

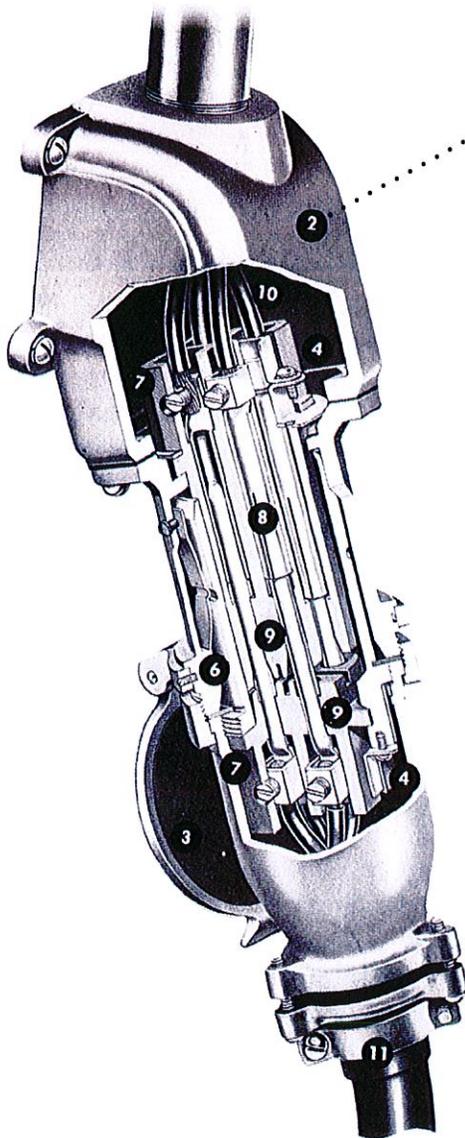
## J-Line™ Interconnection Systems

**J-Line™**  
4P4W Max.  
30 through 200A

Robust service in metal for many industrial applications, the J-Line™ offers a value alternative to MaxGuard® in 3P4W, 30–200 Amp applications with less severe needs. Unique among competitors, the J-Line™ uses a reversible contract carrier for maximum flexibility in many portable service applications.

## Design Features

Russellstoll® J-Line™ Load-Breaking Plugs, Connectors and Receptacles



1. Circuit-interrupting rated safety
2. Cast aluminum, corrosion-resistant copper-free alloy housings and enclosures provide lightweight and maximum corrosion resistance, along with electrostatic epoxy powder coat finish
3. Quick conversion between weathertight flap cover and watertight screw cap assemblies. Basic receptacle housing accommodates both covers and is the basic component of all complete units. All watertight configured plugs may be used interchangeably
4. Two grounding arrangements (Style No. 1 and Style No. 2)
5. Four complete J-Lines: 30, 60, 100 and 200 amps; 600VAC/250VDC (plus 150A/270A specials)
6. Flap cover can be rotated and locked in any convenient position
7. Pressure-type solderless wiring terminals
8. Silver-plated contacts
9. One-piece interior assemblies interchangeable from regular to reverse service in the field with a screwdriver
10. Wiring space ample for maximum requirements
11. Cable clamps adjustable for maximum range of cable size. Oil-resistant Neoprene strain-relief bushing compresses around cable tightly, prevents entry of dust and moisture
12. Polarization provides positive non-interchangeability for different electrical systems
13. Reversed contacts flexibility: male–female reversed installation within any housing

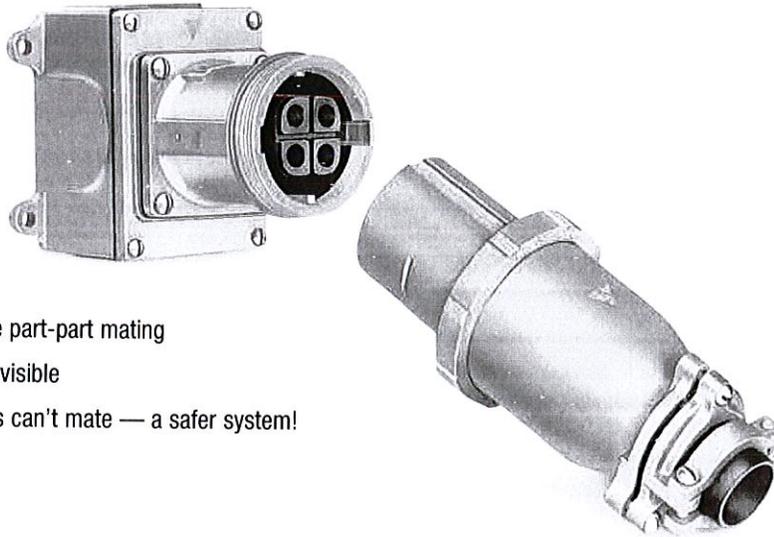
## J-Line™ Interconnection Systems

### Polarization

Devices offer standard and custom polarization for total operator safety so that plugs will fit only into receptacles or connectors having the same electrical/specification characteristics.

Visual means of aligning units for a specific, positive polarization are provided:

- Button inside of receptacle housing mates to groove on plug shroud
- Smaller primary guides also assist positive part-part mating
- External I.D. of 1 of 8 polarization indexes visible
- Different polarizations assigned to voltages can't mate — a safer system!



### Conversion to Weathertight and Watertight Types



*Weathertight J-Line™  
with flap cover assembly*



*Watertight J-Line™  
with screw cap*

Substitution of either the flap cover assembly or the screw cap assembly on the housing of the basic receptacle permits quick and easy conversion between the weathertight and watertight types. Only a small screwdriver is needed to change in the field.

The basic receptacle housing is constructed with a threaded end to accommodate a screw cap or the collar nut of a watertight plug. A special groove above the threads accommodates the flap cover assembly. The flap cover assembly may be rotated around this grooved shell and the set-screw locked in any convenient position.

The watertight plug, with its collar screwed firmly to the basic receptacle shell, forms a completely watertight connection on either type of receptacle assembly.

These conversion features also permit the use of flap cover or screw cap on connector housings.

## J-Line™ Interconnection Systems

30–200/270 Amp (30–200A Load Breaking), Maximum 600VAC/250VDC  
Load-Breaking Receptacles, Plugs, Connectors and Inlets

For all Weathertight and Watertight types.

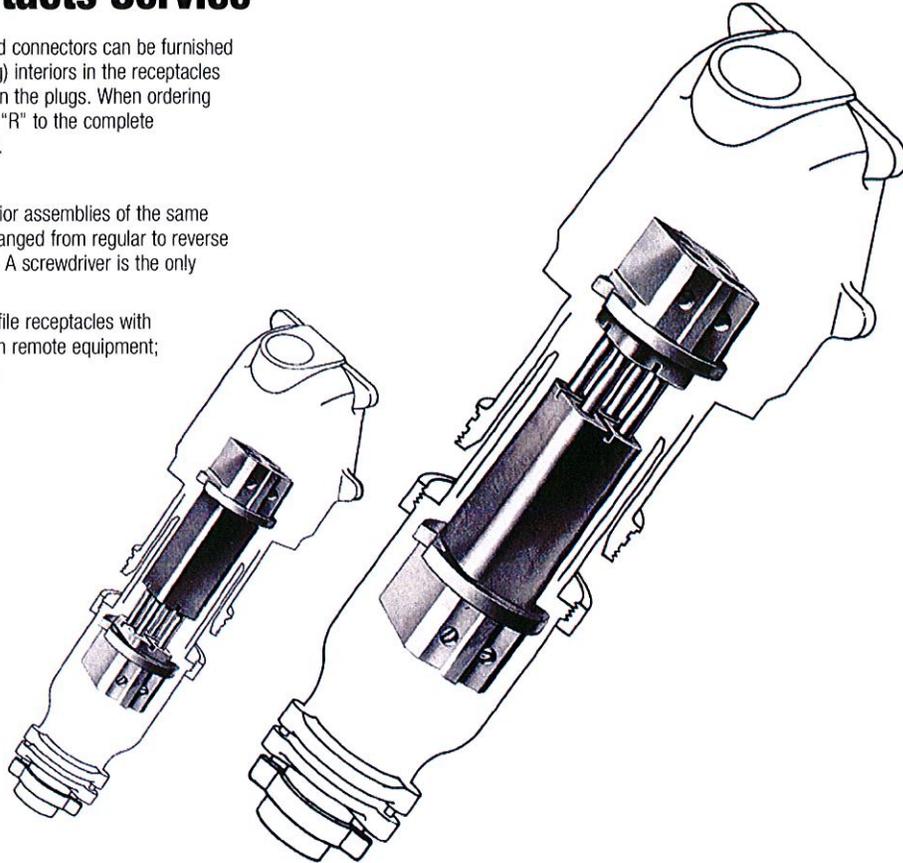
### Reversed Contacts Service

All J-Line™ plugs, receptacles and connectors can be furnished for Reverse Service — male (plug) interiors in the receptacles and female (receptacle) interiors in the plugs. When ordering reverse service, add a final suffix "R" to the complete catalog number. Price on request.

*Example: JRFA334HR*

J-Line™ receptacle and plug interior assemblies of the same amperage may be quickly interchanged from regular to reverse service (or vice versa) in the field. A screwdriver is the only tool required.

*Example: Panel-mounted low-profile receptacles with male interiors act as male inlets in remote equipment; receive power from female plugs. (Cup cap also recommended.)*



#### Regular Service

Interior assemblies placed in normal, standard positions — female interior assembly is positioned in the receptacle housing and the male interior assembly is positioned in the plug housing.

#### Reversed Service

Note the complete interior assemblies have now been interchanged so that the male (plug) interior assembly is positioned in the receptacle housing and the female (receptacle) interior assembly is positioned in the plug housing.

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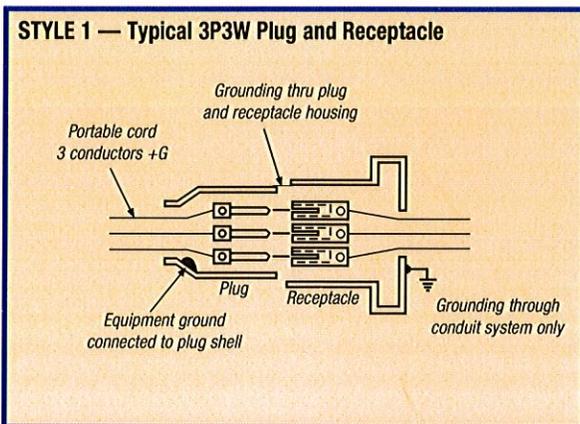
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## Grounding Data

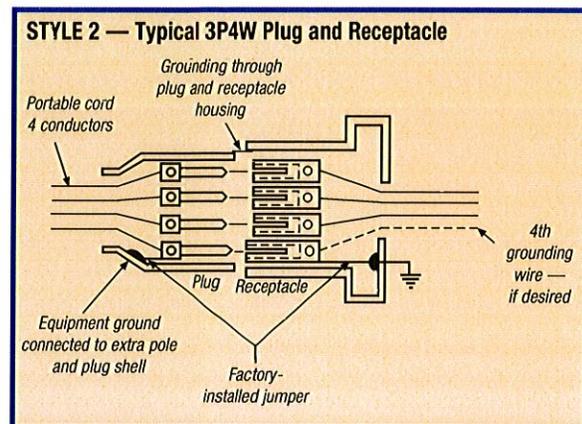
Effective grounding of portable electrical equipment is necessary to protect operators from electric shock. The National Electrical Code® requires that in most cases, exposed non-current-carrying metal parts of portable equipment shall be grounded if operated at more than 150 volts to ground. Grounding must be used in other than residential occupancies when used in damp or wet locations, or by persons standing on the ground or on metal floors or working inside of metal tanks or boilers, except where supplied through an insulating transformer with ungrounded secondary of not over 50 volts.

**Plugs and receptacles provide for grounding of portable equipment in either of two ways:**



## Corrosive Locations

The National Electrical Code® requires that under conditions favorable to corrosion, the grounding conductor for enclosures and equipment be of copper or other corrosion-resistant material. In alternating current systems, this necessitates running another conductor back to the common grounding electrode. This may be run through the conduit containing the circuit conductors. At the receptacle, this grounding conductor should be connected to the extra (grounding) pole by the pressure connector provided for that purpose. Where such an extra grounding conductor is required, Style 2 receptacles should be used.



## Style 1

### 4P4W (or 3P3W) through Metal Housings of Plug and Receptacle

In this system shown above, the equipment grounding conductor in the flexible cable is electrically connected directly to the plug or cable connector housing by a suitable terminal. The receptacle is grounded by being part of a grounded conduit system.

When inserted, the plug housing makes contact with the grounded receptacle or connector housing by means of the receptacle ground spring before the current-carrying contacts engage. On withdrawal, it remains in contact until after the current-carrying contacts disengage.

## Style 2

### 3P4W (or 2P3W) through a Separate Grounding Pole in Plug and Receptacle

In this system shown above, the equipment grounding conductor in the flexible cable is electrically connected to the equipment grounding pole in the plug or cable connector interior. The grounding pole of the receptacle interior is electrically connected by a spring-strap jumper to the receptacle housing, which itself is grounded by being part of the ground spring of the receptacle or connector housing as described in Style 1.

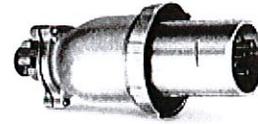
The grounding contact in a type 2 receptacle is longer than the current-carrying contacts so that the ground connection makes first and breaks last.

NEC and National Electrical Code are registered trademarks of the National Fire Protection Association, Inc.

# J-Line™ Interconnection Systems

**30–270 Amp (30, 60, 100 and 200 Amp Load-Breaking, 150 and 270 Amp Special Service), Maximum 600VAC/250VDC Receptacles, Plugs, Connectors and Inlets**

## Plugs



(All plugs come with watertight screw collar)

For any J-Line™ catalog numbers not shown here, check **page H-350** for "Series" information. For special polarizations (suffixes), contact Technical Services.

### Max. 600VAC/250VDC

CURRENT RATING	WEATHERTIGHT/WATERTIGHT	CONFIGURATION	
30 Amp	Weathertight (Spring Hinged Flap Cover)	2P3W	JPS323H <input type="checkbox"/> ▼
		3P3W*	JPS333F
		3P4W	JPS334H
		4P4W*	JPS344F
	Watertight (Screw Cover)	2P3W	JPS323H
		3P3W*	JPS333F
60 Amp	Weathertight (Spring Hinged Flap Cover)	3P4W	JPS334H
		4P4W*	JPS344F
		2P3W	JPS623H
		3P3W*	JPS633F
	Watertight (Screw Cover)	3P4W	JPS634H
		4P4W*	JPS644F
100 Amp (150 Amp)**	Weathertight (Spring Hinged Flap Cover)	2P3W	JPS1023H
		3P3W*	JPS1033F
		3P4W	JPS1034H
		4P4W*	JPS1044F
	Watertight (Screw Cover)	2P3W	JPS1023H
		3P3W*	JPS1033F
200 Amp (270 Amp)**	Weathertight (Spring Hinged Flap Cover)	3P4W	JPS1034H
		4P4W*	JPS1044F
		2P3W	JPS2023H
		3P3W*	JPS2033F
	Watertight (Screw Cover)	3P4W	JPS2034H
		4P4W*	JPS2044F

\* Housing Ground Only (Style 1 Grounding), see **page H-347**.

+ Shown with 20° angle adapter. Can be furnished with 45° angle at same price. When ordering, add suffix -45 to catalog number.

\*\* Special rated devices (not shown). Consult Customer Service for details.

**Note:** To order Reverse Service, add a final suffix "R" to catalog number.  
Example: JRFA334HR — a receptacle housing with male interior.

Polarization index (std. shown); consult Technical Services for more information.

◆ Flap Cover "F" noted. Screw Cover "S" also available.

▼ For Reversed Contacts, use "R" suffix to any catalog number.

### Std. Cable Bushing

CURRENT RATING	BUSHING I.D.	MAX. AWG SIZE
30	7/8"	#6 7-strand or #8 flexible
60	1 1/8"	#4 7-strand or flexible
100	1 1/2"	#10 19-strand or #1 flexible
200	2"	4/0 19-strand or flexible

(See **page H-354** for other bushings.)

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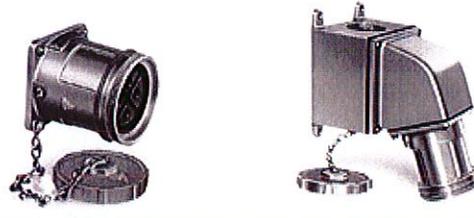
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# J-Line Interconnection Systems

## Connectors



## Receptacles



Power & High Voltage — Russellstoll® Pin & Sleeve Power Connectors

PANEL MOUNT		BASIC RECEPTACLE		STANDARD SERIES*			
◆ □ ▼	◆ □ ▼	◆ □ ▼	◆ □ ▼	◆ □ ▼	◆ □ ▼		
JCF323H _	JRFX323H _	JRF323H _	JRFA323H _	JCF333F	JRFX333F	JRF333F	JRFA333F
JCF334H	JRFX334H	JRF334H	JRFA334H	JCF344F	JRFX344F	JRF344F	JRFA344F
JCS323H	JRSX323H	JRS323H	JRSA323H	JCS333F	JRSX333F	JRS333F	JRSA333F
JCS334H	JRSX334H	JRS334H	JRSA334H	JCS344F	JRSX344F	JRS344F	JRSA344F
JCF623H	JRFX623H	JRF623H	JRFA623H	JCF633F	JRFX633F	JRF633F	JRFA633F
JCF634H	JRFX634H	JRF634H	JRFA634H	JCF644F	JRFX644F	JRF644F	JRFA644F
JCS623H	JRSX623H	JRS623H	JRSA623H	JCS633F	JRSX633F	JRS633F	JRSA633F
JCS634H	JRSX634H	JRS634H	JRSA634H	JCS644F	JRSX644F	JRS644F	JRSA644F
JCF1023H	JRFX1023H	JRF1023H	JRFA1023H	JCF1033F	JRFX1033F	JRF1033F	JRFA1033F
JCF1034H	JRFX1034H	JRF1034H	JRFA1034H	JCF1044F	JRFX1044F	JRF1044F	JRFA1044F
JCS1023H	JRSX1023H	JRS1023H	JRSA1023H	JCS1033F	JRSX1033F	JRS1033F	JRSA1033F
JCS1034H	JRSX1034H	JRS1034H	JRSA1034H	JCS1044F	JRSX1044F	JRS1044F	JRSA1044F
JCF2023H	JRFX2023H	JRF2023H	JRFA2023H	JCF2033F	JRFX2033F	JRF2033F	JRFA2033F
JCF2034H	JRFX2034H	JRF2034H	JRFA2034H	JCF2044F	JRFX2044F	JRF2044F	JRFA2044F
JCS2023H	JRSX2023H	JRS2023H	JRSA2023H	JCS2033F	JRSX2033F	JRS2033F	JRSA2033F
JCS2034H	JRSX2034H	JRS2034H	JRSA2034H	JCS2044F	JRSX2044F	JRS2044F	JRSA2044F

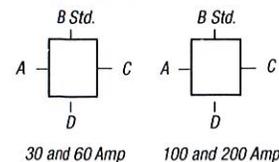
### Conduit Size (Using JPA\_ Series Conduit Adapters)

CURRENT RATING	STD. SIZE	MAX. SIZE
30	1"	1 1/4"
60	1 1/2"	1 3/4"
100	2"	2"
200	3"	3"

\* Smaller NPT openings available on request.

Cable Conduit Adapters, see page H-355.

### Conduit Entry Location: Standard Series



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# J-Line™ Interconnection Systems

30–200/270 Amp (30–200A Load Breaking), Maximum 600VAC/250VDC  
Load-Breaking Receptacles, Plugs, Connectors and Inlets

## Receptacle Mounting Options — J-Line™ Construction

### Progressive Assembly

MOUNTING STYLE	TO ORDER USE:	CURRENT RATING			
		30 AMP	60 AMP	100/150 AMP	200/270 AMP
Standard Series JRFA/JRSA <input type="checkbox"/> 	 Receptacle +  Vertical or Square Mount Box +  Angle Adapter	Basic Receptacle* + JB3-B100 1" Std. Conduit Size + JAA3 (20°) or JAA3-45 (45°)	Basic Receptacle* + JB6-B150 1½" Std. Conduit Size + JAA6-AB6 (20°) or JAA6-45 (45°)	Basic Receptacle* + JB10-B200 2" Std. Conduit Size + JAA10 (20°) or JAA10-45 (45°)	Basic Receptacle* + JB20 3" Std. Conduit Size + JAA20 (20°) or JAA20-45 (45°)
Series JRFR/JRSR <input type="checkbox"/> Straight 	 Receptacle +  Vertical Mount Box +  Straight Adapter	Basic Receptacle* + JB3-B100 1" Std. Conduit Size + JRA3	Basic Receptacle* + JB6-B150 1½" Std. Conduit Size + JRA6-AB6	Basic Receptacle* + JB10-B200 2" Std. Conduit Size + JRA10	Basic Receptacle* + JB20 2½" Std. Conduit Size + JRA20
Series JRFB/JRSB <input type="checkbox"/> 	 Receptacle +  30° Angle Adapter	Basic Receptacle* + JAAB3	Basic Receptacle* + JAAB6	Basic Receptacle* + JAAB10	Basic Receptacle* + JAAB20
Series JRFE/JRSE <input type="checkbox"/> 	 Receptacle +  Angle Enclosure	Basic Receptacle* + JE3 1" Std. Conduit Size	Basic Receptacle* + JE6 1½" Std. Conduit Size	Basic Receptacle* + JE10 2" Std. Conduit Size	N/A
Series JRFH/JRSH <input type="checkbox"/> Horizontal 	 Receptacle +  Horizontal Mount Box +  Angle Adapter	Basic Receptacle* + JB3-B100 1" Std. Conduit Size + JAA10 (20°)	N/A	N/A	N/A

\* Select appropriate receptacle by rating, configuration and voltage on page H-349.

Note: JRXX 3rd letter denotes Flap (F) or Screw (S) Cover.

EX: JRSA — Screw Cover

JRFA — Flap Cover

JRF — Flap Cover, Basic Receptacle

JRS — Screw Cover, Basic Receptacle

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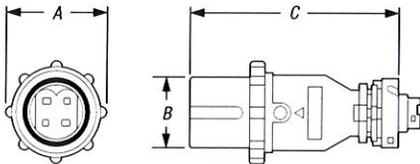
# J-Line Interconnection Systems

30–200/270 Amp (30–200A Load Breaking), Maximum 600VAC/250VDC  
Load-Breaking Receptacles, Plugs, Connectors and Inlets

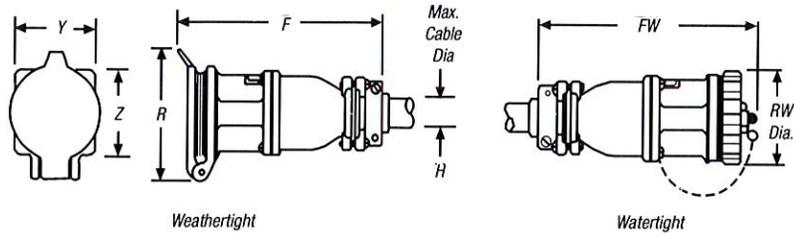
Power & High Voltage — Russellstoll® Pin & Sleeve Power Connectors

## Plugs and Connectors

Watertight Male — Plug



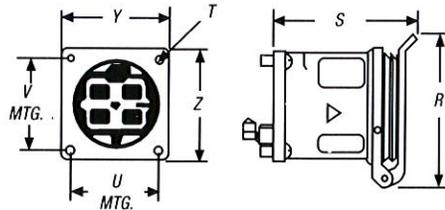
Female — Connector



### Dimensions for 2-, 3- or 4-Wire Weathertight and Watertight Units

AMP	A	B	C	WEATHERTIGHT		WATERTIGHT		Y	Z	H
				F	FW	R	RW			
30	3"	2 <sup>1</sup> / <sub>16</sub> "	7"	8 <sup>1</sup> / <sub>8</sub> "	8 <sup>3</sup> / <sub>8</sub> "	4 <sup>1</sup> / <sub>4</sub> "	3"	2 <sup>3</sup> / <sub>4</sub> "	2 <sup>3</sup> / <sub>4</sub> "	1
60	3 <sup>3</sup> / <sub>4</sub> "	2 <sup>3</sup> / <sub>16</sub> "	8 <sup>1</sup> / <sub>8</sub> "	10 <sup>3</sup> / <sub>4</sub> "	10 <sup>3</sup> / <sub>8</sub> "	5"	3 <sup>3</sup> / <sub>4</sub> "	3 <sup>1</sup> / <sub>2</sub> "	3 <sup>1</sup> / <sub>2</sub> "	3 <sup>3</sup> / <sub>8</sub> "
100/150	4 <sup>1</sup> / <sub>8</sub> "	2 <sup>3</sup> / <sub>16</sub> "	10 <sup>1</sup> / <sub>4</sub> "	10 <sup>1</sup> / <sub>2</sub> "	10 <sup>7</sup> / <sub>8</sub> "	5 <sup>1</sup> / <sub>4</sub> "	4 <sup>1</sup> / <sub>8</sub> "	4"	4"	1 <sup>1</sup> / <sub>8</sub> "
200/270	5 <sup>1</sup> / <sub>4</sub> "	3 <sup>3</sup> / <sub>16</sub> "	14 <sup>1</sup> / <sub>8</sub> "	14 <sup>1</sup> / <sub>8</sub> "	15 <sup>1</sup> / <sub>8</sub> "	7 <sup>1</sup> / <sub>8</sub> "	5 <sup>1</sup> / <sub>4</sub> "	5 <sup>5</sup> / <sub>8</sub> "	5 <sup>5</sup> / <sub>8</sub> "	2 <sup>1</sup> / <sub>2</sub> "

## Basic Receptacles



### Dimensions for 2-, 3- or 4-Wire Units

AMP	Z	Y	X	WEATHERTIGHT		WATERTIGHT		V	U	T
				S	SW	R	RW			
30	2 <sup>3</sup> / <sub>4</sub> "	2 <sup>3</sup> / <sub>4</sub> "	1	3 <sup>3</sup> / <sub>8</sub> "	3 <sup>3</sup> / <sub>4</sub> "	4 <sup>1</sup> / <sub>4</sub> "	3"	2 <sup>1</sup> / <sub>4</sub> "	2 <sup>1</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>4</sub> "
60	3 <sup>1</sup> / <sub>2</sub> "	3 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>4</sub> "	4 <sup>3</sup> / <sub>8</sub> "	4 <sup>3</sup> / <sub>4</sub> "	5"	3 <sup>3</sup> / <sub>4</sub> "	2 <sup>7</sup> / <sub>8</sub> "	2 <sup>7</sup> / <sub>8</sub> "	9 <sup>1</sup> / <sub>32</sub> "
100/150	4"	4"	1 <sup>1</sup> / <sub>4</sub> "	5"	5 <sup>1</sup> / <sub>4</sub> "	5 <sup>1</sup> / <sub>4</sub> "	4 <sup>1</sup> / <sub>8</sub> "	3 <sup>3</sup> / <sub>8</sub> "	3 <sup>3</sup> / <sub>8</sub> "	9 <sup>3</sup> / <sub>32</sub> "
200/270	5 <sup>1</sup> / <sub>8</sub> "	5 <sup>1</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>2</sub> "	6 <sup>1</sup> / <sub>8</sub> "	6 <sup>1</sup> / <sub>8</sub> "	7 <sup>1</sup> / <sub>8</sub> "	5 <sup>1</sup> / <sub>4</sub> "	4 <sup>7</sup> / <sub>8</sub> "	4 <sup>7</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>32</sub> "

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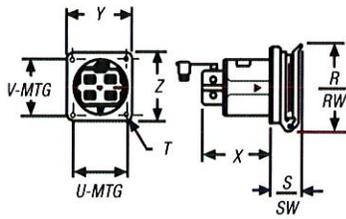
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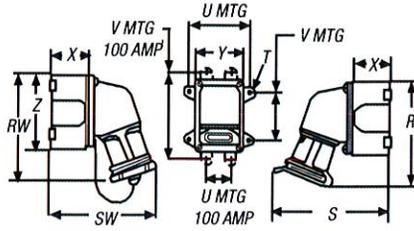
H-351

# J-Line Interconnection Systems

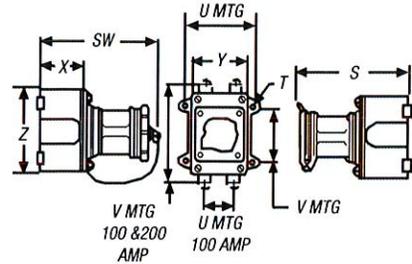
## Panel Mount Series



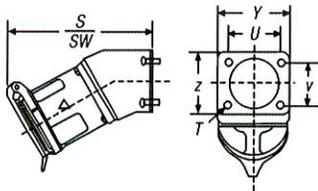
## Standard Series JRFA/JRSA



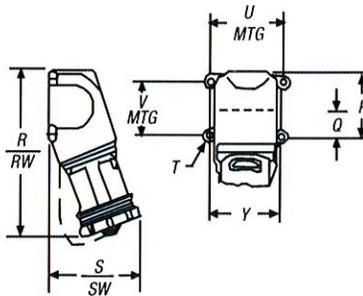
## Series JRFR/JRSR



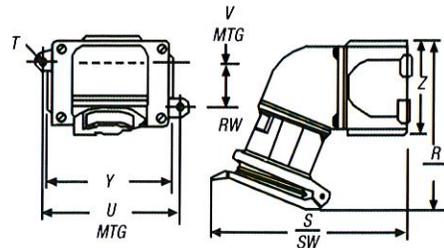
## Series JRFB/JRSB



## Series JRFE/JRSE



## Series JRFH/HRSH



AMP	SERIES	WEATHERTIGHT											PANEL OPENING	
		Z	Y	X	S	SW	R*	RW†	Q	P	V	U		T
30	Panel Mount	3½"	3½"	2¾"	1½"	2"	4¼"	3"	—	—	2⅞"	2⅞"	¼"	2¾"
	Standard (20°)	4½"	3"	2⅞"	7"	6½"	6¾"	6¾"	—	—	2⅞"	3⅞"	¼"	—
	JRFR/JRSR	4½"	3"	2⅞"	6⅞"	6½"	—	—	—	—	2⅞"	3⅞"	¼"	—
	JRFB/JRSB	3⅞"	3⅞"	—	5¼"	5¾"	—	—	—	—	2¼"	2¼"	¼"	2¼"
	JRFE/JRSE	—	3½"	—	5¼"	4¾"	7⅞"	7⅞"	1¼"	2⅞"	—	4	¼"	—
	JRFH/HRSH	3⅞"	4½"	2⅞"	7"	6½"	6⅞"	6⅞"	—	—	2⅞"	3⅞"	¼"	—
60	Panel Mount	4"	4"	3⅞"	1¾"	2"	5"	3¾"	—	—	3⅞"	3⅞"	⅝"	3¼"
	Standard (20°)	5⅞"	4"	3"	9¼"	8⅞"	8⅞"	9"	—	—	3⅞"	4⅞"	1½"	—
	JRFR/JRSR	5⅞"	4"	3"	8⅞"	8½"	—	—	—	—	3⅞"	4⅞"	1½"	—
	JRFB/JRSB	3⅞"	3⅞"	—	7¾"	7¾"	—	—	—	—	2⅞"	2⅞"	⅝"	2½"
	JRFE/JRSE	—	4¼"	—	6⅞"	5¼"	9¼"	9½"	1⅞"	3⅞"	3⅞"	4½"	⅝"	—
100/150	Panel Mount	4¼"	4¼"	4⅞"	1¾"	2"	5¼"	4⅞"	—	—	3⅞"	3⅞"	⅝"	3½"
	Standard (20°)	5½"	5½"	3½"	10½"	9⅞"	9⅞"	9¼"	—	—	6¼"	4¼"	1½"	—
	JRFR/JRSR	5½"	5½"	3½"	11¼"	11⅞"	—	—	—	—	6¼"	4¼"	1½"	—
	JRFB/JRSB	3⅞"	3⅞"	—	8¼"	8¼"	—	—	—	—	2⅞"	2⅞"	⅝"	—
200/270	Panel Mount	6"	6"	5⅞"	2"	2½"	7⅞"	5¾"	—	—	5¼"	5¼"	1½"	5⅞"
	Standard (20°)	8⅞"	8⅞"	6⅞"	15⅞"	15⅞"	12⅞"	12⅞"	—	—	9⅞"	7⅞"	⅝"	—
	JRFR/JRSR	8⅞"	8⅞"	6⅞"	15"	15½"	—	—	—	—	9⅞"	7⅞"	⅝"	—
	JRFB/JRSB	4"	4"	—	12¼"	12¼"	—	—	—	—	2¾"	2¾"	1½"	—

Note: U = horizontal mounting hole centers; V = vertical mounting hole centers.

\* = Flap Cap.

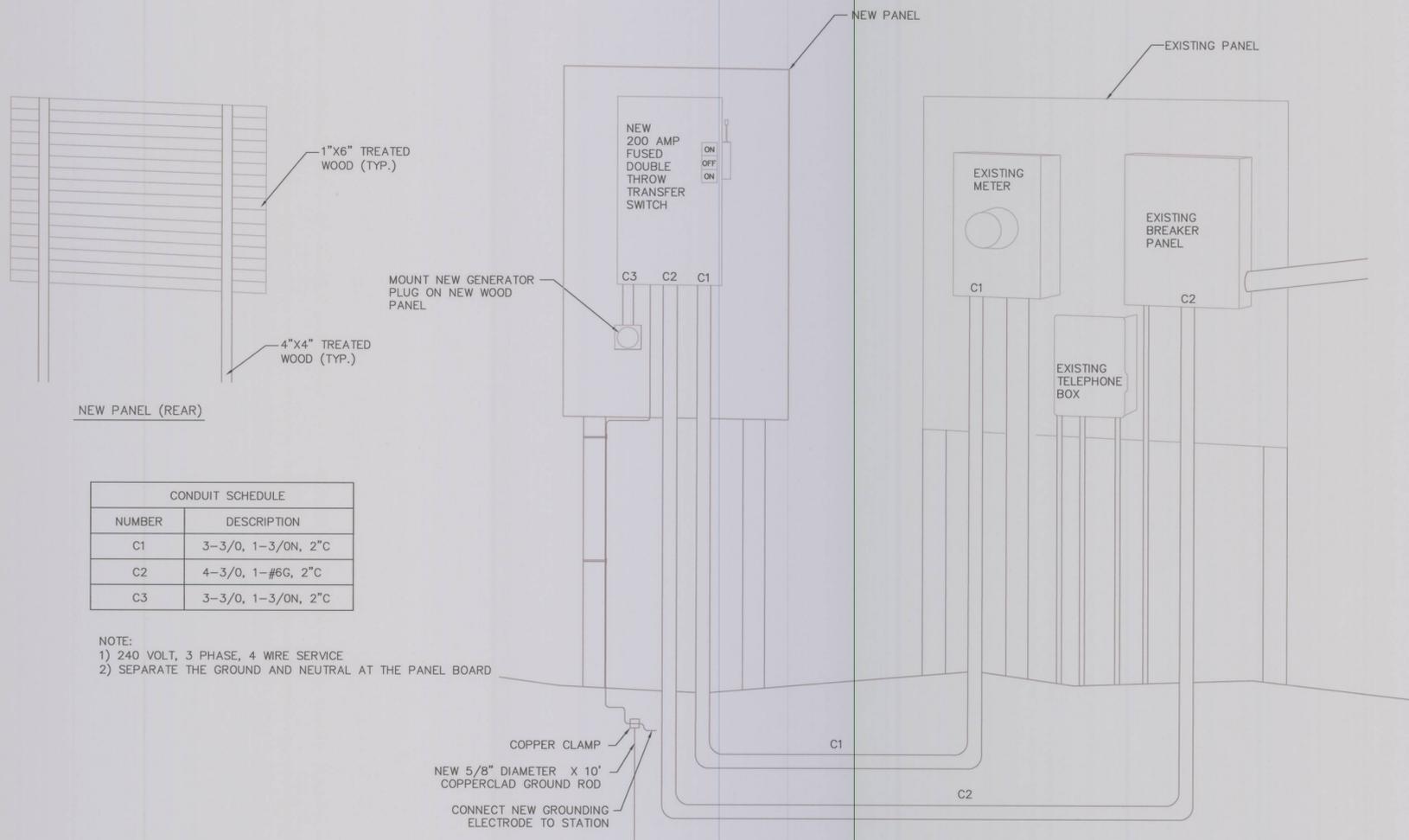
† = Screen Cap.

**Thomas & Betts**

United States  
Tel: 901.252.8000  
800.816.7809  
Fax: 901.252.1354

Technical Services  
Tel: 888.862.3289

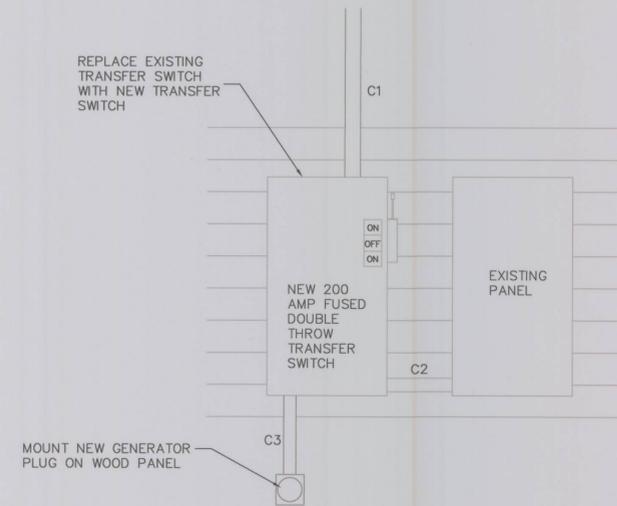
[www.tnb.com](http://www.tnb.com)



CONDUIT SCHEDULE	
NUMBER	DESCRIPTION
C1	3-3/0, 1-3/0N, 2" C
C2	4-3/0, 1-#6G, 2" C
C3	3-3/0, 1-3/0N, 2" C

- NOTE:
- 240 VOLT, 3 PHASE, 4 WIRE SERVICE
  - SEPARATE THE GROUND AND NEUTRAL AT THE PANEL BOARD

LIFT STATION 16-1



CONDUIT SCHEDULE	
NUMBER	DESCRIPTION
C1	3-3/0, 1-3/0N, 2" C
C2	4-3/0, 1-#6G, 2" C
C3	3-3/0, 1-3/0N, 2" C

- NOTES:
- 208 VOLT, 3 PHASE, 4 WIRE SERVICE
  - SEPARATE THE GROUND AND NEUTRAL AT THE PANEL BOARD
  - CONNECT GROUND TO EXISTING GROUNDING ROD

LIFT STATION PW-4



GENERATOR PROJECT  
 MOORE COUNTY, NC

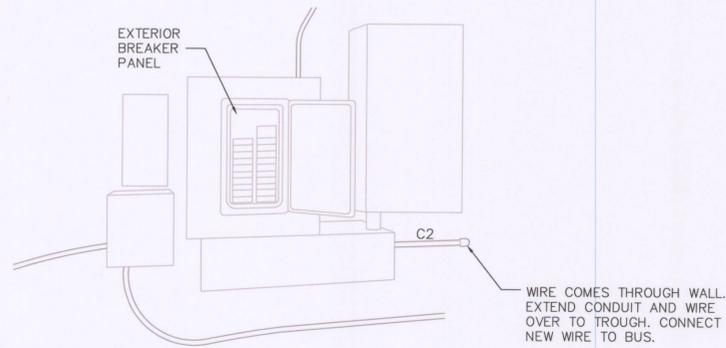
DATE: MAR., 2016  
 DESIGNED BY: LM III  
 CADD BY: LSD

LIFT STATION 16-1  
 LIFT STATION PW-4

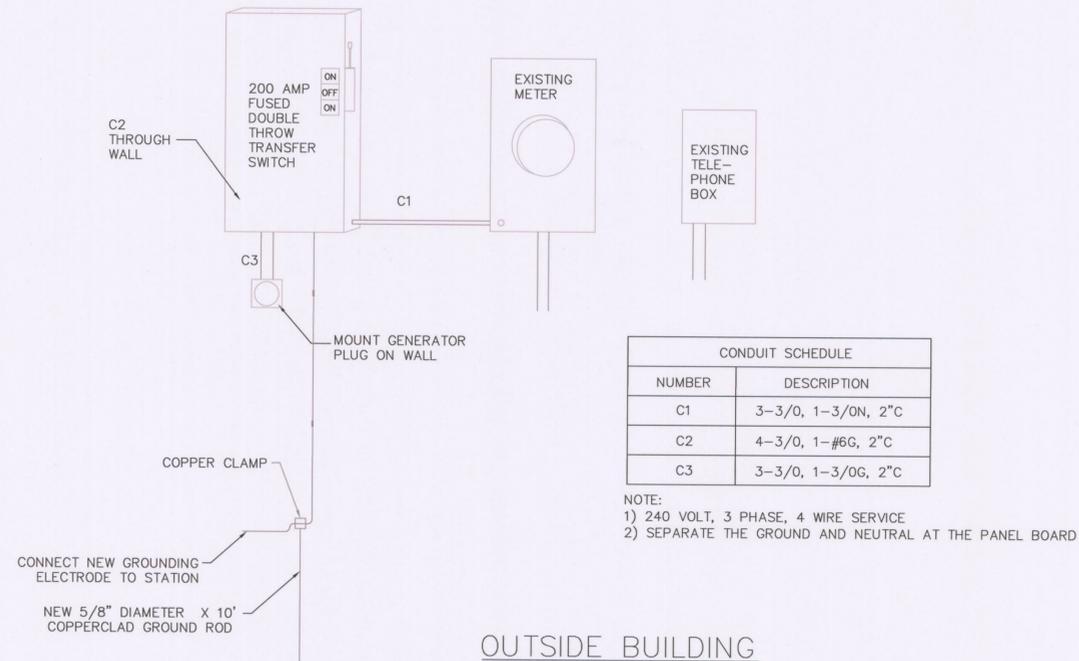
NO.	REVISIONS	
	DATE	DESCRIPTION

SHEET

C1



INSIDE BREAKER PANEL



OUTSIDE BUILDING

LIFT STATION 14-5



GENERATOR PROJECT  
 MOORE COUNTY, NC

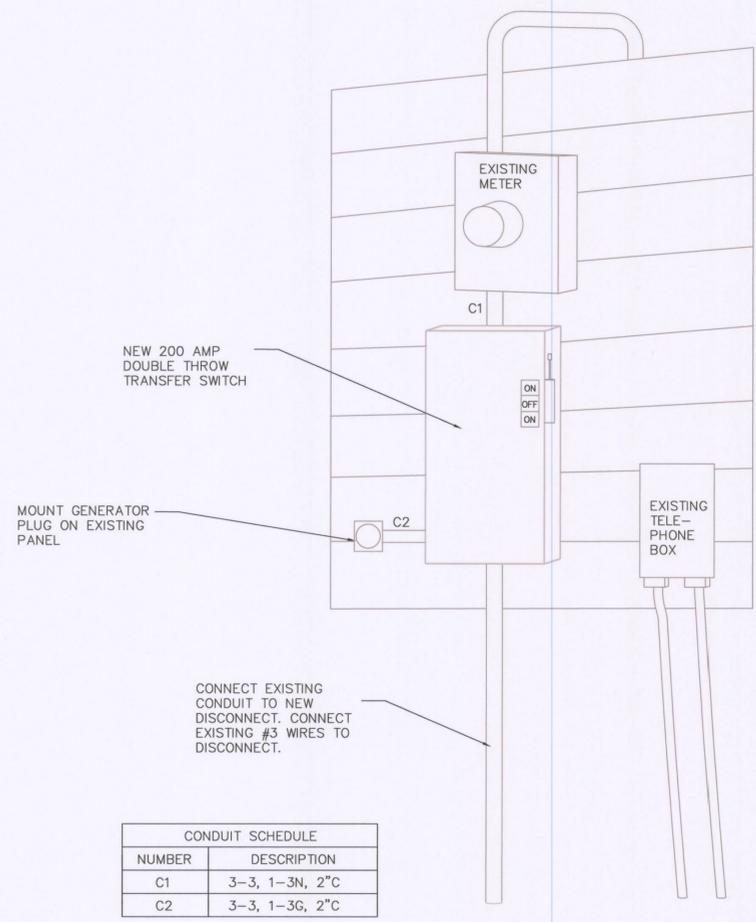
DATE: MAR., 2016  
 DESIGNED BY: LM III  
 CADD BY: LSD

LIFT STATION 14-5

NO.	DATE	BY	REVISIONS DESCRIPTION

SHEET

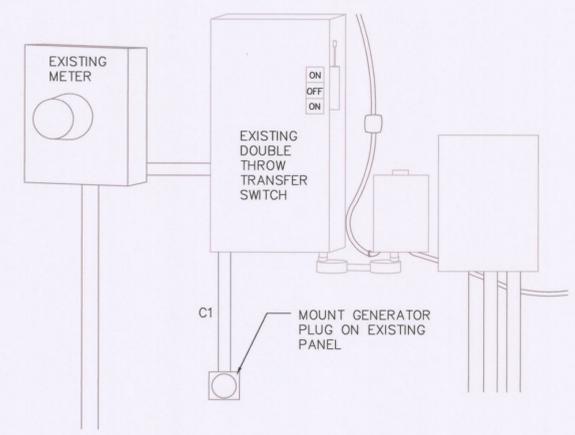
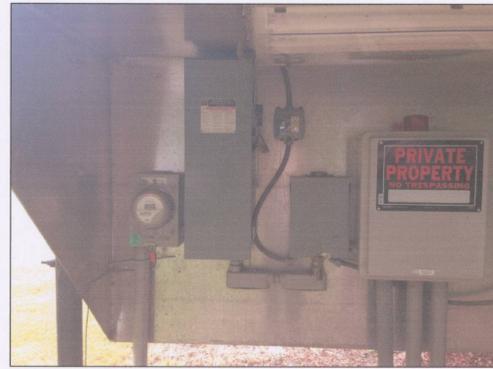
C2



CONDUIT SCHEDULE	
NUMBER	DESCRIPTION
C1	3-3, 1-3N, 2" C
C2	3-3, 1-3G, 2" C

- NOTES:  
 1) 240 VOLT, 3 PHASE, 4 WIRE SERVICE  
 2) SEPARATE THE GROUND AND NEUTRAL AT THE PANEL BOARD  
 3) CONNECT GROUND TO EXISTING GROUNDING ROD

LIFT STATION 3-3



CONDUIT SCHEDULE	
NUMBER	DESCRIPTION
C1	3-3/0, 1-3/0G, 2" C

LIFT STATION 17-2

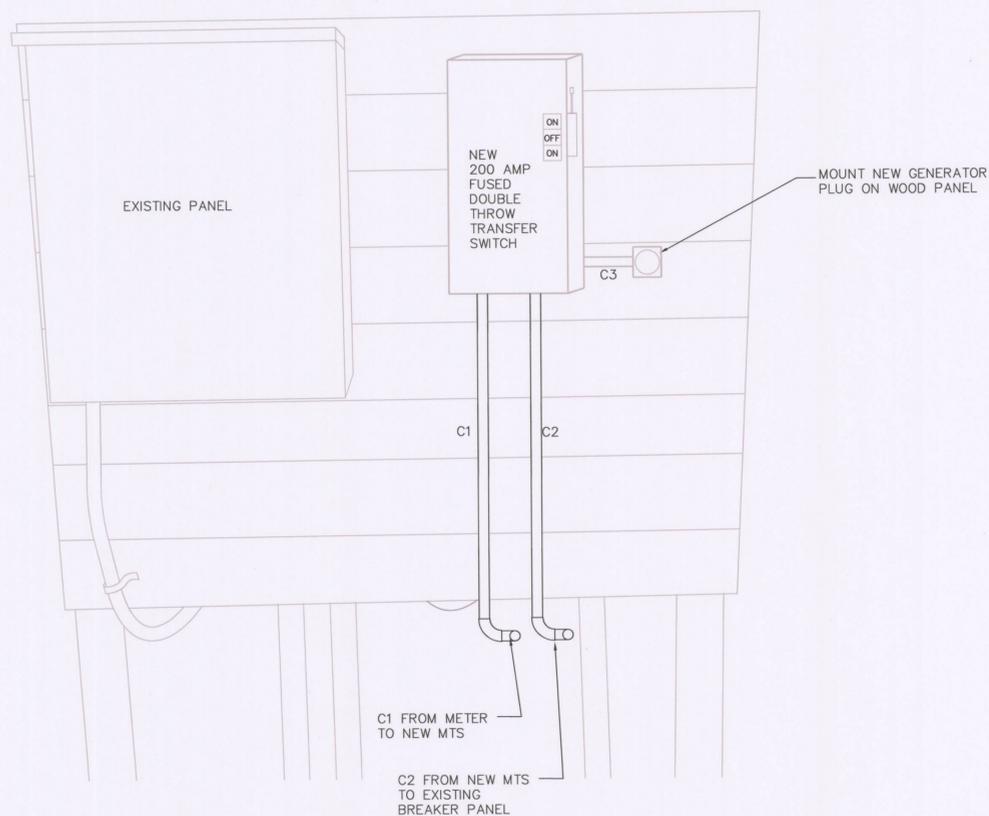
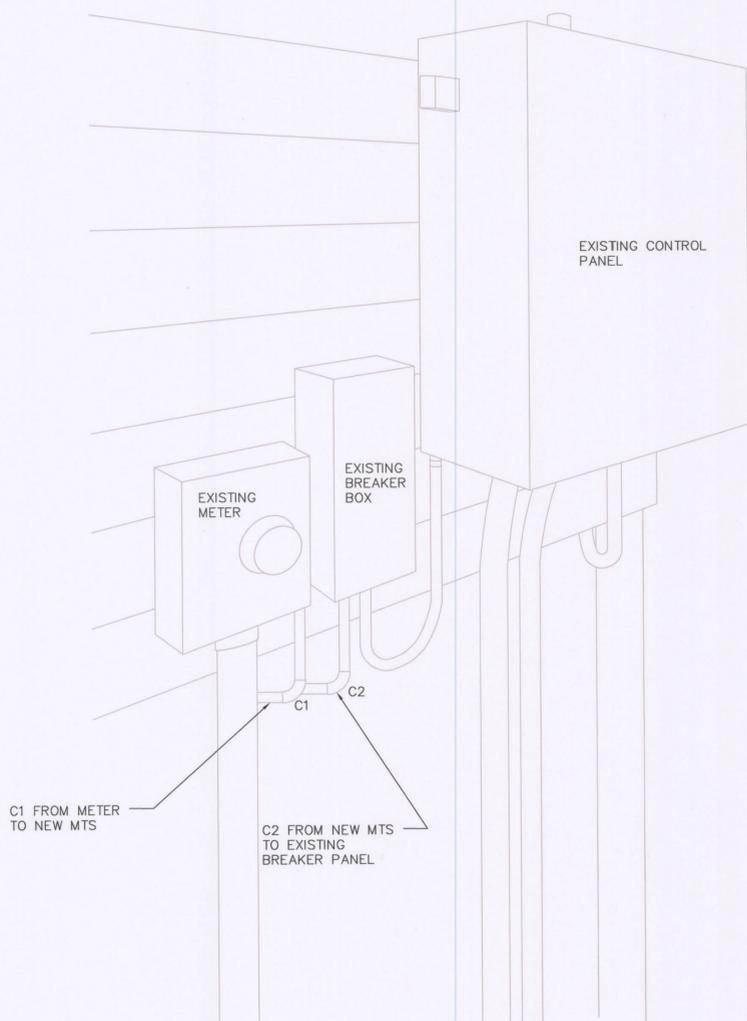


**GENERATOR PROJECT**  
 MOORE COUNTY, NC

DATE: JAN., 2016  
 DESIGNED BY: LM III  
 CADD BY: LSD

LIFT STATION 3-3  
 LIFT STATION 17-2

NO.	DATE	REVISIONS	
		BY	DESCRIPTION



CONDUIT SCHEDULE	
NUMBER	DESCRIPTION
C1	3-3/0, 1-3/0N, 2" C
C2	4-3/0, 1-#6G, 2" C
C3	3-3/0, 1-3/0G, 2" C

- NOTES:  
 1) SEPARATE THE GROUND AND NEUTRAL AT THE PANEL BOARD  
 2) CONNECT GROUND TO EXISTING GROUNDING ROD

LIFT STATION B-1



**GENERATOR PROJECT  
 MOORE COUNTY, NC**

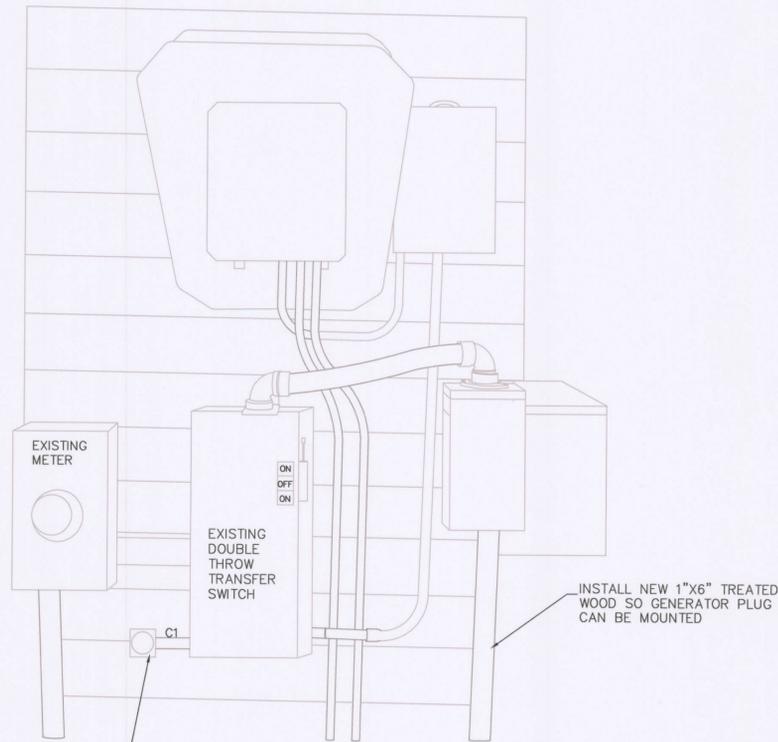
DATE: JAN., 2016  
 DESIGNED BY: LM III  
 CADD BY: LSD

LIFT STATION B-1

NO.	DATE	BY	REVISIONS	DESCRIPTION

SHEET

**C4**

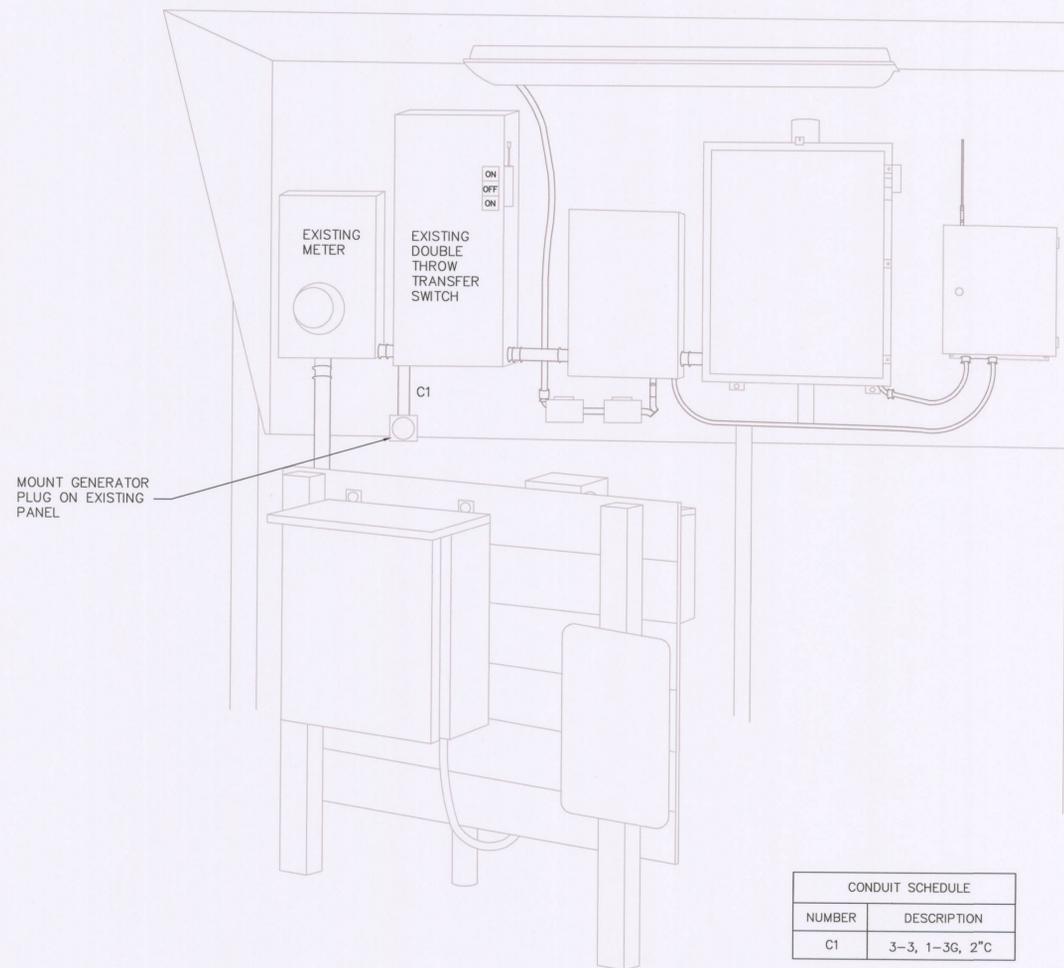


MOUNT GENERATOR  
PLUG ON EXISTING  
PANEL

CONDUIT SCHEDULE	
NUMBER	DESCRIPTION
C1	3-3, 1-3G, 2" C

- NOTES:  
 1) SEPARATE THE GROUND AND NEUTRAL AT THE PANEL BOARD  
 2) CONNECT GROUND TO EXISTING GROUNDING ROD

LIFT STATION 16-2



MOUNT GENERATOR  
PLUG ON EXISTING  
PANEL

CONDUIT SCHEDULE	
NUMBER	DESCRIPTION
C1	3-3, 1-3G, 2" C

- NOTES:  
 1) SEPARATE THE GROUND AND NEUTRAL AT THE PANEL BOARD  
 2) CONNECT GROUND TO EXISTING GROUNDING ROD

LIFT STATION 17-3

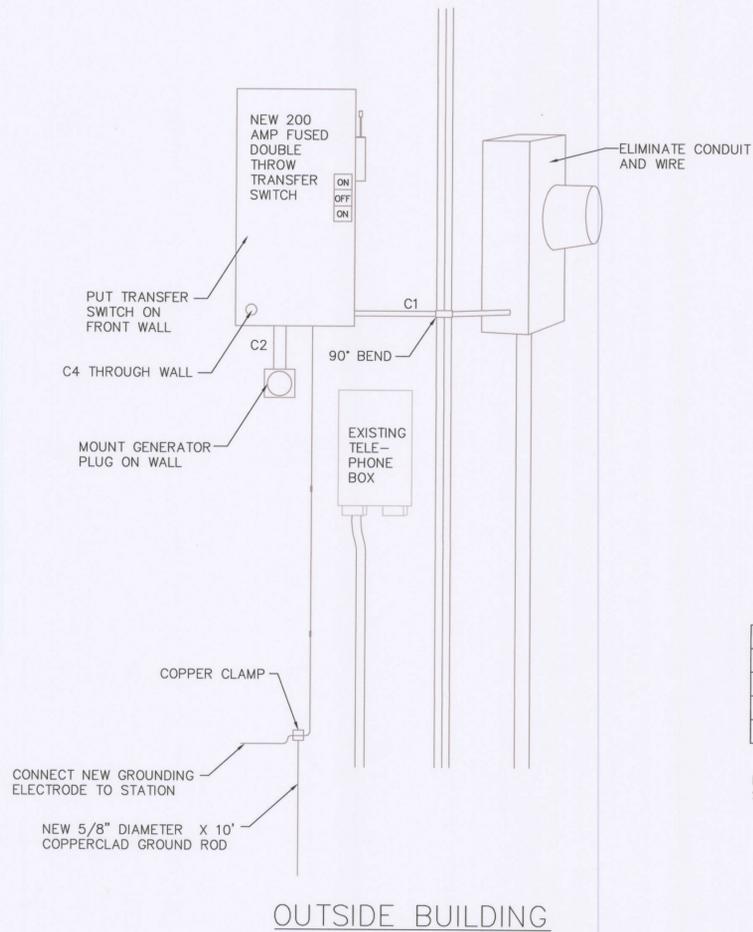


**GENERATOR PROJECT  
 MOORE COUNTY, NC**

DATE: MAR., 2016  
 DESIGNED BY: LM III  
 CADD BY: LSD

LIFT STATION 16-2  
 LIFT STATION 17-3

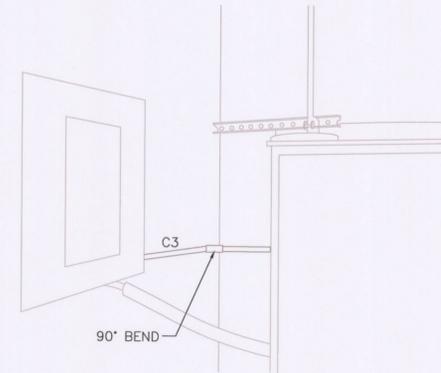
NO.	DATE	BY	REVISIONS
			DESCRIPTION



OUTSIDE BUILDING

CONDUIT SCHEDULE	
NUMBER	DESCRIPTION
C1	3-3/0, 1-3/0N, 2"C
C2	4-3/0, 1-#6, 2"C
C3	3-3/0, 1-3/0, 2"C

NOTE:  
SEPARATE THE GROUND AND NEUTRAL AT THE PANEL BOARD



INSIDE BREAKER PANEL

LIFT STATION 15-2

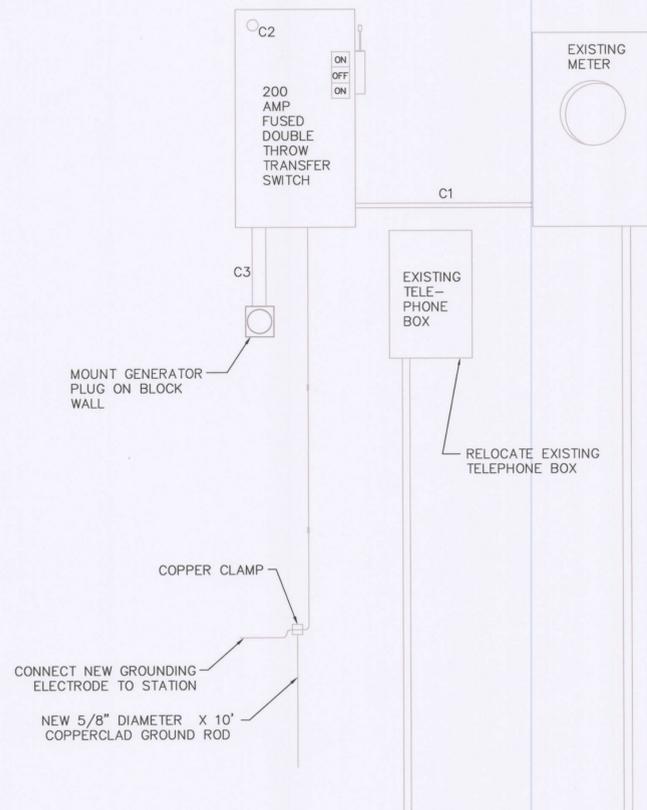
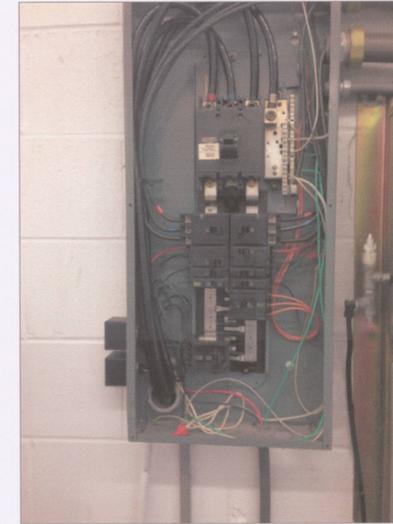


GENERATOR PROJECT  
MOORE COUNTY, NC

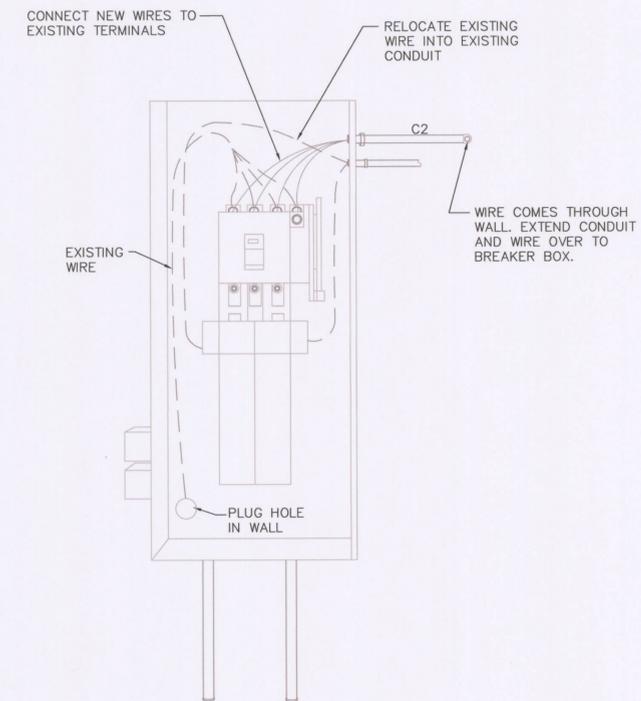
DATE: MAR., 2016  
DESIGNED BY: LM III  
CADD BY: LSD

LIFT STATION 15-2

NO.	DATE	BY	REVISIONS DESCRIPTION



OUTSIDE BUILDING



INSIDE BREAKER PANEL

CONDUIT SCHEDULE	
NUMBER	DESCRIPTION
C1	3-3/0, 1-3/0N, 2"C
C2	4-3/0, 1-#6G, 2"C
C3	3-3/0, 1-3/0G, 2"C

NOTE:  
 1) 208 VOLT, 3 PHASE 4 WIRE SERVICE  
 2) SEPARATE THE GROUND AND NEUTRAL AT THE PANEL BOARD

LIFT STATION 14-4



GENERATOR PROJECT  
 MOORE COUNTY, NC

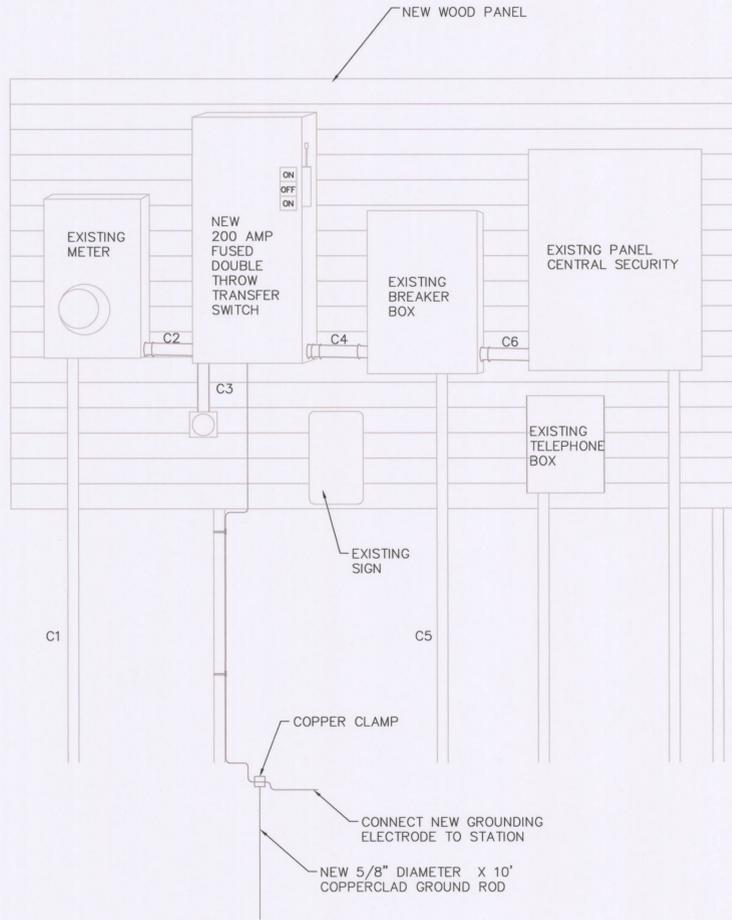
DATE: MAR., 2016  
 DESIGNED BY: LM III  
 CADD BY: LSD

LIFT STATION 14-4

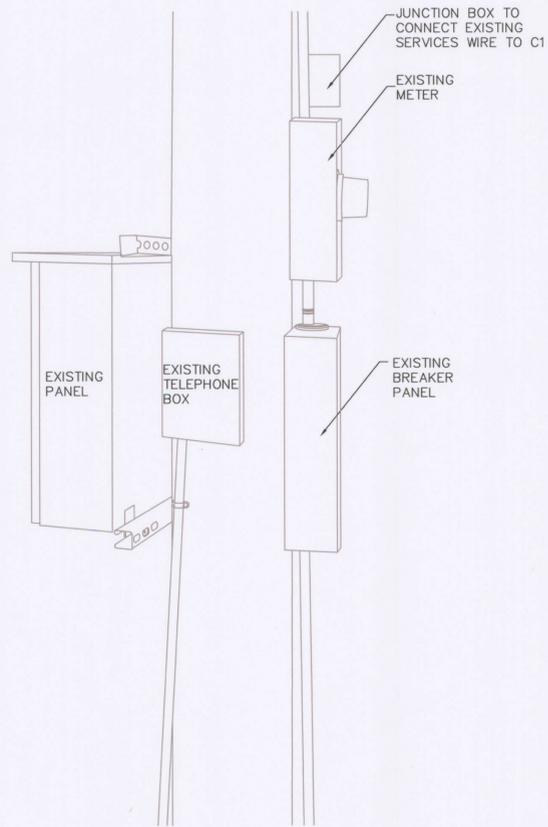
NO.	DATE	BY	REVISIONS DESCRIPTION

SHEET

C7



NOTE:  
ALL BOXES AND SIGNS SHALL  
BE RELOCATED TO NEW WOOD  
PANEL.



CONDUIT SCHEDULE	
NUMBER	DESCRIPTION
C1	3-3, 1-3G, 2" C
C2	3-3, 1-3G, 2" C
C3	3-3, 1-3G, 2" C
C4	3-3, 1-3G, 2" C
C5	3-3, 1-3G, 2" C
C6	2-#16, 1/2" C

NOTE:  
SEPARATE THE GROUND AND NEUTRAL AT THE PANEL BOARD



LIFT STATION 8-1



GENERATOR PROJECT  
MOORE COUNTY, NC

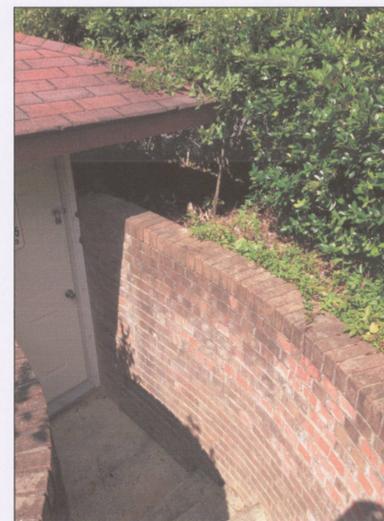
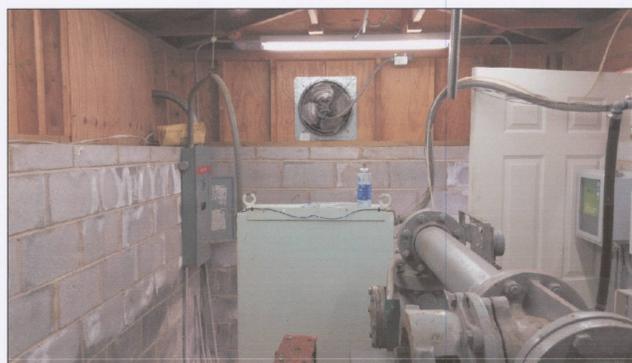
DATE: MAR., 2016  
DESIGNED BY: LM III  
CADD BY: LSD

LIFT STATION 8-1

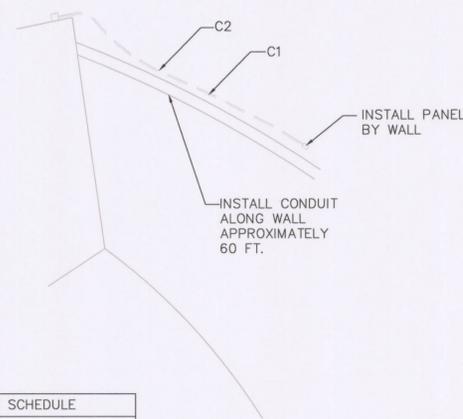
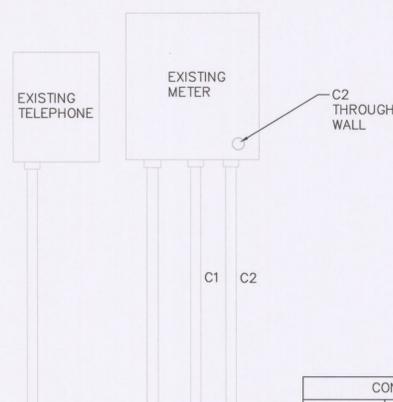
NO.	DATE	BY	REVISIONS DESCRIPTION

SHEET

C8

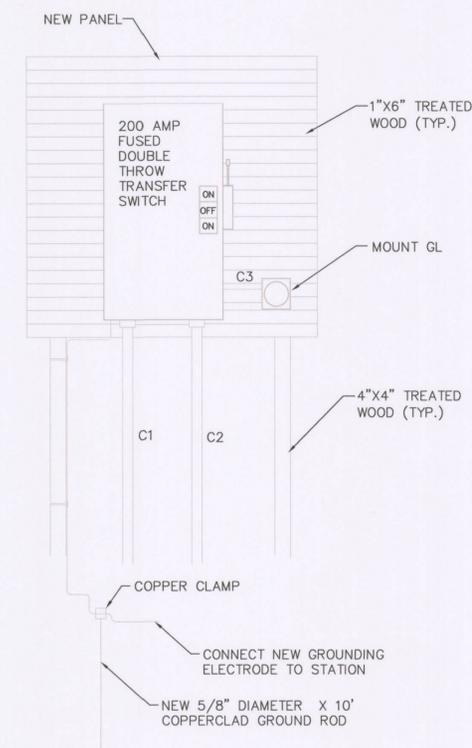


INSIDE BREAKER PANEL



OUTSIDE BUILDING

CONDUIT SCHEDULE	
NUMBER	DESCRIPTION
C1	2-3/0, 1-3/0G, 2°C
C2	2-3/0, 1-3/0G, 2°C
C3	2-3/0, 1-3/0G, 2°C



LIFT STATION 14-3

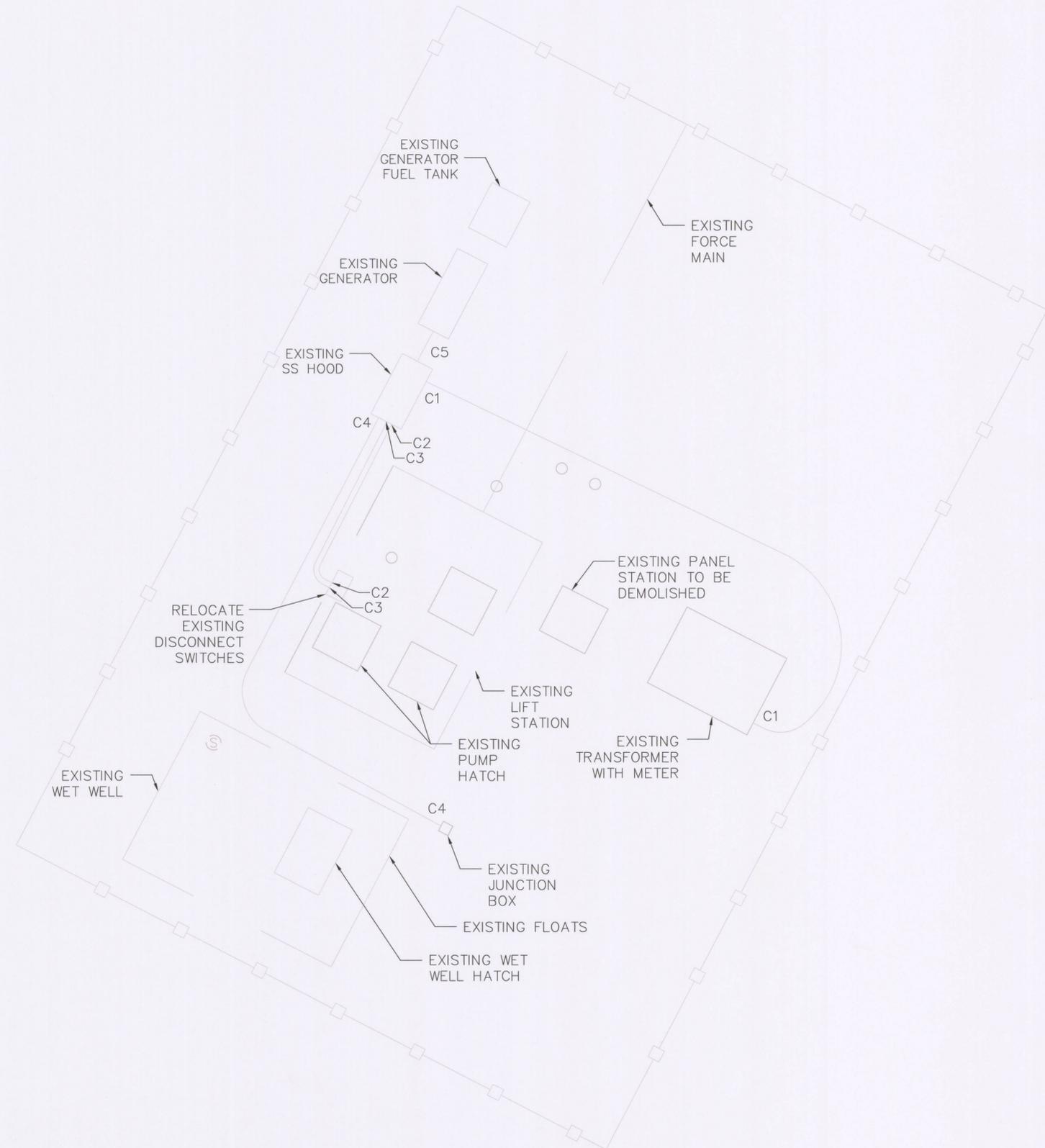


GENERATOR PROJECT  
 MOORE COUNTY, NC

DATE: MAR. 2016  
 DESIGNED BY: LM III  
 CADD BY: LSD

LIFT STATION 14-3

NO.	DATE	BY	REVISIONS	DESCRIPTION



SITE PLAN

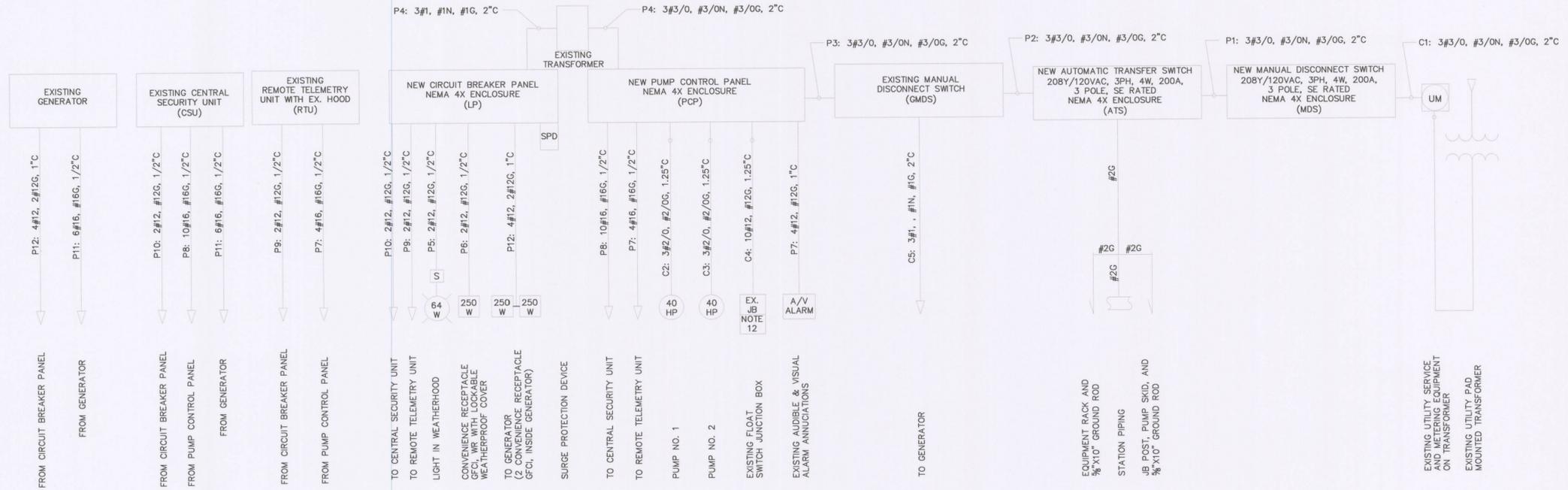
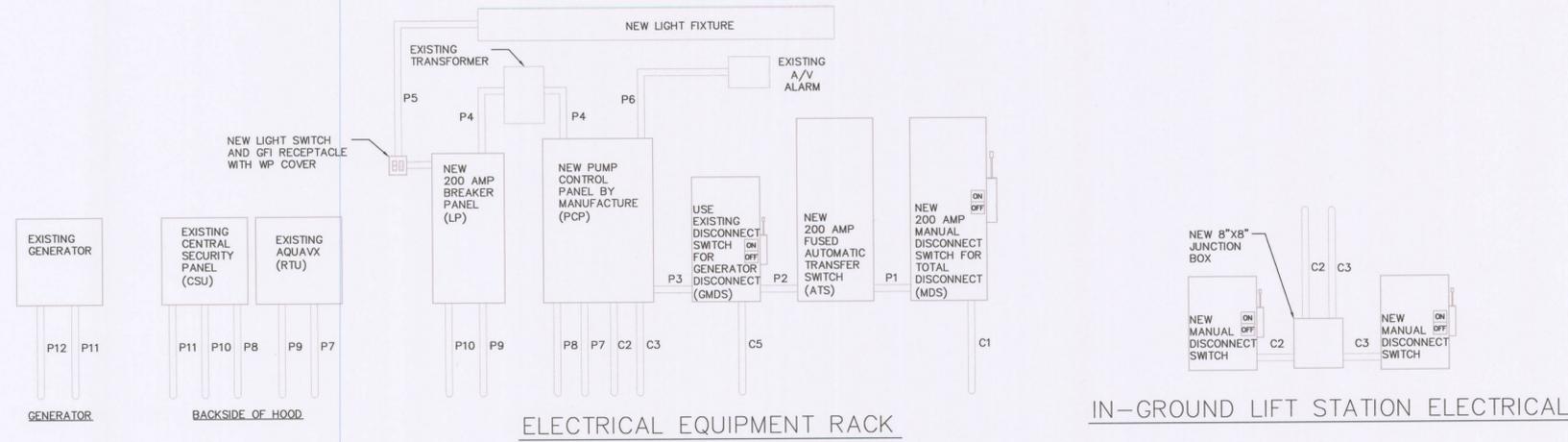


**GENERATOR PROJECT  
 MOORE COUNTY, NC**

DATE: MAR., 2016  
 DESIGNED BY: LM III  
 CADD BY: LSD

LIFT STATION PW-1

NO.	DATE	BY	REVISIONS	DESCRIPTION



LOAD SERVER	WATTS			COND. SIZE	WIRE SIZE	C/B TRIP AMPS	C/B TYPE	CKT NO.	ABC	CKT NO.	C/B TYPE	C/B TRIP AMPS	WIRE SIZE	COND. SIZE	WATTS			LOAD SERVED								
	A	B	C												A	B	C									
TYPE 2, 100KA SURGE PROTECTION DEVICE	0	0	0	3/4	10	30	3P	1		2	1P	15	12	1/2	64			HOOD LIGHT								
								3		4	1P	20	12	1/2		250		HOOD RECEPTACLE								
								5		6	1P	15	12	1/2			50	RTU								
SPARE								7		8	1P	15	12	1/2				CSU								
SPARE								9		10	1P	20	12	1		250		GENERATOR RECEPTACLE								
SPARE								11		12	1P	20	12				250	GENERATOR RECEPTACLE								
SUB - TOTAL "B"																										
SUB-TOTAL "A"															114	500	300	225 A. CU BUS								
SUB-TOTAL "B"															0	0	0	N/A A. MAIN LUGS								
GRAND TOTAL															114	500	300	200 A. MAIN CB								

1. PANEL SHALL BE RATED AS SUITABLE FOR USE AS EQUIPMENT (SUSE)  
 2. SPD MAY BE INTERNAL TO PANEL LP



**GENERATOR PROJECT**  
**MOORE COUNTY, NC**

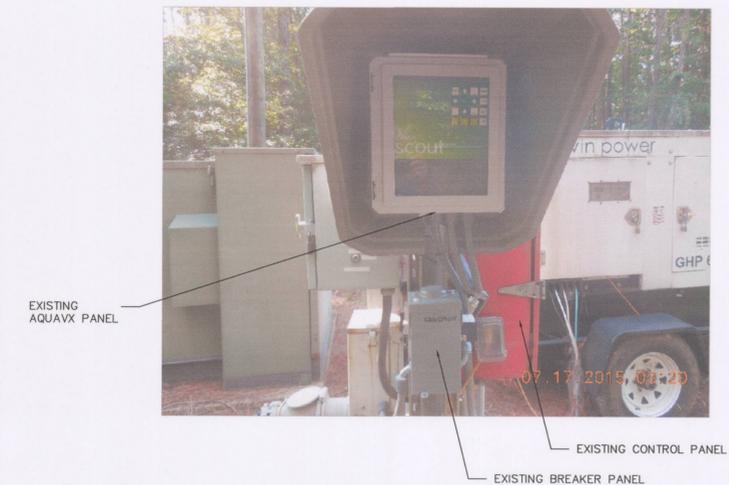
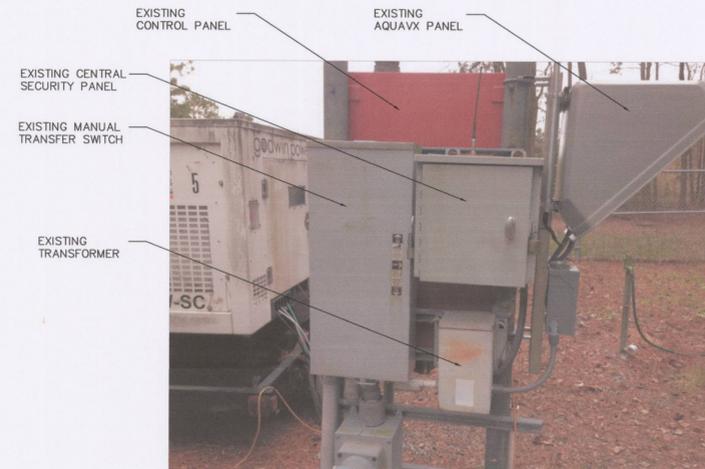
DATE: MAR., 2016  
 DESIGNED BY: LM III  
 CADD BY: LSD

**LIFT STATION PW-1**

NO.	DATE	BY	REVISIONS	DESCRIPTION

NOTES:

1. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, TOOLS EQUIPMENT, PERMITS, AND OPERATIONS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF ALL ELECTRICAL WORK INDICATED ON THE DRAWINGS.
2. ALL ELECTRICAL WORK AND MATERIALS SHALL COMPLY WITH THE NEC AND OTHER APPLICABLE FEDERAL, STATE, AND LOCAL CODES. ALL ELECTRICAL EQUIPMENT SHALL BE LISTED OR LABELED FOR THE APPLICATION AS REQUIRED BY NORTH CAROLINA STATUTES.
3. ALL DISCONNECT SWITCHES, JUNCTION BOXES, MOTOR CONTROLLERS, AND OTHER EQUIPMENT REQUIRING ELECTRICAL POWER CONNECTION SHALL BE MARKED WITH VOLTAGE PRESENT, AS APPROPRIATE TO DESIGNATE 120, 277, 480, 12.470 VOLTS AND SINGLE OR THREE PHASE, AS APPLICABLE.
4. WIRE SHALL BE STRANDED COPPER WITH TYPE THHN/THWN-2 600V INSULATION. CONDUCTORS SHALL BE COLOR CODED BLACK, RED, WHITE, AND GREEN ON 208Y/120 VOLT SYSTEMS, AND BROWN, ORANGE, YELLOW, AND GREEN ON 480Y/277 VOLT SYSTEMS. A GROUNDING CONDUCTOR SHALL BE INSTALLED IN EVERY CONDUIT.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ROUTING ALL CONDUITS. THIS SHALL INCLUDE ALL CONDUITS INDICATED ON THE ONE-LINES, PLANS, AND PANELS SCHEDULES. ALL CONDUIT SHALL BE CONCEALED WHERE POSSIBLE.
6. CONTRACTOR SHALL VERIFY ALL EQUIPMENT LOCATIONS CONNECTIONS POINTS PRIOR TO INSTALLATION.
7. CONTRACTOR SHALL MEET WITH THE LOCAL FIELD ENGINEER OF THE ELECTRICAL UTILITY TO COORDINATE THE EXISTING METER CONNECTION REQUIREMENTS. CONTRACTORS SHALL BE RESPONSIBLE FOR POWER COMPANY DISCONNECTION SO ELECTRICAL CONNECTION CAN BE MADE.
8. MANUAL DISCONNECT SWITCH (MDS) SHALL BE DOUBLE-THROW SAFETY SWITCH TYPE, HEAVY DUTY AND HORSEPOWER RATED 250V, 200A, 3-POLE, 4-WIRE, SERVICE ENTRANCE RATED WITH NEMA 4X ENCLOSURE.
9. LUMINARY IN WEATHER HOOD SHALL BE 4 FOOT FLUORESCENT WITH ENCLOSED FIBERGLASS HOUSING, WET LABEL LISTED, TWO 32WTB TUBES, AND ELECTRICAL BALLAST. COLUMBIA LUN4-232-EB8Z120, LITHONIA DM232-120GEB10IS, METALUX VT2-23DR-120EB81Z-WL OR EQUAL. CONTRACTOR SHALL PROVIDE AND INSTALL A WEATHERPROOF LIGHT SWITCH FOR CONTROL OF THE LIGHT.
10. PUMP CONTROL PANEL (PCP) SHALL BE PROVIDED BY PUMP MANUFACTURER AND INSTALLED & WIRED BY THE ELECTRICAL CONTRACTOR. RELAYS SHALL BE LOCATED IN PUMP CONTROL PANEL. PUMP CONTROL PANEL BREAKER SHALL BE INTERNAL TO PANEL.
11. ALL WIRING FOR FLOAT SWITCHES SHALL BE INTRINSICALLY SAFE
12. ALL SEALOFFS SHALL BE CORDGRIPS
13. LIFT STATION IS CLASSIFIED HAZARDOUS, CLASS 1, DIVISION 1, GROUP D BY NFPA 820. ALL CONDUITS ENTERING THIS AREA SHALL BE PVC AND PANELS WITH A NEMA 4X RATING. CONTRACTOR TO COORDINATE THE LOCATION OF THE JUNCTION BOXES AND DISCONNECTS WITH THE OWNER.
14. ALL CORNERS AND EDGES OF EQUIPMENT RACK SHALL BE ROUNDED AND SMOOTH. ALL CONDUIT THREADS, THREADED FASTENERS, SAW CUTS, AND DAMAGED FINISHES SHALL BE BRUSH PAINTED WITH A HEAVY COAT OF ALUMINIZED PAINT. ALL VERTICAL POSTS SHALL BE CAPPED.
15. ALL MOUNTING HARDWARE (BOLTS, WASHERS, NUTS, STRUT, & CLAMPS) SHALL BE STAINLESS STEEL. PROVIDE NON-CONDUCTIVE SPACERS BETWEEN DISSIMILAR METALS.



EXISTING SITE CONDITIONS

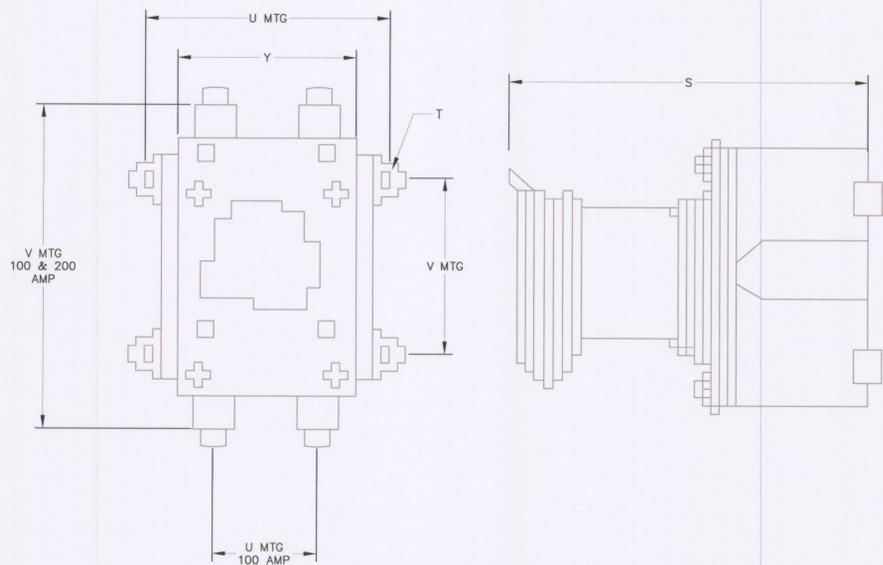


GENERATOR PROJECT  
 MOORE COUNTY, NC

DATE: MAR., 2016  
 DESIGNED BY: LM III  
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LIFT STATION PW-1

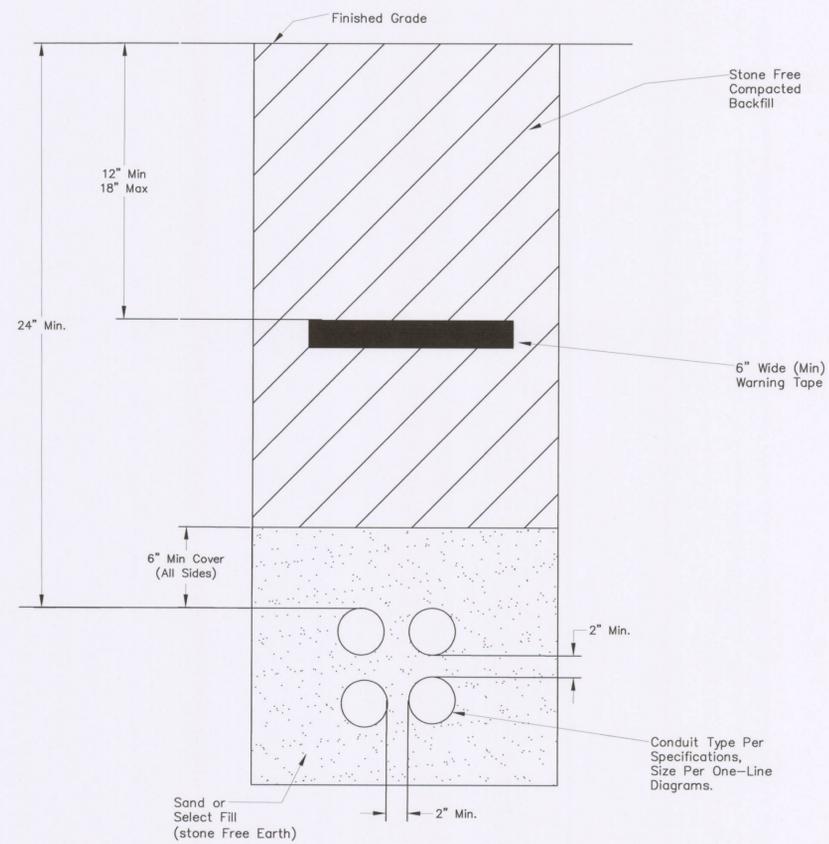
NO.	DATE	BY	REVISIONS	DESCRIPTION



WEATHERWEIGHT														PANEL OPENING
AMP	SERIES	Z	Y	X	S	SW	R	RW	Q	P	V	U	T	
200/270	JRFR/JRSR	8 1/6"	8 1/6"	6 1/6"	-	-	-	-	-	-	9 5/8"	7 1/6"	3/8"	15"

GENERATOR PLUG DETAIL

NOTES:  
COORDINATE WIRING OF GENERATOR PLUG WITH  
EXISTING PORTABLE GENERATOR PLUG



DIRECT BURIED CONDUIT SECTION

NTS



**GENERATOR PROJECT  
MOORE COUNTY, NC**

DATE: MAR., 2016  
 DESIGNED BY: LM III  
 CADD BY: LSD

DETAILS

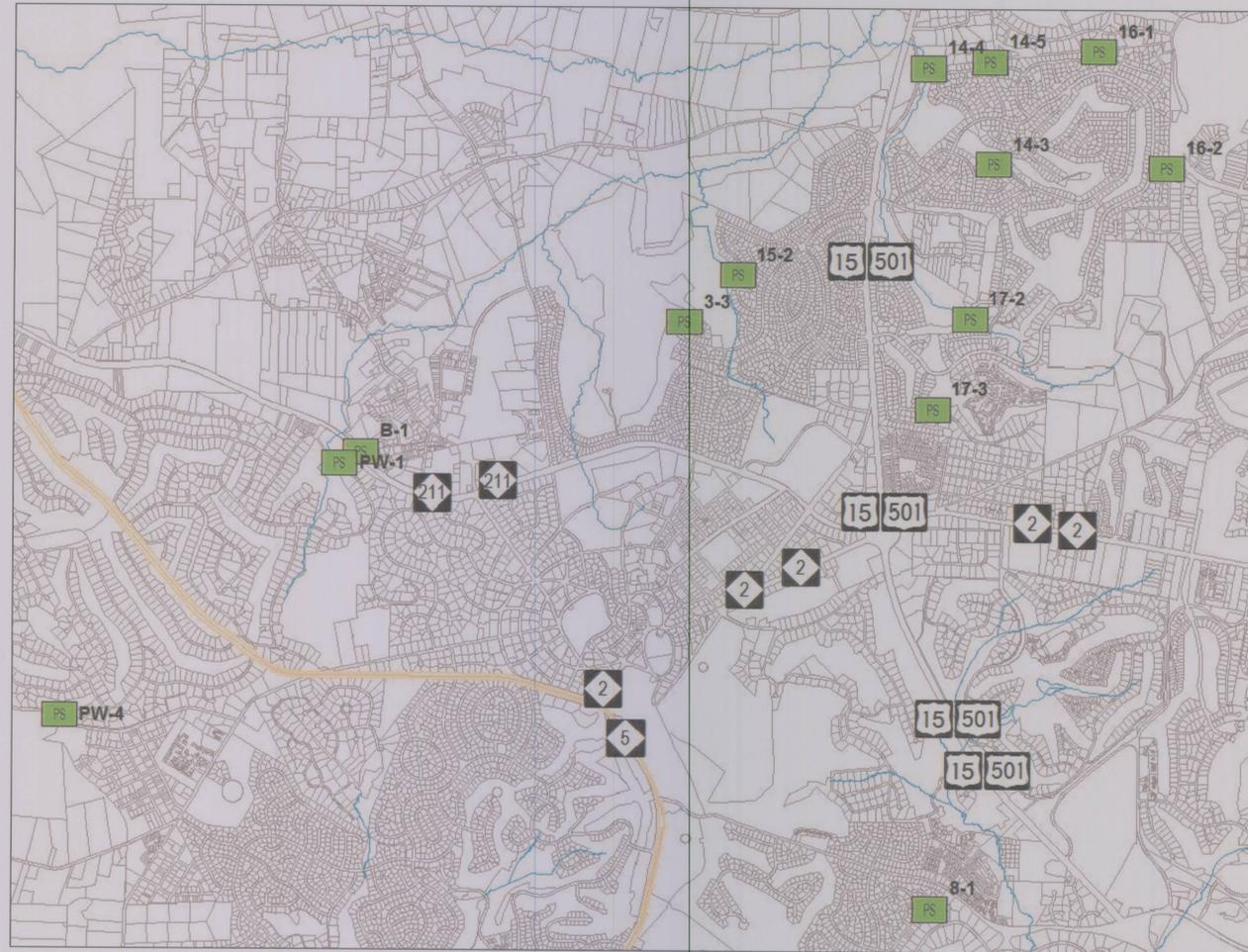
NO.	DATE	BY	DESCRIPTION

SHEET

**C13**

# GENERATOR PROJECT PINEHURST, N.C.

MARCH 2016



## SCHEDULE OF DRAWINGS

G1	COVER SHEET
C1	LIFT STATION 16-1 & PW-4
C2	LIFT STATION 14-5
C3	LIFT STATION 3-3 & 17-2
C4	LIFT STATION B-1
C5	LIFT STATION 16-2 & 17-3
C6	LIFT STATION 15-2
C7	LIFT STATION 14-4
C8	LIFT STATION 8-1
C9	LIFT STATION 14-3
C10	LIFT STATION PW-1
C11	LIFT STATION PW-1
C12	LIFT STATION PW-1
C13	DETAILS



## MOORE COUNTY PUBLIC WORKS DEPARTMENT

www.moorecountync.gov  
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P.O. BOX 1927  
CARTHAGE, NC 28327  
(910) 947-6315

