



# City of Eagan

March 2, 2012

Mike Maguire  
Mayor

Paul Bakken  
Cyndee Fields  
Gary Hansen  
Meg Tilley  
Council Members

Thomas Hedges  
City Administrator

Mr. Karl Keel, PE  
TAC Funding & Programming Committee  
1700 West 98th Street  
Bloomington, Minnesota 55431-2501

**SUBJECT:** TH 149/TH 55 TO I-494 IMPROVEMENT PROJECT – SCOPE CHANGE  
REQUEST  
City of Eagan, Minnesota

## INTRODUCTION

The City was successful in the 2009 federal funding solicitation for “A” Minor Arterial Reliever improvements to the TH 149 corridor. The State Transportation Improvement Program (STIP) has \$3,162,000 in federal funding scheduled for improvements on TH 149 from TH 55 to I-494 in fiscal year 2013 (see Attachment A, Figure 1: Project Location Map). Although the original project description has changed since its submittal, the benefits have remained consistent with its original intent. Therefore, the City is requesting a scope amendment, in order to move forward with a revised project scope. Please consider this formal request from the City of Eagan for the change in scope of the TH 149 reconstruction project for fiscal year 2013.

## ORIGINAL PROJECT DESCRIPTION

In the 2009 STP funding submittal, the scope of the TH 149 project is identified as the reconstruction of a four-lane roadway to six lanes. In addition, the City planned to rebuild the existing traffic signals and construct a multiuse trail on the west side of the corridor. The overall objective of the proposed project is to provide the additional capacity necessary to accommodate existing and future traffic volumes along the corridor.

The City of Eagan continues to identify transportation improvements necessary to accommodate future growth in the northeast portion of their City (see Attachment B: Related Transportation Studies). The need to upgrade the TH 149 corridor was first identified in the *Grand Oak Business Park Final AUAR* (September 1998), whereas the traffic component identified the need for additional northbound through lane capacity to accommodate increasing peak hour traffic volumes. The *Northwest Eagan Areawide Traffic Study* (May 2005), *Transportation Infrastructure Needs Analysis* (May 2005) and *Lone Oak Business Campus Traffic Study* (August 2006)

Municipal Center  
3830 Pilot Knob Road  
Eagan, MN 55122-1810  
651.675.5000 phone  
651.675.5012 fax  
651.454.8535 TDD

Maintenance Facility  
3501 Coachman Point  
Eagan, MN 55122  
651.675.5300 phone  
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[www.cityofeagan.com](http://www.cityofeagan.com)

The Lone Oak Tree  
The symbol of  
strength and growth  
in our community.

were additional studies that examined proposed land use impacts on the supporting roadway system and consistently indicated the need for this section of TH 149 to be upgraded to a six-lane facility. The *North-South Corridor Travel Demand Study* (July 2007) and *Regional Roadway System Visioning Study* (August 2010) were regional transportation studies involving the adjacent communities, Dakota County, MnDOT, Metropolitan Council and FHWA to develop a coordinated plan to handle future growth, balance impacts and provide an overall transportation system that supports regional, as well as local transportation needs.

## **REQUESTED CHANGE OF SCOPE**

The City of Eagan has been working closely with MnDOT, the agency with jurisdiction over TH 149, to fine tune the project scope. In February 2011, the City of Eagan and MnDOT met to discuss how to move forward with the identified federal funding for the TH 149 corridor. In order to determine the appropriate design section for the study corridor, additional analyses were completed (see Attachment C: Current Transportation Improvement Studies). The *TH 149 Corridor Study – 2030 Traffic Forecast Volumes* (February 2011) re-evaluated existing peak hour intersection volumes and 2030 traffic forecasts from past transportation studies to confirm future needs for the corridor. There was a variation in current and future volumes from multiple studies recently conducted in the area and it was important to revisit all available data.

The next step in the City's updated effort included an operations analysis of the confirmed traffic forecasts. The *TH 149 Corridor Study – Traffic Operations Analysis* (March 2011) involved a 2030 operations analysis to determine what specific improvements are necessary to accommodate future growth in traffic. Instead of considering a typical widening of a four-lane roadway to six lanes, the updated operations analysis took a closer look at the directional peak hour volumes and critical lane movements to determine where the additional capacity was needed. As a result of this work, it was determined that a five-lane section (three northbound and two southbound through lanes) is the design concept for the project currently scheduled in fiscal year 2013. With their involvement in the additional analyses, the modified scope and proposed design concept is strongly supported by MnDOT staff.

The change in scope for the TH 149 reconstruction project, from that described in the original funding application, not only responds to the transportation needs for the study area but also provides an opportunity to reduce its overall impact and cost.

## **MODIFIED PROJECT DESCRIPTION AND COST ESTIMATE**

As previously mentioned, the modified project includes the reconstruction of TH 149 from a four-lane to a five-lane facility with three northbound and two southbound through lanes from TH 55 to the I-494 north ramps (see Attachment A, Figure 2: Proposed Improvements). Other project elements that are consistent with the original 2009 grant application include rebuilding four traffic signals and construction of a multiuse trail on the west side of the roadway.

As previously mentioned, the STIP has \$3,162,000 in federal funding scheduled for TH 149 improvements in fiscal year 2013. In order to be consistent with the reduced scope and proposed design concept, a more refined construction cost estimate was developed.

An area of focus in the refined cost estimate included impacts to the existing traffic signals. Due to the roadway widening, modifications to medians/islands and the addition of a trail, there will be significant impacts to the four in-place traffic signals along TH 149. To better understand if the proposed project would necessitate traffic signal system revisions versus replacements, a meeting was held with MnDOT staff in February 2012 to review the status of the in-place equipment and other planned system upgrades. MnDOT staff informed us that arterial management system improvements in this area are programmed for July 2013, including camera installation, conduits, fiber, controllers, and Ethernet equipment.

MnDOT has two of the signals programmed for replacement along TH 149 at the I-494 north and south ramp terminals for construction in Spring 2015, coupled with programmed lane additions to the north ramp. Our goal is to incorporate these two signal replacements and the north ramp improvements under the TH 149 reconstruction project as planned. Although MnDOT does not have plans to rebuild the two signal systems at Northwest Parkway and Lone Oak Parkway, it was agreed that due to the age of these systems, and the inherent impacts associated with the improvements, the most cost-effective approach would be to fully replace these two signal systems under the TH 149 reconstruction project. Therefore, the cost of four traffic signal replacements is accounted for in the refined cost estimate. Note that the construction cost estimate also includes a line item for temporary signal systems at each location. These systems may be needed to safely and efficiently control traffic during the construction of the project. However, this need will be determined during the design process.

As shown in Table 1, the revised cost estimate for the project is estimated at \$2,683,000. This updated cost estimate was developed by using simple area and volume calculations, lump sums, and percent of construction cost. Based on updated information and additional details, this cost estimate better represents the proposed improvements associated with the TH 149 reconstruction project. The City of Eagan expects to maintain the 80/20 cost split.

**Table 1**  
**Revised Cost Estimate**

<b>Project Element</b>	<b>Cost</b>
Mobilization	\$75,000
Removals	\$75,000
Roadway (grading & borrow)	\$24,000
Roadway (aggregate & paving)	\$360,000
Storm sewer	\$125,000
Ponds	\$75,000
Concrete items (curb & gutter, sidewalk, medians)	\$195,000
Pedestrian curb ramps (ADA)	\$6,000
Path/trail construction	\$55,000
Traffic control	\$75,000
Striping	\$5,000
Signing	\$35,000
Lighting	\$125,000
Turf (erosion & landscaping)	\$9,000
Temporary traffic signals (4)	\$400,000
Permanent traffic signals (4)	\$800,000
Contingencies (10%)	\$244,000
<b>Total</b>	<b>\$2,683,000</b>

## **IMPROVED COST EFFECTIVENESS**

Although the project scope has changed, the benefits achieved through the construction of this project remain similar to its original scope. A review of the 2009 federal funding application for TH 149 was completed. It has been determined that the revised TH 149 improvement project from TH 55 to the I-494 north ramps continues to provide similar and improved benefits when compared to the original project scope:

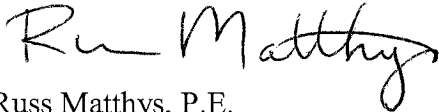
- The intent of the project continues to remain the same. The proposed project implements a solution to a transportation problem identified in the City of Eagan's *Comprehensive Plan, Capital Improvement Plan, Regional Roadway System Visioning Study*, and several other studies.
- The definition and characteristics of TH 149 as a Reliever route has not changed.
- For the Reliever, the crash reduction on TH 149 will need to be recalculated. However, the total crash reduction is expected to be similar since the majority of the crashes on the TH 149 corridor involve vehicles traveling in the northbound direction. In addition, a signal rebuild improvement (with the add lane improvement) can be used in place of the T-intersection improvement, which has a higher percent change in crash reduction.

- The results for Air Quality (emissions reduction) and Congestion Reduction (increase in hourly person throughput) would not be affected, since the calculation is completed for the peak direction of travel. The peak direction of travel continues to be northbound TH 149, with the improvement of an additional third northbound through lane.
- The revised improvement project is more cost effective, providing a better value for the cost invested in the project. The cost effectiveness calculations would result in a lower cost per crash, cost per increase in hourly person throughput and cost per kilogram reduced by the proposed project, since the overall project cost is lower.
- The Development Framework section of the submittal will remain the same. The planning area objectives, natural resources, progress towards affordable housing goals, land use access management planning and integration of modes will not be affected by the revised improvement project for TH 149.

The modified scope and revised design for the TH 149 reconstruction project responds to the transportation needs identified, while minimizing associated impacts and costs. The result will be a project that is more cost effective by providing better value at a lower construction cost.

We look forward to discussing the proposed project with you in more detail. If you have any questions or require additional information, please contact me.

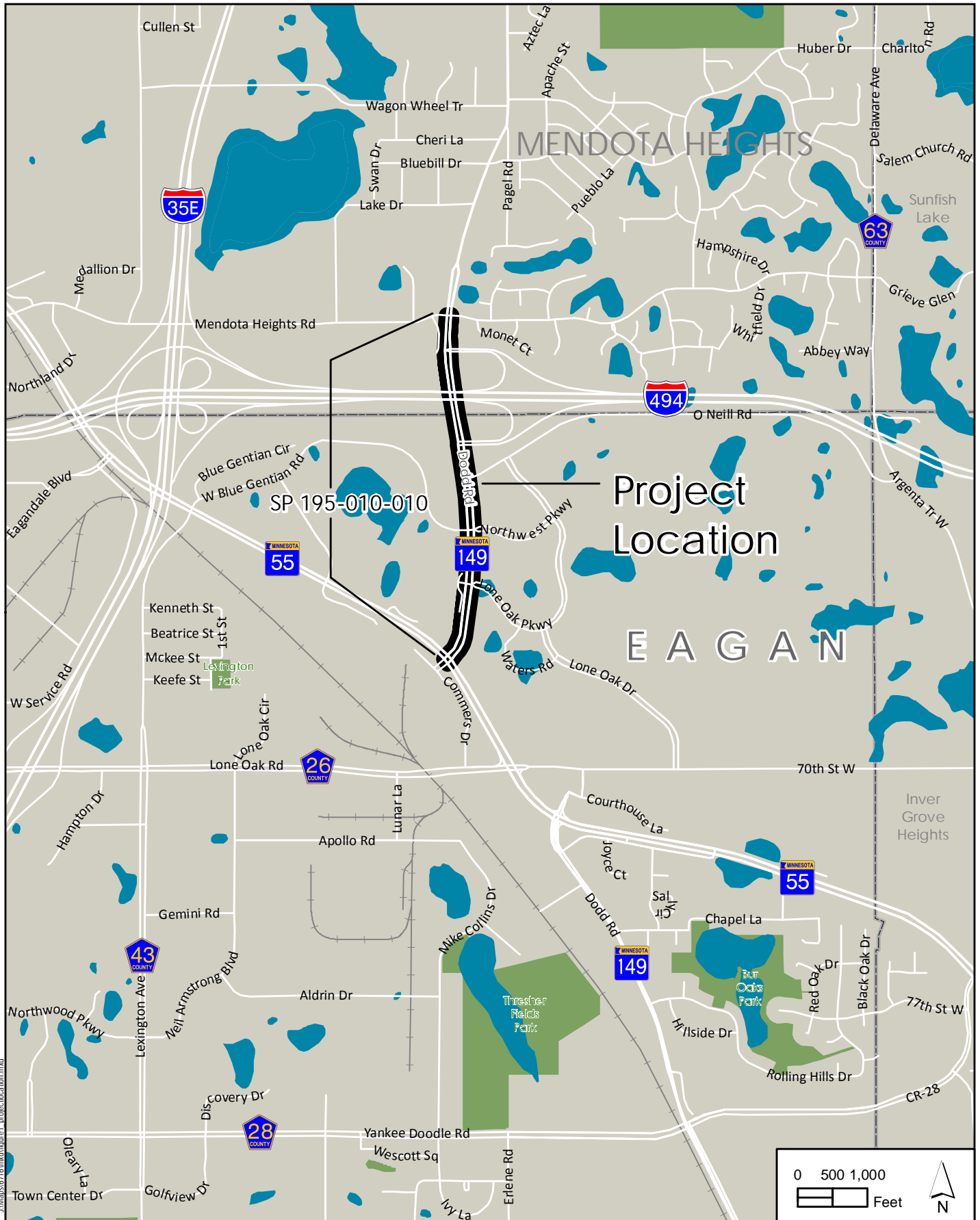
Sincerely,



Russ Matthys, P.E.  
City Engineer  
City of Eagan

Attachments: Attachment A Figures  
Attachment B Related Transportation Studies  
Attachment C Current Transportation Improvement Studies

**ATTACHMENT A**  
**Figures**

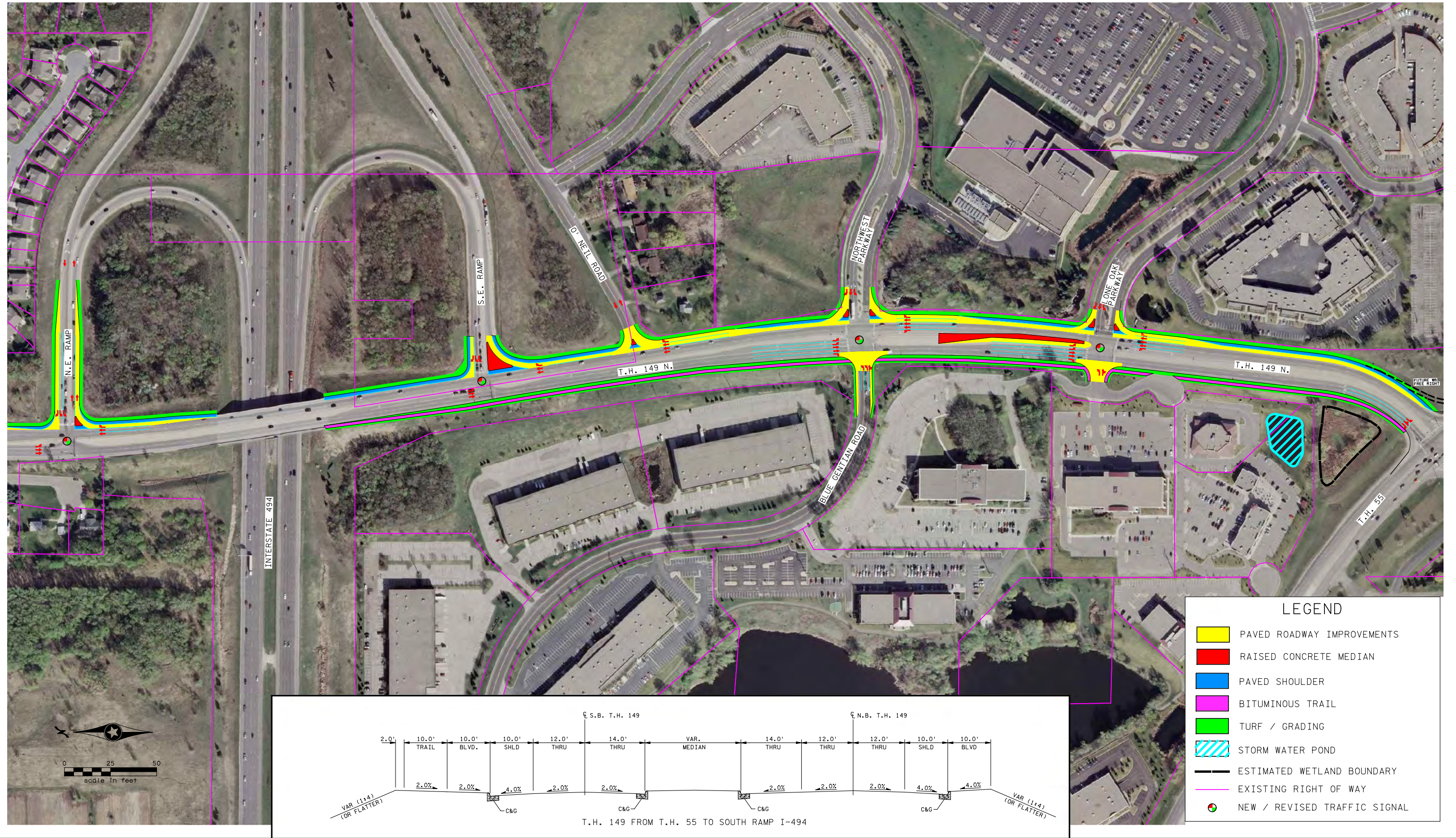


## Project Location

TH 149 Improvement Project  
 SP 195-010-010  
 City of Eagan, Minnesota

Figure 1





**Proposed Improvements - REVISED - FEBRUARY 2012**

TH 149 Improvement Project  
 S.P. 195-010-010  
 City of Eagan, Minnesota

**Figure 2**



**ATTACHMENT B**  
**Related Transportation Studies**

# Alternative Urban Areawide Review (Final AUAR)

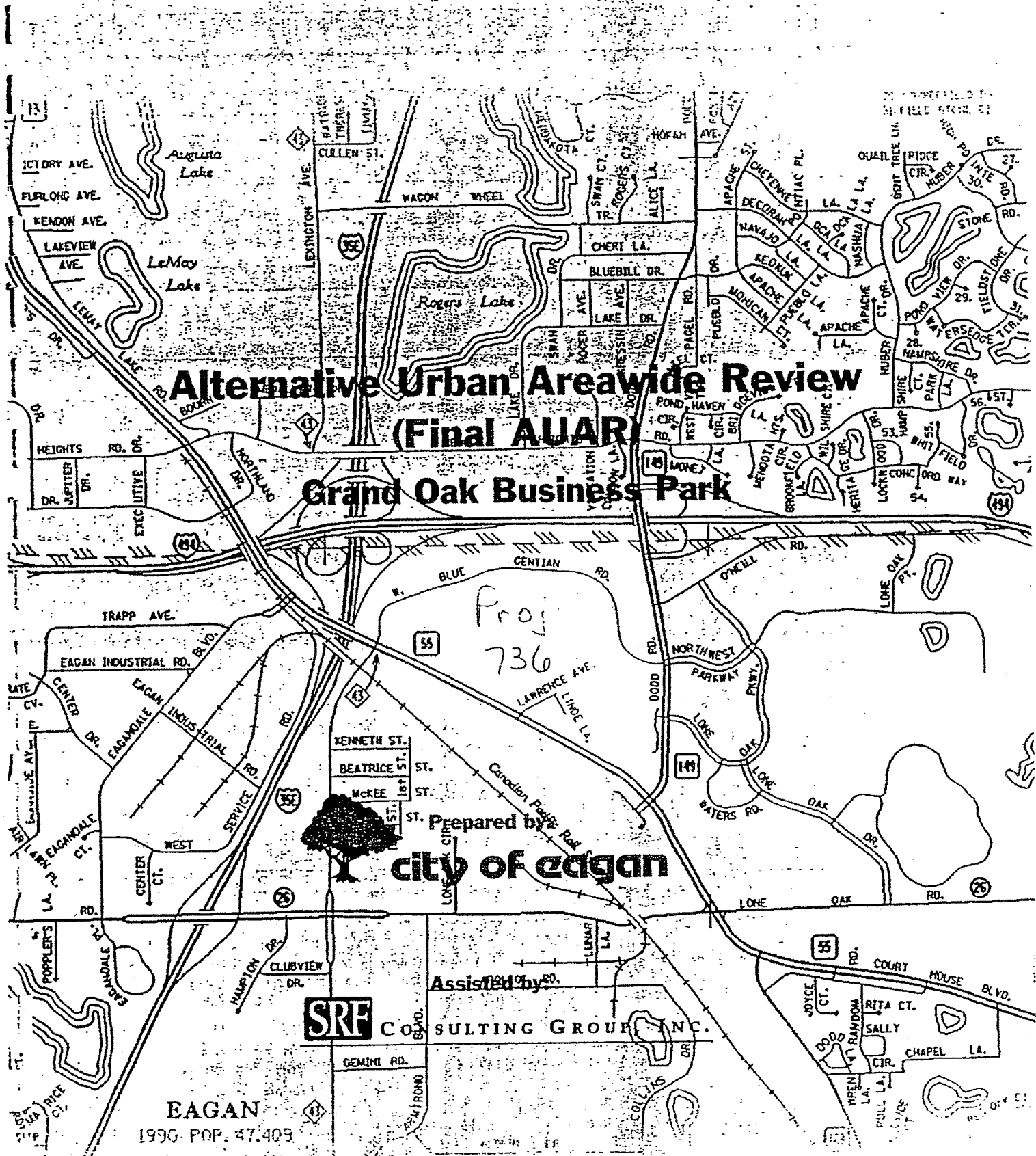
## Grand Oak Business Park

Prepared by  
**city of eagan**

Assisted by  
**SRE CONSULTING GROUP, INC.**

**EAGAN**  
1990 POP. 47,409

September 1998



# GRAND OAK BUSINESS PARK

## ALTERNATIVE URBAN AREA WIDE REVIEW (AUAR) UPDATE

June 2004

Prepared for:

City of Eagan

Prepared by:

SRF Consulting Group, Inc.

SRF No. 0034907

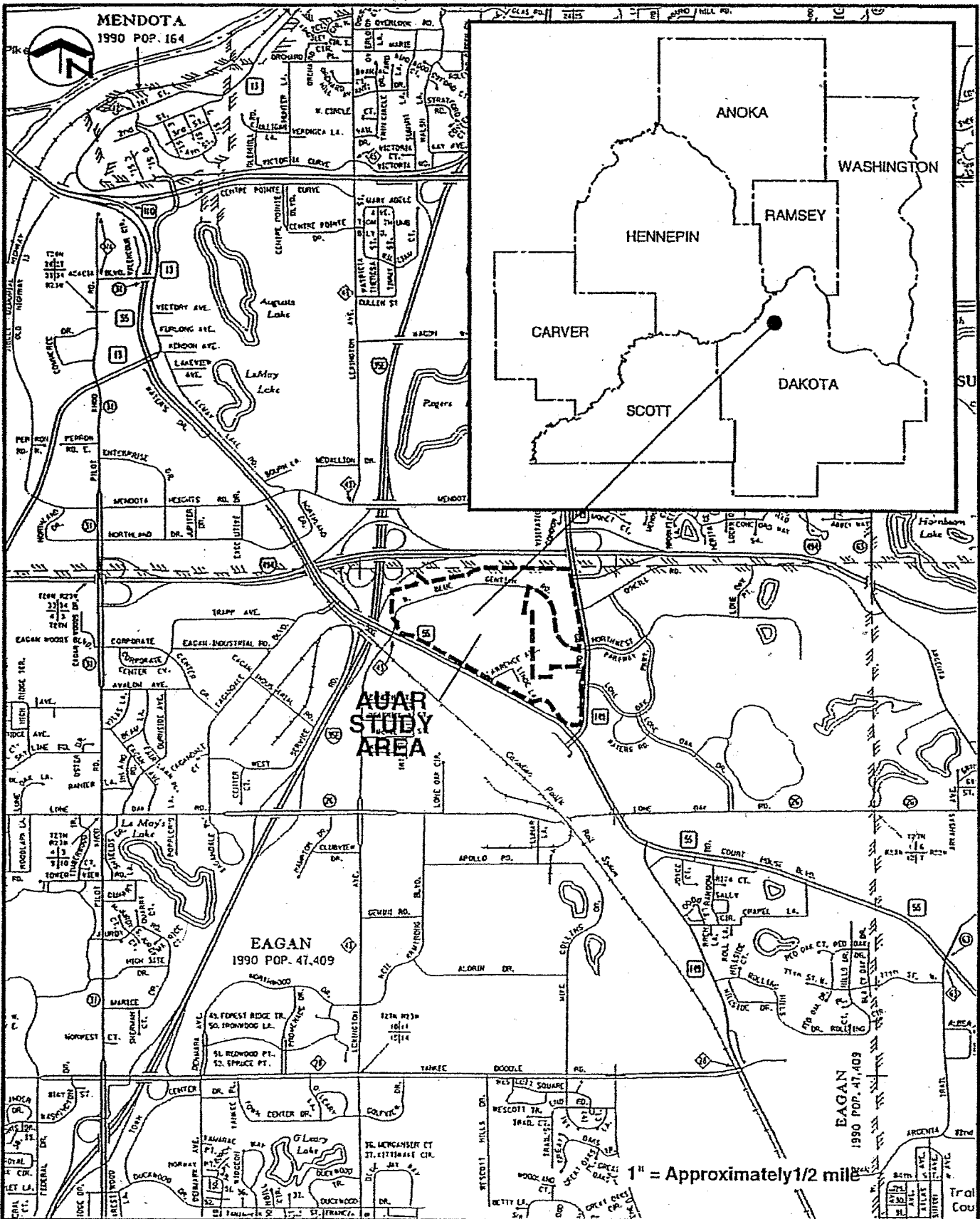
**APPROVED**

By City Council

Date 8-2-04

**EAGAN ENGINEERING DEPT**





City of Eagan

**Project Location**

Grand Oak Business Park AUAR

**FIGURE**

**1**

## 22. Traffic:

The planned Grand Oak Business Park development and forecast increases in background traffic levels will increase traffic volumes on roadways adjacent to the study area through the study period, i.e., through 2018. Increasing traffic values will result in operational problems on area roadways if no roadway improvements are implemented.

Traffic impacts will be mitigated to the degree necessary to maintain traffic operations at an acceptable Level of Service (D or better) by implementing the following roadway improvements:

### TH 149 and I-494 North Ramps

- Westbound dual left-turn lane on the I-494 north ramp to southbound TH 149.
- Northbound free right-turn lane on TH 149 to westbound I-494.

### TH 149 and I-494 South Ramps

- Additional northbound through-lane on TH 149, feeding directly into the free right-turn lane recommended at the north ramps.

### TH 149 and TH 55

- Southbound dual left-turn lane on TH 149 to eastbound TH 55. (The existing roadway width may be able to accommodate this additional lane by re-striping.)
- Eastbound dual left-turn lane on TH 55 to northbound TH 149.
- Westbound free right-turn lane on TH 55 to northbound TH 149.
- Northbound exclusive left-turn lane on Commers Drive to westbound TH 55.
- Additional westbound through lane on TH 55.

### TH 55 and Blue Gentian Road/Lexington Avenue

- Northbound dual left-turn lane on Lexington Avenue to westbound TH 55.
- Southbound exclusive right-turn lane on Blue Gentian Road to westbound TH 55.
- Northbound exclusive right-turn lane on Lexington Avenue to eastbound TH 55.
- Southbound exclusive left-turn lane on Blue Gentian Road to eastbound TH 55.
- Eastbound dual left-turn lane on TH 55 to Blue Gentian Road.

### TH 149 and Blue Gentian Road/Northwest Parkway

- Eastbound dual left-turn lane on Blue Gentian Road to northbound TH 149.

### TH 55

Access controls will be implemented on TH 55 in the vicinity of the study area, including completion of a south frontage road (see Figure 10) to consolidate turning and entering vehicles onto the south side of TH 55.



# CONSULTING GROUP, INC.

Transportation • Civil • Structural • Environmental • Planning • Traffic • Landscape Architecture • Parking

SRF No. 0045294

## MEMORANDUM

**TO:** Tom Colbert, P.E., Director of Public Works  
Jon Hohenstein, Community Development Director  
CITY OF EAGAN

**FROM:** Marie Cote, P.E., Principal  
Joshua Maus, Engineer

**DATE:** May 6, 2005

**SUBJECT:** NORTHEAST EAGAN AREAWIDE TRAFFIC STUDY

### INTRODUCTION

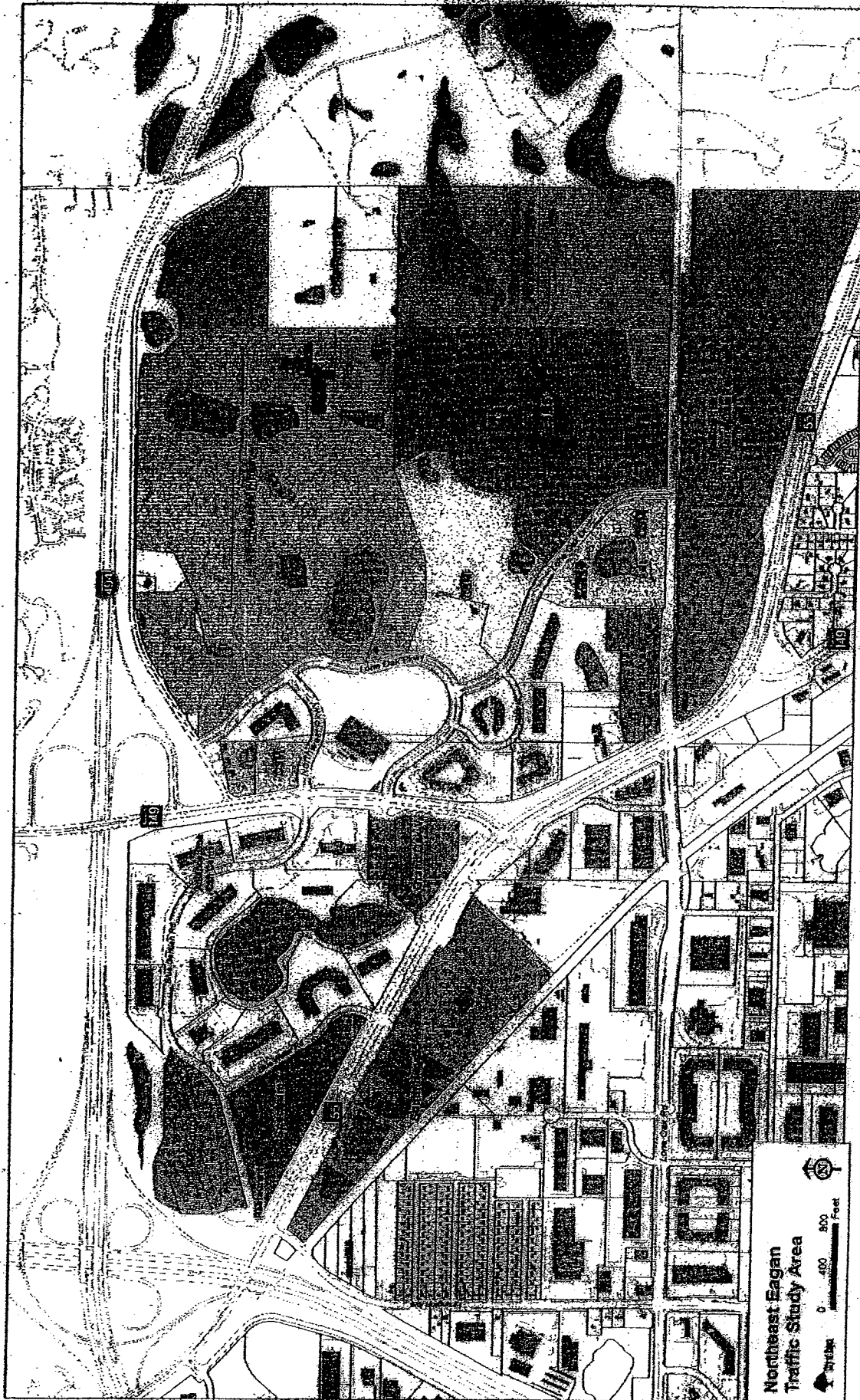
The City of Eagan is contemplating substantial future development in the Northeast part of the City. This growth will have a significant impact on traffic volumes in the area. In addition, the City has undertaken a study to determine whether it should consider major land use changes in a portion of that part of the City. As such, a prior study was completed, the *Northeast Eagan Land Use Study*. This study included an operations analysis for four land use scenarios to determine the necessary improvements to transportation facilities (i.e. TH 149 and TH 55). Due to the significant transportation impacts identified in SRF's January 12, 2005 traffic memorandum, an expanded analysis of future traffic conditions was conducted. This expanded analysis addressed:

- A larger portion of the northeast Eagan area (see Figure 1: Study Area)
- Additional land use scenarios
- A higher level-of-service threshold (i.e. up to LOS F) with reasonable infrastructure improvements (i.e. no triple lefts or rights)

The main objective of the study is to determine how much development can occur, given a higher threshold for levels of service and a more realistic level of infrastructure improvements. In addition, the study will determine what major infrastructure improvements are needed to allow full-growth plans of the study area to occur.

One Carlson Parkway North, Suite 150, Minneapolis, MN 55447-4443  
Telephone (763) 475-0010 • Fax (763) 475-2429 • <http://www.srfconsulting.com>





0045294  
March 2005

**STUDY AREA**  
 NORTHEAST EAGAN AREAWIDE TRAFFIC STUDY  
 City of Eagan

Figure 1

**Table 1**  
**Northeast Eagan Areawide Traffic Study**  
**CSM Reductions (30% reduction)**

Target Parcels	Land Use	Land Use Type	Size	Daily Trips	A.M. Peak		P.M. Peak	
					In	Out	In	Out
1. Grand Oaks 5th Addition (West of TH 149)	Office	710	140 ksf	1,541	191	26	36	173
	Retail	820	9,568 ksf	349	5	3	14	17
	Restaurant	932	7,136 ksf	771	37	33	41	25
2. Spectrum	Office	710	100 ksf	1,101	136	19	25	124
	Hotel	310	77 rooms	535	22	14	20	18
	Restaurant	932	6 ksf	649	31	28	34	22
3. Call Center	Office	710	21 ksf	231	29	4	5	26
4. Oakview Center	Restaurant	932	6.9 ksf	745	35	32	39	25
	Restaurant	932	9,148 ksf	989	47	42	52	33
	Office/Clinic	710	8.58 ksf	94	11	2	2	11
	Daycare	565	10,173 ksf	685	59	52	54	60
5. CSM (# 6)	Office	710	127,021 ksf	979	121	17	22	110
6. McGough	Office	710	240 ksf	2,642	327	45	61	297
7. CSM (# 6)	Office	710	488,613 ksf	3,766	466	64	87	423
8. Ecolab	Office	710	1,400 employees	4,648	591	81	109	535
	710	486 ksf		5,348	663	90	123	601
A								
9. Northwest Airlines	Office	710	920,379 ksf	10,133	1,256	171	233	1,138
B								
10. NE Quad of TH 149/NW Pkwy (#7)	Office	710	110,686 ksf	1,219	151	21	28	137
B								
11. South of Lone Oak	Office	710	666,468 ksf	7,338	909	124	169	824
	Retail	820	165,528 ksf	6,042	88	56	232	296
	Boarding School		Estimated Trips (small)	100	15	5	5	15
12. NE Quad of TH 149/Lone Oak (#8)	Retail	820	195 ksf	7,117	105	66	274	348
13. Laukka-Beck	Office	710	301,451 ksf	3,319	411	56	76	373
14. Loan Oak Development	Office	710	850,135 ksf	9,360	1,160	158	215	1,052
15. Cole	Office	710	408,028 ksf	4,492	556	76	103	505
<b>Totals</b>				<b>74,193</b>	<b>7,422</b>	<b>1,285</b>	<b>2,069</b>	<b>7,188</b>

Preliminary review of future traffic volumes has indicated that the interchange concepts would accommodate future full-growth volumes. However, a detailed operations analysis for the TH 149/TH 55 system would be required if and when these concepts move into the design stage. Further discussion and analysis would also be needed to address potential access impacts on TH 55. In addition, a detailed CORSIM analysis would be necessary to work out the design details of the I-494 facility. For instance, our analysis does not take into account the additional capacity that may be needed on I-494 (an additional lane in each direction).

## STUDY CONCLUSIONS

- Results of the future operations analysis for the Baseline scenario indicate that all development up to and including the Ecolab development (target parcels #1 through #8 in Table 1) can occur with the following roadway assumptions:
  - TH 55 as a six-lane facility (three lanes in each direction).
  - TH 149 as a six-lane facility (three lanes in each direction). Additional fourth northbound lane from Northwest Parkway to the I-494 North ramp.
  - Dual left-turn and dual right-turn lanes where needed.
- Figure 4 illustrates an interchange concept of what could be constructed, in order to accommodate full growth of the study area without a new interchange at Argenta Road. Improvements shown south of the dashed line illustrate what an interchange may look like to accommodate future full-growth volumes in the TH 149/TH 55 area, with or without a new I-494 interchange constructed in the City of Inver Grove Heights.
- Preliminary review of future traffic volumes has indicated that both of these concepts would accommodate future full-build volumes. However, a detailed operations analysis for the TH 149/TH 55 system would be required if and when these concepts move into the design stage, with some additional analysis and reviews necessary to evaluate access impacts. In addition, a detailed CORSIM analysis would be necessary to work out the design details of the I-494 facility. For instance, our analysis does not take into account the additional capacity that may be needed on I-494 (an additional lane in each direction).
- Based on our analysis, grade-separated improvements for the TH 149/TH 55 area and an upgraded I-494 interchange or new interchange in the City of Inver Grove Heights will be necessary with any additional developments beyond the Ecolab development (target parcel #8 in Table 1). Therefore, any change in land use type for target parcels #9 through #15 to reduce overall development trips will still require these major infrastructure improvements.



**DRAFT**

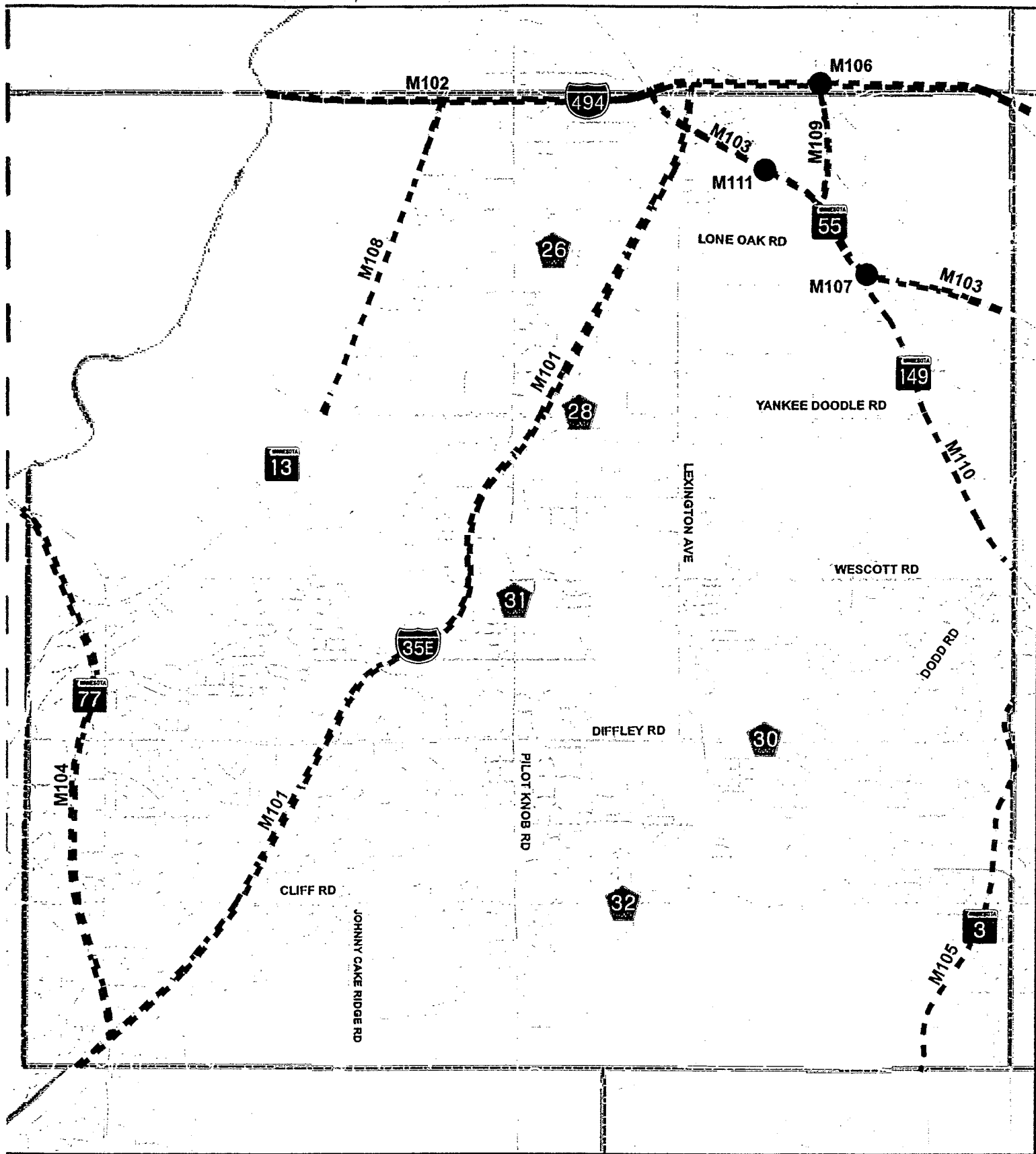
**City of Eagan  
Transportation Infrastructure  
Needs Analysis**

**May 2005**

**SRF Consulting Group, Inc.**

**TABLE 2C  
Mn/DOT MAJOR PROJECTS LIST**

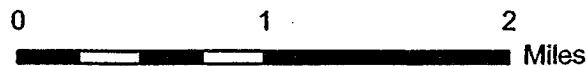
Map ID Number	Project Name/Road	From	To	Project Length (miles)
M101	I-35E	TH 77	TH 110	n/a - all project limits go beyond Eagan city limits
M102	I-494	Dakota/Washington County Line	Dakota/Hennepin County Line	
M103	TH 55	MN River Bridge	TH 52	
M104	TH 77	MN River Bridge	I-35E	
M105	TH 3	TH 50	TH 149	
M106	I-494/TH 149 interchange	n/a	n/a	n/a
M107	TH 55/TH 149 interchange	n/a	n/a	n/a
M108	HWY 13	County Road 28 (Yankee Doodle)	I-494	2.00
M109	TH 149	TH 55	I-494	0.67
M110	TH 149	TH 55	Wescott Road	2.00
M111	TH 55/Blue Water Road Intersection	n/a	n/a	n/a



**Mn/DOT MAJOR PROJECTS**

**Figure 14**

CITY OF EAGAN TRANSPORTATION NEEDS ANALYSIS



**TABLE 4C  
Mn/DOT PROJECT COSTS BY TIME FRAME<sup>1</sup>**

Map ID Number	Project Name/Road	Project Length (miles)	Project Description	Cost per mile (mil)	Total Project Cost (mil)	City Cost (mil)	Priority Rating	Proposed Time Frame
M109	TH 149	0.67	Upgrade from 4 lanes to 6 lanes	\$5.85	\$3.92	\$0.40	S	2006-2017
M110	TH 149	2.00	Upgrade to 4-lane divided highway with turn lanes and a trail on east side	\$5.59	\$11.17	\$3.31	S	2006-2017
M111	TH 55/Blue Water Road Intersection	n/a	Intersection Improvements	n/a	\$0.98	\$0.35	S	2006-2017
				Short-Term Totals	\$16.06	\$4.06		
M101	I-35E		Add lane	n/a	\$150	\$0	L	2013-2025+
M102	I-494		8 lanes & reconstruct	n/a	\$225	\$0	L	2013-2025+
M103	TH 55		Add lane	n/a	\$150	\$0	L	2013-2025+
M104	TH 77		8 lanes & reconstruct	n/a	\$225	\$0	L	2013-2025+
M105	TH 3		2 to 4 lanes	n/a	\$195	\$0	L	2013-2025+
M106	I-494/TH 149 interchange	n/a	Upgrade interchange	n/a	\$30.0	\$0	L	2013-2025+
M107	TH 55/TH 149 interchange	n/a	New interchange	n/a	\$12.6	\$0	L	2013-2025+
M108	HWY 13	2.00	Upgrade from 2-lane to 4-lane divided	\$4.55	\$9.10	\$2.65	L	2013-2025+
				Long-Term Totals	\$96.70	\$2.65		

#### IV. FUNDING NEEDS, SHORTFALLS, AND INVESTMENT STRATEGY

##### A. Funding Needs

The previous analysis identified significant funding needs for both city preservation and major infrastructure improvements. To recap this information, the following data is provided:

##### 1. Preservation

Depending on Council Policy decisions on preservation enhancements desired to meet defined community goals, the future funding needs for critical transportation system preservation efforts range from a total of \$35 million to \$50 million over the twenty year planning period (\$1.75 - \$2.5 million/yr). Table 5 identifies these projected needs.

<sup>1</sup> Mn/DOT projects identified in the Draft 2005 TSP, by the City of Eagan 2005-2009 CIP, and by the Northeast Eagan Area-wide Traffic Study (note costs are not exclusively within Eagan city limits).



## DRAFT MEMORANDUM

TO: Tom Colbert, P.E., Director of Public Works  
CITY OF EAGAN

FROM: Marie Cote, P.E., Principal  
Joshua Maus, P.E., Senior Engineer

DATE: August 16, 2006

SUBJECT: LONE OAK BUSINESS CAMPUS TRAFFIC STUDY

### INTRODUCTION

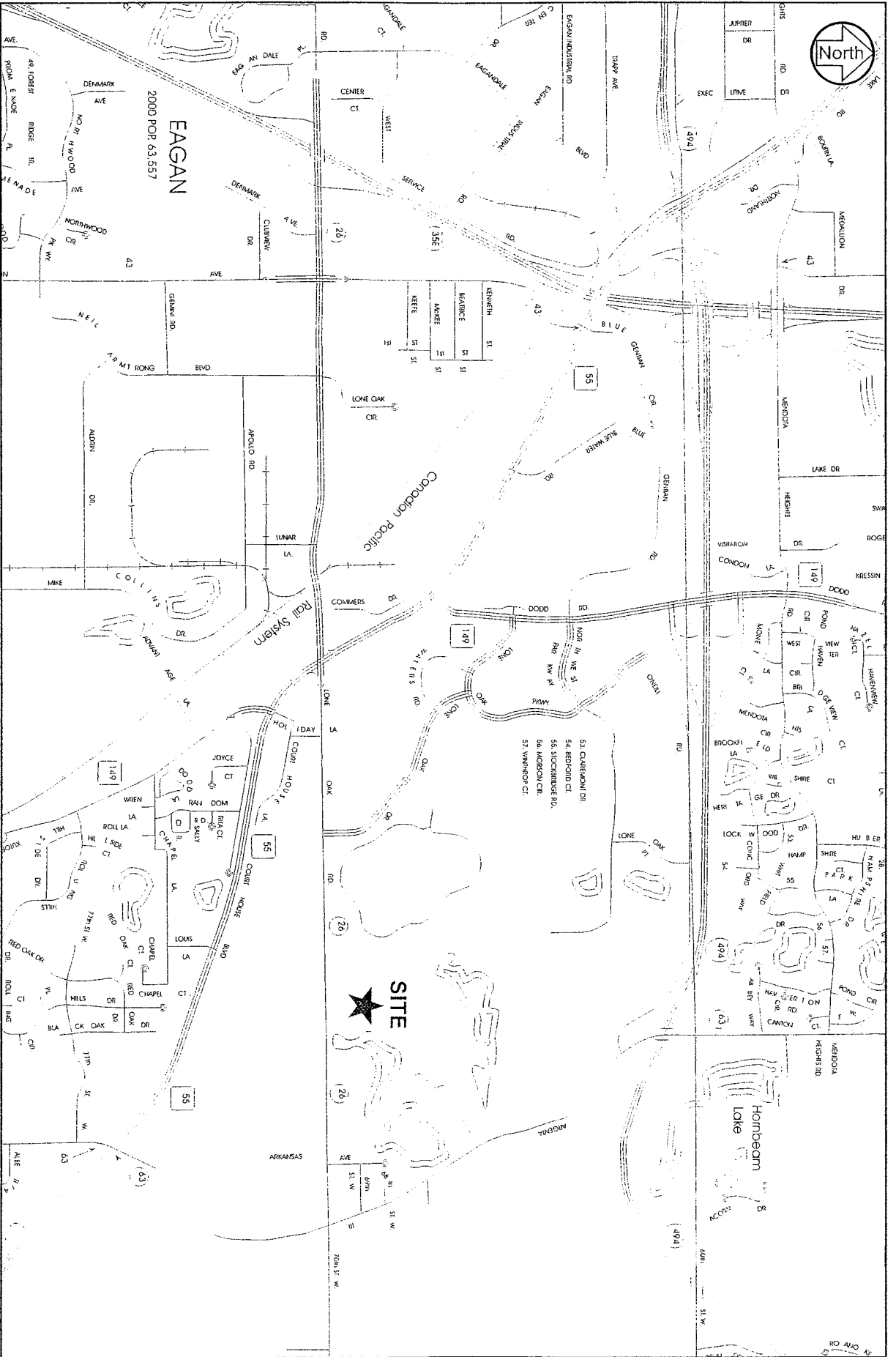
The purpose of this traffic study is to evaluate traffic impacts at key intersections and recommend improvements necessary to support the proposed Lone Oak Business Campus development and other future developments in the northeast area in the City of Eagan and the northwest area in the City of Inver Grove Heights (see Figure 1 - Project Location). This study will take into consideration the previous *Northeast Eagan Area Wide Traffic Study*, dated May 6, 2005. It includes an a.m. and p.m. peak hour operations analysis under existing and future year 2007 and 2017 build conditions.

### EXISTING CONDITIONS

To determine how traffic is currently operating in the study area, traffic operations for existing conditions were analyzed at the following key intersections:

- TH 149/I-494 North Ramps
- TH 149/I-494 South Ramps
- TH 149/O'Neil Road
- TH 149/Blue Gentian Road/Northwest Parkway
- TH 149/Lone Oak Parkway
- TH 149 (N)/TH 55
- TH 55/Lexington Avenue
- TH 55/Blue Water Road
- TH 55/Lone Oak Road (CSAH 26)
- TH 55/TH 149 (S)





**PROJECT LOCATION**

LONE OAK BUSINESS CAMPUS STUDY  
 City of Eagan



0065815  
 August 2006

Figure 1

The amount of allowable development indicated in the updated results for year 2017 conditions are similar to the previous *Northeast Eagan Areawide Traffic Study*, even with the additional traffic from Inver Grove Heights. This is a result of newly constructed developments generating slightly less trips than estimated, as reflected in the updated counts. In addition, there were some reductions in the development sizes and changes in uses as shown in Table 2 that provided overall benefits to the transportation system (office to warehouse square footage).

With the addition of the second Ecolab development (see Table 2 – 486 ksf of office), the roadway network begins to break down, with the following intersections experiencing significant delays during the a.m. peak hour:

- TH 149/I-494 North Ramps (approximately 3 minutes)
- TH 55/Lone Oak Road (approximately 1-1/2 minutes)

In order to accommodate all of the proposed adjacent developments in the area as listed in Table 2 and in Inver Grove Heights, major infrastructure improvements are necessary. Grade-separated concepts were developed as part of the *Northeast Eagan Areawide Traffic Study* that includes the following improvements:

- A modified I-494/TH 149 interchange
- A grade separation in the TH 149/TH 55 area that eliminates three existing signalized intersections along TH 149 and TH 55
- A second major north-south roadway to provide development access in the northeast Eagan area

Currently, the Dakota County North/South Corridor study is being conducted for Dakota County. Results of this study will provide forecast traffic volumes for the northeast Eagan and northwest Inver Grove Heights areas from a regional perspective. Volumes from the regional study can be compared with the local traffic model developed in this study, with adjustments made if necessary.

## STUDY CONCLUSIONS

- Results of the existing operations analysis indicate that the intersection of TH 55/TH 149 (S) currently operates at an unacceptable LOS E during the a.m. peak hour, with existing traffic control and geometric layout. All other intersections currently operate at an acceptable level of service during peak hour conditions.
- The proposed development will consist of 644,000 square feet of office space and 32,000 square feet of warehouse space. The current site plan depicts four direct access points along Lone Oak Road. Future plans include the upgrade of Lone Oak Road to a four-lane divided facility. According to Dakota County access spacing guidelines (Lone Oak Road is a county roadway), it is likely that one full-access and two right-in/right-out access points will be allowed along Lone Oak Road. Further discussions with County staff are recommended.

- Results of the year 2007 operations analysis indicate that all intersections are expected to operate at acceptable levels of service during the a.m. and p.m. peak hours assuming the following improvements:
  - Construct an additional eastbound and westbound through lane on TH 55 between TH 149 (N) and TH 149 (S)
  - Construct an additional eastbound left-turn lane on TH 55 at Lone Oak Road
- Results of the year 2017 analysis indicate that all development up to and including the first part of the Ecolab development (target parcels #1 through #10 in Table 2) can occur with the following roadway assumptions:
  - TH 55 as a six-lane facility (three lanes in each direction) from east of TH 149 (S) to Lexington Avenue.
  - TH 149 (N) as a six-lane facility (three lanes in each direction) from TH 55 to the I-494 North Ramp. An additional fourth northbound lane from Northwest Parkway to the I-494 North Ramp.
  - Dual left-turn and dual right-turn lanes where needed.
- In order to accommodate all of the proposed development in the area, major infrastructure improvements are necessary. The grade-separated concepts developed as part of the *Northeast Eagan Areawide Traffic Study* will provide enough capacity for all of the proposed developments.

**Dakota County North-South Corridor  
Eagan-Inver Grove Heights  
Travel Demand Study**

July, 2007

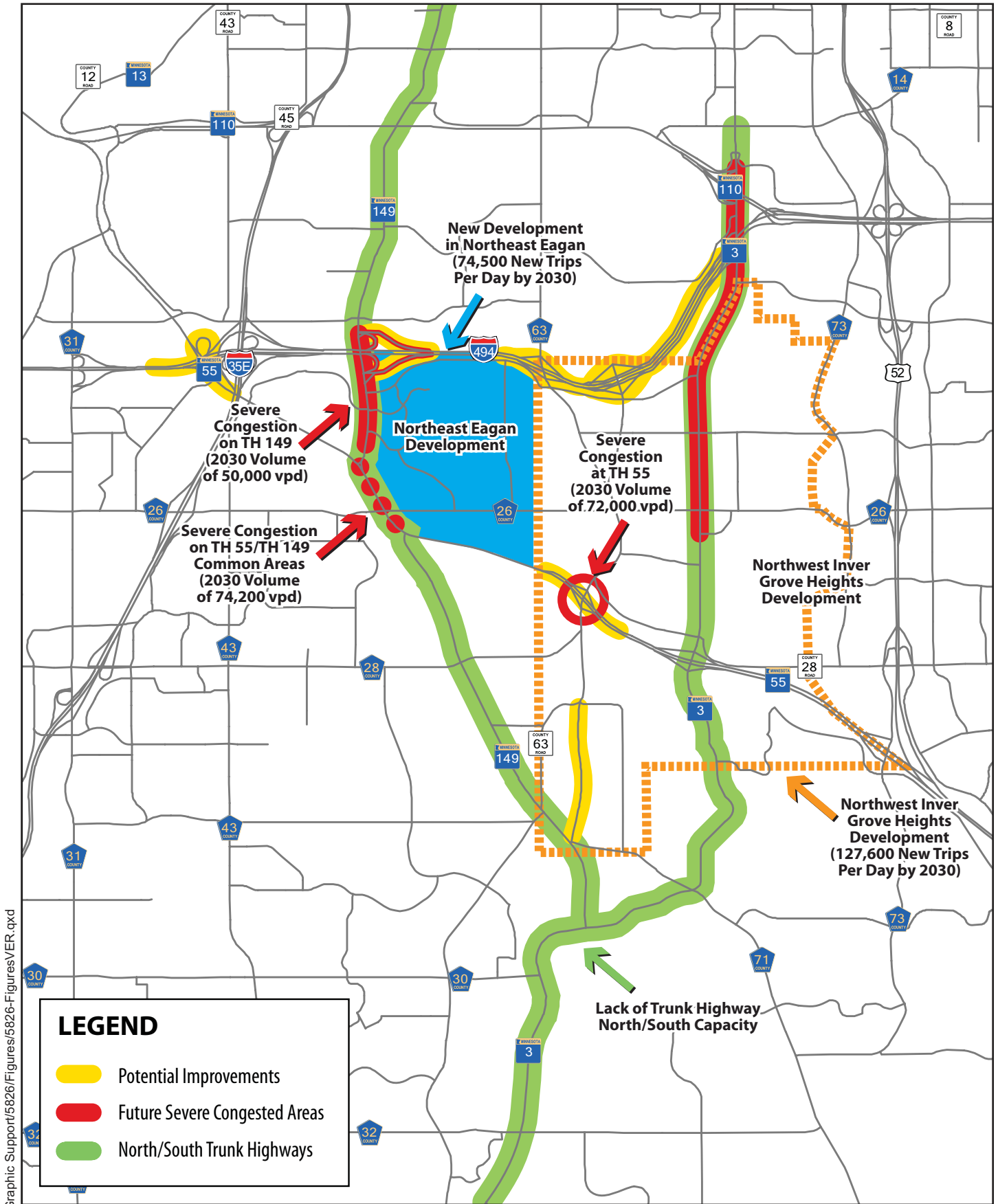
Prepared for

**Dakota County  
City of Eagan  
City of Inver Grove Heights**

Prepared by

**SRF Consulting Group, Inc.**

SRF No. 0065826




**KEY FINDINGS AND ISSUES MAP**

Dakota County North-South Corridor Study  
 Dakota County, MN

**Figure 1**





# Regional Roadway System Visioning Study

prepared for  
Dakota County, Egan, Inver Grove Heights, Mendota Heights, Sunfish Lake,  
Mn/DOT, Metropolitan Council and FHWA

prepared by  
SRF Consulting Group, Inc.

August 2010

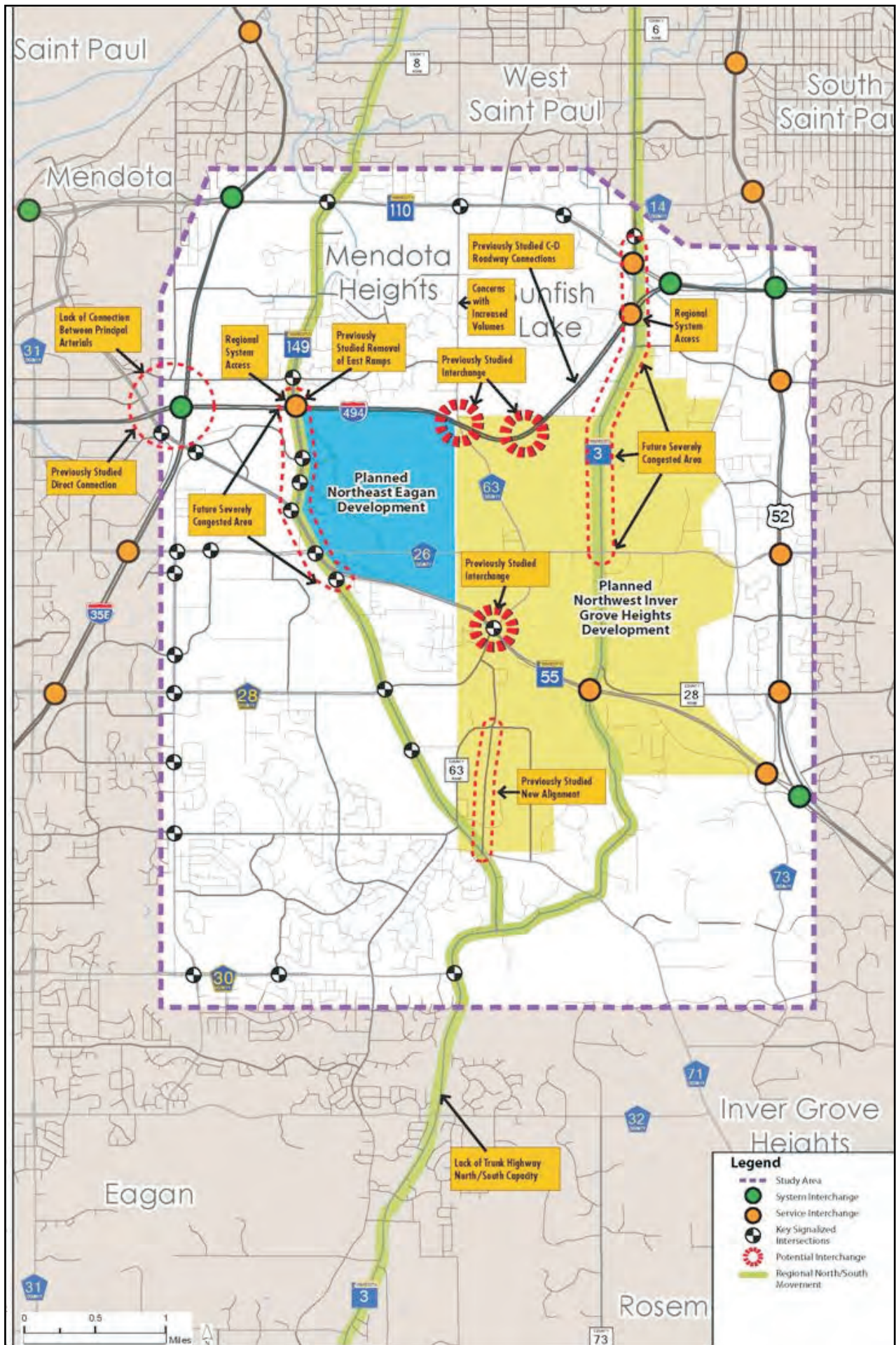


Figure 1

## RECOMMENDATIONS

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

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

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

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

The following key improvements that constitute the vision are listed below and shown in Figure 15:

- a. Lone Oak Road (CSAH 26) – expand 2 to 4 lanes from TH 55 to Athena Way (where it is currently 4 lanes).
- b. 65th Street – extend from Babcock Trail to Lone Oak Point.
- c. CSAH 28 Realignment north of TH 55.
- d. TH 3 – expand 2 to 4 lanes from Cliff Road to TH 55.
- e. TH 149 – expand 2 to 4 lanes from TH 3 to Rich Valley Boulevard.
- f. Baffin Trail Realignment – alignment to be determined in future studies.
- g. CSAH 28 Realignment south of TH 55 – connection to Argenta Trail will be determined during future studies associated with the installation of a full interchange in the long term.
- h. Lone Oak Road (CSAH 26) – expand 4 to 6 lanes from the I-35E West Ramps to Neil Armstrong Boulevard.
- i. TH 55 – expand 4 to 6 lanes from TH 149 south junction to TH 149 north junction.
- j. TH 149 – expand 4 to 6 lanes from TH 55 to I-494. This project recently received STP federal dollars for construction.
- k. TH 3 – consider 2 to 4 lane expansion in the long term from Upper 55th Street to TH 55.
- l. TH 149 Interchange Improvements with I-494 Mainline between I-35E and TH 149 – additional analysis is needed in an Interstate Access Request (IAR). As part of this study, a preliminary analysis was completed to determine how the TH 149 interchange ramps are currently being used, in relation to I-35E and I-494. Further study is necessary to determine the solutions to address the capacity problems at the TH 149 interchange and weaving issues between TH 149 and the I-35E exit.
- m. Delaware Avenue – improvements as required by actual traffic conditions. Such improvements may include turn lanes, shoulders, and trails/sidewalks. No additional through lanes will be required.
- n. New I-494 Interchange near Argenta Trail – approximately ½ mile east of the existing overpass with a configuration to minimize potential impacts to Hornbean Lake on the north. Additional analysis is needed in an Interstate Access Request (IAR).
- o. TH 55/Argenta Trail – consider a high-volume, high-capacity intersection upgrade, or a long-term interchange at this location. 2030 Comprehensive Plan growth assumptions do not reflect a need to separate grades based on traffic volumes. Buildout traffic volumes are borderline. In the vicinity of TH 55, continue to keep Argenta Trail as the through route and CR 28 connection into Argenta Trail (note: this is a change from the recommendations of the “County Road 28 Corridor Study” completed in 2000). Plan for an alignment of future CR 28 east of Argenta Trail that would intersect Argenta Trail where interchange ramps would be located if an interchange were to be constructed in the future. It is likely that the TH 3 West Ramps would need to be removed, if and when a new interchange is constructed.





Figure 15



**ATTACHMENT C**  
**Current Transportation Improvement Studies**

## MEMORANDUM

TO: Russ Matthys, PE, City Engineer  
Tim Plath, PE, PTOE, Transportation Engineer  
City of Eagan

FROM: Marie Cote, PE, Principal

DATE: February 23, 2011

SUBJECT: TH 149 CORRIDOR STUDY – 2030 TRAFFIC FORECAST VOLUMES

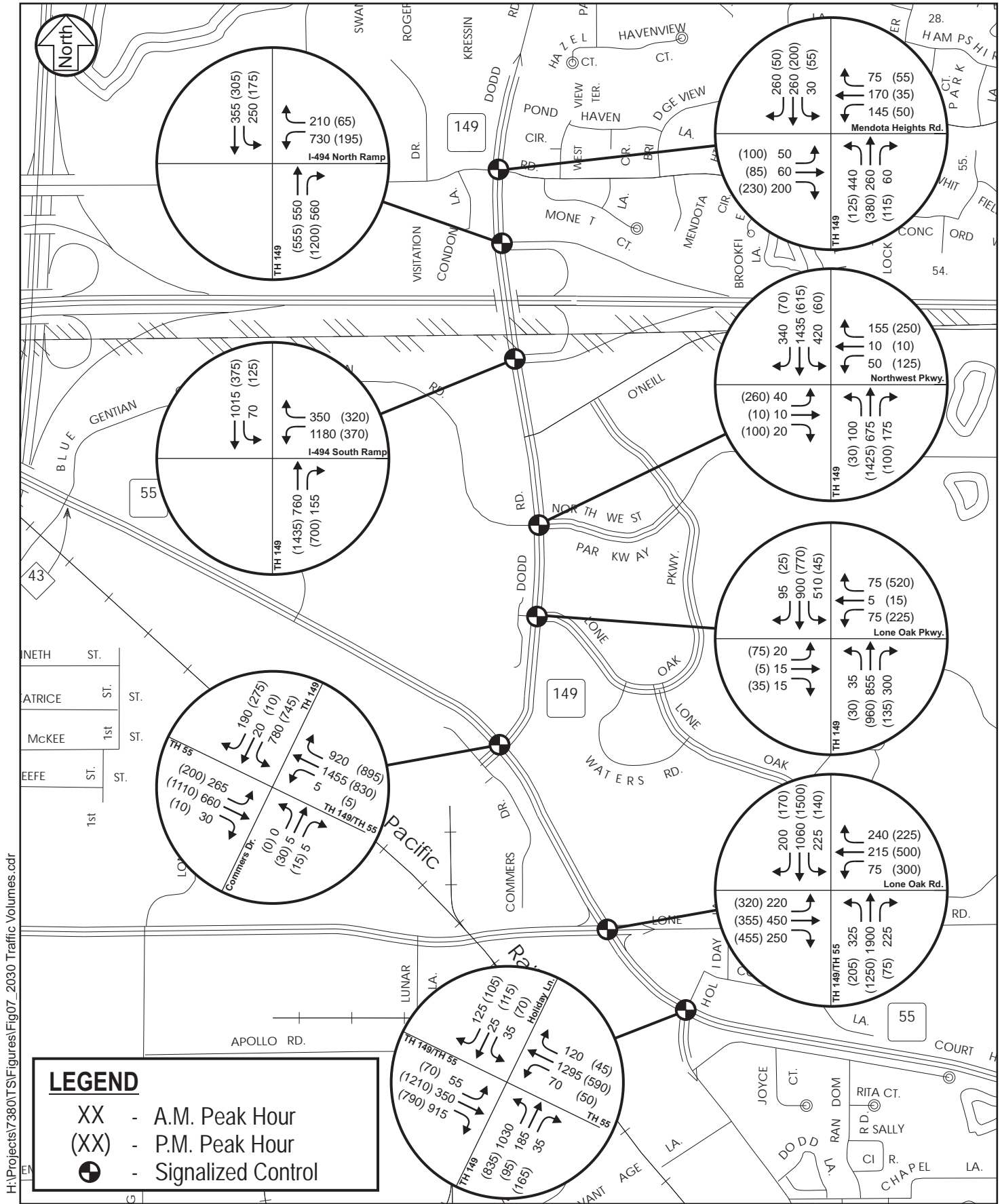
### INTRODUCTION

SRF has been retained by the City of Eagan to conduct an analysis of the TH 149 corridor from Mendota Heights Road to TH 55/TH 149 South. The City was successful in the 2009 federal funding solicitation for “A” Minor Arterial Reliever improvements to TH 149. Mn/DOT recently conducted the Signal Optimization Project dated October 29, 2010 to ensure optimal performance along the TH 149 corridor. The main objective of our analysis is to better understand the 2030 traffic volumes for the intersections along TH 149 and confirm future needs for the corridor. The results of this analysis will provide the necessary improvement options for the City and Mn/DOT to discuss and decide how to move forward with identified funding for the TH 149 corridor. This memorandum provides the comparison of current a.m. and p.m. peak hour turning movement counts and documentation of 2030 traffic forecast volumes.

### EXISTING INTERSECTION COUNTS

The TH 149 Corridor Study focuses on the following signalized intersections:

- TH 149 and Mendota Heights Road
- TH 149 and I-494 North Ramps
- TH 149 and I-494 South Ramps
- TH 149 and Blue Gentian Road/Northwest Parkway
- TH 149 and Lone Oak Parkway
- TH 55 and TH 149 North
- TH 55 and Lone Oak Road
- TH 55 and TH 149 South



H:\Projects\7380\TSIFigures\Fig07\_2030 Traffic Volumes.cdr



**Year 2030 Peak Hour Forecast Volumes**

TH 149 Corridor Analysis  
City of Eagan

**Figure 7**

## MEMORANDUM

TO: Russ Matthys, PE, City Engineer  
Tim Plath, PE, PTOE, Transportation Engineer  
City of Eagan

FROM: Marie Cote, PE, Principal  
Joshua Maus, PE, PTOE, Associate

DATE: March 21, 2011

SUBJECT: TH 149 CORRIDOR STUDY – TRAFFIC OPERATIONS ANALYSIS

### INTRODUCTION

SRF has been retained by the City of Eagan to conduct an analysis of the TH 149 corridor from Mendota Heights Road to TH 55/TH 149 South. The main objective of our analysis is to better understand the 2030 traffic volumes along TH 149 and confirm future needs for the corridor. The results of this analysis will provide the necessary improvement options for the City and Mn/DOT to discuss and decide how to move forward with identified federal funding for the TH 149 corridor.

The first phase of the study included a review of 2030 daily and peak hour volumes. Updated 2030 peak hour volumes for the intersections along TH 149 and TH 55 were developed and documented in the *TH 149 Corridor Study – 2030 Traffic Forecast Volumes* memorandum dated February 23, 2011. The second phase includes the operations analysis of TH 149 and TH 55 for 2030 conditions, which is documented in this memorandum.

### YEAR 2030 NO BUILD CONDITIONS

Traffic operations were analyzed at the following key intersections:

- TH 149 and Mendota Heights Road
- TH 149 and I-494 North Ramps
- TH 149 and I-494 South Ramps
- TH 149 and Blue Gentian Road/Northwest Parkway
- TH 149 and Lone Oak Parkway
- TH 55 and TH 149 North
- TH 55 and Lone Oak Road
- TH 55 and TH 149 South

## **YEAR 2030 RECOMMENDED IMPROVEMENTS**

Results of the operations analysis for the three build alternatives indicate that the Alternative C improvements are necessary to accommodate future 2030 traffic volumes and provide acceptable a.m. and p.m. peak hour operations. Recommended improvements include:

- Additional westbound (dual) left-turn lane at TH 149/I-494 North Ramps
- Additional southbound (dual) left-turn lane at TH 149/Lone Oak Parkway
- Additional eastbound (dual) left-turn lane at TH 55/TH 149 North
- Additional southbound, eastbound and westbound (dual) left-turn lanes at TH 55/Lone Oak Road
- Six-lane TH 55 facility between TH 149 North and TH 149 South (through the intersections)
- Three northbound through lanes on TH 149 from Northwest Parkway to the I-494 North Ramps
- Northbound free right-turn lane on TH 149 at I-494 North Ramps, two-lane on ramp to I-494 with lane drop prior to curve

Additional improvements to be considered include:

- Add the third northbound through lane on TH 149 at TH 55
- Additional westbound (dual) right-turn lanes at TH 149/Northwest Parkway and TH 149/Lone Oak Parkway

## **FEDERAL FUNDING IMPLICATIONS**

The City was successful in the 2009 federal funding solicitation for "A" Minor Arterial Reliever improvements to the TH 149 corridor. Improvements assumed in the 2009 application include a six-lane facility (three through lanes in each direction) for TH 149 from TH 55 to the I-494 North Ramps. Results of this 2030 operations analysis indicate that the Alternative C improvements are necessary to accommodate future traffic volumes. For TH 149, the improvements assumed under Alternative C are not consistent with the 2009 submittal. Therefore, consideration of potential impacts to the awarded funding was conducted to make sure the City can move forward with a slightly different improvement project without jeopardizing the federal funds already identified for the project.

A review of the 2009 federal funding application for TH 149 was completed. It has been determined that the updated improvement project of three TH 149 northbound through lanes from Northwest Parkway (or TH 55) with a northbound free right-turn lane at the I-494 North Ramps should not risk the identified federal funds based on the following:

- The intent of the project continues to remain the same. The proposed project implements a solution to a transportation problem identified in the City of Eagan's *Comprehensive Plan, Capital Improvement Plan, Regional Roadway System Visioning Study*, and several other studies.
- The definition and characteristics of TH 149 as a Reliever route has not changed.



## Federal STP Funding Application (Form 1)

**INSTRUCTIONS:** Complete and return completed application to Kevin Roggenbuck, Transportation Coordinator, Transportation Advisory Board, 390 North Robert St., St. Paul, Minnesota 55101. (651) 602-1728. Form 1 needs to be filled out electronically. Please go to Metropolitan Council's website for instructions. **Applications must be received by 5:00 PM or postmarked on June 15, 2009. \*Be sure to complete and attach the Project Information form. (Form 2)**

Office Use Only

### I. GENERAL INFORMATION

1. APPLICANT: City of Eagan

2. JURISDICTIONAL AGENCY (IF DIFFERENT): Minnesota Department of Transportation

3. MAILING ADDRESS: 3830 Pilot Knob Road

CITY: Eagan

STATE: MN

ZIP CODE: 55122

4. COUNTY: Dakota

5. CONTACT PERSON: Russ Matthys, P.E.

TITLE: City Engineer

PHONE NO.  
(651)675-5637

CONTACT E-MAIL ADDRESS: rmatthys@cityofeagan.com

### II. PROJECT INFORMATION

6. PROJECT NAME: TH 149 Reconstruction Project

7. BRIEF PROJECT DESCRIPTION (Include location, road name, type of improvement, etc... A more complete description must be submitted separately as described in Specific Requirement #3 on p. 5):

The proposed project includes expanding TH 149 from a four-lane divided roadway to a six-lane facility. Improvements extend from TH 55 to the I-494 north ramp intersection. The proposed project also constructs a multi-use trail on the west side of the corridor between TH 55 and the north I-494 ramp intersection.

8. STP PROJECT CATEGORY - Check only one project grouping in which you wish your project to be scored.

"A" Minor Arterials:

Reliever

Connector

Expander

Augmenter

Non-Fwy. Principal Arterial

Bikeway/Walkway

### III. PROJECT FUNDING

9. Are you applying or have you applied for funds from another source(s) to implement this project? Yes  No

If yes, please identify the source(s):

10. FEDERAL AMOUNT: \$2,480,000

13. MATCH % OF PROJECT TOTAL: 20%

11. MATCH AMOUNT: \$620,000

14. SOURCE OF MATCH FUNDS: Local

12. PROJECT TOTAL: \$3,100,000

15. REQUESTED PROGRAM YEAR (CIRCLE):  2013  2014

16. SIGNATURE

17. TITLE: City Engineer

## “A” MINOR ARTERIAL - RELIEVER - PRIORITIZING CRITERIA

Applicants must respond to each of the following prioritizing criteria. Label your responses clearly. If a criterion is not applicable to your project, explain why.

**A. Relative importance of the route as an “A” Minor Arterial Reliever. 100 points**

Although all Reliever routes parallel an urban principal arterial, the relative importance of each Reliever is not the same. Some Relievers play a more significant role than others do in providing an alternative route for medium distance trips and reducing demand on congested metro area principal arterials. The following criteria are intended to measure the relative importance of each Reliever route submitted for funding in this solicitation.

Definition and characteristics of the Reliever route.

**0-100 points**      The applicant must respond to all three items below and provide a map to help answer items a) and b). The Reliever ‘route’ is defined as the uninterrupted length of the arterial that parallels a principal arterial. The route may be an existing or planned road on the TAB adopted system. The route may be longer than the proposed project and include more than one street name, but it must be continuous. The endpoints of the route must be a principal or other “A” minor arterial, and the route cannot be more than eight miles in length. Two projects on the same route will not be selected unless they are at least 3.5 miles apart. Points under this criterion are assigned based on the length of the Reliever route, the current and forecasted traffic volume on the Reliever route and the current transit ridership on the Reliever route.

For Items a, b and c, please reference Attachment A, Figure 4.

a) Provide the length of the Reliever route in miles.

**RESPONSE:** The length of the reliever route (TH 149) is approximately 3.5 miles from TH 55 (in the City of Eagan) to TH 110 (in the City of Mendota Heights).

b) Provide the current (2007) and forecasted (2030) average daily traffic volume at two or more locations on the Reliever route. MN/DOT 50-series maps should be used for current counts. Use approved city or county comprehensive plans, Met Council, accepted State Aid traffic factors by county, or a transportation study with documented acceptable forecasting methodology for forecasted volume.

**RESPONSE:** According to Mn/DOT’s MSAS Traffic Volume maps, the current (2006) Average Annual Daily Traffic (AADT) on TH 149 between TH 55 and I-494 is 23,500 vehicles per day. North of I-494, traffic volumes are 8,100 vehicles per day.

As part of the City’s draft 2009 update to the *Comprehensive Plan*, traffic forecasts were developed for 2030 (see Attachment B). The 2030 forecast volume for TH 149 from TH 55 to Northwest Parkway is 32,000 vehicles per day. The 2030 forecast volume for TH 149 from Northwest Parkway to I-494 is 42,000 vehicles per day.

- c) Is public transit currently provided on this Reliever route and its corresponding section of Principal Arterial? If yes, the Metropolitan Council will provide the project scorers with current average annual ridership based on the project location map and description.

**RESPONSE:** Transit service utilizes TH 149 for access to service points within the Grand Oak Business Park and the Water's Corporate Complex on both sides of TH 149, but does not offer stops along the project corridor. Similarly, transit providers utilize the corresponding sections of Principal Arterial (TH 55 from TH 149 to I-494 and I-35E from TH 55 to I-494) for access to service point while not offering stops along the Principal Arterial corridor in these segments.

**B. Deficiencies and Solutions on Reliever and on Principal Arterial Being Relieved 350 points**

The regional solicitation process is one means of implementing regional plans. The region's Transportation Policy Plan state that the regional highway and street system will be preserved, managed, improved and expanded to support existing and planned land uses and safety and mobility needs consistent with the Regional Development Framework, the Transportation Policy Plan and approved local and county comprehensive plans. The following criteria reflect these objectives.

**1. Crash Reduction.**

**0-50 points**

On the Principal Arterial being relieved: Provide data showing the frequency of traffic crashes expressed as crashes per million vehicle miles on the corresponding section of principal arterial. The principal arterial being relieved should be approximately the same length as the project limits on the reliever. Only one principal arterial may be relieved. The applicant must request from Mn/DOT Metro Traffic Engineering\*, the crash rate for the principal arterial being relieved. The rate received from Mn/DOT will include mainline crashes only. Crash rates will be based on TIS data for 2005-2007.

**RESPONSE:** Using Mn/DOT's TIS system data, the corresponding section of TH-55 between TH 149 and I-494 had a total of **38** crashes from January 1, 2005 through December 31, 2007. The crash rate for the principal arterial was **1.57** crashes per million vehicle miles per year (see Attachment E, Principal Arterial Crash Analysis).

**0-50 points**

On the Reliever: Calculate the total number of crashes reduced due to improvements on the 'A' Minor Arterial Reliever made by the proposed project. Points will be awarded based on the total three-year number of crashes projected to be reduced by the proposed project. The applicant must base the estimate of crash reduction on the methodology found in Appendix E. The applicant must obtain data on crashes for the existing section scheduled for improvement from Mn/DOT's TIS system, and must use data from 2005 through 2007.

**RESPONSE:** As previously indicated, the proposed improvements to TH 149 are intended to increase safety on the corridor. According to Mn/DOT's TIS system data from January 1, 2005 to December 31, 2007, there are a total of 57 crashes

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\* Applicants should request crash data from Mn/DOT as early as possible. An agency that wishes to dispute the results of their crash data requests can contact Jolene Servatius at 651-234-7841 (or [jolene.servatius@dot.state.mn.us](mailto:jolene.servatius@dot.state.mn.us)) to reconcile those differences.

on TH 149 within the project area (see Attachment E, crash diagrams and TIS data listing). This includes 14 personal injury crashes and 43 property damage only crashes. According to the Mn/DOT factors shown in the calculations below, the proposed project would eliminate **33.3** crashes. This is a 58 percent reduction in the number of crashes on the corridor. Crash calculations are shown below.

Improvements from Mn/DOT's "% Change in Crashes" table:

**Add Lanes**

- 0.50 reduction in fatal and injury crashes
- 0.50 reduction in property damage crashes

**T-Intersection Turn Lane**

- 0.20 reduction in fatal and injury crashes
- 0.15 reduction in property damage crashes

**Fatal and Personal Injury Calculations**

$$\begin{aligned} CR &= 1 - (1-0.5) \times (1-0.20) \\ CR &= 1 - (0.5 \times 0.80) \\ CR &= 0.60 \end{aligned}$$

$$0.60 \times 14 \text{ (Number of fatal and injury crashes)} = 8.4 \text{ reduction}$$

**Property Damage Calculations**

$$\begin{aligned} CR &= 1 - (1-0.5) \times (1-0.15) \\ CR &= 1 - (0.5 \times 0.85) \\ CR &= 0.58 \end{aligned}$$

$$0.58 \times 43 \text{ (Number of fatal and injury crashes)} = 24.9 \text{ reduction}$$

**Total Crash Reduction**

$$8.4 + 24.9 = 33.3 \text{ crashes reduced}$$

2. **Air Quality.** The Transportation Policy Plan strongly supports environmental considerations when making transportation funding decisions. The Council supports funding priorities for transportation projects that ensure prevention of air quality violations through the reduction of mobile source emissions.

The applicant must show that the project will reduce emissions and help the region to maintain its attainment of federal carbon monoxide standards. All assumptions and calculations must be clearly documented and explained in order to receive points. The applicant must include documentation of how the VMT reduction was determined and specify the speed used for the assumptions. Speed assumptions shall be based on the methodology found in Appendix F. Points under this criterion will be awarded based on the reduction of carbon monoxide (CO), nitrogen oxide (NOx), and/or volatile organic compounds (VOC) emissions the proposed project is expected to provide.

- 0-100 points** The applicant must demonstrate through a quantitative analysis that CO, NOx, and/or VOC emissions (in KILOGRAMS/DAY) will be reduced compared to the no-build alternative. The applicant must estimate CO, NOx, and/or VOC emissions reductions using the MOBILE6 emissions factors and vehicle emissions reduction worksheet in Appendix G.

RESPONSE: In order to determine the reduction of emissions, an analysis to determine the increase in peak hour speed on TH 149 (Northbound direction during the p.m. peak hour) due to the proposed project was conducted.

Details of the analysis are shown below:

Estimated Segment Length = 0.90 mile  
Posted speed limit = 45 mph

### Existing Conditions

4 signalized intersections (2 v/c <0.8 and 2 v/c >0.90)

Free-flow travel time (minutes) = (0.9 mile/45 mph) x 60 = 1.2 minutes

Intersection delay = (2 x 75) + (2 x 30) = 210 seconds = 3.5 minutes

Mid-block delay for right turn movement to eastbound I-494 ramp = 10 seconds = 0.17 minutes

Arterial Speed = (0.9 mile/(3.5 + 1.2 + 0.17 minutes)) x 60 = **11 mph**

### Proposed Conditions

4 signalized intersections (3 v/c <0.8 and 1 v/c 0.8 to 0.90)

Free-flow travel time (minutes) = (0.9 miles/45 mph) x 60 = 1.2 minutes

Intersection delay = 50 + (3 x 30) = 140 seconds = 2.33 minutes

Mid-block delay = 0

Arterial Speed = (0.9 mile/(2.33 + 1.2 minutes)) x 60 = **15 mph**

Using the MOBILE6 emissions factors and vehicle emissions reduction worksheet (see Attachment E, Vehicle Emissions Reduction Worksheet), a quantitative analysis was conducted for emissions for both baseline (without project) and build (with project) conditions. The average speed along TH 149 is expected to increase by 3 mph, due to the proposed improvements. The emissions reduction due to the proposed improvements is **135 kilograms/day**.

### 3. Congestion Reduction.

**0-75 points** On the Principal Arterial being relieved: The applicant needs to show the hours per day the current volume exceeds the design capacity in either direction. The applicant should obtain needed data directly from Mn/DOT or a local data source if available, and provide documentation to illustrate accuracy. To calculate existing conditions, the applicant must obtain or collect the average hourly, directional traffic volumes on a weekday, the current lane configurations, and the current signal timing schemes, if applicable. Design capacity calculations must be based on the definition found in Appendix A.

RESPONSE: As identified by reports from Mn/DOT, current traffic volumes are within the design capacity guidelines of I-35E (six-lane freeway) between TH 55 and I-494.

**0-75 points** On the Reliever: The applicant must show that the proposed project will reduce congestion at the most congested location on the Reliever. The applicant must include the current volume to capacity (v/c) ratios in the AM and PM peak hours and the improvement in the ratios resulting from the project. Projects that have low existing v/c ratios will receive less credit for the improvement resulting from the project than projects that address a problematic existing v/c ratio. The applicant must use the methodology, worksheet and look-up tables found in

Appendix H. The applicant must conduct a corridor analysis for new alignments, comparing parallel routes that will be affected by the project.

RESPONSE: The intersection of TH 149 and the I-494 South Ramps is currently the most congested location in both the a.m. and p.m. peak hours along the project segment. Details of the volume to capacity ratio (v/c) analysis are shown below:

**Existing conditions**

Southbound a.m. peak hour volume = 689  
Vehicle capacity = 1500 vph (one left-turn lane, two through lanes)  
A.M. volume/capacity ratio =  $689/1500 = 0.46$

Northbound p.m. peak hour volume = 1480  
Vehicle capacity = 1400 vph (two through lanes, one right-turn lane)  
P.M. volume/capacity ratio =  $1480/1400 = 1.06$

**Proposed Conditions**

Southbound a.m. peak hour volume = 689  
Vehicle capacity = 2100 vph (one left-turn lane, three through lanes)  
A.M. volume/capacity ratio =  $689/2100 = 0.33$

Northbound p.m. peak hour volume = 1480  
Vehicle capacity = 2000 vph (three through lanes, one right-turn lane)  
P.M. volume/capacity ratio =  $1480/2000 = 0.74$

A.M. Improvement in Volume/Capacity Ratio =  $0.46 - 0.33 = 0.13$

P.M. Improvement in Volume/Capacity Ratio =  $1.06 - 0.74 = 0.32$

**Total Improvement in Volume/Capacity Ratio = 0.45**

**C. Cost Effectiveness. 275 points**

The Regional Development Framework and Transportation Policy Plan document the need for adequate transportation funding to implement regional transportation plans. The region must allocate transportation funds in such a way that the selected projects provide the most benefit for the amount of funding requested. Cost effectiveness is an essential component of the regional solicitation process. Cost effectiveness calculations must be based on the total cost of the project, not just the portion of the project eligible for federal funding, in order to allow consistent comparisons of all qualifying projects.

1. Crash Reduction.

**0-125 points** The applicant must calculate the cost per crash reduced by the proposed project. The applicant must divide the total cost of the project by the answer from the second part of criterion B.1., crash reduction on the Reliever.

The applicant must obtain data on crashes for the existing section scheduled for improvement from MN/DOT's TIS system, and must only use data from 2005 through 2007. The applicant must base the estimate of crash reduction on the methodology found in Appendix E. Points will be awarded based on the relative cost per crash reduced.

RESPONSE: The proposed improvements will be expected to eliminate **33 crashes per year**. The total project cost is \$3,100,000. The cost per crash reduced by the proposed project is **\$93,939**.

2. Congestion reduction.

**0-75 points** The applicant must calculate the cost per increase in hourly person throughput provided by the proposed improvement. The applicant must use the worksheet in Appendix I. Points will be awarded based on the lowest cost per increase in person throughput, but if there is little congestion under existing conditions fewer points will be awarded for increasing person throughput.

RESPONSE: The hourly throughput in the p.m. peak hour, in the peak direction of travel (northbound), at the most congested location (TH 149/I-494 north ramps) was calculated for current and proposed conditions. Details of the analysis are shown below:

**Existing Conditions**

Vehicle capacity = 1400 vph (two through lanes, one right-turn lane)

A.M. peak hour vehicle occupancy = 1.09

A.M. peak hour bus ridership = 0, assume no increase in service

Hourly person throughput =  $1400 \times 1.09 = 1526$  pph

**Proposed Conditions**

Vehicle capacity = 2000 vph (three through lanes, one right-turn lane)

A.M. peak hour vehicle occupancy = 1.09

A.M. peak hour bus ridership = 0, assume no increase in service

Hourly person throughput =  $2000 \times 1.09 = 2180$  pph

**Total Increase in Hourly Person Throughput =  $2180 - 1526 = 654$**

**Cost per Increase in Hourly Person Throughput =  $\$3,100,000/654 = \$4,740$**

3. Air Quality

**0-75 points** The applicant must calculate the cost per kilogram that will be reduced by the proposed project compared to the no-build alternative. The applicant must use the estimated CO, NO<sub>x</sub>, and/or VOC emissions reductions calculated in questions B.3. and divide it into the total project cost.

RESPONSE: The proposed improvements will be expected to reduce total emissions by **135 kilograms per day**. The total project cost is \$3,100,000. The cost per kilogram reduced by the proposed project is **\$22,937**.

**D. Development Framework Implementation.**

**425 points**

The *2030 Development Framework* is the initial “chapter” and unifying theme of the Council’s metropolitan development guide. Together with the Council’s regional policy plans, the *Framework* is intended to help ensure the orderly, economical development of the seven-county area and the efficient use of four regional systems: transportation, aviation, water resources (including wastewater collection and treatment) and regional parks and open space. The *Framework* was adopted in January 2004, and amended in December 2006.

The Council’s strategies are organized around four policies:



- Accommodating growth in a flexible, connected and efficient manner.
- Slowing the growth in traffic congestion and improving mobility.
- Encouraging expanded choices in housing locations and types.
- Conserving, protecting and enhancing the region’s vital natural resources.

Under the Metropolitan Land Planning Act, local communities must prepare and submit to the Council local comprehensive plans that are consistent with the Council's regional system plans. The new or updated local comp plans were due by the end 2008. Plans submitted for Council review after that date but not yet approved by the Council may be used for the purposes of answering these criteria.

1. Development Framework Planning Area Objectives

**0-75 points** Higher scores will be attributed to projects that demonstrate that the project supports *Framework Planning Area* policy directions and strategies and 2000-2030 forecasts reflected in local comprehensive plans (2008 update approved by Council or a plan update that is complete for review). Higher scores will also be given for projects that support more intense, mixed-use development (residential, commercial, industrial) in centers along transportation corridors.

Applicant provides:

- a) Project Area Location (The project area comprises the TAZs in which the project is located. Provide a map and identify TAZs in which the project is physically located);

**RESPONSE:** The project area forms the border between 2000 Met Council TAZs 258 and 259 with Zone 258 being west of TH 149 and Zone 259 east of TH 149 (see Figure 5, Attachment A).

- b) Identify what the *Framework* Planning Designation for the Project Area and how the project supports *Framework* strategies for the planning area (see *Framework* chapter 3 “Strategies for Geographic Planning Areas – <http://www.metrocouncil.org/planning/framework/documents.htm>.) including the relationship of the project to community development plans and objectives e.g. intensification of centers, mixed use development, development staging, and/or redevelopment/infill plans.

**RESPONSE:** The TH 149 corridor presently serves an important role in the regional roadway network as an “A” minor arterial route relieving traffic on I-35E and TH 55. Currently, the majority of land uses directly adjacent to and near TH 149 include mainly industrial and office developments. As mentioned in the *Grand Oak Business Park AUAR Update, Northeast Eagan Areawide Traffic Study and Lone Oak Business Campus Traffic Study*, substantial future development is expected in the northeast part of the city. These areas of development will rely on the TH 149 corridor for local and regional access. Future land use includes additional office and commercial developments.

The TH 149 corridor will also continue to play a vital role in serving north-south traffic in the City of Eagan. The proposed improvements will provide safer operations for the traffic accessing the office and retail nodes, as well as the I-494 and TH 55 regional transportation systems. North of I-494 between TH 149 and CR 63, future plans include the redevelopment of single-family residential housing units to multi-family residential in the City of Mendota heights. By improving the operations at the TH 149/I-494 interchange, the proposed project will help the corridor serve the more intense land uses planned along and near the corridor.

Land use intensification is born out of traffic analysis zones (TAZs) located adjacent to and near the project corridor. The table below shows the household and employment data for 2006/2007 and 2030 TAZs adjacent to the TH 149 corridor in Eagan. (It should be noted that the City of Eagan’s employment forecasts for 2030 exceed the Met Council system statement. The City and Met Council are in the process of reconciling the Citywide employment numbers.)

<b>TAZ #</b>	<b>2007 HH</b>	<b>2030 HH</b>	<b>Number Increase</b>	<b>2006 Employ</b>	<b>2030 Employ</b>	<b>Number Increase</b>
258	4	4	0	3,546	4,746	1,200
259	6	7	1	4,584	13,746	9,162
<b>Total Corridor</b>	<b>10</b>	<b>11</b>	<b>1</b>	<b>8,130</b>	<b>18,492</b>	<b>10,362</b>

Zone 258 is adjacent to the TH 149 (west) and Zone 259 is adjacent to TH 149 (east). Planned growth along the TH 149 route results in 1 additional households. Contrastingly, employment growth increases by 10,362 by the year 2030. Zone 259 shows the greatest amount of employment growth (increase of 9,162), which corresponds to the increase in land use to fully developed with retail, office, and commercial areas.

The City’s *Comprehensive Plan* shows many areas adjacent to the corridor as either being vacant or underutilized. The areas east and west of TH 149 show that some of the area is vacant and the land use maps indicate these areas will be mostly office and retail development. The proposed roadway improvements will be able to support the land use intensification as these areas fully develop.

The City of Eagan has completed three studies related to the project area: 1) *Northeast Eagan Areawide Traffic Study*; 2) *Transportation Infrastructure Needs Analysis (TINA)*; and 3) *Lone Oak Business Campus Traffic Study*. The *Northeast Eagan Areawide Study* examined the traffic impacts on roadways of development directly adjacent to the corridor. According to the *Northeast Eagan Areawide Study*, which incorporates some development in the Grand Oak Business Park, the proposed developments are anticipated to generate a significant amount of traffic (about 74,000 additional daily trips) with the office/clinics and retail land uses. Because the proposed development is anticipated to generate a large amount of traffic, the study recommends that TH 149 be a six-lane facility (see Attachment B).

The City of Eagan has also completed a *Transportation Infrastructure Needs Analysis (TINA)*, which looks at the City’s future transportation needs. The TINA helps the City determine future transportation projects based on traffic studies, and city, county, and state transportation improvement plans. The TINA includes this project as one of the City’s short-term projects to provide the increase in capacity to meet the needs of additional growth along the corridor over the next 20 years. The proposed project will support and anticipate the intensification of these developments.

Finally, the *Lone Oak Business Campus Traffic Study* examined the impact of an 85 acre office/warehouse development located approximately 0.8 miles east of TH 149. The proposed development utilizes TH 149 for access to the regional transportation network. The results of the study found that TH 149 will need to be expanded to a six-lane facility (three lanes in each direction) from TH 55 to the I-494 north ramp to accommodate additional regional traffic.

The City of Inver Grove Heights has completed an Alternative Urban Areawide Review (AUAR) that discusses land use changes in the northwest portion of the city, which is adjacent to proposed development in the northeast portion of Eagan (see Attachment B, Inver Grove Heights AUAR). Proposed land uses in Inver Grove Heights include low-density, medium-density, and high-density residential, office, industrial, and commercial developments. This development is expected to generate over 90,000 trips per day, some of which will use TH 149 between TH 55 and I-494. The proposed development in Inver Grove Heights will impact TH 149 with additional traffic along the project corridor. These developments, both in Eagan and Inver Grove Heights, will rely heavily on the TH 149 corridor for local and regional access. The proposed project will provide a stronger local link between the Cities of Eagan and Inver Grove Heights and stronger regional link to other surrounding areas and help support the intensification of the proposed developments.

c) Council staff will provide the following information to assist in the evaluation of this criterion:

TAZ Project Area demographic profile:

Population: 2000, 2010, 2020, 2030

Households: 2000, 2010, 2020, 2030

Employment: 2000, 2010, 2020, 2030

Retail Employment: 2000, 2010, 2020, 2030

TAZ Project Area land use profile:

o Acreage by existing land use category

o Planned land use (summarized from local comprehensive plans)

## 2. Natural Resources

**0-45 points** A project will score higher if sensitive natural resources are avoided and if “best management” practices are employed in project implementation beyond which is minimally required by law. Describe in a brief narrative how the project relates to identified regional natural resource areas and any local community natural resource inventory and reference attached map(s). If the project has potential for assisting restoration or has a potential adverse impact, describe the resource, impact and what implementation practices will be employed. For identified natural resource areas go to (<http://gis.metc.state.mn.us/topics/nrda/index.asp>).

**RESPONSE:** The proposed project will not impact any identified natural resource areas. When the proposed project is designed, all efforts will be taken to ensure that there are no or minimal impacts to natural resources in the project area. Best management practices with regard to construction will be employed to reduce impacts from runoff and other issues that occur during construction. Also, new construction can provide better mitigation than older roadways for runoff and other drainage issues. Therefore, when TH 149 is upgraded to a six-lane facility, drainage and roadway runoff can be minimized or even prevented, which would result in a better quality natural area.

The proposed project will increase the capacity and through mobility along the TH 149 corridor, providing better connections to civic centers in the area. Civic centers in the area include schools and parks. For example, Trinity Lutheran Church, a private school, is located near the intersection of TH 149 and TH 55, which is also a historic site.

The roadway connects to many parks and lakes north of the project corridor. The proposed project will improve the operations at the TH 149/I-494 interchange, which is an important

connection to the parks and civic areas north of the project corridor. Adjacent to TH 149 is the Mendakota Park, a 19-acre community park that has many amenities including softball fields, basketball and volleyball courts, a picnic shelter and paved walking paths within the park. Just north of the Mendakota Park is the Mendakota Golf Course. The Friendly Marsh Park, located near the project corridor, is a natural area that attracts a variety of wildlife and is adjacent to the Dodge Nature Center. The Dodge Nature Center is over 300 acres and offers a variety of activities and natural areas. Activities range from school programs to hiking to tours. Natural areas include prairies, marsh lands, ponds, orchards, and woodlands. The Dodge Nature Center also offers classroom spaces to teach children about various topics and has other buildings that house many animals.

In addition, the Saint Thomas Academy is located just west of TH 149 in Mendota Heights, along Mendota Heights Road. The Academy is a Catholic, all-male, college-preparatory military school for grades 7 through 12. East of the Saint Thomas Academy is the Visitation School, which is a Catholic School for boys and girls in Montessori preschool through sixth grade and a college preparatory school for young women in grades seven through twelve. Both schools are for students in the Twin Cities area.

3. Progress Towards Affordable Housing Goals

*NOTE: Information and analysis in this section will be provided by Council staff.*

**0-30 points** Up to 30 points can be awarded to a project, based upon a community’s or group of communities’ progress in addressing their affordable housing goals for 1996-2010.

For communities that participate in the Livable Communities Local Housing Incentives Program, data from their 1996-2010 negotiated housing goals will be used to determine the progress they have made toward providing opportunities to their address affordable housing goals.

For communities that do not participate in the Local Housing Incentives Program, progress will be measured against what the benchmarks were for their community in the Council’s LCA goal setting methodology used in determining goals for 1996 to 2010.

Example of Analysis:

Benchmark or Ownership Goal	Progress Made to Date	Benchmark or Rental Goal	Progress Made to Date	Average Progress Made
900 units	200 units (22%)	200 units	125 units (63%)	43%

Percent of Progress Made:	Points Awarded:
85-100%	30
65-85%	25
45-65%	20
25-45%	15
10-25%	10
1-10%	5

4. Land Use and Access Management Planning

The Development Framework includes support for connected land use patterns served by an integrated street network. Access management along highways is a key component of planning for these objectives. In addition, various access management strategies can reduce crashes, improve traffic flow, and add operational capacity for the applicable roadway. Higher scores will be given to projects that are developed using a local access management plan and to projects located in communities that have a regulatory framework established to protect and improve access control in the future. Additional points will be awarded to projects that implement these plans by reducing undesired access points.

**0-50 points** Reference and describe the local access management plan used to develop the proposed project, and describe the corresponding county or state access management plan which supports the regional road network. Higher scores will be awarded to projects developed with an approach that is consistent with county or state access management plans.

RESPONSE: TH 149 is a state highway and is under the Minnesota Department of Transportation's jurisdiction. The plan uses access management guidelines developed by Mn/DOT (see Attachment C). According to Mn/DOT's guidelines, TH 149 is a Category 5B, which is a minor arterial in an urban/urbanizing area.

Mn/DOT's access guidelines are the focus for the corridor's access management plan. The recommended spacing for "A" minor arterials in urbanizing areas is shown in Attachment A, Figure 6. In general, full-access signalized intersections may be placed at quarter-mile (1,320 feet) spacing and secondary access or right-in/right-out access can be spaced an eighth of a mile (660 feet) apart. Private driveway access is subject to exceptions and deviations.

Existing and proposed access along TH 149 in the project area shown in Attachment A, Figure 7, is consistent with Mn/DOT access management guidelines. No additional access is anticipated in the future.

Provide and identify intersection spacing and signal spacing guidelines, and driveway allowance criteria used for the proposed project and the corresponding county or state access management guidelines.

RESPONSE: Mn/DOT's access guidelines are the focus for the corridor's access management plan. In general, full-access signalized intersections may be placed at quarter-mile (1,320 feet) spacing and secondary access or right-in/right-out access can be spaced an eighth of a mile (660 feet) apart. Private driveway access is subject to exceptions and deviations.

## 5. Land Use and Access Management Planning

**0-50 points** Having the necessary regulatory framework is essential for protecting the efficient functioning of the regional roadway network. Reference (adoption date) and describe the local zoning and subdivision ordinance regulations that are in place to maintain the access plan as adjacent properties are developed and/or redeveloped. Higher scores will be awarded to projects in communities with existing or proposed local support of the access management plan through existing regulations or ordinances.

RESPONSE: The City of Eagan adopted Mn/DOT's access spacing guidelines via the Transportation Section of its *Comprehensive Plan*. The City Council approved the 2008 update to the *Comprehensive Plan* on May 19, 2009.

## 6. Corridor Access Management Improvements

**0-50 points** Projects that help to implement the access management plan by removing or modifying non-conforming access points will receive points in this criterion. Identify the access locations and access management that currently exists and that will be allowed once the project is completed. Indicate by the following classifications, the existing access locations inconsistent with the proposed access management approach and any access locations that will be modified:

The existing access points are in conformance with Mn/DOT's access management guidelines. Upon completion of the project, Mn/DOT's access management guidelines will continue to be implemented along the project corridor.

### a. Private Residential Driveways/Field Entrances

RESPONSE: The TH 149 project corridor does not contain any existing non-conforming private residential driveways or field entrances.

### b. Low-Volume Private Driveways \* (Under 500 trips per day)

RESPONSE: The TH 149 project corridor does not contain any existing low-volume private driveways.

### c. High-Volume Private Driveways \* (Over 500 trips per day)

RESPONSE: The TH 149 project corridor does not contain any existing high-volume private driveways.

### d. Public Streets

RESPONSE: The current intersection spacing for public streets is in conformance with Mn/DOT's access guidelines.

\* *Private driveways may be commercial, industrial or institutional uses such as school or hospitals.*

## 7. Integration of Modes

**0-125 points** The Transportation Policy Plan places importance on investing in multimodal transportation choices and supports the development of a transportation system that accommodates the mobility needs of users of all modes including motorists, transit vehicles and riders, pedestrians of all levels of functional ability, bicyclists and freight movers. "A" Minor Relievers are located parallel to congested principal arterials in the core, urban reserve and urban staging areas. Many of these roadways are served by transit and accommodate travel to congested activity centers and others provide important medium length routes parallel to principal arterials that may be inaccessible to non-motorized travelers. "A" Minor Relievers also play an important role in the movement of freight because they add capacity to freight origins and destinations.

Please provide the information requested below on the existing conditions and proposed changes to the roadway environment and include maps, schematics or cross-sections as appropriate. Please note that all projects that receive STP funding must meet the requirements of the Americans with Disabilities Act (ADA). If the project does not include any multimodal components or does not impact one or more modes of travel, it is only necessary to answer questions related to the existing

conditions for each mode. Evaluation of this criterion will be based on the degree to which multimodal transportation objectives are incorporated into the project. The appropriate extent and character of multimodal improvements may differ based on the role that the road serves and differing roadway conditions that can affect its design.

**Transit:**

Roadway projects can support transit service by improving accessibility to transit stops by pedestrians, installing bus stop amenities for passengers, placing bus stops on the far side of intersections and improving the pedestrian environment, particularly for people with disabilities. In some cases, other improvements to the roadway including curb bump-outs for bus stops or the construction of bus lanes can improve transit service reliability and speed along the segment. Projects will not be evaluated based on the existence of transit service but rather how the needs of transit vehicles and passengers are incorporated into the project if transit service exists.

Existing Conditions:

Is there transit service and/or stops along the segment of the project?

**RESPONSE:** Transit service utilizes TH 149 for access service points within the Grand Oak Business Campus and the Water's Corporate Complex, but does not offer stops along the project corridor.

If so, provide a map that shows the current placement of bus stops along the segment. If not, the project will be evaluated solely on the non-motorized and freight components of this criterion.

Describe transit stop compliance with current ADA Accessibility Guidelines if applicable (curb ramps, boarding and alighting areas and accessible connections to sidewalks and streets).

**RESPONSE:** Not applicable

Changes to Conditions from the Project:

How will the project affect transit service or the conditions for transit riders along the project segment?

**RESPONSE:** Not applicable

**Pedestrians:**

Roadway projects can be opportunities to improve the environment for pedestrian activity that occurs or may occur in the project area. Improvements to the pedestrian environment include the construction or reconstruction of walkways or multi-use paths, separating pedestrian walkways from vehicle traffic through the installation of a buffer such as a boulevard and providing lighting. Equally important to improving pedestrian movement along the project area is improving the safety and ease of pedestrian crossings of the roadway. Some examples of these kinds of improvements are installation of pedestrian countdown signals, marking crosswalks, reducing the effective crossing distance for pedestrians by installing curb extensions and pedestrian medians, and by influencing the speed of vehicles making turning movements at intersections. Different treatments are appropriate for different types of roadway conditions.

Provide information on the existing conditions for pedestrians in the project area:



Provide a map or aerial photo/schematic that shows all existing pedestrian walkways, multi-use paths and signalized and unsignalized pedestrian crossings in the project area.

See Figures 8-10, Attachment A for details on existing pedestrian facilities.

Describe or show on a map how the walkways or multi-use paths are connected to a wider pedestrian network beyond the project area. Describe destinations in the network such as schools, residential areas, transit stops, etc. within a half-mile of the project area:

**RESPONSE:** The existing pedestrian facilities within 0.5 miles of the project area consist of an off-roadway trail systems located in the Grand Oak business campus (west side of TH 149, between TH 55 and I-494), in The Waters Corporate Complex (east side of TH 149, between TH 55 and I-494) and along Mendota Heights Road in the City of Mendota Heights. No pedestrian facilities currently exist along the proposed project corridor.

Briefly describe the pedestrian environment along the walkways in the project area including landscaping, roadway/walkway buffers, lighting, etc.. If markedly different conditions exist along different parts of the roadway segment, describe them separately paying particular attention to existing deficiencies that will be addressed by the project. If there are bridges along the project section, describe the pedestrian condition on and approaching the bridge.

**RESPONSE:** No pedestrian facilities currently exist along the proposed project corridor.

Provide information on changes to the pedestrian environment from the project and provide a plan or schematic if one has been developed:

See Figure 4, Attachment A for details on the proposed multiuse trail.

Describe methods that will be used to facilitate safer and more pleasant pedestrian movement **alongside** the roadway

**RESPONSE:** The proposed project includes the construction of a 10-foot wide multiuse, bituminous trail separated from the TH 149 shoulder by a grass boulevard. The trail will have 2-foot wide shoulders and will be designed to a 20-mph design speed. The trail is proposed to be constructed on the west side of TH 149 to reduce the number of roadway crossings and eliminate bicycle/vehicle interactions at the I-494 north and south ramps. The existing bridge has a concrete barrier separating vehicular traffic from bicyclists who choose to use the trail.

Describe methods that will be used to facilitate safer pedestrian **crossings** of the roadway

**RESPONSE:** All street crossings will occur at controlled (i.e. traffic signal) intersections with painted crosswalks. Traffic signal design will follow Mn/DOT trunk highway design standards and may include pedestrian countdown indicators if allowed

If there are any new walkways or multi-use paths to be constructed with this project, will they be connected to an existing wider pedestrian network beyond the project area? Describe or show on a map destinations in this network such as schools,

residential areas, transit stops, etc. within a half-mile of the project area. (If the project only includes reconstruction of existing pathways described above, do not answer this question.)

**RESPONSE:** The proposed multiuse trail will provide improved connections to the existing pedestrian facilities in The Waters and Grand Oak employment areas located immediately adjacent to the project corridor. The proposed multiuse trail will also connect to an off-street trail system in Mendota Heights. The off-street Mendota Heights trail system connects to several schools, including St. Thomas Academy, Visitation and Friendly Hills Middles School.

**Bicyclists:**

Roadway projects can be an opportunity to improve the conditions for bicycle travel along and crossing the corridor. Examples of ways to improve the bicycling environment include installing bike lanes or 5 foot marked shoulders, off-road paths where conditions favor them, and intersection treatments designed to reduce motor vehicle and bicycle conflict.

Provide information on the existing conditions for bicyclists in the project area:

Provide a map or aerial photo/schematic that shows all existing bicycle facilities along the roadway segment (off-road trails, multi-use paths, bike lanes, marked shoulders, unmarked shoulders, and bicycle accessible crossings of the roadway) as well as any regional trail that intersects with the project segment.

See Figures 8-10, Attachment A for details on existing bicycle facilities.

Provide information on changes to the bicycling environment from the project and provide a plan or schematic if one has been developed:

See Figure 4, Attachment A for details on the proposed multiuse trail.

Describe methods that will be used to facilitate safer and more convenient bicycle travel along the roadway segment (pathway construction, bike lane striping, shoulder improvements, improved accommodation on bridges etc.). If a project plan has been developed that shows the location of improvements, please provide it as well.

**RESPONSE:** The proposed project includes the construction of a 10-foot wide multiuse, bituminous trail separated from the TH 149 shoulder by a grass boulevard. The trail will have 2-foot wide shoulders and will be designed to a 20-mph design speed. The trail is proposed to be constructed on the west side of TH 149 to reduce the number of roadway crossings and eliminate bicycle/vehicle interactions at the I-494 north and south ramps. The existing bridge has a concrete barrier separating vehicular traffic from bicyclists who choose to use the trail. All street crossings will occur at controlled (i.e. traffic signal) intersections with painted crosswalks. Traffic signal design will follow Mn/DOT trunk highway design standards and may include pedestrian countdown indicators if allowed.

The proposed project will also improve the traveling conditions for bicyclists who choose to ride on the roadway shoulder. Currently, the shoulder pavement is aged and rough for use by a bicycle. The proposed

project will construct a new bituminous shoulder providing a better riding surface for bicyclists who choose to ride on the shoulder.

Does the bikeway included in this project connect to an existing official bikeway network? Describe destinations in the network that are or will be accessible by bicycle, such as schools, residential areas, employment areas, regional trails and parks etc. within one mile of the project area.

**RESPONSE:** No official bikeway network exists in this area. However, the proposed multiuse trail would connect to an off-street trail system in Mendota Heights. The off-street Mendota Heights trail system connects to several schools, including St. Thomas Academy, Visitation and Friendly Hills Middles School. The proposed multiuse trail will also provide improved connections to The Waters and Grand Oak employment areas located immediately adjacent to the project corridor.

The proposed multiuse trail would also connect to an on-roadway (unmarked, wide shoulder) route which continues north on TH 149 and links to numerous trails, parks and lakes in Mendota Heights. Construction of the proposed multiuse trail would provide an improved connection through the City of Eagan to the North Urban Regional Trail in Mendota Heights at TH 149 and TH 110.

**Freight:**

Roadway projects that are located in important freight moving areas and that aim to improve freight movement will receive higher scores in this criterion.

What is the current daily heavy commercial traffic along the project segment?

**RESPONSE:** According to Mn/DOT's 2006 Trunk Highway Traffic Volumes map, the current heavy commercial average daily traffic along the project segment is 720 vehicles per day.

Is the roadway used to access any of the regional intermodal freight terminals in Appendix J? If so, please list them:

**RESPONSE:** Adjacent land uses to the project corridor currently include industrial uses with high volumes of truck traffic.

Most of the trucking activity occurs in the northern 1/3 of the City with concentrations along TH 149 (i.e. Thomson Reuters, UPS) and along TH 13. Thomson Reuters and UPS are located on TH 149, south of TH 55. Thomson Reuters recently expanded their facilities to include more warehouse and manufacturing uses, generating additional truck traffic than what had previously existed. Many of the trucks destined for these locations, and to other locations within the city, will use the portion of TH 149 between I-494 and TH 55 as the main, direct route to these locations because it provides convenient access to the regional highway system. Also, in 1997, the City adopted the Trucking Study Report that identifies several key truck-oriented routes in Eagan. The routes include all state trunk highways, which includes TH 149. Again, much of the truck traffic within Eagan uses the project segment of TH 149 to access I-494.

Does the road connect any of the terminals to a freeway? If so, describe the route:

**RESPONSE:** The proposed project provides a direct connection to I-494. By improving safety and adding capacity to the TH 149 corridor and I-494 interchange, the movement of goods and freight to and from these facilities will be enhanced.

**E. Maturity of Project Concept. 100 points**

Projects selected through this solicitation will be programmed for construction in 2013 or 2014. That is a fairly long time but it takes several years to complete preliminary engineering, environmental studies and acquire right-of-way. The region must manage the federal funds in each year of the TIP. Projects that are not implemented in their original program year create problems. Proposed projects that have already completed some of the work is a plus. A schedule is important to know what kind of work might be needed. Large projects that need right-of-way require more work than others that do not.

**0-100 points** Applications involving construction must complete the project implementation schedule found in Appendix K. A detailed schedule of events is expected for all phases of the project. Applications involving non-construction projects must include a detailed discussion of the timeframes involved for initiating and completing each phase of planned activities. Points under this criterion are assigned based on how many steps have been taken toward implementation of the project. These steps reflect a federally funded project development path.

**RESPONSE:** In addition to the numerous studies that have been completed regarding this project, a preliminary layout and draft Project Memorandum have also been completed. Please refer to Appendix K in Attachment E for a project of the development checklist. The schedule identified in Appendix K is achievable and able to be accelerated if needed.

**TOTAL: 1,250 POINTS**

"A" Minor Arterial Reliever - Prioritizing Criteria Scores 2009

project no.	applicant	project name	federal \$	match \$	prioritizing criteria															
					A.1. 0-100	B.1. 0-100	B.2. 0-100	B.3. 0-150	C.1. 0-125	C.2. 0-75	C.3. 0-75	D.1. 0-75	D.2. 0-45	D-3 0-30	D-4 0-50	D-5 0-50	D-6 0-50	D-7 0-125	E.1. 0-100	Total Points
AR-09-10	Ramsey County	CSAH 49/TH 36 Interchange	\$7,000,000	\$13,500,000	100	84	100	105	119	24	56	47	10	25	50	20	23	70	100	933
AR-09-01	Anoka County	CSAH 51 (University Ave) Reconstruction	\$6,120,000	\$1,530,000	75	30	85	118	102	44	75	45	45	20	50	50	38	103	43	923
AR-09-05	Hennepin County	CSAH 61 (Shady Oak Rd) Reconstruction	\$7,000,000	\$3,000,000	69	28	53	58	108	33	40	56	8	25	45	45	45	79	86	778
AR-09-06	Eagan	TH 149 Reconstruction	\$2,480,000	\$620,000	90	30	64	22	125	75	65	40	7	25	50	40	0	58	86	777
AR-09-07	West St Paul	Robert Street Improvements	\$7,000,000	\$3,383,000	99	50	70	37	123	25	50	54	7	30	50	10	50	57	50	762
AR-09-03	Hennepin County	CSAH 5 (Franklin Ave) at E River Pkwy Intersection Reconstruction	\$4,000,000	\$1,000,000	80	34	36	58	34	44	29	70	7	25	45	45	27	69	50	653
AR-09-08	Richfield	CSAH 53 Reconstruction	\$4,498,000	\$1,124,000	74	24	43	0	102	0	46	60	7	25	25	10	40	104	43	603
AR-09-04	Hennepin County	CSAH 3 (Excelsior Blvd) Reconstruction	\$7,000,000	\$3,000,000	85	55	21	15	67	0	9	62	7	20	45	45	28	86	40	585
AR-09-02	Maple Grove	TH 169 & CSAH 130/152 Interchange Reconstruction	\$7,000,000	\$6,410,000	92	12	58	25	0	12	38	75	28	20	45	35	13	76	39	568
AR-09-09	Richfield	CSAH 35 (Portland Av) Reconstruction	\$1,325,408	\$331,352	80	30	2	23	0	0	2	63	7	25	10	10	0	91	50	393
<b>TOTAL FEDERAL FUNDS</b>			<b>\$53,423,408</b>	<b>\$33,898,352</b>																

<b>A.1.</b>	Relative Importance of Route
<b>B.1.</b>	Crash Reduction
<b>B.2.</b>	Air Quality
<b>B.3.</b>	Congestion Reduction
<b>C.1.</b>	Crash Reduction Cost Effectiveness
<b>C.2.</b>	Congestion Reduction Cost Effectiveness
<b>C.3.</b>	Air Quality Cost Effectiveness
<b>D.1.</b>	Development Framework Planning Area Objectives
<b>D.2.</b>	Natural Resources
<b>D-3</b>	Progress Toward Affordable Housing Goals
<b>D-4</b>	Land Use And Access Mgmt Planning
<b>D-5</b>	Land Use And Access Mgmt Regulatory Framework
<b>D-6</b>	Access Management Improvements
<b>D-7</b>	Integration of Modes
<b>E.1.</b>	Maturity of Project Concept