EXECUTIVE SUMMARY

The Missouri Department of Transportation (MoDOT) and the Federal Highway Administration (FHWA) prepared this Draft First Tier Environmental Impact Statement (FTEIS) to discuss and compare strategies for improving I-70 in Kansas City Metropolitan Area.

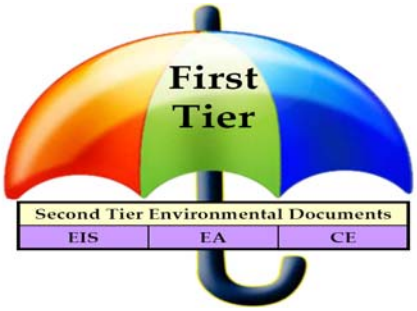


Illustration of the Tiered Environmental Process. The First Tier Study covers a corridor that will be broken down into multiple future Second Tier environmental studies.

What is the I-70 First Tier Environmental Impact Statement?

Under the National Environmental Policy Act (NEPA), FHWA requires an environmental study before a major highway project can be constructed. NEPA promotes efforts that prevent, minimize, or mitigate damage to the environment. An Environmental Impact Statement (EIS) is the documentation of the project's impact to the human and natural environment.

This I-70 environmental study is following a tiered environmental documentation process. Tiering complies with NEPA requirements and other environmental regulations. First Tier documents address broad programs or overall corridor strategies and issues in an initial, high level environmental impact analysis. The tiered process enables a decision-making process that focuses on issues that are ready for decision and reduces repetition in environmental documents. First Tier documents frame and narrow the boundaries and scope for multiple future Second Tier studies.

I-70 Leading into Downtown Kansas City, Missouri

For the Second Tier studies, the portion of I-70 covered by this FTEIS as well as the downtown loop will be divided into Sections of Independent Utility. At this time, the proposed Sections of Independent Utility are the five Sub-Areas in **Figure 3.0** at the end of **Chapter 3**.

What is the I-70 FTEIS Study Area?

The I-70 FTEIS Study Area is located entirely in Jackson County, Missouri. The Study Area is approximately 18 miles

What is the downtown loop?

The downtown loop is the combination of I-70, I-35, I-29, and I-670 that form a circle or "loop" around the downtown area.

What is a bottleneck?

A bottleneck is a section of a road where movement of traffic is limited by the road design. This is often a section of road with a fewer number of lanes, a sharp curve, or traffic joining the road at an interchange. A bottleneck is the most vulnerable point for congestion in a road network and is also referred to as a chokepoint.

Congestion on I-70 Eastbound at Lister

in length from the end of the last ramp termini east of the Missouri and Kansas state line to east of the I-470 Interchange, including the downtown loop. I-70 is a four- or six-lane divided and fully access-controlled interstate facility. The Study Area includes all land within 100 feet of the existing highway right of way along the corridor and within 300 feet of the existing highway right of way at interchanges along I-70.

An expanded Study Area consisting of 1,000 feet on either side of the highway including the downtown loop is being evaluated for land use and socioeconomic studies. The extended Study Area is needed for land use and socioeconomic evaluations to properly assess the potential impacts.

The I-70 FTEIS Study Area is shown in **Figure 1.1** located at the end of **Chapter 1**.

Why is MoDOT Studying I-70 in the KC Metro?

The overall purpose of the I-70 FTEIS is to determine an improvement strategy for the corridor, including future capacity and mode choices, which addresses the following items:

- Improve Safety: Reduce crash rates and crash severity on I-70 and within the downtown loop.
- Reduce Congestion: Remove key bottlenecks; reduce the potential for ramp back-up onto the freeway; and improve multi-modal travel times in coordination with plans put forward by local and regional agencies.
- Restore and Maintain Existing Infrastructure: Improve bridge and pavement conditions on I-70 and the downtown loop and implement cost-effective investment strategies.
- Improve Accessibility: Provide travel options for all residents; increase safe access across I-70 and the downtown loop for non-motorized travel; and support local and regional land use plans.
- Improve Goods Movement: Improve the efficiency of freight movement on I-70 and the downtown loop.

The Study Team developed the elements of the purpose and need in coordination with the Local Study Management Team and I-70 Major Investment Study (MIS). Each of the above elements of the purpose and need for improvements is discussed in more detail in **Chapter 1 Purpose and Need**.

What Strategies did the Study Team Consider for Improving I-70?

MoDOT and FHWA worked with the local agencies, stakeholders, and the public to develop, refine, and evaluate improvement strategies for I-70 and the downtown loop.

The Study Team combined various concepts to develop 15 Initial Strategy Packages. The Strategy Packages were based on initial engineering and environmental analysis, MARC's Congestion Management System (CMS) toolbox, as well as comments and feedback from the local agencies, stakeholders, and the public. The first seven strategy packages evolved from the previously completed I-70 MIS. Eight other packages were focused, goal oriented strategy packages meant to address specific needs or issues along I-70.

The 15 Initial Strategy Packages were evaluated against the purpose and need for improving I-70:

- Improve Safety
- Reduce Congestion
- Restore and Maintain Existing Infrastructure
- Improve Accessibility
- Improve Goods Movement

Chapter 2 provides a summary of each of the Initial Strategy Packages.

What are the Four First Tier Strategy Packages?

The Study Team screened the 15 Initial Strategy Packages down to four First Tier Strategies.

What is meant by improvement strategies?

Improvement strategies are general, high level transportation improvement opportunities to address the transportation issues along I-70. Improvement strategies may include a series of specific transportation improvements such as adding lanes, fixing existing pavement and bridges, improving interchange ramps, and/or transit projects.

Who is the Study Team?

The Study Team is the people who have been working on this project including specialists from the FHWA, MoDOT, and the consultant team.

What is a screening process?

An evaluation that identifies which strategies best achieve the overall purpose of the project.

What is a First Tier Strategy?

A First Tier Strategy is one of four strategies that is carried forward from the 15 initial strategies for more detailed evaluation.

The Study Team also considered engineering issues and impacts to the human and natural environments. The complete memorandum discussing the screening process is located in **Appendix C**.

The screening process resulted in four strategy packages being carried forward. The recommend packages to be carried forward include:

- No-Build Strategy (This is a requirement of the NEPA process)
- Improve Key Bottlenecks Strategy
- Add General Lanes Strategy
- Transportation Improvement Corridor Strategy

Why is the No-Build Considered?

The No-Build Strategy is required in the NEPA process and is always an option in case the benefits of improvements to I-70 do not outweigh the environmental impacts.

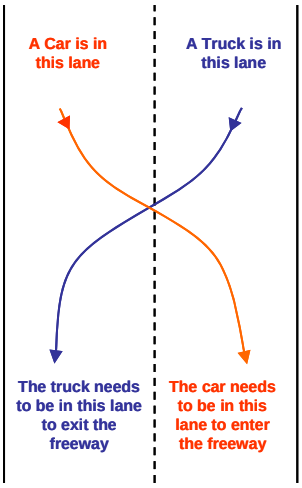
Chapter 2 provides detailed information on the First Tier Strategies; the following paragraphs provide a summary.

No-Build Strategy

The No-Build Strategy includes maintenance activities as needed and projects already committed as part of existing Statewide Transportation Improvement Program (STIP). This includes activities such as:

- Repaving I-70 over time.
- Upgrading the downtown loop's northeast corner/Paseo Boulevard per the kcICON project.
- Upgrading the I-70 bridges as identified in the STIP. Over time, maintenance would occur as needed.
- MoDOT has committed to modifying the freeway access along I-70 and I-435 to relieve congestion in the I-435 & I-70 interchange. The improvements include adding lanes to I-70; modifying ramps on I-70 EB into a collector-distributor system and extending ramps at several locations for additional weave, merge and diverge area; adding partial access at I-435 and US 40 and modifying access at I-70 and Manchester Trafficway; modifying the ramp terminals at US 40/31st Street; and replacing the Blue Ridge Cutoff Bridge. These improvements reduce congestion, improve safety and address two bridge maintenance needs in the interchange area.

What is a weave section?



The car and truck must cross the other traffic to get to the lane they want to be in.

- Maintaining the existing bus service.

There is an on-going South Loop Link study to evaluate the possibility of enclosing the south leg of the downtown loop to expand development opportunities in the downtown. The Second Tier Studies will coordinate with that planning effort and consider the recommended improvements from that study. In addition, the Wyandotte on-ramp to westbound I-670 was removed during the Bartle Hall expansion in 2005. There was a commitment to replace this ramp at a future date. The need to replace this connection or not and where the ramp would be located are issues that will be evaluated in the Second Tier Studies no matter which strategy is selected.

Improve Key Bottlenecks Strategy

The Improve Key Bottlenecks Strategy includes the activities from the No-Build Strategy described above. The Improve Key Bottlenecks Strategy is discussed in detail in **Section 2.2 First Tier Strategies Development** and is shown in **Figure 2.2**. The key elements from the Improve Key Bottlenecks Strategy include activities such as:

- Rebuild and/or rehabilitate I-70 and the entire downtown loop with a design life of 30 to 50 years
- Downtown loop lane balance improvements
- Improve interchanges by addressing ramp lengths, merge areas, and weave sections
- Consider interchange additions, consolidations, modifications, or eliminations to improve traffic flow and safety
- Improve the Jackson and Benton curves
- Rebuild the I-70/I-435 Interchange to provide six lanes on I-70 and six lanes on I-435 through the interchange
- Add collector distributor roads on I-70 and I-470 through the I-70/I-470 Interchange
- Enhance I-70 express bus service, provide for bus transit on shoulder, and explore locations to add park and ride lots as necessary

What does lane balance mean?

A lane balance issue occurs when the number of through lanes on the highway changes, usually as a result of a lane drop. An example of this is I-70 westbound at I-435.

Add General Lanes Strategy

The Add General Lanes Strategy includes the activities from the Improve Key Bottlenecks Strategy described above. The Add General Lanes Strategy is discussed in detail in **Section 2.2 First Tier Strategies Development** and is shown in **Figure 2.4**. The key elements from the Add General Lanes Strategy include activities such as:

- Rebuild and/or rehabilitate I-70 and the entire downtown loop with a design life of 30 to 50 years
- Rehabilitate and/or rebuild I-70 with four lanes in each direction from the downtown loop to I-470
- Downtown loop lane balance improvements
- Improve interchanges by addressing ramp lengths, merge areas, and weave sections
- Consider interchange additions, consolidations, modifications, or eliminations to improve traffic flow and safety
- Improve the Jackson and Benton curves
- Upgrade the Truman Road Interchange
- Rebuild the I-70/I-435 Interchange to provide eight lanes on I-70 and six lanes on I-435 through the interchange
- Add collector distributor roads on I-70 and I-470 through the interchange
- Integrating Operation Green Light on parallel routes
- Improve incident management response times
- Enhance I-70 express bus service, provide for bus transit on shoulder, and explore locations to add park and ride lots as necessary
- Add directional ramps in the southeast and southwest corners of the downtown loop

What is Operation Green Light?

Operation Green Light is a cooperative effort to improve the coordination of traffic signals and incident response on major routes throughout the Kansas City area.

Transportation Improvement Corridor Strategy

The Transportation Improvement Corridor Strategy includes all of the parts of the Improve Key Bottlenecks Strategy plus it adds a dedicated transportation corridor between the downtown loop and I-470. The transportation improvement corridor could be located between the eastbound and westbound lanes or on one side of the I-70 corridor. As currently proposed, the transportation improvement corridor would be barrier separated from the regular traffic lanes. The

transportation improvement corridor could be used for congestion managed lanes, reversible lanes, High Occupancy Vehicle (HOV) lanes, or bus lanes.

The Transportation Improvement Corridor Strategy, as described in detail in **Chapter 2** and shown in **Figure 2.6.,** includes activities such as:

- Rebuild and/or rehabilitate I-70 and the entire downtown loop with a design life of 30 to 50 years
- Add dedicated lanes that could be used for congestion managed lanes, reversible lanes, HOV lanes, or bus lanes located parallel to the general purpose lanes from the downtown loop to east of Lee's Summit Road
- Downtown loop lane balance improvements
- Improve interchanges by addressing ramp lengths, merge areas, and weave sections
- Consider interchange additions, consolidations, modifications, or eliminations to improve traffic flow and safety
- Improve the Jackson and Benton curves
- Rebuild the I-70/I-435 Interchange to provide a transportation improvement corridor on I-70 and six lanes on I-435 through the interchange
- Add collector distributor roads on I-70 and I-470 through the interchange
- Enhance I-70 express bus service, provide for bus transit on shoulder, and explore locations to add park and ride lots as necessary

What are High Occupancy Vehicle (HOV) lanes?
HOV lanes are exclusive lanes for vehicles with two or more occupants. HOV lanes are physically separated by a barrier, striping, or signing from the adjacent regular lanes that are utilized by cars, buses, and freight trucks.

What is the Identified Preferred Strategy?

The Study Team has proposed an Identified Preferred Strategy to move forward at this time. The I-70 FTEIS Identified Preferred Strategy is the Improve Key Bottlenecks Strategy from the downtown loop to east of I-435. The Identified Preferred Strategy from east of I-435 to I-470 is either the Improve Key Bottlenecks Strategy or the Add General Lanes Strategy. Additional information and analysis is necessary and the determination of which strategy will be used will be made in the Second Tier studies. **Figure 2.9** in **Section 2.2 First Tier Strategies Development** provides a graphic explaining

What is meant by Identified Preferred Strategy?

The Identified Preferred Strategy is the strategy that the Study Team has determined will best address the purpose for improving I-70 while minimizing the land-use, social, and environmental effects of the project. This does not mean the Identified Preferred Strategy has been selected as the final strategy. Draft Environmental Impact Statement (DEIS) comments received from agencies, the public, the project website, and the public hearing will be considered prior to selecting a final preferred strategy.

the Identified Preferred Strategy. The Transportation Improvement Corridor Strategy would be eliminated from consideration.

The Study Team selected the Improve Key Bottlenecks Strategy for the downtown loop to east of I-435 for the following reasons:

- It addressed the key reasons for improving I-70 as identified in **Chapter 1**.
- It reduces peak hour congestion to LOS E or better.
- It has the lowest need to acquire properties and relocations of homes and businesses, especially in the environmental justice areas for the Build Strategies.
- It has the lowest human and natural environmental impacts for the Build Strategies.
- It has the lowest estimated cost of the Build Strategies.
- It improves access across the freeway.
- It improves transit service with bus on shoulder.
- It restores and/or rebuilds the existing infrastructure.

Traffic analysis indicates a need for additional capacity on I-70 from east of I-435 to I-470, however, there are several factors that make this conclusion uncertain between now and 2030. The factors and issues leading to this decision include:

- Uncertainty in how much traffic levels are going to grow. With higher gas prices, there have been reductions in national and regional vehicle miles traveled in recent years.
- Uncertainty of the compatibility of the Add General Lanes Strategy with the sustainability goals of the Mid-America Regional Council's 2040 Long Range Transportation Plan update. If this plan results in a strategy for much more compact development, additional road capacity may not be needed.
- Uncertainty of the Add General Lanes Strategy compatibility with future regional transit plan investments such as a fixed guide way system. Improving capacity in the I-70 corridor could potentially be solved be either adding new lanes to I-70 or through regional transit improvements. However, a significant investment to both potential highway and

transit solutions is not necessary. If the region, supported by regional transit plans, concludes a significant transit investment would adequately address the traffic needs in the I-70 corridor, MoDOT, working with the region, would reevaluate the decision in the tiered environmental process.

- Potential federal climate change and vehicle emissions legislation. Congress is considering legislation that may focus transportation improvements on those that reduce driving instead of those that add capacity.
- Delaying the final improvement decision until the Second Tier studies will be a cost effective use of public resources given the uncertainties noted above. This strategy avoids committing to a solution that may be undesirable given future policy changes and thus requiring reopening this First Tier study.

The I-70 FTEIS will provide environmental evaluation for the wider of the two footprints (Add General Lanes Strategy) to ensure appropriate environmental impact analysis is conducted.

The Transportation Improvement Corridor Strategy using fixed barriers was eliminated from further consideration. The option to stripe a HOV/Bus lane will be carried forward with the Add General Lanes Strategy.

How will the Strategies Affect the Human Environment?

The following is a brief summary of some of the key environmental effects of the strategies. **Chapter 3** discusses the effects of the strategies in detail.

Land Use

Land uses within the Study Area include single-family residential, multi-family residential, commercial, industrial, office, mixed use, parks and open space, public/semi-public, and government.

What is meant by public/semi-public land uses?

A public space is open and available to all the citizens. Semi-public space has some stricter rules attached such as dress codes, advertising limits, entrance fee, or skateboards limitations to name a few.

Single-family Residential

What is meant by mixed use?

Mixed use is the combination of residential, commercial, industrial, office, institutional, or other land uses in a single building or set of buildings.

The No-Build Strategy would be consistent with local planning in the cities of Kansas City and Independence, Missouri. This strategy would have no affect on the existing land use and zoning.

The Improve Key Bottlenecks Strategy will have a minimal affect on the existing land use and zoning. It is relatively consistent with current and planned zoning and land use. Properties will need to be acquired along the corridor near existing bottlenecks; however, improvements will be made in existing right of way to the extent possible.

The Add General Lanes Strategy will affect commercial, residential, and other facilities with the expansion of I-70 to eight lanes, four lanes in each direction. As the improvements recommended as a part of the Add General Lanes Strategy are widespread throughout the Study Area, its impacts to land use and zoning are as well. The Add General Lanes Strategy is not consistent with current and planned zoning and land uses.

A Community Market

The Transportation Improvement Corridor Strategy will affect commercial, residential, and other facilities with the expansion of I-70 to include congestion managed lanes, HOV lanes, or bus lanes. As the improvements recommended as a part of this strategy are widespread throughout the Study Area, its impacts to land use and zoning are as well. The Transportation Improvement Corridor Strategy is not consistent with current and planned zoning and land uses.

The impacts of the Identified Preferred Strategy to land use and zoning will vary along the study corridor. The overall impacts could be reduced through the design process.

Section 3.1 Land Use and Zoning provides more details on land use affects.

Effects on Communities and Neighborhoods

Transportation projects can impact neighborhoods by relocating residents, dividing the neighborhood, removing local businesses, and creating an atmosphere that discourages neighbors from interacting with each other. MoDOT and

FHWA will work with local communities and neighborhoods to reduce and minimize neighborhood impacts as much as possible.

The No-Build Strategy will affect the neighborhoods surrounding the existing corridor as increased congestion will make it more difficult to live near I-70 and the downtown loop. Without improvements, local residents can expect increased congestion leading to increase noise and air quality issues. In addition, increased congestion will lead to the use of alternate routes which are often arterial roads through neighborhoods which will likely make travel more difficult for local residents.

The Build Strategies including the Identified Preferred Strategy will affect all neighborhoods surrounding the existing corridor to varying degrees. These effects include acquisition of homes, businesses, and community properties; increased noise and air quality issues, and visual effects on residents. However, the Build Strategies will also provide the opportunity to enhance bicycle and pedestrian facilities in the Study Area.

Section 3.2 Community and Neighborhood Effects provides more details.

Effects on Public Lands

Public lands and facilities include parks and community centers. Many public lands and facilities are protected by Section 4(f) of the Department of Transportation Act or Section 6(f) of the Land and Water Conservation Act.

The No-Build Strategy will have no affect on any of the public lands or facilities protected under Section 4(f) or Section 6(f).

All of the Build Strategies will potentially affect West Terrace Park, Ermine Case Jr. Park, Margaret Kemp Park, and Carriage Hills Park protected under Section 4(f). They will potentially affect Little Blue Trace Park protected under Section 6(f).

What are the Build Strategies?

Build Strategies involve the construction of roads, or other physical improvements. The Identified Preferred Strategy is a Build Strategy.

What is Section 4(f)?

Section 4(f) of the Department of Transportation Act of 1966 states that no transportation project should be approved which requires the use of land from a public park, recreation area, wildlife and waterfowl refuge, or historic site unless there is no feasible or prudent strategy to the use of such land.

What is Section 6(f)?

Section 6(f) of the Land and Water Conservation Act prohibits the conversion of any property acquired or developed with the assistance of the land and water conservation funds to anything other than public outdoor recreation use without the approval of the Secretary of the Department of Interior.

In addition, the Add General Lanes Strategy will potentially affect Jarboe Park, Andrew Drips Park, and Mulkey Square protected under Section 4(f).

The Transportation Improvement Corridor Strategy will also potentially affect Jarboe Park, Andrew Drips Park, and Cypress Park.

All of the Build Strategies will impact the Goin' to Kansas City Plaza located in the Paseo Boulevard median temporarily during construction.

Margaret Kemp Park

The Identified Preferred Strategy will potentially impact three parks in the downtown loop area. The downtown parks include West Terrace Park, Ermine Case Jr. Park, and Margaret Kemp Park. The area known as Freeway Park is home to a community garden on land leased to the city of Kansas City from MoDOT. The Identified Preferred Strategy will use the area to reconfigure I-70 access to Truman Road. Depending on the selected strategy in the Second Tier studies, there are potential impacts to Carriage Hills Park and Little Blue Trace Park with the proposed I-470 interchange improvements. The parks are all Section 4(f) protected parks except the Little Blue Trace Park which is also a Section 6(f) protected park.

As this study continues into the Second Tier studies, reasonable attempts to avoid Section 4(f) and Section 6(f) properties will be made.

Section 3.3 Public Lands and Facilities provides more information.

Relocations of Homes and Businesses

The No-Build Strategy will require the relocation of some residences in the Study Area because of the programmed improvements to the U.S. 40 Interchange and the I-435 Interchange. The No-Build Strategy will not require any additional relocations other than those for existing planned projects.

All of the Build Strategies would require the relocation of homes, businesses, and community facilities within the Study

Area. The Improve Key Bottlenecks Strategy would require the relocation of 170 single-family homes, 18 multi-family buildings, 55 businesses, and three community facilities. The Add General Lanes Strategy would require the relocation of 271 single-family homes, 32 multi-family buildings, 93 businesses, and 11 community facilities. The Transportation Improvement Corridor Strategy would require the relocation of 399 single-family homes, 45 multi-family buildings, 111 businesses, and 12 community facilities.

The Identified Preferred Strategy would require the relocation of 228 single-family homes, 19 multi-family buildings, 67 businesses, and four community facilities, based upon the widest strategy footprint carried forward. As a part of the Second Tier studies, the right of way for acquisitions will be refined to avoid relocations where possible and minimize the total number of properties acquired.

Section 3.4 Relocations provides more information.

Environmental Justice

Executive Order 12898 mandates that MoDOT identify and address disproportionately high and adverse human health or environmental effects of proposed projects on minority and low-income populations. An evaluation of the population characteristics for the proposed Build strategies identified that there are substantial clusters of Environmental Justice populations living within the Study Area. The highest concentrations of low-income and minority households are located in the area of the Study Area between downtown Kansas City, Missouri and I-435.

Manchester Village Mobile Home Park

The No-Build Strategy will have no disproportionate and adverse affect on any segment of the population including minorities and low-income persons.

The Build Strategies may have adverse effects on minorities and low-income persons living along the corridor. The most likely impacts are expected to occur between downtown Kansas City, Missouri and the I-435 Interchange. These impacts may include relocations and increased noise.

The Second Tier studies will make a final determination if there are potential disproportionate and adverse effects on minority and/or low income populations as well as suggested mitigation measures. Close attention will need to be paid to addressing potential impacts to Environmental Justice populations as part of all of the Second Tier studies, but especially those between downtown Kansas City, Missouri and I-435.

More detail on this analysis is contained in **Section 3.5 Environmental Justice**.

Economic Effects on Businesses, Jobs, and Taxes

Under the No-Build Strategy, the congestion, bottlenecks, and goods movement issues discussed in **Chapter 1** would not be addressed. The thousands of residents that use I-70 on a daily basis to commute to work would continue to experience worsening congestion on their daily commute. This would result in reduced or delayed access to jobs in the central parts of the Kansas City Area and a potential reduction in the attractiveness of downtown as a location for employment.

Environmental Justice Populations Defined:

Populations with a cluster(s) of minority and/or low-income populations.

The No-Build Strategy may negatively affect jobs related to the trucking industry and businesses that rely on I-70 for product delivery. Congestion causes travel time delays for the transportation and delivery of goods. This costs businesses in the form of increased fuel usage, wages for drivers stuck in traffic, lost productivity of trucks, and a reduction in the number of daily trips that truck drivers can make.

The Build Strategies including the Identified Preferred Strategy would affect businesses and jobs in three key ways:

- By requiring businesses to relocate as part of the acquisition of new right of way
- By changing access near the location of specific businesses that could make it easier or more difficult for customers/workers to reach the business
- By improving travel times and goods movement for businesses and workers through reduced congestion

In addition, each of the Build Strategies, including the Identified Preferred Strategy, would directly affect the tax base of the City of Kansas City, City of Independence, Jackson County, and local school districts by removing land from the property tax rolls. The Build Strategies would cause the relocation of homes which would represent a decrease in the available property tax base. The Build Strategies with a higher number of relocations would have the greatest negative effects on tax base.

Southwest corner of loop looking at Downtown

Section 3.6 Economics provides more information.

Visual Effects

The overall view of the road and the view from the road will vary somewhat among the Build Strategies. However, the Study Area views are already well developed with urban residential and commercial uses. The overall views of the roadway and the views from the roadway will be comparable to the existing views although the opportunity exists to provide aesthetic enhancements throughout the corridor.

Section 3.7 Visual Effects provides more details.

Hazardous Materials

The potential for hazardous materials contamination from the five identified hazardous material sites in or adjacent to the Study Area is very low for all of the Strategies.

Section 3.8 Hazardous Materials provides more information.

What is the Area of Potential Effect (APE)?

The geographic area or areas within which a project may directly or indirectly cause modification in the character or use of cultural resources, if any exist. The area of potential effect is influenced by the size and nature of the project.

Historic and Archaeological Resources

Several historic properties and districts border the Study Area. However, no historic bridges, properties, cemeteries, or properties potentially eligible for the National Register of Historic Places (NRHP) are located in the Area of Potential Effect (APE).

There are 18 known archaeological sites located immediately adjacent to the Study Area boundaries and nine potential

locations of unknown archaeological sites located within the Study Area. None of the strategies, including the Identified Preferred Strategy, will impact the known archaeological sites. The potential locations of unknown archaeological sites could be impacted by the Identified Preferred or the other Build Strategies. Further investigations for both historic properties and archaeological sites would take place as part of the Second Tier studies.

More information is contained in **Section 3.9 Historic and Archaeological Resources**.

Noise

The I-70 Study Area contains many noise-sensitive land uses, most of which are residential properties. If nothing is done to improve the congestion on I-70 within the Study Area, the No-Build Strategy may increase noise levels for existing residences and businesses along I-70 as traffic and congestion continues to grow over time.

The Build Strategies, including the Identified Preferred Strategy, are expected to increase noise levels. The areas likely to be impacted the most are locations along I-70 that have a high concentration of residences both single-family and multi-family. The Add General Lanes Strategy and the Transportation Improvement Corridor Strategy would relocate more homes and businesses than the other strategies.

As a part of the Second Tier studies, the construction area for the I-70 improvements will be better defined. The MoDOT Noise Policy will dictate the evaluation and assessment methods used as the project proceeds. If a selected strategy requires significant changes in horizontal or vertical alignment or an increase in the number of through lanes, then noise measurements and modeling will be completed and a preliminary assessment of needed mitigation will occur.

Section 3.10 Noise provides additional detail on the areas affected by noise for each strategy.

Energy

The No-Build Strategy will have an adverse affect on the consumption of energy. This strategy will not improve traffic flow and reduce vehicle fuel consumption. In fact, an increase in congestion will lead to more vehicle fuel consumption as vehicles are in stop and go traffic for a longer period of time.

The Build Strategies, including the Identified Preferred Strategy, decrease congestion and improve traffic flow which reduces energy consumption. Over time, improvements to vehicle emissions and fuel efficiency should reduce energy consumption in the corridor even further. Although the improved traffic flow is forecast to attract additional trips into the corridor and increase vehicle miles traveled, continued improvements in efficiency are expected to offset the increase in traffic volumes.

Additional information on the effects on energy use is contained in **Section 3.17 Energy**.

Utilities

The No-Build Strategy would not result in any utility impacts.

The Build Strategies, including the Identified Preferred Strategy, could cause temporary impacts in service utilities; however, temporary telephone and cable service impacts are the most probable. The more detailed design work of the Second Tier studies will allow for greater analysis in the affects on specific utility lines or utility corridors. Second Tier studies will preliminarily identify any needs for relocating utilities along the corridor.

Electrical Lines Across I-70

Section 3.18 Utilities contains more discussion.

How will the Strategies Affect the Natural Environment?

Air Quality

The No-Build Strategy will be the worst for air quality when compared to the any of the Build Strategies. This is due to an increase in traffic, congestion, and delays in the No-Build Strategy.

What are airborne particulates?

Airborne particulates are any solid particle of dirt, dust, sand, water vapor, or other material that is suspended in the atmosphere.

The Build Strategies, including the Identified Preferred Strategy, are expected to improve air quality by improving the existing locations which create congestion and stop and go traffic. The improved traffic flow will allow vehicles to move more efficiently. In addition, anticipated vehicle fuel mileage efficiency increases and emission reductions will also improve air quality over time. However, the Build Strategies are also forecast to have a moderate increase in the number of vehicles on I-70. Increase vehicle use along I-70 may negate some of the air quality benefits.

What is an impervious surface?

Impervious surfaces are hard surface that prevents water from entering the soil.

Section 3.11 Air Quality has more information.

Groundwater, Drainage, and Surface Water Quality

The proposed route for I-70 improvements is identical to the existing route. Consequently, the risks associated with any proposed improvement strategy include all the risks associated with the existing I-70 highway:

What is sediment?

Sediment is small particles of dirt, dust, sand and other materials that are left behind on a surface after water flows over it.

- Pollution of the river system as a result of fuel, oil, and debris carried from the road surfaces by storm water runoff.
- Exposure of the river system to airborne particulates and combustion gases from traffic.

The Build Strategies, including the Identified Preferred Strategy, will increase the impervious surface and increase rainwater runoff. This leads to increased amounts of water flowing into streams, especially during heavy rainfalls; less ground water flowing through the soil; and potentially more erosion of stream beds because of faster flowing water. These

changes to stream flow can result in flooding; habitat loss; erosion, which widens the stream channel; and physical changes in how the stream looks and functions.

Movement of sediment and pollutants into the river system as a result of construction and demolition activities potentially will affect water quality and habitat during construction.

Section 3.12 Groundwater, Drainage, and Surface Water Quality provides more details.

What is a floodplain?

A floodplain is the relatively flat land adjacent to a stream or river that experiences occasional or periodic flooding.

Floodplains, Stream, and River Crossings

The potential for new floodplain encroachment and wider stream crossings exists for all strategies except the No-Build Strategy. The Study Area crosses regulated floodways at the Kansas River, the Missouri River, the Blue River, the Little Blue River, and their tributaries. The Improve Key Bottlenecks Strategy will potentially affect 19 acres of floodplain. The Add General Lanes Strategy will potentially affect 21 acres of floodplain and the Transportation Improvement Corridor will potentially affect 24 acres of floodplain. The Identified Preferred Strategy will potentially affect 20 acres of floodplain. The majority of the impacts (16 acres) will occur in the Blue River floodplain.

Little Blue River under I-70

Section 3.13 Floodplains, Streams, and River Crossings provides more details.

Wetlands

The potential for wetland and habitat loss was measured by estimating the area of wetlands within the boundaries of the construction. Each of the strategies, except the No-Build Strategy, will affect wetlands. The Improve Key Bottlenecks Strategy will affect 1.38 acres of wetland. The Add General Lanes Strategy will affect 2.03 acres of wetland. The Transportation Improvement Corridor will affect 1.99 acres of wetland. The Identified Preferred Strategy will potentially impact 2.03 acres of wetlands using the widest footprint of the strategies carried forward. The potential to minimize wetlands impacts of the Identified Preferred Strategy will be examined in more detail in the Second Tier studies.

What is a wetland?

Wetlands are areas where water covers the soil, or is present either at or near the surface of the soil all year or for varying periods of time during the year.

Section 3.14 Wetlands contains more details.

Wildlife, Plants, and Threatened and Endangered Species

The Study Area does not offer any pristine or unique habitat for wildlife and no state or federal threatened, endangered, or special concern plant or animal species were found within the Study Area. Wildlife species that exist within the Study Area are tolerant of human activities and if disturbed could find comparable habitat in areas adjacent to the Study Area.

The Build Strategies including the Identified Preferred Strategy will impact some forested areas present in the Study Area.

Section 3.15 Wildlife, Plants, and Threatened and Endangered Species provides more information.

Farmland

There are no farmlands located within the Study Area.

What are participating agencies?

The most recent major federal transportation legislation, SAFETEA-LU, included two types of agencies for specific involvement in the preparation of environmental studies.

Cooperating Agencies are federal and state agencies with a specific expertise or authority (such as needing to issue a permit) for the project. There are no Cooperating Agencies currently designated on this project.

Participating Agencies are a wider group of government stakeholders. All federal, state, regional, and local government agencies that may have an interest in the project are invited to serve as participating agencies.

How did the Study Team Coordinate with the Public and Stakeholders?

MoDOT developed a detailed Public Involvement and Agency Coordination Plan specifically for the I-70 FTEIS. The plan was circulated to potential participating agencies for review and comment. The plan was also posted on the project website for public review and comment. The plan has been updated on the website as needed during the course of the study. Detailed discussion of how MoDOT involved the Public and Stakeholders is contained in **Chapter 4**.

Agency Meetings

MoDOT has held six regular meetings with representatives from local stakeholder agencies such as:

- City of Independence, Missouri

- City of Kansas City, Missouri
- Kansas City Area Transportation Authority (KCATA)
- Mid-America Regional Council (MARC)

Stakeholders provided feedback on the strategies as they were developed and refined.

MoDOT also held two meetings with environmental agencies to discuss the environmental analysis procedures for the project and the anticipated affects of the project on the environment.

Public Information

MoDOT developed several ways for members of the public to learn more about the project. These included a project web site, a project phone number, project newsletters, a speaker's bureau, public meetings and listening posts, and other project interactive activities.

Public Meetings

MoDOT held two rounds of public outreach prior to the publication of this DEIS. All meetings were held in an open house format for two to three hours and members of the public could stop by at any time during the meetings. The first round of public outreach was held during September 2008, which included two weekday evening open house public meetings and two Saturday morning neighborhood coffee meetings. The second round of public outreach was held in January 2009, which included an on-line public meeting and an open house public meeting.

September Public Meeting

Mobile Meetings

In addition, MoDOT vinyl wrapped an existing 12-passenger van, provided a display tent, and backdrop to share information about the First Tier strategy packages with the community. The van was stationed for two hours at the following key events: December 21, 2008 Chiefs Football Game and the Wal-Mart Super Center on Blue Ridge Boulevard in Independence, Missouri on January 9, 2009. The

Mobile Voice Van Event

Study Team circulated through the event location to speak with community members about the project and distributed "Contact Us" business cards.

Speakers Bureau

MoDOT also established a speaker's bureau for the project. Study Team members are available to attend neighborhood, business, and community organization meetings by request. The Study Team sent an invitation letter to more than 30 organizations along the corridor inviting them to request a speaker. The Study Team also posted a speaker's bureau request form on the project website. As of June 2009, Study Team members have presented at seven community group meetings.

How Do I Comment on This Document and the Strategies?

A public comment period of no less than 45 days will follow the publication of this Draft FTEIS document. During the comment period, MoDOT will hold a formal Public Hearing. MoDOT will also hold a series of Mobile Meetings, host an on-line presentation, and attend further speaking engagements. The public and stakeholders can participate through any one of these events or send comments on this Draft FTEIS and the strategies to the addresses listed on the first page of the document.

What are the Next Steps for Improving I-70?

Following the Public Hearing and comment period, the Study Team will use the input provided by the public, stakeholders, and agencies to help refine the Identified Preferred Strategy. The Study Team will produce a Final FTEIS document that updates the Identified Preferred Strategy and addresses the comments received. The FHWA will then issue a Record of Decision that will formally select the strategy to move forward into the Second Tier studies.

For the Second Tier studies, the I-70 FTEIS Study Area will be divided into Sections of Independent Utility for a more manageable, in-depth evaluation process. The Second Tier studies will refine the right of way affected by the project in order to avoid, minimize, or mitigate the effects of the I-70 improvements where possible.

There are issues that do not affect the selection of the Identified Preferred Strategy but will need to be resolved as part of the Second Tier studies or subsequent design development. MoDOT is committed to the continued pursuit of resolving these issues. By virtue of the tiered process, a number of issues, mostly due to the conceptual nature of the definition of the FTEIS I-70 improvements, remain for consideration in the Second Tier studies.

Although the first tier process has laid the foundation for the continued study of the I-70 corridor and the downtown loop, there are several issues that remain unresolved that will need to be further clarified prior to or in conjunction with the initiation of the Second Tier studies. These unresolved issues include the following items:

- Type of environmental study for each section of independent utility

- Implementation schedule for I-70 improvements

MoDOT is committed to performing the Second Tier studies in accordance with the recommendations contained within this First Tier EIS. These Second Tier studies will be conducted through a continued and ongoing program of public outreach and agency coordination. Through the Second Tier studies, more specific definitions of the improvements will be developed for consideration by the general public and the various environmental and community resource agencies. The Second Tier studies will assess and study more specifically the following items:

Corridor Wide

- Layouts and impacts of the interchange improvements to address ramp lengths, merge and diverge lengths, and weave areas.
- Air Quality designation status throughout the MARC region.
- Relationship between the MARC's regional long range transportation plan update (Transportation Outlook 2040) and I-70 FTEIS identified preferred strategy.
- Locations and types of Community Bridges.
- Noise studies as directed by MoDOT's Noise Policy. Noise was a specific issue brought forward as a potentially controversial issue from the public and stakeholder outreach efforts.
- U.S. Army Corps of Engineers Section 404 permitting will be required on this project.

Downtown Sub-Area

- Layouts and impacts of the interchange additions, consolidations, or eliminations throughout the downtown loop.
- Location and need to replace the Wyandotte ramp to westbound I-670.
- Coordination and impact of the South Loop Link Study

Urban Sub-Area

- Layouts and impacts of the interchange additions, consolidations, or elimination of access at 18th Street interchange.

I-435 Interchange Sub-Area

- Layouts and impacts of the interchange improvements at the I-435 interchange including modification of access at Manchester Trafficway interchange.

Suburban Sub-Area

- Layouts and impacts of the interchange additions, consolidations, or elimination of access through the series of interchanges at the Sterling Avenue, U.S. 40, and Blue Ridge Boulevard interchanges.

I-470 Interchange Sub-Area

- Layouts and impacts of the interchange improvements at the I-470 interchange.