



I-270 North Corridor Study

Executive Summary
October 2012



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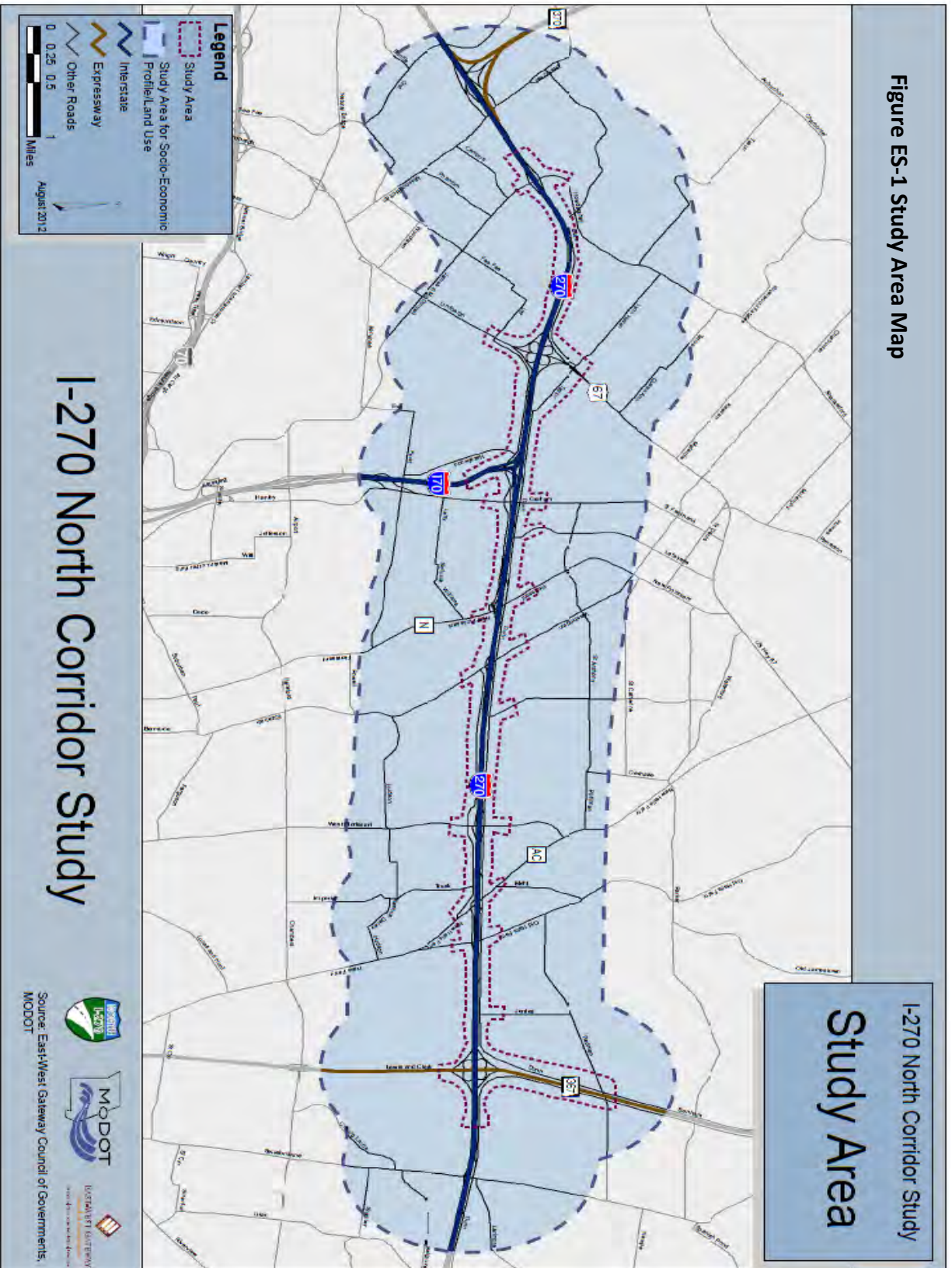
In March 2011, the Missouri Department of Transportation (MoDOT) initiated the Interstate 270 (I-270) North Corridor study to fully investigate the problems, needs, and opportunities along I-270 in North St. Louis County. The study focused on the I-270 mainline, the parallel outer roadways (Dunn Road and Pershall Road), and the connecting arterials, from just west of McDonnell Boulevard (Blvd) to east of Missouri Route 367 (Lewis and Clark Blvd). The study area is shown in Figure ES-1 on the following page. This study was a collaborative effort between MoDOT, East-West Gateway Council of Governments (EWG), Metro, and St. Louis County Department of Highways and Traffic. The study was guided by a study team comprised of representatives of these agencies.

Prior to the formal start of the study, MoDOT organized and facilitated a meeting with EWG, Metro, and others to brainstorm and formulate a set of goals and objectives for the study. These goals and objectives were based on what is known about the corridor as well as opportunities for enhancing its future viability. The refined goals and objectives of the study were to:

1. Identify and define the transportation problems and needs along the I-270 North Corridor, focusing on a 10-mile section of the I-270 mainline, and adjacent and connecting outer roads and arterials.
2. Develop system improvement solutions that are both practical and multimodal in scope, with emphasis placed on safety, capacity, and operational efficiency for all users of the corridor.
3. Enhance access opportunities and safety along the corridor for transit, bicycles, and pedestrians.
4. Recommend sets of both near- and long-term conceptual improvements for the corridor.
5. Partner with the communities of North St. Louis County to implement sound transportation improvement solutions and strategies that enhance economic and community growth.

The study team recognized that to successfully meet these objectives, the communities had to be meaningfully involved throughout the study process. As such the team developed a comprehensive and strategic public involvement plan with this goal in mind. One of these strategies designed to engage and elicit feedback from the various communities was to form a Community Advisory Group (CAG). The CAG consisted of various members from the community, elected leaders, representatives of local public agencies, business leaders, local school administrators, advocacy groups, and law enforcement. The CAG's primary role was to serve as advisors to the study team and provide feedback throughout the study process.

Figure ES-1 Study Area Map



Problem, Needs, and Opportunities

To fully understand the problems, needs, and opportunities of the study area, a comprehensive inventory of the corridor was undertaken to document the condition of the network of roads and bridges, sidewalks, traffic operations, and safety. As a kickoff to the study, meetings were held with both the CAG and the public to help determine the needs and problems along the corridor.

This study has identified several existing traffic operational, geometric, and safety constraints along the I-270 corridor in North St. Louis County. Among these constraints are: aging infrastructure; limited capacity on I-270 mainline; congested and closely-spaced interchanges; lack of and poor access for pedestrians and bicyclists; and confusing two-way cross-over slip ramps from I-270 to Dunn Road. With a forecasted increase in traffic of approximately 25% by the year 2040, it is anticipated that these constraints would worsen congestion, traffic operations, and safety on the corridor in the future.

Most of the crashes on I-270 and the adjacent roadways involve rear-ends collisions and they occur during periods of congestion. The cloverleaf interchanges at Lindbergh Boulevard (US 67) and Route 367 (Lewis & Clark Boulevard) are operating above capacity. The short weaving lengths leading to and away from these interchanges account for the highest percentage of crashes along I-270 within the study area. Safety issues on the arterials and outer roads are associated with congestion and poor access management. In recent years, MoDOT has installed traffic operation measures (e.g. signs, raised medians, striping) along Dunn Road at the two-way slip ramps to improve safety along this road. These improvements have resulted in less severe crashes at various locations along Dunn Road. However, the two-way slip-ramp intersections remain confusing intersections to negotiate or drive through.

The environmental and cultural resources along the corridor were also examined and documented. The I-270 North Corridor is in a highly urbanized setting. As such, there is limited number of natural and cultural resources. However, there are undeveloped areas, parks, and conservation areas that add green space to the corridor and contribute to the quality of the communities.

Equally as important, the team analyzed the socio-economic and demographic profiles of the study area. A number of potential Environmental Justice (EJ) considerations have been identified along the corridor including a high poverty rate; high percentage of elderly, persons with disabilities, and a sizable minority population; and high percentage of zero vehicle households. The ability to access public transportation is essential to those living along corridor. Currently, North County generates nearly 20% of the region's bus ridership and the demand for transit service is expected to grow substantially. In order to better serve this growing market,

Metro intends to build a new Transit Center and bus garage in North County. These facilities will be located on Pershall Road between West Florissant Avenue and New Halls Ferry Road (Route AC).

Interstate 270 also plays an important role in the movement of goods in and through the St. Louis Region. A recent study shows that over 93% of all the commercial vehicles serving the St. Louis region reported using I-270 as a primary regional route once they are in the area. Improving the key challenges facing commercial truck drivers, which include congestion, truck restrictions, and connectivity will sustain and encourage future economic development that requires roads and amenities conducive to truck movements. In addition to the movement of trucks on I-270, the interstate also provides a vital link to other modes in the region including ports, rail, and aviation.

The study also analyzed the existing land use and business characteristics of the corridor. It is important to note that there are several commercial properties that appear to be underutilized or vacant and would, therefore, be poised for redevelopment opportunities. It is anticipated that roadway improvements along the corridor would improve traffic operations and access, which is essential to sustaining existing businesses and encouraging future economic development.

Alternative Analysis

After the team had analyzed existing conditions, it worked to develop preliminary concepts to address the identified problems and needs on the corridor. These preliminary concepts consisted of a wide range of ideas including:

- adding auxiliary lanes
- widening I-270
- removing/consolidating access to and from I-270
- relocating cross-over slip ramps
- managing access
- maintaining existing two-way outer roads
- creating a one-way outer road system
- improving several stand-alone interchanges

The study team engaged the CAG to further develop and refine the concepts to improve the I-270 North Corridor. The preliminary concepts were then screened, as part of the Tier I screening process, to develop a suite of alternatives to undergo more detailed analysis.

The preliminary alternatives screened for further analysis were then grouped into near-term and long-term concepts. Table ES-1 summarizes these near- and long-term concepts. The study team engaged both the CAG and the public to further develop and refine the concepts to improve the I-270 North Corridor.

Near-term concepts include: adding an auxiliary lane between Lindbergh and I-170, restriping westbound I-270 at Lindbergh to improve lane configuration, and modifications along McDonnell Blvd. These near-term concepts are recommended for implementation. In fact, restriping westbound I-270 west of Lindbergh to improve lane configuration has already been completed as part of the programmed Lindbergh project.

Long-term concepts include: widening I-270; a two-way outer road system; a one-way outer road system; and interchange reconfigurations at the Lindbergh and Route 367 interchanges. The following corridor improvement concepts are recommended for further analysis in an environmental study:

1. No-build or maintain the existing system
2. Outer roads remain two-way from McDonnell Blvd to Route 367
3. Outer roads are converted to one-way from McDonnell Blvd to Route 367

The Lindbergh and Missouri Route 367 interchange reconfigurations will be adapted either as stand-alone improvements or as part of the two above corridor-wide concepts.

Table ES-1: Near- and Long-Term Improvement Concepts

Near-Term Improvement Concepts	
Recommendations	Conceptual Estimate* (Millions)
Eastbound Auxiliary Lane between Lindbergh and I-170	\$0.850 M
Improve Lane Utilization on McDonnell Blvd	\$0.750 M
Long-Term Improvement Concepts	
Recommendations	Conceptual Estimate* (Millions)
Lindbergh Single Point Urban Interchange (SPUI) Only	\$25 M
Route 367 Single Point Urban Interchange (SPUI) Only	\$18 M
Widen and Rebuild I-270 in which the Outer Roads remain two-way, from McDonnell Blvd to MO 367 (Including Lindbergh & Route 367 Interchanges)	\$350M - \$385M
Widen & Rebuild I-270 in which the Outer Roads are Converted to One-Way, from McDonnell Blvd to Route 367 (Including the Lindbergh & Route 367 Interchanges)	\$320M - \$360 M

* Construction and Right-of-Way Costs, in Current Dollars.