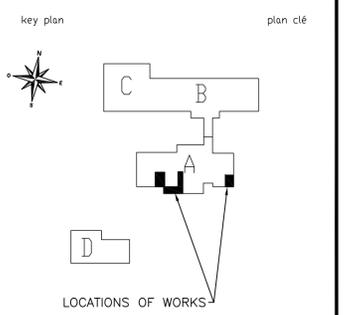


**DESCRIPTION OF WORKS**

- ROOM SENSOR SP1:**
- INSTALL A ROOM TEMPERATURE SENSOR (SP1) (SEE PLAN VIEW FOR LOCATION).
  - CONNECT ROOM TEMPERATURE SENSOR (SP1) TO THE THREE EXISTING CONTROL PANELS FOR THE THREE EXISTING WALL MOUNTED HEAT PUMPS T-A6-01, T-A6-02 AND T-A6-23.
  - REDO THE SCHEMATIC DIAGRAM.
  - UPON REQUESTING AIR-CONDITIONING OR HEAT, CENTRAL COMMAND MUST START ALL THREE HEAT PUMPS AT THE SAME TIME (T-A6-01, T-A6-02 AND T-A6-23).
- ROOM SENSOR SP2:**
- INSTALL A ROOM TEMPERATURE SENSOR (SP2) (SEE PLAN VIEW FOR LOCATION).
  - CONNECT ROOM TEMPERATURE SENSOR (SP2) TO THE FIVE EXISTING CONTROL PANELS FOR THE FIVE EXISTING WALL MOUNTED HEAT PUMPS T-A6-25, T-A6-18, T-A6-17, T-A6-16 AND T-A6-15.
  - REDO THE SCHEMATIC DIAGRAM.
- ROOM SENSOR SP3:**
- INSTALL A ROOM TEMPERATURE SENSOR (SP3) (SEE PLAN VIEW FOR LOCATION).
  - CONNECT ROOM TEMPERATURE SENSOR (SP3) TO THE FOUR EXISTING CONTROL PANELS FOR THE FOUR EXISTING WALL MOUNTED HEAT PUMPS T-A6-14, T-A6-24, T-A6-13 AND T-A6-12.
  - REDO THE SCHEMATIC DIAGRAM.
  - UPON REQUESTING AIR-CONDITIONING OR HEAT, CENTRAL COMMAND MUST START ALL FOUR HEAT PUMPS AT THE SAME TIME (T-A6-14, T-A6-24, T-A6-13 AND T-A6-12).

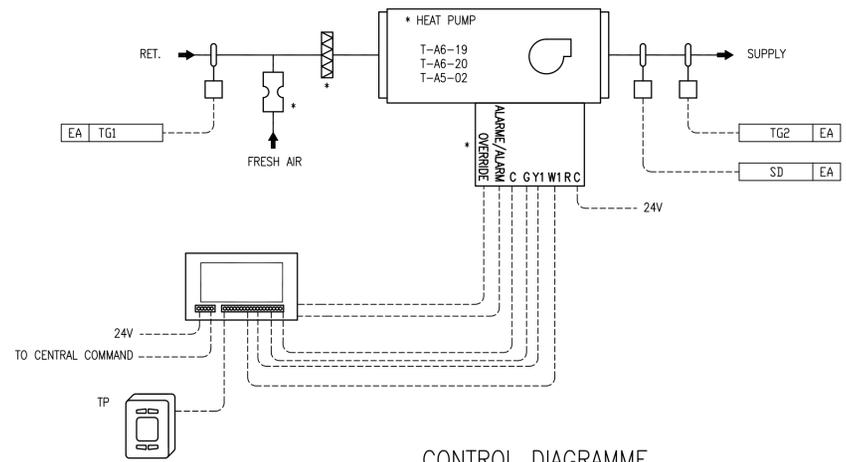


\* : EXISTING HVAC EQUIPMENT  
 \*\* : EXISTING CONTROL EQUIPMENT

**CONTROL DIAGRAMME**  
**WALL MOUNTED HEAT PUMP, ROOM A-602**  
 ECH : NONE

**SEQUENCE OF OPERATIONS**

- SYSTEM OFF:**
- HEAT PUMP IS NOT IN OPERATION.
- SYSTEM ON:**
- CENTRAL COMMAND ALLOWS THE SYSTEM TO FUNCTION ACCORDING TO THE ESTABLISHED SCHEDULE.
  - THE TEMPERATURE SENSOR IN THE RETURN DUCT (TG1) MEASURES THE AVERAGE ROOM TEMPERATURE.
  - THE HEAT PUMP VENTILATOR CONTINUALLY OPERATES AT LOW SPEED (MINIMUM OF FRESH AIR).
  - THE ROOM'S THERMOSTAT (TP) CONTROLS THE HEAT PUMP.
  - THE TEMPERATURE SENSOR (TG2) MONITORS AIR SUPPLY TEMPERATURE AND LIMITS HIGH AND LOW TEMPERATURES IN AIR SUPPLY.
  - THE AIRFLOW SENSOR INDICATES CENTRAL COMMAND'S AIRFLOW (AIRFLOW READING ONLY).
  - THE DUCT TEMPERATURE SENSOR (TG2) MONITORS THE TEMPERATURE OF THE AIR SUPPLY TO THE DIFFUSERS.
- REQUESTING AIR-CONDITIONING:**
- CENTRAL COMMAND ALLOWS THE SYSTEM TO OPERATE ACCORDING TO THE ESTABLISHED SCHEDULE.
  - THE ROOM'S THERMOSTAT (TP) CONTROLS THE HEAT PUMP.
  - CENTRAL COMMAND SENDS A SIGNAL TO THE HEAT PUMP'S TERMINAL BLOCK TO SET THE POSITION OF THE REVERSIBLE VALVE TO "COOL".
  - CENTRAL COMMAND SENDS A SIGNAL TO THE HEAT PUMP'S TERMINAL BLOCK TO START THE FIRST STAGE OF AIR-CONDITIONING (Y1).
  - THE COMPRESSOR TURNS ON.
  - IF THE TEMPERATURE IN THE ROOM DOES NOT GO DOWN AFTER 5 MINUTES, CENTRAL COMMAND STARTS THE SECOND STAGE OF AIR-CONDITIONING (Y2).
- REQUESTING HEAT:**
- CENTRAL COMMAND ALLOWS THE SYSTEM TO OPERATE ACCORDING TO THE ESTABLISHED SCHEDULE.
  - THE ROOM'S THERMOSTAT (TP) OPERATES THE HEAT PUMP.
  - CENTRAL COMMAND SENDS A SIGNAL TO THE HEAT PUMP'S TERMINAL BLOCK TO SET THE POSITION OF THE REVERSIBLE VALVE TO "HEAT".
  - CENTRAL COMMAND SENDS A SIGNAL TO THE HEAT PUMP'S TERMINAL BLOCK TO START THE FIRST STAGE OF HEATING (Y1).
  - THE COMPRESSOR TURNS ON.
  - IF THE TEMPERATURE IN THE ROOM DOES NOT GO UP AFTER 3 MINUTES, CENTRAL COMMAND STARTS THE SECOND STAGE OF HEATING (Y2).
- ALARM:**
- UNINTENDED STOPPING OF THE HEAT PUMP.
  - LOW/HIGH TEMPERATURE OF AIR SUPPLY.
  - LOW TEMPERATURE OF AIR SUPPLY (4°C).
  - HIGH ROOM TEMPERATURE.
- FIRE ALARM:**
- THE HEAT PUMP SHUTS OFF IF THE FIRE ALARM CONTROL PANEL SENDS IT A SIGNAL.



**CONTROL DIAGRAMME**  
**HEAT PUMP, ROOMS A-602 AND A-566 (3 UNITS)**  
 ECH : NONE

\* : EQUIPMENT PROVIDED BY OTHERS

FOR QUOTATION	JD	2019-01-18
Révision	Description	Par/By Date
A	Numéro du détail	A
C	Détail no.	B   C
B: Feuille sur laquelle le détail est référencé Location drawing no.		
C: Feuille sur laquelle le détail est dessiné Drawing no.		
Toute modification doit être rapportée à: All modification must be reported to:		
Biens Immobiliers, Environnement, Sécurité et Santé 104, Dalousie, Québec, Qc G1K 7Y7		
<b>Dossier:</b> Fik:		
<b>MONT-JOLI</b> <b>MAURICE-LAMONTAGNE BUILDING</b> <b>RENOVATION GIST/SPC</b>		
<b>MECHANICAL</b> <b>CONTROLS</b> <b>DETAILS AND SEQUENCE OF OPERATIONS</b>		
Conçu par:	Designated by:	Date
Jessy Devin		2018-05-08
Dessiné par:	Drawn by:	Date
Jessy Devin		2018-05-08
Vérifié par:	Verified by:	Date
Guy Villeneuve, ing.		2018-05-08
Approuvé par:	Approved by:	Date
Guy Villeneuve, ing.		2018-05-08
No. dossier:	File no.	Echelle:
F3677-170169		Indicated
No. dessin:	Sheet no.	No. feuille:
		Sheet no.
		M23 OF 24

FOR QUOTATION  
 THESE DOCUMENTS MUST NOT BE USED  
 FOR CONSTRUCTION (OR FABRICATION).