

THIS RECORD DOCUMENT HAS BEEN PREPARED BASED ON INFORMATION PROVIDED BY THE CONSTRUCTION CONTRACTOR GRW ENGINEERS, INC. HAS ATTEMPTED TO VERIFY THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION BUT SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT.

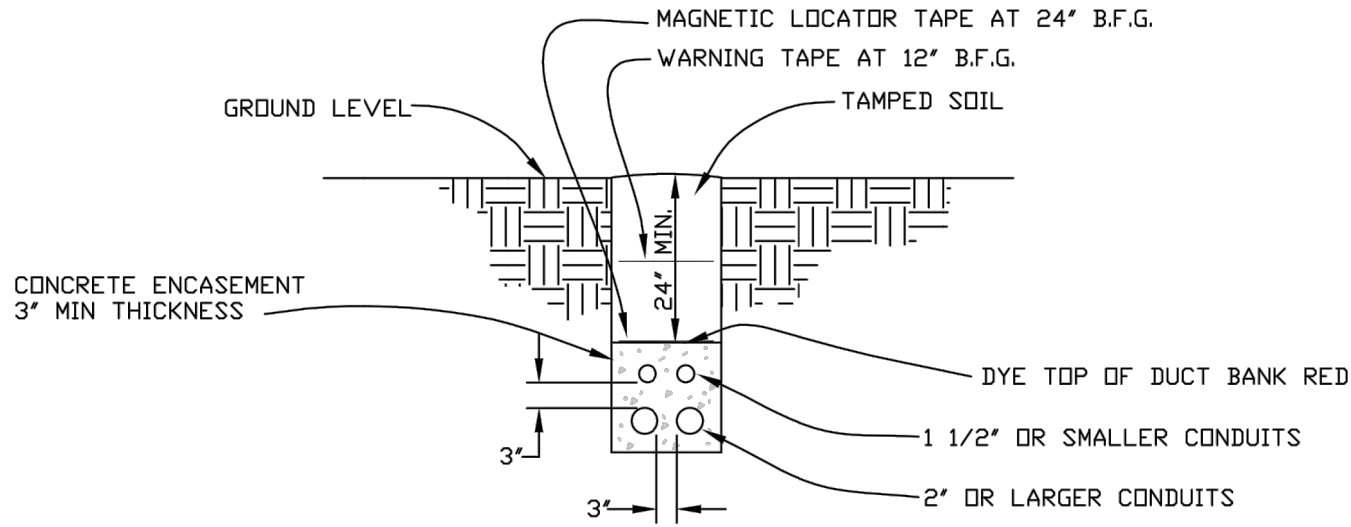


engineering | architecture | geospatial
www.grwinc.com

ENGINEER/ARCHITECT: JAMES D. PHILLIPS

CONSTRUCTION COMPANY: QUINN CONS CORP.

09/27/2018

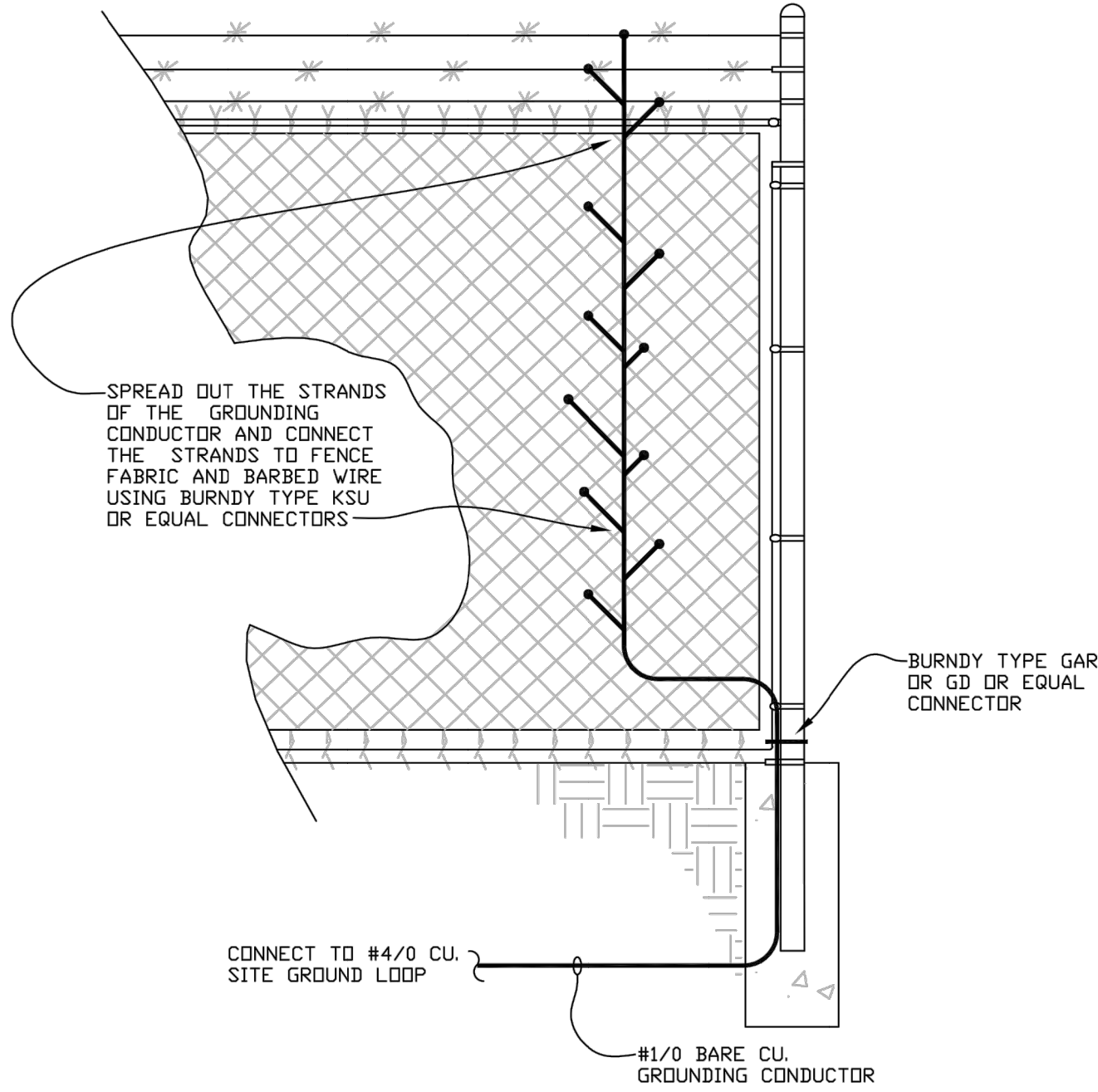


UNDERGROUND CONDUIT INSTALLATION DETAIL

Scale: NONE

NOTE:

- CONTACT ENGINEER FOR INSTALLATION DEPTH VARIATION IN AREAS CONTAINING BURIED PIPING AND OTHER STRUCTURES.
- CONDUIT SEPARATION SHALL BE MAINTAINED BY USE OF PVC CONDUIT SPACERS.



FENCE GROUNDING DETAIL

Scale: NONE

LIGHTING FIXTURE SCHEDULE				
TYPE	DESCRIPTION & SPECIFICATIONS	LAMPS		SUGGESTED MANUFACTURER & CATALOG NO.
		NO.	TYPE	
A	FLUORESCENT FIXTURE, SURFACE MOUNTED, 4 LAMP, WRAPAROUND ACRYLIC LENS, WHITE FINISH, 4 FT. LENGTH, ELECTRONIC BALLAST, W/STEM HANGERS, 120 VOLT A.C.	4	F032T8/SP35	LITHONIA LIGHTING CAT. NO. LB-432-MVOLT-1/4GE101S-SQ12
B	FLUORESCENT FIXTURE, ENCLOSED GASKETED, 2 LAMP, FIBERGLASS HOUSING, 4 FT. LENGTH, CORROSION RESISTANT, W/STEM HANG KIT, 120 VOLT A.C.	2	F032T8/SP35	LITHONIA LIGHTING CAT. NO. DMW-232-MVOLT-GE101S-WLF
P	3 EA. LED FLOODLIGHTING FIXTURES, DIE CAST ALUMINUM HOUSING, 10 FT. ROUND STRAIGHT ALUMINUM POLE W/ALUMINUM BRACKET, 120 VOLT A.C.	3	41W LED (INCLUDED)	LITHONIA LIGHTING CAT. NO. FIXTURE: Q08XFL-LED-2-4530/40K-FL-MVOLT-18 POLE: RSA104C-T25 BRACKET: RBA38

CONDUIT & WIRE DESIGNATION SCHEDULE

DESIG.	DESCRIPTION
1	2 EA. - 3" C., W/4-#350 MCM THHN/THWN CU. & 1-#1 THHN/THWN CU. GND. CONDUCTORS EA.
2	3" C., 3-#350 MCM THHN/THWN CU. & 1-#4 THHN/THWN CU. GND.
3	2" C., 4-#3/0 THHN/THWN CU. & 1-#6 THHN/THWN CU. GND.
4	1 1/2" C., 3-#1 THHN/THWN CU. & 1-#6 THHN/THWN CU. GND.
5	1 1/2" C., 4-#3 THHN/THWN CU. & 1-#8 THHN/THWN CU. GND.
6	1 1/4" C., 3-#3 THHN/THWN CU. & 1-#8 THHN/THWN CU. GND.
7	1" C., 3-#6 THHN/THWN CU. & 1-#10 THHN/THWN CU. GND.
8	1" C., 4-#10 THHN/THWN CU. & 1-#10 THHN/THWN CU. GND.
9	1" C., 3-#10 THHN/THWN CU. & 1-#10 THHN/THWN CU. GND.
10	3/4" C., 3-#10 THHN/THWN CU. & 1-#10 THHN/THWN CU. GND.
11	1" C., 2-#10 THHN/THWN CU. & 1-#10 THHN/THWN CU. GND.
12	3/4" C., 2-#10 THHN/THWN CU. & 1-#10 THHN/THWN CU. GND.
13	3/4" C., 2-#12 THHN/THWN CU. & 1-#12 THHN/THWN CU. GND.
14	3/4" C., 4-#12 THHN/THWN CU. & 2-#12 THHN/THWN CU. GNDS.
15	3/4" C., 4 EA. - 2/C-#16 AWG TWISTED PAIR, SHIELD CABLES
16	3/4" C., 2 EA. - 2/C-#16 AWG TWISTED PAIR, SHIELD CABLES
17	3/4" C., 16-#14 THHN/THWN CU. & 1-#12 THHN/THWN CU. GND.
18	3/4" C., 8-#14 THHN/THWN CU. & 1-#12 THHN/THWN CU. GND.
19	1 1/2" C., EMPTY W/PULLWIRE
20	1" C., EMPTY W/PULLWIRE
21	1" C., 12-#12 THHN/THWN CU. & 1-#12 THHN/THWN CU. GND.
22	3/4" C., 8-#12 THHN/THWN CU. & 1-#12 THHN/THWN CU. GND.
23	3/4" C., 4-#12 THHN/THWN CU. & 1-#12 THHN/THWN CU. GND.
24	3/4" C., 6-#12 THHN/THWN CU. & 1-#12 THHN/THWN CU. GND.
25	1" C., 2 EA. - 2/C-#16 AWG TWISTED PAIR, SHIELDED CABLES

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	CONDUIT CONCEALED IN WALL OR CEILING
	CONDUIT CONCEALED IN FLOOR SLAB OR UNDERGROUND
	CONDUIT EXPOSED ON WALL OR CEILING
	HOMERUN CONDUIT, CKT. W/PHASE(SHORT) & NEUTRAL(LONG)
	EXISTING RACEWAY-EXPOSED
	EXISTING RACEWAY-BELOW SLAB
	FIRE ALARM CONDUIT SYSTEM
	TELEPHONE CONDUIT, 3/4" U.O.N.
	CAPPED CONDUIT
	FLEXIBLE CONDUIT
	WEATHERPROOF CABLE
	JUNCTION BOX
	PULL BOX
	TRACK FOR TRACK LIGHTING FIXTURES
	SINGLE POLE SWITCH, 20 AMP, MTD. HT. PER SPECS.
	SWITCH - 3 WAY, 20 AMP, MTD. HT. PER SPECS.
	SWITCH - 4 WAY, 20 AMP, MTD. HT. PER SPECS.
	DOUBLE POLE, SINGLE THROW SWITCH, 20 AMP, MTD. HT. PER SPECS
	DIMMER SWITCH - WALL MTD., 2,000 WATT, U.O.N., MTD. HT. PER SPECS.
	DIMMER SWITCH - 3 WAY, 2,000 WATT, U.O.N., MTD. HT. PER SPECS.
	DIMMER SWITCH, FLUORESCENT TYPE, MTD. HT. PER SPECS.
	WEATHERPROOF SWITCH, MTD. HT. PER SPECS.
	TIME SWITCH
	MANUAL MOTOR SWITCH W/ THERMAL PROTECTION
	OCCUPANCY SENSOR SWITCH, 20 AMP, MTD. HT. PER SPECS.
	SWITCH W/ PILOT LIGHT, MTD. HT. PER SPECS.
	DIMMER SWITCH - LDM VOLTAGE FIXTURE TYPE, WALL MTD., MTD. HT. PER SPECS.
	SWITCH - KEY-TYPE, MTD. HT. PER SPECS.
	SWITCH - KEY-TYPE, 3 WAY, MTD. HT. PER SPECS.
	SWITCH - KEY-TYPE, DOUBLE POLE, SINGLE THROW, MTD. HT. PER SPECS.
	CEILING MOUNTED OCCUPANCY SENSOR
	MOTION DETECTOR
	PHOTOELECTRIC CELL
	HAND - OFF - AUTO SELECTOR SWITCH
	START - STOP PUSHBUTTON STATIONS
	THERMOSTAT
	SINGLE RECEPTACLE - 20 AMP.
	SINGLE RECEPTACLE, CLOCK HANGER W/HOOK
	DUPLEX RECEPTACLE - MTD. HT. PER SPECS.
	DOUBLE DUPLEX RECEPTACLE - MTD. HT. PER SPECS.
	WEATHERPROOF DUPLEX RECEPTACLE
	WEATHER RESISTANT DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE, GROUND FAULT INTERRUPTER TYPE
	DUPLEX RECEPTACLE, MTD. ABOVE COUNTER
	DOUBLE DUPLEX RECEPTACLE, MTD. ABOVE COUNTER
	230 VOLT RECEPTACLE
	DUPLEX RECEPTACLE - HALF HOT, HALF SWITCHED
	DUPLEX RECEPTACLE - ISOLATED GROUND
	WELDING RECEPTACLE - 60 AMP, VOLTAGE, POLES AS INDICATED
	FLOOR RECEPTACLE
	FLOOR TYPE TELEPHONE OUTLET
	FLOOR TYPE DATA/COMM. OUTLET
	TELEPHONE OUTLET - MTG. HT. & CONDUIT SIZE PER SPECS.
	TELEPHONE OUTLET - MTD. ABOVE COUNTER, COND. SIZE PER SPECS.
	TELEPHONE OUTLET - WALL MOUNTED, CONDUIT SIZE PER SPECS.
	TELEVISION SYSTEM ANTENNA OUTLET, 3/4" C. TO ACCESSIBLE CEILING SPACE
	TELEVISION ANTENNA JACK
	COMPUTER TERMINAL OUTLET, 3/4" C. TO ACCESSIBLE CEILING SPACE
	DATA/COMM. OUTLET, 2 GANG BOX, SINGLE PLASTER RING, 3/4" C.
	SPEAKER - FLUSH MOUNTED IN CEILING
	SURFACE MOUNTED FIXTURE W/IDENTIFICATION, INCAND., PL. FLUOR., OR H.I.D.
	WALL BRACKET FIXTURE, INCANDESCENT OR PL. FLUOR.
	RECESSED FIXTURE, INCANDESCENT, PL. TYPE FLUOR., OR H.I.D.
	FLUORESCENT FIXTURE, SURFACE OR RECESSED, 2X2, 1X4, 2X4
	FLUORESCENT FIXTURE, OPEN TUBE STRIP, SURFACE MTD.
	DISCONNECT SWITCH, FUSIBLE, 30 AMP / 3 POLE
	DISCONNECT SWITCH, NON-FUSIBLE, 30 AMP / 3 POLE
	DISCONNECT SWITCH, NON-FUSIBLE, RAINTIGHT, 30 AMP / 3 POLE
	BUSWAY PLUG, FUSIBLE, 30 AMP/3 POLE
	BUSWAY PLUG, NONFUSIBLE, 30 AMP/3 POLE
	EXHAUST FAN
	DISTRIBUTION PANEL
	LIGHTING OR BRANCH CIRCUIT PANELBOARD
	EMERGENCY LIGHT
	EMERGENCY LIGHT / EXIT LIGHT COMBINATION
	EXIT LIGHT
	OUTSIDE LIGHTING FIXTURE, POLE TYPE
	MOTOR CONTROLLER OR STARTER, MAGNETIC
	MOTOR CONTROLLER OR STARTER, MANUAL
	COMBINATION STARTER AND DISCONNECT
	MOTOR W/ APPROXIMATE HORSEPOWER
	CEILING FAN
	METAL, ALUMINUM, OR STEEL POLE
	WOOD POLE
	DESIGNATES HEATER TYPE
	DESIGNATES NOTE NUMBER
	DESIGNATES CONDUIT & WIRE DESCRIPTION PER SCHEDULE
	GROUNDING ELECTRODE AND CONDUCTOR SYSTEM
	GROUNDING ELECTRODE SYSTEM
	PRESSURE SWITCH
	FLOW TRANSMITTER
	SOLENOID VALVE
	ELECTRICALLY ACTUATED BALL VALVE W/POSITION INDICATION
	FLOAT SWITCH
	PRESSURE TRANSMITTER
	LIMIT SWITCH
	RATE OF FLOW CONTROLLER
	MOTOR OPERATED VALVE
	LOSS OF HEAD TRANSMITTER
	LEVEL TRANSMITTER
	FLOW INDICATOR
	POSITION INDICATOR
	DAMPER
	STRIP HEATER
	RESISTANCE TEMPERATURE DEVICE

This document, originally issued, sealed, and signed by JAMES D. PHILLIPS, Tennessee Professional Engineer, No. 016308, on JUNE 2015, shall not be used in lieu of a certified document.

GRW PROJECT NO. 3827-07

CLIENT PROJECT NO.

ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT OR ANY OF THE CONTENTS HEREIN SHALL BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF GRW ENGINEERS, INC. AND SHALL NOT BE USED FOR ANY OTHER PROJECT OTHER THAN THIS SPECIFIC PROJECT WITHOUT THE WRITTEN PERMISSION.



www.grwinc.com

ELECTRICAL DETAILS, SCHEDULES AND LEGEND

WATER TREATMENT PLANT EXPANSION CITY OF LOBELVILLE, TENNESSEE

DESIGNED	MLK	DRAWN	JRU	REVIEWED	JDP	APPROVED	JDP
NO.							
DATE							
DESCRIPTION							
THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED							

DATE: JUNE 2015

SCALE: AS SHOWN

SHEET NO.

E-6-604



Phone: (731) 885-9532
Fax: (731) 885-2106
Email: pec@phillipsengr.com

P.O. Box 585 - 617 S. First Street - Union City, TN 38261

14047E-6-604