

ROUTING SITE PLAN
SCALE: 1/16" = 1'-0"

DRAWING NOTES

- EXTEND TWO (2) - 4" EMPTY SCHEDULE 40 PVC CONDUITS FROM EXISTING UTILITY COMPANY TRANSFORMER #748394 3300 TO PROPOSED UTILITY COMPANY BACKBOARD/TROUGH (APPROXIMATELY 375 LF.). COORDINATE EXACT ROUTING AND TERMINATION POINT WITH UTILITY COMPANY VERIZON WIRELESS REPRESENTATIVE IN THE FIELD PRIOR TO START OF WORK.
- PROPOSED 10'-0" LONG UTILITY SERVICE BACKBOARD WITH 18"X18"X10'-0" SEALABLE WEATHERPROOF TROUGH. BACKBOARD SHALL COMPLY TO PEPCO STANDARDS. REFER TO DETAILS ON SHEET E-8 FOR ADDITIONAL INFORMATION.
- EXTEND TWO (2) - 4" EMPTY SCHEDULE 40 PVC CONDUITS BELOW GRADE FROM PROPERTY LINE AT T STREET NE TO PROPOSED FIBER HANDHOLE OUTSIDE OF NEW COMPOUND FOR EXTENSION OF FIBER (APPROXIMATELY 375 LF.). COORDINATE EXACT ROUTING WITH VERIZON WIRELESS REPRESENTATIVE IN THE FIELD. PROVIDE NYLON PULL ROPE AND ENDCAPS.
- PROVIDE 24"X36"X30" DEEP PULLBOX FOR EXTENSION OF TELEPHONE SERVICE CABLES. PULLBOXES BEING ACCESS DRIVE SHALL BE COMPOSITE QUAZITE, TIER 15 OR AN APPROVED EQUAL WITH TRAFFIC RATED COVER (#PG2436HA). PROVIDE 6" OF PEA GRAVEL IN BASE OF BOX. COORDINATE PULLBOX LOCATION WITH EXISTING FIELD CONDITIONS. REFER TO DETAIL, THIS SHEET FOR ADDITIONAL INFORMATION.
- CONTRACTOR SHALL COORDINATE INSTALLATION METHOD FOR CONDUITS BEING EXTENDED BELOW GRADE (ASPHALT/ GRAVEL/ DRIVE/ GRASS AREAS, ETC.) WITH LANDLORD PRIOR TO START OF WORK. COORDINATE FINAL ROUTING WITH ALL EXISTING UNDERGROUND UTILITIES.
- ALL CONDUITS BELOW GRADE SHALL BE SCHEDULE 40 PVC. ALL CONDUITS EXTENDING BELOW AREAS SUBJECT TO VEHICULAR TRAFFIC SHALL BE SCHEDULE 80 PVC. ALL CONDUITS ABOVE GRADE AND/OR EXPOSED TO WEATHER SHALL BE RIGID GALVANIZED STEEL. NO SEALTIGHT OR PVC CONDUIT ABOVE GRADE SHALL BE PERMITTED. DUCT SEAL SHALL BE INSTALLED IN ALL CONDUITS ENTERING CABINETS, EQUIPMENT, AND GENERATOR.
- CONTRACTOR SHALL COORDINATE EXACT LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO START OF WORK.
- CONTRACTOR SHALL OBTAIN THE LATEST ELECTRIC SERVICE DESIGN DRAWINGS FROM THE UTILITY COMPANY AND COORDINATE ANY CONCRETE ENCASING REQUIREMENTS PRIOR TO START OF WORK. UTILITY COMPANY DRAWINGS SHALL SUPERSEDE ELECTRIC SERVICE DESIGN AS SHOWN IN CONSTRUCTION DOCUMENTS. COORDINATE ALL REQUIREMENTS WITH UTILITY COMPANY AND VERIZON WIRELESS REPRESENTATIVE.
- PROPOSED LOCATION OF CONCRETE FILLED PROTECTIVE BOLLARD. FINAL BOLLARD LOCATIONS SHALL BE APPROVED BY UTILITY COMPANY PRIOR TO INSTALLATION. REFER TO DETAIL, SHEET E-8 FOR ADDITIONAL INFORMATION.

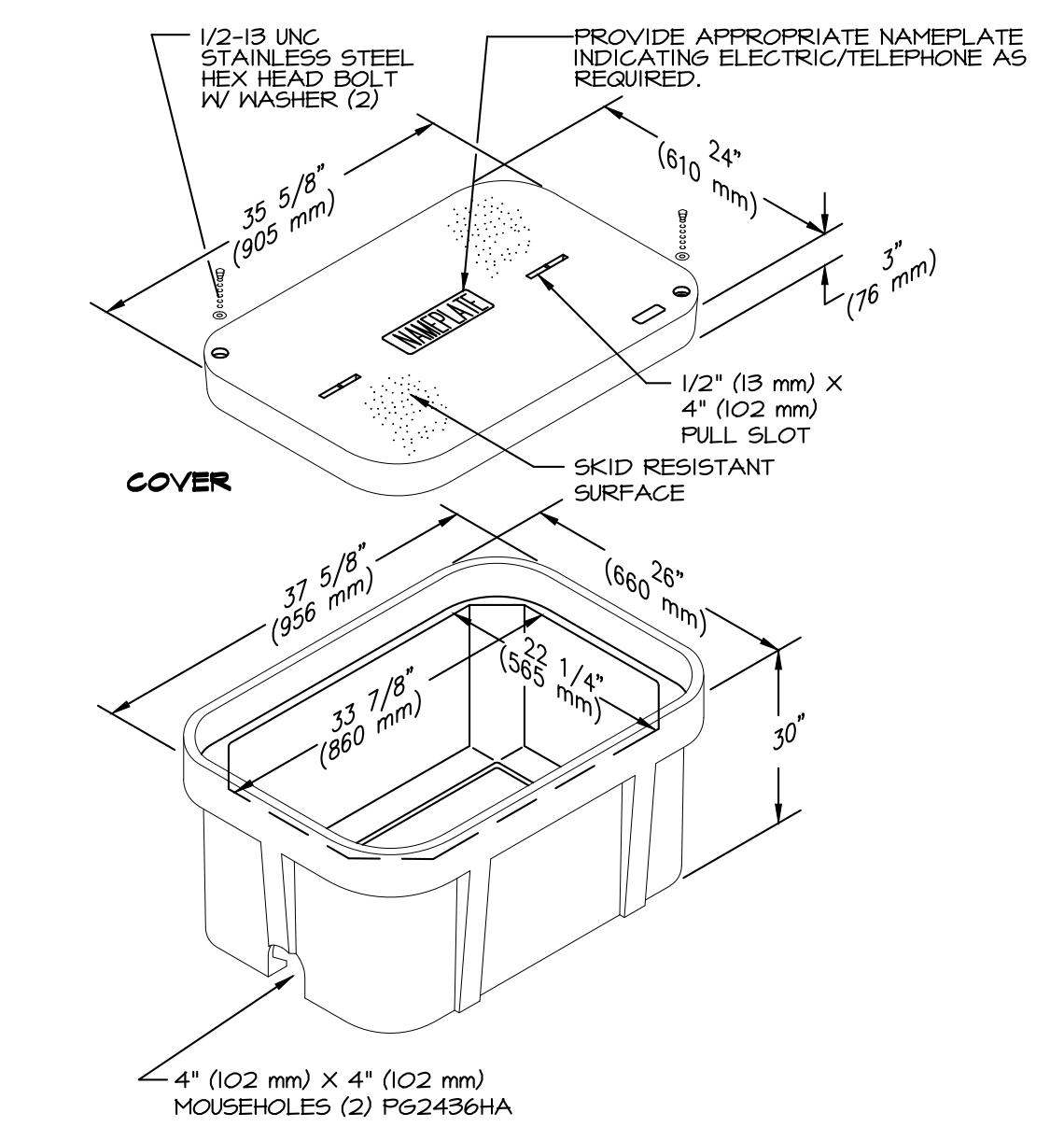
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TELEGENT ENGINEERING INC
2216 Commerce Road, Suite 1
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410-692-3816
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08/08/2024
I AM RESPONSIBLE FOR DETERMINING THAT THE ENGINEERING DESIGNS INCLUDED IN THIS APPLICATION ARE IN COMPLIANCE WITH ALL LOCAL AND FEDERAL REGULATIONS OF THE DISTRICT OF COLUMBIA. I HAVE BEEN PREPARED OR DIRECTLY SUPERVISED THE DEVELOPMENT OF THE ENGINEERING DESIGNS INCLUDED IN THIS APPLICATION.

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WASHINGTON, D.C. 20002
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④ DETAIL - JUNCTION BOX
NO SCALE

0 4 8 12 16 32 48
SCALE: 1/16" = 1'-0"

E-5
E005

TEI#23002Y

REVISIONS:	NO.	DESCRIPTION	DATE
VZN COMMENTS	06/08/24		
PERMIT DRAWINGS	06/26/24		

LAST REV.:
PROJECT NO: 23002Y
DATE: JUNE 26, 2024
SCALE: AS NOTED
TITLE:

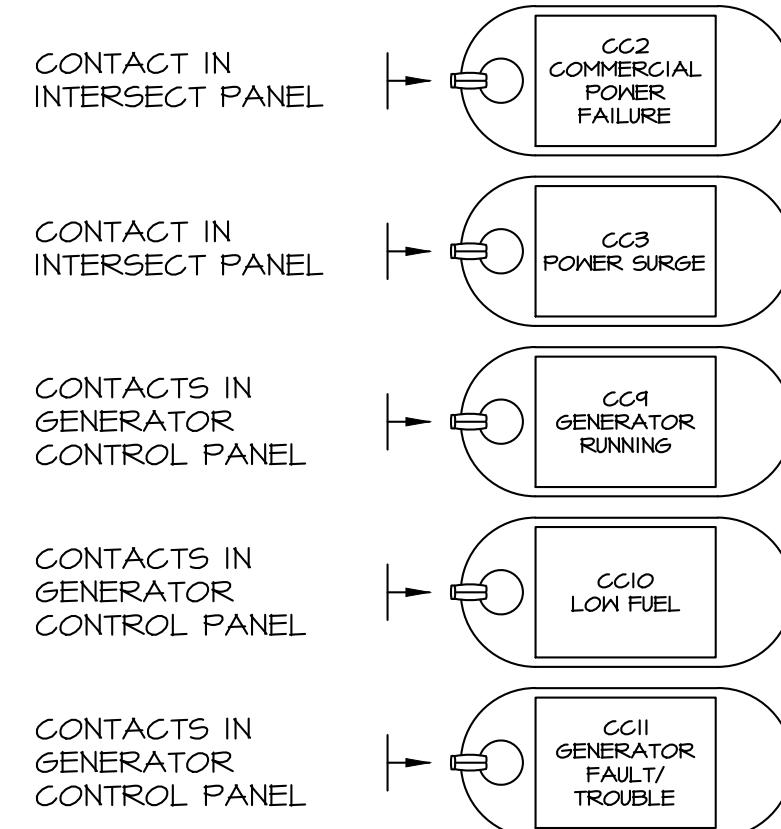
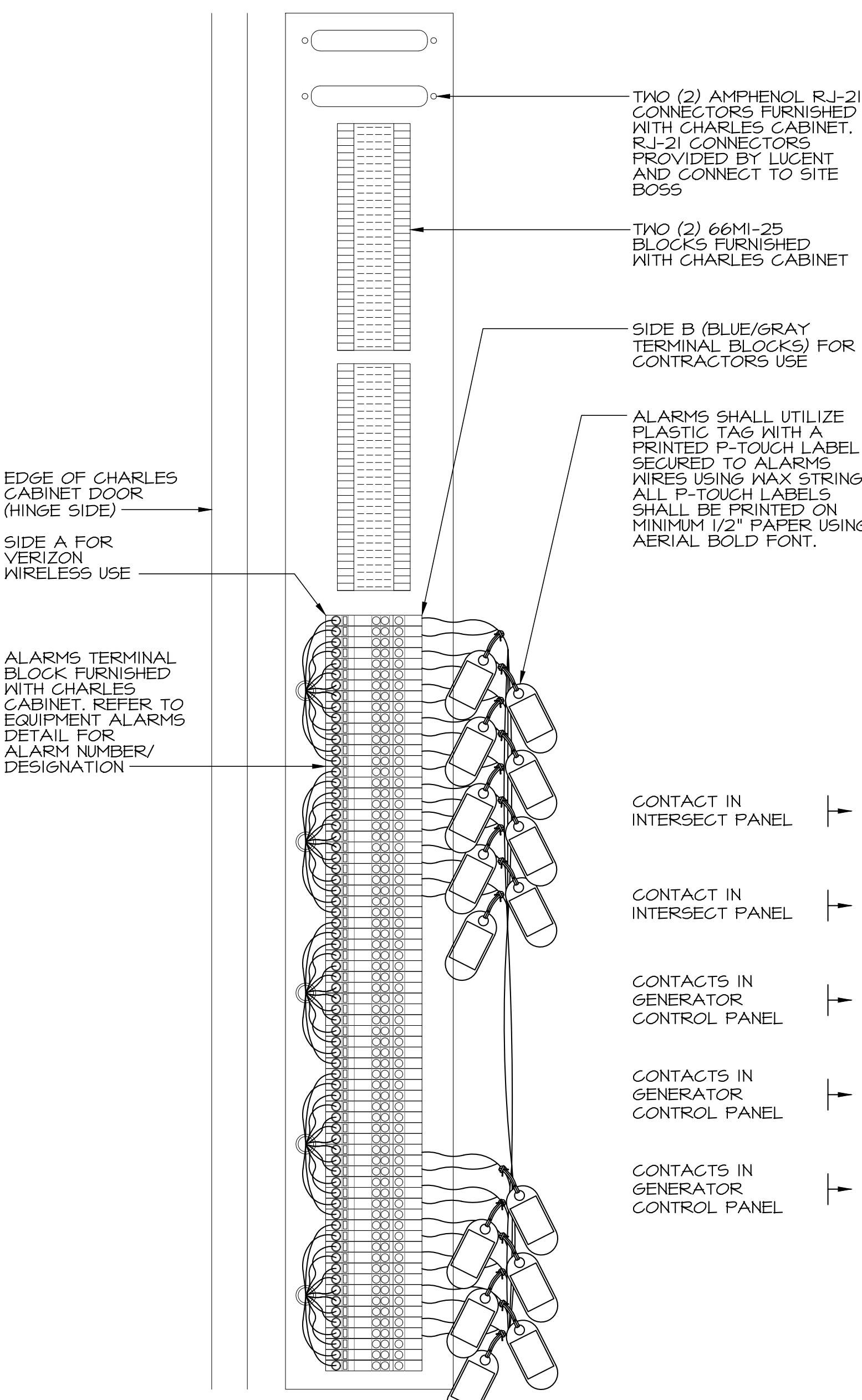
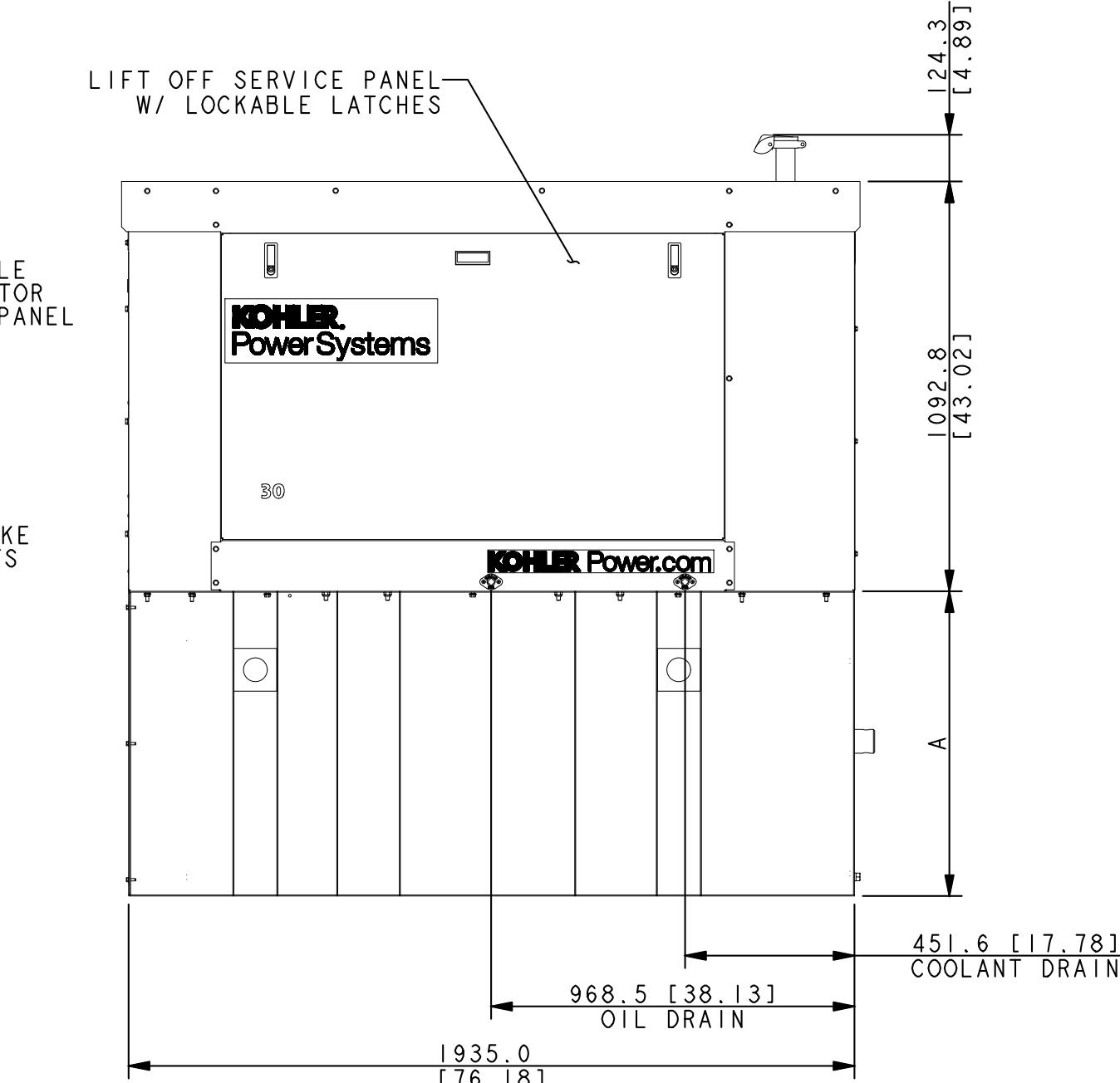
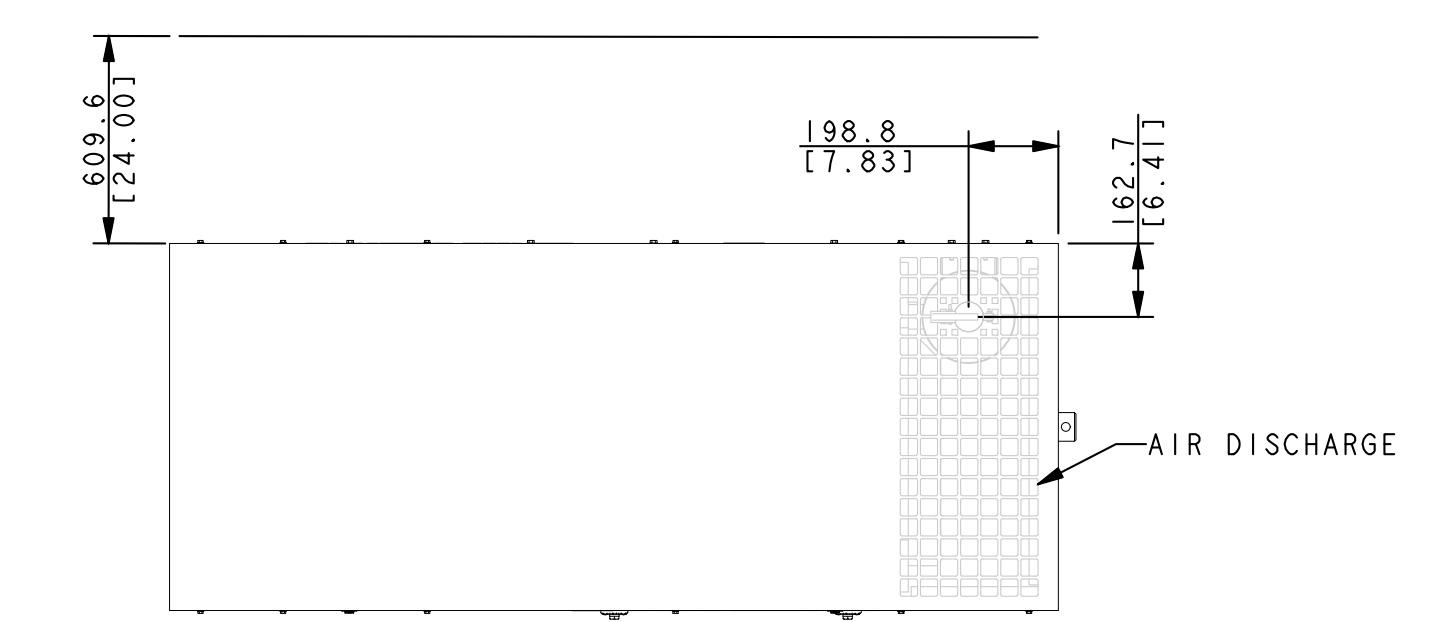
ROUTING SITE
PLAN, DETAIL,
AND NOTES

SHEET:

A B C D E F G H J K L M N P Q R

NOTES:
 1. THE RIGHT SIDE OF THE GENERATOR IS SERVICE ACCESSIBLE.
 2. 6 AMP BATTERY CHARGER.
 3. 120VAC ENGINE BLOCK HEATER.
 4. GENERATOR MUST BE GROUNDED.
 5. SOUND ATTENUATED ENCLOSURE STANDARD WITH GENERATOR.
 6. MUST ALLOW FREE FLOW OF INTAKE AIR AND EXHAUST.
 7. EASY ACCESS SERVICE PANEL IS LOCATED ON THE RIGHT SIDE OF THE GENERATOR ONLY.
 8. BASE TANK REQUIRES ALL STUB-UPS TO BE IN THE REAR TANK STUB-UP AREA.
 9. SET TABLE FOR SUBBASE FUEL TANK CAPACITY.
 10. SET TABLE FOR FIRE SAFETY VALVE ON FUEL SUPPLY LINE.
 11. IT IS THE RESPONSIBILITY OF THE INSTALLATION TECHNICIAN TO ENSURE
 THAT THE GENERATOR INSTALLATION COMPLIES WITH ALL APPLICABLE
 CODES, STANDARDS, AND REGULATIONS.
 13. GENERATOR IS INSTALLED ON A UL-142 RATE DOUBLE WALL SUBBASE FUEL TANK.

MINIMUM REQUIRED CLEARENCE FOR AIRFLOW



ALARM NUMBER	DESCRIPTION
CC1	DOOR INTRUSION
CC2	COMMERCIAL POWER FAILURE
CC3	SURGE SUPPRESSOR/LIGHTNING ARRESTOR
CC4	RECTIFIER FAILURE
CC5	MULTIPLE RECTIFIER FAILURE
CC6	BATTERY DISCHARGE
CC7	LOW VOLTAGE
CC8	DC POWER FAILURE
CC9	GENERATOR RUNNING
CC10	GENERATOR LOW FUEL
CC11	GENERATOR FAILURE
CC12	HVAC FAILURE
CC13	HIGH TEMP
CC14	LOW TEMP
CC15	TOWER LIGHT
CC16	TOWER LIGHT SIDE
CC17	RRH UP-CONVERTER FAILURE
CC18	RRH POWER FAILURE
CC19	RRH HIGH HUMIDITY
CC20	RRH INTRUSION
CC21	SMOKE FIRE
CC22	BUS BAR THEFT
CC23	
CC24	
CC25	MICROWAVE CRITICAL
CC26	MICROWAVE MAJOR
CC27	DEHYDRATOR ALARM
CC28	FIRE SUPPRESSION DISCHARGE
CC29	FIRE SUPPRESSION TROUBLE
CC30	SECONDARY HVAC RUNNING
CC31	EXPLOSIVE GAS
CC32	HIGH HUMIDITY

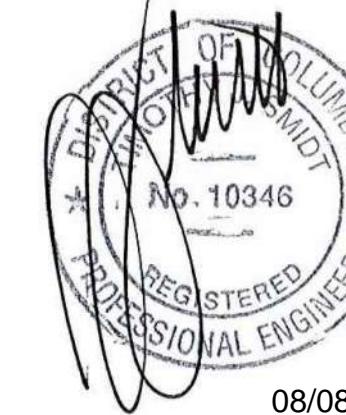
DETAIL - ALARM LEADS TERMINAL
NO SCALE

DETAIL - CHARLES CABINET ALARMS SCHEDULE
NO SCALE

DETAIL - TYPICAL ELECTRIC SERVICE
GROUNDING ELECTRODE
NO SCALE

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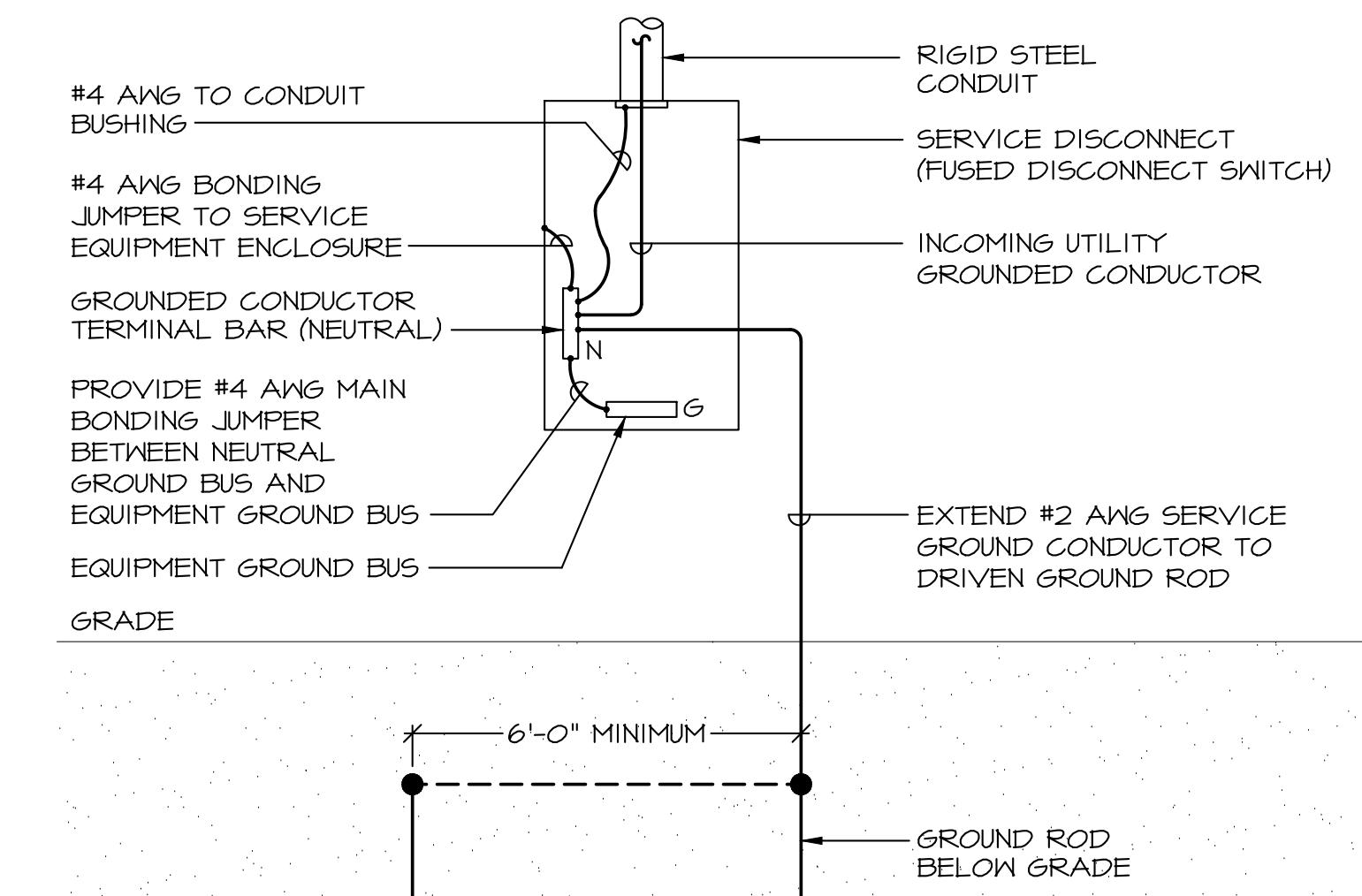
08/08/2024

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REVISIONS:		
NO.	DESCRIPTION	DATE
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LAST REV.:
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SCALE: AS NOTED

DETAILS



SHEET:
E-6
E006

A B C D E F G H J K L M N P Q R

SPEC 41031

TELCOFLEX®-G L5 Telecom Grounding Cable, Green

Green thermoset insulation, 90°C wet or dry continuous operating temperature, 130°C emergency, 250°C short circuit



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. Conductor: Class B tinned copper
2. Separator Tape: Optional Opaque Mylar tape
3. Insulation: Green thermoset insulation, 90°C wet or dry continuous operating temperature, 130°C emergency, 250°C short circuit

APPLICATIONS AND FEATURES:

TELCOFLEX®-G L5 telecom grounding cable is suitable for use in conduit and underground duct. Sunlight and oil resistant. Maximum side wall pressure 500 Lbs./ft. Suitable for DC and AC.

SPECIFICATIONS:

- ASTM B3 Standard Specification for Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay Stranded Copper Conductors
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- UL 44 Thermoset-Insulated Wires and Cables
- IEC60332-2-20 Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy
- RoHS-3 Complies with European Directive 2015/863
- ATIS 0600028.2021 List 5
- REACH - European Community Regulation

SAMPLE PRINT LEGEND:

SOUTHWIRE AWG CORD BRAND TELCOFLEX®-G V / ATIS 0600028.2021 LEAD-FREE RoHS L5 (UL) E30117 SIZE AWG 600 VOLTS XHW2 SUNLIGHT RESISTANT GASOLINE AND OIL RESISTANT II SUITABLE FOR GROUNDING USE (YEAR) (TIME JULIAN DATE)

Table 1 – Physical and Electrical Data

Stock Number	Cond. Size AWG/ Kcmil	Cond. Strands	Diameter Over Cond.	Insul. Thickness mil	Approx. OD inch	Approx. Weight lb/1000ft	Min Bending Radius inch	Allowable Ampacity 75°C *	Allowable Ampacity 90°C *
64366301	10	7	0.113	30	0.173	29	2	30	30
TBA	8	7	0.142	45	0.232	61	2	50	55
64396101	6	7	0.178	45	0.268	99	3	65	75
TBA	4	7	0.225	45	0.315	146	3	85	95
64396201	2	7	0.283	45	0.373	238	4	115	130
TBA	1	19	0.322	55	0.432	290	4	130	145

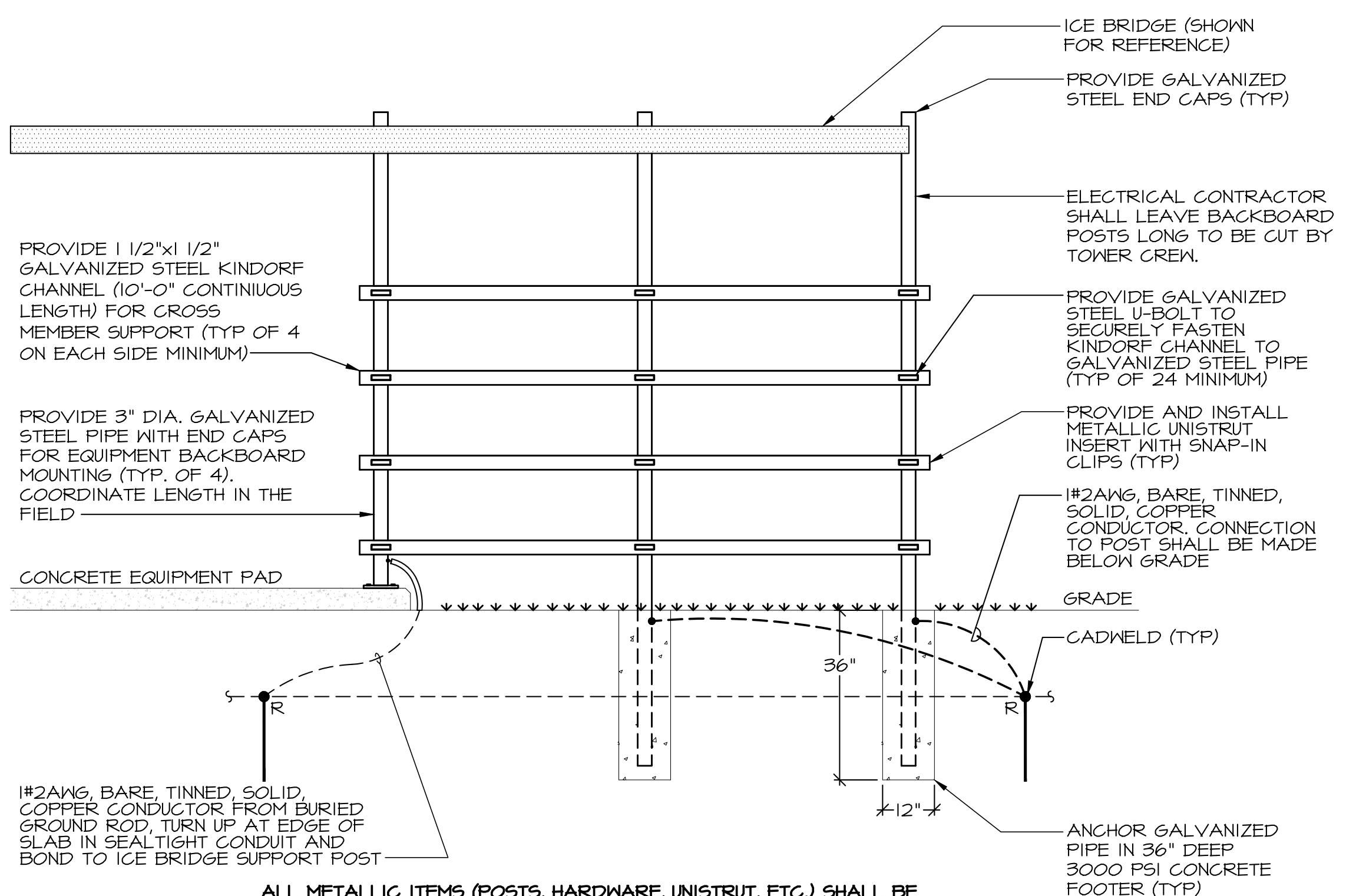
All dimensions are nominal and subject to normal manufacturing tolerances

* Cable marked with this symbol is a standard stock item

* Allowable Ampacity In Raceway per NEC Table 310.15(B)(16)

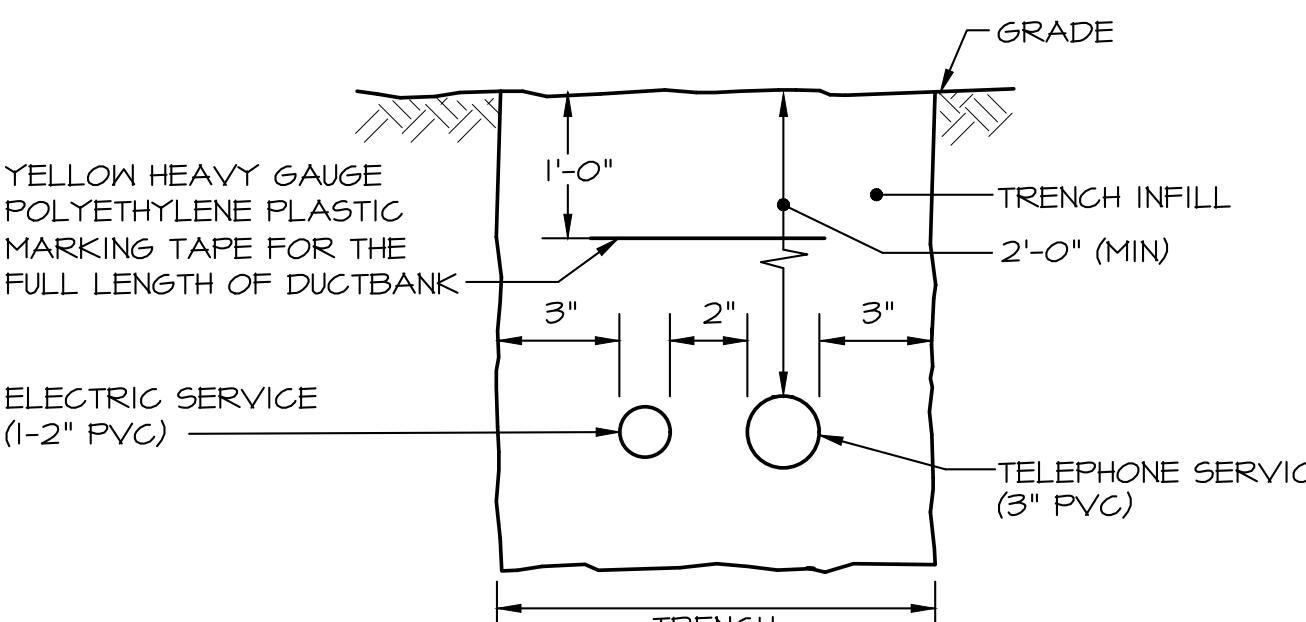
DETAIL - TELCOFLEX GROUNDING CABLE

NO SCALE



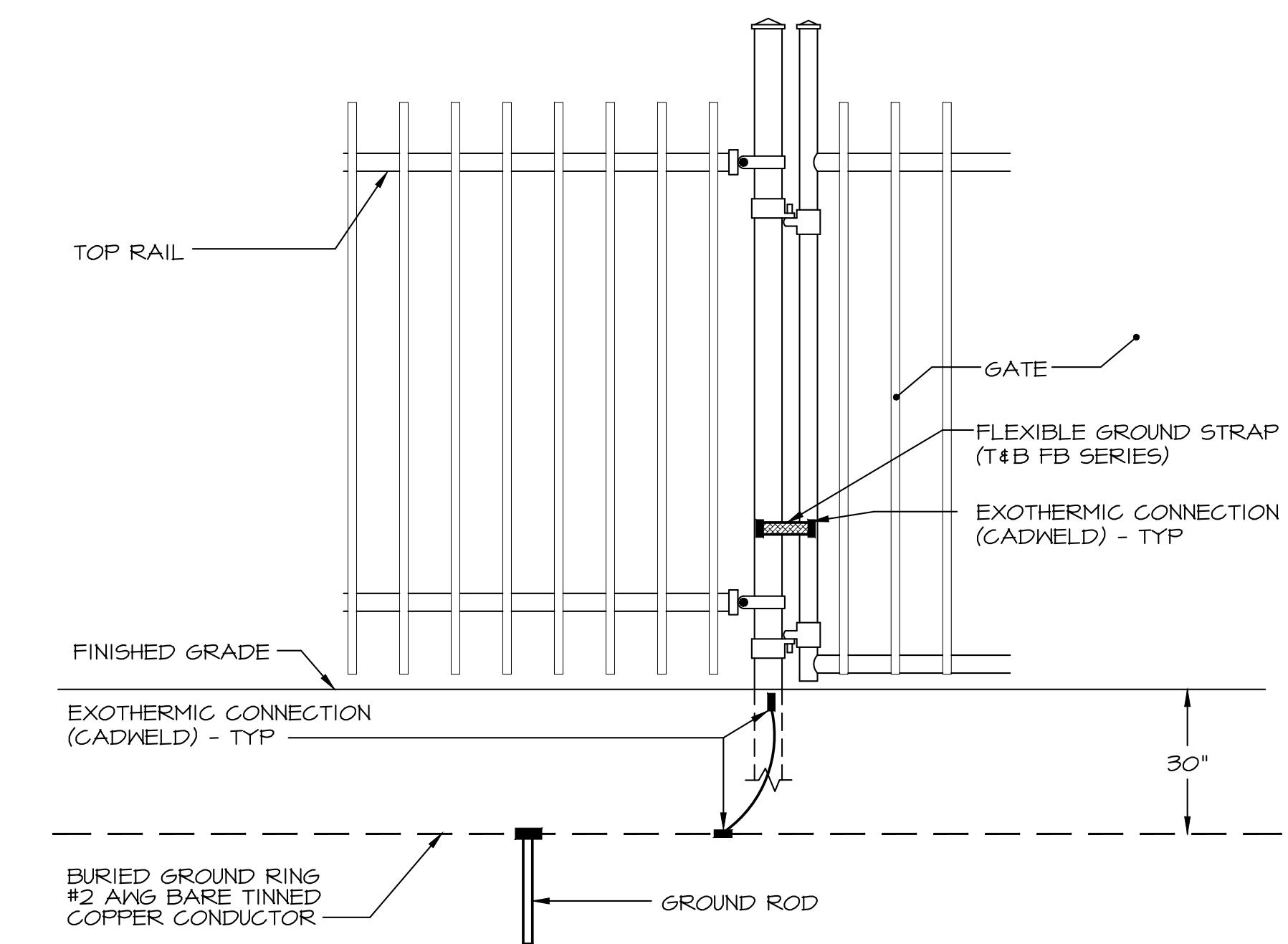
NOTES:
I. ENTIRE TELCO CONDUIT PATHWAY SHALL NOT CONTAIN ANY LB FITTINGS. ALL BENDS SHALL BE OF LONG SLEEPS OR MADE BY USING JUNCTION BOXES.

DETAIL - 3" TELCO CONDUIT
(FIBER CONDUIT WITHIN COMPOUND)



DETAIL - UTILITY CONDUIT SECTION
(WITHIN COMPOUND)

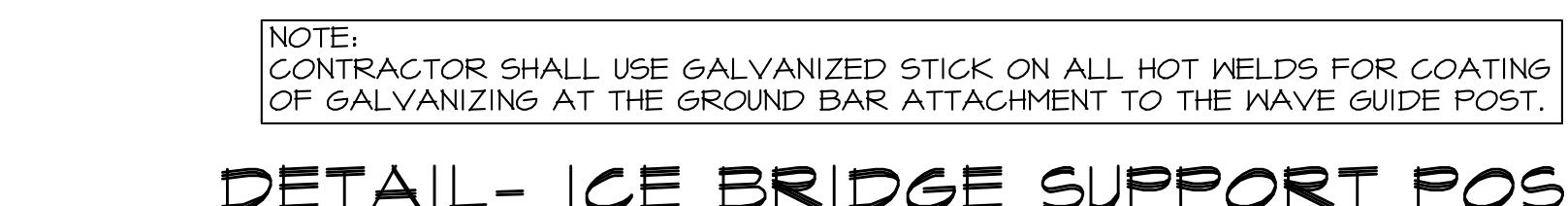
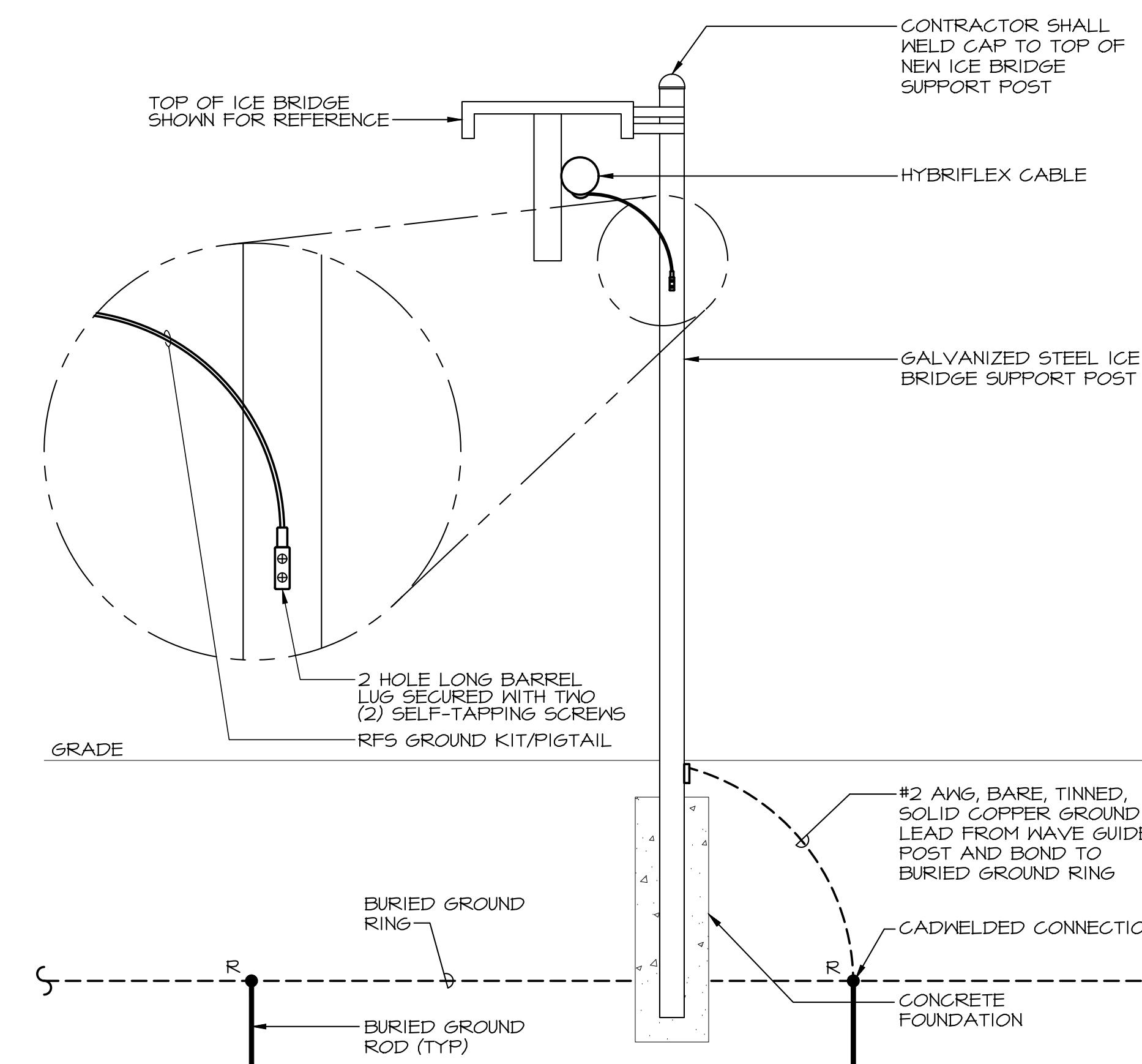
DETAIL - EQUIPMENT/ICE BRIDGE SUPPORT



DETAIL - GATE GROUNDING

NO SCALE

NOTE: CONTRACTOR SHALL SEAL ALL OPEN ENDS ON FENCE/GATE POST TO AVOID BEES NESTING.



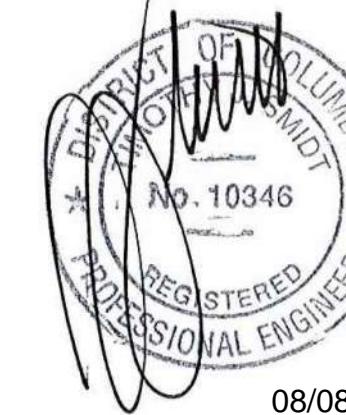
NOTE: CONTRACTOR SHALL USE GALVANIZED STICK ON ALL HOT WELDS FOR COATING OF GALVANIZING AT THE GROUND BAR ATTACHMENT TO THE WAVE GUIDE POST.

DETAIL - ICE BRIDGE SUPPORT POST

NO SCALE

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08/08/2024

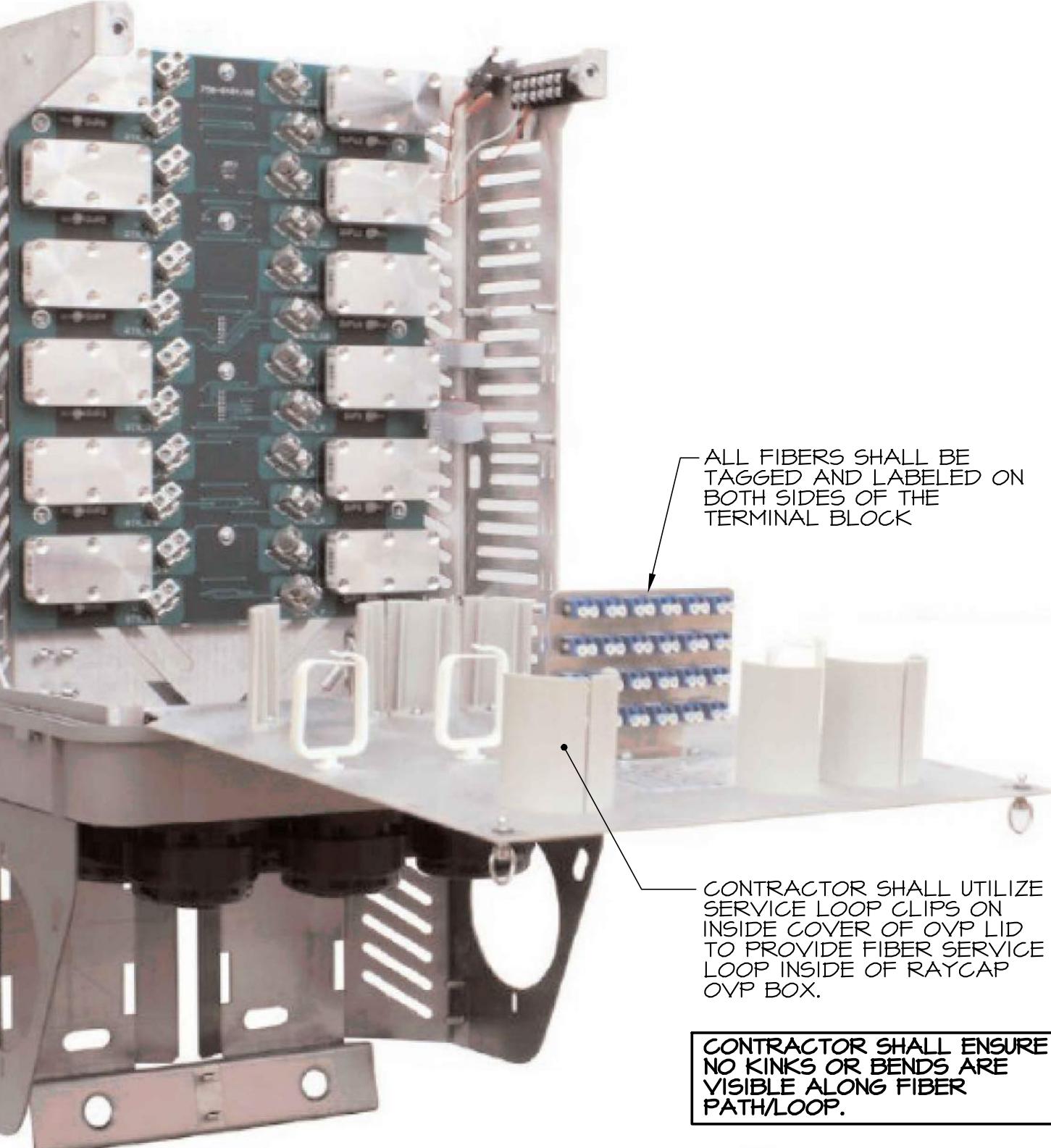
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TITLE: DETAILS

SHEET: E-7
E007

TEI#23002Y



DETAIL - RAYCAP FIBER LOOP
NO SCALE

Feed Hybrid trunk through Insert.

Feed enough of the cable to strip and connect to power connectors.

Connect wires according to the Verizon Wireless established color guide.

Note:
Bring all cables through cable glands. Ensure all fiber is separated and out of the way during copper wire installation.

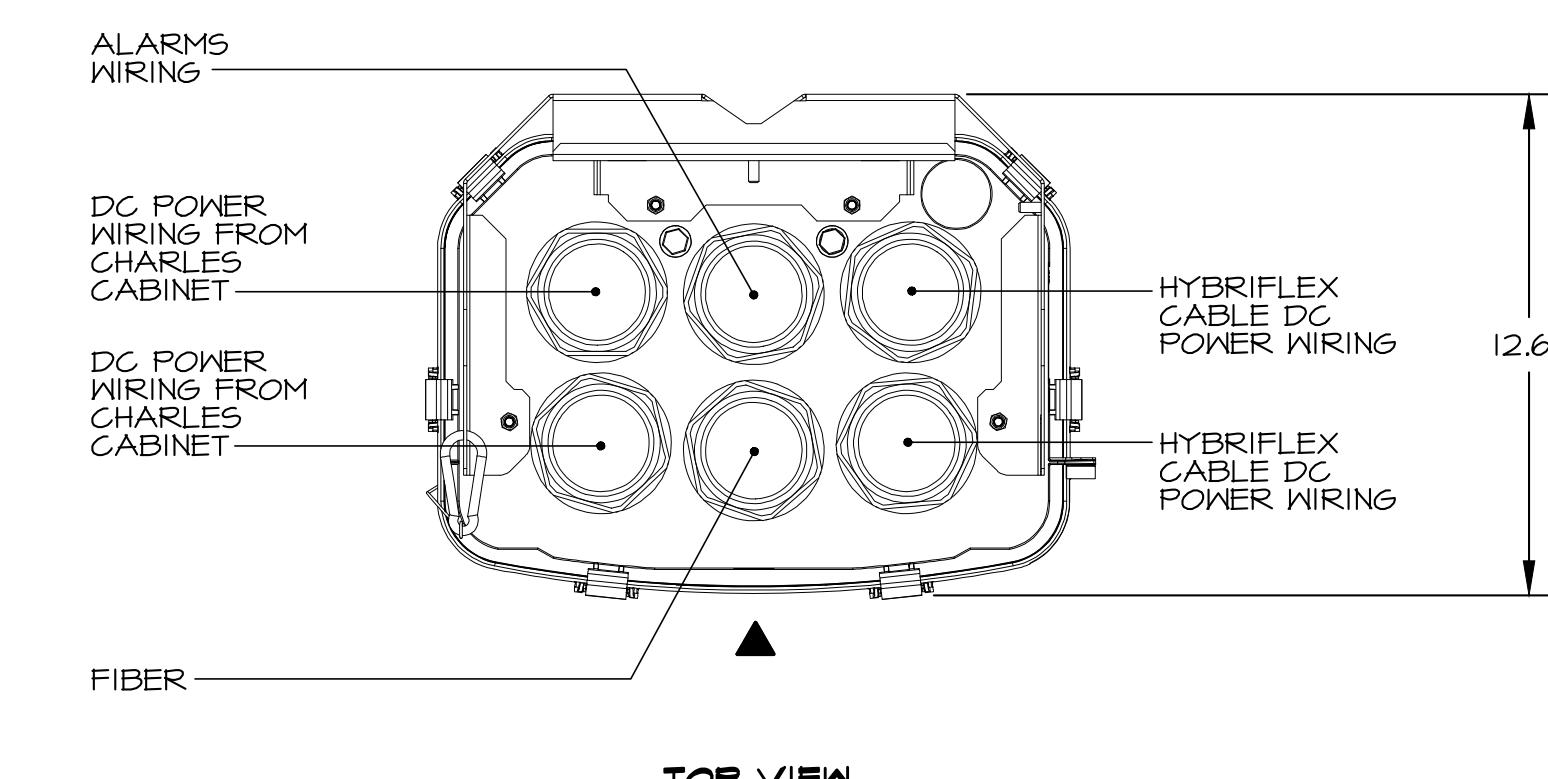
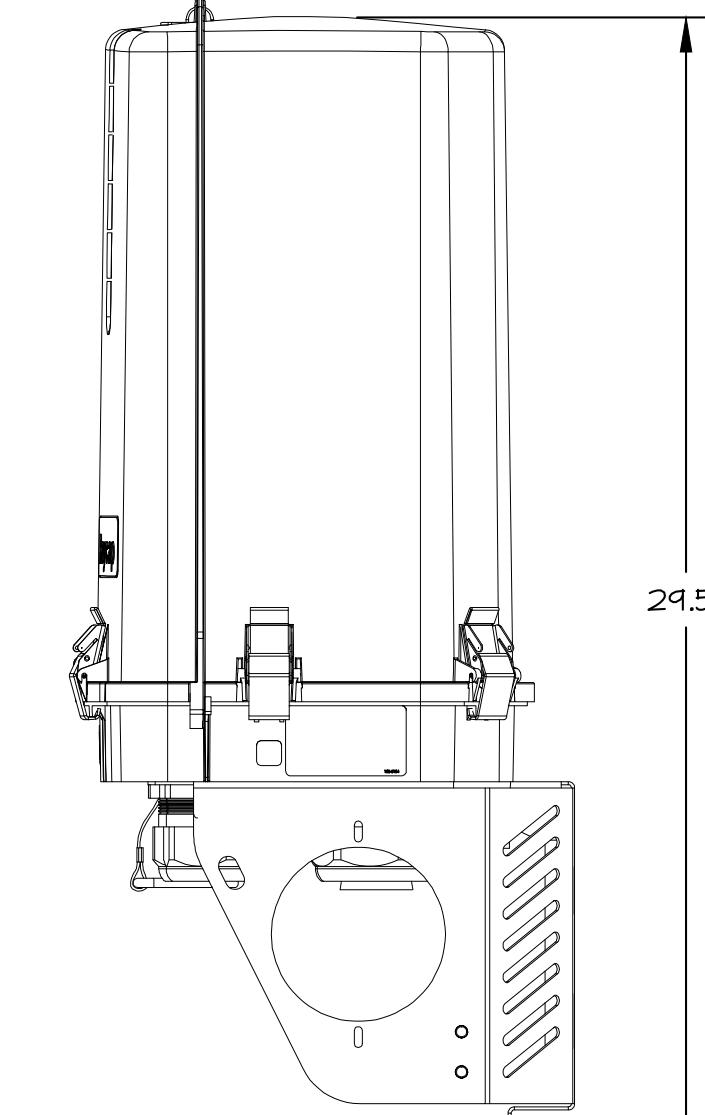
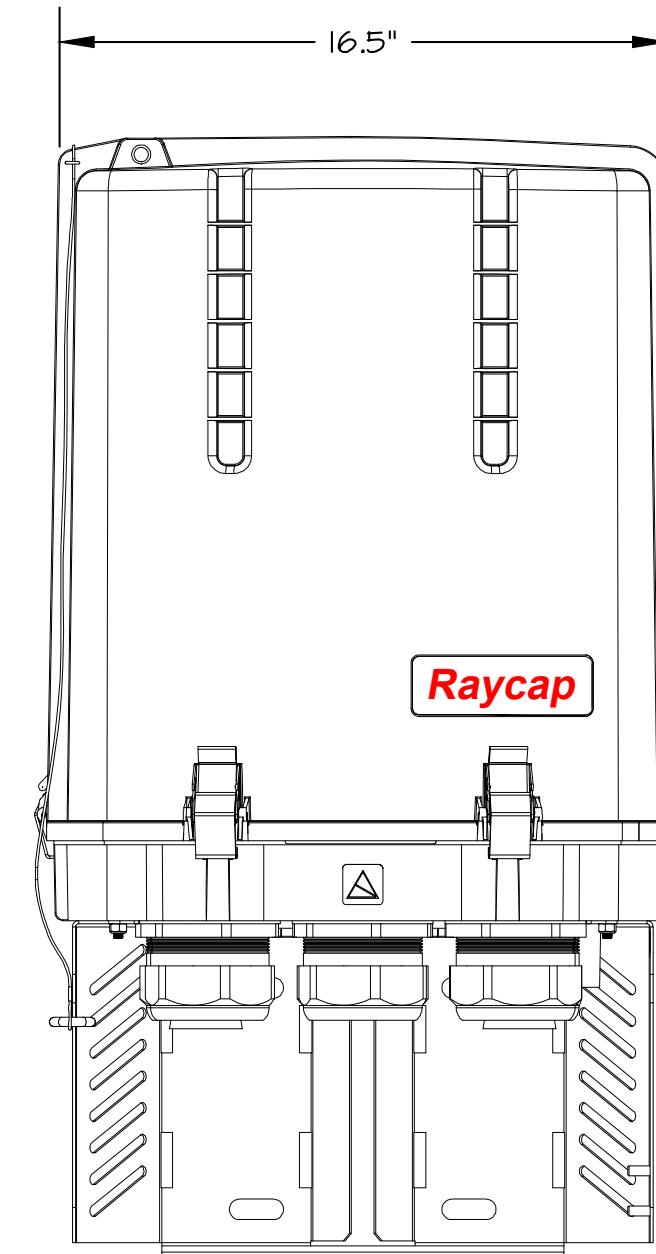
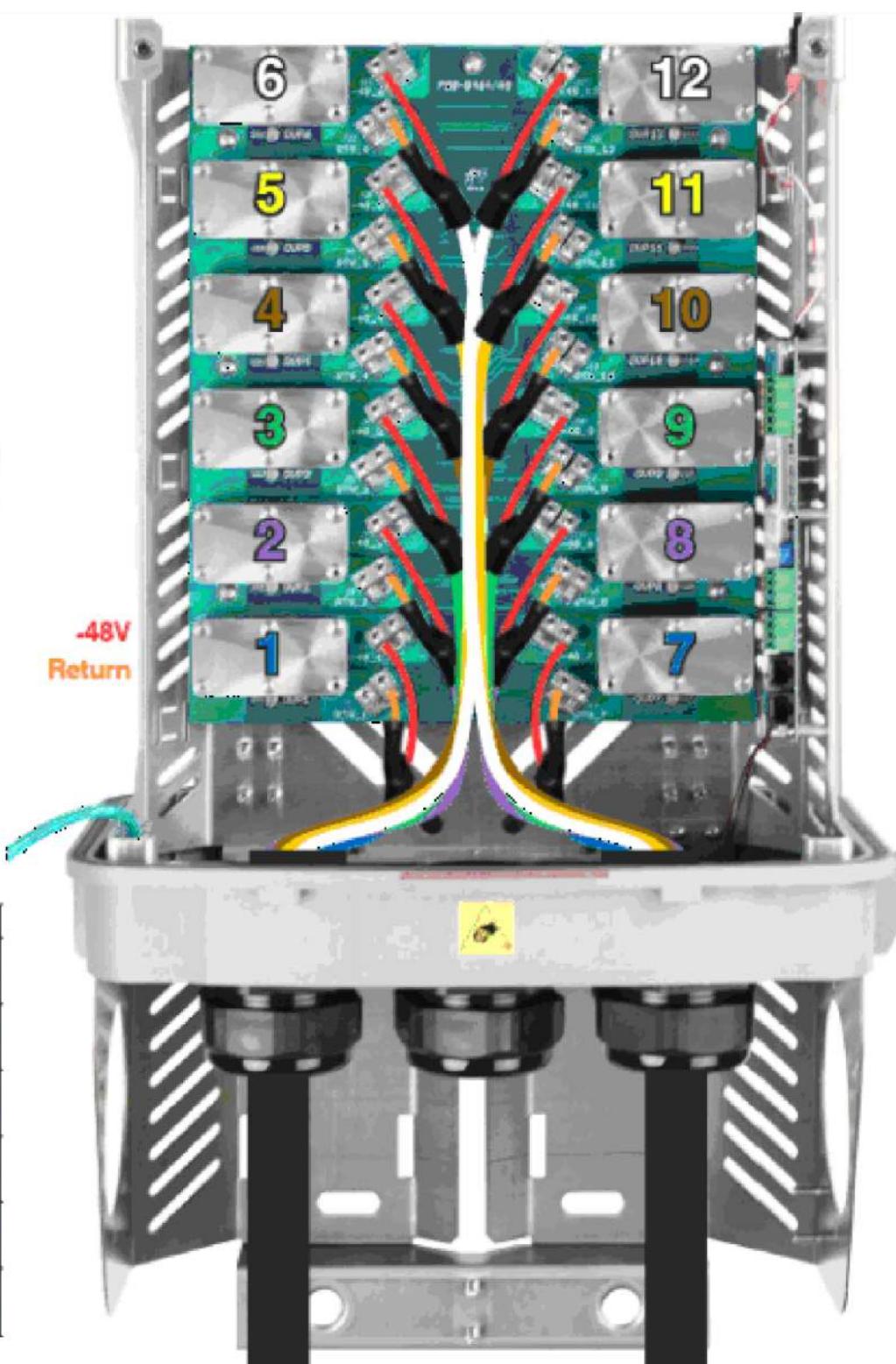
To assist in ease of wiring, proceed by wiring in the following order:

- 1st: OVP #1 and OVP #7
- 2nd: OVP #2 and OVP #8
- 3rd: OVP #3 and OVP #9
- 4th: OVP #4 and OVP #10
- 5th: OVP #5 and OVP #11
- 6th: OVP #6 and OVP #12

Torque: 40 in-lbs (10-6 AWG)

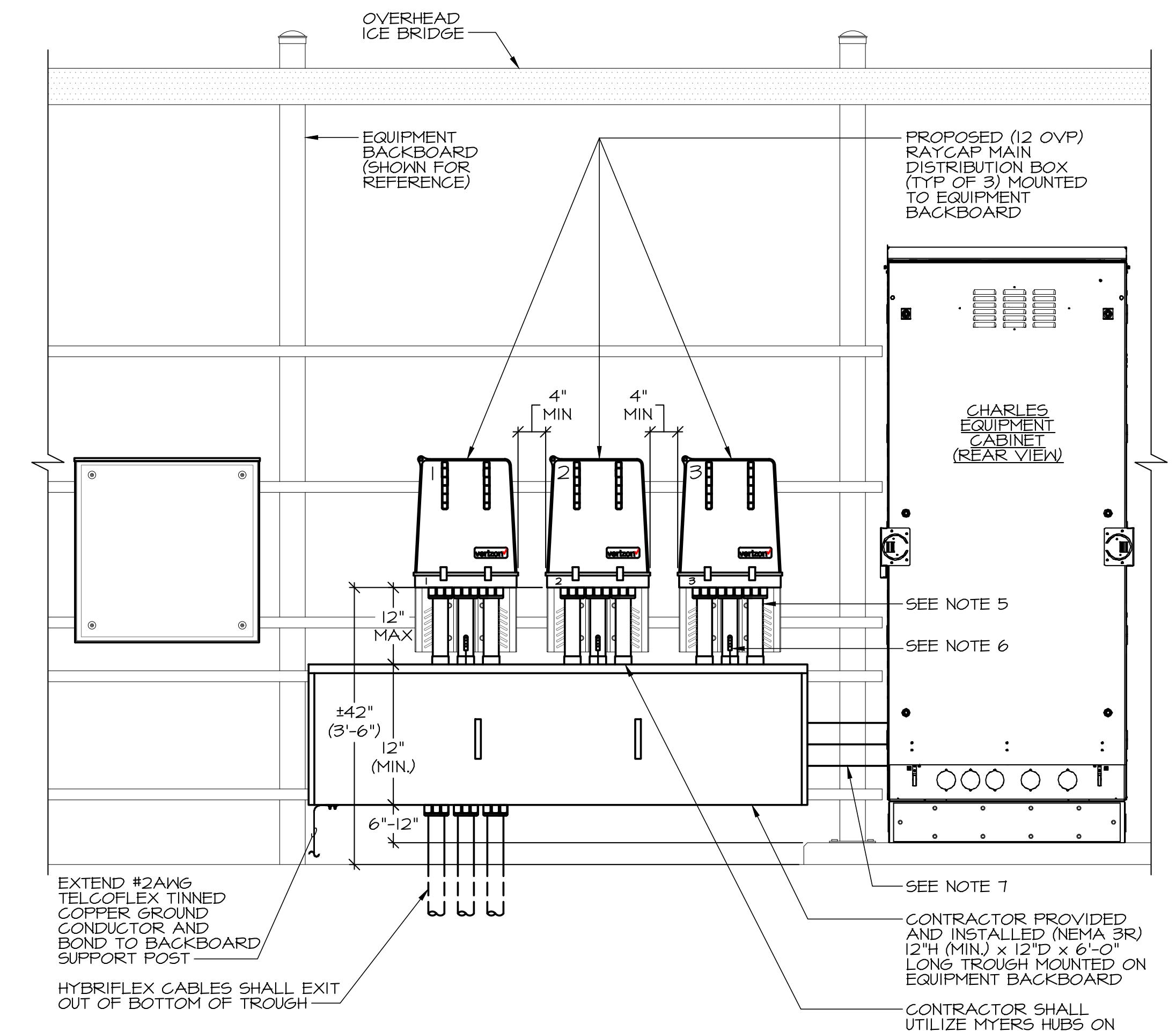
Circuit	Identification Color	-48V	RTN
1, 7	Blue	●	○
2, 8	Violet	○	●
3, 9	Green	○	●
4, 10	Brown	●	○
5, 11	Yellow	○	●
6, 12	White	●	○

DETAIL - RAYCAP 12-OVP IDENTIFIERS
NO SCALE



MANUFACTURER: RAYCAP
MODEL #: RVZDC-6627-PF-48 (12 OVP)
DIMENSIONS: 12.6" D X 16.5" W X 24.5" H
WEIGHT: 32 LBS (SYSTEM)

DETAIL - MAIN DISTRIBUTION BOX
NO SCALE (12 OVP)

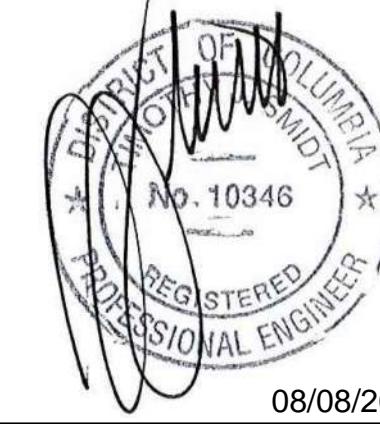


1. ALL RAYCAP MAIN DISTRIBUTION BOXES SHALL BE MOUNTED AT 42" MAX ABOVE FINISHED GRADE/SLAB, MEASURED AT LID GASKET SEAM, NO OBSTRUCTIONS DIRECTLY ABOVE THE DISTRIBUTION BOX SO THAT THE COVER CAN BE REMOVED.
2. ALL HARDWARE SHALL BE GALVANIZED STEEL (UNLESS OTHERWISE APPROVED).
3. ALL EXTERIOR CONDUIT ENTERING CHARLES CABINET SHALL BE RIGID GALVANIZED STEEL (UNLESS OTHERWISE APPROVED).
4. RAYCAP TROUGH SHALL BE 12" H (MIN) X 12" D X 6'-0" LONG NEMA 3R CLASS, BOTTOM OF RAYCAP TROUGH SHALL MEASURE 6" ABOVE TOP OF FINISHED EQUIPMENT CABINET CONCRETE SLAB, TROUGH SHALL FULLY WEATHERPROOF WITH TROUGH LID HANDLES, GASKETED, AND FABRICATED BY 9.A.R. METAL PRODUCTS (OR APPROVED EQUAL). PROVIDE FOUR (4) SCREENED VENT HOLES, ONE IN EACH CORNER TO ALLOW FOR DRAINAGE.
5. REMOVE ALL SIX (6) BLACK, HYBRIFLEX CABLE COMPRESSION FITTINGS SUPPLIED WITH THE 12-OVP RAYCAP BOX AND SALVAGE FOR REUSE. INSTALL SIX (6) RIGID GALVANIZED STEEL CONDUITS (SIZED TO MATCH COMPRESSION FITTINGS BEING REMOVED) WITH NEW COMPRESSION CONNECTORS AND BUSHINGS BETWEEN THE RAYCAP BOX AND THE TOP OF THE TROUGH. LENGTH OF CONDUITS BETWEEN BOTTOM OF RAYCAP AND TOP OF TROUGH SHALL NOT EXCEED 12". THREE (3) CONDUITS SHALL BE INSTALLED SIDE BY SIDE IN THE REAR AND THREE (3) CONDUITS SHALL BE INSTALLED SIDE BY SIDE IN THE FRONT.
 - 5.1. TWO (2) CONDUITS SHALL BE UTILIZED FOR EXTENSION OF DC WIRING FROM CHARLES EQUIPMENT CABINET.
 - 5.2. ONE (1) CONDUIT SHALL BE UTILIZED FOR EXTENSION OF FIBER.
 - 5.3. ONE (1) CONDUIT SHALL BE UTILIZED FOR EXTENSION OF ALARMS WIRING.
 - 5.4. TWO (2) CONDUITS SHALL BE UTILIZED FOR EXTENSION OF HYBRIFLEX CABLES.
6. EXTEND #2AWG TELCOFLEX TINNED COPPER GROUND CONDUCTOR FROM BASE OF THE RAYCAP BOX AND BOND TO BACKBOARD SUPPORT POST.
7. EXTEND THREE (3) RIGID GALVANIZED STEEL CONDUITS FROM SIDE OF RAYCAP TROUGH THROUGH SIDE OF CHARLES EQUIPMENT CABINET.
 - 7.1. TWO (2) RIGID GALVANIZED STEEL CONDUITS SHALL BE UTILIZED FOR EXTENSION OF DC WIRING.
 - 7.2. ONE (1) RIGID GALVANIZED STEEL CONDUIT SHALL BE UTILIZED FOR EXTENSION OF FIBER AND ALARMS.
8. PULL STRING SHALL BE TERMINATED INSIDE RAYCAP TROUGH FOR USE BY OTHERS.
9. VERIZON WIRELESS SUPPLIED PEEL AND STICK LABEL READING "VERIZON" TO BE INSTALLED ON RAYCAP DISTRIBUTION BOX MOUNTED ON BACKBOARD. PROVIDE AND INSTALL APPROPRIATE SIGNAGE AT FINAL RAYCAP BOX/TROUGH LOCATION. SIGNAGE SHALL CONSIST OF SHOCK HAZARD SIGNS AND VERIZON WIRELESS ANTENNA SECTOR IDENTIFICATION/DESIGNATION. COORDINATE FINAL MOUNTING LOCATION OF EACH SIGN WITH VERIZON WIRELESS REPRESENTATIVE.
10. CONTRACTOR SHALL PROVIDE AND INSTALL MEANS AND METHODS FOR SUPPORTING THE FIBER CABLES UP OFF THE BOTTOM OF THE RAYCAP TROUGH. METHODS INCLUDE PROVIDING A J-HOOK OR UTILIZING A THREADED COUPLING WITH GROUND LUG, WHICH MAY BE USED IN CONJUNCTION WITH PIM FRIENDLY TIE-WRAPS TO CREATE FIBER CABLE SUPPORT FROM TOP OF TROUGH. METHOD UTILIZED SHALL BE APPROVED BY VERIZON WIRELESS REPRESENTATIVE.

DETAIL - BACKBOARD MOUNTED RAYCAP BOX
NO SCALE

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verizon
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REVISIONS:		
NO	DESCRIPTION	DATE

VZN COMMENTS 08/08/24

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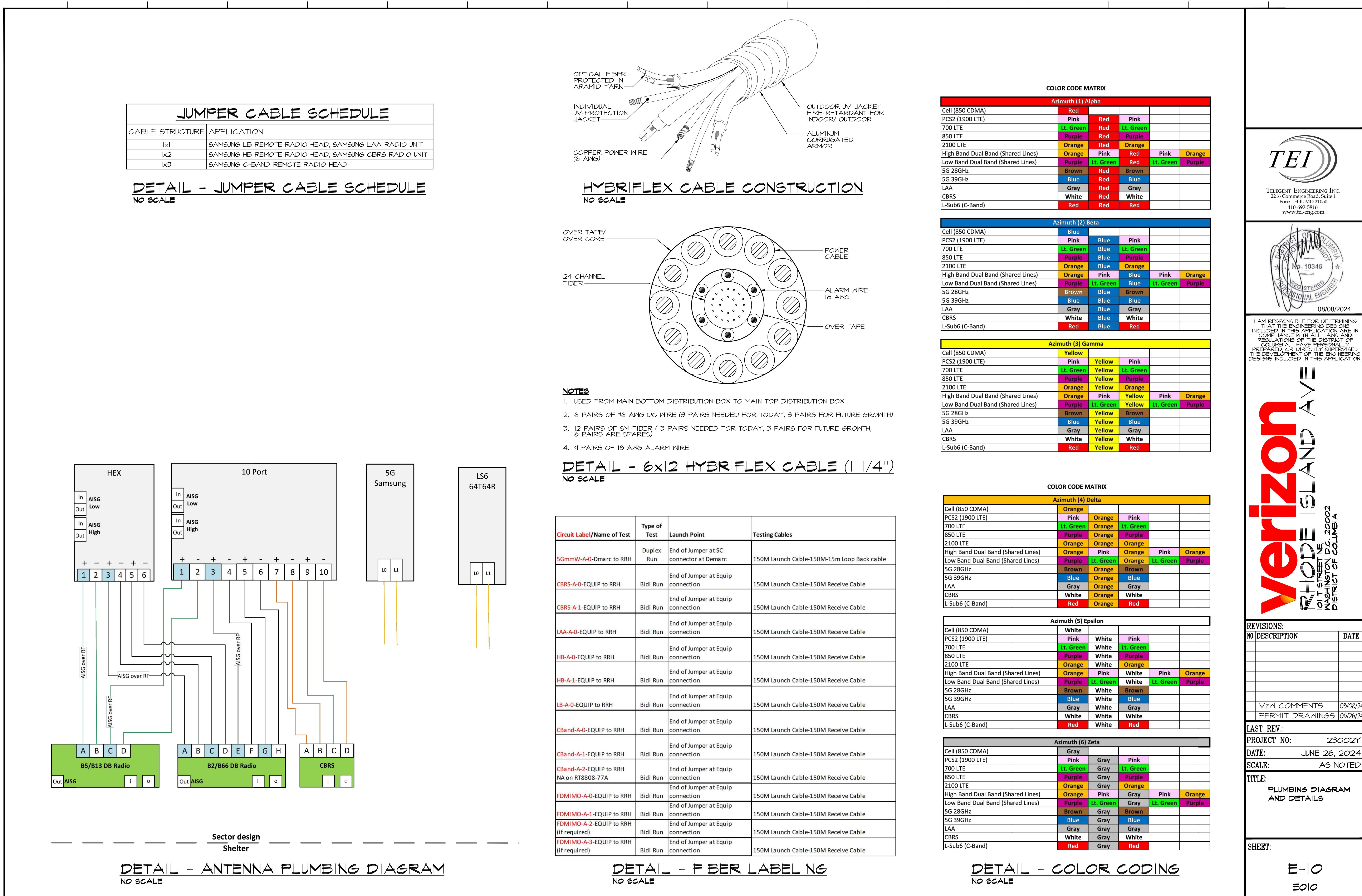
SCALE: AS NOTED

TITLE: RAYCAP DETAILS

SHEET:

E-9
E009

TEI#23002Y



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