

MOVING KANSAS FORWARD










INDUSTRIA PER ASPERA
Kansas
Department of Transportation
ANNUAL REPORT 2017



-----Transportation in Kansas



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A letter from **Acting Secretary Richard Carlson**



The year 2016 was another success for the Kansas Department of Transportation. The two biggest projects under the T-WORKS program opened to traffic at the end of the year. Transload shipping centers that were initiated and partially funded by KDOT were under construction at Great Bend and Garden City by year's end. And Kansas roads were ranked among the nation's best by the Reason Foundation.

It was my honor to become a part of the KDOT team in July when I was named interim and then acting Secretary of Transportation. I have long been a beneficiary of the state's great transportation system, but now I have a better understanding of why KDOT is so highly regarded: the agency's workforce is professional and dedicated to serving the people of Kansas.

Through the information contained on the following pages I hope you will also gain a greater appreciation for KDOT. Keep in mind this report is an abridged version of the KDOT story. We only have room to touch on some of the highlights.

Thank you for your support for transportation and your interest in knowing more about KDOT's dedication to the health and economic well-being of Kansas.

Richard Carlson
*Acting Secretary of Transportation &
Director of the Kansas Turnpike Authority*

Gov. Sam Brownback
Sen. Mike Petersen
*Chairman of the Senate
Transportation Committee*
Rep. Richard Proehl
*Chairman of the House
Transportation Committee*
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*Acting Transportation Secretary and
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Merrill Atwater
Director of Aviation

Barbara Rankin
Chief Counsel
Ron Seitz
Director of Engineering and Design
Larry Thompson
Director of Operations
Wade Wiebe
Director of Administration
Chris Herrick
*Director of Planning
and Development/
Interim Director of Fiscal and
Asset Management*
Joel Skelley
Director of Policy



T-WORKS

UPDATE through 2016

The 10-year T-WORKS program continues to make a difference for Kansas families and businesses.

11,336 miles improved



762 bridges improved

\$169 million invested in public transit, aviation, rail and bike/pedestrian travel



Hundreds of millions of dollars have been invested in the Kansas transportation system under the T-WORKS funding program. Through its first 6½ years, thousands of miles of highway have been improved, massive expansion projects have been completed (the two largest are detailed on the following two pages), hundreds of bridges have been improved or replaced and tens of millions have been invested in non-highway modes. The highway system remains in good condition, with pavement conditions exceeding performance targets for a 16th consecutive year. KDOT continues to focus on preservation of the highway system.



JOHNSON COUNTY GATEWAY

The Johnson County Gateway, which opened to traffic in late 2016, brings relief to one of the most congested, economically-critical corridors in Kansas. The project improves and expands the confluence of Interstates 35 /435 and K-10 and will play a vital role in reducing crashes, supporting the economy and elevating the quality of life. In fact, over the next two decades, the economic impact of the Gateway interchange is expected to exceed \$1.3 billion.

The Gateway, which is the state's most expensive transportation project ever at \$288 million in construction costs alone, is KDOT's first major design-build project. In May 2010, the Kansas Legislature passed the 10-year transportation program T-WORKS. As part of that program, the Legislature approved the use of design-build as an alternative delivery method on one project in Johnson or Wyandotte County. Because of its size and complexity, the Gateway was selected as the design-build project for Kansas.

The design-build approach streamlines project delivery through a single contract between KDOT and the design-build team. Combining the skills of designers and contractors at a project's onset allows faster project delivery, more efficient use of materials and lower labor costs.

Construction of the project began in 2014 and critical interchanges were opened as they were completed. More than 230,000 vehicles pass through the area today and that number is projected to increase to 360,000 by 2040.



JOHNSON COUNTY GATEWAY
A KDOT PROJECT I-435 · I-35 · K-10

By the Numbers

- 2** Diverging diamond interchanges
- 2** Flyover ramps to accommodate I-35/I-435 traffic
- 27** Bridges rebuilt or rehabilitated
- 56** New and reconstructed lane miles



SOUTH LAWRENCE TRAFFICWAY

The east leg of the South Lawrence Trafficway, which has been discussed, debated and litigated for decades, opened to traffic in November 2016.

The six-mile, \$183 million freeway (\$140 million in construction costs) not only was a long time coming, it is one of the most complex road projects ever built in Kansas.

The SLT completes the link to a vital

corridor that will serve thousands of commuters and facilitate the movement of goods between Johnson, Douglas and Shawnee counties.

The project, which is designated K-10, completes a loop around Lawrence connecting K-10 east of the city to the Kansas Turnpike on the west side. The west leg of the SLT from U.S. 59 to the turnpike was

completed in 1996.

The road was proposed to cut through the Baker Wetlands and near culturally-sensitive sites on the Haskell Indian Nations University campus. Striking a balance between the needs of a community, protection of the environment and places of cultural importance was key to clearing the way for the project.



This photo shows the wetlands and the SLT under construction in April 2016.



The Baker Wetlands Discovery Center opened in 2015 and was funded by KDOT.



Construction of the SLT was essentially completed in November 2016.

In exchange for taking 56 acres of the Baker Wetlands for the SLT, KDOT entered into a \$16 million mitigation agreement with Baker University that:

- Created and restored **317 acres** of wetlands.
- Created **37 acres** of upland prairie.
- Created **16 acres** of riparian habitat.
- Spent **\$4 million** on noise walls to lessen the impact of traffic on the wetlands and the Haskell campus.
- Constructed the **\$1.6 million** Baker University Wetlands Education Center.
- Created a **\$9 million** endowment to assure future maintenance of the wetlands.



KANSAS AVIATION

Kansas airports improved



UAS takes flight

Recognizing the potential of Unmanned Aircraft Systems (UAS), better known as drones, KDOT in 2016 created the Kansas Unmanned Aerial Systems program and hired a director. This not only establishes the state as a national leader in UAS development, it better positions Kansas to take advantage of exciting technology.

UAS program goals include:

- Enhance safety, effectiveness and cost-savings of bridge inspections, high-mast light tower inspections, surveys and other functions for KDOT.
- Advance commercial/economic applications.
- Attract new businesses to Kansas.
- Retain Kansas graduates by providing additional tools and opportunities through UAS.

KDOT's aviation leaders are working with universities and other state agencies to develop additional UAS opportunities.

Kansas' 137 public use airports play an important role in the health and economic well-being of citizens, communities and the state as a whole. To that end, KDOT invests \$5 million annually in these airports under the Kansas Airport Improvement Program (KAIP) to improve runway condition, minimize surface travel time to air ambulance pickup locations and

enhance airport and community economic development appeal. On average, the state investment, which has a local matching requirement of between 5 and 50 percent, results in \$5.5 million to \$6 million in airport improvements annually.

Since its inception in 2000, KAIP has supported 508 projects at 115 public use airports totaling more than \$103 million.

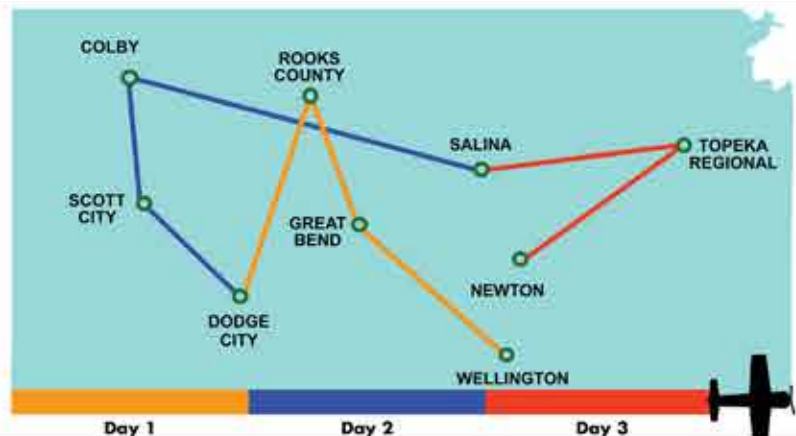


(Before and after) Syracuse-Hamilton County Municipal Airport improvements.

2016 Fly Kansas Air Tour

KDOT and the Kansas Commission on Aerospace Education celebrated aviation in 2016 through the Fly Kansas Air Tour. It was the third consecutive year for the revived tour, which first took place in 1928. More than 40 pilots flew some or all of

the 700-nautical-mile course over three days to promote aviation education for young people and share their passion for aviation. More than 900 students visited their local airports during the tour to meet the pilots and see aircraft up close.



KTA

Milestones in 2016

K-32 BRIDGE: KTA is managing this bridge replacement project for KDOT as a way to increase efficiencies.

On July 1, 2013, legislation formalized the long-time working relationship between KDOT and the Kansas Turnpike Authority, bringing both organizations under the direction of the Secretary of Transportation. Since then, the agencies have collaborated on projects, including several that were under construction in 2016.

KTA by the numbers

236	Length of the turnpike in miles
22	Interchanges
6	Service areas
0	KTA receives no state or federal tax funds

In 2016, overall traffic increased by 5.8 percent when a record 40.2 million vehicles traveled the turnpike.

Electronic toll traffic increased about 3.5 percent compared to the prior year, making electronic travel more than 53 percent of overall travel.

EAST KELLOGG IMPROVEMENTS

The city of Wichita, KDOT and KTA are partnering on this multi-year project to improve travel in east Wichita. KTA is managing the second simultaneous project from Greenwich to K-96, which was let in June 2016.



Flint Hills cattle pens

Access improvements to the Flint Hills cattle pens enhanced safety and provided an opportunity to work with the Kansas Department of Wildlife, Parks and Tourism on a scenic overlook for travelers.

- KTA is interoperable with Oklahoma's PikePass, NationalPass, BestPass, PrePass Plus and coming in mid-2017, Texas (Central States Hub).
- KTA's Long-Term Needs Study was released, focusing on 44 projects and \$1.2 billion in improvements over the next 10 years.
- Legislation was passed allowing KTA to place a hold on vehicle registration renewals, beginning Jan. 1, 2018, in the event of unpaid tolls.
- KTA began a pilot project for video tolling at its three mainline toll plazas: Southern Terminal, East Topeka and Eastern Terminal.



Maintaining

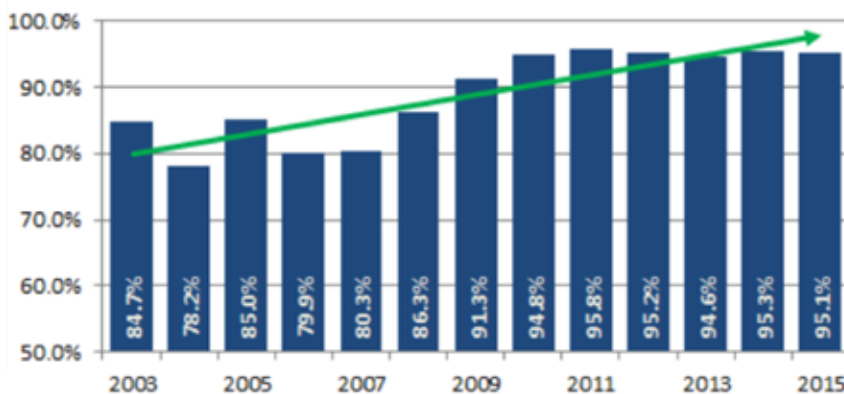
Signs and striping

Pavement markings and signs provide important safety and informational benefits to travelers. On the state system, KDOT crews maintain 24,200 lane miles of highway. In 2016, crews applied 10,087 miles of striping at a cost of \$4.1 million. They also installed or maintained 84,500 signs at a cost of \$4.5 million.



Clearing roads of snow isn't just a safety activity, it's vital to the state's economy. On any given day in winter, thousands of workers and hundreds of millions of dollars in goods move through Kansas, making it essential that roads remain open even in the worst conditions.

Program delivery/on time **95.1%** in 2015



KDOT aims to continually improve the accuracy of project estimation, both in time and cost. Factors such as flooding, drought and severe freeze/thaw cycles can affect both. KDOT's priorities are the safety of the construction workers and travelers and providing quality projects.

Left: Percent of highway construction projects completed early or on time.



the system

Winter 2015 - 2016

591

Dump trucks / plows

1.4 million

Miles treated / plowed

329,000

Labor hours

1,350

CDL operators

74,152

Tons of salt

35,656

Tons of sand

3.4 million

Gallons of salt brine

19,200

Gallons of

magnesium chloride

\$13,532,116

2016 total expenditures

\$5.20

Cost per
registered
vehicle

Roadside maintenance



KDOT owns tens of thousands of acres of right of way along Kansas roadsides and uses maintenance practices that encourage the propagation of native plants and creation of animal habitat.

2016 maintenance numbers

256,000

Acres mowed

\$8.2 million

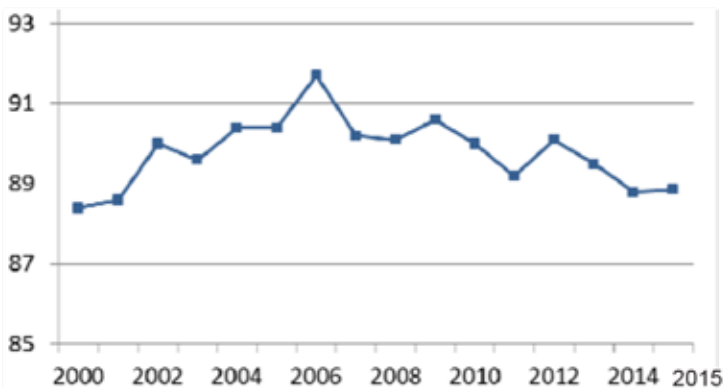
Cost of mowing

\$3.2 million

Cost of litter and animal carcass removal



Maintenance Quality Assurance



88.9% in 2015

The Maintenance Quality Assurance program measures the value of KDOT's maintenance efforts in the categories of travel way, traffic guidance, shoulders, drainage and roadside.

The MQA program involves a physical inspection of randomly selected, tenth-of-a-mile sample segments. Thirty of these samples are analyzed from counties in each KDOT Subarea throughout the state. This translates to more than 3,000 MQA inspections a year.



ROADS & BRIDGES

Smooth roads and well-maintained bridges consistently place the Kansas highway system among the nation's best.

Roads

Pavement conditions on the state highway system have steadily increased since passage of the 1989 Comprehensive Highway Program and two subsequent 10-year funding programs. In the 2016 Reason Foundation roads report, Kansas is tied for first place in both rural interstate pavement condition and rural arterial pavement condition, and third place for urban interstate pavement condition. Current pavement conditions continue to far exceed performance targets.

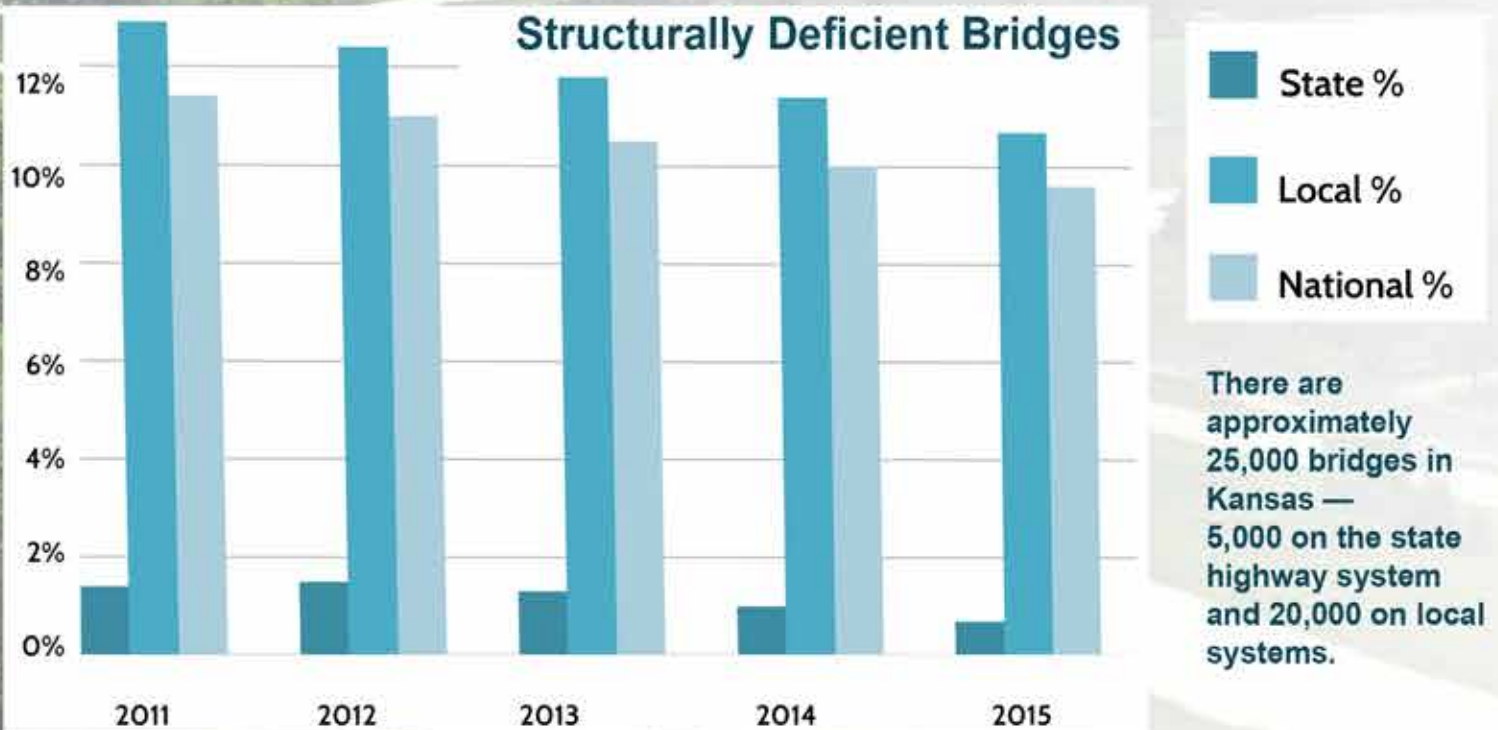
Percent of pavement in good or very good condition



Based on June 30, 2016, data

Bridges

The percentage of structurally deficient bridges on the state highway system has been steadily declining and is now below 1 percent. A bridge is classified as structurally deficient when it is inadequate to carry today's legal loads.



KANSAS SAFETY

driving force behind KDOT decisions

In 2016, the number of fatalities on Kansas roads reflected a national increase in traffic deaths.

	2012	2013	2014	2015	2016
Kansas fatalities	405	350	384	355	429*
National Fatalities	33,782	32,893	32,744	35,092	**
Disabling Injuries	1,596	1,452	1,201	1,180	1,036*

*Unofficial **National fatalities expected to increase 10%

SAFETY is built into road designs



1/3

of all fatalities are due to impaired driving

Seat belt usage rates continue to improve:

	2015	2016
Adults	82%	87%
Children	87%	88%

Studies have found that texting while driving creates a crash risk

23 times greater than driving with no distractions.

DRIVE TO ZERO

KDOT adopted a new logo in 2016 to represent efforts to reduce fatalities and serious injury crashes in Kansas.

Safety is at the core of virtually everything KDOT does, from the design of roads to long-range planning to communications efforts. Federal funds provided specifically for education are spent to influence driver behavior. Every year, thousands of Kansans are exposed to safety messages that raise awareness of the damage and injuries caused by impaired driving, distracted driving, failure to buckle up and more. Safety campaigns such as "Click it. Or ticket," "You Drink, You Drive, You Lose," "Put the Brakes on Fatalities Day" and "National Work Zone Safety Awareness Week" help raise awareness that changing driver behavior is the most effective way to reduce injuries and fatalities.



KDOT supports KANSAS ECONOMY

The average daily value of freight moving across Kansas highways totals more than **\$606 million.**

More than **98,000** oversized/overweight truck permits were issued in 2015 through Kansas' online K-TRIPS system.

Annual truck permits issued in 2015 – **4,867**

At a national crossroads of major east-west, north-south shipping routes, the Kansas transportation network is critical not only to the state economy, but to the economy of the Midwest. Kansas farmers, manufacturers and businesses depend on a robust, multi-modal transportation system to be competitive in domestic and global markets. Kansas' smooth highways, initiatives and investments are designed to make shipping safe and efficient.

Truck parking study

Because truckers are restricted to the number of hours they can drive, they must be able to easily find parking without burning fuel and time looking for a place to safely get off the road. In winter, it's not unusual to see lines of trucks backed up along freeway entrance and exit ramps, sometimes stretching to the actual roadway. With a goal of improving the Kansas freight network, KDOT teamed with the KTA to study related issues and develop solutions.

Four recommendations came from the study:

- Improve parking information and sharing
- Add or improve parking assets
- Explore parking improvement partnerships
- Examine pro-parking policies for freight trucks

Truck Parking Information and Management System

Kansas is the lead partner in an eight-state initiative that will help implement some recommendations of the 2016 Truck Parking Study. The Truck Parking Information and Management System, or TPIMS, is made possible through a matching \$25 million federal TIGER grant awarded in 2015 to the consortium of Kansas, Indiana, Iowa, Kentucky, Michigan, Minnesota, Ohio and Wisconsin. Still in the planning stages during 2016, a system of electronic message signs, traveler information websites and smartphone apps is expected to be in service in 2018.

KDOT is updating the statewide freight plan and statewide rail plan. Both will be completed in June/July 2017.



Truck Parking Information Deployment Corridors



KANSAS RAIL

The Kansas Rail Service Improvement Fund plays an important role in maintaining and expanding a freight rail system that not only moves grain, goods and raw materials, it helps move the entire state economy. In 2016, the fund provided \$4.3 million in loans and grants for rail rehabilitation and capacity improvement. The state money was combined with a \$4.1 million match by railroads.

Transload facilities

Two important projects initiated and partially funded by KDOT in 2016 are transload shipping centers at Garden City and Great Bend. The facilities will provide the infrastructure necessary to move goods from one mode of transportation to another, or, in these cases, from truck to rail and rail to truck.

Great Bend transload facility

Sherwood Companies of Oklahoma City, Okla., will operate the Great Bend transload facility, which was expected to be in operation by the second quarter of 2017. KDOT contributed \$3 million to the \$6.8 million project. The group that developed the proposal comprises the city, local chamber of commerce, Kansas and Oklahoma Railroad and Kansas Transload Services.

Garden City transload facility

The \$14 million Garden City transload facility was expected to be in operation by the end of 2016. KDOT contributed a total of \$4.5 million to the project to fund both rail construction and local roadway improvements.

2016 rail carloads
7,089,291

Number of freight railroads
13

Miles of track operated
4,415

Shortline miles
1,625
Class 1 miles
2,790



BEFORE

Beachner Grain

A project completed in August 2016 that was funded in part by KDOT made improvements to rail facilities at Independence. The project, which is a public-private partnership of KDOT, SKO Railroad and Beachner Grain, includes expanded capacity, new truck scales, increased truck parking and new grain bins. The facility now has access from both ends of the rail line, rather than just one end.



AFTER



KDOT CONNECTS WITH KANSAS

TRANSIT

Kansas is a geographically large state with a rural population that is both aging and declining in numbers. And that poses problems for Kansans who want to continue living in their homes and communities but need a way to reach medical and other services that may be miles away. In 2016, KDOT's Office of Public Transportation worked with transit providers across the state in an effort to regionalize operations. Measures such as reorganization of transit districts, creation of new regional routes, purchase of new buses, coordinated dispatch scheduling that utilizes GPS and much more have allowed rural Kansans to use public transportation and maintain their quality of life.



Transportation Alternatives

KDOT administers the federal Transportation Alternatives Program to provide funding for a variety of projects that enhance mobility throughout Kansas. In 2016, KDOT awarded 25 TA projects – totaling nearly \$13 million – for on-and-off-road pedestrian and bicycle facilities, Safe Routes to School, access to public transportation and more. The program helps communities improve and complete their transportation networks by providing infrastructure that supports non-motorized transportation.



Funding for Safe Routes to School pays for improvements such as striping, sidewalks, ADA curb cuts and signage.

Social Media in 2016



65,943 followers
13 accounts



22,901 followers
10 pages



206 posts
106,609 views

KSDOT.org - 2.2 million page views

Traveler Info



120,609 calls



105 DMS Boards



208 Traffic Cams

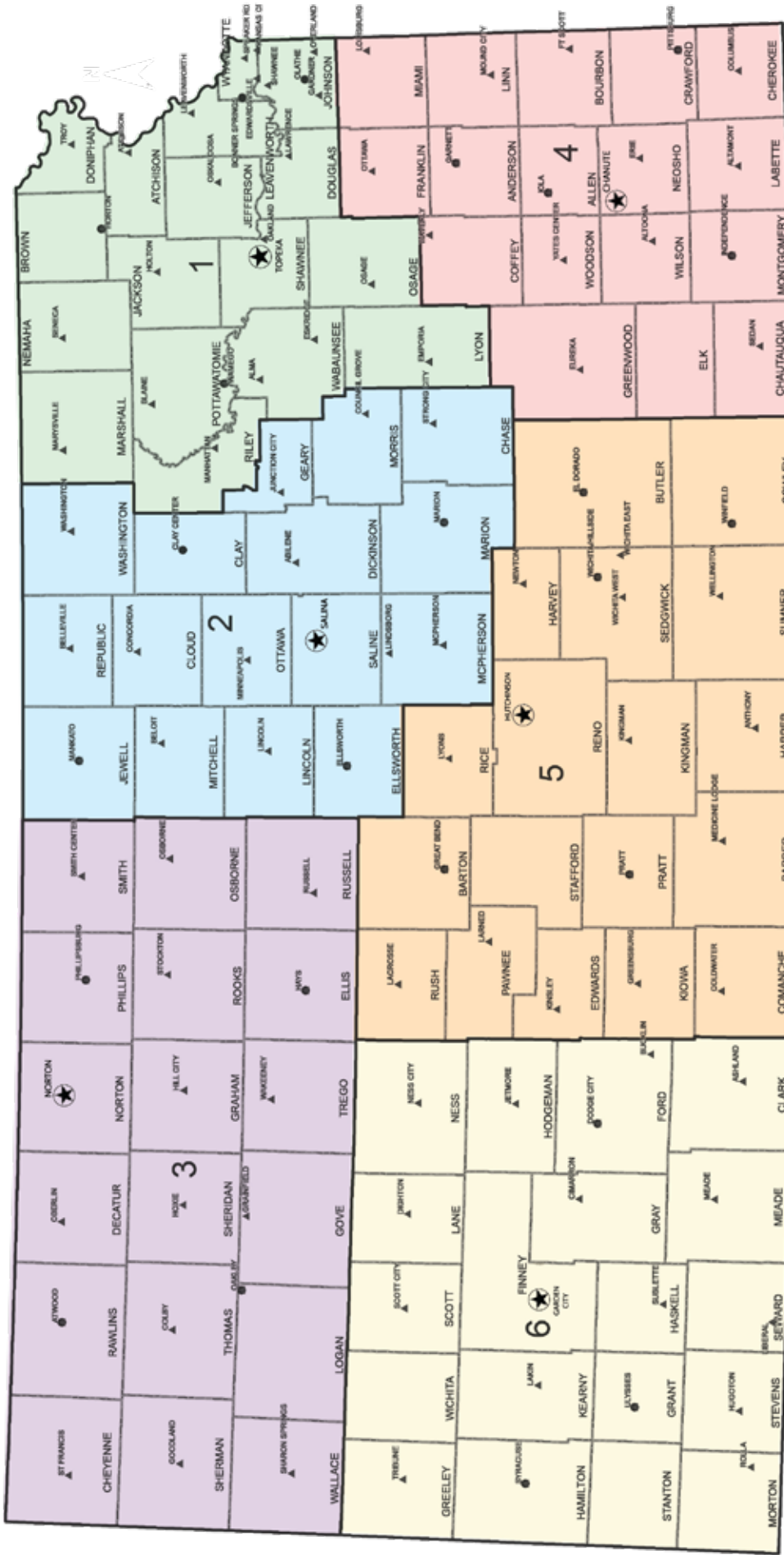
KANDRIVE.ORG - 850,517 page views



In the summer of 2016, KDOT implemented a dynamic late merge, also known as a zipper merge, in a Kansas City-area construction zone. Its great success with drivers was attributed to extensive planning, engineering and a creative education effort that included a KDOT-produced video. The video, which features two animated talking traffic cones, has been viewed nearly 180,000 times on YouTube and Facebook and caught the attention of national media including the New York Times, Wired Magazine and CBS This Morning.



MAP OF KDOT DISTRICT, AREA, & SUBAREA OFFICES



KDOT Headquarters is in Topeka, (785) 296-3585

District Office
 Area Office
 Subarea Office

District 1

District 1 Office
 121 SW 21st Street
 Topeka, KS 66612
 Hugh Bogle
 District Engineer
(785) 296-3881

District 2

District 2 Office
 1006 N. Third
 Salina, KS 67401
 Randy West
 District Engineer
(785) 823-3754

District 3

District 3 Office
 312 S. Second
 Norton, KS 67654
 Jeff Stewart
 District Engineer
(785) 877-3315

District 4

District 4 Office
 411 W. Fourteenth
 Chanute, KS 66720
 Wayne Gudmonson
 District Engineer
(620) 431-1000

District 5

District 5 Office
 500 N. Hendricks
 Hutchinson, KS 67501
 Benny Tarverdi
 District Engineer
(620) 663-3361

District 6

District 6 Office
 121 N. Campus Dr.
 Garden City, KS 67846
 Ron Hall
 District Engineer
(620) 276-3241



Revenues Amounts in Thousands	2016	Percent of Total
Motor Fuel Taxes	\$ 448,904	29 %
Vehicle Registrations and Permits	214,428	14
Intergovernmental	350,731	23
Sales and Use Taxes	519,239	33
Investment Earnings	3,985	0
Other	11,823	1
Transfers from Other State Funds	4,563	0
Total revenues	\$ 1,553,673	100 %
Expenditures		
Current Operating		
Maintenance	\$ 117,789	6 %
Preservation	329,371	17
Modernization	38,145	2
Expansion and enhancement	369,812	19
Communications system	4,173	0
Local Support	340,144	17
Rail, Air and Public Transportation	19,809	1
Administration and transportation planning	53,874	3
Debt Service		
Principal	102,670	5
Interest and fees	79,167	4
Transfers to Other State Funds	528,535	26
Total expenditures	\$ 1,983,489	100 %
Other sources (uses)		
Revenue Bond Proceeds	590,875	121 %
Premium on Issuance of Debt	122,880	25
Payment to Refunded Bonds Escrow Agent	(223,778)	(46)
Total other	489,977	100 %
Excess (Deficiency) of Revenues and Other Sources Over Expenditures	\$ 60,161	100 %

The 2017 Annual Report Appendix is available at:
www.ksdot.org/publications.asp

Back cover photo is of the new Land and Sky Kansas Scenic Byway along the Arikaree Breaks in northwest Kansas. Photo courtesy of The Kansas Department of Wildlife, Parks and Tourism.

