

I-394 Business Impact Study

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Research and Education

Agenda

1. Introduction/Background
2. Problem Statement
3. Why I-394?
4. Study Process
5. Literature Review
6. Corridor Overview
7. Parcel Studies
8. Wrap-Up



Background

- Business owners often suggest that any change to their existing street network will result in one or more of the following adverse impacts:
 - reduction in property value
 - reduction in retail sales
 - failure of their business
- Agency staff may be faced with these comments at any point in the project development process:
 - Early
 - *Corridor Planning*
 - *Environmental Documentation*
 - Late
 - *Condemnation Proceedings*



Background

- Some business owner statements at condemnation hearings (I-394 ROW acquisition):
 - “In the after situation, the location will no longer be viable for a restaurant.”
 - “The current highway is congested, but that’s good for our auto dealership. Freeways are only good for through traffic. Although car dealerships are primarily a destination business, there is a certain amount of impulse purchasing involved.”
 - Our parcels will no longer be good locations due to reduced visibility from a freeway.”



Problem Statement

- Agency project staff have not been able to provide a strong response.
- Very little information currently available regarding economic impacts associated with highway improvements.
- None of the previous research is local.
- Lack of local data appears to call into question the credibility of the findings and the applicability of the research findings to corridors in Minnesota.

➤ ***In response to this information gap, MnDOT project development, access management and right-of-way staff decided to conduct a comprehensive and systematic analysis of economic effects of highway improvements.***

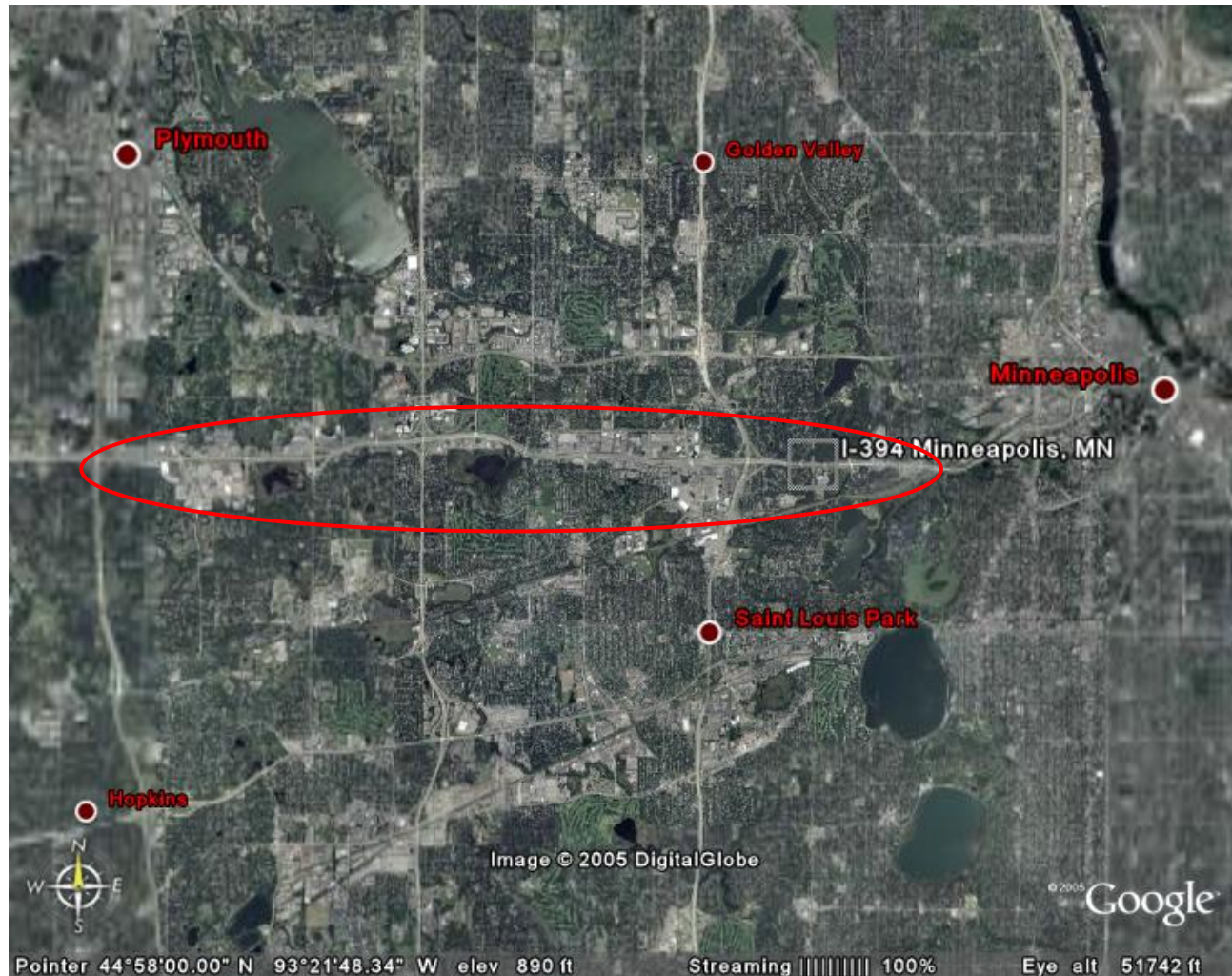


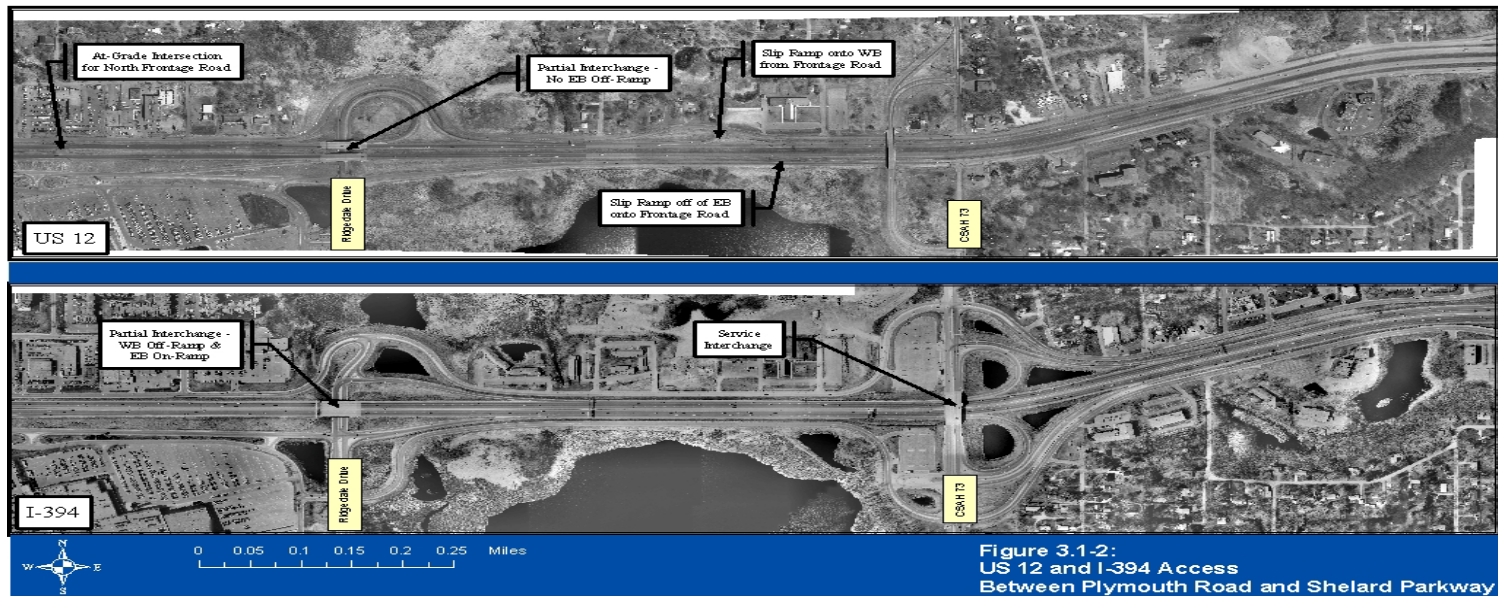
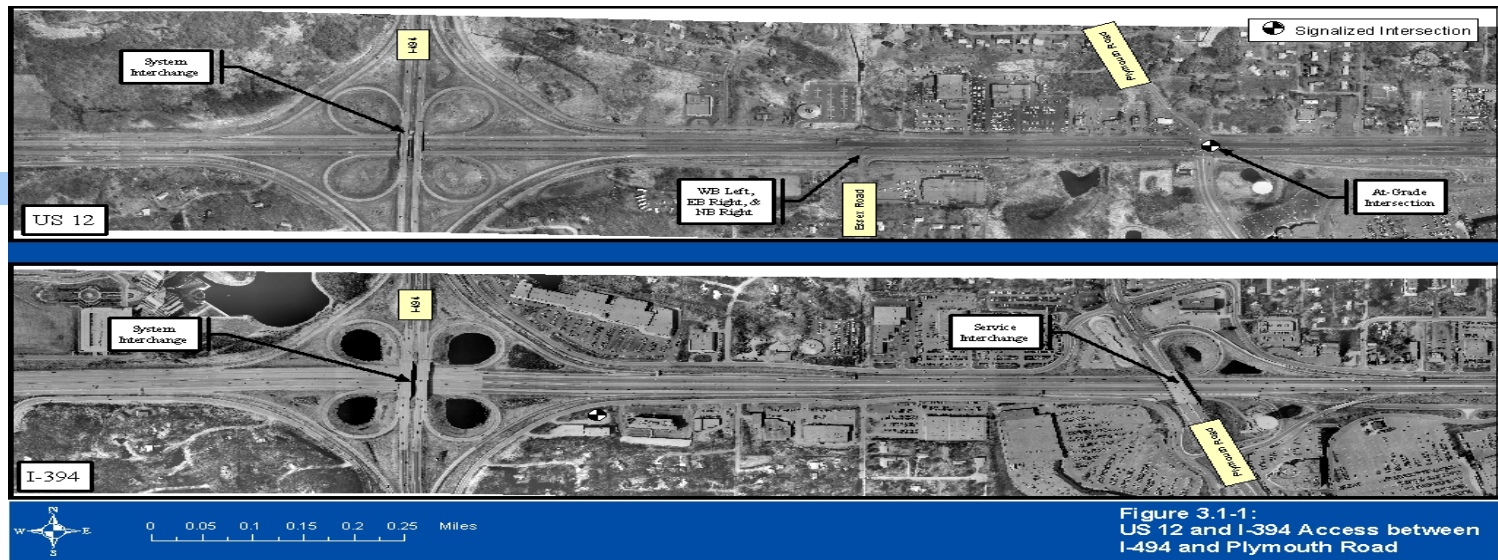
Why I-394?

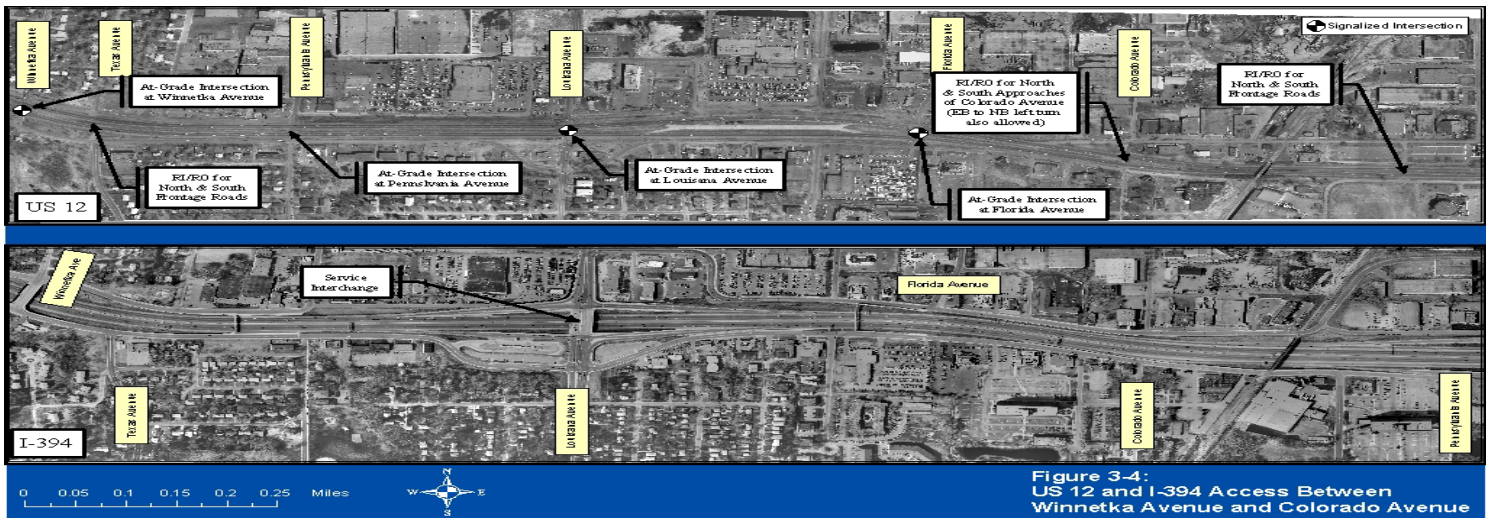
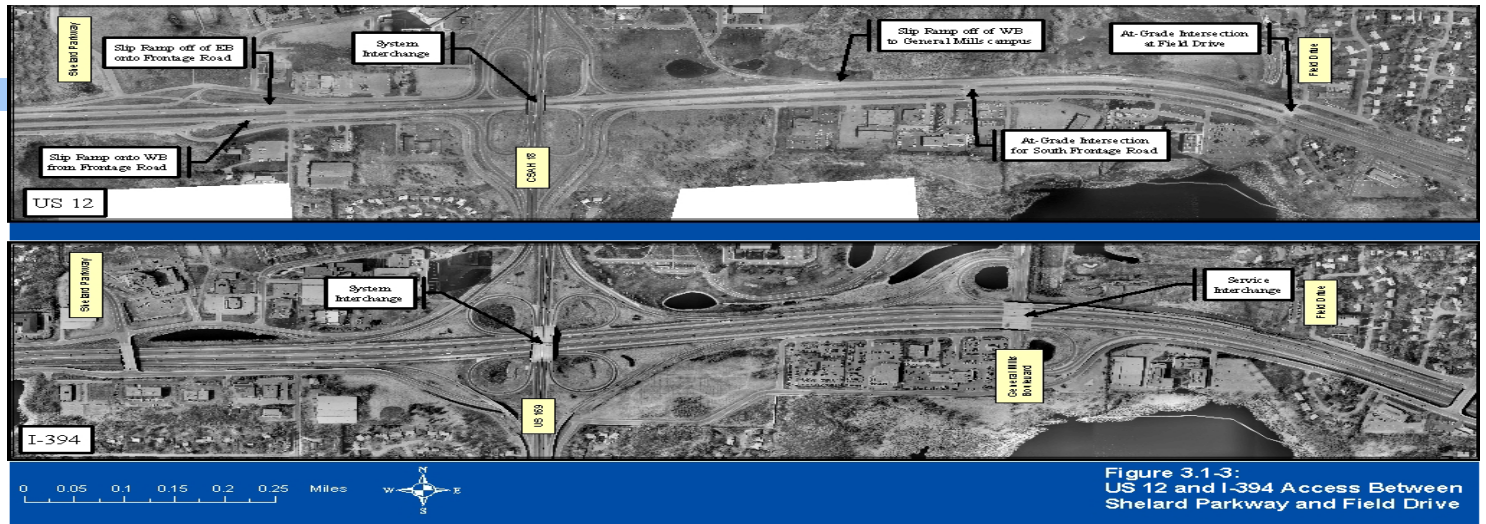
- A major project (10 miles of urban freeway at \$300 million)
- Significant right-of-way acquisition (400 parcels at \$125 million)
- Commercial corridor
- Substantial reduction in access (from 100+ intersection and slip ramps to 10 interchanges)
- Alleged adverse economic effects
- Substantial amount of “available” data

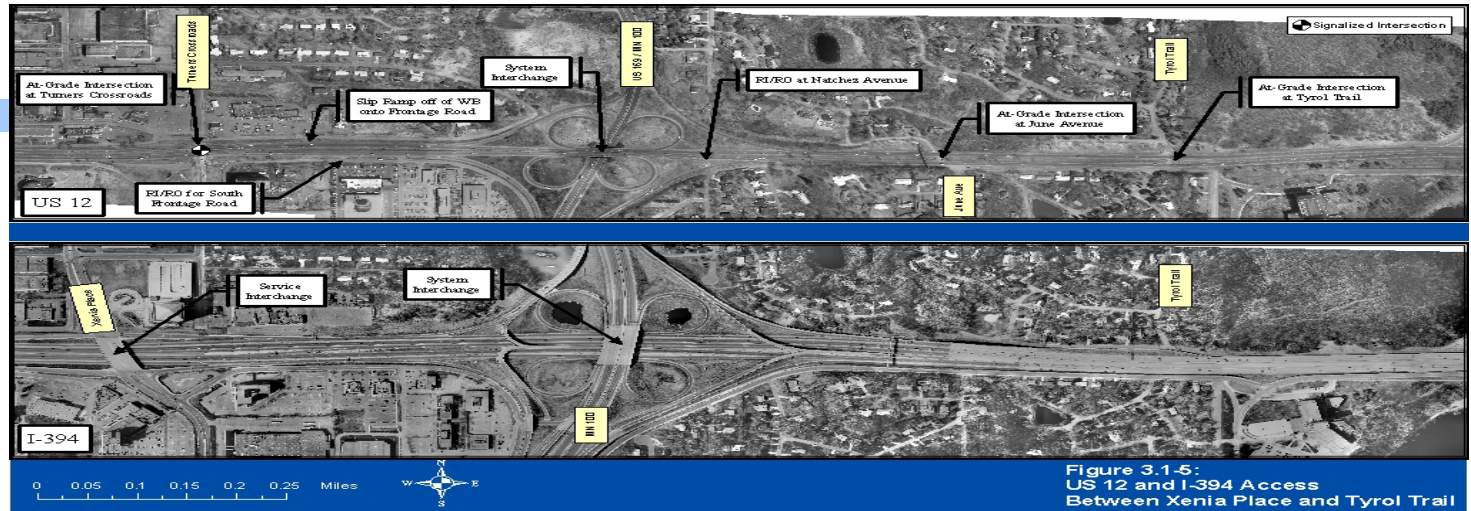


I-394 Corridor



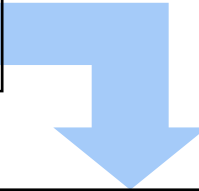






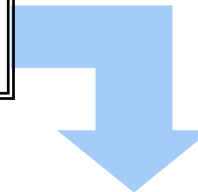
Study Process

Literature Review



Corridor Overview

- *Transportation*
- *Land Use*
- *Demographics*
- *Economics*



Parcel Studies

- *A sample of 22 parcels representing 9 business types were selected by MnDOT staff.*



Literature Review

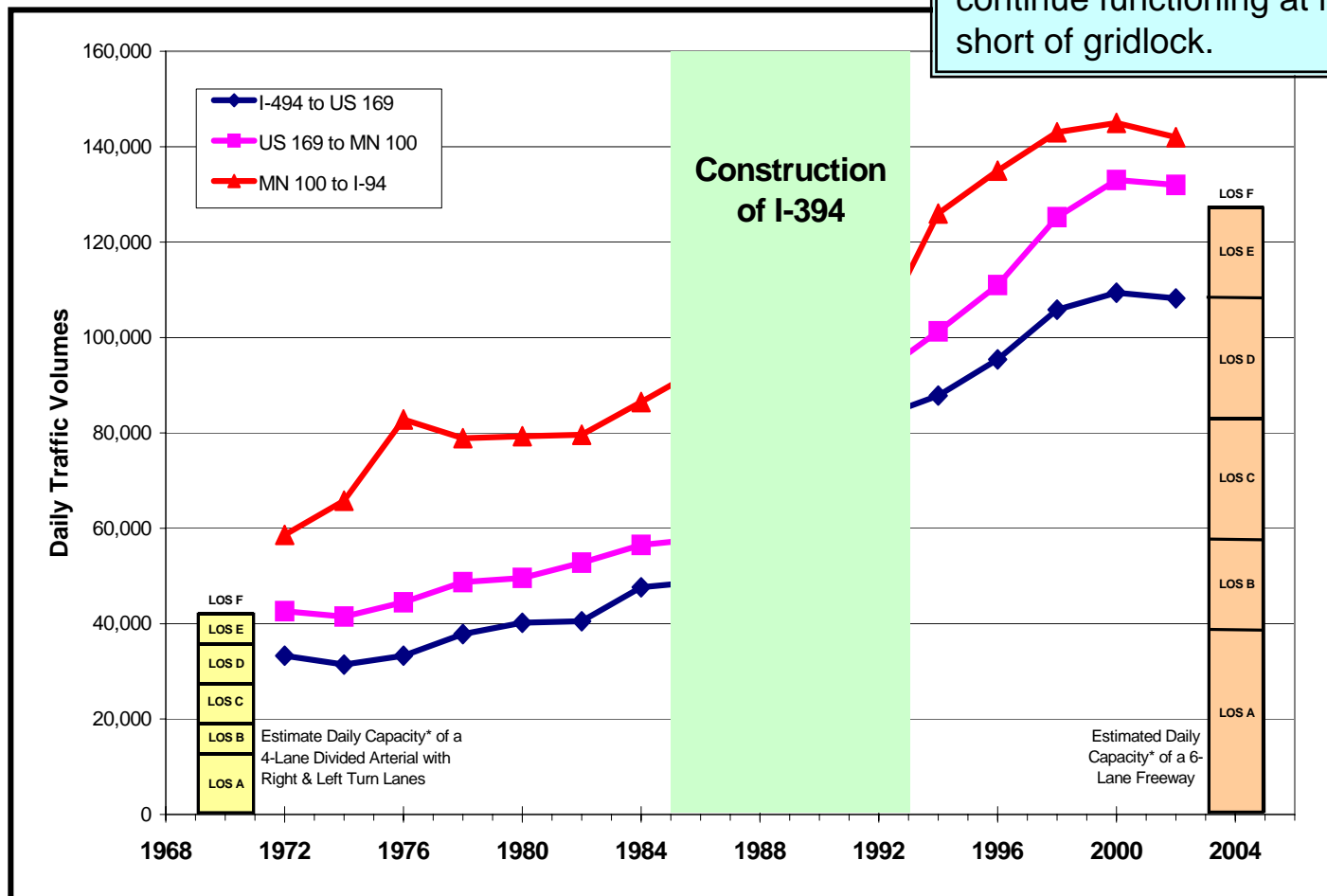
- ***A few previous studies on this topic...***
- **Texas**
 - Documented changes in property values in a limited number of improved urban arterial corridors.
 - **Key Finding**—Property values along improved corridors continued to rise.
- **Kansas**
 - Conducted “Before” vs. “After” studies of a limited number of parcels from around Kansas that were involved in litigation.
 - **Key Finding**—Relatively minor changes in access (< 1 mile) were not sufficient to cause significant changes in land use and value.
- **Florida**
 - Conducted two studies on the economic impacts of median construction.
 - **Key Finding**—Land owner perception of business vitality in the “After” condition was more negative what actual economic conditions suggested.
- **Iowa**
 - Researchers at Iowa State used secondary data, field investigations, and interviews to determine the effects of access management projects on business vitality.
 - **Key Finding**—Improved corridors had higher overall sales than their surrounding cities as a whole. Same overall conclusion as Florida study.



Corridor Overview:

US 12/I-394 Historic Traffic Volumes

The conversion of Highway 12 to I-394 has allowed the corridor to accommodate significant growth and to continue functioning at levels short of gridlock.



Corridor Overview:

Peak Period Travel Speed Summary

TABLE 3.1-3
Peak Period Travel Speed Summary

	Segment	Before Condition (1980)	After Condition (2000)*
Morning Peak Period - Eastbound Traffic	I-494 to US 169	38 mph	63 mph
	US 169 to MN 100	35 mph	38 mph
	MN 100 to I-94	37 mph	47mph
Afternoon Peak Period - Westbound Traffic	I-494 to US 169	41 mph	62 mph
	US 169 to MN 100	37 mph	39 mph
	MN 100 to I-94	39 mph	42 mph

*NOTE: Travel speeds for vehicles in the high occupancy vehicle (HOV) lanes were not included when determining the average travel speed. Including vehicles in the HOV lanes would result in slightly higher average travel speeds.



Corridor Overview:

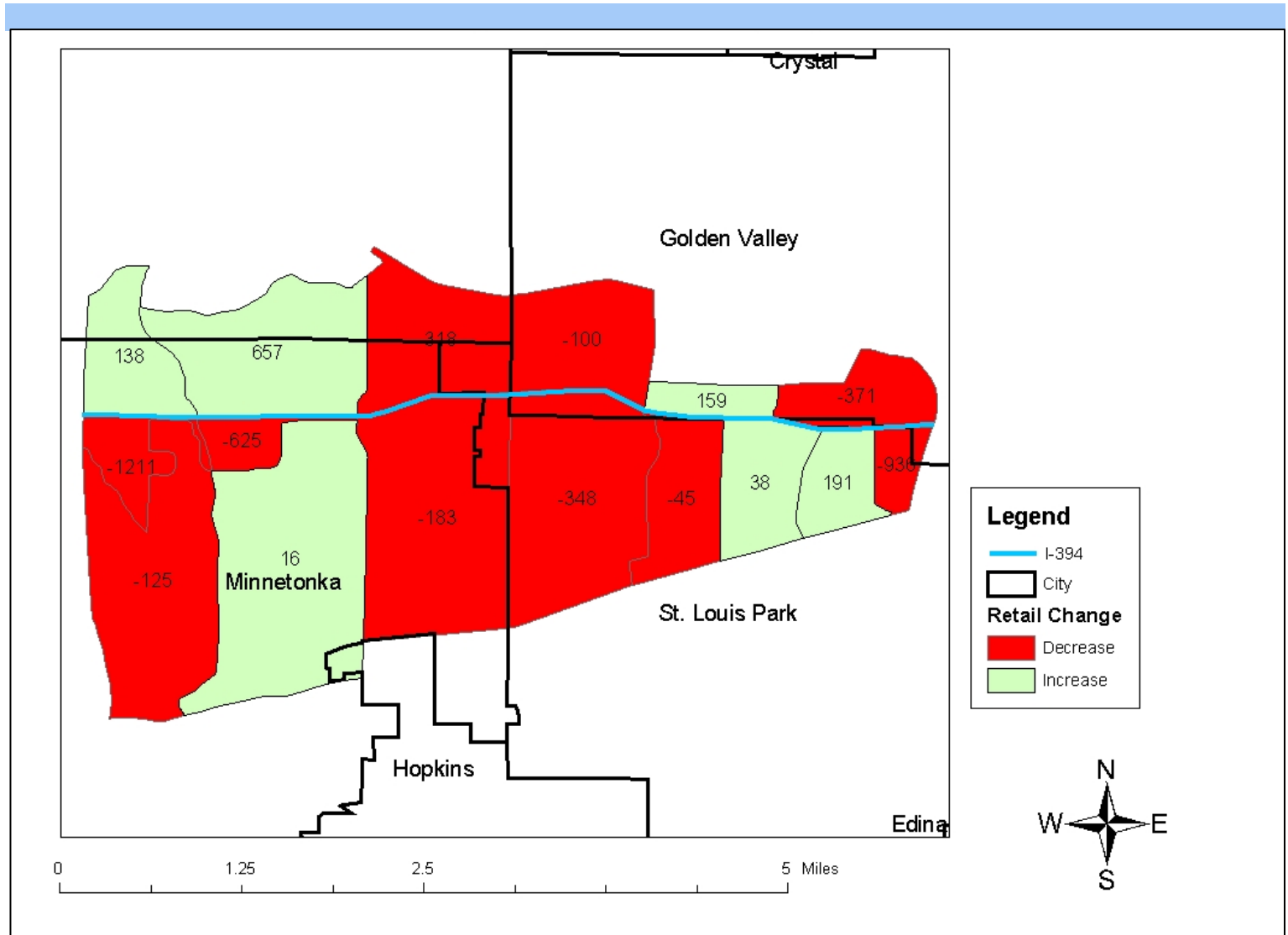
Travel Time Change Analysis (1980-2000) (17 Sample Locations)

Indicator	To/From East	To/From West	Typical Total Travel Time Change (1980-2000)
Mean Change	-6%	-5%	About 1 minute faster
Median Change	-7%	1%	About 1.5 minutes faster to 10 seconds slower
Improved	12	8	
Worse	4	9	
No Change	1	0	
Large Positive Change	6	3	Over 2 minutes faster
Large Negative Change	2	4	Over 2 minutes slower
Small Changes (LT 10%)	9	10	Within 2 minutes faster or slower
Note: Typical total trip times in the I-394 corridor are between 15 and 20 minutes. Trip times include "line haul" and "access" components.			



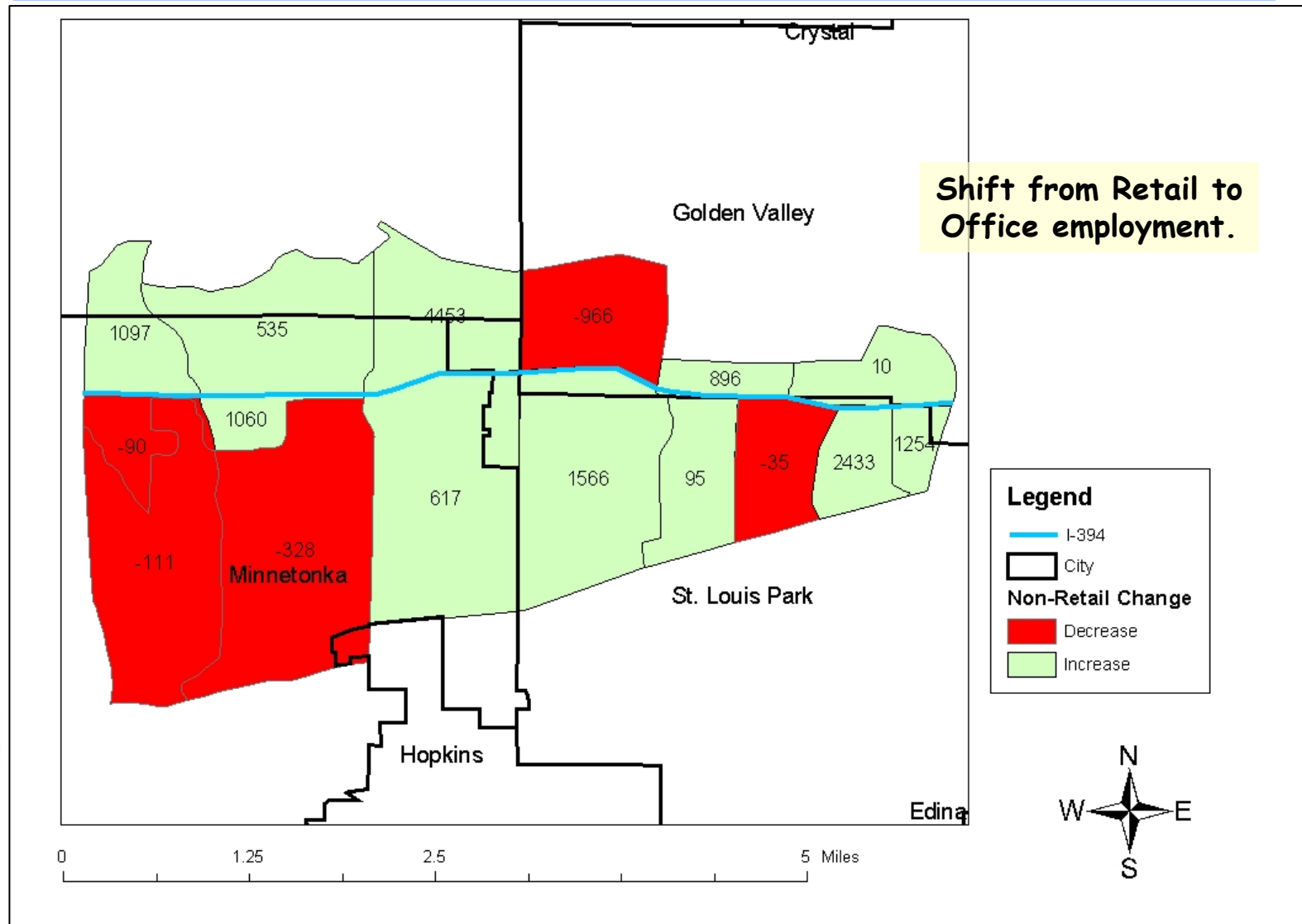
Corridor Overview:

I-394 Total Change in Retail Employment, 1990-2000



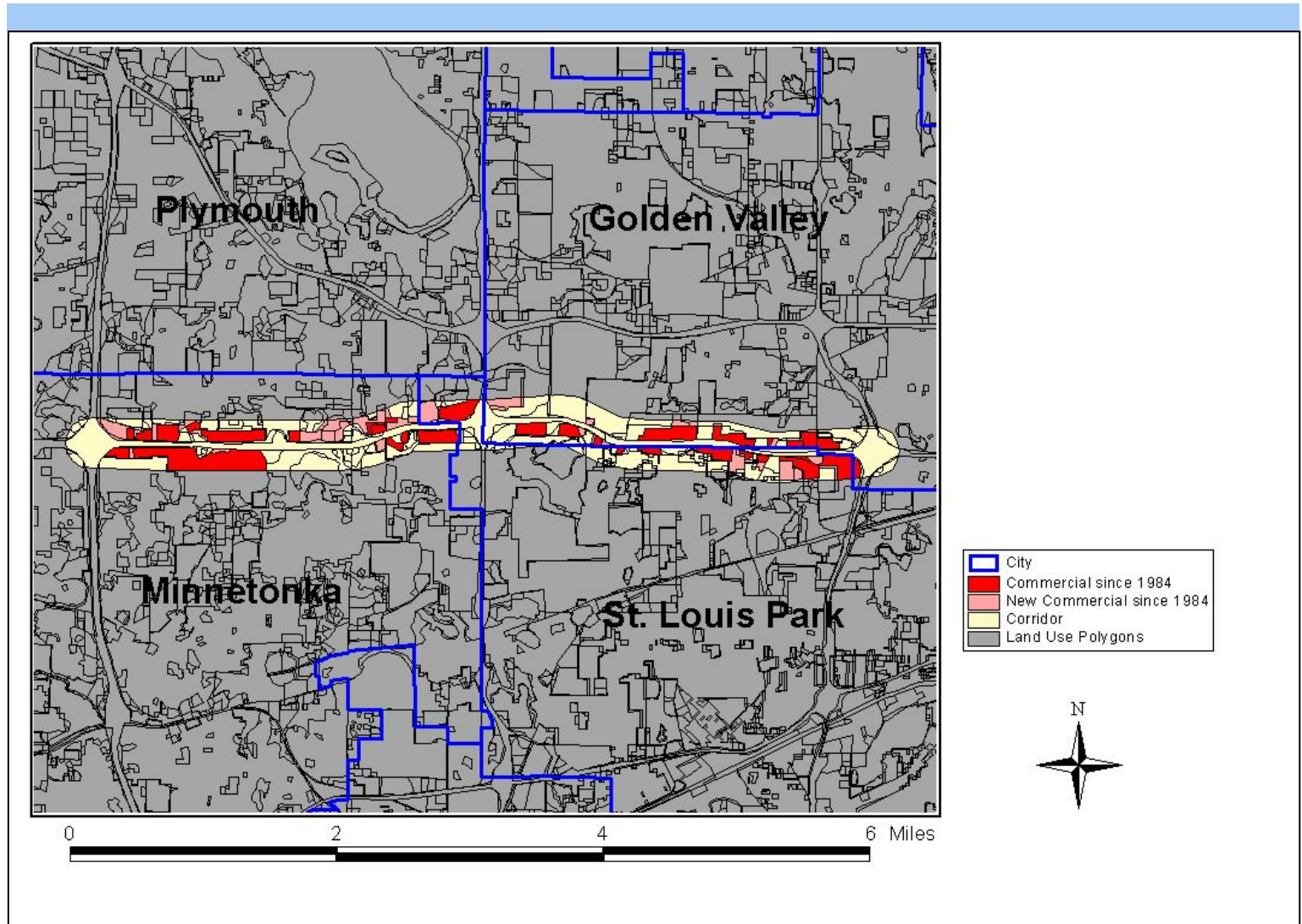
Corridor Overview:

I-394 Total Change in Non-Retail Employment, 1990-2000

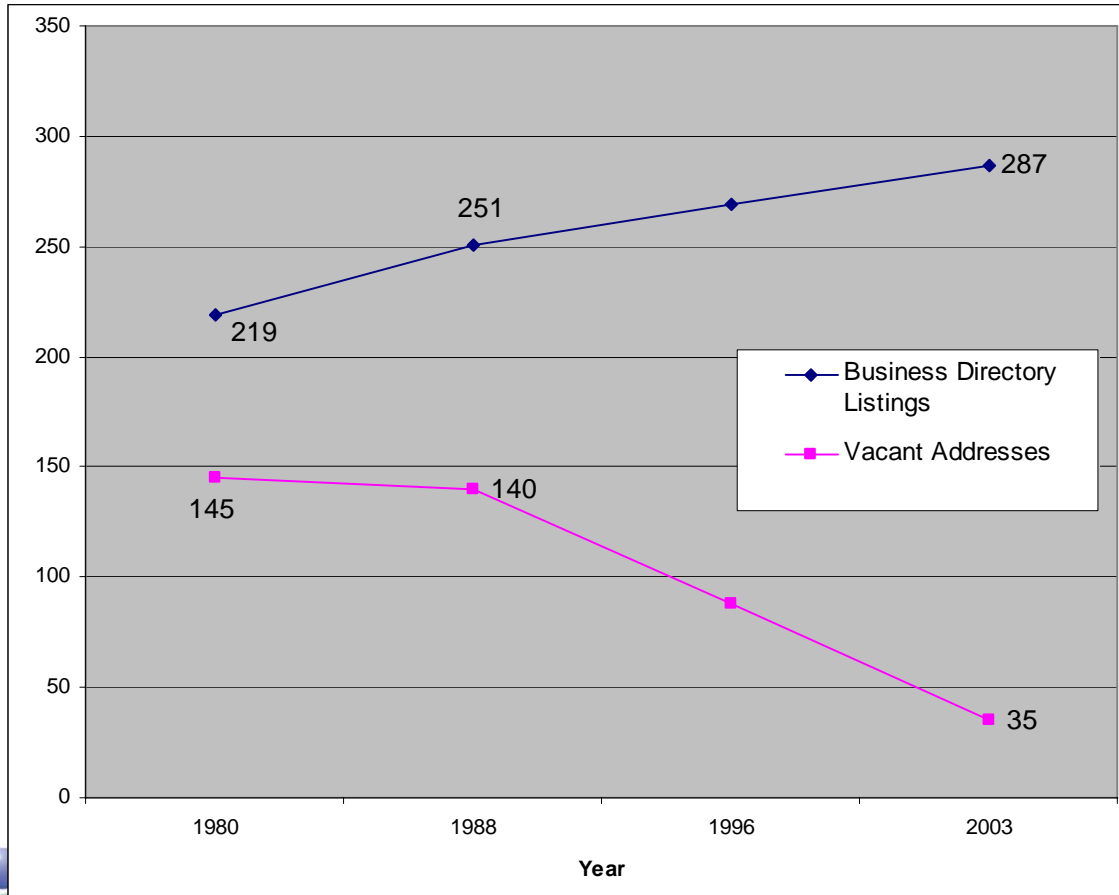


Corridor Overview:

I-394 Commercial Land Use Change, 1984-2000



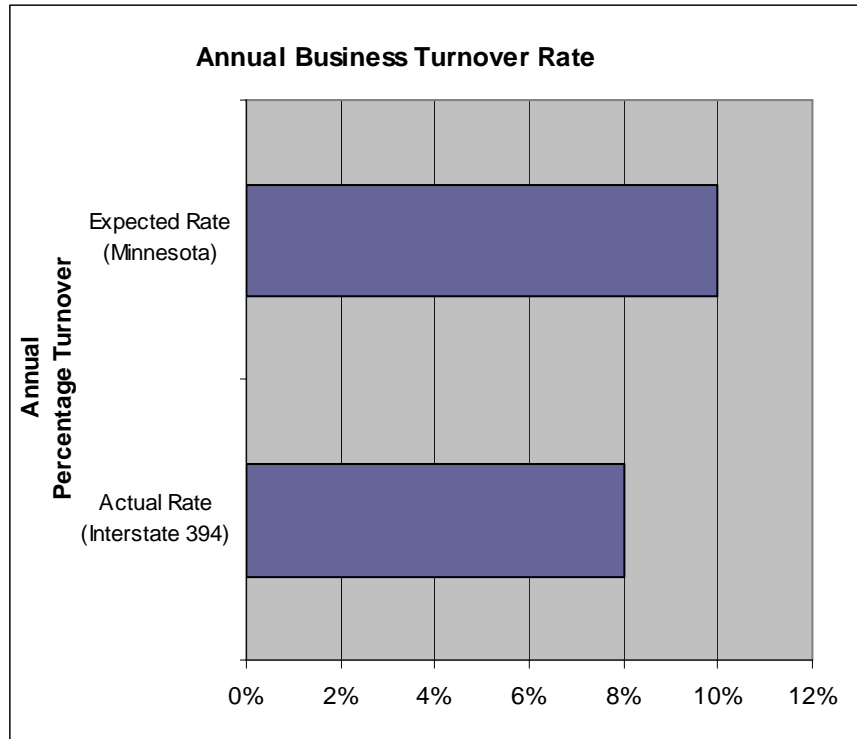
Corridor Overview



- Consistent positive development
- 4 to 5 net new businesses per year
- 2 % annual growth
- Reduction in vacant addresses indicates the corridor is becoming build out
- Future growth will require increased density
- Multi-tenant addresses (office buildings & strip commercial) have become the major source of new listings in the business directory.

Corridor Overview:

Annual Business Turnover Rate



•Actual business turnover is **LESS** than the expected turnover rate (based on MN & U.S. averages)

•High turnover rate sectors include:

- locations in multi-tenant buildings (office & strip commercial)
- personal service businesses (tax preparers, medical, etc.)
- Business service firms (accounting, real estate, etc.)

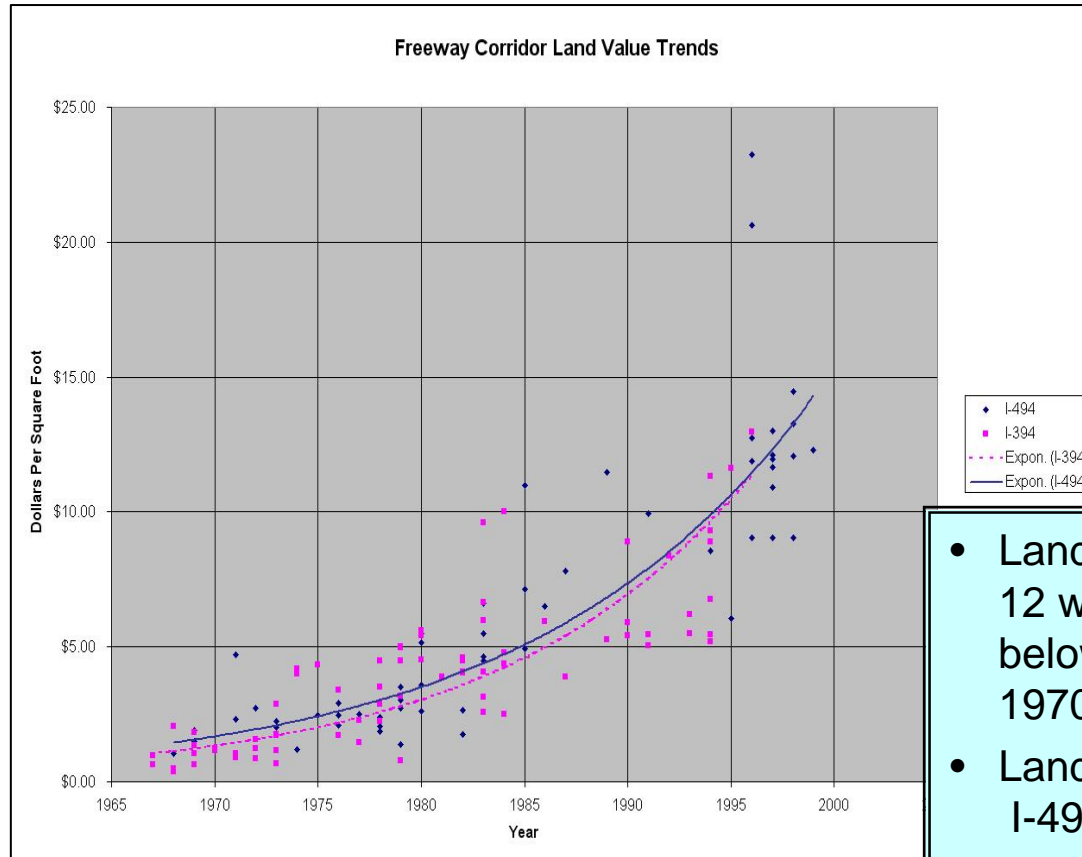
•Low Turnover Rate Sectors include:

- Auto dealers
- Fast food
- Sit down restaurants
- General retail



Corridor Overview:

Freeway Corridor Land Value Trends

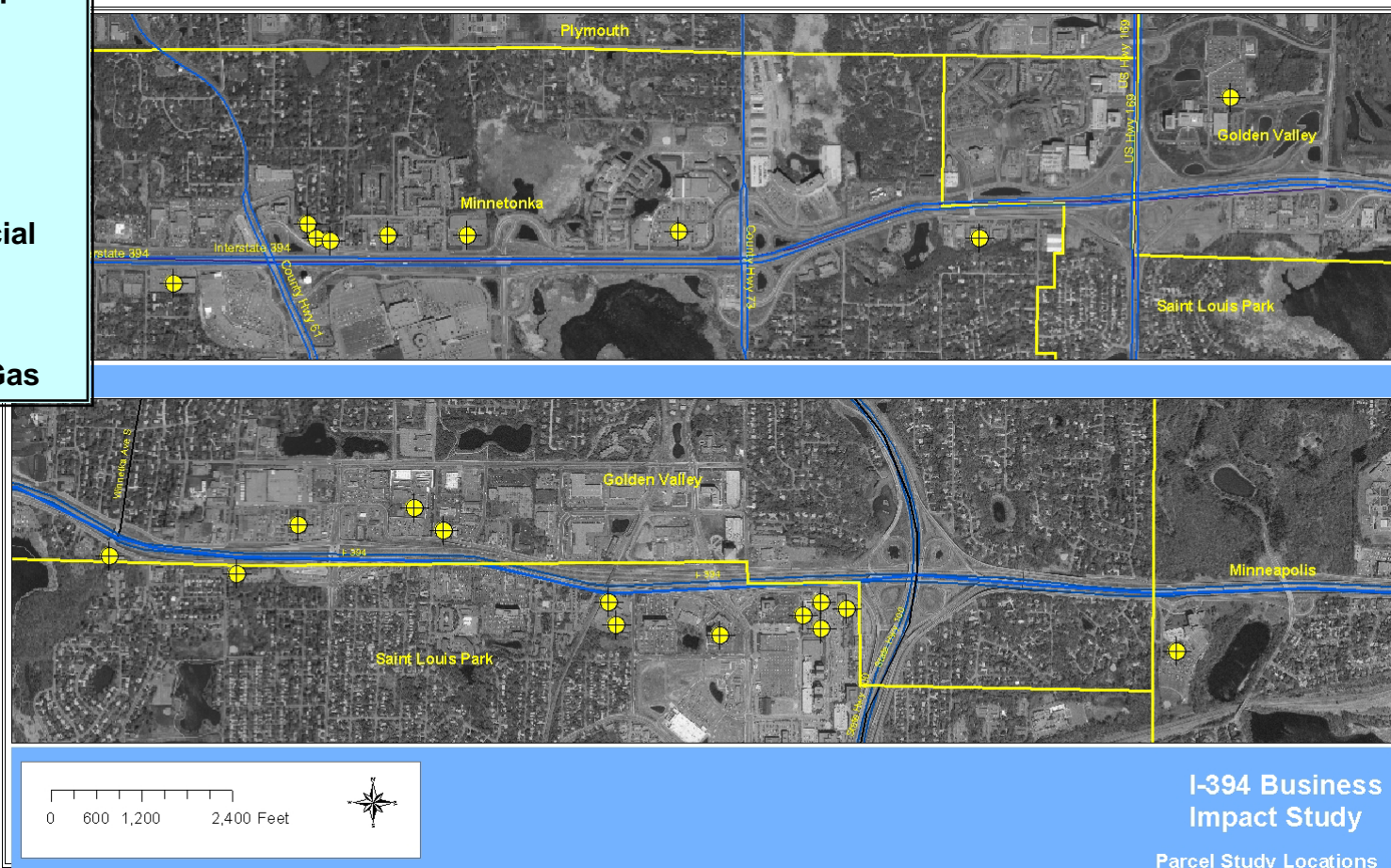


- Land values along Highway 12 were generally \$1.00/sf below I-494 during the 1970s and 1980s
- Land values along I-394 and I-494 have increased at approximately the same rate.
- Today, land values in both corridors are virtually identical.

Parcel Studies

1. Office
2. Auto Dealerships
3. Sit Down Restaurants
4. Fast Food Restaurants
5. General Retail
6. Strip Commercial
7. Big Box Retail
8. Hospitality
9. Convenience/Gas

Parcel Studies



Center for Transportation
Research and Education

- Travel Time Analysis & Market Value Analysis
- Review of Condemnation Proceedings
- Interviews with Business Owners

Study Process:

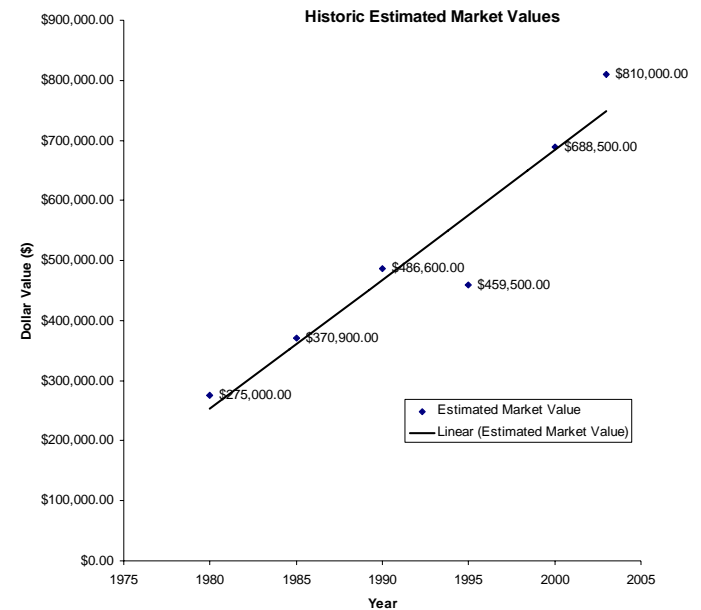
Travel Time & Market Value Analysis

Access Routes & Travel Times

Travel Time To and From East		Before Construction (1980)	After Construction (2000)	Change in Travel Time (1980 – 2000)
Local Road System	To Parcel	1:55	4:20	- 2:25
	From Parcel	0:25	3:30	- 3:05
	Round Trip	2:20	7:50	- 5:30
Regional Road System	To Parcel	8:10	6:15	1:55
	From Parcel	8:10	6:15	1:55
	Round Trip	16:20	12:30	3:50
Total Trip	To Parcel	10:05	10:35	- 0:30
	From Parcel	8:35	9:45	- 1:10
	Round Trip	18:40	20:20	- 1:40

Travel Time To and From West		Before Construction (1980)	After Construction (2000)	Change in Travel Time (1980 – 2000)
Local Road System	To Parcel	0:20	1:40	- 1:20
	From Parcel	2:10	5:10	- 3:00
	Round Trip	2:30	6:50	- 4:20
Regional Road System	To Parcel	7:10	6:00	1:10
	From Parcel	7:10	6:00	1:10
	Round Trip	14:20	12:00	2:20
Total Trip	To Parcel	7:30	7:40	- 0:10
	From Parcel	9:20	11:10	- 1:50
	Round Trip	16:50	18:50	- 2:00

Estimated Market Values



Parcel Studies

Business Owner Interviews

Business Types	Travel Time	Est. Market Value
1. Office	Decrease	↑
2. Auto Dealers	Decrease to slight increase	↑
3. Sit Down Restaurant	Slight increase	↑
4. Fast Food Restaurant	No change	↑
5. General Retail	No change	↑
6. Strip Commercial	Slight increase	↑
7. Big Box Retail	Increase to slight decrease	↑
8. Hospitality	No change	*
9. Conv./ Gas	Increase	*
TOTAL: 22 Parcels * Incomplete Data		

Interview Comments

- Idea location for office; very positive
- Proximity to Minneapolis CBD, connectivity to regional road system
- Thought they would be put out of business; now somewhat positive about location
- Negative impacts during construction
- Thought they would be put out of business; now somewhat positive about location
- Frustrated by lack of continuity of frontage road system
- Benefited from strong customer base; new office development
- Top sales performers in Metro region
- Changed marketing strategy to become more of a destination; less dependent on drive-by business
- Takes advantage of prosperous customer base
- The centers are nearly fully occupied and are doing well
- Benefits from freeway location, visibility and prosperous customer base
- Concerns about lack of continuity of the frontage road system
- Changed business strategy to focus on local market; less dependent on drive-by

Parcel Studies

Research Results Summary

Indicators	Direction Of Impact	Comments
<u>Transportation</u>		
Traffic Volume	Positive	Traffic doubled
Travel Speed	Positive	Peak travel speeds up
Traffic Safety	Very Positive	Large decline in serious crash rate
<u>Economic and Demographic</u>		
Land Use	Positive	Land developed more intensively
Population	Neutral to Negative	Slight population loss due to land use changes
Income	Neutral to positive	Area consumers more affluent
Retail Trade Activity	Neutral	Mixed trends
Employment	Positive	Large office jobs gain
Business Turnover	Neutral to Positive	Below state turnover rate
Commercial Land Values	Neutral	Trend similar to I-494 corridor
<u>Business Types</u>		
Office Buildings	Very Positive	Large increase in activity
Automobile Dealerships	Neutral	Remained viable after transition
Sit-Down Restaurants	Neutral	Remained viable with adjustments
Fast-Food Restaurants	Very Positive	Large increase in business
"Strip Commercial"	Neutral to Positive	Attractive location
General Retail	Neutral	Remained viable with adjustments
"Big Box Retail"	Very Positive	Very attractive customer base
Hospitality	Neutral	Insufficient data
Convenience Stores and Gas Stations	Neutral	Remained viable



Key Conclusions

- Employment in the corridor is up.
 - Land values are up.
 - Business turnover has been less than average for Minnesota.
 - Land use trends are positive (higher uses).
 - Interviews were more positive than expected.
 - Auto dealers, restaurants, and specialty retail had very low turnover rates.
 - Personal and business service firms went out of business (or moved) at high rates. We hypothesize that they moved to better space.
- **These conclusions are very consistent with the results of previous studies in Texas, Kansas, Florida, and Iowa.**
- **Changes in roadway access appear to have less influence on business vitality than either regional/national economics or the skill of the individual business owner.**



Key Conclusions

- Oh, and what about those businesses whose owners made such dire predictions about their future in the late 1970's and early 1980's?
- All of them are still there.



Key Conclusions

- During project planning and design, business and property owners along I-394 often focused on *access* (e.g. the physical layout of driveways and slip ramps)
- They appeared to ignore *accessibility* (e.g. customer travel time, customer ease of travel, and potential for more customer traffic)
- It is important to educate business and property owners about the difference.

