MOTOR/EQUIPMENT SCHEDULE

EQUIPMENT					FEED FROM	PKG	STARTER						CONTROLS				FIRE ALARM SHUT DOWN	REMARKS	SEE NOTES BELOW
ITEM	DESCRIPTION	LOCATION	KW/HP/AMPS	VOLTS/Ø		UNIT	TYPE	FUNC	PL	PB	HOA	SUPPLY BY	TYPE	SUPPLY BY	INSTALL BY	WIRE BY			
MUA-1	PUMP ROOM MUA	PUMP ROOM	0.3 kW	208/3	PNL A	Y							T	MECH	ELEC	ELEC		INTERLOCK WITH MD-1, MD-3, MD-6	2,3,4,5
SF-1	PUMP ROOM VENTILATION FAN	PUMP ROOM	1.5 HP	208/1	PNL A		FVNR		Y	Y	Y	ELEC	T	MECH	ELEC	ELEC		INTERLOCK WITH MD-2, MD-4, MD-5	1,2,3,4,5
EF-1	WET WELL ROOM VENTILATION FAN	WET WELL ROOM	1/3 HP	120/1	PNL A	Y							MS	ELEC	ELEC	ELEC		INTERLOCK WITH WET WELL ROOM LIGHTS	1,2,3,4,5
EF-2	PUMP ROOM VENTILATION FAN	PUMP ROOM	FR. HP	120/1	PNL A	Y							ESC	MECH	ELEC	ELEC		INTERLOCK WITH MUA-1	1,2,3,4,5
EF-3	DRY WELL ROOM VENTILATION FAN	PUMP ROOM	1/4 HP	120/1	PNL A	Y							ESC	MECH	ELEC	ELEC		INTERLOCK WITH MUA-1	1,2,3,4,5
MD-1-6	MOTORIZED DAMPERS	PUMP ROOM	FR. HP	120/1	PNL A	Y								ELEC	ELEC	ELEC		INTERLOCK WITH FAN AND MUA OPERATION	4,5
DH-1	DUCT HEATER	PUMP ROOM	36 kW	600/3	MCC	Y							INT	MECH	ELEC	ELEC		INTERLOCK WITH SF-1	1,2,3,4,5
UH-1	UNIT HEATER	PUMP ROOM & DRY WELL	5 kW	600/3	MCC	Y							T	MECH	ELEC	ELEC		COORDINATE LOCATION OF REMOTE STAT WITH MECH	1,2,3,4,5

GENERAL NOTES:

1. MOTOR STARTER TO BE C/W PILOT LIGHT AND OVERCURRENT PROTECTION
2. ALL STARTERS TO BE SUPPLIED & INSTALLED BY THE ELECTRICAL CONTRACTOR (EC) UNLESS OTHERWISE NOTED.
3. DISCONNECT SWITCHES TO BE SUPPLIED & INSTALLED BY THE ELECTRICAL CONTRACTOR
4. ELECTRICAL CONTRACTOR TO PROVIDE CIRCUIT BREAKERS AND WIRING ACCORDING TO THE FINAL NAMEPLATES OF THE MECHANICAL EQUIPMENT AT NO COST.
5. REFER TO PANEL BOARD SCHEDULES AND SINGLE LINE DIAGRAM FOR MOTOR AND EQUIPMENT OVERLOAD PROTECTION.

F = FLOAT SWITCH
FVNR = FULL VOLTAGE NON-REVERSING
HOA = HAND/OFF/AUTO
INT = INTEGRAL
MAG = MAGNETIC STARTER
MAN = MANUAL STARTER
PL = PILOT LIGHT
PS = PRESSURE SWITCH
RVNR = REVERSE VOLTAGE NON-REVERSING
SS = SOFT STARTER

T = THERMOSTAT
Y = YES
AD = AMMONIA DETECTION SYSTEM
CHL = CHLORINE SENSOR
CO = CARBON MONOXIDE SENSOR
CO2 = CARBON DIOXIDE SENSOR
ES = END SWITCH
ESC = ELECTRONIC SPEED CONTROLLER
FS = FLOW SWITCH
H = HUMIDISTAT

LS = LEVEL SWITCH
MS = MANUAL SWITCH
MT = MANUAL TIMER (WALL MOUNTED)
TDS = TIME DELAY SWITCH (WALL MOUNTED)
DDC = DIGITAL DATA CONTROL SYSTEM
I = INTERLOCK
PB = PUSH BUTTON
RP = REMOTE PANEL
TC = TIME CLOCK
VFD = VARIABLE REQUENCY DRIVE

PANEL 'A'

VOLTAGE : SEE SINGLE LINE
BUS : SEE SINGLE LINE
PHASE : SEE SINGLE LINE
WIRE : SEE SINGLE LINE

DESCRIPTION	LOAD WATTS	BKR SIZE	CIRCUIT		BKR SIZE	LOAD WATTS	DESCRIPTION
LTG - INTERIOR, EBB#1	620	15	1	2	15 3P	300	MUA-1
LTG - EXTERIOR	200	15	3	4			
EXIT SIGNS	40	15	5	6			
RECEPT - WET WELL ROOM	200	15	7	8	30 2P	1000	SF-1 CONTROL PANEL
RECEPT - WET WELL ROOM	200	15	9	10			
RECEPT - MOTOR ROOM	400	15	11	12	20	1000	EF-1 CONTROL PANEL
RECEPT - MOTOR ROOM	400	15	13	14			
RECEPT - DRYWELL	400	15	15	16			
CSO PANEL	1000	15	17	18			
PLC PANEL	1000	20	19	20			
SPARE		15	21	22			
SPARE		15	23	24			
SPARE		15	25	26			
SPARE		15	27	28			
SPARE		15	29	30			
SPARE		15	31	32			
SPARE		15	33	34			
SPARE		15	35	36			
SPARE		15	37	38			
SPARE		15	39	40			
SPARE		15	41	42			

HTG. : 0KW | LTG. : 0.9KW | MTR. : 2.3KW | MISC. : 3.6KW | TOTAL : 6.8KW

LUMINAIRE SCHEDULE

TYPE	MANUFACTURER	CATALOGUE NO.	LAMPS NO.	LAMPS TYPE	VOLTS	MOUNTING	REMARKS	NOTES	WATTS
A	LITHONIA	DMW2-L24-4000LM-ACL-MD-MVOLT-GZ10-40K-80CRI	-	LED	120	S		1	40
B	HOLOPHANE	HXPL-5L-4-2T-AS	-	LED	120	S		1	47
XA	LITHONIA	OLWX1LED-20W-40K-PE	-	LED	120	W	PROVIDE C/W WIRE CAGE	1	20

NOTES:
1. ALL LAMPS ARE TO BE 4000°K AND A MINIMUM 80 CRI UNLESS NOTED OTHERWISE.
2. FINISH AS SELECTED BY INTERIOR DESIGNER.
3. ALL SCREW-IN BASE FIXTURES TO BE LAMPED WITH LED TYPE.

S = SURFACE
R = RECESSED
C = CEILING
W = WALL
V = VALANCE
P = PENDANT
TB = T-BAR
DW = DRYWALL
CH = CHAIN

BATTERY BANK SCHEDULE

NO.	MANUFACTURER	CATALOGUE NO.	INPUT VOLTS	OUTPUT VOLTS	SOURCE PANEL	QUANTITY		MINIMUM WATTAGE x 1.25
EBB#1	LUMACELL	RG12NX-108-2-LD9-CW1	120	12	PNL A	6	1	90
	LUMACELL	LUMACELL LN SERIES, SELF POWERED	120	SEE DWG				

NOTES:
LUMACELL MQM2NX-LD9
LUMACELL MQM2NX-LD9
LUMACELL RS20FXP-LD10-S1-P

APEGM
Certificate of Authorization
Tower Engineering Group
No. 4156 Expiry: April 30, 2020

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

TOWER ENGINEERING GROUP
TOWER PROJECT NO. : 181654
UNIT 1-1140 WAVERLEY ST. WINNIPEG, MB R3T 0P4
TEL: (204) 925-1150 FAX: (204) 925-1155
EMAIL: towereng@towereng.ca WEB: www.towereng.ca
• WINNIPEG • CALGARY

WARNING

IF POWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR MUST:

1) NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.

2) TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS.

SEE PROVINCIAL REGULATION 210/72 FOR DETAILS

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE _____ DATE _____

NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

B.M.
ELEV.

CONSTRUCTION COMPLETION DATE: YYYY MM DD

NO.	REVISIONS	DATE	BY
3	ISSUED FOR TENDER	2019 05 27	DKG
2	ISSUED FOR 99% REVIEW	2019 05 09	DKG
1	ISSUED FOR 66% REVIEW	2019 04 17	DKG

NEEGAN BURNSIDE
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fax (204) 949-7111
web www.neeganburnside.com

DESIGNED BY	DKG	CHECKED BY	DKG
DRAWN BY	VRR	APPROVED BY	DKG
SCALE:	N.T.S.	RELEASED FOR CONSTRUCTION	
HORIZONTAL			
VERTICAL			
DATE	2019 04 15	DATE	

PLOT DATE: 2019-05-27

ENGINEER'S SEAL

CONSULTANT DRAWING NUMBER
E-05

TENDER NO. 269-2019
CONTRACT NUMBER: X

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

MISSION FPS UPGRADES

SCHEDULES

SHEET OF

CITY DRAWING NUMBER
1-0163F-E0006-001

FILE PATH: T:\181000\181654 C Of W Mission Flood Pumping Station\16000 Electrical\11 Drawings\Working Drawings
FILE NAME: 181654 - E-05 Electrical Schedules