

GROUND FLOOR OVERALL PLAN
SCALE: 1 : 100

ELECTRICAL SYMBOLS				NOTE: ALL SYMBOLS MAY NOT BE USED		
LIGHTING		POWER		DATA		
	LIGHT FIXTURE TYPE AS INDICATED		WALL MOUNTED RECEPTACLE (15A-120V)		SINGLE WALL MOUNTED TELEPHONE OUTLET C/W 1/2" (13mm) C TO CABLE MANAGEMENT SYSTEM.	
	LIGHT FIXTURE (HATCHING DENOTES NIGHTLIGHT)		WALL MOUNTED T-SLOT RECEPTACLE (20A-120V)		SINGLE COMPUTER OUTLET C/W 3/4" (21mm) C TO CABLE MANAGEMENT SYSTEM.	
	COMBINATION EMERGENCY/EXIT TYPE AS INDICATED (EM-X INDICATES BATTERY UNIT TYPE, DC-X INDICATES DC CIRCUIT AND X-X INDICATES AC SOURCE CIRCUIT)		T-SLOT RECEPTACLE MTD. ABOVE COUNTER (20A-120V)		COMBINATION SINGLE VOICE/SINGLE COMPUTER OUTLET UNLESS OTHERWISE NOTED C/W 1" (27mm) C TO CABLE MANAGEMENT SYSTEM. # INDICATES THE QUANTITY OF ACTIVE PARTS. LEFT VALUE ALWAYS INDICATES VOICE.	
			WALL MOUNTED SPECIAL RECEPTACLE			
	CEILING OR WALL MOUNTED LIGHT FIXTURE TYPE AS INDICATED		WALL MOUNTED QUAD RECEPTACLE (15A-120V)		WIRELESS ACCESS POINT. PROVIDE 3/4" (21mm) C TO CABLE MANAGEMENT SYSTEM.	
	WALL MOUNTED EXIT LIGHT SHADING INDICATES FACE		WALL MOUNTED QUAD RECEPTACLE (20A-120V)		TELEVISION OUTLET C/W 1" (27mm) C TO CABLE MANAGEMENT SYSTEM.	
	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 (REFER TO SPECIFICATIONS)		AUXILIARY ROUGH-IN FOR USE AS NOTED	
	BATTERY UNIT WITH INTEGRAL EMERGENCY FIXTURE (EM-X INDICATES BATTERY UNIT TYPE, DC-X INDICATES BATTERY UNIT TYPE, DC-X INDICATES DC CIRCUIT AND X-X INDICATES AC SOURCE CIRCUIT)		JUNCTION BOX	COMMUNICATIONS		
			PULL BOX		CLOCK AS PER SPECIFICATIONS	
			SINGLE POLE SWITCH (3=3 WAY, 4=4 WAY, P=PILOT LIGHT, K=KEYED, DM=DIMMER, M=MOTOR RATED)		PANEL AS INDICATED	
	OCCUPANCY SENSOR (PASSIVE)		FUSED DISCONNECT		HANDSET (ND = NON-DIAL STYLE)	
	OCCUPANCY SENSOR: OSD=DUAL TECHNOLOGY OSR=DUAL CIRCUIT/DUAL TECHNOLOGY		UNFUSED DISCONNECT		P.A. CALL SWITCH	
	CEILING MOUNTED MOTION SENSOR		SURGE PROTECTION DEVICE REFER TO SPECIFICATIONS		WALL MOUNTED SPEAKER (CS = COLUMN SPEAKER)	
	WALL MOUNTED MOTION SENSOR		DUAL VOLTAGE RELAY		WALL MOUNTED SPEAKER C/W CALL IN SWITCH	
	DIGITAL ROOM CONTROLLER		MANUAL STARTER		CEILING MOUNTED SPEAKER	
	PHOTOCELL		MAGNETIC STARTER		MICROPHONE OUTLET	
	DIGITAL WALL DIMMER STATION		COMBINATION MAGNETIC STARTER		DOOR BELL	
	EMERGENCY LIGHTING RELAY		DESTRATIFICATION FAN		INTERCOM	
	LIGHTING INPUT/OUTPUT RELAY		SURFACE RACEWAY C/W DEVICES AS NOTED (REFER TO SPECIFICATIONS)	GENERAL		
	ANALOG POWER PACK		CONTACTOR	ER	INDICATES EXISTING ITEM TO REMAIN	
FIRE ALARM			MOTOR CONNECTION	D	INDICATES EXISTING ITEM TO BE DELETED	
	HEAT DETECTOR (135 DEGREE RATE OF RISE AND FIXED TEMPERATURE)		POWER POLE	R	INDICATES EXISTING ITEM TO BE RELOCATED/IN RELOCATED POSITION	
	HEAT DETECTOR (135 DEGREE FIXED TEMPERATURE)		THERMOSTAT (RA = REVERSE ACTING)	WG	WIREGUARD	
	HEAT DETECTOR (194 DEGREE FIXED TEMPERATURE)		UNISTRUT UPSTAND	GF	GROUND FAULT	
	HEAT DETECTOR (194 DEGREE RATE OF RISE AND FIXED TEMPERATURE)		TRANSFORMER	WP	WEATHERPROOF	
	PULL STATION	SECURITY		IG	ISOLATED GROUND	
	ISOLATING MODULE		SECURITY DETECTOR (SURFACE MOUNTED)	SR	SURGE PROTECTED	
	MONITORING MODULE		SECURITY SIREN (INSTALL 2400mm AFF) C/W 21mmC TO NEAREST SECURITY JUNCTION BOX	TR	TAMPER RESISTANT	
	RELAY MODULE		SECURITY KEYPAD INSTALL (1100mm AFF) C/W 21mmC TO NEAREST SECURITY JUNCTION BOX	CLG	CEILING MOUNTED	
	ALARM BELL		DOOR CONTACT C/W 21mmC TO NEAREST SECURITY JUNCTION BOX (REFER TO DETAIL)	EM	EMERGENCY (LAMICOID LABEL)	
	ALARM STROBE		CEILING MOUNTED CAMERA	HG	HOSPITAL GRADE	
	END-OF-LINE RESISTOR		POWER SUPPLY		NOTE INDICATOR	
	FIRE SMOKE DAMPER		MAG LOCK		MECHANICAL ITEM INDICATOR	
ELECTRIC HEATING			ELECTRIC STRIKE CONFIRM ROUGH-IN WITH DOOR HARDWARE		OWNER'S EQUIPMENT ITEM INDICATOR	
	BASEBOARD ELECTRIC HEATER (TYPE AS INDICATED)		CARD/FOB READER ROUGH-IN AS A SINGLE GANG BOX AT 1100mm AFF C/W 13mmC TO ELECTRIC STRIKE AN ADJACENT DOOR FRAME. CONFIRM ROUGH-IN WITH DOOR HARDWARE.		LIGHTING ZONE INDICATOR	
	FAN FORCED ELECTRIC HEATER (TYPE AS INDICATED)			STANDARD CIRCUIT LABELLING		
	UNIT HEATER (TYPE AS INDICATED)					

No. 1

ISSUANCE
ISSUED FOR BID & PERMIT

DATE
25.02.26

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

55 Northland Road,
Waterloo, ON, N2V 2Y8

Phone: 519-725-3555

Website: deiassociates.ca

Project Number: 2025-001

CLIENT

WATERLOO DISTRICT SCHOOL BOARD

PROJECT

ELMIRA DSS - PHASE 2 RENOVATIONS

4 UNIVERSITY AVE EAST, ELMIRA, ONTARIO N3B 1K2

TITLE

KEY PLAN AND LEGEND

SEAL

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. - DO NOT SCALE THIS DRAWING -

COPYRIGHT © WalterFedy, A Part of WF Group Inc.

SCALE: As indicated

DATE: 02/21/25

PROJECT NO: 2022-0277-15

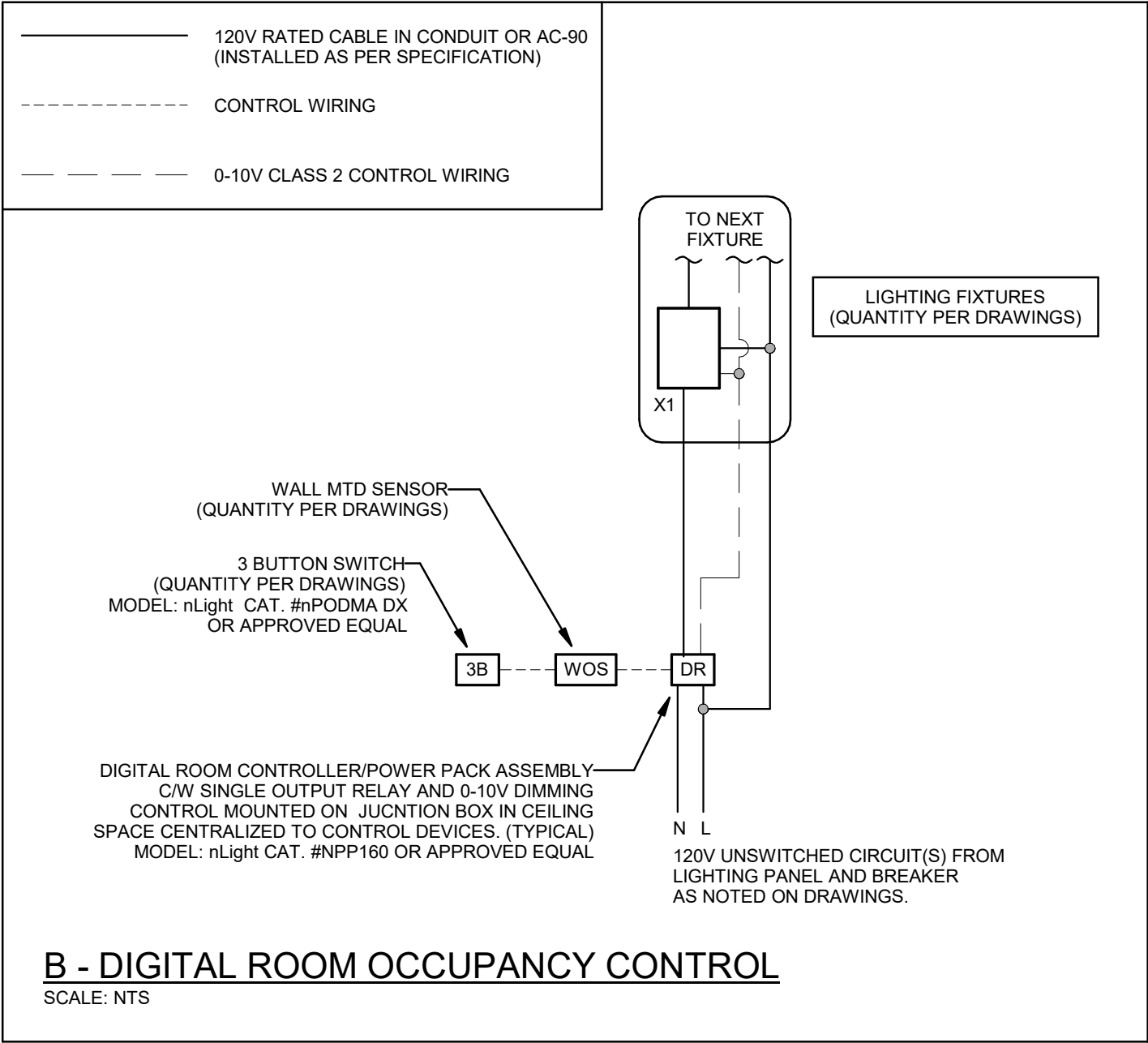
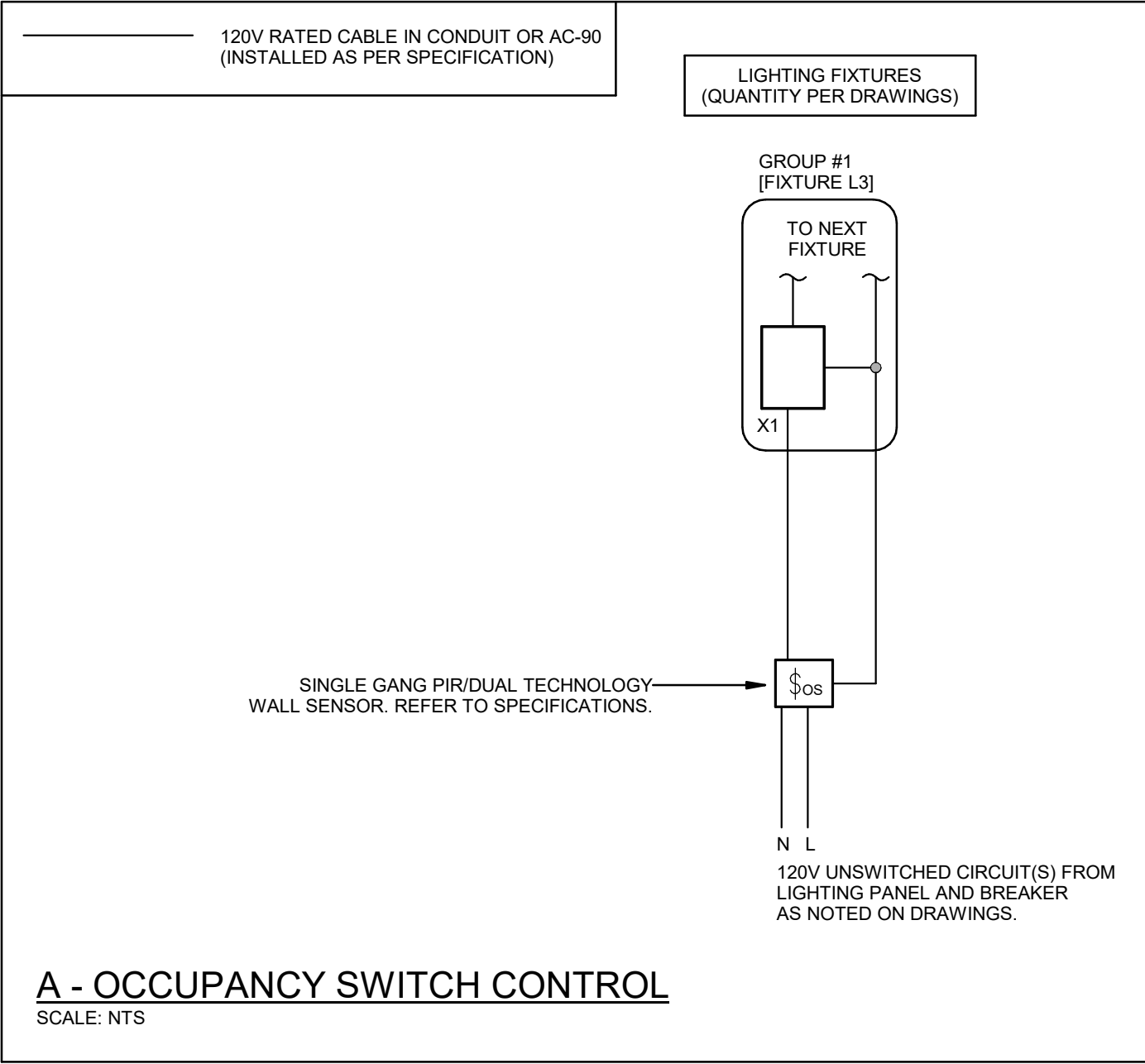
DRAWN BY: TDS

CHECKED BY: DM

SHEET NO: E1.1

INTERIOR LIGHT FIXTURE SCHEDULE

Item	Manufacturer/Catalog Number	Voltage	Lamp					Mounting	Listings	Description
			Type	Lumens	Colour Temperature	Wattage	CRI			
A	COOPER CAT. #14CGTS-NUV LITHONIA CAT. #CPX 1X4 AL07 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 AL07 SWW7 SWL 120 PAC 2DF 36	120V	LED	4712	4000K	37.6W	80	SUSPENDED		SIMILAR TO FIXTURE 'A' BUT SUSPENDED MOUNTING TYPE.
B	3G LIGHTING CAT. #3G-4PLI-DI-DC500-LC250-S80-40K-UNV-DIM-FL-FL-XX-120-1C-S-8 MARK CAT. #S4LID LLP 8FT MSLB 80CRI 40K 500LMF 180CRI 140K 1250LMF MAY1 SCT TGLD MVOLT XXX ZT F272A RDCY XXXCY XCRD DPL AXIS CAT. #TB4DILED-500-250-80-40-SO-SO-8-X-UNV-DP-1-CTS(48)	120V	LED	6000	4000K	38.2W	80	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.
C	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	80	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	LED	-	-	2-4W PART B	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	LED	-	-	2-4W PART B	N/A	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 REFER TO SPECIFICATION. 2 LED LUMEN VALUES QUOTED FOR FIXTURES ARE TO BE CONSIDERED MINIMUM, AND AS ABSOLUTE OR DELIVERED LUMENS. LUMEN VALUES SHOULD NOT EXCEED MORE THAN 10% OF SPECIFIED OUTPUT. 3 WHERE NOTED ABOVE THAT FIXTURES ARE TO HAVE FINISH TO SUIT ARCHITECT THE FINISH WILL BE SELECTED FROM MANUFACTURER'S OPTIONAL COLOUR CHART (i.e. RAL COLOURS OR EQUAL). PROVIDE THIS COLOUR CHART WITH SHOP DRAWING SUBMITTAL. 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



No.

ISSUANCE

DATE

1

ISSUED FOR BID & PERMIT

25.02.26

Professional Engineers
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 conformity for these systems in new and renovation construction.
Association of Professional Engineers of Ontario

55 Northland Road,
Waterloo, ON, N2V 2Y8
Phone: 519-725-3555
Website: deassociates.ca
Project Number: 0365

Consulting Engineers
MECHANICAL | ELECTRICAL | AQUATIC

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.
The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work.
The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions. Drawings and specifications, etc., prepared and issued by the Consultant are the property of the Consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant.
Do not scale this drawing.
© 2025 DEI Consulting Engineers Inc.

CLIENT

WATERLOO DISTRICT SCHOOL BOARD

PROJECT

ELMIRA DSS - PHASE 2 RENOVATIONS

4 UNIVERSITY AVE EAST, ELMIRA, ONTARIO N3B 1K2

TITLE

SCHEDULE AND DETAILS

WALTERFEDY
KITCHENER | HAMILTON | TORONTO | CALGARY
A PART OF WF GROUP
800.685.1378 walterfedy.com

SEAL

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. - DO NOT SCALE THIS DRAWING -

COPYRIGHT © WalterFedy, A Part of WF Group Inc.

SCALE: As indicated

DATE: 02/21/25

PROJECT NO: 2022-0277-15

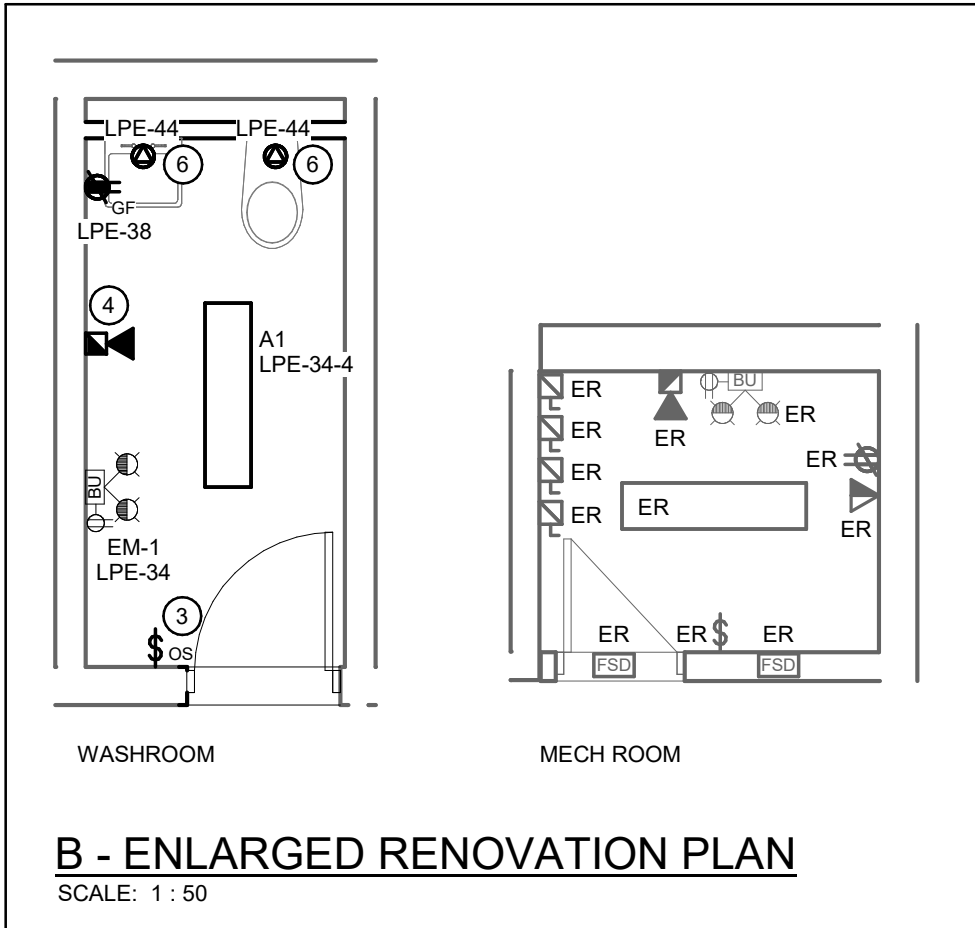
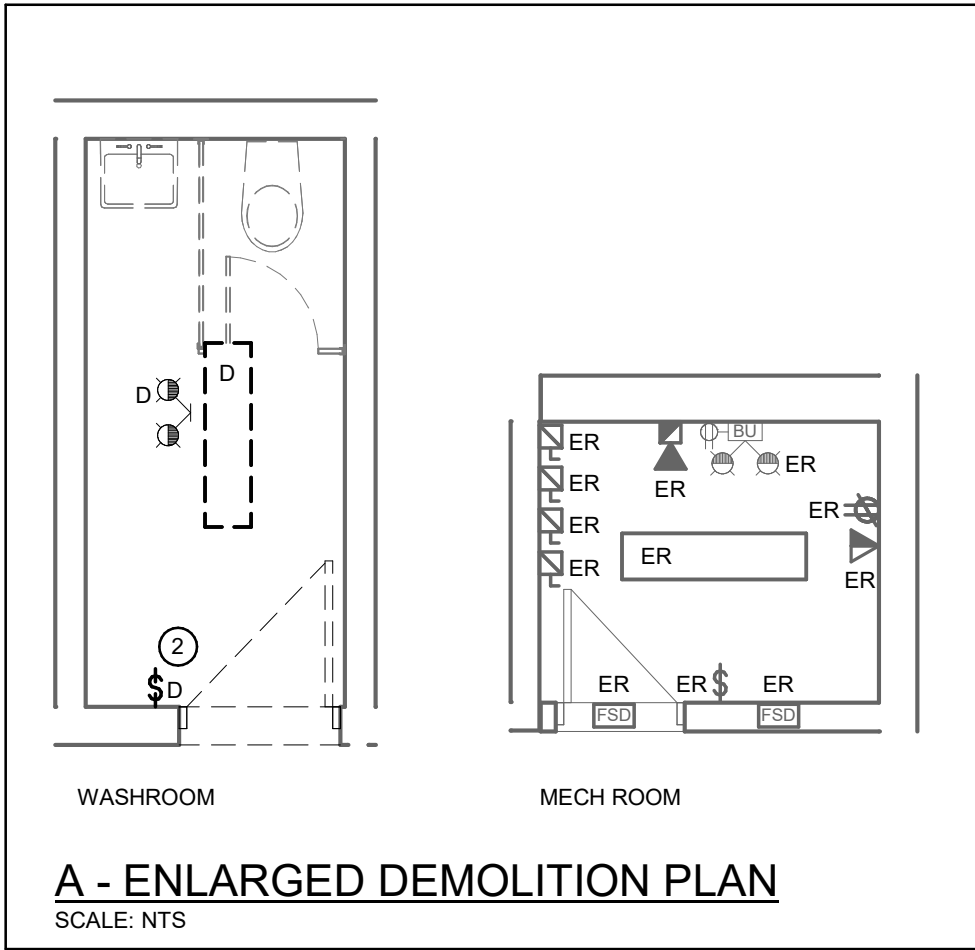
DRAWN BY: TDS

CHECKED BY: DM

SHEET NO:

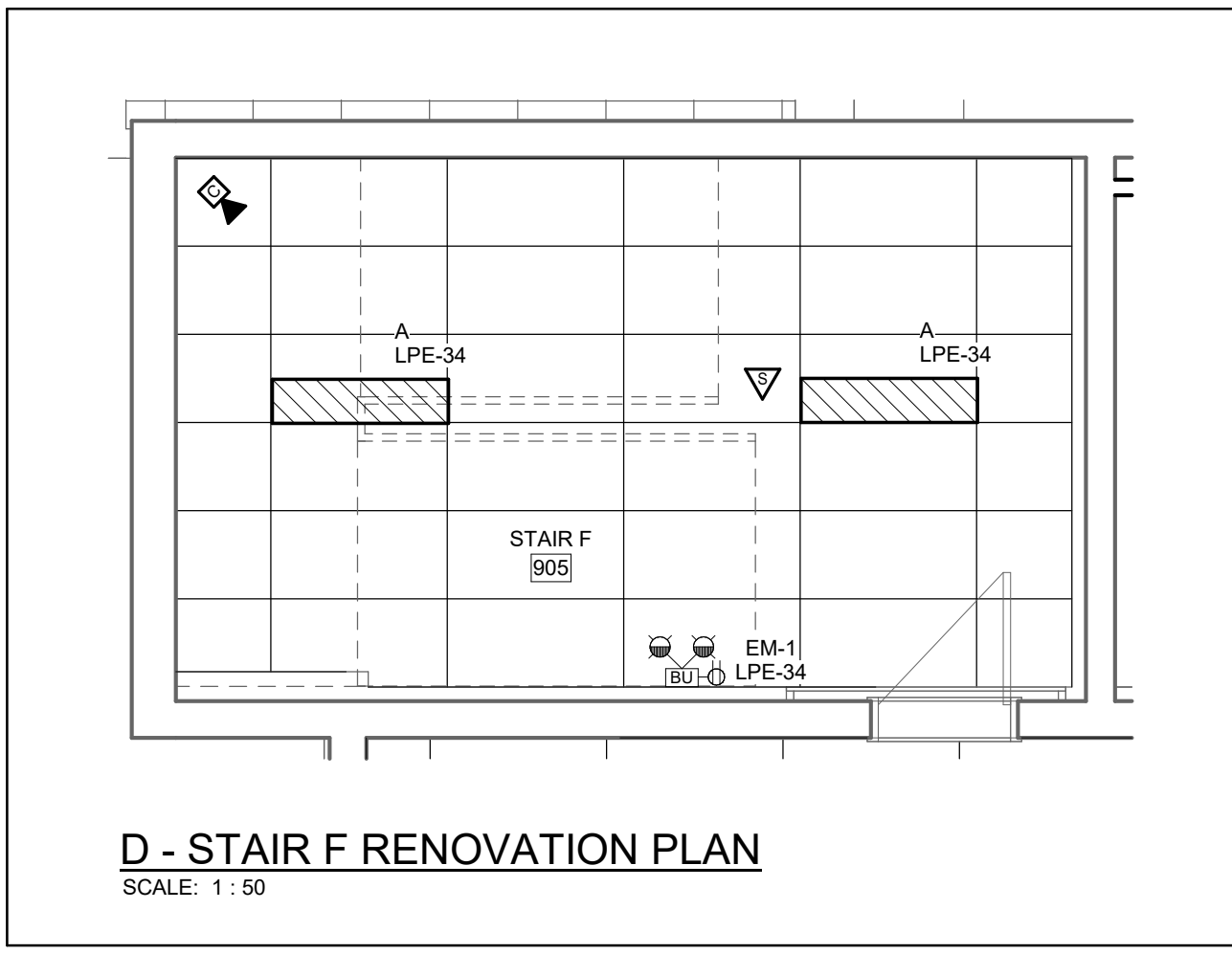
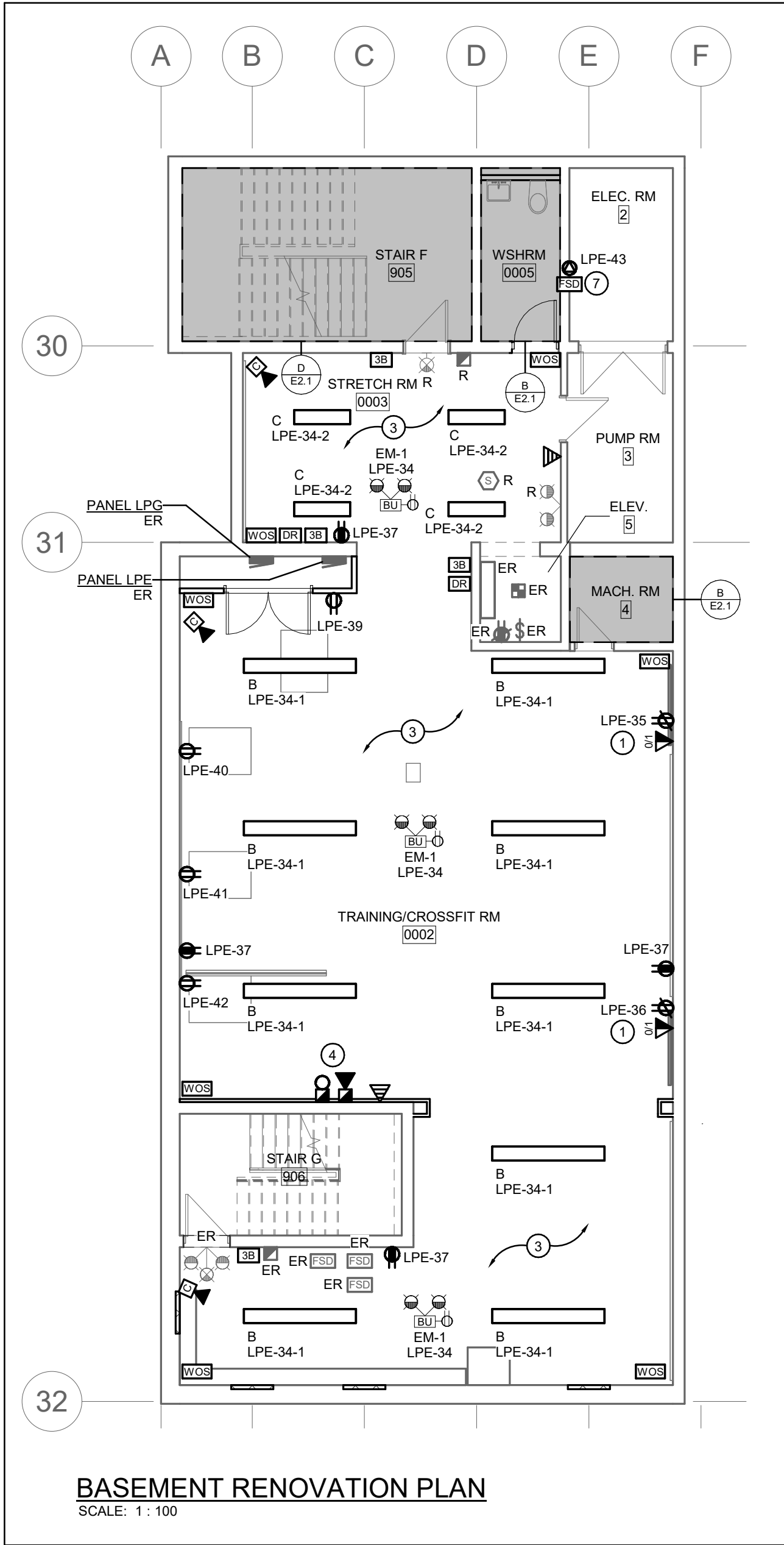
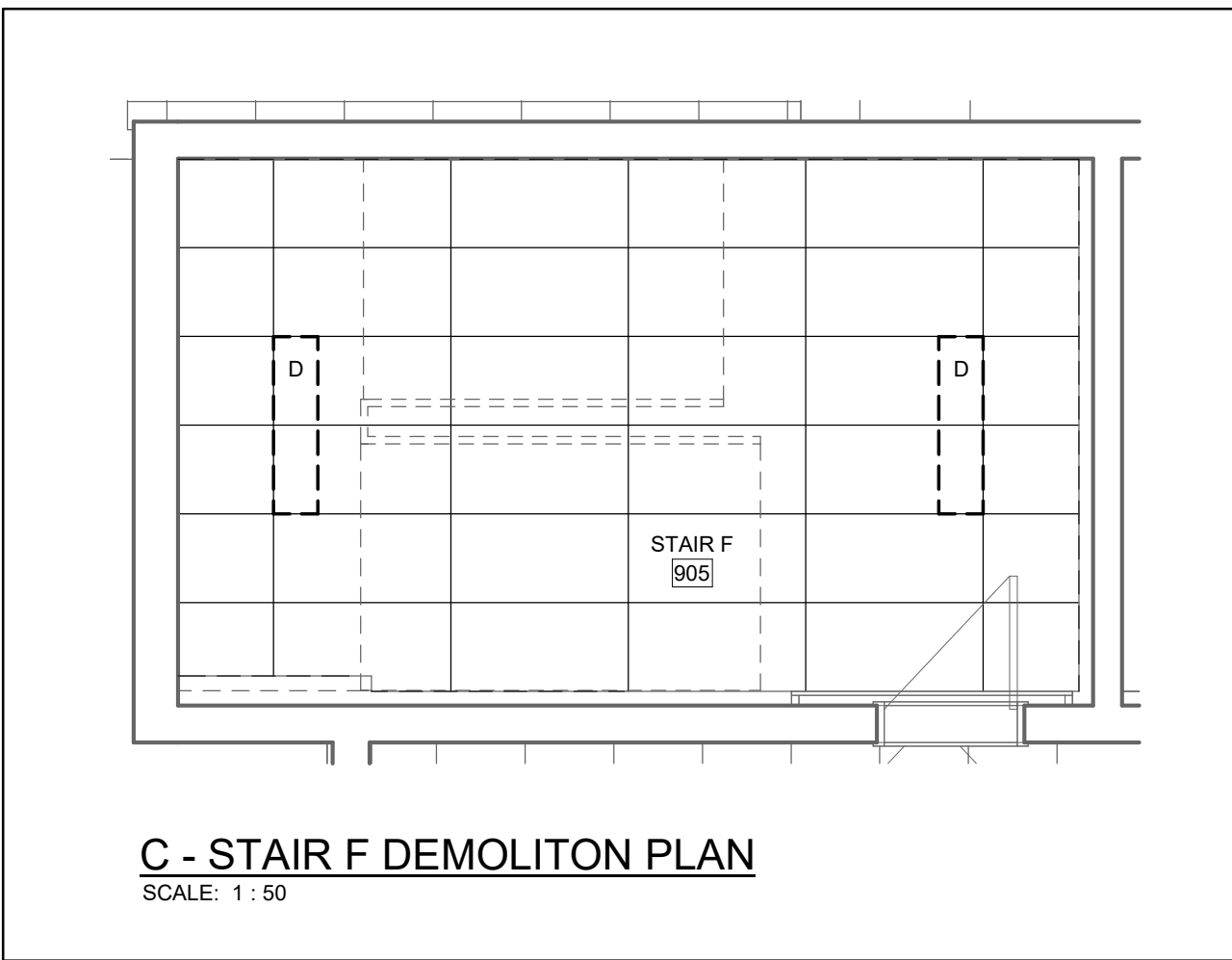
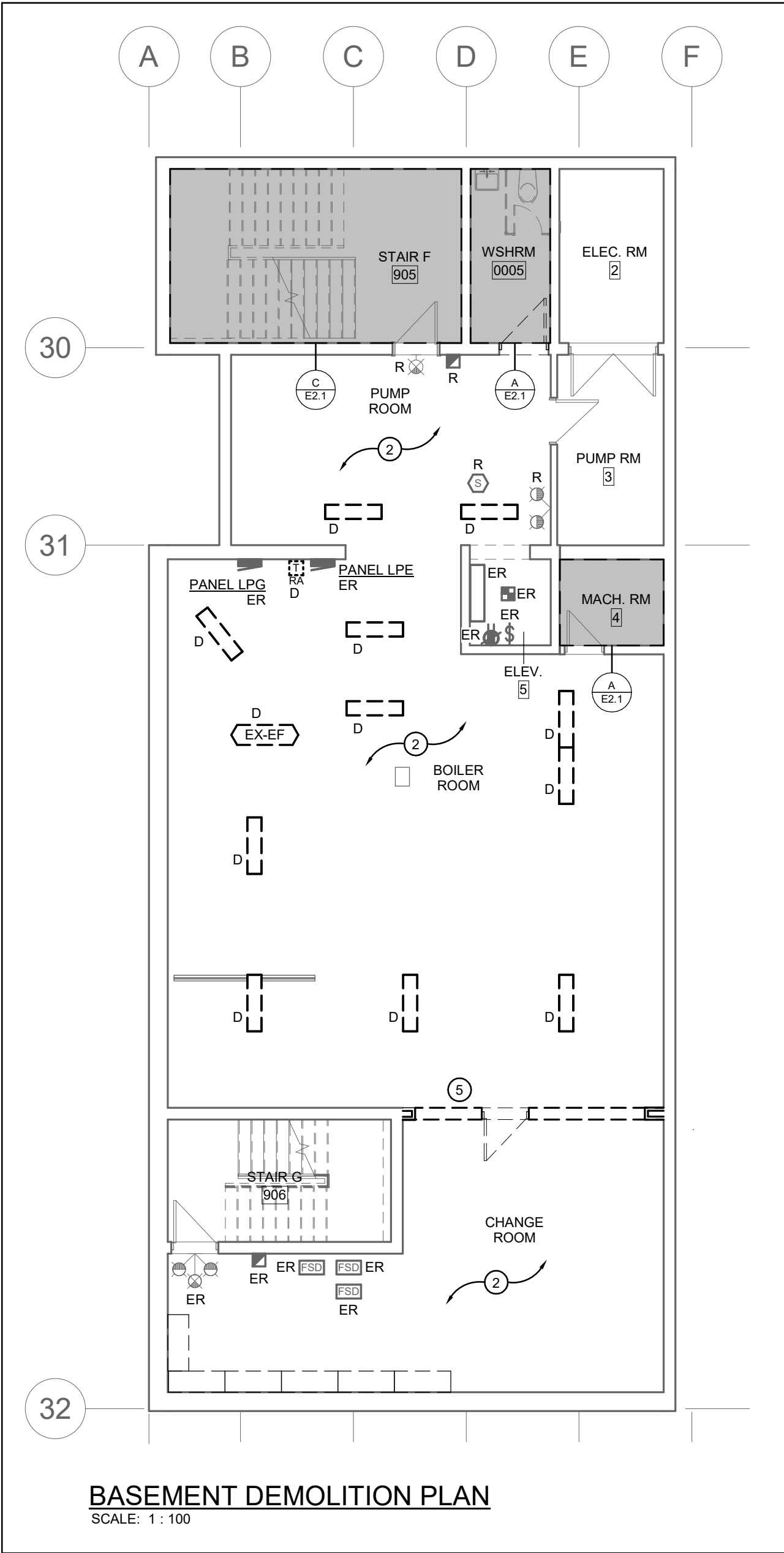
E1.2

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 OTHERWISE.
-	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	
1	INDICATES TV AT APPROXIMATELY 5' A.F.F., DATA AND RECEPTACLE MOUNTING HEIGHT TO BE COORDINATED ON SITE, WITH OWNER PRIOR TO ROUGH-IN.
2	EXISTING LIGHTING AND LIGHTING CONTROLS ARE TO BE REMOVED COMPLETE, MAINTAIN EXISTING CIRCUIT FOR REUSE. REFER TO RENOVATION PLANS FOR CONTINUATION.
3	REWORK EXISTING LIGHTING CIRCUIT THROUGH NEW CONTROLS AND FIXTURES TO SUIT RENOVATION, EXTEND EXISTING CIRCUIT AS REQUIRED.
4	INDICATES NEW FIRE ALARM SIGNAL DEVICE CONNECTED TO EXISTING SIGNAL CIRCUIT. COORDINATE EXACT LOCATION WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.
5	INDICATED WALL TO BE DEMOLISHED, ELECTRICAL CONTRACTOR TO REMOVE ANY EXISTING DEVICES AND RE-ROUTE/EXTEND ANY EXISTING CONDUIT AS REQUIRED FOR DEMOLITION.
6	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.
7	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.



PANEL LPE				MAINS: 225 A				VOLTAGE: 120/208 3P4W				INTERRUPTING CAPACITY: 22000				
MOUNTING: SURFACE				NEUTRAL BUS:				ENCLOSURE: TYPE 2								
MODEL: SQUARE D TYPE NQ																
CKT	Load Name			Type	Rating	Poles	A	B	C	Poles	Rating	Type	Load Name			CKT
1	EXISTING CIRCUIT			--	15 A	1				1	15 A	--	EXISTING CIRCUIT			2
3	EXISTING CIRCUIT			--	15 A	1				1	15 A	--	EXISTING CIRCUIT			4
5	EXISTING CIRCUIT			--	15 A	1				1	15 A	--	EXISTING CIRCUIT			6
7	EXISTING CIRCUIT			--	15 A	1				1	15 A	--	EXISTING CIRCUIT			8
9	EXISTING CIRCUIT			--	15 A	1				1	20 A	--	EXISTING CIRCUIT			10
11	EXISTING CIRCUIT			--	15 A	1				1	15 A	--	EXISTING CIRCUIT			12
13	EXISTING CIRCUIT			--	20 A	1				1	20 A	--	EXISTING CIRCUIT			14
15	EXISTING CIRCUIT			--	20 A	1										16
17	EXISTING CIRCUIT			--	20 A	1				2	20 A	--	EXISTING CIRCUIT			18
19																20
21	EXISTING CIRCUIT			--	20 A	2				2	20 A	--	EXISTING CIRCUIT			22
23	EXISTING CIRCUIT			--	20 A	1				1	20 A	--	EXISTING CIRCUIT			24
25	EXISTING CIRCUIT			--	15 A	1				1	15 A	--	EXISTING CIRCUIT			26
27	EXISTING CIRCUIT			--	15 A	1				1	20 A	--	EXISTING CIRCUIT			28
29	EXISTING CIRCUIT			--	15 A	1				1	15 A	--	EXISTING CIRCUIT			30
31	EXISTING CIRCUIT			--	15 A	1				1	15 A	--	EXISTING CIRCUIT			32
33	EXISTING CIRCUIT			--	15 A	1				1	15 A		LIGHTING			34
35	TRAINING RM TV				15 A	1				1	15 A		TRAINING RM TV			36
37	MAINTENANCE REC				20 A	1				1	20 A		WASHROOM REC			38
39	GYM RECEPTACLE				15 A	1				1	15 A		GYM RECEPTACLE			40
41	GYM RECEPTACLE				15 A	1				1	15 A		GYM RECEPTACLE			42
43	ELEC RM. FIRE SMOKE DAMPER				15 A	1				1	15 A	GF	PLUMBING FIXTURE*			44
45																46
47																48
49																50
51																52
53																54
55																56
57																58
59																60
61																62
63																64
65																66
67																68
69	SPARE			--	15 A	1				1	15 A	--	SPARE			70
71	SPARE			--	15 A	1				1	15 A	--	SPARE			72

NOTES:
* INDICATES 33mA GROUND FAULT STYLE BREAKER.



CLIENT LOGO

No.	ISSUANCE	DATE
1	ISSUED FOR BID & PERMIT	25.02.26

Professional Engineers
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 conformity for these systems in new and renovation construction.
Association of Professional Engineers of Ontario

55 Northland Road,
Waterloo, ON, N2V 2Y8
Phone: 519-725-3555
Website: deiassociates.ca
Project Number: 2025-001

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work. The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work. The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions. Drawings and specifications, etc., prepared and issued by the Consultant are the property of the Consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant. Do not scale this drawing.

© 2025 DEI Consulting Engineers Inc.

CLIENT

WATERLOO DISTRICT SCHOOL BOARD

PROJECT

ELMIRA DSS - PHASE 2 RENOVATIONS

4 UNIVERSITY AVE EAST, ELMIRA, ONTARIO N3B 1K2

TITLE

BASEMENT PARTIAL PLAN

SEAL

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. - DO NOT SCALE THIS DRAWING -

COPYRIGHT © WalterFedy, A Part of WF Group Inc.

SCALE:	As indicated	SHEET NO:
DATE:	02/21/25	
PROJECT NO:	2022-0277-15	
DRAWN BY:	TDS	
CHECKED BY:	DM	

E2.1

ELECTRICAL SPECIFICATION

GENERAL NOTES

- 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.
- 3

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.
- 6

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.
- 7

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.
- 9

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 REQUIREMENTS.
- 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'-0") 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.

SYSTEM	COLOUR
UP TO 208V	YELLOW
209 TO 600V	WHITE
VOICE SYSTEM	GREEN
DATA SYSTEM	ORANGE
SECURITY	BROWN
PUBLIC ADDRESS	BLACK
FIRE ALARM	RED
- 10

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

DRAW BREAKDOWN

- 1

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.
- 2

BREAKDOWN SHALL BE AS FOLLOWS:
 - 1 PERMITS AND FEES
 - 2 MOBILIZATION (MAXIMUM 1%)
 - 3 DEMOLITION
 - 4 BRANCH CONDUITS
 - 5 BRANCH WIRING
 - 6 LIGHTING FIXTURES
 - 7 FIRE ALARM SYSTEM DEVICES AND VERIFICATION
 - 8 AUXILIARY SYSTEM ROUGH-INS
 - 9 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:
 - 1 MOUNTING ARRANGEMENTS.
 - 2 OPERATING AND MAINTENANCE CLEARANCES. E.G. ACCESS DOR SWING SPACES.
- 9

SHOP DRAWINGS AND PRODUCT DATA SHALL BE ACCOMPANIED BY:
 - 1 DETAILED DRAWINGS OF BASES, SUPPORTS, AND ANCHOR BOLTS.
 - 2 MANUFACTURER TEST DATA WHERE REQUESTED.
 - 3 MANUFACTURER TO CERTIFY AS TO CURRENT MODEL PRODUCTION.
 - 4 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 RETURNED REVIEWED 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
 - 2 LUMINAIRES
 - 3 EMERGENCY BATTERY UNITS AND FIXTURES
 - 4 FIRESTOPPING MATERIALS
 - 5 SURFACE RACEWAYS
 - 6 WIRING DEVICES
 - 7 LIGHTING CONTROL DEVICES

FIRESTOPPING

- 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 CANA-S115-M35, AND DO NOT EXCEED OPENING SIZE 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 APPROVED EQUAL.
- 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 RECEIVE FINISHES.
- 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
 - 3M
 - HILTI
 - 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

LED
 - 1 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.
 - 4 LUMINAIRES MUST BE TESTED PRIOR TO SHIPPING.
 - 5 LUMINAIRES MUST BE ULC CERTIFIED AND APPROVED FOR USE IN CANADA.
 - 6 FIXTURES MUST MAINTAIN A MINIMUM OF 90% OF THEIR INITIAL LIGHT OUTPUT FOR 60,000 HOURS. SUBMIT TEST RESULTS UPON REQUEST.
 - 7 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
 - 1 EXIT LIGHTING UNITS MUST CONFORM TO CSA C22.2 NO. 141 (LATEST EDITION AND CSA C860).
 - 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 "RIGHT FROM HERE".
- 3

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. LAMP TYPE: MINIMUM 4W LED.
 - 10 CABINET: FINISH: WHITE.
 - 11 AUXILIARY EQUIPMENT: TEST SWITCH.
- 4

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:
 - 1 TEST SWITCH
 - 2 AC INPUT AND DC OUTPUT TERMINAL BLOCKS INSIDE CABINET.
 - 3 SHELF
 - 4 CORD AND PLUG CONNECTION FOR AC.
 - 5 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 MUST BE PROVIDED WITH WIRE GUARD.
 - 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 APPLIED 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.
 - 7 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)

CLIENT LOGO



No.	ISSUANCE	DATE
1	ISSUED FOR BID & PERMIT	25.02.26

Professional Engineers
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 conformity for these systems in new and renovation construction.

Association of Professional Engineers of Ontario

55 Northland Road,
Waterloo, ON, N2V 2Y8
Phone: 519-725-3555
Website: deiasociates.ca
Project Number: 3555

Consulting Engineers

MECHANICAL | ELECTRICAL | AQUATIC

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work. The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work. The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions. Drawings and specifications, etc., prepared and issued by the Consultant are the property of the Consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant. Do not scale this drawing. © 2025 DEI Consulting Engineers Inc.

CLIENT

WATERLOO DISTRICT SCHOOL BOARD

PROJECT

ELMIRA DSS - PHASE 2 RENOVATIONS

4 UNIVERSITY AVE EAST, ELMIRA, ONTARIO N3B 1K2

TITLE

SPECIFICATIONS

WALTERFEDY

KITCHENER | HAMILTON | TORONTO | CALGARY

A PART OF WF GROUP

800.685.1378 walterfedy.com

SEAL	
------	--

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. - DO NOT SCALE THIS DRAWING -

COPYRIGHT © WalterFedy, A Part of WF Group Inc.	
SCALE :	As indicated
DATE :	02/21/25
PROJECT NO :	2022-0277-15
DRAWN BY :	TDS
CHECKED BY :	DM
SHEET NO :	

E3.1

