

Northwest Area Transportation Study

Final Report

October 12, 2012

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EXECUTIVE SUMMARY

In 2007 a task force of community and business interests in the West Midway area of St. Paul convened to analyze and make recommendations on the transportation network in the area bounded by Larpenteur, Highway 280, Snelling Avenue and I-94. The Northwest Area Transportation Study Task Force, aided by City staff and consultants, has finalized this Study, which will be conveyed to the Saint Paul Planning Commission for its consideration.

The Study area includes residential neighborhoods on the periphery, major industrial development in the middle, and a network of streets and rail corridors – making for a very diverse area of the City. As is typical in these types of urban settings, industrial activities include traffic, noise and air quality challenges both for the functioning of the industrial activities as well as surrounding residential neighborhoods. There are other efforts underway that look at land use and development issues for this community; specifically the West Midway Industrial Study. However, this Study is concerned with the transportation network.

Recommendations Summary

1. The East-West connection should be removed from consideration and have no additional study.
2. At this time, the Task Force does not recommend a connection between Granary Road in Minneapolis to Westgate Drive.
3. The north/south connection should continue to be considered over the long term.
4. Improve the truck route connection along Pierce Butler/Transfer Road/Vandalia.
 - Improve the connection along Ellis Avenue between Transfer Road and Vandalia
 - Improve Vandalia so as to be the primary north/south truck connection to I-94
 - Work with Minnesota Department of Transportation to improve capacity and traffic flow at the Vandalia/I-94 Interchange
5. Improve Territorial Road for access to/from the West Midway Industrial Area and Highway 280 northbound.
6. Relocate the I-94 eastbound access at Highway 280 from Franklin Avenue to Eustis Street
7. Develop several bikeway improvements, consistent with the *Bike Walk Central Corridor Action Plan*
8. In coordination with the *Bike Walk Central Corridor Action Plan*, develop sidewalks on every street in the core industrial area; at least on one side of the street and preferably both sides.

PURPOSE OF THE STUDY

To provide an overall review of the current and future transportation needs, based on planned redevelopment, neighborhood goals, and local and regional needs, and further to develop a balanced area transportation plan that addresses these needs.

GOAL OF THE STUDY (as adopted by the Task Force):

Develop a balanced area Transportation Plan that addresses current and future needs based on planned redevelopment, neighborhood goals and local and regional objectives.

OBJECTIVES

- Protect or improve existing residential neighborhood quality by ensuring efficient access by all modes of movement while considering noise and air quality impacts, and reducing conflicts between industrial and residential vehicular traffic.
- Protect or improve access to business and industry by improving direct, adequate and safe access by all modes.
- Achieve a balanced street transportation network by providing access to business and industry consistent with the City's Comprehensive Plan, with special attention paid to minimizing negative impacts to existing and planned residential neighborhoods.

CONTEXT

The Task Force was populated by a diverse group of individuals representing various neighborhoods; Hamline-Midway, Union Park, St. Anthony Park, and differing interests; Chamber of Commerce, St. Paul Smart Trips, neighborhood residents, etc. There are a variety of activities that were considered as part of this Study:

1. **Minnesota Department of Transportation Study of Snelling Avenue.** Stretching from Selby Avenue and Midway Parkway, a major portion of this study overlaps the Northwest Area Transportation Study area. The MnDOT study will likely be completed before the end of City deliberations on this Study, and will be considered at that time.
2. **Minnesota Department of Transportation Study of I-94.** MnDOT will also be conducting a study on I-94 between downtown Minneapolis and downtown St. Paul. This study will consider a series of improvements to I-94 as well as the Snelling, Vandalia and Highway 280 interchanges. Its conclusions will, hopefully, result in enhanced capacity of the interchange at Vandalia.
3. **West Midway Industrial Study.** This study has been in abeyance awaiting completion of the Northwest Area Transportation Study. It considers land use as well as business retention/development, while incorporating recommendations of this Study.
4. **Redevelopment Activities.** There are a variety of developments being considered, and may be implemented in the near future which may influence the implementation of the recommendations of this study.

5. **City's Comprehensive Plan.** Included in the City's Comprehensive Plan are the District 12 Plan, the Hamline-Midway Council Draft Transportation Plan, Citywide Transportation Policy Plan, Central Corridor Development Framework, Station Area Plans (Westgate, Raymond, and Fairview) and the Bike Walk Central Corridor Action Plan. This Study has considered recommendations from those elements, some of which may be amended in accordance with final recommendations approved by the City Council.

6. **Metro Transit.** The Green Line LRT (Central Corridor) is scheduled to begin service in 2014. When that occurs, the limited service route 50 on University Ave. will be eliminated and the route 16 service intervals will be increased (reduced service). There are several improvements that Metro Transit will be implementing in the study area at that time (and possibly sooner). Increased service of route 87, "Rapid Bus" service on Snelling Avenue, possible relocation of a storage/maintenance facility to the West Midway area, and consideration of placing a route on the North-South Connection if and when it is constructed.

TRAFFIC MODELING

SRF Consulting Group was hired to perform the traffic modeling for the various roadway alternatives. As part of their analysis, SRF utilized the Met Council's Regional Transportation Model to show the current traffic flow and projected flow for the year 2030, given no additional street improvements (the No Build Alternate). Historic traffic volumes and growth rates, demographic and socio-economic data, transit service, and land use projections are all taken into account in the modeling study. What can not be included in the model projections includes spikes in gas prices, sudden economic changes, or changes in transportation habits.

Various alternatives were considered. The primary alternate route was a north-south connection over the railroad tracks connecting Hamline-Midway to North St. Anthony. Four variations of the same initial crossing from Pierce Butler at the south end were analyzed: to Energy Park Drive (Alternative 1); to Como Avenue (Alternative 2); to Commonwealth Avenue (Alternative 3); and to Larpenteur Avenue (Alternative 4). A fifth alternative studied an east-west connection from Pierce Butler Route to the proposed Granary Road in Minneapolis. And finally, a sixth alternative studied an east-west connection from Pierce Butler Route to Energy Park Drive. (See page 11 for a map showing each alternative.)

The results of the traffic analysis for each alternate is summarized below and also the Attachment "[Alternative Traffic Forecasts, March 29, 2012.](#)"

The 2030 No Build Alternative

- Maintains current road network.
- Does nothing to improve access for business or industry, and does not relieve traffic from Snelling, University, Raymond, Pierce Butler or any neighborhood street.
- Does nothing to promote planned redevelopment in the industrial areas.
- Does nothing to make it easier for Bicyclists or Pedestrians to travel from south to north and vice-versa.
- Maintains the current feel of the neighborhood.
- The No Build Alternative does exactly as the name implies, nothing changes.

Alternative 1 – North-South Connection to Energy Park Drive

- Estimated Construction Cost: \$33.3 million (does not include right of way)
- Provides a connection from Pierce Butler/Transfer Road to Energy Park Drive with an enhanced connection between Transfer Road and Vandalia near Ellis Street. Also includes a long bridge over BNSF tracks and Burlington Pond.
- Provides reduction of traffic on Raymond and Minnehaha west of Fairview.
- Adds significant traffic to Energy Park Drive (from 10,000 to 14,200), Transfer Road (12,000 to 14,900) and Prior Avenue (3,100 to 5,300).
- Increases traffic on more “residential” Fairview (4,200 to 4,900)
- Does not relieve traffic on Snelling or University.
- Does not improve bicycle or pedestrian access from North St. Anthony to South St. Anthony.
- Improves access to/from West Midway to Highway 280. This would primarily be for trucks accessing business, warehouse and industry in the West Midway area.
- Is very expensive with very little benefit.

Alternative 2 – North-South Connection to Como Avenue

- Estimated Construction Cost: \$39.7 million (does not include right of way)
- Provides a connection from Pierce Butler/Transfer Road to Energy Park Drive and ending with an at-grade intersection with Como Ave. Enhances the connection between Transfer Road and Vandalia near Ellis Street. Also includes a long bridge over BNSF tracks, Burlington Pond, Energy Park Drive and another set of BNSF mainline tracks.
- Provides significant reduction of traffic on Raymond Ave (11,200 to 7,800) and on Snelling Ave. north of Pierce Butler (50,000 to 40,000).
- Does not relieve traffic on Snelling Ave. south of Pierce Butler.
- Results in a smaller increase of traffic on Energy Park Drive than Alternative 1 (10,000 v. 12,300).
- Increases traffic on Fairview (4,200 to 5,100).
- Provides connection from Hamline-Midway to North St. Anthony for all modes.
- Improves access to St. Paul Campus of the U of M and Fairgrounds.

Alternative 3 – North-South Connection to Commonwealth Avenue

- Estimated Construction Cost: \$40.8 million (does not include right of way)
- Is virtually the same as Alternate 2 but would extend the connection to Commonwealth Ave.
- Does not change traffic volumes on other streets, with the exception of Prior which increased from 3,100 to 6,900 and Transfer Road which increased from 12,000 to 18,000.
- Relieves Raymond, Snelling and University to the same extent as Alternative 2.
- Increases in traffic similar to Alternative 2.
- Provides more direct access to U of M and to Fairgrounds.
- Provides direct bicycle and pedestrian access to U of M.

Alternative 4 – North-South Connection to Larpenteur Avenue at Fairview

- Estimated Construction Cost: \$43.8 million (does not include right of way)
- Extends the connection to Larpenteur Avenue at Fairview with an at-grade intersection at Commonwealth and also at Como and a grade separated interchange at Energy Park Drive.
- Provides direct access from West Midway to Rosedale shopping center via Fairview.
- Relieves more traffic than other alternatives from Snelling north of Pierce Butler (50,000 to 39,000).
- Provides direct access to Highway 36 from West Midway and North St. Anthony.
- The only alternative that relieves traffic on Cleveland near Larpenteur (6,800 to 8900).
- Significantly reduces traffic on Raymond (7,800 from 11,200), Snelling north of Pierce Butler (39,000 from 50,000), and Minnehaha (4,800 from 5,400).
- Removes 3000 vehicles per day from Highway 280.
- Does not reduce traffic on Snelling south of Pierce Butler.
- Provides additional bicycle/pedestrian link from University to Roseville.
- Moderately increases traffic on Energy Park Drive, Prior, Transfer Road and Vandalia.
- Increases traffic on Fairview (4,200 to 5,200).
- Improves truck accesses to/from Highway 280 via Energy Park Drive and to/from Hwy 36.
- Most expensive of all alternates considered.

Alternative 5 – East-West Connection Pierce Butler to Granary Road

- Estimated Construction Cost: \$21.9 million (does not include right of way)
- Connects Pierce Butler Route to Granary Road in Minneapolis. From Pierce Butler there would be a bridge over the railroad tracks and at grade accesses at Vandalia, Hersey, and West Gate Drive. There would not be an interchange with 280.
- Increases traffic on Pierce Butler, Prior, Fairview and Minnehaha.
- Does not relieve traffic on Snelling Ave. north of Pierce Butler and adds 1000 vehicles per day south of Pierce Butler.
- Does not improve access to highway 280, Highway 36, or I-94.
- Does not improve connectivity to/from North and South St. Anthony.
- Does not relieve traffic on University.
- Does relieve traffic from I-94.
- Creates an east-west bicycle connection between the U of M East Bank Campus in Minneapolis to the East Side of St. Paul (upon completion of the Pierce Butler East Extension).

Alternative 6 – East-West Connection to Energy Park Drive

- Estimated Construction Cost: \$39.3 million (does not include right of way)
- Connects Pierce Butler/Transfer Road to Energy Park Drive (similar to Alternative 1) However it utilizes more of an east-west alignment. Would require a bridge over the railroad tracks and over Energy Park Drive.
- Dramatically increases traffic on Energy Park Drive east of Raymond and Prior.
- Relieves traffic on Raymond, similar to Alternative 1 (9,000 down from 11,200).
- Does not significantly relieve traffic anywhere in the study area.
- Does not provide additional bicycle/pedestrian access from North to South St. Anthony.

CONCLUSIONS

Vehicular traffic forecast for 2030:

The No-Build alternative is adequate, but not optimal, for future vehicular traffic. Traffic on Raymond will increase to near congestion levels by 2030 and there is no improvement in truck traffic on Raymond, Pierce Butler, and through the Hamline-Midway neighborhood.

The East-West connection alternatives do not provide vehicular traffic improvements and increase traffic on Pierce Butler, Prior, Fairview and Snelling south of Pierce Butler. The East-West alternatives do not achieve the City and Community priorities.

The North-South connection provides positive impacts on vehicular traffic. The further the new road extends to the north, the more north/south traffic it relieves. When extended to Larpenteur Avenue, it reduces traffic on Raymond, Minnehaha and Snelling north of Pierce Butler and improves truck access to the industrial area. However, it could negatively impact University agriculture research lands. Traffic also increases on Fairview between Pierce Butler and Minnehaha. This option is the most expensive and the cost is difficult to justify for the existing land uses and the forecast traffic.

Bicycle and Pedestrian Improvements:

There are currently existing bike facilities on Como, Raymond, Prior, and Minnehaha. Raymond is scheduled to undergo modification beginning in 2013, which will include alignment improvements under the BNSF bridge north of Energy Park Drive. Bicycle lanes and improved pedestrian crossings are also included.

Charles Avenue from Aldine east to Park Avenue has been identified as a preferred bike boulevard by the City and is currently in the planning stage. Aldine from I-94 to Hewitt or Taylor is being considered by the Snelling Study group as an alternate route for Snelling Avenue.

As a part of the funded City project; the Central Corridor Sidewalk Infill Project, several sidewalks are proposed to be built on streets that currently have none in the study area.

The goals of the Task Force for sidewalks are:

- Collector Arterial Streets – Sidewalk on at least one side of street, but prefer both.
- Local/Residential Streets - Sidewalk on at least one side of street, but prefer both.
- Industrial Park Streets – Sidewalk on one side and bike path on other side.

RECOMMENDATIONS

1. The East-West connection should be removed from consideration and have no additional study.
2. At this time, the Task Force does not recommend a connection between Granary Road in Minneapolis to Westgate Drive as it does not adequately serve St. Paul interests and only functions as access to and from the “SEMI” area in Minneapolis and 280.
3. The North-South connection should continue to be considered if it is shown to provide significant new redevelopment opportunities or if there is new development that changes the 2030 traffic forecast. Further consideration requires additional study to determine overall costs including right of way, and to determine the willingness of other institutions to support a new road in this alignment. These institutions include BNSF railroad, the University of Minnesota, the Minnesota State Fair, Falcon Heights, Roseville and Ramsey County. Alternatives that extend north of Como need to identify mitigations to the potential negative impacts on University of Minnesota agricultural research lands and on traffic on Fairview Avenue.
4. Provide improved vehicular access to the industrial area from Highway 280 via Territorial Road (which also reduces traffic on Raymond between Energy Park Drive and Hampden, and on Hampden between Raymond and Hersey). Allow trucks to use Territorial Road from Highway 280 to Hampden, and improved traffic control at Territorial/Hampden and at Territorial/Vandalia.
5. Improve the connection between Transfer Road and Vandalia at/near Ellis, thereby drawing north/south traffic to Vandalia and away from University between Transfer and Vandalia.
6. Working with MnDOT, make traffic flow improvements at the Vandalia – I-94 interchange.
7. Improve access to eastbound I-94 directly from Eustis, not at Franklin.
8. Improve/reconstruct Pierce Butler Route (Transfer Road to Grotto) to match configuration of proposed East Extension project to include a median, on road bike lanes and an off road trail.
9. Improve on-street bicycle accommodations on:
 - Raymond – University to Como (3 Phases: 2013, 2015 & 2016)
 - Charles/Carlton/Territorial/Westgate Drive from Transfer Road to the U of M Transitway.
 - Transfer Road from Pierce Butler to University.
 - Cleveland from I-94 to University (currently under study).
 - Bike facility treatment on Aldine/Hewitt or Taylor from I-94 to Snelling.
 - Franklin from Pelham to West City Limits.
 - Lanes on Pierce Butler.
 - Lanes on any future North-South connector.
10. Further study improvements for off-street bicycle facilities on:
 - Langford Park over BNSF to Energy Park Drive.
 - Minnehaha Extension over Minnesota Commercial RR to Transfer Road/Charles.
 - Vacated Gibbs under BNSF to Energy Park Drive (unclog and inspect tunnel and negotiate R/W with property owner).
 - Transfer Road – Pierce Butler to University.
 - Snelling over PB/BNSF/EPD/Como (Snelling Study).
 - Path along Pierce Butler – Grotto to Transfer Road
 - Path along any future North-South Connector

11. Investigate full range of noise mitigation measures on Pierce Butler between Snelling and Prior.
12. Additional study of truck movements within the study area should be conducted as part of any planned road improvement project.

TASK FORCE

The Northwest Area Transportation Study Task Force met for the first time in February 2007. At that time the Saint Anthony Park Community Council invited the following people to form the initial Public Task Force:

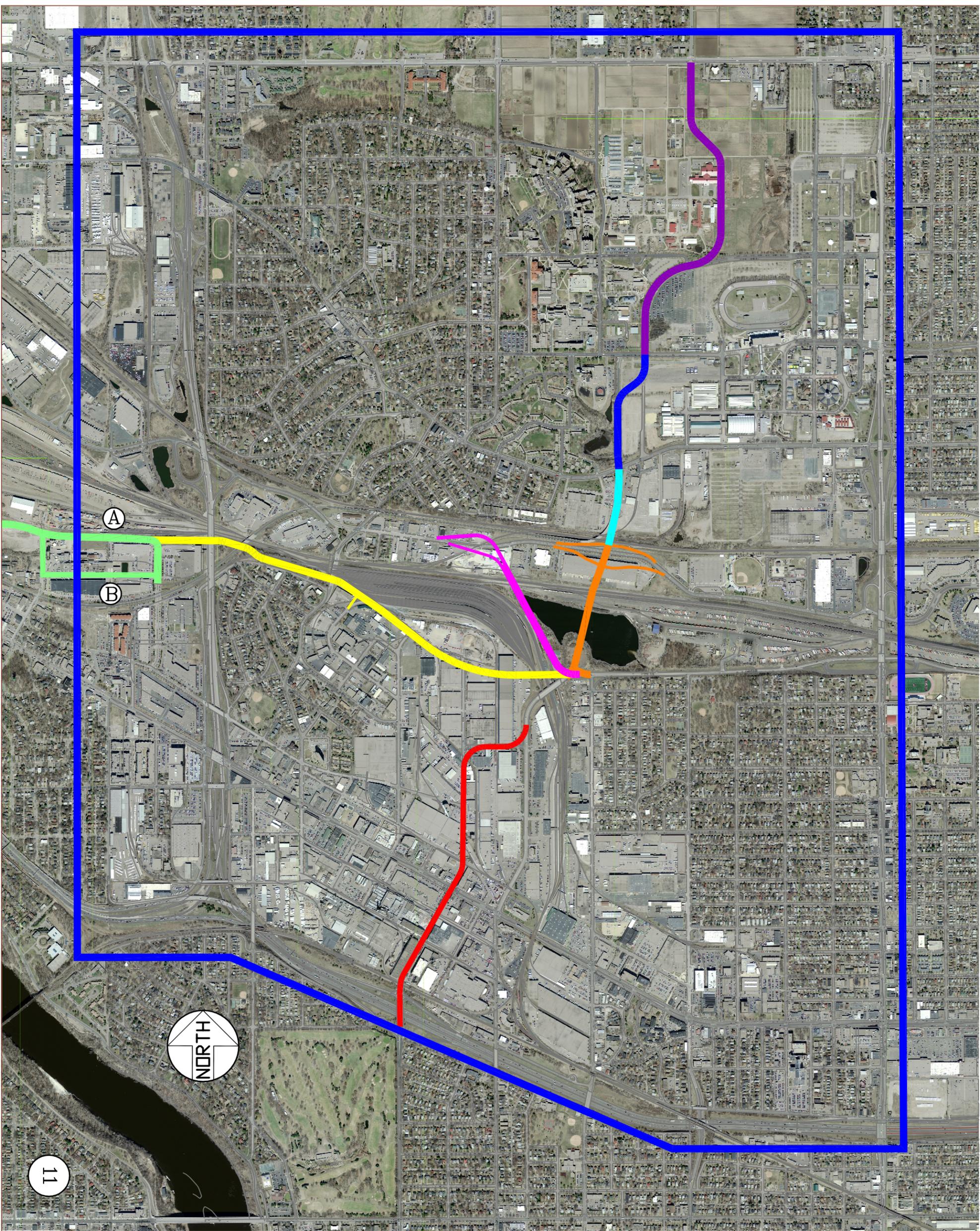
Sherm Eagles, Chair	Lois Braun	Josh Brotemarkle
Megan Carney	Sue Conner	Mark Culver
Maggie Kubak	Betsy Leach	Brian Longley
Gordon Murdoch	Christine O'Connell	Jon Schumacher
Amy Sparks	Britta Stein	Michael Sweet
Mark Thieroff	Jessica Treat	Mike Klassen, Public Works Staff

After several meetings, the Task Force was suspended until a consultant could be hired to perform traffic model studies on various scenarios. In November 2011 the Task Force reconvened with a slightly altered roster:

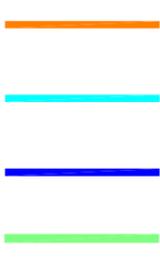
Sherm Eagles, Chair	Greg Haley, Co-Chair	Lois Braun
Ray Bryan	Sue Conner	Mark Culver
Ed Elliott	Steve Holupchinski	Betsy Leach
Brian Longley	John Mark Lucas	Paul McGinley
Emma Pachuta	Mike Samuelson	Steve Samuelson
Benita Warns	Lauren Fulner-Erickson	Samantha Henningson *
Mike Klassen, **	Eriks Ludins, **	

* Councilmember Stark's Office

** Public Works Staff



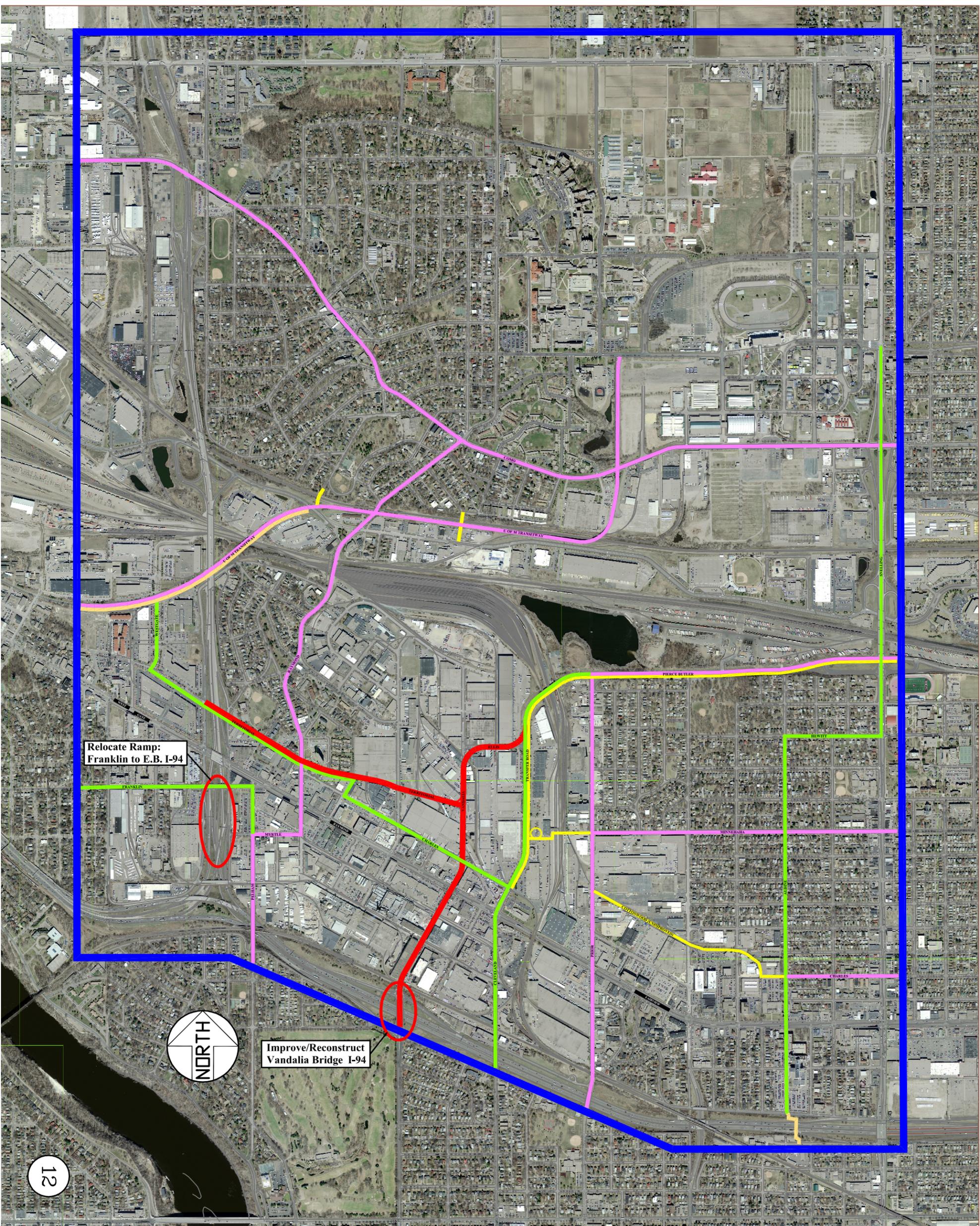
NORTHWEST TRANSPORTATION STUDY AREA
CONNECTION ALTERNATIVES



North South Alternate #1
North South Alternate #2
North South Alternate #3
Granary–Westgate Alt A & B



North South Alternate #4
East West Alternate #5
East West Alternate #6
I-94 to Pierce Butler



-  NORTHWEST TRANSPORTATION STUDY AREA
-  Existing On-Road Bicycle Facilities
-  Existing Off-Road Bicycle Facilities
-  Proposed Road Improvements
-  Proposed On-Road Bicycle Facility Improvements
-  Planned Off-Road Bike/Ped Facilities



Attachments:

2011 Adjusted Average Daily Traffic Volume Map

2007 Sidewalk Infill Map

Proposed Bikeway and Trails (from City's adopted Transportation Policy Plan)

Preferred Transit Network Map (from City's adopted Transportation Policy Plan)

St. Paul Functional Street Classification Map

Alternative Traffic Forecasts, March 29, 2012

Vehicle Forecast Matrix

Task Force Comments on Alternatives

Ellis Vandalia Improvements - 2 maps

ATTACHMENT #1

**2011 ADJUSTED AVERAGE DAILY TRAFFIC
VOLUME MAP**

2580 WESTSIDE

2300 RAYMOND

2060 CLEVELAND

1820 FAIRVIEW

1580 SNELLING

A

B

C

D

E

1

2

3

4

5

6

7

1440 ARLINGTON

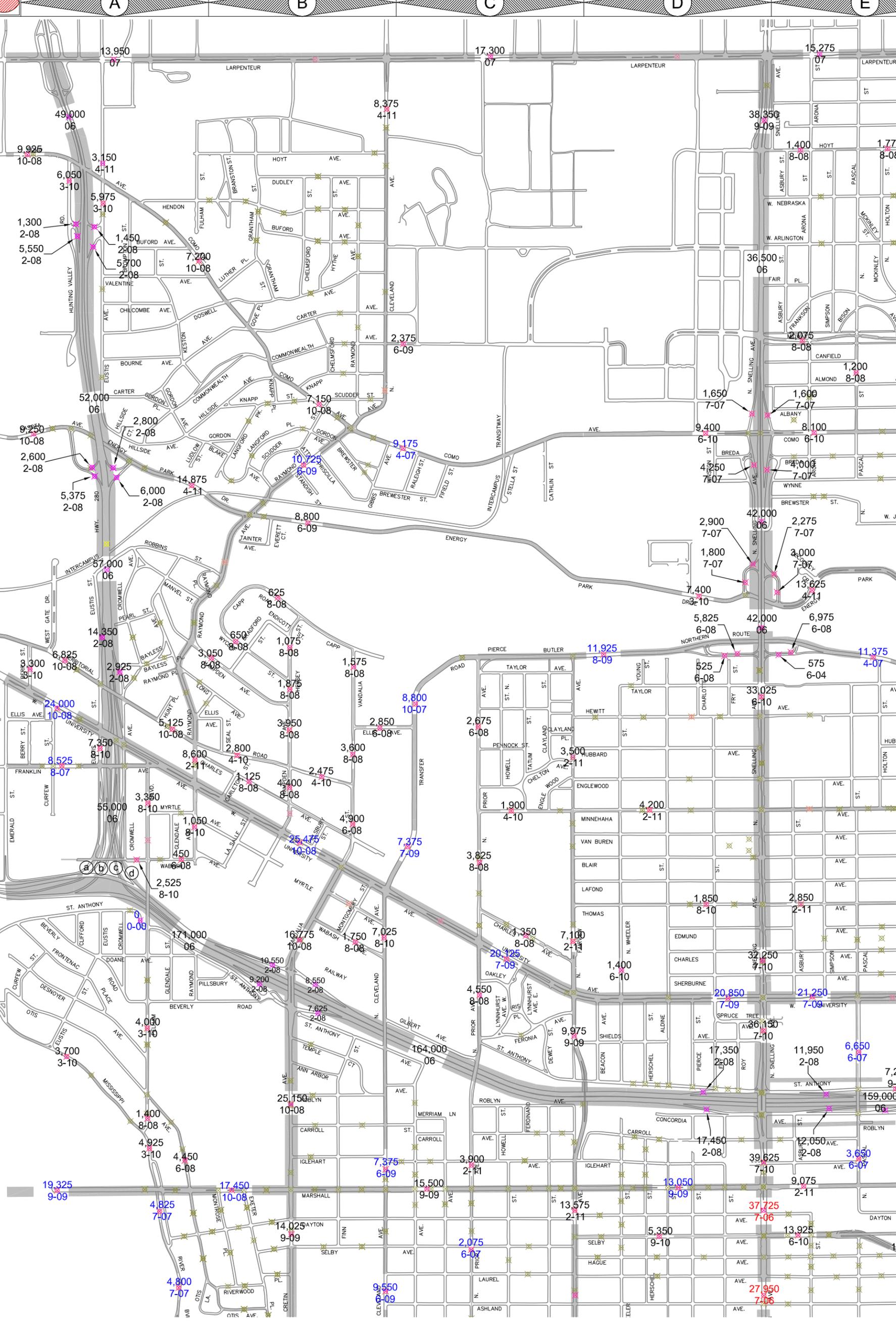
1200 COMO

960 FRONT

720 MINNEHAHA

480 UNIVERSITY

240 MARSHALL



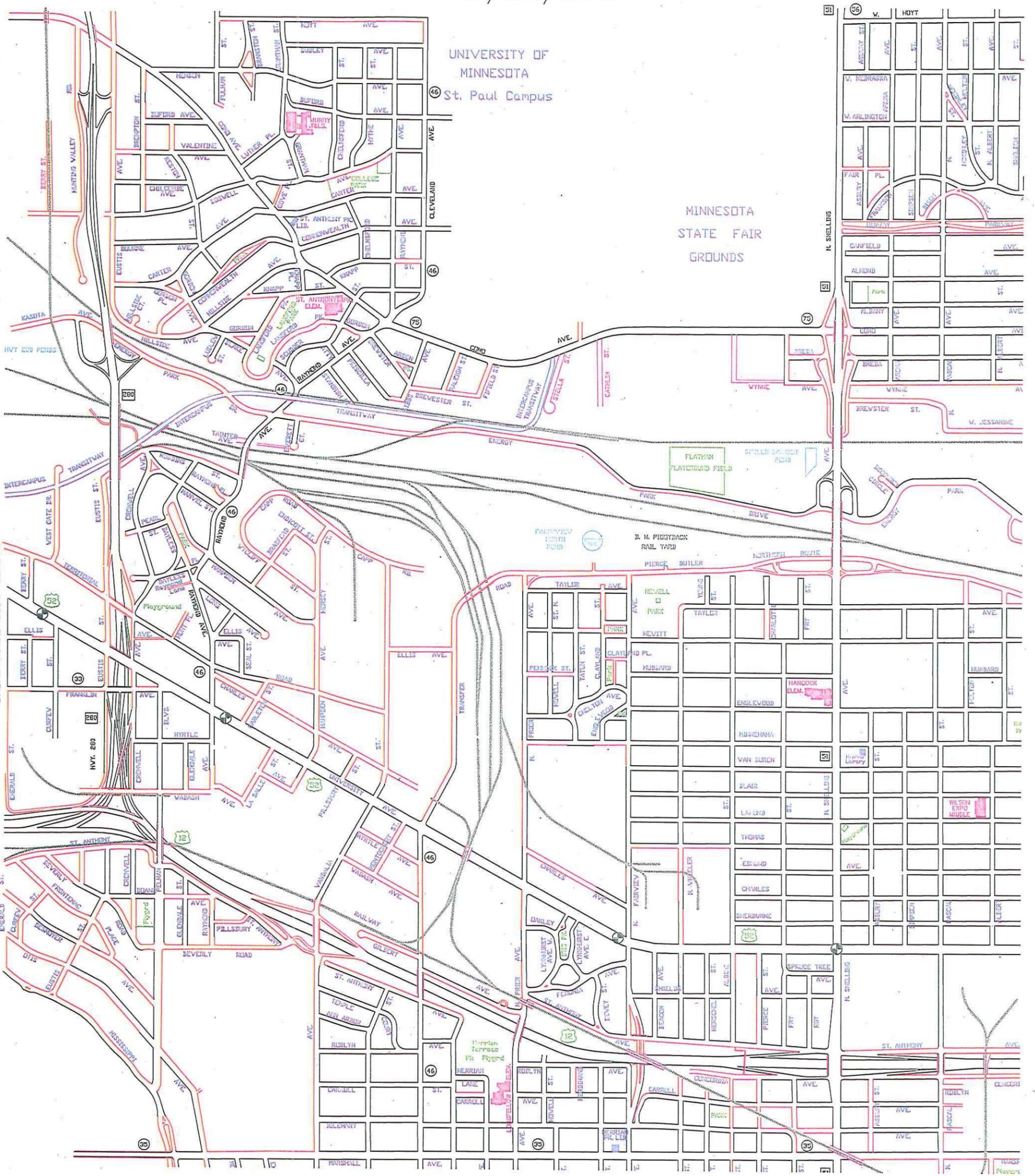
ATTACHMENT #2
SIDEWALK INFILL MAP

ST. PAUL PUBLIC WORKS

- Sidewalks
- No Sidewalks

2/20/2007

FALCON HEIGHTS

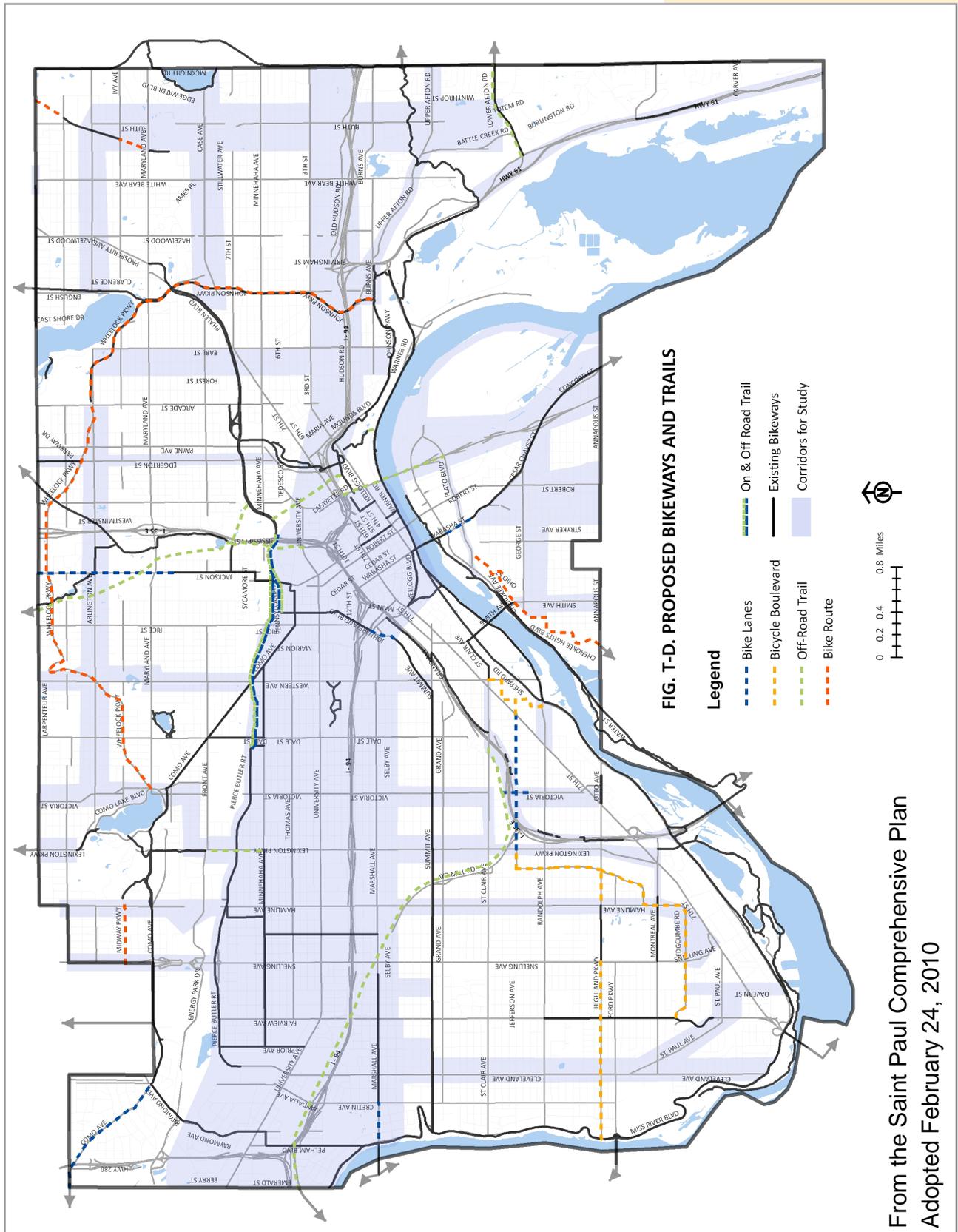


ATTACHMENT #3

PROPOSED BIKEWAY AND TRAIL CORRIDORS

(FROM CITY'S ADOPTED TRANSPORTATION POLICY PLAN)

FIGURE T-D. PROPOSED BIKEWAYS AND TRAILS



ATTACHMENT #4

PREFERRED TRANSIT NETWORK MAP

(FROM CITY'S ADOPTED TRANSPORTATION POLICY PLAN)

FIGURE T-C. PREFERRED TRANSIT NETWORK

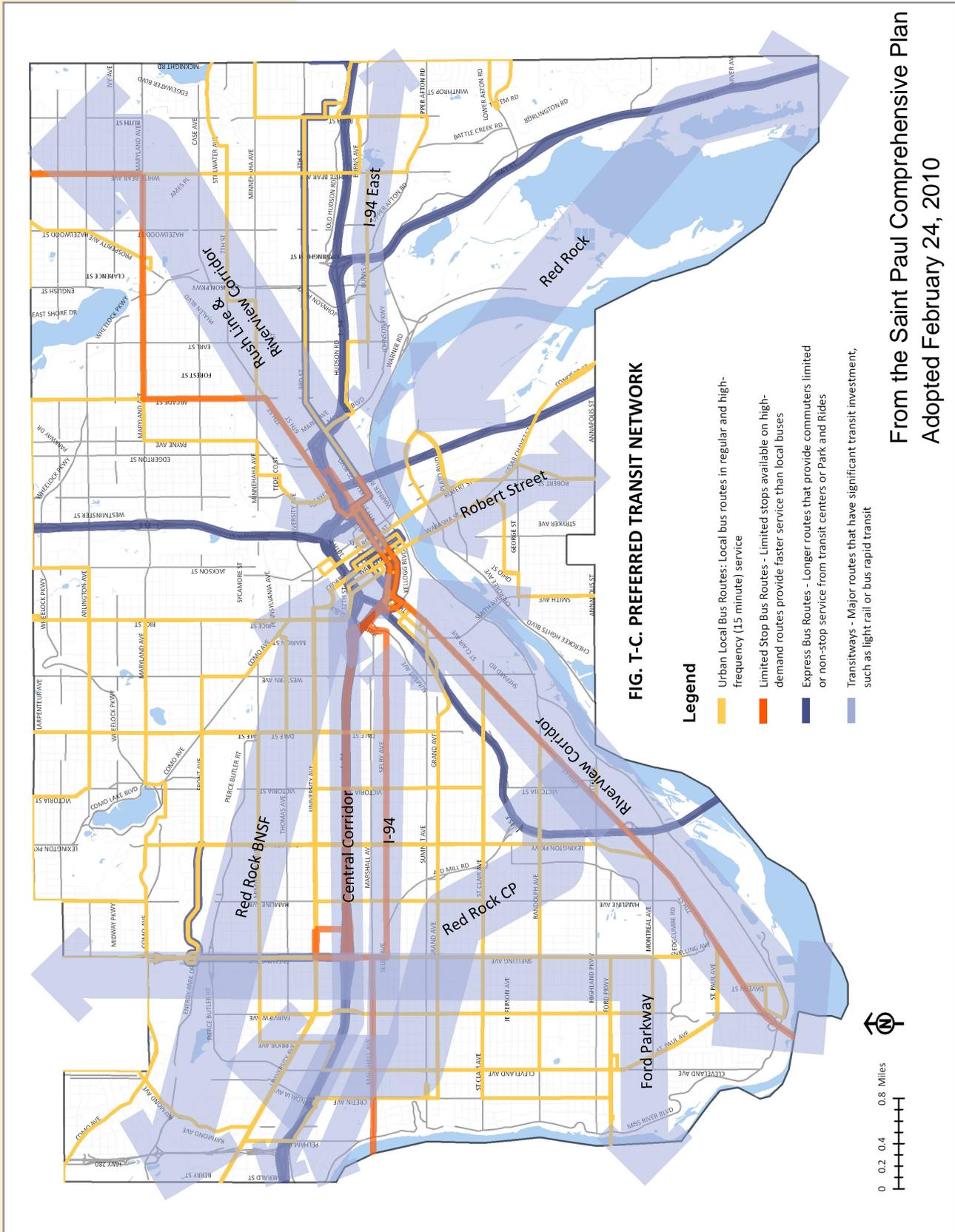


FIG. T-C. PREFERRED TRANSIT NETWORK

Legend

- Urban Local Bus Routes: Local bus routes in regular and high-frequency (15 minute) service
- Limited Stop Bus Routes - Limited stops available on high-demand routes provide faster service than local buses
- Express Bus Routes - Longer routes that provide commuters limited or non-stop service from transit centers or Park and Rides
- Transitways - Major routes that have significant transit investment, such as light rail or bus rapid transit

From the Saint Paul Comprehensive Plan
Adopted February 24, 2010

ATTACHMENT #5

**ST. PAUL FUNCTIONAL
STREET CLASSIFICATION MAP**

LARPENTEUR AVE W

Falcon Heights

127

280

46

RAYMOND AVE

75

31

32

PIERCE BUTLER RTE

34



St. Paul Functional Class October 2006

Functional Class Roads

-  Principal Arterial
-  A Minor Augmentor
-  A Minor Reliever
-  A Minor Expander
-  A Minor Connector
-  B Minor
-  Major Collector
-  Minor Collector
-  Local Roads

Source Metropolitan Council Map

MARSHALL AVE

35

N
E

ATTACHMENT #6

**ALTERNATIVE TRAFFIC FORECASTS,
MARCH 29, 2012**

Alternatives Traffic Forecasts

**ST. PAUL NORTHWEST QUADRANT
TRANSPORTATION STUDY**

March 29, 2012

Background

- ⦿ Twin Cities Regional Travel Demand Model
- ⦿ Most Recent Travel Behavior and Traffic Count Information
- ⦿ Reported as Average Daily Traffic (ADT)
- ⦿ Additional Network Detail
- ⦿ Comprehensive Planned Development Forecasts
 - West Midway Study Concept
- ⦿ Future Transportation System Improvements
 - Central Corridor
 - Pierce Butler Extension
 - Granary Road Concept

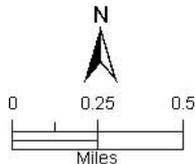
West Midway Study Area

ICDSDG - West Midway Study Area - Final Map - 11/11/11

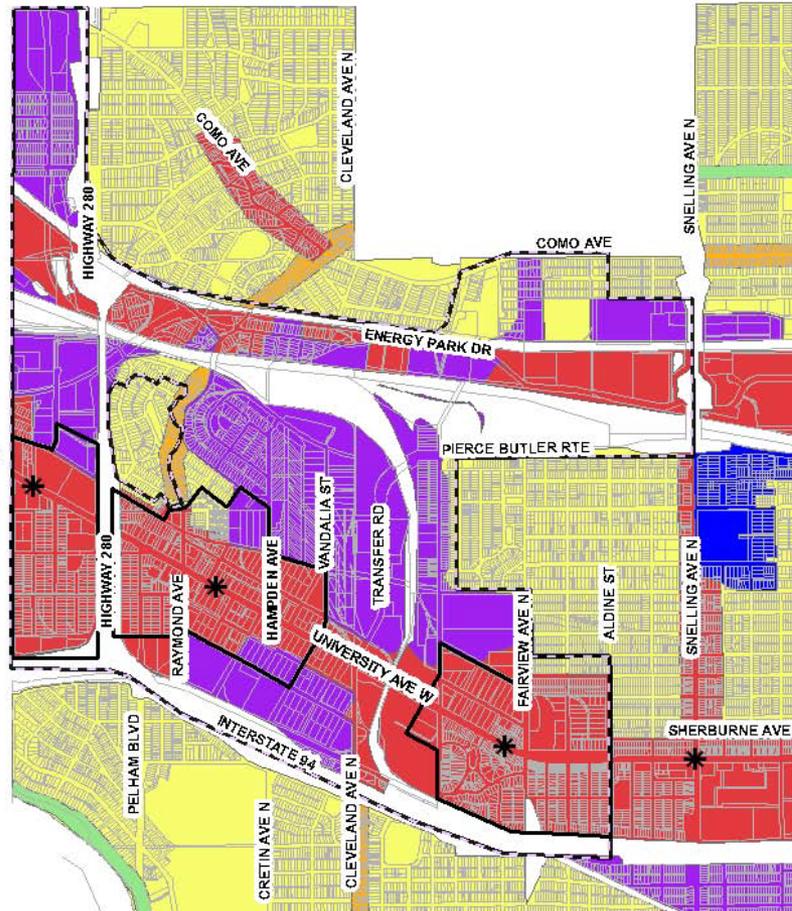
West Midway Study



- Study Area**
- West Midway Study Area
 - LRT Stations
 - Station Areas
- Generalized Future Land Use Map Categories
(In the adopted Comprehensive Plan
Land Use Chapter)**
- Established Neighborhoods
 - Residential Corridor
 - Mixed Use Corridor
 - Major Parks and Open Space
 - Major Institutional
 - Industrial



Source: Saint Paul PED, Saint Paul Public Works

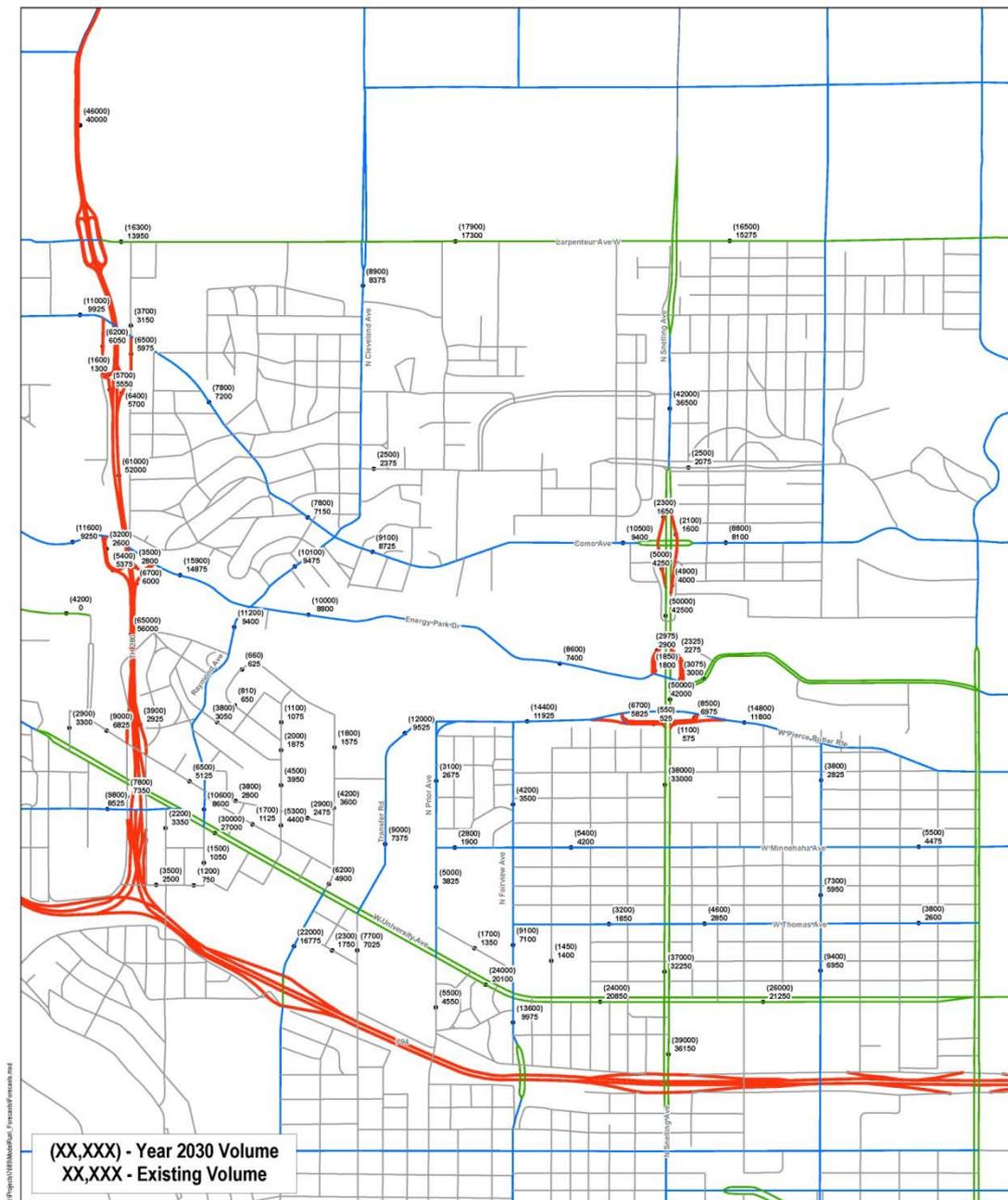


Six Concepts Forecast

- ◎ (2030 No Build)
 1. North/South Connection to Energy Park Drive
 2. North/South Connection to Como Avenue
 3. North/South Connection to Commonwealth Avenue
 4. North/South Connection to Larpenteur Avenue
 5. East/West Connection via Granary Road
 6. East/West Connection via Energy Park Drive

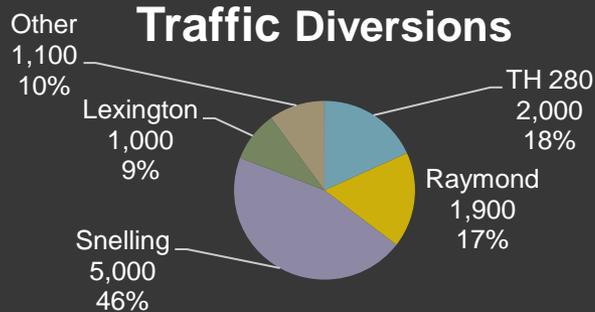
2030 No Build

- Area fully developed
- Changing travel patterns/modes
- Key roads already congested
- Impact of changing University Avenue access?

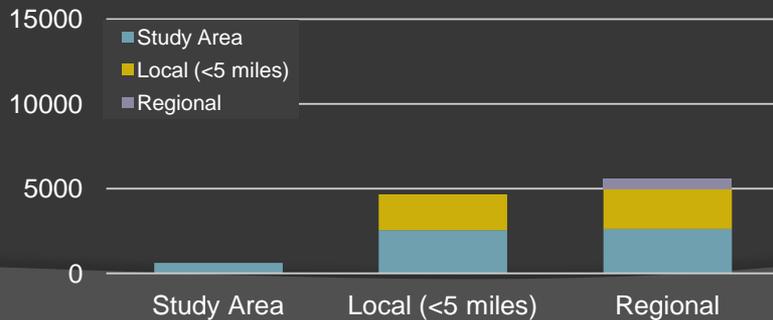


Alternative 1 N/S Connection to Energy Park Drive

- Estimated 2030 ADT **11,000** on connection
- Traffic primarily diverted from Snelling (46%)
- Half of trips study-area related (53%)
- Regional access “desire” to Energy Park Dr.



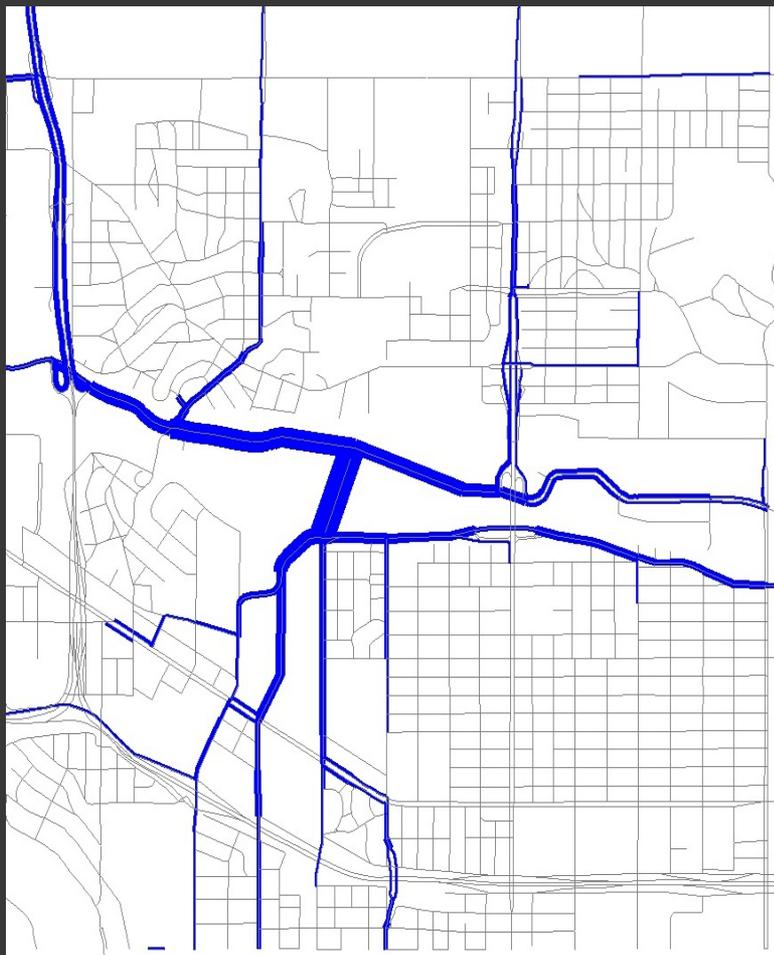
Trips Between:



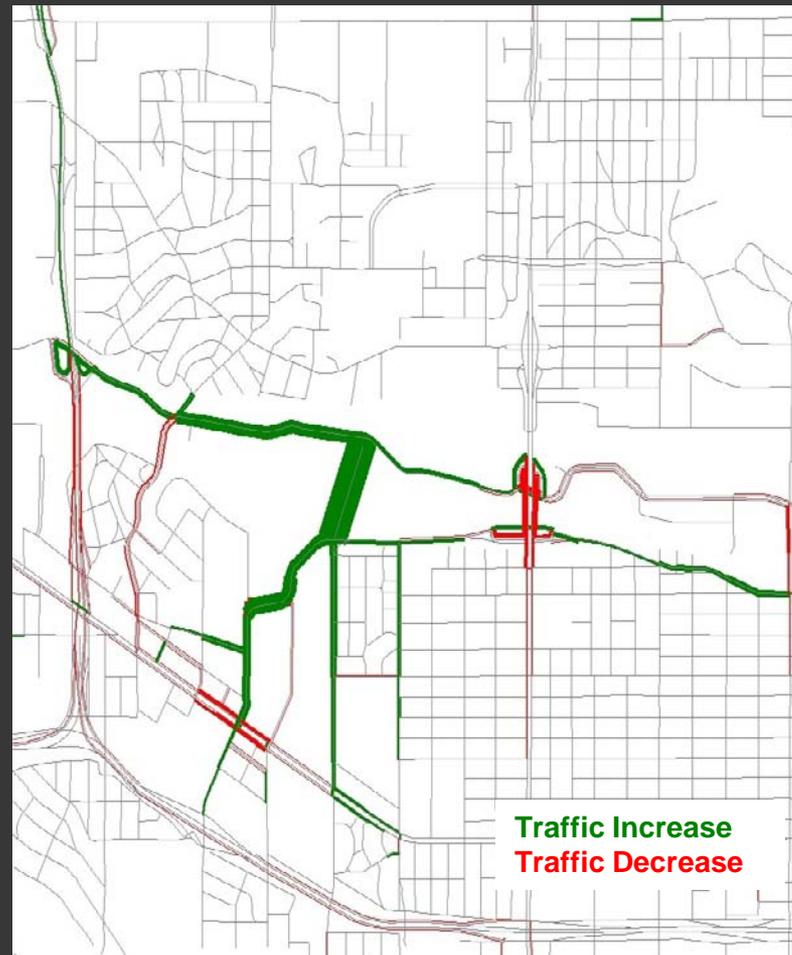
(XXXXX) 2030 Alternative Daily Volume
XXXXX 2030 No Build Daily Volume

Alternative 1

N/S Connection to Energy Park Drive



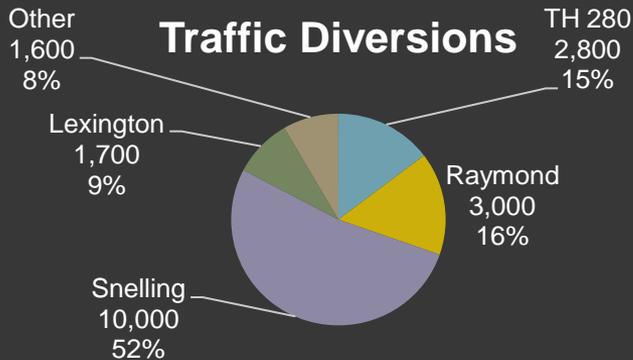
Connection Users



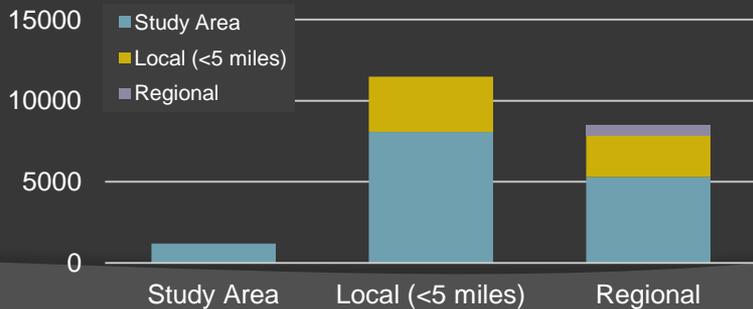
Traffic Volume Changes

Alternative 2 N/S Connection to Como Ave.

- Estimated 2030 ADT **19,000** on connection
- Traffic primarily diverted from Snelling (52%)
- Study area trips 69% of traffic on bridge
- Opens access to U of M and Fairgrounds

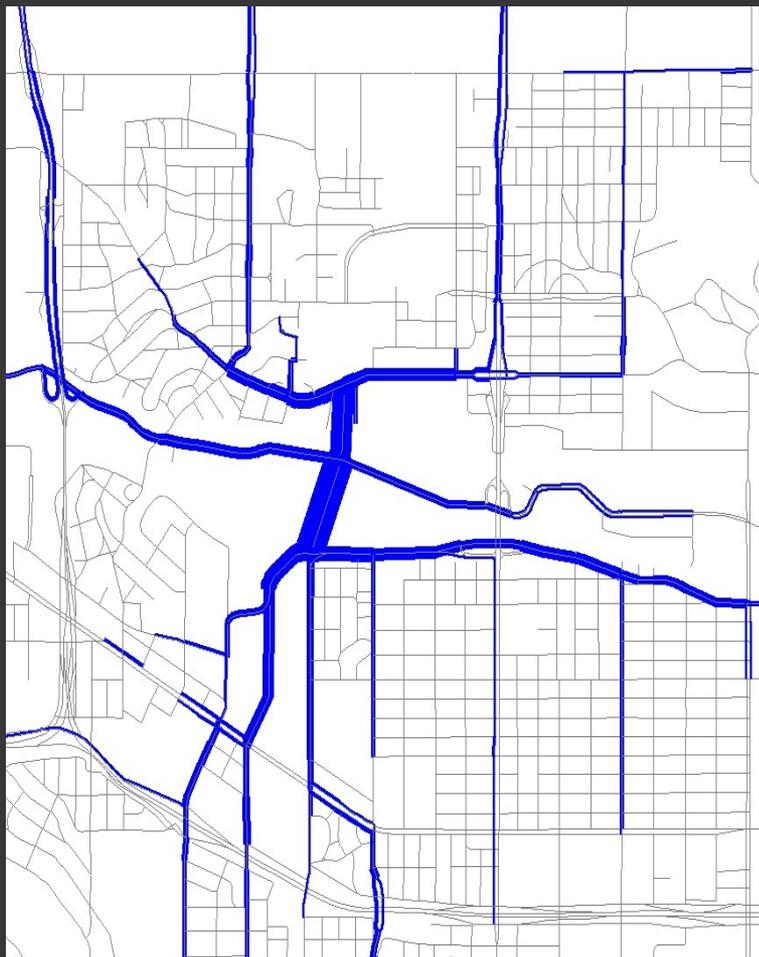


Trips Between:

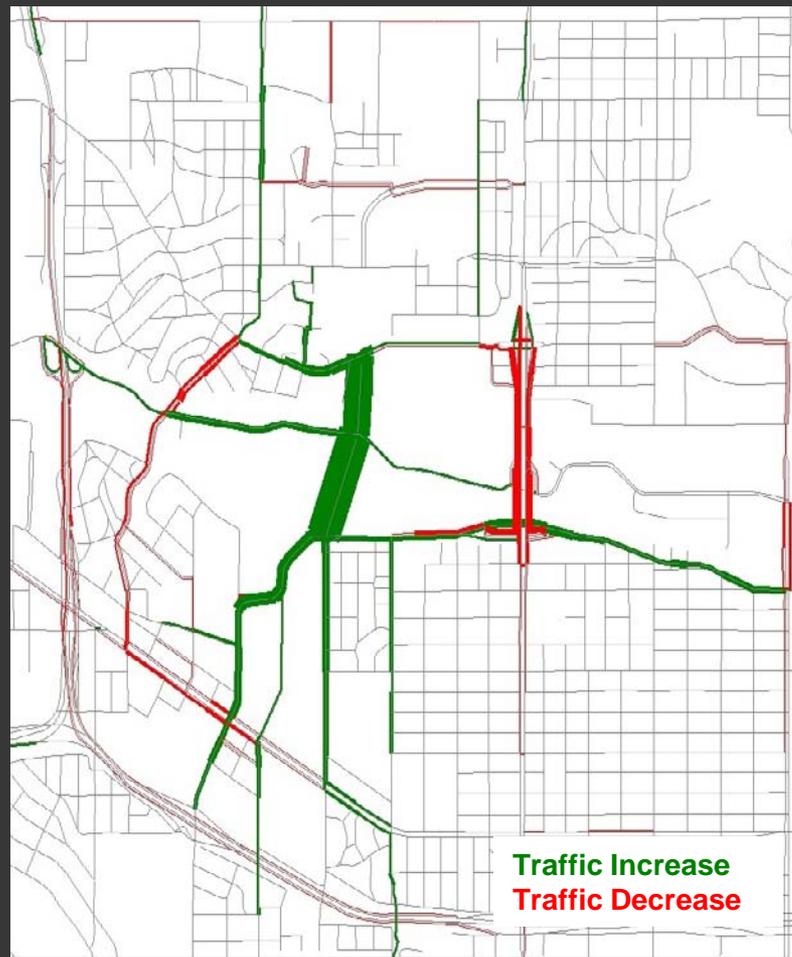


Alternative 2

N/S Connection to Como Avenue



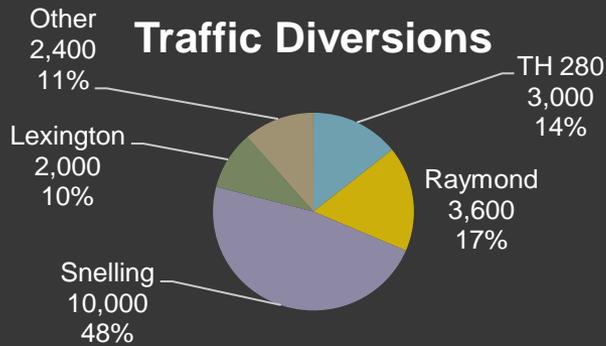
Connection Users



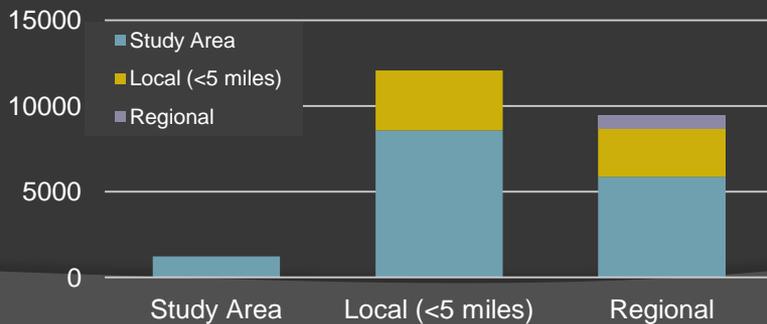
Traffic Volume Changes

Alternative 3 N/S Connection to Commonwealth Ave.

- Estimated 2030 ADT **21,000** on connection
- Increasing diversions from Raymond Ave.
- Study area trips 69% of traffic on bridge
- Slight improvement in access to UM and Fairgrounds

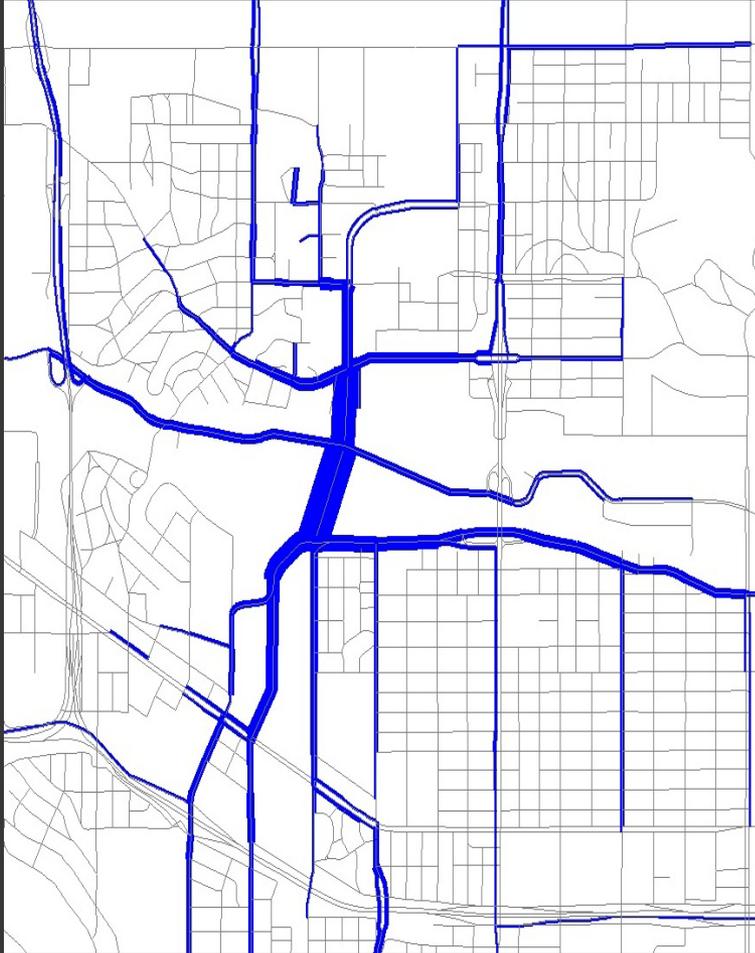


Trips Between:

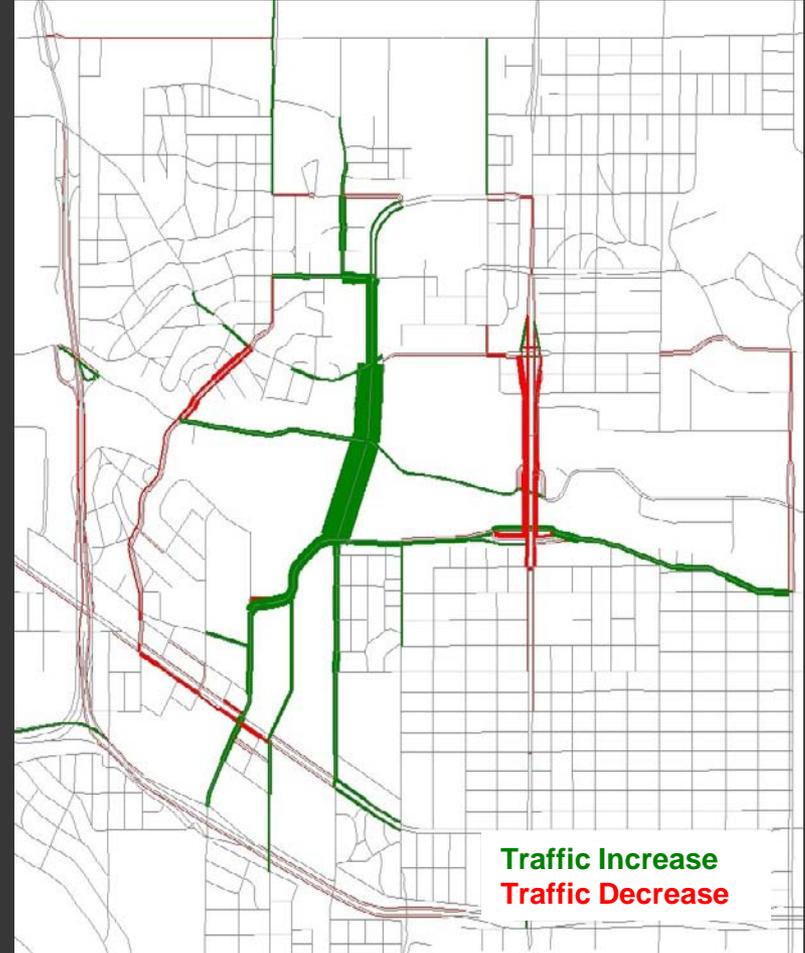


Alternative 3

N/S Connection to Commonwealth Avenue



Connection Users

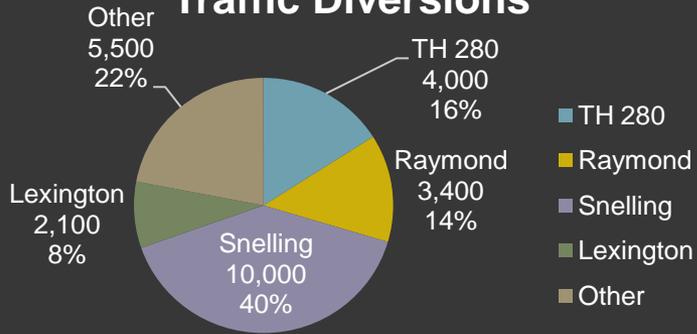


Traffic Volume Changes

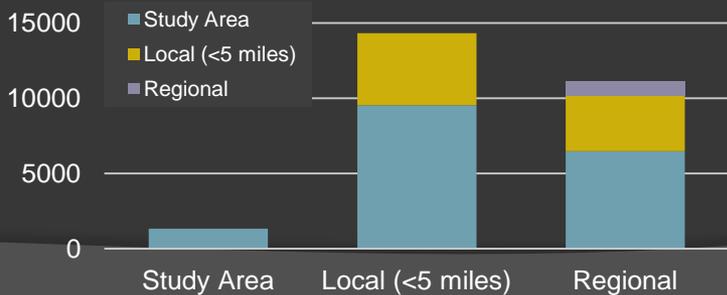
Alternative 4 N/S Connection to Larpenteur Ave.

- Estimated 2030 ADT **25,000** on connection
- Additional traffic primarily local/regional
- Study area trips 65% of traffic on bridge
- Access to internal areas UM and Fairgrounds from north

Traffic Diversions

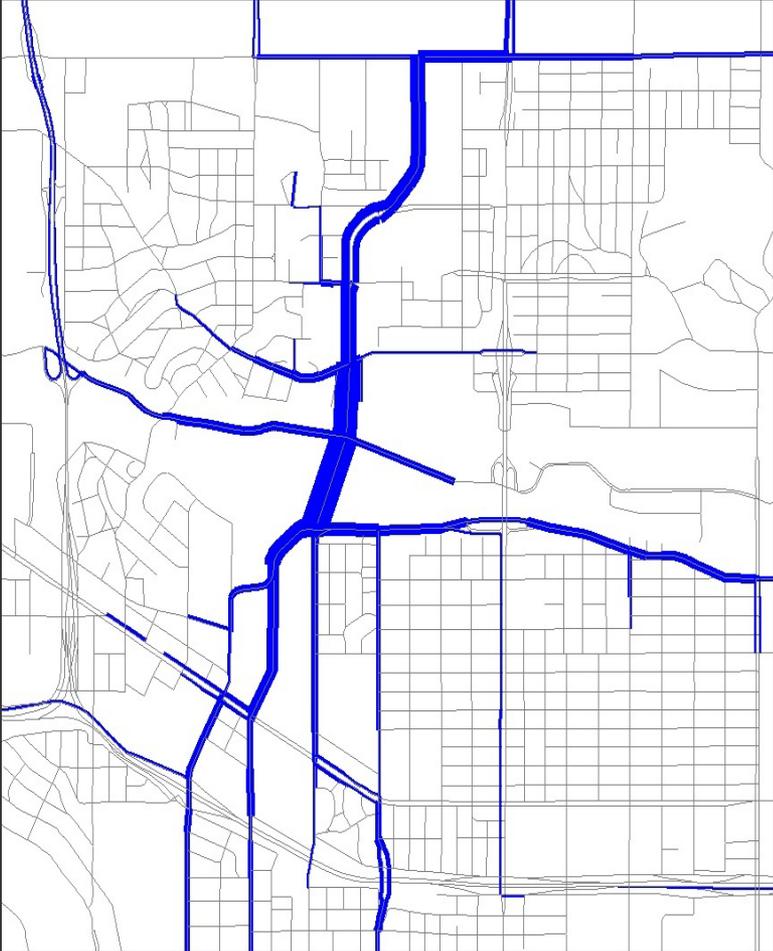


Trips Between:

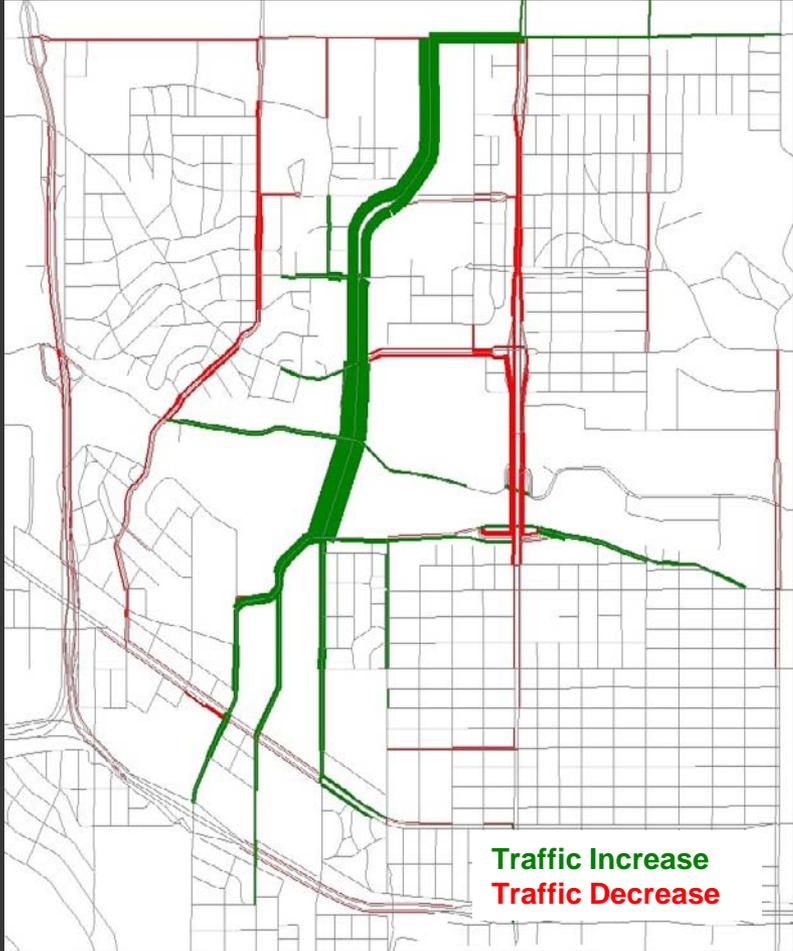


Alternative 4

N/S Connection to Larpenteur Avenue



Connection Users

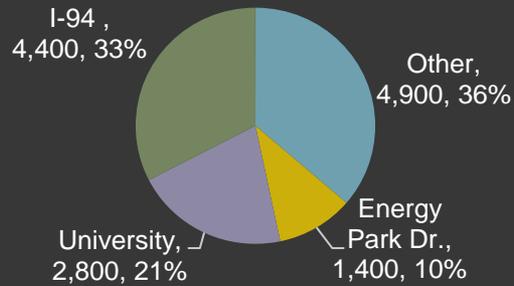


Traffic Volume Changes

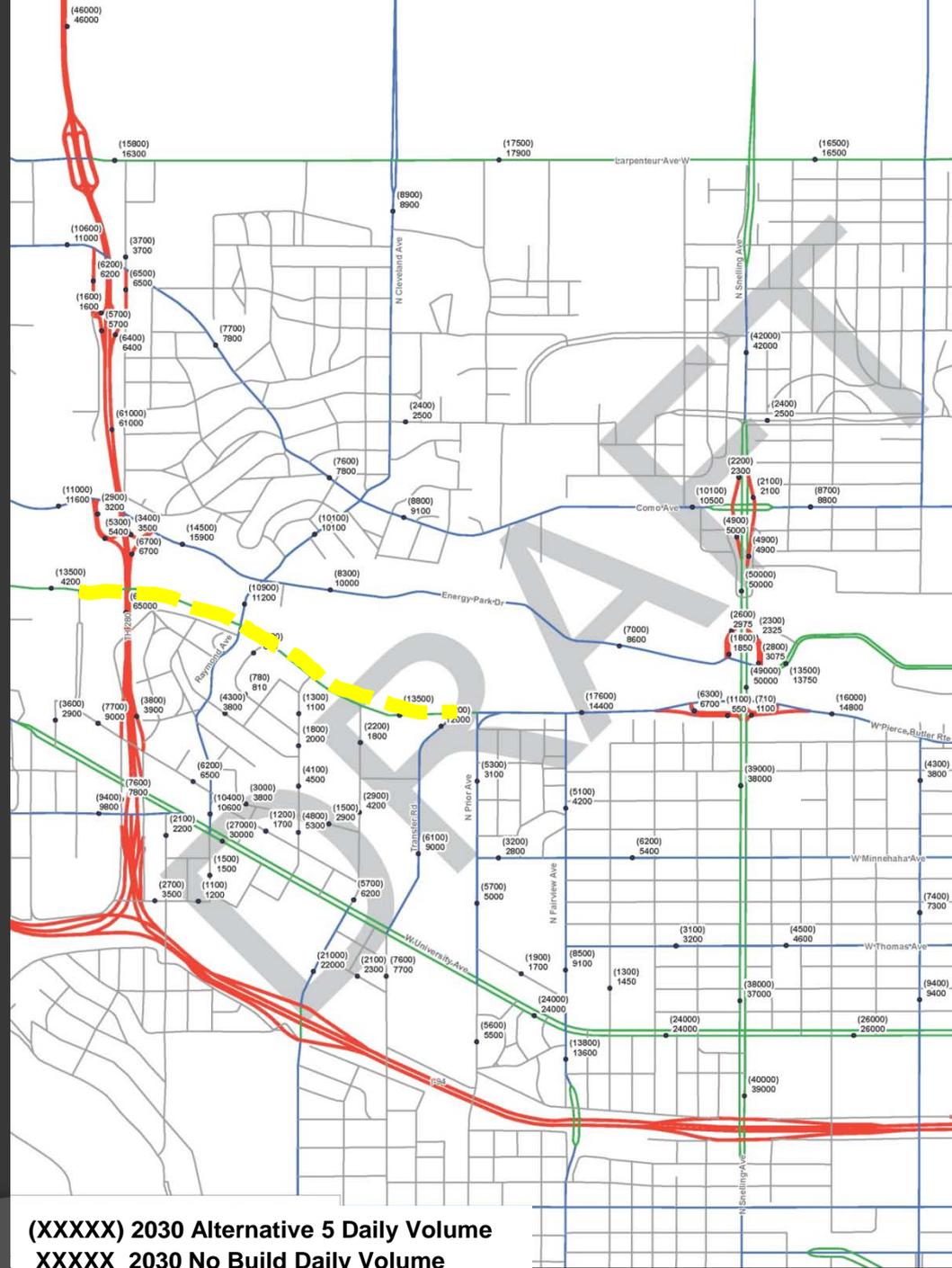
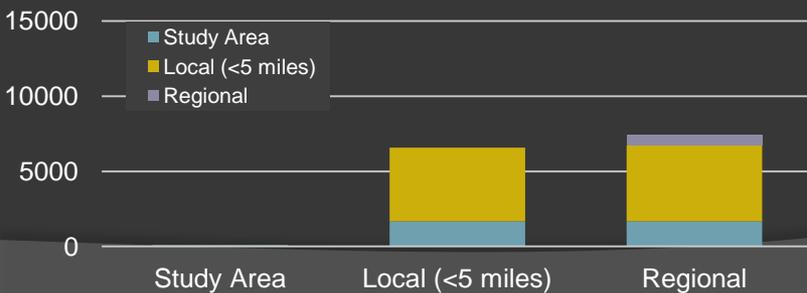
Alternative 5 (Draft) E/W Connection via Granary Road

- Estimated 2030 ADT **13,500** on connection
- Granary Road status not finalized
- Provides alternate to I-94, University Avenue
- Study area trips 23% of traffic on bridge

Traffic Diversions



Trips Between:

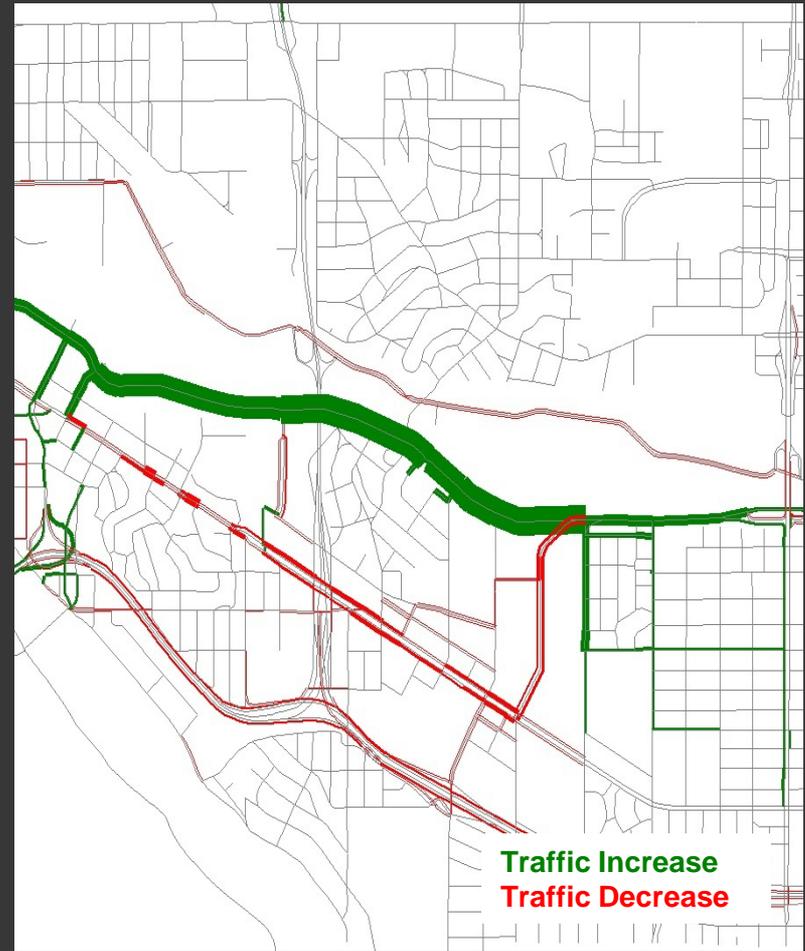


Alternative 5 (DRAFT)

E/W Connection via Granary Road



Connection Users



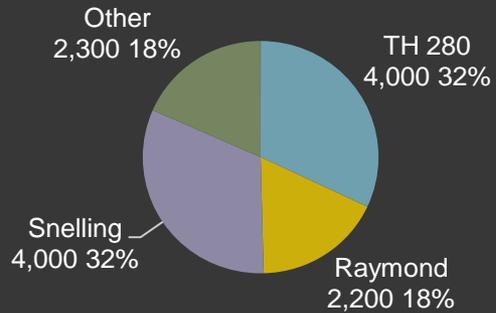
Traffic Volume Changes

Alternative 6

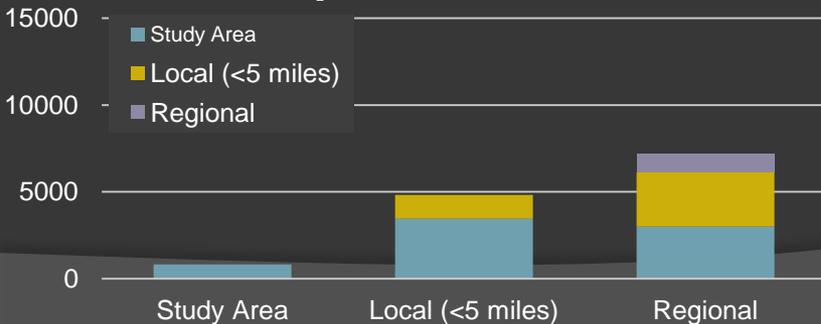
E/W Connection via Energy Park Drive

- Estimated 2030 ADT **12,500** on connection
- Similar to Alternative 1, but more westerly focus on north end
- Study area trips 57% of traffic on bridge
- Continuity of Peirce Butler to TH 280

Traffic Diversions

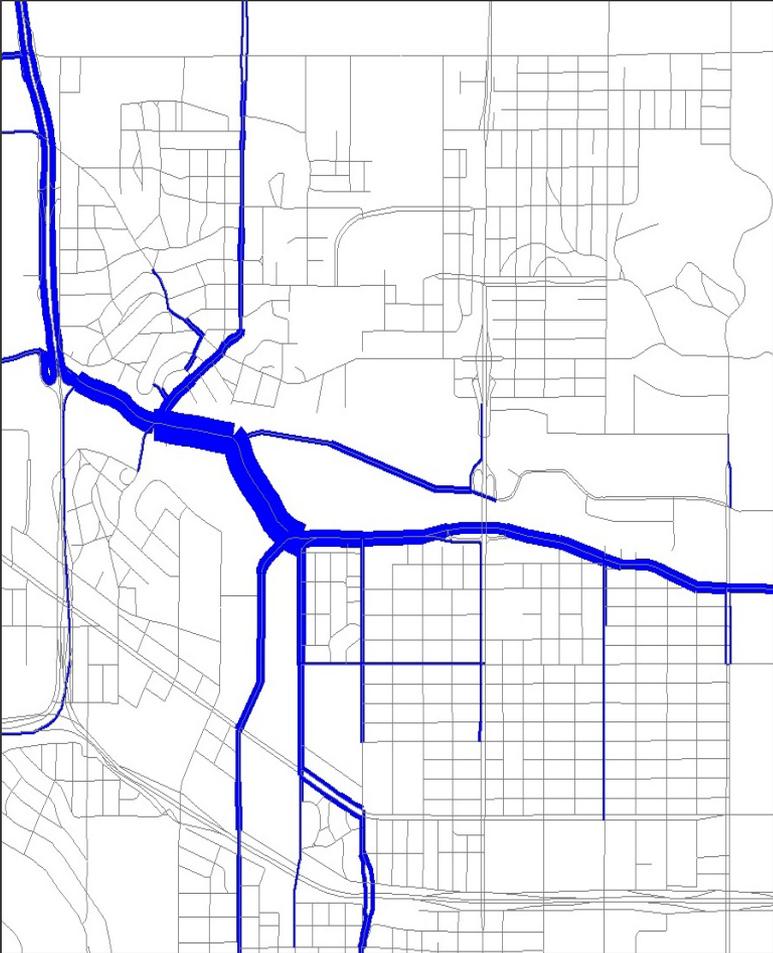


Trips Between:

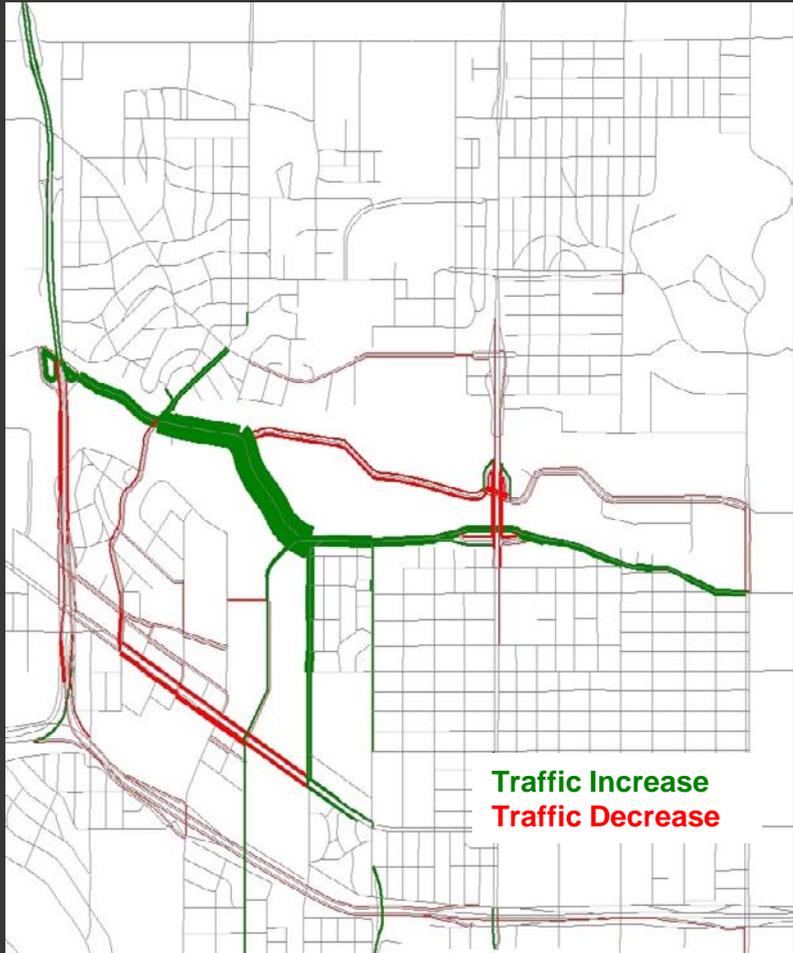


Alternative 6

E/W Connection to Energy Park Drive



Connection Users



Traffic Volume Changes

ATTACHMENT #7

VEHICLE FORECAST MATRIX

Northwest Quadrant Transportation Study

Vehicle Forecast Matrix

Matrix shows only certain streets that seemed the most important to the Task Force during the conversations at the April Meeting. Refer to the Alternatives Volume sheets for all projected traffic volumes of all streets that have been modeled.

Alternate	Description	New Connection		Raymond Ave. at Bridge		Raymond Ave. at University		Snelling North of Pierce Butler		Snelling South of Pierce Butler		Pierce Butler at Fairview		Pierce Butler East of Snelling		University at Fairview		University at Raymond		Energy Park Drive East of Raymond		Cleveland South of Larpenteur		Como East of Raymond	
		ADT	ADT	% Change from 2030 No-Build	ADT	% Change from 2030 No-Build	ADT	% Change from 2030 No-Build	ADT	% Change from 2030 No-Build	ADT	% Change from 2030 No-Build	ADT	% Change from 2030 No-Build	ADT	% Change from 2030 No-Build	ADT	% Change from 2030 No-Build	ADT	% Change from 2030 No-Build	ADT	% Change from 2030 No-Build	ADT	% Change from 2030 No-Build	ADT
	2010 Existing Volumes	0	9,400		8,600		42,000		33,000		11,925		11,800		20,100		27,000		8,800		8,375		8,725		
	2030 No Build ADT (percent increase from 2010 ADT)	0	11,200	19.1%	10,600	23.3%	50,000	19.0%	38,000	15.2%	14,400	20.8%	14,800	25.4%	24,000	19.4%	30,000	11.1%	10,000	13.6%	8,900	6.3%	9,100	4.3%	
1	North-South Connection to Energy Park Drive	11,000	9,300	-17.0%	10,400	-1.9%	50,000	0.0%	38,000	0.0%	14,200	-1.4%	15,200	2.7%	24,000	0.0%	29,000	-3.3%	14,200	42.0%	9,000	1.1%	9,100	0.0%	
2	North-South Connection to Como Ave.	19,100	7,800	-30.4%	9,400	-11.3%	40,000	-20.0%	37,000	-2.6%	14,400	0.0%	15,700	6.1%	25,000	4.2%	28,000	-6.7%	12,300	23.0%	9,700	9.0%	9,600	5.5%	
3	North-South Connection to Commonwealth Ave.	21,000	7,600	-32.1%	9,400	-11.3%	40,000	-20.0%	37,000	-2.6%	15,100	4.9%	16,000	8.1%	25,000	4.2%	28,000	-6.7%	11,600	16.0%	9,900	11.2%	8,600	-5.5%	
4	North-South Connection to Larpenteur Ave.	25,000	7,800	-30.4%	9,100	-14.2%	39,000	-22.0%	37,000	-2.6%	14,300	-0.7%	15,900	7.4%	25,000	4.2%	28,000	-6.7%	11,800	18.0%	6,800	-23.6%	8,800	-3.3%	
5	East-West Connection Pierce Butler to Granary Road	13,500	10,900	-2.7%	10,400	-1.9%	50,000	0.0%	39,000	2.6%	17,600	22.2%	16,000	8.1%	24,000	0.0%	27,000	-10.0%	8,300	-17.0%	8,900	0.0%	8,800	-3.3%	
6	East-West Connection Pierce Butler to Energy Park Drive	12,500	9,000	-19.6%	9,800	-7.5%	49,000	-2.0%	38,000	0.0%	16,700	16.0%	15,800	6.8%	25,000	4.2%	27,000	-10.0%	21,000	110.0%	9,200	3.4%	8,500	-6.6%	

Alternate	Description	New Connection		280 North of Energy Park		Vandalia at I-94		Fairview South of Pierce Butler		Fairview South of Thomas		Minnehaha East of Fairview		Minnehaha West of Fairview		Prior South of Pierce Butler		Transfer Road at Pierce Butler		Hampden North of Territorial		Hampden at Raymond		Franklin West of 280	
		ADT	ADT	% Change from 2030 No-Build	ADT	% Change from 2030 No-Build	ADT	% Change from 2030 No-Build	ADT	% Change from 2030 No-Build	ADT	% Change from 2030 No-Build	ADT	% Change from 2030 No-Build	ADT	% Change from 2030 No-Build	ADT	% Change from 2030 No-Build	ADT	% Change from 2030 No-Build	ADT	% Change from 2030 No-Build	ADT	% Change from 2030 No-Build	ADT
	2010 Existing Volumes	0	52,000		16,775		3,500		7,100		4,200		1,900		2,675		9,525		3,600		3,050		8,525		
	2030 No Build ADT	0	61,000	17.3%	22,000	31.1%	4,200	20.0%	9,100	28.2%	5,400	28.6%	2,800	47.4%	3,100	15.9%	12,000	26.0%	4,200	16.7%	3,800	24.6%	9,800	15.0%	
1	North-South Connection to Energy Park Drive	11,000	62,000	1.6%	23,000	4.5%	4,900	16.7%	8,900	-2.2%	5,400	0.0%	2,500	-10.7%	5,300	71.0%	14,900	24.2%	4,200	0.0%	3,100	-18.4%	9,800	0.0%	
2	North-South Connection to Como Ave.	19,100	60,000	-1.6%	23,000	4.5%	5,100	21.4%	9,000	-1.1%	5,300	-1.9%	2,300	-17.9%	5,100	64.5%	17,300	44.2%	4,000	-4.8%	2,800	-26.3%	9,800	0.0%	
3	North-South Connection to Commonwealth Ave.	21,000	60,000	-1.6%	24,000	9.1%	5,100	21.4%	9,000	-1.1%	5,200	-3.7%	2,400	-14.3%	6,900	122.6%	18,000	50.0%	4,000	-4.8%	2,800	-26.3%	9,900	1.0%	
4	North-South Connection to Larpenteur Ave.	25,000	58,000	-4.9%	24,500	11.4%	5,200	23.8%	8,700	-4.4%	4,800	-11.1%	2,300	-17.9%	7,900	154.8%	19,600	63.3%	4,000	-4.8%	2,700	-28.9%	10,000	2.0%	
5	East-West Connection Pierce Butler to Granary Road	13,500	61,000	0.0%	21,000	-4.5%	5,300	26.2%	8,500	-6.6%	6,200	14.8%	3,200	14.3%	5,300	71.0%	7,200	-40.0%	4,100	-2.4%	4,300	13.2%	9,400	-4.1%	
6	East-West Connection Pierce Butler to Energy Park Drive	12,500	62,000	1.6%	22,000	0.0%	5,000	19.0%	9,000	-1.1%	5,800	7.4%	2,900	3.6%	6,600	112.9%	13,400	11.7%	3,900	-7.1%	2,700	-28.9%	9,900	1.0%	

ATTACHMENT #8

**TASK FORCE COMMENTS ON
ALTERNATIVES**

ATTACHMENT #9

**ELLIS - VANDALIA IMPROVEMENT
CONCEPT "A"**

ATTACHMENT #10

**ELLIS - VANDALIA IMPROVEMENT
CONCEPT "B"**

