

BOSSIER CITY RR NE WWTP
EXPANSION & REHABILITATION

BOSSIER CITY PROJECT 10-DQ-06, 10-BI-04 & 10-DQ-07

SUBMITTAL FOR

**Communication Cabling, Switches and Accessories (Security
Camera System)-Records Storage Building**

D-16710-002-A **5/29/15** **Tim Stewart**

Submittal Number Date Max Foote Construction

Certification Statement: By this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data and I have reviewed and approved this submittal and checked and coordinated each item with other applicable approved shop drawings and all contract requirements.

**Red River & NE WWTP
Expansion & Rehab Project
Bossier City, Louisiana**

City Project # 10-DQ-06 & 10-BI-04
MCG# 1002.111.10

**Specification Section
16710 - Communication Cabling, Switches and Accessories
Security Camera System Submittal**

Customer:

Max Foote Construction Company, Inc.
Mandeville, LA
Subcontract No. 260-17000

Vendor:

Revere Control Systems
2240 Rocky Ridge Road
Birmingham, Alabama 35216
Submittal No. N0575-S-15r0-MIS

Date:

May 26, 2015

Table of Contents

A. Notes and Exceptions

B. Security Camera System Components

Data

Sheet	Manufacturer	Catalog No.	Description
B-1	Corning	CCH-01U	19" Rack Mount Fiber Connector Housing
B-2	Corning	CCH-CP12-15T	Multimode Connector Panel
B-3	Eaton	PW9130L700R-XL2U	700VA Rack Mount UPS
B-4	Hoffman	EWMW482425	19" Wall Mount Server Rack
	Black Box	37803-R2	Horizontal Cable Management

C. United Automation Record Storage Building Submittal

D. Drawings

N0575_RR-NETWORK

N0575_RR-SPB-PLC-060

**Red River WWTP Expansion and Rehabilitation Project
NE WWTP Upgrade and Rehabilitation Project
Bossier City, LA**

Records Storage Building Submittal

**Notes & Exceptions
Specification Section 16721 – Fire Alarm System**

1. Whenever possible, we have used the same manufacturer and model numbers used previously on projects for this site.
2. The existing Red River network drawings have been updated for this submittal. Items 62, 142-146 have been added to the BOM for this submittal.

CLOSET CONNECTOR HOUSING

GENERAL

1	Specification Section	:	16710
2	Component Code	:	N/A
3	Tag No.	:	N/A

CLOSET CONNECTOR HOUSING

4	Description	:	Closet Connector Housing (CCH), one rack unit, holds two CCH connector panels
5	Number of Ports	:	Up to 24
6	Fiber Count	:	Up to 48
7	Mounting	:	Rack 19-in, Rack 23-in, Cabinet-mount

MANUFACTURER & NO.

8	Manufacturer	:	Corning
9	Housing Model No.	:	CCH-01U

Closet Connector Housing (CCH)

one rack unit, holds two CCH connector panels

CORNING

Closet connector housings (CCHs) provide interconnect or cross-connect capabilities between outside plant, riser or distribution cables and opto-electronics. Like other LANscape solutions hardware, the housings accept CCH connector panels. In addition, the housings accept CCH cassettes and CCH modules.

From fiber and cable routing and strain relief, to port labeling and termination, these housings reduce the risk of error that can disrupt networks.

The units are designed for rack mounting in 19-in (48 cm) racks or optional 23-in (58 cm) equipment racks (1.75-in EIA hole spacing). They are available in rack space options of 1U (two panels, cassettes or modules), 2U (four panels, cassettes or modules), 3U (six panels, cassettes or modules) and 4U (12 panels, cassettes or modules). The 1U, 2U and 3U options feature a slide-out tray and see-through, removable top covers. The CCH-04U features a clear door, removable front and rear enclosures and a platinum-colored interior for maximum visibility and access.

Every CCH housing is shipped complete with strain relief brackets, routing clips and guides, and mounting brackets for proper installation. Documentation labels are provided and components can be added as needed to construct a fiber distribution frame for any application. All housings include a removable tinted polycarbonate front door. All size housings have field-installable lock kits available for both front and rear doors.

All CCH housings can also be upgraded for pigtail splicing to full fiber capacity and easy, modular fiber management through the use of CCH Splice Cassettes (CCH-CS), or for easy, modular fiber management when using field-installable connectors through the use of CCH Slack Cassettes (CCH-CF).



Features and Benefits

Interconnect and cross-connect capability

Ideal for field connectorization

Removable, translucent top covers (1U, 2U, 3U), removable rear cover (4U)

Visibility and ease of access for installation, testing, and troubleshooting

Internal and external strain-relief options

Flexibility for installation and moves, adds, and changes (MACs)

Accepts panels, modules, and cassettes

Variety of field-termination options

CORNING

Closet Connector Housing (CCH)

one rack unit, holds two CCH connector panels

CORNING

Features and Benefits

Adaptable to use as a modular splice housing

Splices are stored and protected in same footprint

Standards

Approvals and Listings	Meets ANSI/TIA/EIA-568A and 606
RoHS	Free of hazardous substances according to RoHS 2002/95/EG
UL-Listed	United States and Canadian safety standards

Specifications

General Specifications	
Application	Enterprise Networks, Data Center, Carrier Networks
Mounting Type	Rack 19-in, Rack 23-in, Cabinet-mount
Product Type	Fiber Optic Hardware
Environment	Indoor
Mounting Technology	Flush mount, Protruding, Recessed
Access Type	Front and rear access slidable
Lockable	Yes

Design - Hardware	
Housing Type	CCH
Housing Color	Black, transparent top cover
Height Unit	1U
Locking Availability	Front or rear
Number of Panels per Housing	Up to 2
Pigtail Length	2.25 m
Panel or Module Type	CCH
Splice Tray Options	CCH Splice Cassette (CCH-CS)
Housing Material	Powder-coated metal and Polycarbonate Tray
Number of Ports	Up to 24
Fiber Count	Up to 48

CORNING

Closet Connector Housing (CCH)

one rack unit, holds two CCH connector panels

CORNING

Design - Hardware

Cable entry type	External and Internal strain-relief bracket
Number of splice cassettes	Up to 2
Number of Adapters	Up to 24
Number of pigtails	Up to 48

Mechanical Characteristics

Dimensions (HxWxD)	4.4 cm x 48.3 cm x 43 cm (1.75 in x 19 in x 17 in)
Weight	3.9 kg

Ordering Information

Part Number	CCH-01U
Product Description	Closet Connector Housing (CCH), one rack unit, holds two CCH connector panels

Shipping Information

Units per Delivery	1/1
Shipping Weight	4.5 kg (10 lb)
Dimensions (HxWxD)	54.61 cm x 57.15 cm x 19.05 cm (21.5 in x 22.5 in x 7.5 in)



Corning Optical Communications LLC • PO Box 489 • Hickory, NC 28603-0489 USA

800-743-2675 • FAX: 828-325-5060 • International: +1-828-901-5000 • www.corning.com/opcomm

A complete listing of the trademarks of Corning Optical Communications is available at www.corning.com/opcomm/trademarks. All other trademarks are the properties of their respective owners. Corning Optical Communications is ISO 9001 certified.

© 2015 Corning Optical Communications. All rights reserved.

CORNING

CONNECTOR PANEL

GENERAL

1	Specification Section	:	16710
2	Component Code	:	N/A
3	Tag No.	:	N/A

CONNECTOR PANEL

4	Description	:	Closet Connector Housing (CCH) Panel, ST® Compatible adapters, Simplex, 12 F, 62.5 µm multimode (OM1)
5	Fiber Count	:	12
6	Number of Adapters per Panel	:	12

MANUFACTURER & NO.

7	Manufacturer	:	Corning
8	Model No.	:	CCH-CP12-15T

Closet Connector Housing (CCH) Panel, ST® Compatible Adapters

Simplex, 12 F, 62.5 µm multimode (OM1)

CORNING

Corning closet connector housing panels (CCH-CP) are offered in a variety of fiber counts for use with LANscape® solutions hardware products for a “one-size-fits-all” approach. Used with factory-installed or field-installable connectors, these panels provide interconnect or cross-connect capability in a housing at main cross-connections, intermediate cross-connections, telecommunication rooms or work areas. Available with a variety of industry-standard adapter types, the CCH-CP provides an efficient way to securely mate two connectors and offers multimode and single-mode applications.

Features and Benefits

Universal design approach

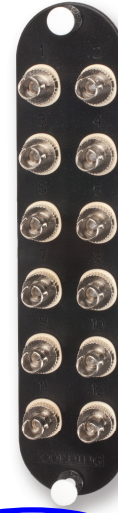
One-size-fits-all LANscape® Solutions housings

Broadest range of fiber count and adapter types

Solutions for all needs

Colored icon labeling

Easy connector identification



Part Number CCH-CP12-15T



Part Number: CCH-CP12-15T

Closet Connector Housing (CCH) Panel, ST[®] Compatible Adapters

Simplex, 12 F, 62.5 µm multimode (OM1)

CORNING

Specifications

General Specifications

Application	Enterprise Networks, Data Center LAN/SAN
Product Type	Panels & Modules
Fiber Category	62.5 µm MM (OM1)

Design - Hardware

Fiber Count	12
Number of Adapters per Panel	12

Design Adapter

Adapter Housing Color	Beige
Adapter Housing Material	Metal
Adapter Type	ST [®] Compatible
Insert Material	Ceramic

Chemical Characteristics

RoHS	Free of hazardous substances according to RoHS 2002/95/EG
------	---

Ordering Information

Part Number	CCH-CP12-15T
Product Description	Closet Connector Housing (CCH) Panel, ST [®] Compatible adapters, Simplex, 12 F, 62.5 µm multimode (OM1)

Shipping Information

Units per Delivery	1/1
Package Contents	CCH Adapter Panel with installation guide

Closet Connector Housing (CCH) Panel, ST[®] Compatible Adapters

Simplex, 12 F, 62.5 µm multimode (OM1)

The Corning logo is a blue square with the word "CORNING" in white, serif, uppercase letters.

Notes



Corning Optical Communications LLC • PO Box 489 • Hickory, NC 28603-0489 USA

800-743-2675 • FAX: 828-325-5060 • International: +1-828-901-5000 • www.corning.com/opcomm

A complete listing of the trademarks of Corning Optical Communications is available at www.corning.com/opcomm/trademarks. All other trademarks are the properties of their respective owners. Corning Optical Communications is ISO 9001 certified. © 2015 Corning Optical Communications. All rights reserved.

RACKMOUNT UPS

GENERAL

1	Specification Section	:	16710
2	Component Code	:	N/A
3	Tag No.	:	N/A

RACKMOUNT UPS

4	Type	:	9130 Rackmount UPS
5	Power rating (VA/watts)	:	700/630
6	Input	:	5-15P
7	Output	:	(6) 5-15R
8	Input cord length	:	6 ft.

MANUFACTURER & NO.

9	Manufacturer	:	Eaton
10	Model No.	:	PW9130L700R-XL2U



Eaton 9130 Rackmount UPS

Online power quality and scalable battery runtimes for IT equipment

Eaton 9130 Rackmount features and benefits

Reliability: Online, double-conversion topology ensures that loads are powered with the highest level of protection available. Mission-critical applications benefit from zero transfer time to battery and an internal automatic bypass. In addition, premium power filtering is ideal for harsh environments where harmonics and other voltage disturbances may occur.

Increased battery life: Eaton® offers ABM® technology that increases battery service life by 50 percent. ABM uses an advanced, three-stage charging technique and closely monitors battery health to provide advanced notice when batteries need replacement.

More power: The 9130 allows you to connect more devices and leave room for expanding IT systems by providing up to 28 percent more wattage compared to traditional UPSs.

Manageability:

- Load segmentation: Grouped outlets with remote control capability enable IT managers to cycle or shed loads through a webcard interface or based upon a preprogrammed schedule.
- Eaton's Intelligent Power Manager (IPM): IPM software provides network power management, ensuring data and system integrity. With IPM, you can have access to easy, versatile, remote monitoring and management of multiple devices.

LCD interface: The bright, intuitive LCD user interface simplifies UPS monitoring and management. The user-friendly menu allows you to view all critical UPS information in a single view.

Intelligent Power Software Suite

By integrating the bundled Intelligent Power® Software Suite (IPSS), you can monitor and manage your network power devices. IPSS enables you to:

- Seamlessly integrate with VMware's vCenter™ Server™ virtualization management solution, as well as virtualization platforms such as Citrix® XenServer, Microsoft SCVMM™, Red Hat® and other Xen® open source platforms
- Initiate live migration of virtual machines (VMs) to automatically and transparently migrate them during power disruptions to unaffected devices with systems such as VMware vMotion™ and Microsoft Live Migration
- Gracefully shutdown computers, VMs and host servers during an extended power outage

To learn more, please visit: Eaton.com/intelligentpower



Microsoft Partner Network

Services and support

Eaton provides 24x7 product support. From battery replacement to full UPS service plans, Eaton has one of the top service models in the industry.



Powering Business Worldwide

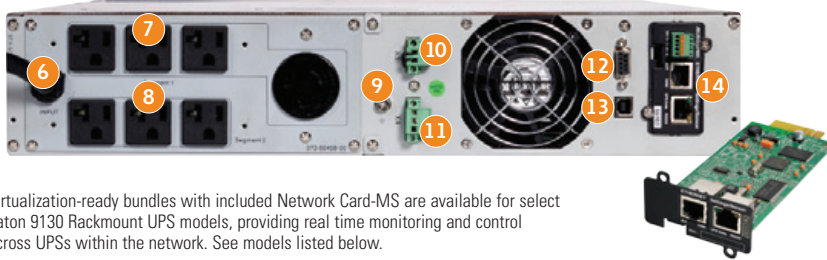
Front panel overview



- 1 Rackmounting ears
- 2 Connect EBMs via front panel
- 3 Hot-swappable batteries
- 4 4-button menu with LCD interface and LED indicators
- 5 2U rack height

Back panel overview

Model PW9130L2000R-XL2U (2 kVA, 120V output, 50/60 Hz)



*Virtualization-ready bundles with included Network Card-MS are available for select Eaton 9130 Rackmount UPS models, providing real time monitoring and control across UPSs within the network. See models listed below.

- 6 6 ft. (1.8 m) input cord with 5-20P
- 7 Load segment 1 with (3) 5-20R and (1) L5-20R
- 8 Load segment 2 with (3) 5-20R
- 9 Ground bonding screw
- 10 RPO (remote power off) port
- 11 Standard relay output contact
- 12 RS-232 port
- 13 USB port
- 14 Communications bay with optional Network-MS card*

9130 Rackmount model selection guide

Catalog number	Power rating (VA/watts)	Input	Output	Dimensions (HxWxD, in.)	Weight (lb.)				
North American models: 120V, 50/60 Hz									
PW9130L700R-XL2U	700/630	5-15P ¹	(6) 5-15R	3.4 (2U) x 17.2 x 17.7	35.3				
PW9130L1000R-XL2U	1000/900	5-15P ¹	(6) 5-15R	3.4 (2U) x 17.2 x 17.7	35.3				
PW9130L1500R-XL2U	1500/1350	5-15P ¹	(6) 5-15R	3.4 (2U) x 17.2 x 17.7	43.0				
PW9130L2000R-XL2U	2000/1800	5-20P ¹	(6) 5-20R, (1) L5-20R	3.4 (2U) x 17.2 x 23.6	63.9				
PW9130L2500R-XL2U	2500/2250	L5-30P ¹	(6) 5-20R, (1) L5-30R	3.4 (2U) x 17.2 x 23.6	65.0				
PW9130L3000R-XL2U	3000/2700	L5-30P ¹	(6) 5-20R, (1) L5-30R	3.4 (2U) x 17.2 x 23.6	65.0				
North American models: 120V, 50/60 Hz Virtualization-ready bundles with Network Card-MS									
PW9130L1500R-XL2UN	1500/1350	5-15P ¹	(6) 5-15R	3.4 (2U) x 17.3 x 16.9	43.0				
PW9130L2000R-XL2UN	2000/1800	5-20P ¹	(6) 5-20R, (1) L5-20R	3.4 (2U) x 17.3 x 22.6	63.9				
PW9130L3000R-XL2UN	3000/2700	L5-30P ¹	(6) 5-20R, (1) L5-30R	3.4 (2U) x 17.3 x 22.6	65.0				
Global models: 208V, 50/60 Hz									
PW9130G3000R-XL2U	3000/2700	L6-20P ¹	1) L6-30R, (1) L6-20R, (2) 6-20R	3.4 (2U) x 17.2 x 23.6	65.0				
PW9130G3000R-XL2UEU	3000/2700	L6-20P ¹	(8) C13, (1) C19	3.4 (2U) x 17.2 x 23.6	65.0				
International models: 230V, 50/60 Hz									
PW9130i1000R-XL2U	1000/900	C14 ²	(6) C13	3.4 (2U) x 17.2 x 17.7	35.3				
PW9130i1500R-XL2U	1500/1350	C14 ²	(6) C13	3.4 (2U) x 17.2 x 17.7	43.0				
PW9130i2000R-XL2U	2000/1800	C14 ²	(8) C13, (1) C19	3.4 (2U) x 17.2 x 23.6	63.9				
PW9130i3000R-XL2U	3000/2700	C20 ³	(8) C13, (1) C19	3.4 (2U) x 17.2 x 23.6	65.0				
Extended battery modules									
PW9130N1000R-EBM2U	Works with 700/1000 VA models, where available			3.4 (2U) x 17.2 x 17.7	48.7				
PW9130N1500R-EBM2U	Works with 1500 VA models			3.4 (2U) x 17.2 x 17.7	62.0				
PW9130N3000R-EBM2U	Works with 2000-3000 VA models, where available			3.4 (2U) x 17.2 x 23.6	90.6				
Rackmount bypass accessories									
Catalog number	Style number	Input plug	Breaker	Max kW	Function	Cord (ft.)	Orientation	Receptacles	Dimensions (HxWxD, in.)
EHBPL1500R-PDU1U	58115	5-15P	None	1.44	BA	8	2U	(6) 5-15R	2.1 x 17.3 x 3.8
EHBPL2000R-PDU1U	58120	5-20P	None	1.92	BA	8	2U	(6) 5-15R	2.1 x 17.3 x 3.8
EHBPL3000R-PDU1U	58130	L5-30P	(2) 20A	2.88	BA	3.3	2U	(5) 5-20R	2.1 x 17.3 x 3.8
EHBPI3000R-PDU1UIEC	68433	C20	(1) 20A	3000	BA		2U	(1) C19, (6) C13	2.1 x 17.3 x 4.8

1. Input cord length is 6 ft.
2. C14, w/ detachable L6-20P.
3. C20, w/ detachable L6-20P.

Additional notes:

TAA-compliant models: Eaton now offers TAA-compliant models for the 9130.

Please visit Eaton.com/taups for model specific information.

Other available options

- Environmental Monitoring Probe
- PowerPass Distribution Modules
- 1U HotSwap Maintenance Bypass

Visit Eaton.com/9130RM for details.

Eaton

1000 Eaton Boulevard
Cleveland, OH 44122
Eaton.com

© 2014 Eaton
All Rights Reserved
Printed in USA
9130RFXA
September 2014

For complete battery runtime information and to interact with the 9130 Rackmount UPS, please visit: **Eaton.com/9130RM**

Eaton, ABM and Intelligent Power are registered trademarks of Eaton.

All other trademarks are property of their respective owners.

SERVER RACK

GENERAL

1	Specification Section	:	16710
2	Component Code	:	N/A
3	Tag No.	:	N/A

SERVER RACK

4	Type	:	ACCESSPLUS® II Double-Hinge, Type 1
5	Rack Units	:	26
6	Material	:	Pretreated steel coated with RAL 9005 black light-textured, low-gloss polyester powder paint

MANUFACTURER & NO.

7	Manufacturer	:	Hoffman
8	Model No.	:	EWMW482425
9	Cable Management No.	:	Black Box 37803-R2

ACCESSPLUS® II Double-Hinge

ACCESSPLUS® II Double-Hinge, Type 1



Industry Standards

UL 508A; Type 1; File No. E61997
cUL Listed per CSA C22.2 No. 182.4; File No. E230874

EIA 310-D
NEMA/EEMAC Type 1
EIC 60529 IP20
Per BICSI TDMM Tenth edition, Chapter 7,
Telecommunication Enclosures (TE)

Application

ACCESSPLUS® II Cabinets provide security, equipment access, cooling and support for network and other 19-in. rack-mount equipment. The cabinet has three components: front door, center section and wall section.

Features

- Double-hinged for easy equipment access; center section provides 19-in. rack mounting per EIA universal spacing and is accessed through the front door or swing the center section away from the wall section for rear access
- Round corners; no sharp edges
- Front door has either a solid steel or hardened, tinted safety-glass window door for superior scratch resistance
- Center section easily removed from rear section; tool-less one-person installation possible
- Self-grounding, plated steel rack angles fully adjustable within center section
- Wall section provides cable entry and cable management with knockouts or gland plates
- Gland plate model provides easy retrofit and fast installation and allows for pre-terminated cables or pre-wired patch panels; no need to re-terminate and test
- Self-locking center-to-wall section latches in two locations
- Front access to all latches (no exposed side latches); cabinet can be installed tightly in corners
- Vented sides provide cross flow ventilation to improve heat dissipation
- Vertical cable manager included in 28-in.-wide models
- A full line of accessories is available

Specifications

Front Door (window or solid steel)

- Composite frame (injection molded top and bottom with extruded composite sides)
- 140-degree opening door
- Field-reversible (left or right) hinge
- Quarter-turn key lock, two keys included
- Window door is scratch-resistant 1/4-in. tinted safety glass
- Solid door has 16 gauge steel insert with matching black finish

Center Section

- Welded 14 gauge steel
- Solid top of center sections provides protection against falling debris
- Ventilated sides (to which fans can be added)
- Self-latching closure connects center section to wall section
- Self-alignment ramp supports center section to wall section
- Heavy duty center-to-rear section hinge with quick-release self-retained hinge pin eases wall installation

Rack-Mounting Angles

- 12 gauge, plated steel
- EIA universal spaced 19-in. rack-mounting holes
- RU marked from bottom to top
- Tapped 10-32 holes, 20 mounting screws included

Rear Wall Section

- Welded 14 gauge steel
- Radius corners; no sharp edges
- Available with knockouts or gland plates
- Raised pads for accessory mounting
- Cable tie-down points for cable management
- Keyhole mounting holes allow wall section to be mounted over fasteners and eases installation
- Three cable-entry grommets

Finish

Pretreated steel coated with RAL 9005 black light-textured, low-gloss polyester powder paint. Other finishes available—contact Hoffman Customer Service.

Bulletin: DWDH1

Catalog Number	AxBxC in.	AxBxC mm	Rack Units	Additional Rack Angles (S=Square Hole) (T=Tapped Hole)
EWMW242418	23.60 x 23.62 x 18.20	600 x 600 x 462	12	EWMR24T or EWMR24S
EWMW362418	36.02 x 23.62 x 18.20	915 x 600 x 462	19	EWMR36T or EWMR36S
EWMW482418	48.03 x 23.62 x 18.20	1220 x 600 x 462	26	EWMR48T or EWMR48S
EWMW602418	60.04 x 23.62 x 18.20	1525 x 600 x 462	32	EWMR60T or EWMR60S
EWMW722418	72.05 x 23.62 x 18.20	1830 x 600 x 462	39	EWMR72T or EWMR72S
EWMW242425	23.62 x 23.62 x 25.09	600 x 600 x 637	12	EWMR24T or EWMR24S
EWMW362425	36.02 x 23.62 x 25.09	915 x 600 x 637	19	EWMR36T or EWMR36S
EWMW482425	48.03 x 23.62 x 25.09	1220 x 600 x 637	26	EWMR48T or EWMR48S
EWMW602425	60.04 x 23.62 x 25.09	1525 x 600 x 637	32	EWMR60T or EWMR60S
EWMW722425	72.05 x 23.62 x 25.09	1830 x 600 x 637	39	EWMR72T or EWMR72S
EWMW242430	23.62 x 23.62 x 30.01	600 x 600 x 762	12	EWMR24T or EWMR24S
EWMW362430	36.02 x 23.62 x 30.01	915 x 600 x 762	19	EWMR36T or EWMR36S
EWMW482430	48.03 x 23.62 x 30.01	1220 x 600 x 762	26	EWMR48T or EWMR48S

B dimension does not include wall-to-center section hinge.





Security Camera Systems

For

**Record Storage Building
Red River WWTP
Bossier City, LA**

**Revere Control Systems
2240 Rocky Ridge Road
Birmingham, AL 35216**

**Engineer
Manchac Consulting Group, Inc.
Quail Run Drive, Suite A
Baton Rouge, LA. 70808**

Waste Water System Improvements

Record Storage Building

Red River WWTP

- **Switch REC-NSW-080 (qty: 1)**
Switch has 16 POE+ ports
Redundant power supplies
SFP Gigabit module (qty: 2)
- **Cameras**
Axis Q-6042 (qty: 6) includes midspan

Product information

MACH104-16TX-PoEP -R

Industrial Ethernet:Workgroup Switches:Gigabit/10 Gigabit Ethernet PoE Workgroup Switches, 22-24 Ports:MACH104-16TX-PoEP -R

<http://e-catalog.hirschmann.com/link/57078-24455-49848-85613-158780/en/conf/uistate>

Name		MACH104-16TX-PoEP -R
		
		20 Port Gigabit Ethernet Industrial Workgroup Switch (16 x GE TX PoEPlus Ports, 4 x GE SFP combo Ports), managed, Software Layer 2 Professional, Store-and-Forward-Switching, IPv6 Ready
Delivery informations		
Availability		available
Product description		
Description		20 Port Gigabit Ethernet Industrial Workgroup Switch (16 x GE TX PoEPlus Ports, 4 x GE SFP combo Ports), managed, Software Layer 2 Professional, Store-and-Forward-Switching, IPv6 Ready
Port type and quantity		20 Ports geamt; 16 x (10/100/1000 BASE-TX, RJ45) PoEPlus und 4 x Gigabit Combo Ports (10/100/1000 BASE-TX, RJ45 oder 100/1000 BASE-FX, SFP)
Type		MACH104-16TX-PoEP -R
Order No.		942 026-001
More Interfaces		
Power supply/signaling contact		1 x terminal block 2-pins, contact manually or automatically (max. 1 A, 24 V DC or 24 V AC)
V.24 interface		1 x RJ11 socket, serial interface for device configuration
USB interface		1 x USB to connect the AutoConfiguration Adapter ACA21-USB
Network size - length of cable		
Twisted pair (TP)		0 m ... 100 m
Multimode fiber (MM) 50/125 µm		see SFP LWL-Module M-FAST SFP-MM/LC and SFP LWL-Module M-SFP-SX/LC
Multimode fiber (MM) 62.5/125 µm		see SFP LWL-Module M-FAST SFP-MM/LC and SFP LWL-Module M-SFP-SX/LC
Single mode fiber (SM) 9/125 µm		see SFP LWL-Module M-FAST SFP-SM/LC und SFP LWL-Module M-SFP-LX/LC
Single mode fiber (LH) 9/125 µm (long haul transceiver)		see SFP LWL-Module M-FAST SFP-SM+/LC
10G-Multimode fiber (MM) 50/125 µm		n/a
10G-Single mode fiber (SM) 9/125 µm		n/a
Network size - cascadiability		
Line - / star topology		any
Ring structure (HIPER-Ring) quantity switches		50 (reconfiguration time < 0.3 sec.)
Power requirements		
Operating voltage		100-240 VAC, 50-60 Hz (redundant)
Heat dissipation		119 Btu (IT) h
Heat dissipation at max. PoE power		235 Btu (IT) h
Power consumption		35 W
Software		
Management		serial Interface, web interface, SNMP V1/V2, HiVision file transfer SW HTTP/TFTP, LLDP-MED
Diagnostics		LEDs, log-file, syslog, relay contact, RMON, port mirroring 1:1 and n:1, egress/ingress traffic configurable, topology discovery 802.1AB, cable tester (TX), address conflict detection, network error detection, SFP diagnostic [temperature, optical input and output power (µW and dBm)], Trap for configuration saving and changing, duplex mismatch detection, disable learning, Port Monitor
Configuration		Comand line interface (CLI), TELNET, BootP, DHCP, DHCP option 82, HiDiscovery, easy device exchange with auto-configuration adapter ACA21-USB (automatic software and/or configuration upload), automatic script load from ACA21, integrated DHCP server per port, DHCP relay, automatic invalid configuration undo, Offline Configuration, SFP Whitelist, ARC automatic ring configuration (MRP), automatic port shutdown (link flapping), configuration signature (water marking), overload detection
Security		ACL/QoS, ACL Layer 4 fragment support, Port Security (IP and MAC) with multiple addresses (MAC 50 per port), SNMP V3, SSH, Authentication (IEEE802.1x), 802.1x Multi Cliant Authentication, Guest VLAN and Unauthenticated VLAN, Port based Radius VLAN assignment, MAC notification
Redundancy functions		HIPER-Ring, MRP, MSTP, RSTP - IEEE802.1D-2004, MRP and RSTP gleichzeitig, Link Aggregation
Filter		QoS 8 classes, prioritisation (IEEE 802.1D/p), VLAN (IEEE 802.1Q), Voice VLAN, shared VLAN learning, Q-in-Q double VLAN tagging, multicast IGMP v1/v2/v3, (snooping/querier), multicast detection unknown multicast, broadcast-, unicast-, multicast limiter, fast aging, GMRP IEEE 802.1D, Jumbo Frame Support,



HIRSCHMANN

A BELDEN BRAND

Industrial Ethernet: Workgroup Switches: Gigabit/10 Gigabit Ethernet PoE Workgroup Switches, 22-24 Ports: MACH104-16TX-PoEP - R

<http://e-catalog.hirschmann.com/link/57078-24455-49848-85613-158780/en/conf/uistate>

	Industrial Profiles, EtherNet/IP und PROFINET (2.2 PDEV, GSDML Stand-alone generator, automatic device exchange) profiles included, configuration and diagnostic via automation, software tools like e.g. STEP7, oder Control Logix IEC61850 protocol (MMS Server, Switch Model)
Time synchronisation	PTP IEEE 1588 v1/v2 Boundary and Transparent Clock hardware time stamping with accuracies of 30ns, SNTP server, realtime clock with energy buffer
Flow control	Flow Control 802.3x, Port Priority 802.1D/p, Priority (TOS/DIFFSERV), Prio (MAC/IP), Prio Mapping (TOS Layer2), Traffic Shaping (Unicast, Multicast, Broadcast), Ingress / Egress
Ambient conditions	
Operating temperature	0 °C ... 50 °C
Storage/transport temperature	-20 °C ... 85 °C
Relative humidity (non-condensing)	10 % ... 95 %
MTBF	n/a
Mechanical construction	
Dimensions (W x H x D)	448 mm x 44 mm x 345 mm
Mounting	19" control cabinet
Weight	4500 g
Protection class	IP20
Mechanical stability	
IEC 60068-2-27 shock	15 g, 11 ms duration, 18 shocks
IEC 60068-2-6 vibration	3.5 mm, 5–8.4 Hz, 10 cycles, 1 octave/min; 1 g, 8.4–150 Hz, 10 cycles, 1 octave/min
EMC interference immunity	
EN 61000-4-2 electrostatic discharge (ESD)	4 kV contact discharge, 8 kV air discharge
EN 61000-4-3 electromagnetic field	10 V/m (80-3000 MHz)
EN 61000-4-4 fast transients (burst)	2 kV power line, 4 kV data line
EN 61000-4-5 surge voltage	power line: 2 kV (line/earth), 1 kV (line/line), 4 kV data line
EN 61000-4-6 conducted immunity	10 V (150 kHz-80 MHz)
EMC emitted immunity	
FCC CFR47 Part 15	FCC 47 CFR Part 15 Class A
EN 55022	EN 55022 Class A
Approvals	
Safety of industrial control equipment	cUL 508
Safety of information technology equipment	cUL 60950-1
Scope of delivery and accessories	
Scope of delivery	Device, terminal block for signal contact, 2 brackets with fasteningscrews (pre-assembled), housing feet - stick-on, non-heating appliance cable - Euro model, CD-ROM with user manual, installation user manual
Accessories to order separately	Fast Ethernet SFP modules, Gigabit Ethernet SFP modules, autoConfiguration Adapter ACA21-USB, terminal cable, Industrial Hivision Network Management software

For more information please contact:

Hirschmann Automation and Control GmbH

Stuttgarter Strasse 45-51

72654 Neckartenzlingen

Germany

Phone: +49 7127/14-1809

E-Mail: inet-sales@belden.com

The information published in the websites has been compiled as carefully as possible. It is subject to alteration without notice in technical as well as in price-related/commercial respect. The complete information and data were available on user documentation. Mandatory information can only be obtained by a concrete query.

**HIRSCHMANN**A **BELDEN** BRAND**The MACH4000 SFP Fiber Optic Fast-, Gigabit- and 10Gigabit- Ethernet Transceivers****SFP fiber optic Fast-Ethernet transceiver**

Description SFP fiber optic Fast-Ethernet transceiver				
Type	M-FAST SFP-LH/LC	M-FAST SFP-SM+/LC	M-FAST SFP-SM/LC	M-FAST SFP-MM/LC
Order number	943 868-001	943 867-001	943 866-001	943 865-001

Network size – length of cable

Multimode fiber (MM) 50/125 µm (62.5/125 µm)				5km (4 km at 62.5/125 µm)
Single mode fiber (SM) 9/125 µm	40 – 104 km	25 – 65 km	25 km	

Technical data

Port type and quantity	1x100BASE-FX with LC-Connector
Diagnostics	Optical input- and output power, transceiver temperature (diagnostic not for M-FAST SFP-MM/LC)
Operating voltage	Power supply via media module
Power consumption	1W
Operating temperature	0° C up to + 60° C

SFP fiber optic Gigabit-Ethernet transceiver

Description SFP fiber optic Gigabit-Ethernet transceiver				
Type	M-SFP-LH+/LC	M-SFP-LH/LC	M-SFP-LX/LC	M-SFP-SX/LC
Order number	943 049-001	943 042-001	943 015-001	943 014-001

Network size – length of cable

Multimode fiber (MM) 50/125 µm (62.5/125 µm)				550m (275m at 62.5/125 µm)
Single mode fiber (SM) 9/125 µm	60 – 120 km	24 – 72 km	20 km	

Technical data

Port type and quantity	1x1000BASE-SX with LC-Connector
Diagnostics	Optical input- and output power, transceiver temperature
Operating voltage	Power supply via media module
Power consumption	1W
Operating temperature	0° C up to + 60° C

XFP fiber optic 10Gigabit-Ethernet transceiver

Description XFP fiber optic 10Gigabit-Ethernet transceiver				
Type	M-XFP-ZR/LC	M-XFP-ER/LC	M-XFP-LR/LC	M-XFP-SR/LC
Order number	943 921-001	943 920-001	943 919-001	943 917-001

Network size – length of cable

Multimode fiber (MM) 50/125 µm (62.5/125 µm)				300m (26m at 62.5/125 µm)
Single mode fiber (SM) 9/125 µm	40 – 80 km	10 – 40 km	10 km	

Technical data

Port type and quantity	1x10GBASE-SX with LC-Connector
Diagnostics	Optical input- and output power, transceiver temperature
Operating voltage	Power supply via media module
Power consumption	3W
Operating temperature	0° C up to + 60° C

AXIS Q6042 PTZ Dome Network Camera

Indoor, high-speed PTZ dome with 36x zoom



- > 36x optical zoom and Extended D1
- > IP52-rated protection against dust and dripping water
- > Shock detection
- > Enhanced intelligent video
- > PoE+

AXIS Q6042 is an advanced indoor PTZ dome, offering higher resolution than normal D1, 36x optical zoom, and fast and precise pan/tilt performance for wide area coverage and great detail when zooming in. It is ideal for airports, train stations, arenas, shopping malls and warehouses.

Supporting round-the-clock pan/tilt/zoom operation, the robust AXIS Q6042 can be automatically directed to 256 preset positions using guard tour. With endless 360° pan and high zoom, the camera can monitor an extremely wide area and provide detailed surveillance. The camera's adjustable day/night functionality ensures high image quality even in low light conditions.

AXIS Q6042 has IP52-rated protection against dust and dripping water, and support for Power over Ethernet Plus (IEEE 802.3at) using the supplied High PoE midspan. The PTZ dome also has shock detection, which mechanically detects and triggers an alarm if the camera has been hit. In vibrating conditions, the camera's electronic image

stabilization reduces the effects of camera vibrations on the view to deliver clearer video.

AXIS Q6042's built-in video analytics include Active Gatekeeper, which enables the camera to automatically move to a preset position when motion is detected in a pre-defined area, and track the detected object. The camera also has substantial capacity for third-party intelligent video applications.

With an optional multi-connector cable, AXIS Q6042 supports two-way audio, I/O ports for external devices and AC/DC power. The camera has a built-in memory card slot for local storage of recordings.

 **ONVIF**

Technical Specifications – AXIS Q6042 PTZ Dome Network Camera

Models	AXIS Q6042 50 Hz, AXIS Q6042 60 Hz
Camera	
Image sensor	1/4" ExView HAD progressive scan CCD
Lens	f=3.3 – 119 mm, F1.4 – 4.2, autofocus Horizontal angle of view: 57.2° – 1.7°
Day and night	Automatically removable infrared-cut filter
Minimum illumination	Color: 0.5 lux at 30 IRE F1.4 B/W: 0.008 lux at 30 IRE F1.4
Shutter time	1/30000 s to 1.5 s (50 Hz), 1/30000 s to 0.5 s (60 Hz)
Pan/Tilt/Zoom	Pan: 360° endless, 0.05° – 450°/s Tilt: 180°, 0.05° – 450°/s 36x optical zoom and 12x digital zoom, total 432x zoom E-flip, 256 presets, Tour recording, Guard tour, Control queue, On-screen directional indicator
Video	
Video compression	H.264 Main and Baseline Profiles (MPEG-4 Part 10/AVC) Motion JPEG
Resolutions	Extended D1 736x576 to 176x144 (50 Hz) Extended D1 752x480 to 176x120 (60 Hz)
Frame rate	H.264: Up to 25/30 fps (50/60 Hz) in all resolutions Motion JPEG: Up to 25/30 fps (50/60 Hz) in all resolutions
Video streaming	Multiple, individually configurable streams in H.264 and Motion JPEG Controllable frame rate and bandwidth; VBR/CBR H.264
Image settings	Wide dynamic range (WDR), Electronic image stabilization, Manual shutter time, Compression, Color, Brightness, Sharpness, White balance, Exposure control, Exposure zones, Backlight compensation, Fine tuning of behavior at low light, Rotation, Text and image overlay, 32 individual 3D privacy masks, Image freeze on PTZ
Audio	
Audio streaming	Two-way
Audio compression	AAC-LC 8/16 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz Configurable bit rate
Audio input/output	Requires multi-connector cable (sold separately) for external microphone or line input, and line output
Network	
Security	Password protection, IP address filtering, HTTPS ^a encryption, IEEE 802.1X ^a network access control, Digest authentication, User access log
Supported protocols	IPv4/v6, HTTP, HTTPS ^a , SSL/TLS ^a , QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, Bonjour, UPnP TM , SNMPv1/v2c/v3 (MIB-II), DNS, DynDNS, NTP, RTSP, RTP, TCP, UDP, IGMP, RTCP, ICMP, DHCP, ARP, SOCKS
System integration	
Application Programming Interface	Open API for software integration, including VAPIX [®] and AXIS Camera Application Platform; specifications at www.axis.com AXIS Video Hosting System (AVHS) with One-Click Camera Connection ONVIF Profile S; specifications at www.onvif.org

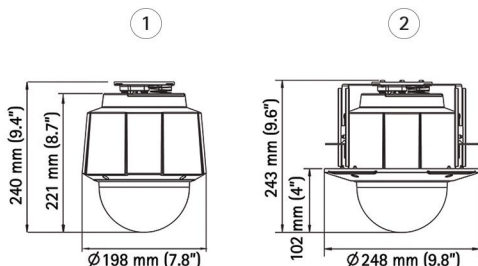
Intelligent video	Video motion detection, Autotracking, Active Gatekeeper, AXIS Camera Application Platform enabling installation of additional applications
Event triggers	Video motion detection, Audio detection, Shock detection, Fan, External input, Manual trigger, Autotracking, PTZ moving, PTZ preset, Edge storage events, AXIS Camera Application Platform
Event actions	File upload: FTP, HTTP, network share and email Notification: email, HTTP and TCP External output, PTZ preset, Guard tour, Play audio clip, Video and audio recording to edge storage, Autotracking, Day/night mode, Pre- and post-alarm video buffering
Built-in installation aids	Pixel counter
General	
Casing	IP52-rated metal casing (aluminum), acrylic (PMMA) clear dome
Memory	512 MB RAM, 128 MB Flash
Power	Power over Ethernet Plus (PoE+) IEEE 802.3at, max. 30 W AXIS T8123 High PoE midspan 1-port: 100–240 V AC, max. 37 W 24–34 V DC, max. 19 W; 20–24 V AC, max. 27 VA
Connectors	RJ45 for 10BASE-T/100BASE-TX PoE Multi-connector (cable sold separately) for AC/DC power, 4 configurable alarm inputs/outputs, mic in, line mono input, line mono output to active speaker
Edge storage	SD/SDHC/SDXC slot supporting memory card up to 64 GB (card not included); support for recording to dedicated network-attached storage (NAS)
Operating conditions	0 °C to 50 °C (32 °F to 122 °F) Humidity 10–85% RH (non-condensing)
Storage conditions	–40 °C to 65 °C (–40 °F to 149 °F)
Approvals	EN 55022 Class A, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2, EN 55024, FCC Part 15 Subpart B Class A, ICES-003 Class A, VCCI Class A, C-tick AS/NZS CISPR 22 Class A, KCC KN22 Class A, KN24, IEC/EN/UL 60950-1, IEC/EN 60529 IP52, IEC 60721-4-3 Class 3K3, 3M3, IEC 60068-2 Midspan: EN 60950-1, GS, UL, cUL, CE, VCCI, CB, KCC, UL-AR
Weight	Camera: 2.6 kg (5.7 lb.); with drop-ceiling mount: 3.2 kg (7.1 lb.)
Included accessories	AXIS T8123 High PoE Midspan 1-port, Mounting kit for hard and drop ceilings, Smoked dome cover, Installation Guide, Installation and Management Software CD, Windows decoder 1-user license
Video management software	AXIS Camera Companion (included), AXIS Camera Station and video management software from Axis' Application Development Partners (not included)
Warranty	Axis 3-year warranty and AXIS Extended Warranty option, see www.axis.com/warranty

- a. This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (www.openssl.org), and cryptographic software written by Eric Young (ey@cryptsoft.com).

More information is available at www.axis.com

Dimensions

1. Hard-ceiling mount
2. Drop-ceiling mount



Optional accessories

1. Axis mounting accessories
2. AXIS T90A Illuminators
3. Multi-connector cable for AC/DC power, I/Os and audio
4. AXIS T8310 Video Surveillance Control Board



AXIS T8123 High PoE 30 W Midspan 1-port

High Power over Ethernet for indoor installations.



- > Reduced installation costs
- > IEEE 802.3at and IEEE 802.3af compliance
- > Plug-and-play installation
- > Support for Axis PTZ dome network cameras

Axis T8123 midspan offer an easy, fast and cost-effective solution for powering network video products, without the need to install power outlets and electrical cabling.

AXIS T8123 midspan connects are connected to the mains power, transforming the power and inject it into the network cable enabling Axis network video products to receive data and power over the same Ethernet cable.

This midspan is used to power all network devices that are IEEE 802.3af or at compliant, meaning that it can be used with all Axis network video products with built-in PoE support.

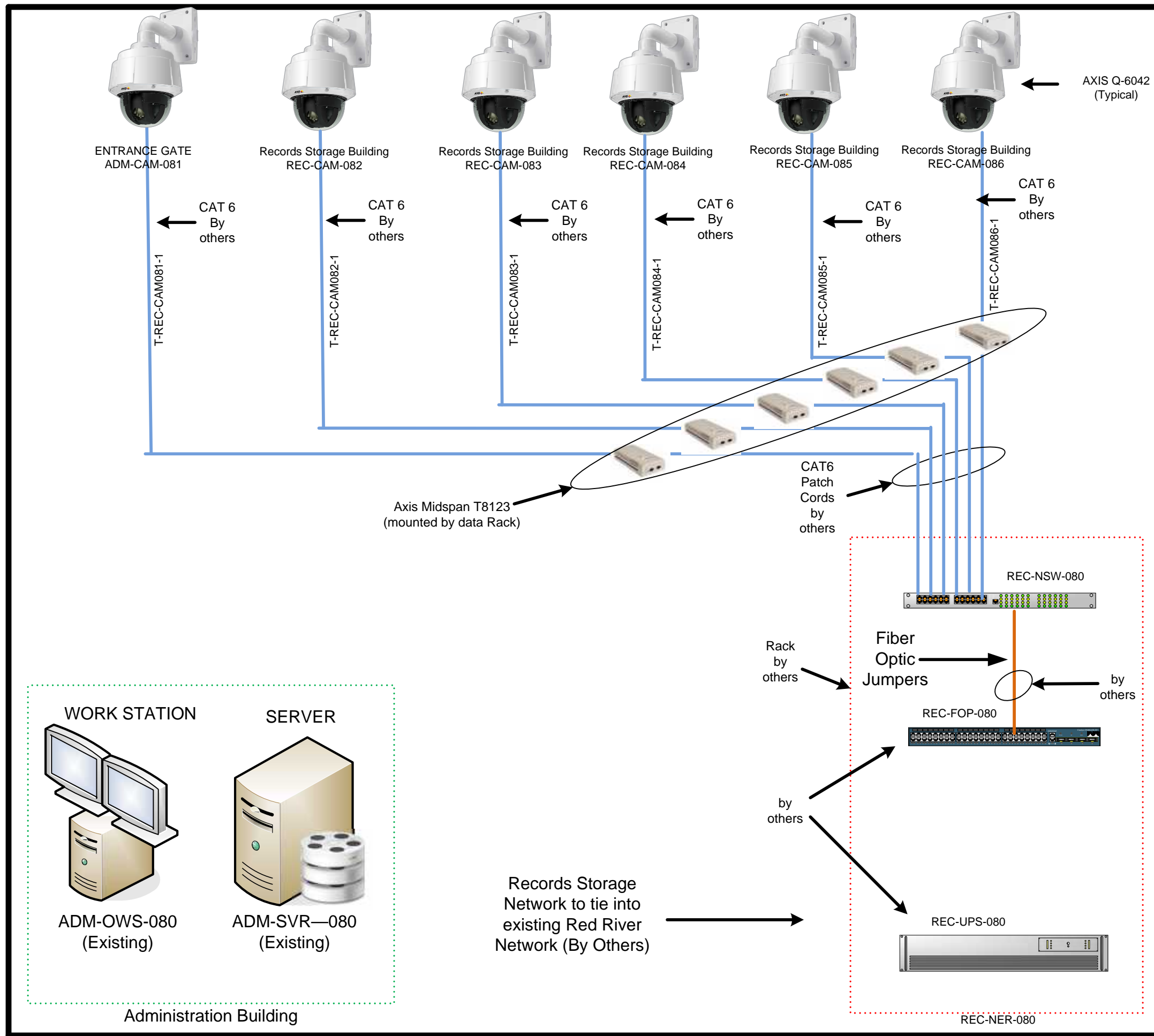
AXIS T8123 is an High PoE product, which makes it easier to install network video products in areas where power cabling and outlets are unavailable, thereby reducing installation costs.

Technical Specifications – AXIS T8123 High PoE 30 W Midspan 1-port

Midspan	
Model	AXIS T8123 High PoE 30 W Midspan 1-port
Function	Data and power are fed to a network video product through an Ethernet cable; use together with a High PoE splitter for a network video product without built-in PoE support
Data rate	10/100/1000 Mbps
Data & Power	
Connectors	Shielded RJ45, EIA 568A and 568B
Network cables	Shielded category 5 (or higher)
Wiring	Data provided over pairs 1/2 and 3/6 for 10/100 Ethernet, over all four pairs for Gigabit Ethernet Power over spare pairs 4/5 (+) and 7/8 (-)
Output power	55 V DC (max. 30 W)
Input power	AC Input Voltage: 100 to 240 V AC (max. 37 W) AC Frequency: 50 – 60 Hz
Installation and management	Plug-and-play installation; automatically detects PoE and High PoE-enabled devices and supplies inline power Local LED management display

General	
Display and indicators	Port interfaces are located on the front panel System indicator: AC power Channel indicator: Power For more information, see www.axis.com/techsup
Compliance	RoHS, WEEE, CE, IEEE 802.3af, IEEE 802.3at
Mounting	Wall or shelf mounting
Approvals	FCC Part 15, Class B with FTP cabling, EN 55022 Class B, EN 55024, VCCI, CB, UL/cUL per EN 60950-1, GS Mark per EN 60950-1, KCC, UL-AR
Operative conditions	-10 °C to 55 °C (14 °F to 131 °F) Humidity max. 95% RH (non-condensing)
Storage	-20 °C to 70 °C (-4 °F to 158 °F)
Dimension	51 x 88 x 166 mm (2 x 3.5 x 6.5 in)
Environment	Indoor
Weight	350 g (0.7 lb)

More information is available at www.axis.com and on products' Installation Guide



315 Wallace Dean Road West Monroe, LA 71291
P.O. Box 607 West Monroe, LA 71294
Phone: 318-397-0208
Fax: 318-397-0140

- Building Automated Systems
- Fire Safety
- Access Controls
- Nurse Call
- CCTV
- Security
- Data & Phone Systems
- Intercom
- Energy Solutions
- Sound Systems

Architect		Engineer	
Mech. Contractor		Elec. Contractor	
	Record Storage Building	4/30/15	JU

BILL OF MATERIAL


ITEM	QTY	TAG	MFG	CATALOG	DESCRIPTION
1	TBD	N/A	CORNING	012K8F-31130-29	FIBER OPTIC CABLE, 12 FIBER, 62.5UM MULTIMODE, TIGHT-BUFFERED, FLAME-RETARDANT, INDOOR/OUTDOOR
2	TBD		CORNING	95-000-50	FIBER CONNECTOR, ST COMPATIBLE MULTI-MODE UNICAM, FOR 62.5UM FIBER WITH CERAMIC FERRULE
3					
4					
5					
6	TBD	N/A	CORNING	006K8F-31130-29	FIBER OPTIC CABLE, 6 FIBER, 62.5UM MULTIMODE, TIGHT-BUFFERED, FLAME-RETARDANT, INDOOR/OUTDOOR
7	TBD		CORNING	95-000-50	FIBER CONNECTOR, ST COMPATIBLE MULTI-MODE UNICAM, FOR 62.5UM FIBER WITH CERAMIC FERRULE
8					
9					
10					
11	1	N/A	DELL	M6600	LAPTOP, MOBILE WORKSTATION, WINDOWS 7 64 BIT, QUAD CORE 2.70 GHZ 8MB CACHE, 8GB RAM, 2GB GRAPHICS
12					CARD, 17.3" WIDE SCREEN, 256GB SATA3 SSD, 8X DVD/RW, 3-YEAR BASIC HARDWARE SERVICE W/NBD LIMITED
13					ONSITE SERVICE AFTER REMOTE DIAGNOSIS, WIRELESS, INCLUDES MICROSOFT OFFICE 2010 PROFESSIONAL AND
14					ADOBE ACROBAT X, INCLUDES LAPTOP CARRYING CASE, MICROSOFT SECURITY ESSENTIALS TO BE
15					DOWNLOADED AT TIME OF PURCHASE
16	1		WONDERWARE	01-2624	INTOUCH FOR SYSPLATFORM 2012 W/O HISTCLIENT
17	1		E&H	SFE500-16W0/0	FIELD CARE, 32 DEVICES
18	1		E&H	FXA195-P1	COMMUNICATION BOX, CONVERTS HART PROTOCOLS TO USB SIGNALS
19	6	SPB-OWS-060	DELL	T3600	WORKSTATION, PRECISION, WINDOWS 7 64 BIT, QUAD CORE 3.0 GHZ 10MB CACHE, 8GB RAM, 512MB GRAPHICS
20		ELC-OWS-060			CARD DUAL MONITORS, 500GB 7200 RPM HD, 8X DVD/RW, 425W POWER SUPPLY, INTERNAL MEDIA READER,
21		RWPS-OWS-060			DUAL PORT 10GB NETWORK ADAPTER, 3 YEAR 24X7 PROSUPPORT AND NBD ON-SITE SERVICE
22		ADM-OWS-061			AFTER REMOTE DIAGNOSIS, INCLUDES MICROSOFT OFFICE 2010 PROFESSIONAL AND ADOBE ACROBAT X,
23		ADM-OWS-062			MICROSOFT SECURITY ESSENTIALS TO BE DOWNLOADED AT TIME OF PURCHASE, MOUSE, KEYBOARD
24		ADM-OWS-080			
25	12		DELL	P2412H	MONITOR, 24" WIDESCREEN, LED BACKLIT, 1920 X 1080 RESOLUTION, 1000:1 CONTRAST RATIO
26	6		KANTEK	CS2000	CPU STAND, LOCKABLE CASTERS
27	5		WONDERWARE	01-2624	INTOUCH FOR SYSPLATFORM 2012 W/O HISTCLIENT, INSTALLED ON ALL EXCEPT ADM-OWS-080
28	1		SYTECH	XL1SM	XLREPORTER, SUITE EDITION, STANDARD, SINGLE STATION, REPORTING FROM A REAL TIME AND ANALYTIC DATA,
29					HISTORICAL SERVER, WEB PUBLISHING AND 1 YEAR OF TECHNICAL SUPPORT & FREE PRODUCT UPGRADES,
30					INSTALLED ON ADM-OWS-061
31	6		ACRONIS	BACKUP SOFTWARE	ACRONIS BACKUP & RECOVERY(R) 11.5 FOR ADVANCED WORKSTATION, INSTALLED ON ALL WORKSTATIONS
32					
33					
34	5	SRS-OWS-800	DELL	T3600	WORKSTATION, PRECISION, WINDOWS 7 64 BIT, QUAD CORE 3.0 GHZ 10MB CACHE, 8GB RAM, 512MB GRAPHICS
35		ADM-OWS-063			CARD DUAL MONITORS, 500GB 7200 RPM HD, 8X DVD/RW, 425W POWER SUPPLY, INTERNAL MEDIA READER,
36		ADM-OWS-064			DUAL PORT 10GB NETWORK ADAPTER, 3 YEAR 24X7 PROSUPPORT AND NBD ON-SITE SERVICE
37		CITY NETWORK			AFTER REMOTE DIAGNOSIS, INCLUDES MICROSOFT OFFICE 2010 PROFESSIONAL AND ADOBE ACROBAT X,
38		CITY NETWORK			MICROSOFT SECURITY ESSENTIALS TO BE DOWNLOADED AT TIME OF PURCHASE, MOUSE, KEYBOARD
39	5		DELL	P2412H	MONITOR, 24" WIDESCREEN, LED BACKLIT, 1920 X 1080 RESOLUTION, 1000:1 CONTRAST RATIO
40	5		KANTEK	CS2000	CPU STAND, LOCKABLE CASTERS
41	2		WONDERWARE	01-2624	INTOUCH FOR SYSPLATFORM 2012 W/O HISTCLIENT, INSTALLED ON ADM-OWS-063 & ADM-OWS-064
42	5		ACRONIS	BACKUP SOFTWARE	ACRONIS BACKUP & RECOVERY(R) 11.5 FOR ADVANCED WORKSTATION, INSTALLED ON ALL WORKSTATIONS
43					
44	1		BLACK BOX	EC42U3042SMDSINK	NETWORK RACK ENCLOSURE, 42U,79" H X 30" W X 42" D, 2000LB. LOAD CAPACITY, M6 RAILS W/SQUARE HOLES,
45					MESH FRONT DOOR, SPLIT MESH BACK DOOR, SOLID SIDE DOORS, 1 10" FAN 550 CFM W/8' CORD & NEMA
46					5-15 PLUG CONNECTOR & 110VAC, KEYED LOCK, COMES W/LEG LEVELERS AND CASTERS, UNIVERSAL
47					MOUNTING HOLES ALLOW FOR REVERSING DOOR, BLACK, INCLUDES GROUND LUG, 50 CAGE NUTS & SCREWS
48	1		BLACK BOX	RM408	CAGE NUTS AND SCREWS, PACKAGE OF 20, M6
49	2		BLACK BOX	PS182A-R2	POWER STRIP, VERTICAL, 8-OUTLETS, 15A, 120 VAC, INCLUDES MOUNTING HARDWARE
50	1		HOFFMAN	PGK	GROUND KIT, INCLUDES 6 16" LONG 12-GAUGE WIRES W/RING TERMINATIONS AND M6 MOUNTING HARDWARE
51	7		BLACK BOX	37803-R2	HORIZONTAL CABLE MANAGEMENT, 1U, 5 1.25" X 4" RINGS
52	1	ADM-FOP-060	CORNING	CCH-01U	FIBER PATCH PANEL 01U, HOLDS 2 CCH CONNECTOR PANELS
53	1	ADM-FOP-070	CORNING	CCH-03U	FIBER PATCH PANEL, 3U, HOLDS 6 CCH CONNECTOR PANELS, 133MM H X 483MM W X 430MM D
54	8		CORNING	CCH-CP12-15T	CCH CONNECTOR PANEL, ST COMPATIBLE MULTIMODE, FOR 62.5UM FIBER W/CERAMIC FERRULE
55	1	ADM-CPP-060	BLACK BOX	JPM612A-R7	COPPER PATCH PANEL, CAT6, 48-PORT, 2U
56	1	ADM-NSW-060	HIRSCHMANN	MACH104-20TX-FR	24 PORTS - 20 GIGABIT ETHERNET COPPER & 4 GIGABIT ETHERNET COMBO PORTS, W/REDUNDANT POWER SUPPLIES, 1RU, IP BASE FEATURE SET

ITEM	QTY	TAG	MFG	CATALOG	DESCRIPTION
57					
58	5	ADM-NSW-060	HIRSCHMANN	M-SFP-SX/LC	GIGABIT ETHERNET SFP, MULTIMODE FIBER w/LC CONNECTOR SX TRANSCEIVER
59					
60	1	ADM-NSW-080	PROVIDED BY OTHERS	TBD	GIGABIT NETWORK SWITCH TX/FX
61					
62	1		QUIKTRON	FOAS2FLCST-2M	FIBER JUMPER, LC-ST, 2M
63					
64					
65					
66					
67					
68	1	ADM-NER-072	BLACK BOX	EC42U3042SMDSINK	NETWORK RACK ENCLOSURE, 42U,79" H X 30" W X 42" D, 2000lb. LOAD CAPACITY, M6 RAILS W/SQUARE HOLES,
69					MESH FRONT DOOR, SPLIT MESH BACK DOOR, SOLID SIDE DOORS, 1 10" FAN 550 CFM w/8' CORD & NEMA
70					5-15 PLUG CONNECTOR & 110VAC, KEYED LOCK, COMES w/LEG LEVELERS AND CASTERS, UNIVERSAL
71					MOUNTING HOLES ALLOW FOR REVERSING DOOR, BLACK, INCLUDES GROUND LUG, 50 CAGE NUTS & SCREWS
72	1		BLACK BOX	RM408	CAGE NUTS AND SCREWS, PACKAGE OF 20, M6
73	2		BLACK BOX	PS182A-R2	POWER STRIP, VERTICAL, 8-OUTLETS, 15A, 120 VAC, INCLUDES MOUNTING HARDWARE
74	1		HOFFMAN	PGK	GROUND KIT, INCLUDES 6 16" LONG 12-GAUGE WIRES w/RING TERMINATIONS AND M6 MOUNTING HARDWARE
75					
76	1		TRIPP-LITE	B020-U08-19-K	CONSOLE KVM SWITCH, 1RU, w/19" LCD + 8 PS2/USB COMBO CABLES, 1280 X 1024 RESOLUTION, 120V, 1A
77	1		LoCIE	9000316	EXTERNAL HARD DRIVES, 4TB, RAID0+1, USB 3.0, 7200 RPM
78	1		BLACK BOX	RM403	FIXED VENTED SERVER SHELF, FOR EXTERNAL HD'S
79	1	ADM-SRV-061	DELL	R720xd	I/O PRIMARY SERVER, POWEREDGE, WINDOWS SERVER 2008 R2 SP1 STANDARD 64 BIT, 6 CORE 2.90 Ghz
80					15MB CACHE, 32GB RAM, 3 500GB 7.2K RPM SATA HARD DRIVES RAID 5 CONFIGURED, DUAL REDUNDANT
81					495W POWER SUPPLIES, 2 NETWORK ADAPTERS, READY RAILS w/CABLE MANAGEMENT, BEZEL, 3 YEAR 24X7
82					PROSUPPORT AND NBD ON-SITE SERVICE
83	1	ADM-SRV-062	DELL	R720xd	I/O BACKUP SERVER, POWEREDGE, WINDOWS SERVER 2008 R2 SP1 STANDARD 64 BIT, 6 CORE 2.90 Ghz
84					15MB CACHE, 32GB RAM, 3 500GB 7.2K RPM SATA HARD DRIVES RAID 5 CONFIGURED, DUAL REDUNDANT
85					495W POWER SUPPLIES, 2 NETWORK ADAPTERS, READY RAILS w/CABLE MANAGEMENT, BEZEL, 3 YEAR 24X7
86					PROSUPPORT AND NBD ON-SITE SERVICE
87	1	ADM-SRV-063	DELL	R720xd	DEVELOPMENT, HISTORIAN, GALAXY REPOSITORY SERVER, POWEREDGE, WINDOWS SERVER 2008 R2 SP1
88					STANDARD 64 BIT, 6 CORE 2.90 Ghz 15MB CACHE, 32GB RAM, 3 500GB 7.2K RPM SATA HARD DRIVES RAID 5
89					CONFIGURED, DUAL REDUNDANT 495W POWER SUPPLIES, 2 NETWORK ADAPTERS, READY RAILS w/CABLE
90					MANAGEMENT, BEZEL, 3 YEAR 24X7 PROSUPPORT AND NBD ON-SITE SERVICE
91	1	ADM-SRV-080	PROVIDED BY OTHERS	TBD	SECURITY SYSTEM SERVER
92					
93					
94					
95	3		MICROSOFT	OFFICE	PROFESSIONAL, LATEST EDITION, INSTALLED ON ALL 4 SERVERS, SECURITY SERVER SOFTWARE BY OTHERS
96	1		ADOBE	ACROBAT	STANDARD, LATEST EDITION, INSTALLED ON BACKUP SERVER ONLY (ADM-SRV-062)
97	4		ACRONIS	BACKUP SOFTWARE	BACKUP & RECOVERY 11.5 ADVANCED SERVER FOR WINDOWS, INSTALLED ON ALL SERVERS
98	1		WONDERWARE	SP-3250A	SYSTEM PLATFORM 2012, INCLUDES HISTORIAN INSTALLED ON ADM-SRV-063, 4 APPLICATION SERVER
99					PLATFORMS INSTALLED ON ADM-SRV-063, 2 DEVICE INTEGRATION SERVERS ONE EACH INSTALLED ON
100					ADM-SRV-061 & ADM-SRV-062
101	1		WONDERWARE	97-1259T	DEVELOPMENT STUDIO 2012 LARGE 5K/3K/500 TSE INSTALLED ON ADM-SRV-063
102	1		WONDERWARE	17-1131	WW HISTORIAN CLIENT PER SERVER CONCURRENT, 5 USERS, V10.0 INSTALLED ON ADM-SRV-063
103	1		WONDERWARE	17-0238	WW BASIC CAL w/MS CAL, 5 PACK, v2008 INSTALLED ON ADM-SRV-063
104	2		KEP	41233192-EX-15C15DUT	KEPWARE KEPSERVEREX ONE EACH INSTALLED ON ADM-SRV-061 & ADM-SRV-062
105					
106					
107					
108	3		WONDERWARE	STDS-019	WONDERWARE CUSTOMER FIRST SUPPORT-STANDARD LEVEL-ONE, INCLUDES TECHNICAL SUPPORT AND VERSION
109					UPGRADES FOR THE ABOVE LICENSES ONLY (NOTE: THIS SUPPORT COVERS THE LICENSING AT BOTH PLANTS)
110	1	ADM-CPP-070	BLACK BOX	JPM612A-R7	COPPER PATCH PANEL, CAT6, 48-PORT, 2U
111	1	ADM-CPP-070	BLACK BOX	JPM610A-R7	COPPER PATCH PANEL, CAT6, 24-PORT, 1U
112	1	ADM-NSW-070	OWNER PROVIDED	TBD	NETWORK SWITCH

E	05/13/15	CHANGE ORDER	YNB	MLC
D	02/19/15	FIELD REVISIONS	YNB	GWG
C	01/24/14	PER ENGINEER'S COMMENTS	YNB	MLC
B	07/01/13	PER ENGINEER'S COMMENTS	MLB	JWO
A	12/26/12	DESIGN	MLB	JWO
REV	DATE	DESCRIPTION	BY	APPV

NOTICE:
THE DOCUMENT AND
INFORMATION CONTAINED
HEREIN IS PROPRIETARY TO
REVERE CONTROL SYSTEMS, INC.
AND SHOULD NOT BE USED,
COPIED OR DISCLOSED TO
OTHERS, EXCEPT AS
SPECIFICALLY AUTHORIZED IN
WRITING BY REVERE CONTROL
SYSTEMS, INC.

CITY OF BOSSIER CITY, LOUISIANA WASTEWATER SYSTEM IMPROVEMENTS RED RIVER WWTP EXPANSION AND REHABILITATION PROJECT BILL OF MATERIAL	
DRAWN BY:	MLB
CHECKED BY:	JWO
DATE:	12/26/12
SCALE:	NTS



2240 ROCKY RIDGE ROAD
BIRMINGHAM, AL 35216
PHONE: (205) 824-0004

CUSTOMER:	MAX FOOTE CONSTRUCTION CO., INC.	DWG NO:	N0575_RR-NETWORK-101
FILE NAME:	101.DWG		


BILL OF MATERIAL

ITEM	QTY	TAG	MFG	CATALOG	DESCRIPTION
113	2	ELC-UPS-050,	EATON	0660C090AAAAAAAI	UPS, 9170+ SERIES, 9-SLOT ENCLOSURE, HARDWIRE INPUT/OUTPUT
114	4	SPB-UPS-050	EATON	ASY-0673	SPLIT PHASE POWER MODULE, 3kVA/2.5kW FOR POWERWARE 9170+ UPS
115	8		EATON	ASY-0529	POWERWARE BATTERY MODULE
116	2		EATON	116750222-001	CONNECTUPS-BD SNMP NETWORK CARD
117	2		EATON	BPE20MBB1A	MAINTENANCE BYPASS SWITCH, MAKE-BEFORE-BREAK, EXTERNAL, 125AMP
118					
119					
120					
121	1	RWPS-UPS-050	EATON	0660C090AAAAAAAI	UPS, 9170+ SERIES, 9-SLOT ENCLOSURE, HARDWIRE INPUT/OUTPUT
122	1		EATON	ASY-0673	SPLIT PHASE POWER MODULE, 3kVA/2.5kW FOR POWERWARE 9170+ UPS
123	2		EATON	ASY-0529	POWERWARE BATTERY MODULE
124	1		EATON	116750222-001	CONNECTUPS-BD SNMP NETWORK CARD
125	1		EATON	BPE20MBB1A	MAINTENANCE BYPASS SWITCH, MAKE-BEFORE-BREAK, EXTERNAL, 125AMP
126					
127					
128					
129	1	ADM-UPS-050	EATON	0660C120AAAAAAAI	UPS, 9170+ SERIES, 12-SLOT ENCLOSURE, HARDWIRE INPUT/OUTPUT
130	3		EATON	ASY-0673	SPLIT PHASE POWER MODULE, 3kVA/2.5kW FOR POWERWARE 9170+ UPS
131	6		EATON	ASY-0529	POWERWARE BATTERY MODULE
132	1		EATON	116750222-001	CONNECTUPS-BD SNMP NETWORK CARD
133	1		EATON	BPE20MBB1A	MAINTENANCE BYPASS SWITCH, MAKE-BEFORE-BREAK, EXTERNAL, 125AMP
134					
135					
136					
137	3	CITY NETWORK	BROTHER	MFC-8710DW	LASERJET PRINTER, MULTI-FUNCTION, 40PPM PRINT SPEED, 1200 X 1200 dpi PRINT RESOLUTION, 64MB MEMORY,
138		CITY NETWORK			WIRELESS 802.11b/g/n, ETHERNET, USB 2.0, 8.5" X 14" DOCUMENT GLASS, 33.6K bps FAX MODEM,
139		ADM-PRINT-060			COLOR SCANNER, WINDOWS 7 COMPATIBLE
140	6		BROTHER	TN-720	STANDARD YIELD TONER (APPROX. 3,000 PAGES)
141	6		ANY	PAPER	1000 SHEET REAM OF 8-1/2" X 11", 24lb, LASER PRINTING PAPER
142	1	REC-NER-080	HOFFMAN	EMMW482425	19" RACK WALL MOUNT SERVER RACK
143	1	REC-FOP-080	CORNING	CCH-01U	19" RACK MOUNT FIBER CONNECTOR PANEL, HOLDS 2 CCH CONNECTOR PANELS, 1U
144	1		CORNING	CCH-CP12-15TCCH	CONNECTOR PANEL, MULTIMODE, ST, 62.5uM, CERAMIC FERRULE, 12 FIBER CONNECTIONS
145	1	REC-UPS-080	EATON	PW9130L700R-XL2U	700VA RACK MOUNT UPS, 2U
146	3		BLACK BOX	37803-R2	HORIZONTAL CABLE MANAGEMENT, 1U

E	05/13/15	CHANGE ORDER	YNB	MLC
D	02/19/15	FIELD REVISIONS	YNB	GWG
C	01/24/14	PER ENGINEER'S COMMENTS	YNB	MLC
B	07/01/13	PER ENGINEER'S COMMENTS	MLB	JWO
A	12/26/12	DESIGN	MLB	JWO
REV	DATE	DESCRIPTION	BY	APPV

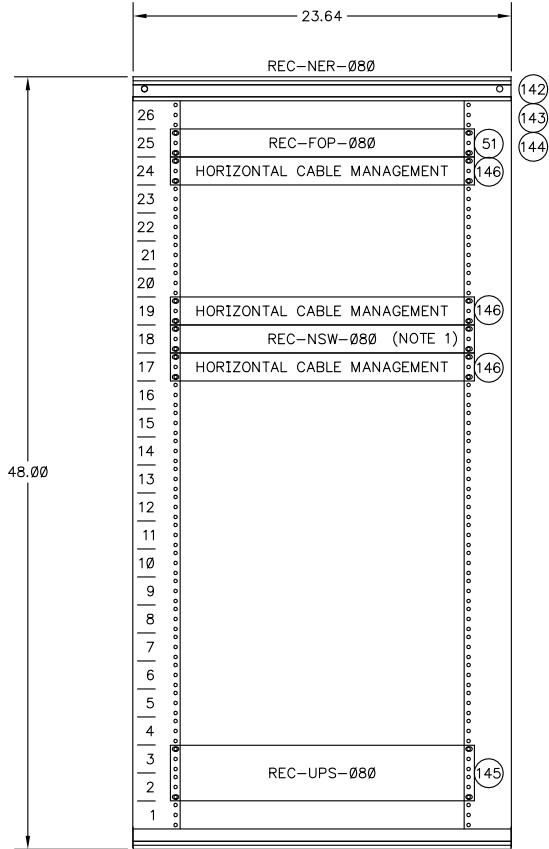
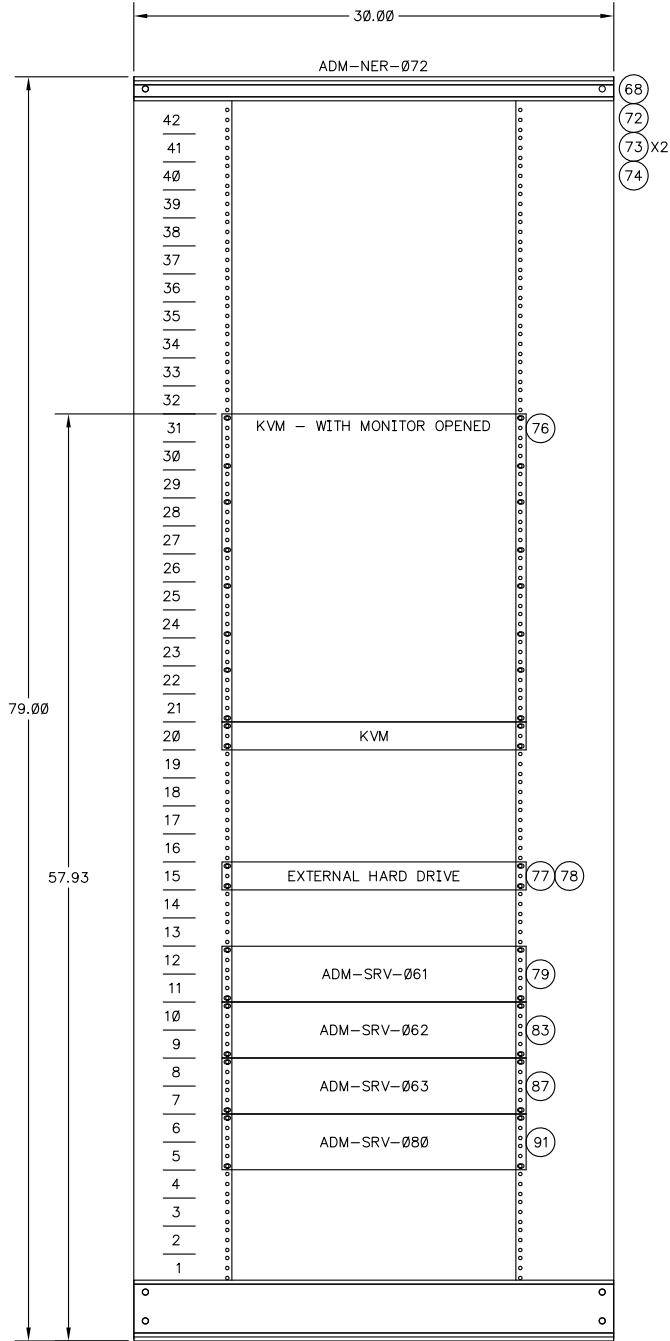
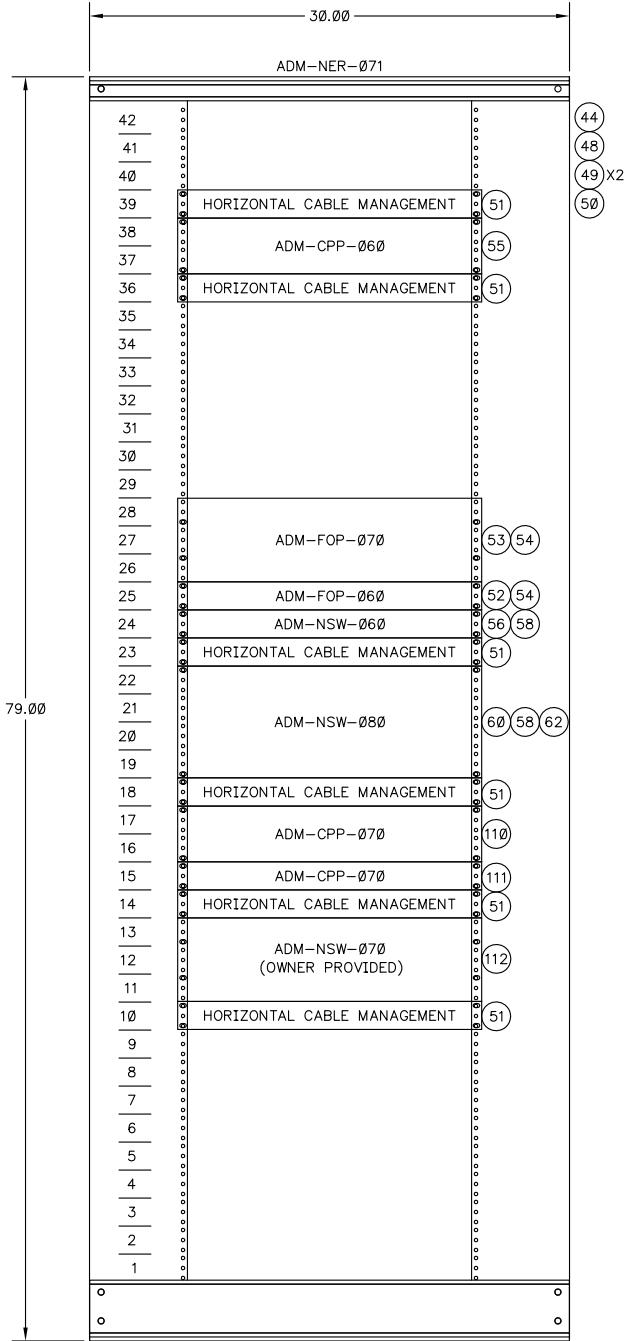
NOTICE:
THE DOCUMENT AND
INFORMATION CONTAINED
HEREIN IS PROPRIETARY TO
REVERE CONTROL SYSTEMS, INC.
AND SHOULD NOT BE USED,
COPIED OR DISCLOSED TO
OTHERS, EXCEPT AS
SPECIFICALLY AUTHORIZED IN
WRITING BY REVERE CONTROL
SYSTEMS, INC.

CITY OF BOSSIER CITY, LOUISIANA WASTEWATER SYSTEM IMPROVEMENTS RED RIVER WWTP EXPANSION AND REHABILITATION PROJECT BILL OF MATERIAL			
DRAWN BY:	MLB	DATE:	12/26/12
CHECKED BY:	JWO	SCALE:	NTS



2240 ROCKY RIDGE ROAD
BIRMINGHAM, AL 35216
PHONE: (205) 824-0004

CUSTOMER:	MAX FOOTE CONSTRUCTION CO., INC.	DWG NO:	N0575_RR-NETWORK-102	2/5
FILE NAME:	102.DWG			



NOTE:
1. PROVIDED BY OTHERS.

E	05/13/15	CHANGE ORDER	YNB	MLC
D	02/19/15	FIELD REVISIONS	YNB	GWG
C	01/24/14	PER ENGINEER'S COMMENTS	YNB	MLC
B	07/01/13	PER ENGINEER'S COMMENTS	MLB	JWO
A	12/26/12	DESIGN	MLB	JWO
REV	DATE	DESCRIPTION	BY	APPV

NOTICE:
THE DOCUMENT AND
INFORMATION CONTAINED
HEREIN IS PROPRIETARY TO
REVERE CONTROL SYSTEMS, INC.
AND SHOULD NOT BE USED,
COPIED OR DISCLOSED TO
OTHERS, EXCEPT AS
SPECIFICALLY AUTHORIZED IN
WRITING BY REVERE CONTROL
SYSTEMS, INC.

CITY OF BOSSIER CITY, LOUISIANA WASTEWATER SYSTEM IMPROVEMENTS RED RIVER WWTP EXPANSION AND REHABILITATION PROJECT NETWORK RACK LAYOUT			
DRAWN BY:	MLB	DATE:	12/26/12
CHECKED BY:	JWO	SCALE:	NTS

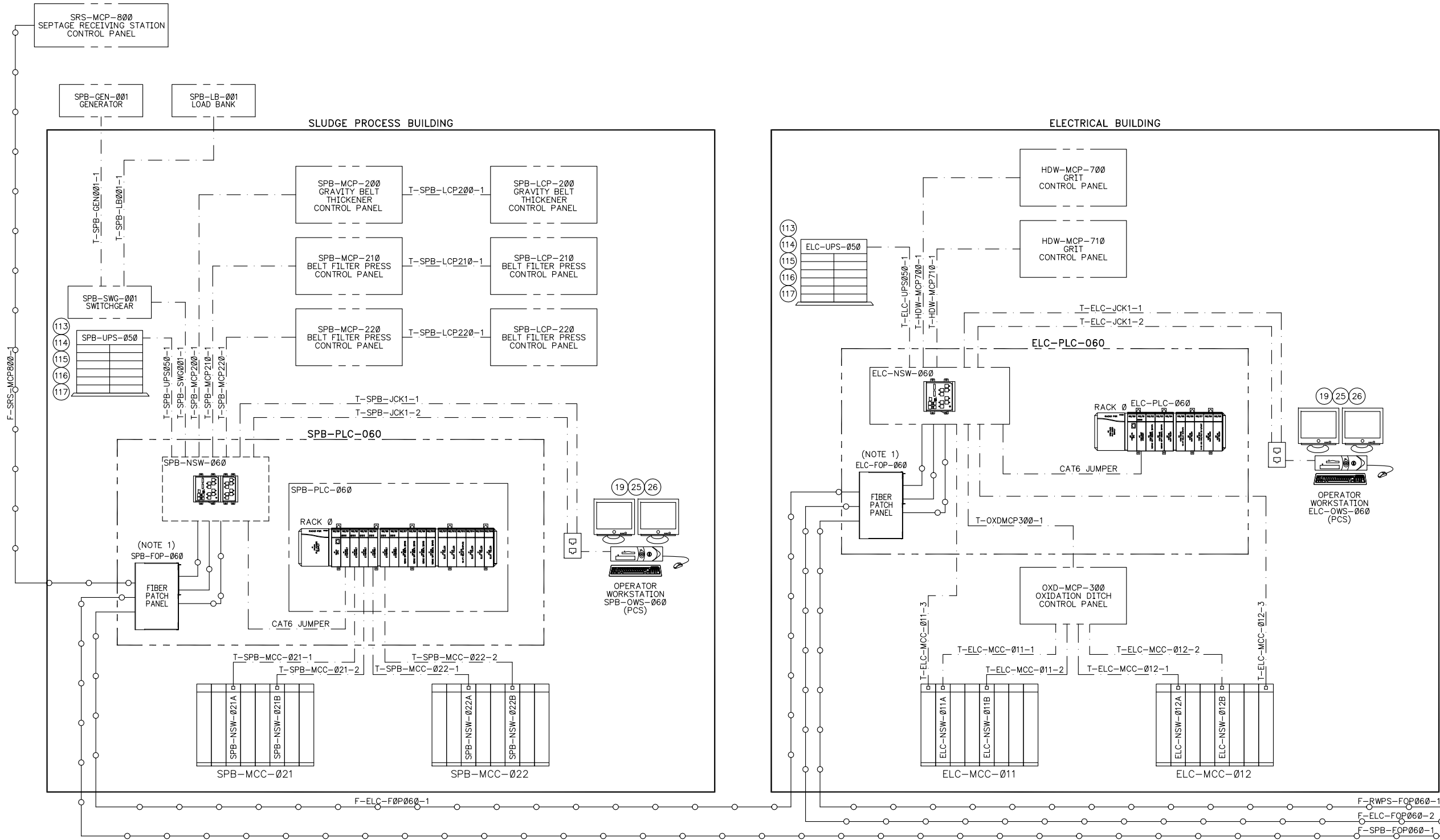


Revere
Control Systems

2240 ROCKY RIDGE ROAD
BIRMINGHAM, AL 35216
PHONE: (205) 824-0004

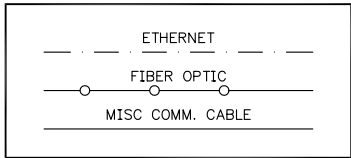
CUSTOMER: MAX FOOTE CONSTRUCTION CO., INC.
DWG NO: N0575_RR-NETWORK-103
FILE NAME: 103.DWG

3/5



NOTE:
1. SEE INDIVIDUAL PANEL DRAWING FOR FIBER CONNECTIONS TO CCTV CAMERAS.
ALSO REFERENCE CONTRACT DRAWING ERR-65 FOR CAMERA NETWORK.


CABLE LEGEND



E	05/13/15	CHANGE ORDER	YNB	MLC
D	02/19/15	FIELD REVISIONS	YNB	GWG
C	01/24/14	PER ENGINEER'S COMMENTS	YNB	MLC
B	07/01/13	PER ENGINEER'S COMMENTS	MLB	JWO
A	12/26/12	DESIGN	MLB	JWO
REV	DATE	DESCRIPTION	BY	APPV

NOTICE:
THE DOCUMENT AND
INFORMATION CONTAINED
HEREIN IS PROPRIETARY TO
REVERE CONTROL SYSTEMS, INC.
AND SHOULD NOT BE USED,
COPIED OR DISCLOSED TO
OTHERS, EXCEPT AS
SPECIFICALLY AUTHORIZED IN
WRITING BY REVERE CONTROL
SYSTEMS, INC.

CITY OF BOSSIER CITY, LOUISIANA WASTEWATER SYSTEM IMPROVEMENTS RED RIVER WWTP EXPANSION AND REHABILITATION PROJECT NETWORK DIAGRAM I			
DRAWN BY:	MLB	DATE:	12/26/12
CHECKED BY:	JWO	SCALE:	NTS



2240 ROCKY RIDGE ROAD
BIRMINGHAM, AL 35216
PHONE: (205) 824-0004

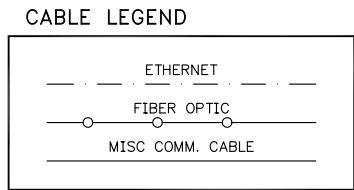
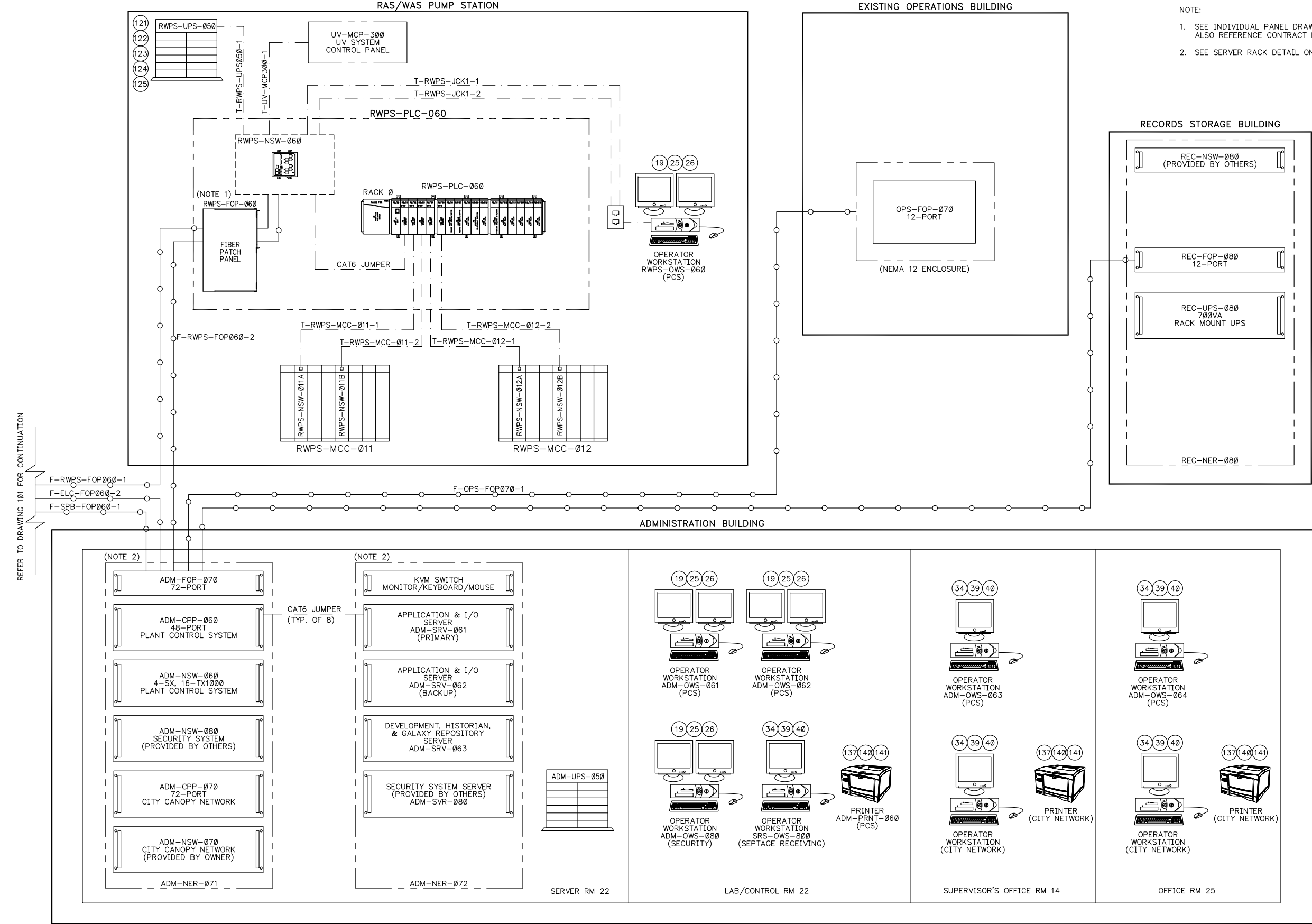
CUSTOMER: MAX FOOTE CONSTRUCTION CO., INC.

DWG NO: N0575_RR-NETWORK-104

FILE NAME: 104.DWG

4/5

REFER TO DRAWING 102 FOR CONTINUATION



E	05/13/15	CHANGE ORDER	YNB	MLC
D	02/19/15	FIELD REVISIONS	YNB	GWG
C	01/24/14	PER ENGINEER'S COMMENTS	YNB	MLC
B	07/01/13	PER ENGINEER'S COMMENTS	MLB	JWO
A	12/26/12	DESIGN	MLB	JWO
REV	DATE	DESCRIPTION	BY	APPV

NOTICE:
THE DOCUMENT AND
INFORMATION CONTAINED
HEREIN IS PROPRIETARY TO
REVERE CONTROL SYSTEMS, INC.
AND SHOULD NOT BE USED,
COPIED OR DISCLOSED TO
OTHERS, EXCEPT AS
SPECIFICALLY AUTHORIZED IN
WRITING BY REVERE CONTROL
SYSTEMS, INC.

CITY OF BOSSIER CITY, LOUISIANA WASTEWATER SYSTEM IMPROVEMENTS RED RIVER WWTP EXPANSION AND REHABILITATION PROJECT NETWORK DIAGRAM II			
DRAWN BY:	MLB	DATE:	12/26/12
CHECKED BY:	JWO	SCALE:	NTS


		2240 ROCKY RIDGE ROAD BIRMINGHAM, AL 35216 PHONE: (205) 824-0004	
CUSTOMER:	MAX FOOTE CONSTRUCTION CO., INC.	DWG NO:	N0575_RR-NETWORK-105
FILE NAME:	105.DWG		5/5

REFER TO DRAWING 101 FOR CONTINUATION

- NOTE:
- SEE INDIVIDUAL PANEL DRAWING FOR FIBER CONNECTIONS TO CCTV CAMERAS. ALSO REFERENCE CONTRACT DRAWING ERR-65 FOR CAMERA NETWORK.
 - SEE SERVER RACK DETAIL ON DWG. 103.

F:\PROJECT FILES\2012\N057500\DRAWINGS.REC\RR-SPB-PLC-0500\101.DWG	05-13-15	07:49
--	----------	-------


F:\PROJECT FILES\2012\N057500\DRAWINGS.REO\RR-SPB-PLC-060\101.DWG

						NOTICE: THE DOCUMENT AND INFORMATION CONTAINED HEREIN IS PROPRIETARY TO REVERE CONTROL SYSTEMS, INC. AND SHOULD NOT BE USED, COPIED OR DISCLOSED TO OTHERS, EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY REVERE CONTROL SYSTEMS, INC.	RED RIVER WASTEWATER TREATMENT PLANT CITY OF BOSSIER CITY, LOUISIANA SLUDGE PROCESS BUILDING CONTROL PANEL TITLE SHEET			 Revere Control Systems			2240 ROCKY RIDGE ROAD BIRMINGHAM, AL 35216 PHONE: (205) 824-0004	
1	01/27/15	FIELD REVISION	JEC	MLC			DRAWN BY: LDG	DATE: 12/4/12	CUSTOMER: MAX FOOTE CONSTRUCTION CO., INC.	DWG NO: N0575_RR-SPB-PLC-060-101	1/24			
0	05/06/14	RECORD DRAWING	LDG	ACS			CHECKED BY: ACS	SCALE: 1=1	FILE NAME: 101.DWG					
REV	DATE	DESCRIPTION	BY	APPV										

BILL OF MATERIAL

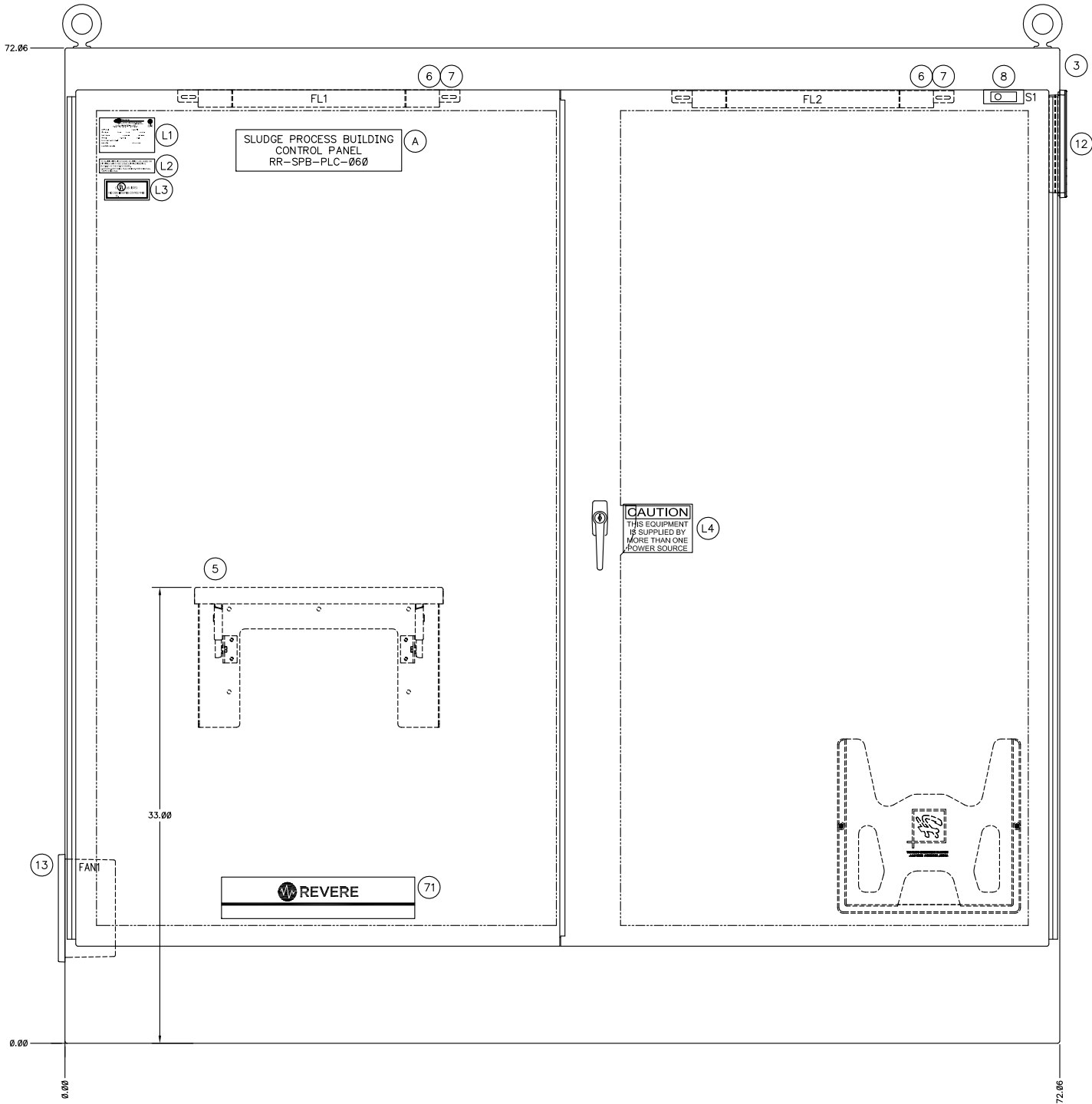
ITEM	QTY	MFG	CATALOG	DESCRIPTION
1	1	HOFFMAN	A727224FSD	ENCLOSURE, FREE-STANDING, NEMA 12, 72" X 72" X 24"
2	1	HOFFMAN	A72P72F1	SUBPANEL, 60" X 68"
3	6	HOFFMAN	AHCI10E	CORROSION INHIBITOR EMITTER, 10 CUBIC FT, 2.5" DIA X 2" H
4	2	HOFFMAN	ATEMNO	TEMPERATURE SWITCH, NO
5	1	HOFFMAN	AASHLF1818	SHELF, 18" X 18"
6	2	HOFFMAN	LF120V18	FLUORESCENT ENCLOSURE LIGHT, 18", 120VAC, 0.13A
7	2	HOFFMAN	F8T5	FLUORESCENT BULB, 18"
8	1	HOFFMAN	ALFSWD	DOOR SWITCH
9				
10				
11				
12	1	HOFFMAN	TEP6UL12	EXHAUST GRILL, 6 IN, TYPE 12
13	1	HOFFMAN	TFP61UL12	COOLING FAN PKG, 6 IN, TYPE 12
14	1	AB	1756-A10	CONTROLLOGIX CHASSIS, 10 SLOTS
15	1	AB	1756-A17	CONTROLLOGIX CHASSIS, 17 SLOTS
16	2	AB	1756-PA72	CONTROLLOGIX POWER SUPPLY, 120/240VAC
17	1	AB	1756-L72	CONTROLLOGIX CPU, 4MB, USER MEMORY
18	5	AB	1756-ENBT	ETHERNET/IP MODULE, 10/100 Mbps, 128 LOGIX CONNECTIONS, 64 TCP/IP CONNECTIONS
19	4	AB	1756-IA16I	CONTROLLOGIX DIGITAL AC INPUT MODULE, 16 PT ISOLATED, 120VAC
20	1	AB	1756-OW16I	CONTROLLOGIX DIGITAL CONTACT OUTPUT MODULE, 16 PT ISOLATED, 10-265VAC/5-150VDC
21	3	AB	1756-IF8H	CONTROLLOGIX ANALOG INPUT MODULE, 8 PT, WITH HART 4-20mA
22	8	AB	1756-TBCH	TERMINATION BLOCK, 36 PIN
23	1	AB	1756-OF6CI	CONTROLLOGIX ANALOG OUTPUT MODULE, 6 ISOLATED OUTPUTS
24	1	AB	1756-TBNH	TERMINATION BLOCK, 20 PIN
25	10	AB	1756-N2	CONTROLLOGIX SLOT FILLER
26	2	AB	1756-EN2TR	CONTROLLOGIX ETHERNET/IP COMMUNICATION MODULE, 2 PORT
27				
28				
29				
30	1	PULS	CS5.241	POWER SUPPLY, 120W, 120/208/240VAC 1PH, 24VDC, 5A
31				
32	16	IDEC	RJ1S-CL-A120	RELAY, SPDT W/ IND LIGHT, 120VAC COIL, 12A CONTACTS
33	16	IDEC	SJ1S-07L	CONTROL RELAY BASE, BLADE TYPE, 300V 12A CONTACTS, DIN RAIL MOUNT
34	2	SQUARE D	QOU120	CIRCUIT BREAKER, 1 POLE, 20A
35	11	AB	1489-A1C050	CIRCUIT BREAKER, 1 POLE, 5A, 240VAC
36	1	AB	1489-A1C030	CIRCUIT BREAKER, 1 POLE, 3A, 240VAC
37	4	AB	1489-A1C020	CIRCUIT BREAKER, 1 POLE, 2A, 240VAC
38	11	AB	1489-A1C010	CIRCUIT BREAKER, 1 POLE, 1A, 240VAC
39	8	AB	1489-A1C005	CIRCUIT BREAKER, 1 POLE, 1/2A, 240VAC
40	30	PHOENIX CONTACT	5650102	CIRCUIT BREAKER, 1 POLE, 0.2AMP
41	6	SQUARE D	QOU110	CIRCUIT BREAKER, 1 POLE, 10A
42	61	WEIDMULLER	1020100000	TERMINAL BLOCK, FEED THROUGH, WDU 4, BEIGE, 600V, 22-10 AWG
43	41	WEIDMULLER	1010100000	TERMINAL BLOCK, GROUND, WPE 4, GREEN/YELLOW, 22-10 AWG
44	80	WEIDMULLER	1021500000	TERMINAL BLOCK, DUAL LEVEL, WDK 2.5, BEIGE, 300V, 30-12 AWG
46	4	WEIDMULLER	1059100000	TERMINAL BLOCK, END PLATE, WAP WDK 2.5, BEIGE
47	10	WEIDMULLER	1631930000	TERMINAL BLOCK, TAG CARRIER, SHT 5 S, BEIGE
48	21	WEIDMULLER	0383560000	TERMINAL BLOCK, END BRACKET, EW 35, BEIGE
49				
50	1	WEIDMULLER	1050000000	TERMINAL BLOCK, END PLATE, WAP 2.5-10, BEIGE
51				
52	A/R	PANDUIT	F2X4LG6	WIRE DUCT, TYPE F, 2.25" x 4.10", RIGID GRAY VINYL
53	A/R	PANDUIT	C2LG6	WIRE DUCT, 2" RIGID GRAY VINYL, NON-SLIP COVER
54	A/R	PANDUIT	F3X4LG6	WIRE DUCT, TYPE F, 3.25" X 4.10", RIGID GRAY VINYL
55	A/R	PANDUIT	C3LG6	WIRE DUCT, 3" RIGID GRAY VINYL, NON-SLIP COVER

ITEM	QTY	MFG	CATALOG	DESCRIPTION
56	2	PANDUIT	LAM2A-2/0	GROUND LUG
57	2	SQUARE D	PK9GTA	GROUND BAR, 9PT
58	4	SQUARE D	PK5GTA	GROUND BAR, 5PT
59	1	CORNING	W1C-04P	FIBER INTERCONNECT CENTER, WALL MOUNT, UP TO 4 CCH CONNECTOR PANELS
60	3	CORNING	CCH-CP12-25T	FIBER CONNECTOR PANEL, 12 ST MULTIMODE ADAPTERS, MM, 62.5uM, CERAMIC INSERT AND METAL HOUSING
61	1	HUBBELL	DRUBGF115	GROUND FAULT RECEPTACLE, DIN RAIL BOX w/ GFR5252GYA, 15A, 125V
62	3	CORNING	0550-02K5141-006-F	FIBER JUMPER, 6 FEET, ST/LC, MULTIMODE
63	3	BELKIN	A3L980-04-BLU-S	CABLE, PATCH, CAT6, 14 FEET, RJ45(M) TO RJ45(M) (TD#90544D)
64				
65				
66				
67	1	PHOENIX CONTACT	2839334	SURGE SUPPRESSOR, PT 2-PE/S-120VAC-ST, LINE, 120VAC, 20A
68	1	PHOENIX CONTACT	2839282	SURGE SUPPRESSOR BASE, PT BE/FM
69	13	EDCO	DRS-036	SURGE SUPPRESSOR, 30V, 3-TERMINAL DEVICE
70	19	EDCO	DRS-175-2	SURGE SUPPRESSOR, 170V, 3-TERMINAL DEVICE
71	1	REVERE	CUSTOM	NAMEPLATE, "REVERE"
72	1	HIRSCHMANN	MS4128-L2P EEC	MODULAR ETHERNET SWITCH, 24VDC, 4 X 1000 BASE-SX AND 24 100 FAST-ETHERNET PORTS, -30 TO 60°C
73	1	HIRSCHMANN	MM4-4TX/SFP	GIGABIT RJ45/SFP COMBO MODULE, 4 X COMBO PORTS FOR USE WITH MS4128 ONLY -40 TO 70°C
74	3	HIRSCHMANN	MM2-4TX1-EEC	MEDIA MODULE, 4X 10/100 Mbit/s RJ45, EXTENDED TEMPERATURE RANGE
75	2	HIRSCHMANN	M-SFP-SX/LC	SFP MODULE, 1 X 1000BASE-SX, LC CONNECTOR
76	1	HIRSCHMANN	MM20-Z6Z6Z6Z6SAHH	4X100 Mbit/s SFP SOCKETS
77	1	HIRSCHMANN	M-FAST SFP-MM/LC	SFP MODULE, 1 X 100BASE-FX, LC CONNECTOR
78	3	IDEC	RH1B-ULDC24V	RELAY, SPDT W/ IND LIGHT, 24VDC COIL, 10A CONTACTS
79	3	IDEC	SH1B-05	RELAY SOCKET, SPDT, DIN RAIL MOUNT

						NOTICE: THE DOCUMENT AND INFORMATION CONTAINED HEREIN IS PROPRIETARY TO REVERE CONTROL SYSTEMS, INC. AND SHOULD NOT BE USED, COPIED OR DISCLOSED TO OTHERS, EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY REVERE CONTROL SYSTEMS, INC.	RED RIVER WASTEWATER TREATMENT PLANT CITY OF BOSSIER CITY, LOUISIANA SLUDGE PROCESS BUILDING CONTROL PANEL BILL OF MATERIAL	 Revere Control Systems	2240 ROCKY RIDGE ROAD BIRMINGHAM, AL 35216 PHONE: (205) 824-0004	
1	01/27/15	FIELD REVISION		JEC	MLC					
0	05/06/14	RECORD DRAWING		LDG	ACS					
REV	DATE	DESCRIPTION		BY	APPV		DRAWN BY: LDG CHECKED BY: ACS	DATE: 12/4/12 SCALE: 1=1	CUSTOMER: MAX FOOTE CONSTRUCTION CO., INC. FILE NAME: 201.DWG	DWG NO: N0575_RR-SPB-PLC-060-201 2/24

07:49
05-13-15
F:\PROJECT FILES\2012\N057500\DRAWINGS\RR-SPB-PLC-060\201.DWG

ENGRAVING SCHEDULE					
ITEM	QTY	LINE1	LINE2	LINE3	TYPE OR MFG
A	1	SLUDGE PROCESS BUILDING	CONTROL PANEL	RR-SPB-PLC-060	BLACK W/.5" WHITE LETTERING
					SIZE OR CATALOG
					3.00" X 12.00"



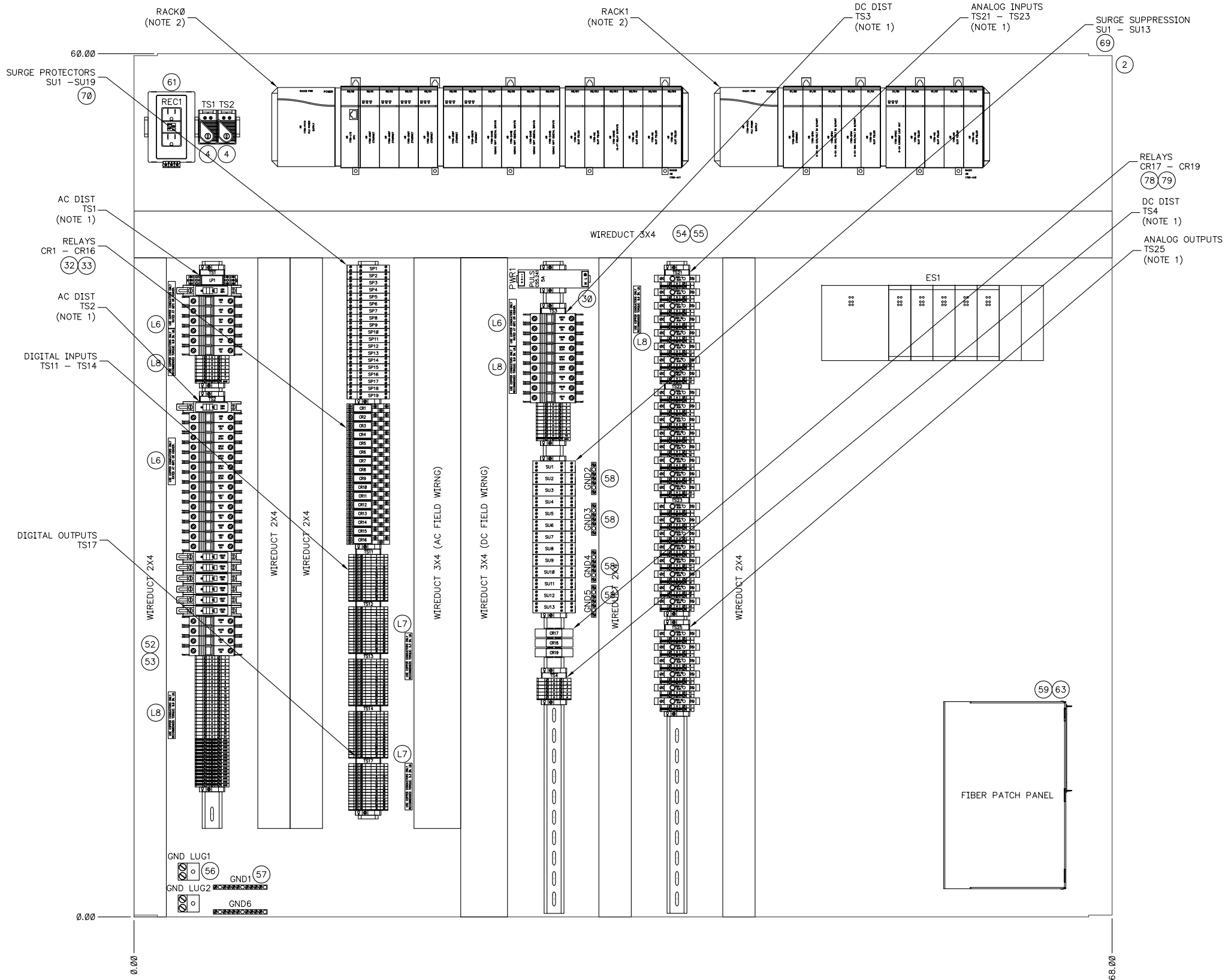
FRONT VIEW
(24" DEEP)

REV	DATE	DESCRIPTION	BY	APPV
1	01/27/15	FIELD REVISION	JEC	MLC
0	05/06/14	RECORD DRAWING	LDG	ACS

NOTICE:
THE DOCUMENT AND
INFORMATION CONTAINED
HEREIN IS PROPRIETARY TO
REVERE CONTROL SYSTEMS, INC.
AND SHOULD NOT BE USED,
COPIED OR DISCLOSED TO
OTHERS, EXCEPT AS
SPECIFICALLY AUTHORIZED IN
WRITING BY REVERE CONTROL
SYSTEMS, INC.

RED RIVER WASTEWATER TREATMENT PLANT CITY OF BOSSIER CITY, LOUISIANA SLUDGE PROCESS BUILDING CONTROL PANEL ENCLOSURE LAYOUT			
DRAWN BY:	LDG	DATE:	12/4/12
CHECKED BY:	ACS	SCALE:	3/32" = 1"

		2240 ROCKY RIDGE ROAD BIRMINGHAM, AL 35216 PHONE: (205) 824-0004	
CUSTOMER:	MAX FOOTE CONSTRUCTION CO., INC.	DWG NO:	N0575_RR-SPB-PLC-060-202
FILE NAME:	202.DWG		3/24



NOTES:

1. FOR TERMINAL BLOCK DETAIL SEE DWG 204
2. FOR PLC DETAIL SEE DWG 301.

REV	DATE	DESCRIPTION	BY	APPV
1	01/27/15	FIELD REVISION	JEC	MLC
0	05/06/14	RECORD DRAWING	LDG	ACS

NOTICE:
THE DOCUMENT AND
INFORMATION CONTAINED
HEREIN IS PROPRIETARY TO
REVERE CONTROL SYSTEMS, INC.,
AND SHOULD NOT BE USED,
COPIED OR DISCLOSED TO
OTHERS, EXCEPT AS
SPECIFICALLY AUTHORIZED IN
WRITING BY REVERE CONTROL
SYSTEMS, INC.

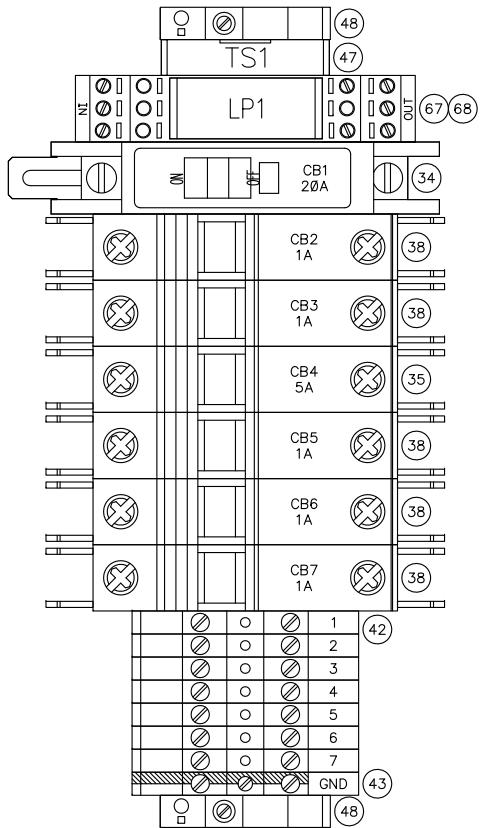
RED RIVER WASTEWATER TREATMENT PLANT CITY OF BOSSIER CITY, LOUISIANA SLUDGE PROCESS BUILDING CONTROL PANEL SUBPANEL LAYOUT			
DRAWN BY:	LDG	DATE:	12/4/12
CHECKED BY:	ACS	SCALE:	1/8" = 1"



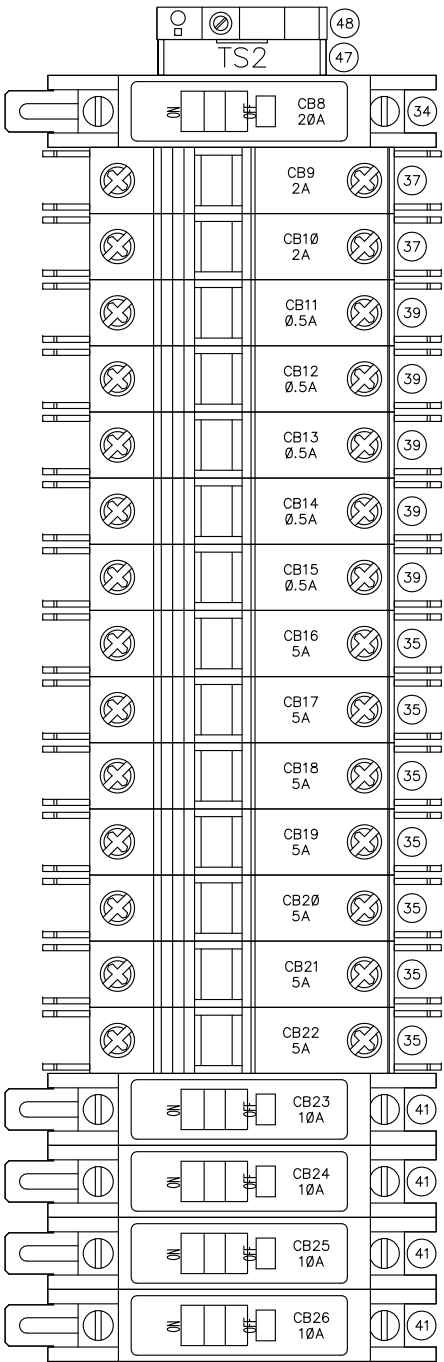
2240 ROCKY RIDGE ROAD
BIRMINGHAM, AL 35216
PHONE: (205) 824-0004

CUSTOMER: MAX FOOTE CONSTRUCTION CO., INC.
FILE NAME: 203.DWG

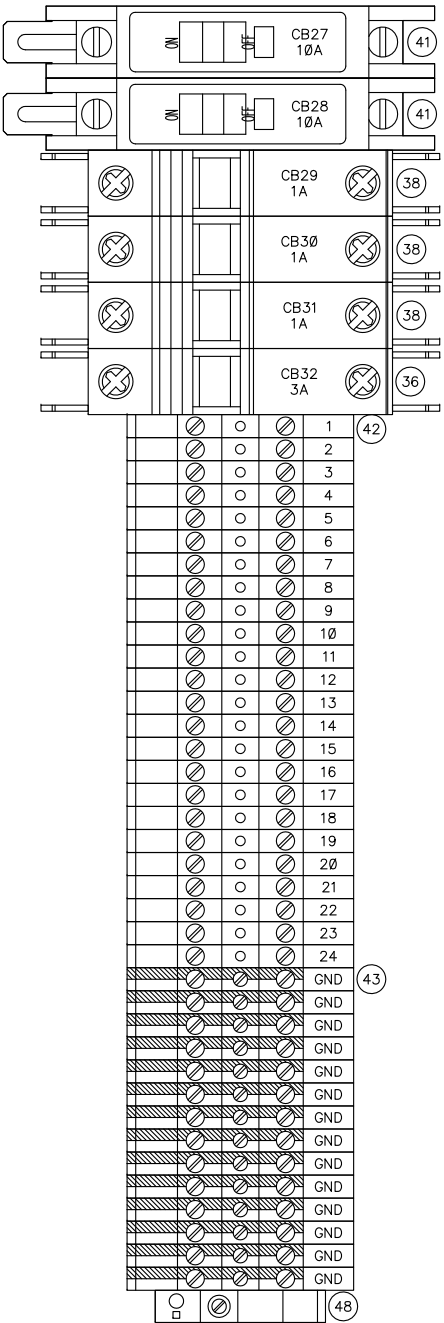
DWG NO: N0575_RR-SPB-PLC-060-203



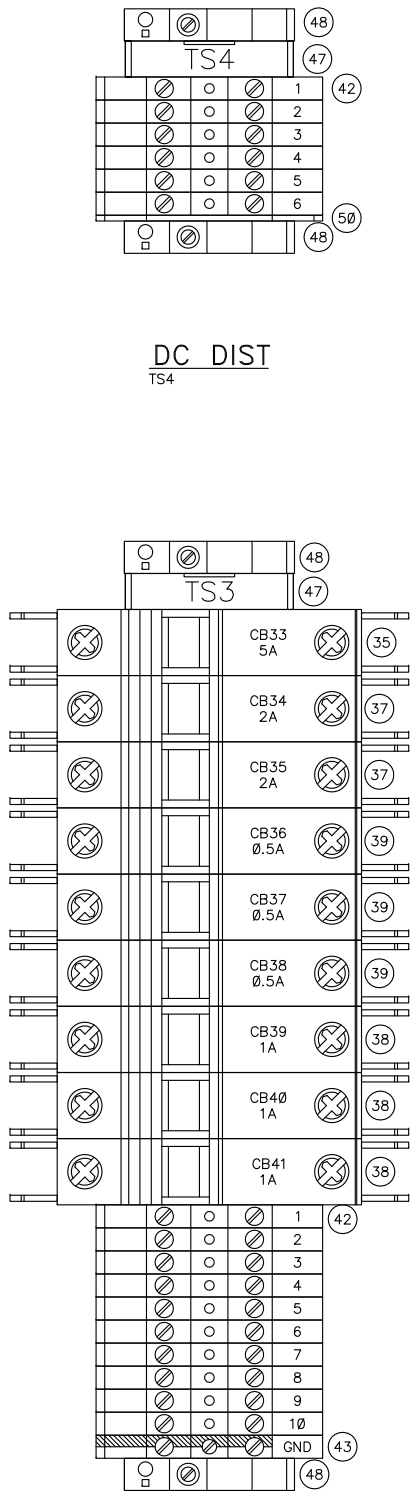
AC DIST
TS1



AC DIST
TS2



AC DIST
TS2 (CONT.)



DC DIST
TS4

DC DIST
TS3

REV	DATE	DESCRIPTION	BY	APPV
1	01/27/15	FIELD REVISION	JEC	MLC
0	05/06/14	RECORD DRAWING	LDG	ACS

NOTICE:
THE DOCUMENT AND
INFORMATION CONTAINED
HEREIN IS PROPRIETARY TO
REVERE CONTROL SYSTEMS, INC.
AND SHOULD NOT BE USED,
COPIED OR DISCLOSED TO
OTHERS, EXCEPT AS
SPECIFICALLY AUTHORIZED IN
WRITING BY REVERE CONTROL
SYSTEMS, INC.

RED RIVER WASTEWATER TREATMENT PLANT CITY OF BOSSIER CITY, LOUISIANA SLUDGE PROCESS BUILDING CONTROL PANEL TERMINAL BLOCK DETAIL			
DRAWN BY:	LDG	DATE:	12/4/12
CHECKED BY:	ACS	SCALE:	1=1



CUSTOMER:

MAX FOOTE CONSTRUCTION CO., INC.

DWG NO:

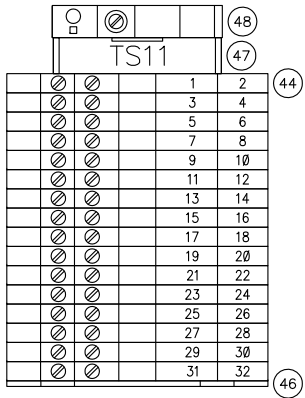
N0575_RR-SPB-PLC-060-204

2240 ROCKY RIDGE ROAD
BIRMINGHAM, AL 35216
PHONE: (205) 824-0004

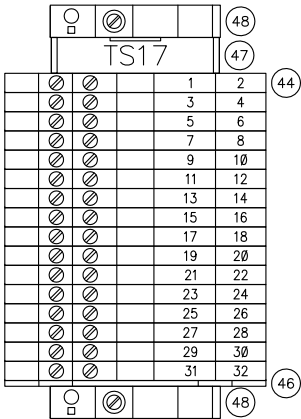
FILE NAME:

204.DWG

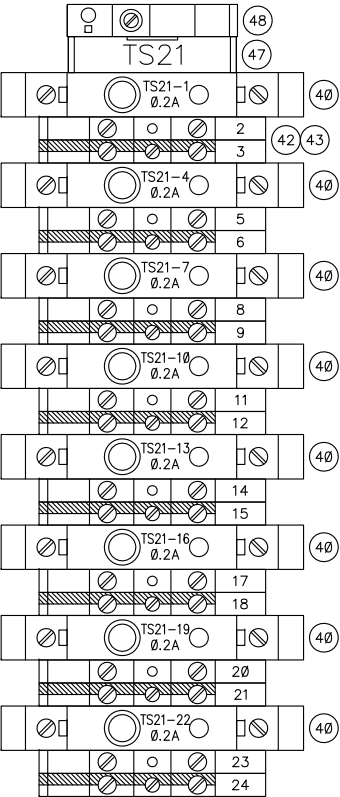
5/24



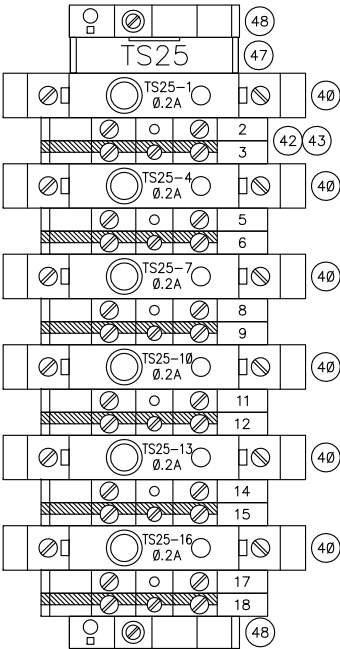
DIGITAL INPUTS
TS11–TS14



DIGITAL OUTPUTS
TS17



ANALOG INPUTS
TS21–TS23



ANALOG OUTPUTS
TS25

REV	DATE	DESCRIPTION	BY	APPV
1	01/27/15	FIELD REVISION	JEC	MLC
0	05/06/14	RECORD DRAWING	LDG	ACS

NOTICE:
THE DOCUMENT AND
INFORMATION CONTAINED
HEREIN IS PROPRIETARY TO
REVERE CONTROL SYSTEMS, INC.
AND SHOULD NOT BE USED,
COPIED OR DISCLOSED TO
OTHERS, EXCEPT AS
SPECIFICALLY AUTHORIZED IN
WRITING BY REVERE CONTROL
SYSTEMS, INC.

RED RIVER WASTEWATER TREATMENT PLANT
CITY OF BOSSIER CITY, LOUISIANA
SLUDGE PROCESS BUILDING CONTROL PANEL
TERMINAL BLOCK DETAIL

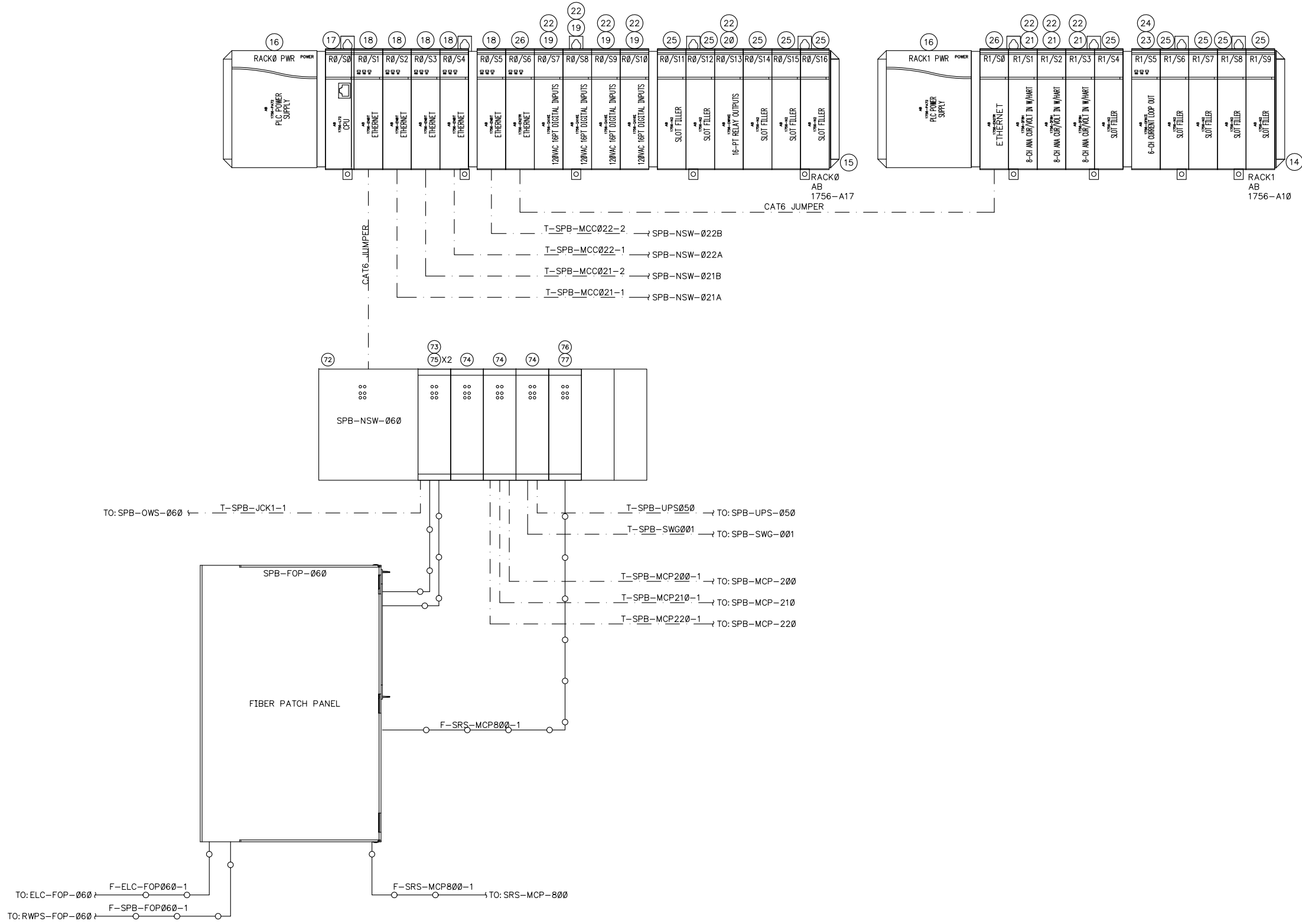
DRAWN BY: LDG
CHECKED BY: ACS
DATE: 12/4/12
SCALE: 1=1

Revere
Control Systems

2240 ROCKY RIDGE ROAD
BIRMINGHAM, AL 35216
PHONE: (205) 824-0004

CUSTOMER: MAX FOOTE CONSTRUCTION CO., INC.
FILE NAME: 205.DWG

DWG NO: N0575_RR-SPB-PLC-060-205



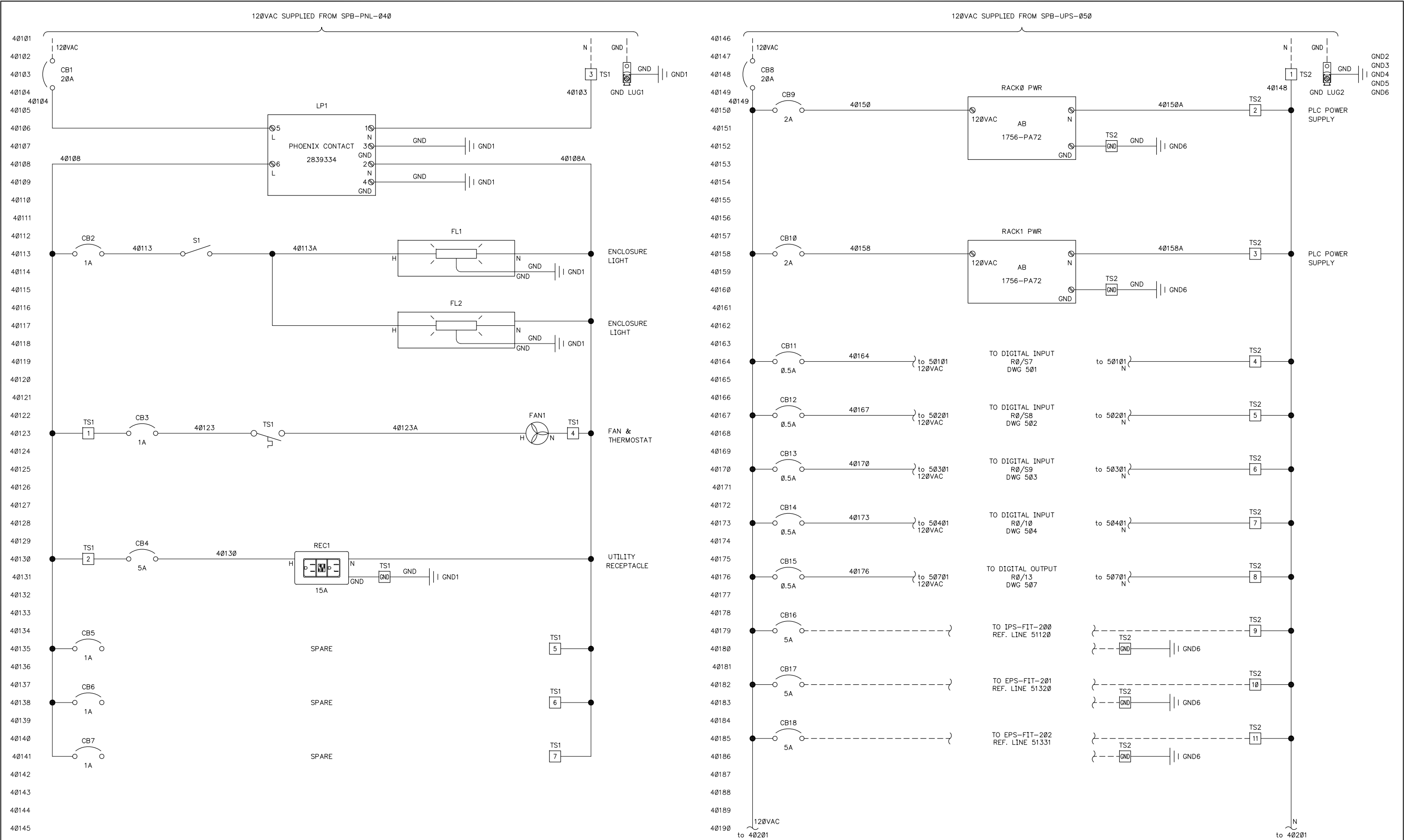
CABLE LEGEND		
	ETHERNET	
	FIBER OPTIC	
	MISC COMM. CABLE	

REV	DATE	DESCRIPTION	BY	APPV
1	01/27/15	FIELD REVISION	JEC	MLC
0	05/06/14	RECORD DRAWING	LDG	ACS

NOTICE:
THE DOCUMENT AND
INFORMATION CONTAINED
HEREIN IS PROPRIETARY TO
REVERE CONTROL SYSTEMS, INC.
AND SHOULD NOT BE USED,
COPIED OR DISCLOSED TO
OTHERS, EXCEPT AS
SPECIFICALLY AUTHORIZED IN
WRITING BY REVERE CONTROL
SYSTEMS, INC.

RED RIVER WASTEWATER TREATMENT PLANT CITY OF BOSSIER CITY, LOUISIANA SLUDGE PROCESS BUILDING CONTROL PANEL COMMUNICATION DIAGRAM			
DRAWN BY:	LDG	DATE:	12/4/12
CHECKED BY:	ACS	SCALE:	NTS

		2240 ROCKY RIDGE ROAD BIRMINGHAM, AL 35216 PHONE: (205) 824-0004	
CUSTOMER:	MAX FOOTE CONSTRUCTION CO., INC.	DWG NO:	N0575_RR-SPB-PLC-060-301
FILE NAME:	301.DWG		7/24




1	01/27/15	FIELD REVISION	JEC	MLC	
0	05/06/14	RECORD DRAWING	LDG	ACS	
REV	DATE	DESCRIPTION	BY	APPV	

NOTICE:
THE DOCUMENT AND
INFORMATION CONTAINED
HEREIN IS PROPRIETARY TO
REVERE CONTROL SYSTEMS, INC.
AND SHOULD NOT BE USED,
COPIED OR DISCLOSED TO
OTHERS, EXCEPT AS
SPECIFICALLY AUTHORIZED IN
WRITING BY REVERE CONTROL
SYSTEMS, INC.

RED RIVER WASTEWATER TREATMENT PLANT
CITY OF BOSSIER CITY, LOUISIANA
SLUDGE PROCESS BUILDING CONTROL PANEL
120VAC POWER DISTRIBUTION

DRAWN BY:	LDG	DATE:	12/4/12
CHECKED BY:	ACS	SCALE:	1=1

**Revere
Control Systems**

2240 ROCKY RIDGE ROAD
BIRMINGHAM, AL 35216
PHONE: (205) 824-0004

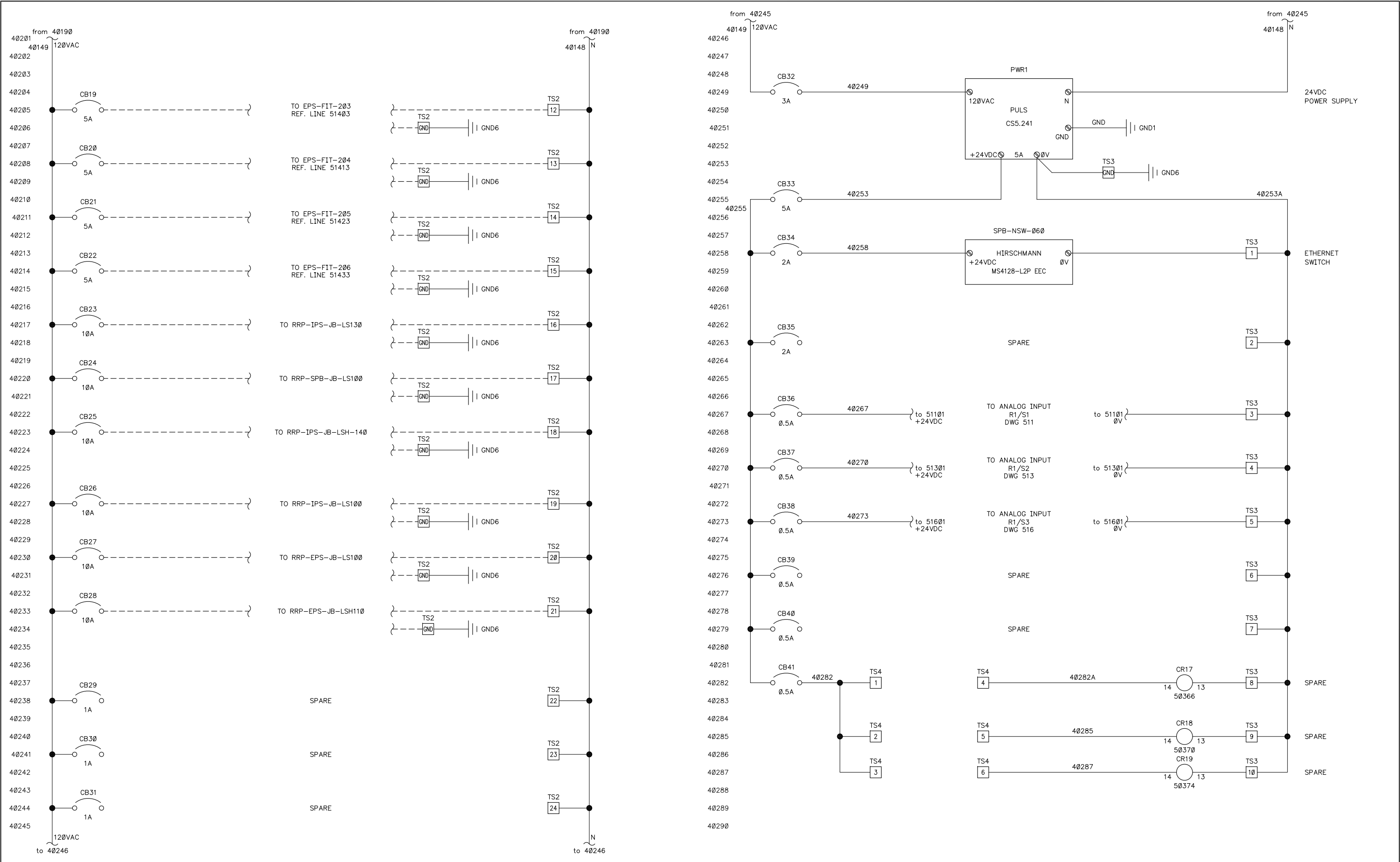
DWG NO:
N0575_RR-SPB-PLC-060-401

8/24

FILE NAME:
401.DWG

CUSTOMER:
MAX FOOTE CONSTRUCTION CO., INC.

07:49
05-13-15
F:\PROJECT FILES\2012\N057500\DRAWINGS\REC\RR-SPB-PLC-060\401.DWG



1	01/27/15	FIELD REVISION	JEC	MLC
0	05/06/14	RECORD DRAWING	LDG	ACS
REV	DATE	DESCRIPTION	BY	APPV

NOTICE:
THE DOCUMENT AND INFORMATION CONTAINED HEREIN IS PROPRIETARY TO REVERE CONTROL SYSTEMS, INC. AND SHOULD NOT BE USED, COPIED OR DISCLOSED TO OTHERS, EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY REVERE CONTROL SYSTEMS, INC.

RED RIVER WASTEWATER TREATMENT PLANT
CITY OF BOSSIER CITY, LOUISIANA
SLUDGE PROCESS BUILDING CONTROL PANEL
POWER DISTRIBUTION

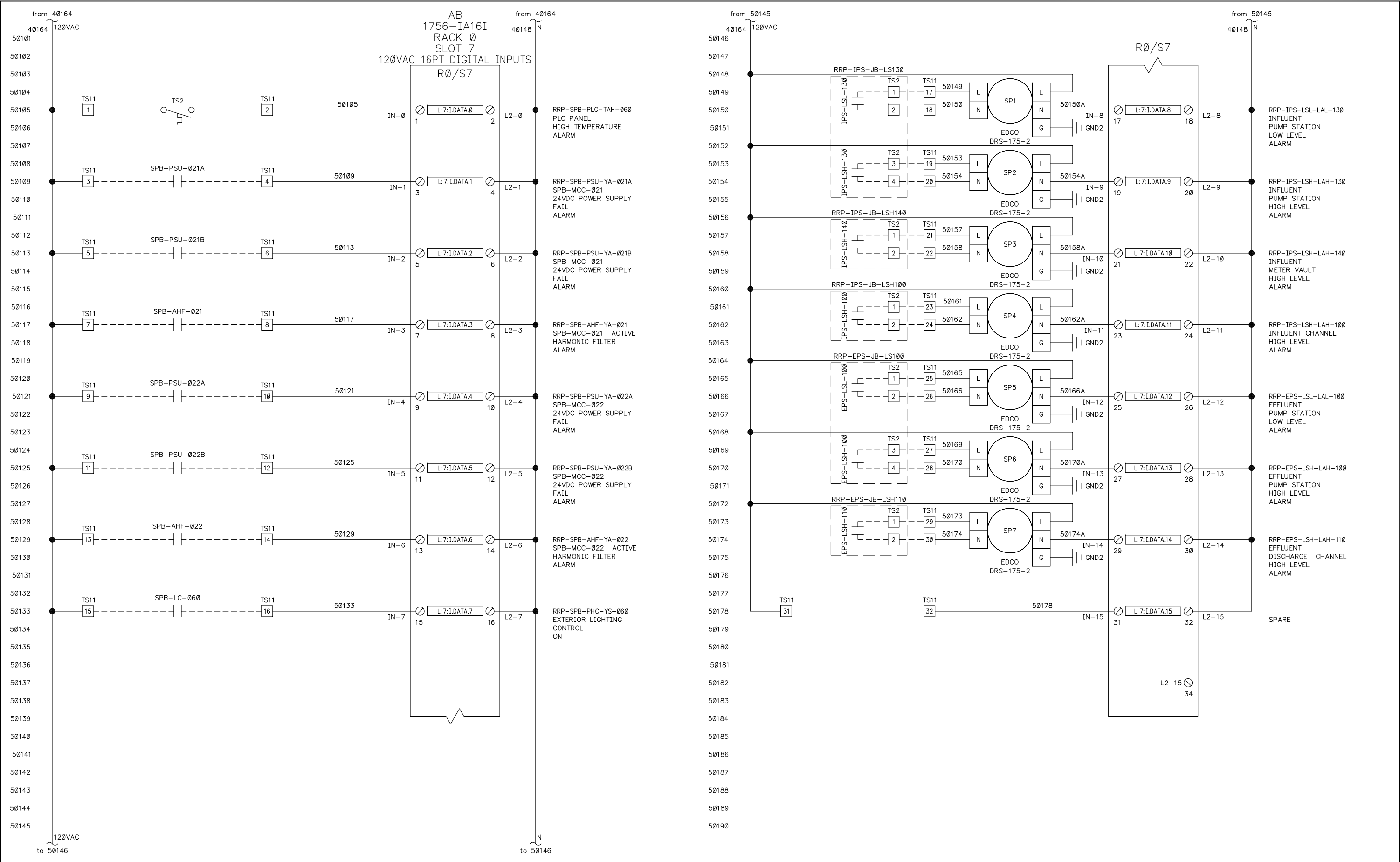
DRAWN BY: LDG
CHECKED BY: ACS
DATE: 12/4/12
SCALE: 1=1

CUSTOMER: MAX FOOTE CONSTRUCTION CO., INC.
FILE NAME: 402.DWG

DWG NO: N0575_RR-SPB-PLC-060-402
9/24

Revere Control Systems
2240 ROCKY RIDGE ROAD
BIRMINGHAM, AL 35216
PHONE: (205) 824-0004

05-13-15 07:49 F:\PROJECT FILES\2012\N057500\DRAWINGS\RR-SPB-PLC-060\402.DWG



1	01/27/15	FIELD REVISION	JEC	MLC	
0	05/06/14	RECORD DRAWING	LDG	ACS	
REV	DATE	DESCRIPTION	BY	APPV	

NOTICE:
THE DOCUMENT AND
INFORMATION CONTAINED
HEREIN IS PROPRIETARY TO
REVERE CONTROL SYSTEMS, INC.
AND SHOULD NOT BE USED,
COPIED OR DISCLOSED TO
OTHERS, EXCEPT AS
SPECIFICALLY AUTHORIZED IN
WRITING BY REVERE CONTROL
SYSTEMS, INC.

RED RIVER WASTEWATER TREATMENT PLANT
CITY OF BOSSIER CITY, LOUISIANA
SLUDGE PROCESS BUILDING CONTROL PANEL
DIGITAL INPUT MODULE WIRING DIAGRAM

DRAWN BY:	LDG	DATE:	12/4/12
CHECKED BY:	ACS	SCALE:	1=1



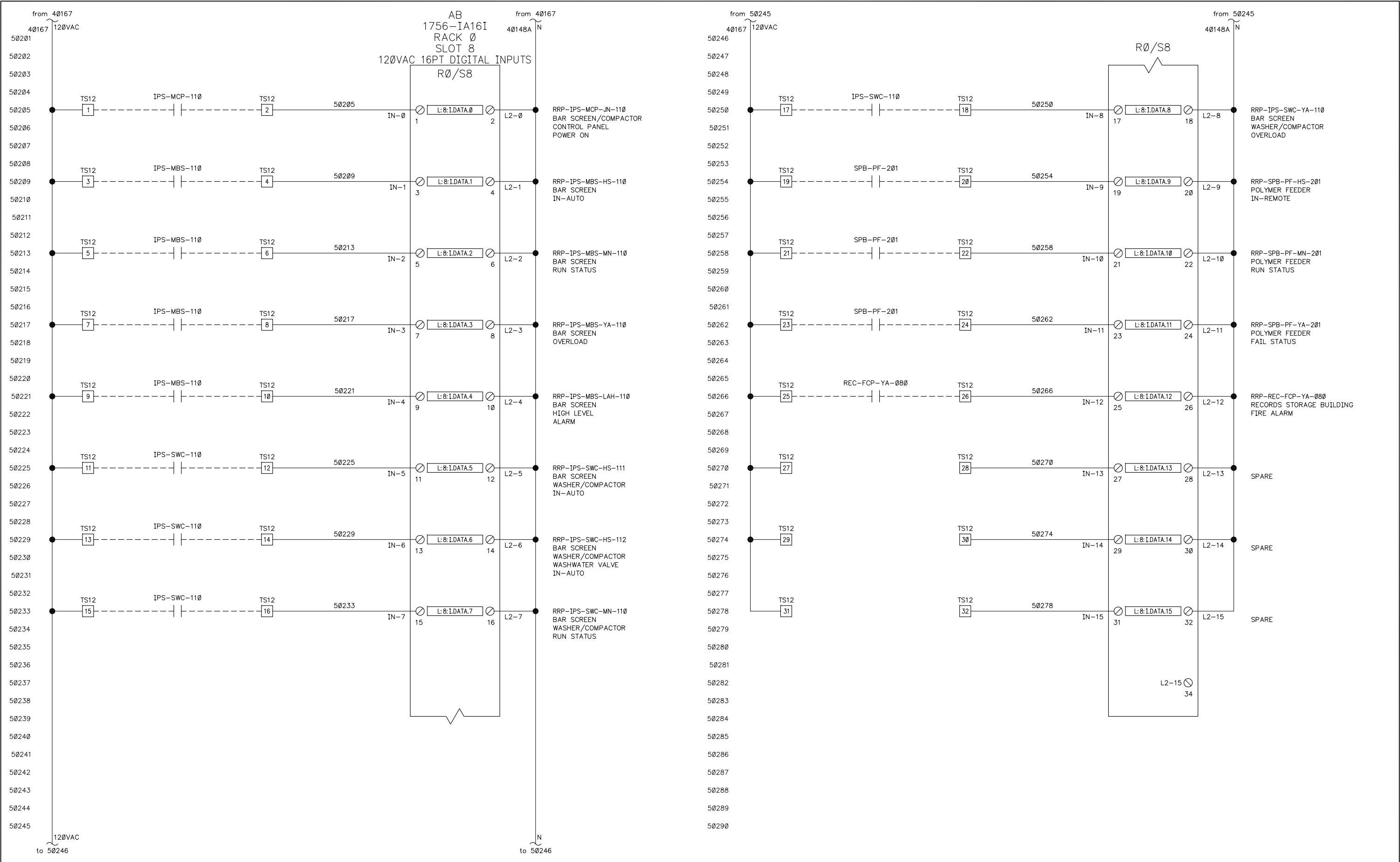
Revere
Control Systems

2240 ROCKY RIDGE ROAD
BIRMINGHAM, AL 35216
PHONE: (205) 824-0004

DWG NO:
N0575_RR-SPB-PLC-060-501

CUSTOMER: MAX FOOTE CONSTRUCTION CO., INC.
FILE NAME: 501.DWG

10/24




REV	DATE	DESCRIPTION	BY	APPV
1	01/27/15	FIELD REVISION	JEC	MLC
0	05/06/14	RECORD DRAWING	LDG	ACS

NOTICE:
THE DOCUMENT AND
INFORMATION CONTAINED
HEREIN IS PROPRIETARY TO
REVERE CONTROL SYSTEMS, INC.
AND SHOULD NOT BE USED,
COPIED OR DISCLOSED TO
OTHERS, EXCEPT AS
SPECIFICALLY AUTHORIZED IN
WRITING BY REVERE CONTROL
SYSTEMS, INC.

RED RIVER WASTEWATER TREATMENT PLANT
CITY OF BOSSIER CITY, LOUISIANA
SLUDGE PROCESS BUILDING CONTROL PANEL
DIGITAL INPUT MODULE WIRING DIAGRAM

DRAWN BY:	LDG	DATE:	12/4/12
CHECKED BY:	ACS	SCALE:	1=1



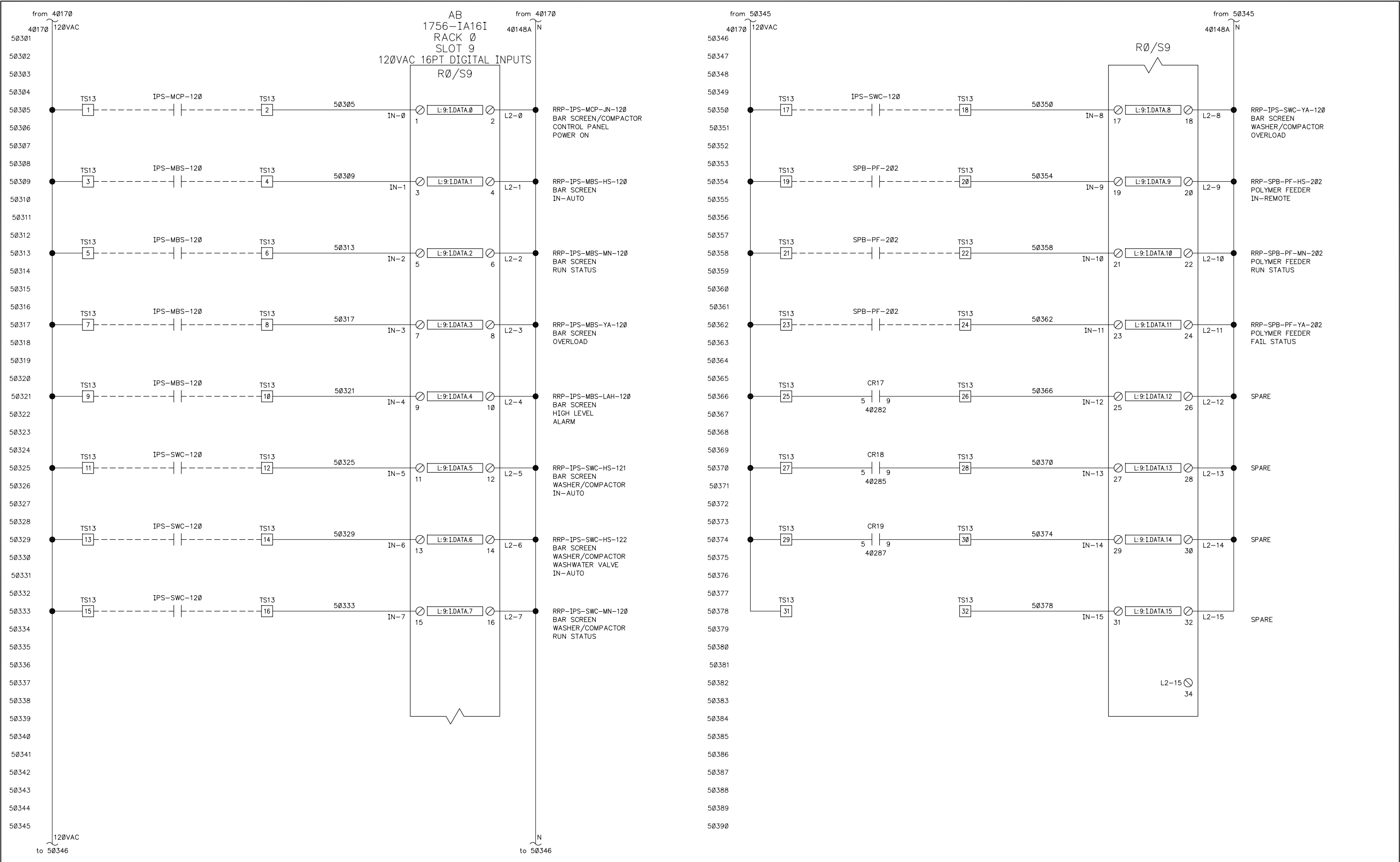
**Revere
Control Systems**

2240 ROCKY RIDGE ROAD
BIRMINGHAM, AL 35216
PHONE: (205) 824-0004

DWG NO:
N0575_RR-SPB-PLC-060-502

11/24

CUSTOMER: MAX FOOTE CONSTRUCTION CO., INC.
FILE NAME: 502.DWG



1	01/27/15	FIELD REVISION	JEC	MLC	
0	05/06/14	RECORD DRAWING	LDG	ACS	
REV	DATE	DESCRIPTION	BY	APPV	

NOTICE:
THE DOCUMENT AND
INFORMATION CONTAINED
HEREIN IS PROPRIETARY TO
REVERE CONTROL SYSTEMS, INC.
AND SHOULD NOT BE USED,
COPIED OR DISCLOSED TO
OTHERS, EXCEPT AS
SPECIFICALLY AUTHORIZED IN
WRITING BY REVERE CONTROL
SYSTEMS, INC.

RED RIVER WASTEWATER TREATMENT PLANT
CITY OF BOSSIER CITY, LOUISIANA
SLUDGE PROCESS BUILDING CONTROL PANEL
DIGITAL INPUT MODULE WIRING DIAGRAM

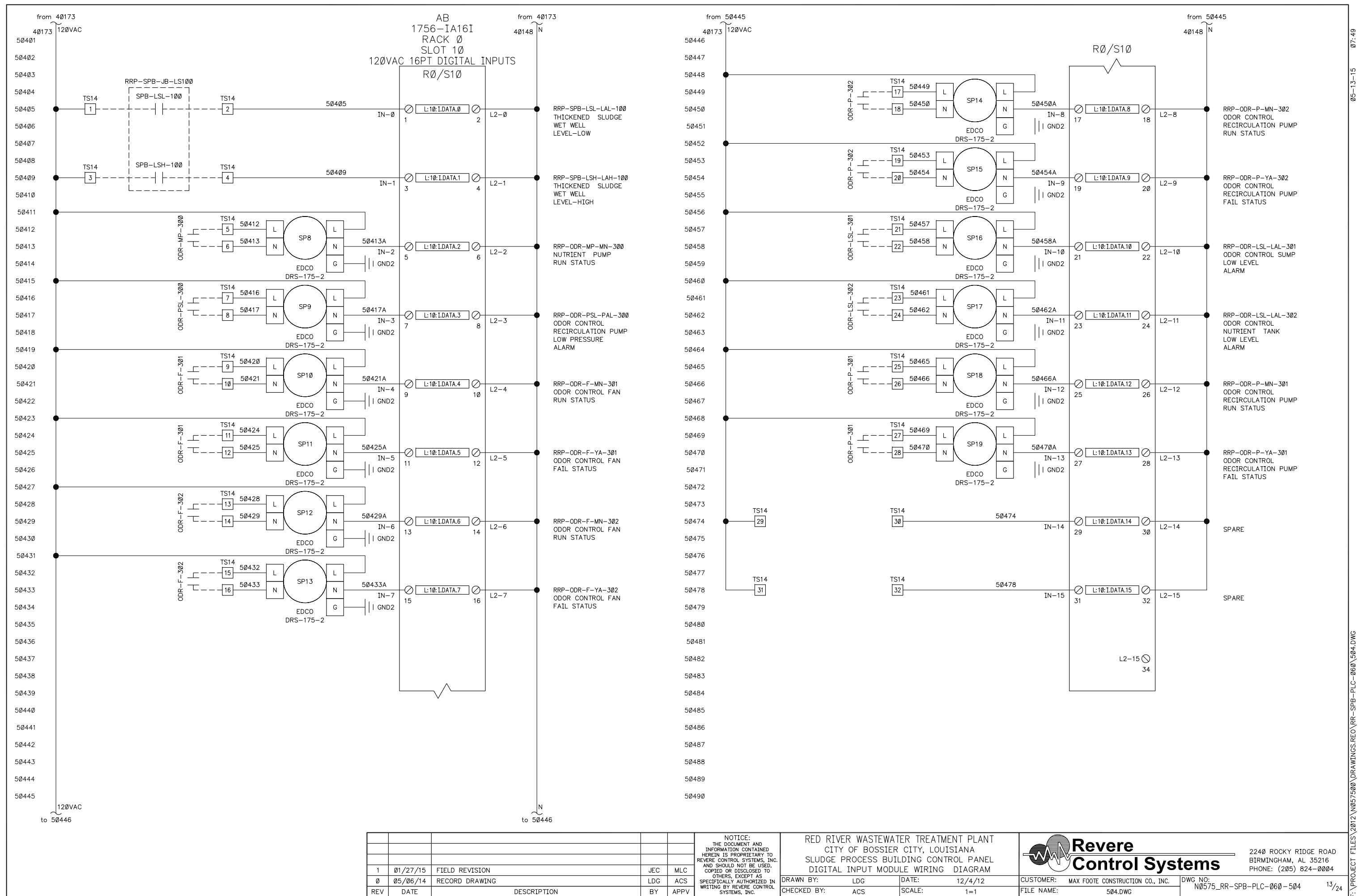
DRAWN BY:	LDG	DATE:	12/4/12
CHECKED BY:	ACS	SCALE:	1=1



**Revere
Control Systems**

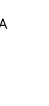
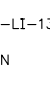
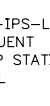
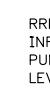
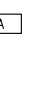
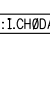
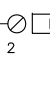
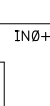
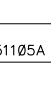
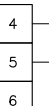
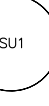
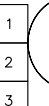
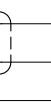
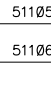
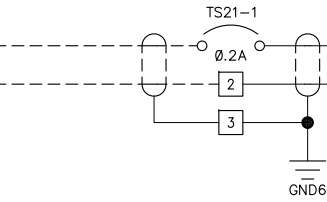
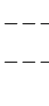
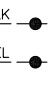
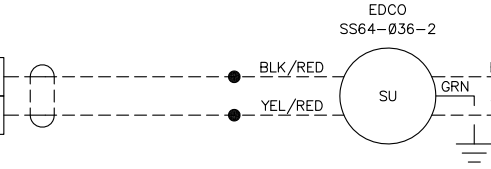
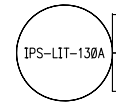
2240 ROCKY RIDGE ROAD
BIRMINGHAM, AL 35216
PHONE: (205) 824-0004

CUSTOMER:	MAX FOOTE CONSTRUCTION CO., INC.	DWG NO:	N0575_RR-SPB-PLC-060-503
FILE NAME:	503.DWG		12/24

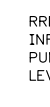
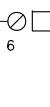
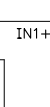
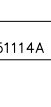
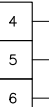
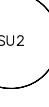
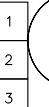
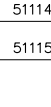
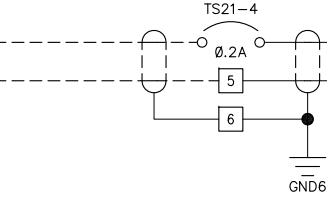
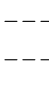
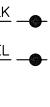
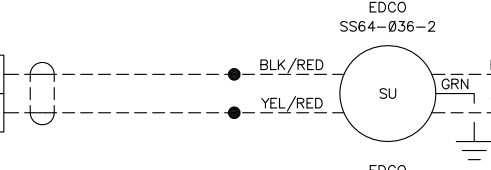
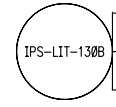


51101
51102
51103
51104
51105
51106
51107
51108
51109
51110
51111
51112
51113
51114
51115
51116
51117
51118
51119
51120
51121
51122
51123
51124
51125
51126
51127
51128
51129
51130
51131
51132
51133
51134
51135
51136
51137
51138
51139
51140
51141
51142
51143
51144
51145

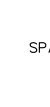
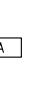
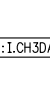
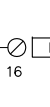
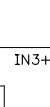
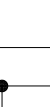
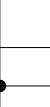
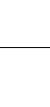
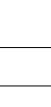
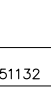
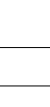
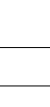
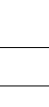
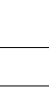
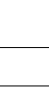
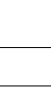
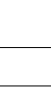
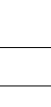
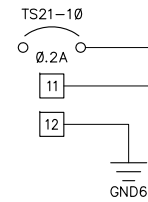
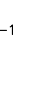
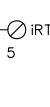
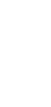
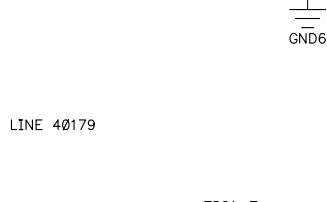
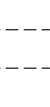
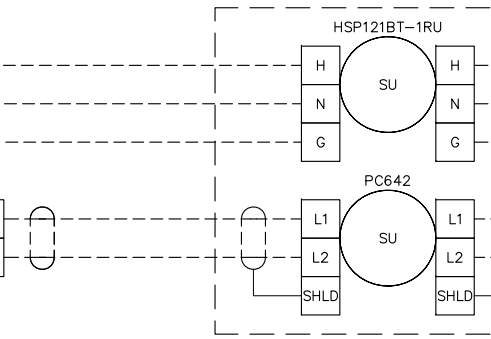
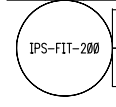
MFG: E & H
MODEL: FMR240-A5V1AWJAA4A
RANGE: 0-20 FT



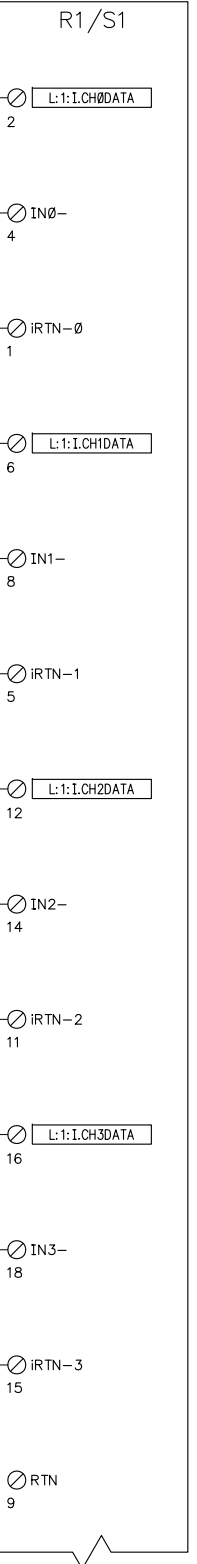
MFG: E & H
MODEL: FMR240-A5V1AWJAA4A
RANGE: 0-20 FT



MFG: E & H
MODEL: 10WV0-HPGAINR
RANGE: 0-50.4 MGD



AB
1756-IF8H
RACK 1
SLOT 1
8-CH ANA CUR/VOLT IN W/HART



RRP-IPS-LIT-LI-130A
INFLUENT
PUMP STATION
LEVEL

RRP-IPS-LIT-LI-130B
INFLUENT
PUMP STATION
LEVEL

RRP-IPS-FIT-FI-200
PLANT INFLUENT
FLOW

SPARE

REV	DATE	DESCRIPTION	BY	APPV
1	01/27/15	FIELD REVISION	JEC	MLC
0	05/06/14	RECORD DRAWING	LDG	ACS

NOTICE:
THE DOCUMENT AND
INFORMATION CONTAINED
HEREIN IS PROPRIETARY TO
REVERE CONTROL SYSTEMS, INC.
AND SHOULD NOT BE USED,
COPIED OR DISCLOSED TO
OTHERS, EXCEPT AS
SPECIFICALLY AUTHORIZED IN
WRITING BY REVERE CONTROL
SYSTEMS, INC.

RED RIVER WASTEWATER TREATMENT PLANT
CITY OF BOSSIER CITY, LOUISIANA
SLUDGE PROCESS BUILDING CONTROL PANEL
ANALOG INPUT MODULE WIRING DIAGRAM

DRAWN BY:	LDG	DATE:	12/4/12
CHECKED BY:	ACS	SCALE:	1=1



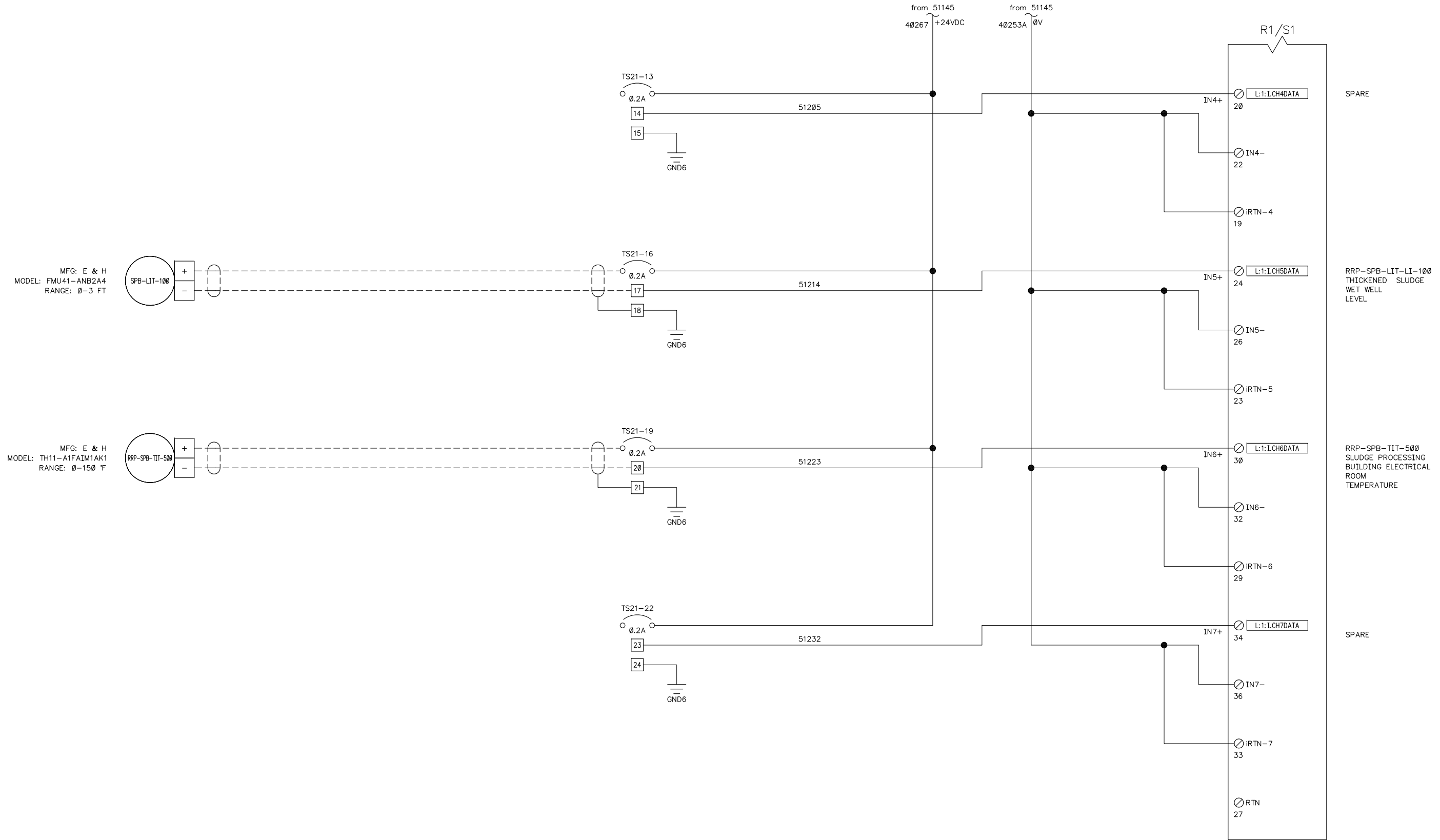
2240 ROCKY RIDGE ROAD
BIRMINGHAM, AL 35216
PHONE: (205) 824-0004

DWG NO:
N0575_RR-SPB-PLC-060-511

FILE NAME: 511.DWG

15/24

51201
51202
51203
51204
51205
51206
51207
51208
51209
51210
51211
51212
51213
51214
51215
51216
51217
51218
51219
51220
51221
51222
51223
51224
51225
51226
51227
51228
51229
51230
51231
51232
51233
51234
51235
51236
51237
51238
51239
51240
51241
51242
51243
51244
51245




1	01/27/15	FIELD REVISION	JEC	MLC
0	05/06/14	RECORD DRAWING	LDG	ACS
REV	DATE	DESCRIPTION	BY	APPV

NOTICE:
THE DOCUMENT AND
INFORMATION CONTAINED
HEREIN IS PROPRIETARY TO
REVERE CONTROL SYSTEMS, INC.
AND SHOULD NOT BE USED,
COPIED OR DISCLOSED TO
OTHERS, EXCEPT AS
SPECIFICALLY AUTHORIZED IN
WRITING BY REVERE CONTROL
SYSTEMS, INC.

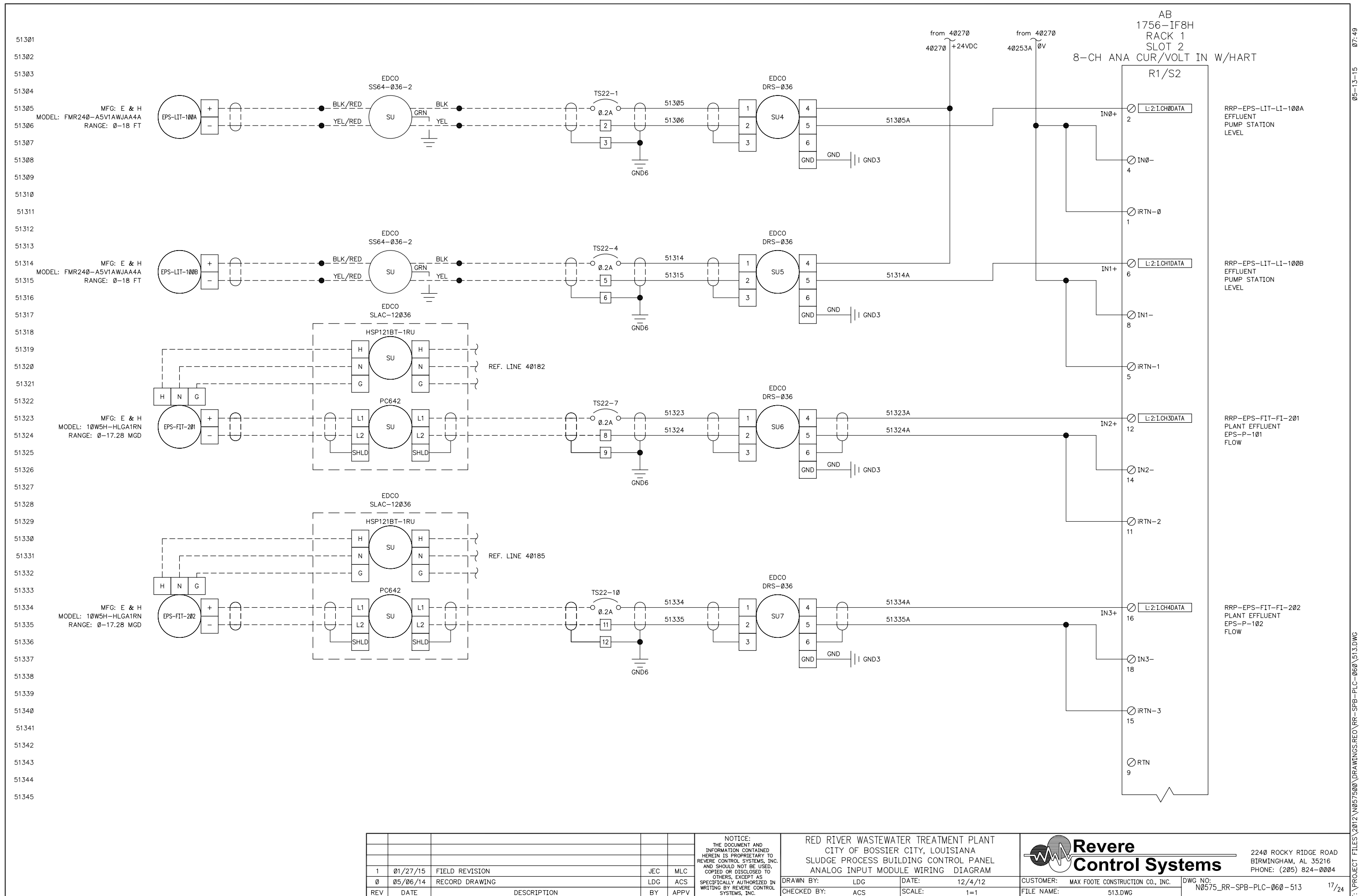
RED RIVER WASTEWATER TREATMENT PLANT
CITY OF BOSSIER CITY, LOUISIANA
SLUDGE PROCESS BUILDING CONTROL PANEL
ANALOG INPUT MODULE WIRING DIAGRAM

DRAWN BY:	LDG	DATE:	12/4/12
CHECKED BY:	ACS	SCALE:	1=1

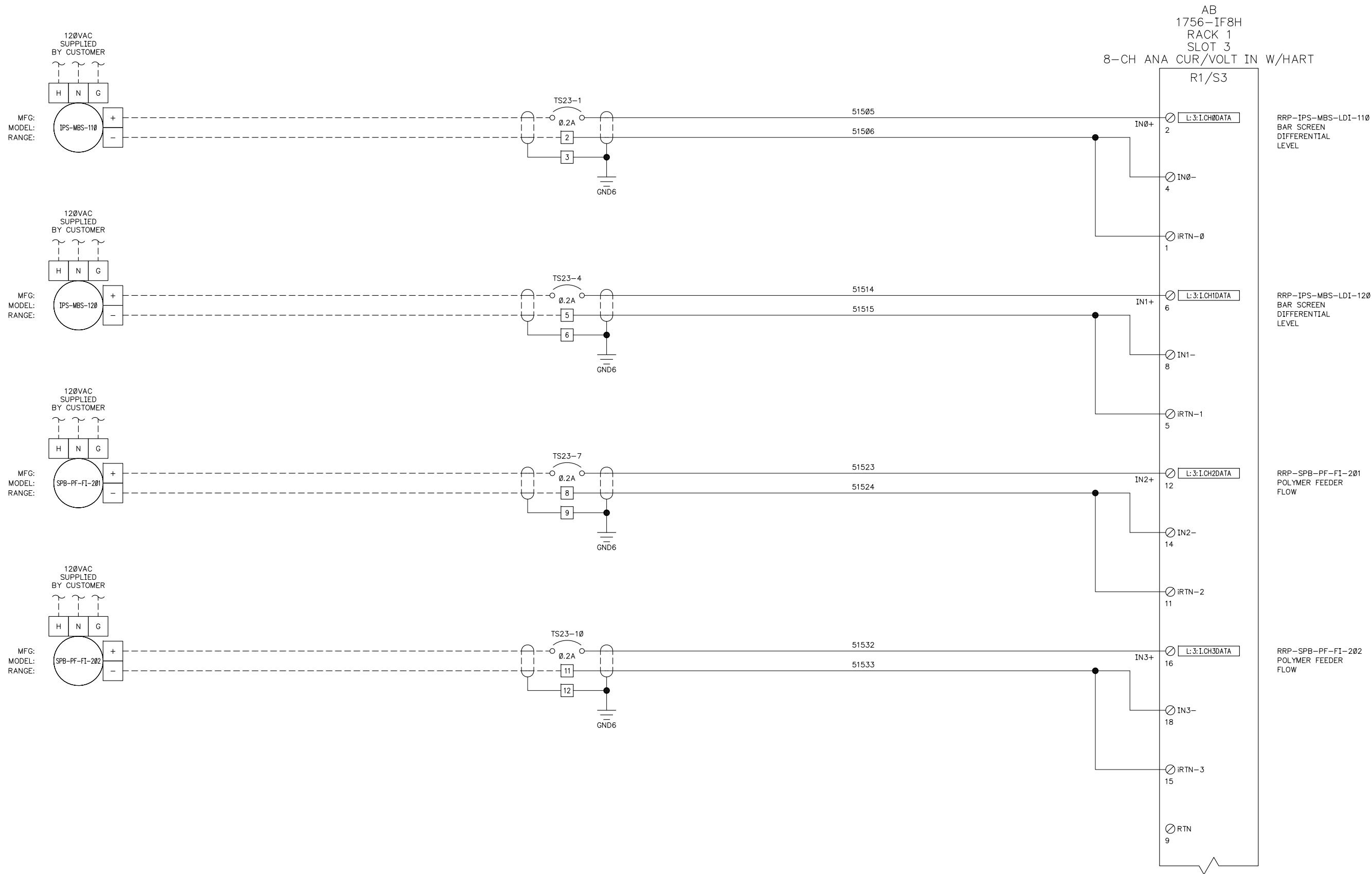
**Revere
Control Systems**

2240 ROCKY RIDGE ROAD
BIRMINGHAM, AL 35216
PHONE: (205) 824-0004

CUSTOMER:	MAX FOOTE CONSTRUCTION CO., INC.	DWG NO:	N0575_RR-SPB-PLC-060-512
FILE NAME:	512.DWG		16/24



51501
51502
51503
51504
51505
51506
51507
51508
51509
51510
51511
51512
51513
51514
51515
51516
51517
51518
51519
51520
51521
51522
51523
51524
51525
51526
51527
51528
51529
51530
51531
51532
51533
51534
51535
51536
51537
51538
51539
51540
51541
51542
51543
51544
51545




REV	DATE	DESCRIPTION	BY	APPV
1	01/27/15	FIELD REVISION	JEC	MLC
0	05/06/14	RECORD DRAWING	LDG	ACS

NOTICE:
THE DOCUMENT AND
INFORMATION CONTAINED
HEREIN IS PROPRIETARY TO
REVERE CONTROL SYSTEMS, INC.
AND SHOULD NOT BE USED,
COPIED OR DISCLOSED TO
OTHERS, EXCEPT AS
SPECIFICALLY AUTHORIZED IN
WRITING BY REVERE CONTROL
SYSTEMS, INC.

RED RIVER WASTEWATER TREATMENT PLANT
CITY OF BOSSIER CITY, LOUISIANA
SLUDGE PROCESS BUILDING CONTROL PANEL
ANALOG INPUT MODULE WIRING DIAGRAM

DRAWN BY: LDG DATE: 12/4/12
CHECKED BY: ACS SCALE: 1=1



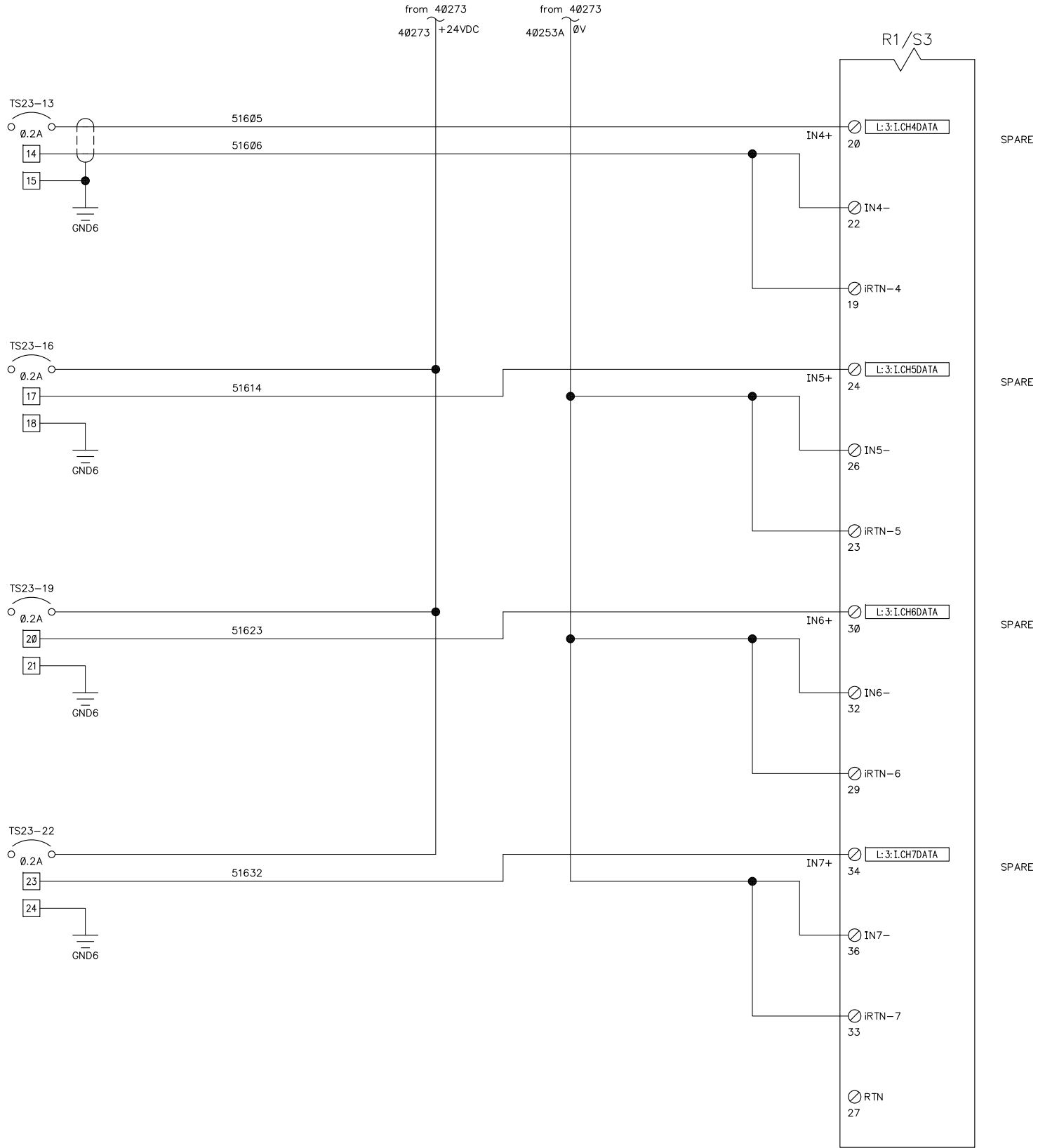
**Revere
Control Systems**

2240 ROCKY RIDGE ROAD
BIRMINGHAM, AL 35216
PHONE: (205) 824-0004

CUSTOMER: MAX FOOTE CONSTRUCTION CO., INC.
FILE NAME: 515.DWG

DWG NO: N0575_RR-SPB-PLC-060-515
19/24

51601
51602
51603
51604
51605
51606
51607
51608
51609
51610
51611
51612
51613
51614
51615
51616
51617
51618
51619
51620
51621
51622
51623
51624
51625
51626
51627
51628
51629
51630
51631
51632
51633
51634
51635
51636
51637
51638
51639
51640
51641
51642
51643
51644
51645




1	01/27/15	FIELD REVISION	JEC	MLC
0	05/06/14	RECORD DRAWING	LDG	ACS
REV	DATE	DESCRIPTION	BY	APPV

NOTICE:
THE DOCUMENT AND
INFORMATION CONTAINED
HEREIN IS PROPRIETARY TO
REVERE CONTROL SYSTEMS, INC.
AND SHOULD NOT BE USED,
COPIED OR DISCLOSED TO
OTHERS, EXCEPT AS
SPECIFICALLY AUTHORIZED IN
WRITING BY REVERE CONTROL
SYSTEMS, INC.

RED RIVER WASTEWATER TREATMENT PLANT
CITY OF BOSSIER CITY, LOUISIANA
SLUDGE PROCESS BUILDING CONTROL PANEL
ANALOG INPUT MODULE WIRING DIAGRAM

DRAWN BY:	LDG	DATE:	12/4/12
CHECKED BY:	ACS	SCALE:	1=1



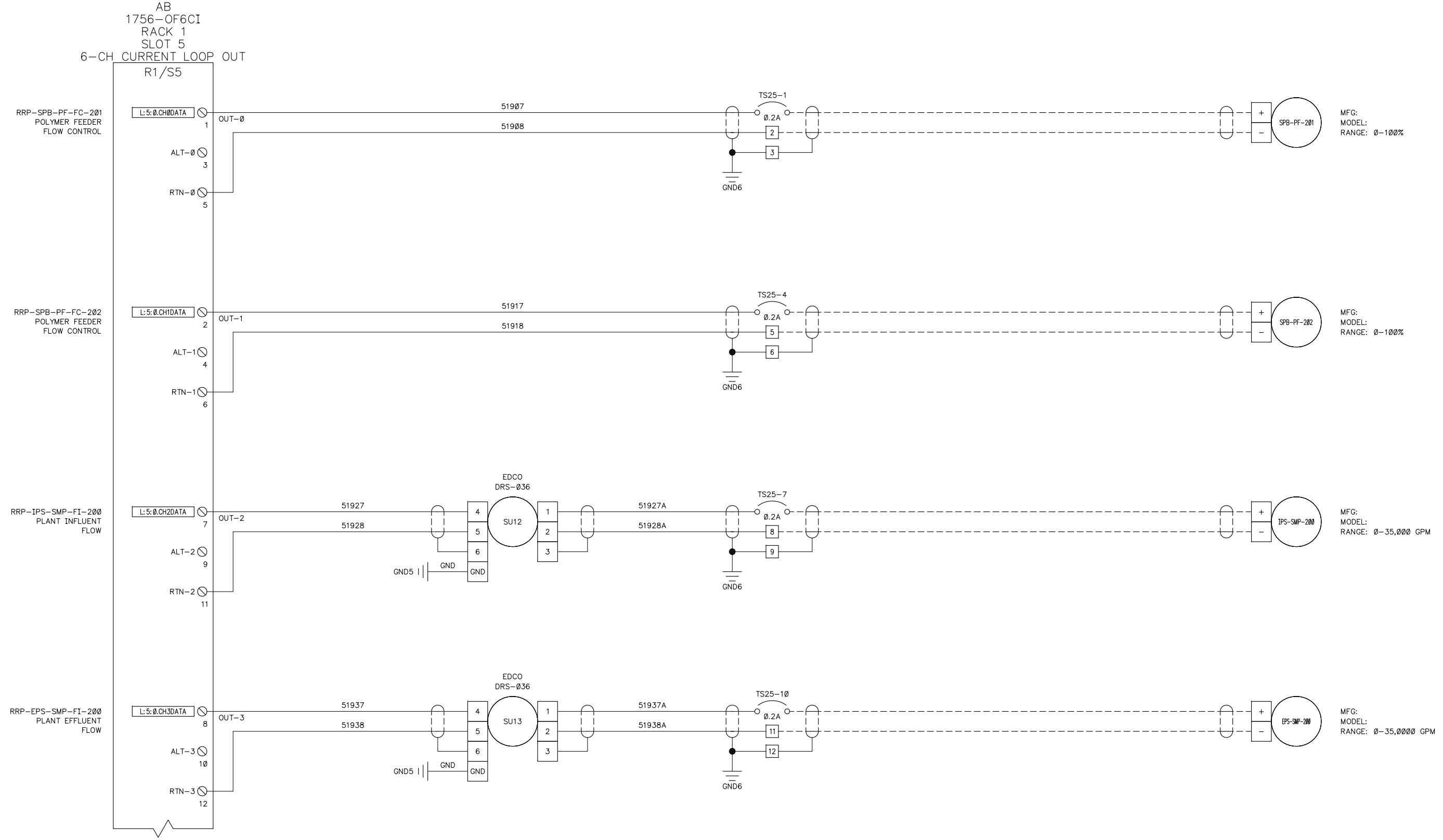
Revere
Control Systems

2240 ROCKY RIDGE ROAD
BIRMINGHAM, AL 35216
PHONE: (205) 824-0004

DWG NO:
N0575_RR-SPB-PLC-060-516

20/24

51901
51902
51903
51904
51905
51906
51907
51908
51909
51910
51911
51912
51913
51914
51915
51916
51917
51918
51919
51920
51921
51922
51923
51924
51925
51926
51927
51928
51929
51930
51931
51932
51933
51934
51935
51936
51937
51938
51939
51940
51941
51942
51943
51944
51945



NOTES:

1. USE RTN-0 FOR LOADS OF 0-550 OHMS.

2. USE ALT-0 FOR LOADS OF 551-1000 OHMS.


1	01/27/15	FIELD REVISION	JEC	MLC	
0	05/06/14	RECORD DRAWING	LDG	ACS	
REV	DATE	DESCRIPTION	BY	APPV	

NOTICE:
THE DOCUMENT AND
INFORMATION CONTAINED
HEREIN IS PROPRIETARY TO
REVERE CONTROL SYSTEMS, INC.
AND SHOULD NOT BE USED,
COPIED OR DISCLOSED TO
OTHERS, EXCEPT AS
SPECIFICALLY AUTHORIZED IN
WRITING BY REVERE CONTROL
SYSTEMS, INC.

RED RIVER WASTEWATER TREATMENT PLANT
CITY OF BOSSIER CITY, LOUISIANA
SLUDGE PROCESS BUILDING CONTROL PANEL
ANALOG OUTPUT MODULE WIRING DIAGRAM

DRAWN BY: LDG
CHECKED BY: ACS

DATE: 12/4/12
SCALE: 1=1



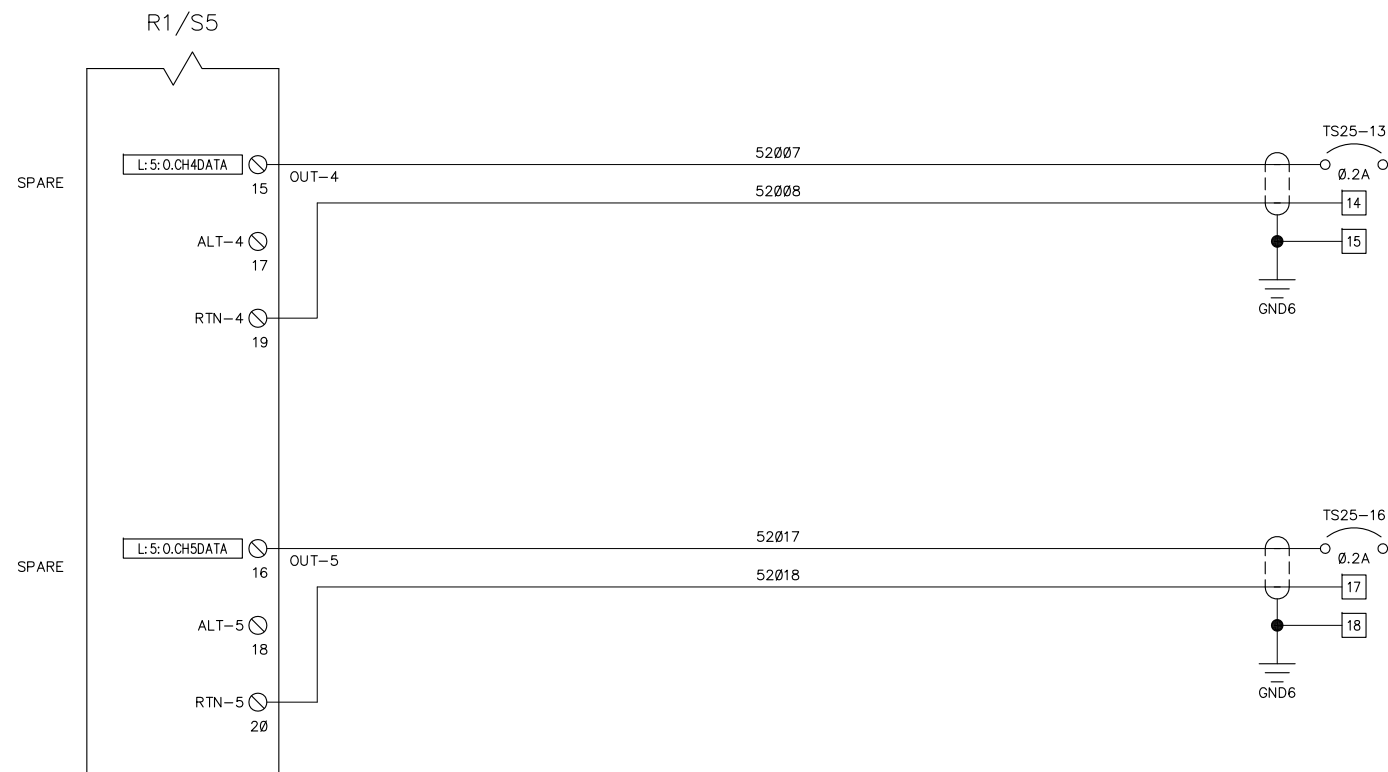
Revere
Control Systems

2240 ROCKY RIDGE ROAD
BIRMINGHAM, AL 35216
PHONE: (205) 824-0004

CUSTOMER: MAX FOOTE CONSTRUCTION CO., INC.
FILE NAME: 519.DWG

DWG NO: N0575_RR-SPB-PLC-060-519
21/24

52001
52002
52003
52004
52005
52006
52007
52008
52009
52010
52011
52012
52013
52014
52015
52016
52017
52018
52019
52020
52021
52022
52023
52024
52025
52026
52027
52028
52029
52030
52031
52032
52033
52034
52035
52036
52037
52038
52039
52040
52041
52042
52043
52044
52045




- NOTES:
1. USE RTN-0 FOR LOADS OF 0-550 OHMS.
 2. USE ALT-0 FOR LOADS OF 551-1000 OHMS.

1	01/27/15	FIELD REVISION	JEC	MLC
0	05/06/14	RECORD DRAWING	LDG	ACS
REV	DATE	DESCRIPTION	BY	APPV

NOTICE:
THE DOCUMENT AND
INFORMATION CONTAINED
HEREIN IS PROPRIETARY TO
REVERE CONTROL SYSTEMS, INC.
AND SHOULD NOT BE USED,
COPIED OR DISCLOSED TO
OTHERS, EXCEPT AS
SPECIFICALLY AUTHORIZED IN
WRITING BY REVERE CONTROL
SYSTEMS, INC.

RED RIVER WASTEWATER TREATMENT PLANT
CITY OF BOSSIER CITY, LOUISIANA
SLUDGE PROCESS BUILDING CONTROL PANEL
ANALOG OUTPUT MODULE WIRING DIAGRAM




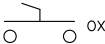
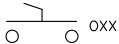










































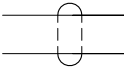


DRAWN BY:	LDG	DATE:	12/4/12
CHECKED BY:	ACS	SCALE:	1=1



**Revere
Control Systems**

2240 ROCKY RIDGE ROAD
BIRMINGHAM, AL 35216
PHONE: (205) 824-0004

CUSTOMER:	MAX FOOTE CONSTRUCTION CO., INC.	DWG NO:	N0575_RR-SPB-PLC-060-520
FILE NAME:	520.DWG		22/24

PUSHBUTTONS			SELECTOR SWITCHES		PILOT LIGHTS		SWITCH
NORMALLY OPEN	NORMALLY CLOSED	MUSHROOM HEAD	2 POSITION	3 POSITION	STANDARD	PUSH-TO-TEST	TOGGLE SWITCH
							
LIMIT SWITCHES				PROXIMITY SWITCHES		LEVEL SWITCHES	
NORMALLY OPEN	NORMALLY CLOSED	HELD OPEN	HELD CLOSED	NORMALLY OPEN	NORMALLY CLOSED	NORMALLY OPEN	NORMALLY CLOSED
							
PRESSURE SWITCHES		TEMPERATURE SWITCHES		FLOW SWITCHES		FOOT SWITCHES	
NORMALLY OPEN	NORMALLY CLOSED	NORMALLY OPEN	NORMALLY CLOSED	NORMALLY OPEN	NORMALLY CLOSED	NORMALLY OPEN	NORMALLY CLOSED
							
TIME DELAY CONTACTS				RELAY CONTACTS		RELAYS, TIMING RELAYS	
ON DELAY NORMALLY OPEN	ON DELAY NORMALLY CLOSED	OFF DELAY NORMALLY OPEN	OFF DELAY NORMALLY CLOSED	NORMALLY OPEN	NORMALLY CLOSED	COIL	SOLENOID
							
CIRCUIT PROTECTORS AND DISCONNECTS				MOTOR CONTROL			
CIRCUIT BREAKER	FUSE	FUSED DISCONNECT	DISCONNECT SWITCH	3 PHASE MOTOR	THERMAL OVERLOAD		
							
MISC SYMBOLS							
TERMINAL BLOCK	GROUND	RESISTOR	DIODE				
							
HORN	HEATER	FAN	POTENTIOMETER	BATTERY	SHIELDED CABLE	PLUG/JACK	NODE
							

MANUFACTURING NOTES:

1. ALL PANEL WIRING WILL REQUIRE WIRE TAGS.

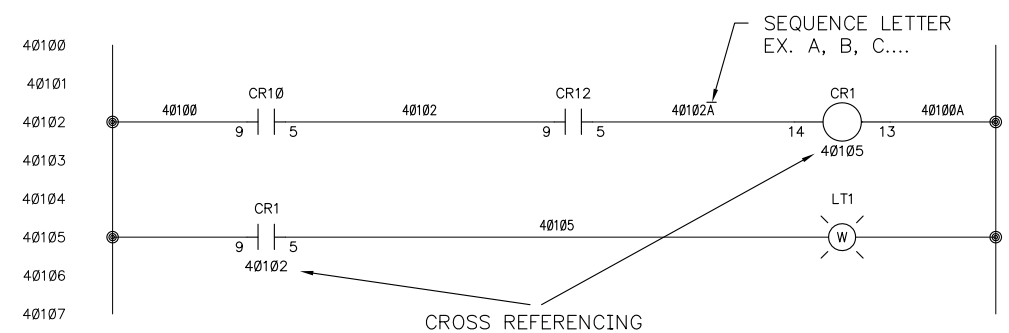
DEVICE AND COMPONENT DESIGNATIONS			
DESIGNATION		DEVICE	
AH	ALARM OR ANNUNCIATOR HORN	LS	LIMIT SWITCH
AIT	ANALYZER INDICATING TRANSMITTER	LT	LIGHT
ANLT	ALARM OR ANNUNCIATOR LIGHT	M	MOTOR STARTER
AM	AMP METER	MOT	MOTOR
CAP	CAPACITOR	MTR	METER
CB	CIRCUIT BREAKER	NP	NAMEPLATE
CBL	CABLES	OL	OVERLOAD
CR	CONTROL RELAY	PB	PUSHBUTTON
CRL	CONTROL RELAY, LATCH	PE	PHOTO ELECTRIC SWITCH
CRU	CONTROL RELAY, UNLATCH	PIT	PRESSURE INDICATING TRANSMITTER
CT	CURRENT TRANSFORMER	PJ	PLUG/JACK
CTR	COUNTER	POT	POTENTIOMETER
D	DIODE	PS	PRESSURE SWITCH
DISC	DISCONNECT SWITCH	PWR	POWER SUPPLY
FIT	FLOW INDICATING TRANSMITTER	PRS	PROXIMITY SWITCH
FL	FLUORESCENT LIGHT	REC	RECEPTACLE
FLS	FLOW SWITCH	R	RESISTOR
FN	FAN	SOL	SOLENOID
FS	FLOAT SWITCH	SS	SELECTOR SWITCH
FTS	FOOT SWITCH	SU	SURGE SUPPRESSOR
FU	FUSE	S	SWITCH
GND	GROUND	TB	TERMINAL BLOCK
HTR	HEATER	TC	THERMOCOUPLE
LIT	LEVEL INDICATING TRANSMITTER	TG	TOGGLE SWITCH
LP	LINE PROTECTOR	TR	TIMING RELAY
		XF	TRANSFORMER

CROSS REFERENCING AND WIRE NUMBERING



PAGE NUMBER LINE NUMBER

40139



WIRING KEY (UNLESS OTHERWISE NOTED)			
120VAC			TYPE
SUPPLY	BLACK	12 AWG	MTW, 600V@90°C
RETURN	WHITE	12 AWG	MTW, 600V@90°C
GROUND	GREEN	12 AWG	MTW, 600V@90°C
SIGNAL/CONTROL	RED	16 AWG	MTW, 600V@90°C
SIGNAL/CONTROL RETURN	WHITE	16 AWG	MTW, 600V@90°C
EXTERNAL SOURCE	ORANGE	14 AWG	MTW, 600V@90°C
24VDC			TYPE
SUPPLY	BLUE	16 AWG	MTW, 600V@90°C
RETURN	WHITE/BLUE	16 AWG	MTW, 600V@90°C
GROUND	GREEN	16 AWG	MTW, 600V@90°C
CONTROL	BLUE	16 AWG	MTW, 600V@90°C
SIGNAL	BLACK/WHITE	18 AWG/SHLD	MTW, 600V@90°C
PANEL WIRING			
FIELD WIRING	-----		

[illegible]

E:\PROJECT FILES\2012\N057500\DRAWINGS\REV\RP-SPB-PLC-060\902.DWG	05-13-15	07:49
---	----------	-------

Serial Number: N0575_RR-SPB-PLC-060		Customer ID:	
Line Voltage:	Phase:	Source:	Frequency:
Control Voltage: 120VAC	Largest Motor:		Total F.L.A.:
Wired By:	Tested By:	Date:	
Reverse Control Systems Contact: D. ABEL			
Ref. Drawing: N0575_RR-SPB-PLC-060		Enclosure Type: 12	
Short Circuit Current Rating:			

TO MAINTAIN ENCLOSURE RATING, USE HUBS OR FITTINGS WITH THE SAME ENVIRONMENTAL RATING AS THE ENCLOSURE.
O-Z/Gedney-CHM Series, Hubs Appleton- HUB Series Hubs, T&B- H Series Hubs

C  US LISTED
ENCLOSED INDUSTRIAL CONTROL PANEL
No.


CAUTION

THIS EQUIPMENT
IS SUPPLIED BY
MORE THAN ONE
POWER SOURCE

USE COPPER CONDUCTORS ONLY
RATED AT 60°C OR HIGHER.

USE COPPER CONDUCTORS ONLY
RECOMMENDED TORQUE: 5.3 IN. LB.

USE COPPER CONDUCTORS ONLY
RECOMMENDED TORQUE: 8.9 IN. LB.

						NOTICE: THE DOCUMENT AND INFORMATION CONTAINED HEREIN IS PROPRIETARY TO REVERE CONTROL SYSTEMS, INC. AND SHOULD NOT BE USED, COPIED OR DISCLOSED TO OTHERS, EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY REVERE CONTROL SYSTEMS, INC.	RED RIVER WASTEWATER TREATMENT PLANT CITY OF BOSSIER CITY, LOUISIANA SLUDGE PROCESS BUILDING CONTROL PANEL LABEL LEGEND			 Revere Control Systems				2240 ROCKY RIDGE ROAD BIRMINGHAM, AL 35216 PHONE: (205) 824-0004			
1	01/27/15	FIELD REVISION		JEC	MLC		DRAWN BY:	LDG	DATE:	12/4/12	CUSTOMER:	MAX FOOTE CONSTRUCTION CO., INC.		DWG NO:	N0575_RR-SPB-PLC-060-902		24/24
0	05/06/14	RECORD DRAWING		LDG	ACS		CHECKED BY:	ACS	SCALE:	1=1	FILE NAME:	902.DWG					
REV	DATE	DESCRIPTION		BY	APPV												