

THE EDGE is a Bulletin prepared by TEC Engineering, Inc. presenting updates on Recent Developments within TEC to Business Communities, Clients and the General Public.

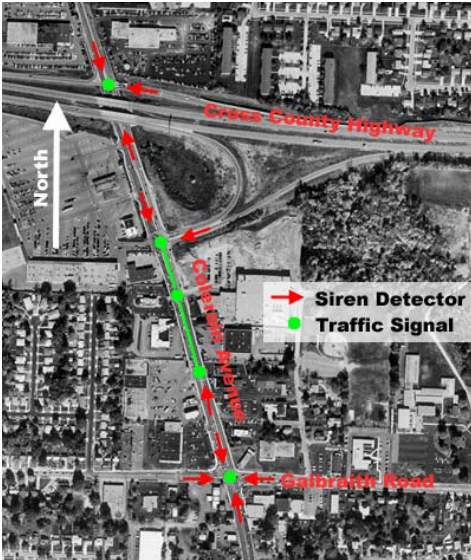
**TEC deploys AIRS System on Dixie Highway!**

TEC has successfully deployed the 2<sup>nd</sup> U.S. application of the Accident Incident Recording Software (AIRS) on Dixie Highway and Kenton Lands Road in Northern Kentucky. This innovative software has been installed to capture accidents and near accidents to video tape and to determine possible design improvements.

For additional information, please visit:  
<http://www.teceng.com/news/AIRS.pdf>

**TEC SPECIALIZES IN THE FIELDS OF:**

- TRAFFIC ENGINEERING**
- TRANSPORTATION PLANNING**
- HIGHWAY & ROADWAY DESIGN**
- LIGHTING DESIGN**
- SURVEYING**
- INTELLIGENT TRANSPORTATION SYSTEMS (ITS)**
- TRAFFIC SIGNAL INSPECTION**



◆ **AUTUMN 2004** ◆

**~EMERGENCY PRE-EMPTION SYSTEMS~**

A common problem for emergency vehicles is delay encountered at signalized intersections as a result of red lights and traffic congestion. Drivers have difficulty clearing a path for emergency vehicles when their travel is restricted by a red light, especially during periods of high congestion.

To combat this problem, systems have been developed to alter the traffic signal timing to favor the emergency vehicle. Such systems, called Emergency Vehicle Preemption, detect the approach of the emergency vehicle and make adjustments to the traffic signal to help clear a path. After the emergency vehicle has passed, the traffic signal quickly returns to normal operation.

In conjunction with Wagner Smith, TEC Project Managers Bob Fluharty, P.E. and Aaron Littman, P.E. have been testing such a system on Colerain Avenue in the vicinity of Ronald Reagan Cross-County Highway. Five signalized intersections from Galbraith Road to the Westbound Cross-County Ramps will be outfitted with emergency vehicle detectors, and improvements in emergency vehicle response times will be measured. If the system produces significant gains, it may be extended elsewhere along Colerain Ave.

**System Types:** Two types of emergency vehicle detection technology are currently available. Sonic systems consist of sonic detectors at signalized intersections that respond to any standard emergency vehicle siren. The sonic system is suited for routes that are used by multiple emergency response organizations and where a broad range of service is desired.

Infrared systems use a combination of infrared emitters mounted on authorized vehicles and infrared detectors at signalized intersections. The infrared detectors only respond to authorized emitters. The systems can respond under silent vehicle operation and offer priority management tools. The system can be expanded to operate with public transit while still providing priority for emergency vehicles.

The sonic system was chosen for use on Colerain Avenue due to the variety of emergency vehicles traveling from various political districts. As a result, no special emitter equipment needs to be installed on the vehicles for the system to be effective.

Both systems include small white confirmation lights on each detected approach to the intersection. These lights communicate the status of the system to the emergency vehicle driver and to the public. The signal lights normally remain dark, but are energized when the system detects an emergency vehicle, to let drivers know the system is responding. A flashing white light means that the system has detected an emergency vehicle approaching in that direction. A steady white light means that, although the system has detected the vehicle in that direction, it is responding to another emergency vehicle on another approach. The signal lights go dark after the emergency vehicle has cleared the intersection, and the signal operation returns to normal.

For more information, please visit: <http://www.teceng.com/colerain/>

**~WELCOME ABOARD~**

◆ A warm welcome to TEC's newest staff member, senior planner, Susan Roschke, PhD!

**PLANNING SERVICES!**

Transportation and community planning are inextricably intertwined. The transportation system serves as the spine of the community, contributing to growth, stability, and function. TEC appreciates the importance of good planning and is pleased to announce the newest member of our staff, Senior Planner, Susan Roschke, PhD. Dr. Roschke has had 16 years of community planning, research, and teaching experience. Her experience and advanced degrees emphasize community planning, policy, social and environmental issues, and research methodology. As the Planning Director of a city of 21,000, Dr. Roschke developed a new comprehensive plan, bringing together city officials, community leaders, and residents to facilitate idea sharing. The plan outlines policy and development directions for the next several years. As part of plan implementation, she established a task force of residents and city officials to update the city's zoning code. She also organized and led a number of community meetings and events on issues of interest or concern to the community. A progressive work plan she put together for a newly-formed citizen board is directed toward improving the tree cover of the community as well as increasing appreciation for the many values of trees. General planning experience also includes small town comprehensive plans, downtown revitalization, reuse of brownfields, zoning analysis, streetscaping, and diversity.



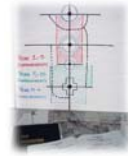
**Susan Roschke, PhD**  
**Senior Planner**

In addition to transportation studies, TEC now offers additional widespread planning expertise. This includes:

- **Comprehensive planning**
- **Code updates and development**
- **Community surveys and meetings**
- **Brownfields**
- **Streetscaping**
- **Environmental justice**
- **Downtown revitalization**

*"We don't do this stuff in a vacuum. Transportation planners are most effective when they understand housing trends, urban and suburban revitalization techniques, principles of placemaking, ecosystem or social diversity, and any number of 'non-transportation' subject areas that shape travel patterns."*

-Whit Blanton, AICP, Chair, APA Transportation Division



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**OUR MISSION IS TO PROVIDE AN EXCELLENT SERVICE TO OUR CLIENTS, MAINTAIN A PROFESSIONAL WORKING ENVIRONMENT FOR OUR STAFF, AND BE A PRODUCTIVE MEMBER OF OUR COMMUNITY.**

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