

Lexington-Fayette Urban County Government
DIVISION OF TRAFFIC ENGINEERING
FACTS & INFORMATION 2014

The Division of Traffic Engineering offers the following facts:

- ✓ There are 380 traffic signals, 19 reversible lane use control signals and 106 school area flashers in Fayette County. Nine traffic signal technicians handle the maintenance activities of all traffic signals in Lexington. New traffic signal construction is contracted out to local companies capable of heavy construction activities. Today the materials, equipment, and installation of one traffic signal can cost as much as \$160,000. A fully equipped signal cabinet alone costs \$14,000. The value of all traffic signal related equipment infrastructure is almost \$33 million which includes \$6 million of installed fiber optic cable.
- ✓ The Fiber Optic Cable Installation program is in its 9th year of a 10-year city-wide effort. Since the program's beginning, 90 miles of fiber optic cable has been installed along arterial roadways and in the downtown. Traffic signal communication and control and video and data transmission benefit from this advanced technology. Other departments and divisions of local government such as Police, Fire, Senior Citizen's Center, and Parks and Recreation benefit from the fiber optic cable installation by receiving much improved computing and data transfer.
- ✓ The electrical consumption for the traffic signals in Fayette County cost \$93,000 during 2014. Nearly 11,000 traffic signal lens were changed to the light emitting diode (LED) lens which is much brighter and more energy efficient. The change out results in an electrical savings of \$10,000 per month for the LFUCG.
- ✓ There are ~1,500 in-pavement vehicle detection loops at Fayette County traffic signals used for the detection of vehicles. Currently the division is responsible for maintenance of 354 video vehicle detection cameras at 189 signalized intersections.
- ✓ Traffic surveillance cameras (currently 80 are installed) are located at or near the heaviest traffic volume intersections in Fayette County. These cameras are used to monitor traffic flow and adjust traffic signal timing, and manage traffic incidents to assist emergency responders. The cameras are shared with the Division of Police, Fire, and Streets and Roads, to assist in incident response and with snow and ice removal efforts. They are also shared with the Kentucky Transportation Cabinet and local television stations.
- ✓ Interstates 64 and 75 have sixteen traffic monitoring cameras and six dynamic message signs are part of an important project that combines Homeland Security, Amber Alerts and Intelligent Transportation Systems.
- ✓ The division works closely with the Division of Police and Fire and Emergency Medical Services on traffic flow management in the community. Training is provided for all police sergeants and police recruit classes in the Traffic Management Center (TMC) to discuss the TMC capabilities and how the division traffic signal staff can assist in the management of traffic incidents.
- ✓ The staff works closely with the Fayette County Public School System and major shopping malls and industries, to adjust traffic signal timing during holidays, special events, and throughout the year. Analysis proves that traffic signal re-timing provides a 47:1 benefit-to-cost ratio in dollars saving in reducing stop delay, pollutant emissions, and fuel consumption.

- ✓ There are over 30,000 streetlights in Fayette County, which consume in excess of 2.0 million kilowatt-hours of electricity each month and cost \$5.8 million per year in operating and maintenance expense. The division is responsible for the design, authorization for installation, and placement of streetlights.
- ✓ The installation cost of streetlights could be as much as \$24 million if all were installed today. During 2013, the division authorized the installation of 111 streetlights on roadways within the community.
- ✓ There are more than 60,000 traffic signs along city routes and an additional 23,000 along state routes in Fayette County. The signs along city routes are valued at \$3 million. The division contracts the installation of traffic signs along city routes. In addition, the division provides needed signage to other LFUCG agencies.
- ✓ There are currently 14 streets and neighborhood areas being considered for traffic calming measures. There were 625 neighborhood and school traffic issues investigations conducted in 2013.
- ✓ There are approximately 4,283 streets in Fayette County. Almost 20 miles of new subdivision streets are added to the street system each year in Fayette County through new development and construction.
- ✓ Last year the division staff performed multi-way stop analyses at 15 intersections in the community. To-date, there are approximately 256 multi-way stop locations in Fayette County.
- ✓ A total of 20,000 hours of traffic count/radar data was collected during 2013. This data is used by several local and state agencies for planning a variety of traffic studies including the development of signal timing plans.
- ✓ The LFUCG authorized the installation and replacement of over 1,300 signs last year. On average, each sign costs about \$100 to replace. Many of these replacements are due to vandalism, routine maintenance, and vehicular accidents. The enhanced street-name sign program installed over 149 of the larger, more visible signs.
- ✓ The division has been recognized by several agencies and has received the following awards:
 - Traffic Engineering received the LFUCG Energy Efficiency Award;
 - Traffic Engineering received the LFUCG Safety Award; and the
 - 1st Place Operational Safety Award
 - American Public Works Association (APWA) – Kentucky Chapter Advanced Communication Network Technology Category Award Traffic Control Center 2009
 - National Incident Management Recognition by FHWA
 - APWA “Project of the Year” Award – Roadway Signage Category – Illuminated Street Name Signs - 2013