

Final Report for

Rosemount / Empire / Umore Area Transportation System Study

In Collaboration with

Dakota County, Rosemount, Empire Township, University of Minnesota
&
Minnesota Department of Natural Resources



June 2010

Prepared by:



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- Attachment A: Purpose/Need for a Study and Expected Study Outcomes
- Attachment B: Public Open House Summaries and Select Comments
- Attachment C: Evaluation Criteria Back-up Information

Executive Summary

Dakota County, the City of Rosemount, Empire Township, the University of Minnesota, the Minnesota Department of Natural Resources (DNR), and the Minnesota Department of Transportation (Mn/DOT) have spent several months planning for the future transportation needs for a study area that includes UMore Park, Vermillion Highlands, and a new regional park. The end result is a recommended transportation system that will meet the needs of the travelling public into the future and allow for phased implementation, in response to future development.

Prior to implementation, this study will serve as a planning tool for communities and agencies with interests in the area. The recommendations will assist Dakota County, the City of Rosemount, Empire Township, the University of Minnesota, and the Minnesota Department of Natural Resources (Mn/DNR) with prioritizing future improvements, coordinating roadway system needs with development and land use needs, and with right-of-way preservation.

The recommendations of this study include:

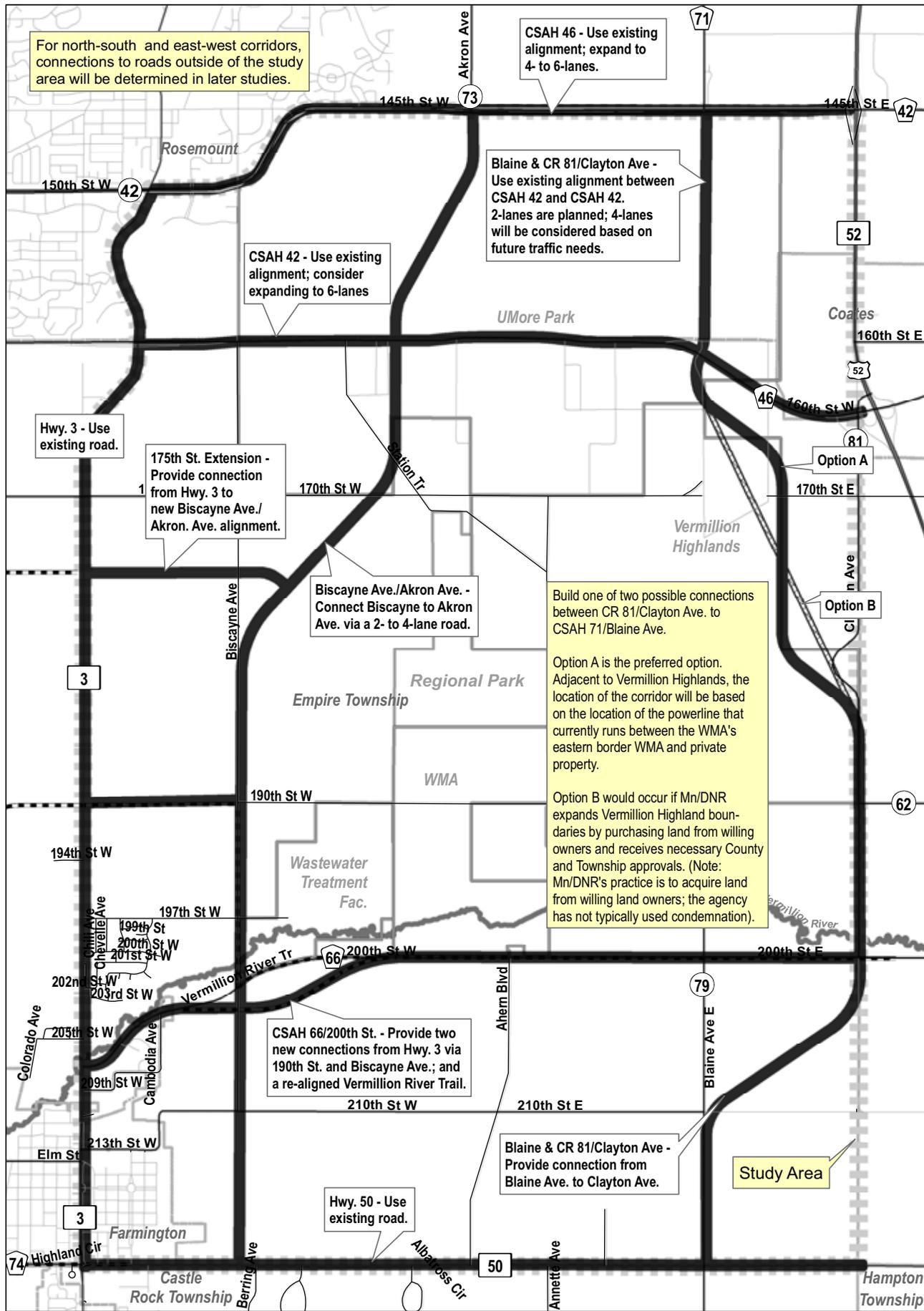
- The regional arterial road network as shown on the *Recommended Regional Arterial Corridors* map will serve as a planning tool for this area as it develops. This recommended system will be used by study partners and surrounding communities as land use and transportation plans are implemented.
- The roadway system recommended in this study will form a “back bone” arterial network. This network was developed using the best information available for a long-term corridor planning study. The recommended corridors may be refined in response to changing circumstances and new information. Any refined corridors would undergo the same level of evaluation as was completed for the recommended corridors.

Each of the agencies involved should update comprehensive and/or transportation plans to properly reflect the study recommendations and subsequent planning activities. This includes the Concept Plan for UMore Park.

Implementation of the recommended regional arterial corridors in the study area will be coordinated with development as it occurs. Any activities/changes made within Vermillion Highlands should also take the recommended regional arterial corridors into account. Through these processes, the following Transportation System Summary recommendations should be considered:

Recommended Transportation System Summary			
Corridor	Existing # of Regional Lanes	Recommended # of Regional Lanes	Required # of New Lanes
East/West Corridors			6- to 8-Lanes
CSAH 42	4-lanes	4- to 6-lanes	0- to 2-lanes
CSAH 46	2-lanes	4- to 6-lanes	2- to 4-lanes
CSAH 66/200 th St.	2-lanes	2-lanes	None
Hwy. 50	2-lanes	2-lanes	None
North/South Corridors			4- to 6-Lanes
Hwy. 3	2-lanes	2-lanes	None
Biscayne Ave. & CR 73/Akron Ave.	N/A (not a regional road)	2- to 4-lanes	0- to 2-lanes
Blaine Ave. & CR 81/Clayton Ave.	N/A (not a regional road)	2-lanes, possible 4-lanes where needed	0- to 2-lanes

In future months and years, this study's team should continue to address transportation network needs for this area; including a local road network, future greenway and bicycle/pedestrian connections, and transit connections. As a complete transportation network for this area continues to be developed, the study team will continue to use a stakeholder based approach to develop a complete transportation system; this includes working with additional partners as appropriate.



For north-south and east-west corridors, connections to roads outside of the study area will be determined in later studies.

CSAH 46 - Use existing alignment; expand to 4- to 6-lanes.

Blaine & CR 81/Clayton Ave - Use existing alignment between CSAH 42 and CSAH 42. 2-lanes are planned; 4-lanes will be considered based on future traffic needs.

CSAH 42 - Use existing alignment; consider expanding to 6-lanes

Hwy. 3 - Use existing road.

175th St. Extension - Provide connection from Hwy. 3 to new Biscayne Ave./Akron. Ave. alignment.

Biscayne Ave./Akron Ave. - Connect Biscayne to Akron Ave. via a 2- to 4-lane road.

Build one of two possible connections between CR 81/Clayton Ave. to CSAH 71/Blaine Ave.

Option A is the preferred option. Adjacent to Vermillion Highlands, the location of the corridor will be based on the location of the powerline that currently runs between the WMA's eastern border WMA and private property.

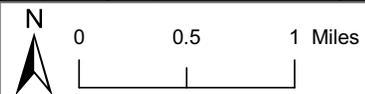
Option B would occur if Mn/DNR expands Vermillion Highland boundaries by purchasing land from willing owners and receives necessary County and Township approvals. (Note: Mn/DNR's practice is to acquire land from willing land owners; the agency has not typically used condemnation).

CSAH 66/200th St. - Provide two new connections from Hwy. 3 via 190th St. and Biscayne Ave.; and a re-aligned Vermillion River Trail.

Blaine & CR 81/Clayton Ave - Provide connection from Blaine Ave. to Clayton Ave.

Hwy. 50 - Use existing road.

Study Area



- Study Boundary
- Previously Planned County Corridor
- Recommended, Regional Corridors

1.0 Introduction

This report documents the process completed by the Rosemount/Empire/UMore Area Transportation System Study (the study) Project Management Team (PMT) to plan for the future transportation needs of the study area, which includes the future UMore Park and Vermillion Highlands. The end result is a recommended transportation system that will meet the needs of the travelling public into the future and allow for phased implementation, in response to future development.

Prior to implementation, this study will serve as a planning tool for communities and agencies with interests in the area. The recommendations contained in this report will assist Dakota County, the City of Rosemount, Empire Township, the University of Minnesota, and the Minnesota Department of Natural Resources (Mn/DNR) with prioritizing future improvements, coordinating roadway system needs with development and land use needs, and also facilitate right-of-way preservation.

1.1 Study Area

Figure 1 shows the study area and its regional orientation. Located within southern Dakota County, this area is now on the edge of suburban development of the Twin Cities Metropolitan Area. Parts of Rosemount and Empire Township are within the study area. The Metropolitan Council forecasts that the population of these two communities will reach a combined 45,000 by 2030, up from 16,500 in 2000. Much of this growth will come from the 5,000-acre UMore Park development, planned to be completed in 25 to 30 years.

The growing communities of Farmington, Lakeville, and Apple Valley are north and west of the study area; the communities of Hastings, Northfield, and Cottage Grove, which have recently experienced substantial population growth, are located to the south and east. Given these circumstances and future land use plans at UMore Park, this area is located within an expanded Twin Cities Metropolitan Area, despite the current predominance of rural agricultural land uses and undisturbed natural areas.

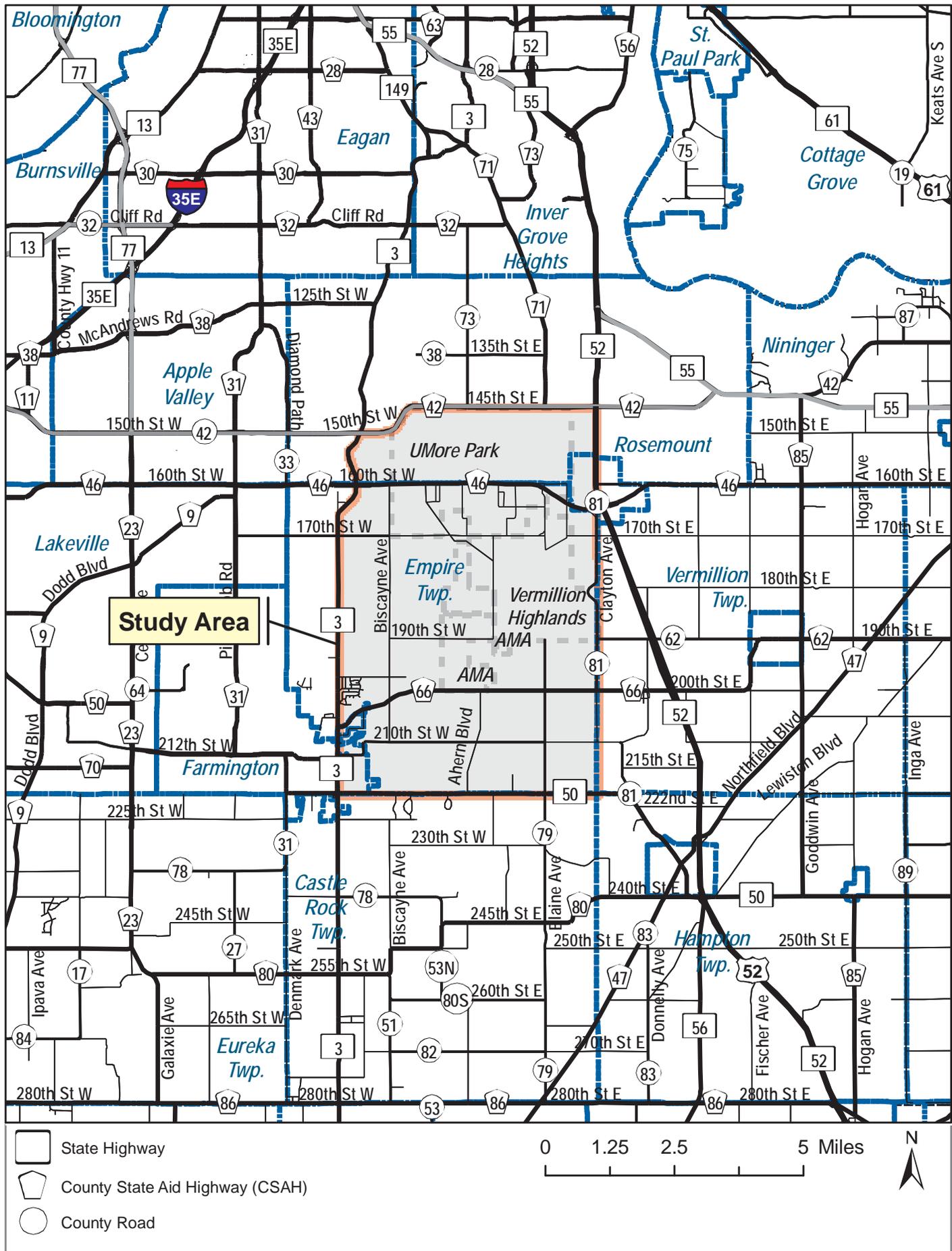
1.2 Study Background

1.2.1 Purpose of Study and Anticipated Study Outcomes

Prior to starting this study, the PMT developed a *Purpose/Need for a Study*. In summary, this document notes that it is timely for the PMT and the general public to:

...develop a plan that addresses transportation issues in this area of Dakota County in a coordinated and balanced manner with area land use development plans. Such a plan will allow these agencies to develop a transportation system together over time that will result in safe and efficient travel in the area as cost-effectively as possible, while at the same time developing land use plans in the area that will accomplish the objectives of the City of Rosemount, Empire Township, the University of Minnesota, the Department of Natural Resources, and Dakota County.

The *Purpose/Need for a Study* and the *Expected Study Outcomes* documents, which were developed by the PMT, are included in Attachment A.



Rosemount/UMore/Empire Area
Transportation System Study

Figure 1
Study Area Location

1.2.2 Relation to Other Studies & Development Planned within Study Area

The study area is currently the subject of a great deal of land use and preservation planning. The intensity of development proposed for this land ranges from large tracts of open spaces within Vermillion Highlands and Dakota County's Regional Park to relatively dense planned urban development within UMore Park and existing and future development in City of Rosemount and Empire Township. As such, this study was developed with consideration of the transportation and land use elements of the following documents (listed chronologically):

- Dakota County 2025 Transportation Plan (July 2004)
- Creating Common Ground, A report to the Minnesota Legislature (January 2007)
- Dakota County Parks, Lakes, Trails and Greenways Vision, 2030 (2007)
- Draft Rosemount Transportation Plan (April 2008)
- Draft of Concept Master Plan for Vermillion Highlands (June 2008)
- City of Rosemount Draft 2030 Comprehensive Land Use Plan (August 2008)
- Empire Township 2030 Future Land Use Map and data (March 2009) and Sewer Staging (June 2008)
- Concept Master Plan for the University of Minnesota's New Sustainable Community at UMore Park (January 2009)

It is noteworthy that the Dakota County 2025 Transportation Plan (see Figure T-6 Dakota County Highway Capacity Deficiencies, 2025) currently includes a direct connection between CR 79 and CSAH 71 via Blaine Avenue. This connection was planned before the creation of Vermillion Highlands. This study was undertaken in part to re-consider this alignment as it would bisect the newly created Vermillion Highlands.

1.2.3 Existing and Forecast Traffic Volumes and Regional Transportation System Needs

Figure 2 shows existing and future (year 2025 or 2030, depending on the data sources noted on the figure) daily traffic volumes for roadways in the study area. Much of the growth in traffic is anticipated to come from planned development within UMore Park and the City of Rosemount.

Traffic forecasts show that future demand for north-south roads will be 50,500 vehicles per day, which will require six- to eight-lanes on regional roads.¹ An additional four to six north-south lanes are needed within the study area to meet future traffic demand.² Currently, this area includes one regional, north-south roadway—Highway 3—which has two to three lanes depending on location. Based on anticipated traffic, an additional four to six north-south regional highway lanes are needed to meet future demand.

¹ The number of lanes needed to accommodate future traffic volumes in both the north-south and east-west directions are based on the assumption that regional, arterial roadways would accommodate an average of 7,000-8,000 vehicles per lane per day. These volumes are consistent with the average, daily capacities for arterials assumed in the UMore Park Development Study. Design capacities are determined based on the relationship between level of service and average daily traffic volumes. Assumptions for this analysis include a maximum flow rate of 800 vehicles/hour/lane and LOS D for arterials.

² A range of the number of north-south and east-west lanes on regional roadways are based on planning level traffic forecasts (versus design level forecasts). This range allows for flexibility in responding to traffic needs as land use planning for this area evolves and is implemented.

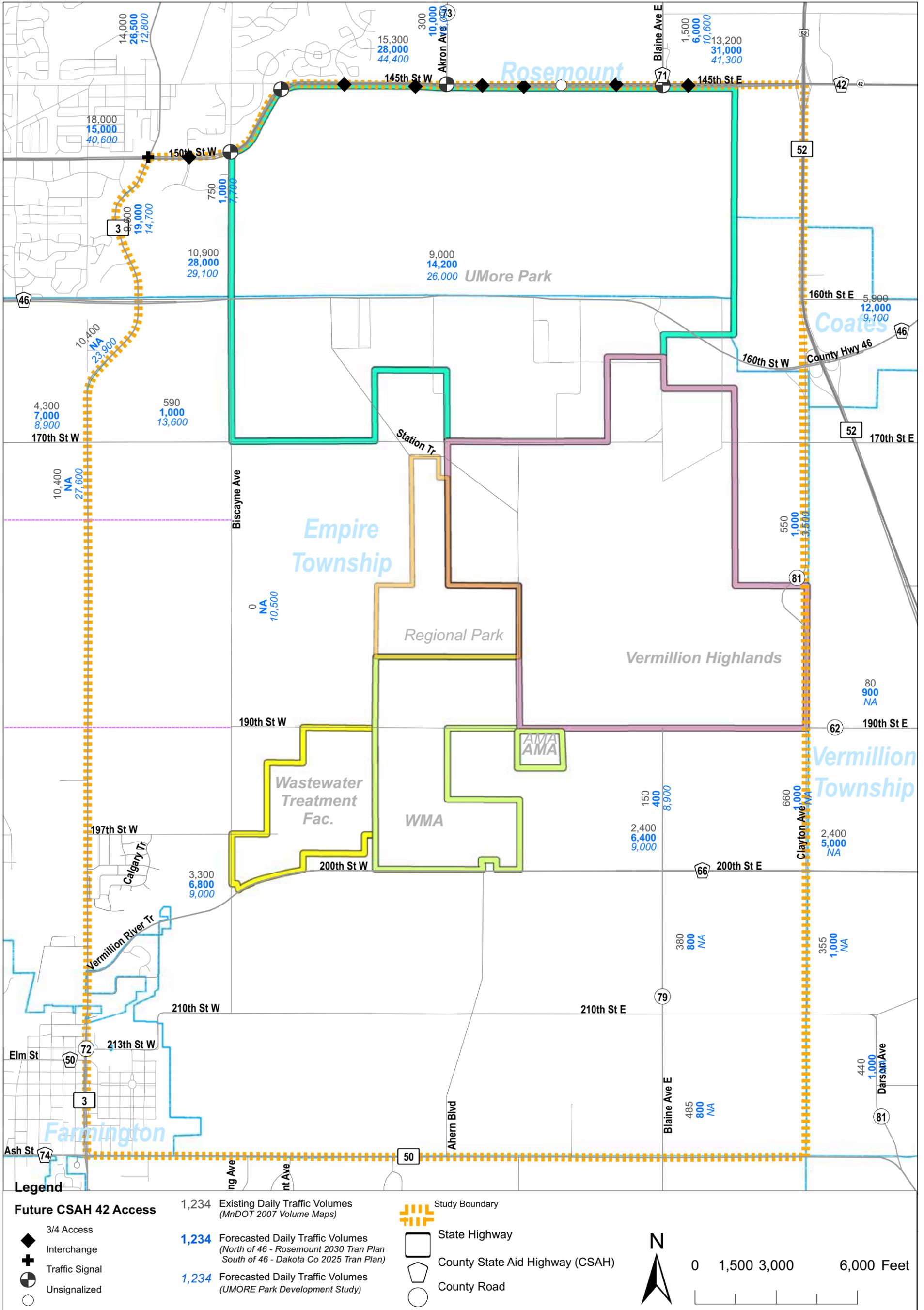


Figure 2 Study Area Daily Traffic Volumes

Traffic forecasts show that in the future, east-west roadways will be used by over 100,000 vehicles per day, which would require 12-14 lanes on regional roadways. The study area now includes three regional roadways: CSAH 42 (4-lanes), CSAH 46 (2-lanes), and Highway 50 (2 lanes); for a total of eight existing east-west, regional roadway lanes. An additional four to six east-west regional highway lanes are needed to meet future demand.

1.3 Supporting Roadway Network

1.3.1 Roadway Functional Classification Guidelines

Developed areas are best served with a classified system of roads where a small fraction provides high mobility and the majority of the roads provide access to adjacent land. All roads can be categorized into one of these categories:

- **Principal Arterials**—Primarily provide mobility and speed for the long, uninterrupted distances with controlled access.
- **Minor Arterials**—Provide a combination of mobility and access with reasonable speed for some extended distance, with some access control.
- **Collectors**—Collect traffic from local roads, and providing connection to land with little or no through movements; usually function at lower speeds and for shorter distances.
- **Local Streets**—Provide access to land with little or no through movement; includes all roads not classified as arterials or collectors.

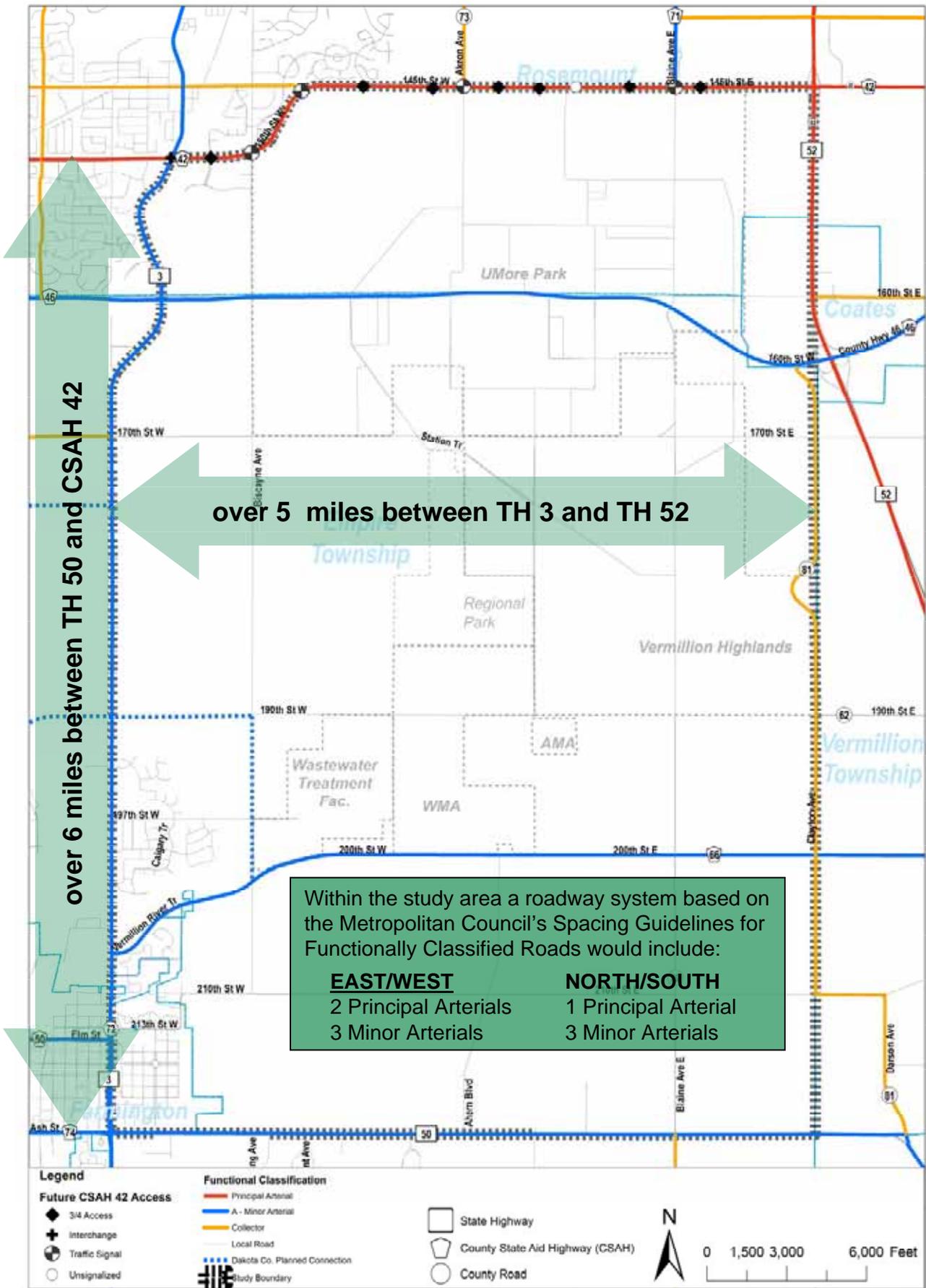
Table 1 provides the Metropolitan Council’s roadway spacing guidelines, which aid in the planning of future transportation systems within developed and developing areas.

Land Use Characteristics	Principal Arterials	Minor Arterials	Collectors	Local Streets
Developed Areas	2 to 3 miles	¼ to ½ mile	⅛ to ½ mile	As needed to access land uses
Developing Areas	3 to 6 miles	1 to 2 miles	½ to 1 mile	
Rural Areas	6 to 12 miles	4+ miles	As needed to access land uses	

Source: Metropolitan Council, Metropolitan Development Guide, Appendix F and Federal Highway Administration, Highway Functional Classification

1.3.2 Existing Roadway Network Functional Classification

Figure 3 shows the location, spacing, and functional classification of highways in the study area. The existing road system, with highways spaced at intervals of one-mile or more, provides adequate levels of mobility for existing rural land uses and relatively low levels of commuting. The study area includes three east-west arterials (CSAH 42, CSAH 46, and Highway 50) and one north-south arterial (Highway 3). The Metropolitan Council’s guidelines for a functionally classified road system indicate that the study area would include a total of five east-west and four north-south arterials. This means there is currently is a shortage of roadways to meet future demand in this developing area.



The existing rural system is not robust enough to reasonably serve the trips that would be generated by the higher density urban development planned in UMore Park, Rosemount, and Farmington, or other nearby areas. The existing transportation system will need to be upgraded to accommodate development, population growth, and increased commuting levels between this area and employment centers within the Twin Cities Metropolitan Area. The likely consequence of an under built transportation system will be substantial increases in traffic on the few available roads.

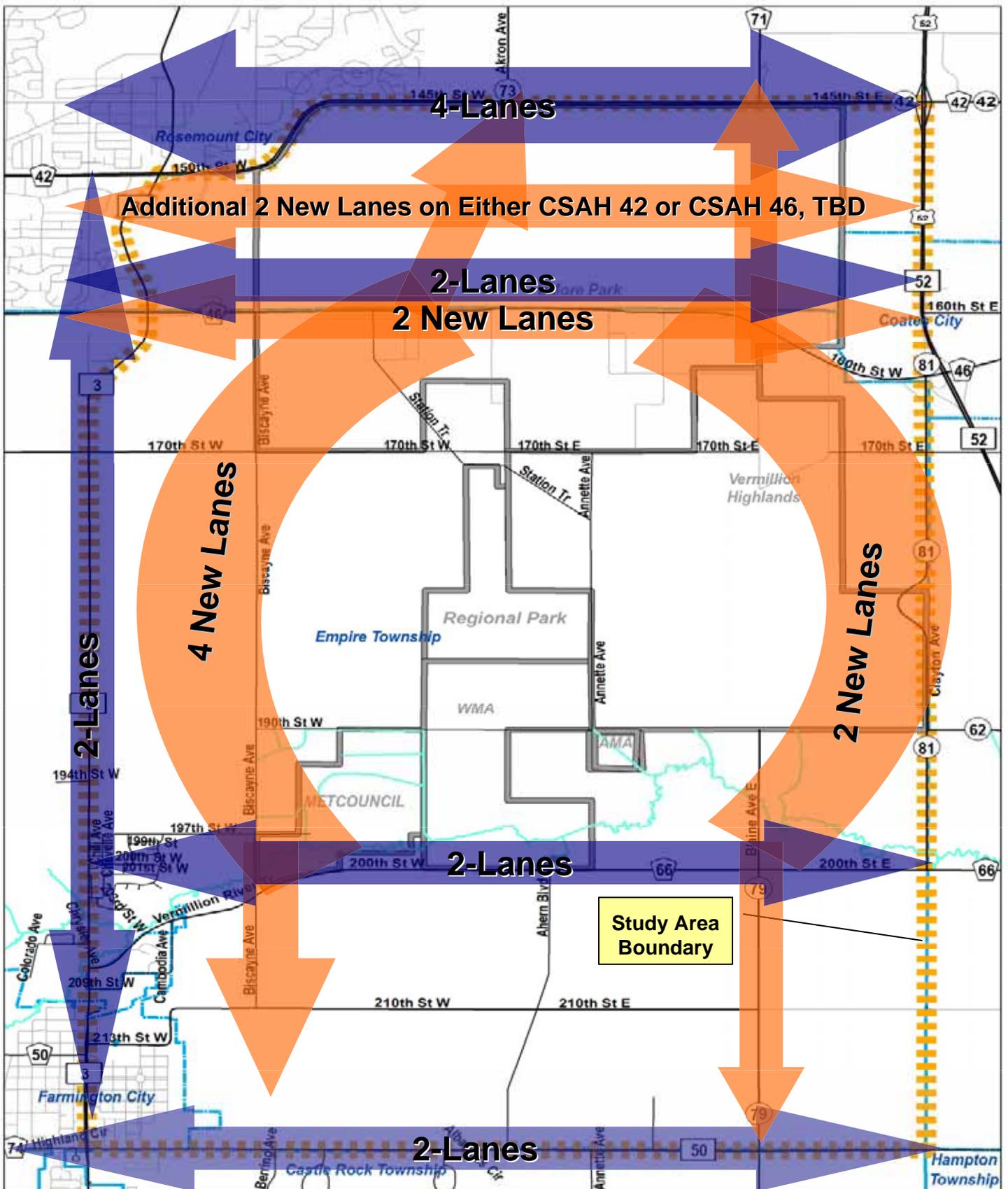
1.3.3 Recommended General Regional Transportation System (Not Specific Corridor Alignments)

As noted above, a regional road system based on the Metropolitan Council’s roadway spacing guidelines would include:

- **East/West Roadways:** two principal arterials and three minor arterials
- **North/South Roadways:** one principal arterial and three minor arterials

Based on these basic traffic capacity needs, the PMT developed a recommended transportation system—package of corridors (not specific alignments). Figure 4 shows these corridors and the number of lanes that would meet anticipated future traffic needs. This recommended system would enhance the arterial network by providing corridors that connect to the regional network. Table 2 describes what would be included in the regional transportation system.

TABLE 2 Recommended Transportation System Summary				
Corridor	New Right-of-Way (ROW) Required?	Existing # of Regional Lanes	Recommended # of Regional Lanes	Required # of New Lanes
East/West Corridors				6- to 8-Lanes
CSAH 42	Possible—Existing CSAH 42 includes 150’ ROW; more ROW needed if lanes are added	4-lanes	4- to 6-lanes	0- to 2-lanes
CSAH 46	Yes—Existing CSAH 46 includes approx. 66’ ROW	2-lanes	4- to 6-lanes	2- to 4-lanes
CSAH 66/200 th St.	Yes—Existing CSAH 66 includes approx. 66’ ROW	2-lanes	2-lanes	None
Hwy. 50	No—Currently a Mn/DOT highway; no jurisdictional change anticipated	2-lanes	2-lanes	None
North/South Corridors				4- to 6-Lanes
Hwy. 3	No—Currently a Mn/DOT highway; no jurisdictional change anticipated	2-lanes	2-lanes	None
Biscayne & Akron Aves.	Yes— Existing CRs include 66’ ROW	N/A (not a regional road)	2- to 4-lanes	0- to 2-lanes
Blaine Ave. and/or CR 81/Clayton Ave.	Yes— Existing CRs include 66’ ROW	N/A (not a regional road)	2-lanes, consider 4-lanes where needed	0- to 2-lanes



Future traffic volumes indicate that the study area will need 6-8 north-south lanes and 12 to 14 east-west lanes to operate at an acceptable level (LOS D/E). This graphic shows the system that has been recommended to achieve these capacity goals.

4-Lane = existing regional road and # of lanes
4-Lane = potential future regional road and # of lanes
 Note: Lines representing lanes do not infer any particular alignment.

2.0 Study Phases, Schedule, and Stakeholder Involvement

2.1 Study Phases and Schedule

The study began in January 2009 and ended in December 2009; it was divided into phases, which are shown on the study schedule (Figure 5) along with the timing of decision points, key meetings, and open houses.

2.2 Study Team and Public Involvement

2.2.1 Project Management Team (PMT)

Figure 6 shows the communities and agencies that served on the PMT and the group's responsibilities. This group developed the recommended transportation system. Throughout the course of this study, the full PMT met ten times, as shown on the project schedule.

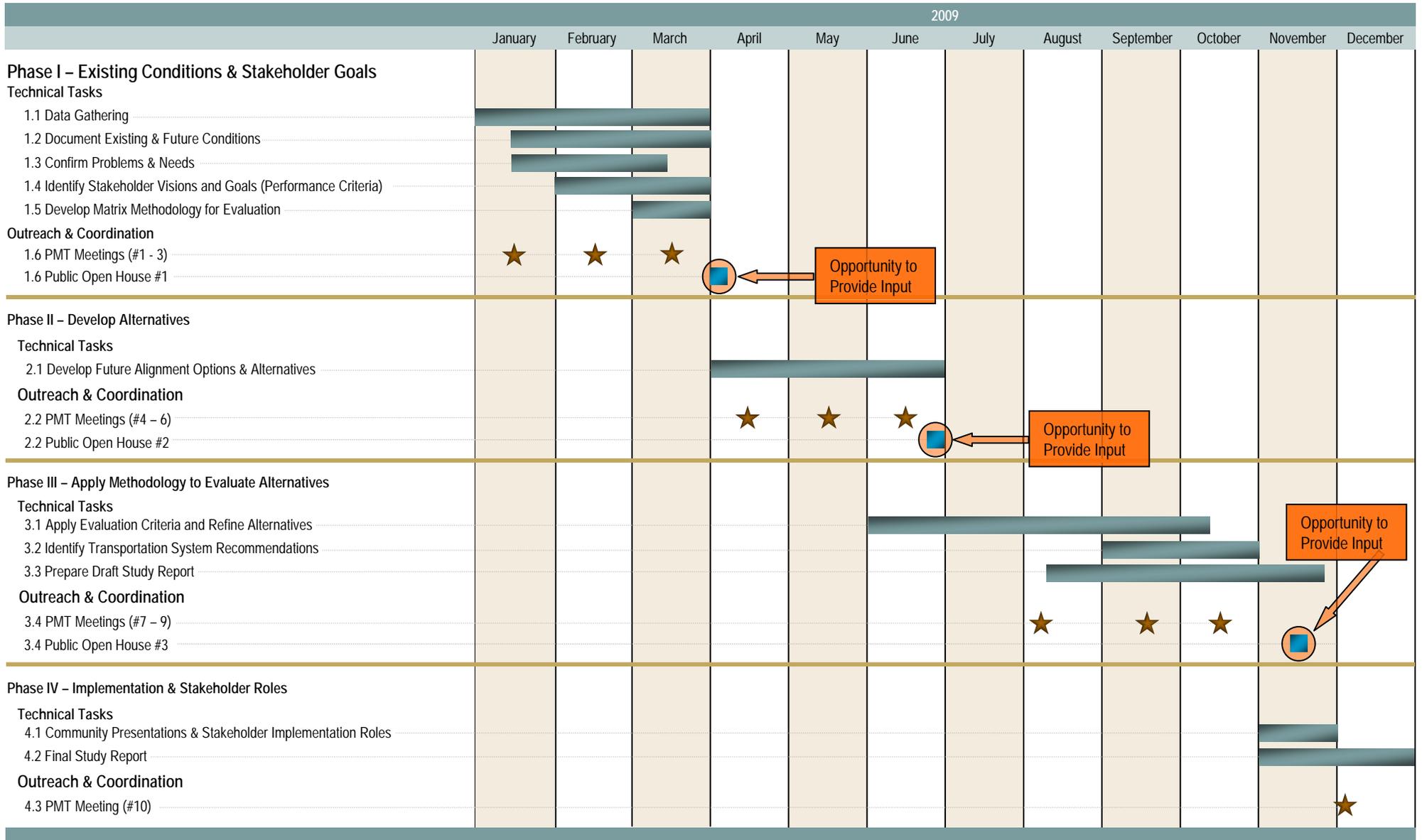
2.2.2 Public Involvement

Three public open houses were held during which the latest study developments were shared and input was obtained from the public. All open houses were held during the late afternoon and early evening at the Rosemount Community Center. Table 3 provides the dates and key objectives of each open house:

TABLE 3
Open House Dates and Key Objectives

Open House Date	Key Objectives
1. April 1, 2009	Develop universe of transportation corridor options and identify issues to assist with developing evaluation criteria
2. June 29, 2009	Review universe of corridor options and evaluation criteria
3. November 12, 2009	Review recommended regional roadway system and identify any implementation issues

Comments received at open houses and throughout the duration of the study help the PMT identify community values and goals, develop a range of alternatives, and evaluate alternatives. Summaries of comments and select representative comments received from the public are included in Attachment B.



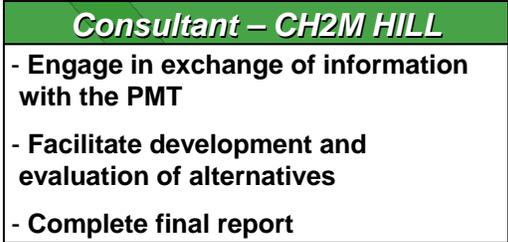
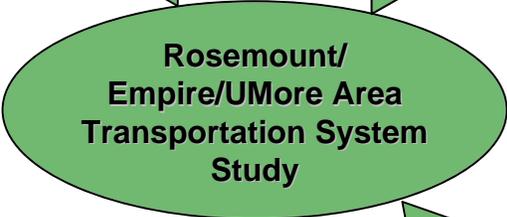
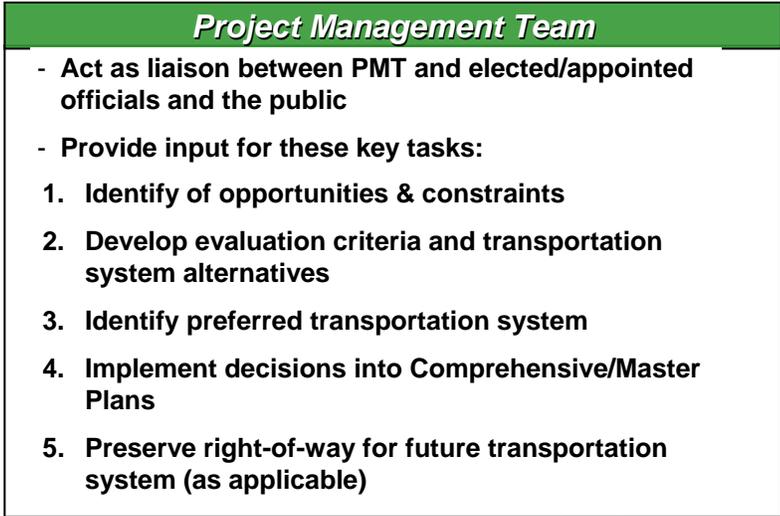


Figure 6
**Project Management Team (PMT)
Member Roles & Responsibilities**

3.0 Corridor Option Evaluation Criteria

Based on input from the PMT and the public during Open House #1, evaluation criteria were developed to compare transportation corridor options. Table 4 shows these criteria, which are grouped into three categories; this table also shows which criteria were used during each of the three levels of evaluation.

TABLE 4 Evaluation Categories and Criteria			
3 Levels of Evaluation	Community Planning & Identity	Natural Resources & Environment	Transportation
I. Fatal Flaw Screening	Is the alignment consistent with transportation and land use elements of area plans?	Does the corridor support opportunities to manage and expand recreational and natural areas?	Does the corridor provide direct connections to the County transportation system?
II. Corridor Screening	Can the corridor be implemented along with planned development?	Does the corridor avoid severances of recreational and natural areas? Private farms?	Is the alignment consistent with County design guidelines?
	Does the corridor allow for future development beyond the study area?	Does the corridor avoid right-of-way impacts?	Does the corridor provide access consistent with plans and guidelines?
		Does the corridor avoid wetland impacts?	Does the corridor provide opportunities for cost-effective implementation (e.g., re-use of existing right-of-way, roads, and bridges)?
		Does the corridor avoid impacts to threatened and endangered species, and/or cultural resources?	Would the corridor divert regional trips from local roads?
III. System Screening	Do the County roads provide adequate access to communities?	Does the County road network provide adequate access to recreational and natural areas?	Would the corridor allow for development of a multi-modal system (integration of roads with transit, trails, greenways, and wildlife corridors)?
	Does the system accommodate land use plans, including aggregate mining activities?		Would the corridor provide sufficient spacing and capacity of north/south and east/west roads to meet future demand?
	Does the system allow for development of local road network?		Would the corridor result in a significant change in travel time for re-routed alignments?

4.0 Development of Transportation Corridor Options

The initial universe of transportation corridor options was developed based on PMT input and comments received during the first public open house. The following statement from the PMT’s vision was also used as a starting point: *The road network provides connectivity and*

functional capacity reflective of the demand for transportation services in both the north-south and east-west directions.

4.1 Initial Universe of East-West Corridor Options

The universe of east-west corridor options initially developed for this study is shown on Figure 7 and summarized below.

CSAH 42 Option

- A. CSAH 42—Upgrade CSAH 42 as planned and documented in the County Transportation Plan and County Plat Map (which reflects the CSAH 42 Final Study and Amendment, and studies completed by Rosemount).

CSAH 46 Options

- B. CSAH 46—Use existing CSAH 46 alignment
- C. CSAH 46, UMore Concept—Realign CSAH 46 based on the alignment shown in the UMore Park Concept Master Plan
- D. CSAH 46 via 170th St.—Realign CSAH 46 onto new alignment and 170th St. through UMore Park (in-between Hwy. 3 and CR 81/Clayton Ave.)

170th St. Options

- E. 170th St.—Use 170th St. alignment (per public comment), extend 170th St. east of CR 79/Blaine Ave.
- F. 170th St. with Extension to Future County Hwy. and CR 81/Clayton Ave.—Extend future east-west County highway (just south of existing 170th St.) to CR 81/Clayton Ave. (near Hwy. 52/CSAH 46 intersection), via 170th St. through UMore

180th St. Option

- G. 180th St. Extension to Future County Hwy., through Park, Vermillion Highlands—Extend future east-west County highway (just south of 170th St.) to Hwy. 52 via new 180th St. alignment through County Park and Vermillion Highlands

CR 62/190th St. Option

- H. 190th St. Extension—Use 190th St. alignment, including new connection between Hwy. 3 and Biscayne Ave.

CSAH 66/200th St. Option

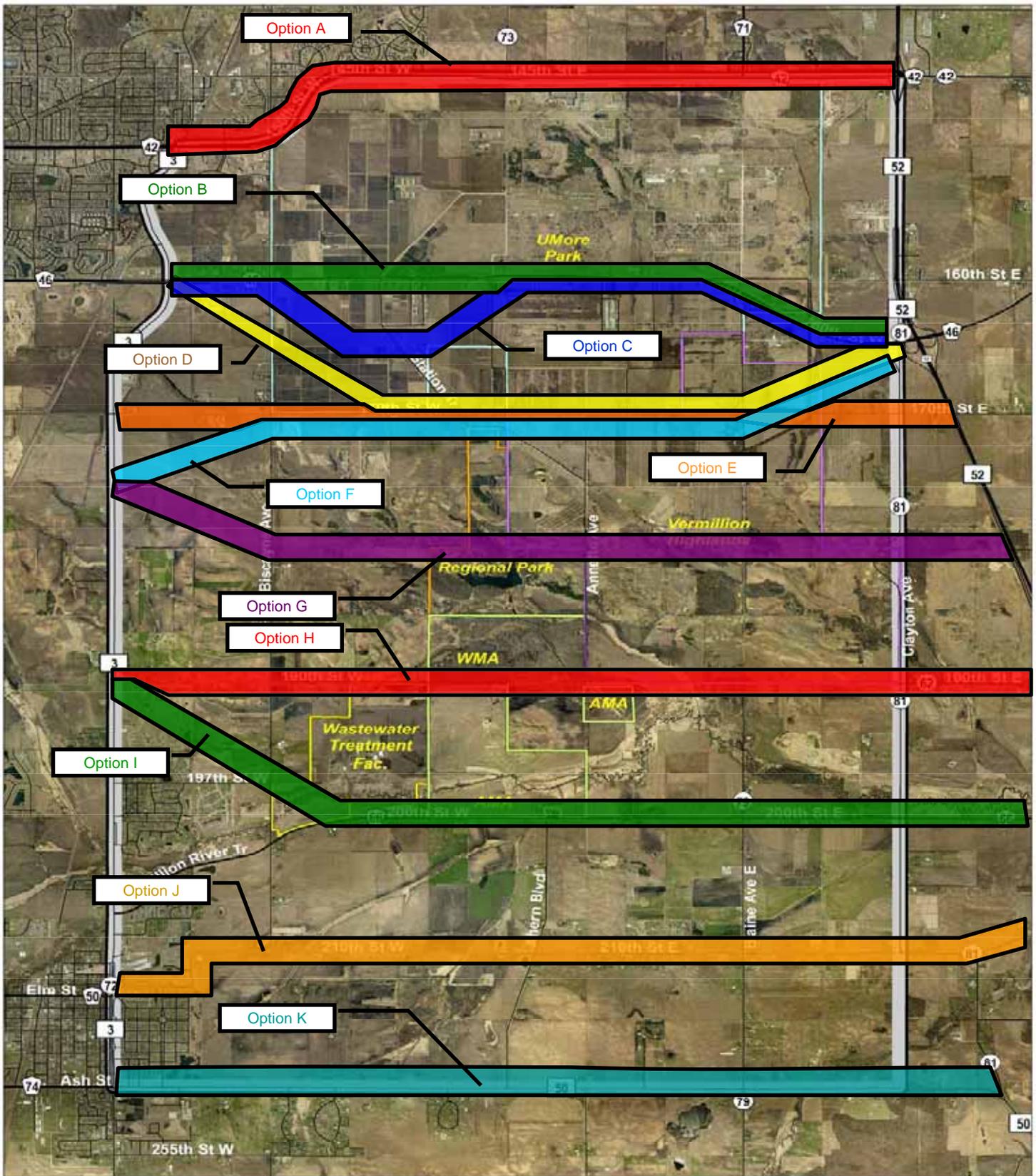
- I. 200th St.—Extend future east-west County highway (along 190th St. alignment) from Hwy. 3 to CSAH 66/200th St.; includes a new Vermillion River Bridge

210th St. Option

- J. 210th St.—Use 210th St. alignment

Hwy. 50 Option

- K. Hwy. 50—Use Hwy. 50 alignment



Rosemount/UMore/Empire Area
Transportation System Study

10/05/2009

Figure 7
Universe of Alternatives
East/West Corridor Options

4.2 Initial Universe of North-South Corridor Options

The universe of north-south corridor options initially developed for this study is shown on Figure 8; each option is summarized below.

Hwy. 3 Options

1. Hwy. 3 through Rosemount—Use Hwy. 3 alignment
2. Hwy. 3 to CR 73/Akron Ave.—Use Hwy. 3 alignment; connect to CR 73/Akron Ave. at CSAH 42

Biscayne Ave. Options

3. Hwy. 3 to Biscayne Ave.—Use Hwy. 3 alignment through Farmington; connect and use Biscayne Ave. up to CSAH 42
4. Hwy. 3 to Biscayne Ave. to CR 73/Akron Ave.—Use Hwy. 3 alignment through Farmington; connect to and use Biscayne Ave. alignment to just north of CSAH 46; connect to CR 73/Akron Ave.
5. Biscayne Ave. to CR 73/Akron Ave.—Extend Biscayne Ave. to Hwy. 50; use Biscayne Ave. corridor to just south of 170th St.; connect to CR 73/Akron Ave. via new alignment

CR 73/Akron Ave. Options

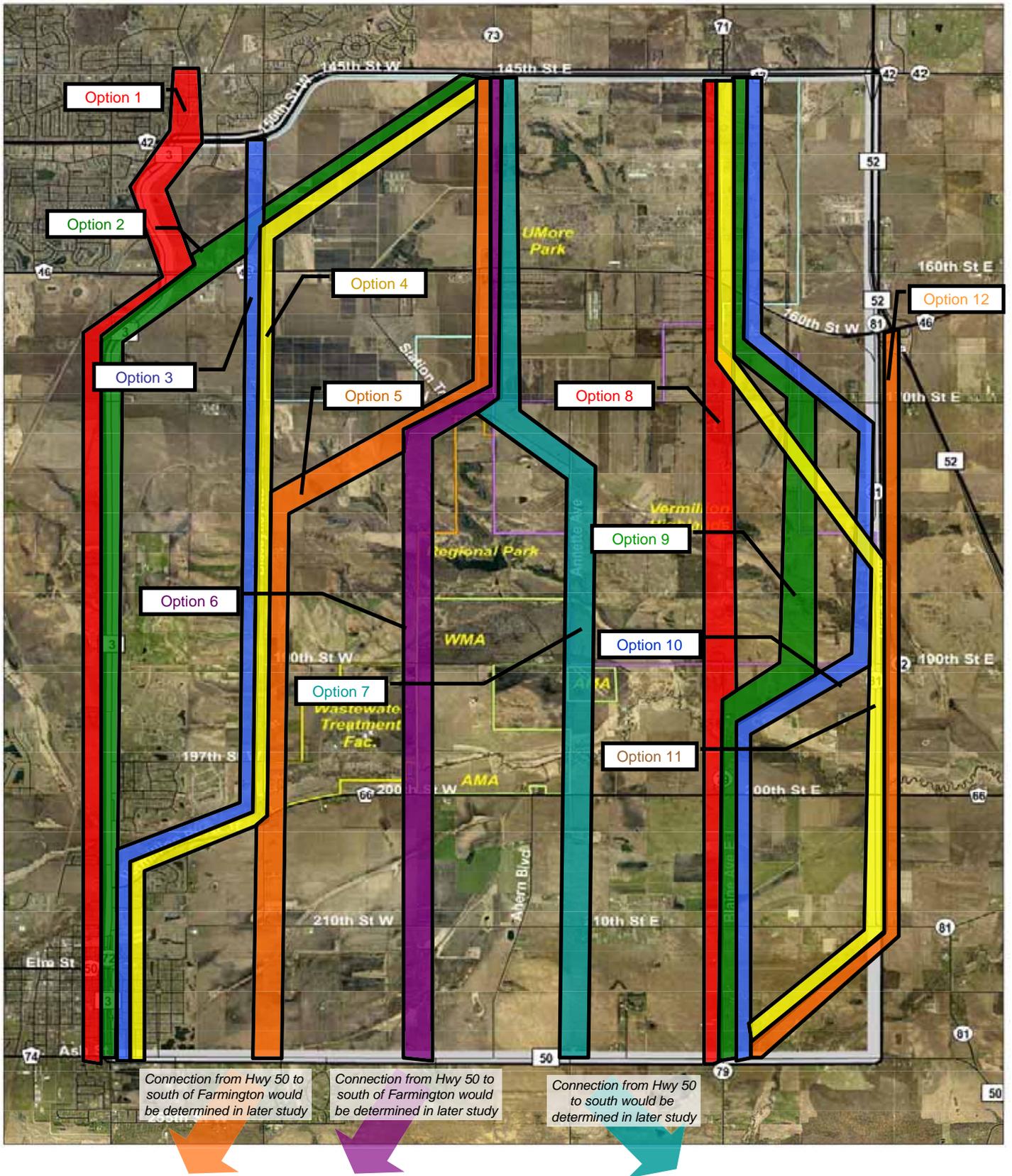
6. West Park/WMA Boundary to CR 73/Akron Ave.—Extend CR 73/Akron Ave. south from CSAH 42 to Hwy. 50, passing along western border of new County Park and WMA/AMA.
7. Annette Ave. to CR 73/Akron Ave.—Extend CR 73/Akron Ave. south from CSAH 42 to Hwy. 50, passing along Annette Ave. and eastern border of new County Park and WMA/AMA, and through part of Vermillion Highlands

CR 79/CSAH 71/Blaine Ave. Options

8. CR 79 to CSAH 71 via direct Blaine Ave. Connection—Directly connect CR 79 to CSAH 71 via Blaine Ave. (in County's current 2025 Transportation Plan)
9. CR 79 to CSAH 71 via New Connection—Use existing CR 79/Blaine Ave. alignment and Vermillion River crossing; connect to CSAH 71 via new alignment.

CR 81/Clayton Ave. Options

10. CR 79 to CSAH 71 via CR 81/Clayton Ave. (190th St. to 170th St.)—Use existing CR 79/Blaine Ave. alignment and Vermillion River crossing; connect to CR 81/Clayton Ave.; connect to CSAH 71 via new alignment
11. CR 79 to CSAH 71 via CR 81/Clayton Ave. (210th St. to north of 190th St.)—Connect to and upgrade CR 81/Clayton Ave., including possible construction of a new Vermillion River bridge (public comments at Open House #1 recommended upgrading CR 81)
12. CR 79 to TH 52/CSAH 46 via CR 81/Clayton Ave.—Connect to and upgrade CR 81/Clayton Ave., including possible construction of a new Vermillion River bridge, terminating at CSAH 46.



Rosemount/UMore/Empire Area
Transportation System Study

Figure 8
Universe of Alternatives
North/South Corridor Options

5.0 Alignment Option Evaluation and Refinement

The screening process was divided into three levels of evaluation as shown in Table 5. As part of a “Context Sensitive Solutions” (CSS) process (described more fully in Section 7.3), a fundamental component of alignment option evaluation was the initial determination of criteria. These criteria were set prior to the development of options to place priority on the stated goals and objectives of project team members. The integrity of a CSS process relies on it being driven by the priorities and objectives of all project participants.

5.1 Step 1: “Fatal Flaw” Alignment Option Evaluation

Table 5 below documents the corridors recommended for elimination from the universe of options during the first evaluation—the fatal flaw evaluation. Corridors with a “fatal flaw” were considered to be in direct conflict with key criteria identified by the project team in one of three categories: 1) community planning and identity; 2) natural resources and environment; or 3) transportation network design and function. Attachment C includes a complete description of the Fatal Flaw Analysis methodology and a table that documents the PMT’s discussion during this step—including consideration of opportunities lost by alignment dismissal, and any potential to use dismissed corridors as local roads.

	Community Planning & Identity	Natural Resources & Environment	Transportation Network Design & Function
<i>Corridors Recommended for Elimination from Universe Options</i>	<i>Is the alignment consistent with transportation and land use elements of area plans?</i>	<i>Does the corridor support opportunities to manage and expand recreational and natural areas?</i>	<i>Does the corridor provide direct connections to the County transportation system?</i>
North/South Corridors			
1. Hwy. 3 through Rosemount Improvements	No—Inconsistent with Rosemount’s Land Use and Transportation Plans.		
3. Hwy. 3 to Biscayne Ave.—Inconsistent with	No—Inconsistent with Rosemount’s Land Use and Transportation Plans		
7. Annette Ave. to CR 73/Akron Ave.	No—Inconsistent with UMore and Vermillion Highlands Plans.	No—Presents management challenges within Vermillion Highlands.	
8. CR 79 to CSAH 71 via direct Blaine Ave. connection	No—Inconsistent with UMore and Vermillion Highlands Plans Yes—Consistent with Dakota County 2025 Transportation Plan	No—Presents management challenges within Vermillion Highlands.	
12. CR 79 to Hwy. 52/CSAH 46 via CR 81/Clayton Ave.			No—Doesn’t provide adequate connection to County road system.

TABLE 5 Fatal Flaw Analysis—Findings and Corridors Eliminated from Further Consideration			
	Community Planning & Identity	Natural Resources & Environment	Transportation Network Design & Function
<i>Corridors Recommended for Elimination from Universe Options</i>	<i>Is the alignment consistent with transportation and land use elements of area plans?</i>	<i>Does the corridor support opportunities to manage and expand recreational and natural areas?</i>	<i>Does the corridor provide direct connections to the County transportation system?</i>
East/West Corridors			
E. 170 th St.			No—Doesn't provide necessary level of connectivity to County System.
G. New alignment (extension of 180 th St. alignment) through Park, Vermillion Highlands	No—Inconsistent with UMore and Vermillion Highlands Plans.	No—Impedes long-term plans for Vermillion Highlands expansion to River.	
H. 190 th St.	No—Corridor is inconsistent with County, UMore, and Vermillion Highlands Plans.	No—Impedes long-term plans for Vermillion Highlands expansion to River.	
J. 210 th St.	No—Inconsistent with Dakota County Plans.		No—Doesn't provide necessary level of connectivity to County System.

The fatal flaw analysis resulted in dismissing five north-south corridors and four east-west corridors from further consideration (see Figures 9 and 10). Corridors of note that were eliminated include all north-south and east-west options that bisect Vermillion Highlands in half. The remaining corridors were carried forward into the next level of evaluation, discussed below.

5.2 Step 2: Corridor Level Evaluation and Continued Alignment Refinement

For the second, corridor level evaluation, more defined alignments were developed for each of the remaining corridors. These alignments, shown in Figure 11, were developed for these corridors using the following design features:

- 60 mile per hour design speed³,
- 1,500 minimum curve radius, and
- 150 foot right-of-way (which would accommodate both 2-lane and 4-lane rural roadways).

³ The 60 mph design speed does not infer that the speed limit would be 60 mph; the statutory speed limit on rural roads is 55 mph. Speed studies may be necessary to determine whether the speed limit should be higher, lower, or that there should be no change from the statutory speed limits.

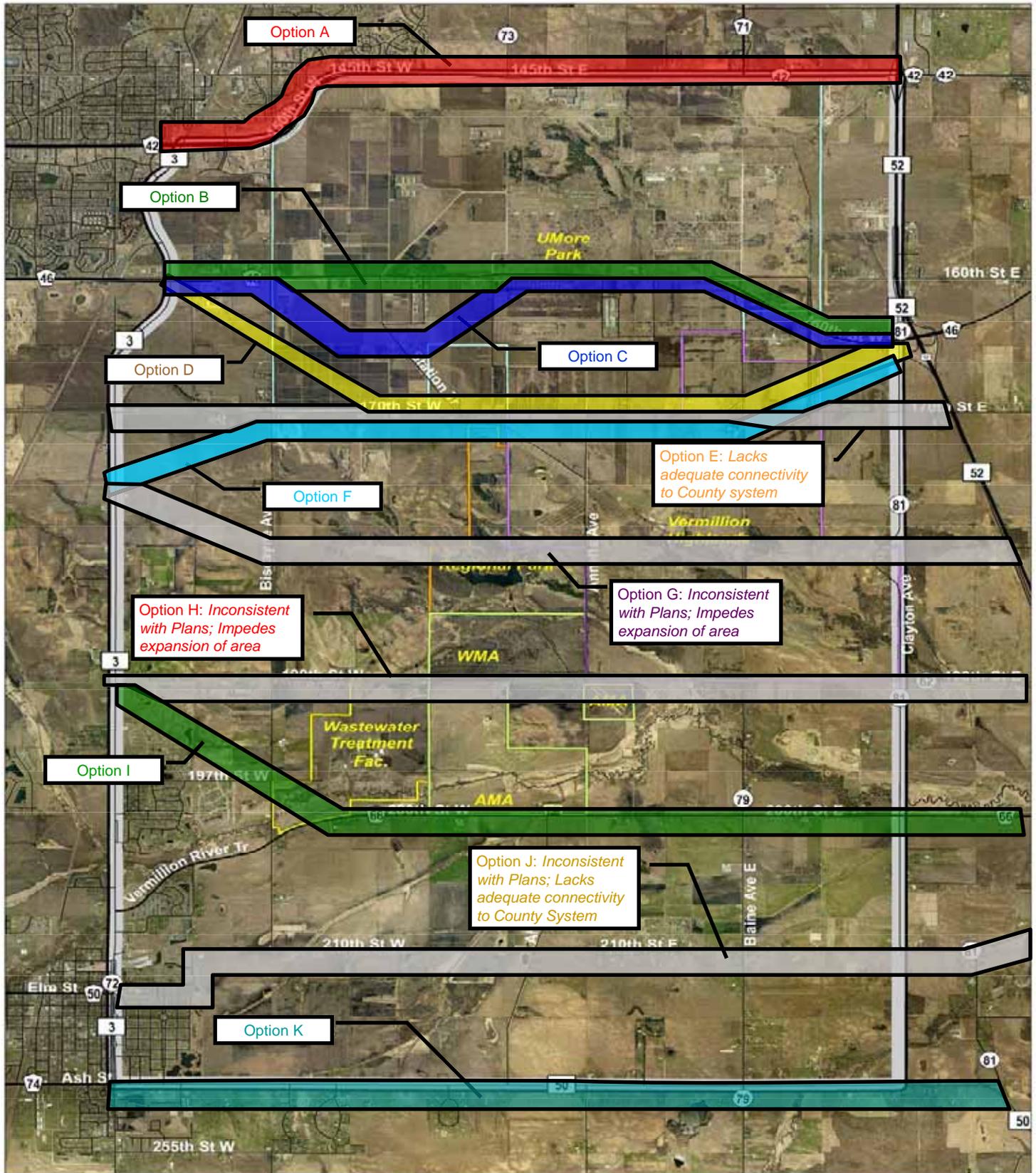
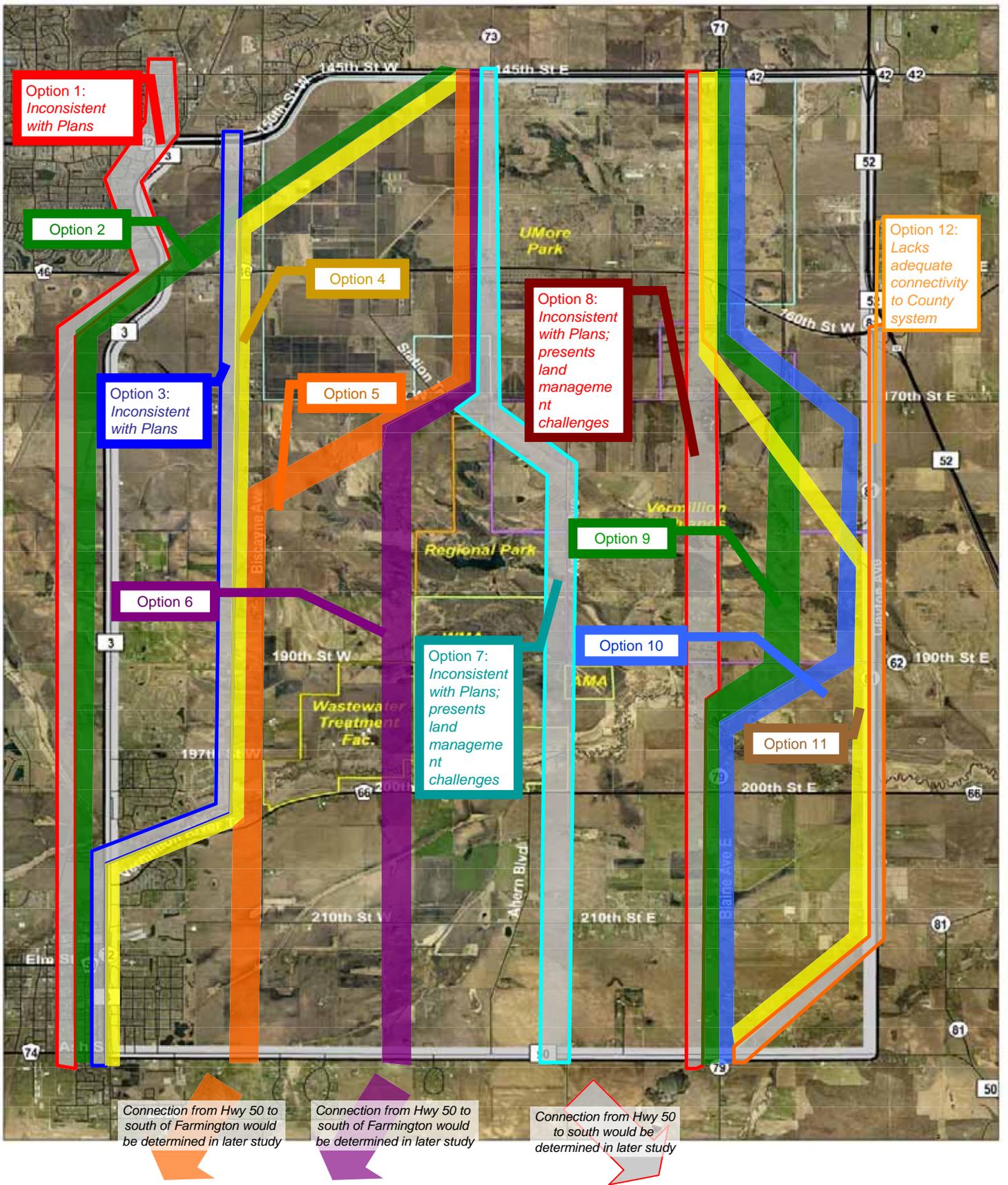
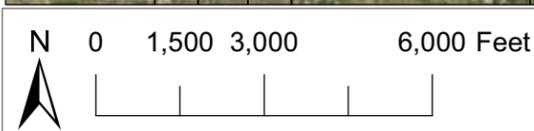
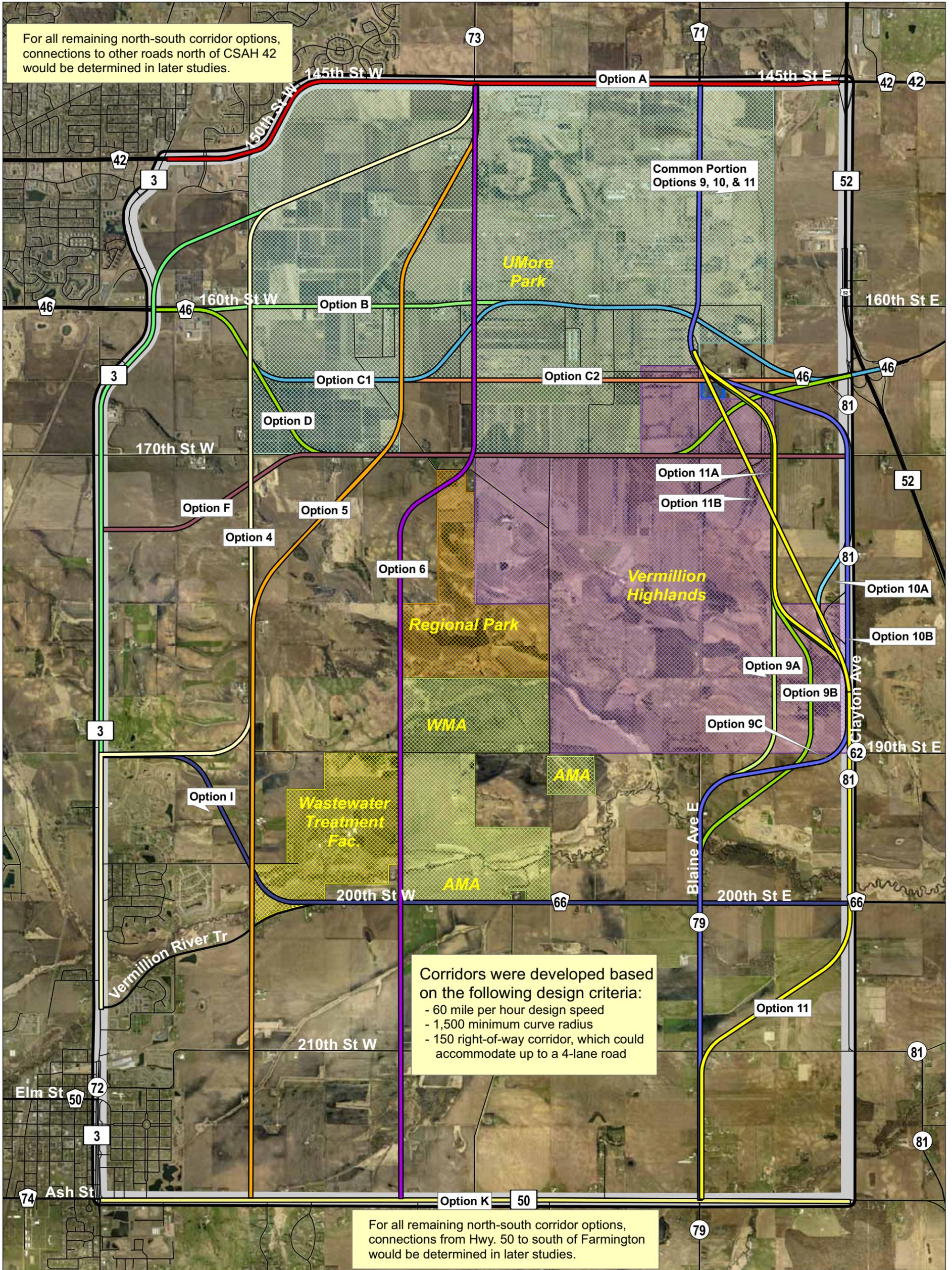


Figure 9
**East-West Corridor Options Remaining
after First Level (Fatal Flaw) Evaluation**



Rosemount/UMore/Empire Area
Transportation System Study

Figure 10
**North-South Corridor Options
Remaining
after First Level (Fatal Flaw) Evaluation**



-  State Highway
-  County State Aid Highway (CSAH)
-  County Road

Numbered transportation corridors represent north/south options; lettered corridors represent east/west options.

These corridors were then evaluated based on the criteria that had been identified for the second level of evaluation (see Table 3). The results of this evaluation are shown in Table 6. The PMT opted not to dismiss any corridor options during the second phase of evaluation. As a result, all corridor options were brought into the system level evaluation, discussed below.

This evaluation included a high level environmental resource scan that reviewed existing data related to wetlands and hydric soils; rare plants and animals; and historical and archaeological features (results shown on Table 6). Initially, this data was used to develop and then refine corridor alignments. Where reasonable, alignments were shifted to avoid known occurrences of rare plants and animals (see Figure 12) and to avoid wetlands and hydric soils (see Figure 13). As mentioned above, this evaluation relied on existing information. As project development progresses for any recommended corridor, more in-depth impact reviews—including more detailed review of contaminated properties—will be completed by responsible communities and agencies.

TABLE 6

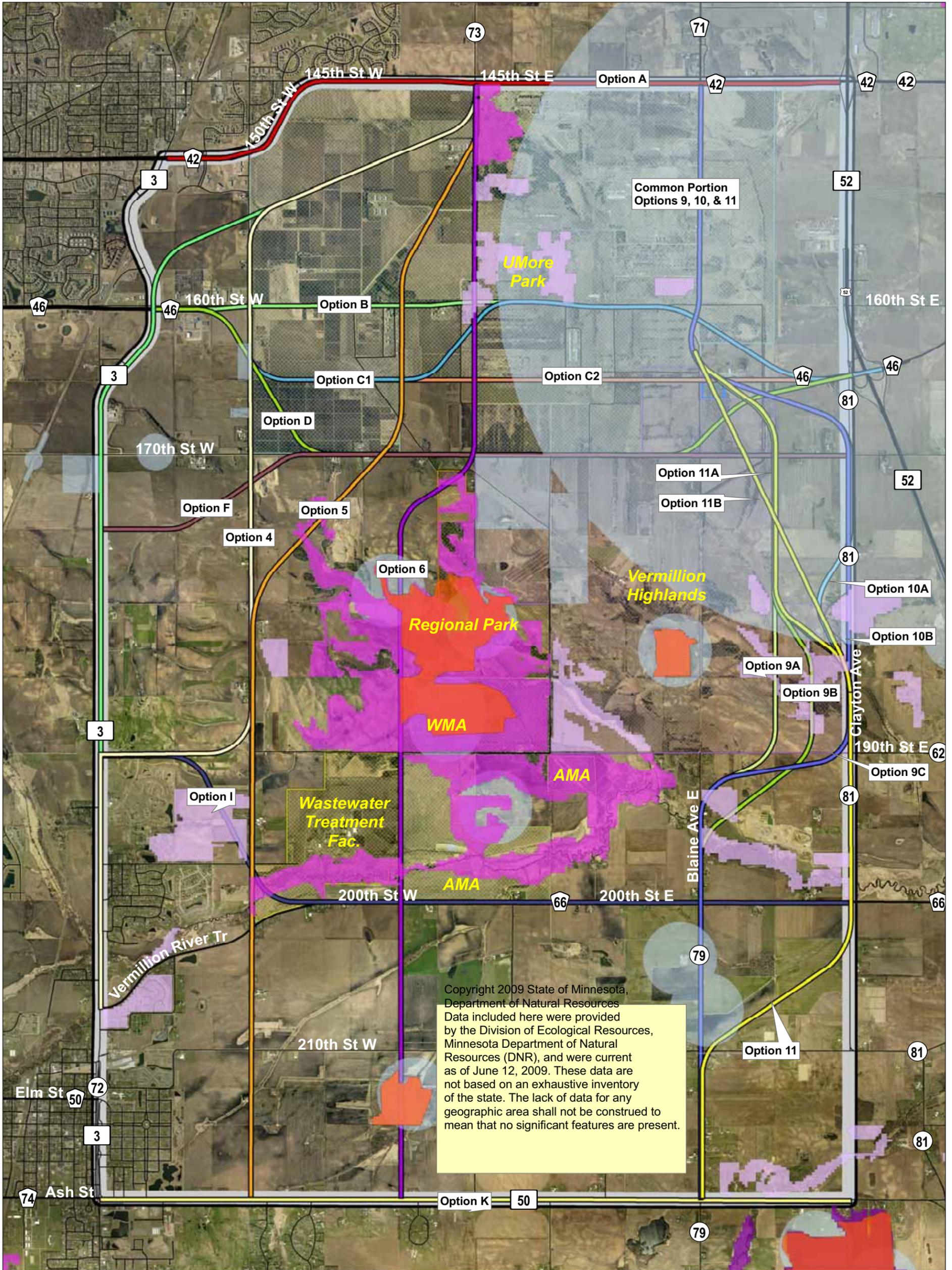
Corridor Level Evaluation—Findings

		<i>Implement with Development</i> <i>How much of the corridor be implemented with planned development (from Rosemount and Empire Twp. 2030 land use plans and UMore Park Concept Plan)? (Length and % of alignment in area identified for future development)</i>	<i>Land Severance</i> <i>How many recreational areas and private parcels would the corridor sever? (# of parcels severed)</i>		<i>Right-of-Way</i> <i>Would the corridor require right-of-way acquisition? (# of parcels affected & acres of right-of-way needed)</i>	<i>Wetlands</i> <i>How many acres of wetlands would the corridor impact? (acres of wetland affected)</i>	<i>Rare Plants & Animals</i> <i>Is the corridor near important plant and animal habitat locations?</i>	<i>Historic and Archaeological Features</i> <i>Is the corridor near known historic (farms and GOW) or archaeological sites? Are sites avoidable?</i>	<i>Cost-effective Implementation</i> <i>What is the potential for cost effective implementation (e.g., re-use of existing right-of-way, roads, and bridges)? (high, medium, low)</i>	<i>Diversion of Regional Trips</i> <i>What is the potential that the corridor would divert regional trips from local roads? (high, medium, low)</i>
NORTH/SOUTH-BOUND CORRIDORS OPTIONS			Rec./Natrl.	Private						
Hwy. 3, Biscayne, Ave., and CR 73/Akron Ave.	Option 2: Hwy. 3 to CR 73 7.6 miles	2.6 miles 34%	0	4	43 parcels affected 99 acres right-of-way needed	3.2 acres	No	Yes, sites are likely avoidable	Medium—Amt. of corridor using: --existing alignment = 65% --existing ROW = 29% Potential to use bridge—Yes	High
	Option 4: Hwy. 3 to Biscayne Ave. to CR 73 8.0 miles	4.4 miles 55%	0	1	35 parcels affected 100 acres right-of-way needed	3.9 acres	No	Yes, sites are likely avoidable	High—Amt. of corridor using: --existing alignment = 71% --existing ROW = 31% Potential to use bridge—Yes	High
	Option 5: Biscayne Ave. to CR 73 8.0 miles	4.1 miles 51%	0	5	20 parcels affected 118 acres right-of-way needed	8.0 acres	No	No	Low—existing alignment = 42% --existing ROW = 19% Potential to use bridge—Yes	High
	Option 6: West Park/WMA Boundary to CR 73 7.7 miles	2.5 miles 32%	1 to Dakota. Co. Park; 11 acres (2.4%)	2	14 parcels affected 128 acres right-of-way needed	41.0 acres	Yes	No	Low—Amt. of corridor using: --existing alignment = 21% --existing ROW = 9% Potential to use bridge—No	Medium
CR 79/CSAH 71/Blaine Ave. and CR 81/Clayton Ave.	Option 9A: CR 79 to CSAH 71 via new connection 8.0 miles	1.9 miles 24%	2 to WMA; 347 acres (12.2 %) 1 to Dakota Co. Parcel 25 acres (20%)	5	25 parcels affected 110 acres right-of-way needed	6.6 acres	Yes	Yes, sites are likely avoidable	Low—Amt. of corridor using: --existing alignment = 54% --existing ROW = 24% Potential to use bridge—No	Low
	Option 9B: 8.2 miles	1.9 miles 23%	2 to WMA; 16+190=206 acres (7.2%) 1 to Dakota Co. Parcel; 25 acres (20%)	4	24 parcels affected 116 acres right-of-way needed	5.4 acres	Yes	Yes, sites are likely avoidable	Low—Amt. of corridor using: --existing alignment = 50% --existing ROW = 22% Potential to use bridge—No	Low
	Option 9C: 8.8 miles	1.9 miles 22%	3 to WMA; 16+4+73 =93 acres (3.3%) 1 to Dakota Co. Parcel 25 acres (20%)	6	27 parcels affected 112 acres right-of-way needed	5.2 acres	Yes	Yes, sites are likely avoidable	Medium—Amt. of corridor using: --existing alignment = 68% --existing ROW = 30% Potential to use bridge—No	Low
	Option 10A: CR 79 to CSAH 71 via CR 81 8.8 miles	1.9 miles 22%	1 to WMA; 59 acres (2.1%) 1 to Dakota Co. Parcel; 40 acres (33%)	15	37 parcels affected 124 acres right-of-way needed	5.3 acres	Yes	Yes, sites are likely avoidable	Low—Amt. corridor using: --existing alignment = 53% --existing ROW = 23% Potential to use bridge—No	Low
	Option 10B: 8.8 miles	1.9 miles 22%	1 to WMA; 4 acres (0.1%) 1 to Dakota Co. Parcel; 40 acres (33%)	10	41 parcels affected 114 acres right-of-way needed	5.2 acres	Yes	Yes, sites are likely avoidable	High—Amt. of corridor using: --existing alignment = 64% --existing ROW = 28% Potential to use bridge—No	Low

TABLE 6

Corridor Level Evaluation—Findings

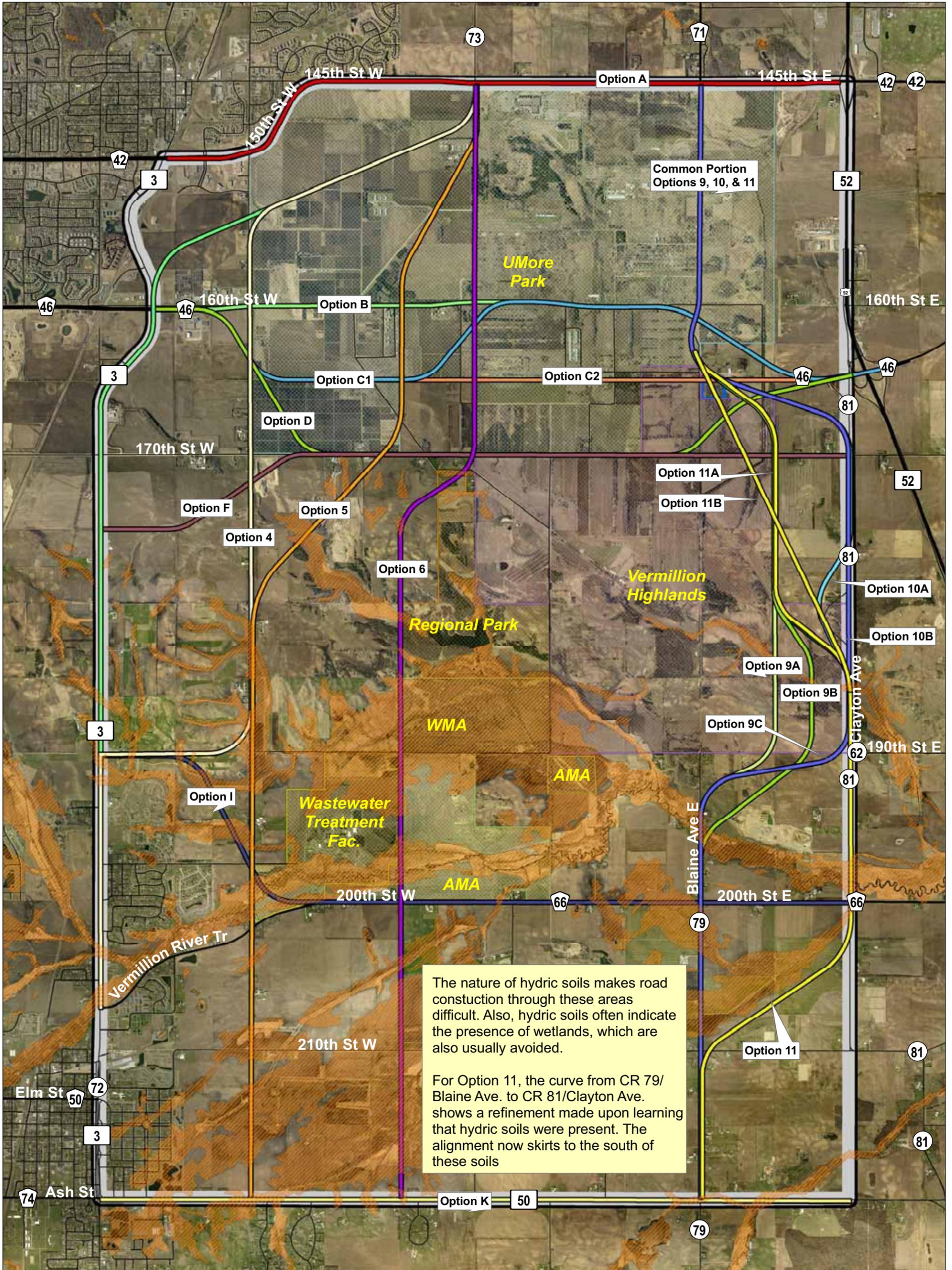
		<i>Implement with Development</i> <i>How much of the corridor be implemented with planned development (from Rosemount and Empire Twp. 2030 land use plans and UMore Park Concept Plan)? (Length and % of alignment in area identified for future development)</i>	<i>Land Severance</i> <i>How many recreational areas and private parcels would the corridor sever? (# of parcels severed)</i>		<i>Right-of-Way</i> <i>Would the corridor require right-of-way acquisition? (# of parcels affected & acres of right-of-way needed)</i>	<i>Wetlands</i> <i>How many acres of wetlands would the corridor impact? (acres of wetland affected)</i>	<i>Rare Plants & Animals</i> <i>Is the corridor near important plant and animal habitat locations?</i>	<i>Historic and Archaeological Features</i> <i>Is the corridor near known historic (farms and GOW) or archaeological sites? Are sites avoidable?</i>	<i>Cost-effective Implementation</i> <i>What is the potential for cost effective implementation (e.g., re-use of existing right-of-way, roads, and bridges)? (high, medium, low)</i>	<i>Diversion of Regional Trips</i> <i>What is the potential that the corridor would divert regional trips from local roads? (high, medium, low)</i>
	Option 11A: CR 79 to CSAH 71 via CR 81 8.2 miles	1.9 miles 23%	2 to WMA; 182 acres (6.4%) 1 to Dakota Co. Parcel 25 acres (20%)	4	26 parcels affected 122 acres right-of-way needed	2.7 acres	Yes	Yes, sites are likely avoidable	Medium—Amt. of corridor using: --existing alignment = 49% --existing ROW = 21% Potential to use bridge—Yes	Low
	Option 11B 8.3 miles	1.9 miles 23%	2 to WMA; 98+38=136 acres (4.8%) 1 to Dakota Co. Parcel; 12 acres (9.8%)	8	26 parcels affected 116 acres right-of-way needed	2.7 acres	Yes	Yes, sites are likely avoidable	Medium—Amt. of corridor using: --existing alignment = 52% --existing ROW = 23% Potential to use bridge—Yes	Low
EAST/WEST-BOUND CORRIDOR OPTIONS			Rec./Natrl.	Private						
CSAH42	Option A: CSAH 42 4.7 miles	N/A no new right-of-way required	0	0	0 parcels affected 0 acres right-of-way needed * ROW may be needed if CSAH 42 is expanded to 6-lanes	0 acres	Yes	No	High— Amt. of corridor using: --existing alignment = 100% --existing ROW = 100%	High
CSAH 46	Option B: CSAH 42 4.8 miles	3.9 miles 81%	0	0	5 parcels affected 49 acres right-of-way needed	0.1 acres	Yes	No	Medium— Amt. of corridor using: --existing alignment = 100% --existing ROW = 44%	High
	Option C1: CSAH 46, UMore Concept 5.2 miles	3.6 miles 70%	0	1	5 parcels affected 72 acres right-of-way needed	0 acres	Yes	No	Low—Amt. of corridor using: --existing alignment = 54% --existing ROW = 24%	High
	Option C2 4.8 miles	3.3 miles 69%	1 to Dakota Co. Parcel; 44 acres (36%)	3	5 parcels affected 83 acres right-of-way needed	0 acres	Yes	No	Low—Amt. of corridor using: --existing alignment = 12% --existing ROW = 5%	High
	Option D: CSAH 46 via 170 th St. 5.2 miles	2.5 miles 48%	1 to WMA; 163 acres (5.8%)	4	9 parcels affected 64 acres right-of-way needed	0 acres	Yes	No	Medium— Amt. of corridor using: --existing alignment = 73% --existing ROW = 32%	High
	Option F: 170 th St. with Extension to Future County Hwy. and CR 81/Clayton Ave. 5.5 miles	1.9 miles 34%	1 to WMA; 253 acres (8.9%)	2	8 parcels affected 68 acres right-of-way needed	0 acres	Yes	No	Medium— Amt. of corridor using: --existing alignment = 73% --existing ROW = 32%	Low
CSAH 66	Option I 6.9 miles	1.4 miles 20%	0	5	21 parcels affected 87 acres right-of-way needed	12.4 acres	No	Yes, sites are likely avoidable.	Medium— Amt. of corridor using: --existing alignment = 71% --existing ROW = 31%	Medium
Hwy. 50	Option K 5.7 miles	0 miles 0%	0	0	46 parcels affected 58 acres right-of-way needed	11.1 acres	No	No	Medium— Amt. of corridor using: --existing alignment = 100% --existing ROW = 44%	High



N 0 1,500 3,000 6,000 Feet
 Rare Plant or Animal Species General Locations
 Sites State-wide Biodiversity Significance
Regionally Significant Ecological Areas
Ecological Score
 Moderate
 High
 Outstanding

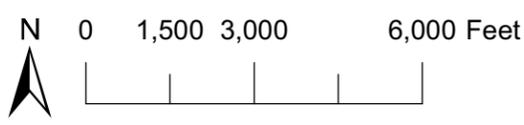
Rosemount/UMore/Empire Area
 Transportation System Study
 12/09/2009

Figure 12
**Known Plant and
 Animal Resources**



The nature of hydric soils makes road construction through these areas difficult. Also, hydric soils often indicate the presence of wetlands, which are also usually avoided.

For Option 11, the curve from CR 79/ Blaine Ave. to CR 81/Clayton Ave. shows a refinement made upon learning that hydric soils were present. The alignment now skirts to the south of these soils



Hydric Soils

Figure 13
Hydric Soils

5.3 Step 3: System Level Evaluation

This phase of evaluation moved beyond individual corridors and assessed how remaining options would function as part of a regional transportation system. Referencing back to Figure 4, the PMT agreed to identify a regional roadway system that would generally provide roadway capacity in the areas identified during the earlier phases of this study. Table 7 and Figures 14 and 15 capture the recommendations developed by the PMT over a series of PMT meetings during the summer and fall of 2009.

6.0 Final Corridor Alignment Recommendations and Roadway Characteristics

Figure 16 shows the recommended transportation system developed by the PMT. The recommendations of this study include:

- The regional arterial road network as shown on the *Recommended Regional Arterial Corridors* map will serve as a planning tool for this area as it develops. This recommended system will be used by study partners and surrounding communities as land use and transportation plans are implemented.
- The roadway system recommended in this study will form a “back bone” arterial network. This network was developed using the best information available for a long-term corridor planning study. The recommended corridors may be refined in response to changing circumstances and new information. Any refined corridors would undergo the same level of evaluation as was completed for the recommended corridors.

The unshaded rows in Table 7 describe the recommended number of lanes and the recommended functional classification system for each alignment. The combination of corridors composing the recommended regional road system for the study area is not consistent with spacing guidelines, but represents a compromise that provides:

- Reasonable spacing and connectivity,
- Consistency with and support for local plans, and
- Minimum impact to area resources.

When Dakota County constructs or re-constructs any of the regional roadways recommended in this study, it is anticipated that the County would use either two-lane or four-lane cross-sections, as shown in Figure 17, based on an assessment of the forecast volume of traffic in each of the corridors. Details, such as whether or not four-lane cross-sections will be divided will be determined during subsequent phases of project development. This study assumed a 150 foot right-of-way to initially assess corridor impacts; this width would accommodate both 2-lane and 4-lane rural roadways.

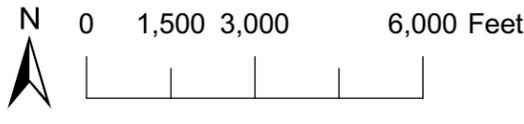
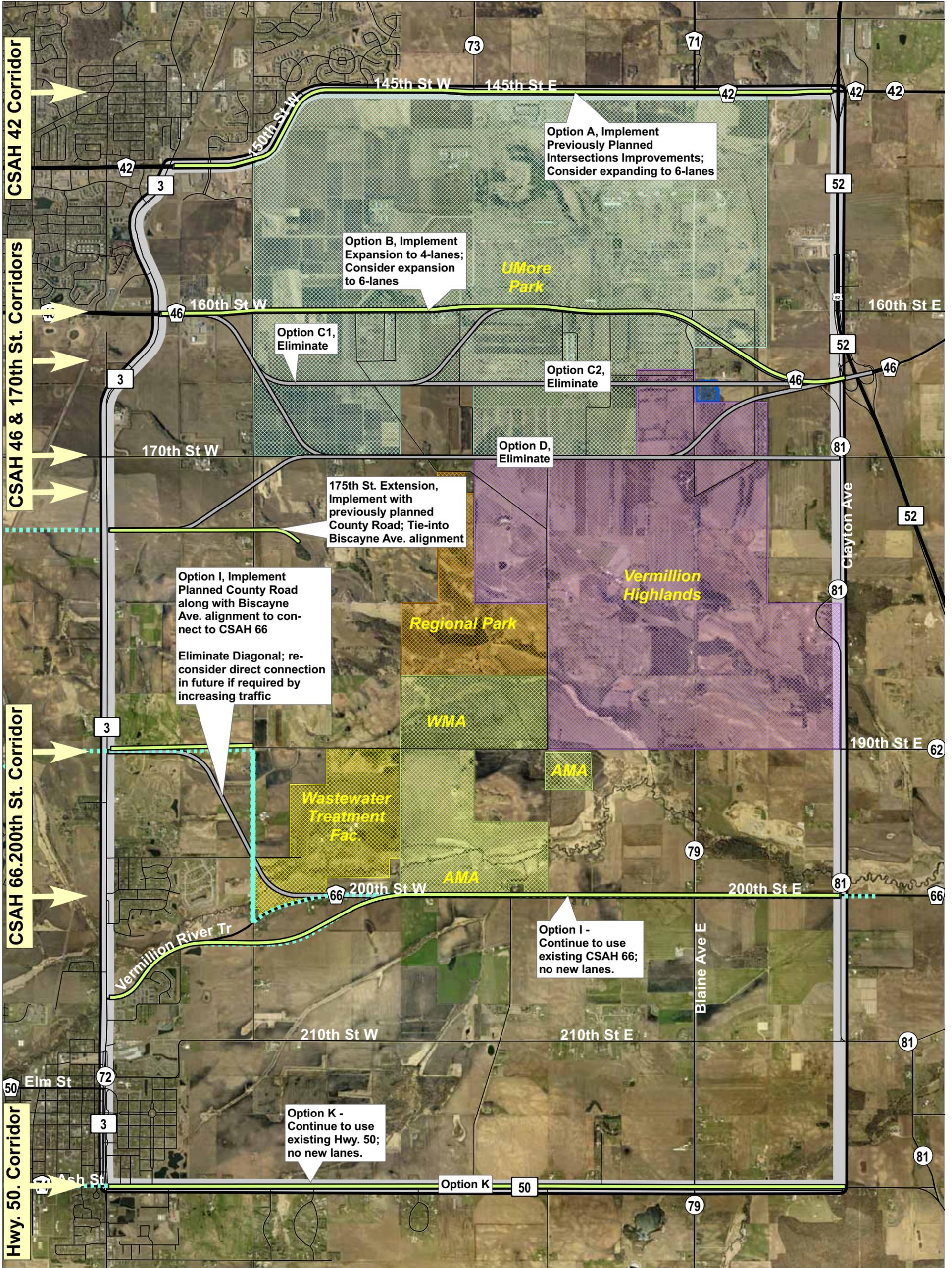


Figure 14
**East-West Regional
Arterial Corridor Options
Final Evaluation Results**

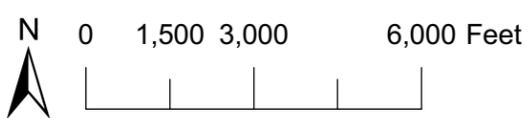
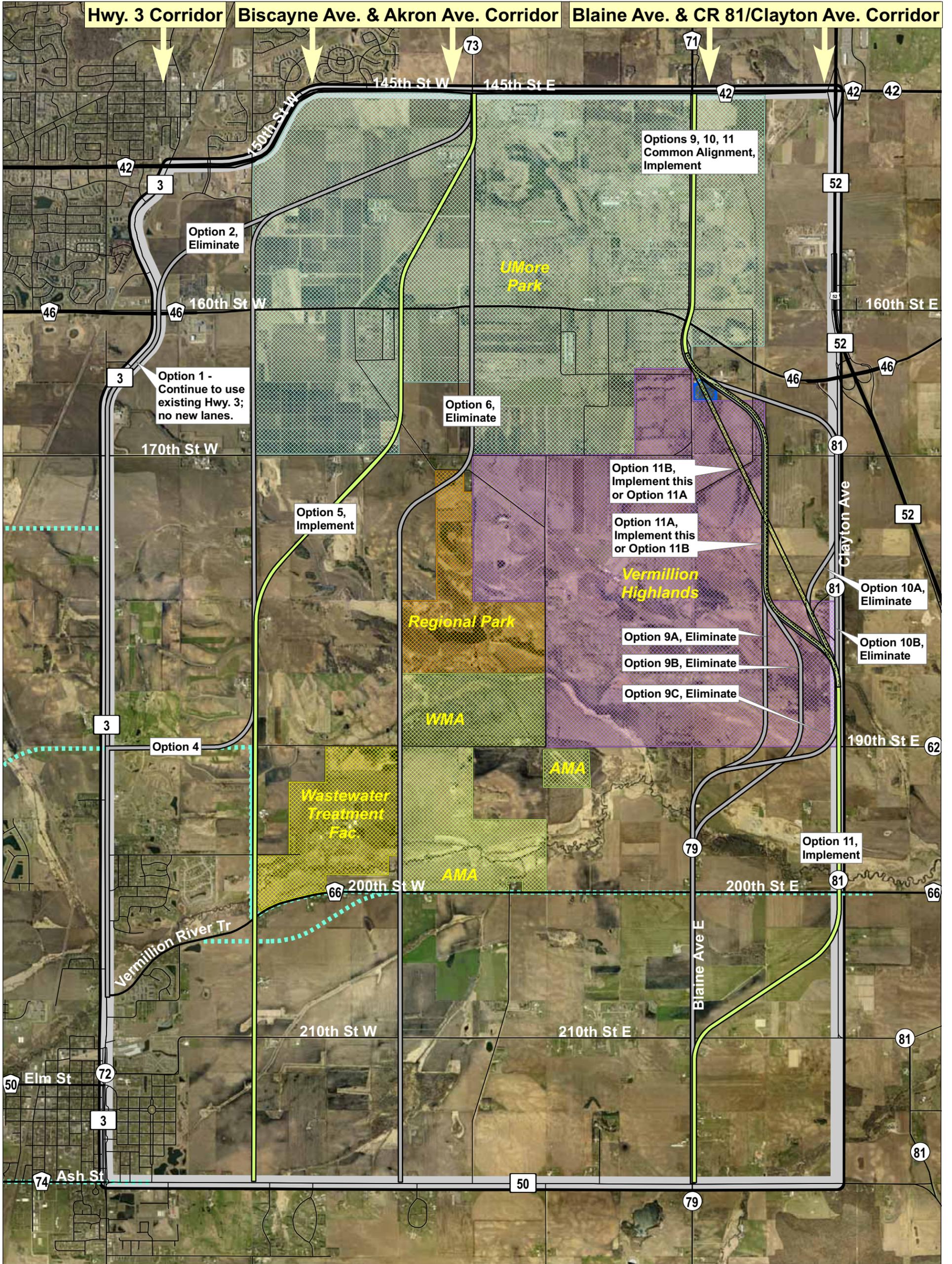
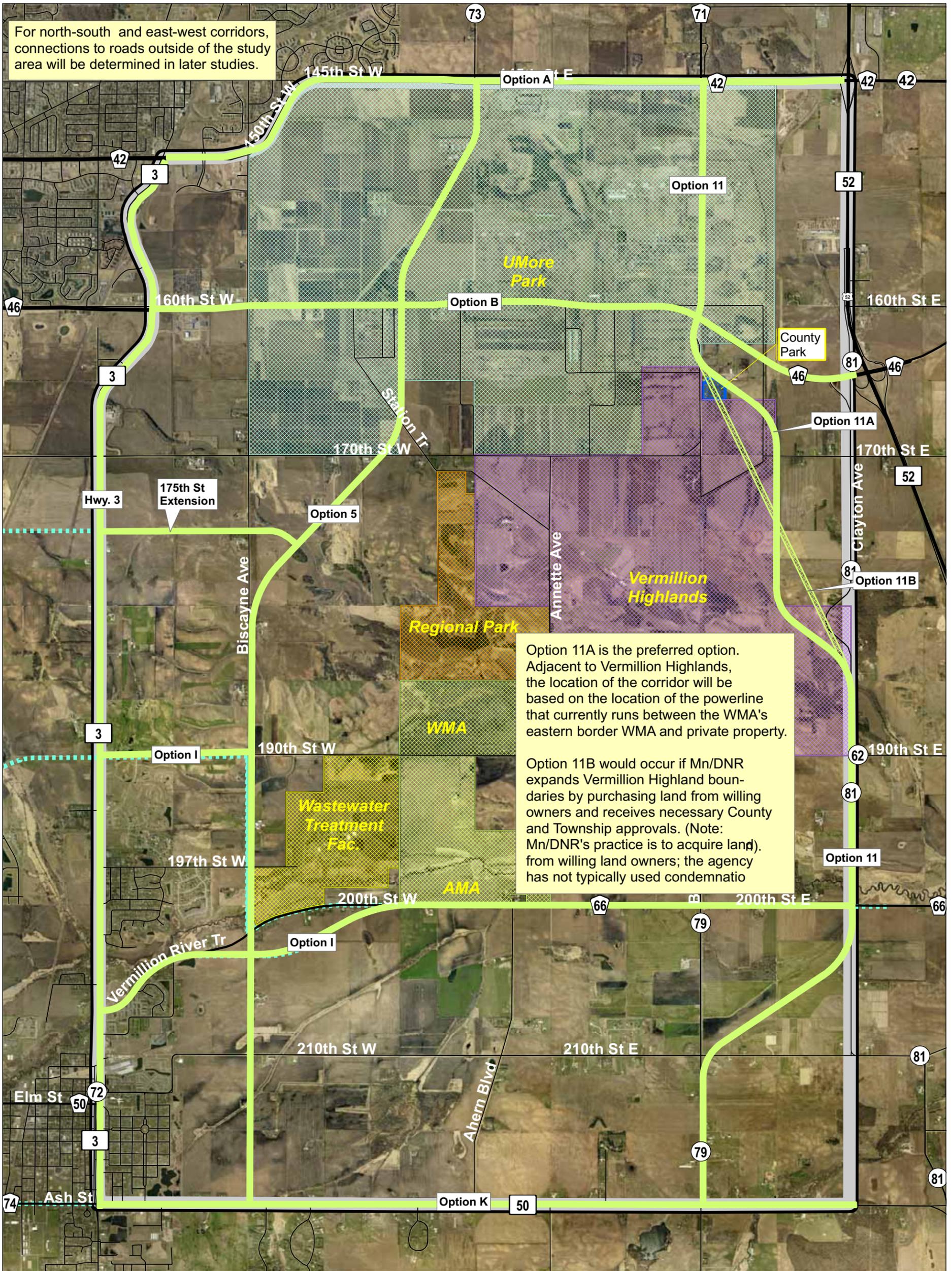


Figure 15
**North-South Regional
Arterial Corridor Options
Final Evaluation Results**

For north-south and east-west corridors, connections to roads outside of the study area will be determined in later studies.



Option 11A is the preferred option. Adjacent to Vermillion Highlands, the location of the corridor will be based on the location of the powerline that currently runs between the WMA's eastern border WMA and private property.

Option 11B would occur if Mn/DNR expands Vermillion Highland boundaries by purchasing land from willing owners and receives necessary County and Township approvals. (Note: Mn/DNR's practice is to acquire land from willing land owners; the agency has not typically used condemnation)

- Recommended, Regional Arterial Corridors
- Planned Dakota County Highways

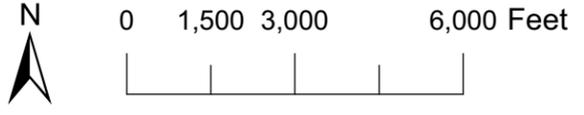


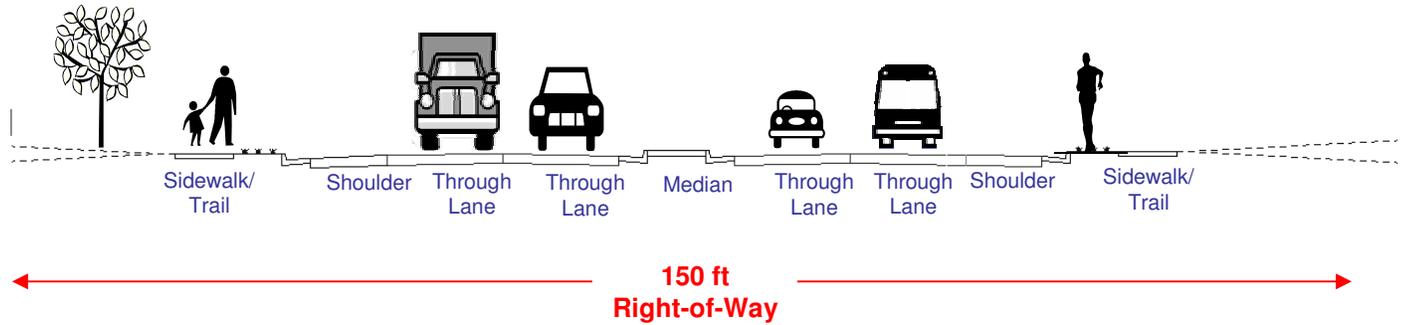
Figure 16
Recommended Regional Arterial Corridors

TABLE 7
Final Corridor Evaluation—Findings

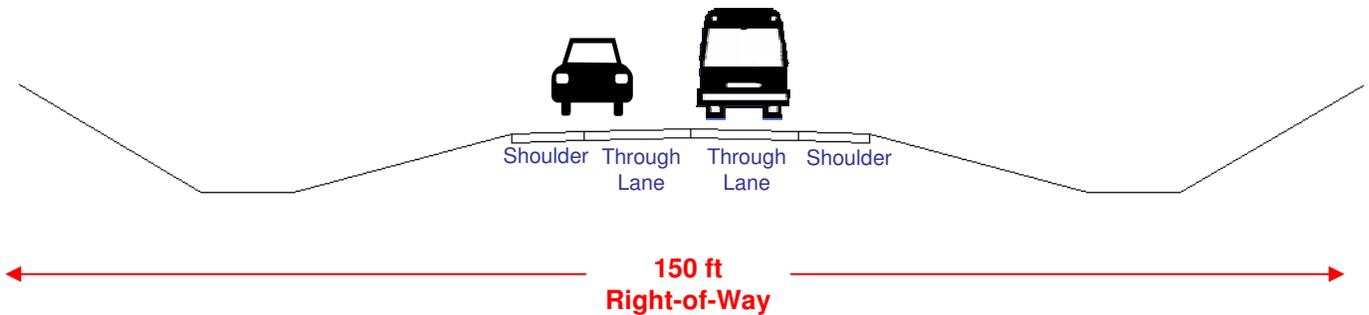
	<i>Recommendation</i>	<i>Number of Lanes</i>	<i>Functional Classification</i>	<i>Date of PMT Concurrence</i>	
Note: Shaded cells indicate a recommendation to eliminate a transportation corridor option; unshaded cells indicate a recommended option. Refer to the map, "Remaining & Refined Regional, Arterial Corridor Options"					
NORTH/SOUTH-BOUND CORRIDORS OPTIONS					
Hwy. 3	Option 1	Continue to use existing Hwy. 3 between Hwy. 50 and CSAH 42. Hwy. 3 won't be expanded because Mn/DOT has no plans or funding and because of limited opportunity to expand through Rosemount.	No change—3-lanes through Rosemount; 2-lanes through rest	A-Minor Arterial (no change)	08/03/09
	Option 2	Eliminate Option 2 given the limited opportunity to expand Hwy. 3 and Rosemount's lack of support. Identify an additional north-south roadway in close proximity to Hwy. 3 (see the Biscayne Ave. Corridor).	N/A	N/A	
Biscayne Ave.	Option 4	Eliminate due to inconsistencies with City of Rosemount land use plans.	N/A	N/A	09/17/09
	Option 5	Implement Option 5 along Biscayne Ave. in the south and connecting to Akron Ave. in the north.	4-lanes: CSAH 42 to 170 th Street; 2-lanes: 170 th Street to Hwy. 50 (with possible 4-lanes)	A-Minor Arterial (Hwy. 3, no change; Biscayne Ave. upgrade)	
	Option 6	Dismiss Options 6 because of potential environmental impacts and diminished ability to serve future demand, compared to Option 5.	N/A		
CR 79/CSAH 71/Blaine Ave.	Option 9A	Eliminate Options 9A, 9B, and 9C due to impacts to Vermillion Highlands and natural resources within.	N/A	N/A	10/15/2009
	Option 9B				
	Option 9C				
	Option 10A	Eliminate due to lack of regional transportation advantage and because of engineering challenges presented by Little Lone Rock.			
	Option 10B				
	Option 11A	Implement Option 11. Near Vermillion Highlands, Option 11A is the preferred option. Option 11B would occur if Mn/DNR expands Vermillion Highland boundaries by purchasing land from willing owners and receiving necessary County and Township approvals.	2-lanes on new north-south alignment	Minor Arterial (new regional road)	
	Option 11B				

TABLE 7 Final Corridor Evaluation—Findings					
	<i>Recommendation</i>		<i>Number of Lanes</i>	<i>Functional Classification</i>	<i>Date of PMT Concurrence</i>
Note: Shaded cells indicate a recommendation to eliminate a transportation corridor option; unshaded cells indicate a recommended option. Refer to the map, "Remaining & Refined Regional, Arterial Corridor Options"					
EAST/WEST-BOUND CORRIDOR OPTIONS					
CSAH 42	Option A	Use existing CSAH 42 as planned and documented in the CH 42 Final Study, including planned access management. (Attachment A: Updated Recommended Roadway Improvements Segment 15: TH 3 to TH 52, 2007).	4-lanes (no change from existing; consider future 6-lanes)	Principal Arterial (no change)	08/03/2009
	Option B	Expand existing CSAH 46 alignment by 2- to 4-lanes.	4- to 6-lanes (expand by 2- to 4-lanes)	A-Minor Arterial (no change)	9/17/09
CSAH 46 & 170 th St.	Option C1	Eliminate Options C1 and C2 as these would not best meet regional transportation needs, or the transportation needs of Rosemount and Empire Township.	N/A	N/A	
	Option C2				
	Option D	Eliminate as regional roadway option because of incompatibility with UMore Park planned development.			
	Option F	Eliminate as regional roadway option because of incompatibility with UMore Park planned development.			
CSAH 66	Option I	Use phased approach to implement a connection between Hwy. 3 and CSAH 66/200th Street. Initially, use 190th Street alignment to Biscayne Ave.; use Biscayne Ave. south to connect to CSAH 66/200th St. Reconsider a direct connection (similar to diagonal shown on Figure 12) from Hwy. 3 to CSAH 66 if traffic levels warrant in the future.	2-lanes (no change)		
Hwy. 50	Option K	Continue to use existing Hwy. 50; no changes in function or geometry recommended.	2-lanes (no change)	A-Minor Arterial (no change)	08/03/09

Divided Urban 4-Lane Cross-Section



Rural 2-Lane Cross-Section



Alternative Concept Design Criteria

- Assumed a 60 mph design speed
- 1,500 feet minimum curve radius
(Source: Mn/DOT Road Design Manual – minimum for 60 mph is 1,349 feet with full superelevation)
- 150-foot Right-of-Way to accommodate a divided 4-lane roadway
(Source: Dakota County Contiguous Plat Ordinance)

7.0 Activities to Implement Recommended Alignments

7.1 Activities and Timing to Implement Recommendations

Future roadway construction will be coordinated with development. When traffic levels or development in an area warrant, consideration will be given to construction of new roads or upgrading existing regional roads. The schedule for implementing study recommendations varies by area.

Dakota County, the City of Rosemount, Empire Township, the University of MN, and Mn/DNR have formally adopted or recognized the recommendations through their governing bodies either by resolution or letter of support, all of which are included in Attachment D. Within the next few years, communities will update their comprehensive land use and/or transportation plans to reflect study recommendations.

In the longer term, construction of regional roads will occur as land uses change (e.g., UMore Park) and development is approved by local governments. UMore Park plans currently show the northern part of the parcel developing first. Total build-out is expected in 30 years, however, as with any development, this too will be subject to market forces.

This network was developed using the best information available for a long-term corridor planning study. This included current environmental resource information, engineering considerations, and land use management plans. The recommended corridors may be refined in response to changing circumstances and new information. Any refined corridors would undergo the same level of evaluation as was completed for the recommended corridors.

Implementation of specific corridors is all subject to phasing, in response to development. For example, northern portions of the north-south alignments for Biscayne Avenue/Akron Avenue and Blaine Avenue may be initially built to accommodate UMore Park, as it develops. However, the southern portions of these corridors may not get built until much later, in response to future development.

7.2 Right-of-Way Acquisition

The acquisition of right-of-way for transportation facilities requires significant financial resources and is a time consuming process. Jurisdictions responsible for road development (state, county, city, etc.) will use available right-of-way preservation tools. For Dakota County, this includes requiring plat dedication for highway corridors to preserve the right-of-way required to implement any of the recommended alignments. In areas that do not develop, a condemnation process would be used to acquire additional right-of-way.

7.3 Context-Sensitive Solution Considerations

Development evaluation criteria and processes, as well as potential transportation corridor options was structured according to the principles of a Context Sensitive Solutions (CSS) process. Given the unique setting for this project—including the unique UMore Park development and Vermillion Highlands—the CSS approach is valuable because decision-making is focused on project context and stakeholder-based criteria. Through this process, the PMT accomplished transportation objectives while developing a project that reflects community values. A four-step approach to CSS was implemented, as follows:

1. Community Inventory and Values;
2. Goals and Criteria;
3. Alternatives Development and Evaluation; and
4. Implementation Planning and Roles.

CSS is a process that will continue to take place through all upcoming stages related to implementing the recommended transportation system. Given the early nature of this study, CSS was applied to identifying project context and issues important to stakeholders. However, the PMT did broadly contemplate geographic areas within the study area which should be given a higher level of CSS consideration moving forward into next steps. These areas are shown on Figure 18.

8.0 Other Transportation Considerations

8.1 Supporting Local Road System, Intersection Spacing, and Other Possible Roadway Projects

The regional roadway network recommended for this study area will be used by the County, local communities, and the University of Minnesota to plan a supporting local road system to complement the transportation network and serve any future land development. Specifically, the Metropolitan Council's roadway spacing guidelines shown in Table 1 will be used to aid in the planning of the local road network in developing areas, including UMore Park.

Intersection spacing is directly tied to the implementation of a supporting road network, discussed above. As such, this topic will be considered in tandem with planning of a supporting, local road network. Dakota County access spacing guidelines will be adhered to in any future access planning.

In addition to any future access spacing planning, previous recommendations for the CSAH 42 corridor will be implemented as planned (see the CH 42 Final Study planned access management and Attachment A: Updated Recommended Roadway Improvements Segment 15: TH 3 to TH 52, 2007). The PMT recognizes that there is potential for some recommended corridors to impact the need for intersection improvements identified in the CH 42 Study. For example, the Biscayne Ave./Akron Ave. north-south alignment may result in a diversion of traffic from Highway 3 that could reduce traffic levels at the intersection of Highway 3 and CSAH 42 to the point that a previously recommended interchange may not be necessary. Any impact this study's recommendations would have on plans for other corridors in or near the study area would need to be studied in detail. Dakota County will work with local communities and Mn/DOT to assess all future capacity issues, necessary improvements, and the interrelatedness of future transportation improvements.

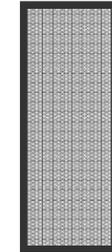
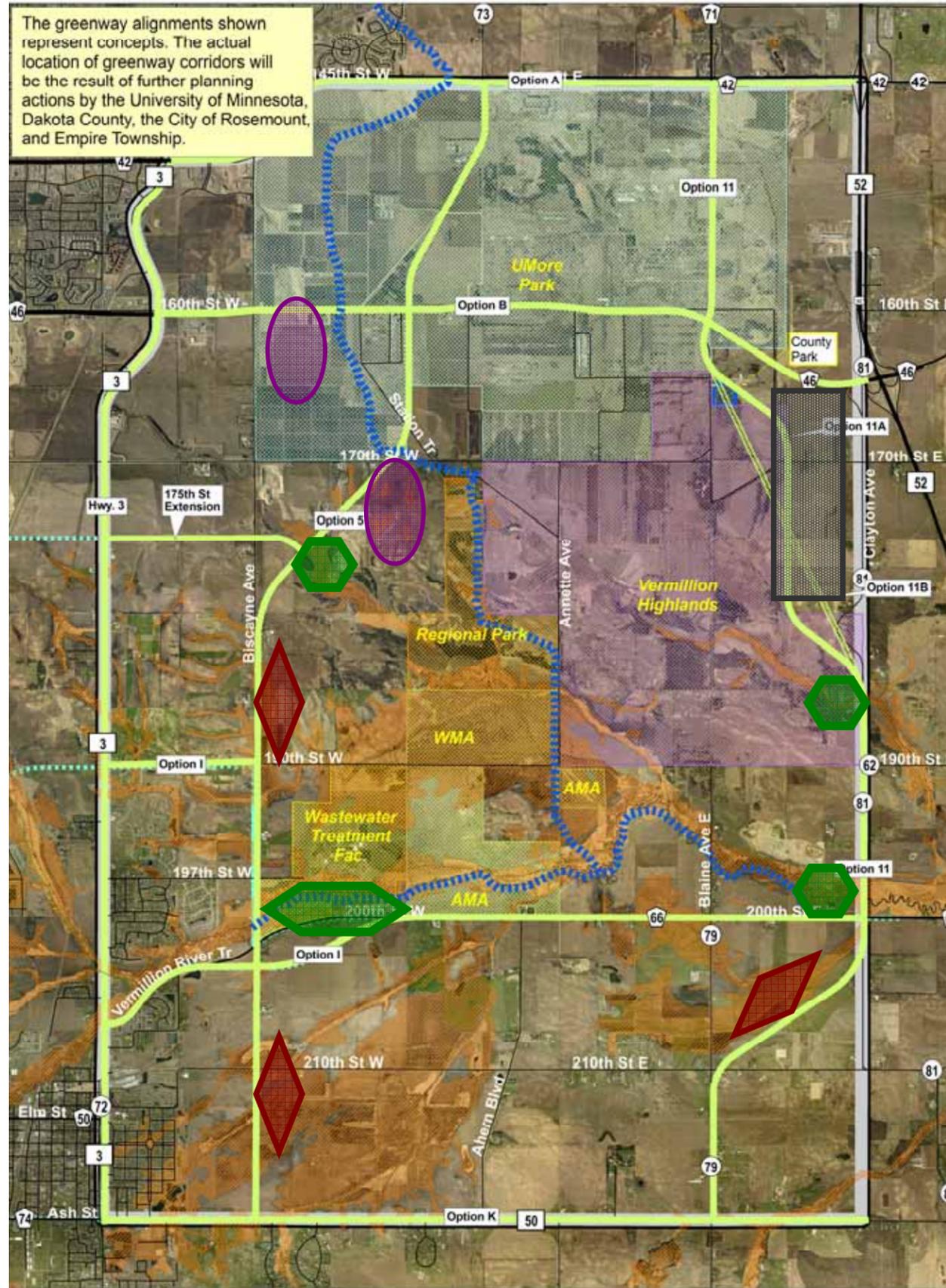
During this study, the need to plan for future crossings of Highway 52 were discussed, including the possibility of grade separating crossings at 170th Street and CSAH 66/200th. While these intersections are outside of this study area and therefore were not considered in detail, it should be noted that Mn/DOT, Dakota County, and local communities may consider grade separations at these locations in the future.



Gravel mining in UMore Park and Empire Township will create opportunities for new lakes and related recreational activities. These lakes offer an opportunity to extend a natural/recreational area corridor beyond the County Park and WMA to the south.



Preservation of greenway corridors through this study area will involve the development of grade-separated highway crossings for trail users, access to natural resource assets such as the Vermillion River, and trail continuity for a regional trail system.



Fields south of County Road 46 and west of Clayton Avenue are intensively used by farmers serving local farmers markets



Streams and natural areas may provide opportunities for modified highway crossings that promote safety for people and/or wildlife by passing underneath the roadway.



Hydric soils in the project area may present opportunities for wetland restoration projects that serve as mitigation for impacts related to highway construction.



Areas shaded orange on this base map are "Hydric Soils" – generally wet locations that are indicative of wetlands or the potential for wetlands.

Figure 18
 Context Sensitive Opportunities for Future Consideration

8.2 Pedestrian and Bicycle Facilities

Dakota County has plans to implement a north-south and an east-west regional greenway corridor within the study area. The currently planned greenway corridors are shown on Figure 18. These greenway alignments are concepts; the actual location of these greenways will be the result of further planning actions by Dakota County, the City of Rosemount, Empire Township, the University of Minnesota, and Mn/DNR. Specifically, the preferred trail alignment for crossing the Vermillion River will be mutually evaluated by appropriate agencies and determined as part of the 2010 master planning process. At any points where greenways will intersect an existing or planned County highway, a grade-separated highway crossing will be considered for trail users. Specific details regarding funding will be addressed during future inter-agency coordination.

8.3 Future Transit Service

The study area currently includes primarily rural and open space land uses and is not served by transit. However, plans for UMore Park and surrounding communities will likely increase the intensity of land uses in coming decades. The UMore Park Concept Master Plan shows that light rail, commuter bus, and internal bus service may some day service the development. Additionally, the Robert Street Corridor Transit Feasibility Study's Long Term Corridor Vision shows a "potential transitway" extending down Highway 3 (to just south of CSAH 42) and providing transit access into UMore Park. None of the above mentioned transit concepts have been planned or funded. However, Dakota County will continue to coordinate with the University of Minnesota, the Metropolitan Council, and local communities regarding any future transit concepts that would service the study area.

Dakota County's Transit Plan (Review Copy, December 2007) has identified specific transit needs for service beyond anything that is included in regional or county plans. Within the study area, the County's Transit Plan has identified needs on CSAH 42, CSAH 46, Highway 3, and Highway 50. As noted in the Transit Plan, implementation of these improvements is considered very long range. Moving forward with any County Highway improvements the Plan does recommend that, "All County arterial highways should provide appropriate level of infrastructure for transit service including adequate widths, shoulders, pullouts, and trails" (*Dakota County Transit Plan, December 2007, Chapter Seven: Page 4 of 7*).