



Tonight's Meeting

The purpose of tonight's meeting is to inform area residents, business owners, and other affected parties of the proposed interchange and roadway improvements along Woods Chapel Road.

Please review the following information concerning:

- The proposed overall improvements
- How the interchange will function
- The preliminary construction schedule

Q & A: Staff members from the Missouri Department of Transportation, MoDOT, the City of Blue Springs, and the design consultant, TranSystems, are available to discuss the project. The project team welcomes questions and comments.

Material Presented

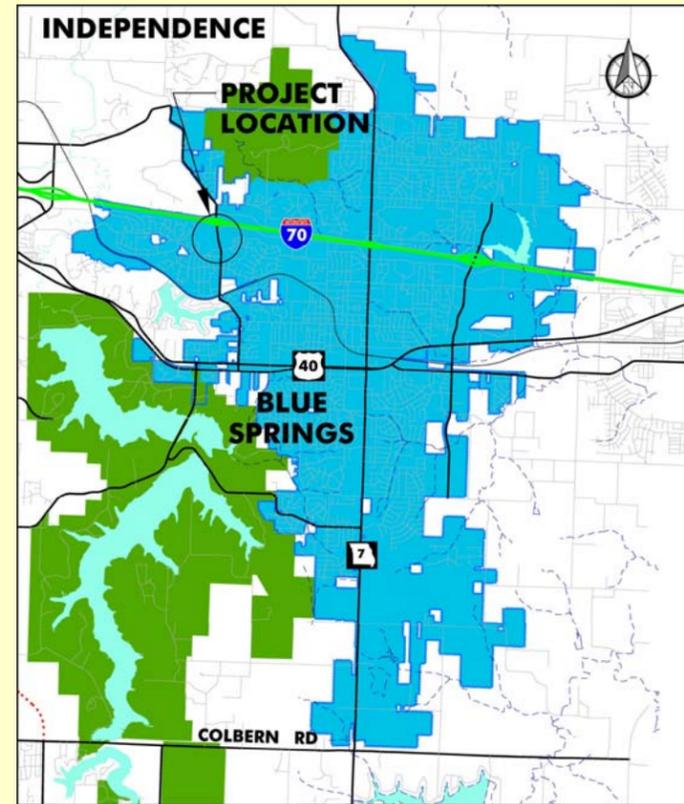
The material presented focuses upon:

- The Interchange Configuration
- The Signalized Intersections
- The Environment
- Enhancements and Implementation

Display boards for each of these topics are placed around the room.

In an effort to help you understand how the proposed improvements will function, a computer rendered video as well as a traffic simulation model are presented. A set of preliminary construction plans is also available for your review. Feel free to browse this information and ask questions!

LOCATION MAP



Project Overview

The project area is located in the northwest portion of the City of Blue Springs. Here segments of Woods Chapel Road and I-70 abut the City of Independence.

The nearly 0.8 mile long project extends from the westbound ramps at the I-70 interchange to south of Briarwood / Castle Drive. The northern segment of the corridor is comprised of an existing commercial area to the east and a planned retail development to the west. South of Valley View Road, the corridor transitions to primarily residential development. Continued traffic growth along the corridor has created the need to improve the roadway and the I-70 interchange. While future phases both to the north and south are contemplated along Woods Chapel Road, the implementation of such future phases is unknown.



Your input is important.

Please fill out a comment card!

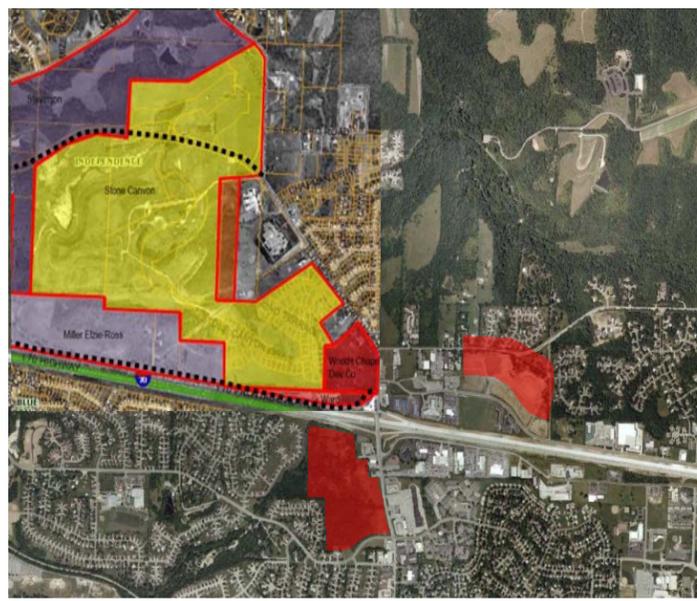


Woods Chapel Road Improvements
INTERCHANGE
CONFIGURATION

Background

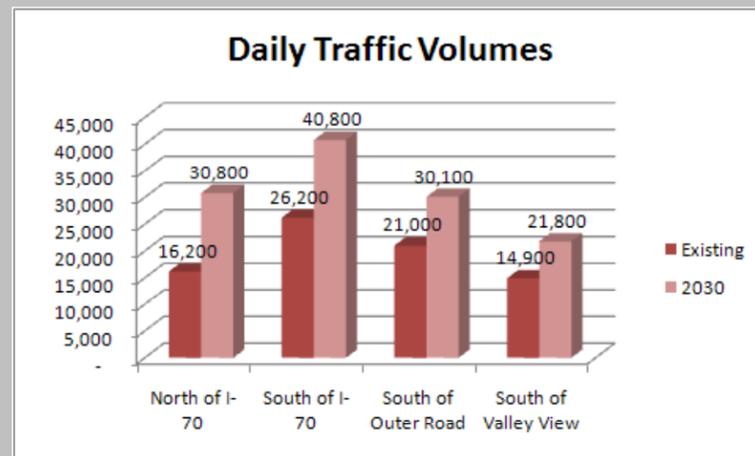
Woods Chapel Road south of I-70 currently experiences long delays and congestion because of:

- **closely spaced intersections**
(existing signals are 350 feet apart where desirable spacing is greater than 800 feet),
- **weaving traffic patterns**
(right turns immediately followed by left turns), and
- **a lack of storage capacity**
as northbound traffic predominantly turns left to I-70 westbound



The City of Blue Springs initiated this improvement project to support existing traffic and planned future development as shown in the figure to the left. With this growth, the interchange at I-70 is projected to reach capacity within the next 10-15 years.

The improvements are designed for a horizon year of 2030. Future traffic projections were established using traffic forecasts from the Mid America Regional Council travel demand model, historical data, projections from the I-70 Secondary Environmental Impact Statement and were supplemented by trip generation estimates for planned development.



Developing Alternative Concepts



Two alternatives were evaluated:

- **Modifications** to the existing diamond interchange, including additional lanes on the bridge over I-70 to accommodate traffic demand and queue storage, and
- A **“Diverging Diamond Interchange” (DDI)** that utilizes the existing bridge width.

Both scenarios include the following improvements:

- **Widening of Woods Chapel Road**
- **Widening the I-70 ramps**
- **Relocation of the South Outer Road**

More information on the design is provided on additional displays.

Funding for this project comes entirely from the City of Blue Springs. These funds are sufficient to improve the corridor yet are limited by significant cost elements such as modification or replacement of the bridge over I-70 or modifications to I-70. Therefore, the project has been designed to provide additional capacity without requiring bridge replacement or modification to mainline I-70. No improvements are anticipated to the acceleration / deceleration lanes or gore areas at the Woods Chapel Road interchange although widening of the ramps is required.



The park-n-ride lot will be relocated or reconfigured although the timeframe for this work is not yet determined.

The I-70 ramps are widened to provide additional queue storage and turn lanes at the ramp terminals. However, no modification to the ramp gore is required.

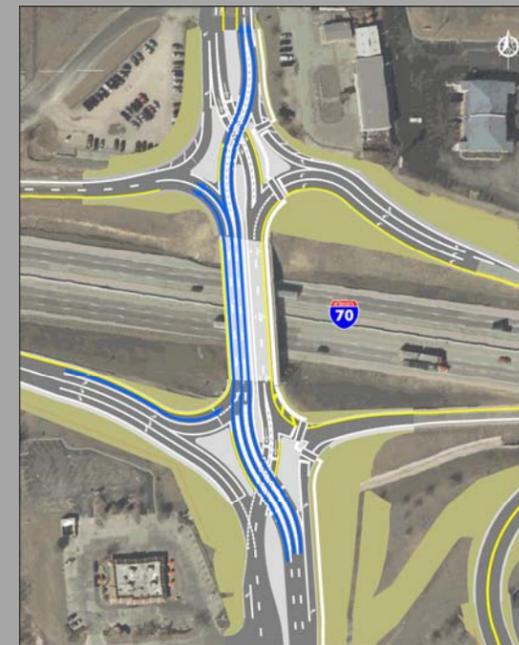


Diverging Diamond

Selecting the Preferred Interchange Concept

An innovative and cost saving element is the conversion of the interchange to a "Diverging Diamond" layout. With a "diverging" design, traffic passing through the interchange crosses over to the opposite of the roadway between the interchange ramps, allowing more efficient turning movements to and from I-70. The crossover movements are safely handled by the traffic signals at the intersections. **The concept is endorsed by the Federal Highway Administration**, and testing with a wide range of drivers have found no "wrong-way" issues.

There are heavy traffic movements from northbound Woods Chapel Road and eastbound on the South Outer Road to westbound on I-70 in the morning peak, with the opposite pattern occurring in the evening peak period. **The DDI interchange configuration aids these heavy travel patterns** without expanding the existing bridge over I-70.



Northbound



Southbound

The Diverging Diamond concept was recently and successfully implemented at the heavily traveled interchange of **I-44 and Route 13 in Springfield, MO** as shown below in an oblique aerial and on the ground photo. This interchange also serves a densely developed commercial area similar to that along Woods Chapel Road.



Corridor Widening with Traffic Signal Relocation, Upgrade and Installation

Woods Chapel Road will be widened to provide two travel lanes in each direction along with a raised median and turn lanes from I-70 south to Valley View Road. Then the roadway transitions to one lane in each direction with a center turn lane or two-way left turn lane (TWTL).

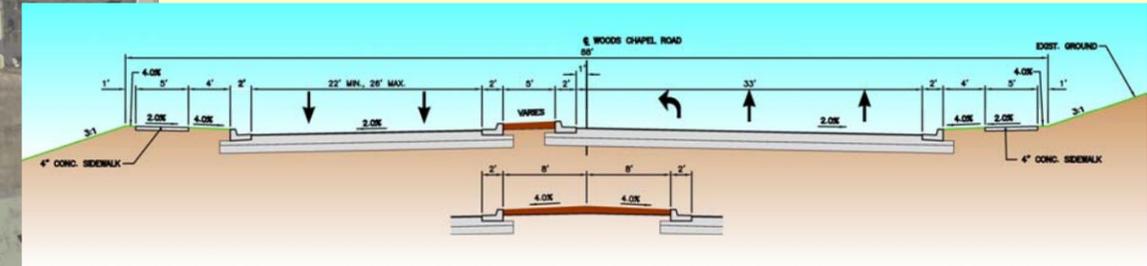
A major component of the widening includes the relocation of the South Outer Road, approximately 300 feet south. This relocation will increase the distance between the Outer Road intersection and the I-70 eastbound ramp (to 550 feet), thereby better managing traffic flow and relieving the current congestion resulting from the close proximity of these two intersections. Access to existing and future businesses is provided by an internal roadway network.

The traffic signal at Valley View Road will be upgraded and include geometric improvements such as dual left turn lanes. A new traffic signal will be installed at the intersection of Briarwood / Castle Drive.

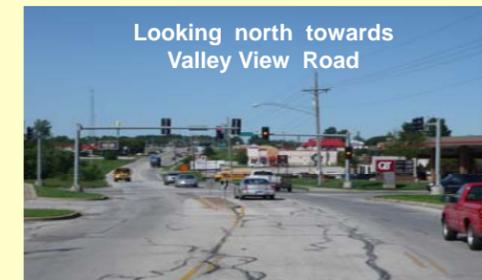
These traffic signals along with those at the interchange will create a series of five interconnected traffic signals providing coordinated traffic flow along Woods Chapel Road. Access management principles such as raised medians, removal of driveways within the intersection's functional area, new connector roads as well as locating driveways for future development are also being employed to improve safety and operations.



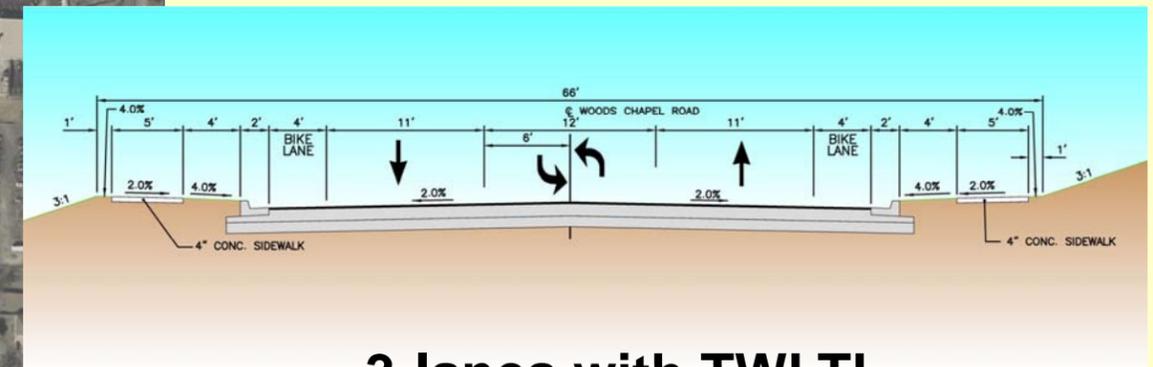
Looking north towards existing outer road junction



4-lanes with median and turn lanes



Looking north towards Valley View Road



3-lanes with TWLTL and bike lanes



Looking north towards Briarwood and Castle Drive intersection



Woods Chapel Road Improvements
**ENHANCEMENTS &
IMPLEMENTATION**

Enhancements and Non-motorized facilities

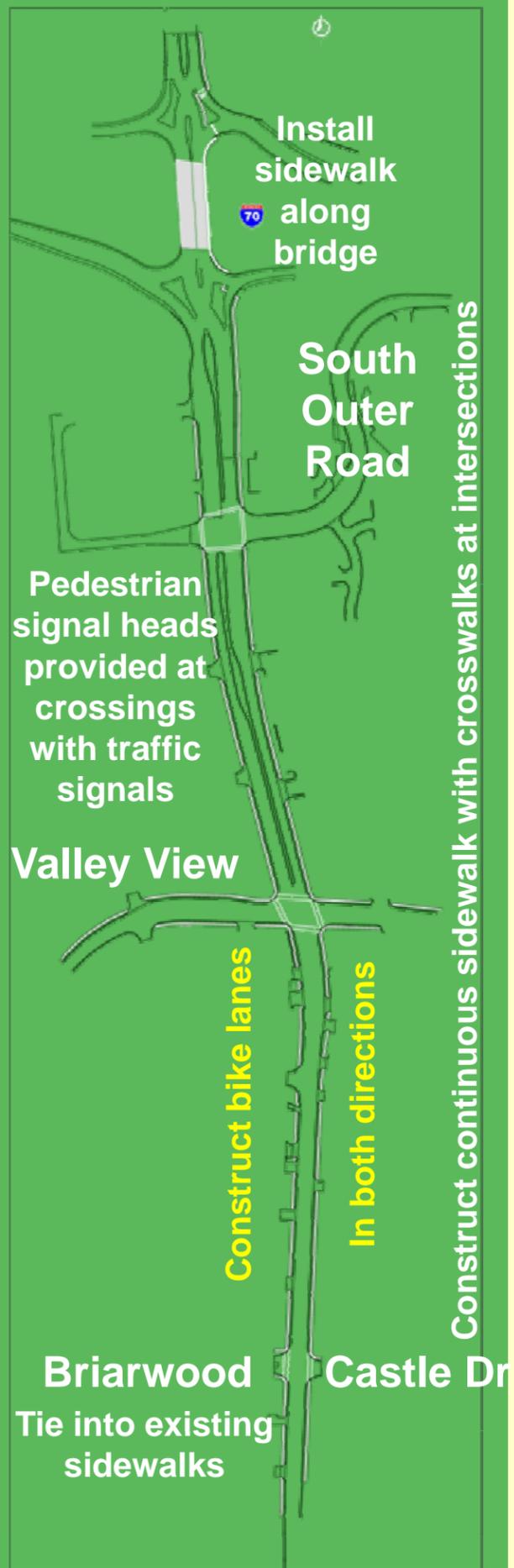
The proposed improvements account for the needs of various users of the corridor, including pedestrians, bicyclists and motorists. Design elements applicable to urban environments like reduced lane widths have been included to incorporate pedestrian-friendly, multi-modal amenities such as continuous sidewalks, pedestrian actuated traffic signals, crosswalks, median island refuges as well as marked and signed bike lanes.

Additional enhancements also include a mixture of stilling basins, silt fences, and controlled construction sequencing in residential areas. Landscaping will be included to enhance the environmental integrity of the area.

In addition to the traditional elements of roadway design and the construction outlined above, TranSystems is working in conjunction with its partners on the project and city staff to create an environmentally friendly project. The project anticipates incorporating sustainable elements such as:

- Installing pervious sidewalk pavement,
- Carefully designed landscaping, and
- Utilizing recycled material for construction.

This approach will enhance the environmental integrity of the area as well as improve the communities quality of life.



Implementation

Construction Phasing

In general terms, the construction sequencing for the Woods Chapel Road Improvements has been developed based upon the roadway remaining open to traffic during construction. While lane closures may occur, the roadway will continue to provide mobility and access throughout construction. An overview of the sequencing phases is:

Phase I – Construct relocated South Outer Road (SOR) and new traffic signal, as well as Woods Chapel Road (WCR) south of Valley View Road (VVR).

Phase II – Construct northbound lanes along WCR north of VVR, southbound lanes south of VVR, as well as construction of sidewalk across the I-70 bridge and widening of the I-70 ramps.

Phase III – Construct central portion of WCR and the ramps.

Phase IV – Construct southbound lanes on WCR north of SOR and northbound lanes south of SOR.

Phase V – Complete median and island construction

Construction Cost and Schedule

An opinion of probable construction cost has been prepared based upon the preliminary plans and is estimated in 2009 dollars at \$8.5 million. This cost excludes the cost for purchasing right-of-way and any relocation of utilities.

The tentative timeline for the Woods Chapel Road Improvements is as follows:

Complete Final plans:	Spring 2010
Acquire right-of-way:	Summer 2010
Relocate utilities:	Fall 2010 to Spring 2011
Start Construction:	Summer 2011
Project Completion:	Fall 2013

The start of construction for the roadway improvements is dependent upon the start and duration of right-of-way acquisition and utility adjustments.

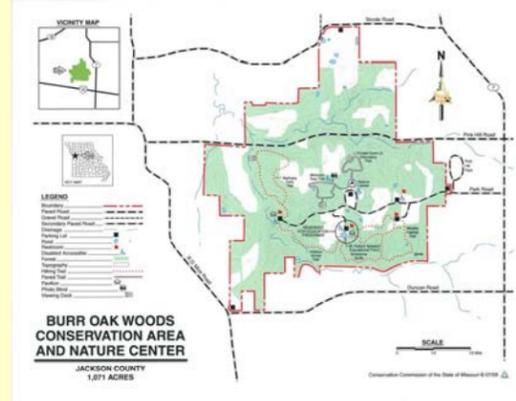


The Environment

The environmental review identifies the social, economic and environmental conditions in accordance with applicable regulations. The purpose is to provide guidance allowing the design to avoid, minimize or mitigate (if necessary) any impacts. All descriptions are relative to the environmental review of the Woods Chapel Road Improvements study area from Duncan Road to south of the Briarwood / Castle intersection.

SOCIOECONOMIC

Public Land - The Burr Oak Woods Conservation Area, a 1,000 acre 4(f) property managed by the Missouri Department of Conservation (MDC) is adjacent to the north end of the project area.



ENVIRONMENTAL RESOURCES

Floodplain – No mapped 100-year floodplain occurs, however a 500-year floodplain is noted south of I-70.

Threatened & Endangered Species – No state or federally listed species or designated critical habitat occurs.

Hazardous Waste – A search of databases indicates no known hazardous waste sites, superfund sites or leaking underground storage tanks.

Cultural Resources - The State Historic Preservation Office (SHPO) concluded that adequate documentation indicates that no historic properties will be affected.

ADDITIONAL INFORMATION

The construction documents, if necessary, will include special Contractor requirements to ensure environmental compliance. For example, a Department of the Army Nationwide Permit will be required.

And while additional right-of-way is required, no displacements of residences or businesses are anticipated.



Woods Chapel Road Improvements



Welcome to today's open-house meeting on the Woods Chapel Road Improvements. Information is available for your review on the what, when and how's of this project. If you have questions or comments, feel free to discuss your thoughts with State or City staff as well as TranSystems staff, our consultant on this project. We are here to help!

The proposed project extends from the westbound ramps at the I-70 interchange to south of Briarwood/Castle Drive. The northern portion of the corridor is primarily commercial in nature, with additional planned retail development on the west side of Woods Chapel Road. South of Valley View Road, the corridor transitions to primarily residential development. Continuing traffic growth along the corridor has created the need to improve the roadway and the I-70 interchange.

Woods Chapel Road will be widened to provide two travel lanes in each direction plus a raised median with turn lanes from I-70 south to Valley View. South of Valley View, the roadway will narrow to one lane in each direction with a center turn lane. The proposed improvements have taken into account the needs of the various users of the corridor, including pedestrians and bicyclists in addition to motorists. The proposed roadway lane widths have been narrowed slightly to allow more room for sidewalks, bike lanes, and additional landscaping.

One major component of the project will be the relocation of the South Outer Road to move the intersection approximately 300 feet south. This relocation will increase the distance between the Outer Road intersection and the I-70 eastbound ramp, helping to reduce the congestion caused by the close proximity of these two intersections.

Another innovative element of the project is the conversion of the interchange to a "Diverging Diamond" layout. With this design, traffic passing through the interchange will cross over to the opposite of the roadway between the two ramps, allowing more efficient movements to and from I-70. The crossover movements are safely handled by the traffic signals at the intersections. This same concept was recently successfully implemented at the interchange of I-44 and Route 13 in Springfield, Missouri.



In addition to the traditional elements of roadway design and the construction outlined above, TranSystems will work in conjunction with its partners on the project and city staff to create an environmentally friendly project, which will incorporate sustainable elements – pervious sidewalk pavement, planting trees and utilization of recycled material for construction – and will enhance and environmental integrity of the area as well as improve the quality of life for those who live in the community and travel through it daily.

Woods Chapel Road will remain open to traffic during construction. The tentative timeline for the Woods Chapel Road Improvements is:

Start Construction: Summer 2011
Project Completion: Fall 2013

The start of construction for the roadway improvements is dependent upon the start and duration of right-of-way acquisition and utility adjustments.

Your input is important and we welcome your comments! Fill out a comment card and become part of the public record.