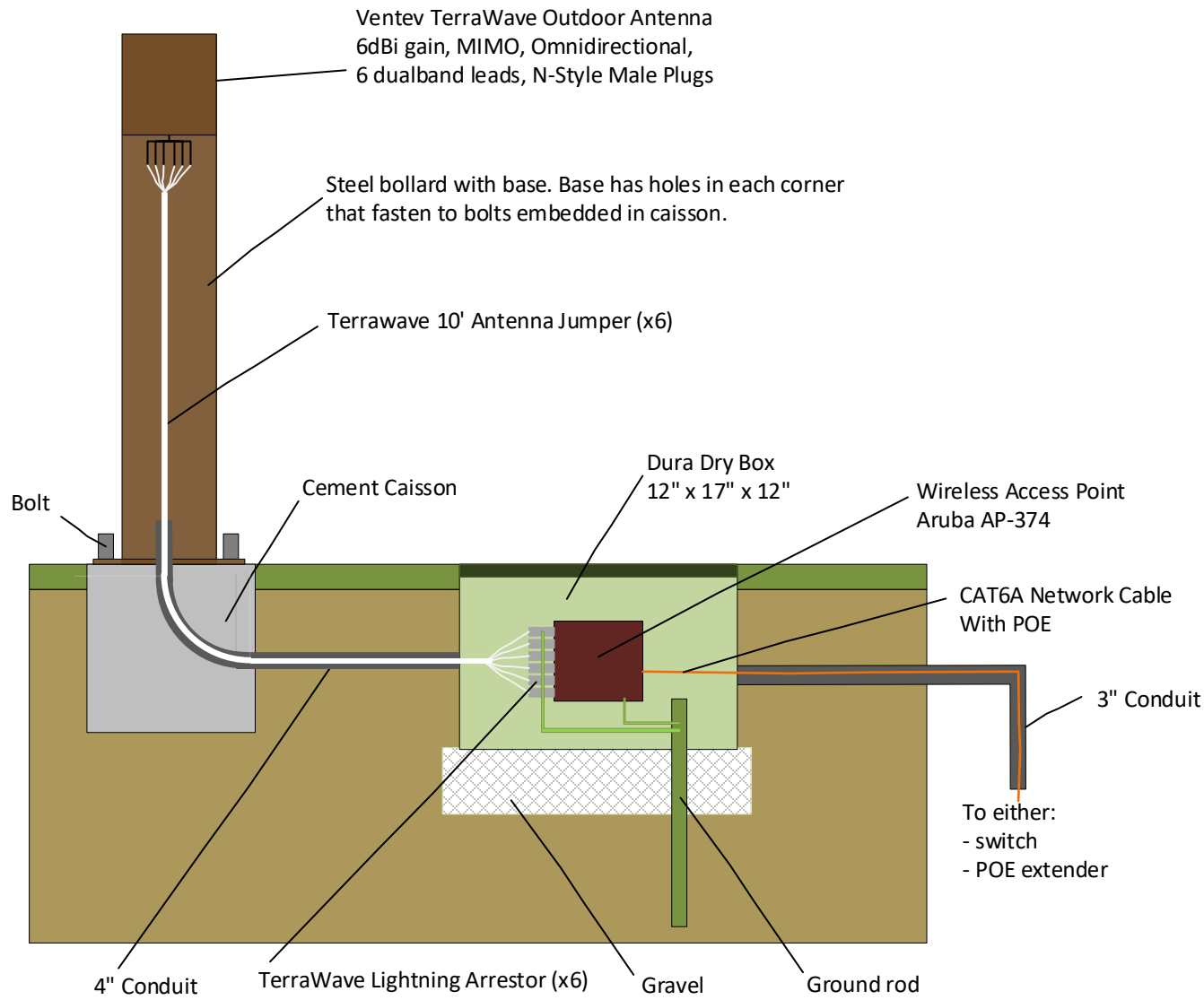


SETUP A

One dry box housing a single AP. Drybox is within ~280 feet of data and power source (POE switch or POE extender).

- Bollard dimensions outlined in table to the right
- Bollard nut/bolt/washer to be stainless steel
- Bollard base will either have a base cover or caps over the bolts
- Conduit from bollard-to-drybox must be curved and 4" to accommodate 8 antenna patch cables. Conduit must rise up into bollard minimum 4" to prevent water intrusion.
- Bollard base plate to be flush with ground
- Dry box baseplate should be sealed with silicone in addition to the provided gasket
- Dry box lid to be sealed with silicone in addition to the provided gasket
- Dry box to rest atop 4" of ¾" to 1" sized gravel
- Dry box lid to be level/flush with ground
- Dry box to be placed a distance from bollard wherein 10' antenna cable creates no more than 1 to 1½ service loop(s) in the drybox
- All conduit entrances into drybox to be properly sealed to prevent water intrusion
- Ground rod to be installed penetrating through drybox base, through gravel, and into the earth
- All groundable equipment will be grounded to the ground rod with appropriate gauge wire
- Conduits leaving dry box towards nearby network tie-in to be 3"
- Pull-string(s) to be left in place in addition to installed network cabling
- All twisted-pair network cabling should be outdoor-rated, shielded, type CAT6A.
- All cable runs shall not exceed their designated maximum distances.



AP Bollard Design
Construction Standard

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UCCS University of Colorado
Colorado Springs

*** Wireless Bollard Design Dimensions ***

- Antenna: 5.9"(w) x 7"(h)
- Bollard tube height (not including antenna): 37.5"
- Bollard tube height (including base): 38"
- Bollard tube diameter: 5.5"
- Bollard base dimensions: 8" x 8" x .5"
- Bollard bolt height: 1.25"
- Bollard nut size: ¾"
- Bollard bolt washer diameter: 1.5"
- Cement caisson diameter: 12"
- Cement caisson depth: 18"

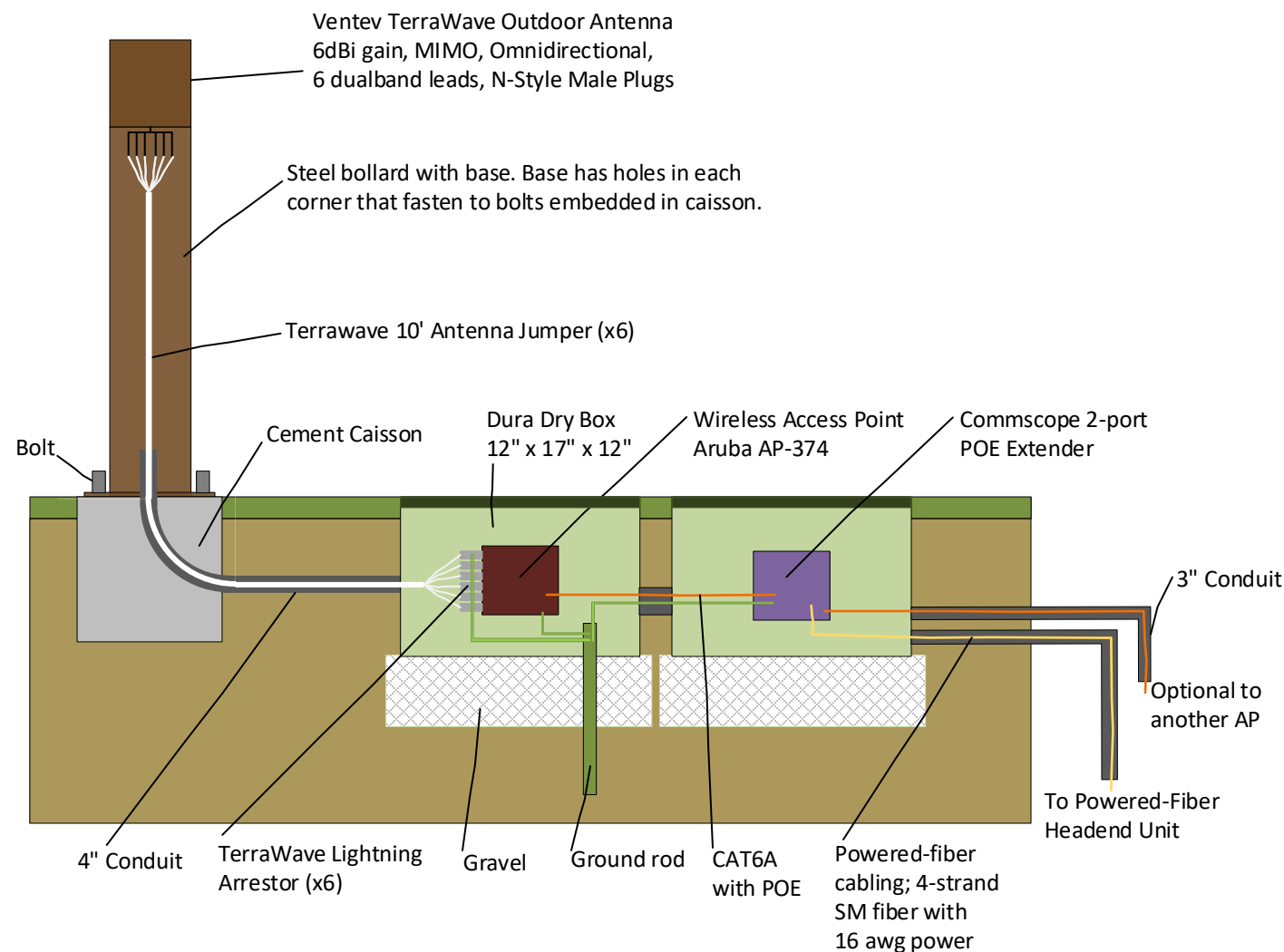
UCCS Paint Code for bollard and antenna:
Anodized Bronze or DB-P Dark Bronze



SETUP B

Two dry boxes - one housing a single AP and one housing a POE extender. Drybox with POE extender to be used in scenario where distance to network tie in is >280'.

- Bollard dimensions outlined in table to the right
- Bollard nut/bolt/washer to be SS
- Bollard base will either have a base cover or caps over the bolts
- Conduit from bollard-to-drybox must be curved and 4" to accommodate 6+ antenna patch cables. Conduit must rise up into bollard minimum 4" to prevent water intrusion.
- Bollard base plate to be flush with ground
- Dry box baseplates should be sealed with silicone in addition to the provided gaskets
- Dry box lids to be sealed with silicone in addition to the provided gaskets
- Dry boxes to rest atop 4" of ¾" to 1" sized gravel
- Dry box lids to be level/flush with ground
- AP dry box to be placed a distance from bollard wherein 10' antenna cable creates 1 to 1.5 service loop in the dry box
- POE Extender dry box to be placed 8" to 10" from AP dry box with 3" conduit connecting the two
- All conduit entrances into dry boxes to be properly sealed to prevent water intrusion
- Ground rod to be installed penetrating through the AP dry box base, through gravel, and into the earth
- All groundable equipment will be grounded to the ground rod in the AP dry box with appropriate gauge wire
- Conduits leaving POE Extender dry box towards nearby network tie-in to be 3"
- Pull-string(s) to be left in place in addition to installed network cabling
- All twisted-pair network cabling should be outdoor-rated, shielded, type CAT6A.
- Powered fiber cable type to be specified depending on project requirements. (2 vs 4 strand fiber, SM vs MM, 12 awg vs 16 awg), etc.



- All cable runs shall not exceed their designated maximum distances.
-



*** Wireless Bollard Design Dimensions ***

- Antenna: 5.9"(w) x 7"(h)
- Bollard tube height (not including antenna): 37.5"
- Bollard tube height (including base): 38"
- Bollard tube diameter: 5.5"
- Bollard base dimensions: 8" x 8" x .5"
- Bollard bolt height: 1.25"
- Bollard nut size: 3/4"
- Bollard bolt washer diameter: 1.5"
- Cement caisson diameter: 12"
- Cement caisson depth: 18"

UCCS Paint Code for bollard and antenna:
Anodized Bronze or DB-P Dark Bronze



TerraWave 6dBi outdoor MIMO omno antenna

Model#: M6060060MO1D36070



TerraWave Lightning Arrestor With N-Style Plug To N-Style Bulkhead Jack 0-6 GHz

Model#: TW-LP-N-P-BHJ



TerraWave 10' NM-to-NF Antenna Jumper

Model#: 400-06-07-P10'



AP Bollard Design
Construction Standard

9/16/2019

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Dura Dry Box

Model#: 121-DB-2



CommScope POE Extender

Model#: PFU-P-C-0-060-02

