Traffic is backed-up due to a crash up ahead. You are late for an appointment. If you only had known about the accident before you passed the last intersection. What are you going to do now?

Counties and cities have tried to address traffic congestion for many years. And the costs of congestion to counties and their residents are enormous.

A recent report from the Texas Transportation Institute (TTI) estimates that congestion already costs Americans $63.1 billion a year and is getting worse. Factoring in today’s fuel prices adds another $1.7 billion per year.

With environmental and financial factors constraining additional highway construction, Lake County, Ill. was searching for new ways to relieve congestion. The county, in the northeastern corner of Illinois, has a current population more than 600,000 and is expected to grow by another 200,000 by 2020.

It identified a large number of county roads and intersections as being over capacity. The Lake County Division of Transportation (LCDOT) recognized that trying to alleviate the congestion with additional lanes and intersection improvements would fail to fully address the congestion problem.

LCDOT applied for and was awarded Federal Highway Administration (FHWA) funding to deploy an Intelligent Transportation System (ITS) to help mitigate increasing congestion in the region.

This was the birth of the “PASSAGE” program, developed through the coordinated effort of the Lake County Division of Transportation, Illinois Department of Transportation (IDOT), Illinois State Toll Highway Authority (ISTHA), the regional Emergency Telephone System Board (ETSB) and other local municipalities.

**What Is PASSAGE?**

PASSAGE, which received a 2009 NACo Transportation Achievement Award, is an ITS program designed to provide motorists with real-time traffic congestion information when there are crashes or construction activity. These events are communicated through the Police Department’s Computer Aided Dispatch (CAD) system that is sent directly to the Transportation Management Center (TMC), then communicated back to highway users via www.lakecountypassage.com, PASSAGE Highway Advisory Radio 1620-AM, and variable message signs. Using a fiber-optic network, CAD coverage, congestion segments, and cameras, PASSAGE will eventually cover all of Lake County.

A key component of PASSAGE is the TMC, which opened in February 2006.
The 4,700-square-foot facility houses technology and staff needed for the PASSAGE program.

**How PASSAGE Works and Why It’s Important**

PASSAGE combines technology and communications to improve traffic flow and manage traffic incidents on arterial roads. This is important because the county has limited resources to invest in congestion mitigation. “The county is limited to investing about $22 million annually for road construction projects and it can cost as much as $4 million to build one mile of new roadway,” said County Board Member Diana O’Kelly, chair of the Public Works and Transportation Committee.

LCDOT partnered with key state agencies and local communities to interconnect traffic signals and expand the system. In addition, an important aspect of the program is the coordination among other significant partners including law enforcement and fire departments.

“Our operators at the Transportation Management Center receive traffic-related information from the Lake County Sheriff’s 9-1-1 computer-aided dispatch program that alerts them to traffic crashes, stalled vehicles and other incidents that would impede traffic flow,” said Carol Spielman, former chairwoman of the Lake County Board’s Revenue, Records and Legislation Committee. “This allows them to adjust traffic signal coordination to keep traffic flowing as efficiently as possible.”

Officials noted that the cameras used in the PASSAGE program are not used by law enforcement to catch red-light runners or speeders, nor is the video recorded.

**Program Costs and Funding**

The PASSAGE program is being deployed in phases, each phase making optimal use of existing infrastructure by tying together communications elements owned by multiple agencies. The first phase involved the opening of the TMC, field interconnects and new ITS field devices. The total cost for phase one was $6.3 million.

The second phase included additional ITS field devices for more roads, more communications, interconnections and central system upgrades. The total cost for that phase is approximately $5.6 million. Initial planning has begun for the next phase.

According to Lake County Board Chairman Suzi Schmidt, Sen. Dick Durbin (D-Ill.) and Rep. Mark Kirk (R-Ill.) negotiated $3.6 million in federal funding toward the cost of the initial phase of PASSAGE. “Intergovernmental cooperation was crucial in getting this transportation management center constructed and will continue to be important as we develop and expand our intelligent transportation system throughout the county,” Schmidt said at the opening of the TMC.

An additional $3.2 million in federal funding was secured to begin the second phase. The federal share for the first two phases was around 60 percent through earmarks. The county match, 40 percent, came from the regular county highway capital program funds.

Even in its early stages, PASSAGE has already been providing a number of important benefits to the motorists of Lake County. That has been seen through the following:

- interconnection of traffic signals throughout Lake County
- engineers using the cameras and fiber-optic tools to review and fine tune highway operations while reducing the need for site visits
- processing information on 152,875 events and providing traveler information for 14,261 events since March of 2006
- the PASSAGE Web site that contains congestion segments allows motorists to view congestion hot spots along its 85-mile long fiber optic network
- the traffic signal system response plans that have been developed allow operators to quickly adjust individual signal timings in response to significant roadway events thus reducing drivers’ vehicle-hours, emissions, fuel consumption and number of stops.

The PASSAGE program supports improved coordination between the Lake County Division of Transportation and local emergency response providers. This aspect of the program has been very favorably received by the Lake County Sheriff’s 9-1-1 dispatch center for the enhancements that it provides to its command and control capabilities.

More information on the Lake County’s PASSAGE project is available at www.lake-countypassage.com. For more information on the NACo project or to submit information on other county based congestion management programs, contact James Davenport at jdavenpo@naco.org or 202.661.8807.