

1 NEW SITE LAYOUT
SCALE 1:200

PROVIDE OVERHEAD
MAST WITH
WEATHERHEAD

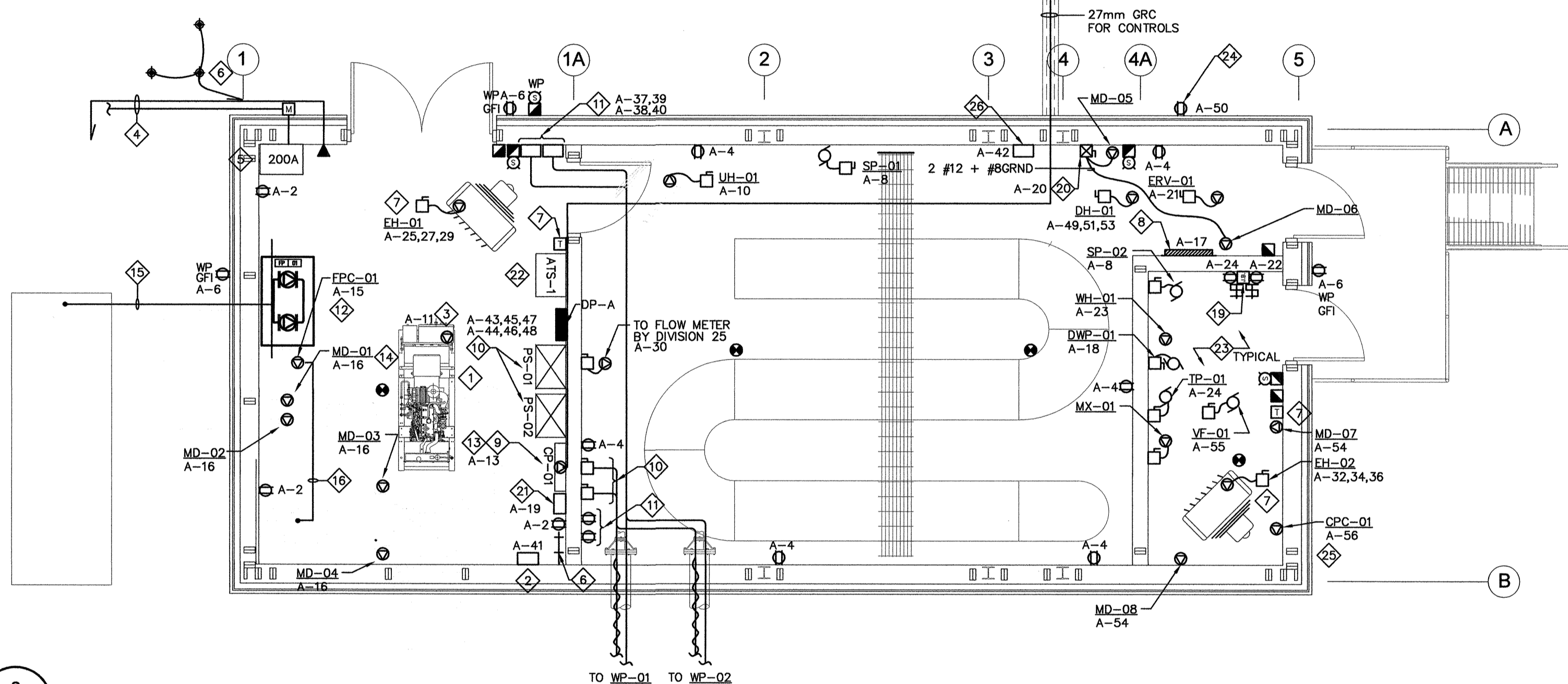
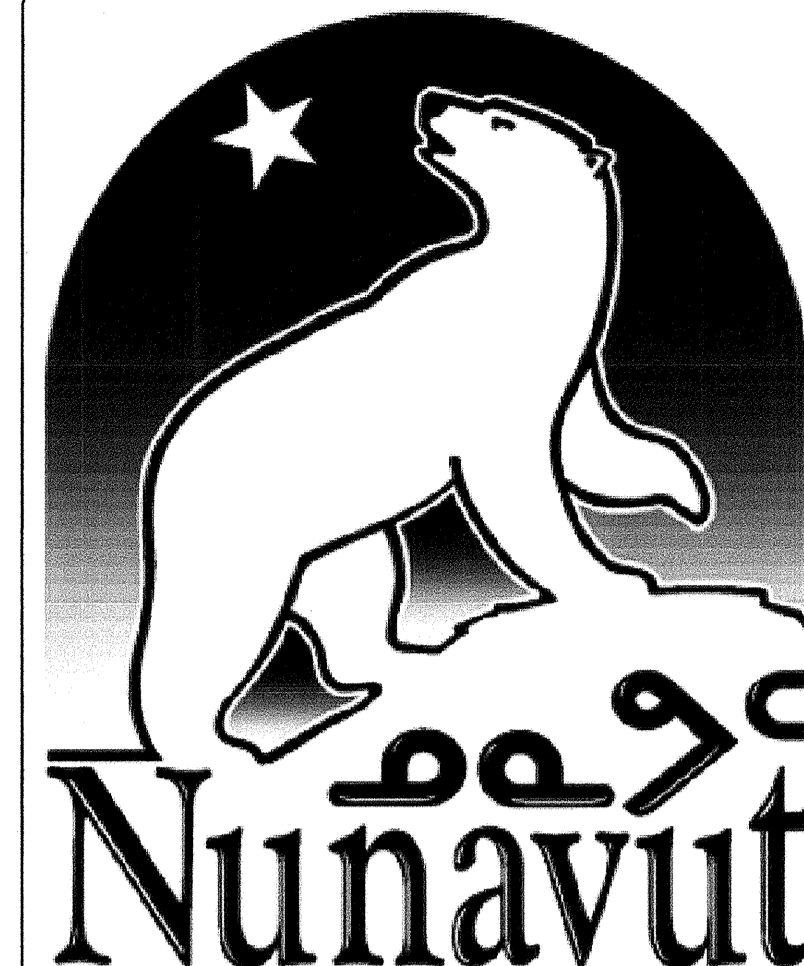
NEW OVERHEAD
POWER AND
COMMUNICATION
SERVICE BY UTILITY

RESERVOIR

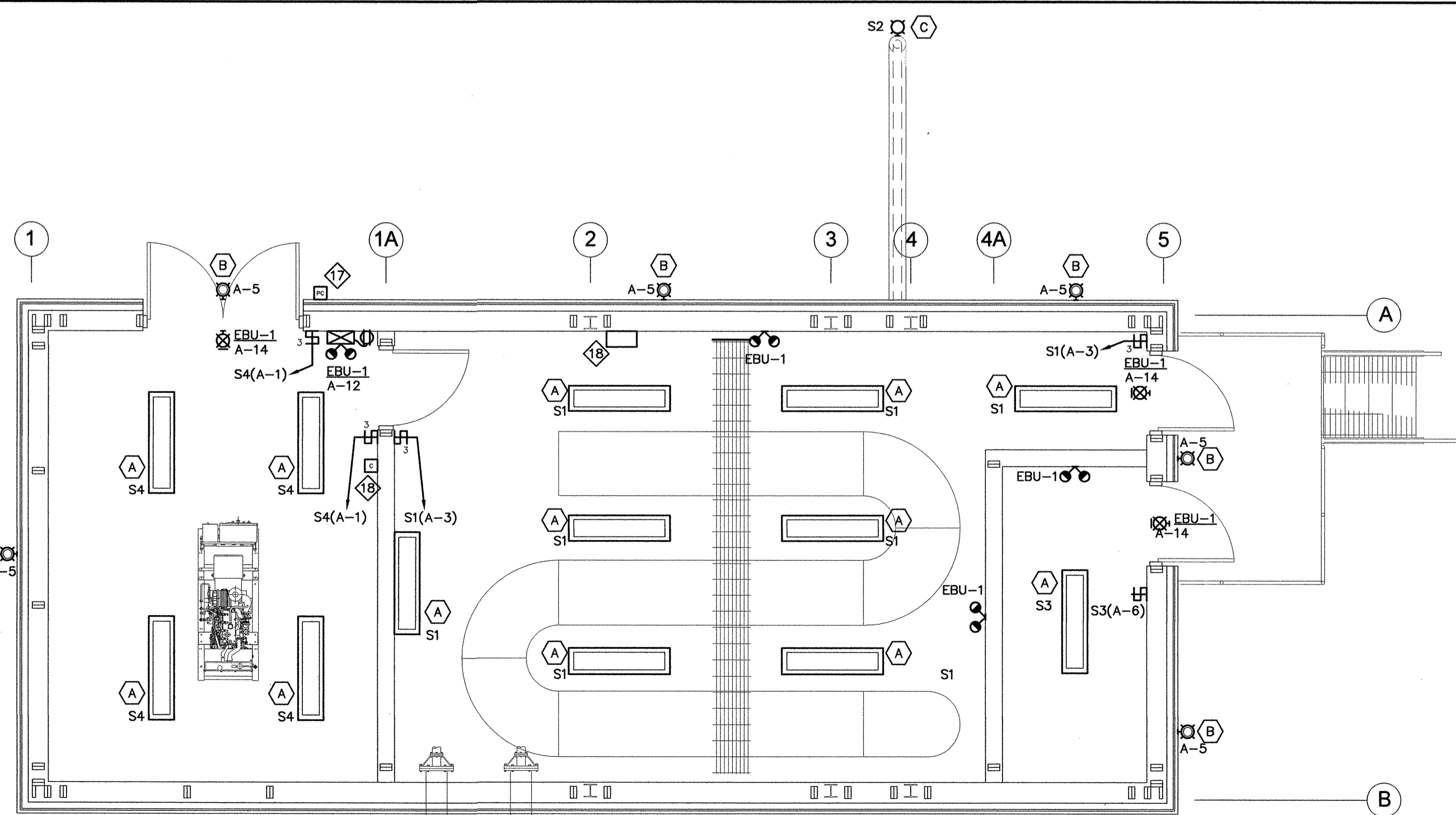
EXISTING
HYDRO POLE

FIXTURE SCHEDULE		
SYMBOL	TYPE	DESCRIPTION
	A	1321mm x 194mm VAPOUR PROOF FLUORESCENT - 2 x 32W T-8 LAMPS - FIBREGLASS REINFORCED POLYESTER HOUSING - SMOOTH VIRGIN ACRYLIC LENS WITH MOLDED CAM ACTION LATCHES AND SILICONE GASKETS - 120V ELECTRONIC BALLAST - SURFACE MOUNTED - WIRE GUARD AND CHAIN SUPPORTS
	B	WALL MOUNTED FLUORESCENT DOWNLIGHT - 1 x 70W, HIGH PRESSURE SODIUM - 120V ELECTRONIC BALLAST - WEATHER RESISTANT DIE CAST ALUMINUM HOUSING - SPECULAR ALZAK ALUMINUM - BOROSILICATE GLASS LENS - C/W VANDAL SHIELD
	C	100mm VAPOURLIGHT FIXTURE - 1 x 100W, INCANDESCENT LAMP - 120V ELECTRONIC BALLAST - VAPOURLIGHT, FULLY ENCLOSED AND GASKETED - WEATHERPROOF, IN DIE-CAST ALUMINUM - CLEAR GLASS PENDANT GLOBE - C/W CAST ALUMINUM GUARD - COORDINATE SUPPORT HARDWARE W/ ARCHITECT

LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	FIRE ALARM PULL STATION		METER HEAD
	FIRE ALARM HEAT DETECTOR		JUNCTION BOX
	FIRE ALARM HORN AND STROBE		CONTACTOR
	FIRE ALARM CONTROL PANEL		PHOTOCELL
	LIGHT SWITCH (3 INDICATES 3-WAY)		BREAKER PANEL
	DOUBLE-GANG LIGHT SWITCH		WALL MOUNTED TELEPHONE OUTLET PROVIDE 119mm BOX C/W SINGLE GANG PLASTER RING (RAISED 13mm) AND 19mm EMT C. (C/W INSULATED BUSHINGS) REACHING THE TELEPHONE SERVICE ENTRANCE. COORDINATE EXACT LOCATION /W LOCAL AUTHORITY
	1' x 4' FLUORESCENT FIXTURE		GROUND ROD
	WALL MOUNTED HID FIXTURE		GROUND
	CEILING MOUNTED BILINGUAL EXIT SIGNS		CIRCUIT BREAKER
	EMERGENCY BATTERY UNIT C/W HEADS		REFER TO NOTE 1
	EMERGENCY REMOTE HEADS - WALL MOUNTED		FIXTURE TYPE 'A'
	DUPLEX RECEPTACLE		GFIs DENOTES GROUND FAULT INTERRUPT
	DIRECT CONNECTION		DENOTES WEATHER PROOF
	COMBINATION MAGNETIC STARTER		
	DISCONNECT SWITCH		



2 NEW POWER AND SYSTEMS LAYOUT
SCALE 1:50



3 NEW POWER AND SYSTEMS LAYOUT
SCALE 1:50

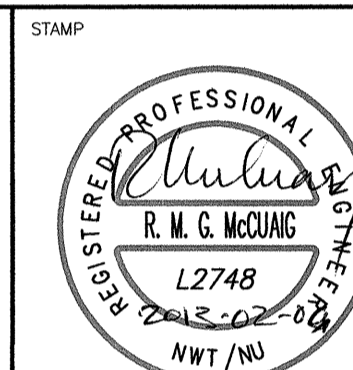
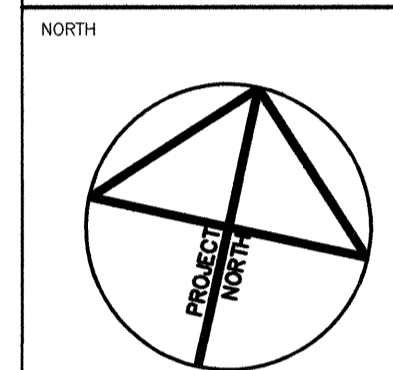
GENERAL NOTES:

- PERFORM COMPLETE INSTALLATION OF EQUIPMENT IN STRICT ACCORDANCE, AND SHALL MEET THE MOST STRINGENT REQUIREMENTS OF THE FOLLOWING STANDARDS:
 - CSA C22.1-12 - 22ND EDITION OF THE CANADIAN ELECTRICAL CODE 2012.
 - GOVERNMENT OF NUNAVUT'S GOOD BUILDING PRACTICES GUIDELINES - SECOND EDITION DECEMBER, 2005.
 - DEPARTMENT OF COMMUNITY AND GOVERNMENT SERVICES - PROTECTION SERVICES DIVISION - GN ELECTRICAL BULLETINS OFFICE OF THE NUNAVUT FIRE MARSHALL TECHNICAL BULLETINS.

- VERIFY WITH THE ELECTRICAL INSPECTION DEPARTMENT THE ACCEPTABILITY OF ANY PRE-WIRING DONE OUTSIDE THE PROVINCE OF NUNAVUT AND ENSURE THAT A PERMIT IS ACQUIRED.

NOTES:

- PROVIDE AND INSTALL NEW 50kW/60kVA, 120/208V, 3Ø, 4W EMERGENCY GENERATOR GL.
- PROVIDE AND INSTALL BATTERY CHARGER AS INDICATED. COMPLETE CONNECTION FROM CHARGER TO BATTERIES AT GENERATOR.
- FEED BLOCK HEATER TERMINAL BOX FROM PANEL DP-A AS INDICATED. REFER TO PANEL SCHEDULE.
- OVERHEAD INCOMING POWER AND COMMUNICATION SERVICE. PROVIDE ONE (1) 38mm RIGID GALVANIZED CONDUIT STUB TO EXTERIOR OF BUILDING FOR SERVICE ENTRANCE AND SEAL.
- PROVIDE MAIN INCOMING FEEDER BREAKER AS INDICATED. REFER TO SINGLE LINE DIAGRAM FOR DETAILS.
- PROVIDE GROUND BUS IN NEW GENERATOR ROOM AS INDICATED. PROVIDE THREE (3) GROUND RODS AS INDICATED. CONNECT GROUND RODS TO GROUND BUS WITH #6 COPPER CONDUCTOR IN PVC CONDUIT.
- PROVIDE 120V/208V, 3Ø ELECTRIC UNIT HEATER EQUIPPED WITH RELAY BASE AS INDICATED. PROVIDE CONDUIT AND WIRE TO THERMOSTAT AS INDICATED. COORDINATE CONNECTION WITH MECHANICAL. REFER TO PANEL SCHEDULE FOR CIRCUIT DETAILS. EH-01: 3 kW. EH-02: 5 kW.
- PROVIDE FIRE ALARM CONTROL PANEL AND ASSOCIATED FIRE DETECTING DEVICES AND ALARMS AS INDICATED.
- PROVIDE POWER FROM PANEL DP-A TO CONTROL PANEL CP-01 PROVIDED BY DIVISION 23. PROVIDE TWO (2) 27mm EMT CONDUIT FROM CONTROL PANEL TO WATER PUMP STARTERS TO CONTROL THEIR OPERATION. COORDINATE CONNECTION WITH MECHANICAL.
- PROVIDE TWO (2) STARTERS COMPLETE WITH 50m of 3 x 4 AWG TECK CABLE FED FROM PANEL DP-A TO FEED WATER PUMPS WP-01 AND WP-02 AS INDICATED. COORDINATE CONNECTION WITH MECHANICAL. PROVIDE 100A DISCONNECTS IN MAIN PUMPING ROOM.
- PROVIDE HEAT TRACE CONTROLLERS AND 6 x 15A-208V RECEPTACLES TO MATCH THE HEAT TRACE CABLE'S PLUG. PROVIDE GFI BREAKERS ON ASSOCIATED CIRCUITS. REFER TO DETAIL 1/E2.
- PROVIDE POWER FROM PANEL DP-A TO FUEL CONTROL PANEL FCP-01 AS INDICATED. TWO (2) FUEL TRANSFER PUMPS AND ONE (1) CONTROL PANEL PROVIDED BY DIVISION 23. FEED EACH PUMP WITH SEPARATE FEEDER FROM CONTROL PANEL IN LIQUID TIGHT FLEX CONDUIT. COORDINATE CONNECTIONS WITH DIVISION 23.
- PROVIDE 120V CIRCUIT TO LOW VOLTAGE TRANSFORMER FOR CONTROL CONNECTIONS PROVIDED BY DIVISION 23. COORDINATE CONNECTIONS WITH MECHANICAL.
- PROVIDE 120V CONNECTION FROM PANEL DP-A TO DAMPER MOTORS AS INDICATED. TYPICAL FOR ALL DAMPER MOTOR CONNECTIONS. MOTORIZED DAMPERS SUPPLIED AND INSTALLED BY DIVISION 23.
- PROVIDE ONE (1) 27mm RIGID PVC CONDUIT FOR CONTROL WIRING FROM FUEL CONTROL PANEL TO MAIN TANK AS INDICATED. COORDINATE CONDUIT RUN WITH MECHANICAL.
- PROVIDE ONE (1) 27mm EMT CONDUIT FOR CONTROL WIRING FROM FUEL CONTROL PANEL TO DAYTANK DT-01 AS INDICATED. COORDINATE CONDUIT RUN WITH MECHANICAL.
- PROVIDE PHOTOCELL AS INDICATED TO CONTROL TYPE B EXTERIOR LIGHTS.
- PROVIDE LIGHTING CONTROL CONTACTOR FOR OUTDOOR LIGHTING COMPLETE WITH HAND-OFF-AUTO CONTROL. CONNECT TO PHOTOCELL.
- PROVIDE UNISTRUT CHANNEL COMPLETE WITH TWO (2) 20A OUTLETS AND TWO (2) HP RATED TOGGLE SWITCHES AS INDICATED, TO POWER AND CONTROL THE OPERATION OF MIXER MX-01 AND PUMP IP-01 PROVIDED BY OTHERS. LABEL CIRCUITS ACCORDINGLY.
- PROVIDE ONE (1) STARTER COMPLETE WITH WIRE AND CONDUIT AS INDICATED, TO FEED DAMPERS MD-05 AND MD-06. CONNECT TO REMOTE SIGNAL PROVIDED BY DIVISION 23, INTERLOCKED TO ERV-01.
- PROVIDE EIGHT (8) CHANNEL AUTO-DIALER COMMUNICATION MODULE AS INDICATED INCLUDING SIGNAL WIRING IN 21mm CONDUIT, AND DRY CONTACTS TO DIAL OUT MAJOR ALARMS AS FOLLOWS:
 - ONE PAIR: 3 #14 TO SIGNAL GENERATOR ON
 - ONE PAIR: 3 #14 TO SIGNAL GENERATOR TROUBLE/FAILURE
 - ONE PAIR: 3 #14 TO SIGNAL LOW BUILDING TEMP
 - ONE PAIR: 3 #14 TO SIGNAL FIRE ALARM ACTIVATION
- PROVIDE 200A, 120/208V, 3Ø, 4W ATS, COMPLETE WITH SWITCHABLE NEUTRAL.
- PROVIDE FIBREGLASS REINFORCED POLYESTER (FRP) BACKBOXES AND JUNCTION BOXES FOR ALL DEVICES INSTALLED INSIDE THE CHEMICAL ROOM. PROVIDE PVC CONDUIT FOR ALL CIRCUITS ENTERING THE CHEMICAL ROOM.
- PROVIDE SPLIT PARKING RECEPTACLE IN WEATHERPROOF ENCLOSURE ON EXTERIOR WALL OF BUILDING FOR MAINTENANCE STAFF.
- PROVIDE POWER FROM PANEL DP-A TO CHLORINE PUMP CONTROLLER CPC-01 AS INDICATED. FIVE (5) CHLORINE DOSING PUMPS AND ONE (1) CONTROL PANEL PROVIDED BY DIVISION 23. FEED EACH PUMP WITH SEPARATE FEEDER FROM CONTROL PANEL IN LIQUID TIGHT FLEX CONDUIT. COORDINATE CONNECTIONS WITH DIVISION 23.
- PROVIDE 8m OF RAYCHEM TYPE 38TVI-CR HEAT TRACE CABLING WRAPPED AROUND THE TRUCK FILL ARM.



NOTES: GENERAL CONTRACTOR TO VERIFY ALL DIMENSIONS WITH FINAL ARCHITECTURAL AND MECHANICAL DRAWINGS. NOTIFY THE ENGINEERS OF ANY ERRORS AND/OR OMISSIONS PRIOR TO CONSTRUCTION FOR DIRECTION. DO NOT SCALE THIS DRAWING.

REVISIONS				
No.	DESCRIPTION	DATE	BY	APP'D
1	ISSUED FOR TENDER	07/02/2014		

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Consulting Engineers



CLIENT
GOVERNMENT OF NUNAVUT
DEPARTMENT OF COMMUNITY
AND GOVERNMENT SERVICES

PROJECT
REPULSE BAY, NUNAVUT
NEW PUMPING STATION

TITLE
ELECTRICAL
NEW POWER AND LIGHTING
LAYOUT

design by	A.W.	project no.	8012-099
drawn by	D.O.	drawing no.	E1
checked by	R.M.M.		
date	DECEMBER 2013		
AS SHOWN			