

GROUND FLOOR OVERALL PLAN

CEILING MOUNTED EXIT LIGHT ARROWS DENOTE DIRECTION SHADING INDICATES FACE DIRECT CONNECTION HANGER SYSTEM (REFER TO DETAILS) SINGLE OR TWIN EMERGENCY LIGHTING FIXTURE FLOOR BOX C/W DEVICES AS NOTED AUXILIARY ROUGH-IN FOR USE AS NOTED REFER TO SPECIFICATIONS) BATTERY UNIT WITH INTEGRAL EMERGENCY FIXTURE (EM-X INDICATES JUNCTION BOX COMMUNICATIONS BATTERY UNIT TYPE, DC-X INDICATES DC CIRCUIT AND X-X INDICATES AC РВ CLOCK AS PER SPECIFICATIONS PULL BOX SOURCE CIRCUIT) SINGLE POLE SWITCH (3=3 WAY, 4=4 WAY, P=PILOT LIGHT, K=KEYED, DM=DIMMER, M=MOTOR RATED) PANEL AS INDICATED ADMINISTRATIVE CONTROL CONSOLE OCCUPANCY SENSOR (PASSIVE) FUSED DISCONNECT (ND = NON-DIAL STYLE) OCCUPANCY SENSOR: OSD=DUAL TECHNOLOGY OSR=DUAL CIRCUIT/DUAL TECHNOLOGY UNFUSED DISCONNECT P.A. CALL SWITCH SURGE PROTECTION DEVICE WALL MOUNTED SPEAKER CEILING MOUNTED MOTION SENSOR REFER TO SPECIFICATIONS (CS = COLUMN SPEAKER) WALL MOUNTED SPEAKER C/W WOS DVR WALL MOUNTED MOTION SENSOR DUAL VOLTAGE RELAY CALL IN SWITCH DR CEILING MOUNTED SPEAKER DIGITAL ROOM CONTROLLER MANUAL STARTER PC MAGNETIC STARTER MICROPHONE OUTLET PHOTOCELL DM DIGITAL WALL DIMMER STATION COMBINATION MAGNETIC STARTER DOOR BELL EMERGENCY LIGHTING RELAY EM DESTRATIFICATION FAN INTERCOM SURFACE RACEWAY C/W DEVICES AS **GENERAL** Ю LIGHTING INPUT/OUTPUT RELAY NOTED (REFER TO SPECIFICATIONS) PK ANALOG POWER PACK CONTACTOR INDICATES EXISTING ITEM TO REMAIN FIRE ALARM MOTOR CONNECTION INDICATES EXISTING ITEM TO BE DELETED HEAT DETECTOR (135 DEGREE RATE OF INDICATES EXISTING ITEM TO BE POWER POLE RELOCATED/IN RELOCATED POSITION HEAT DETECTOR (135 DEGREE FIXED THERMOSTAT WG WIREGUARD (RA = REVERSE ACTING) HEAT DETECTOR (194 DEGREE FIXED \boxtimes UNISTRUT UPSTAND GROUND FAULT TEMPERATURE) HEAT DETECTOR (194 DEGREE RATE OF WEATHERPROOF TRANSFORMER RISE AND FIXED TEMPERATURE) **SECURITY** ISOLATED GROUND PULL STATION SECURITY DETECTOR (SURFACE IM ISOLATING MODULE SURGE PROTECTED MOUNTED) SECURITY SIREN (INSTALL 2400mm AFF) MM MONITORING MODULE C/W 21mmC TO NEAREST SECURITY TAMPER RESISTANT JUNCTION BOX SECURITY KEYPAD INSTALL (1100mm AFF) RM C/W 21mmC TO NEAREST SECURITY RELAY MODULE CEILING MOUNTED JUNCTION BOX DOOR CONTACT C/W 21mmC TO NEAREST SECURITY JUNCTION BOX (REFER TO DETAIL) ALARM BELL EM EMERGENCY (LAMICOID LABEL) ALARM STROBE CEILING MOUNTED CAMERA HOSPITAL GRADE } EOL **END-OF-LINE RESISTOR** POWER SUPPLY NOTE INDICATOR FSD ML FIRE SMOKE DAMPER MAG LOCK MECHANICAL ITEM INDICATOR ELECTRIC STRIKE ELECTRIC HEATING CONFIRM ROUGH-IN WITH DOOR OWNER'S EQUIPMENT ITEM INDICATOR HARDWARF BASEBOARD ELECTRIC HEATER CARD/FOB READER ROUGH-IN AS A LIGHTING ZONE INDICATOR (TYPE AS INDICATED) SINGLE GANG BOX AT 1100mm AFF C/W 13mmC TO ELECRIC STRIKE AN ADJACENT DOOR FRAME. CONFIRM ROUGH-IN WITH FAN FORCED ELECTRIC HEATER STANDARD CIRCUIT LABELLING DOOR HARDWARE. (TYPE AS INDICATED) UNIT HEATER

POWER

WALL MOUNTED RECEPTACLE (15A-120V)

WALL MOUNTED T-SLOT RECEPTACLE

T-SLOT RECEPTACLE MTD. ABOVE

WALL MOUNTED SPECIAL RECEPTACLE

WALL MOUNTED QUAD RECEPTACLE

WALL MOUNTED QUAD RECEPTACLE

COUNTER (20A-120V)

(15A-120V)

ELECTRICAL SYMBOLS

NIGHTLIGHT)

LIGHTING

EM-X DC-X INDICATED (EM-X INDICATES BATTERY UNIT TYPE, DC-X INDICATES DC CIRCUIT AND X-X INDICATES AC SOURCE CIRCUIT)

WALL MOUNTED EXIT LIGHT

SHADING INDICATES FACE

CEILING OR WALL MOUNTED LIGHT FIXTURE TYPE AS INDICATED

(TYPE AS INDICATED)

LIGHT FIXTURE TYPE AS INDICATED

LIGHT FIXTURE (HATCHING DENOTES

COMBINATION EMERGENCY/EXIT TYPE AS

CLIENT LOGO

NOTE: ALL SYMBOLS MAY NOT BE USED

DATA

MANAGEMENT SYSTEM.

DATA---

SINGLE WALL MOUNTED TELEPHONE OUTLET C/W 1/2" (13mm) C TO CABLE

SINGLE COMPUTER OUTLET C/W 3/4"

COMBINATION SINGLE VOICE/SINGLE

COMPUTER OUTLET UNLESS OTHERWISE

WIRELESS ACCESS POINT. PROVIDE 3/4"
(21mm) C TO CABLE MANAGEMENT

TELEVISION OUTLET C/W 1" (27mm) C TO CABLE MANAGEMENT SYSTEM.

(21mm) C TO CABLE MANAGEMENT

NOTED C/W 1" (27mm) C TO CABLE MANAGEMENT SYSTEM. # INDICATES THE QUANTITY OF ACTIVE PARTS. LEFT VALUE

ALWAYS INDICATES VOICE.







PROJECT NORTH

DATE

25.02.26

No. ISSUANCE

1 ISSUED FOR BID & PERMIT

Professio Ontario Limite

Ontario

Limited Engineering Licensee

Name: D.G. MCCONKEY

Number: 100230476

Limitations: Detailed design, reporting, and specifications for all building electrical systems, site servicing and review of

Phone: 519-725-3555 Website: deiassociates.ca

conformity for these systems in new and renovation construction.

Association of Professional Engineers of Ontario

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KEY PLAN AND LEGEND

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SEAL

POWER PANEL LABEL—

SWITCH LEG (IF APPLICABLE)

CIRCUIT INDICATION——

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REPRODUCTION OR DISTRIBUTION FOR PURPOSES OTHER THAN AUTHORIZED BY WALTERFEDY, A PART OF WF GROUP, IS FORBIDDEN. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND REPORT ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON DRAWINGS TO WALTERFEDY, A PART OF WF GROUP.

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 SCALE :
 As indicated

 DATE :
 02/21/25

 PROJECT NO :
 2022-0277-15

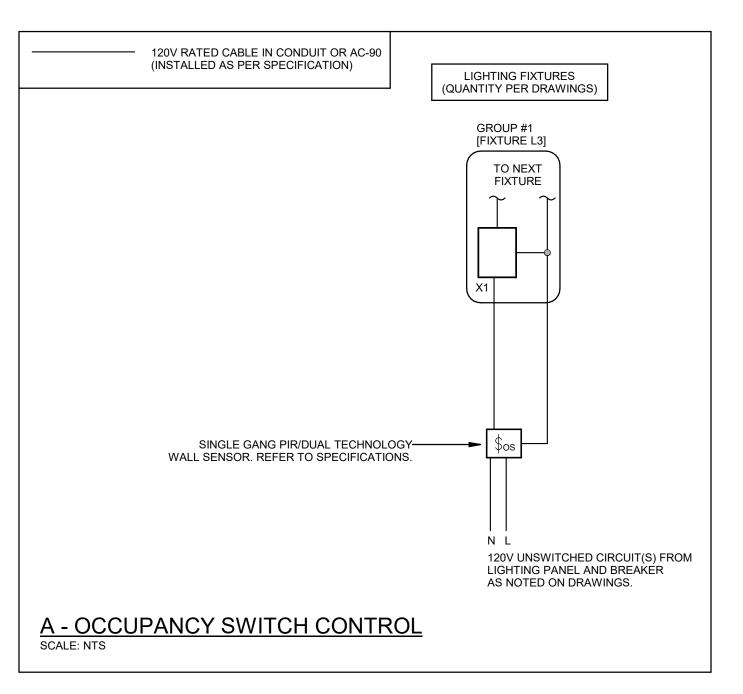
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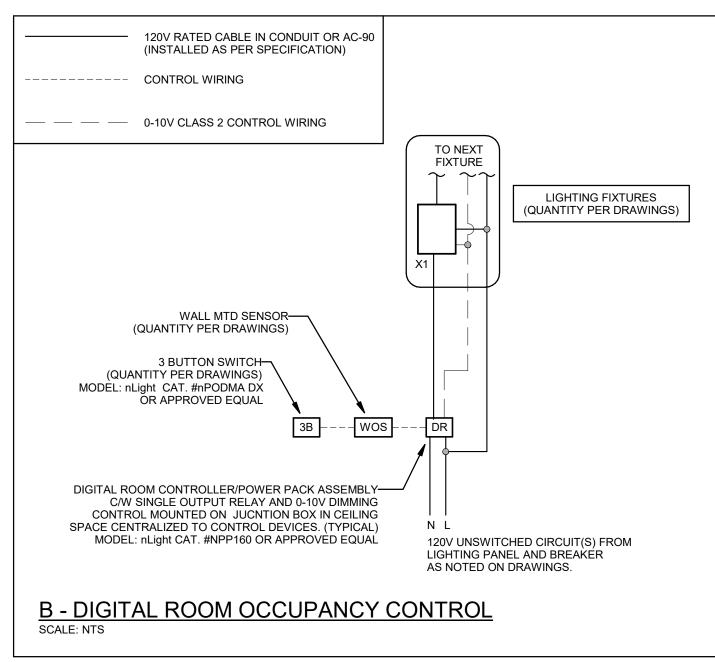
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E1.1

INTERIOR LIGHT FIXTURE SCHEDULE										
			Lamp							
Item	Manufacturer/Catalog Number	Voltage	Туре	Lumens	Colour Temperature	Wattage	CRI	Mounting	Listings	Description
A	COOPER CAT. #14CGTS-NUV LITHONIA CAT. #CPX 1X4 ALO7 SWW7 SWL 120	120V	LED	4712	4000K	37.6W	80	RECESSED		1'X4' (305mmX1220mm) LED BACKLIT FLAT PANEL FIXTURE C/W FIELD SELECTABLE LUMENS AND COLOUR TEMPERATURE, WHITE FROSTED LENS, 10% 0-10V DIMMING DRIVER, AND WHITE FINISH.
A1	COOPER CAT. #14CGTS-NUV-FPSUS2-ML LITHONIA CAT. #CPX 1X4 ALO7 SWW7 SWL 120 PAC 2DF 36	120V	LED	4712	4000K	37.6W	80	SUSPENDED		SIMILAR TO FIXTURE 'A' BUT SUSPENDED MOUNTING TYPE.
В	3G LIGHTING CAT. #3G-4PLI-DI-DC500-LC250-S80-40K-UNV-DIM-FL-FL-XX-120-1C-S-8 MARK CAT. #S4LID LLP 8FT MSL8 80CRI 40K 500LMF I80CRI I40K I250LMF MIN1 SCT TGLD MVOLT XXX ZT F2/72A RDCY XXXCY XCRD DPL AXIS CAT. #TB4DILED-500-250-80-40-SO-8-X-UNV-DP-1-CTS(48)	120V	LED	0009	4000K	39.2W	08	SUSPENDED		8' (2440mm) LONG X 4" (102mm) WIDE DIRECT (67%) / INDIRECT (33%) SUSPENDED LUMINAIRE C/W AIRCRAFT CABLE SUSPENSION (CHORD LENGTH TBD ON SITE), STRUCTURE MOUNTING, EXTRUDED ALUMINUM HOUSING, AND 1% 0-10V DIMMING DRIVER, AND SATIN WHITE FLUSH DIFFUSERS (UP/DOWN). STANDARD FINISH TO BE SELECTED BY ARCHITECT. NOTE: SUSPEND TO MAINTAIN MAXIMUM HEADROOM.
С	COOPER CAT. #14FP4240C LITHONIA CAT. #EPANL 1X4 4800LMHE 80CRI 40K MIN10 ZT 120 LITELINE CAT. #LEDP-14-WH-40K-4-2	120V	LED	4226	4000K	38.3W	08	RECESSED		1'X4' (305mmX1220mm) LED EDGELIT FLAT PANEL FIXTURE C/W WHITE FROSTED LENS, 10% 0-10V DIMMING DRIVER, AND WHITE FINISH.
EMER. BATT. (SELF- POWERED)	EM-1 AIMLITE CAT. #EWBL SERIES LUMACELL CAT. #LBL SERIES OR APPROVED EQUALS BY: STANPRO	12V/120V	ΓED	,	,	2.4W PAR18	N/A	RECESSED		VANDAL RESISTANT LONG LIFE, SEALED BATTERY, C/W 17W LED MODULES, POLYCARBONATE BODY AND 90 MINUTE BATTERY DURATION.
EMER. BATT. (SELF- POWERED) - SURFACE	EM-1 AIMLITE CAT. #EWBL SERIES LUMACELL CAT. #LBL SERIES OR APPROVED EQUALS BY: STANPRO	12V/120V	ΓED	,		2.4W PAR18	A/N	SURFACE		VANDAL RESISTANT LONG LIFE, SEALED BATTERY, C/W 17W LED MODULES, POLYCARBONATE BODY AND 90 MINUTE BATTERY DURATION.
NOTES:	1 FOR INFORMATION REGARDING DRIVER AND LENS INFORMATION REFE 2 LED LUMEN VALUES QUOTED FOR FIXTURES ARE TO BE CONSIDERED IN 3 WHERE NOTED ABOVE THAT FIXTURES ARE TO HAVE FINISH TO SUIT AIR SUBMITTAL.	MINIMUM, AND AS A	ABSOLUTE							

4 IF THERE ARE ANY DISCREPANCIES BETWEEN THE FIXTURE PART NUMBER AND DESCRIPTION, IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO BRING THIS TO THE ELECTRICAL CONSULTANTS ATTENTION PRIOR TO SHOP DRAWING REVIEW.





CLIENT LOGO



DATE ISSUANCE 1 ISSUED FOR BID & PERMIT 25.02.26



Limitations: Detailed design, reporting, and specifications for all building electrical systems, site servicing and review of conformity for these systems in new and renovation construction.

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SCHEDULE AND DETAILS

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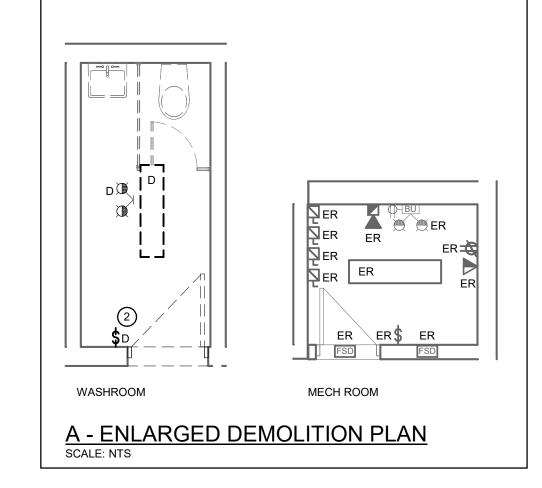
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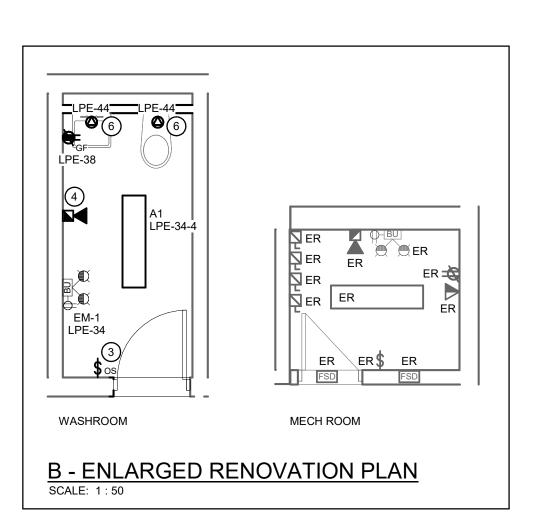
GENERAL NOTES

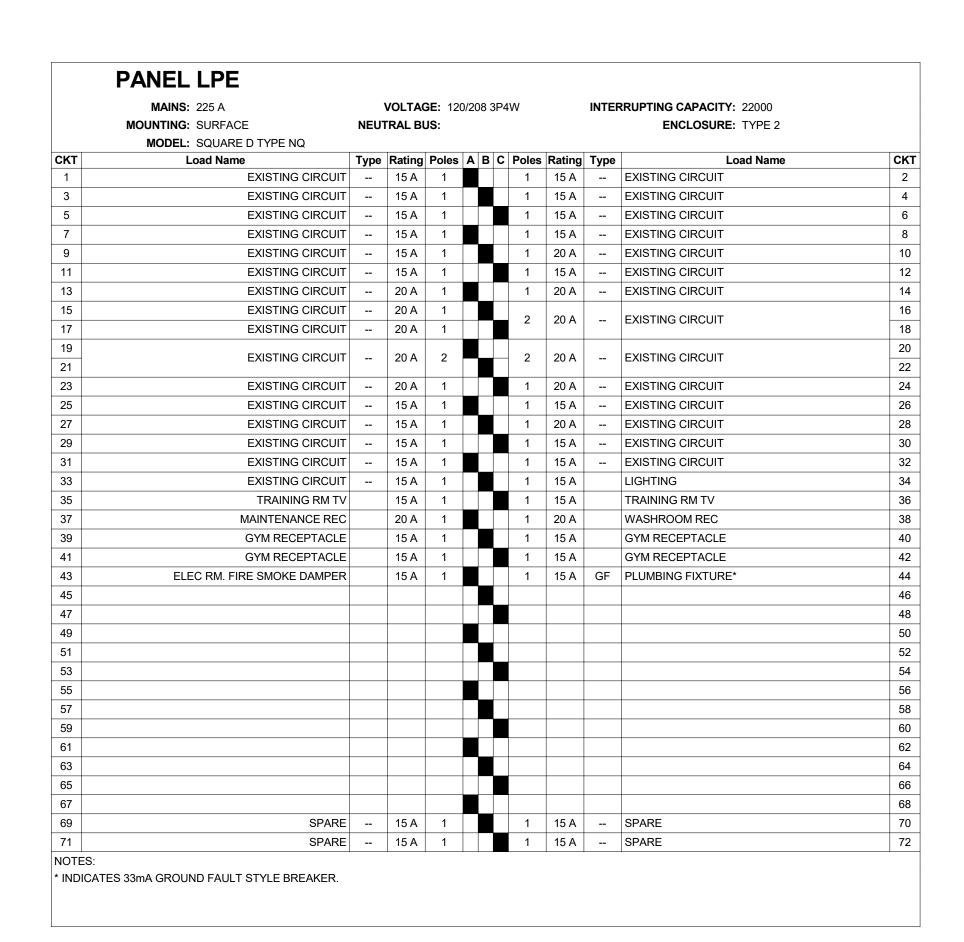
- 'ER' INDICATES EXISTING ITEM TO REMAIN
- 'R' INDICATES EXISTING ITEM IN RELOCATED POSITION. 'D' INDICATES EXISTING ITEM TO BE DELETED. UNLESS OTHERWISE NOTED DISCONNECT AND REMOVE NOTED DEVICE AND WIRING BACK TO SOURCE. EXISTING ELECTRICAL EQUIPMENT NOT SHOWN SHALL REMAIN UNLESS NOTED
- ALL LIGHTING FIXTURES BEING RELOCATED SHALL BE CLEANED AND CHECKED PRIOR TO BEING REINSTALLED.
- ALL DEVICES SHOWN ARE NEW UNLESS OTHERWISE NOTED.
- MAINTAIN SERVICE TO ALL EXISTING DEVICES TO REMAIN. ALL DEVICES ON EXISTING WALLS ARE TO BE FED WITH WIREMOLD.

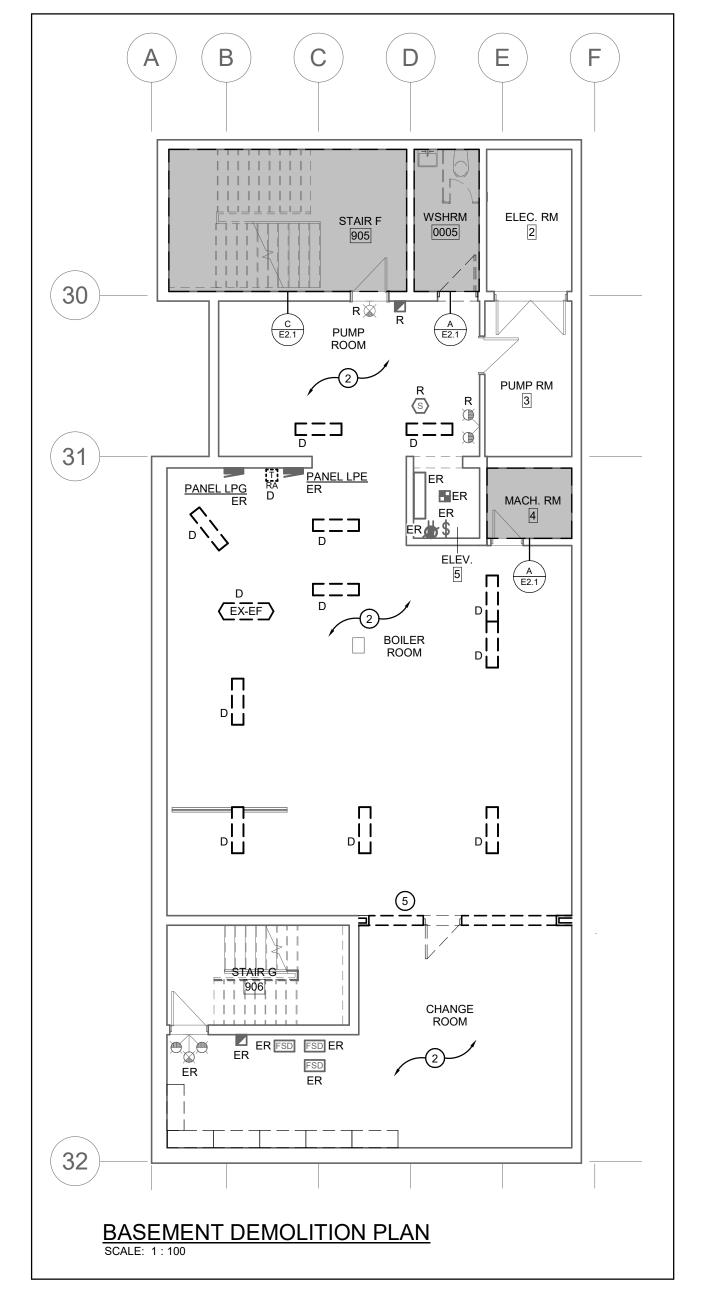
SPECIFIC NOTES

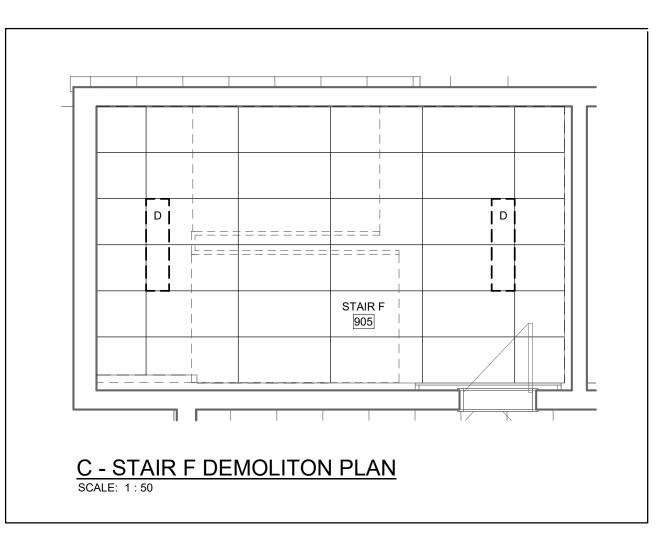
- INDICATES TV AT APPROXIMATELY 5' A.F.F., DATA AND RECEPTACLE MOUNTING HEIGHT TO BE COORDINATED ON SITE WITH OWNER PRIOR TO ROUGH-IN. EXISTING LIGHTING AND LIGHTING CONTROLS ARE TO BE REMOVED COMPLETE. MAINTAIN EXISTING CIRCUIT FOR REUSE. REFER TO RENOVATION PLANS FOR CONTINUATION.
- REWORK EXISTING LIGHTING CIRCUIT THROUGH NEW CONTROLS AND FIXTURES TO SUIT RENOVATION. EXTEND EXISTING CIRCUIT AS REQUIRED. INDICATES NEW FIRE ALARM SIGNAL DEVICE CONNECTED TO EXISTING SIGNAL CIRCUIT. COORDINATE EXACT LOCATION WITH ARCHITECTURAL ELEVATIONS
- INDICATED WALL TO BE DEMOLISHED, ELECTRICAL CONTRACTOR TO REMOVE ANY EXISTING DEVICES AND RE-ROUTE/EXTEND ANY EXISTING CONDUIT AS REQUIRED FOR DEMOLITION.
- INDICATES 120V FEED TO 24VDC STEP DOWN TRANSFORMER MOUNTED ABOVE CEILING OR AT A HIGH LEVEL FOR AUTOMATIC PLUMBING FIXTURE(S). COORDINATE WITH MECHANICAL TRADE.
- INDICATES 120V POWER AND FIRE ALARM CONNECTIONS TO SMOKE/FIRE DAMPER WITH INTEGRAL SMOKE DETECTOR. ADD ONE TROUBLE SIGNAL TO FIRE ALARM PANEL FOR THE SUPERVISION OF 120V POWER CONNECTION. ALARM SIGNAL TO INTEGRAL SMOKE DETECTOR SHALL BE CONNECTED TO LOCAL SIGNALING ZONE. COORDINATE EXACT LOCATION/CONNECTION REQUIREMENTS WITH MECHANICAL CONTRACTOR. SMOKE/FIRE DAMPER AND ASSOCIATED INTEGRAL SMOKE DETECTOR TO BE PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR. PROVIDE TWO MONITORING MODULES PER SMOKE/FIRE DAMPER ONE TO SUPERVISE 120V POWER SUPPLY CONNECTION TO THE DAMPER ACTUATOR, AND ONE FOR INTEGRAL SMOKE DETECTOR ALARM SIGNAL.

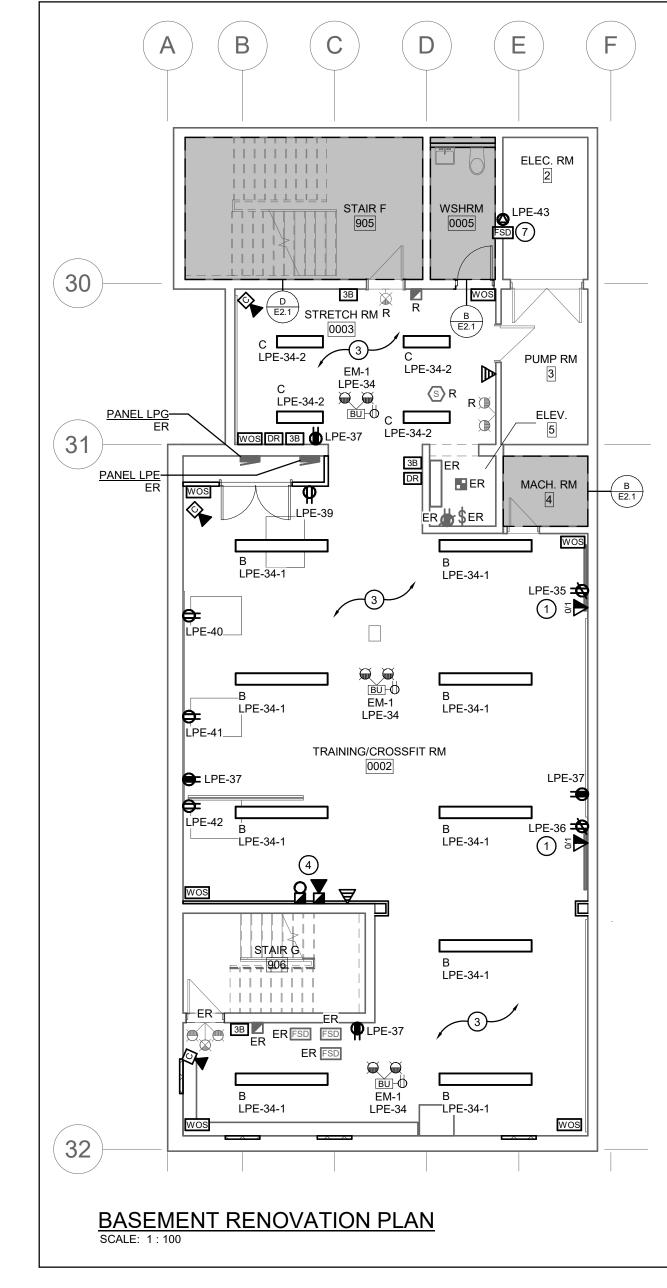


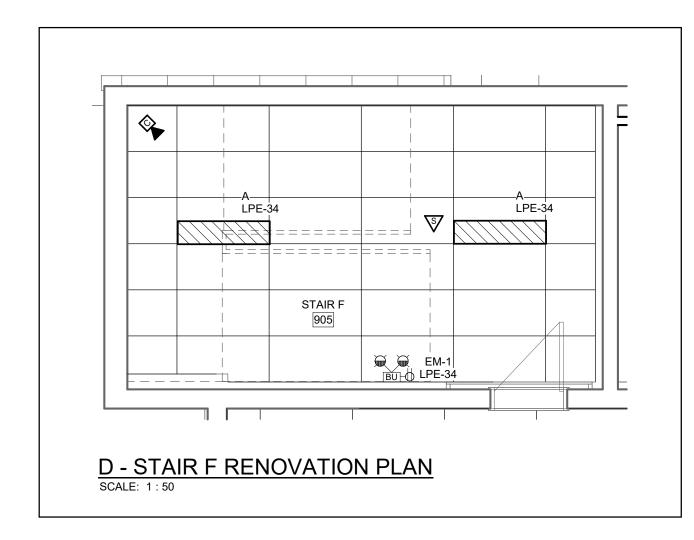












CLIENT LOGO





PROJECT NORTH

DATE

25.02.26

ISSUANCE 1 ISSUED FOR BID & PERMIT

> Limited Engineering Licensee Name: D.G. MCCONKEY Number: 100230476

Limitations: Detailed design, reporting, and specifications for all building electrical systems, site servicing and review of conformity for these systems in new and renovation construction Association of Professional Engineers of Ontario

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ELECTRICAL SPECIFICATION

- .1 PROVIDE LABOUR MATERIAL AND EQUIPMENT REQUIRED TO PROVIDE A COMPLETE INSTALLATION WITH QUALITY WORKMANSHIP ACCEPTABLE TO THE OWNER, ARCHITECT AND CONSULTANT
- 2 OBTAIN ALL PERMITS AND PAY ALL TAXES, FEES AND OTHER COSTS INCURRED WITH THIS WORK. FILE ALL PLANS. OBTAIN NECESSARY APPROVALS, CERTIFICATES AND INSPECTIONS. SUBMIT ALL FINAL CERTIFICATES TO THE CONSULTANT.
- COMPLY WITH RULES AND RECOMMENDATIONS OF THE BOARD OF UNDERWRITERS, ELECTRICAL SAFETY AUTHORITY, THE CANADIAN STANDARDS ASSOCIATION AND ALL REQUIREMENTS OF THE LOCAL UTILITY.
- .4 VISIT THE SITE BEFORE SUBMITTING TENDERS TO EVALUATE ANY SITE CONDITIONS THAT MIGHT ARISE. INCLUDE ALL SITE CONDITIONS IN TENDER, EXTRAS WILL NOT BE ACCEPTED UNLESS BELIEVED TO BE REASONABLE BY THE OWNER AND CONSULTANT.
- .5 CUTTING AND PATCHING SHALL BE BY THE CONTRACTOR REQUIRING TO INSTALL THE SERVICE.
- THE DRAWINGS ARE DIAGRAMMATIC, THE SERVICES SHALL BE INSTALLED TO CONSERVE HEADROOM AND INTERFERE AS LITTLE AS POSSIBLE WITH THE FREE USE OF THE SPACES THROUGH WHICH THEY PASS.
- SUBMIT COPIES OF SHOP DRAWINGS AS PDF FILES VIA EMAIL FOR ALL MAJOR EQUIPMENT. THESE WILL BE REVIEWED BY THE CONSULTANT. RESUBMIT AS OFTEN AS MAY BE FOUND NECESSARY.
- .8 PROVIDE ALL NECESSARY PROTECTION FOR FINISHED OR UNFINISHED WORK. ALL OPENINGS IN CONDUITS, DUCTS AND EQUIPMENT SHALL BE CAPPED TO ENSURE SERVICES ARE KEPT CLEAN WHEN NOT IN USE
- MAINTAIN INSURANCE TO FULLY PROTECT THE CONTRACTOR, OWNER AND CONSULTANT FROM ANY AND ALL CLAIMS SUCH AS UNDER THE WORKMEN'S COMPENSATION ACT, ETC. POST PROJECT NOTIFICATION AT THE SITE IN ACCORDANCE WITH THE MINISTRY OF LABOUR
- .10 PROVIDE STRUCTURAL SUPPORTS, PLATFORMS, SUPPORTING RODS, HANGERS, INSERTS AND BRACKETS FOR EQUIPMENT AND SERVICES. DO NOT SUPPORT SERVICES FROM STEEL DECK.
- .11 INSTRUCT THE OWNER'S STAFF IN THE CARE, MAINTENANCE AND OPERATION OF THE SYSTEMS.
- .12 WARRANTY ALL LABOUR, MATERIAL AND EQUIPMENT FOR A PERIOD OF TWO (2) YEARS AFTER FINAL ACCEPTANCE OF SYSTEM.
- .13 COORDINATE WITH OTHER CONTRACTORS INSTALLING EQUIPMENT OR MATERIAL AND ARRANGE EQUIPMENT IN PROPER RELATION WITH APPARATUS OF ALL OTHER TRADES.
- .14 PROVIDE LAMICOID TAGS FOR IDENTIFICATION OF NEW EQUIPMENT ADDED.
- .15 MOUNTING HEIGHTS SHALL BE AS FOLLOWS FROM FINISHED FLOOR TO CENTERLINE OF DEVICE/EQUIPMENT (UNLESS OTHERWISE NOTED); SWITCHES, DIMMERS AND SPEED CONTROLLERS: 1100mm (44")
- WALL RECEPTACLES: GENERAL: 400mm (16")
- ABOVE TOP OF COUNTERS: 100mm (4") IN MECHANICAL/ELECTRICAL ROOMS: 1100mm (44") (GANG WITH SWITCH).
- PANEL BOARDS: 1400mm (4'-8") OR AS REQUIRED BY CODE. - TELEPHONE OUTLETS: 400mm (16")
- VOICE/DATA OUTLETS: 400mm (16")
- FIRE ALARM STATIONS: 1200mm (48") - FIRE ALARM SIGNAL DEVICES: 2250mm (7'-6")
- FIRE ALARM STROBES: 2250mm (7'-6") THERMOSTAT: 1200mm (44")
- SECURITY SYSTEM MOTION DETECTORS: 300mm (12") BELOW FINISHED CEILING OR CEILING MOUNTED AS DIRECTED BY MANUFACTURER - SECURITY SYSTEM KEY SWITCHES: 1100mm (44")
- .16 ALL AREAS NOT AFFECTED BY RENOVATION OR DEMOLITION SHALL REMAIN AS PRESENTLY INSTALLED UNLESS OTHERWISE NOTED.
- .17 ALL EXISTING ELECTRICAL DEVICES, OUTLET BOXES, ETC., NOT SHOWN ON DRAWINGS OR MENTIONED IN THE FOLLOWING NOTES AND INSTALLED IN WALLS SLATED FOR DEMOLITION, SHALL BE DISCONNECTED AND REMOVED COMPLETELY IN ALL RESPECTS.
- .18 SUBMIT ONE COPY OF OPERATING AND MAINTENANCE INSTRUCTIONS IN A THREE RING BINDER LABELED FOR THE PROJECT COMPLETE WITH ITEMIZED SECTIONS CONTAINING PROJECT DATA, SHOP DRAWINGS, ETC. UPON ACCEPTANCE OF THE OPERATION AND MAINTENANCE MANUAL BY THE CONSULTANT PROVIDE TWO ADDITIONAL COPIES BOUND IN SEPARATE THREE RING BINDERS. A PDF FILE OF THE ENTIRE MANUAL IS TO

BE PROVIDED ON A USB STICK. ONLY ONE USB STICK IS TO BE PROVIDED CONTAINING BOTH THE APPROVED MANUALS AND RECORD DRAWINGS.

- .19 CONTRACTOR SHALL PROVIDE 2 SETS OF REPRODUCIBLE ELECTRICAL DRAWINGS. MARK THEREON ALL CHANGES AS WORK PROGRESSES AND AS CHANGES OCCUR. THIS SHALL INCLUDE FIELD AND CONTRACT CHANGES TO ELECTRICAL SYSTEMS. IDENTIFY EACH DRAWING IN LOWER RIGHT HAND CORNER IN LETTERS AT LEAST 3mm (1/8") HIGH AS FOLLOWS: - "RECORD DRAWINGS: THIS DRAWING HAS BEEN REVISED TO SHOW ELECTRICAL SYSTEMS AS INSTALLED. (SIGNATURE OF CONTRACTOR)(DATE)". SUBMIT HARD COPY TO CONSULTANT FOR APPROVAL. WHEN RETURNED, MAKE CORRECTIONS (IF ANY) AS DIRECTED. ONCE APPROVED, SUBMIT COMPLETED REPRODUCIBLE PAPER RECORD DRAWINGS AS WELL AS A SCANNED PDF COPY FILE ON USB STICK WITH OPERATING AND MAINTENANCE MANUALS.
- .20 CONTRACTOR SHALL PROVIDE RED LINE RECORD DRAWINGS OF EACH AND EVERY ELECTRICAL DRAWING FOR DEI CONSULTING ENGINEERS TO CAD THE RECORD DRAWINGS. THE CAD DRAWING FILES WILL BE PROVIDED TO THE OWNER AS PART OF THE MAINTENANCE MANUALS.
- .21 THE CONTRACTOR IS TO DETERMINE GENERAL INSPECTION FEES WITH THE ELECTRICAL SAFETY AUTHORITY AND INCLUDE AS PART OF TENDER.

BASIC MATERIALS

- .1 JUNCTION, OUTLET AND PULL BOXES MUST BE APPROVED TO SUIT INSTALLATION METHODS AND ENVIRONMENT.
- .2 CONDUIT MUST BE CONCEALED UNLESS INSTALLED IN SERVICE OR STORAGE ROOMS
- .3 CONDUIT MUST BE INSTALLED PARALLEL AND PERPENDICULAR TO BUILDING LINES IN A NEAT AND WORKMANLIKE MANNER.
- .4 ALL FEEDER AND BRANCH CIRCUIT WIRING MUST BE COPPER, T90 RATING/STYLE RUN IN EMT CONDUIT WITH INTERNAL INSULATED GREEN GROUND WIRE UNLESS NOTED OTHERWISE. MINIMUM WIRE SIZE SHALL BE #12 AND MINIMUM CONDUIT SIZE SHALL BE 3/4" (19mm).
- .5 AC90 CABLE MAY BE USED FOR BRANCH CIRCUIT WIRING IN STEEL STUD WALLS AND "DROPS" IN T-BAR CEILING AREAS TO LIGHT FIXTURES AND FIRE ALARM DEVICES. LENGTH OF DROP MUST BE LIMITED TO 8'-0" (2400mm).
- .6 WHERE DEVICES ARE TO BE INSTALLED ON EXISTING WALLS IN FINISHED AREA, WHICH CANNOT BE FISHED, INSTALL FEEDS IN A SURFACE METAL RACEWAY EQUAL TO WIREMOLD V700 SERIES.
- .7 COLOUR CODE CONDUITS. BOXES AND METALLIC SHEATHED CABLES.
- .8 CODE WITH PLASTIC TAPE OR PAINT AT POINTS WHERE CONDUIT OR CABLE ENTERS WALL, CEILING, OR FLOOR, AND AT 15m(45') INTERVALS.
- .9 COLOUR BANDS MUST BE 25mm(1") WIDE AND CODED AS FOLLOWS FOR NOTED SYSTEMS

UP TO 208V YELLOW 209 TO 600V WHITE VOICE SYSTEM **GREEN** DATA SYSTEM ORANGE **BROWN** SECURITY PUBLIC ADDRESS BLACK FIRE ALARM

.10 THIS CONTRACTOR MUST PAINT ALL SYSTEM JUNCTION BOXES AND COVERS IN CONFORMANCE WITH THE ABOVE SCHEDULE.

DRAW BREAKDOWN

- THIS CONTRACTOR MUST SUBMIT A BREAKDOWN OF THE TENDER PRICE INTO CLASSIFICATIONS TO THE SATISFACTION OF THE CONSULTANT WITH THE AGGREGATE OF THE BREAKDOWN TOTALING THE TOTAL CONTRACT AMOUNT. EACH ITEM MUST BE BROKEN OUT INTO MATERIAL AND LABOUR COSTS. PROGRESS CLAIMS. WHEN SUBMITTED ARE TO BE ITEMIZED AGAINST EACH ITEM OF THE DRAW BREAKDOWN. THIS SHALL BE DONE IN TABLE FORM SHOWING CONTRACT AMOUNT, AMOUNT THIS DRAW, TOTAL TO DATE, % COMPLETE AND BALANCE.
- BREAKDOWN SHALL BE AS FOLLOWS: PERMITS AND FEES
- MOBILIZATION (MAXIMUM 1%)
- DEMOLITION
- BRANCH CONDUITS BRANCH WIRING
- LIGHTING FIXTURES FIRE ALARM SYSTEM DEVICES AND VERIFICATION
- AUXILIARY SYSTEM ROUGH-INS WIRING FOR MECHANICAL EQUIPMENT
- 10 INTEGRATED LIFE SAFETY TEST DOCUMENTS .11 COMMISSIONING (MINIMUM 3%)
- .3 THE BREAKDOWN MUST BE APPROVED BY THE CONSULTANT PRIOR TO SUBMISSION OF THE FIRST DRAW
- .4 BREAKDOWNS NOT COMPLYING TO THE ABOVE WILL NOT BE APPROVED.
- .5 BREAKDOWN MUST INDICATE TOTAL CONTRACT AMOUNT.
- .6 MOBILIZATION AMOUNT MAY ONLY BE DRAWN WHEN ALL REQUIRED SHOP DRAWINGS HAVE BEEN REVIEWED BY THE CONSULTANT.

SHOP DRAWINGS AND PRODUCT DATA

- .1 FURNISH COMPLETE CATALOG DATA FOR MANUFACTURED ITEMS OF EQUIPMENT TO BE USED IN THE WORK TO CONSULTANT FOR REVIEW WITHIN 30 DAYS AFTER AWARD OF CONTRACT.
- .2 IF MATERIAL OR EQUIPMENT IS NOT AS SPECIFIED OR SUBMITTAL IS NOT COMPLETE, IT WILL BE REJECTED BY CONSULTANT.
- .3 ADDITIONAL SHOP DRAWINGS REQUIRED BY THE CONTRACTOR FOR MAINTENANCE MANUALS, SITE COPIES ETC., SHALL BE PHOTOCOPIES OF THE "REVIEWED" SHOP DRAWINGS. ALL COSTS TO PROVIDE ADDITIONAL COPIES OF SHOP DRAWINGS SHALL BE BORNE BY THE CONTRACTOR.
- .4 PARTIAL SUBMITTALS WILL NOT BE ACCEPTED.
- .5 CATALOG DATA OR SHOP DRAWINGS FOR EQUIPMENT, WHICH ARE NOTED AS BEING REVIEWED BY CONSULTANT OR HIS ENGINEER SHALL NOT SUPERSEDE CONTRACT DOCUMENTS.
- .6 REVIEW COMMENTS OF CONSULTANT SHALL NOT RELIEVE THIS DIVISION FROM RESPONSIBILITY FOR DEVIATIONS FROM CONTRACT DOCUMENTS UNLESS CONSULTANT'S ATTENTION HAS BEEN CALLED TO SUCH DEVIATIONS IN WRITING AT TIME OF SUBMISSION, NOR SHALL THEY RELIEVE THIS DIVISION FROM RESPONSIBILITY FOR ERRORS IN ITEMS SUBMITTED.
- .7 CHECK WORK DESCRIBED BY CATALOG DATA WITH CONTRACT DOCUMENTS FOR DEVIATIONS AND ERRORS.
- .8 SHOP DRAWINGS AND PRODUCT DATA SHALL SHOW:
 - MOUNTING ARRANGEMENTS OPERATING AND MAINTENANCE CLEARANCES. E.G. ACCESS DOOR SWING SPACES.
- .9 SHOP DRAWINGS AND PRODUCT DATA SHALL BE ACCOMPANIED BY DETAILED DRAWINGS OF BASES, SUPPORTS, AND ANCHOR BOLTS.
- MANUFACTURER TEST DATA WHERE REQUESTED.
- MANUFACTURER TO CERTIFY AS TO CURRENT MODEL PRODUCTION. CERTIFICATION OF COMPLIANCE TO APPLICABLE CODES.
- .10 STATE SIZES, CAPACITIES, BRAND NAMES, MOTOR HP, ACCESSORIES, MATERIALS, GAUGES, DIMENSIONS, AND OTHER PERTINENT INFORMATION. LIST ON CATALOG COVERS PAGE NUMBERS OF SUBMITTED ITEMS. UNDERLINE APPLICABLE DATA.
- .11 ONCE THESE SHOP DRAWINGS ARE RETURNED "REVIEWED" OR "REVIEWED AS NOTED" FABRICATION, PRODUCTION, AND INSTALLATION MAY COMMENCE. NOTE: IF A SHOP DRAWING IS RETURNEDIEWED AS NOTED" THIS CONTRACTOR MUST PROVIDE WRITTEN INDICATION THAT THE COMMENTS HAVE BEEN COMPLIED WITH.
- .12 A PARTIAL LIST OF SHOP DRAWINGS INCLUDES: .1 FIRE ALARM SYSTEM DEVICES
- EMERGENCY BATTERY UNITS AND FIXTURES FIRESTOPPING MATERIALS
- SURFACE RACEWAYS WIRING DEVICES
- .7 LIGHTING CONTROL DEVICES

- .1 FIRESTOPPING MATERIAL AND INSTALLATION WITHIN ANNULAR SPACE BETWEEN CONDUITS, DUCTS, AND ADJACENT FIRE SEPARATION.
- .2 PROVIDE MATERIALS AND SYSTEMS CAPABLE OF MAINTAINING EFFECTIVE BARRIER AGAINST FLAME, SMOKE, AND GASES
- .3 COMPLY WITH THE REQUIREMENTS OF CAN4-S115-M35, AND DO NOT EXCEED OPENING SIZED FOR WHICH THEY HAVE BEEN TESTED.
- .4 SYSTEMS TO HAVE AN F OR FT RATING (AS APPLICABLE) NOT LESS THAN THE FIRE PROTECTION RATING REQUIRED FOR CLOSURES IN A FIRE SEPARATION. PROVIDE "FIREWRAP" BLANKET AROUND SERVICES PENETRATING FIREWALLS.
- .5 EXTENT OF BLANKET MUST CORRESPOND TO ULC RECOMMENDATIONS. IN GENERAL WRAP INDIVIDUAL CONDUITS WITH APPROVED FIREWRAP MATERIALS ON EACH SIDE OF FIREWALL. REFER TO ARCHITECTURAL DRAWINGS FOR FT RATINGS. PROVIDE 1 AND/OR 2 LAYERS OF FIREWRAP WITH TRANSVERSE AND LONGITUDINAL SEAMS OVERLAPPED AND/OR BUTTED (SECOND LAYER OFFSET FROM FIRST LAYER). CUT EDGES ARE TO BE SEALED WITH ALUMINUM FOIL TAPE. PROVIDE 50 MM STAINLESS STEEL BANDING AT 200 MM INTERVALS. INSTALL FIREWRAP TO MANUFACTURERS' RECOMMENDATIONS FOR PROPER FT RATING. ACCEPTABLE MANUFACTURERS ARE 3M FIREMASTER DUCTWRAP OR
- .6 THE FIRESTOPPING MATERIALS ARE NOT TO SHRINK, SLUMP OR SAG AND BE FREE OF ASBESTOS, HALOGENS AND VOLATILE SOLVENTS.
- .7 FIRESTOPPING MATERIALS ARE TO CONSIST OF A COMPONENT SEALANT APPLIED WITH A CONVENTIONAL CAULKING GUN AND TROWEL.
- .8 FIRESTOP MATERIALS ARE TO BE CAPABLE OF RECEIVING FINISH MATERIALS IN THOSE AREAS, WHICH ARE EXPOSED AND SCHEDULED TO
- .9 FIRESTOPPING SHALL BE INSPECTED AND APPROVED BY LOCAL AUTHORITY PRIOR TO CONCEALMENT OR ENCLOSURE.
- .10 INSTALL MATERIAL AND COMPONENTS IN ACCORDANCE WITH ULC CERTIFICATION, MANUFACTURERS INSTRUCTIONS AND LOCAL AUTHORITY
- .11 SUBMIT PRODUCT LITERATURE AND INSTALLATION MATERIAL ON FIRESTOPPING IN SHOP DRAWING AND PRODUCT DATA MANUAL. .12 ACCEPTABLE MANUFACTURERS:
- RECTORSEAL CORPORATION (METACAULK) PROSET SYSTEMS

STI FIRESTOP

- NOTE: FIRE STOP MATERIAL MUST CONFORM TO REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION. CONTRACTOR TO CONFIRM PRIOR TO APPLICATION AND ENSURE MATERIAL USED IS COMPATIBLE WITH THAT USED BY OTHER TRADES ON SITE.
- .13 ENSURE FIRESTOP MANUFACTURER REPRESENTATIVE PERFORMS ON SITE INSPECTIONS AND CERTIFIES INSTALLATION. SUBMIT INSPECTION REPORTS/CERTIFICATION AT TIME OF SUBSTANTIAL COMPLETION.

READY FOR TAKEOVER

- .1 COMPLETE THE FOLLOWING TO THE SATISFACTION OF THE CONSULTANT PRIOR TO REQUEST FOR READY FOR TAKEOVER
 - .1 AS-BUILT DRAWINGS.
- .2 MAINTENANCE MANUALS.
- .3 SYSTEM START UP.
- .4 INSTRUCTIONS TO OWNERS.
- .5 OUTLET COVER CIRCUIT LABELS.
- .6 FINAL CERTIFICATES
- ELECTRICAL SAFETY AUTHORITY EMERGENCY LIGHTING
- FIRE ALARM VERIFICATION CERTIFICATE INTEGRATED LIFE SAFETY SYSTEMS COMMISSIONING

LIGHTING SYSTEMS

FIXTURES ARE TO BE PROVIDED AS NOTED IN THE LIGHT FIXTURE SCHEDULE C/W THE FOLLOWING FEATURES:

.1 EXIT LIGHTING UNITS MUST CONFORM TO CSA C22.2 NO. 141 (LATEST EDITION AND CSA C860).

- FIXTURE LED'S MUST BE TESTED IN CONFORMANCE WITH IESNA LM80 STANDARD. .2 LED'S MUST BE SELECTED USING A BINNING ALGORITHM TO ENSURE COLOUR AND LUMEN OUTPUT OF A GIVEN FIXTURE ARE
- CONSISTENT, AS WELL AS MEET OR SURPASS ANSI C78.377 SPECIFICATION FOR THE RATED LIFETIME OF THE FIXTURE. COLOUR ACCURACY BETWEEN PRODUCTS MUST BE WITHIN A 2-STEP MACADAM ELLIPSE.
- .3 LUMINAIRES MUST BE TESTED TO IESNA LM79 BY AN INDEPENDENT APPROVED LABORATORY
 - LUMINAIRES MUST BE TESTED PRIOR TO SHIPPING. LUMINAIRES MUST BE ULC CERTIFIED AND APPROVED FOR USE IN CANADA.
- FIXTURES MUST MAINTAIN A MINIMUM OF 90% OF THEIR INITIAL LIGHT OUTPUT FOR 60,000 HOURS. SUBMIT TEST RESULTS UPON
- LUMEN VALUES INDICATED FOR FIXTURES IN THE PROJECT DOCUMENTS ARE TO BE CONSIDERED AS 'ABSOLUTE' OR 'DELIVERED' VALUES. OTHER THAN FOR SPECIALTY FIXTURES, AND UNLESS OTHERWISE INDICATED, THE MAXIMUM DRIVER CURRENT IS TO BE 750 MA.

.2 STANDARD EXIT LIGHTING UNITS

- .2 LAMPS: LED 2W
- .3 OPERATION: 25 YEARS
- .4 UNITS ARE TO BE PROVIDED WITH THREE (3) PICTOGRAM LEGENDS INDICATING "LEFT FROM HERE", "STRAIGHT FROM HERE", AND

SELF-POWERED EXIT LIGHTING UNITS .1 EXIT LIGHTING MUST CONFORM TO CSA C22.2 No. 141 (LATEST EDITION OR CSA C860).

- .2 LAMPS: LED 2W
- .3 OPERATION: 25 YEARS LIFE
- .4 UNITS ARE TO BE PROVIDED WITH THREE (3) PICTOGRAM LEGENDS INDICATING "LEFT FROM HERE", "STRAIGHT FROM HERE", AND "RIGHT FROM HERE".
- .5 SUPPLY VOLTAGE: 120 VOLT, AC.
- .6 OUTPUT VOLTAGE: 12 VOLT, DC.
- .7 BATTERY: SEALED MAINTENANCE FREE, 10 YEAR LIFE. NOTE: BATTERY MUST BE CAPABLE OF SUPPLYING THE WATTAGE INDICATED FOR A MINIMUM OF 30 MINUTES
- .8 SIGNAL LIGHTS: "AC POWER ON" CONDITION AND "CHARGING" CONDITION.
- .9 LAMP HEADS: INTEGRAL ON UNIT, 345° HORIZONTAL AND 180° VERTICAL ADJUSTMENT
- .10 CABINET: FINISH: WHITE.
- .11 AUXILIARY EQUIPMENT: TEST SWITCH.

LAMP TYPE: MINIMUM 4W LED.

EMERGENCY LIGHTING UNITS .1 MUST CONFORM TO CSA C22.2 NO. 141 (LATEST EDITION).

- .2 SUPPLY VOLTAGE: 120 VOLT, AC.
- .3 OUTPUT VOLTAGE: 12 VOLT, DC.
- .4 BATTERY: SEALED UNITS MUST BE CAPABLE OF SUPPLYING THE WATTAGE INDICATED FOR A MINIMUM OF 30 MINUTES.
- .5 SIGNAL LIGHTS: "AC POWER ON" CONDITION AND "CHARGING" CONDITION
- .6 LAMP HEADS: INTEGRAL ON UNIT, 345° HORIZONTAL AND 180° VERTICAL ADJUSTMENT LAMP TYPE: MINIMUM 4W LED.
- .7 AUXILIARY EQUIPMENT TEST SWITCH
- AC INPUT AND DC OUTPUT TERMINAL BLOCKS INSIDE CABINET.
- .4 CORD AND PLUG CONNECTION FOR AC. REMOTE EMERGENCY LIGHTING FIXTURES
- 1 REMOTE EMERGENCY LIGHTING FIXTURES MUST CONFORM TO CSA C22.2 NO. 141 (LATEST EDITION).
- .2 FIXTURES SHALL BE SMALL "MICRO" SIZE WITH WHITE FINISH. .3 FIXTURES MUST BE ADJUSTABLE TYPE HEADS WITH CANOPY.
- .4 UNLESS OTHERWISE INDICATED SURFACE MOUNTED FIXTURES IN WASHROOMS, LOCKER ROOMS, CHANGE ROOMS AND GYMNASIUMS
- .6 FIXTURE INSTALLATION .1 LOCATE AND INSTALL LUMINAIRES AS INDICATED.
- 2 FIXTURE SURFACE MOUNTED TO SUSPENDED CEILINGS MUST BE SECURED THROUGH CEILING ASSEMBLY TO CROSS MEMBER SUPPORTS. THESE SUPPORTS ARE TO BE STEEL CHANNELS OR ANGLES INDEPENDENTLY SECURED TO STRUCTURE USING #12 "JACK" CHAIN. EACH
- CHAIN MUST BE SECURED SO NO FIXTURE WEIGHT IS ADDED TO THE CEILING ASSEMBLY. .3 PLASTER FRAMES/FLANGE KITS MUST BE PROVIDED BY THIS DIVISION FOR FIXTURES RECESSED IN PLASTER AND/OR DRYWALL CEILINGS.

.4 WHERE SPECIFIED, FIXTURES TO BE CHAIN HUNG SHALL BE HUNG USING "JACK" CHAIN WITH A CAPACITY TO SUIT THE FIXTURE WEIGHT.

BRANCH CIRCUIT WIRING FEEDING THESE FIXTURES SHALL BE AC90 CABLE "TY-WRAPPED" AT 36" (900mm) INTERVALS ALONG LENGTH OF

- DROP. FINAL APPEARANCE MUST BE NEAT AND PROFESSIONAL.
- .5 INSTALL EXIT LIGHTING UNITS AS INDICATED WITH ILLUMINATED FACES AND CHEVRONS/ARROWS INDICATING PATH(S) OF EXIT.
- .6 INSTALL EMERGENCY LIGHTING UNITS AND ASSOCIATED REMOTE MOUNTED FIXTURES AS INDICATED.
- .7 DIRECT "HEADS" ON UNITS AND REMOTE MOUNTED FIXTURES TO ILLUMINATE PATH(S) OF EXIT .8 INSTALL EMERGENCY LIGHTING UNITS AND REMOTE FIXTURES AT 8' (2400mm) ABOVE FINISHED FLOOR UNLESS INDICATED OTHERWISE
- .9 PROVIDE A 15A 120V DUPLEX RECEPTACLE (CONNECT TO CIRCUIT INDICATED) ADJACENT TO UNIT.

.10 CONNECT LUMINAIRES TO LIGHTING CIRCUITS AS INDICATED.

- .11 CONNECT EXIT FIXTURES TO EXIT LIGHTING CIRCUITS AND UNIT EQUIPMENT (IF APPLICABLE).
- .12 CONNECT UNIT EQUIPMENT TO CIRCUITS AS INDICATED.
- .13 ALL WIRING OF REMOTE EMERGENCY FIXTURES SHALL BE MINIMUM #10 T90 FOR EACH CIRCUIT AND RUN IN CONDUIT. WIRING MUST BE SIZED IN CONFORMANCE WITH MANUFACTURERS' RECOMMENDATIONS FOR DISTANCE REQUIRED.
- .14 ALIGN LUMINAIRES MOUNTED IN CONTINUOUS ROWS TO FORM STRAIGHT UNINTERRUPTED LINES.
- .15 ALIGN LUMINAIRES MOUNTED INDIVIDUALLY PARALLEL OR PERPENDICULAR TO BUILDING GRID LINES.
- .16 ALL LIGHTING BRANCH CIRCUITS ARE TO BE PROVIDED WITH SEPARATE NEUTRALS.
- GUARANTEE .1 ALL LED FIXTURES AND DRIVERS ARE TO BE COMPLETE WITH A 5 YEAR GUARANTEE.
- .2 THE LABOUR REQUIRED TO REPLACE THESE DRIVERS MUST BE INCLUDED IN THE ABOVE GUARANTEE

.8 TESTING/CERTIFICATION

- .1 AT THE COMPLETION OF THE PROJECT AND IN THE PRESENCE OF THE CONSULTANT, TEST ALL EXIT AND EMERGENCY FIXTURES. ON COMPANY LETTERHEAD, THE CONTRACTOR IS TO PREPARE A CHART INDICATING:
- PROJECT DATE
- EQUIPMENT TYPE CERTIFICATION OF CORRECT CONNECTION
- CERTIFICATION OF CORRECT OPERATION **DURATION OF TEST IN MINUTES (MINIMUM 30)** - ACTUAL PERIOD OF TESTING (TIME OF DAY)

ISSUANCE DATE

25.02.26

1 ISSUED FOR BID & PERMI





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WIRING DEVICES

- .1 RECEPTACLES, PLUGS, AND OTHER SIMILAR WIRING DEVICES MUST CONFORM TO CSA C22.2 NO. 42 (LATEST EDITION).
- .2 DUPLEX RECEPTACLES, CSA TYPE 5-15 R, 125 V, 15 A, U GROUND, WITH THE FOLLOWING FEATURES:
- UREA MOLDED HOUSING WITH COLOUR AS SELECTED BY ARCHITECT. SUITABLE FOR NO. 10 AWG FOR BACK AND SIDE WIRING.
- BREAK-OFF LINKS FOR USE AS SPLIT RECEPTACLES.
- EIGHT BACK WIRED ENTRANCES, FOUR SIDE WIRING SCREWS
- .5 TRIPLE WIRE CONTACTS AND RIVETED GROUNDING CONTACTS.
- .3 ACCEPTABLE MATERIALS:

LEVITON

- TAMPER RESISTANT RECEPTACLE: HUBBELL CAT. #BR15TR TAMPER RESISTANT T-SLOT RECEPTACLE: HUBBELL CAT. #BR20TR
- TAMPER RESISTANT GROUND FAULT PROTECTED RECEPTACLE: HUBBELL CAT. #GFTR15
- TAMPER RESISTANT GROUND FAULT PROTECTED T-SLOT RECEPTACLE: HUBBELL CAT. #GFTR20
- .4 OTHER RECEPTACLES WITH AMPACITY AND VOLTAGE AS INDICATED. COLOUR BY ARCHITECT.
- .5 ACCEPTABLE ALTERNATE MANUFACTURERS INCLUDE: PASS & SEYMOUR

COVER THE RESPECTIVE ROOMS.

- .6 WALL MOUNTED OCCUPANCY SENSORS (PASSIVE TECHNOLOGY), OCCUPANCY SENSORS USED IN STORAGE AND SERVICE ROOMS SHALL BE
- .1 HUBBELL CAT. #AP1277XIN (COLOUR BY ARCHITECT)
- WATTSTOPPER CAT. #PW-100-VOLT-X (COLOUR BY ARCHITECT) LEVITON CAT. #ODS-15-ID-VOLT-X (COLOUR BY ARCHITECT)
- .4 SENSOR SWITCH CAT. #WSD-VOLT-X (COLOUR BY ARCHITECT)
- .7 PROVIDE OTHER OCCUPANCY SENSORS TO SUIT THE DETAIL(S) ON THE DRAWINGS.
- .8 ALL SENSORS SHALL BE SET TO 5 MINUTES "DELAY TO OFF" UNLESS OTHERWISE DIRECTED.

.2 PROVIDE ACCESS DOORS IF POWER PACKS ARE INSTALLED ABOVE DRYWALL CEILINGS.

- .1 INSTALL POWER PACKS IN ACCESSIBLE MAINTENANCE AREAS.
- .3 IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND AIM SENSORY IN THE CORRECT LOCATION REQUIRED FOR COMPLETE AND PROPER COVERAGE WITHIN THE RANGE OF COVERAGE AS PER THE MANUFACTURER'S RECOMMENDATIONS. THE LOCATIONS AND QUANTITIES OF SENSORS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE ONLY THE ROOMS WHICH ARE TO BE

PROVIDED WITH SENSORS. THE CONTRACTOR SHALL PROVIDE ADDITIONAL SENSORS IF REQUIRED TO PROPERLY AND COMPLETELY

- .4 IT IS THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A PRE-INSTALLATION MEETING WITH THE MANUFACTURER'S FACTORY AUTHORIZED REPRESENTATIVE, AT THE FACILITY, TO VERIFY PLACEMENT TO SENSORS AND INSTALLATION CRITERIA.
- .5 THE CONTRACTOR SHALL ALSO PROVIDE THE ON-SITE TRAINING NECESSARY TO FAMILIARIZE THE OWNER'S PERSONNEL WITH THE OPERATION, USE, ADJUSTMENT AND PROBLEM SOLVING DIAGNOSIS OF THE OCCUPANCY SENSING DEVICES SYSTEMS.
- .6 UPON COMPLETION OF THE INSTALLATION, THE SYSTEM SHALL BE COMPLETELY COMMISSIONED BY THE MANUFACTURER'S FACTORY AUTHORIZED TECHNICIAN WHO WILL VERIFY ALL ADJUSTMENTS AND SENSOR PLACEMENT TO ENSURE A TROUBLE-FREE OCCUPANCY-BASED LIGHTING CONTROL. SUBMIT COMMISSIONING REPORT WITH CLOSE-OUT DOCUMENTS.
- .10 INSTALL DEVICES IN GANG TYPE OUTLET BOX WHEN MORE THAN ONE DEVICE IS REQUIRED IN ONE LOCATION.
- .11 SHEET STEEL UTILITY BOX COVER FOR WIRING DEVICES INSTALLED IN SURFACE MOUNTED UTILITY BOXES.
- .12 STAINLESS STEEL, VERTICALLY BRUSHED, 1mm THICK, THICKNESS 2.5mm, COVER PLATES FOR WIRING DEVICES MOUNTED IN FLUSH-MOUNTED
- .13 SHEET METAL COVER PLATES FOR WIRING DEVICES MOUNTED IN SURFACE-MOUNTED FS OR FD TYPE CONDUIT BOXES.
- .14 PROTECT STAINLESS STEEL COVER PLATE FINISH WITH PAPER OR PLASTIC FILM UNTIL PAINTING AND OTHER WORK IS FINISHED.
- .15 INSTALL SUITABLE COMMON COVER PLATES WHERE WIRING DEVICES ARE GROUPED.

SURFACE RACEWAY

- .1 THE TWO COMPARTMENT SURFACE RACEWAY SHALL BE COMPLETE WITH THE FOLLOWING FEATURES:
- .1 SURFACE NON-METALLIC RACEWAY IS TO BE UTILIZED IN DRY INTERIOR LOCATIONS ONLY.
- .2 THE SURFACE NON-METALLIC RACEWAY SYSTEM SHALL BE EQUAL TO WIREMOLD 5400 SERIES. .3 THE RACEWAY AND ALL SYSTEM COMPONENTS MUST BE UL LISTED AND EXHIBIT NON-FLAMMABLE SELF-EXTINGUISHING
- CHARACTERISTICS TESTED TO COMPARABLE SPECIFICATIONS OF UL94V-0. THE RACEWAY BASE AND COVER SHALL BE MANUFACTURED BY RIGID COMPOUND, AVAILABLE IN COLOUR / FINISH AS SELECTED BY OWNER
- .4 THE RACEWAY SHALL BE A TWO-PIECE DESIGN WITH A BASE AND A SNAP-ON COVER. TOTAL WIDTH SHALL BE 133mm (5-1/4") BY 44.5mm (1-3/4") DEEP WITH AN APPROXIMATE THICKNESS OF 2.4mm (1/12"). THE BASE AND COVER SHALL BE AVAILABLE IN 2400mm (8') LENGTHS. THE RACEWAY SHALL BE AVAILABLE WITH TWO MULTIPLE WIRING CHANNELS FORMED BY INTEGRAL BARRIERS IN THE BASE.
- .5 THE COVER SHALL SPAN THE ENTIRE WIDTH OF THE BASE CONCEALING ALL OF THE WIRING CHANNELS.
- A FULL COMPLIMENT OF FITTINGS MUST BE AVAILABLE INCLUDING, BUT NOT LIMITED TO FLAT, INTERNAL AND EXTERNAL ELBOWS, TEES, ENTRANCE FITTINGS. COVER CLIPS AND END CAPS. THEY SHALL BE MANUFACTURED OF A RIGID PVC COMPOUND. THE FITTINGS SHALL HAVE A MATTE TEXTURE TO MATCH THE BASE AND COVER. THEY SHALL OVERLAP THE COVER AND BASE TO HIDE UNEVEN CUTS. ALL FITTINGS SHALL BE SUPPLIED WITH A BASE WHERE APPLICABLE TO ELIMINATE MITERING.
- .7 DEVICE BRACKETS SHALL BE AVAILABLE FOR MOUNTING STANDARD DEVICES IN-LINE WITH THE RACEWAY. FACEPLATES SHALL MATCH AND FIT FLUSH IN THE DEVICE PLATE. THEY SHALL BE MANUFACTURED OF RIGID PVC COMPOUND. THEY SHALL HAVE COLOUR AS SELECTED BY OWNER. CONTRACTOR IS TO PROVIDE DEVICES AS NOTED.
- .8 THE RACEWAY MANUFACTURER WILL PROVIDE A COMPLETE LINE OF CONNECTIVITY OUTLETS AND MODULAR INSERTS FOR UTP (INCLUDING CATEGORY 5e AND 6), STP (150 OHM) FIBRE OPTIC, COAXIAL AND OTHER CABLING TYPES WITH FACE PLATES AND BEZELS TO FACILITATE MOUNTING. THE ELECTRICAL CONTRACTOR IS TO PROVIDE ADAPTER PLATES FOR FACEPLATES TO BE PROVIDED BY THE VOICE/DATA SUB-CONTRACTOR. THE RECOMMENDED PLATE IS A DECO ADAPTER 3-PORT PLATE STYLE, CONFIRM WITH VOICE/DATA SUB-CONTRACTOR.
- .2 ACCEPTABLE ALTERNATE MANUFACTURERS INCLUDE: HUBBELL BASE TRAK
- .2 PANDUIT PAN-WAY
- .3 INSTALL ALL COMPONENTS TO SUIT MANUFACTURERS RECOMMENDATIONS

DISCONNECT SWITCHES

- .1 MUST CONFORM TO CSA C22.2 NO. 4 (LATEST EDITION).
- .2 FUSIBLE, AND/OR NON-FUSIBLE, HORSEPOWER RATED DISCONNECT SWITCHES, SIZE AS INDICATED.
- .3 PROVISION FOR PADLOCKING IN OFF SWITCH POSITION BY THREE LOCKS.
- .4 MECHANICALLY INTERLOCKED DOOR TO PREVENT OPENING WHEN HANDLE IS IN "ON" POSITION
- .5 QUICK-MAKE, QUICK-BREAK ACTION.
- .6 ON-OFF SWITCH POSITION INDICATION ON SWITCH ENCLOSURE COVER.
- .7 PROVIDE LAMICOID LABEL
- .8 DISCONNECTS FEEDING ELEVATOR CONTROLLERS MUST BE EQUIPPED WITH TWO AUXILIARY CONTACTS APPROVED BY THE ELEVATOR
- .9 DISCONNECT SWITCHES MUST BE ONE OF THE FOLLOWING:
- 1 CUTLER HAMMER SCHNEIDER ELECTRIC

INTEGRATED TESTING OF LIFE SAFETY AND FIRE PROTECTION SYSTEMS

- .1 LIFE SAFETY AND FIRE PROTECTION SYSTEMS ARE TO BE INSTALLED TO COMPLY WITH THE PROVISIONS OF THE CURRENT ONTARIO BUILDING AND FIRE CODES. AS A RESULT, COMMISSIONING OF THESE INTEGRATED SYSTEMS MUST BE PERFORMED AS A WHOLE TO ENSURE THE PROPER OPERATION AND INTER-RELATIONSHIP BETWEEN SYSTEMS.
- THESE SYSTEMS AS APPLICABLE TO ANY GIVEN PROJECT INCLUDE BUT ARE NOT LIMITED TO FIRE ALARM AND ACCESS CONTROL AND EGRESS DEVICES.
- .3 ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH CAN/ULC S1001-2011. SPECIAL CONSIDERATION IS TO BE GIVEN TO THE SEQUENCE OF OPERATIONS. THE WORK TO BE PERFORMED BY THIS CONTRACTOR IS ALSO DESCRIBED IN CAN/ULC S1001-2011.
- .4 ALL APPLICABLE CONTRACTORS, SUB-CONTRACTORS, TESTING AGENTS, AND SUPPLIERS ARE TO INCLUDE ALL REQUIRED COSTS IN THEIR RESPECTIVE TENDER COSTS. THIS TESTING AGENT MUST BE A THIRD PARTY FIRM NOT ASSOCIATED WITH THIS PROJECT IN ANY WAY AND BE UNDER CONTRACT WITH THE ELECTRICAL SUB-CONTRACTOR NOT THE FIRE ALARM SUPPLIER.

FIRE ALARM SYSTEMS

- .1 INSTALLATION OF FIRE ALARM DEVICES MUST CONFORM TO ULC-S524 (LATEST EDITION).
- .2 ALL WIRING MUST BE COLOUR CODED, SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND CONFORM TO THE LATEST EDITION OF THE ELECTRICAL SAFETY CODE.
- .3 ALL NEW FIRE ALARM DETECTION AND SIGNALING DEVICES ADDED DUE TO RENOVATIONS AND ADDITIONS SHALL BE CONNECTED TO EXISTING LOCAL ZONE OR NEW ZONE AS INDICATED.
- .4 EQUIPMENT SHALL BE SUPPLIED AND INSTALLED AS FOLLOWS;
- .1 AUTOMATIC ALARM INITIATING DEVICES
- MANUAL ALARM STATIONS: PULL LEVER STYLE, WALL MOUNTED SEMI-FLUSH TYPE, NON-CODED SINGLE POLE NORMALLY OPEN CONTACT FOR SINGLE STAGE, ENGLISH SIGNAGE.
- THERMAL FIRE DETECTORS: FIXED TEMPERATURE, NON-RESTORABLE, RATED 57C OR 88C AS INDICATED THERMAL FIRE DETECTORS: COMBINATION FIXED TEMPERATURE AND RATE OF RISE, NON-RESTORABLE FIXED TEMPERATURE
- ELEMENT, SELF-RESTORING RATE OF RISE, FIXED TEMPERATURE 57C OR 88C, RATE OF RISE 8.3C PER MINUTE. .4 SMOKE DETECTOR: CEILING MOUNTED, PHOTO ELECTRIC TYPE, VISUAL ALARM INDICATOR, COMPLETE WITH RELAY BASE WHERE
- .5 SMOKE DETECTOR: PHOTO ELECTRIC TYPE AIR DUCT TYPE WITH SAMPLING TUBES WITH PROTECTIVE HOUSING.
- .1 PLUG-IN TYPE WITH FIXED BASE. WIRE-IN BASE ASSEMBLY WITH INTEGRAL RED ALARM LED, AND TERMINALS FOR REMOTE ALARM LED.
- .2 AUDIBLE/VISUAL SIGNAL DEVICES
- 150mm (6") BELLS: SURFACE MOUNTED BELL, VIBRATION TYPE 24VDC, 6", 92DBA RATING AT 10', RED FINISH, FM AND ULC LISTED. 250mm (10") BELLS: SURFACE MOUNTED BELL, VIBRATION TYPE 24VDC, 10", 94DBA RATING AT 3000mm (10'), RED FINISH, FM AND ULC
- STROBE: SEMI-RECESSED, 24VDC OPERATION, COMPLETE WITH SELECTABLE 15/30/75/110 CANDELA OUTPUT (UNLESS OTHERWISE NOTED SET AT 75 CD), SYNCHRONIZED STROBE, RED FINISH, FM AND ULC LISTED. SUITABLE FOR MOUNTING ON A SINGLE GANG BOX.
- .1 ANY SURFACE MOUNTED SIGNAL DEVICES MUST BE PROVIDED WITH SUITABLE BACKBOXES SUPPLIED BY THE MANUFACTURER.
- END-OF-LINE DEVICES TO CONTROL SUPERVISORY CURRENT IN ALARM CIRCUITS AND SIGNALING CIRCUITS, SIZED TO ENSURE CORRECT SUPERVISORY CURRENT FOR EACH CIRCUIT. OPEN, SHORT OR GROUND FAULT IN ANY CIRCUIT WILL ALTER SUPERVISORY
- CURRENT IN THAT CIRCUIT, PRODUCING AUDIBLE AND VISIBLE ALARM AT MAIN CONTROL PANEL AND REMOTELY AT ANNUNCIATORS.
- .5 ONCE INSTALLATION IS COMPLETE THE MANUFACTURER'S REPRESENTATIVE MUST MAKE AN INSPECTION OF THE DEVICES INSTALLED.
- .7 ALL COSTS ASSOCIATED WITH THIS INSPECTION BY THE CONTRACTOR AND MANUFACTURER MUST BE CARRIED IN THE TENDER PRICE.
- .8 UPON SUCCESSFUL COMPLETION OF TESTING THE MANUFACTURER MUST SUBMIT TO THE CONTRACTOR AND CONSULTANT: A CERTIFICATE OF VERIFICATION FIELD TECHNICIAN VERIFICATION SHEETS FOR EACH DEVICE VERIFIED (INCLUDE COPIES OF SAME IN MAINTENANCE MANUALS)

.6 THIS TEST MUST CONFORM TO THE ONTARIO BUILDING CODE AND THE LATEST EDITION OF ULC CAN4-S537

- .9 THE ELECTRICAL CONTRACTOR IS TO INCLUDE IN THEIR BID THE COST TO ADD TWO (2) ADDITIONAL SIGNALING DEVICES TO BE INSTALLED AND VERIFIED IN LOCATIONS AS DIRECTED BY THE CONSULTANT. NOTE: THIS INSTALLATION AND VERIFICATION AND SUBSEQUENT AUDIBILITY TEST WILL BE OCCURRING AFTER THE INITIAL AUDIBILITY TESTING IS COMPLETE.
- .10 THE ELECTRICAL CONTRACTOR IS TO INCLUDE IN THEIR BID THE COST TO ADD TWO (2) ADDITIONAL FIRE DETECTION DEVICES (HEAT OR SMOKE DETECTORS) TO BE INSTALLED AND VERIFIED IN LOCATIONS AS DIRECTED BY THE CONSULTANT.
- .11 THE ELECTRICAL CONTRACTOR IS TO INCLUDE IN THEIR BID THE COST TO ADD ONE (31) ADDITIONAL FIRE ALARM ZONE WITH ASSOCIATED ZONE
- MODULES AND INCLUDING TWO (2) ADDITIONAL ISOLATION MODULES TO BE INSTALLED AND VERIFIED AS DIRECTED BY THE CONSULTANT. .12 THE ELECTRICAL CONTRACTOR IS TO INCLUDE IN THEIR BID THE COST TO ADD THREE (3) ADDITIONAL FIRE SMOKE DAMPER CONNECTIONS AND 120V LOSS OF POWER TROUBLE SIGNAL WITH ASSOCIATED MODULE AND INCLUDING TEN (10) ADDITIONAL ISOLATION MODULES TO BE
- .1 THE CONTRACTOR IS TO COORDINATE AN AUDIBILITY TEST PRIOR TO OCCUPANCY OF THE FACILITY. THE TEST IS TO BE PERFORMED BY THE REPRESENTATIVES OF THE FIRE ALARM MANUFACTURER IN THE PRESENCE OF THE CONSULTANT. THE TEST REPORT IS TO BE IN
- CHART FORM INDICATING: PROJECT
- DATE OF TEST ROOM NAME AND NUMBER

INSTALLED AND VERIFIED AS DIRECTED BY THE CONSULTANT.

- AMBIENT DB LEVEL
- ALARM DB LEVEL NAME OF TESTING TECHNICIAN
- .14 THE TEST RESULTS ARE TO BE SUBMITTED TO THE CONSULTANT FOR REVIEW PRIOR TO ISSUING TO OWNER'S REPRESENTATIVES AND/OR AUTHORITIES HAVING JURISDICTION.
- .15 EQUIPMENT

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	<u>DEVICE</u>	EDWARDS
	INTELLIGENT DEVICES:	
1	MANUAL ALARM STATIONS 1-STAGE	SIGA-270
2	ADDRESSABLE MULTI-SENSOR	SIGA-IPHS
3	ADDRESSABLE BASE	SIGA-SB
4	ADDRESSABLE BASE c/w RELAY	SIGA-RB
5	HEAT SENSOR	SIGA-HFS OR SIGA-HRS
6	MONITOR MODULE	SIGA-MM1
7	CONTROL MODULE	SIGA-CR
8	ISOLATOR MODULE	SIGA-IM
	AUXILIARY DEVICES:	
9	150mm (6") BELLS	439D SERIES OR MB SERIES
10	250mm (10") BELLS	439D SERIES OR MB SERIES
11	STROBE	G1R-VM



ISSUANCE 1 ISSUED FOR BID & PERMIT 25.02.26





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ELMIRA DSS - PHASE 2 RENOVATIONS

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