10 SmartSensor HD Install Tips

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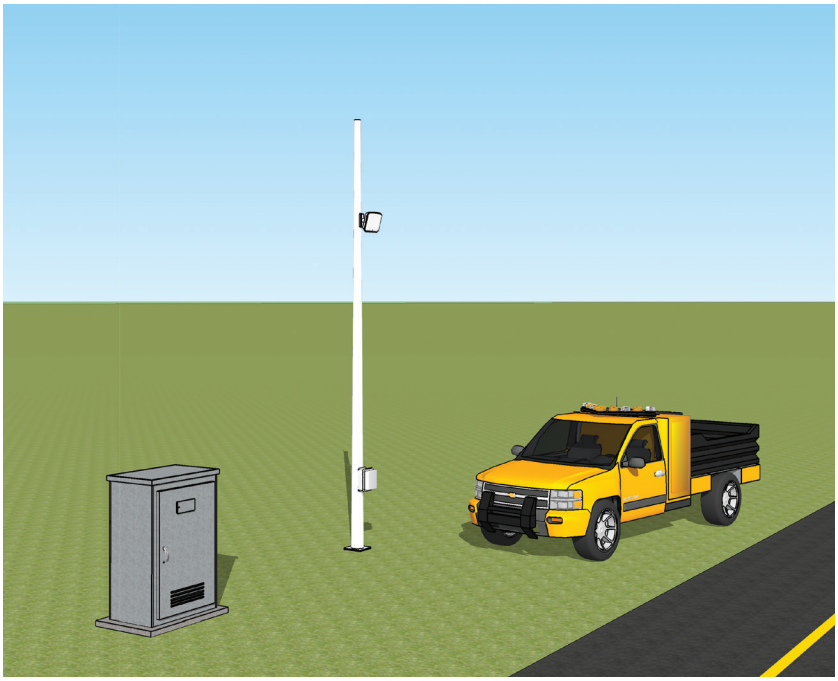
The SmartSensor HD gathers accurate detection data from up to 22 lanes of traffic. With its nonintrusive placement and its helpful alignment and configuration software, the SmartSensor HD is quick and easy to install. Following the 10 installation tips below will ensure you get the best possible performance from your sensor.



1. Know your purpose

The SmartSensor HD improves many aspects of traffic management, gathering data for a host of different applications:

- Count stations
- Congestion alerts
- HOT lanes
- Speed maps
- Ramp metering
- Trip times
- Incident management
- Variable speed limits
- Work zone management

How you install the sensor will depend on the applications you're implementing.

2. Know where your sensor will go

Once you've decided the general area your sensor will be installed in, assess the area to see if there's any existing infrastructure you can take advantage of. Using existing poles and/or power sources for your installation

will spare you the expense of putting them there yourself.

Keep in mind that the pole you use must fall within acceptable offset requirements. If no poles fit the requirements, you will need to have one placed on the site.

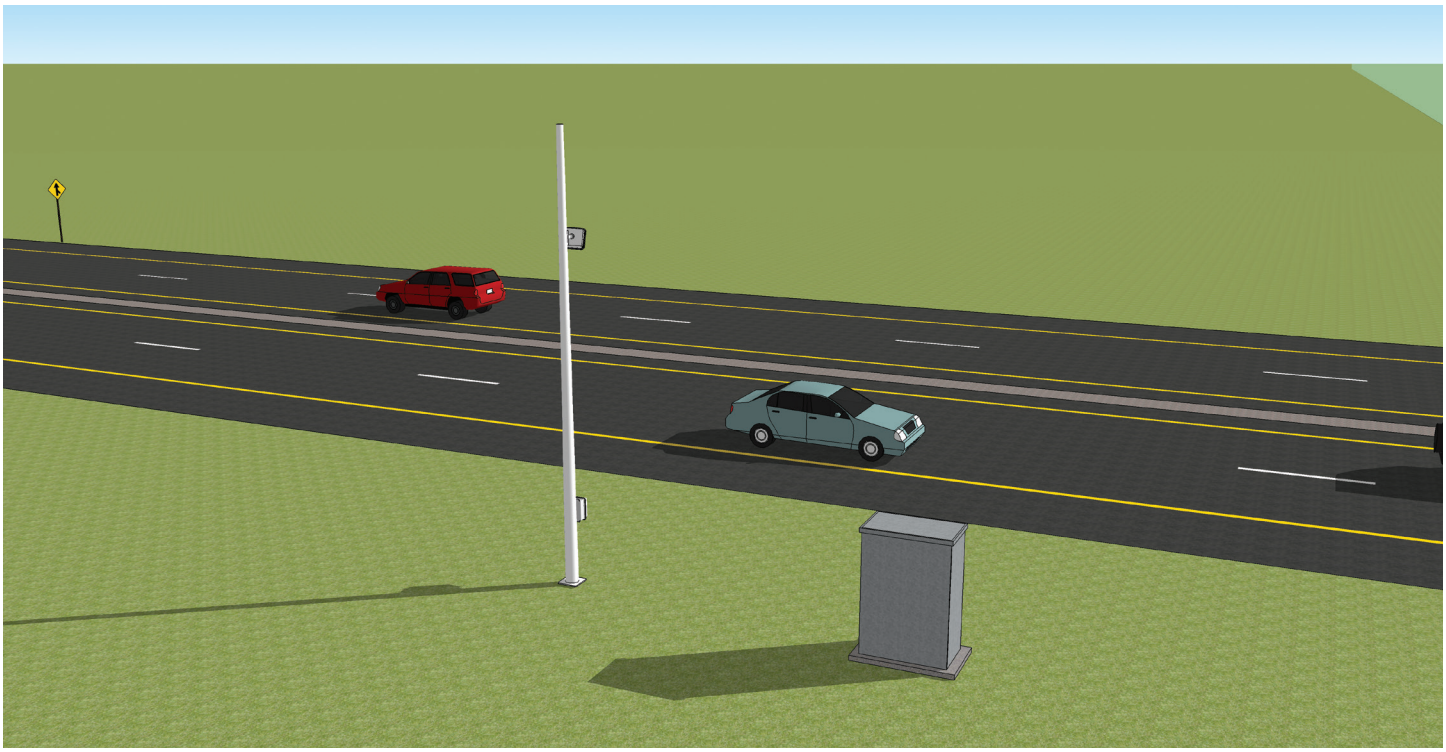
3. Come prepared

Make sure you have everything you need before you go to the installation site.

- The SmartSensor HD and mount, plus Click equipment and cables
- Bandit clamping system for fastening the mount to the pole
- A basic toolkit, including a screwdriver, multimeter, wire stripper and crescent wrench
- Pertinent documentation
- Draw wire or similar equipment for pulling the cable through conduit
- Multiple ways to connect to the sensor, such as serial cables and a USB to RS-485 converter (it is recommended you come prepared with multiple means)
- Laptop or PDA with SmartSensor Manager HD installed
- Bucket truck

4. Don't worry about lane closures

Many traffic detectors must be placed in or under the asphalt, meaning that installation and maintenance require costly, inefficient and dangerous lane closures. But the SmartSensor HD is an above-ground, nonintrusive detector, so the installation process keeps your traffic flowing and your personnel out of the road.



5. Don't worry about maintenance and adjustments

Once the SmartSensor HD is installed and aligned properly, you're done! Unlike other traffic detectors, Wavetronix sensors require almost no maintenance: they are unaffected by road damage or resurfacing; they don't need to be cleaned or tuned; and they last for years.

6. Power your sensor

Along with the sensor itself, you're going to need a cabinet with the power, surge, and communication devices to support your installation. The SmartSensor HD, and all the devices in the cabinet, run off of 24 VDC power. You have several options for power:

- If there's already DC power coming into the cabinet, you just need surge devices to make sure that power is clean.
- If there's AC power coming into the cabinet, you'll need an AC to DC converter.
- If your installation is remote enough, you may want to consider an alternate power source, such as solar panels.

DID YOU KNOW

Wavetronix offers preassembled cabinet systems ready to power, protect and connect your installation right out of the box. These end-to-end systems simplify the ordering and installation process because they arrive prewired and are tailored to meet your needs.

7. Connect your sensor

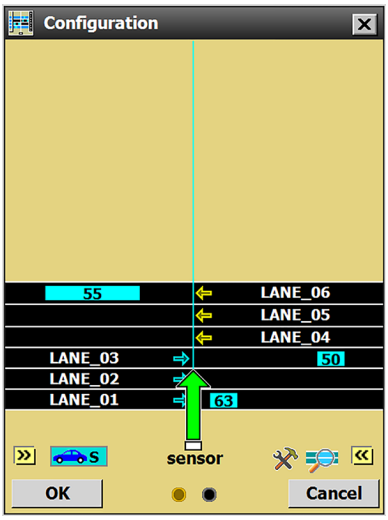
You need to decide how you're going to access the data the sensor is collecting. For a count station or similarly remote installation where you're going to manually download the data in person, you may need a short-range communication device (e.g. Bluetooth). If you'd like to be able to connect to the sensor from your TOC, however, you're going to need a communication device in the cabinet that will send your data via a long-distance medium such as Ethernet, fiber or radio.

8. Protect your sensor

It's important to protect your sensor and your cabinet from surges coming from the power source or any underground cable runs. Use a circuit breaker and a power surge protector in your cabinet to protect it from surges from the power input. If you have an underground cable run—for instance, from the cabinet to a pole-mount box directly beneath the sensor—put a surge protector on either end of the cable run to protect both the cabinet equipment and the sensor from any surges on that cable.

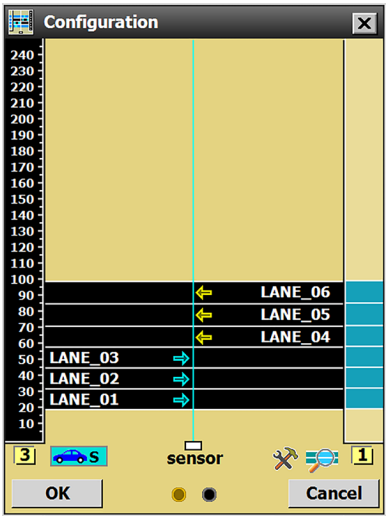
9. Align your sensor

Before you leave the installation site, make sure the sensor is aligned properly. First, point it perpendicular to the flow of traffic and down toward the center of the lanes of interest. Then connect to the sensor with your computer and use the alignment tool found in the SmartSensor Manager HD software to verify that you've aimed it correctly.



10. Set up your lanes

The last thing to do in the installation process is to configure your lanes. SmartSensor Manager HD's user-friendly auto-configuration process will detect passing vehicles and determine where the lanes in the roadway are. Once this is completed, you can use the manual configuration options to make adjustments, if needed.



DID YOU KNOW

The SmartSensor HD collects much more than simple vehicle presence data; its innovative dual-radar design also detects speed, 85th percentile speed, volume, occupancy, headway, gap, and size classification.

The user-friendly software, SmartSensor Manager HD, allows you to choose whether to collect this data for each vehicle that passes or for set intervals of time.