O'M Engineering
Electrical & Electronic Consulting Engineers
www.omengineering.ca

City of Coquitlam - Poirier Admin Building

ELECTRICAL FEASIBILITY STUDY

Prepared for:

City of Coquitlam

640 Poirier Street, Coquitlam, BC V3J 6B1

Project No.	Date	Authored by	Reviewed by
24-258	August 16, 2024	Richard Wu, EIT	Jinwoo Park, P.ENG.

Permit to Practice No: 1001261

PERMIT TO PRACTICE: #1001261
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ENGINEER
2024-08-15

PROFESSIONAL SEAL & SIGNATURE

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1.0 INTRODUCTION

O'M Engineering was retained by The City of Coquitlam to provide an electrical feasibility study for the addition of Variable Refrigerant Flow (VRF) HVAC systems to the Poirier Admin Building located at 640 Poirier Street, Coquitlam BC.

This feasibility study discusses the electrical findings, current electrical power capacity, additional electrical load requirements and the impact on the existing electrical system for the addition of new mechanical systems. The mechanical system will be designed by The AME Group.

2.0 CODES AND STANDARDS

Although all existing installations would have been completed to applicable codes and standards at the time of installation, the electrical system was reviewed in accordance with the intent of all current applicable codes, ordinances, bylaws, standards, and regulations.

The following list of applicable codes and regulations applies to this report:

- 2021 Canadian Electrical Code (CEC)
- 2024 British Columbia Building Code (BCBC)
- Applicable NFPA Regulations
- Canadian Standards Association (CSA)
- Underwriters' Laboratories of Canada (ULC)

3.0 ASSESSMENT APPROACH

3.1. Site Visit Approach

O'M Engineering conducted the electrical assessment by visiting the building, completing a walkthrough, and making observations of the electrical systems. O'M Engineering visited the site on May 1st, 2024 to develop an understanding of the existing electrical power distribution system and how it serves the building including existing mechanical units.

As per WorkSafe BC regulations, destructive testing was not undertaken, and boxes and equipment were not opened. No testing of existing equipment was in the scope of this review.

During the site visit, short, informal interviews and discussions were held with Krystal Law, Building Technician and John Baird, F.M.C City Assets. The results of these discussions are considered in this report.

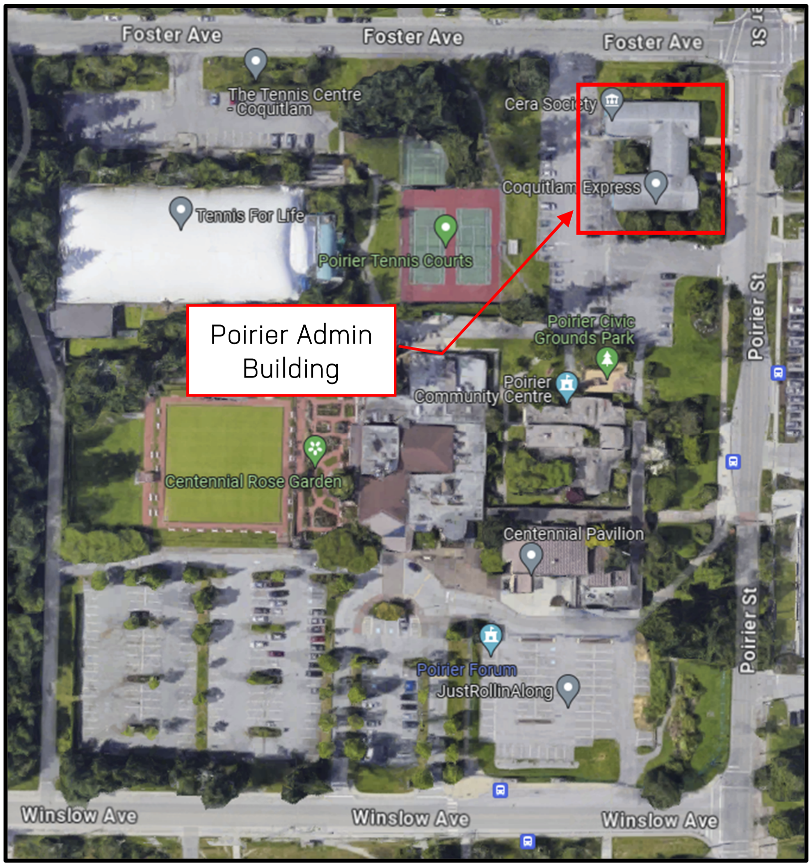


Figure 1: Site Plan of Existing Poirier Admin Building

3.2. Site Overview

Poirier Admin building is a two-storey building with multiple offices, a board room, a kitchen, and storage space. During the site visit, O'M engineering completed a review of the following areas:

- Offices spaces, a boardroom, a kitchen and storages space of the Poirier Admin Building,
- The exterior surrounding the Poirier Admin Building.

3.3. Available Documents

The following existing drawings and documents were made available for the preparation of this report:

- Poirier Admin Level 1 and 2 As-Built Architectural Floor Plans (May 2019)
- BC Hydro historical data from 2022/01/01 to 2024/06/14
- HVAC Feasibility Study dated July 3rd, 2024 by The AME Group.

4.0 PROJECT SCOPE OF WORK

4.1. Project Understanding

The City of Coquitlam is considering four (4) options for upgrading the HVAC systems at the Poirier Admin building:

- Option 1: VRF with Ducted Fan Coil Indoor Units (Half Space*)
- Option 2: VRF with Wall-Mounted Indoor Units (Half Space*)
- Option 3: VRF with Ducted Fan Coil Indoor Units (Full Space**)
- Option 4: VRF with Wall-Mounted Indoor Units (Full Space**)

*Half Space refers to the entire City of Coquitlam space only.

**Full Space refers to the entire building including City of Coquitlam space and tenant space.

This report highlights the current electrical power capacity of the building and compares that with the power requirement of the Half Space options and the Full Space options.

4.2. Existing Power System

The current power service to the building is from an overhead line from Poirier Street (east face of the building). The overhead lines are fed from a bank of three pole-mounted BC Hydro transformers. The building is fed with a 200A, 208/120V, 3-phase service.

There is only one meter for the entire building. The BC Hydro meter number is 5146747.

Picture 1: Existing BC Hydro Meter

The main electrical feeder enters the building on the ground floor near the east main entrance where it terminates in the 200A, 208/120V, 3-phase service Panel MP located in the electrical/mechanical room within the tenanted area. Panel MP feeds various loads through sub-panels located throughout the building. Panels PA, PB and PC are located within the City of Coquitlam space. Refer to *Figure 2* below for the Existing Single Line Diagram.

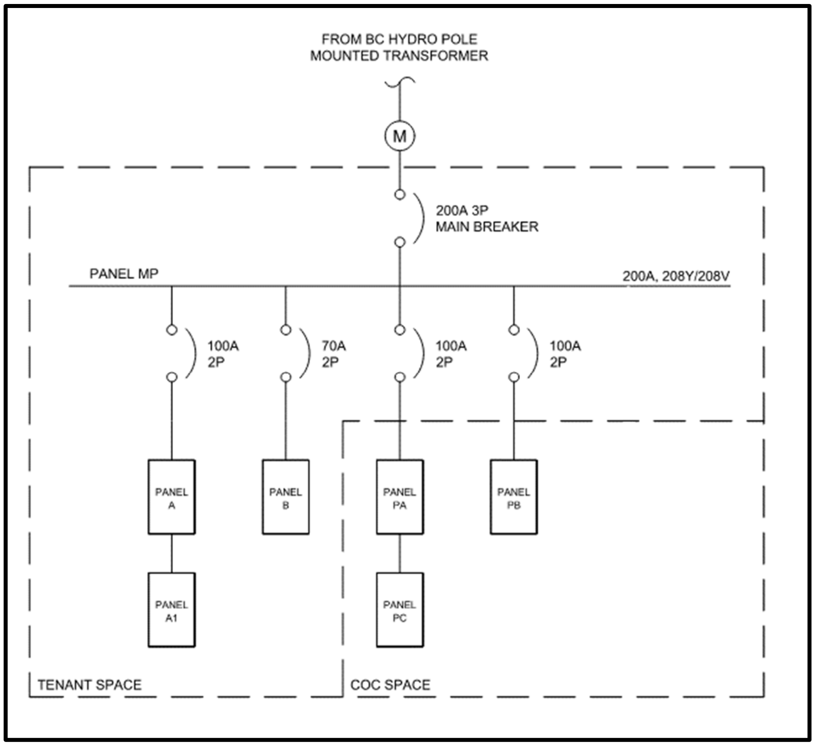


Figure 2: Existing Single Line Diagram

Panel MP is in good condition and appears to be recently installed compared to the sub-panels which appear to be original to the building. While Panel MP and the incoming electrical service to the building are a 3-phase service, all the sub-panels are single-phase. It appears that an incoming electrical power service upgrade has taken place in recent years in increasing electrical capacity from single to three phases.

Picture 2: Existing Panel MP

4.3. Electrical Capacity

Since the tenant space is unoccupied for a long period of time, BC Hydro historical data do not provide reliable peak loads. A load study was carried out using Table 14 of the Canadian Electrical Code (CEC), which provides calculated electrical demand (in kW) for different spaces based on their square meters. After the electrical basic demand is calculated based on a building footprint, then the existing mechanical loads are added to determine the estimated total electrical demand of the space. The findings of the calculations are summarized in the table below.

Item	Description			Power	Unit
1	Total Capacity of Incoming Service 200A, 208/120V, 3PH at 80%			57.64	kW
2	Building Basic Load as per CEC	Area (sqm)	1213.9	51.79	kW
		kW per sqm	0.05		
		First 930 sqm of the building load with a 90% Demand Factor as per CEC, Table 14	41.85		
		Remaining of the building load with a 70% Demand Factor as per CEC, Table 14	9.94		
		Total Basic Building Load	51.79		
3	Mechanical Loads	Window AC Units (700W x 12)	8.4	11.28	kW
		Boilers Pumps and Controls	2.88		
4	Total Calculated Load (2+3)			63.07	kW
5	Available Capacity (1-4)			-5.43	kW
6	Available Capacity (%)			-9.42	%

Table 1: Existing Load Calculation by CEC

The above load study based on CEC shows the building has a greater calculated electrical demand than the building electrical capacity. However, since there has been no issue with the building's main breaker tripping, it is unlikely that the building's real-world electrical demand is this high and consideration of the vacancy of the tenant space. Additionally, based on the informal interviews and discussions held during the site visit, we understand that City offices are not always occupied due to the hybrid work-from-home policy and portions of the tenant spaces are unoccupied. Since the CEC load study method is based on each square meter used equally, the load calculation cannot implement diversity factors by occupancy load.

The table below summarizes a second load study using historical BC Hydro data in kWh with assumptions of safety factors. The historical data in kWh does not reflect the peak demand as it is the total power consumption in an hour with 10-minute interval. On the other hand, historical data in kW is recorded over 5-

minute interval and gives a more accurate representation of the peak demand. To compensate for this, the peak kWh demand was multiplied by a factor of 1.5.

It was noted that the building has a peak energy consumption of 18.31 kWh on July 26th, 2022. Refer to *Appendix A* for a summary of the BC Hydro historical data.

Item	Description	Power	Unit	Comment
1	Total Capacity of Incoming Service	57.64	kW	200A, 208/120V, 3 Ph at 80%
2	Peak Electrical Consumption	18.31	kWh	Recorded on July 26th, 2022
3	Calculated Electrical Demand with Extrapolation Factor	27.47	kW	Reasonable factor to convert between kWh to kW (x1.5)
4	The factor for building underutilization	1.15		Work-From-Home Policy
5	Total Calculated Demand with underutilization load	31.59	kW	
6	Load Allowance for Empty Tenant Space	15	kW	Load assuming an office-type tenant would occupy the space (approx. 1/3 space compared to CoC space)
7	Total Calculated Demand (5+6)	46.59	kW	
8	Available Capacity (1-7)	11.05	kW	
9	Available Capacity (%)	19	%	

Table 2: Existing Load Calculation with Historical Data

5.0 NEW MECHANICAL SYSTEM LOADS

It is understood four (4) options for mechanical system upgrades are proposed by mechanical consultants. The four options are summarized in *Table 3* below.

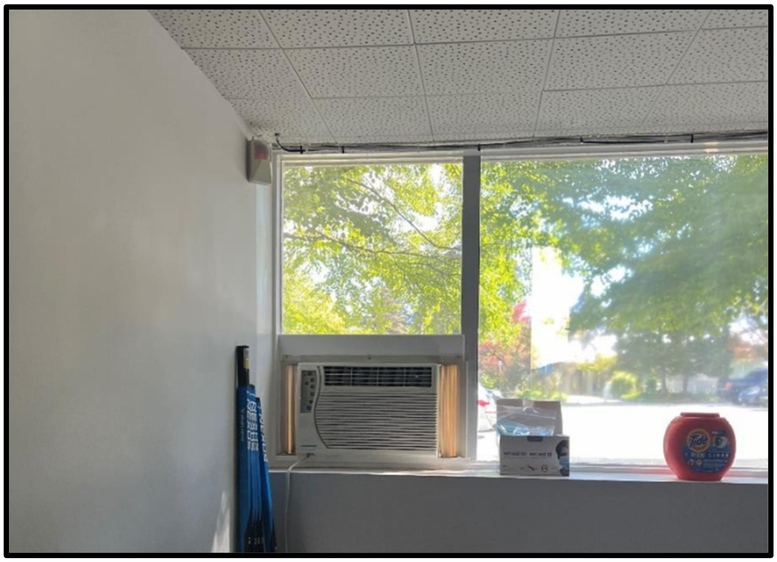
Item	Description	Power Requirement	Unit
Option 1	VRF with Ducted Fan Coil Indoor Units (Half Space)	16.18	kW
Option 2	VRF with Wall-Mounted Indoor Units (Half Space)	16.47	kW
Option 3	VRF with Ducted Fan Coil Indoor Units (Full Space)	34.57	kW
Option 4	VRF with Wall-Mounted Indoor Units (Full Space)	35.84	kW

Table 3: New Mechanical Systems Power Requirements

Refer to the mechanical feasibility study report prepared by the AME Group for further details.

The detailed mechanical schedules of each option can be found in *Appendix B.*

Currently, there are about twelve window-mounted A/C systems which will be removed once the new mechanical system is installed. These existing units are plug-in type systems, and it can be assumed that their load is about 700W each and a total of 8.4kW.



Picture 3: Existing Window AC Unit

5.1. Option 1 - VRF with Ducted Fan Coil Indoor Units (Half Space)

Based on the proposed mechanical equipment for Option 1, the below load calculation summarizes the available capacity after the mechanical upgrade:

Item	Description	Power	Unit	Comment
1	Existing Spare Capacity	11.05	kW	Refer to Table 2
2	Removal of Existing Window AC Units	8.4	kW	700W each (12 total)
3	Existing Spare Capacity with Demo of Existing Window AC Units	19.45	kW	
4	New Mechanical Load - Option 1	16.18	kW	Refer to Table 3
5	Available Spare Capacity After Mechanical Addition (3-4)	3.27	kW	
6	Available Capacity (%)	5.7	%	Based on 57.64kW incoming service.

Table 4: Option 1 Existing Load and Available Spare Capacity

Although the new proposed mechanical systems equipment in Option 1 (VRF with Ducted Fan Coil Indoor Units - Half Space) can be powered from the existing electrical power service as per load calculations above, the existing electrical power service will reach its maximum capacity, and it is not recommended. In addition, the new mechanical equipment's inrush current most likely will be over the existing electrical service main breaker and it will result in unexpected trips on the main breaker. It is recommended to upgrade the existing electrical power service for Option 1.

5.2. Option 2 – VRF with Wall Mounted Indoor Units (Half Space)

Based on the proposed mechanical equipment for Option 2, the below load calculation summarizes the available capacity after the mechanical upgrade:

Item	Description	Power	Unit	Comment
1	Existing Spare Capacity	11.05	kW	Refer to Table 2
2	Removal of Existing Window AC Units	8.4	kW	700W each (12 total)
3	Existing Spare Capacity with Demo of Existing Window AC Units	19.45	kW	
4	New Mechanical Load – Option 2	16.47	kW	Refer to Table 3
5	Available Capacity After Mechanical Addition (3-4)	2.98	kW	
6	Available Capacity (%)	5.2	%	Based on 57.64kW incoming service.

Table 5: Option 2 Existing Load and Available Spare Capacity

Although the new proposed mechanical systems equipment in Option 2 (VRF with Wall Mounted Indoor Units - Half Space)) can be powered from the existing electrical power service as per load calculations above, the existing electrical power service will be reaching its maximum capacity, and it is not recommended. In addition, the new mechanical equipment's inrush current most likely will be over the existing electrical service main breaker and it will result in unexpected trips on the main breaker. It is recommended to upgrade the existing electrical power service for Option 2.

5.3. Option 3 – VRF with Ducted Fan Coil Indoor Units (Full Space)

Based on the proposed mechanical equipment for Option 3, the below load calculation summarizes the available capacity after the mechanical upgrade:

Item	Description	Power	Unit	Comment
1	Existing Spare Capacity	11.05	kW	Refer to Table 2
2	Removal of Existing Window AC Units	8.4	kW	700W each (12 total)
3	Existing Spare Capacity with Demo of Existing Window AC Units	19.45	kW	
4	New Mechanical Load – Option 3	34.57	kW	Refer to Table 3
5	Available Spare Capacity After Mechanical Addition (3-4)	-15.12	kW	
6	Available Capacity (%)	-26.2	%	Based on 57.64kW incoming service.

Table 6: Option 3 Existing Load and Available Spare Capacity

Based on the load calculations above, the existing electrical power service is not sufficient to provide power to the new proposed mechanical systems equipment in Option 3 (VRF with Ducted Fan Coil Indoor Units - Full Space). An electrical power service upgrade is required to provide sufficient power to the new proposed mechanical systems equipment for this option.

5.4. Option 4 – VRF with Wall Mounted Indoor Units (Full Space)

Based on the proposed mechanical equipment for Option 4, the below load calculation summarizes the available capacity after the mechanical upgrade:

Item	Description	Power	Unit	Comment
1	Existing Spare Capacity	11.05	kW	Refer to Table 2
2	Removal of Existing Window AC Units	8.4	kW	700W each (12 total)
3	Existing Spare Capacity with Demo of Existing Window AC Units	19.45	kW	
4	New Mechanical Load – Option 4	35.84	kW	Refer to Table 3
5	Available Spare Capacity After Mechanical Addition (3-4)	-16.39	kW	
6	Available Capacity (%)	-28.4	%	Based on 57.64kW incoming service.

Table 7: Option 4 Existing Load and Available Spare Capacity

Based on the load calculations above, the existing electrical power service is not sufficient to provide power to the new proposed mechanical systems equipment in Option 4 (VRF with Wall Mounted Indoor Units - Full Space). An electrical power service upgrade is required to provide sufficient power to the new proposed mechanical systems equipment for this option.

6.0 FUTURE EV CHARGING STATION

In addition to the mechanical upgrades of the building, the City of Coquitlam plans to install two (2) EV charging stations in the future.

Two (2) Level 2 EV charging stations are considered into EV charging load calculations as below.

Voltage	Input Current	Power	Quantity	Total Power
208V	32A	6.66 kW	2	13.32 kW

Table 8: EV Charging Station Load Additions

Section 7.0 proposed electrical service upgrade which includes EV charging station load additions.

7.0 PROPOSED ELECTRICAL DESIGN

We recommend the existing electrical power service be upgraded to a new 400A, 208/120V, 3 Phase, 4 Wire service. Upgrade of the service will ensure that there is sufficient capacity for the new proposed mechanical systems, power the currently unoccupied space, and EV charging stations.

However, as the metering equipment for a 400A service is different than that of a 200A service, a new larger electrical power service equipment and CT/PT cabinet will be required as per BC Hydro standards. A new electrical room with exterior access will be required as well. The new electrical room requires approximately 2500mm x 2500mm space for the new equipment. An outdoor kiosk can be an alternative option if space is allowed on the property. Since the existing electrical room is in the basement, it may not suffice for the new service. The new electrical power service equipment can split into two distributions. One is to backfeed the existing electrical distribution. One is to serve new mechanical equipment and EV charging loads.

- Options 1 & 2: Recommend upgrading the existing electrical power distribution due to potential breaker trips by grouped motor inrush currents.
- Options 3 & 4: Recommend upgrading the existing electrical power distribution due to insufficient capacity to accommodate additional loads and grouped motor inrush currents.

The below load calculations table summarises the anticipated available spare capacity based on the upgraded electrical power service total capacity and total calculated power demand that includes the existing loads and new proposed mechanical equipment loads.

Options	New Service Total Capacity @120/208V 400A, 3PH, 4W	Total Calculated Demand	Proposed Future EV Charging Stations (Level 2)	Available Spare Capacity	Available Spare Capacity (%)
Option 1 – VRF with Ducted Fan Coil Indoor Units (Half Space)	115.28 kW	55.47 kW	13.32kW	46.49 kW	40%
Option 2 – VRF with Wall Mounted Indoor Units (Half Space)	115.28 kW	55.76 kW	13.32kW	46.2 kW	40%
Option 4 – VRF with Ducted Fan Coil Indoor Units (Full Space)	115.28 kW	73.86 kW	13.32kW	28.1 kW	24%
Option 4 – VRF with Wall Mounted Indoor Units (Full Space)	115.28 kW	75.13 kW	13.32kW	26.83 kW	23%

Table 9: Load Calculation with the New Upgraded Electrical Service

8.0 OPINION OF PROBABLE COSTS

Below is the Opinion of Probable costs for the electrical works. The opinion of probable costs in this report is based on our experience in the related field. This cost is for the electrical sub-trade labour and materials.

Item	Description	Opinion of Probable cost
BC Hydro Fee [1]	BC Hydro will require a design fee and construction fee on public property for the service upgrade	N/A
New Underground Work [2]	New underground electrical work and secondary feeder on private property	$20,000
New Service Equipment	400A, 208/120V, 3 Phase rated service equipment	$30,000
Conduit/wire	To back feed existing panel MP, new mechanical panel and mechanical units	$30,000
New Panel/Breakers	New mechanical panel and breakers	$20,000
Builders work	For new electrical room and service entrance penetrations (assuming new service will be overhead).	$50,000
EV Charging Stations	Provide two (2) new Level 2 EV Charging Stations (including trenching and infrastructure installation)	$45,000

Electrical Contractor Mobilization and demobilization		$10,000
Electrical Contractor Profit and Markup		$20,000
Total probable cost (approximate)		$225,000
Considerations and Assumptions: [1] BC Hydro cost varies at the time of service upgrade application and completion of construction. BC Hydro's cost cannot be estimated. [2] The civil and structural work excluded. [3] The opinion of probable costs in this report is based on our experience in the related field and only provides a Class D estimate. A Class D estimate provides a rough order of magnitude cost, as such the accuracy of this estimate is generally +40% to -20%. This cost is for the electrical sub-trade labour and materials.		

Table 10: Opinion Of Probable Costs

9.0 CONCLUSION

Based on the CEC's Table 14 load study, the site does not have sufficient capacity to add electrical loads. However, a second load study with BC Hydro historical data and safety factors was performed with the approximate peak demand of 27.47kW from July 2022, which was interpolated from 30 months of BC Hydro historical kWh data. As per this second load study, the existing electrical power service has an 11.05 kW spare capacity. Due to the lack of BC Hydro data in kW and the inconsistent use and vacancy of the space, neither of these methods will provide a precisely accurate account of the current electrical demand. However, they do provide a rough estimate of which recommendations can be made.

- Option 1 and 2 (Half Space)
  According to load calculations in *Section 5.1* and *Section 5.2* (using interpolated peak demand of 27.47kW), the current electrical power system has very limited capacity to accommodate the half-space options only. Furthermore, even though options 1 & 2 appear to be possible, the inrush currents of the new mechanical equipment would likely cause tripping issues with the main breaker, and an electrical power service upgrade is still recommended.

- Option 3 and 4 (Full Space)
  As per the load calculations in *Section 5.3* and *Section 5.4*, the electrical load of both full space options exceeds the existing electrical power capacity of the building, and an electrical power service upgrade is recommended.

Consequently, without the electrical system upgrade, it is not recommended to add mechanical system equipment and EV Charging Station due to the insufficient spare power capacity of the building.

10.0 REPORT QUALIFICATIONS

Please note, that this report has been prepared by O'M Engineering for the exclusive use of The City of Coquitlam. The material in this report reflects the best judgment of O'M Engineering with the information made available to us at the time of preparation of this report. Any use a third party may make of this report, or any reliance on or decisions made based upon this report, is the responsibility of such third parties. O'M Engineering accepts no responsibility for damages suffered by a third party as a result of decisions made or actions taken based on this report.

END OF REPORT

APPENDIX A – HISTORICAL ELECTRICAL POWER CONSUMPTION DATA

Peak kWh Recorded				
Month	**Year**			**Max (kWh) from all Years**
	2022	**2023**	**2024**	
Jan	**10.89**	**15.08**	**11.95**	**15.08**
Feb	**11.18**	**16.38**	**11.12**	**16.38**
Mar	**12.66**	**12.92**	**12.12**	**12.92**
Apr	**14.38**	**9.07**	**10.44**	**14.38**
May	**13.62**	**13.11**	**10.6**	**13.62**
Jun	**16.8**	**10.52**	**10.63**	**16.8**
Jul	**18.31**	**11.54**		**18.31**
Aug	**17.13**	**13.8**		**17.13**
Sep	**16.62**	**10.28**		**16.62**
Oct	**14.74**	**9.93**		**14.74**
Nov	**15.26**	**11.55**		**15.26**
Dec	**15.07**	**10.38**		**15.07**
Max (kWh) from all Months	**18.31**	**16.38**	**12.12**	**18.31**

APPENDIX B – PROPOSED MECHANICAL UPGRADE SYSTEMS MECHANICAL SCHEDULES

Option 1 – VRF with Ducted Fan Coil Indoor Units (Half Space)

MECHANICAL EQUIPMENT SCHEDULE - OPTION 1

PROJECT	CoC- Poirier Admin Building Electrical Feasibility Study	TOTAL MECHANICAL LOAD	16.18 KVA
NO.	24-258	EMERGENCY POWER LOAD	- KVA
Date	2024-07-27	STANDBY BACK-UP POWER LOAD	- KVA
		NON-EMERG. POWER LOAD	16.18 KVA

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EQUIPMENT											NOTES
UNIT					LOAD DATA						
TAG	QTY.	TYPE	DESCRIPTION	LOCATION / AREA SERVED	VOLT	PH	POWER	UNIT	VA PER UNIT	MOCP	
VARIABLE REFRIGERANT VOLUME - AIR-COOLED CONDENSING UNIT SCHEDULE											
REYQ144AATJA	1	MTR	12 TON Air cooled heat recovery (1) CU 2 South		208	3	47.80	MCA	13,777		
VARIABLE REFRIGERANT VOLUME - INDOOR UNIT SCHEDULE											
FXSQ24TBVJU	3	MTR	2.0 TON MSP Concealed Ducted Unit (Medium Static)		208	1	1.80	MCA	300		
FXSQ18TBVJU	5	MTR	1.5 TON MSP Concealed Ducted Unit (Medium Static)		208	1	1.60	MCA	267		
FXSQ18TBVJU	1	MTR	0.5 TON MSP Concealed Ducted Unit (Medium Static)		208	1	1.00	MCA	167		

Option 2 – VRF with Wall Mounted Indoor Units (Half Space)

MECHANICAL EQUIPMENT SCHEDULE - OPTION 2

PROJECT	CoC- Poirier Admin Building Electrical Feasibility Study	TOTAL MECHANICAL LOAD	16.47 KVA
NO.	24-258	EMERGENCY POWER LOAD	- KVA
Date	2024-07-27	STANDBY BACK-UP POWER LOAD	- KVA
		NON-EMERG. POWER LOAD	16.47 KVA

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EQUIPMENT											NOTES
UNIT					LOAD DATA						
TAG	QTY.	TYPE	DESCRIPTION	LOCATION / AREA SERVED	VOLT	PH	POWER	UNIT	VA PER UNIT	MOCP	
VARIABLE REFRIGERANT VOLUME - AIR-COOLED CONDENSING UNIT SCHEDULE											
AM168BXVGFR	1	MTR	VRF OUTDOOR UNIT - SOUTH 1&2F		208	3	54.4	MCA	15,679		
VARIABLE REFRIGERANT VOLUME - INDOOR UNIT SCHEDULE											
AM005	12	MTR	INDOOR WALL MOUNTED UNIT		208	1	0.16	MCA	27		
AM007	7	MTR	INDOOR WALL MOUNTED UNIT		208	1	0.20	MCA	34		
AM009	1	MTR	INDOOR WALL MOUNTED UNIT		208	1	0.25	MCA	42		
AM012	1	MTR	INDOOR WALL MOUNTED UNIT		208	1	0.31	MCA	52		
AM015	1	MTR	INDOOR WALL MOUNTED UNIT		208	1	0.34	MCA	57		
AM018	1	MTR	INDOOR WALL MOUNTED UNIT		208	1	0.44	MCA	74		

Option 3 – VRF with Ducted Fan Coil Indoor Units (Full Space)

MECHANICAL EQUIPMENT SCHEDULE - OPTION 3											
PROJECT NO. Date			CoC- Poirier Admin Building Electrical Feasibility Study 24-258 2024-07-27		TOTAL MECHANICAL LOAD EMERGENCY POWER LOAD STANDBY BACK-UP POWER LOAD NON-EMERG. POWER LOAD				34.57 KVA - KVA - KVA 34.57 KVA		O'M Engineering Electrical & Electronic Consulting Engineers
EQUIPMENT											NOTES
UNIT					LOAD DATA						
TAG	QTY.	TYPE	DESCRIPTION	LOCATION / AREA SERVED	VOLT	PH	POWER	UNIT	VA PER UNIT	MOCP	
VARIABLE REFRIGERANT VOLUME - AIR-COOLED CONDENSING UNIT SCHEDULE											
REYQ168AATJA	1	MTR	14 TON Air cooled heat recovery (1) CU 1 North		208	3	54.90	MCA	15,823		
REYQ144AATJA	1	MTR	12 TON Air cooled heat recovery (1) CU 2 South		208	3	47.80	MCA	13,777		
VARIABLE REFRIGERANT VOLUME - INDOOR UNIT SCHEDULE											
FXSQ30TBVJU	1	MTR	2.5 TON MSP Concealed Ducted Unit (Medium Static)		208	1	1.80	MCA	300		
FXSQ24TBVJU	3	MTR	2.0 TON MSP Concealed Ducted Unit (Medium Static)		208	1	1.80	MCA	300		
FXSQ18TBVJU	12	MTR	1.5 TON MSP Concealed Ducted Unit (Medium Static)		208	1	1.60	MCA	267		
FXSQ18TBVJU	1	MTR	1.3 TON MSP Concealed Ducted Unit (Medium Static)		208	1	1.40	MCA	233		
FXSQ18TBVJU	1	MTR	0.6 TON MSP Concealed Ducted Unit (Medium Static)		208	1	1.00	MCA	167		
FXSQ18TBVJU	1	MTR	0.5 TON MSP Concealed Ducted Unit (Medium Static)		208	1	1.00	MCA	167		

Option 4 – VRF with Wall Mounted Indoor Units (Full Space)

MECHANICAL EQUIPMENT SCHEDULE - OPTION 4											
PROJECT NO. Date			CoC- Poirier Admin Building Electrical Feasibility Study 24-258 2024-07-27		TOTAL MECHANICAL LOAD EMERGENCY POWER LOAD STANDBY BACK-UP POWER LOAD NON-EMERG. POWER LOAD				35.84 KVA - KVA - KVA 35.84 KVA		O'M Engineering Electrical & Electronic Consulting Engineers
EQUIPMENT											NOTES
UNIT					LOAD DATA						
TAG	QTY.	TYPE	DESCRIPTION	LOCATION / AREA SERVED	VOLT	PH	POWER	UNIT	VA PER UNIT	MOCP	
VARIABLE REFRIGERANT VOLUME - AIR-COOLED CONDENSING UNIT SCHEDULE											
AM072BXVGFR	1	MTR	VRF OUTDOOR UNIT - NORTH 1F		208	3	28	MCA	8,070		
AM096BXVGFR	1	MTR	VRF OUTDOOR UNIT - NORTH 2F		208	3	36	MCA	10,376		
AM168BXVGFR	1	MTR	VRF OUTDOOR UNIT - SOUTH 1&2F		208	3	54.4	MCA	15,679		
VARIABLE REFRIGERANT VOLUME - INDOOR UNIT SCHEDULE											
AM005	33	MTR	INDOOR WALL MOUNTED UNIT		208	1	0.16	MCA	27		
AM007	8	MTR	INDOOR WALL MOUNTED UNIT		208	1	0.20	MCA	34		
AM009	3	MTR	INDOOR WALL MOUNTED UNIT		208	1	0.25	MCA	42		
AM012	1	MTR	INDOOR WALL MOUNTED UNIT		208	1	0.31	MCA	52		
AM015	1	MTR	INDOOR WALL MOUNTED UNIT		208	1	0.34	MCA	57		
AM018	3	MTR	INDOOR WALL MOUNTED UNIT		208	1	0.44	MCA	74		
AM028	1	MTR	INDOOR WALL MOUNTED UNIT		208	1	0.54	MCA	90		