



R2BUILD dba R2B Engineering, Inc
23441 S. Point Dr., #280 Laguna Hills, CA
CSLB #1031564 A, B
P: 949-466-5543 Email: info@r2-build.com

Via Email: citymanager@ggcity.org
rebeccal@ggcity.org

Monday, June 19th, 2023

Ms. Lisa Kim
City Manager
City of Garden Grove
11222 Acacia Parkway
Garden Grove, CA 92840

Re: Specification No. 779 CIP 1268010
SCADA Master Plan Implementation – TRASK & WESTHAVE RESERVIOR
SCADA IMPROVEMNTS PRJOECT

Subject: **Letter of Appeal**

Ms. Lisa Kim:

R2BUILD was the apparent low bidder for the above referenced City of Garden Grove's project that bid on May 31st, 2023. We are writing to appeal the non-responsive determination email we received from Rebecca Li (Senior Civil Engineer) on June 13th, 2023.

I understand that the application was deemed non-responsive due to a technicality, but we believe this decision was made in error. We have carefully reviewed the requirements and guidelines for the bid proposal, and we are confident that we have met all the necessary criteria. R2BUILD is primarily a public works General Engineering Contractor that was founded in 2016. We have successfully completed all the projects awarded. R2BUILD has no past, present or outstanding legal issues with either the client or subvendors. We are financially strong and do not have any outstanding disputes or unresolved payment issues with any vendors.

We are including the following additional information for your consideration:

- List of (6) Public works projects that are similar in size and nature and 1 active project in progress.
- Resume for Field Instrument Technician - Victor Espinoza
- Panel Fabricator references- JFR Controls



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List of Public Works Projects:

Project 1: CRA MILE 12 Improvements

Description of work: Scope of Work included installation new 32 flowmeters in underground two 12'0 barrel with a critical limited shut down timeframe. Work included working on maintaining a existing infrastructure to minimize interruptions. Included design build of new off-grid solar PV system, 40' antenna pole, antennas, cameras, design build emergency propane generator system with dual redundancy control panels to operate propane tanks. New Generator control panel, pump control panel, integrated SCADA through RTU & RTU-TC. Included underground electrical ductbanks, vaults, new ATS, working in confined spaces - installation of complete functioning security & intrusion detection system. Project valued at \$2,200,000 and is similar in nature as it involved maintaining existing industrial infrastructure, close coordination during critical shutdowns, new control panels fabricated by same shop intended for this project. Project loop drawings are attached for reference.

Project 2: Irvine Cove Lift Station – Emergency Generator

Description of work: Scope of Work included construction UG 10'x10'x20' vault for emergency generator. Included new Generator Control panel, integrated Motorola Radio to the City's SCADA. New Natural Gas, new UG ductbank, large 30" SS exhaust and 36" intake lines. New switchboard, subpanel. concrete pad, & asphalt restoration. Working in a sensitive area while maintaining high public pedestrian traffic. Close coordination of final shut down, switch over. Valued \$700,000 with primarily electrical work and working directly with City of Laguna Beach.

Project 3: Whittier Narrows – Site Security Improvements

Description of work: Scope of Work included construction of approx.. 4000' of prefab fence and rolling gates. Underground electrical duct-banks, underground Vaults, installation of new control panels integrating new security and intrusion detection system with existing. Project valued at \$1,100,000 and is similar in nature due maintaining a fully functioning industrial facility with critical infrastructure.

Project 4: Siting Generator of Well 8

Description of Work: Scope of work included UG electrical duct-bank, Grading, OverEx, New CMU building - concrete pad footing, CMU, fire rated openings, Roof Structural Steel, metal deck that included mechanical attachment and welding in place. New site concrete, new/restore existing irrigation. New Power to existing Water well, booster pumps, flowmeter, chlorine room. Furnish and install switchboard, MCC, VFD, RTU cabinet, fire alarm system. Install 350 KW diesel generator, Particle Filter and ATS. Close coordination of final shut down, switch over and restart of Water Well, Booster Pump Facility. Project valued \$1,000,000 and is similar industrial water reservoir facility that required maintaining existing infrastructure and close coordination required for minimum interruptions to critical infrastructure.

Project 5: Construction of Safety Portables

Description of work: Scope of Work included construction of Underground electrical duct-banks, New ATS, working in confined spaces - underground Vaults, installation of complete functioning intrusion detection system, site security system, main addressable



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fire alarm system. New fire water/fire hydrant, portable water, sewer and storm drain system. Scope included concrete foundation for 3600 sqft bldg and site restoration consisting of concrete, asphalt and grading. Project valued at \$964,000 and is similar in nature due maintaining a fully functioning commercial facility with critical infrastructure.

Project 6: CNG electrical - City of Commerce

Description of work: Scope of Work included construction of over +1,000' of UG electrical ductbank along commercial paved road. Electrical Work in Class 2 Div 2 area of Compressed Natural Gas. New switchboard, subpanel. New CMU retaining wall, concrete pad, & asphalt restoration. Close coordination of final shut down, switch over and restart of CNG facility. Valued \$400,000 with primarily electrical work and working directly with City of Commerce.

Project 7: GARDEN GROVE PMI (in Progress)

Description of Work: Scope of work includes design, fabrication and installation of 6 pedestals and Pressure monitoring control panels (Fabricated by JFR Controls) at various locations around the City of Garden Grove. Scope of work to include demo, underground electrical ductbank, concrete pad. Includes coordination with Utility provider. Project valued \$420,000 and similar in nature due to fabrication of control panels and working with City of Garden Grove.

We understand that there may have been some confusion or miscommunication regarding information provided in the bid document, but we'd like to request that you reconsider your decision. We are eager to participate in this project with City of Garden Grove and we believe we have a lot to offer your team for the successful completion of this project.

Per the Notice To Contractor Section B item 6 we'd like to request the City Manager or a designee of City Manager to independently reevaluate R2BUILD's qualifications and conduct a hearing as allowed in the bid documentation.

I would be happy to provide any additional information or clarification that you may need in order to reconsider your evaluation. I appreciate your time and consideration. We are confident that R2BUILD has the required qualifications to complete this project. R2BUILD should be deemed responsible and awarded the project.

Should you have any questions, please do not hesitate to contact me at 949.466.5543

Sincerely,

Massoud Jami
President



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Attachments:

1. Resume for Field Instrument Technician - Victor Espinoza
2. Panel Fabricator references- JFR Controls
3. Sample As-built Loop Drawings for Project 1

Name Victor H. Espinoza (858) 305 9961
Title Instrumentation and PLC Controls Systems Engineer
E-mail Victor_hech@hotmail.com, victor@consultcc.com

COMPUTER SKILL

Operating Systems and Virtualization: NT, XP, Vista, Windows 8, Windows 10, Windows 11, TeamViewer, Remote Desktop Connection, VMWare.

2D Cad drawing: Autocad Electrical, **Computer Languages:** Assembler, Visual basic, C++, Python, MySQL Data Base, **PLC Programs:** RSLogix, Rslinx, ISaGRAF, Telepace Studio, Do-more Desinger 2.5, 2.6, 2.7, 2.8 **HMI:** PanelBuilder32, C-MORE, Maple System (Easy Builder 500), EZWarePlus, Wonderware 9.5, RSView32, RSView Studio, Lookout, Ignition (Inductive Automation), Clear Scada, C-more EA9 Series. **Hardware:** VFDs, Micrologix, SLC 5, SLC 500, Controllogix, PanelView, PanelView Plus, etc. **Radios:** MDS iNET-II 900, ESTeems, Airmux 400, Nanostation Ubiquiti, Guardian Calamp, Viper Calamp, Phoenix Contact 900Mhz Radios, SCADALink RIO 900Mhz etc.

2016 to Present

- Provide support and service to **City of Pico Rivera**, Troubleshooting PLC's, VFD, Analog signals, Digital signals, Airlink Modem, Modify HMI (Ignition), Create Reports, do service remotely are some of the tasks that are performed daily.
- Provide support service to **City of South Gate**, Troubleshooting PLC's, Analog signals, Digital signals, Esteem Radios, Add signal to HMI (Clear Scada), are some of the tasks that are performed daily.
- Participated in 5 Station (Pumping Plant with Gate Controller, River Pump Station, River Pipeline Intake with Gate Controller base on Flow or Level, Enos Lane take flow and Level measurements, State-takeout take flow and Level measurements for **KWBA** (Kern Water Bank Authority), Programming PLC's in Telepace, HMI Ignition, MDS Radios for Communication, create a mobile app for HMI Ignition.
- Participated in improvement of Well 28 for the **City of South Gate**, added a water Tank and 3 Boosters, Programming PLC's in Telepace Studio, HMI Clear Scada.
- Participated in a new Well 29 for the **City of South Gate**, Programming PLC's in Telepace Studio, HMI Clear Scada and commissioning and startups.
- Participated in the installation of 7 security cameras for **KWBA** (Kern Water Bank Authority), Programming cameras Hikvision, Programming radios Ubiquiti Nanostation, Programming NVR, commissioning and startups.
- Create a Design to control 3 Gates base on Level, Flow or Position, program PLC Telepace Studio, HMI Clear Scada, programming OIT (Operator Interface Terminal) EZWarePlus, Cellular modem Sierra Wireless RV50, Drawings Autocad Electrical, Participated in the Electrical Installation, commissioning and startups for **Madera Irrigation District**.
- Participated and Install 19 SDR's (Stage Digital Recorder), Write and Install Mimics for Clear Scada, Programming and Setup Cellular Modems (Sierra Wireless RV50), Design and provide Control schematic for panels and submittals for **Madera Irrigation District**.
- Create and Design Level Alarm, Design and provide Control schematic for panels and submittals, Arduino Board with Ultrasonic Sensor, SIM Card to send Alarms Text Messages for the High and Low Level and the ability to program from a Text Message.
- Added 13 Rubicon Gates into SCADA (Clear Scada) Using Calamp Radios (Guardian and Viper), Installation of radios, antenna, interface, programming radios, Screens on SCADA and startup for **Madera Irrigation District**.
- Design, Build and Install a Control Panel with Controller (Rug3), Cellular Modem (RV50), Lever Transmitter (Flowline ECHOPOD) Solar Panel and Batteries to register Level and send to SCADA at Abbey's Hole for **Madera Irrigation District**.
- Build Network Drawings for **Madera Irrigation District**.
- Install remote display and put in SCADA Siemens Magmeter 5000 for **City of South Gate**.
- Replace Ultrasonic Transducer and commissioning for Siemens Hydro Ranger 200 **City of South Gate**.
- Alignment and troubleshooting Radio repeater from Santa Fe Tank to Yard **City of South Gate**.
- Installation and commissioning for Existing sensor for Panametrics Flow Meter at **Kern Water Bank Authority**.
- Created a Daily Flow Report for 7 sites in Ignition SCADA at **Kern Water Authority**.
- Participated on Fabrication and Design of 7 control Panels for UPGRADE WWTP SYSTEM MAIN BASE & AFRL EDWARDS AIR FORCE BASE, CALIFORNIA.
- Troubleshooting and fix Issues at the CL2 High and Low alarm for Well 29 **City of Southgate** and created the function for Low **Flow-Cutoff** saving between 1 to 4 hours of pumping water.
- Estimating for Control Panel Drawings Design and Integration to ClearSCADA for Well18 **City of South Gate**.
- Estimating SITING OF EMERGENCY GENERATORS & SITE IMPROVEMENTS PROJECT, PROJECT NO. 4011.67.901 & 4011.67.910, Well 8, Control Panel, Instrumentation and Control, **City of Lynwood**.
- Submittal and Control Panel Design, PLC and OIT Programming, Malibu Pier Lift Station Replacement, **City of Malibu**.
- Estimating and Control Panel Drawings Design, Integration for two actuators at Metering Station **Kern Water Authority**.
- Estimating and Control Panel Drawings Design, Integration for Strand Pump Station and Bypass Pump Station Projects at **Kern Water Bank Authority**.
- Estimating and Control Panel Drawings Design, Integration for a Lift Station at City Of Laguna Beach, Victoria 1 Lift Station, Rehabilitation.
- Participate in Cad Drawings and design for a Lift Station, PLC and OIT Programming, at City Of Malibu Pier lift Station Replacement.

- Create Drawings for existing Gate Controller at LOS ANGELES COUNTY SANITATION DISTRICTS Whittier Narrows Water Reclamation Plant Security Fence and Entrance Gate Improvements.
- Control Panel Design, Fabrication, Installation, termination, Programming PLC (Telepace Studio) and SCADA (Ignition) for Integration of two actuators at Headwork for KWBA (Kern Water Bank Authority).
- Participated on By Pass Project on Integration of actuator control, flow meter, level indicator, Programming PLC (Telepace Studio) and SCADA (Ignition) for KWBA (Kern Water Bank Authority).
- Emigrated SCADA (Ignition) to a new Server with data base, remotely.
- Create Submittals and Drawings for COLORADO RIVER AQUEDUCT MILE 12 MONITORING STATION UPGRADES Metropolitan Water District, Control Valve 50LCP-135 and 50LCP-165, Sump Pump 50LCP-142, 50LCP-136 Generator Control Panel, RTU-TC, Schematic, Point to Point and Loop Drawings.
- Created Submittal and Drawings for IEUA RMPU BASIN IMPROVEMENT PROJECT AT RP-3 BASIN NETWORK CABINET NC-1 AND NC-2 for MetroBuilders.
- Create Submittal for CROCKETT TERMINAL TIDE ENVIROMENTAL ENCLOSURE NEXSENS RADIO for NuStar.
- Create Submittal and Drawings for Solar Level Monitoring Station Control Panel 99-CP-270, CRA MILE 12 FLOW & CHLORINE STATION UPGRADE.
- Create Drawings for industrial panel IRVINE COVE SEWER LIFT STATION EMERGENCY GENERATOR INSTALLATION PROJECT.
- Participated on the chlorine system upgrade for Well 26, Well 27, South Gate Park and Hawkins, Startup, PLC and SCADA Programming this for **City of South Gate**.
- Recovery Clear SCADA using backup on **City of Southgate**.
- Startup and commissioning Solar Panels, Sol-Ark Inverter, Fortress Batteries and Propane Generator, Programed PLC Micro 800 for Generator Control Panel 50LCP-136, created O&M Manual for COLORADO RIVER AQUEDUCT MILE 12 MONITORING STATION UPGRADES Metropolitan Water District

2008 to 2015

Technical department of the company. Electrical control panel fabrication, PLC & HMI programming, O&M user manuals, engineering diagrams, troubleshooting, commissioning and start ups are some of the tasks that are performed daily

Accomplishments:

- Participated PLC and HMI instrumentation for Del *Campo, Ca.* And Otay Water Distric for *San Diego, Ca.* and City of *Oceanside*
- Participated in the electrical design and control and startup for the WESP “wet electrostatic system precipitator” Units at a Lead recycling facility in *Indianapolis, US.*
- Participated Design, Fabrication, Programming, and Start up of the PLC section of a pump house project for the city of *Coronado, Ca*
- Participated Design, fabrication and Installation of PLC Scada panels for three pump houses for the *City of Poway, San Diego, Ca*
- Participated for the installation phase of a project developed in *Fort Irwin, Ca.* that consist in the installation and start up of 21 PLC SCADA panels plus 1 Master Central Unit that integrates the Remote monitoring via radio of the 95% of all Lift Stations inside the military base and 100% of the Wells and Reservoir Tanks.
- Participated Implementation for a Telemetry system that watches the level for a Reservoir tank and a new PID system capable of maintaining the residual CL2 from a Chlorine contact chamber in a water treatment plant within specs. Reports generation, autodialer, etc. That provides clean water for *Wild Animal Park in CA.*
- Participated Fabrication, Programming, installation of a 3 new Telemetry cabinet for a Lift Station in Camp Wilson *Twentynine Palms, Ca.*
- Participated Fiber Optic Network Installation in addition to an existing Network in Camp Wilson *Twentynine Palms, Ca.*
- Renewing the Chlorine system for a disinfection process in the Waste Water Treatment Plant No. 9 in *Camp Pendleton, CA.* In this project HMI development and PLC programming was required.
- Participated Fabrication, Programming, installation of a 3 new Telemetry cabinet for a Lift Station in Camp Wilson *Twentynine Palms, Ca.*
- Participated on upgrade PLC Control Panel, Modify and Startup on GKN AEROSPACE INC. EL CAJON, SAN DIEGO, CA. This Panel control the temperature for different chemicals to create the aircraft or naval metal parts.

2006 to 2007

HMI Programmer performing several projects at a time, conduct troubleshooting on PLC systems already installed. Writing user manuals and engineering diagrams.

Accomplishments:

- Participated Calibration for Motor Vibration sensors, Motor Temperature sensors, analog ultrasonic height level sensor meters, in three waste water pump house These facilities were working with Moscad PLC units and Intouch 9.5 from Wonderware in “CESPM (Estate Commission of Potable water services in Mexicali) *Estate Water waste and water distribution, Mexicali*”
- Participated HMI work for CESPT (Estate Commission of Potable water services in Tijuana) ActiveFactory from Lookout in two potable pumping water plants.
- Install an Electricity demand watcher program in “*Delphi connection systems*” that monitors in real time energy consuming from building elements like: Lights, Chillers, air blowers, HVAC. Development software: ASI Expert, Wonderware Intouch 9.5.
- Assist several companies in the area with Electrical or Electronic problems such as *SAMSUNG, ICHIA, DUCAMEX, etc.*

Kern Water Bank Authority

kwb.org

Contact: Nick Torres, Operation & Maintenance Manager, ntorres@kwb.org (661) 398-4900

Provide electrical engineer services, computers, Programmable Logic Controllers (PLC), SCADA Software (Ignition) new remote units (RTU), Electrical equipment's., maintenance and Integration from 2016 to 2022. For the sites: State Intake, Main Pumping Station, Strand Pump Station, Enos Lane, River Pump Station, Headworks and CRP.

City Of South Gate

cityofsouthgate.org

Contact: Ramiro Hernandez, Water Operations Foreman, rhernandez@sogate.org (323) 595-9119

Contact: Daniel Dhayer, Water System Lead Operator, ddhayer@sogate.org, (323) 357-9653

Provide electrical engineer services, computers, Programmable Logic Controllers (PLC), SCADA Software (Clear SCADA), remote units (RTU), Electrical equipment's., maintenance and Integration from 2016 to 2022 for the sites: Well26, Well27, Well28 Elizabeth Booster Station, Well29, CB7, CB11, Park Reservoir, Park Repeater, West Site Reservoir, Hawkins and Control Room.

Acme Automation Corp

Contact: Robert Tran, President, robert.tran@acmeautomation.com (858) 603-0390

Work with several project from 2008 to 2015 in Control System, Integration and Scada Upgrades
Control Panel Design and Fabricate PLC and RTU Control Panels for Manufacturing and Process industries, Provide Electrical Installation Services, provide electrical engineer services, computers, Programmable Logic Controllers (PLC), remote units (RTU), SCADA Software's, Electrical equipment's.

Madera Irrigation District

madera-id.org

Contact: Charles Contreras, Operation & Maintenance Manager, ccontreras@madera-id.org

Provide electrical engineer services, Control System, Integration and Scada Upgrades

Design, Install, commission, program and integrate 3 Actuators at Burgess @ Motel, Burgess Diversion and Avenue 12.

Integration and commissioning of 12 Rubicon Gates for flow monitoring and control.

Design, commission, Integration (Clear SCADA) of 19 SDR for flow monitoring on different sites.

Design, Install, commission, program and integrate (Clear SCADA) Abby's Hole for flow monitoring.

JFR CONTROLS

1651 San Luis Rey Ave
Vista, Ca 92084
Cell: 760.822.4708

RE: Minimum Qualifications – Panel Fabricator:

15 June 2023

R2BUILD

Attn: Massoud Jami

To whom it may concern,

JFR Controls is a single source for control panel modification and wiring. All provided by qualified personnel to complete work specified by this project. JFR has been building UL508a listed control panels since 2010 and 15 years prior to that. All forms of PLC(s) used during that time (Modicon, IDEC, Allen Bradley, Siemens, Mitsubishi & Opto22. See attached UL508a Certificate of Qualification Manufacture Technical Representative (MTR).

2018 Price Electric (owner) (end user) Pacira WFI ICP Allen Bradley Plc's
Brad Price (619) 843-2383

2019 Neal Electric (owner) (end user) Caltrans ICP Allen Bradley Plc's
Danny Rivera (951) 538-7230


2020 Electrical Sales Inc (owner) (end user) WinWater Skid Hot Springs ICP Siemens Plc's
Ryan Sullivan (760) 598-1510 ext.1100

2021 Rwsmith & Co (owner) (end user) Kite Pharma ICP's Allen Bradley plc's
Laura Baily (760) 717-9819

2022 Cascade Thermal Solutions (owner) (end user) Illumina ICP's Idec Plc's
Aaron Essley (619) 550-7228

2023 Enthim Industries LLC, (owner) (end user) Spa's Rec Sports ICP's Opto22 plc's
Evan Kuklinski (503) 504-9818

Sincerely,



COLORADO RIVER AQUEDUCT MILE 12 MONITORING STATION UPGRADES LOOP DRAWINGS

DRAWING INDEX

NOTES:

1. USE SHIELDED CABLE SUITABLE FOR 300 VOLTS, RATED AT LEAST 90 DEG. C #18/2, AS REQUIRED FOR LOW LEVEL ANALOG SIGNAL.
2. USE #14 STRANDED MTW OR THHN SINGLE CONDUCTOR WIRE FOR ALL DISCRETE SIGNAL WIRE EXCEPT AS NOTED IN THE DRAWINGS.
3. RUN LOW VOLTAGE WIRES (24VDC DISCRETE OR ANALOG SIGNAL WIRES) AND 120VAC SIGNAL WIRES IN DIFFERENT CONDUITS.
4. DASH LINE (-----) REPRESENTS FIELD WIRING.
5. SOLID LINE (————) REPRESENTS INSIDE PANEL WIRING.
6. COMPONENTS WITH NOTE (F) REPRESENTS FIELD MOUNTED DEVICES.

ABBREVIATIONS

- CB = CIRCUIT BREAKER
 CR = CONTROL RELAY
 PS = POWER SUPPLY

DRAWING NUMBER	DESCRIPTIONS	SITE
DWG_LOOP01	FLOW METERS 50-FIT-140 & 50-FIT-141.	ELECTRICAL ROOM
DWG_LOOP02	UPS SYSTEM 50-UPS-166, COMMUNICATION & ACP PANEL.	ELECTRICAL ROOM
DWG_LOOP03	LEVEL SWITCH ALARM, DOOR ALARM & SMOKE DETECTOR.	ELECTRICAL ROOM
DWG_LOOP04	CHLORINE ANALYZER, TEMPERATURE TRANSMITTER.	ELECTRICAL ROOM
DWG_LOOP05	TRANSFER VALVE 50LCP-135	GENERATOR ROOM
DWG_LOOP06	TRANSFER VALVE 50LCP-165	GENERATOR ROOM
DWG_LOOP07	GENERATOR CONTROL PANEL 50LCP-136	GENERATOR ROOM
DWG_LOOP08	GENERATOR CONTROL PANEL 50LCP-136	GENERATOR ROOM
DWG_LOOP09	PROPANE ANALYZER, TEMPERATURE TRANSMITTER, DOOR ALARM & SMOKE DETECTOR.	GENERATOR ROOM
DWG_LOOP10	LEVEL INDICATOR 50LIT-131, 50LIT-132 & PROPANE ANALYZER	GENERATOR PIPING
DWG_LOOP11	INVERTER 50INV-167	BATTERY ROOM
DWG_LOOP12	HYDROGEN TRANSMITTER, TEMPERATURE TRANSMITTER, DOOR ALARM & SMOKE DETECTOR.	BATTERY ROOM
DWG_LOOP13	SUMP PUMP 50P-142	YARD PIPING

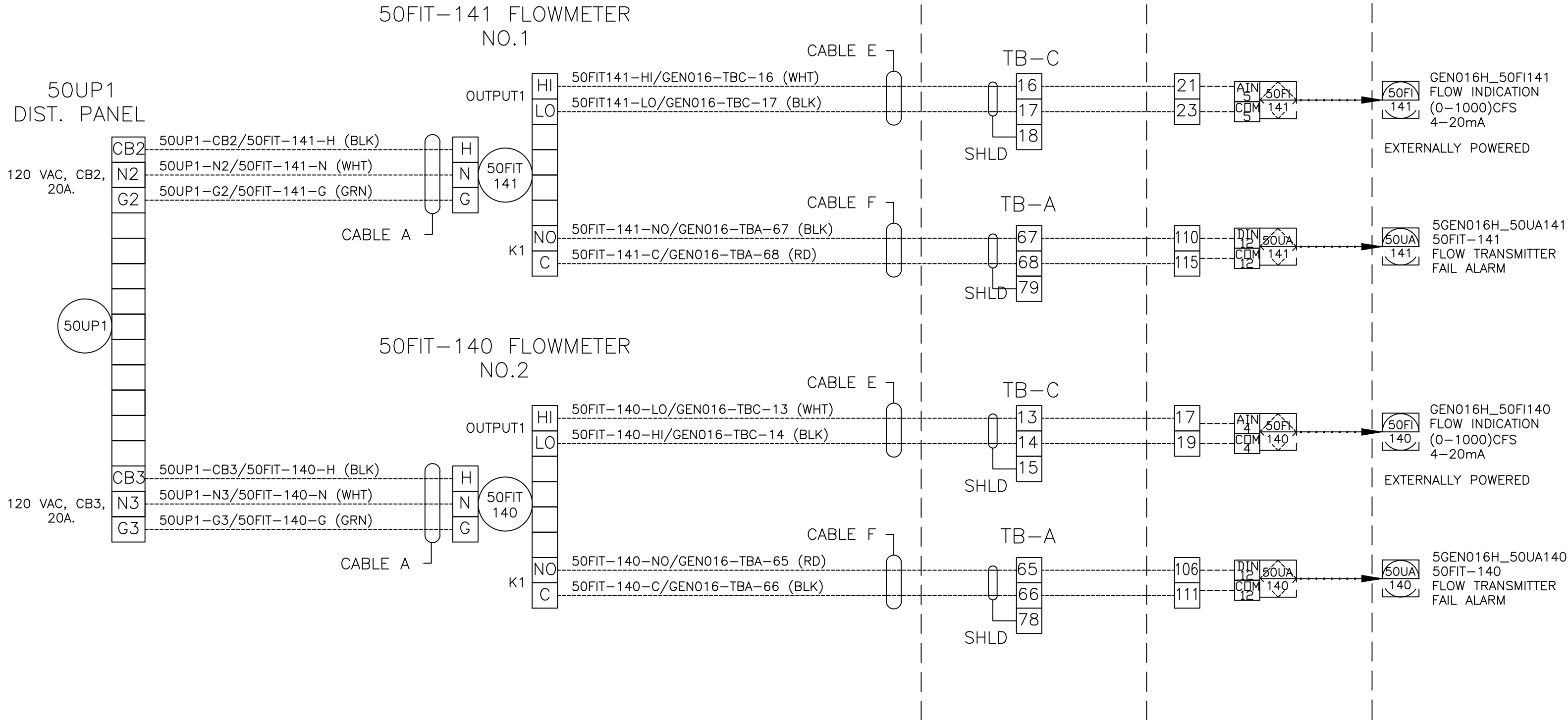
NO.	DATE	REVISIONS	CK. BY
0	8/19/21	FIRST ISSUE	RN
1	4/24/23	AS BUILT	SM

APPROVED _____ 2021
DRAWN BY: <u>V. ESPINOZA</u>
CHECKED BY: <u>S. MUDALIYAR</u>
SCALE: NONE

COLORADO RIVER AQUEDUCT MILE 12 MONITORING STATION UPGRADE
INDEX DRAWING
—

R2BUILD 23441 S Pointe Dr #280, Laguna Hills, CA 92653 TEL. 818-856-0326 ap@consultcc.com
DRAWING No. : LOOP_INDEX

PROJECT NO. 203
SHEET 01 OF 14



REFERENCE TABLE MORE DETAIL ON 1760A CONSOLIDATED DRAWING SHEET E-7 DRAWING B-172694

DESCRIPTION	TAG NO.	RTU POINT IDENTIFICATION	RTU	CABLE A	CABLE E	CABLE F
				1-3/C#12 (W/GND)	1-2/C#18 SHLD	1-3/C#14 SHLD (1SP)
MILE 12 SIPHON 1	50FIT-141	50FI-141	GEN016	50UP102PA	50FT141IB	50FT141CA
MILE 12 SIPHON 2	50FIT-140	50FI-140	GEN016	50UP103PA	50FT140IB	50FT140CA

NO.	DATE	REVISIONS	CK.BY
0	7/27/21	FIRST ISSUE	RN
1	3/08/22	UPDATED INFORMATION FROM POINT LIST	VE
2	4/05/22	FU, PLC AND TB INFORMATION DELETED	VE
3	4/24/23	AS BUILT	SM

APPROVED: _____ 2021

DRAWN BY: V.ESPINOZA

CHECKED BY: S.MUDALIYAR

SCALE: NONE

COLORADO RIVER AQUEDUCT
MILE 12 MONITORING STATION UPGRADE

ELECTRICAL ROOM

FLOWMETERS No.1 & No.2

R2BUILD

23441 S Pointe Dr #280, Laguna Hills, CA 92653

TEL. 818-856-0326

ap@consultcc.com

DRAWING No. : DWG_LOOP01

PROJECT NO. **203**

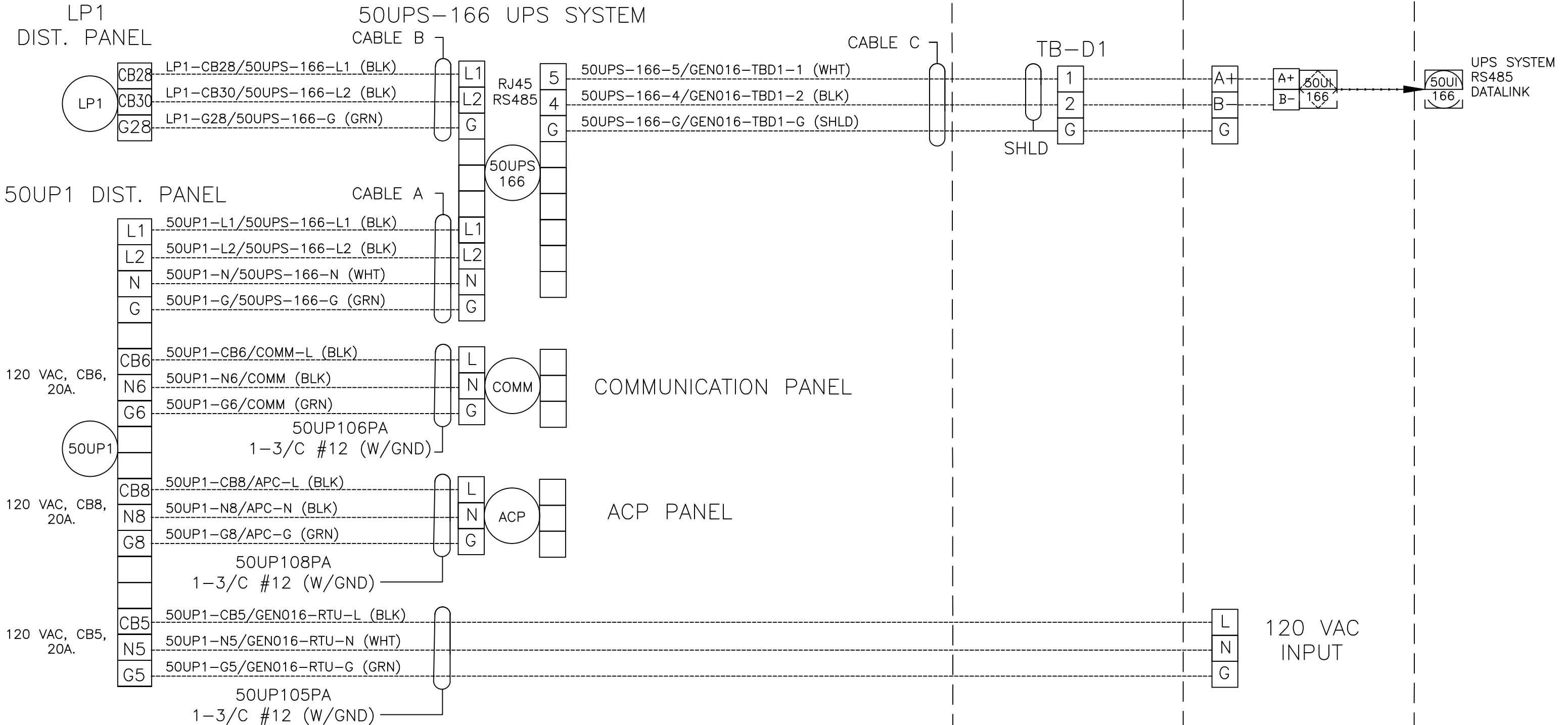
SHEET **02** OF **14**

ELECTRICAL ROOM

GEN016 RTU-TC

GEN016 RTU

SCADA



REFERENCE TABLE MORE DETAIL ON
1760A CONSOLIDATED DRAWING
SHEET E-10
DRAWING B-172697

DESCRIPTION	TAG NO.	RTU POINT IDENTIFICATION	RTU	CABLE A	CABLE B	CABLE C
				1-4/C #8 (W/GND)	1-3/C #8 (W/GND)	ARMORED CAT6A
FROM DIST. PANEL LP-1 TO UPS 50UPS166	LP-1	-	50UPS-166	50LP128PA	50UPS166	50UP166IA
FROM DIST. PANEL 50UP-1 TO UPS 50UPS-166	50UP-1	-	50UPS-166	50LP128PA	50UPS1PA	50UP166IA
FROM 50UPS-166 TO RTU-TC	50UPS-166	-	GEN016	50LP128PA	50UPS1PA	50UP166IA

NO.	DATE	REVISIONS	CK.BY
0	7/27/21	FIRST ISSUE	RN
1	3/08/22	UPDATED INFORMATION FROM POINT LIST	VE
2	4/05/22	FU, PLC AND TB INFORMATION DELETED	VE
3	4/24/23	AS BUILT	SM

APPROVED: _____ 2021

DRAWN BY: V. ESPINOZA

CHECKED BY: S. MUDALIYAR

SCALE: NONE

COLORADO RIVER AQUEDUCT
MILE 12 MONITORING STATION UPGRADE

ELECTRICAL ROOM
UPS SYSTEM

R2BUILD
23441 S Pointe Dr #280, Laguna Hills, CA 92653
TEL. 818-856-0326
ap@consultcc.com

DRAWING No. : DWG_LOOP02

ELECTRICAL ROOM

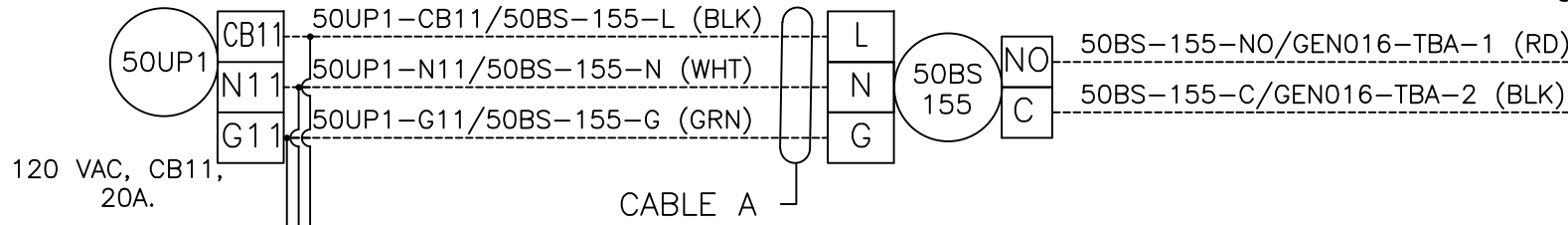
GEN016 RTU-TC

GEN016 RTU

SCADA

50UP1
DIST. PANEL

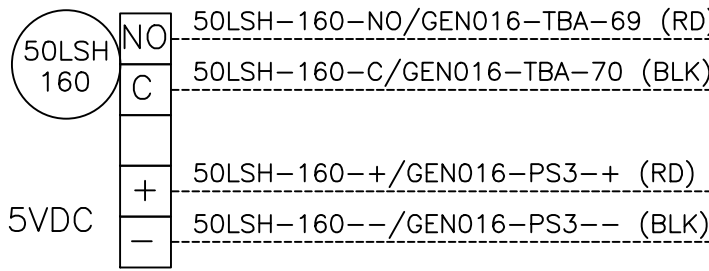
50BS-155
SMOKE DETECTOR



CABLE A

SMOKE DETECTOR
TO:DWG_LOOP11
TO:DWG_LOOP12

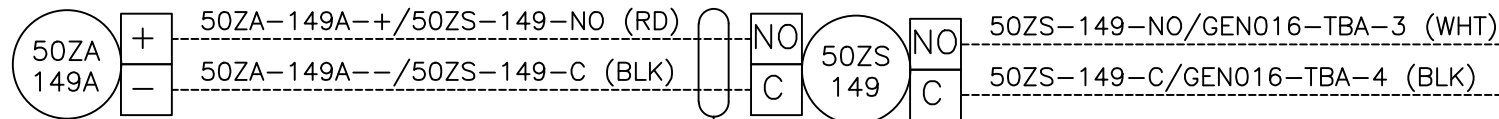
50LSH-160
LEVEL SWITCH



50LS160CB 1-2/C#18 SHLD

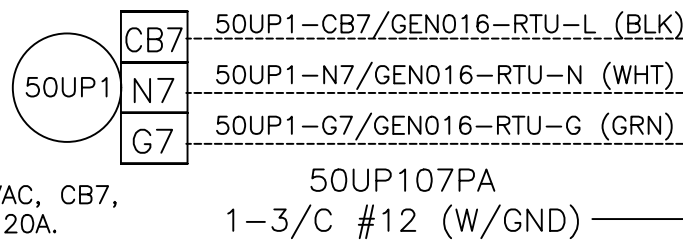
ACP
DOOR ALARM
50ZA-149A

50ZS-149
DOOR ALARM



CABLE D

50UP1
DIST. PANEL



120 VAC, CB7,
20A.

50UP107PA
1-3/C #12 (W/GND)

CABLE E

TB-A

CABLE E

TB-A

CABLE E

DC
POWER
SUPPLY
3

120 VAC
INPUT

GEN016H_50BA155
ROOM SMOKE
DETECTOR ALARM

GEN016H_50LAH160
MOISTURE/FLOOD HIGH
ALARM

GEN016H_50ZA149B
DOOR ALARM

REFERENCE TABLE MORE DETAIL ON
1760A CONSOLIDATED DRAWING
SHEET E-11
DRAWING B-172698

DESCRIPTION	TAG NO.	RTU POINT IDENTIFICATION	RTU	CABLE A	CABLE D	CABLE E
				1-3/C#12 (W/GND)	1-3/C#14 SHLD (1SP)	1-3/C#14 SHLD (1SP)
SMOKE DETECTOR	50BS-155	GEN016H_50BA155	GEN016	50UP111PA	50ZS149CA	50BA155CA
LEVEL SWITCH	50LSH-160	5GEN016H_50LAH160	GEN016	50UP107PA	50ZS149CA	50LS160CA
DOOR ALARM	50ZS-149	GEN16H_50ZA149B	GEN016	50UP107PA	50ZS149CA	50ZS149CB

NO.	DATE	REVISIONS	CK.BY
0	7/27/21	FIRST ISSUE	RN
1	3/9/22	INFORMATION UPDATED	VE
2	4/5/22	FU, PLC AND TB INFORMATION DELETED	VE
3	4/24/23	AS BUILT	SM

APPROVED _____ 2021
DRAWN BY: V.ESPINOZA
CHECKED BY: S.MUDALIYAR
SCALE: NONE

COLORADO RIVER AQUEDUCT
MILE 12 MONITORING STATION UPGRADE
ELECTRICAL ROOM
SMOKE DET, LEVEL SW, DOOR ALM

R2BUILD
23441 S Pointe Dr #280, Laguna Hills, CA 92653
TEL. 818-856-0326
ap@consultcc.com
DRAWING No. : DWG_LOOP03

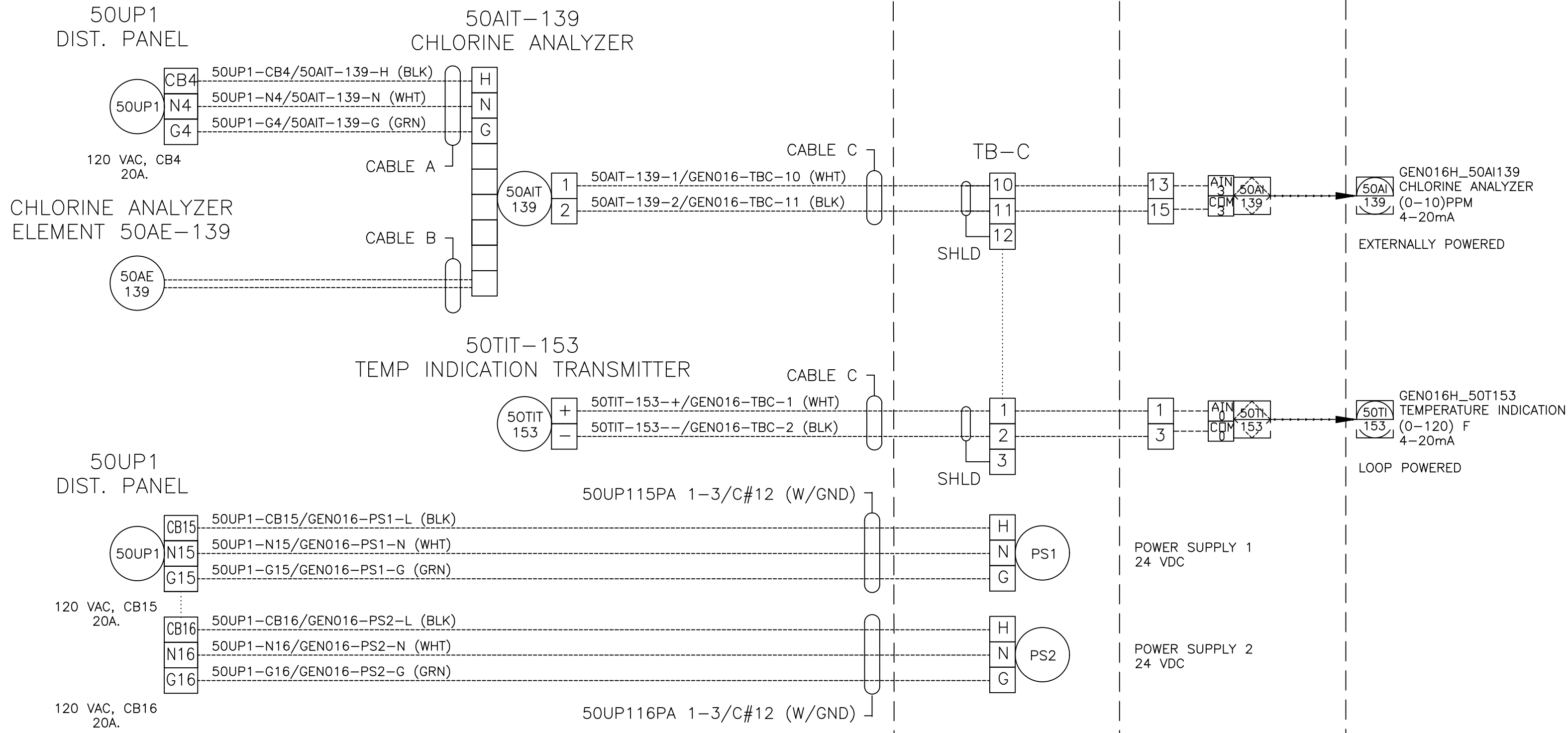
PROJECT NO.
203
SHEET **04** OF
14

ELECTRICAL ROOM

GEN016 RTU-TC

GEN016 RTU

SCADA



REFERENCE TABLE 1 MORE DETAIL ON 1760A CONSOLIDATED DRAWING SHEET E-11 DRAWING B-172698

DESCRIPTION	TAG NO.	RTU POINT IDENTIFICATION	RTU	CABLE A	CABLE B	CABLE C
				1-3/C#12 (W/GND)	VENDOR FURNISHED CABLE	1-2/C#18 SHLD
CHLORINE ANALYZER	50AIT-139	GEN016H_50AI139	GEN016	50UP104PA	50AT139IA	50AT139IB
TEMPERATURE INDICATOR TRANSMITTER	50TIT-153	GEN016H_50TI153	GEN016	X	X	50TT153IA

NO.	DATE	REVISIONS	CK.BY
0	7/27/21	FIRST ISSUE	RN
1	3/09/22	UPDATED INFORMATION FROM POINT LIST	VE
2	4/05/22	FU, PLC AND TB INFORMATION DELETED	VE
3	5/15/23	AS BUILT	SM

APPROVED: _____ 2021

DRAWN BY: V.ESPINOZA

CHECKED BY: S.MUDALIYAR

SCALE: NONE

COLORADO RIVER AQUEDUCT
 MILE 12 MONITORING STATION UPGRADE

ELECTRICAL ROOM
 CHLORINE ANALYZER & TEMP TX

R2BUILD
 23441 S Pointe Dr #280, Laguna Hills, CA 92653
 TEL. 818-856-0326
 ap@consultcc.com

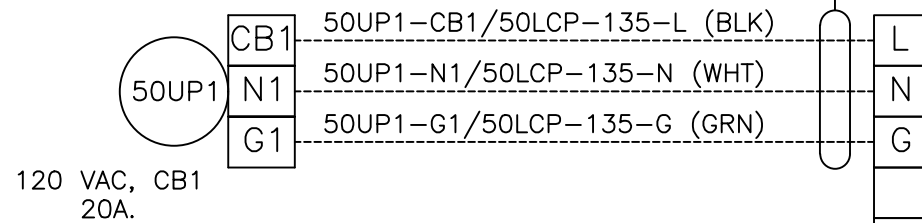
DRAWING No. : DWG_LOOP04

PROJECT NO.
203

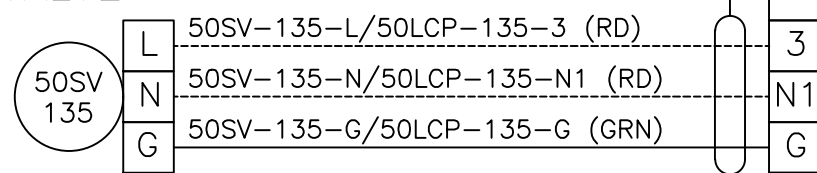
SHEET **05** OF
14

50LCP-135
PROPANE TRANSFER VALVE

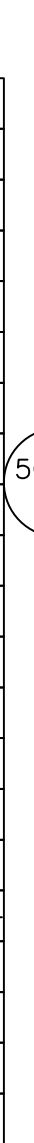
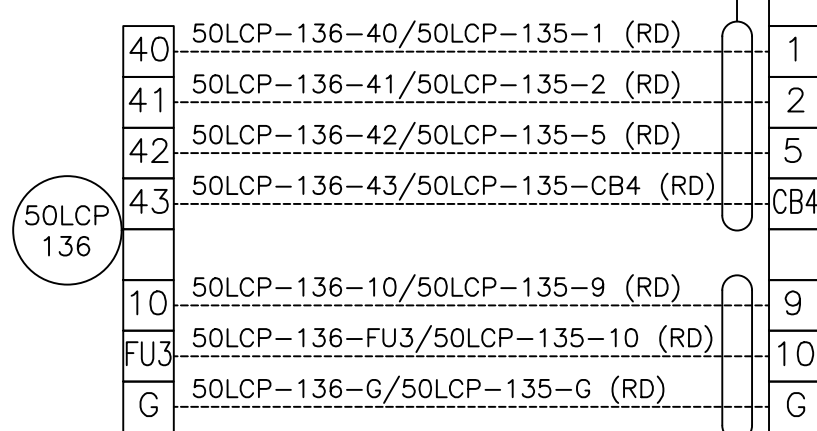
50UP1
DIST. PANEL



50SV-135
VALVE



50LCP-136
GENERATOR CONTROL PNL



OPEN CMD FROM:
50LCP-136

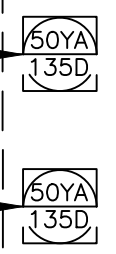
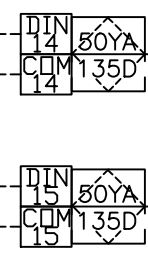
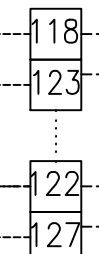
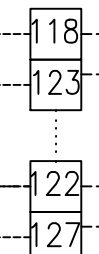
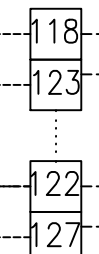
CLOSE CMD FROM:
50LCP-136

OPEN STATUS
50LCP-135

CABLE D

TB-A

SHLD



GEN016H_50YA135D_OPEN
VALVE OPEN STATUS

GEN016H_50YA135D_CLOSE
CLOSE STATUS

REFERENCE TABLE FOR CABLE A-D
MORE DETAIL ON 1760A
CONSOLIDATED DRAWING
SHEET E-8
DRAWING B-172695

DESCRIPTION	TAG NO.	RTU POINT IDENTIFICATION	RTU	CABLE A	CABLE B	CABLE C	CABLE D	CABLE E
				1-3/C#12 (W/GND)	1-5/C#14 (1 SP)	1-3/C#14 (1 SP)	1-5/C#14 SHLD (2 SP)	1-3/C#14 SHLD (1 SP)
FROM PANEL 50UP-1 TO PROPANE TRANSFER VALVE CONTROL PNL	50UP-1	-	50LCP-135	50UP101PA				
FROM GENERATOR CONTROL PANEL TO PROPANE TRANSFER VALVE CONTROL PNL	50LCP-136	-	50LCP-135		50SV135CA			
FROM PROPANE TRANSFER VALVE CONTROL PNL TO SOLENOID VALVE	50LCP-135	-	50SV-135			50SV135CB		
FROM PROPANE TRANSFER VALVE CONTROL PNL TO RTU-TC	50LCP-135	-	GEN016				50SV135CC	
FROM GENERATOR CONTROL PANEL TO PROPANE TRANSFER VALVE CONTROL PNL	50LCP-136	-	50LCP-135					50SV135CD

NO.	DATE	REVISIONS	CK.BY
0	7/27/21	FIRST ISSUE	RN
1	3/09/22	UPDATED INFORMATION FROM POINT LIST	VE
2	4/05/22	FU, PLC AND TB INFORMATION DELETED	VE
3	5/15/23	AS BUILT	SM

APPROVED: _____ 2021

DRAWN BY: V. ESPINOZA

CHECKED BY: S. MUDALIYAR

SCALE: NONE

COLORADO RIVER AQUEDUCT
MILE 12 MONITORING STATION UPGRADE

GENERATOR ROOM

PROPANE TRANSFER VALVE 50LCP-135

R2BUILD

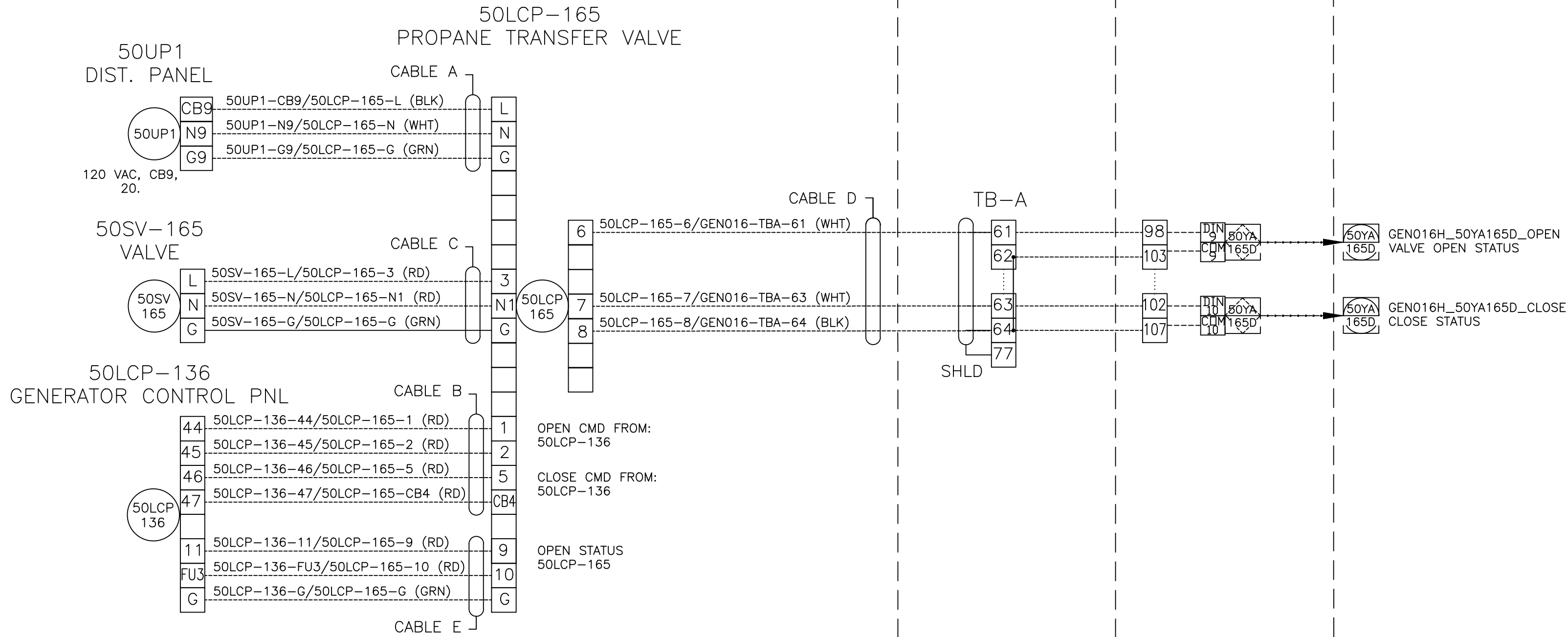
23441 S Pointe Dr #280, Laguna Hills, CA 92653

TEL. 818-856-0326
ap@consultcc.com

DRAWING No. : DWG_LOOP05

PROJECT NO.
203

SHEET **06** OF
14



REFERENCE TABLE MORE DETAIL ON 1760A CONSOLIDATED DRAWING SHEET E-8 DRAWING B-172695

DESCRIPTION	TAG NO.	RTU POINT IDENTIFICATION	RTU	CABLE A	CABLE B	CABLE C	CABLE D	CABLE E
				1-3/C#12 (W/GND)	1-5/C#14 (1 SP)	1-3/C#14 (1 SP)	1-5/C#14 SHLD (2 SP)	1-3/C#14 SHLD (1 SP)
FROM PANEL 50UP-1 TO PROPANE TRANSFER VALVE CONTROL PNL	50UP-1	-	50LCP-165	50UP109PA				
FROM GENERATOR CONTROL PANEL TO PROPANE TRANSFER VALVE CONTROL PNL	50LCP-136	-	50LCP-165		50SV165CA			
FROM PROPANE TRANSFER VALVE CONTROL PNL TO SOLENOID VALVE	50LCP-165	-	50SV-165			50SV165CB		
FROM PROPANE TRANSFER VALVE CONTROL PNL TO RTU-TC	50LCP-165	-	GEN016				50SV165CC	
FROM GENERATOR CONTROL PANEL TO PROPANE TRANSFER VALVE CONTROL PNL	50LCP-136	-	50LCP-165					50SV165CD

NO.	DATE	REVISIONS	CK.BY
0	7/27/21	FIRST ISSUE	RN
1	3/09/22	UPDATED INFORMATION FROM POINT LIST	VE
2	4/05/22	FU, PLC AND TB INFORMATION DELETED	VE
3	5/15/23	AS BUILT	SM

APPROVED: _____ 2021
 DRAWN BY: V. ESPINOZA
 CHECKED BY: S. MUDALIYAR
 SCALE: NONE

COLORADO RIVER AQUEDUCT
 MILE 12 MONITORING STATION UPGRADE
 GENERATOR ROOM
 PROPANE TRANSFER VALVE 50LCP-165

R2BUILD
 23441 S Pointe Dr #280, Laguna Hills, CA 92653
 TEL. 818-856-0326
 ap@consultcc.com
 DRAWING No. : DWG_LOOP06

PROJECT NO. **203**
 SHEET **07** OF **14**

GENERATOR ROOM

GEN016 RTU-TC

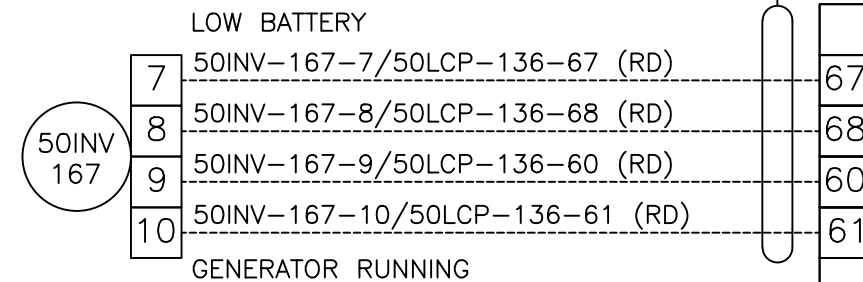
GEN016 RTU

SCADA

50LCP-136
GENERATOR CONTROL PNL

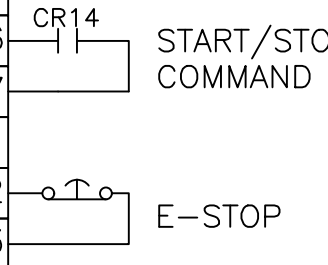
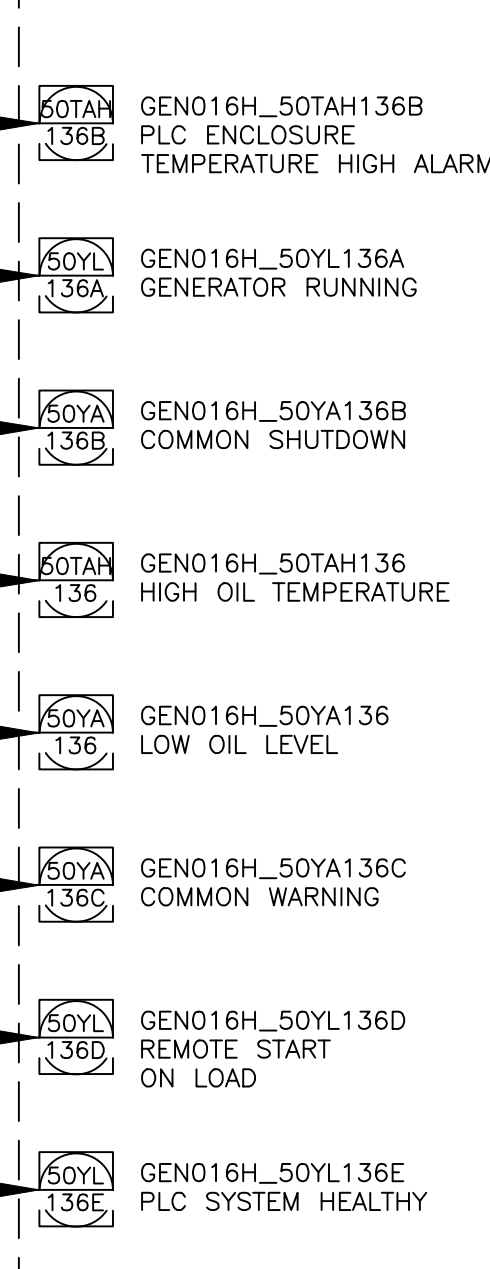
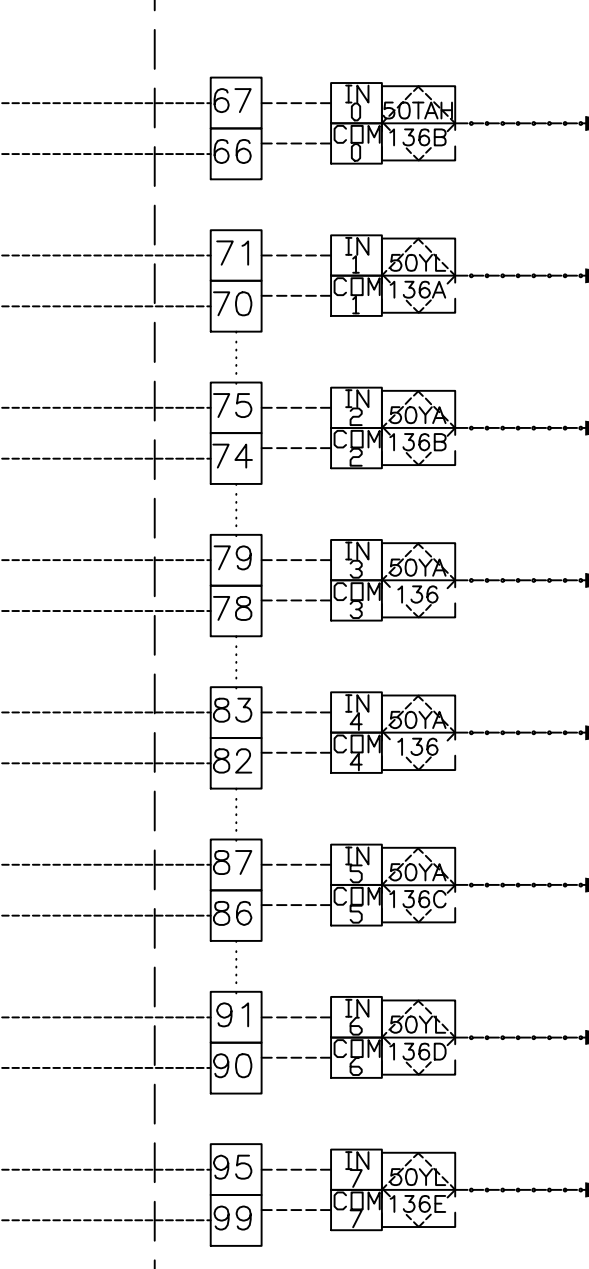
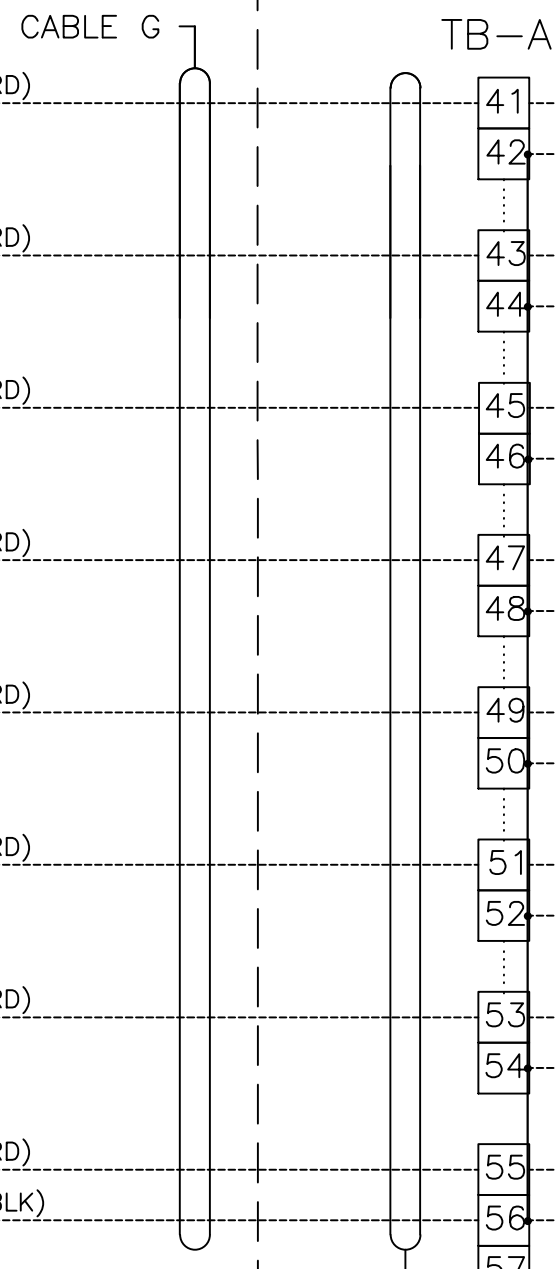
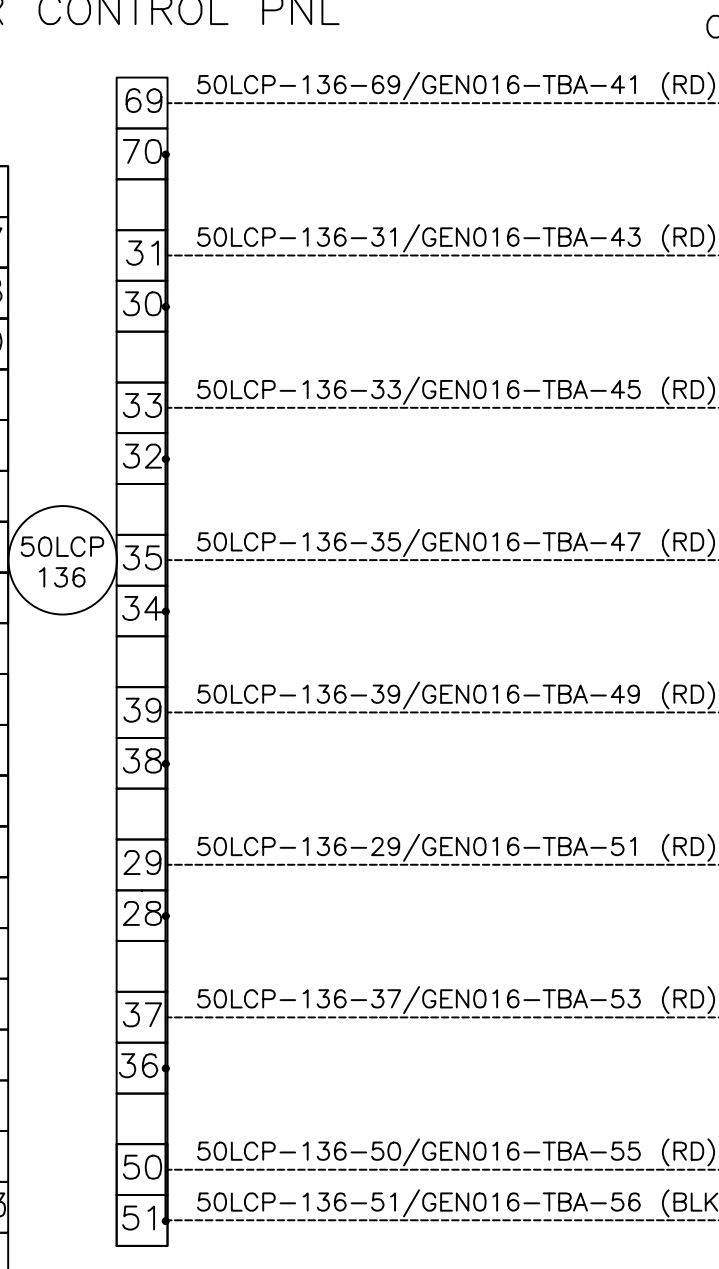
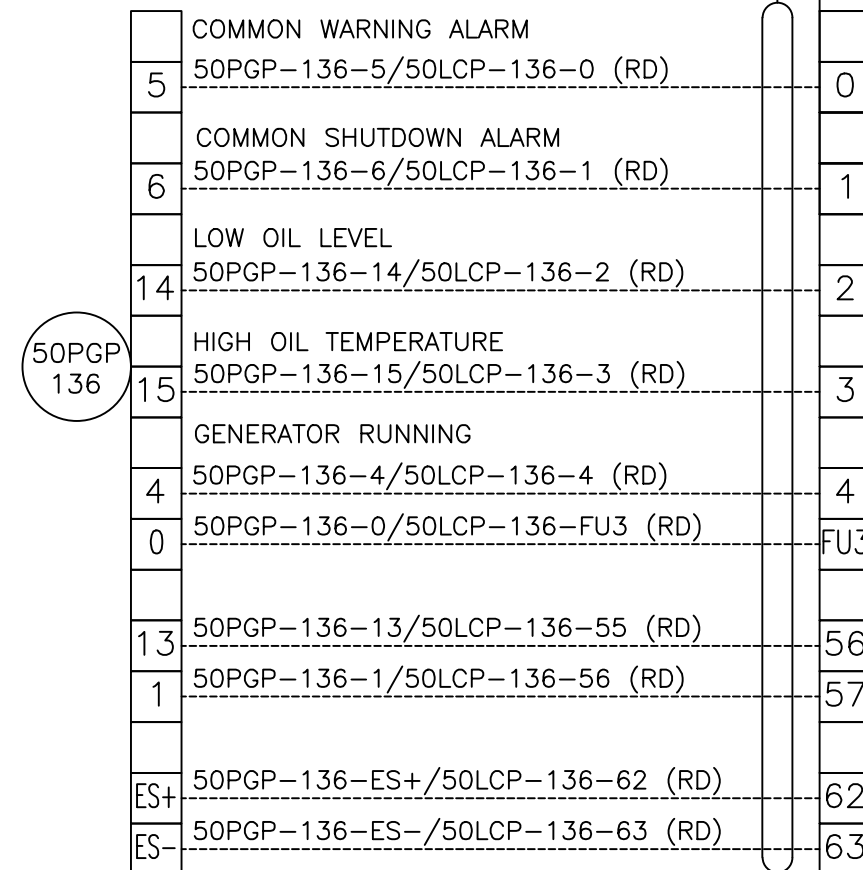
INVERTER

50INV167IB 1-4/C#14 (1SP)



GENERATOR CONTROL MODULE

50PG136IA 1-10/C#14 (1SP)



REFERENCE TABLE MORE DETAIL ON
1760A CONSOLIDATED DRAWING
SHEET E-9
DRAWING B-172696

DESCRIPTION	TAG NO.	RTU POINT IDENTIFICATION	RTU	CABLE G
FROM GENERATOR 50LCP-136 TO RTU-TC	50LCP-136	-	GEN016	1-12/C#14 SHLD (5 SP)
				50PG136CB

NO.	DATE	REVISIONS	CK.BY
0	7/27/21	FIRST ISSUE	RN
1	3/10/22	UPDATED INFORMATION FROM POINT LIST	VE
2	4/05/22	FU, PLC AND TB INFORMATION DELETED	VE
3	7/06/22	ADDED SIGNALS ON GENERATOR PLN	VE
4	5/15/23	AS BUILT	SM

APPROVED: _____ 2021
 DRAWN BY: VESPINOZA
 CHECKED BY: S. MUDALIYAR
 SCALE: NONE

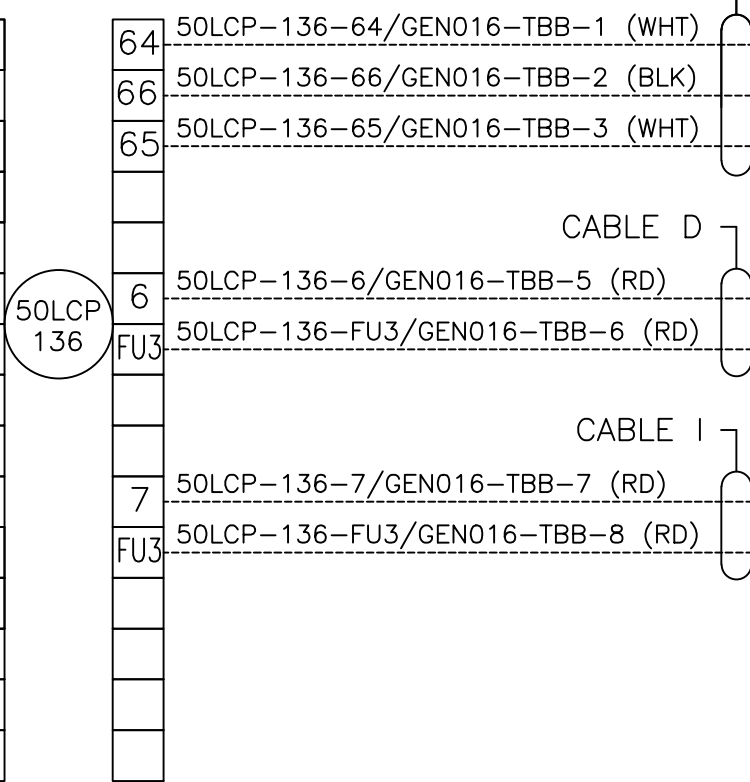
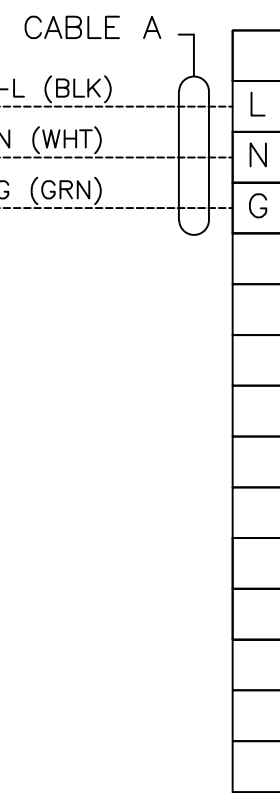
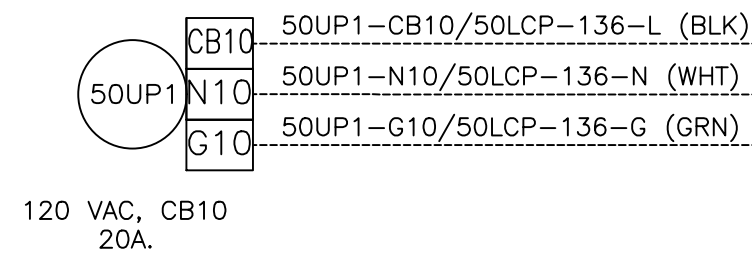
COLORADO RIVER AQUEDUCT
 MILE 12 MONITORING STATION UPGRADE
 GENERATOR ROOM
 GENERATOR CONTROL PANEL 50LCP-136

R2BUILD
 23441 S Pointe Dr #280, Laguna Hills, CA 92653
 TEL. 818-856-0326
 ap@consultcc.com
 DRAWING No. : DWG_LOOP07

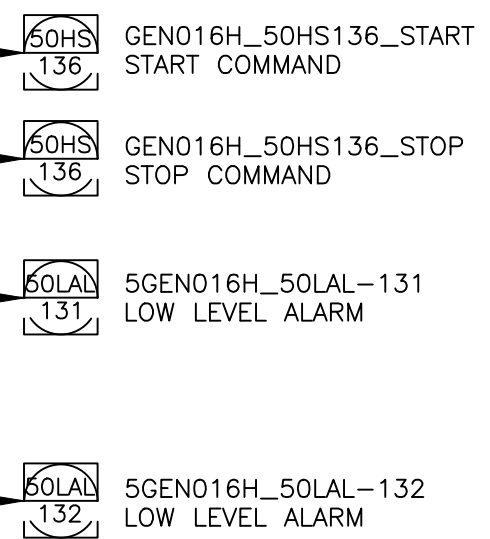
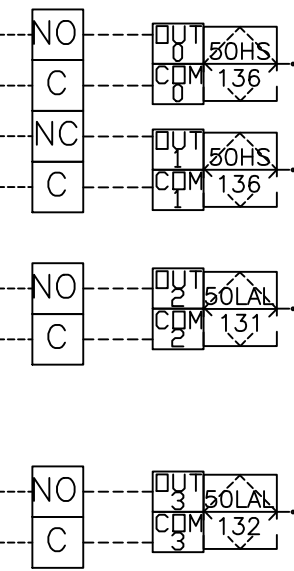
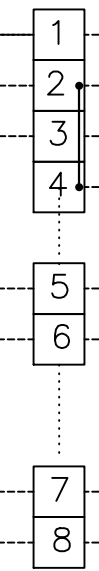
PROJECT NO.
203
 SHEET **08** OF
14

50LCP-136
GENERATOR CONTROL PNL

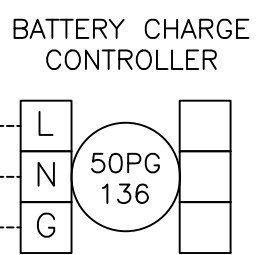
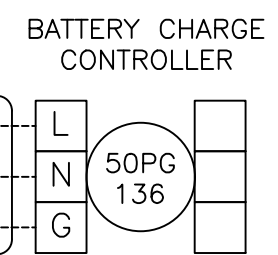
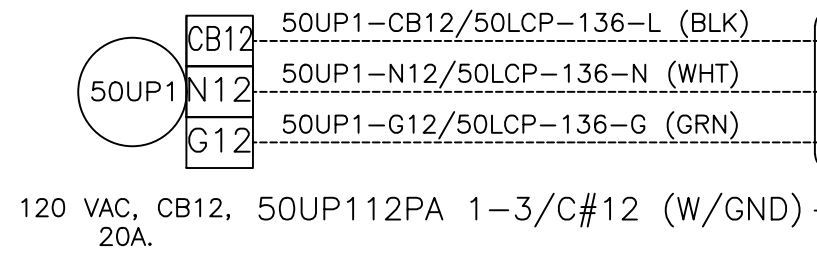
50UP1
DIST. PANEL



TB-B



50UP1
DIST. PANEL



REFERENCE TABLE MORE DETAIL ON
1760A CONSOLIDATED DRAWING
SHEET E-9
DRAWING B-172696

DESCRIPTION	TAG NO.	RTU POINT IDENTIFICATION	RTU	CABLE A	CABLE C	CABLE D	CABLE I
				1-3/C#12 (W/GND)	1-5/C#14 (2SP)	1-5/C#14 (1SP)	1-5/C#14 (1SP)
FROM PANEL 50UP1 TO GENERATOR LCP	50UP-1	-	50LCP-136	50UP110PA			
FROM GENERATOR TO RTU-TC	50LCP-136	-	GEN016		50PB136CA		
FROM GENERATOR FUEL LEVEL 50LI-132 TO RTU-TC	50LIT-132	GEN016H_50LI132	GEN016			50LA131CA	
FROM RTU 50LAL-132 TO RTU-TC	50LAL-132	5GEN016H_50LAL-132	GEN016				50LA132CA

NO.	DATE	REVISIONS	CK.BY
0	7/27/21	FIRST ISSUE	RN
1	3/09/22	UPDATED INFORMATION FROM POINT LIST	VE
2	4/05/22	FU, PLC AND TB INFORMATION DELETED	VE
3	5/15/23	AS BUILT	SM

APPROVED: _____ 2021
DRAWN BY: V.ESPINOZA
CHECKED BY: S.MUDALIYAR
SCALE: NONE

COLORADO RIVER AQUEDUCT
MILE 12 MONITORING STATION UPGRADE
GENERATOR ROOM
GENERATOR CONTROL PANEL 50LCP-136

R2BUILD
23441 S Pointe Dr #280, Laguna Hills, CA 92653
TEL. 818-856-0326
ap@consultcc.com
DRAWING No. : DWG_LOOP08

PROJECT NO.
203
SHEET **09** OF
14

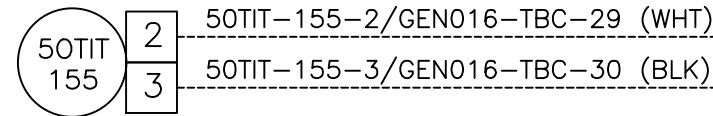
GENERATOR ROOM

GEN016 RTU-TC

GEN016 RTU

SCADA

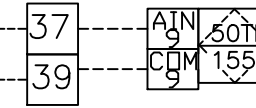
50TIT-155
TEMP INDICATION TRANSMITTER



CABLE C

TB-C

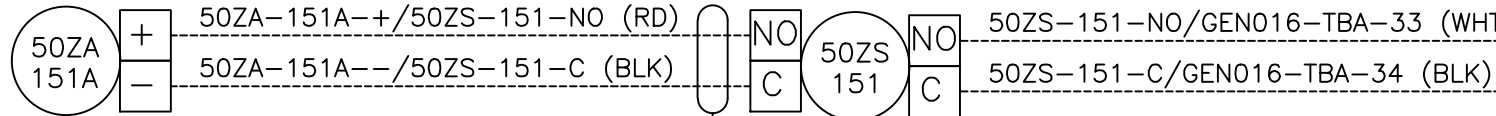
SHLD



GEN016H_50TI155
TEMPERATURE INDICATION
(0-120) F
4-20mA
LOOP POWERED

ACP
DOOR ALARM
50ZA-151A

50ZS-151
DOOR ALARM

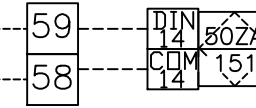


CABLE D

CABLE E

TB-A

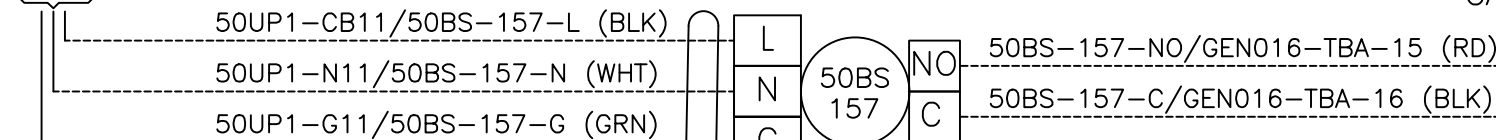
SHLD



GEN016H_50ZA151B
DOOR ALARM

FROM:DWG_LOOP03
50UP1, CB11

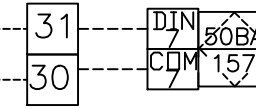
50BS-157
SMOKE DETECTOR



CABLE A

CABLE E

SHLD



GEN016H_50BA157
SMOKE DETECTOR
ALARM

REFERENCE TABLE 1 MORE DETAIL
ON 1760A CONSOLIDATED DRAWING
SHEET E-11
DRAWING B-172698

REFERENCE TABLE 2 MORE DETAIL
ON 1760A CONSOLIDATED DRAWING
SHEET E-11
DRAWING B-172698

DESCRIPTION	TAG NO.	RTU POINT IDENTIFICATION	RTU	CABLE A	CABLE B	CABLE C	CABLE D	CABLE E
				1-3/C#12 (W/GND)	VENDOR FURNISHED CABLE	1-2/C#18 SHLD	1-3/C#14 (1SP)	1-3/C#14 SHLD (1SP)
PROPANE GAS ANALYZER	50AIT-146	GEN016H_50A146	GEN016		50AT146IA	50AT146IB		
TEMPERATURE INDICATOR TRANSMITTER	50TIT-155	GEN016H_50TI155	GEN016			50TT155IA		
DOOR ALARM	50ZS-151	GEN016H_50ZA151B	GEN016				50ZS151CA	50ZS151CB
SMOKE DETECTOR	50BS-157	GEN016H_50BA157	GEN016	50UP111PA				50BA157CA

NO.	DATE	REVISIONS	CK.BY
0	7/27/21	FIRST ISSUE	RN
1	3/10/22	UPDATED INFORMATION FROM POINT LIST	VE
2	4/05/22	FU, PLC AND TB INFORMATION DELETED	VE
3	5/15/23	AS BUILT	SM

APPROVED: _____ 2021
DRAWN BY: V.ESPINOZA
CHECKED BY: S.MUDALIYAR
SCALE: NONE

COLORADO RIVER AQUEDUCT
MILE 12 MONITORING STATION UPGRADE
GENERATOR ROOM
50AIT-146,50TIT-155,50ZS-151 & 50BS-157

R2BUILD
23441 S Pointe Dr #280, Laguna Hills, CA 92653
TEL. 818-856-0326
ap@consultcc.com
DRAWING No. : DWG_LOOP09

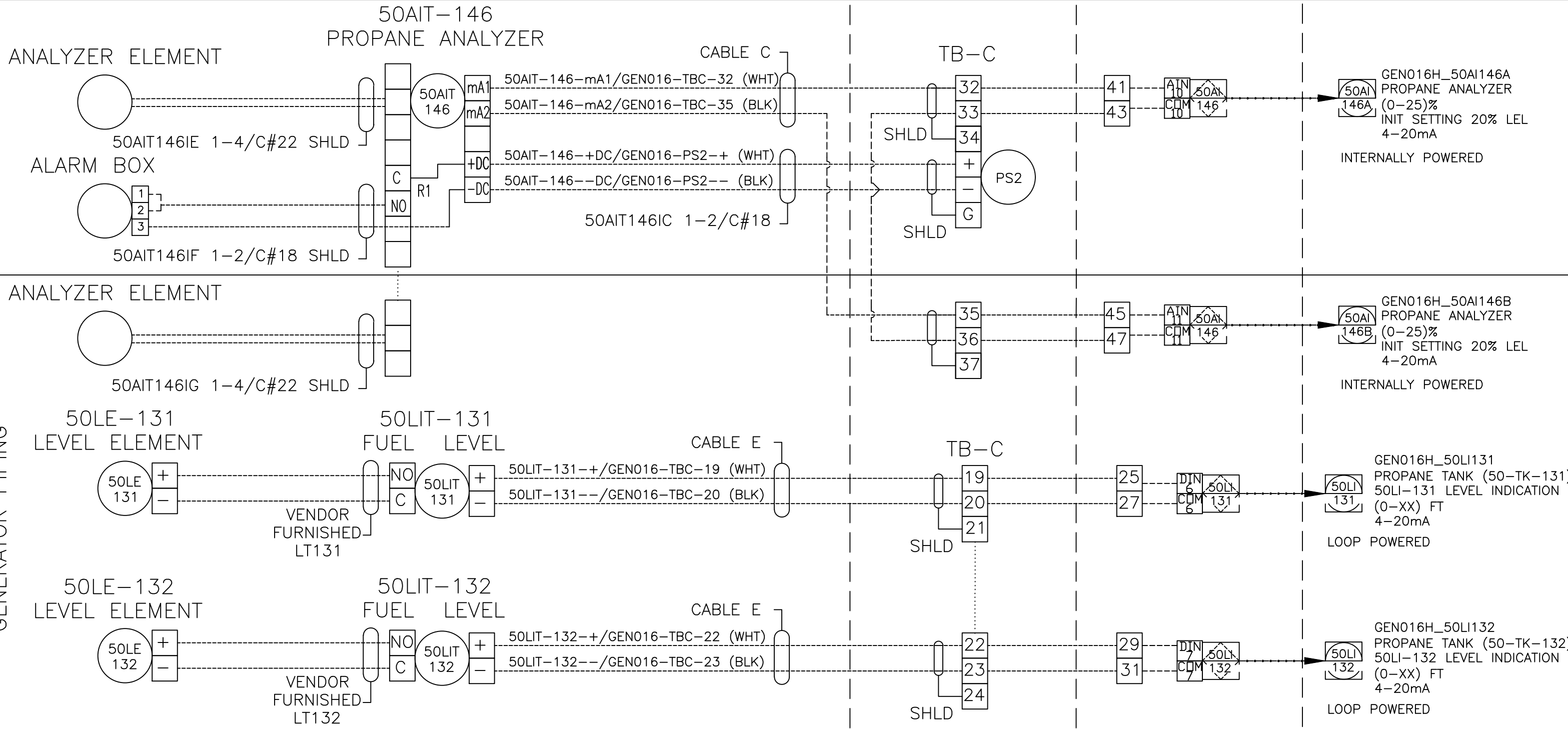
PROJECT NO.
203
SHEET **10** OF
14

GENERATOR ROOM

GEN016 RTU-TC

GEN016 RTU

SCADA



GENERATOR PIPING

REFERENCE TABLE
MORE DETAIL ON 1760A
CONSOLIDATED DRAWING
SHEET E-9
DRAWING B-172641

DESCRIPTION	TAG NO.	RTU POINT IDENTIFICATION	RTU	CABLE B	CABLE C	CABLE E
				VENDOR FURNISHED CABLE	1-2/C#18 SHLD	1-2/C#18 SHLD
FROM GENERATOR FUEL LEVEL 50LI-131 TO RTU-TC	50LIT-131	GEN016H_50LI131	GEN016	X	X	50LT131IB
FROM GENERATOR FUEL LEVEL 50LI-132 TO RTU-TC	50LIT-132	GEN016H_50LI132	GEN016	X	X	50LT132IB

NO.	DATE	REVISIONS	CK. BY
0	7/27/21	FIRST ISSUE	RN
1	3/10/22	UPDATED INFORMATION FROM POINT LIST	VE
2	5/15/23	AS BUILT	SM

APPROVED: _____ 2021
DRAWN BY: V. ESPINOZA
CHECKED BY: S. MUDALIYAR
SCALE: NONE

COLORADO RIVER AQUEDUCT
MILE 12 MONITORING STATION UPGRADE
GENERATOR PIPING
50LIT-131, 50LIT-132 & 50ATI-135

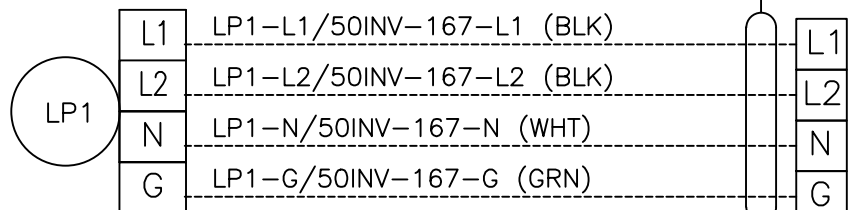
R2BUILD
23441 S Pointe Dr #280, Laguna Hills, CA 92653
TEL. 818-856-0326
ap@consultcc.com
DRAWING No. : DWG_LOOP10

PROJECT NO. **203**
SHEET **11** OF **14**

50INV-167
INVERTER

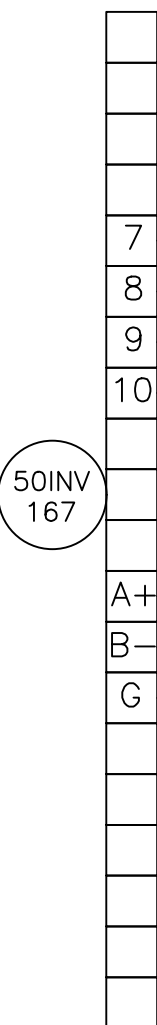
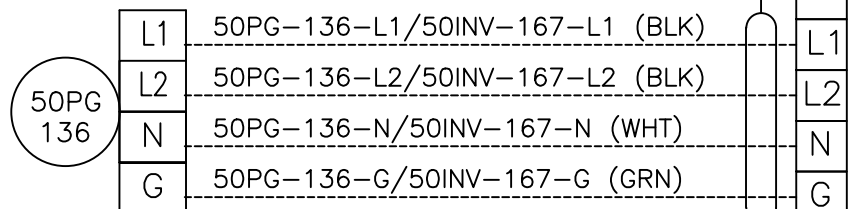
LP1
DIST. PANEL

50INV167PA
1-4/C#6



GENERATOR

50PG136PA
1-4/C#6



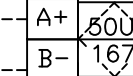
7 --- } LOW BATTERY
8 --- } TO:DWG_LOOP07
9 --- } GENERATOR RUNNING
10 --- } FROM:DWG_LOOP07

A+ --- 50INV-167-A+/GEN016-TBD2-1 (WHT)
B --- 50INV-167-B-/GEN016-TBD2-2 (BLK)
G --- 50INV-167-G/GEN016-TBD2-G (SHLD)

CABLE L

TB-D2

SHLD



REFERENCE TABLE MORE DETAIL ON
1760A CONSOLIDATED DRAWING
SHEET E-9
DRAWING B-172696

DESCRIPTION	TAG NO.	RTU POINT IDENTIFICATION	RTU	CABLE L
				RS485
FROM INVERTER TO RTU	50INV-167	-	GEN016	50INV167IA

NO.	DATE	REVISIONS	CK.BY
0	7/27/21	FIRST ISSUE	RN
1	3/10/22	UPDATED INFORMATION FROM POINT LIST	VE
2	4/05/22	FU, PLC AND TB INFORMATION DELETED	VE
3	5/15/23	AS BUILT	SM

APPROVED _____ 2021
DRAWN BY: V.ESPINOZA
CHECKED BY: S.MUDALIYAR
SCALE: NONE

COLORADO RIVER AQUEDUCT
MILE 12 MONITORING STATION UPGRADE
BATTERY ROOM
INVERTER 50INV-167

R2BUILD
23441 S Pointe Dr #280, Laguna Hills, CA 92653
TEL. 818-856-0326
ap@consultcc.com
DRAWING No. : DWG_LOOP11

PROJECT NO.
203
SHEET **12** OF
14

BATTERY ROOM

GEN016 RTU-TC

GEN016 RTU

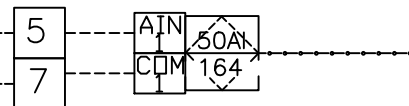
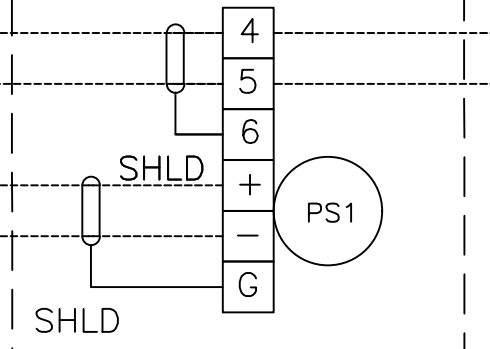
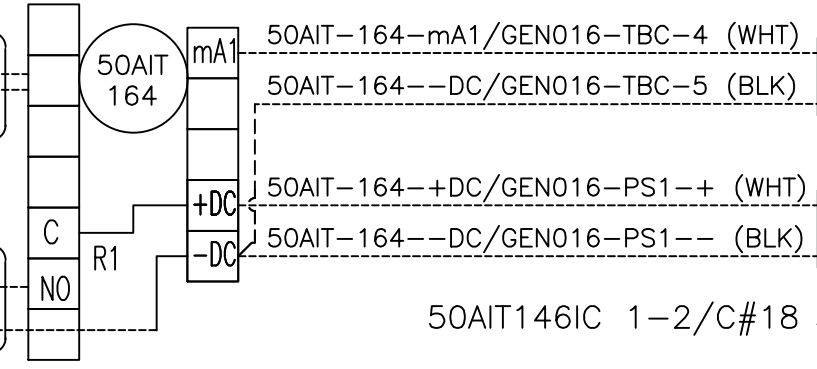
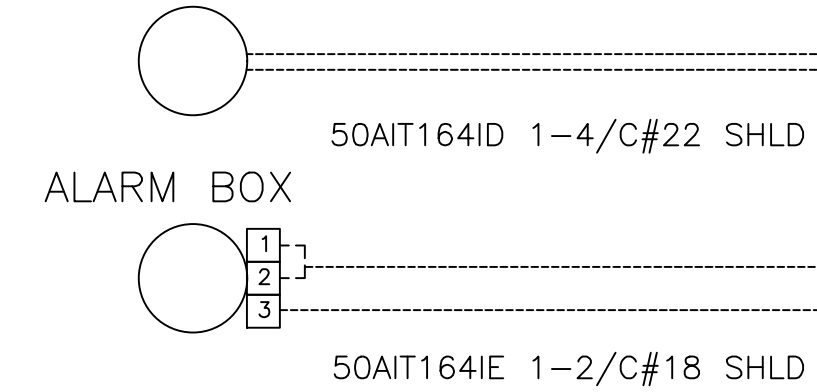
SCADA

50AIT-164
HYDROGEN TRANSMITTER

CABLE C

TB-C

ANALYZER ELEMENT



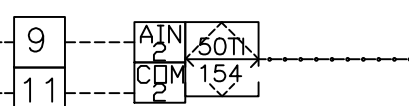
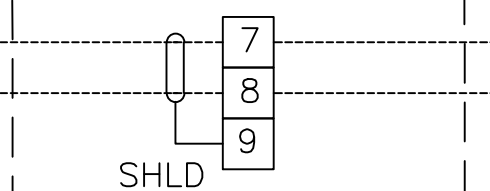
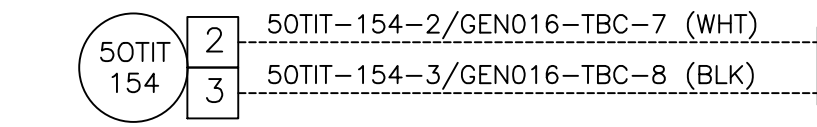
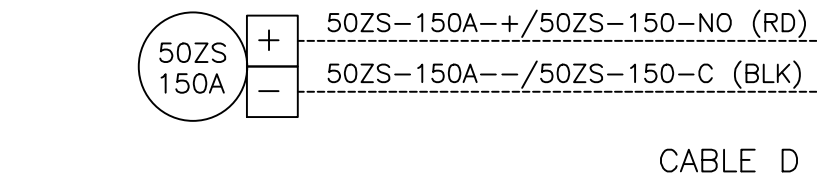
GEN016H_50AI164
HYDROGEN ANALYZER
(0-4)%
INIT SETTING 1%
4-20mA
INTERNALLY POWERED

50TIT-154
TEMP INDICATION TRANSMITTER

CABLE C

TB-C

ACP
DOOR ALARM
50ZS-150A



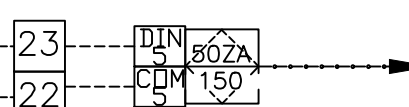
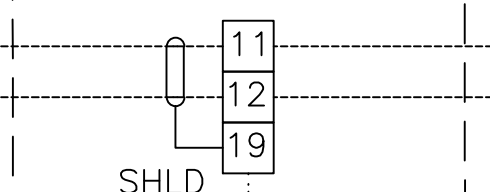
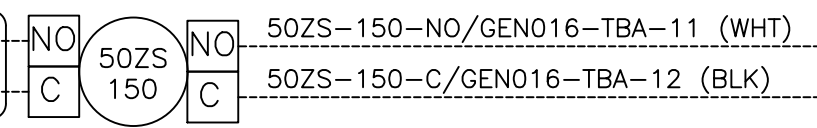
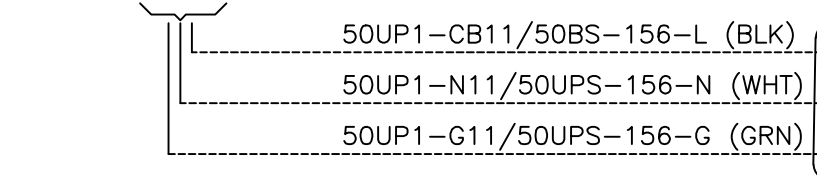
GEN016H_50TI154
TEMPERATURE INDICATION
(0-120) F
4-20mA
LOOP POWERED

50ZS-151
DOOR ALARM

CABLE E

TB-A

FROM:DWG_LOOP03
50UP1, CB11

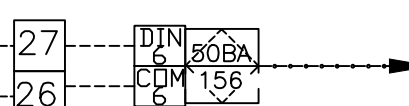
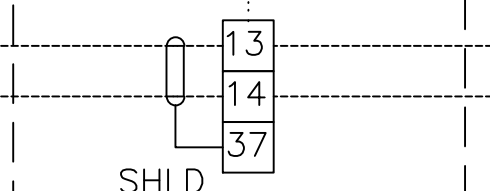
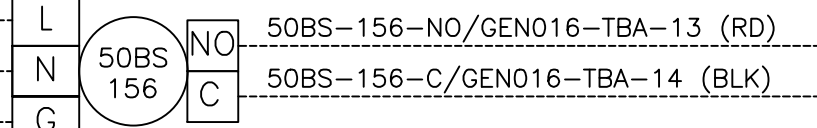
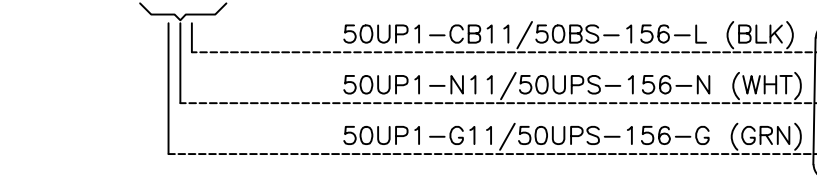


GEN016H_50ZA150B
DOOR ALARM

50BS-156
SMOKE DETECTOR

CABLE E

TB-A



GEN016H_50BA156
SMOKE ALARM

DESCRIPTION	TAG NO.	RTU POINT IDENTIFICATION	RTU	CABLE A	CABLE B	CABLE C	CABLE D	CABLE E
				1-3/C#12 (W/GND)	VENDOR FURNISHED CABLE	1-2/C#18 SHLD	1-3/C#14 (1SP)	1-3/C#14 SHLD (1SP)
HYDROGEN ANALYZER TRANSMITTER	50AIT-164	GEN016H_50AI164	GEN016		50AT164IA	50AT164IB		
TEMPERATURE INDICATOR TRANSMITTER	50TIT-154	GEN016H_50TI154	GEN016			50TT154IA		
DOOR ALARM	50ZS-150	GEN016H_50ZA150B	GEN016				50ZS150CA	50ZS150CB
SMOKE DETECTOR	50BS-156	GEN016H_50BA156	GEN016	50UP111PA			50UP111PA	50BA156CA

REFERENCE TABLE 1 MORE DETAIL
ON 1760A CONSOLIDATED DRAWING
SHEET E-11
DRAWING B-172698

REFERENCE TABLE 2 MORE DETAIL
ON 1760A CONSOLIDATED DRAWING
SHEET E-11
DRAWING B-172698

NO.	DATE	REVISIONS	CK.BY
0	7/27/21	FIRST ISSUE	RN
1	3/10/22	UPDATED INFORMATION FROM POINT LIST	VE
2	4/05/22	FU, PLC AND TB INFORMATION DELETED	VE
3	5/15/23	AS BUILT	SM

APPROVED: _____ 2021
DRAWN BY: V.ESPINOZA
CHECKED BY: S.MUDALIYAR
SCALE: NONE

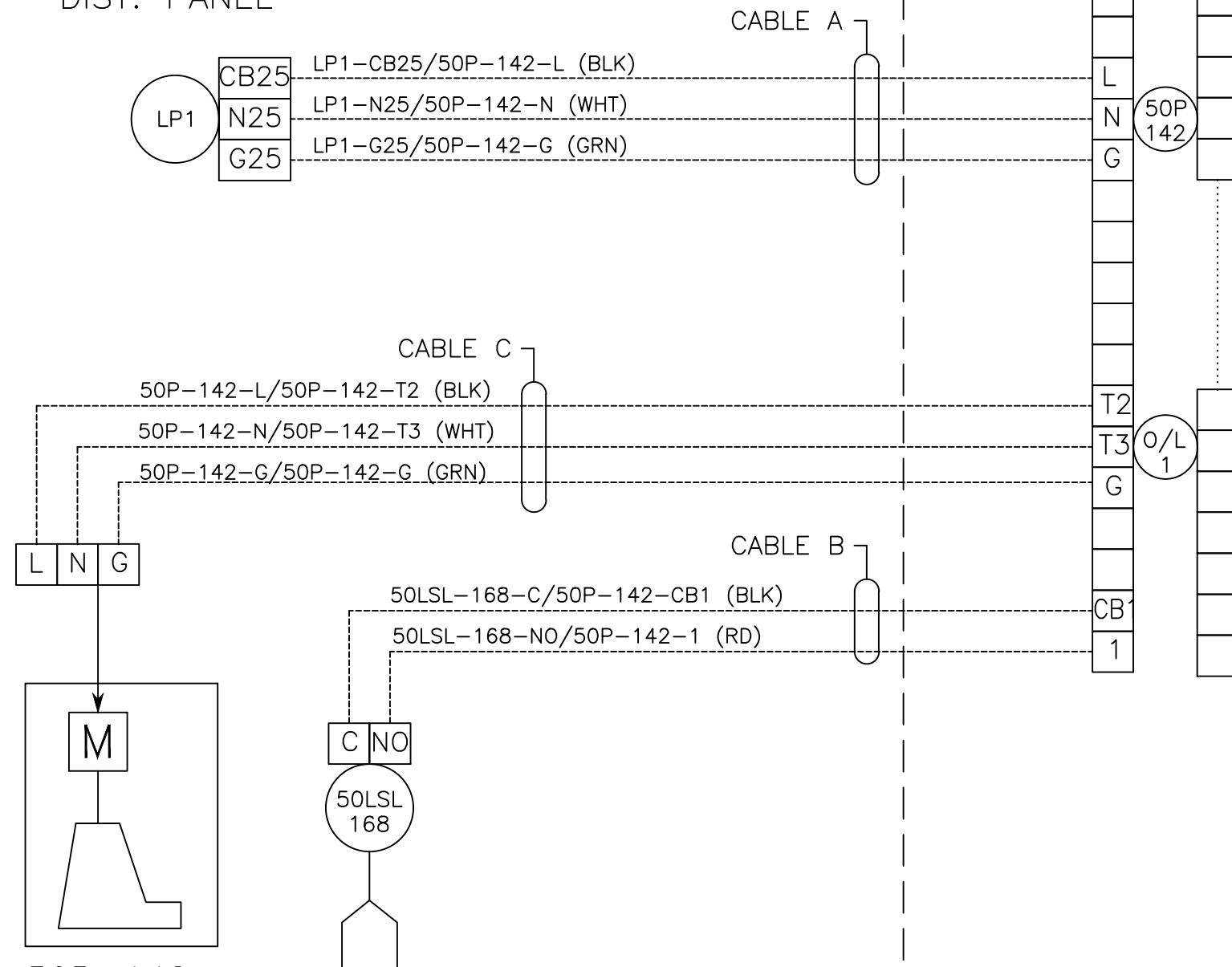
COLORADO RIVER AQUEDUCT
MILE 12 MONITORING STATION UPGRADE
BATTERY ROOM
50AIT-164,50TIT-154,50ZS-151 & 50BS-156

R2BUILD
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DRAWING No. : DWG_LOOP12

PROJECT NO.
203
SHEET **13** OF
14

50LCP-142
SAMPLE PUMP

LP1
DIST. PANEL



50P-142
WATER SAMPLING
PUMP (MFE)

REFERENCE TABLE MORE DETAIL ON
1760A CONSOLIDATED DRAWING
SHEET E-8
DRAWING B-172695

DESCRIPTION	TAG NO.	RTU POINT IDENTIFICATION	RTU	CABLE A	CABLE B	CABLE C
				1-3/C#10 (W/GND)	1-3/C#14 (1 SP)	1-3/C#12 (W/GND)
DIST. PANEL LP1 TO SAMPLE PUMP PNL	LP1	-	50P-142	50LP125PA	 	
SAMPLE PUMP PNL TO LOW LEVEL SWITCH	50P-142	-	50LSL-168	 	50P142CA	
SAMPLE PUMP PNL TO WATER SAMPLING PUMP	50P-142	-	50P-142	 	 	50P142BA

NO.	DATE	REVISIONS	CK. BY
0	7/27/21	FIRST ISSUE	RN
1	3/10/22	UPDATED INFORMATION FROM POINT LIST	VE
2	4/24/23	AS BUILT	VE

APPROVED: _____ 2021
DRAWN BY: V. ESPINOZA
CHECKED BY: S. MUDALIYAR
SCALE: NONE

COLORADO RIVER AQUEDUCT
MILE 12 MONITORING STATION UPGRADE
YARD PIPING PLAN
SAMPLE PUMP 50LCP_142

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DRAWING No. : DWG_LOOP13

PROJECT NO.
203
SHEET **14** OF
14