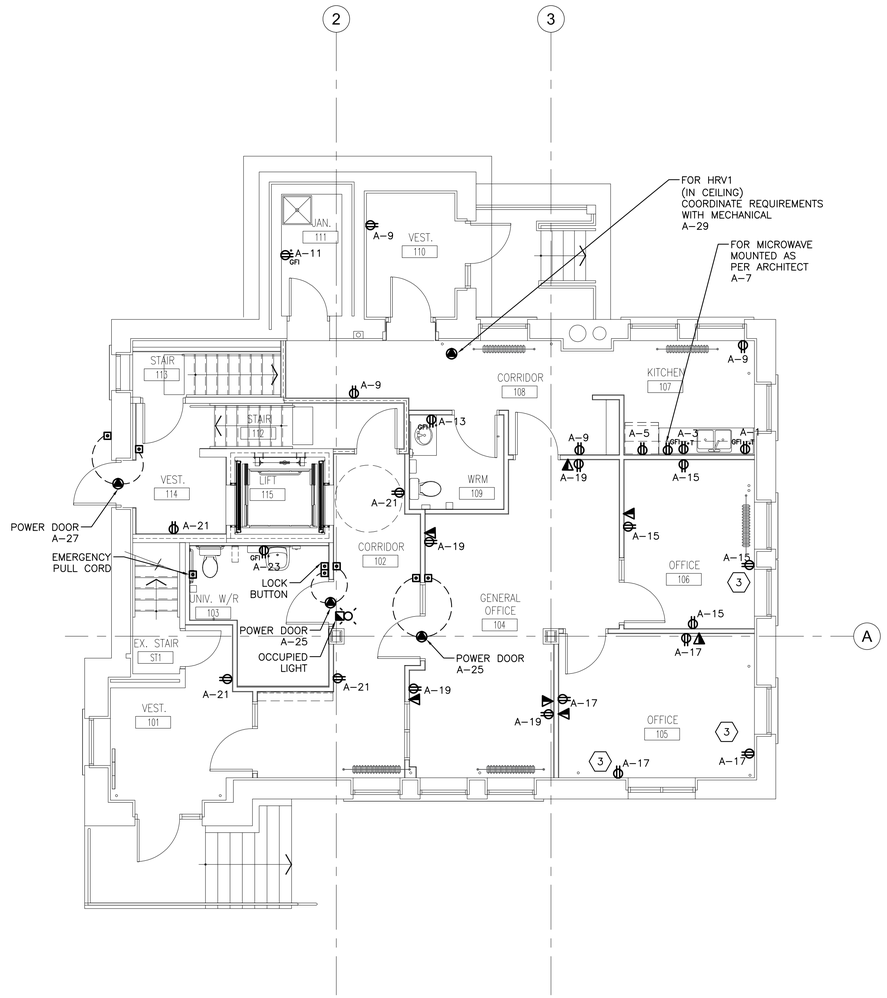
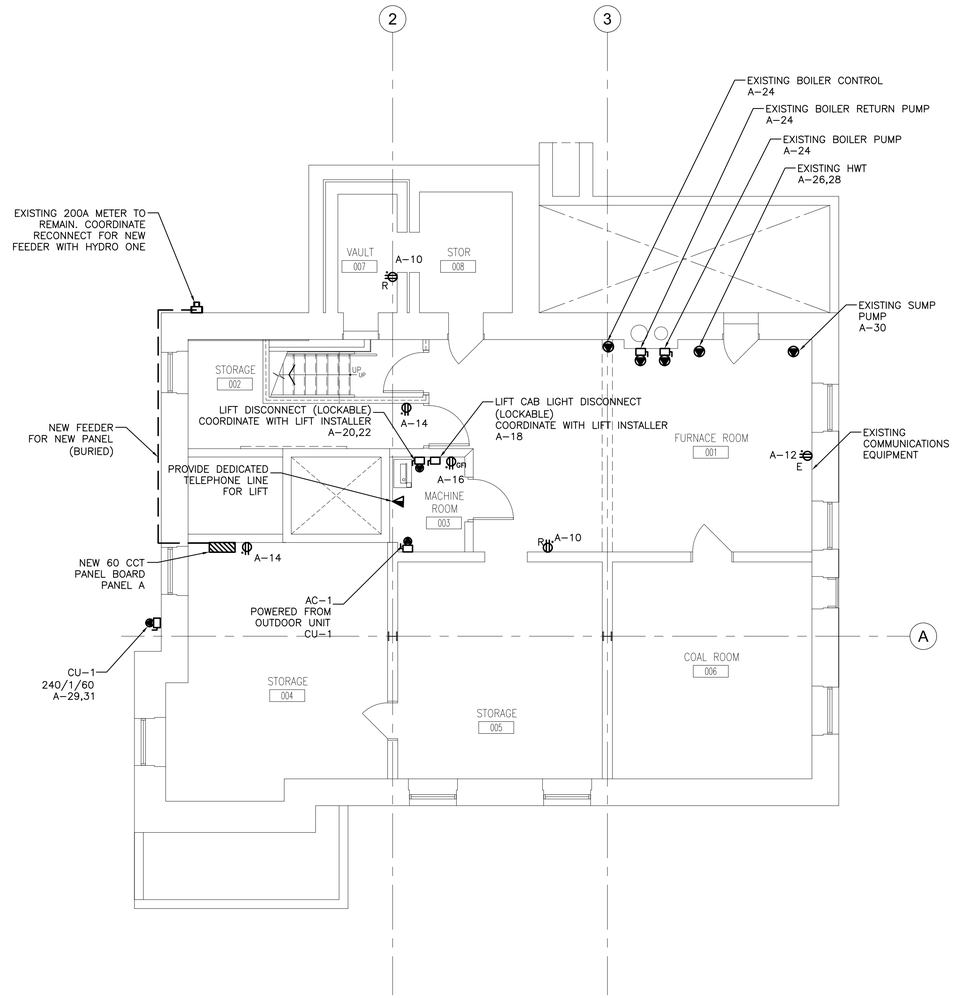



1 POWER – GROUND FLOOR
E1 SCALE: 3/16" = 1'-0"




2 POWER – BASEMENT
E1 SCALE: 3/16" = 1'-0"

NOTES

1. EXISTING EXTERIOR WALL MOUNTED RECEPTACLES TO REMAIN. RESUPPLY CIRCUITS ACCORDINGLY.
2. CIRCUIT NUMBERING SHOWN FOR SCOPE PURPOSES. REUSE EXISTING CIRCUITS WHERE SUITABLE. PROVIDE NEW BREAKERS AS REQUIRED.
3. NEW OUTLETS ON EXTERIOR WALLS NEED TO BE SURFACE MOUNTED

LEGEND

- RECEPTACLE
- RECEPTACLE MOUNTED ABOVE COUNTER
- GFI — GFI
- WP — WEATHER PROOF
- C — CEILING MOUNTED
- T — 20A T-SLOT
- DIRECTION CONNECTION
- DISCONNECT
- PHONE/DATA
- EXHAUST FAN
- $M — MECHANICAL SWITCH

| NO. | DESCRIPTION | DATE | BY |
|---|---|---|---|
| 0 | ISSUED FOR TENDER & PERMIT | 15/07/22 | DRM |

REVISIONS

Kirkland Engineering Ltd BCIN: 28857

REGISTERED PROFESSIONAL ENGINEER
D.R.MILLEN
100134238
JULY 15, 2022
PROVINCE OF ONTARIO
ELECTRICAL

NOT TO BE USED FOR CONSTRUCTION UNLESS SIGNED BY THE ENGINEER.

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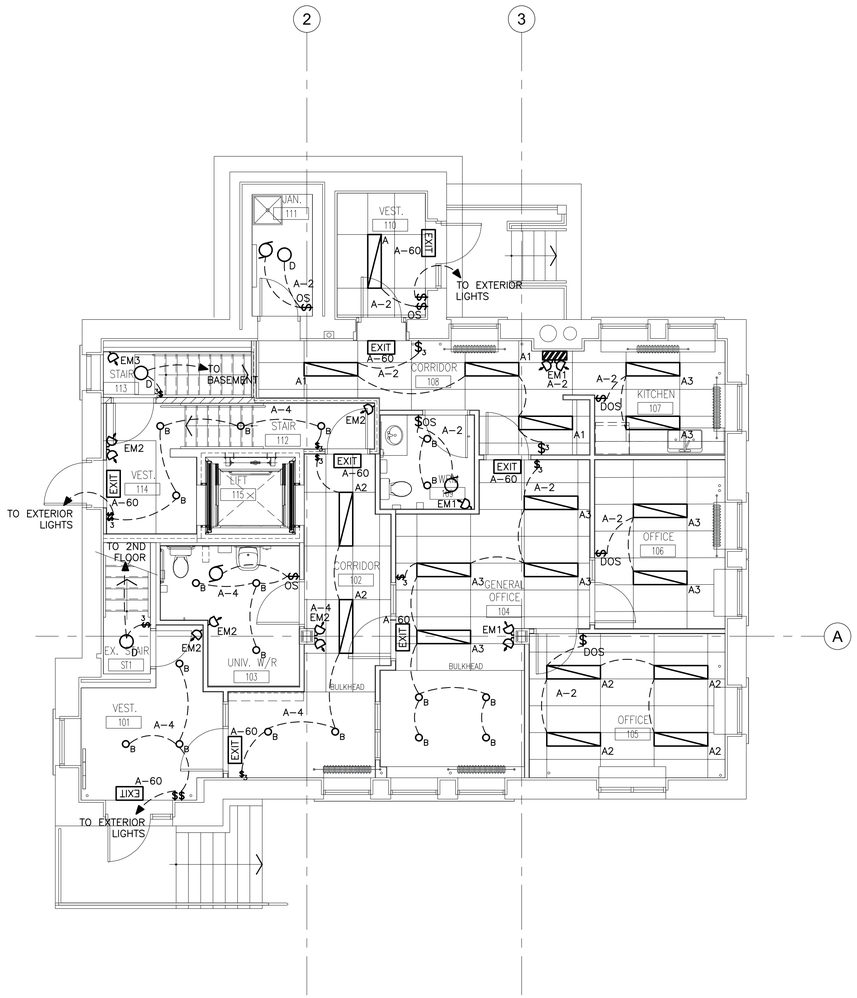
PROJECT
ACCESSIBILITY RENOS
FORMER LAKEFIELD POST OFFICE
12 QUEEN STREET
LAKEFIELD, ONTARIO

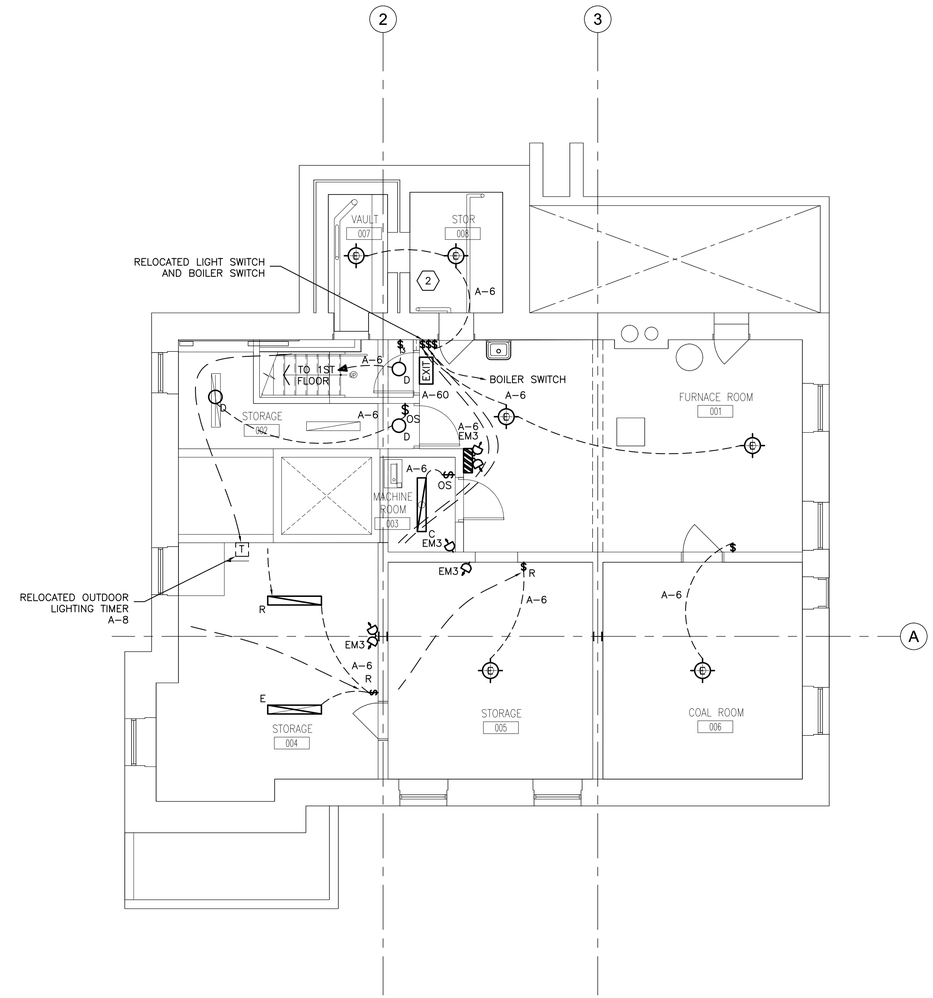
TITLE
GROUND FLOOR AND BASEMENT POWER

| | | | |
|---|---|---|---|
| DESIGN | IAB | SCALE | AS NOTED |
| DRAWN | IAB | DWG NO. | E1 |
| CHECKED | DRM | | |
| APPROVED | IAB | | |
| PROJECT | 6847 | | |

CADD FILE NO. E1




1 LIGHTING – GROUND FLOOR
E2 SCALE: 3/16" = 1'-0"




2 LIGHTING – BASEMENT
E2 SCALE: 3/16" = 1'-0"

| INTERIOR LIGHT FIXTURE SCHEDULE | | | |
|---|---|---|---|
| FIXTURE TYPE | DESCRIPTION | MANUFACTURER | MODEL NO. |
| A1 | 1'x4' TROFFER LED FLAT PANEL FIXTURE, 22W, SET AT 2400 LUMENS, 4000K CCT, 120V, 0–10V DIMMING. | LITHONIA OR EQUAL | PCAML 1X4 AL01 SWW7 M4 |
| A1 | 1'x4' TROFFER LED FLAT PANEL FIXTURE, 31W, SET AT 3300 LUMENS, 4000K CCT, 120V, 0–10V DIMMING. | LITHONIA OR EQUAL | PCAML 1X4 AL01 SWW7 M4 |
| A1 | 1'x4' TROFFER LED FLAT PANEL FIXTURE, 41W, SET AT 4400 LUMENS, 4000K CCT, 120V, 0–10V DIMMING. | LITHONIA OR EQUAL | PCAML 1X4 AL01 SWW7 M4 |
| B | 8" ROUND LED DOWNLIGHT, RECESSED (NO HOUSING) MOUNTED, 4000K CCT, 20.5W, 1850 LUMEN, 120V, 0–10V DIMMING. WHITE | LITHONIA OR EQUAL | WF8 LED 30K40K50K MVOLT 90CRI MW |
| C | 4' SURFACE MOUNED LED WRAP FIXTURE, 42W, SET AT 2900 LUMENS, 4000K CCT, 120V, 0–10V DIMMING. | LITHONIA OR EQUAL | FMLWL 48 840 ZT MVOLT |
| D | 11" ROUND LED FLUSH MOUNT FIXTURE, 16W, 1100 LUMENS, 4000K CCT, 120V, 0–10V DIMMING. | LITHONIA OR EQUAL | EMLRL 11 14840 M4 |

| EMERGENCY LIGHTING & EXIT SCHEDULE | | | |
|---|---|---|---|
| SYMBOL | DESCRIPTION | MANUFACTURER | MODEL No. |
| | EMERGENCY LIGHTING UNIT, 100W, 12VDC, 10 YEAR BATTERY, AUTO–TEST FEATURE, C/W 2 X 12V, 4W LED MR16 HEADS AND MOUNTING SHELF. WHITE FINISH. | LUMACELL OR APPROVED EQUAL | RG12S1002LD10AT C/W 440.0616–L |
| | EMERGENCY LIGHTING UNIT, 100W, 12VDC, 10 YEAR BATTERY, AUTO–TEST FEATURE C/W MOUNTING SHELF. WHITE FINISH. | LUMACELL OR APPROVED EQUAL | RG12S100AT C/W 440.0616–L |
| | DUAL REMOTE HEAD, 12VDC, 4W, MICRO PAR 18, MR16 LED. WHITE FINISH. | LUMACELL OR APPROVED EQUAL | MQM2–LD10 |
| | SINGLE REMOTE HEAD, 12VDC, 4W, MICRO PAR 18, MR16 LED. WHITE FINISH. | LUMACELL OR APPROVED EQUAL | MQM1–LD10 |
| EXIT / EXIT | SELF POWERED RUNNING MAN EXIT SIGN, SINGLE OR DOUBLE FACE AS INDICATED, ARROWS AS INDICATED, LED LAMPS FOR 120VAC, CSA–C860–96 LISTED & CERTIFIED | LUMACELL OR APPROVED EQUAL | LA SERIES |

LEGEND

- A (1,2,3) — 1'x4' LED RECESSED TROFFER (SEE SCHEDULE)
- B — 8" LED DOWNLIGHT
- C — 4' LED SURFACE MOUNTED STRIP FIXTURE, (SEE SCHEDULE)
- D — 11" LED FLUSH MOUNTED LED FIXTURE
- E — EXISTING FIXTURE
- EMERGENCY BATTERY PACK W 2 HEADS
- EMERGENCY LIGHTS 2 REMOTE HEADS
- EMERGENCY LIGHTS 1 REMOTE HEAD
- EXIT — SELF POWERED RUNNING MAN EXIT SIGN
- $ — ON/OFF SWITCH
- $3 — 3 WAY SWITCH
- $OS — SWITCH WITH OCCUPANCY SENSOR
- $DOS — DIMMING SWITCH W/ OCCUPANCY SENSOR
- WP — WEATHERPROOF
- EXHAUST FAN

| NO. | DESCRIPTION | DATE | BY |
|---|---|---|---|
| 0 | ISSUED FOR TENDER & PERMIT | 15/07/22 | DRM |

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PROJECT
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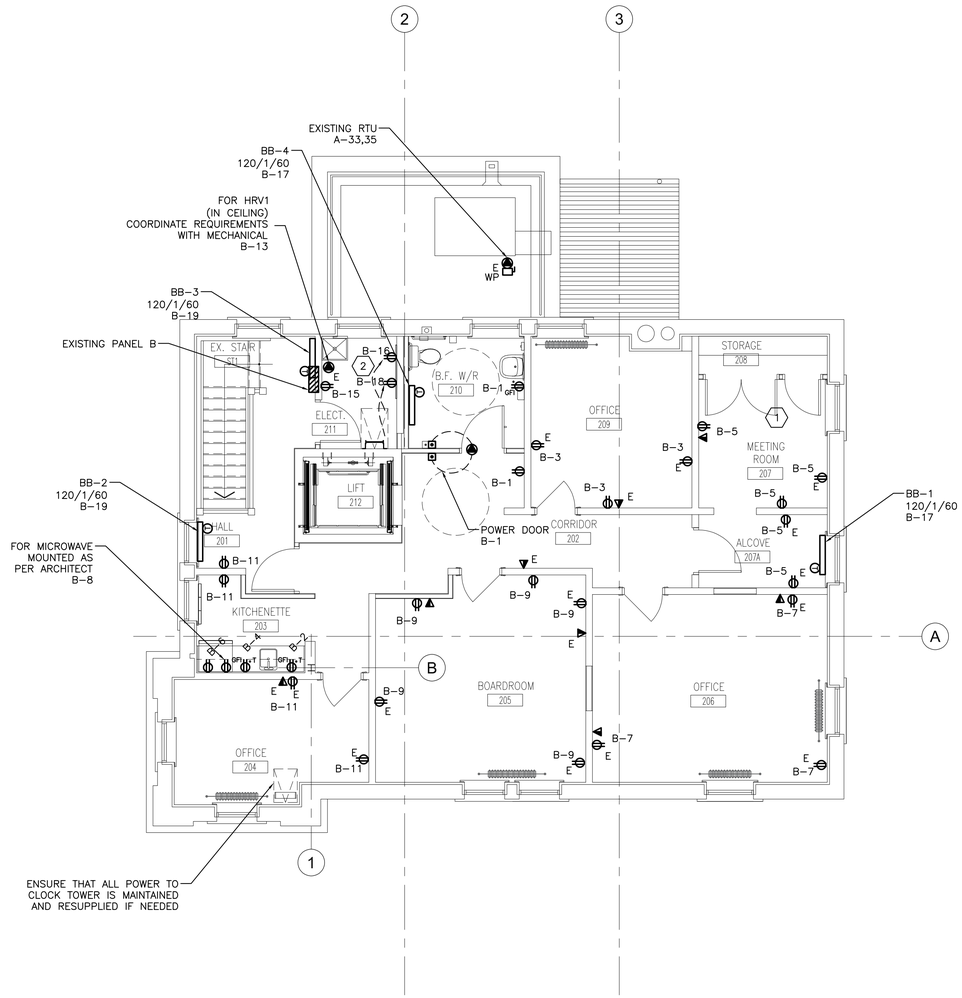
FORMER LAKEFIELD POST OFFICE
12 QUEEN STREET
LAKEFIELD, ONTARIO

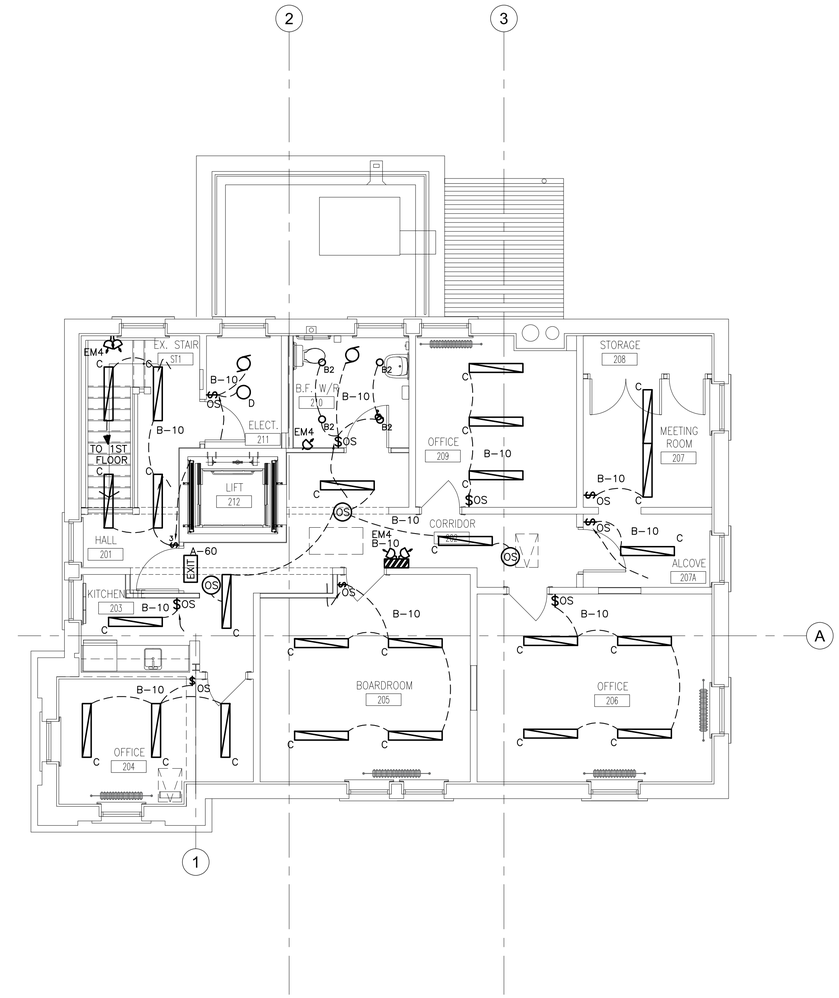
TITLE
GROUND FLOOR AND BASEMENT LIGHTING

| | | | |
|---|---|---|---|
| DESIGN | IAB | SCALE | AS NOTED |
| DRAWN | IAB | DWG NO. | E2 |
| CHECKED | DRM | | |
| APPROVED | IAB | | |
| PROJECT | 6847 | | |

CADD FILE NO. E2




1 POWER – SECOND FLOOR
E3 SCALE: 3/16" = 1'-0"




2 LIGHTING – SECOND FLOOR
E3 SCALE: 3/16" = 1'-0"

NOTES:
1. REUSE EXISTING WIRING AND CIRCUITING WHERE POSSIBLE. CIRCUITING SHOWN FOR GROUPING ONLY. REUSE EXISTING BREAKERS WHERE POSSIBLE. SUPPLY AND INSTALL NEW BREAKERS AS REQUIRED.

LEGEND

| | |
|---|---|
| | RECEPTACLE |
| | RECEPTACLE MOUNTED ABOVE COUNTER |
| GFI | GFI |
| WP | WEATHER PROOF |
| C | CEILING MOUNTED |
| T | 20A T-SLOT |
| | DIRECTION CONNECTION |
| | DISCONNECT |
| | PHONE/DATA |
| | EXHAUST FAN |
| $M | MECHANICAL SWITCH |
| B2 | 6" LED DOWNLIGHT |
| C | 4' LED SURFACE MOUNTED STRIP FIXTURE, (SEE SCHEDULE) |
| D | 11" LED FLUSH MOUNTED LED FIXTURE |
| | EMERGENCY BATTERY PACK W 2 HEADS |
| | EMERGENCY LIGHTS 2 REMOTE HEADS |
| | EMERGENCY LIGHTS 1 REMOTE HEAD |
| EXIT | SELF POWERED RUNNING MAN EXIT SIGN |
| $ | ON/OFF SWITCH |
| $3 | 3 WAY SWITCH |
| $OS | SWITCH WITH OCCUPANCY SENSOR |
| $DOS | DIMMING SWITCH W/ OCCUPANCY SENSOR |
| | EXHAUST FAN |
| T | BASEBOARD HEATER 500W C/W INTEGRATED THERMOSTAT |

| NO. | DESCRIPTION | DATE | BY |
|---|---|---|---|
| 0 | ISSUED FOR TENDER & PERMIT | 15/07/22 | DRM |

REVISIONS

Kirkland Engineering Ltd BCIN: 28857

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JULY 15, 2022
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TITLE
SECOND FLOOR POWER AND LIGHTING

| | | | |
|---|---|---|---|
| DESIGN | IAB | SCALE | AS NOTED |
| DRAWN | IAB | DWG NO. | E3 |
| CHECKED | DRM | | |
| APPROVED | IAB | | |
| PROJECT | 6847 | | |

CADD FILE NO. E3

# SPECIFICATION

1. GENERAL CONDITIONS
1. DO ALL WORK IN ACCORDANCE WITH ONTARIO ELECTRICAL SAFETY CODE, CURRENT EDITION, BASED UPON THE CANADIAN ELECTRICAL CODE, PART I, CSA STANDARD C22.1, AND ALL BULLETINS TO DATE.

2. SCOPE OF WORK
2.1 PROVIDE ALL MATERIALS EQUIPMENT AND LABOUR TO PROVIDE A COMPLETE OPERATING INSTALLATION AS DESIGNATED IN THIS SPECIFICATION AND AS INDICATED ON THE DRAWINGS EXCEPT WHERE OTHERWISE NOTED.
2.2 THE SCOPE OF WORK INCLUDES, BUT IS NOT LIMITED TO, SUPPLY AND INSTALLATION OF THE FOLLOWING ITEMS:
2.2.1 POWER DISTRIBUTION.
2.2.2 LIGHTING
2.2.3 EMERGENCY LIGHTING AND EXIT SIGNAGE.
2.2.4 FEEDERS AND OVER CURRENT PROTECTION FOR MECHANICAL EQUIPMENT.
2.2.5 MAIN SERVICE BOARD C/W METERING SYSTEM.
2.2.6 MOTOR STARTERS FOR MECHANICAL EQUIPMENT.
2.2.7 EMPTY RACEWAY SYSTEM FOR TELEPHONE AND CABLE TV SYSTEMS
2.2.8 FIRE ALARM SYSTEM

3. GENERAL
3.1 ALL MATERIALS SHALL BE CSA APPROVED, NEW AND SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

4. IDENTIFICATION
4.1 WIRES TO BE COLOURED AS FOLLOWS: 120V AC NEUTRAL WHITE
12V DC BLUE.
120V AC SWITCHED, BLACK OR RED.
120V AC LINE, BLACK.
600V AC LINE, RED, BLACK, AND BLUE
4.2 PROVIDE LAMICOID LABELS FOR NEW OR REVISED BREAKER PANELS, SPLITTERS AND DISCONNECTS.
4.3 PROVIDE TYPED CIRCUIT LISTING FOR NEW OR REVISED BREAKER PANELS.

5. EXAMINATION OF SITE
5.1 PRIOR TO SUBMITTING TENDERS, THIS CONTRACTOR SHALL VISIT THE SITE TO DETERMINE ALL EXISTING CONDITIONS.
5.2 ALLOW FOR ALL COSTS ASSOCIATED WITH COMPLETING THE WORK OF DIVISION 16 IN ACCORDANCE WITH EXISTING SITE AND BUILDING CONDITIONS.
5.3 NO ALLOWANCE FOR EXTRA PAYMENTS TO THE CONTRACTOR WILL BE MADE BY THE OWNER FOR FAILING TO VISIT AND EXAMINE SITE CONDITIONS.

6. INSURANCE
6.1 SUB-CONTRACTOR SHALL MAINTAIN SUCH INSURANCE AS WILL FULLY PROTECT BOTH THE OWNER AND THE SUB-CONTRACTOR FROM ANY AND ALL CLAIMS UNDER THE WORKMEN'S COMPENSATION ACT, ALSO ALL INSURANCE AS NOTED WITHIN ARCHITECTURAL GENERAL CONDITIONS.

7. AS BUILT DRAWINGS
7.1 MAINTAIN A SEPARATE SET OF WHITE PRINTS ON THE SITE AND NOTE ALL CHANGES AND DEVIATIONS FROM THE ORIGINAL DESIGN. TWO SETS OF THESE DRAWINGS SHOWING ALL AS-BUILT CONDITIONS SHALL BE FORWARDED TO THE ARCHITECT AT THE COMPLETION OF THIS CONTRACT AND BEFORE APPLYING FOR FINAL PAYMENT.

8. REVISIONS AND EXTRAS
8.1 ADDITIONAL MONEY OVER THE CONTRACT PRICE SHALL NOT BE PAID UNLESS AN APPROVED CHANGE ORDER IS ISSUED BY THE ARCHITECT. CLAIMS FOR EXTRAS SHALL BE SUBMITTED WITH A COMPLETE BREAKDOWN OF MATERIAL, LABOUR , HOURLY RATES, ETC.

9. CLEAN UP
9.1 BE RESPONSIBLE TO KEEP THE AREA CLEAN AT ALL TIMES AND TO PERIODICALLY REMOVE ALL DEBRIS.

10. CUTTING AND PATCHING
10.1 ALL CUTTING AND PATCHING REQUIRED FOR THE WORK OF THIS DIVISION SHALL BE CARRIED OUT BY THIS DIVISION. NO CHASING BLOCK WORK WILL BE ALLOWED. CUTTING AND DRILLING SHALL BE PERFORMED IN A MANNER SO AS TO CAUSE LITTLE DAMAGE. BE RESPONSIBLE AND PAY FOR ANY DAMAGE TO THE BUILDING INCURRED BY WORK OF THIS DIVISION.

11. COORDINATION
11.1 BE RESPONSIBLE TO COORDINATE THE INSTALLATION OF EQUIPMENT, CONDUIT WORK, LIGHTING FIXTURES, ETC. WITH OTHER TRADES AND THE OWNER'S REPRESENTATIVE PRIOR TO THE ACTUAL INSTALLATION.

12. RESPONSIBILITY
12.1 BE RESPONSIBLE FOR ELECTRICAL WORK UNTIL THE COMPLETION AND FINAL ACCEPTANCE, FOR REPLACING ANY ITEM THAT MAY BE DEFECTIVE, DAMAGED, LOST OR STOLEN WITHOUT ADDITIONAL COST TO THE OWNER OR DELAY TO THE COMPLETION OF THE PROJECT.

13. WIRING MATERIALS AND METHODS
13.1 USE MATERIALS AND METHODS APPROVED BY ONTARIO ELECTRICAL CODE FOR USE IN NON-COMBUSTIBLE CONSTRUCTION.
13.2 ALL BUILDING WIRE SHALL BE COPPER TYPE RW90-XLPE WHERE APPROPRIATE EXCEPT WHERE OTHERWISE NOTED.
13.3 USE MINIMUM OF #12 AWG FOR BRANCH CIRCUIT WIRING.
13.4 ARMOURED CABLE TYPE AC90 (BX) WITH INTERLOCKING ARMOUR FABRICATED FROM ALUMINUM STRIP C/W COPPER INSULATED CONDUCTORS, SIZE AS INDICATED, TO BE USED IN CONCEALED WALL AND CEILING CAVITIES.

14. SHOP DRAWINGS AND PRODUCT DATA
14.1 'SHOP DRAWINGS' MEANS DRAWINGS, DIAGRAMS, ILLUSTRATIONS, SCHEDULES, PERFORMANCE, CHARTS, BROCHURES, AND OTHER DATA WHICH ARE TO BE PROVIDED BY CONTRACTOR TO ILLUSTRATE DETAILS OF A PORTION OF THE WORK.
14.2 INDICATE MATERIALS METHODS OF CONSTRUCTION AND ATTACHMENT OR ANCHORAGE, NECESSARY FOR COMPLETION OF WORK.
14.3 ADJUSTMENTS MADE ON SHOP DRAWINGS BY OWNER OR ENGINEER ARE NOT INTENDED TO CHANGE CONTRACT PRICE.
14.4 MAKE CHANGES IN SHOP DRAWINGS AS OWNER OR ENGINEER MAY REQUIRE.
14.5 SUBMIT 6 HARD COPIES, OR 1 HIGH QUALITY ELECTRONIC COPY OF PRODUCT DATA SHEETS OR BROCHURES FOR LIGHTING FIXTURES, EMERGENCY LIGHTING, EXIT SIGNS, MAIN SERVICE BOARD, MOTOR STARTERS, FIRE ALARM EQUIPMENT AND POWER DISTRIBUTION EQUIPMENT.
14.6 PROVIDE 2 MAINTENANCE MANUALS COMPLETE WITH WARRANTEE, CERTIFICATE OF INSPECTION BY ESA, FIRE ALARM VERIFICATION REPORT, AND COPY OF ALL PRODUCT LITERATURE AND MAINTENANCE INFORMATION.

15. SYSTEMS DEMONSTRATION
15.1 PRIOR TO FINAL INSPECTION DEMONSTRATE OPERATION OF EACH SYSTEM TO OWNER AND ENGINEER.
15.2 INSTRUCT PERSONNEL IN OPERATION ADJUSTMENT AND MAINTENANCE OF EQUIPMENT AND SYSTEMS, USING PROVIDED OPERATION AND MAINTENANCE DATA AS BASIS FOR INSTRUCTION.

16. PERMITS, FEES AND INSPECTION
16.1 SUBMIT TO ELECTRICAL SAFETY AUTHORITY NECESSARY NUMBER OF DRAWINGS AND SPECIFICATIONS FOR EXAMINATION AND APPROVAL PRIOR TO COMMENCEMENT OF WORK.
16.2 PAY ASSOCIATED FEES, INCLUDING EQUIPMENT APPROVAL INSPECTION FEE.
16.3 OWNER WILL PROVIDE DRAWINGS AND SPECIFICATIONS REQUIRED BY ELECTRICAL SAFETY AUTHORITY AT NO COST.
16.4 NOTIFY ENGINEER OF CHANGES REQUIRED BY ELECTRICAL SAFETY AUTHORITY PRIOR TO MAKING CHANGES.
16.5 FURNISH CERTIFICATES OF ACCEPTANCE FROM ELECTRICAL SAFETY AUTHORITY AND AUTHORITIES HAVING JURISDICTION OF COMPLETION OF WORK TO ENGINEER.

17. THIRD PARTY TESTING
17.1 THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THIRD PARTY TESTING OF THE LIGHTING SYSTEM IN ACCORDANCE WITH ASHRAE STANDARD 90.1-2010, SECTION 9.4.4 FUNCTIONAL TESTING. THE PARTY RESPONSIBLE FOR THE FUNCTIONAL TESTING SHALL NOT BE DIRECTLY INVOLVED IN EITHER THE DESIGN OR CONSTRUCTION OF THE PROJECT AND SHALL PROVIDE DOCUMENTATION CERTIFYING THAT THE INSTALLED LIGHTING CONTROLS MEET OR EXCEED ALL DOCUMENTED PERFORMANCE CRITERIA.
17.2 LIGHTING CONTROL DEVICES AND CONTROL SYSTEMS SHALL BE TESTED TO ENSURE THAT CONTROL HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS.
17.3 WHEN SENSORS, TIME SWITCHES, PROGRAMMABLE SCHEDULE CONTROLS OR PHOTOSENSORS ARE INSTALLED, THE FOLLOWING PROCEDURES SHALL BE PERFORMED:
17.2.1 CONFIRM THAT THE PLACEMENT, SENSITIVITY AND TIME-OUT ADJUSTMENTS FOR OCCUPANT SENSORS YIELD ACCEPTABLE PERFORMANCE, LIGHTS TURN OFF ONLY AFTER SPACE IS VACATED. WHERE AN AUTO-ON MODE HAS BEEN SELECTED, LIGHTS DO NOT TURN ON UNLESS SPACE IS OCCUPIED.
17.2.2 CONFIRM THAT THE TIME SWITCHES AND PROGRAMMABLE SCHEDULE CONTROLS ARE PROGRAMMED CORRECTLY TO TURN THE LIGHTS OFF.
17.2.3 WHERE DAYLIGHT HARVESTING CAPABILITY HAS BEEN INSTALLED, CONFIRM THAT PHOTOSENSOR CONTROLS REDUCE ELECTRIC LIGHT LEVELS BASED ON THE AMOUNT OF USABLE DAYLIGHT IN THE SPACE AS SPECIFIED.

18. WARRANTY
18.1 AFTER THE WORK IS COMPLETED, GIVE A WRITTEN GUARANTEE FOR ONE YEAR COVERING WORKMANSHIP AND MATERIALS. REPAIR OR REPLACE, WITHOUT EXPENSE TO THE OWNER, ANY DEFECTS DUE TO WORKMANSHIP OR MATERIALS WHICH IN THE OWNER'S OPINION, ARE NOT DUE TO MISUSE OR NEGLECT.

19. CONDUITS AND RACEWAYS
19.1 RIGID GALVANIZED STEEL CONDUIT TO BE USED WHERE SUBJECT TO MECHANICAL DAMAGE.
19.2 ELECTRICAL METALLIC TUBING (EMT) WITH COUPLINGS TO BE USED EXCEPT WHERE EMBEDDED IN CONCRETE OR SUBJECT TO UNDUE MOISTURE OR MECHANICAL DAMAGE.
19.3 RIGID PVC CONDUIT WHERE EMBEDDED IN CONCRETE OR BELOW GRADE.
19.4 FLEXIBLE ALUMINUM CONDUIT WITH WEATHERPROOF COVERING TO BE USED WHERE SUBJECT TO VIBRATION OR STRAIN RELIEF.
19.5 CONDUITS IN FINISHED AREA SHALL BE CONCEALED.
19.6 CONDUITS SHALL BE MINIMUM 1/2".

20. INSTALLATION OF OUTLETS
20.1 THE DRAWINGS SHOW APPROXIMATE LOCATION OF OUTLETS, EXACT LOCATION SHALL BE COORDINATED ON THE SITE WITH OTHER TRADES, ARCHITECTURAL DRAWINGS, ETC. OUTLETS INACCURATELY LOCATED SHALL BE READJUSTED OR RELOCATED AT THE CONTRACTOR'S EXPENSE. UNLESS OTHERWISE NOTED ON THE DRAWING LOCATE OUTLETS AS FOLLOWS:
20.1.1 RECEPTACLES, TELEPHONE AND DATA OUTLETS (15.7") 400mm ABOVE FINISHED FLOOR.
20.1.2 OUTLETS OVER COUNTER (45") 1143mm ABOVE FLOOR OR CO-ORDINATION.
20.1.3 OUTLETS IN MECHANICAL, ELECTRICAL AND TELEPHONE ROOMS (48") 1220mm ABOVE FLOOR.
20.1.4 LIGHT SWITCHES NOT LESS THAN (35.4") 900mm AND NOT MORE THAN (43") 1100mm ABOVE FLOOR.
20.2 RACEWAYS SHALL BE EMT UNLESS OTHERWISE NOTED.
20.3 SUPPORT OUTLET BOXES, JUNCTION BOXES, CONDUIT AND THE LIKE.

21. RECEPTACLES
21.1 WHITE DUPLEX RECEPTACLES CSA TYPE 5-15R, 125V OR CSA 5-20A 20A, T-SLOT, U GROUND. USE BLACK IN WAREHOUSE.
21.2 WHITE COVER PLATES. USE STEEL PLATES IN WAREHOUSE
21.4 IF RECEPTACLE IS SURFACE MOUNTED USE CAST BOX AND STAINLESS STEEL COVER PLATE.

22. EXCAVATION, BACKFILL AND CONCRETE WORK
22.1 WHERE REQUIRED FOR UNDERGROUND SERVICE (POWER OR TELEPHONE) THE EXCAVATION, BACKFILL AND CONCRETE WORK SHALL BE BY THE GENERAL CONTRACTOR. THE ELECTRICAL TRADE SHALL SUPERVISE THE PROCESSING OF CONCRETE AROUND DUCT BANK, TO ENSURE THEY ARE FREE FROM VOIDS SHALL ADVISE THE GENERAL CONTRACTOR OF THIS WORK FOR INCLUSION IN THE GENERAL CONTRACTOR'S TENDER PRICE.

23. MECHANICAL EQUIPMENT
23.1 PROVIDE ALL CONDUIT, WIRING, SPLITTERS, OUTLET BOXES AND DISCONNECT SWITCHES AS SHOWN. ALL MOTORS, STARTERS AND CONTROL WIRING PROVIDED BY MECHANICAL DIVISION UNLESS OTHERWISE NOTED. INSTALL ALL STARTERS AND WIRE COMPLETE. ALL EXTERIOR DISCONNECTS TO BE WEATHERPROOF.
23.2 THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL MOTOR CONNECTION FOR PROPER PHASE ROTATION, WHERE APPLICABLE.

24. SWITCHES
24.1 20A, 120V, SINGLE POLE SWITCHES
24.2 WHITE TOGGLE
24.3 WHITE COVER PLATES., USE STEEL IN WAREHOUSE.
24.4 IF SWITCH IS SURFACE MOUNTED USE CAST BOX.

25. EQUIPMENT FOR EMERGENCY LIGHTING
25.1 SUPPLY VOLTAGE: 120V AC
25.2 OUTPUT VOLTAGE: 12V DC.
25.3 OPERATIONS TIME: 30 MINUTES MINIMUM
25.4 CABINET: SUITABLE FOR DIRECT OR SHELF MOUNTING TO WALL C/W KNOCKOUTS FOR CONDUIT, REMOVABLE OR HINGED FRONT PANEL FOR EASY ACCESS TO BATTERIES.

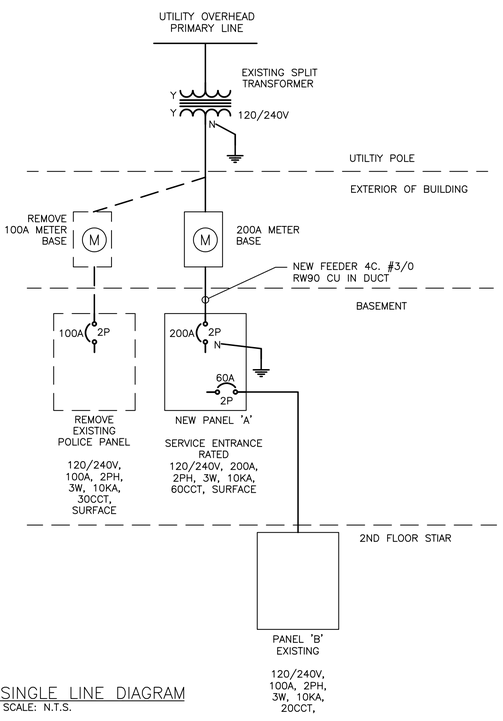
26. TELEPHONE CABLE T.V./COMPUTER RACEWAY SYSTEM. (ETC.)
26.1 PROVIDE EMPTY CONDUIT SYSTEMS FOR TELEPHONE AS SHOWN ON THE DRAWINGS.
26.2 WHERE CONDUITS NOT SHOWN ON DRAWINGS PROVIDE CONDUITS FROM OUTLET BOX TO ACCESSIBLE CEILING SPACE.
26.3 THIS CONTRACTOR SHALL PROVIDE AND/OR COORDINATE THE SIZE, TYPE AND LOCATION OF THE INCOMING TELEPHONE CONDUIT WITH THE TELEPHONE COMPANY OR THE BUILDING OWNER.
26.4 RACEWAYS (OTHER THAN INCOMING) SHALL BE EMT.
26.5 A MAXIMUM OF 2 LONG RADIUS 90 DEGREE BENDS SHALL BE PROVIDED BETWEEN PULL BOXES.
26.6 A WIRE SHALL BE PULLED AND LEFT IN EACH CONDUIT RUN TO FACILITATOR THE FUTURE PULLING OF WIRES.
26.7 PROVIDE NECESSARY BOXES AND ASSOCIATED COVER PLATES AS REQUIRED FOR THE ABOVE SYSTEMS.

**PANEL 'A'**
120/240V, 1 PHASE, 3 WIRE, 225A BUS, 60 CIRCUIT, BOLT-ON BREAKERS 10KA IC WITH 200A MAIN BREAKER

| DESCRIPTION | LOAD | BKR | CCT | CCT | BKR | LOAD | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| KITCHEN RECEPTACLE | x | 20A | 1 | 2 | 15A | x | NORTH FIRST FLOOR LIGHTS |
| KITCHEN RECEPTACLE | x | 20A | 3 | 4 | 15A | x | SOUTH FIRST FLOOR LIGHTS |
| MICROWAVE | x | 15A | 5 | 6 | 15A | x | BASEMENT LIGHTS |
| REFRIGERATOR | x | 15A | 7 | 8 | 15A | x | OUTDOOR LIGHTING (TIMER) |
| BACK CORRIDOR/VEST REC | x | 15A | 9 | 10 | 15A | x | BASEMENT RECS |
| JANITOR REC | x | 15A | 11 | 12 | 15A | x | BASEMENT RECS |
| BACK WASHROOM REC | x | 15A | 13 | 14 | 15A | x | BASEMENT RECS |
| OFFICE 106 RECS | x | 15A | 15 | 16 | 15A | x | LIFT MACHINE ROOM REC |
| OFFICE 105 RECS | x | 15A | 17 | 18 | 15A | x | LIFT CAB LIGHTS |
| GENERAL OFFICE RECS | x | 15A | 19 | 20 | 40A | x | LIFT POWER |
| FRONT CORRIDOR/VEST RECS | x | 15A | 21 | 22 | | x | |
| UNIVERSAL W/R REC | x | 15A | 23 | 24 | 15A | x | BOILER AND PUMPS |
| POWER DOOR OPERATORS | x | 15A | 25 | 26 | 20A | x | HWT |
| POWER DOOR OPERATOR | x | 15A | 27 | 28 | | x | |
| CU-1 (AC-1) | x | 30A | 29 | 30 | 15A | x | SUMP PUMP |
| | x | | 31 | 32 | 15A | x | SPARE |
| RTU | x | 40A | 33 | 34 | 15A | x | SPARE |
| | x | | 35 | 36 | – | x | – |
| PANEL B | x | 60A | 37 | 38 | – | x | – |
| | x | | 39 | 40 | – | x | – |
| SPARE | x | 20A | 41 | 42 | – | x | – |
| SPARE | x | 20A | 43 | 44 | – | x | – |
| SPARE | x | 20A | 45 | 46 | – | x | – |
| SPARE | x | 20A | 47 | 48 | – | x | – |
| – | x | – | 49 | 50 | – | x | – |
| – | x | – | 51 | 52 | – | x | – |
| – | x | – | 53 | 54 | – | x | – |
| – | x | – | 55 | 56 | – | x | – |
| – | x | – | 57 | 58 | – | x | – |
| – | x | – | 59 | 60 | 15A | x | EXITS |

**PANEL 'B'**
120/240V, 1 PHASE, 3 WIRE, 125A BUS, 20 CIRCUIT, BOLT-ON BREAKERS 10KA IC

| DESCRIPTION | LOAD | BKR | CCT | CCT | BKR | LOAD | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| W/R REC/DOOR/HALL REC | x | 15A | 1 | 2 | 15A | x | KITCHENETTE COUNTER |
| OFFICE 209 RECEPTACLE | x | 20A | 3 | 4 | 15A | x | KITCHENETTE COUNTER |
| RM 207 RECS | x | 15A | 5 | 6 | 15A | x | KITCHENETTE REFRIGERATOR |
| OFFICE 206 RECS | x | 15A | 7 | 8 | 15A | x | KITCHENETTE MICROWAVE |
| BOARDROOM RECS | x | 15A | 9 | 10 | 15A | x | 2ND FLOOR LIGHTS |
| OFFICE 204/STAIR/KITCHENETTE | x | 15A | 11 | 12 | 15A | x | CLOCK TOWER |
| HRV-1 | x | 15A | 13 | 14 | | x | |
| PANEL REC | x | 15A | 15 | 16 | 15A | x | CLOCK RECS |
| BB-1,4 | x | 15A | 17 | 18 | 15A | x | CLOCK RECS |
| BB-2,3 | x | 15A | 19 | 20 | 15A | x | SPARE |




1 E4 SINGLE LINE DIAGRAM
SCALE: N.T.S.

| NO. | DESCRIPTION | DATE | BY |
|---|---|---|---|
| 0 | ISSUED FOR TENDER & PERMIT | 15/07/22 | DRM |

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Kirkland Engineering Ltd BCIN: 28857

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D.R.MILLEN
100134238
JULY 15, 2022
PROVINCE OF ONTARIO
ELECTRICAL

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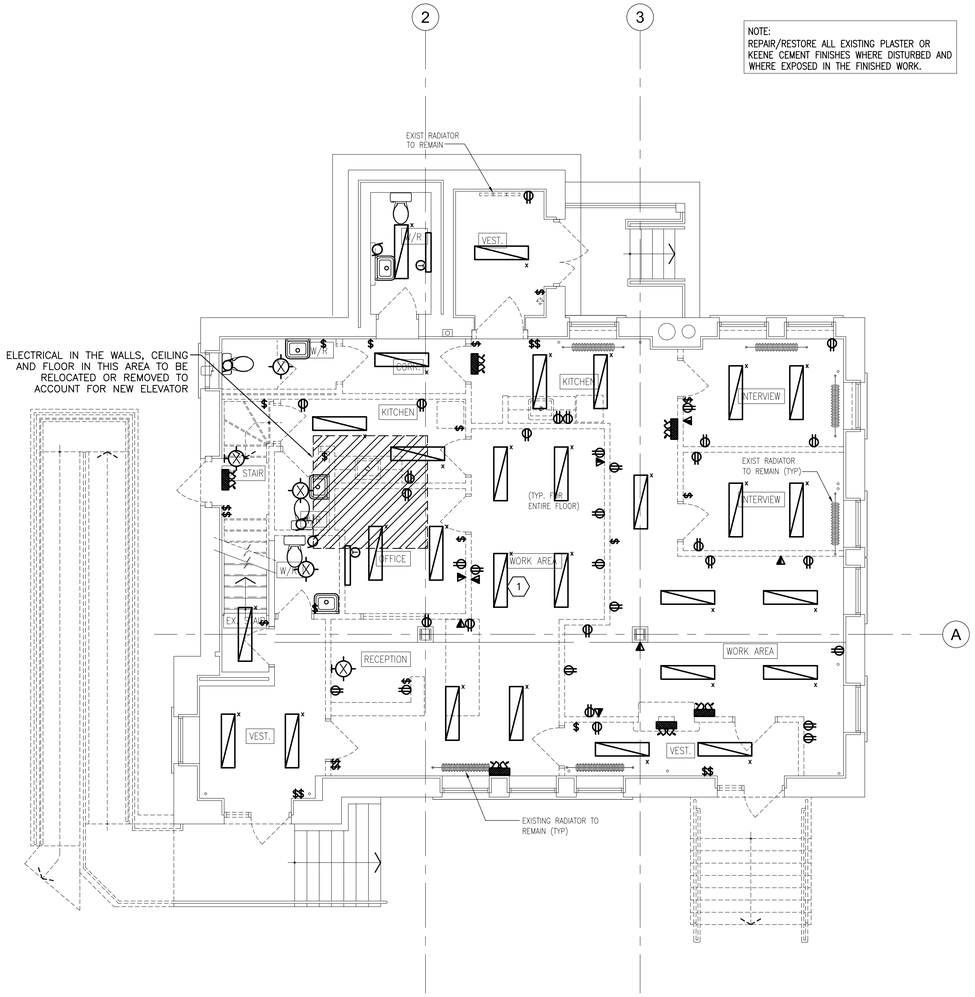
PROJECT
ACCESSIBILITY RENOS
FORMER LAKEFIELD POST OFFICE
12 QUEEN STREET
LAKEFIELD, ONTARIO

TITLE
ELECTRICAL SPECIFICATIONS

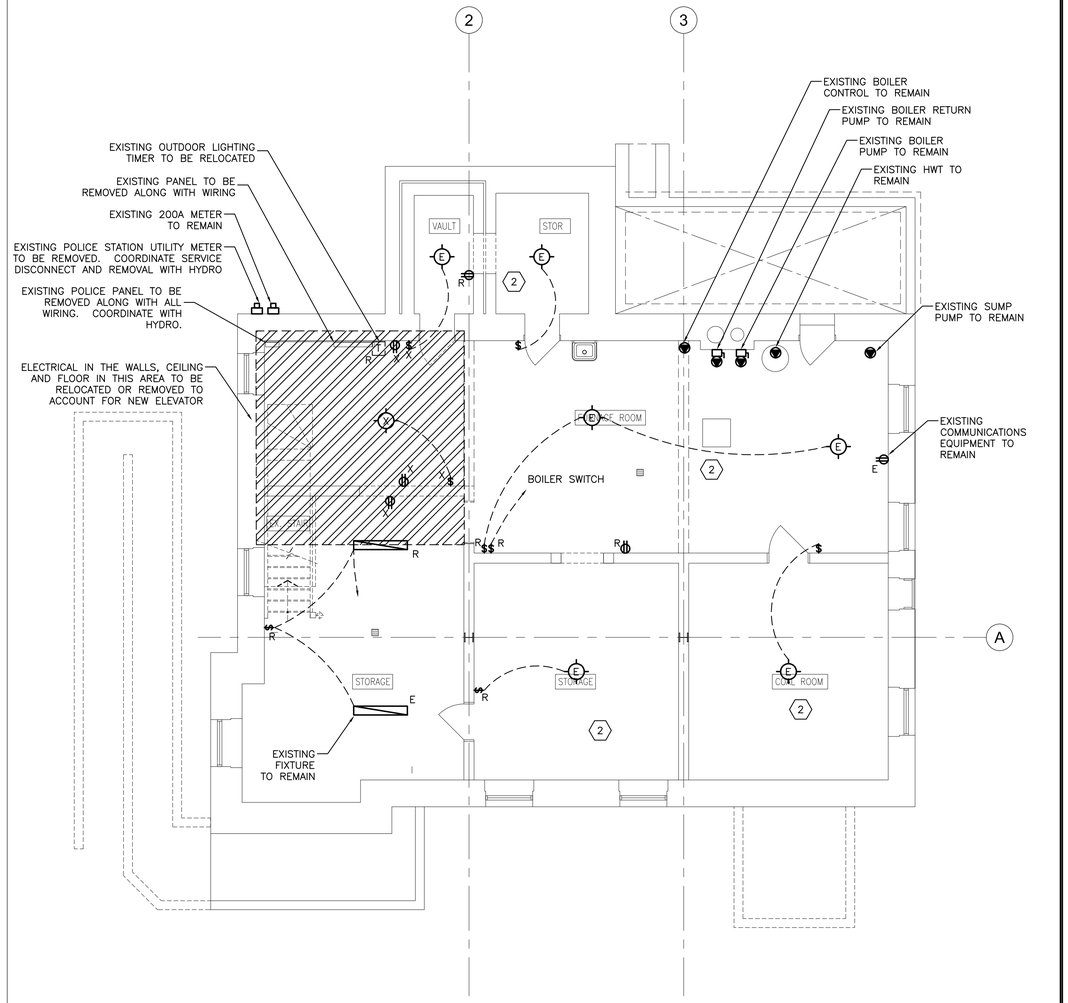
| | | | |
|---|---|---|---|
| DESIGN | IAB | SCALE AS NOTED | |
| DRAWN | IAB | DWG NO. | E4 |
| CHECKED | DRM | | |
| APPROVED | IAB | | |
| PROJECT | 6847 | | |

CADD FILE NO. E3

NOTE:
REPAIR/RESTORE ALL EXISTING PLASTER OR KEENE CEMENT FINISHES WHERE DISTURBED AND WHERE EXPOSED IN THE FINISHED WORK.




1 DEMO – GROUND FLOOR
E5 SCALE: 3/16" = 1'-0"




2 DEMOLITION – BASEMENT
E5 SCALE: 3/16" = 1'-0"

NOTES

1. ALL 1ST FLOOR ELECTRICAL EQUIPMENT (RECEPTACLES, LIGHT FIXTURES, ETC) TO BE REMOVED. REMOVE WIRING BACK TO PANEL AND MAKE SAFE. CONTRACTOR TO VERIFY SITE TO CONFIRM EXTENT OF REMOVALS AND QUANTITIES.
2. BASEMENT ELECTRICAL TO REMAIN UNLESS OTHERWISE SPECIFIED.

LEGEND

X – REMOVE
E – EXISTING TO REMAIN
R – EXISTING TO BE RELOCATED
EX – EXISTING CIRCUIT TO REMAIN REPLACE DEVICE
RX – EXISTING CIRCUIT TO BE RELOCATED, REPLACE DEVICE

| NO. | DESCRIPTION | DATE | BY |
|---|---|---|---|
| 0 | ISSUED FOR TENDER & PERMIT | 15/07/22 | DRM |

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JULY 15, 2022
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FORMER LAKEFIELD POST OFFICE
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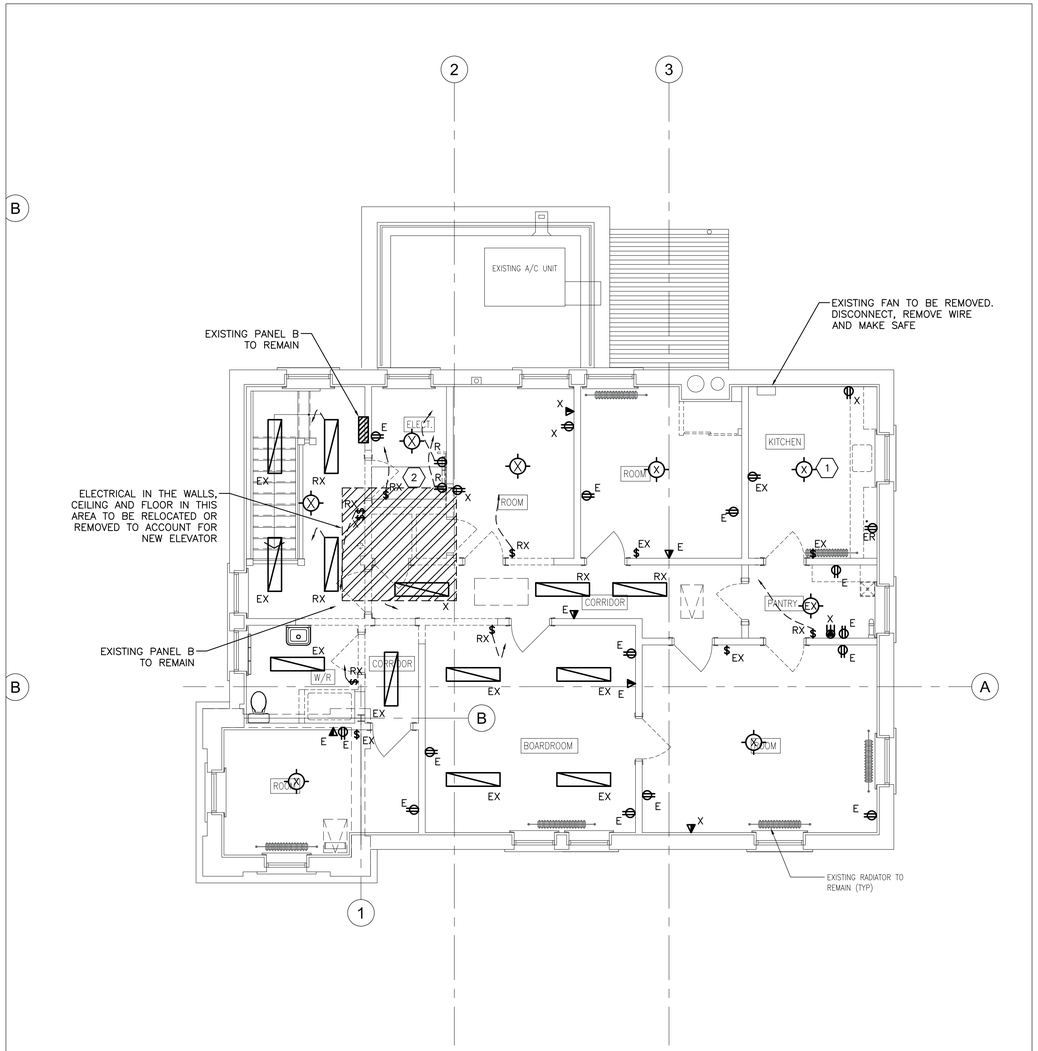
LAKEFIELD, ONTARIO

TITLE
GROUND FLOOR AND BASEMENT DEMOLITION

| | | | |
|---|---|---|---|
| DESIGN | IAB | SCALE | AS NOTED |
| DRAWN | IAB | DWG NO. | E5 |
| CHECKED | DRM | | |
| APPROVED | IAB | | |
| PROJECT | 6847 | | |

CADD FILE NO. E3




1 DEMOLITION – SECOND FLOOR
E6 SCALE: 3/16" = 1'-0"

NOTES

1. REMOVE ABOVE COUNTER RECEPTACLES AND ANY KITCHEN EQUIPMENT PRESENT.
2. EXISTING CLOCK EQUIPMENT TO REMAIN
3. REUSE EXISTING POWER WHERE POSSIBLE

X – REMOVE
E – EXISTING TO REMAIN
R – EXISTING TO BE RELOCATED
EX – EXISTING CIRCUIT TO REMAIN REPLACE DEVICE
RX – EXISTING CIRCUIT TO BE RELOCATED, REPLACE DEVICE

| NO. | DESCRIPTION | DATE | BY |
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LAKEFIELD, ONTARIO

TITLE
SECOND FLOOR DEMOLITION

| | | | |
|---|---|---|---|
| DESIGN | IAB | SCALE | AS NOTED |
| DRAWN | IAB | DWG NO. | E6 |
| CHECKED | DRM | | |
| APPROVED | IAB | | |
| PROJECT | 6847 | | |

CADD FILE NO. E3