An issue on managing growth

Growing pains

One county’s experience with rural residential development

... by Lisa Harris

Pottawatomie County, in North-central Kansas, is fairly rural and has welcomed growth. However, a recent expansion of troops at nearby Fort Riley has caused a development surge that is exacerbating existing problems and causing concerns about road and infrastructure construction and maintenance. Pottawatomie County’s public works director, Leu Lowrey, shares his strategies for addressing this growth, and a few lessons learned along the way.

Country roads... take me home...

Country roads are taking home more and more people in Pottawatomie County these days, and that’s a problem. “In many cases these gravel roads used to carry just 40 to 50 vehicles per day. With the addition of several large subdivisions, the same roads are now carrying 700 to 800 vehicles per day and that has created safety and maintenance problems for the county.

Safety issues. Families are drawn to rural subdivisions, and with them come drivers not familiar with rural county roads. This has kept the county’s sign crews busy installing additional traffic signs to alert drivers to potential road problems.

The increase in roadway traffic generates

continued on next page ➤

KDOT and KCHA to work together to build executive skills at local road departments

Kansas Transportation Secretary Deb Miller and Kansas County Highway Association President J.R. McMahon sign a Memorandum of Understanding about KDOT providing road scholar courses. More on page 5.
Growing pains,  
continued from page 1

more requests to establish speed limits and other traffic control devices.

“Our office spends much more time researching traffic sign requests to see if they meet warrants in the Manual on Uniform Traffic Control Devices,” Lowrey said. He noted that even with established speed limits, enforcement is needed, too. Isolated speed zones in rural areas have always been difficult for sheriff’s departments to enforce.

Another safety issue related to the increase in traffic is where the county roads intersect the state highway.

“Access onto the state highway can be a problem during peak traffic in the mornings and late afternoon,” said Lowrey. “Major intersection improvements will probably be needed in the near future.”

Cost to maintain roads. Increased traffic is hard on gravel roads. Many communities elect to chip and seal roads in response to the public’s request to hard surface roads. But these roads are expensive to maintain.

“Our experience with chip and seal roads is that you see potholes in the first few years, and you fix those and reseal, then in the next 2-3 three years you skim patch 20ft. to 50ft. stretches at a time and reseal, the next 2-3 years you consider an overlay,” Lowrey said.

Pottawatomie County requires subdivisions to pay for their hard surfaced roads through the formation of benefit districts. “Rather than allow chip and seal roads, we require 3 to 5 inches of paved surface. This type of surface requires less long term maintenance at taxpayers expense,” Lowrey said. The county has different road specs depending on the kind of road being paved, with collectors requiring a deeper base and asphalt layer than subdivision roads.

Paved roads are often safer, too.

“Residents in subdivisions generally work in town and drive on improved roads. They have a different expectations and driving habits than our long time rural residents,” Lowrey said.

Streets are not the only public works concern. When communities grow rapidly, it’s difficult to keep up with the demand for water and sewer improvements. Pottawatomie County operates both a water district and sewer district. The recent growth in the county has used up all of the available capacity with the sewer treatment plant. “We had anticipated the capacity to last approximately 10 years and it was used up in just two,” said Lowrey.

Advice for handling growth  
Create standards and procedures. Lowrey recommends developing procedures to let developers know what to expect and help the community grow in a more cost-effective way. His county has comprehensive design specs for all roads, including gravel roads, and all road plans must be approved by a licensed engineer. Specs include road width, right-of-way width, ditches, curves, vertical alignment, culvert placement, and seeding. The county has standards for water and sewer provisions, too. The county routinely checks sites to see that specs are followed.

Stick to your guns. While Lowrey concedes that sometimes there are reasons to bend the rules, he encourages his commissioners to make that a rare occurrence. “We need to have control over what is going on out there,” he said.

Develop objective criteria for evaluating road related requests from the public. Lowrey uses a point system with points awarded on existing traffic counts, projected traffic from undeveloped lots, truck traffic, economic development and accident history as some of the criteria. This helps remove some of the pressure for commissioners in selecting road improvement projects.

Anticipate the long-term effects of development in rural areas. Lowrey suggests to other communities that as soon as you can see where development is going, ask yourself how all the streets and sewer and water will be paid for. Look at both the initial costs of construction and anticipated ongoing maintenance. Lowrey also noted that there are hidden costs, like the need for more staff to inspect sites, handle new traffic concerns and review plans. Right now Lowrey said his county “has more situations and work than our department can handle.”

Lowrey said “if we had the chance to do it again, I wish we had assessed the total impact of growth, and planned better for it. We really wanted growth out there, and it happened fast. Now we’re dealing with some unexpected consequences.”

“It’s very difficult to figure out what’s fair in paying for all the maintenance and improvements,” Lowrey said. Long-time rural residents would not have needed the improvements without the extra development in their area, yet they also benefit from improved roads. Lowrey thinks a combination of special assessments and increased taxes is probably the most fair solution.

Work closely with your planning department. This is something Pottawatomie County has been doing for the last 10 years or so, and it has made a big difference, said Lowrey. “It’s just critical, really,” he said. “You need to understand each other’s needs; then you can work together to make things go a lot more smoothly for the county, and developers, too.”

Talk with peers who have some experience managing growth. Lowrey is grateful for the advice he has received over the years from other counties, like Johnson and Shawnee. Lowrey takes the opportunity to talk with peers at professional meetings. “That’s why I go,” he said. “I bring up problems I’m facing, and I know I can get a good conversation continued on page 4 ➤
Choosing the right median

. . . by Laura Snyder . . . . . . . . . . . . .

The developer of a new subdivision in your jurisdiction asks the county commissioners to add a raised median and a turn lane on a road in front of the subdivision. The commissioners consult you, and but you have concerns about whether a raised median belongs on this road, which has a speed limit of 55 miles per hour.

To answer this question you will need to know when medians are called for, and if so, which type to use—raised or flush. We’ve consulted two sources for tips: the Federal Highway Administration’s (FHWA) guidebook, Flexibility in Highway Design, and the well-known Green Book of the American Association of State Highway and Transportation Officials (AASHTO).

Standards and guidelines
While some states have developed their own guidelines, Kansas relies on AASHTO’s Green Book as a guide to medians, in addition to engineering judgment. Factors such as traffic speed and environment might influence an engineer’s decision to differ from the Green Book, said Richard Adams, road design engineer at KDOT.

Medians serve two purposes, according to the FHWA guidebook. They separate opposing flows of traffic and provide storage and protection for pedestrians and for vehicles preparing to turn left, make a U-turn, or cross traffic.

According to AASHTO’s Green Book, raised medians, which are six- to eight-inch high sections of concrete that divide traffic, should be used on low-speed* arterial streets. You can use raised medians on arterial streets when you want to prevent left turns in the middle of the block.

One of the advantages of raised medians is that they are visible in snowy weather. Raised medians also provide a place for pedestrians to wait while crossing the street, as well as a place to put signs.

Unfortunately, raised medians can’t prevent cross-median vehicle

*Although AASHTO’s Green Book uses the terms “low speed” and “high speed,” there is no definition for either in the Green Book, leaving “low speed” and “high speed” up to engineering judgment.
crashes unless a barrier is added, as the Green Book suggests. Hitting a raised median at a high speed can cause a driver to lose control of his or her car, causing it to overturn or become airborne. For this reason, the Green Book does not recommend raised medians for roads with high-speed traffic.

Raised medians can also be difficult to see at night, unless lighting or retroreflective paint is added, and car headlights can cast shadows that conceal the curb as well as part of the adjacent lane. Although raised medians prevent midblock left turns, they cause an increase in left-turning traffic at the access points (and potential queuing problems), and an increase in U-turns.

Flush medians
Flush medians are mostly flat paved areas with painted stripes, and are usually either crowned in the middle to prevent water build-up or slightly depressed with a drain in the center. Designed so vehicles can easily cross them in case of emergency, the total height of a flush median should not be more than 6 inches.

Flush medians are more suitable for high-speed traffic. However, flush medians, too, can be difficult to see at night. Because they are flat, they are easily covered by snow. You can make flush medians more detectable by using a different, contrasting pavement texture, and by using reflective pavement markings.

AASHTO’s Green Book offers more guidance on medians, such as how wide a median should be, depending on the conditions, and where it should open.

Sources:
KDOT to provide five courses for Road Scholar Program

There is statewide agreement that training for county public transportation employees to develop technical and management skills will greatly improve efficiency for county government as well as the Kansas Department of Transportation (KDOT). To help achieve this, Secretary of Transportation Deb Miller signed a Memorandum of Understanding on Feb. 7, 2006, in Topeka with the Kansas County Highway Association to provide five of the 10 courses required for executive development in the Kansas County Road Scholar Program.

There are four parts to the Road Scholar Program, concentrating on technical skills, supervisory skills, executive development, and a county engineer certificate program.

Currently, the state’s road scholar efforts have been developed for county employees. In the future, the goal is for the program to also include city and state employees.

Secretary Miller said “By providing ... employees an opportunity to learn important skills, county governments can operate more efficiently and provide improved service to the traveling public.”

The cost is $35 to register for each level of the program and approximately $100 for each workshop. For more information or to register for the program, contact Rose Lichtenberg, Local Transportation Assistance Program, at 785-864-2594.

Source: KDOT Press Release 06-047.
Johnson County provides assistance to cities to assure continuity of road conditions

If you look down the road in this photograph, you would never know whether it is maintained by two different jurisdictions. However, in urbanized areas, major transportation corridors can cross several different government jurisdictions with different street maintenance resources and priorities. This can lead to changes in the condition of the roadway as it passes from one jurisdiction to another.

To address this situation, in 1983 the Johnson County Board of Commissioners adopted its County Assistance Road System (CARS) Program to promote interlocal cooperation between the county government and its cities in planning, maintaining, constructing and improving streets in Johnson County. The program was created jointly by city and county public works officials. The CARS program makes it easier for the county to provide financial assistance to cities in its jurisdiction to assure an adequate, safe, and integrated transportation network in developing and incorporated areas.

What is eligible
Major arterial roadways and some minor collector streets are eligible for the program, in any city in Johnson County. A project must be a proposed public improvement of a street, intersection, bridge, sidewalk or bikeway that is an integral part of the County’s major or minor collector roadway system. According to the CARS policy and provisions, minor collector routes are eligible for CARS participation if they carry an Average Daily Traffic (ADT) of at least 3,500 vehicles in the urban areas and 1,500 vehicles in suburban and outlying areas.

The application process
Cities must apply for each improvement project, and project applications must be received by the Johnson County Public Works Department by March 1st for consideration in the County’s 5-Year Plan or Fiscal Year Plan, both of which begin January 1st of the following year.

“The Public Works Department scores and prioritizes each application and then makes recommendations to the Board of County Commissioners,” says Brian Pietig of the Johnson County Public Works Department. The Board of Commissioners reviews the recommendations and decides which of projects have the highest priority for funding.

Priority projects are generally added to the Fiscal Year Plan and the 5-Year Plan includes the applications that meet CARS requirements but can wait until a later date for improvement or repair.

Projects are approved on a year-to-year basis and must be reapplied for each year that construction goes unfinished. Project continuations are considered priorities for the next Fiscal Year Plan.

Funding
Road construction can be an expensive endeavor with different costs involved. The CARS program was developed to help the Cities ease this expense. The current CARS program is $15.4 million dollars which is made up of all funds received from the state in the Special City & County Highway Fund, plus $3.4 million in property tax.

A project must be a proposed public improvement of a street, intersection, bridge, sidewalk or bikeway that is an integral part of the County’s major or minor collector roadway system.

Who pays, and for what are they paying? “The CARS program funds 50 percent of construction costs to eligible projects,” according to Pietig. However, the County will not reimburse any city for costs of land acquisition, right-of-way acquisition, utility relocation, legal costs, design engineering services, project administration, financing costs, taxes, licensing or permit fees, title reports, insurance premiums, exactions, recording fees, or other similar charges. Cities administer the projects and pay the contractor, then submit monthly bills to the county for 50 percent reimbursement.
Further information
Applications for the CARS program are due to officials in the Johnson County area at the beginning of February. They are also available for download via the Johnson County Infrastructure and Transport (JCIT) Web site, www.jocogov.org, in the projects section.

The program policies, procedures, and the different project bids are also available online. To learn more about this project and other transportation related programs in Johnson County, contact the public works department at kim.stephenson@jocogov.org, or call (913) 782-2640.

Source: www.jocogov.org

Cooperative streets in Minnesota

... by Lisa Harris .................

We found an interesting item on the internet regarding local governments sharing maintenance activities. Called "Cooperative Street Efforts," it is a chart published in April 2004 by the League of Minnesota Cities that shows cities that are cooperating with others in their maintenance activities, and what those activities entail.

Here are just a few examples: The City of Anoka provides street light maintenance for four other cities; Burnsville participates in joint purchasing with eight other cities for sealing and striping materials; the City of Canby does street sweeping for the county in exchange for road salt. Several examples of cost- or effort-sharing with the Minnesota DOT are also mentioned.

The chart makes for interesting reading and has good ideas for any size road department. To download the file, go to http://www.lmnc.org/pdfs/CoopStreetEfforts.pdf

... by Lisa Harris .................

[Here's information on five programs that can increase purchasing power for local governments—one national and four Kansas-based. Information on the national program comes from Gib Peaslee, manager of the LTAP Program for FHWA.]

U.S. Communities Government Purchasing Alliance

LTAP recently became aware of a national program that significantly reduces the costs of purchased goods. It’s called the U.S. Communities Government Purchasing Alliance.

Designed in cooperation with an advisory board of local government purchasing officials, the program competitively solicits products through a lead public agency, and offers contract prices to public agencies nationwide.

Currently over 14,000 public agencies participate in U.S. Communities, in all 50 states. It is available to all local governments, including townships, plus schools, state agencies, and non-profit agencies that support local and state governments. There is no cost to participate.

Products. U.S. Communities offers a variety of product lines and services on their contracts. The chart on page 9 shows a current list of their offerings, the lead public agency that executed each solicitation, and the supplier or suppliers awarded under the contract.

Advantages. Key advantages to local agencies are cost savings and confidence in products offered through U.S Communities. The program is managed by public purchasing professionals who work closely with public agencies to understand their buying needs. U.S. Communities is constantly expanding its product offerings to public agencies and acts as a strategic sourcing option for local government.

For more information and to become a public agency participant, visit http://uscommunities.org.

The Kansas Collaborative

The State of Kansas manages 1,000+ open-ended supply and service contracts. More than half are approved for use by local governments. The contracts can be found at: http://da.state.ks.us/purch/contracts/contract.asp

The site is searchable by contract title and keyword, and each listing indicates whether the contract can be used by a local political subdivision.

The search feature is a “work in progress;” it might take a few tries to find what you want. For example, if you are looking for paint for your road striping, you won’t find it under “paint.” You’ll find it under “pavement.” However, many products are easy to find, and a little extra effort searching for the others is worth the
KDOT research examines traffic safety, materials and infrastructure issues; reports are now online

... by Lisa Harris ............... 

The Kansas Department of Transportation funds research every year on traffic safety and performance of materials used in road maintenance and construction. Many of these projects are relevant to—and sometimes particularly targeted to—local governments.

These reports are now available for download through the KDOT Research Reports Catalog. The catalog provides access to electronic copies of the reports, and it is conveniently searchable.

The catalog is available at the Web address below. Reports can be searched by:

- topic,
- key word, or
- a range of dates published.

To test the site, I searched for reports published within the last 10 years with the term “rural” in the report name or key word. This produced a listing of 28 reports, with topics including the effects of bypasses on rural communities, effectiveness of two-ways stops at rural intersections, and effectiveness and design of passing lanes on rural highways.

This site has information of use to nearly every local government in Kansas. Check it out, and see what can be useful to you.

http://www.ksdot.org/burmatrres/kdotlib2.asp

KDOT recognized for roadside program

A program designed to preserve roadside prairies in Kansas has received national recognition from the Federal Highway Administration (FHWA). The Kansas Prairie Ecosystem Restoration, Education, and Conservation Initiative was recently recognized by the FHWA as an Exemplary Ecosystem Initiative. The initiative is a partnership between KDOT and other state agencies.

Kansas is home to three endangered ecosystems which include tall, mixed, and short-grass prairies. The prairie ecosystem initiative is helping restore and preserve portions of these ecosystems adjacent to Kansas’s roadways, while educating the public on the importance of these diminishing natural resources.

Project partners include the Kansas Department of Wildlife and Parks, Kansas Department of Agriculture, and the Audubon Society of Kansas.

New seed mixes and erosion control practices were developed for KDOT to more closely represent and protect vegetation found in the particular region during restoration processes and best suit the habitat needs of area wildlife.
New flagger poster

Kansas LTAP has produced a new shop poster with basic safety tips for flaggers. The poster is bright yellow-green to get your crew’s attention, and contains do’s and don’ts for effective and safe flagging. Two copies were sent to each city and county in Kansas and one copy was sent to each KDOT district and area office.

If your Kansas jurisdiction did not receive a poster, or if you would like an extra, order it on page 15.

State Use Facilities

The Kansas State Use Catalog has eight participating vendors that provide employment to individuals with visual and cognitive disabilities. Their products include office supplies, decals and hang tags, towels, air filters, signs, custodial services, and document imaging. The catalog is available online at www.ksstateuse.org.

KDOT Project Notification and Sharing Program

In our next issue we will provide information on a new program in Kansas that will make it easier for local governments to purchase road construction and maintenance materials from suppliers who will be in their area working on KDOT projects. The Kansas County Highway Association and KDOT have worked out a plan for KDOT to notify the counties about these projects well in advance. Counties will be asked to notify the cities in their jurisdictions. Look for more information in our next issue.
Bicycling in congested areas
What municipalities can do to help increase safety

While the number of bicycle-vehicle collisions in Kansas has decreased since the mid-90s, there were still 381 collisions reported in 2004. Development and resulting traffic congestion can increase the likelihood of a crash. Growing cities and counties are faced with a problem: How can they make it safer to bicycle in congested areas without inhibiting vehicle traffic flow?

Cities and counties in California with a longer history of bicycling under congested conditions have been aware of this issue and have been dealing with it much longer than Kansans. Here are some good tips and resources for making streets more bicycle-friendly recommended by Diane Stark of the Alameda County (Calif.) Congestion Management Agency, Rochelle Wheeler, Countywide Bike Coordinator for the Alameda County Transportation Improvement Authority, and the Web site www.bicyclinginfo.org.

Start with the MUTCD
First, it’s important to know what the Manual of Uniform Traffic Control Devices (MUTCD) requires. If your city or county decides to modify streets to accommodate bicycles, take a look at Part 9 of the MUTCD, which gives regulations and recommendations for bicycling facilities, including size and use of signs, markings, and bicycle lane treatments.

When to add a bike lane
Michael King, consultant for the Pedestrian and Bicycle Information Center (BPIC), has reviewed more than 20 bicycle facility selection guides from the U.S. and other countries. In his August 2002 guide, Bicycle Facility Selection: A Comparison of Approaches, he presents some strategies for selecting the appropriate counter-measures to bicycling in congested areas. While there is no one way to ensure safer roads for bicyclists, King’s guide suggests solutions that generally seem to work.

Under the proper circumstances bike lanes can help create safer roads, says Rochelle Wheeler. King’s guide cites standards used by the New Jersey Department of Transportation’s bicycle facilities design guide to decide when to use bike lanes. According to the New Jersey DOT, for roads with speeds of 35 miles per hour and under, a bike lane should only be used when the traffic volume is 10,000 and over. If the volume is between 1,200 and 10,000, a wide curb lane should be used. If the volume is 1,200 or less, there is no need for bike-specific facilities, as drivers and cyclists can easily share the road.

However, if the speed limit on the road is 40 miles per hour or above, a traffic volume of only 1,200 vehicles warrants a bike lane. Volumes of less than 1,200 require only a wide curb lane.

To accommodate a 5-foot bicycle lane, travel lanes for vehicles can be reduced to 11, 10, or even nine feet, Wheeler says.

Bike lanes can run along major streets, but Diane Stark recommends running bike lanes along less-congested roads that parallel major ones, when possible. However, Wheeler says the lack of crossing signals at intersections on parallel streets is a problem. She points out that while inexperienced bicyclists may appreciate using the parallel side streets, more skilled riders would prefer to ride on a busy street because the signals at the intersections make crossing easier.

Problems with bike lanes
If bike lanes are improperly designed, they can be dangerous. Situations to avoid are having the lane too close to parked cars (in the “door zone”), and
substandard lane width. Other hazardous situations and photos can be seen at: http://bicycledriving.com/bfz/bikelane.htm, a page posted by the Bicycle Transportation Institute.

Other options to increase safety
Although not included in the MUTCD, the Web site www.bicycling-info.org reports that some newer methods have been successful in making roads safer for bicyclists and drivers alike. One solution to the intersection problem is the use of bicycle signal heads, which signal bicycle-only movements at intersections.

When bicyclists arrive at the intersection, they would wait for a specialized bicycle signal to indicate their turn to cross, much like a pedestrian waits for the “walk” signal.

An alternative to bike lanes is the Denver Arrow, a symbol that indicates bicyclists will be sharing the road. It is sometimes referred to as a “sharrow.” See example above, left.

Lawrence, Ks., employed this method three years ago on Louisiana Street, a road that is a bicycle route but is not wide enough for bike lanes. David Woosley, city engineer, said he has received mixed reactions from people regarding the arrow. “We had calls from some people that thought it was confusing, while others thought it helped make motorists more aware of bicyclists,” he says. Woosley says he is unsure if Lawrence will use the Denver Arrow in the future; that will be based on recommendations from the city’s Bicycle Advisory Committee.

James Mackay, Denver Bicycle Planner, says a 2004 study shows an alternative to the Denver Arrow used in San Francisco may be more successful at reducing accidents. The new mark, originally used in Chicago and Paris, France, shows a bicycle with two angled chevron markings above it. Motorists were more likely to identify the road as a bicycle route.

Share the Road Signs

“Share the Road” signs encourage us to remember that everyone has a right to use the road. The Federal Motor Carrier Safety Administration (FMCSA) created the Share the Road Safely Program to educate drivers, pedestrians, bicyclists and motorists about traveling safely on the highway around large trucks and busses.

Section 2C.51 of the MUTCD says that “in situations where there is a need to warn drivers to watch for other slower forms of transportation traveling along the highway, such as bicycles, golf carts, horse-drawn vehicles, or farm machinery, a SHARE THE ROAD plaque may be used.” However, the use and the placement of these signs are left to engineering judgment.

Although Share the Road signs serve as a reminder, some bicyclists and motorists appear unwilling to share. Recently, a frustrated motorist wrote to the Lawrence Journal-World newspaper regarding the hazard she believes bicyclists pose to motorists, especially on County Roads 458 and 1061. The motorist says she is tired of the “Share the Road” signs and wants bicyclists to drive vehicles instead.

Several readers responded to the woman’s letter. One reader noted that vehicles pose a greater danger to bicyclists than bicyclists poses to motorists. Another pointed out that according to Kansas law, bicyclists have an equal right to be on the roads as motorists.

Also, banning slow-moving bicycles could lead to banning farm equipment, mopeds, vehicles pulling trailers, elderly drivers, school busses or any other vehicle that was deemed a nuisance, commented one reader. As a “public” road, all of the aforementioned vehicles, including bicycles, have equal rights to be on the road.

To improve motorist-bicyclist relationships, check out the Web site www.sharetheroadsafely.com, which offer tips on sharing the road for bicyclists, motorists and other vehicle operators. The Web site www.bikemonth.com/radio.htm suggests some public service announcements for radio broadcast that can be used to remind people to share the road.

Above are two examples of options to bike lanes. Recent research has shown that the marking with the chevrons, bottom photo, is more effective than the “Denver arrow” shown at top.
Bicycling in congested areas, continued from page 11

ify the bike-and-chevron marking as a shared lane symbol—and slow down—than the Denver Arrow. The specs for the bike-and-chevron marking also place bicyclists an average of three inches farther away from motorists than the Denver Arrow. Bicyclists who usually rode on sidewalks were also 10 percent more likely to ride on a street marked with the bike-and-chevron than a street marked with the Denver Arrow.

Delineating bike lanes and bike boxes with colored paint to make them more visible originated in Europe and has become increasingly common in the United States. A five-year trial in Portland, Ore. revealed that motorists were significantly more likely to look for and yield to cyclists and modify their driving behavior after the entire width of the bike lane was painted blue. The number of bicycle-vehicle conflicts decreased as well. See additional information (and pictures) at http://www.walkinginfo.org/pdf/r&d/bluelane.PDF.

Blue, also used in Denmark, may be an easily visible color, but unfortunately, facilities for people with disabilities are also marked blue, which could cause confusion. Red or green markings, used in the Netherlands and France, respectively, are less visible than the blue markings.

Advanced stop lines or “bike boxes” are also being used in the United States, but the details of how a motorist or cyclist should use them needs to be clarified with signs. The basic idea is that the “box” pavement marking allows bicyclists to move to the front of traffic at signalized intersections so as to more easily cross through the intersection, or turn.

In sum, there are several ways to make your streets safer for bicyclists. We hope this article has given you food for thought and options to consider for your community.

>> Sources for this article:

- “Signs and markings” http://www.bicyclinginfo.org/de/signs_markings.htm
- www.ljworld.com

Special assessments: When and how to use them

If there’s a road in your city or county that needs improvement, and you’re short on funds, consider petitioning for a special assessment. Special assessments are a tool for paying for road, sewer and drainage projects by assessing a cost to a benefit district composed of the homeowners or business owners who will benefit most from the project. These assessments are divided among the affected home or business owners, based on the number of lots in a subdivision or the square footage of each of those lots.

The process
We asked Dennis Clennan, civil engineer/technical consultant for Wilson & Company in Salina, how it works. Clennan said Kansas Statutes Annotated (KSA) 12-6a (1-12) outlines the procedures for petitioning for a special assessment. First, the petition, which is usually prepared by the city or county engineer, must be circulated and signed by more than 50 percent of the property owners or more than 50 percent of the homeowners in that benefit district.

Next, the petition is filed with the city or county clerk, who double-checks the names on the petition against the owners of the property.

Then the petition goes to the city council or county commissioners, who pass a resolution to authorize the project. Public notice and a 20-day waiting period is required so that any residents not in favor of the project can file a remonstrance petition. A remonstrance petition must be signed by both the owners of more than 50 percent of the property, as well as more than 50 percent of the property owners. This way, if some residents of a
subdivision do not agree with the special assessment, they can dispute it by gathering signatures from the majority of property owners in the subdivision.

After the 20 days, if no remonstrance petition is presented, the city or county clerk can borrow money to pay the bills associated with the project. Usually, the developer is required to put down some sort of financial security, in the form of cash or a letter of credit, to ensure that the project will get finished.

**Drafting the petition**

A petition for a special assessment should have sufficient detail to adequately describe the scope of the work. For example, if the assessment is for a street project, how wide will the street be? Will storm drainage structures be associated with it? Will the project include sidewalks? These questions must be answered in the petition, says Clennan. KSA 12-6a02 specifies what types of infrastructure can be included in a special assessment.

The petition should also estimate the cost of the project, which the engineer should calculate. The cost of the entire project should be included, such as engineering services and temporary finance costs, not just the cost of construction.

The extent of the improvement district must be defined. This part of the petition explains who will be responsible to pay the assessment. A legal description must be used to describe different blocks and lots of a subdivision.

The method of assessment must also be explained. Property can be assessed either by square footage or per lot. If it is assessed by square footage, homeowners pay based on the size of their property. If it is assessed by lots, the assessment is divided equally and each homeowner pays the same amount, regardless of property size.

Last, the petition must specify the apportionment of cost between the improvement district and the government entity, if any. Apportionment formulas differ among cities and counties. For example, some cities pay for intersections while homeowners pay for the cost of a road in front of their homes. Kansas Statute 12-6a does not specify apportionment amounts, but according to Clennan, cities typically pay between seven and 11 percent of the cost of street projects, over 50 percent of the cost of water projects, and zero percent of the cost of sewer projects based on each city’s policy.

In areas that are in the process of being developed, sometimes special assessments are planned for the area but are not yet levied. In these cases, the governing body can specify in its approval of a development plan that a developer will not protest a special assessment on that property.

**Legal issues with determining fair assessments**

According to Clennan, if assessments aren’t levied fairly, the city can be liable. KSA 12-6a has specified that every property substantially affected by the special assessment must be assessed in a similar way, like a tax. That means that even if an affected property owner wanted to pay more than their fair share, they can’t. For example, in Hutchinson, a school wanted to pave an adjacent dirt road because school traffic created dust that affected homes along that road. The school wanted to pay for the paving instead of charging the residents. The court ruled that the adjacent properties must be similarly assessed, and the residents had to pay their fair share.

Clennan recalled another issue of fairness where a developer wanted to build a street to two new businesses, passing some vacant property. Special assessments were levied against the new businesses. The vacant property was later developed into other retail businesses, which did not have to pay special assessments. The new retail properties were ruled to have an unfair advantage over the original two businesses.

When asked about the issue of fairness in assessment, Dave Corliss, Interim City Manager for Lawrence, Ks., said “I am familiar with the Davies v. City of Lawrence (1976) Kansas Supreme court case, which stood for the proposition that a city could not establish benefit districts with varying assessments based on varying benefits.” (This case involved a sidewalk installation in a neighborhood whereby properties with sidewalks on their side of the street paid a differing assessment than those across the street). The city lost the case, but Corliss said KSA 12-6a08 was amended to include this subsection (b):

(b) This section shall not be construed to limit the adoption of any assessment plan for any improvement that recognizes varying benefit levels to property within the improvement district and imposes assessments in relation thereto.

This was in direct response to the Davies decision, but has not had a lot of judicial interpretation to flesh out its full meaning, Corliss said.

**Guidebook available**

This article provides a quick overview of the assessment process. The League of Kansas Municipalities offers a more in-depth examination of this subject in its publication: 6a Special Assessments: A Procedural Manual (1988). It sells for $10 for members and $15 for nonmembers.

Go to www.lkm.org and click on “publications.”

Sources:

Kansas Statute 12-6a01 through 12-6a20. http://www.kslegislature.org/legsrv-statutes/getStatute.do
Reviews

... by Lisa Harris ......

Diamond Grinding of Portland Cement Concrete, FHWA, 2005.


Partial-Depth Repair of Portland Cement Concrete Pavement, FHWA, 2005.

Full-Depth Repair of Portland Cement Concrete Pavements, FHWA, 2005.

The four guides listed above provide practical technical advice on specific concrete pavement operations. They are part of FHWA's Pavement Preservation Checklist Series. Each booklet contains recommended steps to complete the operation effectively, from prep to finish. Highly recommended for crews doing concrete grinding or repair.

Distress Identification Guide, FHWA/LTAP, 2005. This handy little pocket guide is derived from FHWA's Distress Identification Manual, 2003. It shows photographs of types of cracking on asphalt pavement, pothole patch deterioration, surface deformation and defects, shoulder drop-off deterioration, and water bleeding and pumping, and how to measure the severity of these problems.

A Snowplow Operator's Guide to Snow and Ice Equipment—on DVD, FHWA/LTAP, 2005. This is a training tool for experienced or new operators of snow removal equipment. It covers various types of equipment, mounting attachments, inspection, anti-icing/deicing, and plowing techniques, and concludes with a test. The subject areas are organized into separate modules and the student can choose which of them to study. About four hours is required to review all the modules. The DVD is interactive and requires a computer with a DVD player and a mouse.

Calendar

See our Web site for even more calendar listings.
Go to www.kutc.ku.edu and click on “Training Calendar.”

May 8-10
Kansas County Highway Association Spring Conference Junction City Call Alvin Perez at 785-527-2235 to register

May 19
Basics in Budgeting, Finance and Reporting (LM)
Topeka Contact Kansas Association of Counties at 785-272-2585

May 23
MUTCD for Technicians (AT)
To register contact KSU at 785-532-5569

May 23-24
Hydraulic Modeling with HEC-RAS and HEC-GeoRAS Lawrence
May 23-24
Transportation Safety Conference Overland Park Call 877-404-5823 to register

May 24
Low-Cost Safety Improvements Salina
To register contact KSU at 785-532-5569

May 30
Geometric Design of Low Volume Roads Chanute
To register contact KSU at 785-532-5569

June 1
**APWA Click, Listen & Learn
“TARGET Road Safety” #5: Traffic Management Techniques

June 15
**APWA Click, Listen & Learn
Fleet Utilization: Optimizing Your Resources

July 20
**APWA Click, Listen & Learn
Controlling Construction Site Run-Off

July/August
GIS – Geographic Information Systems Lawrence

August
Road and Bridge Operations I and II (LS) at two locations

August 17
**APWA Click, Listen & Learn
Lessons Learned in Streetscaping Projects

Sept./Oct.
Bridge Maintenance Four Sessions

September 10-13
APWA International Congress in Kansas City, MO
www.apwa.net

October
Snow and Ice Control (AT) Five Sessions

October
Gravel Road Maintenance (AT) Five Sessions

October 10
APWA Kansas Chapter Fall Membership Meeting Topeka Call Kendl Lynn at 785-827-3603

November
Concrete Streets and Local Roads Seminar Overland Park Contact: MO/KS ACPA at 913-381-2251

November 19-21
Kansas Association of Counties Annual Meeting Topeka Call 785-272-2585

Unless otherwise indicated, for information on calendar items (or to suggest a topic for an LTAP workshop), contact: Rose Lichtenberg, LTAP Training Coordinator, 785/864-2594, rosemary@ku.edu.

**To arrange for an APWA “Click Listen and Learn” downlink at your location, call Carrie Merker at 816/848-2792. Cost is $150 per downlink for APWA members; otherwise $200. Presentations are also available on CD for $49 for APWA members; otherwise $59.

LM = Kansas County Road Scholar Program
Master Road Scholar required course

AT = Kansas County Road Scholar Program
Technical skills required course

LS = Kansas County Road Scholar Program
Supervisory skills required course
Free Resources

Check off your selections, fill in the bottom portion, and return this form to:
KUTC Materials Request, 1530 W. 15th St., Room 2160, Lawrence, Kansas 66045
or fax to 785/864-3199

DVD Training

Two-week loan period.

- A Snowplow Operator’s Guide to Snow and Ice Equipment FHWA/LTAP, 2005. Requires a computer that can read a DVD, and a mouse.

Publications

You are free to keep these unless otherwise noted.

- Diamond Grinding of Portland Cement Concrete FHWA, 2005.
- Partial-Depth Repair of Portland Cement Concrete Pavement FHWA, 2005.
- Full-Depth Repair of Portland Cement Concrete Pavements FHWA, 2005.
- Prairie Passage in Kansas brochure Kansas DOT, 2005.
- Kansas Wildflowers, Native Grasses & Shrubs Kansas DOT, 2005.

Equipment

We offer turning movement counter boards for loan to local highway agencies. Call us at (785) 864-5658 to arrange a loan. There could be a waiting list for these items.

- Turning Movement Counter Board DB-400, Jamar Technologies, Inc.
  A basic model for recording turning movements at intersections. The board is lightweight and comes with its own case.
- Turning Movement Counter Board TDC-8, Jamar Technologies, Inc.
  Can be used to do turning movement counts, classification counts, gap studies, stop-delay studies, speed studies, and travel time studies. The board is lightweight and comes with its own case.

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- send materials indicated
- address correction
- add to newsletter mail list

Note: Our video and publication catalog is accessible online, in a searchable format. Visit: www.ksltap.kutc.ku.edu

*For requests outside the United States: After receiving your request, we will notify you of the postage cost and will send materials after receiving payment for postage.
Let us at the KUTC help you find the answers to your transportation-related questions.

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Call 785/864-5658 (fax 785/864-3199)
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The Kansas Local Technical Assistance Program (LTAP) is an educational, research and service program of the Kansas University Transportation Center (KUTC), located in the University of Kansas School of Engineering. Its purpose is to provide information to local and county highway agencies and transportation personnel by translating into understandable terms the latest technologies in the areas of roads, highways and bridges.

The KUTC Newsletter is one of the KUTC’s educational activities. Published quarterly, the newsletter is free to counties, cities, townships, tribal governments, road districts and others with transportation responsibilities. Editorial decisions are made by the KUTC. Engineering practices and procedures set forth in this newsletter shall be implemented by or under the supervision of a licensed professional engineer in accordance with Kansas state statutes dealing with the technical professions.

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