NOTICE !

The Missouri Department of Transportation (MoDOT) and the Federal Highway Administration (FHWA) are considering use of the *Design-Build process*, rather than the Design-Bid-Build process, to yield transportation solutions for the needs identified and studied in this Environmental Impact Statement (EIS). The Design-Build process allows design of the facility and construction to take place simultaneously by a contractor chosen to design and build the project, in this case, for a specified cost. The solutions proposed in this EIS are intended to represent a "worst-case" yet reasonable scenario for likely impacts of the project, offering a footprint within which any number of reasonable options might be proposed.

The alternatives offered in the EIS do not limit the proposals the Design-Build contractor can suggest. For example, the specific layout of the I-29 ramps for Paseo Boulevard might retain a left-hand exit, as is current, rather than the right-hand exit shown in the EIS. The interchange layouts for the Front Street and the Route 210 interchanges might differ from the layouts examined in this EIS. However, the footprint used within the EIS for environmental analysis is expected to accommodate the alternatives that the Design-Build contractor proposes. Reasonable proposals from the contractor will be examined to assure we have considered their impacts and also to confirm their ability to meet the purpose and need of the project in a safe and effective manner. Public involvement about the chosen alternative(s) and its specific details is expected as the Design-Build process progresses.

We will continually monitor and assess the proposed Design-Build alternative to make sure it does not introduce significant impacts that aren't covered in the approved NEPA document.

SUMMARY

The Missouri Department of Transportation (MoDOT) and the Federal Highway Administration (FHWA) are proposing to reconstruct and widen Interstate 29/35 with new interchange configurations, bridges, including the bridge over the Missouri River, and roadways in Clay and Jackson Counties. The study corridor extends approximately 4.7 miles (7.6 kilometers), from just north of Missouri Route 210/Armour Road in Clay County and continues south on I-29/35/US 71, to the northwest corner of the central business district (CBD) freeway loop in downtown Kansas City, Missouri. The project includes the north side of the CBD Loop, designated as both I-35/70 and US 24/40. This Environmental Impact Statement (EIS) examines operational and capacity improvements for this section of I-29/35 and I-35/70 and evaluates whether to complete a major rehabilitation of the existing I-29/35 Paseo Bridge over the Missouri River and construct a new companion bridge or replace the existing bridge with an entirely new structure or structures. A final determination on the Paseo Bridge will be made during the design-build process. It describes existing problems in the corridor, discusses development of alternatives, examines potential impacts of the alternatives considered and identifies a preferred alternative. The location of the I-29/35 Study Corridor within the Kansas City region is shown in Figure S-1, Project Location Map.

A preferred alternative is the alternative that best meets the project Purpose and Need, balances the benefits and impacts of the project, and is responsive to public and agency comments. The preferred alternative has been identified based on engineering analysis related to probable project costs, constructability, public input and based on the evaluation of the social, economic and environmental impacts of the potential alternatives. The final selection of an alternative will not be made until after considering comments from other federal, state and local agencies, location public hearing comments and following approval of the Final EIS. The NEPA Section 404 merged process has not been initiated because preliminary coordination with the U.S. Army Corps of Engineers (USACE) indicates the project will likely be permitted under a Nationwide Permit. However, if the USACE determines an Individual Permit will be required for the project, the merged NEPA/Section 404 process will be pursued.

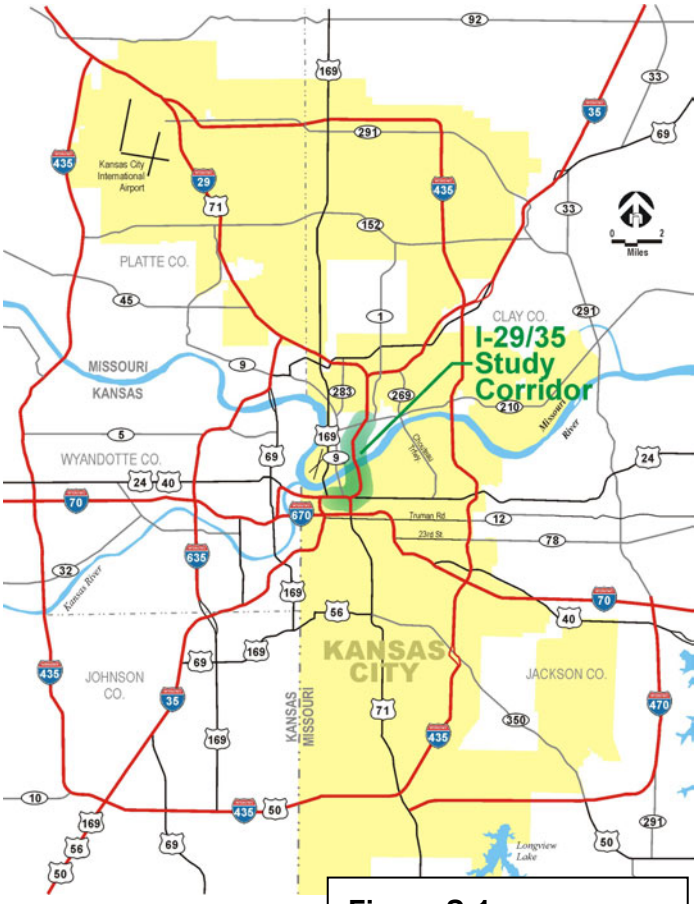


Figure S-1
Project Location Map

The Preferred Alternative from M-210 to the northeast corner of the CBD Loop will be constructed as part of a design-build process. In anticipation of this process, this EIS defines a maximum footprint related to the right-of-way needed for construction of the preferred alternative. Additional project refinement will take place during the design-build process.

A. Purpose and Need for the Project

Within the study corridor, I-29/35 has four through lanes and carries over 90,000 vehicles per day. This interstate highway route is very congested during peak travel periods. A Major Investment Study (MIS), the Northland~Downtown MIS, was completed in 2002 which identified a recommended strategy, including capacity and operational improvements to I-29/35 and to the Missouri River Crossing. Additionally, the corridor is listed in the Kansas City area Long Range Transportation Plan as a regionally significant project. This EIS is the next step to identify a preferred alternative to address transportation needs in the study corridor.

The purpose of the proposed project is to add vehicular capacity and improve safety consistent with best design practices along this 4.7 mile (7.6 kilometer) section of I-29/35. The proposed action would address several needs:

- Replace the deteriorating infrastructure and improve interchanges.
- Improve traffic safety.
- Improve the interstate system linkage across the Missouri River.
- Provide sufficient vehicle capacity and improve traffic operation to accommodate travel demands across the Missouri River and within the study corridor.
- Improve access to the Kansas City Central Business District (CBD) and other major activity centers.
- Facilitate the movement of trucks.

B. Description of Proposed Action

The proposed action consists of improving the existing I-29/35 roadway and bridge corridor from the northern terminus at M-210 (Armour Road) to a connection with the existing CBD freeway loop which encompasses downtown Kansas City, Missouri – the southern terminus. Included in the proposed action is the improvement of the existing Paseo Bridge crossing which currently carries I-29/35 over the Missouri River. This proposed action includes improving the corridor's connection to the CBD Loop and the connection of the Broadway Extension (US 169) with the downtown street and freeway loop system. The northern side of the CBD Loop, designated as I-35/70 and US 24/40, is included in the proposed action.

Design-build methods can help deliver a project faster and reduce costs as compared to traditional design-bid-build approaches. Design-build encourages contractor innovations in design, traffic management and construction phasing. Because design and construction take place simultaneously under the same contractor, design-build methods can have dramatically positive impacts on project schedules, often delivering a project years ahead of traditional methods. Because of this, MoDOT may be able to realize substantial cost savings. Because projects are delivered faster, design-build at a minimum saves on inflationary costs. To the extent that design-build is able to minimize the time that the project will be under construction and provide cost savings, there is also the possibility that environmental impacts may be reduced.

Public involvement will continue as the project is designed and built. A public involvement plan is being prepared by MoDOT that will define opportunities for public input into this process. It is not anticipated that a public hearing will be included in the design-build process, however, other methods of public involvement will be utilized.

C. Initial Improvement Concepts

A wide range of improvement concepts were initially considered for the I-29/35 corridor. Initial improvement concepts are consistent with the corridor definition and its limits as established by the termini of this EIS – M-210 to an improved connection to the CBD Loop, including the Broadway Extension (US 169) connection. A reconfirmation of the strategies considered in the Northland~Downtown MIS, the prior corridor multi-modal planning study completed in 2002, was conducted as they relate to the proposed action.

Initial improvement concepts for the I-29/35 Study Corridor include the following:

- ***No-Build Concept*** – Maintain the existing pavement and bridges in the corridor.
- ***Reconstruction Concept*** – Reconstruct the existing corridor in-kind.
- ***Parallel Arterials Concept*** – Improve other Downtown river bridges and connecting arterial routes.
- ***Transportation System and Travel Demand Management Concept*** – Reduce cross-river traffic through car pools, low-cost transit service improvements, and improved traffic flow with low-cost improvements.
- ***High Capacity Transit Concept*** – Construct fixed guideway, high capacity transit improvements extending from the Northland, over the Missouri River, into Downtown.
- ***Bicycle and Pedestrian Concept*** – Provide improved bicycle and pedestrian facilities across the Missouri River, better connecting the Northland with Downtown.
- ***Build Concepts*** – Construct highway widening and bridge improvements within the study corridor, including: Build Concept 1 (Widen to Six Lanes); Build Concept 2 (Widen to Six Lanes/Reserve for Two Additional Lanes); Build Concept 3 (Widen to Six Lanes/Reserve for Two Additional HOV Lanes); Build Concept 4 (Reversible Lanes); Build Concept 5 (New Alignment); or Build Concept 6 (Geometric Improvements).

An initial concept evaluation was completed where those options not meeting the purpose and need for the proposed action were eliminated from further consideration (see Table S-1). The remaining concepts were reviewed and further refined through coordination with stakeholder groups, public officials, and others who had an interest in a particular element of the project. A key consideration has been determining the appropriate capacity needed to meet future travel demands. A traffic analysis was completed utilizing the regional travel demand model developed and maintained by the region's Metropolitan Planning Organization (MPO), Mid-America Regional Council (MARC). Level of service (LOS) is a qualitative measure used by transportation planners and engineers to characterize the operational conditions within a traffic stream and its perception by motorists. It is a means of evaluating traffic conditions that would be encountered by a driver traveling through an intersection, interchange or open section of roadway under peak-hour traffic volume conditions. The greater the traffic density on a highway, the lower the LOS will be. Letters A through F are used to denote LOS, with LOS A being the most favorable driving condition, LOS D or E considered acceptable during peak travel times and LOS F representing a failure of traffic operations.

The Year 2030 forecast volumes for a six-lane wide facility are shown to result in a LOS D for southbound travel during the AM peak hour and a LOS E for northbound travel during the PM peak period. The traffic analysis suggests that the LOS E would be reached between the years 2025-27 and that LOS F would be reached sometime beyond the year 2040 given anticipated

growth trends. This information suggests that a six-lane facility would provide improved travel mobility relative to existing conditions for the next 20 years but that an eight-lane travel corridor would be needed beyond that time to improve upon the anticipated LOS E/F condition.

For that reason, the build alternatives that allow for the ultimate widening of I-29/35 to eight lanes when needed in the future were carried forward as reasonable alternatives for further consideration in this EIS. Because of this expectation, Build Concept 1 would be constructed initially as part of Build Concept 2 that would allow for construction of eight through lanes if warranted in the future. Thus, Build Concept 1 is not carried forward as a separate concept; it is considered to be the initial phase of the Build Concept 2. The results of the concept evaluations are summarized in Table S-1, showing the combined build concept that was carried forward for more detailed evaluation in this EIS. For a more detailed discussion of the traffic analysis, see Chapter II, Section G.

Table S-1
Screening of the Initial Improvement Concepts

	Initial Improvement Concept	Purpose and Need							Other Impacts				
		Roadway Deficiencies	Traffic Safety	System Linkage	Transportation Capacity	Traffic Operation	Economic Development	Intermodal/ NAFTA	Built Environment	Natural Areas	Social Environment	Section 4(f) Properties	Project Cost
	No-Build	x	x	○	x	x	-	-	○	○	○	○	L
	Reconstruction	x	○	○	x	x	○	○	○	○	○	○	L
	Parallel Arterials	x	○	○	x	-	-	x	-	○	○	○	M
	Travel Demand Management	x	x	○	x	○	○	○	○	○	○	○	L
	Transportation System Management	x	●	○	x	○	○	○	○	○	○	○	L
	High Capacity Transit	x	x	○	x	x	○	x	○	○	○	○	M
	Bicycle and Pedestrian	x	x	○	x	x	○	x	○	○	○	○	M
BUILD CONCEPTS	**1 Widen to Six Lanes ***	●	●	●	◒	●	◒	●	-	○	○	-	H
BUILD CONCEPTS	**2 Widen to Six Through Lanes / Reserve Two Additional***	●	●	●	●	●	◒	●	-	○	○	-	H
BUILD CONCEPTS	**3 Widen to Six Lanes / Reserve Two additional for HOV***	●	●	●	◒	◒	◒	●	-	○	◒	-	H
BUILD CONCEPTS	**4 Reversible Lanes**	●	◒	●	●	◒	◒	●	-	○	○	-	H
BUILD CONCEPTS	**5 New Alignment**	●	●	●	○	●	◒	●	x -	-	-	-	H
BUILD CONCEPTS	**6 Geometric Changes**	●	●	●	x	x	○	●	○	○	○	-	M

* In addition. Auxiliary lanes located between some interchanges.
○ = Neutral, - = Negative Impact, ◒ = Moderately Addresses Needs, ● = Substantially Addresses Needs,
x = Determined Not to Meet Purpose and Need; Project Cost: L = Low, M = Medium, H = High.
Shaded concepts carried forward for further consideration (i.e., reasonable alternatives).

D. Reasonable Alternatives

1. ROADWAY AND BRIDGE DESIGN CHARACTERISTICS

The build concept would include widening of the existing four-lane I-29/35 corridor from the existing M-210/Armour Road Interchange to the CBD Loop. The general improvement concept, consisting of an initial three/ultimate four lanes in each direction with a closed median, is shown in Figure S-2. As shown, the potential improvements would include improved inside and outside shoulders. If HOV lanes are to be designated in the future, the inside lanes would be reserved for exclusive HOV use.

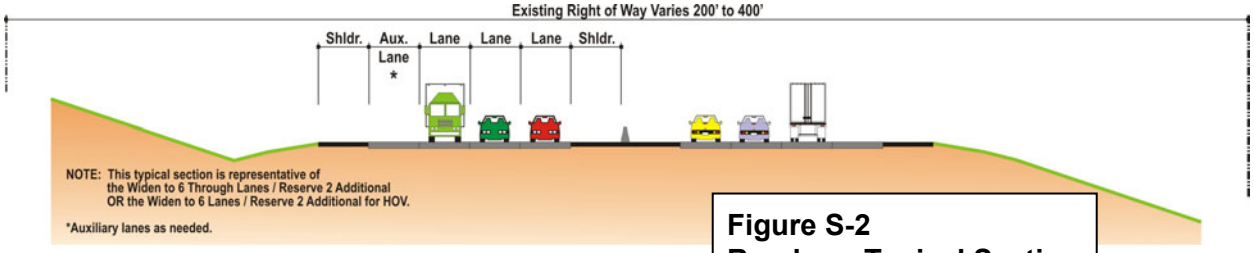


Figure S-2
Roadway Typical Section

2. PASEO BRIDGE ANALYSIS

A number of alternative roadway and bridge alignments were investigated for the Missouri River crossing of the I-29/35 corridor. Improvements considered included the widening of the existing roadway and Paseo Bridge crossing to provide additional mainline traffic lanes. However, by virtue of the type of bridge (cable suspension bridge), the existing Paseo Bridge cannot be widened. Therefore, alignments studied were located immediately upstream, downstream or centered on the current bridge alignment. These alternatives vary in the magnitude of the roadway centerline shift necessary to construct the improvements. The location study concluded that if the traffic were to be maintained during construction, the new alignment should be located immediately downstream from the existing alignment for all of the bridge options because of constraints created by existing development and hazardous waste sites. The option of closing the Paseo Bridge, removing it, and rebuilding a new bridge(s) on the current location may be considered, but would not be acted upon until further consultation with the public and local governmental agencies takes place.

Three alignment options were identified as improvement alternatives for addressing the long-term maintenance demands of the existing Paseo Bridge and increasing the vehicular traffic capacity of the crossing. Exhibit S-1 shows the general configuration of these three options.

- ***Option 1 (Companion Bridge)*** – Add a companion bridge to the existing Paseo Bridge and complete an in-depth rehabilitation to the existing bridge to extend the design life from 10-15 years (2005 rehabilitation) to 50 years.
- ***Option 2*** – Replace the existing Paseo Bridge with two new twin bridges or one larger bridge constructed within the same project footprint.
- ***Option 3 (New Single Bridge)*** – Replace the existing Paseo Bridge with one new bridge.

3. INTERCHANGE ANALYSIS

The EIS analyzed several options at each interchange location within the corridor. First, potential interchange improvement types were identified at each location. The benefits and disadvantages of each interchange type were reviewed based on engineering feasibility (i.e., could it be built), traffic requirements, and gross-level impacts to the nearby environment, including the natural and man-made environments. The initial interchange layouts at each location were reviewed and further refined through coordination with stakeholder groups, public officials, and others who had an interest in that particular element of the project. While exact interchange configurations are not specified in this EIS, the interchange analysis was used to demonstrate feasibility of specific interchange types and was used to determine an expected maximum footprint for improvements.

4. DESCRIPTION OF REASONABLE ALTERNATIVES

Following the evaluation of the initial improvement concepts, reasonable alternatives were defined based on the analysis of the Missouri River bridge crossing and potential interchanges. As shown in Table S-1, the reasonable alternatives are comprised of the selected build concepts and the No-Build Concept for comparison. The build alternatives represent Build Concept 2 with sufficient right-of-way to enable a widening to eight lanes if warranted in the future.

For evaluation purposes, the study corridor was divided into three subcorridors – the North Subcorridor, the River Crossing Subcorridor and the CBD North Loop Subcorridor. The reasonable alternatives, by subcorridor, are summarized in the following section. A plan view of each reasonable alternative is included in Appendix C, Alternatives Plates. The locations of the subcorridors are illustrated in Figure S-3.

North Subcorridor (M-210/Armour Road to 14th Avenue)

- ***No-Build Alternative*** – This alternative includes only minor short-term activities that would be completed throughout the life of the project (anticipated to be 30 years approximately between 2010 and 2040), including pavement overlays, routine maintenance and bridge repair.
- ***Build Alternative*** – The Build Alternative includes widening the I-29/35 mainline to six through lanes with sufficient right-of-way to enable future widening to eight through lanes and improving the interchange at M-210/Armour Road and the half interchange at 16th Avenue.

River Crossing Subcorridor (14th Avenue to Dora Street)

- ***No-Build Alternative*** – Under this alternative, the I-29/35 Corridor would remain in its present configuration and location and a new bridge over the Missouri River would not be constructed. This alternative includes only minor short-term activities that would be completed throughout the life of the project, including pavement overlays, routine maintenance and bridge repair. The bridge repair would include the corridor roadway bridges, as well as a major rehabilitation plan that would extend the life of the existing I-29/35 Paseo Bridge. It would include pavement mill and overlays to maintain the driving surface of the interstate.
- ***Build Alternatives*** – Within this subcorridor, the build alternative includes widening the I-29/35 mainline initially to six through lanes with sufficient right-of-way to enable future widening to eight through lanes and improving or replacing the I-29/35 Paseo Bridge, as well as several corridor interchange improvement options. The build alternative combinations within this subcorridor include:

- ***Alternative A*** – Alternative A consists of rehabilitating the existing I-29/35 Paseo Bridge and converting it to a one-way bridge for southbound traffic. A new companion bridge would be constructed immediately adjacent to and downstream from the existing bridge. This build alternative includes widening the I-29/35 mainline and assumes constructing braided ramps at Bedford Avenue and Levee Road and an improved interchange at Front Street.

- ***Alternative B*** – This alternative includes the construction of two new twin bridge structures, with one bridge carrying southbound traffic and one bridge carrying northbound traffic or one larger bridge constructed within the same project footprint. This build alternative includes widening the I-29/35 mainline and assumes constructing braided ramps at Bedford Avenue and Levee Road and an improved interchange at Front Street. Two different interchange types at Front Street have been identified as possible options, which are labeled in Chapter II, Section H. 2. b. as B-1 and B-2. These two interchange types were used to determine the impacts for Alternative B. The final interchange configuration will be based on the outcome of the design-build process and may or may not be one of the two alternatives identified.

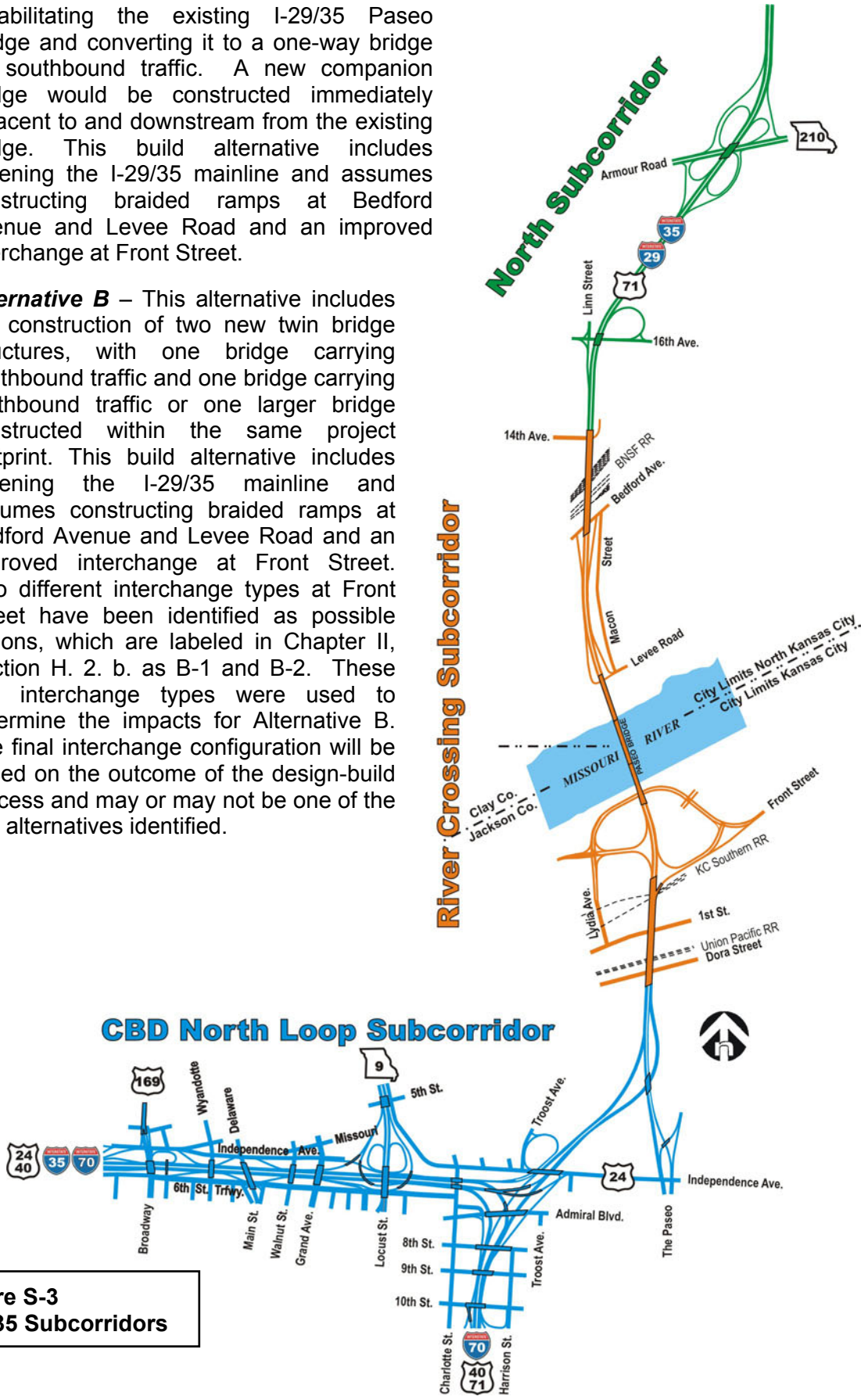


Figure S-3
I-29/35 Subcorridors

- ***Alternative C*** – This alternative includes the construction of one new bridge downstream of the existing Paseo Bridge carrying both northbound and southbound traffic. This build alternative also includes widening the I-29/35 mainline and assumes constructing braided ramps at Bedford Avenue and Levee Road and an improved interchange at Front Street.

CBD North Loop Subcorridor (Dora Street to Broadway Boulevard)

- ***No-Build Alternative*** – This alternative includes only minor short-term activities that would be completed throughout the life of the project, including pavement overlays, routine maintenance and bridge repair.

- ***Build Alternatives*** – Within this subcorridor, the build alternatives include improvements to the north leg of the CBD Loop, as well as several corridor interchange improvement options. There are two build alternative combinations within this subcorridor.

  - ***Alternative A*** – This build alternative includes widening the I-29/35 mainline from Dora Street to the northeast corner of the CBD Loop. From there to just west of Broadway Boulevard, the mainline's current six-lane section would be maintained with minor ramp and lane modifications to improve operations and safety. The US 24/Independence Avenue, M-9 and Main Street interchanges would remain in their current configurations. The existing Paseo Boulevard left-hand entrance and exit is shown to be converted to a right-hand entrance and exit though a final determination will occur in the design-build process. The Broadway Boulevard interchange could potentially be converted to a Single Point Urban Interchange (SPUI) and the I-29/35 mainline ramps to and from the north would be removed.

  - ***Alternative B*** – This build alternative includes widening the I-29/35 mainline from Dora Street to the northeast corner of the CBD Loop. The mainline from the northeast corner of the CBD Loop to just west of Broadway Boulevard maintains the current six-lane mainline section, but includes ramp and lane modifications to improve operations and safety.

    Within this alternative, access from the US 24/Independence Avenue westbound loop ramp to I-35 southbound/I-70 westbound is shown to be relocated as US 24/Independence Avenue is converted to a continuous frontage road from the northeast corner of the CBD Loop to the Broadway Boulevard interchange. Direct access from Sixth Street to I-29/35 northbound is added. The M-9 directional interchange would be converted to an at-grade interchange. Operations and impacts were assessed assuming that in this alternative the Broadway Boulevard interchange would be converted to a Single Point Urban Interchange (SPUI).

E. High Occupancy Vehicle (HOV) Lane Analysis

This analysis was completed in order to determine if HOV lanes should be considered if a future widening from six to eight lanes is determined to be warranted and if funding is available. The physical layout of designating HOV lanes would differ very little from designating general purpose lanes and could be included as part of any of the build alternatives. An HOV Alternative would differ only by lane markings and signage limiting the use of the inside lanes to higher occupancy vehicles during peak hours.

A comparison of traffic operations for the HOV and the non-HOV build alternatives is provided in Table S-2. The analysis of forecasted regional travel statistics indicates that the travel time savings from HOV lanes for this section of I-29/35 would lead to a small increase in HOV trips

and a reduction in Vehicle Miles Traveled as compared to the No-Build. The reservation of two lanes, one in each direction, of I-29/35 for HOV use would not reduce the level of service on the general purpose lanes from LOS D. This analysis does not support the further consideration of HOV lanes as part of the Preferred Alternative of this EIS. However, this would not preclude the designation of two lanes for HOV usage as part of a separate systemic regional initiative designed to support a shift to non-single occupant vehicles. The operational changes associated with constructing two lanes as HOV lanes could also be revisited as part of the later phase of the project if and when a future eight-lane section is considered and possibly constructed.

Table S-2
HOV Lane Alternative Comparison (2030)

Factor	No-Build Alternative	6-Lane Reserve 2	6-Lane Reserve 2 HOV	Initial 6-lane Alternative
Level of Service (2030)	F	D	D	E
Crashes (2030) Total	2,881	1,240	1,223	n/a
Change in Vehicle Miles from No-Build	N/A	+14,100	-1,100	-3,200
Change in Vehicle Hours from No-Build	N/A	-5,500	-4,300	-2,100
Travel Time Savings (minutes)	-	-	0.3	-
Increase in HOV Vehicle Trips Per Day	-	-	2,386	-
Corridor Vehicle Occupancy	1.53	1.53	1.58	1.53

F. Preferred Alternative and Summary of Major Impacts

The engineering, traffic, environmental, social and economic impacts of each alternative within each subcorridor were evaluated and compared. The combination of the best subcorridor alternatives formed the Preferred Alternative for the project. MoDOT will be reviewing this alternative for efficiencies during the design process.

The Missouri Department of Transportation (MoDOT) and the Federal Highway Administration (FHWA) are considering use of the ***Design-Build process***, rather than the Design-Bid-Build process, to yield transportation solutions for the needs identified and studied in this Environmental Impact Statement (EIS). The Design-Build process allows design of the facility and construction to take place simultaneously by a contractor chosen to design and build the project, in this case, for a specified cost. In a typical Design-Build project, construction begins when about 30 percent of the total design is completed. Time savings and innovation are two advantages of Design-Build. The solutions proposed in this EIS are intended to represent a "worst-case" yet reasonable scenario for likely impacts of the project, offering a footprint within which any number of reasonable options might be proposed.

The alternatives offered in the EIS do not limit the proposals the Design-Build contractor can suggest. For example, the specific layout of the I-29 ramps for Paseo Boulevard might retain a left-hand exit, as is current, rather than the right-hand exit shown in the EIS. The interchange layouts for the Front Street and the Route 210 interchanges might differ from the layouts examined in this EIS. However, the footprint used within the EIS for environmental analysis is expected to accommodate the alternatives that the Design-Build contractor proposes. Reasonable proposals from the contractor will be examined to assure we have considered their impacts and also to confirm their ability to meet the purpose and need of the project in a safe and effective manner. Public involvement about the chosen alternative(s) and its specific details is expected as the Design-Build process progresses.

We will continually monitor and assess the proposed Design-Build alternative to make sure it does not introduce significant impacts that aren't covered in the approved NEPA document.

Exhibit S-2, Summary of Impacts, provides an overall comparison of the engineering, environmental and social/economic benefits and impacts of the project alternatives. Wherever possible, these key factors that define and characterize the alternatives have been evaluated using quantifiable measures. In other cases, more subjective assessments have been summarized using a rating scale. These evaluations are based on the investigations and assessments documented in this EIS. In developing these alternatives and determining their respective impacts, all reasonable measures were incorporated to avoid, minimize and mitigate adverse impacts.

The recommendation of the Preferred Alternative is based upon three primary considerations – 1) the effectiveness of the alternative in accomplishing the purpose and need of the proposed action; 2) the comparison of the alternative's overall social, economic and environmental impacts and benefits; and 3) input from the public and review agencies. Based upon the satisfaction of the purpose and need, overall social, economic and environmental impacts and benefits, and input from the public and review agencies, it is recommended that the **combination of the North Build Alternative, River Crossing Build Alternative A or B (B-1 or B-2) and CBD North Loop Alternative B** be identified as the Preferred Alternative. The total costs of the Preferred Alternative improvements from M-210 to Broadway for the eight-lane configuration are estimated to range from $271 million to $342 million including the funds for the noteworthy bridge crossing. The final selection of an alternative will not be made until after consideration of impacts, agency comments and location public hearing comments and following approval of the Final EIS.

1. EFFECTIVENESS IN ACCOMPLISHING PURPOSE AND NEED OBJECTIVES

Each of the reasonable alternatives within each subcorridor addresses the purpose and need objectives.

- ***Replace Deteriorating Infrastructure and Improve Interchanges*** – The reasonable alternatives would have improved infrastructure and interchanges. However, in some cases, short weaving areas would remain in North Loop Alternative A. North Loop Alternative B would consolidate ramp access to remove short weaving sections on the mainline and would shift the weaving traffic movements to the frontage road system thereby improving traffic operations on the I-35/70 mainline.

- ***Improve Traffic Safety*** – All of the reasonable alternatives provide a level of design and traffic operations that would result in improved traffic safety by providing a roadway with enhanced roadway geometrics including flatter curves, improved shoulders and longer merging distances. Reduced levels of congestion will result in fewer collisions.

- ***Improve Interstate System Linkage Across the Missouri River*** – The reasonable alternatives would enhance movement and connectivity across the Missouri River.

- ***Provide Sufficient Vehicle Capacity and Improve Traffic Operation*** – All of the reasonable alternatives include an initial widening of I-29/35 to six lanes, and sufficient right-of-way to enable a future widening to eight lanes which would improve freeway and interchange capacity to meet future travel demands. Each reasonable alternative would eliminate poor traffic weaving sections between Bedford Avenue and Levee Road, between Paseo Boulevard and Front Street and between Broadway and Main Street. It

would increase the length of acceleration/deceleration lanes at all interchange ramps, and improve roadway shoulders.

- ***Improve Access to Kansas City CBD and Other Major Activity Centers*** – The Preferred Alternative would provide safe and efficient access to-and-from the North Kansas City industrial area located adjacent to the corridor, the North Kansas City Hospital, the Northeast industrial area, the Isle of Capri Casino, Berkley Riverfront Park, the Kansas City CBD, the River Market, the Columbus Park neighbor-hood, and the Downtown Airport. Between the River Market and the CBD areas and across M-210, wider pedestrian accommodations on bridges and under interchanges would improve connectivity. Build Alter-native B would provide better access between the CBD and the I-29/35 Corridor and connectivity between the River Market, Columbus Park and the CBD. (See Figure S-4.) Build Alternative A would retain the system-to-system connection between M-9 and I-35/70 along the north side of the CBD loop however because of the aforementioned benefits, North Loop Alternative B is recommended.

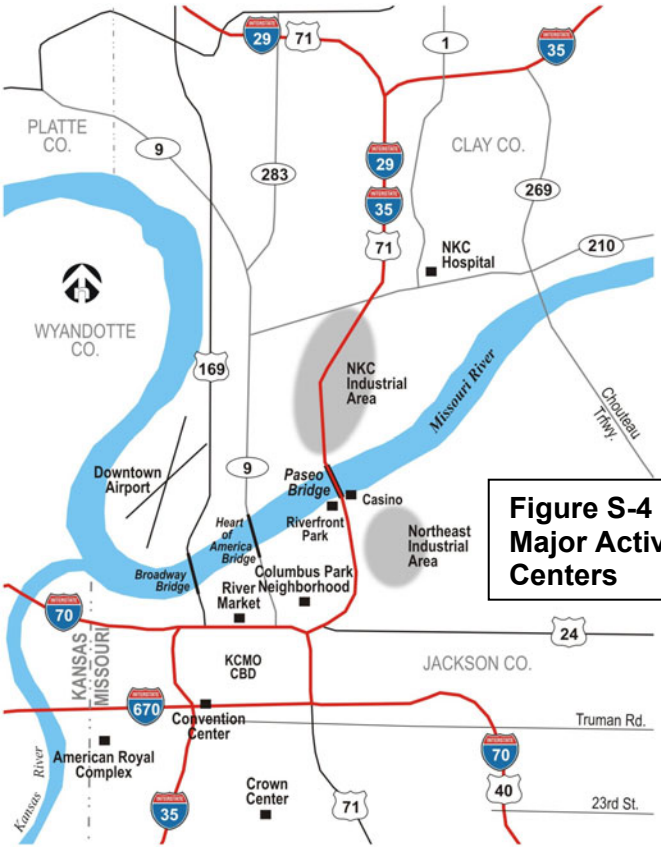


Figure S-4 Major Activity Centers

- ***Facilitate the Movement of Trucks*** – Each reasonable alternative improves access at the major heavy truck access points of Front Street, Levee Road, Bedford Avenue and 16th Avenue by improving the grades of entrance ramps, lengthening merge distances improving truck turning radii and providing auxiliary lanes. These features of the Preferred Alternative improve truck and overall vehicle operations. Each reasonable alternative would enhance the movement of international trade on the I-35 NAFTA trade route, by eliminating the existing capacity bottleneck.

2. SOCIAL, ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS

The social, economic and environmental factors for the reasonable alternatives were similar. The primary differences in the constraints were in the River Crossing Subcorridor. The designation of the Preferred Alternative is based upon trade-offs between the various factors and considerations.

a. Social Factors

Impacts to Existing Structures

The reasonable alternatives would have similar property impacts.

Neighborhood/Community Cohesion

The Preferred Alternative would improve neighborhood or community cohesion. These benefits would primarily occur in the CBD North Loop Subcorridor where Alternative B would improve the connectivity between the River Market and Columbus Park.

b. Economic

Project Cost

The Preferred Alternative was not the highest or the lowest in terms of project cost, but fell within a middle range. The Preferred Alternative does not have the best benefit-cost ratio; however, the benefit-cost methodology does not capture many of the additional benefits provided by the Preferred Alternative. The level of detail in the travel demand forecasting did not differentiate access benefits from different alternatives at Front Street and in the CBD. In some cases, benefits such as improved urban design or improved pedestrian connectivity cannot be definitively quantified and are not reflected in the benefit-cost results.

Economic Access

The Preferred Alternative improves economic access by providing additional through lane capacity and improved interchange access. CBD North Loop Alternative B would improve the access to-and-from the CBD and the Northland portion of the Kansas City region through an improved frontage road connection to I-29/35.

c. Environmental Factors

Parkland

None of the reasonable alternatives would have impacts to parklands or recreational areas.

Water Resources

The Preferred Alternative contains four streams: the Missouri River (perennial), two tributaries to the Missouri River (intermittent), and one ephemeral stream. The Preferred Alternative also contains three jurisdictional wetlands: one emergent wetland and one forested wetland along the ephemeral stream north of 16th Avenue, and a forested/emergent wetland fringe around the edge of a pond within the existing ramp at 16th Avenue. At the Missouri River, the Preferred Alternative would impact up to 0.12 surface acres of water as the result of pier placement. The two tributaries to the Missouri River would be impacted by culvert extension resulting in up to 269 linear feet of stream being filled, equating to 0.06 acres. The ephemeral stream would not be impacted. Wetland impacts would result from embankment fill in up to 0.06 acre of jurisdictional emergent wetland and 0.02 acre of fringe forested wetland. The forested wetland along the ephemeral stream would not be impacted. In addition, a 0.56-acre, non-jurisdictional pond within the existing 16th Avenue loop ramp would also be impacted.

Cultural Resources

The Preferred Alternative may result in the construction of a structure or structures replacing the existing Paseo Bridge, which is a National Register of Historic Places eligible bridge. Full replacement would result in the demolition of the existing bridge. There would be no other adverse effect on any of the properties, districts or bridges listed on or eligible for the NRHP.

The Preferred Alternative would impact two archaeological areas of interest. These include parcel MJA122, which is the site of the Town of Kansas Graveyard, and parcel VJA117 located at 6th Street and Charlotte. If any of these areas of archaeological interest are to be directly impacted by the proposed I-29/35 construction, they will be investigated to verify the potential of intact remains beneath the modern landscape and thoroughly evaluated to determine the significance of these remains.

Hazardous Waste Sites

The purpose of the hazardous waste assessment was to identify sites within the study corridor that are contaminated or potentially contaminated with hazardous materials or waste. There are three sites within the potential impact area that are screened as having a high potential for contamination where avoidance is desired. These are Site No. 14 American Railcar Industries, 1101 Bedford, North Kansas City, MO; Site No. 20 Cook Paint and Varnish, 919 E. 14th Ave, North Kansas City, MO; and Site No. 40 Kansas City Limited Partnership, 2251 Armour Road, North Kansas City, MO. Although Site No. 20 Cook Paint & Varnish would be avoided, it is part of an industrial complex (between 16th and 14th Avenues, west of I-29/35) comprised of other individual parcels, in which a small portion of open grassed land on Site No. 19 Cook Composites and Polymers rated as having a low potential for contamination would be acquired. There are no structures on the parcel that would be partially acquired. Two separate sites have a moderate potential for contamination, Site No. 4 and Site No. 6. Both sites are located on the *KCI, Inc.* (formerly Excelsior Steel Furnace) property, located south of Guinotte Street on the east and west sides of I-29/35. Depending on the design of the Front Street interchange, the Preferred Alternative would impact one or two hazardous waste sites. A Single Point Urban Interchange design at Front Street would impact both sites. The modified interchange type would impact only one site. Both sites are under the same ownership.

Visual Quality

The visual impacts of views to the road may vary as the bridge type of a new Missouri River crossing is undetermined at this time. The visual impacts of River Crossing Alternative A are a potential concern if a suspension bridge was not used as the new companion structure. Likewise, the visual quality of new river crossings may be reduced or improved when compared to the existing Paseo suspension bridge, depending on the type of bridges and design character of those bridges. Views from the road are considered to be similar to the No-Build with all of the reasonable alternatives, except in those areas that would be developed or redeveloped in the future.

Navigation

For corridor alternatives that include River Crossing Alternative A, piers of a new companion bridge must match the location of the piers of the existing bridge. The first pier on the existing bridge is located 308 feet off of the south bank. If the existing bridge is replaced, new bridge piers would need to be located approximately 450 feet off of the south bank of the Missouri River. Based on correspondence with the Coast Guard, new bridge spans for Alternatives B and C could be built to roughly match the pier locations of the existing M-9/Heart of America Bridge, with pier locations approximately 450 feet off the south bank of the Missouri River. These pier location and span configuration requirements provide more design options for the bridge type and vertical roadway alignment.

All new bridges must provide a minimum vertical clearance of 55 feet at the standard high water elevation of 734.4 feet mean sea level (2% flowline). The clearances listed above have been approved by the Coast Guard. However, the possibility exists that the Coast Guard would approve matching the M-9/Heart of America Bridge which has 52 feet of vertical clearance from the 2% flow line elevation of 733.1 mean sea level. Any such modification would need to be approved by the Coast Guard before it could be incorporated into the project design.

Noise

The reasonable alternatives would expose 106 residences to noise levels ranging from 66 to 77 dBA Leq(h) which would approach or exceed MoDOT's Noise Abatement Criteria of 67 dBA Leq(h). Three locations were identified where noise mitigation would be feasible and reasonable according to MoDOT's Traffic Noise Policy. One location is for the residences and apartment

complexes west of I-29/35 and north of Armour Road. The second location is at the Chouteau Courts public housing apartment complex located east of I-29/35 and north of Independence Avenue. A third location would be between Pacific Street and Dora Street west of I-29/35, along the east side of the Guinotte Manor public housing area and the east side of the Columbus Park residential neighborhood. During future design efforts, possible noise barrier types and locations will be presented and discussed with the residents in these areas.

3. PUBLIC / AGENCY PARTICIPATION AND COMMENT

The residents and community leaders located adjacent to the I-29/35 Corridor have been active in the project development. Input gathered through stakeholder meetings and public information meetings has directly contributed to the collaborative decision-making process by prompting the inclusion of various evaluation considerations.

Resource agency coordination has been ongoing throughout the study. Environmental scoping to identify issues and concerns that could affect the definition and evaluation of the alternatives has been conducted since the beginning of the study, including a formal scoping meeting and ongoing dialog with the various resource agencies. After consultation with the United States Army Corps of Engineers (USACE) it was decided that the NEPA Section 404 merged process would not be used because the project appears to be eligible for Section 404 authorization by Nationwide Permit. However, if the USACE determines an Individual Permit will be required for the project, the merged NEPA/Section 404 process will be pursued.

4. SUMMARY OF ISSUES

a. Areas of Controversy

In the planning and development of the I-29/35 Corridor improvement alternatives, some issues of potential controversy became apparent. These items were identified through the active coordination of the project with community leaders, potentially affected communities and resource agencies. As with almost any public improvement project of a complex nature, there are varying and diverse viewpoints regarding certain aspects of the proposed improvements. For the I-29/35 Study Corridor improvements, an active community involvement program was utilized to identify these issues early in the study process. Activities such as public meetings, stakeholder meetings, the agency scoping meeting, and other community-oriented outreach events helped bring these issues to attention. In response, actions were put in place and adjustments to the project were made as necessary to address these particular issues.

- ***Bridge Type*** – The existing Paseo Bridge is an unusual structure type. Since its opening in 1954, the unique structural form of the bridge has served as a “gateway” to travelers, signifying entry between the Northland and Downtown. As a self-anchored suspension bridge, the unusual lines of the suspension catenary system and the associated towers have become associated with downtown Kansas City.

  Large civil works projects, particularly long-span bridges over major waterways such as the Missouri River, provide an opportunity for the project to be an expression of the surrounding community. In this regard, Kansas City’s civic leadership has expressed two desires. Most critical to the community is that a unique and noteworthy bridge structure be provided if the Paseo Bridge is to be replaced. Secondly, the community leaders requested that the type of bridge for the Missouri River crossing be a major consideration in the Preferred Alternative recommendation.

  Due to the numerous bridge type options available for each river crossing alternative and the numerous factors involved, the approach utilized for the EIS focused first on the route location and the disposition of the existing Paseo Bridge. The route location

recommendation (i.e., Preferred Alternative) was based on the physical and operational constraints of the crossing location, life-cycle cost considerations, and the overall flexibility of the alternative to enable the community to participate in the type of structure determination. The opportunity for each alternative to provide a unique bridge structure was considered in the evaluation of the alternatives. River Crossing Subcorridor Alternative A or B, the Preferred Alternative, provides an opportunity for the new Missouri River crossing to be a unique and special structure. The bridge type will be determined after this EIS is completed.

- ***Missouri River Pedestrian Crossing*** – With the planned widening of the I-29/35 Study Corridor, pedestrian and bicycle advocates have expressed the desire for pedestrian mobility issues to be addressed as part of the proposed action in this EIS. The Missouri River is a major barrier for pedestrian and bicycle interactions between the Northland and Downtown. For some time, Kansas City transportation leadership has struggled with the ability to improve pedestrian and bicycle mobility across the river. Possible access over the river is limited to the existing bridge crossings. The Broadway Bridge is not considered a compatible corridor for pedestrians. However, the Heart of America Bridge, which has at-grade access north of the river and slower posted speeds, is much more compatible for pedestrian travel. Consequently, all previous area-wide planning has focused on the future pedestrian role of the Heart of America Bridge. One desire expressed is that a new pedestrian/bicycle river crossing be constructed at or adjacent to I-29/35. Decisions regarding bicycle/pedestrian alternatives will be made concurrent with community discussions including the I-29 Design-Build Advisory Group, the MARC River Crossing Committee, North Kansas City and the City of Kansas City.

- ***Columbus Park Neighborhood*** – Columbus Park residents have expressed concern about the indirect impacts of the proposed action on their neighborhood. These issues and concerns have generally revolved around proximal impact issues, such as noise, visual effects, and changes in vehicular access. Coordination with the community has been provided as the various alternatives have been refined and evaluated to avoid and minimize any effects to the community. In some locations, the additional highway capacity on I-29/35 would result in locating the highway lanes closer to the neighborhood fringe. The corridor widening does not require additional right-of-way in the vicinity of Columbus Park. In addition, changes to the frontage road and ramp access systems, and consequently some changes to traffic circulation, would occur with the Preferred Alternative. These changes are intended to improve the Loop's operations while providing better connectivity between Columbus Park, the River Market and Downtown.

- ***M-210/Armour Road Access Management*** – The southeast quadrant of the M-210 Interchange with I-29/35 is being redeveloped by North Kansas City. Many of the properties are now owned by North Kansas City and a number of them will be removed by the city for their redevelopment project. Maintaining the most direct access to this area is desired by the city for the redevelopment to be successful. However, one purpose of the highway improvements at this location is to provide better management and control of driveway and entrance access along M-210/Armour Road. Meetings have been conducted with North Kansas City to find solutions that meet both the needs of the highway system and the planned redevelopment. Access management in the M-210 interchange area will be further coordinated with the City of North Kansas City during the project design phase.

b. Unresolved Issues

The potential impacts of each improvement alternative have been assessed, evaluated and compared in sufficient detail to characterize the degree of impact and the relative differences of

the alternatives. Sufficient detail has been provided to enable well informed recommendations regarding the best improvement alternative. However, for some issues, more detail is necessary to identify more precisely the impacts of the project and to better define the improvements, particularly regarding its design features. More detailed investigations will be conducted during the design phase to resolve each of these issues.

- ***Bridge Type*** – The type of bridge structure for the Preferred Alternative's Missouri River crossing has not yet been defined. The Preferred Alternative recommendation (i.e., River Crossing Subcorridor Alternative A or B) is based on issues irrespective of bridge type, leaving the bridge type to be determined during project design. The subsequent bridge type recommendation will be based on the physical, operational, navigational, economic and environmental impact constraints defined for the Missouri River crossing.

  Numerous bridge type options are available for the new Missouri River crossing. More detailed study of the Preferred Alternative is necessary to identify the type of structure to be constructed. Constraints affecting the bridge's design features are identified in this EIS, including the bridge alignment and navigational requirements. Based on the general span requirements of the crossing, a number of bridge types are feasible, including a plate girder, concrete box girder, trusses, suspension, a tied arch, or a cable-stayed structure. Retention of the existing suspension bridge in the ultimate facility also would affect the type of companion structure. The determination of the bridge type will consider the construction and maintenance costs of the bridge. The bridge type evaluation would also consider the bridge's ability to be an expression of the community while being sensitive to financial constraints of the project.

- ***Hazardous Waste Investigations*** – A number of properties in the project corridor have potential for hazardous waste concerns based on the type of business or known hazardous waste activity in the past. Investigation and cleanup of these sites may be necessary prior to construction.

- ***Section 106 Process*** – A Memorandum of Agreement for the NRHP eligible Paseo Bridge, other properties in or eligible for inclusion in the National Register and areas of archaeological interest will be coordinated between the State Historic Preservation Office (SHPO) and the Federal Highway Administration (FHWA). A draft of that is included in Appendix F.

- ***Urban Design Issues*** – MoDOT is committed to working with Kansas City and North Kansas City to consider shared financial responsibility related to providing urban design treatments and aesthetics at interchanges and bridges in the I-29/35 EIS corridor and in the north loop of the CBD. There are opportunities in the CBD North Loop Subcorridor to work with the local agencies and neighborhoods regarding certain types of corridor enhancements or urban design elements that could be integrated into the proposed action. Use of integrated urban design enhancements will help to better connect the CBD to the River Market and Columbus Park areas.

- ***Maintenance of Traffic During Construction*** – The option of closing the Paseo Bridge or other portions of I-29/35 within the study corridor during construction of the project is being considered. This decision would take place following coordination with city officials, law enforcement and emergency services officials, adjacent property owners and receipt of public input.

c. Future Coordination

Following the Final EIS and Record of Decision approval, ongoing coordination with the public, stakeholders, organizations and resource agencies would continue to develop and fulfill

appropriate mitigation measures and commitments as well as project coordination into the future during project design and construction. Additional decision-making related to future coordination would be made when more detailed design information becomes available.

G. Project Constraints

The following section includes a list of the constraints within the I-29/35 Study Corridor that will be avoided during the design-build phase. Impacting any of the listed resources will require that further studies be conducted; this could have significant cost and schedule implications.

1. KNOWN SECTION 4(F) RESOURCES

The Paseo Bridge is the only known Section 4(f) resource that could potentially be impacted by the project depending on whether it is retained for the ultimate facility or not. A draft Programmatic Section 4(f) Evaluation that addresses the bridge is included in Appendix E. In addition, there are two areas of archaeological interest. These two areas would need to be further evaluated before a recommendation on NRHP eligibility could be made. These two areas could potentially be impacted by the project. If modifications to the project are made that impact the cultural resources that are on or eligible for listing on the National Register of Historic Places (NRHP), then the Memorandum of Agreement executed for this project will address steps to be taken to address those impacts.

Public parks will not be impacted by the proposed action.

a. Public Parks

The following is a list of the public parks, located within the study corridor, which will be avoided:

- River Forest Park
- Richard L. Berkley Riverfront Park
- Kessler Park
- Belvidere Playground
- Margaret Kemp Park
- Garrison Square
- Columbus Square
- River Bluff Park
- West Terrace/Case Park

b. Cultural Resources

Table S-3 lists those cultural resources that are on or eligible for the NRHP that would be avoided by the project.

Table S-3
Cultural Resources to be Avoided

Name/Number	Location	Type
Kansas City Masonic Temple JA101	903 Harrison (Plates A-06 & B-06)	NRHP Building
Kelley-Reppert Motor Company JA126	416-429 Admiral (Plates A-07 & B-07)	NRHP Building
Buick Automobile Co. Bldg. JA134	216-220 Admiral (Plates A-07 & B-07)	NRHP Building
Western Union Telegraph Building JA140	100-114 E. 7th (Plates A-07 & B-07)	NRHP Building
Old Town Historic District	Old Town Historic District (Plates A-07, A-08, B-07 & B-08)	NRHP District

Table S-3 (continued)
Cultural Resources to be Avoided

Name/Number	Location	Type
Wholesale District	Wholesale District (Plates A-08, A-09, B-08 & B-09)	NRHP District
JA4	1426 Guinotte (Plates A-03, B-03 & C-03)	Commercial
LJA9	Cliff Drive (Plates A-03, A-04, A-05, B-03, B-04, B-05, C-03, C-04 & C-05)	Landscape
JA73	569-571 Campbell (Plates A-06 & B-06)	Residential
JA86	520-526 Holmes (Plates A-07 & B-07)	Apartment
JA89	611-613 Forest (Plates A-05, A-06, B-05 & B-06)	Apartment
JA98A	1015 E. 8th St. (Plates A-06 & B-06)	Commercial
JA107A	703 E. 10th St. (Plates A-06 & B-06)	Apartment
JA157	340 W. 5th St. (Plates A-08 & B-08)	Commercial
JA129	404-406 Admiral (Plates A-07 & B-07)	Commercial
JA130	400 Admiral (Plates A-07 & B-07)	Commercial
JA131	411-417 E. 6th St. (Plates A-07 & B-07)	Commercial
JAB27	South of Broadway Bridge (not shown on Plates)	Bridge
JAB24/A4649	Broadway, over MO River (not shown on Plates)	Bridge

2. HAZARDOUS WASTE

There are three sites within the potential impact area that are screened as having a high potential for contamination where avoidance is warranted. These are Site No. 14 American Railcar Industries, 1101 Bedford, North Kansas City, MO; Site No. 20 Cook Paint and Varnish, 919 E. 14th Ave, North Kansas City, MO; and Site No. 40 Kansas City Limited Partnership, 2251 Armour Road, North Kansas City, MO. If necessary, portions of the property boundaries of Sites 14 and 20 may be taken with appropriate investigation. However, Site No. 40 is a Superfund site (NPL of the CERCLIS database) located at the east side of the north end of the study corridor. It is recommended no excavation take place in the proximity of this property without more detailed investigation.

3. MISSOURI RIVER CROSSING

The Coast Guard has indicated that the vertical clearance to the superstructure for all of the options should be 55 feet above the 2% flowline. However, the possibility exists that the Coast Guard would approve matching the M-9/Heart of America Bridge which has 52 feet of vertical clearance from the two percent flow line elevation of 733.1 mean sea level. Any such modification would need to be approved by the Coast Guard before it could be incorporated into the project design.

Based on correspondence with the USCG, new bridge spans for the Preferred Alternative could be built to roughly match the pier locations of the existing M-9/Heart of America Bridge, with pier locations approximately 450 feet off the south bank of the Missouri River. These pier location and span configuration requirements provide more design options for the bridge type and vertical roadway alignment. If the existing bridge remains and another bridge is added, the piers of the new bridge must match the location of the piers of the existing bridge. The first pier on the existing bridge is located 308 feet off of the south bank.

H. List of Commitments

The following is a summary of the commitments offered in this I-29/35 Environmental Impact Statement (EIS). Please refer to subsequent chapters of this EIS for details regarding specific

commitments. This list may not be all-inclusive and is not firm until the Final EIS and Record of Decision are approved.

1. MoDOT will continue to work with stakeholders and the public to create bridge concepts that may be incorporated into the design-build process.

2. MoDOT will continue to work with the public, organizations and appropriate agencies to collaborate on possible urban design enhancements and address concerns during the final design of projects within the I-29/35 Corridor.

3. MoDOT is responsible for implementing Intelligent Transportation Systems (ITS) strategies as part of the Kansas City Scout project. As part of the Preferred Alternative, MoDOT will incorporate suitable and reasonable ITS elements consistent with KC Scout programs and projects.

4. MoDOT will develop maintenance of traffic plans for the construction phases. It is likely that some interchange ramps and cross roads will be closed and temporary detours required. In addition, the possibility that the Paseo Bridge or other portions of the I-29/35 Study Corridor be closed during all or part of the construction period for this project may be considered. Construction schedules, road closures and detours will be coordinated with local officials, police forces and emergency services to reduce impacts to response times of these agencies. MoDOT's communication with the cities and their emergency services during construction will be imperative in order to facilitate the planning of temporary alternate routes for emergency vehicles.

5. MoDOT will coordinate with area businesses regarding access issues, via direct communication throughout the construction period.

6. MoDOT will coordinate with local public service and utility service providers during the final design phase of the project and during the construction.

7. MoDOT will ensure that any right-of-way acquisition and relocations will be accomplished in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Relocation assistance under this program will be made available to all relocated persons without discrimination. MoDOT will examine ways to further minimize property impacts throughout the corridor, without compromising the safety of the proposed facility, during subsequent design phases.

8. During construction, MoDOT's specifications, Missouri Department of Natural Resources (MDNR) Solid Waste Management Program, and MoDOT's Sediment and Erosion Control Program will all be followed. MoDOT will require that all contractors comply with all applicable state and federal laws and regulations relating to noise levels permissible within and adjacent to the project construction site. To minimize impacts associated with construction, pollution control measures outlined in the MoDOT Standard Specifications for Highway Construction will be used. These measures pertain to air, noise and water pollution as well as traffic control and safety measures.

9. Through MoDOT's approved Pollution Prevention Plan for the National Pollutant Discharge Elimination System (NPDES), the control of water pollution will be accomplished. The plan specifies berms, slope drains, ditch checks, sediment basins, silt fences, rapid seeding and mulching and other erosion control devices or methods as needed. In addition, all construction and project activities will comply with all conditions

of appropriate USACE and Missouri Department of Natural Resources permits and certifications.

10. MoDOT will continue to coordinate with the USACE, EPA, and the Missouri Department of Natural Resources to develop appropriate mitigation strategies that are deemed necessary as compensation for project impacts to Waters of the U.S.

11. The project construction will incorporate those features necessary to meet National Flood Insurance Program (NFIP) standards, FEMA, and SEMA guidelines.

12. MoDOT will minimize lighting impacts. Efficient lighting and equipment will be installed, where appropriate, to optimize the use of light on the road surface while minimizing stray light intruding on adjacent properties.

13. MoDOT will continue to coordinate with the SHPO and comply with the National Historic Preservation Act.

14. When trees are removed, MoDOT will implement its tree replacement policy and plant two trees for every tree removed that has a diameter greater than six inches at breast height.

15. Future design and construction of bridge piers will be discussed with the U.S. Fish and Wildlife Service (USFWS), U.S. Coast Guard (USCG) and the Missouri Department of Conservation (MDC) during the design phase to consider seasonal patterns of habitat use, potential habitat areas and existing habitat of the Pallid Sturgeon and other threatened or endangered species that might be present.

16. Plans for suitable pedestrian and bicycle access upon streets crossing I-29/35 and I-35/70 will be considered during the design of the interchanges and bridges where warranted by land use.

17. MoDOT will support the future creation of a bicycle and pedestrian connection across the Missouri River on the Heart of America Bridge, M-9, in conjunction with local master plans. This project may be funded by local or regional transportation sources.

18. The MoDOT Noise Policy will be used to address noise impacts. Where appropriate, possible noise abatement measures will be presented and discussed with the benefited residents during the design phase. Noise abatement measures will be considered that are deemed reasonable, feasible and cost effective.

19. Public outreach efforts during future project phases will be made through a variety of publications to increase awareness of the project and encourage comments from all communities, including minority communities.

20. Access management in the M-210 interchange area will be further coordinated with the City of North Kansas City during the project design process.

21. MoDOT will work with the appropriate city governments and stakeholders to develop an appropriate context sensitive urban design approach allowing the integration of enhancements along the corridor and to determine financial and maintenance responsibilities. The design and physical appearance of future bridges, retaining walls and other barriers will be explored as part of an integrated context sensitive urban

design approach for the corridor to ensure the appearance from the roadway as well as from the residential areas will complement the visual character of the surrounding area.

Regulatory Requirements

MoDOT will fulfill federal and state environmental regulatory requirements for all applicable laws, regulations and executive orders through subsequent project design, property acquisition and construction. These include, but are not limited to, the following:

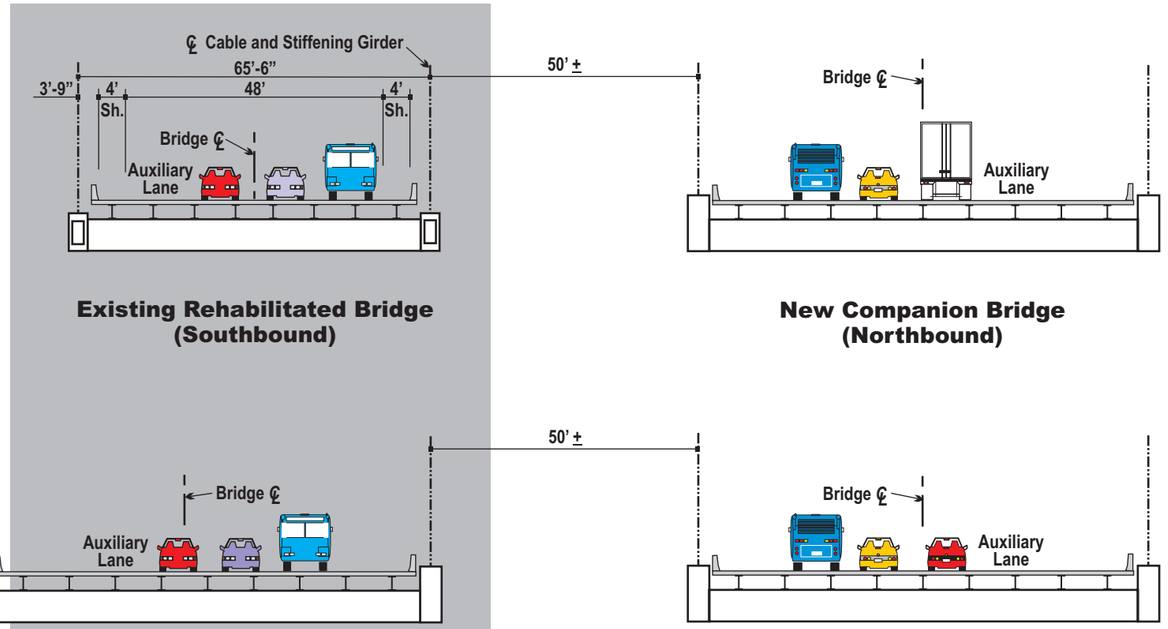
- The Clean Water Act
- The Clean Air Act Amendments
- The Endangered Species Act
- The National Historic Preservation Act
- Various Hazardous Waste and Solid Waste Acts
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act
- FEMA and SEMA Requirements
- The Noise Control Act of 1972
- Title VI of the Civil Rights Act of 1964
- Executive Order 12898 (Environmental Justice)
- Section 4(f) of the USDOT Act

Environmental Impact Statement

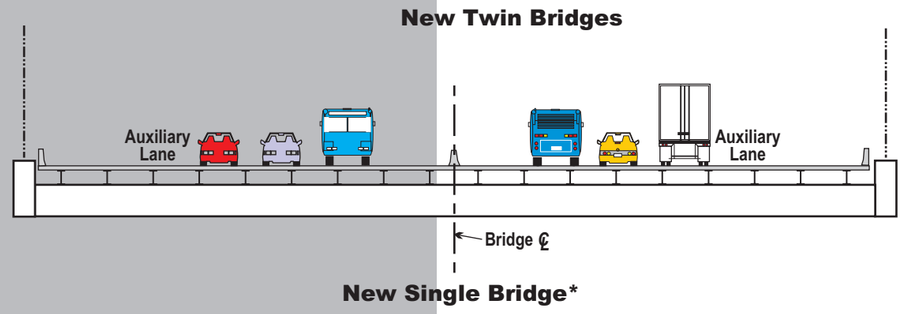
EXHIBIT **S-1**

Missouri River Bridge Options

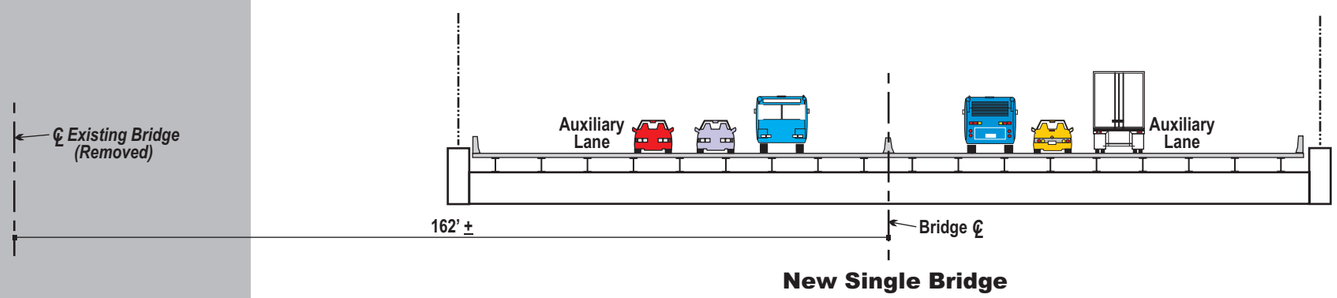
Option 1



Option 2 { New Twin Bridges OR New Single Bridge



Option 3



Existing Right-of-Way

*The exact horizontal location will be determined during the Design-Build process.

EVALUATION FACTORS	UNITS	PROJECT ALTERNATIVES						
		No-Build	**1**	**2**	**3**	**4**	**5**	**6**
	North Subcorridor	No-Build	Build	Build	Build	Build	Build	Build
	River Crossing Subcorridor	No-Build	Alt. A	Alt. A	Alt. B-1	Alt. B-1	Alt. B-2	Alt. B-2
	CBD North Loop Subcorridor	No-Build	Alt. A	Alt. B	Alt. A	Alt. B	Alt. A	Alt. B
ENGINEERING & TRAFFIC CONSIDERATIONS								
PROJECT COST								
Roadway Construction Cost Estimate[1]	$ (Million)	$90.7	$185.6	$216.1	$187.6	$218.1	$197.4	$227.9
River Bridge Construction Cost Estimate[1]	$ (Million)	$9.5	$49.1	$49.1	$54.4	$54.4	$54.4	$54.4
Right-of-Way and Relocation Cost[1]	$ (Million)	NA	$6.2	$6.2	$6.2	$6.2	$6.5	$6.5
TOTAL PROJECT COST[1]	$ (Million)	$100.2	$240.9	$271.4	$248.2	$278.7	$258.3	$288.8
30-Year Operation and Maintenance Costs	$ (Million)	$1.3	$1.7	$1.7	$1.7	$1.7	$1.7	$1.7
Unique Bridge Additional Cost	$ (Million)	NA	$14.1 to $16.2	$14.1 to $16.2	$3.5 to $39.5	$3.5 to $39.5	$3.5 to $39.5	$3.5 to $39.5
CONSTRUCTABILITY ISSUES								
Timing/Staging	Rating							
Difficulty of Construction	Rating							
Traffic Accommodation During Construction	Rating							
Impacts to Adjacent Properties	Rating							
RIVER BRIDGE MAINTENANCE	Rating							
RIVER BRIDGE ENHANCEMENT OPPORTUNITY	Rating							
RIVER BRIDGE TYPE OPTIONS	Rating							
LEVEL OF SERVICE Mainline (2030)	Peak Hour LOS	D-F*	C-D*	C-D*	C-D*	C-D*	C-D*	C-D*
SAFETY[2]								
Crashes 2030 - (PDO)	Number	708	858	858	892	892	892	892
Crashes 2030 - (Injury)	Number	2171	405	405	348	348	348	348
Crashes 2030 - (Fatal)	Number	2	0	0	0	0	0	0
Crashes 2030 - (Total)	Number	2,881	1,263	1,263	1,240	1,240	1240	1240
Crashes 2030 - (Rate)	Number (HMVMT)	246.1-577.5*	121.6-156.6*	121.6-156.6*	121.6	121.6	121.6	121.6
SOCIAL CONSIDERATIONS								
TOTAL ACQUISITIONS								
Single-Family Residential	Dwelling Units	0	0	0	0	0	0	0
Multi-Family Residential	Dwelling Units	0	0	0	0	0	0	0
Business	Establishments	0	2	2	2	2	2	2
Public/Semi-Public Facilities[3]	Buildings	0	0	0	0	0	0	0
PARTIAL ACQUISITIONS		0	0	0	0	0	0	0
Single-Family Residential	Number	0	3	4	3	4	3	4
Multi-Family Residential	Number	0	1	1	1	1	1	1
Business	Number	0	10	10	10	10	10	10
Business	Buildings	0	0	0	0	0	0	0
Public/Semi-Public Facilities[3]	Number	0	2	2	2	2	2	2
NEIGHBORHOOD/COMMUNITY COHESION	Rating							
ECONOMIC CONSIDERATIONS								
ECONOMIC ACCESS[4]	Rating							

Rating Scale: ○ Low Impact ◔ Low/Moderate Impact ◑ Moderate Impact ◕ Moderate/High Impact ● High Impact

NOTE: Reasonable Alternatives are defined in Chapter II -- Alternatives. Preferred Alternative shown as shaded. Alternative A or B is the Preferred Alternative for the River Crossing. This means that A, B-1 or B-2 could be selected. The letters and/or numbers with an "*" represent a range for the three subcorridors.

1 Assumes year 2005 dollars. Low End Cost Estimate = utilizing existing bridges at 16th Avenue, Bedford RR tracks, & Front Street RR tracks.

2 Accident statistics and safety data summarized and presented in this table are protected under federal law. See Appendix A.

3 Does not include public parks/recreation facilities subject to Section 4(f).

4 Uses Impact Factors Rating Scale: ○ Strong Positive ◔ Positive ◑ Neutral ◕ Negative ● Strong Negative

Environmental Impact Statement

EXHIBIT **S-2a**

Summary of Impacts

MoDOT

EVALUATION FACTORS	UNITS	PROJECT ALTERNATIVES						
		No-Build	**1**	**2**	**3**	**4**	**5**	**6**
	North Subcorridor	No-Build	Build	Build	Build	Build	Build	Build
	River Crossing Subcorridor	No-Build	Alt. A	Alt. A	Alt. B-1	Alt. B-1	Alt. B-2	Alt. B-2
	CBD North Loop Subcorridor	No-Build	Alt. A	Alt. B	Alt. A	Alt. B	Alt. A	Alt. B
ENVIRONMENTAL CONSIDERATIONS								
PARKLAND – Section 4(f)/6(f)	Number	0	0	0	0	0	0	0
Total Permanent Impacts	Acres	0	0	0	0	0	0	0
RIVERFRONT HERITAGE TRAIL	No. of Crossings	0	1	1	1	1	1	1
AIR QUALITY	CO Exceedences	0	0	0	0	0	0	0
IMPACTED NOISE RECEPTORS	Dwelling Units	0	106	106	106	106	106	106
WATER RESOURCES								
Streams	Number	0	3	3	3	3	3	3
	Linear Feet	0	269	269	269	269	269	269
Wetlands	Acreage	0	0	0	0	0	0	0
Ponds	Acreage	0	0.56*	0.56*	0.56*	0.56*	0.56*	0.56*
FLOODPLAINS	Linear Feet	0	1900	1900	1900	1900	2150	2150
	Acreage	0	1.59	1.59	1.59	1.59	1.88	1.88
NATURAL COMMUNITIES								
Upland Forests	Acreage	0	0.04	0.04	0.04	0.04	0.04	0.04
Riparian Forests	Acreage	0	0.64	0.64	0.64	0.64	0.64	0.64
THREATENED & ENDANGERED SPECIES	Number	0	1	1	1	1	1	1
CULTURAL RESOURCES								
NRHP Listed Historic Properties - Adverse Effect	Number	0	0	0	0	0	0	0
NRHP Listed Historic Districts - Adverse Effect	Number	0	0	0	0	0	0	0
NRHP Eligible Architectural Resources - Adverse Effect	Number	0	0	0	0	0	0	0
NRHP Eligible Historic Districts - Adverse Effect	Number	0	0	0	0	0	0	0
NRHP Eligible Bridges - Adverse Effect	Number	0	0	0	1	1	1	1
Historic Archaeological Area of Interest - Adverse Effect	Number	0	0	2	0	2	0	2
HAZARDOUS WASTE SITES (Hi or Mod. Pot.)	Number	0	1	1	1	1	2	2
VISUAL QUALITY / AESTHETICS								
Views Of The Road[4]	Rating							
Views From The Road[4]	Rating							

Rating Scale: Low Impact · Low/Moderate Impact · Moderate Impact · Moderate/High Impact · High Impact

NOTE: Preferred Alternative shown as shaded. Alternative A or B is the Preferred Alternative for the River Crossing. This means that A, B-1 or B-2 could be selected.

1 Assumes year 2005 dollars. Low End Cost Estimate = utilizing existing bridges at 16th Avenue, Bedford RR tracks, & Front Street RR tracks.

2 Accident statistics and safety data summarized and presented in this table are protected under federal law. See Appendix A.

3 Does not include public parks/recreation facilities subject to Section 4(f).

4 Uses Impact Factors Rating Scale: Strong Positive · Positive · Neutral · Negative · Strong Negative

* Pond impacts relate to a non-jurisdictional pond.

Environmental Impact Statement

EXHIBIT **S-2b**

Summary of Impacts

MoDOT