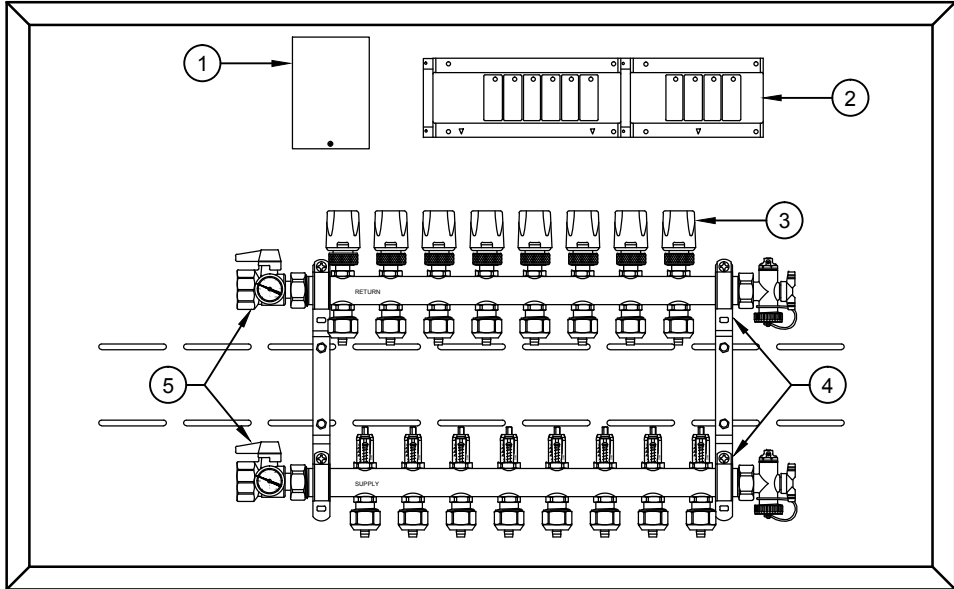
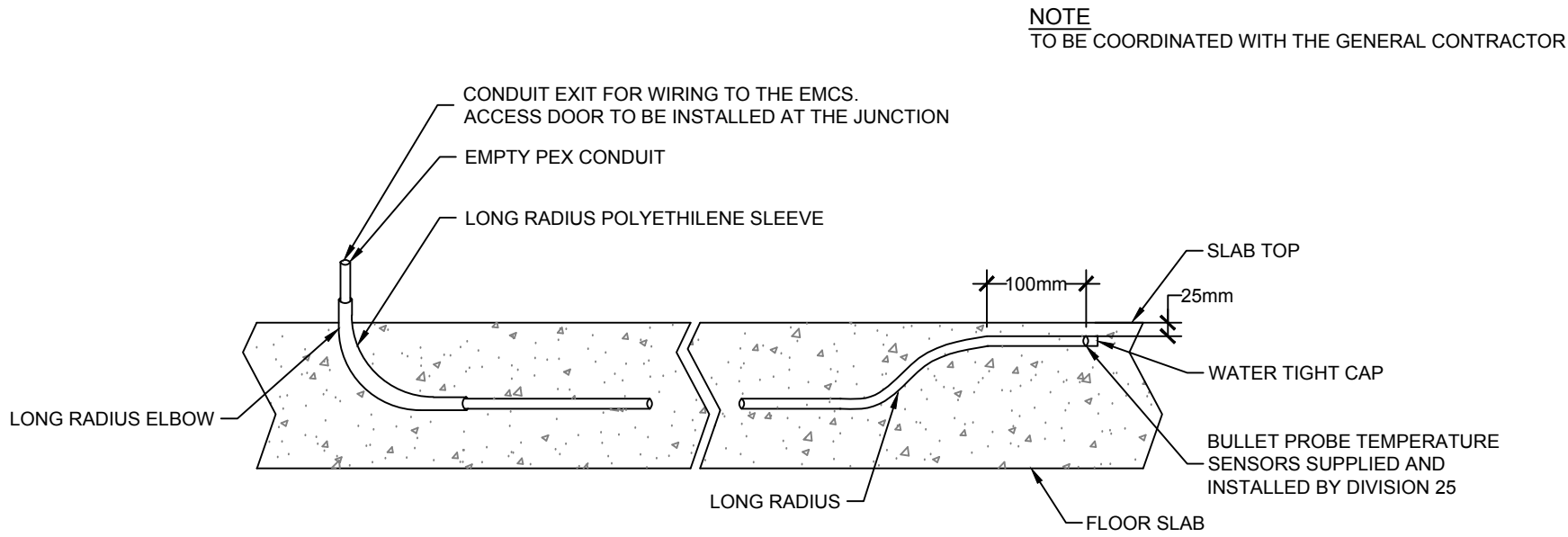


RADIANT DISTRIBUTION PANEL	
①	120 / 24 VAC TRANSFORMER
②	CONTROL MODULE
③	CONTROL VALVES c/w TWO-POSITIONS 24VAC ACTUATORS, PRE-WIRED TO THE CONTROL MODULE
④	STAINLESS-STEEL MANIFOLD
⑤	MANUAL BALL VALVE c/w THERMOMETER



RADIANT FLOOR DISTRIBUTION PANEL DETAIL

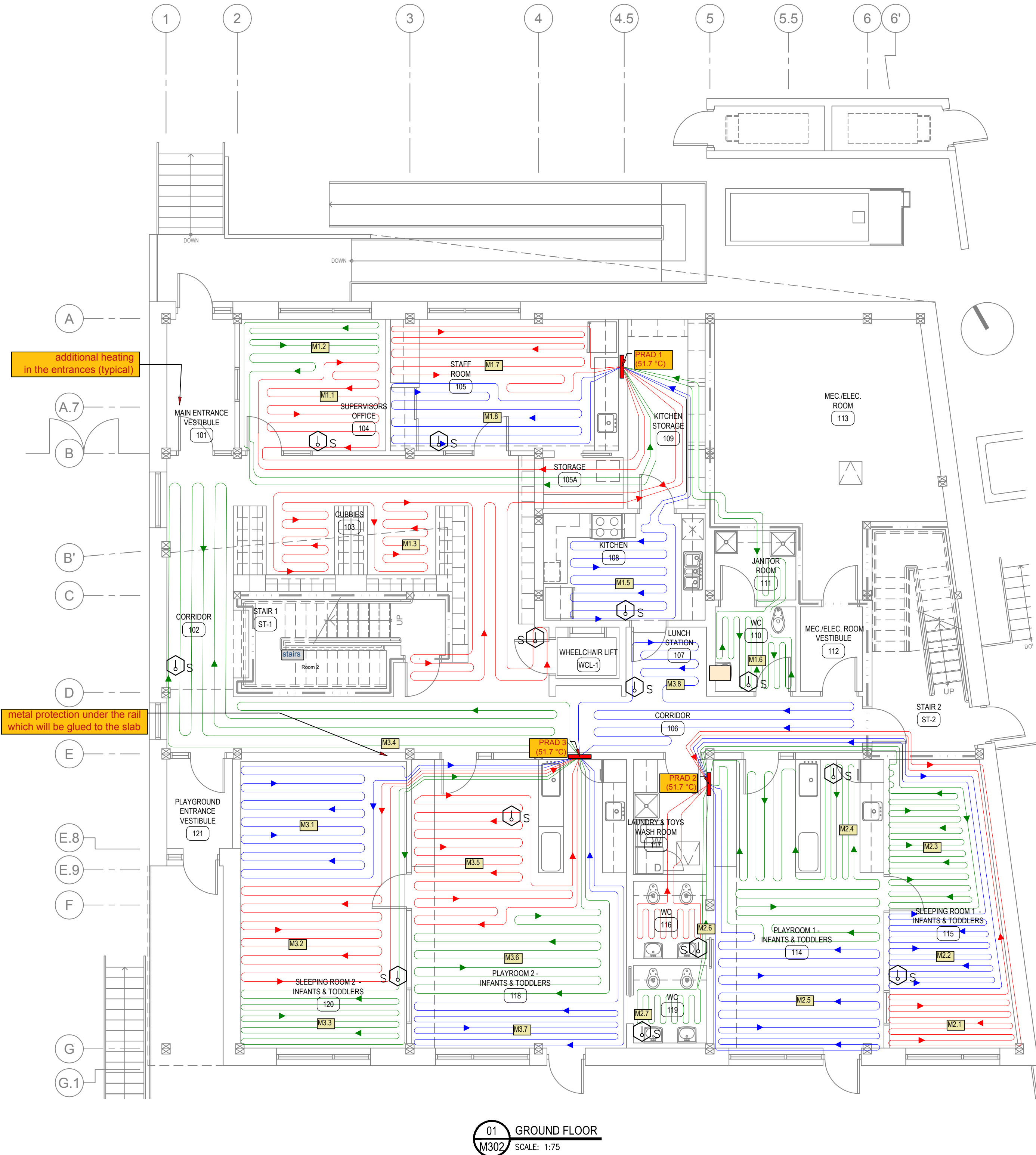


EMPTY "PEX" CONDUIT DETAIL FOR TEMPERATURE SENSOR FLOOR SURFACE

Zones			
Name	Area (m2)	# Circuit	Total load (kW)
Zone 101	51.6	1	5.99
Zone 103	40.3	1	2.20
Zone 104	14.1	2	2.43
Zone 105	25.6	2	3.56
Zone 108	12.4	1	0.58
Zone 109	11.4	0	1.13
Zone 102	16.4	1	0.77
Zone 110	12.1	1	0.58
Zone 112	3.7	0	0.13
Zone 113	36.9	0	3.18
Zone 114	35.4	2	3.58
Zone 115	36.0	3	3.85
Zone 116	4.2	1	0.20
Zone 117	6.4	0	0.31
Zone 118	44.6	3	4.18
Zone 119	4.7	1	0.48
Zone 120	35.0	3	3.76
Zone 121	4.9	0	1.12

Circuit information									
Number	Lenght (mm)	Tube size (mm)	Manifold	Flow (L/s)	Head loss (m water)	Total Load (kW)	Velocity (m/s)	Fluid	Coil-Lenght (mm)
M1.1	4,851	13	PRAD 1	7.93	0.915	1.22	0.27	50% Propylene Glycol	
M1.2	5,105	13	PRAD 1	6.97	0.762	1.07	0.24	50% Propylene Glycol	
M1.3	7,087	13	PRAD 1	12.36	2.896	2.06	0.40	50% Propylene Glycol	
M1.5	3,734	13	PRAD 1	4.28	0.366	0.72	0.15	50% Propylene Glycol	
M1.6	4,140	13	PRAD 1	5.39	0.488	0.82	0.18	50% Propylene Glycol	
M1.7	4,216	13	PRAD 1	6.02	0.549	0.99	0.21	50% Propylene Glycol	
M1.8	3,607	13	PRAD 1	6.02	0.488	0.99	0.21	50% Propylene Glycol	
M2.1	5,715	13	PRAD 2	6.18	0.762	0.94	0.21	50% Propylene Glycol	
M2.2	5,740	13	PRAD 2	5.71	0.732	0.90	0.18	50% Propylene Glycol	
M2.3	5,486	13	PRAD 2	5.71	0.701	0.88	0.18	50% Propylene Glycol	
M2.4	6,375	13	PRAD 2	11.41	2.287	1.88	0.40	50% Propylene Glycol	
M2.5	6,401	13	PRAD 2	8.40	1.311	1.37	0.27	50% Propylene Glycol	
M2.6	1,880	13	PRAD 2	1.90	0.091	0.37	0.06	50% Propylene Glycol	
M2.7	2,057	13	PRAD 2	2.69	0.122	0.41	0.09	50% Propylene Glycol	
M3.1	5,334	13	PRAD 3	8.24	1.067	1.34	0.27	50% Propylene Glycol	
M3.2	5,563	13	PRAD 3	8.08	1.098	1.32	0.27	50% Propylene Glycol	
M3.3	5,563	13	PRAD 3	6.18	0.762	1.31	0.21	50% Propylene Glycol	
M3.4	8,306	13	PRAD 3	15.38	5.000	0.25	0.52	50% Propylene Glycol	
M3.5	5,334	13	PRAD 3	8.88	1.220	0.15	0.30	50% Propylene Glycol	
M3.6	4,928	13	PRAD 3	7.29	0.793	1.20	0.24	50% Propylene Glycol	
M3.7	5,131	13	PRAD 3	6.18	0.701	1.00	0.21	50% Propylene Glycol	
M3.8	3,912	13	PRAD 3	3.65	0.335	0.61	0.12	50% Propylene Glycol	

Manifolds												
Name	Manifold type	# Circuits	Tubing size	Supply Temp (°C)	Total Flow (L/s)	Headloss (m water)	Total Load (kW)	S/R Lenght (mm)	S/R Head Loss (m water)	S/R Type	Required Temp (°C)	# Actuators
PRAD 1	Zone	7	13	51.7	48.8	3.3	7.87	508	0.122	Steel, Schedule 40, 1"	51.1	7
PRAD 2	Zone	7	13	51.7	42.0	2.8	6.75	1016	0.213	Steel, Schedule 40, 1"	51.7	7
PRAD 3	Zone	8	13	51.7	64.0	5.8	10.48	1143	0.457	Steel, Schedule 40, 1"	51.7	8



SPECIFIC NOTES:

- ALL SIZING OF INFLOOR RADIANT HEATING SHALL BE DESIGNED CALCULATED BY THE MANUFACTURER. THE CALCULATIONS SHALL BE SIGNED BY AN ENGINEER.

PRELIMINARY  
NOT FOR CONSTRUCTION

Architects

EVOQ

1435, SAINT-ALEXANDRE STREET, SUITE 1000  
MONTREAL (QUEBEC) H3A 2G4  
T. 514-393-9490 F. 514-393-9498  
info@evoqarchitecture.com

Engineers

SNC-LAVALIN  
Infrastructure Engineering  
Eastern Canada

SNC-Lavalin inc.  
455, René-Lévesque Blvd. West  
Montreal (Quebec) H2Z 1Z3 Canada  
Telephone: (514) 393-8000  
www.snc-lavalin.com

0	ISSUED FOR TENDER	2016-03-16
Revision	Description	Date
Client		client

Indigenous and Northern  
Affairs Canada

Public Works and Gouvernment  
Services Canada

Project title

NEW IQALUIT DAYCARE

Designed by

M.B.

Conçu par

J.F.F.

Drawn by

J.F.F.

Approved by

M.B.

PWSSC Project Manager

Russell Knister

Drawing title

MECHANICAL

INFLOOR RADIANT HEATING

AND CONTROLS

GROUND FLOOR

Project no./No. du projet

648139

Drawing no./No. du dessin

M302

Revision no.

0

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