CABINET LAYOUT DETAIL (For Up To Four Lanes)

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.

Note:
Bracket shall be fabricated of 0.090 - 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.

equipment Cable, 5 ft.
long, furnished separately
(wet sheet no. 4)

J1 receptacle with alum.
mnt. bracket
for lanes 1 to 4 

Adjustable shelf

Cabinet Cable

Surge Suppressors
(Furnished separately)

Loops Term Strip

Veh. Speed/Class. Unit

Battery Terminal

Solar Power Surge Suppression

Solar Terminal

12 Volt Storage Battery

Backplane for lanes 1 to 4 

1.5 0.75
1.5625 0.75

O.125

O.16875

O.375

3.0 2.5 3.5
1.0
2.6

J1 MOUNTING BRACKET

All bracket dimensions are in inches

0.75
1.5

0.75

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

1. Traffic monitoring site cabinet includes:
   A. One adjustable shelf.
   B. Two backplane assemblies (equipped as shown).
   C. Two J1 receptacles with mfg. 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.
Ref. sheet no. 1 or 2, note 2 for items to be included with backplane.

8 in. x 24 in. x 0.125 in. Thick Aluminum Backplane.

Solar Power Voltage Reg.

Solar Power Surge Suppressor

Inductive Loop Lead-In And Vehicle Sensor Leads From Roadway

24" Earth Ground

Loop Leads From Lanes 1 & 2

Loop Leads From Lanes 3 & 4

Piezo Sensor Leads From Lanes 1 - 4

Surge Suppressor

Jumper

(-)

(+)

(+)

(-)

1 3/8"

2"

3 3/8"

4 3/8"

5 3/8"

All terminal strip contacts are on 7/32" inch centers (Cinch 142 Series or equal). Use insulated fork wire terminations.

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

The equipment cable can accommodate up to four lanes of inductive loop and vehicle sensor inputs.

1. A second Vehicle Speed/Classification Unit and separate equipment cable connecting to a second J1 receptacles or

2. A single Vehicle Speed/Classification 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 backbone for lanes 5 through 8 is required.

The contractor shall be responsible for contacting the FDOT planning office for lane number information and verification.
**SPEED/CLASSIFICATION LOOP ASSEMBLY WITH AXLE SENSORS PLACEMENT DETAIL**

**Loop Wire / Homemotion Cable Splices**

Loop wires shall be 0.25 inches wide (max.) by 1.5 inches to 2 inches deep. Four turns of 12 AWG, type XHHW stranded copper wire shall be placed in the slot. Backer rod shall be used to hold the loop wire in the bottom of the slot.

Loop leads shall be twisted at the rate of 10 to 12 twists per foot. The twisted pair shall extend to the pull box with three feet of spare length added in the pull box.

The contractor shall be responsible for contracting the FDOT office for lane number information and verification. All lanes shall be labeled with permanent marker to indicate their lane number and position. For example, the leading loop in lane 1 is marked as "L1". The trailing loop (if present) is marked as "L2". The axle sensor (if present) is marked as "A1". And so on for all lanes.

Note:

There are typical dimensions, actual dimensions, element cross-sections, and standoff may vary depending on manufacturer and model.

**Typical Uncapsulated Class II Vehicle Sensor**

- **SIDE VIEW**
  - Sensor Cable Connection (loop)
  - Lead-In
  - Sensor Slot
  - End of Sensor Mounted Even with Inside Edge Of Stripe

- **TOP VIEW**
  - Sensor Element Bonding Agent
  - Sensor Element
  - Standoff
  - Plastic Standoff
  - Roadway Surface
  - Shoulder

- **END VIEW**
  - Sensor Element
  - Plastic Standoff
  - Roadway Surface

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**Loop and Piezoelectric Vehicle Sensor Detail**

- **Loop Leads (Twisted Pair) From Roadway**
- **Shielded Homemotion Cable To Cabinet**
- **3M Part No. 357DG (Or Equal) Scotchcast Insulating Resin Electrical Splice Kit Pouch**
- **3M Part No. S-31 (Or Equal) Closed End Electrical Grip Sleeve**
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 Travellanes, 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 and existing clear zone requirements.

**TYPE II VEHICLE SENSOR MICROWAVE RADAR**
Solar Panel(s)

Lightning Rod (2.5 in x 36 in.)
Mounted On The Top
(2.5 in x 36 in.) Threaded
Galvanized Steel Pipe
Cost Into Pole

12 in. Min.

No. 4 AWG Stranded Bare
Copper Wire (Cover In Pole)
Bonded To Lightning Rod And 
Ground Rod.

4th Latitude At Location 10'

Modified Type IV-III
Concrete Pole 
(Ref. Sec. 744)

30 ft.
Telex Service Box

4 in. x 6 in
Warehouse 
W/Cover

6 ft.

2.5 ft.

6 ft.

3 in. x 5 in 
Conduit Entry 
Hole

3 ft.

0.625 in. x 40 ft. (Min.) 
Copper Clad Ground Rod 
With Clamp

0.625 in. x 40 ft. (Min.) 
Copper Clad Ground Rod 
With Clamp

SOLAR POWER POLE
WITH POLE MTD. CABINET

SOLAR POWER POLE
WITH BASE MTD. CABINET

Wire for Solar Panel Array installations shall be #10 AWG stranded copper, Red Insulation in TW4W or TW3W for positive 12 volts wiring. Black Insulation in TW4W or TW3W for negative 12 volts wiring. Green Insulation is TW4W or TW3W for ground bonding of the solar panel frame to the pole and earth.

Pole placement shall be in accordance with section 195.4 and 195.8.2 of the Standard Specifications.

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

48 in. to Center of Cabinet

6 in. Min.
0.625 in. x 40 ft.
Copper Clad 
Ground Rod 
With Clamp

PEDESTAL MTD. CABINET

Aluminum, Square Base 
Assembly With Plastic 
Access Door