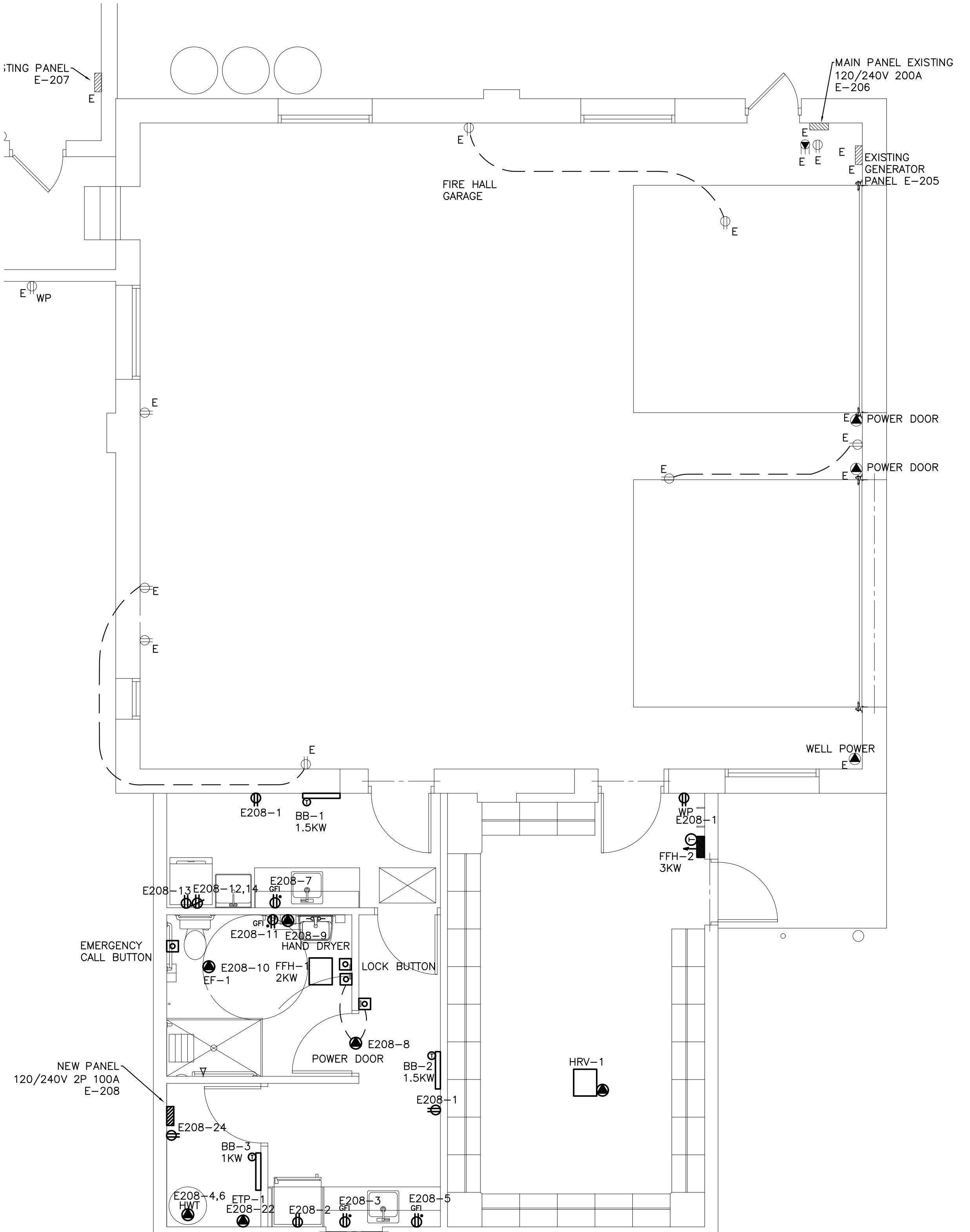


② SINGLE LINE DIAGRAM
E1 SCALE:

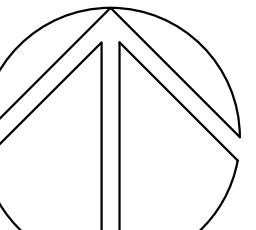
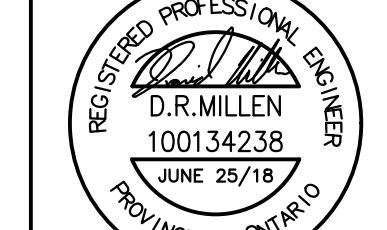
NEW PANEL 'E-208'							
120/240V, 2 PHASE, 3 WIRE, 30 CIRCUIT, C/W 125A BUS							
DESCRIPTION	LOAD	BKR	CCT	CCT	BKR	LOAD	DESCRIPTION
ADDITION RECEPTACLES	x	15A	1	2	15A	x	FRIDGE
KITCHEN COUNTER	x	15A	3	4	30A	x	HWT
KITCHEN COUNTER	x	15A	5	6	15A	x	POWER DOOR OPENER
LAUNDRY COUNTER	x	15A	7	8	15A	x	EF-1
HAND DRYER	x	15A	9	10	15A	x	DRYER
BATHROOM RECEPTACLE	x	15A	11	12	30A	x	FFH-2
WASHING MACHINE	x	15A	13	14	15A	x	FFH-2
FF-1 + BB-1	x	20A	15	16	30A	x	EMERGENCY CALL BUTTON
BB-2 + BB-3	x	15A	19	18	15A	x	EXIT SIGNS
HRV-1	x	15A	21	20	15A	x	ETP-1
SPARE	x	15A	23	22	15A	x	PANEL RECEPTACLE
SPARE	x	15A	25	24	15A	x	BB-2 1.5KW
SPARE	x	15A	27	26	15A	x	POWER DOOR
SPARE	x	15A	29	28	15A	x	E208-1



① POWER LAYOUT
E1 SCALE:
1/4" = 1'-0"

- LEGEND
 ● RECEPTACLE
 ♦ DRYER RECEPTACLE
 • COUNTER MOUNT
 WP WEATHER RATED
 GFI GROUND FAULT INTERRUPTER
 ● DIRECT CONNECTION
 □ DISCONNECT
 ■ PANEL
 R EXISTING TO RELOCATE
 X EXISTING TO REMOVE
 E EXISTING TO REMAIN
 FAN FORCED HEATER
 BASEBOARD HEATER

- NOTES:
 1. SUPPLY NEW PANEL E-208 FROM EXISTING 100A SPARE BREAKER IN PANEL E-206.
 2. HEATERS PROVIDED BY MECHANICAL INSTALLED BY ELECTRICAL.

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REVISIONS			
Kirkland Engineering Ltd BCIN: 28857			
 		ELECTRICAL	
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570 Water Street
Peterborough, Ontario
K9J 7L2
p. (705) 745-2831
f. (705) 741-1526
www.kirklandeng.com

KIRKLAND ENGINEERING LTD.

PROJECT
KINMOUNT FIRE STATION

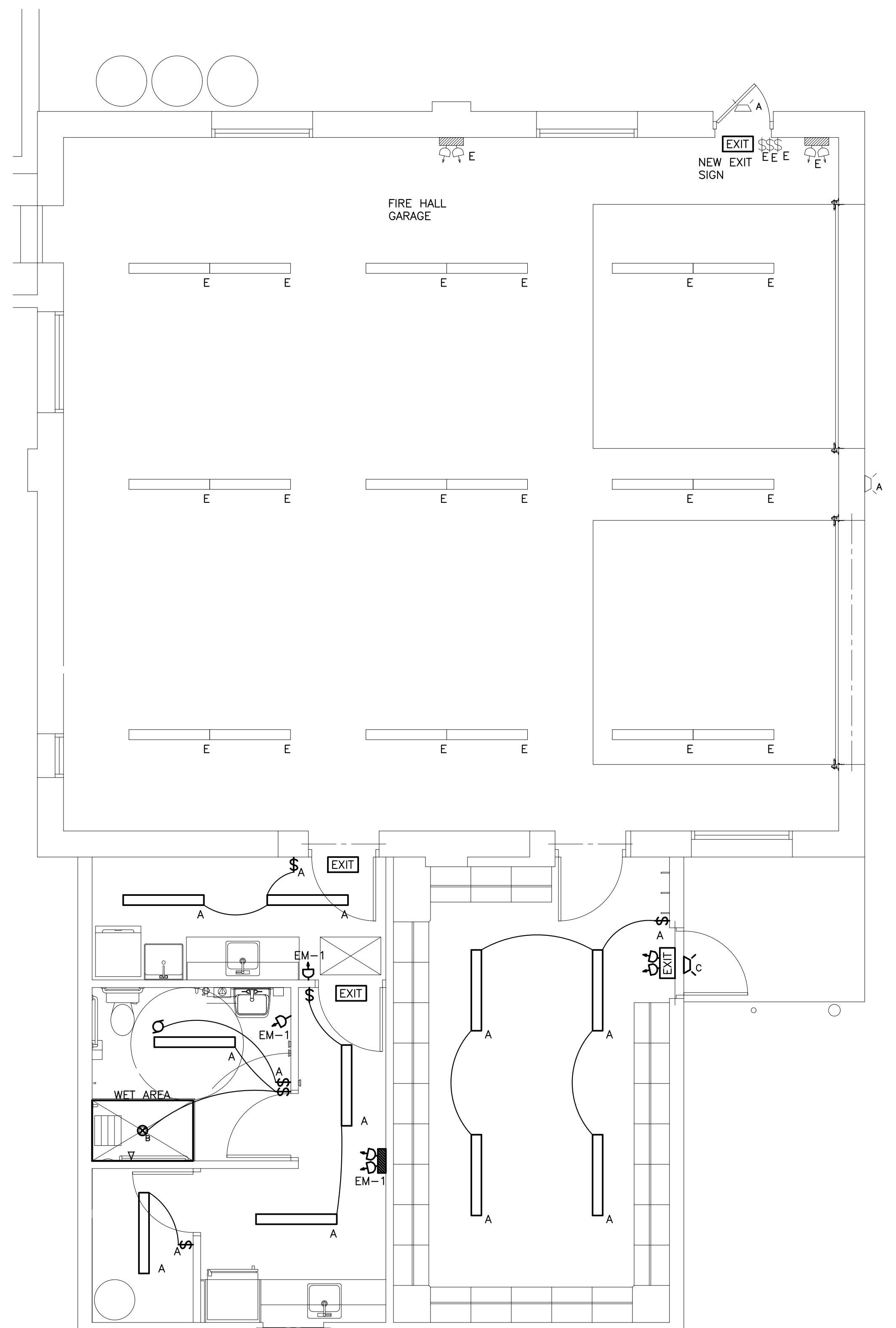
24 Majestic St.
Kinmount, ON

TITLE
POWER

DESIGN	DRM	SCALE AS NOTED
DRAWN	AJM	DRM
CHECKED	DRM	DRM
APPROVED	DRM	DRM
PROJECT	DRM	DRM
7529		

E1

- NOTES:**
1. ADD LIGHTS AND EMERGENCY LIGHTS IN ADDITION TO NEW 15A CIRCUITS IN GENERATOR PANEL.
 2. NO ELECTRICAL UNLESS RATED FOR WET AREA, SHALL BE WITHIN 1M OF THE SHOWER WET AREA.
 3. PROVIDE POWER FOR NEW OUTDOOR WALL PACK FROM EXISTING OUTDOOR LIGHTING CIRCUIT.
 4. PROVIDE POWER FOR EXIT SIGNS



A	4' LED STRIP LIGHT, 3000 LUMEN, 18.5 W 4000K, 120-277V, 80CRI, 0-10V DIMMER TO 10%, MATTE WHITE FINISH.	LITHONIA OR APPROVED EQUAL	CLX L48 3000LM SEF FDL MVOLT GZ10 40K 80CRI WH
B	6" ROUND RECESSED LED DOWNLIGHT FOR WET LOCATION, 1300 LUMEN 16 W 3500K, 120V, MATTE WHITE, 120V	LITHONIA OR APPROVED EQUAL	WF6 DREG B ALO20 SWW5 90CRI MW M6
C	8"X11" LED WALL PACK, 2900 LUMEN, 24 W 3000K, 120-277V, C/W PHOTOCELL, BLACK FINISH.	LITHONIA OR APPROVED EQUAL	WPX2 LED 30K MVOLT PE DDLXD

① LIGHTING AND FIRE LAYOUT

(E2) SCALE:
1 0 3 6
1/4" = 1'-0"

LEGEND

- \$ LIGHT SWITCH
- \$ A AUTO ON/OFF OCCUPANCY SENSOR SWITCH
- EM-1 EMERGENCY LIGHT BATTERY PACK 72W C/W 2 4W LED HEADS
- 4W LED REMOTE HEAD

	COMBO EXIT AND EMERGENCY LIGHT FIXTURE. C/W RUNNING MAN EXIT, ARROWS AS INDICATED 150W, 24W LAMPS.	LUMACELL	LAC SERIES
	RUNNING MAN EXIT SIGN, SELF POWERED 120V.	LUMACELL	LA SERIES

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K9H 3M5
P. (705) 741-2631
F. (705) 741-1526
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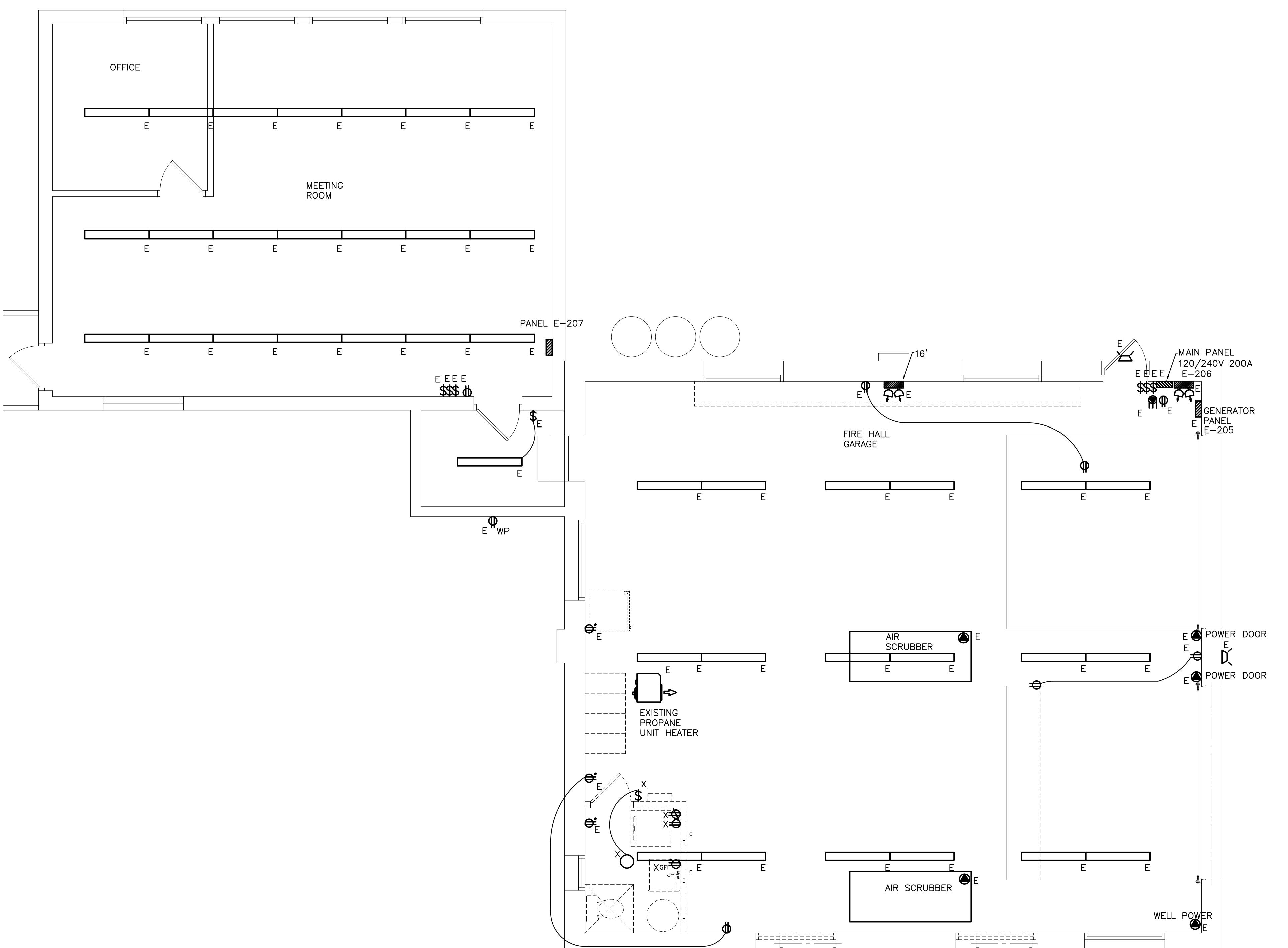
TITLE

LIGHTING AND FIRE

DESIGN	DRM	SCALE AS NOTED
DRAWN	AJM	DWG NO.
CHECKED	DRM	
APPROVED	DRM	
PROJECT	E2	7529

E2

- NOTES:**
1. EXISTING POWER, LIGHTING, AND CONTROL TO REMAIN UNLESS NOTED OTHERWISE.
 2. EXISTING WASHROOM TO BE REMOVED. DISCONNECT POWER IN WALLS TO BE DEMOLISHED, PULL WIRE BACK TO PANEL AND MAKE SAFE.



1 DEMOLITION LAYOUT
E3 SCALE: 1 0 3 6
1/4" = 1'-0"

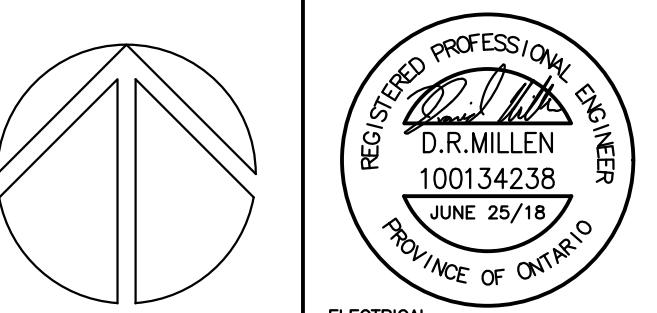
LEGEND

- ∅ RECEPTACLE
- ∅ DRYER RECEPTACLE
- WP WEATHER RATED
- gf GROUND FAULT INTERRUPTER
- DIRECT CONNECTION
- DISCONNECT
- PANEL
- R EXISTING TO RELOCATE
- X EXISTING TO REMOVE
- E EXISTING TO REMAIN

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TITLE

DEMOLITION

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DRAWN	AJM	DWG NO.
CHECKED	DRM	
APPROVED	DRM	
PROJECT	DRM	

E3

CADD FILE NO. 7529E3

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 COLORED AS FOLLOWS:
120V AC NEUTRAL WHITE
12V DC BLUE
120V AC SWITCHED, BLACK OR RED.
120V AC LINE, BLACK.

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 ARMORED 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 WARRANTY, 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 PHOTORESISTORS 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 PHOTORESISTOR 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 UNDE 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 RECEPACES, 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. RECEPACES

21.1 NEW DUPLEX RECEPACES CSA TYPE 5-15R, 125V OR CSA 5-20A 20A, 1-SLOT U GROUND.
21.2 IVORY COVER PLATES.
21.3 INSTALL RECEPACES WITH GROUND POSITION UP.
21.4 IF RECEPACLE 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 IVORY TOGGLE
24.3 IVORY COVER PLATES.
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 FACILITATE THE FUTURE PULLING OF WIRES.
26.7 PROVIDE NECESSARY BOXES AND ASSOCIATED COVER PLATES AS REQUIRED FOR THE ABOVE SYSTEMS.

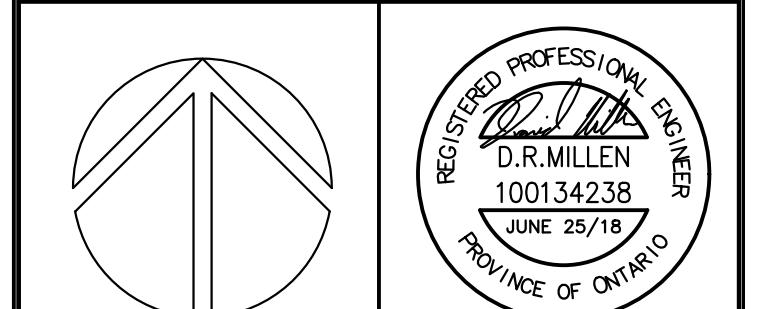
27. TEMPORARY SERVICES

27.1 IN CASES OF NEW CONSTRUCTION, ALL TEMPORARY ELECTRICAL SERVICES, AS REQUIRED, SHALL BE PROVIDED BY THE GENERAL CONTRACTOR AS SPECIFIED IN THE ARCHITECTURAL/STRUCTURAL CONTRACT DOCUMENTATION.
27.2 PROVIDE TEMPORARY GENERAL LIGHTING THROUGHOUT CONSTRUCTION SITE, LIGHTING STRINGS WITH LAMPS AT SUITABLE CENTERS TO CONFORM TO CONSTRUCTION STANDARDS AND ALL AUTHORITIES HAVING JURISDICTION.
27.3 PROVIDE TEMPORARY GENERAL POWER SUPPLIES WITH RECEPTACLES FOR ALL TRADES AS DIRECTED BY THE GENERAL CONTRACTOR.
27.4 MAINTAIN THE TEMPORARY FACILITIES IN GOOD REPAIR AND SAFE WORKING CONDITION THROUGHOUT THE DURATION OF CONSTRUCTION PROJECT.
27.5 REMOVE AT THE END OF PROJECT THE ABOVE NOTED TEMPORARY SYSTEM.

28. FIRE ALARM

28.1 PROVIDE ALL MATERIAL EQUIPMENT AND LABOUR REQUIRED FOR A COMPLETE AND ADEQUATE INSTALLATION OF THE FIRE ALARM SYSTEM AS SHOWN ON THE DRAWINGS AND AS DESCRIBED HEREIN, MATCH EXISTING SYSTEM.
28.2 SHOP DRAWINGS FOR THE COMPLETE SYSTEM, INCLUDING LAYOUT OF EQUIPMENT, ZONING AND COMPLETE WIRING DIAGRAMS FOR CONNECTIONS AND DEVICES, AND METHODS OF OPERATION SHALL BE SUBMITTED.
28.3 ALL COMPONENTS OF THE SYSTEM, ITS INSTALLATION AND THE SYSTEM AS A WHOLE SHALL BE ULC LISTED AND LABELED AND SHALL MEET THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION OF THE APPLICATION. THE ENTIRE INSTALLATION SHALL BE CARRIED OUT IN ACCORDANCE WITH CAN/ULC SS24 AND SHALL BE VERIFIED IN ACCORDANCE WITH CAN/ULC SS37.
28.4 BREAKER FOR FIRE ALARM CONTROL PANEL AND BOOSTER PANELS TO BE LOCKABLE AND CLEARLY IDENTIFIED BY PAINTING IT RED.
28.5 PROVIDE SEPARATE CIRCUITS FROM CONTROL PANEL TO EACH ZONE OF INITIATING DEVICES.
28.6 SINGLE STAGE OPERATION.
28.7 ACTUATION OF ANY SINGLE OPERATION DEVICE TO INITIATE BUILDING EVACUATION ALARM DEVICES TO OPERATE IN TEMPORAL CODE. CONFIRM WITH LOCAL AUTHORITY.
28.8 ZONE OF ALARM DEVICE TO BE INDICATED ON CONTROL PANEL.
28.9 POWER SUPPLY IS 120VAC, 60HZ INPUT, 24VDC OUTPUT FROM RECTIFIER TO OPERATE ALARM AND SIGNAL CIRCUITS WITH STANDBY POWER GELL CELL BATTERIES. MINIMUM EXPECTED LIFE OF FOUR YEARS, SIZED IN ACCORDANCE WITH NBC.
28.10 PROVIDE FIRE ALARM SYSTEM RISER DIAGRAM IN CONTROL PANEL.
28.11 ARRANGE AND PAY FOR ON-SITE LECTURE AND DEMONSTRATION BY FIRE ALARM EQUIPMENT MANUFACTURER TO TRAIN OPERATIONAL PERSONNEL IN USE AND MAINTENANCE OF FIRE ALARM SYSTEM.
28.12 COORDINATE WITH MANUFACTURER TO PROVIDE STROBE LIGHT SYNCHRONIZATION MODULES AS REQUIRED.
28.13 PROVIDE SUFFICIENT OUTPUT MODULES IN FIRE ALARM CONTROL PANEL.
28.14 PROVIDE OUTPUT POWER BOOSTERS AS REQUIRED. COORDINATE WITH MANUFACTURER.
28.15 ALL FIRE ALARM JUNCTION BOXES SHALL BE PAINTED RED.

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