

Kansas Department of Transportation

# ANNUAL REPORT



January, 2006



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from Secretary Deb Miller

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**NOTE:** This information is available in alternative accessible formats. Contact the KDOT Bureau of Transportation Information, Eisenhower State Office Building, 2nd floor west, Topeka, Kan., 66603-3754, or phone (785) 296-3585 (Voice)/(TTY).

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*A Letter From...*

## *Secretary Deb Miller*

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I am pleased to present the Kansas Department of Transportation's 2006 annual report. We had a very productive year in 2005, initiating some new programs and projects and advancing others. Many of these successes are detailed in the following pages.

Our accomplishments are a reflection of the hard work of KDOT employees in the field and at headquarters in Topeka. I am grateful for their strong sense of service. As we move into the final three years of the 10-year Comprehensive Transportation Program (CTP), I will count on their dedication and the continued support of the Governor and Legislature to deliver all of the CTP projects as promised.

A good transportation system enhances health and safety, stimulates and sustains our economy, and has a positive impact on how citizens live, work and play. KDOT's objectives reflect those qualities. We will do our best in 2006 to accomplish those objectives in a manner that is both responsible and responsive to those we serve.

Sincerely,

A handwritten signature in black ink, appearing to read 'Deb Miller', written in a cursive style.

Deb Miller  
Secretary of Transportation

Nearly 120 pages of project listings that have appeared in recent annual reports have been eliminated from this report in an effort to cut printing costs.

The complete project list can be found on KDOT's Internet site at <http://www.ksdot.org/publications.asp>. Paper copies of the project list may be obtained by contacting KDOT's Bureau of Transportation Information at 785-296-3585.



# Who we are, what we do - Part A





# WHO WE ARE ...

The Secretary of the Kansas Department of Transportation (KDOT) is responsible for coordinating the planning, development, and operation of the various modes and systems of transportation within the state. KDOT is divided into six geographical transportation districts and has its headquarters in Topeka. The Headquarters offices are divided into divisions, bureaus, and offices. Each division oversees various bureaus/offices.

## **KDOT Executive Staff** *(as of January 1, 2006)*

**Deb Miller,**  
Secretary of  
Transportation



**Warren L. Sick,**  
Assistant  
Secretary/State  
Transportation  
Engineer



**David Comstock,**  
Director of  
Engineering  
and Design



**Mike Crow,**  
Director of  
Operations



**Marcia Ferrill,**  
Chief of  
Management  
and Budget



**Terry Heidner,**  
Director of  
Planning and  
Development



**Sally Howard,**  
Chief Counsel



**Julie Lorenz,**  
Director of  
Public Affairs



**Gene Robben,**  
Inspector  
General



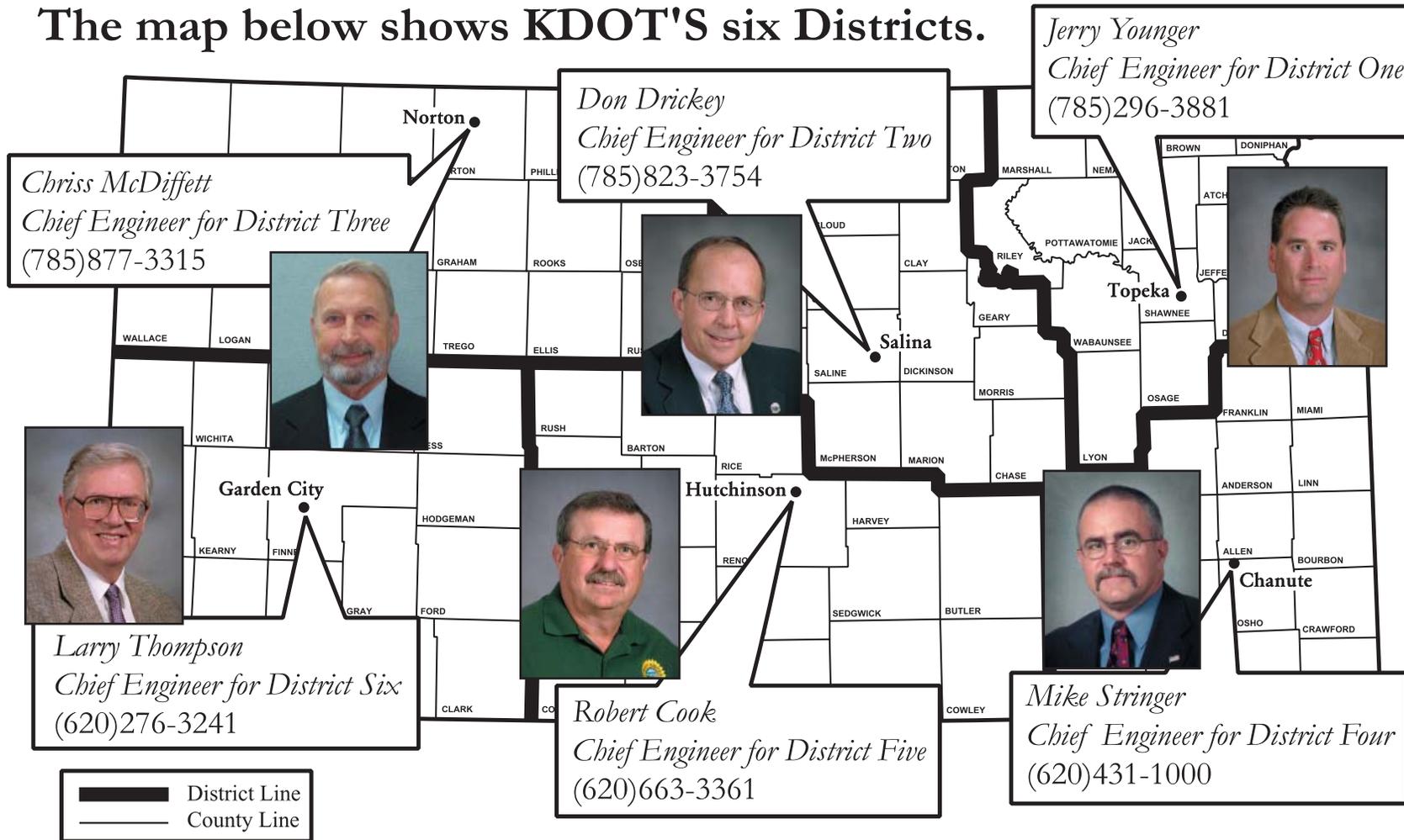
**Bob Stacks,**  
Director of  
Admin-  
istration



**Ed Young,**  
Director of  
Aviation

**Executive Staff - (785) 296-3566. Mailing address - KDOT,  
700 S.W. Harrison, Topeka, KS, 66603-3754.**

# The map below shows KDOT'S six Districts.

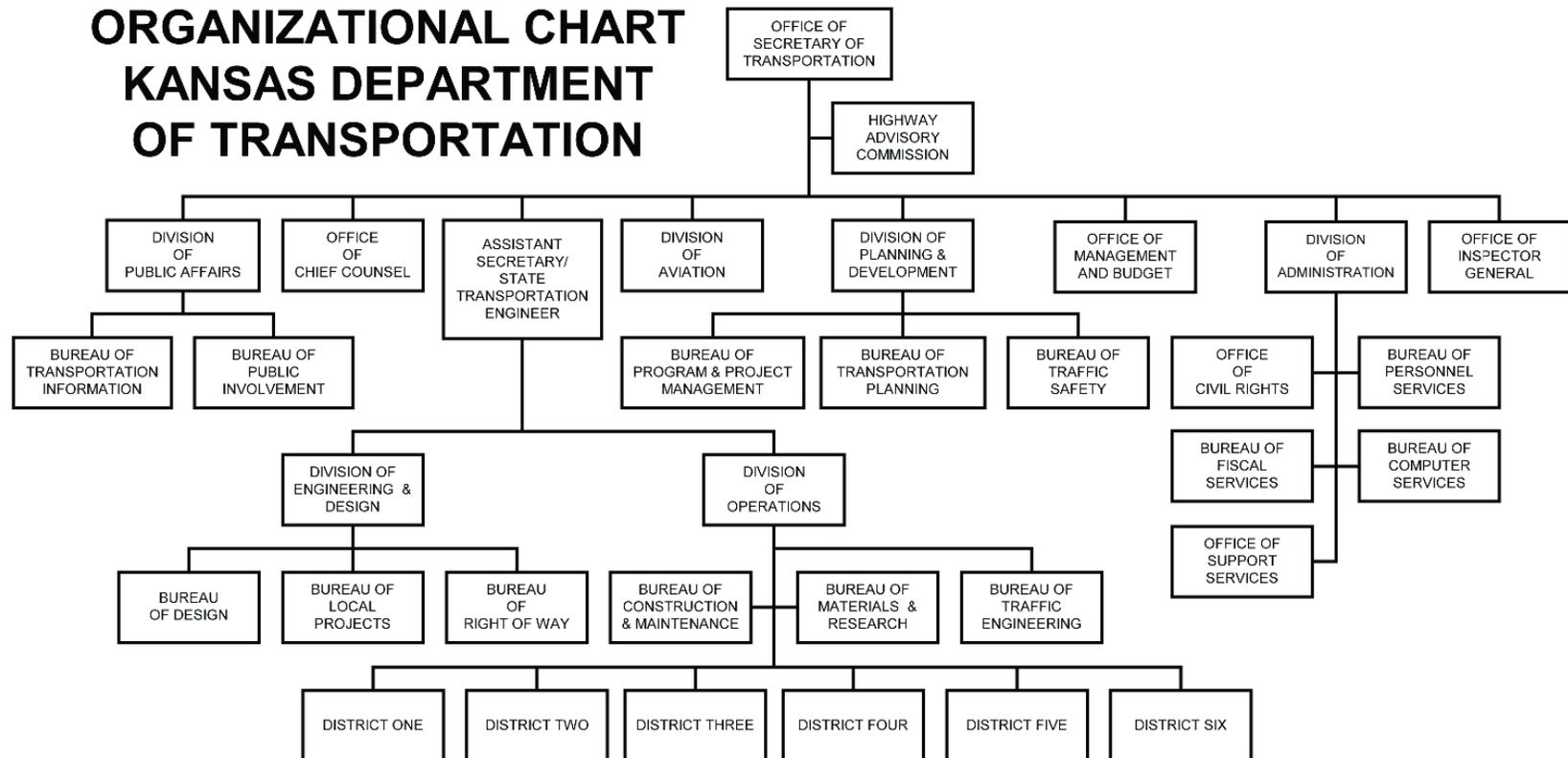


Each of the six KDOT Districts is headed by its own District (Chief) Engineer. District Engineers are delegated the responsibility and authority to supervise administration, construction, maintenance, and materials throughout that District. Each District is further divided into several area offices that are headed by Area Engineers. Within each Area are Subarea offices that primarily perform road-

way maintenance activities including snow/ice removal.

KDOT's experienced workforce has a diverse background. From civil engineers to equipment operators to office assistants to application programmers to engineering technicians, Department employees strive to provide the many quality services necessary for a safe and efficient transportation system in Kansas.

# ORGANIZATIONAL CHART KANSAS DEPARTMENT OF TRANSPORTATION



# What we do ...

## OUR MISSION

KDOT's mission is *to provide a statewide transportation system to meet the needs of Kansas*. We work to achieve that goal each and every day in many different ways. Some of the agency's responsibilities are to:

- ♦ Scope, design, and let bids on state and local improvement projects
- ♦ Identify and study future highway traffic needs
- ♦ Maintain the roads and bridges on the State Highway System
- ♦ Administer federal funding, contract compliance, and inspection of material and labor
- ♦ Research and develop innovative materials to lengthen roadway life
- ♦ Assist with aviation, public transit, local partnership, and rail crossing and service improvements



*Workers repair a US-24 bridge east of Grantville.*

## THE COMPREHENSIVE TRANSPORTATION PROGRAM

At the core of our mission is the ten-year Comprehensive Transportation Program of 1999 (CTP). Spanning fiscal years 2000-2009, the CTP is comprised of three components further divided into program categories:

### 1. State Highway Program

- ♦ Substantial Maintenance
- ♦ Major Modification
- ♦ Priority Bridge
- ♦ System Enhancement

### 2. Local Transportation Program

- ♦ Special City and County Highway Fund
- ♦ Local Federal-Aid Projects
- ♦ Local Partnership Program
- ♦ City Connecting Link Payments
- ♦ Transportation Enhancement

### 3. Other Modal Programs

- ♦ Kansas Airport Improvement Program
- ♦ Rail Service Improvement Program
- ♦ Public Transportation

KDOT selects projects in each category based on criteria tailored to the intent and funding constraints of each program component. The program categories are briefly described in the following section. For more information and details on each program and subcategory, please see Section B.

## State Highway Program

While Kansas has the fourth largest number of public road miles in the nation, the majority of the state's public roads are not maintained by KDOT. KDOT is responsible for maintaining the State Highway System (U.S., Kansas, and Interstate routes). That system consists of about 9,565 miles, or 7.1 percent of the total number of public road miles. Still, the State Highway System and its 839 miles of City Connecting Links (city streets that connect rural portions of the State Highway System) carry 53.4 percent of the state's total traffic.

### **Substantial Maintenance**

This category helps protect the investment the state has made in its road and bridge infrastructure by preserving the "as-built" condition of our highways to the best extent possible. The projects include pavement resurfacing; bridge and culvert repairs and bridge painting; and safety, signing, lighting, pavement markings, and emergency work.

### **Major Modification**

This category is used to preserve and improve the service and safety of the existing highway system through modernization projects. Examples of work in this category are reconstruction and rehabilitation of pavement, widening lanes, adding or widening shoulders, and eliminating steep hills or sharp curves. Associated bridge work includes widening narrow bridges, replacing obsolete bridges, and modernizing bridge rails and guard fences. A number of other projects are financed with funds set aside each year to address specific concerns such as railroad crossings, corridor management, and other spot location improvements.

### **Priority Bridge**

The Priority Bridge category funds projects to replace or rehabilitate bridges that are in a deteriorated condition or are deficient in load-carrying capacity, width, or traffic service.

### **System Enhancement**

The System Enhancement Program category consists of

projects that substantially improve safety, relieve congestion, improve access or enhance economic development. Projects must be on the State Highway System or be a logical addition to the State Highway System.



*Maintenance crews work to remove snow from highways in the Topeka area.*

## Local Transportation Program

### ***Special City and County Highway Fund***

A portion of the state motor fuels tax revenue is shared with local governments through the Special City and County Highway Fund (SCCHF). On average, about 35.6 percent of the receipts go to the SCCHF. It provides about \$160 million per year to local governments. The funds are distributed directly to cities and counties quarterly by the State Treasurer.

### ***Local Federal Aid Projects***

Local units of government as well as the state are provided federal aid through the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). SAFETEA-LU authorizes the federal surface transportation programs for highways, highway safety, and transit for the five-year period of Federal Fiscal Years 2005-2009. KDOT will continue its policy of sharing federal aid with local units of government. SAFETEA-LU is estimated to provide approximately \$67 million per year in funding to local units of government. This is a 14 percent increase in funding (approximately \$8 million more per year) over the amount provided by the previous federal bill, the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21). Local units of government are responsible for programming these projects.



***Railroads help ship freight across Kansas.***

### ***Local Partnership Program***

The Local Partnership Program includes the KLINK Resurfacing Set-aside Program for resurfacing projects on City Connecting Links; Geometric Improvement projects to help cities widen pavements and add turning, acceleration, and deceleration lanes on City Connecting Links; and Economic Development funds for highway and bridge construction projects that enhance area economic development.

### ***City Connecting Link Payments***

Cities receive payments from KDOT to help maintain their City Connecting Links.

### ***Transportation Enhancement***

These projects fall into three major categories: 1. historic, 2. scenic and environmental, and 3. pedestrian and bicycle facilities. The projects must be directly related to a surface transportation system. They can include safety and education for pedestrians and bicyclists, tourist and welcome center facilities, environmental mitigation and wildlife habitat connectivity, and transportation museums.

## Other Modal Programs

### ***Kansas Airport Improvement Program***

The Kansas Airport Improvement Program supports improvements to the state's local airport infrastructure. The improvements enhance airport safety and area economic development. They also help bring air ambulance capability within reach of most Kansans.

### **Rail Service Improvement Fund**

The fund provides Kansas short line railroads with low interest loans and grants primarily for track rehabilitation. Short line railroads provide rail service to many areas not served by Class I railroads. They help connect rural areas of the state to the national rail network and national and international markets.

### **Public Transportation**

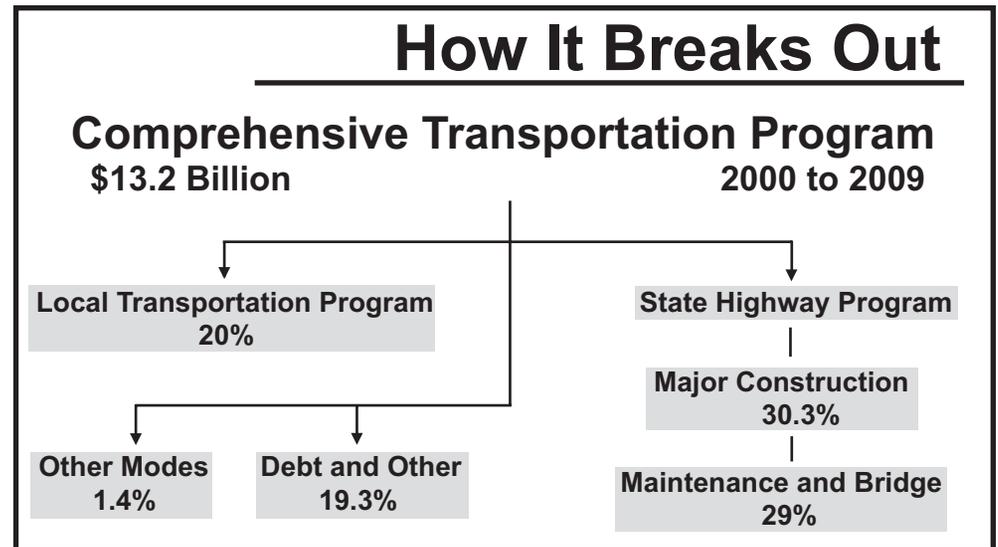
Public transit programs provide services to Kansans who depend upon public transportation to make medical appointments, hold a job, shop, or be self-sufficient. Public transit is particularly important when considering an aging population.

## **Funding to Complete the CTP**

The Department is funded with revenue from a combination of sources that include motor fuel taxes, vehicle registration fees, sales tax, bond proceeds supplemented by federal-aid and local funds in some categories.

Current revenue projections are based on estimates from the State Consensus and Highway Revenue Estimating Groups and current statutes. Estimated motor fuel tax collections were down from previous consensus estimates with the decrease for diesel and gasoline reflecting the impact of higher fuel prices. Future growth in motor fuel is expected to be minimal. Registration fees have been strong because of the economy but future increases are expected to be slightly more than two percent per year. Sales tax projections for FY 2006 and FY 2007 have been revised slightly to reflect the recovering economy.

Much of the State Highway Fund's revenue is not sensitive to inflation and remains basically flat over time. It should be noted that the sales tax is the only source sensitive to inflation.



**Proportion of funds spent in CTP**

And, because of the rise in energy prices, cost increases for CTP projects exceed the currently used estimates for inflation.

In 2004, the Kansas Legislature reaffirmed its commitment to the CTP by restructuring the program's funding. KDOT will ask the 2006 Legislature – early in the session – to take the final steps necessary to authorize the sale of the \$150 million in bonds approved in the 2004 package. KDOT will also ask legislators to follow through on the commitment they made in the 2004 package to repay \$125 million in loans made to the general fund from the highway fund at the height of the state's fiscal crisis.

Included in that 2004 restructuring was an assumed increase of \$250 million from the federal reauthorization bill. The federal bill, known as SAFETEA-LU, was approved in August, 2005. However, this funding component is approximately \$117 million short of what the 2004 Legislature had assumed when it restructured the CTP's tight funding package.

For this reason, Secretary Deb Miller has asked that the Legislature issue the \$60 million "failsafe" in bonds that were

built into the 2004 package in case Federal funds fell short. The Department, pursuant to statute, has already requested and received the recommendation from the Legislative Budget Committee in December 2005 to issue the additional \$60 million in “failsafe” bonds and will request the State Finance Council to approve the issue early in the 2006 legislative session.

All of the actions outlined in the 2004 restructuring are necessary to ensure the completion of the CTP.

Despite rising energy prices, the Secretary is optimistic that with the issue of the bonds provided for in the 2004 Legislative funding package and repayment of the loan, the Department will be able to deliver the CTP projects as promised.

## Ongoing Initiatives

### ***The Partnership Project***

The Partnership Project (P2) began in 2003 and was designed as a top to bottom review of the agency by KDOT and its advisory group, a “Board of Directors.” The goal was to find ways for KDOT to be more responsive to internal and external customers and become a more efficient agency. The P2 project used a comprehensive, open and transparent process to gather information and synthesize findings into recommendations. From the process, a phrase emerged that will be used to guide

KDOT employees in how they pursue their jobs - ***Responsible and Responsive***. After evaluating and categorizing all the internal and external information three areas of focus emerged:

- ◆ Make KDOT a more desirable place to work
- ◆ Nurture better relationships with local governments
- ◆ KDOT's roadmap for continued success

Specific recommendations for improvement have been developed for each of the areas listed above and implementation is an ongoing effort. Two of the more than 20 improvement strategies are highlighted below.



***Improvements greatly enhance service at the Kingman airport.***

### ***Local Consultation Process***

Results from the KDOT Partnership Project survey tell us that we need to better engage local officials in identifying transportation needs and selecting projects. In addition, the Federal Highway Administration has directed all state departments of transportation to talk with local officials about their transportation consultation process. Most importantly, we recognize that a more collaborative process results in better understood and more supportable decisions about where and when projects are

needed. KDOT decided to use a collaborative process to identify a process for consulting with local officials.

In spring 2005, the agency began to examine the processes it uses to engage local governments regarding highway program

development and project selection. In a series of meetings across the state, KDOT transportation planners, road designers, and public affairs managers talked with elected officials, local transportation staff members, and economic development professionals about how the project programming process might be expanded. Four alternative consultation approaches were developed from the discussions with local officials. In fall 2005, KDOT again met with local officials to get their feedback on four alternatives. The results of those discussions are being analyzed and KDOT plans to roll out its local consultation process in 2006.

### ***The Kansas Collaborative Breakthrough Teams***

The Kansas Collaborative is a joint effort between the State of Kansas, the Kansas Association of Counties and the League of Kansas Municipalities to foster collaboration and improve government efficiency.

By promoting creative problem solving across jurisdictions, The Kansas Collaborative identifies potential cost savings through data analysis and strategic planning. Already identified as a priority action under P2, KDOT joined with The Kansas Collaborative as a part of the Transportation Purchasing Pool Breakthrough Team.

KDOT recognizes that local government wants access to state and multi-county purchasing power. Items such as gasoline, diesel fuel, heavy equipment, vehicles, barricades, bridge timbers, culverts, tires and road signs are on the shopping list. This breakthrough team will strive to balance pooled purchasing and multiple vendors with supporting local businesses. Success will look like lower prices and consistent standards while serving the needs of municipalities, counties and the state.



***Concrete is placed on I-35 near 87th Street in Kansas City.***

### ***Empowering Local Governments***

Local governments have said they want help to identify and address their own transportation needs. To empower them to meet those needs, the Kansas Transportation Revolving Fund (TRF) was created to provide low cost, flexible financing to local governments for transportation projects, on or off the state highway system.

### ***Improving public safety communications***

It became clear over time that Kansas needed to improve communications among its public safety entities. It was difficult for many local public safety providers to work together in critical situations because their disparate radio systems didn't allow them to communicate with each other. Many local safety officials indicated they couldn't afford the higher cost of new 800 MHz radio equipment. It was

also time to more thoroughly utilize the agency's statewide system of 76 radio towers that it shares with the Kansas Highway Patrol. To address the problems, two important initiatives were created to form the ***Statewide Interoperable Communication System*** that includes four components:

1. Help public agencies acquire new radio equipment
2. Offer public agencies the use of tower space for non-800 MHz service, at cost
3. Offer the use of tower space to private organizations, at market rates
4. Upgrade the communications system so it is interoperable, allowing emergency officials to talk with each other using a variety of radio systems

The Statewide Interoperable Communication System is the result of a cooperative effort that includes the Governor's Office, the Governor's Homeland Security Council, KDOT, Kansas Adjutant General including the Kansas Division of Emergency Management, Kansas Highway Patrol, and the Kansas Legislature – as well as input from other agencies.

### ***New equipment and tower space***

The 2004 Legislature established the Communication System Revolving Fund authorizing KDOT to purchase and lease communication equipment to public safety agencies and to offer access to public and private entities, with public agencies having the highest priority. Lease agreements have been completed and KDOT began accepting applications for the leasing of radios and tower space on August 1, 2005.

### ***An interoperable system***

Phase I of the Statewide Interoperable Communication System began on July 1, 2005 in southeast Kansas. That region was chosen because of the critical nature of the infrastructure at Wolf Creek. The first phase includes equipment upgrades to 10 tower sites so users will have interoperability. Phase I is expected to be operational by July 2006.

### ***Tracking KDOT Right of Way***

Since January 1, 2000, existing and new right-of-way has been inventoried using an inventory database system. This enables KDOT to provide timely annual inventory updates at the same time that historical information is being captured and entered into the system. The Secretary files annual reports to the Legislature on all real property owned and real estate transactions engaged in by KDOT.

# A HIGHLIGHT OF ACCOMPLISHMENTS IN 2005

The agency is involved in many ongoing initiatives to be more responsible and responsive to the traveling public, partners, and its employees. The following highlights cover a variety of topics and illustrate a small sampling of KDOT accomplishments in 2005.

## CONSTRUCTION

### *Projects across state in 2005*

In Fiscal Year 2005, KDOT let to construction 385 projects for an estimated \$496 million. They included 1,500 miles of roadway to be resurfaced, 90 miles of roadway to be reconstructed or rehabilitated, and 26 bridges to be replaced. In 2005, KDOT opened several major projects, including:

- ♦ US-75 realignment, from south of US-36 seven miles northward to just north of Sabetha
- ♦ US-69 expansion to four lanes, from Louisburg southward about 15 miles
- ♦ US-77 southeast bypass of Arkansas City
- ♦ US-24 bridge replacement over the Republican River west of Clay Center
- ♦ US-50 reconstruction, from just east of Garden City about ten miles southeast to the Finney-Gray county line
- ♦ US-36 reconstruction, from US-383 about six miles eastward to Norton



***Construction work on I-635 north and US-24 in Kansas City was one of many roadway improvement projects that took place across the state in 2005.***

## GOING THE EXTRA MILE

### ***Returning troops spur K-18 improvements***

Major repairs to the Kansas River bridge were going to close Henry Drive, the fort road leading into Fort Riley from I-70, southwest of Marshall Field. Closing Henry Drive would send more traffic to the K-18 and 12<sup>th</sup> Street intersection near Ogden, so the intersection needed to be improved. KDOT was designing the improvements when the military announced that thousands of additional troops would return to Fort Riley. The news meant

the 12<sup>th</sup> Street improvements would have to be quickly redesigned and built to handle the greater than expected traffic demands. KDOT was able to redesign the project, negotiate a construction contract, and build the improvements during the summer of 2005. The work included temporary lane widening, turn lanes and a temporary traffic signal. Since some of the preliminary design work had already been done, the project was completed in a matter of months, rather than one or two years.

### **Record-breaking project begins**

In August 2005, in cooperation with the City of Overland Park, KDOT let to construction the Focus 435 System Enhancement project in Overland Park. This record-breaking \$127 million dollar project was the culmination of five years of study, design, right-of-way purchasing, and utility relocation work. It includes a new interchange at Antioch Road and widening I-435 from six to eight lanes from US-69 east to Metcalf. Even the plan sheets were record-breaking. At 3,085 pages (Leo Tolstoy's *War and Peace* was 1,408 pages), the set of plan sheets broke a KDOT Print Shop record when six sets were needed, totaling 18,510 pages and over 40 hours of staff time. The five-year development schedule was an impressive partnering effort between KDOT, the City of Overland Park, and the design consultant.

### **Performance measures being developed**

KDOT is working to strengthen its performance measures to get the most out of every transportation dollar. The Agency implemented its first Strategic Management Plan in 1992 and new measures are being revised and implemented to evaluate agency performance for both internal and external use. Performance data is collected annually and subjected to trend analysis and target comparisons. KDOT is continually forming linkages between the strategic management planning process and other management activities and initiatives.



**Secretary Deb Miller, Overland Park Mayor Carl Gerlach, Governor Kathleen Sebelius, and Bill Clarkson, Sr., President of Clarkson Construction, break ground on I-435 in Kansas City on September 6.**

### **Permits help get big loads going**

KDOT's Bridge Management section is expected to issue more than 1,250 "super-load" permits in 2005. Super-loads are over-height/width or over-weight truck loads that must be routed on highways with bridges that can handle the extra loads. 118 permits were issued between July 15 and September 30 for 828 truckloads of wind tower components to be installed at a wind farm near US-400 between Beaumont and Latham.

## **WORKING WITH LOCAL PARTNERS**

### **City, state work together**

KDOT is partnering with the City of Topeka and the Department of Corrections to help clean up public rights-of-way in the Topeka metro area. Under the agreement, Corrections provides labor to clean up right-of-way. The city funds the labor on city right-of-way while KDOT funds the clean up of state right-of-way. This program provides cost effective labor to clean up the highways and allows KDOT crews to spend more time maintaining the highways instead of picking up trash.

### **K-10 Transportation Study completed**

KDOT worked with the Mid-America Regional Council of Kansas City and the Lawrence-Douglas County Metropolitan Planning Commission on the K-10 Transportation Study. The study will help identify future improvements for the K-10 highway corridor between Lawrence and the Kansas City metropolitan area. The study objectives were to determine how and when to widen K-10, establish where new interchanges will be considered, plan for other modes of transportation in the corridor, study bicycle and

pedestrian issues along and crossing K-10, and provide guidance to local agencies when making land-use decisions.

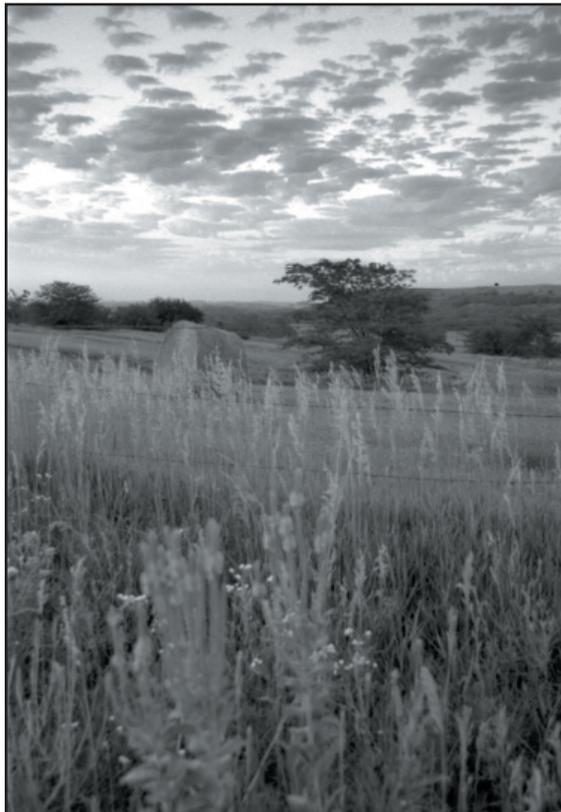
***Wichita Area Metropolitan Planning Organization (WAMPO) adds members***

Coordinated regional planning is vital to developing effective transportation systems, particularly in large urban areas. As a result of the U.S. Census, the boundaries of the Wichita Urbanized Area expanded to include some of the smaller cities in Sedgwick County and portions of Butler and Sumner counties. KDOT worked with WAMPO to facilitate a new membership agreement with the cities and counties. This will increase the opportunities for coordinated regional transportation planning and allow for the efficient use of federal funds. Also in the Wichita area, KDOT led an effort to craft an Intelligent Transportation System (ITS) Regional Architecture document for the region. The document is the culmination of more than a dozen local entities working together to plan for intelligent transportation technology systems in the Wichita region. ITS assists with emergency response and provides information to travelers to make informed decisions.

***Fredonia rail project improves traffic***

KDOT partnered with the city of Fredonia to reduce rail traffic in the city. At one time, three Class I railroad

systems operated in Fredonia. Now, all rail service in and through Fredonia is operated by one short line railroad company, the South Kansas and Oklahoma Railroad Company (SK&O). A new convenient rail connection was built that allowed 18 public at-grade crossings to be closed in Fredonia, providing many safety benefits. The connection reduces to a few minutes a complicated rail movement that previously had taken up to three hours to complete. Traffic in Fredonia is no longer split or delayed by rail crossings blocked for long periods of time. This also allows for overall increased train operating efficiency.



***A view from the Flint Hills Scenic Byway, one of the first two byways in Kansas to receive national designation.***

***KDOT assists with Reservoir Development Study***

KDOT is partnering with the Departments of Commerce and Wildlife and Parks to help fund a study on the economic development potential around federal reservoirs in Kansas. Part of the development plans of this project involve infrastructure, such as roads and trails.

**NATIONAL ENVIRONMENTAL ACHIEVEMENTS**

***National recognition for Kansas Scenic Byways***

Two Kansas Scenic Byways, the Flint Hills Scenic Byway and the Wetlands and Wildlife Scenic Byway, received National Scenic Byway designation. They were the first to receive federal designation in Kansas, which allows them to be added to the national scenic byways map. The two byways were nominated for their scenic and natural qualities.

### ***KDOT helps imperiled grassland ecosystems***

Kansas is home to three endangered grassland ecosystems known as tall, mixed, and short-grass prairies. The Kansas Prairie Ecosystem Restoration, Education, and Conservation Initiative helps restore and preserve portions of the ecosystems adjacent to Kansas's roadways while educating the public on the importance of these diminishing resources. In 2005, the Initiative received national recognition and was selected by the Federal Highway Administration as an exemplary ecosystem initiative. With more than 650,000 acres of right-of-way along Kansas roads, KDOT plays a major role in state conservation activities. The project is a cooperative effort with the Kansas Department of Wildlife and Parks, Kansas Department of Agriculture, and the Audubon Society of Kansas.

## **IN TIME OF NEED**

### ***KDOT helps communities***

KDOT maintenance workers responded to one natural disaster after another in 2005. When an ice storm struck south central Kansas early in the year, crews from Pratt, Anthony, and Kingman all took part in cleaning up the debris.

Flooding along K-152 in Linn County and, later, in northeast

Kansas had crew members from local KDOT offices working to help control traffic and assist law enforcement officials. In June, four tornados swept across Meade County. A tornado



***The KDOT District Five Bridge, Paint, and Special Maintenance crews remove limbs from the streets in Haven after an ice storm that struck south central Kansas.***

struck the town of Fowler damaging the high school and downing power lines and trees. KDOT employees from Cimarron, Dodge City, and Bucklin assisted the Fowler community. They hauled away more than 120 truckloads of tree branches and other debris. In June, severe wind storms battered southeast Kansas communities before the Fourth of July weekend. Crews from Erie, Chanute, and St. Paul took part in the clean up efforts. In August, a funnel cloud passed over Great Bend causing heavy damage and KDOT employees from the Great Bend office helped with the cleanup work.

### ***KDOT joins national hurricane relief efforts***

KDOT employees joined the relief and recovery efforts after Hurricanes Katrina and Rita struck the Gulf Coast in 2005. Employees from across the state worked in a variety of roles, from helping to transport equipment to serving as public information officers in the devastated areas. Coupled with the generosity of many other employees in helping raise money for hurricane victims, these efforts illustrate our employees' dedication to serving others in times of need.

## TECHNOLOGICAL ADVANCEMENTS

### ***Outstanding information technology efforts***

KDOT was one of only six organizations in the United States and the only state department of transportation to be honored in 2005 with the Excellence in Enterprise Architecture award sponsored by the E-Gov Institute. KDOT was also honored with a Global Excellence in Business Process Management (BPM) and Workflow award. This is an international award; KDOT received a silver award for all of North America.

### ***Supporting city and county bridge management***

Improving local bridge data accuracy to more accurately reflect the condition of the state's bridges is the goal of a new web site that is nearing completion. The web site will provide a way to input and view National Bridge Inventory bridge inspection data. Better data will help enhance bridge safety. The site, which is being built in phases, will eventually include reports so KDOT and local officials can view trends in bridge conditions to help in making bridge management decisions.

Electronic mapping of local bridges is nearly complete for more than 20,000 local bridges. Electronic mapping and its sorting and display features will help local officials manage their bridge infrastructure. Initially, this will be available to KDOT users, but eventually, the mapping will be tied to the web site data described above for use at the local level.

KDOT worked with a bridge maintenance consultant and the Local Transportation Assistance Program at the Kansas University Transportation Center to conduct a school for local bridge maintenance personnel. Classes were held in October 2005 in three locations around the state. More than 130 people participated and they recommended that the school be held again in the future.

### ***Kansas City Scout assists motorists***

Kansas City Scout began operating 24 hours a day, 365 days a year on June 18, 2005. Kansas City Scout is a joint project between Kansas and Missouri that monitors 75 miles of freeways in the Kansas City metropolitan area. Scout uses technologies that include closed-circuit TV cameras, communication with Motorist Assist and law enforcement officials, and a traffic management center (TMC). Once an incident is detected, TMC staff activates dynamic message signs (DMS) to inform motorists of any problems ahead. Other information posted on the DMS includes AMBER and ozone alerts. The information is also available on the web site at [www.kcscout.net](http://www.kcscout.net).



***The Kansas City Scout project helps to improve traffic flow and reduce congestion in the Kansas City metropolitan area.***

### ***Easier access to information***

KDOT launched a new electronic system for storing official employee and medical files in the Document Management System. The project makes it easier for KDOT employees to review their records. The other benefits include the eventual decrease of storage needed for paper documents.

### ***KDOT goes live***

KDOT implemented Live Meeting, a collaboration tool that allows staff and agency partners to meet using phones and computers for facilitating the communication. Live Meeting makes it easier and more efficient for people to collaborate while reducing travel and time costs.

### ***Leading in document management***

KDOT is a leader in document management and workflow. The agency hosted the Document Management and Workflow 2005 conference in the fall 2005. The conference helped state departments of transportation and other organizations learn more about the process and find new ways to share information. Document management and workflow saves time and allows information to be saved electronically. This can be critical in many situations, including disasters such as hurricane Katrina.

### ***KDOT web site gets new look***

The KDOT internet site received a makeover in 2005. The new look is easier to navigate and will help users more quickly find the information they need.

## **OTHER MODES KEEP KANSAS MOVING**

### ***New public transit facilities***

KDOT celebrated the opening of two public transit buildings in 2005 - one in Hays in February and one in Girard in July. The

buildings represent a major step by KDOT's public transit providers to improve service to Kansans. This partnering effort between KDOT, the Federal Transit Authority, and the local transit providers will benefit these communities by allowing the providers to centralize their administrative, managerial, operations, maintenance and dispatching functions into one location.

### ***Improving public transit***

In conjunction with the Hays public transit building, a computer dispatch/Automatic Vehicle Locator system was installed and launched. The system allows the dispatch center to control bus service in Hays with computer and radio technology. The system will help public transit providers increase ridership and reduce miles traveled by closely controlling how and where

the buses operate. The same type of service will be launched in Reno County in 2006.

### ***Improving rail customer service***

In FY 2005, the State Railroad Improvement Fund made four track rehabilitation loans to three railroads of more than \$1.9 million. The projects improved 104 miles of track and improved rail customer service. A federal \$2 million rehabilitation



***Secretary Deb Miller and Congressman Jerry Moran, left of Miller, applaud after the official dedication of the new public transit facility in Hays during a ceremony on February 7.***

project between Carvel and Coats (done with KDOT oversight) also improved railroad operating efficiencies and customer service along that line.

### **Study shows rail program is “on track”**

KDOT retained a consulting firm to conduct a detailed review of the Kansas Short Line Loan/Grant component of the Comprehensive Transportation Program, its expenditures and uses, its impacts on short line railroad operations, and its economic impacts. The Program was found to have been a good investment. An analysis of Program expenditures between 2000 and 2005 identified significant benefits to both the public and private sectors, including a cost/benefit ratio of 8.8 based on operating improvements.

## **SAFE DRIVING EFFORTS IN HIGH GEAR**

### **Coaches stress safe driving**

The Bureau of Traffic Safety linked seat belt and drunk driving advertising campaigns with sports programs at Kansas State University, Kansas University and Wichita State University. The effort includes using coaches from all the universities in public service announcements that will run during home games. The goal of this attention-getting campaign is to promote safety, positively influence driver behavior, and highlight the consequences of disobeying safe driving laws.

### **456 in 2004**

That’s the number of people killed in traffic crashes in 2004 on Kansas roadways. KDOT has joined with the Kansas Highway Patrol and the Kansas Department of Health and Environment for the Kansas Safe Driving Campaign, an initiative to reduce fatalities on Kansas roadways. The campaign is taking a broad-base approach to the problem, looking at solutions using engineering, enforcement, and education. The campaign started with an effort to raise awareness about the number of fatalities on Kansas roadways. Community forums were held across the state to give citizens the opportunity to share their concerns and several meetings were held with newspaper editorial boards across the state. The three agencies have reviewed the comments from

the forums and are planning to work with people across the state to create ways to address the problems.

### **Safety web site wins award**

For its web pages on KDOT’s internet site, the Bureau of Traffic Safety was awarded Runner Up in the 2005 Best Web Site Competition by the Association of Transportation Safety Information Professionals. Traffic Safety and the Bureau of Computer Services staff worked together on the project.







# Project Selection Criteria - Part B





# PROJECT SELECTION CRITERIA

The Fiscal Year (FY) 2000-2009 Comprehensive Transportation Program (CTP) has four program categories that were originally established by the FY 1990 - 1997 Comprehensive Highway Program: Substantial Maintenance; Major Modification; Priority Bridge; and System Enhancement. Within each of these major categories are funding and/or project-type subcategories. The selection criteria used in developing projects are tailored to the intent and funding constraints of each program component.

## Substantial Maintenance

Substantial Maintenance projects, the first major component, are intended to protect the traveling public and the public's investment in its highway system by preserving the "as built" condition as long as possible. These projects are financed with funds that are reserved (or set aside) for specific purposes.

Without proper maintenance, the cost for major repairs and/or replacement at a later date can be several times greater than the cost of timely maintenance. The Substantial Maintenance set-aside funds include Non-Interstate Resurfacing, Interstate Resurfacing, City Connecting Link (KLINK) Resurfacing, Contract Maintenance, Safety Projects, Emergency Repair, Bridge and Culvert Repair, Bridge Painting, Signing, Pavement Marking, and Lighting.

### Non-Interstate Resurfacing

Approximately 1,200 miles of two-lane non-Interstate pave-

ment are resurfaced or repaired annually through this set-aside program. The program's intent is to maintain non-Interstate pavements in adequate condition and keep rideability at an acceptable level.

These projects are selected by using the Pavement Management System (PMS). PMS is an integrated set of procedures that was developed by KDOT and Woodward-Clyde Consultants. It recommends pavement maintenance and rehabilitation strategies on both a network and a project level. PMS consists of three interconnected subsystems:

The Pavement Management Information System (PMIS) is a data base and supporting computer programs and tools which contain network and project-level survey results, information downloaded from the planning database, and output from the Construction Priority System. Information from the planning database includes data on geometric features, traffic, and truck load information. Information is regularly transferred between these multiple data sources.

The Network Optimization System (NOS) models the highway network and determines the action for each one-mile segment of the entire system to produce the

## Substantial Maintenance Components

### of the CTP

- ♦ *Non-Interstate Resurfacing, page B-1*
- ♦ *Interstate Resurfacing, page B-2*
- ♦ *KLINK Resurfacing, page B-2*
- ♦ *Contract Maintenance, page B-2*
- ♦ *Safety Projects, page B-2*
- ♦ *Emergency Repair, page B-3*
- ♦ *Bridge and Culvert Repair, page B-3*
- ♦ *Bridge Painting, page B-3*
- ♦ *Signing, page B-3*
- ♦ *Pavement Marking, page B-4*
- ♦ *Lighting, page B-5*

optimal statewide benefit. The system can operate in either a “desired- performance” mode or a “fixed-budget” mode. In the desired- performance mode, the system selects actions to achieve the selected performance level at the lowest cost. In the fixed-budget mode, the system selects the set of projects that produces the “best” total system performance for the fixed-budget level. A linear programming model is used to minimize the long-term expected average cost of rehabilitation, subject to certain short-term requirements. Program development is a two-part process. NOS selects “locations only” for projects to be let to contract two years following the survey year. The second process (described below) develops scopes for resurfacing projects for the year following the pavement survey.

The Project Optimization System (POS) will serve two functions. First, it is a comprehensive design system for pavement structural sections on new grades. Second, it utilizes site-specific cost and material parameters to revise tentative project scopes from the NOS. Alternative rehabilitation strategies for a single project, or for groups of projects which meet cost and performance constraints from the NOS, are further evaluated. The POS selects the strategy which minimizes the need for future maintenance.

## **Interstate Resurfacing**

Approximately 20 center-line miles of divided Interstate roadway (40 miles of two-lane pavement) are resurfaced or repaired annually through the Interstate Resurfacing set-aside program. Input from the Pavement Management System is used to decide which sections of Interstate are to be resurfaced.

## **City Connecting Link “KLINK” Resurfacing**

This is a Local Partnership Program. The KLINK Resurfacing set-aside program provides funding for resurfacing projects on city streets that connect two rural portions of state highway (called City Connecting Links). These projects are funded under a 50 percent

state/50 percent city funding matching arrangement for cities with greater than 10,000 population and a 75 percent state/25 percent city ratio for cities with less than 10,000 population. The maximum state share for a project is \$200,000.

KDOT annually solicits requests for eligible projects. All State Highway System City Connecting Links are eligible except those on the Interstate System and fully-controlled access sections on the Freeway System. Cities requesting projects are encouraged to review the proposed projects with the KDOT District Engineer or designated representative before submitting applications. If requested funds exceed available funds, projects are prioritized and selected on the basis of pavement survey conditions.

## **Contract Maintenance**

Maintenance activities are undertaken to offset the effects of weather, deterioration, traffic wear, damage, and vandalism. Eligible projects are those that KDOT is not adequately staffed or equipped to perform. Due to the diverse types of actions and/or geographic location, contracting for the service is the most cost-effective approach for the agency.

Selection is based on priority as seen from a statewide perspective. Basic criteria for contract maintenance projects are: 1) inability to perform necessary actions with existing maintenance forces; 2) not eligible for other maintenance programs; 3) not anticipated (generally the result of weather or traffic conditions). Projects are selected on the basis of statewide need for corrective action, not on a balanced distribution between districts.

## **Safety Projects**

This set-aside program provides for improvement of intersections or spot locations where major improvement of a corridor is not required. Geometric improvements (turn lanes, curb radius, roundabouts) and traffic signals, along with signing and pavement marking, can be cost effective in reducing crashes at

these locations.

The Bureau of Traffic Engineering conducts traffic studies investigating the physical and operational characteristics of locations. These studies:

1. identify the reason the location is being reviewed;
2. identify sight characteristics;
3. identify concerns;
4. identify possible causes of the concerns;
5. identify possible countermeasures;
6. consider the effect of these countermeasures;
7. provide a recommendation.

If the recommendation involves a geometric or signal improvement, the location is added to the list of locations to be considered for funding. Depending on potential costs, a benefit cost analysis may be completed.

## **Emergency Repair**

Funds are set aside annually for emergency repairs that occur as the result of accidents or disasters. Allocation of these funds is authorized by the State Transportation Engineer when accidents/ weather-related causes occur.

## **Bridge and Culvert Repair**

The Bridge Repair and Culvert Repair set-aside programs supplement the Priority Bridge program (see B-11). The program aims to restore the structural integrity of bridges and culverts. Bridge repair work includes: overlaying concrete decks; replacing or resetting expansion joints; resetting bearing devices; repairing abutments, piers, or girders; and repairing damage from external sources.

Each District, using the Bridge Management Engineer's recommended repair list, submits prioritized lists of candidate bridge and culvert projects to the Bureau of Construction and Maintenance and the Bureau of Design. Each candidate project is

reviewed for the structure's condition history and latest inspection to confirm necessary repairs or replacement. Statewide lists are prioritized using such factors as maintenance effort, safety, traffic, and engineering judgment. The lists are submitted to the Bureau of Program Management for review to confirm that the candidate structures are not programmed for future work under any other KDOT program. The prioritized lists are merged to create the yearly statewide repair list.

## **Bridge Painting**

There are approximately 800 bridge structures on the Kansas State Highway System that require periodic painting of the structural steel to slow corrosion. These structures contain nearly 242,000 tons of structural steel. They are categorized into two groups:

### **Group A:**

Structures which have 10 tons or more of structural steel.

The Bridge Management Engineer prioritizes these structures (approximately 760 bridges) according to the Bridge Inspection Manual's "Paint Condition Rating." The statewide prioritized list is reviewed by the Bureau of Program Management to confirm that each candidate structure is not programmed for future work under any other KDOT program. Projects are then scheduled in order of priority until available funds are exhausted.

### **Group B:**

Structures having less than 10 tons of structural steel.

Each District is responsible for the painting of these structures (approximately 40 bridges statewide).

## **Signing**

This program was established in 1996 to address necessary sign replacements on the State Highway System due to pending new federal requirements for minimum retroreflectivity of signs. This program schedules sign replacements based upon highway route mileage statewide and the total mileage of all the routes in

each District for that year. This program excludes signs on any other state projects that include sign replacement for that highway route in the same year. This program also excludes any signs that were replaced within five years of the scheduled date of the replacement project.

## **Pavement Marking**

This set-aside program was established in FY 1996 to address pavement marking necessary due to pending new federal requirements for minimum retroreflectivity of pavement markings. Improvements in this category utilize high-performance, long-life pavement marking materials. Efforts are also made to identify those marking materials with wet-weather retroreflectivity. This program is limited to projects that do not have high-performance markings included under any other KDOT program. Projects are selected by the Bureau of Traffic Engineering based upon a roadway's traffic volumes, past performance of marking material, condition of existing marking, surface condition, surface type, crash history, and, in the case of new marking materials, the research benefit.

## **Lighting**

Because lighting is beneficial to the safety and operation of the highway system, this set-aside program was established in FY 2000. Projects are selected by the Bureau of Traffic Engineering based on the roadway's volume and night-time crash history. This program is limited to projects which are not included under any other KDOT program. Projects are scheduled until the available lighting funds are exhausted. (At other locations, lighting may be installed by the local unit of government by obtaining a highway permit. In

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## *Major Modification Components*

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**of the CTP**

- ◆ *Non-Interstate Roadway and Associated Bridges, page B-4*
- ◆ *Interstate Roadways and Associated Bridges, page B-5*
- ◆ *Economic Development, page B-5*
- ◆ *Geometric Improvement, page B-6*
- ◆ *Railroad/Highway Crossing, page B-6*
- ◆ *STP Safety Projects, page B-7*
- ◆ *Railroad Grade Separations, page B-8*
- ◆ *Guard Fence Upgrades, page B-8*
- ◆ *Corridor Management, page B-8*
- ◆ *Railroad Crossing Surfacing, page B-8*
- ◆ *Local Partnership Railroad Grade Separations, page B-9*
- ◆ *Intelligent Transportation Systems (ITS), page B-9*

general, the local entity bears the cost of installation, maintenance, and operation.)

## **MAJOR MODIFICATION**

The Major Modification program is the second major component of the FY 2000-2009 CTP. It is designed to improve the service, comfort, capacity, condition, economy, or safety of the existing system. It includes a number of set-aside programs: Economic Development; Geometric Improvement; and the federal-aid Railroad/Highway Crossing and Safety programs. Only a portion of the Railroad/Highway Crossing and Safety funds are included in the state program because most of the projects are off the State Highway System. Two new set-aside programs, Guard Fence Upgrades and Railroad Grade Separations, were established in FY 1996 and 1998 respectively.

For the CTP, four additional new set-aside programs were established: Corridor Management; Railroad Crossing Surfacing; Local Partnership Railroad Grade Separations; and Intelligent Transportation Systems (ITS).

## **Non-Interstate Roadway and Associated Bridges**

### **Construction Priority System - Major Modification**

Interstate and Non-Interstate roadway and Priority Bridge projects are selected using the Construction Priority System. It ranks roadway sections and bridges for improvement by the seriousness

of their deficiencies.

The system was developed by KDOT and Woodward-Clyde Consultants in 1981. The system originally consisted of two formulas – one for roads and one for bridges – that used input from KDOT’s planning data base to measure the relative need for improvement of all roads and bridges. Both the roadway and the bridge formulas have since been modified by KDOT, and a third formula, for Interstate roadway rehabilitation projects, has been developed by modifying the original roadway formula to apply to Interstate roadway sections only. All three formulas are currently under review.

KDOT runs the three priority formulas to update priority ratings by using updated survey information. The output from the formulas, prioritized lists of roadway control sections and bridges, are used to identify logical projects. Projects with the highest relative need are programmed for improvement first within available funding and based on scheduling considerations. This process was used to select projects in the CTP Major Modification program and Priority Bridge program. These are the basic steps used to develop the multiyear program:

1. Develop funding estimates.
2. Identify and prioritize projects, determine improvement

scopes, and prepare cost estimates.

3. Earmark set-aside funds.
4. Balance project costs and funding by fund class and obligation limit within each fiscal year.
5. Prepare summary of project costs and funding by fund class and fiscal year.
6. Review of draft program, cost, and funding summary data by Program Review Committee.

**Non-Interstate Projects** - Roadway work in this category includes reconstruction/heavy rehabilitation of pavement, widening traffic lanes, adding or widening shoulders, and improving alignment (i.e., eliminating steep hills or sharp curves). Associated bridge work includes widening narrow bridges, replacing obsolete bridges, and modernizing bridge rails for bridges within the limits of each project. Non-Interstate roadway projects were prioritized using the Non-Interstate Roadway Priority Formula. A schematic of the formula is shown on page B-17.

### Interstate Roadway and Associated Bridges

Roadway work in this category includes resurfacing, restoring, rehabilitating, and reconstructing pavement on the Interstate System. A separate priority formula was developed for Interstate

## HIGHWAY JURISDICTION AND RESOURCES

Road Category	Jurisdictional Authority	Fund Sources	
State Highway System 10,377 miles* 53.4% of total travel	<b>KDOT</b>	<ul style="list-style-type: none"> <li>♦ State Highway Fund</li> <li>♦ Federal funds</li> <li>♦ Local funds</li> </ul>	<i>*Includes City Connecting Links. **The remaining 5.1% of total travel is on the 238-mile Kansas Turnpike.</i>
Nonstate highway system 124,401 miles 41.4% of total travel**	<b>Cities and Counties</b>	<ul style="list-style-type: none"> <li>♦ Special City and County Highway Fund</li> <li>♦ Local Funds</li> <li>♦ State allocated federal funds</li> </ul>	

roadway rehabilitation by KDOT in January 1988. A schematic of the formula is shown on page B-18.

The Interstate Roadway Formula was reviewed prior to selecting projects for FY 1998. As a result of this review, use of the formula was suspended due to data-related issues and the need for the formula to more accurately reflect the structural condition of Interstate pavements. KDOT is in the process of reviewing both current data used in the formula and computer procedures for new data that evaluate pavement by pavement layer type, thickness, age, and axle loadings. For FY 1998-2009, Interstate Roadway projects were selected based on the age of the underlying pavement, pavement deterioration requiring frequent and repeated Substantial Maintenance projects, and system rehabilitation continuity.

## **Economic Development**

Economic Development projects are highway and bridge construction projects intended to enhance the economic development of the State of Kansas. This is a Local Partnership Program in which a project's cost is shared by the state and a local unit of government. Local support must be at least 25 percent of a project's total cost. Eligible projects must have the potential to significantly enhance the income, employment, sales receipts, and land values in the surrounding area.

KDOT annually solicits requests for eligible projects. Applicants are encouraged to review proposed projects with the KDOT District Engineer or a designated representative prior to the submission of the application. Upon submission, KDOT's Bureau of Program Management reviews the proposed project scope and estimate. All projects are then assembled in a single package and presented to the Kansas Highway Advisory Commission. Staff from KDOT and the Kansas Department of Commerce and Housing assist the Highway Advisory Commission by evaluating the projects. The Highway Advisory Commission recommends a set of projects to the Secretary of Transportation who makes the final selection.

## **Geometric Improvement**

This is a Local Partnership Program. Funds are set aside annually to assist cities in funding geometric improvements on City Connecting Links (city streets which connect two portions of rural state highway). Geometric improvements are designed to widen pavements, add or widen shoulders, and add needed turning, acceleration, and deceleration lanes. The minimum local funding can range from 0 percent to 25 percent of the project cost, depending on the size of the city. The maximum state share ranges from \$700,000 to \$950,000.

KDOT annually solicits requests for eligible projects. Cities are encouraged to review proposed projects with the KDOT District Engineer or a designated representative before submitting the application. Upon submission, KDOT's Bureau of Program Management reviews the proposed project scope and estimate. All projects are then assembled in a single package and presented to the Highway Advisory Commission. KDOT staff assists by providing project-related information and design criteria. The Highway Advisory Commission recommends a set of projects to the Secretary of Transportation, who makes the final selection.

## **Railroad/Highway Crossing**

The 2005 Safe, Accountable, Flexible, Efficient Transportation Act: A Legacy for Users (SAFETY-LU) sets aside funding for use on railroad/highway crossings. This federal-aid program funds protective device installation and hazard elimination at railroad/highway grade crossings on public roads.

In accordance with Section 130 of the 1973 Federal-aid Highway Act, KDOT has established a state rail crossing inventory and formula to prioritize all 6,200 at-grade public crossings in Kansas.

The priority formula "hazard index" is used to rate the relative hazard potential for all crossings and is based on highway traffic, train traffic, and a warning device factor. A schematic of the formula

is shown on page B-18.

Each year a number of the highest ranked crossings that have not been addressed in prior programs are selected for review. A preliminary review of these crossings is conducted to verify crossing inventory information.

Crossings from this list that pass the preliminary review are scheduled for on-site diagnostic reviews. The diagnostic review team consists of KDOT, railroad, and local government staff. This team makes recommendations for each crossing as to type of warning system, crossing surface work, approach roadway improvements, drainage improvements, and brush and timber clearing. A rough cost estimate of the recommendations is developed for each crossing.

The on-site review is sent to the local government officials who have maintenance responsibilities for the highway or roadway. When crossing projects receive a commitment from local government, railroads, and the State, a project implementation procedure is started that leads to improvements at the crossing.

In conjunction with the United States Department of Transportation's national highway/railroad crossing safety initiatives, KDOT is also addressing railroad corridor highway/railroad crossing safety projects. For corridor project approval there must be a reasonable number of highway/railroad crossing closures. The highest priority highway/railroad crossings in the corridor are improved with active flashing light and gate signal systems.

In addition to the federally-funded projects, \$300,000 per year of state funds is programmed for crossing improvements. Prior to the CTP, this program was administered by the Kansas Corporation Commission. Crossings are eligible for this funding only if they don't meet the federal eligibility requirements. Local jurisdictions must submit crossing for funding, which require 20 percent matching funds from the railroad company.

## STP Safety Projects

The 2005 Safe, Accountable, Flexible, Efficient Transportation Act: A Legacy for Users (SAFETY-LU) sets aside funding for use on construction projects. These federal-aid projects provide safety improvements on all federal-aid systems. The Bureau of Traffic Engineering administers the majority of this program. The Bureau of Local Projects administers a small portion of the program for projects on county roads and for cities under 5,000 population.

Four categories of roadway systems have been established for location analysis and funding to ensure that all roadway systems can benefit from federal-aid safety improvements. Each category is allotted a portion of the total amount of STP Safety funds available at the beginning of each federal fiscal year.

<u>Jurisdiction-Location</u>	<u>Population</u>	<u>Funding Split</u>
N Metropolitan	Kansas City/Wichita	38 percent
U Urban	Over 5,000	30 percent
K Rural State Hwys.		20 percent
C County Rds. and other Roadways	Less than 5,000	12 percent

*(These figures are not intended to be rigid. The percentages may vary by a few points in any given year. In addition, funds that cannot be utilized in one category may be transferred to another category.)*

**Identification of High-Crash Locations** - For Jurisdictions U and N, cities are requested to submit two years of crash data for up to five high-crash locations on federal-aid routes within their areas. High-crash locations are determined and ranked by descending equivalent-property-damage-only (EPDO) accident rate. The top 30 (approximately) are considered high-crash locations warranting further analysis. Projects in these categories are financed with federal-aid and local matching funds.

For jurisdiction K, to determine if a location is a high-frequency crash location, a comparison is made between the actual crash rate and the statewide average rate for similar highways. The Bureau of Traffic Engineering conducts county-wide road safety audits. From these audits and from traffic studies, high-

crash locations are established. High-crash locations are ranked in descending EPDO crash rate order. The top locations are considered high-crash locations warranting further analysis. Projects in jurisdiction K on the rural State Highway System are financed with federal-aid and state funds.

Jurisdiction C projects are financed with federal-aid and local matching funds rather than state funds. These projects are selected by local units of government and are subject to Federal Highway Administration approval. They are administered by the Bureau of Local Projects.

**Prioritization** - The identified high-crash locations are prioritized on the basis of the average annual net return for each location. The average annual net return is a dollar amount found by subtracting the average annual costs from average annual benefits. Priority consideration is given to the locations with high average annual net return and high benefit cost ratio. Remaining projects are scheduled in descending order until funds are exhausted. Exceptions to this might be caused by the unavailability of city matching funds, future projects that may encompass the selected location, a grouping of proximate locations into one project, or combining several smaller projects for a total net return larger than one project.

## Railroad Grade Separations

This program was established in FY 1998 to replace state highway railroad at-grade crossings with grade separation structures. To be eligible for this program crossings must be:

- ◆ a rural or City Connecting Link state highway crossing;
- ◆ main line railroad traffic, excluding industrial spur tracks; and
- ◆ route classification must be “B” or “C” or be on the National Highway System (NHS).

Eligible at-grade crossings are prioritized using KDOT’s priority formula hazard index. This is the ranking formula also used for the Major Modification Railroad/Highway Crossing

projects. The formula is based on railroad and highway operational characteristics. Projects are funded with a combination of federal, state, railroad company, and local monies.

## Guard Fence Upgrades

This program was established in FY 1996 to address guard fence upgrades on Interstate and selected high-priority corridors where guard fence is not a part of any other Major Modification or Priority Bridge project. This set-aside fund is necessary due to federal requirements.

It is anticipated that the program will require several years to be completed. Locations of individual sites for the program are determined and grouped into projects according to proximity. Prioritization is based on traffic exposure with locations having the highest traffic volumes being scheduled for construction in the earlier years followed in subsequent years by routes with lower volumes.

## Corridor Management

The Corridor Management set-aside program was created to address the growing need for KDOT, cities, and counties to jointly manage transportation corridors, particularly in high-growth developing areas. This fund is divided into two subcategories with two-thirds going to a project subcategory and one-third to a contingency subcategory. To be eligible for either category of funds, a corridor must be designated in the district plan, there must be a partnering agreement between the Secretary, city, and county, and there must be a binding corridor master plan in place.

The contingency subcategory of funds is designed to address rapidly developing areas or sites where transportation infrastructure changes must be made to better accommodate changes in demand. This fund requires a minimum 50 percent local match for state monies. There is also a per-project maximum of \$200,000.

The project subcategory of funds is designed to assist newly

developing areas in meeting the master plan or to retrofit established areas to master plan standards. Projects are solicited annually and require a minimum 33 percent local match for state monies. There is a per-project maximum of \$250,000.

Also, Corridor Management funds may be used for advance right-of-way acquisition or corridor studies in some special cases.

### **Railroad Crossing Surfacing**

This program was established in FY 2000. Projects under this program will be for at-grade highway/railroad crossing approach and surface upgrades. Eligible crossings will be rural State Highway System crossings and State Highway System City Connecting Link crossings in cities up to 2,500 population.

Projects will be selected from applications for crossing surface improvement projects submitted by railroad companies and Districts. Project scopes will include all necessary materials and activities required for long-term crossing surface and approach improvements. These projects will be funded with 50 percent state and 50 percent railroad company monies.

### **Local Partnership Railroad Grade Separations**

This is a new program established for the CTP. The Local Partnership Railroad Grade Separation Program addresses highway/railroad at-grade crossings off the State Highway System and crossings on the State Highway System, which are on lower priority routes (Route Class “D” and “E”). Project applications will be solicited from local units of government. The project sponsor will be responsible for providing 10 to 20 percent of the project funds, depending on the population of the city or county. Funds provided by the railroad company will be counted as part of the local match funds; the project sponsor will be responsible for negotiating with the railroad.

Projects will be selected based on KDOT’s priority formula hazard index. This is the ranking formula also used for the Major

Modification Railroad/Highway Crossing projects. The formula is based on railroad and highway operational characteristics. Additional selection consideration will be given to projects with relatively higher rates of local and railroad match finding in order to leverage state dollars. The project selection process will also give consideration to the overall positive effects on communities.

### **Intelligent Transportation Systems (ITS)**

The ITS set-aside program was established to meet the funding needs of ITS/technology-related projects in Kansas. The funding is available to apply technology such as advanced sensor, computer, electronics, communications, and management strategies to increase the safety and efficiency of the transportation system. The funding is available to both state and local agencies and is not necessarily limited to agencies that are responsible for transportation. ITS has applications in urban areas, rural areas, transit, and commercial vehicle operations, and consideration for funding will be given to all of these areas.

The Bureau of Transportation Planning, along with the ITS Steering Committee, establishes project rankings based on:

- ◆ anticipated ITS benefits;
- ◆ likelihood to succeed;
- ◆ cost effectiveness;
- ◆ matching funds or KDOT project; and
- ◆ rural/local impact.

Projects are solicited annually and selected based on the criteria listed above.

## **P**RIORITY BRIDGE

The Priority Bridge program, the third major component of the 2000-2009 CTP, is designed to replace or rehabilitate substandard bridges. Substandard bridges are those in a

deteriorated condition or with deficiencies in load-carrying capacity, width, or traffic service. Special consideration is given to replacing one-lane bridges (bridges with roadway width less than 20 feet), restricted vertical clearance bridges, and cribbed bridges (bridges with temporary structural supports to keep them in use).

Priority Bridge projects are selected using the Bridge Priority Formula. The formula was developed by KDOT and Woodward-Clyde Consultants in 1981. It was modified by KDOT in July 1987 and again in September 1988. Bridges with the highest relative need are programmed for improvement first within available funding and based on scheduling considerations. A schematic of the formula appears on page B-18.

### **Bridge Deck Replacement and Culvert-Bridge**

Both of these categories expand the Priority Bridge program. The Culvert-Bridge program addresses culverts that are beyond the scope of a Substantial Maintenance project but do not qualify for the Priority Bridge Replacement/Rehabilitation program. The Bridge Deck Replacement program addresses bridges where the bridge superstructure and substructure are in satisfactory condition, but the bridge deck has deteriorated to the point where a Substantial Maintenance project would not be adequate.

Each District, using the Bridge Management Engineer's recommended repair list, submits prioritized lists of candidate projects to the Bureau of Design. Each candidate project is reviewed for the structure's condition history and latest inspection to confirm necessary repairs or replacement. Statewide lists are prioritized using such factors as maintenance effort, safety, traffic, and engineering judgment. The lists are submitted to the Bureau of Program Management for review to confirm that each candidate structure is not programmed for future work under any other KDOT program. The prioritized lists are then merged to create the yearly statewide repair list.

## **SYSTEM ENHANCEMENT**

The System Enhancement Program is the fourth major component of the CTP. Legislation authorizing the CTP, House Bill (HB) 2071, provides that the Secretary of Transportation shall include in the CTP "system enhancement projects which include additions to the system of highways or which substantially improve safety, relieve congestion, improve access, or enhance economic development. It is the intent of the Legislature that, as nearly as possible, the amount of \$1.05 billion shall be expended or committed to be expended for the period beginning July 1, 1999, through June 30, 2009." It also states KDOT "shall utilize the selection methodology developed by the Department to select system enhancement projects."

CTP System Enhancement projects were selected using the same approach that was successfully used for the Comprehensive Highway Program System Enhancement Program in 1990. Project applications were solicited from local units of government. Candidate projects were submitted in three separate categories: Corridor Improvements, Bypass Construction, and Interchange/Separation Improvements.

Each category had unique, objective selection criteria primarily based on engineering and safety factors. Additional credit was given to a candidate project's score for local match funding, lane-miles removed from the State Highway System, and partially complete project development. Local match is a way to measure a local community's support for a project based upon their willingness to invest money in it. Lane-miles removed from the system are a way to gain local cooperation in removing redundant miles from the State Highway System. Credit for projects where project development is partially complete takes into account projects that have previously been determined to be a priority but for which funding has been unavailable.

Only city/county governments or coalitions of city/county governments were allowed to submit an application for a System Enhancement project. System Enhancement projects must be on the State Highway System or a logical addition to the State Highway System.

All of the selected System Enhancement projects for the CTP were announced August 4, 2000.

**Fund Distribution** - No single set of criteria could be used to rate the three very different types of projects. Likewise, a distribution of the funds available had to be made to the various project types. Furthermore, a distribution of funds had to be made between the urban and rural regions of the state.

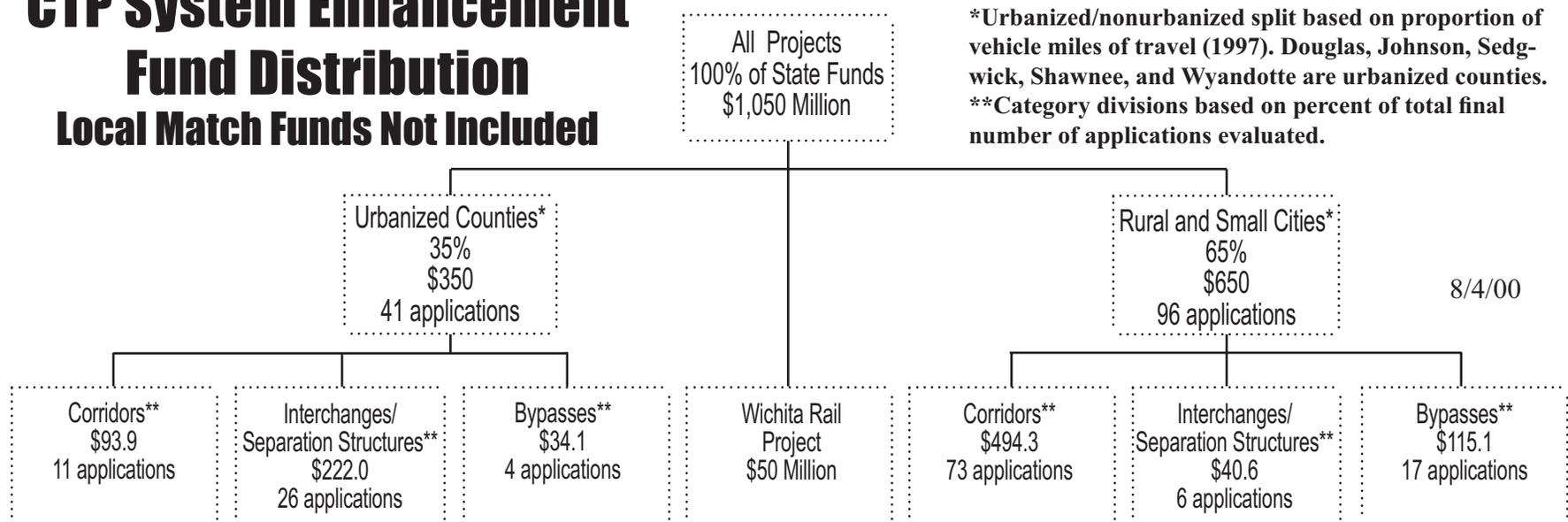
Funds were distributed between urbanized and nonurbanized counties on the basis of vehicle miles of travel. The breakdown was based on 1997 Annual Average Daily Traffic (AADT) counts that showed approximately 35 percent of all vehicle miles traveled on the State Highway System are in the five urbanized counties. The

urbanized counties are Douglas, Johnson, Sedgwick, Shawnee, and Wyandotte. Vehicle miles of travel are used because they are a measure of both the source of highway revenues and highway usage, which in turn relate to need.

The urban and rural fund allocations were further divided between the Corridor Improvements, Bypass Construction, and Interchange/Separation Improvements categories based on their percent of the total final number of applications received in each category. In addition, \$50 million of the System Enhancement funds were earmarked for the Wichita Rail Project. The chart below shows the fund distribution.

**Economic Development Review Panel (EDRP)** - An independent group of experts reviewed the economic development potential of the candidate projects. Governor Bill Graves appointed the EDRP in July 1999, and members included Lt. Governor Gary Sherrer (Chairman), Topeka; James M. AuBuchon, Pittsburg; Mary Birch, Overland Park; Sheryl Dick, Garden City; Don A.

## CTP System Enhancement Fund Distribution Local Match Funds Not Included



\*Urbanized/nonurbanized split based on proportion of vehicle miles of travel (1997). Douglas, Johnson, Sedgwick, Shawnee, and Wyandotte are urbanized counties.  
\*\*Category divisions based on percent of total final number of applications evaluated.

Hill, Emporia; John G. Montgomery, Junction City; John L. Rolfe, Wichita; Billie Jo Smart, Washington; and Lavern D. Squier, Hays. Based on their own knowledge and experience, their observations, and the information provided by the applicant, the panel assigned the Economic Development Enhancement Rating to each project. The panel could assign a score up to 20 points for each project.

**Project Evaluation** - As specified in HB 2071, KDOT evaluated and ranked the eligible project requests based on criteria developed by the Department.

KDOT developed a score for each project based on objective engineering criteria, considering such factors as current and projected traffic volume, design, and safety issues. This score could be a maximum of 80 points. The EDRP considered a project’s potential for economic development and assigned a project score of up to 20 points.

These scores were combined and then any points earned through “extra credit” categories were added to the score. A project sponsor could earn extra credit in one of three ways: offer to take over responsibility of lane miles currently on the State Highway System once the System Enhancement project is completed and open to traffic; offer a percentage of the project cost as local matching funds; or submit a project where a portion of the project may already be complete. The combination of these three numbers - KDOT score, EDRP score, and extra credit points - created the project’s final score. It was then prioritized against the other projects in its category, and projects were funded from the top down until dollars in that category were exhausted.

KDOT received more than \$5 billion in project requests for the \$1 billion System Enhancement pool. KDOT did decide to fund some projects that were ranked lower than other candidates because these projects could be fully funded with the remaining dollars available in the category. KDOT also decided to partially fund some projects. All of these decisions were made to make the best use of the dollars available.

## Corridor Improvements

**Eligibility for Corridor Improvements** - Each proposed project must be either on the currently approved State Highway System or must be eligible to be added to the System as determined by KDOT in accordance with the established guidelines. Eligible projects must also substantially improve the capacity and serviceability of significant segments of the route. Design standard continuity and significant traffic volume changes are considered in determining eligibility. Projects in this category might include such improvements as replacing a two-lane facility with a four-lane facility, adding a new two-lane or four-lane corridor, or improving significant segments of a major thoroughfare in an urban area.

*Criteria for evaluating corridor candidate projects:*

Evaluation Attributes	Percent Relative Weight
Economic Development Enhancement	20
Current Volume/Capacity Ratio	25
Estimated Future Volume/Capacity Ratio	20
Average Trip Length Index	5
Accident Rate	5
Fatal Accident Rate	5
Priority Formula Rating	10
Truck Traffic	10
<b>Sub-Total</b>	<b>100</b>

### Extra-Credit Factors

Lane-Miles Removed	Unlimited
Percent Local Match	0 to 100
Partially Complete Project Development	0 to 18

## Bypass Construction

**Eligibility for Bypass Construction** - Each proposed project must be either on the currently approved State Highway System or must be eligible to be added to the System as determined by KDOT in accordance with the established guidelines. When the

bypass is constructed and open to traffic, the existing route through the city will be removed from the State Highway System.

*Criteria for evaluating bypass candidate projects:*

Evaluation Attributes	Percent Relative Weight
Economic Development Enhancement	20
Estimated Future Traffic Volume	15
Percent Through Traffic	20
Current Volume/Capacity Ratio	20
Accident Rate	10
Truck Traffic	15
<b>Sub-Total</b>	<b>100</b>

**Extra-Credit Factors**

Lane-Miles Removed	Unlimited
Percent Local Match	0 to 100
Partially Complete Project Development	0 to 35

**Interchange/Separation Improvements**

**Eligibility for Interchange/Separation Improvements -**

All Interchange/Separation Improvements must be on the currently approved State Highway System. For this System Enhancement category only, the project sponsor must provide 100 percent of the total cost of preliminary engineering, right of way, and utility adjustment.\*

*Criteria for evaluating interchange/separation candidate projects:*

Evaluation Attributes	Relative Weight
Economic Development Enhancement	20
Safety Enhancement	20
Operational Enhancement	15
Cost Effectiveness	15
Traffic Served	30
<b>Sub-Total</b>	<b>100</b>

**Extra-Credit Factors**

Lane-Miles Removed	Unlimited
Percent Local Match	0 to 100*
Partially Complete Project Development	0 to 47

**System Enhancement Projects**

◆ **US-24/40 STATE AVENUE**

US-24/40 (State Avenue) in Wyandotte County from west of the K-7 interchange, east to 118<sup>th</sup> Street. This project will reconstruct the roadway to a five-lane section, improve the US-24/40 & K-7 interchange, and complete any turnback work on US-24/40/73 from K-7 east to I-70 near KS-MO state line.

◆ **I-35 & US-69 INTERCHANGE WITH 87<sup>TH</sup> STREET**

I-35 and US-69 interchange with 87<sup>th</sup> Street in Lenexa and Overland Park. This project will reconstruct the interchange to current design standards and increase traffic capacity.

◆ **US-40 (6<sup>TH</sup> STREET) LAWRENCE**

US-40 (6<sup>th</sup> Street) in Lawrence from K-10 (South Lawrence Trafficway) east through the Wakarusa Drive intersection. This project will reconstruct the roadway from two lanes to four lanes.

◆ **US-50 / 400 GARDEN CITY WEST**

US-50/400 from Gray/Finney County line east to junction with US-83. This project will complete the design for a four-lane access-controlled facility within the project limits and construction from one mile west of Holcomb east to junction with US-83.

◆ **US-50 NEWTON INTERCHANGE**

US-50 and K-15 interchange in Newton. This project will improve and signalize the intersection of K-15 and 15th Street.

◆ **US-50 SOUTH HUTCHINSON INTERCHANGE**

East US-50 and K-96 interchange in South Hutchinson. This project will reconstruct the interchange to improve traffic flow and capacity.

◆ **US-54 EL DORADO BYPASS**

Southeast of El Dorado: new alignment from US-54/77, northeast to US-54. This project has been **cancelled** at the request of the project sponsors.

◆ **US-54 WOODLAWN INTERCHANGE**

US-54 (Kellogg) from Sylvan Lane east to Mission Road. Reconstruct US-54 to six-lane freeway section and construct interchange at Woodlawn Road.

◆ **US-54 ROCK ROAD INTERCHANGE**

US-54 (Kellogg) from Mission Road to Heather Street. Reconstruct US-54 to six-lane freeway section and construct interchange at Rock Road.

◆ **US-54 GODDARD BYPASS**

US-54 from existing US-54 freeway section west of Goddard east to near 167<sup>th</sup> Street. Design and corridor preservation for a freeway section.

◆ **US-54 CORRIDOR FROM KINGMAN TO PRATT**

US-54 from west of Pratt, east to the existing four-lane section east of Kingman. The System Enhancement recommendation is to complete the preliminary engineering and right-of-way acquisition for the entire corridor. Construction will begin approximately 4 miles east of the Pratt/Kingman County line and proceed east for 10 miles.

◆ **US-59 ATCHISON RIVER BRIDGE**

US-59 the Amelia Earhart Bridge over the Missouri River in Atchison. This project will replace the current bridge with a four-lane improvement.

◆ **K-61 CORRIDOR FROM HUTCHINSON TO McPHERSON**

K-61 from four-lane section in Hutchinson, north to existing four lanes south of McPherson. This project will construct a four-lane access controlled improvement with bypasses at Inman and Medora.

◆ **US-69 CORRIDOR IN JOHNSON COUNTY**

US-69 from 119<sup>th</sup> Street, north to I-35, and then on to 75<sup>th</sup> Street. This project will complete the design work and right-of-way acquisition for a reconstruction to six lanes. Construction will be determined as funding permits.

◆ **I-70 JUNCTION CITY INTERCHANGE**

I-70 and Exit 298 interchange with East and Chestnut Streets. This project will reconstruct interchange to increase vertical clearance over the sideroad.

◆ **US-73 / K-7 (MAIN STREET) LANSING**

US-73/K-7 (Main Street) from south of Gilman Road, north to Connie Street. This project will widen the roadway to five lanes and add lighting, landscaping, and access control.

◆ **US-75 JACKSON COUNTY INTERCHANGE**

US-75 and County Road 150 intersection just south of Mayetta. This project will construct a new diamond interchange and frontage roads.

◆ **US-77/US-166 ARKANSAS CITY BYPASS**

US-77 bypass of Arkansas City in the southeast part of town. This project is the continuation of the plans started under the Comprehensive Highway Program. It will construct a four-lane bypass of US-77.

◆ **US-81 (47<sup>TH</sup> STREET) IN WICHITA**

US-81 (Broadway Avenue) from 48<sup>th</sup> Street, north to 47<sup>th</sup> Street, then east on US-81 (47<sup>th</sup> Street) from Broadway Avenue

east through the I-135 interchange. This project will complete a preliminary engineering study for future corridor improvements.

◆ **US-83 LIBERAL CORRIDOR PRESERVATION**

US-83 on the east side of Liberal from US-54 north to north of Liberal. This project has been **cancelled** at the request of the project sponsors.

◆ **I-135 SALINA INTERCHANGE**

I-135 and Waterwell road overpass. This project, located approximately 1 mile south of the Shilling Road interchange, will construct a diamond interchange utilizing the existing bridge.

◆ **US-169 COFFEYVILLE (TWO SYSTEM ENHANCEMENT PROJECTS)**

US-169 from the junction with US-166 north to County Road 2800. This project will construct a four-lane access-controlled improvement.

◆ **US-183 HAYS**

US-183 from south of I-70 ramp terminal, north through 55<sup>th</sup> Street. This project will construct a four-lane access-controlled roadway.

◆ **K-254 NORTHWEST BYPASS IN SEDGWICK COUNTY**

This new alignment will start from US-54 near 167<sup>th</sup> Street proceeding north and east to K-96 near 45<sup>th</sup> Street North. This project will acquire the right-of-way for a corridor preservation of a freeway section.

◆ **US-400 DODGE CITY BYPASS**

This new alignment will start from the junction of US-50/US-50B, proceeding south and east to US-56 west of Dodge City. This project will construct a two-lane bypass on four-lane right-of-way with access control.

◆ **US-400 PARSONS BYPASS**

This new alignment begins approximately 3.5 miles west of

Parsons, proceeding around the city to the north to 2.5 miles east of Parsons. This project will construct a two-lane bypass on four-lane right-of-way.

◆ **US-400 STUDY**

US-400 from junction with US-83 near Garden City in Finney County, south and east to east of Mullinville in Kiowa County. This project will complete a location and design concept study for future four-lane improvements of this corridor.

◆ **I-435 ANTIOCH INTERCHANGE**

I-435 and Antioch overpass in Overland Park, Johnson County. This project will construct an interchange with Antioch Road in conjunction with I-435 widening and required work on US-69.

## OTHER MODAL PROGRAMS

### Kansas Airport Improvement Program

When time is of the essence, no other means of travel can fulfill time-sensitive requirements the way that air transportation does. Airports serve an important role in the state transportation system. The foremost role is the economic activity generated by companies that rely on airports in the daily conduct of their business. Also important are medical services, both fly-in by professionals and emergency evacuations. In addition, agricultural application, charter, a link to the national air transportation system private air travel, and many other services are available.

The goals of the Kansas Airport Improvement Program include:

- ◆ preserving and improving the state's airport infrastructure;
- ◆ minimizing surface travel time to air ambulance pick-

up locations;

- ♦ increasing safety by improvements to taxiways, ramps, and lighting;
- ♦ enhancing community economic development appeal.

A key element of the program is a matching requirement of between 10 to 50 percent, which is determined by community population. The program's \$3 million per year in state funds, combined with local matching funds, results in \$4 to \$4.5 million in improvements per year. Over the course of the program, the average runway pavement condition in Kansas is expected to improve from a "fair" rating in 1999 to a "very good" rating by 2009.

To date, the program has supported 158 projects at 82 public-use airports.

## **Rail Service Improvement Fund**

Many areas of the state no longer have service from Class I railroads. Short line railroads provide rail service to such areas, provide an alternative to trucks for freight (primarily grain) shippers, and keep rural areas of the state connected to the national rail network as well as national and international markets for Kansas grains and products. This alternative provides competition and helps keep shipping rates down. It also reduces the number of trucks that would otherwise be on Kansas roads and highways. This in turn avoids increased maintenance and rehabilitation costs for those roads.

The Rail Service Improvement Fund component of the CTP receives \$3 million per year for eight years (through State Fiscal Year 2007) and is administered by KDOT's Rail Affairs section. The fund makes available to short line railroads operating in Kansas low-interest, long-term (ten-year) loans and grants to be used primarily for track rehabilitation projects. Funds may also be used for financing and acquisition activities.

## **Public Transportation**

One state and three federal public transit programs provide services to the citizens of Kansas who depend upon public transportation. Without these programs, many citizens would have no way to make medical appointments, hold a job, shop, or be self-sufficient.

Federal Transit Administration (FTA) 49 U.S.C. 5311 provides federal monies to support nonurban area (under 50,000 population) transportation programs that serve elderly persons and persons with disabilities while also providing the general public with an equal opportunity to utilize the services. About \$4.0 million is available yearly to Kansas under the program. FTA 49 U.S.C. 5310 provides federal monies to private nonprofit corporations and associations or public bodies approved by the state to purchase vehicles and related equipment to meet the special transportation needs of elderly persons and persons with disabilities. Urbanized areas and nonurban-areas under 50,000 population are eligible. About \$1.0 million is available yearly to Kansas under this program.

FTA 49 U.S.C. 5309 is a capital investment program with annual funding about \$3 million depending on Congressional earmarks. Assistance is available for the purchase of vehicles and vehicle related equipment and/or facility construction and/or renovation. Currently there are four facilities that will be built across the state.

Funding for the state program is available from the Elderly & Disabled Coordinated Public Transportation Assistance Fund. Under the CTP, the state program provides \$6 million a year for needed transportation in areas of the state lacking service and to expand and enhance existing services.

FORMULA (USED FOR CTP PROJECTS) REFERRED TO ON PAGE B-5

<sup>1</sup> **Average Annual Daily Traffic** – The number of vehicles per day on a roadway segment averaged over one year.

<sup>2</sup> **Substandard Stopping Sight Distance** – A stopping distance for a vehicle that is less than the agency standard. The standard is a function of the design speed which is based on the Kansas Route Classification and AADT group.

<sup>3</sup> **Substandard Horizontal Curve** – A sharp curve on a roadway segment on which the design speed cannot be maintained; the segment has a posted speed limit that is less than the design speed.

<sup>4</sup> **Capacity Adjusted AADT** – Adjusted for number of lanes and capacity so that different roadway types can be evaluated on a comparable basis.

**Non-Interstate Priority Formula (ATTRIBUTES/ADJUSTMENT FACTORS)**

		Adjustment Factors								
		Accident Rate (See below)	Posted Speed (See below)	Facility Type		Shoulder Type		Route Class (See below)	AADT <sup>1</sup> (See below)	
Attribute (Need Value)		Relative Weight	*	*	Divided	Undivided	Stabilized	Unstabilized	*	*
Driver Exposure Attributes	No. of Narrow Structures Per Mile	0.086	0 to 1	0 to 1					0 to 1	0 to 1
	Shoulder Width	0.089	0 to 1	0 to 1	0.54	1.0	0.607	1.0	0 to 1	0 to 1
	No. of SSSD <sup>2</sup> Per Mile	0.069	0 to 1	0 to 1		1.0			0 to 1	0 to 1
	Lane Width	0.101	0 to 1	0 to 1	0.5				0 to 1	0 to 1
	No. of SHC <sup>3</sup> Per Mile	0.099	0 to 1	0 to 1				0 to 1	0 to 1	
	Volume/ Capacity (Maximum Default Value = 1.15)	0.091							0 to 1	0 to 1
	Commercial Traffic (Maximum Default Value = 725)	0.065			0.376	1.0	0.519	1.0	0 to 1	0 to 1
	Rideability	0.088						0 to 1	0 to 1	
	Pavement Structural Evaluation (PSE)	0.208							0 to 1	0 to 1
	Observed Condition	0.104							0 to 1	0 to 1
<b>Sum of All Weights</b>		<b>1.000</b>								

**\* Non-Interstate Priority Formula (ADJUSTMENT FACTORS)**

Accident Rate	Adjustment Factor	Posted Speed	Adjustment Factor	Route Class	Adjustment Factor	Capacity -Adjusted AADT <sup>4</sup>	Adjustment Factor
High	1.0	≥ 55 MPH	1.0	A	1.0	20,000	1.0
Medium	0.858			B	0.9	10,000	0.925
Low	0.734	< 55 MPH	Varies from	C	0.7	6,000	0.895
			0 to 1	D	0.5	2,000	0.865
				E	0.3	0	0.850

FORMULAS (USED  
FOR CTP PROJECTS)  
REFERRED TO ON  
PAGES B-5,  
B-6, AND B-10

**Interstate Priority Formula (ATTRIBUTES/ADJUSTMENT FACTORS)**

Attribute Relative (Need Value)	Weight	Adjustment Factors					
		Facility Type		Shoulder Type		Route Class (See B-20)	AADT <sup>1</sup> (See B-20)
		Divided	Undivided	Stabilized	Unstabilized		
Commercial Traffic	0.140	0.376	1.0	0.519	1.0	0 to 1	0 to 1
Rideability	0.189					0 to 1	0 to 1
Pavement Structural Evaluation (PSE)	0.447					0 to 1	0 to 1
Observed Condition	0.224					0 to 1	0 to 1
<b>Sum of All Weights</b>	<b>1.000</b>						

<sup>1</sup> Average Annual Daily Traffic – The number of vehicles per day on a roadway segment averaged over one year.

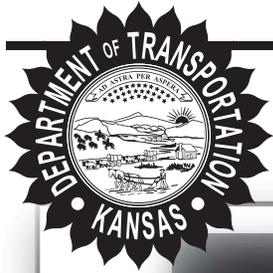
**Bridge Priority Formula  
(ATTRIBUTES/ADJUSTMENT FACTORS)**

Attribute (Need Value)	Rel. Weight	Adjustment Factors
		AADT <sup>1</sup> (See B-20)
Bridge Width (Driver Exposure Attribute)	0.222	0 to 1
Deck Condition	0.169	0 to 1
Structural Condition	0.359	0 to 1
Operating Rating	0.250	0 to 1
<b>Sum of All Weights</b>	<b>1.000</b>	

<sup>1</sup> Average Annual Daily Traffic – The number of vehicles per day on a roadway segment averaged over one year.

**Priority Formula For Railroad Crossings**

Hazard Index = AADT x T x W  
 AADT = Average Annual Daily Traffic  
 T = Average Trains per day  
 W = 0.1 for gates  
 W = 0.6 for flashing lights  
 W = 1.0 for cross bucks



# Project Listings - Part C





# PROJECT LISTINGS



Included in this section are two maps showing Comprehensive Transportation Program state highway system projects, and maps involving aviation, public transit, and rail. A detailed explanation of the methods or criteria employed in the selection of highway projects can be found in Part B. An explanation of changes from last year's Annual Report project list is also included.

K.S.A. Supp. 68-2315, as amended, requires information concerning construction work completed in the preceding fiscal year, construction work in progress, and planned projects for future years.

These project listings are available on KDOT's Internet site at <http://www.ksdot.org/publications.asp>, under the 2006 Annual Report listing. If you would like to receive a copy of this section, please contact KDOT's Bureau of Transportation Information at 785-296-3585.

The listings include projects scheduled for improvement during FY 2000-2009, the projects completed in FY 2005, and projects under construction as of October 31, 2005, organized in alphabetical order by county. Each one includes a project description, length, construction cost or estimated construction cost, and work type. In addition to state highway construction project lists are aviation, rail, and public transit project listings.

# Explanation of Changes To/From 2005 Annual Report

Comprehensive Transportation Program FY 2000-2009

Major Modification Interstate and Non-Interstate and Priority Bridge Projects Only

Assumes funding provided for in HB2071(April 1999), HB3011 (May 2002), and SB384 (April 2004)

## **New Priority Bridge Deck Replacement Projects (Identified Only One Year at a Time) Followed by Program Category**

K-152	Linn	Marias Des Cygnes River Bridge 8 miles east of K-7 (Annual addition for Redeck set-aside program)	PB
US-160	Barber	Elm Creek Bridge east of US-281 (Annual addition for Redeck set-aside program)	PB

## **Project Category Changes Due to Scope Refinement Followed by Program Category**

K-4	Saline	I-135 to K-104 (Converted to SM project due to current condition; Dry Creek Bridge will be replaced in FY 2007)	MM
K-104	Saline	North-south section adjacent to I-135 (Converted to SM project due to current condition)	MM

10/25/05 KDOT



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# Financial Report - Part D

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# FINANCIAL COMPLIANCE ...

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Each year the Department provides to the governor and the Legislature summary financial information and a statement of assurance that the Department has prepared a comprehensive financial report of all funds for the preceding year. The financial report must include a report by independent public accountants attesting that the financial statements present fairly the financial position of the Department in conformity with generally accepted accounting principles (GAAP).

The Department has prepared a Comprehensive Annual Financial Report (CAFR) for Fiscal Year (FY) 2005. Included in the CAFR is the report of the independent public accountants, Berberich Trahan & Co., P.A. and Allen Gibbs & Houlik, L.C. attesting that the financial statements present fairly the financial position of the Department in conformity with accounting principles generally accepted in the United States of America. Also included in the report is a certificate of achievement awarded to the Department for excellence in financial reporting for the 2004 CAFR. The award for 2003 marks the seventeenth consecutive year the Department has received the award for excellence in financial reporting. The FY 2005 CAFR has been submitted for consideration of the award.

The complete CAFR for FY 2005 is available upon request by contacting KDOT's Office of Transportation Information, 700 S.W. Harrison, Topeka, Kansas, 66603-3754, or by telephone 785-296-3585 (Voice)/(TTY). The CAFR is also available by accessing KDOT's web site at <http://wwwdev.ksdot.org/publications.asp>.

## Transportation Program Information

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The Comprehensive Transportation Program (CTP) is a program for all modes of transportation: highways, aviation, rail, and public transit. Descriptions of the programs for each of the modes can be found in Section 2, "What We Do." For highways, the 10-year CTP will provide nearly \$1.8 billion for the substantial maintenance program, \$3.8 billion for major modification and priority bridge programs, and \$1.3 billion for system enhancement projects. In addition, the CTP will provide approximate state funding of \$30 million for the aviation program over 10 years, \$60 million for the public transit program over 10 years, and \$24 million for the rail program over eight years.

Enhanced local support includes \$1.5 billion over 10 years in the distributions of the Special City and County Highway Fund; local federal aid projects (including required local matching funds) of \$728 million over 10 years; local partnership programs (including required local matching funds) which consist of resurfacing programs, economic development and geometric improvements of \$242 million over 10 years; and city connecting link maintenance payments of \$31 million over 10 years.

The Comprehensive Transportation Program is based on 10-year projections. The schedule below is a snapshot solely comparing FY 2005 revenues and expenditures to FY 2004 revenue and expenditures.

The Comprehensive Transportation Program is based on 10-year projections. The schedule below is a snapshot solely comparing FY 2005 revenues and expenditures to FY 2004 revenue and expenditures.

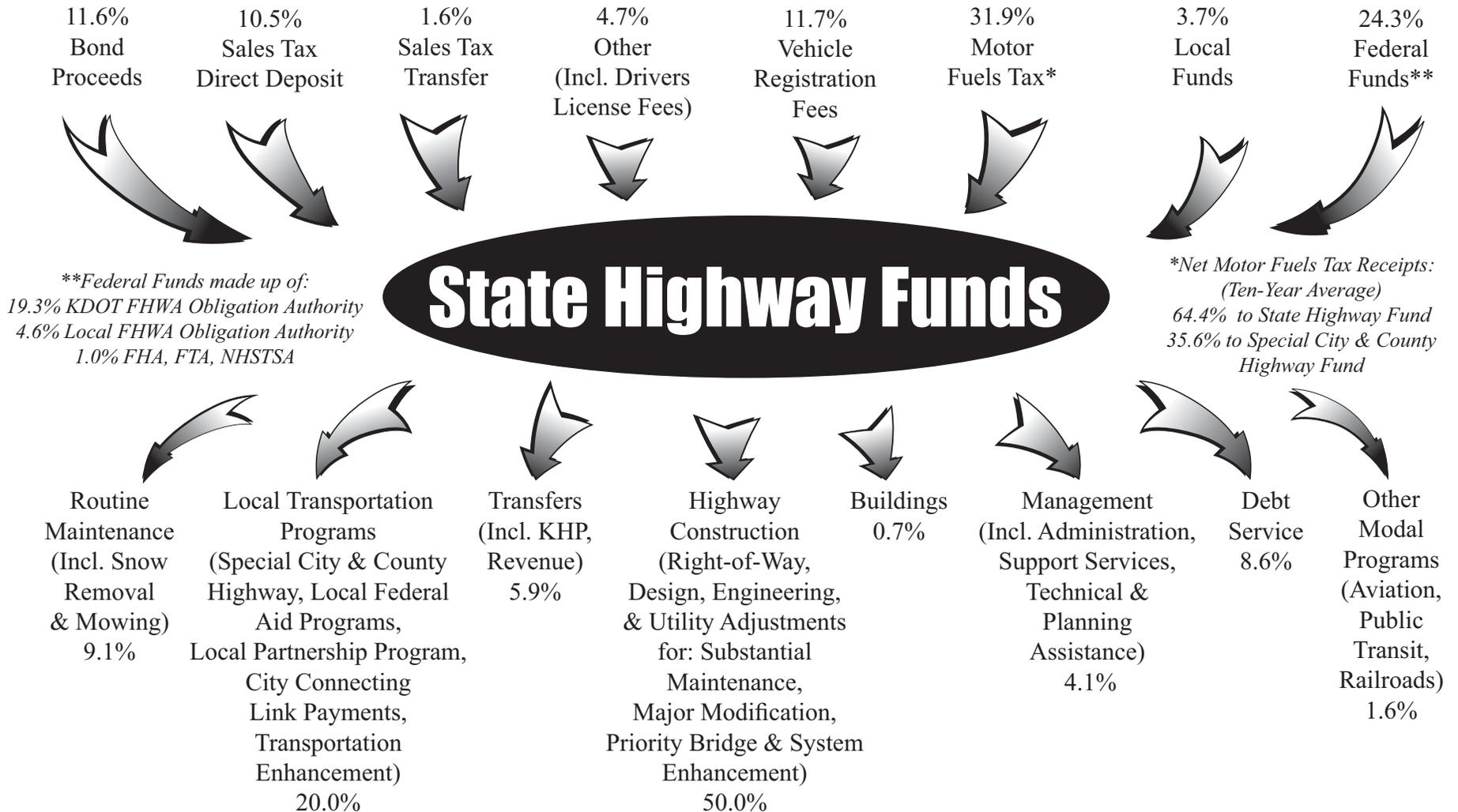
## FY 2005 FINANCIAL INFORMATION

The following schedule is a summary of revenues and expenditures for FY 2005 and the amount and percent of increases or decreases in relation to prior year amounts. All amounts are in thousands.

REVENUES	2005	Percent of Total	Increase (Decrease) from prior year	
			Amount	Percent
Motor Fuel Taxes	\$ 423,316	37 %	\$ 2,860	1 %
Vehicle Registrations and Permits	163,760	15	6,844	4
Intergovernmental	384,069	35	56,802	17
Sales and Use Taxes	94,208	9	3,544	4
Investment Earnings	16,622	2	12,868	343
Motor Carrier Property				
Taxes	10,064	1	10,064	0
Other	6,118	1	(6,937)	(53)
Transfers from				
Other State Funds	3,825	0	492	15
<b>Total revenues</b>	<b>\$ 1,101,982</b>	<b>100 %</b>	<b>\$ 86,537</b>	<b>9 %</b>

Expenditures	2005	Percent of Total	Increase (Decrease) from prior year	
			Amount	Percent
Current Operating				
Maintenance	\$ 304,196	22 %	\$ 39,186	15 %
Construction	516,557	37	(46,568)	(8)
Local Support	284,022	21	2,634	1
Rail, Air and Public Trans.	11,330	1	2,020	22
Management	60,749	4	6,645	12
Debt Service				
Principal	38,460	3	10,110	36
Interest and Fees	67,528	5	13,998	26
Transfers to Other				
State Funds	94,705	7	40,994	76
<b>Total expenditures</b>	<b>\$ 1,377,547</b>	<b>100 %</b>	<b>69,019</b>	<b>5 %</b>
OTHER FINANCING SOURCES (USES)				
Revenue Bond Proceeds	\$ 200,000	100 %	(475,739)	(70) %
Paid to Bond Escrow Agent	0	0	442,780	(100)
<b>Total other sources (uses)</b>	<b>\$ 200,000</b>	<b>100 %</b>	<b>(32,959)</b>	<b>(14) %</b>
Excess (Deficiency) of Revenues and Other Sources Over Expenditures	\$ (75,565)	100 %	\$ (15,441)	26 %

# Kansas Department of Transportation Fund Sources and Disposition FY 2000-2009



*\*\*Federal Funds made up of:  
19.3% KDOT FHWA Obligation Authority  
4.6% Local FHWA Obligation Authority  
1.0% FHA, FTA, NHSTSA*

*\*Net Motor Fuels Tax Receipts:  
(Ten-Year Average)  
64.4% to State Highway Fund  
35.6% to Special City & County Highway Fund*

*November 2005 Cash Flow Basis*





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# Reference Information - Part E

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# REFERENCE INFORMATION

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Catch KDOT  
on the web:

**WWW.KSDOT.ORG**

*Connect with any KDOT office from anywhere in Kansas, toll-free 8 a.m. - 5 p.m., Monday through Friday. Closed holidays.*

**KDOT Connection:  
toll-free, 1-877-550-KDOT (5368)**

**Call 511**  
(anywhere in Kansas)  
or go to

**<http://511.ksdot.org>**

Find out route  
specific road conditions,  
construction/detour, weather,  
and emergency road closure  
information 24 hours a day.  
Outside of Kansas, call  
1-866-511-5368.

## ***KDOT'S WEB SITE HAS DETAILS ON MANY TOPICS INCLUDING:***

- ◆ KDOT offices throughout the state;
- ◆ City, county, and state maps;
- ◆ Other modes of transportation;
- ◆ Latest road condition information;
- ◆ News releases;
- ◆ Various publications;
- ◆ Safety information;
- ◆ Career Opportunities;
- ◆ Information for highway contractors, design consultants, vendors, and other organizations.

## ***GLOSSARY OF COMMONLY USED KDOT TERMS***

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**At-grade intersection** - An intersection with two or more roadways that provide for the movement of traffic on the same level.

**City Connecting Link (KLINK)** - A city street that connects two rural portions of state highway. Normally a city is responsible for maintaining the connecting link.

**Culvert** - Generally a drainage structure constructed beneath an embankment. Box sections, pipes, and arches are examples of various culvert shapes.

**Deck** - That portion of a bridge that provides direct support of and the riding surface for vehicular and pedestrian traffic. The deck distributes traffic and deck weight loads to the superstructure elements.

**Expressway** - Multilane; divided highway where access is allowed at public roads via at-grade intersections.

**Fiscal Year** - A 12-month period to which the annual operating budget applies and at the end of which a government determines its financial position and the results of its operations. The State

of Kansas fiscal year (FY) is July 1 through June 30. The federal fiscal year (FFY) is October 1 through September 30.

**Freeway** - Multilane highway where access is provided only at grade-separated interchanges.

**Geometric Improvement** - A project that includes roadway improvements other than a surface treatment, such as shoulder and lane widening, curb and gutter work, or roadway alignment.

**Intersections** - Where two or more roadways meet. An interchange has two or more roadways that provide for the movement of traffic on different levels (grade separated). An at-grade intersection has two or more roadways that provide for the movement of traffic on the same level.

**Kansas Turnpike Authority** - A 238-mile toll highway facility extending from Kansas City west and south past Wichita to the Kansas/Oklahoma state line. It is supported by user toll fees and is operated by the Kansas Turnpike Authority. KDOT has no jurisdiction over the KTA.

**Let** - Advertise and award a contract to the lowest responsible bidder.

**Major Modification** - Program of projects to improve the service and safety of the existing highway system.

**Pavement Management System (PMS)** - A program of data gathering and analysis used by KDOT to select surface preservation locations and actions. The system can be used to determine actions to achieve the best pavement surface conditions

possible using available funds or alternatively to determine the minimum cost to achieve a given level of performance.

**Priority Bridge** - Program of projects to replace or rehabilitate bridges that are deteriorated or have deficiencies in load carrying capacity, width, or traffic service.

**Reconstruction** - Type of improvement designed to replace the existing roadway or bridge when it has reached the end of its useful life. Often accompanied by improvements to the functional and operational capacity of the highway.

**Rehabilitation** - Type of improvement designed to preserve and extend the service life and enhance the safety of an existing roadway or bridge when total replacement is not warranted.

**Retroreflectivity** - Light reflected back to the driver's eye from reflective material on pavement marking or signing.

**Rideability** - A measure of the smoothness and riding characteristics of a road surface.

**Right of Way** - Land or property used specifically for transportation purposes.

**Route Classification System** - A detailed classification system that groups all state highway routes into five levels:

**Class A** - the Interstate System.

**Class B** - Routes that serve as the most important statewide and Interstate corridors for travel.

**Class C** - Defined as arterials, these routes are closely integrated with Class A and B routes in service to all of the state.

**Class D** - These routes provide access to arterials and serve small urban areas not on a Class A, B, or C route, or access to county-seat cities.

**Class E** - Primarily used for local service only, these routes are typified by very short trips.

**Routine Maintenance** - The activities to preserve the “as built” condition of Kansas highways to the best extent possible by KDOT personnel. These activities include pot-hole patching, drainage work, guardrail repairs, highway striping, right-of-way mowing, and snow and ice control.

**Set-aside** - A program of funds reserved for a specific purpose.

**Separation Structure** - A bridge that separates the grades of two or more intersecting roadways or a highway and a railroad.

**State Highway System** - All state, US, and Interstate roadways in Kansas. State routes have K prefixes (K-7, K-99, etc.); US routes are designated such as US-54, US-283, etc; Interstates have I prefixes (I-70, I-35, etc.).

**Substantial Maintenance** - Program of projects selected annually to protect the investment in the State Highway System by preserving existing roadways and bridges.

**Substructure** - The abutments, piers, or other constructed bridge elements built to support the span of a bridge superstructure. The substructure transfers loads from the superstructure to the foundation soil or rock.

**Superstructure** - The entire portion of a bridge structure which primarily receives and supports traffic loads transmitted through

the bridge deck. The superstructure carries these loads across the span and then transfers them to the bridge substructure.

**Surface Preservation** - Projects designed to preserve the “as-built” condition of roadways. This work can include a variety of actions (overlay, milling, crack repair, patching, edge drains, or mudjacking).

**Surface Reconstruction** - Projects designed to replace only the existing surface of a roadway whose geometric characteristics meet current standards.

**System Enhancement** - Program of projects to relieve congestion, improve access, enhance economic development, or improve safety on major segments of the State Highway System. Projects are in three basic categories - corridors, interchanges/separations, and bypasses. The program was originally established by the Comprehensive Highway Program and was reauthorized on a one-time only basis for the CTP FY 2000-2009. Projects were submitted by local governments and were selected after being ranked according to scores based on engineering criteria, a project’s potential for economic development, and the local government’s contribution to the project. Each project was prioritized against the other projects in this category, and projects were funded from the top down until dollars in that category were exhausted.

**TEA-21** - Congress passed the Transportation Equity Act for the 21st Century (TEA-21) on June 9, 1998. It provided authorizations for highways, highway safety, and mass transit.

**Work Zone** - A designated area where highway construction or maintenance is taking place.

## Commonly-used Acronyms and Abbreviations

Abbreviation	Description
AADT	Average Annual Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
ACPA	American Concrete Paving Association
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
APE	Advanced Preliminary Engineering
APTA	American Public Transit Association
APWA	American Public Works Association
ARTBA	American Road and Transportation Builders Association
ATSSA	American Traffic Safety Services Association
BAC	Blood Alcohol Content
BEST	Basic Effective Supervisory Training
BR	Bridge
CADD	Computer-Aided Design and Drafting
CAM	Computer-Aided Mapping
CANSYS	Control Section Analysis System
CASE	Computer-Aided Software Engineering
CDBG	Community Development Block Grant
CDL	Commercial Driver's License
CE	Civil Engineer, Construction Engineering
CL	County Line

C/L	Centerline
CMAQ	Congestion Mitigation and Air Quality Improvement Program
CMS	Contract Management System or Construction Management System
COLA	Cost of Living Adjustment
CONST	Construction
CPMS	Comprehensive Program Management System
DBE	Disadvantaged Business Enterprise
DE	District Engineer
DEIS	Draft Environmental Impact Statement
DOS	Disk Operating System
DOT	Department of Transportation
DUI	Driving Under the Influence
E	East
EA	Environmental Assessment, Environmental Agency, Engineering Associate
EB	Eastbound
ED	Economic Development
EEO	Equal Employment Opportunity
EIS	Environmental Impact Statement
EIT	Engineer in Training
EMS	Equipment Management System
EO	Equipment Operator
ET	Engineering Technician
EWS	End of Wearing Surface
FAA	Federal Aviation Administration
FARS	Fatal Accident Records System
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Administration
FFY	Federal Fiscal Year
FHWA	Federal Highway Administration

FIMS	Financial Information Management System	MM	Major Modification
FONSI	Finding of No Significant Impact	MMS	Maintenanc Management System
FTA	Federal Transit Administration	MPO	Metropolitan Planning Organization
FY	Fiscal Year (State)	MUTCD	Manual on Uniform Traffic Control Devices
GAAP	Generally Accepted Accounting Principles	N	North
GASB	Governmental Accounting Standard Board	NB	Northbound
GI	Geometric Improvement	NHI	National Highway Institute
GIS	Geographic Information System	NHS	National Highway System
GPS	Global Positioning System	NHTSA	National Highway Traffic Safety Administration
HAC	Highway Advisory Commission	NRC	National Research Council
HAZMAT	Hazardous Materials	NSC	National Safety Council
HEEP	Highway Engineering Exchange Program	OSHA	Occupational Safety and Health Association
HMMS	Highway Maintenance Management System	PB	Priority Bridge
HPMS	Highway Performance Monitoring System	PE	Preliminary Engineering, Professional Engineer
IMMS	Integrated Maintenance Management System	PI	Public Involvement, Point of Intersection
INK	Information Network of Kansas	PMS	Pavement Management System
ISTEA	Intermodal Surface Transportation Efficiency Act	PS&E	Plans, Specifications and Estimates
ITS	Intelligent Transportation System	QA	Quality Assurance
KARS	Kansas Accident Records System	QC	Quality Control
KCC	Kansas Corporation Commission	RCB	Reinforced Concrete Box
KDOT	Kansas Department of Transportation	ROW	Right-of-Way
KHP	Kansas Highway Patrol	RR	Railroad
KLINK	City Connecting Link Resurfacing	S	South
KPERS	Kansas Public Employees Retirement System	SB	Southbound
KQM	Kansas Quality Management	SCCHF	Special City/County Highway Fund
KTA	Kansas Turnpike Authority	SE	System Enhancement
LAN	Local Area Network	SEIS	Supplemental Environmental Impact Statement
LPA	Local Public Authority	SEP	System Enhancement Program
MARC	Mid-America Regional Council	SHA	State Highway Agency
MCSAP	Motor Carrier Safety Assistance Program	SHRP	Strategic Highway Research Program
MIS	Managment Information System, Major Investment Study	SM	Substantial Maintenance
		SMP	Strategic Management Plan

SRA	Safety Rest Area
STIP	State Transportation Improvement Program
STP	Surface Transportation Program
TE	Transportation Enhancement
TEA-21	Transportation Equity Act for the 21st Century
TIP	Transportation Improvement Program

TRB	Transportation Research Board
TRIP	The Road Information Program
TTY	Telecommunications Device for the Deaf
W	West
WB	Westbound

## KANSAS TRANSPORTATION AT A GLANCE - 2004

<b>Background of Kansas</b>		<b>State tax rates (cents/gal.)</b>		<b>Accidents and fatalities</b>	
105 counties, 635 cities, 4 MPOs		(Effective July 1, 2002)		Total accidents 74,102	
135,019 miles of public roads		Gasoline	24	Fatal accidents	391
<b>Land area</b> (sq. miles)	81,823	Diesel	26	Fatalities	460
<b>Population</b> (2000 census)	2,688,418	Gasohol	24	<b>Airports</b>	
<b>Registered vehicles</b>		<b>Public road miles</b>		Public use	143
Autos	1,420,210	Rural	124,151	Commercial service	8
Pickups & trucks	701,601	Urban	10,868	<b>Rail</b>	
Trailers	119,592	Total	135,019	Miles operated	2,339
Motorcycles	56,019	<b>Bridges</b>		Class I shortline	
Motorized bikes	5,659	Structurally deficient	3,144	miles operated	2,022
Special registrations	171,642	Functionally obsolete	2,531	<b>Waterways</b>	
Total	2,488,284	Non-deficient	19,714	Terminals	8
<b>Licensed drivers</b>	2,013,010	Not rated	407		
<b>Annual vehicle miles of travel</b> (in 1,000s)	29,523,063	Total	25,796		