

DRUMHELLER AQUAPLEX



MECHANICAL UPGRADE

100 RIVERSIDE DR W
DRUMHELLER, AB. T0J0Y4

MECHANICAL DRAWING LIST	
DRAWINGS NO.	DESCRIPTION
M000	COVER SHEET
M001	MECHANICAL DRAWING LIST, LEGENDS, AND SITE PLAN
M002	MECHANICAL SCHEDULES
M400	MAIN FLOOR - HVAC - DEMOLITION PLAN
M401	MAIN FLOOR - HVAC - RENOVATION PLAN
M402	ROOF - HVAC - DEMOLITION AND RENOVATION PLAN
M403	INDOOR POOL MECH ROOM - HVAC - DEMOLITION PLAN
M404	INDOOR POOL MECH ROOM - HVAC - RENOVATION PLAN
M405	OUTDOOR POOL MECH ROOM - HVAC - DEMOLITION AND RENOVATION PLAN
M501	INDOOR POOL MECH ROOM - HYDRONIC - DEMOLITION & RENOVATION PLAN
M502	OUTDOOR POOL MECH ROOM - HYDRONIC - DEMOLITION & RENOVATION PLAN
M600	HVAC SCHEMATIC
M601	AHU DETAILS
M801	MECHANICAL DETAILS I
M802	MECHANICAL DETAILS II
M803	MECHANICAL DETAILS III

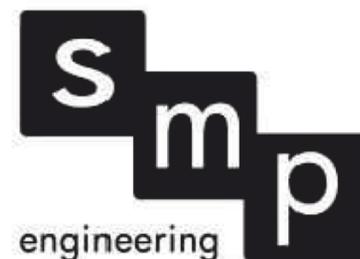
ELECTRICAL DRAWING LIST	
DRAWINGS NO.	DESCRIPTION
E001	COVER SHEET AND SCHEDULES
E002	ELECTRICAL PLAN - MECHANICAL ROOMS
E003	ROOF PLAN, SINGLE LINE DIAGRAM & DETAILS
E004	ELECTRICAL SPECIFICATIONS

STRUCTURAL DRAWING LIST	
DRAWINGS NO.	DESCRIPTION
S100	NOTES, PLANS AND DETAILS

STRUCTURAL CONSULTANT



ELECTRICAL CONSULTANT



ARCHITECTURAL CONSULTANT



Architecture
Interior Design

PRIME AND MECHANICAL CONSULTANT



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REV.	DATE	DESCRIPTION
A.	2023.02.13	ISSUED FOR AHU-1 PRE-PURCHASE
B.	2023.04.01	ISSUED FOR TENDER/CONSTRUCTION



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 AME CONSULTING GROUP LTD
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 RM APEGA ID #: [ID]
 DATE: [Date]
PERMIT NUMBER: P009296
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)



CONSULTANT:

SEAL:

PROJECT TITLE:
DRUMHELLER AQUAPLEX - MECHANICAL UPGRADE

PROJECT ADDRESS:
 DRUMHELLER AQUAPLEX
 100 RIVERSIDE DR W
 DRUMHELLER, AB
 T0J 0Y4

DRAWN BY	MZ
CHECKED BY	JH/BG
SCALE	AS NOTED
DATE	2023, 01, 23

DRAWING TITLE:
MECHANICAL DRAWING LIST, LEGENDS, AND SITE PLAN

PROJECT NO.	DRAWING NO.
000c-1309-22	M001

SYMBOL SCHEDULE

SYSTEM MONITORING			
DEMOLITION	EXISTING	NEW	
			ROOM TEMPERATURE SENSOR
			TEMP. SENSOR
			HUMIDISTAT
DUCTWORK			
			SUPPLY OR OUTDOOR AIR DUCT UP
			SUPPLY OR OUTDOOR AIR DUCT DOWN
			RETURN AIR DUCT UP
			RETURN AIR DUCT DOWN
			EXHAUST AIR DUCT UP
			EXHAUST AIR DUCT DOWN
			TURNING VANES
			ACOUSTIC INSULATION
			BALANCING DAMPER (BD)
			BACKDRAFT DAMPER (BDD)
			MOTORIZED DAMPER (MD)
			FIRE DAMPER - VERTICAL (FD)
			SMOKE / FIRE DAMPER (FSD)
			DUCT OR PIPE CAP-OFF
			RETURN OR EXHAUST AIR GRILLE
			SMOKE DAMPER
EQUIPMENT TAGS			
			GRILLE TYPE
			NECK / GRILLE SIZE
			AIR VOLUME (L/s)
			EQUIPMENT / FIXTURE TYPE
			KEY NOTE
			DRAWING REVISION
			DETAIL NUMBER
			DRAWING NUMBER
			SECTION NUMBER
			DRAWING NUMBER
PIPING			
			HWS HEATING WATER SUPPLY
			HWR HEATING WATER RETURN
			CHWS CHILLED WATER SUPPLY
			CHWR CHILLED WATER RETURN
			CD CONDENSATE DRAIN
			S STEAM
			C CONDENSATE
FITTINGS AND VALVES			
			DIRECTION OF FLOW
			PIPE DROP
			PIPE RISE
			PIPE TEE UP
			PIPE TEE DOWN
			PIPE UNION
			ISOLATION VALVE (NORMALLY OPEN)
			ISOLATION VALVE (NORMALLY CLOSED)
			CHECK VALVE
			2-WAY CONTROL VALVE
			BALANCING VALVE
			CIRCUIT BALANCING VALVE (CBV)
			PRESSURE REDUCING VALVE (PRV)
			STRAINER
			RELIEF VALVE
			BACKFLOW PREVENTOR (BFP)
			AUTOMATIC AIR VENT (AAV)
			TRIPLE DUTY VALVE
			TEMPERATURE GAUGE
			PRESSURE GAUGE
			THERMOMETER
			PUMP
OUTLETS AND DRAINS			
			FLOOR DRAIN (FD)
			OPEN DRAIN
			ROOF DRAIN (RD)

MECHANICAL ABBREVIATIONS

AHU	AIR HANDLING UNIT	LAT	LEAVING AIR TEMPERATURE
ARCH	ARCHITECTURAL	LBS	POUNDS
BDD	BACKDRAFT DAMPER	LWT	LEAVING WATER TEMPERATURE
BTUH	BRITISH THERMAL UNIT / HOUR	MUA	MAKE-UP AIR UNIT
CFM	CUBIC FEET PER MINUTE	MAX	MAXIMUM
CLG	CEILING	MBH	1000 BRITISH THERMAL UNITSHOUR
CONN	CONNECTION	MD	MOTORIZED DAMPER
CW	COMPLETE WITH	MECH	MECHANICAL
CONT	CONTINUATION	MIN	MINIMUM
CTE	CONNECT TO EXISTING	MU	MAKE-UP MECHANICAL WATER
DEG	DEGREE	NIC	NOT IN CONTRACT
DIA	DIAMETER	NC	NOISE CRITERIA/NORMALLY CLOSED
DN	DOWN	NO	NORMALLY OPEN
DWG	DRAWING	NTS	NOT TO SCALE
E/A	EXHAUST AIR	O/A	OUTDOOR AIR
EAT	ENTERING AIR TEMPERATURE	OED	OPEN ENDED DUCT
EF	EXHAUST FAN	OD	OUTSIDE DIAMETER
EFF	EFFICIENCY	POC	POINT OF CONNECTION
ELEC	ELECTRICAL	PRV	PRESSURE REDUCING VALVE
ENT	ENTERING	PSI	POUNDS PER SQUARE INCH
ESP	EXTERNAL STATIC PRESSURE	RA	RETURN AIR
EWT	ENTERING WATER TEMPERATURE	RF	RETURN FAN
EXH	EXHAUST	RM	ROOM
FLA	FULL LOAD AMPS	RPM	REVOLUTIONS PER MINUTE
FLR	FLOOR	S/A	SUPPLY AIR
FPM	FEET PER MINUTE	SF	SUPPLY FAN
FT	FEET/FOOT	SS	STAINLESS STEEL
GAL	GALLONS	SP	STATIC PRESSURE
GPM	GALLONS PER MINUTE	SPEC	SPECIFICATION
HCR	HEATING COIL RETURN	T/A	TRANSFER AIR
HCS	HEATING COIL SUPPLY	TAD	TRANSFER AIR DUCT
HRR	HEAT RECOVERY RETURN	TBC	TO BE CONFIRMED
HRS	HEAT RECOVERY SUPPLY	TBD	TO BE DETERMINED
HWR	HEATING WATER RETURN	THRU	THROUGH
HWS	HEATING WATER SUPPLY	TSP	TOTAL STATIC PRESSURE
ID	INSIDE DIAMETER	TYP	TYPICAL
IE	INVERT ELEVATION	V	VENT
IN	INCH	VFD	VARIABLE FREQUENCY DRIVE
INV	INVERT	LPST	LOW PRESSURE STEAM
KW	KILOWATT	LPS	LOW PRESSURE CONDENSATE

MECHANICAL DRAWING LIST

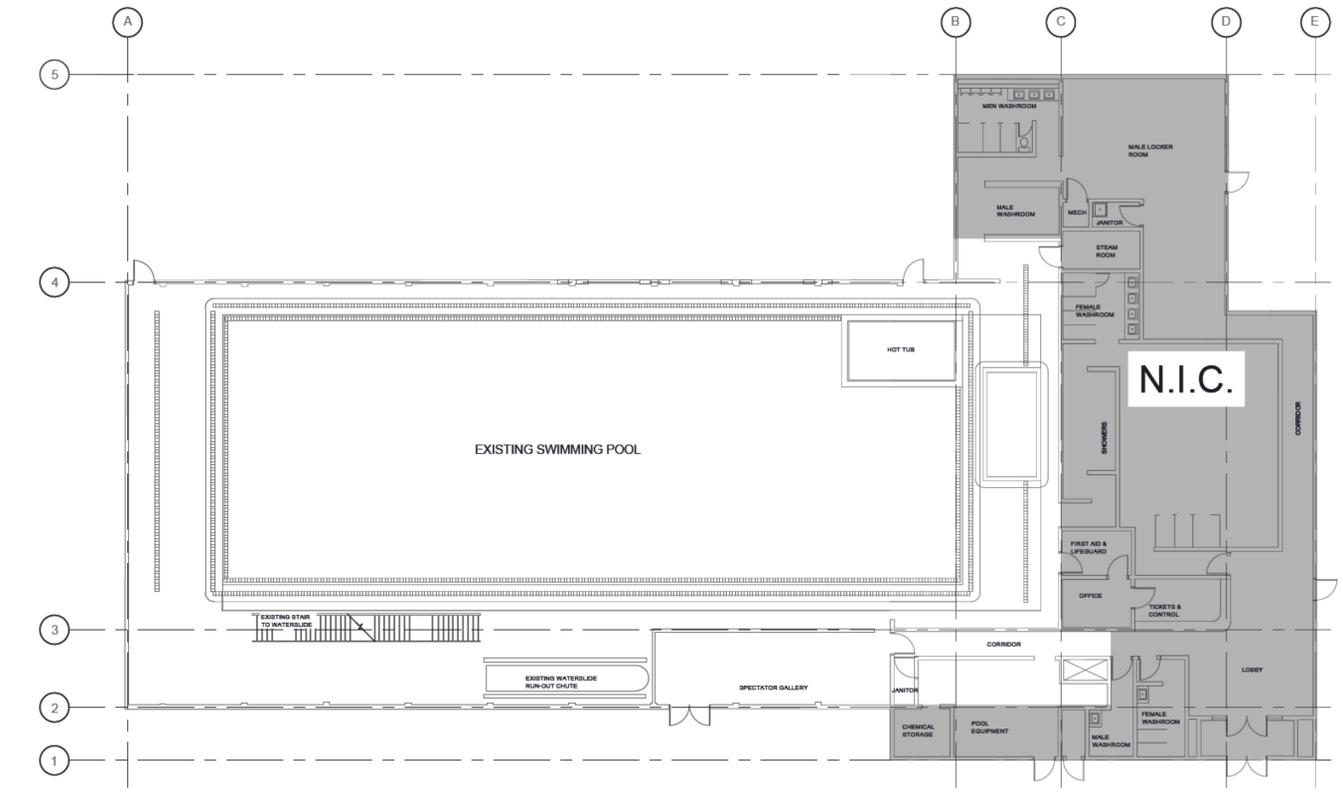
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MECHANICAL RENOVATION NOTES

- THE CONTRACTOR SHALL BE REQUIRED TO ATTEND A PRE-BID WALK THROUGH TO ENSURE A PROPER UNDERSTANDING OF THE MECHANICAL SCOPE OF WORK.
- CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND VERIFYING ACTUAL ON-SITE CONDITIONS AND EQUIPMENT LOCATIONS PRIOR TO ANY AND ALL DEMOLITION WORK AND/OR EQUIPMENT REMOVAL.
- CONTRACTOR TO INCLUDE AS A PART OF THE BID ALL COSTS ASSOCIATED WITH CUTTING AND PATCHING THAT IS REQUIRED TO INSTALL ALL NEW MECHANICAL SYSTEMS AS REQUIRED TO MEET THE SITE CONDITIONS AS SHOWN ON THE DRAWINGS. PATCHING SHALL MEET THE AESTHETIC CONDITIONS WHICH WAS THE CONDITION PRIOR TO ANY CUTTING BEING PERFORMED.
- CONTRACTOR TO PROPERLY SEAL AND REPAIR ANY AND ALL DAMAGE THAT IS A RESULT OF REMOVAL OR DEMOLITION OF MECHANICAL EQUIPMENT. THIS INCLUDES BUT IS NOT LIMITED TO WALL, DOOR, CEILINGS, ETC.
- THE EXISTING FACILITIES MECHANICAL SYSTEMS SHALL REMAIN OPERATIONAL DURING THE CONSTRUCTION AND RENOVATION PERIOD. CONTRACTOR TO COORDINATE CONSTRUCTION ACTIVITIES AND PHASING WITH OWNER TO MINIMIZE DISRUPTIONS TO OWNERS OPERATIONS AND ACCESS, AND TO ENSURE SAFETY OF THE USERS. PROVIDE ALL MEASURES REQUIRED TO PREVENT HAZARDS TO PEOPLE AND DAMAGE TO ITEMS REMAINING INCLUDING BUT NOT LIMITED TO DAMAGE FROM DUST AND HEAT.
- THE EXISTING DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED AND FURNISHED BY OTHERS. AS A RESULT, THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THIS DOCUMENT.
- DURING REMOVAL OF ITEMS SO INDICATED, CAUTION SHOULD BE USED TO PREVENT DAMAGE TO ANY EQUIPMENT HAVING SALVAGE VALUE. ALL REUSABLE SALVAGED MATERIAL SHALL REMAIN THE PROPERTY OF THE OWNER AND BE RETAINED FOR THEIR INSPECTION. ONLY ITEMS AGREED BY THE OWNER SHALL BE DISPOSED OF BY THE CONTRACTOR.
- CONTRACTOR SHALL COORDINATE AND SCHEDULE WORK WITH FACILITY TO LIMIT INTERFERENCE WITH OPERATIONS.
- CONTRACTOR TO RE-BALANCE EXISTING AIR TERMINALS TO INDICATED AIR VOLUMES. FLOW RATES ON HEATING COIL BE BALANCED TO MATCH EXISTING SUPPLY AIR TEMPERATURES.
- INSTALL ALL MECHANICAL WORK AS HIGH AS POSSIBLE.
- ALL EQUIPMENT CONNECTIONS SHALL HAVE A MINIMUM OF 4 INCH OF REINFORCED CANVAS FLEXIBLE DUCTWORK FOR VIBRATION ISOLATION.
- COORDINATE LOCATIONS AND MOUNTING HEIGHTS OF ALL THERMOSTATS AND WALL SWITCHES WITH THE INTERIOR DESIGN ARCHITECT PRIOR TO FINAL INSTALLATION.
- ALL OPEN ENDS OF DUCTWORK DURING DEMOLITION AND INSTALLATION PHASE SHALL BE CAPPED AND KEPT CLEAN.
- MAXIMUM FLEXIBLE DUCT LENGTH SHALL BE 3' (900mm) UNLESS OTHERWISE NOTED FOR THE SPECIFIC APPLICATION.
- CONTRACTOR TO SUPPLY AND INSTALL VOLUME DAMPER FOR EACH SUPPLY, RETURN, AND EXHAUST DUCTWORK RUN WITH TWO OR MORE OPENINGS ASSOCIATED WITH THE BRANCH, PROVIDE CONCEALED DAMPER REGULATIONS FOR ALL VOLUME DAMPERS ABOVE INACCESSIBLE CEILINGS AND SOFFITS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
- ALL CONTROLS WORK IS TO BE DONE BY BASE BUILDING CONTROLS CONTRACTOR (TO BE CONFIRMED BY CONTRACTOR) WHO SHALL PROVIDE ALL CONTROL WIRING, CONDUITS, RELAYS, INTERFACE COMPONENTS TO MAKE A FULLY FUNCTIONAL CONTROLS SYSTEM.
- PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL EXERCISE PROPER PRECAUTIONS TO VERIFY THE ROUTING, INVERT LEVELS, AND SLOPES SHOWN ON THE DRAWING AND BE RESPONSIBLE FOR ERRORS AND ALL EXTRA COSTS OF EXTRA WORK RESULTING FROM FAILURE TO EXERCISE SUCH PRECAUTIONS.
- CONTRACTOR TO CAP AND SEAL ALL UN-USED DUCTWORK.

MECHANICAL GENERAL NOTES

- THE MECHANICAL SYSTEM SHALL CONSIST OF ALL WORK SHOWN ON THE DRAWINGS, DIAGRAMS, SCHEMATICS AND AS DESCRIBED IN THE SPECIFICATIONS.
- THE MECHANICAL PLANS ARE DIAGRAMMATIC IN NATURE AND DO NOT ATTEMPT TO SHOW ALL REQUIRED OFFSETS. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL CONSTRUCTION DETAILS.
- COORDINATE THE DRAWINGS WITH THE SPECIFICATIONS AND IN CASES WHERE CONFLICTS OCCUR THE MOST STRINGENT REQUIREMENT SHALL APPLY.
- CONTRACTOR TO COORDINATE ALL MECHANICAL WORK WITH THAT OF OTHER TRADES TO ENSURE PROPER AND ADEQUATE INTERFACE WITH THE WORK OUTLINED FOR THIS PROJECT.
- CONTRACTOR TO PROVIDE HORIZONTAL AND VERTICAL CLEARANCE REQUIREMENTS AS PER CEC (CANADIAN ELECTRICAL CODE) FOR ALL INSTALLED EQUIPMENT. OFFSET MECHANICAL WORK AS REQUIRED TO MEET THIS REQUIREMENT.
- MECHANICAL EQUIPMENT SHALL NOT BE USED FOR TEMPORARY HEATING DURING THE CONSTRUCTION PROCESS. A WRITTEN LETTER FROM THE OWNER IS REQUIRED TO DO SO.
- ALL DUCTWORK SIZES ARE SHOWN AS INSIDE CLEAR. ADD APPROPRIATE DIMENSION FOR INSULATION OR DUCT LINER TO OBTAIN "TOTAL DUCT SIZE".
- CONTRACTOR TO ALLOW AND PROVIDE FOR METAL DUCTWORK TRANSITIONS BETWEEN ALL EQUIPMENT AND DUCT CONNECTIONS.
- PROVIDE DIFFUSERS AND GRILLE COMPATIBLE WITH ARCHITECTURAL CEILING TYPES. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
- COORDINATE EXACT LOCATIONS OF ALL ROOM THERMOSTATS AND/OR ROOM TEMPERATURE SENSORS WITH THE DESIGN ARCHITECT BEFORE FINAL INSTALLATION.
- ALL EXISTING DUCTWORK INDICATED ON PLANS ARE BASED ON AN INITIAL SITE SURVEY AND SHALL NOT BE CONSIDERED 100% ACCURATE. CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING SYSTEMS PRIOR TO CONSTRUCTION.
- IF ASBESTOS IS DISCOVERED ON THE PREMISES, OWNER SHALL BE NOTIFIED AND ALL WORK SHALL CEASE IMMEDIATELY UNTIL ASBESTOS ABATEMENT WORKS ARE COMPLETED.
- PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL LOCATE AND EXPOSE ANY UTILITY SERVICES CROSSING THE ROUTING OF NEW SERVICES. ENSURE THAT THESE SERVICES REMAIN OPERATIONAL AND ARE NOT DAMAGED DURING OPERATIONS. RECORD THE LOCATION AND TYPE OF SERVICE.
- ALL NEW DUCTWORK SHALL BE FABRICATED FROM ALUMINUM.



1 SITE PLAN
 M001 SCALE: 1:150



UNIT NO.	QTY	UNIT DESCRIPTION	UNIT LOCATION	STANDBY PWR (YES/NO)	EMERGENCY PWR (YES/NO)	ELECTRICAL LOAD				VOLT	PH	EQUIPMENT			STARTER				DISCONNECT			CONTROL			FFCP			NOTES					
						MCA	FLA	KW	HP			S	I	C	S	I	C	TYPE	S	I	C	S	I	C	TYPE	AUTO ON	AUTO OFF		PNL SWITCH	STATUS			
AHU-1	1	AIR HANDLING UNIT	INDOOR POOL AREA	N	N	70			15	208	3	Mech	Mech	Elec	MANF	MANF	MANF	MANF	MANF	MANF	MANF	MANF	MANF	BMS								1, 2, 3	
B-1	1	BOILER - GAS FIRED	INDOOR POOL MECH ROOM	N	N			5.3		115	1	Mech	Mech	Elec	Mech	Mech	Elec	PCs	Elec	Elec	Elec	Mech	Mech	Mech	BMS								
B-2	1	BOILER - GAS FIRED	OUTDOOR POOL MECH ROOM	N	N			10		115	1	Mech	Mech	Elec	Mech	Mech	Elec	PCs	Elec	Elec	Elec	Mech	Mech	Mech	BMS								
P-1	1	PUMP - BOILER RECIRCULATION PUMP	INDOOR POOL MECH ROOM	N	N				0.5	115	1	Mech	Mech	Elec	Mech	Mech	Elec	PCs	Elec	Elec	Elec	Mech	Mech	Mech	BMS								
P-2	1	PUMP - BOILER RECIRCULATION PUMP	OUTDOOR POOL MECH ROOM	N	N				0.5	115	1	Mech	Mech	Elec	Mech	Mech	Elec	PCs	Elec	Elec	Elec	Mech	Mech	Mech	BMS								
RF-1	1	RETURN FAN	INDOOR POOL MECH ROOM	N	N				7.50	208	3	Mech	Mech	Elec	Mech	Mech	Elec	VFD	Elec	Elec	Elec	Mech	Mech	Mech	BMS								3
UH-1	1	UNIT HEATER - GAS FIRED	INDOOR MECH ROOM	N	N					FRAC	115	1	Mech	Mech	Elec	Mech	Mech	Elec	PCs	Elec	Elec	Elec	Mech	Mech	Mech	T							3

SUPPLIER / INSTALL / WIRE CODES:
MECH = MECHANICAL
ELEC = ELECTRICAL
MANF = MANUFACTURER
S = SUPPLIED BY
I = INSTALLED BY
C = CONNECTED BY

STARTER CODES:
MAN = MANUFACTURER CONTROLS TO INTERCONNECT AND OPERATE WITH BMS
MAG = MAGNETIC STARTER CAV AUX STATUS CONTACTS
MRR = MOTOR RATED RELAY, 24 VAC COIL & MOTOR PROTECTION SWITCH
PCS = PACKAGED CONTROL SYSTEM
VFD = VARIABLE FREQUENCY DRIVE
RVS = REDUCED VOLTAGE STARTER
WS = WALL SWITCH
CP = CONTROL PANEL

EMERGENCY POWER CODES:
VP = VITAL POWER
DVP = DELAYED VITAL POWER
CP = CONDITIONAL POWER
NP = NORMAL POWER

CONTROL DEVICE CODES:
AQUA = PUMP CONTROLLED BY AQUASTAT
BMS = BLDG MANAGEMENT SYSTEM
ES = END SWITCH
ET = LINE VOLTAGE T'STAT
FA = FIRE ALARM
FAP = FIRE ALARM PANEL
FS = FLOW SWITCH
GS = GAS SENSOR
H = HUMIDITY SENSOR
I = INTERLOCK, SEE NOTES
LIGHT = WIRED TO LIGHT SWITCH
LS = LEVEL SWITCH
OS = OCCUPANT SENSOR
PS = PRESSURE SWITCH
R, STAT = REVERSE ACTING THERMOSTAT
TC = TIME CLOCK
T = LOW VOLTAGE T'STAT OR SENSOR
TS = TAMPER SWITCH
VS = VARIABLE SPEED SWITCH
WS = WALL SWITCH
MANF = MANUFACTURER CONTROLS TO INTERCONNECT AND OPERATE WITH BMS

ELECTRICAL LOAD CODES:
BHP = BREAK HORSEPOWER
FLA = UNIT FULL LOAD AMPS
HP = UNIT OR MOTOR HORSE POWER
PH = POWER PHASE
MCA = MINIMUM CIRCUIT AMPS
VOLT = REQUIRED SUPPLY VOLTAGE

MISCELLANEOUS CODES:
FFCP = FIRE FIGHTERS CONTROL PANEL
FRAC = FRACTIONAL HORSEPOWER
INT = INTEGRAL PART OF UNIT

GENERAL NOTES:
A. ALL FIRE ALARM DEVICES WIRED BY ELECTRICAL.
B. CONTROL PANELS ARE SHIPPED LOSS & REQUIRE FIELD WIRING
C. PCS EQUIPMENT REQUIRES SINGLE SOURCE POWER CONNECTION, UNLESS NOTED OTHERWISE
D. CP, VFD EQUIPMENT REQUIRES POWER WIRING TO AND FROM CONTROL PANEL TO CONTROLLED EQUIPMENT

NOTES:
1. SINGLE POINT POWER CONNECTION (EXCEPT FOR LIGHTS).
2. PROVIDE SEPARATE 120V CIRCUIT FOR MARINE LIGHTS AND CONVENIENCE OUTLET.
3. STANDBY POWER IF POSSIBLE. ELECTRICAL TO ADVISE
4. REQUIRES RECEPTACLE.

AIR HANDLING UNIT	
TAG	AHU-1
SERVICE	INDOOR POOL AREA
LOCATION	MECH ROOM
MANUFACTURER	ENGINEERED AIR
MODEL	DUS140M/R
SUPPLY FAN	
TOTAL NORMAL VOLUME (LPS)	8,024
OUTDOOR AIR (LPS)	4,011
EXTERNAL STATIC EACH (PA)	400
FAN RPM	700
VFD	YES
TOTAL MOTOR (HP)	15.0
FLA (AMP)	46.0
POWER SUPPLY	208/3/60
HEATING CAPACITY	
SYSTEM TYPE	INDIRECT GAS FIRE
INPUT CAPACITY (KW)	410
OUTPUT CAPACITY (KW)	328.0
TEMP. RISE (DEG C)	36.7
FILTERS	PLEATED
PRE-FILTER	2" MERV 13
MAIN FILTER	
DIMENSIONS LxWxH (MM)	4775x2135x1500
APPROX. WEIGHT (Kg)	1542.0
ELECTRICAL	
VOLTAGE	208/3/60
MCA (AMP)	70.0
MAX. FUSE (DUAL ELEMENT)	110.0
MAX. BREAKER	110.0
REMARK:	
1. 100% ECONOMIZER CAPABILITY	
2. ALL HOA AND VSD STARTER ARE TO BE FACTORY INSTALLED AND BE INSTALLED IN NEMA 1 RATED ENCLOSURES	
3. SINGLE POINT POWER CONNECTION TO UNIT (EXCEPT LIGHTING)	
4. LIGHTING IS TO BE PROVIDED ON A SEPARATE 120V CIRCUIT.	
5. LIGHTS TO BE WIRED BY THE MANUFACTURER BACK TO A SINGLE TERMINAL BLOCK DIV. 26 TO PROVIDE POWER TO THE TERMINAL BOX	
6. THE AHU UNIT NEEDS TO BE SPLIT INTO SECTIONS PRIOR TO BE INSTALLED IN THE MECH ROOM. THE APPROX. OPENING THRU THE DOUBLE DOOR IS 1700mm H x 1500mm W. THE MANUFACTURER WILL BE REQUIRED TO VISIT THE SITE TO VERIFY THE OPENING SIZE AND ENSURE THE UNIT WILL FIT INTO THE MECH. ROOM PRIOR TO THE SHOP DRAWING STAGE.	

DIFFUSERS AND GRILLES				
EQUIPMENT TAG	DESCRIPTION/TYPE	MANUFACTURER	MODEL NUMBER	NOTES
S-1	SUPPLY GRILLE - DOUBLE DEFLECTION, BLADE DEFLECTION 45 DEG., BLADE SPACING 3/4 IN.	PRICE	600	ALL
R-1	RETURN GRILLE - DOUBLE DEFLECTION, BLADE DEFLECTION 45 DEG., BLADE SPACING 3/4 IN.	PRICE	630	ALL

NOTES:
1. PROVIDE DIFFUSERS AND GRILLES WITH BORDER STYLES THAT ARE COMPATIBLE WITH ADJACENT WALLS AND CEILING SYSTEMS.
2. NC LEVELS BASED ON OCTAVE BANDS 2-7 SOUND POWER LEVELS MINUS A ROOM ABSORPTION OF 10 DB, MEASURED PER ASHRAE 70-91.
3. CUSTOM COLOUR OF PRODUCT TO BE SELECTED BY THE ARCHITECT DURING THE SHOP DRAWINGS SUBMITTAL PROCESS.
4. WHERE A BALANCE DAMPER IS NOT INDICATED ON THE PLANS, PROVIDE A DIFFUSER/GRILLE WITH INTEGRATED OPPOSABLE BLADE DIFFUSER

EXPANSION TANK												
EQUIPMENT TAG	LOCATION	TANK DESCRIPTION	TYPE	MANUFACTURER	MODEL	VOLUME (L)	TANK DIAMETER (MM)	TANK LENGTH (MM)	MAX WORKING PRESS. (KPA)	ARRANGEMENT	SHIP. WEIGHT (Kg)	NOTES
ET-1	INDOOR POOL MECH ROOM	HEATING SYSTEM	DIAPHRAGM	AMTROL	AX-20V	42	305	660	862	VERTICAL	26	ALL
ET-2	OUTDOOR POOL MECH ROOM	HEATING SYSTEM	DIAPHRAGM	AMTROL	AX-20V	42	305	660	862	VERTICAL	26	ALL

NOTES:
1 SHELL: STEEL
2 DIAPHRAGM: HEAVY DUTY BUTYL

UNIT HEATER (GAS FIRED)													
EQUIPMENT TAG	QTY	SERVICE	LOCATION	MANUFACTURER	MODEL	TYPE	MOUNTING TYPE	AIR FLOW (LPS)	MOTOR (HP)	HGT CAP (KW)	OP. WEIGHT (Kg)	ELEC (V/PH/Hz)	NOTES
UH-1	1	HEATING	INDOOR MECH ROOM	ROSEMEX	UDZ-30	HORIZONTAL	CEILING	215.0	FRAC	8.8	26.0	115/1/60	ALL

NOTES:
1 REFER TO SPECIFICATION FOR FURTHER INFORMATION
2 HORIZONTAL DISCHARGE, HORIZONTAL LOUVERS
3 FACTORY HANGER AND VIBRATION ISOLATION
4 PROVIDE WALL-MOUNTED LINE VOLTAGE T-STAT
5 ALUMINUM FINNS, AND COPPER TUBES
6 FAN GUARD

AIR SEPARATOR											
EQUIPMENT TAG	QTY	LOCATION	TANK DESCRIPTION	MANUFACTURER	MODEL	FLOW (LPS)	MAX PRESSURE DROP (KPA)	TANK DIAMETER (MM)	TANK LENGTH (MM)	ARRANGEMENT	NOTES
AS-1	1	INDOOR POOL MECH ROOM	VORTEX AIR SEPARATOR WITH STRAINER	ARMSTRONG	VAS-3	8.8	861	394	483	VERTICAL	ALL
AS-2	1	OUTDOOR POOL MECH ROOM	VORTEX AIR SEPARATOR WITH STRAINER	ARMSTRONG	VAS-3	8.8	861.00	394	483	VERTICAL	ALL

NOTES:
1 C/W STRAINER, AIR CONTROL AND ELIMINATION
2 PROVIDE ASME RATING
3 PROVIDE AUTOMATIC AIR ELIMINATOR A-VV-075
4 PROVIDE DIRT SEPARATOR

BOILER (GAS FIRED)															
EQUIPMENT TAG	LOCATION	MANUFACTURER	TYPE	MODEL	INPUT (KW)	OUTPUT (KW)	EFF. (%)	FLOW RATE (LPS)	WATER P. DROP (KPa)	EWT (DEG C)	LWT (DEG C)	OPERATING WEIGHT (Kg)	ELEC (FLA)	POWER (V/PH/Hz)	NOTES
B-1	INDOOR POOL - MECH ROOM	RBI	FULL MODULATION HIGH EFFICIENCY	FUTERA II 1000	293.0	249.0	85	5.4	10.1	71.1	82.2	262	5.3	115/1/60	ALL
B-2	OUTDOOR POOL - MECH ROOM	RBI	FULL MODULATION HIGH EFFICIENCY	FUTERA II 1250	366.0	311.0	85	6.7	6.2	71.1	82.2	305	10	115/1/60	ALL

NOTES:
1 LOW WATER CUT-OFF
2 FULLY MODULATING BURNER
3 TEMPERATURE AND PRESSURE GAUGE
4 RELIEF VALVES, GAS VALVE
5 UL APPROVED
6 BOILER TO BE SUPPLIED WITH PACKAGED CONTROLS SYSTEM FOR BOILER MODULATION, OUTDOOR AIR SENSOR AND DDC SYSTEM MONITOR POINTS
7 PROVIDE WITH ACID NEUTRALIZER

FANS													
EQUIPMENT TAG	LOCATION	TYPE	MANUFACTURER	MODEL	AIR FLOW EACH (LPS)	E. S. P. EACH (PA)	FAN (RPM)	MOTOR SIZE EACH (HP)	VFD MOTOR	POWER (V/PH/Hz)	SOUND LEVEL EACH (SONES)	EQ. WEIGHT TOTAL (KG)	NOTES
RF-1	INDOOR POOL MECH ROOM	MEDIUM PRESSURE AXIAL DIRECT DRIVE	GREENHECK	AX-72-190-0630-A75	8,064	190	1,770	7.5	YES	208/3/60	62	160	ALL

NOTES:
1 ACOUSTICALLY LINED CABINET.
2 C/W FAN MONITORING SYSTEM
3 FACTORY MOUNTED SPEED CONTROL DIAL ON FAN FOR BALANCING.

PUMP SCHEDULE														
EQUIPMENT TAG	DESCRIPTION	LOCATION	DESCRIPTION / TYPE	MANUFACTURER	MODEL	FLUID TEMP. (DEG C)	FLUID TYPE	FLOW (EA) (L/s)	HEAD (EA) (kPa)	IMPELLER SIZE (mm)	MOTOR (HP)	MOTOR (RPM)	POWER (V/PH/Hz)	NOTES
P-1	BOILER RECIRCULATION PUMP	INDOOR POOL MECH ROOM	DRY ROTOR CIRCULATOR - COMPASS R SERIES	ARMSTRONG	R25-140 DI	82.2	NON POTABLE WATER	5.4	36	106.0	0.5	2,000	115/1/60	ALL
P-2	BOILER RECIRCULATION PUMP	OUTDOOR POOL MECH ROOM	DRY ROTOR CIRCULATOR - COMPASS R SERIES	ARMSTRONG	R25-140 DI	82.2	NON POTABLE WATER	6.8	36	106.0	0.5	2,000	115/1/60	ALL

NOTES:
1 ALL BRONZE CONSTRUCTION.
2 NORYL IMPELLER
3 PROVIDE WITH FULL SIZE IMPELLER.
4 PUMP TO BE COMPLETE WITH ECM MOTOR.
5 C/W MODULE FOR CONNECTION TO DDC.

SHELL & TUBE HEAT EXCHANGER																
EQUIPMENT TAG	LOCATION	DESCRIPTION	MANUFACTURER	MODEL	HEAT LOAD (KW)	TUBE SIDE - WATER				SHELL SIDE - WATER				DIM. (DxH) (MM)	OPERATING WEIGHT (Kg)	NOTES
						FLOW RATE (LPS)	P-DROP (KPA)	INLET TEMP. (DEG. C)	OUTLET TEMP. (DEG. C)	FLOW RATE (lps)	P-DROP (KPA)	INLET TEMP. (DEG. C)	OUTLET TEMP. (DEG. C)			
HE-1	INDOOR POOL MECH ROOM	SHELL & TUBE	AIC	B-1000	234.00	5.0	22.0	71.2	60.0	8.3	53.8	29.0	35.5	167 x 895	40.0	ALL

NOTES:
1 TO BE CORROSION RESISTANT.
2 DESIGN, TEST, AND FABRICATION IN ACCORDANCE WITH ASME CODE SEC. VIII, DIV. 1
3 MATERIAL SS316L
4 DESIGN RATING 150 psi AT 208 C

PLATE HEAT EXCHANGER																
EQUIPMENT TAG	LOCATION	DESCRIPTION	MANUFACTURER	MODEL	HEAT EXCHANGED (KW)	COLD SIDE - WATER				HOT SIDE - WATER				DIM. (LxWxH) (MM)	WEIGHT (Kg)	NOTES
						FLOW RATE (Kg/S)	P-DROP (KPA)	INLET TEMP. (DEG. C)	OUTLET TEMP. (DEG. C)	FLOW RATE (Kg/S)	P-DROP (KPA)	INLET TEMP. (DEG. C)	OUTLET TEMP. (DEG. C)			
HE-2	OUTDOOR POOL MECH ROOM	PLATE HEAT EXCHANGER	ARMSTRONG	ABX400H-70	293.00	8.4	52.5	21.1	29.5	6.4	28.5	71.1	60.0	762x321x190	90.0	ALL

NOTES:
1 PLATE MATERIAL: SS316, BRAZING MATERIAL: NI
2 DESIGN, TEST, AND FABRICATION IN ACCORDANCE WITH ASME
3 GASKET MATERIAL: NBR HT, GASKET MAX. TEMPERATURE: 150C
4 CONNECTION TYPE GROOVED HOT AND COLD SIDE 75mm

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CONSULTANT:

SEAL:

PROJECT TITLE:
DRUMHELLER AQUAPLEX - MECHANICAL UPGRADE

PROJECT ADDRESS:
DRUMHELLER AQUAPLEX
100 RIVERSIDE DR W
DRUMHELLER, AB
T0J 0Y4

DRAWN BY: MZ
CHECKED BY: JH/BG
SCALE: AS NOTED
DATE: 2023, 01, 23

DRAWING TITLE:
MECHANICAL SCHEDULES

PROJECT NO. 000c-1309-22
DRAWING NO. M002

- KEY NOTES**
- 1 DEMOLISH THE EXISTING SUPPLY AIR DUCTWORK, INCLUDING ALL ASSOCIATED FITTINGS, AND DIFFUSERS, AND BALANCE DAMPER
 - 2 DEMOLISH THE EXISTING RETURN AIR DUCTWORK, INCLUDING ALL ASSOCIATED FITTINGS, AND DIFFUSERS, AND BALANCE DAMPER
 - 3 RETURN DUCT TO REMAIN

GENERAL NOTES

1. ALL EXISTING DUCTWORK INDICATED ON PLANS ARE BASED ON AN INITIAL SITE SURVEY AND SHALL NOT BE CONSIDERED 100% ACCURATE. CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING SYSTEMS PRIOR TO CONSTRUCTION.

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 DRUMHELLER VALLEY
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 APEGA ID: 227412

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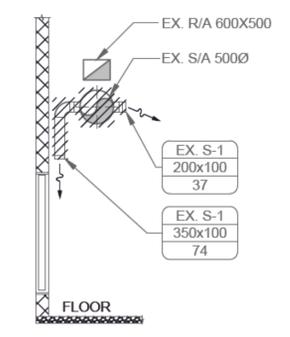
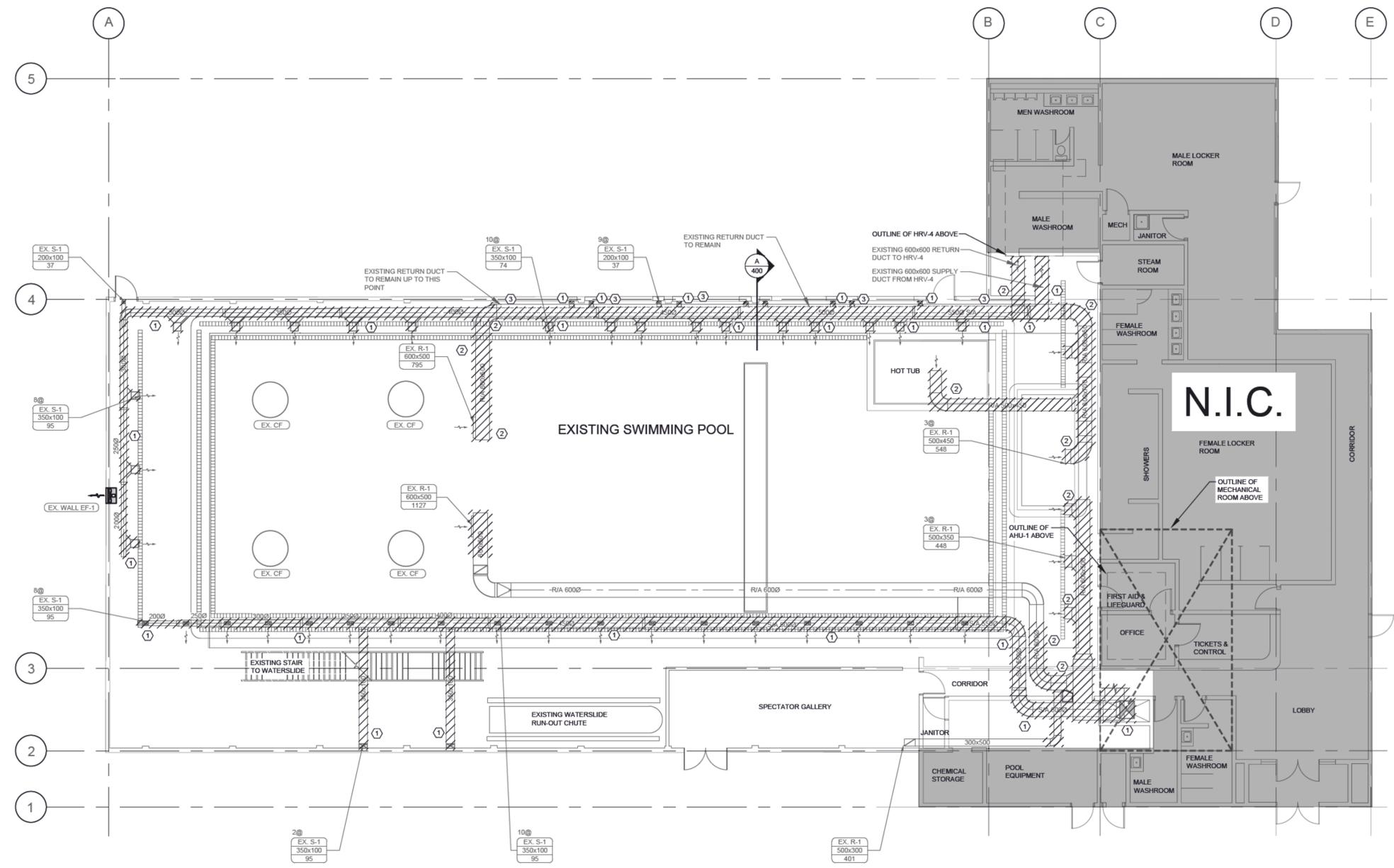
PROJECT TITLE:
DRUMHELLER AQUAPLEX - MECHANICAL UPGRADE

PROJECT ADDRESS:
 DRUMHELLER AQUAPLEX
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 DRUMHELLER, AB
 T0J 0Y4

DRAWN BY	MZ
CHECKED BY	JH/BG
SCALE	AS NOTED
DATE	2023, 01, 23

DRAWING TITLE:
MAIN FLOOR - HVAC - DEMOLITION PLAN

PROJECT NO.	DRAWING NO.
000c-1309-22	M400



1 MAIN FLOOR - HVAC - DEMOLITION PLAN
 M400 SCALE: 1:100

2 SECTION A
 M401 SCALE: NTS

KEY NOTES

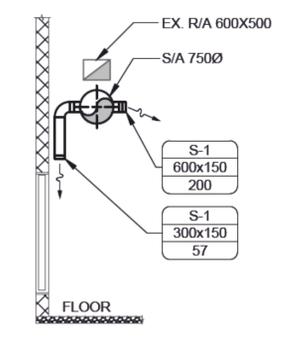
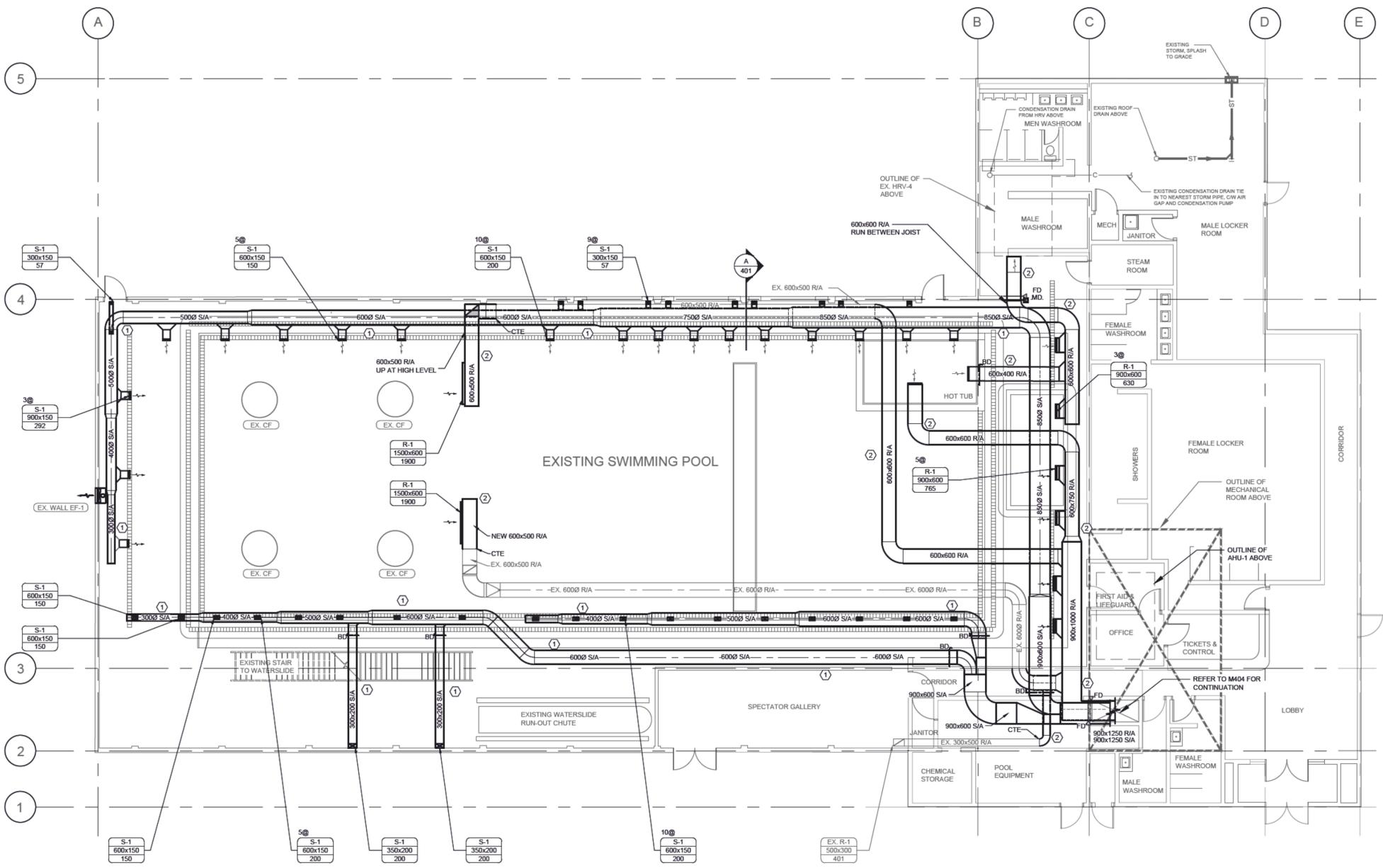
1. INSTALL NEW SUPPLY AIR DUCTWORK, INCLUDING ALL ASSOCIATED FITTINGS, AND DIFFUSERS, AND BALANCE DAMPER.
2. INSTALL NEW RETURN AIR DUCTWORK, INCLUDING ALL ASSOCIATED FITTINGS, AND DIFFUSERS, AND BALANCE DAMPER.

GENERAL NOTES

1. COORDINATE EXACT LOCATIONS OF ALL ROOM THERMOSTATS AND/OR ROOM TEMPERATURE SENSORS WITH THE DESIGN ARCHITECT BEFORE FINAL INSTALLATION.
2. ALL DUCTWORK SIZES ARE SHOWN AS INSIDE CLEAR. ADD APPROPRIATE DIMENSION FOR INSULATION OR DUCT LINER TO OBTAIN "TOTAL DUCT SIZE".
3. PROVIDE BALANCING DAMPERS IN DUCTWORK BRANCHES FEEDING INDIVIDUAL DIFFUSERS AND GRILLES, AND AT POINTS ON LOW PRESSURE SUPPLY AND RETURN DUCTS WHERE BRANCHES ARE TAKEN FROM THE LARGER DUCT.
4. RE-BALANCING ALL THE EXISTING GRILLES AND DIFFUSERS AS PER NEW AIRFLOW.
5. ALL DUCTWORK SHALL BE FABRICATED FROM ALUMINUM.

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1 MAIN FLOOR - HVAC - RENOVATION PLAN
 M401 SCALE: 1:100

2 SECTION A
 M401 SCALE: NTS



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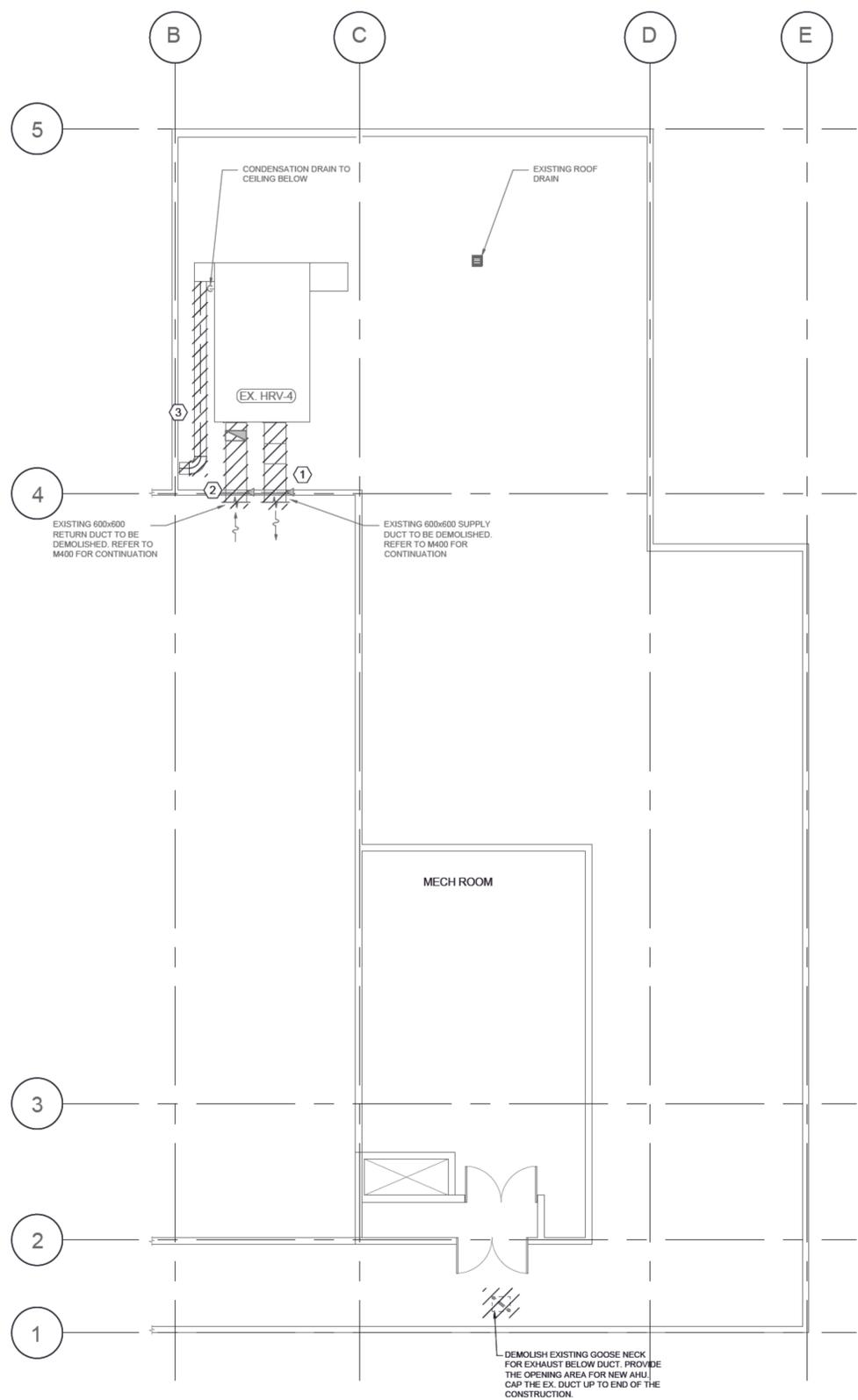
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DRUMHELLER AQUAPLEX - MECHANICAL UPGRADE

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 DRUMHELLER, AB
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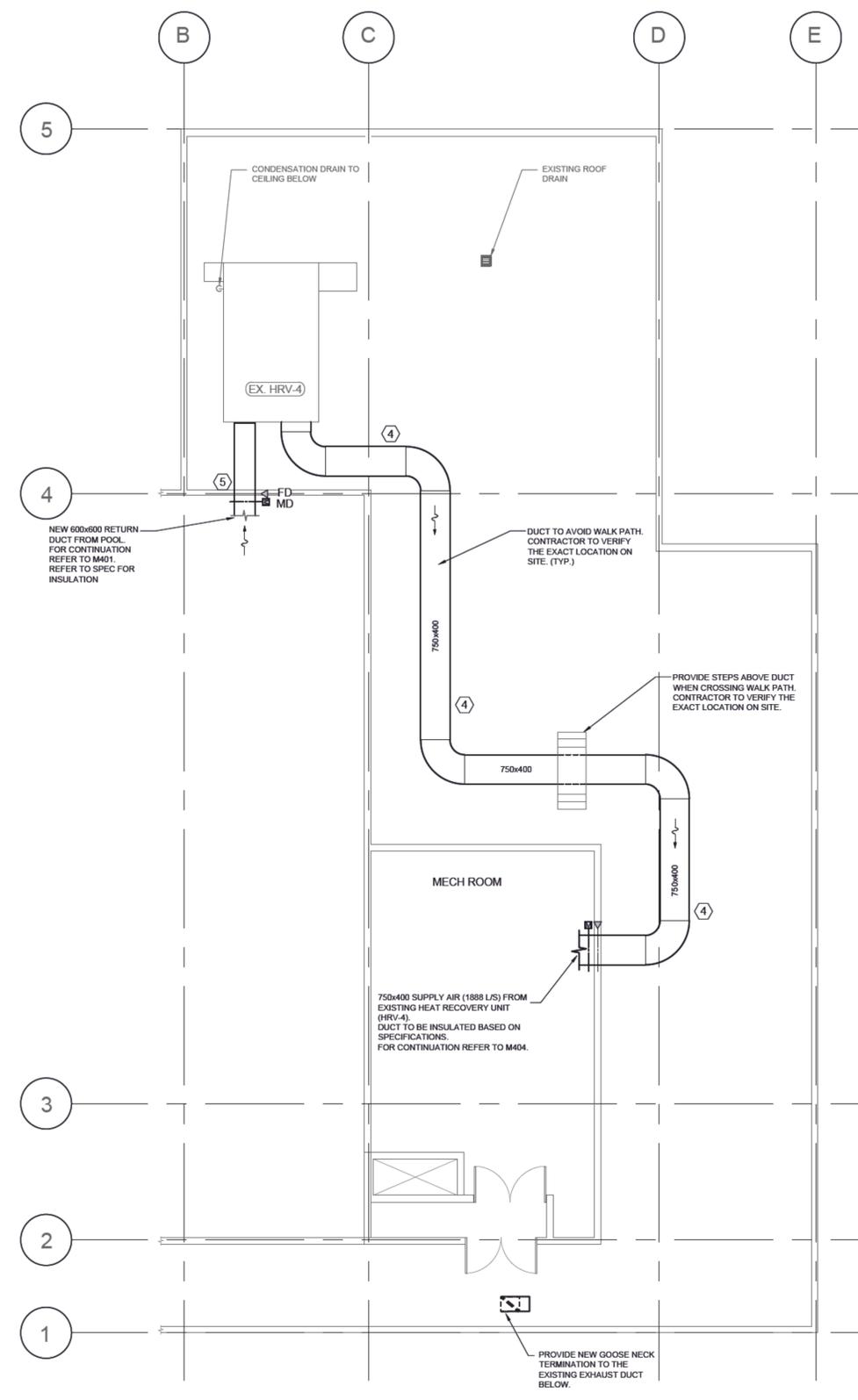
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DRAWING TITLE:
MAIN FLOOR - HVAC - RENOVATION PLAN

PROJECT NO. 000c-1309-22
 DRAWING NO. M401



1 ROOF - HVAC - DEMOLITION PLAN
 M402 SCALE: 1:100



2 ROOF - HVAC - RENOVATION PLAN
 M402 SCALE: 1:100

- KEY NOTES**
- DEMOLISH THE EXISTING SUPPLY AIR DUCTWORK, INCLUDING ALL ASSOCIATED FITTINGS, AND DAMPER.
 - DEMOLISH THE EXISTING RETURN AIR DUCTWORK, INCLUDING ALL ASSOCIATED FITTINGS, AND DAMPER.
 - DEMOLISH THE EXISTING EXHAUST AIR DUCTWORK, INCLUDING ALL ASSOCIATED FITTINGS.
 - INSTALL NEW SUPPLY AIR DUCTWORK, INCLUDING ALL ASSOCIATED FITTINGS AND DAMPER. DUCT TO BE INSULATED BASED ON SPECIFICATIONS.
 - INSTALL NEW RETURN AIR DUCTWORK, INCLUDING ALL ASSOCIATED FITTINGS AND DAMPER. DUCT TO BE INSULATED BASED ON SPECIFICATIONS.

- GENERAL NOTES**
- ALL DUCTWORK SIZES ARE SHOWN AS INSIDE CLEAR. ADD APPROPRIATE DIMENSION FOR INSULATION OR DUCT LINER TO OBTAIN "TOTAL DUCT SIZE".
 - ALL DUCTWORK SHALL BE FABRICATED FROM ALUMINUM.

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PROJECT TITLE:
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PROJECT ADDRESS:
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DATE	2023, 01, 23

DRAWING TITLE:
ROOF - HVAC - DEMOLITION AND RENOVATION PLAN

PROJECT NO. 000c-1309-22
 DRAWING NO. M402



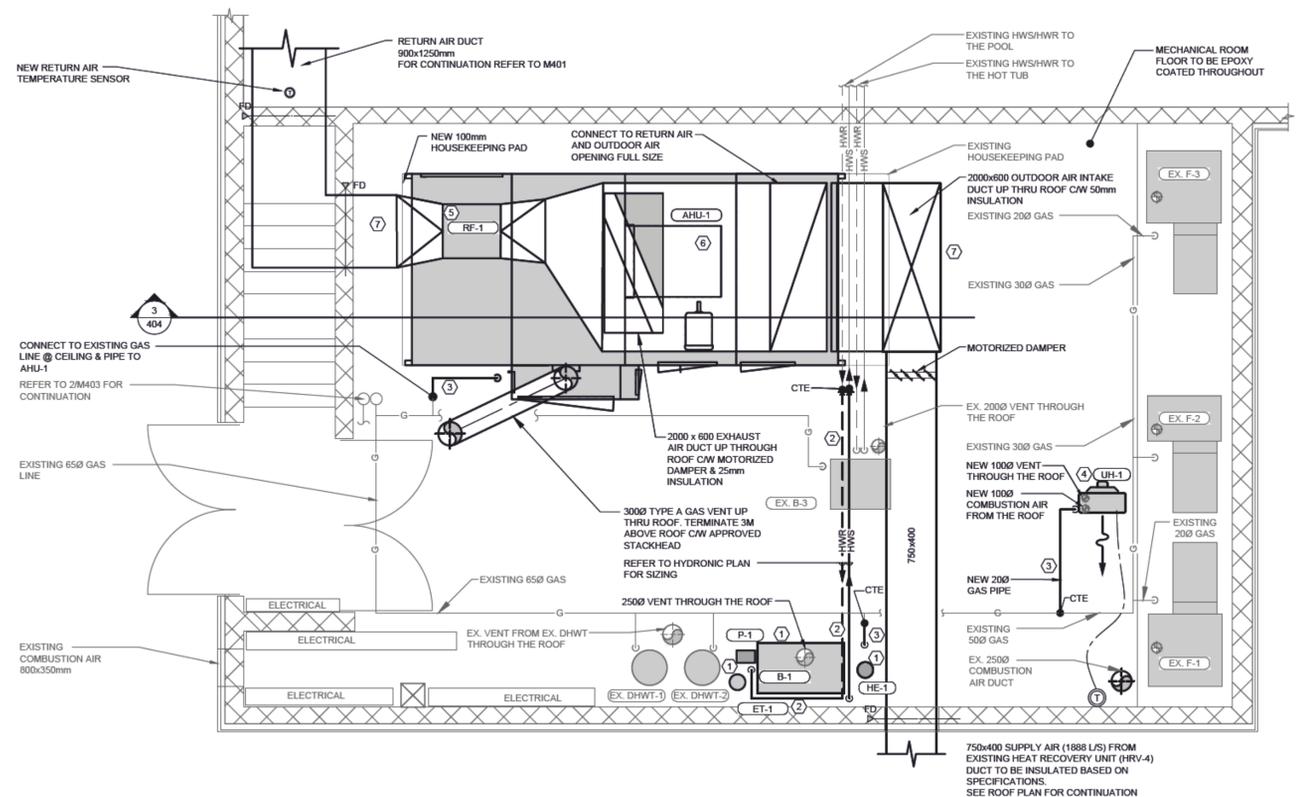
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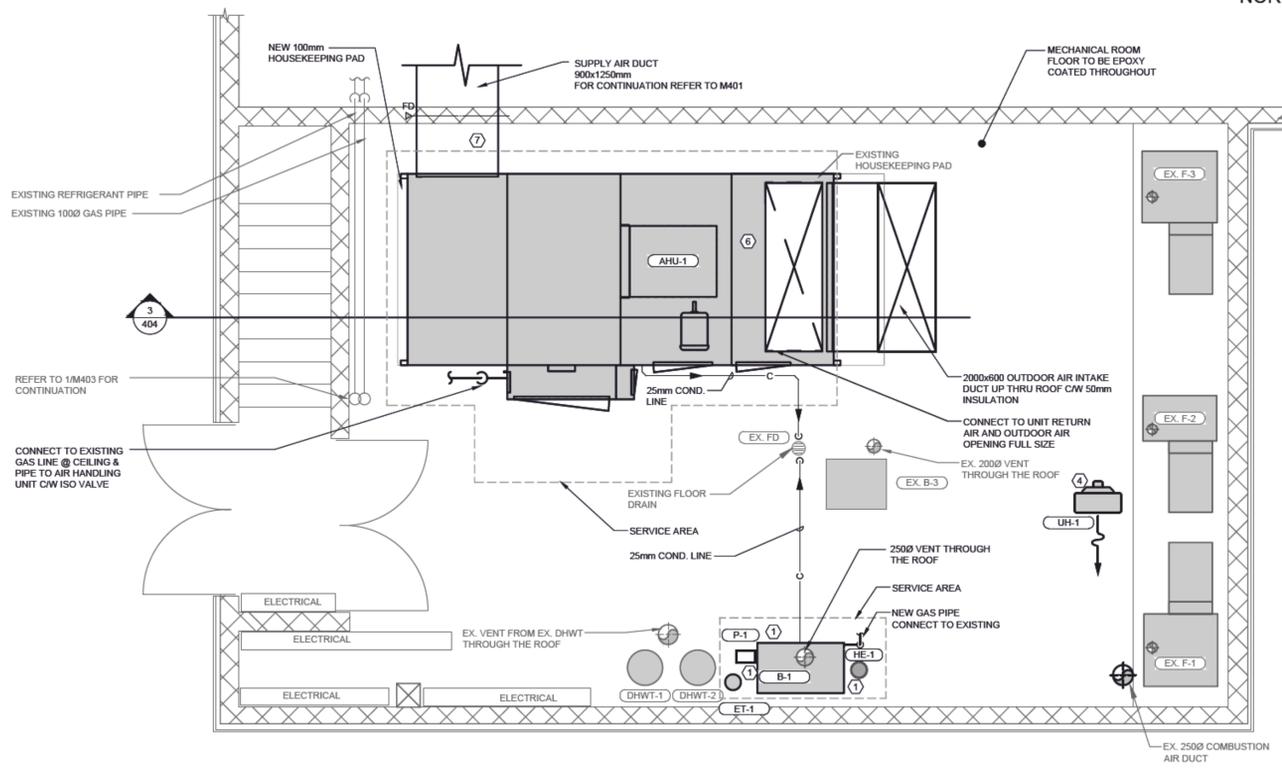


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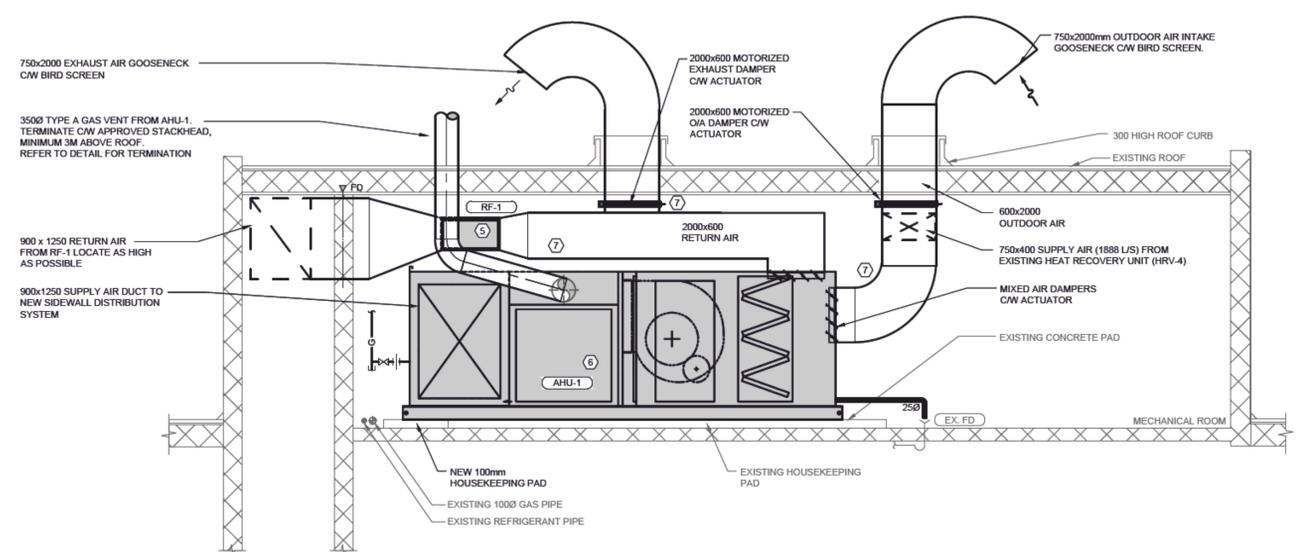
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1 MECH. ROOM LAYOUT - RENOVATION PLAN - HIGH LEVEL
 M404 SCALE: 1:50



2 MECH. ROOM LAYOUT - RENOVATION PLAN - LOW LEVEL
 M404 SCALE: 1:50



3 MECH. ROOM SECTION - RENOVATION PLAN
 M404 SCALE: 1:50

- KEY NOTES**
- 1 PROVIDE NEW BOILER, PUMP, EXPANSION TANK, AND HEAT EXCHANGER AND ASSOCIATED ELEMENTS.
 - 2 PROVIDE NEW HEATING SUPPLY AND RETURN LINES. CONNECT TO EXISTING. CONTRACTOR TO VERIFY ON SITE.
 - 3 PROVIDE NEW GAS PIPE AND ISO VALVE FOR NEW EQUIPMENT. CONTRACTOR TO VERIFY THE EXISTING GAS PIPE SIZE, PRESSURE AND TOTAL EXISTING BUILDING LOAD ON SITE.
 - 4 PROVIDE NEW UNIT HEATER, GAS PIPE, AND COMBUSTION AIR & VENT.
 - 5 PROVIDE NEW RETURN FAN.
 - 6 PROVIDE NEW AHU, DUCTWORK, VENT, MOTORIZED DAMPER, AND ASSOCIATED ELEMENTS.
 - 7 PROVIDE NEW SUPPLY, RETURN, AND OUTDOOR AIR DUCT, AND ASSOCIATED ELEMENTS.

- GENERAL NOTES**
1. ALL EXISTING DUCTWORK AND PIPING INDICATED ON PLANS ARE BASED ON AN INITIAL SITE SURVEY AND SHALL NOT BE CONSIDERED 100% ACCURATE. CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING SYSTEMS PRIOR TO CONSTRUCTION.
 2. PROVIDE AND INSTALL ALL UNITS ACCORDING TO THE MANUFACTURER'S RECOMMENDED CLEARANCES FOR MAINTENANCE. MAINTAIN MINIMUM CLEARANCE MINIMUM CLEARANCE TO ELECTRICAL AND SERVICES ACCESS PANELS AND DISCONNECT.
 3. PROVIDE ALL FIRE STOPPING MATERIAL AND ENSURE THAT ALL THE FIRE PENETRATIONS ARE PROTECTED AS REQUIRED BY THE NATIONAL BUILDING CODE - ALBERTA EDITION AND THE LOCAL AUTHORITIES.
 4. CONNECT CONDENSATE DRAINS TO SAN PIPING WITH INDIRECT CONNECTION.
 5. ALL DUCTWORK SIZES ARE SHOWN AS INSIDE CLEAR. ADD APPROPRIATE DIMENSION FOR INSULATION OR DUCT LINER TO OBTAIN "TOTAL DUCT SIZE".
 6. ALL DUCTWORK SHALL BE FABRICATED FROM ALUMINUM.

CONSULTANT:

PROJECT TITLE:
DRUMHELLER AQUAPLEX - MECHANICAL UPGRADE

SEAL:

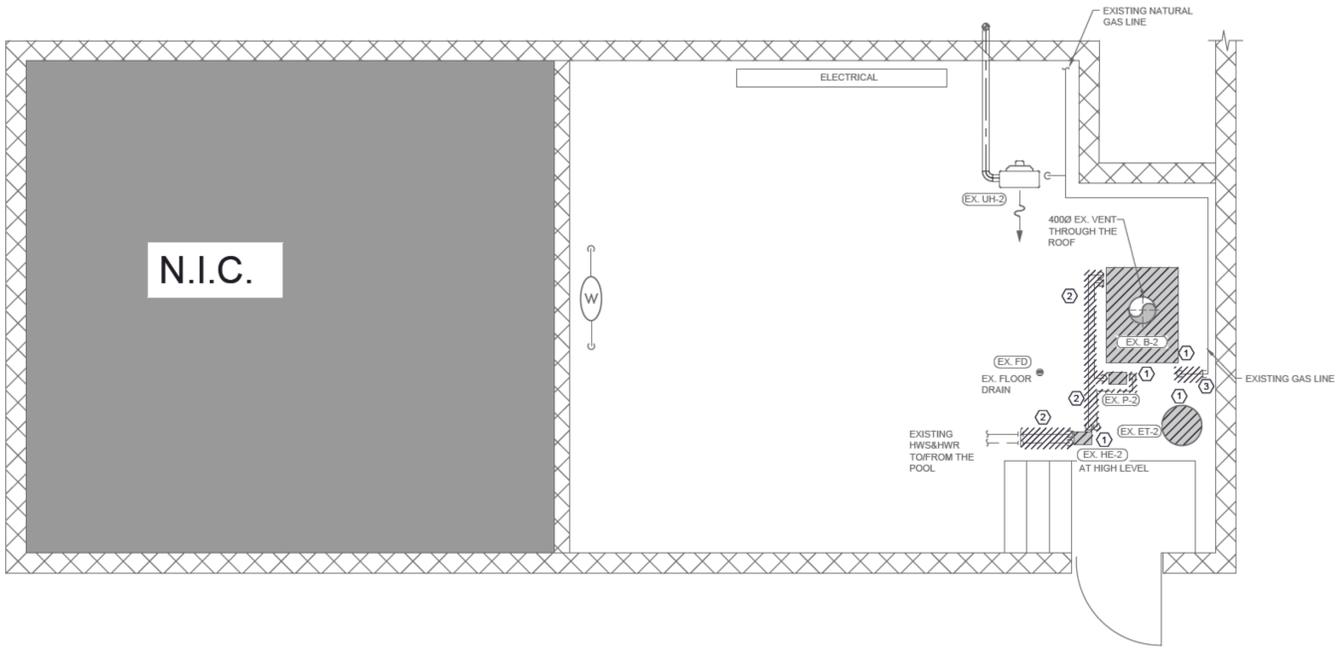
PROJECT ADDRESS:
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 DRUMHELLER, AB
 T0J 0Y4

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DATE	2023, 01, 23

DRAWING TITLE:
INDOOR POOL MECH ROOM - RENOVATION PLAN

PROJECT NO.	DRAWING NO.
000c-1309-22	M404





- DEMOLITION KEY NOTES**
- DEMOLISH THE EXISTING BOILER, PUMP, EXPANSION TANK, AND HEAT EXCHANGER AND ASSOCIATED ELEMENTS.
 - DEMOLISH THE EXISTING HEATING SUPPLY AND RETURN LINES AND CAP.
 - DEMOLISH THE EXISTING GAS PIPE AND CAP IT

- DEMOLITION GENERAL NOTES**
- THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE INCURRED DURING DEMOLITION AND CONSTRUCTION. CONTRACTOR TO PATCH AND REPAIR ALL DAMAGE AND ANY ABANDONED OPENINGS.

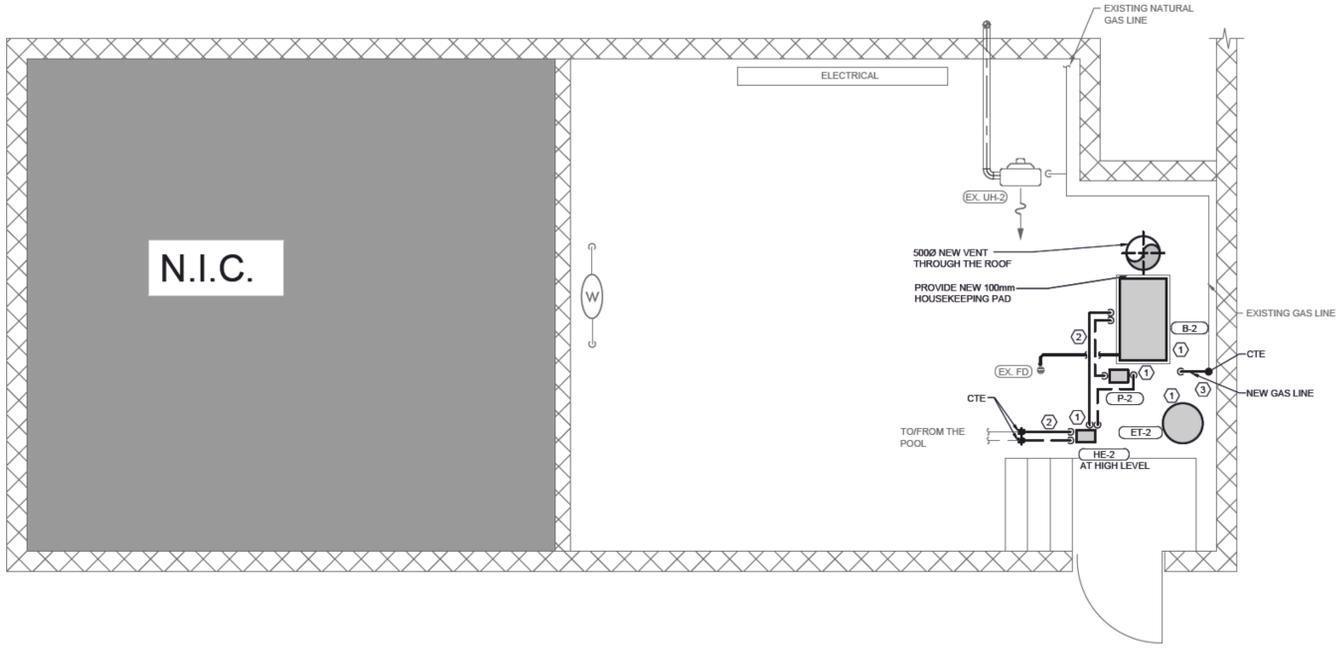
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1
 M405 **OUTDOOR POOL MECH. ROOM - DEMOLITION PLAN**
 SCALE: 1:50



- RENOVATION KEY NOTES**
- PROVIDE NEW BOILER, PUMP, EXPANSION TANK, AND HEAT EXCHANGER AND ASSOCIATED ELEMENTS.
 - PROVIDE NEW HEATING SUPPLY AND RETURN LINES. CONNECT TO EXISTING. CONTRACTOR TO VERIFY ON SITE.
 - PROVIDE NEW GAS PIPE AND ISO VALVE FOR NEW EQUIPMENT. CONTRACTOR TO VERIFY THE EXISTING GAS PIPE SIZE, PRESSURE AND TOTAL EXISTING BUILDING LOAD ON SITE.

- RENOVATION GENERAL NOTES**
- PROVIDE AND INSTALL ALL UNITS ACCORDING TO THE MANUFACTURER'S RECOMMENDED CLEARANCES FOR MAINTENANCE. MAINTAIN MINIMUM CLEARANCE TO ELECTRICAL AND SERVICES ACCESS PANELS AND DISCONNECT.
 - CONNECT CONDENSATE DRAINS TO SAN PIPING WITH INDIRECT CONNECTION.

2
 M405 **OUTDOOR POOL MECH. ROOM - RENOVATION PLAN**
 SCALE: 1:50

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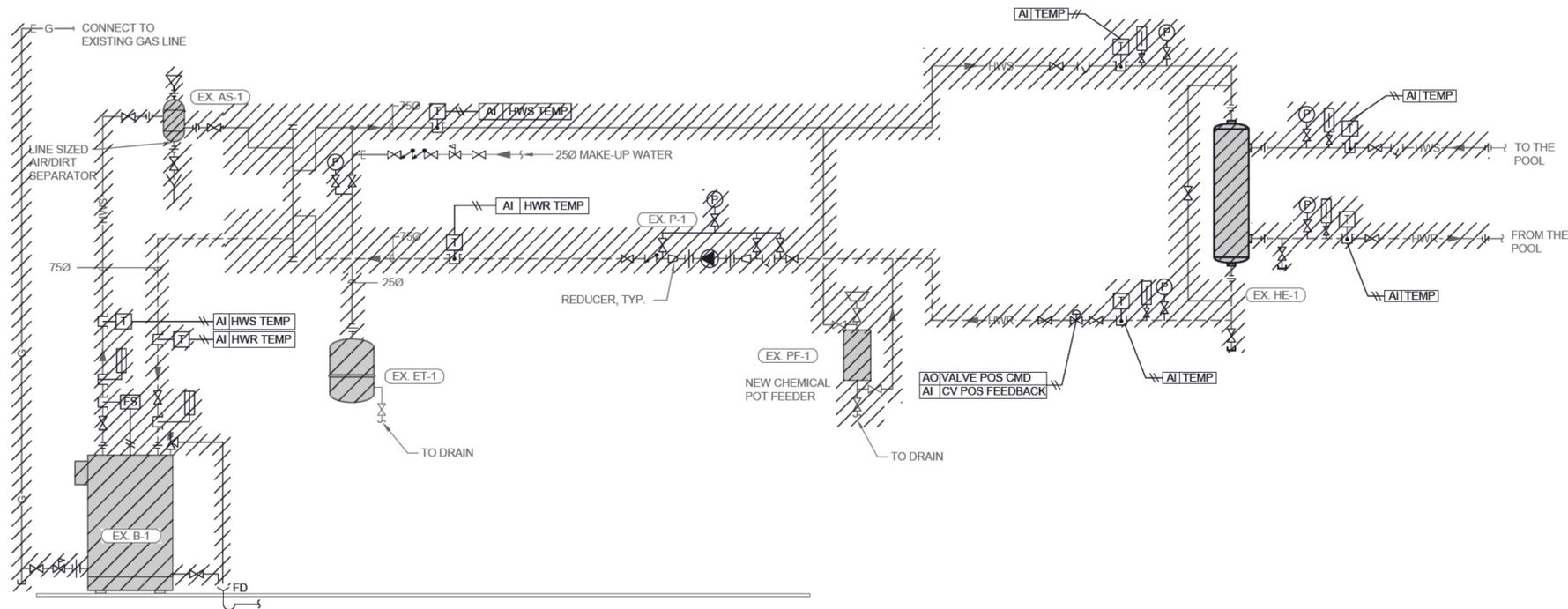
PROJECT TITLE:
 DRUMHELLER
 AQUAPLEX -
 MECHANICAL
 UPGRADE

PROJECT ADDRESS:
 DRUMHELLER AQUAPLEX
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 DRUMHELLER, AB
 T0J 0Y4

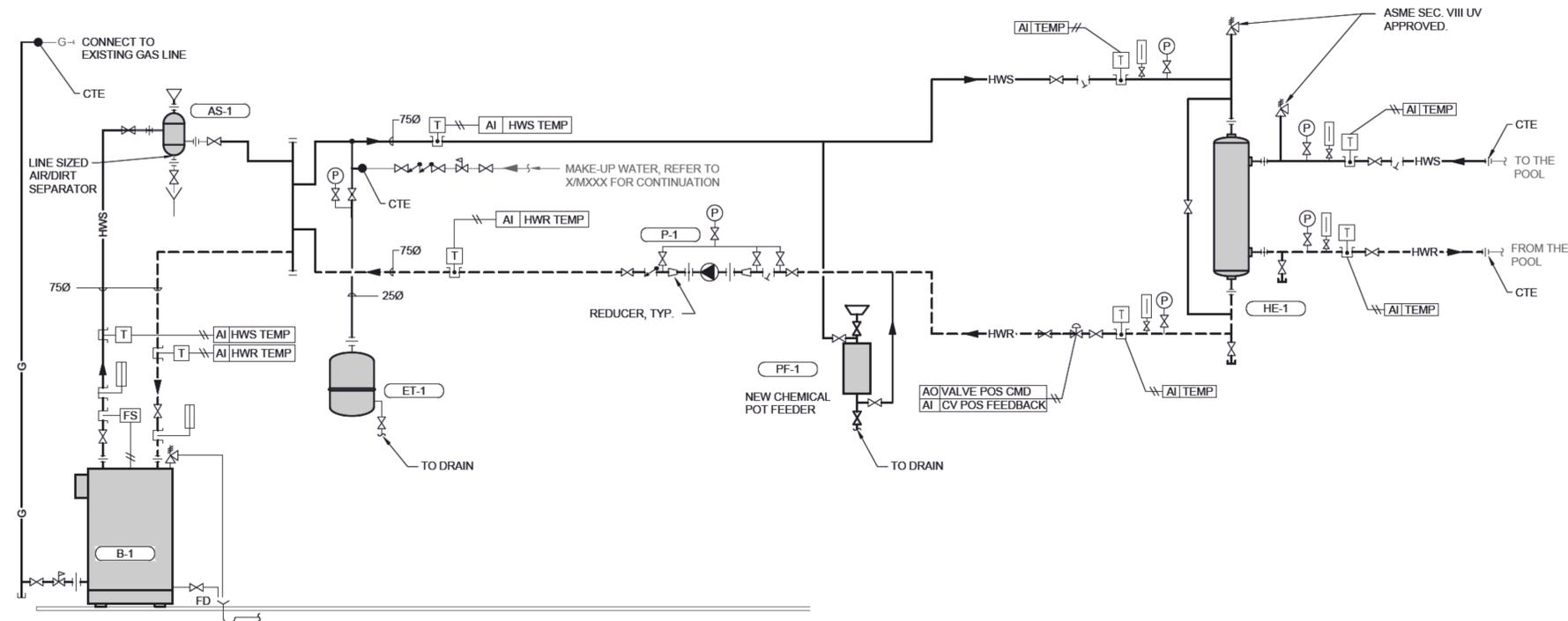
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DRAWING TITLE:
 OUTDOOR POOL MECH.
 ROOM - DEMOLITION
 & RENOVATION PLAN

PROJECT NO.	DRAWING NO.
000c-1309-22	M405



1 INDOOR POOL MECH. ROOM - HYDRONIC SCHEMATIC - DEMOLITION
M501 SCALE: NTS



2 INDOOR POOL MECH. ROOM - HYDRONIC SCHEMATIC - RENOVATION
M501 SCALE: NTS



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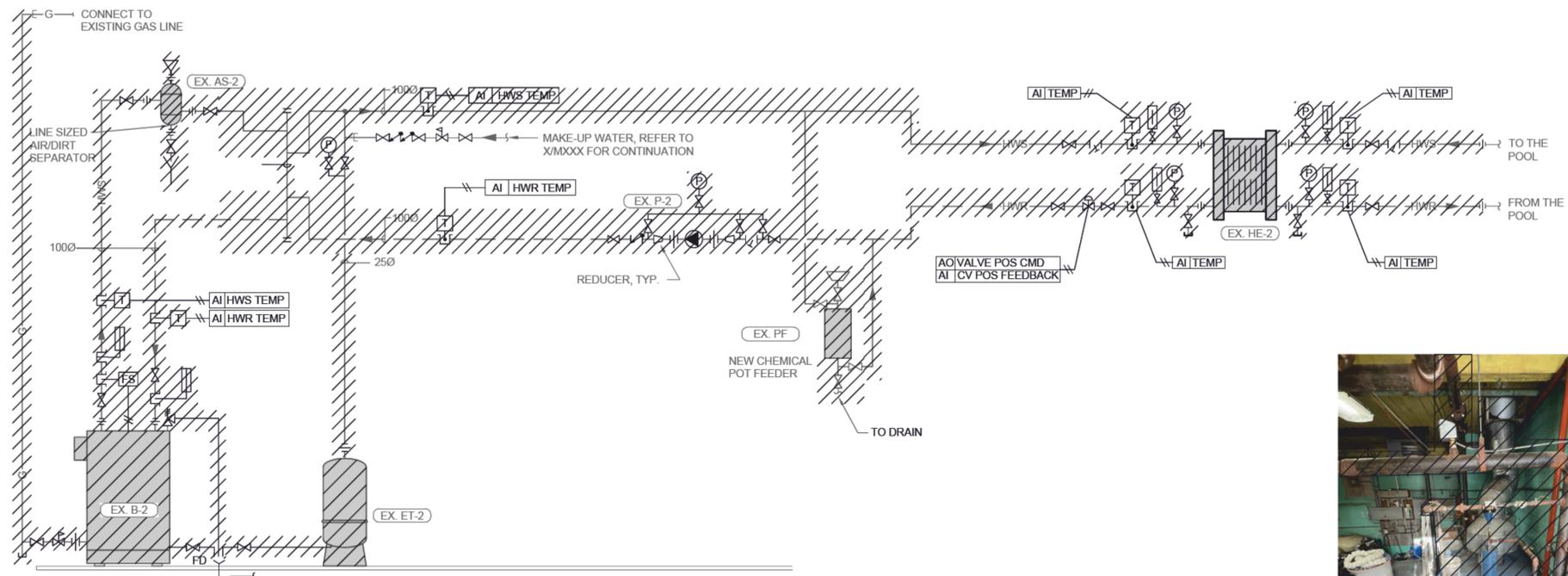
PROJECT TITLE:
DRUMHELLER AQUAPLEX -
MECHANICAL
UPGRADE

PROJECT ADDRESS:
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100 RIVERSIDE DR W
DRUMHELLER, AB
T0J 0Y4

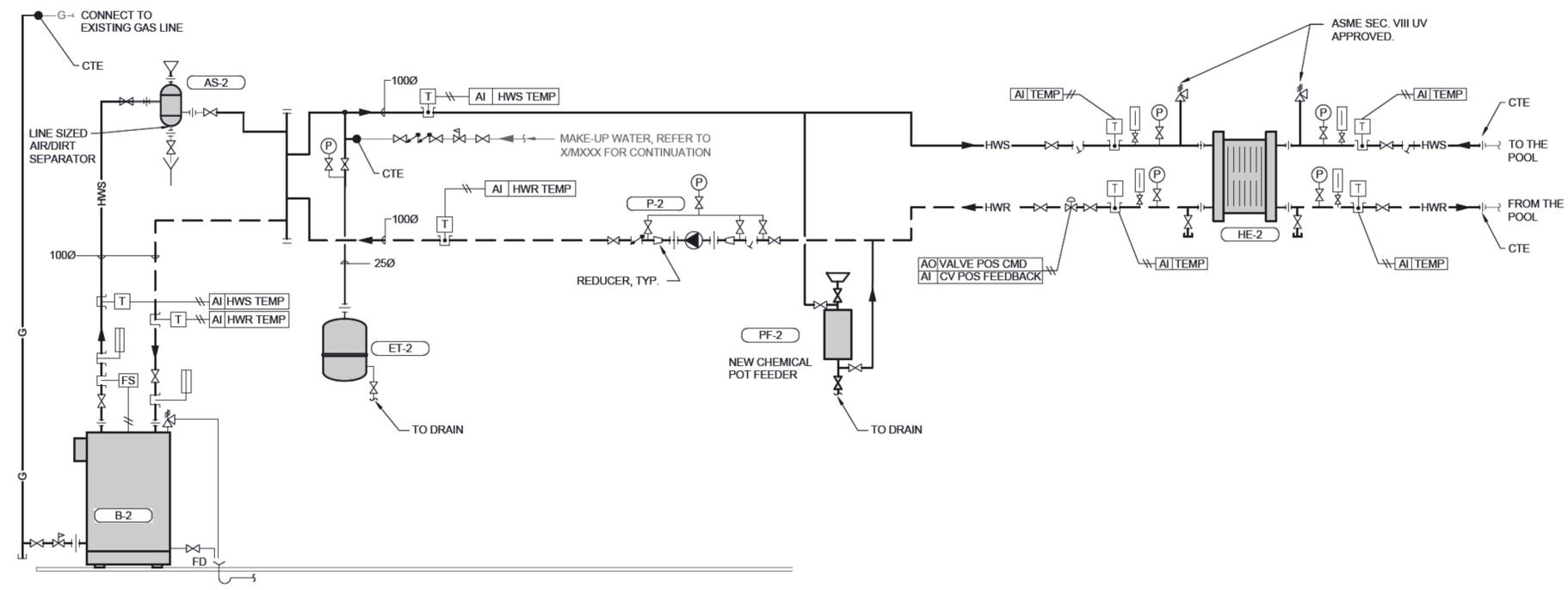
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SCALE	AS NOTED
DATE	2023, 01, 23

DRAWING TITLE:
INDOOR POOL MECH.
ROOM - HYDRONIC -
RENO & DEMO PLAN

PROJECT NO.	DRAWING NO.
000c-1309-22	M501



1 OUTDOOR POOL MECH. ROOM - HYDRONIC SCHEMATIC - DEMOLITION
M5012 SCALE: NTS



2 OUTDOOR POOL MECH. ROOM - HYDRONIC SCHEMATIC - RENOVATION
M5012 SCALE: NTS



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PROFESSIONAL ENGINEER
ALBERTA
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PROJECT ADDRESS:
DRUMHELLER AQUAPLEX
100 RIVERSIDE DR W
DRUMHELLER, AB
T0J 0Y4

DRAWN BY	MZ
CHECKED BY	JH/BG
SCALE	AS NOTED
DATE	2023, 01, 23

DRAWING TITLE:
OUTDOOR MECH. ROOM -
HYDRONIC - RENOVATION
& DEMOLITION PLAN

PROJECT NO.	DRAWING NO.
000c-1309-22	M502

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REV.	DATE	DESCRIPTION
A.	2023.02.13	ISSUED FOR AHU-1 PRE-PURCHASE
B.	2023.04.01	ISSUED FOR TENDER/CONSTRUCTION



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 RM APEGA ID #: 227412
 DATE: 06/01/2023
PERMIT NUMBER: P009296
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)



CONSULTANT:

SEAL:

PROJECT TITLE:
DRUMHELLER AQUAPLEX - MECHANICAL UPGRADE

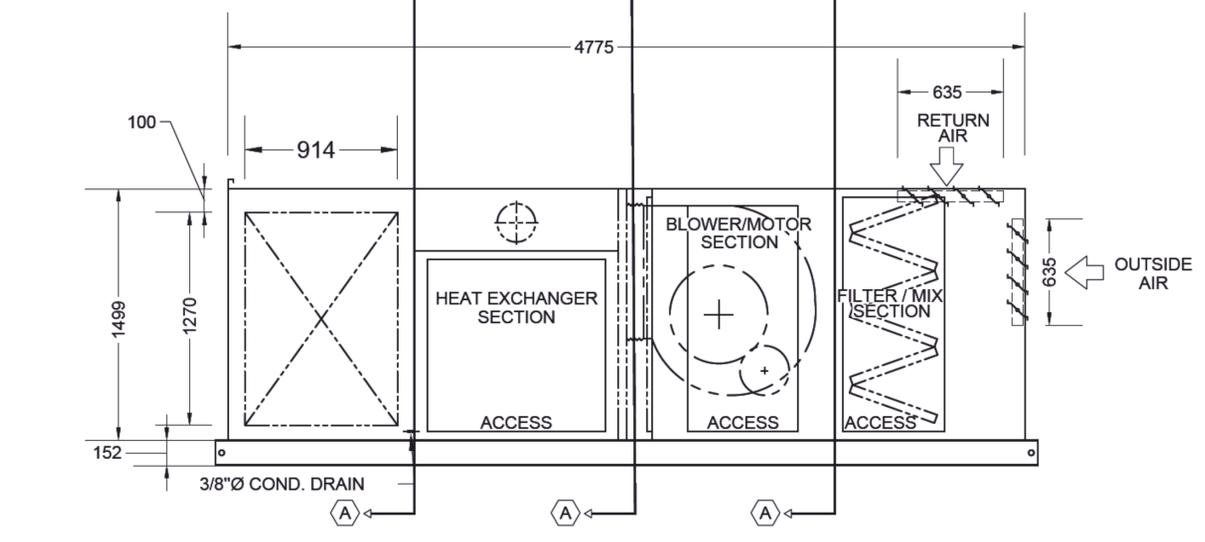
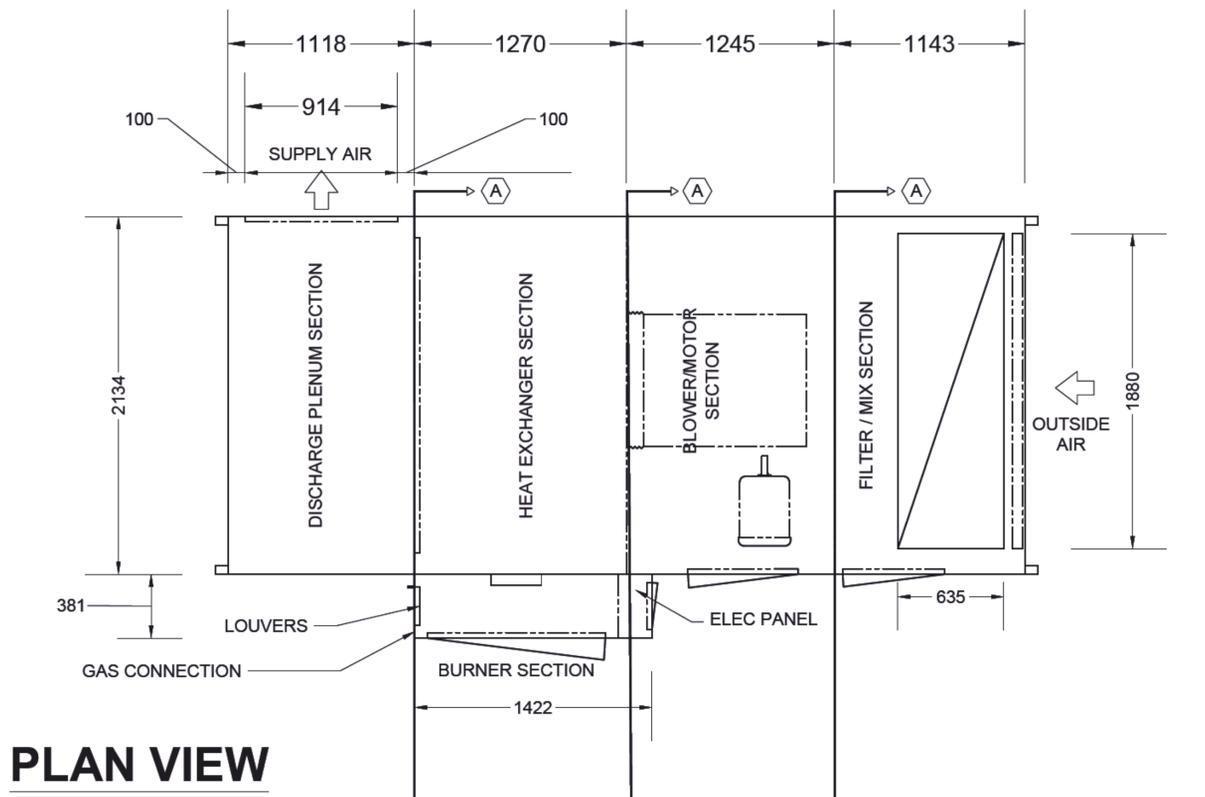
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 DRUMHELLER AQUAPLEX
 100 RIVERSIDE DR W
 DRUMHELLER, AB
 T0J 0Y4

DRAWN BY	MZ
CHECKED BY	JH/BG
SCALE	AS NOTED
DATE	2023, 01, 23

DRAWING TITLE:
AHU-1 DETAILS

PROJECT NO.	DRAWING NO.
000c-1309-22	M601

AHU-1 GENERAL NOTES:
 (A) THE AHU UNIT NEEDS TO BE SPLIT INTO SECTIONS PRIOR TO BE INSTALLED IN THE MECH ROOM. THE APPROX. OPENING THRU THE DOUBLE DOOR IS 1700mm H x 1500mm W. THE MANUFACTURER WILL BE REQUIRED TO VISIT THE SITE TO VERIFY THE OPENING SIZE AND ENSURE THE UNIT WILL FIT INTO THE MECH. ROOM PRIOR TO THE SHOP DRAWING STAGE.



SIDE VIEW

1 AHU-1 DETAIL
 M601 SCALE: NTS

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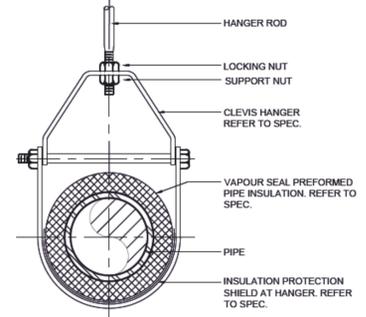
PROJECT TITLE:
DRUMHELLER AQUAPLEX - MECHANICAL UPGRADE

PROJECT ADDRESS:
 DRUMHELLER AQUAPLEX
 100 RIVERSIDE DR W
 DRUMHELLER, AB
 T0J 0Y4

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SCALE	AS NOTED
DATE	2023, 01, 23

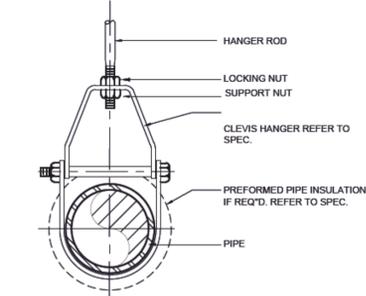
DRAWING TITLE:
MECHANICAL DETAILS I

FOR NPS 65mm PIPE AND LARGER, REFER TO SPEC. FOR INSERTS OR HIGH DENSITY INSULATION AT INSULATION PROTECTION SHIELDS.



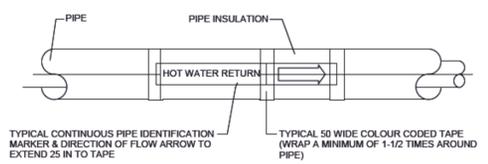
HANGER DETAIL FOR PIPING WITH VAPOUR SEALED INSULATION

FOR COLD PIPING 10°C (50°F) OR LESS.



HANGER DETAIL FOR INSULATED HOT PIPING UP TO NPS 3 (75mm) OR ALL SIZES OF BARE PIPE

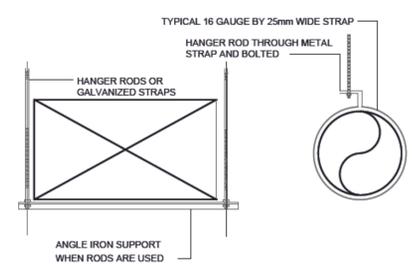
1 PIPE HANGERS
 SCALE: NTS



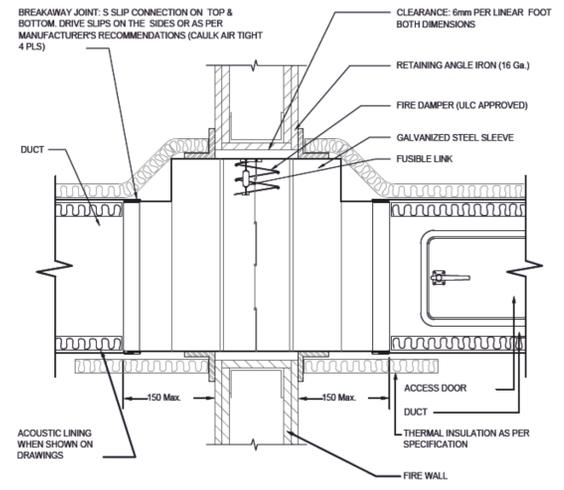
NOTES
 APPLY A CONTINUOUS COATING OF CONTACT CEMENT TO THE LABEL TO ENSURE PERMANENT ADHESION
 REFER TO SPECIFICATION FOR COLOUR CODING OF SERVICES

2 PIPE IDENTIFICATION DETAIL
 SCALE: NTS

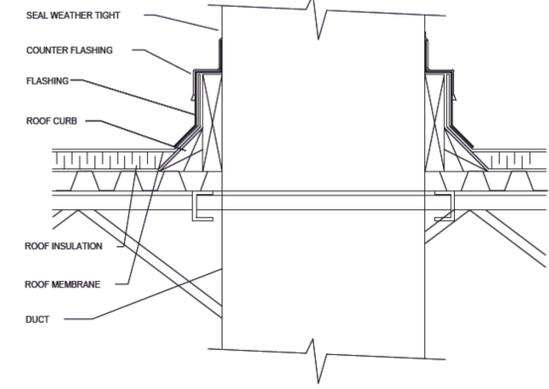
INSULATE DUCTWORK AS OUTLINED IN THE SPECIFICATIONS
 RODS SHALL BE USED FOR HANGING EXPOSED DUCTWORK



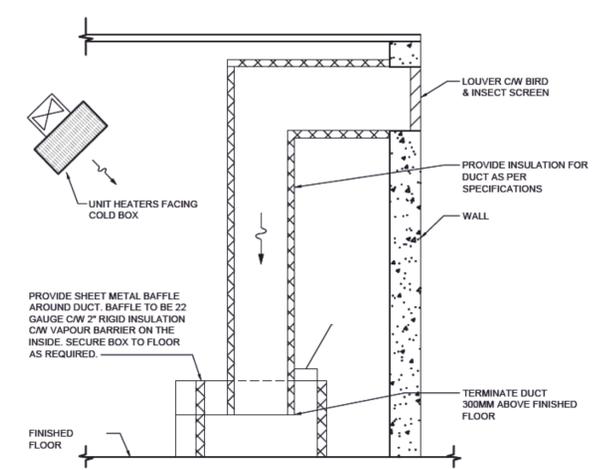
3 DUCT HANGING DETAIL
 SCALE: NTS



4 FIRE/SMOKE DAMPER DETAIL
 SCALE: NTS

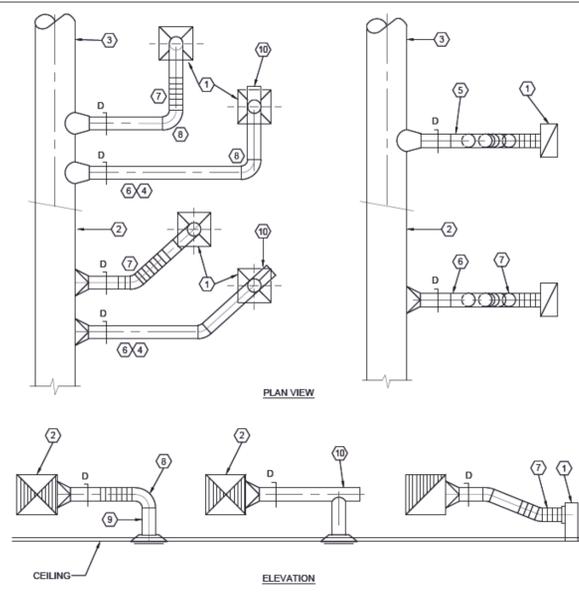


5 DUCT ROOF PENETRATION
 SCALE: NTS



NOTES:
 REFER TO PLAN DRAWINGS FOR DUCT AND BAFFLE BOX SIZE

6 COMBUSTION AIR TRAP DETAIL
 SCALE: NTS



- 1 AIR TERMINAL UNIT AS SCHEDULED.
 - 2 RECTANGULAR DUCT - TYP
 - 3 ROUND DUCT - TYP
 - 4 DUCT SIZE TO MATCH DIFFUSER NECK SIZE
 - 5 DUCT SIZE AS SCHEDULED
 - 6 RIGID DUCT
 - 7 FLEX DUCT - MAX. LENGTH AS SPECIFIED - MAX. BEND PERMITTED 45 DEG
 - 8 RIGID DUCT ELBOW - RADIUS = 1.5 x DIA. MIN.
 - 9 RIGID DUCT MIN. 1 DUCT DIA. LONG FROM ELBOW TO DIFFUSER.
 - 10 PROVIDE CUSHION HEAD FOR DIFFUSER WHERE CEILING SPACE IS LIMITED. TRANSITION TO EQUIVALENT RECTANGULAR DUCT AS REQUIRED. CUSHION HEAD LENGTH = 1 x DIFFUSER DIAMETER
- USE ALL RIGID DUCT FOR EXPOSED STRUCTURE

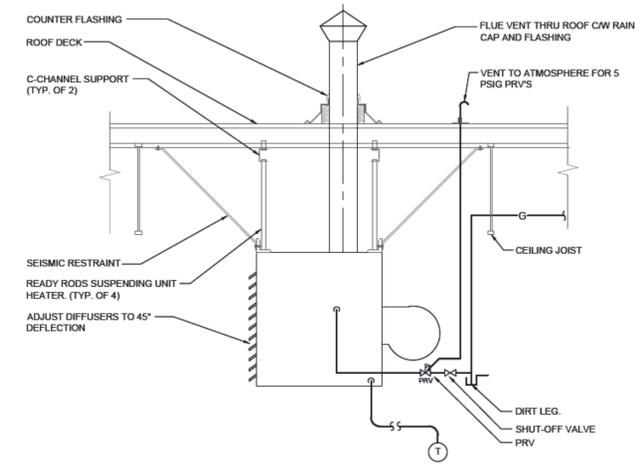
7 DUCT CONNECTIONS TO AIR TERMINAL UNITS
 SCALE: NTS

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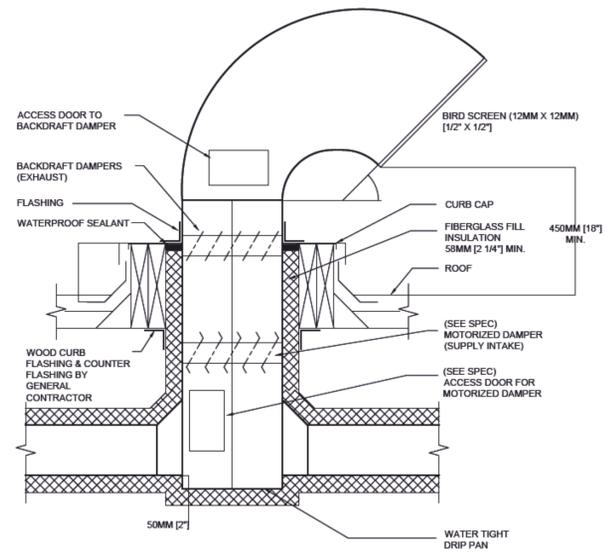
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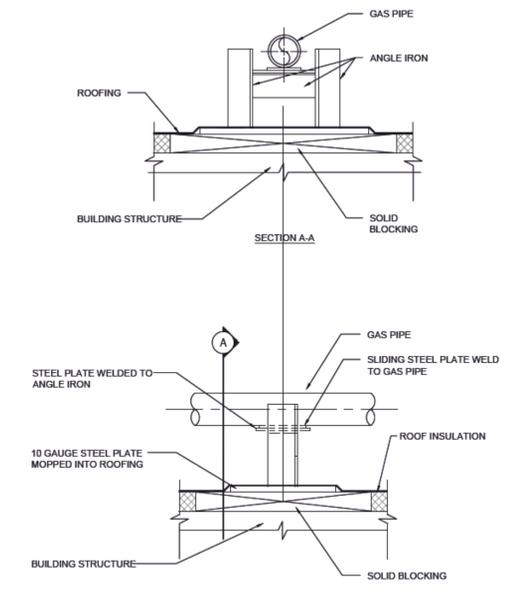
06/01/2023
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 RM APEGA ID #: 227412
 DATE: 06/01/2023
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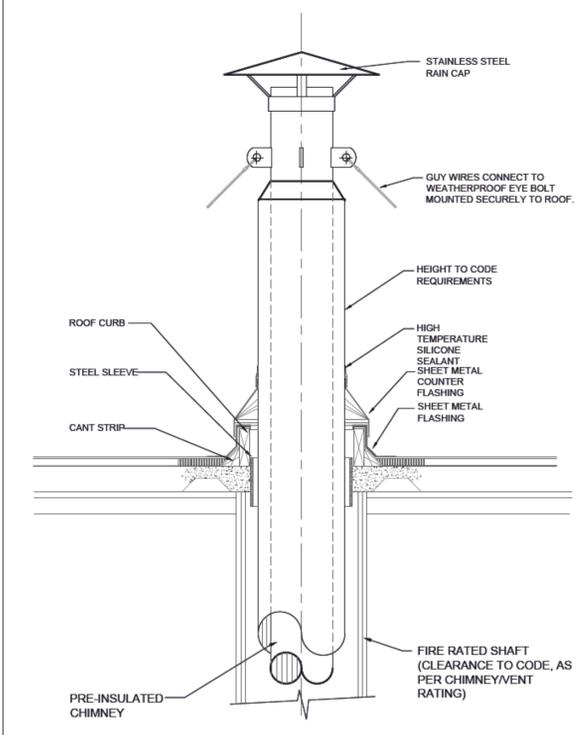
1 GAS FIRED UNIT HEATER DETAIL
 M701 SCALE: NTS



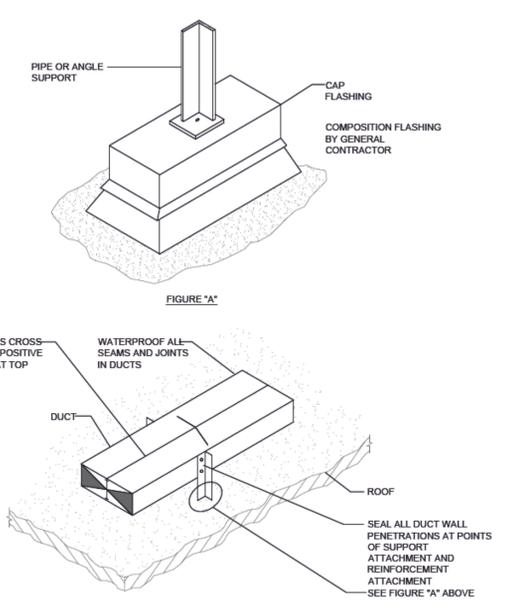
2 GOOSENECK EXHAUST OR INTAKE
 M701 SCALE: NTS



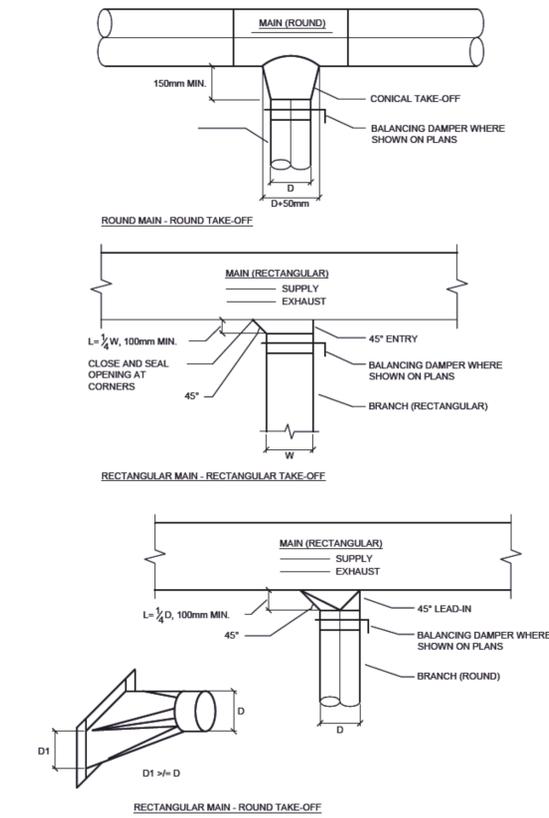
3 GUIDE FOR ROOF GAS PIPING
 M701 SCALE: NTS



4 VENT THROUGH ROOF
 M701 SCALE: NTS



5 DUCT SUPPORT ON ROOF
 M701 SCALE: NTS



6 DUCT TAKE-OFF DETAILS
 M701 SCALE: NTS



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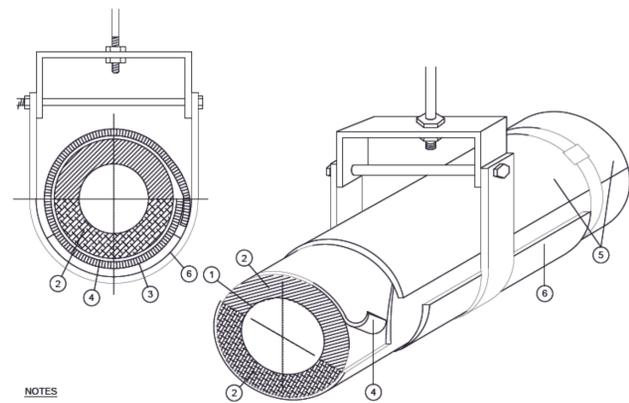
PROJECT TITLE:
DRUMHELLER AQUAPLEX - MECHANICAL UPGRADE

PROJECT ADDRESS:
 DRUMHELLER AQUAPLEX
 100 RIVERSIDE DR W
 DRUMHELLER, AB
 T0J 0Y4

DRAWN BY: MZ
 CHECKED BY: JH/BG
 SCALE: AS NOTED
 DATE: 2023, 01, 23

DRAWING TITLE:
MECHANICAL DETAILS II

PROJECT NO. 000c-1309-22
 DRAWING NO. M701

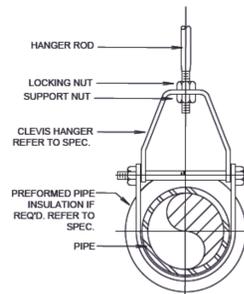


NOTES

- 1 PIPE
- 2 INSULATION (TYPE SPECIFIED FOR THE PIPING SYSTEM)
- 3 HIGH DENSITY INSULATION INSERT (EXTEND BEYOND THE) SHIELD TO FACILITATE PROPER BUTT JOINT SEALING)
- 4 FACTORY APPLIED VAPOR-BARRIER JACKET SECURING TWO INSULATION SECTIONS TOGETHER (COLD APPLICATION)
- 5 JACKETING (FIELD-APPLIED METAL SHOWN)
- 6 METAL SHIELD

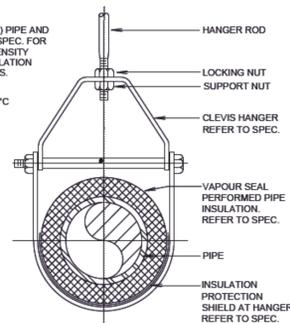
FOR NPS 2-1/2 (65mm) PIPE AND LARGER, REFER TO SPEC. FOR INSERTS OR HIGH DENSITY INSULATION AT INSULATION PROTECTION SHIELDS.

FOR COLD PIPING 10°C (50°F) OR LESS.

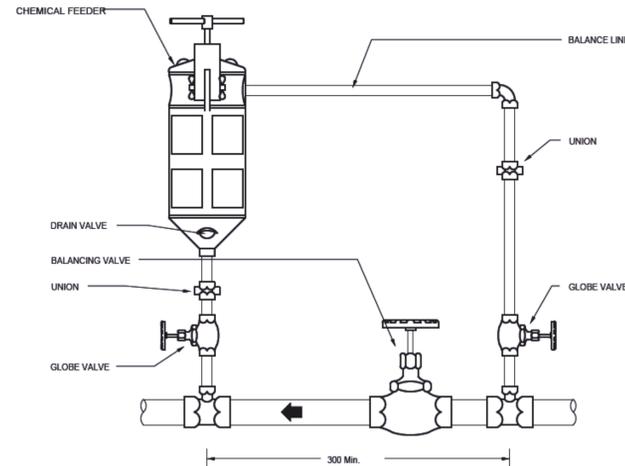


HANGER DETAIL FOR INSULATED HOT PIPING
UP TO NPS 3 (75mm) OR ALL SIZES OF BARE PIPE

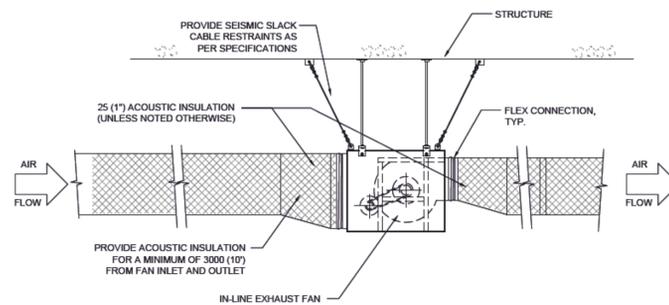
1 INSULATED PIPE HANGER DETAIL
SCALE: NTS



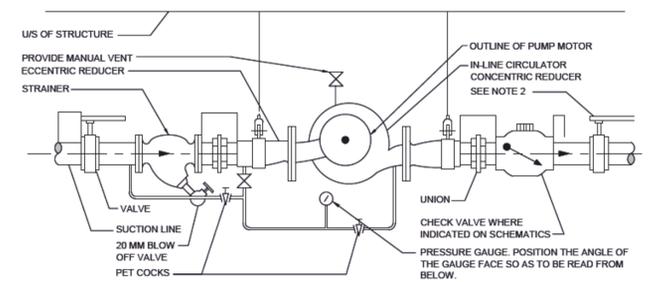
HANGER DETAIL FOR PIPING WITH
VAPOUR SEALED INSULATION



2 CHEMICAL POT FEEDER
SCALE: NTS

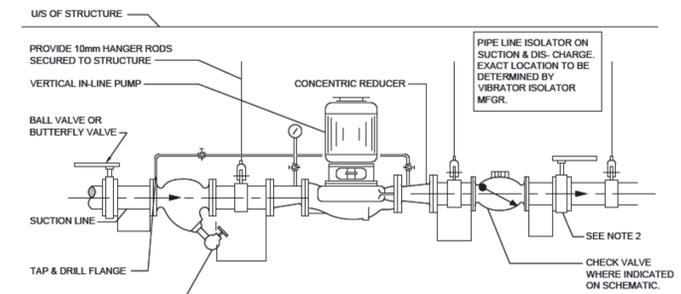


3 EXHAUST FAN (CABINET INLINE)
SCALE: NTS



- DETAIL NOTES
1. VALVES TO BE PIPE LINE SIZE AS INDICATED ON SCHEMATIC.
 2. FOR PIPE 2" (50mm) AND UNDER USE BALL VALVE CW INFINITE MEMORY STOP.
- FOR PIPE 2 1/2" (65mm) AND ABOVE USE BUTTERFLY VALVE CW INFINITE MEMORY STOP.

TYPICAL HORIZONTAL IN-LINE CIRCULATOR PUMP
SCALE: NTS



- DETAIL NOTES
1. VALVES TO BE PIPE LINE SIZE AS INDICATED ON SCHEMATIC.
 2. FOR PIPE 50mm AND UNDER USE BALL VALVE CW INFINITE MEMORY STOP.
- FOR PIPE 65mm AND ABOVE USE BUTTERFLY VALVE CW INFINITE MEMORY STOP.

4 TYPICAL VERTICAL IN-LINE PUMP
SCALE: NTS

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06/01/2023
APEGA ID: 227412

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RM APEGA ID #: 227412
DATE: 06/01/2023
PERMIT NUMBER: P009296
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)



CONSULTANT:

SEAL:

PROJECT TITLE:
**DRUMHELLER
AQUAPLEX -
MECHANICAL
UPGRADE**

PROJECT ADDRESS:
DRUMHELLER AQUAPLEX
100 RIVERSIDE DR W
DRUMHELLER, AB
T0J 0Y4

DRAWN BY: MZ
CHECKED BY: JH/BG
SCALE: AS NOTED
DATE: 2023, 01, 23

DRAWING TITLE:
MECHANICAL DETAILS III

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ELECTRICAL DRAWING LIST	
DWG. NO.	DWG. NAME
E001	COVER SHEET & SCHEDULES
E002	ELECTRICAL PLAN - MECHANICAL ROOMS
E003	SINGLE LINE DIAGRAM, & DETAILS
E004	ELECTRICAL SPECIFICATIONS

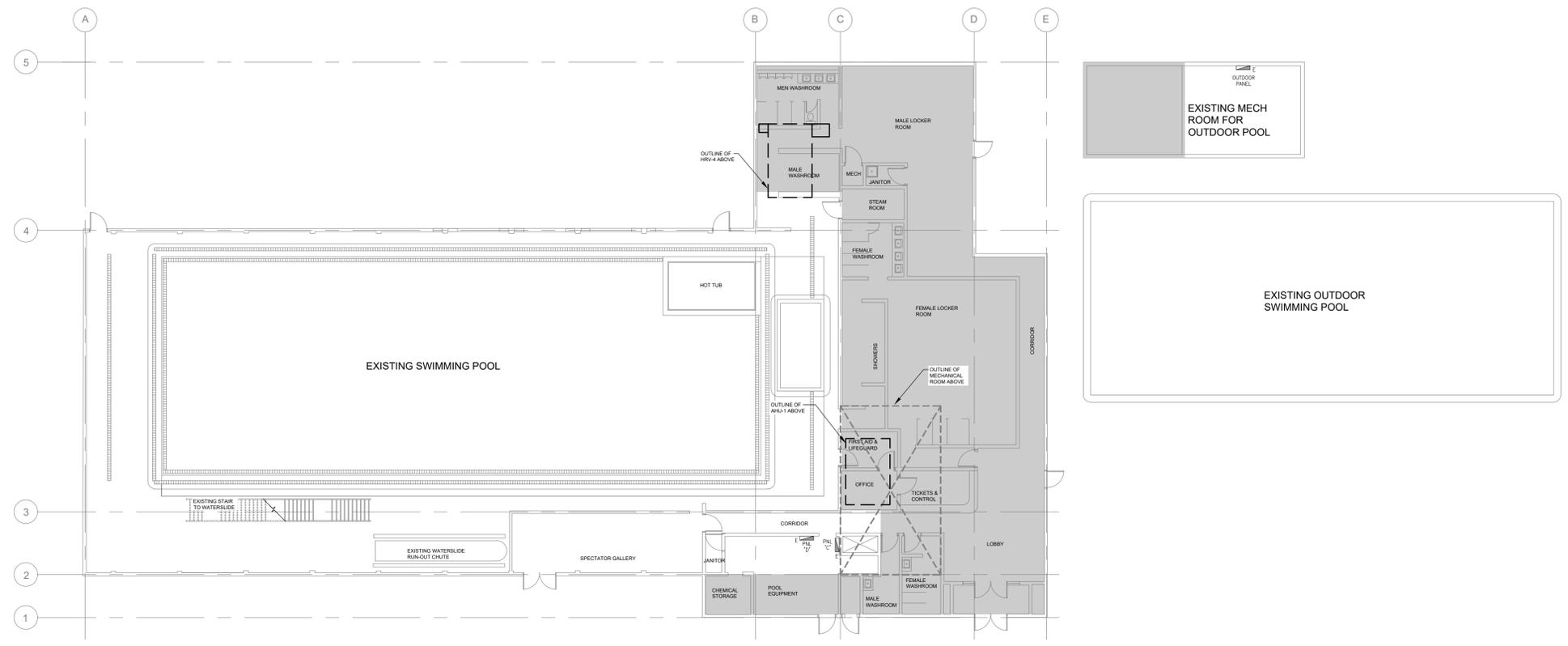
LEGEND OF SYMBOLS

POWER	
	DUPLEX RECEPTACLE
	WEATHERPROOF RECEPTACLE
	SWITCH RECEPTACLE
	FOURPLEX RECEPTACLE
	ISOLATED GROUND FOURPLEX RECEPTACLE
	T-SLOT DUPLEX RECEPTACLE (5-20R)
	T-SLOT GROUND FAULT RECEPTACLE (5-20R)
	T-SLOT COMPUTER RECEPTACLE (5-20R)
	COMPUTER DUPLEX RECEPTACLE
	COMPUTER FOURPLEX RECEPTACLE
	FLOOR MOUNTED RECEPTACLE
	FLOOR MOUNTED ISOLATED GROUND RECEPTACLE
	FLOOR MOUNTED FOURPLEX RECEPTACLE
	FLOOR MOUNTED ISOLATED GROUND FOURPLEX RECEPTACLE
	FLOOR MOUNTED COMPUTER DUPLEX RECEPTACLE
	CEILING MOUNTED SINGLE/SPECIAL PURPOSE RECEPTACLE
	CEILING MOUNTED DUPLEX RECEPTACLE
	CEILING MOUNTED JUNCTION/SLAB BOX
	WALL MOUNTED JUNCTION BOX
	FLOOR MOUNTED JUNCTION/SLAB BOX
	ELECTRICAL PANELBOARD - SURFACE MOUNTED
	ELECTRICAL PANELBOARD - RECESSED MOUNTED
	CONTACTOR
	CONTROL TRANSFORMER
	TIMECLOCK
	GROUND BUS BAR
	AUTOMATIC DOOR OPERATOR - BARRIER FREE

MECHANICAL	
	MOTOR
	SWITCH - MANUAL STARTER
	MOTOR C/W MANUAL STARTER
	MOTOR C/W DISCONNECT SWITCH
	UNFUSED DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	COMBINATION MAG STARTER/DISCONNECT SWITCH
	MAGNETIC STARTER
	FAN SPEED CONTROLLER
	THERMOSTAT
	SENSOR
	MOTOR IDENTIFICATION TAG (REFER TO MECHANICAL SCHEDULE)
	NON-MOTORIZED DAMPER
	MOTORIZED DAMPER
	DAMPER END SWITCH

GENERAL	
	CONDUIT CONCEALED IN WALL OR CEILING
	CONDUIT IN WALL/CEILING - EMERGENCY OR UPS POWER
	CONDUIT CONCEALED IN SLAB
	CONDUIT BURIED BELOW GRADE
	CONDUIT - UP
	CONDUIT - DOWN
	WP DENOTES WEATHERPROOF DEVICE
	E DENOTES EXISTING DEVICE TO REMAIN
	R DENOTES EXISTING DEVICE TO REMOVE BACK TO SOURCE
	RR DENOTES REMOVE AND REPLACE WITH NEW
	ER DENOTES EXISTING DEVICE TO BE RELOCATED
	RL DENOTES RELOCATED DEVICE
	N DENOTES NEW DEVICE
	C DENOTES EXISTING DEVICE TO RECIRCUIT
	B DENOTES EXISTING DEVICE TO BLANK OFF

FIRE ALARM	
	SMOKE DETECTOR
	DUCT SMOKE DETECTOR (ADDRESSABLE)
	DUCT SMOKE DETECTOR C/W SHUTDOWN RELAY (CONVENTIONAL)
	FIRE ALARM MANUAL PULL STATION
	ADDRESSABLE CONTROL MODULE
	ADDRESSABLE MONITORING MODULE
	FIRE ALARM CONTROL PANEL



1 SITE PLAN
E001 SCALE: 1:150

MECHANICAL EQUIPMENT SCHEDULE																			
Printed on May 31, 2023 at 11:52 AM																			
Unit No.	Description	Nameplate		Overcurrent Protection			Feeder			Disconnect		Starter/VFD		Remarks					
		Voltage (V)	Phase #	Load (HP, FLA, kW)	Type	Rating	Poles	Conductors	Cond	Conduit	NEMA Rating	S	I		C	Type	S	I	C
AHU-1	AIR HANDLING UNIT 1	208	3	15.0 HP	BKR	110 A	3P	3 #4	#6	27mm	SPLITTER	1	M	M	INT	M	M	E	[1] [2]
B-1	BOILER 1	120	1	5.3 FLA	BKR	25 A	1P	2 #12	#12	21mm	C-11	1	E	E	INT	M	M	E	[1]
P-1	BOILER RECIRCULATION PUMP 1	120	1	0.5 HP	BKR	20 A	1P	2 #12	#12	21mm	E-35	1	E	E	INT	M	M	E	[1]
B-2	BOILER 2	120	1	10.0 FLA	BKR	25 A	1P	2 #12	#12	21mm	Outdoor Panel	4X	E	E	INT	M	M	E	[1]
P-2	BOILER RECIRCULATION PUMP 2	120	1	0.5 HP	BKR	20 A	1P	2 #12	#12	21mm	Outdoor Panel	4X	E	E	INT	M	M	E	[1]
RF-1	RETURN FAN 1	208	3	7.5 HP	BKR	40 A	3P	3 #10	#10	21mm	SPLITTER	1	E	E	VFD	M	M	E	[1]
UH-1	UNIT HEATER 1	120	1	1.9 FLA	BKR	15 A	1P	2 #12	#12	21mm	EXISTING	1	E	E	TST	M	M	E	[3]

COMMON ABBREVIATIONS	
E-ELECTRICAL CONTRACTOR	M-MECHANICAL CONTRACTOR
S-SUPPLIED BY	I-INSTALLED BY
	NT-INTEGRAL TO UNIT (BY MANUFACTURER)
	C-CONNECTED BY
	NR-NOT REQUIRED

STARTER TYPE ABBREVIATIONS	
VF-VARIABLE FREQUENCY DRIVE	MAG-MAGNETIC FMR
FHM-FULL VOLTAGE NON-REVERSING	FHM-FULL VOLTAGE REVERSING
SM-SOFT STARTER	1ST-LINE VOLTAGE THERMOSTAT

STARTER CONTROL TYPE ABBREVIATIONS	
BMS-BUILDING MANAGEMENT SYSTEM	H.O.A-HAND-OFF-AUTO
LST-LOW VOLTAGE THERMOSTAT	R.O.A-REMOTE OFF
	F.O.R-FORWARD/REVERSE
	O.O-ON/OFF
	O.C-OPEN/CLOSE

GENERAL NOTES	
a. IN MOST CASES THE FLA'S AND ASSOCIATED BRANCH CIRCUITS ARE BASED ON THE CANADIAN ELECTRICAL CODE. CONFIRM THE ACTUAL FLA'S OF MOTORS WITH THE MECHANICAL CONTRACTOR PRIOR TO ORDERING EQUIPMENT (BREAKERS, OVERLOADS, ETC.) AND INSTALLATION OF BRANCH CIRCUITS. APPROVAL OF DISTRIBUTION SHOP DRAWINGS IS BASED ON THE ASSUMPTION THAT FLA'S OF MOTORS HAVE BEEN CONFIRMED. NO ADDITIONAL COSTS WILL BE CONSIDERED FOR FAILURE TO CONFIRM THE FLA'S OF MOTORS PRIOR TO SUBMISSION OF DISTRIBUTION EQUIPMENT SHOP DRAWINGS.	
b. IF MOTOR FEEDER SIZES ARE NOT SHOWN, REFER TO SINGLE LINE DIAGRAM.	
c. ELECTRICAL CONTRACTOR IS TO UPDATE ALL INFORMATION IN THIS SCHEDULE PRIOR TO SUBMITTING AS-BUILT DRAWINGS. THE OVERCURRENT PROTECTION AND MOTOR NAMEPLATE COLUMNS ARE TO BE FILLED IN BY THE CONTRACTOR.	
d. WHERE INDICATED, PROVIDE ROOFTOP GFCI RECEPTACLES AS PER CEC RULE 26-704.	
e. UNLESS NOTED OTHERWISE, ALL EQUIPMENT TEMPERATURE RATINGS ARE ASSUMED TO BE 75°C (CONDUCTOR TEMPERATURE), FOR EXISTING EQUIPMENT, CONFIRM THAT THE TEMPERATURE RATINGS ARE 75°C. IF THE EQUIPMENT IS UNMARKED AND RATED 100 A OR LESS, ASSUME THE TEMPERATURE RATING IS 60°C AND INCREASE THE CONDUCTOR SIZE APPROPRIATELY (CEC RULE 4-006).	

REFERRAL NOTES	
[1] PROVIDE NEW BREAKER.	
[2] PROVIDE SEPARATE 120 V, 15 A CIRCUIT FOR MARINE LIGHTING AND SERVICE RECEPTACLE.	
[3] LINE VOLTAGE T-STAT TO BE PROVIDED BY MECHANICAL, INSTALLED AND CONNECTED BY ELECTRICAL. REFER TO MECHANICAL DRAWINGS FOR T-STAT LOCATION.	

EXISTING PANEL E											
Printed on Jul 01, 2023 at 9:02 AM											
Location: Mechanical Room (Indoor)											
120 / 208 V											
42 Circuits											
3 Phase / 4 Wire											
Mounting: Surface											
No.	Type	Load Description	kVA	BKR	Ø	Type	Load Description	kVA	BKR	Ø	No.
1	HRV	- 4				XX / A	HRV-2				XX / 2
2						/ B	BMS				15 / 4
3						/ 3P	C	FORCE FLOW HEATER 1			15 / 6
5						/ 2P	A	EXISTING			15 / 8
7	CU-1					XX / A					15 / 10
9						/ B	FORCE FLOW HEATER 2				15 / 12
11						/ 3P	C	EXISTING			15 / 14
13		MEN'S FURNACE	20	A			HOT TUB BOILER	15			15 / 14
15		WOMEN'S FURNACE	15	B			HRV-1	30			15 / 16
17		LOBBY FURNACE	20	C			HRV-1 HEATER	15			15 / 18
19		EXISTING	15	A							15 / 20
21		EXISTING	15	B							15 / 22
23		EXISTING	XX	C			HRV-2 HEATER	15			15 / 24
25		EXISTING	15	A							15 / 26
27		EXISTING	15	B							15 / 28
29		EXISTING	15	C			HRV-3 HEATER	15			15 / 30
31		BOILER RECIRC PUMP 1 [4]	15	A							15 / 32
33		MARINE LIGHTS [4]	15	B							15 / 34
35											36
37											38
39											40
41											42

GENERAL NOTES	
a. REFER TO SINGLE LINE FOR FEEDER SIZE.	
b. BREAKERS FOR HEATING CABLES TO BE G.F.P., 30mA.	
c. EXISTING PANELS: BOLD TEXT INDICATES NEW OR MODIFIED.	

REFERRAL NOTES	
[4]-BENTLEY-WITH-RED-NAMEPLATE-AND-RED-LOOK-ON-DEVICE	
[5]-BREAKER-TO-BE-GROUND-FAULT-PROTECTION-TYPE-(50mA)	
[6]-BREAKER-TO-BE-VRD-FAULT-GROUP-INTERTRIP-TYPE	
[4] NEW BREAKER TO BE SUPPLIED AND INSTALLED.	

Panel C											
Printed on Jul 01, 2023 at 9:02 AM											
Location: Equipment Room											
120 / 208 V											
24 Circuits											
3 Phase / 4 Wire											
Bus Rating: 225 A											
Existing Panel											
Mounting: Surface											
No.	Type	Load Description	kVA	BKR	Ø	Type	Load Description	kVA	BKR	Ø	No.
1	EXISTING		15	/	A		EXISTING				15 / 2
3	EXISTING		15	/	2P	B	EXISTING				15 / 4
5	EXISTING		15	/	C	B	EXISTING				15 / 6
7	EXISTING		15	/	2P	A	EXISTING				15 / 8
9	EXISTING		15	/	B	B	EXISTING				15 / 10
11	INDOOR POOL BOILER [4]		15	/	C	B	EXISTING				15 / 12
13	EXISTING		XX	/	A						15 / 14
15	EXISTING		15	/	2P	B	EXISTING				15 / 16
17	EXISTING		15	/	C	B	EXISTING				15 / 18
19	EXISTING		15	/	A	B	EXISTING				15 / 20
21	EXISTING		15	/	B	B	EXISTING				15 / 22
23	EXISTING		15	/	C	B	EXISTING				15 / 24

GENERAL NOTES	
a. REFER TO SINGLE LINE FOR FEEDER SIZE.	
b. BREAKERS FOR HEATING CABLES TO BE G.F.P., 30mA.	
c. EXISTING PANELS: BOLD TEXT INDICATES NEW OR MODIFIED.	

REFERRAL NOTES	
[4]-BENTLEY-WITH-RED-NAMEPLATE-AND-RED-LOOK-ON-DEVICE	
[5]-BREAKER-TO-BE-GROUND-FAULT-PROTECTION-TYPE-(50mA)	
[6]-BREAKER-TO-BE-VRD-FAULT-GROUP-INTERTRIP-TYPE	
[4] NEW BREAKER TO BE SUPPLIED AND INSTALLED.	

REV.	DATE	DESCRIPTION
1	2023.06.01	IFT/HC

PERMIT TO PRACTICE
SMP ENGINEERING

RM SIGNATURE:

RM APEGA ID #: 111020

DATE: 2023-06-01

PERMIT NUMBER: P005622
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

DRUMHELLER VALLEY

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2023-Jun-01

PROJECT TITLE:
DRUMHELLER AQUAPLEX - MECHANICAL UPGRADE

PROJECT ADDRESS:
DRUMHELLER AQUAPLEX
100 RIVERSIDE DR W
DRUMHELLER, AB
T0J 0Y4

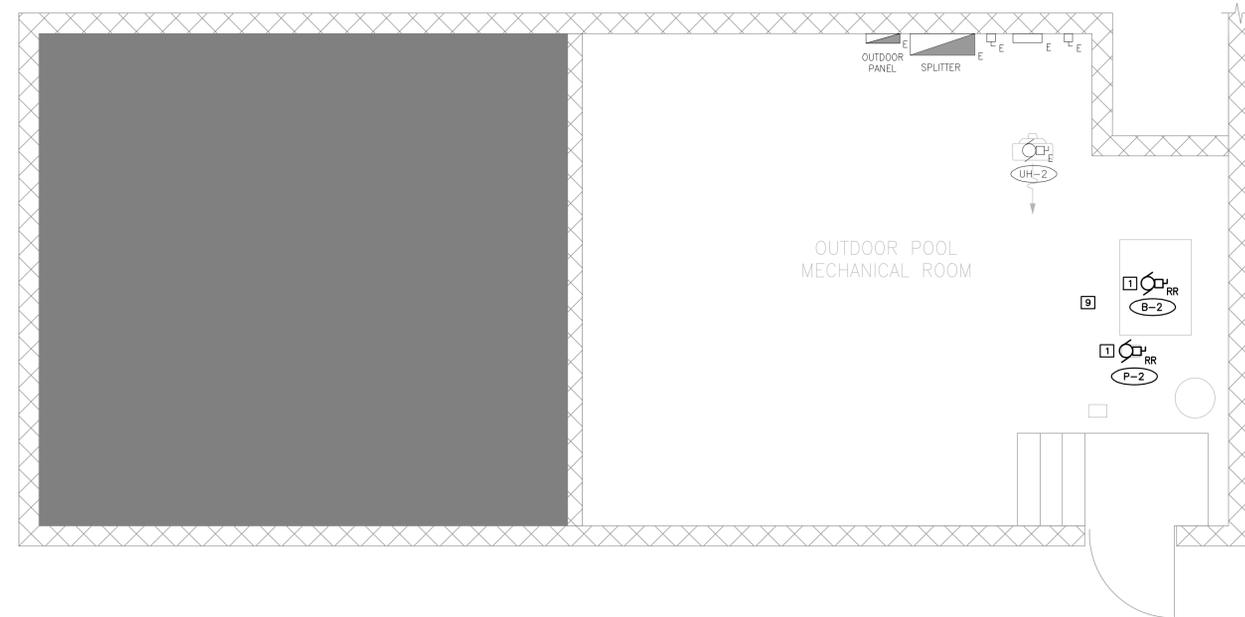
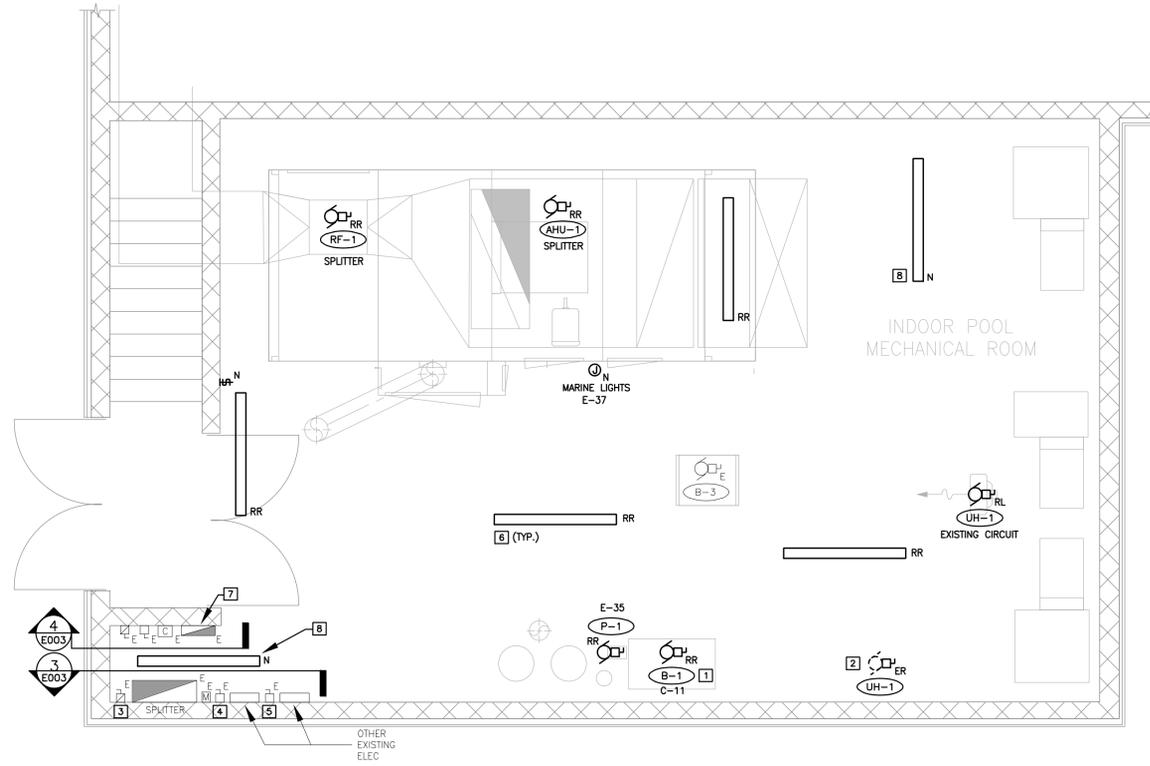
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CHECKED BY: CB
SCALE: AS NOTED
DATE: 2023-06-01

DRAWING TITLE:
COVERSHEET AND SCHEDULES

PROJECT NO. 23-01-0033
DRAWING NO. E001

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REV.	DATE	DESCRIPTION
1	2023.06.01	IFT/IFC



1 INDOOR POOL MECHANICAL ROOM
 E002 SCALE: 1:50

2 OUTDOOR POOL MECHANICAL ROOM
 E002 SCALE: 1:50

GENERAL DEMOLITION NOTES:

- A. ALL EQUIPMENT SHOWN DASHED ON THIS DRAWING IS TO BE REMOVED C/W ALL ASSOCIATED BOXES, CONDUIT & WIRE.
- B. TAKE CARE TO MINIMIZE DAMAGE TO EXISTING CEILINGS, WALLS AND FLOORS THAT ARE TO REMAIN.
- C. WHERE EXISTING EQUIPMENT AND RELATED CIRCUITRY, WHICH IS TO REMAIN, IS IN THE VICINITY OF AREAS TO BE RENOVATED, LEAVE INTACT IF POSSIBLE; IF IT MUST BE REMOVED TO FACILITATE OTHER CONSTRUCTION, RESTORE TO PREVIOUS CONDITION UNLESS INDICATED OR NEGOTIATED OTHERWISE.
- D. THE EXISTING FIRE ALARM AND LIFE SAFETY SYSTEMS SHALL REMAIN OPERATIONAL AT ALL TIMES. TAKE PRECAUTIONS TO AVOID FALSE ALARMS AND DISRUPTIONS WITH THE OWNERS OPERATION.
- E. ALL EQUIPMENT AND FIXTURES REMOVED BY DEMOLITION AND AS DIRECTED BY OWNER SHALL BE REMOVED BY CONTRACTOR FOR RECYCLE OR PROPER DISPOSAL OF BALLAST, FIXTURES, BULBS, CONDUIT & WIRE. REFER TO SPECIAL CONDITIONS OF TENDER.
- F. PROVIDE BLANK STAINLESS STEEL COVER PLATES ON ALL OUTLETS NOT BEING RE-USED BUT REMAINING.
- G. ALL RECEPTACLES, DEVICES, LIGHTING ETC. LEFT ISOLATED BY THE REMOVAL OF OUTLETS IN THE SAME RUN SHALL BE RE-FED TO BECOME FULLY OPERATIONAL TO THE SATISFACTION OF THE DESIGN ENGINEER.

GENERAL RENOVATION NOTES:

- A. COORDINATE LOCATIONS OF ALL MECHANICAL MOTORS WITH DIV. 23. CONFIRM EXACT LOCATION PRIOR TO ROUGH-IN.
- B. REFER TO MOTOR SCHEDULE FOR ALL MOTOR FEEDER SIZES.
- C. MINIMUM BRANCH CIRCUIT HOME RUN CONDUIT SIZE TO BE 21mm DIAMETER.

REFERRAL NOTES:

- 1 UTILIZE EXISTING CIRCUIT. ADJUST WIRING ON SITE AS REQUIRED TO SUIT NEW CONNECTION POINT.
- 2 EXTEND EXISTING UNIT HEATER 120 V, 15 A CIRCUIT TO NEW LOCATION. PROVIDE & INSTALL ALL WIRING ASSOCIATED WITH NEW T-STAT. T-STAT TO BE PROVIDED BY MECHANICAL, INSTALLED BY ELECTRICAL.
- 3 EXISTING CUTLER-HAMMER 400 A MAIN FUSED DISCONNECT.
- 4 EXISTING AIR HANDLING UNIT REMOTE BREAKER ENCLOSURE. BREAKER AND ASSOCIATED WIRING TO BE REMOVED AND REPLACED WITH NEW. REFER TO MECHANICAL EQUIPMENT SCHEDULE FOR BREAKER, FEEDER, AND CONDUIT SIZES.
- 5 EXISTING RETURN FAN REMOTE BREAKER ENCLOSURE. BREAKER AND ASSOCIATED WIRING TO BE REMOVED AND REPLACED WITH NEW. REFER TO MECHANICAL EQUIPMENT SCHEDULE FOR BREAKER, FEEDER, AND CONDUIT SIZES.
- 6 ALL EXISTING LIGHTING FIXTURES IN MECHANICAL ROOM TO BE REMOVED AND REPLACED WITH NEW. PROVIDE NEW LIGHT SWITCH AND COVER PLATES. NEW LIGHT FIXTURES TO BE SURFACE MOUNTED TO THE CEILING. NEW FIXTURES TO BE METALUX #4SLTP40400D-120V OR APPROVED EQUAL. CONNECT FIXTURES TO EXISTING CIRCUIT.
- 7 EXISTING 208Y/120 V 3Ø, 4W, PANEL E.
- 8 NEW FIXTURE LOCATION. TIE INTO EXISTING LIGHTING CIRCUIT.
- 9 ANY NEW WIRING IN OUTDOOR POOL BUILDING TO BE IN PVC CONDUIT. FINAL CONNECTIONS FROM DISCONNECT TO WALL TO BE TECK CABLE. NEW DISCONNECTS TO BE NEMA 4X. PULL SEPARATE BONDING CONDUCTOR IN ALL PVC CONDUITS.

**PERMIT TO PRACTICE
 SMP ENGINEERING**
 RM SIGNATURE: *[Signature]*
 RM APEGA ID #: 111020
 DATE: 2023-06-01
PERMIT NUMBER: P005622
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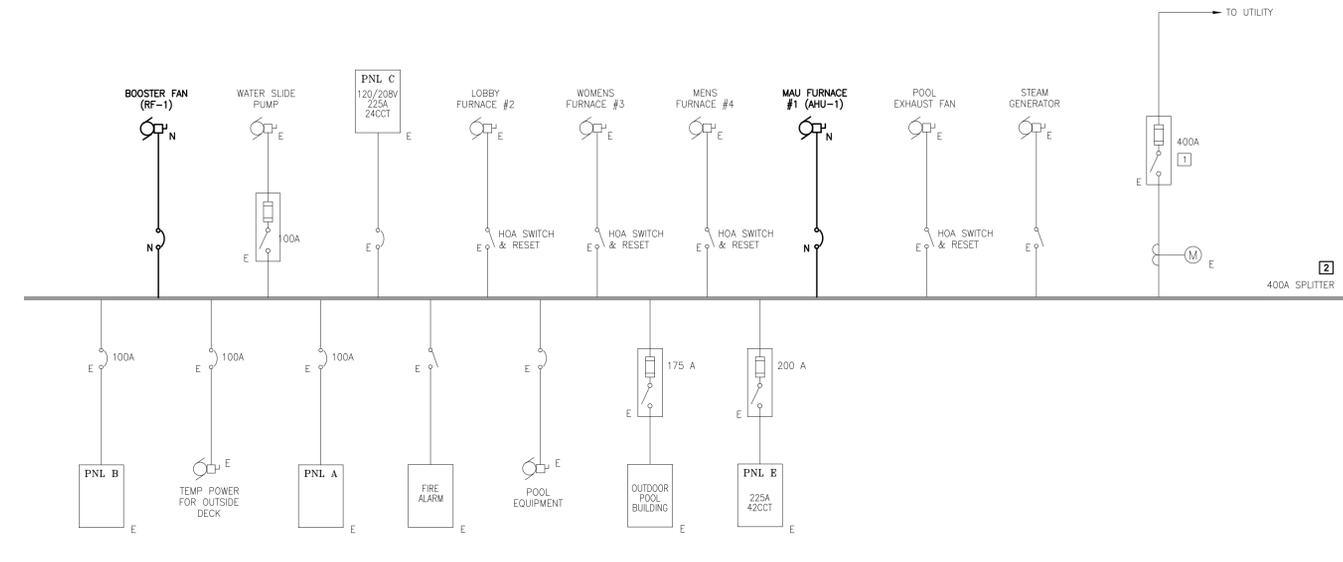
PROJECT TITLE:
 DRUMHELLER
 AQUAPLEX -
 MECHANICAL
 UPGRADE

PROJECT ADDRESS:
 DRUMHELLER AQUAPLEX
 100 RIVERSIDE DR W
 DRUMHELLER, AB
 T0J 0Y4

DRAWN BY: CB
CHECKED BY: CB
SCALE: AS NOTED
DATE: 2023-06-01

DRAWING TITLE:
 ELECTRICAL PLAN -
 MECHANICAL
 ROOMS

PROJECT NO.: 23-01-0033
DRAWING NO.: E002



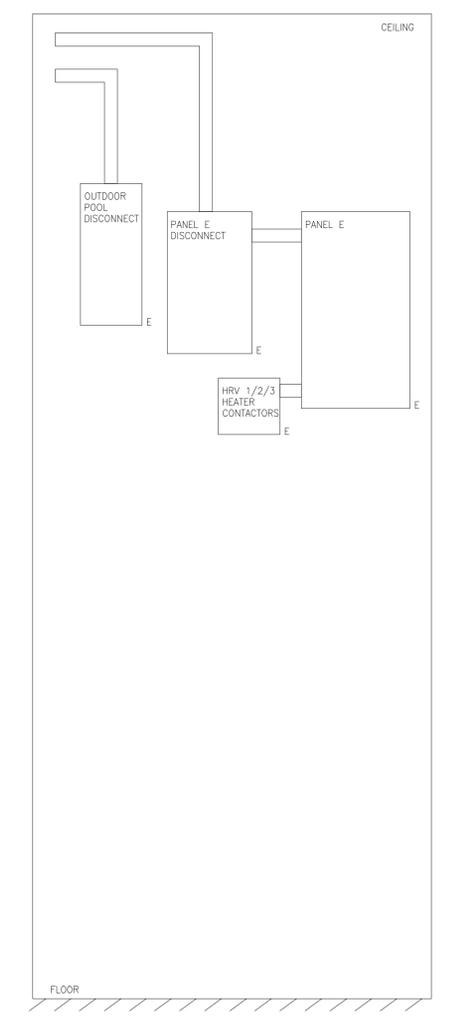
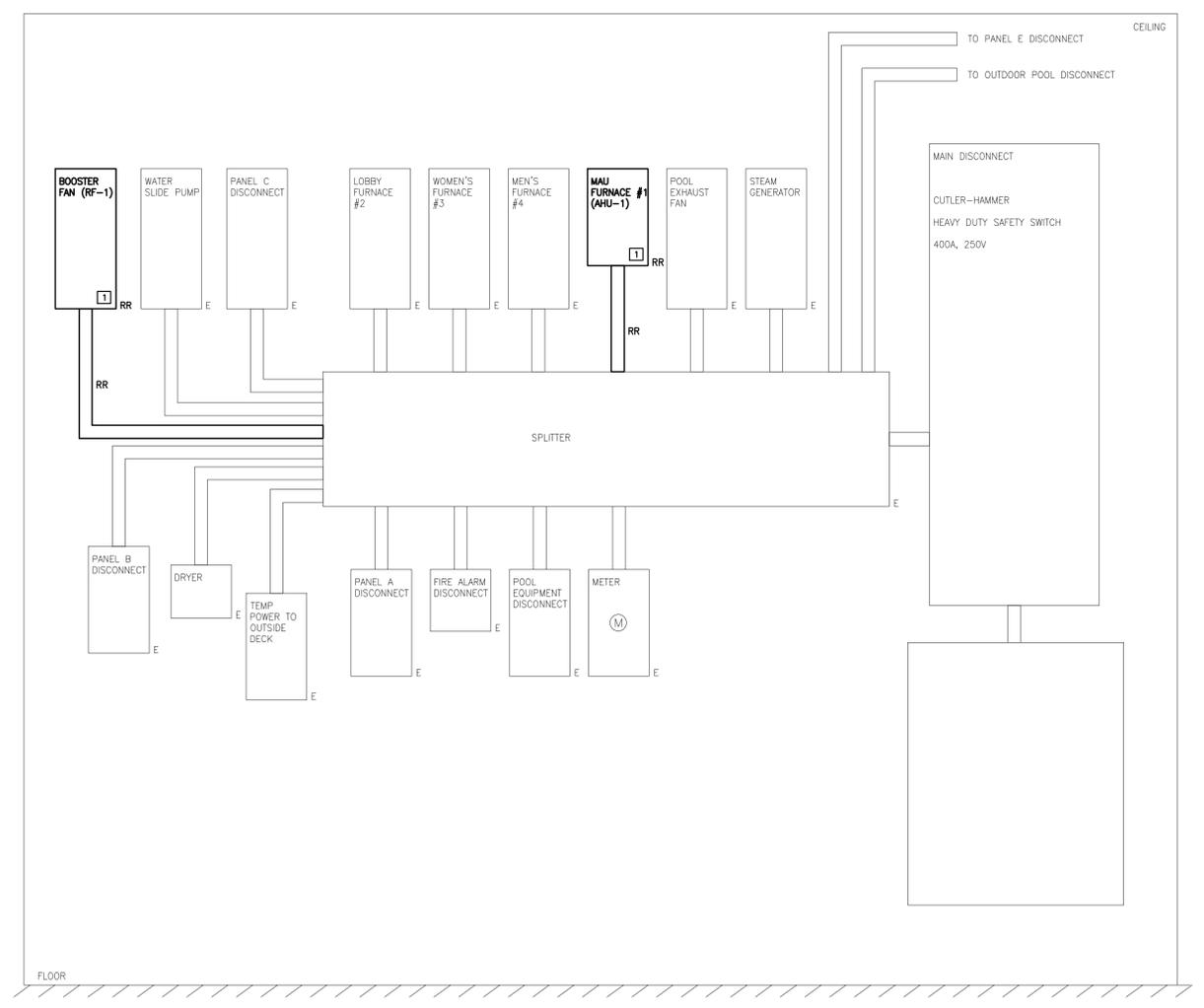
GENERAL NOTES:
 A. REFER TO MECHANICAL EQUIPMENT SCHEDULE FOR BREAKER, WIRE, & CONDUIT SIZES.
 B. ALL WIRE TO BE COPPER.

REFERRAL NOTES:
 1 EXISTING CUTLER HAMMER 400A MAIN FUSED DISCONNECT. FUSED AT 400A.
 2 CONTRACTOR TO INVESTIGATE STATUS OF SPLITTER AT BEGINNING OF PROJECT AND INFORM ENGINEER IF MODIFICATIONS ARE REQUIRED TO PERFORM PROPOSED WORK.

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REV.	DATE	DESCRIPTION
1	2023.06.01	IFT/IPC

1 SINGLE LINE DIAGRAM
 E003 SCALE: NTS



2 EQUIPMENT SPACE - ELEVATION PLAN
 E003 SCALE: NTS

3 EQUIPMENT SPACE ELEVATION PLAN
 E0003 SCALE: NTS

GENERAL NOTES:
 A. NOT ALL CONDUIT AND DEVICES ARE SHOWN HERE. CONTRACTOR TO CONFIRM THE EXTENT OF CONDUIT TO BE RE-ROUTED ON SITE DURING PRE-BID WALK-THROUGH.

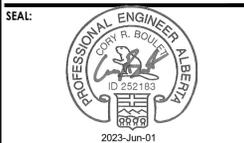
REFERRAL NOTES:
 1 BREAKER AND ENCLOSURE TO BE REMOVED AND REPLACED WITH NEW. REFER TO MECHANICAL EQUIPMENT SCHEDULE FOR BREAKER, WIRE, & CONDUIT SIZES.

PERMIT TO PRACTICE
 SMP ENGINEERING
 RM SIGNATURE: [Signature]
 RM APEGA ID #: 111020
 DATE: 2023-06-01
PERMIT NUMBER: P005622
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PROJECT TITLE:
 DRUMHELLER AQUAPLEX - MECHANICAL UPGRADE

PROJECT ADDRESS:
 DRUMHELLER AQUAPLEX
 100 RIVERSIDE DR W
 DRUMHELLER, AB
 T0J 0Y4

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CHECKED BY: CB
SCALE: AS NOTED
DATE: 2023-06-01

DRAWING TITLE:
 SINGLE LINE DIAGRAM & DETAILS

PROJECT NO.: 23-01-0033
DRAWING NO.: E003

1.0. GENERAL

1.1 THE GENERAL REQUIREMENTS, INSTRUCTIONS TO BIDDERS, THIS SPECIFICATION AND ANY ADDENDA HERETO FORM PART OF THE CONTRACT DOCUMENTS AND SHALL BE READ IN CONJUNCTION WITH THEM. WORK SHALL INCLUDE THE FURNISHING OF ALL LABOUR AND MATERIALS UNLESS SPECIFICALLY NOTED OTHERWISE TO COMPLETE AND PUT INTO OPERATING CONDITION ALL ELECTRICAL SYSTEMS AS INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN.

1.2 THE SCOPE OF WORK IS AS DESCRIBED HEREIN AND SHOWN ON THE DRAWINGS.

2.0. STANDARD OF MATERIAL AND WORKMANSHIP

2.1 ALL MATERIALS SHALL BE NEW AND OF THE QUALITY SPECIFIED AND SHALL CONFORM TO THE STANDARDS OF THE CANADIAN STANDARDS ASSOCIATION, WHERE EQUIPMENT OR MATERIALS ARE SPECIFIED BY TECHNICAL DESCRIPTION ONLY, THEY SHALL BE OF THE BEST COMMERCIAL QUALITY OBTAINABLE FOR THE PURPOSE.

2.2 QUALIFIED TRADESMEN SHALL EXECUTE ALL WORK IN A NEAT AND WORKMANLIKE MANNER. ELECTRICAL TRADE SHALL KEEP A COMPETENT FOREMAN AND NECESSARY ASSISTANTS ALL SATISFACTORY TO THE ENGINEER ON THE JOB DURING THE PROGRESS OF THE WORK.

3.0. FIRE PROTECTION AND SMOKE SEALING

3.1 WHERE CABLES, CONDUITS, BUS DUCTS OR SIMILAR ELECTRICAL EQUIPMENT PASS THROUGH FIRE RATED ASSEMBLIES SUCH AS FLOORS, WALLS AND CEILINGS, THE FIRE RATING OF THESE ASSEMBLIES SHALL BE MAINTAINED BY USING ENGINEER APPROVED AND ULC LISTED FIRESTOP MATERIALS. PROVIDE MANUFACTURER LITERATURE SHOWING THAT THE PROPOSED FIRESTOP SYSTEM IS A ULC LISTED SYSTEM FOR THE PROPOSED APPLICATION.

3.2 WHERE CABLES, CONDUITS, BUS DUCTS OR SIMILAR ELECTRICAL EQUIPMENT PASS THROUGH SMOKE RATED ASSEMBLIES SUCH AS FLOORS, WALLS AND CEILINGS, THE SMOKE RATING OF THESE ASSEMBLIES SHALL BE MAINTAINED BY USING ENGINEER APPROVED AND ULC LISTED MATERIALS. PROVIDE MANUFACTURER LITERATURE SHOWING THAT THE PROPOSED SYSTEM IS A ULC LISTED SYSTEM FOR THE PROPOSED APPLICATION.

3.3 THE SYSTEMS USED TO COMPLY WITH THE SMOKE SEALING AND FIRE PROTECTION REQUIREMENTS SHALL BE INSTALLED AS PER THE MANUFACTURER RECOMMENDATIONS. THE MANUFACTURER REPRESENTATIVE SHALL WITNESS AND CONFIRM THAT THE SYSTEM HAS BEEN INSTALLED IN COMPLIANCE WITH MANUFACTURER RECOMMENDATIONS AND THE ULC LISTING FOR THE SPECIFIC INSTALLATION.

3.4 THIS CONTRACTOR SHALL PROVIDE TWO LETTERS TO THE ENGINEER AT THE COMPLETION OF THE JOB AS FOLLOWS:

1. A LETTER ON THE COMPANY OFFICIAL LETTERHEAD SIGNED BY AN OFFICIAL OF THE CONTRACTING COMPANY WITH SIGNING AUTHORITY STATING THAT THE SYSTEMS HAVE BEEN INSTALLED AS PER THE MANUFACTURER RECOMMENDATIONS.

2. A LETTER ON THE COMPANY OFFICIAL LETTERHEAD SIGNED BY AN OFFICIAL OF THE MANUFACTURER REPRESENTATIVE COMPANY WITH SIGNING AUTHORITY STATING THEY HAVE INSPECTED THE SYSTEMS AND THAT THE SYSTEMS HAVE BEEN INSTALLED AS PER MANUFACTURER RECOMMENDATIONS AND THE ULC LISTING FOR THE SPECIFIC INSTALLATIONS.

3.5 THIS CONTRACTOR SHALL ALLOW FOR ALL COSTS RELATING TO THE INSTALLATION OF SEALING AND FIRE PROTECTION MATERIALS FOR ELECTRICAL INSTALLATIONS, WITNESSING BY THE MANUFACTURER REPRESENTATIVES AND PREPARATION OF THE LETTERS.

4.0. FLAME RATING OF CABLES

4.1 CABLES NOT INSTALLED IN ENCLOSED CONDUIT SHALL BE MINIMUM FT6 RATED. TYPICAL EXAMPLES ARE: CABLES IN CABLE TRAY, TECK CABLES AND CABLES USED FOR GROUNDING CABLE TRAYS.

5.0. UNIFORMITY OF EQUIPMENT

5.1 UNLESS OTHERWISE SPECIFICALLY CALLED FOR IN THE SPECIFICATIONS, UNIFORMITY OF MANUFACTURE SHALL BE MAINTAINED FOR ANY PARTICULAR ITEM THROUGHOUT THE BUILDING.

6.0. DRAWINGS AND SPECIFICATIONS

6.1 THE DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY EACH TO THE OTHER AND WHAT IS CALLED FOR BY ONE SHALL BE BINDING AS IF CALLED FOR BY BOTH.

6.2 SHOULD ANY DISCREPANCY APPEAR BETWEEN THE DRAWINGS AND SPECIFICATIONS WHICH LEAVES THE ELECTRICAL TRADE IN DOUBT AS TO THE TRUE INTENT AND MEANING OF THE PLANS AND SPECIFICATIONS, A RULING SHALL BE OBTAINED FROM THE ENGINEER. IF THIS IS NOT DONE, IT WILL BE ASSUMED THAT THE MOST EXPENSIVE ALTERNATE HAS BEEN FIGURED.

7.0. CODES, PERMITS AND INSPECTION

7.1 THE INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF THE CURRENTLY ENFORCED EDITION OF THE CANADIAN ELECTRICAL CODE AND THE REGULATIONS OF THE ELECTRICAL INSPECTION DEPARTMENT OF THE AHJ.

7.2 THE ELECTRICAL TRADE SHALL OBTAIN ALL PERMITS REQUIRED AND DISPLAY THEM IN THE ELECTRICAL ROOM.

8.0. EXAMINATION OF THE SITE

8.1 PRIOR TO SUBMITTING THEIR TENDER, THE ELECTRICAL TRADE SHALL CAREFULLY EXAMINE THE SITE AND ASCERTAIN ALL CONDITIONS WHICH SHALL AFFECT THEIR TRADE. NO EXTRAS WILL BE ALLOWED FOR WORK RESULTING FROM CONDITIONS THAT WOULD HAVE BEEN EVIDENT UPON A THOROUGH EXAMINATION OF THE SITE.

9.0. CLEAN UP

9.1 THE ELECTRICAL TRADE AND THEIR SUBTRADES SHALL AT ALL TIMES DURING CONSTRUCTION, KEEP THE SITE FREE OF ALL DEBRIS, BOXES, PACKING ETC., RESULTING FROM WORK OF THIS TRADE.

9.2 AT THE COMPLETION OF THE WORK, THE ELECTRICAL INSTALLATION SHALL BE LEFT IN A CLEAN FINISHED CONDITION TO THE SATISFACTION OF THE ENGINEER.

9.3 ALL LUMINAIRES AND ELECTRICAL DEVICES IN THE RENOVATED AREAS SHALL BE WASHED, CLEANED OF GREASE, DIRT AND LINT AS REQUIRED.

10.0. (NOT IN USE)

11.0. SETTING OUT OF THE WORK

11.1 THE ELECTRICAL TRADE SHALL BE RESPONSIBLE FOR CORRECTING ALL WORK COMPLETED CONTRARY TO THE INTENT OF THE DRAWINGS AND SPECIFICATIONS AND SHALL BEAR ALL COST FOR SAME. WHERE THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS NOT CLEAR, THEY SHALL OBTAIN THE CLARIFICATION OF THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

11.2 THE ELECTRICAL TRADE SHALL GIVE THE WORK THEIR PERSONAL SUPERVISION, LAY OUT THEIR OWN WORK, DO ALL NECESSARY LEVELING AND MEASURING OR EMPLOY A COMPETENT ENGINEER TO DO SO. FIGURES, FULL SIZE AND DETAIL DRAWINGS SHALL TAKE PRECEDENCE OVER SCALE MEASUREMENTS.

11.3 WHERE ANY EQUIPMENT SUPPLIED BY THE ELECTRICAL TRADE MUST BE BUILT IN WITH THE WORK OF OTHER CONTRACTORS, THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE SUPPLYING OF THE EQUIPMENT TO BE BUILT IN OR MEASUREMENTS TO BE LEFT SO AS NOT TO HOLD UP THE WORK.

11.4 ELECTRICAL TRADE SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE OWNER OR ANY OF THE OTHER TRADES BY IMPROPER LOCATION OF CARRYING OUT OF THEIR WORK.

12.0. LOCATION OF OUTLETS

12.1 ENGINEER RESERVES THE RIGHT TO CHANGE LOCATION OF OUTLETS TO WITHIN 3048mm (10') OF POINTS INDICATED ON PLANS WITHOUT EXTRA CHARGE PROVIDING ELECTRICAL TRADE IS ADVISED PRIOR TO INSTALLATION.

13.0. (NOT IN USE)

14.0. ACCESS DOORS

14.1 NUMBER OF ACCESS DOORS TO BE KEPT TO AN ABSOLUTE MINIMUM AND TO BE USED ONLY WITH THE PERMISSION OF THE ENGINEER.

14.2 WHERE ACCESS IS REQUIRED TO PULLBOXES AND JUNCTION BOXES, THESE BOXES TO BE LOCATED IN REMOVABLE TYPE CEILING AREAS WHERE POSSIBLE OR ADJACENT TO RECESSED LUMINAIRES.

14.3 WHERE IT IS ABSOLUTELY IMPOSSIBLE TO SERVICE CERTAIN EQUIPMENT THROUGH REMOVABLE TYPE CEILINGS OR RECESSED LUMINAIRES AND WHERE SPECIAL PERMISSION HAS BEEN OBTAINED FROM THE ENGINEER, DIVISION 26 TO SUPPLY AND INSTALL ACCESS DOORS REQUIRED FOR SERVICING OF SUCH WORK, ACCESS DOORS TO BE COMPLETE WITH NECESSARY FRAMES AND HINGED DOORS HELD CLOSED WITH CAPTIVE TYPE STUDS. ACCESS PANELS TO BE OF NOT LESS THAN 14 GAUGE STEEL, PRIME COATED AND PAINTED ON THE JOB TO MATCH THE WALL OR CEILING FINISH.

15.0. PAINTING AND FINISHES

15.1 ALL ELECTRICAL FITTINGS, SUPPORTS, HANGER RODS, PULL BOXES, CHANNEL FRAMES, CONDUIT RACKS, OUTLET BOXES, BRACKETS, CLAMPS, ETC., SHALL HAVE GALVANIZED FINISH OR PAINT FINISH OVER CORROSION-RESISTANT PRIMER.

15.2 ALL PANELBOARDS SHALL BE FACTORY FINISHED WITH SPRAY-ON AIR DRY ENAMEL. ALL ENAMEL SHALL BE APPLIED OVER CORROSION-RESISTANT PRIMER. MATTE OR FLAT TYPE FINISH PAINT WILL NOT BE ACCEPTED. ALL PANELS OR SIMILAR FACTORY-FINISHED UNITS THAT ARE SCRATCHED OR MARKED DURING INSTALLATIONS SHALL BE TOUCHED UP WITH MATCHING SPRAY-ON DRY LACQUER AND IF REQUIRED TO PROVIDE SATISFACTORY JOB SHALL BE COMPLETELY REFINISHED.

16.0. SHOP DRAWINGS

16.1 ELECTRICAL TRADE SHALL SUBMIT TO THE ENGINEER FOR APPROVAL, SHOP DRAWINGS OF ELECTRICAL COMPONENTS.

16.2 ALL DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER IN PDF FORM VIA EMAIL. EACH ITEM TO BE A SEPARATE PDF FILE, SUITABLE LABELED AND REVIEWED BY THE CONTRACTOR AFTER REVIEW AND APPROVAL THEY WILL BE EMAILED BACK TO THE SENDER.

16.3 THE ENGINEER'S APPROVAL OF SHOP DRAWINGS SHALL BE FOR GENERAL DESIGN ONLY AND SHALL NOT RELIEVE THE ELECTRICAL TRADE OR SUPPLIERS FROM THEIR RESPONSIBILITY FOR ERRORS, PROPER FITTING, CONSTRUCTION OF THE WORK AND FURNISHING OF MATERIALS. THE APPROVAL SHALL NOT BE CONSTRUED AS APPROVING DEPARTURES FROM THE CONTRACT DOCUMENT REQUIREMENTS IF SUCH DEPARTURES ARE NOT SPECIFICALLY NOTED IN A COVERING LETTER ACCOMPANYING SUCH DRAWINGS. ELECTRICAL TRADE SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS.

17.0. ASBUILT PLANS

17.1 THE ENGINEER WILL FURNISH TO THE ELECTRICAL TRADE ONE SET OF PDF DRAWINGS TO BE USED FOR ASBUILT WORK AS ACTUALLY INSTALLED. ELECTRICAL TRADE SHALL ACCURATELY RECORD ON THIS SET OF PLANS, DAY BY DAY, ALL OUTLETS, CONDUIT, LUMINAIRES, EQUIPMENT AS ACTUALLY INSTALLED ON THE JOB. ANY CHANGES TO THE CONTRACT WORK SHALL BE SIMILARLY RECORDED.

17.2 ASBUILT DRAWINGS SHALL BE CLEARLY MARKED IN RED INCLUDING ALL CHANGES TO THE ORIGINAL TENDER DRAWINGS COVERED BY ADDENDA, CHANGE ORDERS, FIELD CHANGES, JOB CONDITIONS, ETC.

17.3 FINAL PAYMENT TO THE CONTRACTOR WILL NOT BE RELEASED UNTIL ASBUILT DRAWINGS ARE RECEIVED BY THE ENGINEER. ASBUILT DRAWINGS ARE TO BE TURNED OVER TO THE ENGINEER AT TIME OF FINAL INSPECTION.

18.0. TESTS

18.1 ALL PORTIONS OF THE ELECTRICAL WORK SHALL BE TESTED AND CHECKED FOR SATISFACTORY OPERATION.

19.0. GUARANTEE/WARRANTY

19.1 FURNISH A WRITTEN GUARANTEE/WARRANTY COUNTERSIGNED AND GUARANTEED BY GENERAL CONTRACT TRADE STATING:

1. THAT ALL WORK EXECUTED UNDER THIS CONTRACT WILL BE FREE FROM DEFECTS OF MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THIS WORK.

2. THE ABOVE PARTIES FURTHER AGREE TO, AT THEIR OWN EXPENSE, REPAIR AND REPLACE ALL SUCH DEFECTIVE WORK AND OTHER WORK DAMAGED THEREBY WHICH FAILS OR BECOMES DEFECTIVE DURING THE TERM OF THE GUARANTEE/WARRANTY PROVIDED THAT SUCH FAILURE IS NOT DUE TO IMPROPER USAGE.

3. THE PERIOD OF THE GUARANTEE/WARRANTY SPECIFIED SHALL IN NO WAY SUPPLANT ANY OTHER GUARANTEE OF A LONGER PERIOD BUT SHALL BE BINDING ON WORK NOT OTHERWISE COVERED.

20.0. BUILDING WIRING

20.1 ALL WIRING SHALL BE COPPER WITH RW90 X-LINK INSULATION IN RIGID GALVANIZED STEEL CONDUIT OR ELECTRICAL METALLIC TUBING. NO WIRE SMALLER THAN NO. 12 AWG SHALL BE USED FOR BRANCH CIRCUIT WIRING. BX CABLE MAY BE USED ONLY AS FOLLOWS:

1. ABOVE REMOVABLE CEILINGS FROM EMT JUNCTION BOXES DOWN TO NEW DUPLEX RECEPTACLES MOUNTED IN EXISTING DRYWALL PARTITIONS OR EXISTING DE-MOUNTABLE OR THIN WALL PARTITIONS. IN THIS CASE, THE EMT JUNCTION BOX MUST BE MOUNTED ON THE SLAB IMMEDIATELY ABOVE THE PARTITION WALL.

2. WITHIN NEW DRYWALL PARTITIONS TO INTERCONNECT ELECTRICAL DEVICES IN THE SAME WALL, EXCEPT THAT THE CONNECTION FROM THE JUNCTION BOX ABOVE THE SUSPENDED CEILING DOWN TO THE FIRST ELECTRICAL DEVICE IN THE DRYWALL WALL SHALL BE WIRE IN EMT CONDUIT OR EMPTY EMT CONDUIT FOR LOW VOLTAGE DEVICES.

3. BX CABLING IN CEILING PLENUM TO BE KEPT TO A MAXIMUM OF THREE (3) METERS IN LENGTH.

WITH THE ABOVE EXCEPTIONS, ALL 120 VOLT BRANCH CIRCUIT WIRING MUST BE INSTALLED IN RIGID OR EMT CONDUIT. BX CABLE SHALL BE COMPLETE WITH ANTI-SHORT BUSHINGS. WIRING SHALL BE COLOR CODED TO MATCH EXISTING INSTALLATION. RIGID THREADED GALVANIZED STEEL CONDUIT SHALL BE USED FOR STUB-UPS FROM CONCRETE SLABS AND FOR EXPOSED RUNS BELOW 2100mm (7') FROM THE FLOOR.

20.2 CONDUIT TO BE SIZED IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE.

21.0. WIRING DEVICES

21.1 BOXES, EXCEPT WHERE OTHERWISE NOTED, SHALL BE PRESSED SHEET STEEL GALVANIZED TO CSA STANDARDS. ALL OUTLETS FOR FLUSH WALL MOUNTING SWITCHES, RECEPTACLES, TELEPHONE AND LV OUTLETS SHALL BE NO. 52151 BOX WITH APPROPRIATE PLASTER COVER FOR SINGLE, 2-GANG OUTLETS OR 4-GANG OUTLETS. FLUSH MOUNTING VOICE AND/OR DATA WALL OUTLETS SHALL BE NO. 52171 SERIES (4" SQUARE, 2K" DEEP WITH APPROPRIATE PLASTER OR EXTENSION RING).

21.2 SECTIONAL TYPE BOXES OR HANDY BOXES SHALL NOT BE USED.

21.3 RECEPTACLES TO BE OF SPECIFICATION GRADE AND OF ONE MANUFACTURER, E.G. LEVITON.

21.4 AT THE COMPLETION OF THE PROJECT:

1. THE CONTRACTOR SHALL TURN OVER EQUIPMENT BEING REMOVED TO BUILDING MANAGEMENT. EQUIPMENT NOT REQUIRED BY BUILDING MANAGEMENT SHALL BE REMOVED FROM SITE BY THE CONTRACTOR.

2. THE CONTRACTOR SHALL SEAL ALL UNUSED OPENINGS DUE TO ELECTRICAL DEMOLITION TO ENSURE THAT FIRE-RESISTANCE RATING IS MAINTAINED.

3. THE CONTRACTOR SHALL REMOVE, REINSTALL AND RECONNECT ALL ELECTRICAL DEVICES AFFECTED BY NEW CEILING OR WALL FINISHES.

21.5 ALL DEVICES MOUNTED IN DRYWALL AND ASSOCIATED COVERPLATES TO BE WHITE. ALL DEVICE COVERPLATES IN MILLWORK TO BE STAINLESS STEEL.

22.0. LIGHTING

22.1 NEW LIGHTING TYPE TO BE AS STATED IN DRAWINGS OR APPROVED EQUAL.

22.2 ALTERNATES ARE APPROVED IF EQUAL TO SPECIFIED PRODUCT.

23.0. SUPPORTING DEVICES

23.1 CONDUIT SUPPORTS: SINGLE RUNS - TO BE GALVANIZED CONDUIT STRAPS OR RING BOLT RANGE 1 TYPE HANGERS; MULTIPLE RUNS (THREE OR MORE) - CONDUIT RACK; VERTICAL RUNS - CHANNEL SUPPORT WITH CONDUIT FITTINGS.

23.2 INSTALL TO MAINTAIN HEADROOM, NEAT MECHANICAL APPEARANCE AND TO SUPPORT EQUIPMENT LOADS REQUIRED. WHERE INSERTS ARE REQUIRED IN CONCRETE, EXPANSION INSERTS, LEAD INSERTS OR PLASTIC INSERTS MAY BE USED IN DRILLED HOLES. WOOD OR FIBRE PLUGS NOT PERMITTED.

23.3 ALL ELECTRICAL DISTRIBUTION INCLUDING CABLE TRAY AND CONDUIT THAT IS MOUNTED ABOVE THE SUSPENDED CEILING SHALL BE SUPPORTED DIRECTLY AND INDEPENDENTLY FROM THE STRUCTURE.

23.4 THE USE OF ANY PART OF THE CEILING OR CEILING SUSPENSION SYSTEM AS A SUPPORT OR FOUNDATION FOR THE SUSPENSION OF CABLE TRAY, CONDUIT OR FLEXIBLE CONDUIT (WHERE PERMITTED) IS FORBIDDEN. DATA/VOICE CABLING MAY BE SUPPORTED FROM THE ANCHOR EYE BOLT.

23.5 THE USE OF ANY DRYWALL OR WALL PARTITION AS A SUPPORT OR FOUNDATION FOR CABLE TRAY OR CONDUIT ROUTED HORIZONTALLY THROUGH THE CEILING SPACE IS FORBIDDEN.

23.6 SUPPORT HANGERS AND TRAYS INSTALLED BY THE ELECTRICAL TRADE SHALL NOT BE USED BY OTHER TRADES TO SUPPORT NON-ELECTRICAL SERVICES OR DEVICES.

24.0. FIRE ALARM SYSTEM (NOT APPLICABLE)

25.0. (NOT IN USE)

26.0. BRANCH CIRCUIT PANELS

26.1 BRANCH CIRCUIT BREAKERS: BOLTED FULL SIZE BREAKERS TO MATCH EXISTING INTERRUPTING CAPACITY. UPDATE TYPEWRITTEN DIRECTORY INSIDE DOOR TO INCLUDE NEW CIRCUITS IN EXISTING PANELS. (REFER TO DRAWINGS FOR EXISTING MANUFACTURER)

26.2 PROVIDE PANELBOARDS FOR 120/208 VOLT BRANCH CIRCUIT DISTRIBUTION AS INDICATED ON SCHEDULES SHOWN ON THE DRAWINGS, COMPLETE WITH ALL ITEMS LISTED.

26.3 CONSTRUCT PANELBOARDS TO CSA STANDARDS, APPLY CSA APPROVAL LABELS.

26.4 PANELBOARDS SHALL BE OF CORROSION-RESISTANT FINISH HAVING TRIM FOR FLUSH OR SURFACE MOUNTING AS INDICATED IN THE SCHEDULES. PANELBOARD TRIM SHALL HAVE A HINGED LOCKING DOOR WITH FLUSH TYPE CATCH AND LOCK OVER CIRCUIT BREAKERS. TYPEWRITTEN DIRECTORY TO BE INSIDE DOOR.

26.5 LABEL ALL EQUIPMENT (NEW AND EXISTING) WITH LAMACOID LABELS. LABELS ARE TO INDICATE EQUIPMENT DESIGNATION AND VOLTAGE AS PER SINGLE LINE DIAGRAM AND INCLUDE "FED FROM...". LAMACOID SHALL BE FASTENED TO EQUIPMENT WITH SCREWS OR RIVETS. LAMACOIDS ATTACHED WITH ADHESIVE TAPE ONLY ARE NOT ACCEPTABLE.

26.6 NEW PANELBOARDS TO BE SUITABLE FOR INSTALLATION IN SPRINKLERED BUILDING.

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REV.	DATE	DESCRIPTION
1	2023.06.01	IFT/IFC

**PERMIT TO PRACTICE
SMP ENGINEERING**

RM SIGNATURE: *[Signature]*
RM APEGA ID #: 111020
DATE: 2023-06-01

PERMIT NUMBER: P005622
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2023-Jun-01

PROJECT TITLE:
**DRUMHELLER
AQUAPLEX -
MECHANICAL
UPGRADE**

PROJECT ADDRESS:
DRUMHELLER AQUAPLEX
100 RIVERSIDE DR W
DRUMHELLER, AB
T0J 0Y4

DRAWN BY	CB
CHECKED BY	CB
SCALE	AS NOTED
DATE	2023-06-01

DRAWING TITLE:
**ELECTRICAL
SPECIFICATIONS**

PROJECT NO.	DRAWING NO.
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