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Emergency Warning Video System



Many state DOT's employ loops; piazo sensors or magnetic sensors to estimate traffic flow on interstate or arterial highways. Typical remote installations involve the use of solar power panels to charge the batteries that run the counter devices. Information from all the lanes on both sides of the highway is collected at a local monitoring station that is housed in a weatherproof cabinet installed at the side of the road. A modem is provided which connects to a standard analog POTS telephone line installed to this remote site.

These remote sites may be polled from a central monitoring station. A report is generated which indicates if the traffic is moving normally at each remote site. Unfortunately, when the sensor indicates that the traffic is not moving normally the operator cannot tell if the results are due to the fact that there are no vehicles on the highway, the vehicles are motionless, or if the sensor is malfunctioning. In locations, which face weather conditions severe enough to cause public evacuation of an area, the missing information is critical.

Low cost video cameras installed at highway counting stations will provide accurate information concerning the condition of the traffic during evacuation. At several locations in Florida, ATD Northwest recently installed digital video systems, which transmit color video images to a central control station over the same PSTN standard phone lines that are used to poll the traffic sensors. Thus, the condition of the traffic on the highway may be verified at any time through the use of a visible image. Receiving units are provided to both DOT and Emergency Management personnel. It is possible to call up an image from each site from any receiving station located in the United States. Florida's DOT is one of the forward thinking transportation agencies in the country willing to try new solutions to old problems. This project certainly is an innovative approach to emergency management.

Some states have conveniently installed emergency phone units at various locations along remote highways. These units often use solar power or are connected to local power sources. Some units are wireless and are connected to the nearest cell phone tower. It is possible to install one of the low cost video cameras at some of these sites to provide highway data via phone line video transmission units.

It is not necessary to monitor the sites at all times. When data is needed, a simple phone call from any monitoring location provides instantaneous data. It must be remembered that if a site is in use by one agency, it will preempt other organizations from monitoring the site until the first user terminates the call. The image may be recorded in a computer or on a standard time lapse VCR at any monitoring location. Time, date and location is provided for each site. The recorded information provides an excellent means for gaining citizen and media support for emergency management projects, for conducting before and after studies, for justifying expenditures, and for safety analysis.

For instances when the need for video monitoring can be determined in advance, ATD Northwest offers a pole-mounted, battery powered video archival system.