NOTES:
1. If cabinet is located more than 30 feet from the edge of the roadway, provide a minimum cover of 12 inches. Otherwise, provide a minimum cover of 18 inches.
2. Install copper-clad ground rod or copper plate according to Subsection 636.07.
3. Refer to Subsection 721.01(f) for grounding and bonding equipment material requirements.
4. Refer to Subsection 721.02(a) for pole and cabinet paint requirements.
5. Provide cabinet equipped with a door stop that holds the door open at 90 degrees and 120 degrees.
6. Ensure cabinet is clean, watertight, and fitted to prevent standing water.
7. Place cabinet and pole base door so that they face away from the direction of traffic.
8. Install anchor bolts vertically using templates provided by the manufacturer. Alternatively, use 1/2-inch diameter, 18-inch long elongated bolts.

POLE-MOUNTED CABINET

Breakaway aluminum base

SECTION A-A

POLE CLAMP

(See Note 3)

Tamper proof head
Secure with set screws

Pole base door
See Note 7

13 1/2"

15"

1 1/2" PVC conduit

1/16" dia. x 6" long anchor bolt (typ.)

See Note 8

6" x 6" Welded wire mesh with minimum 1" overlap

Concrete foundation

To pull box

2" PVC conduit

1/2" (max.)

6" (min.)

3"-6"

1/2" x 1/2" copper-clad ground rod or 14" x 14" copper ground plate

See Note 2

Ground surface

Breakaway aluminum base

Terminates conduit 2" above the bottom of the breakaway base

Drill pole to provide wire access between the pole and cabinet

Pole clamps

4-6" mounting height

10" Pole height

3'-9"

1/2" (max.)

12" or 18" (min.)

See Note 1

2" PVC conduit

A A

6/16" x 6" louveres

Internally sealed air inlet filter. Do not interfere with terminal strips. Ensure right wall louver is 4" from top of wall.

Pole handle capable of padlocking

On left wall, 6" x 6" louveres with

If required, place fan on right wall

louver as directed by the CO

Side-opening door encompassing 80% (approx.) of the cabinet face

Mount solar panel clamp a maximum of 6" below the top of the pole with a bracket that offers horizontal and vertical positioning of the panel

20K minimum solar panel

(As required)

4" diameter, Schedule 80 spun aluminum pole

NEMA Type 3R watertight, outdoor cabinet

30" x 24" x 16" unless otherwise approved by the CO

See Note 7

Cabinet ground busbar

Mounting bracket

Gasket
NOTES TO THE DESIGNER
NPS Traffic Counter Details
August 10, 2017

General Information

According to version 2 of the NPS Guidance and Specifications for the Installation of Permanent Inductive Loop Systems for Continuous Traffic Counting Purpose, these details drawings describe installation procedures for inductive loop systems for the purpose of motorized vehicle traffic counting. The details are intended for use by the National Park Service (NPS) to improve the accuracy and operating reliability of continuous traffic monitoring systems within the NPS units throughout the U.S. Other federal land management agencies (FLMA) may choose to use these details, in whole or in part, where roadway and site conditions are similar to those experienced in NPS units.

Some of these details may not be applicable to all projects. The Designer must consult with the Safety Engineer and/or PM before using these details on a project.

Guidance

1. Details E636-01 and E636-02 may or may not be used together depending on the project. Consult with the PM or Traffic Engineer or determine during scoping trip if single loop, dual loops, or both are needed for the project.
2. Include Detail E636-03 on projects that have traffic detector wire loops pay item regardless of the loops being single or dual.
3. If there are existing loops on your project, consult with the Pavement Engineer and Traffic Engineer to determine if the type of proposed pavement treatment (mill and overlay, full depth reconstruction, or pavement preservation) will affect the existing wire loops and if they will need to be replaced. Include applicable 636 Details.
4. For projects where existing wire loops will be replaced and connected to the existing system; or where the wire loops are to be connected to a cabinet installed by others:
   - Include only Details E636-01, E636-03, and E636-04 for single loops configuration;
   - Include only Details E636-02, E636-03, and E636-04 for dual loops configuration; or
   - Include all four Details if both configurations apply to the project.
5. Include all 636 Details on projects where NPS has decided to replace (upgrade) the existing traffic counting system with a new one, or when a new system is to be installed for the first time. Consult with the PM and Traffic Engineer in this regard.
6. For Note 5 on Details E636-01 and E636-02, the directional boring may be used for mill & overlay and pavement preservation projects, while open trench would be suitable for full depth reconstruction projects. Designers are encouraged to discuss with the COE for best approach and update the SCRs as necessary.
7. For Detail E636-04, consult with the PM and Traffic Engineer to determine the type of pull box to be used (to be decided by NPS).
8. For Detail E636-04, Note 6, if more splices are needed to repair older installations, consult with the PM and Traffic Engineer to determine if additional pull boxes are needed.
9. For Detail E636-06, consult with the PM and Traffic Engineer for the need of Solar Panel (To be decided by NPS) and add the requirements to the SCRs and pay item description.
10. For Details E636-06 and E636-07, consult with the PM and Traffic Engineer to determine the pole height to use (To be decided by NPS). E636-06 is the standard pole height, and E636-07 may be used where a lower mounting height is desired.
11. For Details E636-06 and E636-07, consult with the PM and Traffic Engineer for the need of optional fan (To be decided by NPS) and add the requirements to the SCRs and pay item description.

Applicable SCRs

1. Section 636 TRAFFIC SIGNAL, TRAFFIC COUNTER, LIGHTING, AND ELECTRICAL SYSTEMS (See LOS instructions for which clauses to include).
2. Section 721 ELECTRICAL AND ILLUMINATION MATERIAL (See LOS instructions for which clauses to include).

Typical Pay Item Used:

63601-6000 System Installation, Traffic Detector System, LPSM

This pay item may be used when only one traffic detector system is to be installed for the project. All items that are needed for the installation of the system (electrical material, conduits, pull boxes, etc...) are incidental to this pay item. If more than one system is to be installed, then pay item 63602-6000 should be used instead as explained below.

63602-6000 System Installation, Traffic Detector System, EACH

This pay item may be used when more than one system is to be installed in a single project. In this case also, all items that are needed for the installation of each system (electrical material, conduits, pull boxes, etc...) are incidental to the pay item for each system.

63602-6020 System Installation, Traffic Detector Wire Loop, EACH

This pay item may be used when only the wire loops in the ground are to be replaced and be connected to the existing system. This is a typical application for a mill and overlay or full depth projects where the wire loops get damaged during milling or pavement removal operations.

Other 636 pay items are also available when paying for traffic detector items (pull box, pole, wires, conduits etc...) individually.