ITS Adaptive Application

Wavetronix has been working for years to optimize interstate traffic flow. Our reliable controlled access roadway detection has proven to be accurate and effective in measuring traffic flow. Then our Command product paved the way for Operation Center management by collecting real-time data over IP; Command allows for real-time reports, congestion alerts, trip times, and data conversion.

Often it is possible to divert traffic flow to arterial roads through an adaptive system. In some areas ITS engineers have created signalized frontage roads that run parallel to the controlled access freeway. Wavetronix has created an adaptive system to improve flow by using these frontage roads; the system involves the SmartSensor HD and the Click 513.

Wavetronix’ SmartSensor HD accurately detects vehicles on a per vehicle basis; this type of detection allows for quick and accurate calculations of occupancy, speed, and volume. In this system, the sensor sends the Click 513 user-configurable interval data. The Click 513 compares the detected interval data to a set of predetermined speed, volume, and occupancy threshold value and activates a digital output when the data exceeds these threshold values. These predetermined speed, volume, and occupancy thresholds, as well as the interval length, are configured by the user. Once the threshold is exceeded, the digital output is activated and the message sign is turned on. The message sign communicates to approaching drivers that there is congestion ahead and tells them to exit the controlled access roadway to proceed on the frontage roads. Drivers following the instructions of the sign will then divert to less congested roadways.

Messages boards can also be used on the frontage roads telling drivers the congestion has dissipated and it is recommended to proceed again on the controlled access roadway.

Setting up the Click 513

See the Click 513 Quick-reference Guide for information on setting up the Click 513.