

FIRE ALARM NOTES:

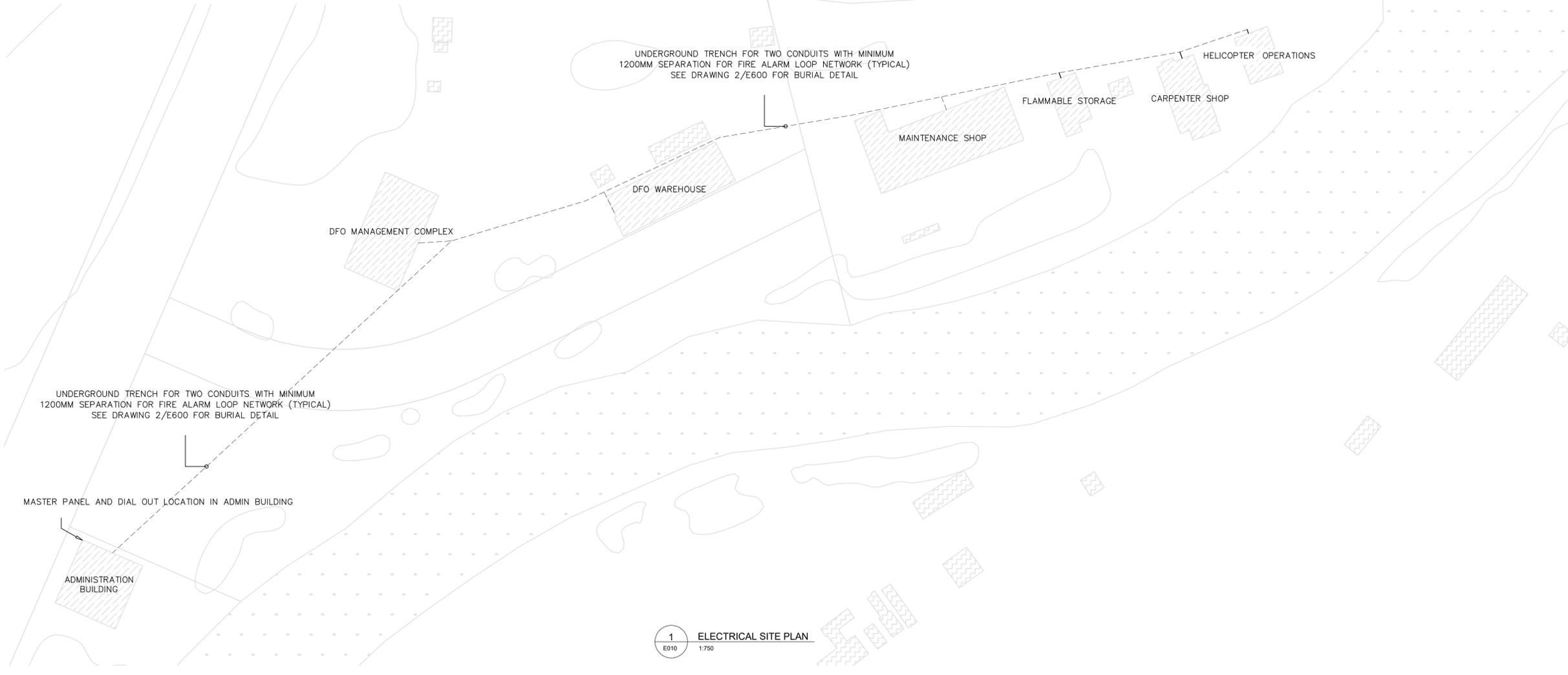
1. FIRE ALARM EOL DEVICES TO BE IN SEPARATE OUTLET BOX MOUNTED LESS THAN 1800 A.F.F. LABEL ZONE SERVED ON FACEPLATE.
2. AS PER CAN/ULC S524-19, INSTALL CEILING MOUNTED SMOKE DETECTORS NO CLOSER THAN 100MM FROM WALLS, AND MAINTAIN A SEPARATION OF NOT MORE THAN 6400MM BETWEEN SMOKE DETECTOR AND WALL, AND 12,800MM BETWEEN TWO SMOKE DETECTORS.
3. INSTALL CEILING MOUNTED HEAT DETECTORS NO CLOSER THAN 100MM FROM WALLS, AND MAINTAIN A SEPARATION OF NOT MORE THAN 5300MM BETWEEN SMOKE DETECTORS DEVICE AND WALL, AND 10,600MM BETWEEN TWO HEAT DETECTORS.
4. AS PER CAN/ULC S524-19, PROVIDE FAULT ISOLATORS AT POINTS WHERE THE INITIATION DEVICE LOOP TRAVELS FROM ANY LEVEL TO ANOTHER LEVEL (CRAWLSPACE, MAIN FLOOR, SECOND FLOOR, ETC.) FAULT ISOLATION MODULES SHALL ALSO BE UTILIZED WHEN ENTERING AND LEAVING EACH FIRE ALARM ZONE AS WELL AS THE MECHANICAL/ELECTRICAL ROOMS. AS PER S524-19 6.1.3, IF AN ADDRESSABLE SYSTEM IS USED, ALL DEVICE LOOPS ARE TO BE WIRED AS CLASS A. ENSURE THAT PRIMARY AND ALTERNATE WIRING RUNS ARE IN SEPARATE CONDUITS, WITH MINIMUM OF 300MM BETWEEN VERTICALLY RUN CONDUITS/ CIRCUITS AND MINIMUM 1200MM BETWEEN HORIZONTALLY RUN CONDUITS/CIRCUITS.
 - EXCEPTION A: PRIMARY AND ALTERNATE WIRING CIRCUITS MAY USE SAME CONDUIT TO AND FROM CONTROL UNIT OR TRANSPONDER FOR A DISTANCE NOT TO EXCEED 3M.
 - EXCEPTION B: PRIMARY AND ALTERNATE WIRING CIRCUITS MAY DROP AND RETURN TO AN INDIVIDUAL FIELD DEVICE, IE: PULL STATION BESIDE DOOR FROM JUNCTION BOX AND CONDUIT IN CEILING SPACE, OR FROM CEILING JUNCTION BOX TO T-BAR SUSPENDED DEVICE.
 - EXCEPTION C: PRIMARY AND ALTERNATE WIRING CIRCUITS FOR MULTIPLE DEVICES INSIDE A SINGLE ROOM WITH ROOM SIZE NOT EXCEEDING 100M².
5. FIRE ALARM SCOPE INCLUDES COMPLETE REMOVAL OF EXISTING FIRE ALARM SYSTEMS AND DEVICES IN EACH BUILDING AND REPLACEMENT WITH NEW CAMPUS STYLE NETWORKED FIRE ALARM SYSTEM FOR ENTIRE SITE. EXISTING FIRE ALARM PANELS, ALL ASSOCIATED INITIATING AND SIGNALING DEVICES AND WIRING/CONDUIT TO BE COMPLETELY REMOVED. EXISTING CONDUIT PENETRATIONS TO BE RE-USED WHERE POSSIBLE TO MINIMIZE NEW PENETRATIONS. EACH BUILDING SHALL HAVE A STAND-ALONE FIRE ALARM PANEL FOR LOCAL OPERATION. EACH BUILDING PANEL SHALL BE CONNECTED BY A NETWORK DATA COMMUNICATION LOOP TO THE MAIN FIRE ALARM CONTROL PANEL AND WORKSTATION LOCATED IN THE ADMINISTRATION BUILDING. ANY SUPERVISORY, TROUBLE OR ALARM CONDITION IN ONE BUILDING SHALL BE ANNUNCIATED BOTH LOCALLY AND AT THE MAIN PANEL IN THE ADMINISTRATION BUILDING.
6. FIRE ALARM POWER TO BE SOURCED FROM A NEW BREAKER FROM AN ELECTRICAL PANEL CLOSEST TO POWER ENTRANCE. CIRCUIT TO FEED NO OTHER LOADS. BREAKER TO BE RED IN COLOR AND WITH LOCK-ON DEVICE. MODIFY EXISTING PANEL AS REQUIRED TO ACCOMMODATE NEW BREAKERS.
7. THE TOP OF THE FIRE ALARM CONTROL PANEL, ANNUNCIATOR DISPLAY OR OPERATING CONTROLS SHALL BE NOT MORE THAN 1800 A.F.F.

GENERAL NOTES

1. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM AUTHORITIES HAVING JURISDICTION AND PAY ALL ASSOCIATED FEES.
2. LOCATE JUNCTION AND PULL BOXES AS REQUIRED TO ALLOW ACCESS AFTER EQUIPMENT AND APPEARANCES ARE INSTALLED. COORDINATE LOCATIONS AND ELEVATIONS OF ALL DEVICES WITH DRAWINGS AND WITH SITE CONDITIONS PRIOR TO INSTALLATION.
3. PROTECT PERMANENT BUILDING FINISHES FROM DAMAGE DURING CONSTRUCTION PERIOD. PROVIDE PLYWOOD OR SIMILAR MATERIAL UNDER EQUIPMENT OR MATERIALS STORED ON FLOORS, AND IN AREAS WHERE CONSTRUCTION MAY DAMAGE FINISHES. SURFACES OR FINISHES DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT THE COST OF THE CONTRACTOR AT FAULT.
4. CEILING MOUNTED DEVICES SHALL BE MOUNTED IN THE CENTER OF THE CEILING TILES, UNLESS OTHERWISE NOTED.
5. UPDATE PANEL SCHEDULE WITH THE NEW BREAKER AND CIRCUIT USED FOR THE FIRE ALARM CONTROL PANEL.
6. WHERE PROJECT PHASING IS INDICATED IN ANY PART OF THE WORKING DOCUMENT PACKAGE, THE CONTRACTOR IS TO PLAN WORK SO AS TO FACILITATE SUCH PHASING, OR COORDINATE WITH THE CLIENT
7. DO NOT SCALE THE DRAWINGS. BECAUSE OF THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS OR OTHER SIMILAR ITEMS WHICH MAY BE REQUIRED TO MAKE A COMPLETE OPERATING SYSTEM. CAREFULLY INVESTIGATE CONDITIONS AFFECTING WORK AND INSTALL WORK IN SUCH MANNER THAT INTERFERENCES BETWEEN PIPES, CONDUITS, DUCTS, EQUIPMENT, ARCHITECTURAL AND STRUCTURAL FEATURES SHALL BE AVOIDED.

8. SOME OF THE BUILDINGS INCLUDED IN THE SCOPE OF THIS CONTRACT ARE OVER 40 YEARS OLD AND AS PER TREASURY BOARD POLICY ARE CANDIDATES FOR FHBRO REVIEW. THESE BUILDINGS WILL BE DESIGNATED AS "RECOGNIZED" HERITAGE BUILDINGS. AS SUCH, THE RENOVATIONS IN THESE BUILDINGS SHALL FOLLOW THE STANDARDS AND GUIDELINES FOR CONSERVATION OF HISTORIC PLACES IN CANADA. REFER TO PROJECT SPECIFICATIONS AND HERITAGE CONSERVATION ADVICE REPORT. THE RECOGNIZED BUILDINGS FOR THE PURPOSE OF THIS PROJECT INCLUDE:
 - A. DFO MANAGEMENT COMPLEX
 - B. MAINTENANCE SHOP
 - C. CARPENTER SHOP
 - D. HELICOPTER OPERATIONS
9. EXISTING LIFE SAFETY SYSTEMS SHALL REMAIN FULLY OPERATIONAL THROUGHOUT CONSTRUCTION UNTIL NEW SYSTEMS HAVE BEEN INSTALLED, TESTED AND VERIFIED AS FULLY OPERATIONAL.
10. AFTER NEW LIFE SAFETY SYSTEMS ARE FULLY OPERATIONAL, EXISTING SYSTEMS ARE TO BE COMPLETELY REMOVED

LEGEND	
	FADED SYMBOLS ARE INDICATIVE OF EXISTING DEVICES
	PULL STATION
	POWER PANELBOARD
	HEAT DETECTOR
	END OF LINE RESISTOR
	FIRE ALARM BELL
	SMOKE DETECTOR
	FIRE ALARM CONTROL PANEL
	AUTO-DIALER PANEL (DACT)
	IN-DUCT SMOKE DETECTOR
	EXISTING EMERGENCY REMOTE HEAD (1 LAMP)
	WALL MOUNTED EMERGENCY REMOTE HEAD (2 LAMPS)
	EMERGENCY LIGHTING BATTERY PACK (2 LAMPS)
	EXISTING EMERGENCY LIGHTING BATTERY PACK (1 LAMP)
	WALL MOUNTED EXIT SIGNS (FRONT MOUNTED)
	WALL MOUNTED EXIT SIGN (SIDE MOUNTED)
	CEILING MOUNTED EXIT SIGN (ONE SIDED)
	CIRCUIT PROTECTION
	FIRE ALARM ANNUNCIATOR
	CARBONMONOXIDE DETECTOR
	FIRE ALARM HORN/STROBE
	HARDWIRED CONNECTION
	DISCONNECT SWITCH
	SURFACE MOUNTED LED LUMINAIRE
ABBREVIATIONS	
RM	REMOVE EXISTING DEVICE
WP	WEATHER-PROOF DEVICE



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Date: August 6, 2021
PERMIT NUMBER: P 800
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Revision	Description	Date
0	ISSUED FOR TENDER	2021.08.06

Client: client

Project title: **HAY RIVER, NT
42043 MACKENZIE HWY**
**DEPT. OF FISHERIES & OCEANS
LIFE SAFETY SYSTEMS
REPLACEMENT**

Designed by: H.R. / Conçu par
Drawn by: HANI R. / Dessiné par
Approved by: J.Y. / Approuvé par
PWSCC Project Manager: Y.W. / Administrateur de Projets TPSGC

Drawing title: **ELECTRICAL
LEGEND, GENERAL NOTES
& SITE PLAN**

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
144903068	E010	0
	02 OF 14	



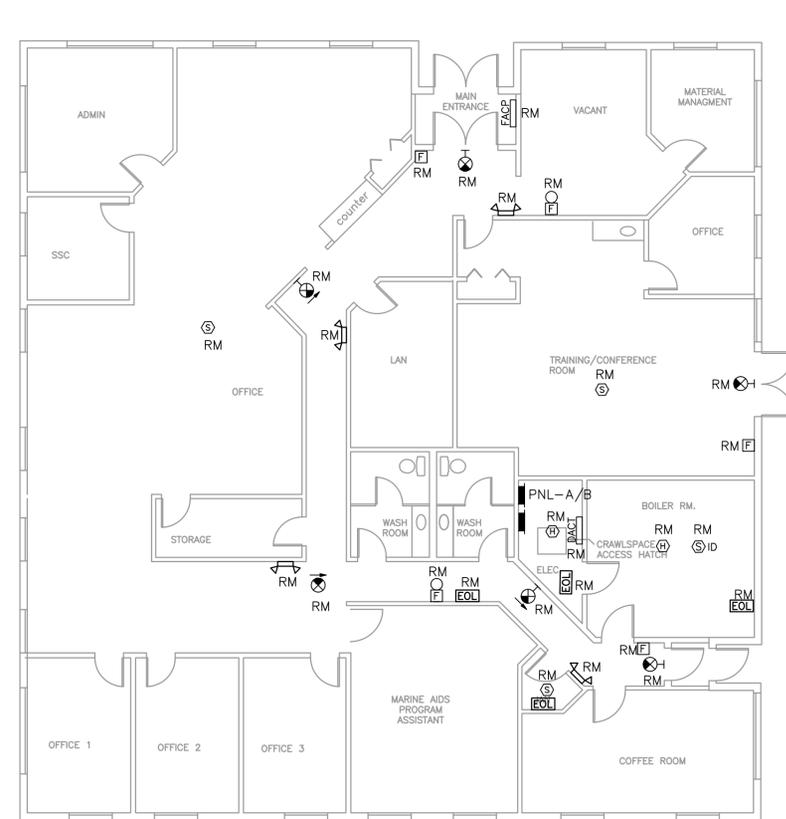
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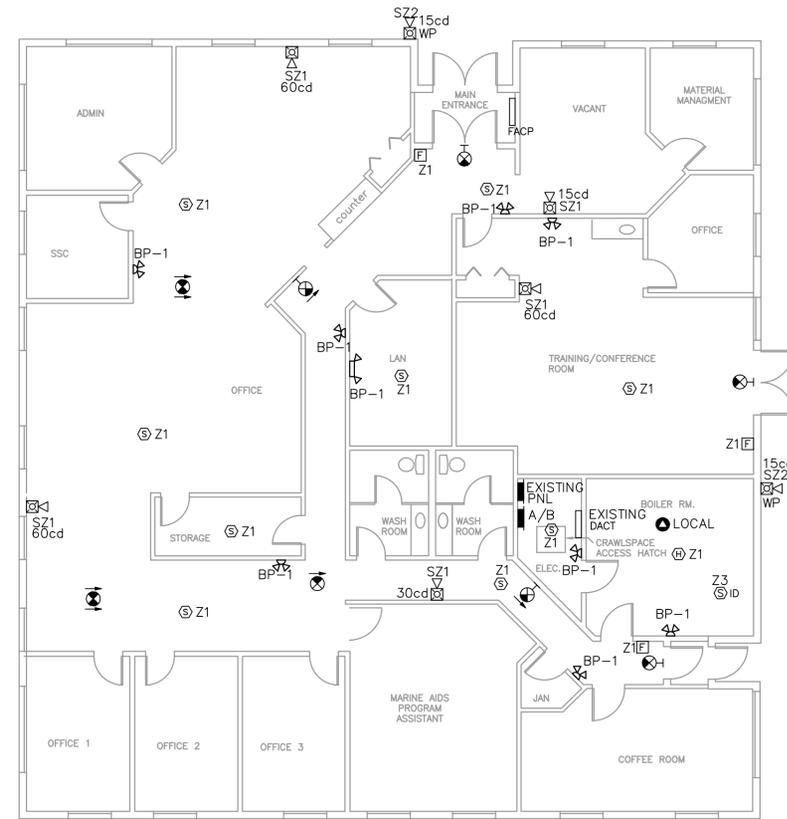
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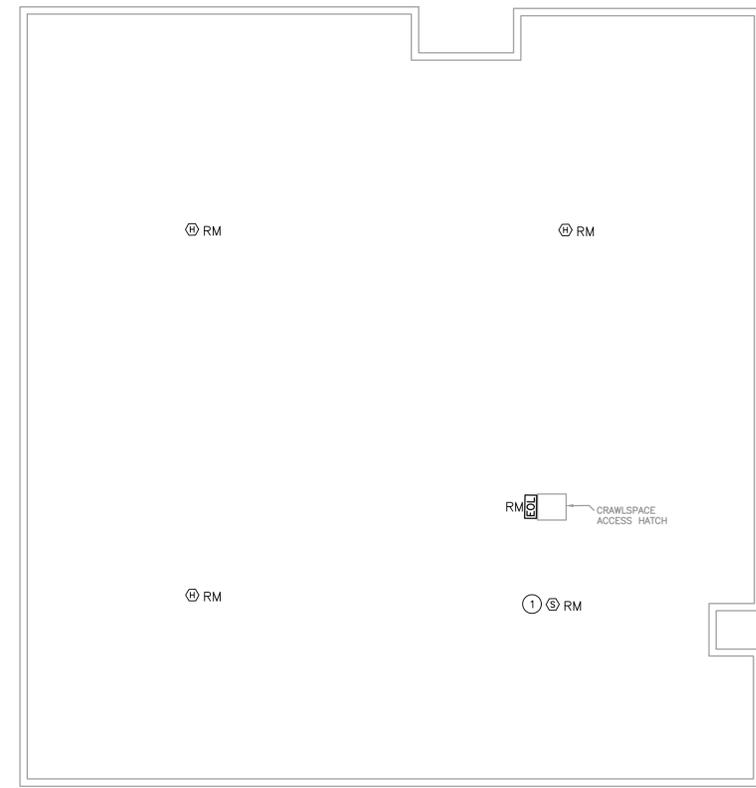
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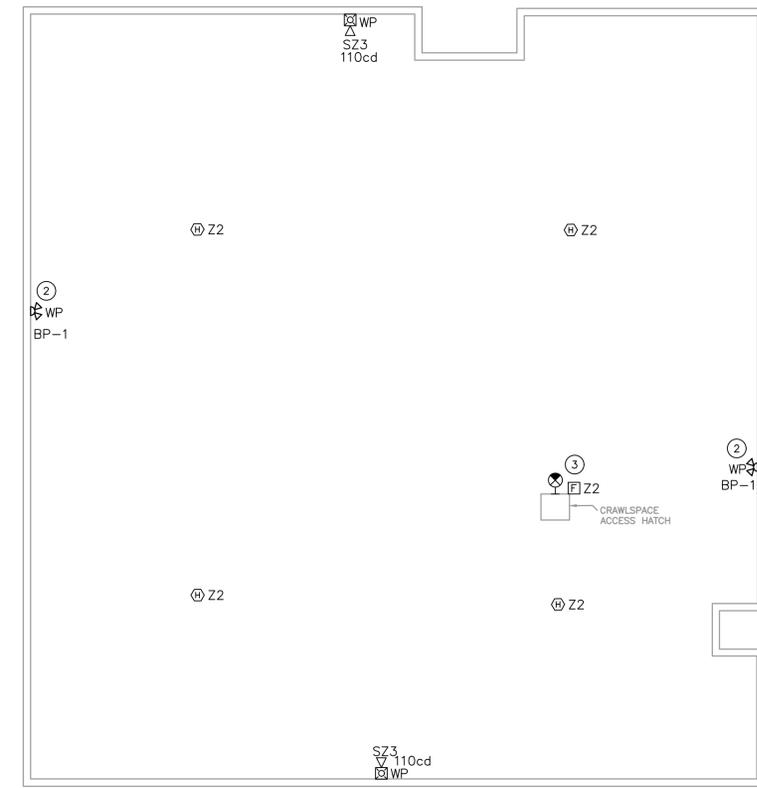
1 ADMIN BUILDING LIFE SAFETY LAYOUT - EXISTING/DEMO
E400 1:100



2 ADMIN BUILDING LIFE SAFETY LAYOUT - NEW
E400 1:100



3 ADMIN BUILDING LIFE SAFETY LAYOUT - CRAWLSPACE EXISTING/DEMO
E400 1:100



4 ADMIN BUILDING LIFE SAFETY LAYOUT - CRAWLSPACE NEW
E400 1:100

KEYNOTES	
1	EXISTING CRAWLSPACE DEVICE QUANTITIES ARE BASED ON INFORMATION PROVIDED BY OTHERS AND WAS NOT INDEPENDENTLY VERIFIED. EXISTING DEVICE LOCATIONS AND TYPES TO BE DETERMINED ON SITE.
2	EMERGENCY LIGHTING TO TURN ON UPON FAILURE OF THE CRAWLSPACE LIGHTING CIRCUIT.
3	DEVICE PLACEMENTS AND MOUNTING TO BE DETERMINED AND COORDINATED AS PER SITE CONDITIONS.

BATTERY PACK SCHEDULE				
ID	LOCATION	TIME (MIN)	POWER (W)	CIRCUITS #
BP#1	CORRIDOR	60	288	N/A

- SIZING IS BASED ON A PARTICULAR MANUFACTURER AT 24V DC WITH 6 WATT MR16 LED LAMPS AND A 5 WATT ALLOWANCE FOR EACH LIGHT.
- HEADS TO BE MOUNTED AT 2200mm A.F.F. TO CENTER.
- BATTERY PACK INDICATED TO BE MINIMUM ALLOWABLE SIZE.
- PROVIDE ZONE SENSING RELAYS AS REQUIRED TO MONITOR CIRCUITS TO NORMAL LIGHTING ZONES WHERE REQUIRED.
- ALL EMERGENCY LIGHTS AND EXIT SIGNS WIRING TO BE FOLLOWED AND ENSURE THEIR CONNECTION AS PER CEC 46-108.
- ALL EMERGENCY LIGHTING CIRCUITS TO MATCH WITH THE EXISTING LIGHTING CIRCUITS.

Revision	Description	Date
0	ISSUED FOR TENDER	2021.08.06

Client: _____ client

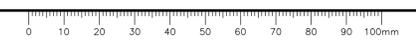
Project title: **HAY RIVER, NT
42043 MACKENZIE HWY
ADMINISTRATION BUILDING**

**DEPT. OF FISHERIES & OCEANS
LIFE SAFETY SYSTEMS
REPLACEMENT**

Designed by: H.R. Conçu par
Drawn by: HANI R. Dessiné par
Approved by: J.Y. Approuvé par
PWSSC Project Manager / Administrateur de Projets TPSGC: Y.W.

Drawing title: **ELECTRICAL
ADMINISTRATION BUILDING
LIFE SAFETY SYSTEMS
EXISTING AND UPGRADE LAYOUTS**

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
144903068	E400	0





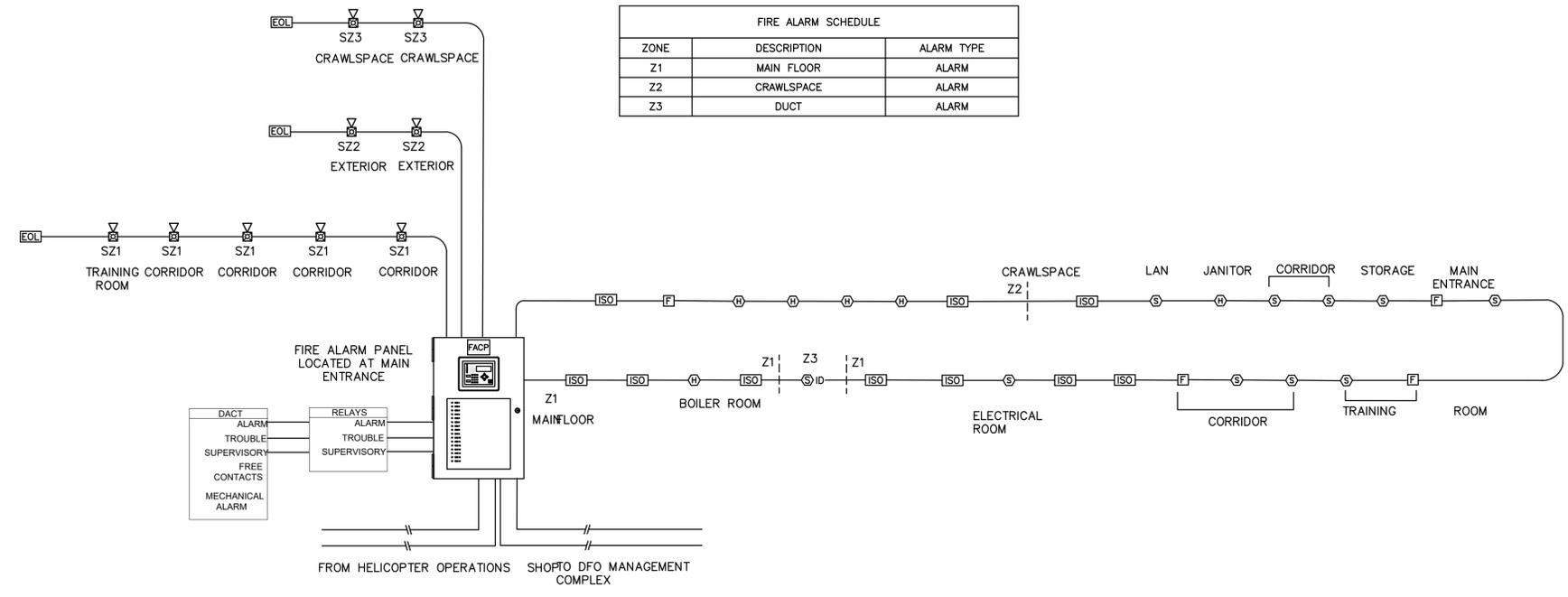
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SIGNAL ZONES		
ZONE	DESCRIPTION	ALARM TYPE
SZ1	ALL OTHER AREAS	ALARM
SZ2	EXTERIOR	ALARM
SZ3	CRAWLSPACE	ALARM

FIRE ALARM SCHEDULE		
ZONE	DESCRIPTION	ALARM TYPE
Z1	MAIN FLOOR	ALARM
Z2	CRAWLSPACE	ALARM
Z3	DUCT	ALARM



FIRE ALARM NOTES:

- AS PER CAN/ULC S524, PROVIDE FAULT ISOLATORS BETWEEN ZONES CONTAINED ON THE SAME ADDRESSABLE LOOP. THE RISER DIAGRAM SHOWN HERE INDICATES PROPER LOCATION FOR LINE ISOLATORS, SHOULD THE SYSTEM BE INSTALLED AS ONE CONTINUOUS CLASS 'A' LOOP WITH THE SAME SEQUENCE OF DEVICES INDICATED.
- THIS RISER IS FOR EXAMPLE ONLY AND CONTRACTOR MAY USE MORE LOOPS AS IS CONVENIENT FOR INSTALLATIONS PROVIDED CAN/ULC S524, 'THE STANDARD FOR INSTALLATION OF FIRE ALARM SYSTEMS' IS ADHERED TO. FAULT ISOLATION MODULES ARE TO BE PROVIDED BETWEEN FIRE COMPARTMENTS SHARING A COMMON LOOP. FAULT ISOLATION MODULES SHOWN HERE MAY REQUIRE TWO (OR MORE) DEVICES INSTALLED BACK-TO-BACK DEPENDING ON ASSEMBLY(IES) PENETRATED AND LOCATION/ROUTE CHOSEN. IN GENERAL, ISOLATORS REQUIRED FOR PENETRATION OF RATED ASSEMBLIES FOR SERVICE ROOMS (INCLUDING ELECTRICAL AND MECHANICAL ROOMS) JANITOR'S ROOMS, STAIR SHAFTS AND BETWEEN FLOORS. FAULT ISOLATOR MODULES THAT ARE INSTALLED BACK-TO-BACK TO BE HORIZONTALLY OFFSET BY MINIMUM OF 400mm AND IF ASSEMBLY PENETRATED IS WOOD OR STEEL-STUD CONSTRUCTION NOT LOCATED WITHIN THE SAME STUD SPACE. REFER TO CAN/ULC-S524, 10.2.
- PROVIDE SURGE PROTECTION DEVICE FOR FIRE ALARM CONTROL PANEL.
- RISER DIAGRAM IS FOR INFORMATION PURPOSES ONLY. QUANTITIES OF SIGNAL AND INITIATING DEVICES ARE GOVERNED BY FLOOR PLANS RATHER THAN THIS RISER.
- PROVIDE A RED COLORED LOCKABLE BREAKER FOR THE FIRE ALARM CONTROL PANEL WITH PROPER LABELING.
- INCLUDE FOR THE GREATEST NUMBER OF DEVICES AND MOST COSTLY SITUATION, SHOULD THERE BE A DISCREPANCY BETWEEN PLANS AND RISER.

1 ADMIN BUILDING - NEW FIRE ALARM RISER DIAGRAM
E401 N.T.S.



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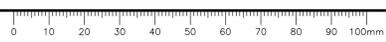
Client: client

Project title: **HAY RIVER, NT
42043 MACKENZIE HWY
ADMINISTRATION BUILDING**
**DEPT. OF FISHERIES & OCEANS
LIFE SAFETY SYSTEMS
REPLACEMENT**

Designed by: H.R. / Conçu par: H.R.
Drawn by: HANI R. / Dessiné par: HANI R.
Approved by: J.Y. / Approuvé par: J.Y.
PWSSC Project Manager: Y.W. / Administrateur de Projets TPSGC: Y.W.

Drawing title: **ELECTRICAL
ADMINISTRATION BUILDING**
**LIFE SAFETY SYSTEMS
FIRE ALARM RISER DIAGRAM**

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
144903068	E401	B





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GENERAL NOTE
 1. THE MAINTENANCE SHOP IS TO BE TREATED AS A RECOGNIZED HERITAGE BUILDING FOR THE PURPOSE OF THIS RENOVATION. REFER TO PROJECT SPECIFICATIONS AND HERITAGE CONSERVATION ADVICE REPORT.

NOTES:
 1. ZONE 2 UP 50mm A.F.F. ALL WIRING AND DEVICES WITHIN HAZARDOUS AREA TO BE RATED FOR THE ZONE AS SHOWN.

Revision	Description	Date
0	ISSUED FOR TENDER	2021.08.06

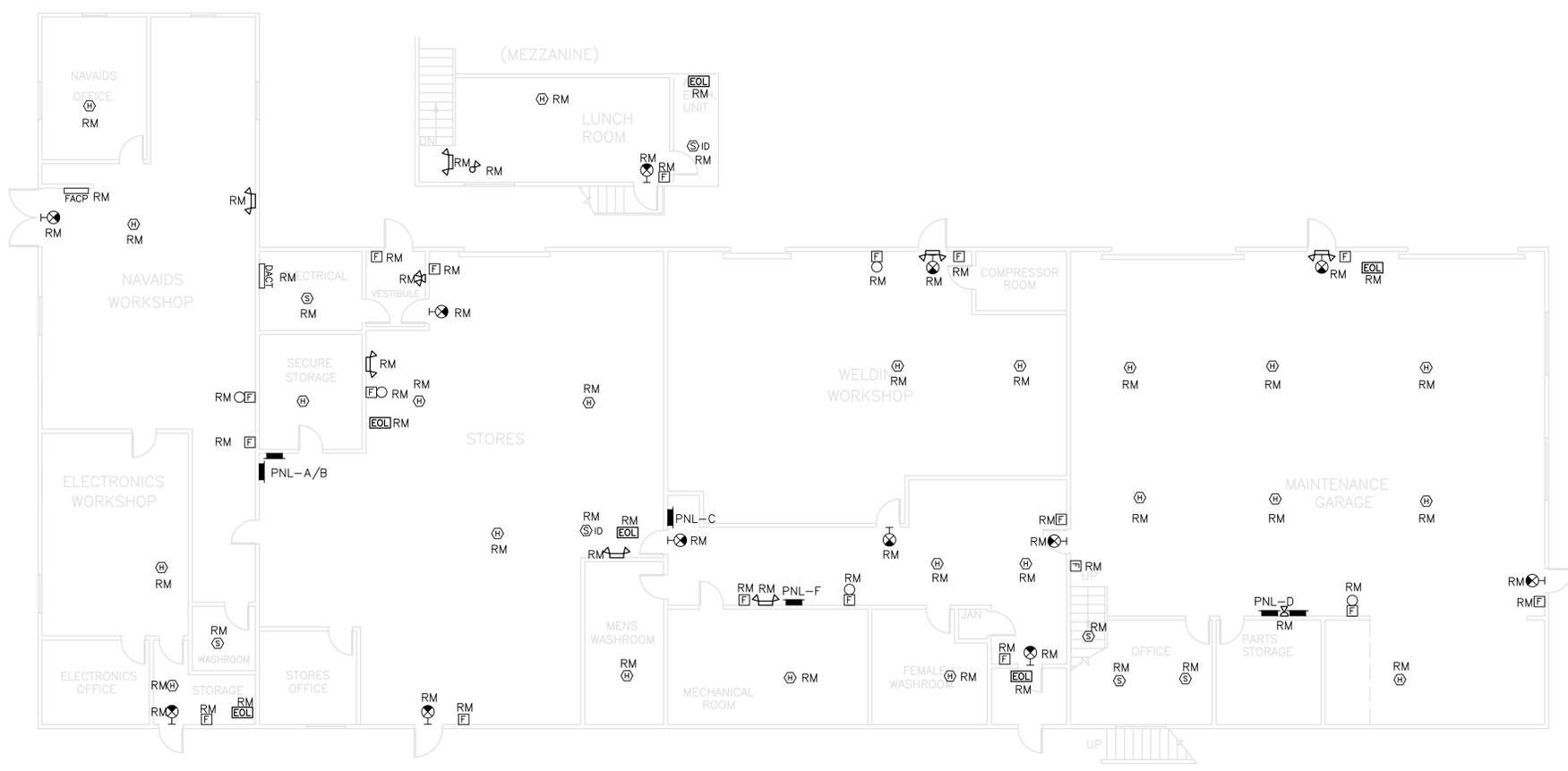
Client	client
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Project title: **HAY RIVER, NT 42043 MACKENZIE HWY MAINTENANCE SHOP**
DEPT. OF FISHERIES & OCEANS LIFE SAFETY SYSTEMS REPLACEMENT

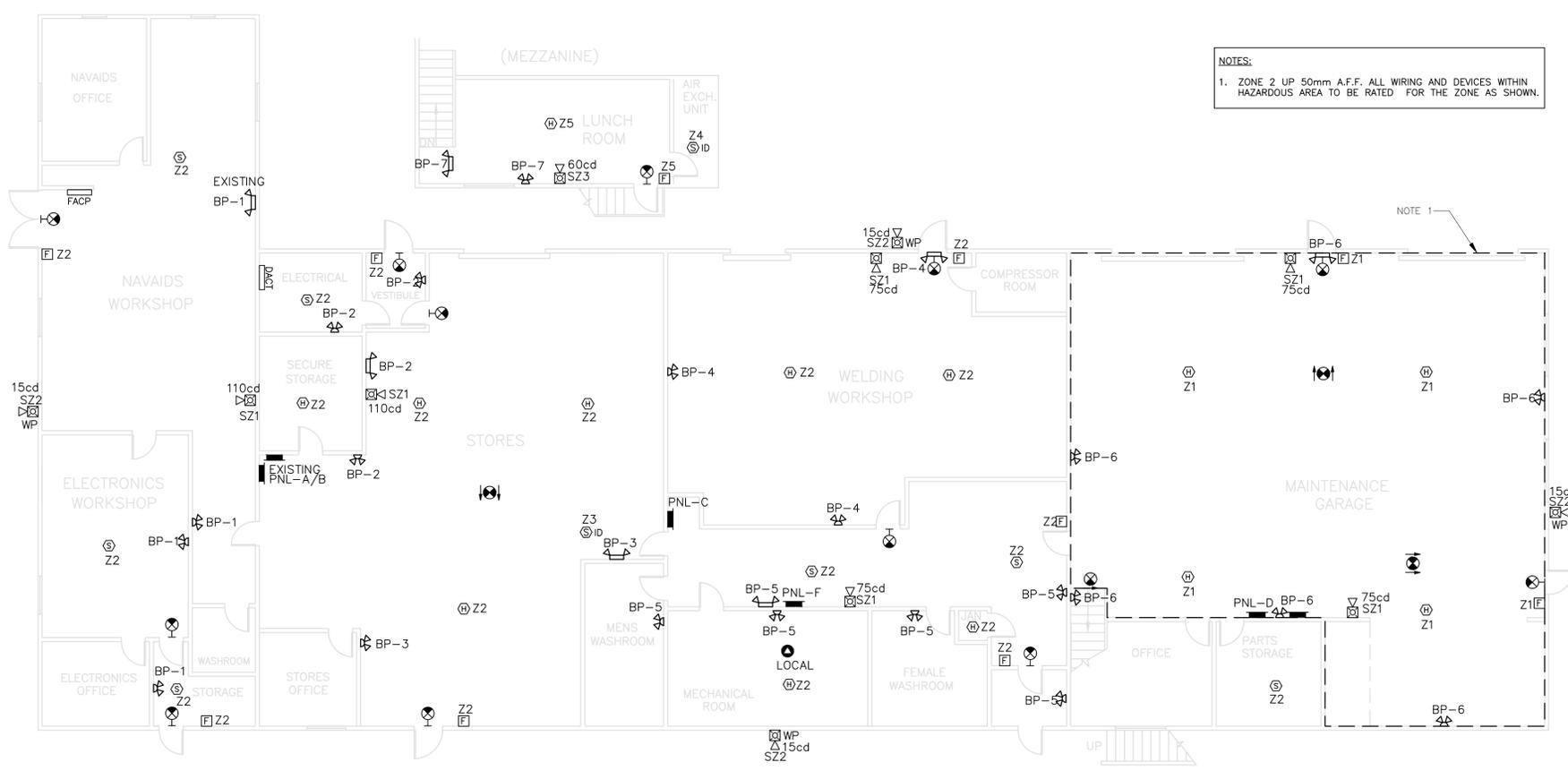
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 Drawn by: **HANI R.** / Dessiné par
 Approved by: **J.Y.** / Approuvé par
 Project Manager: **Y.W.** / Administrateur de Projets TPSGC

Drawing title: **ELECTRICAL MAINTENANCE SHOP LIFE SAFETY SYSTEMS EXISTING AND UPGRADE LAYOUTS**

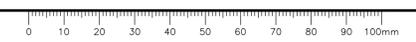
Project no./No. du projet	Drawing no./No. du dessin	Revision no.
144903068	E410	0
	05 OF 14	



1 MAINTENANCE SHOP LIFE SAFETY LAYOUT- EXISTING/DEMO
 E410 1:100



2 MAINTENANCE SHOP LIFE SAFETY LAYOUT - NEW
 E410 1:100





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BATTERY PACK SCHEDULE				
ID	LOCATION	TIME (MIN)	POWER (W)	CIRCUITS #
BP#1	CORRIDOR	60	144	N/A
BP#2	STORES	60	144	N/A
BP#3	STORES	60	144	N/A
BP#4	WELDING SHOP	60	144	N/A
BP#5	STORES	60	144	N/A
BP#6	MAINTENANCE GARAGE	60	200	N/A
BP#7	LUNCH ROOM	60	144	N/A

- SIZING IS BASED ON A PARTICULAR MANUFACTURER AT 24V DC WITH 6 WATT MR16 LED LAMPS AND A 5 WATT ALLOWANCE FOR EACH LIGHT.
- HEADS TO BE MOUNTED AT 2200mm A.F.F. TO CENTER.
- BATTERY PACK INDICATED TO BE MINIMUM ALLOWABLE SIZE.
- PROVIDE ZONE SENSING RELAYS AS REQUIRED TO MONITOR CIRCUITS TO NORMAL LIGHTING ZONES WHERE REQUIRED.
- ALL EMERGENCY LIGHTS AND EXIT SIGNS WIRING TO BE FOLLOWED AND ENSURE THEIR CONNECTION AS PER CEC 46-108.
- ALL EMERGENCY LIGHTING CIRCUITS TO MATCH WITH THE EXISTING LIGHTING CIRCUITS.

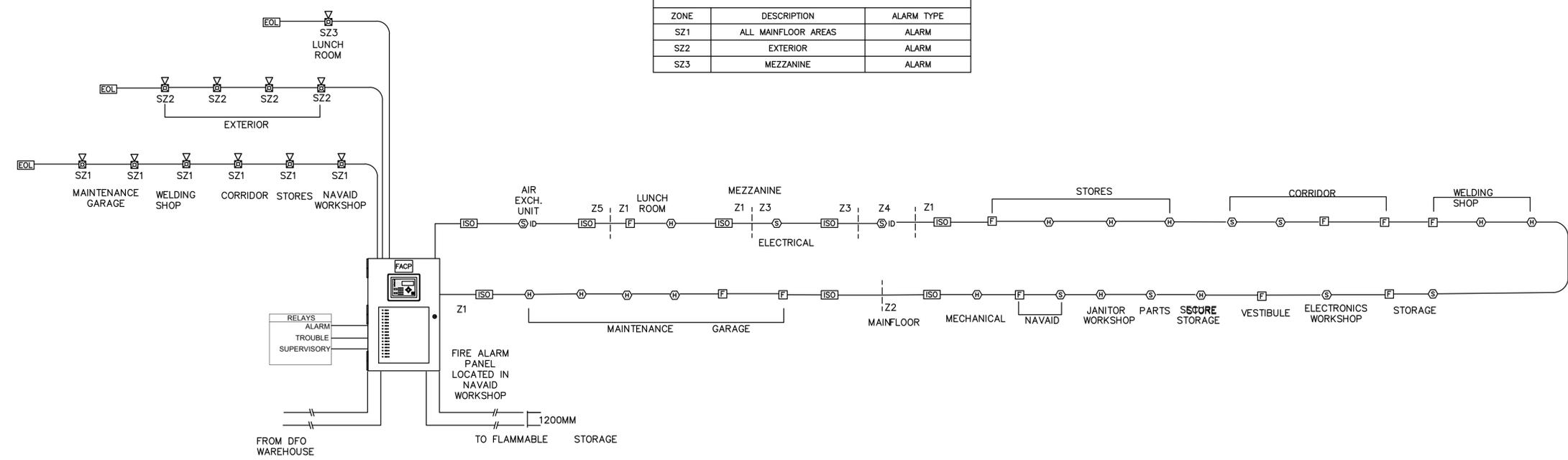
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- PROVIDE SURGE PROTECTION DEVICE FOR FIRE ALARM CONTROL PANEL.
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- PROVIDE A RED COLORED LOCKABLE BREAKER FOR THE FIRE ALARM CONTROL PANEL WITH PROPER LABELING.
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1 MAINTENANCE SHOP - BATTERY PACK SCHEDULE
E411 N.T.S.

FIRE ALARM SCHEDULE		
ZONE	DESCRIPTION	ALARM TYPE
Z1	MAINTENANCE GARAGE	ALARM
Z2	ALL MAIN FLOOR AREAS	ALARM
Z3	MEZZANINE	ALARM

NEW SIGNAL ZONES		
ZONE	DESCRIPTION	ALARM TYPE
SZ1	ALL MAINFLOOR AREAS	ALARM
SZ2	EXTERIOR	ALARM
SZ3	MEZZANINE	ALARM



2 MAINTENANCE SHOP - NEW FIRE ALARM RISER DIAGRAM
E411 N.T.S.



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Client: _____ client

Project title: **HAY RIVER, NT
42043 MACKENZIE HWY
MAINTENANCE SHOP**

**DEPT. OF FISHERIES & OCEANS
LIFE SAFETY SYSTEMS
REPLACEMENT**

Designed by: H.R. Conçu par

Drawn by: HANI R. Dessiné par

Approved by: J.Y. Approuvé par

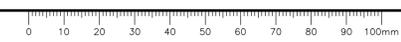
PWSSC Project Manager / Administrateur de Projets TPSGC
Y.W.

Drawing title: **ELECTRICAL
MAINTENANCE SHOP
FIRE ALARM RISER DIAGRAM**

Project no./No. du projet: **144903068**

Drawing no./No. du dessin: **E411**

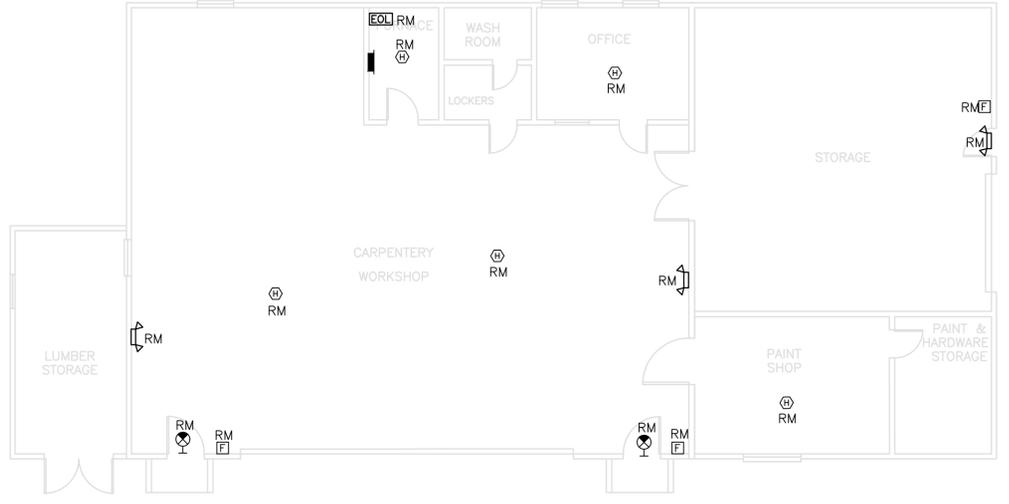
Revision no.: **0**



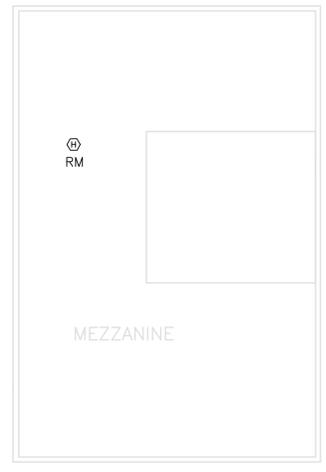


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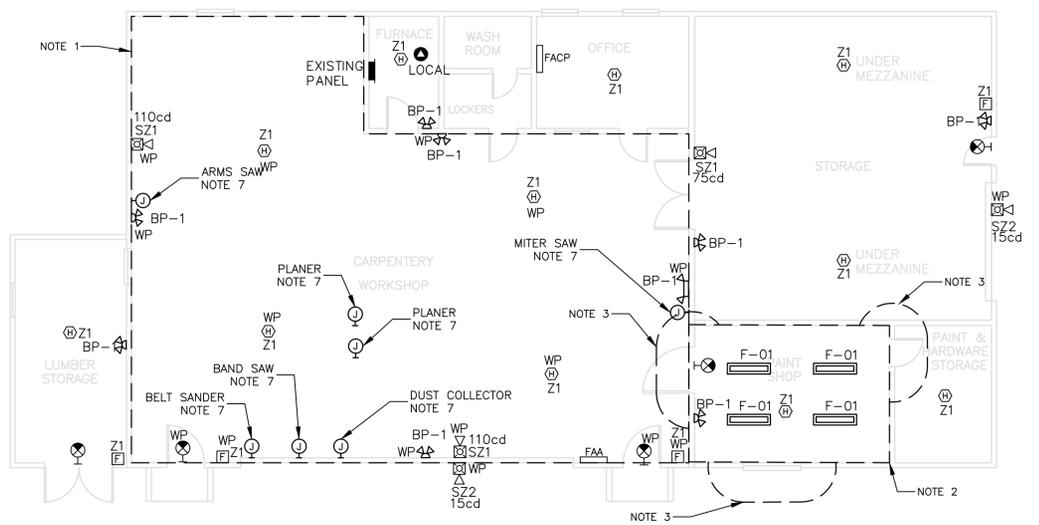
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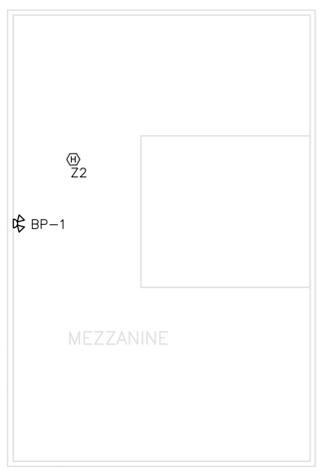
1 CARPENTER SHOP LIFE SAFETY LAYOUT - EXISTING/DEMO
 E420 1:100



3 CARPENTER SHOP LIFE SAFETY LAYOUT - MEZZANINE EXISTING/DEMO
 E420 1:100



2 CARPENTER SHOP LIFE SAFETY LAYOUT - NEW
 E420 1:100



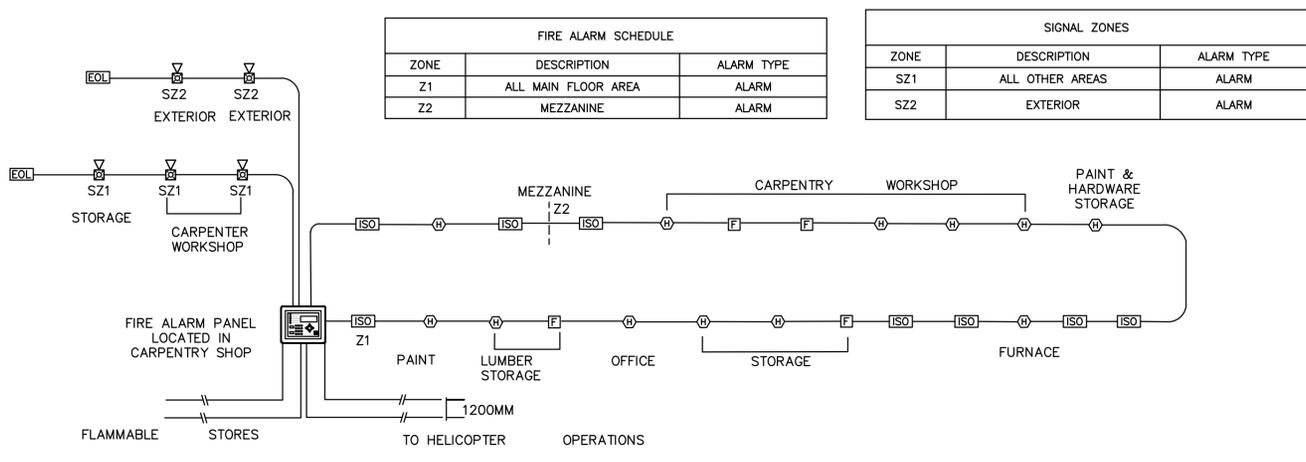
4 CARPENTER SHOP LIFE SAFETY LAYOUT - MEZZANINE NEW
 E420 1:100

GENERAL NOTE
 1. THE CARPENTER SHOP IS TO BE TREATED AS A RECOGNIZED HERITAGE BUILDING FOR THE PURPOSE OF THIS RENOVATION. REFER TO PROJECT SPECIFICATIONS AND HERITAGE CONSERVATION ADVICE REPORT.

FIRE ALARM NOTES:

- AS PER CAN/ULC S524, PROVIDE FAULT ISOLATORS BETWEEN ZONES CONTAINED ON THE SAME ADDRESSABLE LOOP. THE RISER DIAGRAM SHOWN HERE INDICATES PROPER LOCATION FOR LINE ISOLATORS, SHOULD THE SYSTEM BE INSTALLED AS ONE CONTINUOUS CLASS 'A' LOOP WITH THE SAME SEQUENCE OF DEVICES INDICATED.
- THIS RISER IS FOR EXAMPLE ONLY AND CONTRACTOR MAY USE MORE LOOPS AS IS CONVENIENT FOR INSTALLATIONS PROVIDED CAN/ULC S524, 'THE STANDARD FOR INSTALLATION OF FIRE ALARM SYSTEMS' IS ADHERED TO. FAULT ISOLATION MODULES ARE TO BE PROVIDED BETWEEN FIRE COMPARTMENTS SHARING A COMMON LOOP. FAULT ISOLATION MODULES SHOWN HERE MAY REQUIRE TWO (OR MORE) DEVICES INSTALLED BACK-TO-BACK DEPENDING ON ASSEMBLY(IES) PENETRATED AND LOCATION/ROUTE CHOSEN. IN GENERAL, ISOLATORS REQUIRED FOR PENETRATION OF RATED ASSEMBLIES FOR SERVICE ROOMS (INCLUDING ELECTRICAL AND MECHANICAL ROOMS) JANITOR'S ROOMS, STAIR SHAFTS AND BETWEEN FLOORS. FAULT ISOLATOR MODULES THAT ARE INSTALLED BACK-TO-BACK TO BE HORIZONTALLY OFFSET BY MINIMUM OF 400mm AND IF ASSEMBLY PENETRATED IS WOOD OR STEEL-STUD CONSTRUCTION NOT LOCATED WITHIN THE SAME STUD SPACE. REFER TO CAN/ULC-S524, 10.2.
- PROVIDE SURGE PROTECTION DEVICE FOR FIRE ALARM CONTROL PANEL.
- RISER DIAGRAM IS FOR INFORMATION PURPOSES ONLY. QUANTITIES OF SIGNAL AND INITIATING DEVICES ARE GOVERNED BY FLOOR PLANS RATHER THAN THIS RISER.
- PROVIDE A RED COLORED LOCKABLE BREAKER FOR THE FIRE ALARM CONTROL PANEL WITH PROPER LABELING.
- INCLUDE FOR THE GREATEST NUMBER OF DEVICES AND MOST COSTLY SITUATION, SHOULD THERE BE A DISCREPANCY BETWEEN PLANS AND RISER.
- DUST COLLECTOR TO BE INTERLOCKED WITH CIRCUITS FOR FIXED WOODWORKING EQUIPMENT SUCH THAT ACTIVATION OF THE DUST COLLECTOR WILL ENERGIZE CONTACTORS SERVING WOODWORKING EQUIPMENT. IT SHALL NOT BE POSSIBLE TO OPERATE WOODWORKING EQUIPMENT UNLESS DUST COLLECTOR IS ENERGIZED. PROVIDE ALL CURRENT SENSORS, RELAYS, CONTACTORS AND WIRING AS REQUIRED.

- NOTES:**
- ZONE 22. ALL WIRING AND DEVICES WITHIN HAZARDOUS AREA TO BE RATED FOR THE ZONE AS SHOWN.
 - ZONE 1. ALL WIRING AND DEVICES WITHIN HAZARDOUS AREA TO BE RATED FOR THE ZONE AS SHOWN.
 - ZONE 2. ALL WIRING AND DEVICES WITHIN HAZARDOUS AREA TO BE RATED FOR THE ZONE AS SHOWN.



5 CARPENTER SHOP - NEW FIRE ALARM RISER DIAGRAM
 N.T.S.

FIRE ALARM SCHEDULE		
ZONE	DESCRIPTION	ALARM TYPE
Z1	ALL MAIN FLOOR AREA	ALARM
Z2	MEZZANINE	ALARM

SIGNAL ZONES		
ZONE	DESCRIPTION	ALARM TYPE
SZ1	ALL OTHER AREAS	ALARM
SZ2	EXTERIOR	ALARM

LUMINAIRE SCHEDULE FOR PAINT SHOP										
TYPE	DESCRIPTION	MOUNTING	MANUFACTURER	CATALOG NO.	ALTERNATIVE MANUFACTURERS	LUMENS	COLOR	WATTS	VOLTS	COMMENTS/NOTES
F01	LINEAR	SURFACE	EATON	HAZARD-GARD XPLA	ABB L11 SERIES, HAZLUX 7XFM	3800	4000K	59	120	CLASS 1, DIV. 1
RH	REMOTE HEAD	WALL MOUNTED	BEGHELLI	SICURA REMOTE	ABB EFXPR LED SERIES, READY-LITE RFX SERIES	-	-	-	-	CLASS 1, DIV. 1
EXT	EXIT SIGN	WALL MOUNTED	BEGHELLI	SICURA RM	EATON CEAG EXIT, ABB EX SERIES	-	-	-	-	CLASS 1, DIV. 1



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Revision	Description	Date
0	ISSUED FOR TENDER	2021.08.06

Client: client

Project title: **HAY RIVER, NT 42043 MACKENZIE HWY CARPENTER SHOP**
DEPT. OF FISHERIES & OCEANS LIFE SAFETY SYSTEMS REPLACEMENT

Designed by: H.R. / Conçu par: H.R.
 Drawn by: HANI R. / Dessiné par: HANI R.
 Approved by: J.Y. / Approuvé par: J.Y.
 Project Manager: J.W. / Administrateur de Projets: J.W.

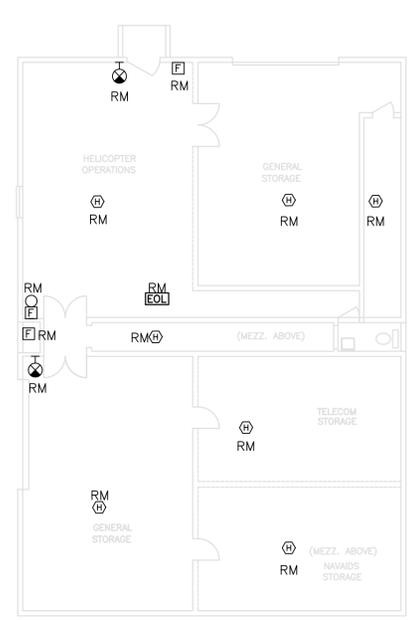
Drawing title: **ELECTRICAL CARPENTER SHOP LIFE SAFETY SYSTEMS EXISTING AND UPGRADE LAYOUTS**

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
144903068	E420	0

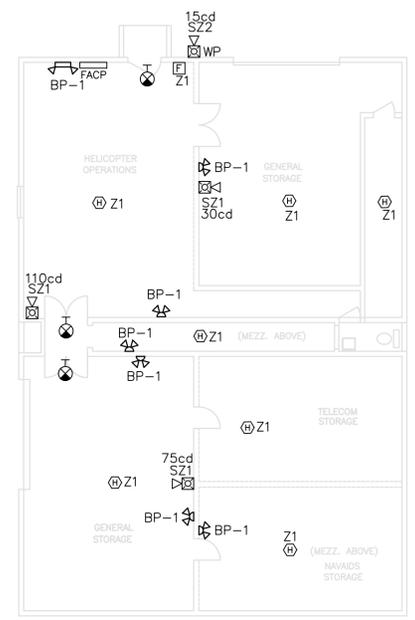


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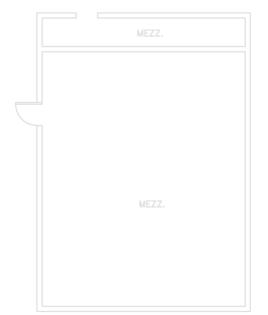
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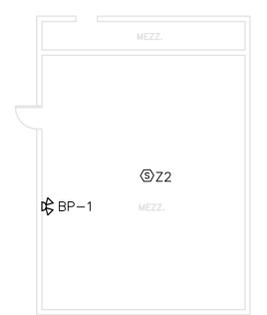
1 HELICOPTER OPERATIONS LIFE SAFETY LAYOUT - EXISTING/DEMO
 E430 1:100



3 HELICOPTER OPERATIONS LIFE SAFETY LAYOUT - NEW
 E430 1:100



2 HELICOPTER OPERATIONS LIFE SAFETY LAYOUT - MEZZANINE EXISTING/DEMO
 E430 1:100



4 HELICOPTER OPERATIONS LIFE SAFETY LAYOUT - MEZZANINE NEW
 E430 1:100

GENERAL NOTE
 1. THE HELICOPTER OPERATIONS IS TO BE TREATED AS A RECOGNIZED HERITAGE BUILDING FOR THE PURPOSE OF THIS RENOVATION. REFER TO PROJECT SPECIFICATIONS AND HERITAGE CONSERVATION ADVICE REPORT.

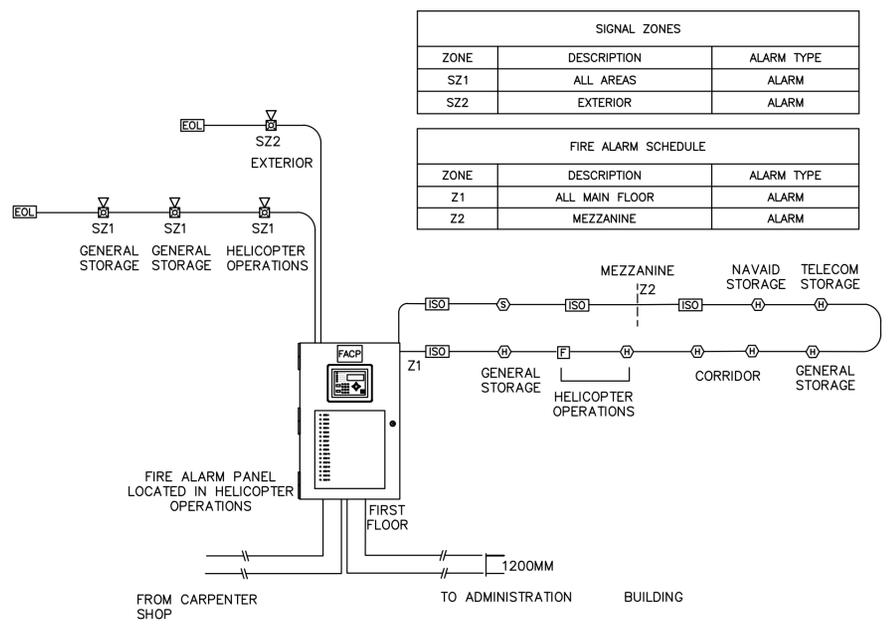
FIRE ALARM NOTES:

- AS PER CAN/ULC S524, PROVIDE FAULT ISOLATORS BETWEEN ZONES CONTAINED ON THE SAME ADDRESSABLE LOOP. THE RISER DIAGRAM SHOWN HERE INDICATES PROPER LOCATION FOR LINE ISOLATORS, SHOULD THE SYSTEM BE INSTALLED AS ONE CONTINUOUS CLASS 'A' LOOP WITH THE SAME SEQUENCE OF DEVICES INDICATED.
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- PROVIDE SURGE PROTECTION DEVICE FOR FIRE ALARM CONTROL PANEL.
- RISER DIAGRAM IS FOR INFORMATION PURPOSES ONLY. QUANTITIES OF SIGNAL AND INITIATING DEVICES ARE GOVERNED BY FLOOR PLANS RATHER THAN THIS RISER.
- PROVIDE A RED COLORED LOCKABLE BREAKER FOR THE FIRE ALARM CONTROL PANEL WITH PROPER LABELING.
- INCLUDE FOR THE GREATEST NUMBER OF DEVICES AND MOST COSTLY SITUATION, SHOULD THERE BE A DISCREPANCY BETWEEN PLANS AND RISER.



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5 HELICOPTER OPERATIONS - NEW FIRE ALARM RISER DIAGRAM
 E400 N.T.S.

ID	LOCATION	TIME (MIN)	POWER (W)	CIRCUITS #
BP#1	CORRIDOR	60	200	N/A

- SIZING IS BASED ON A PARTICULAR MANUFACTURER AT 24V DC WITH 6 WATT MR16 LED LAMPS AND A 5 WATT ALLOWANCE FOR EACH LIGHT.
- HEADS TO BE MOUNTED AT 2200mm A.F.F. TO CENTER.
- BATTERY PACK INDICATED TO BE MINIMUM ALLOWABLE SIZE.
- PROVIDE ZONE SENSING RELAYS AS REQUIRED TO MONITOR CIRCUITS TO NORMAL LIGHTING ZONES WHERE REQUIRED.
- ALL EMERGENCY LIGHTS AND EXIT SIGNS WIRING TO BE FOLLOWED AND ENSURE THEIR CONNECTION AS PER CEC 46-108.
- ALL EMERGENCY LIGHTING CIRCUITS TO MATCH WITH THE EXISTING LIGHTING CIRCUITS.

4 BATTERY PACK SCHEDULE
 E430 N.T.S.

Project title: **HAY RIVER, NT 42043 MACKENZIE HWY HELICOPTER OPERATIONS SHOP**

DEPT. OF FISHERIES & OCEANS LIFE SAFETY SYSTEMS REPLACEMENT

Designed by: HANI R. / Conçu par: HANI R.
 Drawn by: HANI R. / Dessiné par: HANI R.
 Approved by: J.Y. / Approuvé par: J.Y.
 PWSSC Project Manager: Y.W. / Administrateur de Projets TPSOC: Y.W.

Drawing title: **ELECTRICAL HELICOPTER OPERATIONS SHOP LIFE SAFETY SYSTEMS EXISTING AND UPGRADE LAYOUTS**

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
144903068	E430	0

08 OF 14



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Revision	Description	Date
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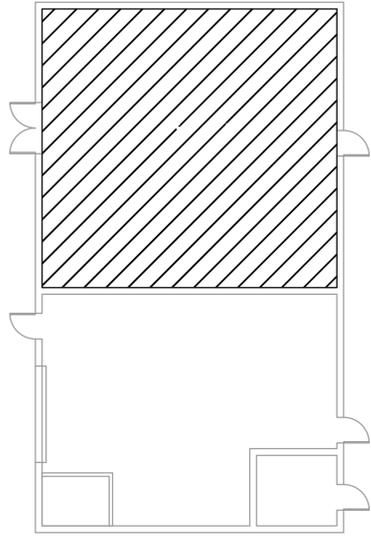
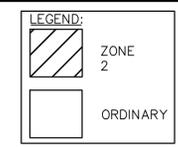
Client: client

Project title: **HAY RIVER, NT 42043 MACKENZIE HWY FLAMMABLE STORES**
DEPT. OF FISHERIES & OCEANS LIFE SAFETY SYSTEMS REPLACEMENT

Designed by: H.R. / Conçu par: H.R.
 Drawn by: HANI R. / Dessiné par: HANI R.
 Approved by: J.Y. / Approuvé par: J.Y.
 PWSSC Project Manager / Administrateur de Projets TPSGC: Y.W.

Drawing title: **ELECTRICAL FLAMMABLE STORES LIFE SAFETY SYSTEMS EXISTING AND UPGRADE LAYOUTS**

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
144903068	E440	0



5 HAZARDOUS AREA CLASSIFICATION
 E440 1:100

KEYNOTES	
1	USE THE EXISTING FOUR SPARE BREAKERS TO PROVIDE CIRCUITS TO NEW MECHANICAL EQUIPMENT.
2	PROVIDE NEW BREAKERS FOR CONNECTIONS TO ALL THE CONTROL DAMPERS AND VALVES. COORDINATE THE EXACT QUANTITIES AND LOCATIONS WITH MECHANICAL DIVISION.
3	DEVICE PLACEMENTS AND MOUNTING TO BE DETERMINED AND COORDINATED AS PER SITE CONDITIONS.
4	RE-USE THE EXISTING CIRCUIT FROM THE REMOVED LIGHT FIXTURE TO PROVIDE CIRCUIT TO NEW LIGHTS.
5	PROVIDE NEW WIRING FOR THE NEW LIGHTS. ALL NEW DEVICES AND WIRING IN THIS ROOM TO BE EXPLOSION PROOF (CLASS 1, DIV.1). REFER TO THE LUMINAIRE AND EMERGENCY LIGHT SCHEDULE FOR DEVICES DETAIL.
6	EXISTING PARTITION TO BE UPGRADED TO A 2 HOURS FIRE RESISTANCE RATING. REFER TO SPECIFICATION SECTION 092116.08 & 078400. WALL DIMENSIONS: 8300mm x 3800mm
7	REMOVE ALL EXISTING LIGHT FIXTURES, SWITCHES, WIRING AND CONDUITS BACK TO SOURCE.

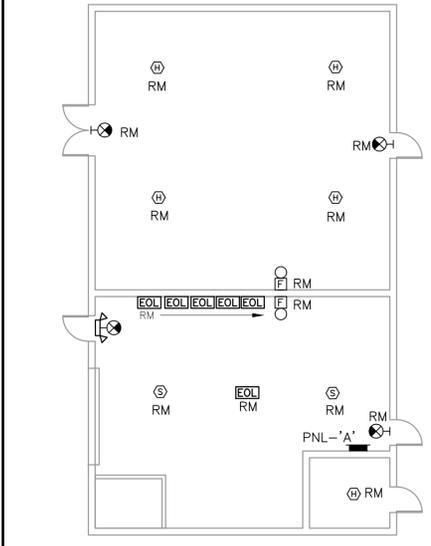
GENERAL NOTES

- ALL ELECTRICAL INSTALLATIONS WITHIN THE FLAMMABLE LIQUID STORAGE ROOM SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS FOR ZONE 1 LOCATIONS IN ACCORDANCE WITH SECTIONS 18 AND 20 OF THE CANADIAN ELECTRICAL CODE.
- ELECTRICAL INSTALLATIONS WITHIN THE REMAINDER OF THE BUILDING TO BE TREATED AS ORDINARY LOCATIONS.
- THE DIVIDING WALL BETWEEN THE FLAMMABLE LIQUID STORAGE ROOM AND THE REMAINDER OF THE BUILDING SHALL BE A CONTINUOUS 2 HOUR RATED FIRE SEPARATION. ALL PENETRATIONS SHALL BE SEALED BY APPROVED FIRE STOP SYSTEMS. REFER TO SPECIFICATION 07 84 00.
- HAZARDOUS AREA CLASSIFICATION IS BASED ON THE STORAGE AND DISPENSING OF CLASS I FLAMMABLE LIQUIDS. THE DEPARTMENTAL REPRESENTATIVE SHALL ENSURE THE MAXIMUM QUANTITIES, STORAGE ARRANGEMENT AND HEIGHTS ARE IN ACCORDANCE WITH THE NATIONAL FIRE CODE OF CANADA, PART 4. REFER TO CLAUSES 4.2.9.1(1) AND (3), 4.2.7.5(3) AND (4). WHERE CLASS 1A LIQUIDS ARE STORED, MAXIMUM QUANTITY FOR ALL FLAMMABLE LIQUIDS WITHIN THE ENTIRE ROOM SHALL BE 2500L.

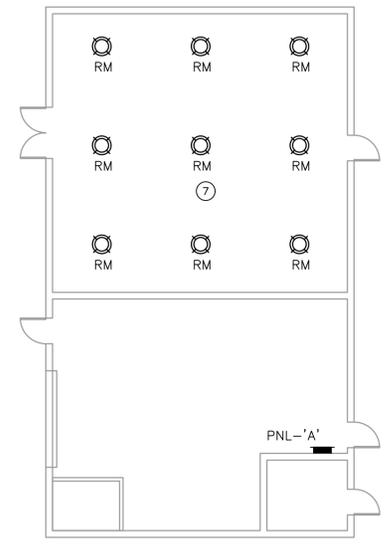
LUMINAIRE SCHEDULE FOR FLAMMABLE LIQUIDS STORAGE										
TYPE	DESCRIPTION	MOUNTING	MANUFACTURER	CATALOG NO.	ALTERNATIVE MANUFACTURERS	LUMENS	COLOR	WATTS	VOLTS	COMMENTS/NOTES
F01	BAY LIGHTING	SURFACE	EATON	HAZARD-GARD EVLLA	HUBBELL KEMLUX III SERIES, RAB HAZLED	6200	4000K	59	120	CLASS 1, DIV. 2
RH	REMOTE HEAD	WALL MOUNTED	AIMLITE	AIMVC	HUBBELL DYNAMO REMOTE SERIES, ABB RS10XP	-	-	-	-	CLASS 1, DIV. 2
EXT	EXIT SIGN	WALL MOUNTED	AIMLITE	RP2N2	ABB LH SERIES, READYLITE RH SERIES	-	-	-	-	CLASS 1, DIV. 2

BATTERY PACK SCHEDULE					
ID	LOCATION	TIME (MIN)	POWER (W)	CIRCUITS #	COMMENTS
BP#1	GENERAL FLAMMABLE	60	144	N/A	

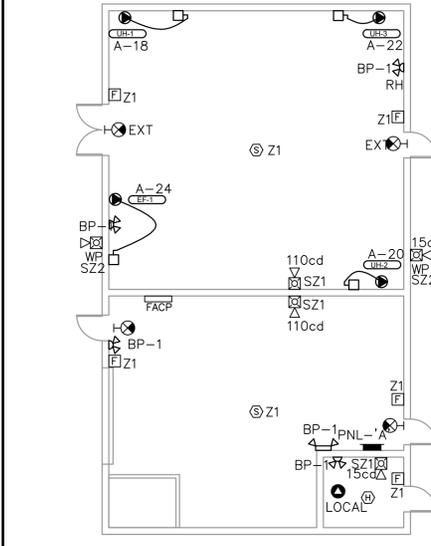
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 2. HEADS TO BE MOUNTED AT 2200mm A.F.F. TO CENTER.
 3. BATTERY PACK INDICATED TO BE MINIMUM ALLOWABLE SIZE.
 4. PROVIDE ZONE SENSING RELAYS AS REQUIRED TO MONITOR CIRCUITS TO NORMAL LIGHTING ZONES WHERE REQUIRED.
 5. ALL EMERGENCY LIGHTS AND EXIT SIGNS WIRING TO BE FOLLOWED AND ENSURE THEIR CONNECTION AS PER CEC 46-108.
 6. ALL EMERGENCY LIGHTING CIRCUITS TO MATCH WITH THE EXISTING LIGHTING CIRCUITS.



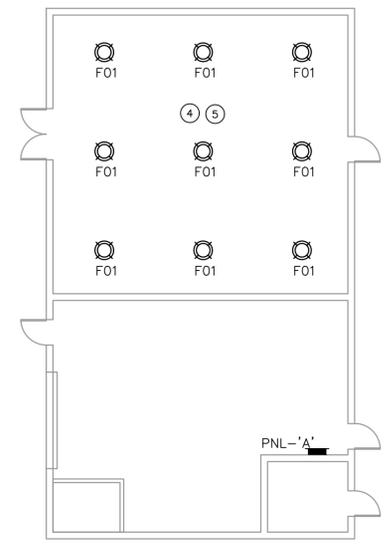
1 FLAMMABLE STORES LIFE SAFETY LAYOUT - EXISTING/DEMO
 E440 1:100



3 FLAMMABLE STORES LIGHTING LAYOUT - EXISTING/DEMO
 E440 1:100



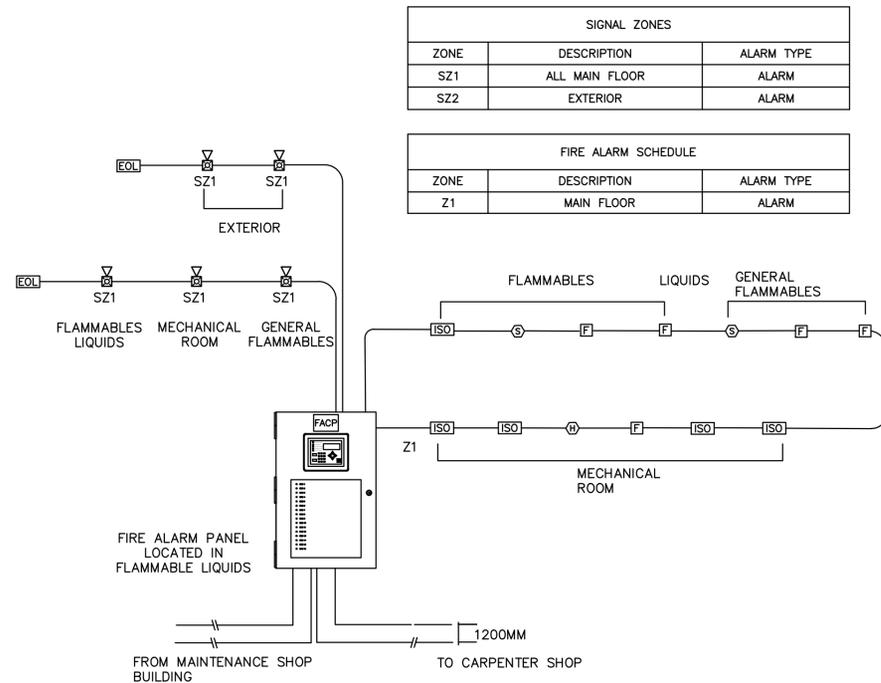
2 FLAMMABLE STORES LIFE SAFETY LAYOUT - NEW
 E440 1:100



4 FLAMMABLE STORES LIGHTING LAYOUT - NEW
 E440 1:100

FIRE ALARM NOTES:

- AS PER CAN/ULC S524, PROVIDE FAULT ISOLATORS BETWEEN ZONES CONTAINED ON THE SAME ADDRESSABLE LOOP. THE RISER DIAGRAM SHOWN HERE INDICATES PROPER LOCATION FOR LINE ISOLATORS, SHOULD THE SYSTEM BE INSTALLED AS ONE CONTINUOUS CLASS 'A' LOOP WITH THE SAME SEQUENCE OF DEVICES INDICATED.
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- PROVIDE SURGE PROTECTION DEVICE FOR FIRE ALARM CONTROL PANEL.
- RISER DIAGRAM IS FOR INFORMATION PURPOSES ONLY. QUANTITIES OF SIGNAL AND INITIATING DEVICES ARE GOVERNED BY FLOOR PLANS RATHER THAN THIS RISER.



1 E450 FLAMMABLE STORES - NEW FIRE ALARM RISER DIAGRAM N.T.S.

MOTOR CONTROL AND EQUIPMENT SCHEDULE											
ID	DESCRIPTION	LOCATION	WATTS	VOLTS	PH	FLA	MOP	FEEDER	BREAKER	CCT	CONTROLS
UH-1	HORIZONTAL UNIT HEATER	FLAMMABLE LIQUIDS	50	120	1	-	15	2C #12AWG CU + #14AWG CU BOND IN 21MM EMT CONDUIT	1P15	A-18	MRR
UH-2	HORIZONTAL UNIT HEATER	FLAMMABLE LIQUIDS	50	120	1	-	15	2C #12AWG CU + #14AWG CU BOND IN 21MM EMT CONDUIT	1P15	A-20	MRR
UH-3	HORIZONTAL UNIT HEATER	FLAMMABLE LIQUIDS	100	120	1	-	15	2C #12AWG CU + #14AWG CU BOND IN 21MM EMT CONDUIT	1P15	A-22	MRR
EF-1	EXHAUST FAN	FLAMMABLE LIQUIDS	187	120	1	5.8	15	2C #12AWG CU + #14AWG CU BOND IN 21MM EMT CONDUIT	1P15	A-24	VFD
CD	MISC CONTROL DAMPERS	FLAMMABLE LIQUIDS	100	120	1	-	15	2C #12AWG CU + #14AWG CU BOND IN 21MM EMT CONDUIT	1P15	A-26	-
CV	MISC CONTROL VALVES	FLAMMABLE LIQUIDS	100	120	1	-	15	2C #12AWG CU + #14AWG CU BOND IN 21MM EMT CONDUIT	1P15	A-28	-

NOTES:

- MOTOR SCHEDULE IS FOR ESTIMATING PURPOSES ONLY. CONFIRM ALL MOTORS' FULL LOAD CURRENTS WITH NAMEPLATES AND SIZE MOTOR DISCONNECTS, BREAKERS, FEEDERS, AND OVERLOADS ACCORDINGLY.
- CONFIRM MECHANICAL EQUIPMENT LOCATIONS WITH MECHANICAL DIVISION.
- DIVISION 26 SHALL COORDINATE THE LOCATIONS OF ALL LINE VOLTAGE PILOT DEVICES WITH DIVISION 23 AND PROVIDE CONDUIT AND WIRING AS NECESSARY.
- IN ADDITION TO CONTROL SHOWN, PROVIDE LOCAL DISCONNECT IF REQUIRED BY C.E.C.

CONTROL DEVICE LEGEND:

- ECP - EXISTING CONTROL PANEL
- LRD - LOAD RATED DISCONNECT
- MAG - MAGNETIC STARTER
- CMS - COMBINATION MAGNETIC STARTER WITH DISCONNECT
- MMP - MANUAL MOTOR PROTECTION
- /R - WITH LOAD RATED RELAY
- /HOA - WITH H-O-A SWITCH
- /K - KEYPAD
- /SS - SOFT START
- VFD - VARIABLE FREQUENCY DRIVE
- CP-2 - NEW BIOMASS CONTROL PANEL
- CP-1 - EXISTING BIOMASS CONTROL PANEL
- VSD - VARIABLE SPEED DRIVE

REFER TO DRAWING E440 FOR KEYNOTES

PANEL: A											
VOLTS: 120/208			LOCATION: FLAMMABLE STORAGE			BUSS: -					
PHASE: 3			FEEDER: EXISTING			MTG: SURFACE					
WIRE: 4											
CIRC	BRKR	WATTS			DESCRIPTION	DESCRIPTION	WATTS			BRKR	CIRC
		A	B	C			A	B	C		
1					EXISTING	EXISTING					2
3					EXISTING	EXISTING					4
5					EXISTING	EXISTING					6
7					EXISTING	EXISTING					8
9					EXISTING	EXISTING					10
11					EXISTING	EXISTING					12
13					EXISTING	EXISTING					14
15					EXISTING	EXISTING					16
17					EXISTING	UH-1			50	1P15	18
19					EXISTING	UH-2			50	1P15	20
21					EXISTING	UH-3			100	1P15	22
23					EXISTING	EF-1	187			1P15	24
25					EXISTING	CONTROL DAMPERS			100	1P15	26
27					SPACE	CONTROL VALVES			100	1P15	28
29					SPACE	FACP	500			1P15	30
TOTAL											TOTAL
PHASE A TOTAL =											
PHASE B TOTAL =											
PHASE C TOTAL =											
PANEL TOTAL =		@120/208 VOLTS 3 PHASE			AMPS						
REMARKS: UPDATE THE PANEL SCHEDULE AS PER THE RENOVATION WORK AND LABEL ALL THE REVISED CIRCUITS.											
PANEL INFORMATION											
MANUFACTURER: SCHNEIDER, NQOD PANELBOARD											

REFER TO DRAWING E440 FOR KEYNOTES



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Revision	Description	Date
0	ISSUED FOR TENDER	2021.08.06

Client client

Project title HAY RIVER, NT 42043 MACKENZIE HWY FLAMMABLE STORES

DEPT. OF FISHERIES & OCEANS LIFE SAFETY SYSTEMS REPLACEMENT

Designed by H.R. Conçu par HANI R. Drawn by HANI R. Dessiné par J.Y. Approved by J.Y. Approuvé par Y.W. Project Manager Administrateur de Projets TPSGC

Drawing title ELECTRICAL FLAMMABLE STORES RISER DIAGRAM, PANEL AND EQUIPEM SCHEULES.

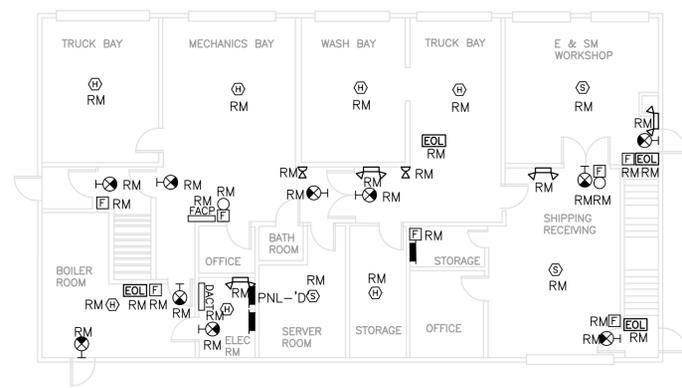
Project no./No. du projet	Drawing no./No. du dessin	Revision no.
144903068	E450	0



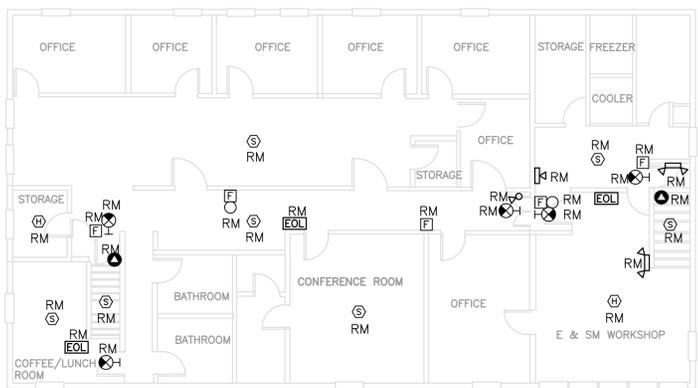
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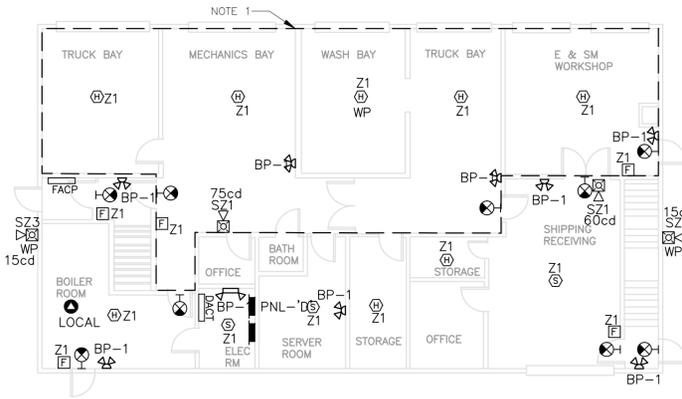
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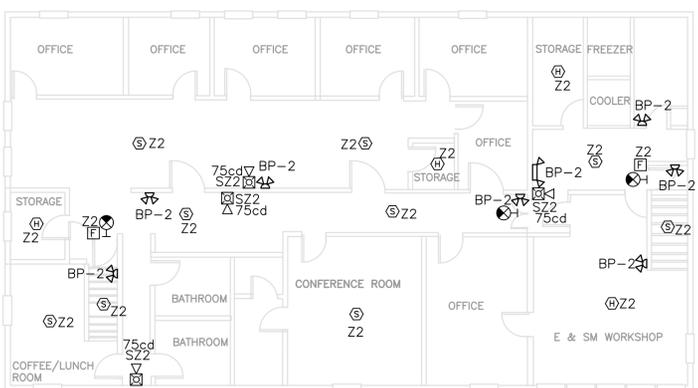
1 DFO MANAGEMENT COMPLEX LIFE SAFETY LAYOUT - FIRST FLOOR EXISTING/DEMO
E460 1:100



3 DFO MANAGEMENT COMPLEX LIFE SAFETY LAYOUT - SECOND FLOOR EXISTING/DEMO
E460 1:100



2 DFO MANAGEMENT COMPLEX LIFE SAFETY LAYOUT - FIRST FLOOR NEW
E460 1:100



4 DFO MANAGEMENT COMPLEX LIFE SAFETY LAYOUT - SECOND FLOOR NEW
E460 1:100

NOTES:
1. ZONE 2 UP 50mm A.F.F. ALL WIRING AND DEVICES WITHIN HAZARDOUS AREA TO BE RATED FOR THE ZONE AS SHOWN.

GENERAL NOTE
1. THE DFO MANAGEMENT COMPLEX IS TO BE TREATED AS A RECOGNIZED HERITAGE BUILDING FOR THE PURPOSE OF THIS RENOVATION. REFER TO PROJECT SPECIFICATIONS AND HERITAGE CONSERVATION ADVICE REPORT.



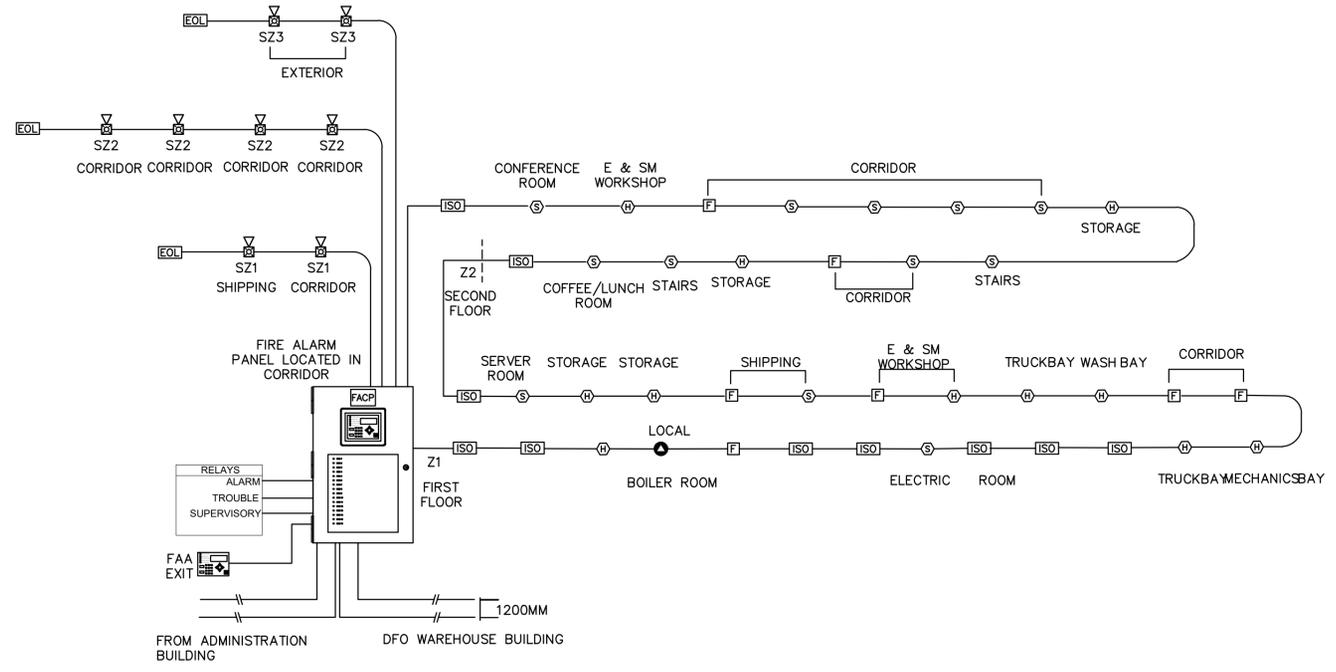
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FIRE ALARM NOTES:

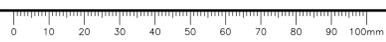
- AS PER CAN/ULC S524, PROVIDE FAULT ISOLATORS BETWEEN ZONES CONTAINED ON THE SAME ADDRESSABLE LOOP. THE RISER DIAGRAM SHOWN HERE INDICATES PROPER LOCATION FOR LINE ISOLATORS, SHOULD THE SYSTEM BE INSTALLED AS ONE CONTINUOUS CLASS 'A' LOOP WITH THE SAME SEQUENCE OF DEVICES INDICATED.
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- PROVIDE SURGE PROTECTION DEVICE FOR FIRE ALARM CONTROL PANEL.
- RISER DIAGRAM IS FOR INFORMATION PURPOSES ONLY. QUANTITIES OF SIGNAL AND INITIATING DEVICES ARE GOVERNED BY FLOOR PLANS RATHER THAN THIS RISER.
- PROVIDE A RED COLORED LOCKABLE BREAKER FOR THE FIRE ALARM CONTROL PANEL WITH PROPER LABELING.
- INCLUDE FOR THE GREATEST NUMBER OF DEVICES AND MOST COSTLY SITUATION, SHOULD THERE BE A DISCREPANCY BETWEEN PLANS AND RISER.

NEW SIGNAL ZONES		
ZONE	DESCRIPTION	ALARM TYPE
SZ1	MAIN FLOOR	ALARM
SZ2	SECOND FLOOR	ALARM
SZ3	EXTERIOR	ALARM

FIRE ALARM SCHEDULE		
ZONE	DESCRIPTION	ALARM TYPE
Z1	MAIN FLOOR	ALARM
Z2	SECOND FLOOR	ALARM



5 DFO MANAGEMENT COMPLEX - NEW FIRE ALARM RISER DIAGRAM
E460 N.T.S.

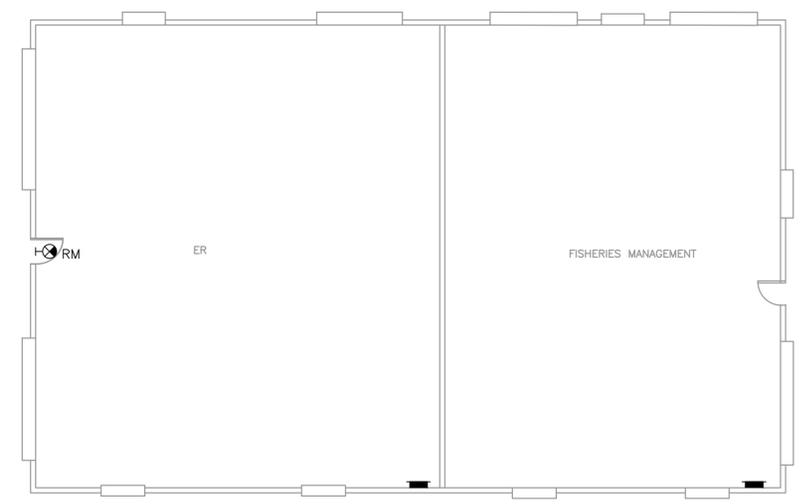




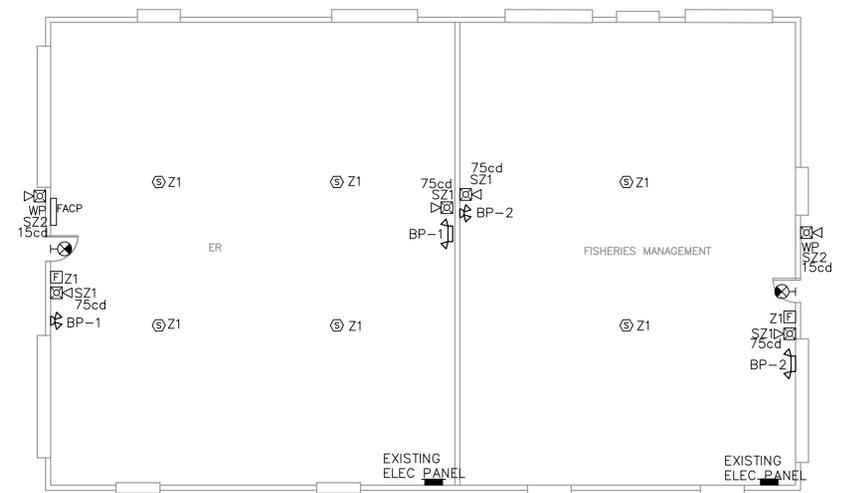
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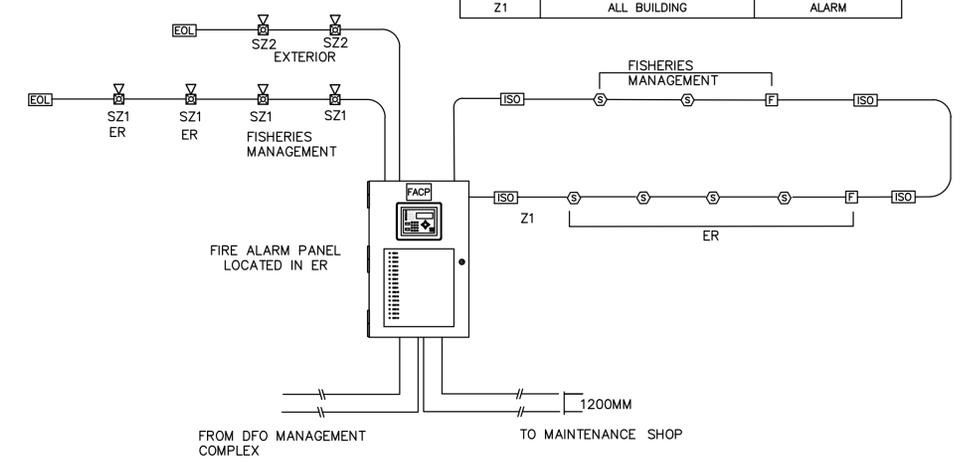
1 DFO WAREHOUSE LIFE SAFETY LAYOUT - EXISTING/DEMO
E470 1:100



2 DFO WAREHOUSE LIFE SAFETY LAYOUT - NEW
E470 1:100

SIGNAL ZONES		
ZONE	DESCRIPTION	ALARM TYPE
SZ1	ALL OTHER AREAS	ALARM
SZ2	EXTERIOR	ALARM

FIRE ALARM SCHEDULE		
ZONE	DESCRIPTION	ALARM TYPE
Z1	ALL BUILDING	ALARM



3 DFO WAREHOUSE - NEW FIRE ALARM RISER DIAGRAM
E470 N.T.S.

FIRE ALARM NOTES:

- AS PER CAN/ULC S524, PROVIDE FAULT ISOLATORS BETWEEN ZONES CONTAINED ON THE SAME ADDRESSABLE LOOP. THE RISER DIAGRAM SHOWN HERE INDICATES PROPER LOCATION FOR LINE ISOLATORS, SHOULD THE SYSTEM BE INSTALLED AS ONE CONTINUOUS CLASS 'A' LOOP WITH THE SAME SEQUENCE OF DEVICES INDICATED.
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- INCLUDE FOR THE GREATEST NUMBER OF DEVICES AND MOST COSTLY SITUATION, SHOULD THERE BE A DISCREPANCY BETWEEN PLANS AND RISER.

BATTERY PACK SCHEDULE

ID	LOCATION	TIME (MIN)	POWER (W)	CIRCUITS #
BP#1	ER	60	144	N/A
BP#2	FISHERIES MANAGEMENT	60	144	N/A

- SIZING IS BASED ON A PARTICULAR MANUFACTURER AT 24V DC WITH 6 WATT MR16 LED LAMPS AND A 5 WATT ALLOWANCE FOR EACH LIGHT.
- HEADS TO BE MOUNTED AT 2200mm A.F.F. TO CENTER.
- BATTERY PACK INDICATED TO BE MINIMUM ALLOWABLE SIZE.
- PROVIDE ZONE SENSING RELAYS AS REQUIRED TO MONITOR CIRCUITS TO NORMAL LIGHTING ZONES WHERE REQUIRED.
- ALL EMERGENCY LIGHTS AND EXIT SIGNS WIRING TO BE FOLLOWED AND ENSURE THEIR CONNECTION AS PER CEC 46-108.
- ALL EMERGENCY LIGHTING CIRCUITS TO MATCH WITH THE EXISTING LIGHTING CIRCUITS.

4 BATTERY PACK SCHEDULE
E470 N.T.S.



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Revision	Description	Date
0	ISSUED FOR TENDER	2021.08.06

Client: client

Project title: HAY RIVER, NT 42043 MACKENZIE HWY DFO WAREHOUSE

DEPT. OF FISHERIES & OCEANS
LIFE SAFETY SYSTEMS
REPLACEMENT

Designed by: Conçu par H.R.

Drawn by: Dessiné par HANI R.

Approved by: Approuvé par J.Y.

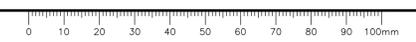
PWSSC Project Manager / Administrateur de Projets TPSGC Y.W.

Drawing title: Titre du dessin

ELECTRICAL
DFO WAREHOUSE

LIFE SAFETY SYSTEMS
EXISTING AND UPGRADE LAYOUTS

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
144903068	E470	0

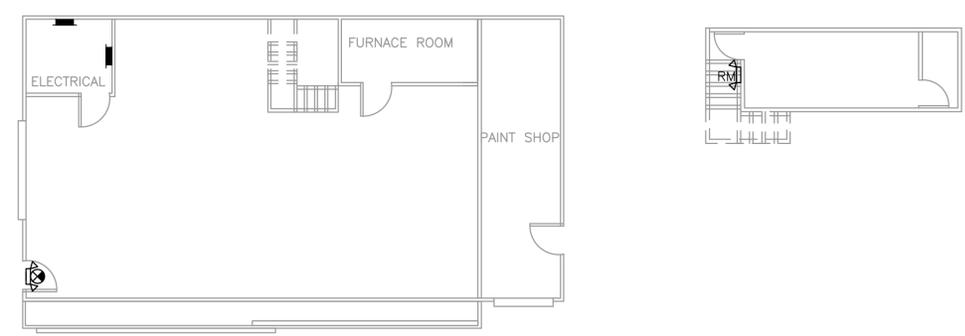




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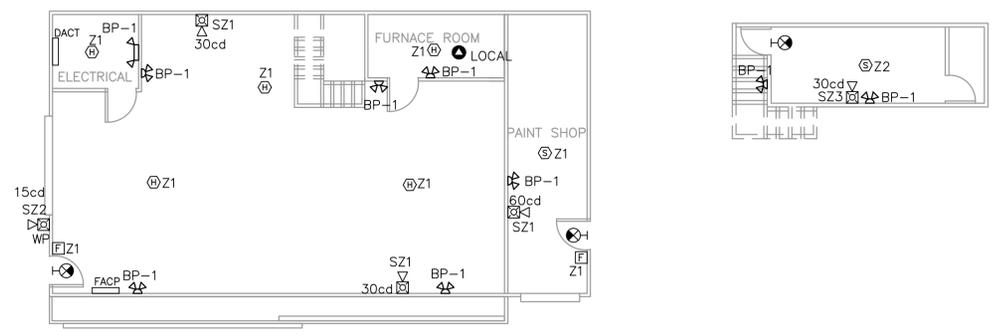
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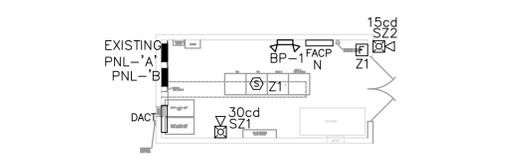
1 WELDING SHOP LIFE SAFETY LAYOUT - EXISTING/DEMO
E480 1:100



4 TX BUILDING LIFE SAFETY LAYOUT - EXISTING/DEMO
E480 1:100



2 WELDING SHOP LIFE SAFETY LAYOUT - NEW
E480 1:100



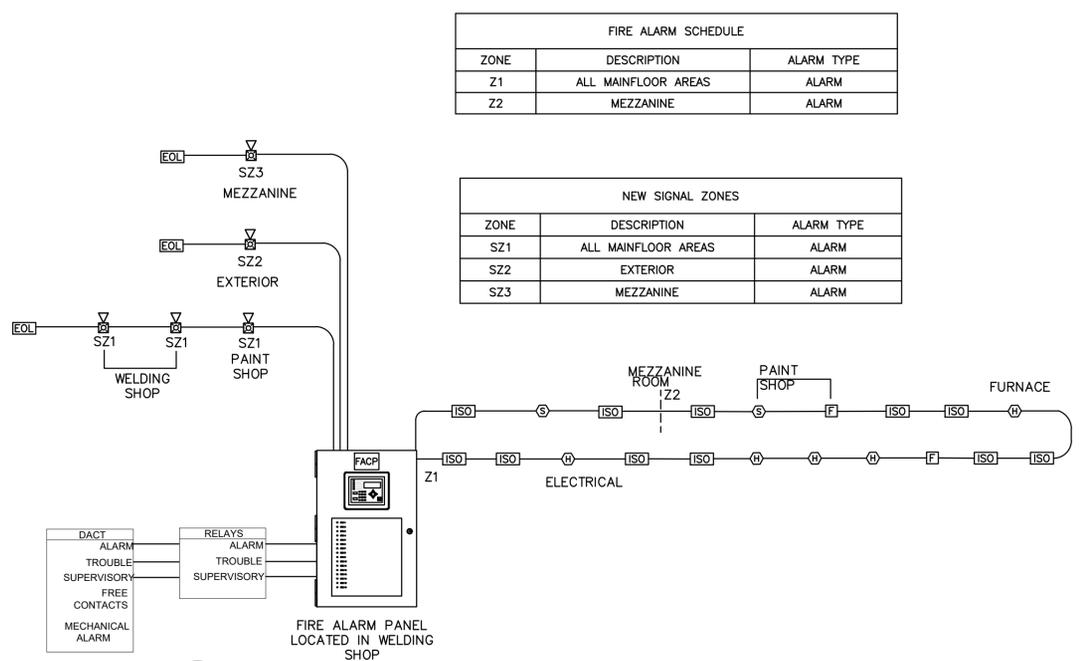
5 TX BUILDING LIFE SAFETY LAYOUT - NEW
E480 1:100

FIRE ALARM SCHEDULE		
ZONE	DESCRIPTION	ALARM TYPE
Z1	ALL MAINFLOOR AREAS	ALARM

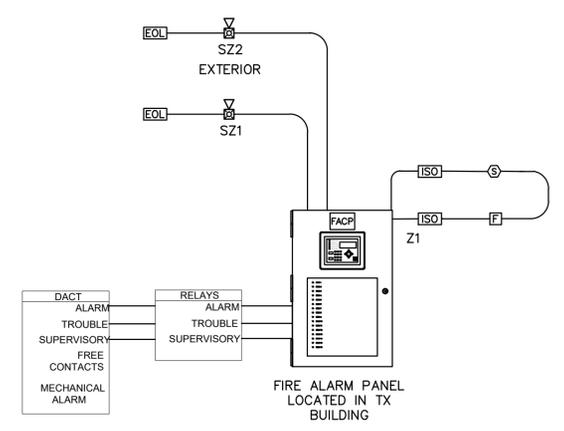
NEW SIGNAL ZONES		
ZONE	DESCRIPTION	ALARM TYPE
SZ1	ALL MAINFLOOR AREAS	ALARM
SZ2	EXTERIOR	ALARM

FIRE ALARM SCHEDULE		
ZONE	DESCRIPTION	ALARM TYPE
Z1	ALL MAINFLOOR AREAS	ALARM
Z2	MEZZANINE	ALARM

NEW SIGNAL ZONES		
ZONE	DESCRIPTION	ALARM TYPE
SZ1	ALL MAINFLOOR AREAS	ALARM
SZ2	EXTERIOR	ALARM
SZ3	MEZZANINE	ALARM



3 WELDING SHOP - NEW FIRE ALARM RISER DIAGRAM
E480 N.T.S.



6 TX BUILDING - NEW FIRE ALARM RISER DIAGRAM
E480 N.T.S.

FIRE ALARM NOTES:

- AS PER CAN/ULC S524, PROVIDE FAULT ISOLATORS BETWEEN ZONES CONTAINED ON THE SAME ADDRESSABLE LOOP. THE RISER DIAGRAM SHOWN HERE INDICATES PROPER LOCATION FOR LINE ISOLATORS, SHOULD THE SYSTEM BE INSTALLED AS ONE CONTINUOUS CLASS 'A' LOOP WITH THE SAME SEQUENCE OF DEVICES INDICATED.
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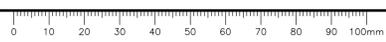
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144903068

Revision	Description	Date
0	ISSUED FOR TENDER	2021.08.06

Project title: **HAY RIVER, NT 42043 MACKENZIE HWY DEPT. OF FISHERIES & OCEANS LIFE SAFETY SYSTEMS REPLACEMENT**

Designed by: H.R. / Conçu par: H.R.
Drawn by: HANI R. / Dessiné par: HANI R.
Approved by: J.Y. / Approuvé par: J.Y.
PWSSC Project Manager / Administrateur de Projets TPSGC: Y.W.
Drawing title: **ELECTRICAL WELDING SHOP AND TX BUILDING LIFE SAFETY SYSTEMS EXISTING AND UPGRADE LAYOUTS**

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
144903068	E480	0





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Revision	Description	Date
0	ISSUED FOR TENDER	2021.08.06

Client: client

Project title: **HAY RIVER, NT
42043 MACKENZIE HWY**

**DEPT. OF FISHERIES & OCEANS
LIFE SAFETY SYSTEMS
REPLACEMENT**

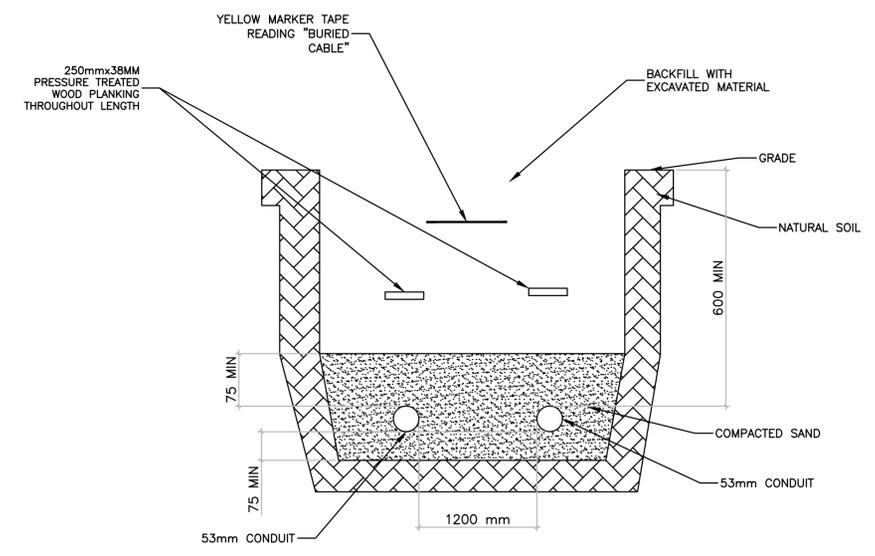
Designed by: H.R. / Conçu par
Drawn by: HANI R. / Dessiné par
Approved by: J.Y. / Approuvé par
PWSCC Project Manager / Administrateur de Projets TPSGC
Y.W.

Drawing title: **ELECTRICAL
MULTIPLE BUILDING LOOP DIAGRAM**

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
144903068	E600	0
	14 OF 14	

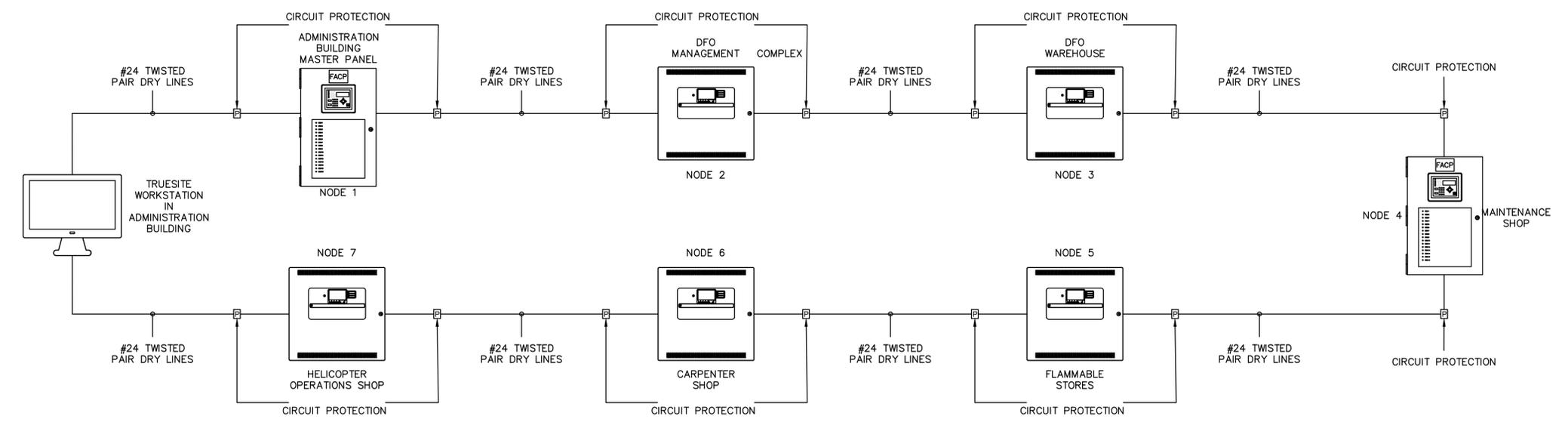
FIRE ALARM NOTES:

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- PROVIDE A RED COLORED LOCKABLE BREAKER FOR THE FIRE ALARM CONTROL PANEL WITH PROPER LABELING.

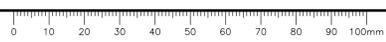


2 CONDUIT BURIAL DETAIL
E600 N.T.S.

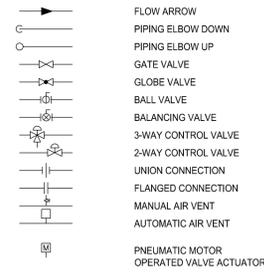
- NOTES:
- MINIMUM COVER TO BE IN ACCORDANCE WITH CEC RULES 12-012 AND 60-600. REDUCED MINIMUM COVER PER CEC IS ACCEPTABLE, WHERE MECHANICAL PROTECTION IS PROVIDED ACCORDINGLY.
 - MARKER TAPE TO BE APPROXIMATELY HALF WAY BETWEEN FINISHED GRADE AND CONDUIT OR CABLE.
 - MINIMUM SEPARATION BETWEEN CABLES TO BE 1200mm.



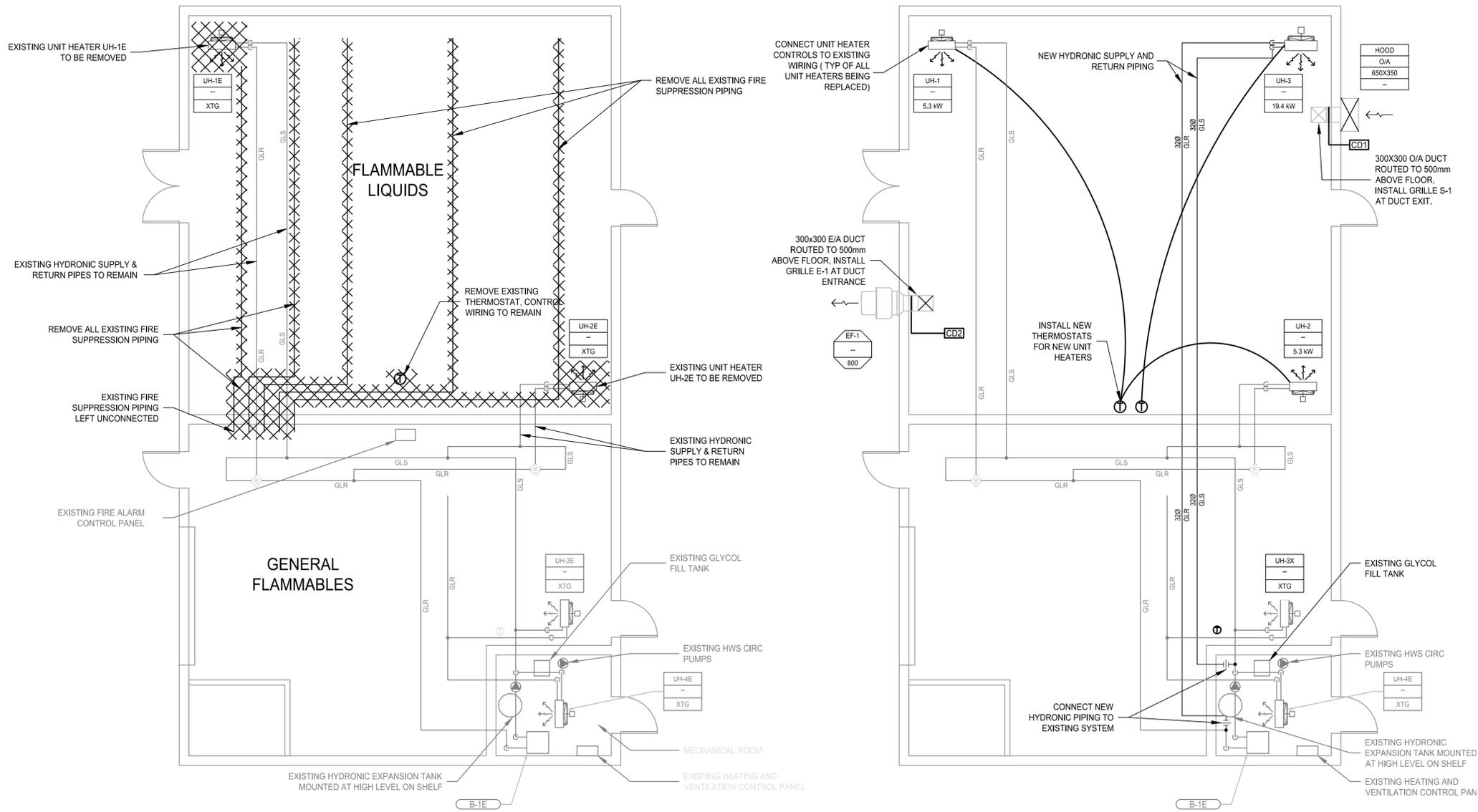
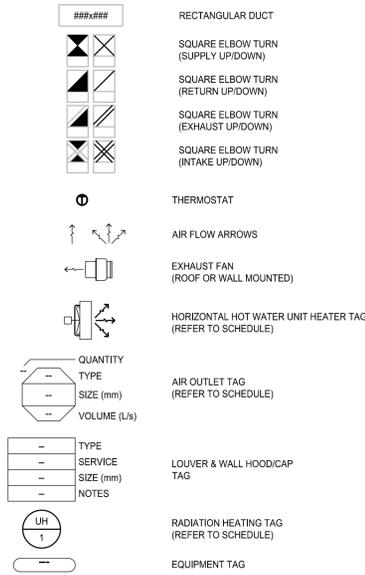
1 MULTIPLE BUILDING LOOP DIAGRAM
E600 N.T.S.



PIPING IDENTIFICATION AND SYMBOLS



HVAC SYMBOLS



1 FLAMMABLE STORES HEATING & VENTILATION - EXISTING/DEMO
M100 1:50

2 FLAMMABLE STORES HEATING & VENTILATION - NEW
M100 1:50

FAN SCHEDULE

FAN No.	SERVICE	LOCATION	MANUFACTURER	MODEL No.	AIR FLOW (L/s)	EXTERNAL STATIC PRESS. (Pa)	MOTOR (HP)	FAN RPM	ELECTRICAL (V/Ph/Hz)	MOUNTING ARR'GT	TYPE	REMARKS
EF-1	EXHAUST	FLAMMABLE LIQUIDS	GREENHECK	CUBE-099-4	335	75	0.25	1246	115/1/60	SIDEWALL	CENTRIFUGAL	FAN MOTOR TO BE VFD CONTROLLED. UNIT TO BE EXPLOSION PROOF

MOTORIZED DAMPER SCHEDULE

TAG No.	MANUFACTURER	MODEL	DUTY	NORMAL POSITION	TYPE	SIZE	REMARKS
CD1	TAMCO	9000 SC	SUPPLY	CLOSED	PARALLEL	300x300	PARALLEL BLADE, THERMALLY INSULATED, THERMALLY BROKEN FRAME, EXTRUDED ALUMINUM FRAME AND BLADES, BLADE AND JAMB SEALS.
CD2	TAMCO	9000 SC	EXHAUST	CLOSED	PARALLEL	300x300	PARALLEL BLADE, THERMALLY INSULATED, THERMALLY BROKEN FRAME, EXTRUDED ALUMINUM FRAME AND BLADES, BLADE AND JAMB SEALS.

HYDRONIC UNIT & CABINET UNIT HEATER SCHEDULE

TAG	LOCATION	MANUFACTURER	MODEL	HEATING MEDIUM	CAPACITY (kW)	LIQUID			MOTOR (kW)	V/PH/Hz	WEIGHT (kg)	DIMENSIONS (LxWxD) (mm)	REMARKS
						EWI °C	LWT °C	FLOW (L/S)					
UH-1	FLAMMABLE LIQUIDS	ROSEMEX	H-18	50% PG	5.3	82.2	71.1	0.13	0.037	115/1/60	17.6	480x230x325	UNIT TO BE EXPLOSION PROOF
UH-2	FLAMMABLE LIQUIDS	ROSEMEX	H-18	50% PG	5.3	82.2	71.1	0.13	0.037	115/1/60	17.6	480x230x325	UNIT TO BE EXPLOSION PROOF
UH-3	FLAMMABLE LIQUIDS	ROSEMEX	H-80	50% PG	19.4	82.2	71.1	0.23	0.25	115/1/60	37.2	635x230x550	UNIT TO BE EXPLOSION PROOF

GRILLE, DIFFUSER, AND LOUVER SCHEDULE

TAG No.	MANUFACTURER	MODEL No.	SIZE	SERVICE	DESCRIPTION	FINISH	REMARKS
S-1	PRICE	80 SERIES	300x300	SUPPLY	FLOOR GRILLE	-	
E-1	PRICE	80 SERIES	300x300	SUPPLY	FLOOR GRILLE	-	



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GENERAL NOTES:
1. ENTIRE GLYCOL HEATING SYSTEM IS TO BE DRAINED DOWN, CLEANED AND FLUSHED FOLLOWING THE PROCEDURE PROVIDED IN THE SPECIFICATION. UPON COMPLETION REPLACE WITH NEW GLYCOL. EXISTING GLYCOL IS NOT TO BE REUSED.



144903068 DFO
Life Safety
Systems

PERMIT TO PRACTICE
STANTEC ARCHITECTURE LTD.

Signature
Date August 6, 2021

PERMIT NUMBER: P 800
NT/NJ Association of Professional Engineers and Geoscientists

144903068

Revision	Description	Date
0	ISSUED FOR TENDER	2021.08.06

Client client

Project title HAY RIVER, NT 42043 MACKENZIE HWY

DEPT. OF FISHERIES & OCEANS
LIFE SAFETY SYSTEMS
REPLACEMENT

Designed by DS Conçu par DS

Drawn by DS Dessiné par DS

Approved by BRM Approuvé par BRM

PNSSC Project Manager Administrateur de Projets TPSGC YW

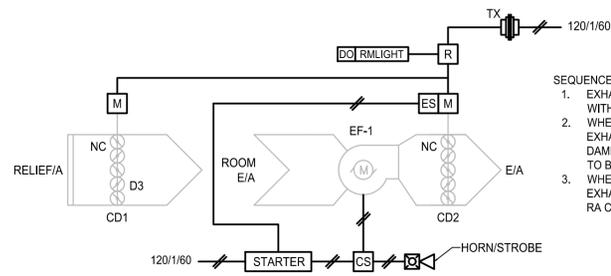
Drawing title MECHANICAL FLAMMABLE STORES HEATING & VENTILATION LAYOUT

Project no./No. du projet 144903068

Drawing no./No. du dessin M100

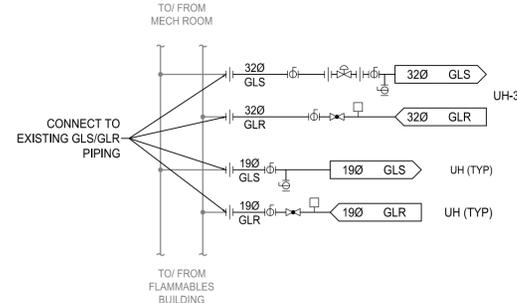
Revision no. 0

01 OF 02



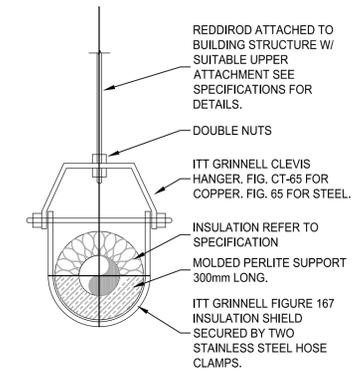
- SEQUENCE OF OPERATIONS:
1. EXHAUST FAN OPERATION TO BE INTERLOCKED WITH STORAGE ROOM LIGHT SWITCH.
 2. WHEN LIGHT SWITCH IS TOGGLED ON, EXHAUST AIR AND RELIEF AND EXHAUST FAN IS TO BE ACTIVATED ON END SWITCH.
 3. WHEN LIGHT SWITCH IS DEACTIVATED, EXHAUST FAN IS TO DEACTIVATE AND EA AND RA CONTROL DAMPERS ARE TO CLOSE

1 EXHAUST FAN SCHEMATIC
M101 NTS

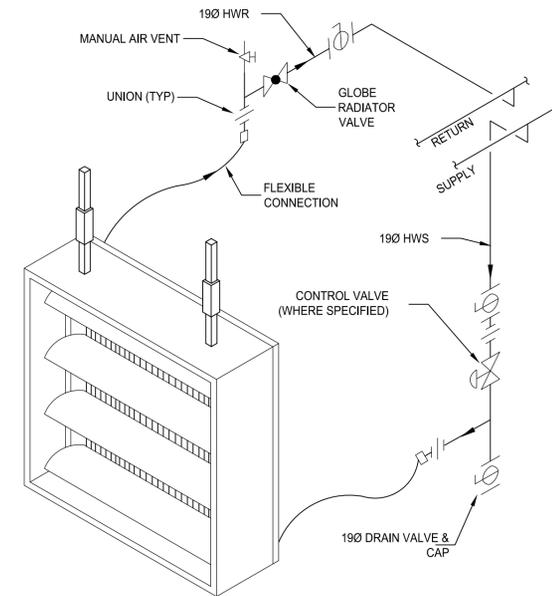


3 HEATING WATER SCHEMATIC
M101 NTS

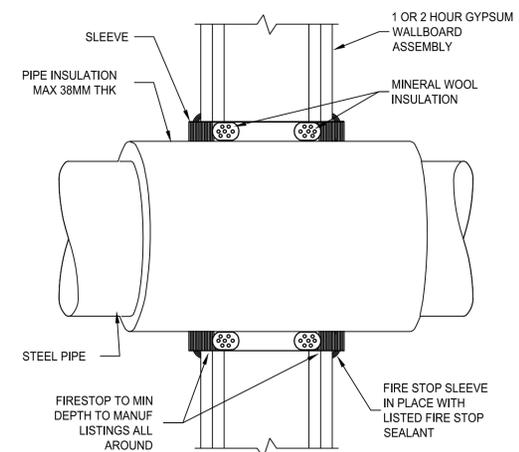
NOTE: THIS DETAIL APPLIES TO ALL BOILER & FAN ROOM PIPING 500 & UNDER & TO COPPER PIPING OF ALL SIZES.



2 PIPE HANGER DETAIL
M101 NTS



4 UNIT HEATER DETAIL
M101 NTS



5 PIPE WALL PENETRATION DETAIL
M101 NTS



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Client client

Project title
**HAY RIVER, NT
42043 MACKENZIE HWY**
**DEPT. OF FISHERIES & OCEANS
LIFE SAFETY SYSTEMS
REPLACEMENT**

Designed by Conçu par
DS

Drawn by Dessiné par
DS

Approved by Approuvé par
BRM

PNWSC Project Manager Administrateur de Projets TPSGC
YW

Drawing title Titre du dessin

**MECHANICAL
FLAMMABLE STORES
HEATING & VENTILATION LAYOUT**

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
144903068	M101	0

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