Curiosity Lab at Peachtree Corners

Sensor Infrastructure
As a part of the Curiosity Lab test track development, smart poles with cameras and dedicated short-range communications (DSRC) devices are installed along the 1.5-mile route. In total, there are 16 cameras and 4 DSRC roadside units. There are also smart poles located throughout the corridor with fiber optic network connectivity and power connections as well as a 5G wireless network. Figure 1 shows the exact locations for smart poles, cameras, and DSRC roadside units.

Figure 1 Map of Curiosity Lab Sensor Infrastructure
**Dedicated Short-Range Communications Roadside Units**

There are 4 DSRC devices installed covering the length of the corridor (Figure 2). They are BlueTOAD DSRC Roadside Units manufactured by TrafficCast International Inc., with 5.9 GHz communication system and Bluetooth connectivity. For more information, visit [http://trafficcast.com/spectrarsu/index.html](http://trafficcast.com/spectrarsu/index.html). On-board units are not provided.

![BlueTOAD DSRC Roadside Unit](image1)

*Figure 2 BlueTOAD DSRC Roadside Unit*

**Cameras**

There are 16 cameras with video feed that is transmitted to a centralized location (Figure 3). The video is stored for 15 days. If longer storage duration is required, arrangements will be made on a project-by-project basis or by providing storage capability. A secure connection to download video recordings will be provided by Curiosity Lab.

![Axis Camera](image2)

*Figure 3 Axis Camera*
Smart Poles and Project-Provided Sensors
Each smart pole location has power and network connections (Figure 4 and Figure 5). Project-provided sensors can be installed at the smart pole locations with prior approval from the City of Peachtree Corners and Georgia Power. Georgia Power will install such sensors. Please submit your device specifications to ensure proper integration into the sensor suite architecture.

Figure 4 Smart Pole Installation

Figure 5 Smart Pole Camera and Power Connection
**Autonomous Vehicle**
Curiosity Lab and Georgia Tech WILL NOT provide an autonomous vehicle. However, if the proposed project has access to an autonomous vehicle(s), it can be deployed on the test track and use the separate right-of-way (Figure 6).

*Figure 6 Rendering of Curiosity Lab Cross Section*