



Node #3

KingOfP-VZW-003

349-509 W Beidler Rd. King Of Prussia, PA 19406

### DRAWING INDEX SHEET DESCRIPTION TITLE SHEET E4 ATTACHMENTS S1 SITE PLAN & POLE ELEVATIONS E1 EQUIPMENT MOUNTING DETAILS E2 GROUNDING & WEATHERHEAD E3 EQUIPMENT SPECS

### **CODE COMPLIANCE**

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING:

1 BUILDING CODE

4. UNIFORM MECHANICAL CODE

- 2. UNIFORM BUILDING CODE 3. BUILDING OFFICIALS AND CODE ADMINISTRATORS (BOCA)
- 5. ANSI/TIA/EIA-222-F
- 6. UNIFORM PLUMBING CODE 7. NATIONAL ELECTRIC CODE
- 8 LOCAL BUILDING CODE
- 9. CITY/COUNTY ORDINANCES

### **GENERAL NOTES**

### STANDARD CONSTRUCTION NOTES:

- 1. THESE NOTES SHALL BE CONSIDERED PART OF THE WRITTEN SPECIFICATIONS.
- 2. THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS

3. PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTORS SHALL VISIT THE JOB SITE AND BE RESPONSIBLE FOR ALL CONTRACT DOCUMENTS, FIELD CONDITIONS, DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE IMPLEMENTATION ENGINEER AND ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH WORK.

- 4. THE CONTRACTOR SHALL RECEIVE IN WRITING, AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
- 5. THE CONTRACTOR SHALL INSTALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE
- 6. ALL WORK PERFORMED AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCE CONTRACTORS SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. MECHANICAL AND ELECTRICAL SYSTEMS
  SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- 7. THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING THE BEST SKILLS AND ATTENTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATION OF ALL PORTIONS OF THE WORK UNDER THE CONTRACT INCLUDING CONTACT AND COORDINATION WITH THE IMPLEMENTATION ENGINEER AND WITH THE LANDLORD'S AUTHORIZATION REPRESENTATIVE.
- 8. SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH U.L. LISTED FIRE CODE APPROVED MATERIALS.
- 9. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A10BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF THE PROJECT AREA DURING CONSTRUCTION.
- 10. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CHAPTER 23 OF THE UBC REGARDING EARTHQUAKE PIPING, LIGHT FIXTURES, CEILING GRID, INTERIOR PARTITIONS AND MECHANICAL EQUIPMENT. ALL WORK MUST BE IN ACCORDANCE WITH LOCAL EARTHQUAKE CODES AND REGULATIONS.
- 11. DETAILS ARE INTENDED TO SHOW END RESULTS OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS AND SLICH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK
- 12. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, PAVING, CURBS, VEGETATION, GALVANIZED SURFACES, ETC., AND UPON COMPLETION OF WORK REPAIR ANY DAMAGE THAT OCCURRED DURING CONSTRUCTION TO TH SATISFACTION OF EXTENET.
- 13. KEEP GENERAL AREA CLEAN, HAZARD FREE, AND DISPOSE OF ANY DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED A REMAINING ON THE PROPERTY, LEAVE PREMISES IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
- 14. REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE PLOT OF SURVEY DRAWING, SHALL BE USED TO IDENTIFY OR ESTABLISH THE BEARING OF TRUE NORTH AT THE SITE. THE CONTRACTOR SHALL RELY SOLELY ON THE PLOT OF SURVEY DRAWING AND ANY SURVEYOR'S MARKINGS AT THE SITE FOR THE ESTABLISHMENT OF TRUE NORTH, AND SHALL NOTIFY THE ARCHITECT / ENGINEER PRIOR TO PROCEEDING WITH THE WORK. IF ANY DISCREPANCY IS FOUND BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE TRUE NORTH ORIENTATION (AS DEPICTED ON THE CML SURVEY). THE CONTRACTOR SHALL ASSUME SOLE LIABILITY FOR ANY FAILURE TO NOTIFY THE ARCHITECT/ENGINEER. 15. PLANS ARE NOT SCALED AND ARE INTENDED FOR DIAGRAMMATIC OUTLINE ONLY, UNLESS NOTED OTHERWISE.
- 16. DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON THE DRAWING, DIMENSIONS SHOWN AS X-X ARE ESTIMATED AND SHALL BE VERIFIED BY A SURVEYOR OR BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- 17. ALL SITE WORK SHALL BE CAREFULLY COORDINATED BY GENERAL CONTRACTOR WITH LOCAL UTILITY COMPANY, TELEPHONE COMPANY, AND ANY OTHER UTILITY COMPANIES HAVING JURISDICTION OVER THE LOCATION.

### GENERAL CML NOTES:

- 1. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWING AND STIPULATED IN THE SPECIFICATIONS PROJECT SUMMARY 2. RUBBISH, STUMPS, DEBRIS, STICKS, STONES, AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY
- 3. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACE IN ANY FILL OR EMBANKMENT. 4. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO THE CRUSHED STONE APPLICATION.
- 5. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRICAL, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATION OR PIER DRILLING AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORK CREW.
- 6. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRICAL, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND SHALL BE CAPPED, PLUGGED, OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK. SUBJECT TO THE APPROVAL OF THE ENGINEER.
- 7. THE AREAS OF PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE BUILDING, DRIVEWAY OR CRUSHED STONE, SHALL BE GRADED TO A UNIFORM SLOPE, FERTILIZED, SEEDED, AND COVERED WITH MULCH AS SPECIFIED IN THE SPECIFICATION LANDSCAPE WORK



PROJECT INFORMATION:

349-509 W Beidler Rd King Of Prussia, PA 19406

CURRENT ISSUE DATE:

2/18/16

ISSUED FOR:

**PLANNING** 

REV: DATE:		DESCRIPTION	BY:
$\Lambda$	6/3/15	DESIGN	JC
<u> </u>	9/1/15	Proposed & Band	ΚP
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### PLANS PREPARED BY



PHONE: (802) 885-9317

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CHK:	APV:
RC	PP
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LICENSURE:

SHEET TITLE:

TITLE SHEET

SHEET NUMBER:

DWG.EXT

REVISION:



### **SCOPE OF WORK**

CONSTRUCTION OF AN UNMANNED TELECOMMUNICATION FACILITY CONSISTING OF (1) Flex Wave Prism, (1) Cylidrical Antenna CWT070X06Fxy-1 TSI BATTERY BACKUP AND ASSOCIATED CABLES MOUNTED TO A UTILITY

NOTE: Extenet to place new 45/3 pole in the city ROW upon municipality

### PROJECT INFORMATION

SITE ADDRESS: 349-509 W Beidler Rd

King Of Prussia, PA 19406

POLE NUMBERS: LATITUDE: 40.1102153 LONGITUDE: -75.3897956

POLE OWNER: ExteNet Systems, Inc.

CONTACT PERSON: Rick Angelini

3030 WARRENVILLE ROAD, SUITE 340 LISLE, IL 60532

NOC: (866) 892-5327

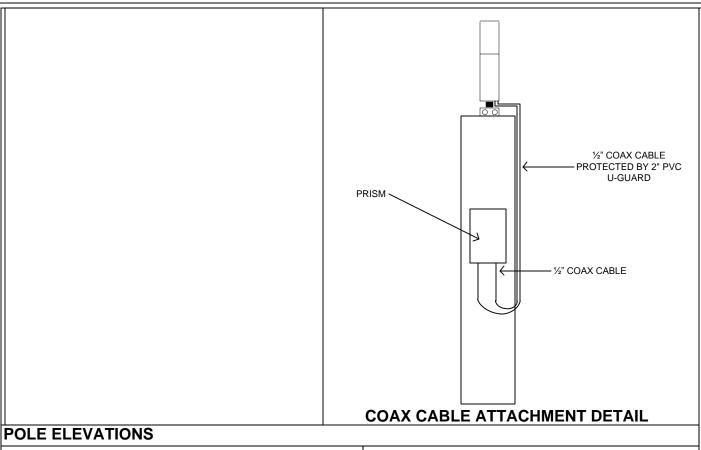
ExteNet Systems Inc

3030 WARRENVILLE ROAD, SUITE 340 LISLE, IL 60532

Rick Callahan 802-683-6520 PVC







### **ROW GROUND CONSTRUCTION NOTES:**

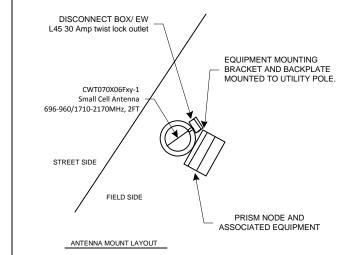
- 1. 120/240 POWER REQUIRED FOR 3-WIRE SERVICE
- 2. GC TO REMOVE/CLEAN ALL DEBRIS, NAILS, STAPLES, OR NON-USED VERTICALS OFF THE POLE.
- 3. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH MUNICIPAL, COUNTY, STATE, FEDERAL, G095 AND G0128 STANDARDS AND REGULATIONS.
- 4. CALL ONE CALL 72 HOURS PRIOR TO EXCAVATING. 811
- 5. ALL LANDSCAPING TO BE RESTORED TO ORIGINAL CONDITION OR
- 6. ALL EQUIPMENT TO BE BONDED.

- STANDARD GROUNDING NOTES:

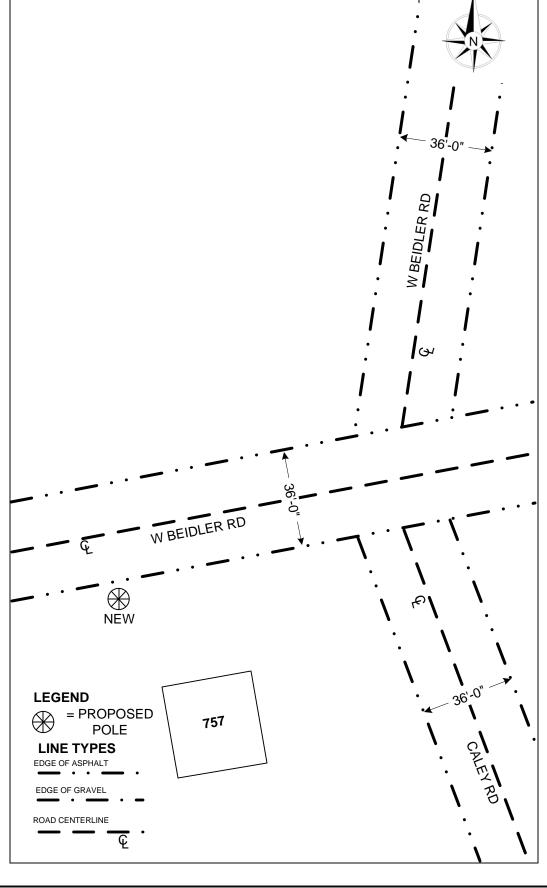
  1. GROUND TESTED AT 5 OHMS OR LESS.
- 2. 5/8" X 8' GRD ROD
- 3. #6 COPPER GROUND AND BOND WIRE.
- 4. CONTRACTOR SHALL LEAVE GROUND VISIBLE UNTIL ELECTRICAL INSPECTION COMPLETED, THEN DRIVE 6" BELOW GRADE.

### **ROW UTILITY POLE CONSTRUCTION NOTES:**

- 1. NO BOLT THREADS TO PROTRUDE MORE THAN 1-1/2".
- 2. FILL ALL HOLES LEFT IN POLE FROM REARANGEMENT OF CUMBERS.
- 3. CABLE NOT TO IMPEDE 15" CLEAR SPACE OFF POLE FACE (12:00). 4. 90° SHORT SWEEPS UNDER ANTENNA ARM. ALL CABLES MUST ONLY TRANSITION ON THE INSIDE OR BOTTOM OF ARMS (NO CABLE ON TOP OF
- 5. USE CABLE CLAMPS TO SECURE CABLE TO ARMS; PLACE 2" EXTENET CABLE ID TAGS ON BOTH SIDES OF ARMS. ALL TAGS SHOULD BE SECURELY
- 6. USE ½ CABLE ON ANTENNAS UNLESS OTHERWISE SPECIFIED.
  7. FILL VOID AROUND CABLES AT CONDUIT OPENING WITH FOAM SEALANT TO PREVENT WATER INTRUSION.
- 8. EQUIPMENT/ANTENNA SPACING NEAR POWER LINES AND COMMUNICATION CABLES TO BE INSTALLED PER POLE OWNER/UTILITY COMPANY SPECIFICATIONS.
- 9. CONTRACTOR TO ROUTE FIBER AND POWER AERIALLY TO NEAREST UTILITY DEMARK. FIELD VERIFY LOCATION PRIOR TO CONSTRUCTION. 10. MAINTAIN 12" SPACE BETWEEN ALL COMMS.









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PLANS PREPARED BY



PHONE: (802) 885-9317

CONSULTANT:

AWN RY:	CHK.	ΔP\/·

JJC	RC	PP
CENSURE:		

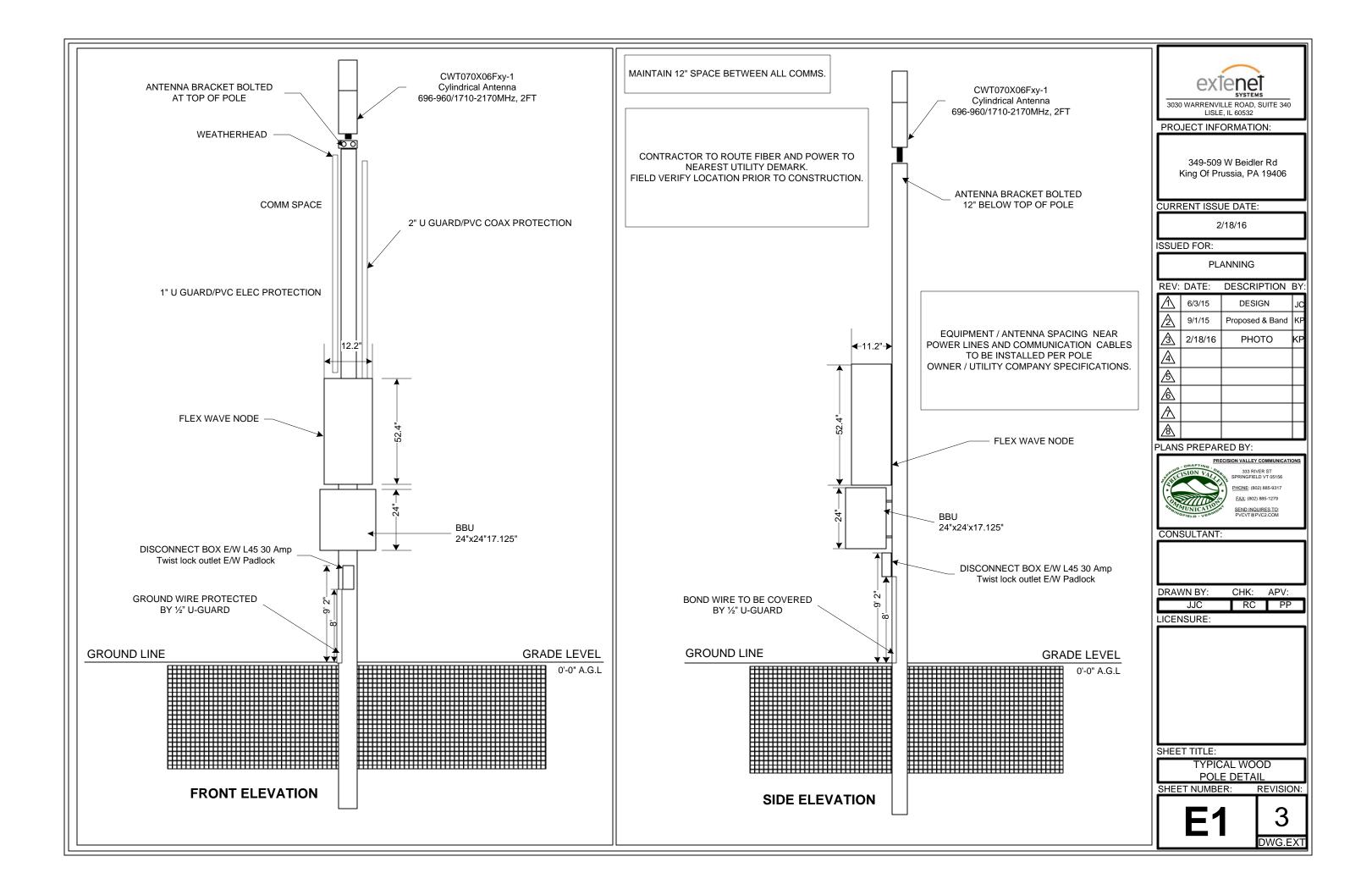
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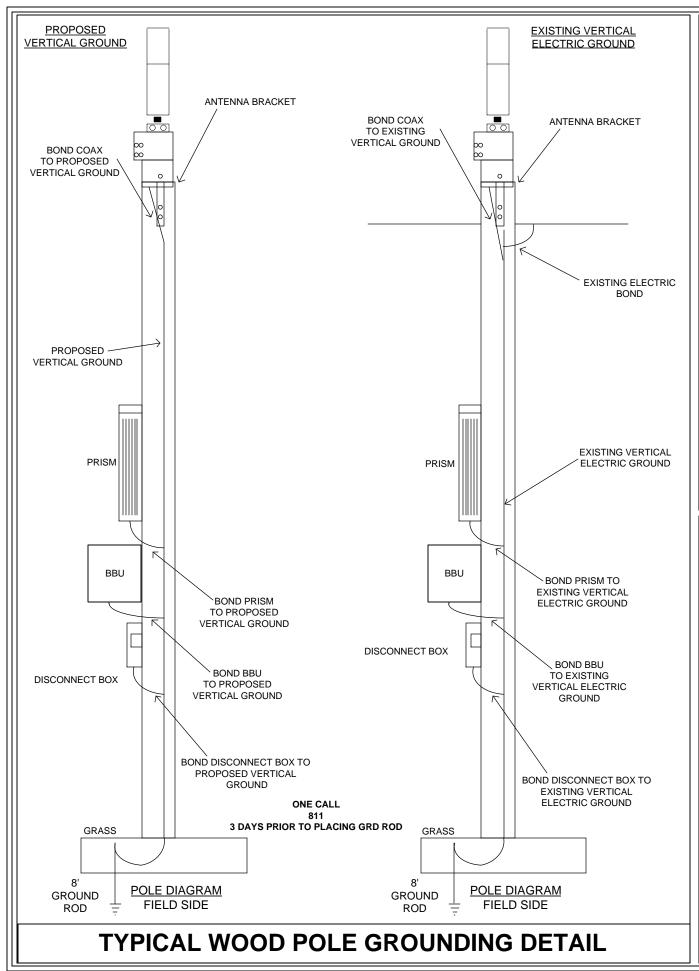
SITE PLAN & **POLE ELEVATIONS** SHEET NUMBER: REVISION:

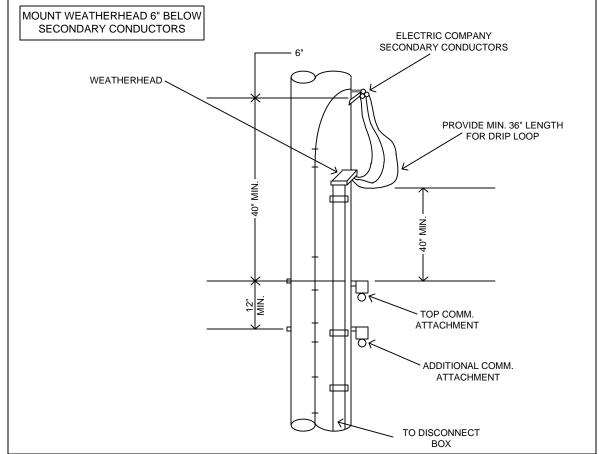
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**ROW CONSTRUCTION NOTES** 

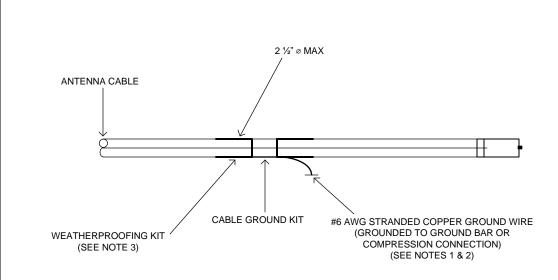
SITE PLAN







## **WEATHERHEAD DETAIL**



- 1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND ROD, OR COMPRESSION CONNECTION.

  2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.

# **ANTENNA CABLE GROUND KIT**



PROJECT INFORMATION:

349-509 W Beidler Rd King Of Prussia, PA 19406

**CURRENT ISSUE DATE:** 

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PLANS PREPARED BY:



CONSULTANT:

DRAWN BY: CHK: APV:

RC PP LICENSURE:

SHEET TITLE:

GROUNDING & **WEATHERHEAD** 

SHEET NUMBER: REVISION:

3 DWG.EXT



The Square D by Schneider Electric QO 30/100 Amp 4-Space 8-Circuit Temporary Transfer Generator Panel helps you change from utility power to a standby source with the flip of 2 QO main circuit breakers. The panel is intended for outdoor use to connect to a standby power source for as many as 8 circuits. The ANSIcertified and UL-listed unit features a mechanical interlock to help ensure that only 1 main circuit breaker is in the on position at any

Use to connect to a standby power source to as many as 8 circuits Changes from utility power to a standby source with the flip of 2 QO main circuit breakers

Aluminum buss Single phase

120/240 Volts For outdoor use

Mechanical interlock helps ensure that only 1 main circuit breaker is in the on position at any time

Accepts up to 8 QO circuit breakers (sold separately)

ANSI certified and UL listed

Includes a 30 Amp 4-Watt L14-30P twist-lock receptacle in the bottom end wall for direct connection from a generator cord supply

### **SPECIFICATIONS**

Assembled Depth (in.): 14.3" Assembled Height (in.): 4.8" Assembled Width (in.): 10.4"

1-UL Listed.ANSI Certified Certifications and Listings: Electrical Product Type: Load Center

Load Center Type: **Temporary Power** Load center depth (in.): 4.27"

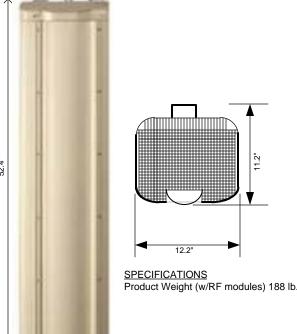
Load center height (in.): 12.65 Load center width (in.): 8.88" Maximum Amperage (amps) 30/100A Mounting Type: Plug In Number of Gangs: Number of Spaces: Number of Phases:

Power Distribution Features: No Additional Features

**Product Series:** 11.53 Product Weight (lb.)

Call 888-778-2733 Manufacturer Warranty lifetime: for further details

**Square D Outdoor Manual Transfer** Switch w/ 30-Amp Twist Lock Receptacle (QO1DM10030TRBR)



### **QUAD BAND FLEXWAVE PRISM**

Amphenol Small Cell / Distributed Antenna Systems (DAS) Cylindrical Antennas ANTENNA SOLUTIONS

Dual Band: 696-960 / 1710-2170 MHz

### CWT070X06Fxv-1

Dual Band, Tri Sector (120°) Cylindrical Antenna DIPLEXED, XX-Pol, 70° / 70°, 9.5 / 13.5 dBi, Fixed Tilt.

RELEASED



70	CWT070X06Fxy-1	
nte	CWT070X06Fxy-1S	
n pai	CWT070X06Fxy-1T	
>	CWT070X06Fxy-1U	
17	Vac	

Replace "x" in the model number with the desired Fixed Electrical Downtilt for the low band and replace "y" in the model number with the desired Fixed Electrical Downtilt for the high band (see options below under Electrical Downtilt)

Mechanical Characteristics	
Dimensions (Height x Diameter)	610 x 371 mm (24.0 x 14.6 in)
Weight without Mounting Brackets	13 kg (28.7 lbs)
Survival Wind Speed	201 km/hr (125 mph)
Wind Loads (160 km/hr or 100 mph)	191 N (43 lbf)

Battery heater option

Moisture protection

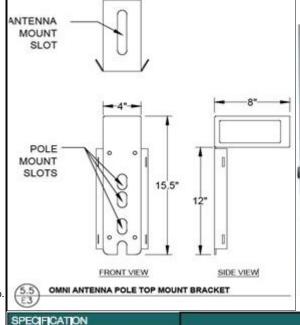
Cooling method

SAFETY

Standards

WARRANTY

Warranty





3030 WARRENVILLE ROAD, SUITE 340 LISLE II 60532 PROJECT INFORMATION:

> 349-509 W Beidler Rd King Of Prussia, PA 19406

CURRENT ISSUE DATE:

2/18/16

ISSUED FOR:

**UPS Model** 

12008-0780

1.8 hrs backup

1200 W

115 V

PLANNING

REV: DATE: DESCRIPTION BY: 6/3/15 DESIGN 9/1/15 Proposed & Band 2/18/16 PHOTO

### PLANS PREPARED BY:

# PRECISION VALLEY COMMUNICATION PHONE: (802) 885-9317

CONSULTANT:

DRAWN BY: CHK: APV: JJC RC PP LICENSURE:

SHEET TITLE:

**EQUIPMENT SPECS** 

SHEET NUMBER:

REVISION:

3

INPUT Nominal voltage 115 V ± 8% 96 - 136 V without transferring to inverter Operating voltage Ourrent @98 V & max charging 18.6 A 20 A Oirouit breaker (FO00017) Surge voltage test condition ANSI/IEEE: 6 kV, 1.2 x 50 µs /3 kA, 8 x 20 µs; L-N: 450 V L-G: 300 V N-G: 300 V Output power 1200 W Voltage 115 V ± 8% Creet factor 3 - 1 Waveform and THD Sine wave, < 3% THD with linear load Power efficiency Line: 97%, Inverter: 92% under full load conditions Transfer time 0 to 8 milliseconds BATTERY Туре Four (4) Wide-temperature, sealed gel cells, pure lead, MK Battery: 8G24FT (sold separately) 7.71L x 5.18W x 7.22H / 196L x 132W x 183H; 52 lbs / 23.6kg Dimensions inch / mm; weight Ah @ 20hr rate and bus voltage 73.6 Ah, 48 VDO Number of batteries Battery circuit breaker 40 A magnetic type -4° to +140° F (-20° to +60° C), -40° to +140° F (-40° to + 60° C) with optional battery heater Temp. range fully charged Battery backup time vs. load 1.5 hrs at 1200 W 4.25 hrs at 600 W Recharge time Temperature compensated charger, charge to 90% capacity after full discharge - 20 hours INDICATORS AND ALARMS Status indicators INVERTER ON : Amber, Solid; FAULT ON : Red, Solid; LOW BATT ON : Amber, Solid; BUCK ON: Green, Solid; BOOST ON: Green, Solid; AO ON: Green Solid Alarm connections 6 Alarm connection terminal block is integrated into the main control board PHYSICAL Dimensions inch / mm 24H x 24W x 17.125D / 762H x 762W x 435D Outdoor type, powder coated gray, rain tested to NEMA 3R UL 50 Aluminum cabinet Input / output connections 3 position terminal block provided for 3 x 12 AWG, 3/4" holes for conduit connectors Weight, without batteries lbs / kg 87 / 39.5 Bolting or banding to monopole via optional pole mount bracket - PM2 (stainless steel mounting Mounting option bands not included), pad (ground) with optional bottom mounted u-channel - PAD2, or wall mountable via four wall mounting 'feet' which are included standard - WM2 ENVIRONMENTAL Operating temperature 14° to +113° F (-10° to +45° O) ambient air temperature

-40° to +113° F (-40° to +45° C) with optional battery heater

Thermostat controlled exhaust fan for heat sinks on main circuit board

Conformal coating of electronic boards for moisture resistance

Designed to conform to UL 60950-1 and UL 1778 and rain tested to NEMA 3R

Two-year limited warranty, parts and labor. Manufacturer warranty on batteries.

