

Mechanical design group
 100 - 2330 15th Avenue, Regina, SK Canada S4P 1A2
 phone: (306) 777-0123
 fax: (306) 525-6780
 PROJECT No.: 15-016
 CONTACT: J.Y.

Association of Professional Engineers & Geoscientists of Saskatchewan
CERTIFICATE OF AUTHORIZATION
Regina Mechanical Design Group
 Number C1553
 Permission to Consult held by:
 Discipline: **MECH** Sk. Reg. No. **15983** Signature: *J.Y.*

ENGINEERING LICENSE
 J. YANNEKOS
 MEMBER 15983
 16024
 YR. MN. DAY
 SASKATCHEWAN

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Revision/Revision	Description/Description	Date/Date
0	ISSUED FOR TENDER	2016-06-24

Client/client

Project title/Titre du projet
AIRPORT HANGAR RENOVATIONS PRINCE ALBERT, SK

Approved by/Approve par

Designed by/Concept par
 J.Y.

Drawn by/Dessine par
 J.Y.

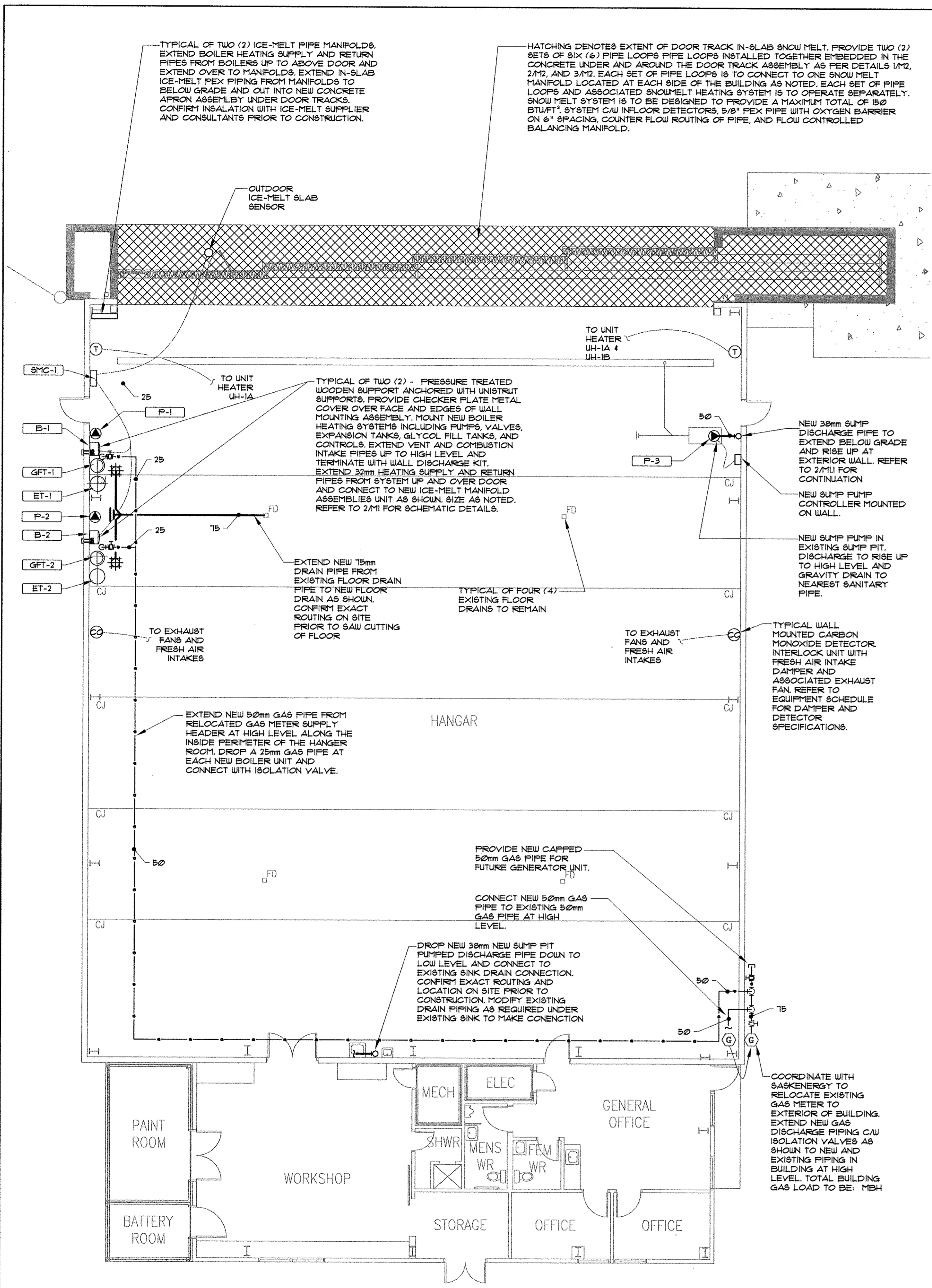
Project Manager/Administrateur de Projets
 J.Y.

Architectural and Engineering Resources Manager/
 Ressources Architecturales et de Directeur d'ingénierie

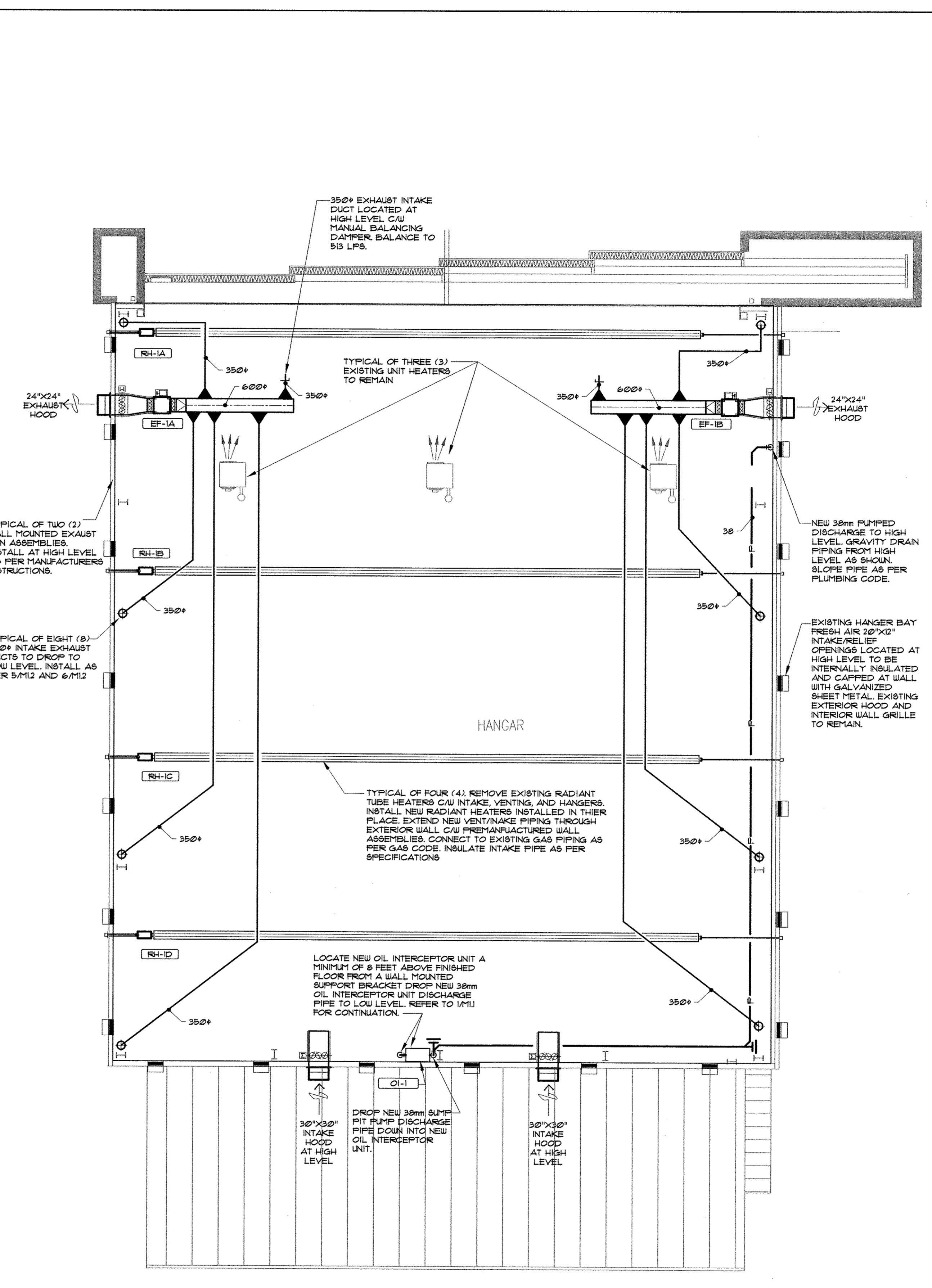
Client/client

Drawing title/Titre du dessin
LOWER AND UPPER LEVEL FLOOR PLANS - MECHANICAL

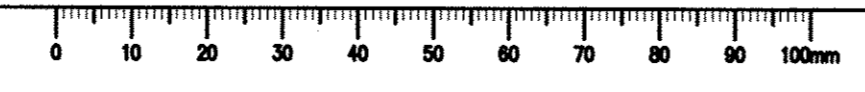
Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
32/2015	M1.1	0



1 LOWER LEVEL MAIN FLOOR PLAN - MECHANICAL
 1/100



2 UPPER LEVEL MAIN FLOOR PLAN - MECHANICAL
 1/100

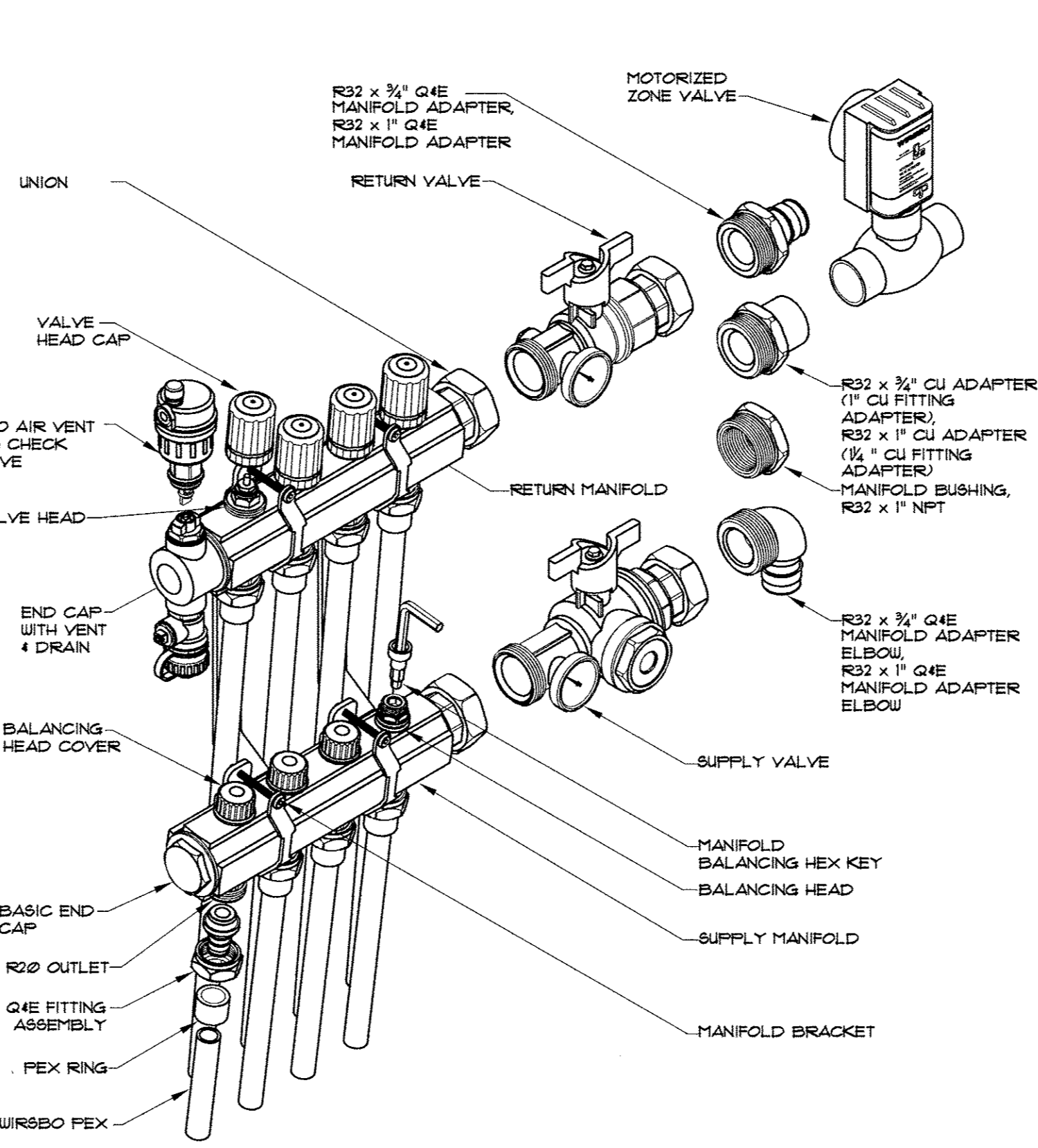


EQUIPMENT SCHEDULE

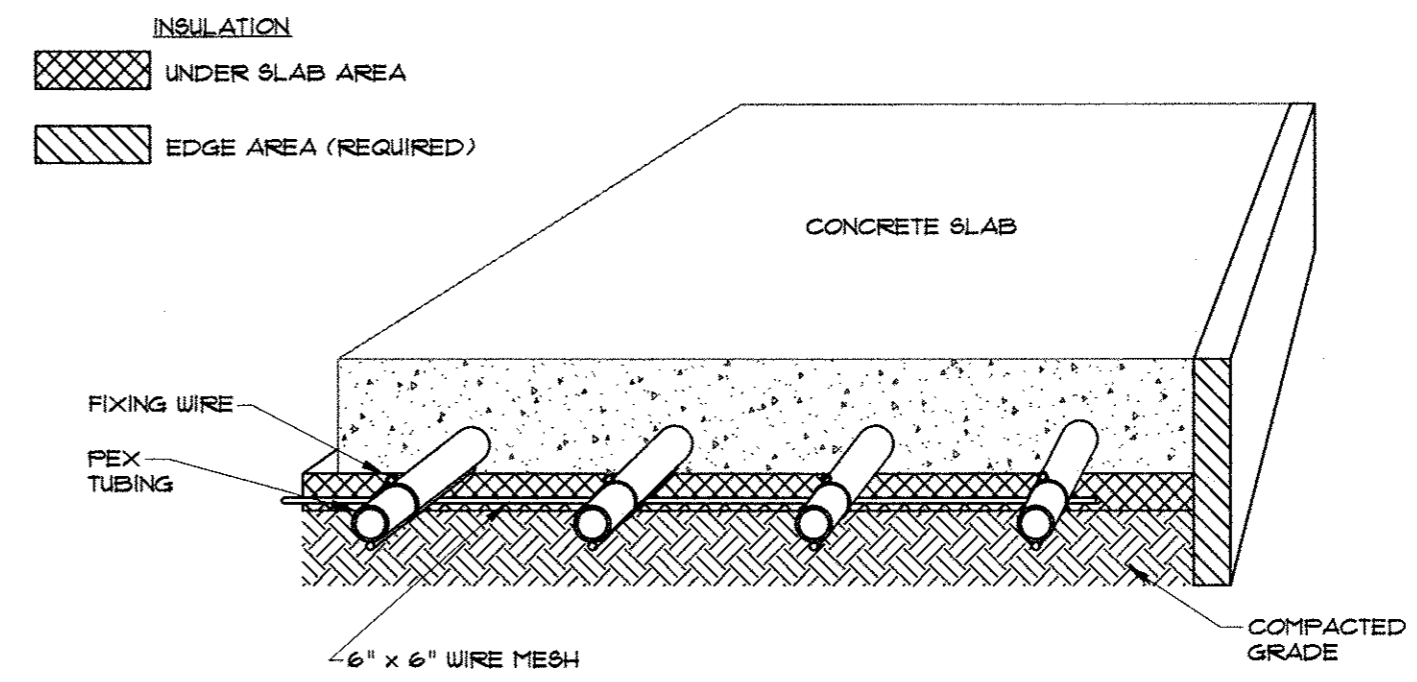
- B-1** HIGH EFFICIENCY WALL MOUNTED BOILER TO PROVIDE 80 MBH INPUT, 102 MBH OUTPUT, NATURAL GAS FIRED HOT WATER BOILER, C/W STAINLESS STEEL HEAT EXCHANGER, TEMPERATURE AND PRESSURE RELIEF VALVES, LOW WATER CUT OFF, HIGH LIMIT, FULLY MODULATING BURNER, INDOOR-OUTDOOR CONTROLLER, WALL VENT 4 AIR INLET TERMINATIONS WITH SCREENS, WALL MOUNTING KIT AND PRESSURE/TEMPERATURE GAUGES, 120V/1PH/60HZ BOILER TO PROVIDE 102 GPM @ 120°F, 33% PROPYLENE GLYCOL STANDARD OF ACCEPTANCE: FEERLESS, LOCKNVAR, TELETYPE LARRS
- B-2** HIGH EFFICIENCY WALL MOUNTED BOILER TO PROVIDE 80 MBH INPUT, 102 MBH OUTPUT, NATURAL GAS FIRED HOT WATER BOILER, C/W STAINLESS STEEL HEAT EXCHANGER, TEMPERATURE AND PRESSURE RELIEF VALVES, LOW WATER CUT OFF, HIGH LIMIT, FULLY MODULATING BURNER, INDOOR-OUTDOOR CONTROLLER, WALL VENT 4 AIR INLET TERMINATIONS WITH SCREENS, WALL MOUNTING KIT AND PRESSURE/TEMPERATURE GAUGES, 120V/1PH/60HZ BOILER TO PROVIDE 102 GPM @ 120°F, 33% PROPYLENE GLYCOL STANDARD OF ACCEPTANCE: FEERLESS, LOCKNVAR, TELETYPE LARRS
- P-1** CAST IRON HIGH CAPACITY CIRCULATOR WITH 1-1/4" CONNECTIONS TO PROVIDE 102 GPM FLOW AT 35 FEET TOTAL HEAD, 3450 RPM, 1/2 HP MOTOR, 3.6 AMP, 120V/1PH/60HZ UNIT C/W NON OVERLOADING MOTOR, INTERLOCK PUMP OPERATION WITH BOILER B-1 CONTROLS, 33% PROPYLENE GLYCOL SOLUTION, STANDARD OF ACCEPTANCE: TACO, BELL AND GOSSETT, GRANDROSS
- P-2** CAST IRON HIGH CAPACITY CIRCULATOR WITH 1-1/4" CONNECTIONS TO PROVIDE 102 GPM FLOW AT 35 FEET TOTAL HEAD, 3450 RPM, 1/2 HP MOTOR, 3.6 AMP, 120V/1PH/60HZ UNIT C/W NON OVERLOADING MOTOR, INTERLOCK PUMP OPERATION WITH BOILER B-1 CONTROLS, 33% PROPYLENE GLYCOL SOLUTION, STANDARD OF ACCEPTANCE: TACO, BELL AND GOSSETT, GRANDROSS
- P-3** BARNES MODEL NO. SP33 SUBMERSIBLE SUMP PUMP TO HAVE A CAPACITY OF 25 US.G.P.M. AT 14.1 KPA HEAD, 15V/1PH/60HZ, POWER, 3450 RPM, 25 WATT (1/2 HP) MOTOR, UNIT C/W ON/OFF/HIGH LEVEL ALARM FLOATS.
- ET-1** BLADDER TYPE EXPANSION TANK, 862 KPA (125 PSIG) DESIGN PRESSURE, 9 GALLON TOTAL VOLUME, 9 GALLON MAXIMUM ACCEPTANCE VOLUME WITH HEAVY DUTY SEAMLESS BUTYL BLADDER, STANDARD OF ACCEPTANCE: TACO, BELL AND GOSSETT, AMTROL
- ET-2** BLADDER TYPE EXPANSION TANK, 862 KPA (125 PSIG) DESIGN PRESSURE, 9 GALLON TOTAL VOLUME, 9 GALLON MAXIMUM ACCEPTANCE VOLUME WITH HEAVY DUTY BUTYL RUBBER DIAPHRAGM, STANDARD OF ACCEPTANCE: TACO, BELL AND GOSSETT, AMTROL
- ET-3** BLADDER TYPE EXPANSION TANK, 862 KPA (125 PSIG) DESIGN PRESSURE, 18 GALLON TOTAL VOLUME, 25 GALLON MAXIMUM ACCEPTANCE VOLUME WITH HEAVY DUTY BUTYL RUBBER DIAPHRAGM, STANDARD OF ACCEPTANCE: TACO, BELL AND GOSSETT, AMTROL
- AS-1** AIR SCOOP - AIR SCOOP, AUTOMATIC AIR VENT AND BLOW DOWN VALVE, MAXIMUM WORKING PRESSURE: 125 PSI, STANDARD OF ACCEPTANCE: TACO, BELL AND GOSSETT, AMTROL
- AS-2** AIR SCOOP - AIR SCOOP, AUTOMATIC AIR VENT AND BLOW DOWN VALVE, MAXIMUM WORKING PRESSURE: 125 PSI, STANDARD OF ACCEPTANCE: TACO, BELL AND GOSSETT, AMTROL
- GFT-1** MINI SYSTEM FEEDER, 6.0 GALLON TANK FOR STORAGE AND MIXING, 18V/1PH/60HZ, PUMP PERFORMANCE: 0.71 GPM @ FREE FLOW, STANDARD OF ACCEPTANCE: AXION, HYDRONIC SYSTEMS ENTRY, AMTROL
- GFT-2** MINI SYSTEM FEEDER, 6.0 GALLON TANK FOR STORAGE AND MIXING, 18V/1PH/60HZ, PUMP PERFORMANCE: 0.71 GPM @ FREE FLOW, STANDARD OF ACCEPTANCE: AXION, HYDRONIC SYSTEMS ENTRY, AMTROL
- SMC-1** SNOW MELT CONTROLLER C/W TWO ZONE CONTROL, REMOTE SLAB TEMPERATURE SENSORS, INDOOR/OUTDOOR TEMPERATURE SENSOR, PUMP CONTROLLER, BOILER INTERLOCK CONTROLLER, LEAD/LAG/PRIMARY/SECONDARY SYSTEM WITH PROGRAMMABLE CHANGEOVER, AND LOCKABLE ENCLOSURE, 120V/1PH/60HZ AT 600 VA, STANDARD OF ACCEPTANCE: TECHMAR, HONEYWELL
- EF-1A** GREENHECK MODEL NO. B9Q-180 2 HP 208V/1PH, BELT DRIVE INLINE CABINET FAN TO PROVIDE 3450 GPM @ 0.23" ESP, 1375 RPM, C/W MOTORIZED DAMPER, ALL WEATHERHOOD, WALL COLLAR AND VIBRATION ISOLATORS, INTERLOCK WITH CO-1 DETECTORS.
- EF-1B** GREENHECK MODEL NO. B9Q-180 2 HP 208V/1PH, BELT DRIVE INLINE CABINET FAN TO PROVIDE 3450 GPM @ 0.23" ESP, 1375 RPM, C/W MOTORIZED DAMPER, ALL WEATHERHOOD, WALL COLLAR AND VIBRATION ISOLATORS, INTERLOCK WITH CO-1 DETECTORS.
- RH-1A** SCHWANK GAS FIRED RADIANT TUBE HEATER MODEL NO. STS-JZ 80 HEATER TO PROVIDE 80 MBH INPUT, UNIT C/W HORIZONTAL GUARD CONFIGURATION, FRESH AIR INTAKE WALL CAP, 4" HORIZONTAL FLUE VENT KIT, AND TRUTEMP INFRARED SETBACK THERMOSTAT, 15 AMP, 120V/1PH/60HZ, PROVIDE SCHWANK INFRARED WALL MOUNTED THERMOSTAT
- RH-1B** SCHWANK GAS FIRED RADIANT TUBE HEATER MODEL NO. STS-JZ 80 HEATER TO PROVIDE 80 MBH INPUT, UNIT C/W HORIZONTAL GUARD CONFIGURATION, FRESH AIR INTAKE WALL CAP, 4" HORIZONTAL FLUE VENT KIT, AND TRUTEMP INFRARED SETBACK THERMOSTAT, 15 AMP, 120V/1PH/60HZ, PROVIDE SCHWANK INFRARED WALL MOUNTED THERMOSTAT
- RH-1C** SCHWANK GAS FIRED RADIANT TUBE HEATER MODEL NO. STS-JZ 80 HEATER TO PROVIDE 80 MBH INPUT, UNIT C/W HORIZONTAL GUARD CONFIGURATION, FRESH AIR INTAKE WALL CAP, 4" HORIZONTAL FLUE VENT KIT, AND TRUTEMP INFRARED SETBACK THERMOSTAT, 15 AMP, 120V/1PH/60HZ, PROVIDE SCHWANK INFRARED WALL MOUNTED THERMOSTAT
- RH-1D** SCHWANK GAS FIRED RADIANT TUBE HEATER MODEL NO. STS-JZ 80 HEATER TO PROVIDE 80 MBH INPUT, UNIT C/W HORIZONTAL GUARD CONFIGURATION, FRESH AIR INTAKE WALL CAP, 4" HORIZONTAL FLUE VENT KIT, AND TRUTEMP INFRARED SETBACK THERMOSTAT, 15 AMP, 120V/1PH/60HZ, PROVIDE SCHWANK INFRARED WALL MOUNTED THERMOSTAT
- CO-1** ZURN MODEL 7-1156 OIL INTERCEPTOR, SIZE 400, TO PROVIDE 15 GPM FLOW CAPACITY, UNIT C/W 1/2" CONNECTIONS, OIL ALARM C/W FLOATS AND HIGH OIL LEVEL ALARM, ACID RESISTANT COATINGS, CLEANOUT FLUG, EQUALIZING FLOW Baffle, SEDIMENT BUCKET, VENT CONNECTIONS, 120V/1PH/60HZ 20 AMP CONNECTIONS

GENERAL NOTES

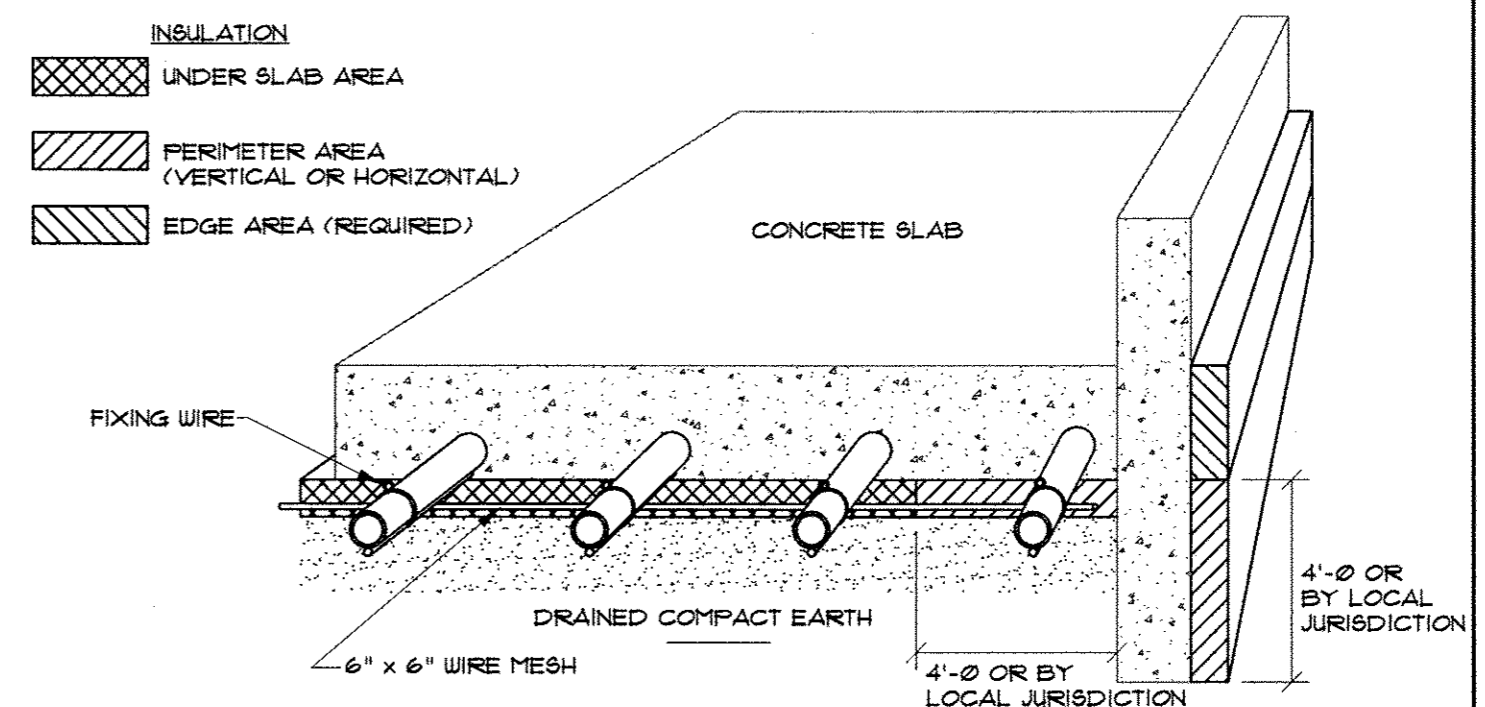
1. CONFIRM DETAILS OF ALL SUPPORTS WITH STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
2. CONFIRM ALL ROUTING OF PIPING ON SITE PRIOR TO CONSTRUCTION.
3. PROVIDE A COMPLETE SNOW MELT SYSTEM, PROVIDE PIPE LAYOUT AND EQUIPMENT SCHEDULE FOR APPROVAL BY MECHANICAL CONSULTANT PRIOR TO CONSTRUCTION, CONFIRM INFLOOR SYSTEM CONNECTIONS, EQUIPMENT LOCATIONS AND LAYOUT WITH MECHANICAL CONSULTANT PRIOR TO CONSTRUCTION.
4. CLOSELY COORDINATE LOCATION OF ALL NEW WALL MOUNTED MECHANICAL EQUIPMENT, VALVES, AND PIPING WITH CONSULTANT PRIOR TO THE START OF CONSTRUCTION, EXISTING WALL MOUNTED ELECTRICAL AND CONTROL DEVICES WILL NOT BE ALLOWED TO BE REMOVED OR RELOCATED.



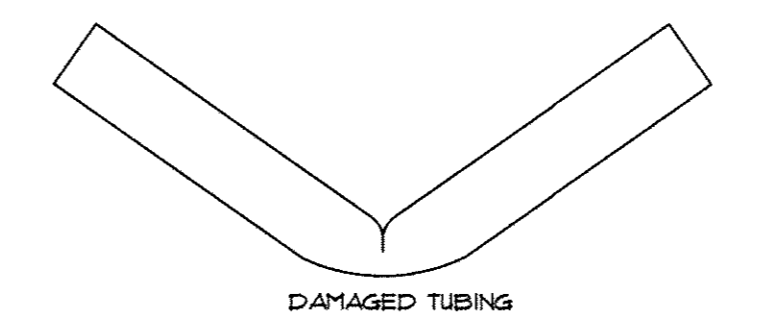
1 INFLOOR HEATING MANIFOLD WITH ZONE VALVE
M2-1 NOT TO SCALE



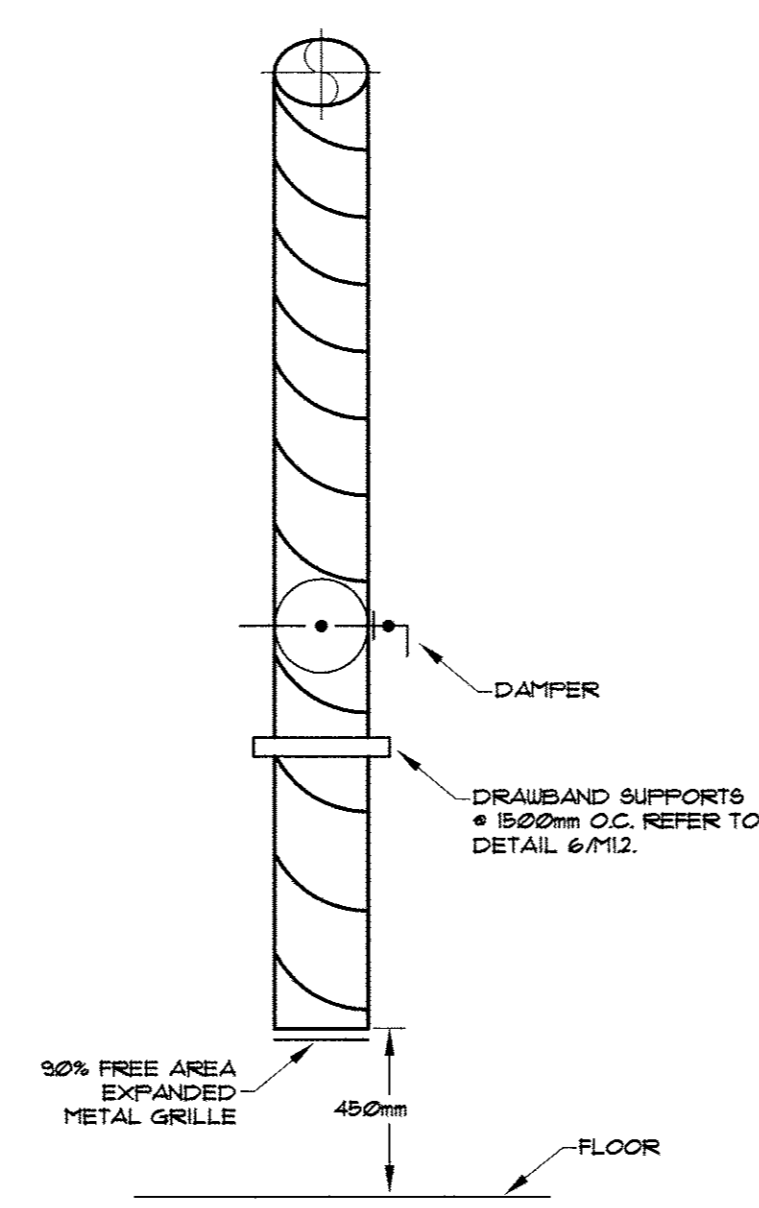
2 SNOWMELT WITH UNDER SLAB AND EDGE INSULATION
M2-1 NOT TO SCALE



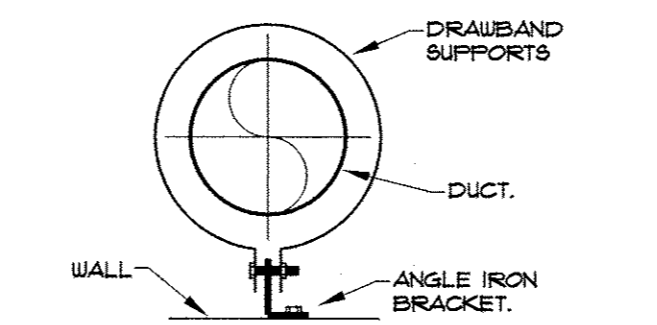
3 SLAB ON OR BELOW GRADE INSTALLATION
M2-1 NOT TO SCALE



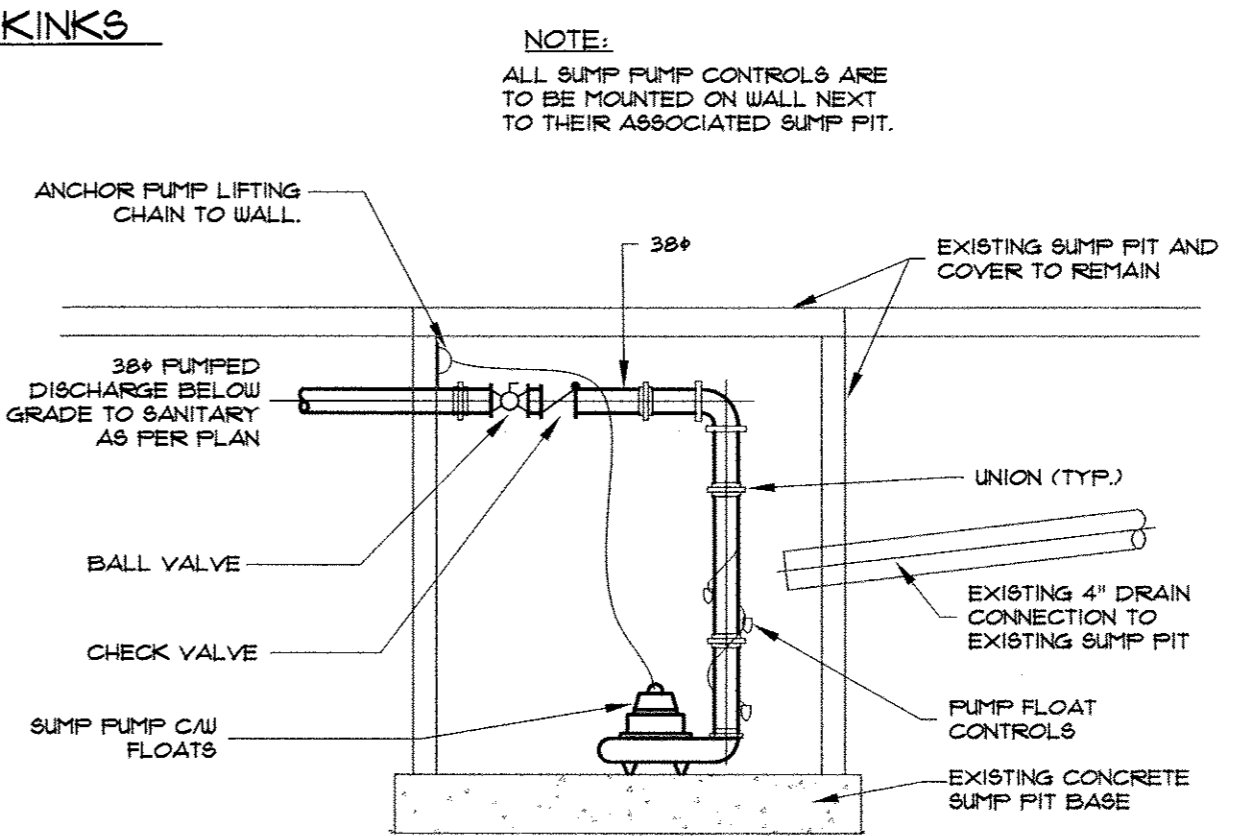
4 REPAIRING KINKS
M2-1 NOT TO SCALE



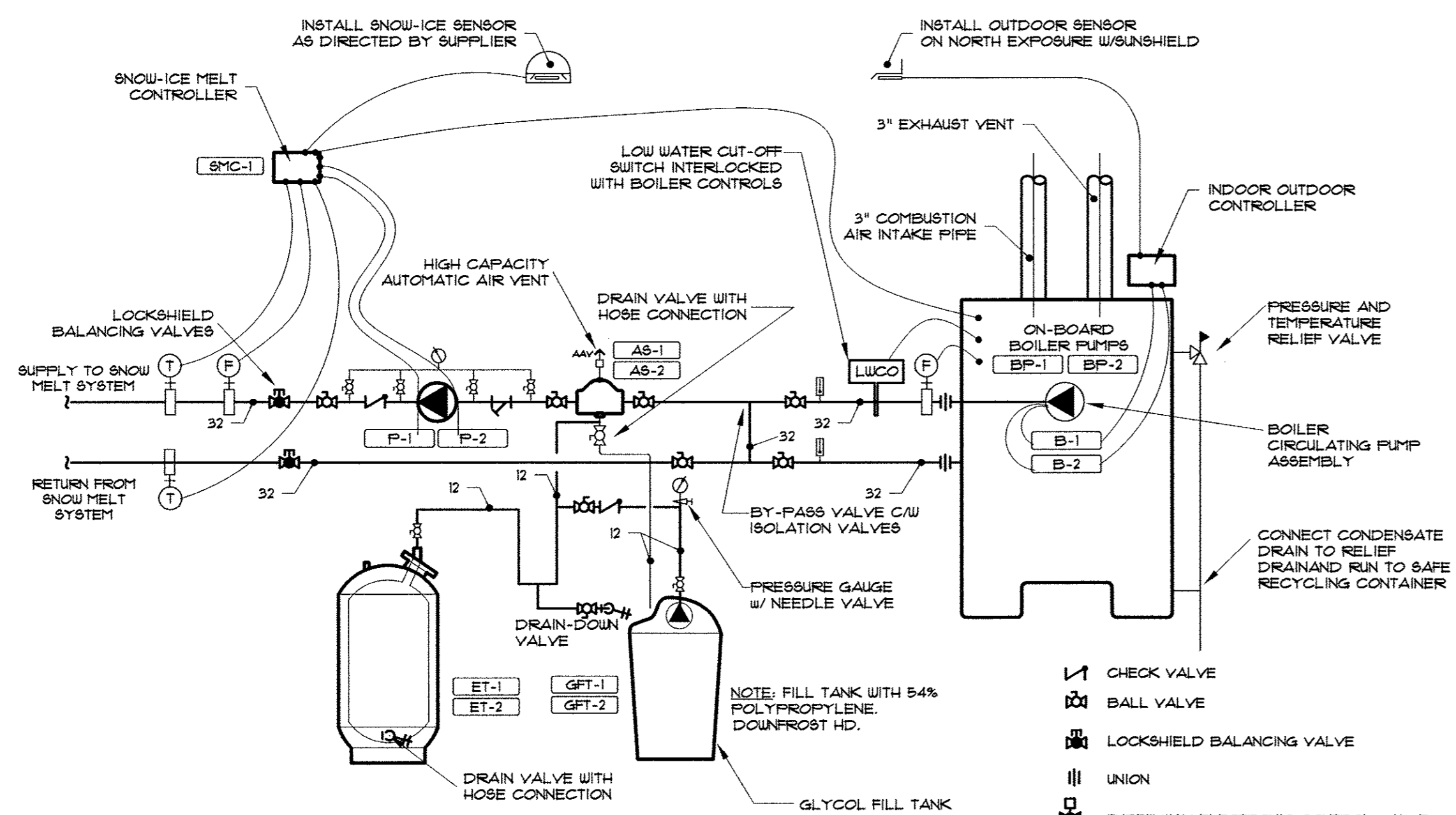
5 EXHAUST INTAKE DETAIL
M2-1 NOT TO SCALE



6 DRAWBAND SUPPORT DETAIL
M2-1 NOT TO SCALE



7 SUMP PIT SUMP PUMP DETAIL
M2-1 NOT TO SCALE



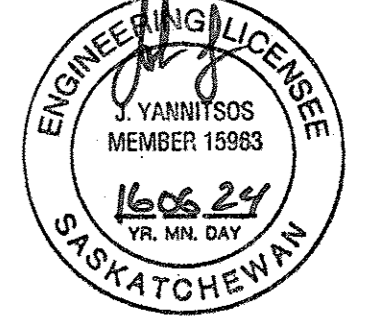
8 SNOW-ICE MELT SYSTEM SCHEMATIC
M1 TYPICAL FOR EACH OF 2 SYSTEMS NOT TO SCALE

- 1 CHECK VALVE
- 2 BALL VALVE
- 3 LOCKSHIELD BALANCING VALVE
- 4 UNION
- 5 THREE WAY ELECTRONIC CONTROL VALVE
- 6 MANUAL TEMPERATURE GAUGE
- 7 MANUAL PRESSURE GAUGE

SEPW Architecture Inc.
 109 - 3725 Pasqua Street, Regina, SK S4S 0A8 ph: (306) 569-2255
 112 - 3718 Kinross Place, Saskatoon SK S7P 0A6 ph: (306) 652-4457
 website: www.sepw.ca

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 Discipline: MECH Sk. Reg. No. 15963 Signature: J.Y.



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0	ISSUED FOR TENDER	2016-06-24

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 Architectural and Engineering Resources Manager/Ressources Architectural et de Directeur d'ingénierie: J.Y.

MECHANICAL EQUIPMENT SCHEDULE, HEATING SCHEMATIC ICE-MELT SYSTEM DETAILS

Project No./No. du projet: 32/2015	Sheet/Feuille: M1.2 OF 1	Revision no./La Révision no.: 0
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