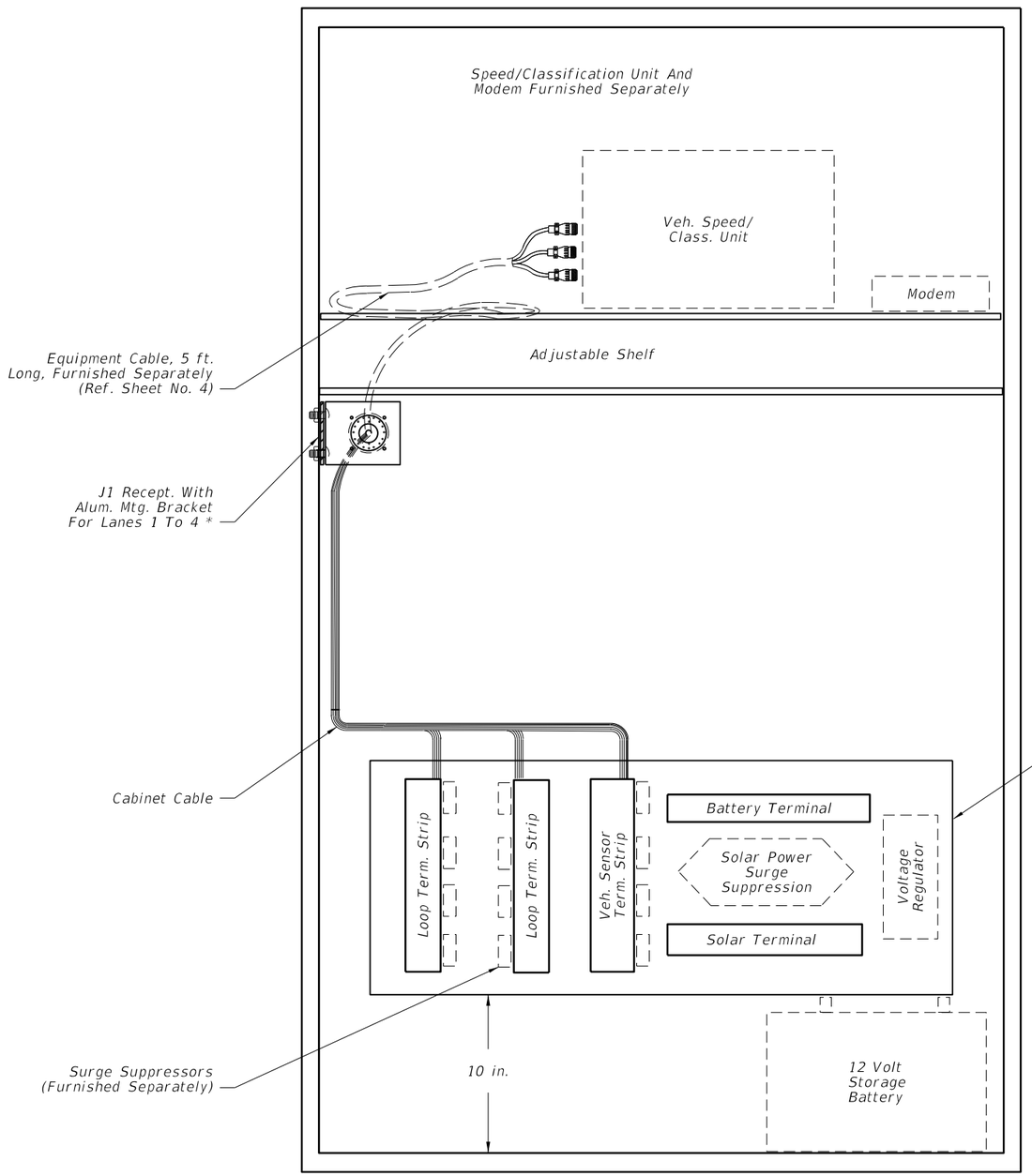
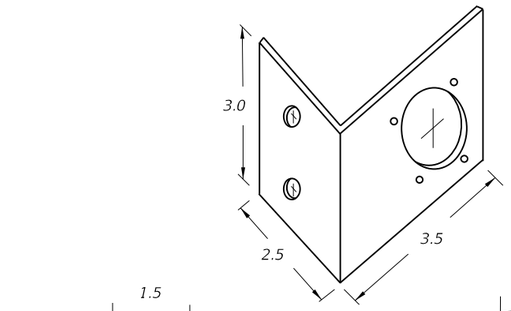
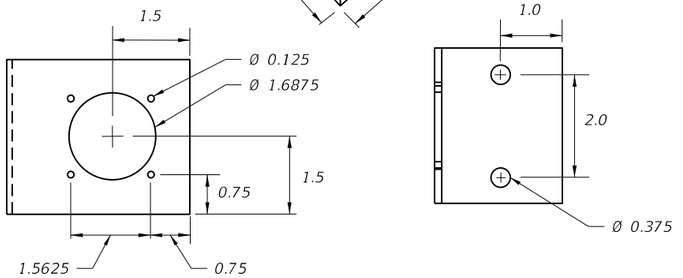




Note:
Bracket shall be fabricated of .090 – 0.125 inch thick aluminum.
Dimensions may vary depending on the manufacturer of the J1 receptacle being furnished. The cabinet manufacturer will construct the mtg. bracket to fit the receptacle.



J1 MOUNTING BRACKET

All bracket dimensions are in inches

1. Traffic monitoring site cabinet includes:
   - A. One adjustable shelf; (equipped as shown)
   - B. One backplane ass'y;
   - C. One J1 receptacle with mounting bracket;
   - D. All associated wiring and wiring harnesses.

2. Basic backplane assembly consists of:
   - A. Two inductive loop terminal strips;
   - B. One vehicle sensor terminal strip;
   - C. One battery terminal strip;
   - D. One solar panel terminal strip.

* The contractor shall be responsible for contacting the FDOT planning office for lane number information and verification.

CABINET LAYOUT DETAIL (For Up To Four Lanes)

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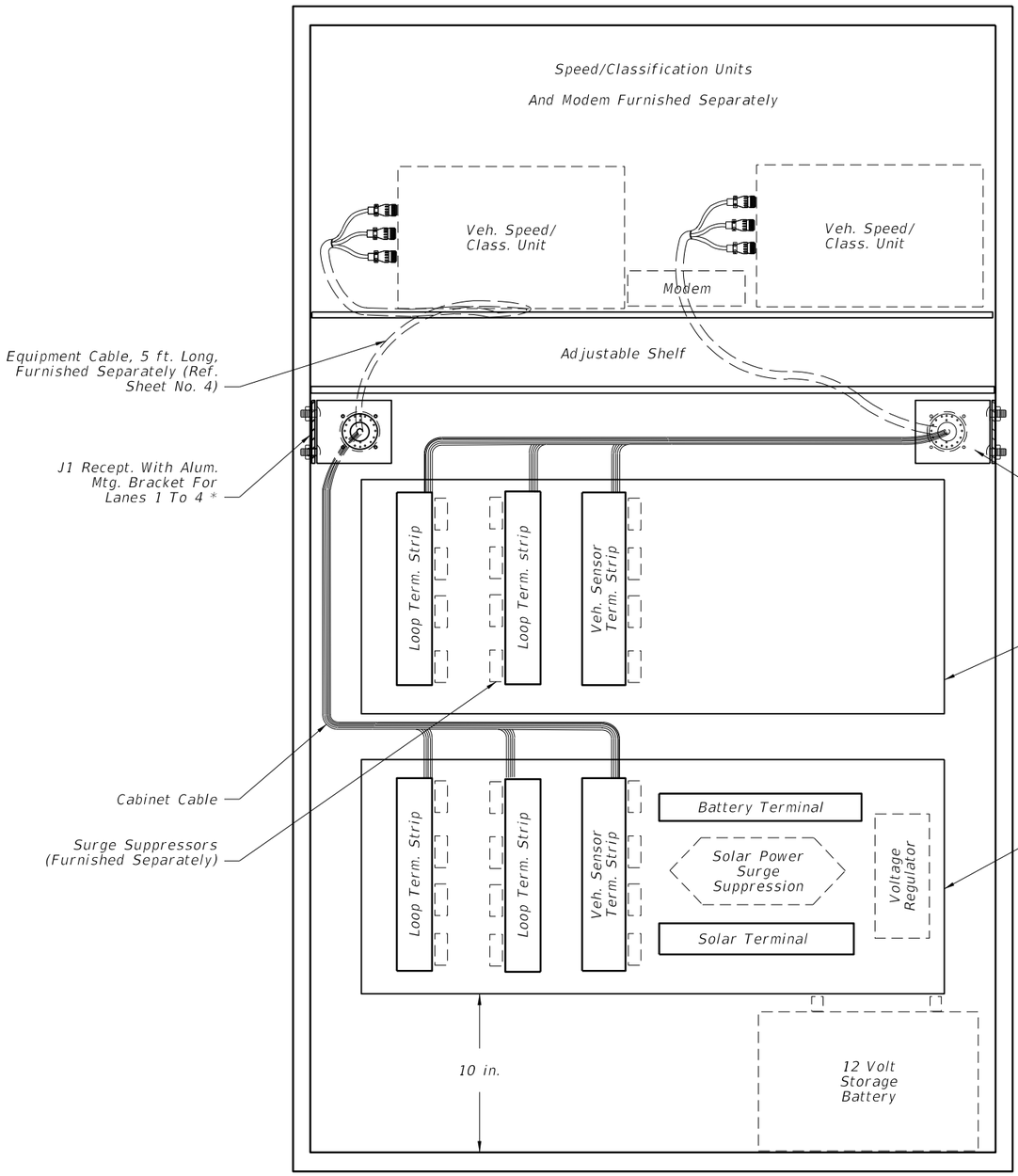
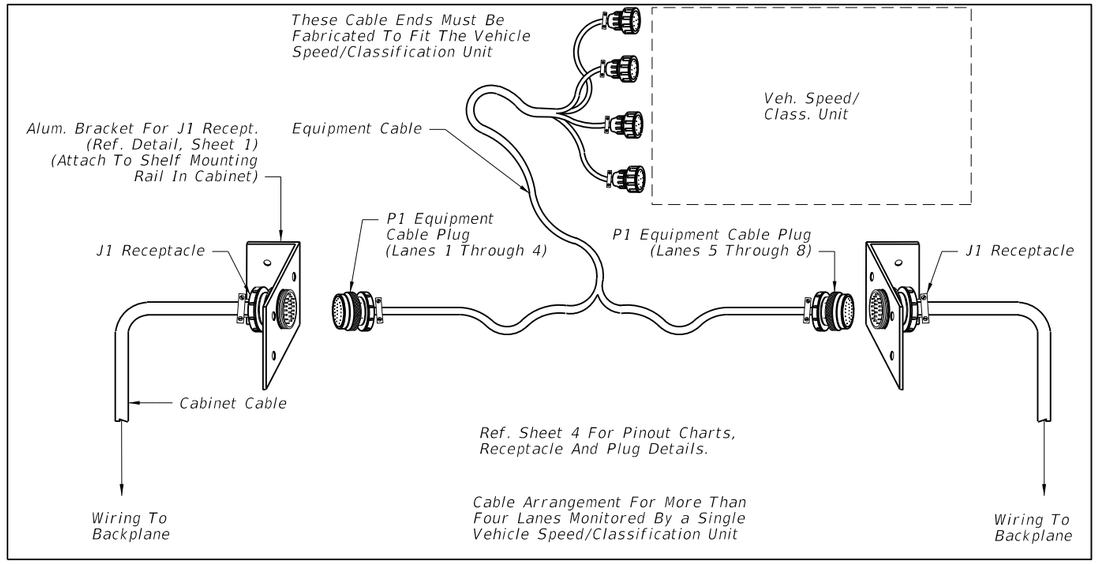
LAST REVISION	REVISION	DESCRIPTION:			INDEX NO.	SHEET NO.
07/01/07			FDOT DESIGN STANDARDS 2013	TRAFFIC MONITORING SITE	17900	1





1. Traffic monitoring site cabinet includes:
   - A. One adjustable shelf;
   - B. Two backplane assemblies (equipped as shown);
   - C. Two J1 receptacles with mtg. brackets;
   - D. All associated wiring and wiring harnesses.

2. Basic backplane assembly consists of:
   - A. Two inductive loop terminal strips;
   - B. One vehicle sensor terminal strip;
   - C. One battery terminal strip;
   - D. One solar panel terminal strip.

* The contractor shall be responsible for contacting the FDOT planning office for lane number information and verification.

CABINET LAYOUT DETAIL (For More Than Four Lanes And Up To Eight Lanes)

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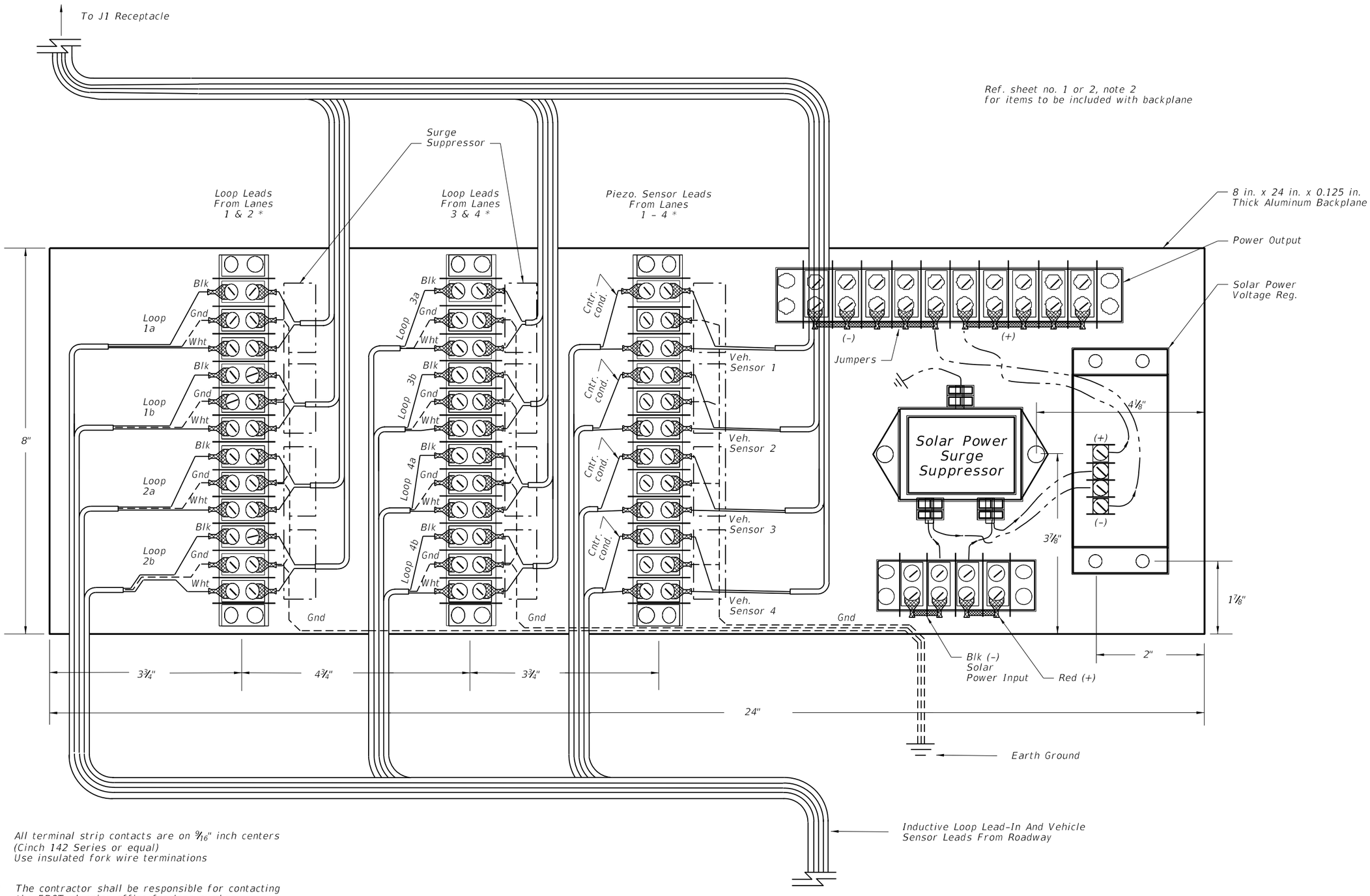

All terminal strip contacts are on 9/16" inch centers
(Cinch 142 Series or equal)
Use insulated fork wire terminations

* The contractor shall be responsible for contacting the FDOT planning office for lane number information and verification.

CABINET BACKPLANE DETAIL

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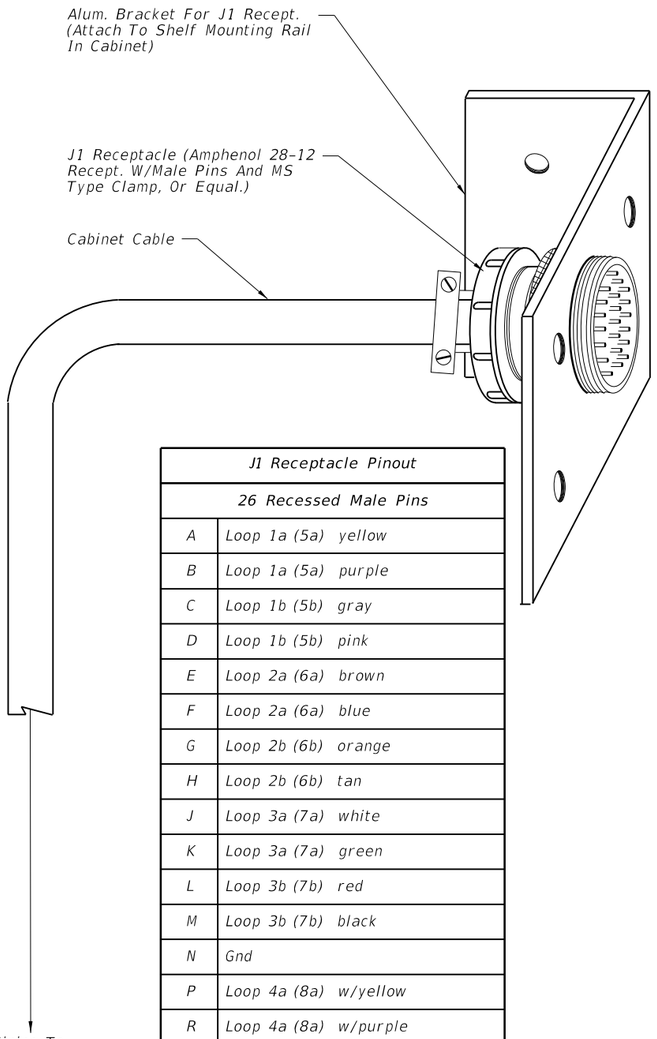
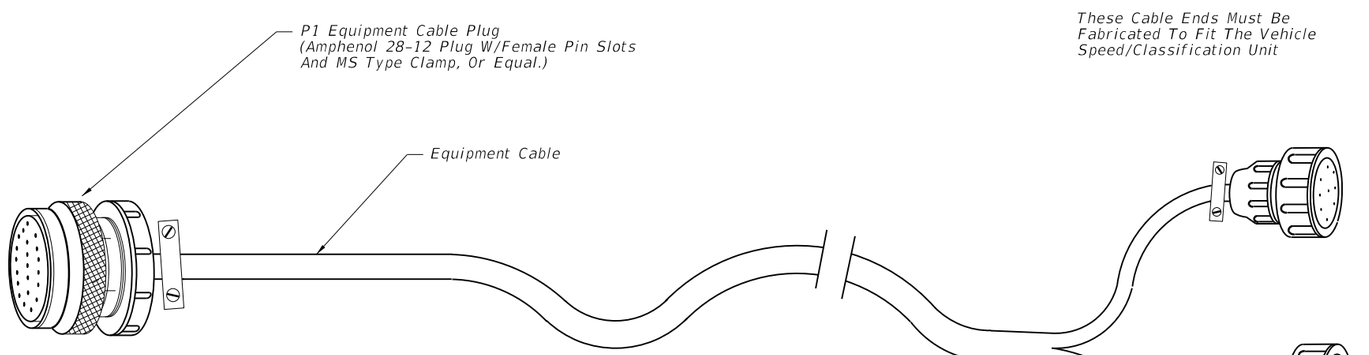


J1 Receptacle Pinout	
26 Recessed Male Pins	
A	Loop 1a (5a) yellow
B	Loop 1a (5a) purple
C	Loop 1b (5b) gray
D	Loop 1b (5b) pink
E	Loop 2a (6a) brown
F	Loop 2a (6a) blue
G	Loop 2b (6b) orange
H	Loop 2b (6b) tan
J	Loop 3a (7a) white
K	Loop 3a (7a) green
L	Loop 3b (7b) red
M	Loop 3b (7b) black
N	Gnd
P	Loop 4a (8a) w/yellow
R	Loop 4a (8a) w/purple
S	Loop 4b (8b) w/gray
T	Loop 4b (8b) w/brown
U	Piezo 1 (5) (+) w/blue
V	Piezo 1 (5) sh w/orange
W	Piezo 2 (6) (+) w/green
X	Piezo 2 (6) sh w/red
Y	Piezo 3 (7) (+) w/black
Z	Piezo 3 (7) sh w/red/blk
a	Piezo 4 (8) (+) red/green
b	Piezo 4 (8) sh red/yellow
d	Gnd red/black



P1 Equipment Cable Plug		
26 Female Pin Slots		
A	Loop 1a (5a)	Connects To Electronics Unit
B	Loop 1a (5a)	
C	Loop 1b (5b)	
D	Loop 1b (5b)	
E	Loop 2a (6a)	
F	Loop 2a (6a)	
G	Loop 2b (6b)	
H	Loop 2b (6b)	
N	Gnd	
J	Loop 3a (7a)	Connects To Electronics Unit
K	Loop 3a (7a)	
L	Loop 3b (7b)	
M	Loop 3b (7b)	
P	Loop 4a (8a)	
R	Loop 4a (8a)	
S	Loop 4b (8b)	
T	Loop 4b (8b)	
d	Gnd	
U	Piezo 1 (5) (+)	Connects To Electronics Unit
V	Piezo 1 sh	
W	Piezo 2 (6) (+)	
X	Piezo 2 sh	
Y	Piezo 3 (7) (+)	
Z	Piezo 3 sh	
a	Piezo 4 (8) (+)	
b	Piezo 4 sh	

NOTE:

The equipment cable can accommodate up to four lanes of inductive loop and vehicle sensor inputs. (Ref. Sheet No. 1 for cabinet layout)

For more than four lanes and up to eight lanes of inputs, the following options are available:

1. A second Vehicle Speed/Class. Unit and separate equipment cable connecting to a second J1 receptacle; or
2. A single Vehicle Speed/Class. Unit capable of up to eight lanes of inputs and a single equipment cable with split ends to fit two J1 receptacles. (Ref. Sheet 2 detail)

Numbers in parenthesis in the pinout chart identify lane numbers when a second backplane for lanes 5 through 8 is required.

NOTE:

The contractor shall be responsible for contacting the FDOT planning office for lane number information and verification.

EQUIPMENT CABLE DETAIL

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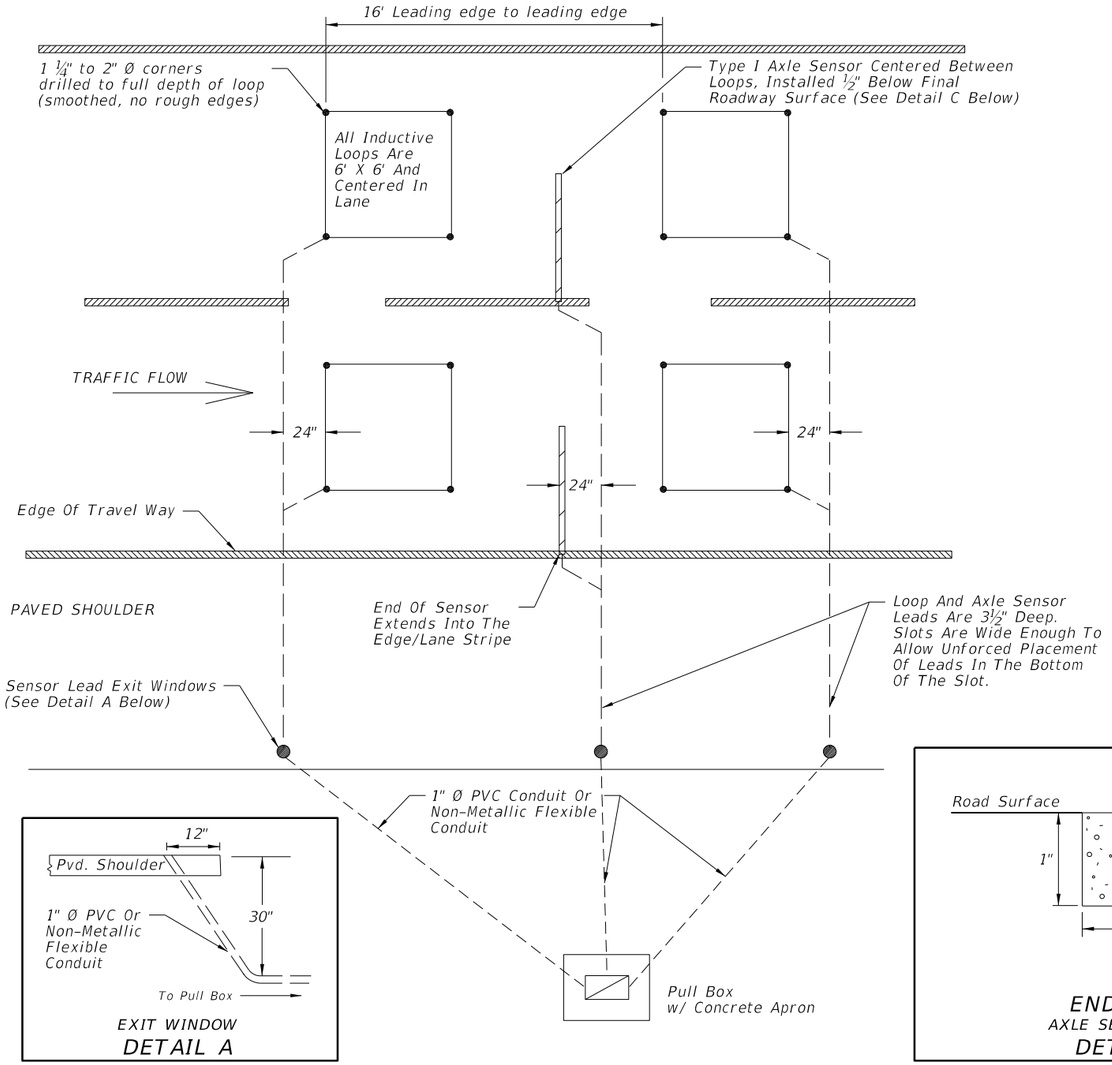
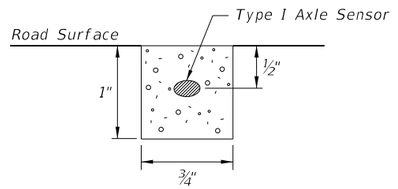
TYPICAL FOR UP TO 4 LANES OF SENSOR LEADS PULLED TO ONE SIDE OF THE ROADWAY

ROADWAYS WITH PAVED SHOULDERS

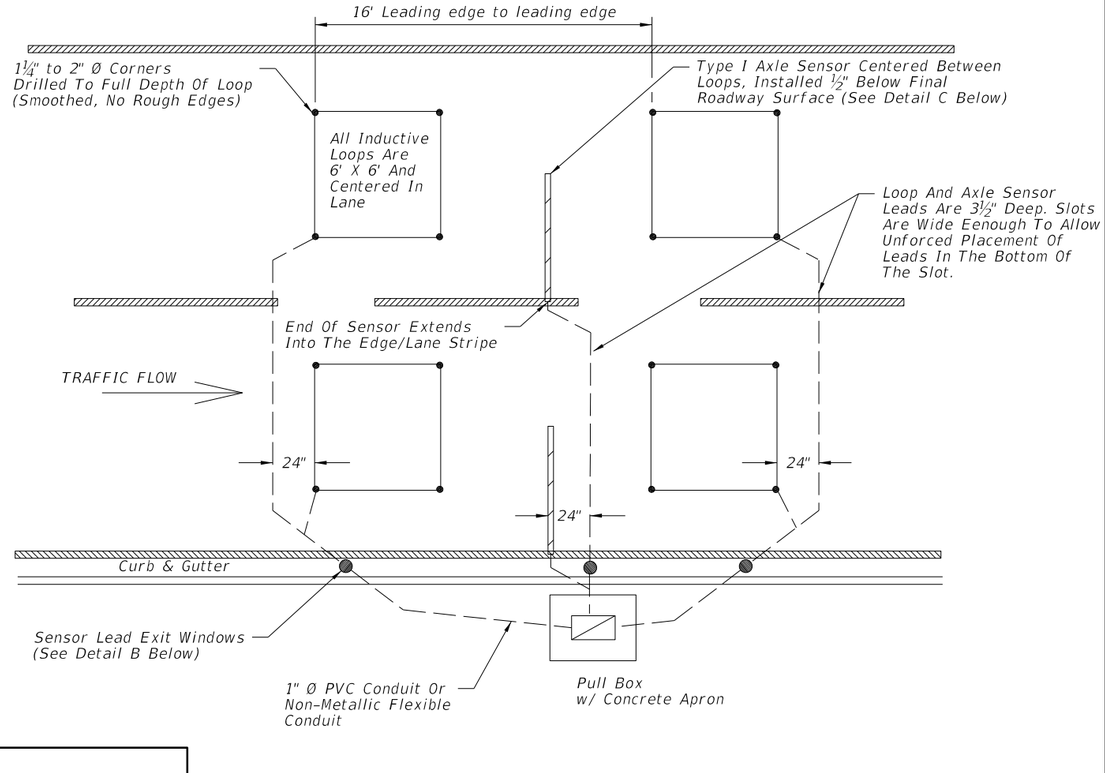


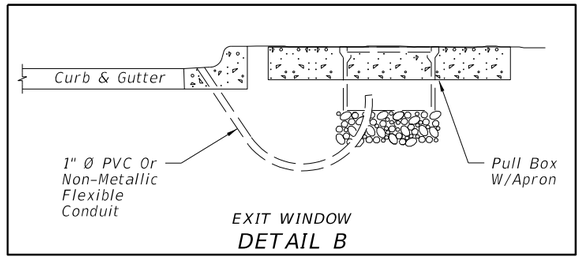
EXIT WINDOW
DETAIL A



END VIEW
AXLE SENSOR SLOT
DETAIL C

CURB & GUTTER ROADWAYS





EXIT WINDOW
DETAIL B

NOTES:

1. Type I axle sensors shall be installed after placement of the friction course. Loops associated with axle sensors shall also be installed after placement of the friction course.
2. Inductive loops slots shall be cut 3½" deep. Loop slots will be cut wide enough to allow unforced placement of the wire into the bottom of the slot. Four turns of #12 AWG, type XHHW stranded copper wire, or #14 AWG, IMSA 51-7 copper wire shall be placed in the slot. Short pieces of backer rod (2" to 3" in length) shall be placed every 18" to 24" to hold the loop wire in the bottom of the slot.
3. Loop leads shall be twisted at the rate of 6 to 8 twists per foot. For loops that are within 150' of the cabinet, the twisted pair loop wire shall be extended directly to the cabinet and no shielded lead-in cable is required. For distances over 150', #14 IMSA 50-2 shielded lead-in cable must be spliced to the loop wire twisted pair at the first pull box to which the loop wire is pulled.
4. The Contractor shall be responsible for contacting the FDOT office that maintains the traffic monitoring site in order to obtain lane numbering identification. All leads shall be labeled with permanent markers to indicate their lane number and position. For example: The leading loop (the first loop a vehicle encounters) in the lane designated as number 1, shall be marked as "1A". The trailing loop. if present, shall be marked "1B". If an axle sensor is present, the sensor will be marked as "P1" for lane #1, P2 for lane #2, and so on for all lanes.
5. See Index 17700 for pull box and apron details.
6. All splices will be performed using splice kits designed for direct burial. Splice kits will include screw on wire connectors and a housing with sufficient sealant to fully encapsulate the spliced connections. Taped splices are not permitted.

LANE LAYOUT FOR TMS INDUCTIVE LOOP AND TYPE I AXLE SENSOR

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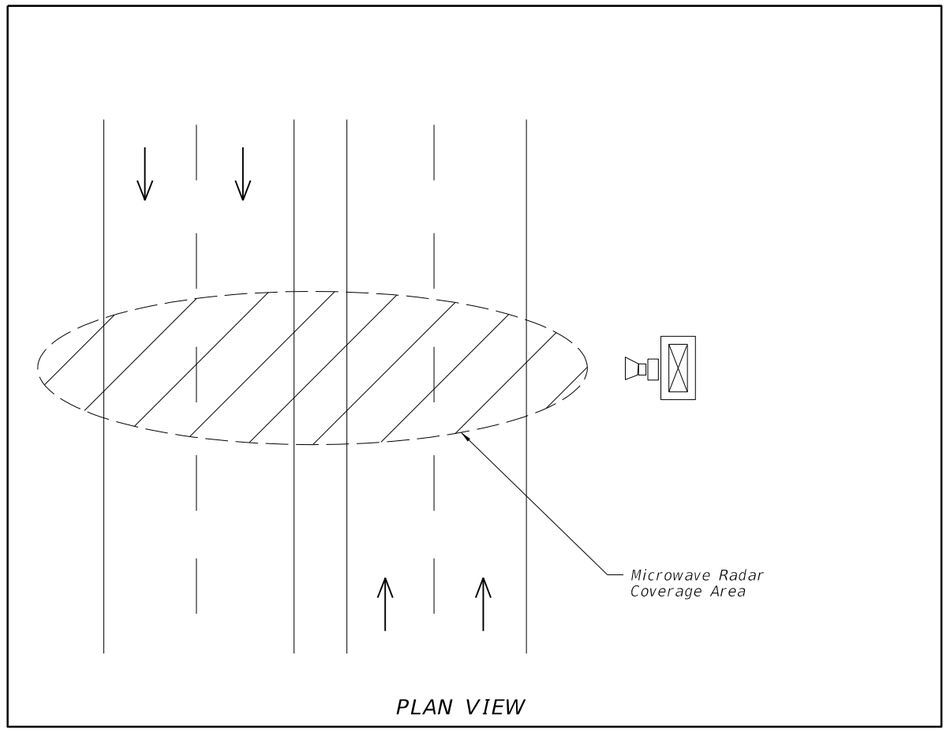
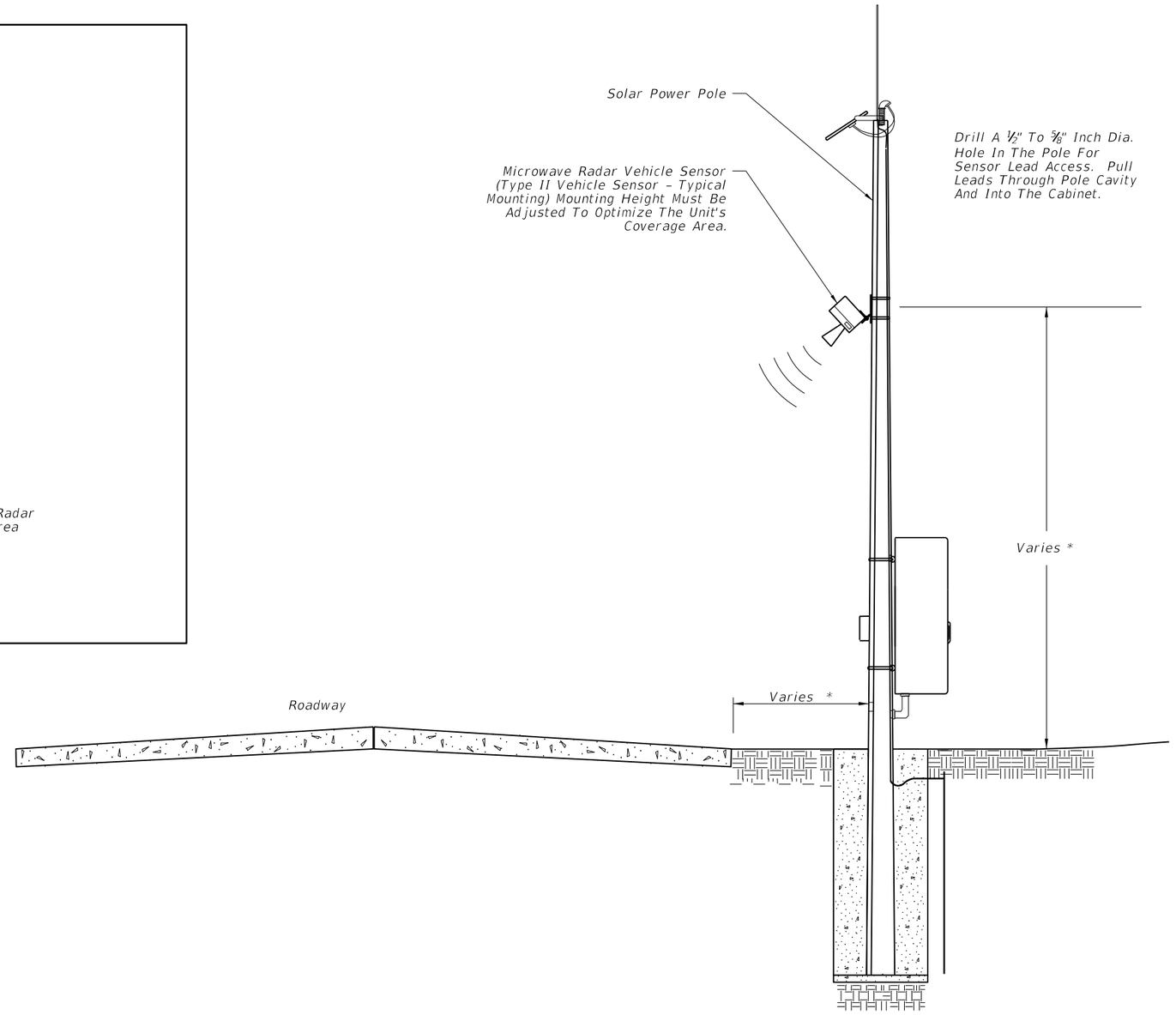


PLAN VIEW



The Unit Must Be Capable Of Detecting Up To Eight Lanes Of Traffic (In Either Or Both Directions) When Mounted Perpendicular To The Roadway.

Coverage Area Of The Unit Is Affected By The Roadway Geometry: Distance From The Travel Lanes, Median Type And Width, Barrier Walls, Etc.

* Mounting height of the unit and offset from the roadway must be determined on a site-by-site basis, in accordance with the manufacturer's recommended guidelines. Offset of pole must be greater than or equal to minimum clear zone requirements.

TYPE II WIRELESS VEHICLE SENSOR MICROWAVE RADAR

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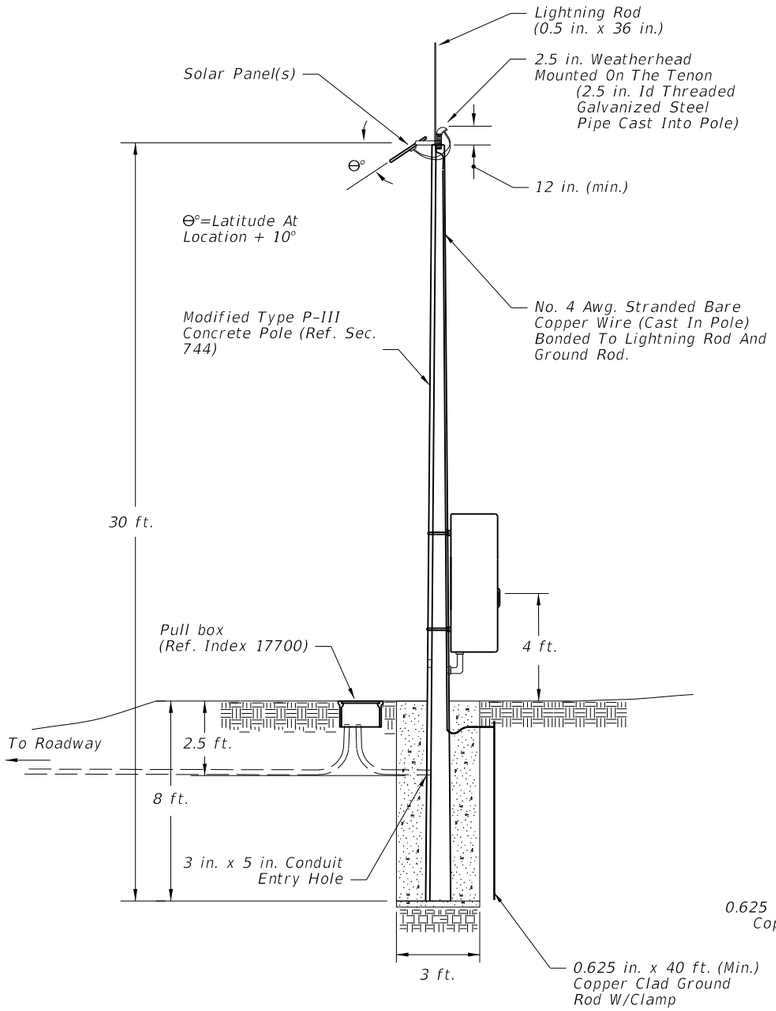
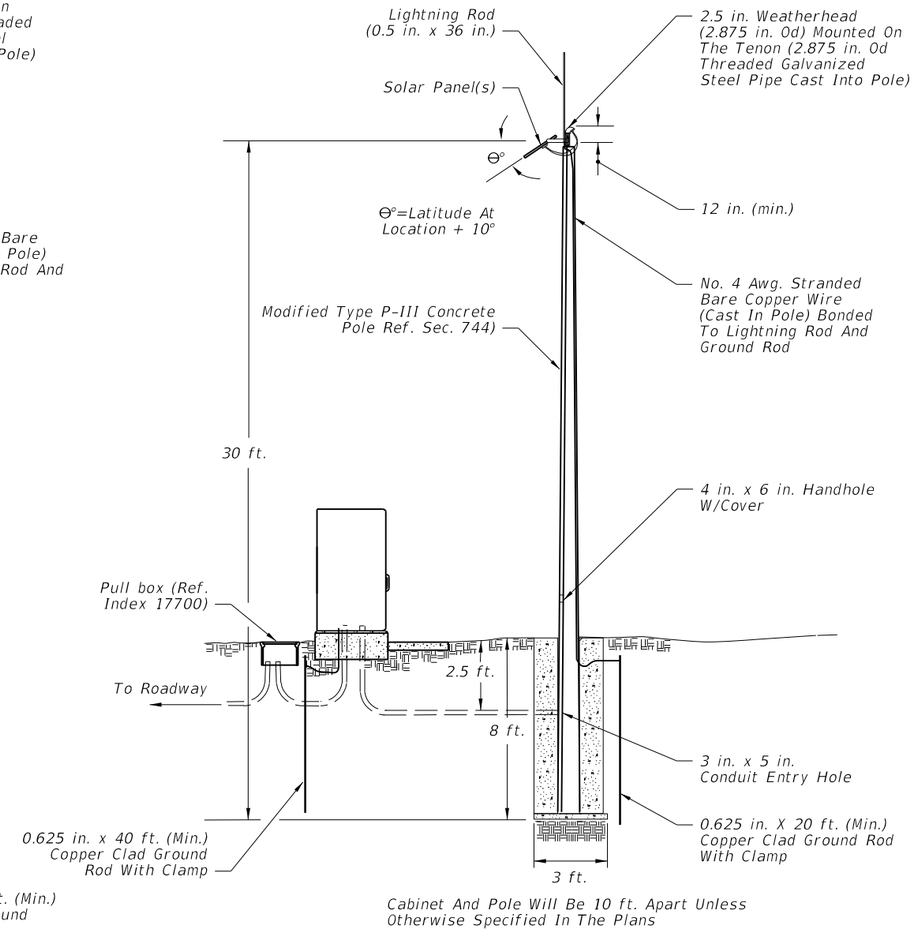
Note: Cabinet installed per Index 17841 except cabinet center will be 4 feet above grade.

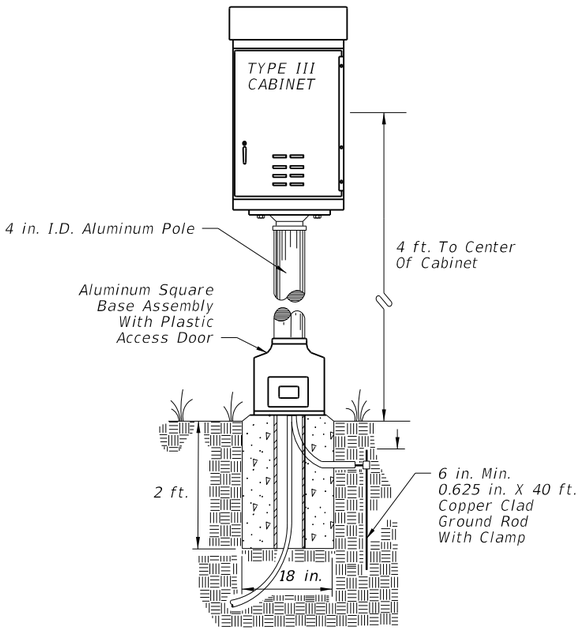


SOLAR POWER POLE
WITH POLE MTD. CABINET



Cabinet And Pole Will Be 10 ft. Apart Unless Otherwise Specified In The Plans

SOLAR POWER POLE
WITH BASE MTD. CABINET



PEDESTAL MTD. CABINET

Wire for Solar Panel Array installations shall be #10 AWG stranded copper, Red insulation is THHN or THWN for positive 12 volts wiring, Black insulation is THHN or THWN for negative, 12 volts wiring, Green insulation is THHN or THWN for ground bonding of the solar panel frame to the pole and earth.

Pole placement shall be in accordance with section 125.4 and 125.8.2 of the Standard Specifications.

SOLAR POWER POLE DETAIL

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01/01/12						17900	7

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