U.S. 71 Transit Study

Locally Preferred Alternative

May 2013

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A Project Partnership Team made up of the Mid-America Regional Council (MARC), the Kansas City Area Transportation Authority (KCATA), the City of Kansas City, Missouri, and Jackson County, Missouri sponsored a transit study for U.S. 71/I-49 originating in downtown Kansas City, Missouri and extending south of downtown area to a terminus in Grandview, Missouri. The study is following an "alternatives analysis" process – which is a detailed study of all reasonable transportation alternatives within a corridor that address locally identified needs. The study process began in May of 2012. The final step, the acceptance of a Locally Preferred Alternative (LPA) is documented in this summary.

Purpose and Need for the Study

During the planning process, the project partners, stakeholders and the public concluded that a successful transit solution for the U.S. 71/I-49 corridor must meet needs for transportation, economic development and sustainability.

Transportation needs identified for a transit enhancement include:

- Improve travel time
- Connect with the region
- Enhance mobility for transit-dependent users

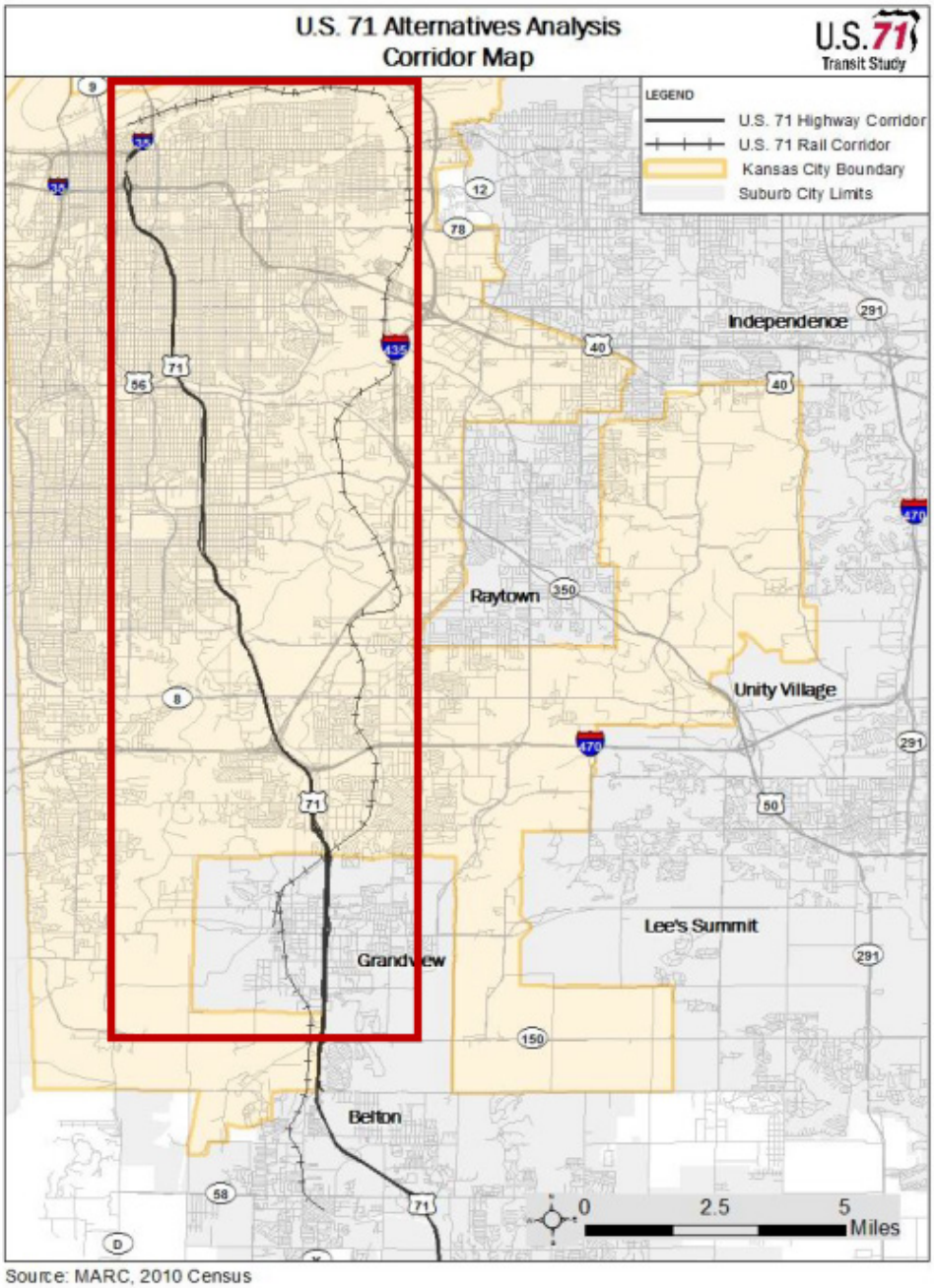
Economic development needs identified for a transit enhancement include:

- Connect key activity centers to entice development
- Support neighborhood revitalization through station area investment and development
- Support local planning initiatives

Sustainability needs identified for a transit enhancement include:

- Increase transportation options and reduce auto dependency
- Promote the protection, preservation and access to key environmental assets
- Promote workforce development in the study area through better job access and direct transit jobs

Figure 1: U.S. 71 Transit Study – Study Area



Source: MARC, 2010 Census

Alternatives Studied

The consultant team evaluated alternatives through two phases of study. The first phase of study provided a comparative analysis that focused on qualitative measures. In the first phase, the following alternatives were analyzed:

- No Build: A baseline alternative that includes only those project enhancements that are already identified and funded. Analyzing this as an alternative provides information on what would occur in the study area if no transit enhancements were developed.

- Transportation Systems Management (TSM): An alternative that focuses on low-cost investments, such as increased transit service, new park and ride lots and signal priority. Analyzing this as an alternative provides information on what value can be derived from low-cost investments and how that differs from the value of higher-cost investments.

- Bus Rapid Transit (BRT) along U.S. 71/I-49: This alternative includes the use of the U.S. 71 median shoulder between 23rd and 63rd streets as a bus guideway. Intermediate stations would be located at 31st or 39th, 63rd, Bannister Road, Longview Road, Truman Corners and M-150. Traffic signals would have transit priority at 55th and 59th streets. This service would be coupled with a Prospect MAX service to support needs in the urban portions of the corridor.

- Enhanced Streetcar along U.S. 71: This alternative would travel down Main Street and Volker, and then use the western right-of-way on U.S. 71 as a streetcar guideway. The streetcar would leave U.S. 71 at 85th street and travel south to Grandview using arterial roadways (due to right of way constraints on U.S. 71).

- Diesel Multiple Unit (DMU) along the Kansas City Southern Railroad: This alternative would use the common line of the East/Southeast Commuter Corridors (with a terminus at 3rd and Grand in the River Market), splitting off of the Southeast line southwest of Truman Sports Complex. It would then operate on the Kansas City Southern Rail line that is parallel to the east with U.S. 71. Stations include Bannister Road, I-470/Blue Ridge Boulevard, downtown Grandview, and M-150. This service would be coupled with a Prospect MAX service to support needs in the urban portions of the corridor.

The first phase of analysis found that the Enhanced Streetcar did not effectively meet the Purpose and Need and the demands required for an effective, affordable, and timely commuter transit alternative over these distances.

The second phase of analysis quantified the measures of effectiveness (meeting the identified needs), as well as ridership, cost, feasibility, environmental impacts and equity. The following are a summary of how each alternative supported the purpose and need and their technical output.

Public Engagement

Public engagement was an important component to the U.S. 71 Transit Study. Participants reviewed the Tier 1 alternatives at a public meeting in Grandview in July of 2012. The public identified the need for a transit approach that provided both enhanced service for the urban areas of the study area and new commuter service for areas further south. In October of 2012, the public reviewed and provided comment regarding land use concepts at station areas. Comments at this meeting showed an interest in rail development as a catalyst for economic development. A public meeting was held in November 2012 where the public was able to provide feedback on the Tier 2 Screening process. A final public meeting is scheduled for May 2013. Throughout the process, there has been overwhelming support and enthusiasm for the development of rail transit in the corridor.

Table 1: Alternative's Effectiveness at Meeting Transportation Needs

Transportation Need	TSM (Express Bus)	BRT	DMU	Analysis
Improve travel time	Low	High	High	Travel times are similar for the BRT and DMU alternatives.
Connect with the region	Medium	High	Medium	BRT provides connectivity to a greater number of locations.
Enhance mobility for transit-dependent users	Medium	High	Medium	BRT provides service to a greater number of transit-dependent users.

Table 2: Alternative's Effectiveness at Meeting Economic Development Needs

Economic Development Need	TSM (Express Bus)	BRT	DMU	Analysis
Connect key activity centers to entice development	Low	Medium	High	DMU will provide better conduit to entice development.
Support neighborhood revitalization through station area investment and development	Low	High	Medium	BRT provides service to a greater number of existing neighborhoods.
Support local planning initiatives	Low	Medium	High	DMU more directly supports local planning and redevelopment initiatives.

Table 3: Alternative's Effectiveness at Meeting Sustainability Needs

Sustainability Need	TSM (Express Bus)	BRT	DMU	Analysis
Increase transportation options and reduce auto dependency	Low	High	Medium	The BRT serves more riders than the DMU and connects with the more transit routes.
Promote the protection, preservation and access to key environmental assets	Low	High	High	BRT and DMU result in minimal environmental impacts while increasing access to environmental assets.
Promote workforce development in the study area through better job access and direct transit jobs	Low	High	High	The BRT provides more regional transit options, which provide better job access. The DMU will provide more jobs during construction.

Table 4: Technical Output from Alternatives

Technical Output	TSM (Express Bus)	BRT	DMU
Daily Ridership	250	1,200-1,900	500-1,000
Capital Cost	Dependent on level of capital investment	$23,670,000	$81,180,000
Operating Cost	$2,517,000	$2,785,000	$6,960,000 – peak only $11,430,000 – all day
End to End Travel Time	Varies depending on peak and off-peak	33 minutes 44 seconds	30 minutes

The Locally Preferred Alterative

A long-term vision for rail and supporting bus services in the corridor advanced through a phased approach to implementation.

In evaluating the potential alternatives, it was determined that the appropriate LPA must serve both urban and suburban users and that a phased approach to transit development in the corridor was essential to serving both markets. While rail is the long-term goal for transit enhancement in the corridor, shorter term strategies were identified to prime the area for enhanced transit.

Near Term Strategies

- Advance Prospect MAX: The Prospect corridor is currently being studied for infrastructure enhancements similar to those along the Troost MAX line.
- Expand and enhance existing express bus service along U.S. 71, leading to express BRT on U.S. 71.
- Continue negotiations with host railroads to facilitate the implementation of near-term Commuter DMU service.
- Develop funding solutions for expanded corridor transit services.

Long-Term Strategies

- Expand and enhance Commuter DMU operations.
- Identify and advance a fixed-guideway rail alternative within the U.S. 71 Bruce R. Watkins corridor.

Next Steps

- Advance design and federal funding request for Prospect BRT.
- Advance environmental and design studies for near-term express bus and rail solutions, contingent upon local authorization and funding.
- Develop plan for a local funding mechanism to support program implementation.

Diesel Multiple Units (DMU)

DMUs are rail cars that are self-propelled - no large locomotive engine is required. Using dual cab train set configurations, DMUs are capable of running in the reverse direction which eliminates the need for turnaround tracks. These vehicles are compliant with requirements from the Federal Railroad Administration (FRA) for trains operating on active freight tracks.

Bus Rapid Transit (BRT)

Bus Rapid Transit takes different forms depending on the level of investment. KCATA's MAX service is an example of what can be offered through lower investment bus rapid transit. Higher investment bus rapid transit aims to provide a service similar to rail by offering bus-only lanes, enhanced bus stations/amenities and branding. The Cleveland Health Line along Euclid Avenue in Ohio is the generally-cited success story in the United States. A higher end investment is what is being considered for U.S. 71.

Photo Source: Jackson County, Missouri

Questions or Comments

Study documents are available at the Smart Moves website: www.kcsmartmoves.org. Additionally, you can provide comments at the Jackson County MindMixer website: www.imaginetransit.com.