



Traffic Engineering, Operations & Safety Manual

Chapter 4 Signals

Section 9 Electrical Cable

4-9-1 Cable Type/Information/Connections

April 2025

GENERAL

This section presents information, some of which has been previously printed from in such documents as the Standard Specifications for Road and Bridge Construction, Standard Detail Drawings, and the *Wisconsin Electrical Code*.

Refer to the Construction Materials Manual, Section 6-55 Electrical Construction for checklists that pertain to the inspection of installation of these units.

CABLE TYPE/INFORMATION

All wiring, cable, and connections **shall** be installed according to the Standard Specifications and the Wisconsin Electrical Code.

Detector Lead-in Cable

The loop detector lead-in cable **shall** be continuous from the loop detector splice to the loop detector input terminal strip in the controller cabinet.

Each loop **shall** have a separate lead-in cable from the cabinet to the loop detector splice.

Signal Cable

All traffic signal cable **shall** be installed in accordance with the Standard Specifications.

An as-built intersection wiring diagram **shall** be developed in accordance with the wiring as it was installed in the field and placed inside the controller cabinet upon completion of electrical work at the signalized intersection.

Due to the differences in cable size and wiring schemes, signal designers *should* contact the respective maintaining authorities to determine the proper wiring guidelines.

Spare Conductors

Where future pedestrian movements or left turn signal heads are anticipated, electrical cable with spare conductors *may* be routed from the controller cabinet to the quadrant or pole on which they would be installed. Due to the relatively low cost, spare conductors *should* be provided for possible future equipment. Spare conductors, if desired, *should* be shown on the plans and identified as such. *Should* questions arise, contact the maintaining authority for proper direction.

CABLE CONNECTIONS (SPLICES)

All cable splicing **shall** be installed in accordance with the Standard Specifications.

Underground splicing is not acceptable, except for the loop detector wire to its loop detector lead-in cable, which is spliced in an acceptable pull box or junction box.