

1. DETECTOR – RADAR / PRESENCE

A. Description. Furnish a radar presence detection system to detect vehicles for traffic signal operation.

B. Materials. Furnish a complete detection system including radar presence detector, cabinet interface, and necessary mounting hardware approved or provided by the manufacturer. The cabinet interface will provide communication, power, and surge protection for four (4) detection units. The cabinet interface will provide ethernet connectivity and an SDLC port. Furnish radar detection cable as specified and approved by the manufacturer of the radar detection equipment.

The radar presence detection system is used to detect and report presence for vehicles within a 90-degree field of view with a range of 6 feet up to a 140 foot arc from the sensor.

Furnish a detection system that holds a call for presence while a vehicle remains in the detection zone and operates in a temperature range of –40 °F to +165 °F (-40 °C to +74 °C) and maintains accurate performance in all weather and light conditions. The radar presence detection system will provide at least 8 RF channels so that multiple units can be mounted in the same vicinity without causing interference between them.

Furnish any additional cable, terminations, jumpers, connectors, and any miscellaneous equipment required to make this a complete and functional system as part of this item.

The radar presence detection system is required to have automatic and manual configuration of lanes, stop bars, and zones. The radar detection system must include software for saving detector configurations and firmware upgrading.

Ensure that a factory representative of the radar detection system manufacturer is present at the traffic signal turn-on to give technical assistance in setting up, checking out, and demonstrating that the system meets functional and operational requirements.

C. Construction Requirements. Mount the radar detection units as approved by the manufacturer at the locations shown on the plans. Connect the radar detector to the detection cable as approved by the manufacturer and install the radar detection cable as a single continuous run from the traffic signal cabinet to each radar detector connection. Splicing the radar detection cable is not allowed. Seal any wire entrance holes drilled in the signal standard as approved by the project manager.

D. Method of Measurement and Basis of Payment. Payment is for furnishing and installing each radar detection sensor, power/communication cable, and mounting hardware. Also include equipment required in the cabinet, software, and all items necessary for a complete and functional system.

Furnish a detection system that holds a call for presence while a vehicle remains in the detection zone and operates in a temperature range of -40°F to +165°F (-40°C to +74°C) and maintains accurate performance in all weather and light conditions. Furnish a RADAR presence detection system that provides at least 8 RF channels in order that multiple units can be mounted in the same vicinity without causing interference between them.

Include any additional cable, terminations, jumpers, connectors, and any miscellaneous equipment required to make this a complete and functional system as part of this item.

The RADAR presence detection system is required to have automatic and manual configuration of lanes, stop bars, and zones. The RADAR detection system must include software for saving detector configurations and firmware upgrading.

Ensure that a factory representative of the RADAR detection system manufacturer is present at the traffic signal turn-on to give technical assistance in setting up, checking out, and demonstrating that the system meets functional and operational requirements.

E. Construction Requirements. Mount the RADAR detection units as approved by the manufacturer at the locations shown on the Plans. Connect the RADAR detector to the detection cable as approved by the manufacturer and install the RADAR detection cable as a single continuous run from the traffic signal cabinet to each RADAR detector connection.