



December 7, 2021

CF Shops at Don Mills 7 Maginn Mews Toronto, Ontario M3C 0G8

Attention: Catherine Dubois

Re: Shops at Don Mills System Upgrades Maintenance and Equipment Testing 1090 Don Mills, RBC Tower Toronto, Ontario Our Reference #21-061-001

Dear Catherine,

Based on our observations at the final field review at the time of the project, we advise that the Electrical Installation has been substantially completed in general conformance with the electrical drawings and specifications as approved for Issued for Tender and Tender addendums.

Yours very truly,

HAMMERSCHLAG & JOFFE INC.



Filip Ivanovski, P.Eng. /sk

December 3, 2021



CMS Electrical Group 2721 Markham Road – Unit 10 Scarborough, Ontario M1X 1L5

Attention: Brad Herring

1090 Don Mills Road Warranty Letter

Mr. Herring,

Re:

Please note that the installed 2000A breaker at 1090 Don Mills Road has a one-year warranty from the manufacturer from the time of delivery (September 2021). If there are any issues that arise from the breaker, please contact Krka Power Inc. directly and we will begin the remediation process.

Should you have any questions, or require further clarification, please do not hesitate to contact me at your earliest convenience.

Thank you,

Pjay Tizon Krka Power Inc. | Field Service Representative



ESAFE – Product Approval Services 4043 Carling Avenue, Suite 106, Ottawa, ON, K2K 2A4 For Inquiries: Toll Free Telephone: 1-800-559-5356 Toll Free Fax: 1-800-559-5358

www.esafe.org

Applicant: BIBICO ELECTRIC INC 3348 HARVESTER RD UNIT 3 BURLINGTON, ON, CA, L7N 3M8

Notification: 30372061 Customer ID: 32872 Certificate Issued: Nov 2, 2021

Certificate of Conformity

Location of Inspection:

1090 DON MILLS 1090 DON MILLS, NORTH YORK, ON, CA, M3C 3R6

Approval Date: Nov 1, 2021 Customer Order: NO PO Print Date: Nov 2, 2021

At the time of evaluation, the product listed below was found to be in conformity with applicable National Standards as noted below. It is therefore deemed to be approved. For additional information regarding conformity, please contact the ESAFE Customer Service Centre at 1-800-559-5356.

Equipment Information

| Description: Model Number: Manufacture Name: Enclosure: Enclosure Type: Connection Type: Number of pieces of Equ | ipment: | 2000A SWITCH 2000A MAIN E BIBICO/KRKA Metal Indoor Permanently A 1 | HBOARD BREAKER REPLACEMENT Attached | | | |
|--|----------|--|---|--------------|------------|---------------|
| <u>Voltage</u> | Rated In | <u>put</u> | Frequency | <u>Phase</u> | | <u>SCCR</u> |
| 347/600V | 2000A | | 60Hz | 3 Phase + N | | |
| SPE-1000 Procedures: Standards Used: Other Procedures: Conditions of acceptabil | ity: | Yes N/A N/A N/A | | | | |
| Approval Labels Issued: Serial No 211101 | | <u>ESA L</u> P4424 | <u>abel No</u> 194 | Ē | Partner La | <u>bel No</u> |



ELECTRICAL FIELD REVIEW REPORT

| Project Name: | System Upgrades Maintenance and Equipment Testing, | Date of Review: | 20 November 2021 |
|------------------|---|-----------------|------------------|
| Project Address: | 1090 Don Mills, RBC Tower, Toronto ON | Project No.: | 21-061-001 |
| Reviewed By: | Filip Ivanovski, P. Eng. | | |

Distribution:

| Cadillac Fairview | Catherine Dubois | catherine.dubois@cadillacfairview.com |
|-------------------|------------------|---------------------------------------|
| Cadillac Fairview | llene Klein | ilene.klein@cadillacfairview.com |
| CMS | Brad Herring | brad@cmselectricalgroup.com |

Note #1: Any deficiency items not specifically mentioned in the Field Review Reports does not alleviate the Contractors of the responsibility to comply with the intent of the plans and specifications or the requirements of the Local Authorities. Errors or omissions must be notified in writing within seven days of the date reviewed, or the report will be accepted as written.

Note #2: Items listed in the report reflect visible site conditions observed at time of our site visit.

Note #3: The field review work was completed during site attendance while maintaining COVID-19 protocols, adhering to the sitespecific COVID-19 policies, and having required COVID-19 PPE.

Based on a process of random sampling, the following were observed on site.

General:

- 1. H&J went on site to confirm new breaker install and electrical equipment in good order.
- 2. We reviewed the newly installed equipment that is to replace the original one and found the installation in order.
- 3. At the time of our review H&J delivered and applied new arc flash labels for the main electrical equipment.
- 1. Items requiring contractor's attention:
 - 1.1. Final document submission one package to include all documents 2021-11-20

Required submittals at project substantial completion:

- 1. Submit:
 - a. Hydro Electrical Inspection report received
 - b. Warranties, manual outstanding
 - c. Record drawings and testing records received

End of Report





Photo Records:

Picture 1: New sub-main breaker switch installed in the original Federal Pioneer equipment.

November 8, 2021



CMS Electrical Group 2721 Markham Road – Unit 10 Scarborough, Ontario M1X 1L5

Attention: Brad Herring

Re: 1090 Don Mills Road Substation Maintenance Report

Mr. Herring,

I am pleased to enclose the following report with respect to the substation maintenance and switch replacement performed on October 16, 2021 and October 31, 2021 respectively, for the facility located at 1090 Don Mills Road in Toronto, Ontario.

Should you have any questions, or require further clarification, please do not hesitate to contact me at your earliest convenience.

Thank you,

Pjay Tizon Krka Power Inc. | Field Service Representative



The following is a summary of the tasks performed and our findings, comments and recommendations with respect to the work completed on October 16th nd October 31, 2021:

1. Equipment

- i. Switchboard PQR
- ii. Switchboard R
- iii. Old Electrical Room Switchboard
- iv. MCC 'AA'
- v. MCC 'EBB'

2. Tasks Performed

- i. Regarding the above listed Switchboard and its associated disconnects and breakers
 - i. Visual and mechanical inspection
 - ii. Verification of operation
 - iii. Cleaning of the breaker
 - iv. Cleaning of the disconnect
 - v. Cleaning of the cell
 - vi. Contact resistance test
 - vii. Insulation resistance test
 - viii. Secondary injection relay test
- ii. Replacement of main 2000AF FPE switch with a fixed moulded case breaker at Old Electrical Room
- iii. Regarding 'Chiller' Disconnect Old Electrical Room
 - i. Thorough cleaning of disconnect blades
- iv. Regarding 'RP Busduct' Disconnect Level 2
 - i. Thorough cleaning of disconnect blades and replaced 3 100A fuses
- v. Regarding 'RP-2C' in 'PP-2HH' Level 2
 - i. Cut melted part of the cable and re-terminate to the breaker
- vi. Regarding 'RP-6B' Disconnect Level 6
 - i. Thorough cleaning of disconnect blades



3. Findings

- i. Regarding Switchboard R
 - i. Presence of rust found at the bottom part of switchboard during visual inspection
 - ii. Presence of water dripping at the back of switchboard and main incoming conduit
- ii. Regarding Old Electrical Room Switchboard
 - i. Presence of rust found at the bottom part of switchboard during visual inspection
 - ii. Associated disconnect and its compartment too dirty and dusty
 - iii. Paradise Frozen Yogurt and Q4 Cadet Cleaners has lock on it
- iii. Regarding MCC AA
 - i. Associated disconnect and its compartment too dirty and dusty
 - ii. Only 1 fuse connected at 'Sec. Chilled Water P3'
 - iii. No fuse connected to 'Kitchen Exh Fan F13'
- iv. Regarding MCC EBB
 - i. Associated disconnect and its compartment too dirty and dusty
 - ii. 2 Blown fuse found at 'Cooling Tower Heater'. Subsequently, replaced with 3 new fuses (supplied by client)
 - iii. MCC side cover is bended

4. Comments and Recommendation

- i. Old electrical room switchboard and disconnects are in very poor condition. It is strongly recommended that the existing switchboard to be replaced/modified to be updated with breakers instead of disconnects to increase facility reliability, as well as improved arc flash protection of equipment and personnel.
- ii. Regarding Switchboard R
 - i. Switchboard needs to be replaced due to high amounts of rusting and water leakage (see pictures)
- iii. Regarding 'RP-2C' in 'PP-2HH' Level 2
 - i. No access to tenant space to allow for further investigation as to what caused damage to cable prior to correction.
- iv. Thermal re-scanning of equipment noted with issues was based on its available load.



SWITCHBOARD 'R'





FPE 2000AF SWITCH REPLACEMENT

Before



After





OLD ELECTRICAL ROOM SWITCHBOARD







<u>'CHILLER' DISCONNECT</u>

Before



After



Krka Power Inc. 3348 Harvester Road | Burlington, Ontario | L7N 3M8



MCC 'EBB':





<u>'RP-BUSDUCT' DISCONNECT – LEVEL 2</u>

Before









<u>'RP-2C' – LEVEL 2</u>

Before



After



Moulded Case Circuit Breaker

| Work Order Dat | a: | | | | | | | |
|----------------|---------------|-------|-------|----|-------------|-----------------|---------------|---------------------|
| Work Date: | October 16, 2 | 021 | | A | ddress: | | 1090 D | on Mills Road |
| Krka Job No: | 21061 | 314 | | | City: | | | Toronto |
| Technicians: | SN/PT | /EL | | | | | | |
| Equipment Data | a: | | | | | | | |
| Panel | Designation | Frame | Plug | kA | Contac A | t Resistan B | ice (μΩ) C | Mechanical Check |
| SWBD PQR | Splitter PQ | 400 A | 400 A | 35 | 320 | 310 | 250 | \checkmark |
| SWBD PQR | Q4 | 400 A | 400 A | 35 | 161 | 190 | 280 | \checkmark |
| SWBD PQR | Spare | 400 A | 400 A | 35 | 380 | 444 | 433 | \checkmark |
| SWBD PQR | Q2/Q3 | 400 A | 400 A | 35 | 309 | 206 | 249 | \checkmark |
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Notes & Comments:

1) Exercised breaker mechanical operation 3x.

(C) Correct (N/C) Non Conform (N/A) Non Applicable (N/V) Non Verified (✓) Satisfactory

| Work Order Data: | 4 | | ka lah N | | 04004044 | | Teel | | | |
|----------------------------|----------|--------------|----------|--------|--------------------|-------------------|--------------|-----------|---|-----------|
| Date: October 31, 202 | 1 | Kr | ka Jod i | NO.: | 21061314 | _ | I eci | nnician | s: | PT/AS |
| Customer: C | MS Elect | rical Group |) | | Site: | 1090 [| Don M | lills Roa | ad | |
| Switchboard: SWBE |) R | Equip | ment D | esigna | tion: | Mai | Main Breaker | | | |
| Equipment Data: | | | | | | | | | | |
| Manufacturer: | | Cutler | Hamme | er | Rating: | | | | | 1600 A |
| Туре: | | | CRI | D | Interrupt | ing Capacity: | | | | 50 kA |
| Poles: | | 3 | | | | | | | | |
| Mechanical & Electrical | Inspec | tion: | | | | | | | | |
| Description | | Status | Notes | ; | | Description | | | Statu | s Notes |
| Close-Open Trip Indication | | \checkmark | | | Clean Br | eaker | | | \checkmark | |
| Mechanical Interlock | | N/A | | | Clean Co | ell | | | \checkmark | |
| Lubrication | | \checkmark | | | Interlock | | | | N/A | |
| Tripping Manual | | \checkmark | | | Tripping | Electrical-by Pro | tectio | n | \checkmark | |
| Frame Condition | | \checkmark | | | Manual- | Electrical Close | | | N/A | |
| Inspect Insulators | | ~ | | | Charging Mechanism | | | | N/A | |
| Inspect Barriers | | \checkmark | | | | | | | | |
| Relay Test & Settings: | | | | | | | | | | |
| Trip Unit: | | RMS 310 | | | Test Equ | ipment: | | Cutl | er Harr | Imer |
| Туре: | NP | 7801C99H | 04 | | Type of I | njection: | | S | econda | ry |
| Rating Plug: | | 1600 A | | _ | | | | | | |
| Type of Protection | | Settin | a | | Tr | ipping Results | - | | IN/A N/A N/A N/A er Hammer econdary Trip Indicator ss √ | |
| | _ | | 9 | (| Current | Time | | Stat | us | Indicator |
| | | | | | | | | | | |
| Long Time Delay | _ | | _ | | | | | | | |
| Short Time | | 4X | - | | | | | Pas | S | ✓ |
| Short Time Delay | _ | 0.2 s | ; | | | | | | | |
| Ground Foult | - | 800 / | <u> </u> | | | | | Doo | | |
| Ground Fault Delay | | 0.00 | ` | | | | | Pas | 5 | • |
| Ground Fault Delay | | 0.3 5 | | | | | | | | |
| Contact Resistance (μΩ | 2): | | | | | | - | | | |
| Phase: | A: | | 24 | | B: | 26 | C: | | | 23 |
| Insulation Resistance (| MΩ): | | | | | | | | | |
| Phase-to-Phase | A-B: | | >99 | 99 | B-C: | >999 | C-A: | | | >999 |
| Phase-to-Ground | A-GN | ID: | >99 | 99 | B-GND: | >999 | C-GI | ND: | | >999 |
| Notes & Comments: | | | | | | | | | | |

Moulded Case Breaker

- Exercised breaker operation 3x.

- Breaker and its compartment is too dusty.

(C) Correct (N/C) Non Conform (N/A) Non Applicable (N/V) Non Verified (✓) Satisfactory

Fuse Disconnect Switch

| Work Order Dat | a: | | | | | | | |
|------------------|-------------------------------|-------|-------|-----|-------------|--------------------------|--------|---------------------|
| Work Date: | October 16, 202 | 21 | | Add | ress: | | 1090 E | on Mills Road |
| Krka Job No: | 210613 | 14 | | | City: | | | Toronto |
| Technicians: | ans:SN/PT/EL | | | | | | | |
| Equipment Data | 1: | - | | | - | | | _ |
| Panel | Designation | Frame | Fuse | kA | Contac A | t Resistance (μΩ) B C | | Mechanical Check |
| Old Elec Rm SWBD | Chiller | 600 A | 600 A | 200 | 174 | 170 | 168 | \checkmark |
| Old Elec Rm SWBD | MCC- AA | 600 A | 600 A | 200 | 180 | 173 | 218 | \checkmark |
| Old Elec Rm SWBD | Bus Duct - 400 A | 600 A | 400 A | 200 | 276 | 235 | 240 | \checkmark |
| Old Elec Rm SWBD | 600 A Busduct RPS | 600 A | 600 A | 200 | 162 | 182 | 164 | \checkmark |
| Old Elec Rm SWBD | LP-BHB | 200 A | 200 A | 200 | 600 | 686 | 640 | \checkmark |
| Old Elec Rm SWBD | DP-PEA | 200 A | 200 A | 200 | 560 | 525 | 470 | \checkmark |
| Old Elec Rm SWBD | Roger Wireless | 200 A | 150 A | N/V | 2870 | 3330 | 2710 | \checkmark |
| Old Elec Rm SWBD | MSP BB | 100 A | 70 A | N/V | 1740 | 1680 | 1540 | \checkmark |
| Old Elec Rm SWBD | Park Lot | 100 A | 100 A | N/V | 1280 | 1100 | 1100 | \checkmark |
| Old Elec Rm SWBD | Unit 405 | 100 A | 100 A | N/V | 1480 | 1900 | 2730 | \checkmark |
| Old Elec Rm SWBD | Elec RM U/H, Sprinkler RM U/H | 100 A | 15 A | N/V | 3840 | 3000 | 3200 | \checkmark |
| Old Elec Rm SWBD | Meter Manager Carma | 100 A | 15 A | N/V | 3100 | 4000 | 3200 | \checkmark |
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Notes & Comments:

1) Exercised switch operation 3x.

2) SWBD too dirty.

3) Rust found on the bottom side of SWBD.

(C) Correct (N/C) Non Conform (N/A) Non Applicable (N/V) Non Verified (✓) Satisfactory

Fuse Disconnect Switch

| Work Order Da | ata: | | | | | | | | |
|---------------|------------------------------|----------|-------|-----|-------------|--------------------------|--------|---------------------|--|
| Work Date: | October 16, 20 | 21 | | Add | ress: | | 1090 E | on Mills Road | |
| Krka Job No: | 210613 | 14 | | | City: | | | Toronto | |
| Technicians: | SN/PT/I | SN/PT/EL | | | | | | | |
| Equipment Dat | ta: | | | | | | | | |
| Panel | Designation | Frame | Fuse | kA | Contac A | t Resistance (μΩ) B C | | Mechanical Check | |
| MCC AA | Supply Air Fan AHU 1 | 400 | 250 A | N/V | 760 | 511 | 554 | \checkmark | |
| MCC AA | Cooling Tower Fan | 60 A | 60 A | N/V | 1603 | 1470 | 1448 | ~ | |
| MCC AA | Sec Chilled Water P3 | 15 A | 15 A | N/V | 600 | | | \checkmark | |
| MCC AA | Sec Chilled Water Standby P4 | 15 A | 15 A | N/V | 3750 | 3240 | 3630 | ~ | |
| MCC AA | Standby P10 | 15 A | 15 A | N/V | 3500 | 3300 | 3500 | \checkmark | |
| MCC AA | Retail F.A Fan AHU-2 F3 | 15 A | 15 A | N/V | 1700 | 1800 | 2700 | \checkmark | |
| MCC AA | Cond. Water P5 | 60 A | 60 A | N/V | 1600 | 1500 | 1600 | \checkmark | |
| MCC AA | Glycol Htg P13 | 6 A | 6 A | N/V | 1130 | 1150 | 1140 | ~ | |
| MCC AA | Cond. Water Standby P6 | 60 A | 60 A | N/V | 1500 | 1600 | 1600 | ~ | |
| MCC AA | Kitchen Exhaust Fan | | | | | | | | |
| MCC AA | Spare | | | | | | | | |
| MCC AA | Sanitary Exh Fan F5 | N/V | 6 A | N/V | 1140 | 1160 | 1150 | ~ | |
| MCC AA | Primary HTG Water P8 | N/V | 15 A | N/V | 2900 | 2800 | 2900 | ~ | |
| MCC AA | Primary HTG Water P7 | N/V | 15 A | N/V | 2800 | 2800 | 2700 | \checkmark | |
| MCC AA | Chilled Water P1 | N/V | 45 A | N/V | 3100 | 3100 | 3200 | ~ | |
| MCC AA | LP-"PHA" | N/V | 45 A | N/V | 3200 | 3400 | 3300 | ~ | |
| MCC AA | Return Air Fan AHU 1 | 250 A | 125 A | N/V | 1600 | 1700 | 1800 | ~ | |
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Notes & Comments:

1) Exercised switch operation 3x.

2) SWBD too dirty.
3) Only 1 fuse found connected in Sec. Chilled Water Disconnect.
4) No fuse found in Kitchen Exh Fan F13 and Spare Disconnect.

(C) Correct (N/C) Non Conform (N/A) Non Applicable (N/V) Non Verified (✓) Satisfactory

Fused Disconnect Switch

| Work Order Data: | | | | | | | | |
|------------------|---------------------------------|-----------|------|-----|--------------|------------------------|--------|---------------------|
| Work Date: | October 16, 202 | 21 | | Add | lress: | | 1090 D | on Mills Road |
| Krka Job No: | 210613 | 14 | | | City: | | | Toronto |
| Technicians: | SN/PT/E | <u>EL</u> | | | | | | |
| Equipment Data: | | | | | | | | |
| Panel | Designation | Frame | Fuse | kA | Contact A | Resistance (mΩ) B C | | Mechanical Check |
| MCC EBB | Scheduled Water (P9) | N/V | 15 A | N/V | 42.76 | 38.88 | 45.62 | \checkmark |
| MCC EBB | Heating Water (P11) | N/V | 6 A | N/V | 118.71 | 119.97 | 119.93 | \checkmark |
| MCC EBB | Control Air Comp (CAC1) | N/V | 30 A | N/V | 8.76 | 5.82 | 6.13 | \checkmark |
| MCC EBB | Control Air Comp (CAC2) | N/V | 30 A | N/V | 8.64 | 5.72 | 5.88 | \checkmark |
| MCC EBB | Heating Boiler (HB - 1) - Spare | N/V | 15 A | N/V | 18.75 | 18.26 | 16.14 | \checkmark |
| MCC EBB | Heating Boiler (HB - 2) - Spare | N/V | 15 A | N/V | 36.77 | 37.83 | 36.13 | \checkmark |
| MCC EBB | Cooling Tower Heater | N/V | 30 A | N/V | 1.07 | 8.63 | 2.36 | \checkmark |
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Notes & Comments:

1) Exercised switch operation 3x.

2) 2 Blown fuse found in Cooling Tower Disconnect.Subsequently replaced 3 fuses.

3) MCC Panel too dirty.

4) Side cover found bend.

(C) Correct (N/C) Non Conform (N/A) Non Applicable (N/V) Non Verified (✓) Satisfactory

September 14, 2021



CMS Electrical Group 2721 Markham Road – Unit 10 Scarborough, Ontario M1X 1L5

Attention: Brad Herring

Re: 1090 Don Mills Road IR Scanning Report

Mr. Herring,

I am pleased to enclose the following report with respect to the IR scanning performed on August 30, 2021 for the facility located at 1090 Don Mills Road in Toronto, Ontario.

Should you have any questions, or require further clarification, please do not hesitate to contact me at your earliest convenience.

Thank you,

Pjay Tizon Krka Power Inc. | Field Service Representative



Thermographic Survey Summary

Survey Intent

It was the intent of this thermographic inspection to survey a number of pieces of electrical equipment throughout your facility with the objective of locating potential problems and determining their seriousness.

Background

Thermal radiation (heat) is constantly being emitted by all objects around us and is converted into a colour thermal image by specialized infrared scanners. This technique for imaging and measuring heat is called thermography. The thermal images produced by the camera allow for meaningful interpretation of the thermal properties of various objects and at the same time makes it possible to pinpoint potential problems at a stage where damage can still be prevented and costly heat related problems identified.

Results

The results are presented in the form of a hard copy image (thermogram) of the thermal anomaly. The data with the resultant temperature differential(s) is given with the thermogram. In the particular case of electrical inspections, if the components are under sufficient load and excess temperatures are measured directly on the faulty part itself, the following three categories are used to define the deficiency:

Note:

- 1. All of the below listed equipment was surveyed as per the customers' request with the available equipment load.
- 2. Any recommendations made for correcting the deficiencies are suggestions only. Exact diagnosis to be made by an experienced electrical technician after the component/equipment is inspected during a shutdown.



Survey Summary

Items shown in **color** indicate that a deficiency was found in that area during the survey:

- Level P1
 - o Main Switchboard
 - o Sub Main Electrical SWBD
 - o LP-BB
 - o MSP-BB
- Level 2
 - \circ LP-2HA SW
 - o LP-2HA PD
 - \circ LP-2HA
 - o TX RP -2
 - \circ TX RP -2 PD
 - $\circ~$ TX RP 2 SW
 - o RP 2
 - **PP 2HH**
- Level 3
 - LP 3HA
 - \circ LP 3HA PD
 - TX RP 3A SW
 - TX RP 3A PD
 - TX RP 3A
 - o RP 3A
 - o RP-3B CB
 - $\circ ~~ \text{TX 200ASP SW}$
 - o TX 200ASP PD
 - o TZ 200ASP
 - \circ 200A Splitter
 - o 304 SW & PD
 - 303 SW & PD



- Level 4
 - $\circ \quad \text{TX RP-4A SW}$
 - o TX RP-4A PD
 - TX RP 4A
 - o Unit 406
 - o LP-4HA SW
 - o RP-4A
 - o TX U#403
 - TX UNIT#405
 - o UNIT #405 PD
- Level 5
 - \circ TX RP-5A SW
 - o TX RP-5A PD
 - \circ TX RP-5A
 - o RP-5A
 - **RP-5B**
 - \circ LP-5HA SW
 - \circ LP-5HA PD
 - o LP-5HA
- Level 6
 - $\circ \quad \text{Panel A}$
 - $\circ \quad \mathsf{TX} \ \mathsf{PNL} \ \mathsf{A} \ \mathsf{SW}$
 - o TX RP-6BSW
 - \circ TX RP-6B PD
 - \circ TX RP-6B
 - $\circ \quad \text{LP-6HA SW}$
 - o LP-6HA PD
 - o LP-6HA
 - \circ TX RP-6 SW
 - o TX RP-6 PD
 - o TX RP-6
- Penthouse
 - $\circ \quad \text{Chiller PD} \quad$
 - \circ Chiller SW
 - o MCC



- o LP-PHA CB
- o LP-PHA
- $\circ \quad \text{RP-TA TX}$
- o RP-PA
- o ATS
- GEN CB
- \circ DP-DEA
- o LP-EHA
- MC-EBB
- **TX-9**
- o LP-EPA
- MSP-EAA
- o MSP-EAB



Findings / Comments / Recommendations:

- 1) Regarding 'Chiller' Disconnect Sub Main Electrical Room
 - a. Sign of pitting observed in one of the disconnect blades
 - b. Hot spot found at the point of pitting
 - c. Recommend isolation of disconnect for detailed inspection and cleaning and then re-scanning
- 2) Regarding 'RP Busduct' Disconnect Level 2
 - a. Amperage recordings of:
 - i. A: 50A / B: 52A / C: 43A
 - b. Recommend isolation of disconnect for detailed inspection and cleaning, as well as supply and install of replacement fuses, and then re-scanning
- 3) Regarding 'RP-2C' in 'PP-2HH' Level 2
 - a. Melted cable insulation found
 - b. Recommend isolation to allow for detailed inspection of cable, as well as tracing of cable route for installation of new cable
- 4) Regarding 'RP-6B' Disconnect Level 6
 - a. Amperage recording of:
 - i. A: 5.5A / B: 5.5A / C: 6.5A
 - b. Recommend isolation of disconnect for detailed inspection and cleaning and then re-scanning



Equipment #1: RP-2C





Equipment #2: Chiller Disconnect







| Name | RP-2C in PP-2HH – Level 2 |
|------------------------|---------------------------|
| Emissivity | 1.00 |
| Background Temperature | 23.00 °C |
| Calibration Range | -20.00 °C to 450.00 °C |
| Image Range | 24.76 °C to 89.92 °C |
| IR Sensor Size | 220X165 |
| Camera Serial Number | TiS55-16060915 |
| DSP Version | 6.0.86 |

| Marker Name | Maximum | Minimum | Average | Emissivity | BG Temp | Std.Dev | Delta-T |
|-------------|---------|---------|---------|------------|---------|---------|---------|
| Centerpoint | 84.3 °C | 84.3 °C | 84.3 °C | 1.00 | 23.0 °C | 0.00 | |
| Centerbox | 89.9 °C | 26.1 °C | 35.9 °C | 1.00 | 23.0 °C | 11.21 | |
| Hot | 89.9 °C | 89.9 °C | 89.9 °C | 1.00 | 23.0 °C | 0.00 | |
| Cold | 24.8 °C | 24.8 °C | 24.8 °C | 1.00 | 23.0 °C | 0.00 | |





| Name | RP Busduct Switch – Level 2 |
|------------------------|-----------------------------|
| Emissivity | 1.00 |
| Background Temperature | 23.00 °C |
| Calibration Range | -20.00 °C to 80.00 °C |
| Image Range | 26.49 °C to 54.27 °C |
| IR Sensor Size | 220X165 |
| Camera Serial Number | TiS55-16060915 |
| DSP Version | 6.0.86 |

| Marker Name | Maximum | Minimum | Average | Emissivity | BG Temp | Std.Dev | Delta-T |
|-------------|---------|---------|---------|------------|---------|---------|---------|
| Centerpoint | 52.5 °C | 52.5 °C | 52.5 °C | 1.00 | 23.0 °C | 0.00 | |
| Centerbox | 54.3 °C | 28.1 °C | 32.9 °C | 1.00 | 23.0 °C | 4.13 | |
| Hot | 54.3 °C | 54.3 °C | 54.3 °C | 1.00 | 23.0 °C | 0.00 | |
| Cold | 26.5 °C | 26.5 °C | 26.5 °C | 1.00 | 23.0 °C | 0.00 | |





| Name | Chiller Disconnect – Level P1 |
|------------------------|-------------------------------|
| Emissivity | 1.00 |
| Background Temperature | 23.00 °C |
| Calibration Range | -20.00 °C to 80.00 °C |
| Image Range | 25.32 °C to 46.48 °C |
| IR Sensor Size | 220X165 |
| Camera Serial Number | TiS55-16060915 |
| DSP Version | 6.0.86 |

| Marker Name | Maximum | Minimum | Average | Emissivity | BG Temp | Std.Dev | Delta-T |
|-------------|---------|---------|---------|------------|---------|---------|---------|
| Centerpoint | 44.4 °C | 44.4 °C | 44.4 °C | 1.00 | 23.0 °C | 0.00 | |
| Centerbox | 46.5 °C | 26.8 °C | 35.2 °C | 1.00 | 23.0 °C | 4.12 | |
| Hot | 46.5 °C | 46.5 °C | 46.5 °C | 1.00 | 23.0 °C | 0.00 | |
| Cold | 25.3 °C | 25.3 °C | 25.3 °C | 1.00 | 23.0 °C | 0.00 | |





| Name | TX RP-6B PD (20A) - Level 6 |
|------------------------|-----------------------------|
| Emissivity | 1.00 |
| Background Temperature | 23.00 °C |
| Calibration Range | -20.00 °C to 80.00 °C |
| Image Range | 32.88 °C to 40.33 °C |
| IR Sensor Size | 220X165 |
| Camera Serial Number | TiS55-16060915 |
| DSP Version | 6.0.86 |

| Marker Name | Maximum | Minimum | Average | Emissivity | BG Temp | Std.Dev | Delta-T |
|-------------|---------|---------|---------|------------|---------|---------|---------|
| Centerpoint | 39.6 °C | 39.6 °C | 39.6 °C | 1.00 | 23.0 °C | 0.00 | |
| Centerbox | 40.3 °C | 33.4 °C | 35.0 °C | 1.00 | 23.0 °C | 1.26 | |
| Hot | 40.3 °C | 40.3 °C | 40.3 °C | 1.00 | 23.0 °C | 0.00 | |
| Cold | 32.9 °C | 32.9 °C | 32.9 °C | 1.00 | 23.0 °C | 0.00 | |



Cadillac Fairview

GROUP LTD.



| DRAWN APPR BY | NAME J.S. D.B. | DATE 2021/11/09 2021/11/10 | TITLE | 1090 DON MIL SINGLE LINE I | 1090 DON MILLS ROAD SINGLE LINE DIAGRAM | | |
|------------------|----------------------|----------------------------------|------------|-------------------------------|--|--|--|
| DWG # | 01- | 001 | SCALE: N/A | REV: A SHEET: 1 OF 1 | | | |