Appendix A

Referenced in Section 1.0, Introduction

Contents:

1. Anoka County 2030 Transportation Plan Project Management Team (PMT) List

Anoka County 2030 Transportation Plan Project Management Team (PMT)

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Appendix B

Referenced in Section 3.0, The Anoka County Freight System

Contents:

1. Anoka County Freight System Technical Memorandum, Barton Consulting, October 2008

BARTON CONSULTING

Memo

To: Kate Garwood, Anoka County Highway Department

From: Jim Barton

CC: Mary Gute, Stephanie Eiler CH2MHill

Date: 10/02/08

Re: County Freight Mobility Issues - Freight Element , Anoka County 2030 Transportation Plan

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OVERVIEW

Community development directors for the Cities of Anoka, Blaine, Coon Rapids, Fridley and Lino Lakes and transportation representatives of businesses within the US 10 and I-35 corridors were contacted in September and early October. They were asked to identify freight mobility issues important to their communities or businesses. The community responses focused on industrial land usage, truck traffic volumes, highway capacity needs, access and congestion concerns. The business contacts responses focused on the structure of their respective trucking operations, ease of highway access and dealing with congestion problems on the regional highway system. Obviously the increasing congestion their drivers experience effects their delivery schedules and they move an d receive products outside the region and serve their customers within the region. The high cost of fuel is expected to continue with significant fluctuation in costs. All have noted that energy costs has added another dimension to implementing more cost effective operation procedures in 2008. For example one company no longer allows trucks to leave its facility half loaded in order to meet a predetermined schedule. Trucks now must be at minimum three quarters full even if the delay in leaving the terminal will increase delivery time by a day. So the trade off is accepting a longer delivery time by the customer to offset increases in delivery costs.

Although acknowledging operational changes, none of the business representatives contacted were certain about the long- term affects of expected rises in energy costs on their trucking or facilities operations located in the county. It appears too early to determine how the changes now altering national and international freight movements, will affect freight facility operations located in the Twin Cities or cause increasing mode shifts such as from truck to rail. Congestion on the regional highway system particularly on US 10 was frequently noted. A freight forwarder contacted located outside the county (provides trucking service to the county), responded it was a roadway and area to avoid if possible. However, businesses located in the corridor, their responses were to describe modifying operations to move trucks during off- peak periods as much as possible while still meeting the schedule demands of their customers. The sampling of businesses contacted represented manufacturing, warehousing, distribution and freight service provider services and functions.

As a response to county staff concern about the availability and movement of aggregate within the county, a representative of the industry was contacted. Currently most of the aggregate used in the county for roadway and building construction is brought into the county from operations in Sherburne County. Some aggregate may be brought in from aggregate distribution sites in northern Hennepin County. The industry is not incline to divulge information on the remaining life of existing deposits or the location future aggregate resources. When asked, the response was to assume that current sources are adequate to meet the near-term demands of the county. I did ask about the possibility of shipping aggregate by rail from north of the Twin Cities citing that aggregate is shipped by rail into the Twin Cities by rail from sources in Northern Iowa. And, interest has been expressed by some entrepreneurs to ship mill tailings from depleted iron range mining operations for use as aggregate. The representative's response was that no new major gravel operations north of the Twin Cities to serve the northern portion of the region has been identified and a market has not developed for the mill tailings. Further, the representative noted the shipping of the tailings is more costly than conventional aggregate because its more dense making it heavier to transport and harder to crush in various sizes of desired aggregate. I was reminded of the industry formula that the cost of moving aggregate doubles after every ten miles of travel. This cost factor will keep the aggregate industry exhausting aggregate deposits in and around the region first before shipping aggregate to the region by rail in significant volumes.

Finally, I contacted the plant manager of a well established company in lino Lakes suggested by city planning director that produces prefab concrete components which are shipped to construction sites within a five state delivery area. The plant uses significant amounts of sand, gravel and cement and they have not experienced any supply problems nor do they anticipate any future availability problems.

COMMUNITY INTERVIEW RESPONSES

CITY OF ANOKA

Improving access to the Anoka Enterprise Park (Park) with US -10 and increasing congestion along this principle arterials remains a serious issue. The city by policy has actively promoted the location of manufacturing businesses in the industrial park. The location of new truck terminal operations was not supported by city land use policies because these types of facilities didn't add to its employment base. Existing businesses in the park generate truck traffic during the day to move product to customers and to receive deliveries from suppliers. The primary access is at the Thurston Avenue intersection at US-10. Traffic flow at this intersection is affected by the daily congestion on this section of US- 10. An alternative access to the Park is Bunker Lake Blvd. north of the Park. The city community development director acknowledged that no studies of truck traffic generated by the Park have been prepared by the city. The improvements to US- 10 under study would improve access to the Park and are supported by the city. Main Street and US-169 provide the only access for trucks traveling south crossing the Mississippi River to Hennepin County for connections to TH-610 and I-94. These arterials are already congested with auto traffic.

A major manufacturer contacted and located in the city noted the county improvements to CR -30 would provide better access to US-169 and allow bypassing the downtown traffic for truck movements south. When asked about the difficulty of crossing the river, he responded there are other alternative river crossings available by traveling south on US-10 such as TH-610 and I-94.

CITY OF BLAINE

The city by policy and in its comprehensive plan discourages industrial uses that will generate significant amounts of truck traffic and is viewed by the city as not a viable use of remaining developable land in the city. In addition to concerns of increased traffic, the city is encouraging industrial uses that increases its tax and employment bases. I raised the potential for development an emerging freight corridor along TH 65, but its now clear local land use policies will not allow it. A concern was raised by county staff about the level of access to existing industrial uses in the SE section of the city. I contacted the transportation manager for Sysco, a food service provider located in the area and he stated their access to US-10 via the 85th Ave. NW interchange was considered very good.

CITY OF COON RAPIDS

The city has little vacant industrial zoned undeveloped and the city staff didn't identity any freight mobility issues. Two major freight facilities are located in the city. A major beer company five-state distributor center is located just north of US -10 and east of Hanson Blvd. and a major national trucking terminal is located adjacent to this facility. The beer distribution center is serviced by a RR industrial spur from the BNSF Twin cities/Duluth mainline (Northern Lights Express corridor).

The facilities can handle and routinely does, up to 20 rail cars per day delivering beer products from other outstate breweries it operates . The facilities manager for the truck freight terminal was contacted and didn't have any major issues other than the congestion on US-10 and the regional highway system in general. He did acknowledge the improvements on Hanson Blvd and the new interchange has greatly Improved the ease of access to the terminal.

CITY OF FRIDLEY

The city staff did not identify any freight mobility issues only to point out that Main Street (CSAH 102) functions as a local collector for truck traffic due to the number of industrial facilities with direct access to the street. He also noted that East River Road and TH 47 carry the largest amounts of total truck volumes traversing the city on arterial streets, but no city generated truck ADT data was available.

Several additional resources prepared by MnDOT Office of Freight and Commercial Vehicle Operations, and Hennepin County are applicable to better understand freight movements south of the city corporate limits. The industrial area in North Minneapolis borders the City of Fridley and contains a significant cluster of freight facilities. Collectively, the cluster generates a significant amount of truck traffic north bound through the City of Fridley primarily to gain access to I-694. Because of the fright mobility importance of this I-694 connection to the freight facilities located in the North Minneapolis industrial area, the pursuit of a federal designation as an" Intermodal Connector" described below by Anoka County, is suggested.

A study of freight mobility in North Minneapolis industrial area was completed in October 2006, by MnDOT. This industrial area was one of four areas studied for adequacy of freight connections. The objective of the study was to evaluated alternative approaches to determine the adequacy of highway connections serving major concentrations of Twin Cities freight facilities. The report can be downloaded from the department's web site at:
http://www.dot.state.mn.us/ofrw/PDF/TCMAfreightConnectorsFinalReport.pdf

The report defines freight connectors as "*roadways that tie together elements of an intermodal freight transportation system. Connectors link major freight activity nodes to arterial highway systems, and enable efficient networks serving ports, rail intermodal yards, airports, and other freight intensive*

nodes". The area studied contains approximately 10,500 acres, 86 warehouse and manufacturing facilities which supports over 10,000 jobs. These facilities produced approximately 635,000 tons of freight in 2002. The dominate freight facility is the CP Rail Shoreham Intermodal Yard as measured in terms of truck volumes and number of containers handled annually. Over a third of the containers handled in the region passes through this facility west to the Port of Vancouver and east to the Port of Montreal. Exporting and importing finished goods, raw materials and agriculture products. I contacted the terminal manager and found out the facility had been expanded in recent years from 26 acres to 40 acres to accommodate increased container traffic. Service has expanded to the west as the result of agriculture products from Minnesota to China to take advantage of the back hauling of empty containers.

The second report prepared by MnDOT and Hennepin County was completed in March 2008 using the data and findings from the "Freight Connectors Report" . The report was used to support a request by MnDOT to the Federal Highway Administration (FHWA) for the addition of an "Intermodal Connector" between the CP Rail Shoreham Yard and I-94. The proposed route would become part of the National Highway System (NHS). Federal law allows for such designations to identify local "critical connections" between a freight intermodal facility to the nearest NHS highway. Roadway segments so identified by the FHWA would be eligible for federal funds for bridge, roadway and capacity improvements. The request was submitted by Hennepin County to MnDOT and the Metropolitan Council for concurrence. MnDOT supports the request and has forwarded it to FHWA. MnDOT has the responsibility to identify and secure FHWA approval of Intermodal Connectors. A map from the report showing the NHS Intermodal Connector route designation requested is attached.

The Anoka county highway staff may want to include in future transportation studies of the South Fridley area, the feasibility and benefits of an extension of the "freight connector route" north from the Shoreham Yard to I- 694. A logical extension is a continuation of the route north on TH 47 to I-694 or an alignment on East River Road. The Hennepin County/MnDOT request to the FHWA can be downloaded from the Metropolitan Council's web site at:
http://councilmeetings.metc.state.mn.us/council_meetings/2008/040908/0409_2008_88.pdf

The request document also lists in an attachment the FHWA Guidance Criteria for obtaining agency approval of adding a NHS Intermodal Connector to the system.

CITY OF LINO LAKES

The city planning staff provided a good description of current truck traffic patterns within the city. Birch Street functions as the main east/west truck route across the city linking CSAH -21 to CSAH -23. CSAH- 21 provides access to I-35E southbound on CSAH- 23 to the CR -J interchange. Main street (CSAH 14) via Lake Drive provides access to I-35E. CSAH- 14 is the northern crosstown connection but is not as heavily used for truck traffic because of a lack of direct` connection with I-35W. The city supports a new northern east/west alignment with a connection to 80th St on east and the construction of new interchanges with I-35W and I-35E. The new alignment will be needed as large tracks of industrial zoned land along I-35E become developed. The city staff acknowledged the timing of development in the area is uncertain Improvements to the CSAH- 14/ I-35E Interchange is programmed by MnDOT. The city staff recognizes that funding for I-35W improvements to add additional lanes is not been programmed by MnDOT . In the meantime they assume I-35E and I-35W will remain heavily congested during peak periods. As with freight facilities using access to US 10, it can be assumed that businesses with heavy truck traffic will continue to modify their daily operations to take advantage of the additional highway capacity available during non-peak periods.

An unknown is the scale and timing for future freight facilities along the I-35E corridor, if industrial development continues to expand westward from the cluster in Hugo. If combined with the industrial areas identified in the LIno Lakes Comprehensive Plan and currently zoned, there is the potential for the industrial areas to evolve into a significant cluster of freight facilities over time when combined with the industrial area in Hugo. No one contacted attempted to place a time frame on if or when that may occur. Its difficult to determine the extent of market forces that will over time drive the development. One force may be the continued expansion of port functions at the Port of Duluth. I contacted a logistic consultant who is familiar with the Duluth area and he offered some observations on how the port may expand. The current freight connections between the port are by rail and I-35. Freight movement could increase if more intermodal container traffic was routed through the port as rumored should the Canadian National Railroad establish service between the Prince Rupert Port (north of Vancouver) to Chicago via Duluth. Congressman Oberstar has expressed support for federal funding to establish a system of "Short Sea" shipping lanes between Great Lakes ports to ship containers similar to shipping service available in the European Union. Ports along the North Sea, English Channel and Mediterranean Sea are linked by the ocean going service avoiding shipping containers inland on congested highway and rail systems. The new Great Lakes service would help to bypass freight movement bottlenecks in Chicago. A significant expansion of port functions at Duluth of the types mentioned is at least a decade away according to an experienced logistics manager contracted who is knowledgeable of the port operations.

CITY OF RAMSEY

The city planning staff (this meeting included the city engineer) noted trucks routinely bypass the weight station on US-10 when its in operation. The drivers use a Alpine Drive to Armstrong Blvd. to US 10 route. We discussed how establishing a designated truck route could aid the city in its enforcement efforts. Staff identified an immediate need to improve connectivity between the Ramsey and Anoka industrial areas by extending McKinley St in Ramsey east to connect with McKinley Street in the Anoka industrial park. Trucks traveling from the Ramsey industrial area to the industrial park will often use US -10 rather than Bunker Lake Blvd. The City of Anoka has been approached about making the connection, but to date have not supported the connection.

CONTACTS WITH BUSINESSES WITH OPERATIONS AT FREIGHT FACILITIES IN ANOKA COUNTY

Summary of responses:

- The framework of Logistics supply chain within which they operate is changing due to higher energy costs. Although fluctuations in fuel cost will occur, the upward trend is expected to remain;

- Trucks are no longer leaving their facilities have empty. There are a minimum ¾ full or fully loaded. They and their customers are more willing to accept longer transit times such as an additional delay to gain cost savings in fuel. The savings can be passed on the their customers to remain competitive;

- The cost of shipping product by container from China to the TC has increased from an average of $1500 to $3000 per container. Shipping times have increased due to container ships reducing speed to conserve fuel;

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- As the result of increased cost to ship by containers and longer transit times, companies are rethinking their off shore manufacturing strategies and some production or expansion are being relocated to US locations closer to existing distribution centers;

- The common logistics practice of just-in-time deliveries is changing to the high cost of keeping product in trucks moving highways between suppliers and customers. As a consequence more stock is being kept on hand to avoid stock-outs. The function and designs (multilevel) of warehouses may change due to higher land costs to locate these facilities closer to an urban customer base and reduce travel times and costs. However, none of the managers contacted could provide specifics as how the above trends may affect long-term freight operations at facilities located in the county;

- Transportation or logistics managers contacted generally agreed their truck flows were predominately east to west on interregional flows following I-694/I-94 east to Chicago and along US 10 and I-94 west following the NW corridor to St Cloud and destination points beyond. Their description matched the FHWA US truck freight flow maps. A copy of the map is in the freight section of the Draft Transportation Policy Plan. Although the sample was limited, none indicated traffic flows north along the I-35 corridor to Duluth would experience significant increases from current volumes. Various options of routing of truck travel south to other parts of the region from the county were described. The routes identified were principal arterials as expected: US 169, US 10 and 610, I-35W and I-35E. No surprises here. One City of Anoka based business did indicate that improvements to CSAH 30 will improve its access to US 169;

- One manager when asked if an Anoka county location presented freight mobility challenges, responded that their drivers found it easier to travel south during morning peak hour traffic rather than traveling north from points of origin in Ramsey, Hennepin and Dakota counties;

- Not surprising a pattern emerged from the responses on freight mobility depending on location in the county. Businesses located in the western southern section of the county and dependent on US 10 for access to the region's principal arterial system noted the congestion on this arterial has forced them to alter operations to avoid peak hour travel as much a possible. Those located with direct access to I- 610 and I-35W and I-35E didn't have an issue other than dealing with the usual peak hour congestion delays. One business which manufactures concrete prefab components and ships it products within a five state market stated that the ability to move their products by truck on a schedule to meet customer delivery requirements was not a problem.

REVIEW OF ANOKA COUNTY HIGHWAY DEPARTMENT –DEVELOPMENT REVIEW PROCESS

The manual is a very useful tool to help coordinate and facilitate county reviews of local development projects. I suggest adding a section or an appendix with guidelines on roadway

geometrics to make roadways and access to industrial uses more truck-friendly. MnDOT Office of Freight and Commercial Vehicle Operations has identified the need to prepare "Minnesota guidance for planning, design, specifying, and maintaining transportation facilities around heavy truck traffic generators". The guidance, based on contact with MnDOT staff, should be available by the end of 2009 or early 2010. More detail on the "guidance" is in a 2005 Trucks and Twin Cities Traffic Management Report available on line. The MnDOT guidance could be referenced or appropriate sections added to the manual.

The manual perhaps in a new section dealing with industrial land uses, should address the need for roadway connectively particularly between adjoining industrial uses by sharing common points of access, adding private frontage roadway and requiring roadway alignments. Improved connectivity helps to avoid using local streets for access and to direct truck traffic on to designated truck routes. And finally, should the county adopt designated truck routes on the county highway system, guidance should be added for use by the communities in their planning and decision-making on locating and accessing major industrial uses. Those are the industrial uses that have the potential for generating significant amounts of truck traffic.

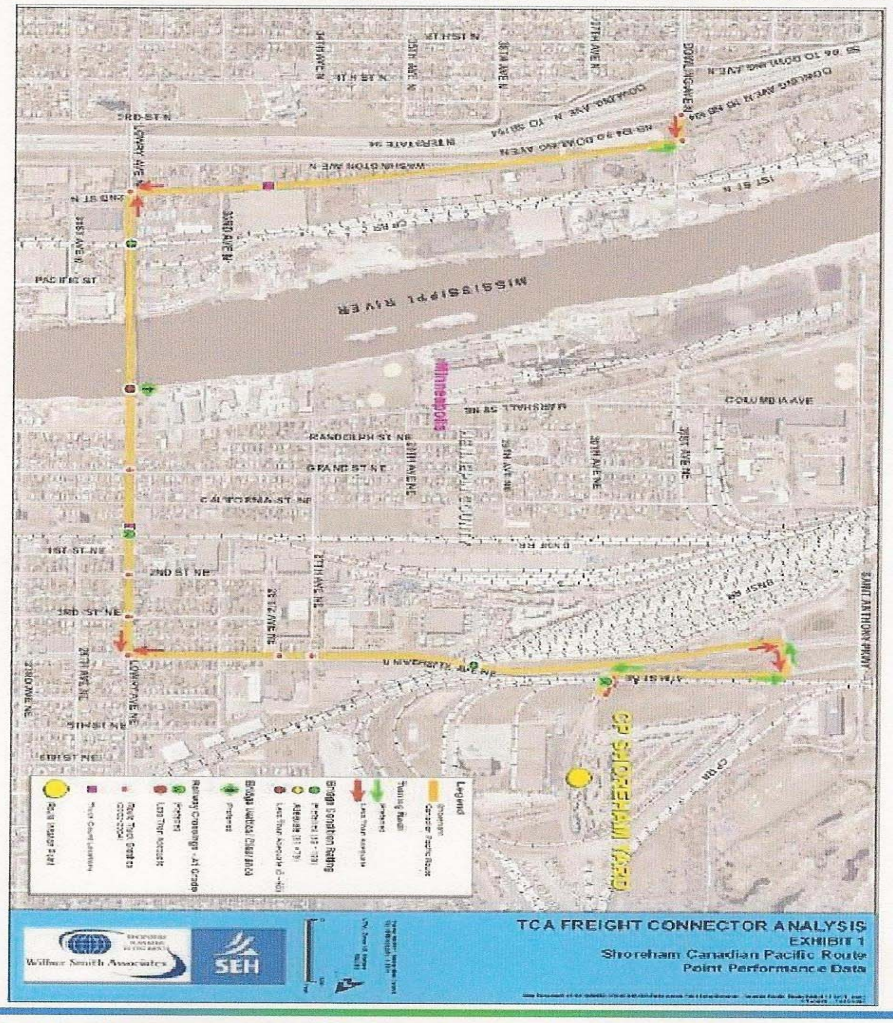
ANOKA COUNTY PARTICIPATION IN THE 2009-2010 REGIONAL FREIGHT STUDY

The freight section in the 2030 Metropolitan Council Transportation Policy Plan expected to be adopted in December, references the joint undertaking with MnDOT a regional freight study to identify freight related transportation capital improvement needs. As part of the study effort the county should not only be an active participant, but request that freight flow data purchased be of sufficient detail for use by the county in further analysis of its freight mobility issues. This level of detail in the data should be the RFP issued for the study and cost estimates. Freight flow data is proprietary and expensive to obtain and the only source is through a private vendor. Its more cost effective to purchase the data at the regional level rather than at the county or municipal levels.

Twin Cities Metro Area Freight Connectors Study

FREIGHT CONNECTORS

Exhibit 4 - CP Shoreham Intermodal Yard Route Point Performance Data



Appendix C

Referenced in Section 4.0, County Safety Analysis

Contents:

2. Anoka County Strategic Highway Safety Plan Technical Memorandum, July 24, 2008

Anoka County Strategic Highway Safety Plan Technical Memorandum

PREPARED FOR: Anoka County 2030 Transportation Plan – Project Management Team

PREPARED BY: CH2M HILL: Howard Preston, Richard Storm, Mary Gute, & Nicole Farrington

DATE: July 24, 2008

1. Background—Anoka County Highway Department's Commitment to Safety

The vision of the Anoka County Highway Department (ACHD) is to enhance and protect life by providing safe roads and eliminating congestion. The County recognizes that a safe and efficient transportation system is essential for the traveling public, as well as to communities and businesses within the County.

Anoka County fosters a culture of safety by performing many tasks and constructing projects aimed at improving safety. County leaders decided to take this a step further during development of the 2030 Transportation Plan. As the Plan was developed, the County took a structured approach towards improving traffic safety. This decision was made in part because when compared to other Minnesota Counties, Anoka County has the third highest traffic fatality count in the state (*Minnesota Strategic Highway Safety Plan* June 30, 2007).[1] Below is an overview of the County's approach for addressing traffic safety:

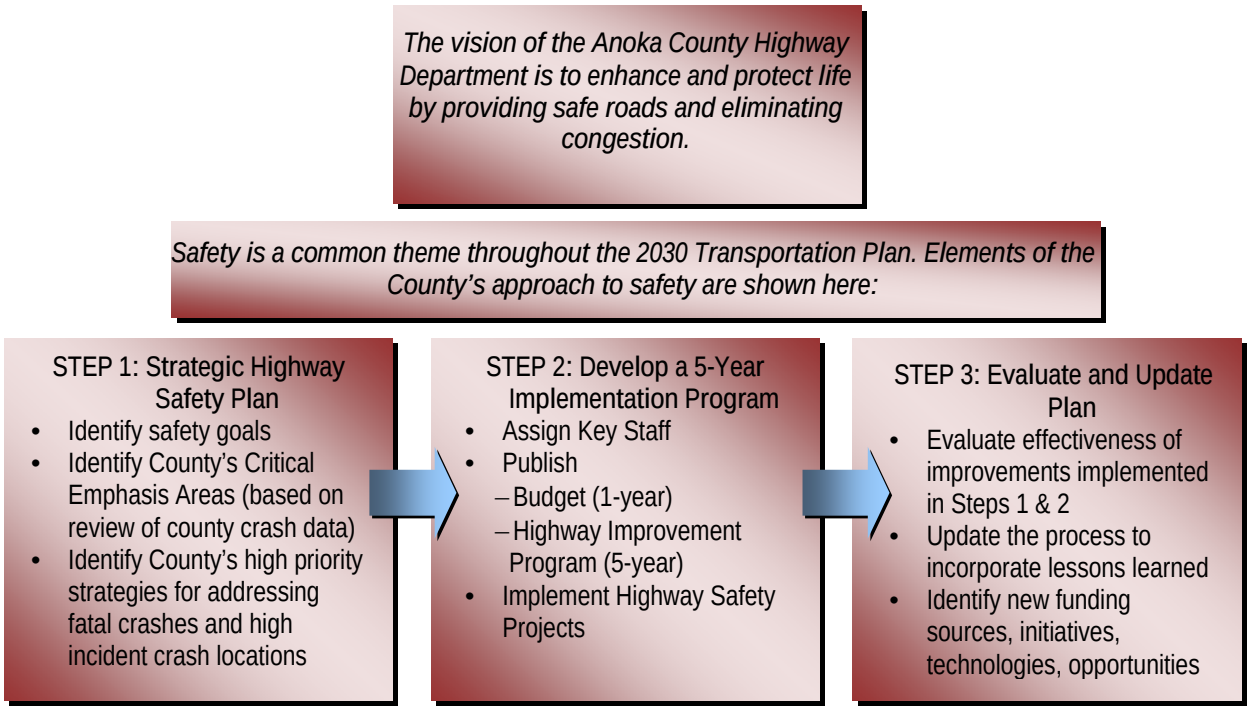


FIGURE 1
Anoka County's Overall Approach to Highway Safety

[1] One hundred thirty-three (133) traffic fatalities occurred in Anoka County during the time period 2001-2005 (*Minnesota Strategic Highway Safety Plan*). With 288 fatalities between 2001-2005, Hennepin County ranked first; and Ramsey County ranked second with 142 fatalities.

It is notable that in Minnesota, four of the five counties with the highest number of traffic fatalities are in the seven county Twin Cities Metropolitan Area. However 70 percent of traffic fatalities in the state occurred in the eighty counties that make up Greater Minnesota and 72% of fatalities occurred in rural areas. Because of the prevalence of rural fatal crashes, the Minnesota SHSP is heavily focused towards addressing crashes in these areas. Therefore, it was important for Anoka County—which is primarily urban in the southern half and rural in the northern half—to go through their own data-driven process to identify the greatest areas of concern (Critical Emphasis Areas) and the strategies most directly linked to the causes of fatal and serious injury crashes (Critical Strategies).

This Technical Memorandum documents the methodology and results of the highway safety planning process that was completed as a component of Anoka County's 2030 Transportation Plan. The memo includes documentation of the County's traffic safety goal, Critical Emphasis Areas (CEAs), and Critical Strategies. Also included is an overview of Anoka County's crash data to identify the locations of fatal and serious injury crashes; as well as locations where there were 10 or more crashes of any severity level between 2002-2006 (also referred to high incident crash locations).

2. National and State Models for Developing Anoka County's Traffic Safety Program

2.1 SAFETEA-LU

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) is the Federal law governing surface transportation programs at the time the Anoka County 2030 Transportation Plan is being developed. As the name suggests, SAFETEA-LU included several important safety requirements, including that all states must develop Strategic Highway Safety Plans.

2.2 AASHTO and State of Minnesota Strategic Highway Safety Plans; 22 Critical Emphasis Areas (CEAs)

The American Association of State Highway and Transportation Officials (AASHTO) first published a nationally focused Strategic Highway Safety Plan (SHSP) in 1997, along with an update in 2004. The SHSP focused on 22 specific highway safety challenges or "emphasis areas" that are divided into six categories. These 22 emphasis areas are shown below in Table 1. Each of the emphasis areas includes strategies for addressing the particular type of fatal crash.

TABLE 1
AASHTO SHSP Key Emphasis Areas

Part 1: Drivers
1. Instituting Graduated Licensing for Young Drivers
2. Ensuring Drivers are Licensed and Fully Competent
3. Sustaining Proficiency in Older Drivers
4. Curbing Aggressive Driving
5. Reducing Impaired Driving
6. Keeping Drivers Alert
7. Increasing Driver Safety Awareness
8. Increasing Seat Belt Usage

TABLE 1
AASHTO SHSP Key Emphasis Areas

Part 2: Special Users
9. Making Walking and Street Crossing Safety
10. Ensuring Safety Bicycle Travel
Part 3: Vehicles
11. Improving Motorcycle Safety and Increasing Motorcycle Awareness
12. Making Truck Travel Safer
13. Increasing Safety Enhancements in Vehicles
Part 4: Highways
14. Reducing Vehicle-Train Crashes
15. Keeping Vehicles on the Roadway
16. Minimizing the Consequences of Leaving the Road
17. Improving the Design and Operation of Highway Intersections
18. Reducing Head-On and Across Median Crashes
19. Designing Safer Work Zones
Part 5: Emergency Medical Services
20. Enhancing Emergency Medical Capabilities to Increase Survivability
Part 6: Management
21. Improving Information and Decision Support Systems
22. Creating More Effective Processes and Safety Management Systems

The National Cooperative Highway Research Program (NCHRP) is in the process of developing a series of guides corresponding to the 22 CEAs, listed above that are intended to assist state and local agencies reduce traffic-related fatalities and injuries. This effort is part of NCHRP Project 17-18(3); *Report 500 series*. Each guide includes a description of the problem, strategies for addressing the problem, and model implementation processes.

Analyzing crash records and determining where the crashes can be categorized within the CEAs helps agencies select strategies to implement for reducing crashes. This process also aids agencies in determining where limited highway and safety improvements funds should be invested to have the greatest positive impact.

AASHTO's SHSP and Implementation Guides were used to develop the *State of Minnesota Strategic Highway Safety*, which was initially published in 2004, and updated in 2007. The Minnesota SHSP includes tools developed to facilitate implementation; and provide state and local transportation agencies a blueprint for developing their own customized highway safety plans.

Both the national and state safety plans were developed with a variety of stakeholders from public and private agencies. This stakeholder involvement acknowledges that maintaining and improving a safe transportation system will only be achieved through combined efforts of a

variety of stakeholders. Anoka County has worked with a variety of agencies in the past to improve safety; and is committed to expanding the group of stakeholders as the County moves the safety planning process forward.

Given the availability of the national and state planning processes for reducing traffic fatalities, and to be consistent with these higher level processes, Anoka County is using AASHTO's and Mn/DOT's Strategic Highway Safety Planning processes to guide development of the County's safety plan.

3. Objectives

Anoka County's strategic highway safety plan was developed to meet five objectives:

- To be an consistent with and an extension of Federal and State initiatives [the American Association of State Highway and Transportation Officials' (AASHTO) Strategic Highway Safety Plan, the National Cooperative Highway Research Program (NCHRP) Report 500 series, and Minnesota's own 2007 Strategic Highway Safety Plan (SHSP)].
- To be data driven, based on Anoka County crash statistics.
- To involve Education, Enforcement, Engineering, and Emergency Medical Services (EMS)—the Four Es of traffic safety.
- To consider all roads in Anoka County when setting the traffic safety goal.
- To consider only Anoka's County State Aid Highways (CSAH) and County Highways (CH) when selecting the CEAs, identifying Critical Strategies, and identifying high-crash locations for Anoka County.

4. Anoka County Safety Goals

4.1 Reduce Fatalities on Roadways in Anoka County

As noted above, one of the objectives of this plan is to be consistent with national and state plans. As shown in **Figure 2**, the Minnesota SHSP adopted a goal of reducing traffic fatalities 19 percent by 2010.[2] For consistency, Anoka County adopted a goal of reducing traffic fatalities within the County by 19% by the year 2010. In 2006, there were a total of 29 traffic fatalities within Anoka County. Therefore, Anoka County's traffic safety goal is to reduce traffic fatalities from 29 in 2006 to 23 or fewer by 2010.

The severity of crashes ranges from property damage, to injury crashes, to fatal crashes. While ideally there is a desire to prevent all crashes, ACHD staff recognize that certain crash types—specifically fatal and serious injury crashes—have the most impact on those involved, as well as the families and friends of crash victims. Also, since maintaining consistency with the Minnesota SHSP, ACHD staff decided to focus on reducing fatal crashes within the County as a goal in the County's first strategic highway safety plan.

[2] Minnesota's Safety Partners created a Toward Zero Deaths initiative where the ultimate goal is to eliminate all traffic fatalities in the state. The Minnesota SHSP adopted an interim goal to reduce traffic fatalities to 400 or fewer by 2010, down from 494 traffic fatalities in 2006; approximately a 19% reduction in traffic fatalities.

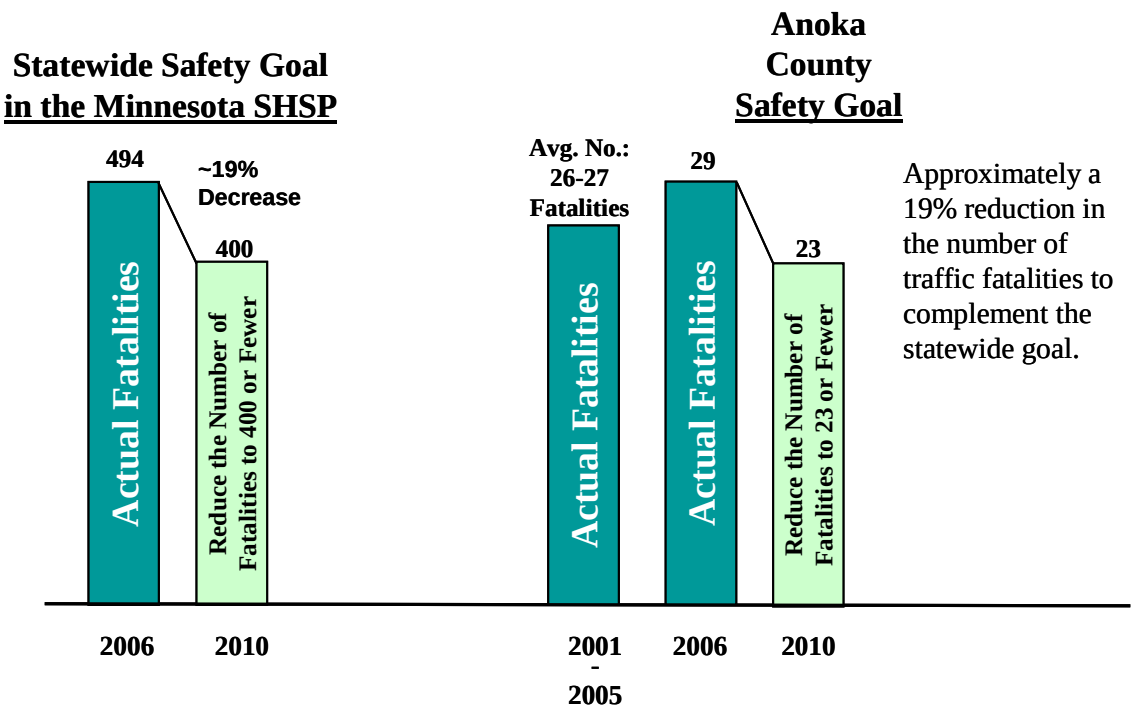


FIGURE 2
Anoka County and Minnesota Traffic Safety Goal

Figure 3 shows the location of fatal (2002-2006) and serious injury crashes that occurred in Anoka County (2002-2005).[3] While Anoka County has not formally adopted a goal of reducing serious injury crashes, these types of crashes would be expected to decrease through measures taken to address fatal injury crashes as well as the high incident crash location, discussed below.

4.2 Address High Incident Crash Locations (≥10 Crashes, 2002-2006)

This memo and the 2030 Transportation Plan primarily deals with the goal of reducing traffic fatalities. However, Anoka County also decided to include a safety goal for addressing high incident crash locations, or locations in the County where ten or more crashes occurred from 2002-2006, shown on **Figure 4**. High incident crash locations include crashes of all severity types, from fatalities to property damage only.

While the remainder of this memo primarily deals with addressing the first goal—reducing traffic-related fatalities—Anoka County is developing a Five Year Safety Program concurrently with the Strategic County Safety Plan. The Five Year Safety Program will:

- Identify the high-incident crash locations;
- Analyze the locations to determine if there common characteristics to the crashes
- Select safety strategies to most effectively address the types of crashes occurring at the high-incident crash locations
- Select safety projects which will address the high incident crash locations with the greatest needs

[3] Serious injury crash data for 2006 was unavailable at the time this analysis was conducted.

5. Assumptions Used for Analysis

ACHD staff made some assumptions regarding the initial crash record analysis, including the years, roadways, and types of crashes to be considered part of the process. The assumptions used in the analysis are documented below.

5.1 Years Included in Analysis

Data used for the Anoka County crash analysis was provided by the Minnesota Department of Public Safety's Crash Records. ACHD staff selected the five most recent years for which crash data was available, 2002-2006. However, serious injury crash data was not available for 2006 at the time this analysis was conducted.

5.2 Roadways within County Included in Analysis

County staff decided to address traffic safety on all roadways in the County because traffic safety is a universal concern for Anoka County residents and commuters, regardless of roadway jurisdiction. While this is the goal, in reality, the County has jurisdiction over County roadways—not interstates, US highways, state highways, or local streets. Addressing safety on these other roadways in the County will require cooperation and collaboration with Mn/DOT, as well as local cities.

6. Anoka County Critical Emphasis Areas

The demand for resources to address traffic safety needs far exceeds available safety funding levels. This means it is essential for agencies to prioritize and address the most critical needs to effectively decrease traffic fatalities.

6.1 Anoka County's Critical Emphasis Areas Based on Review of County Crash Data

The initial step in the prioritization process involves identifying the number of fatalities on Anoka County highways associated with each of the 22 safety emphasis areas described in AASHTO's SHSP. The results of this effort are summarized in **Table 2**. **Highlighted rows** within Table 2 indicate that a particular emphasis area was identified as an Anoka County CEA based on review of county crash records.

TABLE 2
Anoka County Traffic Fatalities by AASHTO's the 22 Emphasis Areas (from the Strategic Highway Safety Plan)

		Fatalities on Anoka County Highways*	Percent
Part 1: Drivers	**1. Instituting Graduated Licensing for Young Drivers**	**17 fatalities involving drivers under age 21**	**35%**
	2. Ensuring Drivers are Licensed and Fully Competent	0 fatalities involved a driver with an invalid license**	0%
	3. Sustaining Proficiency in Older Drivers	6 fatalities involved a driver over 64	12%
	4. Curbing Aggressive Driving	**13 fatalities involved a speeding driver**	**27%**
	5. Reducing Impaired Driving	**13 fatalities were alcohol related**	**29%**
	6. Keeping Drivers Alert	**3 fatalities involved an inattentive/sleepy driver**	**6%**
	7. Increasing Driver Safety Awareness	-- Not Quantifiable --	
	8. Increasing Seat Belt Usage	12 vehicle occupant fatalities were not	38%

TABLE 2
Anoka County Traffic Fatalities by AASHTO's the 22 Emphasis Areas (from the Strategic Highway Safety Plan)

		Fatalities on Anoka County Highways*	Percent
		using a restraint device***	
Part 2: Special Users	9. Making Walking and Street Crossing Safety	8 pedestrian fatalities	16%
	10. Ensuring Safety Bicycle Travel	1 bicyclists fatalities	2%
Part 3: Vehicles	11. Improving Motorcycle Safety and Increasing Motorcycle Awareness	5 motorcyclists fatalities	10%
	12. Making Truck Travel Safer	3 fatalities involving heavy vehicles	6%
	13. Increasing Safety Enhancements in Vehicles	-- Not Quantifiable --	
Part 4: Highways	14. Reducing Vehicle-Train Crashes	0 fatalities involving a collision with a train	0%
	15. Keeping Vehicles on the Roadway	7 single vehicle run-off the road fatalities	14%
	16. Minimizing the Consequences of Leaving the Road	Top 3 most harmful events for SVROR fatalities were: • Collision with a utility pole (4) • Overturn/Rollover (3) • Collision with a tree/shrubbery (3)	
	17. Improving the Design and Operation of Highway Intersections	19 fatalities at an intersection	39%
	18. Reducing Head-On and Across Median Crashes	11 head-on and across-median fatalities	22%
	19. Designing Safer Work Zones	0 work zone fatalities	0%
Part 5: Emergency Medical Services	20. Enhancing Emergency Medical Capabilities to Increase Survivability	In 2005, the average response time (time of crash to arrival hospital) was 52.0 minutes for 4 rural fatal crashes (time exceeded one hour in 1 crash). For 34 urban fatal crashes, the average response time was 27.9 minutes (time exceeded one hour in none of the crashes)****	
Part 6: Management	21. Improving Information and Decision Support Systems	-- Not Quantifiable --	
	22. Creating More Effective Processes and Safety Management Systems	-- Not Quantifiable --	

* SOURCE: MINNESOTA CRASH RECORDS (2002 – 2006)

** INFORMATION REGARDING DRIVER LICENSE STATUS WAS ADDED TO THE CRASH RECORD DATABASE IN 2003.

*** BETWEEN 2002 AND 2006, THERE WERE 34 VEHICLE OCCUPANT FATALITIES.

**** INFORMATION REGARDING EMS RESPONSE TIMES WAS FROM THE FARS DATABASE AND IS FOR ALL CRASHES IN THE COUNTY.

NOTE: Between 2002 and 2006, there were 45 fatal crashes that resulted in 49 fatalities on the Anoka County Highway System.

6.2 Ranking Anoka County's CEAs

The next step involves ranking the emphasis areas by the number of fatalities. The effort resulted in identification of the top safety emphasis areas in Anoka County which are documented in **Table 3** along with the number and percentage of fatalities in Anoka County. Anoka County's Highway Department staff and the PMT reviewed and concurred with the prioritization of the emphasis areas. This resulted in the adoption of the following Critical Emphasis Areas (CEA's):

- Improving the Design and Operation of Highway Intersections
- Reducing Impaired Driving
- Increasing Seat Belt Usage
- Curbing Aggressive Driving
- Addressing Over Involvement of Young Drivers
- Reducing Head-On and Across Median Crashes
- Keeping Drivers Alert
- Keeping Vehicles on the Road & Minimize the Consequences of Leaving the Road
- Improving Pedestrian and Bicycle Safety
- Utilizing Information and Decision Support Systems

Nine emphasis areas with the most Anoka County traffic fatalities match the state's CEAs as documented in the *Minnesota SHSP*.[4] Analysis of Anoka County crash data resulted in the addition of these additional CEAs: *Keeping Drivers Alert* and *Reducing Motorcycle Crashes*. The addition of these two CEAs reinforces the importance of a county-specific data driven process, to ensure that the County is aware the types of crashes occurring on roadways; and is best able to address these types of crashes.

In addition to the quantifiable CEAs, the CEA: *Utilizing Information and Decision Support Systems* was added to Anoka County's CEA's, as it was in Minnesota's SHSP. This CEA acknowledges the importance of good crash data to the overall safety planning process. **Table 4** provides a breakdown of the traffic fatalities in each CEA by jurisdiction.

TABLE 3
Anoka County Critical Emphasis Areas

Critical Emphasis Area	Related Anoka County Fatalities *	Percent of Anoka County Fatalities (49 b/w 2002-2006)	Serious Injuries	Fatalities & Serious Injuries
1) Improving Design and Operation of Highway Intersections *(Ranked #3 in Mn SHSP)*	19	39%	181	200
2) Addressing Young Drivers' Over Involvement *(Ranked #6 in Mn SHSP)*	17	35%	97	114
3) Reducing Lane Departure Crashes (Head-On and Run-Off Road Crashes) *(Ranked #4 & 7 in Mn SHSP)*	18	37%	94	112
4) Keeping Drivers Alert	3	6%	91	94

[4] The Minnesota SHSP CEA's "Keeping Vehicles on the Roadway" and "Reducing Head-On and Across-Median Crashes" were combined for the Anoka County SHSP and categorized as "Reducing Lane Departure Crashes," shown in Table 3.

TABLE 3
Anoka County Critical Emphasis Areas

Critical Emphasis Area	Related Anoka County Fatalities *	Percent of Anoka County Fatalities (49 b/w 2002-2006)	Serious Injuries	Fatalities & Serious Injuries
(Not Ranked in Mn SHSP)				
5) Increasing Seat Belt Usage *(Ranked #1 in Mn SHSP)*	13	27%	65	78
6) Curbing Aggressive Driving *(Ranked #5 in Mn SHSP)*	13	27%	45	58
7) Reducing Impaired Driving *(Ranked #2 in Mn SHSP)*	14	29%	38	52
8) Reducing Motorcycle Crashes *(Not Ranked in Mn SHSP)*	5	10%	31	36
9) Improving Pedestrian and Bicycle Safety *(Not Ranked in Mn SHSP)*	9	18%	26	35
10) Utilizing Information and Decision Support Systems *(Not Ranked in Mn SHSP)*	—Not Quantifiable—			

* Source: Minnesota Crash Records Database (2002-2006) for Anoka County's County State Aid Highways and County Highways.

** Percentage based on vehicle occupant fatalities instead of all traffic fatalities.

TABLE 4
Traffic Fatality Distribution by Jurisdiction for the Anoka County Critical Emphasis Areas

Critical Emphasis Area	Distribution by Roadway Jurisdiction*			
	County **	State	City/Other	Total
1) Improving Design and Operation of Highway Intersections	19 (37%)	29	4	52
2) Addressing Young Drivers Over Involvement	17 (52%)	13	3	33
3) Reducing Lane Departure Crashes (Head-On and Run-Off Road Crashes)	18 (34%)	28	7	53
4) Keeping Drivers Alert	3 (13%)	18	2	23
5) Increasing Seat Belt Usage	13 (25%)	32	6	51
6) Curbing Aggressive Driving	13 (38%)	16	5	34
7) Reducing Impaired Driving	14 (30%)	29	4	47
8) Reducing Motorcycle Crashes	5 (42%)	6	1	12
9) Improving Pedestrian and Bicycle Safety	9 (47%)	10	0	19
10) Utilizing Information and Decision Support Systems	-- Not Quantifiable --			

* Source: Minnesota Crash Records (2002 – 2006)

** The percentage that county highway fatalities are of all related fatalities is included in parentheses.

6.3 Infrastructure Based vs. Driver Behavior Based Critical Emphasis Areas

It is important to distinguish between two categories of CEAs, before beginning the process of selecting strategies to address CEAs selected for Anoka County. Infrastructure based emphasis areas refer to characteristics of the area in which crashes occur. Driver behavior based emphasis areas refer to motorist characteristics or actions that contribute to crashes. Anoka County's CEA's are categorized in Table 5 by infrastructure or driver behavior based emphasis areas:

TABLE 5
Anoka County Critical Emphasis Category—Driver Behavior or Infrastructure Based

Driver Behavior Based Emphasis Areas	Infrastructure Based Emphasis Areas	Other Emphasis Area
2) Addressing Young Drivers' Over Involvement	1) Improving Design and Operation of Highway Intersections	10) Utilizing Information and Decision Support Systems
4) Keeping Drivers Alert	3) Reducing Lane Departure Crashes (Head-on and Run-off Road Crashes)*	
5) Increasing Seat Belt Usage	9) Improving Pedestrian and Bicycle Safety	
6) Curbing Aggressive Driving		
7) Reducing Impaired Driving		
8) Reducing Motorcycle Crashes		

* Because of the similar strategies used to address the CEAs *Reducing Head-On and Across-Median Crashes* and *Keeping Vehicles on the Roadway & Minimize the Consequences of Leaving the Road*, the strategies were combined into the CEA, "Reducing Land Departure Crashes" for the purposes of this analysis.

This distinction is important because the Anoka County Highway Department generally has less ability to address Driver Behavior Based CEAs than Infrastructure Based CEAs. This is because many of the Driver Behavior Based CEAs are tied to laws made at the national or state level. As will be demonstrated in Section 7, the County Highway Department's most effective approach towards addressing these CEAs will be public education and law enforcement efforts. Driver Behavior Based CEAs are also most effectively addressed through the highway department's cooperation and collaboration with other County departments and County leaders; various agencies, including law enforcement; schools, etc. The County Highway Department has more ability to address Infrastructure Based CEAs as many of the strategies in these categories can be implemented as separate projects, or along with other planned improvements.

7. Anoka County Critical Strategies

Using the selected CEAs, County staff focused on selecting strategies that would most effectively utilize limited safety resources to significantly reduce the number of traffic fatalities on Anoka County roadways. This focus is necessary because numerous strategies are available to address the ten CEAs; however, only a few of these are likely to address a majority of the causal factors crashes in Anoka County. Therefore, a screening process was used to identify the top or Critical Strategies in each county-specific CEA. The County will look to these strategies first for future deployment when addressing safety issues. The Critical Strategies do not replace or supersede existing programs; instead, they define direction for new investments.

The NCHRP Report 500 series and the Minnesota SHSP were the initial sources for all of the safety strategies considered to address the elected CEAs. The strategies in both sources were identified using a panel of traffic safety experts considering the most recent fatal crash information and the most current safety research.

The next step in the County's selection of Critical Strategies included a review of local crashes and contributing factors. This information was then used by County Staff at internal workshops where the list of strategies were reviewed and refined to match County needs. The selected Anoka County Critical Strategies for addressing the Infrastructure Based CEAs are summarized in tables 6-8. Critical Strategies selected by Anoka County to address Driver Behavior Based CEAs are summarized in Table 10.

TABLE 6

Critical Strategies to Address Crashes in the Intersection CEA (CEA # 1)

Objectives	Strategies	Relative Cost to Implement and Operate	Effectiveness	Typical Timeframe for Implementation
A—Improve access management	A1—Implement intersection or driveway closures, relocations, and turning restrictions using signing or by providing channelization.	Low to Moderate	Tried	Medium (1-2 yrs.)
B—Reduce the frequency and severity of intersection conflicts through geometric design improvements	B1 – Realign intersection approaches to reduce or eliminate intersection skew.	High	Proven	Medium (1-2 yrs.)
	B2—Provide left-turn lanes at intersections and provide sufficient length to accommodate deceleration and queuing.	Moderate to High	Proven	Medium (1-2 yrs.)
	B3—Provide right-turn lanes at intersections and provide sufficient length to accommodate deceleration and queuing. Use offset turn lanes to provide better visibility if needed.	Moderate to High	Proven	Medium (1-2 yrs.)
	B4—Use left-turn lanes or provide bypass lanes on shoulders at T-intersections; add requirement to Development Process Review Manual	Low	Tried	Short (<1 yr.)
C—Improve sight distance at intersections	C1—Clear sight triangles approaches to intersections; in addition to eliminating objects in the roadside, this may also include eliminating parking that restricts sight distance; review when reconstruction occurs; add ROW request/easements over sight triangles.	Low to Moderate	Tried	Short (<1 yr.)
D—Improve driver awareness of intersections as viewed from the intersection approach	D1—Improve visibility of the intersection by providing lighting (install or enhance) or red flashing beacons mounted on stop signs; develop policy for including with development review; develop polity to reflectorize entire post; consider lighting as part of cost share policy; add requirements to Development Process Review manual for developer to ALWAYS include street light, street sigh blade at intersection of county road to county standard for readability and delineator beneath stop signs.	Low to Moderate	Proven	Medium (1-2 yrs.)
	D2—Improve visibility of traffic signals using overhead mast arms and larger lenses; convert to LED lighting when possible; replace span wire systems.	Moderate	Tried	Short (<1 yr.)
	D3—Continue providing enhanced signing; may include installing larger regulatory warning and guide signing and supplementary stop signs; where appropriate, utilize STOP AHEAD informational signage; add reflectorization to vertical post on stop signs and/or yellow warning signs.	Low	Tried	Short (<1 yr.)

TABLE 6
Critical Strategies to Address Crashes in the Intersection CEA (CEA # 1)

Objectives	Strategies	Relative Cost to Implement and Operate	Effectiveness	Typical Timeframe for Implementation
	D4—Improve visibility of intersections by providing enhanced pavement markings, encourage cities to enhance pavement markings such as adding or widening stop bar on minor road approaches, supplementary signs on city roads (i.e., STOP AHEAD); use durable materials on minor roads.	Low	Tried	Short (<1 yr.)
E—Choose appropriate intersection traffic control to minimize crash frequency and severity	E1—Consider roundabouts at appropriate locations.	High	Proven	Long (>2 yrs.)
	E2—Provide all-way stop control at appropriate intersections; continue to evaluate, and when appropriate, convert to signalized intersection or roundabout when congestion warrants; monitor crash frequency.	Low	Proven	Short (<1 yr.)
F—Reduce frequency and severity of intersection conflicts through traffic signal control and operational improvements	1—Employ multiphase signal operation, signal coordination, emergency vehicle preemption optimize clearance intervals; implement dilemma zone protection; on high speed roadways, install advance warning flashers to inform driver of need to stop; and retime adjacent signals to create gaps at stop-controlled intersections	Low to Moderate	Proven/Tried	Medium (1-2 yrs.)

TABLE 7
Critical Strategies to Address Crashes in the Lane Departure CEA (CEA #3)

Objectives	Strategies	Relative Cost to Implement and Operate	Effectiveness	Typical Timeframe for Implementation
A—Assist drivers in maintaining their lane	A1—Consider spot implementation of longitudinal rumble strips to warn drivers when leaving their lane; includes centerline rumble strips for two-lane roads, shoulder rumble strips, and shoulder rumble stripes. Implement access, crash and safety corrections each time a road is "touched" as appropriate.	Low	Tried	Short (< 1 yr.)
	A2—Consider spot implementation of enhanced centerline and edgeline pavement markings for improved day/night/wet visibility. Treatments may include 6" or 8" wide markings instead of 4" and durable pavement markings in construction areas.	Low	Tried/	Short (< 1 yr.)
	A3—Provide wider cross section on two-lane roads.	Low to High	Tried	Medium (1-2 yrs.)
B—Keep vehicles from encroaching on the roadside	B1—Eliminate shoulder drop-offs by paving or widening shoulders, continue and formalize (write out/adopt) County's practice of shoulder maintenance; identify areas with deteriorating curves and widen shoulders inside curves	Moderate to High	Proven/Tried	Medium (1-2 yrs.)
	B2—Provide advance warning of unexpected horizontal curves along with enhanced curve delineation (i.e., edgeline enhancements, chevrons, delineators)	Low	Proven/Tried/Experimental	Short (< 1 yr.)
C—Reduce the severity of run-off the road crashes	C1—Remove/relocate objects (such as trees, utility poles, light poles, extend culverts to move outside of clear zone, etc.) to provide adequate clear zones; encourage cities to do same when working in County ROW; improve boulevard recovery area. Update Development Process Review Manual to include details. Evaluate ROW needs to accomplish tasks.	Low to Moderate	Proven	Short (< 1 yr.)
	C2—Design slopes and ditches to prevent rollovers, including transverse slope (i.e., flatten or use culvert safety grates).	Moderate to High	Proven	Medium (1-2 yrs.)
	C3—Shield motorists from steep slopes and roadside objects. Including updating of barriers and crash cushions that do not meet current standards.	Moderate to High	Proven/Tried	Medium (1-2 yrs.)

TABLE 8

Critical Strategies to Address Crashes in the Pedestrian and Bicycle CEA (CEA #9)

Objectives	Strategies	Relative Cost to Implement and Operate	Effectiveness	Typical Timeframe for Implementation
A—Reduce pedestrian and bicycle exposure to vehicular traffic	A1—Provide sidewalks/walkways, paved shoulders, bike paths, curb ramps, and curb extensions where appropriate.	Moderate to High	Proven	Long (> 2 yrs.)
	A2—Install or upgrade traffic (i.e., improved timing, count down timers, image displays, extended delay to accommodate elderly, advanced WALK display, etc.).	Moderate to High	Proven/Tried/ Experimental	Medium (1-2 yrs.)
	A3—At intersections, improve bicycle signing, markings, timing and detection at intersections, where appropriate. Work with cities to add detection at intersections, and improve pedestrian/bicycle signing and markings.	Moderate	Tried	Medium (1-2 yrs.)
B—Improve sight distance and/or visibility between vehicles and pedestrians and bicyclists	B1—Crosswalk enhancements: crosswalk lighting or intersection illumination.	Low to Moderate	Proven/Tried	Medium (1-2 yrs.)
	B2—Eliminate screening by physical objects, including parking of cars; eliminate crosswalks at unsignalized/uncontrolled intersections.	Moderate	Tried	Medium (1-2 yrs.)
C—Reduce vehicle speed	C1—Provide school route improvements.	Low	Tried	Short (< 1 yr.)
D—Implement a safety program targeting “high crash locations” in the major urbanized areas and select rural areas	D1— Develop a process to identify high crash locations; continue to investigate areas of concern; perform more formalized (documented, standardized) analysis of crash areas and consideration of potential future strategies	Low	Experimental	Short (<1 yr.)
E—Reduce pedestrian and bicycle exposure at railroad crossings	Provide separate crossings for pedestrians and bicyclists	NA	NA	NA

TABLE 9
Strategies to Address Driver Behavior Based and Other Critical Emphasis Areas (CEAs)

	Driver Behavior Based						Other
	CEA #2	**CEA #4**	**CEA #5**	**CEA #6**	**CEA #7**	**CEA #8**	**CEA #10**
	Address Young Driver Over Involvement	**Keep Drivers Alert**	**Increase Seat Belt Usage**	**Curb Aggressive Driving**	**Reduce Impaired Driving**	**Reduce Motorcycle Crashes**	**Utilize Info. & Decision Support Systems**
Education Strategies							
Encourage the enactment of a stronger graduated driver licensing system.	✓						
Support the enforcement of traffic safety laws by working with courts to prevent the reduction or dismissal of traffic citations for impaired or aggressive driving.				✓	✓		
Utilize safe community coalitions to improve driver behavior, including impaired driving, crashes involving motorcycle drivers, young drivers, using seat belts, aggressive drivers, and distracted drivers. *Note: Safe Communities of Wright County is an example safe community coalition that has been able to successfully address several of the leading contributing factors in fatal crashes.*	✓	✓	✓	✓	✓	✓	
Enforcement Strategies							
Provide adequate resources to allow law enforcement to perform traffic enforcement for speeding, unbelted occupants, and impaired driving. *Note: Also includes data driven enforcement for more efficient and better utilization of current resources.*			✓	✓	✓		✓
Encourage the enactment of: 1) a statewide primary seat belt law that will permit standard enforcement and provide universal coverage to all vehicle occupants; and 2) the enactment of a statewide motorcycle helmet law that will permit standard enforcement.			✓			✓	
Participate in publicized saturations and targeted enforcement to deter impaired drivers and aggressive drivers, and increase seat belt use. Existing programs include (but are not limited to) Safe & Sober, NightCAP, and Highway Enforcement of Aggressive Traffic.			✓	✓	✓		
EMS Strategies							
Improve emergency trauma response by supporting training of	✓	✓	✓	✓	✓	✓	

TABLE 9
Strategies to Address Driver Behavior Based and Other Critical Emphasis Areas (CEAs)

	Driver Behavior Based						Other
	CEA #2	**CEA #4**	**CEA #5**	**CEA #6**	**CEA #7**	**CEA #8**	**CEA #10**
	Address Young Driver Over Involvement	**Keep Drivers Alert**	**Increase Seat Belt Usage**	**Curb Aggressive Driving**	**Reduce Impaired Driving**	**Reduce Motorcycle Crashes**	**Utilize Info. & Decision Support Systems**
local law enforcement officer.							
Support the development of common location information and communication standards to assist emergency responders in quickly and efficiently locating crashes. *Note: For example, Mn/DOT's 511 system could be modified to add features that allow EMTs access to information and assistance on route selection to the crash scene and from the crash scene to the best hospital given the level of trauma.*	✓	✓	✓	✓	✓	✓	✓
Equip all law enforcement vehicles with Automatic External Defibrillators.	✓	✓	✓	✓	✓		
Data and Information System Strategies							
Lead the formation of a 4E Fatal Crash Review Committee that reviews each fatal crash to help identify patterns and contributing factors in fatal crashes so that cooperative and integrated solutions can be developed. *Note: New strategy, not in the Minnesota SHSP.*							✓

8. Next Steps

As noted in Section 4.2, this memo primarily focused on the reduction of traffic fatalities. However, Anoka County also adopted a goal for address high incident crash locations—areas where ten or more crashes occurred between 2002-2006. The County Highway Department will soon develop a Five Year Safety Program aimed at addressing fatalities, as well as the identified high incident crash locations.

Appendix D

Referenced in Section 5.0, Travel Demand Analysis

Contents:

1. Anoka County Transportation Plan: Travel Demand Analysis Technical Memorandum, October 30, 2007, Revised January 29, 2008
2. Year 2000 Modeled Volume/Capacity (v/c) Ratios
3. Travel Demand Modeling Update
4. 2030 Transit Demand Documentation

Memorandum To: Stephanie Eiler, CH2M Hill
Kate Garwood, Anoka County

From: Steve Ruegg, PB

Date: October 30, 2007, Revised January 29, 2008

Subject: **Anoka County Transportation Plan: Travel Demand Analysis**

I. Introduction

This memo describes the methodology and results of an analysis of the 2030 travel demand for Anoka County. This analysis has been done in support of the 2030 Transportation Plan update and provides information on overall system performance and specific corridor performance, needs and priority for 2030, based on travel demand.

The forecast demand was developed using the Anoka County travel demand model, which incorporates the entire metropolitan region, but with greater network and socioeconomic detail in Anoka County. As such it is capable of reflecting regional trends in travel and regional transit impacts as well.

II. Alternatives

Two network alternatives were modeled, both using the same socioeconomic demand values. Scenario 1 represents the existing plus committed projects in the county, based on current plans through 2030. Scenario 2 differs from Scenario 1 only in that the corridor capacity enhancements of the inter-regional corridor recommendations (on TH10 and I-35W) are included. For a detailed description of the networks, see the June 28, 2007 memo from Dennis Farmer to Kate Garwood entitled "Basic Modeling Assumptions for Network Scenarios 1 & 2 in the 2030 Anoka County Transportation Plan. The proposed Northstar commuter rail line was included, along with the 2030 regional transit plan.

III. Modeling Approach

The Anoka County model is an adaptation of the Twin Cities Regional model, which is maintained and developed by the Metropolitan Council, and is used for regional planning purposes. The Anoka county model covers the same geographic area (the 7-county core plus the 13-county "collar" area) but has enhanced detail in Anoka County in terms of both network and zone structure. The Anoka County model contains 487 zones in the county, compared with 126 in the regional model. In terms of network, the Anoka County model has 4,591 links in the county, compared with 1,613 in the regional model.

The Anoka County model also uses the same modeling structure as the regional model, including modes, parameters and the overall four-step modeling process, which includes:

1. Trip Generation – Used to estimate the number of trips
2. Trip Distribution – Used to allocate trips to origin and destination zone pairs

3. Mode Choice – Used to estimate the number of trips by auto, transit and non-motorized modes for each origin/destination zone pair
4. Assignment – Used to allocate mode-specific trips to paths between origin and destination zones.

Socioeconomic data, consisting of population, households, retail and non-retail employment by zone were collected from each community in the county for 2030. The county provided assistance to the cities, where necessary, to help the city staff allocate municipal totals to the traffic analysis zones in a consistent manner. All municipal forecasts were constrained to the current Metropolitan Council forecasts by city. The official Metropolitan Council 2030 socioeconomic forecasts were used for zones outside of Anoka County.

The model was then executed according to standard procedures. Each model step was run in sequence, and a feedback loop was employed until overall convergence was achieved. The result is a set of traffic assignments by time of day and daily that provide vehicle-demand flows, and speeds on each modeled link in the county.

The county network was then isolated from the rest of the region and placed in a GIS environment. County-wide summaries were first prepared, identifying vehicle-miles of travel (VMT), vehicle-hours of travel (VHT), delay and average speed. The latter is computed by dividing the VMT by the VHT. All of these measures were computed by facility type.

An existing (year 2000) scenario was also used to compile similar system-wide statistics.

Link-specific level of service (LOS), delay and required lanes were computed. The number of required lanes was based on the estimated peak hour demand divided by the per-lane capacity of each link. The capacity is defined as the maximum flow at level of service E, a volume just below breakdown conditions. The level of service was computed based on the volume to capacity (v/c) ratio. The level of service classification was nominally defined as:

LOS A = <0.65 v/c
LOS B = 0.65-0.75 v/c
LOS C = 0.75-0.85 v/c
LOS D = 0.85-0.95 v/c
LOS E = 0.95-1.05 v/c
LOS F = >1.05

The links were next sorted and ranked according to delay. The 100 links with the most delay were displayed with a color range to highlight their location. In addition maps were prepared showing the number of additional lanes which would be required to meet the demand.

Using plots of LOS, delay and volume, specific corridors were defined based on the following factors:

1. Continuity of roadway designation (CSAH 1).
2. Extent of LOS E or greater conditions
3. Logical termini for planning and project development purposes
4. Extent of excessive delay and volume.
5. Number and location of high-ranking links by delay.
6. Extent and continuity of required additional lanes.

There were 17 corridors involving county roads, and 8 corridors involving state roadways. These corridors accounted for 69-71 percent of the total delay in Anoka County. Summary totals of delay, VMT and VHT were computed for each corridor, and the corridors themselves were ranked according to the amount of delay per additional required lane-mile – which may be thought of as the congestion relief afforded per new lane mile investment.

IV. System-Wide Results

Tables 1-4 show system-wide measures related to VMT, VHT, delay and average speed by facility type in Anoka County. The figures highlight several major trends:

- VMT will increase by 61% from 2000 to 2030
- VHT and delay will more than double from 2000 to 2030
- Scenario 2, with the inter-regional corridor projects, does relieve delay by about 22% when compared with Scenario 1.
- About one-half of the total delay, and more than one-half of the increase in delay occurs on the arterial system.
- Freeways show the largest decrease in system speed, the percentage change is even across facility types.
- The capacity improvements on I-35 and TH 10 (Scenario 2) have the effect of drawing more traffic to those facilities, and relieving parallel arterial highways. Therefore, arterials show the greatest absolute benefit in terms of delay from the IRC improvements, though collectors and arterials show an equal percent change benefit in delay from the IRC.

Table 1: Anoka County, Vehicle-Miles of Travel (VMT in thousands)

	Freeway	Arterial	Collector	Total
Yr 2000	2,975	3,576	1,098	7,650
Scenario 1 (2030)	4,485	6,146	1,662	12,294
Scenario 2 (2030)	5,006	5,786	1,541	12,333
Change				
Scen1 – 2000	1,510	2,570	564	4,644
Scen 2 - Scen 1	521	-361	-122	39
Percent Change				
Scen1 – 2000	51%	72%	51%	61%
Scen 2 - Scen 1	12%	-6%	-7%	0%

Table 2: Anoka County Vehicle-Hours of Travel (VHT in thousands)

	Freeway	Arterial	Collector	Total
Yr 2000	63	124	41	228
Scenario 1 (2030)	144	324	89	557
Scenario 2 (2030)	137	274	74	485
Change				
Scen1 – 2000	80	200	48	329
Scen 2 - Scen 1	-7	-50	-15	-72
Percent Change				
Scen1 – 2000	126%	162%	118%	144%
Scen 2 - Scen 1	-5%	-15%	-17%	-13%

Table 3: Anoka County Vehicle-Hours of Delay (VHT in thousands)

	Freeway	Arterial	Collector	Total
Yr 2000	22	35	13	70
Scenario 1 (2030)	82	174	48	304
Scenario 2 (2030)	68	133	37	237
Change				
Scen1 – 2000	59	139	35	234
Scen 2 - Scen 1	-14	-41	-12	-67
Percent Change				
Scen1 – 2000	269%	402%	259%	333%
Scen 2 - Scen 1	-17%	-23%	-25%	-22%

Table 4: Anoka County Average Daily Speed (mph)

	Freeway	Arterial	Collector	Total
Yr 2000	46.9	28.9	26.8	33.5
Scenario 1 (2030)	31.2	19.0	18.7	22.1
Scenario 2 (2030)	36.6	21.1	20.8	25.4
Change				
Scen1 – 2000	-15.7	-9.9	-8.2	-11.5
Scen 2 - Scen 1	5.4	2.2	2.1	3.4
Percent Change				
Scen1 – 2000	-33%	-34%	-30%	-34%
Scen 2 - Scen 1	17%	11%	11%	15%

V. Corridor-Specific Results

A total of 25 corridors were defined and the 17 county road corridors are shown in Figure 1.

Figure 1: Corridor Locations

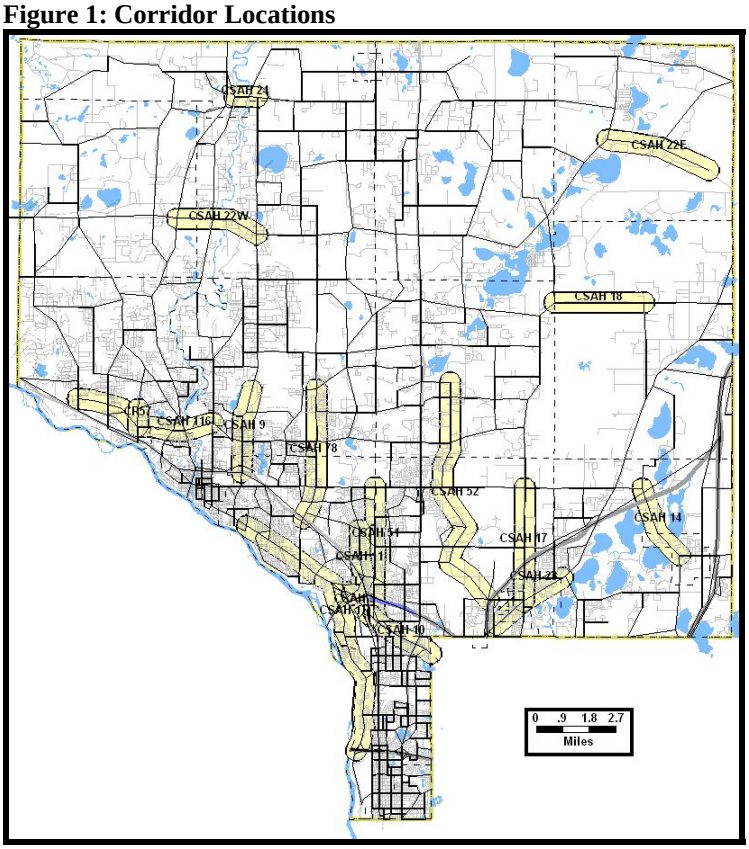


Table 5 provides a detailed description of each corridor.

Table 6 sorts the corridors in order of delay per additional required lane mile, a measure of the effectiveness of improvements on each corridor. Note that Scenario 2 changes the ranking of some of these county corridors, as the increased capacity on TH 10 an I-35W relieves some county roads more than others. In particular, CSAH 116 (Bunker Lake Blvd), CSAH 1 (East River Road) and CSAH 23 (Lake Drive) move down in the ranking because the overall delay drops significantly due to the IRC improvements. This list may be used as one part of the information needed to prioritize the corridors for long range improvement plans. Other considerations are cost, feasibility (e.g., availability of land) and alternative solutions, such as upgraded intersection capacity, improved access management, or land use controls.

Tables 7 and 8 show the delay and required additional lane miles by city and township in Anoka County for Year 2030. Table 7 excludes state facilities and Table 8 includes all facilities, including state roadways. In both tables, the cities or townships are sorted in order of Scenario 1 delay, and the Scenario 1 and 2 rankings are given. The rankings do not change significantly, or at all, for most cities and townships under the two Scenarios.

In Figures 2-7, a graphical representation of delay, peak hour volume, level of service and required additional lanes is shown. Figures 2-4 refer to Scenario 1. Figure 5 shows peak hour volume and level of service for Scenario 2, and Figures 6 and 7 shows the difference between the Scenarios. Delay and required additional lanes for Scenario 2 are not shown, as they are very similar to Scenario 1 in graphic terms. As can be seen from all the maps, delay, capacity needs and low levels of service are concentrated in the southern portions of the county, primarily along north-south routes. This is a reflection of the following:

- while growth trends may be accelerating in the northern portions of the county, this growth is of lower density than in the more southern portions, and
- jobs and other destinations remain focused on the southern portions of the county, and in general to the south of Anoka County regionally.

Therefore, demand will remain at high levels on the north-south roadways in the southern portion of the county. Note also that congestion on CSAH 18, 22 and 24 in the north is primarily a result of a lack of east-west alternatives, making these facilities primary "bottlenecks" in the system.

Finally, as Figure 6 and 7 illustrate, the IRC improvements do relieve parallel county facilities to some degree, as travelers change travel paths to take advantage of increased capacity on the IRC corridors.

VI. General Conclusions

The data presented here reveals several prominent conclusions, including:

1. Travel demand will increase substantially over the next 25-30 years, resulting in an approximately 60% increase in vehicle-miles and more than a doubling of the vehicle-hours and especially vehicle delay. This is true even with the IRC improvements.
2. The IRC improvements, as represented in Scenario 2, offer a measurable improvement in delay and VHT for some corridors but provide only marginal improvement for most county corridors.
3. There are 17 definable county facility corridors, and 8 definable state facility corridors, that may require some level of capacity enhancement by 2030 to accommodate the anticipated demand levels.
4. North-South corridors in the southern half of Anoka County will experience most of the congestion that is expected to occur by 2030. This is due to continued demand to the southern area of the county and to points further south in the region.
5. East-West corridors in the northern half of Anoka County will experience increased congestion and delay due to lack of alternative east-west routes.
6. Prioritization of corridors based on the effectiveness of capacity enhancement is a valuable input, combined with cost and feasibility, to forming a county-wide corridor improvement plan.

Table 5: Anoka County Corridor Definitions

Corridor Label	Description	Limits	Length (mi)
County Corridors			
CSAH 1	East River Road	51st Way to 5th Avenue (Anoka)	9.21
CSAH 3	Coon Rapids Blvd	US 10 to CSAH 1	1.50
CSAH 9	Round Lake Blvd	US 10 to 151st Lane	2.82
CSAH 10		County Line to US 10	2.44
CSAH 11	Foley Blvd	CSAH 1 to Northdale Blvd	2.37
CSAH 14		Centerville Rd to Rondeau Lk Rd	2.63
CSAH 17	Lexington Avenue	Lake Drive to Main St.	3.81
CSAH 18	West Broadway	Lexington Ave to Potomac St.	3.01
CSAH 22W	Viking Blvd.	SH 47 to Lake George Blvd	2.81
CSAH 22E	Viking Blvd	Typo Creek Dr to county line	3.61
CSAH 23	Lake Drive	I-35W to Hodgson Rd	2.74
CSAH 24	Bridge St	Ambassador Blvd to Lake George Blvd	0.76
CSAH 51	University Ave.	US 10 to Main St.	4.58
CSAH 52	Radisson Rd	I-35W to 153rd Avenue	8.34
CSAH 78	Hanson Blvd.	US 10 to 150th Avenue	4.43
CSAH 116	Bunker Lk Blvd	Armstrong Blvd to 7th Avenue North	4.90
CR 57	Sunfish Lk Blvd	Industry Avenue to 145th Ln	0.59
State Corridors			
TH 47	Univ/St. Francis	South County Line to North County Line	22.23
TH 65	Central Avenue	South County Line to North County Line	21.15
TH 610		County Line to US10	2.42
US 10		South County Line to West County Line	16.49
US 169		Mississippi River to US 10	1.52
I-35E		South County Line to I-35	17.73
I-35		South County Line to I-35	10.44
I-694		West County Line to East County Line	4.04

Table 6: Delay and Required Additional Lane-Miles by Corridor – Yr 2030 Anoka County

Corridor	VH of Delay/day		Required Addl Lane-Miles		Delay/Reqd Addl Lane-Mile		Rank on Delay/RA LM		Change
	Scen 1	Scen 2	Scen 1	Scen 2	Scen 1	Scen 2	Scen 1	Scen 2	
County Facilities									
CSAH 24	844	587	2	2	555	386	1	7	-6
CSAH 116	4,342	2,589	10	10	443	264	2	11	-9
CSAH 9	4,875	4,886	11	11	432	433	3	5	-2
CSAH 18	2,574	2,197	6	6	428	365	4	8	-4
CSAH 17	9,142	8,241	23	23	400	361	5	9	-4
CSAH 11	3,560	2,560	9	5	376	524	6	2	4
CSAH 1	13,787	8,321	37	37	374	226	7	12	-5
CSAH 10	3,641	2,028	10	5	373	416	8	6	2
CSAH 78	6,265	5,030	18	9	354	568	9	1	8
CSAH 51	6,461	4,031	18	9	353	440	10	4	6
CSAH 23	1,795	607	5	5	328	111	11	16	-6
CSAH 3	1,780	1,411	6	3	297	470	12	3	9
CSAH 52	4,839	5,298	17	17	290	318	13	10	3
CR 57	249	228	1	1	211	193	14	13	1
CSAH 22W	877	574	6	6	156	102	15	17	-2
CSAH 14	740	609	5	5	141	116	16	14	2
CSAH 22E	892	829	7	7	124	115	17	15	2
State Facilities									
US169	13,020	9,564	12	9	1,071	1,049	1	1	0
TH610	6,950	9,079	10	15	718	625	2	4	-2
US10	45,232	33,657	66	66	686	510	3	6	-3
I35E	24,102	19,814	35	35	679	559	4	5	-1
I694	10,050	10,892	16	16	622	674	5	2	3
I35	5,753	3,324	10	5	551	637	6	3	3
TH47	13,872	13,121	44	44	312	295	7	7	0
TH65	24,272	19,293	101	101	241	192	8	8	0
Other	94,029	68,617							
Sum	303,943	237,387	486	452	625	525			
Corr Sum	209,914	168,770	486	452	432	373			
Pct Corridor	22%	21%	21%	36%					
Pct State	47%	50%	32%	64%					
Pct Other	31%	29%							
County	66,663	50,025	191	161	349	312			
State	143,251	118,745	295	292	486	407			

Notes:
VH – Vehicle-Hours
Required Additional Lane-Miles (RALM) – Additional new lane miles required to meet projected 2030 demand
Other – Refers to Anoka county segments not included in the listed corridors
Pct Corridor – Percent of delay and RALM in County Corridors
Pct State – Percent of Delay and RALM in State Corridors
Pct Other – Percent of Delay and RALM in segments not in corridors
County – County corridor totals
State – State Corridor Totals

Corr Sum – State and County Corridor Totals

Table 7: Anoka County Year 2030 Scenario 1 vs. Scenario 2 (IRC) Comparison, Only County and Local Facilities

City or Township	Veh-Hrs Delay/Day		Reqd Lane-Miles		Delay/Lane-Mile		Delay Rank	
	Scen 1	Scen 2	Scen 1	Scen 2	Scen 1	Scen 2	Scen 1	Scen 2
BLAINE MN	41,088	31,809	55	44	753	725	1	1
COON RAPIDS MN	32,896	22,490	50	37	652	601	2	2
FRIDLEY MN	18,453	15,223	15	15	1,214	1,002	3	3
ANDOVER MN	14,454	11,995	17	13	828	925	4	4
RAMSEY MN	10,310	7,951	10	10	1,070	825	5	5
LINO LAKES MN	9,163	6,503	3	3	2,908	2,064	6	6
Columbus TWP	5,963	3,742	6	6	991	622	7	9
HAM LAKE MN	5,216	4,282	5	5	1,149	943	8	7
ANOKA MN	4,886	3,995	1	1	3,640	2,976	9	8
SPRING LAKE PARK MN	4,549	2,772	5	2	973	1,186	10	10
LEXINGTON MN	2,001	373	4	4	517	97	11	19
OAK GROVE MN	1,745	1,262	3	3	540	391	12	11
ST. FRANCIS MN	1,251	918	2	2	819	601	13	13
CENTERVILLE MN	1,076	689	2	2	510	327	14	15
CIRCLE PINES MN	1,009	544	3	3	289	156	15	17
Linwood TWP	992	915	7	7	138	127	16	14
COLUMBIA HEIGHTS MN	938	1,105	0	0	0	0	17	12
EAST BETHEL MN	778	639	0	0	0	0	18	16
Burns TWP	594	446	2	2	250	187	19	18
HILLTOP MN	13	10	0	0	0	0	20	20
BETHEL MN	8	7	0	0	0	0	21	21
Sum	157,382	117,669	191	160	825	143		

Table 8: Anoka County Year 2030 Scenario 1 vs. Scenario 2 (IRC) Comparison, All Facilities

	Veh-Hrs Delay/Day		Reqd Lane-Miles		Delay/Lane-Mile		Delay Rank	
City or Township	Scen 1	Scen 2	Scen 1	Scen 2	Scen 1	Scen 2	Scen 1	Scen 2
BLAINE MN	70,630	52,110	93	86	763	608	1	1
COON RAPIDS MN	66,339	51,699	89	81	746	641	2	2
FRIDLEY MN	38,434	31,704	53	53	724	598	3	3
ANOKA MN	31,568	26,309	31	28	1,024	947	4	4
LINO LAKES MN	23,833	21,190	30	30	787	705	5	5
RAMSEY MN	18,459	14,734	38	39	486	373	6	6
ANDOVER MN	14,454	11,995	17	13	828	925	7	7
Columbus TWP	12,452	8,054	19	14	651	579	8	8
HAM LAKE MN	9,140	7,381	29	29	310	251	9	9
SPRING LAKE PARK MN	6,904	4,151	10	7	716	569	10	10
LEXINGTON MN	2,001	373	4	4	517	97	11	19
OAK GROVE MN	1,754	1,272	6	6	275	200	12	13
ST. FRANCIS MN	1,670	1,281	6	6	283	217	13	12
EAST BETHEL MN	1,290	1,093	28	28	46	39	14	14
COLUMBIA HEIGHTS MN	1,282	1,439	8	8	155	174	15	11
CENTERVILLE MN	1,076	689	2	2	510	327	16	16
CIRCLE PINES MN	1,009	544	3	3	289	156	17	17
Linwood TWP	992	915	7	7	138	127	18	15
Burns TWP	636	489	11	11	56	43	19	18
HILLTOP MN	13	10	0	0	0	0	20	20
BETHEL MN	8	7	0	0	0	0	21	21
Sum	303,943	237,437	486	457	625	380		

Figure 2: Anoka County Year 2030: Delay and Ranking of Top 100 Roadway Segments, Excluding State Facilities

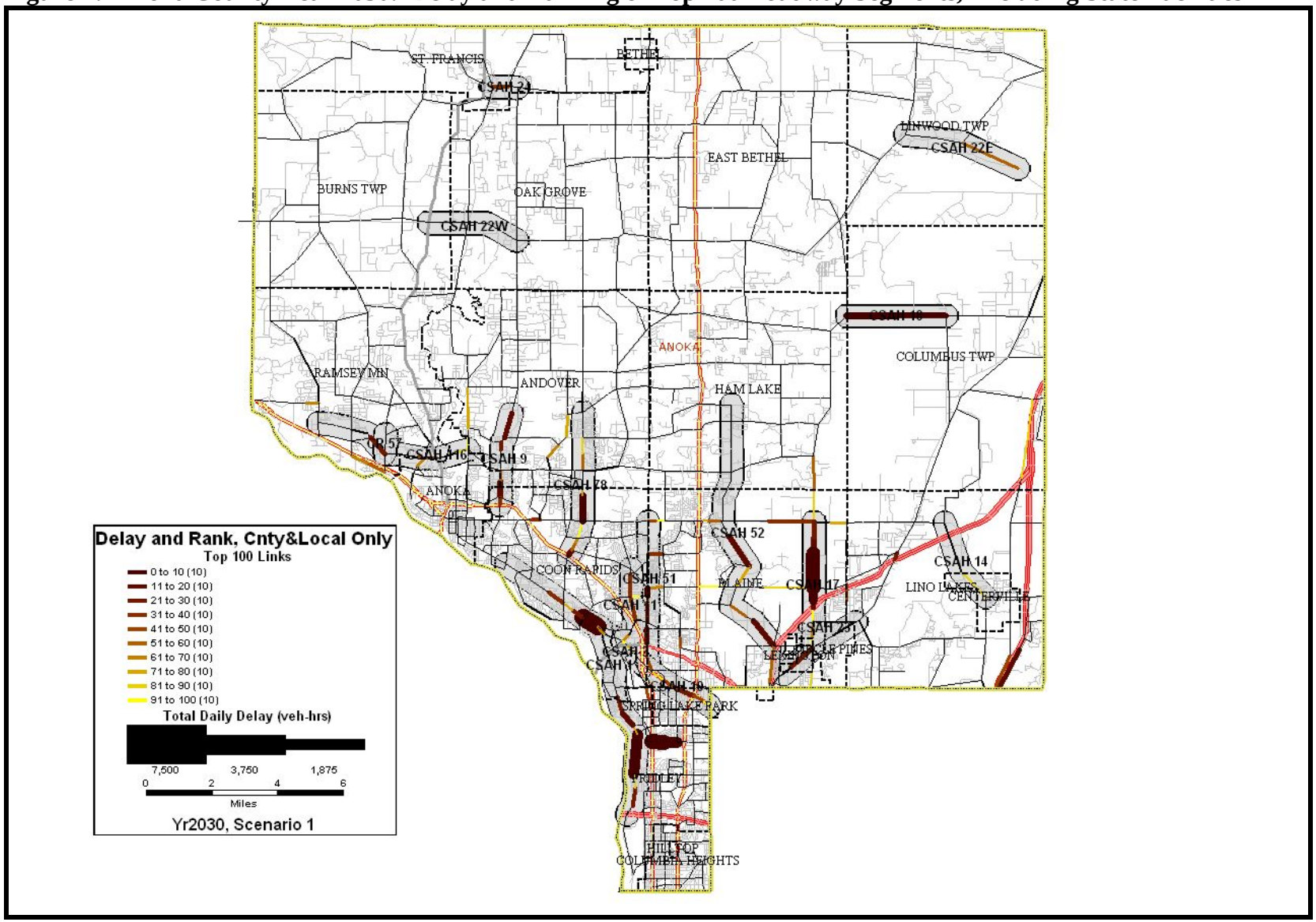


Figure 3: Anoka County Year 2030 Scenario 1:Level of Service and Peak Hour Volume, Excluding State Facilities

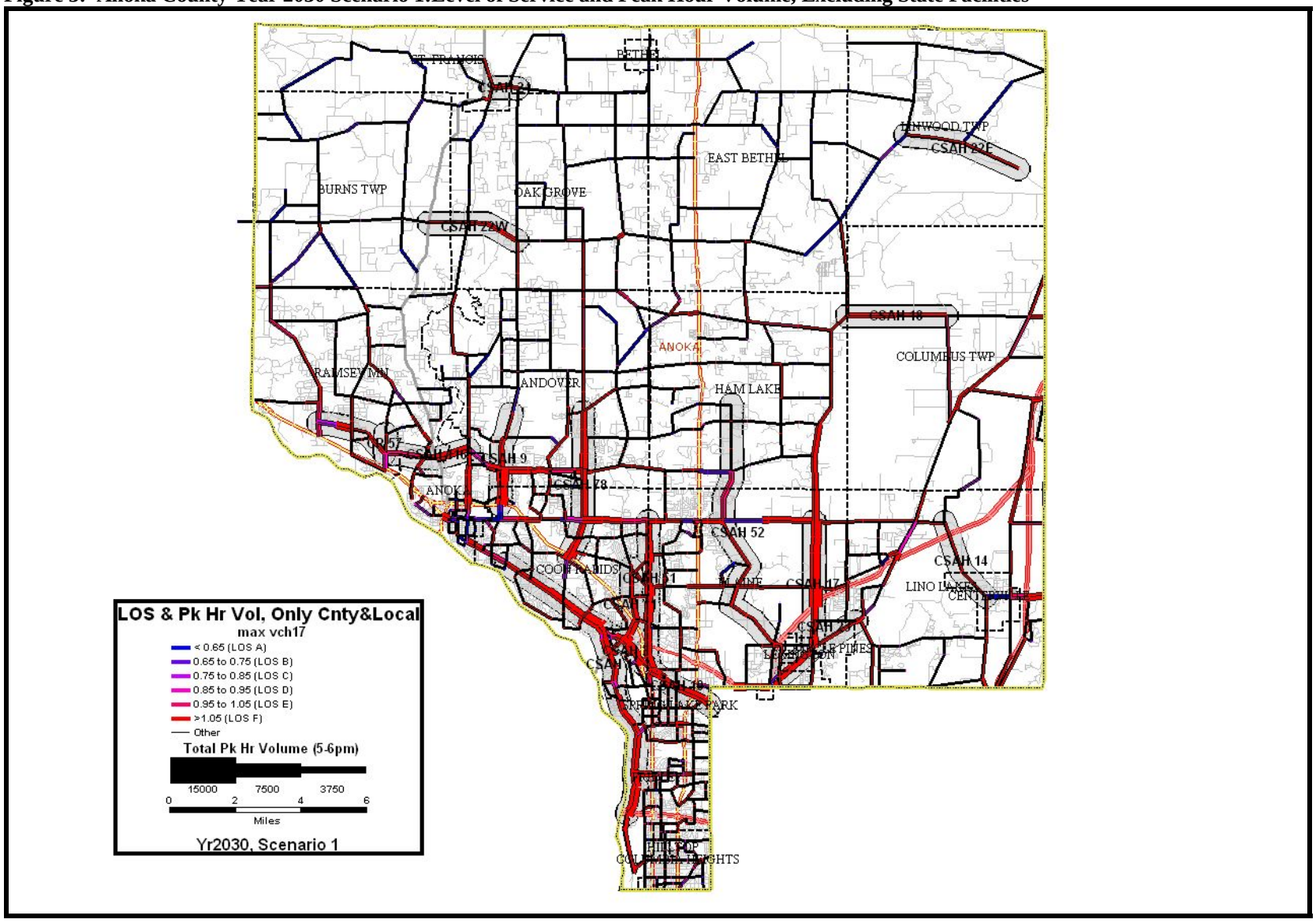


Figure 4: Anoka County Year 2030 Scenario 1: Peak Hour Volume and Required Additional Lanes to Meet Demand

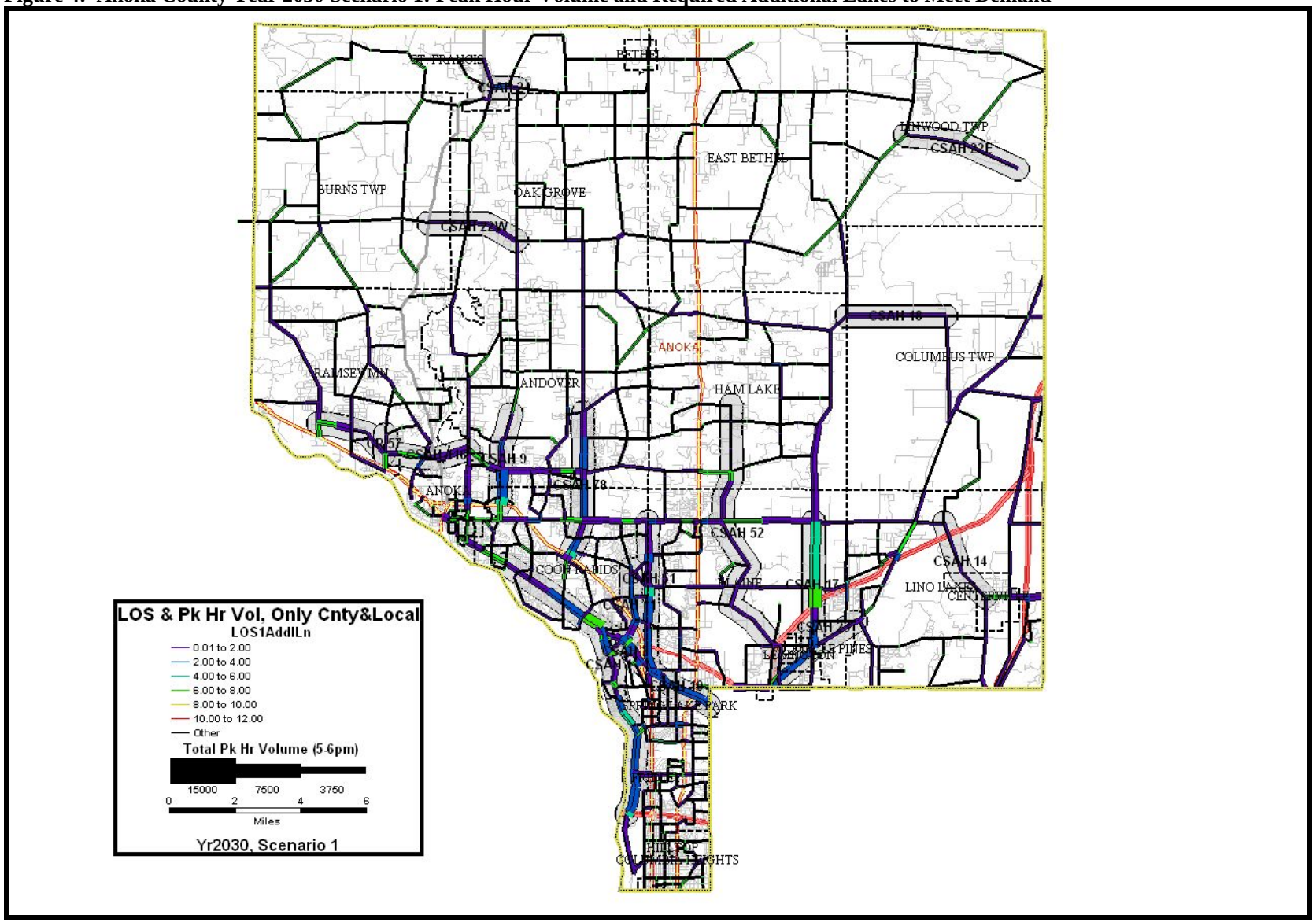


Figure 5: Anoka County Year 2030: Scenario 2 (IRC): Level of Service and Peak Hour Volume, Excluding State Facilities

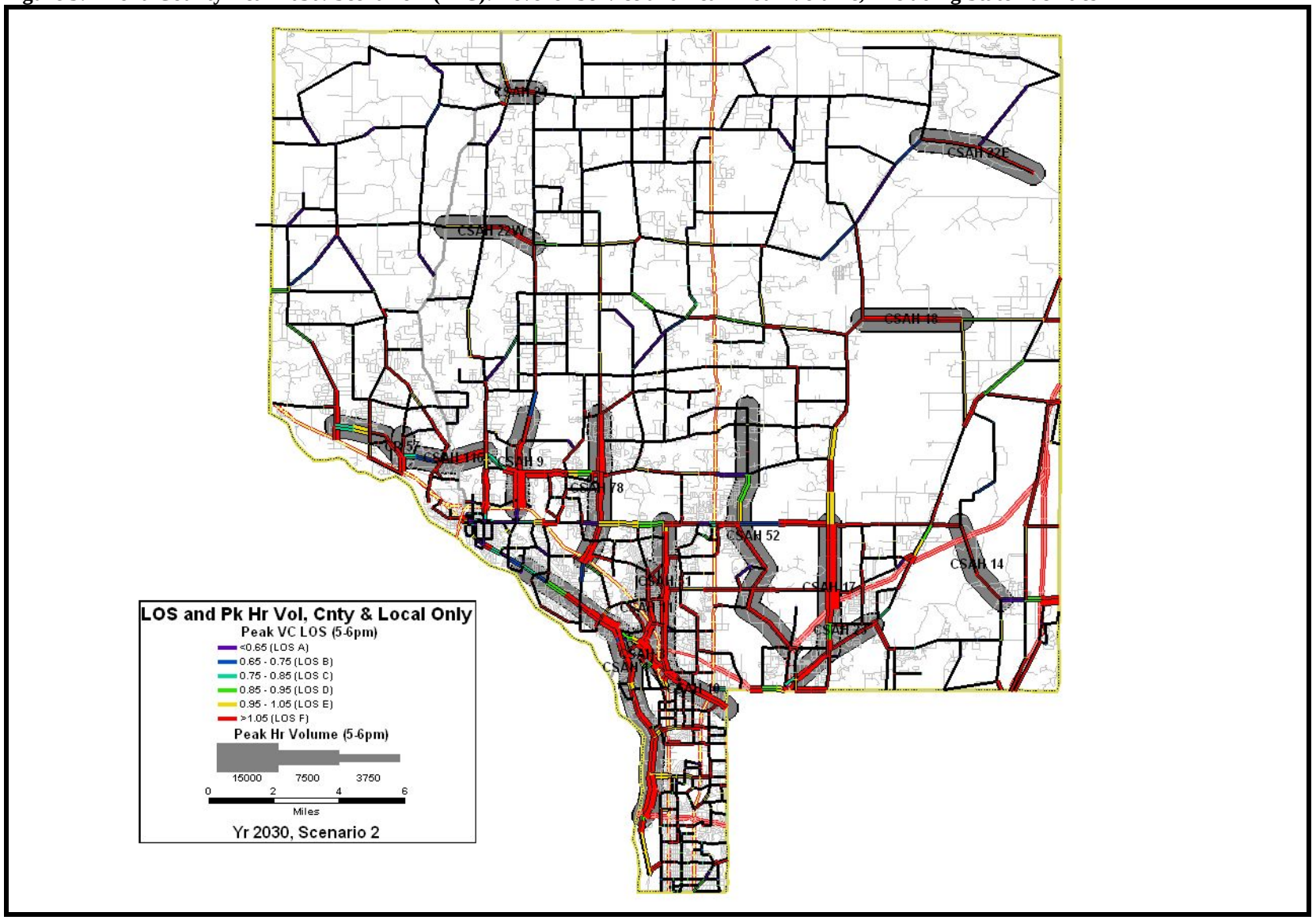


Figure 6: Anoka County Year 2030: Change in Peak Hour Volume, Scenario 1 - Scenario 2

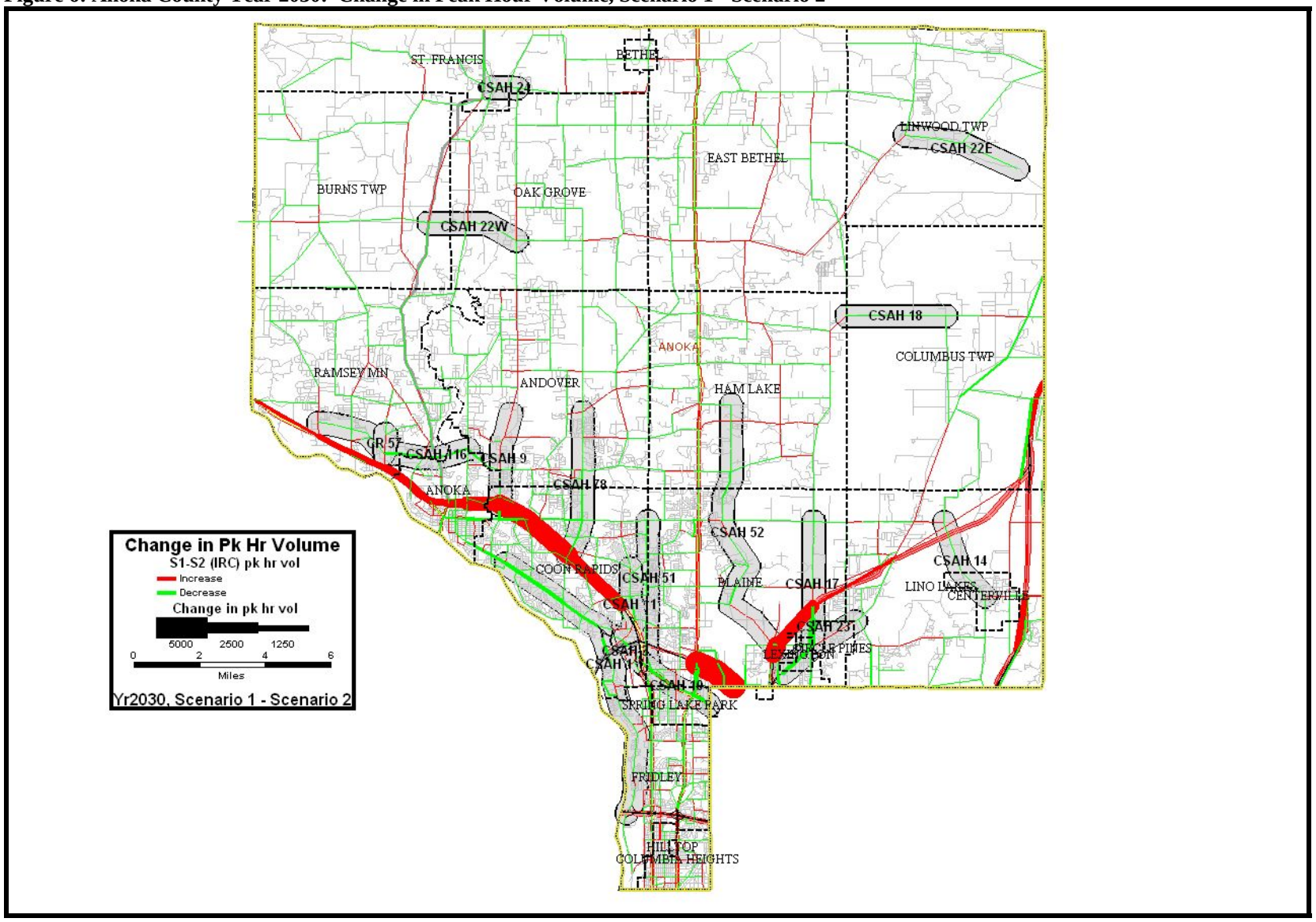
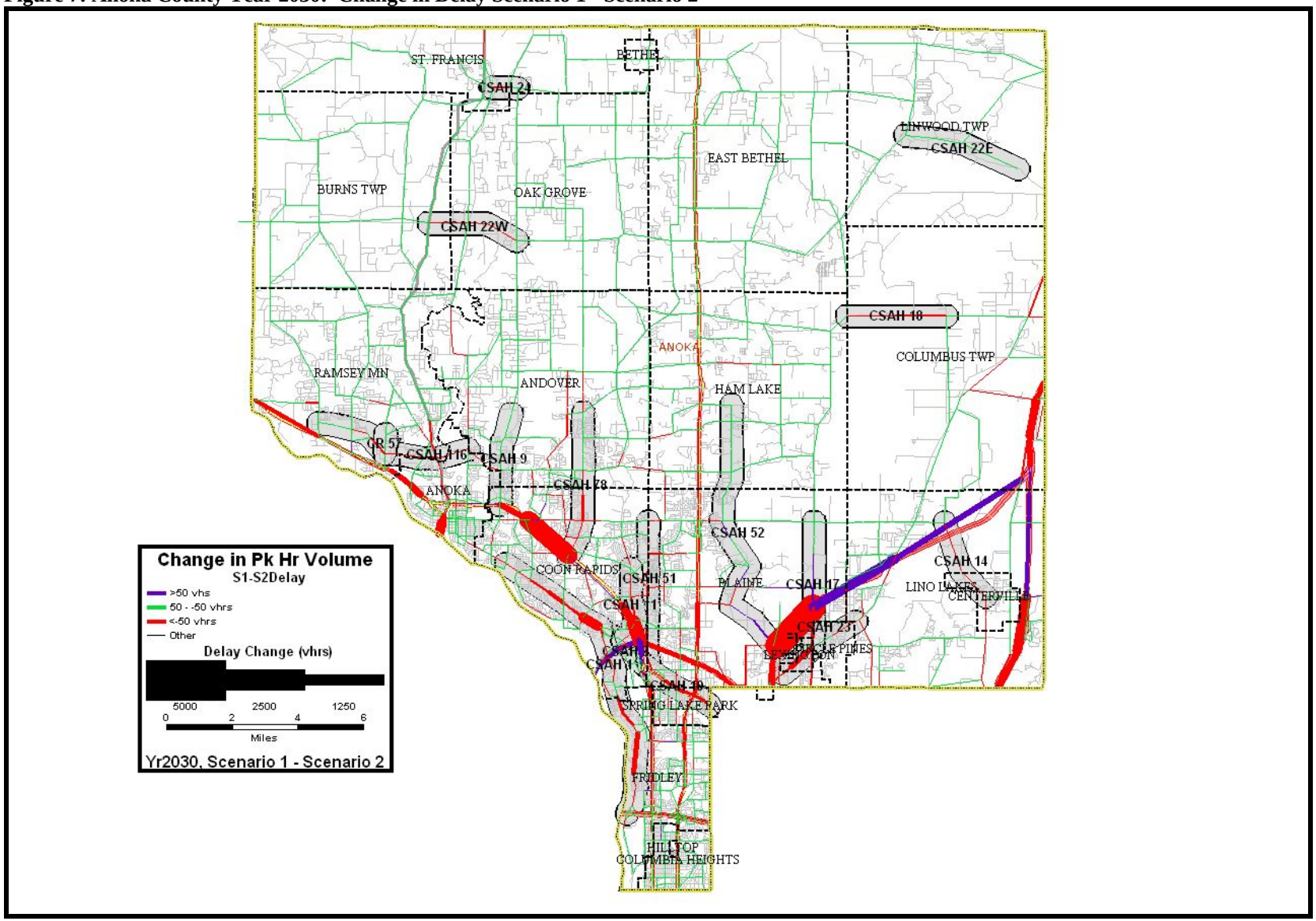


Figure 7: Anoka County Year 2030: Change in Delay Scenario 1 - Scenario 2



From: Eiler, Stephanie/MSP
Sent: Tuesday, September 30, 2008 4:16 PM
To: Gute, Mary/MSP
Subject: FW: Anoka County Transportation Plan: YR2000 modeled Levels of service
This should also be a separate appendix to the travel demand appendix, as it doesn't show up elsewhere in his report and it was a basic comparative piece of data.

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Solutions Without Boundaries

From: Ruegg, Steven [mailto:Ruegg@pbworld.com]
Sent: Thursday, April 17, 2008 12:57 PM
To: Gute, Mary/MSP
Cc: Eiler, Stephanie/MSP
Subject: Anoka County Transportation Plan: YR2000 modeled Levels of service

Mary and Stephanie:

Here is the Year 2000 modeled V/C values:

YR 2000 Modeled V/C

Corridor	Length	Corridor ID	PM Pk V/C
Rest of County	967.1	0	**0.66**
CSAH 17	3.8	1	**1.11**
CSAH 52	8.3	2	**1.16**
CSAH 51	4.6	3	**1.15**
CSAH 11	2.4	4	**1.18**
CSAH 10	2.4	5	**1.22**
CSAH 3	1.7	6	**1.21**
CSAH 1	9.4	7	**1.27**
CSAH 78	4.4	8	**1.09**
CSAH 9	2.8	9	**1.04**
CSAH 116	4.9	10	**0.88**
CR 57	0.6	11	**1.03**
CSAH 22W	2.8	12	**0.82**
CSAH 18	3.0	14	**1.29**
CSAH 14	2.6	15	**0.89**
CSAH 23	2.7	16	**0.81**
CSAH 24	0.8	24	**0.96**
CSAH 22E	3.6	25	**0.78**
I35	3.5	101	**1.20**
I35E	21.2	103	**0.94**
I694	8.1	105	**1.17**
TH65	26.1	106	**1.03**
TH610	4.8	107	**1.04**
US10	18.9	108	**1.29**
TH47	24.0	109	**0.99**
US169	1.5	110	**1.62**
County overall			**0.916**

County Facilities	**1.125**
State Facilities	1.107

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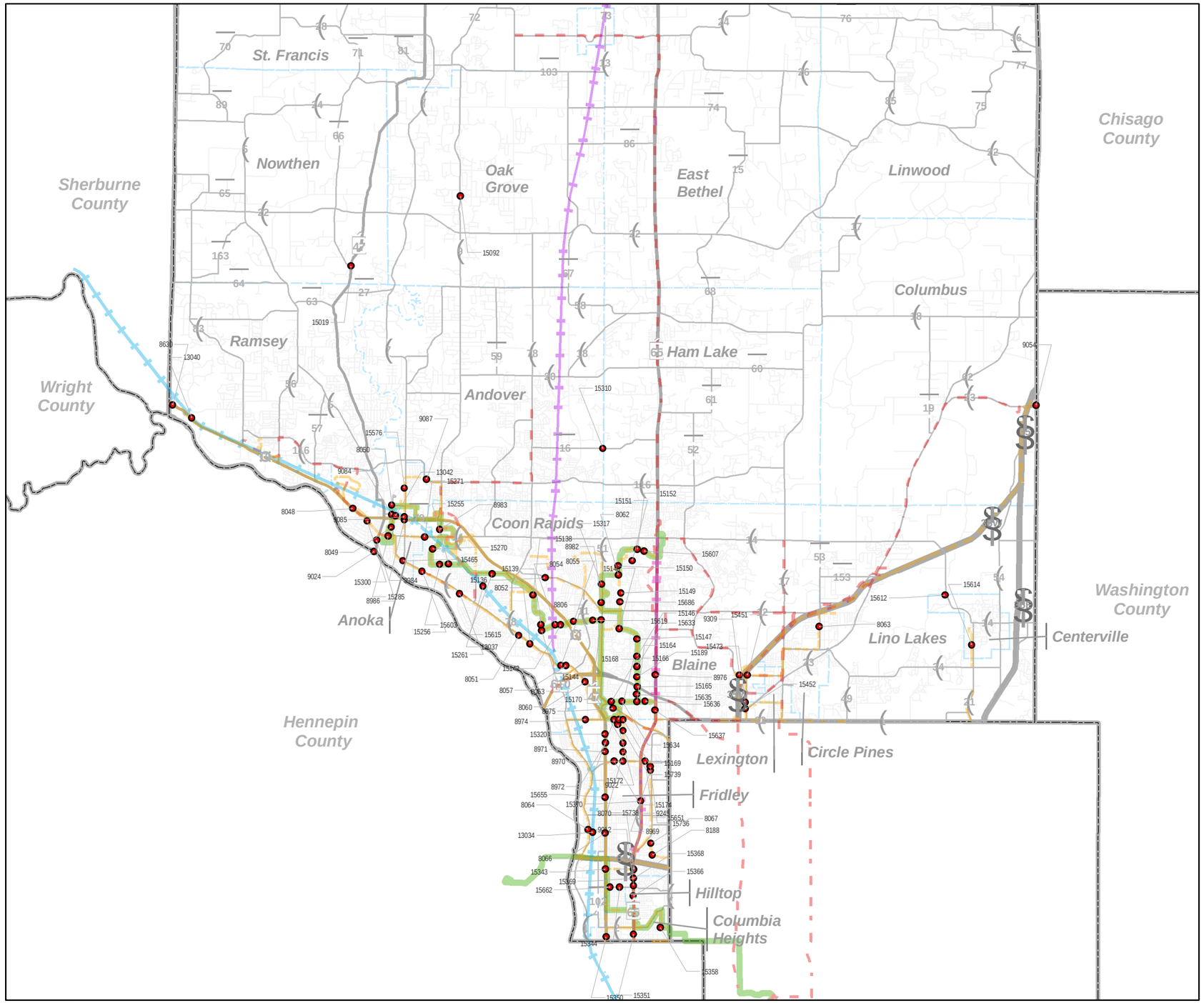
The additional lanes shown on the “blue noodle” maps represent the capacity needed to accommodate year 2030 peak hour traffic volumes at the same level of service experienced in the year 2000 peak hour. This was calculated by the traffic model runs completed by PB. [For purposes of the model, a volume/capacity (v/c) of > 1.0 is considered LOS F]. Below is an example of how this process worked using CSAH 17/Lexington Avenue as an example.

- On CSAH 17/Lexington Avenue, the year 2000 peak hour v/c = 1.1. (As noted above, this translates to LOS F).
- The unconstrained, peak hour v/c in the year 2030 on CSAH 17/Lexington Avenue (with no IRC improvements) was 2.1
- The model calculated that to reduce the year 2030 peak hour traffic v/c from 2.1 to the year 2000 peak hour v/c of 1.1 would require adding 8 lanes on CSAH 17/Lexington Avenue.

In total, seventeen roadways were documented on the “blue noodle” maps as needing additional lanes to accommodate year 2030 peak hour traffic at year 2000 peak hour LOS. It is important to note that the number of additional lanes generated by the model is only intended to address the peak hour v/c. The year 2030 average daily traffic (ADT) generated by the model in and of themselves do not warrant the number of additional lanes shown on the 17 corridors. In some instances, the number of additional lanes needed does not intuitively match the ADT for the roadway.

Again using CSAH 17/Lexington Avenue as an example, 73,817 vpd was the highest ADT generated by the model for year 2030 unconstrained, with no IRC improvements (between CSAH 12 & I-35W). This volume of just under 74,000 would not warrant the addition of 8 lanes to the roadway.

The discrepancy between the numbers of additional lanes needed based on overall ADT or peak hour ADT is explained in part by the model’s calculation of peak hour demand. While it is standard to assume a peak hour factor of 10 percent of the daily volume, the model calculated peak hour demand factors that were in excess of this. Again, using CSAH 17/Lexington Avenue as an example, the model calculated peak hour factors of over 20 percent of the ADT (assuming 950 vehicles/hour/lane). These higher than normal factors are based on the model’s calculation of peak hour demand based on the traffic generated by nearby facilities, the density and intensity of surrounding land uses, and the number of work trips, etc.



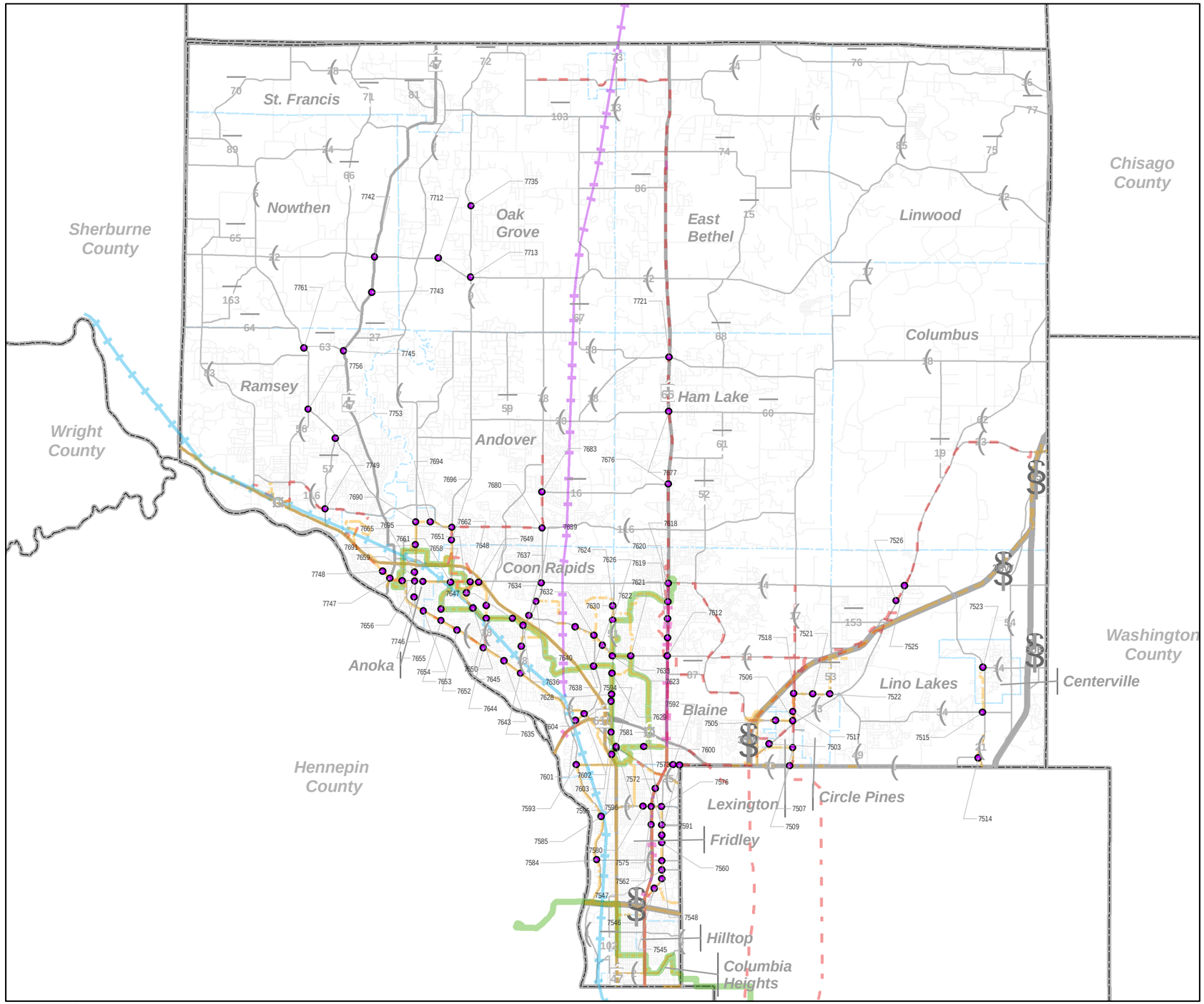
Legend

STOPNODE

- 8000 - 15739
- MetroTransit Bus Routes
- Proposed TH 65 LRT Corridor
- Future Northstar Commuter Rail
- Proposed Northern Lights Commuter Rail
- Existing Anoka County Traveler Routes
- Future Anoka County Traveler Routes
- Interstates
- US Highways
- State Highways
- County State Aid Highways (CSAH)
- County Roads
- Local Roads

0 1.5 3 6 Miles

1 inch equals 3 miles



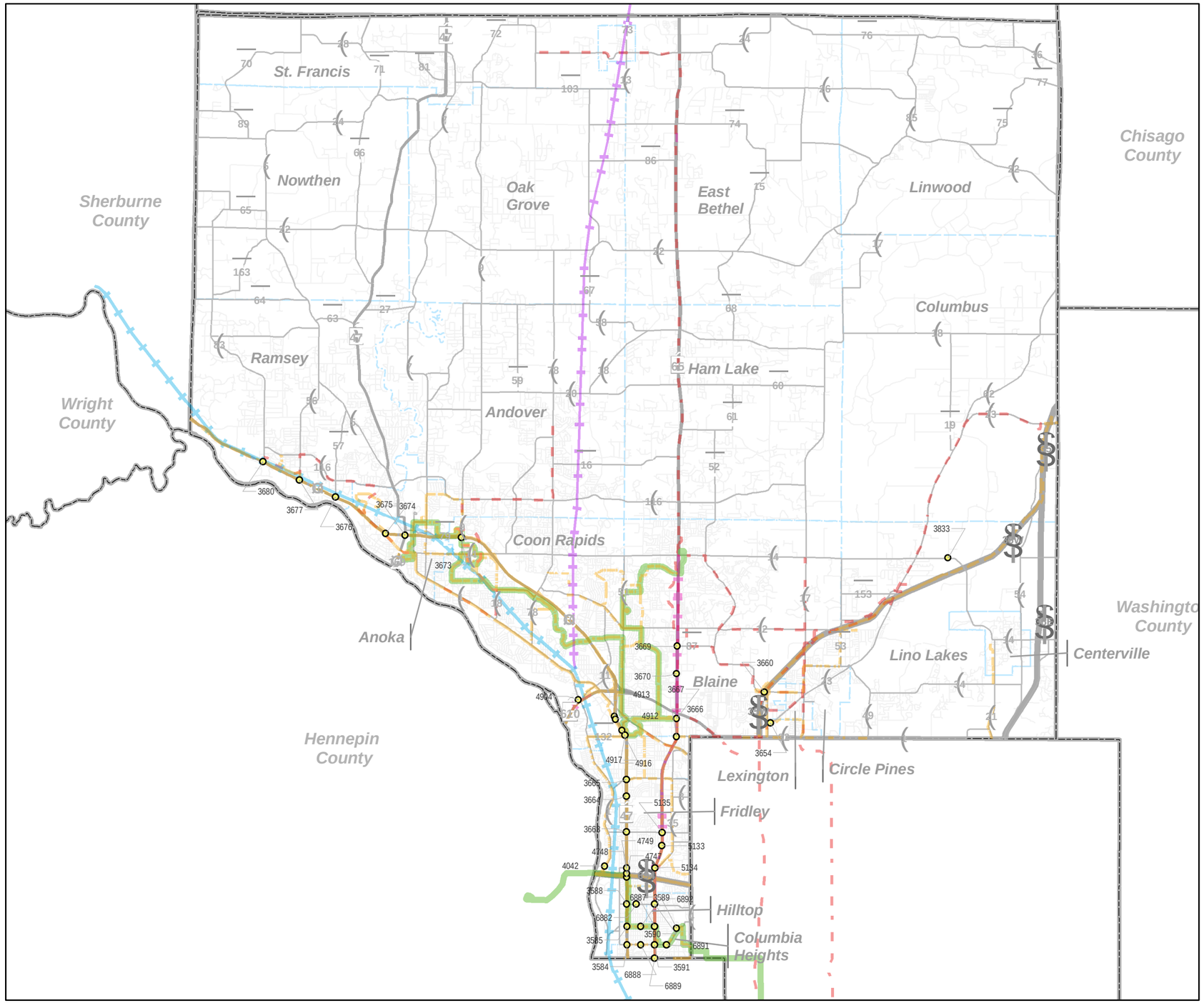
Legend

STOPNODE

- 7000 - 7999
- MetroTransit Bus Routes
- Proposed TH 65 LRT Corridor
- Future Northstar Commuter Rail
- Proposed Northern Lights Commuter Rail
- Existing Anoka County Traveler Routes
- Future Anoka County Traveler Routes
- Interstates
- US Highways
- State Highways
- County State Aid Highways (CSAH)
- County Roads
- Local Roads

0 1.5 3 6 Miles

1 inch equals 3 miles



Legend

STOPNODE

- 3584 - 6999
- MetroTransit Bus Routes
- Proposed TH 65 LRT Corridor
- Future Northstar Commuter Rail
- Proposed Northern Lights Commuter Rail
- Existing Anoka County Traveler Routes
- Future Anoka County Traveler Routes

- Interstates
- US Highways
- State Highways
- County State Aid Highways (CSAH)
- County Roads
- Local Roads

0 1.5 3 6 Miles

1 inch equals 3 miles

Appendix E

Referenced in Section 6.0, Intersection Decision Process

Contents:

1. Roundabout Decision Process Screening Summary

Roundabout Decision Process Screening Summary

Intersection Location	Total Volume (vpd)	Corridor Study Planned	Screen 1 # of Crashes (> 5 per year) *Source: Chapter 4C.8 Crash Experience, MnMUTCD*	Screen 2 Corridor Study (Multiple High Incident Crash Locations along one corridor)	Screen 3 Single-Lane Roundabout Volumes 1-lane roundabout < 20,000 ADT entering volumes *Source: MnDOT Intersection Control Evaluation Guidance, Section 2.3, Table 3*	Screen 4 Crash Characteristics (> 40% angle crashes) *Source: MnDOT Traffic Safety Fundamentals Handbook, expected crash distribution for angle = 28% right angle + 8% left turn = 36%*	Screen 5 Facility Type (Roundabout not appropriate in the middle of a system of signals)
County Road 132 and Springbrook Drive	25980		74		**Signal Imp/Access Mgt**		
County Road 79 and Northdale Boulevard	25900	YES	44	**Corridor Study**			
CSAH 1 and 100th Lane	49290	YES	33	**Corridor Study**			
CSAH 1 and Avocet Street	49290	YES	33	**Corridor Study**			
CSAH 1 and CSAH 11	38320		66		**Signal Imp/Access Mgt**		
CSAH 1 and CSAH 18/Crooked Lake Boulevard	29260	YES	51	**Corridor Study**			
CSAH 1 and CSAH 7/7th Avenue	31240	YES	28	**Corridor Study**			
CSAH 1 and CSAH 78	41430	YES	85	**Corridor Study**			
CSAH 1 and Egret Boulevard	51080	YES	69	**Corridor Study**			
CSAH 1 and Pheasant Ridge Drive	22870	YES	33	**Corridor Study**			
CSAH 1 and Round Lake Boulevard	20890	YES	50	**Corridor Study**			
CSAH 1 and Xavis Street	21910		26		**Signal Imp/Access Mgt**		
CSAH 1 and Mississippi Boulevard	28380		27		**Signal Imp/Access Mgt**		
CSAH 1/5th Avenue and CSAH 14/CSAH 31	8990	YES	42	**Corridor Study**			
CSAH 10 and Able Street	34860	YES	32	**Corridor Study**			
CSAH 10 and County Road 3	64790	YES	56	**Corridor Study**			
CSAH 10 and Jefferson Street	65400	YES	31	**Corridor Study**			
CSAH 11 and 99th Avenue	46560		28		**Signal Imp/Access Mgt**		
CSAH 11 and CSAH 12	28150	YES	52	**Corridor Study**			
CSAH 11 and Egret Boulevard	45190	YES	47	**Corridor Study**			
CSAH 11 and CSAH 18	19720		50		19720	58% angle crashes	**Signal Impr / Access Mgt**
CSAH 11 and CSAH 78	33530		96		**Signal Imp/Access Mgt**		
CSAH 11 and Raven Street	18870		25		18870	Signal Imp / Access Mgt (36% angle, 52% rear)	
CSAH 116 between CSAH 78 and Jay Street	28200		26		**Signal Imp/Access Mgt**		
CSAH 12 and CSAH 51	61660		29		**Signal Imp/Access Mgt**		
CSAH 12 and CSAH 52	33800		35		**Signal Imp/Access Mgt**		
CSAH 14 and 9th Avenue/Hoffman Way	16150	YES	26	**Corridor Study**			
CSAH 14 and CSAH 9/Round Lake Boulevard	26700	YES	82	**Corridor Study**			
CSAH 14 and Northdale Boulevard	38530	YES	64	**Corridor Study**			
CSAH 17 and CSAH 23	53530		42		**Signal Imp/Access Mgt**		
CSAH 23 and County Road 105	29350		37		**Signal Imp/Access Mgt**		
CSAH 23 and CSAH 10/CSAH 49	30760		28		**Signal Imp/Access Mgt**		
CSAH 3 and CSAH 11	70090	YES	33	**Corridor Study**			
CSAH 3 and Springbrook Drive	43520	YES	32	**Corridor Study**			
CSAH 31 and Main Street	21690	YES	40	**Corridor Study**			
CSAH 51 and 101st Avenue NE	54500		33		**Signal Imp/Access Mgt**		
CSAH 7 and 38th Avenue	24360		49		**Signal Imp/Access Mgt**		
CSAH 7 and CSAH 116	45780		25		**Signal Imp/Access Mgt**		
CSAH 7 and CSAH 14	14230	YES	114	**Corridor Study**			
CSAH 7 and Harrison Street	28310		25		**Signal Imp/Access Mgt**		
CSAH 78 and 121st Avenue	51840		25		**Signal Imp/Access Mgt**		
CSAH 87 and Davenport Street	24390		25		**Signal Imp/Access Mgt**		
CSAH 9 and County Road 79	54300	YES	54	**Corridor Study**			
CSAH 9 and CSAH 116	94550	YES	64	**Corridor Study**			
CSAH 9 and CSAH 22	38410		28		**Signal Imp/Access Mgt**		
CSAH 9 and CSAH 24	33660		30		**Signal Imp/Access Mgt**		
CSAH 9 and Northdale Boulevard	73240	YES	64	**Corridor Study**			
CSAH 9 and River Rapids Drive	12680	YES	31	**Corridor Study**			
CSAH 9 and Rose Street	14020	YES	30	**Corridor Study**			
CSAH 9 between CSAH 14 and River Rapids Drive	12680	YES	31	**Corridor Study**			
CSAH78 and 125th Lane	31270		29		**Signal Imp/Access Mgt**		

Appendix F

Referenced in Section 7.0, Evaluation Process and Recommendations

Contents:

1. Worksheets documenting development of transportation improvement recommendations (Note: final recommendations included in Section 7.0)

Name of Corridor/Roadway: *CSAH 1 Coon Rapids Blvd.: CSAH 9 to CSAH 10*	Corridor Characteristics
Need for 2030 Capacity Improvements – High/Medium/Low *(to maintain 2000 congestion levels, w/o IRCs* - 6 additional lanes/approx. 5 miles*)*	High
Recommendation would change if IRC improvements are implemented?	Yes – to TH 10
Traffic Volumes	Existing: 38,200 vpd *Constrained 2030 without IRC Improvements:* 9,100 – 49,290 vpd *Unconstrained 2030 without IRC Improvements:* 20,370 – 65,350 vpd
Existing number of lanes/undivided or divided	4 lanes divided b/w CSAH 9 & CSAH 78 6 lane divided b/w Egret to CSAH 3
Shoulder bus lanes	Existing, but discontinuous bus shoulder lanes on both sides
Recommended Lanes Needed *2030 Plan*	Corridor Study Programmed
Right-of-Way Availability *(High/Med/Low)*	Medium/Low
Right-of-Way Preservation Required	Yes
Environmental Feasibility (High/Medium/Low)	High
Parallel Route Availability *(High/Med/Low)*	High IRC Improvements to TH 10 by Mn/DOT – 3rd lane programmed in 2009 between Egret and CSAH 78
Parallel Route: Expand	Yes—TH 10 improvements
Parallel Route: New	No
Functional Class: Existing	A minor Arterial
Functional Class: Proposed	A minor Arterial
Jurisdictional Change Proposed	None
Safety: High Incident Crash Location	15 high incident location b/w CSAH 9 & CSAH 10 (to be addressed in programmed Corridor Study)

Name of Corridor/Roadway: *CSAH 1 Coon Rapids Blvd.: CSAH 9 to CSAH 10*	Corridor Characteristics
Safety: Noted by community as problem	Yes
Interchange Needed: New/Upgraded	No
Other Grade Separation Needed	No
Signal: Add	No
Signal: Remove	Remove 2 signals between CSAH 9 and CSAH 18/Crooked Lake to achieve ½ mile spacing (currently 4 signals)
Transit Route: Existing	MT Rt. 850, 852
Transit Route: Proposed	Planned ACT Rt. 878 b/w CSAH 9 and CSAH 18 – Crooked Lake
Park/Ride Location: Existing	Yes—@ Foley Blvd.; Riverdale & Ride for Northstar
Park/Ride Location: Expand	No
Park/Ride Location: New	No
Corridor Study Recommended	Yes—County to study
Pedestrian/Bike Facility Included	Yes—existing trail along road; potential to coordinate with sewer expansion
Connection to Recreational/Other Facility	Yes—Coon Rapids Dam
Consistent with Met Council Transportation Policy Plan	No—Not included in TPP
Priority: Short term – 2009-2015	Corridor Study with ROW Preservation to address access management & high incident locations
Priority: Mid-term – 2015 – 2020	Implementation spot safety/access improvements based on Corridor Study recommendations
Priority: Long-term – 2020 – 2030	Reconstruction

Name of Corridor/Roadway: *CSAH 1 East River Road: CSAH 10 to I-694*	Corridor Characteristics
Need for 2030 Capacity Improvements – High/Medium/Low *(to maintain 2000 congestion levels, w/o IRCs* - 6 additional lanes/approx. 5 miles*)*	High
Recommendation would change if IRC improvements are implemented?	Yes – to TH 10
Traffic Volumes	Existing: 12,000—35,240 vpd <u>*Constrained 2030 without IRC Improvements*</u>: 17,800—43,000 vpd <u>*Unconstrained 2030 without IRC Improvements*</u>: 31,520 — 64,330 vpd
Existing number of lanes/undivided or divided	4 lanes divided b/w CSAH 10 and I-694
Shoulder bus lanes	None existing
Recommended Lanes Needed *2030 Plan*	6-lane facility
Right-of-Way Availability *(High/Med/Low)*	Low
Right-of-Way Preservation Required	Yes
Environmental Feasibility (High/Medium/Low)	Low – environmental justice issues
Parallel Route Availability *(High/Med/Low)*	Low—TH 47 (currently 4-lane divided) has capacity b/w now and 2030; at capacity by 2030 No reasonable opportunities to build parallel routes; provide as much capacity on facility as possible through coordination with MnDOT on access management and signal timing
Parallel Route: Expand	See Parallel Route Availability.
Parallel Route: New	No
Functional Class: Existing	A Minor Arterial
Functional Class: Proposed	A Minor Arterial
Jurisdictional Change Proposed	None
Safety: High Incident Crash Location	6 high incident location b/w CSAH 10 & I-694
Safety: Noted by community as problem	No

Name of Corridor/Roadway: *CSAH 1 East River Road: CSAH 10 to I-694*	Corridor Characteristics
Interchange Needed: New/Upgraded	No
Other Grade Separation Needed	Yes—at CSAH 6/Mississippi St.
Signal: Add	No
Signal: Remove	No
Transit Route: Existing	MT Rt. 852
Transit Route: Proposed	Same as existing
Park/Ride Location: Existing	None
Park/Ride Location: Expand	No
Park/Ride Location: New	Planned P & Rs at CR 6/Mississippi St. and new Northstar Station
Corridor Study Recommended	Yes
Pedestrian/Bike Facility Included	Yes—existing trail along road
Connection to Recreational/Other Facility	Yes—Mississippi River Reg. Trail; Manomin County Park; Islands of Peace Regional Park; Anoka River Front Regional Park; connection to Rice Creek West Regional Trail
Consistent with Met Council Transportation Policy Plan	No—Not included in TPP
Priority: Short term – 2009-2015	Corridor Study with ROW Preservation to address access management & high incident locations. Th 47 signal timing and access management improvements (MnDOT).
Priority: Mid-term – 2015 – 2020	Implementation of Corridor Study spot improvement recommendations
Priority: Long-term – 2020 – 2030	Reconstruction

Name of Corridor/Roadway: *CSAH 10: CSAH 1 to County Line*	Corridor Characteristics
Need for 2030 Capacity Improvements – High/Medium/Low *(to maintain 2000 congestion levels, w/o IRCs* - 4 additional lanes/approx. 3.5 miles*)*	Medium
Recommendation would change if IRC improvements are implemented?	Yes
Traffic Volumes	Existing: 15,900—35,800 vpd *Constrained 2030 without IRC Improvements:* 25,300—45,000 vpd *Unconstrained 2030 without IRC Improvements:* 35,410—53,710 vpd
Existing number of lanes/undivided or divided	4-lanes divided
Shoulder bus lanes	None existing
Recommended Lanes Needed *2030 Plan*	6-lane facility
Right-of-Way Availability *(High/Med/Low)*	High
Right-of-Way Preservation Required	No
Environmental Feasibility (High/Medium/Low)	High
Parallel Route Availability *(High/Med/Low)*	Medium—north parallel route TH 10; south parallel route CSAH 8/Osborne
Parallel Route: Expand	Grade separations on CSAH 8/Osborne Ave. @ TH 65 & TH 47.
Parallel Route: New	No
Functional Class: Existing	A Minor Arterial
Functional Class: Proposed	A Minor Arterial
Jurisdictional Change Proposed	None
Safety: High Incident Crash Location	9 high incident crash locations
Safety: Noted by community as problem	No
Interchange Needed: New/Upgraded	Upgrades at TH 65 & TH 47 (consider other grade separation possibilities)

Name of Corridor/Roadway: *CSAH 10: CSAH 1 to County Line*	Corridor Characteristics
Other Grade Separation Needed	See above.
Signal: Add	None
Signal: Remove	Remove 1-2 signals b/w TH 47 & Foley Blvd.
Transit Route: Existing	MT Rt. 860
Transit Route: Proposed	Yes—proposed ACT Rt. 816
Park/Ride Location: Existing	Yes – Northtown Transit Hub south of CSAH 10 on TH 47
Park/Ride Location: Expand	No
Park/Ride Location: New	No
Corridor Study Recommended	Yes—to address capacity, access, and safety issues.
Pedestrian/Bike Facility Included	Yes—include ped/bike facility in corridor redesign
Connection to Recreational/Other Facility	Yes – Anoka County Library; Northtown Shopping Center
Consistent with Met Council Transportation Policy Plan	No—Not included in TPP
Priority: Short term – 2009-2015	Corridor Study
Priority: Mid-term – 2015 – 2020	Implementation of Corridor Study Recommendations
Priority: Long-term – 2020 – 2030	

Name of Corridor/Roadway: *CSAH 51/University Ave: CSAH 10 t. to CSAH 14/Main St (extension to CSAH 13)*	Corridor Characteristics
Need for 2030 Capacity Improvements – High/Medium/Low *(to maintain 2000 congestion levels, w/o IRCs* - 4 additional lanes/approx. 4 miles*)*	Medium
Recommendation would change if IRC improvements are implemented?	No
Traffic Volumes	Existing: 11,400 - 23,980 vpd *Constrained 2030 without IRC Improvements:* 22,650—43,360 vpd *Unconstrained 2030 without IRC Improvements:* 25,040 – 47,720 vpd
Existing number of lanes/undivided or divided	4-lanes undivided (CSAH 12 to 113th Avenue) 2-lane (113th Avenue to CSAH 14) 4-lane divided (CSAH 14 to CSAH 12)
Shoulder bus lanes	None existing
Recommended Lanes Needed *2030 Plan*	4-lane divided from 113th Ave to CSAH 14 (6-lane may be needed based on projected volumes, Corridor Study will recommend)
Right-of-Way Availability *(High/Med/Low)*	Low – cemetery, ponds, environmental justice
Right-of-Way Preservation Required	Yes
Environmental Feasibility (High/Medium/Low)	Low – environmental justice, cemetery
Parallel Route Availability *(High/Med/Low)*	Medium—Foley Blvd and TH 65 improvements
Parallel Route: Expand	Foley Blvd (see Foley Blvd table – 4-lane divided) Improve TH 65 (new interchanges) – next priority based on TH 65 study
Parallel Route: New	No
Functional Class: Existing	A Minor Arterial
Functional Class: Proposed	A Minor Arterial
Jurisdictional Change Proposed	None
Safety: High Incident Crash Location	6 high incident crash locations (programmed

Name of Corridor/Roadway: *CSAH 51/University Ave: CSAH 10 t. to CSAH 14/Main St (extension to CSAH 13)*	Corridor Characteristics
	construction projects may reduce number of locations)
Safety: Noted by community as problem	No
Interchange Needed: New/Upgraded	No
Other Grade Separation Needed	Yes – 2 locations: CSAH 12/109th Ave and at CSAH 14/Main St.
Signal: Add	No
Signal: Remove	Consider new signal locations near grade-separation at CSAH 12
Transit Route: Existing	Yes – ACT Rt. 831 and Rt. 805; MT Rt. 829, 854, 805
Transit Route: Proposed	Yes – Cambridge "Northern Lights" Commuter Rail
Park/Ride Location: Existing	Yes – Northtown
Park/Ride Location: Expand	No
Park/Ride Location: New	No
Corridor Study Recommended	Yes
Pedestrian/Bike Facility Included	Yes – need better connection between Roosevelt Middle School and Blaine High School
Connection to Recreational/Other Facility	Yes – Bunker Hills
Consistent with Met Council Transportation Policy Plan	No
Priority: Short term – 2009-2015	Corridor Study and Interchange at TH 65 and CSAH 12
Priority: Mid-term – 2015 – 2020	Expansion of existing CSAH 51 to 4-lanes (113th to CSAH 14) plus bridge at Sand Creek
Priority: Long-term – 2020 – 2030	Extension of CSAH 51 to CSAH 13

Name of Corridor/Roadway: *CSAH 11/Foley St.: CSAH 1/East to CSAH 12/Northdale Blvd.*	Corridor Characteristics
Need for 2030 Capacity Improvements – High/Medium/Low *(to maintain 2000 congestion levels, w/o IRCs* - 2 additional lanes/approx. 3.0 miles*)*	Low
Recommendation would change if IRC improvements are implemented?	Yes
Traffic Volumes	Existing: 13,290—21,610 vpd *Constrained 2030 without IRC Improvements:* 14,790—28,400 vpd *Unconstrained 2030 without IRC Improvements:* 16,250—30,300 vpd
Existing number of lanes/undivided or divided	4-lane undivided to Egret 2-lane from Egret to CSAH 12
Shoulder bus lanes	None existing
Recommended Lanes Needed *2030 Plan*	4-lane divided for 2-lane segment from Egret to CSAH 12 and other improvements based on outcome of Corridor Study
Right-of-Way Availability *(High/Med/Low)*	Low
Right-of-Way Preservation Required	Yes
Environmental Feasibility (High/Medium/Low)	Medium/Low
Parallel Route Availability *(High/Med/Low)*	Low—(proposing Foley as reliever to CSAH 51/University Ave.)
Parallel Route: Expand	Low—CSAH 51/University Ave. proposed expansion to 6-lanes, TH 10 3rd lane project between Egret and Hanson
Parallel Route: New	None
Functional Class: Existing	A Minor Arterial
Functional Class: Proposed	A Minor Arterial
Jurisdictional Change Proposed	None
Safety: High Incident Crash Location	14 High incident crash location (to be addressed by dividing roadway)

Name of Corridor/Roadway: *CSAH 11/Foley St.: CSAH 1/East to CSAH 12/Northdale Blvd.*	Corridor Characteristics
Safety: Noted by community as problem	No
Interchange Needed: New/Upgraded	Upgraded at TH 10 completed in 2007;
Other Grade Separation Needed	No
Signal: Add	Maintain existing signals; evaluate Northdale Blvd because of businesses and skewed intersection
Signal: Remove	No
Transit Route: Existing	Metro Transit Rt. 829
Transit Route: Proposed	Maintain existing service and Northstar
Park/Ride Location: Existing	Yes—Metro transit very large P & R at TH 610
Park/Ride Location: Expand	No
Park/Ride Location: New	No
Corridor Study Recommended	Yes—to address high incident crash locations & access management issues and Northdale Blvd intersection
Pedestrian/Bike Facility Included	Yes—need bike/ped route to serve residential development; take down to Coon Rapids Blvd NW and connect to proposed trail to Coon Rapids Dam park
Connection to Recreational/Other Facility	Coon Rapids Dam through proposed trail connection (see above)
Consistent with Met Council Transportation Policy Plan	No—Not included in TPP
Priority: Short term – 2009-2015	Improvements at TH 10 interchange completed in 2007
Priority: Mid-term – 2015 – 2020	Complete corridor study to address access management & safety issues
Priority: Long-term – 2020 – 2030	Reconstruct as 4-lane divided

Name of Corridor/Roadway: *CSAH 9/Round Lake Blvd: CSAH 14/Main Street to CSAH 20/157th Ave.*	Corridor Characteristics
Need for 2030 Capacity Improvements – High/Medium/Low *(to maintain 2000 congestion levels, w/o IRCs* - 6 additional lanes/approx. 4 miles*)*	High
Recommendation would change if IRC improvements are implemented?	No
Traffic Volumes	Existing: 7,000—33,700 vpd *Constrained 2030 without IRC Improvements:* CR 14/Main St to TH 10 = 12,680—17,090 vpd TH 10 to Bunker Lk Blvd = 54,300 – 66,470 vpd Bunker Lk Blvd to CSAH 20 = 19,930 - 33,070 vpd *Unconstrained 2030 without IRC Improvements:* CR 14/Main St to TH 10 = 14,730 – 19,300 vpd TH 10 to Bunker Lk Blvd = 67,050 – 80,400 vpd Bunker Lk Blvd to CSAH 20 = 27,750 –45,590 vpd
Existing number of lanes/undivided or divided	6-lane divided b/w CSAH 14/Main St. & CSAH 116/Bunker Lake Blvd. 4-lane divided b/w CSAH 116/Bunker Lake Blvd. & CSAH 20/157th Ave. (except 2-lane segment ½ mile north and south of 152nd Ave)
Shoulder bus lanes	None existing
Recommended Lanes Needed *2030 Plan*	Existing facility – Corridor Study recommendations should address the possible need for 6-lanes from CSAH 116 to CSAH 20
Right-of-Way Availability (High/Med/Low)	Medium
Right-of-Way Preservation Required	Yes
Environmental Feasibility (High/Medium/Low)	Medium/High
Parallel Route Availability (High/Med/Low)	Low—constrained by Round Lake to west;
Parallel Route: Expand	Expand CSAH 7 (2-lane to 4-lane) from TH 10 to CSAH 116/Bunker Lk Blvd
Parallel Route: New	Extend CR 18 to CR 59
Functional Class: Existing	A Minor Arterial
Functional Class: Proposed	A Minor Arterial (consider principal arterial as replacement for TH 47 up to CSAH 22)

Name of Corridor/Roadway: *CSAH 9/Round Lake Blvd: CSAH 14/Main Street to CSAH 20/157th Ave.*	Corridor Characteristics
Jurisdictional Change Proposed	None
Safety: High Incident Crash Location	10 high incident locations
Safety: Noted by community as problem	No
Interchange Needed: New/Upgraded	No
Other Grade Separation Needed	Yes—at CSAH 116/Bunker Lake Blvd.
Signal: Add	Yes—see below
Signal: Remove	Yes—9 signals b/w CSAH 14/Main Street & CSAH 116/Bunker Lake Blvd.; Perform corridor study to investigate removal & relocation of signals to optimize signal spacing
Transit Route: Existing	MT Rt. 851
Transit Route: Proposed	Yes—Future ACT Rt. 878 b/w CSAH 116/Bunker Lk. Blvd & CSAH 14/Main St.
Park/Ride Location: Existing	None
Park/Ride Location: Expand	No
Park/Ride Location: New	No
Corridor Study Recommended	Yes—to address supporting arterials, capacity, safety, and signal spacing
Pedestrian/Bike Facility Included	Yes—existing ped/bike trail currently between Bunker Lake Blvd and CSAH 2
Connection to Recreational/Other Facility	Yes—Round Lake Park
Consistent with Met Council Transportation Policy Plan	No—Not included in TPP
Priority: Short term – 2009-2015	Corridor Study with ROW Preservation to address supporting arterials, capacity, safety, and signal spacing New Connection of CR 18 to CR 59 (parallel relief to both CSAH 9 and CSAH 78)
Priority: Mid-term – 2015 – 2020	Implementation of spot improvements as recommended by Corridor Study
Priority: Long-term – 2020 – 2030	Implementation of Corridor Study (reconstruction)

Name of Corridor/Roadway: *CSAH 116 Bunker Lake Blvd.: CSAH 7/7th Ave. to CSAH 83/Armstrong Blvd.*	Corridor Characteristics
Need for 2030 Capacity Improvements – High/Medium/Low *(to maintain 2000 congestion levels, w/o IRCs* - 6 additional lanes/approx. 5 miles)	High
Recommendation would change if IRC improvements are implemented?	Yes – to TH 10
Traffic Volumes	Existing: 7,400—14,200 vpd *Constrained 2030 without IRC Improvements:* CSAH 83 to CR 57 = 14,910 – 35,410 vpd CR 57 to CSAH 7 = 21,100 – 31,210 vpd *Unconstrained 2030 without IRC Improvements:* CSAH 83 to CR 57 = 32,110 – 46,100 vpd CR 57 to CSAH 7 = 38,940 – 44,630 vpd
Existing number of lanes/undivided or divided	4-lanes undivided (CSAH 7 to Ramsey Blvd); Assume roadway will be built to 4-lanes by 2011 from Thurston to Sunfish; 2-lanes for the remainder
Shoulder bus lanes	None existing
Recommended Lanes Needed *2030 Plan*	4-lane divided (assessment should be made after implementation of CSAH 116 recommended improvements for the possible need of a 6-lane roadway)
Right-of-Way Availability *(High/Med/Low)*	High
Right-of-Way Preservation Required	Yes
Environmental Feasibility (High/Medium/Low)	High
Parallel Route Availability *(High/Med/Low)*	Low—need for a supporting east-west minor arterial parallel route north of TH 116. No county roads in this area to fulfill this function. Improvements to TH 10 would serve as parallel route to south of CSAH 116.
Parallel Route: Expand	Improvements to TH 10 would serve as parallel route to south of CSAH 116.

Name of Corridor/Roadway: *CSAH 116 Bunker Lake Blvd.: CSAH 7/7th Ave. to CSAH 83/Armstrong Blvd.*	Corridor Characteristics
Parallel Route: New	Need for route to north (see above).
Functional Class: Existing	A Minor Arterial
Functional Class: Proposed	A Minor Arterial
Jurisdictional Change Proposed	None
Safety: High Incident Crash Location	3 high incident locations
Safety: Noted by community as problem	No
Interchange Needed: New/Upgraded	No
Other Grade Separation Needed	No
Signal: Add	Follow CSAH 116 Corridor Study Recommendations
Signal: Remove	Follow CSAH 116 Corridor Study Recommendations
Transit Route: Existing	MT Rt. 851
Transit Route: Proposed	Yes—proposed ACT Rt. 816 b/w Thurston & CSAH 56/Ramsey Blvd.
Park/Ride Location: Existing	Yes - Ramsey Town Center; future Northstar station site
Park/Ride Location: Expand	No
Park/Ride Location: New	No
Corridor Study Recommended	No—but review of completed corridor study for updates.
Pedestrian/Bike Facility Included	Yes—existing piecemeal facilities
Connection to Recreational/Other Facility	Yes—Rum River Nature Area
Consistent with Met Council Transportation Policy Plan	No—Not included in TPP
Priority: Short term – 2009-2015	Review/update CSAH 116 Corridor Study Recommendations and implement spot improvements for safety/access changes
Priority: Mid-term – 2015 – 2020	Implement CSAH 116 Corridor Study Recommendations
Priority: Long-term – 2020 – 2030	Implement CSAH 116 Corridor Study Recommendations

Name of Corridor/Roadway: *CSAH 78/Hanson Blvd: TH 10. to CSAH 20/Constance Blvd (extension to CSAH 13)*	Corridor Characteristics
Need for 2030 Capacity Improvements – High/Medium/Low *(to maintain 2000 congestion levels, w/o IRCs* - 4 additional lanes/approx. 5.5 miles*)*	Medium
Recommendation would change if IRC improvements are implemented?	No
Traffic Volumes	Existing: 1,900 - 32,000 vpd *Constrained 2030 without IRC Improvements:* US 10 to CSAH 14 = 40,360 – 55,060 vpd CSAH 14 to CSAH 20 = 21,670 – 31,060 vpd *Unconstrained 2030 without IRC Improvements*: US 10 to CSAH 14 = 48,677 – 60,763 vpd CSAH 14 to CSAH 20 = 22,592 – 33,578 vpd
Existing number of lanes/undivided or divided	4-lanes divided (TH 10 to just north of CSAH 116 at 139th) 2-lane (139th to CSAH 20)
Shoulder bus lanes	None existing
Recommended Lanes Needed *2030 Plan*	4-lane divided from CSAH 116 to CSAH 20
Right-of-Way Availability (High/Med/Low)	Low – landfill and power line
Right-of-Way Preservation Required	Yes
Environmental Feasibility (High/Medium/Low)	Medium/Low
Parallel Route Availability (High/Med/Low)	Low – east side has park impacts, new alignment Medium – west side has some existing roadways
Parallel Route: Expand	University Ave – expansion/extension CR 18 – existing 4-lane and extension between CR 59 and CR 18
Parallel Route: New	Extension of University Extension of CR 18
Functional Class: Existing	A Minor Arterial
Functional Class: Proposed	A Minor Arterial
Jurisdictional Change Proposed	None

Name of Corridor/Roadway: *CSAH 78/Hanson Blvd: TH 10. to CSAH 20/Constance Blvd (extension to CSAH 13)*	Corridor Characteristics
Safety: High Incident Crash Location	10 high incident crash locations
Safety: Noted by community as problem	Yes, but north of Constance Ave
Interchange Needed: New/Upgraded	No
Other Grade Separation Needed	Yes – 2 locations: CSAH 116/Bunker Lake and at CSAH 14/Main St
Signal: Add	Implement as programmed at 140th Ln, and 130th Ave, plan for new signal at 133rd Ave
Signal: Remove	No
Transit Route: Existing	MT Rt. 850 south of TH 10
Transit Route: Proposed	Yes – Rt. 878
Park/Ride Location: Existing	No
Park/Ride Location: Expand	No
Park/Ride Location: New	No
Corridor Study Recommended	North of CSAH 22 – new corridor study for linkage to CSAH 13
Pedestrian/Bike Facility Included	Yes – add west of 139th
Connection to Recreational/Other Facility	Coon Creek Park; Bunker Hills Regional Park Trail; Lions Coon Creek Park
Consistent with Met Council Transportation Policy Plan	No—Not included in TPP
Priority: Short term – 2009-2015	Support City of Andover's efforts to create new Connection of CR 18 to CR 59 (parallel relief to both CSAH 9 and CSAH 78)
Priority: Mid-term – 2015 – 2020	Bridge over Cook Creek
Priority: Long-term – 2020 – 2030	Reconstruct 4-lane undivided (CSAH 116 to CSAH 20) to 4-lane divided

Name of Corridor/Roadway: *CR 57/Sunfish Lake Blvd: TH 10 to CSAH 116*	Corridor Characteristics
Need for 2030 Capacity Improvements – High/Medium/Low *(to maintain 2000 congestion levels, w/o IRCs* - 2 additional lanes/approx. 0.5 miles*)*	Low
Recommendation would change if IRC improvements are implemented?	No
Traffic Volumes	Existing: 10,000 vpd *Constrained 2030 without IRC Improvements*: 23,800 vpd *Unconstrained 2030 without IRC Improvements*: 22,670 vpd
Existing number of lanes/undivided or divided	2-lane Currently under construction 4-lane divided (TH 10 to McKinley by 2008, McKinley to Bunker Lk Blvd by 2011)
Shoulder bus lanes	None existing
Recommended Lanes Needed *2030 Plan*	4-lane divided (will be completed by 2011)
Right-of-Way Availability *(High/Med/Low)*	High
Right-of-Way Preservation Required	Yes
Environmental Feasibility (High/Medium/Low)	High
Parallel Route Availability *(High/Med/Low)*	High—with TH 10 interchanges at Thurston Blvd & CSAH 56/Ramsey Blvd.
Parallel Route: Expand	N/A
Parallel Route: New	N/A
Functional Class: Existing	A Minor Arterial
Functional Class: Proposed	A Minor Arterial
Jurisdictional Change Proposed	None
Safety: High Incident Crash Location	1 High incident crash location
Safety: Noted by community as problem	No

Name of Corridor/Roadway: *CR 57/Sunfish Lake Blvd: TH 10 to CSAH 116*	Corridor Characteristics
Interchange Needed: New/Upgraded	New interchange at TH 10; in TH 10 IRC Plan
Other Grade Separation Needed	No
Signal: Add	New signal at CSAH 116 (programmed for 2011) and at CSAH 5
Signal: Remove	No
Transit Route: Existing	None
Transit Route: Proposed	None
Park/Ride Location: Existing	No
Park/Ride Location: Expand	No
Park/Ride Location: New	No
Corridor Study Recommended	Current study for interchange with 56
Pedestrian/Bike Facility Included	Yes – planned improvements in 2011
Connection to Recreational/Other Facility	N/A
Consistent with Met Council Transportation Policy Plan	No—Not included in TPP
Priority: Short term – 2009-2015	Planned reconstruction in 2008 and 2011
Priority: Mid-term – 2015 – 2020	None
Priority: Long-term – 2020 – 2030	New interchange at TH 10 interchange

Name of Corridor/Roadway: *CSAH 83/Armstrong Blvd.: US 10 to CSAH 161st Street.*	Corridor Characteristics
Need for 2030 Capacity Improvements – High/Medium/Low *(to maintain 2000 congestion levels, w/o IRCs* - 2 additional lanes/approx. 2.0 miles*)*	Low
Recommendation would change if IRC improvements are implemented?	No
Traffic Volumes	Existing: 8,250 – 12,730 vpd *Constrained 2030 without IRC Improvements:* 16,590 – 30,340 vpd *Unconstrained 2030 without IRC Improvements:* 16,980 – 30,930 vpd
Existing number of lanes/undivided or divided	2-lane
Shoulder bus lanes	None Existing
Recommended Lanes Needed *2030 Plan*	Expand to 4-lanes
Right-of-Way Availability *(High/Med/Low)*	Low
Right-of-Way Preservation Required	Yes
Environmental Feasibility (High/Medium/Low)	Medium
Parallel Route Availability *(High/Med/Low)*	High – with TH 10 interchanges at CSAH 56/Ramsey Blvd.
Parallel Route: Expand	N/A
Parallel Route: New	N/A
Functional Class: Existing	A Minor Arterial
Functional Class: Proposed	A Minor Arterial
Jurisdictional Change Proposed	None
Safety: High Incident Crash Location	0 high incident crash locations
Safety: Noted by community as problem	No
Interchange Needed: New/Upgraded	New interchange at TH 10

Name of Corridor/Roadway: *CSAH 83/Armstrong Blvd.: US 10 to CSAH 161st Street.*	Corridor Characteristics
Other Grade Separation Needed	None
Signal: Add	New signals at Alpine Drive, Bunker Lake Blvd, and 161st Street
Signal: Remove	None
Transit Route: Existing	None
Transit Route: Proposed	None
Park/Ride Location: Existing	No
Park/Ride Location: Expand	No
Park/Ride Location: New	No
Corridor Study Recommended	No
Pedestrian/Bike Facility Included	Yes
Connection to Recreational/Other Facility	Yes
Consistent with Met Council Transportation Policy Plan	No – Not included in TPP
Priority: Short term – 2009-2015	
Priority: Mid-term – 2015 – 2020	
Priority: Long-term – 2020 – 2030	Expand to 4-lane facility

Name of Corridor/Roadway: *CSAH 17 Lexington Avenue: Lake Drive to CR 14/Main St.*	Corridor Characteristics
Need for 2030 Capacity Improvements – High/Medium/Low *(to maintain 2000 congestion levels, w/o IRCs* - 8 additional lanes/30.5 lane miles/approx. 4 miles*)*	High
Recommendation would change if IRC improvements are implemented?	Yes – to I-35W
Traffic Volumes	Existing: 13,200 vpd <u>*Constrained 2030 without IRC Improvements*</u>: S. of Lake Drive = 12,210 – 18,340 vpd Lake Drive to I-35W = 30,920 – 35,270 vpd I-35W to CR 14/Main = 42,840 – 59,160 vpd <u>*Unconstrained 2030 without IRC Improvements:*</u> S. of Lake Drive = 12,600 – 18,990 vpd Lake Drive to I-35W = 43,330 – 47,980 vpd I-35W to CR 14/Main = 51,610 – 73,820 vpd
Existing number of lanes/undivided or divided	CSAH 23/Lexington to Edgewood = 4-lane undivided Edgewood to CR 14/Main St = 4-lane divided
Shoulder bus lanes	No existing; evaluate addition of bus shoulder lanes in corridor study; recommend bus shoulders if buses cannot maintain 35 mph average
Recommended Lanes Needed *2030 Plan*	6-lane divided on CSAH 17/Lexington between I-35W and CR 14/Main Street; with Expansion of Sunset; and Expansion/Extension of Naples
Right-of-Way Availability *(High/Med/Low)*	Medium (access issues, power lines, other constraints)
Right-of-Way Preservation Required	Yes
Environmental Feasibility (High/Medium/Low)	Medium (soils)
Parallel Route Availability *(High/Med/Low)*	Medium/High - CR 53/Sunset on east side from Lake Dr. to CSAH 14 Medium/Low - Naples Dr (on west side of Lexington); potential to expand to north to CSAH 12
Parallel Route: Expand	Yes—1) Expand Lexington Ave. to 6-lanes; 2) Expand CR 53/Sunset to channelized 2-lane; 3) Expand Naples to channelized 2-lane
Parallel Route: New	Yes—Extend Naples to CSAH 12

Name of Corridor/Roadway: *CSAH 17 Lexington Avenue: Lake Drive to CR 14/Main St.*	Corridor Characteristics
Functional Class: Existing	CSAH 17/Lexington Ave.—A minor arterial CR 53 Sunset—Major Collector Naples Dr—Major Collector south of I-35, local north of I-35
Functional Class: Proposed	CSAH 17/Lexington Ave.—A minor arterial CR 53/Sunset—Major Collector Naples Dr—Major Collector or local
Jurisdictional Change Proposed	May consider Naples Dr as local
Safety: High Incident Crash Location	6 high incident crash locations
Safety: Noted by community as problem	None
Interchange Needed: New/Upgraded	Upgraded interchange Lexington Ave./I-35W
Other Grade Separation Needed	Grade separation on Lexington at CSAH 23 and CSAH 14/Main St.
Signal: Add	One additional signal south of CSAH 14/Main St. in vicinity of 117th Ave. (based on possible future spacing needs)
Signal: Remove	Future study to determine signal locations south of I-35
Transit Route: Existing	MT #250
Transit Route: Proposed	Planned ACT Rt. 809 on CSAH 17/Lexington Ave.
Park/Ride Location: Expand	No
Park/Ride Location: New	No
Corridor Study Recommended	Yes – consider access management in coordination with Lexington/CSAH 23 Area Study
Pedestrian/Bike Facility Included	Yes—look to expand Central Anoka Co. Reg. Trail along with any proposed road expansion
Connection to Recreational/Other Facility	Yes—Bunker Chain of Lakes Reg. Trail; Central Anoka Co. Reg. Trail
Consistent with Met Council Transportation Policy Plan	No—Not included in TPP
Priority: Short term – 2009-2015	Lexington/CSAH 23 Area Study with ROW Preservation
Priority: Mid-term – 2015 – 2020	Implementation of Area Study spot improvement recommendations
Priority: Long-term – 2020 – 2030	Reconstruction of CSAH 17/Lexington & Parallel Routes

Name of Corridor/Roadway: *CSAH 23/Lake Dr.: I-35W to CSAH 49/Hodgson (CR 49/North Road)*	Corridor Characteristics
Need for 2030 Capacity Improvements – High/Medium/Low *(to maintain 2000 congestion levels, w/o IRCs* - 6 additional lanes/approx. 3.5 miles*)*	High
Recommendation would change if IRC improvements are implemented?	Yes – to I-35W
Traffic Volumes	Existing: 6,600—17,000 vpd <u>*Constrained 2030 without IRC Improvements:*</u> I-35W to Lexington = 32,760 - 35,000 vpd Lexington to CSAH 49 = 10,330 – 10,710 vpd <u>*Unconstrained 2030 without IRC Improvements:*</u> I-35W to Lexington = 42,900 – 44,500 vpd Lexington to CSAH 49 = 12,500 – 12,600 vpd
Existing number of lanes/undivided or divided	2-lane from I-35W to ¼ mile southwest of Lexington Avenue 4-lane divided (1/4 mile southwest of Lexington Avenue to CR 49 except for 2-lane (1/4 mile northeast of Shepard Court)
Shoulder bus lanes	None existing
Recommended Lanes Needed *2030 Plan*	4-lane divided minimum (6-lane may be required based on volumes from I-35W to Lexington – Corridor Study recommendations should address the need)
Right-of-Way Availability *(High/Med/Low)*	High
Right-of-Way Preservation Required	Yes
Environmental Feasibility (High/Medium/Low)	High
Parallel Route Availability *(High/Med/Low)*	Low—I-35W is best option
Parallel Route: Expand	None
Parallel Route: New	Yes – Depending on recommendation from Lexington/CSAH 23 Area Study —New Connection to CR 53/Sunset @ CSAH 49 (supports CR 53/Sunset as parallel reliever to CSAH 17/Lexington Ave.)
Functional Class: Existing	A Minor Arterial

Name of Corridor/Roadway: *CSAH 23/Lake Dr.: I-35W to CSAH 49/Hodgson (CR 49/North Road)*	Corridor Characteristics
Functional Class: Proposed	A Minor Arterial
Jurisdictional Change Proposed	None
Safety: High Incident Crash Location	5 high incident crash locations
Safety: Noted by community as problem	No
Interchange Needed: New/Upgraded	Upgrade Lake Dr./I-35W interchange (plans with MnDOT to make this interchange or Cty Rd J interchange (Medtronic) fully directional)
Other Grade Separation Needed	Yes—at CSAH 17/Lexington Ave Complex intersections at CSAH 52 (Lovell) and CSAH 23/Lexington
Signal: Add	New signal locations to be evaluated in Lexington/CSAH 23 Area Study
Signal: Remove	No
Transit Route: Existing	None
Transit Route: Proposed	Future ACT Route 817 b/w CSAH 17/Lexington Ave. & Naples
Park/Ride Location: Existing	No
Park/Ride Location: Expand	No
Park/Ride Location: New	No
Corridor Study Recommended	Yes—Lexington/CSAH 23 Area Study
Pedestrian/Bike Facility Included	Yes—add connection to Rice Creek Chain of Lakes and snowmobile trail
Connection to Recreational/Other Facility	Rice Creek Chain of Lakes
Consistent with Met Council Transportation Policy Plan	No—Not included in TPP
Priority: Short term – 2009-2015	Lexington/CSAH 23 Area Study with ROW Preservation to address capacity needs & high incident locations
Priority: Mid-term – 2015 – 2020	Reconstruction; Implementation of Corridor Study
Priority: Long-term – 2020 – 2030	Grade separation at CSAH 17/Lexington Ave. (when traffic volumes reached 50,000 vpd)

Name of Corridor/Roadway: *CSAH 14/Main St. : I-35E to CSAH 23*	Corridor Characteristics
Need for 2030 Capacity Improvements – High/Medium/Low *(to maintain 2000 congestion levels, w/o IRCs* - 2 additional lanes/approx. 4.5 miles*)*	Low Reconstruction finished in 2009
Recommendation would change if IRC improvements are implemented?	No
Traffic Volumes	Existing: 4,760—9,320 vpd *2030 without IRC Improvements:* 10,600—20,900 vpd *2030 without IRC Improvements:* 11,700—21,000 vpd
Existing number of lanes/undivided or divided	2-lane (CSAH 23/Lake Drive to Mound Trail) 3-lanes (Mound Trail to CSAH 54) 4-lane divided (CSAH 54 to CSAH 14)
Shoulder bus lanes	None existing
Recommended Lanes Needed *2030 Plan*	Corridor Study recommended – relieved by new Northerly Bypass
Right-of-Way Availability *(High/Med/Low)*	High
Right-of-Way Preservation Required	Yes - Implement/acquire right-of-way for Northerly Bypass
Environmental Feasibility (High/Medium/Low)	Medium/Low
Parallel Route Availability *(High/Med/Low)*	High
Parallel Route: Expand	No
Parallel Route: New	High- Northerly Bypass of CSAH 14 extension to CR 140; direct east extension of CR 14 between Roundeau and Peltier Lakes; east to New Parallel N/S route of either Wash. Co. Elm Crest Ave. or Anoka Co. extension of CR 84
Functional Class: Existing	Principal Arterial b/w CSAH 23 & I-35W A Minor Arterial from I-35W to I-35E
Functional Class: Proposed	Principal Arterial for entire corridor (applies to

Name of Corridor/Roadway: *CSAH 14/Main St. : I-35E to CSAH 23*	Corridor Characteristics
	CSAH 14 extension)
Jurisdictional Change Proposed	None
Safety: High Incident Crash Location	None
Safety: Noted by community as problem	No
Interchange Needed: New/Upgraded	Upgrade I-35E interchange at CSAH 14 (in TIP for 2009)
Other Grade Separation Needed	Yes – based on Northerly Bypass Corridor Study – two locations – CSAH 14/Main Street and I-35E
Signal: Add	No
Signal: Remove	No
Transit Route: Existing	Yes – Met Council Route 275
Transit Route: Proposed	No new routes
Park/Ride Location: Existing	Yes—one at CSAH 21 at St. Genevieve's
Park/Ride Location: Expand	No
Park/Ride Location: New	Planned in NW quadrant of CSAH 14 and 21st Ave at I-35E to replace multiple small existing locations
Corridor Study Recommended	Implement recommendations from previous CSAH 14 Corridor Study
Pedestrian/Bike Facility Included	Yes—implement planned Central Anoka Co. Reg. Trail
Connection to Recreational/Other Facility	Rice Creek Chain of Lakes; Bunker Chain of Lakes Reg. Trail; City Hall Park
Consistent with Met Council Transportation Policy Plan	No—Not included in TPP
Priority: Short term – 2009-2015	Implement planned reconstruction (b/w I-35E & I-35W)
Priority: Mid-term – 2015 – 2020	Implement plan recommendations from previous CSAH 14 Corridor Study (new east west extension of CSAH 14)
Priority: Long-term – 2020 – 2030	Continue implementing recommendations from CSAH 14 Corridor Study

Name of Corridor/Roadway: *CSAH 52/Radisson Rd.: I-35W to CSAH 52 (up to CSAH 116) & CR 52 b/w CSAH 116 and CR 61)*	Corridor Characteristics
Need for 2030 Capacity Improvements – High/Medium/Low *(to maintain 2000 congestion levels, w/o IRCs* - 2 additional lanes/approx. 9.5 miles*)*	Low
Recommendation would change if IRC improvements are implemented?	Yes
Traffic Volumes	Existing: 5,120—10,000 vpd *<u>Constrained 2030 without IRC Improvements:</u>* I-35W to Bunker: 8,750—23,190 vpd Bunker to CSAH 62: 8,750 – 10,720 vpd *<u>Unconstrained 2030 without IRC Improvements:</u>* I-35W to Bunker: 13,200—25,630 vpd Bunker to CSAH 62: 9,600 – 12,960 vpd
Existing number of lanes/undivided or divided	4-lanes divided (from I-35W to CSAH 14/Main St.) Planned to extend to 4-lane divided from CSAH 14/Main St. to CSAH 116 (2009) Remainder is two lane undivided
Shoulder bus lanes	None existing
Recommended Lanes Needed *2030 Plan*	4-lane divided (I-35W to CSAH 116) 2-lane (CSAH 116 to CR 61)
Right-of-Way Availability *(High/Med/Low)*	High
Right-of-Way Preservation Required	No – in process
Environmental Feasibility (High/Medium/Low)	High
Parallel Route Availability *(High/Med/Low)*	Low— Study as part of Lexington/CSAH 23 Area Study; TH 65 will serve as reliever when interchanges are built at CSAH 12 (first to be built) and CSAH 116 (second to be built)—TH 65 becomes freeway
Parallel Route: Expand	Study as part of Lexington/CSAH 23 Area Study
Parallel Route: New	Study as part of Lexington/CSAH 23 Area Study High—Naples Dr. from I-35W to CSAH 14/Main Street (also reliever for CSAH 17/Lexington Ave.
Functional Class: Existing	A Minor Arterial I-35W to CSAH 116 B Minor Arterial CSAH 116 to CR 62

Name of Corridor/Roadway: *CSAH 52/Radisson Rd.: I-35W to CSAH 52 (up to CSAH 116) & CR 52 b/w CSAH 116 and CR 61)*	Corridor Characteristics
Functional Class: Proposed	A Minor Arterial I-35W to CSAH 116 B Minor Arterial CSAH 116 to CR 62
Jurisdictional Change Proposed	Per realignment (north end of 61)
Safety: High Incident Crash Location	4 high incident crash locations (part of programmed 2009 reconstruction)
Safety: Noted by community as problem	No
Interchange Needed: New/Upgraded	No
Other Grade Separation Needed	No
Signal: Add	New signal at: CSAH 116 (programmed for 2009); Tournament Players Pkwy.
Signal: Remove	No
Transit Route: Existing	No
Transit Route: Proposed	Yes – ACT Rt. 823
Park/Ride Location: Existing	Existing at I-35W & 95th Ave.
Park/Ride Location: Expand	Yes – by 500 spaces with UPA funding
Park/Ride Location: New	Planned at CSAH 14 and TH 65
Corridor Study Recommended	Yes – Traffic Management Study
Pedestrian/Bike Facility Included	Yes—review as part of Lexington/CSAH 23 Area Study
Connection to Recreational/Other Facility	Tournament Players Club Golf Courses; Victory Links Golf Course; National Sports Center; Proposed Bunker Chain of Lakes Regional Trail on CSAH 14 & Center Anoka Co. Reg. Trail (CSAH 116);
Consistent with Met Council Transportation Policy Plan	No—Not included in TPP
Priority: Short term – 2009-2015	Implement planned 4-lane divided extension from CSAH 14/Main St. to CSAH 116 (2009) and ITS improvements
Priority: Mid-term – 2015 – 2020	Interchanges on TH 65 @ CSAH 116 & CSAH 12 Reconstruction of CSAH 17/Lexington & Parallel Routes (based on recommendation from Lexington/CSAH 23 Area Study)
Priority: Long-term – 2020 – 2030	Expansion to 4-lanes between CSAH 116 & CR 61

Name of Corridor/Roadway: *CSAH 18/Broadway Ave: CSAH 17/Lexington Ave.(northern intersection) to CR 19*	Corridor Characteristics
Need for 2030 Capacity Improvements – High/Medium/Low *(to maintain 2000 congestion levels, w/o IRCs* - 2 additional lanes/approx. 3.0 miles*)*	Low
Recommendation would change if IRC improvements are implemented?	No
Traffic Volumes	Existing: 12,500 vpd *Constrained 2030 without IRC Improvements:* 21,750 vpd *Unconstrained 2030 without IRC Improvements:* 23,660 vpd
Existing number of lanes/undivided or divided	2-lane
Shoulder bus lanes	None existing
Recommended Lanes Needed *2030 Plan*	Possible upgrade to channelized 2-lane facility; Provide intersection control
Right-of-Way Availability *(High/Med/Low)*	NA
Right-of-Way Preservation Required	No
Environmental Feasibility (High/Medium/Low)	Low
Parallel Route Availability *(High/Med/Low)*	Low—constrained by Carlos Avery WMA
Parallel Route: Expand	N/A
Parallel Route: New	N/A
Functional Class: Existing	A Minor Arterial
Functional Class: Proposed	A Minor Arterial
Jurisdictional Change Proposed	None
Safety: High Incident Crash Location	None
Safety: Noted by community as problem	No
Interchange Needed: New/Upgraded	No
Other Grade Separation Needed	No

Name of Corridor/Roadway: *CSAH 18/Broadway Ave: CSAH 17/Lexington Ave.(northern intersection) to CR 19*	Corridor Characteristics
Signal: Add	Yes—CSAH 17/Lexington Ave.; CR 19
Signal: Remove	No
Transit Route: Existing	None
Transit Route: Proposed	None
Park/Ride Location: Existing	No
Park/Ride Location: Expand	No
Park/Ride Location: New	No
Corridor Study Recommended	No
Pedestrian/Bike Facility Included	No – not in WMA
Connection to Recreational/Other Facility	Carlos Avery WMA
Consistent with Met Council Transportation Policy Plan	No—Not included in TPP
Priority: Short term – 2009-2015	None
Priority: Mid-term – 2015 – 2020	Upgrade to channelized 2-lane facility; add signals
Priority: Long-term – 2020 – 2030	None

Name of Corridor/Roadway: *CSAH 22/Viking Blvd.: CSAH 85 to Anoka/Washington County Line*	Corridor Characteristics
Need for 2030 Capacity Improvements – High/Medium/Low *(to maintain 2000 congestion levels, w/o IRCs* - 2 additional lanes/approx. 4.5 miles*)*	Low
Recommendation would change if IRC improvements are implemented?	No
Traffic Volumes	Existing: 7,970 vpd *Constrained 2030 without IRC Improvements:* 15,380 - 17,090 vpd *Unconstrained 2030 without IRC Improvements:* 14,670 – 16,040 vpd
Existing number of lanes/undivided or divided	2-lane
Shoulder bus lanes	None existing
Recommended Lanes Needed *2030 Plan*	Provide adequate turn lanes & intersection control; possible upgrade to channelized 2-lane facility
Right-of-Way Availability *(High/Med/Low)*	High
Right-of-Way Preservation Required	Yes – 200-225 feet needed to meet MnDOT Principal Arterial requirements
Environmental Feasibility (High/Medium/Low)	High
Parallel Route Availability *(High/Med/Low)*	Low—not a high need
Parallel Route: Expand	N/A
Parallel Route: New	N/A
Functional Class: Existing	A Minor Arterial
Functional Class: Proposed	Principal Arterial
Jurisdictional Change Proposed	Proposed Turn-up to Mn/DOT for TH
Safety: High Incident Crash Location	None
Safety: Noted by community as problem	No
Interchange Needed: New/Upgraded	No

Name of Corridor/Roadway: *CSAH 22/Viking Blvd.: CSAH 85 to Anoka/Washington County Line*	Corridor Characteristics
Other Grade Separation Needed	No
Signal: Add	Yes—study new signal at CSAH 85
Signal: Remove	No
Transit Route: Existing	None
Transit Route: Proposed	None
Park/Ride Location: Existing	No
Park/Ride Location: Expand	No
Park/Ride Location: New	No
Corridor Study Recommended	Yes – access management study as part of Turnback Study
Pedestrian/Bike Facility Included	Yes—proposed N. Anoka Co. Regional Trail along entire length
Connection to Recreational/Other Facility	Carlos Avery WMA; Martin Island Linwood Reg. Park
Consistent with Met Council Transportation Policy Plan	Yes—currently under consideration in Regional Principal Arterial Study
Priority: Short term – 2009-2015	None
Priority: Mid-term – 2015 – 2020	Corridor analysis; construct turn lanes
Priority: Long-term – 2020 – 2030	None

Name of Corridor/Roadway: *CSAH 22/Viking Blvd.: County Line & CSAH 9/Lake George Blvd.*	Corridor Characteristics
Need for 2030 Capacity Improvements – High/Medium/Low *(to maintain 2000 congestion levels, w/o IRCs* - 2 additional lanes/approx. 8.0 miles*)*	Low
Recommendation would change if IRC improvements are implemented?	No
Traffic Volumes	Existing: 2,700—9,800 vpd *Constrained 2030 without IRC Improvements:* 4,330 —19,800 vpd *Unconstrained 2030 without IRC Improvements:* 4,590 —20,930 vpd
Existing number of lanes/undivided or divided	2-lane
Shoulder bus lanes	None existing
Recommended Lanes Needed *2030 Plan*	Provide adequate turn lanes & intersection control; possible upgrade to channelized 2-lane facility
Right-of-Way Availability *(High/Med/Low)*	High
Right-of-Way Preservation Required	Yes
Environmental Feasibility (High/Medium/Low)	High
Parallel Route Availability *(High/Med/Low)*	Low—not a high need
Parallel Route: Expand	N/A
Parallel Route: New	N/A
Functional Class: Existing	A Minor Arterial
Functional Class: Proposed	Principal Arterial
Jurisdictional Change Proposed	Proposed Turn-up to Mn/DOT for TH
Safety: High Incident Crash Location	2 high incident crash locations
Safety: Noted by community as problem	Yes—three locations noted by Oak Grove (CSAH 9; Martin Street NW; CSAH 78/Hanson Blvd.)

Name of Corridor/Roadway: *CSAH 22/Viking Blvd.: County Line & CSAH 9/Lake George Blvd.*	Corridor Characteristics
Interchange Needed: New/Upgraded	No
Other Grade Separation Needed	No
Signal: Add	Yes—TH 47; CSAH 7; CSAH 9; CSAH 78/Flamingo; in vicinity of CSAH 13/Cedar Dr.
Signal: Remove	No
Transit Route: Existing	None
Transit Route: Proposed	None
Park/Ride Location: Existing	No
Park/Ride Location: Expand	No
Park/Ride Location: New	No
Corridor Study Recommended	Yes – part of Turnback Study
Pedestrian/Bike Facility Included	Yes—proposed N. Anoka Co. Regional Trail b/w TH 47 & CSAH 9; proposed ped./bike facility along entire length of CSAH 22
Connection to Recreational/Other Facility	Proposed Regional Park in St. Francis; Rum River Reg. Trail
Consistent with Met Council Transportation Policy Plan	Yes – under consideration in Regional Principal Arterial Study
Priority: Short term – 2009-2015	Turnback Study
Priority: Mid-term – 2015 – 2020	Safety improvements & signal implementation ; Construction of turn-lanes
Priority: Long-term – 2020 – 2030	None

Name of Corridor/Roadway: *CSAH 24/Bridge St.: TH 47 to CR 9*	Corridor Characteristics
Need for 2030 Capacity Improvements – High/Medium/Low *(to maintain 2000 congestion levels, w/o IRCs-*2 additional lanes/approx. 1.5 miles*)*	Low
Recommendation would change if IRC improvements are implemented?	No
Traffic Volumes	Existing: 15,500 vpd *Constrained 2030 without IRC Improvements:* 27,000 vpd *Unconstrained 2030 without IRC Improvements:* 26,700 vpd
Existing number of lanes/undivided or divided	2-lane
Shoulder bus lanes	None existing
Recommended Lanes Needed *2030 Plan*	4-lane divided (may require bridge replacement)
Right-of-Way Availability *(High/Med/Low)*	Low
Right-of-Way Preservation Required	Yes
Environmental Feasibility (High/Medium/Low)	Low
Parallel Route Availability *(High/Med/Low)*	Low—bridge
Parallel Route: Expand	N/A
Parallel Route: New	N/A
Functional Class: Existing	Major Collector from TH 47 to CSAH 7; B Minor Arterial from CSAH 7 to CSAH 28; remainder is A Minor Arterial
Functional Class: Proposed	A Minor Arterial
Jurisdictional Change Proposed	None
Safety: High Incident Crash Location	2 high incident crash locations
Safety: Noted by community as problem	Yes—St. Francis concerned with bridge
Interchange Needed: New/Upgraded	No

Name of Corridor/Roadway: *CSAH 24/Bridge St.: TH 47 to CR 9*	Corridor Characteristics
Other Grade Separation Needed	No
Signal: Add	Yes—CSAH 9
Signal: Remove	No
Transit Route: Existing	No County/Met Council routes, but multiple school routes
Transit Route: Proposed	None
Park/Ride Location: Existing	No
Park/Ride Location: Expand	No
Park/Ride Location: New	No
Corridor Study Recommended	Yes – Area Study (route continuity, new crossings, etc)
Pedestrian/Bike Facility Included	Yes—proposed NW Anoka Co. Reg. Trail
Connection to Recreational/Other Facility	Proposed Rum River Reg. Trail; Rum River N. Co. Park
Consistent with Met Council Transportation Policy Plan	No—Not included in TPP
Priority: Short term – 2009-2015	Area Study (county roadway connections and new crossing)
Priority: Mid-term – 2015 – 2020	Add signal at CSAH 9; implement spot improvements based on Area Study recommendations
Priority: Long-term – 2020 – 2030	Implement reconstruction/new crossing construction based on recommendations of Area Study

Appendix G

Referenced in Section 8.0, Financial Analysis

Contents:

1. Financial Analysis Technical Memorandum

Memorandum Final DRAFT

To: **Kate Garwood (Anoka County), Stephanie Eiler (CH2M Hill)**
From: **Michael Benouaich (PB Consult), Nick Amrhein (PB Consult)**
Date: **September 15, 2008**

Subject: **2030 Transportation Plan, Highway Funding Alternative Summary**

Forewords

Anoka County is currently developing its first long-term highway capital improvements plan ("the 2030 Plan" or "the program") aimed at identifying a list of short-term, mid-term, and long-term projects necessary to improve safety and provide additional capacity to hold congestion to the 2000 level on the County highway and road system. The County selected the team of CH2M Hill, Parsons Brinckerhoff, and PB Consult to assist in developing the Plan.

As part of this planning effort, PB Consult was retained by the County to review in close collaboration with County staff the currently-available and anticipated sources of funds as well as potential funding and financing options to implement the Plan recommendations by maximizing the use of traditional and innovative local, regional, and state funding sources. This analysis was conducted through a series of three workshops involving County staff, CH2M Hill, and PB Consult.

The present memorandum summarizes the results of these collaborative efforts. The following sections of this memorandum are intended to be included in whole or in part, and after editing form the County, in the final 2030 Plan public document and are therefore written in the active voice with "the County" as the subject (e.g. "the County assumed…"). The estimates of capital costs developed by CH2M Hill and funding levels used in this analysis are order-of-magnitude estimates appropriate to support long-term capital program planning but not intended to support actual project funding or financing. The assumptions used to develop these estimates are the results of workshops and discussions with County officials and represent ultimately the planning assumptions of the County.

This memorandum also provides information on how various value capture techniques can be implemented and the capital funding potential of these mechanisms with regard to proposed roadway improvements in the County. The analysis presented in this memorandum is conceptual in nature. PB Consult has relied on the accuracy of several different data sources to perform this analysis including, but not limited to, the State of Minnesota, the Metropolitan Council Association of Governments, Anoka County, and other private sources, for assumptions to build the analysis.

This conceptual analysis is meant to provide Anoka County with an understanding of some alternative ways to fund the County transportation needs, a relative indication of funding levels from value capture mechanisms, and an outline of potential legislative shortcomings that need further evaluation prior to instituting any of these mechanisms. It is important to recognize that the findings presented herein are conceptual and could substantially change based on more refined review of legislative factors and market analyses.

The Appendices of this memorandum provide more details on cost escalation assumptions and methodology (Appendix A) as well as a review of value capture practices in other States (Appendix B) and the results of our preliminary research on value capture legislation in Minnesota (Appendix C). Numerous footnotes are also included in the following sections. They are aimed at providing sources of information or discussing specific technical issues. The present forewords, the Appendices as well as the footnotes are not intended to be used in the 2030 Plan public document.

Executive Summary

As part of the 2030 Plan, the County has identified long-term capital improvements necessary to improve safety and provide additional capacity to hold congestion to the 2000 level on the County highway and road system. The Program needs have been identified at $1,088 million in 2008$, corresponding to $1,570 in year of expenditure dollars (YOE$).

The County reviewed the currently-available and anticipated sources of funds as well as potential funding and financing options to implement the Plan, including the use of traditional and innovative local, regional, and state funding sources.

Under baseline funding assumptions, the County anticipates to allocate $696 million dollars to the Program from 2009 to 2029 and receive contribution from the State and the Cities of Anoka County of $92 million and $101 million respectively for a total of $890 million (all YOE$), as shown in the table below.

2030 Plan Anticipated Sources of Funds (YOE$)

Sources of Funds	2009-2029 Total YOE$'000
Total HUTDF Anticiapted Funds Allocated to 2030 Program	278,496
Anticipated County Property Tax Levy Allocated to 2030 Program	231,407
Anticipated GO Bonds Allocated to 2030 Program	154,425
Anticipated Wheelage Tax Allocated to 2030 Program	32,107
Total Anticipated County Sources of Funds Allocated to 2030 Program	**696,435**
Funds Anticipated from State for Turnback Projects	44,656
Anticipated Hazard Safety Improvement Program (HSIP)	31,500
Anticipated Local Bridge Replacement Program	10,500
Anticipated State Roads of Regional Significance Funds	4,125
Anticipated Safe-Route-To-School Grant Program	1,050
Total Anticipated State Sources of Funds Allocated to 2030 Program	**91,831**
Total Anticipated Matching Cities Sources of Funds	**101,332**
Total Anticipated Sources of Funds for the 2030 Program (YOE$)	**889,598**

The currently-identified sources of funds are insufficient to meet the Program needs corresponding to unmet capital needs of $680 million (YOE$), or 43% of the total Program escalated costs. New revenues needed to fund the Program amount to $228 million by the end of 2014, $441 million by the end of 2019, and $680 million by the end of 2029.

While the County is actively considering means to reduce the Program capital costs through value engineering and to reduce and manage demand on the road and highway network by implementing transit alternatives, additional new revenues must be identified to meet the long-term transportation needs of the County.

At the local level, the County has reviewed options for providing such new funds including local ¼ cent sales tax dedicated to highway, Development Impact Fee (DIF), and Tax increment Finance (TIF). Although local option sales taxes are currently in use in Minnesota

for highway and in Anoka County for transit, and existing legislation enables TIF, new legislative actions at the State level may be required to implement DIF.

A local ¼ cent sales tax dedicated to highway and a DIF program have the potential to provide an additional $320 million (YOE$) from 2010 to 2029 in pay-as-you-go funds, or alternatively proceeds on the order of $58 to $64 million from each source if debt financing is considered, depending on the assumptions of the debt calculation. With these two additional sources, new revenues needed to fund the Program would amount to $148 million by the end of 2014, $227 million by the end of 2019, and $361 million (YOE$) by the end of 2029.

While the County is actively considering local options to achieve long-term mobility for its citizens, congestion on the County road and highway network is a regional problem that requires a regional solution, for which further regional, state and federal support will be required.

1.0 Introduction

1.1 General

As part of the 2030 Plan ("the Plan" or "the Program"), the County has identified long-term highway capital improvements necessary to improve safety and provide additional capacity to hold congestion to the 2000 level on the County highway and road system. The Program regroups highway projects according to the timeframe during which these projects need to be implemented to achieve the Program goals: short-term (2009-2014), mid-term (2015-2019), and long-term (2020-2029). Capital costs for each project were developed in 2008 dollars and escalated in year-of-expenditure dollars (YOE$) according to this implementation plan.

The County then reviewed the currently-available and anticipated sources of funds as well as potential funding and financing options to implement the Plan, including the use of traditional and innovative local, regional, and state funding sources.

The Program capital needs in YOE$ were finally compared with the currently-available and anticipated sources of funds to determine if Program funding would be sufficient. These funding sources being insufficient, the County assessed how additional local funding mechanism could be used to bridge the funding gap.

The 2030 Plan does not include any capital costs or sources of funds for projects already included in the Anoka County Highway Department Five-Year Improvement Plan for the period 2007-2011.[1]

1.2 National Perspective on Local and State Highway Expenditures

As many city and county governments within the State of Minnesota, Anoka County has experienced increasing demand for transport and consequently higher highway capital needs. Being also responsible for a large part of the capital and operational expenditures for the road and highway network within its jurisdiction and having limited access to funding sources, the County is faced with long-term challenges to meet the transportation needs of its citizens.

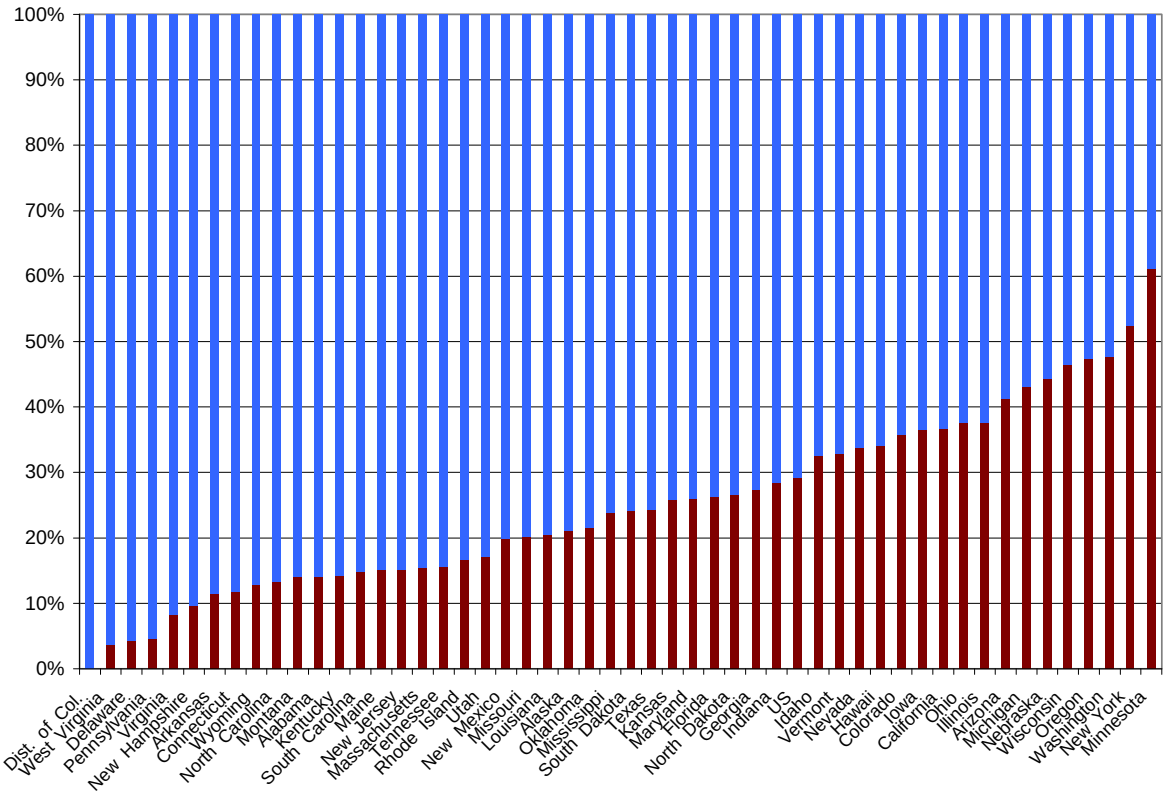
At the national level, the respective share of state and local government contributions to highway construction and operations vary widely. In Minnesota however, the responsibility for highway expenditures is primarily born by local governments. As shown in Exhibit 1, according to the Federal Highway Administration (FHWA), county and city government participation to highway expenditures varied in 2004 (year of the latest comprehensive national highway statistics) form a low of 5% in Delaware to a high of 65% in Minnesota, while the national average was 29% and the average for all states was 27%.

Moreover, in recent years, Minnesota has seen relatively low levels of spending for highway capital needs. As show in Exhibit 2, in 2004, highway capital outlays per capita for the State were at $133, while the national average was at $168.

[1] Approved by the County Board December 19, 2007 and Amended by the County Board July 10, 2007.

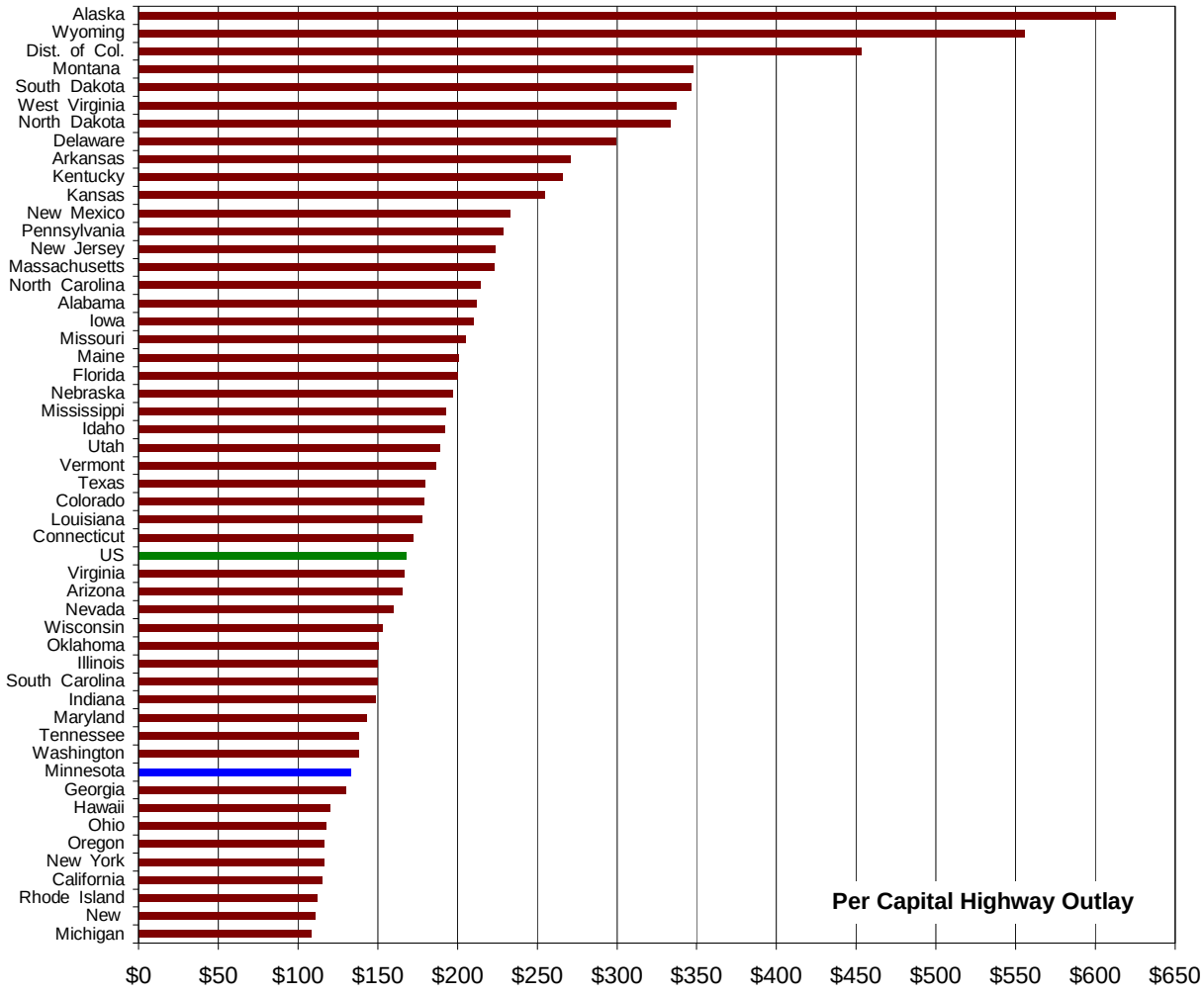
While the need for capital investment in highway infrastructure has been increasing, the State has responded with the enactment of the Transportation Finance Bill (HF 2800) providing local government with increased revenue from the state gas tax through formula allocations from the Highway User Tax Disctribution Fund (HUTDF). Previously at ¢20 per gallon, the bill provides for an increase to ¢25 per gallon this year, and an additional ¢3.5 per gallon over the next five years. This new measure places the State of Minnesota well above the average for all states at ¢19.25 per gallon and the federal gas tax at ¢18.40 (in 2006) as shown in Exhibit 3. The additional revenues to Anoka County generated by HF 2800 are described in Section 3.1.

Exhibit 1: Share of Local and State Government Highway Expenditure by State (FHWA, 2004)[2]



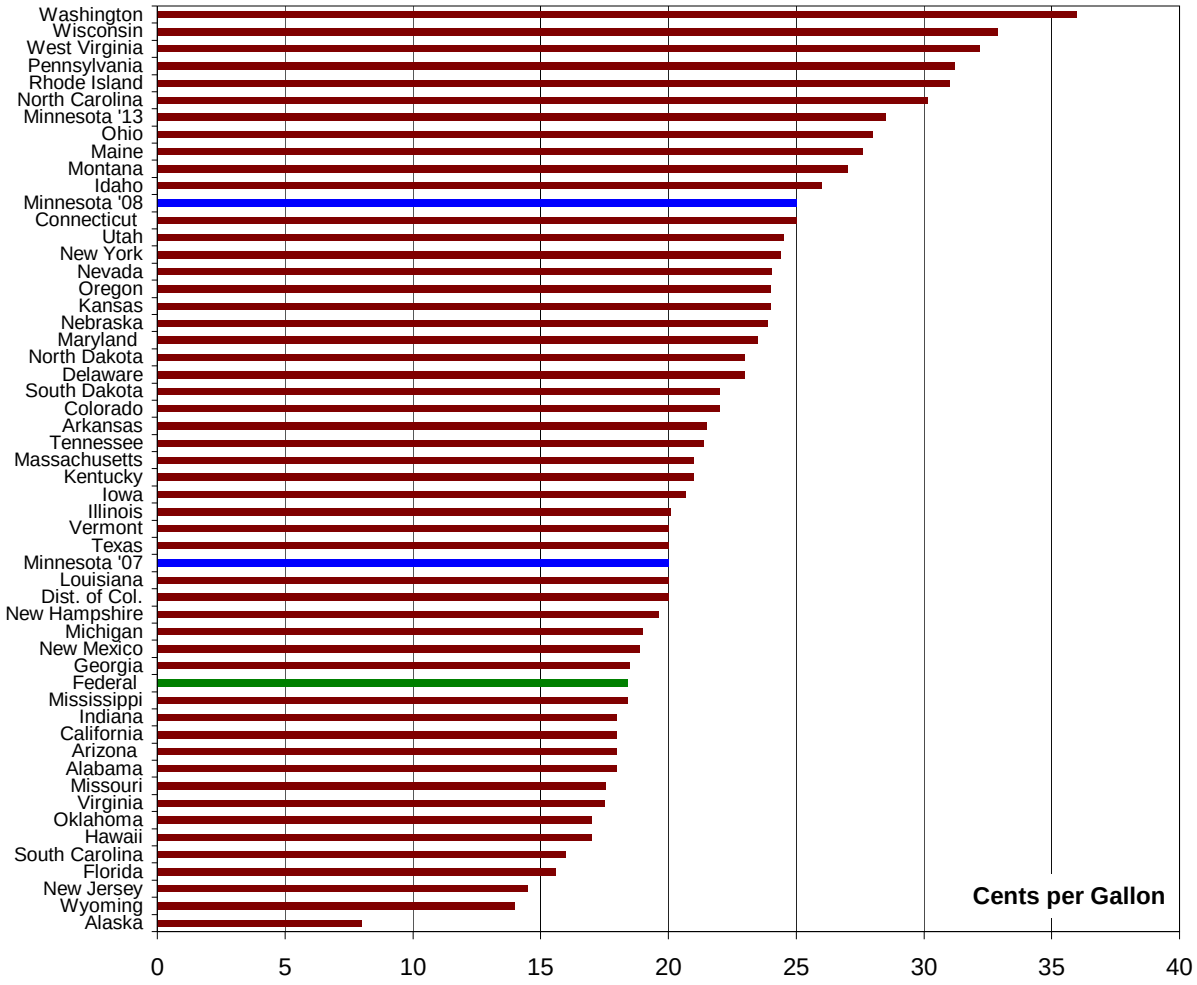
[2] Source: Federal Highway Administration, Highway Statistics 2004, Table HF2 Total Disbursement for Highways, All Units of Government

Exhibit 2: State Disbursements for Highway Capital Outlay Per Capita (FHWA, 2004)[3]



[3] Sources: Capital outlay data per Federal Highway Administration, Highway Statistics 2004, Table HF2 Total Disbursement for Highways, All Units of Government. Population data per U.S. Census Bureau, Population Division.

Exhibit 3: Share of Local and State Government Highway Expenditure by State (FHWA, 2006)[4]



2.0 Program Planed Capital Needs

The 2030 Plan cost estimates were developed in current, 2008 dollars (2008$) and are based on the estimates developed by the County and its planning and engineering consultants[5]. The Program encompass 19 major projects including interchanges and intersection improvements, new connections, roads turned back from the State to the County (part of the State Turnback Program), and improvements along 17 CSAH corridors.

Program costs were estimated at $1,088 million (2008$) as shown in Methodology

Budgeting for long-range capital program requires taking into account long-term inflationary pressures on capital costs. In order to determine the additional costs due to escalation, the 2030 Plan cost estimates incorporated standard escalation calculation, according to the following methodology:

[4] Source: Federal Highway Administration, Highway Statistics 2006, Table MF-121T, Tax Rates on Motor Fuel

[5] CH2M Hill and Parsons Brinckerhoff.

1. For each corridor, costs expressed in 2008$ were broken down in three planning periods:
    i. Short-term from 2008 to 2014
    ii. Mid-term from 2015 to 2019, and
    iii. Long-term from 2020 to the end of 2029

    and three cost categories:
    i. Soft costs, including planning and engineering studies
    ii. Construction costs, including construction management costs
    iii. Right-of-way acquisition costs.
2. For each corridor, costs were allocated to each planning horizon so as to meet the transportation goals of the Program.
3. At the current stage of the planning effort, a precise schedule of expenditures could not be established. It was assumed instead that capital costs are expected to be distributed evenly within each planning period
4. For each cost category expressed in 2008$, the year expenditures will commence was identified based on the schedule of expenditure assumed in (3) above.
5. Escalation rates were estimated for each cost category identified in (1) above (see Section 2.2.2 and Appendix A).
6. The cumulative escalation rates from the year expenditures commence were identified and cumulative escalation factors derived.
7. For each cost category expressed in 2008$, the cost items in each category were multiplied by the appropriate cumulative escalation factor according to the assumed schedule of expenditures (see (3) above) to calculate the year-of-expenditure cost estimate.

The resulting Program costs in YOE$, estimated at $1,582 million (YOE$), are summarized in **Error! Not a valid bookmark self-reference.** per corridor and for each planning horizon.

2.1.1 Capital Program Escalation Rates

Escalation rates were estimated for each of the three cost categories: soft costs (including planning and engineering studies), construction costs (including construction management costs), and right-of-way (ROW) acquisition costs.

For the period from 2009 to 2012, the County used the highway construction cost escalation forecasted at the national level by PB Consult and published in the Economic Forecasting Review (EFR). Average highway and bridge escalation rates for the U.S. have been projected, starting with preliminary 2007 full year data and extending to 2012. The forecast methodology entails derivation of a “blended” escalation rate reflecting major underlying factor inputs to highway and bridge construction and is presented in more details in Appendix A. The forecast yields a highway construction cost escalation rate between 3.5%

and 4.5% annually from 2008 to 2012. After 2012, the County used the long-term trend for the national Construction Cost Index forecasted by ENR at 2.9% annually (Exhibit 4).

Soft cost were assumed to follow closely the ENR Construction Cost Index for the entire forecast period, with rates varying from 2.8% in 2008, to 2.7% in 2009 and 2010, and 2.9% annually thereafter (Exhibit 4).

Exhibit 4: Construction Costs and Soft Costs Escalation Rates

Construction Cost Annual Escalation Rates	
2008	3.10%
2009	3.50%
2010	4.50%
2011	4.30%
2012	3.90%
2013	2.93%

Soft Cost Annual Escalation Rates	
2008	2.75%
2009	2.82%
2010	2.67%
2011	2.72%
2012	2.87%
2013	2.93%

ROW acquisition costs escalation rates were estimated to follow the trend for the national Median Sales Price Existing Single-Family Homes forecasted by Economy.com. This trend was adjusted to zero in the in 2008 and 2009 (instead of -12.93% and -1.78%, respectively) to be more conservative. This annual escalation rate is anticipated to decline steadily from 4.4% in 2010 to 3.3% in 2029.

2.1.2 Program Costs in Year-of-Expenditure Dollars (YOE$)

The resulting Program costs in 2008$ and YOE$ are summarized in Exhibit 4 per corridor and for each planning horizon.

The capital needs for the 2030 Plan being spread over a 22-year period with approximately 40% of the costs being incurred past 2020, escalated capital costs are very sensitive to escalation assumptions:

- 1% higher escalation increases Program cost by approximately 11% to $1,742 million (YOE$)
- 2% higher escalation increases Program cost by approximately 24% to $1,941 million (YOE$)

Exhibit 5 per corridor and for each planning horizon.

2.2 Capital Cost Estimate in Year-of-Expenditure Dollars (YOE$)

2.2.1 Methodology

Budgeting for long-range capital program requires taking into account long-term inflationary pressures on capital costs. In order to determine the additional costs due to escalation, the 2030 Plan cost estimates incorporated standard escalation calculation, according to the following methodology:

8. For each corridor, costs expressed in 2008$ were broken down in three planning periods:
    i. Short-term from 2008 to 2014
    ii. Mid-term from 2015 to 2019, and
    iii. Long-term from 2020 to the end of 2029

    and three cost categories:

    iv. Soft costs, including planning and engineering studies
    v. Construction costs, including construction management costs
    vi. Right-of-way acquisition costs.
9. For each corridor, costs were allocated to each planning horizon so as to meet the transportation goals of the Program.
10. At the current stage of the planning effort, a precise schedule of expenditures could not be established. It was assumed instead that capital costs are expected to be distributed evenly within each planning period
11. For each cost category expressed in 2008$, the year expenditures will commence was identified based on the schedule of expenditure assumed in (3) above.
12. Escalation rates were estimated for each cost category identified in (1) above (see Section 2.2.2 and Appendix A).
13. The cumulative escalation rates from the year expenditures commence were identified and cumulative escalation factors derived.
14. For each cost category expressed in 2008$, the cost items in each category were multiplied by the appropriate cumulative escalation factor according to the assumed schedule of expenditures (see (3) above) to calculate the year-of-expenditure cost estimate.

The resulting Program costs in YOE$, estimated at $1,582 million (YOE$), are summarized in **Error! Not a valid bookmark self-reference.** per corridor and for each planning horizon.

2.2.2 Capital Program Escalation Rates

Escalation rates were estimated for each of the three cost categories: soft costs (including planning and engineering studies), construction costs (including construction management costs), and right-of-way (ROW) acquisition costs.

For the period from 2009 to 2012, the County used the highway construction cost escalation forecasted at the national level by PB Consult and published in the Economic Forecasting Review (EFR).[6] Average highway and bridge escalation rates for the U.S. have been projected, starting with preliminary 2007 full year data and extending to 2012. The forecast methodology entails derivation of a “blended” escalation rate reflecting major underlying

[6] http://www.pbconsult.com/news/default.asp

factor inputs to highway and bridge construction and is presented in more details in Appendix A. The forecast yields a highway construction cost escalation rate between 3.5% and 4.5% annually from 2008 to 2012. After 2012, the County used the long-term trend for the national Construction Cost Index forecasted by ENR at 2.9% annually (Exhibit 4).

Soft cost were assumed to follow closely the ENR Construction Cost Index for the entire forecast period, with rates varying from 2.8% in 2008, to 2.7% in 2009 and 2010, and 2.9% annually thereafter (Exhibit 4).

Exhibit 4: Construction Costs and Soft Costs Escalation Rates [7]

Construction Cost Annual Escalation Rates	
2008	3.10%
2009	3.50%
2010	4.50%
2011	4.30%
2012	3.90%
2013	2.93%

Soft Cost Annual Escalation Rates	
2008	2.75%
2009	2.82%
2010	2.67%
2011	2.72%
2012	2.87%
2013	2.93%

ROW acquisition costs escalation rates were estimated to follow the trend for the national Median Sales Price Existing Single-Family Homes forecasted by Economy.com. This trend was adjusted to zero in the in 2008 and 2009 (instead of -12.93% and -1.78%, respectively) to be more conservative. This annual escalation rate is anticipated to decline steadily from 4.4% in 2010 to 3.3% in 2029.

2.2.3 Program Costs in Year-of-Expenditure Dollars (YOE$)

The resulting Program costs in 2008$ and YOE$ are summarized in Exhibit 4 per corridor and for each planning horizon.

The capital needs for the 2030 Plan being spread over a 22-year period with approximately 40% of the costs being incurred past 2020, escalated capital costs are very sensitive to escalation assumptions:

- 1% higher escalation increases Program cost by approximately 11% to $1,742 million (YOE$)
- 2% higher escalation increases Program cost by approximately 24% to $1,941 million (YOE$)

[7] Source: PB Consult, Economic Forecasting Review and ENR Construction Cost Index.

Exhibit 5: 2030 Plan Capital Costs (dollars in thousands)[8]

Planning Horizon / Corridor	Short Term 2009-2014 Constant $'000	Mid-Term 2015-2019 Constant $'000	Long-Term 2020-2029 Constant $'000	TOTAL Constant $'000	TOTAL YOE$'000
Interchanges/Intersection Impvts	$227,500	$141,500	$101,500	$470,500	$630,263
New Connections/Turnback	$17,496	$28,535	$92,331	$138,362	$217,492
CSAH 17	$24,300	$6,000	$69,763	$100,063	$154,654
CSAH 1 (CSAH 9 to 10)	$7,600	$6,000	$19,189	$32,789	$49,535
CSAH 1 (CSAH 10 to I-694)	$14,270	$6,000	$35,206	$55,476	$84,354
CSAH 23	$2,475	$8,285	$0	$10,760	$14,200
CSAH 9	$16,912	$9,000	$0	$25,912	$31,753
CSAH 116	$6,000	$6,000	$0	$12,000	$15,227
CSAH 78	$0	$5,440	$23,726	$29,166	$47,918
CSAH 10	$5,350	$29,000	$0	$34,350	$46,107
CSAH 51	$700	$24,555	$52,125	$77,380	$123,805
CSAH 83	$0	$0	$12,600	$12,600	$21,604
CSAH 14	$1,620	$9,846	$6,000	$17,466	$25,555
CSAH 52	$1,000	$3,600	$9,140	$13,740	$21,631
CSAH 11	$0	$350	$6,370	$6,720	$11,380
CSAH 18	$0	$6,000	$0	$6,000	$8,257
CSAH 22 (CSAH 85 to Cnty Line)	$0	$9,000	$0	$9,000	$12,385
CSAH 22 (TH 47 to CSAH 13)	$350	$16,000	$0	$16,350	$22,409
CSAH 24	$700	$6,000	$12,963	$19,663	$31,289
Total 2030 Program Costs	**$326,273**	**$321,111**	**$440,913**	**$1,088,297**	**$1,569,819**

3.0 Anticipated Program Sources of Funds

The County anticipates receiving funds for the 2030 Plan from three primary sources:

- Existing County taxes
- State programs
- Local municipalities contributions

Funds from these sources are presented hereafter and summarized in Exhibit 8. The total sources of funds currently identified and anticipated to be available for the 2030 Plan is $889.6 million (YOE$).

[8] Cost estimates in 2008 dollars were provided by CH2M Hill and escalated to YOE$ by PB Consult.

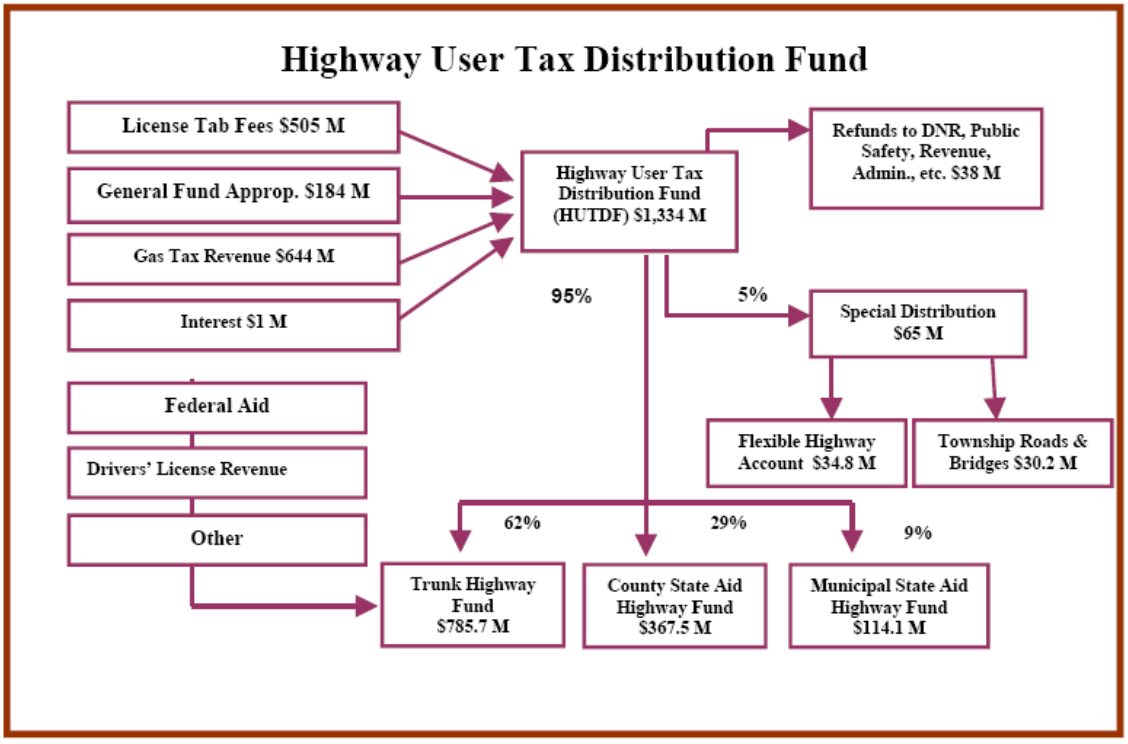
3.1 County Sources of Funds

In total, for the period from 2009 to 2029, the County anticipates contributing $696.4 million (YOE$) to the 2030 Plan from the following sources (Exhibit 8) from the following sources:

Highway User Tax Distribution Fund (HUTDF) / County State Aide Highway (CSAH) Fund

The County receives a portion of its funds for highway capital projects form the Highway User Tax Distribution Fund (HUTDF). These funds are collected through the State's gas tax, license plate registration, and State general fund appropriations. Funds from the HUTDF are allocated to the County State Aide Highway (CSAH) Fund by formula as represented in Exhibit 6, using 2004 figures.[9]

Exhibit 6: Highway User Tax Distribution Fund[10]



The base allocation from HUTDF in 2008 amounts to $9.5 million.[11] The County estimates that these funds will increase by 2% annually during the planning period. In addition, the

[9] This language is taken form the Anoka County Highway Department Five-Year Improvement Plan for the period 2007-2011, Approved by the County Board December 19, 2006. No quotation marks were included so as to facilitate the insertion of this language into the 2030 Plan final document.

[10] Anoka County Highway Department Five-Year Improvement Plan for the period 2007-2011, Approved by the County Board December 19, 2006

[11] Allocations to the Cities within Anoka County amount to $19,382,000 in 2008.

Transportation Finance Bill (HF 2800) included provisions changing the gas tax and tab fees allocated to the counties through the HUTDF. The bill also created a new leasing sales tax and allocated new revenues to the County form the Flex Account. The additional revenues from H.F. 2800 are estimated at $82.2 million from 2009 to 2018 and are summarized in Exhibit 7. Past 2018, additional revenues resulting from the changes in the gas tax and tab fees are anticipated to grow at $135,000 per year and additional revenues form the leasing sales tax and allocated the Flex Account are anticipated to grow at $75,000 per year.

Total funds from HUTDF allocation for the period from 2009 to 2029 are anticipated to amount $278.5 million (YOE$) (Exhibit 8).

Exhibit 7: Estimated Additional Revenues from H.F. 2800 from 2009 to 20218 (YOE$)

	HUTDF Changes to Gas Tax and Tab Fees	Leasing Sales Tax and Flex Account Revenues
Current ('08) Allocation	$9,524,000	$0
FY 2009 Additional	$1,797,000	$0
FY 2010 Additional	$3,449,000	$1,724,000
FY 2011 Additional	$4,178,000	$3,195,000
FY 2012 Additional	$4,888,000	$3,125,000
FY 2013 Additional	$5,493,000	$3,658,000
FY 2014 Additional	$5,839,000	$3,726,000
FY 2015 Additional	$6,102,000	$3,778,000
FY 2016 Additional	$6,325,000	$3,821,000
FY 2017 Additional	$6,552,000	$3,863,000
FY 2018 Additional	$6,788,000	$3,905,000
Total Additional	**$51,411,000**	**$30,795,000**

County Property Tax Levy [12]

One of the primary sources of funds for the County is the property tax levied by the County Board of Commissioners after careful consideration and balancing of the overall needs of its citizens. The County Board has worked very hard to keep the basic tax rate low for all residents and businesses.

Property Tax Levy for 2008 is anticipated to amount $110.9 million. A blended growth rate for property tax collection was calculated based on the MPO-projected household and job growth rates combined with inflation.[13] The rate of growth of households and jobs is blended based on the proportion each source (households and employment) accounts for in the total

[12] See Note 9.

[13] Household, population and job growth rates per the Metropolitan Council Association of Governments, 2030 Regional Development Framework - Revised Forecasts as of January 9, 2008. CPI forecasted by Economy.com for the Minneapolis-St. Paul-Bloomington, MN-WI, varies from 1.71% to 2.71% over the forecast period, corresponding to an average compounded annual growth rate of 2.5%.

assessed value in the County. In each of the financial years between 2004 and 2006, residential properties accounted for approximately 85% of the assessed value while non-residential properties accounted for about 15%. The resulted bended rate varies from 3.6% to 4.2% per year from 2009 to 2020 and from 3.4% to 3.2% per year thereafter.

Of the total County Property Tax Levy, the County anticipates to allocate16% to the Road and Bridge Levy, and 40% of that amount is anticipated to be allocated to fund the 2030 Plan.

Total funds from County Property Tax Levy allocated to the 2030 Plan for the period from 2009 to 2029 are anticipated to amount $231.4 million (YOE$) (Exhibit 8).

General Obligation Bonds

Whenever possible, the County Board leverages the property taxes to accelerate project implementation. From 2009 to 2029, the County anticipates to allocate $154.4 million (YOE$) in General Obligation bonds.

Wheelage Tax

Beginning in 2007, Anoka County, along with four other Metro Area counties, has begun collecting a wheelage tax corresponding to an additional $5 fee per vehicle when residents renew their license plate tabs. The fee provides funding for transportation needs within the County and is deposited directly to the Anoka County Road and Bridge account. Revenues from the wheelage tax are anticipated to amount $1.3 million in 2008 and grow at the same pace as the MPO-projected household growth rate. [14]

The amount collected from the wheelage tax will be allocated to the 2030 Plan for the period from 2009 to 2029 for a total of $32.1 million (YOE$) (Exhibit 8).[15]

3.2 State Sources of Funds

Funds allocated to the County from the State, either directly or as part of larger federal programs, come from a variety of programs including the State Turnback Program, funds for State Roads of Regional Significance, Local Bridge Replacement Program, Safe-Route-To-School Grant Program, and Hazard Safety Improvement Program (HSIP).

In total, State funds made available to the 2030 Plan for the period from 2009 to 2029 are anticipate to amount to $91.8 million (YOE$) (Exhibit 8):

[14] Ibid.

[15] Currently, the wheelage tax is a per-vehicle tax. If the tax were to be changed to a per-wheel tax, considering that 94% of the vehicle fleet registered in the County are personal cars and 6% are commercial trucks, the total revenues from the wheelage tax could be increased to approximately $136 million ($32.1 million (4 x 94% + 8 x 6%)).

3.3 Cities Sources of Funds

Over the past ten years, the Cities of Anoka County have participated to road and highway capital expenditures at an average rate of 18% of the cost of construction. The County anticipates that such level of contribution will continue in the future. For the purpose of revenue planning for the 2030 Plan, the County therefore assumed that the Cities would contribute 18% of actual construction costs for those projects that have sufficient funds to be implemented. The matching contributions of the Cities of Anoka County to the 2030 Plan are anticipated to amount $101.3 million (YOE$) from 2009 to 2029 (Exhibit ***8***).

3.4 Summary of 2030 Anticipated Sources of funds

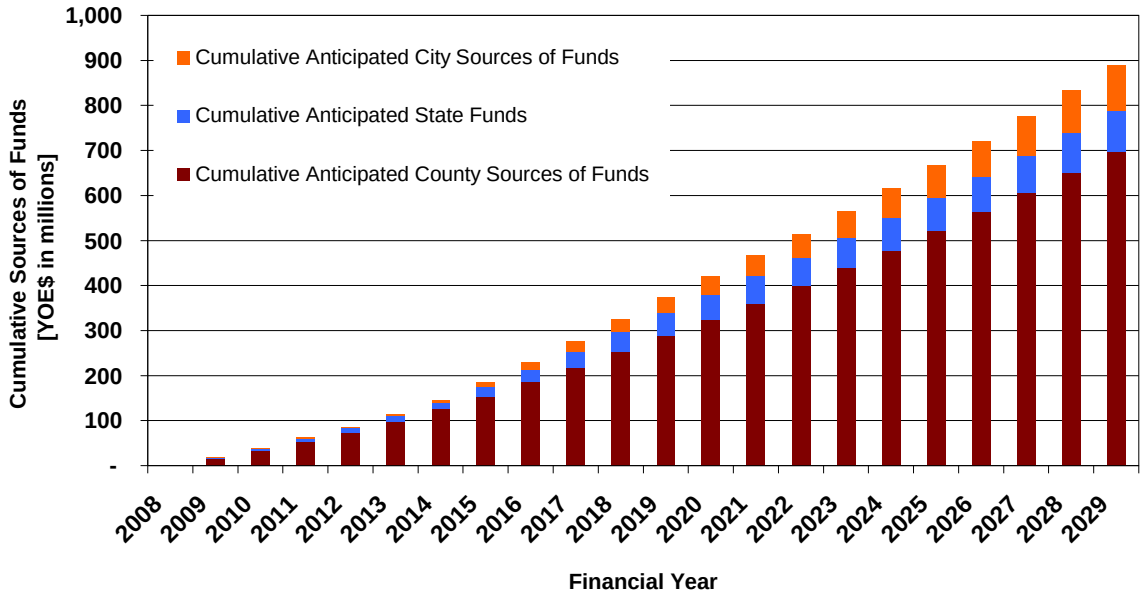
Exhibit ***8*** summarizes the currently-identified sources of funds anticipated to be available to fund the long term capital needs of the 2030 Plan. Under this baseline funding scenario, the County would contribute 79% of the Program funds, while the State and the Cities of Anoka County would contribute 10% and 11% of total Program funds respectively. General Obligation bonds from the County represent 17% of the total anticipated sources of funds.[16] The timing of these sources of funds is presented in Exhibit 9.

Exhibit 8: 2030 Plan Anticipated Sources of Funds (YOE$)

Sources of Funds	2009-2029 Total YOE$'000
Total HUTDF Anticiapted Funds Allocated to 2030 Program	278,496
Anticipated County Property Tax Levy Allocated to 2030 Program	231,407
Anticipated GO Bonds Allocated to 2030 Program	154,425
Anticipated Wheelage Tax Allocated to 2030 Program	32,107
Total Anticipated County Sources of Funds Allocated to 2030 Program	**696,435**
Funds Anticipated from State for Turnback Projects	44,656
Anticipated Hazard Safety Improvement Program (HSIP)	31,500
Anticipated Local Bridge Replacement Program	10,500
Anticipated State Roads of Regional Significance Funds	4,125
Anticipated Safe-Route-To-School Grant Program	1,050
Total Anticipated State Sources of Funds Allocated to 2030 Program	**91,831**
Total Anticipated Matching Cities Sources of Funds	**101,332**
Total Anticipated Sources of Funds for the 2030 Program (YOE$)	**889,598**

[16] A sensitivity analysis on the funding assumptions was presented and discussed with County staff during the funding workshops held in July and August 2008. The results of this analysis are not discussed further in the present memorandum.

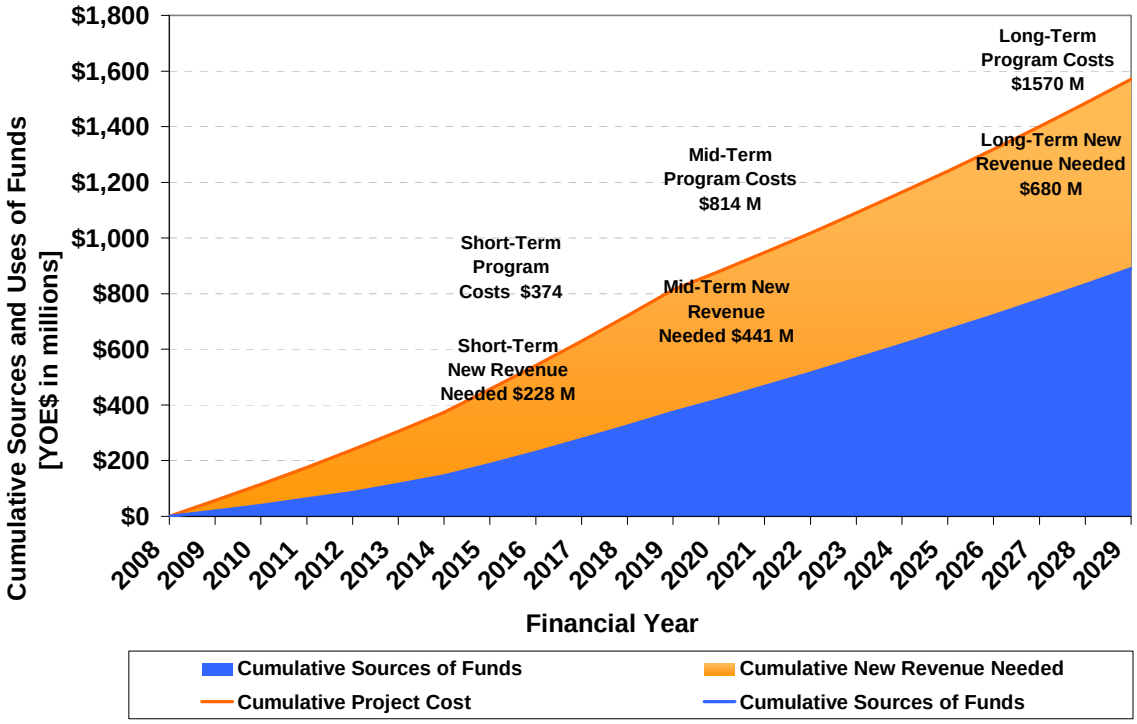
Exhibit 9: Timing of 2030 Plan Anticipated Sources of Funds (Cumulative, YOE$)



4.0 Program Sources and Uses of Funds

Under the baseline assumptions described in Section 2.0 and Section 3.0, the 2030 Plan is underfunded and unmet capital needs amount to $680.2 million (YOE$), or 43% of the total Program escalated costs. Exhibit 9 presents the Program sources and uses of funds for the entire forecast period. New revenues needed to fund the Program amount to $228.0 million by the end of 2014, $440.7 million by the end of 2019, and $680.2 million by the end of 2029.

Exhibit 10: 2030 Plan Anticipated Sources and Uses of Funds (Cumulative, YOE$)



5.0 Options to Meet the Program Funding Needs

Recognizing that with currently-identified funding sources only 57% of the 2030 Plan could be implemented, the County reviewed other potential options to meet the Program needs. While increasing revenues from existing sources was analyzed, such increases could not be reasonably implemented to meet the Program funding needs. The County therefore decided to review other local options.

Special local funding mechanisms associated with increasing real estate values as a result of improved transportation access in Anoka County and the seven-county MPO region were examined and are discussed in this Section. Some of these mechanisms, referred to as "value capture" techniques, include tax increment finance, development impact fees or a special local sales tax collection. Given the vast shortage of traditional, gasoline tax-based revenues available to fund infrastructure needs these mechanisms provide additional funding options for policy makers to consider.[17]

[17] This conceptual analysis is meant to provide Anoka County with an understanding of some alternative ways to fund the County transportation needs, a relative indication of funding levels from value capture mechanisms, and an outline of potential legislative shortcomings that need further evaluation prior to instituting any of these mechanisms. It is important to recognize that the findings presented herein are conceptual, not intended for project funding or financing, and could substantially change based on more refined review of legislative factors and market analyses.

The County is also actively considering means to reduce the Program capital costs through value engineering and to reduce and manage demand on the road and highway network by implementing transit alternatives.[18]

5.1 Introduction to Value Capture Mechanisms

Three value capture mechanisms, tax increment finance, development impact fees and local option sales taxes, are presented with a description of how each mechanism generates revenue and an indication of the magnitude of funding each could generate.

One common trait to each of the value capture mechanisms presented herein is that they all operate within a designated Area of Benefit (AOB). The AOB is the geographic area surrounding the new infrastructure asset wherein the residents and businesses receive a material benefit from the infrastructure asset being funded. Such benefit may be in the form of new or enhanced access to and from the AOB, or it could be in the form of additional capacity created on existing roads due to a new road that relieves congestion network-wide.

A method of more accurately allocating the cost of the new infrastructure to those who benefit the most from it is to create more than one "layer" within the AOB. By doing so, residents and businesses located relatively close to the new infrastructure (the inner layer), who receive more benefits due to their proximity, pay a higher amount, be it a development impact fee, special assessment or other form of revenue generator. With this approach, more people participate in paying the costs of the infrastructure, but the amount they pay varies based on the relative benefit they receive. Because of the conceptual level of this analysis, only one area of benefit was used which included all of Anoka County.

The following Sections discuss each value capture technique in more details.

5.1.1 Value Capture Tools Defined

Local Option Special Sales Tax

Many counties and local jurisdictions across the country have been granted the ability to vote to pass into law additional sales taxes for various purposes, including transportation infrastructure development and maintenance. This local option has been used widely in Minnesota to fund various types of projects. In the metro area a ¼ cent sales tax was recently instituted to fund transit projects. While the new sales tax was initially intended to generate a ¼ cent for transit and ¼ cent for highway infrastructure, there is currently no Local Option Special Sales Tax in Anoka County dedicated to highway projects. Other Counties in Minnesota benefit from sales tax to help fund their highway and road capital needs.

[18] PB Consult recommends studying road pricing in connection with transit as an alternative to reduce and manage highway demand. It is our understanding however that such mechanisms are not being actively considered by the County at this time.

Development Impact Fees (DIF)

A value capture mechanism most successfully implemented in areas with little or no existing development is a Development Impact Fee (DIF) program. DIFs are generally one-time fees paid when a landowner or a developer pulls a permit to build within the AOB. DIFs can be charged for new projects or expansions of existing buildings. The fees themselves, generally structured per dwelling unit or square foot of non-residential space, are based on the relative benefit the infrastructure asset provides to the property owner and may be escalated over time to keep up with inflation.

Roadway impact fees are a variation of the Development Impact Fees whereby the fee is calculated using a travel demand model to assess the number of new trips on the roadway network that will be generated by the project. Roadway impact fees were not calculated as part of this analysis but are mentioned as they are gaining popularity and are viewed in some areas as a more equitable allocation of the fees.

Tax Increment Finance (TIF)

Tax increment financing (TIF) is the reallocation of future property tax collections such that a predetermined proportion of expected collections are dedicated to a specific use, in this case, the repayment of debt for roadway improvements. The most important aspect of TIF is that the tax rates charged to residents and business owners do not change. Rather, future property tax collections above the current levels, based on the current tax rates, are reallocated away from the levying jurisdiction to a specific project and leveraged to issue debt to pay for project costs. The amount of property tax growth allocated to the project, in theory, equals the amount the infrastructure asset adds to the value of the real estate located in the AOB. TIF is most often used in small areas for redevelopment projects and has had limited success for infrastructure projects over a larger area.

Comparison

Special sales taxes are usually the safest of the three revenue sources outlined, because they begin at healthy levels the first year implemented and grow slowly over time with relatively little fluctuation, even during poor economic times.

Development impact fees revenues vary from year to year based on fluctuations in real estate market growth. When housing production and the development of commercial space is robust, DIF programs do their best. DIF revenues are, however, susceptible to fluctuations from year to year as real estate booms can begin and end quickly. Generally, DIF revenues decline over time as vacant developable land is absorbed and only redevelopment remains. This trend can be somewhat counterbalanced by rising DIFs, which generally escalated with inflation.

Generally, the TIF revenue stream is very small in the early years and grows quickly as development occurs and assessed values increase. Because most of the revenue is generated in the later years, TIF has a relatively lower net present value, decreasing the debt capacity of the cash flow.

While a sales tax could be implemented at the County level and a DIF program could also be implemented to a large AOB, TIF techniques generally require much smaller AOBs with clearly defined direct benefits. Therefore, a TIF is not considered for implementation at the Program level, although the technique may still prove useful to generate funds for projects within the Program with smaller and well-defined AOBs.

5.2 Methodology

Additional local option ¼ cent sales tax was modeled as being collected on all sales occurring within the County. Retail sales as reported in the 2006 County Comprehensive Annual Financial Report (CAFR) were projected to grow at the same rate as the County's population, expected to be 1.2% annually on average between 2000 and 2030 in the adopted MPO forecast.[19]

DIFs were assessed at 1% of the current average home value and 2% of the average commercial square foot value, assumed at $3,400 and $2.60, respectively.[20] The adopted MPO forecasts of residential dwelling units and jobs were used to calculate the revenues. Jobs forecasted by the MPO were converted into gross square feet of commercial space using a factor of 400 square feet per employee. DIFs were escalated at 2.6% to account for inflation.[21]

The base case TIF projections were calculated from County property tax levy only. No school, special district or other taxing entity's revenues are reallocated. Five percent (5%) of future property tax levy over and above the estimated 2010 collection amount are dedicated to a special Program fund. A blended growth rate for property tax collection growth was calculated based on the MPO-projected household and job growth rates combined with inflation using the same assumptions as for the forecast of the property tax levy (Section 3.1).[22]

5.3 Cash Flow

The objective of a conceptual value capture analysis is to estimate annual revenues net of costs and to calculate the cash flow available. This cash flow can either be used directly to fund project costs ("pay-as-you-go") or for the repayment of debt used to pay for project costs.

For the 2030 Plan capital costs of specific projects have not been matched with revenues associated with specific areas of benefit, therefore the analysis results simply speak to the magnitude of potential funding amounts, regardless of the project or parts of projects it would fund. Exhibit 11 provides annual gross revenues calculated from each value capture mechanism and Exhibit 12 presents these same revenues cumulatively in a graphical

[19] See Note 13.
[20] Average home and nonresidential square foot values were estimated by PB Consult for use in this analysis.
[21] See Note 12.
[22] Ibid.

format. It is assumed that any revenue from a value capture mechanism would start in 2010 to leave time for implementation.

With the assumptions presented above, a ¼ sales tax dedicated to highway could generate revenues on the order of $165 million from 2010 to 2029, while a DIF program could generate revenues on the order of $155 million. Revenue from a TIF program could generate revenues on the order of $55 million. However, as opposed to a sales tax or a DIF program, it must be emphasized that revenue generated under a TIF mechanism could not be combined with the projections for anticipated revenue for the future property tax levy and for the General Obligation bonds (Section 3.1) as these three sources of funds rely on the same tax base.

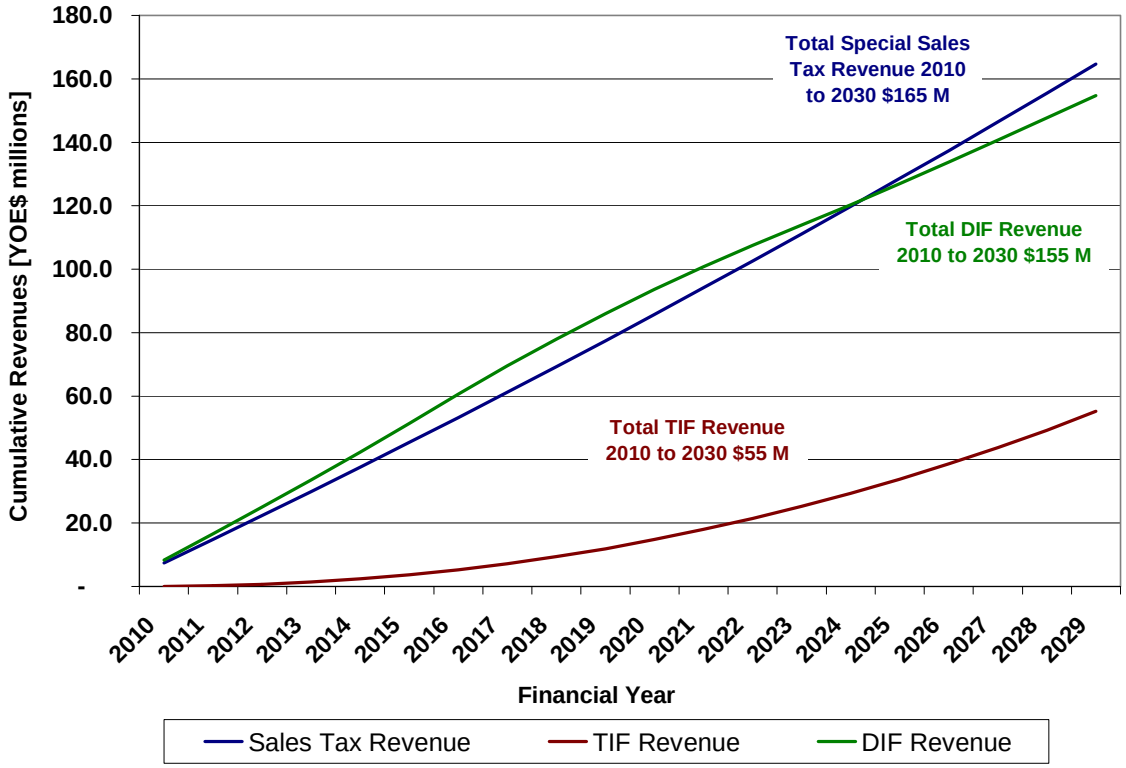
Exhibit 11: Order-of-Magnitude Value Capture Revenues (Annual, YOE$)

FY	Sales Tax Revenue	DIF Revenue	TIF Revenue
2010	7.3	8.2	0.0
2011	7.4	8.3	0.2
2012	7.5	8.4	0.5
2013	7.6	8.6	0.7
2014	7.7	8.8	1.0
2015	7.8	9.0	1.3
2016	7.9	9.2	1.6
2017	8.0	8.9	1.9
2018	8.1	8.5	2.2
2019	8.2	8.0	2.5
2020	8.3	7.6	2.9
2021	8.4	7.2	3.2
2022	8.5	6.8	3.5
2023	8.6	6.3	3.8
2024	8.7	6.5	4.1
2025	8.8	6.6	4.5
2026	8.9	6.8	4.8
2027	9.0	6.9	5.2
2028	9.1	7.0	5.5
2029	9.2	7.1	5.9
2030	0.0	0.0	0.0
	$164.7	**$154.7**	**$55.2**

Seven-County MPO Area

For comparison, the same calculations were made for the seven-county MPO area that includes Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington counties. This much larger area would yield revenues from a ¼ cent sales tax on the order of $2,027 million and revenues from a DIF program on the order of $1,571 million.

Exhibit 12: Order-of-Magnitude Value Capture Revenues (Cumulative YOE$)



5.4 Financing

Once revenue projections were prepared, standard municipal financing assumptions were used to estimate the amount of funds that could be made available for construction under a financing scenario.

Capitalizing a revenue stream consists of four major elements, the required debt service coverage ratio, the discount rate, the term of the borrowing, and issuance costs. Each of these factors is defined and outlined below.

Debt Service Coverage Ratio

This ratio, generally set by rating agencies, dictates the proportion of annual operating cash flow that can be dedicated for debt service repayment, generally stated in terms of the number of "times" needed to "cover" the payment due. Riskier operating cash flow streams require higher debt service coverage due to inherent characteristics making them less likely to reach their forecast annual revenue amounts. If a debt service payment in a given year is $1.0 million and the debt service coverage ratio is 1.5 times, operating cash flow for that year should be expected to total $1.5 million in order avoid breach of the debt service covenant. The debt service coverage ratio used in this conceptual analysis was 1.5 times, though this could vary, given the State or other public entity's willingness to backstop or pledge their general revenues to make debt service payments should revenue not be strong enough.

Discount Rate

The discount rate used for capitalization is the interest rate charged for lending funds. It is determined by the market based on the credit rating of the issuing entity, the type of debt and associated covenants and recourses, and prevailing trends in the market. This conceptual analysis assumes a municipal financing that achieves a rate of 7.5% on a stand alone basis and a rate of 6% with credit enhancement, in the form of credit backing by the State, County or other jurisdiction. Credit backing by a governmental body with revenue collection ability, be it taxes or other revenues, can enhance the credit rating of a stand alone project significantly if the backing body has a good credit rating and free cash flow. The lower the discount rate, the greater the amount of debt that can be supported with a given revenue stream, such that borrowing at 6% versus 7.5% results in, roughly, a 10% increase in the total amount that can be borrowed.

Term (or Maturity)

The term is the number of years over which debt service must be repaid on the borrowed funds. For this analysis, a 20-year maturity was used for each revenue securitization calculated. Generally, the longer the maturity, the more that can be borrowed; though each additional year adds incrementally less to the present value of the cash flows (the total amount that can be borrowed).

Issuance Costs

Once the revenues are reduced by coverage and administrative costs and discounted back to a par amount (the total borrowing amount), issuance costs including underwriting and legal costs and the funding of any special accounts that are needed to secure the bonds are subtracted. Issuance costs range from 15% to 30% in the scenarios presented. The 30% issuance costs is for the TIF issuance, since additional funds (20%) will need to be set aside for a capitalized interest fund, due to the shape of the revenue curve and the additional risks inherent in the mechanism (low initial revenues and a back ended repayment stream).

Order-of-Magnitude Debt Proceed

The capitalization of the revenue streams presented in Exhibit 11 yields a range of potential capital contributions for Anoka County on the order of $58 to $64 million each with revenue from a ¼ cent sales tax or from a DIF program and on the order of $16 to $19 million for TIF, depending on the interest rate used.[23]

For comparison, the same calculations were made for the 7-county MPO area that includes Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington counties. This much larger area would yield debt proceeds supported by revenues from a ¼ cent sales tax on the

[23] Given the long-term nature of the investment plan contemplated in the 2030 Plan, PB consult considers that a pay-as-you-go funding mechanism is more appropriate in matching sources and uses of funds for the Program. Use of debt financing should be considered when the benefit of accelerating projects outweigh the cost of financing.

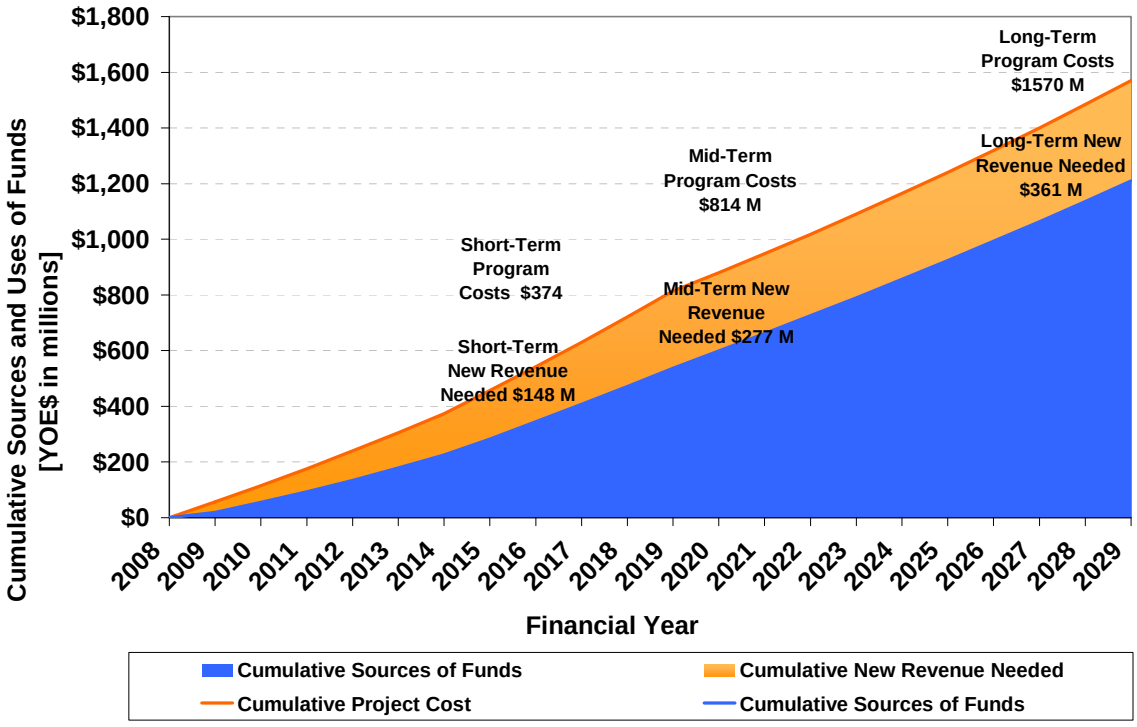
order of $712 to 793 million and debt proceeds supported by revenues from a DIF program on the order of $561 to $623 million.

5.5 Program Sources and Uses of Funds Including Value Capture Mechanisms

Local option sales taxes are currently in use in Minnesota for highway and in Anoka County for transit. Similarly, enabling legislation is in place in the State to implement TIF. While many states have used DIFs to support roadway improvement projects, there is no enabling legislation in the State of Minnesota to create DIF districts for any project, roadway or otherwise.[24]

A local ¼ cent sales tax and a DIF program together have the potential to generate funds on the order of $320 million (YOE$), corresponding to almost half of the anticipated unfunded needs for the Program. Exhibit 13 presents the Program sources and uses of funds for the entire forecast period with the potential additional revenues generated from a local ¼ cent sales tax and a DIF program. With these two additional sources, additional new revenues needed to fund the Program would amount to $148 million by the end of 2014, $227 million by the end of 2019, and $361 million by the end of 2029.

Exhibit 13: 2030 Plan Sources and Uses of Funds with Potential Additional Revenues from ¼ cent Sales Tax and a DIF Program (Cumulative, YOE$)



[24] See Appendix C for an overview of the State legislative framework.

6.0 Conclusions

As part of the 2030 Plan, the County has identified long-term capital improvements necessary to improve safety and provide additional capacity to hold congestion to the 2000 level on the County highway and road system. The Program needs have been identified at $1,088 million in 2008$, corresponding to $1,570 in year of expenditure dollars.

Under baseline funding assumptions described in Section 2.0 and Section 3.0, the 2030 Plan is underfunded and unmet capital needs amount to $680 million (YOE$), or 43% of the total Program escalated costs.

As a great number of local governments, Anoka County is responsible for a large part of highway capital expenditures and would provide close to 80% of the 2030 Program currently-identified funds with contributions from the Cities of Anoka County and the State of 11% and 10% respectively.

While the County is actively considering means to reduce the Program capital costs through value engineering and to reduce and manage demand on the road and highway network by implementing transit alternatives, additional new revenues must be identified to meet the long-term transportation needs of the County.

At the local level, the County has reviewed options for providing such new funds. Two value capture mechanisms, a local ¼ cent sales tax dedicated to highway and Development Impact Fee (DIF) program have the potential to provide an additional $320 million (YOE$) from 2010 to 2029. Although local option sales taxes are currently in use in Minnesota for highway and in Anoka County for transit, new legislative actions at the State level may be required to implement DIF.

However, while the County is actively considering local option to achieve long-term mobility for its citizens, congestion on the County road and highway network is a regional problem that requires a regional solution, for which further regional, state and federal support will be required. As part of this regional solution, previously identified improvements in high-volume interregional corridors (e.g. I35, highway 10 and 65) should be implemented at the earliest time possible. Other options, including transit and possibly tolling in high-volume interregional corridors, should be studied: such options have the potential to provide simultaneously new revenue and congestion relief.

As the County moves forward with addressing the mobility needs on its road and highway network, the underfunded 2030 Plan will be implemented as funding permit, focusing on specific corridors for accelerating construction on those sections where safety is the primary concern and where congestion is the worst.

As the County continues to work with its partners at the federal, state, regional and municipal levels, the County will endeavor to minimize the cost of congestion to users and non-users for those projects, which will need to be delayed for lack of funding.

Appendix A – Short-Term Average Highway and Bridge Escalation Rates for the U.S.

Highway and bridge cost escalation forecasts at a national level are a regular feature of the Economic Forecasting Review (EFR). Periodically, the forecasts will be updated as new information is available. This issue includes an update to the EFR September, 2007 forecast.

Forecast Methodology

Average highway and bridge escalation rates for the U.S. have been projected, starting with preliminary 2007 full year data and extending to 2012. The forecast methodology entails derivation of a "blended" escalation rate reflecting major underlying factor inputs to highway and bridge construction. For highway projects, the major underlying factor inputs include:

- Construction labor
- Construction equipment costs
- Materials, including
    - Asphalt paving
    - Portland cement
    - Crushed stone

For major bridge projects, the major underlying factor inputs include:

- Construction labor
- Construction equipment
- Materials, including
    - Structural concrete
    - Structural steel
    - Concrete reinforcing steel bar ("rebar")
    - Crushed stone

Projected rates of growth for each of the major cost inputs are "weighted" based on each of the input's estimated contribution to overall highway and bridge costs. The weighted sum of all of the growth rates thus yields the "component-weighted" average escalation rate.

Individual baseline escalation projections for the factor inputs in the near term (i.e. through 2008) were derived from the Engineering News Record's most recent Quarterly Cost Report and weekly cost updates.[25] These forecasts represent national averages.

[25] Engineering News Record, Construction Economics (Fourth Quarterly Cost Report), December 17, 2007; and ENR, Construction Economics (weekly cost updates), January 7, 2008, February 4, 2007; February 25 2007.

Considering the current uncertainty relative to the U.S. economy due to the financial crisis, housing market downturn and subprime woes, this issue of EFR includes a business cycle analysis for the past 35 years. The objective is to help put the forecast that follows into historical context by analyzing how the various labor and other commodity markets mentioned above respond to economic downturn during the contraction period and how these markets rebound after the trough in the cycle.

PB Consult Forecast Results

PB Consult forecasts are presented in the table below.

	2007	2008	2009	2010	2011	2012
HIGHWAY						
Labor	3.4%	3.6%	3.5%	3.9%	3.8%	3.8%
Construction Equipment	2.2%	2.6%	3.0%	4.9%	5.1%	3.3%
Materials						
Asphalt Paving	1.4%	3.4%	3.4%	4.7%	3.5%	3.9%
Portland Cement	3.5%	-0.8%	3.9%	4.8%	4.7%	4.7%
Crushed Stone	8.7%	4.4%	4.4%	4.9%	4.7%	4.6%
HIGHWAY TOTAL	**3.3%**	**3.1%**	**3.5%**	**4.5%**	**4.3%**	**3.9%**
BRIDGE						
Labor	4.1%	4.5%	4.0%	3.9%	3.4%	3.8%
Construction Equipment	2.2%	2.6%	3.0%	4.9%	5.1%	3.3%
Materials						
Structural Concrete	2.3%	2.1%	2.4%	4.8%	4.7%	4.6%
Structural Steel	8.1%	6.7%	7.4%	7.5%	6.9%	4.1%
Reinforcing Steel	6.7%	6.6%	7.4%	7.5%	6.9%	4.1%
Crushed Stone	8.7%	4.4%	4.4%	4.9%	4.7%	4.6%
BRIDGE TOTAL	**4.6%**	**4.2%**	**4.4%**	**5.3%**	**5.0%**	**4.0%**

Source:
2007: Bureau of Labor Statistics (Preliminary)
2008-2013: PB Analysis

Highway: With the current economic slowdown and based on the historical evidence presented above, when compared with 2007, the growth rate in highway prices is expected to increase at a slightly lower rate in 2008 to 3.1%. This can be mostly attributable to a short term decrease in the price of Portland cement and a decline in growth rate for Crushed stones from 8.7% in 2007 to 4.4% in 2008. According to ENR, concrete prices have dropped 1% in the month of January 2008 alone. PB expects this trend to be relatively short term and expects prices to recover in 2009. Prices are then expected to peak in 2010, mainly as a result of sustained global inflationary pressures on materials prices from Asia in general and China and India in particular. The longer term growth rate is expected to level off around 1% to 2% above base CPI, corresponding to a 4% growth rate.

Bridge: Bridge cost escalation is projected to moderate slightly in 2008, around 4.2%, reflecting a short term cooling off in material prices such as steel and structural concrete. Growth rates for rebar and structural steel are still expected to remain above 6.5% due to global inflationary pressures. Similarly to highway, we expect bridge construction prices to regain momentum in 2009 to reach a 4.4% growth. The peak in 2010 just under 6.0% is expected to be followed by a cooling off period to allow for prices to approach a long term growth rate closer to general CPI, around 4%.

Market Factors: Here are some of the major market factors affecting highway and bridge escalation:

Energy prices: As discussed below, rising energy prices – still dominated by crude oil prices – effect construction escalation in a number of ways. Directly, higher crude oil prices translate in part to higher asphalt prices. Indirectly, higher energy prices affect the costs of transportation, an important production cost for items such as cement and asphalt. Finally, higher energy prices cascade through the economy as a whole, and can exert upward price pressure in general, such as labor costs. Such pressure is attenuated, however, during economic slowdowns, when labor and other markets soften.

Asphalt: The price of asphalt is linked, at least in part, to crude oil prices in international markets, and is therefore subject to the uncertainties surrounding the geopolitical conditions in the Middle East and Venezuela. (Asphalt prices are also sensitive to local markets, since asphalt plants tend to be located quite close to their customers.) In 2007, asphalt prices grew by 1.4%, a significant drop compared to the double digit inflation of the 2005-2006 periods. Upward pressures on crude oil prices will be sustained in the short run. The rate of inflation for asphalt paving is therefore expected to increase at a more sustained rate this year and then stabilize, reaching a 3.5%-4.0% long term level.

Steel: After retreating to single digit growth levels from the historic high of 2004, steel prices growth rate continued declining last fall, amid a weaker domestic market due to a fallback in manufacturing activity. Global demand for steel appears to have rapidly offset this trend, as steel prices have seen strong gains in February. According to ENR, structural steel prices even made their highest monthly gain in February since October 2006. In the mid-term, China's appetite for manufacturing inputs such as steel is expected to remain a major driving factor for price increases.

Cement/concrete: Rising transportation costs have been the primary driver for the increase in concrete and cement prices. As mentioned above, crude oil reached a record high of $106 per barrel on March 5th and diesel fuel prices were more than 50% over their level a year ago as of January 2008.[26] On the demand side, the housing crisis has been the main driver for a continued decline in concrete and cement prices over 2007 which offset inflationary pressures from energy prices.

Labor: Labor costs are a function of the overall strength of the economy, specific supply demand conditions within the construction industry, and underlying inflationary pressures. While there are strong underlying inflationary pressures at least in the short run, the weakness of the economy will keep labor costs in check. With the cooling in material prices

[26] Energy Information Agency, February 12, 2008

in the short run, the labor cost component will provide a counterweight to the overall construction cost escalation.

Equipment: U.S. is a net exporter of construction machinery and equipment. With the current residential housing market crisis spreading to the non-residential sector, domestic demand is likely to soften. Combined with lower interest rates, this would likely support a moderate growth in prices of construction equipment. This however is expected to be largely offset by global demand, especially coming from China.

Business Cycle Response: Based on historical data presented in the business cycle analysis above, escalation pressures are expected to be held in check during the economic downturn this year but will recover and rebound after, in ways that look similar to market responses in other post recessionary periods, especially the more recent ones.

Note on Localized Effects

Construction cost inflation is heavily influenced by local factors and it is not uncommon for prices to grow at a rate that is 2% to 5% higher than national prices. Major drivers for local differences include local labor (e.g. availability of skilled labor, union vs. non-union), transportation costs (especially for construction material prices such as concrete, cement, aggregates, and asphalt), local competition for similar projects and bidding environment.

Appendix B – Value Capture in Practice

Value capture mechanisms have been put in place to supplement other infrastructure revenue streams across the country. The following paragraphs present five examples of value capture use that have been employed in Maryland, California, Ohio and Illinois.

Development Impact Fee Districts

Montgomery County, Maryland: Impact Fee for Transportation Improvements
Montgomery County currently has a development impact fee program, which was phased in between 2002 and 2004. The additional fee is levied on developers when building permits for new properties or permits for the expansion of existing properties are pulled. Certain exemptions exist including affordable housing units, biotechnology companies, and hospitals. The revenues from this program will be used to pay for road and transit improvements; roughly in the areas that the fees are collected.

Three areas of benefit have been established, one in Clarksburg, a 'Metro Station Areas' designation that applies to areas such as the Shady Grove and Rockville Metrorail station areas and a 'General District' that applies to the rest of the County. The following exhibit contains a schedule of fee rates for the various types of properties. Note that rates in the Metro Station Areas are much lower than other areas. This reflects the desire for the County to concentrate development in these areas by giving developers an incentive in the form of reduced DIFs. Fees are per dwelling unit or non-residential square foot of space, payable when the building permit is pulled.

Development Impact Fee Schedule for Montgomery County

	Clarksburg	Metro Station Areas	General (rest of County)
Single Family Detached	$8,250	$2,750	$5,500
Single Family Attached	$6,750	$2,250	$4,500
Multi-Family Garden	$5,250	$1,750	$3,500
Multi-Family High Rise	$3,750	$1,250	$2,500
Multi-Family Senior	$1,500	$500	$1,000
Office	$6.00	$2.50	$5.00
Retail	$5.40	$2.25	$4.50
Industrial	$3.00	$1.25	$2.25
Bioscience	$0.00	$0.00	$0.00
Hospital	$0.00	$0.00	$0.00
Private School	$0.50	$0.20	$0.40
Place of Worship	$0.35	$0.15	$0.30
Other Non-Resdential	$3.00	$1.25	$2.50

Source: Montgomery County Department of Park and Planning, Approved by the Montgomery County Council October 28, 2003

Orange County, CA: DIF for Toll Roads

The Transportation Corridor System, an entity of the State of California, established a Development Impact Fee district in Orange County, CA to collect one-time fees paid by developers as new residential and non-residential buildings were erected. Two separate agencies making up the Transportation Corridor System, the Foothill/Eastern Transportation Corridor Agency (F/ETC) and the San Joaquin Hills Transportation Corridor Agency (SJHTC), have established AOBs around their toll road assets. Revenues from this program are collected and used by the each respective agency to help pay the costs of building and maintaining the toll roads.

The combined AOB is large, covering approximately two-thirds of Orange County. The AOB for each transportation corridor is made up of two zones; Zone A located closest to the transportation corridor and Zone B located farther away from the transportation corridor, with "A" zones paying 20 to 30% higher fees per residential unit and as much as 40% more per square foot of non-residential space.

Fees are collected by the local jurisdictions within the AOB and remitted to the proper agency on either a monthly or quarterly basis. Since inception in the mid 1980s, the SJHTC and F/ETC have collected over $95 million and $255 million respectively in DIFs, net of developer negotiated credits received for contributions of right-of-way, grading and improvements that are required for the development of the transportation corridors.

The combined outstanding debt of the Transportation Corridor Agencies is in excess of $4 billion with debt service paid primarily from toll collections.

Tax Increment Finance Districts

Chicago, IL: TIF for Economic Redevelopment

In response to a decline in Federal redevelopment funding, the Illinois legislature adopted the Tax Increment Allocation Act in 1977 to provide municipalities with a tool to finance and stimulate urban redevelopment. The City of Chicago uses this tool to stimulate private investment by offering incentives to attract and retain businesses, improve its various community areas and maintain a well educated labor force.

Chicago uses TIF to achieve a wide range of urban redevelopment goals in addition to targeting specific areas on a coordinated basis and within a reasonable period of time. Some examples of uses of TIF funds in Chicago are:

- Infrastructure improvements (roads, utilities etc)
- Land acquisition, clearance and other site preparation activities
- Rehabilitation of older buildings
- Mitigation of environmental concerns
- Job training and workforce development
- Incentive programs to attract private development

As of 2003, 129 TIF districts representing 30% of the city's acreage have resulted from the program. Chicago's TIF districts have helped fund construction, rehabilitation and expansion totaling over 7 million square feet of space, over 80% of which has been new development, and over 1,100 new dwelling units. Total investment in these properties has exceeded $5.5 billion, of which 86% has come from private investors. It is estimated that

TIF districts in Chicago have supported the retention of over 37,000 jobs, the creation of nearly 18,000 new jobs and the building of 5,200 dwelling units. Incremental property taxes resulting from Chicago's TIF districts have made over $750 million available for use by the City to fund redevelopment projects.

Cincinnati, OH: TIF for Transportation Improvements
In the mid 1990s, government and business leaders in Cincinnati developed a master plan for the redevelopment of Ohio's Southern Gateway, which included major regional transportation improvements and integration. The three main components of what would be called the Banks Transportation Improvements were the reconfiguration of Fort Washington Way Highway, the Riverfront Transit Center/Banks Intermodal Facility and related street grid modifications.

The total project cost, expected to exceed $300 million, is supported by several sources of funding, one of which is a TIF district, the revenue from which will likely be used to repay project debt. Though some of the Banks Project involves redevelopment, the transportation improvement aspects of the Banks Project constitute a somewhat non-typical use of TIF proceeds.

Special Tax Districts

Montgomery County: Special Tax for Transportation Improvements
Road improvements in connection with the establishment of the Kingsview Village retail shopping center and adjoining residential properties located in Germantown, Maryland were financed through the $2.4 million issuance of tax-exempt bonds in 1999. Three years later, the West Germantown Development District was formed, which represented the second such taxing district created by Montgomery County since the enabling legislation to authorize the creation of such districts was implemented in 1994.

The West Germantown district is made up of approximately 671 acres of land stretching southwest of Clopper Road to Germantown Road. Specific infrastructure improvements consisted of new road construction, sidewalks, bike paths, street lighting, trees, a wastewater pumping station and two local public parks.

Residents of the homes located in the West Germantown Development District will see an additional $300 to $1,000 of special taxes added to their real property tax bills each year, with the special taxes being used by the County to pay debt service on the revenue bonds. The special taxes will continue until the bonds are repaid in full, which may not occur until 2027.

Appendix B – Overview of Value Capture Legislation in the State of Minnesota

The following paragraphs provide a very high level overview of state and local laws governing the use of the value capture tools outlined above. This does not constitute a legal opinion or judgment on the applicability of the value capture tools in Minnesota. State counsel should be consulted before the planning of any special revenue generating mechanism is contemplated for implementation.

Tax Increment Finance Districts

The Minnesota State Legislature passed TIF enabling laws in 1979 to provide economic development / redevelopment assistance in areas where such redevelopment would not occur without the infusion of capital to fund public improvements. TIFs can be formed by cities or certain entities created by a county, and have generally been used in Minnesota to fund land and real estate redevelopment, as opposed to transportation infrastructure projects. TIF districts for special circumstances can be formed, subject to a decision by the municipalities impacted.

Development Impact Fees

While many states have used DIFs to support roadway improvement projects, there is no enabling legislation in the State of Minnesota to create DIF districts for any project, roadway or otherwise.

Local Option Sales Taxes

Local option sales and use taxes can be instituted by cities and counties within the State of Minnesota and can be assessed on all sales or targeted to specific items such as liquor or entertainment. Using this revenue for roadway projects is allowable and has been done, though is a less common use. Generally a local voter referendum is required since this represents a tax increase. State legislative approval is also necessary.

Joint Powers Agreements

In the case of benefit districts that cross county or jurisdictional boundaries, a single committee, a Joint Powers Authority (JPA), with representatives from each “governmental unit” is formed to make policy decisions and otherwise control the benefit district according to its resolution and within the bounds of applicable state and local laws. The JPA would be governed by a board with representatives from each jurisdiction within the Area of Benefit. Rules for the formation and operation of a JPA in the state of Minnesota are outlined in Chapter 471.59, Minnesota Statutes 2007, Joint Exercise of Powers.