

RM 5 LIGHTS 15A 8 _____ 15A LT & REC RM 7 LIGHTS 15A 9 10 15A RM 8 REC RM 7 LIGHTS 15A 11 12 15A RM 3 REC ENTRANCE SOUTH 15A 13 14 15A RM 7 REC 16 30A CONDEMNING UNIT CU-1 RM 8 LIGHTS 15A 15 RM 5 LIGHTS 15A 20 30A CONDEMNING UNIT CU-3 UV-1 UNIT VENTILATOR 15A 19 $\left\langle \text{UV-3} \right\rangle$ unit ventilator 15A $\stackrel{?}{\sim}$ 21 SPARE 15A 23 CU-1 15A 25 26 15A UV-2 CU-1 15A 27 28 15A UV-3 CU-2 15A 29 30 15A UV-4 CU-2 15A 31 32 15A RM 3 REC CU-3 15A 33 34 15A/15A ROOM 5/FRIDGE CU-3 15A 35 36 15A RM 8 REC CU-4 15A 37 38 15A/15A ROOM 8/FRIDGE CU-4 15A 39 40 15A RM 6 REC ROOF TOP RECEPTACLE 15A 41 42 15A CIRC PUMP FOR UV's

DESIGNATION

'ER' INDICATES EXISTING SERVICE AND BREAKER THAT SHOULD REMAIN UNTOUCHED 'SP' INDICATES EXISTING BREAKER THAT MAY BECOME SPARE DUE TO DEMOLITION. (CONFIRM ON SITE) 'RW' INDICATES EXISTING BREAKER THAT SHOULD BE REWIRED TO SERVICE DEVICES INDICATED ON PLAN 'SB' INDICATES SPARE BREAKER TO BE USED FOR NEW SERVICE INDICATED. 'NB' INDICATES NEW BREAKER AND WIRING TO SERVICE INDICATED. PROVIDE MOUNTING HARDWARE AS

'D' INDICATES EXISTING BREAKER TO BE REMOVED COMPLETE. PROVIDE FILLER PLATES AS REQUIRED. NOTES: THIS CONTRACTOR IS TO INVESTIGATE BREAKERS AND REVISE PANEL SCHEDULES TO SUIT RENOVATION, NOTING ANY BREAKERS THAT BECOME SPARE DUE TO DEMOLITION. THIS CONTRACTOR IS ALSO TO NOTIFY THE CONSULTANT OF ANY BREAKERS THAT ARE INDICATED TO BE DEMOLISHED OR REUSED, BUT WHICH ARE IN USE BY OTHER DEVICES OR SERVICES.

	LIGHT FIXTURE TYPE AS INDICATED CEILING OR WALL MOUNTED LIGHT FIXTURE TYPE AS INDICATED WALL MOUNTED EXIT LIGHT SHADING INDICATES FACE SINGLE OR TWIN EMERGENCY LIGHTING FIXTURE BATTERY UNIT WITH INTEGRAL EMERGENCY FIXTURE (EM—X INDICATES BATTERY UNIT TYPE, DC—X INDICATES DC CIRCUIT, AND X—X INDICATES AC SOURCE CIRCUIT SINGLE POLE SWITCH (3=3 WAY, 4=4 WAY, P=PILOT LIGHT, K=KEYED, DM=DIMMER, M=MOTOR RATED)		WALL MOUNTED RECEPTACLE (15A-120V) WALL MOUNTED T-SLOT RECEPTACE (20A-120V) T-SLOT RECEPTACLE MTD. ABOVE COUNTER (20A-120V) RECEPTACLE MTD. ABOVE COUNTER S=SPLIT (15A-120V) PANEL AS INDICATED UNFUSED DISCONNECT
	CEILING OR WALL MOUNTED LIGHT FIXTURE TYPE AS INDICATED WALL MOUNTED EXIT LIGHT SHADING INDICATES FACE SINGLE OR TWIN EMERGENCY LIGHTING FIXTURE BATTERY UNIT WITH INTEGRAL EMERGENCY FIXTURE (EM—X INDICATES BATTERY UNIT TYPE, DC—X INDICATES DC CIRCUIT, AND X—X INDICATES AC SOURCE CIRCUIT SINGLE POLE SWITCH (3=3 WAY, 4=4 WAY, P=PILOT LIGHT, K=KEYED, DM=DIMMER, M=MOTOR RATED)	P Pr S	WALL MOUNTED T-SLOT RECEPTAC (20A-120V) T-SLOT RECEPTACLE MTD. ABOVE COUNTER (20A-120V) RECEPTACLE MTD. ABOVE COUNTER S=SPLIT (15A-120V) PANEL AS INDICATED
	WALL MOUNTED EXIT LIGHT SHADING INDICATES FACE SINGLE OR TWIN EMERGENCY LIGHTING FIXTURE BATTERY UNIT WITH INTEGRAL EMERGENCY FIXTURE (EM-X INDICATES BATTERY UNIT TYPE, DC-X INDICATES DC CIRCUIT, AND X-X INDICATES AC SOURCE CIRCUIT SINGLE POLE SWITCH (3=3 WAY, 4=4 WAY, P=PILOT LIGHT, K=KEYED, DM=DIMMER, M=MOTOR RATED)	₽ Pr s ·	COUNTER (20A-120V) RECEPTACLE MTD. ABOVE COUNTER S=SPLIT (15A-120V) PANEL AS INDICATED
### 1	BATTERY UNIT WITH INTEGRAL EMERGENCY FIXTURE (EM-X INDICATES BATTERY UNIT TYPE, DC-X INDICATES DC CIRCUIT, AND X-X INDICATES AC SOURCE CIRCUIT SINGLE POLE SWITCH (3=3 WAY, 4=4 WAY, P=PILOT LIGHT, K=KEYED, DM=DIMMER, M=MOTOR RATED)	-	S=SPLIT (15A-120V) PANEL AS INDICATED
\$ \$ \$ \$	EMERGENCY FIXTURE (EM-X INDICATES BATTERY UNIT TYPE, DC-X INDICATES DC CIRCUIT, AND X-X INDICATES AC SOURCE CIRCUIT SINGLE POLE SWITCH (3=3 WAY, 4=4 WAY, P=PILOT LIGHT, K=KEYED, DM=DIMMER, M=MOTOR RATED)	ㅁ	
\$ 2	CIRCUIT SINGLE POLE SWITCH (3=3 WAY, 4=4 WAY, P=PILOT LIGHT, K=KEYED, DM=DIMMER, M=MOTOR RATED)	_	UNFUSED DISCONNECT
\$ 4	4=4 WAY, P=PILOT LIĞHT, K=KEYED, DM=DIMMER, M=MOTOR RATED)	HD	
\$os (OCCUDANCY SENSOD (DASSING)		HAND DRYER
	OCCUPANCY SENSOR (PASSIVE)	•	PUSH-BUTTON STATION
\$ ^K	KEY SWITCH	JB	JUNCTION BOX
os c	CEILING MOUNTED MOTION SENSOR		COMMUNICATIONS
	POWER PACK	▽ #	SINGLE COMPUTER OUTLET UNLESS OTHERWISE NOTED C/W 1" (27mm TO HANGER SYSTEM IN NEAREST CORRIDOR CEILING SPACE. 'WAP'
DR C	DIGITAL ROOM CONTROLLER		WIRELESS ACCESS POINT WALL MOUNTED SPEAKER
	ACCESS CONTROL	₩	(CS=COLUMN SPEAKER)
ES	ELECTRIC STRIKE. CONFIRM ROUGHIN WITH DOOR HARDWARE.	8	CEILING MOUNTED SPEAKER
PTL	"PUSH-TO-LOCK" BUTTON		GENERAL
● EM	EMERGENCY PUSH BUTTON STATION	ER	INDICATED EXISTING ITEM TO REMA
DLH	"ASSISTANCE REQUIRED" DOME LIGHT WITH SOUNDER	D	INDICATES EXISTING ITEM TO BE DELETED
Á	"ASSISTANCE REQUIRED" INDICATOR LIGHT WITH SOUNDER	R	INDICATES EXISTING ITEM TO BE RELOCATED/IN RELOCATED POSITION
구	CLOCK AS PER SPECIFICATION	WG	WIREGUARD
₩	WALL MOUNTED SPEAKER (CS=COLUMN SPEAKER)	WAP	WIRELESS ACCESS POINT
	FIRE ALARM	WP	WEATHER PROOF
8	ALARM BELL (A, B = SIGNAL CIRCUIT)	GF	GROUND FAULT
Y	ALARM STROBE (A, B = SIGNAL CIRCUIT)	CLG	CEILING MOUNTED
E	HEAT DETECTOR (135 DEGREE RATE OF RISE AND FIXED TEMPERATURE)	\otimes	NOTE INDICATOR
	END-OF-LINE RESISTOR	X	MECHANICAL ITEM NO.

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.

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Do not scale this drawing.

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PROJECT NORTH

Consulting Engineers MECHANICAL | ELECTRICAL | AQUATIC 55 Northland Road, Waterloo, ON N2V 1Y8 Phone: 519-725-3555 Project Number: 21046

CHALMERS ST. CAMBRIDGE - PS RENOVATIONS -

> 35 Chalmers St. S Cambridge, ON N1R 5B4

LEGEND, SCHEDULES AND KEY PLAN

SCALE:

AS NOTED

DRAWING NO: REV.

PROJECT NO:

CHECKED:

A20002.6

MAR 2021

LIGHTING CONT	TROL SYSTEMS	SEQUENCE OF OPERATION			
Space Type	Room Names	Control Sequence / Control Device(s):	Control System		
Washrooms/Change Room	TYPICAL	Sequence: ON: Lights turned on automatically via occupancy sensor (where applicable). OFF: 5 minutes after the room has been vacated, the lights will automatically turn off.	LINE VOLTAGE OCCUPANCY CONTROL SYSTEM		
Classrooms	TYPICAL	Sequence: ON: Lights turned on automatically via occupancy sensor. OFF: 15 minutes after the room has been vacated, the lights will automatically turn off.	LINE VOLTAGE OCCUPANCY CONTROL SYSTEM		

	Space Type	Room Names	Control Sequence / Control Device(s):	Control System	l
	Washrooms/Change Room	TYPICAL	Sequence: ON: Lights turned on automatically via occupancy sensor (where applicable). OFF: 5 minutes after the room has been vacated, the lights will automatically turn off.	LINE VOLTAGE OCCUPANCY CONTROL SYSTEM	
	Classrooms	TYPICAL	Sequence: ON: Lights turned on automatically via occupancy sensor. OFF: 15 minutes after the room has been vacated, the lights will automatically turn off.	LINE VOLTAGE OCCUPANCY CONTROL SYSTEM	
QUIPMEN	IT WIRING SCHEDUL	<u>.E</u>		E=ELECTRICAL M=MECHANICAL O=OTHERS	
D*4	lion D		Solution Solution		

<u>EQU</u>	<u>IPM</u>	ENT WIRING	SCH	ED)ULI	Ε																										M=N	LECTR IECHA THER:	NICA	L
	Desc	ription			Date	a		5	Starter	r		Cont	rol Dev	vice		ls [olatin Device	ig e			F	Remo	te Ite	ms								Inte	erlock	,	Remarks
Electrical Item	Electrical Number	Description	Emergency Power Circuit	٠ ا	Voltage Size	hp/kW/Amps Phase	Magnetic	Manual	Contactor	Combination Variable	Frequency Drive	Hand/Off/Auto	Selector Start/Stop PB.	High/Low/Off	Pilot Light	Disconnect	WP Disconnect	Brkr/Fuse	Starter/Device Wired By	Thermostat	RA Thermostat Time Clock	ַיַד	Sensor Start/Stop	Solenoid Valve	CO/NOx Detector	Dual Voltage Relay	Interval Timer	Control Panel		Bldg Auto System	Wired by	Interlock To	Interlock By		Description
(UV-1)	1	UNIT VENTILATOR UV-1	N	/ 1:	20 7.2 MC	25 A 1										E		Ε	Е	М									М	М	М	4	N	1	
(UV-2)	2	UNIT VENTILATOR UV-2	N	A 1:	20 7.2 MC	25 XA 1										Е		E	Е	М									М	М	М	5	N	1	
(UV-3)	3	UNIT VENTILATOR UV-3	N		20 7.2 MC											Ε		Е	Е	М									М	М	М	6	M	1	
CU-1	4	CONDENSING UNIT	N	1 2	08 18 MC												Е	Е	Е													1	M	1	
CU-2	5	CONDENSING UNIT			08 18 MC												Е	Е	Е													2	M	1	
CU-3	6	CONDENSING UNIT			08 18 MC												Е	Е	Е													3	M	1	

EXISTING PANEL 'LP-A' SCHEDULE VOLTAGE: 120/208 VOLTS

PHASE: 3P, 4W MAINS: 225A MOUNTING: RECESSED NOTES: EXISTING EATON PRL1A

ER	CLASSROOM 3&4&CORRIDOR	20A1		2 15A PRINCIPAL 7 VICE PRINCIPAL	ER
ER	EXIT LIGHTS			4 15A FOYER LIGHTS	ER
ER	CLASSROOM 4 LIGTHS			6 15A JUNIOR KINDERGARTEN	ER
ER	CORRIDOR LIGHTS			8 15A JUNIOR KINDERGARTEN	ER
ER	EXISTS	15A 9		10 15A ADMIN COUNTER RECEPTACLE	ER
ER	ADMINISTRATION OFFICE LIGHTS	15A 11		12 15A EXTERIOR LIGHTS	ER
ER	X	15A 13		14 15A RECEPTACLES	ER
ER	X	15A 15		16 15A CORRIDOR RECEPTACLES	ER
ER	CLASSROOM 3 LIGTHS	15A 17		18 15A MECHANICAL CONTROLS POWER	ER
ER	CLASSROOM 4 LIGTHS	15A 19		20 15A CLASSROOM 1&2 RECEPTACLES	ER
ER	WASHROOM LIGHTS	15A 21		22 15A CLASSROOM 3 LIGHTS	ER
ER	CLASSROOM LIGHTS	15A 23		24 15A X	ER
ER	FIRE ALARM	15A 25		26 15A PA SYSTEMS CLOCK	ER
ER	CLASSROOM 6 LIGHTS	15A 27		28 15A SPARE	SB
ER	FOUNTAIN	15A 29		30 20A HAND DRYER GIRLS WASHROOMS	ER
D	SPARE	15A 31		32 20A HAND DRYER GIRLS WASHROOMS	ER
D	SPARE	15A 33		34 20A HAND DRYER BOYS WASHROOMS	ER
ER	SPARE	15A 35		36 20A HAND DRYER BOYS WASHROOMS	ER
ER	SPARE	15A 37		38 15A VICE PRINCIPAL OFFICE REC.	ER
ER	PRINCIPAL OFFICE RECEPTACLE	15A 39	$\sqcup \bot$	40 15A PROJECTOR POWER CLASSROOM	ER
ER	CLASSROOM 2 RECEPTACLE	15A 41		42 20A SPARE	ER

AT THE COMPLETION OF THE

INCLUDE A COPY IN THE

MAINTENANCE MANUALS

PROJECT, PROVIDE A NEW TYPE WRITTEN PANEL DIRECTORY AND

PROPOSED PANEL 'LP-A' SCHEDULE

ER	CLASSROOM 3&4&CORRIDOR	20A1	2	5A PRINCIPAL 7 VICE PRINCIPAL	ER
ER	EXIT LIGHTS	15A 3	4 0 15	SA_ FOYER LIGHTS	ER
ER	CLASSROOM 4 LIGTHS	15A 5	6 15	5A_ JUNIOR KINDERGARTEN	ER
ER	CORRIDOR LIGHTS	15A 7	8 15	JUNIOR KINDERGARTEN	ER
ER	EXISTS _	15A 9	10 15	ADMIN COUNTER RECEPTACLE	ER
ER	ADMINISTRATION OFFICE LIGHTS	15A 11	12 15	<u>SA</u> EXTERIOR LIGHTS	ER
ER	X .	15A 13	14 15	RECEPTACLES	ER
ER	X _	15A15	16 15	CORRIDOR RECEPTACLES	ER
ER	CLASSROOM 3 LIGTHS	15A 17	18 15	MECHANICAL CONTROLS POWER	ER
ER	CLASSROOM 4 LIGTHS	15A19	20 0 15	CLASSROOM 1&2 RECEPTACLES	ER
ER	WASHROOM LIGHTS	15A 21	22 15	SA CLASSROOM 3 LIGHTS	ER
ER	CLASSROOM LIGHTS	15A 23	24 15	<u>5A</u> X	ER
ER	FIRE ALARM	15A 25		A PA SYSTEMS CLOCK	ER
ER	CLASSROOM 6 LIGHTS	15A 27	28 15	$5A$ UNIT VENERATOR $\left(UV-2 \right)$	SB
ER	FOUNTAIN	15A 29	30 20	DA HAND DRYER GIRLS WASHROOMS	ER
NB	CU-2 CONDENCING UNIT	30A 31		DA HAND DRYER GIRLS WASHROOMS	ER
NB		2P 33	34 20	DA HAND DRYER BOYS WASHROOMS	ER
ER	SPARE _	15A 35	36 20	DA HAND DRYER BOYS WASHROOMS	ER
ER	SPARE _	15A 37	38 15	VICE PRINCIPAL OFFICE REC.	ER
ER	PRINCIPAL OFFICE RECEPTACLE	15A 39	40 15	PROJECTOR POWER CLASSROOM	ER
ER	CLASSROOM 2 RECEPTACLE	15A 41	42 20	DA SPARE	ER
		_	1		1

DESIGNATION

REQUIRED.

'ER' INDICATES EXISTING SERVICE AND BREAKER THAT SHOULD REMAIN UNTOUCHED 'SP' INDICATES EXISTING BREAKER THAT MAY BECOME SPARE DUE TO DEMOLITION. (CONFIRM ON SITE) 'RW' INDICATES EXISTING BREAKER THAT SHOULD BE REWIRED TO SERVICE DEVICES INDICATED ON PLAN 'SB' INDICATES SPARE BREAKER TO BE USED FOR NEW SERVICE INDICATED. 'NB' INDICATES NEW BREAKER AND WIRING TO SERVICE INDICATED. PROVIDE MOUNTING HARDWARE AS

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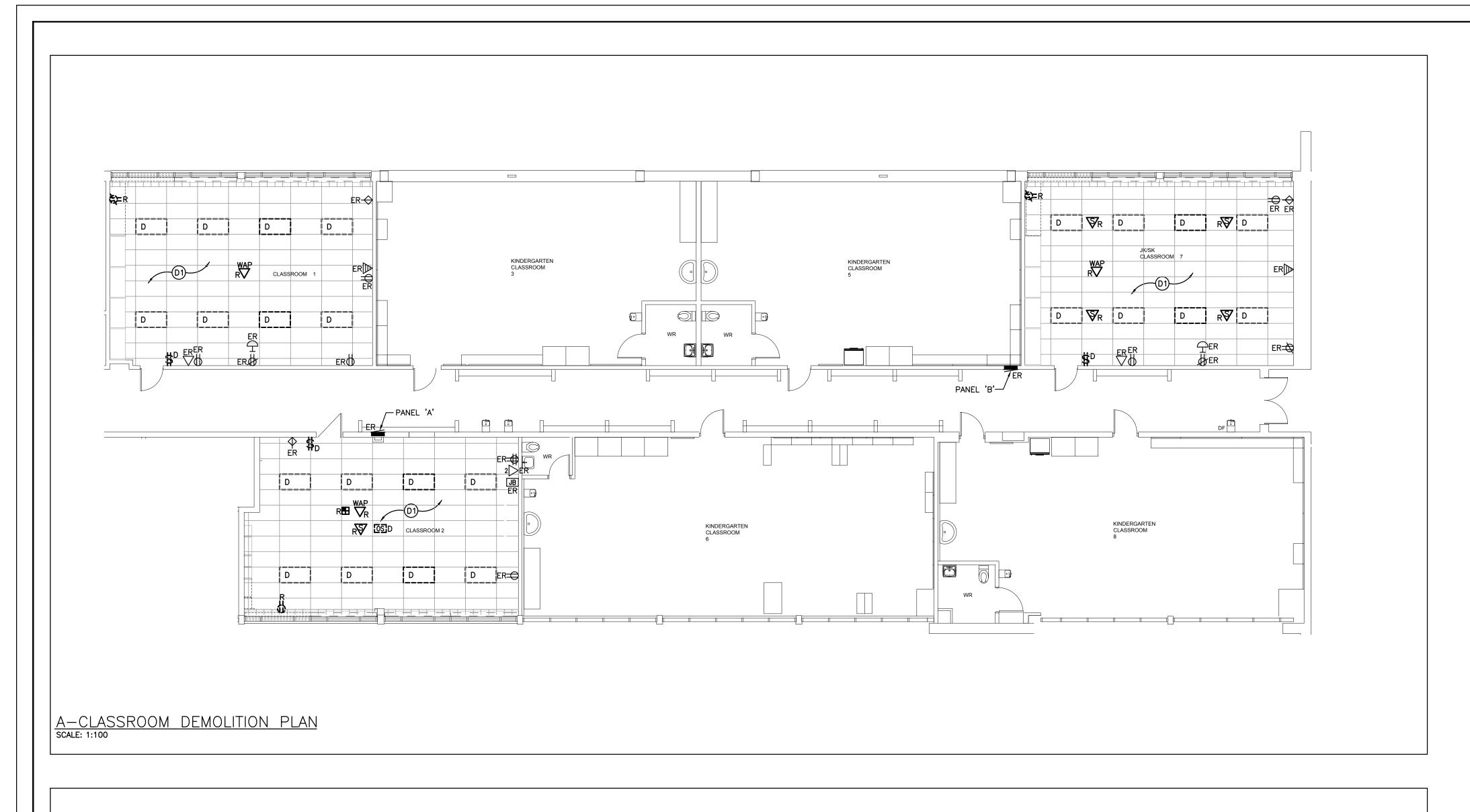
BE DEMOLISHED OR REUSED, BUT WHICH ARE IN USE BY OTHER DEVICES OR SERVICES.

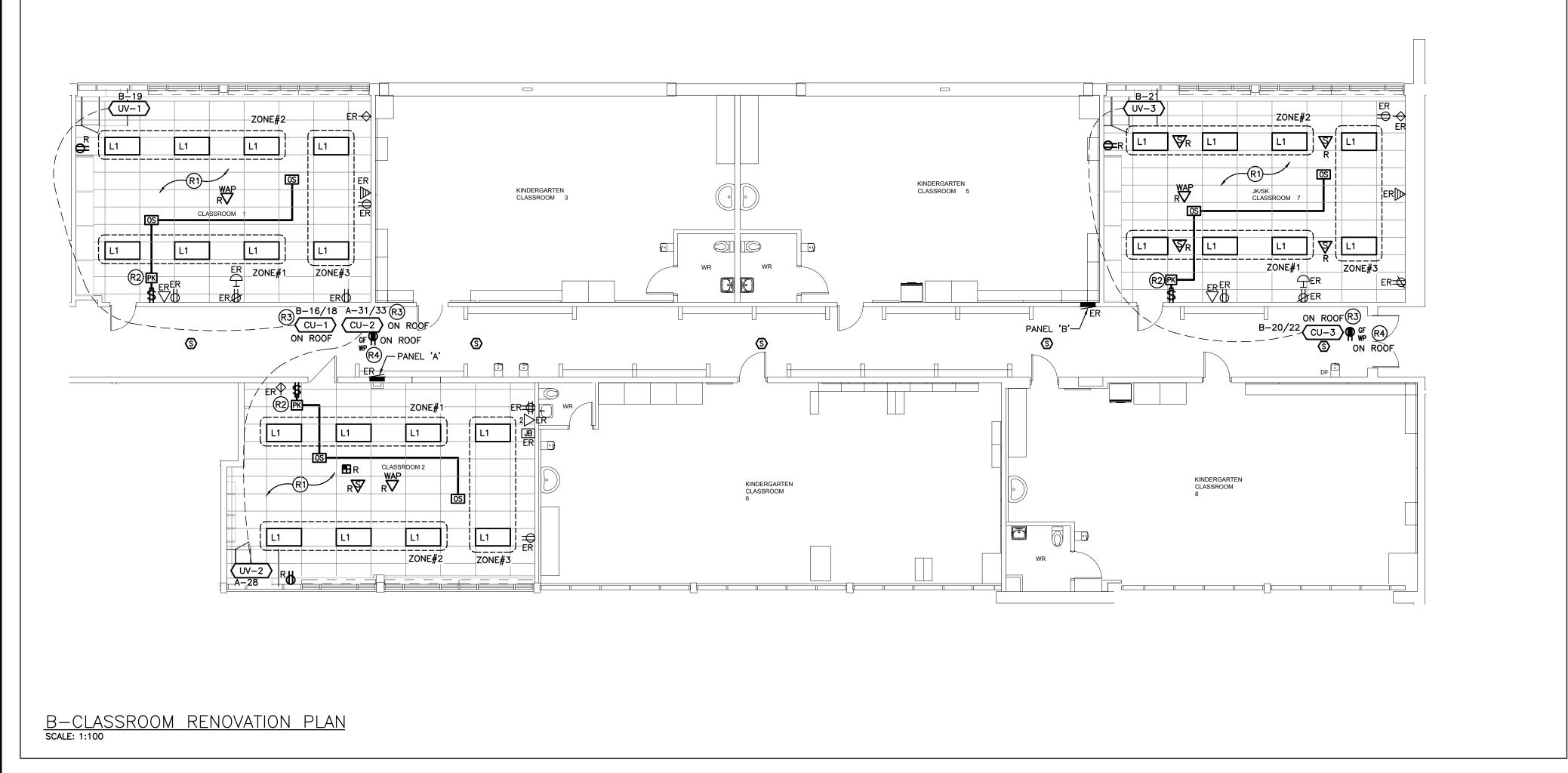
Item	Manufacturer/Catalog Number	Voltage	Lamp	Mounting	Description
L1	COOPER CAT. #24-GR-LD5-38-A125-UNV-L840-CD-1 LITHONIA CAT. #2GTL-4-40L-EZ1-LP840 SIGNIFY CAT. #2TG43L840-4-FS-02F-UNV-DIM	120V	LED 3800 LUMENS 4000K 35W	RECESSED	2X4 (610mmX1220mm) LED TROFFER C/W PATTERN 12 LENS AND WHITE FINISH
EMERG. BATT.	BEGHELLI TEMPESTA SERIES: EM-1 #TA-LED-EM-120-TB-90SP (RECESSED TBAR MOUNT)	х	N/A	AS NOTED	VANDAL RESISTANT LONG LIFE, SEALED BATTERY, C/W 17W LED MODULES, POLYCARBONATE BODY AND 90 MINUTE BATTERY DURATION
	OR APPROVED EQUALS BY: EMERGILITE STANPRO DUAL-LITE READY-LITE AIMLIGHT CAT. #VP1 SERIES				

LUMENS. LUMEN VALUES SHOULD NOT EXCEED MORE THAN 10% OF SPECIFIED OUTPUT. CONSULTANTS ATTENTION PRIOR TO SHOP DRAWING REVIEW.

WHERE NOTED ABOVE THAT FIXTURES ARE TO HAVE FINISH TO SUIT ARCHITECT THE FINISH WILL BE SELECTED FROM
2) WILKE NOTED ABOVE THAT TIXTORES ARE TO TIAVE TIMIST
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.

								ST	ANDA	RD (CIRCU	IITING	LAB	ELIN	G		
			•			(CIRCL	ER PA	IDICA	TION			A-) —	1-	-1		
	<u>.TIC</u>	<u>NC</u>															
/	Cont	rol [Device	e(s):										С	ontrol S	ystem	
via 3 b	occ een	upar vaca	ncy s ited,	enso the	r (wh lights	nere will	appl auto	icable omati	e). cally	turn	off.				INE VOLT OCCUPANO CONTROL	CY	
via Is	occi been	upan vac	ncy s ated,	enso the	r.										INE VOLT OCCUPANO CONTROL	CY	
														_ ! _			
																ECTRICA CHANICA HERS	
				Re	mote	lter	ns								Inter	lock	Remarks
Brkr/Fuse	Starter/Device Wired By	Thermostat	RA Thermostat	Time Clock	Current Sensor	Start/Stop	Solenoid Valve	CO/NOx Detector	Dual Voltage Relay	Interval Timer	Control Panel	Wired by	Bldg Auto System	Wired by	Interlock To	Interlock By	Description
Ε	E	М										М	М	М	4	М	
Ε	E	М										М	М	М	5	М	
Ε	E	М										М	М	М	6	М	
E	Ε														1	М	
E	E														2	М	
Е	Е														3	М	





GENERAL NOTES

- 'ER' DENOTES EXISTING ITEM TO REMAIN.
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN SHALL REMAIN UNLESS NOTED OTHERWISE.
- 'R' INDICATES EXISTING ITEM TO BE RELOCATED. REFER TO RENOVATION DRAWINGS AND RELOCATE DEVICE AND WIRING TO SUIT. UNLESS OTHERWISE NOTED.
- 'D' INDICATES EXISTING ITEM TO BE DELETED. UNLESS OTHERWISE NOTED DISCONNECT AND REMOVE NOTED DEVICE AND WIRING BACK TO SOURCE.
- ALL LIGHTING FIXTURES BEING RELOCATED SHALL BE CLEANED AND CHECKED PRIOR TO BEING REINSTALLED.

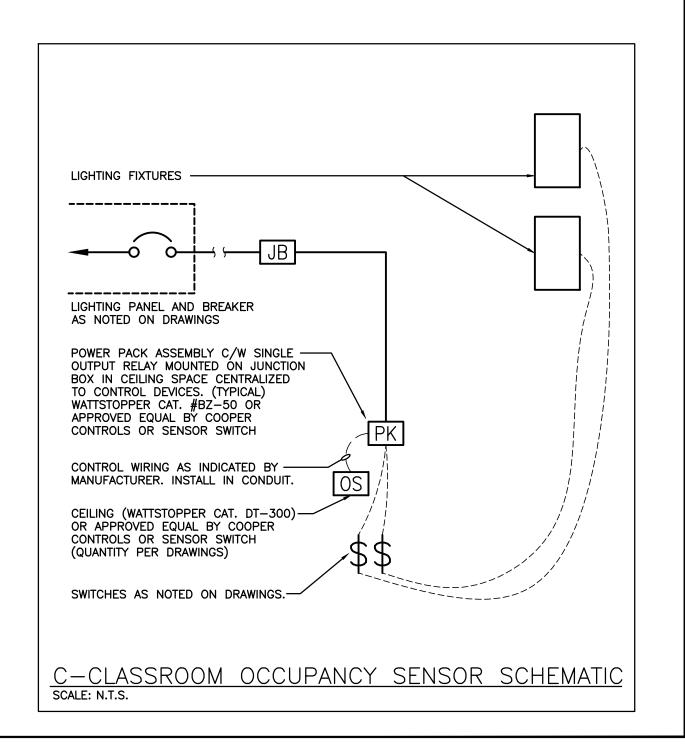
SPECIFIC DEMOLITION NOTES

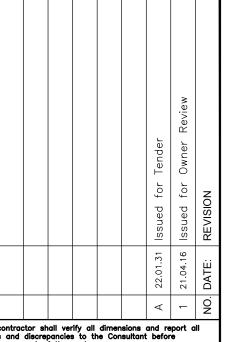
D1 CEILING WITHIN INDICATED AREA TO BE REMOVED BY GENERAL CONTRACTOR. ELECTRICAL CONTRACTOR IS TO REMOVE AND REINSTALL ALL CEILING MOUNTED DEVICES, DEVICES ARE TO BE STORED IN A DRY SAFE LOCATION DURING CONSTRUCTION. FIXTURES TO BE REMOVED AND DISPOSED OF. EXISTING CIRCUIT AND LIGHTING CONTROLS TO REMAIN FOR CONNECTION TO NEW FIXTURES. REFER TO RENOVATION PLANS.

SPECIFIC RENOVATION NOTES

- R1 INDICATES FIXTURES TO BE CONNECTED TO EXISTING CIRCUIT AND NEW CONTROLS AS SHOWN.
- R2 INDICATES POWER PACK INSTALLED WITHIN ACCESSIBLE CEILING SPACE FOR CONTROL OF NOTED MOTION SENSOR(S). REFER TO LIGHTING CONTROL DETAILS.
- R3 DISCONNECT FOR INDICATED MECHANICAL EQUIPMENT IS TO BE MOUNTED TO NEAREST DOGHOUSE.
- R4 PROVIDE T—SLOT DUPLEX GROUND FAULT PROTECTED RECEPTACLE MOUNTED TO NOTED ROOFTOP EQUIPMENT. COORDINATE LOCATION WITH MECHANICAL CONTRACTOR AND SHOP DRAWINGS. RECEPTACLE IS TO BE COMPLETE WITH "EXTRA DUTY" IN—USE COVER AND IS TO BE NEXT LESS THAN 750mm ABOVE FINISHED ROOF.

ALL RECEPTACLES ARE TO BE TAMPER RESISTANT TYPE PER 2019 OESC CODE UPDATES — RULE 26—706.





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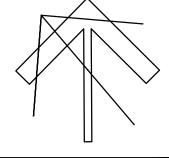
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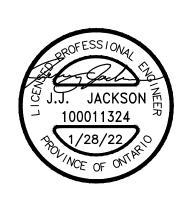
PROJECT NORTH





MECHANICAL | ELECTRICAL | AQUATIC

55 Northland Road, Waterloo, ON N2V 1Y8
Phone: 519-725-3555
Website: deiassociates.ca
Project Number: 21046





CHALMERS ST. CAMBRIDGE - PS RENOVATIONS -

> 35 Chalmers St. S Cambridge, ON N1R 5B4

DRAWING TITLE:

ELECTRICAL DEMOLITION AND RENOVATION PLANS

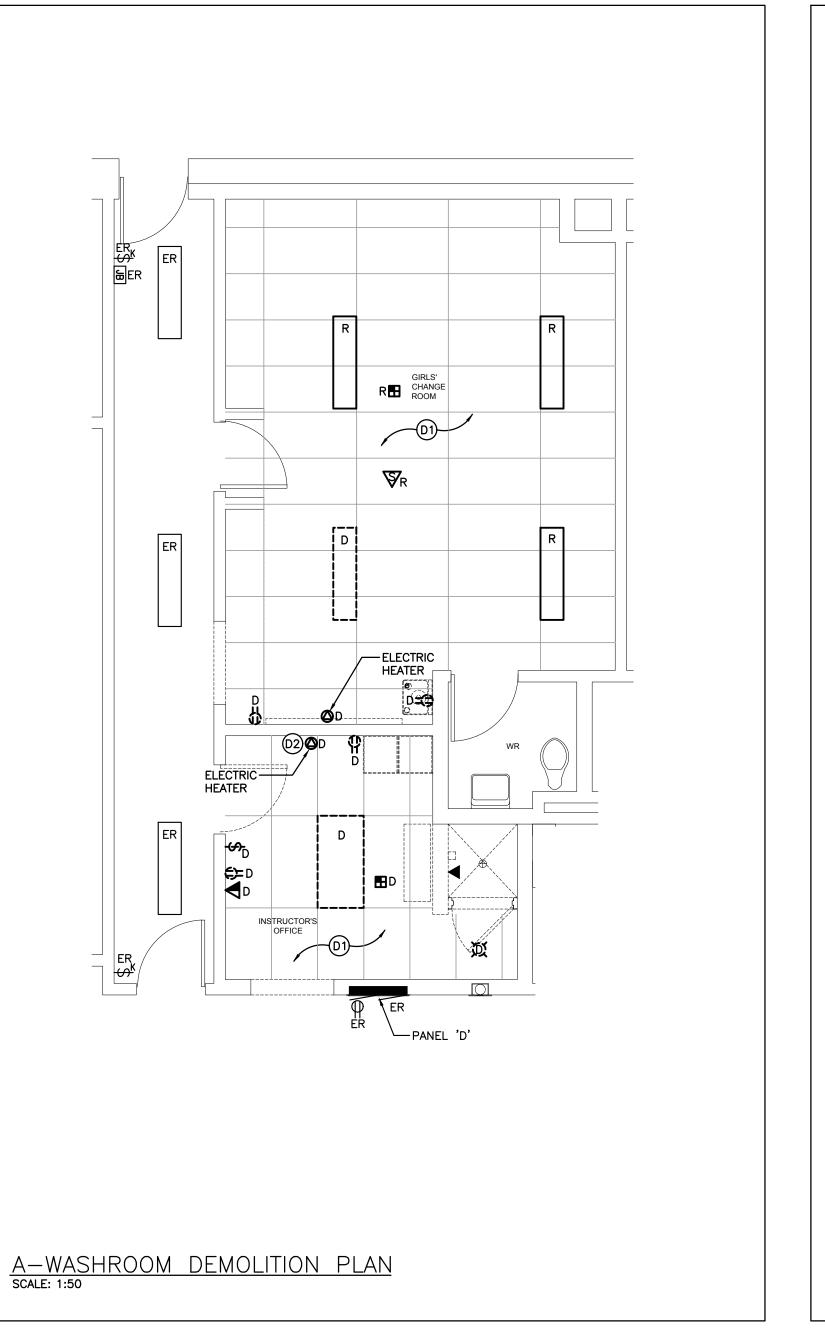
PROJECT NO: | SCALE:

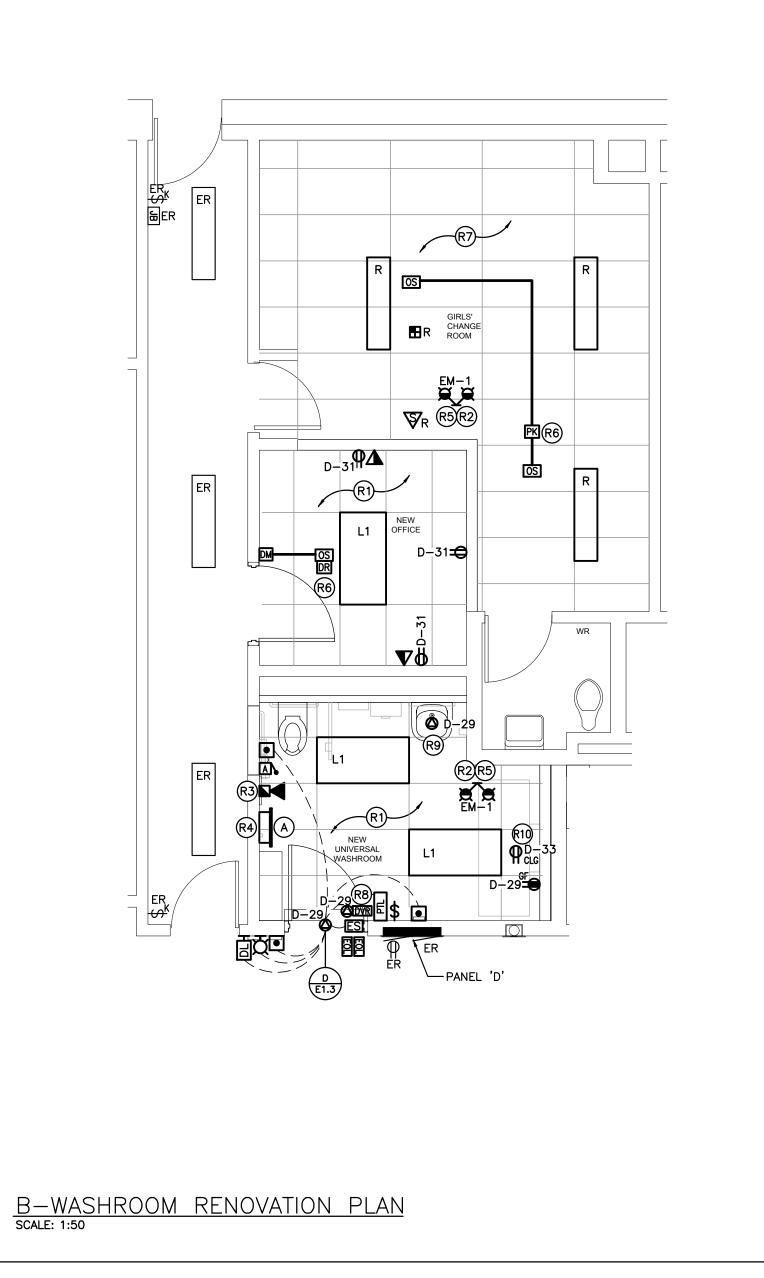
A20002.6 AS NOTED

DRAWN: DRAWING NO: REV.

CHECKED: E1.2

DATE: MAR 2021





EXISTING PANEL 'D' SCHEDULE VOLTAGE: 120/208 VOLTS PHASE: 3P, 4W MAINS: 225A MOUNTING: RECESSED NOTES: EXISTING FEDERAL PIONEER NBLP 42-4L 15A 0 1 2 0 15A ELECTRICAL HEAT ELECTRICAL HEAT 15A 3 4 15A ELECTRICAL HEAT ELECTRICAL HEAT 2P 5 6 15A ELECTRICAL HEAT ELECTRICAL HEAT 15A 7 8 15A ELECTRICAL HEAT ELECTRICAL HEAT 15A 9 10 15A ELECTRICAL HEAT CHANGE ROOM EXHAUST 15A 13 14 3P ELECTRICAL HEAT STORAGE ROOM FAN 15A 15 16 15A KITCHEN HOOD FAN WATER HEATER 15A 17 18 15A DRINKING FOUNTAIN WATER HEATER 15A 19 20 15A STOVE REC. WATER HEATER 15A 23 24 15A BASKET BALL NET CUSTODIAL ROOM 15A 25 SPACE SPACE SPACE ___ SPACE SPACE ______ SPACE _____ SPACE

PROPOSED PANEL 'D' SCHEDULE

									ı
ER		15A	1		2		15A	ELECTRICAL HEAT	E
ER	ELECTRICAL HEAT		3		4	\	15A	ELECTRICAL HEAT	E
ER	ELECTRICAL HEAT		5		6	<u>`</u>	15A	ELECTRICAL HEAT	E
ER	ELECTRICAL HEAT		7		8	<u>`</u>	15A	ELECTRICAL HEAT	E
ER	ELECTRICAL HEAT		9		10 1	<u>`</u>	15A	ELECTRICAL HEAT	E
ER	ELECTRICAL HEAT		11		12	<u>`</u>		ELECTRICAL HEAT	E
ER	CHANGE ROOM EXHAUST	15A	13		14	<u>`</u>	3P_	ELECTRICAL HEAT	E
ER	STORAGE ROOM FAN	15A	15		16	<u>`</u>	15A	KITCHEN HOOD FAN	E
ER	WATER HEATER	15A	17		18	<u>`</u>	15A	DRINKING FOUNTAIN	E
ER	WATER HEATER	15A	19		20 (<u>`</u>	15A	STOVE REC.	E
ER		15A	21		22	<u>`</u>	2P		E
ER	WATER HEATER	15A	23		24	<u>`</u>	15A	BASKET BALL NET	E
ER	CUSTODIAL ROOM	15A	25		26	<u>`</u>	2P	WINCH	E
ER	WASHROOM REC.	15A	27		28	<u>`</u>		SPACE	E
NB	UNIVERSAL WASHROOM		29		30	` —		SPACE	E
NB	NEW OFFICE REC.		31		32	`		SPACE	E
NB	UNIVERSAL WASHROOM	15A	33		34	`		SPACE	E
ER	SPACE		35		36	` <u> </u>		SPACE	E
ER	SPACE		37		38	`		SPACE	E
ER	SPACE		39		40 6	`		SPACE	E
ER	SPACE		41		42	,		SPACE	E
					-	-			

DESIGNATION

'ER' INDICATES EXISTING SERVICE AND BREAKER THAT SHOULD REMAIN UNTOUCHED 'SP' INDICATES EXISTING BREAKER THAT MAY BECOME SPARE DUE TO DEMOLITION. (CONFIRM ON SITE) 'RW' INDICATES EXISTING BREAKER THAT SHOULD BE REWIRED TO SERVICE DEVICES INDICATED ON PLAN 'SB' INDICATES SPARE BREAKER TO BE USED FOR NEW SERVICE INDICATED. 'NB' INDICATES NEW BREAKER AND WIRING TO SERVICE INDICATED. PROVIDE MOUNTING HARDWARE AS

'D' INDICATES EXISTING BREAKER TO BE REMOVED COMPLETE. PROVIDE FILLER PLATES AS REQUIRED.

NOTES: THIS CONTRACTOR IS TO INVESTIGATE BREAKERS AND REVISE PANEL SCHEDULES TO SUIT RENOVATION, NOTING ANY BREAKERS THAT BECOME SPARE DUE TO DEMOLITION. THIS CONTRACTOR IS ALSO TO NOTIFY THE CONSULTANT OF ANY BREAKERS THAT ARE INDICATED TO BE DEMOLISHED OR REUSED, BUT WHICH ARE IN USE BY OTHER DEVICES OR SERVICES.

GENERAL NOTES

- 'ER' DENOTES EXISTING ITEM TO REMAIN.
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN SHALL REMAIN UNLESS NOTED OTHERWISE.
- 'R' INDICATES EXISTING ITEM TO BE RELOCATED. REFER TO RENOVATION DRAWINGS AND RELOCATE DEVICE AND WIRING TO SUIT. UNLESS OTHERWISE NOTED.
- 'D' INDICATES EXISTING ITEM TO BE DELETED. UNLESS OTHERWISE NOTED DISCONNECT AND
- ALL LIGHTING FIXTURES BEING RELOCATED SHALL BE CLEANED AND CHECKED PRIOR TO BEING REINSTALLED.

SPECIFIC DEMOLITION NOTES

REMOVE NOTED DEVICE AND WIRING BACK TO SOURCE.

- D1 CEILING WITHIN INDICATED AREA TO BE REMOVED BY GENERAL CONTRACTOR. ELECTRICAL CONTRACTOR IS TO REMOVE AND REINSTALL ALL CEILING MOUNTED DEVICES, DEVICES ARE TO BE STORED IN A DRY SAFE LOCATION DURING CONSTRUCTION. FIXTURES TO BE REMOVED AND DISPOSED OF AS NOTED. EXISTING CIRCUIT AND LIGHTING CONTROLS TO REMAIN FOR CONNECTION TO NEW FIXTURES. REFER TO RENOVATION PLANS.
- D2 THIS CONTRACTOR IS TO DISCONNECT AND REMOVE EXISTING ELECTRIC HEATER. MAINTAIN CIRCUIT FOR RECONNECTION TO NEW HEATER. EXTEND CIRCUIT AS REQUIRED.

SPECIFIC RENOVATION NOTES

- R1 INDICATES FIXTURES TO BE CONNECTED TO EXISTING CIRCUIT AND NEW CONTROLS AS
- R2 INDICATED DEVICE IS TO BE CEILING MOUNTED. PROVIDE ADEQUATE SUPPORT.
- R3 INDICATES NEW STROBES TO BE INSTALLED ON SIGNAL CIRCUIT. CONTRACTOR IS TO PROVIDE BOOSTER MODULE FOR NEW SIGNAL DEVICE(S).
- R4 CONNECT HEATER TO CIRCUIT MADE AVAILABLE DURING DEMOLITION. EXTEND CIRCUIT AS
- R5 CONNECT NEW EMERGENCY BATTERY UNIT TO UNSWITCHED SIDE OF EXISTING LIGHTING BRANCH CIRCUIT WHICH SERVES THIS AREA.
- R6 INDICATES POWER PACK/DIGITAL ROOM CONTROLLER INSTALLED WITHIN ACCESSIBLE CEILING SPACE FOR CONTROL OF NOTED MOTION SENSOR(S). REFER TO LIGHTING CONTROL
- R7 INDICATES FIXTURES TO BE CONNECTED TO EXISTING CIRCUIT AND CONTROLLED AS SHOWN.
- R8 INDICATES POWER AND FIRE ALARM CONNECTIONS TO SMOKE/FIRE DAMPERS AT DUCT TRANSFER. COORDINATE EXACT LOCATION/CONNECTION REQUIREMENTS WITH MECHANICAL CONTRACTOR. SMOKE/FIRE DAMPER AND ASSOCIATED DETECTOR TO BE PROVIDED AND INSTALLED BY MECHÁNICAL CONTRACTOR.
- R9 INDICATES 120V FEED TO 24VDC STEP DOWN TRANSFORMER LEVEL FOR AUTOMATIC PLUMBING FIXTURE(S). COORDINATE EXACT LOCATION AND INSTALLATION WITH MECHANICAL
- R10 INDICATES RECEPTACLE IN CEILING ABOVE CHANGE TABLE IS FOR FUTURE LIFT.

ALL RECEPTACLES ARE TO BE TAMPER RESISTANT TYPE PER 2019 OESC CODE UPDATES - RULE 26-706.

FOR INFORMATION REGARDING EQUAL MANUFACTURERS REFER TO SPECIFICATION. HEATER SCHEDULE LIGHTING FIXTURES (QUANTITY PER DRAWINGS) Manufacturer/Catalog Number 2000 WATT 208 VOLT SINGLE PHASE FAN FORCED HEATER C/W SURFACE MOUNTING BOX, INTEGRAL TAMPERPROOF THERMOSTAT AND STANDARD FACTORY FINISH TO SUIT ARCHITECT. OUELLET CAT. #OACO2008-T

PROJECT NORTH

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.

commencement of the work.

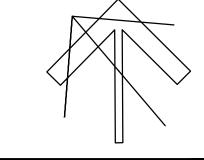
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Do not scale this drawing.

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Consulting Engineers MECHANICAL ELECTRICAL AQUATIC

55 Northland Road, Waterloo, ON N2V 1Y8 Phone: 519-725-3555 Project Number: 21046





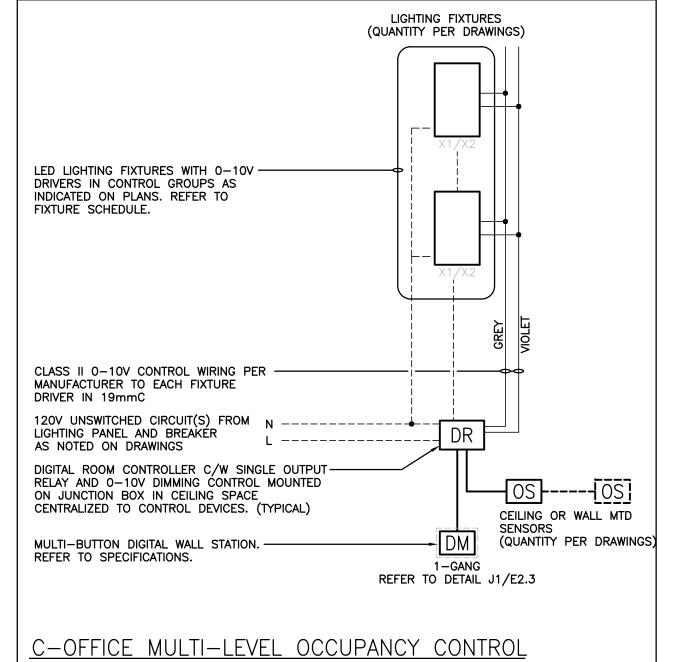
CHALMERS ST. CAMBRIDGE - PS RENOVATIONS -

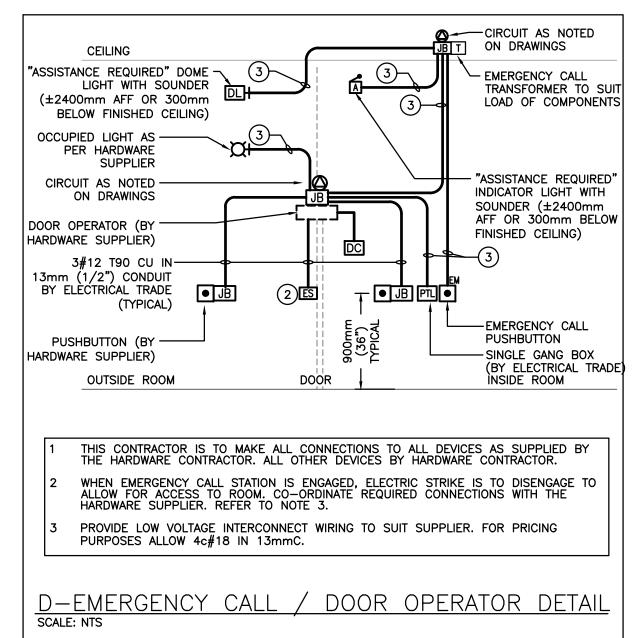
> 35 Chalmers St. S Cambridge, ON N1R 5B4

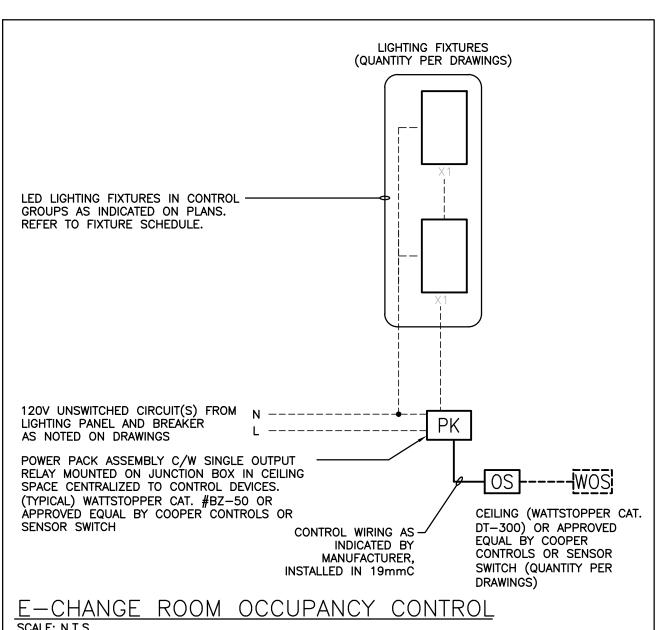
DRAWING TITLE:

ELECTRICAL DEMOLITION AND RENOVATION PLANS

PROJECT NO: SCALE: A20002.6 AS NOTED DRAWING NO: REV. CHECKED MAR 2021







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
- .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 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
- .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
- .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.

SHALL BE CAPPED TO ENSURE SERVICES ARE KEPT CLEAN WHEN NOT IN USE.

- .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
- SWITCHES, DIMMERS AND SPEED CONTROLLERS: 1100mm (44")
- WALL RECEPTACLES:
- ABOVE TOP OF COUNTERS: 100mm (4")
- IN MECHANICAL/ELECTRICAL ROOMS: 1100mm (44") (GANG WITH SWITCH). FIRE ALARM STROBES: 2250mm (7'-6")
- .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
- .20 THE CONTRACTOR WILL INCLUDE REDLINES FOR EACH AND EVERY ELECTRICAL DRAWING FOR DEI & ASSOCIATES INC. TO CAD THE RECORD DRAWINGS. THE CAD DRAWING FILES WILL BE PROVIDED TO THE OWNER AS PART OF THE MAINTENANCE MANUALS.

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 MANNEL
- .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
- .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')
- .9 COLOUR BANDS MUST BE 25mm(1") WIDE AND CODED AS FOLLOWS FOR NOTED SYSTEMS. SYSTEM UP TO 208V

FIRE ALARM

.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: PERMITS AND FEES
- MOBILIZATION (MAXIMUM 1%)
- DEMOLITION **BRANCH CONDUITS**
- BRANCH WIRING LIGHTING FIXTURES
- FIRE ALARM SYSTEM DEVICES WIRING FOR MECHANICAL EQUIPMENT
- AUXILIARY SYSTEM ROUGH-INS .10 CONTRACT CLOSEOUT (MINIMUM 3% BUT NO LESS THAN \$1,500.00)
- .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.

WIRING DEVICES

- .1 GENERAL PURPOSE AC SWITCHES MUST CONFORM TO CSA C22.2 NO. 111 (LATEST EDITION).
- .2 15 OR 20 A, 120 V, SINGLE POLE, DOUBLE POLE, THREE-WAY, OR FOUR-WAY SWITCHES.
- .3 INSTALL SWITCHES IN GANG TYPE OUTLET BOX WHEN MORE THAN ONE SWITCH IS REQUIRED IN ONE LOCATION.
- .4 RECEPTACLES, PLUGS, AND OTHER SIMILAR WIRING DEVICES MUST CONFORM TO CSA C22.2 NO. 42 (LATEST EDITION).
- .5 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. TRIPLE WIRE CONTACTS AND RIVETED GROUNDING CONTACTS
- .6 ACCEPTABLE MATERIALS:
- 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
- .7 OTHER RECEPTACLES WITH AMPACITY AND VOLTAGE AS INDICATED. COLOUR BY ARCHITECT.
- .8 ACCEPTABLE ALTERNATE MANUFACTURERS INCLUDE: PASS & SEYMOUR
- .9 WALL MOUNTED OCCUPANCY SENSORS (PASSIVE TECHNOLOGY), OCCUPANCY SENSORS USED IN STORAGE AND SERVICE ROOMS
- WATTSTOPPER CAT. #PW-100-VOLT-X (COLOUR BY ARCHITECT SENSOR SWITCH CAT. #WSD-VOLT-X (COLOUR BY ARCHITECT)
- EQUAL BY COOPER CONTROLS
- .10 WHERE NOTED ON THE DRAWINGS, THE WALL MOUNTED SWITCH STYLE OCCUPANCY SENSOR USED IN ADMINISTRATIVE OFFICES AND SEMINAR/MEETING ROOMS SHALL BE A DUAL TECHNOLOGY WITCH WITH EITHER SINGLE OR DOUBLE RELAY (CIRCUIT) AS NOTED ON THE DRAWINGS. COLOUR TO SUIT ARCHITECT. SWITCHES SHALL BE EITHER:
- SINGLE RELAY (CIRCUIT): WATTSTOPPER CAT. #DW-100 DUAL RELAY (CIRCUIT): WATTSTOPPER CAT. #DW-200
 - APPROVED EQUAL: .1 SENSOR SWITCH COOPER CONTROLS

NOTE: FOR DUAL RELAY SWITCHES, PROGRAM THE SENSORY FOR 15 MINUTE OFF DELAY, ENABLED WAL-THRU, AUDIBLE ALERT ENABLED, RELAY 1 ON MODE: AUTO ON, RELAY 2 ON MODE: MANUAL ON.

- .11 PROVIDE OTHER OCCUPANCY SENSORS TO SUIT THE DETAIL(S) ON THE DRAWINGS.
- .12 ALL SENSORS SHALL BE SET TO 5 MINUTES "DELAY TO OFF" UNLESS OTHERWISE DIRECTED

.13 OCCUPANCY SENSORS: .1 INSTALL POWER PACKS IN ACCESSIBLE MAINTENANCE AREAS.

- .2 PROVIDE ACCESS DOORS IF POWER PACKS ARE INSTALLED ABOVE DRYWALL CEILINGS.
- .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 COVER THE RESPECTIVE ROOMS.
- .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.
- .14 INSTALL DEVICES IN GANG TYPE OUTLET BOX WHEN MORE THAN ONE DEVICE IS REQUIRED IN ONE LOCATION.
- .15 SHEET STEEL UTILITY BOX COVER FOR WIRING DEVICES INSTALLED IN SURFACE MOUNTED UTILITY BOXES.
- .16 STAINLESS STEEL, VERTICALLY BRUSHED, 1mm THICK COVER PLATES FOR WIRING DEVICES MOUNTED IN FLUSH-MOUNTED OUTLET
- .17 SHEET METAL COVER PLATES FOR WIRING DEVICES MOUNTED IN SURFACE-MOUNTED FS OR FD TYPE CONDUIT BOXES. .18 PROTECT STAINLESS STEEL COVER PLATE FINISH WITH PAPER OR PLASTIC FILM UNTIL PAINTING AND OTHER WORK IS FINISHED.
- .19 INSTALL SUITABLE COMMON COVER PLATES WHERE WIRING DEVICES ARE GROUPED.

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
- .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;

EDITION OF THE ELECTRICAL SAFETY CODE.

- AUTOMATIC ALARM INITIATING DEVICES
 - .1 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
- .4 SMOKE DETECTOR: CEILING MOUNTED, PHOTO ELECTRIC TYPE, VISUAL ALARM INDICATOR, COMPLETE WITH RELAY BASE
- .5 SMOKE DETECTOR: PHOTO ELECTRIC TYPE AIR DUCT TYPE WITH SAMPLING TUBES WITH PROTECTIVE HOUSING. .1 PLUG-IN TYPE WITH FIXED BASE.
- AUDIBLE/VISUAL SIGNAL DEVICES .1 STROBE: SEMI-RECESSED, 24VDC OPERATION, COMPLETE WITH SELECTABLE 15/30/75/110 CANDELA OUTPUT (UNLESS

.2 WIRE-IN BASE ASSEMBLY WITH INTEGRAL RED ALARM LED, AND TERMINALS FOR REMOTE ALARM LED.

- OTHERWISE NOTED SET AT 75 CD), SYNCHRONIZED STROBE, RED FINISH, FM AND ULC LISTED. SUITABLE FOR .2 250mm (10") BELLS: SURFACE MOUNTED BELL, VIBRATION TYPE 24VDC, 10", 94DBA RATING AT 3000mm (10'), RED FINISH, FM AND ULC LISTED.
- SIGNAL DEVICES WITH INTEGRAL STROBE LIGHTS IN HIGH ABUSE AREAS (I.E. GYMNASIUM, CHANGE ROOMS, ETC.)
 - MUST BE PROVIDED WITH PROTECTIVE WIREGUARDS. .2 ANY SURFACE MOUNTED SIGNAL DEVICES MUST BE PROVIDED WITH SUITABLE BACKBOXES SUPPLIED BY THE
- .3 END-OF-LINE DEVICES .1 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. .6 THIS TEST MUST CONFORM TO THE ONTARIO BUILDING CODE AND THE LATEST EDITION OF ULC CAN4-S537.
- .7 ALL COSTS ASSOCIATED WITH THIS INSPECTION BY THE CONTRACTOR AND MANUFACTURER MUST BE CARRIED IN THE TENDER
- .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) .9 THE TEST RESULTS ARE TO BE SUBMITTED TO THE CONSULTANT FOR REVIEW PRIOR TO ISSUING TO OWNER'S REPRESENTATIVES AND/OR AUTHORITIES HAVING JURISDICTION.

	DEVICE	<u>EDWARDS</u>
1	CONTROL PANEL: (CONVENTIONAL /ADDRESSABLE)	EST 3X
	INTELLIGENT DEVICES:	
2	SMOKE DETECTORS	SIGA-PS
3	MONITOR MODULE	SIGA-MM1
4	CONTROL MODULE	SIGA-CR
5	ISOLATOR MODULE	SIGA-IM
	AUXILIARY DEVICES:	
6	STROBE	G1R-VM

EQUIPMENT

- .1 HAND DRYERS .1 HAND DRYERS WHERE NOTED ON THE DRAWINGS ARE TO BE SUPPLIED AND INSTALLED BY THIS DIVISION
 - WITH THE FOLLOWING FEATURES: SURFACE MOUNTING.
 - FIXED NOZZLE. WHITE FINISH WITH AUTOMATIC ACTIVATION.

APPROVED ALTERNATË: AMERICAN DRYER CAT. #GXT

RATING OF 1000W, 120V, THREE SPEED, SET TO MEDIUM SPEED AND LOW HEAT. WORLD DRYER CAT. #SMARTDRI

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commencement of the work.

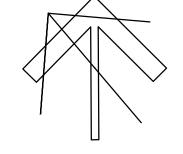
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PROJECT NORTH

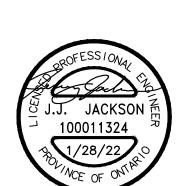




55 Northland Road, Waterloo, ON N2V 1Y8

Phone: 519-725-3555

Project Number: 21046





CHALMERS ST. CAMBRIDGE - PS RENOVATIONS -

> 35 Chalmers St. S Cambridge, ON

> > N1R 5B4

SPECIFICATIONS

PRAWING TITLE:

MAR 2021

PROJECT NO: SCALE: A20002.6 AS NOTED DRAWING NO: REV CHECKED:

LIGHTING SYSTEMS

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

- FIXTURE LED'S MUST BE TESTED IN CONFORMANCE WITH IESNA LM80 STANDARD. 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. 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 REQUEST. .7 LUMEN VALUES INDICATED FOR FIXTURES IN THE PROJECT DOCUMENTS ARE TO BE CONSIDERED AS 'ABSOLUTE' OR
- .8 OTHER THAN FOR SPECIALTY FIXTURES, AND UNLESS OTHERWISE INDICATED, THE MAXIMUM DRIVER CURRENT IS TO BE

.2 SELF-POWERED EMERGENCY 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 EXIT 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 BATTERY: SEALED MAINTENANCE FREE, 10 YEAR LIFE.
 BATTERY MUST BE CAPABLE OF SUPPLYING THE WATTAGE INDICATED FOR A MINIMUM OF 30 MINUTES.
- .7 SIGNAL LIGHTS: "AC POWER ON" CONDITION AND "CHARGING" CONDITION.
- .8 CABINET: FINISH: WHITE.
- .9 AUXILIARY EQUIPMENT: TEST SWITCH.

.3 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
- .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
- .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 ALIGN LUMINAIRES MOUNTED IN CONTINUOUS ROWS TO FORM STRAIGHT UNINTERRUPTED LINES.
- .14 ALIGN LUMINAIRES MOUNTED INDIVIDUALLY PARALLEL OR PERPENDICULAR TO BUILDING GRID LINES.
- .15 ALL LIGHTING BRANCH CIRCUITS ARE TO BE PROVIDED WITH SEPARATE NEUTRALS.
- .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

.5 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:
- 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)
- PROJECT

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.
- IF MATERIAL OR EQUIPMENT IS NOT AS SPECIFIED OR SUBMITTAL IS NOT COMPLETE, IT WILL BE REJECTED BY CONSULTANT. 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.
- PARTIAL SUBMITTALS WILL NOT BE ACCEPTED. CATALOG DATA OR SHOP DRAWINGS FOR EQUIPMENT, WHICH ARE NOTED AS BEING REVIEWED BY CONSULTANT OR HIS ENGINEER
- SHALL NOT SUPERSEDE CONTRACT DOCUMENTS. 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.
- 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. .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: FIRE ALARM SYSTEM COMPONENTS
 - LUMINAIRES EMERGENCY BATTERY UNITS AND FIXTURES
 - STARTERS, CONTACTORS, AND CONTROL DEVICES
- FIRESTOPPING MATERIALS HAND DRYERS
- LIGHTING CONTROL DEVICES WIRING DEVICES

<u>FIRESTOPPING</u>

- .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
- .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 "FIREWRÀP" 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
- .7 FIRESTOPPING MATERIALS ARE TO CONSIST OF A COMPONENT SEALANT APPLIED WITH A CONVENTIONAL CAULKING GUN AND
- .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
- .11 SUBMIT PRODUCT LITERATURE AND INSTALLATION MATERIAL ON FIRESTOPPING IN SHOP DRAWING AND PRODUCT DATA MANUAL.
- .12 ACCEPTABLE MANUFACTURERS:
- FYREESLEEVE INDUSTRIES INC GENERAL ELECTRIC PENSIL FIRESTOP SYSTEMS
- INTERNATIONAL PROTECTIVE COATINGS CORP. RECTORSEAL CORPORATION (METACAULK)
- PROSET SYSTEMS
- AD SYSTEMS
- ROYAL

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.

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work. commencement of the work.

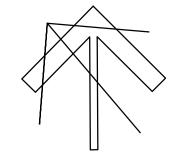
The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work.

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.

PROJECT NORTH





Project Number: 21046

MECHANICAL | ELECTRICAL | AQUATIC 55 Northland Road, Waterloo, ON N2V 1Y8 Phone: 519-725-3555





CHALMERS ST. CAMBRIDGE - PS RENOVATIONS -

> 35 Chalmers St. S Cambridge, ON

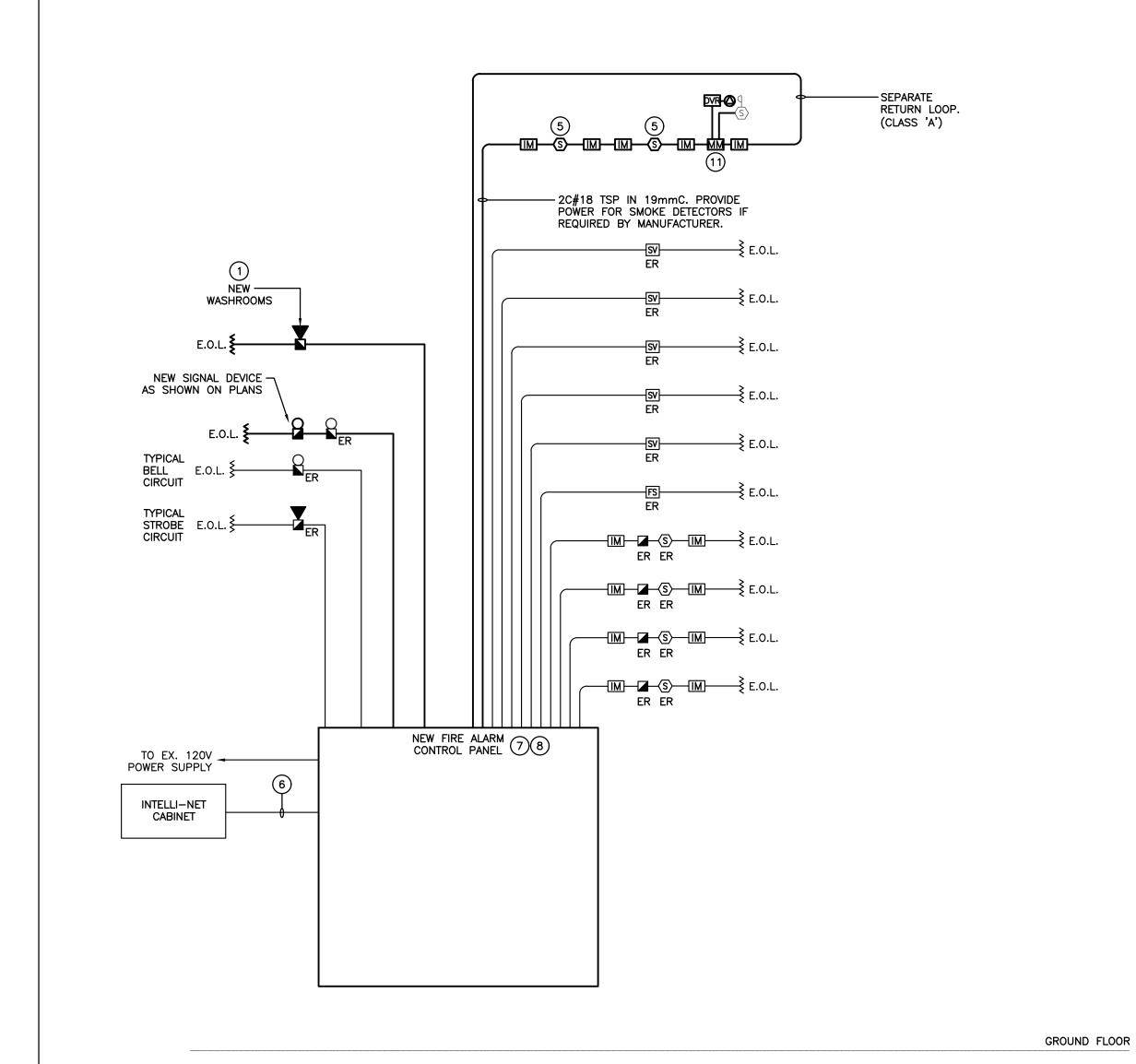
> > N1R 5B4

PRAWING TITLE:

MAR 2021

SPECIFICATIONS PROJECT NO: SCALE: A20002.6 AS NOTED

DRAWING NO: REV. CHECKED



Zone	Description	Alarm	Supervisory	Existing
1	NORTH WING	•		•
2	SOUTH WING	•		•
3	EAST WING	•		•
4	UPPER NORTH WING	•		•
5	PORTABLES	•		•
6	EAST WING SPRINKLER FLOW	•		•
7	BACKFLOW VALVE SV1		•	•
8	BACKFLOW VALVE SV2		•	•
9	EAST WING VALVE SV3		•	•
10	STANDPIPE SV4		•	•
11	FIRE SMOKE DAMPERS	•		
12				
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24 25				

NOTES

- 1 REFER TO FLOOR PLANS FOR EXACT LOCATION AND QUANTITIES OF DEVICES.
- 2 CONTRACTOR IS TO CONFIRM WIRE SIZE (BASED UPON LENGTH OF CIRCUIT RUN AND QUANTITY OF SIGNALS) FOR SIGNAL CIRCUIT WITH MANUFACTURER.
- 3 PROVIDE THE REQUIRED NUMBER OF SIGNAL CIRCUITS TO SUIT THE QUANTITY OF STROBES. SIGNAL CIRCUITS ARE TO BE ALTERNATED.
- 4 LOCATE END OF LINE RESISTORS AND ISOLATOR MODULES IN SERVICE ROOMS AT ± 1.8 M AFF. PROVIDE LAMICOID LABEL INDICATING ZONE LABEL AND NUMBER.
- 5 INDICATES NEW ADDRESSABLE SMOKE DETECTORS TO BE CROSS ZONED WITH EXISTING CONVENTIONAL ZONE(S). REFER TO OVERALL PLAN ON DRAWING E1.1 FOR NEW SMOKE DETECTORS TO BE INSTALLED OUTSIDE "AREA OF WORK".
- 6 RECONNECT TO EXISTING INTELLI-NET CABINET.
- 7 PROVIDE WITHIN CONTROL PANEL ADDITIONAL CONTACTS FOR "FIRE ALARM SYSTEM TROUBLE" AND "FIRE ALARM SYSTEM ACTIVATED" CONDITION AND CO-ORDINATE WITH CONTROLS CONTRACTOR TO COMPLETE CONNECTION/INTERFACE OF THESE SYSTEMS.
- 8 EXISTING CONVENTIONAL FIRE ALARM CONTROL PANEL SHALL BE DISCONNECTED AND REMOVED COMPLETE, ALL EXISTING INITIATING / SIGNAL WIRING IS TO REMAIN FOR RECONNECTION TO NEW HYBRID PANEL.
- 9 INDICATES CONVENTIONAL LOOP MODULE FOR EXISTING PORTABLE CLASSROOM DEVICES.
- 10 INDICATES (CONVENTIONAL TYPE) DEVICES WITHIN EXISTING PORTABLE CLASSROOMS.
- 11 INDICATES 120V POWER AND FIRE ALARM CONNECTIONS TO SMOKE/FIRE DAMPER WITH INTEGRAL SMOKE DETECTOR. 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 MONITORING MODULE(S) PER SMOKE/FIRE DAMPER TO 120V POWER SUPPLY CONNECTION TO THE DAMPER ACTUATOR, AND INTEGRAL SMOKE DETECTOR ALARM AS SIGNAL. A TROUBLE CONDITION SHALL BE ACTIVATED DUE TO THE LOSS OF AC POWER AT THE MAIN CONTROL PANEL, CONSISTING OF AUDIBLE AND VISUAL TROUBLE SIGNAL UNTIL ACKNOWLEDGED BY OPERATOR.

PHASING OF FIRE ALARM SYSTEMS

THE EXISTING FIRE ALARM SYSTEM MUST REMAIN IN OPERATION THROUGHOUT CONSTRUCTION OF THE NEW SYSTEM. CONTRACTOR SHALL INSTALL NEW WIRING FOR ALL REPLACEMENT DEVICES TO ACCESSIBLE LOCATION FOR FINAL SWITCHOVER TO NEW DEVICE UPON REMOVAL OF EXISTING. PERFORM VERIFICATION IN STAGES WHICH WILL ALLOW FOR MINIMAL DOWNTIME DURING SWITCHOVER. INCLUDE FOR MULTIPLE VERIFICATIONS AS NECESSARY. FIRE WATCH SHALL BE PROVIDED WHENEVER PROTECTION IS NOT ABLE TO BE MAINTAINED. INCLUDE IN CONTRACT FOR INTERCONNECTION BETWEEN THE NEW AND EXISTING SYSTEMS DURING SWITCHOVER. MAINTAIN EXISTING MONITORING UNTIL SUCH TIME AS NEW MONITORING IS IN PLACE. THE CONTRACTOR IS TO INCLUDE IN THE TENDER THE PROVISION AND INSTALLATION OF ADDITIONAL FIRE ALARM DEVICES NOT INDICATED ON THIS DRAWING. REFER TO SPECIFICATIONS.

FIRE ALARM RISER DIAGRAM (1)(2)(4)

B-FIRE ALARM RISER DIAGRAM AND SCHEDULE SCALE: NTS

A 22.01.31 Issued for Tender
1 21.04.16 Issued for Owner Review
NO. DATE: REVISION

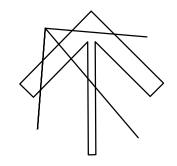
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PROJECT NORTH





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DRAWING TITLE:

MAR 2021

FIRE ALARM RISER

PROJECT NO: SCALE:
A20002.6 AS NOTED

DRAWN: DRAWING NO: REV.

CHECKED: E3.1