



REGIONAL ROADWAY SYSTEM VISIONING STUDY

Recommendations

The intent of the study is to identify a transportation system plan that can support long-term growth and development in the region, as well as complement and build upon current transportation systems. The study area has one of the largest undeveloped areas (approximately 4,300 acres) adjacent to the I-494/I-694 beltway. This area will develop over time and as a result, add more traffic to the current transportation system. In addition, growth is also occurring in surrounding communities, particularly to the south and east; this traffic also impacts the transportation system in this area. It is therefore important to identify potential improvements needed to support this future growth, as well as ensure safe and efficient travel into, through and out of the area. With this plan and subsequent environmental studies, the appropriate agencies can work toward implementing improvements over time, as needs arise, and as opportunities and funding permit. In addition, the plan will allow for avoidance and minimization of property impacts and disruptions in services, especially as development occurs in the study area.

The study recommendations need to be put in the following planning context.

- The study is not an official environmental study and therefore does not carry any official environmental standing. More detailed analysis will need to be done to fully assess environmental, design and operational issues in accordance with the National Environmental Policy Act (NEPA) and Minnesota Environmental regulations at the time individual projects are developed. The study focused on a high-level screening of environmental elements to identify potential environmental issues, including a review of natural wetland inventory, special habitat designations and right-of-way impacts to residential and commercial properties.
- While a specific system alternative is identified as an outcome of this study, all of the remaining system alternatives (alternatives not selected) will need to be carried into future environmental studies to fulfill environmental requirements. However, some of these alternatives may end up in a considered, but dismissed narrative.
- Any changes in interstate access require a significant amount of analysis and study to ensure safe and efficient operations of the system. This lengthy process may ultimately determine that an additional access may not be warranted, or other modifications of the system may be needed in conjunction with access changes.

The following recommendations have been developed through the involvement of the cities of Eagan, Inver Grove Heights, Mendota Heights, and Sunfish Lake; Dakota County, the Minnesota Department of Transportation (MnDOT), the Metropolitan Council, and the Federal Highway Administration (FHWA). The recommendations are based on technical analysis, as well as public and committee input. These recommendations constitute a vision for the area transportation system that will allow the system to support area growth (as identified in local 2030 Comprehensive Plans) safely and efficiently.

The following key improvements that constitute the vision are listed below and shown in Figure 1:

- a. Lone Oak Road (CSAH 26) – expand 2 to 4 lanes from TH 55 to Athena Way (where it is currently 4 lanes).
- b. 65th Street – extend from Babcock Trail to Lone Oak Point.
- c. CSAH 28 Realignment north of TH 55.
- d. TH 3 – expand 2 to 4 lanes from Cliff Road to TH 55.
- e. TH 149 – expand 2 to 4 lanes from TH 3 to Rich Valley Boulevard.
- f. Baffin Trail Realignment – alignment to be determined in future studies.
- g. CSAH 28 Realignment south of TH 55 – connection to Argenta Trail will be determined during future studies associated with the installation of a full interchange in the long term.
- h. Lone Oak Road (CSAH 26) – expand 4 to 6 lanes from the I-35E West Ramps to Neil Armstrong Boulevard.
- i. TH 55 – expand 4 to 6 lanes from TH 149 south junction to TH 149 north junction.
- j. TH 149 – expand 4 to 6 lanes from TH 55 to I-494. This project recently received STP federal dollars for construction.
- k. TH 3 – consider 2 to 4 lane expansion in the long term from Upper 55th Street to TH 55.
- l. TH 149 Interchange Improvements with I-494 Mainline between I-35E and TH 149 – additional analysis is needed in an Interstate Access Request (IAR). As part of this study, a preliminary analysis was completed to determine how the TH 149 interchange ramps are currently being used, in relation to I-35E and I-494. Further study is necessary to determine the solutions to address the capacity problems at the TH 149 interchange and weaving issues between TH 149 and the I-35E exit.
- m. Delaware Avenue – improvements as required by actual traffic conditions. Such improvements may include turn lanes, shoulders, and trails/sidewalks. No additional through lanes will be required.
- n. New I-494 Interchange near Argenta Trail – approximately ½ mile east of the existing overpass with a configuration to minimize potential impacts to Hornbean Lake on the north. Additional analysis is needed in an Interstate Access Request (IAR).



Figure 1

- o. TH 55/Argenta Trail – consider a high-volume, high-capacity intersection upgrade, or a long-term interchange at this location. 2030 Comprehensive Plan growth assumptions do not reflect a need to separate grades based on traffic volumes. Buildout traffic volumes are borderline. In the vicinity of TH 55, continue to keep Argenta Trail as the through route and CR 28 connection into Argenta Trail (note: this is a change from the recommendations of the “County Road 28 Corridor Study” completed in 2000). Plan for an alignment of future CR 28 east of Argenta Trail that would intersect Argenta Trail where interchange ramps would be located if an interchange were to be constructed in the future. It is likely that the TH 3 West Ramps would need to be removed, if and when a new interchange is constructed.
 - p. Argenta Trail – realign and expand to 6 lanes from TH 55 to I-494. This likely would be built first as a 4-lane roadway, then expanded to 6 lanes in the future as demands increase.
2. Based on the analysis and input throughout the study process, Alternative “E” is recommended as the “locally-preferred”¹ system vision with new access to I-494. As noted in 1(n), this recommended vision includes a new interchange along I-494. The Study Partners should continue to investigate the technical and environmental acceptability of adding an additional interchange access to I-494. This recommendation is made for the following reasons.
- a. It addresses the growth anticipated in 2030, based on approved area Comprehensive Plans, including the 2030 growth anticipated for NE Eagan and NW Inver Grove Heights.
 - b. It limits overloads of key arterial segments which are difficult and costly to expand beyond six lanes (i.e., more urbanized area along TH 55 from south junction of TH 149 to north junction of TH 149; and TH 149 from TH 55 to I-494).
 - c. It eliminates overloaded interchanges on I-494 at TH 149 and TH 3 by better balancing transportation demand among other regional access points and a new interchange access. This maximizes long-term flexibility of the overall transportation system.
 - d. It reduces travel demands at the I-494/TH 149 interchange, which is in close proximity to the I-35E system interchange. Currently, there are operational and safety problems with traffic from the TH 149 loop wanting to travel westbound on I-494, weaving with westbound I-494 traffic exiting to I-35E within approximately 2,300 feet. Additional modifications to the I-494/TH 149 interchange and the I-494 mainline will be needed in the future. With a new I-494 interchange at the proposed Alternative E location, 40 percent of the traffic using the TH 149 westbound loop would be relocated to the new interchange, approximately 8,200 feet further east. This will provide a longer distance for vehicles to sort themselves out, which makes the weave and right-lane congestion issues easier to address in the long-term on I-494.

¹ Mn/DOT and FHWA cannot commit to one alternative until the environmental process is completed.

- e. It has the lowest right-of-way acreage impacts of all new I-494 interchange alternatives and the lowest number of residential and commercial property acquisitions based on current properties.
 - f. It maintains logical system connections with existing Argenta Trail and Delaware Avenue thereby providing access to and from communities to the north; yet the traffic demands along Delaware Avenue for this option are very similar to the other system improvement options.
 - g. Alternative E is in close proximity to Hornbeam Lake and this proximity will need to be evaluated more closely in subsequent environmental studies. Interchange designs that limit encroachments and impacts to this area should be considered.
 - h. Alternative E's interchange location and proposed alignment for Argenta Trail will be designed to minimize impacts to wetlands and avoid where possible. Its location does a better job of avoiding areas that have been identified as Regionally Significant Ecological Areas (defined by the DNR using Minnesota Land Cover Classification System – 2008). Alternatives C and D have some impacts to wetlands and the areas identified as regionally significant ecological areas. These areas are located adjacent to existing Argenta Trail and in the Argenta Trail and I-494 overpass area (Figure 2).
 - i. Alternative E has a low percentage of local trips using the regional system for a short distance (i.e., interchange to interchange on I-494). A high percentage of the trips accessing the regional system using the new interchange have other regional destinations in the region.
 - j. It avoids undesirable direct impacts to residences immediately north of I-494 in the area of Delaware Avenue, as well as shifts the alignment of Argenta Trail to the east of a developed residential area on the south side of I-494.
 - k. The location of the new I-494 interchange in Alternatives C and D are not consistent with Mendota Heights and Sunfish Lake Comprehensive Plans (i.e., Alternative E is located in Inver Grove Heights). The new interchange location and potential realignment of Argenta Trail is consistent with the Inver Grove Heights Comprehensive Plan.
3. An Interchange Warrant Analysis has been completed and submitted to FHWA, through Mn/DOT, to obtain formal feedback on the additional access on I-494 at location "E". A more detailed and comprehensive operations and safety analysis will be required, assuming the access process moves forward (see Recommendation #4).

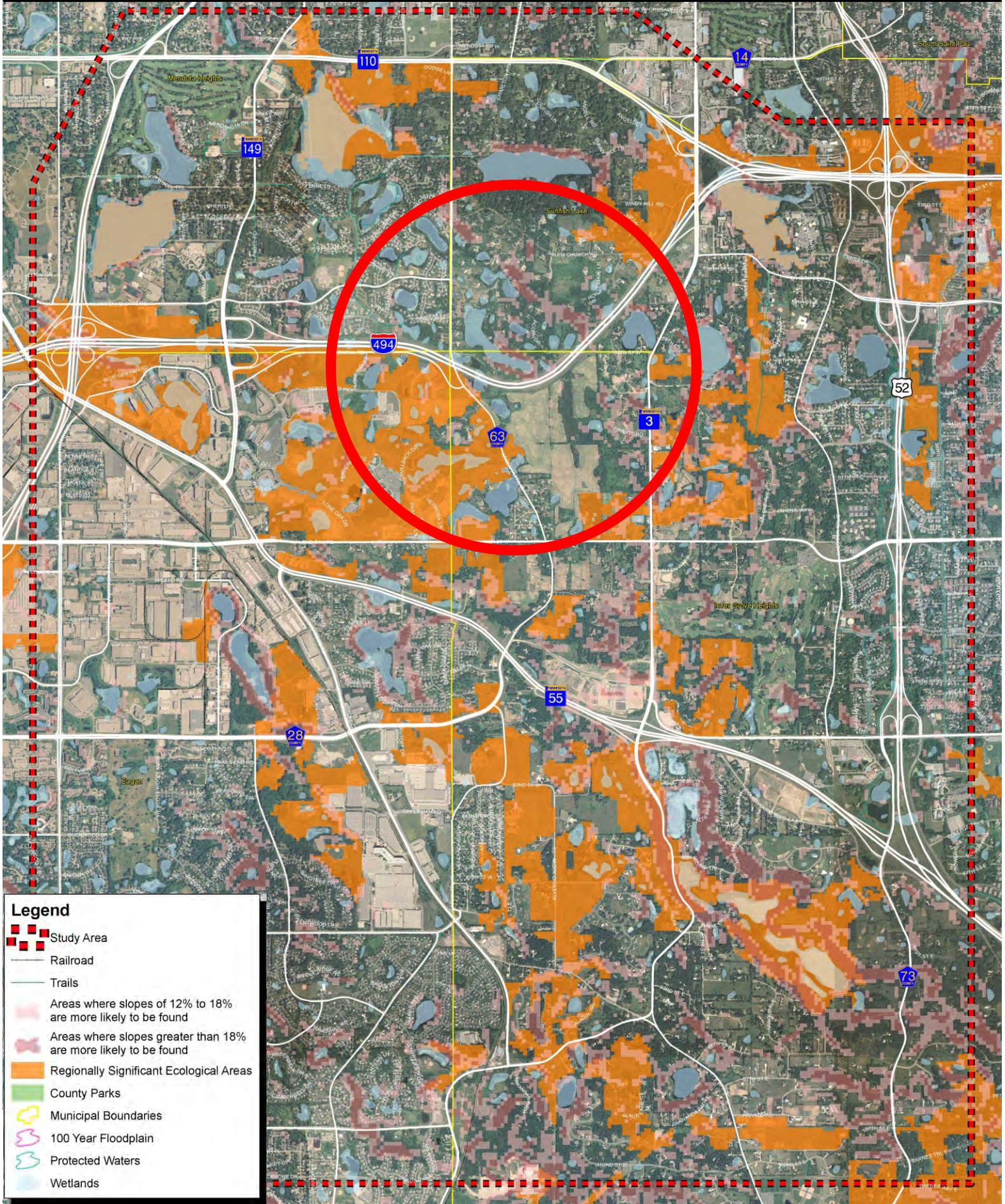
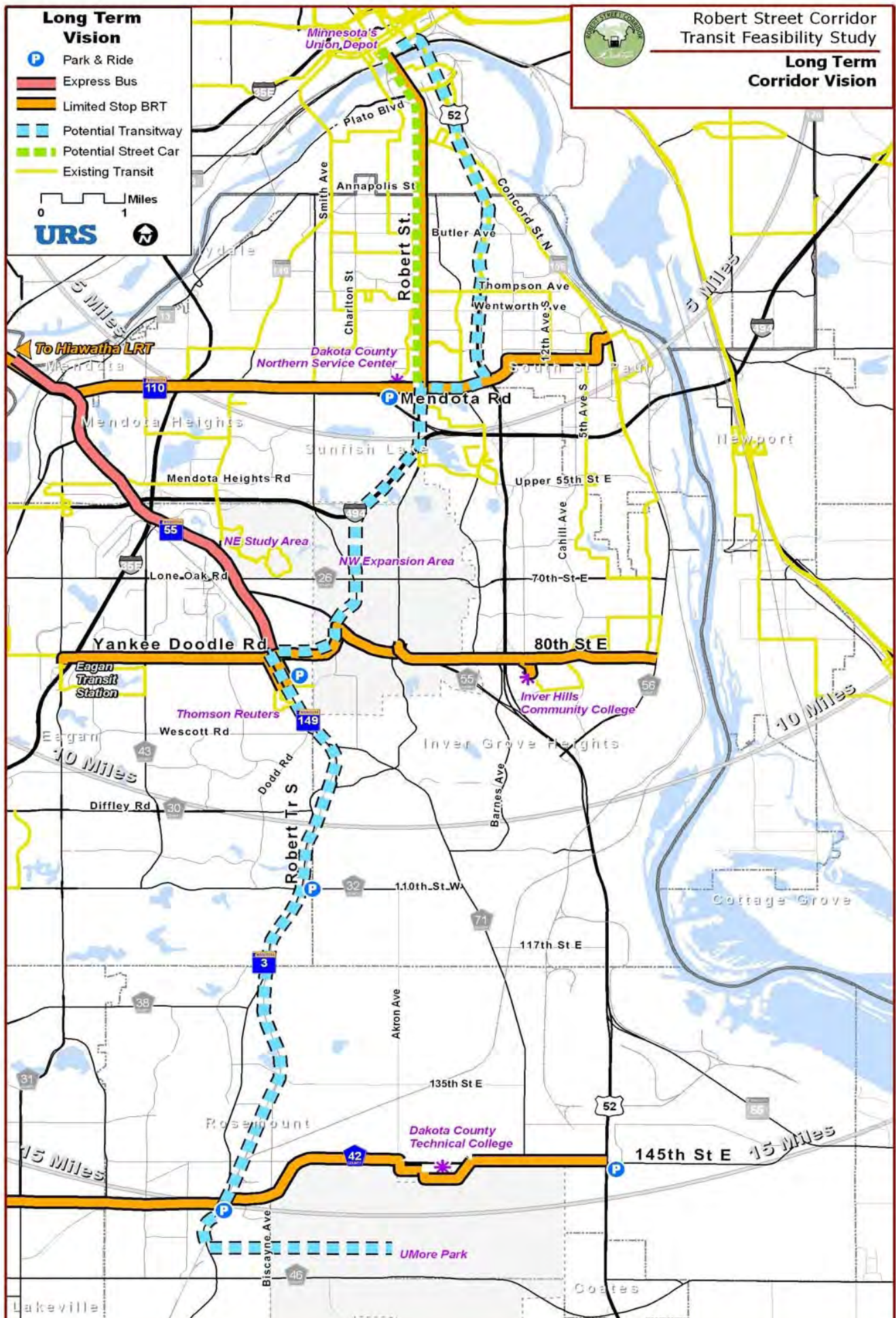


Figure 2

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4. If FHWA indicates that the warrant analysis has merit to move forward to the next step (this decision doesn't signify support for the access change, only that it warrants greater analysis); then the next step is to complete an Interstate Access Request (IAR). This process will address in more detail operations and safety issues on I-494. Based on input from FHWA and Mn/DOT, this analysis will need to develop solutions for the capacity problems at the TH 149 interchange and weave issues on I-494 associated with I-35E and TH 149. This analysis will require a formal layout for the interchange and other access changes, as well as an environmental study that meets state and federal requirements.
5. All agencies should continue to pursue a variety of funding sources, both public and private. As one example, the City of Eagan has previously instituted a system to generate funds for future transportation improvements in Northeast Eagan. This type of funding should be considered in Northwest Inver Grove Heights. In addition, they should work to identify projects that could be incorporated into Capital Improvement Programs.
6. While this study identifies basic right-of-way footprints and general access considerations, subsequent efforts will further define specific property acquisitions and detailed access strategies for all arterial and collector routes. Based on volumes and function, access to Argenta Trail south of I-494 and north of TH 55 will be limited to three full-access points. This will guide future development and allow study partners to take advantage of opportunities as they arise. This corridor should also be planned for a minimum of 200 feet in width of right-of-way considering the 6-lane needs and the need to coordinate with transit planning that has been completed to-date (Figure 3).
7. Specific improvements to Delaware Avenue north of I-494 will need to be agreed upon by Dakota County, Mendota Heights and Sunfish Lake if the need arises based on actual traffic conditions.
8. The Study Partners should take additional steps in subsequent studies to further develop pedestrian and bicycle accommodations within the planned corridors so that safety is addressed on segments as well as at nodes/intersections for other modes. In addition, designs and land uses should be planned to accommodate transit where it is applicable.
9. The Study Partners need to consider strategies to reducing demand for access to the regional system. With future planning, the City of Eagan and Inver Grove Heights should promote mixed land uses with integrated pedestrian/bicycle facilities that encourage and increase internal trips and decrease regional peak hour trips. In addition, TDM requirements should be considered for higher trip generation land uses to reduce peak hour demand on the roadway system, as transit service opportunities are realized in this area of Dakota County. As part of this effort, the Study Partners should also look at land uses and their role in supporting transit service. In particular, it should further define/develop transit's role in this area given the potential transitway alignment identified in the Robert Street Corridor Feasibility Study. This alignment is consistent with the proposed Argenta Trail realignment and interchange location in Alternative "E" (see Figure 3).



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Figure 3

10. Mn/DOT, Dakota County, Eagan and Inver Grove Heights should conduct additional system planning work south of TH 55 to define and reconcile future roadway connections between the RRSVS and the Rosemount/Empire/UMore Transportation System Study.



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Next Steps

The study recommendations include additional studies, processes and activities to move the planning process forward. The focus of these activities is to provide more detailed information to agencies, property owners and other stakeholders as it becomes available and to provide a solid framework for implementation. The following have been extracted from the recommendations and repeated in one location.

1. The improvements included in the system vision should be incorporated into appropriate capital improvement programs as the following occurs:
 - As safety and/or operational issues occur on the existing transportation system
 - As opportunities arise to coordinate with development or other outside funding sources
 - As necessary environmental reviews/studies are completed
 - Specific to the interchange, all necessary supporting roadway system connections must be in place prior to, or at the time of, building a new access to I-494. Through this study, the main benefit of a new interchange lies in its ability to accommodate regional trips. The system must be in place to allow the interchange to support this need.
2. All system improvements included in these recommendations should be reflected in the appropriate agency planning documents, including:
 - City of Eagan and City of Inver Grove Heights Comprehensive and Transportation Plans
 - Dakota County Transportation Plan
 - Dakota County Plat Review Needs Map
3. The cities of Eagan, Inver Grove Heights, Mendota Heights, and Sunfish Lake, and Dakota County should submit these recommendations to be included in future updates of the Metropolitan Council's TPP and Mn/DOT's TSP.
4. An Interchange Warrant Analysis has been completed and submitted to FHWA, through Mn/DOT, to obtain formal feedback on the additional access on I-494 as shown in Alternative "E". Depending on FHWA evaluation and comments, a more detailed and comprehensive operations and safety analysis of the I-494 facility will be required (see Recommendation #4).
5. A Highway Interchange Request should be made to the Metropolitan Council prior to beginning the FHWA's Interchange Access Request process, if FHWA agrees to proceed to the next step.

6. All agencies should continue to pursue a variety of funding sources, both public and private. As one example, the City of Eagan has previously instituted a system to generate funds for future transportation improvements in Northeast Eagan. This type of funding should be considered in Northwest Inver Grove Heights. In addition, they should work to identify projects that could be incorporated into Capital Improvement Programs.
7. The City of Inver Grove Heights should work with Dakota County to further define specific property acquisitions and detailed access strategies for all arterial and collector routes, including an access management plan for Argenta Trail between I-494 and TH 55.
8. The Cities of Mendota Heights and Sunfish Lake should continue discussions with Dakota County to agree upon future improvements to Delaware Avenue north of I-494, if the need arises based on actual traffic conditions.
9. Subsequent studies should be completed to provide safer pedestrian and bicycle accommodations within the planned corridors, as well as the intersections. In addition, designs and land uses should be planned to accommodate transit where it is applicable.
10. The Study Partners need to consider strategies to reducing demand for access to the regional system. With future planning, the City of Eagan and Inver Grove Heights should promote mixed land uses with integrated pedestrian/bicycle facilities that encourage and increase internal trips and decrease regional peak hour trips. In addition, TDM requirements should be considered for higher trip generation land uses to reduce peak hour demand on the roadway system, as transit service opportunities are realized in this area of Dakota County. As part of this effort, the Study Partners should also look at land uses and their role in supporting transit service. In particular, it should further define/develop transit's role in this area given the potential transitway alignment identified in the Robert Street Corridor Feasibility Study.
11. Dakota County, Eagan and Inver Grove Heights should conduct additional system planning work south of TH 55 to define and reconcile future roadway connections to the south of TH 55 to bring consistency between the RRSVS and the Rosemount/Empire/UMore Transportation System Study.