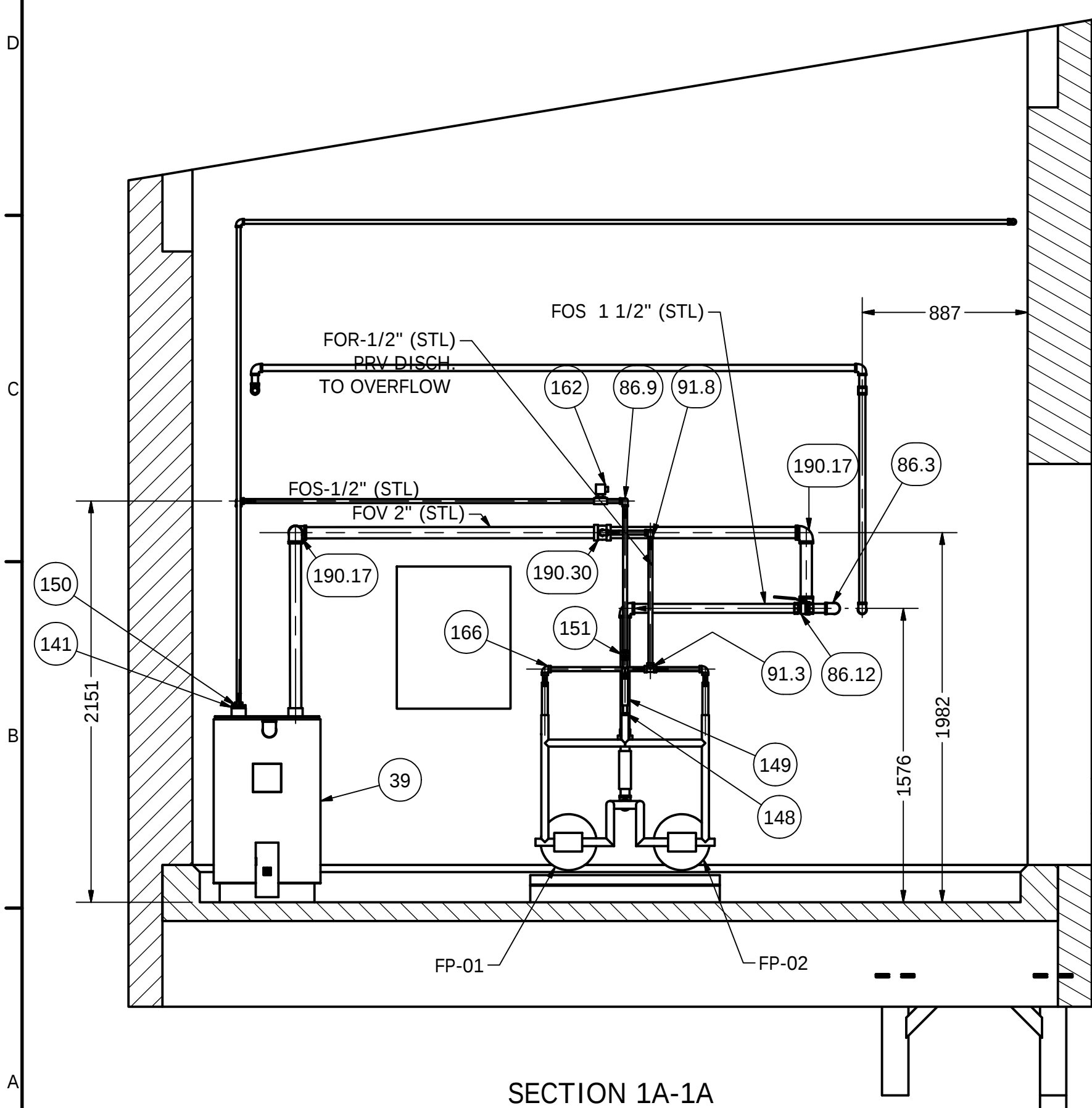
DATE:
04/08/2010

PROJ.NO.:
08-2019

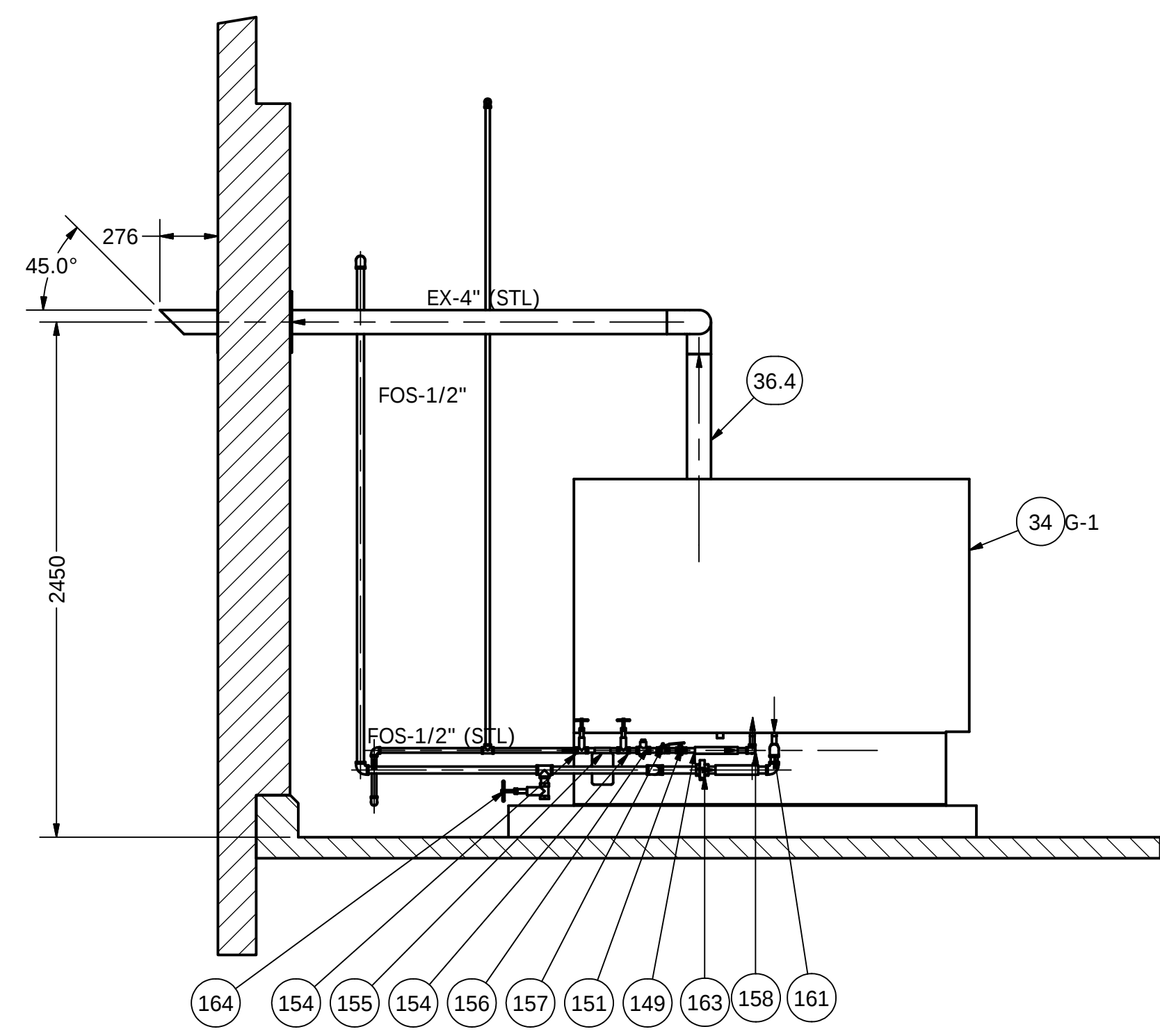
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SKE-M1



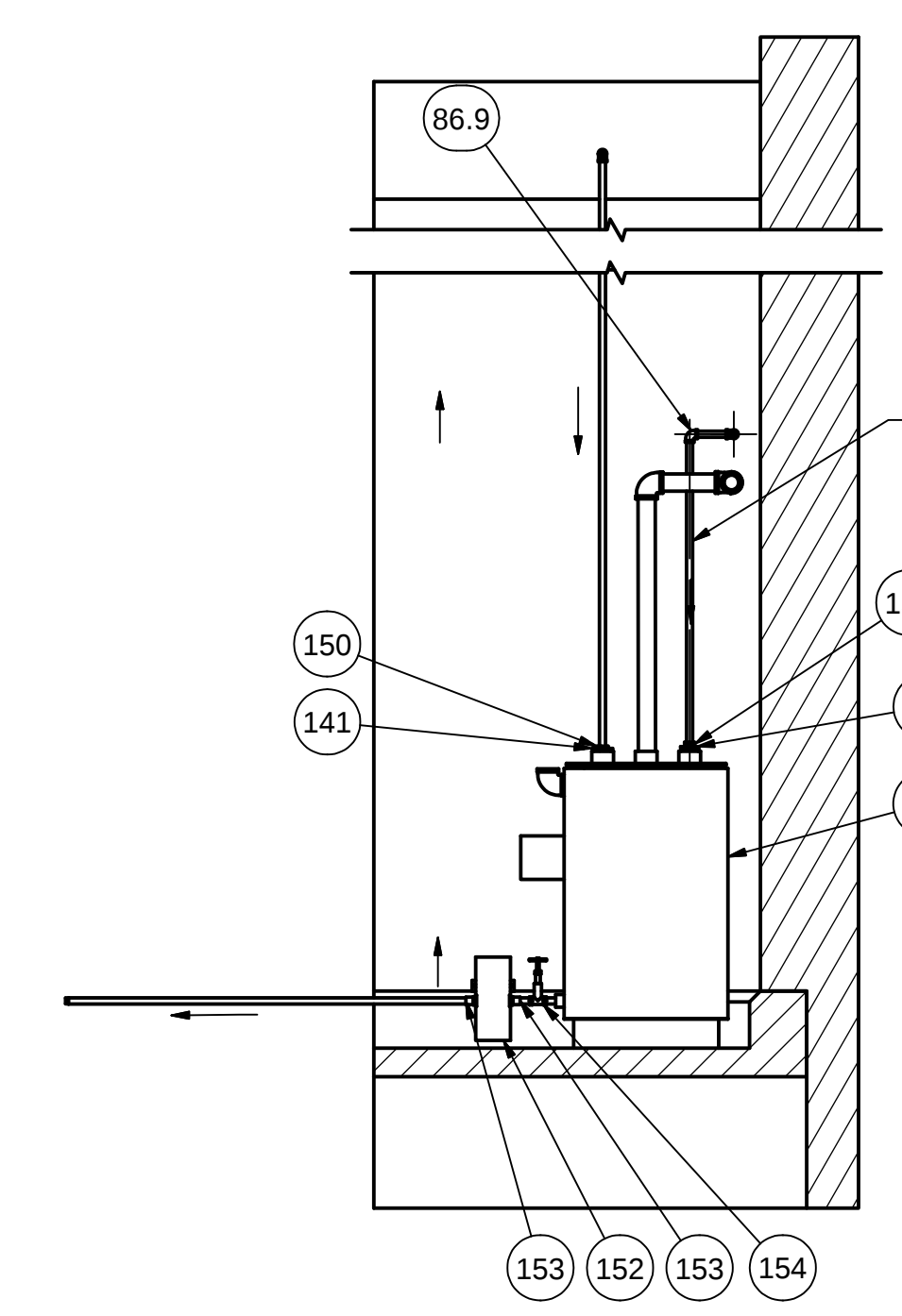
PLAN VIEW
SCALE 1 / 25



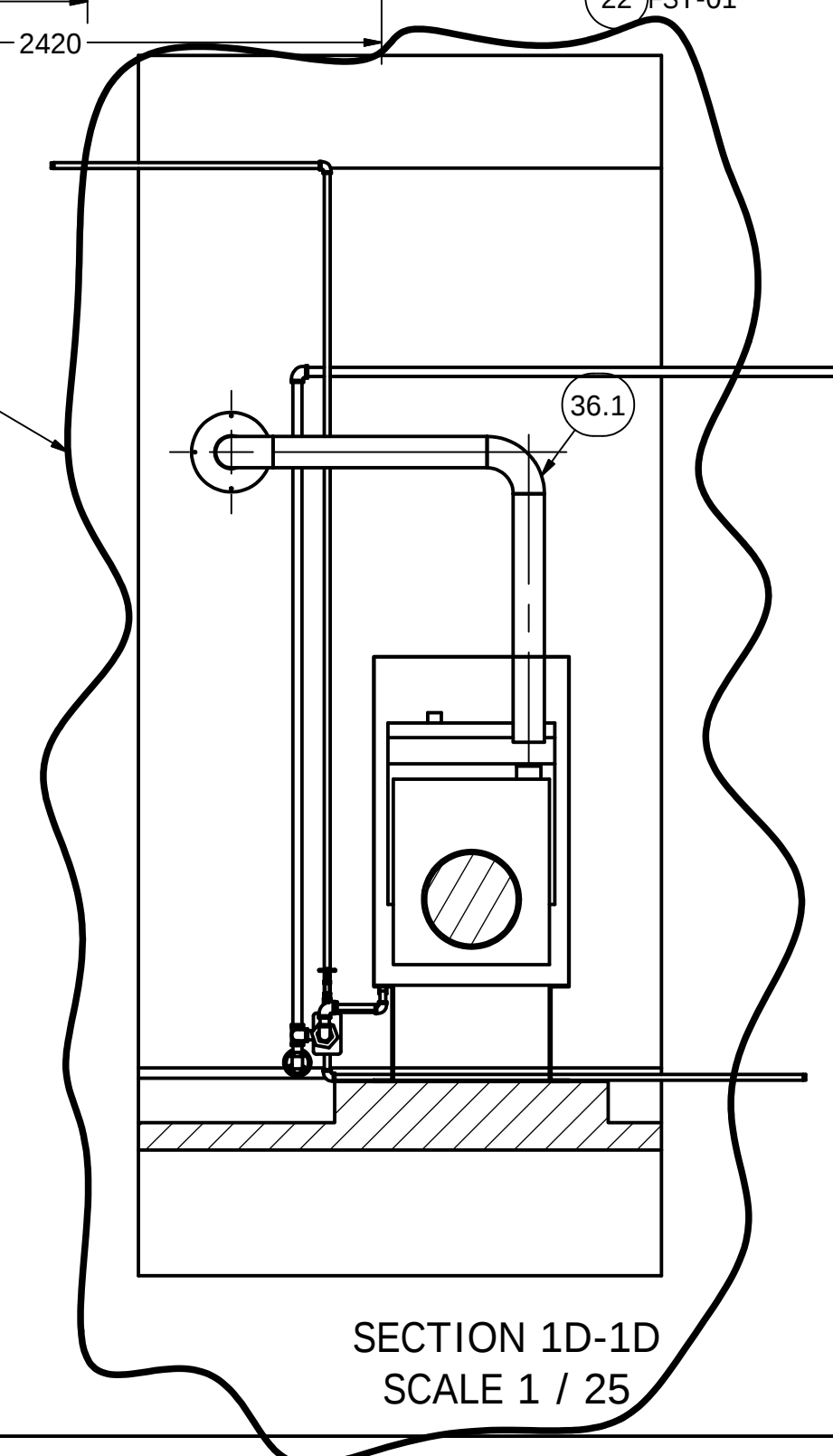
SECTION 1A-1A
SCALE 1 / 25



SECTION 1B-1B
SCALE 1 / 25



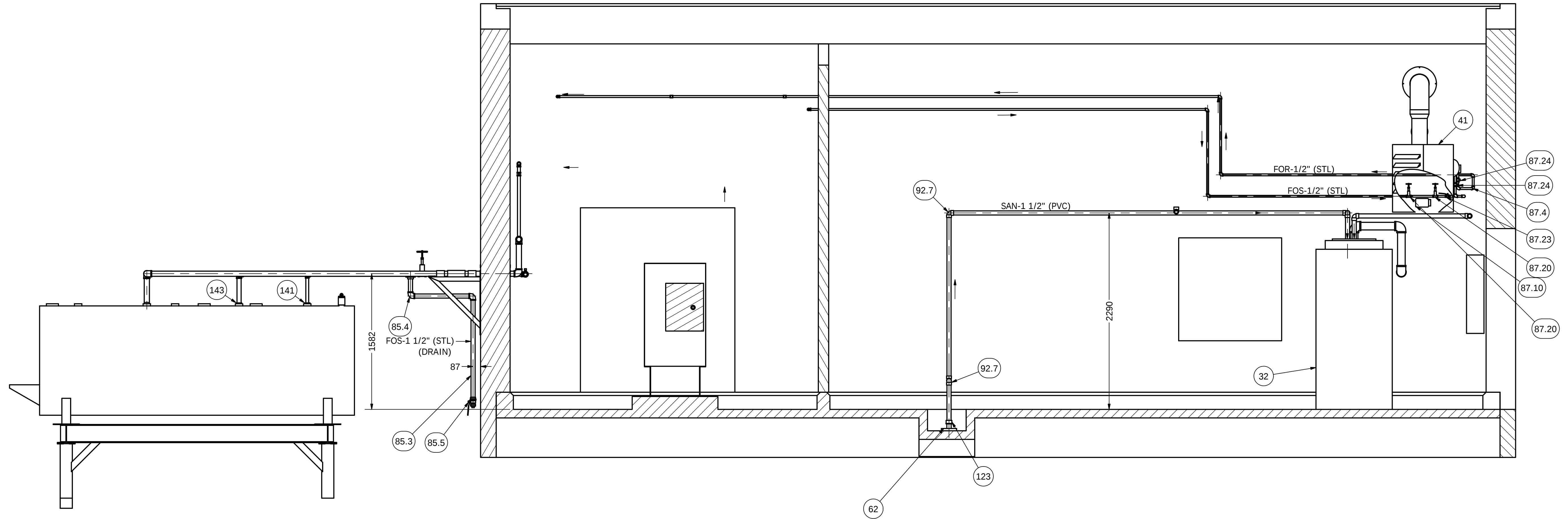
SECTION 1C-1C
SCALE 1 / 25



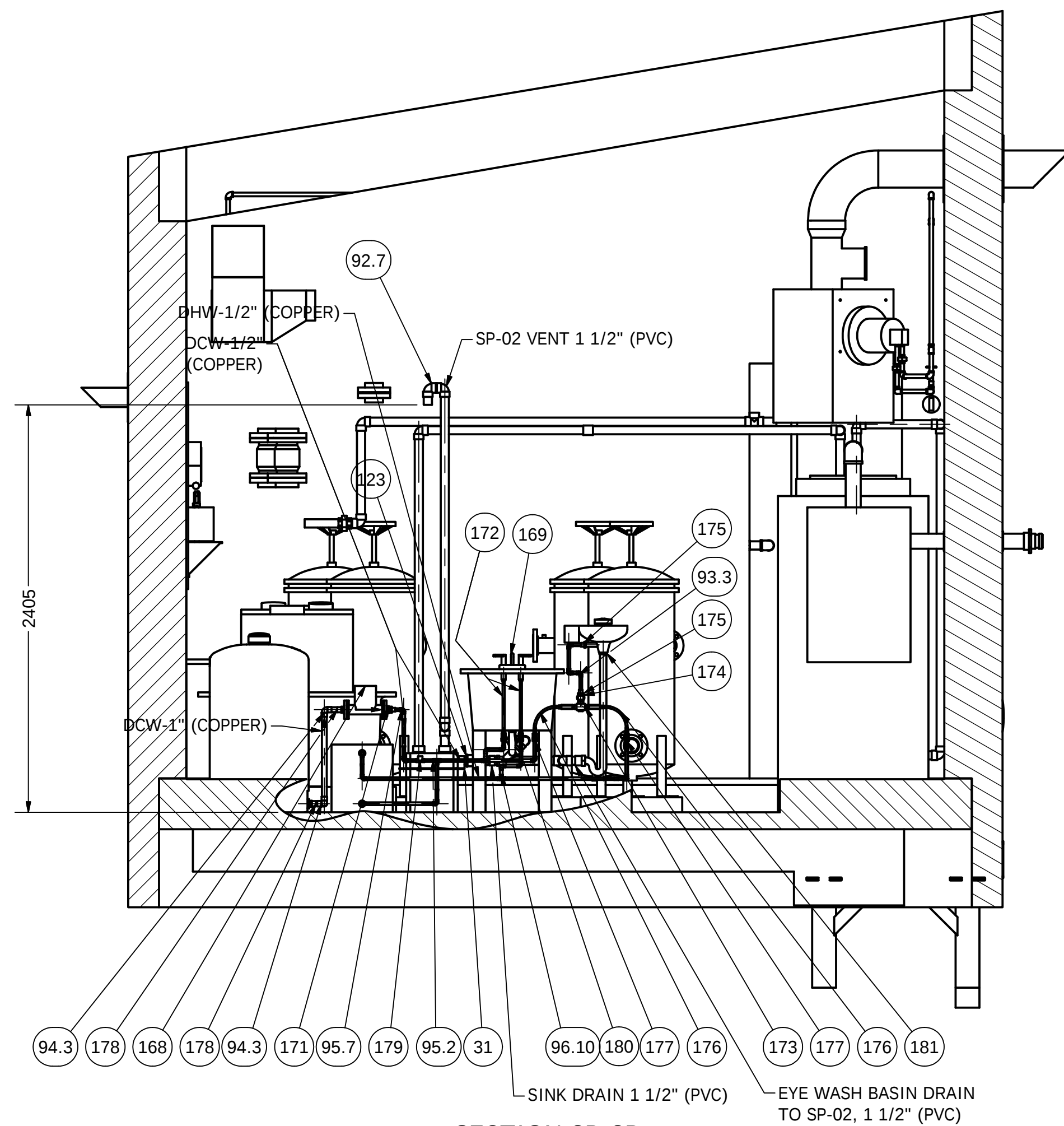
SECTION 1D-1D
SCALE 1 / 25

AS BUILT

MOSHER ENGINEERING LIMITED		1869 UPPER WATER STREET	
-GRAVEL CRUSHING		SUITE AH 202	
-EARTHWORK		HALIFAX, NS	
-PROCESS PIPE WELDING		B3J 1S9	
-INDUSTRIAL CONTRACTING		PH: (902) 429-0272	
		FAX: (902) 429-7762	
DRAWN M. LOSIER	9/28/2010	SANIKILUAQ NEW TRUCKFILL STATION	
CHECKED		TITLE	
QA		Piping Arrangement Fuel, Domestic Water, Sanitary, Generator Exhaust	
MFG		SIZE	
APPROVED		DWG NO	
		186-M11	
		REV	
		1	
SCALE		SHEET 1 OF 3	



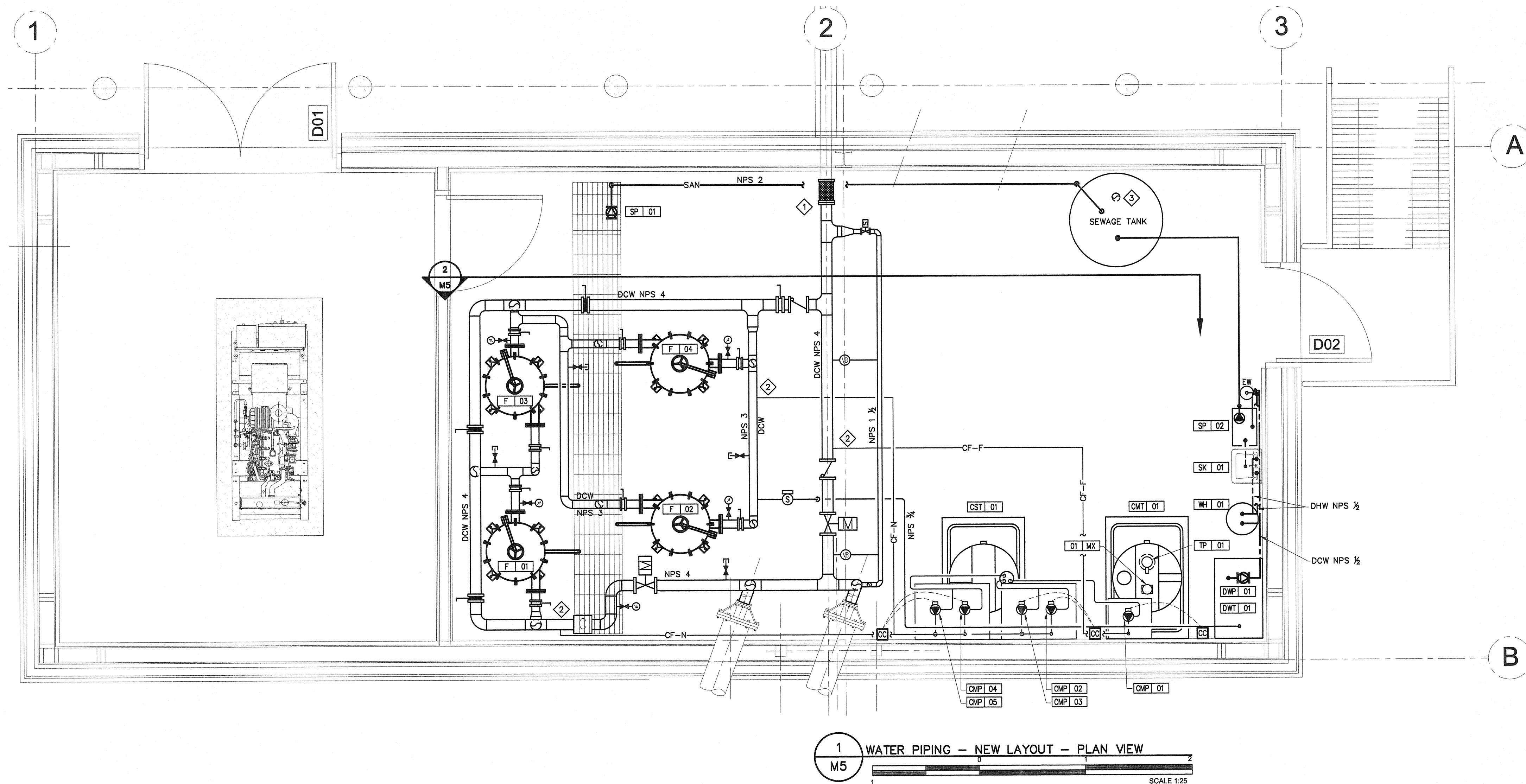
SECTION 2A-2A
SCALE 1 / 25



SECTION 2B-2B
SCALE 1 / 25

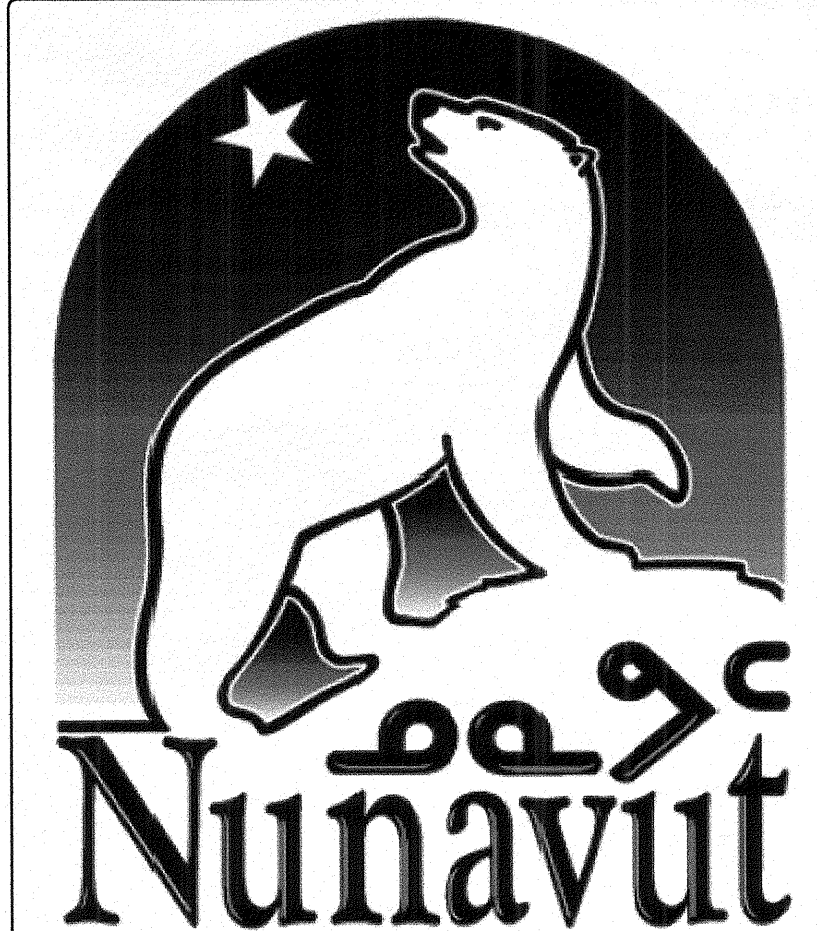
AS BUILT

MOSHER ENGINEERING LIMITED				1869 UPPER WATER STREET				B	
-GRAVEL CRUSHING				SUITE AH 202					
-EARTHWORK				HALIFAX, NS					
-PROCESS PIPE WELDING				B3J 1S9					
-INDUSTRIAL CONTRACTING				PH: (902) 429-0272 FAX: (902) 429-7762					
DRAWN									
M. LOSIER	9/28/2010	SANIKILUAQ NEW TRUCKFILL STATION							
CHECKED		TITLE							
QA		Piping Arrangement Fuel, Domestic Water, Sanitary, Generator Exhaust							
MFG									
APPROVED									
		SIZE		DWG NO				REV	
		A1		186-M11				1	
		SCALE			SHEET			2 OF 3	

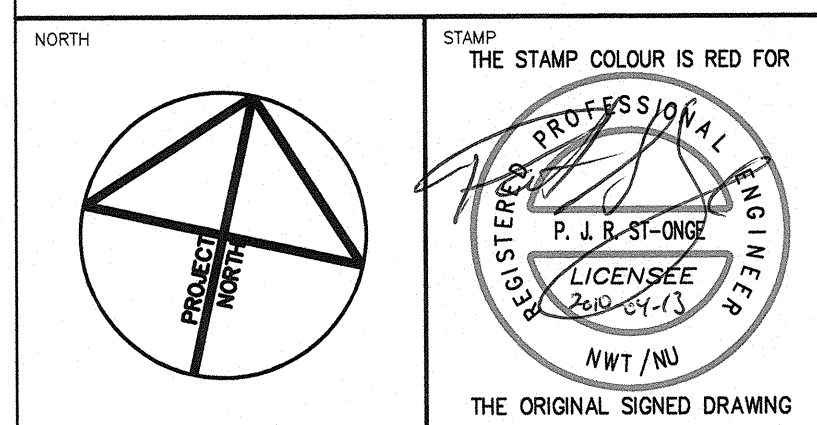


GENERAL NOTES:
 - LAYOUT OF CHEMICAL FEED PIPING IS SHOWN SCHEMATICALLY FOR CLARITY. COORDINATE FINAL LAYOUT ON SITE.

DRAWING NOTES:
 1. CONNECT PIPE TO TRUCK FILL ARM WITH FLEXIBLE JOINT (ARM BY OTHER).
 2. CONNECT CHEMICAL FEED PIPE TO WATER PIPE.
 3. SEWAGE TANK AIR VENT.



PERMIT TO PRACTICE
 WOOD BARNUM BOUTHALETTE PARIZEAU INC.
 Signature: _____
 Date: 13-APR-2010
PERMIT NUMBER: P657
 The Association of Professional Engineers, Geologists and Geophysicists of the NWT/NU



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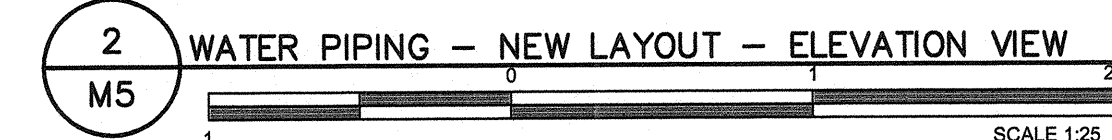
CLIENT: **GOVERNMENT OF NUNAVUT
 DEPARTMENT OF COMMUNITY
 AND GOVERNMENT SERVICES**

PROJECT: **SANIKILUAQ, NUNAVUT
 WATER TRUCK FILL STATION**

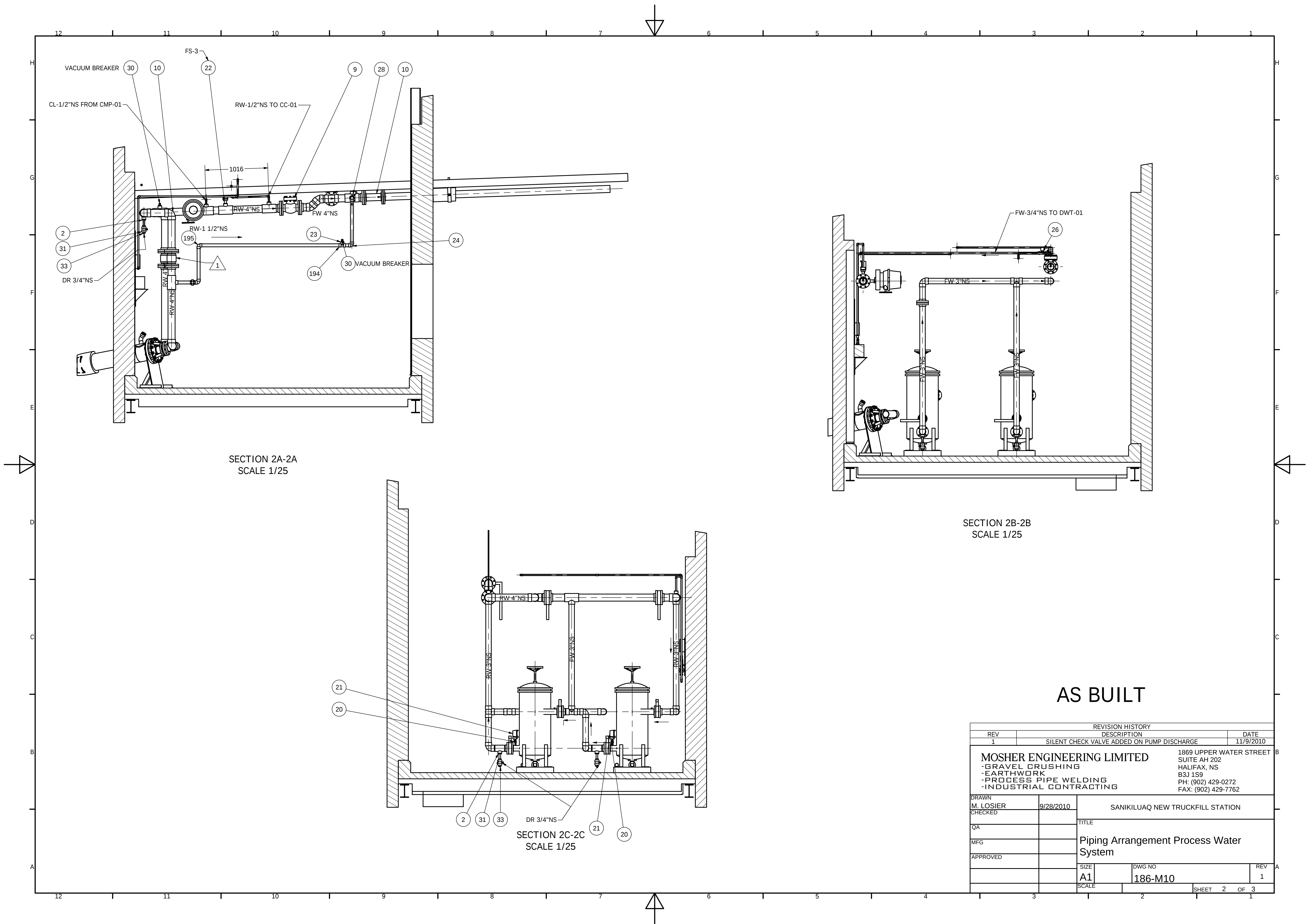
TITLE: **MECHANICAL
 NEW WATER PIPING LAYOUT**

design by	C.BOURGOGNE	project no.	08-2019
drawn by	C.BOURGOGNE	drawing no.	M5
checked by	P.ST-ONGE		
date	APRIL 2010		
scale	AS SHOWN		

DRAWING NOTES:
 1. CONNECT DRAIN TO DRAINAGE TRENCH



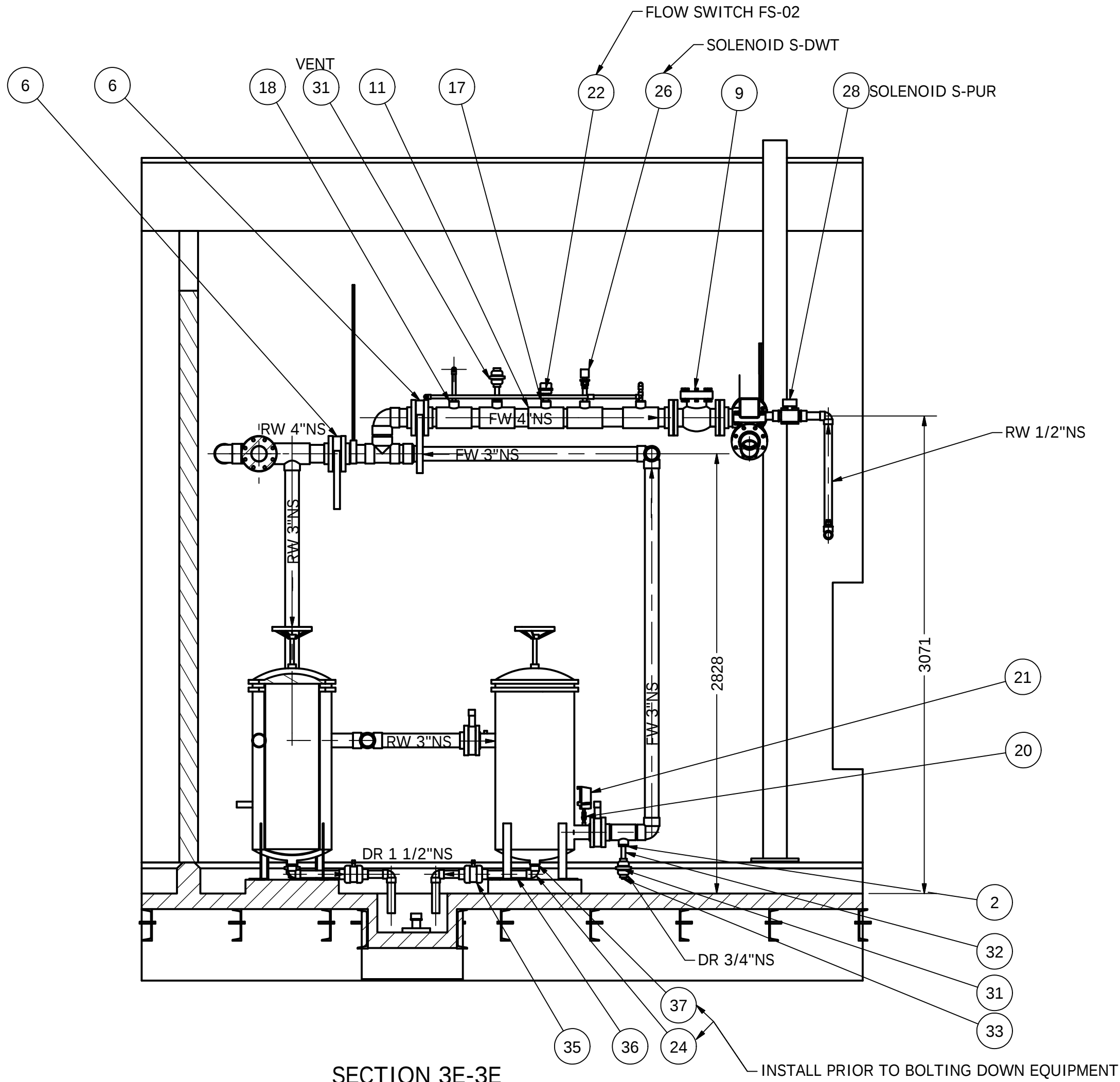
RECORD DRAWING
 SEE DRAWING 186-M10 AS
 BUILT



DOMESTIC FRESH WATER TANK
DWT-01

SECTION 3D-3D
SCALE 1/25

1/2"NS TO DRAIN TRENCH



SECTION 3E-3E
SCALE 1/25

INSTALL PRIOR TO BOLTING DOWN EQUIPMENT

AS BUILT

REVISION HISTORY		DATE
REV 1	DESCRIPTION SILENT CHECK VALVE ADDED ON PUMP DISCHARGE	11/9/2010
MOSHER ENGINEERING LIMITED -GRAVEL CRUSHING -EARTHWORK -PROCESS PIPE WELDING -INDUSTRIAL CONTRACTING		1869 UPPER WATER STREET SUITE AH 202 HALIFAX, NS B3J 1S9 PH: (902) 429-0272 FAX: (902) 429-7762
DRAWN M. LOSIER CHECKED	9/28/2010	SANIKILUAQ NEW TRUCKFILL STATION
QA		TITLE
MFG		Piping Arrangement Process Water System
APPROVED		
	SIZE A1	DWG NO 186-M10
	SCALE	REV 1
		SHEET 3 OF 3

FUEL SYSTEM SCHEMATICS

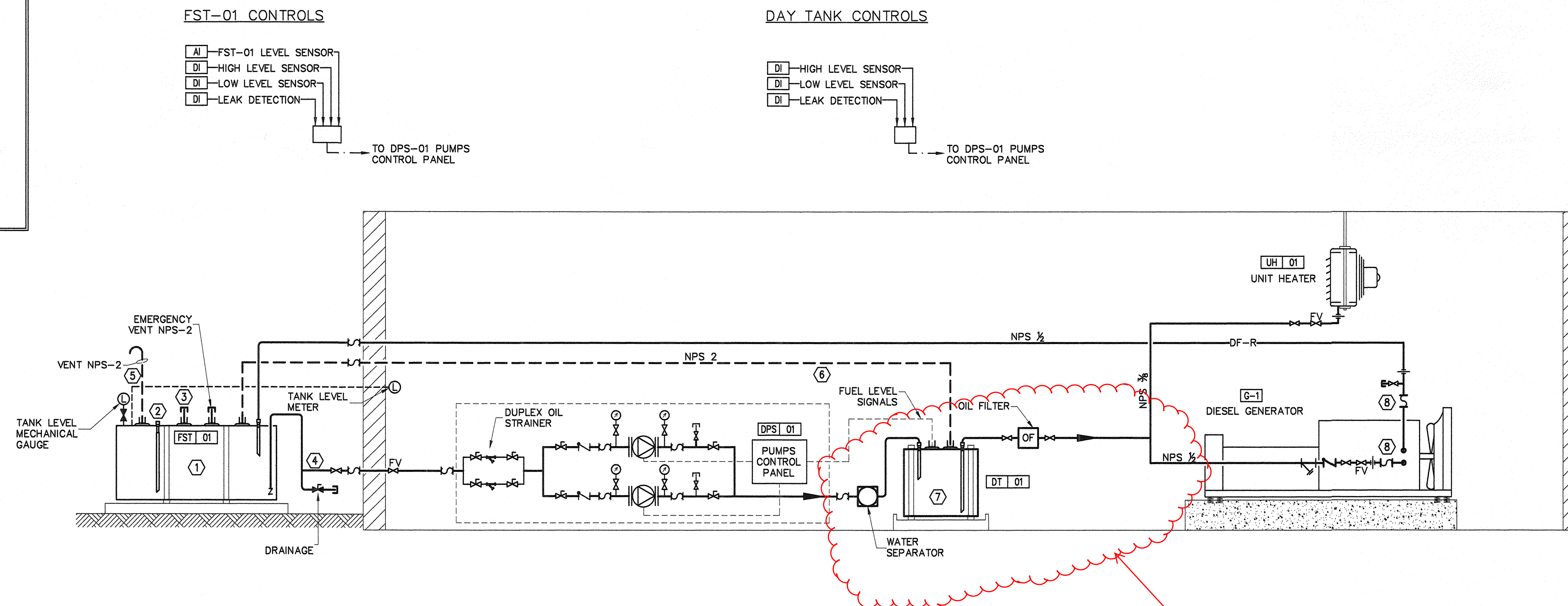
PIPING AND CONTROLS SCHEMATICS

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 TANK VENT C/W VENT WHISTLE (NPS-2)
- ⑥ FUEL VENT LINE FROM GENERATOR'S DAY TANK (ALL NPS-1 1/2)
- ⑦ GENERATOR'S DAY TANK
- ⑧ STAINLESS STEEL FLEXIBLE CONNECTION. CONNECT TO FUEL SUPPLY AND RETURN CONNECTIONS ON ENGINE.

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.



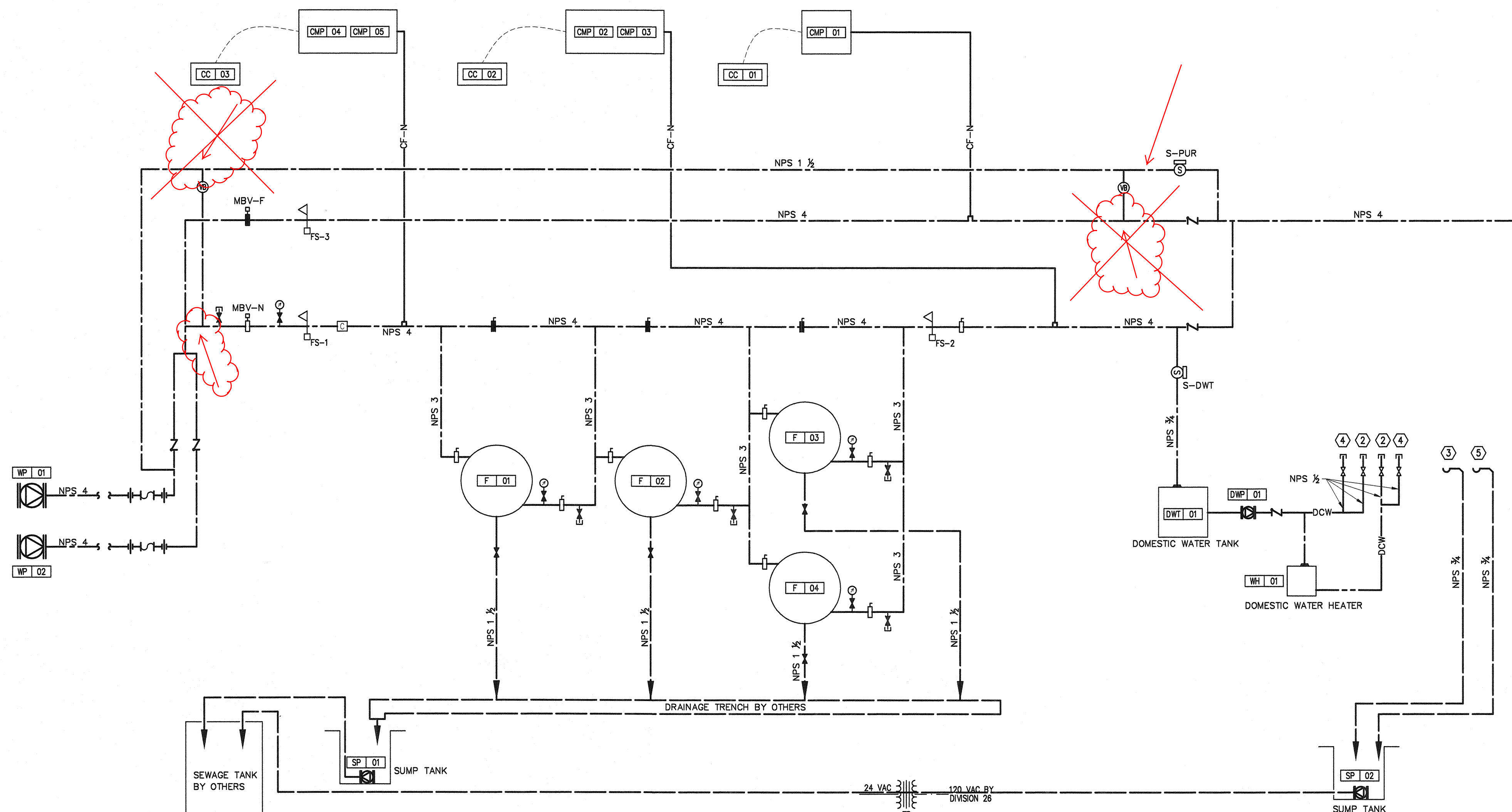
WATER SYSTEM

HYDRAULIC DIAGRAM

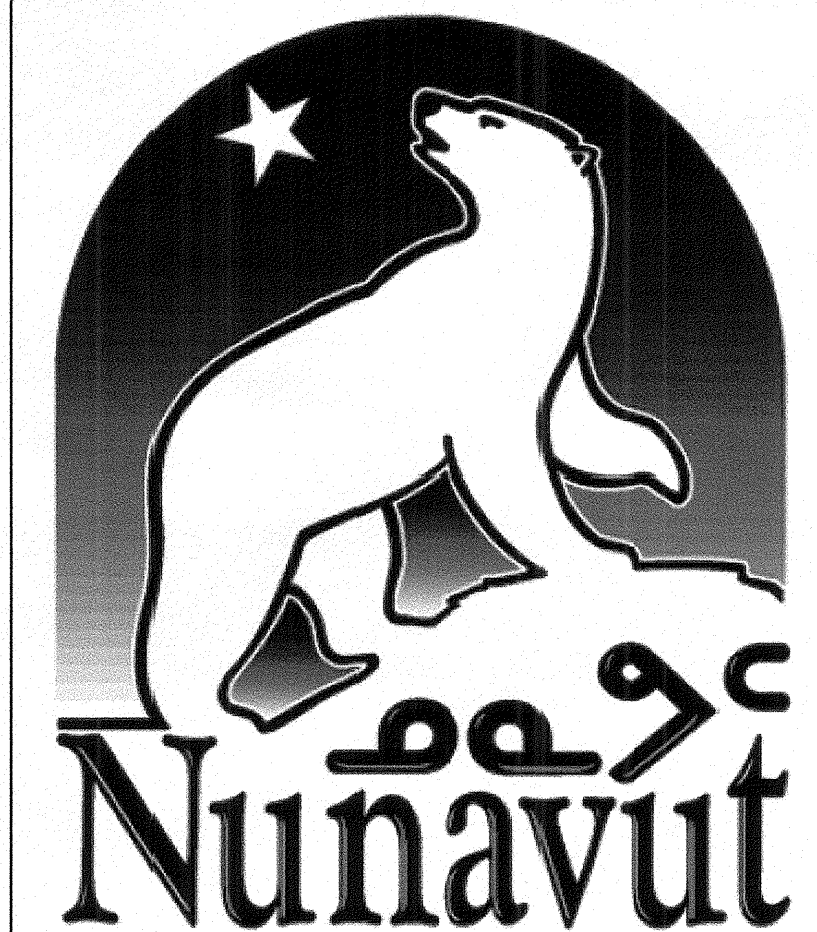
SEE SKE-M1
ATTACHED

NOTES:

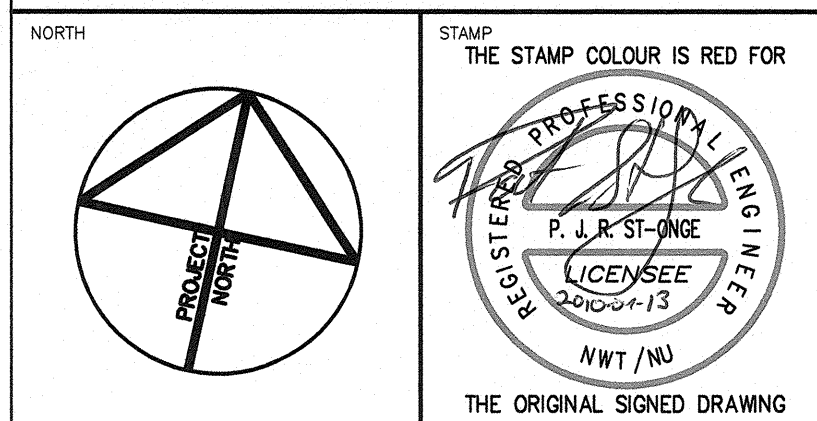
- ① TO TRUCKFILL ARM
- ② CONNECTION FOR WATER FAUCET
- ③ SINK DRAIN
- ④ CONNECTION FOR EMERGENCY EYEWASH STATION
- ⑤ EYEWASH STATION DRAIN



RECORD DRAWING



PERMIT TO PRACTICE
WOOD BANAAN BOUTALETTE PARIZEAU INC.
Signature _____
Date 13-APR-2010
PERMIT NUMBER: P657
The Association of Professional Engineers,
Geologists and Geophysicists of the NWT/NU



NOTES: GENERAL CONTRACTOR TO VERIFY ALL DIMENSIONS WITH FINAL ARCHITECTURAL AND MECHANICAL DRAWINGS. NOTIFY THE ENGINEERS OF ANY ERRORS AND / OR OMISSIONS PRIOR TO CONSTRUCTION FOR DIRECTION. DO NOT SCALE THIS DRAWING.

REVISIONS				
No.	DESCRIPTION	DATE	BY	APP'D
0	ISSUED FOR TENDER	04/13/2010	C.B.	P.S.O.

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3740 Richmond Road, Suite 100, K2H 5B9
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Consulting Engineers

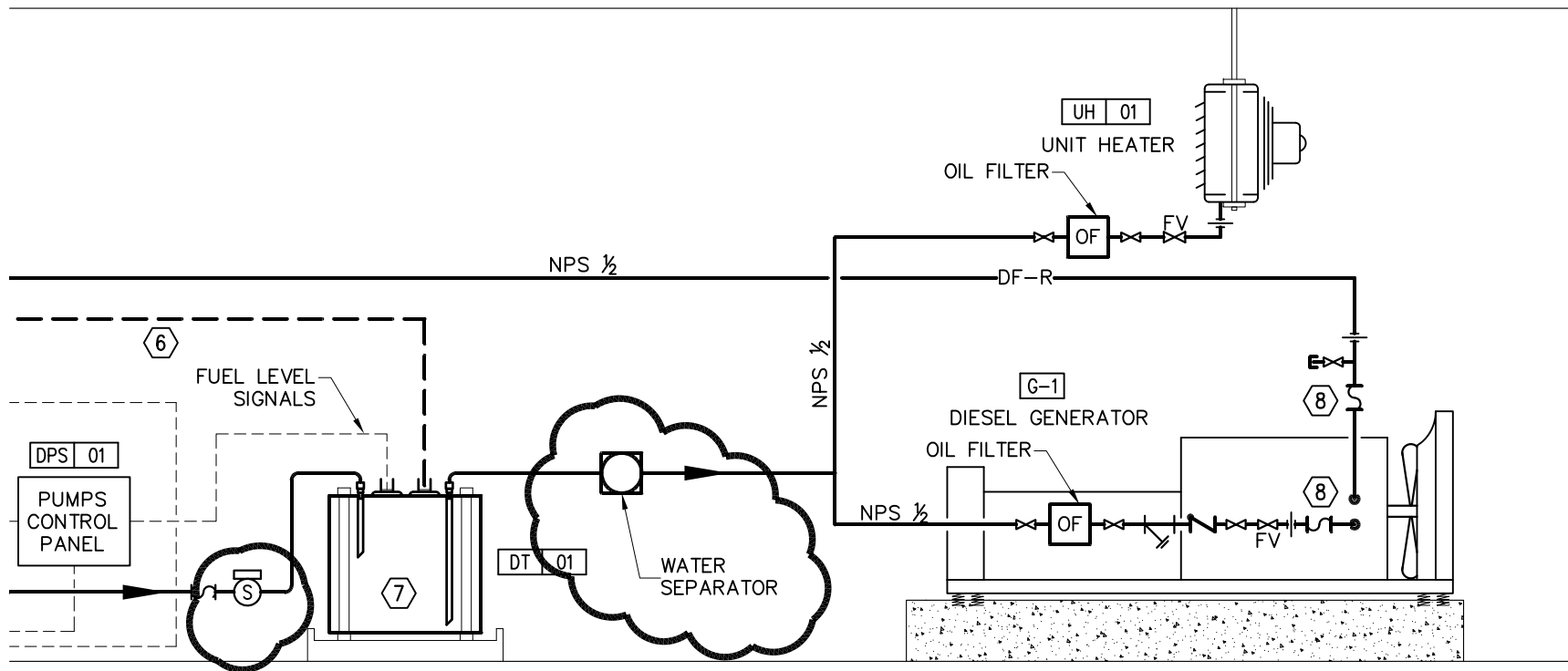
Trow Associates Inc.
154 Colonnade Road South
Ottawa, Ont. K2E 7J5
Tel:(613)225-9940
Fax:(613)225-7337

CLIENT
**GOVERNMENT OF NUNAVUT
DEPARTMENT OF COMMUNITY
AND GOVERNMENT SERVICES**

PROJECT
**SANIKILUAQ, NUNAVUT
WATER TRUCK FILL STATION**

TITLE
**MECHANICAL
FUEL AND WATER
PIPING SCHEMATIC**

design by	C.BOURGOONE	project no.	08-2019
drawn by	C.BOURGOONE	drawing no.	M6
checked by	P.ST-ONGE		
date	APRIL 2010		
scale	AS SHOWN		



PROJECT:
**SANIKILUAQ, NUNAVUT
WATER TRUCK FILL STATION**

TITLE:
**MECHANICAL
FUEL PIPING SCHEMATIC**

DESIGNED BY:
C.B.

DRAWN BY:
C.B.

SCALE:
N.T.S.

ISSUED FOR:
SI M1

DATE:
15/07/2010

PROJ.NO.:
08-2019

DWG. No.:
SKE-M1