



REFERENCE NOTES:

- 1 SPLICE EXISTING CABLES WITH NEW CABLES COMING FROM NEW HEADWORKS/LV/BLOWER BUILDING INSIDE CABLE PIT.
- 2 CONTRACTOR TO SUPPLY AND INSTALL A REMOTE I/O AS PER PROCESS LOAD SHEDDING MONITORING DETAIL ON E12.
- 3 ATS-3 IS C/W SCHNEIDER POWERLOGIC ION7550 POWER METER.

SYMBOL	LEGEND
	WOOD UTILITY POLE C/W POLE NUMBER AS INDICATED
	1φ POLE MOUNTED TRANSFORMER
	GROUNDING - CADWELDED TO METAL WELL CASING
	GROUND BAR
	GROUND RODS AT 3m SPACING
	METERING CURRENT TRANSFORMERS (CTS)
	METERING POTENTIAL TRANSFORMERS (PTS)
	UTILITY METER; '914425' - NB POWER METER #
	DIGITAL UTILITY METER
	DISTRIBUTION PANELBOARD; PANEL NAME AS INDICATED
	CIRCUIT BREAKER
	TRANSFORMER DELTA-WYE GROUNDING
	CONTACTOR; 'C' - COIL
	DISCONNECT SWITCH
	FUSE
	MAGNETIC MOTOR STARTER; 'M' - NEMA STARTER SIZE
	GENERATOR
	GENERATOR CONNECTION - RECEPTACLE AND PLUG
	DIRECT CONNECTION
	3φ MOTOR; 'S' - INDICATES HP RATING
	1φ MOTOR; '1/3' - INDICATES HP RATING
	MOTOR STARTER
	EQUIPMENT & LOAD
	ELECTRICAL ENCLOSURE
	BRANCH CIRCUIT PANELBOARD
	AUTOMATIC TRANSFER SWITCH C/W ISOLATION BYPASS
	MANUAL TRANSFER SWITCH; 'A' - AUTOMATIC, 'E' - EMERGENCY, 'L' - LOAD, 'N' - NORMAL
	COMMUNICATIONS ENTRANCE BOARD
	UNDERGROUND WIRING & CONDUIT
	SURFACE WIRING & CONDUIT
	TRANSIENT VOLTAGE SURGE SUPPRESSOR
	SPLITTER
	RECEPTACLE FOR GENERATOR CONNECTION
	PHOTOCELL
	BUILDING EXTERIOR WALL
	RECEPTACLE
	SINGLE POLE SWITCH
	MAST AND WEATHERHEAD
	ANTENNA

**ELECTRICAL ENTRANCE LOAD CALCULATION
WWTP Building
C22.1-18 (24TH EDITION)**

Step 1(8-210 a): Basic Load (Breakdown your building in different occupancies, if applicable)

Occupancy Names	Occupancy Types	Watts per m2	Demand factor, % (Feeder)	Area (m2)	Watts (kW)
WWTP Building	Industrial and commercial	25	100	378	9,450
Total					9,450

Step 2 (8-210 b): Special Loads (Add all special loads as electric space-heating, air-conditioning, motor loads, show window lighting, etc and use demand factors permitted by CEC)

Loads	Connected Load (kW)	Demand Factor	Quantity	Demand Load (kW)
DWH	27.00	0.75	1	20.25
Pressure Washer	9.34	1	1	9.34
Screenner	22.84	1	1	22.84
Screw Compactor	11.42	1	1	11.42
Mechanical Loads	4.61	1	1	4.61
Fire Range (Ex Bldg)	20.00	1	1	20.00
Recyc. & Compost. Bldg (Ex Bldg #A6)	50.00	1	1	50.00
Aeration Blower	22.84	1	2	45.67
Heating	78.00	0.75	1	58.50
Total				242.63

Step 3: Electrical Entrance Ampacity Calculation

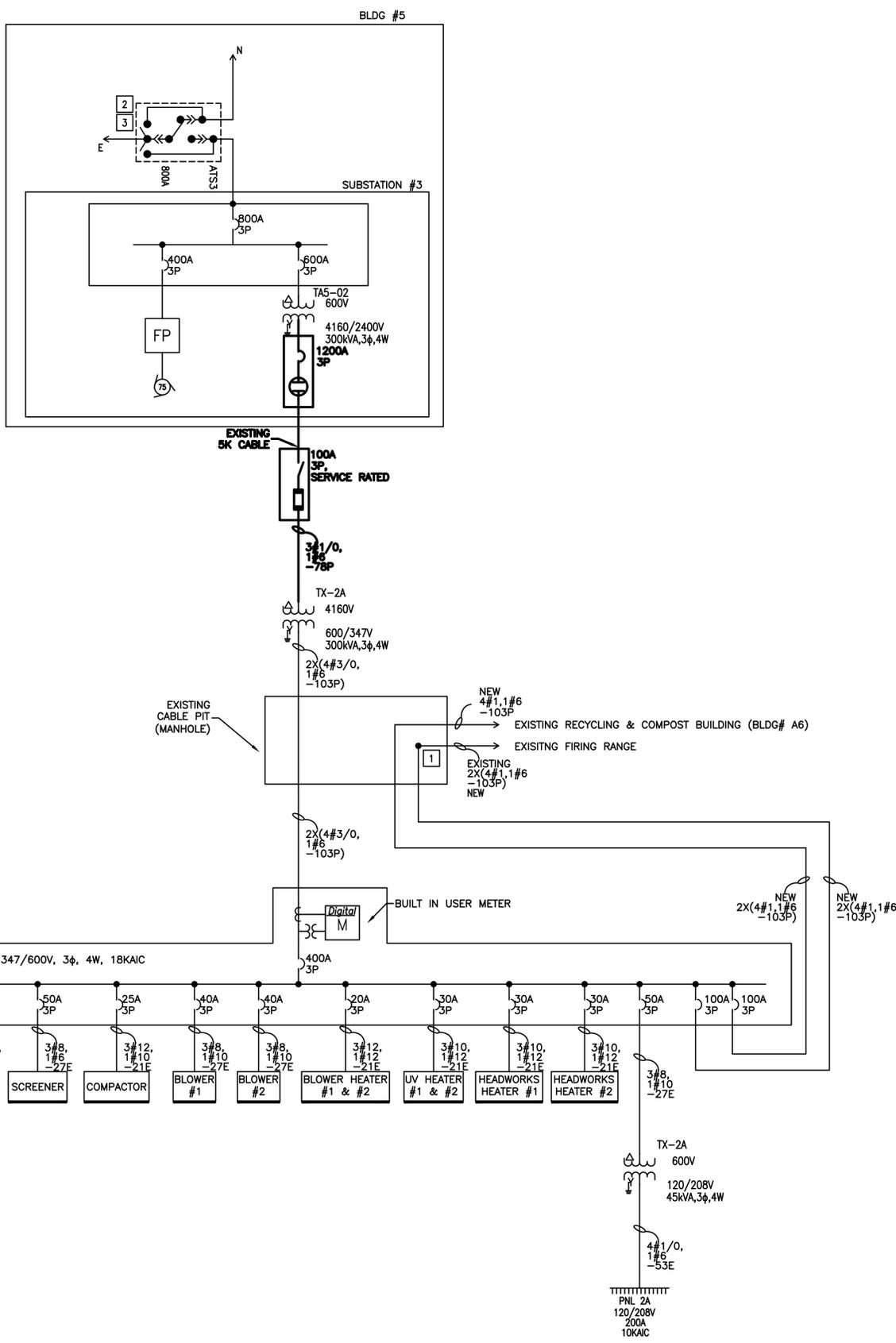
Total Load (kW)	252.08 kW
Voltage	347/600, 3φ Volts
Ampacity	242.56 Amps
Ampacity w/ correction factor (80% rating)	303.20 Amps
Electrical Entrance Ampacity Size	400 Amps

**ELECTRICAL ENTRANCE LOAD CALCULATION
TAS-02 Transformer
C22.1-18 (24TH EDITION)**

Demand Table

Approximated Gym Max Load	93.40 kW
New WWTP Building Load	252.10 kW
Total Load (kW)	345.50 kW

DEMAND TABLES - NEW WORK



SINGLE LINE DIAGRAM - NEW WORK



revisions	date
3	ISSUED FOR TENDER 06/17/2022
2	ISSUED FOR RS4 99% SUBMISSION 10/30/2020
1	ISSUED FOR RS4 66% SUBMISSION 02-28/2020
0	ISSUED FOR RS3 SUBMISSION 08-17/2018

**SEWAGE TREATMENT UPGRADES
SPRINGHILL INSTITUTION**

drawing design

ELECTRICAL SINGLE LINE DIAGRAM

designed	EH	conçu
date	2022-06-17	
drawn	GS	dessiné
date	2022-06-17	
approved	DD	approuvé
date	2022-06-17	
Tender		Soumission
PWGS Project Manager	Administrateur de projets TPSGC	
project number	no. du projet	
R.061876.001		
drawing no.	no. du dessin	
E13		