



Coffeyville Corridor Improvement

US-169 North of Coffeyville • Project 169-63 K-8241-01
August 20, 2003

About the Project

The City of Coffeyville, as a part of KDOT's System Enhancement Program (SEP), applied for a project to widen US-169 from two to four lanes north of the US-166 intersection for two and one-half miles.

This project was accepted by KDOT in August 2000. An agreement between KDOT and the City of Coffeyville, as the project sponsor, was signed in June 2002.

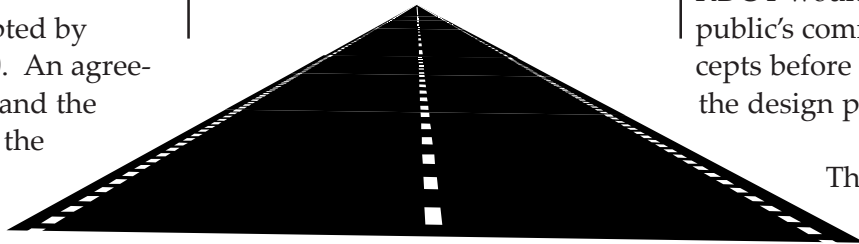
KDOT is currently working along with its engineering consultant, HDR, Inc., to complete the Location and Design Concept Study. That study will act as the basis for designing the project. Construction is expected to start in 2007.

As the local project sponsor, the

City of Coffeyville has agreed to be responsible for 17 percent of the costs of preliminary engineering, right-of-way, utility adjustments, construction, and construction engineering for the project, in an amount not to exceed \$3,326,773.

to be let for construction. It will be let for construction in the fall of calendar year 2006.

Three preliminary concepts have been developed for this project. Information about the concepts can be found inside this handout. KDOT would like to hear the public's comments on those concepts before the project moves into the design phase.



The public's comments are very important to KDOT as projects

KDOT has programmed \$32,144,000 in 2007 dollars for the project, this total includes the costs for not only construction but all right of way, utility, engineering costs, etc.

progress. KDOT and its engineering consultant will incorporate the comments into a recommendation for the roadway location and design concept. Following KDOT's acceptance of the recommendation, design work on the project will begin.

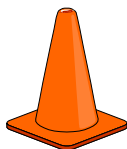
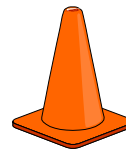
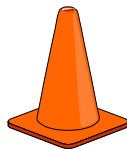
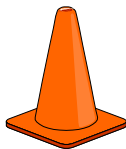
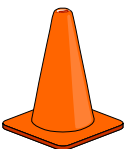
The cost estimates are projected to 2007 dollars because that is the fiscal year the project is scheduled

The System Enhancement Program

This study is a project under the System Enhancement Program (SEP), a part of the ten-year Comprehensive Transportation Program enacted by the Kansas Legislature in 1999 (HB 2071). The SEP consists of projects that substantially improve safety, relieve congestion,

improve access, or enhance economic development. Local sponsors competed for projects in one of six categories: Rural Corridor, Rural Bypass, Rural Interchange, Urban Corridor, Urban Bypass, and Urban Interchange. This study is in the Rural Corridor category.

Projects were compared only to others in their category and all sponsors were asked to submit their proposals using 1999 cost estimates. Continued SEP project development is contingent on funding as provided in the enabling legislation.



Why the Project Was Requested

As part of its application, the City of Coffeyville stated several reasons why they would like to see improvements made on US-169 near the Industrial Park. Some of their reasons included:

- To handle increasing traffic in the Industrial Park area.
- To enhance the safety of through traffic on US-169.

- To offer easy access to the Industrial Park, including improving the entering and exiting of traffic to and from the Industrial Park.

- To keep up with development in the area. According to the project sponsors, a lack of efficient traffic flow into and out of the Industrial Park could hurt potential development in the area.

- To provide a higher capacity roadway for a mix of heavy truck and passenger traffic.
- To improve the flow of traffic at the US-169/166 junction.

Environmental Issues

As part of this project, various environmental issues are being investigated. Below is the status of some of the environmental findings to date:

Cultural and Historical - A potential of eight sites may require further study depending on the selected alignment. Those areas are identified on a map which is a separate handout piece.

Wetlands - A number of existing wetlands have been found within the study corridor. Those areas are identified on a map which is a separate handout piece..

Wildlife - We have identified a designated critical habitat for a federal endangered species, the American burying beetle, and a species listed by the State as threatened, the spotted skunk. In addition, potential bald eagle perching trees are located within 100 feet of the Verdigris River.

Hazardous Waste - Several areas have been identified, by visual inspection, as potential problems. Those areas are identified on a map which is a separate handout piece.

KDOT Responses to Concerns

We have heard some concerns from the City of Coffeyville about this project. Some of the concerns that we've heard are listed below along with brief responses. The concerns are bold and in italics with the response following.

- ***The number of roadway miles that will be turned back to the City of Coffeyville. Turnback miles are taken off the state highway system and maintenance responsibilities turned over to the City.*** - The project team is working to use as much of the existing roadway as possible to keep the number of turnback miles at a minimum.
- ***Will there be any improvements made to the roadway prior to it being turned back to the local government?*** - KDOT policy is that all roads and bridges that are transferred to cities or counties will meet current maintenance standards and be in a condition mutually agreeable to the local authority and KDOT. This means that KDOT will perform any needed maintenance work before to the roads are turned over to the local governing body.
- ***Is this the beginning of a bypass around Coffeyville?*** - The City of Coffeyville applied for this project to help handle increasing traffic and improve safety. KDOT accepted the project on those terms and at this time there are no plans nor is there funding to build a bypass of Coffeyville.
- ***How will access be handled in the future? We like the access we have now.*** - Access to US-169 will change as part of this project. Access control is a very important along highways and helps enhance the safety of the traveling public immensely. All access issues have not been determined yet, but information on access and each of the three potential concepts can be found on the next page.

Freeways and Expressways

Both offer a different mix of safety and convenience, depending on the situation. Engineers consider many factors to help decide which (or combinations) to use. The goal is to move traffic safely and efficiently while helping drivers safely enter and exit the highway.

Expressways

An expressway is a multi-lane highway with a median. Connecting roads cross the highway at the same level (at-grade) as the expressway to maintain cross traffic flow. Intersections with connecting



public roadways usually cross the highway about every mile. Private driveways or entrances are discouraged or limited to right-turn-in, right-turn-out designs.

If a junction has particularly heavy traffic, an interchange might be used to help ensure driver safety. Turning, acceleration, and deceleration lanes at key intersections might be used to help control entering and exiting traffic.

Freeways

A freeway is also a multi-lane highway with a median, but access to it is provided only at interchanges. In order to service through traffic, drivers must enter or exit the highway via interchange ramps. These interchanges are usually spaced at 3-5 mile intervals in rural areas.

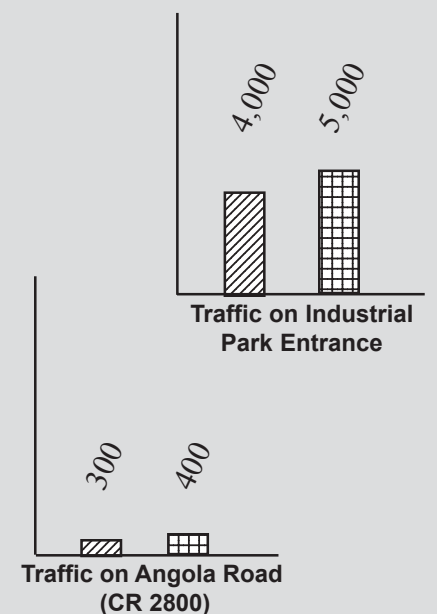
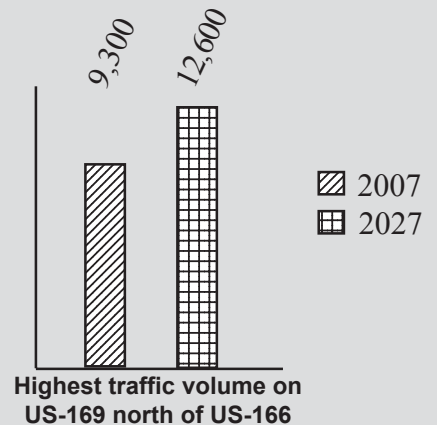
Cross traffic is handled by separating roads from the freeway with bridges over or under the freeway (grade separations). If that's not practiced, traffic is redirected to other roads. Freeways typically have access roads parallel to the



highway. Using these access roads, drivers can enter and exit homes and businesses while ensuring safety for themselves and other drivers.

Traffic on US-169

The AADT (Average Annual Daily Traffic) for US-169 north of US-166 in 2002 was approximately 7,250 vehicles with approximately 10 percent of the volume being truck traffic. Traffic was forecasted for the years 2007 and 2027 for US-169, Angola Road (CR 2800), and the Industrial Park entrance which are shown below.



The Potential Concepts

Three potential concepts have been developed for a four-lane highway on US-169 from the US-166 intersection 2.5 miles north. A comparison of those concepts is to the right.

Separate handout pieces are available which show the three potential concepts on aerial photographs.

The original proposal submitted by the City of Coffeyville is also shown in comparison. This was the concept that was submitted during the SEP application process.

The comparisons shown at right are a just brief snapshot of several things that KDOT and its consultant look at for each concept. These and other engineering factors must be considered when making decisions on the design of our highways.



Concept A - Freeway* Alternative	
Description	Freeway design from the Verdigris River Bridge north to Angola Road (CR 2800).
Access to US-169 – Interchange/ Intersection Locations	Access only allowed at interchanges. One interchange will be located at US-169/US-166. Two options being considered for a second interchanges are: <ul style="list-style-type: none"> • Industrial Park and Airport main entrance. • Angola Road (CR 2800)
Estimated Right Of Way Needs	Business Relocations <ul style="list-style-type: none"> • 5 - Angola Road (CR 2800) Interchange • 3 - Industrial Park Interchange Residence Relocations <ul style="list-style-type: none"> • 7 - Angola Road (CR 2800) Interchange • 5 - Industrial Park Interchange Partial Land Acquisitions <ul style="list-style-type: none"> • 35 - Either Interchange Location
County Rd. Relocations	Angola Road (CR 2800), CR 5300
Turnback Miles	2 miles along Industrial Park and all frontage roads
Use of existing US-169	Frontage road on east side of new US-169.
Need new county roads to maintain access?	YES
Need to construct frontage road?	YES, along west side of US-169
Construction Costs (in 2007 dollars)	\$29,100,000
Pros	<ul style="list-style-type: none"> • Enhanced safety by limiting access to interchanges • Increased capacity • Higher operating speeds • Safest access for development outside of Industrial Park boundaries • Improved access for properties in Industrial Park
Cons	<ul style="list-style-type: none"> • Direct access to US-169 will be somewhat less convenient for local traffic • The relocation of Angola Road will be less convenient for through traffic on Angola.

* The terms Freeway and Expressway are used frequently on these two pages. For a complete description of freeways and expressways and the differences between them, please see page 3 of this handout.



The Potential Concepts continued

	Concept B - Expressway* Alternative	City of Coffeyville Original Proposal
Description	Expressway design from the Verdigris River Bridge north to Angola Road (CR 2800).	Two new lanes adjacent to US-169 from CR 2400 to Angola Road (CR 2800).
Access to US-169 – Interchange/ Intersection Locations	Access only allowed at at-grade intersections located at Angola Road (CR 2800) and County Road 2300.	Specific access points have not been determined. KDOT would introduce some level of access control along the corridor.
Estimated Right Of Way Needs	Business Relocations - 3 Residence Relocations - 5 Partial Land Acquisition - 35	Not evaluated - but would require additional ROW to the east of existing US-169.
County Rd. Relocations	Angola Road (CR 2800), CR 5300	None
Turnback Miles	2.0 miles along Industrial Park and all frontage roads	Any frontage roads constructed
Use of existing US-169	Frontage road on east side of new US-169.	Northbound lanes of the new roadway.
Need new county roads to maintain access?	YES	YES
Need to construct frontage road?	YES, along west side of US-169	YES, to limit the number of access points along US-169
Construction Costs (in 2007 dollars)	\$27,050,000	\$18,884,000 (Estimate provided by City, inflated to 2007 dollars - This estimate does NOT include several additional items that would be needed)
Pros	<ul style="list-style-type: none"> • Offers improvement in access management from existing condition by limiting entrances allowed onto the highway. 	<ul style="list-style-type: none"> • Use of existing US-169 right-of-way.
Cons	<ul style="list-style-type: none"> • Loss of free flow due to lower speeds of merging traffic. • Reduction in enhanced safety from Concept A - Freeway. • Less efficient entering and exiting for semi traffic. • Direct access to US-169 will be somewhat less convenient for local traffic • The relocation of Angola Road will be less convenient for through traffic. • Traffic signals may be required in the future – hindering the free flow of traffic. 	<ul style="list-style-type: none"> • Existing US-169 does not meet current design criteria. • Doesn't address the multiple access points along the highway and the need to introduce access management. • Proposed median is too narrow for KDOT criteria. • Acquisition costs of ROW on east side of highway could include hazardous waste materials issues. • To get over the railroad bridge you would encroach on properties on the east side of US-169

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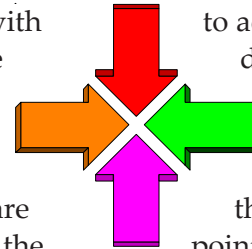
Intersections Along a Highway

Entering, leaving, or crossing a highway poses risks, no matter how well the highway is designed. Be alert, never expect other drivers to watch for you, and proceed only when it's safe to do so. Access control is a way engineers can help make your trip safer.

Places where vehicles can enter, exit, or cross a highway are called access points. The number and frequency of access points along a highway are important safety features of modern highway design. Vehicles entering, leaving or crossing a highway's path create a potential hazard because they conflict with the steady flow of traffic or simply cut across it.

Many older highways were built with numerous access points, when traffic speeds and volumes were lower. Now, many state highways are used as thoroughfares, with higher traffic volumes and speeds. Even today, little or no access control is best restricted to low-volume, two-lane roads. One way potential traffic conflicts

can be reduced is to fully or partially control access to a highway. Fully controlled access occurs on interstates and freeways, with interchanges providing the only access. Partially controlled access is typical of expressways, where some intersections are allowed to join the edge of the highway. Partial access means that closely spaced driveways and intersections might have to be closed, rearranged, combined, or diverted onto side roads with a safer speed. The side roads then join the highway at safe intervals and provide access to adjacent property. This might mean that your favorite intersection can no longer be used. While that could be inconvenient, it's also much safer.



Access points are designed and placed for prevailing or expected traffic conditions. Designers try to address the needs of local drivers when designing access points while ensuring the safety of all motorists who use the highway. Access points can be as simple as an intersection that meets the highway's edge (an at-grade intersection) or as elaborate as a multi-level interchange. Sometimes, roads will cross the highway using an overpass or underpass (grade separations). Acceleration and deceleration lanes, stop signs, signals, or wide median waiting areas are some of the tools designers use to help control the traffic flow across, onto or off the highway.

Accident & Accident Rates on US-169

from the intersection at US-166 north to Angola Road

YEAR	Total Accidents	Fatal Accidents	Injury Accidents	Property Dmg. Only	Deaths	Injuries
1995	12	1	3	8	1	8
1996	17	1	7	9	1	10
1997	14	0	6	8	0	13
1998	9	0	2	7	0	4
1999	22	0	6	16	0	8
Totals	74	2	24	48	2	43

1995 - 1999 Accident Rates

Overall accident rate per million miles of vehicle travel - 2.07
Statewide overall accident rate for similar roadway type - 1.60
 Fatal accident rate per 100 million miles of vehicle travel - 5.59
Statewide fatal accident rate for similar types of roads - 2.33

Accident rates compare similar types of roads, not other specific roads or sections of specific roads. Here, similar road types are all two-lane, undivided, rural roads on the state highway system that have no access control.

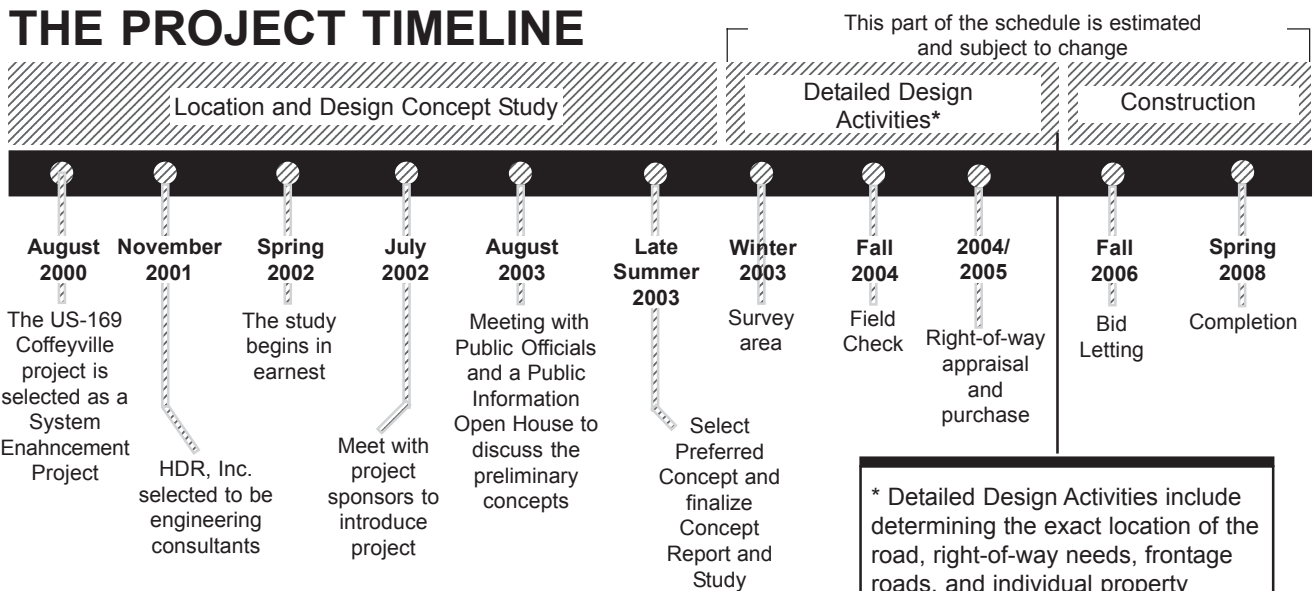


Traffic during construction

As part of each project, dealing with traffic during construction is investigated. KDOT's goal is always to have the least disruption as possible to the area where construction is going on. While it is rarely possible to avoid all inconveniences, KDOT does attempt to make those situations as few as possible.

For this project along US-169, construction under traffic can be sequenced to keep traffic flowing in the area. For a majority of the project length, the first part of construction would be on the new lanes of traffic allowing traffic to use existing US-169. Shoofly detours would be built to provide access between either existing or newly constructed sections of the highway. Local roads may be used during construction for detours.

THE PROJECT TIMELINE



* Detailed Design Activities include determining the exact location of the road, right-of-way needs, frontage roads, and individual property access.

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Studying and designing a highway or bridge improvement project is the responsibility of the KDOT Bureau of Design in the Division of Engineering and Design.

KDOT sometimes uses private consulting firms to help with the study and design of projects. Assisting KDOT with this study is **HDR Engineering, Inc.**

For more information or to discuss this study, call TOLL-FREE



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Information in this booklet is available in alternative accessible formats.
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