HOT Lane AVC/LPR

Determine Class and Read the License Plate Image

The TDS design for the combined violation enforcement and vehicle classification system for an HOT lane tightly integrates an LPR camera system with two laser scanners. This solution provides 100% vehicle image coverage of the roadway including vehicles that are straddling lanes.

A high-resolution rear color camera and associado oted illuminator will be provided for each HOT lane in order to capture images of the vehicles license number plates passing through the tolling zone. The camera provides a field-of-view that spans an entire lane with 1 foot of overlap on each side, ensuring that an entire plate is captured in at least one image in the case of a vehicle straddling 2 lanes.

The proposed camera system includes an image capture processor. The Linux based processor will host the TDS License Plate Reader (LPR) software which provides the suite of functions and interfaces involved in controlling the rear camera, performing license plate OCR, and uploading data and images to the Image Server as required. Each processor will receive triggers from the Lane Controller over a dedicated Ethernet subnet, or directly from the TDS AVC application running on the same processor.

- Designed for Single HOT Lane Locations
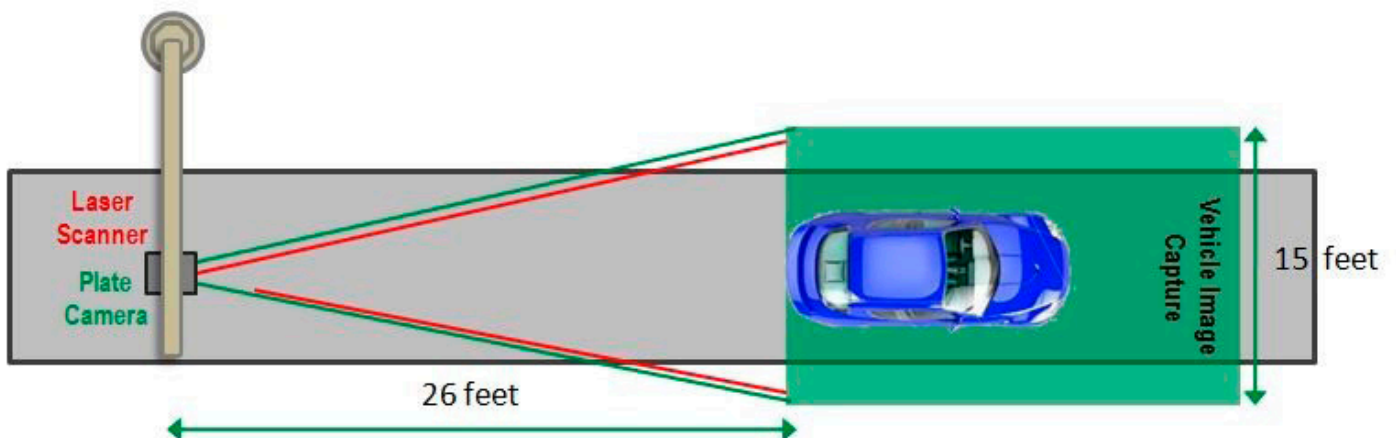- Single Rear Camera and Dual Lasers
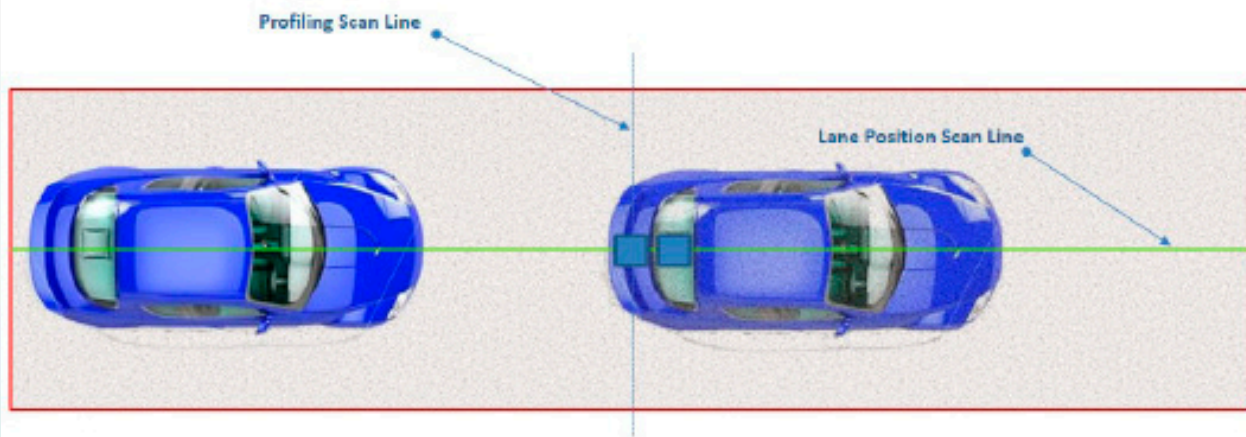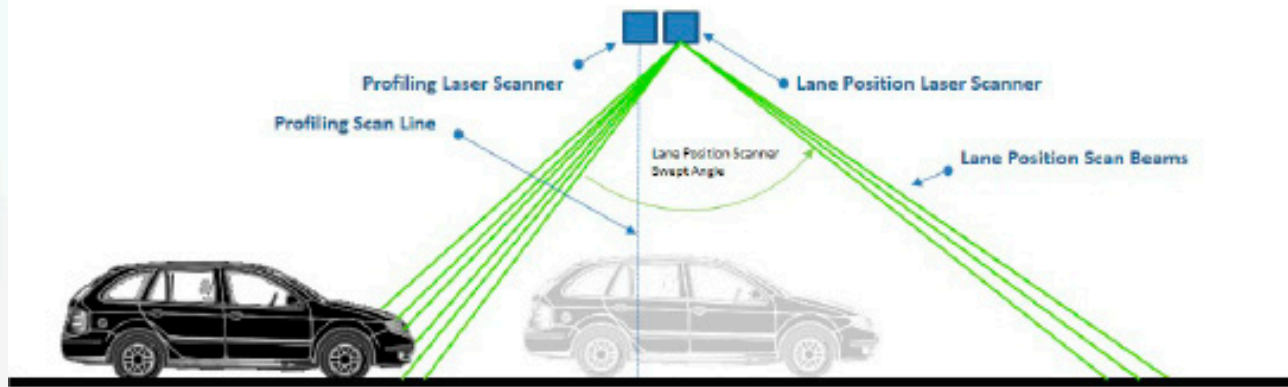- All Lighting Conditions
- Handles Motorcycles
- Classifies the Vehicle into Agency Class Table
- 0 to 100 MPH
- 2200 Vehicles Per Hour
- COTS Equipment

Profiling Laser Scanner   Lane Position Laser Scanner
Profiling Scan Line   Lane Position Scanner Swept Angle   Lane Position Scan Beams

Profiling Scan Line   Lane Position Scan Line

The two scanners together provide the ability to:

- Identify start and end of vehicles.
- Provide a vertical profile of the vehicle.
- Provide the height and width of all four wheel vehicles based on the vertical profile.
- Provide the length of the four wheel vehicle
- Identify motorcycles based on width and height of the profile.
- Provide triggering for the camera system.

Camera System   **Illuminator**
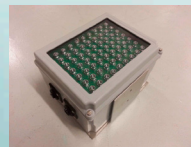
Laser Scanner   **Industrial PC**

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TDS
TRANSPORT DATA SYSTEMS