

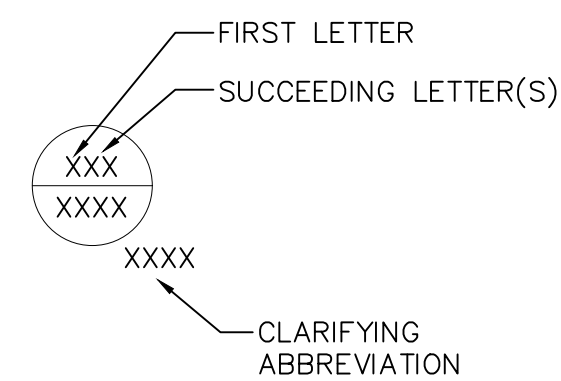
6/30/2021 10:40 AM W:\T-PROJECTS\T-18009-00 - TAUNTON WWTF UPGRADES\ELECTRICAL DEPARTMENT\18009-00 I&C DWG (BETA STB BW STB)

ABBREVIATIONS

Table of abbreviations including AM (Auto-Manual), CP (Control Panel), DO (Dissolved Oxygen), ES (Emergency Stop), ETH (Ethernet), FR (Forward-Reverse), HI (High), HOA (Hand-Off-Auto), JB (Junction Box), LR (Local-Remote), MC (Motor Controller (Starter)), OAC (Open-Auto-Close), OEM (Equipment Manufacture Provided), OIT (Operator Interface Terminal), ORP (Oxygen Reduction Potential), OS (Operator Station), PH (Hydrogen Ion Concentration), PRESS (Pressure), SS (Start-Stop), TEMP (Temperature), TURB (Turbidity), VFD (Variable Frequency Drive), ABA (Aeration Blower Air), BTE (Biological Treated Effluent), CAR (Micro Carbon), CEN (Centrate), FA (Foul Air), FS (Foam Spray), LS (Lime Slurry), MTH (Methane), PM (Polymer), PI (Primary Influent), PS (Primary Sludge), PTE (Primary Tank Effluent), RAS (Return Activated Sludge), RSW (Raw Sewage Water), SAN (Sanitary Waste), SAXE (Secondary Anoxic Effluent), SC (Scum), SBS (Sodium Bisulfite), SHC (Sodium Hypochlorite), SSE (Secondary Settled Effluent), STO (Sludge Thickener Overflow), TEF (Treated Effluent Water), TS (Thickened Sludge), WAS (Waste Activated Sludge).

INSTRUMENT IDENTIFICATION LETTERS

Table for instrument identification letters with columns for First Letter and Succeeding Letter(s). Rows include PROCESS OR INITIATING VARIABLE, ANALYSIS, BURNER, COMBUST., USER'S CHOICE, VOLTAGE, FLOW, FRACTION, HAND, MANUAL, CURRENT, TIME, SCHEDULE, LEVEL, MOISTURE, HUMIDITY, USER'S CHOICE, PRESSURE, VACUUM, QUANTITY, EVENT, RADIATION, SPEED, FREQUENCY, TEMP., MULTI-VARIABLE, VIBRATION, WEIGHT, FORCE, UN-CLASSIFIED, EVENT, STATE, POSITION.



LINE LEGEND

Table for line legend with symbols and descriptions: NEW PROCESS PIPING, EXISTING PROCESS PIPING, PNEUMATIC AIR PIPING, DIGITAL SIGNAL, ANALOG SIGNAL, ELECTRICAL POWER OR CONTROL, FIELD INSTRUMENTATION, PLC INTERFACE, PANEL/OIT/SCADA DISPLAY AND OR CONTROL, INDEPENDENT CONTROL CIRCUIT, DRAWING AND OR PROCESS REFERENCE.

SYMBOL LEGEND

Table for symbol legend with symbols and descriptions: ACTUATOR - MOTORIZED, ACTUATOR - SOLENOID, AIR REGULATOR/SEPARATOR, ANALYZER, AERATOR - BUBBLE, AERATOR - SURFACE, BLOWER/FAN, CALIBRATION COLUMN, COMPRESSOR - ROTARY TYPE, DRAIN, EDUCATOR, ELECTRIC MOTOR, EMERGENCY EYEWASH/SHOWER, FLEX CONNECTION, FLOW METER - MAGNETIC, FLOW METER - ULTRASONIC STRAP ON, FLOW METER - ROTAMETER, FLOW METER - THERMAL MASS, FLOW SWITCH, GRINDER, HOSE, LEVEL SWITCH - FLOAT SWITCH, LEVEL SWITCH - PADDLE WHEEL, LEVEL TRANSMITTER - SUBMERSIBLE PRESSURE, LEVEL TRANSMITTER - ULTRASONIC, LEVEL TRANSMITTER - RADAR, MACERATOR, MIXER, MIXER - SUBMERSIBLE, MOTOR, POSITION SWITCH, PULSATION DAMPENER, PUMP - CENTRIFUGAL, PUMP - PERISTALTIC, PUMP - PROGRESSING/CAVITY, PUMP - RECIPROCATING/METERING, PUMP - ROTARY LOBE, PUMP - SUBMERSIBLE, SLIDE OR SLUICE GATE, STATIC MIXER, VALVE - BALL, VALVE - BUTTERFLY, VALVE - CHECK, VALVE - GATE, VALVE - GLOBE, VALVE - PINCH, VALVE - PLUG, VALVE - PRESSURE REGULATING, VALVE - PRESSURE REGULATING, VIBRATOR.

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PROJECT

Taunton Wastewater
Treatment Facility
Improvements
Phase 1

Taunton, MA

TITLE

INSTRUMENTATION
& CONTROLS
LEGEND AND
NOTES

Table with columns: NO., REVISIONS, DATE

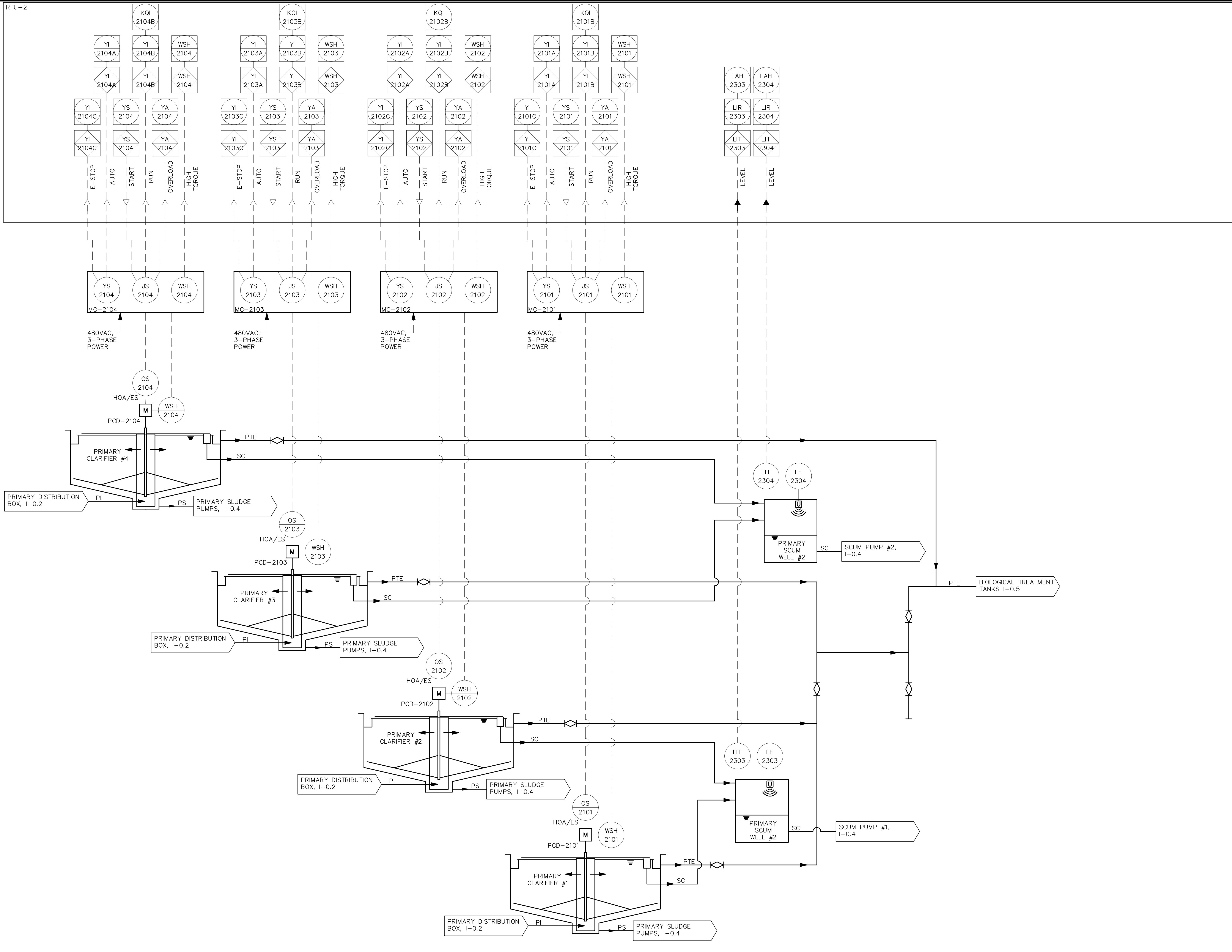
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SCALE

AS SHOWN

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I-0.1



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PROJECT

**Taunton Wastewater
Treatment Facility
Improvements
Phase 1**

Taunton, MA

TITLE

**INSTRUMENTATION
& CONTROLS
PRIMARY
CLARIFIERS**

NO.	REVISIONS	DATE

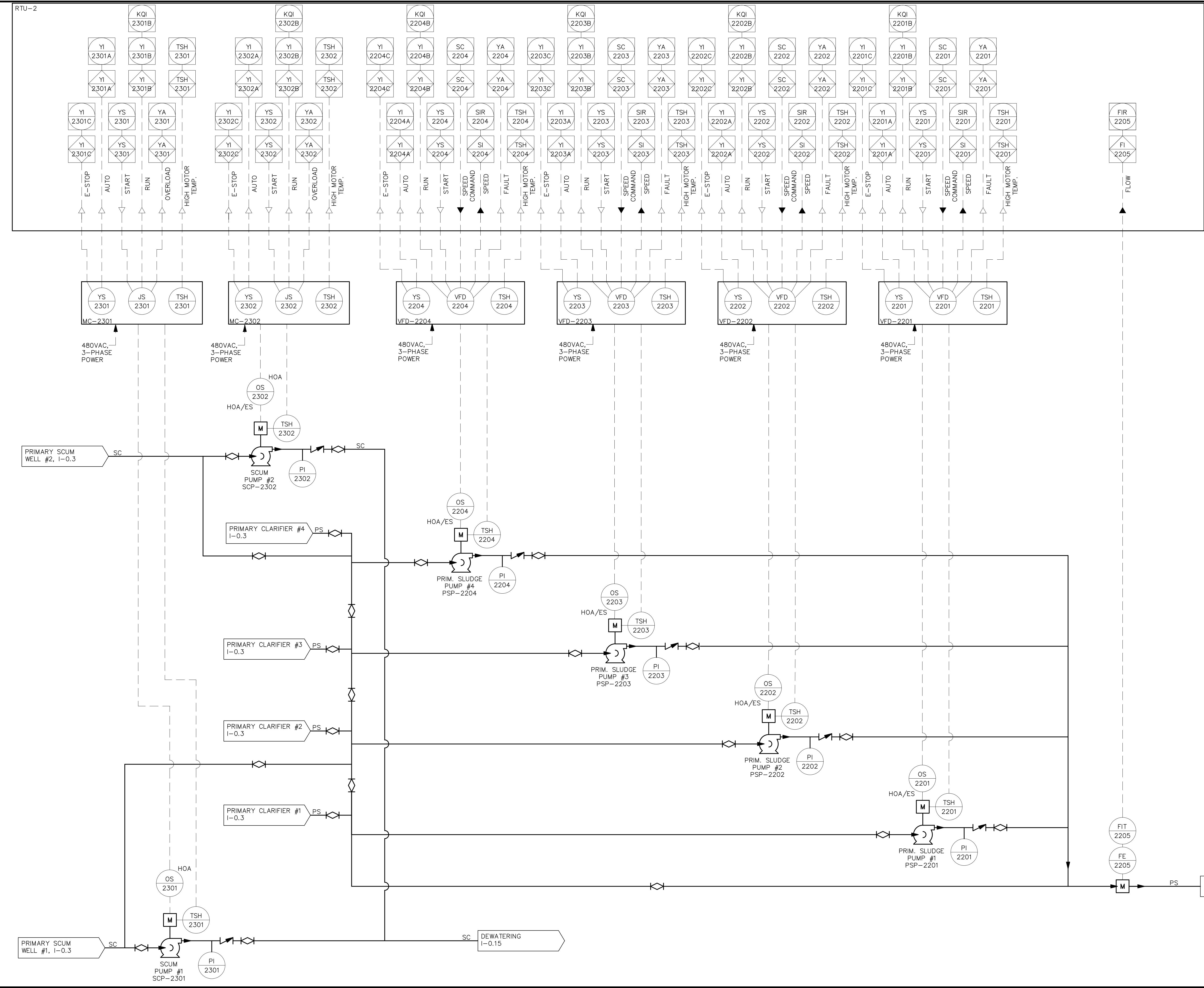
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DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

INSTRUMENTATION & CONTROLS PRIMARY SLUDGE PUMPS

NO.	REVISIONS	DATE

DRAWN BY: RB
DESIGNED BY: MC
CHECKED BY: MC
ISSUE DATE: 7/2/21
BETA JOB NO.: 6050

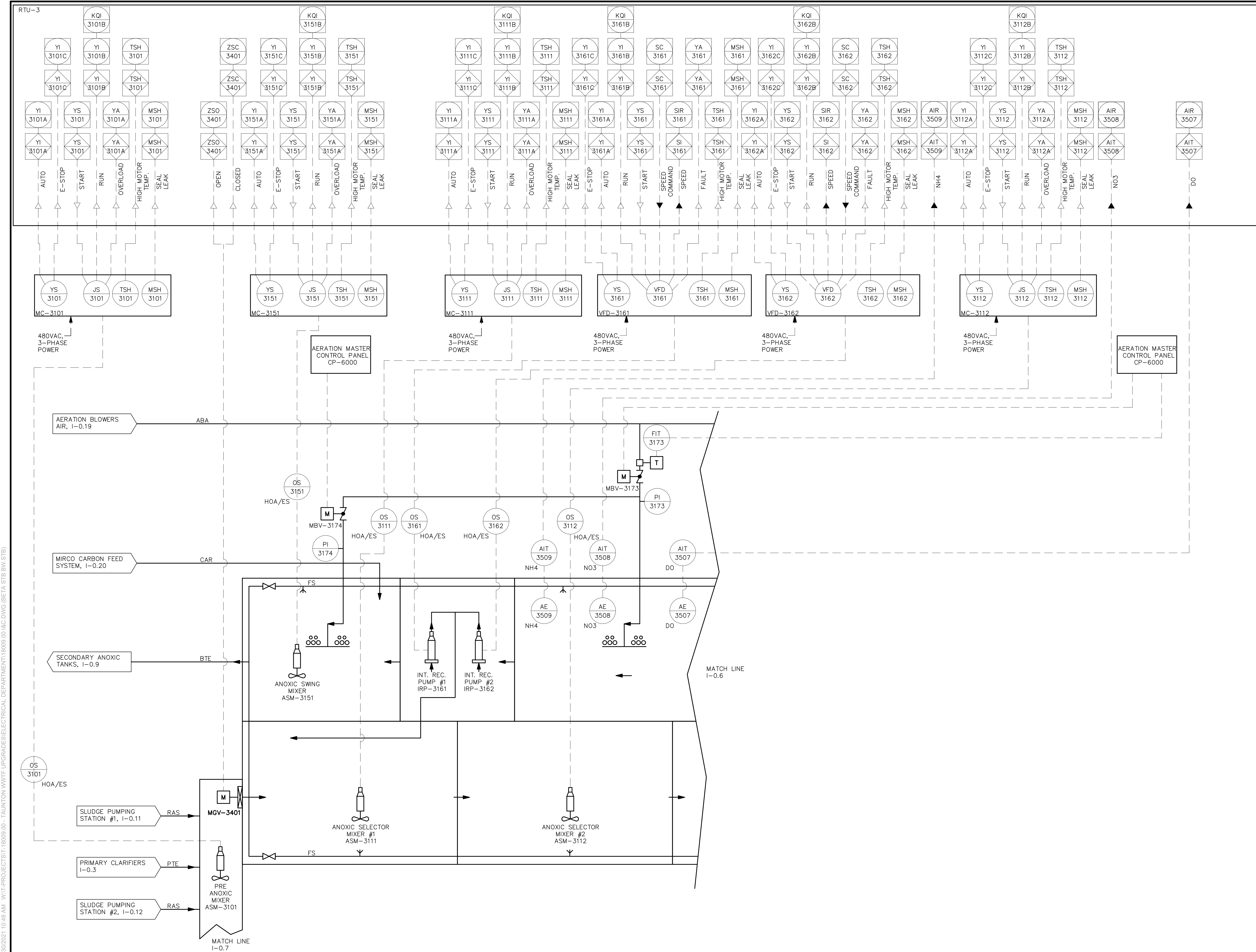
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SHEET NO. I-0.4

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Michael J. Cotter
Electrical
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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 2

Taunton, MA

TITLE

INSTRUMENTATION & CONTROLS BIOLOGICAL TREATMENT TRAIN #1

NO.	REVISIONS	DATE

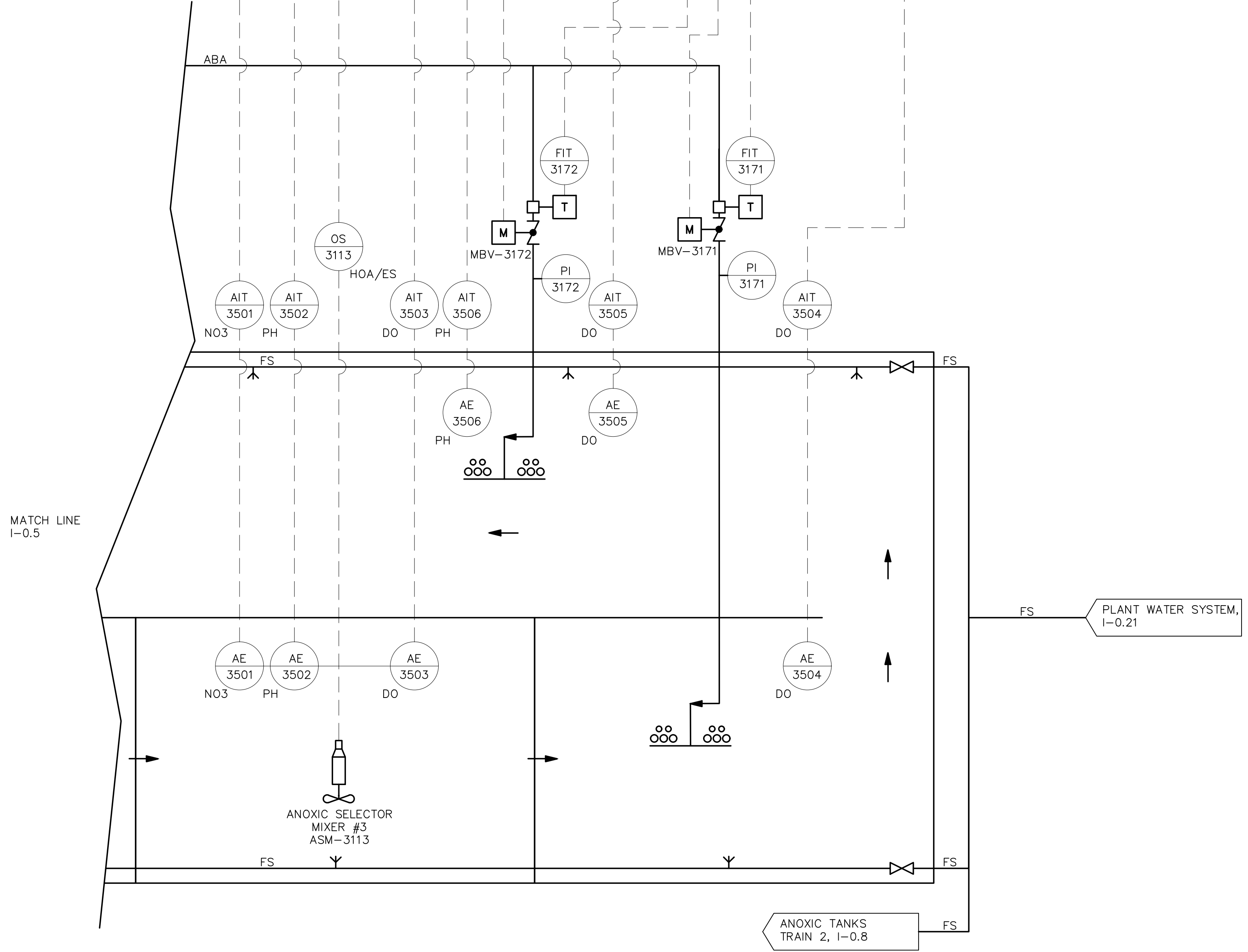
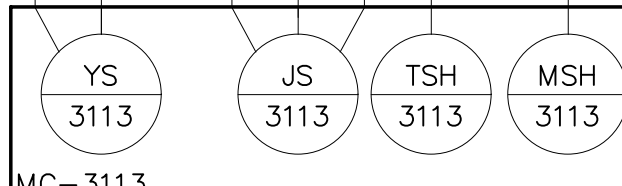
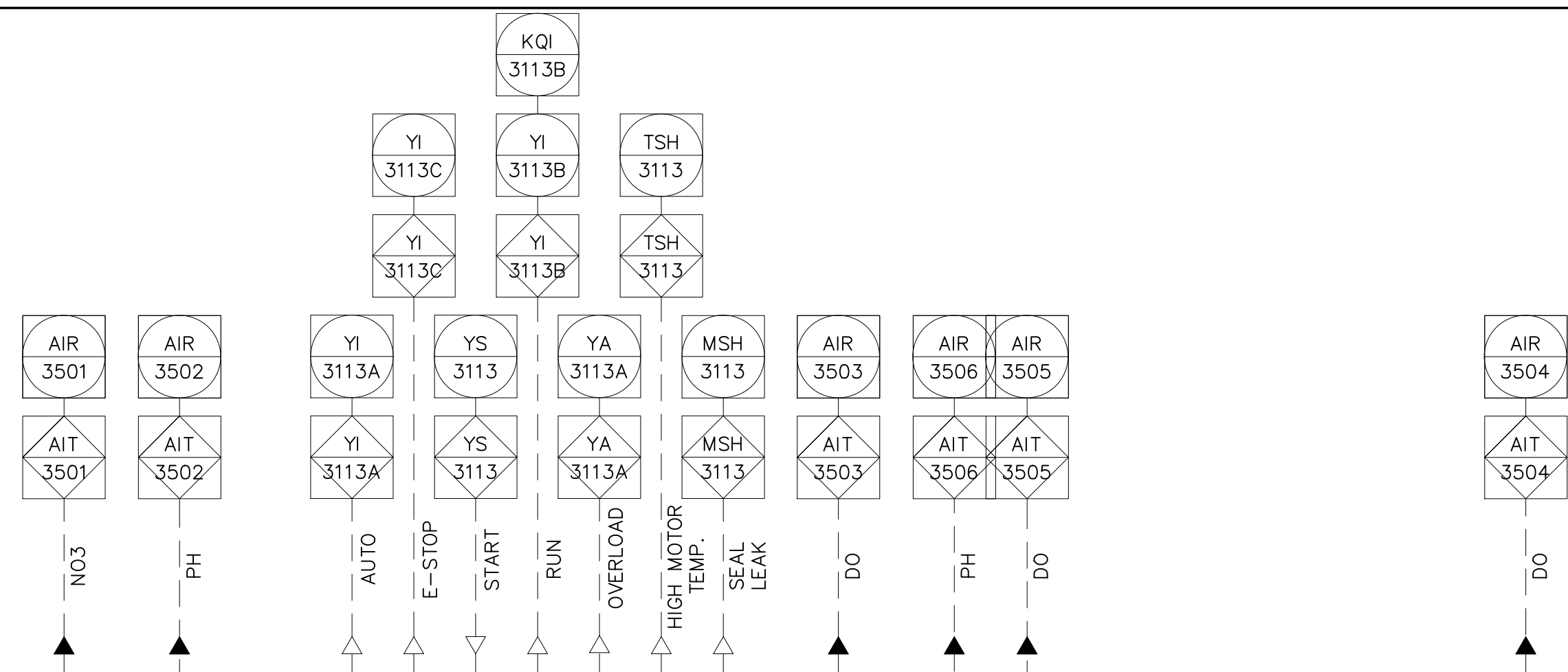
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BETA JOB NO.: 6050

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 2

Taunton, MA

TITLE

INSTRUMENTATION & CONTROLS BIOLOGICAL TREATMENT TRAIN #1

NO.	REVISIONS	DATE

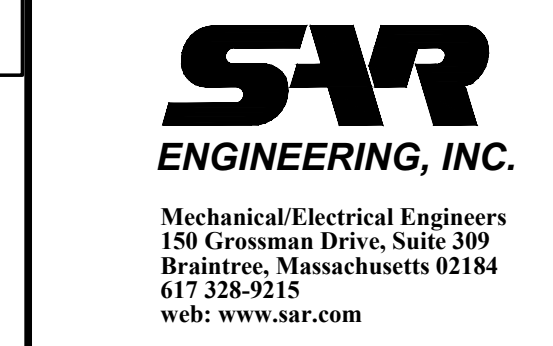
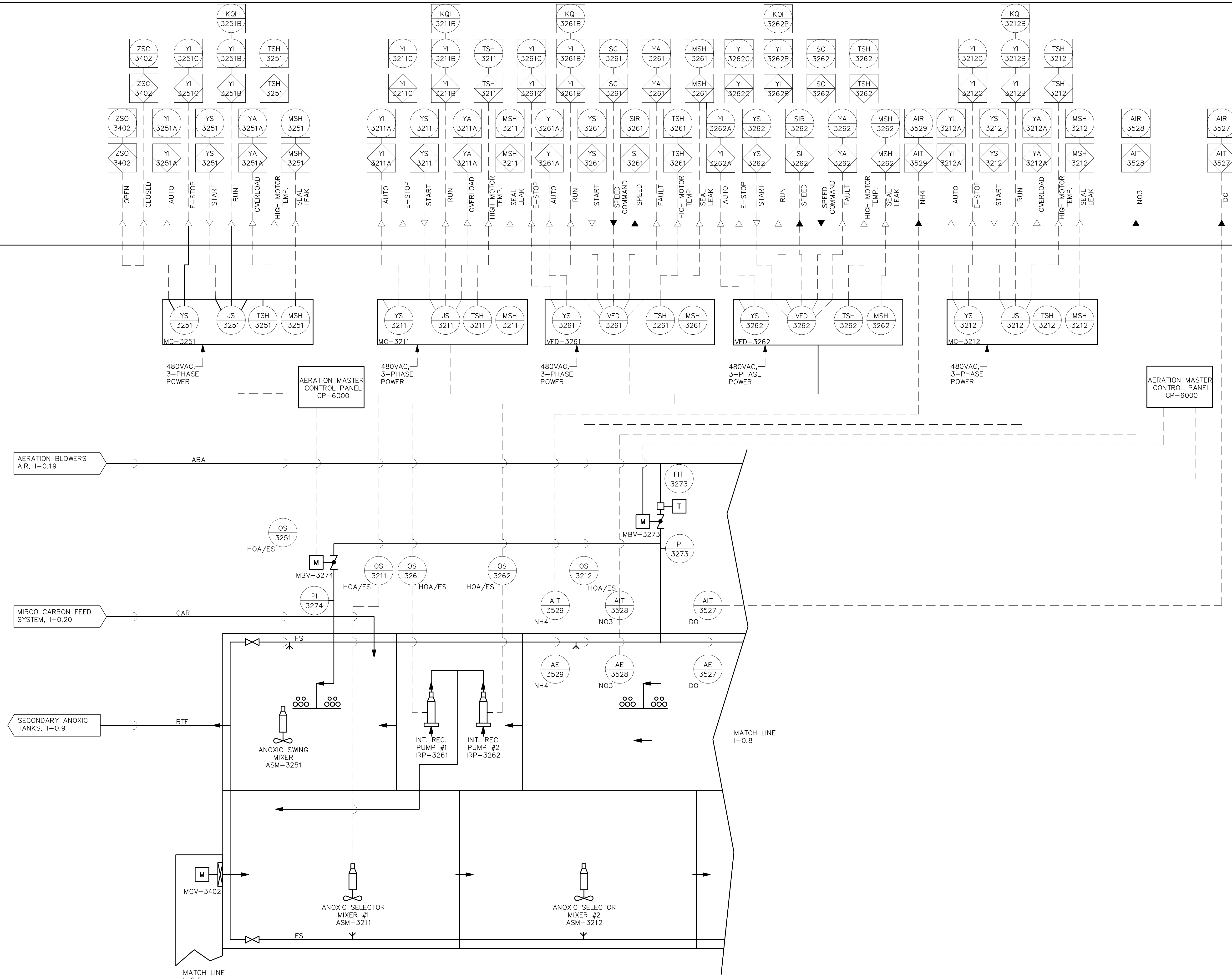
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BETA JOB NO.:	6050

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SHEET NO.

I-0.6



Taunton Wastewater Treatment Facility Improvements Phase 2

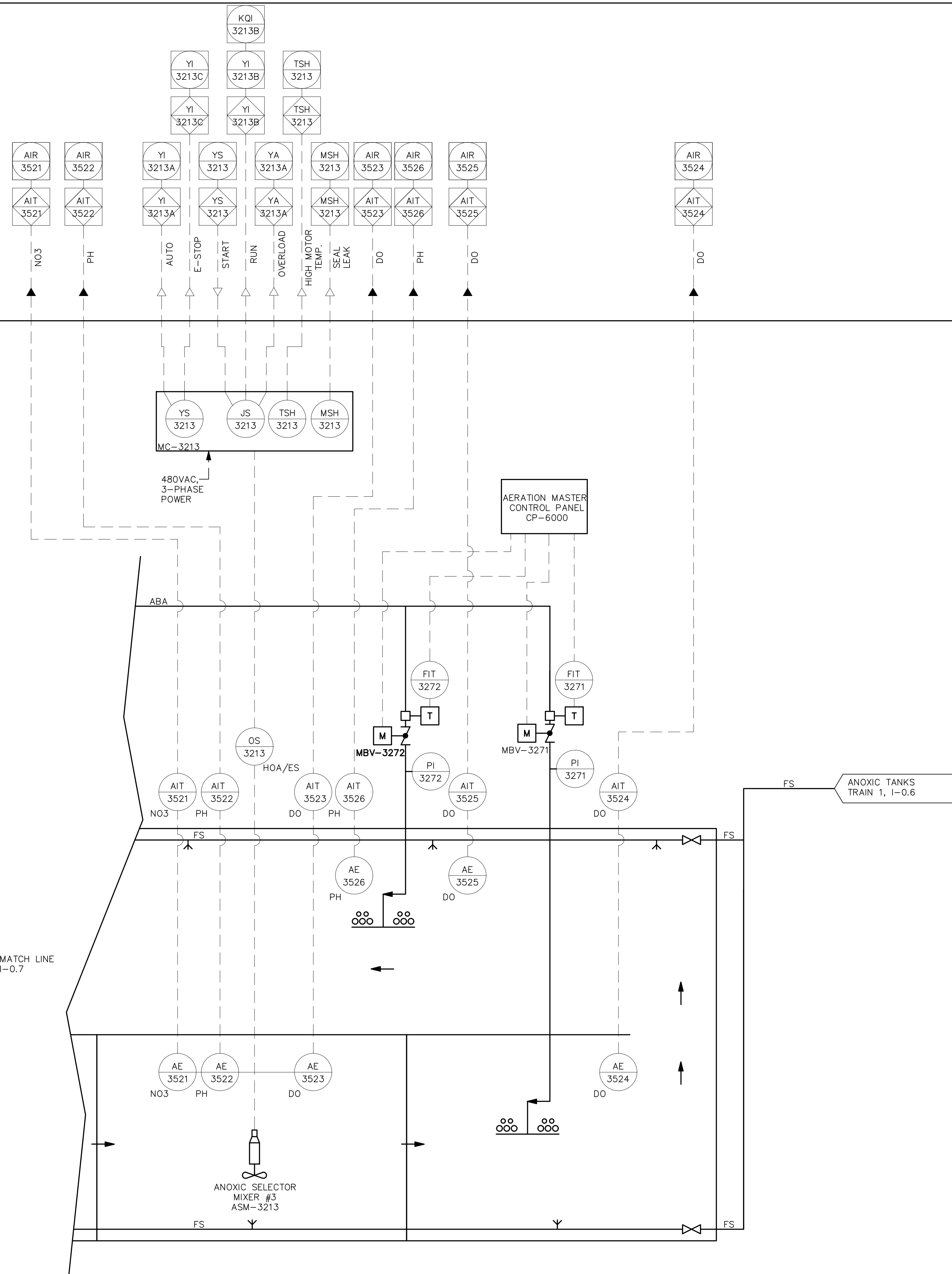
Taunton, MA

INSTRUMENTATION & CONTROLS BIOLOGICAL TREATMENT TRAIN #2

NO.	REVISIONS	DATE

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BETA JOB NO.:	6050

SCALE
NONE



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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 2

Taunton, MA

TITLE

INSTRUMENTATION & CONTROLS BIOLOGICAL TREATMENT TRAIN #2

NO.	REVISIONS	DATE

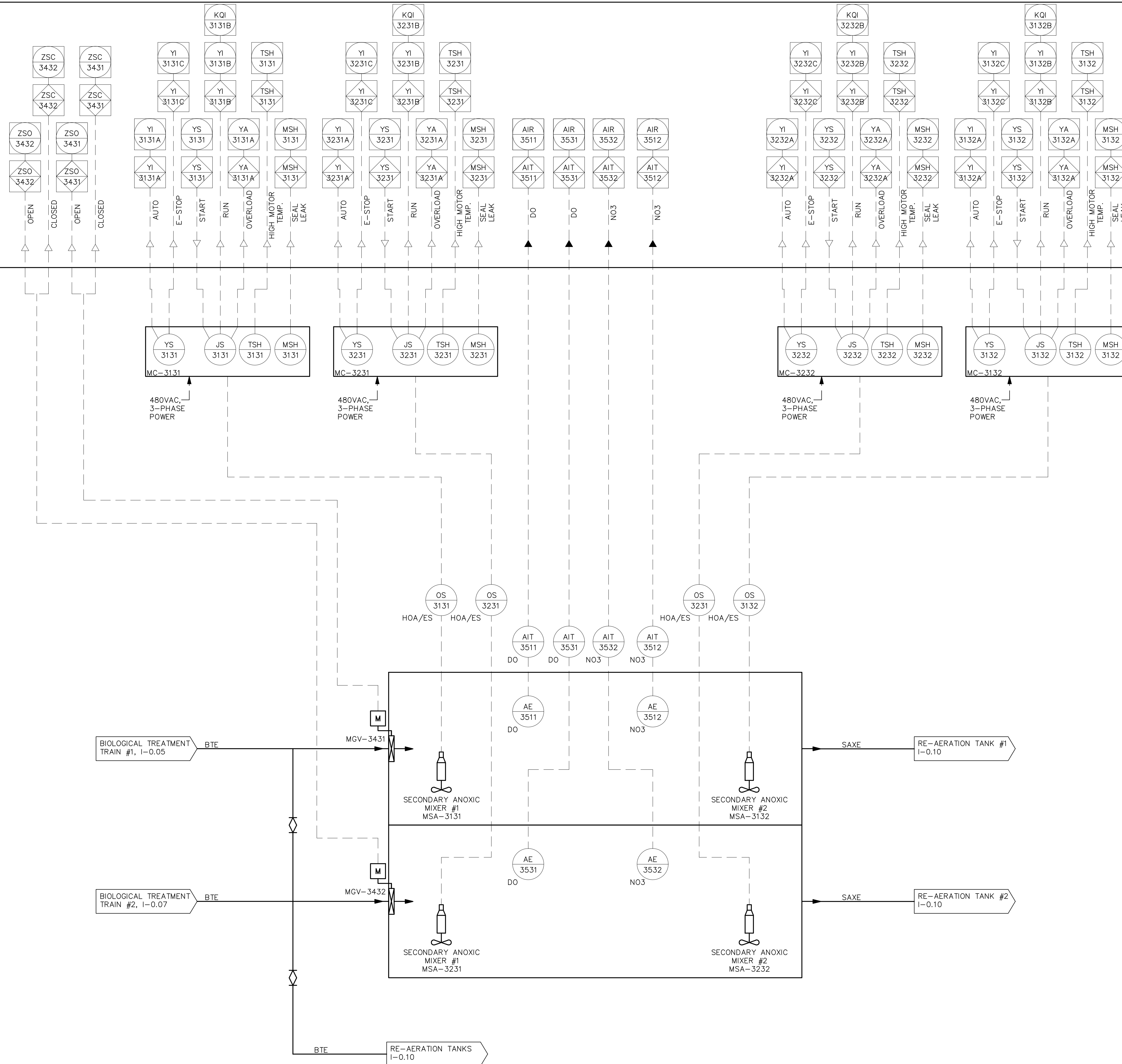
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SCALE

NONE

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Taunton Wastewater Treatment Facility Improvements Phase 2

Taunton, MA

INSTRUMENTATION & CONTROLS SECONDARY ANOXIC TANKS

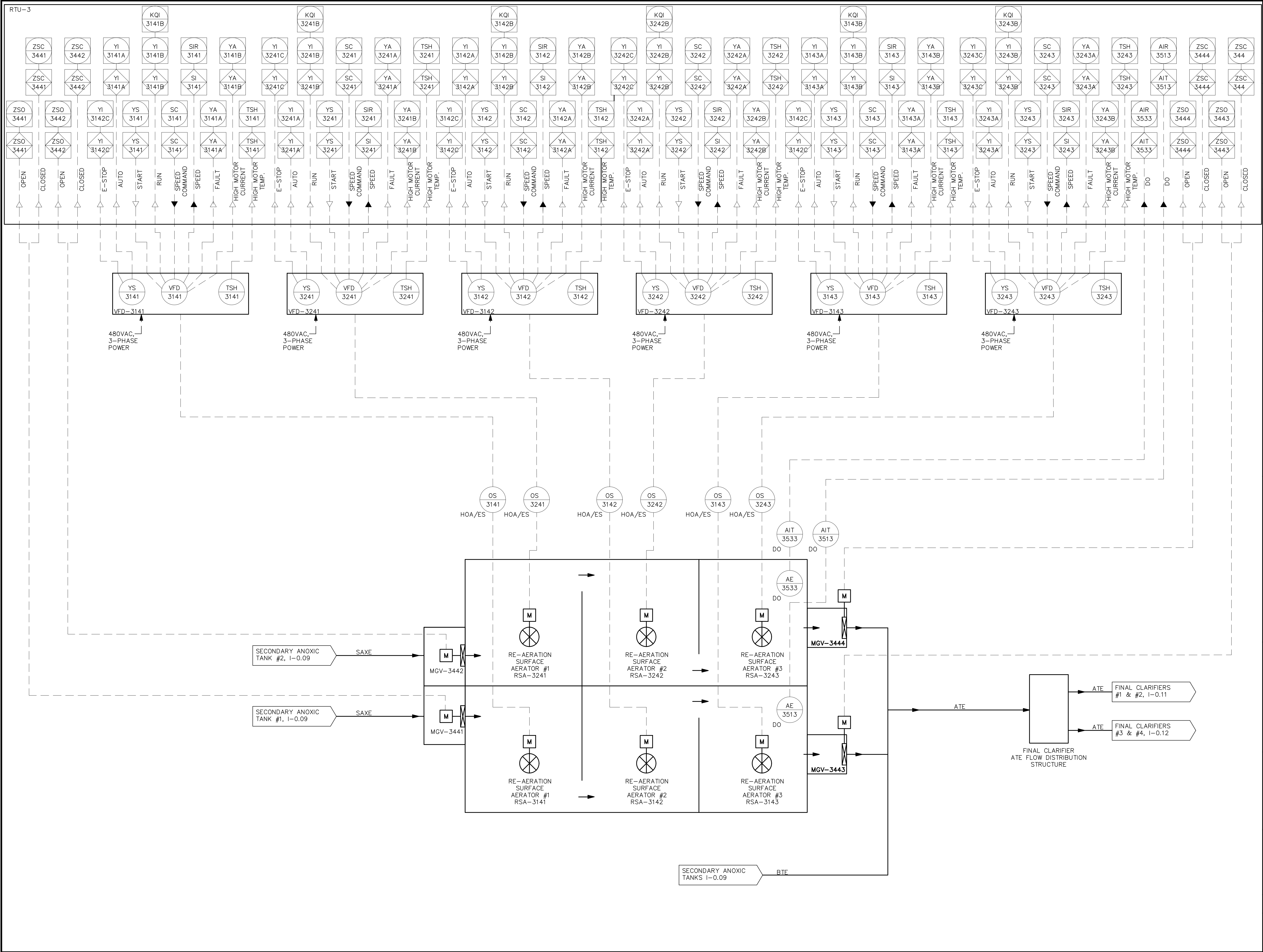
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ISSUE DATE:	10/16/2020
BETA JOB NO.:	6050

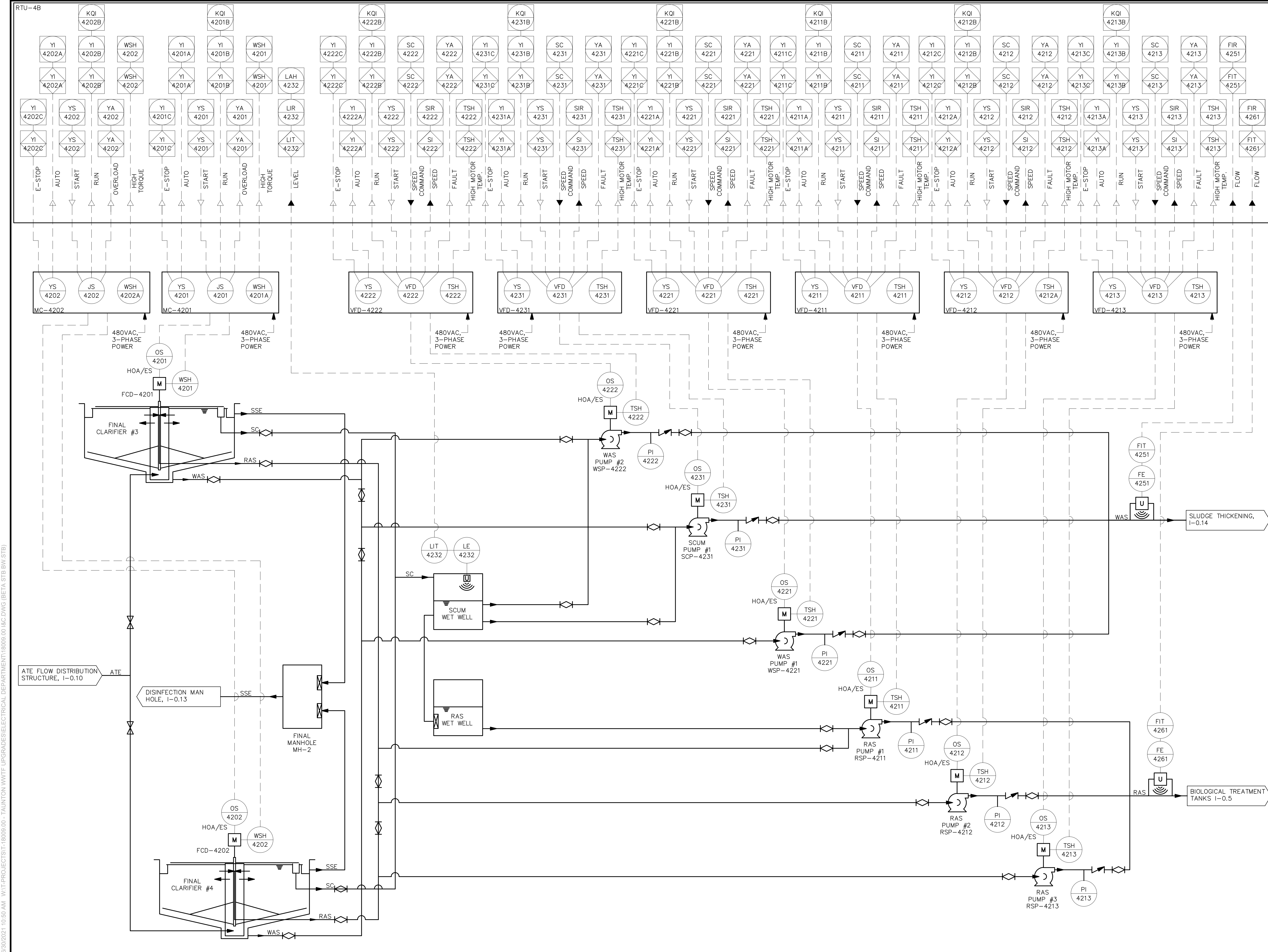
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6/30/2021 10:50 AM WWT-PROJECTS\F-18009.00 - TAUNTON WWT UPGRADE\ELECTRICAL DEPARTMENT\18009.00 I&C.DWG (BETA STB.BW.STB)



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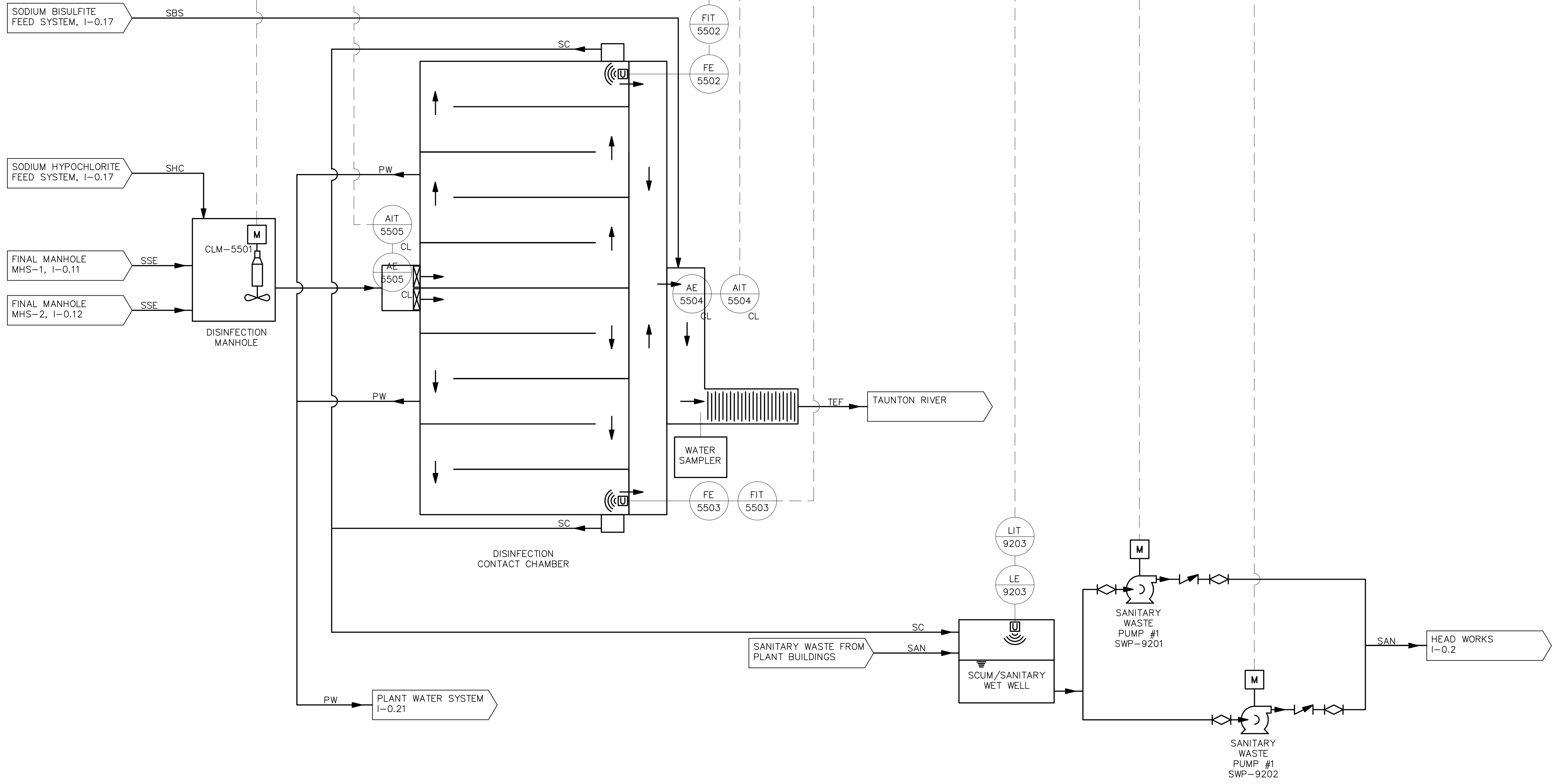
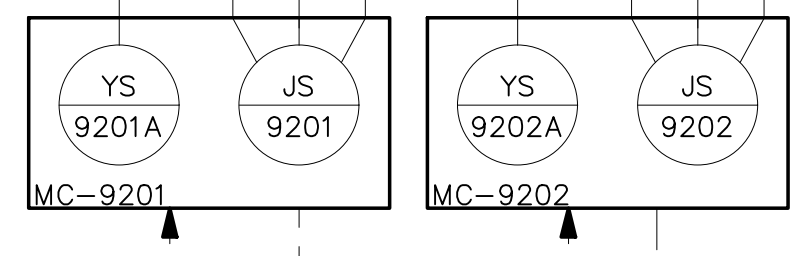
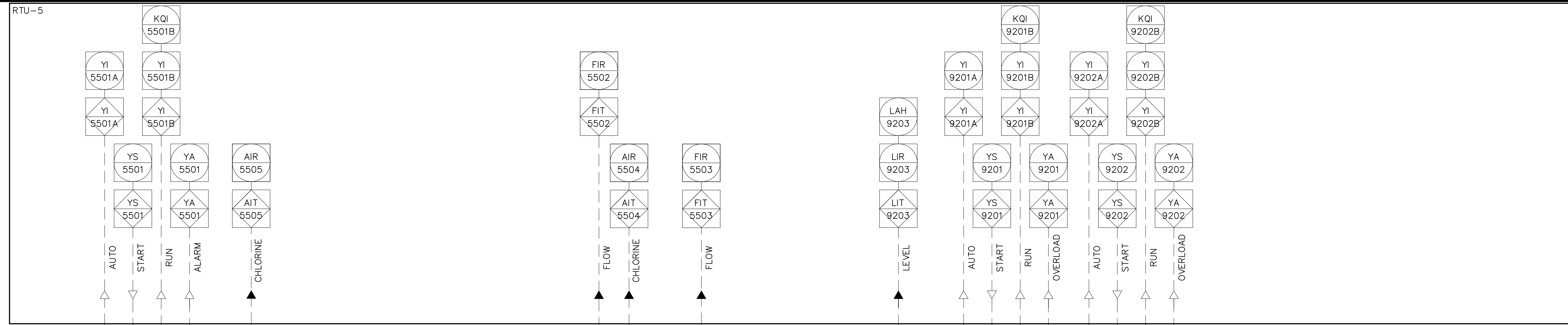
PROJECT
Taunton Wastewater Treatment Facility Improvements Phase 2
 Taunton, MA

TITLE
INSTRUMENTATION & CONTROLS FINAL CLARIFIERS #3 & #4

NO.	REVISIONS	DATE

DRAWN BY: RB
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TITLE

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Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

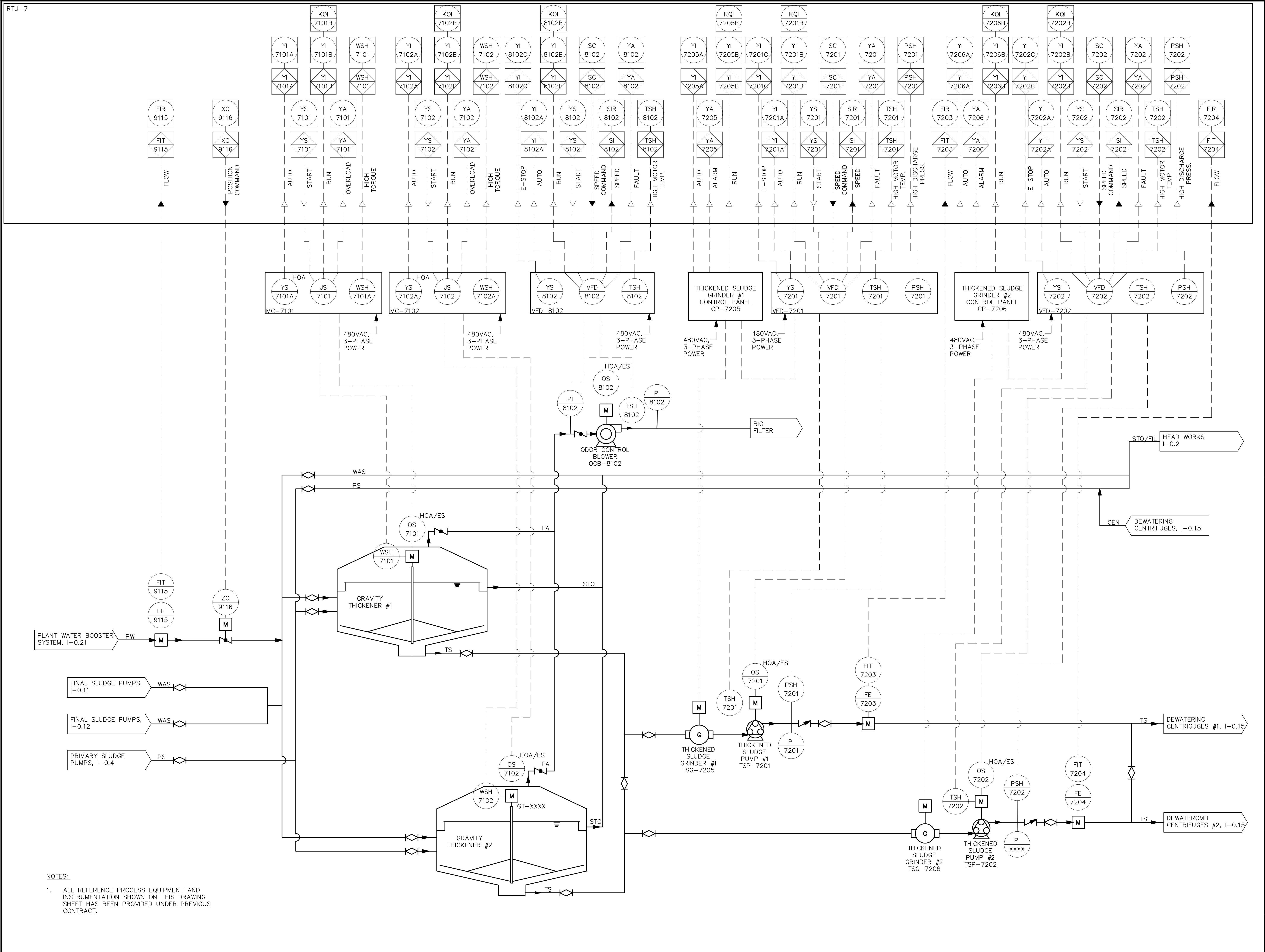
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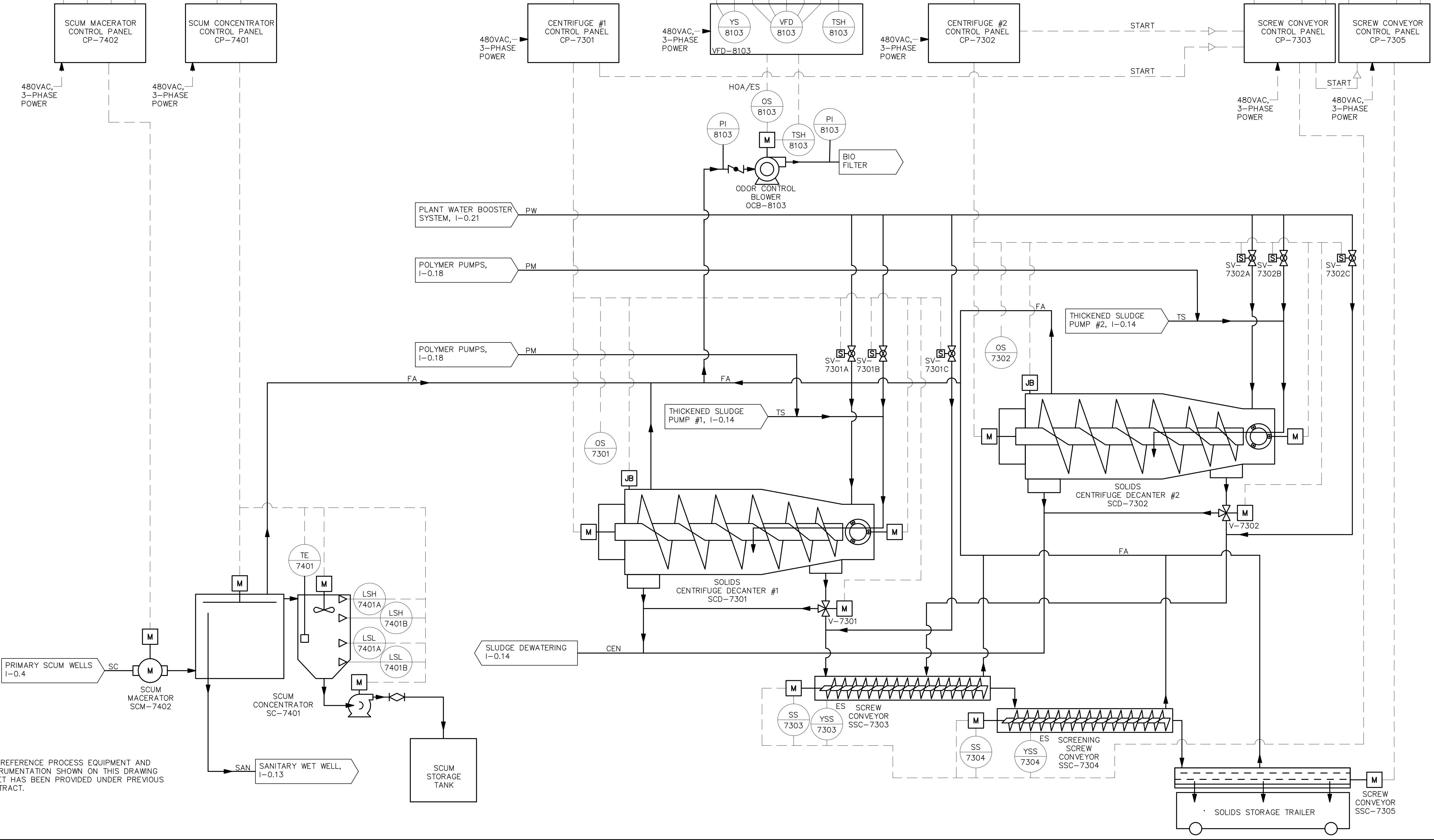
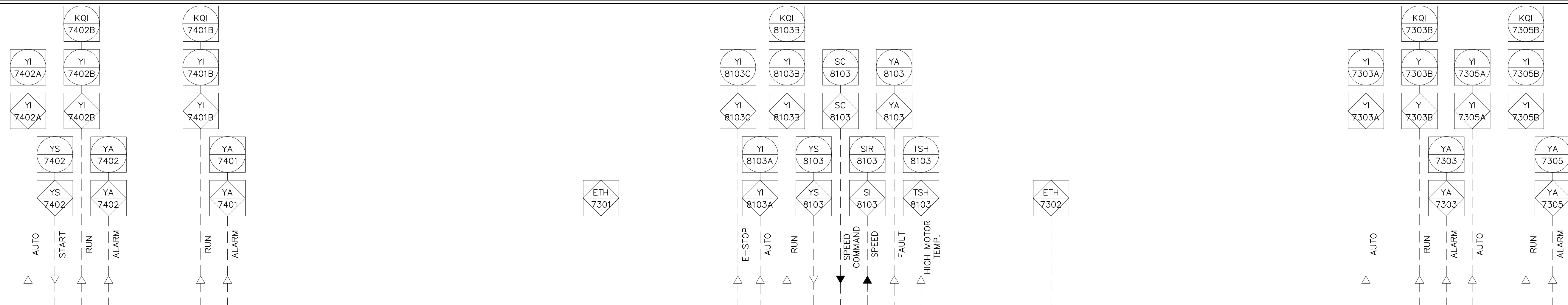
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480VAC, 3-PHASE POWER

480VAC, 3-PHASE POWER

480VAC, 3-PHASE POWER

480VAC, 3-PHASE POWER

480VAC, 3-PHASE POWER

480VAC, 3-PHASE POWER

480VAC, 3-PHASE POWER

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Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

INSTRUMENTATION & CONTROLS DEWATERING

NO.	REVISIONS	DATE
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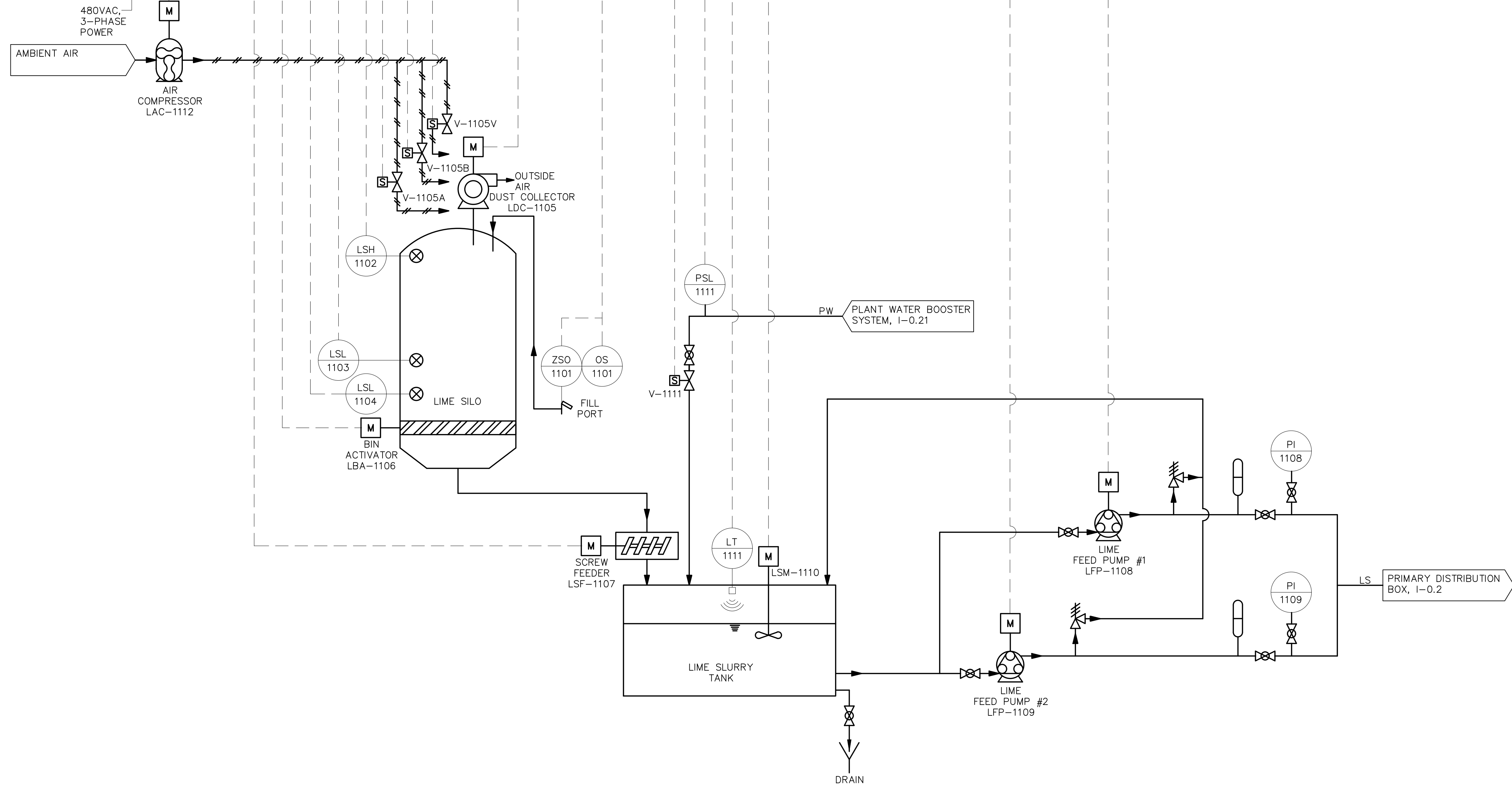
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I-0.15

RTU-7

ETH
1300

LIME SYSTEM
OEM PROVIDED
CONTROL PANEL
CP-1100



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PROJECT

**Taunton Wastewater
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Improvements
Phase 1**

Taunton, MA

TITLE

**INSTRUMENTATION
& CONTROLS
LIME SYSTEM**

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SCALE

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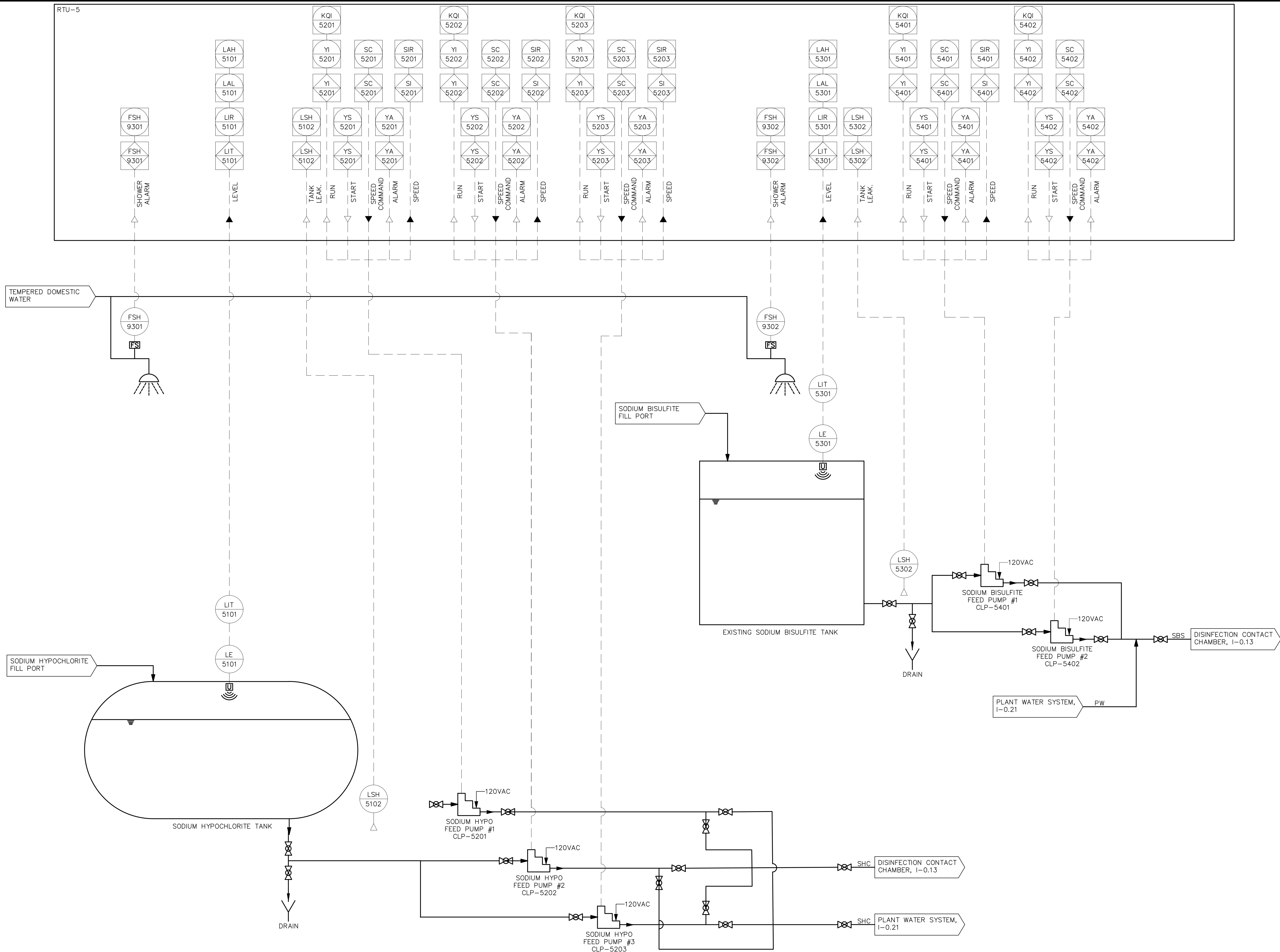
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**Taunton Wastewater
Treatment Facility
Improvements
Phase 1**

Taunton, MA

TITLE

**INSTRUMENTATION
& CONTROLS
SODIUM
HYPOCHLORITE
& SODIUM
BISULFITE
SYSTEMS**

NO. REVISIONS DATE

DRAWN BY:	RB
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CHECKED BY:	MC
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BETA JOB NO.:	6050

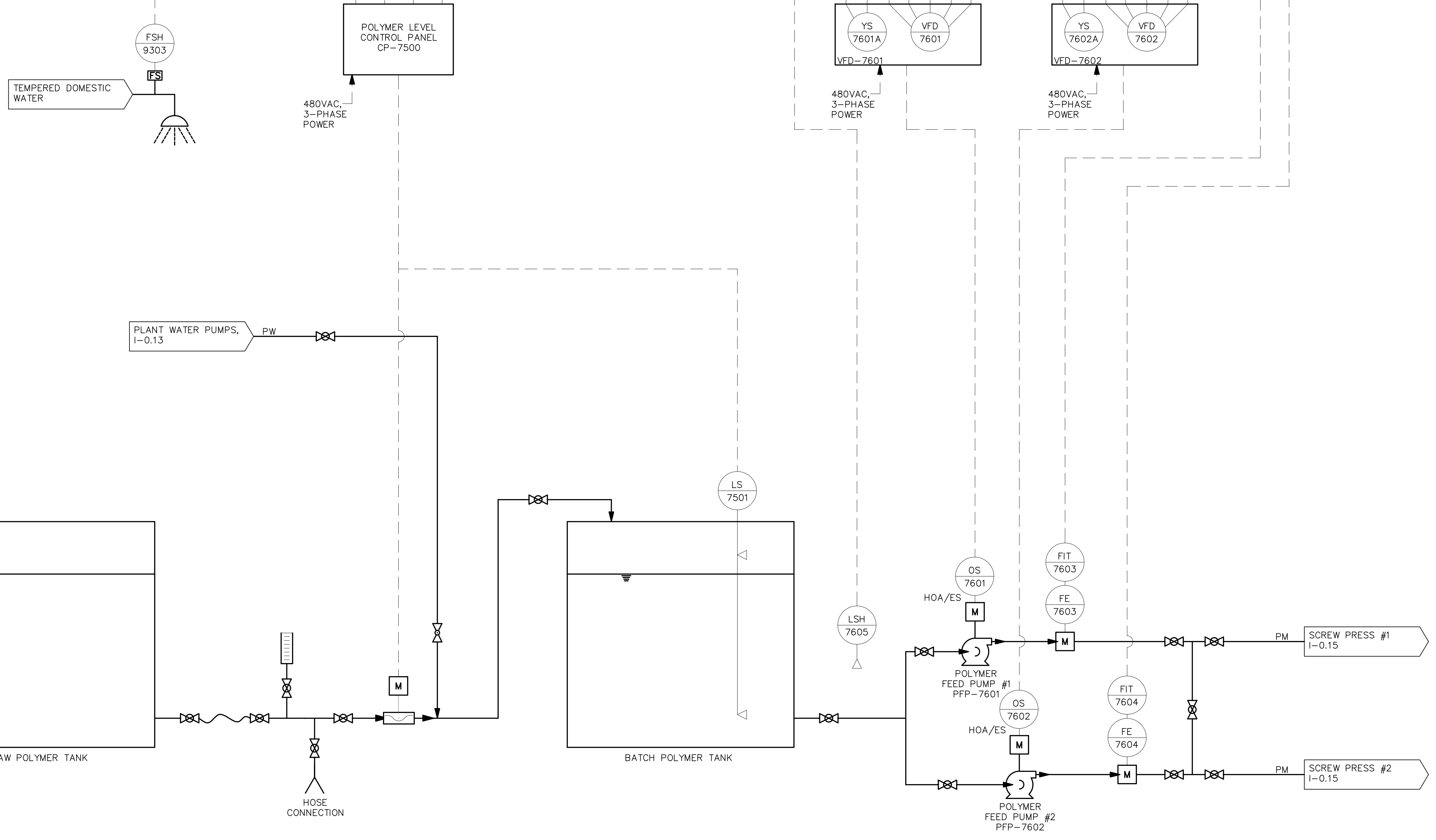
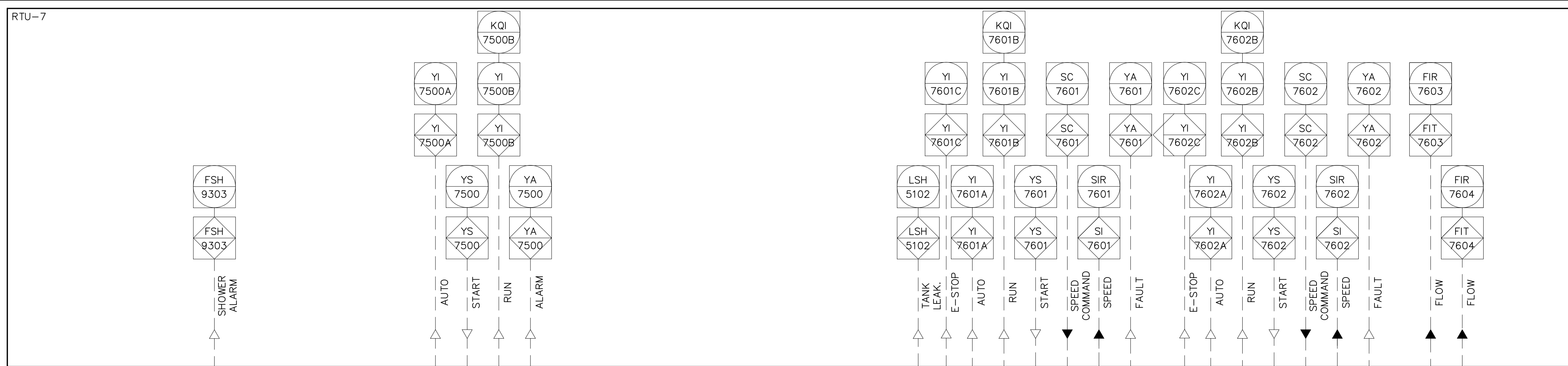
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I-0.17



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Taunton Wastewater Treatment Facility Improvements Phase 2

Taunton, MA

INSTRUMENTATION & CONTROLS AERATION BLOWERS

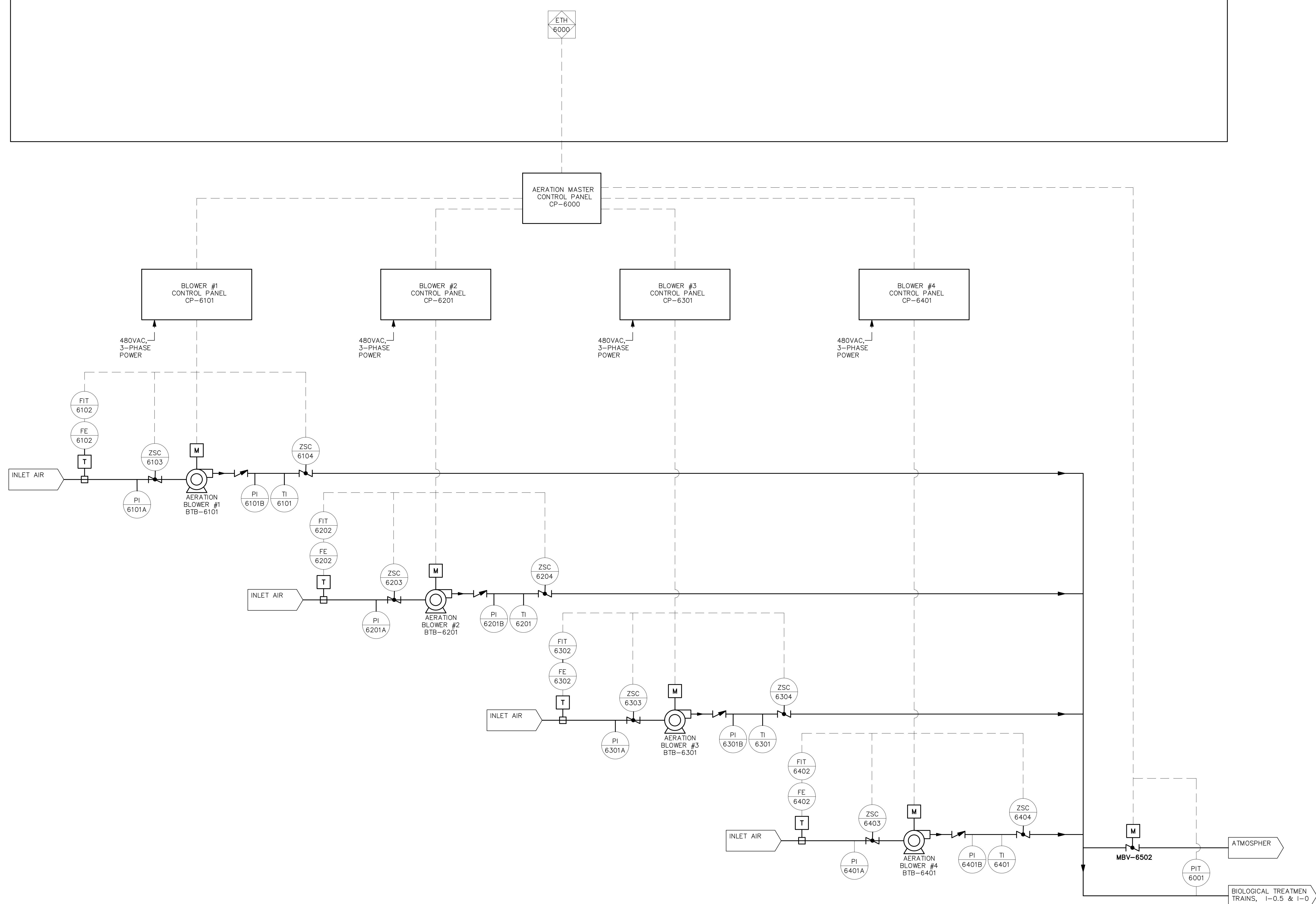
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ISSUE DATE:	10/16/2020
BETA JOB NO.:	6050

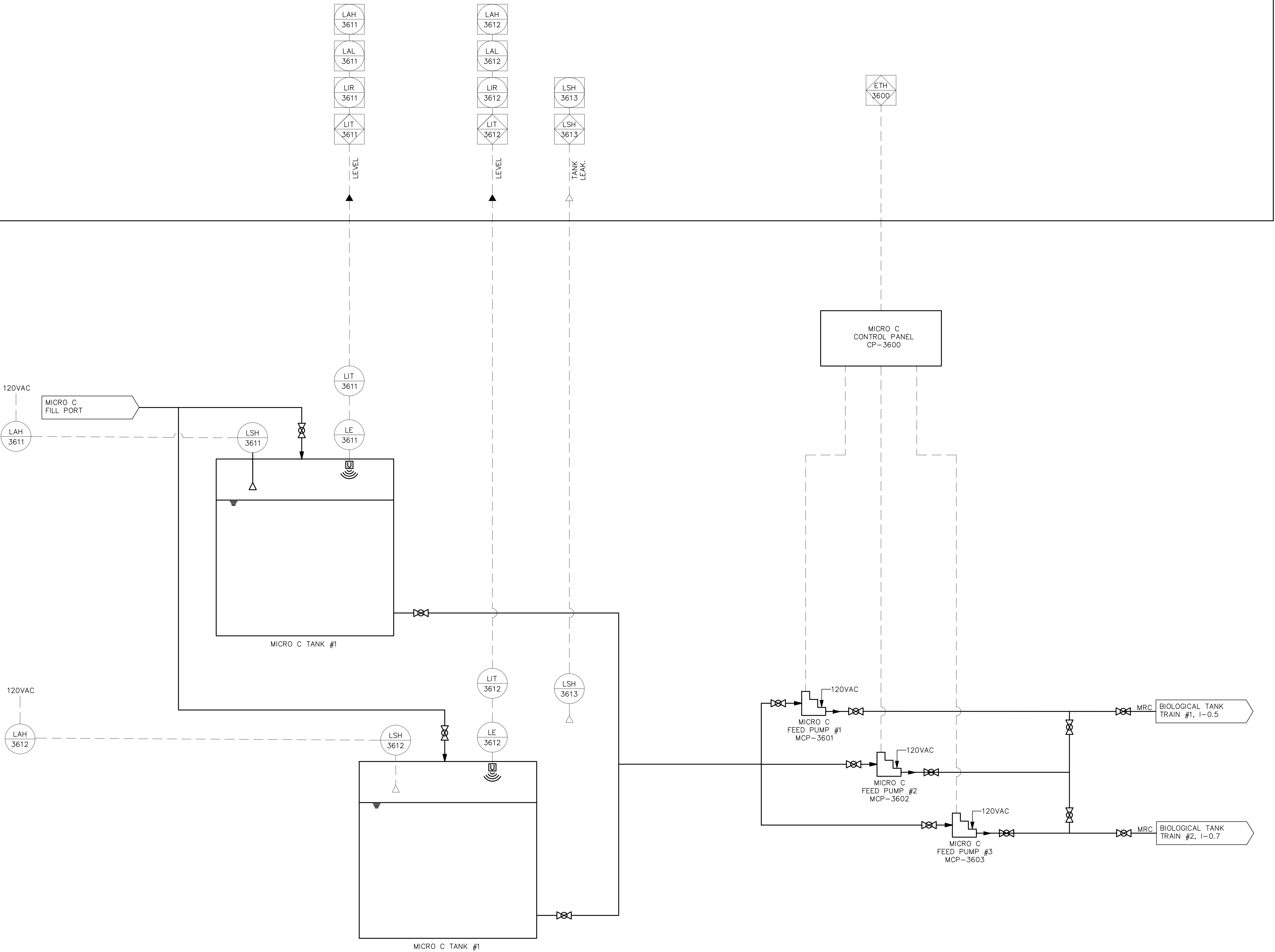
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SHEET NO.	I-0.19
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6/30/2021 10:51 AM WWT-PROJECTS\T-18009.00 - TAUNTON WWTU UPGRADE\ELECTRICAL DEPARTMENT\18009.00 I&C.DWG (BETA STB.BW.STB)



RTU-3



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PROJECT

**Taunton Wastewater
 Treatment Facility
 Improvements
 Phase 2**

Taunton, MA

TITLE

**INSTRUMENTATION
 & CONTROLS
 MICRO C
 SYSTEM**

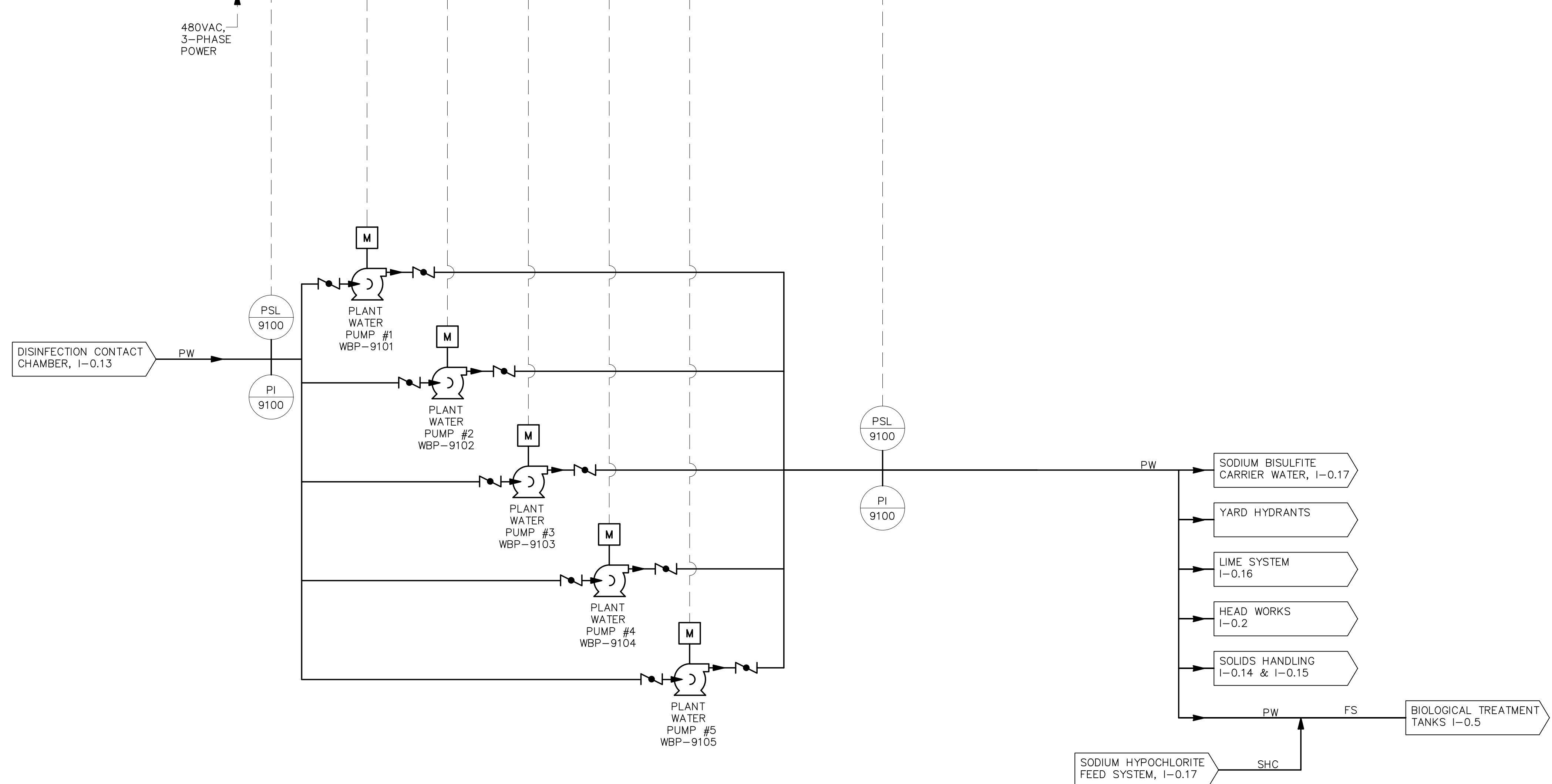
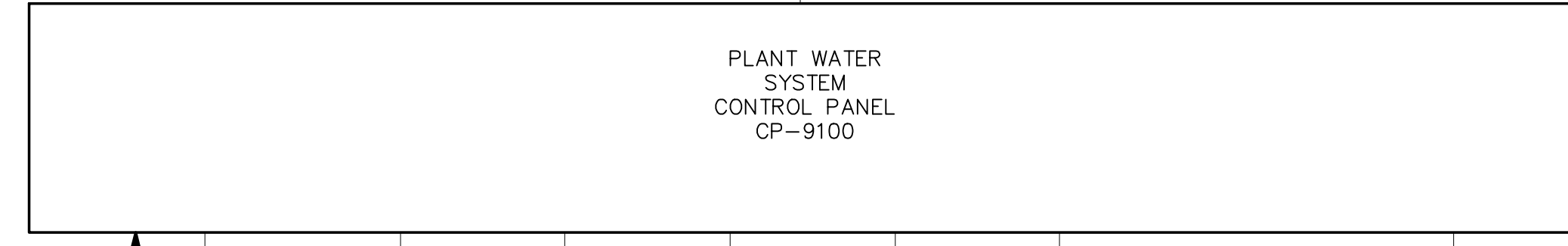
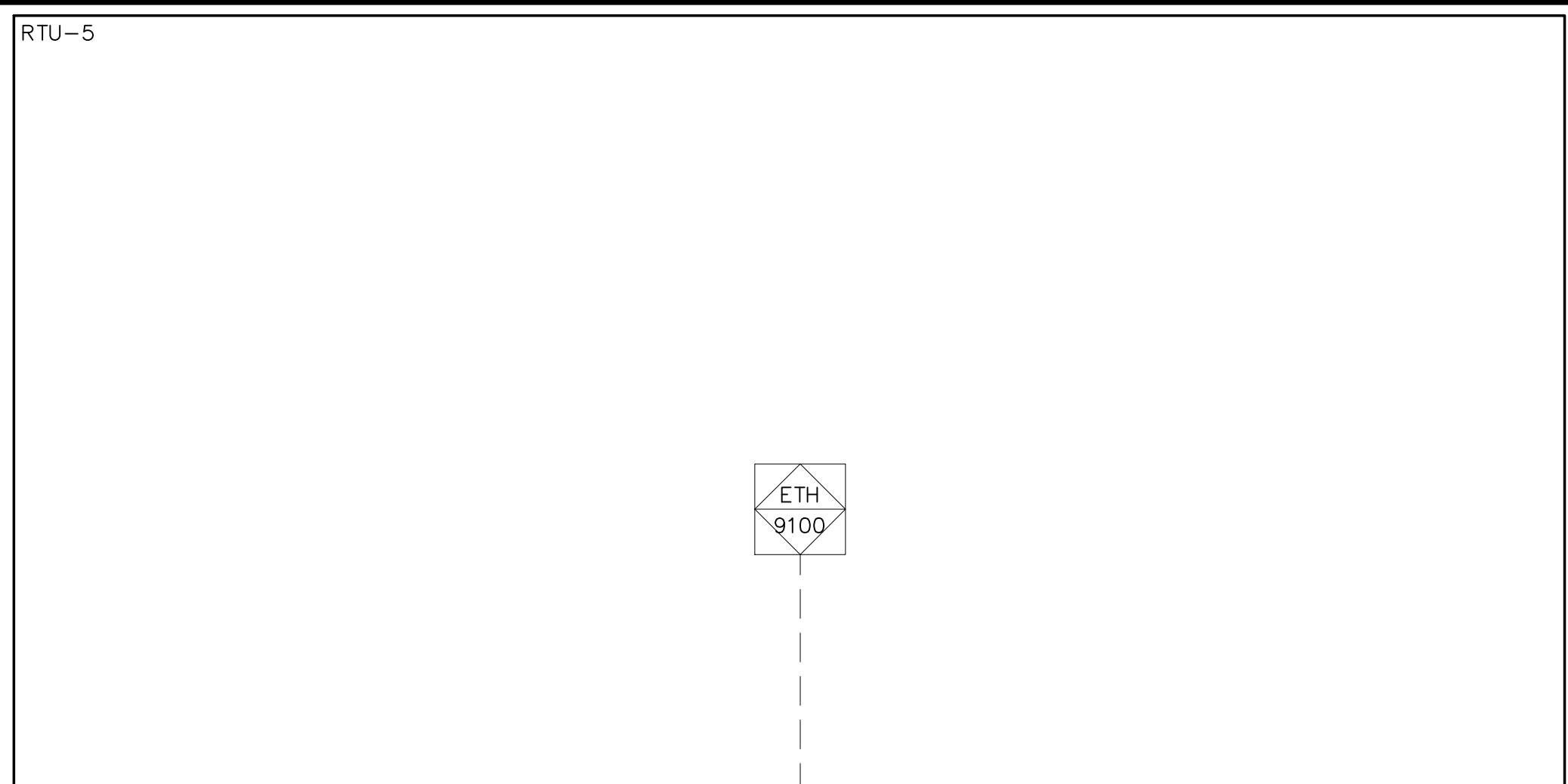
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 I-0.20

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REGISTERED PROFESSIONAL

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No. 40509
REGISTERED PROFESSIONAL ENGINEER

SUBCONSULTANT

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

INSTRUMENTATION & CONTROLS PLANT WATER

NO.	REVISIONS	DATE

DRAWN BY: RB

DESIGNED BY: MC

CHECKED BY: MC

ISSUE DATE: 7/2/21

BETA JOB NO.: 6050

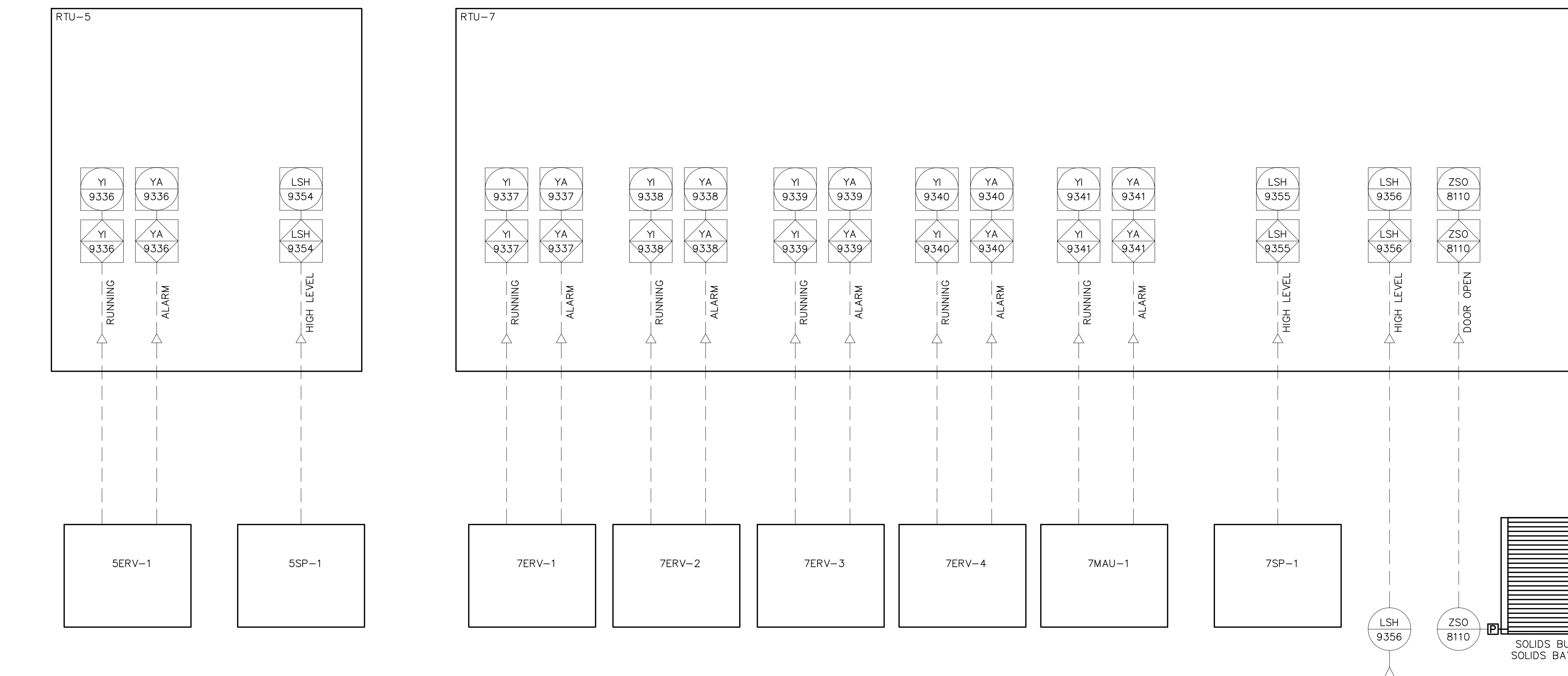
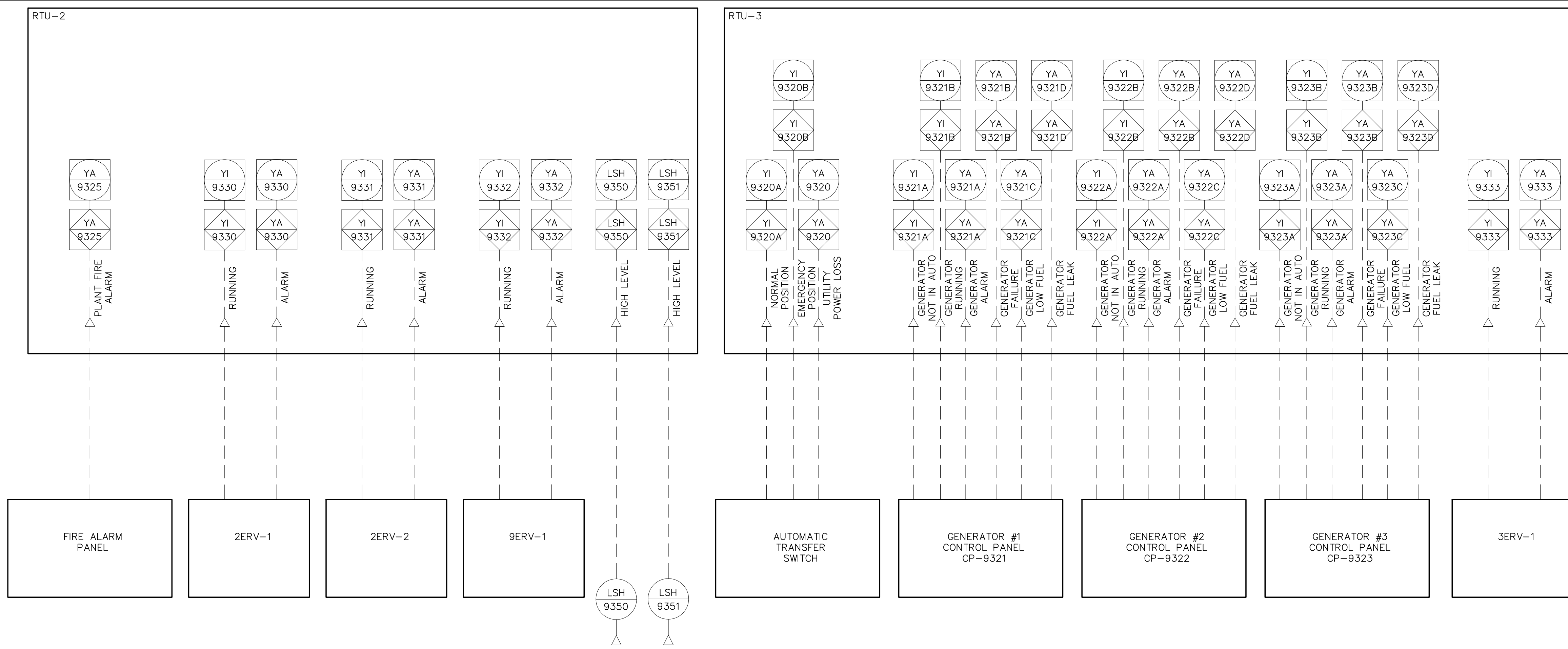
SCALE

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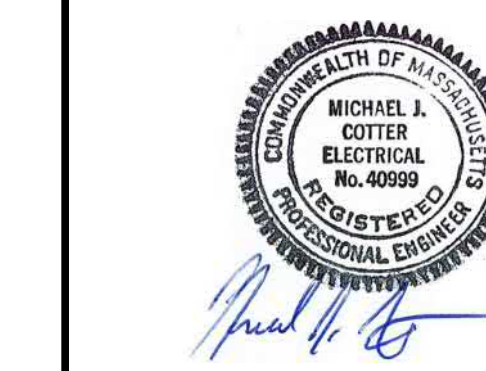
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REGISTERED PROFESSIONAL



SUBCONSULTANT



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150 Grossman Drive, Suite 309
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617.328.9215
web: www.sar.com

PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

INSTRUMENTATION & CONTROLS HVAC & PLUMBING SYSTEMS

NO. REVISIONS DATE

DRAWN BY: RB
DESIGNED BY: MC
CHECKED BY: MC
ISSUE DATE: 7/2/21
BETA JOB NO.: 6050

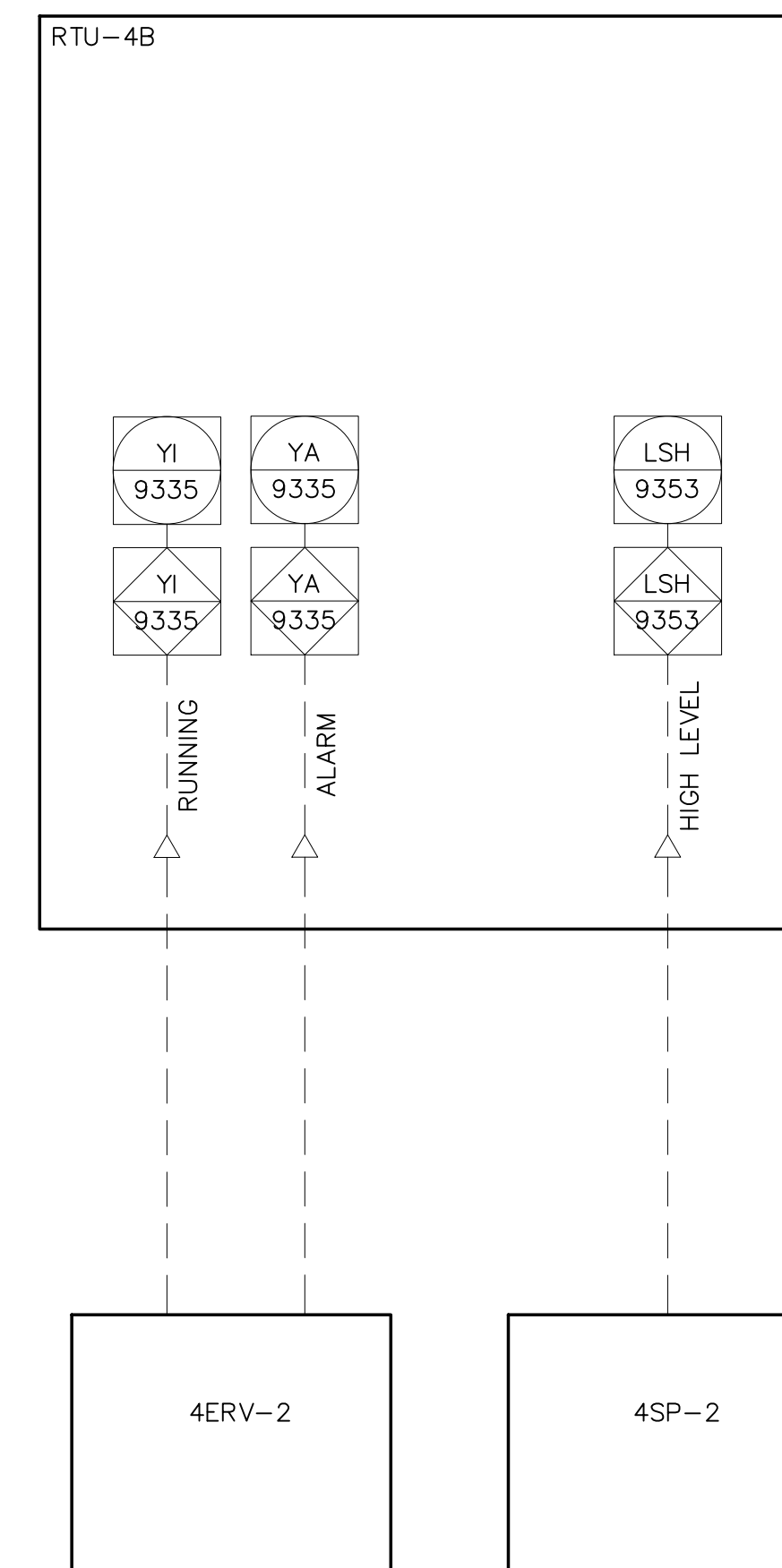
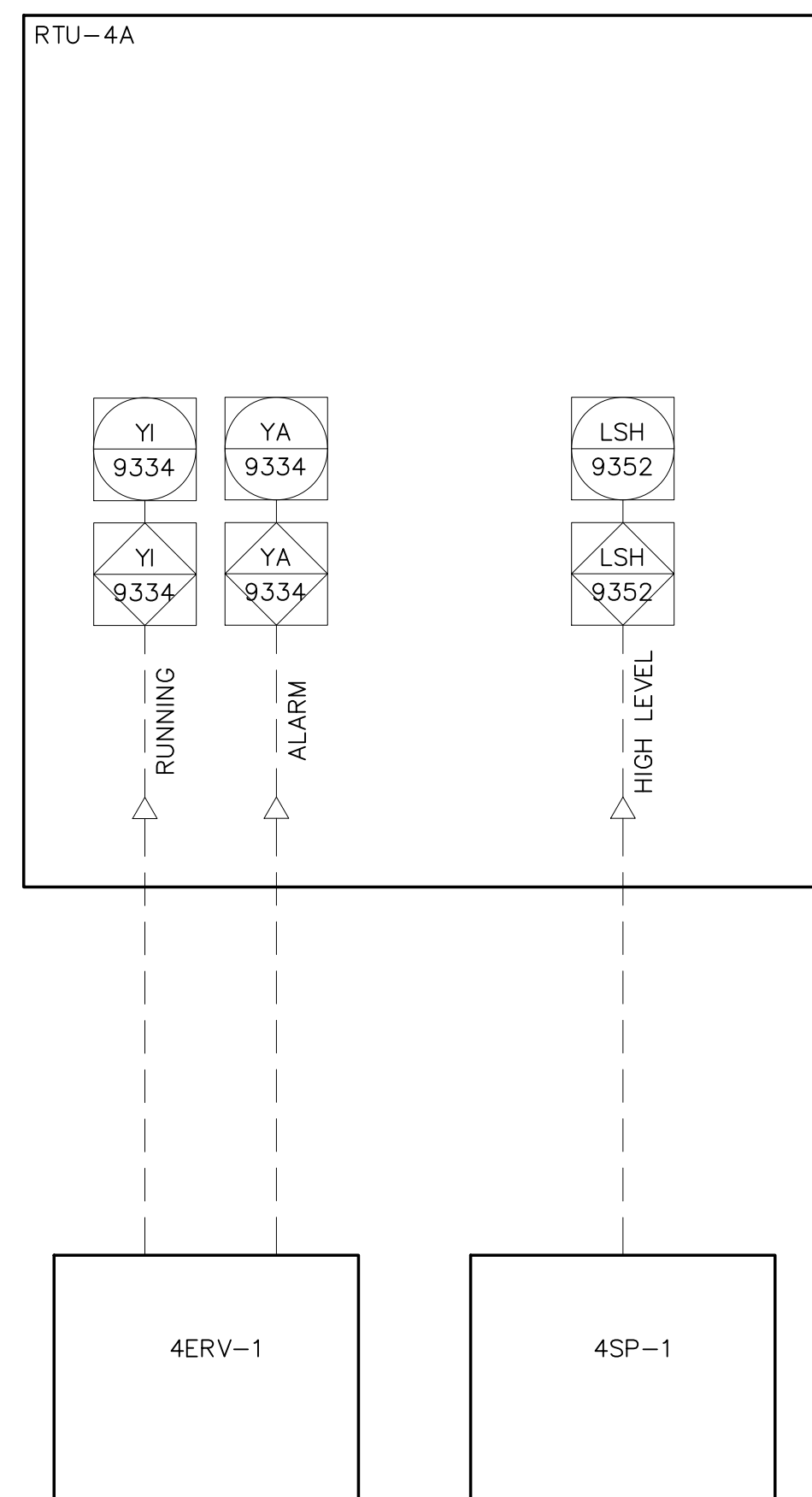
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PROJECT

**Taunton Wastewater
Treatment Facility
Improvements
Phase 2**

Taunton, MA

TITLE

**INSTRUMENTATION
& CONTROLS
HVAC & PLUMBING
SYSTEMS**

NO. REVISIONS DATE

DRAWN BY: RB
DESIGNED BY: MC
CHECKED BY: MC
ISSUE DATE: 7/2/21
BETA JOB NO.: 6050

SCALE

NONE

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