Executive Summary

Proposed Action

The Interstate 270 (I-270) North Environmental Assessment (EA) is a transportation study to investigate and identify improvements to I-270, from the I-70/I-270 interchange in Bridgeton, Missouri, to the Mississippi River/Chain of Rocks Bridge, between Missouri and Illinois. Figure S-1 depicts the vicinity of the study area for the I-270 North EA.

![I-270 North Environmental Assessment Vicinity Map](image)

Figure S-1. Vicinity Map

The study’s Preferred Alternative includes many elements, consistent with the performance measures as identified in Table 3-5. A complete listing of the reconfiguration of the corridor is available in Section 3.3.7. The major elements of the Preferred Alternative are summarized below.

**In Area 1: I-70 to McDonnell Boulevard**

- Add continuous auxiliary lanes between St. Charles Rock Road and MO 370, northbound (NB) and southbound (SB)
- Reconstruct the St. Charles Rock Road interchange as an improved interchange within the identified footprint
- Add SB auxiliary lane through the MO 370 interchange; maintain existing number of lanes NB
- Improve connections between northbound I-270, MO 370 and Missouri Bottom Road
- Reconstruct the McDonnell Boulevard interchange as an improved interchange within the identified footprint
EXECUTIVE SUMMARY

In Area 2: McDonnell Boulevard to Hanley/Graham Road

• Add continuous auxiliary lanes between McDonnell Boulevard and Lindbergh Boulevard
• Reconstruct the Lindbergh Boulevard interchange as an improved interchange within the identified footprint
• Separate I-270 and Lindbergh Boulevard interchange traffic from Taylor/Lynn Haven
• Add basic lane EB and WB on I-270; east of Lindbergh Boulevard to Route 367
• Add auxiliary lane on eastbound I-270 from Lindbergh Boulevard to I-170
• Maintain/improve two-way Dunn Road and Pershall Road, mainly in existing location

In Area 3: Hanley/Graham Road to Old Halls Ferry Road

• Add basic lane EB and WB on I-270
• Reconstruct Dunn Road and Pershall Road within the identified footprint, improving mobility and maintaining access. This includes conversion to a one way outer road system with turn-around connections where needed.
• Reconstruct the interchanges between Hanley and New Halls Ferry as improved interchanges within the identified footprint
• Construct as many as overpass turnarounds connecting Dunn Road and Pershall Road as necessary to achieve established level of service (LOS), mainline weaves, Vehicle Hours of Delay, and Average Speed performance measures identified in Table 3-5.
• Add auxiliary lane(s) EB and WB on I-270 between interchanges

In Area 4: Old Halls Ferry Road to Chain of Rocks Bridge

• Maintain/improve Dunn Road and Pershall Road, mainly in their existing locations and configurations
• Add basic lane EB and WB I-270 from Old Halls Ferry to MO 367
• Reconstruct the MO 367 interchange as an improved interchange within the identified footprint
• Add auxiliary lane EB and WB I-270 from MO 367 to Bellefontaine Road
• Reconstruct the Bellefontaine Road interchange as an improved interchange within the identified footprint
• Relocate Dunn Road to the north at Bellefontaine Road
• Maintain number of existing basic lanes from Bellefontaine Road to the Lilac Avenue interchange
• Reconstruct the Lilac Avenue interchange as an improved interchange within the identified footprint
• Add basic lane EB and WB on I-270 from the Lilac Avenue interchange to Chain of Rocks Bridge
• Reconstruct the Riverview Drive interchange as an improved interchange within the identified footprint

Preferred Alternative

Reasonable Alternative 1, with variation 1a, between West Florissant Avenue and New Halls Ferry Road is the Preferred Alternative.

The Preferred Alternative conforms to Missouri Department of Transportation’s (MoDOT’s) Engineering Policy Guide (EPG), satisfies the study’s Purpose and Need, and fulfills the study’s desired operational characteristics/performance measures. It also minimizes impacts to the human and natural environment.
All study exhibits are contained in Appendix A.

The Preferred Alternative as presented in this I-270 North EA is composed of alternative configurations that meet a set of minimum performance measures agreed upon prior to the development of study alternatives. The performance measures are broken out into corridor-wide measures, as well as location-specific operational measures that are met by the Preferred Alternative, and would be required of any alternate configuration proposals. The Preferred Alternative is depicted on Figure S-2. MoDOT intends to take full advantage of savings that may be realized through alternative project delivery options.

Purpose and Need

The term “Purpose and Need” refers to the transportation-related problems that a study is intended to address. The generation and evaluation of alternatives are conducted to develop the most appropriate solution to the identified problems. Ultimately, the identification of a Preferred Alternative will be based, in part, on how well it satisfies the study’s Purpose and Need.

In its very broadest sense, the purpose and need of the I-270 North EA can be defined as follows:

- The need to address the aging infrastructure along I-270
- The need to improve mobility and operations within the I-270 corridor
- The need to achieve accessibility consistent with the designated uses of I-270
- The need to improve safety within the I-270 corridor
- The specific transportation problems that affect the I-270 North EA study area are detailed in the summary of the Purpose and Need Statement in Section 2.

Reasonable Alternatives Considered

Based on evaluation and coordination, a series of Reasonable Alternatives were developed. These configurations conform to the study’s design standards, satisfy the study’s Purpose and Need, and fulfill the study’s desired operational characteristics and performance measures. These configurations represent changes to the I-270 corridor that will result in acceptable future conditions. The selection of a Preferred Alternative was based on the differential impacts, costs, and operations that they represent.

The Reasonable Alternatives are shown in Appendices A and C. The configurations are numbered and organized into four map areas. The configurations are interchangeable. The Reasonable Alternatives are described as follows:

Reasonable Alternative #1

Map Area #1: I-70 to McDonnell Boulevard
The existing numbers of I-270 lanes is maintained, with auxiliary lanes added to accommodate the operation of I-270. At St. Charles Rock Road, a diverging diamond interchange will replace the diamond interchange. At McDonnell Boulevard, a diverging diamond interchange will replace the existing diamond interchange.

Map Area #2: McDonnell Boulevard to Hanley/Graham Road

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1 Exhibit 1 depicts natural resources (including floodplains and National Wetland Inventory).
Exhibit 2 depicts human resources (including Endangered Species Act screening sites and noise study areas).
Exhibit 3 depicts community resources (including land uses and important community landmarks).
Exhibit 4 depicts the footprint and impacts associated with Reasonable Alternative 1/1a (Preferred Alternative).
Exhibit 5 depicts the footprint and impacts associated with Reasonable Alternative 2/2a.
Exhibit 6 depicts the detailed lane work and transportation improvements associated with the Preferred Alternative.
EXECUTIVE SUMMARY

The only alternative at the existing cloverleaf Lindbergh Boulevard interchange is a partial cloverleaf configuration. It will add an additional lane on I-270, east of Lindbergh Boulevard. It will remove the WB-to-SB loop ramp at Lindbergh Boulevard with a direct connection to the north. Dunn Road will be extended through (under) the interchange. An auxiliary lane will be added (EB) between Lindbergh Boulevard and I-170.

Map Area #3: Hanley/Graham Road to Old Halls Ferry Road

The focus of Reasonable Alternative 1 is converting the outer road system (Dunn Road and Pershall Road) from a two-way system to a one-way system. There are two different variations under consideration (1 and 1a). An additional through lane on I-270 in each direction will be constructed. The interchange ramps within this area will be consolidated into a split diamond configuration. Variation 1 will extend the split diamond configuration from West Florissant Avenue to Old Halls Ferry Road. Variation 1a will limit the split diamond to between West Florissant Avenue to New Halls Ferry Road. To minimize out-of-direction travel on the one-way system, two EB-to-WB U-turn lanes will be added at New Florissant Road and West Florissant Avenue. An additional U-turn lane for both EB to WB and WB to EB located between Elizabeth Avenue and West Florissant Avenue (nearest Knollway Drive) has two options. Auxiliary lanes will be added as needed.

Map Area #4: East of Old Halls Ferry Road to Chain of Rocks Bridge

The only alternative at the existing cloverleaf MO 367 interchange is a partial cloverleaf configuration. It will eliminate two loop ramps, using a fly-over ramp for the EB-to-NB movement and diamond exit ramp from WB I-270 to NB and SB MO 367. At the Bellefontaine Road interchange, the existing diamond interchange will be reconfigured. The slip ramps will be removed and Dunn Road relocated. At the Lilac Avenue interchange, the existing diamond configuration will be modified. Most noticeably, the ramps will be moved closer to I-270. At the Riverview Road interchange, the existing diamond configuration will be modified.

Reasonable Alternative #2

Map Area #1: I-70 to McDonnell Boulevard

The existing numbers of I-270 lanes is maintained with auxiliary lanes added to accommodate the operation of I-270. At St. Charles Rock Road, the existing diamond interchange will be reconstructed with added lanes. At McDonnell Boulevard, a partial cloverleaf interchange will replace the existing diamond interchange. New one-way connector roads will be constructed between Missouri Bottom and McDonnell Boulevard.

Map Area #2: McDonnell Boulevard to Hanley/Graham Road

The only alternative at the existing cloverleaf Lindbergh Boulevard interchange is a partial cloverleaf configuration. It will add an additional lane on I-270, east of Lindbergh Boulevard. It will remove the WB-to-SB loop ramp at Lindbergh Boulevard with a direct connection to the north. Dunn Road will be extended through (under) the interchange. An auxiliary lane will be added (EB) between Lindbergh Boulevard and I-170.

Map Area #3: Hanley/Graham Road to Old Halls Ferry Road

The focus of Reasonable Alternative 2 is retaining the existing two-way Dunn and Pershall Roads. An additional through lane in each direction on I-270 will be constructed. The interchange ramps will also be consolidated into split diamond configurations. Variation 2a will extend the split diamond configuration from West Florissant Avenue to Old Halls Ferry Road. Variation 2 will limit the split diamond to between West Florissant Avenue to New Halls Ferry Road (the opposite of Reasonable Alternative 1). The two-way configuration of Dunn and Pershall Roads will be retained, although some sections of both roads would be relocated. An overpass at Lafayette Street will be added. The New Florissant Road and Washington Street/Elizabeth Avenue interchange and the West Florissant Avenue...
and the Halls Ferry interchange essentially operate as two diamond interchanges. Auxiliary lanes will be added as needed.
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Figure S-2. I-70 North Environmental Assessment Preferred Alternative
EXECUTIVE SUMMARY

MAP AREA 2 - PREFERRED ALTERNATIVE
East of McDonnell Boulevard to Hanley Road / Graham Road

FOR PLANNING USE ONLY
The alternatives properties are conceptual in nature and are subject to changes based on additional data collection, further analysis, and future phases of design.

Figure S-2. I-270 North Environmental Assessment Preferred Alternative
MAP AREA 3 - Hanley Road / Graham Road to Old Halls Ferry Road - PREFERRED ALTERNATIVE

Figure S-2. I-270 North Environmental Assessment Preferred Alternative
MAP AREA 4 - East of Old Halls Ferry Road to Riverview Drive - PREFERRED ALTERNATIVE

Figure 5-2. I-270 North Environmental Assessment Preferred Alternative
Map Area #4: East of Old Halls Ferry Road to Chain of Rocks Bridge

The only alternative at the existing cloverleaf MO 367 interchange is a partial cloverleaf configuration. It will eliminate two loop ramps, using a fly-over ramp for the EB-to-NB movement and diamond exit ramp from WB I-270 to NB and SB MO 367. At the Bellefontaine Road interchange, the existing diamond interchange will be converted into a partial cloverleaf interchange. At the Lilac Avenue interchange, the existing diamond interchange will be converted into a partial cloverleaf interchange. At the Riverview Road interchange, the existing diamond configuration will be converted into a partial cloverleaf interchange.

Summary of Impacts

The process that led to the identification of the Preferred Alternative included evaluating impacts. The impact analysis was multi-faceted, encompassing numerous elements, such as right-of-way requirements, environmental impacts, socio-economic consequences, disruptions to important cultural resources, community impacts, building relocations, safety, and other engineering considerations along with an examination of the compatibility with local transportation priorities.

Impacts associated with the Preferred Alternative include the acquisition of land and structures, stream and floodplain crossings, alterations to the bike/pedestrian environment, noise impacts, and work in proximity to several neighborhoods. Tables 3-2 through 3-4, in Section 3, present a summary of the impacts associated with the Reasonable Alternatives. In general, the impacts associated with the Reasonable Alternatives are very similar. Table 5-1 presents an impact summary for the Preferred Alternative.

Based on the evaluation of impacts, a Preferred Alternative emerged. The Preferred Alternative conforms to the criteria contained within the MoDOT EPG, the study’s Purpose and Need, and the study’s desired operational characteristics/performance measures. It also minimizes impacts to the human and natural environment. Section 4 presents data regarding the natural and human resources associated with the study area and present study-related impacts for the Reasonable Alternatives and the Preferred Alternative.

Environmental Commitments

If approved, during the design and implementation of the Preferred Alternative, MoDOT is committed to obtaining necessary permits and performing other actions that would minimize and mitigate the impacts of the study on the environment.

Those commitments are listed in Section 5.
Public Involvement/Agency Coordination

The public involvement techniques used for this study included newsletters, a website, news media releases, formal and informal meetings, and other general coordination. The agency coordination process included multiple collaboration points where study updates were provided and input requested. Section 6 discusses the public involvement and agency coordination activities that have been conducted. Public involvement efforts will continue throughout the duration of the study.

In early 2015, the I-270 North EA was suspended as part of a funding shortfall. The study was restarted in mid-2016. Overall, the basic nature of the study is unchanged from the suspension including alternatives, construction methods, and techniques. Some techniques, such as cost estimating and crash evaluations, have evolved. As necessary, those have been updated. New information, such as the updated long-range transportation plan (Connected2045), were also incorporated into the analysis. As necessary, impact analyses were also updated based on new or revised regulations. Public involvement and stakeholder coordination was restarted and is documented here.
### Table S1-1. Environmental Impact Summary for the Preferred Alternative

**I-270 North Environmental Assessment**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>PRELIMINARY STRUCTURE ACQUISITION ESTIMATES</th>
<th>PRELIMINARY PROPERTY ACQUISITION ESTIMATES</th>
<th>PARKS AND RECREATION IMPACTS</th>
<th>ENVIRONMENTAL JUSTICE IMPACTS</th>
<th>WATERWAY IMPACTS</th>
<th>BIKE/PED IMPACTS</th>
<th>KEY TRAFFIC PATTERN IMPACTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SAINT CHARLES ROCK ROAD</strong></td>
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</table>
| Improved Interchange (Alternative 1)              | None                                       | Less than 1 acre                        | No property acquisition from Carrollton Disc Park; operational impacts are not expected | Diverging diamond interchanges can limit some transit bus and emergency medical services operations. | Nearly identical Cowmire Creek Crossings. | Depending on design, diverging diamond interchanges can require pedestrians to cross free-flowing traffic | • Synchronized signals reduce delay  
• Reduced number of conflict points |
| **MCDONNELL BOULEVARD**                           |                                            |                                          |                               |                                |                 |                 |                               |
| Improved Interchange (Alternative 1)              | None                                       | Less than 1 acre                        | None                          | Diverging diamond interchanges can limit some transit bus and emergency medical services operations. | None             | Depending on design, diverging diamond interchanges can require pedestrians to cross free-flowing traffic | • Synchronized signals reduce delay  
• Reduced number of conflict points |
| **LINDBERGH BOULEVARD**                           |                                            |                                          |                               |                                |                 |                 |                               |
| Improved Interchange (Alternative 1)              | None                                       | ± 4 acres                               | No property acquisition from Brooks Park, but trees within right-of-way may be removed | Improved interchange will benefit local users. | None             | Direct Dunn Road connection through Lindbergh Boulevard interchange should improve bike/pedestrian operations | • Improved connection between WB 270 and NB Lindbergh Boulevard  
• Improved connection for SB Lindbergh Boulevard and WB I-270  
• Eliminating loop ramp reduces conflicts  
• Continuous Dunn Road under Lindbergh Boulevard |
| **HANLEY ROAD/GRAHAM ROAD**                        |                                            |                                          |                               |                                |                 |                 |                               |
| Improved Interchange with One-Way Dunn/Pershall Roads (Alternative 1) | Two single-family residences at Pershall Road and Brackleigh Lane | Less than 2 acres                       | No expected impacts to the Myers House | Metropolitan Saint Louis Transit Agency (Metro Transit) estimates that one-way outer roads will increase their operating expenses. | None             | One-way outer roads tend to benefit pedestrians (because of fewer conflict points). One-way outer roads tend to result in out-of-direction travel by bicyclists, thus creating more conflicts with automobiles | • Dunn and Pershall Roads operate as one-way outer roads  
• Access to/from I-270 via slip ramps |
| **NEW FLORISSANT ROAD TO WASHINGTON STREET/ELIZABETH AVENUE** |                                              |                                          |                               |                                |                 |                 |                               |
| Improved Interchange with One-Way Dunn/Pershall Roads (Alternative 1) | Twenty-one single-family residences: six at Santa Cruz Drive, and fifteen between Dubourg Lane and Jean Drive  
Plaza Duchesne: Kwik Mart and five others and Gary’s Av Auto/ Joe’s Auto Mart  
Creative Cuts: Pershall/Jeann | ± 13 acres                               | None                                      | One-way operation at New Florissant Road and Washington Street is primarily within the existing corridor. Important exceptions include the creation of a connection between Dunn Road and Waterford, behind the Grandview Plaza Shopping Center and the possible mid-block crossover at Grandview Drive. | Limited culvert extensions for Fountain Creek | One-way outer roads tend to benefit pedestrians (because of fewer conflict points). One-way outer roads tend to result in out-of-direction travel by bicyclists creating more conflicts with automobiles | • Dunn and Pershall Roads operate as one-way outer roads  
• Access to/from I-270 via slip ramps |
Table S1. Environmental Impact Summary for the Preferred Alternative
I-270 North Environmental Assessment

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<tr>
<th>DESCRIPTION</th>
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<th>WATERWAY IMPACTS</th>
<th>BIKE/PED IMPACTS</th>
<th>KEY TRAFFIC PATTERN IMPACTS</th>
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<tbody>
<tr>
<td>WEST FLORISSANT AVENUE TO OLD HALLS FERRY ROAD</td>
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<tr>
<td>Improved Interchange from West Florissant Avenue to New Halls Ferry Road</td>
<td>None</td>
<td>± 6 acres</td>
<td>Little Creek Nature Area: Acquisition limited to narrow linear strip along Dunn Road. Driveway will be improved as necessary</td>
<td>Metro Transit estimates that one-way outer roads will increase their operating expenses. Additional turnarounds provided from WB Dunn Road to EB Pershall Road between Washington Street and Florissant Avenue and from EB Pershall Road to WB Dunn Road at New Halls Ferry Road.</td>
<td>All alternatives have limited culvert extensions of existing culverts within Maline Creek tributaries at New Halls Ferry Road and Old Halls Ferry Road. These alternatives have no other impacts</td>
<td>One-way outer roads tend to benefit pedestrians (because of fewer conflict points). One-way outer roads tend to result in out-of-direction travel by bicyclists, thus creating more conflicts with automobiles</td>
<td>Dunn and Pershall Roads operate as one-way outer roads</td>
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<td>弁</td>
<td>MO 367</td>
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<tr>
<td>Improved Interchange (Alternative 1)</td>
<td>None</td>
<td>± 1 acres</td>
<td>No direct impacts to Bellefontaine Conservation Area</td>
<td>-</td>
<td>Limited culvert extensions of existing culverts for Maline Creek tributaries</td>
<td>-</td>
<td>Provides free flow movement from EB I-270 to MO 367</td>
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<tr>
<td>BELLLEFONTAINE ROAD</td>
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<tr>
<td>Improved Interchange (Alternative 1)</td>
<td>Pizza Hut restaurant</td>
<td>± 8 acres</td>
<td>None</td>
<td>-</td>
<td>New crossing of Watkins Creek for relocated Dunn Road and replacement of existing culverts elsewhere</td>
<td>-</td>
<td>Removes slip ramps</td>
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<td>LILAC AVENUE</td>
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<tr>
<td>Improved Interchange (Alternative 1)</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>-</td>
<td>None</td>
<td>-</td>
<td>Moves WB I-270 ramps closer to the freeway to avoid relocating Dunn Road</td>
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<td>RIVERVIEW DRIVE</td>
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<tr>
<td>Improved Interchange with Two-Way Dunn Road (Alternative 1)</td>
<td>None</td>
<td>None</td>
<td>No Impact to Dundee Park or Watkins Estate</td>
<td>-</td>
<td>Limited culvert extensions of existing culverts within Watkins Creek</td>
<td>-</td>
<td>Will require extension of ramps to the east when the bridge is replaced</td>
</tr>
</tbody>
</table>

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