

10/17/2014 10:33:10 AM - P:\IER\1740\200-11740-10003\CAD\SHEETFILES\TREATMENT PLANT\WTP-1-2603\FILTER CONTROL CONSOLE.DWG - CALZARETTA, TIMOTHY

DIGITAL SIGNALS

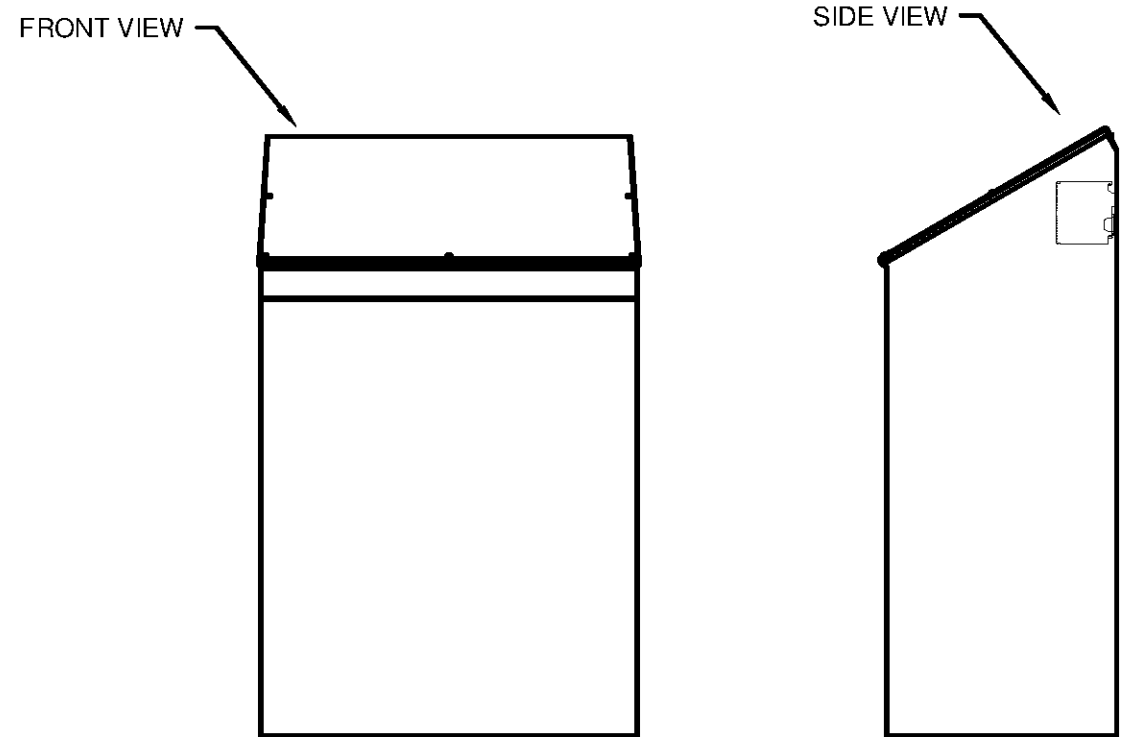
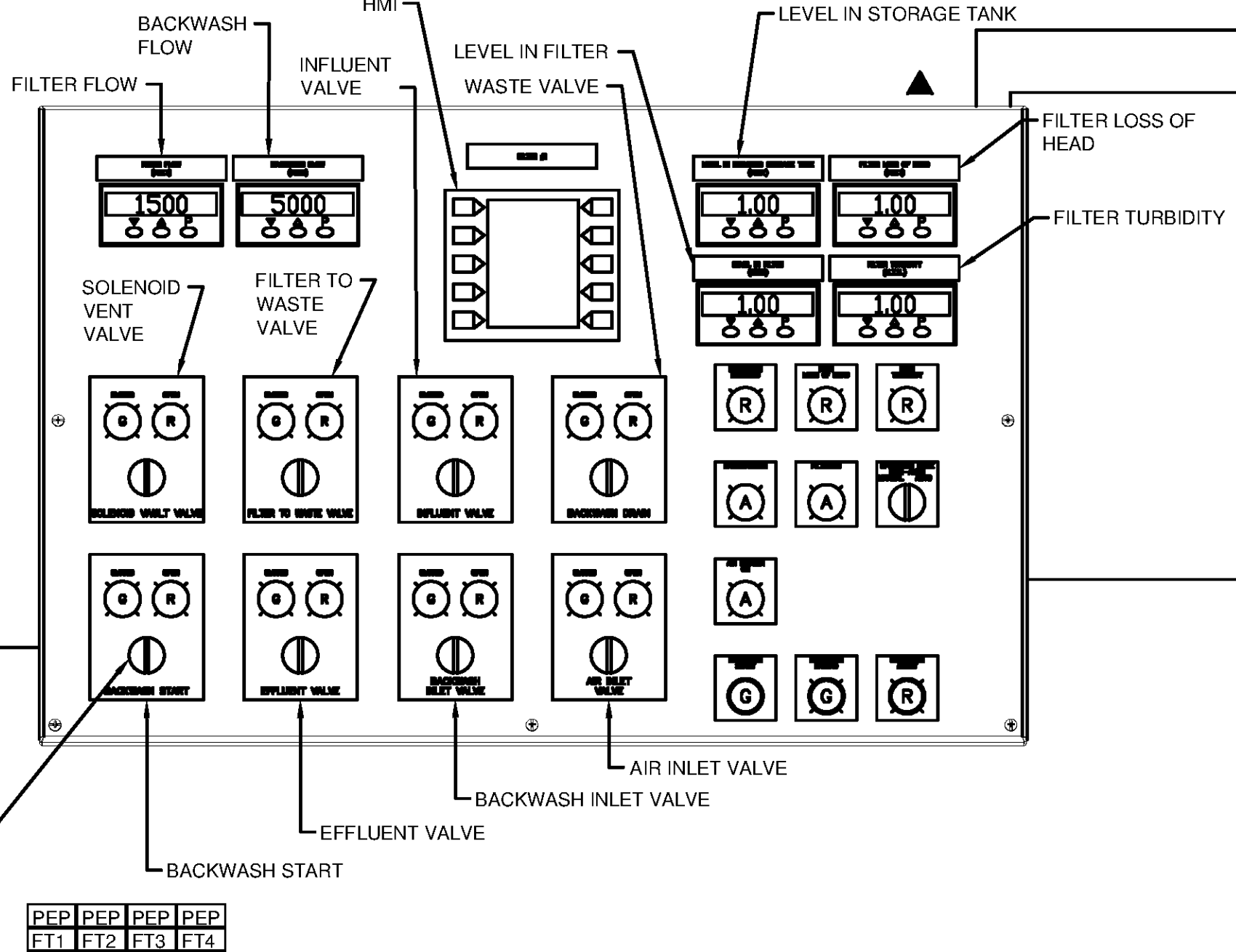
- INPUT: INFLUENT VALVE OPENED
- INPUT: INFLUENT VALVE CLOSED
- INPUT: WASH WATER SUPPLY VALVE OPENED
- INPUT: WASH WATER SUPPLY VALVE CLOSED
- INPUT: AIR VENT VALVE OPENED
- INPUT: AIR VENT VALVE CLOSED
- INPUT: AIR INLET VALVE OPENED
- INPUT: AIR INLET VALVE CLOSED
- INPUT: WASHWATER DRAIN VALVE OPENED
- INPUT: WASHWATER DRAIN VALVE CLOSED
- INPUT: BACKWASH EXTENDED
- INPUT: BACKWASH ABORT
- INPUT: BACKWASH START
- INPUT: BACKWASH MODE
- OUTPUT: INFLUENT VALVE OPEN
- OUTPUT: INFLUENT VALVE CLOSE
- OUTPUT: WASH WATER SUPPLY VALVE OPEN
- OUTPUT: WASH WATER SUPPLY VALVE CLOSE
- OUTPUT: AIR VENT VALVE OPEN
- OUTPUT: AIR VENT VALVE CLOSE
- OUTPUT: AIR INLET VALVE OPEN
- OUTPUT: AIR INLET VALVE CLOSE
- OUTPUT: WASH WATER DRAIN VALVE OPEN
- OUTPUT: WASH WATER DRAIN VALVE CLOSE
- OUTPUT: BACKWASH REQUIRED
- OUTPUT: HIGH TURBIDITY
- OUTPUT: HIGH LOSS OF HEAD
- OUTPUT: FILTERING
- OUTPUT: BACKWASHING
- OUTPUT: AIR BLOWER ON

ANALOG SIGNALS

- INPUT: EFFLUENT FLOW RATE
- INPUT: EFFLUENT VALVE POSITION
- INPUT: FILTER TO WASTE VALVE POSITION
- INPUT: FILTER LOSS OF HEAD
- INPUT: FILTER TURBIDITY
- INPUT: FILTER LEVEL
- OUTPUT: EFFLUENT CONTROL VALVE SETPOINT
- OUTPUT: FILTER TO WASTE VALVE SETPOINT
- OUTPUT: INFLUENT CHANNEL LEVEL
- OUTPUT: LEVEL IN STORAGE TANK

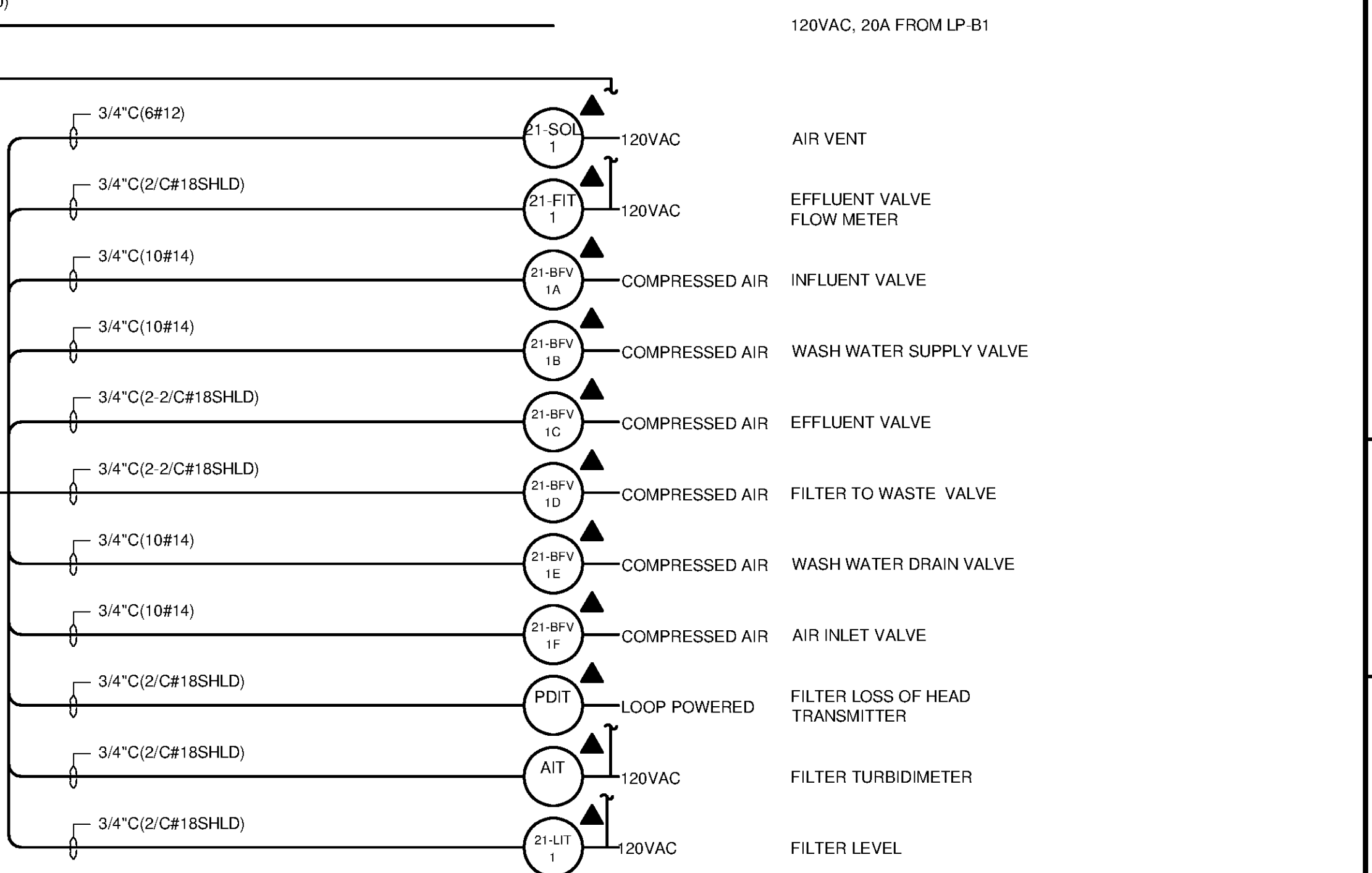
PROVIDE REGISTER MAPPING FOR PROFINET NETWORK.

PLANT CONTROL SYSTEM



- ACCESSORIES:**
- SURGE SUPPRESSOR ON INCOMING POWER.
 - TWO DEEP HINGED WINDOW KIT COVERING CONSOLE DISPLAY ELEMENTS.
 - TYPE 316 STAINLESS STEEL, WITH ACID WASH

PRE-ENGINEERED CONTROL PANEL



INSTRUMENTATION TAG TABLE

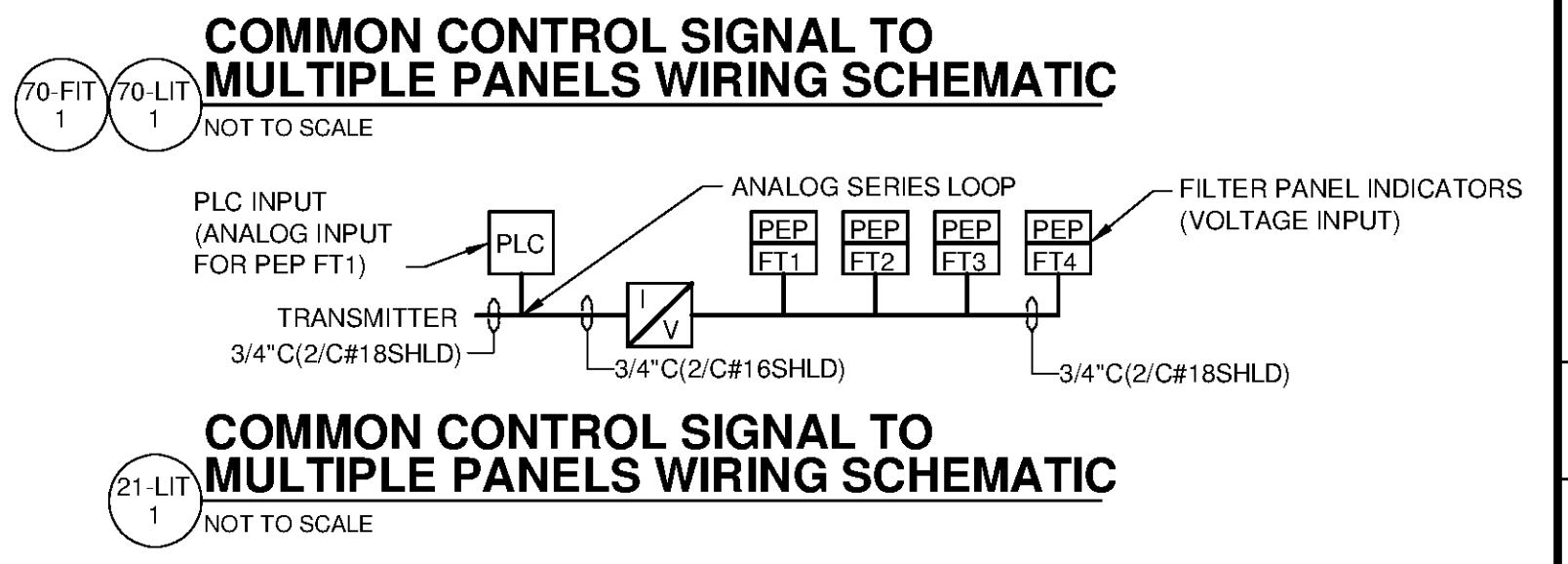
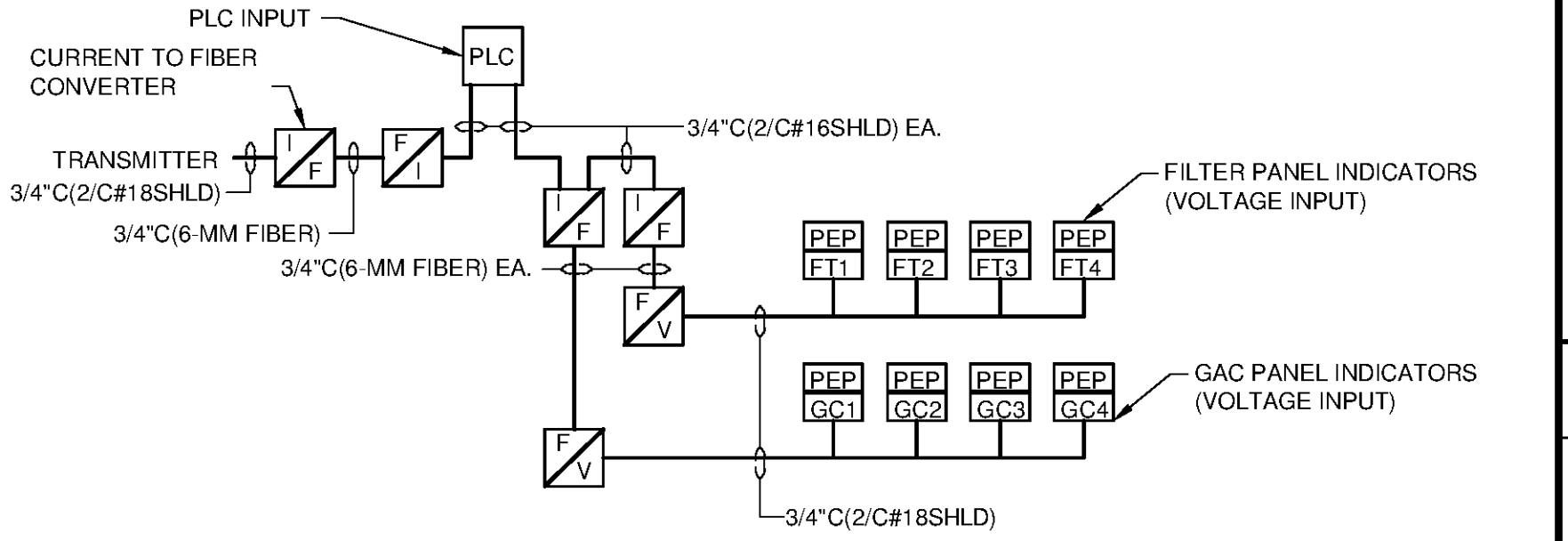
DEVICE	PEP FT1	PEP FT2	PEP FT3	PEP FT4
FIT	21-FIT-1	21-FIT-2	21-FIT-3	21-FIT-4
PDIT	21-PDIT-1	21-PDIT-2	21-PDIT-3	21-PDIT-4
AIT	21-AIT-1	21-AIT-2	21-AIT-3	21-AIT-4
LIT	21-LIT-1	21-LIT-2	21-LIT-3	21-LIT-4

▲ = PROVIDED BY MANUFACTURER

FIELD MOUNTED 480/120VAC POWERED DEVICE TABLE

DEVICE	POWER FROM	VOLTAGE	NOTES:
21-FIT-1	PEP/FT1	120VAC	
21-FIT-2	PEP/FT2	120VAC	
21-FIT-3	PEP/FT3	120VAC	
21-FIT-4	PEP/FT4	120VAC	
21-AIT-1	PEP/FT1	120VAC	
21-AIT-2	PEP/FT2	120VAC	
21-AIT-3	PEP/FT3	120VAC	
21-AIT-4	PEP/FT4	120VAC	

FIELD DEVICES



- GENERAL NOTES:**
1. TYPICAL OF 4 PRE-ENGINEERED PANELS. PEP-FT1 AND ASSOCIATED EQUIPMENT IS SHOWN.
 2. SEE SECTION 40 99 90 "PACKAGE CONTROL SYSTEMS" FOR PANEL REQUIREMENTS. OUTDOOR PANELS SHALL BE NEMA 4X TYPE 316 STAINLESS STEEL.
 3. SEE ELECTRICAL SPECIFICATIONS FOR CONDUIT AND WIRE REQUIREMENTS.
 4. EQUIPMENT PLACEMENT SHOWN ON E-2402 AND E-2411.
 5. PANEL MANUFACTURER MUST DEMONSTRATE INTEGRATION TO SIEMENS S7-1500 PROCESS PRIOR TO COMMISSIONING.
 6. ELEVATED STORAGE TANK LEVEL AND FLOW METER READINGS TO BE DISPLAYED ON EACH GAC AND FILTER PANEL.

- PROCESSOR NOTES:**
1. UTILIZE THE FOLLOWING SIEMENS EQUIPMENT:
 - 1.1. IM 155-5 PN (6ES7155-5AA00-0AB0), INTERFACE MODULE
 - 1.2. ET 200MP I/O CARDS
 - 1.3. PS 25W 24VDC, POWER SUPPLY
 2. SIEMENS PROFINET COPPER TO FIBER CONVERTER.

- HMI NOTES:**
1. MONITOR AND MANUAL START/STOP LOGIC TO BE PROGRAMMED IN WTP-LCP-1.
 2. PEP SHALL INCLUDE MANUAL CONTROL OF EQUIPMENT, ALLOWING COMPLETE CONTROL OF BACKWASH AND NORMAL OPERATION FROM THE PEP WHILE WTP-LCP-1 IS OFFLINE. ANY ADDITIONAL CONTROLS OR INDICATION SHALL BE INCLUDED IN THE BASE SCOPE OF WORK.

TETRA TECH

www.tetra-tech.com
101 QUALITY CIRCLE, SUITE 140
HUNTSVILLE, ALABAMA 35806
PHONE: (256) 424-4077 FAX: (256) 424-4097

BID SET

ALABAMA PROFESSIONAL ENGINEERING SEAL
No. 21928
PROFESSIONAL
REGISTERED
CIVIL ENGINEER
STATE OF ALABAMA

BY	DATE	DESCRIPTION

HUNTSVILLE UTILITIES
SOUTHEAST WATER TREATMENT PLANT
FILTER CONTROL CONSOLE

Project No.: 200-11740-10003
Designed By: AJK
Drawn By: TAC
Checked By: DAB

I-2603

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