



CHAPTER I

Purpose And Need For The Project

The First Tier Improve I-70 Study established the corridor-wide purpose and need for I-70 improvements between Kansas City and St. Louis. That document identified the goal of I-70 improvements as to provide a safe, efficient, environmentally sound and cost-effective transportation facility that responds to the needs of the study corridor in addition to the expectations of a nationally important interstate. The specific purpose and need for the SIU 1 improvements are summarized as follows:

A. Roadway Capacity

Increase roadway system capacity in accordance with the projected travel demands to improve the general operating conditions of I-70. Based on level of service (LOS) analyses and forecast volumes on mainline I-70, by 2030, all mainline portions of SIU 1 and many of the existing interchanges will operate at an undesirable LOS. Capacity improvements for mainline I-70 and the interchanges within SIU 1 were selected.

B. Traffic Safety

Reduce the number and severity of traffic-related crashes occurring along I-70. According to available crash data, obtained through the Missouri Department of Transportation (MoDOT) Traffic Management System database and existing reports, SIU 1 is in need of several safety upgrades. According to MoDOT crash data, the predominant types of crashes in SIU 1 are rear-end and out of control. Possible causes of these types of crashes on I-70 are speed and congestion. Adding capacity to I-70 in the SIU 1 Project Area would improve operational conditions, relieve congestion and reduce the density of traveling vehicles, thereby reducing the crash rate within SIU 1.

C. Roadway Design Features

Upgrade current roadway design features along I-70, including interchanges, roadway alignment and roadway cross sections. Many portions of the I-70 mainline and all but two of the interchanges within SIU 1 fail to meet current design standards as well as MoDOT's desired standards for the I-70 improvements. Design parameters that do not meet current standards would be addressed as part of any improvement to the I-70 facility. Recognizing that the investments in I-70 will be long term, more stringent and conservative design criteria and standards have been defined in anticipation of future corridor needs and ever-evolving design parameters. A more stringent design standard has been established as a desired goal to allow design flexibility within the corridor such that future design evolutions can be reasonably "absorbed" within the project.

D. System Preservation

Preserve the existing I-70 facility as needed to carry existing and future loads. Improving I-70 to the preferred design criteria will require mainline pavement replacement and the reconstruction of most bridges in SIU 1. A portion of I-70 in SIU 1, from I-470 to the intersection at Route 7, has recently undergone a pavement replacement that meets current design standards. Therefore, widening in this area would only require converting the existing roadway shoulder into a travel lane (the shoulder was designed with considerations for this purpose) and constructing a new shoulder to the outside of the roadway.

E. Goods Movement

Improve the efficiency of freight movement using I-70. The I-70 Corridor is a major east-west route that accommodates a significant volume of daily truck traffic for the purpose of goods movement. Within SIU 1, trucks currently account for approximately 20 percent of total traffic. Without improvements to I-70, future traffic congestion would degrade the movement of goods by truck in SIU 1 and result in higher transport costs. An improved transportation facility would facilitate the movement of increasing volumes of goods as well as support local and regional economic growth.

F. Access to Recreational Facilities

Facilitate the usage by motorists of nearby regional recreational facilities through improved accessibility. Interstate 70 is one of only two east-west interstates in Missouri, and the only interstate facility that connects the two largest cities in Missouri; St. Louis and Kansas City. Interstate 70 is the largest gateway to the vast amount of tourist and recreational destinations in the state. While the SIU 1 portion of I-70 does not provide direct access to major tourist attractions, it is a vital part of the overall I-70 corridor that provides access to a major population center (i.e., the Kansas City Metropolitan Area) and as such is a key route for tourists wishing to access major tourist attractions across the State of Missouri.

G. National Security

Increase transportation system security and accommodate the potential movement of personnel and equipment as needed for national security. Interstate 70 is a major east-west transportation corridor on a national, regional and local level. As such, I-70 is a vital part of the nations National Security System. Within SIU 1, I-70 is the major east-west transportation corridor through the Kansas City Metropolitan Area and outlying areas and provides a efficient route to facilities of national security interest such as the Lake City Army Ammunition Plant located north of Blue Springs. Additional capacity along the I-70 Corridor would increase the ability of the corridor to handle diversion from other highway links, should some type of disaster occur as well as enhancing the ability to handle emergency responses. The I-70 Corridor is part of the Strategic Highway Network (STRAHNET) and at several interchanges provides connections to STRAHNET connecting links. Implementation of the proposed Intelligent Transportation System along the corridor would also enhance traffic management capabilities and protect critical assets.