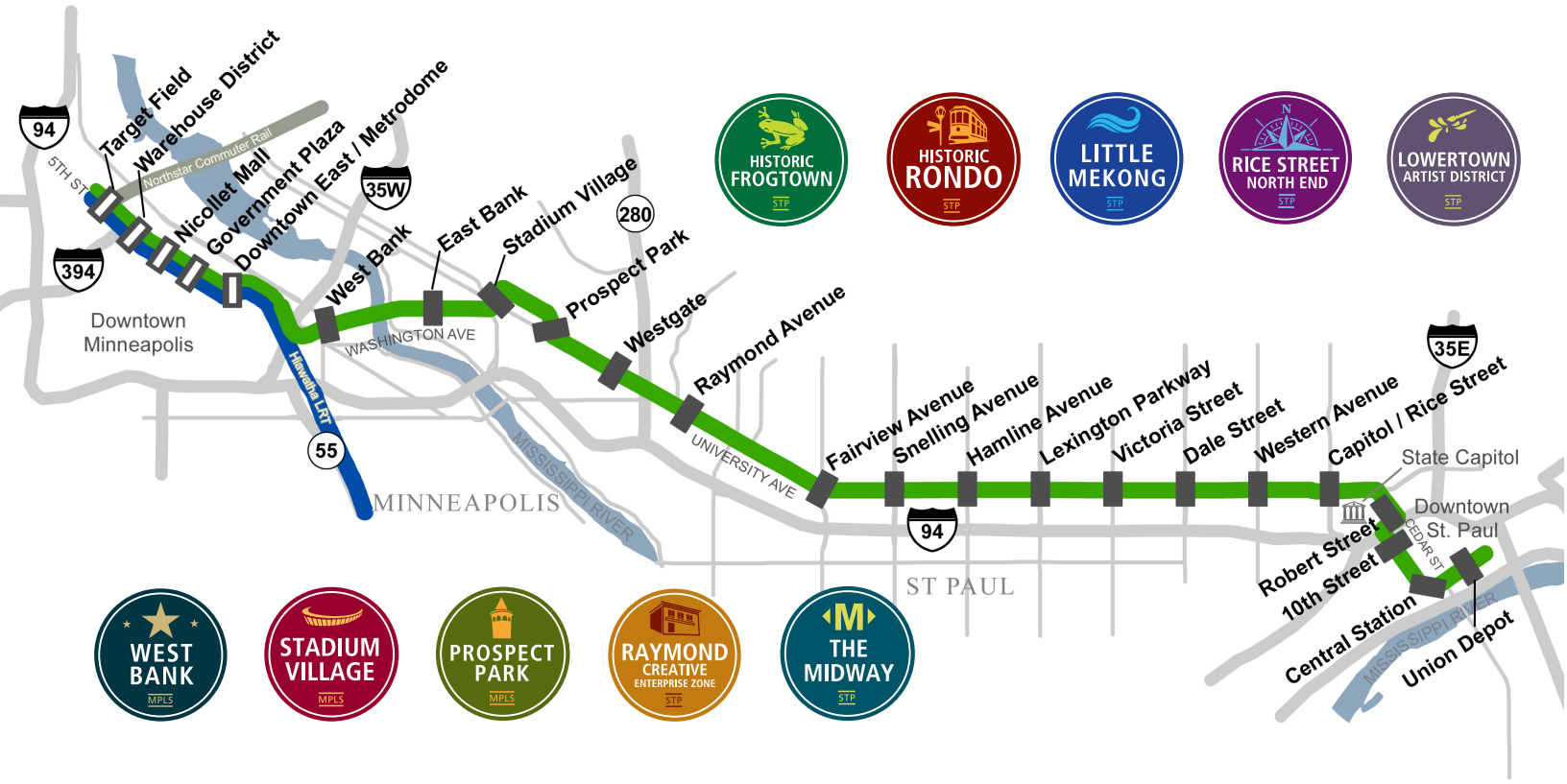
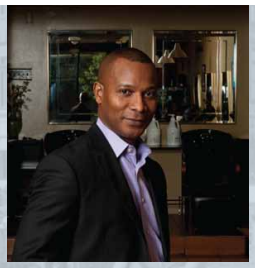
Central Corridor **LIGHT RAIL TRANSIT**

Supplemental Draft Environmental Impact Statement-

Construction-Related Potential Impacts on Business Revenue





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CENTRAL CORRIDOR LIGHT RAIL TRANSIT PROJECT

SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT

CONSTRUCTION-RELATED POTENTIAL IMPACTS ON BUSINESS REVENUES

Prepared by:
Federal Transit Administration
and Metropolitan Council

Pursuant to:

National Environmental Policy Act of 1969 (NEPA), as amended, 42 U.S.C. Section 4321 et seq.; Council on Environmental Quality (CEQ) regulations, 40 C.F.R. Section 1500 et seq. implementing NEPA; Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Pub.L. No. 109-59 (Aug. 10, 2005); Federal Transit Laws, 49 U.S.C. Chapter 53; Environmental Impact and Related Procedures, 23 C.F.R. Part 771, a joint regulation of the Federal Highway Administration and Federal Transit Administration implementing NEPA and CEQ regulations; Section 106 of the National Historic Preservation Act of 1966, 16 U.S.C. Section 470(f); Section 4(f) of the Department of Transportation Act of 1966, as amended, 49 U.S.C. Section 303; Section 6(f)(3) of the Land and Water Conservation Fund Act of 1965, 16 U.S.C. Section 4601-4 et seq.; Clean Air Act, as amended, 42 U.S.C. Section 7401 et seq.; Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, 42 U.S.C. Section 4601 et seq.; Executive Order No. 12898 (Federal Actions to Address Environmental Justice in Minority and Low Income Populations); Executive Order No. 13166 (Improving Access to Services for Persons with Limited English Proficiency); Executive Order No. 11990 (Protection of Wetlands); Executive Order No. 11988 (Floodplain Management); other applicable Federal laws and procedures.

Date of Approval

Marisol Simon, Region 5
Regional Administrator
Federal Transit Administrator

11.30.12
Date of Approval

Mark W. Fuhrmann
New Starts Program Director
Metropolitan Council

ABSTRACT

The Federal Transit Administration (FTA), the lead federal agency, and the Metropolitan Council, the local lead agency, have prepared this Construction-related Potential Impacts on Business Revenues Supplemental Draft Environmental Impact Statement (EIS) for the Central Corridor Light Rail Transit Project (the Project) pursuant to 23 CFR 771.130(f). The Project is 10.9 miles long (9.7 miles of new alignment, 1.2 miles on shared alignment) and consists of 23 Central Corridor Light Rail Transit (LRT) stations – 18 new stations and five shared with the Hiawatha LRT.

On January 26, 2011, the U.S. District Court for the District of Minnesota in *NAACP, et. al. v. US Department of Transportation, et. al.,* CIV 10-147, held that the Final Environmental Impact Statement ("FEIS"), prepared in June 2009, was deficient in its analysis of effects to business revenue as an adverse impact of construction. In a second Court order dated January 23, 2012, it was clarified that the consideration of impacts on business revenue loss required by the 2011 ruling must be completed in the form of a Supplemental EIS. The intent of this Supplemental Draft EIS is to comply with the Court's orders.

A public comment period has been established for this document. Comments may be submitted in writing or in person at public hearing scheduled for Thursday, January 10, 2013. Two hearings will be held that day, one starting at 8:00 a.m. at Model Cities (849 University Avenue W., St. Paul, MN 55104) and one starting at 6:00 p.m. at Goodwill / Easter Seals (553 Fairview Avenue N., St. Paul, MN 55104).

Written comments should be submitted directly to Ms. Kathryn O'Brien by January 30, 2013 at the address below or by e-mail to centralcorridor@metc.state.mn.us.

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Central Corridor
Light Rail Transit Project

Supplemental Draft Environmental Impact Statement for Construction-Related Potential Impacts on Business Revenues

Federal Transit Administration

Metropolitan Council

December 2012

TABLE OF CONTENTS

ES EXECUTIVE SUMMARY 1

1 PURPOSE AND NEED FOR THE PROPOSED ACTION 1

1.1 Purpose and Need for the Proposed Action 1
1.2 Project History and Timeline 3
1.2.1 Alternatives Analysis/Draft Environmental Impact Statement (AA/DEIS), 2006 3
1.2.2 Supplemental Draft Environmental Impact Statement (SDEIS), 2008 3
1.2.3 Final Environmental Impact Statement (FEIS), Record of Decision (ROD), and Adequacy Determination, 2009 3
1.2.4 Infill Stations Environmental Assessment (EA) and Finding of No Significant Impact (FONSI), 2010 4
1.2.5 Construction-Related Potential Impacts on Business Revenue EA and FONSI, 2011 4
1.3 Basis for this Supplemental Draft EIS 5

2 ALTERNATIVES CONSIDERED 6

2.1 Alternatives Previously Considered 6
2.1.1 Alternatives Evaluated in the AA/DEIS 6
2.1.2 Selection of the Locally Preferred Alternative 7
2.1.3 The Purpose of the 2008 SDEIS 7
2.1.4 Selection of the Preferred Alternative 8
2.2 Alternatives Evaluated in This Supplemental Draft EIS 8
2.2.1 No-Build Alternative 9
2.2.2 Baseline Alternative 9
2.2.3 LRT on University Avenue 9
2.2.4 BRT on University Avenue 11
2.3 Construction Activities 14
2.3.1 No-Build Construction Activities 14
2.3.2 Baseline Construction Activities 14
2.3.3 LRT Construction Activities 14
2.3.4 BRT Construction Activities 18

3 ECONOMIC EFFECTS 20

3.1 Overview of Existing Economic Conditions 20
3.1.1 Minneapolis-Saint Paul-Bloomington Metropolitan Statistical Area Economic Indicators 20
3.1.2 Central Corridor LRT Business Characteristics 21
3.2 Construction-Related Impacts on Business Revenues and Mitigation 23

3.3 No-Build Alternative 24
3.4 Baseline Alternative 24
3.5 LRT Alternative 24
3.5.1 General Business Trends 24
3.5.2 Identification of Types/Severity of Impacts to Businesses 27
3.5.3 Assessment of Revenue Loss due to Construction 44
3.5.4 Impacts due to LRT Construction 49
3.6 BRT Alternative 51
3.6.1 Anticipated Impacts Prior to BRT Construction 51
3.6.2 Comparison of LRT and BRT Future Concerns and Anticipated Impacts 53
3.6.3 Impacts due to BRT Construction 55
3.7 Mitigation Program Overview 55
3.7.1 Mitigation Approach 55
3.7.2 Mitigation Commitments 62

4 EVALUATION OF ALTERNATIVES 73
4.1 Purpose and Need 73
4.2 Evaluation Relative to Project Goals and Objectives 73
4.2.1 No-Build Alternative 75
4.2.2 Baseline Alternative 75
4.2.3 LRT Alternative 75
4.3 Comparative Evaluation of Alternatives 78

5 PUBLIC AND AGENCY COORDINATION 81
5.1 Outreach Completed During Supplemental Ea 81
5.2 Outreach After Supplemental EA 81
5.3 Outreach During this Supplemental Draft EIS 82

APPENDICES

APPENDIX A: Central Corridor LRT National Environmental Policy Act Document List

APPENDIX B: Supplemental EA

APPENDIX C: Central Corridor BRT Alternative Construction Duration

APPENDIX D: Literature Review for the Central Corridor Supplemental EIS

APPENDIX E: Central Corridor Key Outcomes: 2012 Indicators

APPENDIX F: Change in the Number of Occupied Storefronts Along University Avenue, 1st Quarter 2011 And UABA Vacancy Report Correspondence

APPENDIX G: Assessing Neighborhood and Social Influences of Transit Corridors

APPENDIX H: Central Corridor Light Rail Transit Construction: Impact Study for Pascal Street to Dale Street Sample, Saint Paul, Minnesota

APPENDIX I: Mitigating Business Losses: Services, Strategies, and Effectiveness

APPENDIX J: Little Mekong CCLRT Impact Study

APPENDIX K: Business Support Fund

APPENDIX L: List of Meetings

LIST OF TABLES

Table 2-1. LRT and BRT Construction Element Comparison 18

Table 3-1. Minneapolis-Saint Paul-Bloomington Metropolitan Statistical Area Economic Indicators 21

Table 3-2. Sector Composition of the Central Corridor 22

Table 3-3. CCPO Street Level Business Change (February 2011 - June 2012) 25

Table 3-4. UABA Storefront Vacancy Rates, observed quarterly, May 2011-May 2012 ... 26

Table 3-5. Central Corridor LRT Business Study: Businesses by Type, Size and Property 32

Table 3-6. Level of Construction and Construction-Related Disruptions 33

Table 3-7. Respondent Participation in Construction Mitigation Services 35

Table 3-8. Awareness of Services and Communication Efforts 36

Table 3-9. Primary Reasons for Not Participating in Services 37

Table 3-10. Reasons for Uncertainty 40

Table 3-11. Types of Participating Businesses Compared to All Businesses in Little Mekong 42

Table 3-12. Reported Utility Trouble 43

Table 3-13. Reported Trouble with Construction Activities 43

Table 3-14. Reported Trouble with Access 43
Table 3-15. Business Support Fund Participants by Geographic Location 46
Table 3-16. Business Support Fund Participants by Type of Business 47
Table 3-17. Business Support Fund Overall Trends 47
Table 3-18. Business Support Fund Data by Business Type 48
Table 3-19. Business Support Fund by Geographic Location 48
Table 3-20. Mitigation Measures: Financial Commitments 63
Table 3-21. Mitigation Measures: Staffing and Contract Commitments (Non-Direct Financial Commitments) 65
Table 4-1. Alternative Performance Against Goals and Measures 74
Table 4-2: Comparative Analysis of Build Alternatives 78
Table 4-3: Summary of Comparative Analysis 80

LIST OF FIGURES

Figure 2-1. Preferred Alternative- LRT on University Avenue 12
Figure 2-2. BRT Alternative 13
Figure 2-3. Civil West and Civil East Construction Segments 16
Figure 3-1. Survey Sample Industry Sectors by NAICS Code 28
Figure 3-2. Perception of Transitway Impacts 29
Figure 3-3. Levels of Concern over Transitway Construction 29
Figure 3-4. Specific Anticipated Construction Concerns 30
Figure 3-5. Length of Time Business Has Been in Operation 32
Figure 3-6. Construction Impacts Reported by Businesses Owners 34
Figure 3-7. Specific Effectiveness of Programs 38
Figure 3-8. Overall Effectiveness of Programs 39
Figure 3-9. "Do You Expect This Business Will Be Operating in its Current Location in 5 Years?" 40
Figure 3-10. Expectations Over the Next Five Years 41
Figure 3-11. Business Support Fund Corridor Segments 45
Figure 3-12: Collapsed Categories 46
Figure 3-13. Cedar Avenue - Survey Sample Industry Sectors by NAICS Code 51
Figure 3-14. Cedar Avenue - Perception of Transitway Impacts 52
Figure 3-15. Cedar Avenue - Levels of Concern over Transitway Construction 53
Figure 3-16. Cedar Avenue - Specific Anticipated Construction Concerns 53
Figure 3-17: BRT vs. LRT - Perception of Transitway Impacts 54
Figure 3-18: BRT vs. LRT - Levels of Concern over Transitway Construction 54
Figure 3-19: BRT vs. LRT - Specific Anticipated Construction Concerns 55

LIST OF PHOTOS

Photo 1: Contractors created temporary parking for residents in the construction zone on University Avenue in Minneapolis. 11

Photo 2: Outreach coordinator Shoua Lee discusses the project with a Central Corridor business owner. 12

Photo 3: Under an arrangement with the city, a former restaurant parking lot at the southwest corner of Fry and University offers free two-hour parking for patrons of nearby businesses. 12

Photo 4: The Republic Café and Pub in Minneapolis' Seven Corners Neighborhood is a recipient of the City's Great Streets façade improvement grant 13

Photo 6: Variable message signing used to alert drivers to the traffic switch on University Avenue 14

Photo 6: Special signage shows parking locations on the corridor 67

Photo 7: Lunch on the Avenue events support local restaurateurs during construction. 69

Photo 13: The Republic Café and Pub in Minneapolis' Seven Corners Neighborhood is a recipient of the City's Great Streets façade improvement grant 70

Photo 9: Reconstructed sidewalks and street lamps along University Avenue. 71

ES EXECUTIVE SUMMARY

The Federal Transit Administration (FTA), the lead federal agency, and the Metropolitan Council, the lead local agency, have prepared this Supplemental Draft Environmental Impact Statement (EIS) for the Central Corridor light rail transit (LRT) project in the cities of Saint Paul and Minneapolis. The Project is 10.9 miles long (9.7 miles of new alignment, 1.2 miles on shared alignment) and consists of 23 Central Corridor light rail transit (LRT) stations – 18 new stations and five shared with the Hiawatha LRT.

Why was a supplement to the EIS completed?

A Final Environmental Impact Statement (FEIS) for the Central Corridor LRT project was issued in June 2009 and a Record of Decision (ROD) in August 2009.[1] Following the FEIS and ROD, a lawsuit was filed against the U.S. Department of Transportation, the FTA and the Metropolitan Council by a coalition of local businesses, residents and non-profit organizations. One of the claims made in the lawsuit was that the environmental review of the Project violated the National Environmental Policy Act (NEPA) by failing to adequately analyze potential loss of business revenues caused during construction of LRT. In January 2011, the Court held that the 2009 FEIS did not evaluate this issue and that construction-related business revenue loss should have been evaluated during the NEPA process. The Court found that the FEIS was inadequate insofar as it failed to address the loss of business revenues as an adverse impact of the construction of the Central Corridor LRT and ordered the FTA and the Metropolitan Council to supplement the FEIS. In April 2011, pursuant to 23 C.F.R. Section 771.130, the FTA and the Metropolitan Council completed an Environmental Assessment (EA) to address the Court's order. Plaintiffs objected to the use of a supplemental EA in response to the Court's order, and in January 2012 the Court clarified that the consideration of construction impacts on business revenues required by the January 2011 ruling must be completed in the form of a Supplemental EIS. The purpose of this Supplemental Draft EIS is to address the potential loss of business revenue as an adverse impact of construction.

[1] A number of documents have been prepared pursuant to NEPA for this project. A complete listing of these documents is included in Appendix A.

What issues does this Supplemental Draft EIS examine and what is the framework for examination?

This Supplemental Draft EIS examines construction-related impacts on the revenues of businesses along the Central Corridor alignment by drawing on a collection of studies and surveys carried out by local business associations, the Central Corridor Project Office (CCPO), researchers at the University of Minnesota, and researchers at the Wilder Foundation. The studies draw on business owners' and managers' perceptions and reports of construction-related impacts. These studies paint a broad picture of the trends in the corridor during construction. This Supplemental Draft EIS also examines data from the Business Support Fund, a construction mitigation loan program administered by the City of Saint Paul, to provide a quantitative analysis of the effects of construction on a subset of corridor businesses' revenues.

What is the framework for this Supplemental Draft EIS?

The Supplemental Draft EIS used the following process in order to examine construction-related impacts to Central Corridor business revenues:

- CCPO staff conducted an exhaustive literature review in an attempt to identify methodologies related to quantifying business revenue loss as an adverse impact of construction projects and to investigate construction mitigation best management practices.
- The literature revealed that the prevailing methods of analyzing construction-related impacts to businesses primarily rely on qualitative examinations of business owners' and managers' stated perceptions of construction-related impacts.
- The collection of surveys, reports and data documenting the experiences and opinions of Central Corridor business owners and managers were gathered from local business associations, the Central Corridor Project Office (CCPO), researchers at the University of Minnesota, and researchers at the Wilder Foundation for analysis.
- The surveys, reports and data were examined for similarities, differences, and trends that revealed the experiences of Central Corridor businesses during construction.

The findings of the analysis were applied to the alternatives evaluated, which are discussed below.

What are the alternatives covered in this Supplemental Draft EIS?

The FTA and the Metropolitan Council determined that in order to systematically evaluate the impact of construction on business revenues, the Supplemental Draft EIS would need to review the alternatives covered in the previous NEPA documents. Since none of the previous NEPA documents completed for the Central Corridor LRT Project

thoroughly discussed short-term business revenue effects as an adverse impact of construction, this Supplemental Draft EIS describes the potential construction-related effects associated with each alternative considered in the 2006 AA/DEIS. These alternatives are discussed below.

No-Build Alternative	The No-Build Alternative includes Metropolitan Council services and facilities that are programmed to be in operation in fiscal year 2014 (Central Corridor LRT opening year) and the regional roadway/highway facilities that are programmed to be in place by 2030. The No-Build Alternative is defined as existing and committed transportation projects. For the purposes of this analysis, this No-Build Alternative assumes no major transitway investment is included for this alternative.

Baseline Alternative	This alternative serves as a basis for comparison to the alternatives that include large infrastructure upgrades and changes. The Baseline Alternative is designed to do the "best that can be done" to improve transit service in the Central Corridor Study Area without a major capital investment.
LRT on University Avenue Preferred Alternative **LRT Initial Construction Mitigation** **LRT Final Construction Mitigation**	The Central Corridor Preferred Alternative is proposed to be a 10.9-mile double tracked alignment with a total of 23 stations (18 new and 5 existing shared with Hiawatha LRT) between downtown Minneapolis and downtown Saint Paul with intermediate service to the University of Minnesota. The Central Corridor Preferred Alternative would be primarily at-grade and is center-running throughout all segments. This Supplemental Draft EIS includes an evaluation of the impact of LRT construction on business revenues for two LRT alternatives. The first LRT alternative is defined as LRT with an initial construction mitigation package as identified in the FEIS published in 2009. The second LRT alternative is defined as LRT with the final mitigation as identified and assembled by the Metropolitan Council and other project stakeholders. This alternative is currently under construction in accordance with the requirements under the 2009 Record of Decision (ROD), the 2010 Finding of No Significant Impact (FONSI), and the 2011 FONSI. The project stakeholders and the Metropolitan Council also chose to do a total reconstruction of University Avenue, replacing aged

	utilities, streetlights, traffic lights, and sidewalks because the Project was defined to include total street reconstruction upon entry into Preliminary Engineering with FTA.
BRT on University Avenue	The BRT Alternative is proposed to be a high-capacity frequent bus alternative that would operate in both mixed traffic and an exclusive guideway with a total of 22 stations, as defined in the 2006 AA/DEIS. Full street reconstruction would be required to install the exclusive guideway planned for over half of the alignment. Also, the condition of University Avenue prior to construction was very poor; needed improvements were deferred to a later date to coincide with the construction of a future transitway. This Supplemental Draft EIS assumes that University Avenue would have been reconstructed even in the areas that did not include an exclusive guideway.

What are the findings of this Supplemental Draft EIS?

In the No-Build and Baseline Alternatives, construction would not occur or would be minor; therefore, no construction-related impacts on business revenue would be anticipated for either of these two alternatives. However, construction-related impacts would be expected for both BRT on University Avenue and the Preferred Alternative (LRT on University Avenue). This document is focused on the short term impacts businesses experienced during construction. The impacts for each alternative are discussed below.

What might have been the impacts associated with construction of a BRT Alternative on University Avenue?

BRT construction on University Avenue would have been of a similar extent and duration as the construction of Central Corridor LRT. This Supplemental Draft EIS is predicated on the fact that project stakeholders and the Metropolitan Council would have chosen, as they have done with LRT construction, to do a total reconstruction of University Avenue, replacing aged utilities, streetlights, traffic lights, and sidewalks as part of the Project. This is based upon the fact that the Project was defined to include total street reconstruction upon entry into Preliminary Engineering with FTA.

Because BRT construction activities and duration would be similar in nature to LRT construction, this Supplemental DEIS concludes that the impacts experienced by businesses during BRT construction would have been similar to those being experienced during LRT construction both in terms of extent and duration.

What were the impacts associated with construction of the LRT Alternative on University Avenue?

The Supplemental DEIS documents the impacts experienced by businesses during LRT construction. The findings of the report are summarized in the table below.

ISSUE	OVERALL TREND	FINDING
Business trends in the corridor compared to trends in the greater region prior to construction	**NEUTRAL**	Prior to construction, the number of businesses was decreasing slightly in the corridor, but the losses were in line with overall economic regional trends.
Corridor street level business turnover (the rate at which businesses leave the corridor and are replaced by another business) during construction	**POSITIVE**	Out of the 1,243 street-level businesses on the corridor, the area saw a net loss of three businesses during the construction period as of June 2012.

Corridor storefront vacancy rates (percentage of unoccupied storefronts) during construction	**POSITIVE**	Vacancy rates in the corridor generally remained stable from May 2011* to August 2012.
Business revenues of participants in the Business Support Fund, a mitigation program that provided forgivable loans to small retail oriented businesses	**NEGATIVE**	Overall, small retail-oriented businesses that participated in the Business Support Fund saw a range of losses from 2 percent to 84 percent of average monthly revenues with a mean average sales loss of 30 percent and a median of 25 percent. A reasonable hypothesis is that other small and large retail oriented businesses in the corridor may also experience similar losses in the 25 to 30 percent range.
Business owners' opinions of corridor construction impact mitigation programs	**POSITIVE**	Businesses generally had positive opinions of corridor mitigation programs.
Future business outlook	**POSITIVE**	Many businesses reported that they planned to stay in the corridor and expected sales and profits to improve in the future.

*Study tracking corridor vacancy rates began in May 2011. Corridor construction began in late August 2009.

What major impacts of LRT construction were reported by business owners?

The top major construction impacts expected and experienced by local businesses were:

- Ability of customers to navigate streets and sidewalks during construction.
- Reduction in automobile traffic during construction.

What are the impacts to business revenues due to construction?

The Supplemental Draft EIS uses data from the Business Support Fund, a program administered by the City of Saint Paul. The Business Support Fund focuses on retail businesses with revenues of up to $2 million and has estimated business revenue impacts due to LRT construction. Based on data from the Business Support Fund, small

retail businesses experienced between a 25 to 30 percent average monthly loss in revenues.

Construction also impacts larger retail-oriented businesses. Despite their size, large retail-oriented businesses still rely on customers physically accessing their brick-and-mortar locations. Therefore, it is reasonable to assume large businesses may have also experienced a 25 to 30 percent loss in average monthly revenues.

Non-retail businesses may not be as dependent as their retail counterparts on customers accessing their physical location to conduct business and generate revenue. Nonetheless, non-retail revenues could be affected by construction activities due to impacts to deliveries/pick-ups, utility interruptions, noise/vibration, dust as well as other impacts. Impacts to non-retail business revenue could be expected but to a lesser extent than small retail businesses.

It is important to note that there are a multitude of social, economic, local, and national variables that may impact business revenues. It is logical to conclude that businesses that rely on customers physically accessing their locations may experience impacts during a large construction project. The estimated ranges of revenue loss reported above are derivative, yet they should be viewed through a broader lens that includes regional and national economic influences not associated with LRT construction.

How is the Metropolitan Council mitigating short-term impacts to businesses?

The LRT construction mitigation programs being implemented in the Central Corridor are the result of collaboration between many entities. The level of collaboration and amount of mitigation evolved and increased as construction in the Central Corridor progressed. The initial mitigation program outlined in the FEIS and the ROD included a standard construction mitigation package, with provisions for outreach, signage, and maintenance of access. The final mitigation program included targeted assistance to smaller businesses whose revenues may have greater potential for being adversely affected by traffic and pedestrian disruptions during construction.

Multiple government agencies, area non-profits, local businesses, and residents contributed to the mitigation. For example, the Metropolitan Council focused on implementing contractor requirements, city governments focused on administering loan programs, and non-profits focused on helping small businesses chart business plans to help them during and after construction. This collaboration culminated in a final business mitigation program, currently in place and described in the LRT Final Construction Mitigation Alternative. The details of the final mitigation program are outlined in Section 3.7.

What are the strategies being used by the Metropolitan Council to minimize short-term impacts to businesses?

Studies have shown that oftentimes, construction projects have short-term impacts on business revenue. A number of strategies and mitigation measures are often developed to help minimize adverse impacts to business revenue. The Metropolitan Council, along with project partners, has committed to providing construction mitigation strategies that focus on:

(1) Minimizing the impacts of construction activities;

(2) Communications with corridor businesses and the community regarding construction activities;

(3) Promotional and marketing activities to encourage customers to shop at businesses during construction;

(4) Technical assistance to businesses during construction;

(5) Financial assistance to businesses for projects or programs that improve parking access and efficiency, and;

(6) General financial assistance to small businesses affected by construction activities.

A summary of these mitigation strategies is presented below. The funding amount allocated to each mitigation strategy and the amount of funds expended is also shown below in Table ES-1.

Table ES-1. Mitigation Measures: Financial Commitments

Mitigation Measures		Funding Amount (Funds Expended) (8)	Responsible Agency	LRT with Initial Construction Mitigation (9))	LRT with Final Construction Mitigation
Construction Contract	Construction Access Plan	$200,000 ($163,332)	Metropolitan Council/ Contractor	✓	✓
	Contractor Incentive Program	$850,000 ($352,436)	Metropolitan Council		✓
Project Communications	Community Outreach Coordinators (1)	$3,500,000 ($2,750,000)	Metropolitan Council	✓	✓
	Construction Communication Plan (Special Signage) (2)	$200,000 ($128,311)	Metropolitan Council / Contractor	✓	✓
Parking Assistance	Neighborhood Commercial Parking Program	$1,325,000 (1,325,000)	City of Saint Paul		✓
	Alley Improvements Program	$632,000 ($632,000)	City of Saint Paul / Metropolitan Council		✓
Business Assistance Programs	Business Support Fund (3)	$4,000,000 ($2,160,125)	City of Saint Paul		✓
	Business Improvement / Expansion Assistance	$700,000 ($612,497)	Neighborhood Development Center		✓
	Business Resources Collaborative (4)	$305,000 ($305,000)	N/A		✓
	University Avenue Business Preparation Collaborative (5)	$1,075,000 ($1,075,000)	N/A		✓
	Great Streets and Business Association Assistance Program	$210,000 ($192,000)	City of Minneapolis		✓
	Other (6)	$7,670 ($7,670)	N/A		✓

	Business Marketing Program [7]	$1,200,000 ($191,560)	Metropolitan Council		✓
University Avenue / Cedar Riverside Betterments	Improved Street Lighting / Trees / Street Furniture	$1,000,000 ($1,000,000)	Metropolitan Council		✓
	Business Façade Improvement Financing	$150,000 ($69,530)	City of Minneapolis		✓
Promoting Business Access	Additional Business Signage	$50,000 ($50,000)	Metropolitan Council		✓
	Cooperative Advertising and Transit Fare Passes	$250,000 ($164,122)	Metropolitan Council		✓
TOTAL FUNDING AMOUNT		**$15,654,670**			
TOTAL FUNDS SPENT		**$11,178,583**			

(1) Includes salary and benefits for the fully staffed Central Corridor Outreach and Communications Team for the three years of heavy project construction from 2010-2012 and the first six months of 2013.

(2) Includes temporary directional signage, including portable changeable message signs, project identification boards, construction site signage, and other signs.

(3) Includes $2,500,000 from the Metropolitan Council, $1,000,000 from the City of Saint Paul, and $500,000 from the CCFC.

(4) Includes grants from CCFC as well as a matching investment from the City of Saint Paul for marketing during project construction.

(5) Includes $800,000 from CCFC, $150,000 from the F.R. Bigelow Foundation, and $125,000 from the Saint Paul Foundation.

(6) Includes grants from CCFC to Central Corridor Partnership and AEDA to support presentations from business mitigation consultants.

(7) This amount was approved September 28, 2011 by the Metropolitan Council to be used to retain a consultant to provide marketing assistance to Central Corridor businesses.

(8) Funds expended are current as of September 30, 2012.

(9) The LRT with the Initial Construction Mitigation is associated with the 2009 ROD and LRT with Final Construction Mitigation is associated with the current construction mitigation program.

Construction Contract

The contract between the Metropolitan Council and Central Corridor LRT contractors paired measures to minimize construction-related disruptions to businesses with financial incentives to encourage contractor cooperation with implementation of these measures. Some outcomes of this contract included:

- Development of a vehicle and pedestrian access plan
- Award of quarterly monetary incentives to contractors that complied with measures developed by stakeholders
- Coordination with stakeholders involved in special events, so that contractors could plan for construction activities that would minimize event disruptions

Photo 1: Contractors created temporary parking for residents in the construction zone on University Avenue in Minneapolis.

Project Communications

Several communication strategies have been implemented to provide consistent and timely information about Central Corridor LRT construction. For example, Community Outreach Coordinators were hired to act as liaisons between the public, local businesses, and project contractors. Also, each contractor was required to provide a Contractor Community Relations Leader who was responsible for communicating construction activities to businesses and to the public.

Photo 2: Outreach coordinator Shoua Lee discusses the project with a Central Corridor business owner.

Parking Assistance

Several different parking programs and plans were designed to minimize the impact to businesses due to the loss of parking. For example, the Neighborhood Commercial Parking Program offered low-interest loans to businesses that could be used to improve parking access or efficiency.

Photo 3: Under an arrangement with the city, a former restaurant parking lot at the southwest corner of Fry and University offers free two-hour parking for patrons of nearby businesses.

Business Assistance Programs

Business assistance programs were developed to assist businesses impacted by construction activities. These programs offered businesses loans or grants to assist with things like marketing and exterior building improvements. One of the largest programs was the Business Support Fund. This program offered small businesses that experienced construction-related disruptions low- or no-interest forgivable loans. The loans could be used for basic business expenses including taxes, rent/mortgage, utility or personnel payments.

Photo 4: The Republic Café and Pub in Minneapolis' Seven Corners Neighborhood is a recipient of the City's Great Streets façade improvement grant.

University Avenue/ Cedar Riverside Betterments

The City of Minneapolis and the City of Saint Paul both provided funding to add amenities and improve aesthetics in the corridor. This included funds for improved street lighting and street furniture as well as funds for business façade-improvements.

Promoting Business Access

A number of programs were undertaken to encourage patronage of Central Corridor businesses during construction. For example, variable message signs were used to assist travelers with navigating the corridor. The signs also displayed messages encouraging the public to support local businesses. In a separate program, Metropolitan Council provided businesses with transit fare passes for distribution to customers.

Photo 5: Variable message signing used to alert drivers to the traffic switch on University Avenue.

What was the result of the evaluation of alternatives?

The following table summarizes the comparative evaluation of the effects of the alternatives considered in this Supplemental Draft EIS on business revenue due to construction. The main finding through this comparison is that impacts to business revenues are least severe under the LRT Alternative with the final construction mitigation. Although impacts to business revenue due to the construction of LRT are unavoidable, greater adverse effects would have occurred had the final construction mitigation strategies not been employed.

Alternative	Construction Duration	Construction Severity	Mitigation Package	Business Revenue	Meets Purpose and Need (Yes/No)
No-Build	NA	NA	NA	🟢	No
Baseline	NA	NA	NA	🟢	No
LRT (Initial Construction Mitigation)	🟡	🟡	🟡	🟡	Yes
LRT (Final Construction Mitigation)	🟡	🟡	🟢	🟡	Yes
BRT	🟡	🟡	🟡	🟡	No

🟢 Minimal Impact or Positive Benefit

🟢🟡 Moderate to Positive Impact

🟡 Moderate

🟡🔴 Moderate to Negative

🔴 Maximum Impact or Negative Benefit

1 PURPOSE AND NEED FOR THE PROPOSED ACTION

The Federal Transit Administration (FTA), the lead federal agency, and the Metropolitan Council, the lead local agency, have prepared this Supplemental Draft Environmental Impact Statement (EIS) for the Central Corridor light rail transit (LRT) project in the cities of Saint Paul and Minneapolis. The content of this Supplemental Draft EIS includes a discussion of the following elements: purpose and need for the proposed action; alternatives to the proposed action; an assessment of potential revenue losses to businesses as an adverse impact of construction of the Central Corridor LRT; and a description of public involvement/agency coordination activities.

1.1 Purpose and Need for the Proposed Action

The purpose and need for the Central Corridor was presented in the Alternatives Analysis/Draft Environmental Impact Statement (AA/DEIS) and approved by the FTA in 2006. A summary of the purpose and need as presented in the AA/DEIS and the 2009 Final Environmental Impact Statement (FEIS) is presented below.

> As growth in the U.S. shifted to the south and west over the past 30 years, the Twin Cities area was one of the few northern metropolitan regions that did not follow this trend. The Twin Cities have continued to grow, and the results of that growth are felt in the Central Corridor. The purpose of the Central Corridor LRT is to meet the future transit needs of the Central Corridor LRT Study Area and the region, and to support the economic development goals for the Central Corridor Study Area. The Metropolitan Council's regional 2030 Transportation Policy Plan identified this corridor as a top priority for early implementation. Due to increasing traffic congestion and major redevelopment in the physically constrained Central Corridor, a need currently exists for a viable alternative to auto travel. The introduction of fixed guideway transit to the Central Corridor Study Area is proposed as a cost-effective measure aimed at improving mobility by offering an alternative to auto travel for commuting and discretionary trips. The Central Corridor LRT would help to minimize congestion increases, offer travel time savings, provide better transit service and capacity to the

diverse population of existing and future riders in the corridor, and optimize significant public investments in the regional transit system.[2]

Goals and objectives were developed as part of the AA/DEIS to serve as the framework for decision making for the Central Corridor. The full text of the goals and objectives is provided in Chapter 1 of the AA/DEIS, and is summarized below.

GOAL 1: ECONOMIC OPPORTUNITY AND INVESTMENT

Objectives:

- Support investments in infrastructure, business, and community that sustain the heart of the region.
- Promote a reliable transit system that allows an efficient, effective land use development pattern in major activity centers that minimizes parking demand, facilitates the highest and best use of adjacent properties, and gives employers confidence that employees can travel to/from work.

GOAL 2: COMMUNITIES AND ENVIRONMENT

Objectives:

- Facilitate the preservation and enhancement of neighborhoods in the Central Corridor Study Area.
- Acknowledge the individual character and aspirations of each place served, and of the region as a whole.
- Support regional goals for cleaner air and water, more efficient energy use, and a safer and healthier environment.

GOAL 3: TRANSPORTATION AND MOBILITY

Objectives:

- Create transportation improvements that add people-carrying capacity, minimize operating costs, improve operating efficiency, provide high-quality modal alternatives, and reinforce the region's transportation system.
- Expand opportunities for all users to move freely to, through, and within the Central Corridor Study Area.
- Enhance the existing transportation infrastructure to serve the high number of transit dependent persons in the Central Corridor Study Area.

[2] Central Corridor FEIS, 2009, Chapter 1, Page 1-5

1.2 Project History and Timeline

This section is intended to give a brief project history and a summary of the previously completed NEPA documents. This will include the purpose of each of the documents and general timeframes of completion.

1.2.1 Alternatives Analysis/Draft Environmental Impact Statement (AA/DEIS), 2006

The Central Corridor AA/DEIS began in 2002 and was released for public and agency comment on April 3, 2006. Public hearings were held at four locations in May, and the comment period closed on June 5, 2006. On June 28, 2006, the Metropolitan Council adopted a Locally Preferred Alternative (LPA) for the Central Corridor, namely LRT operating on Washington and University avenues (Metropolitan Council Resolution No. 2006-15). The AA/DEIS LPA was 11 miles long (9.8 miles of new alignment and 1.2 miles sharing the existing Hiawatha LRT alignment in downtown Minneapolis).

1.2.2 Supplemental Draft Environmental Impact Statement (SDEIS), 2008

Subsequent to the completion of the AA/DEIS, several unresolved policy questions and design options surfaced which required additional study.

A Notice of Intent (NOI) to prepare a Supplemental DEIS (SDEIS) documenting potentially significant effects of implementing proposed changes to the AA/DEIS LPA was published in February 2008. The SDEIS was published in July 2008 and the comment period closed on August 25, 2008. A Preferred Alternative (Metropolitan Council Resolution No. 2008-26) was adopted by the Metropolitan Council on September 3, 2008, subsequent to three SDEIS public hearings and the closure of the SDEIS public comment period on August 25. The Preferred Alternative was 10.9 miles long (9.7 miles of new alignment, 1.2 miles on shared alignment), and had 15 new stations and five stations shared with the Hiawatha LRT for a total of 20 stations.

1.2.3 Final Environmental Impact Statement (FEIS), Record of Decision (ROD), and Adequacy Determination, 2009

The Project's FEIS was published in June 2009, beginning a required minimum 30-day review period. The FEIS was developed to comply with applicable federal regulations and act as the public document that discloses the environmental effects of the Preferred Alternative with possible reasonable and feasible mitigation measures. This document also reflected the comments received during the circulation of the AA/DEIS and the SDEIS.

In August 2009, the FTA issued a Record of Decision (ROD), which concluded the formal federal environmental review process. In addition, the Metropolitan Council issued an Adequacy Determination under the requirements of Minnesota Environmental Policy Act (MEPA), which concluded the state environmental review process. The ROD is the federal action which determines that the requirements of NEPA have been satisfied,

and formally commits the FTA and Metropolitan Council to the mitigation measures required for the impacts identified in the FEIS. The mitigation measures are also conditions for receiving federal funding for the Project.

1.2.4 Infill Stations Environmental Assessment (EA) and Finding of No Significant Impact (FONSI), 2010

After the FTA issued a ROD in August 2009, the project sponsors obtained a commitment for local funding to build one above-grade infill station at Hamline Avenue, Victoria Street, or Western Avenue. Consequently, an evaluation of the social, economic, and environmental impacts for the construction of an above-grade station was required in accordance with NEPA. The Metropolitan Council, on behalf of the FTA, the lead federal agency, prepared the Infill Stations Environmental Assessment (EA) for the Central Corridor LRT Project. The Build Alternative, as defined in the Infill Stations EA, consisted of 10.9 miles of LRT (9.7 miles of new alignment, 1.2 miles on shared alignment) and consisted of the 20 Central Corridor LRT stations – 15 new stations and five shared with the Hiawatha LRT as described in the FEIS, and included all the below-grade and above-grade infrastructure construction of up to three potential infill stations at Western Avenue, Victoria Street, and Hamline Avenue.

Because the project sponsors had not determined which one of the three stations would be constructed, the above-grade construction of all three infill stations was included in the Infill Stations EA. By analyzing the social, economic, and environmental impacts of construction of above-grade elements for all three potential stations, project sponsors could select any of the three infill stations for above-grade construction using locally committed funds. Ultimately, all three infill stations were selected for construction.

A public comment period was established for the Infill Stations EA and two hearings were held on January 27, 2010. Following publication of the EA and the EA public comment period, the above-ground construction of all three infill stations was added to the project scope and budget by resolution of the Metropolitan Council on February 24, 2010 (Metropolitan Council Resolution No. 2010-68).

The FTA issued a Finding of No Significant Impact (FONSI) on February 26, 2010. This FONSI only addressed environmental mitigation measures resulting from construction of above-grade elements of the three infill stations, as identified in the EA.

1.2.5 Construction-Related Potential Impacts on Business Revenue EA and FONSI, 2011

Following the June 2009 FEIS and the August 2009 ROD, a lawsuit was filed against the United States Department of Transportation (US DOT), the FTA, and the Metropolitan Council by a coalition of local businesses, residents, and non-profit organizations. One of the claims made in this lawsuit was that the environmental review of the Project violated NEPA by failing to adequately analyze the impact on business revenues

potentially caused by construction of the Project. The Court directed the FTA and the Metropolitan Council to supplement the FEIS to address the potential loss of business revenues as an adverse impact of the construction of the Central Corridor LRT.

In April 2011, the FTA and the Metropolitan Council prepared a Supplemental EA (Appendix B) to document construction-related impacts on businesses to comply with the January 26, 2011 court ruling and NEPA. The Supplemental EA was prepared pursuant to 23 CFR Section 771.130.

Following the publication of the Supplemental EA, the FTA issued a FONSI which included specific mitigation to minimize impacts to business revenue due to construction of the LRT. Mitigation included a number of measures and financial commitments designed to either avoid impacts during construction or provide mitigation of impacts.

1.3 Basis for this Supplemental Draft EIS

The Court order in *NAACP v. DOT,* Case No. 10-147 (USDC MN), dated January 26, 2011, stated that the "FEIS was deficient in its consideration of lost business revenue as an adverse impact of the construction of the CCLRT" and ordered the defendants to supplement the FEIS on that issue. FTA's regulation 23 CFR Section 771.130, titled "Supplemental environmental impact statements" provides a number of options for supplementing an EIS. Section 771.130(c) states, "Where the Administration is uncertain of the significance of the new impacts, the applicant will develop appropriate environmental studies or, if the Administration deems appropriate, an EA to assess the impacts of the changes, new information, or new circumstances." Because the issue that the FTA was evaluating was discrete and narrow in scope, the FTA chose to conduct a supplemental EA as the appropriate level of environmental review under NEPA. In April 2011, the FTA and the Metropolitan Council completed a Supplemental EA to document construction-related impacts on businesses to comply with the January 2011 court ruling and NEPA. A public comment period for the Supplemental EA was held from March 1 through March 31, 2011, and two public hearings were held on March 16, 2011. Comments received during the public comment period and responses to these comments were included within the Supplemental EA.

In a second order on January 23, 2012, the Court clarified that the consideration of impacts on business revenue loss required by the January 2011 ruling must be completed in the form of a Supplemental EIS. The intent of this Supplemental Draft EIS is to comply with the Court's order. This Supplemental EIS includes a description of LRT construction activities, a summary of economic conditions in the corridor, an assessment of revenue losses to businesses as an adverse impact of construction activities, a description of the final mitigation program, and an evaluation of the alternatives. This Supplemental Draft EIS has been prepared in accordance with 40 C.F.R. Sec. 1502.9(c).

2 ALTERNATIVES CONSIDERED

Chapter 2 presents a brief history of the alternatives previously considered and the alternatives carried forward in this Supplemental Draft EIS.

2.1 Alternatives Previously Considered

This section will describe the alternatives previously considered through the various Central Corridor NEPA documents.

2.1.1 Alternatives Evaluated in the AA/DEIS

The initiation of the AA/DEIS for the Central Corridor began with a formal scoping process, which provided an opportunity for regulatory agencies and the public to respond to the concept of proposed transit in the Central Corridor Study Area and to identify issues of concern. The scoping process was officially initiated on June 5, 2001, with publication in the Federal Register of the NOI to prepare an EIS. The Notice of Availability of the Central Corridor Scoping Booklet was published in the Minnesota EQB Monitor on June 11, 2001. The comment period closed on July 20, 2001. Four scoping meetings were held, consisting of one agency meeting and three public meetings.

The alternatives presented during scoping included LRT and BRT on University Avenue and LRT on Interstate 94 (I-94). A No-Build Alternative and a Baseline Alternative were also included in the scoping process. A more detailed description of the alternatives is described in Chapter 2 of the AA/DEIS.

Alternative alignments for LRT and Busway/Bus Rapid Transit through the University of Minnesota (U of M), State Capitol, and downtown Saint Paul were suggested during scoping. Project partners including the U of M, Saint Paul's Capitol Area Architectural and Planning Board (CAAPB), and the City of Saint Paul advocated minor changes in the alignment or affirmed their preference for specific alignments. Further analysis was undertaken to satisfy concerns and to respond to comments received. Through the scoping process, alignments and alternatives that were not prudent or reasonable and did not satisfy requirements of the purpose and need were not carried forward for additional analysis in the AA/DEIS. Scoping results are included in the Scoping Summary Report (December 7, 2001). Two build alternatives were selected for evaluation in the AA/DEIS in addition to a No-Build and Baseline Alternative. The build alternatives included: University Avenue LRT and University Avenue BRT.

2.1.2 Selection of the Locally Preferred Alternative

After circulation of the AA/DEIS, the Metropolitan Council and project partners reviewed the relative merits and benefits of each of the alternatives. This evaluation of the alternatives is presented in the AA/DEIS and is included in the Evaluation of Central Corridor Alternatives (Technical Memorandum submitted to Central Corridor Coordinating Committee, May 30, 2006). Following the completion of the AA/DEIS public hearings, the Metropolitan Council adopted the AA/DEIS LPA for the Central Corridor (June 28, 2006, Metropolitan Council Resolution No. 2006-15). The University Avenue LRT Alternative was selected as the AA/DEIS LPA. The AA/DEIS LPA was 11 miles in length, of which 9.8 miles consisted of new alignment and 1.2 miles used the existing Hiawatha LRT alignment in downtown Minneapolis.

2.1.3 The Purpose of the 2008 SDEIS

Subsequent to the completion of the AA/DEIS for the Central Corridor LRT Project, several unresolved policy questions and design element options arose which required additional study. These design considerations responded to changed conditions within the corridor, technical, operational, and financial constraints, and major infrastructure requirements that were not fully documented in the AA/DEIS. An NOI to prepare the SDEIS for the Central Corridor LRT Project was published in the *Federal Register* (Federal Register / Vol. 73, No. 37 / Monday, February 25, 2008/ p. 10090-10091) as well as the Minnesota EQB Monitor on February 25, 2008.

The goal of the SDEIS was to assist the Metropolitan Council, resource agencies, and key project partners in understanding and resolving critical project elements within the context of NEPA. It provided an opportunity to document and disclose local decision-making related to project elements as they were refined during the preliminary engineering (PE) effort. The SDEIS was of limited scope and focused on proposed changes to the AA/DEIS LPA and relevant updates to information provided in the AA/DEIS. The proposed changes evaluated in the SDEIS are listed below. A more detailed description of the changes is included in the SDEIS and FEIS.

- Hiawatha/Central Connection
- University of Minnesota Alignment
- Future Infill Stations at Hamline, Victoria, or Western
- Capitol Area Alignment and Stations
- Downtown Saint Paul Alignment/Station Modifications
- Traction Power Substations
- Three-Car Train Requirement
- Vehicle Maintenance and Storage Facility
- Washington Avenue Bridge

2.1.4 Selection of the Preferred Alternative

A Notice of Availability was published in the Federal Register on July 11, 2008, and in the Minnesota EQB Monitor on July 14, 2008, providing notification to the public and resource agencies of publication of the SDEIS. After the closing of the formal comment period (August 25, 2008), the Metropolitan Council adopted the Preferred Alternative for Central Corridor. LRT was reaffirmed as the preferred transit mode for the Central Corridor operating at-grade on Washington and University Avenues, passing north of the Capitol and turning south on Robert Street, turning west at 12th Street to Cedar Street, and then continuing south on Cedar Street into downtown Saint Paul turning diagonally at 4th Street, and continuing east to end at Saint Paul's Union Depot with track leading to an operations and maintenance facility farther east (Metropolitan Council Resolution No. 2008-26). The Preferred Alternative included 20 (15 new and five shared with Hiawatha) stations. This decision, revising the AA/DEIS LPA, formed the basis of the evaluation undertaken and documented in the FEIS.

On August 18, 2009, the FTA issued the Central Corridor LRT ROD. The ROD documents that the FTA and the Metropolitan Council met the requirements of NEPA for the Central Corridor LRT Project. The ROD describes the project, alternatives considered, public comments and responses, and the basis for the decision and mitigation measures required. Mitigation of adverse effects caused by the construction of LRT are described in the FEIS and summarized in the Mitigation Monitoring Program (Attachment B of the ROD).

After the FTA issued a ROD in August 2009, the project sponsors obtained a commitment for local funding to build one above-grade infill station at Hamline Avenue, Victoria Street, or Western Avenue. An EA was completed to document the effects of constructing the infill stations. Following publication of the EA and the EA public comment period, the above-ground construction of all three infill stations was added to the project scope and budget by resolution of the Metropolitan Council on February 24, 2010 (Metropolitan Council Resolution No. 2010-68). The Preferred Alternative was modified to consist of 23 stations (18 new and five shared with Hiawatha).

2.2 Alternatives Evaluated in This Supplemental Draft EIS

This Supplemental Draft EIS documents the potential impacts on the loss of business revenue during construction of the Central Corridor LRT Project. Since none of the previously completed NEPA documents thoroughly discussed business revenue impacts due to construction of a transitway, this Supplemental Draft EIS will describe the potential effects associated with construction of the alternatives considered in the AA/DEIS. These alternatives are being introduced for illustrative purposes only, as a means of providing a basis for understanding the potential severity of LRT construction effects and the appropriate mitigation that may be identified to offset effects. The Central Corridor LRT project (as discussed in Section 2.3.3) is presently under construction. Therefore, there is no opportunity for this Supplemental Draft EIS to influence the "preferred alternative" insofar as the selection of mode (LRT), alignment

(as illustrated in Figure 2-1), or project design features (which are currently under construction).

A description of the alternatives included in this Supplemental Draft EIS follows.

2.2.1 No-Build Alternative

The No-Build Alternative includes Metropolitan Council services and facilities that are programmed to be in operation in fiscal year 2014 (Central Corridor LRT opening year) and the regional roadway/highway facilities that are programmed to be in place by 2030. The No-Build Alternative is defined as existing and committed transportation projects. The 2030 Transportation Policy Plan currently identifies Central Corridor LRT as a committed project. For the purposes of this analysis, this No-Build Alternative will assume no major transitway investment for the Central Corridor.

Under requirements included in 40 CFR Section 1502.14(d), the alternatives analysis in the project development process must include the alternative of no-action or no-build. This analysis provides a benchmark, enabling decision-makers to compare the magnitude of environmental effects of the action alternatives. Inclusion of such an analysis in the process is necessary to inform Congress, the public, and the President as intended by NEPA (Section 1500.1(a)).

2.2.2 Baseline Alternative[3]

This alternative serves as a basis for comparison to the build alternatives as part of the FTA's New Starts Process. The Baseline Alternative is designed to do the "best that can be done" to improve transit service in the Central Corridor Study Area without a major capital investment. Low capital cost infrastructure and bus transit improvements for the Central Corridor include bus operations, Intelligent Transportation System (ITS) techniques, travel demand management (TDM), and other system improvements. ITS techniques use the latest technology to more effectively manage transportation systems. TDM strategies help reduce congestion by encouraging the use of alternative modes of transportation rather than driving alone.

2.2.3 LRT on University Avenue

The Central Corridor Preferred Alternative (Figure 2-1) is a 10.9-mile LRT double tracked alignment with a total of 23 stations (18 new stations and five shared with Hiawatha LRT) between downtown Minneapolis and downtown Saint Paul with intermediate service to the U of M. The Central Corridor Preferred Alternative would be primarily at-grade except for aerial structures over I-35W, Trunk Highway 280 (TH 280), I-94, and the

[3] The AA/DEIS included a combined No-Build and Baseline Alternative. The subsequent FEIS separated them into two distinct alternatives for analysis in the document.

Washington Avenue Bridge facility over the Mississippi River. In downtown Minneapolis, the Preferred Alternative is proposed to share the Hiawatha LRT alignment. The Preferred Alternative uses an exclusive at-grade alignment and is center-running throughout all segments.

This Supplemental Draft EIS includes an evaluation of the impact of LRT construction on business revenues for two LRT alternatives. The first LRT alternative is defined as LRT with the initial construction mitigation package as identified in the FEIS and ROD. The second LRT alternative is defined as LRT with final mitigation as identified and assembled by the Metropolitan Council and other project stakeholders following the publication of the FEIS, the ROD, the Supplemental EA, and the 2011 FONSI. The second LRT alternative is currently being constructed. The following sections briefly describe the LRT alternatives and the mitigation associated with each. Section 3.7 includes a more detailed description of the mitigation strategies.

2.2.3.1 LRT Alternative (Initial Construction Mitigation)

LRT with the initial construction mitigation includes the construction of the Preferred Alternative with the initial mitigation package identified in the FEIS and ROD. The mitigation measures included in the FEIS and ROD included short-term mitigation strategies to help minimize adverse effects to businesses due to LRT construction. These mitigation strategies included:

- Construction Contract Requirements During Construction:
  - Construction Access Plans
  - Special Events Plans
  - Best Management Practices (BMPs) to minimize impacts
- Project Communications
  - Construction Public Information and Communication Plan
  - Community Outreach Coordinators
  - Contractor Community Relations Leader

2.2.3.2 LRT Alternative (Final Construction Mitigation)

The LRT Alternative with the final construction mitigation includes the construction of the Preferred Alternative with the initial mitigation package identified, as well as expanded mitigation strategies focused on financial assistance to businesses. The additional mitigation strategies include:

- Construction Contract Requirements During Construction:
  - Contractor Incentive Program
- Parking Assistance:
  - Neighborhood Commercial Parking Program

  - Alley Improvements Program
- Business Assistance Programs:
  - Business Support Fund
  - Business Improvement/ Expansion Assistance
  - Business Resources Collaborative
  - University Avenue Business Preparation Collaborative
  - Great Streets and Business Association Assistance Program
  - Business Marketing Program
- University Avenue/Cedar Riverside Betterments
  - Improved Street Lighting/Trees/Furniture
  - Business Façade Improvement Financing
- Promoting Business Access
  - Additional Business Signage
  - Cooperative Advertising and Transit Fare Passes

The mitigation assistance in this alternative is being provided by multiple government agencies, as well as area non-profits and local businesses. Some of the mitigation assistance included financial assistance to businesses with demonstrated revenue losses, business marketing programs, parking assistance, and increased signage during construction. However, not all of the mitigation identified as part of the final construction mitigation package was direct financial assistance; rather, many of the non-profit organizations provided technical assistance to businesses. This included assistance with bookkeeping, cash flow projections, and individualized marketing and promotions.

2.2.4 BRT on University Avenue

The BRT Alternative (Figure 2-2) was proposed to be a high-capacity frequent bus alternative that would operate in both mixed traffic and an exclusive guideway with a total of 22 stations. The exclusive guideway would be located in the median of University Avenue between Bedford Avenue and Rice Street (approximately five miles). Buses would operate on a 28-foot pavement that includes a separate bus lane for eastbound and westbound movements. Mountable curbs would separate the guideway from vehicular traffic while allowing emergency vehicles to access the guideway. In downtown Minneapolis, the BRT Alternative would follow existing Routes 16 and 50 on Fourth Street South, with a western terminus at Metropolitan Council's Fifth Street Garage. Eastbound Busway/BRT vehicles would operate in mixed traffic. Westbound vehicles would operate on an existing contraflow bus lane on the north side of Fourth Street South.

Figure 2-1. Preferred Alternative- LRT on University Avenue

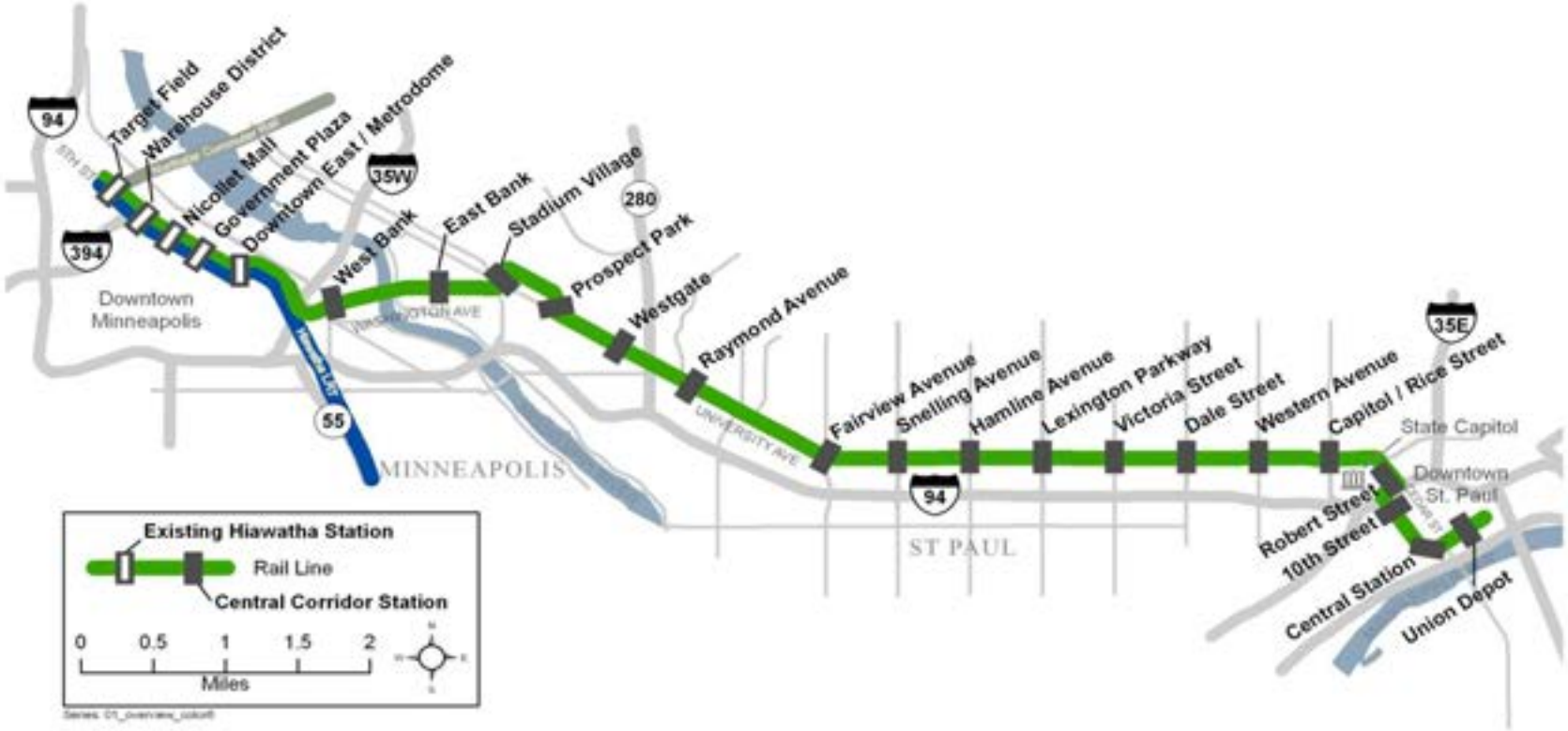
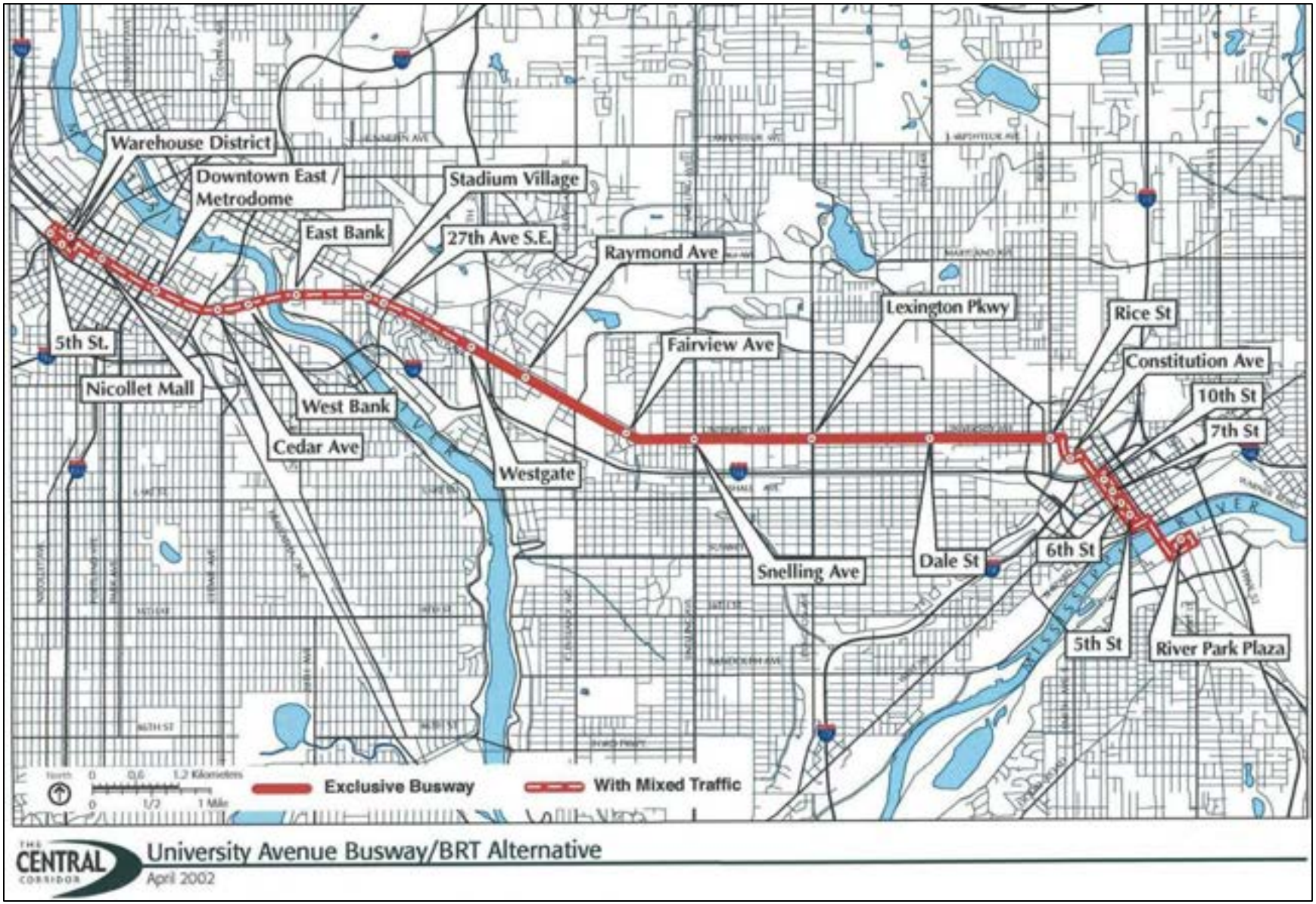


Figure 2-2. BRT Alternative



2.3 Construction Activities

This section describes construction activities associated with the alternatives considered. Each of the alternatives considered will have a description of general construction activities, as well as typical durations.

2.3.1 No-Build Construction Activities

The No-Build Alternative includes roadway and bus system improvements for which funding has been committed along the University Avenue and I-94 corridors as specified in the appropriate agency transportation improvement plans and 2030 Transportation Policy Plan. Minimal modifications or expansions of transportation or transit facilities are expected; thus, for the No-Build Alternative, no construction is anticipated.

2.3.2 Baseline Construction Activities

In addition to the roadway and bus system improvements described in the No-Build Alternative, the Baseline Alternative assumes the implementation of ITS and TDM techniques and improvements. The construction activities required to implement these improvements are expected to be minimal and limited to traffic signal improvements.

2.3.3 LRT Construction Activities

Construction of LRT consists of guideway construction, station construction, structures work, maintenance facility construction, power systems installation and civil work. The following description of LRT construction activities is applicable to both the LRT Alternative with the initial construction mitigation and LRT with the final construction mitigation. For the purposes of this Supplemental Draft EIS, construction of the Project is addressed in two general sections: Civil West and Civil East (Figure 2-3). The Civil West construction comprises the western three miles of the Project within the City of Minneapolis. The Civil East Construction comprises the eastern seven miles of the Project within the City of Saint Paul. The western-most one-mile segment of the Project along the Hiawatha LRT in downtown Minneapolis will not be affected by project construction because the Hiawatha LRT Project is already completed. The boundaries of the Civil West construction and Civil East construction as well as a summary of civil work activities are described below.

2.3.3.1 Civil West Construction

The Civil West segment extends generally from a connection to the existing Hiawatha LRT line near the Hubert H. Humphrey Metrodome, crossing over I-35W, continuing along Washington Avenue across the Mississippi River on the existing Washington Avenue Bridge and through the University of Minnesota campus, along the south side of the University of Minnesota Transitway, along 29th Avenue SE, and along University Avenue to the Saint Paul city limits near Emerald Street SE.

The Civil West construction includes: demolition of existing underground utilities and roadway pavement; environmental remediation; construction of underground public utilities; areaways (underground building spaces); drainage; light rail track and stations; retaining wall structures; underground communication, signal, and traction power ducts; pull boxes; and catenary pole foundations. Construction also includes any work on and to off-site locations such as duct bank, utilities, and traction power substation sites. Associated roadway work includes construction of new roadway pavements, sidewalks, curbs and gutters, street lighting, above and below-grade traffic signal facilities and other related improvements. Associated utility work includes relocation of private utilities by the utility owner and/or its contractor.

Civil West construction activities also include modifications to the Hiawatha LRT bridge over 3rd and 4th Streets (Bridge 27884); construction of a new bridge spanning I-35W (Bridge 27B63); modifications to the Washington Avenue Bridge over the Mississippi River, West River Road, and East River Road (Bridge 9360); and construction of a transit mall through the University of Minnesota campus. Washington Avenue Bridge work includes converting the interior lower deck roadway lanes to a light rail transit track, leaving one outer lane on each side of the bridge for vehicular traffic. Modification work will be performed on the existing Hiawatha LRT bridge (Bridge 27878), the existing Cedar Avenue Bridge (Bridge 27030), and the existing 19th Avenue South bridge (Bridge 27620) to accommodate future LRT operations. Transit mall work includes landscaping, street and sidewalk paving, lighting, signage, and a light rail station.

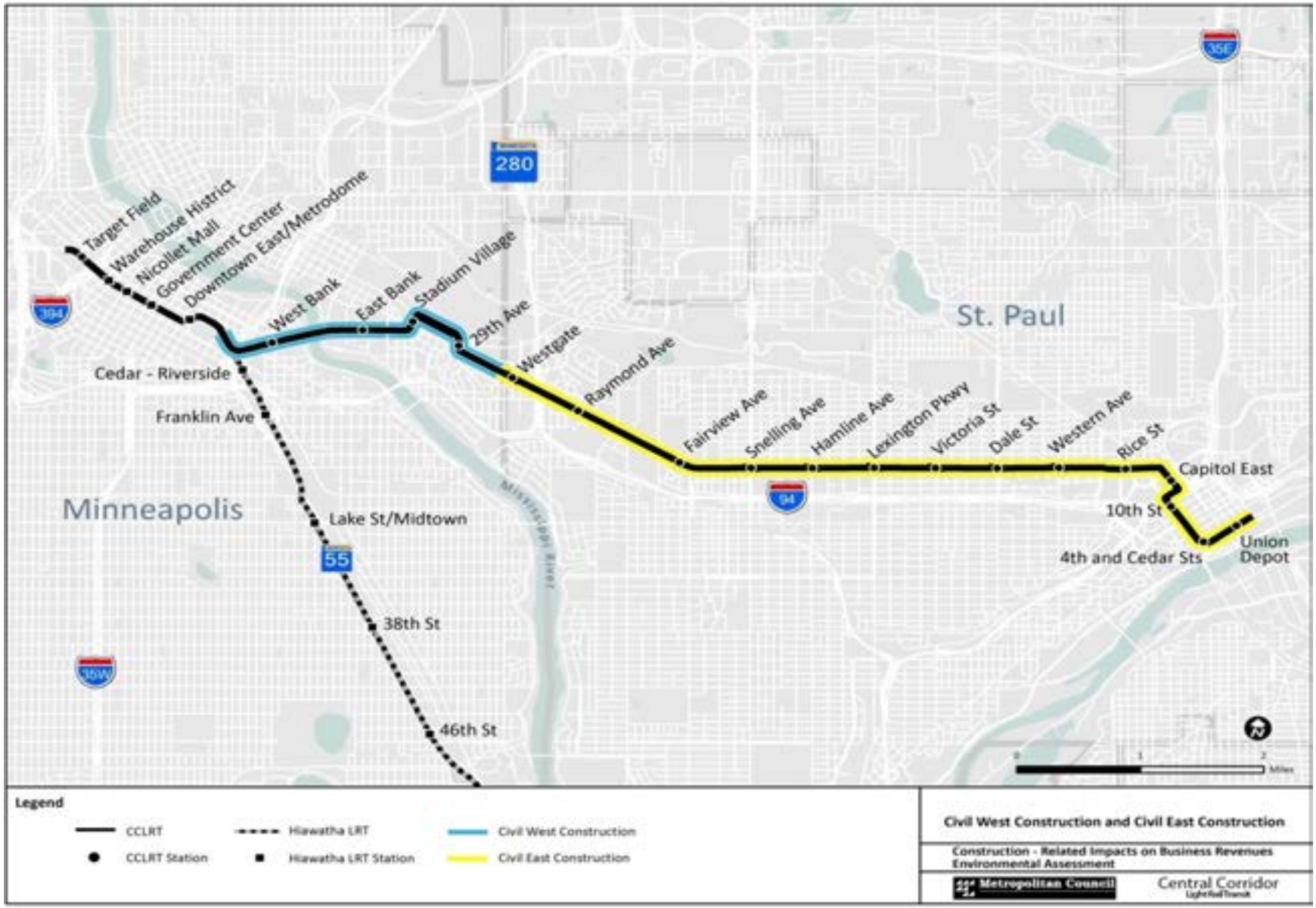
2.3.3.2 Civil East Construction

The Civil East construction segment extends generally from the Minneapolis/Saint Paul border along University Avenue to the State Capitol, Robert Street to 12th Street, 12th Street to Cedar Street, Cedar Street to 4th Street, and then 4th Street to Broadway Street.

The Civil East construction activities include: demolition of existing structures, underground utilities, and roadway pavement; environmental remediation; underground public utilities; drainage; light rail track and stations; retaining wall structures; adjustments to areaways (below ground building spaces); underground communications, signal, and traction power ducts; pull boxes; and catenary pole foundations. Construction also includes any work on and to off-site locations such as duct bank, utilities, and traction power substation sites. Associated roadway work includes construction of new roadway pavements, sidewalks, curbs and gutters, street lighting, above and below-grade traffic signal facilities and other related improvements. Associated utility work includes relocation of private utilities by the utility owner and/or its contractor.

Civil East construction also includes modifications to the University Avenue Bridge over State Highway 280 (Bridge 9472) and modifications to the Cedar Street Bridge over I-94/I-35E (Bridge 62889).

Figure 2-3. Civil West and Civil East Construction Segments



2.3.3.3 Other Construction Activities

Other activities that will occur during project construction are summarized below. These activities will occur concurrently or subsequent to the Civil West and Civil East construction.

- **Operations and Maintenance Facility (OMF):** Construction of the Central Corridor LRT maintenance facility at the eastern end of the Project on the east side of Broadway Street.
- **Systems:** Construction and testing of train control signals, overhead catenary system, traction power system, and communication facilities. Most of this work will not involve any excavation or other activities that would result in vibration, dust, noise or other nuisance impacts. However, short-term access impacts due to temporary lane closures are anticipated to occur.
- **Fare Collection:** Installation of ticket vending machines and related equipment on station platforms.
- **Station Artwork:** Installation of artwork at all station locations.

2.3.3.4 LRT Construction Status

Construction of the Central Corridor LRT began in late 2009 on 4th Street in downtown Saint Paul and in 2010 with advanced traffic improvements on the University of Minnesota campus. Heavy construction began in 2011 with final completion of all Civil West and Civil East construction work anticipated by the end of 2013. Passenger operations are anticipated to begin in 2014. Under this schedule, project construction will take approximately four years, followed by a shorter period of integration, measurements, and system testing. As of September 2012, approximately 80 percent of the Central Corridor LRT construction has been completed. Construction activities that have been completed include:

- **Stations:** Six of the 18 stations (Westgate, Raymond, Fairview, Snelling, Robert, and Union Depot) are structurally complete.
- **4th Street Advanced Utility Construction:** Construction of underground utilities in 4th Street in downtown Saint Paul (Minnesota Street to Broadway Street).
- **Advanced Traffic Improvements:** Street modifications to Pleasant Street, East River Parkway, Arlington Street, and other streets at the University of Minnesota as part of the Central Corridor LRT Project.
- **Operations and Maintenance Facility (OMF) Yard Site Preparation:** Placement of surcharge soils in OMF yard.
- **OMF Construction:** Construction of the storage and maintenance facility is underway. Construction in the building has included pouring floor slabs, building masonry walls, and installation of mechanical and electrical components.

- **Power Systems Installation:** Completed placement of first Traction-Power Substation south of Raymond Avenue Station.

By the end of 2012, much of the infrastructure associated with LRT construction will be completed. This includes all 18 stations, all roadways, sidewalks, curbs and gutters, street lights, and traffic signals. Also by this time four of the LRT vehicles will have been built and shipped from the manufacturer and be in the process of acceptance testing by the Metropolitan Council.

2.3.4 BRT Construction Activities

This Supplemental Draft EIS estimates that construction activities for the BRT Alternative would be similar in scale and scope to the construction activities related to the LRT Alternative (See Appendix C). Full street reconstruction would be required to install the exclusive guideway planned for over half of the alignment. Also, the condition of University Avenue prior to construction was very poor; needed improvements were deferred to a later date to coincide with the construction of a future transitway. This Supplemental Draft EIS assumes that University Avenue would have been reconstructed even in the areas that did not include an exclusive guideway. The construction boundaries of the BRT alignment are also similar to the boundaries of the LRT Alternative, but would extend into downtown Minneapolis to include the construction of BRT stations on 4th Street South.

As shown in Table 2-1, many of the construction elements required for the LRT Alternative would also be required for the BRT Alternative. The BRT Alternative requires civil roadway reconstruction and the construction of exclusive guideway, stations, and structures. A maintenance facility would likely not be required as all BRT buses are assumed to be maintained and stored at existing Metropolitan Council facilities. The BRT Alternative would also have used standard articulated buses and not require the construction of a traction power system.

Table 2-1. LRT and BRT Construction Element Comparison

Construction Element	LRT	BRT
Guideway	X	X
Stations	X	X
Structures	X	X
Maintenance Facility	X	
Power Systems	X	
Civil (Clearing, Grading, Excavation, Utilities, etc.)	X	X

2.3.4.1 BRT Civil Construction

The BRT Alternative construction is estimated to include: demolition of existing underground utilities and roadway pavement; environmental remediation; construction

of underground public utilities; areaways (underground building spaces); drainage; exclusive guideway and stations; retaining wall structures; underground communication and signal ducts; and pull boxes. Associated roadway work would include construction of new roadway pavements, sidewalks, curbs and gutters, street lighting, above and below-grade traffic signal facilities and other related improvements. Associated utility work includes relocation of private utilities by the utility owner and/or its contractor.

The most intrusive elements of construction include the civil work, which entails clearing, grading, excavation, and replacement of underground utilities. This would have mainly occurred in the portion of the alignment that has a dedicated BRT guideway; however, other sections of the alignment that would have operated in mixed-traffic may also have included road reconstruction activities. This is because many needed roadway and utility improvements were deferred until the construction of a transitway in the corridor occurred.

Unlike the LRT Alternative, the BRT Alternative was proposed to operate in mixed traffic through downtown Minneapolis and the University of Minnesota. As such, this alternative would likely not have required modifications to the Washington Avenue Bridge to accommodate BRT. However, it must be noted that, because the Washington Avenue Bridge, prior to its rehabilitation as part of Central Corridor LRT construction, was a fracture critical bridge, its reconstruction would likely have been required under Minnesota law requiring replacement of fracture critical bridges by 2018. Minn. Stat. Section 165.14, subd. 4(c). A BRT alternative may also have not required construction of a new bridge over I-35W or modifications to the existing Hiawatha LRT bridge over I-35W.

2.3.4.2 Other Construction Activities

Other activities that would likely have occurred during BRT project construction are summarized below. These activities would likely have occurred concurrently or subsequent to the primary BRT Alternative construction activities.

- **Fare Collection:** Installation of ticket vending machines and related equipment on station platforms.
- **Station Artwork:** Installation of artwork at all station locations.

2.3.4.3 BRT Construction Schedule

The overall construction timeline of the BRT Alternative can reasonably be expected to be shorter in duration than the LRT Alternative; however, the duration of the civil work activities and station construction is expected to be approximately the same. The construction timeline for the LRT Alternative includes additional time dedicated to construction and testing of the train communication and power systems and the construction of the OMF; these are activities that would not be needed for the BRT Alternative, thus reducing the overall duration of BRT construction.

3 ECONOMIC EFFECTS

Chapter 3 presents a summary of existing economic characteristics of the Minneapolis-Saint Paul-Bloomington 13-county MN/WI (Minnesota-Wisconsin) Metropolitan Statistical Area and general characteristics of existing businesses along the Central Corridor. This chapter also includes a discussion of construction-related impacts on business revenues from the alternatives considered. Following this discussion, a summary of the mitigation program implemented to help reduce short-term impacts to business revenue during project construction is presented.

3.1 Overview of Existing Economic Conditions

This section provides a summary of existing economic characteristics within the Minneapolis-Saint Paul-Bloomington MN-WI Metropolitan Statistical Area and general characteristics of existing businesses along the Central Corridor.

3.1.1 Minneapolis-Saint Paul-Bloomington Metropolitan Statistical Area Economic Indicators

The Central Corridor is located within the Minneapolis-Saint Paul-Bloomington MN-WI Metropolitan Statistical Area (MSA). The Minneapolis-Saint Paul-Bloomington MN-WI MSA is comprised of a total of 13 counties: 11 counties in Minnesota (Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, Sherburne, Washington, and Wright) and 2 counties in Wisconsin (Pierce and St. Croix). A sample of economic indicators for the Minneapolis-Saint Paul-Bloomington MN-WI MSA region, from years 2001 through 2010, is presented in Table 3-1. Data available regarding MSA Gross Domestic Product (GDP), Per Capita Personal Income and Median Household Income show steady increases in the past decade while unemployment rates have varied within a range between 3.5 percent and 5.1 percent. Indicators for 2009-2010 show a slight decrease in GDP and an increase in the unemployment rate, likely reflecting impacts from current economic conditions. While the MSA is significantly larger than the Central Corridor project area, these indicators suggest that the project area lies within a strong, stable regional economy.

Table 3-1. Minneapolis-Saint Paul-Bloomington Metropolitan Statistical Area Economic Indicators

Economic Indicators	Year									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
GDP for MSA ($ billion) (1)(2)	$144B	$149B	$156B	$167B	$176B	$182B	$189B	$194B	$191B	$200B
Per Capita Personal Income (2)	$37,901	$38,467	$39,534	$41,613	$42,721	$44,975	$46,870	$47,653	--	--
Median Household Income (3)	--	--	--	--	$65,803	$66,454	$66,352	$65,862	--	--
Unemployment Rate (%) (4)	3.5%	4.4%	4.7%	4.4%	3.9%	3.8%	4.3%	5.1%	7.9%	7.3%

(1) Gross Domestic Product (GDP) for Metropolitan Statistical Area (MSA) in billions of current dollars.

(2) Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Accounts.

(3) Median household income in 2008 dollars. Metropolitan Council. *MetroStats*. October 2009.

(4) Source: U.S. Department of Labor. Bureau of Labor Statistics.

3.1.2 Central Corridor LRT Business Characteristics

The Central Corridor alignment extends between downtown Saint Paul and downtown Minneapolis largely along University Avenue. Both downtown areas can be described as dense, urban commercial environments characterized by multi-story office/retail (3-50 stories) buildings. University Avenue commercial areas are less dense, with buildings typically 1-3 stories tall, and intermixed with residential and institutional uses. Types of businesses in the project corridor range from small service uses, restaurants, and retail storefronts to "big box" stores and large department stores. Business ownership ranges from individually or family-owned single establishments, to local companies with multiple Twin City outlets, to national chains.

The Central Corridor has a diverse economy with nearly all of the North American Industry Classification System (NAICS) sectors represented along it.[4] Approximately 82

[4] The North American Industry Classification System (NAICS) is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy. See http://www.census.gov/eos/www/naics/ for additional information on how the codes classify businesses.

percent of the businesses along the corridor are small businesses with revenues under $2 million. Table 3-2 shows a breakdown of the businesses in the corridor by NAICS sector.[5]

Table 3-2. Sector Composition of the Central Corridor

Business Type	Percent of Corridor	Number of Businesses	Percent Small Business	Number of Small Businesses
Animal Production	0%	1	100%	1
Construction	2%	23	78%	18
Manufacturing	2%	21	62%	13
Wholesale	4%	37	38%	14
Retail	17%	161	75%	121
Transportation and Warehousing	1%	8	100%	8
Information and Cultural Industries	3%	28	75%	21
Finance and Insurance	5%	51	76%	39
Real Estate, Rental, and Leasing	4%	37	81%	30
Professional Scientific and Technical Services	14%	130	85%	111
Company Management	0%	1	0%	0
Administrative and Support Services	6%	55	82%	45
Education	1%	8	88%	7
Health Care and Social Assistance	20%	185	85%	158
Arts, Entertainment and Recreation	1%	13	92%	12
Accommodation and Food Services	10%	99	97%	96
Other Services	9%	89	96%	85
Total	100%	947	82%	779

[5] The NAICS classifications were taken from the U-Plan dataset, with the exception of three businesses. Episcopal Homes and Second Debut 2 were added to the U-Plan Dataset between August 2010 and December 2010 and did not include a NAICS code in their entry. Macy's in Downtown Saint Paul was added by the project team from information provided by the Metropolitan Council. Episcopal Homes was coded as Health Care and Social Services, Second Debut 2 was coded as Retail-Miscellaneous, and Macy's was coded as Retail-General Merchandise.

3.2 Construction-Related Impacts on Business Revenues and Mitigation

Determining the specific impacts large transportation projects have on businesses is a challenging process. Isolating to what degree construction causes businesses to lose revenue in the face of other confounding variables, such as national economic conditions or individual business practices, is difficult.

Central Corridor Project Office (CCPO) staff, with assistance from the Iowa State University Institute for Transportation, conducted an exhaustive literature review in an attempt to identify methodologies related to quantifying business revenue loss as an adverse impact of construction projects. The CCPO reviewed studies examining construction-related impacts to businesses stemming from large highway and transit projects in multiple states, but they did not find any examples that clearly identified a quantitative methodology to measure project-level revenue related impacts (See Appendix D).

To develop an estimate of project-level construction impacts, it is necessary to have a reliable estimate of current and future revenues for specific businesses. Yet businesses are often hesitant to share this type of data due to privacy concerns. CCPO found that in response to this issue, the majority of studies reviewed investigated the impacts of construction on businesses by using surveys aimed gathering business owners' and managers' perceptions of construction-related impacts. This type of data is gathered through surveys as opposed to through quantitative analysis.

This Supplemental Draft EIS follows a similar process. Data from the Business Support Fund[6], a mitigation program that provided forgivable loans to Central Corridor small retail-oriented businesses that experienced construction impacts, allows for a quantitative analysis on a subset of corridor businesses. In order to examine trends for all the businesses in the corridor, it draws on business owners' and managers' perceptions and reports of construction-related impacts drawn from a collection of studies and surveys performed along the Central Corridor by local business associations, the CCPO, and professional research teams. The analysis uses data from these studies to estimate a range of impacts on businesses along the Central Corridor.

It is important to note that this document is focused on the short term impacts businesses experienced during construction. As time progresses, long term impacts to revenue resulting from operation of LRT may reveal different patterns and trends.

[6] For a full description of the Business Support Fund please see Section 3.7.2.4

3.3 No-Build Alternative

No construction would occur under the No-Build Alternative; thus, no construction-related impacts on business revenue are anticipated.

3.4 Baseline Alternative

Construction activities associated with the Baseline Alternative would be minimal and limited to traffic signal improvements. No impacts to business revenue due to construction of the Baseline Alternative would be expected.

3.5 LRT Alternative

The analysis of construction-related impacts on business revenue due to LRT is grouped into the three following categories:

- General Business Trends (3.5.1)
- Identification of Types/Severity of Impacts (3.5.2)
- Quantitative Assessment of Revenue Loss (3.5.3)

The following sections will summarize and describe main findings from studies that documented impacts on businesses due to LRT construction. The results of this analysis will paint a broad picture of the impacts experienced by businesses during construction of the Central Corridor.

3.5.1 General Business Trends

This section summarizes data collected by the Central Corridor Funder's Collaborative (CCFC), CCPO staff and the University Avenue Betterment Association (UABA), regarding overall general business trends prior to and during Central Corridor construction. The CCFC data discusses overall economic trends prior to construction, and CCPO and UABA data deal with business turnover and vacancy rates within the corridor during construction.

3.5.1.1 Business Sector Trends Prior to Construction

Business sector trends in the Central Corridor prior to construction are discussed in the CCFC's latest April 2012 report, *Central Corridor Key Outcomes: 2012 Indicators* (See Appendix E). The CCFC is a group of 13 grant-making organizations that seeks to make the Central Corridor a place of opportunity for all by creating and implementing Corridor-wide strategies in conjunction with a variety of local organizations. The group is engaged in a multi-year study that tracks social and economic trends in the corridor through a series of indicators, such as the levels of affordable housing in the corridor and the diversity of corridor businesses. To measure these trends, the group tracks yearly

changes within the corridor and then compares them to the trends in the cities of Minneapolis and Saint Paul as a whole.

Since the majority of the data in the group's latest report is dated prior to the beginning of Central Corridor construction, it portrays overall corridor trends before businesses were exposed to construction. Overall, the report shows that the corridor lost businesses across all business sectors between 2009 and 2010, but that the losses largely mirror those of the Twin Cities as a whole and are most likely due to the continued sluggish economy. The CCFC report demonstrates that prior to construction economic trends in the corridor were very comparable to economic trends in the Twin Cities.

3.5.1.2 CCPO Business Openings/Closings/Relocations during Construction

Beginning in February 2011, CCPO staff began to track business openings, closings, and relocations in the corridor on a monthly basis. This data is presented through monthly reports published by the CCPO summarizing how the Metropolitan Council and other partner agencies work to minimize Central Corridor construction impacts on local businesses. These reports are in accordance with the 2011 FONSI, which the FTA issued following publication of the April 2011 Supplemental EA of Construction-Related Potential Impacts on Business Revenues. Trends in the opening, closing and relocation data are summarized in this section.

CCPO Business Inventory

To track openings, closings, and relocations along the corridor, CCPO outreach staff maintains an inventory of street-level business establishments along the Central Corridor alignment from the West Bank area of Minneapolis to downtown Saint Paul. In February 2011, this list included 1,243 businesses. Between February 2011 and June 2012, CCPO staff reported a Corridor-wide net loss of three street-level businesses, as shown in Table 3-3. This demonstrates that over this 16 month time period, business openings, closings and relocations resulted in little net change regarding the number of businesses in the corridor.

Table 3-3. CCPO Street Level Business Change (February 2011 - June 2012)

	Feb-May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	CUMULATIVE
Openings	22	4	4	7	3	4	7	1	5	5	2	1	2	6	**73**
Closings	-14	-5	-4	-2	-1	-8	-9	-6	-2	-4	-4	0	0	-3	**-62**
Relocations Off Corridor	-3	0	-2	0	-1	-1	-1	0	0	0	-1	0	-1	-4	**-14**
Net loss of businesses along the Corridor: Feb. 2011-June 2012															**-3**
Relocations within Corridor	6	2	1	1	0	3	0	2	0	0	0	2	0	0	17

3.5.1.3 UABA Storefront Inventory

UABA, a local business association in the Central Corridor area, tracked vacancy rates in the corridor on a quarterly basis beginning in May 2011[7]. UABA examined vacancy rates among retail storefront spaces along University Avenue in Saint Paul between Emerald Street and Rice Street. The survey recorded if storefronts were occupied or vacant. UABA defined "storefront" as what the "average person would observe to be a University Avenue storefront shop window business space." For a full explanation of survey methodology see Appendix F. UABA data shows that from May 2011 to August 2012, there was little variation in storefront vacancy rates within the study area, as shown in Table 3-4.

Table 3-4. UABA Storefront Vacancy Rates, observed quarterly, May 2011-May 2012

	May-11	Aug-11	Nov-11	Feb-12	May-12	Aug-12
Occupied	312	314	308	314	311	311
Vacant	86	95	98	86	93	96
Total	398	409	406	400	404	407
Vacancy Rate	21.6%	23.2%	24.1%	21.5%	23.0%	23.6%

3.5.1.4 General Business Trends Summary

The three data sources reviewed do not provide a direct link between Central Corridor construction and corridor business trends. Without additional data such as historic revenue trends, customer counts, and other private historical business data, it is impossible to draw a bright line between Central Corridor construction and business turnover and vacancy rates. However, the data does provide an instructional snapshot of overall business trends in the Central Corridor. The CCFC data demonstrates that prior to construction economic trends in the corridor were similar to those in the Twin Cities as a whole. The corridor did lose businesses in 2012, but those losses were in line with losses in the larger region. CCPO data demonstrates that as construction in the corridor progressed, the rate of businesses opening and closing within the corridor began to cancel each other out. The UABA data found similar trends to that tracked by CCPO; namely, that corridor storefront vacancy rates stayed fairly stable as construction progressed.

[7] UABA also conducted an inventory of the storefronts along University Avenue on April 6, 2011 and reported their findings in a report titled Change in the Number of Occupied Storefronts along University Avenue, 1st Quarter 2011, published on April 18, 2011. However, the authors of the report concluded that the methodology used to conduct the survey was not sound; therefore the findings are not documented in this Supplemental DEIS.

3.5.2 Identification of Types/Severity of Impacts to Businesses

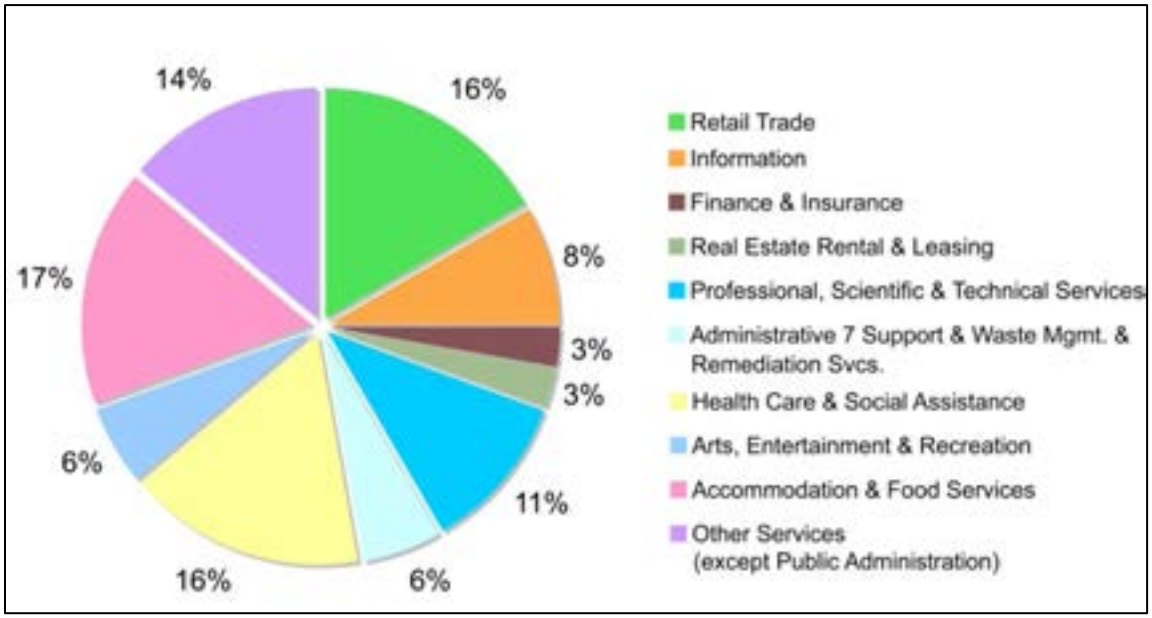
This section relies on multiple data sources to present construction-related impacts anticipated by business owners prior to LRT construction as well as impacts actually reported during LRT construction. A July 2012 study by the University of Minnesota's Humphrey School of Public Affairs, *Assessing Neighborhood and Social Influences of Transit Corridors*, discusses the impacts anticipated by business owners prior to the commencement of construction activities (See Appendix G). A 2012 study by Wilder Research, *Mitigating Businesses Losses: Services, Strategies, and Effectiveness* (See Appendix I), and the *Little Mekong CCLRT Impact Study*, published by the Asian Economic Development Association (AEDA) on August 1, 2012 (See Appendix J), both discuss impacts reported by businesses during construction.

3.5.2.1 Anticipated Impacts Prior to LRT Construction

A research team at the University of Minnesota's Humphrey School of Public Affairs conducted a survey of residents and businesses along four transitways (the existing Hiawatha LRT, the existing Northstar Commuter Line, the future Cedar Avenue BRT, and the future Central Corridor LRT) in the Twin Cities region to better understand individual perceptions of transit-induced neighborhood change. These perceptions are documented in the study titled, *Assessing Neighborhood and Social Influences of Transit Corridors*, and published in July 2012 (See Appendix G). The study documents many issues, including specific construction-related impacts in neighborhoods along the four transitways. The survey took place in the Central Corridor prior to construction, meaning the study only addresses the construction-related impacts anticipated by business owners. The results of the Central Corridor portion of the study are summarized in the following sections. It should be noted that the survey did not address business owners' thoughts on how construction would affect business revenue.

Central Corridor LRT Transitway Survey Participants. The study focused on four neighborhood planning districts along the Central Corridor alignment: Prospect Park, Hamline-Midway, Thomas-Dale, and Summit-University. To identify study participants, the survey employed a simple random sample of businesses drawn at the neighborhood level from a Dun and Bradstreet business database. Forty businesses, ten from each neighborhood, participated in the survey. A fairly diverse mix of industries participated in the survey, as shown in Figure 3-1. The relatively large percentage of "Other Services" includes businesses such as car dealerships and repair shops as well as hair and nail salons which are all numerous along the corridor. The large majority of the survey participants were small businesses with less than ten employees and annual sales of $200,000 – $500,000. Overall, the characteristics of the sample businesses are representative of the businesses in the Central Corridor.

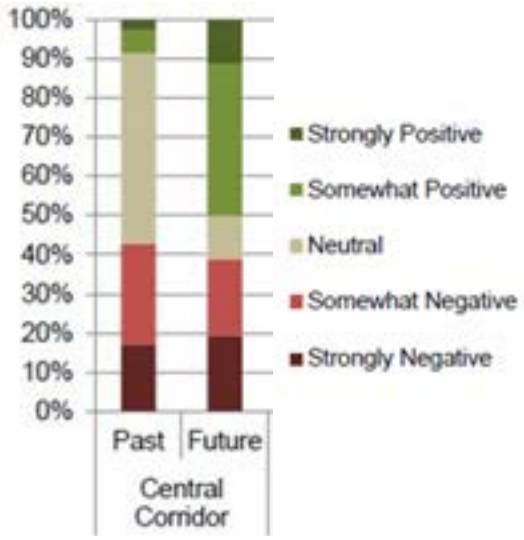
Figure 3-1. Survey Sample Industry Sectors by NAICS Code



Source: *Assessing Neighborhood and Social Influences of Transit Corridors*

Perceptions of Central Corridor LRT-Related Impact. The survey asked business owners to gauge how they thought the planned Central Corridor had affected their business over the past five years, and how they thought it would affect their business over the next five years. As shown in Figure 3-2, over the past five years, approximately 40 percent of businesses perceived negative impacts from the Central Corridor transitway and approximately 50 percent of businesses perceived no impacts. Only 10 percent of businesses perceived positive impacts. However, over the next five years, the number of positive responses increases significantly with 50 percent of businesses reporting that they expect positive impacts from the Central Corridor transitway. Furthermore, there was a slight decrease in businesses that perceive negative impacts from the transitway.

Figure 3-2. Perception of Transitway Impacts

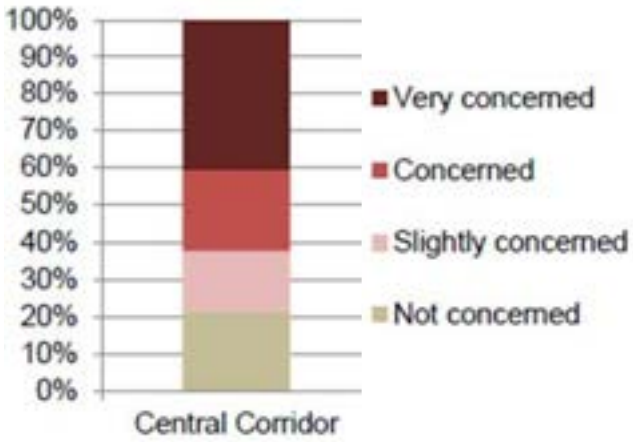


Source: *Assessing Neighborhood and Social Influences of Transit Corridors*

Future Concerns and Anticipated Impacts Due to LRT Construction. Businesses also were asked to rate their level of concern regarding the upcoming Central Corridor construction. Businesses were asked to rate their concern on a scale from "Not concerned at all" to "Very concerned." Figure 3-3 demonstrates that roughly 60 percent of businesses were either concerned or very concerned about transitway construction, indicating that the majority of businesses had concerns about upcoming construction.

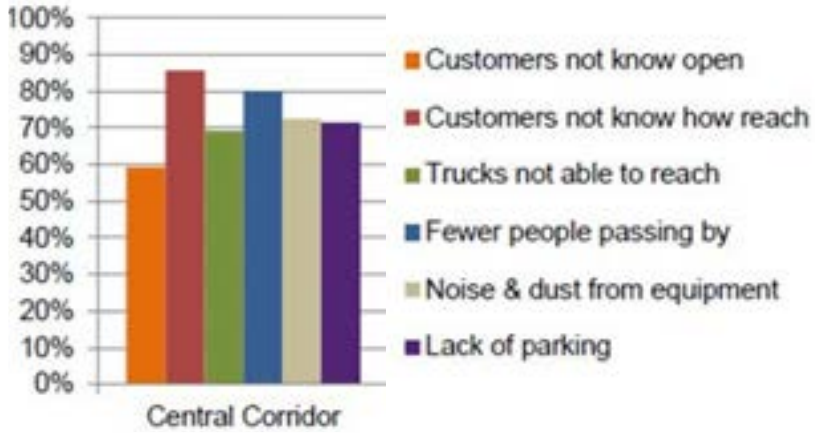
Figure 3-4 shows the percentage of respondents concerned with six specific anticipated construction related impacts. The greatest concerns that survey participants mentioned were that customers would not know how to reach them during construction and that fewer people would be passing by their businesses, indicative of the business' reliance on automobile and pedestrian traffic on University Avenue and Washington Avenue to generate sales revenues.

Figure 3-3. Levels of Concern over Transitway Construction



Source: *Assessing Neighborhood and Social Influences of Transit Corridors*

Figure 3-4. Specific Anticipated Construction Concerns



Source: *Assessing Neighborhood and Social Influences of Transit Corridors*

3.5.2.2 Reported Impacts During Construction

This section will use two data sources to summarize impacts reported by business owners during Central Corridor LRT construction. These data sources include *Mitigating Business Losses: Services, Strategies, and Effectiveness,* a survey by Wilder Research published in 2012, and the *Little Mekong CCLRT Impact Study* conducted by the Asian Economic Development Association and published in August 1, 2012.

The Central Corridor Light Rail Transit Construction: Impact Study for Pascal Street to Dale Street, Saint Paul, MN, published August 16, 2012 by UABA was submitted to the Metropolitan Council for consideration in this Supplemental Draft EIS. The report provides a summary, as well as detailed notes, of interviews with four University Avenue businesses regarding impacts experienced by these businesses as a result of LRT construction activities (See Appendix H). The report concludes that businesses are suffering substantial impacts as a result of LRT construction, but it also acknowledges that it reports sentiment rather than empirical data. After a review of this study, it was determined it could not be used as an example of larger trends in the Central Corridor, because it was not clear how the report's sample was selected and because the selected sample was extremely small. A memo explaining the review of the study is included in Appendix H.

3.5.2.3 Mitigating Business Losses: Services, Strategies, and Effectiveness, a study by Wilder Research

With support from the Business Resources Collaborative (BRC), a coalition that provides support and technical assistance to businesses affected by Central Corridor construction, the CCFC commissioned the Amherst H. Wilder Research, a non-profit research agency based in Saint Paul, to survey Central Corridor businesses about the multitude of programs and services designed to mitigate business loss during Central Corridor LRT construction. Wilder Research reported their findings in a 2012 report titled *Mitigating Business Losses: Services, Strategies, and Effectiveness*. The study also

documented specific construction-related impacts reported by businesses during construction.

Survey Methodology. Wilder Research defined its study population as all for-profit businesses with street addresses directly along the Central Corridor alignment. For the downtown Saint Paul section of the corridor, this included only businesses on the street level. Businesses fitting these criteria were identified from three lists of businesses kept by organizations working with businesses in the corridor, including the list created by the CCPO. Also, as the central goal of the study was to evaluate the effectiveness of the mitigation programs, businesses that were known to have received services through Central Corridor construction mitigation programs were automatically included in the sample. These businesses were identified through lists of participants provided by the various agencies carrying out mitigation programs.

In total, 1,144 businesses fitting the survey criteria were identified in the corridor. Wilder Research attempted to contact 456 of the businesses and reached 201, for a 60 percent survey response rate. Of those 201, 71 had received some sort of mitigation services and 130 had not received services. The survey took place between March and June 2012, but respondents were asked to only reference events that occurred during the first year of construction, from March to November 2011.

Business Characteristics. As shown in Table 3-5, a diverse representation of businesses participated in this study. The table also identifies the number of employees at the businesses, and it is clear that the majority of the businesses surveyed were small, with 74 percent of surveyed businesses employing fewer than 10 people, and with 10 percent reporting the owner as the only employee. Three-fourths of respondents reported that they rent their business space.

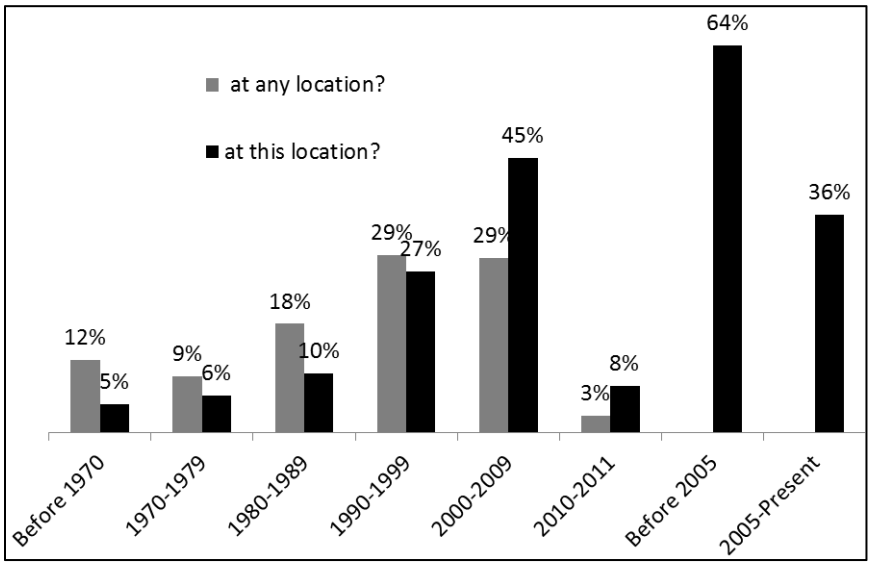
Table 3-5. Central Corridor LRT Business Study: Businesses by Type, Size and Property

Business Type (n=201)[a]	Number	Percent
Retail, grocery, and convenience stores	61	30%
Restaurants, bars, hospitality, and recreation	44	22%
Nonprofessional services (e.g., auto, plumbing, etc.)	43	21%
Property management, professional services, and finance	31	15%
Health and fitness	22	11%
Number of employees (n=199)		
Owner only (no employees)	20	10%
1-9 employees	127	64%
10+ employees	52	26%
Property Tenure		
Rents space	148	75%
Owns Space	50	25%

Note: [a] n refers to the number of businesses

The businesses surveyed were generally established businesses that have been in operation for several years (see Figure 3-5). Of the businesses surveyed, 68 percent have been in operation at any location since before 2000, and 64 percent have been at their current location since before 2005, a full five years before Central Corridor LRT construction began.

Figure 3-5. Length of Time Business Has Been in Operation



Source: *Mitigating Business Losses: Services, Strategies, and Effectiveness*

3.5.2.4 Construction-Related Impacts Reported to Wilder Research

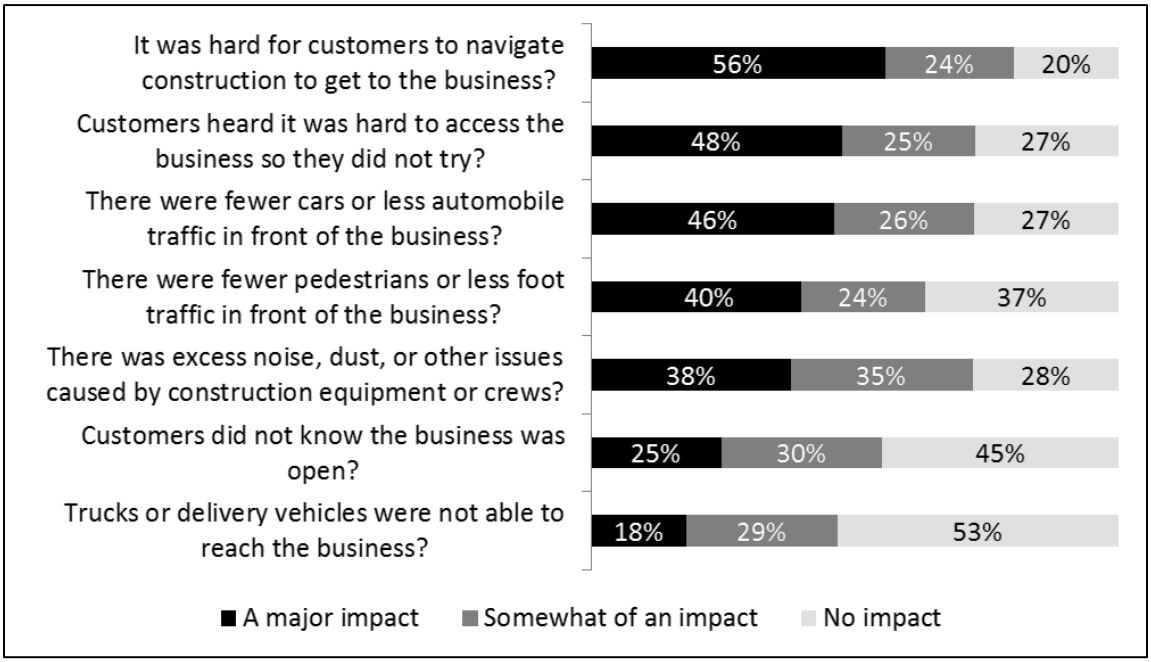
Respondents were asked if there was significant, minor, or no construction near their business during the year before the survey. The majority of survey respondents reported either minor or significant construction, as shown in Table 3-6. Over half of the surveyed businesses reported reduced access to their sidewalk, extended closure of the street in front of their business, and the loss of on-street parking. A large majority of businesses, 68 percent, reported at least one of these disruptions near their business.

Table 3-6. Level of Construction and Construction-Related Disruptions

Overall Experience (N=201)	Number	Percent
There was no construction	41	21%
There was minor construction	33	17%
There was significant construction	126	63%
Types of Disruptions (N=201)		
Sidewalk in front of business had reduced access	107	53%
Business side of street was closed longer than a month	105	52%
Lost on-street parking	102	51%
Lost off-street parking	55	27%
One or more of the above disruptions	137	68%

Respondents were also asked if any of the seven specific construction-related impacts, shown in Figure 3-6, affected their businesses. Overall, the largest percent of business owners, 80 percent, reported difficult navigation for customers as an impact. The largest percentage of business owners, 56 percent, also rated this issue as a "major impact."

Figure 3-6. Construction Impacts Reported by Businesses Owners



Source: *Mitigating Business Losses: Services, Strategies, and Effectiveness*

3.5.2.5 Construction Mitigation Program Participation

More than one-third of respondents reported participating in one or more of the construction mitigation services listed below. However, these programs do not represent the full suite of Central Corridor mitigation programs. For a comprehensive look at the mitigation strategies please see Section 3.7.2. The services discussed in the Wilder Research study include:

- **Business Support Fund:** Administered by the Neighborhood Development Center (NDC) in Saint Paul and the Minneapolis Consortium of Community Developers (MCCD) in Minneapolis, this program provides a modest safety net for businesses that show a loss in sales due to the construction of the Central Corridor LRT construction.
- **Parking Loan Program**. Administered by the City of Saint Paul, this program provides forgivable loans for improvements to off-street parking along University Avenue. The program is only available to businesses in Saint Paul.
- **Services provided by the University Avenue Business Preparation Collaborative (U7).** The U7 collaborative provides a wide range of services including marketing and business planning assistance, façade improvement, and technical assistance for technology and other business services.
- **The "Buy Local" coupon book.** Organized by the Midway Chamber of Commerce, the "Buy Local" coupon book was a component of the Chamber's Discover Central Corridor initiative to market local businesses.

- **Progressive Dinner.**[8] Organized by the Midway Chamber of Commerce, the progressive dinner took place in December 2011 and provided transportation to different restaurants on the corridor over the course of a single night.

In addition to the services described above, respondents were asked about their awareness and perceived effectiveness of the CCPO communications efforts to highlight local businesses in their weekly newsletter. However, these communications efforts are not a program or service in which the businesses would actively participate, so respondents were not asked if their business had participated.

Participants in Mitigation Programs. The number of respondents that participated in each program and the rates of participation are shown in Table 3-7. Wilder Research listed businesses as "potentially eligible" due to their classification as a small business and geographic location; however they did not determine which businesses were officially eligible based on mitigation program standards. For details on mitigation program eligibility requirements please see Section 3.7.2.

Table 3-7. Respondent Participation in Construction Mitigation Services

	Number potentially eligible	Number participating	Percent of eligible participating
Business Support Fund	201	42	21%
Parking Loan Program[a]	158	9	6%
U7 Services[b]	201	22	11%
"Buy Local" coupon book	201	27	13%
Progressive Dinner (Dec 11)[c]	43	10	23%
Any of the above	**201**	**72**	**36%**

Notes: *[a] Only Saint Paul businesses were eligible. [b]Respondent businesses participated in the following U7 services: technical support (8), printing of flyers, banners, etc. (7), advertising and marketing support (6), information sessions (6), business planning (3), and financial support (3).Because some participated in multiple services, individual service participation counts do not total the number of U7 Services participants. [c]Only restaurants were eligible to participate.*

[8] Progressive Dinner is not a formal mitigation strategy identified as part of the LRT Alternatives. No financial commitments are associated with this strategy.

Non-Participants in Mitigation Programs. Wilder Research asked the 130 businesses that did not report participating in any mitigation programs if they were aware of the mitigation programs in the corridor. The Business Support Fund was the only program where a majority of randomly selected participants were aware of the program, as shown in Table 3-8.

Table 3-8. Awareness of Services and Communication Efforts

	Number Potentially Eligible	Number Aware	Percent Aware
Business Support Fund	130	83	66%
Parking Loan Program [a]	107	32	30%
"Buy Local" coupon book	130	47	37%
Progressive Dinner (Dec 11)[b]	21	0	0%
Project Office communication efforts	130	55	42%

Note: *This table includes only the 130 those not selected for their participation in services; see Section 3.5.2. for more information. Respondents were not asked about awareness of U7 services.* [a] *Only Saint Paul businesses were eligible.* [b]*Only restaurants were eligible.*

Respondents who were aware of the mitigation programs but had not participated in one were asked why they chose not to participate. Their responses are shown in Table 3-9. Ineligibility was a primary reason why businesses had not participated in the Small Business Loan and Parking Loan programs. For the "Buy Local" coupon book, a majority of respondents said they did not need this type of assistance.

Table 3-9. Primary Reasons for Not Participating in Services

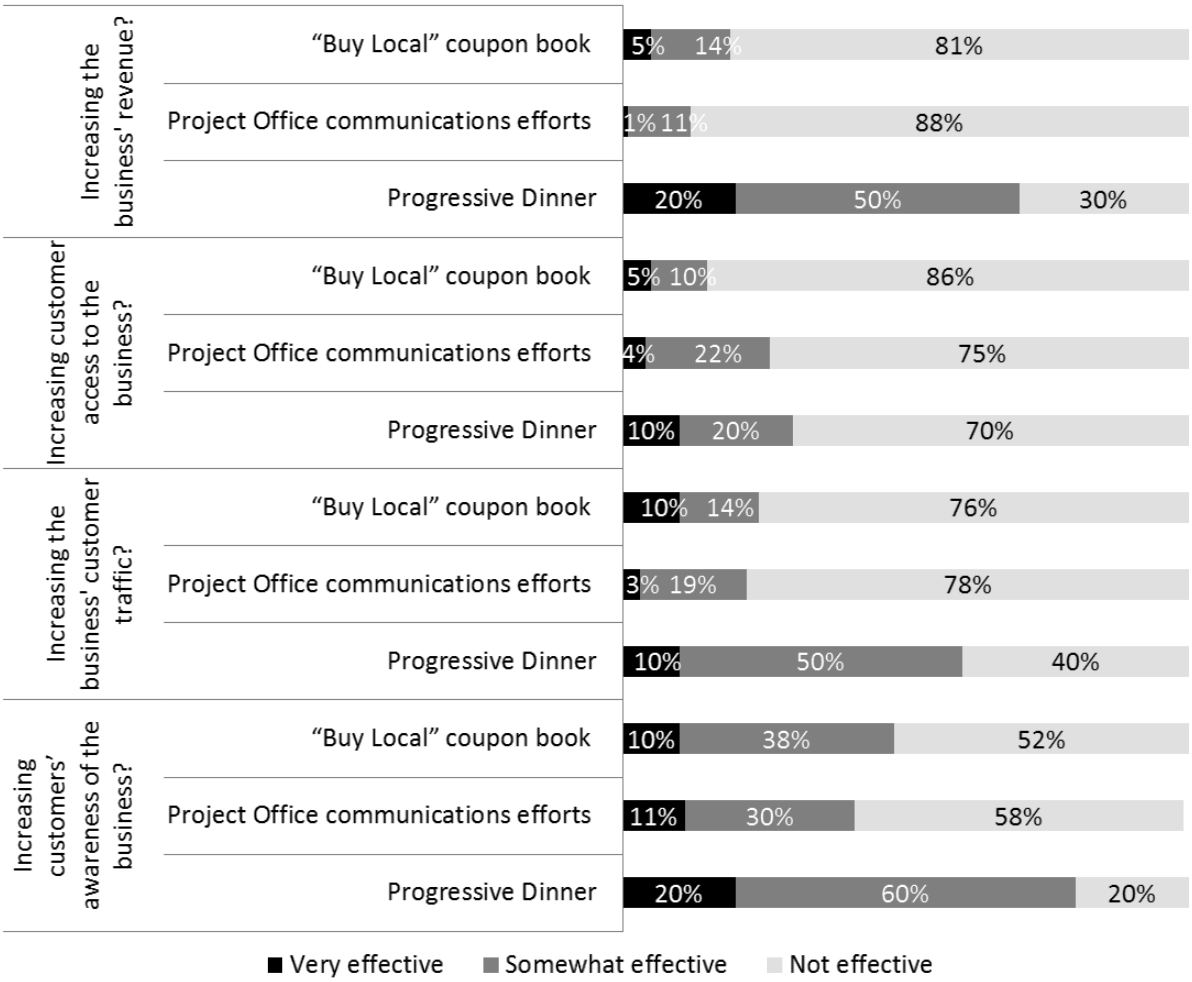
	Business Support Fund (N=77)	Parking Loan Program (N=33)	"Buy Local" coupon book (N=52)
Was not eligible[a]	49%	64%	19%
Did not need this type of assistance	19%	27%	44%
Did not have time to apply or found out too late	5%	0%	8%
Did not know how or where to apply	3%	3%	10%
There was no space left in the program	N/A	0%	0%
Application process too much work	9%	0%	2%
Requirements of program were too restrictive	13%	0%	10%
Level of support did not match level of need	8%	3%	15%

Note: *[a] In this table "eligibility" refers to the respondents' perception of whether or not their business was eligible for the program. It does not mean they were officially identified as ineligible for the mitigation program. For a full description of mitigation program eligibility requirements, please see Section 3.7.2.*

3.5.2.6 Effectiveness of Mitigation Strategies

In general, program participants rated the mitigation programs favorably, with the majority of respondents describing each service as at least somewhat effective overall in mitigating the effects of construction. In fact, as shown in Figure 3-7 and Figure 3-8, overall effectiveness ratings frequently exceeded ratings on specific effectiveness measures (e.g. increasing customer traffic or business revenue), indicating that respondents saw some important overarching quality in these programs despite perceiving most of them to be only minimally effective in their specific goals. The services thus appear to be effectively accomplishing something, if only primarily the generation of good will among recipients. This was especially true of the CCPO communication efforts, which at a minimal cost, received relatively high ratings of overall effectiveness.

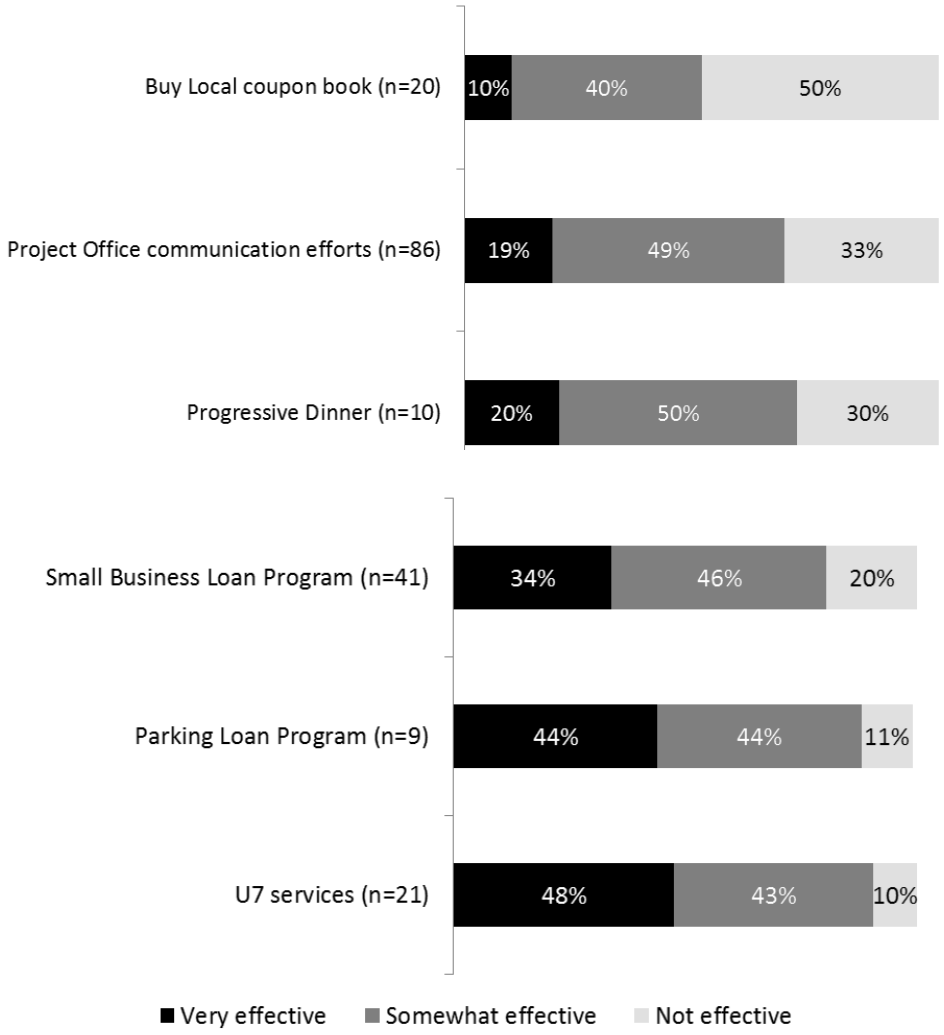
Figure 3-7. Specific Effectiveness of Programs



Source: *Mitigating Business Losses: Services, Strategies, and Effectiveness*

Notes: *Progressive Dinner (n=10) and "Buy Local" coupon book (n=21) ratings are from program participants only. Project Office communication efforts ratings are from respondents who were aware of these efforts (n=80). This question was not asked about the U7 Services, the Business Support Fund, or the Parking Loan program.*

Figure 3-8. Overall Effectiveness of Programs



Source: *Mitigating Business Losses: Services, Strategies, and Effectiveness*

3.5.2.7 Future Business Outlook

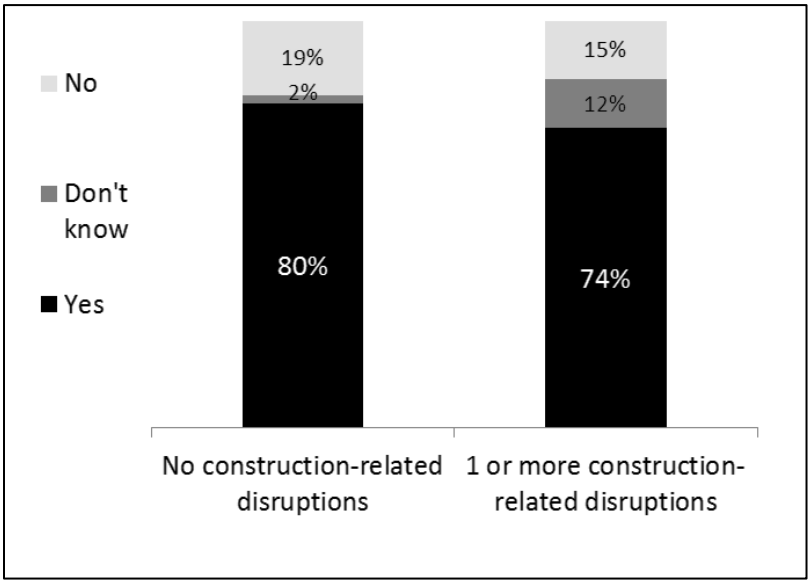
Finally, respondents were asked if they expected their business to still be located in the Central Corridor in the next five years: 76 percent of businesses reported that they did expect their business to be operating in its current location within five years, 16 percent did not expect their business to be in operation at its current location, and 9 percent said they did not know. The reasons for the 16 percent of businesses expressing uncertainty about their future location are shown in Table 3-10.

Table 3-10. Reasons for Uncertainty

Reason	Number of Businesses Citing this Reason
Uncertain future	19
Severe financial losses	9
The business does not want to stay in the area	8
Pending or future building eviction (e.g., demolition, sale, new lease)	4
TOTAL	32

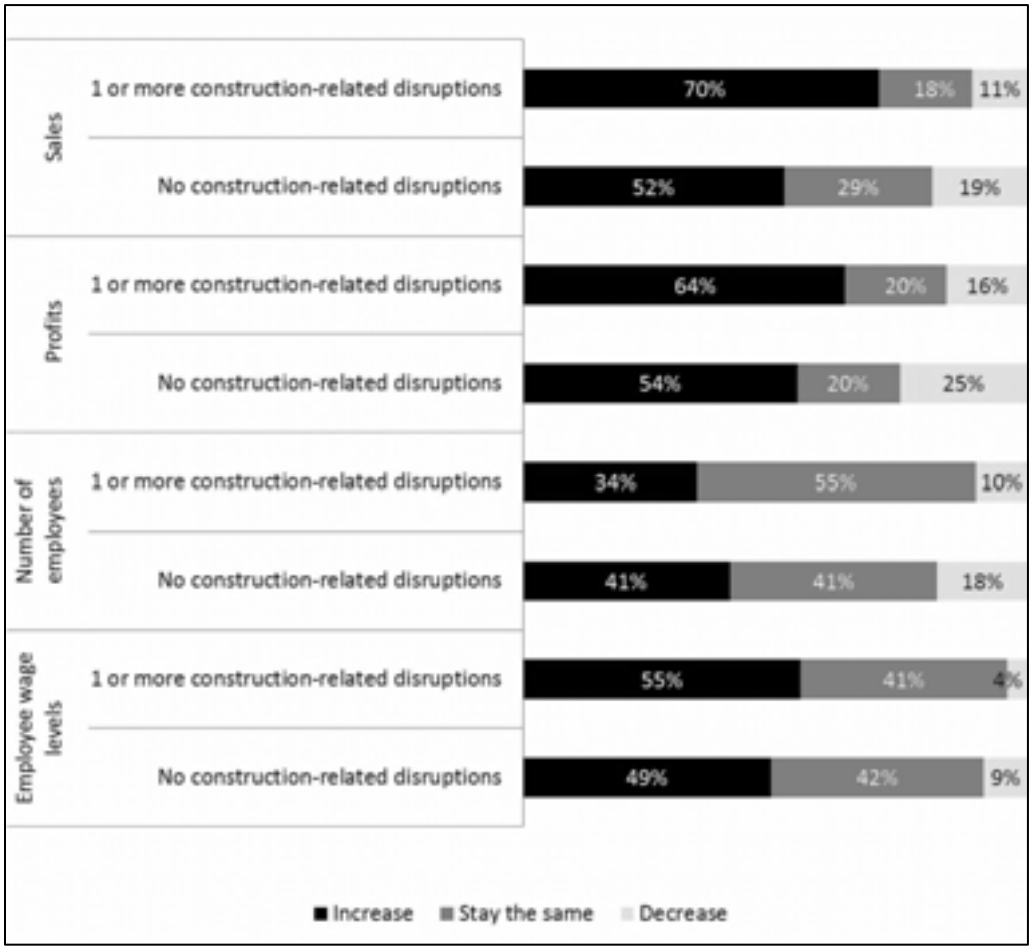
The businesses that experienced no construction-related disruptions were slightly more likely than those who experienced one or more disruptions to report that their business would still be in operation in five years, as shown in Figure 3-9. As shown in Figure 3-10, overall, businesses expected that their sales, profits, number of employees, and employee wage levels would at a minimum stay the same or increase. Very few expected decreases in these areas.

Figure 3-9. "Do You Expect This Business Will Be Operating in its Current Location in 5 Years?"



Source: *Mitigating Business Losses: Services, Strategies, and Effectiveness*

Figure 3-10. Expectations Over the Next Five Years



Source: *Mitigating Business Losses: Services, Strategies, and Effectiveness*

3.5.2.8 Mitigation Business Losses Report Summary

Many of the findings in the *Mitigating Business Losses: Services, Strategies, and Effectiveness Study* are encouraging. In particular, respondents report strong satisfaction and general effectiveness of the services as well as well-designed programs. Also, although many of the businesses surveyed were affected by construction, the majority of respondents report that they intend to stay in business along the Central Corridor.

3.5.2.9 Little Mekong CCLRT Impact Study

In their August 1, 2012, report, *The Little Mekong CCLRT Impact Study,* AEDA documented construction-related impacts reported by businesses located in the Little Mekong business district (See Appendix J). AEDA is a community-driven nonprofit organization that works with Asian small businesses. The group was founded by a group of Asian small business owners concerned with the development of the Central Corridor. The Little Mekong district encompasses a five-block strip of University Avenue

from Mackubin Street to Galtier Street in Saint Paul and is located directly on the Central Corridor alignment and will be served by the Dale, Western, and Rice/Capitol stations.

Little Mekong CCLRT Impact Study Methodology. Data for the study was collected through semi-structured interviews with business owners from March 30, 2012 through July 25, 2012. AEDA staff made contact with 64 of the 80 businesses within the Little Mekong District, for a study response rate of 80 percent.

Business Characteristics. A majority of the businesses in the study sample were restaurants, and beauty and health services, as shown in Table 3-11. The table also shows that the distribution of businesses in the sample was fairly representative of the types of businesses in the area as a whole.

Table 3-11. Types of Participating Businesses Compared to All Businesses in Little Mekong

	Study Sample		All Businesses in Little Mekong	
Business Type	n=64	Percent of Business	N=80	Percent of Business
Arts/Culture	2	3.1%	2	2.5%
Beauty Service	9	14.1%	11	13.8%
Grocer	4	6.3%	4	5.0%
Health-related service	12	18.8%	12	15.0%
Non-grocery retail	7	10.9%	9	11.3%
Religious place of worship	1	1.6%	1	1.3%
Restaurant	11	17.2%	13	16.3%
Social services/nonprofit	7	10.9%	9	11.3%
Other	11	17.2%	16	20.0%
Don't Know	n/a	n/a	3	3.8%

Results. During the interviews, AEDA staff collected specific numbers of complaints in relation to the following six categories of complaints: utilities, construction activities, access, signage, safety and communication. Respondents could report more than one issue per category, meaning the total number of reports per category is sometimes larger than the study sample size. The study makes a distinction between "reports" and "impacts." Interviewees could report an occurrence of an issue, but then also report that the issue had no impact on their business.

Reports of Trouble with Utilities. During the interviews, there were 47 reports of some type of trouble with a utility. Table 3-12 shows that water shut-offs was by far the most common utility issue. Interviewees reported shut-offs ranging from 10 minutes to 8.5 hours and many different impacts were reported. Impacts included loss of customers, inability of customers to use the bathroom, and needing to spend money on bottled water. Of the four reports of electricity issues, one business reported losing one full day of business due to an electricity issue. Four businesses had their internet, phone and/or fax interrupted during construction. No significant impacts were reported as a result of the six gas shut-offs.

Table 3-12. Reported Utility Trouble

Utility/Service disrupted	# of reports
Water	33
Gas	6
Electricity	4
Internet/phone/fax	4
Total Reports	**47**

Reports of Trouble with Construction Activities. There were 77 reports of some form of trouble from construction activities among the 64 businesses and 17 reports of having no trouble. As seen in Table 3-13, noise/vibration was the most common complaint. Businesses cited items falling off shelves, disturbed customers, and cracked walls all as impacts of noise/vibration.

Table 3-13. Reported Trouble with Construction Activities

Trouble reported	# of reports
Dust/air	19
Noise/vibration	52
Other	6
Total Reports	**77**

Reports of Trouble with Access. There were 79 reports of trouble with access among the interviewees and 22 reports of "no trouble." The large majority of impacts involved parking and parking lot access, as seen in Table 3-14.

Table 3-14. Reported Trouble with Access

Access Issues Reported	# of reports
Parking/parking lot access	44
Traffic	10
Sidewalk/handicap access	14
Truck access	11
Total Reports	**79**

Reports of Trouble with Signage. Little Mekong businesses were almost evenly split on their opinions of signage, with 33 businesses reporting that construction way-finding signage was sufficient and 24 businesses reporting that it was not sufficient, or had no opinion about its sufficiency. Many businesses also reported that it was challenging to communicate to customers that their business was still open despite construction. Nineteen businesses reported spending between $20 and $300 on making their own signs.

Reports of Trouble with Safety. The number of reported safety concerns was much lower than the number of respondents that reported no construction-related safety concerns. There were 46 reports of no safety concerns and only 19 reported safety concerns. The safety concerns that were reported included hazards to pedestrians such as rocks on sidewalks and uneven surfaces, as well as dangerous pedestrian crossings.

Other safety concerns included crime, air quality, poor lighting, cars parking on sidewalks, and access to bus stops.

3.5.3 Assessment of Revenue Loss due to Construction

This section discusses data collected from the Business Support Fund, a construction impact mitigation program administered by the City of Saint Paul. While this data is focused on small businesses, it provides valuable insights for any businesses (non-retail and/or larger businesses) which may be most vulnerable to challenges of customer access created by construction activities.

The Business Support Fund

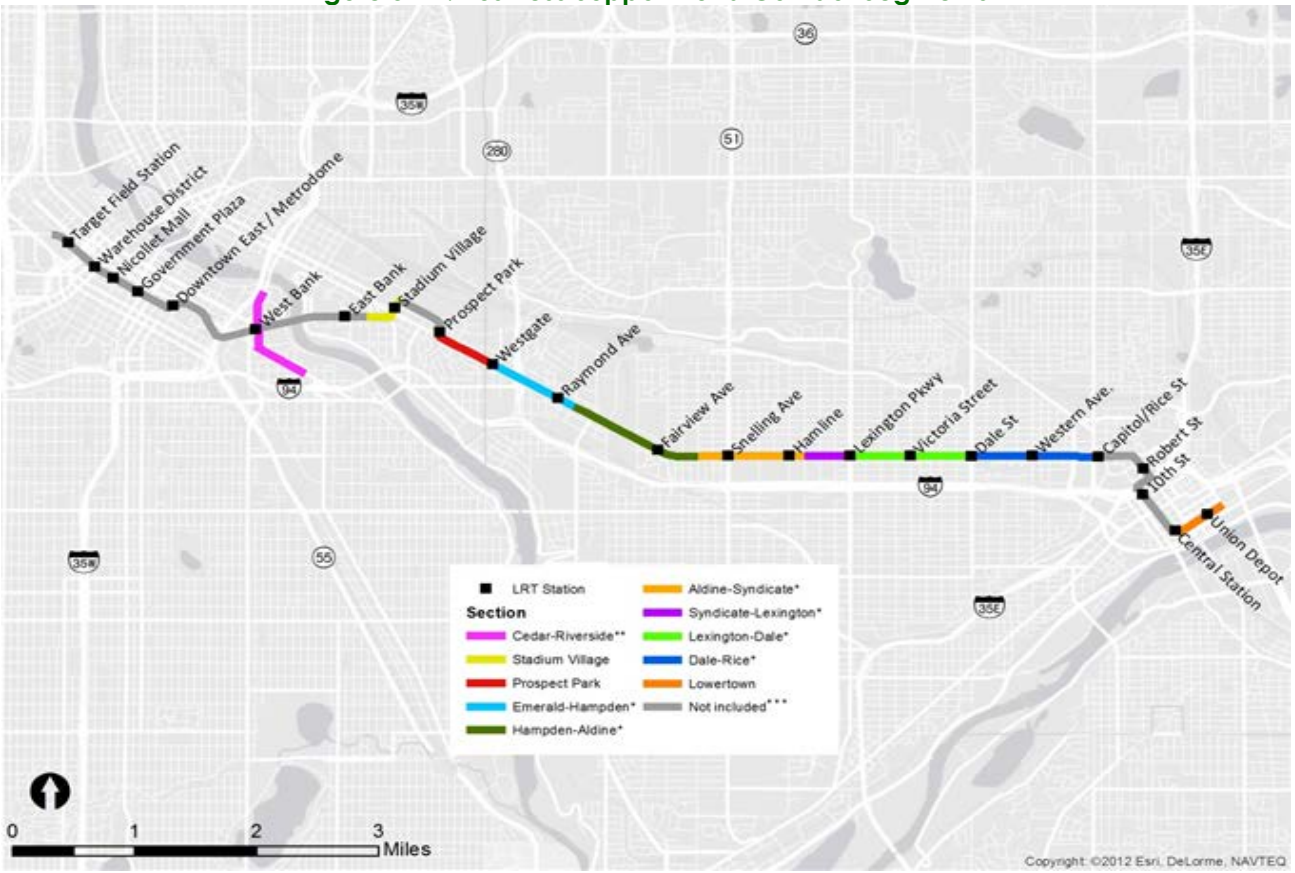
The purpose of the Business Support Fund is to provide a modest safety net for corridor businesses that can demonstrate a loss in sales due to the construction of the Central Corridor LRT. The program, administered by the City of Saint Paul, provides no-interest forgivable loans in amounts up to $20,000 to for-profit retail-oriented small businesses with up to $2 million in annual gross sales that:

- Are independently owned (with four or fewer locations).
- Are located on the Central Corridor LRT (or within one block of the construction zone).
- Have been at their current Central Corridor location for one year or more
- Are focused on retail services (selling products or services directly to the consumer, including restaurants).
- Have experienced a decline in revenue due to the construction of the Central Corridor LRT. Loan recipients were required to submit three years of tax returns and an accounting of current-year sales demonstrating a decline in sales from pre-construction levels.
- Prequalify by successfully participating in appropriate training with a small business loan consultant or by attending a "Ready4Rail" Forgivable Loan Workshop.

The loan may be used for basic business expenses, including payroll, inventory, rent, mortgage payments, utilities, taxes, marketing, and insurance.

Business Support Fund Data Characteristics. Between July 2011 and the end of June 2012, the program awarded loans to 98 small businesses. For each loan recipient, City of Saint Paul staff tracked the business's geographic location and type of business. Saint Paul staff split the corridor into ten segments as shown in Figure 3-11 and the number of program participants per segment is shown in Table 3-15. The greater number of program participants in the western section of the corridor is due to the fact that construction activities during this time period largely took place along the western half of the corridor.

Figure 3-11. Business Support Fund Corridor Segments



Notes: ** These segments contain both a north and south segment. The Central Corridor alignment is the dividing line between north and south segments. **The Cedar-Riverside segment does not run parallel to the alignment, because the small businesses in this area are also not parallel to the alignment.***The gray sections of the alignment were not included because of a lack of for profit retail-oriented businesses in the nearby area. Downtown Minneapolis was not included, because this section of alignment was already constructed as part of the Hiawatha Line.*

Table 3-15. Business Support Fund Participants by Geographic Location

Geographic Location	Number of Businesses
Cedar-Riverside	19
Stadium Village	10
Prospect Park	1
Emerald to Hampden	13
Hampden to Aldine	19
Aldine to Syndicate	19
Syndicate to Lexington	1
Lexington to Dale	7
Dale to Rice	1
Lowertown	6
Total	96*

*A total of 98 loans were disbursed, however two entries did not have geographic or business type data; therefore only 96 loan recipients are included in the analysis.

Participating businesses were sorted into seven main categories by Saint Paul staff: retail, restaurants, salons, professional businesses, entertainment businesses, printing, and automobile repair businesses. However, some of the categories contained only one or two businesses. To protect the privacy of these businesses they were collapsed into two new categories, as shown in Figure 3-12.

Figure 3-12: Collapsed Categories

	Entertainment Businesses Restaurants
New Category:	**Restaurants/Entertainment**
	Professional Businesses Printing Businesses Automobile Repair Businesses
New Category:	**Professional/Services**

Businesses in the Professional/Services category were combined in a larger aggregate group due to the distinct trips made to these establishments to serve a purpose (i.e., a customer would likely make a planned trip to visit an automobile repair or professional service business). Restaurants and Entertainment businesses were combined, because customers visit these types of establishments more spontaneously.

The number of businesses per category is shown in Table 3-16.

Table 3-16. Business Support Fund Participants by Type of Business

Type of Business	Number of Businesses
Retail	45
Restaurant/Entertainment	34
Salon	8
Professional/Services	9
Total	96*

*A total of 98 loans were disbursed, however two entries did not have geographic or business type data; therefore only 96 loan recipients are included in this discussion.

Loan recipients were required to submit three years of tax returns and an accounting of current-year sales demonstrating a decline in sales from pre-construction levels. Businesses operating for less than three years were required to submit tax returns from the time they had been in business. The program did not require any specific set of accounting metrics, but instead relied on self-reports from business owners to demonstrate a loss in revenue. From this data, Saint Paul staff derived pre-construction average monthly sales, as well as the average monthly reported sales loss during construction for each business (See Appendix K).

3.5.3.1 Business Support Fund Data Trends

Overall, businesses reported a large range of pre-construction monthly sales as well as a large variation in percent loss of monthly sales (see Table 3-17). Businesses reported losses in average monthly sales anywhere from 2 percent to 84 percent, with a mean average monthly sales loss of 30 percent and a median of 25 percent. The reports of average monthly sales loss had a standard deviation of 19 percentage points, meaning that within the range of reported losses the data were highly variable.

Table 3-17. Business Support Fund Overall Trends

Number of Businesses	Pre-construction Monthly Sales				Percent loss of monthly sales			
	Range (Minimum/Maximum)		Mean	Median	Range (Minimum/Maximum)		Mean	Median
96	$705	$141,280	$30,670	$18,644	2%	84%	30%	25%

When the loan recipients are broken into categories by business type, the wide ranges in both measurements persists. This demonstrates that there is not one category of businesses that is pushing the ranges in one direction or another, but instead that the large differences persist within the categories. Overall by category, businesses have a range of mean average monthly sales loss from 20 to 35 percent and a range of median average monthly sales loss from 18 to 35 percent. Retail businesses, the

category with the largest sample size, reported the largest mean and median monthly percent loss at 35 percent. Restaurant/Entertainment businesses reported the lowest mean and median monthly percent loss at 20 percent and 18 percent respectively.

Table 3-18. Business Support Fund Data by Business Type

Type of Business	Number of Businesses	Pre-construction Monthly Sales Range (Minimum/Maximum)		Mean	Median	Percent loss of monthly sales Range (Minimum/Maximum		Mean	Median
Retail	45	$705	$108,757	$26,450	$15,956	4%	84%	35%	35%
Restaurant/Entertainment	34	$4,281	$141,280	$46,634	$40,451	2%	65%	20%	18%
Salon	8	$2,672	$16,873	$6,953	$5,482	7%	68%	35%	31%
Professional/Services	9	$1,164	$28,530	$12,549	$10,472	12%	58%	33%	33%
Total	**96**	**$705**	**$141,280**	**$30,670**	**$18,644**	**2%**	**84%**	**30%**	**25%**

As shown in Table 3-19, the ranges of reported monthly percent loss in sales by location are also large. By location, businesses report a range of mean average monthly sales loss from 11 to 35 percent and a range of median average monthly sales loss from 9 to 39 percent. The high ends of both these ranges occurs in the segment from Lexington to Dale as businesses located there reported the highest mean and median month monthly percent sales loss at 35 and 39 percent. Conversely, the low ends of the overall ranges both occur in the Lowertown segment. Businesses in Lowertown reported the lowest mean and median monthly percent sales loss at 11 and 9 percent.

Table 3-19. Business Support Fund by Geographic Location

Geographic Location	Number of Businesses	Pre-construction Monthly Sales Range (Minimum/Maximum)		Mean	Median	Percent loss of monthly sales Range (Minimum/Maximum)		Mean	Median
Cedar-Riverside	19	$2,199	$87,906	$20,520	$14,717	11%	65%	33%	34%
Stadium Village	10	$16,873	$108,356	$50,639	$46,533	8%	43%	22%	19%
Prospect Park	1	-	-	$32,442	$32,442	-	-	21%	21%
Emerald to Hampden	13	$705	$107,375	$29,044	$23,343	2%	66%	28%	24%
Hampden to Aldine	19	$2,306	$108,757	$28,816	$12,854	5%	68%	31%	28%
Aldine to Syndicate	19	$1,417	$141,280	$28,769	$17,660	4%	84%	34%	30%
Syndicate to Lexington	1	-	-	$95,947	$95,947	-	-	33%	33%
Lexington to Dale	7	$3,913	$46,121	$15,746	$10,362	18%	49%	35%	39%
Dale to Rice	1	-	-	$89,189	$89,189	-	-	23%	23%
Lowertown	6	$17,134	$89,300	$41,429	$34,639	4%	19%	11%	9%
Total	**96**	**$705**	**$141,280**	**$30,670**	**$18,644**	**2%**	**84%**	**30%**	**25%**

Estimating Impacts to Small Retail-Oriented Businesses. As stated above, the Business Support Fund program was geared toward supporting retail businesses – those that, according to the program's website, sold "products or services directly to the consumer, including restaurants." Using the data from Table 3-2. Sector Composition of the Central Corridor, of the estimated 1,000 corridor businesses, approximately 25 percent (or 250), are small businesses that sell products or services directly to customers. The 96 small businesses that participated in the Business Support Fund program represent a significant portion of that 25 percent. A reasonable hypothesis is that the 30 percent mean and 25 percent median monthly revenue losses experienced by Business

Support Fund participants was most likely also experienced by the other small retail-oriented businesses in the corridor during construction.

Estimating Impacts to Large Retail-Oriented Businesses. Despite their size, large retail-oriented businesses still rely on customers being able to physically access their brick-and-mortar locations. As shown in Table 3-2. Sector Composition of the Central Corridor large retail-oriented businesses comprise approximately 5 percent of businesses on the corridor. A reasonable hypothesis is that these large businesses may also experience a 25 percent to 30 percent loss in monthly revenues.

Estimating Revenue Impacts to Non-Retail Businesses. Many non-retail businesses may not be as dependent on customers accessing their physical location to conduct business and generate revenue as their retail counterparts. Nonetheless, non-retail revenues could be affected by construction activities due to impacts to deliveries/pick-ups, utility interruptions, noise/vibration, dust and other impacts as described in the *Mitigating Business Losses: Services, Strategies, and Effectiveness,* a survey by Wilder Research published in 2012, and the *Little Mekong CCLRT Impact Study* conducted by the Asian Economic Development Association and published in August 1, 2012.

As revenue data is not available for non-retail businesses, specific information about revenue losses due to construction to these businesses cannot be definitively identified. However, impacts to non-retail businesses' revenue could be expected but to a lesser extent than small retail businesses.

A multitude of variables affect business trends. It is important to note that there are always a multitude of social, economic, local and national variables that may have an impact on business revenues. It is logical to conclude that businesses which rely on customers physically accessing their locations may experience impacts during a large construction project. The estimated ranges of revenue loss reported above are derivative, yet they should be viewed through a broader lens that includes regional and national economic influences not associated with LRT construction.

3.5.4 Impacts due to LRT Construction

The information contained in each study reviewed in this chapter helps create a picture of the impacts experienced by businesses during the construction of the Central Corridor LRT. The CCFC's study established that prior to construction business trends in the corridor were sluggish, reflecting the trends in the greater regional and national economy. During construction, data collected by the CCPO and UABA demonstrated that overall business turnover and vacancy rates in the corridor generally remained neutral. Wilder Research and AEDA documented construction-related impacts reported by business owners during construction. Those impacts included:

- Customer Navigation Issues
- Less Automobile Traffic
- Less Pedestrian Traffic
- Noise/Dust/Vibration

The Business Support Fund provides the best data set for use in determining the potential loss of business revenue due to LRT construction. Of the small retail-oriented businesses that did apply for assistance through loan program, when categorized by business type, businesses saw a median average monthly sale loss from 18% to 35%, with retail businesses at the high end of the range and restaurants and entertainment businesses at the low end of the range. Therefore, a reasonable inference is that other small and large retail-oriented businesses in the corridor may have experienced similar losses during construction. Unfortunately it was not possible to provide a confident measure quantifying the impact of construction on corridor-wide business revenues, because there is not a clear methodology for obtaining an estimate that is not theoretical.

However, despite the impacts felt by corridor businesses, outlooks remain positive. Wilder Research reported that of the businesses that participated in corridor mitigation programs those businesses viewed the programs as at least somewhat effective in mitigating construction-related impacts. Even more positive, a large percentage of businesses reported to Wilder Research that they expected to be operating at their current location on Central Corridor within the next five years, and many businesses expected sales and profits to increase.

3.5.4.1 LRT Alternative (Initial Construction Mitigation)

LRT with the initial construction mitigation includes the mitigation package that was identified in the FEIS and ROD as described in Chapter 2. The mitigation strategies identified under this alternative are standard approaches that are typical of transportation construction projects. As described in earlier sections of this Supplemental Draft EIS, Central Corridor businesses experienced a variety and range of construction-related impacts. This Supplemental Draft EIS assumes that under this alternative the variety and range of construction-related impacts would have been more severe.

3.5.4.2 LRT Alternative (Final Construction Mitigation)

The LRT Alternative with the final construction mitigation includes the construction of the Preferred Alternative with the initial mitigation package identified, as well as the expanded mitigation strategies focused on financial and technical assistance to businesses.

The quantitative analysis completed in this Supplemental Draft EIS shows that even with the final construction mitigation, some businesses still experienced adverse effects on business revenue. However, this Supplemental Draft EIS concludes that the LRT Final Construction Mitigation Alternative helped alleviate the severity of the variety and range of construction-related impacts experienced by Central Corridor businesses

3.6 BRT Alternative

The BRT Alternative would have included the construction of an exclusive guideway as well as the reconstruction of the roadway surface. The construction patterns required to construct the BRT Alternative, had it been selected as the preferred alternative by the Metropolitan Council, would have closely followed the construction patterns for the LRT Alternative.

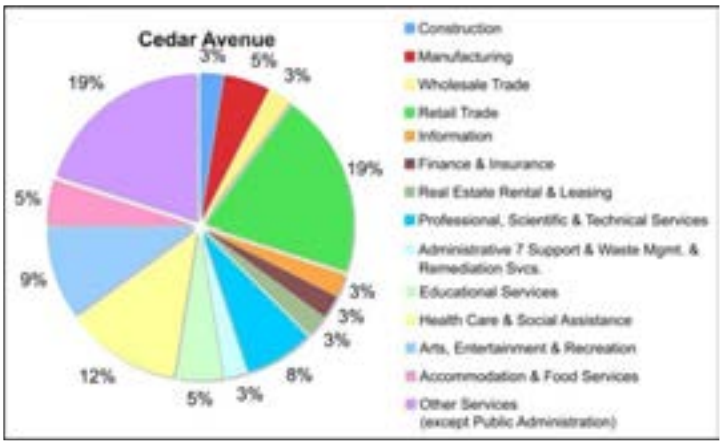
3.6.1 Anticipated Impacts Prior to BRT Construction

The University of Minnesota's Humphrey School of Public Affairs study, *Assessing Neighborhood and Social Influences of Transit Corridors* was used in the LRT Alternative section to discuss impacts anticipated by business owners prior to Central Corridor LRT construction. The report also recorded construction-related impacts anticipated by business owners along the Cedar Avenue BRT line. While the Cedar Avenue corridor has a much more suburban character than the Central Corridor, the attitudes of Cedar Avenue business owners regarding BRT construction provide an instructive comparison indicating how BRT may have been perceived by Central Corridor business owners.

3.6.1.1 Cedar Avenue BRT Survey Participants

The planned Cedar Avenue BRT route runs south from Mall of America to the outer suburbs and is scheduled to open in 2015. The study focused on four neighborhood areas along the Cedar Avenue alignment: Cedar Grove, Apple Valley Walk & Ride, Apple Valley Park & Ride, and Lakeville-Cedar. To identify study participants, the survey employed a simple random sample of businesses drawn at the neighborhood level from a Dun and Bradstreet business database. 40 businesses, ten from each neighborhood, participated in the survey. A fairly diverse mix of industries participated in the survey, as shown in Figure 3-13. The relatively large percentage of "Other Services" includes businesses such as hair and nail salons which are numerous along the corridor. The large majority of the survey participants were small businesses with fewer than ten employees and annual sales of $100,000 – $250,000.

Figure 3-13. Cedar Avenue - Survey Sample Industry Sectors by NAICS Code

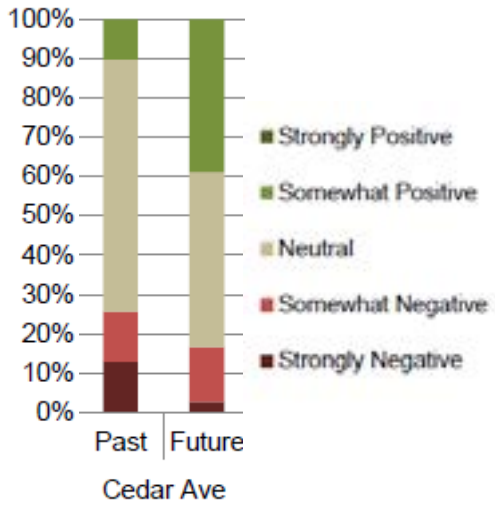


Source: *Assessing Neighborhood and Social Influences of Transit Corridors*

3.6.1.2 Perceptions of Cedar Avenue BRT Related Impacts on Businesses

The survey asked business owners to gauge how they thought the planned Cedar Avenue BRT had impacted their business over the past five years, and how they thought it would impact their business over the next five years. The large number of neutral responses in both time frames, shown in Figure 3-14, demonstrates that Cedar Avenue businesses generally have not felt and do not anticipate many impacts, positive or negative, from the construction of BRT. However, a fairly sizeable portion of respondents see BRT as somewhat positively impacting the corridor in the future.

Figure 3-14. Cedar Avenue - Perception of Transitway Impacts

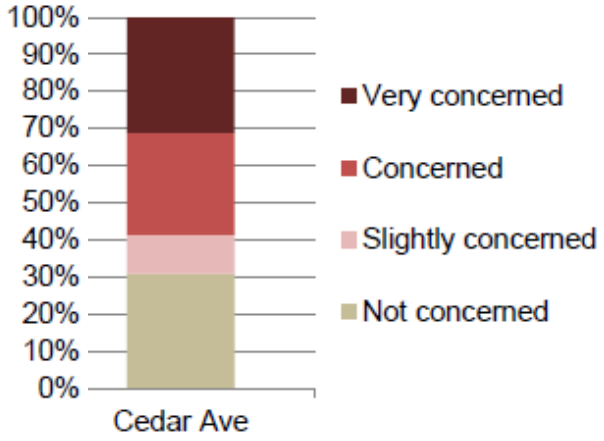


Source: *Assessing Neighborhood and Social Influences of Transit Corridors*

3.6.1.3 Future Concerns and Anticipated Impacts due to BRT Construction

Businesses were also asked to rate their level of concern regarding the upcoming Cedar Avenue BRT construction on a scale from "Not concerned at all" to "Very concerned". Respondents who did not answer "Not concerned at all" were then asked a follow-up question about their specific concerns. Figure 3-15 demonstrates that roughly 60 percent of businesses had "moderate to serious concerns about transitway construction," according to the study.

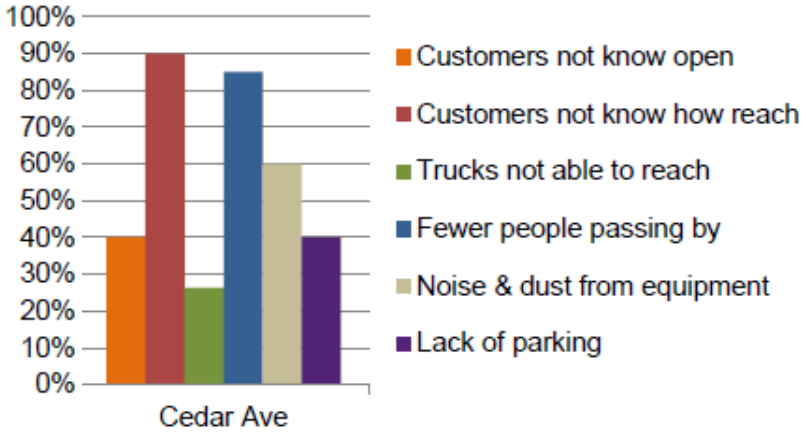
Figure 3-15. Cedar Avenue - Levels of Concern over Transitway Construction



Source: *Assessing Neighborhood and Social Influences of Transit Corridors*

Figure 3-16 shows the percentage of respondents concerned with six specific anticipated construction-related impacts. Cedar Avenue respondents were by far most concerned that customers would not know if their businesses were open during construction and that fewer people may be passing by. Respondents were least concerned by truck access issues.

Figure 3-16. Cedar Avenue - Specific Anticipated Construction Concerns



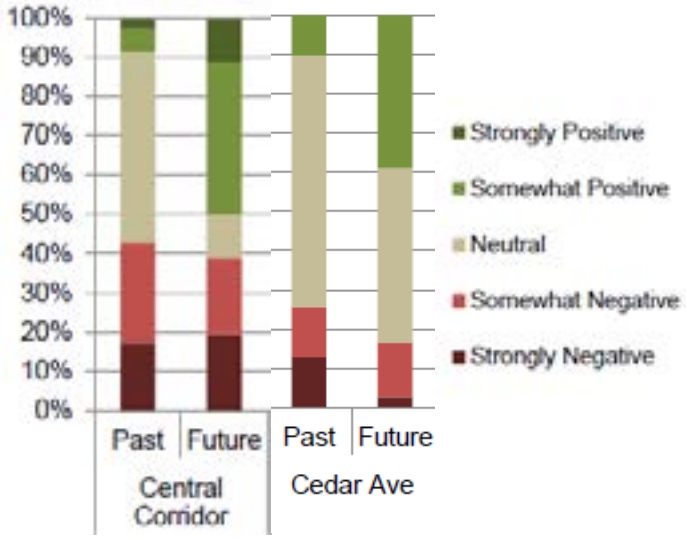
Source: *Assessing Neighborhood and Social Influences of Transit Corridors*

3.6.2 Comparison of LRT and BRT Future Concerns and Anticipated Impacts

This section provides a comparison of impacts anticipated by survey respondents in the Central Corridor LRT study area and the Cedar Avenue BRT study area.

Respondents in the Central Corridor were far more polarized in their perceptions of past and future transitway impacts than their Cedar Avenue counterparts, as shown in Figure 3-17. Yet both corridors did see a decrease in neutral responses and an increase in positive responses across time frames.

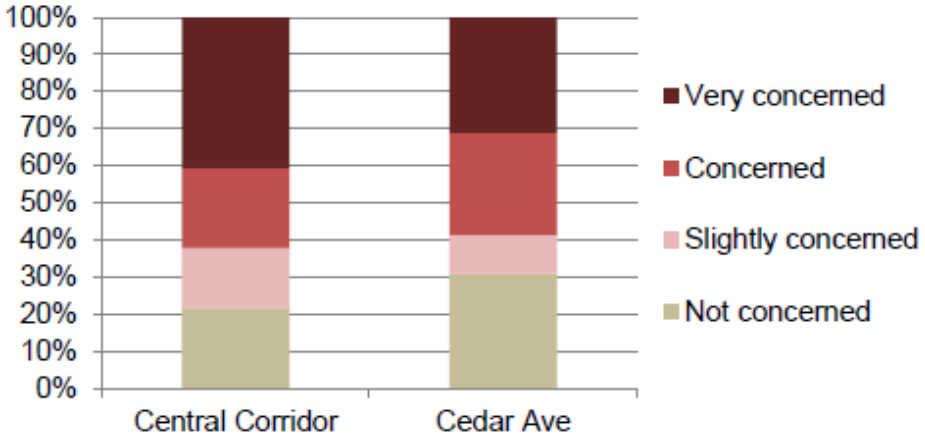
Figure 3-17: BRT vs. LRT - Perception of Transitway Impacts



Source: *Assessing Neighborhood and Social Influences of Transit Corridors*

The levels of concern regarding transitway construction are extremely similar, with slightly more "not concerned" respondents and slightly more "concerned" respondents in the Cedar Avenue Corridor, as shown in Figure 3-18.

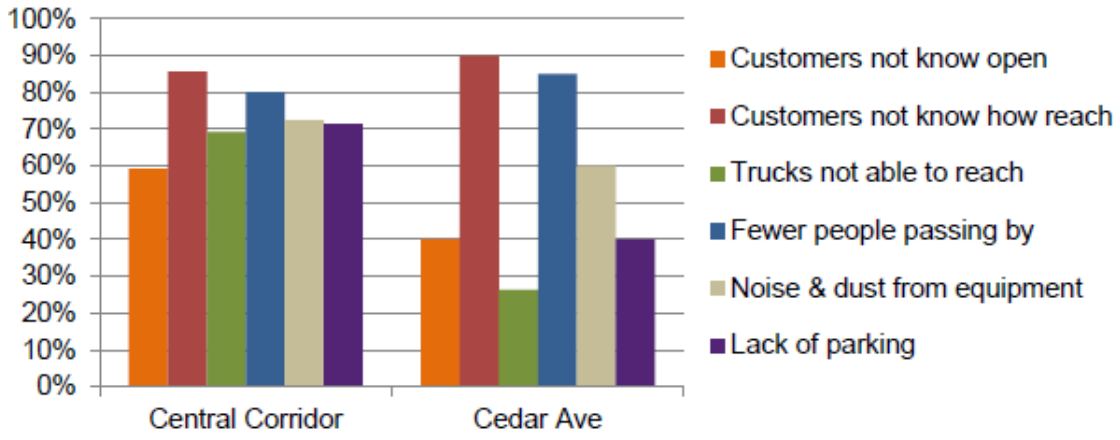
Figure 3-18: BRT vs. LRT - Levels of Concern over Transitway Construction



Source: *Assessing Neighborhood and Social Influences of Transit Corridors*

Concerns regarding customers not knowing if businesses were open and regarding fewer people passing by during construction were anticipated by the greatest number of respondents and at similar percentages across both corridors, as shown in Figure 3-19. However, while these impacts were the greatest concerns along Central Corridor, the other impacts were also anticipated at almost the same rate. In contrast, customers not knowing if businesses were open and fewer people passing by dominated Cedar Avenue respondents' concerns.

Figure 3-19: BRT vs. LRT - Specific Anticipated Construction Concerns



Source: *Assessing Neighborhood and Social Influences of Transit Corridors*

Overall, when these transitway corridors are compared, construction-related impacts anticipated by business owners are fairly similar.

3.6.3 Impacts due to BRT Construction

Given that the intensity and duration of construction activities for the BRT Alternative would be very similar to those of the LRT alternatives, this Supplemental Draft EIS concludes that the impacts experienced from LRT construction would also be experienced from BRT construction. The overall construction schedule for a BRT transitway would be shorter than an LRT construction schedule, as power and electrification systems as well as operations and maintenance facility would not be part of the BRT Alternative construction. The duration and intensity of the civil work activities and station construction are very similar for both modes. It is during these phases that the most intense construction occurs, and therefore it is during these phases that businesses in the project area experience construction-related impacts. Since these phases are similar in duration for both modes, this Supplemental Draft EIS concludes that the effects of construction of either type of transitway on business revenue would be similar.

3.7 Mitigation Program Overview

This section discusses the mitigation approach and describes mitigation measures to help reduce short-term impacts to business revenues during LRT project construction.

3.7.1 Mitigation Approach

Studies of construction-related impacts on business revenues have identified a number of factors that may contribute to loss of business revenue during project construction including loss of access, loss of parking, and reduced traffic flow. These studies also

recognize that there are many factors unrelated to construction activity that may also impact business revenues, including local and global economic factors, unemployment rates, seasonal businesses, etc. Indirectly, potential customers also may be discouraged from patronizing businesses due to both real and perceived inconvenience factors including congestion, confusion, safety concerns, noise, and dust.

While many of these factors cannot be completely avoided during construction activity, studies referenced in the CCPO literature review (Appendix D) identify a number of best practices to minimize impacts to businesses. These include:

- **Access:** Using signage and creating alternate routes to direct people to businesses
- **Communications/Outreach:** Maintaining strong communication between agencies and businesses
- **Marketing:** Using various marketing techniques to promote businesses
- **Construction Practices:** Using best management practices to minimize impacts due to construction
- **Technical and Financial Resources:** Providing technical and financial resources such as small business loans during construction

In addition, the Minnesota Department of Transportation (MnDOT) recommends mitigation measures as best practices for transportation projects.[9] The following is a list of the relevant mitigation strategies identified by MnDOT that are applicable to construction of an LRT project and how the Central Corridor Project sponsors propose to address that mitigation strategy.

1. Small business outreach must be emphasized as an integral part of a broader public participation process.

Central Corridor Project Response:

- During the early phases of Central Corridor LRT project development, a Business Advisory Committee (BAC) was formed to provide input into the project, including the siting of traction power substations, reconstruction of the road from building face to building face (including sidewalk reconstruction), design of streetscaping (planting trees, street furniture, lighting, etc.) and other design elements.
- Business outreach was part of a broader program of public involvement aimed at engaging all project stakeholders. This program of outreach substantially influenced the project and was successful at reaching a broad

[9] CH2MHill for the MnDOT, "Report on Mitigation of Transportation Construction Impacts". Final Report. February 2009.

group of people. A significant component of that outreach has been working with the business and property owners along the alignment to discuss issues related to design, access during construction, parking, and construction-related concerns. A summary of how outreach influenced the project can be found at: http://www.metrocouncil.org/transportation/ccorridor/PublicInfluence.htm

- Since December 2006, the Metropolitan Council has had a number of Outreach Coordinators, including staff fluent in languages commonly spoken along the corridor, such as Hmong, French, and Spanish. The Outreach Coordinators are full-time staff and are available to work with businesses, including minority-owned businesses, interest groups and the public along the corridor to provide information and assistance regarding the construction of the project.

2. Important business issues need to be identified early in project development.

a. Consultation with local units of government and business community representatives to identify businesses surrounding the project, potential impacts to small businesses (e.g., parking, traffic, and access), and to discuss potential mitigation measures;

b. Development of a packet for businesses that will include project information (e.g., nature, extent, and timing of construction and anticipated changes in parking, traffic, and public access), a transportation agency project contact; and

c. Determine a list of project-specific area business development organizations that may offer support and resources to affected businesses.

Central Corridor Project Response:

- The Metropolitan Council has been in close consultation with all local units of government along the Central Corridor LRT alignment. In December 2006, the Metropolitan Council formed a Project Advisory Committee (PAC), including representatives from the cities of Minneapolis and Saint Paul, Hennepin and Ramsey Counties, MnDOT, and the University of Minnesota. The PAC has been meeting regularly since December 2006 and will continue to meet through the duration of Central Corridor construction.

- The Metropolitan Council partnered with the City of Saint Paul to investigate options for mitigating the loss of on-street parking along the corridor during construction.

- As referenced above, the Metropolitan Council has engaged in a rigorous program of outreach targeted at reaching all Corridor stakeholders since taking over as the lead planning agency in June 2006. Some of the outreach strategies are listed below.

- The project web site (*www.centralcorridor.org*) contains a wealth of information on the project, with a focus on construction information and advisories. Information includes maps and text describing the location and impacts of expected construction activities, including road and sidewalk closures, bus stop and route changes, and other changes in access that may affect workers and patrons of businesses. This information is updated regularly to reflect progress of construction activities.
- Prior to construction, the Metropolitan Council mailed a "What to Expect from Construction" to all businesses and properties directly on the alignment. The document included a description of construction activities, a general timeline, and contact information.
- The Metropolitan Council partnered with the Business Resources Collaborative with funding provided by the CCFC to prepare the "Ready for Rail" initiative, which includes information available online and printed packets of material. The "Ready for Rail" program includes information on the Business Resources Collaborative, which is a partnership of business coalitions, nonprofit community developers, and local governments that bridges various community-led planning efforts addressing business and economic development in the Central Corridor. The packet was distributed to all businesses along the alignment in 2010 and also posted online at www.readyforrail.net. This packet was also made available in Somali, Vietnamese, Hmong, and Spanish.

3. **Identify opportunities for partnership with a greater depth of resources, including economic development offices, dynamic local business leaders, or local government agencies.** Every project has unique technical issues but also unique human resources, personalities, and organizations. Taking advantage of the ideas, services, and relationships that these resources can offer will help businesses manage the challenges of construction. Besides offering greater knowledge of site-specific issues, their presence often serves as a moderating force in public outreach that enables a shared understanding of project impacts.

   Central Corridor Project Response:

   - See the above discussion regarding the "Ready for Rail" program and Business Resources Collaborative.
   - The Metropolitan Council, the City of Saint Paul, and the Central Corridor Funders Collaborative have all contributed funding to the City of Saint Paul's Business Support Fund. The purpose of the Business Support Fund, as described in the Joint Powers Agreement between the Metropolitan Council and the City of Saint Paul, is identified below.

The purpose of this Agreement is to help implement a support program ("Program") for small businesses located along the Central Corridor LRT that may experience disruptions from construction activities associated with the Central Corridor LRT project. The program is intended to help provide a modest "safety net" for small businesses that undertake business planning and prepare in advance for the Central Corridor LRT but still may be adversely affected by construction activities, and to provide some incentives for those businesses to continue operating at their existing locations after construction is completed and the Central Corridor LRT is operating.

- Metropolitan Council's Outreach Coordinators work closely with business organizations and chambers of commerce in the corridor to share information and coordinate activities in support of corridor businesses.

4. **Enhance engagement of the construction contractor as an important resource for business communication and relationships.** The construction contractor offers a tremendous resource that can positively or adversely affect the effectiveness of business outreach. As a result of their visibility in the construction area, contractors oftentimes become the face of a project in the eyes of the public. Transportation agency staff may consider including contract provisions related to contractor participation or communication in projects where small businesses will be impacted. This may include a requirement that the contractor provide a business liaison to communicate with business operators and resolve issues on a regular basis (e.g. weekly) or as need may arise.

   Central Corridor Project Response:

   - Construction contract bid documents for construction of the Civil East (all LRT trackway and station construction in Saint Paul) and the Civil West (all LRT trackway and station construction in Minneapolis) segments included measures to either require or to encourage the contractor to take measures to avoid business impacts during construction.
   - A section of the construction bid documents was solely devoted to Public Involvement (Section 01 31 20 – Public Involvement). This included requirements to submit a Public Involvement Plan, a monthly Community Involvement Report (submitted with Application for Payment), and an employee parking plan minimizing use of existing parking currently needed by local residents and businesses. The contract also requires the designation of a Contractor Community Relations Leader who is required to attend meetings with the public, as specified, and to provide support to the Metropolitan Council's Community Outreach Staff. Under Community Impact Mitigation, the Contractor is required to maintain access (parking, deliveries, and pedestrian) and participate in meetings with affected property owners. The Contractor is also required (under

Community Impact Mitigation) to develop access plans for business and residents on each block and to provide maps showing existing and planned patron, delivery, and resident access during any construction period. The access plans are to include times of business operation and deliveries.

- Contract bid documents for Civil East and Civil West also provide for a Contractor Incentive Allowance (Section 01 21 50 – Incentive Allowance). This document describes the Construction Communication Committees (CCCs) established for the contract and the ways in which their input will be used to evaluate Contractor responsiveness to public and business concerns and to award the incentive allowance based on Contractor performance, as ranked and evaluated by the CCC's.
- Contract Special Procedures include a comprehensive listing of community and other special events and require that the Contractor meet with event coordinators and other officials to submit plans and procedures associated with the protection of the public and the work during the events.

5. **Review policies for signing in construction zones.** Appropriate signing can benefit businesses but, at the same time, good signing practices must be maintained (for example, drivers can be overwhelmed with information from too many signs, spaced frequently). Signing practices that can be considered should be documented as well as those that should not be used.

   Central Corridor Project Response:

   - The Civil West and Civil East construction packages include allowances for signage and requirements for signage of alternative access to businesses and traffic detours. The Council created a working group to provide guidance on the types of signage needed by businesses as well as to provide advice on the language and general placement of the signs. The working group started meeting in November 2010 and includes business owners, business organizations, Metropolitan Council Outreach Coordinators and construction staff, contractor's traffic and outreach staff, and city economic development and public works representatives.

6. **Evaluate the effectiveness of small business outreach activities.** Regularly review business outreach efforts on a project-by-project basis and apply lessons learned to future projects.

Central Corridor Project Response:

- The Metropolitan Council encourages people to provide feedback on communication and outreach efforts and frequently makes changes and additions based on input received. For example, early versions of the construction update newsletters included photos of construction. Community representatives suggested using the space in the construction updates to feature businesses or community events. This has been a key part of the construction updates.
- The Metropolitan Council is aware that the CCFC with the assistance of Wilder Research has prepared baseline indicators to measure progress toward key outcomes of the Central Corridor project. These indicators include several measures of a "Strong Local Economy" including number of businesses, share of business establishments by industry and number of employees by establishment. The Metropolitan Council endorses the efforts of the CCFC in this work and will review the annual indicator updates.
- The Metropolitan Council conducted a Lessons Learned exercise at the end of the 2011 construction season and sought feedback from project partners as well as the business community. The lessons learned through this process resulted in changes during the 2012 construction season, such as fully closing intersections to expedite work in four weeks instead of trying to keep some lanes open through the intersection, which resulted in closures of up to three months in 2011.

In addition to the key recommendations noted above, other Central Corridor LRT project efforts of note include the disadvantaged business enterprise (DBE) goals for contracting established by the Metropolitan Council; the LRT Works program, which seeks to pair tradespeople seeking employment with the Central Corridor LRT Contractors working on the Project; and the Ride-to-Rewards program, a business marketing/loyalty program which allows its members to accumulate points by riding buses and trains and by shopping at participating merchants, including Central Corridor businesses.

Based on these recommendations, proposed mitigation for the Central Corridor LRT Project focuses on: (1) minimizing the unavoidable impacts of construction activities; (2) proactive communications with both corridor businesses and the community to minimize confusion and uncertainty regarding the timing and duration of construction activities; (3) promotional and marketing activities to encourage patronage of businesses during construction; (4) technical assistance to business during the construction period to improve business management and customer communication skills; (5) financial assistance to businesses losing nearby on-street parking, and; (6) general financial assistance to small businesses affected by construction activities.

3.7.2 Mitigation Commitments

The following mitigation activities are currently being implemented through commitments in contracts or agreements entered into by the Metropolitan Council for the Central Corridor LRT Project. The mitigation commitments represent a substantial investment of financial resources as well as staffing commitments to communications activities and inspection activities to assure contractor compliance. Table 3-20 summarizes direct financial commitments to date totaling nearly $16 million and Table 3-22 summarizes staffing/contractual commitments. Table 3-20 also identifies the mitigation strategies that were initially identified with the LRT Alternative with the initial construction mitigation, and the LRT Alternative with the final construction mitigation. A more detailed description of each of the mitigation measures is also included in this section.

Table 3-20. Mitigation Measures: Financial Commitments

Mitigation Measures		Funding Amount (Funds Expended) [8]	Responsible Agency	LRT with Initial Construction Mitigation [9]	LRT with Final Construction Mitigation
Construction Contract	Construction Access Plan	$200,000 ($163,332)	Metropolitan Council/ Contractor	✓	✓
	Contractor Incentive Program	$850,000 ($352,436)	Metropolitan Council		✓
Project Communications	Community Outreach Coordinators [1]	$3,500,000 ($2,750,000)	Metropolitan Council	✓	✓
	Construction Communication Plan (Special Signage) [2]	$200,000 ($128,311)	Metropolitan Council / Contractor	✓	✓
Parking Assistance	Neighborhood Commercial Parking Program	$1,325,000 (1,325,000)	City of Saint Paul		✓
	Alley Improvements Program	$632,000 ($632,000)	City of Saint Paul / Metropolitan Council		✓
Business Assistance Programs	Business Support Fund [3]	$4,000,000 ($2,160,125)	City of Saint Paul		✓
	Business Improvement / Expansion Assistance	$700,000 ($612,497)	Neighborhood Development Center		✓
	Business Resources Collaborative [4]	$305,000 ($305,000)	N/A		✓
	University Avenue Business Preparation Collaborative [5]	$1,075,000 ($1,075,000)	N/A		✓
	Great Streets and Business Association Assistance Program	$210,000 ($192,000)	City of Minneapolis		✓
	Other [6]	$7,670 ($7,670)	N/A		✓

	Business Marketing Program [7]	$1,200,000 ($191,560)	Metropolitan Council		✓
University Avenue / Cedar Riverside Betterments	Improved Street Lighting / Trees / Street Furniture	$1,000,000 ($1,000,000)	Metropolitan Council		✓
	Business "Façade Improvement Financing	$150,000 ($69,530)	City of Minneapolis		✓
Promoting Business Access	Additional Business Signage	$50,000 ($50,000)	Metropolitan Council		✓
	Cooperative Advertising and Transit Fare Passes	$250,000 ($164,122)	Metropolitan Council		✓
TOTAL FUNDING AMOUNT		**$15,654,670**			
TOTAL FUNDS SPENT		**$11,178,583**			

(1) Includes salary and benefits for the fully staffed Central Corridor Outreach and Communications Team for the three years of heavy project construction from 2010-2012 and the first six months of 2013.

(2) Includes temporary directional signage, including portable changeable message signs, project identification boards, construction site signage, and other signs.

(3) Includes $2,500,000 from the Metropolitan Council, $1,000,000 from the City of Saint Paul, and $500,000 from the CCFC.

(4) Includes grants from CCFC as well as a matching investment from the City of Saint Paul for marketing during project construction.

(5) Includes $800,000 from CCFC, $150,000 from the F.R. Bigelow Foundation, and $125,000 from the Saint Paul Foundation.

(6) Includes grants from CCFC to Central Corridor Partnership and AEDA to support presentations from business mitigation consultants.

(7) This amount was approved September 28, 2011 by the Metropolitan Council to be used to retain a consultant to provide marketing assistance to Central Corridor businesses.

(8) Funds expended are current as of September 30, 2012.

(9) The LRT with Initial Construction Mitigation is associated with the 2009 ROD and LRT with Final Construction Mitigation is associated with the current construction mitigation program.

Table 3-21. Mitigation Measures: Staffing and Contract Commitments (Non-Direct Financial Commitments)

Mitigation Measures		Responsible Agency
Construction Contract	Special Events Plans	Metropolitan Council/ Contractor
	Best Management Practices (BMPs)	Metropolitan Council/ Contractor
Project Communications	Contractor Community Relations Leader	Contractor
	Construction Communication Plan	Metropolitan Council
	Construction Information Packet	Metropolitan Council
	Construction Signage	Metropolitan Council/ Contractor
Parking Assistance	Construction Employee Parking Plan	Metropolitan Council/ Contractor

3.7.2.1 Construction Contract

Construction contract specifications included measures to minimize construction-related disruptions to businesses, and included incentives to encourage contractor cooperation with implementation of these measures. Construction contract specifications also included measures to minimize construction-related noise, vibration, and dust impacts through construction practices.

- **Construction Access Plans:** A construction access plan was developed for all Civil West and Civil East project segments to identify construction-related access concerns for each corridor business with a driveway or parking lot and document how business access would be maintained during construction. The construction contracts included $200,000 for implementation of construction access plans. Access plans contained maps showing existing and planned patron, delivery, and resident access during construction periods. Maps also showed times of business operations and deliveries. Businesses are notified of any changes to access at least two weeks prior to the start of construction.

- **Contractor Incentive Program:** A contractor incentive program was provided to encourage effective communication and cooperation between the contractor, businesses and residents. A Construction Communication Committee ("CCC") comprised of business owners, residents, and other stakeholders was created for each outreach sector identified in contract documents. The CCC meets every two weeks to vote on identified evaluation criteria measuring contractor efforts

to minimize construction-related impacts and award quarterly incentives to contractors demonstrating compliance with these measures. The construction contracts included an $850,000 allowance (project-wide total) for the contractor incentive program.

- **Special Events Plans:** Special events anticipated in the corridor during the construction period were identified in the construction documents. Contractors will work with cities and community groups to coordinate construction activities with these events to protect both the work site and the public, and minimize construction-related disruptions during scheduled special events.
- **Construction Best Management Practices (BMPs):** Contract documents required best management practices (BMPs) to help minimize construction-related noise, vibration and dust impacts to businesses throughout construction.

3.7.2.2 Project Communications

Several communication strategies have been implemented to provide consistent and timely information about construction. These strategies are described below.

- **Community Outreach Coordinators:** The Metropolitan Council is providing Community Outreach Coordinators throughout project construction. The Community Outreach Coordinators act as a liaison between the public and local businesses, including minority-owned businesses, and project contractors. Community Outreach Coordinators are available to answer questions and direct specific construction-related concerns back to project contractors and the Metropolitan Council. The Metropolitan Council has dedicated $3,500,000 to this effort, which includes salary and benefits for a fully staffed Central Corridor Outreach and Communications Team for the three years of heavy project construction from 2010 through 2012 and for the first six months of 2013.
- **Construction Public Information and Communication Plan:** A Construction Communication Plan was developed for all Civil West and Civil East project segments. The Construction Communication Plan contains the following elements:
    - Provide a 30-day notice of construction (includes private utility relocations and LRT construction).
    - Provide a 72-hour advance notice to businesses for utility shut-offs.
    - Provide a 24-hour construction hotline and project information line.
    - Communication with businesses through weekly meetings with Community Outreach Coordinators and the contractor's community relations leader as well as monthly public informational meetings.
    - Provide clear directional signage, variable message signs, and construction site information such as contact information and anticipated

completion dates. The construction contracts will include a $200,000 allowance (project-wide total) to accommodate special signage.

Photo 6: Special signage shows parking locations on the corridor.

- Produce communication materials such as weekly construction updates, construction update posters, and monthly newsletters ("Making Tracks" newsletter). Weekly construction updates will be distributed by email, news release and posted to the Central Corridor Project Website. Work with affected business owners to include information regarding their businesses in these construction update materials. (See also Construction Information Packet.)
    - Construction Information Packet: Construction information packets were developed for all Civil West and Civil East project segments. Construction information packets included a description of upcoming construction activities, construction schedule, and construction staging. Construction information packets also included contact information for Community Outreach Coordinators, business assistance, and local City contacts for non-construction related questions.

- **Contractor Community Relations Leader:** Construction contract specifications included public outreach measures to assure that impacted businesses are fully informed about potential construction-related disruptions, which are also included in the contractor incentive program described previously. Each contractor is required to provide a Contractor Community Relations Leader to establish and maintain communication between Community Outreach Coordinators, businesses and the public. Contractor Community Relations Leaders communicate construction activities to the public and businesses, and respond to concerns from business owners during project construction. Contractor Community Relations Leaders also attend weekly Construction Communication Committee meetings and monthly public involvement meetings.

3.7.2.3 Parking Assistance

Several parking programs were identified to help minimize the impact to businesses due to the loss of parking.

- **Neighborhood Commercial Parking Program:** The City of Saint Paul funds and administers a program to address the loss of parking during and after project construction by providing financial assistance to improving off-street parking. The program provides low-interest loans of up to $25,000 to individual businesses that can be used for facilitating agreements with other businesses for shared parking or limited construction improvements to improve the access or parking efficiency (e.g., driveway grades, more efficient uses/physical reconfiguration of existing parking). As of October 2012, the Neighborhood Commercial Parking Program included $1,325,000 in loan funds.
- **Alley Improvements Program:** The City of Saint Paul prioritized a list of alleys to be re-paved and refurbished providing enhanced access to off-street parking to mitigate parking loss during Central Corridor LRT construction. Many alleys behind Central Corridor businesses were in extremely poor condition (large potholes, broken pavement, etc.). Improving these alleys made the off-street parking behind Central Corridor businesses more easily accessible for customers and was intended to mitigate some effects of loss of on-street parking during construction. A total of $632,000 has been dedicated to this effort, comprising $350,000 in the City of Saint Paul's 2011 Capital Improvement Budget and $282,000 contributed from Central Corridor LRT contingency funds in 2012.
- **Construction Employee Parking Plan:** Construction contracts require contractors to minimize use of available parking by developing an employee parking plan to direct employee and construction vehicle parking away from business and residential areas. Contractors are responsible for identifying parking off-site and transporting workers to the work site if necessary. Construction vehicles will be parked within delineated construction zones and work material will be kept out of existing parking areas.

3.7.2.4 Business Assistance Programs

Business programs have been developed to provide measures to assist businesses impacted by construction of the Project. These programs have been identified to specifically assist small businesses that may be impacted by temporary vehicular and pedestrian access changes, traffic detours, or other construction-related impacts (e.g., noise, dust). The business assistance programs include the following measures.

Photo 7: Lunch on the Avenue events support local restaurateurs during construction.

- **Business Support Fund:** The Business Support Fund program provides low- or no-interest forgivable loans and grants with no obligation to repay to small businesses (gross annual sales less than $2 million) that may experience construction-related disruptions. The Business Support Fund includes $4.0 million in loan funds ($2.5 million from the Metropolitan Council; $1.0 million from the City of Saint Paul and $0.5 million from the Central Corridor Funders Collaborative). Individual small businesses whose business focuses on retail sales would be eligible for loans of up to $20,000. Loans could be used for basic business expenses including taxes, rent/mortgage, utility or personnel payments. The Business Support Fund is being administered by the City of Saint Paul Housing and Redevelopment Authority ("HRA").

  To be eligible for the Business Support Fund, small retail focused businesses must also fulfill the following requirements:

  - Are independently owned (with four or fewer locations).
  - Are located on the Central Corridor LRT (or within one block of the construction zone).
  - Have been at their current Central Corridor location for one year or more.
  - Are focused on retail services (selling products or services directly to the consumer, including restaurants).
  - Have experienced a decline in revenue due to the construction of the Central Corridor LRT.
  - Prequalify by successfully participating in appropriate training with a small business loan consultant or by attending a "Ready4Rail" Forgivable Loan Workshop.

- **Business Improvement / Expansion Assistance:** The Business Improvement/ Expansion Assistance program included $700,000 available in loan, grant and Program Related Investment (PRI) funds to assist targeted businesses with significant growth opportunities and/or that are in a position to buy or improve

their own buildings with the goal of reinforcing the importance of locally- and minority-owned businesses to the Central Corridor. This program is administered by the Neighborhood Development Center.

- **Business Resources Collaborative (BRC):** The Business Resources Collaborative (BRC) is an informal coalition that provides support and technical assistance to businesses affected by the Project. The BRC has received $305,000 in grants in support of its operations. The BRC provides the following services to businesses along the Central Corridor:
    - Provide business consulting and technical assistance (e.g., business and real estate development loan assistance; parking; energy efficiency programs; advocacy, information and referrals).
    - Provide and maintain a business resource/information clearinghouse (http://www.readyforrail.net).
    - Provide a grassroots "buy local" marketing campaign to help provide customers to Central Corridor businesses during project construction.
- **University Avenue Business Preparation Collaborative (U7):** The University Avenue Business Preparation Collaborative (U7) was created by community development organizations to provide marketing support, on-site business consulting, resource center and planning center, small business workshops, grants for marketing and façade improvements, micro-lending and financing support to small businesses along the Central Corridor. U7 has received a total of $1,075,000 in grants in support of its operations ($800,000 from Central Corridor Funders Collaborative, $150,000 from the F.R. Bigelow Foundation, and $125,000 from the Saint Paul Foundation).
- **Great Streets and Business Association Assistance Program:** The City of Minneapolis will contribute a total of $210,000 for business technical and marketing support.

Photo 8: The Republic Café and Pub in Minneapolis' Seven Corners Neighborhood is a recipient of the City's Great Streets façade improvement grant.

- **Other Business Assistance:** Other Business Assistance includes a $3,000 funding commitment from the CCFC and $4,670 from AEDA to support public presentations from business mitigation consultants.
- **Business Marketing Program:** On September 28, 2011, the Metropolitan Council approved the use of $1.2 Million in Central Corridor LRT project contingency funding for use to market businesses in the Central Corridor area of Saint Paul and Minneapolis, increase customer traffic, and minimize lost business revenues. MOD and Co., an advertising and marketing firm located in Saint Paul, has been contracted to conduct the marketing program on behalf of the Metropolitan Council. During June 2012, MOD and Co. developed targeted marketing campaigns for nine different business districts along the Central Corridor LRT alignment based on business outreach and research efforts. The marketing campaign incorporates many types of advertising platforms such as billboards, a website (www.onthegreenline.com), and social media.

3.7.2.5 University Avenue/Cedar Riverside Betterments

Adding amenities and improving the aesthetics of commercial areas will attract customers to the Central Corridor project area. The following activities have been funded and may occur both during and after the construction period.

- **Improved Street Lighting / Trees / Street Furniture:** A total of $1,000,000 in CCLRT project contingency funds has been committed for aesthetic improvements and amenities, including street lighting, trees, and street furniture within the public right of way, to enhance the pedestrian character of University Avenue and downtown business districts.
- **Business Façade Improvement Financing:** The City of Minneapolis has committed $150,000 for business façade-improvement matching grants to businesses along the project corridor.

Photo 9: Reconstructed sidewalks and street lamps along University Avenue.

3.7.2.6 Promoting Business Access

Additional measures have been undertaken to encourage patronage of Central Corridor businesses.

- **Additional Business Signage:** The Metropolitan Council has employed movable variable message signs during construction to assist travelers in accessing businesses in response to day to day changes in construction activities. A total of $50,000 will be allocated by the Metropolitan Council for this additional business signage.
- **Cooperative Advertising and Transit Fare Passes:** Metropolitan Council is providing $250,000 in marketing support in the form of cooperative advertising and fare passes to businesses for distribution to customers.

4 EVALUATION OF ALTERNATIVES

The potential impact of construction on business revenues in the Central Corridor was not used as a measure in the AA/DEIS evaluation of alternatives. This chapter provides a brief summary of the results of the evaluation of alternatives from the AA/DEIS and also expands the discussion to include the effects of construction on business revenue from the various alternatives.

4.1 Purpose and Need

The purpose and need for the Central Corridor was presented in the AA/DEIS and approved by FTA in 2006. Goals and objectives were developed as part of the AA/DEIS to serve as the framework for decision making for the Central Corridor. The full text of the goals and objectives is provided in the AA/DEIS, and is summarized in Chapter 1 of this document.

4.2 Evaluation Relative to Project Goals and Objectives

After circulation of the AA/DEIS, the Metropolitan Council and project partners reviewed the relative merits and benefits of each of the alternatives. LRT was selected as the alternative that best met the purpose and need of the Central Corridor. Table 4-1 from the AA/DEIS, summarizes the evaluation of the Baseline, LRT and BRT alternatives against the goals and measures identified for the Central Corridor Project.

Subsequent to the completion of the AA/DEIS for the Central Corridor LRT Project, several unresolved policy questions and design element options arose which required additional study. The SDEIS and FEIS reconfirmed LRT as the Preferred Alternative. As described in Chapter 1, an EA was completed in 2010 to evaluate the effects of adding three infill stations to the scope of the project. Following publication of the EA and the EA public comment period, the above-ground construction of all three infill stations was added to the project scope and budget by resolution of the Metropolitan Council on February 24, 2010 (Metropolitan Council Resolution No. 2010-68). Based on this, the Preferred Alternative is defined as LRT on University Avenue with 23 stations (18 new and five shared Hiawatha stations).

Table 4-1. Alternative Performance Against Goals and Measures

Goals and Measures	Baseline	LRT	BRT
Goal 1: Economic Opportunity and Investment			
Previous Investment – Transportation	X	●	●
Previous Investment – Development	X	●	●
Proximity to Developable and Redevelopable Land	X	●	●
Proven Technology	●	●	●
Consistency with Land Use Patterns	X	●	●
Service to Major Travel Markets	X	●	◓
Proximity to Planned Development	X	●	◓
Parking	X	◓	◓
Major Employment Centers Served	◓	●	◓
Business Community Sentiment	◓	◓	◓
Goal 2: Communities and Environment			
Residential Population Served	◓	●	◓
Consistency with Local Plans	X	●	◓
Community Sentiment	X	●	◓
Noise and Vibration	N/A	◓	◓
Compatibility with Community Character	X	●	◓
Potential to Support Smart Growth and Livable Communities	X	●	●
Environmental Impacts (Air Quality, Water Quality and Flood Plains, Energy)	◓	●	◓
Existing Right-of-Way Utilization	X	●	◓
Goal 3: Transportation and Mobility			
Capacity	○	●	○
Operating Costs	◓	◓	○
Efficiency	X	●	◓
Consistency with Regional Plans	X	●	◓
Intermodal Connectivity	○	●	○
Regional Connectivity	X	●	◓
Diversity of Population Served	X	●	◓
Travel Time Savings	X	●	◓

X - The Alternative "does not support the objective"

○ - The Alternative "somewhat supports the objective"

◓ - The Alternative "supports the objective"

● - The Alternative "strongly supports the objective"

The following sections evaluate each alternative considered in this Supplemental Draft EIS regarding the effect of the alternative on business revenue. The sections also describe how each of the alternatives meet the purpose and need of the Central Corridor Project.

4.2.1 No-Build Alternative

The No-Build Alternative would not involve any construction; thus, this alternative would avoid potential disruption to neighborhoods, commercial districts, and historic areas in the corridor. Because no construction would be associated with the No-Build Alternative, no impacts to business revenue would be expected.

The No-Build Alternative, however, would not meet the purpose and need for the Central Corridor Project. The No-Build Alternative does not support the goal of supporting economic opportunities and development in the Central Corridor Study Area. It would be inconsistent with local and regional comprehensive plans, which specifically identify LRT as a critical element in shaping development in the Central Corridor Study Area and supporting regional economic development goals. The No-Build Alternative would not include potential improvements to community character or improved transit service with connections to major destinations. The No-Build Alternative would not meet the goal of improving and increasing transportation and mobility in the Central Corridor Study Area. It would not improve regional transit system connectivity, nor would it increase transit ridership.

4.2.2 Baseline Alternative

The Baseline Alternative assumes the implementation of ITS and TDM techniques and improvements. The construction activities required to implement these improvements are expected to be minimal and limited to traffic signal improvements. No impacts to business revenue due to construction of the Baseline Alternative would be expected.

The Baseline Alternative does not meet the purpose and need for the Central Corridor Project. Similar to the No-Build Alternative, the Baseline Alternative would not meet the goal of supporting economic opportunities and development in the Central Corridor Study Area. It would not include potential improvements to community character. The Baseline Alternative would not meet the goal of improving and increasing transportation and mobility in the Central Corridor Study Area. It would not improve regional transit system connectivity, nor would it increase transit ridership.

4.2.3 LRT Alternative

Construction of the LRT Alternative involves guideway construction, station construction, structural work, maintenance facility construction, installation of power stations, and street reconstruction including clearing, grading, excavation, and utility work. These types of construction activities will temporarily impede access by pedestrians and vehicles; temporarily consume space for parking; lead to temporary utility shutoffs; result in nuisance impacts such as noise, vibration, and dust; and temporarily impede

business visibility. Over the course of the project, most businesses along the corridor are likely to experience potential impacts from project construction, including issues associated with those factors identified above. These impacts may directly impact business revenue.

As noted in Chapter 3 (Economic Effects), the top major construction impacts expected and experienced by local businesses were:

- Customer Navigation Issues
- Less Automobile Traffic

These impacts are typically the result of roadway reconstruction activity that require the closure of one side of the street, significantly impacting the levels of traffic congestion and often making access to businesses more difficult. More than half of all businesses in the corridor experienced having the business side of their street closed for longer than a month, reduced access from the sidewalk in front of their business, or a loss of on-street parking. The nature of the Central Corridor construction required these closures to complete construction of the LRT guideway in the center of the roadway and the reconstruction of the street surface on each side of the guideway.

4.2.3.1 LRT Alternative (Initial Construction Mitigation)

LRT with the initial construction mitigation includes the construction of the Preferred Alternative with the initial mitigation package identified in the FEIS and ROD. The mitigation measures included in the FEIS and ROD included short-term mitigation strategies to help minimize adverse effects to businesses due to LRT construction.

The initial construction mitigation package defined in the FEIS and ROD is one that is typically implemented with transportation construction projects. The Central Corridor is a unique corridor with a large number of businesses directly fronting the LRT alignment. Many of the businesses along the alignment rely on pedestrian and vehicular traffic access. Because construction is unavoidable, impacts to business revenue due to LRT construction are expected.

4.2.3.2 LRT Alternative (Final Construction Mitigation)

Mitigation strategies were expanded and designed to help small businesses during construction. Some of the mitigation assistance included financial assistance to businesses with demonstrated revenue losses, business marketing programs, parking assistance, and increased signage during construction. However, not all of the mitigation identified as part of the final package was only direct financial assistance; rather, many of the non-profit organizations provided technical assistance to businesses. This included assistance with bookkeeping, cash flow projections, and individualized marketing and promotions.

The LRT Alternative with the final construction mitigation includes the construction of the Preferred Alternative with the initial mitigation package identified, as well as expanded

mitigation strategies focused on financial assistance to businesses. This is the alternative that is currently being constructed.

The introduction and expansion of additional mitigation identified in the LRT Alternative (Final Construction Mitigation) helps minimize adverse effects to business revenue. Although business revenue loss is not completely mitigated, the LRT Alternative with the final construction mitigation was designed in a manner to help provide assistance to businesses during construction and avoid as many impacts as possible.

The LRT Alternative is identified as the alternative that best meets the purpose and need of the project. Although the LRT Alternative does have short-term construction impacts on businesses, for every measure of evaluation, the LRT Alternative received a score equal to or exceeding the BRT and Baseline Alternatives in terms of supporting the project objectives. The AA/DEIS identified LRT as a permanent investment in the Central Corridor Study Area that could act as a catalyst in furthering community development. The subsequent NEPA documents also made the same conclusion. LRT provides improvements to community character including superior transit service and connections to major destinations and new transit-oriented development.

4.2.3.2.1 BRT Alternative

As discussed in the Construction Activities section in Chapter 2, the overall impact of BRT Alternative construction activities on the surrounding areas would have been very similar to those produced by LRT Alternative construction activities. As proposed, the BRT Alternative would have also included the construction of an exclusive guideway as well as the reconstruction of the roadway surface. The construction patterns required to construct the BRT Alternative would therefore have closely followed the construction patterns for the LRT Alternative.

The overall construction duration of the BRT Alternative would likely be shorter than the construction duration of the LRT Alternative due to the absence of elements such as a traction power system. However, the duration of the roadway reconstruction phase—the primary cause of business revenue loss—would have been approximately the same for both alternatives due to the similar roadway and transit guideway design requirements.

Because the most intrusive construction activities are estimated to be similar in scope and duration for each build alternative, this Supplemental Draft EIS estimated that the impacts on local businesses due to construction of the BRT Alternative would have been similar to the impacts due to construction of the LRT Alternative.

If the BRT Alternative had been selected as the LPA, mitigation measures associated with the alternative would have been identified. This Supplemental Draft EIS assumes that mitigation associated with the BRT Alternative would have been similar to the mitigation associated with the LRT Alternative with the initial construction mitigation. The mitigation would include construction contract requirements to help minimize adverse effects during construction, and a project communications program. Similar to the LRT

Alternative with the initial construction mitigation, impacts to business revenue due to construction of BRT would be expected.

The AA/DEIS concluded that the BRT Alternative had substantially lower performance on measures of effectiveness including ridership, travel time savings, cost per rider, and other project objectives. Additionally, the BRT Alternative did not fully satisfy a principal element of project purpose and need — to adequately meet forecast demand for Central Corridor transit ridership by providing sufficient capacity to meet forecast need. The BRT Alternative did not provide the required capacity to meet year 2030 transit demand. 2030 ridership forecasts for the Corridor showed that loading volumes at specific BRT station areas would exceed the capacity of the BRT alternative. The corridor was already congested and experiences platooning of buses at critical areas along the alignment. An increase of this phenomenon in the future, as was forecast for the BRT Alternative in the AA/DEIS, would compromise the ability for BRT to provide the increased frequencies required to meet travel demand. Therefore, it was determined that the BRT Alternative was not a reasonable alternative in meeting the project purpose and need and was not brought forward for further evaluation in the FEIS.

4.3 Comparative Evaluation of Alternatives

A comparative analysis of the effects of the alternatives considered in this Supplemental Draft EIS on business revenue due to construction is shown in Table 4-2 and summarized in Table 4-3. The main finding through this comparison is that impacts to business revenues are least severe under the LRT Alternative with the final construction mitigation. Although impacts to business revenue due to the construction of LRT are unavoidable, greater adverse effects would have occurred had the final construction mitigation strategies not been employed.

Table 4-2: Comparative Analysis of Build Alternatives

Alternative	Construction Duration	Construction Severity	Mitigation Package	Business Revenue	Meets Purpose and Need
No-Build	No construction.	No construction.	No construction associated with No-Build; therefore, no mitigation is required.	No construction associated with No-Build; therefore, no impacts to business revenue are expected.	No-Build does not meet purpose and need for the project.

Baseline	Minimal construction	Minimal construction	Minimal construction associated with Baseline; therefore, no mitigation is identified.	Minimal construction associated with Baseline; therefore, no impacts to business revenue are expected.	Baseline does not meet purpose and need for the project.
LRT (Initial Construction Mitigation)	Construction duration of civil work is estimated to take 2 years.	Most intrusive construction element is the required civil work along the alignment.	Initial construction mitigation package focused on construction contract strategies and project communications.	Construction of this alternative is expected to have an adverse effect on business revenue.	LRT was identified as the alternative that best meets the purpose and need for the project.
LRT (Final Construction Mitigation	Construction duration of civil work is estimated to take 2 years.	Most intrusive construction element is the required civil work along the alignment.	Final construction mitigation package includes additional strategies and resources to better mitigate impacts to businesses.	Construction of this alter-native is expected to have an adverse effect on business revenue; however, to a much less extent than what would be anticipated with the initial construction mitigation package.	LRT was identified as the alternative that best meets the purpose and need for the project.

BRT	Similar to LRT, construction duration of civil work is estimated to take 2 years.	Similar to LRT, the most intrusive construction element is the required civil work along the alignment.	Initial construction mitigation package focused on construction contract strategies and project communications.	Construction of this alternative is expected to have an adverse effect on business revenue.	BRT does not meet purpose and need for the project.

Table 4-3: Summary of Comparative Analysis

Alternative	Construction Duration	Construction Severity	Mitigation Package	Business Revenue	Meets Purpose and Need (Yes/No)
No-Build	NA	NA	NA	🟢	No
Baseline	NA	NA	NA	🟢	No
LRT (Initial Construction Mitigation)	🟠	🟠	🟠	🟠	Yes
LRT (Final Construction Mitigation)	🟠	🟠	🟢	🟡	Yes
BRT	🟠	🟠	🟠	🟠	No

🟢 Minimal Impact or Positive Benefit

🟢 Moderate to Positive Impact

🟡 Moderate

🟠 Moderate to Negative

🔴 Maximum Impact or Negative Benefit

5 PUBLIC AND AGENCY COORDINATION

Chapter 5 summarizes public outreach activities related to this Supplemental Draft EIS.

5.1 Outreach Completed During Supplemental EA

In April 2011, the FTA and the Metropolitan Council completed a Supplemental EA to document construction-related impacts on businesses to comply with the January 2011 court ruling and NEPA, as discussed in Chapter 1.

Two town hall meetings were held on February 17, 2011, to consider the views of the general public and local merchants and to gather information in anticipation of the Supplemental EA. The town hall meetings were held in an open house format. Representatives of the FTA, the Metropolitan Council, City of Saint Paul and BRC members were available at the meetings to discuss the Project and the supplemental environmental review process. Business owners, employees and citizens were provided the opportunity to discuss specific issues and provide written and verbal comments. A meeting notice announcing the town hall meetings was published in local newspapers (Pioneer Press, Star Tribune and Finance and Commerce). News advisories were distributed by the Metropolitan Council to area media outlets, community groups, stakeholders and project partners. This news advisory was also distributed by the Metropolitan Council to community leaders, business owners and other area organizations, and was posted on the Project Website.

The Draft Supplemental EA was made available for public review on March 1, 2011. The public had an opportunity to review and comment on the Draft Supplemental EA from March 1 through March 31, 2011. Two public hearings were held on March 16, 2011. Notifications of the Draft Supplemental EA and the public hearings appeared in area newspapers and were sent to stakeholders in the project corridor including local, regional and state agencies. The Draft Supplemental EA was made available for viewing online and at area libraries prior to the public hearings. Public comments were received from 73 individuals or groups/organizations. These comments and their corresponding responses are included in the Supplemental EA (Appendix B).

5.2 Outreach After Supplemental EA

Following the publication of the Final Supplemental EA for Construction-Related Potential Impacts on Business Revenues, outreach to businesses in the corridor continued. The Metropolitan Council prepares monthly Business Mitigation Status Reports describing how the Metropolitan Council and other partner agencies have

worked to minimize construction impacts to local businesses. These reports include the following information:

- Construction-related complaints and responses
- Public outreach and communication activities
- Funds spent to assist businesses during construction
- Requests for business assistance and responses
- Number of business openings / closings/ relocations

Between May 2011 and June 2012, 835 meetings took place on the corridor. The meeting topics varied, but mostly focused on construction activity communication. Appendix L includes a list of formal meetings that have taken place since May 2011. Several informal meetings occurred along the corridor that are not captured in this summary. For example, CCPO staff makes door-to-door visits to notify businesses about upcoming work adjacent to their businesses.

5.3 Outreach During this Supplemental Draft EIS

On May 14, 2012, the FTA and the Metropolitan Council issued a Notice of Intent (NOI) to prepare a supplement to the FEIS to evaluate the potential impacts of lost revenue on area businesses during the construction of the Central Corridor LRT. In the early development stages of this Supplemental Draft EIS, the Metropolitan Council worked with the BRC to solicit input and data from local groups pertaining to impacts on business revenue due to LRT construction. This outreach was an important part of this Supplemental Draft EIS. Most of the studies summarized in this analysis relied on information submitted by local groups.

A Notice of Availability (NOA) was published in the Federal Register on December 14, 2012, signaling the start of the 45-day comment period. Once the 45-day comment period is completed on January 30, 2013, the FTA and the Metropolitan Council will summarize and respond to all comments received on the Supplemental Draft EIS. This information will be included in the Final Supplemental EIS.

APPENDIX A:
Central Corridor LRT National Environmental Policy Act Document List

APPENDIX B:
Supplemental EA

APPENDIX C:
Central Corridor BRT Alternative Construction Duration

APPENDIX D:
Literature Review for the Central Corridor Supplemental EIS

APPENDIX E:
Central Corridor Key Outcomes:
2012 Indicators

APPENDIX F:
Change in the Number of Occupied Storefronts Along University Avenue, 1st Quarter 2011 And UABA Vacancy Report Correspondence

APPENDIX G:
Assessing Neighborhood and Social Influences of Transit Corridors

APPENDIX H:
Central Corridor Light Rail Transit Construction: Impact Study for Pascal Street to Dale Street Sample, Saint Paul, Minnesota

APPENDIX I:
Mitigating Business Losses: Services, Strategies, and Effectiveness

APPENDIX J:
Little Mekong CCLRT Impact Study

APPENDIX K:
Business Support Fund

APPENDIX L:
List of Meetings

APPENDIX A:
Central Corridor LRT National Environmental Policy Act Document List

Central Corridor LRT National Environmental Policy Act Documents

Document	Published
Alternative Analysis/Draft Environmental Impact Statement (AA/DEIS)	April 2006
Supplemental Draft Environmental Impact Statement (SDEIS)	July 2008
Final Environmental Impact Statement (FEIS)	June 2009
FTA Record of Decision (ROD)	August 2009
Draft Infill Stations Environmental Assessment (EA)	January 2010
Final Infill Stations Environmental Assessment (EA)	February 2010
Finding of No Significant Impact (FONSI)	February 2010
Draft Supplemental Environmental Assessment for Construction-Related Potential Impacts on Business Revenues (SEA)	February 2011
Final Supplemental Environmental Assessment for Construction-Related Potential Impacts on Business Revenues (SEA)	April 2011
Finding of No Significant Impact (FONSI)	April 2011
Draft Supplemental Environmental Impact Statement on Construction-Related Potential Impacts on Business Revenues (SDEIS)	December 2012

APPENDIX B:
Supplemental EA

Central Corridor
Light Rail Transit

Metropolitan Council

Supplemental Environmental Assessment
Construction - Related Potential Impacts on Business Revenues

April 2011

Volume 1 of 3

CENTRAL CORRIDOR LIGHT RAIL TRANSIT PROJECT

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT
CONSTRUCTION-RELATED POTENTIAL IMPACTS ON BUSINESS REVENUES

Prepared by:
Federal Transit Administration (FTA)
Metropolitan Council

Pursuant to:

National Environmental Policy At of 1969, Section 102(2)(c), 42.U.S.C. 4332 (2)(c);
National Historic Preservation Act of 1966, Section 106, 16 U.S.C. 470f, et seq.;
Federal Transit Act, 53 U.S.C. Section 5323(b), Section 5309(e)(2) – (7), 5301(e), and 5324(b)(1) – (3);
Title 49 U.S.C. Section 303, formerly Department of Transportation Act of 1966, Section 4(f);
Executive Order 11990 (Protection of Wetlands);
Executive Order 12898 (Environmental Justice);
Executive Order 13045 (Protection of Children from Environmental Health and Safety Risks);
Executive Order 13166 (Improving Access to Services for Persons with Limited English Proficiency).

4-20-2011
Date of Approval

Marisol Simon, Region 5
Regional Administrator
Federal Transit Administration

4.20.11
Date of Approval

Mark W. Fuhrmann
New Starts Program Director
Metropolitan Council

ABSTRACT

The Metropolitan Council and the Federal Transit Administration (FTA), the lead federal agency, have prepared this Construction-related Potential Impacts on Business Revenues Supplemental Environmental Assessment (EA) for the Central Corridor Light Rail Transit Project (the Project) pursuant to 23 CFR 771.130(c). The Project is 10.9 miles long (9.7 miles of new alignment, 1.2 miles on shared alignment) and consists of 23 Central Corridor Light Rail Transit (LRT) stations – 18 new stations and five shared with the Hiawatha LRT. On January 26, 2011, the U.S. District Court for the District of Minnesota in the case *NAACP, et. al. v. US Department of Transportation, et. al.*, CIV 10-147, held that the Final Environmental Impact Statement ("FEIS"), prepared in June 2009, did not evaluate potential impacts on the loss of business revenue during construction and that it should have been evaluated during the National Environmental Policy Act ("NEPA") process. This supplemental EA analyzes the potential average loss of revenue by local businesses during the construction period for the Project.

A public comment period was established for this document. Comments were submitted in writing, via e-mail or in person at two public hearings held on Wednesday, March 16, 2011. Two hearings were held that day, one starting at 8:00 am at the Lao Family Community of Minnesota (320 W. University Ave., St. Paul, MN 55103) and one starting at 6:00 pm at Goodwill / Easter Seals (553 Fairview Ave. N., St. Paul, MN, 55104).

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Central Corridor
Light Rail Transit

Supplemental Environmental Assessment
Construction-Related Potential Impacts on Business Revenues

Federal Transit Administration
Metropolitan Council
April 2011

Table of Contents

VOLUME 1 OF 3

ES 1.0 EXECUTIVE SUMMARY ES-1
ES 1.1 BASIS FOR THIS ENVIRONMENTAL ASSESSMENT ES-1
ES 1.2 DESCRIPTION OF CONSTRUCTION ACTIVITIES ES-2
ES 1.3 EXISTING ECONOMIC CONDITIONS AND DEMOGRAPHICS ES-2
ES 1.4 SUMMARY OF CONSTRUCTION-RELATED IMPACTS ON BUSINESS REVENUES ES-3
ES 1.5 PUBLIC COORDINATION ES-4
ES 1.6 CONCLUSION AND SUMMARY OF COMMITMENTS ES-5

1.0 BASIS FOR THIS ENVIRONMENTAL ASSESSMENT 1
1.1 BASIS FOR THIS ENVIRONMENTAL ASSESSMENT 1
1.2 UPDATES SINCE PUBLICATION OF THE DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT 1

2.0 DESCRIPTION OF CONSTRUCTION ACTIVITIES 2
2.1 CONSTRUCTION ACTIVITIES 2
2.1.1 Civil West Construction 2
2.1.2 Civil East Construction 4
2.1.3 Other Construction Activities 4
2.2 CONSTRUCTION SCHEDULE AND SEGMENTS 4
2.2.1 Construction Schedule 5
2.2.2 Construction Segments 5
2.3 CONSTRUCTION SEQUENCING AND UTILITIES 5
2.3.1 Construction Sequencing 6
2.3.2 Utility Disruptions During Construction 7

3.0 EXISTING ECONOMIC CONDITIONS AND DEMOGRAPHICS 13
3.1 OVERVIEW OF EXISTING ECONOMIC CONDITIONS 13
3.1.1 Minneapolis-St. Paul-Bloomington Metropolitan Statistical Area Economic Indicators 13
3.1.2 Central Corridor LRT Business Characteristics 14
3.2 PROJECT AREA POPULATION DEMOGRAPHICS 15

4.0 CONSTRUCTION-RELATED IMPACTS ON BUSINESS REVENUES AND MITIGATION 17
4.1 INCOMPLETE OR UNAVAILABLE INFORMATION 17
4.2 CONSTRUCTION-RELATED POTENTIAL IMPACTS ON BUSINESS REVENUES TECHNICAL STUDY 17
4.2.1 Potential Impacts 17
4.2.2 Economic Impacts 19

4.3 MITIGATION PROGRAM OVERVIEW 21
4.3.1 Mitigation Approach 21
4.3.2 Mitigation Commitments 26
4.3.3 Value of Mitigation Commitments 31

5.0 PUBLIC COORDINATION 33
5.1 FEBRUARY 17, 2011 TOWN HALL MEETINGS 33
5.2 DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT COMMENT PERIOD 33

6.0 CONCLUSION AND SUMMARY OF COMMITMENTS 40

Appendices

Appendix A: Technical Report on the Potential Impacts on Business Revenues During Construction of the Central Corridor Light Rail Project
Appendix B: Sample of Weekly Construction Update and News Release
Appendix C: Sample of Construction Information Packet
Appendix D: Sample Construction Access Plan
Appendix E: Sample of Contractor Incentive Program
Appendix F: Sample of Construction Public Information and Communication Plan
Appendix G: Response to Comments Matrix and Index of Commenters

VOLUME 2 OF 3 AND VOLUME 3 OF 3

Appendices

Appendix H: Record of Comments Received

List of Tables

Table 2-1: Central Corridor LRT Construction Schedule Overview 8
Table 3-1: Minneapolis-St. Paul-Bloomington Metropolitan Statistical Area Economic Indicators 13
Table 3-2: Central Corridor LRT Business Establishments 14
Table 4-1: Business Classification 20
Table 4-2: Mitigation Measures: Financial Commitments 32
Table 4-3: Mitigation Measures: Staffing and Contract Commitments 33

List of Figures

Figure 2-1: Civil West Construction and Civil East Construction 3
Figure 2-2: Construction Segments (Downtown Minneapolis and University/ Prospect Park) 9
Figure 2-3: Construction Segments (Midway West and Midway East) 10
Figure 2-4: Construction Segments (Midway East and Capitol Area) 11
Figure 2-5: Construction Segments (Capitol Area and Downtown St. Paul) 12

ES 1.0 EXECUTIVE SUMMARY

The Metropolitan Council and Federal Transit Administration (FTA), the lead federal agency, have prepared this Supplemental Environmental Assessment (EA) of the potential impacts on business revenues during construction of the Central Corridor Light Rail Transit (LRT) Project pursuant to 23 CFR 771.130(c). The Project is 10.9 miles long (9.7 miles of new alignment, 1.2 miles on shared alignment) and consists of 23 Central Corridor LRT stations – 18 new stations and five shared with the Hiawatha LRT.

ES 1.1 Basis for this Environmental Assessment

Basis for this Environmental Assessment (Section 1.1)

Following the June 2009 Final Environmental Impact Statement ("FEIS") and the August 2009 Record of Decision ("ROD"), a lawsuit was filed against the U.S. Department of Transportation, the FTA and the Metropolitan Council by a coalition of local businesses, residents and non-profit organizations. One of the four claims made in the lawsuit was that the environmental review of the Project violated the National Environmental Policy Act ("NEPA") by failing to adequately analyze potential loss of business revenues caused during construction of the Project. The Court held that the FEIS prepared in June 2009, had failed to evaluate potential impacts on the loss of business revenue during construction and that it should have been evaluated during the NEPA process. The Court ordered the Metropolitan Council and FTA to supplement the FEIS for this issue and to address any loss of business revenues as an adverse impact of the construction of the Central Corridor LRT. The results of this analysis, as required by the January 26, 2011 Court order, are documented in this Supplemental EA.

The Court order in *NAACP v. DOT,* Case No. 10-147 (USDC MN), dated January 26, 2011, stated that the "FEIS was deficient in its consideration of lost business revenue as an adverse impact of the construction of the CCLRT" and ordered the defendants to supplement the FEIS on that issue. FTA's regulation 23 CFR Section 771.130, titled "Supplemental environmental impact statements" provides a number of options for supplementing an EIS. Section 771.130(c) states, "Where the Administration is uncertain of the significance of the new impacts, the applicant will develop appropriate environmental studies or, if the Administration deems appropriate, an EA to assess the impacts of the changes, new information, or new circumstances." Because the issue that FTA was evaluating was discrete and narrow in scope, FTA chose to conduct a supplemental EA as the appropriate level of environmental review under NEPA.

Updates Since Publication of the Draft Supplemental Environmental Assessment (Section 1.2)

Since publication of the Draft Supplemental EA, updated information regarding existing economic conditions, construction-related impacts on business revenues and mitigation, and public involvement has been incorporated into this final Supplemental EA.

ES 1.2 Description of Construction Activities

For the purposes of this final Supplemental EA, construction of the Project is being addressed in two general sections: Civil West and Civil East. The Civil West construction comprises the western three miles of the Project within the City of Minneapolis. The Civil East Construction comprises the eastern seven miles of the Project within the City of St. Paul. The western one-mile segment of the Project along the Hiawatha LRT in downtown Minneapolis will not be affected by project construction and therefore is not included in this Supplemental EA.

Civil West and Civil East Construction (Section 2.1)

Civil West and Civil East construction includes utility relocations, LRT construction and related activities, bridge construction, and roadway construction and related activities (e.g., new roadway pavements, sidewalks, curbs and gutters, street lighting, above and below-grade traffic signal facilities, etc.). Other activities that would occur during project construction include Operations and Maintenance Facility (OMF) construction, LRT systems construction, fare collection installation, and station artwork. The following activities have already been completed: 4th Street advanced utility construction in downtown St. Paul, advanced traffic improvements to streets at the University of Minnesota, and OMF yard site preparations.

Construction Schedule and Segments (Section 2.2)

Construction of the Central Corridor LRT began in late 2009. Final completion of all Civil West and Civil East construction work is anticipated by the end of 2013, with system operation anticipated in 2014. Civil West construction and Civil East construction are each divided into five segments. Detailed work-specific construction plans will be developed to establish the estimated schedule and staging of construction phases for all project segments, consistent with the constraints and sequencing limitations identified in the construction contract documents.

Construction Sequencing and Utilities (Section 2.3)

The overall construction period for each segment will include a period of localized utility work, site preparation and mobilization, heavy construction, and construction completion and clean up. Utility relocations may result in temporary, short-term disruptions to utility services; however, utility service will be maintained throughout project construction. After the final completion of all construction activities, there will be a shorter period of integration and system testing prior to full operation of the Central Corridor LRT system.

ES 1.3 Existing Economic Conditions and Demographics

Existing Economic Conditions (Section 3.1)

The Central Corridor LRT is located within the Minneapolis-St. Paul-Bloomington MN-WI (Minnesota-Wisconsin) Metropolitan Statistical Area (MSA). A sample of economic indicators for the Minneapolis-St. Paul-Bloomington MN-WI MSA region from years 2001 through 2009 are presented in Table 3-1 of this Supplemental EA. The indicators suggest that the project area lies within a strong, stable regional economy.

U.S. Census information for 2008 documented over 4,000 establishments in the 8 zip codes surrounding the Central Corridor LRT alignment outside of the downtown areas. A large majority (greater than 75 percent) of business establishments located with zip codes corresponding to the Central Corridor LRT are establishments with fewer than 20 employees.

The zip code level is the smallest geographic area corresponding to the Central Corridor LRT where reliable, current data is available. However, the geographic area covered by these eight zip codes extends far beyond the project corridor. The number of business establishments adjacent to the project corridor has been estimated by local planning groups at approximately 1,100 establishments outside of the downtown areas.

Project Area Demographics (Section 3.2)

Project area demographics are described in detail in Section 3.8.4 of the FEIS. Ethnic minority populations comprise a significant portion of study area population. Although distributed throughout the study area, the highest concentrations of minority populations are located along University Avenue from Rice Street to Snelling Avenue. The Central Corridor project area generally has higher percentages of low-income persons compared to Hennepin County and Ramsey County.

ES 1.4 Summary of Construction-Related Impacts on Business Revenues

Incomplete or Unavailable Information (Section 4.1)

Information is incomplete or unavailable to credibly and reliably predict the potential loss of business revenues for any one business due to the construction phase of a light rail transit project. The outcome of such an analysis would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than actual construction-related business revenue impacts directly attributable to the environmental effects of the proposed action.

Construction-Related Potential Impacts to Business Revenues Technical Study (Section 4.2)

Discussion of potential impacts to revenues of business in the project corridor are drawn from a technical study prepared by the US DOT Volpe Center ("Volpe Center") titled "Technical Report on the Potential Impacts on Business Revenues during Construction of the Central Corridor Light Rail Project" ("Technical Report") which has been revised since the publication of the Draft Supplement EA. A copy of the revised Technical Report can be found in Appendix A of the final Supplemental EA.

The Technical Report identifies seven impact categories based on previous studies. The Technical Report anticipates that construction activities will temporarily impede access by pedestrians and vehicles; temporarily consume space for parking; lead to temporary utility shutoffs; result in nuisance impacts such as noise, vibration, and dust; and temporarily impede business visibility. Over the course of the project, most of the businesses along the corridor are likely to experience potential impacts from project construction, including issues associated with those factors identified above.

The Technical Report notes that no studies have directly connected potential construction-related impacts to quantitative estimates of business revenue losses during construction. The Volpe Center conducted a comprehensive literature review on the topic identifying four previous studies addressing business revenue impacts resulting from construction activities. While any individual business has the potential to experience a loss of business revenues during the construction period, the one previous study most similar to Central Corridor conditions indicated

that four business types (general merchandise, food stores, automotive retail and home furnishings) are more likely to experience greater sales revenue losses due to construction, as well as other economic factors. See De Solminihac and Harrison study.

In light of the numerous comments regarding the applicability of the Volpe methodology to the Central Corridor LRT Project to provide any reliable estimate of prospective potential loss of revenues caused by the construction phase of the Project, FTA has decided that predicting average percent business losses with any accuracy is not warranted here because any prediction would be too speculative. Moreover, since releasing the Draft Supplemental EA for comment, a number of other reports looking at the impact of the construction phase of transportation projects on businesses have been brought to FTA's attention. These reports, although not put through the scientific rigor of a peer review, provide additional support for FTA's conclusion that providing a reliable estimate of future lost revenues is not possible given the current state of knowledge, but would only be conjecture and speculation, and have the effect of understating the actual impacts some businesses may incur during the construction phase of the Project.

Mitigation Program Overview (Section 4.3)

While many of the factors that contribute to potential loss of business revenue cannot be avoided during construction activity, studies referenced in the *Technical Report* identify a number of suggested mitigation measures to counteract loss of business revenue. These include business counseling, adjustments to construction phasing, traffic management and public relations and marketing activity. Furthermore, as required by Minnesota legislation, the Minnesota Department of Transportation (Mn/DOT) concluded a study that reviewed the impacts to businesses due to construction and recommended a series of mitigation measures as best practices for transportation projects.

Based on the "best practices" currently available to alleviate construction impacts to businesses and the recommendations made in the Mn/DOT study, proposed mitigation for the Central Corridor LRT Project focuses on: (1) minimizing the unavoidable impacts of construction activities; (2) proactive communications with both corridor businesses and the community to minimize confusion and uncertainty regarding the timing and duration of construction activities; (3) promotional and marketing activities to encourage patronage of businesses during construction; (4) technical assistance to businesses during the construction period to improve business management and customer communication skills; (5) financial assistance to businesses losing nearby on-street parking, and; (6) general financial assistance to small businesses affected by construction activities.

Key elements of the mitigation commitments include a number of contractor obligations to minimize potential construction impacts, extensive communications and coordination activities, and financial programs to enhance parking/access and support businesses through the construction period. The value of mitigation commitments totals nearly $15 million.

ES 1.5 Public Coordination

February 17, 2011 Town Hall Meetings (Section 5.1)

Two town hall meetings were held on February 17, 2011, to consider the views of the general public and local merchants and to gather information in anticipation of the Supplemental Environmental Assessment. The town hall meetings were held in an open house format. Representatives of the FTA, the Metropolitan Council, City of St. Paul and Business Resource

Collaborative members were available at the meetings to discuss the Project and the supplemental environmental review process. Business owners, employees and citizens were provided the opportunity to discuss specific issues and provide written and verbal comments.

Draft Supplemental Environmental Assessment Comment Period (Section 5.2)

The public had the opportunity to review and comment on the Draft Supplemental EA from March 1 through March 31, 2011. Two public hearings were held on March 16, 2011. Public comments were received from 73 individuals or groups/organizations during the comment period. A summary matrix of all substantive comments and responses is included in Appendix G.

ES 1.6 Conclusions and Summary of Commitments

The Technical Report anticipates that construction activities will cause temporary partial blockages to access, traffic detours, parking restrictions, temporary utility shutoffs and nuisance impacts such as noise, vibration, dust and visual impacts. The Technical Report prepared by the Volpe Center states that while any individual business has the potential to experience loss of business revenues during the construction period, previous studies indicate that businesses that include general merchandise, food stores, automotive retail, and furniture stores are more likely to experience greater sales revenue losses due to construction activities. These studies also recognize that there are many factors unrelated to construction activity that may also impact business revenues, including external economic factors, unemployment rates, and world events.

The Technical Report also states that the estimate of impacts is subject to significant uncertainty and there may be businesses with sales revenue losses other than those identified as being impacted. We cannot predict with specificity which particular businesses will experience adverse impacts or positive impacts, and to what extent those impacts may affect business revenues. Smaller businesses may be impacted to a greater extent depending on the duration and magnitude of nuisance impacts associated with project construction. If construction impacts to businesses are sufficiently adverse, then businesses may close or chose to relocate. Less severely impacted businesses would likely experience short-term declines in revenues due to reduced business activity. Metropolitan Council is implementing mitigation measures to address potential adverse construction impacts to the extent reasonable and feasible. However, FTA recognizes that some adverse impacts will be unavoidable and may be of a magnitude that the effect to an individual business may be losses in revenues that result in the business owner deciding to either relocate or close.

While many of these factors cannot be completely avoided during construction activity, a number of mitigation measures have been identified to minimize the negative impact of construction activities, improve communications and provide assistance to businesses to counteract loss of business revenue. Direct financial commitments to mitigation measures total nearly $15 million. In addition, substantial staffing, communication and contractual commitments are provided to implement mitigation measures and assure contractor compliance.

1.0 BASIS FOR THIS ENVIRONMENTAL ASSESSMENT

1.1 Basis for this Environmental Assessment

The content of a traditional Environmental Assessment (EA) document includes a discussion of the following elements: purpose and need for the proposed action; alternatives to the proposed action, including the no-build alternative; evaluation of the social, economic and environmental impacts of the project; identification of mitigation measures; and a description of public involvement/agency coordination activities. These elements were previously addressed in the June 2009 FEIS and August 2009 ROD for the Central Corridor LRT and therefore are not included in this EA. The basis for this EA is described below.

Following the June 2009 FEIS and the August 2009 ROD, a lawsuit was filed against the US Department of Transportation (DOT), the FTA, and the Metropolitan Council by a coalition of local businesses, residents, and non-profit organizations. One of the four claims made in this lawsuit was that the environmental review of the Project violated the National Environmental Policy Act (NEPA) by failing to adequately analyze the impact on business revenues potentially caused during the construction of the Project. The Court directed the FTA, and the Metropolitan Council to supplement the FEIS to address the potential loss of business revenues as an adverse impact of the construction of the Central Corridor LRT.

The Court order in *NAACP v. DOT*, Case No. 10-147 (USDC MN) dated January 26, 2011, stated that the "FEIS was deficient in its consideration of lost business revenue as an adverse impact of the construction of the CCLRT" and ordered the defendants to supplement the FEIS on that issue. FTA's regulation 23 CFR Section 771.130, titled "Supplemental environmental impact statements" provides a number of options for supplementing an EIS. Section 771.130(c) states, "Where the Administration is uncertain of the significance of the new impacts, the applicant will develop appropriate environmental studies or, if the Administration deems appropriate, an EA to assess the impacts of the changes, new information, or new circumstances." Because the issue that FTA was evaluating was discrete and narrow in scope, FTA chose to conduct a supplemental EA as the appropriate level of environmental review under NEPA.

1.2 Updates Since Publication of the Draft Supplemental Environmental Assessment

Since publication of the Draft Supplemental EA, updated information regarding existing economic conditions, construction-related impacts on business revenues and mitigation, and public involvement has been incorporated into Chapter 3 through Chapter 5 of this final Supplemental EA. An updated version of the US DOT Volpe Center *Technical Report on the Potential Impacts on Business Revenues During Construction of the Central Corridor Light Rail Project* is located in Appendix A.

2.0 DESCRIPTION OF CONSTRUCTION ACTIVITIES

Chapter 2 presents several topics related to the construction of the Central Corridor LRT Project. Specifically, a summary of construction activities is provided, including information regarding construction schedule, construction segments, and sequencing of construction activities.

2.1 Construction Activities

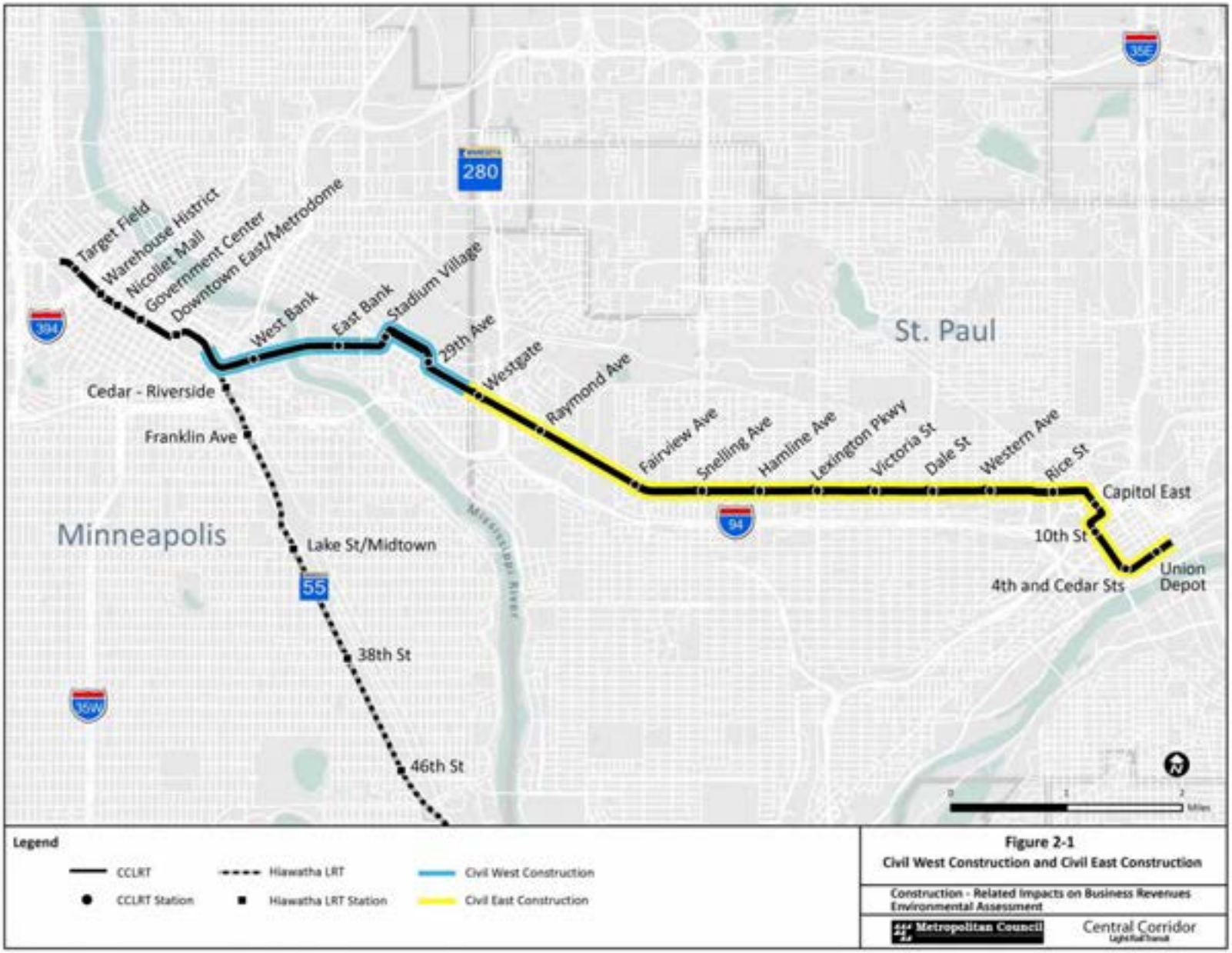
This section identifies the construction activities associated with the Project. For the purposes of this Supplemental EA, construction of the Project is being addressed in two general sections: Civil West and Civil East. The Civil West construction comprises the western three miles of the Project within the City of Minneapolis. The Civil East Construction comprises the eastern seven miles of the Project within the City of St. Paul. The western one-mile segment of the Project along the Hiawatha LRT in downtown Minneapolis will not be affected by project construction because the Hiawatha LRT Project is already completed. The boundaries of the Civil West construction and Civil East construction are described below.

2.1.1 Civil West Construction

The Civil West segment extends generally from a connection to the existing Hiawatha LRT line near the Hubert H. Humphrey Metrodome, crossing over Interstate-35W (I-35W), continuing along Washington Avenue across the Mississippi River on the existing Washington Avenue Bridge and through the University of Minnesota campus, along the south side of the University of Minnesota Transitway, along 29th Avenue SE, and along University Avenue to the Saint Paul city limits near Emerald St SE. (See Figure 2-1.)

The Civil West construction includes: demolition of existing underground utilities and roadway pavement; environmental remediation; construction of underground public utilities; areaways (underground building spaces); drainage; light rail track and stations; retaining wall structures; underground communication, signal, and traction power ducts; pull boxes; and catenary pole foundations. Construction also includes any work on and to off-site locations such as duct bank, utilities, and traction power substation sites. Associated roadway work includes construction of new roadway pavements, sidewalks, curbs and gutters, street lighting, above and below-grade traffic signal facilities and other related improvements. Associated utility work includes relocation of private utilities by the utility owner and/or its contractor.

Civil West construction activities also include modifications to the Hiawatha LRT bridge over 3rd and 4th Streets (Bridge 27884); construction of a new bridge spanning Interstate 35W (I-35W) (Bridge 27B63); modifications to the Washington Avenue Bridge over the Mississippi River, West River Road and East River Road (Bridge 9360); and construction of a transit mall through the University of Minnesota campus. Washington Avenue Bridge work includes converting the interior lower deck roadway lanes to a light rail transit track, leaving one outer lane on each side of the bridge for vehicular traffic. Modification work will be performed on the existing Hiawatha LRT bridge (Bridge 27878), the existing Cedar Avenue Bridge (Bridge 27030), and the existing 19th Avenue South bridge (Bridge 27620) to accommodate future LRT operations. Transit mall work includes landscaping, street and sidewalk paving, lighting, signage, and a light rail station.


Target Field
Warehouse Histrict
Nicollet Mall
Government Center
Downtown East/Metrodome
West Bank
East Bank
Stadium Village
29th Ave
Westgate
Raymond Ave
Fairview Ave
Snelling Ave
Hamline Ave
Lexington Pkwy
Victoria St
Dale St
Western Ave
Rice St
Capitol East
10th St
4th and Cedar Sts
Union Depot
Cedar - Riverside
Franklin Ave
Lake St/Midtown
38th St
46th St
Minneapolis
St. Paul
Mississippi River
280
94
55
35E
35W
394
Legend
CCLRT
CCLRT Station
Hiawatha LRT
Hiawatha LRT Station
Civil West Construction
Civil East Construction
Figure 2-1
Civil West Construction and Civil East Construction
Construction - Related Impacts on Business Revenues
Environmental Assessment
Metropolitan Council
Central Corridor

2.1.2 Civil East Construction

The Civil East construction segment extends generally from the Minneapolis/St. Paul border along University Avenue to the State Capitol, Robert Street to 12th Street, 12th Street to Cedar Street, Cedar Street to 4th Street and then 4th Street to Broadway Street. (See Figure 2-1.)

The Civil East construction activities include: demolition of existing structures, underground utilities, and roadway pavement; environmental remediation; underground public utilities; drainage; light rail track and stations; retaining wall structures; adjustments to areaways (below ground building spaces); underground communications, signal, and traction power ducts; pull boxes; and catenary pole foundations. Construction also includes any work on and to off-site locations such as duct bank, utilities, and traction power substation sites. Associated roadway work includes construction of new roadway pavements, sidewalks, curbs and gutters, street lighting, above and below-grade traffic signal facilities and other related improvements. Associated utility work includes relocation of private utilities by the utility owner and/or its contractor.

Civil East construction also includes modifications to the University Avenue Bridge over State Highway 280 (Bridge 9472) and modifications to the Cedar Street Bridge over I-94/I-35E (Bridge 62889).

2.1.3 Other Construction Activities

Other activities that will occur during project construction are summarized below. These activities will occur concurrently or subsequent to the Civil West and Civil East construction.

- **Operations and Maintenance Facility (OMF):** Construction of the Central Corridor LRT maintenance facility at the eastern end of the Project on the east side of Broadway Street.
- **Systems:** Construction and testing of train control signals, overhead catenary system, traction power system, and communication facilities.
- **Fare Collection:** Installation of ticket vending machines and related equipment on station platforms.
- **Station Artwork:** Installation of artwork at all station locations.

Central Corridor LRT construction activities that have been completed include:

- **4th Street Advanced Utility Construction:** Construction of underground utilities in 4th Street in downtown Saint Paul (Minnesota Street to Broadway Street).
- **Advanced Traffic Improvements:** Street modifications to Pleasant Street, East River Parkway, Arlington Street, and other streets at the University of Minnesota as part of the Central Corridor LRT Project.
- **OMF Yard Site Preparation:** Placement of surcharge soils in OMF yard.

2.2 Construction Schedule and Segments

This section describes the anticipated construction schedule for the Project and the construction segments along the project corridor.

2.2.1 Construction Schedule

Construction of the Central Corridor LRT began in late 2009. Final completion of all Civil West and Civil East construction work is anticipated by the end of 2013, with system operation anticipated in 2014. Under this schedule, project construction will take approximately four years, followed by a shorter period of integration, measurements and system testing.

2.2.2 Construction Segments

Construction of linear projects such as the Central Corridor LRT is typically divided into various segments. Civil West construction segments and Civil East construction segments are illustrated in Figures 2-2 through Figure 2-5.[1] Table 2-1 summarizes the Civil West and Civil East construction segments and the anticipated construction schedule associated with each segment from start of construction to substantial completion as identified in the construction documents. Civil West and Civil East construction work will occur concurrently, along with other construction activities described above. The duration of construction for individual segments will depend upon construction staging, construction methods and other constraints (e.g., maintenance of vehicular and pedestrian traffic and access, property access, street closures and detours, etc.).

Within each segment, construction will be staged to minimize impacts to adjacent properties. A sample illustration of construction staging on 4th Street in downtown St. Paul (Civil East Segment 5) is provided in the construction update news release in Appendix B. A sample illustration of construction staging on University Avenue between Emerald Street and Hamline Avenue is provided in the construction information packet in Appendix C. Construction staging on Emerald Street to Hamline Avenue (Civil East Segment 1) will occur in one-mile sections, beginning at Emerald Street and progressing to the east. Heavy construction will start on the south side of University Avenue first, followed by heavy construction on the north side of the roadway. One lane of through traffic will be maintained in each direction on University Avenue during this time. Station construction (Civil East Segment 1A) and trackway construction (Civil East Segments 1B and 1C) will continue within the middle of the street until construction is substantially complete.

Detailed, work-specific construction plans will be developed for all project segments. These construction plans will establish the estimated schedule and staging of construction phases within each segment, similar to the examples provided above, consistent with the constraints and sequencing limitations identified in the construction contract documents.

2.3 Construction Sequencing and Utilities

This section describes the general sequencing of construction activities and the duration of temporary utility disruptions during construction.

[1] Figures 2-2 and 2-3 illustrate trackway construction from Emerald Street to Prior Avenue (Segment 1B) and from Prior Avenue to Hamline Avenue (Segment 1C). Heavy construction for the entire section from Emerald Street to Hamline Avenue (Segment 1) will occur in stages from March 2011 to November 2011.

2.3.1 Construction Sequencing

The overall construction period for each segment will include a period of localized utility work and relocation, site preparation and mobilization, heavy construction, and finish construction and clean up. A general description of the activities associated with each of these construction periods is described below.

- **Localized Private Utility Work:** Prior to project construction, utilities such as electric, natural gas lines, phone and fiber optic communication cables may be relocated by the private utility owner or its contractors. The duration of utility relocation would depend upon the number of utilities within the corridor, and the extent to which the utilities would need to be relocated to accommodate the Project. When possible, relocation of private utilities will be incorporated into heavy construction to minimize the duration of construction activities.

- **Site Preparation and Mobilization:** Site preparation and initial mobilization will include preparation of staging areas, transporting and assembling necessary work materials and equipment to the project site, and installation of security measures (e.g., barriers or fencing enclosing work areas). Traffic control measures, including barricades, signage, temporary traffic signalization and temporary accesses will also be installed during site preparation activities.

- **Heavy Construction:** Heavy construction activities include relocating existing public utilities, such as water, storm sewer, and sanitary sewer. All existing surface features within the right of way, including the street surface, sidewalks, curbs and gutters, medians, trees and other vegetation would be removed. Excavation for the light rail track and stations would be completed, along with station foundation work. The final stages of heavy construction include curb and gutter and median construction, planting of boulevard trees, asphalt paving of roadways, and construction of sidewalks.

  Once the roadway is removed adjacent to an existing property, contractors will have a maximum of 150 days to restore the roadway directly adjacent to the property. Once sidewalks are removed, contractors will have a maximum of 15 days to restore sidewalk areas.[2] At least four feet of sidewalk width would be maintained, except when the new sidewalk is being constructed. Contractors will be required to maintain access at all times and provide Americans with Disabilities Act (ADA)-compliant temporary walkways over construction areas. Traffic and pedestrian access will be restored to its final condition by the end of heavy construction activities.

- **Finish Construction and Clean Up:** Finish construction and clean-up activities include construction of the trackway, above-ground station work and welding of the embedded track. This stage would also include the systems construction (installation of overhead wires and associated communication systems). This work will occur within the middle of the roadway. Following the completion of

[2] The 150 day limit for contractors to restore the roadway directly adjacent to an existing property applies to all construction segments except for Civil West, Segment 1 (Hiawatha LRT to I-35W) and Civil West, Segment 3 (Washington Avenue, Pleasant Street to Walnut Street). The 15-day limitation for restoring sidewalk areas adjacent to existing properties applies project-wide.

station, track and systems construction, final construction and site clean-up will be completed and remaining construction areas would be restored to their final condition.

After the final completion of all construction activities summarized above, there will be a shorter period (approximately six months) of integration and system testing prior to full operation of the Central Corridor LRT system.

2.3.2 Utility Disruptions During Construction

Examples of public and private utilities within the project corridor include: hot water, cooling water, municipal water and sewer, electric, natural gas, phone and fiber optic communication cables. Private utility relocations may be undertaken by the utility owner in advance of heavy construction; however, private utility relocations will be incorporated into heavy construction activities when possible. The Metropolitan Council will coordinate with utility owners to coordinate construction activities and minimize the duration of private utility relocations. Relocation of public utilities generally will occur concurrent with heavy construction activities, although some minor work could also occur in advance of heavy construction. The timing of utility relocations will depend upon construction sequencing limitations and constraints.

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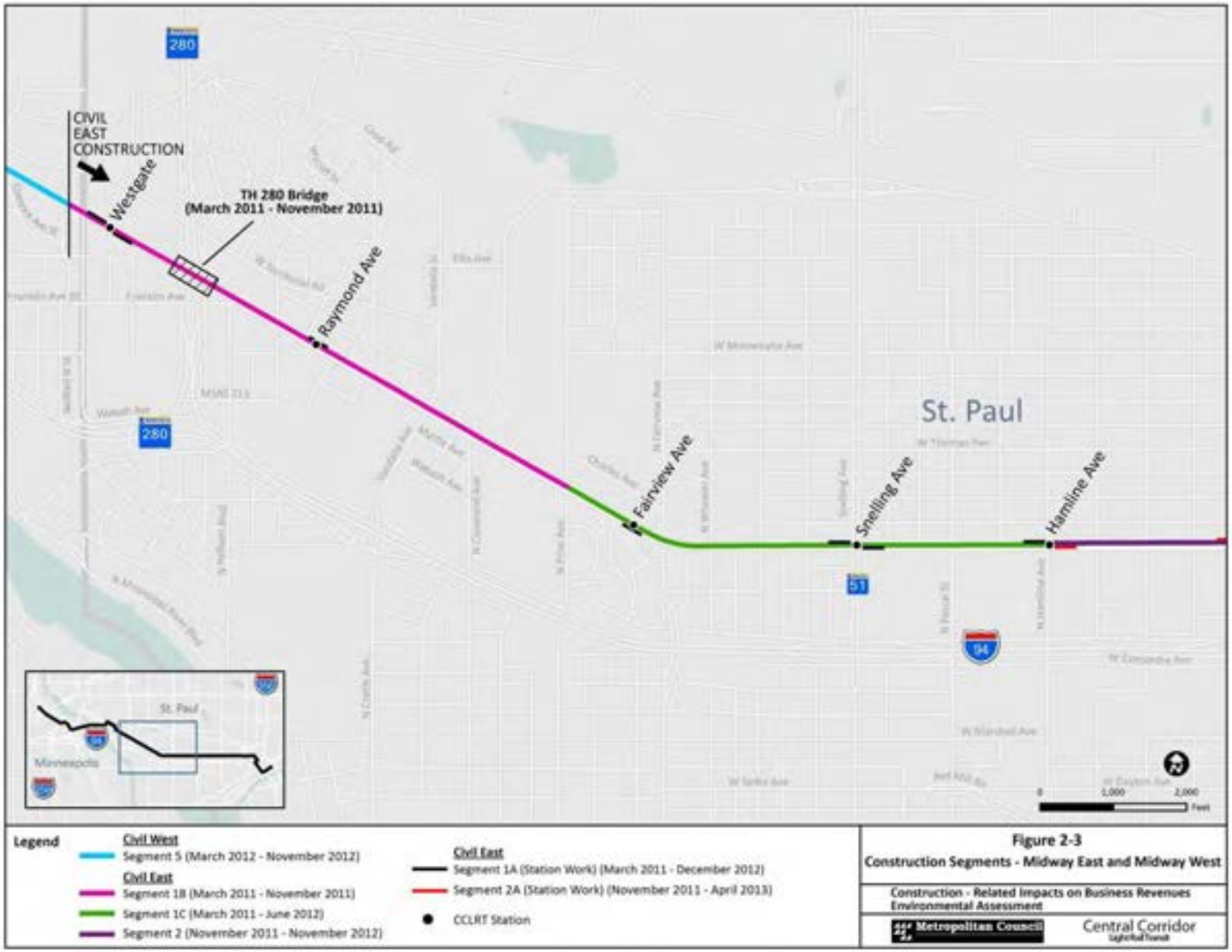
Table 2-1. Central Corridor LRT Construction Schedule Overview

Approximate Location			Construction Schedule [1]	
Segment	**From**	**To**	**Anticipated Start**	**Substantially Complete**
Civil West Construction				
Segment 1 [2]	Hiawatha LRT	I-35W	Dec. 2010	Nov. 2011
Segment 2 [3]	I-35W	Pleasant St	Sept. 2010	Nov. 2012
Segment 3	Pleasant St	Oak St	May 2011	August 2012
Segment 4	Oak St		May 2011	Nov. 2011
Segment 5	Oak St	Emerald St	March 2012	Nov. 2012
Segment 5A (U of M Transitway)	23rd Ave SE	29th Ave SE	May 2011	Aug. 2011
Civil East Construction				
Segment 1 (Heavy Construction)	Emerald St	Hamline Ave	March 2011	Nov. 2011
Segment 1A (Station Work)	Emerald St	Hamline Ave	March 2011	Dec. 2012
Segment 1B (Trackway)	Emerald St	Prior Ave	March 2011	Nov. 2011
Segment 1C (Trackway)	Prior Ave	Hamline Ave	March 2011	June 2012
Segment 2	Hamline Ave	Robert St	Nov. 2011	Nov. 2012
Segment 2A (Station Work)	Hamline Ave	Robert St	Nov. 2011	April 2013
Segment 3	University Ave	Cedar St	July 2010	Nov. 2011
Segment 4	12th St	Minnesota St	June 2011	Nov. 2012
Segment 4A [4]	Cedar St. and 5th St.		April 2011	Nov. 2011
Segment 5	Minnesota St	Broadway St	March 2011	Nov. 2011
Bridges	University Ave. over State Hwy 280		March 2011	Nov. 2011
	Cedar St over I-94/I-35E		March 2011	Nov. 2012

[1] Approximate construction duration from start of construction to substantial completion as identified in the construction documents. The anticipated final completion date for all work for both Civil West and Civil East is December 2013.
[2] Civil West, Segment 1 includes Central Corridor LRT Bridge over I-35W.
[3] Civil West, Segment 2 includes Washington Avenue Bridge over the Mississippi River, West River Road and East River Road.
[4] Civil East, Segment 4A includes demolition of former Bremer Bank building and replacement of skyway.

Downtown East / Metrodome
West Bank
East Bank
Segment 4
(May 2011 - November 2011)
Stadium Village
29th Ave
St. Paul
CIVIL
EAST
CONSTRUCTION
Westgate
CIVIL
WEST
CONSTRUCTION
Cedar - Riverside
Minneapolis
Mississippi River
Franklin Ave
TH 280 Bridge
(March 2011 - November 2011)
Legend
Civil West
Segment 1 (December 2010 - November 2011)
Segment 2 (September 2010 - November 2012)
Segment 3 (May 2011 - August 2012)
Segment 4 (May 2011 - November 2011)
Segment 5 (March 2012 - November 2012)
Civil West
Segment 5A (May 2011 - August 2011)
Civil East
Segment 1B (March 2011 - November 2011)
Segment 1A (Station Work)
(March 2011 - December 2012)
Hiawatha LRT
Hiawatha LRT Station
CCLRT Station
Figure 2-2
Construction Segments - Downtown Minneapolis and University / Prosepct Park
Construction - Related Impacts on Business Revenues
Environmental Assessment
Metropolitan Council
Central Corridor



Note: Figure 2-3 illustrates Segment 1B and Segment 1C trackway construction. Civil East Segment 1 (Emerald to Hamline) heavy construction is scheduled from March 2011 to November 2011. (See Table 2-1.)

St. Paul
Hamline Ave
Lexington Pkwy
Victoria St
Dale St
Western Ave
Rice St
Capitol East
10th St
Minneapolis
Legend
Civil East
Segment 1C (March 2011 - June 2012)
Segment 2 (November 2011 - November 2012)
Segment 3 (July 2010 - November 2011)
Segment 4 (June 2011 - November 2012)
Segment 2A (Station Work) (November 2011 - April 2013)
CCLRT Station
Figure 2-4
Construction Segments - Midway East and Capitol Area
Construction - Related Impacts on Business Revenues
Environmental Assessment
Metropolitan Council
Central Corridor

Legend

Civil East

- Segment 2 (November 2011 - November 2012)
- Segment 3 (July 2010 - November 2011)
- Segment 4 (June 2011 - November 2012)
- Segment 5 (March 2011 - November 2011)
- Segment 2A (Station Work) (November 2011 - April 2013)
- CCLRT Station

Figure 2-5
Construction Segments - Capitol Area and Downtown St. Paul

Construction - Related Impacts on Business Revenues
Environmental Assessment

Metropolitan Council
Central Corridor

3.0 EXISTING ECONOMIC CONDITIONS AND DEMOGRAPHICS

Chapter 3 presents a summary of existing economic characteristics of the Minneapolis-St. Paul-Bloomington 13-county MN/WI Metropolitan Statistical Area and general characteristics of existing businesses along the Central Corridor LRT. Chapter 3 also presents project area demographics as described in more detail Section 3.8 of the FEIS.

3.1 Overview of Existing Economic Conditions

This section provides a summary of existing economic characteristics within the Minneapolis-St. Paul-Bloomington MN-WI Metropolitan Statistical Area and general characteristics of existing businesses along the Central Corridor LRT.

3.1.1 Minneapolis-St. Paul-Bloomington Metropolitan Statistical Area Economic Indicators

The Central Corridor LRT is located within the Minneapolis-St. Paul-Bloomington MN-WI (Minnesota-Wisconsin) Metropolitan Statistical Area (MSA). The Minneapolis-St. Paul-Bloomington MN-WI MSA is comprised of a total of 13 counties: 11 counties in Minnesota (Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, Sherburne, Washington, and Wright) and 2 counties in Wisconsin (Pierce and St. Croix). A sample of economic indicators for the Minneapolis-St. Paul-Bloomington MN-WI MSA region from years 2001 through 2009 are presented in Table 3-1. Data available regarding MSA Gross Domestic Product (GDP), Per Capita Personal Income and Median Household Income show steady increases in the past decade while unemployment rates have varied within a range between 3.5% and 5.1%. Indicators for 2009 show a slight decrease in GDP and an increase in the unemployment rate, likely reflecting impacts from the current recession. While the MSA is significantly larger than the Central Corridor LRT project area, these indicators suggest that the project area lies within a strong, stable regional economy.

Table 3-1. Minneapolis-St. Paul-Bloomington Metropolitan Statistical Area Economic Indicators

Economic Indicators	Year								
	2001	2002	2003	2004	2005	2006	2007	2008	2009
GDP for MSA ($ billion) (1)(2)	$144B	$149B	$156B	$167B	$176B	$182B	$189B	$192B	$189B
Per Capita Personal Income (2)	$37,901	$38,467	$39,534	$41,613	$42,721	$44,975	$46,870	$47,653	--
Median Household Income (3)	--	--	--	--	$65,803	$66,454	$66,352	$65,862	--
Unemployment Rate (%) (4)	3.5%	4.4%	4.7%	4.4%	3.9%	3.8%	4.3%	5.1%	7.8%

(1) Gross Domestic Product (GDP) for Metropolitan Statistical Area (MSA) in billions of current dollars.
(2) Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Accounts.
(3) Median household income in 2008 dollars. Metropolitan Council. *MetroStats*. October 2009.
(4) Source: U.S. Department of Labor. Bureau of Labor Statistics.

3.1.2 Central Corridor LRT Business Characteristics

The Central Corridor LRT alignment extends between downtown St. Paul and downtown Minneapolis largely along University Avenue. Both downtown areas can be described as dense, urban commercial environments characterized by multi-story office/retail (3-50 stories) buildings. University Avenue commercial areas are less dense, with buildings typically 1-3 stories tall, and intermixed with residential and institutional uses. Types of businesses in the project corridor range from small service uses, restaurants, and retail storefronts to "big box" stores and large department stores. Business ownership ranges from individually or family-owned single establishments, to local companies with multiple Twin City outlets, to national chains.

U.S. Census information for 2008 documented over 4,000 establishments in the 8 zip codes surrounding the project corridor outside of the downtown areas.[3] Business establishment size, as measured by number of employees, was also identified along the project corridor using U.S. Census Bureau data at the zip code level. The number of business establishments within each zip code, including the number of business establishment by size (i.e., number of employees) is presented in Table 3-2. A large majority (greater than 75 percent) of business establishments located with zip codes corresponding to the Central Corridor LRT are establishments with fewer than 20 employees.

Table 3-2. Central Corridor LRT Business Establishments

Business Establishments	Central Corridor LRT Zip Codes (1)								
	Minneapolis Zip Codes				St. Paul Zip Codes				TOTAL
	55415	55454	55455	55414	55114	55104	55103	55101	
Number of Establishments (2)	325	164	30	801	563	1155	340	765	4143
Establishments with 1 to 19 employees (2)	266	127	24	627	428	954	270	635	3331
Establishments with ≥ 20 employees (2)	59	37	6	174	135	201	70	130	812

(1) Does not include zip codes in downtown Minneapolis along the shared segment of the Hiawatha LRT which has already been completed.
(2) Source: U.S. Census Bureau. 2008 Zip Code Business Patterns (NAICS).

The Central Corridor Funders Collaborative, a coalition of local planning groups concerned with the community and economic health of neighborhoods adjacent to the project corridor, have assembled "indicators" to provide an information baseline against which changes in the residential and business community can be measured.[4] The indicators identified for the "Strong Local Economy" outcome include share of business establishments by top industries and business establishments by size with data sources identified as the U.S. Census at the zip code

[3] U.S. Census Bureau. 2008 Zip Code Business Patterns (NAICS). Zip code area is the smallest level of geography for which information regarding business establishments is provided. Data provided at the zip code level is limited to the number of establishments, the number of employees per establishment, and aggregate payroll.
[4] Wilder Research, "Central Corridor Key Outcomes: Baseline Indicators Report," March 2011, available at http://www.wilder.org/reportsummary.0.html?tx_ttnews%5Btt_news%5D=2393.

level.[5] Other economic indicators identified include Central Corridor LRT construction work hours performed by women, Central Corridor LRT construction work hours performed by minorities, share of Central Corridor LRT contracts paid to disadvantaged businesses, and low- or moderate-income employed residents who work within a 45-minute transit commute shed.

However, the geographic area covered by these eight zip codes extends far beyond the project corridor. The number of business establishments adjacent to the project corridor has been estimated by local planning groups at approximately 1,100 outside of the downtown areas, a majority of which are reported to be small businesses with revenues less than $2 million per year[6]. Other sources verifying the data provided by local planning groups regarding the number, characteristics, and annual revenues of businesses adjacent to the project corridor are not readily available.

The Metropolitan Council conducted a survey of businesses along the alignment to determine whether the businesses were owned by members of minority groups. FTA analyzed the data and found that the survey established that the businesses directly on the alignment include 162 Asian owned businesses (15.1%), 51 Black or African American owned businesses (4.8%) and 4 Hispanic or Latino owned businesses (0.4%), representing slightly over 20% in minority owned businesses compared to the alignment area minority population of 46%. Therefore, there is no disparate or disproportionate impact to minority owned businesses along the corridor.

3.2 Project Area Population Demographics

Similar to the Project Corridor's commercial characteristics, residential population within and adjacent to the corridor is very diverse. Total population and percent of total population by identified racial or ethnic heritage for Hennepin County, Ramsey County, and a one-half mile study area adjacent to the Central Corridor LRT are identified in Section 3.8.4.1 of the FEIS. The following discussion from the FEIS describes the racial and ethnic minority composition of the Central Corridor LRT study area.

> [I]n 2000 there was a small majority of non-Hispanic white persons living in the Central Corridor study area. However, ethnic minority populations comprise a significant portion of study area population (46 percent), and account for a higher total minority population percentage than Hennepin County (19 percent) and Ramsey County (23 percent) (excluding the Hispanic or Latino category). Within the study area, the Black or African-American population represents the largest ethnic minority group next to non-Hispanic Whites with the Asian community being the next largest ethnic community group.
>
> Although distributed throughout the study area, the highest concentrations of minority populations are located along University Avenue from Rice Street to Snelling Avenue. Minority populations also represent a significant portion of the downtown St. Paul population. In Minneapolis, the Cedar-Riverside neighborhood located just east of Downtown Minneapolis is home to a concentration of ethnic minorities, comprised primarily of recent Somali and East

[5] U.S. Census data typically lags two years behind data collection. 2008 data is currently available; 2009 data at the zip code level will be available in August 2011.

[6] U-PLAN Community Studio, "University Avenue Business List, July 2010" 712 University Avenue, Suite 105, Saint Paul, MN 55104

> African immigrants. As shown by the data, minority populations of African-Americans and Somali or other East African immigrants are also higher near the Hubert H. Humphrey Metrodome and in the Elliot Park neighborhood of Minneapolis. Native American populations are highest along Franklin Avenue between the Franklin Avenue Hiawatha LRT station and Interstate 35W.

Income characteristics for Hennepin County, Ramsey County, and a one-half mile study area adjacent to the Central Corridor LRT are identified in Section 3.8.4.2 of the FEIS. The following discussion from the FEIS describes the distribution of median household incomes within the one-half mile study area adjacent to the Central Corridor LRT.

> Areas with significantly lower incomes are predominantly located north, south, and west of downtown St. Paul. Along the corridor, median household incomes are also relatively low in the Midway East segment, with incomes moderately rising in the Midway West segment. Low-income populations are also located on the southeast side of Downtown Minneapolis, particularly the Elliot Park neighborhood south of the Downtown East/Metrodome Hiawatha LRT station. Median household incomes rise in select Census block groups paralleling the river in Downtown Minneapolis, an area that has recently seen significant residential and some commercial development. Incomes are lowest surrounding the University of Minnesota. Relatively few households are located within the Census block groups that surround the University of Minnesota. The primary form of housing on the campus is dormitories populated by students for select periods of time. Students typically comprise a lower-income group, and that group is reflected in the data (Figure 3.8.3).

Additional social and demographic factors are described in Section 3.8.4.3 of the FEIS. The following list describes the select demographic characteristics (e.g., age, disability, language proficiency and access to a personal vehicle) within the Central Corridor LRT study area.

- [T]he 2000 Census indicates that the majority of residents in the study area are between the ages of 18 and 64.
- [P]ersons with disabilities are distributed throughout the study area, with some noticeable concentrations.
- Among households, the 2000 Census data indicate that 4,876 households within the study area Census block groups are categorized as linguistically isolated or speak English as a second language.
- According to 2000 Census data for the study area, within one-half mile of the proposed LRT alignment, approximately 15,502 households are without an automobile, or approximately 31 percent of all households in the study area.

Environmental justice findings related to the implementation of the Central Corridor LRT are addressed in Section 3.8 of the FEIS. Minority and low-income populations are found within the Central Corridor LRT project area. Adverse impacts, off-setting benefits, and mitigation for adverse effects not offset by project benefits are committed to by the Metropolitan Council. Please refer to Section 3.8 of the FEIS for a complete discussion of the environmental justice analysis and conclusions.

4.0 CONSTRUCTION-RELATED IMPACTS ON BUSINESS REVENUES AND MITIGATION

Chapter 4 summarizes potential, short-term impacts to business revenues during construction of the Project, and describes mitigation measures to help reduce impacts to affected businesses during project construction.

4.1 Incomplete or Unavailable Information

As noted in the Volpe Center *Technical Report on the Potential Impacts on Business Revenues During Construction of the Central Corridor Light Rail Project* ("Technical Report") (see Appendix A), lack of available information based on generally accepted scientific approaches or research methods makes it difficult to reliably predict potential adverse impacts to business revenues for any one business caused by construction of the Project. Due to this limitation, the following discussion is included in this Supplemental EA in accordance with Council on Environmental Quality (CEQ) regulations (40 CFR 1502.22(b)) regarding incomplete or unavailable information. The limitations and uncertainty in predicting the potential loss of business revenues due to project construction are reported below as described in the Technical Report.

An exhaustive review of the peer-reviewed literature was conducted as part of the Technical Report. Prior studies recognize that numerous factors other than construction activities can impact revenues of an individual business, including external economic factors, unemployment rates, and world events. The ability to control for these external factors is limited. Further, accurate data documenting long-term revenue patterns, and the factors that influenced revenues, is not readily available. As a result, predicting the amount of lost business revenue for any given business or market segment is highly uncertain and speculative. Further discussion of this issue can be found in Chapter 3 of the Technical Report.

4.2 Construction-Related Potential Impacts on Business Revenues Technical Study

This section summarizes the results of the Technical Report, which can be found in Appendix A.

4.2.1 Potential Impacts

Project construction activities can result in short-term, temporary impacts to businesses. The Technical Report identifies seven impact categories: temporary impediments to access by pedestrians and vehicular traffic; temporary loss of parking; utility shut-offs; increases in noise levels and vibrations; increases in dust and dirt; and temporary visual impacts. These short-term, construction-related impacts are qualitatively described below.

- **Impacts to Pedestrian Access:** Impediments to pedestrian access will occur mainly at the beginning of the construction period within each phase, when one side of the road is demolished to build new sidewalks and roadway. During this period, pedestrians will need to access the building from side streets or use temporary sidewalks created by the contractor.

- **Impacts to Vehicle Access:** Restrictions to vehicle access will occur mainly at the beginning of the construction period within each phase, when one side of the road is demolished to build new sidewalks and roadway. Construction can impact vehicular access to businesses in two ways: it can increase congestion on the roadway and block access to entryways. Increased congestion on the roadway can lead to potential customers avoiding the location, effectively reducing traffic to the business, and congestion can also serve to block access, as it becomes difficult to turn in or out of the building's parking lot. Access can also be blocked if roadways or intersections are closed for a length of time. These effects can be more severe if the customers are uninformed of the situation and unexpectedly find themselves unable to access a business from the direction they are approaching, potentially causing them to take their business elsewhere.

  In addition to the impact to customers, constraints on vehicle access and congestion hinder delivery of goods to the stores and restaurants. Impacts to vehicle access may cause businesses to reduce or relocate services during the period of roadway reconstruction. Businesses which rely on pick-ups and deliveries at specific times may be affected by traffic conditions.

- **Impacts on Parking:** Parking along the corridor alignment will be lost during construction due to roadway reconstruction, and side street parking may be impacted on days when intersections are closed for construction activities. The effects of this temporary loss of parking may impact smaller establishments without access to off-street parking more than businesses that have off-street parking lots.

- **Impacts due to Utility Shut-Offs:** Business impacts due to utility shutoffs usually have a fairly short duration and can be scheduled around business hours. Utilities located along the corridor include gas, water, electricity, and internet service, and all will need to be relocated during at least one phase of the project. There are approximately four hotels and bed and breakfasts adjacent to the alignment, all of which potentially need access to at least water and electricity 24 hours a day. Additionally, restaurants and food stores would need advanced warning of shutoffs to ensure adequate food storage and safety measures are put in place. Loss of power or water could impact personal care services and manufacturers. Professional services businesses tend to keep regular business hours, so that utility shutoffs could be adjusted to minimize impacts.

- **Impacts due to Noise and Vibrations:** Noise and vibrations from construction and truck traffic can create an unpleasant shopping environment during the duration of construction. These impacts may be more significant during the beginning of the construction phase, when dirt and debris from demolition are removed and replaced with new materials.

- **Impacts due to Dust and Dirt:** Reconstructing the road and sidewalks will generate fugitive dust and dirt which may limit outdoor storage of goods for sale, discourage outdoor dining, and require additional interior and exterior cleaning of businesses.

- **Visual Impacts:** Construction of temporary fencing, equipment and materials storage and construction activities may obstruct business signage making businesses difficult to find and/or lead customers to believe that businesses have closed during the

construction period. This problem would largely affect "impulse-stop" businesses, such as retail shops, restaurants, and food stores.

4.2.2 Economic Impacts

The Technical Report notes that no previous studies have directly connected the potential impacts qualitatively described in Section 4.2.1 to quantitative estimates of business revenue losses during construction. Further, the Technical Report outlines the challenges of preparing the "ideal" predictive analysis of construction impacts on sales revenues, noting that many market variables would need to be accounted for to isolate impacts resulting from the construction impacts discussed above and that measurable data for these variables is difficult to obtain. (See Section 3.3 of the Technical Report.) The Report concludes that "[w]ith the current state of knowledge about construction impacts on business revenue, developing reliable point estimate of such transit construction impacts is infeasible to implement for a project-level analysis. ... As a result, predicting the amount of lost business revenue for any given business or market segment is highly uncertain and speculative.[7]"

In the absence of substantive data available to assess loss of revenue directly applicable to construction-related environmental impacts on a light rail transit project in an urban setting, the analysis described in the Technical Report utilized previously published studies as the framework for defining the potential loss of revenue for the corridor, with the caveat that the assessment is an estimation at best. The Technical Report notes that comparison between the four studies identified in a comprehensive literature search to the Central Corridor project is difficult, as none represent similar corridor characteristics or project elements to the Central Corridor project.[8] The studies also employed a wide range of sophistication in their data collection and analysis techniques, providing little guidance as to a broadly accepted approach to the issue.

Consequently, the studies identified during the literature search were reviewed to determine if any would provide a framework for acceptable estimates of revenue losses. The De Solminihac and Harrison (1993) study analyzing impacts to business revenues during the construction of the Southwest Freeway in Houston, Texas, project was selected as the best predictive approach because the context was the most analogous to the Central Corridor Project, and used the strongest methodological approach. The authors examined ten categories of retail businesses using statistical techniques to compare actual revenues during construction with what might otherwise be anticipated in the corridor. They also compared the results for the construction-affected businesses to the results for a similar corridor not impacted by the construction to include the effects of the economy. The authors concluded that four retail categories – general merchandise, food stores, automotive outlets, and home furnishings – were adversely affected by the construction. Revenue losses for these categories of businesses ranged from 17% to 37%. The remaining six categories of businesses did not experience revenue losses. These findings were used to estimate the upper bound of average revenue losses for small businesses adjacent to the Central Corridor. Because of the large number of small businesses in the Central Corridor project area, and the vulnerability of small businesses in particular to withstand construction impacts to revenues, estimation of revenue losses focused on small businesses.

[7] Volpe Center. April 2011. *Technical Report on the Potential Impacts on Business Revenues During Construction of the Central Corridor Light Rail Project*, pg. 8

[8] Studies identified in the literature search are described in Section 3.2 (pg.4 – pg.7) of the Technical Report.

The Technical Report utilized the U-Plan dataset to identify business types and small businesses along the project corridor.[9] The U-Plan dataset initially contained more than 1,400 business listings as of July 2010. The U-Plan dataset was validated against information from project area business associations, resulting in 1,272 business listings as of December 2010. This dataset was next compiled with available annual revenue data and current NAICS information. There were 947 businesses along the project alignment with revenue data and current NAICS information. Using this dataset, businesses were then sorted by the ten categories used in De Solminihac and Harrison (1993). Section 3.6 and 3.7 of the Technical Report describes how businesses were sorted into categories used in De Solminihac and Harrison (1993) based on NAICS codes. Table 4-1 lists the business types represented along the project corridor corresponding to the categories used in De Solminihac and Harrison (1993).

Table 4-1. Business Classification

Business Type (1)	Percent Revenue Loss from the Literature	Number of Businesses	Percent With Annual Revenue Less than $2 million	Number of Businesses with Revenue Less than $2 million (Small businesses)
Food Stores	37%	25	76%	19
General Merchandise	28%	6	33%	2
Furniture Stores	17%	3	100%	3
Automotive Retail	32%	53	81%	43
Building Materials	0%	3	67%	2
Liquor Stores	0%	5	60%	3
Clothing	0%	31	94%	29
Restaurants	0%	93	99%	92
Drug Store	0%	15	67%	10
Miscellaneous Businesses (2)	0%	713	81%	576
Total # of Businesses	--	947	82%	779

(1) Does not include businesses located in downtown St. Paul and downtown Minneapolis (shared segment of the Hiawatha LRT which has already been completed).

(2) Includes all businesses in the sector categories listed in Table 2 of the Technical Report, with the exception of the Retail and Accommodations and Food Services sectors. 20 business establishments are miscellaneous retail shops, such as book or music stores, and the 6 hotels from the Accommodations category.

As shown in Table 4-1, the four categories found to be most sensitive to construction impacts in the De Solminihac and Harrison study represent approximately 9% of the businesses (87 businesses) along the project corridor. The De Solminihac and Harrison study categories of building materials, liquor stores, clothing, restaurants, and drug stores represent approximately 16% of the businesses (147 businesses) along the project corridor. The remaining 713

[9] The U-Plan dataset includes business listings outside of the project corridor, but does not include business listings within downtown St. Paul and downtown Minneapolis.

businesses (75% of the businesses) were classified under the miscellaneous retail category similar to the De Solminihac and Harrison study.

The table also indicates a majority of the businesses are small businesses with revenues less than $2 million per year. Based on a year 2010 database of business revenue data, 779 businesses along the Central Corridor LRT would be considered small businesses, of which 67 businesses represent the four business categories (general merchandise, food stores, automotive outlets, and home furnishings) used in the De Solminihac and Harrison (1993) study.

The aggregate business revenue loss for all small businesses included in the database was estimated using the percent loss found in each category.[10] The losses were totaled across the categories to get the total revenue lost by small businesses on the corridor ($13,935,430) and then divided by the total small business revenue ($487,805,000) yielding the upper bound average percentage loss of 2.85%.

The Technical Report concluded that there are a number of external factors, other than construction activities, that can impact revenues of an individual business. In light of the information presented in the technical report and the applicability of the methodology used in the Technical Report to provide any reliable estimate of prospective potential loss of revenues caused by the construction phase of the project, FTA has decided not to adopt the 2.85% average developed in the Technical Report to predict the total average business loss to individual businesses. The basis for this decision is more fully set forth in Section 5.2 of this Supplemental EA.

4.3 Mitigation Program Overview

This section discusses the mitigation approach and describes mitigation measures to help reduce short-term impacts to business revenues during project construction.

4.3.1 Mitigation Approach

As previously discussed, studies of construction-related impacts on business revenues have identified a number of factors that contribute to loss of business revenue during project construction including loss of access, loss of parking, and reduced traffic flow. These studies also recognize that there are many factors unrelated to construction activity that may also impact business revenues, including local and global economic factors, unemployment rates, seasonal businesses, etc. Indirectly, potential customers also may be discouraged from patronizing businesses due to both real and perceived inconvenience factors including congestion, confusion, safety concerns, noise, and dust.

[10] For example, the combined revenue of the 43 small automotive businesses was $27,051,000. The sums for each category were then multiplied by the percentage impacts from De Solminihac and Harrison (1993) to calculate the predicted revenue loss. To continue the example, automotive outlets were found to lose 32% of revenue in the De Solminihac and Harrison study, so $27,051,000 was multiplied by 0.32 to get $8,656,320, the estimated revenue loss for automotive outlets.

While many of these factors cannot be completely avoided during construction activity, studies referenced in the Technical Report identify a number of suggested mitigation measures to counteract loss of business revenue. These include:

- Business counseling[11]
- Adjustments to construction phasing[11]
- Traffic management[11]
- Public relations and marketing activity[12]

In addition, the Minnesota Department of Transportation ("Mn/DOT") recommends mitigation measures as best practices for transportation projects.[13] The following is a list of the relevant mitigation strategies identified by Mn/DOT applicable to construction of a light rail transit project and how the Central Corridor Project sponsors propose to address that mitigation strategy.

1. **Small business outreach must be emphasized as an integral part of a broader public participation process.** While greater emphasis on business outreach is necessary, the outreach must be conducted as part of an integrated public outreach program…

   Central Corridor project response:

   - During the early phases of Central Corridor LRT project development, a Business Advisory Committee was formed to provide input into the project, including the siting of traction power substations, reconstruction of the road from building face to building face (including sidewalk reconstruction), design of streetscaping (planting trees, street furniture, lighting, etc.) and other design elements.
   - Business outreach was part of a broader program of public involvement aimed at engaging all project stakeholders. This program of outreach substantially influenced the project and was successful at reaching a broad group of people.
   - Since December 2006, the Metropolitan Council has had a number of Outreach Coordinators, including staff fluent in languages commonly spoken along the corridor, such as Hmong, French, and Spanish. The Outreach Coordinators are full-time staff and are available to work with businesses, including minority-owned businesses, interest groups and the public along the corridor to provide information and assistance regarding the construction of the project.

[11] De Solminihac, Hernan E. and Robert Harrison, "Analyzing Effects of Highway Rehabilitation on Businesses" Transportation Research Record 1395, Transportation Research Board of the National Academies, Washington, D.C., 1993, pp 137-143.
[12] University of Wyoming, Department of Civil and Architectural Engineering. *Highway Construction Related Business Impacts: Phase 3 Effort for the Town of Debois.* U.S. Department of Transportation – Federal Highway Administration. March 2008.
[13] CH2MHill for the Minnesota Department of Transportation, "Report on Mitigation of Transportation Construction Impacts". Final Report. February 2009. Note that Item 2 is not listed here as it pertains to a Mn/DOT specific program not applicable to the Central Corridor Project.

3. Important business issues need to be identified early in project development

a. Consultation with local units of government and business community representatives to identify businesses surrounding the project, potential impacts to small businesses (e.g., parking, traffic, and access), and to discuss potential mitigation measures;
b. Development of a packet for businesses that will include project information (e.g., nature, extent, and timing of construction and anticipated changes in parking, traffic, and public access), a transportation agency project contact; and
c. Determine a list of project-specific area business development organizations that may offer support and resources to affected businesses.

Central Corridor project response:

- The Metropolitan Council has been in close consultation with all local units of government along the Central Corridor LRT alignment. In December 2006, the Metropolitan Council formed a Project Advisory Committee (PAC), including representatives from the cities of Minneapolis and St. Paul, Hennepin and Ramsey counties, Mn/DOT, and the University of Minnesota. The PAC has been meeting regularly since December 2006 and will continue to meet through the duration of Central Corridor construction.
- The Metropolitan Council partnered with the City of St. Paul to investigate options for mitigating the loss of on-street parking along the corridor during construction. It should be noted that loss of on-street parking was in some part related to mitigating for another impact noted by residents and community members in the environmental justice areas of the Corridor, specifically, the desire for pedestrian crossings of University Avenue to avoid loss of community cohesion.
- As referenced above, the Metropolitan Council has engaged in a rigorous program of outreach targeted at reaching all Corridor stakeholders since taking over as the lead planning agency in June 2006. A significant component of that outreach has been working with the business and property owners along the alignment to discuss issues related to design, access during construction, parking, and construction-related concerns.
- The project web site (www.centralcorridor.org) contains a wealth of information on the project, with a focus on construction information and advisories. Information includes maps and text describing the location and impacts of expected construction activities, including road and sidewalk closures, bus stop and route changes, and other changes in access that may affect workers and patrons of businesses. This information is updated regularly to reflect progress of construction activities.
- The Metropolitan Council partnered with the Business Resources Collaborative with funding provided by the Central Corridor Funders Collaborative to prepare the "Ready for Rail" initiative, which includes information available online and printed packets of material. The "Ready for Rail" program includes information on the Business Resources Collaborative, which is a partnership of business coalitions, nonprofit community developers, and local governments that bridges various community-led planning efforts addressing business and economic development in

the Central Corridor. This packet was also made available in Somali, Vietnamese, Hmong, and Spanish.

4. **Identify opportunities for partnership with a greater depth of resources, including economic development offices, dynamic local business leaders, or local government agencies.** Every project has unique technical issues but also unique human resources, personalities, and organizations. Taking advantage of the ideas, services, and relationships that these resources can offer will help businesses manage the challenges of construction. Besides offering greater knowledge of site-specific issues, their presence often serves as a moderating force in public outreach that enables a shared understanding of project impacts.

   Central Corridor project response:

   - See the above discussion regarding the "Ready for Rail" program and Business Resources Collaborative.
   - The Metropolitan Council, the City of St. Paul, and the Central Corridor Funders Collaborative have all contributed funding to the City of St. Paul's Business Support Fund ("Business Support Fund".) The purpose of the Business Support Fund, as described in the Joint Powers Agreement between the Metropolitan Council and the City of St. Paul, is identified below. More information is provided in Section 4.3.2 of this Supplemental EA.

     > The purpose of this Agreement is to help implement a support program ("Program") for small businesses located along the CCLRT corridor that may experience disruptions from construction activities associated with the CCLRT Project. The program is intended to help provide a modest "safety net" for small businesses that undertake business planning and prepare in advance for the CCLRT Project but still may be adversely affected by construction activities, and to provide some incentives for those businesses to continue operating at their existing locations after construction is completed and the CCLRT is operating.

   - Metropolitan Council's Outreach Coordinators work closely with business organizations and chambers of commerce in the corridor to share information and coordinate activities in support of corridor businesses.

5. **Enhance engagement of the construction contractor as an important resource for business communication and relationships.** The construction contractor offers a tremendous resource that can positively or adversely affect the effectiveness of business outreach. As a result of their visibility in the construction area, contractors oftentimes become the face of a project in the eyes of the public. ... Transportation agency staff may consider including contract provisions related to contractor participation or communication in projects where small businesses will be impacted. This may include a requirement that the contractor provide a business liaison to communicate with business operators and resolve issues on a regular basis (e.g. weekly) or as need may arise.

Central Corridor project response:

- Construction contract bid documents for construction of the Civil East (all LRT trackway and station construction in St. Paul) and the Civil West (all LRT trackway and station construction in Minneapolis) segments included measures to either require or to encourage the contractor to take measures to avoid business impacts during construction.
- One entire section of the construction bid documents was solely devoted to Public Involvement (Section 01 31 20 – Public Involvement). This included requirements to submit a Public Involvement Plan, a monthly Community Involvement Report (submitted with Application for Payment), and an employee parking plan minimizing use of existing parking currently needed by local residents and businesses. The contract also requires the designation of a Contractor Community Relations Leader who is required to attend meetings with the public, as specified, and to provide support to the Metropolitan Council's Community Outreach Staff. Under Community Impact Mitigation, the Contractor is required to maintain access (parking, deliveries, and pedestrian) and participate in meetings with affected property owners. The Contractor is also required (under Community Impact Mitigation) to develop access plans for business and residents on each block and to provide maps showing existing and planned patron, delivery, and resident access during any construction period. The access plans are to include times of business operation and deliveries.
- Contract bid documents for Civil East and Civil West also provide for a Contractor Incentive Allowance (Section 01 21 50 – Incentive Allowance). This document describes the Construction Communication Committees (CCC's) established for the contract and the ways in which their input will be used to evaluate Contractor responsiveness to public and business concerns and to award the incentive allowance based on Contractor performance, as ranked and evaluated by the CCC's.
- Contract Special Procedures include a comprehensive listing of community and other special events and require that the Contractor meet with event coordinators and other officials to submit plans and procedures associated with the protection of the public and the work during the events.

6. **Review policies for signing in construction zones…** Appropriate signing can benefit businesses but, at the same time, good signing practices must be maintained (for example, drivers can be overwhelmed with information from too many signs, spaced frequently). Signing practices that can be considered should be documented as well as those that should not be used. ...

   Central Corridor project response: The Civil West and Civil East construction packages include allowances for signage and requirements for signage of alternative access to businesses and traffic detours. The Council created a working group to provide guidance on the types of signage needed by businesses as well as to provide advice on the language and general placement of the signs. The working group started meeting in November 2010 and includes business owners, business organizations, Metropolitan Council Outreach Coordinators and construction staff, contractor's traffic and outreach staff, and city economic development and public works representatives.

7. **Evaluate the effectiveness of small business outreach activities.** Mn/DOT will regularly review business outreach efforts on a project-by-project basis and apply lessons learned to future projects. …

Central Corridor project response:

- The Metropolitan Council encourages people to provide feedback on communication and outreach efforts and frequently makes changes and additions based on input received. For example, early versions of the construction update newsletters included photos of construction. Community representatives suggested using the space in the construction updates to feature businesses or community events. This has been a key part of the construction updates.
- The Metropolitan Council is aware that the Central Corridor Funders Collaborative with the assistance of Wilder Research has prepared baseline indicators to measure progress toward key outcomes of the Central Corridor project. These indicators include several measures of a "Strong Local Economy" including number of businesses, share of business establishments by industry and number of employees by establishment. The Metropolitan Council endorses the efforts of the Central Corridor Funders Collaborative in this work and will review the annual indicator updates.

In addition to the key recommendations noted above, other Central Corridor LRT project efforts of note include the disadvantaged business enterprise (DBE) goals for contracting established by the Metropolitan Council; the LRT Works program, which seeks to pair tradespeople seeking employment with the Central Corridor LRT Contractors working on the Project; and the Ride-to-Rewards program, a business marketing/loyalty program which allows its members to accumulate points by riding buses and trains and by shopping at participating merchants, including Central Corridor businesses.

Based on these recommendations, proposed mitigation for the Central Corridor LRT Project focuses on: (1) minimizing the unavoidable impacts of construction activities; (2) proactive communications with both corridor businesses and the community to minimize confusion and uncertainty regarding the timing and duration of construction activities; (3) promotional and marketing activities to encourage patronage of businesses during construction; (4) technical assistance to business during the construction period to improve business management and customer communication skills; (5) financial assistance to businesses losing nearby on-street parking, and; (6) general financial assistance to small businesses affected by construction activities.

4.3.2 Mitigation Commitments

The following mitigation activities are already being implemented through commitments in contracts or agreements entered into by the Metropolitan Council for the Central Corridor LRT Project.

Construction Contract Requirements During Construction

Construction contract specifications will include measures to minimize construction-related disruptions to businesses, and will include incentives to encourage contractor cooperation with implementation of these measures. Construction contract specifications will also include measures to minimize construction-related noise, vibration, and dust impacts through construction practices. Elements identified in construction documents are summarized below.

- **Construction Access Plans:** A construction access plan will be developed for all Civil West and Civil East project segments to identify construction-related access concerns for each corridor business and document how business access will be maintained during construction. The construction contracts include $200,000 for construction access plans. A sample access plan is included in Appendix D. Access plans will contain maps showing existing and planned patron, delivery, and resident access during construction periods. Maps will also show times of business operations and deliveries. Businesses will be notified of any changes to access at least two weeks prior to the start of construction.

- **Contractor Incentive Program:** A contractor incentive program will be provided to encourage effective communication and cooperation between the contractor, businesses and residents. A Construction Communication Committee ("CCC") comprised of business owners, residents, and other stakeholders will be created for each outreach sector identified in contract documents. The CCC will meet every two weeks to vote on identified evaluation criteria measuring contractor efforts to minimize construction-related impacts and award quarterly incentives to contractors demonstrating compliance with these measures. The construction contracts include an $850,000 allowance (project-wide total) for the contractor incentive program. A sample CCC charter, evaluation process and evaluation form are included in Appendix E.

- **Special Events Plans:** Special events anticipated in the corridor during the construction period will be identified in the construction documents. Contractors will work with cities and community groups to coordinate construction activities with these events to protect the both the work site and the public, and minimize construction-related disruptions during scheduled special events.

- **Construction Best Management Practices (BMPs):** Contract documents will require best management practices (BMPs) to help minimize construction-related noise, vibration and dust impacts to businesses throughout construction.

Proactive communications by the Contractor

- **Contractor Community Relations Leader:** Construction contract specifications will include public outreach measures to assure that impacted businesses are fully informed about potential construction-related disruptions, which will also be included in the contractor incentive program described above. Each contractor will be required to provide a Contractor Community Relations Leader to establish and maintain communication between Community Outreach Coordinators, businesses and the public. Contractor Community Relations Leaders will communicate construction activities to the public and businesses, and respond to concerns from business owners during project construction. Contractor Community Relations Leaders will also attend weekly Construction Communication Committee meetings and monthly public involvement meetings.

Proactive communications by Metropolitan Council

Metropolitan Council has implemented a comprehensive public outreach program for the Project to assure that impacted businesses are fully informed about potential construction-related disruptions, including: temporary access modifications; parking availability; temporary street

closures; temporary utility shut-offs; abnormally loud construction noise or vibrations; and potential light/glare impacts associated with any necessary nighttime construction. The elements of the public outreach program are described below.

- **Construction Public Information and Communication Plan:** A Construction Communication Plan will be developed for all Civil West and Civil East project segments. A sample communication plan is included in Appendix F (Construction Public Information and Communication Plan, Capitol Area, August 2010). The Construction Communication Plan will contain the following elements:

  - Provide a 30-day notice of construction (includes private utility relocations and LRT construction).
  - Provide a 72 hour advance notice to businesses for utility shut-offs.
  - Provide a 24-hour construction hotline and project information line.
  - Communication with businesses through weekly meetings with Community Outreach Coordinators and the contractor's community relations leader as well as monthly public informational meetings.
  - Provide clear directional signage, variable message signs, and construction site information such as contact information and anticipated completion dates. The construction contracts will include a $200,000 allowance (project-wide total) to accommodate special signage. (See also Construction Signage.)
  - Produce communication materials such as weekly construction updates, construction update posters, and monthly newsletters ("Making Tracks" newsletter). Weekly construction updates will be distributed by email, news release and posted to the Central Corridor Project Website. (See Appendix B). Work with affected business owners to include information regarding their businesses in these construction update materials. (See also Construction Information Packet.)

- **Community Outreach Coordinators:** Community Outreach Coordinators will be provided by the Metropolitan Council throughout project construction. The Community Outreach Coordinators will act as a liaison between the public and local businesses, including minority-owned businesses, and project contractors. Community Outreach Coordinators will be available to answer questions and direct specific construction-related concerns back to project contractors and the Metropolitan Council. The Metropolitan Council has dedicated $4,000,000 to this effort, which includes salary and benefits for a fully staffed Central Corridor Outreach and Communications Team for the four years of project construction from 2010 through 2013.

- **Construction Information Packet:** Construction information packets will be developed for all Civil West and Civil East project segments. A sample construction information packet is included in Appendix B (Central Corridor LRT 2011 Construction Schedule. University Avenue: Emerald to Hamline). Construction information packets will include a description of upcoming construction activities, construction schedule, and construction staging. Construction information packets will also include contact information for Community Outreach Coordinators, business assistance, and local City contacts for non-construction related questions.

- **Construction Signage:** Construction signage will include "Open for Business" signage for all businesses that are subject to temporary changes in access. These signs will include an "open for business" statement, emergency contact information, and

Metropolitan Council contact information. Approximately four signs will be required per block of construction, and signs will be in place until substantial completion of construction of the surface elements of the project.

Measures to assist businesses losing nearby on-street parking

- **Construction Employee Parking Plan:** Construction contracts will require contractors to minimize use or available parking by developing an employee parking plan to direct employee and construction vehicle parking away from business and residential areas. Contractors are responsible for identifying parking off-site and transporting workers to the work site if necessary. Construction vehicles will be parked within delineated construction zones and work material will be kept out of existing parking areas.

- **Neighborhood Commercial Parking Program:** The City of St. Paul will fund and administer a program to address the loss of parking during and after project construction by providing financial assistance to improving off-street parking. The program provides low-interest loans of up to $25,000 to individual businesses that can be used for facilitating agreements with other businesses for shared parking or limited construction improvements to improve the access or parking efficiency (e.g., driveway grades, more efficient uses/physical reconfiguration of existing parking). As of April 2011, the Neighborhood Commercial Parking Program included $2.1 million in loan funds.

- **Alley Improvements Program:** The City of St. Paul is prioritizing a list of alleys to be re-paved and refurbished providing enhanced access to off-street parking to mitigate parking loss during Central Corridor LRT construction. Many alleys behind Central Corridor businesses are in extremely poor condition (large potholes, broken pavement, etc.). Improving these alleys will make the off-street parking behind Central Corridor businesses more easily accessible for customers and mitigate some effects of loss of on-street parking during construction. A total of $350,000 has been dedicated in the City of St. Paul's Capital Improvement Budget to complete this work.

Technical and financial assistance to businesses affected by construction activities

Business programs have been developed to provide measures to assist businesses impacted by construction of the Project. These programs have been identified to specifically assist small businesses that may be impacted by temporary vehicular and pedestrian access changes, traffic detours, or other construction-related impacts (e.g., noise, dust). The business assistance programs include the following measures.

- **Business Support Fund:** The Business Support Fund program provides low- or no-interest forgivable loans and grants with no obligation to repay to small businesses (gross annual sales less than $2 million) that may experience construction-related disruptions. The Business Support Fund includes $4.0 million in loan funds ($2.5 million from the Metropolitan Council; $1.0 million from the City of Saint Paul and $0.5 million from the Central Corridor Funders Collaborative). $3.5 million of the funds will be available as forgivable loans; $0.5 million will be available as grants[14]. Individual small businesses whose business focuses on retail sales would be eligible for loans of up to $10,000. Loans could be used for basic business expenses including taxes,

[14] These changes (increase in total funds, change from non-forgivable to forgivable loans) will necessitate an amendment to the Joint Powers Agreement between the City of St. Paul and Metropolitan Council.

rent/mortgage, utility or personnel payments. The Business Support Fund is being administered by the City of St. Paul Housing and Redevelopment Authority ("HRA").

Eligibility requirements for the Business Support Fund, as defined in the Joint Powers Agreement between the Metropolitan Council and the City of St. Paul HRA, are identified below. The Business Support Fund program will be available to small businesses that:

(1) Qualify as a "small business" as that term has been defined by the Saint Paul HRA and others involved in the development and implementation of the Program;
(2) Are located in close proximity to the CCLRT line (using standards established by the Saint Paul HRA and others involved in the development and implementation of the Program) and can demonstrate a clear, significant new barrier to access during construction; and
(3) Prequalify by successfully participating in appropriate training or attending meetings with a business consultant and meeting other Program requirements developed by the parties and others involved in the development and implementation of the Program. Businesses participating in the bridge loan and grant component of the Program are excluded from this requirement.

- **Business Improvement / Expansion Assistance:** The Business Improvement/ Expansion Assistance program includes $850,000 available in loan, grant and Program Related Investment (PRI) funds to assist targeted businesses with significant growth opportunities and/or that are in a position to buy or improve their own buildings with the goal of reinforcing the importance of locally- and minority-owned businesses to the Central Corridor. This program will be administered by the Neighborhood Development Center.

- **Business Resources Collaborative (BRC):** The Business Resources Collaborative (BRC) is an informal coalition that provides support and technical assistance to businesses affected by the Project. The BRC has received $240,000 in grants in support of its operations. The BRC provides the following services to businesses along the Central Corridor:

  - Provide business consulting and technical assistance (e.g., business and real estate development loan assistance; parking; energy efficiency programs; advocacy, information and referrals).
  - Provide and maintain a business resource/information clearinghouse (http://www.readyforrail.net).
  - Provide a grassroots "buy local" marketing campaign to help provide customers to Central Corridor businesses during project construction.

- **University Avenue Business Preparation Collaborative (U7):** The University Avenue Business Preparation Collaborative (U7) was created by community development organizations to provide marketing support, on-site business consulting, resource center and planning center, small business workshops, grants for marketing and façade improvements, microlending and financing support to small businesses along the Central Corridor. U7 has received a total of $675,000 in grants in support of its operations ($400,000 from Central Corridor Funders Collaborative, $150,000 from the F.R. Bigelow Foundation, and $125,000 from the St. Paul Foundation).

- **Great Streets and Business Association Assistance Program:** The City of Minneapolis will contribute a total of $210,000 for business technical and marketing support.

University Avenue / Cedar Riverside Betterments

Adding amenities and improving the aesthetics of commercial areas will attract customers to the Central Corridor project area. The following activities have been funded and may occur both during and after the construction period.

- **Improved Street Lighting / Trees / Street Furniture:** The City of St. Paul has contributed additional funds to the project in the amount of $650,000 for aesthetic improvements and amenities, including street lighting, trees, and street furniture within the public right of way, to enhance the pedestrian character of University Avenue and downtown business districts.

- **Business Façade Improvement Financing:** The City of Minneapolis has committed $150,000 for business façade-improvement matching grants to businesses along the project corridor.

Promoting Business Access

Additional measures have been undertaken to encourage patronage of Central Corridor businesses.

- **Additional Business Signage:** The Metropolitan Council will employ movable variable message signs during construction to assist travelers in accessing businesses in response to day to day changes in construction activities. A total of $50,000 will be allocated by the Metropolitan Council for this additional business signage.

- **Cooperative Advertising and Transit Fare Passes:** Metro Transit will provide $250,000 in marketing support in the form of cooperative advertising and fare passes to businesses for distribution to customers.

4.3.3 Value of Mitigation Commitments

The above mitigation commitments represent a substantial investment of financial resources as well as staffing commitments to communications activities and inspection activities to assure contractor compliance. The following tables summarize direct financial commitments to date totaling nearly $15 million (Table 4-2) as well as staffing/contractual commitments (Table 4-3).

Table 4-2. Mitigation Measures: Financial Commitments

Mitigation Measures		Dollar Amount	Responsible Agency
Construction Contract	Construction Access Plan	$200,000	Metropolitan Council/ Contractor
	Contractor Incentive Program	$850,000	Metropolitan Council
Project Communications	Community Outreach Coordinators [1]	$4,000,000	Metropolitan Council
	Construction Communication Plan (Special Signage) [2]	$200,000	Metropolitan Council / Contractor
Parking Assistance	Neighborhood Commercial Parking Program	$2,100,000	City of St. Paul
	Alley Improvements Program	$350,000	City of St. Paul
Business Assistance Programs	Business Support Fund [3]	$4,000,000	City of St. Paul
	Business Improvement / Expansion Assistance	$850,000	Neighborhood Development Center
	Business Resources Collaborative [4]	$240,000	N/A
	University Avenue Business Preparation Collaborative [5]	$675,000	N/A
	Great Streets and Business Association Assistance Program	$210,000	City of Minneapolis
	Other [6]	$7,670	N/A
University Avenue / Cedar Riverside Betterments	Improved Street Lighting / Trees / Street Furniture	$650,000	City of St. Paul / Metropolitan Council
	Business "Façade Improvement Financing	$150,000	City of Minneapolis
Promoting Business Access	Additional Business Signage	$50,000	Metropolitan Council
	Cooperative Advertising and Transit Fare Passes	$250,000	Metro Transit
	TOTAL	$14,782,670	

(1) Includes salary and benefits for the fully staffed Central Corridor Outreach and Communications Team for the four years of project construction from 2010-2013.

(2) Includes temporary directional signage, including portable changeable message signs, project identification boards, construction site signage, and other signs.

(3) Includes $2,500,000 from the Metropolitan Council, $1,000,000 from the City of St. Paul, and $500,000 from the Central Corridor Funders Collaborative.

(4) Includes grants from Central Corridor Funders Collaborative as well as a matching investment from the City of St. Paul for marketing during project construction.

(5) Includes $400,000 from Central Corridor Funders Collaborative, $150,000 from the F.R. Bigelow Foundation, and $125,000 from the St. Paul Foundation.

(6) Includes grants from Central Corridor Funders Collaborative to Central Corridor Partnership and Asian Economic Development Association to support presentations from business mitigation consultants.

Table 4-3. Mitigation Measures: Staffing and Contract Commitments (Non-Direct Financial Commitments)

Mitigation Measures		Responsible Agency
Construction Contract	Special Events Plans	Metropolitan Council/ Contractor
	Best Management Practices (BMPs)	Metropolitan Council/ Contractor
Project Communications	Contractor Community Relations Leader	Contractor
	Construction Communication Plan	Metropolitan Council
	Construction Information Packet	Metropolitan Council
	Construction Signage	Metropolitan Council/ Contractor
Parking Assistance	Construction Employee Parking Plan	Metropolitan Council/ Contractor

5.0 PUBLIC COORDINATION

5.1 February 17, 2011 Town Hall Meetings

Two town hall meetings were held on February 17, 2011 to consider the views of the general public and local merchants and to gather information in anticipation of the supplemental Environmental Assessment. The town hall meetings were held in an open house format. Representatives of the FTA, the Metropolitan Council, City of St. Paul and Business Resource Collaborative (BRC) members were available at the meetings to discuss the Project and the supplemental environmental review process. Business owners, employees and citizens were provided the opportunity to discuss specific issues and provide written and verbal comments. A meeting notice announcing the Town Hall Meetings was published in local newspapers (Pioneer Press, Star Tribune and Finance and Commerce). News advisories were distributed by the Metropolitan Council to area media outlets, community groups, stakeholders and project partners. This news advisory was also distributed by the Metropolitan Council to community leaders, business owners and other area organizations, and was posted on the Project Website.

5.2 Draft Supplemental Environmental Assessment Comment Period

The Construction-Related Potential Impacts on Business Revenues Draft Supplemental Environmental Assessment (EA) was made available for public review on March 1, 2011. The public had an opportunity to review and comment on the Draft Supplemental EA from March 1 through March 31, 2011. Two public hearings were held on March 16, 2011. Notifications of the Draft Supplemental EA and the public hearings appeared in area newspapers and were sent to stakeholders in the project corridor including local, regional and state agencies. The Draft Supplemental EA was made available for viewing online and at area libraries prior to the public hearings.

Public comments were received from 73 individuals or groups/organizations and those comments are contained verbatim in Appendix H to the final Supplemental EA, along with complete copies of the transcript from the two public hearings held on March 16, 2011. Below is

a summary by topic of comments addressing issues raised in the Supplemental EA Construction-Related Potential Impacts on Business Revenues. Comments that were outside the scope of the Supplemental EA were not addressed in the Response to Comments, but complete copies of those comments are available in Appendix H.

Below are FTA's detailed responses to comments on the following subjects: NEPA EA process, adequacy of technical report analysis methodology, comparison of analysis methodology/mitigation identification to other similar projects (Lake Street and Seattle projects), adequacy of mitigation measures, and public participation.

- **NEPA EA Process:** Comments were received on the Draft Supplemental EA concerning the adequacy of the use of an environmental assessment to supplement a Final Environmental Impact Statement.

  Response: The Federal Transit Administration, as the lead federal agency, and the Metropolitan Council, as the lead local agency, have prepared the Draft Supplemental EA and final Supplemental EA in compliance with the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4321 et. seq., and with FTA's regulations, 23 C.F.R. Part 771. Section 1.1 of this document describes the basis of the Supplemental EA. Section 1.1 also discusses FTA's decision to conduct a Supplemental EA as the appropriate level of environmental review under NEPA. Public participation is a requirement of NEPA for the preparation of environmental documents. The March 16, 2011 public hearings and 30-day comment period for the Supplemental EA are a part of this public participation process. Substantive comments submitted during the Draft Supplemental EA comment period, and oral testimony recorded at the March 16, 2011 public hearings, are responded to in the final Supplemental EA (see Appendix G for responses to comments).

- **Adequacy of Technical Report Analysis Methodology:** Comments were received regarding the adequacy of the methodology used in the Technical Report.

  Response: The Technical Report addressed the potential loss of revenue by local businesses during the construction period by classifying the businesses that abut the alignment, identified the potential environmental impacts caused by the construction and attempted to quantify the potential average loss of revenue for small businesses. Due to the dearth of information available that provides a reliable methodology for quantifying potential business losses caused by construction of a light rail project prospectively, Volpe undertook an exhaustive literature review to find peer reviewed methodological approaches to a retrospective calculation of business revenue loss from construction of transportation infrastructure projects. The search yielded 4 previous studies, of which one study (De Solminihac & Harrison, 1993) was utilized as the framework under which Volpe started its analysis for the Central Corridor project. All studies reflected a range of impacts on business revenues, from positive to larger negative impacts on discrete market segments. The studies also reflected that some businesses experienced an increase in revenues during the construction period, most likely due to receiving business from construction workers. Volpe then attempted to take the methodology used for quantifying actual impacts on business revenues during a transportation construction project and develop a basis for predicting what impact the construction on the Central Corridor LRT project will have on the local businesses along the corridor. In order to do make this prediction, Volpe analyzed the data provided in the four peer reviewed studies.

Data availability and methodological practices limit how researchers can conduct the analysis. An extensive literature search, which included researching multiple comprehensive reference databases, revealed the four studies utilized in the Technical Report. Each of the studies was peer reviewed or published by a government agency, a criterion held strongly by Volpe Center in assessing which studies to utilize for the Technical Report, because it ensures that the studies are unbiased and have met generally accepted methodological standards. The process of peer review means that qualified individuals in the given topic of study evaluated the study for its analytical credibility. The peer reviewers provide comments to the authors on how to improve the study, and studies are not published unless the concerns of the reviewers are met.

The four peer-reviewed studies considered by Volpe provided estimates of overall impacts of construction on business revenues, finding that such losses generally fall within a small range on average. Of the four peer-reviewed studies, Volpe concentrated on the De Solminihac & Harrison (1993).

Considering the complexities of using information from the literature, the De Solminihac and Harrison (1993) study was selected as the best predictive approach because the context of the transportation project in that study was the most analogous to the Central Corridor Project, and it was the strongest study from a methodological perspective, given the lack of available studies on this subject matter. The analysis used in the Technical Report applied the estimates of actual impacts on business revenues in one provided by De Solminihac and Harrison (1993) study to predict the upper bound of the effects of the construction phase of the Central Corridor LRT Project on sales revenues of impacted businesses. The project reviewed in the De Solminihac and Harrison study was in a major urban area with a variety of options for consumers to switch their business away from the construction corridor based on the environmental impacts caused by the construction phase of the project. The project also included some transit elements (bus transitway) as part of major work on a busy urban highway. The business mix on that study corridor was weighted differently than the Central Corridor LRT corridor but included many of the same categories of business. De Solminihac and Harrison found revenue decreases in four types of businesses: general merchandise, food stores, automotive outlets, and home furnishing, ranging from 17 to 37 %. No impacts were found in the remaining six categories. These findings were used to estimate the upper bound of effects of the construction phase of the Project on sales revenues for impacted businesses.

Volpe gathered relevant data for businesses along the Central Corridor alignment. Volpe used a dataset assembled by U-Plan (a Twin Cities community planning studio located on the Corridor). The U-Plan dataset consists of 1,410 businesses located on University Avenue and Washington Avenue from July 2010. U-Plan validated the data against lists from the University Avenue Betterment Association, Asian Economic Development Association, and the University of Minnesota. The validation effort resulted in 1,272 businesses in December of 2010, compiled with annual revenue as well as a GIS marker on the business address. The U-Plan dataset did not include downtown St. Paul and Minneapolis and is not limited to the businesses adjacent to the Central Corridor LRT alignment. Finally, Volpe eliminated those businesses not adjacent to the alignment, resulting in a total of 947 discrete businesses with revenue information in the U-Plan dataset.

All 947 small businesses from the Central Corridor LRT dataset were assigned to the impact categories used in the De Solminihac and Harrison study. The aggregate business revenue loss for all businesses in the U Plan database was estimated by multiplying the combined revenue of all businesses within the four categories by the percent loss found in each category. The losses were totaled for the four categories to get the projected estimated total revenue lost by this subset of small businesses on the Corridor, $13,935,430, and then divided by the total small business revenue for all nine categories of businesses, $487,805,000, yielding the upper bound average percentage loss of 2.85% across all small business categories. Changes in sales revenues to individual businesses could fall above or below this range. For example, businesses that sell to the construction workers and companies will likely benefit with higher revenues during construction. Some businesses that experience disruption but do not attract business from the construction spending may see their revenues decline. For instance, restaurants that can meet a construction worker's needs during their lunch break may see their revenues increase, while a more formal restaurant that targets the dinner crowd may lose business to similar restaurants unaffected by construction.

To develop an estimate of construction impacts on a project-level, it is necessary to have a reliable estimate of current and future revenues for specific businesses, and then adjust that estimate by the change in business resulting from the construction controlling for other economic and social factors. Difficulties in estimating future revenues include: accurately predicting the overall state of the economy and how it affects businesses in the construction zone, predicting local changes in socio-economic characteristics, anticipating other local changes that would affect traffic or business patterns, anticipating other technological or behavioral changes that could affect businesses in each industry and anticipating for acts of nature in some instances. As a result, predicting the amount of lost business revenue for any given business or market segment is highly uncertain and speculative. Indeed, Volpe acknowledged that "With the current state of knowledge about construction impacts on business revenues, developing reliable point estimates of such transit construction impacts is infeasible to implement for a project-level analysis."[15]

As raised by several of the people who commented on the Draft Supplemental EA, drawing a direct comparison from the academically published studies in the Technical Report to the Central Corridor is difficult. The construction projects analyzed in the studies were all highway projects, with measures taken to minimize disruption. Moreover, the highway projects varied significantly from the Central Corridor project in terms of construction complexity, duration, construction staging options, geographic constraints and construction seasons, all of which can contribute to the impact of construction on a given business' revenues.

Considering the complexities of using information from the literature, the De Solminihac and Harrison (1993) study was selected as the best predictive approach because the context was the most analogous to the Central Corridor Project, and it was the strongest study from a methodological perspective, given the lack of available studies on this subject matter. Volpe has provided a revised Technical Report that further explains the methodology and conclusions reached in the report. However, in light of the numerous comments regarding the applicability of the Volpe methodology to the Central Corridor LRT Project to provide any reliable estimate of prospective potential loss of revenues

[15] Volpe Center. April 2011. *Technical Report on the Potential Impacts on Business Revenues During Construction of the Central Corridor Light Rail Project*, pg. 8

caused by the construction phase of the Project, FTA has decided that to use the 2.85% average to predict with any accuracy the total average business losses is not warranted here. Moreover, since releasing the Draft Supplemental EA for comment, a number of other reports looking at the impact of the construction phase of transportation projects on businesses have been brought to FTA's attention. These reports, although not put through the scientific rigor of a peer review, provide additional support for FTA's conclusion that providing any hard estimate of future lost revenues is not possible given the current state of knowledge, but would only be conjecture and speculation, and have the effect of understating the actual impacts some businesses may incur during the construction phase of the Project.

- **Comparison of Analysis Methodology / Mitigation Identification to other similar projects:** Comments concerning the Technical Report analysis methodology and mitigation identification focused on two other projects: a study of business impacts during reconstruction of Lake Street in Minneapolis and the mitigation proposed for the Seattle Central Link LRT construction. The Lake Street study is suggested as an alternate methodology for the study of business impacts; the Seattle project is referenced as an approach to mitigation of business impacts during of construction. Many of the concerns noted that these two studies should have been considered more strongly in the methodology used for the analysis of business impacts in the Draft Supplemental EA, and in determining mitigation for impacts identified.

  Response (Lake Street Study): The Lake Street study (Diaz, Jose, "Economic Indicators of the Lake Street Corridor," NPCR1303)[16] used aggregated taxable revenue and number of businesses collected for state sales tax purposes at the census block level to ascertain economic impacts from the 2004-2006 reconstruction of Lake Street in Minneapolis. Comparable data from businesses located on University Avenue was used as a control group (due to similar types, size, age and character of the two business corridors) as a means to determine what variations in the data might be attributable to construction activities versus broader fluctuations in economic activity. The study found significant variations in taxable revenue, only some of which correlated with construction activities. FTA staff have reviewed the study and found the methodology inconclusive as a predictive tool for revenue impacts for the Central Corridor project for two reasons: (1) as sales taxes are collected on a limited type of goods sold (and not services), variations in sales taxes collected do not directly correlate with business revenues (which is further confounded during the study timeframe due to laws governing sales tax collection) and (2) insufficient information regarding the numbers and locations of businesses to directly correlate variations in sales tax data with the addition/loss of the number of businesses and/or types. In addition, the block level data does not allow distinctions to be made about differing levels of impacts by types of businesses or other characteristics.

  Response (Seattle Central Link project): The Record of Decision prepared for the Seattle Central Link project required the creation of a $50 million Transit-Oriented Business Development Fund (later renamed the Rainier Valley Community Development Fund) to assist the community and qualified local businesses, neighborhood organizations and community institutions in mitigating and offsetting adverse economic impacts resulting from the Link light rail and its construction. The Fund was available to fund physical and economic improvements to the Southeast Seattle Corridor and was to

[16] Diaz, Jose, "Economic Indicators of the Lake Street Corridor," NPCR1303, available at http://www.cura.umn.edu/search/index.php

be exclusively used to increase transit ridership on the system and/or address project impacts. A portion of the fund was designated as Supplemental Mitigation Assistance (SMA) to provide assistance to both relocated and remaining businesses along the project corridor. The assistance was used for rent increases, equipment replacement, tenant improvements and operating costs necessary to maintain business operations or reestablish a business. Under this program, over $15 million was granted to local businesses achieving a success rate of 85% of the businesses operating pre-construction surviving post construction. The City of Seattle provided funding for the program, but specifically recognized the uniqueness of both the project (64 full property acquisitions and 232 partial acquisitions resulting in the relocation of 60 businesses and 38 residential households) and the circumstances surrounding the project that warranted creation of the Fund. The City found that the convergence of a significant investment in a regional transportation improvement, the degree of displacement of small businesses, the high presence of low-income minorities, refugees and immigrants and weak market conditions to drive redevelopment created a unique situation warranting City investment beyond what would otherwise be necessary. Unlike the Seattle project, the Central Corridor LRT project will require only one operating business to relocate as a result of the project. Moreover, Metropolitan Council, in cooperation with its funding partners and other stakeholders, has undertaken significant measures to either avoid construction-related impacts or mitigation the extent of those impacts on the businesses located along the corridor. The mitigation measures more fully discussed in Section 4.3 should provide an adequate measure of financial security for businesses, including minority-owned and small businesses that will be adversely affected during the construction of the Central Corridor project.

- **Adequacy of Mitigation Measures:** Comments received on the Draft Supplemental EA concerning mitigation measures focused on the adequacy of the mitigation measures to help minimize adverse impacts to businesses during project construction. In particular, many of the concerns focused on the adequacy, size and administration of the Business Support Fund (i.e., $10,000 loans to qualified businesses for basic business expenses) or the need for a business compensation/grant program.

  Response: A report prepared for the Legislature of the State of Minnesota in February 2009, titled “Mitigation of Transportation Construction Impacts,” served as the primary reference point for identifying mitigation activities reported in this Supplemental EA. This February 2009 document was prepared in response to an act of the 2008 Minnesota Legislature requiring the Minnesota Department of Transportation (Mn/DOT) to report on the mitigation of construction impacts on small businesses.

  The key recommendations of this February 2009 report served as the basis for developing the business mitigation measures for Central Corridor LRT project construction as described in Section 4.3.1 of this Supplemental EA.

  NEPA requires federal agencies take a "hard look” at environmental consequences and provide for broad dissemination of relevant environmental information. NEPA does not impose a substantive duty on agencies to mitigate adverse environmental effects or to mandate particular results. *Robertson v. Methow Valley Citizens Council,* 490 U.S. 332, 109 S.Ct. 1835, 104 L.Ed.2d.351 (1989). However, as noted in Chapter 6 of this Supplemental EA, the Metropolitan Council, along with the assistance and support of its project partners and other project stakeholders, intends to mitigate adverse construction impacts on businesses to the extent reasonable and feasible. Mitigation measures to

help reduce short-term impacts to business revenues during project construction include financial commitments totaling nearly $15 million, and also include non-financial staffing/contractual commitments. (See Section 4.3.3 of this Supplemental EA). These mitigation measures are not intended to be restorative to businesses with respect to potential losses to revenues during project construction. That is, these mitigation measures are not designed to replace any percent of revenue or any specific dollar amount of business revenue lost during the period of project construction.

The Business Support Fund is intended to be as accessible as possible to eligible businesses along the Central Corridor. The City of St. Paul will select one or more qualified non-profits to administer the loan program and to assist business owners in completing the modest requirements necessary to access funds through this program. The $10,000 limit was established by the City of St. Paul in order to ensure as many businesses as possible were served by available funds. With new funds being committed for the Business Support Fund, this limit may change. The City of St. Paul will be revising its Joint Powers Agreement with the Metropolitan Council, and any final changes to the limit on funds available to any individual business will be reflected in the revised Joint Powers Agreement.

FTA finds that while some businesses may be adversely impacted during the construction of the project, the avoidance and mitigation strategies set forth in Section 4.3 will provide an adequate measure of financial security for businesses, including minority-owned and small businesses adversely affected during the construction of the Central Corridor project. FTA also will monitor the success of the mitigation measures that Metropolitan Council has agreed to implement to address impacts on business revenues.

- **Public Participation:** The majority of the comments concerning the February 17, 2011 town hall meetings were in regards to the disposition of comments that were submitted to Metropolitan Council at these meetings.

  Response: Two town hall meetings were held on February 17, 2011, to consider the views of the general public and local merchants and to gather information in anticipation of the Supplemental Environmental Assessment. The town hall meetings were held in an open house format. Representatives of the FTA, the Metropolitan Council, City of St. Paul and Business Resource Collaborative members were available at the meetings to discuss the project and the supplemental environmental review process. Business owners, employees and citizens were provided the opportunity to discuss specific issues and provide written and verbal comments.

  The February 17, 2011 town hall meetings were not public hearings with respect to the NEPA process, thus formal responses were not generated for comments received at the meetings. However, the input collected at these meetings was considered during preparation of the Draft and final Supplemental EA and in preparing the response to comments on the Draft Supplemental EA. Moreover, the subjects raised in the comments received at the town hall meetings are similar to the comments raised in the NEPA comment period and are addressed in the final Supplemental EA.

The following list summarizes the common themes of comments received at the February 17, 2011 town hall meetings.

- General comments regarding traffic and transportation, including support for transit; accessibility; impacts to bus routes; design alternatives such as narrowing University Avenue to two lanes of traffic to accommodate multiple transportation modes; and traffic flow and congestion.

- A majority of the comments received were in regards to concerns for impacts to businesses. Generally, these concerns included impacts to specific businesses and parking availability; comments regarding business mitigation programs, business support and the need for grant programs; concerns about agency communication and project construction communications; and comments regarding the loss of rental income.

- Comments regarding impacts to business revenues, including the need for estimates of impacts to business revenues and the loss of business revenues impacting the personal incomes of small business owners.

- Comments regarding construction impacts to businesses, including the loss of business revenue during project construction; concerns regarding abilities of small businesses to survive through the construction period; comments regarding the need for property tax relief; the need for business marketing support; concerns regarding utility relocations and impacts to business revenues; and comments regarding signage plans.

- More than 20 comments were received regarding parking and impacts to businesses, including concerns regarding the loss of parking; availability for employee parking during construction; the need for replacement parking; comments regarding preservation of parking at station areas; parking in Minneapolis; and maintaining on-street parking on University Avenue.

6.0 CONCLUSION AND SUMMARY OF COMMITMENTS

Studies of construction-related impacts on business revenues resulting from transportation projects have identified a number of factors that contribute to loss of business revenue during project construction including loss of access, loss of parking, reduced traffic flow and utility shut offs. Indirectly, potential customers may also be discouraged from patronizing businesses due to both real and perceived inconvenience factors including congestion, confusion, safety concerns, noise, vibration and dust. These studies also recognize that there are many factors in addition to construction activity that may also impact business revenues, including external economic factors, unemployment rates, and world events.

The Technical Report, prepared by the Volpe Center, categorized business types along the project corridor using NAICS codes, identifying business types most sensitive to seven impact factors stated earlier based on previous studies. The Technical Report anticipates that construction activities will cause temporary partial blockages to access, traffic detours, parking restrictions, temporary utility shutoffs and nuisance impacts such as noise, vibration, dust and

visual impacts. The Technical Report states that while any individual business has the potential to experience business revenues losses during the construction period, previous studies indicate that businesses that include general merchandise, food stores, automotive outlets, and home furnishings stores are more likely to experience greater sales revenue losses due to construction, as well as other economic factors.

The Technical Report also states that the estimate of impacts is subject to significant uncertainty. Given this uncertainty, it is likely that there may be other types of businesses with sales revenue losses other than those identified in the Technical Report as being impacted. However, we cannot predict with specificity which particular businesses will experience adverse impacts and to what extent those impacts may affect business revenues. Additionally, some businesses will experience positive impacts to their revenues during construction of the project. Again, we cannot predict with specificity which particular businesses will experience positive impacts and to what extent those impacts may affect business revenues. Furthermore, construction work may cause temporary partial blockages to access, decreased traffic volumes, increased congestion, detours, parking restrictions, and nuisance impacts such as noise and dust. Smaller businesses may be impacted to a greater extent depending on the duration and magnitude of nuisance impacts associated with construction. If construction impacts to businesses are sufficiently adverse, then businesses may close or chose to relocate. Less severely impacted businesses would likely experience short-term declines in revenues due to reduced business activity. Construction activity would, however, also result in increased output, income, and jobs for the local economy. Estimates of the economic impact of construction expenditures can be reviewed in Section 5.1.1 of the FEIS. Metropolitan Council is implementing mitigation measures to address potential adverse construction impacts to the extent reasonable and feasible. However, FTA recognizes that some adverse impacts will be unavoidable and may be of a magnitude that the effect to an individual business may be losses in revenues that result in the business owner deciding to either relocate or close.

FTA finds that while some businesses may be adversely impacted during the construction of the project, the avoidance and mitigation strategies set forth in this Supplemental EA will provide an adequate measure of financial security for businesses, including minority-owned and small businesses adversely affected during the construction of the Central Corridor project. These mitigation measures include:

Efforts to minimize the unavoidable impacts of construction activities

- Construction Access Plans
- Contractor Incentive Program
- Special Events Planning
- Construction Best Management Practices (BMPs)

Proactive communications

- Contractor Community Relations Leaders
- Construction Public Information and Communication Plans
- Community Outreach Coordinators
- Construction Information Packets
- Construction Signage

Measures to assist businesses losing nearby on-street parking

- Construction Employee Parking Plan
- Neighborhood Commercial Parking Program
- Alley Improvements Program

Technical and financial assistance to businesses affected by construction activities

- Business Support Fund
- Business Improvement / Expansion Assistance
- Business Resources Collaborative (BRC)
- University Avenue Business Preparation Collaborative (U7)
- Great Streets and Business Association Assistance Program

University Avenue / Cedar Riverside Betterments

- Improved Street Lighting / Trees / Street Furniture
- Business Façade Improvements Financing

Promoting Business Access

- Additional Business Signage
- Cooperative Advertising and Transit Fare Passes to Corridor Businesses

Direct financial commitments to these mitigation measures total nearly $15 million. In addition, significant staffing, communication and contractual commitments are provided to implement mitigation measures and assure contractor compliance.

The mitigation program is designed to target businesses that may require financial assistance. Based on the information discussed in this document, not all businesses will need assistance or suffer revenue losses; those that do will likely not be severe and prolonged; and that with the mitigation program, the impacts are not expected to be significant in the aggregate.

APPENDIX A

U.S. Department of Transportation
Federal Transit Administration

Technical Report on the Potential Impacts on Business Revenues during Construction of the Central Corridor Light Rail Project

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	April, 2011	

4. TITLE AND SUBTITLE Technical Report on the Potential Impacts on Business Revenues during Construction of the Central Corridor Light Rail Project	5. FUNDING NUMBERS
6. AUTHOR(S) Radin, Sari; Ray, Rosalie	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) USDOT Volpe Center 55 Broadway Cambridge, MA 02142	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Department of Transportation Federal Transit Administration Office of Planning and Environment Washington, DC 20590	10. SPONSORING/MONITORING AGENCY REPORT NUMBER
11. SUPPLEMENTARY NOTES	
12a. DISTRIBUTION/AVAILABILITY STATEMENT This document is available to the public through the National Technical Information Service, Springfield, VA 22161.	12b. DISTRIBUTION CODE

13. ABSTRACT (Maximum 200 words)

This report investigates the potential impacts to business revenues along the Central Corridor resulting from the construction of the Central Corridor Light Rail Project. This study addresses the potential loss of revenue by local businesses during the construction period.

14. SUBJECT TERMS Construction impacts, revenue loss	15. NUMBER OF PAGES 21
	16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	

Contents

1.0 Introduction 1
2.0 Economic description of the region 2
3.0 Methodology 3
3.1 Background 3
3. 2 Literature search 4
3.2.1 Academic and government-published studies 4
3.2.2 Additional published studies 6
3.2.3 Student papers 6
3.3 Development of a methodology for the Central Corridor 7
3.3.1 Consideration of the four studies in developing a prediction 8
3.3.2 Selection of the De Solminihac and Harrison study as a basis for estimation 9
3.4 Case studies of other light rail projects 10
3.5 Data 14
3.6 Description of businesses 14
3.7 Estimation of business revenue loss using De Solminihac and Harrison findings 16
4.0 Results 17
4.1 Qualitative assessment of potential construction-related impacts 17
4.2 Estimates of impacts to business revenue 19
5.0 Conclusion 20

Tables

Table 1. Recent quantitative studies of construction sales revenue impacts on businesses 8
Table 2. Sector composition of the Central Corridor 15
Table 3. Categorization of Central Corridor businesses by the De Solminihac and Harrison categories 15

Figures

Figure 1. Business openings and closures compared to overall trends in Minneapolis-St. Paul ... 2
Figure 2. Business openings and closures in Portland during light rail construction 11
Figure 3. Business openings and closures in Salt Lake City during light rail construction 12
Figure 4. Business openings and closures in San Jose during light rail construction 13
Figure 5. Business openings and closures in Seattle during light rail construction 14

1.0 Introduction

This report will investigate the impacts to business revenues along the Central Corridor resulting from the construction of the Central Corridor Light Rail Project ("Project"). It is prepared in response to the District Court's January 26, 2011 opinion issued in *NAACP et al v. USDO*T,[1] in which the Court held that the Final Environmental Impact Statement ("FEIS") did not evaluate potential impacts on the loss of business revenue during construction and that it should have been evaluated during the National Environmental Policy Act ("NEPA") process. This study will address the potential loss of revenue by local businesses during the construction period for the Project. This report will classify the businesses that abut the alignment, identify the potential environmental impacts caused by the construction of the project, and attempt to quantify the potential average loss of revenue for small businesses, to the extent that such potential losses can be quantified.

It is important to note that there is a dearth of information available that provides a reliable methodology for quantifying potential business losses caused by construction of a project like the Central Corridor Project. We undertook an exhaustive review of the literature, searching the largest online bibliographic database of transportation research and working with research librarians in government and a major research university and were only able to find four prior studies since 1990 that used objective data to attempt to quantify the construction impacts on businesses that abut the construction of transportation alignments. These studies, which are set forth in more detail in Table 1, reflect a range of impacts on business revenues, from positive impacts to larger negative impacts on discrete market segments. These studies also reflect that some businesses may show an increase in revenues likely due to receiving business from construction workers. None of the studies reviewed provided an "apples to apples" comparison, with each study reflecting projects of different sizes and scope, construction duration, and construction staging options. Moreover, what is clear from reviewing the studies is that numerous factors other than construction can impact a business' revenues, including external economic factors, unemployment rates, and world events. The ability to control for these external factors is limited. Indeed, based on the experience of the businesses along the Central Corridor between 2009 and 2011, the number of vacancies increased from 126 to 193.[2]

[1] *NAACP, et al. v. US Department of Transportation, et. al.*, CIV 10-147 (W.D. MN, UNPUBLISHED DECISION, January 26, 2011).
[2] Business census data of the Central Corridor from the Metropolitan Council. E-mail 2/23/11 from Robin Caufman.

2.0 Economic description of the region

The Central Corridor Light Rail Transit Project is located within the Minneapolis-St. Paul-Bloomington Metropolitan Statistical Area (MSA). As a whole, the MSA has experienced lower unemployment rates and higher per capita personal income than the national average, though the recession did negatively impact both unemployment rates and commercial and retail vacancy rates within the region.[3]

Current unemployment data by county is also available from the Minnesota Department of Employment and Economic Development, and shows some regional differences between the two cities and counties through which the CCLRT runs, Minneapolis in Hennepin County and St. Paul in Ramsey County. Unemployment in Minneapolis is at 6.5%, while it is at 7.3% in St. Paul. The county data shows lower unemployment in each county than in its city, with Hennepin at 6.4% and Ramsey at 6.9%. Additionally, St. Paul had a lower average weekly wage than Minneapolis in 2010, with workers making an average of $877-$962 per week in St. Paul versus $1,087-$1,212 per week in Minneapolis.

Of particular interest to this study when looking at regional economic indicators are the measures of annual business openings and closings by MSA, which can be found on the Census website under the Statistics of U.S. Businesses section.[4] Unfortunately, the data is only available through 2007, so it does not capture what happened in the most recent recession. The data, however, is still illustrative of the yearly churn of business openings and closings.

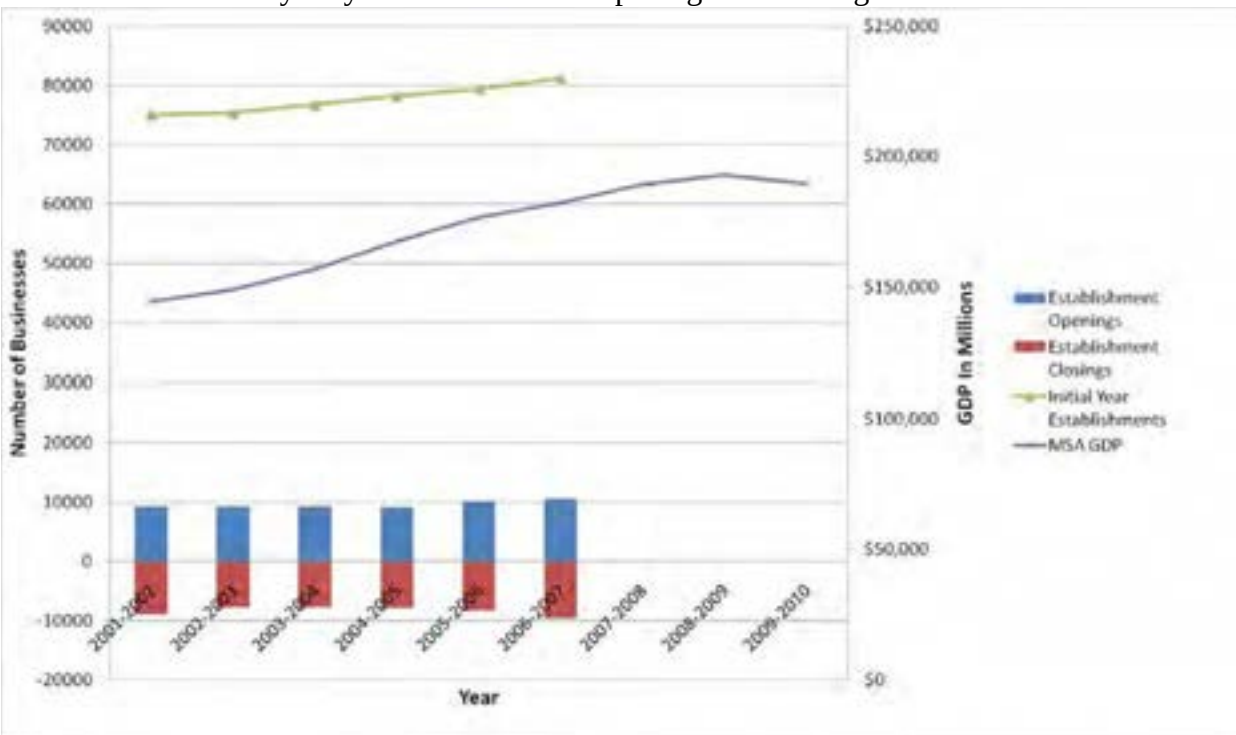


Figure 1. Business openings and closures compared to overall trends in Minneapolis-St. Paul

[3] Federal Reserve Beige Book, Region IX, March 4th, 2009 and April 15th 2009.
[4] http://www.census.gov/econ/susb/

As can be seen in Figure 1, the numbers of businesses that open or close each year are roughly equal, with the small net increase each year leading to the rising trend in initial year establishments, the green line on the graph. The definition of initial year establishments is the number of establishments in March of the first year of each range. For example, in March 2001 there were 75,057 businesses in the MSA. Between March 2001 and March 2002, 9,279 businesses opened and 8,942 closed, resulting in a net gain of around 300 businesses, reflected in the 2002 initial year establishment figure of 75,360.[5] Over the years for which there are data, an average of 8,355 businesses closed each year within the MSA.

With regards to small businesses, which make up the largest part of businesses on the Central Corridor, a 2005 nationwide study of Bureau of Labor Statistics data from 1999-2002 found that around a third of new small businesses fail within two years of opening, while 56% of small business have closed after four years. In general, one business in five of establishments that opened in the same year fails each year.[6] While a similar study has not been done for Minnesota specifically, the study's findings can be put in context using the Forbes' "Best States for Business and Careers" rankings. In 2010, Minnesota was 15th overall, which was driven by high rankings in quality of life and labor force. Business costs, regulatory environment, and economic climate rankings were much lower, at 30th, 32nd, and 37th in the country, respectively, which can have a negative effect on the likelihood of small business success.[7]

3.0 Methodology

3.1 Background

The Minnesota Department of Transportation's February 2009 report, *Mitigation of Transportation Construction Impacts* ("MnDOT Report"), provides context regarding the types of impacts experienced by businesses during construction of transportation projects. The report, required by Minnesota law, surveyed business owners recently affected by highway construction projects to determine the greatest impacts on the businesses and the most successful mitigation practices.[8] The businesses named loss of access, highway or road closures, detours, reduced traffic, poor signing, and project length as major impacts, as well as congestion resulting from lane closures, lost parking leading to avoidance of the construction area (and surrounding businesses), and property damage resulting from contractor actions. While the report focused on roadway reconstruction projects, not transit projects, the types of construction activities (demolition of pavement, utility reconstruction, signal construction, drainage systems and signage) and resulting impacts to traffic and access (lane closures, rerouting of access,

[5] The data is not an exact function of net gain plus initial, but the numbers are very close. The dataset does not provide an explanation for the small difference.
[6] Knaup, Amy E. "Survival and Longevity in the Business Employment Dynamics Database" *Monthly Labor Review*, Volume 128, Number 5 (May 2005), pp. 50-6
[7] Badenhausen, Kurt. "The Best States for Business and Careers" *Forbes Magazine*, October 13, 2010. Accessed at http://www.forbes.com/2010/10/13/best-states-for-business-business-beltway-best-states-table.html
[8] CH2MHill for the Minnesota Department of Transportation, "Report on Mitigation of Transportation Construction Impacts". Final Report. February 2009.

displacement of parking) are very similar to that experienced during construction of a transit facility within a roadway.

Environmental Impact Statements (EIS) from four light rail projects that are either constructed or in the final design phase document similar types of impacts to businesses in construction corridors: Portland's light rail link to Milwaukie, scheduled to be finished in 2015; Dallas's Green Line ("the DART Project"), already operating as of December 2010; and two projects in Seattle, the East Link and the North Link, scheduled to open in 2016. All of the projects except the DART Project have some stretch of the corridor operating along a retail street. In the EIS reviews, the major impacts considered were access to businesses, traffic impacts, noise and vibration, temporary loss of parking, increased dirt and dust, visual impacts, and utility shutoffs.

However, neither the MnDOT study nor these environmental reviews attempted to quantify the effect these impacts would have on the potential loss of business revenues during construction. In this study, the Volpe Center conducted a literature search to identify studies that could be used to predict anticipated revenue losses to businesses along construction corridors, and developed an estimate for the Central Corridor project.

3. 2 Literature search

A search using the TRID database, INSPEC database, Engineering Index, and EBSCOhost identified four peer reviewed or government studies. Additional publications were found documenting anecdotal reports of business impacts during construction. Several student projects were also identified in the Minneapolis-St. Paul area addressing the topic. These studies are summarized below.

Few studies have attempted to quantify specific values for loss of revenue associated with construction, and the identified studies focus on the impacts of highway construction rather than transit. In addition, the quantified impacts vary with the context of the project, so there is not a single point estimate on which all agree. With the current state of knowledge about construction impacts on business revenues, developing reliable point estimates of such transit construction impacts is infeasible to implement for a project-level analysis.

3.2.1 Academic and government-published studies

Four studies were identified through a comprehensive literature search to identify studies that were completed since 1990 and used objective methods to measure construction impacts on sales revenues, such as analyzing sales tax revenue of businesses during construction.

Buddemeyer, Young and Vander Giessen studied the impacts of reconstruction of US 26/287 over Togwotee Pass on businesses in Dubois, Wyoming. Businesses were concerned prior to the construction that there would be a loss in tourism traffic during construction since that route connects Dubois to Jackson Hole and Yellowstone National Park. The study looked at business impacts and the effectiveness of mitigation efforts through sales tax revenue analysis, a literature review and business and traveler surveys. The sales tax revenue analysis focused on business

impacts, while the literature review and surveys primarily assessed the effectiveness of mitigation. The 174 businesses in Dubois are highly dependent on out of town customers with over 60% of businesses reporting that 75% or more of their customers are from out of town. The businesses were classified by Standard Industrial Classification (SIC) codes into one of nine categories: apparel, automobile, building and hardware, food stores, furniture, general merchandise, miscellaneous stores, traveler accommodation, and restaurants. The researchers were able to obtain sales tax revenue data from the State of Wyoming. The businesses were only identified by SIC code to preserve confidentiality. The researchers calculated revenues for each business based on the tax rates for each type of business. Using tax revenue data on 110 businesses, the researchers estimated a trend line for revenues. Revenues during the construction period were compared to the trend line. The authors conclude that the overall estimated sales revenue is holding steady with minor declines. The magnitude of sales revenue growth was lower for tourist-based businesses than others.

De Solminihac and Harrison analyzed historical sales data of the businesses and interviewed the owners of businesses in the area of construction activities for the Southwest Freeway project in Houston. This project had both highway and transit components, with construction going from August 1989 to December 1992. The authors examined ten categories of retail businesses: building materials, general merchandise, food stores, automotive, clothing, home furnishings, restaurants, drug stores, liquor stores, and miscellaneous. For each of those categories, the authors estimated regressions with annual sales data for the preconstruction period as the dependent variable. They used these regressions to predict sales during the construction period and identified which business categories had actual sales revenues outside of the confidence intervals of the regressions. They also compared the results for the construction-affected businesses to the results for a similar corridor to include the effects of the economy. The authors conclude that four retail categories—general merchandise, food stores, automotive outlets, and home furnishings—were adversely affected by the construction.

Wildenthal and Buffington studied the impact of widening State Highway 21 in Caldwell, Texas, a town of 3000. They looked at a range of impacts, including sales, property values, traffic volumes, travel time, and accident rates. For their sales revenue analysis, they used gross sales data for all Caldwell businesses combined obtained from the state comptroller's office and surveyed business owners about their sales during construction. Some surveyed business owners reported sales numbers, but many would only report on whether there was an increase or decrease. The authors used the gross sales data for all of Caldwell (5% increase) in combination with the reported sales numbers from the survey to conclude that while abutting businesses gross sales dropped 5%, nonabutting businesses' sales must have increased. This conclusion relies on the assumption that the survey responses on gross sales were representative of the population of abutting businesses.

Young, Wolffing, and Tomasini looked at 12 case study projects in Wyoming and compared actual Wyoming Department of Revenue tax data to survey responses from business owners addressing their perceptions of the impacts on revenues. The projects took place from 1998 to 2001 in towns with populations ranging from 807 to 53,011. Projects ranged from simple sidewalk and curb replacements to complete pavement rehabilitations. As in the related study by Buddemeyer, Young and Vander Giessen, the businesses were classified by Standard Industrial

Classification (SIC) codes into one of nine categories: apparel, automobile, building and hardware, food stores, furniture, general merchandise, miscellaneous stores, traveler accommodation, and restaurants. The researchers were able to obtain sales tax revenue data from the State of Wyoming. The businesses were only identified by SIC code to preserve confidentiality. The researchers calculated revenues for each business based on the tax rates for each type of business. The average change in sales revenues overall ranged from an 8.3% decrease to a 39.9% increase across all projects. The authors also summarized the sales data by business categories. It is difficult to reach conclusions about the effect of construction because the study did not account for other changes that occurred at the same time. One particularly interesting conclusion from the report, however, is that the perceived impacts from the business survey and the actual impacts from the sales tax data were only in agreement 60% of the time.

3.2.2 Additional published studies

In addition to the peer-reviewed, statistics based studies of highway impacts, there are also two anecdotal studies of impacts from recent light rail projects, which, while not replicable or peer-reviewed are useful for providing more information on the subject. The first study was conducted by **Houston Tomorrow**, formerly known as the Gulf Coast Institute, a non-profit organization in Houston. [9] The goal was to inform Houston residents about impacts that other large cities had experienced due to recent light rail projects. The non-profit spoke with representatives of the local governments, transit agencies, and business community in six cities: Los Angeles, San Diego, Dallas, Portland, Minneapolis, and Salt Lake City. In general, they found estimates of business closures ranging from one business in Portland to 10-15% of businesses in Dallas, but Dallas could not specifically attribute closures to the line, and had received few negative comments from businesses. Portland's corridor was the most similar to University Ave, as their Interstate MAX line ran along a major commercial arterial. Portland was the only city that was able to document whether businesses had closed due to construction, though Salt Lake City noted that two businesses that it had given mitigation loans to had closed.

3.2.3 Student papers

The other anecdotal study that mentioned business impacts from light rail projects in specific cities was a master's thesis from the Hubert H. Humphrey Institute for Public Affairs at the University of Minnesota, which focused on mitigating impacts from the Central Corridor project.[10] The study found one article in the Salt Lake City Tribune that estimated that nearly 30% of businesses closed during the construction of Salt Lake City's first alignment (an earlier project than the one looked at by Houston Tomorrow), but there was no formal tracking done by the city. The study also mentions Martin Luther King Jr. Way, a major arterial in a diverse neighborhood in Seattle. Similarly to University Avenue, Seattle's Central Link project included a reconstruction of that roadway from building face to building face. A Seattle Times news

[9] "The Impact of Light Rail on Local Businesses," published by Houston Tomorrow, May 2006. Available at http://www.gulfcoastinstitute.org/university/LightRail_BusinessImpact.pdf.

[10] Collins, Reuben. "Light Rail Transit Construction Impact Mitigation Strategies: Case Studies and Recommendations for the Central Corridor."Master's Thesis at the Hubert H. Humphrey Institute for Public Affairs, University of Minnesota, 21 December 2007. Available at http://nexus.umn.edu/Theses/ReubenCollins_ProfessionalPaper.pdf

article reported that as of February 2006, 44 of the 274 businesses along Martin Luther King Jr. Way were no longer operating, but again, there is no way to identify from the article whether the closures were part of natural turnover or directly resulting from the construction.[11]

3.3 Development of a methodology for the Central Corridor

The ideal analysis of impacts of construction on sales revenues would use direct measures of the environmental effects of construction on behavior of consumers and businesses to estimate the sales revenue impacts and the associated business decisions that were made. For instance, an anticipation of losses could cause businesses to relocate prior to construction, or actual losses during construction could lead to businesses incurring additional costs, such as increased marketing costs or making private arrangements for customer parking. The ideal analysis would categorize businesses so that all businesses in a category experience similar gains or losses resulting from the construction. Explanatory variables would include measures of actual environmental impacts so that businesses that have more extreme exposure can be distinguished from those with moderate exposure. It would be necessary to control for the size of the metro area, the local economy, and any significant shifts in the customer base, such as the effects of shifts in neighborhood ethnic composition on an ethnic food store. The ideal analysis would also include variables addressing broad shifts in customer behavior, such as competition from internet businesses. It would also be necessary to control for mitigation of the impacts. When all of the data are assembled, the researcher would conduct a statistical analysis to develop estimates of sales revenue impacts, dependent on the variables that are good predictors of outcomes. These statistical relationships would then be used to develop forecast predictions for the corridor of interest, making explicit the range of uncertainty in those estimates.

However, data availability and methodological issues limit how close researchers can come to an ideal analysis. The analysis would ideally be done using comparable data on multiple projects with reasonable variation in the factors described for a recent time period. To obtain a set of recent light rail transit construction projects affecting businesses, it is necessary to look at multiple states. These states have different sales taxes, so they would not be directly comparable. Simplifying to one state with the most similar project would require negotiations with the state government to obtain data in a sufficiently disaggregated form to be able to conduct the analysis described. It is not clear that such data would be provided in a manner that would allow matching with other necessary data.[12] Complicating the analysis further, many of the desired explanatory variables do not have readily available information. For instance, local economic data are not available more recently than 2007, and information on ownership of businesses is not available on an annual basis, but only when a special study was conducted. It is not clear what level of detail on construction environmental impacts would be available for a completed project.

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[11] Collins, pg. 8

[12] Aggregated data is readily available, such as at the State of Minnesota website, http://map.deed.state.mn.us/m3d/. Aggregated sales tax data were used in an analysis done by a research assistant at the University of Minnesota for the Lake Street Council. Unfortunately, the block level data do not allow distinctions to be made about differing levels of impacts by types of businesses or other characteristics. The study is Diaz, Jose, "Economic Indicators of the Lake Street Corridor," NPCR1303, available at http://www.cura.umn.edu/search/index.php.

With the current state of knowledge about construction impacts on business revenues, developing reliable point estimates of such transit construction impacts is infeasible to implement for a project-level analysis. To develop an estimate of construction impacts on a project-level, it is necessary to have a reliable estimate of current and future revenues for specific businesses, and then adjust that estimate by the change in business resulting from the construction controlling for other economic or social factors. Difficulties in estimating future revenues include: accurately predicting the overall state of the economy and how it affects businesses in the construction zone, predicting local changes in socio-economic characteristics, anticipating other local changes that would affect traffic or business patterns (such as the opening or closing of competing businesses outside the construction zone), anticipating other technology or behavioral changes that could affect businesses in each industry (such as the downsizing of businesses due to technological advances in the business function), and anticipating force majeure impacts (e.g. "acts of nature") to businesses. As a result, predicting the amount of lost business revenue for any given business or market segment is highly uncertain and speculative. Business forecasts generally are not done for corridors for this reason, even under ordinary circumstances, let alone when business is disrupted by a construction project.

3.3.1 Consideration of the four studies in developing a prediction

Given these difficulties in developing a new specially tailored estimate of construction impacts, the studies identified during the literature search were reviewed to determine if any studies that have already been done would provide acceptable estimates. Table 1 summarizes estimates of construction impacts on business revenues drawn from studies discussed above.

Table 1. Recent quantitative studies of construction sales revenue impacts on businesses

Study	Context of construction	Magnitude of impact
Buddemeyer, Young and Vander Giessen (2008)[13]	Highway reconstruction near Dubois, Wyoming on the way to Jackson Hole and Yellowstone National Park	No impact: "holding steady with minor declines"
De Solminihac and Harrison (1993)[14]	Houston urban highway rehabilitation, including High Occupancy Vehicles (HOV) lanes and a transit center	General merchandise: 28% decrease Food stores: 37% decrease Automotive outlets: 32% decrease Home furnishings: 17% decrease
Wildenthal and Buffington (1996)[15]	Widening a state highway in Caldwell, TX (population	5% decrease

[13] Buddemeyer, Jenna, Rhonda Young and Steven Vander Giessen, "Highway Construction Related Business Impacts: Phase 3 Effort for the Town Of Dubois". FHWA-WY-08/01F. March 2008: http://rip.trb.org/browse/dproject.asp?n=11090.

[14] De Solminihac, Hernan E. and Robert Harrison, "Analyzing Effects of Highway Rehabilitation on Businesses" Transportation Research Record 1395, Transportation Research Board of the National Academies, Washington, D.C., 1993, pp 137-143.

Study	Context of construction	Magnitude of impact
	3000)	
Young, Wolffing, and Tomasini (2005)[16]	Twelve highway construction projects in Wyoming in towns ranging in size from 807 to 53,011 people	8.3% decrease to 39.9% increase

Drawing a direct comparison from these studies to the Central Corridor is difficult. The construction projects analyzed were all highway projects, with measures taken to minimize disruption. Moreover, the highway projects varied significantly from the Central Corridor project in terms of construction complexity, duration, construction staging options, geographic constraints and construction seasons, all of which can contribute to the impact of construction on a given business' revenues.

The studies ranged in sophistication of analytical techniques. For instance, Buddemeyer, Young and Vander Giessen provided summary statistics of sales data, while De Solminihac and Harrison tried to control for other effects on revenues through advanced statistical methods. They estimated average impacts of construction on sales tax revenues by comparing to businesses in a similar location during the same time period. Even with the more sophisticated method, these average impacts do not provide good predictions of sales revenue impacts for any particular business, because businesses experienced both greater and lesser impacts, with only the average presented. The average is presented with a confidence interval that lets the reader interpret how sure the authors are. For instance, De Solminihac and Harrison used a confidence level of 90% in their analysis to conclude that there were no sales revenue impacts for building materials, clothing, restaurants, drug stores, liquor stores, and "miscellaneous". Consequently, the average sales revenue impact was sufficiently small that the study could not distinguish it from zero. This occurs when there are businesses in the category that have increased sales and others with decreased sales. For example, if sales at sandwich shops increase and sales at formal restaurants decrease, the overall category of restaurants could show on average no effect.

3.3.2 Selection of the De Solminihac and Harrison study as a basis for estimation

Considering the complexities of using information from the literature, the De Solminihac and Harrison (1993) study was selected as the best basis for estimation because the context was the most analogous to the Central Corridor Project, and it was the strongest study from a methodological perspective, given the lack of available studies on this subject matter. The project reviewed in the De Solminihac and Harrison study was in a major urban area with a variety of options for consumers to switch their business away from the construction corridor based on the environmental impacts caused by construction. It included some transit elements

[15] Wildenthal, MT and Buffington, "Estimated Construction Period Impact of Widening State Highway 21 in Caldwell, Texas" Transportation Research Record 1559, Transportation Research Board of the National Academies, Washington, D.C., 1996, pp 76-83.

[16] Young, Rhonda Kae, Chris Wolffing, and Michael Tomasini, "Highway Construction Impacts on Wyoming Businesses" *Transportation Research Record: Journal of the Transportation Research Board, No. 1924,* Transportation Research Board of the National Academies, Washington, D.C., 2005, pp. 94–102.

(bus transitway) as part of major work on a busy urban highway. The business mix on that corridor is weighted differently than the CCLRT corridor but includes the same categories of business.

The findings in the De Solminihac and Harrison (1993) study were used to estimate the upper bound of effects of the Project on sales revenues impacted businesses. The estimates provided by the other three studies in Table 1 were used to support a predicted lower bound of no effect since the business contexts for those construction projects would tend to lead to the economic stimulus effects of construction spending outweighing the disruptive effects on businesses of the construction itself.

The percentage impacts from De Solminihac and Harrison (1993) are applied to revenue data from a July 2010 business survey by the U-Plan community planning studio to develop the upper bound revenue loss by business type.[17] For the calculation of sales revenue impacts, the categories are consolidated to reflect the way business categories are aggregated in the previous studies. These categories reflect differences in potential sales revenue impacts by business category, but are not tied directly to the qualitative impacts that will be described. No attempt was made to adjust the impacts for seasonal factors because of the inherent uncertainty in the estimates and lack of information to attempt to adjust for seasonal patterns in revenue in conjunction with fluctuating levels of construction activity through the seasons.

Estimates of the numbers of small businesses affected are presented in this report. Small businesses are defined as those with annual revenues less than $2 million. The percentage impacts from De Solminihac and Harrison (1993) are applied to annual revenues of small businesses in the corridor to generate an upper bound sales weighted average overall impact estimate for small businesses.

3.4 Case studies of other light rail projects

Four similar light rail transit projects were also researched, to explore whether any business impacts could be seen in the county level business turnover numbers, taken from the same Census dataset used above in the Economic Description section, Statistics of US Businesses. The difficulty with the data is that the business turnover trends appear to be much more influenced by the economy than by any specific disruption along a corridor. Therefore, in cases like Portland and San Jose, where little impact was identified in terms of business closure, there are upticks in business closures due to a bad economy at that time, while Seattle, which reported 44 business closures in 2006 due to the Central Link on MLK Jr. Way, was overall doing well as a whole and in 2006 had many more businesses opening than closing.

Portland's Interstate Avenue project was the closest match to the CCLRT project, as much of the project length runs at surface level along a commercial corridor. Figure 2, below, shows the business openings and closures in Multnomah County before, during, and after the construction of the Interstate MAX, which became the Yellow Line. Business closures exceeded openings in only one year during the construction period, and Portland's own data on business effects during the construction, retrieved from a survey of light rail projects carried out by Houston Tomorrow,

[17] U-PLAN Community Studio, "University Avenue Business List, July 2010" 712 University Avenue, Suite 105 Saint Paul, MN 55104 adam@u-plan.org

a non-profit organization, found only that only three businesses were forced to close or relocate during construction, not nearly enough to cause closures to exceed openings.[18]

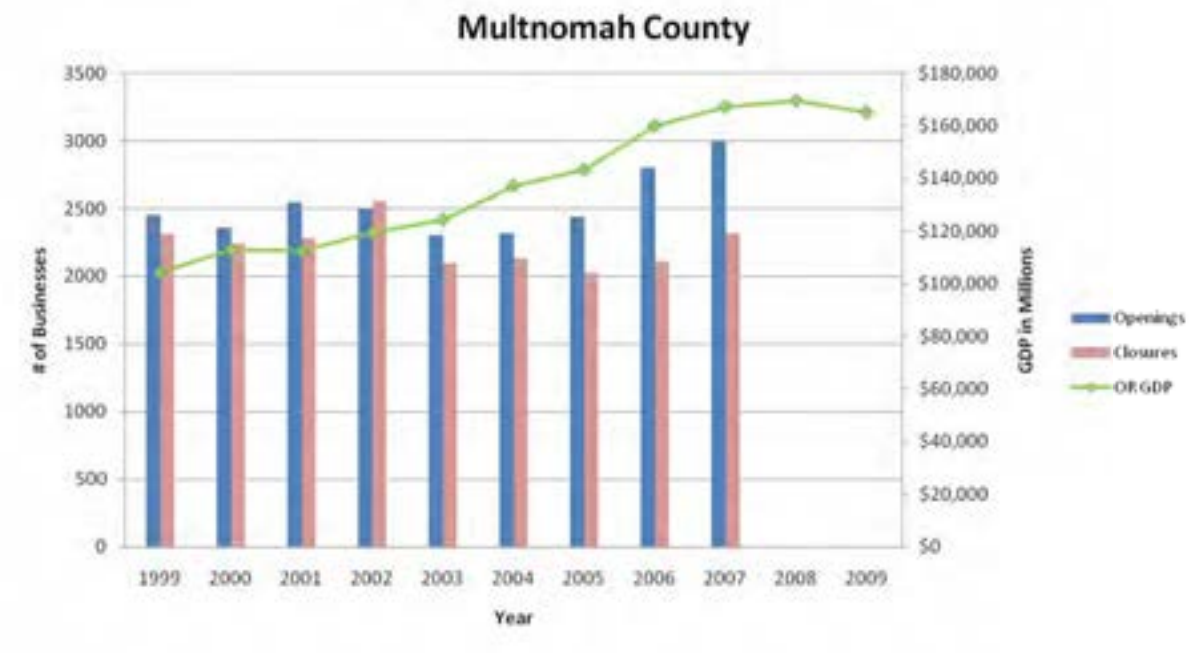


Figure 2. Business openings and closures in Portland during light rail construction

The Houston Tomorrow survey also looked at impacts in Salt Lake City during the construction of the TRAX University and Medical Center extensions, as well as the initial TRAX construction, all of which took place in the downtown area and were surface level. During the initial construction, the combination of highway reconstruction and light rail construction downtown was "problematic for businesses," according to Allison McFarlane of the City of Salt Lake.[19] The Houston Tomorrow study identified two businesses that had closed as well as one that had closed for the construction and then reopened. During the construction of the extensions, businesses reported much less impact, and the TRAX has been popular enough that four more lines are now being constructed as part of the Frontlines 2015 project. Figure 3 shows the business turnover in Salt Lake County during the construction periods. It is important to keep in mind that Salt Lake City hosted the Olympics in 2002, which might explain why it alone of the four cities researched had business openings exceed business closures in 2002, despite construction.

[18] "The Impact of Light Rail on Local Businesses," published by Houston Tomorrow, May 2006. Available at http://www.gulfcoastinstitute.org/university/LightRail_BusinessImpact.pdf.
[19] "The Impact of Light Rail on Local Businesses," published by Houston Tomorrow, May 2006, page 6

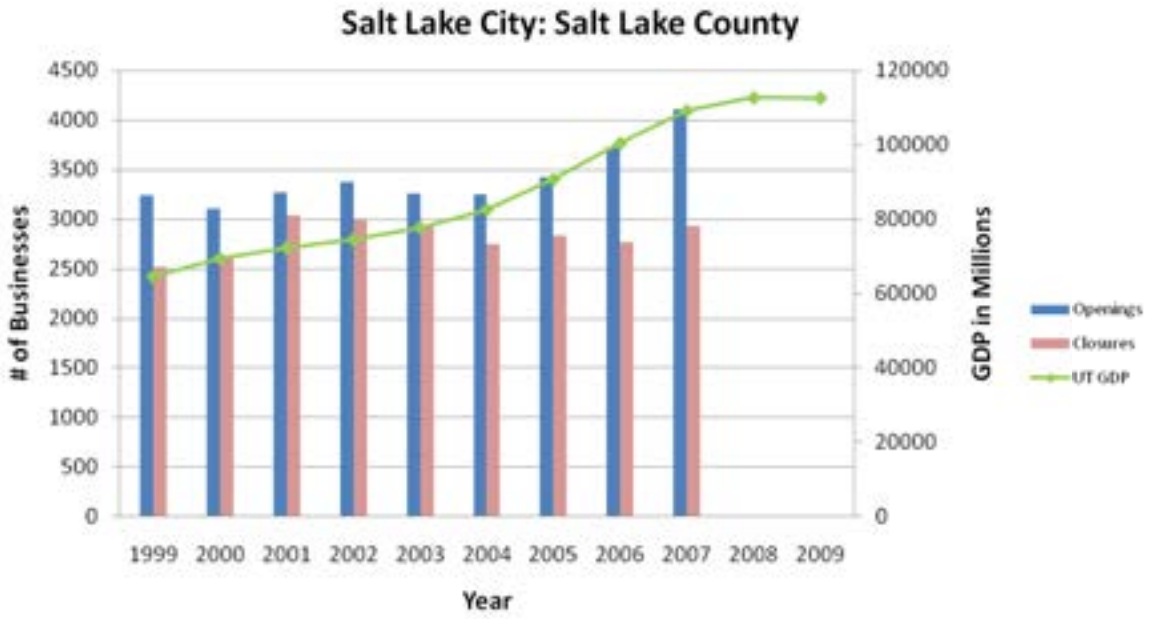


Figure 3. Business openings and closures in Salt Lake City during light rail construction

San Jose built its Tasman East extension along Tasman Drive, Great Mall Parkway, and Capitol Avenue between 1999 and 2004. The project included an elevated section over I-880 and then a surface section running along an arterial street. Most of the businesses along the arterial are office buildings set back from the road with surrounding parking lots, and relatively little retail, so the impacts were mainly traffic related.[20] Figure 4 shows the business turnover in Santa Clara County during the construction. Unlike the other business turnover graphs, which use the state Gross Domestic Product (GDP) to show overall economic trends, this graph uses the San Jose Metropolitan Statistical Area GDP, as San Jose is too small in relation to the rest of California for the state GDP to be relevant. The downturn in the early 2000s reflects the "dot com" bust, which affected the major industry of San Jose, more than the minimal impacts of construction.

[20] Collins, Reuben. "Light Rail Transit Construction Impact Mitigation Strategies: Case Studies and Recommendations for the Central Corridor."Master's Thesis at the Hubert H. Humphrey Institute for Public Affairs, University of Minnesota.

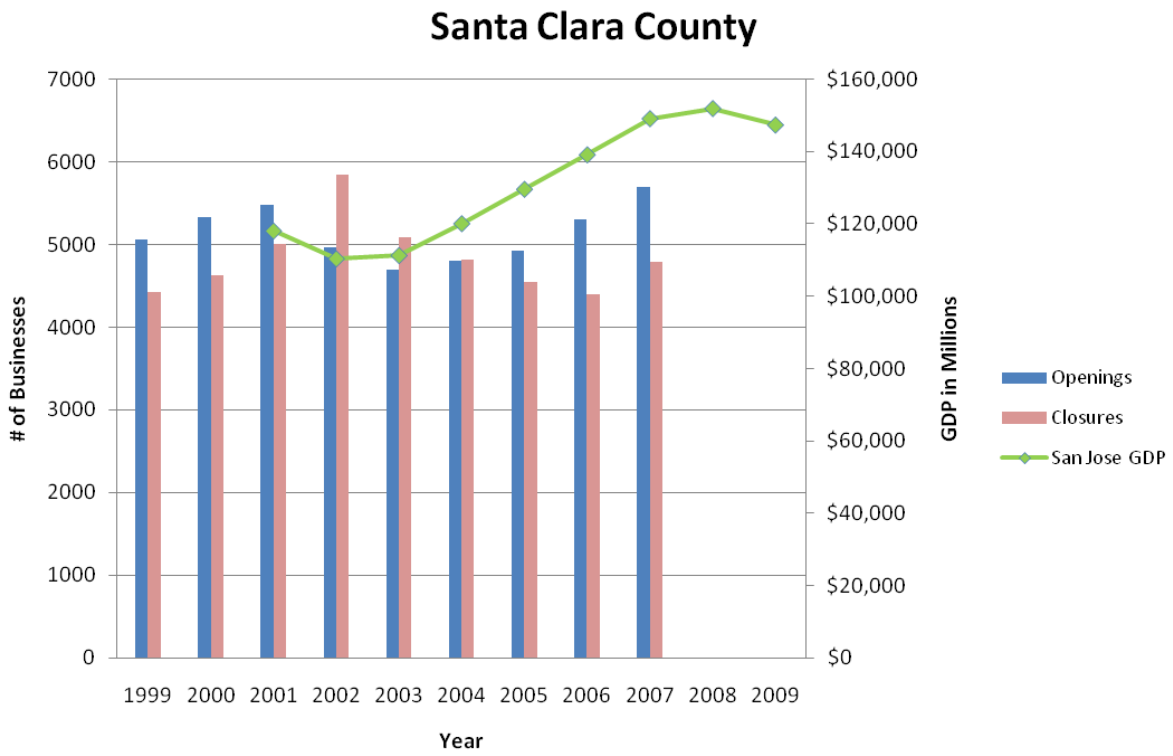


Figure 4. Business openings and closures in San Jose during light rail construction

The last city explored was Seattle during the construction of their Central Link from 2002 to 2009. While much of the alignment is either underground or elevated, it does run on the surface along Martin Luther King Jr. Way, a major arterial in a diverse neighborhood. Similarly to University Avenue, the project included a reconstruction of the roadway from building face to building face. A Seattle Times news article reported that as of February 2006, 44 of the 274 businesses along Martin Luther King Jr. Way were no longer operating.[21] Figure 5 reports business turnover figures for King County, which does not reflect these losses as the King County economy as a whole was benefiting from a strong economy in 2006.

[21] Collins, pg. 8

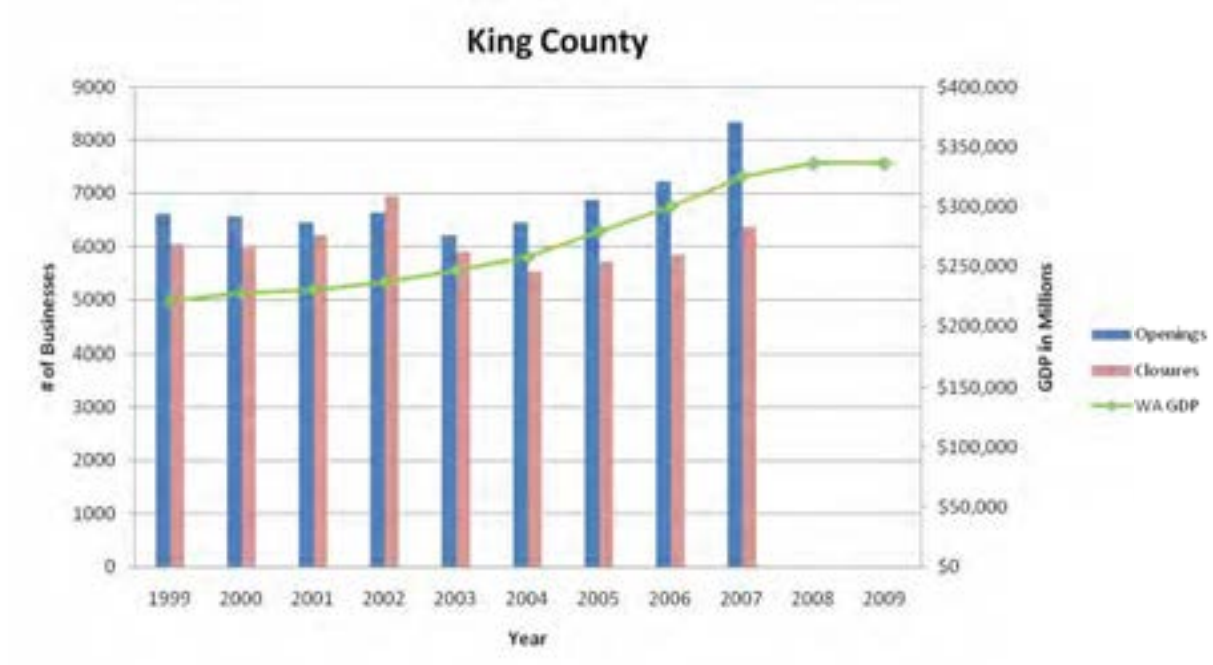


Figure 5. Business openings and closures in Seattle during light rail construction

3.5 Data

In order to identify small businesses along the corridor, the dataset assembled by U-Plan (a community planning studio located on the corridor) was utilized ("U-Plan Dataset"). The U-Plan Dataset initially consisted of 1,410 entities that were located on University Avenue and Washington Avenue in July 2010. U-Plan validated the data against lists from the University Avenue Business Association, Asian Economic Development Association, and the University of Minnesota capstone project. The validation effort resulted in 1,272 businesses in December of 2010, compiled with annual revenue as well as a GIS data point based on the business address. The U-Plan Dataset does not include downtown St. Paul and Minneapolis and is not limited to businesses adjacent to the alignment. There were 947 businesses with revenue in the dataset along the construction alignment.

3.6 Description of businesses

The Central Corridor has a diverse economy with nearly all of the North American Industry Classification System (NAICS) sectors represented along it.[22] 82% of the businesses along the corridor are small businesses with revenues under $2 million. Table 2 shows a breakdown of the businesses in the corridor by NAICS sector.[23]

[22] The North American Industry Classification System (NAICS) is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy. See http://www.census.gov/eos/www/naics/ for additional information on how the codes classify businesses.

[23] The NAICS classifications were taken from the U-Plan dataset, with the exception of three businesses. Episcopal Homes and Second Debut 2 were added to the U-Plan Dataset between August 2010 and December 2010 and did

Table 2. Sector composition of the Central Corridor

Business Type	Percent of the Corridor	Number of Businesses	Percent Small Business	Number of Small Businesses
Animal Production	0%	1	100%	1
Construction	2%	23	78%	18
Manufacturing	2%	21	62%	13
Wholesale	4%	37	38%	14
Retail	17%	161	75%	121
Transportation and Warehousing	1%	8	100%	8
Information and Cultural Industries	3%	28	75%	21
Finance and Insurance	5%	51	76%	39
Real Estate, Rental, and Leasing	4%	37	81%	30
Professional Scientific and Technical Services	14%	130	85%	111
Company Management	0%	1	0%	0
Administrative and Support Services	6%	55	82%	45
Education	1%	8	88%	7
Health Care and Social Assistance	20%	185	85%	158
Arts, Entertainment and Recreation	1%	13	92%	12
Accommodation and Food Services	10%	99	97%	96
Other Services	9%	89	96%	85
Total	100.00%	947	82%	779

Table 3 shows the breakdown of businesses identified in the U-Plan dataset by the categories used in De Solminihac and Harrison (1993), including the percentage with revenues less than $2 million per year.

Table 3. Categorization of Central Corridor businesses by the De Solminihac and Harrison categories

Business Type	Percent Revenue Loss from the Literature	Number of Businesses	Percent with Annual Revenue Less than $2 million	Number of Businesses with Revenue Less than $2 million
Food Stores	37%	25	76%	19
General Merchandise	28%	6	33%	2
Furniture Stores	17%	3	100%	3
Automotive Retail	32%	53	81%	43

not include a NAICS code in their entry. Macy's in Downtown St. Paul was added by the project team from information provided by the Metropolitan Council. Episcopal Homes was coded as Health Care and Social Services, Second Debut 2 was coded as Retail-Miscellaneous, and Macy's was coded as Retail-General Merchandise.

Business Type	Percent Revenue Loss from the Literature	Number of Businesses	Percent with Annual Revenue Less than $2 million	Number of Businesses with Revenue Less than $2 million
Building Materials	0%	3	67%	2
Liquor Stores	0%	5	60%	3
Clothing	0%	31	94%	29
Restaurants	0%	93	99%	92
Drug Store	0%	15	67%	10
Miscellaneous Businesses[24]	0%	713	81%	576
TOTAL BUSINESSES		947	82%	779

3.7 Estimation of business revenue loss using De Solminihac and Harrison findings

Using the findings of the De Solminihac and Harrison (1993) study to develop the upper bound revenue loss by business type required organization of the U-Plan data into similar categories to that of the study.[25] De Solminihac and Harrison found revenue decreases in four types of businesses: general merchandise, food stores, automotive outlets, and home furnishing. No impacts were found in the remaining categories.

To create a category similar to "food stores", all businesses assigned a NAICS code beginning with "445" were placed in a category with the exception of the five business coded 4453 ("Beer, Wine, and Liquor Stores")because the De Solminihac and Harrison (1993) study specifically separated out liquor stores. Similarly, all general merchandise stores begin with 452, while home furnishings stores begin with 442. There is not a similarly broad category for automotive outlets, as they consist of a number of different types of economic activity. Therefore, an "automotive outlet" category was created from businesses with NAICS codes of new and used car and truck dealers (4411), tire and auto parts stores (4413), auto repair stores (8111), gas stations (447), and automotive rental stores (5321).

The De Solminihac and Harrison study also included the categories of building materials, liquor stores, clothing, restaurants, drug stores, and miscellaneous retail as noted in Table 3. As the study found no business revenue impacts in any of these categories, businesses in these categories were treated as a single group for the purposes of this analysis. Within the CCLRT corridor, there are three building materials stores (4441), five liquor stores (4453), 31 clothing and accessory stores (4481), 93 food service and drinking places (722), and 15 health and

[24] Includes all businesses in the sector categories listed in Table 2 except for Retail and Accommodations and Food Services. Added to that total are 20 miscellaneous retail shops, such as book or music stores, and the 6 hotels from the Accommodations category.

[25] U-PLAN Community Studio, "University Avenue Business List, July 2010" 712 University Avenue, Suite 105 Saint Paul, MN 55104 adam@u-plan.org

personal care stores (446). The remaining 713 businesses were classed under miscellaneous retail.

4.0 Results

4.1 Qualitative assessment of potential construction-related impacts

This analysis addresses seven different impacts that the construction of light rail can have on local business revenues. Construction can impede access to businesses by foot and by vehicle; it can temporarily consume space for parking; it can lead to temporary, and potentially unexpected, utility shutoffs; increased truck traffic and certain construction activities such as sheet piling can increase ambient noise levels and lead to unpleasant vibrations; road demolition for the laying of tracks can increase the amounts of dust and dirt in the air; and the construction vehicles and temporary fencing of the work site can impede business visibility.

4.1.1 Impacts to pedestrian access

Impediments to pedestrian access will occur mainly at the beginning of the construction period within each phase, when one side of the road is demolished to build new sidewalks and roadway. During this period, pedestrians will need to access the building from side streets or use temporary sidewalks created by the contractor.

4.1.2 Impacts to vehicle access

Restrictions to vehicle access will also occur mainly at the beginning of the construction period within each phase, when one side of the road is demolished to build new sidewalks and roadway. Construction can impact vehicular access to businesses in two ways: it can increase congestion on the roadway and block access to entryways. Increased congestion on the roadway can lead to potential customers avoiding the location, effectively reducing traffic to the business, and congestion can also serve to block access, as it becomes difficult to turn in or out of the building's parking lot. Access can also be blocked if roadways or intersections are closed for a length of time. These effects can be more severe if the customers are uninformed of the situation and are unexpectedly unable to access a business from the direction they are approaching, potentially causing them to turn around and take their business elsewhere.

In addition to the impact to customers, constraints on vehicle access also hinder delivery of goods to the stores and restaurants, which can be further hampered by roadway congestion. Impacts to vehicle access may cause businesses to reduce or relocate services during the period of roadway reconstruction. Businesses that rely on pick-ups and deliveries at specific times may be affected by traffic conditions along the roadway. Most office buildings along the CCLRT corridor have parking lots accessible by side streets and can alert their employees and clients to the need to change their route to work for the construction period.

4.1.3 Impacts on parking

Parking along the corridor alignment will be lost during construction due to roadway reconstruction, and side street parking may be impacted on days when intersections are closed for construction activities. The effects of this temporary loss of parking may impact smaller establishments without access to off-street parking more than businesses that have off-street parking lots.

4.1.4 Impacts due to utility shutoffs

Business impacts due to utility shutoffs usually have a fairly short duration and can be scheduled around business hours. Utilities located along the corridor include gas, water, electricity, and internet service, and all will need to be relocated during at least one phase of the project. There are approximately four hotels and bed and breakfasts adjacent to the alignment, all of which potentially need access to at least water and electricity 24 hours a day. Additionally, restaurants and food stores would need advanced warning of shutoffs to ensure adequate food storage and safety measures are put in place, and the loss of power or water could impact personal care services and manufacturers. Professional services businesses tend to keep regular business hours, so that utility shutoffs could be adjusted to minimize impacts.

4.1.5 Impacts due to noise and vibrations

Noise and vibrations from construction and truck traffic can create an unpleasant shopping environment during the duration of construction and could impact business revenues. These impacts likely will be more significant during the beginning of the construction phase, when dirt and debris from demolition are removed and replaced with new materials. Because University Avenue is a major truck route within St. Paul, the additional construction trucks will not have as great an impact as they would traveling on a residential street. Additionally, the noise from the construction site and from any traffic congestion resulting from the site can lead retail shoppers to go elsewhere until the construction is finished.

4.1.6 Impacts due to dust and dirt

Reconstructing the road and sidewalks will generate a lot of dirt and dust, not all of which will stay inside the construction site. The need to clean this dust may negatively impact businesses, particularly car dealerships whose goods are stored out in the open. The dirt and dust may also necessitate more window cleaning and mopping or sweeping as it is tracked in by customers, and will impact possibilities for outdoor dining during the summer months. Because most dust is generated while construction work is actually occurring, it should be confined to daylight hours unless it is disturbed by the wind at night.

4.1.7 Visual impacts

Construction of temporary fencing and equipment movement and storage may obstruct business signage and may lead customers to believe that businesses have closed during the construction period, leading them to look elsewhere for their business. This problem would largely affect non-appointment based businesses, such as retail shops and many restaurants, as those businesses with appointments can assure their customers that they are operating. It would also reduce the

likelihood of impulse decisions to stop in at a particular store or personal care service place, such as a nail salon.

4.2 Estimates of impacts to business revenue

No studies have directly tied the impacts qualitatively described above to quantitative estimates of revenue losses. As described in the methodology section, the potential for sales revenue losses was calculated using information from the literature on actual losses during construction projects. Baseline revenue figures are from the U-Plan Dataset. There have been some new businesses and some closures since that measurement, and refined data are currently not available.

In the absence of substantive data available to assess loss of revenue directly applicable to construction-related environmental impacts on a light rail transit project in an urban setting, this analysis utilized previously published studies as the framework for defining the potential loss of revenue for the corridor with an understanding that the assessment is an estimation at best. In addition to presenting the estimated average percent losses by category and the number of businesses in each category, an average loss range was estimated for the entire corridor. This estimate is in keeping with the studies reviewed in the literature, which presented overall losses, and where possible provided estimates or descriptions of the variation across categories or geography.

For small businesses under $2 million in annual sales revenues, the upper bound average percentage revenue loss is estimated to be 2.85%. This estimate is derived from averaging potential losses across all business types. All small businesses in the corridor were assigned to the impact categories as discussed in the Methodology section.[26] The aggregate business revenue loss for all businesses in the U Plan database was estimated by multiplying the combined revenue of all businesses within the four categories by the percent loss found in each category by the De Solminihac and Harrison study.[27] The losses were totaled across the categories to get the total revenue lost by small businesses on the corridor, $13,935,430, and then divided by the total small business revenue, $487,805,000, yielding the upper bound average percentage loss of 2.85%.

As noted in the Methodology section, the lower bound of average impacts is predicted to be no average loss, yielding a range of potential average losses to small businesses of 0 to 2.85% of revenue. Changes in sales revenues to individual businesses could fall above or below this

[26] The effects on small businesses were summarized in this fashion because of concerns expressed specifically about small businesses, and the fact that most businesses in the corridor are small businesses. However, all businesses in the corridor were identified by these same impact categories. The best information available on impacts is from the De Solminihac and Harrison study, so the impact estimates for larger businesses would be the same percentage impacts as for small businesses.

[27] For example, the combined revenue of the 43 small automotive businesses was $27,051,000. The sums for each category were then multiplied by the percentage impacts from De Solminihac and Harrison (1993) to calculate the predicted revenue loss. To continue the example, automotive outlets were found to lose 32% of revenue in the De Solminihac and Harrison study, so $27,051,000 was multiplied by 0.32 to get $8,656,320, the estimated revenue loss for automotive outlets.

range. Some businesses that sell to the construction workers and companies will likely benefit with higher revenues during construction. Some businesses that experience disruption but do not attract business from the construction spending may see their revenues decline. For instance, limited service restaurants that can meet a construction worker's needs during their lunch break may see their revenues increase, while a more formal restaurant that targets the dinner crowd may lose business to similar restaurants unaffected by construction.

5.0 Conclusion

While this technical analysis examined impacts on business revenues along the Central Corridor resulting from the construction of the Central Corridor Light Rail Project, the analysis presented in this report is not a conclusive statement on the potential loss of revenue for the businesses along the CCLRT alignment. As described in the Methodology section, quantifying the amount of lost business revenue in the absence of future global and local economic factors and historical context has great uncertainty for project-level analysis. It is not possible to predict the specific revenues (losses or gains) that any individual business may experience during the construction period. However, given the limitation of available data, the analysis describes a range of potential impacts both in terms of qualitative assessments of potential impacts (through an EIS review of analogous transit projects in metro areas) and estimates of sales revenue impacts of construction (by developing a corresponding classification system utilized by previously published studies approximately analogous to the CCLRT project).

Over the course of the project, businesses adjacent to the alignment are likely to experience potential impacts on revenues from construction, including issues with pedestrian access, vehicle access, parking, utility shut-offs, noise and vibrations, dust and dirt, and visual impacts. These effects will be phased over the course of the project, with construction extending from March 2011 to November 2012. During that time, while any individual business has the potential to experience business revenue losses during the construction period, the studies indicate that businesses that include general merchandise, food stores, automotive outlets, and home furnishings stores are more likely to experience greater sales revenue losses due to construction, as well as other economic factors. This estimate of impacts is subject to significant uncertainty, including:

- Limited published research on the sales revenue impacts of construction on businesses caused reliance on a single study for the upper bound, which addresses impacts of a primarily highway project going through neighborhoods with a different mix of businesses than the Central Corridor.
- The studies relied upon for estimation of sales revenue impacts from construction had limited ability to separate construction impacts from other factors that affected business revenues.
- The statistical analysis in that study concluded that there were no sales revenue impacts for building materials, clothing, restaurants, drug stores, liquor stores, and "miscellaneous businesses". Consequently, it is likely that there were average sales revenue impacts that were sufficiently small that the study could not detect them, and some businesses in these categories gained revenue while other businesses lost revenue.

Given this uncertainty, it is likely that there will be businesses with sales revenue losses other than those identified as being impacted. In some cases, the losses may be significant, since statistical methods provide average results for a group, rather than exact predictions for individual businesses. At the same time, there are likely to be businesses that experience increased revenues as a result of construction spending during the project. Based on the level of aggregation and uncertainty associated with the studies on which this analysis relies, there is no way to predict what any one business will experience during the construction project. This analysis provides estimates of average effects for broad categories of businesses, and applies these estimates to the small businesses in the corridor to yield a range of average impacts on the small businesses of no impact to 2.85% loss of revenue during the construction period.

APPENDIX B

Having trouble viewing this email? Click here

Updated October 15, 2010
Construction Details for the week of October 18th - October 24th

For all construction questions, call the Construction Hotline: (651) 602-1404

Advanced Utility Relocation Overview

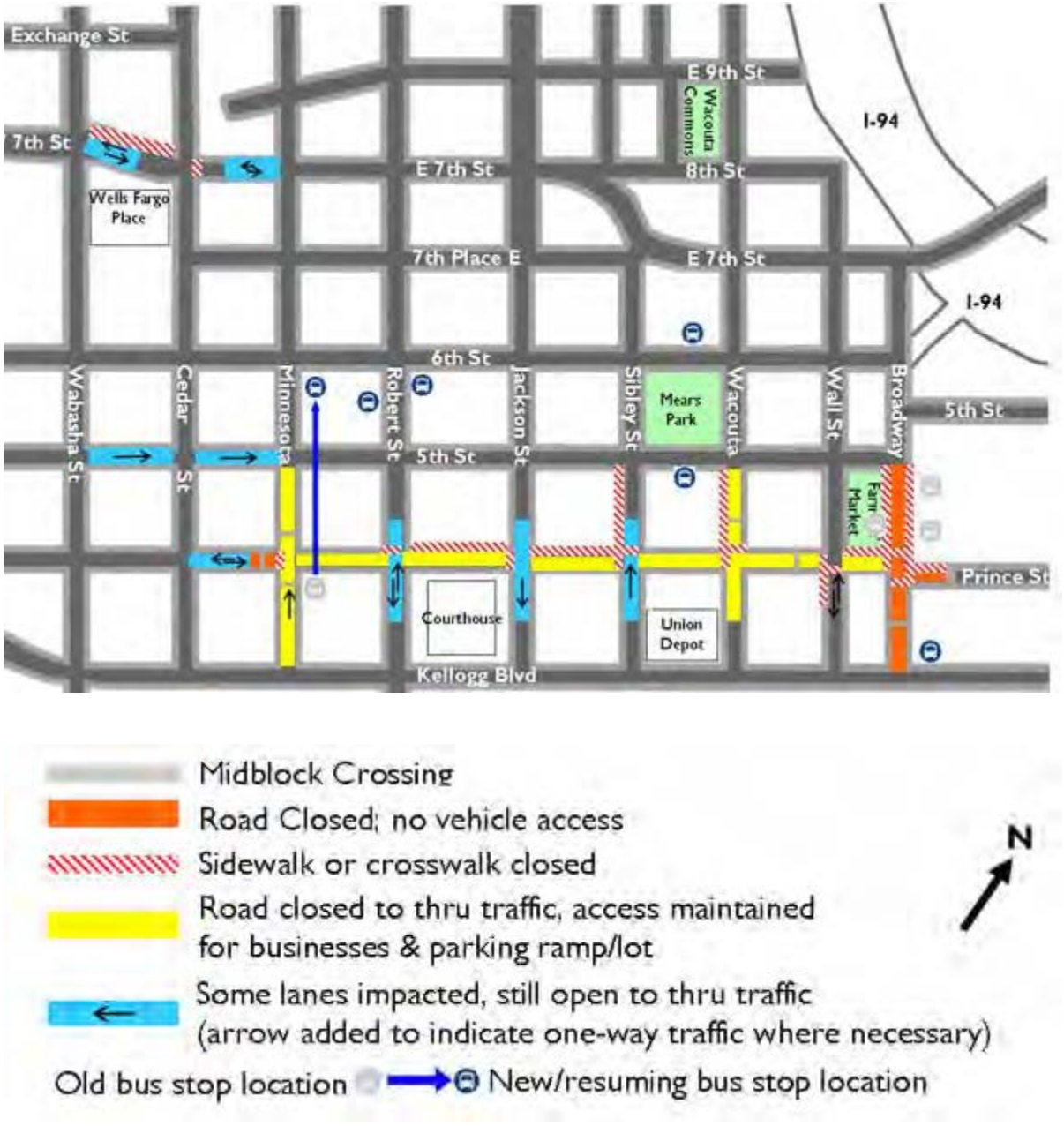
- Utility relocation and road construction is occurring on Fourth Street between Minnesota and Broadway streets in preparation for the Central Corridor Light Rail. This work includes relocating utilities, permanently removing parking meters and replacing sidewalks and light poles.When this work is complete in November 2010, the road will be restored to its final layout with one lane of traffic westbound between Wacouta and Minnesota streets. (Scheduled completion subject to change due to weather and unforeseen circumstances.)
- Additional work in 2011 and 2012 will involve laying the tracks, building the stations and installing the electrical and communication systems. More detail will be provided when the schedule is available.

ALERT: Construction crews have started sidewalk reconstruction along 4th Street between Minnesota and Broadway; watch for marked pedestrian detours. The information included in this update and map reflects work at the beginning of the week. Change may occur midweek; check www.centralcorridor.org construction alerts for any changes that occur midweek.

New sidewalks are being installed on Fourth Street.

Traffic and pedestrian modifications until further notice
Businesses are open and accessible via the skyway system and sidewalks.
Street signs and the information below provide alternate route information.

Downtown St. Paul:
Utility Relocation Construction
For the Week of October 18th-October 24th



A printable version of this map is also available.

Traffic Detail

- Prince St. closed approximately 100 feet east of Broadway.
- Fourth between Broadway to just west of Minnesota closed to through traffic; local access only.
- Broadway closed to through traffic between 5th Street and Kellogg.
- Wacouta closed to through traffic at intersection with Fourth.
- Sibley open to one lane northbound.
- Jackson open to one lane southbound.
- Robert open to one lane in each direction.

- Minnesota closed between Fifth and Kellogg; local access only. **-NEW**
- Seventh between Minnesota and Cedar open to one lane of traffic in each direction.
- Seventh between Cedar and Wabasha open to two lanes eastbound and one lane westbound.
- Fifth between Minnesota and Wabasha open to two lanes of traffic eastbound.

Sidewalk Detail

- South and east crosswalks at Prince and Broadway closed. Alternate routes are crosswalks at Kellogg and Broadway. Midblock crossing available between Prince and Kellogg. West and north crosswalks at Fourth and Broadway closed. Alternate routes are crosswalks at Wall and Fourth.
- West and south crosswalks at Fourth and Wall closed. Use east and north crosswalks.
- North and west crosswalks at Fourth and Wacouta closed. Use east and south crosswalks. **-NEW**
- West and north crosswalks at Fourth and Sibley closed. Use east and south crosswalks.
- North crosswalk at Fourth and Robert closed. Use east, west and south crosswalks.
- West crosswalk at Fourth and Jackson closed. Use east, north and south crosswalks.
- West crosswalk at Fourth and Minnesota closed. Use east, north and south crosswalks.
- East crosswalk at Seventh and Cedar closed. Use west, south and north sides crosswalks. **-NEW**
- Sidewalk closed on north side of Seventh between Wabasha and Cedar. Alternate route is sidewalk on the south side of Seventh. **-NEW**
- Sidewalk closed on north side of Prince approximately 100 feet east of Broadway. Alternate route is temporary midblock crossing to sidewalk on south side of Prince.
- Sidewalks closed on west and east sides of Broadway between Fifth and Prince. Alternate routes are sidewalks on Wall.
- Sidewalk closed on the north side of Fourth between Broadway and Wall. Alternate route is sidewalk on south side of Fourth.
- Sidewalk closed on west side of Wall at Fourth extending 150 feet south. Alternate route is sidewalk on east side of Wall.
- Sidewalk closed on west side of Sibley between Fourth and Fifth. Alternate route is east sidewalk.
- Sidewalk closed on west side of Wacouta between Fourth and Fifth. Alternate route is east sidewalk.
- Sidewalk closed on north side of Fourth between Jackson and Sibley. Alternate route is south sidewalk.
- Sidewalk closed on north side of Fourth between Jackson and Robert. Alternate route is side walk on south side of Fourth.

Bus stop relocation detail

- Routes 21, 53, 63, 70, 294, 350, 351, 353, 361 and 364 in both directions. Bus stops on Broadway will be closed; passengers are directed to board east bound/south bound buses on Fifth Str. between Sibley and Wacouta and west bound/north bound buses at Kellogg and Broadway or at Sixth Str. and Sibley.
- Routes 68 and 71 southbound: Bus stop on the west side of Robert between Sixth and Fifth is open
- Routes 68 and 71 northbound: Bus stop on the northeast corner of Robert and Fourth is closed. Passengers should use the regular bus stop on the southeast corner of Robert and Sixth.

Got questions? Contact the project office, not the work crews!

Please don't go around barriers into work zones. Construction hours will generally be from 7 a.m. to 5 p.m. weekdays, but crews will be allowed to work from 7 a.m. to 10 p.m. seven days a week if needed. Schedules are subject to changes due to weather and other unforeseen circumstances! Check www.centralcorridor.org frequently for updates.

If you have questions or concerns, please contact the Central Corridor LRT Project office at centralcorridor@metc.state.mn.us or call 651-602-1645.

For all construction questions, call the Construction Hotline: 651-602-1404

For general project questions and comments, contact:
Community outreach coordinator Dana Happel
Office: 651-602-1954 Cell: 612-968-8382
Email: dana.happel@metc.state.mn.us

For utility service questions, contact:

District Energy -
Nina Axelson
Phone: 651-925-8147
Email: nina.axelson@ever-greenenergy.com

Xcel Energy -
Shannon M. Forss
Phone: 612-720-3663
Email: shannon.m.forss@xcelenergy.com

St. Paul Public Works -
Shannon Tyree
Phone: 651-266-6063
Email: shannon.tyree@ci.stpaul.mn.us

St. Paul Regional Water Services -
Jerry Strauss
Phone: 651-266-6268
After hours dispatch: 651-266-6874
Email: jerry.strauss@ci.stpaul.mn.us

Follow us on twitter

About the project: The Central Corridor Light Rail Transit Project will link downtown St. Paul and downtown Minneapolis along Washington and University avenues via the state Capitol and the University of Minnesota. Construction began in late summer 2010 on the planned 11-mile Central Corridor line, and service will begin in 2014. The line will connect with the Hiawatha LRT line at the Metrodome station in Minneapolis and the Northstar commuter rail line at the Target Field Station. The Metropolitan Council will be the grantee of federal funds. The regional government agency is charged with building the line in partnership with the Minnesota Department of Transportation. The Central Corridor Management Committee, which includes commissioners from Ramsey and Hennepin counties, the mayors of St. Paul and Minneapolis and the University of Minnesota, provides advice and oversight. Funding is provided by the Federal Transit Administration, Counties Transit Improvement Board, state of Minnesota, regional railroad authorities for Ramsey and Hennepin counties, city of St. Paul, Metropolitan Council and the Central Corridor Funders Collaborative.The Central Corridor LRT Project Website is www.centralcorridor.org.

Metropolitan Council

Forward email

Email Marketing by

SafeUnsubscribe®
This email was sent to robin.caufman@metc.state.mn.us by centralcorridor@metc.state.mn.us.
Update Profile/Email Address | Instant removal with SafeUnsubscribe™ | Privacy Policy.

Constant Contact
TRY IT FREE

Central Corridor Project Office | Griggs Midway Building | 540 Fairview Ave. N. | Suite 200 | Saint Paul | MN | 55104

Central Corridor
Light Rail Transit

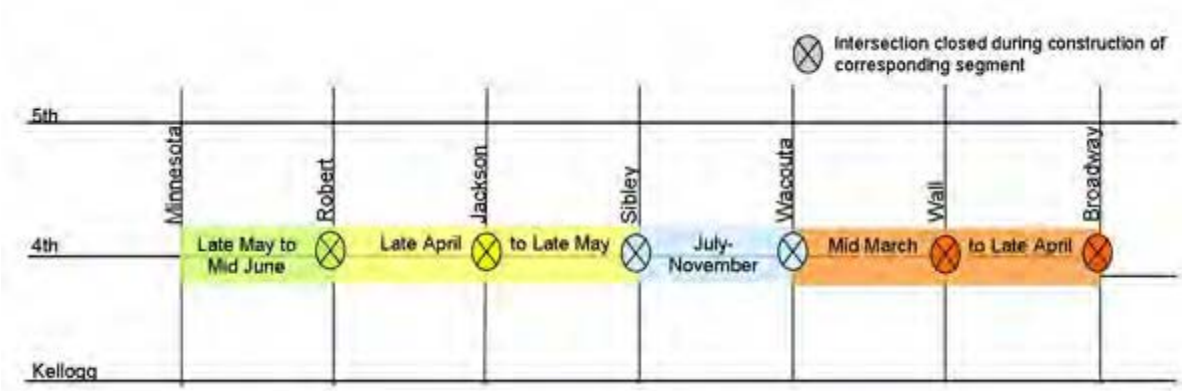
News Advisory

Contact: Laura Baenen
Communications Manager
Central Corridor LRT Project
Metropolitan Council
651-602-1797 office
612-269-4365 cell
Laura.baenen@metc.state.mn.us

LRT work to begin March 21 in segments on 4th Street

Feb. 7, 2011 – ST. PAUL – Construction of the Central Corridor Light Rail Transit line will begin March 21 in segments on Fourth Street in St. Paul. Below are details by segment:

First stage: road and rail guideway constructed in segments



Mid-March to late April: From Wacouta to Broadway streets under construction. Wall and Broadway intersections will be closed during this time

Late April to late May: From Robert to Sibley streets under construction. Jackson Street intersection will be closed during this time.

Late May to mid-June: From Minnesota to Robert streets under construction. Robert Street intersection will be closed during this time.

July to November: From Sibley to Wacouta streets under construction. Sibley and Wacouta intersections will be closed during this time.

Traffic control measures, including barricades and signage installed.

Removal of temporary asphalt and excavation for the track guideway and stations.

Asphalt paving of street of new roadway between Wacouta and Broadway.

Foundation for the guideway and station is poured.

Construction between Wacouta and Sibley, which includes guideway, station and track work; begins after track work completed on rest of the segments. Timing coordinated with Union Depot work to minimize impacts.

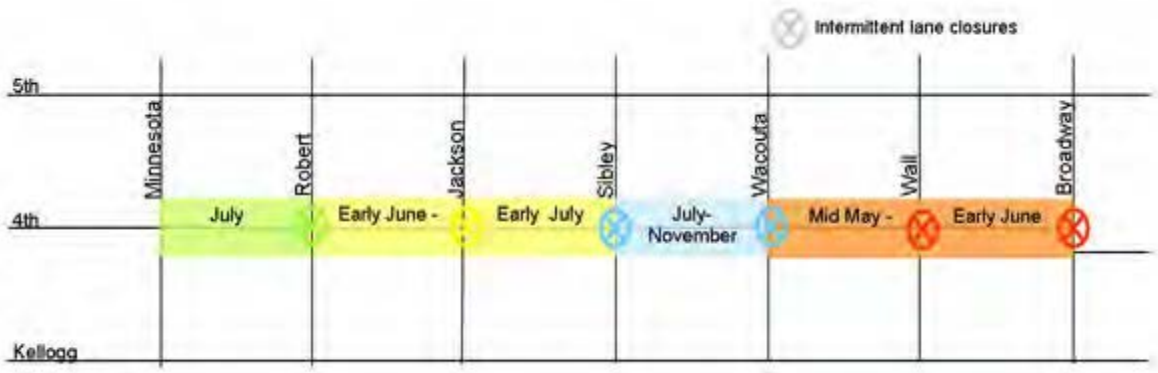
Lanes closed to through traffic.

Access maintained to parking facilities or alternative parking provided.

Newly constructed sidewalks remain open.

Cross street intersections closed, as marked, to through traffic.

Second stage: construct embedded track



Mid-May to early June: Embedded track construction between Wacouta and Broadway streets. Intermittent lane closures at Wall and Broadway intersections.

Early June to early July: Embedded track construction between Robert and Sibley streets. Intermittent lane closures at Jackson Street intersection.

July: Embedded track construction between Minnesota and Robert streets. Intermittent lane closures at Robert Street intersection.

July to November: Embedded track construction between Sibley and Wacouta streets. Intermittent lane closures at Sibley and Wacouta intersections.

Lanes open to through traffic, intermittent closures when pouring concrete.

Access maintained to parking facilities or alternative parking provided.

Newly constructed sidewalks remain open.

Intermittent cross street intersection closures when laying track through the intersection, notice will be provided.

Schedules subject to changes due to weather and other unforeseen circumstances! Weekly online construction updates at www.centralcorridor.org provide schedule updates and changes.

About the Central Corridor LRT Project

The Central Corridor Light Rail Transit Project will link downtown St. Paul and downtown Minneapolis along Washington and University avenues via the state Capitol and University of Minnesota. Construction began in 2010 on the planned 11-mile Central Corridor line, and service will begin in 2014. The line will connect with the Hiawatha LRT line at the Metrodome station in Minneapolis and the Northstar commuter rail line at the new Target Field Station. The Metropolitan Council would be the grantee of federal funds. The regional government agency is charged with building the line in partnership with the Minnesota Department of Transportation. The Central Corridor Management Committee, which includes the mayors of St. Paul and Minneapolis, commissioners from Ramsey and Hennepin counties and the University of Minnesota, provides advice and oversight. Funding is provided by the Federal Transit Administration, Counties Transit Improvement Board, state of Minnesota, Ramsey and Hennepin counties' regional railroad authorities, city of St. Paul, Metropolitan Council and the Central Corridor Funders Collaborative. For details, visit www.centralcorridor.org

APPENDIX C

Improving mobility

Easing congestion

Strengthening our communities

Central Corridor LRT 2011 Construction Schedule

University Avenue: Emerald to Hamline

Finished Product

- LRT tracks and stations
- New sidewalks
- New curbs and gutter
- New street surface
- New landscaping

Work in Progress

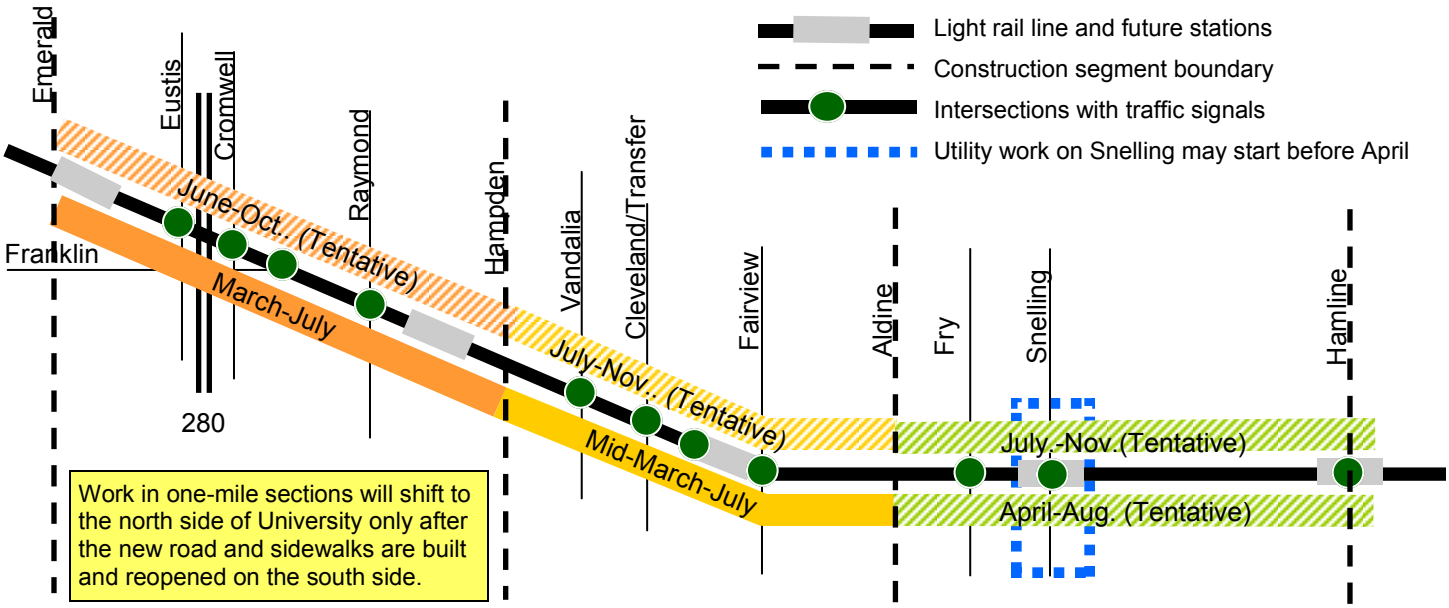
- One through lane of traffic each way on University Avenue
- Alternate vehicle access to buildings
- Temporary sidewalks, ramps over construction
- Pavement restored within 150 days, sidewalks within 15 days

www.centralcorridor.org

What to Expect from 2011 Construction

- Heavy construction will start in March on the south side of University at Emerald and progress eastward in approximately one-mile sections to just east of Hamline.
- Work in the one-mile sections will shift to the north side of University only after the new road and sidewalks are built and reopened on the south; project staff will provide notification prior to shifting traffic lanes.
- When work is done on the north side, two lanes of traffic will be restored in each direction with work continuing in the middle of the road on track, guideway and stations through 2012.
- Snelling Avenue will be open during the State Fair.

Planned Construction Schedule by One-Mile Sections



1. Traffic control measures, including barricades, signage, temporary traffic signalization and temporary accesses will be installed. Left turns across University will be restricted to 11 signalized crossings.
2. Partial removal of the street surface (on one side of the street at a time), sidewalks, curbs, gutters, median, trees and other vegetation. At least four feet of sidewalk width will be maintained, except when the existing or new sidewalk is being constructed.
3. Relocation of public and private utilities, such as water, storm and sanitary sewers and electrical and phone lines.
4. Excavation for the track guideway and stations; station foundation work.
5. Removal of remainder of curbs and other half of sidewalks and construction of new sidewalks. Contractor is required to provide alternate pedestrian access via ramps and temporary walkways over construction and to restore the sidewalk within 15 days of removal.
6. Reinstallation of curbs, gutters, medians and trees.
7. Asphalt paving of street.
8. Traffic switch to newly paved south side of University so crews can work on the north side of the street, repeat steps 1-7.
9. Construction of guideway and stations and welding of embedded track in the middle of the street.

Construction Will Be Staged to Maintain Traffic and Pedestrian Access

Crews will stage construction to maintain one lane of through traffic in each direction on University Avenue. The contractor is required to restore the roadway within 150 days after the pavement is removed. During this time, traffic and pedestrian access will be maintained to all businesses and properties. Construction and outreach staff will meet with each building to discuss access plans and timing of sidewalk replacement. At least four feet of sidewalk will be maintained, except when the new sidewalk is being constructed. The following graphics demonstrate how the contractor will remove portions of the road and sidewalk in stages.

Stage 1: Work starts on south two-thirds of University. One lane of traffic maintained in each direction on the north side of University. Roadway restored within 150 days.

Stage 2: Work shifts to north two-thirds of University. One lane of traffic maintained in each direction on the newly restored road on the south side of University. Pavement restored within 150 days.

Stage 3: Two lanes of traffic restored in each direction. Work continues on guideway, track and stations in the middle of University through November 2011. In 2012, crews return to complete station and tracks and install overhead wires and communication systems.

Schedules subject to changes due to weather and other unforeseen circumstances! Weekly online construction updates at www.centralcorridor.org provide schedule updates and changes.

24-hour hotline 651-602-1404

Contacts and More Information

Community outreach coordinators for the Central Corridor LRT Project are liaisons between the public and contractors. For questions or concerns about 2011 construction activities on the western Saint Paul portion of University Avenue, contact outreach coordinators:

- Rita Rodriguez, 651-602-1805, rita.rodriguez@metc.state.mn.us
- Joey Browner, 651-602-1953 joey.browner@metc.state.mn.us
- Construction hotline at 651-602-1404

To stay informed ahead of the construction work:

- Get email updates every Friday on road, sidewalk and crosswalk detours and relocated bus stops for the coming week. To sign up, fill in your email address in the yellow box at the top right of the www.centralcorridor.org homepage.
- Attend regular meetings for businesses and residents in the construction zone. To receive meeting notices, contact outreach coordinator Rita Rodriguez at rita.rodriguez@metc.state.mn.us or 651-602-1805 or the general project email address at centralcorridor@metc.state.mn.us

To get business assistance:

- Contact the Business Resources Collaborative at www.readyforrail.net

For non-construction related questions, contact City of Saint Paul staff:

- **Land-Use**
  Christina Morrison, Planner, (651) 266-6546, christina.morrison@ci.stpaul.mn.us
- **Parking**
  Craig Blakely, Senior planner, (651) 266-6697, craig.blakely@ci.stpaul.mn.us
- **Public Works**
  Shannon Tyree, Public Relations Manager, (651) 266-6063, shannon.tyree@ci.stpaul.mn.us

Please don't go around barriers into construction zones. Construction hours will generally be from 7 a.m. to 5 p.m. weekdays, but crews will be allowed to work from 7 a.m. to 10 p.m. seven days a week if needed. ***Schedules are subject to change due to weather and other unforeseen circumstances! Check www.centralcorridor.org frequently for updates.***

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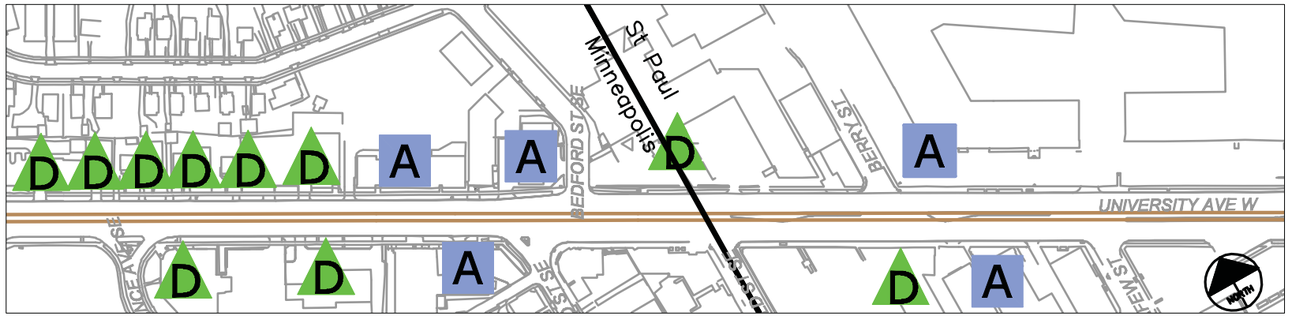
APPENDIX D

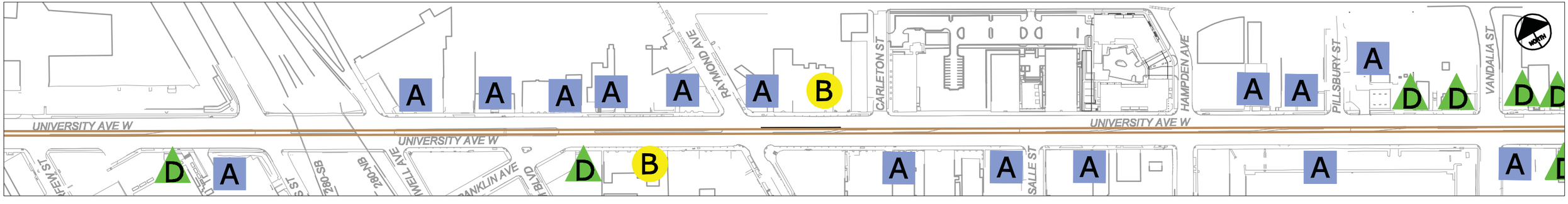
CORRIDOR ACCESS OPPORTUNITIES MAP
CE Segment 1

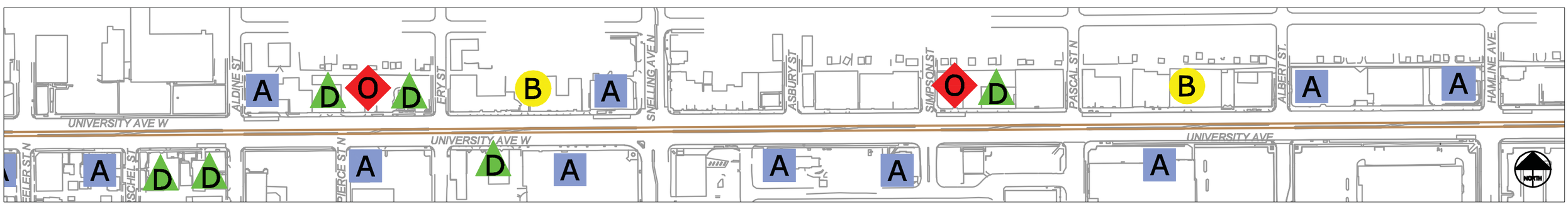
Draft 9-14-2010

LEGEND

- A Side street access available
- B Alley access available
- C New alley access
- D Maintain main access
- O Other







CORRIDOR ACCESS OPPORTUNITIES CE SEGMENT 1

February 14, 2011

Central Corridor
Light Rail Transit

Metropolitan Council

Contents

Clarence, Bedford 1
Berry, Curfew 2
Highway 280 3
Cromwell, Franklin, Pelham, Raymond 4
Raymond, Carleton La Salle 5
Hampden, Pillsbury 6
Vandalia, Transfer, Cleveland 7
Cleveland 8
Prior, Lynnhurst 9
Lynnhurst, Fairview 10
Fairview, Beacon, Wheeler 11
Aldine, Pierce 12
Fry, Snelling 13
Asbury, Simpson, Pascal 14
Pascal, Albert 15
Hamline, Syndicate 16

Clarence, Bedford

Notes:
-Plan used to show access for properties only.
-For traffic control and end treatment detail see traffic control plan.
-Sign locations are approximate.
-It is anticipated that general business way-finding signs will be needed and will be installed as directed by the CAR

ACCESS PLAN_A

LEGEND

- A Side street access available
- B Alley access available
- C New alley access
- D Maintain main access
- O Other
- No Left Turn

February 14, 2011

Berry, Curfew

Notes:
-Plan used to show access for properties only.
-For traffic control and end treatment detail see traffic control plan.
-Sign locations are approximate.
-It is anticipated that general business way-finding signs will be needed and will be installed as directed by the CAR

LEGEND

- A Side street access available
- B Alley access available
- C New alley access
- D Maintain main access
- O Other
- No Left Turn

ACCESS PLAN_A

February 14, 2011

Highway 280

Notes:
-Plan used to show access for properties only.
-For traffic control and end treatment detail see traffic control plan.
-Sign locations are approximate.
-It is anticipated that general business way-finding signs will be needed and will be installed as directed by the CAR

LEGEND

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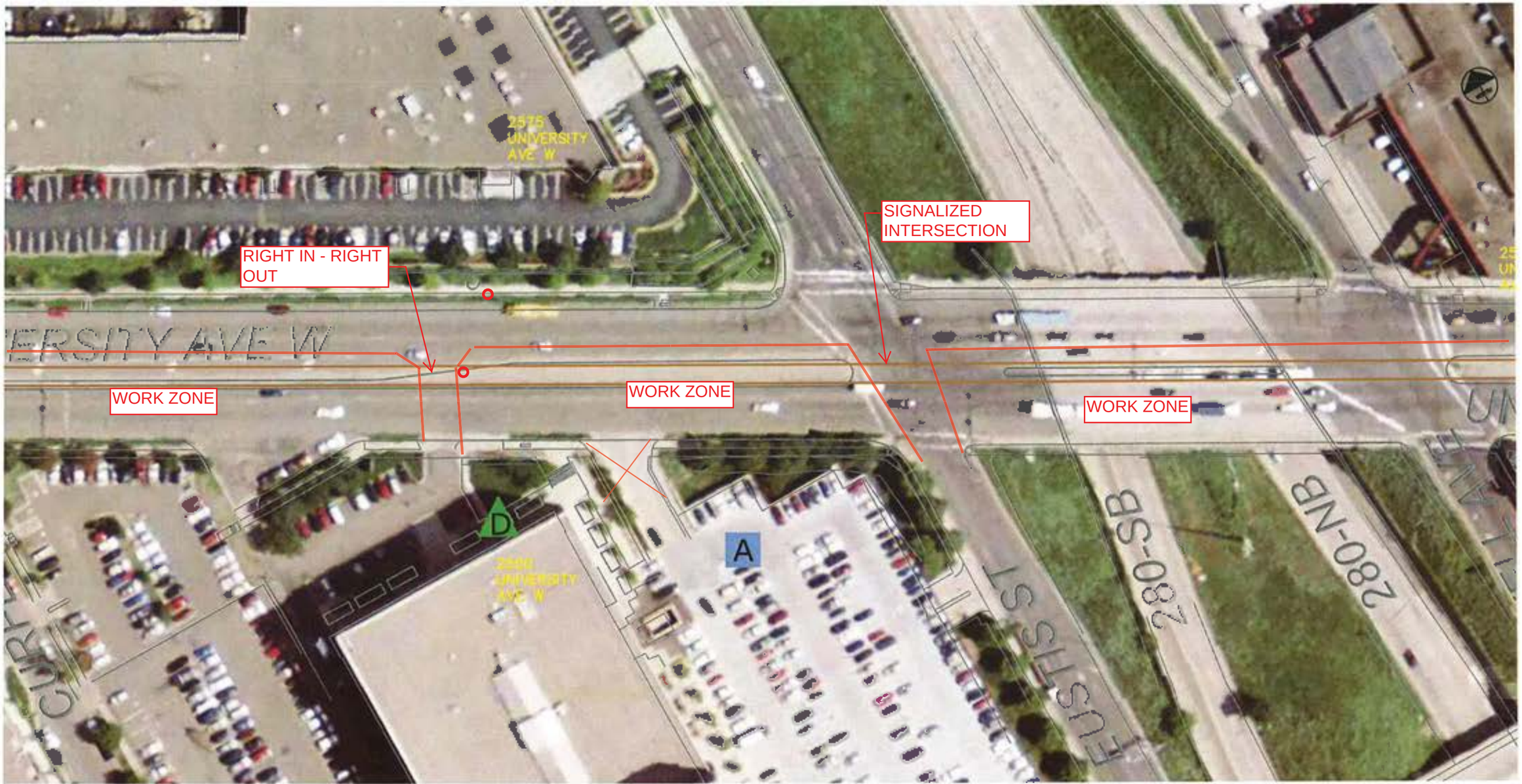
- No Left Turn

ACCESS PLAN_A

February 14, 2011



Cromwell, Franklin, Pelham, Raymond

Notes:
-Plan used to show access for properties only.
-For traffic control and end treatment detail see traffic control plan.
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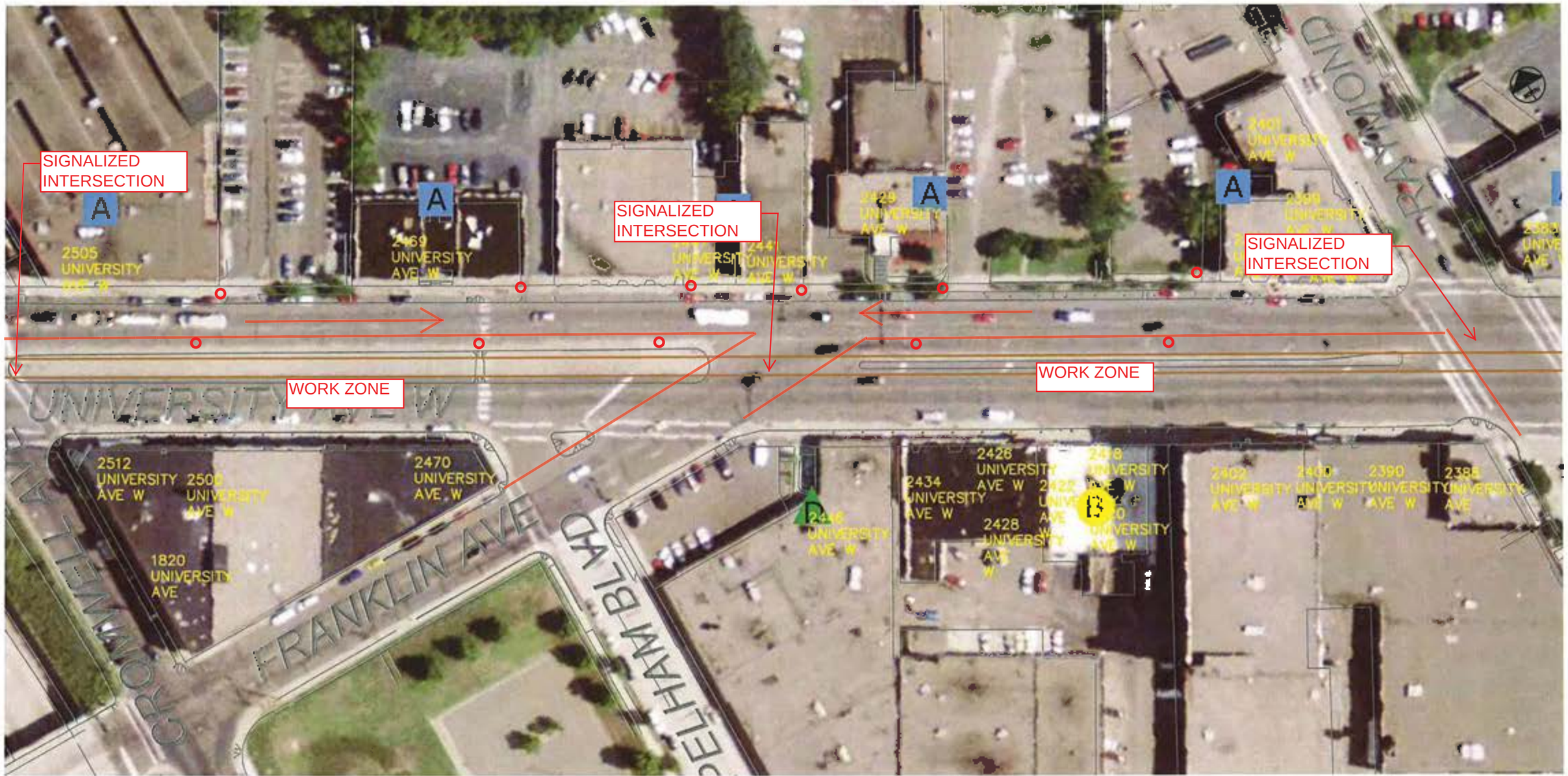
ACCESS PLAN_A

February 14, 2011



APPENDIX E

Metropolitan Council

Charter of the Central Corridor Construction Communication Committee (CCC) for the Capitol Area

INTRODUCTION

Based on feedback from project partners, the Business Advisory Council and the Community Advisory Council, the Metropolitan Council has created a smaller geographically and community based committees to seek ongoing public input during construction. The role of the Construction Communication Committee (CCC) is generally outlined in the Construction Public Information and Communication Plan for the Saint Paul portion of the alignment which will cover utility relocation activities, and construction completed under the Civil East and Systems contracts; the communication plan provides more detail. The Capitol Area is defined as the area between University Avenue at Marion Street to Robert Street, including Robert Street, 12th Street, and Cedar St. ending at I-94.

PURPOSE

The purpose of the CCC is to be proactive in communicating construction activities and addressing community concerns during construction. The CCC will provide an important vehicle for coordinating public outreach efforts that allow for two-way communication, resolving issues raised by the community and ensuring compliance with standards outlined in the Construction Public Information and Communication Plans.

RESPONSIBILITIES

The CCC is responsible for:

- Assisting with implementation of a coordinated, proactive communications effort that supports the Central Corridor LRT project.
- Advising the Central Corridor Project Office (CCPO) on communications and access during construction.
- Facilitating public participation and input into the construction process.
- Coordinating the dissemination of information to the public and identifying opportunities to leverage existing communications vehicles about the Central Corridor LRT project.
- Reviewing construction activities to ensure compliance with standards outlined in the Construction Public Information and Communication Plan.
- Participating in periodic assessments of the communications effort and providing feedback to adjust the communications plan as needed.
- Convening on a quarterly basis with other CCC's in the Civil East construction zone to evaluate the contractor's performance and adherence to set standards and make a recommendation for allocation of the contractor incentive.

Each committee member is responsible for:

- Attending scheduled CCC meetings,
- Contributing to the discussion of issues and concerns,
- Listening to and respecting the viewpoints of others,
- Participating in the development of solutions,
- Accepting the outcome of past decisions,
- Informing represented organizations of meeting discussions and outcomes,
- Following established communications protocol for responding to media contacts, and
- Delivering consistent key messages in all communications about the Central Corridor LRT project.

The Central Corridor Project Office and its staff are responsible for staffing the committee; developing construction plans that balance the project budget, timeline, access and community concerns; and seeking public input in the development of those plans.

MEMBERSHIP

Members of the CCC include community representatives, CCPO staff, public works staff from partner agencies, and representatives from utilities with work in the area. The community stakeholders will be the only one eligible to evaluate contractor performance and make recommendations for the contractor incentive program.

Community Stakeholders:

- Jim Aleckson, Minnesota State Department of Administration employee
- Rick Huston, Regions Hospital
- Tony Luna, Emma Norton Residence
- Margot Imdieke, ADA
- Kou Vang, business owner, District 7 Planning Council
- TBD, District 7/Capitol Heights resident

Technical Staff:

- Shoua Lee, CCPO, Outreach Coordinator (Chair)
- Mike Pretel, CCPO, Assistance Construction Manager, Civil East
- Greg Sorensen CCPO, Principal Engineer, Civil East
- TBD, Contractor Representative
- John Maczko or Shannon Tyree, City of St. Paul Public Works
- Ken Haider, Ramsey County,
- Nina Axelson or Brian Connolly, District Energy
- Shannon Forss, Xcel Energy, Project Manager
- Jerry Strauss, St. Paul Regional Water Services

TIMELINE

Each CCC will meet twice a month during construction or less depending on construction activity starting August 2010 and will continue to meet until Civil East work is complete.

Metropolitan Council

Contractor Incentive Evaluation Process

INTRODUCTION

The contractor incentive program was created based on feedback from the community and project partners. The program was incorporated into the construction specifications for both the Civil East and Civil West contracts. Civil East has $600,000 and Civil West has $250,000 available as incentive pay. Neighborhood and business representatives developed the evaluation form to rate the contractors' work in five different areas: information distribution, responsiveness to community concerns, maintenance of access, safety, and site cleanliness.

PURPOSE

The purpose of the contractor incentive program is to allow the community to take ownership of the project and provide some accountability between the contractor and the businesses and neighborhoods.

RESPONSIBILITIES

The active Construction Communication Committees for the Civil East and Civil West contracts are responsible for convening separately on a quarterly basis in their respective construction zones to evaluate the contractor's performance and adherence to set standards and make a recommendation for allocation of the contractor incentive.

TIMELINE

The first evaluation will be completed early 2011. All subsequent quarterly evaluations will be completed in the first 2 weeks of the month following the end of each quarter. Third quarter 2013 will be the last construction period to be evaluated.

RATING PROCESS

With the exception of the initial evaluation, all other evaluations will be special meetings to accommodate the Civil East CCC's and Civil West CCC's to meet and rate the contractors in a large group setting. CCC members are encouraged to complete the evaluation form prior to the meeting with feedback from the group(s) they represent. CCPO staff will provide a copy of comments received on that contract during the three month period as reference material. The meeting will break into three parts:

- CCC members complete their evaluation forms
- CCPO staff tally results and share them with the group
- CCC members reach a consensus on recommendation

The contractor will not participate in this evaluation process. Written comments from the CCC's will be forwarded to contractor and time will be set aside at the following regular CCC meetings for community stakeholders to give feedback to the contractor.

The recommendation will be forwarded to the Project Director for the final decision.

MEMBERSHIP

Community stakeholders of active CCC's are eligible to evaluate contractor performance and make recommendations for the contractor incentive program.

Civil East

- Capitol Area
- Downtown St. Paul
- University Avenue West
- University Avenue East

Civil West

- Prospect Park/Stadium Village
- East Bank/Stadium Village
- West Bank

ATTACHMENTS

- Evaluation form
- Incentive program schedule

Contractor Evaluation Form

Name_____

Please review and rate the contractor's work on the following items from 0 to 10 with 0 meaning "strongly disagree" and 10 meaning "strongly agree." ***IN THE PAST QUARTER, DID THE CONTRACTOR:***

	Strongly Disagree										**Strongly Agree**
1. **Maintenance of Access – 30% Weight**											
a. Maintain vehicle and pedestrian access to businesses, parking lots & driveways	0	1	2	3	4	5	6	7	8	9	10
b. Implement and maintain effective and highly visible directional signage	0	1	2	3	4	5	6	7	8	9	10
c. Minimize impacts from public utility & other construction-related disruptions	0	1	2	3	4	5	6	7	8	9	10

Comments:

2. Safety – 15% Weight											
a. Maintain ADA compliant pedestrian access that is well- marked, multi-lingual, free of debris and detectable by low and no vision population	0	1	2	3	4	5	6	7	8	9	10
b. Ensure construction site is safe & secure at all times, including at the end of each day	0	1	2	3	4	5	6	7	8	9	10
c. Install and maintain appropriate safety barriers to construction site	0	1	2	3	4	5	6	7	8	9	10

Comments:

3. <u>Site Cleanliness & Organization – 15% Weight</u>

a. Dispose of trash & waste as required in proper containers to avoid overflowing - no littering — 0 1 2 3 4 5 6 7 8 9 10

b. Appropriate placement & maintenance of temporary sanitary facilities — 0 1 2 3 4 5 6 7 8 9 10

c. Minimize use of space for construction-related equipment, personal & construction vehicles and materials — 0 1 2 3 4 5 6 7 8 9 10

Comments:

4. <u>Information Distribution – 15% Weight</u>

a. Clearly identify a contractor point person and make them readily available — 0 1 2 3 4 5 6 7 8 9 10

b. Adhere to all notification requirements — 0 1 2 3 4 5 6 7 8 9 10

c. Make sure that weekly construction updates accurately reflects work performed in the field — 0 1 2 3 4 5 6 7 8 9 10

Comments:

<u>5. Responsiveness to Community Concerns – 25% Weight</u>

a. Provide a contractor point person that participates in meetings with the community, listens to concerns and implements timely solutions — 0 1 2 3 4 5 6 7 8 9 10

b. Respond to community concerns with courtesy and respect within allotted time (or sooner) based on classification of urgency — 0 1 2 3 4 5 6 7 8 9 10

Comments:

APPENDIX F

Central Corridor
Light Rail Transit
Metropolitan Council

CONSTRUCTION PUBLIC INFORMATION AND COMMUNICATION PLAN
Capitol Area

August 2010

Submitted by
The Central Corridor Project Office

On behalf of
The Metropolitan Council

TABLE OF CONTENTS

1.0 INTRODUCTION 3
2.0 ROLES AND RESPONSIBILITIES 3
2.1 Central Corridor Project Office 3
2.2 Construction Communication Committees 4
2.3 Contractor 5
3.0 PUBLIC INFORMATION AND COMMUNICATION PLAN 5
3.1 Schedule Milestones 5
3.2 Public Interaction 5
3.2.1 Public Notifications 6
3.2.2 24-Hour Hotline 6
3.2.3 Database 7
3.2.4 Complaint/Comment Forms 7
3.2.5 Construction Schedule/Maintenance of Traffic and Access 8
3.3 Emergency Response 8
3.3.1 Telephone Trees 9
3.3.2 Documentation 9
3.4 Business and Residential Impact Mitigation 9
3.4.1 Access Maps 9
3.4.2 Changes to Access 9
3.4.3 Signage 9
3.5 Public Meetings 9
3.6 Media Relations 10

1.0 INTRODUCTION

This Central Corridor LRT Communications and Public Involvement Plan is critical to the success of CCLRT. The objectives of the Plan are to:

- Build broad public awareness of, and support for, the project as an essential means to improve our transportation system and maintain regional competitiveness
- Identify key community, business, racial and ethnic groups within the corridor to maximize opportunities for public involvement and communication during the design and construction process to promote public ownership of the project
- Prepare project-area residents, businesses, property owners and commuters for realistic expectations during construction, listen to their concerns, and develop plans to minimize harmful or disruptive effects

This Construction Communication and Public Information Plan for the Capitol Area construction is a key component in the efforts to minimize impacts to businesses, properties, residents, students, Capitol Area facilities and staff. The purpose of this plan is to guide the Metropolitan Council, Contractor and project partners in involving the public and maintaining positive community relations during construction of the Central Corridor LRT Line. The Metropolitan Council, through the Central Corridor Project Office (CCPO) will be prepared to respond to the public's comment and concerns related to construction of Central Corridor LRT.

2.0 ROLES AND RESPONSIBILITIES

The Public Information and Communications Plan for the construction phase of the Central Corridor LRT project involves three entities:

- Central Corridor Project Office (CCPO)
- Construction Communication Committees (CCC)
- Contractor

This plan outlines the roles and responsibilities of each of these entities.

2.1 Central Corridor Project Office

The CCPO will have primary responsibility to assure that the activities specified herein are communicated to the public. The CCPO will be responsible for day-to-day public information and communications activities. The CCPO's public information activities will be directed by the Manager of Public Involvement and will include the following:

- Community Outreach Coordinator
- Communications Manager
- Engineering staff
- Construction staff

In addition to day to day activities, CCPO responsibilities include:

- Implementing the Public Involvement and Communications Strategic Plan
- Responding to media requests and inquiries
- Complying with the public information requirements outlined in this document
- Supporting the CCC
- Conducting CCPO-sponsored public information and community relation's activities
- Seeking public feedback on effectiveness of the public involvement and communications activities

2.2 Construction Communication Committees

The CCPO will create a Construction Communication Committee for each of the construction areas. Each CCC will have community representation:

- Resident
- Business
- Transit user
- Accessibility

And technical staff:

- CCPO community outreach coordinator
- CCPO construction staff
- CCPO engineering staff
- Contractor
- City public works designated staff
- County public works designated staff

The responsibilities of each of the CCC include:

- Assisting with implementation of a coordinated, proactive communications effort that supports the Central Corridor LRT project.
- Advising the Central Corridor Project Office (CCPO) on communications and access during construction.
- Facilitating public participation and input into the construction process.
- Coordinating the dissemination of information to the public and identifying opportunities to leverage existing communications vehicles about the Central Corridor LRT project.
- Reviewing construction activities to ensure compliance with standards outlined in the Construction Public Information and Communication Plan.
- Participating in periodic assessments of the communications effort and providing feedback to adjust the communications plan as needed.
- Convening on a quarterly basis with other CCC's in the Civil East construction zone to evaluate the contractor's performance and adherence to set standards and make a recommendation for allocation of the contractor incentive.

2.3 Contractor

The Contractor will designate a Community Relations Point person to work with the CCPO outreach, engineering and construction staff. That person will be responsible for supporting the flow of public information and communication efforts:

- Be one of the Contractors key personnel that can commit the contractor to action
- Have "real time" access to all project details that the contractor is currently engaged in
- Be a member of the CCC and attend all meetings
- Attend regularly scheduled construction update meetings
- Provide information to CCPO
- Support CCPO public information and communication efforts
- Ensure that the contractor responds to community concerns
- Provide adequate access for all snow and garbage removal
- Provide and maintaining signage as described in Section 3.3.4.

Contractor responsibilities established in this section will be subject to Contractor performance requirements identified in the contract General Conditions.

3.0 PUBLIC INFORMATION AND COMMUNICATION PLAN

3.1 Schedule Milestones

Within 15 days of award, the Contractor will complete and submit to the CCPO, its anticipated Schedule of Milestones. The Contractor will update and submit its schedule to the CCPO at least monthly. A copy of each update will be submitted to CCC.

3.2 Public Interaction

The CCPO is the first and preferred point of contact for residents, businesses or other member of the public with questions or comments on the Project. The CCPO and the contractor will take necessary steps to foster these contacts, including continuous interaction with the public and community.

3.2.1 Public Notifications

The CCPO will notify affected businesses, affected properties, affected residents and general public of construction progress, upcoming events and specific notifications, as shown in table 3.2-1. Notification of directly affected businesses and residents will be through personal contact and other communication strategies.

Table 3.2-1
Notifications

Notice	Requirement
• 30-day Construction Notification	Written notification of construction will be given 30 days prior to construction. Access maps will be provided per the Maintenance of Traffic and Access plan
• 72-hour Business/Commercial Utility Shutdown	Written notification by utility company of utility shutdown for businesses and commercial property.
• 48-hour Residential Utility Shutdown	Written notification by utility company of shutdown for residential property.
• Weekly Construction Updates	A construction update will be provided to each business or resident fronting a Construction Zone. The update will be a personal visit, email or letter based on business or resident's preference
• Emergency Unforeseen Utility Disruptions, Hazardous Conditions, Traffic Signal Emergencies, Security and Loss of Access	See Section 3.3
• Road and Driveway Closures	Written notice, email or personal contact at least 72-hours in advance of closure.
• Construction Schedule	One (1) month prior to start of construction

3.2.2 24-Hour Hotline

The CCPO established a 24-hour hotline that is staffed by a call center. The CCPO will provide the call center with instructions to guide personnel in responding to call and ensuring it is forwarded to the appropriate CCPO staff. The CCPO will develop procedures for addressing, responding to and documenting all calls to the hotline as well as emergency phone procedures. These procedures will be updated on a quarterly basis so that information contained therein is current.

Calls will be classified and addressed accordingly,

- Emergency call relating to risk to life, limb will be responded to according to emergency procedures
- Urgent construction related issue that requires response within a hour such as loss of access
- Non urgent issue or complaint that requires a response or resolution within 1 business day
- Comments or questions that require follow up from outreach or appropriate CCPO staff within 5 days

The CCPO will acknowledge receipt of complaint and indicate estimated time to resolve the complaint. The CCPO will review all complaints received and resolution or response of the issue to the CCC meetings. If the CCPO or Contractor is unable to resolve a complaint regarding Contractor's response to a complaint or concern within two (2) days, the Contractor will notify the Project Director. The Contractor will provide necessary information, staff support and representation to assist in resolving the issue.

3.2.3 Database

All calls and contacts from the general public regarding construction will be logged onto a form supplied by the CCPO. The CCPO will create a database to document contacts with individuals with construction comments or concerns:

- Contact name
- Business name, if applicable
- Address
- Phone number including business, mobile and home phone for emergencies
- Information about the contact including date, time, method of contact and a brief description of the nature of the contact,
- A brief description of handouts and a document control number that identifies a hardcopy of the contact information.

The CCPO will develop a standardized form to log contact information. This form will become the hard copy of all contacts. Handouts will be attached to this form. The contact information will include the information provided for the database as well as a description of what was discussed. The database will document all contact with the public and to be able to recreate what transpired during the Project.

The CCPO will provide contact forms for the Contractor's use in documenting contacts consistent with the database. The Contractor will provide all contact information to the CCPO within 24 hours.

All mass communications, emails or letters will be archived using the Central Corridor Project Office Document Management system.

3.2.4 Complaint/Comment Forms

The CCPO will provide on online complaint/comment forms to businesses and residents along the Project as a method for the public to express Project concerns. These forms will provide all information needed for entry into the database. The CCPO will also make paper complaint/comment forms available to the public. The forms will indicate the address and fax number where the forms can be sent and show the 24-hour hotline number.

3.2.5 Construction Schedule/Maintenance of Traffic and Access

The CCPO will notify properties, businesses and residents along the Project and will publicize commencement of construction prior to the beginning of construction in any area of the Project. This notification will publicize the projected dates for the construction by individual notices to stakeholders, community groups, businesses, and residents along the corridor, in the neighborhoods surrounding the construction including Capitol Heights and Mt. Airy, as well as along alternative routes. The Contractor will provide all relevant information concerning the construction schedule to CCPO who will then publicize the information.

The advertisements and notices will address:

- Road and lane changes
- Sidewalk and crosswalk closures
- Alternative routes
- Any other impacts such as street parking

Construction in any area will be constrained by the requirements of Contract. Each area where active construction is being conducted will be treated as a distinct entity in all notification activities.

Information regarding Project design and construction will be readily available in a form that can be quickly disseminated to the public.

3.3 Emergency Response

The Contractor will provide immediate response to emergencies by trained personnel from an incident response team within 30 minutes of receiving notification from CCPO, Utility Owner and/or affected business(es) and/or resident(s). Emergencies include, but are not limited to:

- Unforeseen utility disruptions
- Hazardous conditions
- Traffic signal emergencies
- Security concerns
- Loss of access notifications

All emergency and/or unforeseen disruptions will be explained to the public immediately by a personal contact from the CCPO. The person making the contact will provide to the affected party(ies) information such as:

- Cause of disruption (i.e., whether it is construction oriented or not);

- Actions being taken to alleviate the problem; and
- Anticipated duration of the disruption.

3.3.1 Telephone Trees

The CCPO and Contractor will establish and manage an emergency response telephone tree. All appropriate CCPO, project partner and Contractor personnel will be included on this telephone tree for immediate response in the event of an emergency. The telephone tree will be divided into areas of expertise so the proper people are called for specific emergency situations.

3.3.2 Documentation

All Emergencies will be logged into the construction issues database including contact information, reason for the emergency and response.

3.4 Business and Residential Impact Mitigation

The CCPO, CCC and Contractor will take steps to mitigate the impacts of construction by providing frequent and accurate information to businesses and residents based on project milestones.

3.4.1 Access Maps

The Contractor with the CCPO will develop access plans with businesses and residents on each block and will provide maps showing existing and planned patron and delivery and residential access during any construction period. The map(s) will identify times of business operation and deliveries.

3.4.2 Changes to Access

The CCPO will inform businesses and residents in writing or by personal contact, of any changes to access that may impact them, at least 2 weeks prior to start of construction. Contractor will submit a new access map to the CCPO Construction manger at least 2 weeks prior to construction for a written statement of no objection.

The Contractor will provide adequate access for all snow and garbage removal.

3.4.3 Signage

The Contractor will maintain public information and warning signage throughout the Project at each construction site consistent with the construction contract provisions.

3.5 Public Meetings

The CCPO will host a variety of public meetings and forums to provide construction information and listen to concerns including:

- Construction tours
- Neighborhood monthly meetings
- Business organizations
- Quarterly information sessions
- Small block

The Contractor's Community Outreach Liaison will attend these meetings. CCPO representatives will include the Project Resident Engineer and Community Outreach Coordinator.

The CCPO outreach staff will evaluate the effectiveness of these meetings and make adjustments based on community feedback.

3.6 Media Relations

An ongoing media relations campaign will occur and be managed by CCPO's Communications Manager. The Contractor will assist in giving timely information to CCPO's Communications Manager regarding construction activities for use in media events.

The CCPO's Communication Manager is responsible for conducting all media interviews and responding to inquiries. The Contractor, their Subcontractor and their employees will not conduct or participate in media events, radio or television broadcasts, without the written consent of CCPO, except in emergencies. In emergency situations, the Contractor will immediately notify CCPO's Public Involvement Manager and Communications Manager of any situations that may involve the media.

APPENDIX G

CENTRAL CORRIDOR CONSTRUCTION-RELATED POTENTIAL IMPACTS ON BUSINESS REVENUES
COMMENTS AND RESPONSES

FTA received comments from 73 individuals or organizations and those comments are contained verbatim in Appendix H to the final Supplemental Environmental Assessment, along with complete copies of the transcript from the two public hearings held on March 16, 2011. Below is a summary by topic of comments addressing issues raised in the *Supplemental Environmental Assessment Construction-Related Potential Impacts on Business Revenues*. Comments that were outside the scope of the Supplemental Environmental Assessment were not addressed in the Response to Comments, but complete copies of those comments are available in Appendix H. In addition, in Section 5.2 of the final Supplemental Environmental Assessment, FTA included detailed responses to comments on the following subjects: NEPA EA process, adequacy of technical report analysis methodology, comparison of analysis methodology/mitigation identification to other similar projects (Lake Street and Seattle projects), adequacy of mitigation measures, and public participation.

No.	Commenter	Group/ Affiliation	Comment	Response
PUBLIC HEARING No. 1 March 16, 2011, 8:00 a.m., Lao Family Community of Minnesota				
1	James Segal	Corridor business owner	Comments included the following subjects: (1) adequacy and completeness of the Technical Report, including the quantitative studies on which it is based.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
			(2) Draft SEA does not identify appropriate mitigation measures.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.
			(3) Draft SEA does not identify all construction impacts.	Please see discussion in Section 4.2 and Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
			(4) Communication of information regarding construction has been inadequate.	Please see Section 2.2 of the final Supplemental EA, which includes a construction schedule overview, and Section 4.3, which details Metropolitan Council's mitigation measures related to communication. Additionally, FTA will monitor Metropolitan Council's compliance with the mitigation measures identified in the final Supplemental EA.
2	Mike Baca	Corridor business owner	Comments raised the following subjects: (1) adequacy of mitigation measures, particularly with regards to adequacy of measures to address parking impacts during construction and sufficiency of the business mitigation fund.	Details regarding Metropolitan Council's mitigation regarding short-term parking during construction are addressed in Section 6.3.5 of the FEIS. Additional parking mitigation measures are described in Section 4.3.1 of the final Supplemental EA. Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
			(2) Businesses should be entitled to relocation expenses under the Uniform Relocation Act.	The Uniform Relocation Assistance and Real Property Acquisition Policies Act ("URA") applies to all projects receiving federal funds where real property is acquired or persons are displaced as a direct result of acquisition, demolition, or rehabilitation of real property. The URA provides the process for acquisition of real property and relocation benefits, if the person is being displaced. See 49 C.F.R. Part 24. Any business owners who believe that they qualify as "displaced persons" under the URA may submit a claim under the act to the Metropolitan Council. Metropolitan Council has prepared a Real Estate Acquisition Management Plan ("RAMP"), which sets forth the process for the acquisition of real estate for this Project and for claiming relocation benefits. In addition, any person who believes Metropolitan Council has failed to properly consider the person's application or claim for payments or assistance under the URA may file a written appeal with the local agency. Persons who believe they may have such a claim, should contact the Central Corridor Project Office at 651-602-1930 and ask for Victoria Nill or email victoria.nill@metc.state.mn.us.

No.	Commenter	Group/ Affiliation	Comment	Response
3	Tim Holden	Corridor business owner	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to adequacy of measures to address parking impacts during construction and timely provision of signage announcing construction activities.	Details regarding Metropolitan Council's mitigation regarding short-term parking during construction are addressed in Section 6.3.5 of the FEIS. Additional parking mitigation measures regarding parking and providing adequate and timely signage are described in Section 4.3.1 of the final Supplemental EA. Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
4	Diane Pietro	Corridor business owner	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to adequacy of measures to address parking impacts during construction and timely provision of signage announcing construction activities.	Details regarding Metropolitan Council's mitigation regarding short-term parking during construction are addressed in Section 6.3.5 of the FEIS. Additional parking mitigation measures regarding parking and providing adequate and timely signage are described in Section 4.3.1 of the final Supplemental EA. Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
5	Jack McCann	University Avenue Betterment Association (UABA)	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to adequacy of measures to address parking impacts during construction and construction impacts on traffic.	Details regarding Metropolitan Council's mitigation regarding short-term parking during construction are addressed in Section 6.3.5 of the FEIS. Additional parking mitigation measures regarding parking and providing adequate and timely signage are described in Section 4.3.1 of the final Supplemental EA. Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment. Section 6.2 of the FEIS discusses impacts to local and regional traffic, and traffic mitigation measures during construction.
6	Steve Bernick	Corridor business owner	Comments included the following subjects: (1) adequacy and completeness of the Technical Report, including the quantitative studies on which it is based.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
			(2) Draft SEA does not identify appropriate mitigation measures.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.
			(3) adequacy of mitigation measures, particularly with regards to providing access to businesses during construction.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.
7	Marilyn Porter	University Avenue Business Corporation Collaborative (U7)	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to adequacy of measures to address parking impacts during construction, access to businesses, and potential revenue losses.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.
8	Frank Lorenz	Business owner	Comments included the following subjects: (1) adequacy and completeness of the Technical Report, including the quantitative studies on which it is based.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
			(2) Draft SEA does not identify appropriate mitigation measures.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.

No.	Commenter	Group/ Affiliation	Comment	Response
			(3) Businesses should be entitled to relocation expenses under the Uniform Relocation Act.	The Uniform Relocation Assistance and Real Property Acquisition Policies Act ("URA") applies to all projects receiving federal funds where real property is acquired or persons are displaced as a direct result of acquisition, demolition, or rehabilitation of real property. The URA provides the process for acquisition of real property and relocation benefits, if the person is being displaced. See 49 C.F.R. Part 24. Any business owners who believe that they qualify as "displaced persons" under the URA may submit a claim under the act to the Metropolitan Council. Metropolitan Council has prepared a Real Estate Acquisition Management Plan ("RAMP"), which sets forth the process for the acquisition of real estate for this Project and for claiming relocation benefits. In addition, any person who believes Metropolitan Council has failed to properly consider the person's application or claim for payments or assistance under the URA may file a written appeal with the local agency. Persons who believe they may have such a claim, should contact the Central Corridor Project Office at 651-602-1930 and ask for Victoria Nill or email victoria.nill@metc.state.mn.us.
9	James Segal	Corridor business owner	Comments included the following subject: adequacy and completeness of the Technical Report, including the quantitative studies on which it is based.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
10	Diane Pietro	Corridor business owner	Comment raised subject of adequacy of mitigation measures.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. Additionally, FTA will monitor Metropolitan Council's compliance with the mitigation measures identified in the final Supplemental EA.
PUBLIC HEARING No. 2 March 16, 2011, 6:00 p.m., Goodwill/Easter Seals				
11	Scott Walker	Metropolitan Business Council	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to a business mitigation fund.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.
12	Larry Peterson	University Avenue Betterment Association	Comments raised the following subjects: (1) use of comments from the February 17, 2011 Town Hall meetings.	Please see Section 5.2 of the final Supplemental EA, "Public Participation," for FTA's response to this comment.
			(2) adequacy and completeness of the Technical Report, including the quantitative studies on which it is based.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
			(3) particularly with regards to adequacy of measures to address parking impacts during construction, access to businesses, and potential revenue losses.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. Additionally, FTA will monitor Metropolitan Council's compliance with the mitigation measures identified in the final Supplemental EA.
			(4) Lake Street study and Seattle study are better examples of impacts caused by construction projects and should be considered in the SEA and Technical Report.	Please see Section 5.2 of the final Supplemental EA, "Comparison of Analysis Methodology/Mitigation Identification to other similar projects," for FTA's response to this comment.
13	Tim Holden	Corridor business owner	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to adequacy of measures to address parking impacts during construction, access to businesses, and potential revenue losses.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.
14	Mary Leonard	Corridor business owner	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to adequacy of measures to address potential revenue losses.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.
15	Benita Warns	Corridor business owner	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to adequacy of measures to address parking impacts during construction, access to businesses, and potential revenue losses.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.

No.	Commenter	Group/ Affiliation	Comment	Response
16	Karen Inman	District Councils Collaborative of St. Paul and Minneapolis	Comments raised the following subjects: (1) adequacy of mitigation measures, particularly with regards to adequacy of measures to address potential revenue losses.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.
			(2) adequacy and completeness of the Technical Report, including the quantitative studies on which it is based.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
17	Patricia O'Keefe	Corridor resident	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to adequacy of measures to address parking impacts during construction and access to businesses, particularly for persons with disabilities.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.4 of the FEIS, which addresses need for temporary pedestrian walkways and sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA).
18	Jamie Delton	Corridor business owner	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to adequacy of measures to address parking impacts during construction and access to businesses, traffic plans during construction to address reduced lanes on University Avenue, emergency evacuations, snow removal, access for persons with disabilities.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.4 of the FEIS, which addresses need for temporary pedestrian walkways and sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA); Section 6.2 of the FEIS, which addresses the effect of the project on regional and local roadways. The Metropolitan Council has and will continue to work with local police, fire and medical service providers to address emergency services. See also Section 3.7 of the FEIS regarding safety and security. Snow and snow removal will continue to be managed as is currently is by responsible agencies. Section 6.3 of the FEIS addresses parking impacts. Section 6.4 of the FEIS addresses accessibility.
19	Eva Ng	Capitol City Business Council	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to adequacy of measures to address potential revenue losses.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.
20	James Segal	Corridor business owner	Comments raised the following subjects: (1) adequacy and completeness of the Technical Report, including the quantitative studies on which it is based.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
			(2) adequacy of mitigation measures, particularly with regards to adequacy of measures to address potential revenue losses.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.
21	John Slade	Metropolitan Interfaith Council on Affordable Housing (MICAH)	Comments raised the following subjects: (1) use of comments from the February 17, 2011 Town Hall meetings.	Please see Section 5.2 of the final Supplemental EA,"Public Participation," for FTA's response to this comment.
			(2) adequacy of mitigation measures, particularly with regards to adequacy of measures to address potential revenue losses.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.
			(3) Lake Street study is better example of impacts caused by construction projects and should be considered in the SEA and Technical Report.	Please see Section 5.2 of the final Supplemental EA, "Comparison of Analysis Methodology/Mitigation Identification to other similar projects," for FTA's response to this comment.
			(4) adequacy and completeness of the Technical Report, including the quantitative studies on which it is based.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
22	Andy Singer	St. Paul Bicycle Coalition	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to relocation of utilities and impact of pedestrians during construction.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.4 of the FEIS addresses potential impacts to pedestrians. All mitigation measures committed to in the FEIS will be implemented.

No.	Commenter	Group/ Affiliation	Comment	Response
23	Mike Madden	Citizen	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to adequacy of measures to address parking impacts during construction.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.3 of the FEIS addresses parking impacts.
24	La Shella Sims	Metropolitan Interfaith Council on Affordable Housing (MICAH)	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to adequacy of measures to address potential revenue losses.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.
25	Jennette Gudgel	Capitol City Business Council	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to adequacy of measures to address potential revenue losses.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.
26	Jack McCann	University Avenue Business Association	Comments raised the following subject: use of comments from the February 17, 2011 Town Hall meetings.	Please see Section 5.2 of the final Supplemental EA,"Public Participation," for FTA's response to this comment.
27	Jeffrey Zrust	Corridor business owner	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to adequacy of measures to address potential revenue losses.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.
WRITTEN COMMENTS RECEIVED DURING PUBLIC COMMENT PERIOD, March 1-March 31, 2011				
28	Harry Kent	Citizen	Comments included the following subject: adequacy and completeness of the Technical Report, including the quantitative studies on which it is based.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
29	Jack McCann, Va-Megn Thoj	University Avenue Business Association (UABA), Asian Economic Development Association (AEDA)	Comments raised the following subjects: (1) adequacy of mitigation measures, particularly with regards to adequacy of measures to address parking impacts during construction and construction impacts on traffic and pedestrians, and loss of business revenues.	Details regarding Metropolitan Council's mitigation regarding short-term parking during construction are addressed in Section 6.3.5 of the FEIS. Additional parking mitigation measures regarding parking and providing adequate and timely signage are described in Section 4.3.1 of the final Supplemental EA. Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment. Section 6.2 of the FEIS discusses impacts to local and regional traffic, and traffic mitigation measures during construction.
			(2) Businesses should be entitled to relocation expenses under the Uniform Relocation Act.	The Uniform Relocation Assistance and Real Property Acquisition Policies Act (“URA”) applies to all projects receiving federal funds where real property is acquired or persons are displaced as a direct result of acquisition, demolition, or rehabilitation of real property. The URA provides the process for acquisition of real property and relocation benefits, if the person is being displaced. See 49 C.F.R. Part 24. Any business owners who believe that they qualify as “displaced persons” under the URA may submit a claim under the act to the Metropolitan Council. Metropolitan Council has prepared a Real Estate Acquisition Management Plan (“RAMP”), which sets forth the process for the acquisition of real estate for this Project and for claiming relocation benefits. In addition, any person who believes Metropolitan Council has failed to properly consider the person’s application or claim for payments or assistance under the URA may file a written appeal with the local agency. Persons who believe they may have such a claim, should contact the Central Corridor Project Office at 651-602-1930 and ask for Victoria Nill or email victoria.nill@metc.state.mn.us.
30	Nikolai Alenov	Corridor business owner	Comments raised the following subjects: (1) adequacy of mitigation measures, particularly with regards to adequacy of measures to address potential revenue losses.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.

No.	Commenter	Group/ Affiliation	Comment	Response
			(2) Property taxes should be held in abeyance during construction for businesses impacted by the construction.	Property taxation policies are the responsibility of the cities of Minneapolis and St. Paul are more properly addressed to those entities.
31	Vic Rosenthal, Andrea Lubov	Jewish Community Action	Comments raised the following subjects: (1) adequacy of mitigation measures, particularly with regards to adequacy of measures to address parking impacts during construction and construction impacts on traffic and pedestrians, and loss of business revenues.	Details regarding Metropolitan Council's mitigation regarding short-term parking during construction are addressed in Section 6.3.5 of the FEIS. Additional parking mitigation measures regarding parking and providing adequate and timely signage are described in Section 4.3.1 of the final Supplemental EA. Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment. Section 6.2 of the FEIS discusses impacts to local and regional traffic, and traffic mitigation measures during construction.
			(2) construction impacts that contribute to reduction in revenues include such things as reduced access, disruptions in traffic patterns, temporary closures of sidewalks, disruptions in bus service, temporary reductions in the number of bus stops, interruption of electricity and utility services, and the very presence of construction activity with its noise, trucks, large equipment, dust, and visual obstructions.	Section 4.2 of the final Supplemental EA sets forth a detailed discussion of the potential construction-related impacts on business revenues. Section 4.3 of the final Supplemental EA details the mitigation measures undertaken by Metropolitan Council to avoid or mitigate those impacts. Finally, please see discussion in Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.
			(3) the Supplemental EA should consider a study on economic indicators for the corridor recently released by the Wilder Foundation (Wilder Research, “Central Corridor Key Outcomes: Baseline Indicators Report,” March 2011).	The final Supplemental EA considers the Wilder report referenced by the commentator and cites that report in Section 3.1 of the final Supplemental EA.
			(4) adequacy and completeness of the Technical Report, including the quantitative studies on which it is based, the methodology used and the conclusions reached.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
			(5) small businesses owned by Environmental Justice populations should be studied as a subset to determine whether or not they will sustain different and disproportionate impacts.	The Metropolitan Council conducted a survey of businesses along the alignment to determine whether the businesses were owned by members of minority groups. FTA analyzed that data and found that the survey established that the businesses directly on the alignment contain 162 Asian owned businesses (15.1%), 51 Black or African American owned businesses (4.8%) and 4 Hispanic or Latino owned businesses (0.4%), representing slightly over 20% in minority owned businesses compared to the alignment area minority population of 46%. Therefore, there is no disparate or disproportionate impact to minority owned businesses along the corridor.
32	Matt Kramer	St. Paul Area Chamber of Commerce	Comments raised the following subjects: (1) adequacy and completeness of the Technical Report, including the quantitative studies on which it is based, the methodology used and the conclusions reached.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
			(2) adequacy of mitigation measures, particularly with regards to adequacy of measures to address potential revenue losses.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.
			(3) requests that status of mitigation measures for businesses be reported to the community on a regular basis.	FTA will monitor Metropolitan Council's compliance with the mitigation measures identified in the final Supplemental EA.
33	Karen Inman	District Council Collaboratives of St. Paul and Minneapolis	***[Comments entered in as testimony at March 16 public hearing.]***	Please refer to the responses to comment 16.
34	Tim Holden	Corridor business owner	***[Comments received with testimony at March 16 Public Hearings.]***	Please refer to the responses to comment 13.
35	Andy Singer	St. Paul Bicycle Coalition	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to adequacy of measures to address potential revenue losses.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.

No.	Commenter	Group/ Affiliation	Comment	Response
36	Leah Carr	Corridor resident	Comments raised that following subject: adequacy of mitigation measures, particularly with regards to providing access to businesses during construction.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.4 of the FEIS, which addresses need for temporary pedestrian walkways and sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA); Section 6.2 of the FEIS, which addresses the effect of the project on regional and local roadways. Section 6.3 of the FEIS addresses parking impacts. Section 6.4 of the FEIS addresses accessibility.
37	Molly Park	Citizen	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to adequacy of measures to address potential revenue losses.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.
38	Jamie Delton	Corridor business owner	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to adequacy of measures to address parking impacts during construction and access to businesses, traffic plans during construction to address reduced lanes on University Avenue, emergency evacuations, snow removal, access for persons with disabilities.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.4 of the FEIS, which addresses need for temporary pedestrian walkways and sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA); Section 6.2 of the FEIS, which addresses the effect of the project on regional and local roadways. The Metropolitan Council has and will continue to work with local police, fire and medical service providers to address emergency services. See also Section 3.7 of the FEIS regarding safety and security. Snow and snow removal will continue to be managed as is currently is by responsible agencies. Section 6.3 of the FEIS addresses parking impacts. Section 6.4 of the FEIS addresses accessibility.
39	Russ Batisto	Corridor business owner	Comments raised the following subjects: (1) adequacy of mitigation measures, particularly with regards to adequacy of measures to address parking impacts during construction and construction impacts on traffic and pedestrians.	Details regarding Metropolitan Council's mitigation regarding short-term parking during construction are addressed in Section 6.3.5 of the FEIS. Additional parking mitigation measures regarding parking and providing adequate and timely signage are described in Section 4.3.1 of the final Supplemental EA. Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment. Section 6.2 of the FEIS discusses impacts to local and regional traffic, and traffic mitigation measures during construction.
40	Sheldon Gitis	Citizen	Comments raised the following subject: adequacy and completeness of the Technical Report, including the quantitative studies on which it is based, the methodology used and the conclusions reached.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
41	Jay Cherner	Corridor business owner	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to adequacy of measures to address parking impacts during construction and access to businesses for persons with disabilities.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.4 of the FEIS, which addresses need for temporary pedestrian walkways and sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA); Section 6.3 of the FEIS addresses parking impacts. Section 6.4 of the FEIS addresses accessibility.
42	Sidney Applebaum	Corridor business owner	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to adequacy of measures to address parking impacts during construction and access to businesses.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.4 of the FEIS, which addresses need for temporary pedestrian walkways and sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA); Section 6.3 of the FEIS addresses parking impacts. Section 6.4 of the FEIS addresses accessibility.
43	City Council of the City of St. Paul (Resolution 11-576)	City of St. Paul	The Neighborhood Commercial Parking Program is incorrectly described on page 20 of the Draft Supplemental EA as being financed by the Metropolitan Council. All of the program funds come from the City of Saint Paul. The Business Mitigation Fund, itemized on page 22 will be administered by the City of Saint Paul, but will be financed by the Metropolitan Council and the Central Corridor Funders Collaborative.	The description of the Neighborhood Commercial Parking Program has been corrected in the final Supplemental EA as noted. Administration and financing for the Business Support Fund has also been clarified in the final Supplemental EA as noted. See Section 4.3.2 and Section 4.3.3 of the final Supplemental EA.

No.	Commenter	Group/ Affiliation	Comment	Response
44	Russ Batisto	Corridor business owner	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to providing access to businesses during construction and parking.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.4 of the FEIS, which addresses need for temporary pedestrian walkways and sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA); Section 6.2 of the FEIS, which addresses the effect of the project on regional and local roadways. Section 6.3 of the FEIS addresses parking impacts. Section 6.4 of the FEIS addresses accessibility.
45	Sowa Unora	Citizen	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to parking during construction and the possibility that contractors may block parking before it is actually needed.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. Additionally, FTA will monitor Metropolitan Council's compliance with the mitigation measures identified in the final Supplemental EA. See also Section 6.4 of the FEIS, which addresses need for temporary pedestrian walkways and sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA); Section 6.2 of the FEIS, which addresses the effect of the project on regional and local roadways. Section 6.3 of the FEIS addresses parking impacts. Section 6.4 of the FEIS addresses accessibility.
46	David Barnhart	Corridor business owner	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to parking during construction, access to businesses, dust and noise during construction.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.
47	Gen Fujioka	National Coalition for Asian Pacific American Community Development	Comments raised the following subjects: (1) adequacy and completeness of the Technical Report, including the quantitative studies on which it is based, the methodology used and the conclusions reached.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
			(2) small businesses owned by Environmental Justice populations should be studied as a subset to determine whether or not they will sustain different and disproportionate impacts.	The Metropolitan Council conducted a survey of businesses along the alignment to determine whether the businesses were owned by members of minority groups. FTA analyzed that data and found that the survey established that the businesses directly on the alignment contain 162 Asian owned businesses (15.1%), 51 Black or African American owned businesses (4.8%) and 4 Hispanic or Latino owned businesses (0.4%), representing slightly over 20% in minority owned businesses compared to the alignment area minority population of 46%. Therefore, there is no disparate or disproportionate impact to minority owned businesses along the corridor.
48	Anne White	Corridor resident	Comments raised the following subjects: (1) adequacy of mitigation measures, particularly with regards to adequacy of measures to address parking impacts during construction and business revenue losses caused by construction.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.3 of the FEIS addresses parking impacts.
			(2) adequacy and completeness of the Technical Report, including the quantitative studies on which it is based, the methodology used and the conclusions reached.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
49	Benita Warns	Corridor business owner	Comments raised the following subjects: (1) adequacy of mitigation measures, particularly with regards to providing access to businesses during construction.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.4 of the FEIS, which addresses need for temporary pedestrian walkways and sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA); Section 6.2 of the FEIS, which addresses the effect of the project on regional and local roadways. Section 6.3 of the FEIS addresses parking impacts. Section 6.4 of the FEIS addresses accessibility.

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			(2) adequacy and completeness of the Technical Report, including the quantitative studies on which it is based, the methodology used and the conclusions reached.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
50	Tom and Kathy Stransky	Corridor business owners	Comments raised the following subjects: (1) adequacy of mitigation measures, particularly with regards to providing access to businesses during construction and providing measures to address loss of business revenues.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.4 of the FEIS, which addresses need for temporary pedestrian walkways and sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA); Section 6.2 of the FEIS, which addresses the effect of the project on regional and local roadways. Section 6.3 of the FEIS addresses parking impacts. Section 6.4 of the FEIS addresses accessibility.
			(2) adequacy and completeness of the Technical Report, including the quantitative studies on which it is based, the methodology used and the conclusions reached.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
			(3) adequacy of mitigation measures, particularly with regards to adequacy of measures to address potential revenue losses.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.
51	Michael Warns	Corridor business owner	Comments raised the following subjects: (1) adequacy of mitigation measures, particularly with regards to providing access to businesses during construction, parking and providing measures to address loss of business revenues.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.4 of the FEIS, which addresses need for temporary pedestrian walkways and sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA); Section 6.2 of the FEIS, which addresses the effect of the project on regional and local roadways. Section 6.3 of the FEIS addresses parking impacts. Section 6.4 of the FEIS addresses accessibility.
			(2) adequacy and completeness of the Technical Report, including the quantitative studies on which it is based, the methodology used and the conclusions reached.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
52	Roy Hunn	Corridor business owner	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to providing access to businesses during construction, parking and providing measures to address loss of business revenues.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.4 of the FEIS, which addresses need for temporary pedestrian walkways and sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA); Section 6.2 of the FEIS, which addresses the effect of the project on regional and local roadways. Section 6.3 of the FEIS addresses parking impacts. Section 6.4 of the FEIS addresses accessibility.
53	Ardis Hafdahl	Corridor business owner	Comments raised the following subjects: (1) adequacy and completeness of the Technical Report, including the quantitative studies on which it is based, the methodology used and the conclusions reached.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
			(2) adequacy of mitigation measures, particularly with regards to providing access to businesses during construction, parking and providing measures to address loss of business revenues.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.4 of the FEIS, which addresses need for temporary pedestrian walkways and sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA); Section 6.2 of the FEIS, which addresses the effect of the project on regional and local roadways. Section 6.3 of the FEIS addresses parking impacts. Section 6.4 of the FEIS addresses accessibility.
54	Carol Swenson	District Councils Collaborative of St. Paul and Minneapolis	Comments raised the following subjects: (1) adequacy and completeness of the Technical Report , including the quantitative studies on which it is based, the methodology used and the conclusions reached.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.

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			(2) adequacy of mitigation measures, particularly with regards to providing access to businesses during construction, parking and providing measures to address loss of business revenues.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.4 of the FEIS, which addresses need for temporary pedestrian walkways and sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA); Section 6.2 of the FEIS, which addresses the effect of the project on regional and local roadways. Section 6.3 of the FEIS addresses parking impacts. Section 6.4 of the FEIS addresses accessibility.
55	Chris Ferguson	Corridor business owner	Comments raised the following subjects: (1) adequacy and completeness of the Technical Report , including the quantitative studies on which it is based, the methodology used and the conclusions reached.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
			(2) adequacy of mitigation measures, particularly with regards to providing access to businesses during construction, parking and providing measures to address loss of business revenues.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.4 of the FEIS, which addresses need for temporary pedestrian walkways and sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA); Section 6.2 of the FEIS, which addresses the effect of the project on regional and local roadways. Section 6.3 of the FEIS addresses parking impacts. Section 6.4 of the FEIS addresses accessibility.
56	Thomas F. DeVincke	Bonner & Borhart, LLP, representing plaintiffs in pending civil action entitled *The St. Paul Branch of the NAACP, et al., vs. The Metropolitan Council, et al.*	Comments raised the following subjects: (1) adequacy and completeness of the Technical Report , including the quantitative studies on which it is based, the methodology used and the conclusions reached.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
			(2) adequacy of mitigation measures, particularly with regards to providing access to businesses during construction, parking and providing measures to address loss of business revenues.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.4 of the FEIS, which addresses need for temporary pedestrian walkways and sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA); Section 6.2 of the FEIS, which addresses the effect of the project on regional and local roadways. Section 6.3 of the FEIS addresses parking impacts. Section 6.4 of the FEIS addresses accessibility.
			(3) Seattle study is better example of impacts caused by construction projects and should be considered in the SEA and Technical Report.	Please see Section 5.2 of the final Supplemental EA, "Comparison of Analysis Methodology/Mitigation Identification to other similar projects," for FTA's response to this comment.
57	Va-Megn Thoj	Asian Economic Development Association	Comments raised the following subjects: (1) The supplemental EA process did not provide adequate time for the public to provide comments.	Public participation is a requirement of the National Environmental Policy Act (NEPA) for preparation of environmental documents. Consistent with FTA regulations a 30-day time period was provided for the public to comment. Two public hearings were also held, at which members of the public could submit comments on the EA. FTA finds that this comment period was adequate under the circumstances.
			(2) adequacy and completeness of the Technical Report, including the quantitative studies on which it is based, the methodology used and the conclusions reached.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
			(3) Lake Street study and Seattle study are better examples of impacts caused by construction projects and should be considered in the SEA and Technical Report.	Please see Section 5.2 of the final Supplemental EA, "Comparison of Analysis Methodology/Mitigation Identification to other similar projects," for FTA's response to this comment.

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			(4) small businesses owned by Environmental Justice populations should be studied as a subset to determine whether or not they will sustain different and disproportionate impacts.	The Metropolitan Council conducted a survey of businesses along the alignment to determine whether the businesses were owned by members of minority groups. FTA analyzed that data and found that the survey established that the businesses directly on the alignment contain 162 Asian owned businesses (15.1%), 51 Black or African American owned businesses (4.8%) and 4 Hispanic or Latino owned businesses (0.4%), representing slightly over 20% in minority owned businesses compared to the alignment area minority population of 46%. Therefore, there is no disparate or disproportionate impact to minority owned businesses along the corridor.
			(5) adequacy of mitigation measures, particularly with regards to providing access to businesses during construction, parking and providing measures to address loss of business revenues, and responses to disruptions to business caused by utility shut offs, noise, dust and debris.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.4 of the FEIS, which addresses need for temporary pedestrian walkways and sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA); Section 6.2 of the FEIS, which addresses the effect of the project on regional and local roadways. Section 6.3 of the FEIS addresses parking impacts. Section 6.4 of the FEIS addresses accessibility.
58	Skip and Heidi Brist	Corridor business owners	Comments raised the following subject: adequacy of mitigation measures, particularly with regards to addressing loss of business revenues.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.
59	Jennette Gudgel	Citizen	Comments raised the following subjects: (1) adequacy of mitigation measures, particularly with regards to providing access to businesses during construction, parking and providing measures to address loss of business revenues.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.4 of the FEIS, which addresses need for temporary pedestrian walkways and sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA); Section 6.2 of the FEIS, which addresses the effect of the project on regional and local roadways. Section 6.3 of the FEIS addresses parking impacts. Section 6.4 of the FEIS addresses accessibility.
			(2) adequacy and completeness of the Technical Report, including the quantitative studies on which it is based, the methodology used and the conclusions reached.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
			(3) Seattle study is better example of impacts caused by construction projects and should be considered in the SEA and Technical Report.	Please see Section 5.2 of the final Supplemental EA, "Comparison of Analysis Methodology/Mitigation Identification to other similar projects," for FTA's response to this comment.
60	N/A	University Avenue Betterment Association (UABA)	Comments raised the following subjects: (1) environmental review process should have been a supplemental EIS.	Please see Section 5.2 of the final Supplemental EA, "NEPA Process" for FTA's response to this comment.
			(2) identification of the construction impacts on the loss of business revenues.	Please see discussion in Section 4.2 and Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
			(3)adequacy of all of the proposed mitigation measures.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment.
			(4) use of comments from the February 17, 2011 Town Hall meetings.	Please see Section 5.2 of the final Supplemental EA,"Public Participation," for FTA's response to this comment.
			(5) environmental documents should be concise, no longer than absolutely necessary, and include a robust discussion of impacts and alternatives. alternative considerations to agency decisions.	FTA has revised the Draft Supplemental EA extensively in order to remove repetitive information, increase readability and provide additional detail and discussion on issues identified during the comment period.

No.	Commenter	Group/ Affiliation	Comment	Response
			(6) Businesses should be entitled to relocation expenses under the Uniform Relocation Act.	The Uniform Relocation Assistance and Real Property Acquisition Policies Act ("URA") applies to all projects receiving federal funds where real property is acquired or persons are displaced as a direct result of acquisition, demolition, or rehabilitation of real property. The URA provides the process for acquisition of real property and relocation benefits, if the person is being displaced. See 49 C.F.R. Part 24. Any business owners who believe that they qualify as "displaced persons" under the URA may submit a claim under the act to the Metropolitan Council. Metropolitan Council has prepared a Real Estate Acquisition Management Plan ("RAMP"), which sets forth the process for the acquisition of real estate for this Project and for claiming relocation benefits. In addition, any person who believes Metropolitan Council has failed to properly consider the person's application or claim for payments or assistance under the URA may file a written appeal with the local agency. Persons who believe they may have such a claim, should contact the Central Corridor Project Office at 651-602-1930 and ask for Victoria Nill or email victoria.nill@metc.state.mn.us.
			(7) adequacy and completeness of the Technical Report, including the quantitative studies on which it is based, the methodology used and the conclusions reached.	Please see Section 5.2 of the final Supplemental EA, "Adequacy of Technical Report Analysis and Methodology" for FTA's response to this comment.
			(8) Lake Street study and Seattle study are better examples of impacts caused by construction projects and should be considered in the SEA and Technical Report.	Please see Section 5.2 of the final Supplemental EA, "Comparison of Analysis Methodology/Mitigation Identification to other similar projects," for FTA's response to this comment.
61	Gerry McInerney	Corridor business owner	Comments included the following subject: information regarding business signage/directional, construction timeliness, and street closures/openings, concerns regarding communications with Metropolitan Council staff, business owner's experience of loss of revenue to date.	FTA appreciates the comments from individual business owners providing information regarding their experiences to date with the construction of the project. FTA has considered these comments in developing the final Supplemental EA, particularly in FTA's requirement that Metropolitan Council provide monthly reports regarding the status of business mitigation measures as set forth in the FONSI being issued.
62	Jim Golden	Corridor business owner	Comments included the following subjects: (1) information regarding business signage/directional, construction timeliness, and street closures/openings, concerns regarding communications with Metropolitan Council staff, business owner's experience of loss of revenue to date.	FTA appreciates the comments from individual business owners providing information regarding their experiences to date with the construction of the project. FTA has considered these comments in developing the final Supplemental EA, particularly in FTA's requirement that Metropolitan Council provide monthly reports regarding the status of business mitigation measures as set forth in the FONSI being issued.
			(2)adequacy of mitigation measures, particularly with regards to providing access to businesses during construction, parking and providing measures to address loss of business revenues.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.4 of the FEIS, which addresses need for temporary pedestrian walkways and sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA); Section 6.2 of the FEIS, which addresses the effect of the project on regional and local roadways. Section 6.3 of the FEIS addresses parking impacts. Section 6.4 of the FEIS addresses accessibility.
63	Mary Leonard	Corridor business owner	Comments included the following subjects: (1) information regarding business signage/directional, construction timeliness, and street closures/openings, concerns regarding communications with Metropolitan Council staff, business owner's experience of loss of revenue to date.	FTA appreciates the comments from individual business owners providing information regarding their experiences to date with the construction of the project. FTA has considered these comments in developing the final Supplemental EA, particularly in FTA's requirement that Metropolitan Council provide monthly reports regarding the status of business mitigation measures as set forth in the FONSI being issued.

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			(2)adequacy of mitigation measures, particularly with regards to providing access to businesses during construction and off street parking.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.4 of the FEIS, which addresses need for temporary pedestrian walkways and sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA); Section 6.2 of the FEIS, which addresses the effect of the project on regional and local roadways. Section 6.3 of the FEIS addresses parking impacts. Section 6.4 of the FEIS addresses accessibility.
64	Roger Nielsen	Corridor business owner	Comments included the following subject: information regarding business signage/directional, construction timeliness, and street closures/openings, concerns regarding communications with Metropolitan Council staff, business owner's experience of loss of revenue to date.	FTA appreciates the comments from individual business owners providing information regarding their experiences to date with the construction of the project. FTA has considered these comments in developing the final Supplemental EA, particularly in FTA's requirement that Metropolitan Council provide monthly reports regarding the status of business mitigation measures as set forth in the FONSI being issued.
65	Sara Remke	Corridor business owner	Comments included the following subject: information regarding business signage/directional, construction timeliness, and street closures/openings, concerns regarding communications with Metropolitan Council staff, business owner's experience of loss of revenue to date, construction impacts experienced to date.	FTA appreciates the comments from individual business owners providing information regarding their experiences to date with the construction of the project. FTA has considered these comments in developing the final Supplemental EA, particularly in FTA's requirement that Metropolitan Council provide monthly reports regarding the status of business mitigation measures as set forth in the FONSI being issued.
66	Tim Holden	Corridor business owner	Comments included the following subject: information regarding business signage/directional, construction timeliness, and street closures/openings, concerns regarding communications with Metropolitan Council staff, business owner's experience of loss of revenue to date, construction impacts experienced to date.	FTA appreciates the comments from individual business owners providing information regarding their experiences to date with the construction of the project. FTA has considered these comments in developing the final Supplemental EA, particularly in FTA's requirement that Metropolitan Council provide monthly reports regarding the status of business mitigation measures as set forth in the FONSI being issued.
67	Habtamu Market Grocery Store	Corridor business	Comments included the following subject: information regarding vehicle access to business and parking, expected loss in revenues for business.	FTA appreciates the comments from individual business owners providing information regarding their experiences to date with the construction of the project. FTA has considered these comments in developing the final Supplemental EA, particularly in FTA's requirement that Metropolitan Council provide monthly reports regarding the status of business mitigation measures as set forth in the FONSI being issued.
68	Korey Niesen	Corridor business owner	Comments included the following subject: information regarding vehicle access to business and parking, expected loss in revenues for business, job losses/layoffs.	FTA appreciates the comments from individual business owners providing information regarding their experiences to date with the construction of the project. FTA has considered these comments in developing the final Supplemental EA, particularly in FTA's requirement that Metropolitan Council provide monthly reports regarding the status of business mitigation measures as set forth in the FONSI being issued.
69	Michael and Jean Hafner	Corridor business owners	Comments included the following subjects: (1) information regarding business signage/directional, construction timeliness, and street closures/openings, concerns regarding communications with Metropolitan Council staff, business owner's experience of loss of revenue to date.	FTA appreciates the comments from individual business owners providing information regarding their experiences to date with the construction of the project. FTA has considered these comments in developing the final Supplemental EA, particularly in FTA's requirement that Metropolitan Council provide monthly reports regarding the status of business mitigation measures as set forth in the FONSI being issued.
			(2) adequacy of mitigation measures, particularly with regards to providing access to businesses during construction and off street parking.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.4 of the FEIS, which addresses need for temporary pedestrian walkways and sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA); Section 6.2 of the FEIS, which addresses the effect of the project on regional and local roadways. Section 6.3 of the FEIS addresses parking impacts. Section 6.4 of the FEIS addresses accessibility.

No.	Commenter	Group/ Affiliation	Comment	Response
70	Midway Liquor Store	Corridor business	Comments included the following subject: information regarding decrease in sales and business activity and expected lost income. Information regarding business relocation and job losses/layoffs.	FTA appreciates the comments from individual business owners providing information regarding their experiences to date with the construction of the project. FTA has considered these comments in developing the final Supplemental EA, particularly in FTA's requirement that Metropolitan Council provide monthly reports regarding the status of business mitigation measures as set forth in the FONSI being issued.
71	Roger Fuerstenberg	Corridor business owner	Comments included the following subject: information regarding lost business revenue, expected lost income and estimates of rental income losses. Information regarding business relocation and job losses/layoffs.	FTA appreciates the comments from individual business owners providing information regarding their experiences to date with the construction of the project. FTA has considered these comments in developing the final Supplemental EA, particularly in FTA's requirement that Metropolitan Council provide monthly reports regarding the status of business mitigation measures as set forth in the FONSI being issued.
72	Tom and Kathy Stransky	Corridor business owners	Comments included the following subject: information about business access during construction (Snelling Avenue and University Avenue under construction at the same time). Information regarding expected lost income and job losses/layoffs.	FTA appreciates the comments from individual business owners providing information regarding their experiences to date with the construction of the project. FTA has considered these comments in developing the final Supplemental EA, particularly in FTA's requirement that Metropolitan Council provide monthly reports regarding the status of business mitigation measures as set forth in the FONSI being issued.
73	Frank Lorenz	Business owner	Comments raised the following subjects: (1) adequacy of mitigation measures, particularly with regards to adequacy of measures to address parking impacts during construction and business revenue losses caused by construction.	Please see discussion in Section 4.3 and Section 5.2 of the final Supplemental EA, "Adequacy of Mitigation Measures," for FTA's response to this comment. See also Section 6.3 of the FEIS addresses parking impacts.
			(2) small businesses owned by Environmental Justice populations should be studied as a subset to determine whether or not they will sustain different and disproportionate impacts.	The Metropolitan Council conducted a survey of businesses along the alignment to determine whether the businesses were owned by members of minority groups. FTA analyzed that data and found that the survey established that the businesses directly on the alignment contain 162 Asian owned businesses (15.1%), 51 Black or African American owned businesses (4.8%) and 4 Hispanic or Latino owned businesses (0.4%), representing slightly over 20% in minority owned businesses compared to the alignment area minority population of 46%. Therefore, there is no disparate or disproportionate impact to minority owned businesses along the corridor.

CENTRAL CORRIDOR CONSTRUCTION-RELATED POTENTIAL IMPACTS ON BUSINESS REVENUES
COMMENTER INDEX

Below is a listing of individuals and organizations that provided comments on the Draft Supplemental Environmental Assessment.

No.	Commenter	Group/ Affiliation
1	James Segal	Corridor business owner
2	Mike Baca	Corridor business owner
3	Tim Holden	Corridor business owner
4	Diane Pietro	Corridor business owner
5	Jack McCann	University Avenue Betterment Association (UABA)
6	Steve Bernick	Corridor business owner
7	Donald Dickerson	Citizen
8	Marilyn Porter	University Avenue Business Corporation Collaborative (U7)
9	Frank Lorenz	Business owner
10	Scott Walker	Metropolitan Business Council
11	Larry Peterson	University Avenue Betterment Association (UABA)
12	Don Smith	Corridor resident
13	Mary Leonard	Corridor business owner
14	Tim Nolan	Citizen
15	Benita Warns	Corridor business owner
16	Karen Inman	District Councils Collaborative of St. Paul and Minneapolis
17	Patricia O'Keefe	Corridor resident
18	Jamie Delton	Corridor business owner
19	Inna Valin	Citizen
20	Eva Ng	Capitol City Business Council
21	Greg Copeland	Citizen
22	Carl Gelbart	Citizen
23	John Slade	Metropolitan Interfaith Council on Affordable Housing (MICAH)
24	Andy Singer	St. Paul Bicycle Coalition
25	Mike Madden	Citizen
26	La Shella Sims	Metropolitan Interfaith Council on Affordable Housing (MICAH)
27	Colin Wilkinson	Citizen
28	Jennette Gudgel	Capitol City Business Council
29	Richard Bold	Citizen
30	Jeffrey Zrust	Corridor business owner
31	Harry Kent	Citizen
32	Jack McCann, Va-Megn Thoj	University Avenue Business Association (UABA), Asian Economic Development Association (AEDA)
33	Nikolai Alenov	Corridor business owner
34	Vic Rosenthal, Andrea Lubov	Jewish Community Action
35	Kari Canfield	Midway Chamber of Commerce
36	Matt Kramer	St. Paul Area Chamber of Commerce
37	Margaret Beegle	Member of Citizens for Personal Rapid Transit
38	Marianne Mersch	Citizen
39	Gary Hukriede	Citizen
40	Leah Carr	Corridor resident
41	Molly Park	Citizen
42	Russ Batisto	Corridor business owner
43	Sheldon Gitis	Citizen
44	Jay Cherner	Corridor business owner
45	Sidney Applebaum	Corridor business owner
46	City Council of the City of St. Paul (Resolution 11-576)	City of St. Paul
47	Sowa Unora	Citizen
48	Monica Millsap Rasmussen	Corridor resident
49	David Barnhart	Corridor business owner

No.	Commenter	Group/ Affiliation
50	Gen Fujioka	National Coalition for Asian Pacific American Community Development
51	Anne White	Corridor resident
52	David Markle	Citizen
53	Tom and Kathy Stransky	Corridor business owners
54	Michael Warns	Corridor business owner
55	Roy Hunn	Corridor business owner
56	Ardis Hafdahl	Corridor business owner
57	Carol Swenson	District Councils Collaborative of St. Paul and Minneapolis
58	Chris Ferguson	Corridor business owner
59	Thomas F. DeVincke	Bonner & Borhart, LLP, representing plaintiffs in pending civil action entitled *The St. Paul Branch of the NAACP, et al., vs. The Metropolitan Council, et al.*
60	Va-Megn Thoj	Asian Economic Development Association
61	Thea Johansen	Corridor resident
62	Skip and Heidi Brist	Corridor business owners
63	N/A	University Avenue Betterment Association (UABA)
64	Gerry McInerney	Corridor business owner
65	Jim Golden	Corridor business owner
66	Roger Nielsen	Corridor business owner
67	Sara Remke	Corridor business owner
68	Tina Lehman	Corridor business owner
69	Habtamu Market Grocery Store	Corridor business
70	Korey Niesen	Corridor business owner
71	Michael and Jean Hafner	Corridor business owners
72	Midway Liquor Store	Corridor business
73	Roger Fuerstenberg	Corridor business owner

APPENDIX C:
Central Corridor BRT Alternative Construction Duration

SRF Consulting Group, Inc. | ENGINEERS PLANNERS DESIGNERS

SRF No. 0127829 006F

MEMORANDUM

TO: Kathryn O'Brien
Environmental Services Manager

FROM: James Gersema, PE

DATE: October 23, 2012

SUBJECT: CENTRAL CORRIDOR BRT ALTERNATIVE CONSTRUCTION DURATION

The Central Corridor Bus Rapid Transit (BRT) alternative is proposed to contain sections of dedicated guideway operation and sections of mixed traffic operation. It is assumed that both types of BRT section would require full reconstruction of the corridor to provide improved pavement strength and rideability, pedestrian facilities, and reconstructed utilities. In addition, the BRT alternative assumes that transit stations would be constructed with the same amenities as the Light Rail Transit (LRT) alternative, and that there would be similar bridge replacement and/or rehabilitation along the corridor with the exception that a new bridge over I-35W would not be needed, and that modification to the existing LRT bridge over I-35W would not be needed.

The overall construction timeline of the BRT alternative can reasonably be expected to be shorter in duration than the LRT alternative; however, the duration of the civil work activities and station construction is expected to be slightly longer. The difference in civil work activities is the result of the differing alignment alternatives through downtown Minneapolis. The LRT alternative is able to utilize the Hiawatha LRT track and stations, while the BRT alternative would be routed on 4th Street in mixed traffic. This alternate alignment adds more than an additional mile of corridor pavement rehabilitation, pedestrian facility upgrades, and station construction.

The construction timeline for the LRT alternative includes additional time dedicated to construction and testing of the train communication and power systems and the construction of the operations and maintenance facility; these are activities that would not be needed for the BRT alternative, thus, reducing the overall duration of BRT construction.

JDG/gjd

cc: Beth Bartz, SRF
Mona Elabbady, SRF

H:\Projects\7829_Correspondence\Memorandums\Memo.docx

O'Brien, Kathryn

From: Soler, Dan
Sent: Wednesday, November 14, 2012 9:16 AM
To: O'Brien, Kathryn
Subject: BRT Construction Duration
Attachments: 121023_Memo_OBrien.pdf.pdf

Kathryn,

I have reviewed the attached memo prepared by SRF regarding the proposed duration of a BRT alternative for the Central Corridor project. I concur with the analysis presented in the memorandum. I agree that the overall timeline of construction of a BRT alternative would be less due to the elimination of the systems construction and testing of the project. I also agree that the civil construction portion of the project (roadways, utilities, stations, etc.) would be at least as long or longer than the civil construction associated with the LRT project

Thanks for the opportunity to review and comment on this issue.

DAN

Daniel Soler, P.E
Director, Transit Systems Design and Construction
Central Corridor Project Office
540 N. Fairview Avenue
Saint Paul, MN 55104
Phone: 651-602-1971
Cell: 651-900-9902

APPENDIX D:
Literature Review for the Central Corridor Supplemental EIS

Literature Review for the Central Corridor Supplemental EIS

This literature review examines papers, reports, studies and other documents on

- The impacts from the construction of major transportation projects on area business revenues; and/or,
- Best practices employed to mitigate adverse construction-related impacts to businesses.

Studies that undertook quantitative analyses of impacts to **storefront businesses** were particularly sought out. Although growing as a field of research, literature on the impacts of transportation construction to area businesses is relatively scarce. The "Technical Report on the Potential Impacts on Business Revenues during Construction of the Central Corridor Light Rail Project" completed by the US Department of Transportation Volpe Center (2011) reviewed four academic and government-published studies as well as two additional studies. In addition to highlighting studies with quantitative analyses of business impacts as the Volpe report did, this literature review includes additional published reports that present qualitative findings on the topic.

Peer-Reviewed, Government or Academically Published Works

Analyzing the Effects of Highway Rehabilitation on Businesses[i]

This 1993 study by de Solminihac and Harrison on construction phase impacts to businesses from urban highway rehabilitation projects examined an 11.6-mile highway reconstruction project along the Southwest Freeway (US-59) in Houston, TX. Construction activities were broken into four segments and took place from August 1989 to December 1992.

The researchers examined sales data for businesses along the corridor and compared actual sales data during construction to predictions of sales based on pre-construction sales data. Businesses were broken down into ten categories to determine which sectors were most impacted by construction. Based on this quantitative analysis, the researchers found that negative impacts from construction were most severely felt by businesses in four retail categories: food stores (37 percent drop), automotive outlets (32 percent drop), general merchandise (28 percent drop) and home furnishings (17 percent drop).

The authors also conducted a business survey to ask managers to quantify impacts to their businesses. About 49 percent reported being considerably affected by construction and an additional 32 percent said they were somewhat affected. Of the 66 respondents, 22.7 percent said their sales either improved or did not change during construction. Another 22.7 percent reported sales dropping between 10 to 20 percent. Only 12 percent of businesses surveyed reported experiencing a sales drop of 40 percent or more during construction.

Estimated Construction Period Impact of Widening State Highway 21 in Caldwell, Texas[i]

Wildenthal and Buffington's 1996 study examined the widening of a 2.3-mile stretch of State Highway 21 in Texas. Construction on the project occurred between 1991 and 1993 in Caldwell, TX, a town of 3,000. The transportation construction project differs greatly from the CCLRT project in its location and project type. The authors surveyed managers of abutting businesses to obtain information on sales figures, number of employees and number of available parking spaces before and during construction. Survey data on sales were cross-checked with actual sales data, where available. Of the 54 survey respondents, 34 (63 percent) reported a decline in sales and 20 reported a decline of 25 percent or more. Twenty-three businesses reported actual sales data for 1990 (before construction) and 1991 (less than one year into construction). Of those 23 businesses, slightly over half experienced a decline. The aggregate sales data from these 23 businesses showed a five percent decrease in sales between 1990 and 1991. Meanwhile, gross sales data for all businesses in Caldwell (obtained from the state comptroller's office) showed a five percent increase in sales during this period. Approximately 80 percent of business managers reported no change in the number of employees during construction.

Mitigating the Adverse Impacts of the Dallas North Central Expressway Construction on Businesses

In a 1998 study, Harrison and Waldman examined the impacts to business associated with the reconstruction of an 18-mile stretch of the North Central Expressway (NCE) and the construction of an adjacent Dallas Area Rapid Transit (DART) light rail transit (LRT) in Dallas, TX. The researchers surveyed businesses along two sections of the corridor where construction had already been completed as well as businesses abutting two sections that were under construction at the time of the survey. Harrison and Waldman supplemented the business owner perceptions gained through the surveys with an analysis of more objective sales data reported to the Texas state comptroller. The research team further examined business openings and closings during construction and trends in multi-tenant real-estate market.

Based on two previous reports (WisDOT, 1989; de Solminihac and Harrison, 1993) and correlation with NCE surveys, the researchers identified the four most sensitive sectors to transportation construction work: retail, other; retail, food; retail, auto; and services. Harrison and Waldman collected sales data for the businesses within these sectors along the NCE project corridor. They then compared the data from before construction began to sales data from the construction period. They further compared sales data for businesses along the NCE construction corridor to sales data for these sectors in Dallas as a whole. Both of these comparisons yielded no significant difference in business sales. Surveys of business openings and closings along the four sections showed 60 business openings and 36 business closings occurred during construction. Finally, analysis of quarterly absorption, occupancy and rental rates for multi-tenant office buildings showed a low point from 1991 to 1992, when occupancy rates in the project area were 10 percent below the city average. However, the statistics showed a steady rise from 1992 to 1996, when occupancy in buildings of this type was 87 percent along the NCE project corridor – four percent above the city average.

Survey responses from businesses in the two completed sections primarily highlighted negative impacts to sales and driving patterns. Some also noted communication issues between the Texas Department of Transportation (TxDOT), the construction contractor and businesses. Surveys that were administered to businesses as they were experiencing frontage road reconstruction activities yielded similar results to

those in the completed sections. However, these business owners noted less adverse impacts from construction than those surveyed in the completed sections. Harrison and Waldman hypothesized that this could mean that TxDOT, the contractor and businesses had learned from the experiences from the already completed sections.

The authors highlighted five recommendations for mitigating impacts to business during the construction of large, urban transportation projects:

1. A dedicated person or group tasked with mitigating adverse impacts to area residents and businesses.
2. Expedited construction of frontage roads to minimize access issues for area businesses.
3. A survey of businesses before construction begins to identify those businesses most vulnerable to construction and to establish contacts between the businesses and the project outreach person or team.
4. Targeted outreach and mitigation measures for those types of businesses that have been determined to be more sensitive to construction activities.
5. Flexibility in communication techniques to take advantage of the best available and most effective media.

Highway Construction Impacts on Wyoming Business[i]

In a 2005 study, Young, Wolffing and Tomasini analyzed twelve highway construction projects, which were all completed in Wyoming between 1998 and 2001. One of the largest projects examined was located in Cody (population 49,644). It affected 50 businesses and cost over $8 million. Projects ranged in size and location down to an $87,000 project in Moorcroft (population 807), which affected three businesses.

The researchers used a survey to identify business managers' perceived impacts to revenue from construction. A total of 98 surveys were returned. Responses were then compared to actual tax data from the Wyoming Department of Revenue for projects with a large enough number of businesses to complete a statistical analysis. Forty-two percent of the survey responses about perceived impacts during construction were found to be more pessimistic than actual impacts to revenue. The authors found that most businesses experienced reduced positive growth as opposed to negative growth in sales during construction. The authors further classified businesses by Standard Industrial Classification (SIC) codes and examined impacts to businesses by business category. Some business categories were particularly susceptible to negative impacts during construction, namely the food-related retail, gas service and hotel service categories.

Young, Wolffing and Tomasini also sent out a survey to all fifty state Departments of Transportation (DOTs) to assemble a list of common practices implemented to address business owner concerns and to mitigate impacts to businesses during construction of transportation projects. All fifty DOTs responded. The results showed that DOTs emphasized communications to businesses through television, radio, newspapers and websites as a way of disseminating information about construction schedules, closures and other related information. State DOTs tended to emphasize maintaining access to businesses as the

primary mitigation measure employed. Special signage to denote business access was highlighted, though states were split on whether or not individual business names should be used on signs. Contractor incentives or penalties were also common measures implemented by DOTs to encourage efficient construction practices.

Development of Improved Procedures for Business Accommodation on Transportation Construction Projects

A 2005 report by Ellis and Washburn for the Florida Department of Transportation (FDOT) surveyed and interviewed businesses along four reconstruction corridors to determine their perceptions of impacts to their businesses during construction. The four projects were

- A 2-year major reconstruction of San Jose Boulevard (Jacksonville).
- A 13-month (400-day) major reconstruction of 1.6 miles of SR 121 (MacClenny).
- A 20-month major reconstruction of 1.16-mile stretch of Mahan Drive (Tallahassee).
- A major reconstruction of 3 miles of US 192 (Kissimmee).

Using information gathered from interviews and focus groups with business managers along the four corridors, Ellis and Washburn rated the construction impacts of highest concern to businesses. The highest rated concerns were related to customer access/parking and delivery access followed by business visibility and signage concerns. The prevailing perception of the business managers was that customers had a difficult time accessing their businesses. The next impacts of highest concern, according to the FDOT report, were utility outages and disruptions during construction. Construction-associated congestion and changes in traffic patterns were determined to be another set of impacts that concerned business managers. Based on information gathered from businesses on their perceptions, the report concluded that destination businesses (e.g. banks, specialty retailers, insurance agencies) were less likely to feel negative impacts on business due to traffic pattern changes than other businesses such as fast-food retailers.

The 2005 report by Ellis and Washburn for FDOT further expounded a number of accommodation strategies to address the business concerns that were identified. The authors broke down these recommendations into three areas:

1. Strategies to Improve Communication with Businesses
    - Hold a public meeting to introduce mitigation efforts and project personnel before construction starts.
    - Install a project sign that includes basic information about the project and contact information.
    - Regularly distribute information to businesses via flyers.
    - Provide project information and updates on a project website.
2. Business Signage
    - Mount signs on posts to increase visibility.
3. Business Access, Parking and Traffic Congestion

- Develop traffic control plans which take into account construction impacts to automobile traffic; other traffic including pedestrian, bicycle and bus; business access; and parking availability. The development of the plan should also include accident analysis and level of service analysis of the existing corridor, pre-construction.
- Base part of contractor incentive pay on the successful implementation of business accommodation efforts.

Improved Procedures for Business Accommodation on Transportation Construction Projects

Ellis and Agdas published an updated report in 2010. The authors noted that three-quarters of business managers surveyed along the San Jose Boulevard project and two-thirds of businesses along the Mahan Drive project reported that construction of the projects had negatively impacted their businesses. The authors further stated that reported declines in revenue were in the 5 percent to 25 percent range.

Ellis and Agdas's 2010 article further highlighted the benefits of developing a pre-construction business inventory and establishing early contact with businesses abutting the construction project, routinely visiting businesses to foster communication and coordinate utility outages with all relevant actors.

Highway Construction Related Business Impacts[i]

In a 2008 study, Buddemeyer and Young study looked at the impacts to businesses in Dubois, Wyoming, during a major reconstruction of US 26/287 over Togwotee Pass. The reconstruction was scheduled in five phases and broken into four projects to be completed over seven years. Business owners and residents in Dubois, a small rural town with a population of 926, were concerned that construction activities would cause a loss of tourism traffic to the town, as US 26/287 runs through the center of Dubois and connects it to the tourist destinations of Jackson Hole and Yellowstone National Park.

The authors compiled a list of businesses operating in the town of Dubois at the start of construction. Most of the 174 businesses on the list were highly dependent on tourist traffic; 60 percent of the businesses reported that 75 percent or more of their customers were from out of town. The authors classified the businesses by business type according to Standard Industrial Classification (SIC) codes and then used sales tax revenue data and sales tax rates for the different types of businesses to calculate revenues for each business. The researchers plotted revenue data for 110 of the 174 businesses (only those that were operating in Dubois from January 2001 to October 2007). Aggregate yearly sales figures were compared to predicted sales figures, which were calculated based on pre-construction data. The authors found that the Dubois businesses, overall, were performing close to the level expected by the predicted sales figures, with some minor declines in 2007. Tourist-based businesses, overall, also experienced growth, though it was lower than other businesses.

The researchers also conducted a survey of business owners. Only 13 of the 63 survey respondents reported that they felt their business was negatively impacted by construction activities.

Report on Mitigation of Transportation Construction Impacts. Minnesota Department of Transportation[i]

A 2009 report published by the Minnesota Department of Transportation (MnDOT) examined impacts to businesses during the construction of transportation projects. As part of its broader study, MnDOT

conducted a survey of businesses along seven transportation construction projects in the state of Minnesota to glean information about the types and extents of impacts to businesses and the effectiveness of various mitigation measures.

Three projects were located in the Twin Cities Metro:

- Major reconstruction of Highway 36 between White Bear Ave. and Hwy 120/Century Ave;
- Major reconstruction of I-35W & 54th Street/Diamond Lake Road (Minneapolis);
- Major reconstruction of Lake Street (Minneapolis).

Four projects were located outside of the metropolitan area:

- Major reconstruction of Highways 16/61 (La Crescent);
- Mill and overlay of Highway 2 West of Highway 38 intersection (Grand Rapids);
- Major reconstruction of Highway 2 East of Highway 38 (Grand Rapids);
- Major reconstruction of Highway 10 (Detroit Lakes).

In total, MnDOT sent out over 400 surveys and received responses from 95 businesses. Of the respondents, 76 percent said their business had been impacted by construction and 62 percent reported having lost business.

The 2009 MnDOT report presented a list of best practices and recommendations for implementing mitigation activities.

1. Include business outreach in a broader, more holistic public involvement program to connect different stakeholder groups in the community. Mitigation of business impacts necessarily involves communications not just to business owners but also to customers, employees and suppliers.
2. Map out key decision makers and project managers early in the project to reduce confusion when rules and policies change under new management. The benefit of the construction contractor as a direct point of contact for businesses should not be overlooked.
3. Tailor outreach and communication strategies to each specific project and allow for natural changes. The greater the impact on business impacts, the longer the lead-time a project should have in starting outreach. Corridor construction projects have the greatest impact and should have significant outreach along the corridor at least one year ahead of construction.
4. Provide businesses with an information packet that includes construction information, agency contact information, and a list of resources that can provide financing, marketing and/or technical support. A project description that lays out the reasoning behind the project may increase buy-in to the project.
5. In addition to providing project information, demonstrate responsiveness to questions and requests for further information.
6. Identify business issues early in project planning through consultations with local government units and business representatives.

7. Identify partnership opportunities with community and business organizations and with other government entities.

Mitigating Traffic Impacts During the Marquette Interchange Reconstruction Project

The Wisconsin Department of Transportation (WisDOT) developed and implemented a traffic mitigation program to manage business and community needs during the reconstruction of the Marquette Interchange in the heart of downtown Milwaukee. The Marquette Interchange, where Interstates 43, 94 and 794 intersect, is a gateway to downtown Milwaukee, which is a large population and job center with approximately 4,300 businesses. WisDOT solicited ideas for mitigation measures from local business organizations and other local agencies in four areas: public information, freeway traffic operations and safety, transit and demand management, and local road traffic operations. Based on an evaluation of the measures that were ultimately implemented as part of the traffic mitigation program, the authors identified three key success factors:

1. Good partnerships with local agencies.
2. Early identification of mitigation measures during the design and budgeting processes.
3. Strong lines of communication with the public, local agencies and construction contractors.

Assessing Neighborhood and Social Influences of Transit Corridors

Fan and Guthrie authored a 2012 study on neighborhood change during and after transit corridor development. The researchers surveyed residents and business owners along two existing Twin Cities transit corridors – the Hiawatha LRT and the Northstar commuter rail line – and two planned corridors – the Cedar Avenue Bus Rapid Transit line and the Central Corridor LRT. The authors sought to identify which businesses saw themselves as “winners” and which as “losers” in transitway development. Though the study overall was focused on longer-term impacts of transitway development, part of the survey instrument was designed to probe business owner perceptions of impacts from transitway construction. Construction on the Central Corridor and Cedar Avenue transitways had not yet begun at the time of data collection, so all construction impacts measured were actually business owner expectations of impacts.

Around 40 percent of businesses surveyed along the Central Corridor LRT perceived that transitway development had had and would continue to have somewhat negative or strongly negative impacts. Comparatively, perceptions of negative impacts from the Cedar Avenue transitway development were held by around 20 percent of the survey population. Forty percent of Central Corridor business survey respondents were very concerned by construction impacts. Only about 20 percent reported no concern. These figures compare to approximately 30 percent of businesses along Cedar Avenue that reported being very concerned and an approximately equal number of businesses that reported not being concerned at all.

The authors asked business about their level of concern over several specific impacts including customers not knowing how to reach businesses, fewer people passing by, trucks not being able to reach businesses, noise and dust impacts, and loss of parking. Along the Central Corridor, a majority of businesses noted concern about each of these potential impacts. Central Corridor business owners were

slightly more likely to be concerned about customers not knowing how to reach businesses and fewer people passing by, and a slightly less likely to be concerned about customers not knowing that businesses are open. Along the Cedar Avenue transitway corridor, business owners were primarily concerned with customers not knowing how to reach their businesses and fewer people passing. Other concerns, especially trucks not being able to reach, noise and dust, and lack of parking were not as commonly listed as concerns.

Other Published Works

The Impact of Light Rail on Local Businesses[i]

In 2006, Houston Tomorrow (formerly the Gulf Coast Institute) published a case study report on the impact of light rail projects on businesses in six cities that had recently constructed projects. As a non-profit organization, Houston Tomorrow sought to provide information to Houston residents about experiences with light rail construction in other cities. Houston Tomorrow gathered data by interviewing transit agency staff, local government officials, and representatives of the business community in Los Angeles, San Diego, Dallas, Portland, Minneapolis and Salt Lake City.

Portland's TriMet was the only agency to collect data on small businesses during construction, and several of the other cities noted how beneficial such data collection would have been in measuring the impacts of construction to businesses. The extension of Portland's LRT system along Interstate Avenue mirrored many of the characteristics of the CCLRT, running along an urban corridor with storefront businesses, about 70 percent of which were possibly dependent on impulse customers. Portland's data showed seven business closures during construction, but only one was determined to be directly related to construction. Thirteen of the original 106 businesses along the corridor moved and four changed names and ownership; two of these changes were determined to be attributable to LRT construction.

Some of the representatives from other cities surveyed provided anecdotal estimates of impacts to businesses during LRT construction, but most did not attempt to quantify overall impacts. A transit agency official estimated that no more than 10-15 percent of businesses along recent LRT construction corridors in Dallas shut down during construction; he further noted that not all closures were due to construction.

Light Rail Construction: Mitigation of Business Interruption

In another 2006 report, Houston Tomorrow surveyed methods used by six cities to mitigate business interruption during LRT construction projects to present "a toolkit of tested mitigation practices" for future projects, particularly those in the City of Houston. Data on methods used in these cities, along with mostly anecdotal appraisals of success levels, were collected via interviews with City officials, rail project officials, business community members and others involved (e.g. officials from banks or non-profit lending institutions involved). Effective methods employed in Dallas, Los Angeles, Minneapolis, Portland, Salt Lake City, and San Diego were broken down into five key areas for successful mitigation. These areas, along with the various strategies highlighted by Houston Tomorrow, are listed below.

1. Financial assistance programs:
    - Small loan programs that offer low-interest or interest-free loans
    - Loans administered by a third-party, non-profit institution
2. Community relations:
    - A single point of contact for businesses and the broader community
    - 24-hour construction hotline
3. Construction guidelines and project management:
    - Meeting with utility companies to coordinate construction schedule
    - Flexibility in design
    - Early communications with businesses about construction plans
    - Completing construction in sections
    - Maintaining vehicle access to parking and pedestrian access to business entrances
4. Contractor incentives:
    - Incentive pay determined based on appraisal of calls into the complaints hotline and on the votes of community representatives
5. Marketing:
    - Distribution of coupon books
    - Promotional mail alerting neighbors that shops are open
    - Special signage along corridor
    - Placing of ads on buses
    - Placing of full-page ads for specific geographic clusters of businesses as they were experiencing construction on their doorstep
    - Establishment of Lunch Bus program to bring project-related employees to eat at restaurants along the construction corridor

Little Mekong CCLRT Impact Study

In a 2012 study, the Asian Economic Development Association (AEDA) surveyed business owners along University Avenue between MacKubin Street and Galtier Street in Saint Paul about the impacts of light rail construction. This five-block study area contains 80 businesses, with a high percentage of Asian-owned (70 percent) and non-Asian minority-owned (13.8 percent) businesses. The majority of businesses can be classified under the restaurant, retail or service-related sectors (61.25 percent). The study gathered qualitative data through semi-structured, in-person interviews with business owners, managers or other staff at 64 of the 80 businesses in the study area. Data collection occurred from late March to July 2012.

The study includes a number of estimates provided by the survey respondents of percent loss of customers or percent loss of revenue from construction. These estimates are presented anecdotally and vary significantly, with some businesses reporting losses of 25-30 percent and others reporting losses of 70-80 percent.

One of the questions survey respondents were asked was what the “greatest challenge” posed by construction to their business was. Twenty-four said customer access, 14 said traffic and navigation, 12

said parking access and 11 said nothing. According to case study summaries of 31 of the businesses surveyed, service-based businesses were the most likely *not* to report significant negative impacts from construction. Meanwhile, all six case study restaurants reported loss of customers and business. The study concluded that businesses that rely on the physical presence of customers at their University Avenue location were more affected than businesses that do not rely on customers coming in.

Student Papers

Light Rail Transit Construction Impact Mitigation Strategies[i]

As a student at the University of Minnesota's Humphrey Institute, Reuben Collins prepared a report on mitigation of construction impacts to businesses. In this 2007 study, Collins analyzed case studies from seven US cities that had recently completed construction of LRT projects. The cities included Portland, Seattle, Salt Lake City, Phoenix, Denver, Houston and San Jose, and were selected because they had one or more key characteristics in common with the Central Corridor LRT project, namely a mid-size metropolitan area context and/or a center-running alignment on an arterial street. The author focused on mitigation strategies employed in the seven cities, but made mention of impacts to businesses in a few of the case studies. The report cited the same figures for business closures during the construction of Portland's Interstate Avenue LRT as the 2006 Houston Tomorrow report on impacts. Collins looked at business impacts from the first LRT line in Salt Lake City, which was completed in 1999 (an earlier project than the one analyzed in the Houston Tomorrow report). The report cites an anecdotal estimate that thirty percent of businesses along the corridor closed curing construction, although no formal tracking of closures was completed. In a case study of the construction of 4.3-mile at-grade stretch of Seattle's Central Link LRT, the author cited a Seattle Times news article from February 2006 that reported that 44 of 274 businesses along the corridor had closed since construction began in July 2004.

Based on the data collected in the case studies, Collins developed a table of mitigation measures implemented in the seven cities and rated each measure's effectiveness and popularity among businesses and residents. Some of the most commonly employed measures included regular communication channels such as websites, mailers, and meeting; 24-hour hotlines for complaints; "Open for Business" signage; and extra advertising for businesses. The effectiveness of these measures did not always correlate with their broad implementation. Open for business signage, advertising campaigns, business advice and counseling, contractor incentive programs, door to door canvassing, multi-lingual outreach coordinators and travel demand management were determined to be the most popular measures in the cities in which they were implemented. The programs with the highest effectiveness rankings included contractor incentive programs, the hiring of multi-lingual outreach coordinators, door to door canvassing, and the provision of business advice and counseling free of charge.

Alive! Survive! Thrive!: Outreach, Construction Mitigation and Assistance Strategies for Small Businesses Along University Avenue from Lexington to Rice

In 2007, Larry Fasching, Mary Guerra, John McCarthy and Susan Sloper completed a pre-construction study of businesses along a two-mile stretch of University Avenue as part of their course work at the University of Minnesota's Humphrey Institute. The authors' study involved a survey of 19 businesses

between Lexington Parkway and Rice Street. The purpose of the survey was to extract business manager perceptions on their existing business conditions, the potential impacts of LRT construction to their businesses and mitigation measures that might be useful. Most respondents said their businesses are destination businesses. The primary mode of customer access for most businesses was via personal vehicle and most provided off-street parking. The most prominent concerns regarding LRT construction were related to decreased customer access and a shrinking customer base due to traffic flow changes and customer avoidance of the construction zone.

Based on their survey of businesses and a literature review on business impact mitigation measures employed during other transitway construction projects, Fasching et al. identified twelve strategies to mitigate business interruption during construction of the Central Corridor LRT. The proposed medium-term strategies (to be completed before construction started) are listed below, along with the recommended agency to serve as a lead on the undertaking.

1. Designate a Mitigation Specialist to serve as a single point of contact for business owners and contractors about mitigation of impacts to local businesses. (Metropolitan Council)
2. Establish business mentoring programs to offer courses and training to area businesses, for example on how to develop a business plan. (City of St. Paul)
3. Establish construction guidelines to keep business interruption to a minimum, for instance by completing construction in segments to reduce the amount of time that construction activities are taking place in front any given business. (Metropolitan Council)
4. Disseminate a list of business resources that includes existing organizations that offer technical support, loans, etc. (City of St. Paul)

Longer-term strategies (2010-2014) to be implemented during construction include

1. Hold weekly meetings to allow business owners, project managers, contractors and city officials to have a regular forum for exchange. (City of St. Paul)
2. Create a Community Development Fund to provide grants and low-interest loans to businesses impacted by LRT construction. (City of St. Paul and non-profit organization)
3. Leverage other available private and non-profit lending resources. (Metropolitan Council)
4. Establish a parking management program to identify off-street parking availability and a plan to share these resources. (Metropolitan Council)
5. Launch an “Open for Business” campaign to encourage patronage to the area during construction. Activities may include distributing coupons for area businesses and placing advertising on local bus routes serving the area. (Metropolitan Council)
6. Provide additional signage to notify customers that businesses are open and provide specific information on alternate access to businesses. (Metropolitan Council)
7. Implement a lunch bus campaign to bring customers to a given restaurant along the corridor and/or a food court that brings University Avenue restaurants to customers somewhere off of the corridor (e.g. at State Capitol). (City of St. Paul)
8. Use contractor incentives to allow the community to control quarterly contractor bonuses. (Metropolitan Council Business Advisory Council)

Economic Indicators of the Lake Street Corridor

A 2009 report prepared by Jose Diaz, a doctoral candidate at the University of Minnesota's Applied Economics department, appraised and analyzed the changes in the economic performance of businesses along a 5-mile stretch of Lake Street, a commercial corridor in Minneapolis, MN, during major reconstruction of the street. As measures of economic performance, the study collected and used data on the number of open businesses per section of street and the sales tax revenue from each section from 2004 to 2006. Diaz then compared these figures to construction timelines, and particularly looked at the two sections which were under construction in 2005 and 2006 as well as one section in which construction was scheduled to begin in 2007. The correlative results showed negative growth in the number of businesses in the year in which those two sections experienced construction, but positive growth in years without construction. The sales tax data showed no discernible correlation with construction periods.

Impact of Light Rail Construction on Neighborhood Business Activity in the Rainier Valley, Seattle, Washington

In a 2009 master's thesis, Alexandre Krieg investigated the impacts of Central Link LRT construction on neighborhood business activity along a commercial corridor in the Rainier Valley neighborhood of Seattle, WA. This section of the Central Link LRT involved the construction of a center-aligned, at-grade track along 4.5 miles of Martin Luther King Jr. Way South, a main commercial corridor in the ethnically diverse neighborhood.

Though this analysis focused on data collected before LRT and after construction, a few of the findings presented speak to impacts on business activity during construction. According the study, 268 businesses were open a year before construction began and 57 businesses were forced to relocate due to construction. Despite these 57 relocations, 234 businesses were open in 2009, when Central Link operation began. While business turnovers did occur during the six-year study period (from 2003, a year before construction began, until 2009, when Central Link operation began), the total number of open businesses peaked during the middle of the construction period in 2006. Total revenue reported by businesses along the corridor that paid business taxes grew by 30 percent between 2001 and 2008 (adjusted for inflation). However, businesses with gross annual revenues below $50,000 during this period were tax exempt, and are thus excluded from this figure. The number of businesses above the threshold was relatively stable during construction, but the number of businesses below the threshold fluctuated and many of these businesses demonstrated losses.

Business impact mitigation measures included a Supplemental Mitigation Assistance (SMA) program, which disbursed $15.1 million in business re-establishment payments, business interruption payments and loans for business improvements. The business re-establishment payments were geared towards businesses forced to relocate off of the corridor. The business interruption payments were targeted at small businesses staying on the corridor, which were required to demonstrate losses to be eligible. One hundred sixty-eight businesses out of a universe of 310 businesses received business interruption payments.

Results of the Supplemental Mitigation Assistance Program on Businesses Impacted by Light Rail Construction in the Rainier Valley

In a second report submitted in 2009, Krieg evaluated the effects of the SMA products used during the construction of the Central Link LRT through Seattle's Rainier Valley. Based on this evaluation of success factors and obstacles, Krieg distilled three best practices and six further recommendations for future projects utilizing mitigation funding programs:

1. Ability to adapt mitigation products based on changes in construction schedule or other changes.
2. Ongoing and active engagement and follow-up with businesses by the organization managing the fund.
3. Clear goals set to establish a framework for the funding activities.
4. Collaboration and communication between various actors, including all transit agencies, construction contractors, counties, cities, funding agencies, residents and businesses involved.
5. Linkage of financial and technical assistance to help businesses receiving financial assistance also improve their business practices.
6. A single provider of technical and financial assistance to provide a one-stop-shop for businesses.
7. Long-term business outreach that begins before construction, continues during construction and is sustained after construction.
8. Preparation for the end of construction and end of the financial assistance program.
9. On-going reporting and monitoring to document program impacts in a standardized, objective manner.

The Potential Impact of Central Corridor LRT on Existing University Avenue Businesses

Agnew et al. reviewed business impacts of LRT construction and mitigation strategies employed in four US cities: Seattle, Portland, Phoenix and East Los Angeles. The student researchers also completed an inventory of University Avenue businesses between Lexington Parkway and Rice Street and classified businesses by sector. Based on a literature review, the authors identified eight factors that influence the extent of LRT construction impacts to a given business. These included, in order of importance, the financial state of the business (at the start of construction), mitigation measures taken, parking and accessibility, marketing, type of customer base, property value changes, proximity to new developments or vacancies (possible future sites for new development), and whether a business owned or leased their space. The authors then completed a sectoral analysis of businesses in this study area based on the eight factors outlined above. The researchers found that businesses in the personal care services sector, the largest sector in the study area, were not expected not to be particularly affected during construction due to their regular clientele. Full-service restaurants were expected to see impacts due to loss of walk-in business during construction. Businesses in the automotive repair and maintenance sector were expected to have relatively low survivability as compared to other sectors due to loss of accessibility during construction.

Light Rail Construction Mitigation Strategies: National Examples for the Central Corridor

In 2007, Arbit et al., students at the University of Minnesota's Humphrey Institute of Public Affairs, conducted case study research to determine recommendations for business impact mitigation during Central Corridor LRT construction. The authors examined business impact mitigation strategies employed during LRT construction in Portland, Salt Lake City, San Diego and Houston, due to the similar contexts of these LRT projects, which generally ran along median alignments in urban commercial corridors. Based on the findings from these case studies, the authors developed a number of recommendations for the agencies involved in the Central Corridor LRT project as well as recommendations for construction contractors.

Summary of recommendations to the City of Saint Paul, the Metropolitan Council and other agencies:

- Begin mitigation efforts as early as possible.
- Keep pedestrian and vehicle access to businesses open.
- Create a business directory and help promote those businesses during construction.
- Include mitigation funds in project budget.
- Hire outreach staff who have connections to the local area and do not just give out information but listen to business owners' concerns.
- Use construction incentive pay to stimulate efficient construction practices.

Summary of recommendations for construction contractors:

- Work with businesses and municipal agencies to arrange alternate access when necessary.
- Find off-street parking locations that do not compete with customer or delivery van parking for area businesses.
- Organize lunch visits to area restaurants.
- Put up detour signs that are easily seen by both vehicular and pedestrian traffic.

Summary

Apart from the studies previously reviewed in the Volpe Center's 2011 Technical Report, most of the studies that outlined impacts to businesses during the construction of transportation projects used surveys of business owners' and managers' perceptions. Very few of the studies employed other methods, such as comparative analysis of sales tax data or an assessment of business openings and closings during construction. Most studies showed at least some impact to businesses, although several of the studies utilizing survey instruments noted businesses impacts were not as bad as expected, according to subjective survey responses.

A number of the recommendations or best practices in business impact mitigation were outlined in various studies summarized above. These recommendations or best practices were by and large derived from case study reviews, which generally included subjective and anecdotal responses from interview partners involved with the various construction projects. Recommendations can be organized into five broad categories: access, communications/outreach, marketing, construction practices and the provision of technical and financial resources to businesses.

Recommendations for access included putting up clearly visible signs to direct vehicle and pedestrian traffic to alternate access routes to businesses and creating a parking plan to make best use of available parking.

Best practices for communications included starting project communications and public outreach significantly before construction; maintaining strong communication lines between agencies, local governments, businesses, residents and all other relevant actors; having a stable, single point of contact for businesses; and, being responsive and flexible in communication strategies.

Common marketing recommendations included launching an "Open for Business" campaign; sending out coupon books for area businesses; placing ads in buses and other media; and, establishing a lunch bus program.

Best practices in construction included completing construction in segments; working with businesses to maintain vehicular and pedestrian access; and, utilizing contractor incentive pay that is tied to contractor's success in accommodating businesses.

Finally, common recommendations for the provision of resources to affected businesses included developing and disseminating a list of existing technical and financial resources for businesses; providing low-interest small business loans during construction through a third-party; and, folding financial and technical support into a one-stop-shop for businesses along the corridor.

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[i] Reviewed in Volpe Center's 2011 Technical Report.

APPENDIX E:
Central Corridor Key Outcomes:
2012 Indicators

Central Corridor Key Outcomes

2012 INDICATORS

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CENTRAL CORRIDOR
FUNDERS COLLABORATIVE
INVESTING BEYOND THE RAIL

CENTRAL CORRIDOR FUNDERS COLLABORATIVE

Central Corridor Key Outcomes 2012 Indicators

April 2012

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Table of Contents

Introduction 1

Indicators and discussion by outcome area

ACCESS TO AFFORDABLE HOUSING 3

Share of households by income 3

Average housing plus transportation costs as a percentage of household income 5

STRONG LOCAL ECONOMY 7

Percentage of businesses by industry type 7

Percentage of businesses by size (number of employees) 11

Percentage of Central Corridor LRT construction work hours performed by women or minorities 14

Percentage of Central Corridor LRT contracts paid to Disadvantaged Business Enterprises (DBEs) 16

Street-level business change 18

Percentage of low- and moderate-income Corridor residents who work within a commute-shed reachable within 45 minutes by public transit 19

VIBRANT, TRANSIT-ORIENTED PLACES 20

Total number of occupied residential and commercial addresses 20

Average Walk Score® in the Central Corridor compared to Lake Street in Minneapolis and West 7th Street in Saint Paul 23

EFFECTIVE COORDINATION AND COLLABORATION 25

Perspectives of representatives of key stakeholder groups 26

Demographic context 29

Appendix 32

Data notes 33

Detailed results related to the Key Question: Do stakeholders recognize shared goals? 54

Introduction

The Central Corridor Funders Collaborative is a group of 13 grant-making organizations that are investing in the Central Corridor of Minneapolis-Saint Paul. They are investing based on the belief that the new light rail line offers an opportunity to "strengthen the regional economy and make adjacent neighborhoods better places to live and work." The Funders Collaborative envisions a Corridor that is a place of opportunity for all, where residents and businesses thrive. The Funders Collaborative pursues this vision by working with a variety of organizations, community groups, coalitions, and public agencies to create and implement corridor-wide strategies. These strategies aim to ensure that adjoining neighborhoods, residents, and businesses all share in the expected benefits resulting from Light Rail Transit (LRT).

The Funders Collaborative promotes learning so decisions affecting the Corridor are informed and far-sighted; builds shared solutions through the creation of corridor-wide strategies and goals; and invests capital through the Catalyst Fund. Through these activities it seeks to achieve the following four outcomes in the Central Corridor:

- Access to affordable housing
- Strong local economy
- Vibrant, transit-oriented places
- Effective coordination and collaboration

Tracking outcomes in the Corridor:

To assess progress on these outcomes, the Funders Collaborative has been working with Wilder Research over the past two years to develop, report on, and update measures for the desired outcomes. This report is the second report in what is now envisioned as a multi-year series tracking change along the corridor, following up on the Baseline report one year ago. As was the case last year, this report is complemented by a more concise "Central Corridor Tracker" that summarizes the more detailed information contained in this report.

Notes on methods:

Work has included identifying key questions related to the outcomes; determining indicators and data sources; gathering and analyzing data; and reporting results. Indicators were selected not only on their "goodness of fit" with the outcomes, but also with attention to whether they are straightforward to understand or interpret. Additionally, the data source for each indicator needed to be available for small geographic areas (e.g., blocks, block groups, or census tracts) and updated on a relatively timely basis, to meet the objective of tracking changes along the corridor. While the intention of this report is to track changes in the same indicators over time, new data sources are continually being developed and will be included in this report as appropriate; this has already occurred in this second version of the report.

More information on the indicators, including maps showing the areas included in the analysis, as well as detailed tables and results of a stakeholder survey, are included in the Appendix. Throughout the report the indicators are shown for each of three major "segments" of the Corridor: the West, including downtown Minneapolis and the University of Minnesota Campus; the Middle, which runs on University Avenue from the Midway area to Dale Street; and East, which includes the state capitol area as well as downtown Saint Paul. In addition, most indicators also present comparable data for the cities of Minneapolis and St. Paul combined. Note that while this report features the most recent data available for each indicator, the dates vary somewhat from indicator to indicator. We refer to the data reported in the 2010 document as "Baseline" and the data reported in this document as "Year 2." However, in some cases both Baseline and Year 2 measures are pre-construction and in other cases they are not. Detail of the source-years, indicator by indicator, can be found in the Appendix.

The Funders Collaborative intends to continue working with Wilder Research for the next several years to annually track and report on these measures as the construction goes forward, is eventually completed, and when the light rail line is fully operating.

Central Corridor Funders Collaborative members

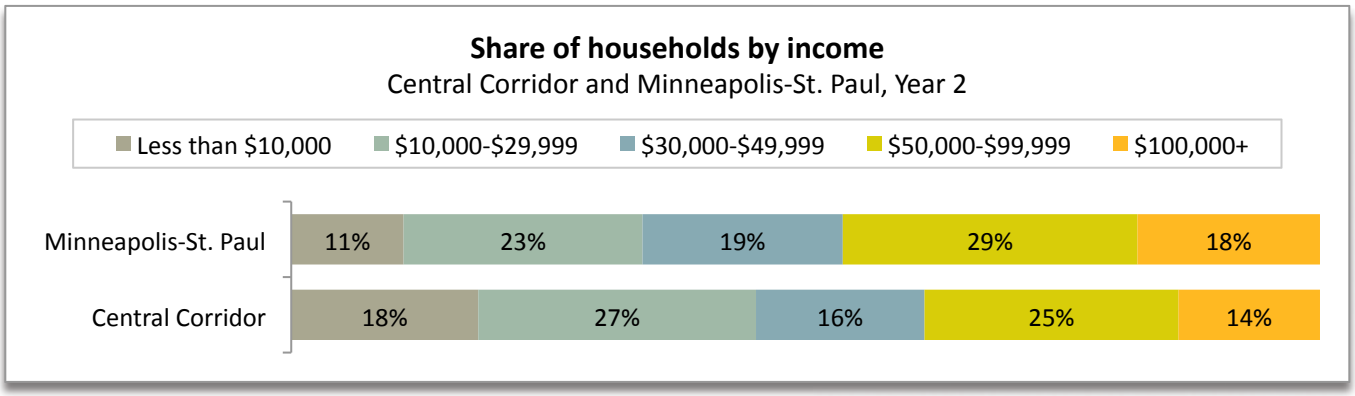
Annie E. Casey Foundation, Ford Foundation, F.R. Bigelow Foundation, John S. and James L. Knight Foundation, Living Cities, Inc., McKnight Foundation, The Minneapolis Foundation, Northwest Area Foundation, Otto Bremer Foundation, Jay and Rose Phillips Family Foundation of Minnesota, The Saint Paul Foundation, Surdna Foundation, and Travelers Foundation.

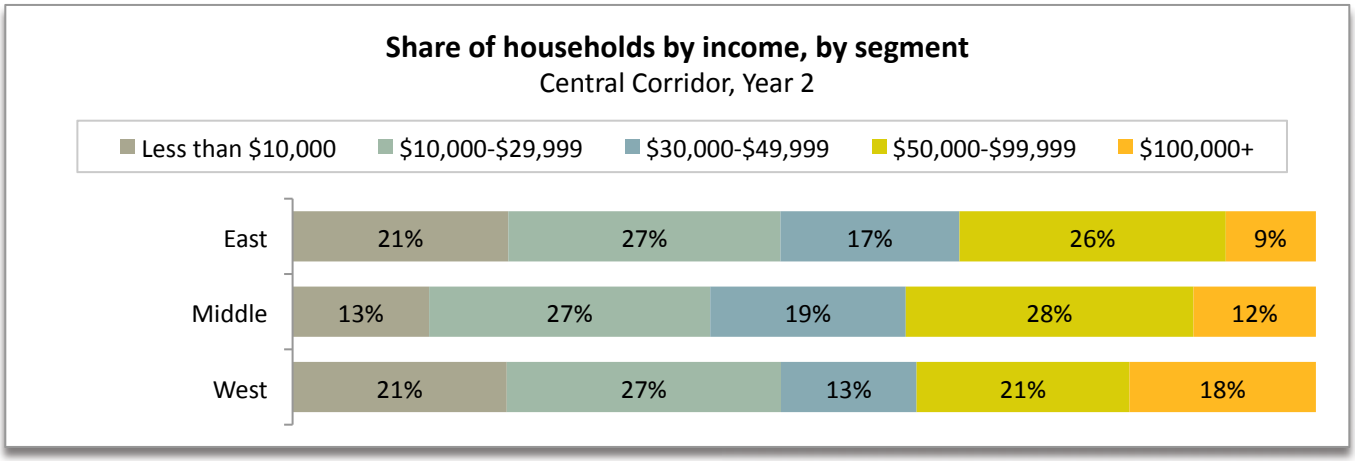
Access to affordable housing

Outcome: **Mix of household incomes**

Indicator: **Share of households by income**

Key Question: **Are low-income people still able to live near the Central Corridor?**





Source: US Census Bureau, American Community Survey 2006-10 5-year estimates.
Note: Income adjusted to 2010 dollars. See appendix for comparisons with Baseline and data source explanations.

Overall Corridor:

- From Baseline to Year 2 there was no discernible change in the income distribution along the Corridor.[1]
- Nearly half of all households in the Corridor earn less than $30,000 per year. Nearly 1 in 5 households are extremely poor, with an income of less than $10,000 per year.
- At the same time, 14 percent of Corridor households make over $100,000 and 1 in 4 Corridor households earn between $50,000 and $99,999 per year.

[1] *For methodological reasons it is highly unlikely that indicators relying on 5-year American Community Survey data will show change at this early stage in the project. See the appendix for further explanation.*

- As compared to Minneapolis-St. Paul, the Corridor has a higher share of low- to moderate-income households (households earning under $30,000 per year).

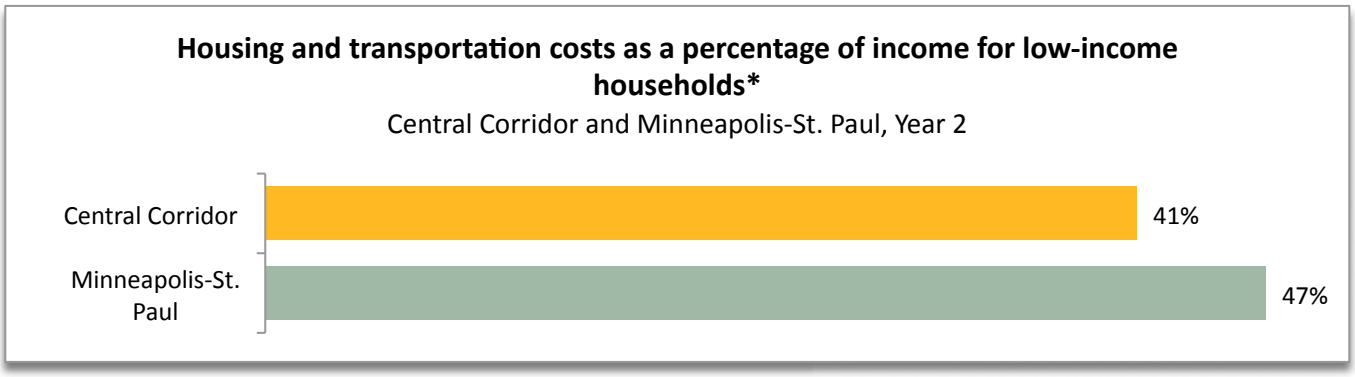
By Segment:

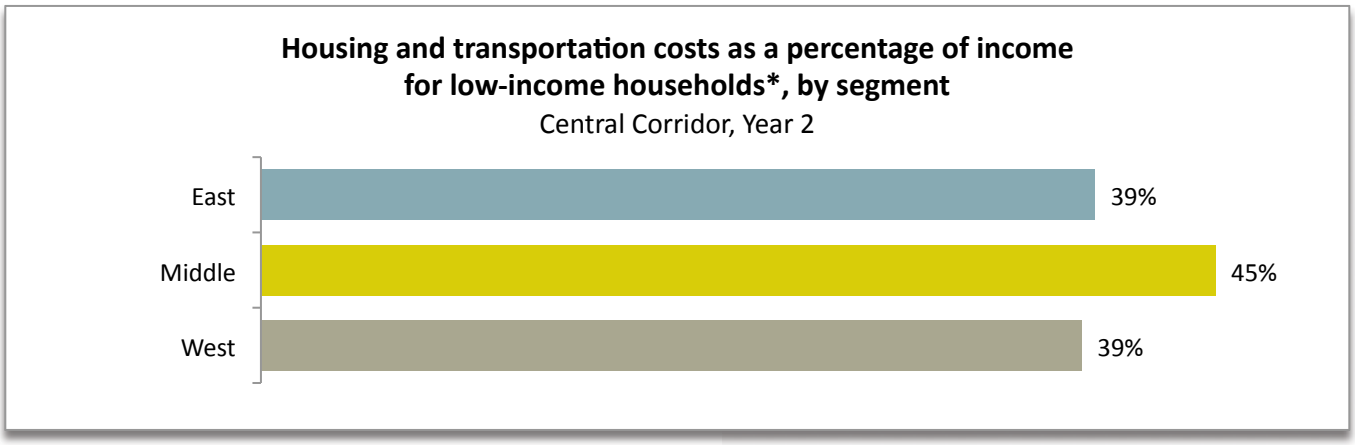
- From Baseline to Year 2 there was no discernible change in the income distribution among the three segments of the corridor.
- In both the West and East segments of the Corridor, nearly half of households earn less than $30,000 per year.
- At the same time, the West segment has the largest share of high income households; nearly 1 in 5 (over 2,500 households) earns over $100,000 per year. This is contrasted with the East segment where fewer than 1 in 10 (less than 1,000 households) earn at that level.
- The Middle segment has the smallest share of households earning less than $10,000 per year (13 percent).
- Each of the three segments has 27 percent of the households (1 in 4) who make between $10,000 and $29,999 per year (The poverty level for a family of four in 2010 was $22,314).
- The West segment is host to a relatively high percentage of very low income households as well as high income households. (See appendix map for more detail.)

Outcome: **Housing with enduring affordability is available to current and future residents**

Indicator: **Average housing plus transportation costs as a percentage of household income**

Key Question: **Is it affordable to live in the Central Corridor?**





Source: Housing + Transportation Affordability Index, online at htaindex.cnt.org. Center for Neighborhood Technology, Chicago, IL. (Data available by block group and aggregated to census tracts.)

** Low-income households are those making 60 percent of area median income. Income is in 2009 dollars. Area median income relates to the median for the nation as per CNT. Results reported in the figure assume an average household size of 2.59 people and 1.14 commuters. Median income in 2000 was $41,994 ($53,187 in 2010 dollars) and was $51,425 in 2009 ($52,288 in 2010 dollars).*

Overall Corridor:

- An H+T burden in excess of 45% is considered unaffordable. The cost of housing and transportation of living in the Central Corridor is just below this threshold for the lower-income households, indicating the Central Corridor has a higher degree of location efficiency as compared to the region.
- For households in the Corridor who earn 60 percent or less of area median income (about $31,375 in 2010 dollars), the cost of housing and transportation averaged 41 percent of household income.

- According to the H+T index, the Corridor can be considered an affordable place to live. However, it is less affordable than it was at the Baseline measure. For the Baseline, housing and transportation accounted for just 34 percent of household income along the Corridor; a few years later, those same items now take up 41 percent of household income.
- The Corridor's H+T cost increase follows those of Minneapolis-St. Paul, though the two cities are more expensive than the Corridor as a whole or any of its segments.

By Segment:

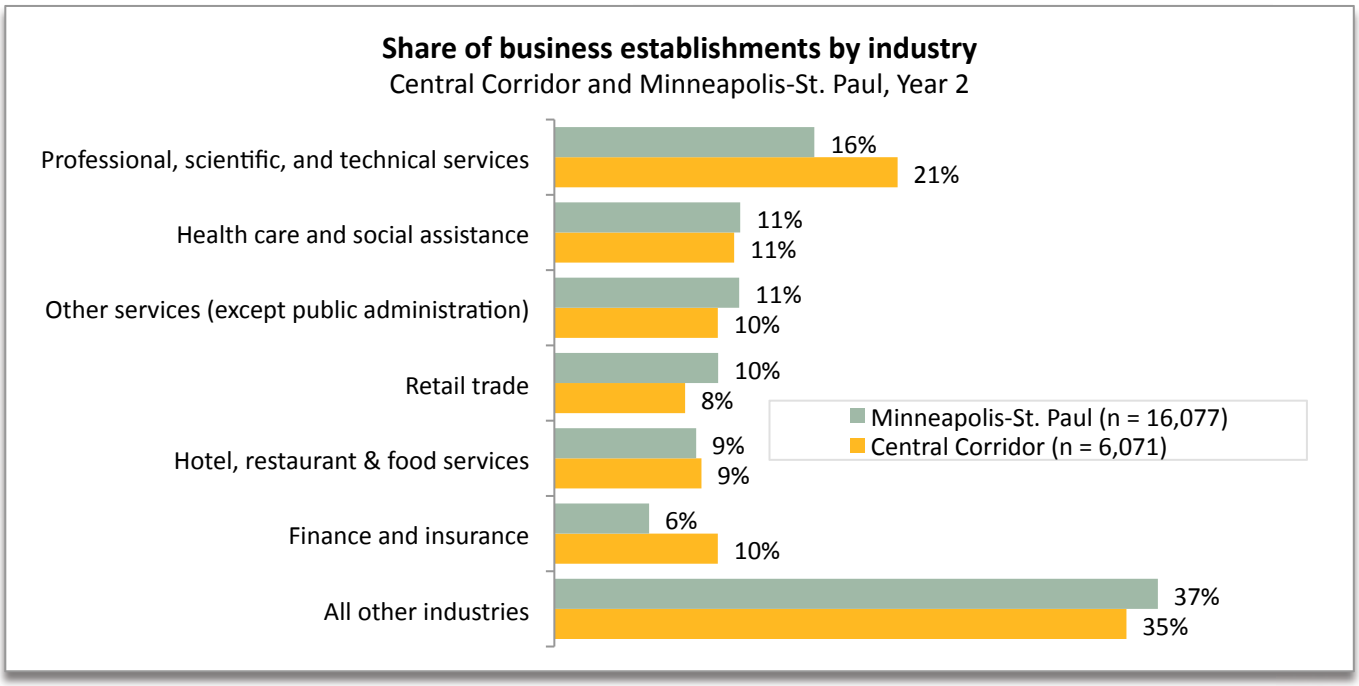
- Though the Corridor is considered affordable even for low-income households, increasing costs for housing and transportation are a reality throughout the Corridor; the West and Middle segments experienced an increase of about 7 percentage points, while the East segment saw an increase of 13 percentage points.
- The Middle segment has the highest H+T cost of the three segments; it also has the highest share of its income devoted to transportation (22 percent).

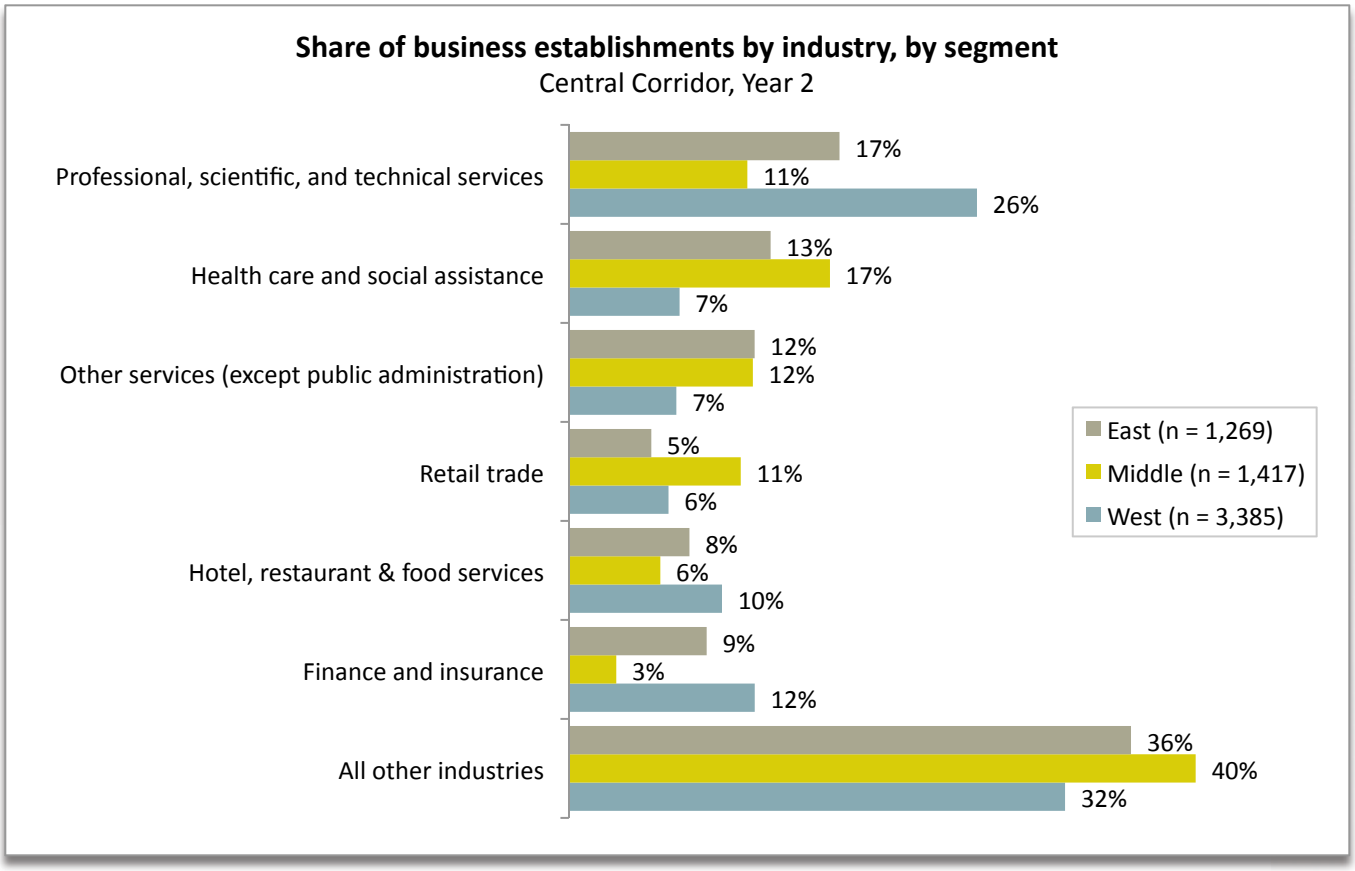
Strong local economy

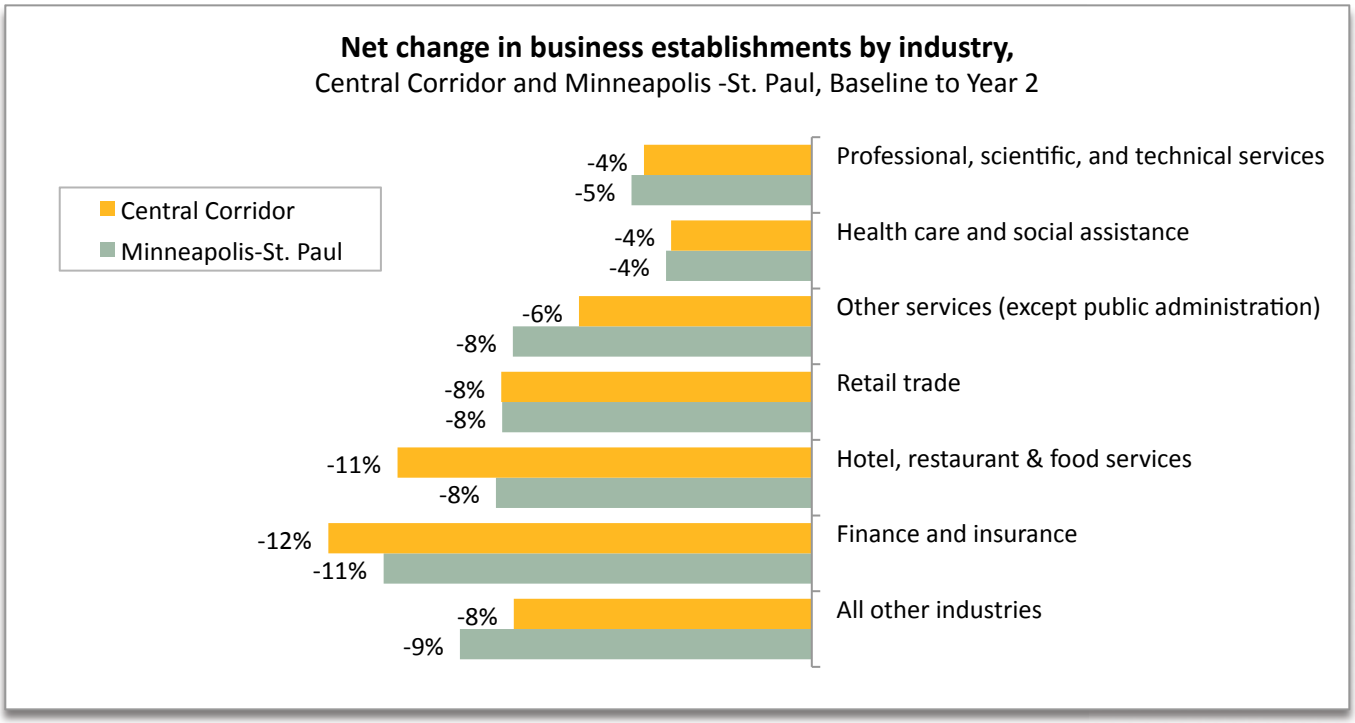
Outcome: **Mix of businesses***

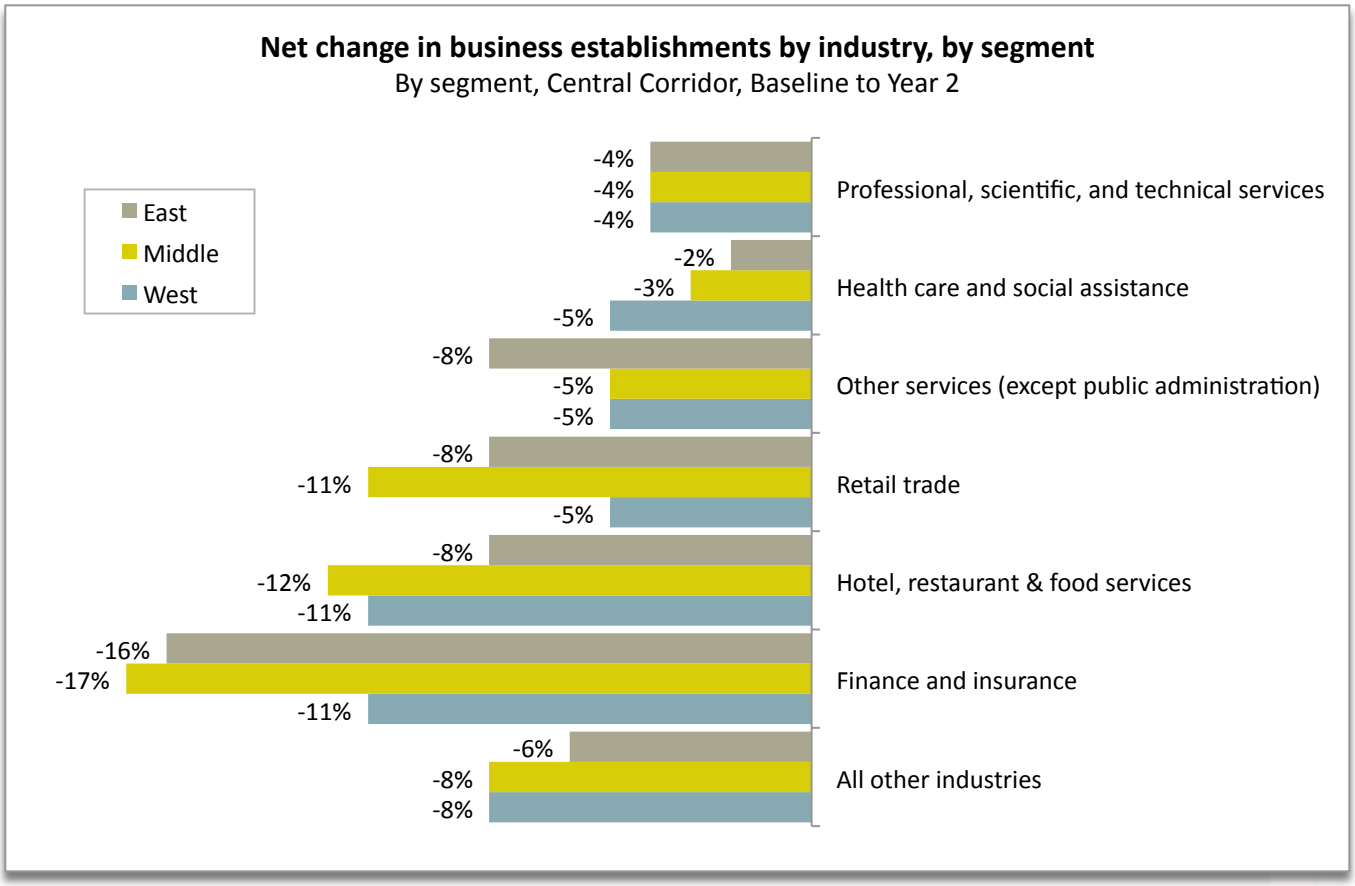
Indicator: **Percentage of businesses by industry type**

Key Question: **Does the Corridor provide a mix of services for residents?**




Share of business establishments by industry, by segment
Central Corridor, Year 2
Professional, scientific, and technical services
17%
11%
26%
Health care and social assistance
13%
17%
7%
Other services (except public administration)
12%
12%
7%
Retail trade
5%
11%
6%
Hotel, restaurant & food services
8%
6%
10%
Finance and insurance
9%
3%
12%
All other industries
36%
40%
32%
East (n = 1,269)
Middle (n = 1,417)
West (n = 3,385)


Net change in business establishments by industry,
Central Corridor and Minneapolis -St. Paul, Baseline to Year 2
Central Corridor
Minneapolis-St. Paul
Professional, scientific, and technical services
-4%
-5%
Health care and social assistance
-4%
-4%
Other services (except public administration)
-6%
-8%
Retail trade
-8%
-8%
Hotel, restaurant & food services
-11%
-8%
Finance and insurance
-12%
-11%
All other industries
-8%
-9%



Source: Metropolitan Council summary of Minnesota Depaartment of Employment and Economic Development, Quarterly Census of Employment and Wages, 2009-2010.

**Data by industry only shown for the six largest categories. See apppendix for additional notes and explantion.*

Overall Corridor:

- From Baseline to Year 2 the Central Corridor has had a net loss of businesses. However, these losses appear to have less to do with the development of the light rail line than with the continued sluggish economy, since the Corridor's business losses largely mirror those of Twin Cities as a whole and that given the timing (the data are pre-construction), very little of this could be due to construction.
- Overall, as compared to Minneapolis-St. Paul, the Corridor has a larger share of its establishments in the professional, scientific and technical industry. Many of those establishments are located in the two downtowns.
- The Central Corridor's establishment gains and losses for top industries follow closely the industry trends of Minneapolis-St. Paul with losses ranging from 4 to 12 percent in the top six corridor industries. As a share of total jobs in an industry, the Central Corridor took the largest hit in finance and insurance (12 percent net loss; 79 establishments).
- Health care and social assistance had the smallest net loss in both Minneapolis-St. Paul and the Central Corridor (net losses of 71 and 24 business establishments, respectively).
- Of all Minneapolis-St. Paul establishments in the top six industries, more than 1 in 3 is located in the Central Corridor, reflecting how much of an economic hub the Central Corridor is for the two cities.

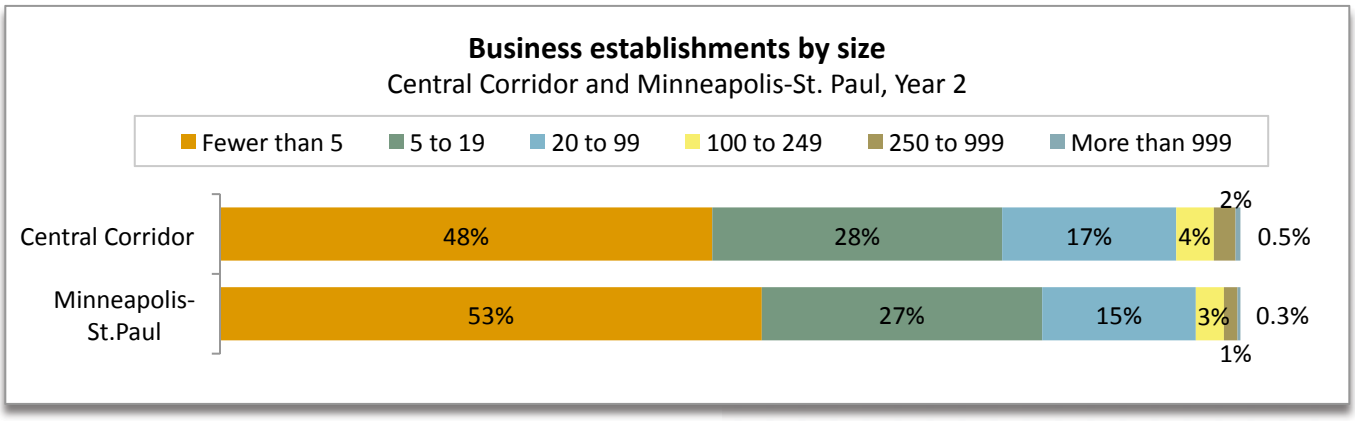
By Segment:

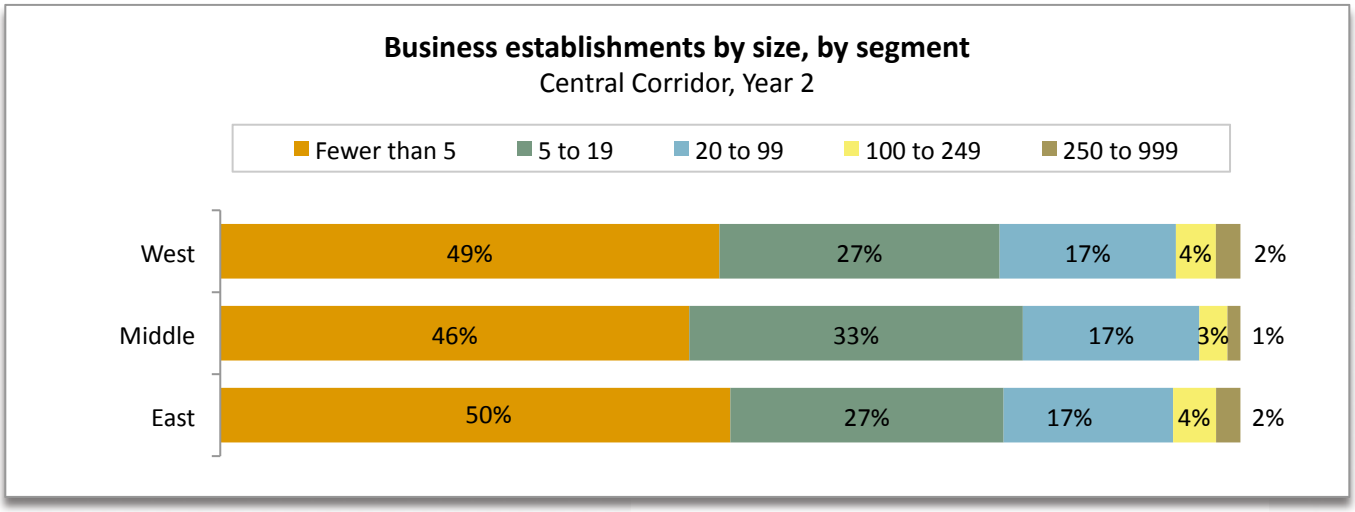
- From Baseline to Year 2 all three segments of the Central Corridor suffered a similar net loss (7 percent) of all establishments. However, in numeric terms, the West segment had the highest net loss with more than 250 business establishments during the year.
- More than 1 in 4 business establishments in the West segment is in the professional and technical services industry (926 establishments—the highest number and share of any segment or single industry).
- At 17 percent of the total number of establishments in the Central Corridor, the Middle segment has the highest share of jobs in the health care and social assistance industry (245 establishments). It also has the smallest number and share of finance and insurance jobs as compared to the other segments.
- Of all segments and industries, finance and insurance business establishments in the West segment lost the greatest number of establishments (48 establishments, 11 percent of all its Finance and insurance establishments).

Outcome: **Mix of businesses***

Indicator: **Percentage of businesses by size (number of employees)**

Key Question: **Does the Corridor provide a place for small businesses to thrive?**





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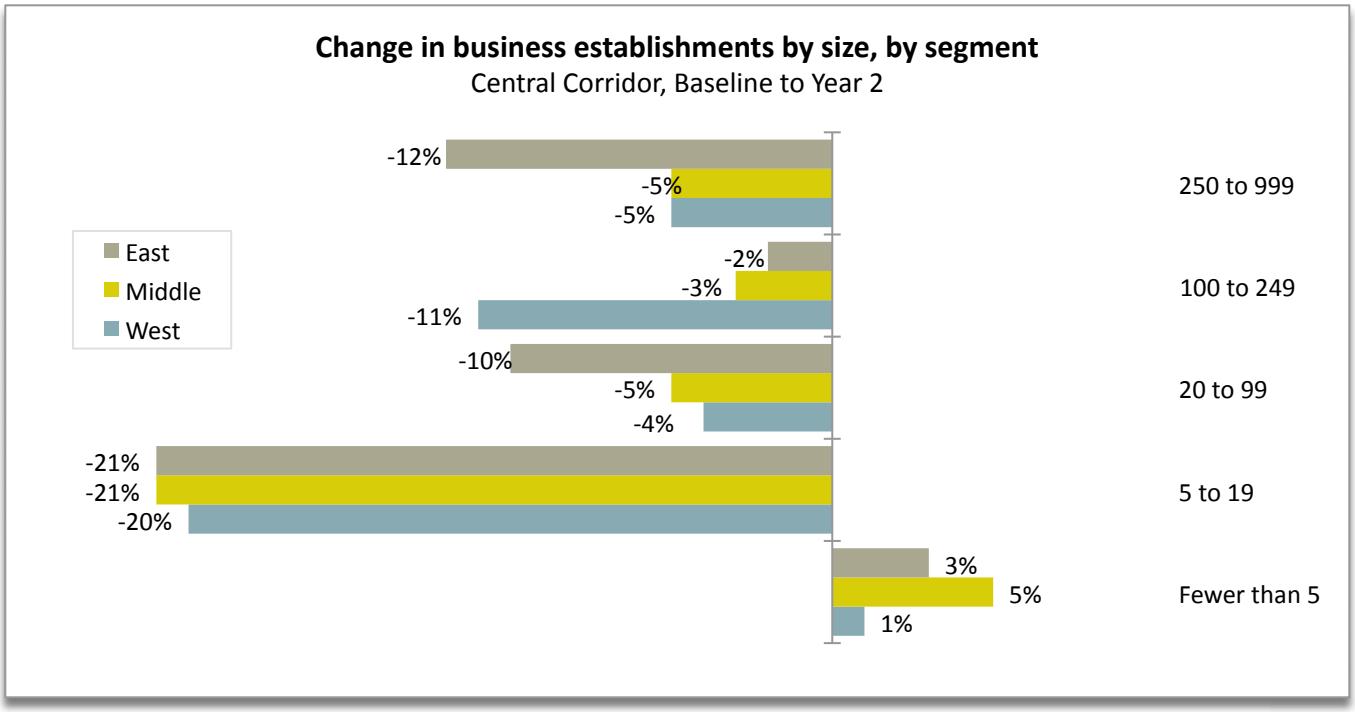


Source: Metropolitan Council summary of Minnesota Department of Employment and Economic Development, Quarterly Census of Employment and Wages, 2009 and 2010.
**Data by industry only shown for the six largest categories and suppressed at the segment-level for establishments with more than 999 employees. See appendix for additional notes and explanation.*

Overall Corridor:

- From Baseline to Year 2, the Central Corridor saw losses of establishments of all sizes, with the exception of a small gain in those with fewer than 5 employees.
- While the Central Corridor largely followed Minneapolis-St. Paul's characteristics of industry changes from the Baseline to Year 2, the Corridor losses do not follow in the same pattern for establishment size. Minneapolis-St. Paul had a net loss in very small establishments (fewer than 5 employees), but the Corridor saw a net gain of 61 very small establishments. Among other possibilities, this change could be a result of business establishments that were in the '5 to 19' category for Baseline measure reducing employee numbers, so that in Year 2 they are accounted for in the 'Fewer than 5' category by Year 2.
- Establishments that employ between 5 and 19 employees took the largest share of the total losses in the Corridor with a net loss of 438 establishments (20 percent of all businesses that size; Minneapolis-St. Paul lost 13 percent of similarly sized establishments).
- Small- to mid-size establishments have the strongest presence in the Corridor with 97 percent of all establishments employing fewer than 100 people, including nearly half which employ fewer than 5 people.

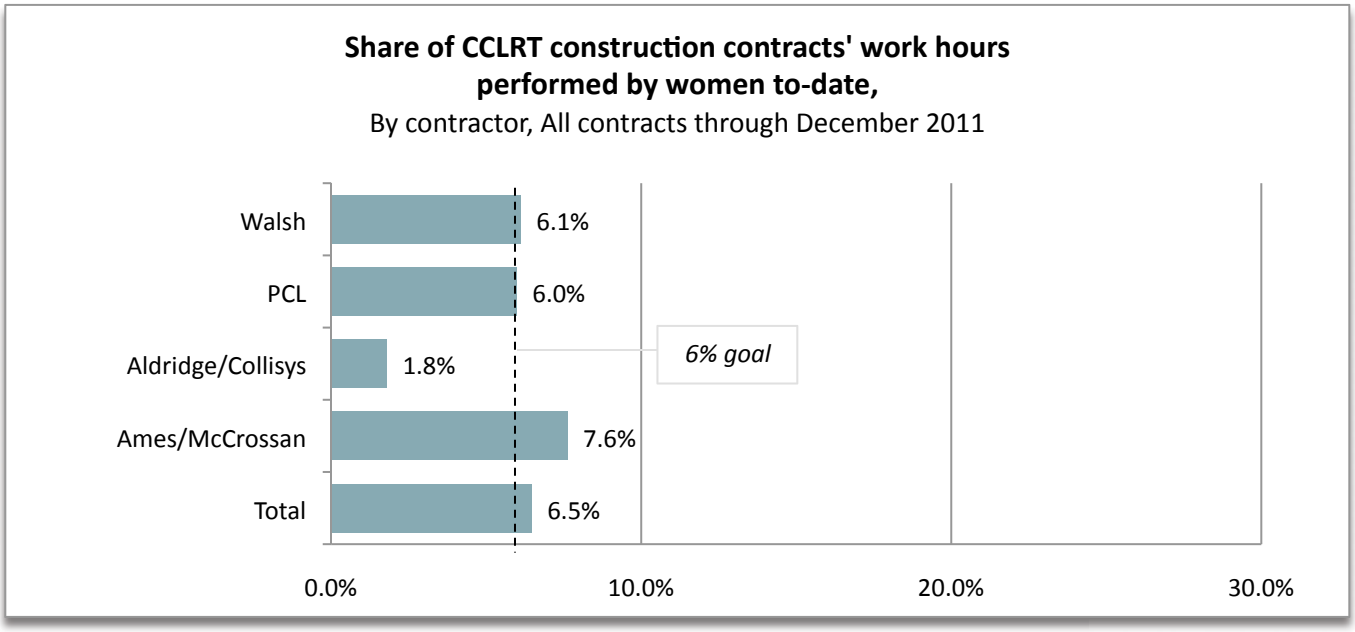
By Segment:

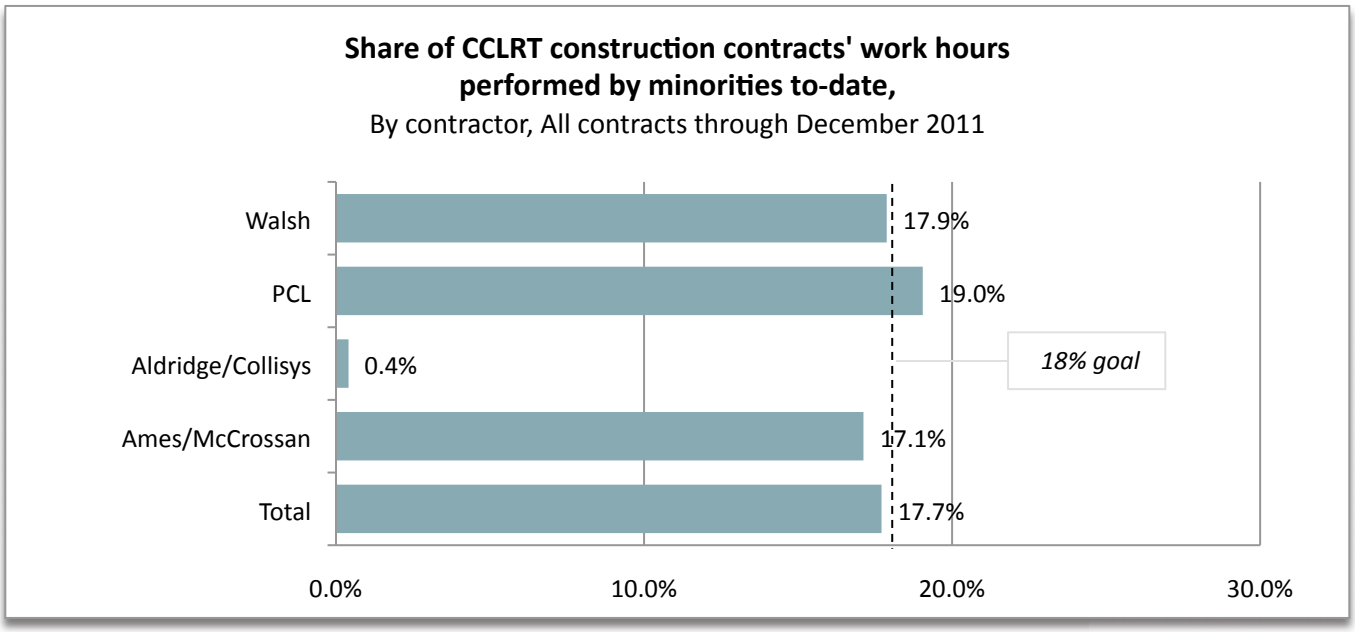
- In total, more than half of all establishments in the Central Corridor are in the West segment, which includes much of downtown Minneapolis.
- With a net gain of 29 establishments from the Baseline to Year 2, very small businesses (fewer than 5 employees) in the Middle segment fared best as compared to any other segment or business size. Half of that loss of businesses with 5-19 employees came from the West segment (net loss of 227 establishments).
- Each of the three segments has a similar breakdown of establishments by size, though the number of large establishments is concentrated in the West Segment where 85 establishments have between 250 and 999 employees.

Outcome: **New development brings opportunities for career-building and long-term employment**

Indicator: **Percentage of Central Corridor LRT construction work hours performed by women or minorities**

Key Question: **Are goals for inclusion of women and people of color in the workforce building the LRT being met?**





Source: Metropolitan Council

Overall Corridor:

- The Minnesota Department of Human Rights has established a goal of 6 percent women and 18 percent minority representation in the workforce for Central Corridor LRT construction contracts, based upon share of total work hours performed by each group.
- Summed across contractors to-date, female work participation (6.5 percent) has exceeded the goal and minority workforce participation (17.7 percent) is nearly at the goal.

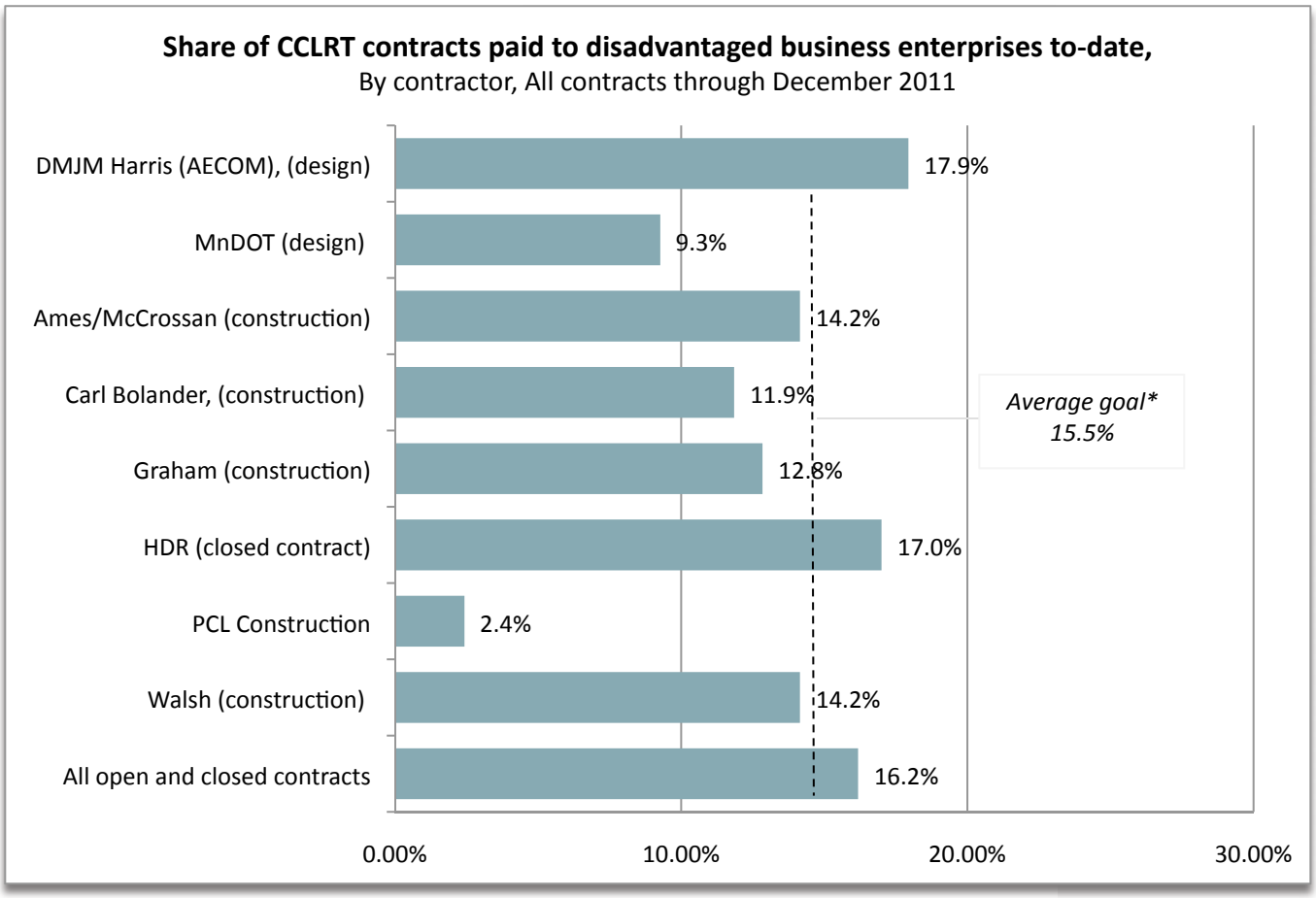
By Contractor:

- All contractors except for Aldridge/Collisys are at or near their stated goal for work participation by females and minorities. It should be noted that the Aldridge/Collisys contract is only 15 percent completed (in terms of dollars paid to contract).
- Thus far, Ames/McCrossan is the only to have exceeded the 6 percent requirement for female hours worked and is currently at 7.6 percent; PCL and Walsh came in at exactly 6 percent.
- Regarding minority participation, all contractors except Aldridge/Collisys have met or are nearly meeting the requirement for minority work hours.

Outcome: **New development brings business opportunities**

Indicator: **Percentage of Central Corridor LRT contracts paid to Disadvantaged Business Enterprises (DBEs)**

Key Question: **Is the goal for contracting with DBEs in the design and construction of the LRT being met?**



Source: Metropolitan Council, Disadvantaged Business Enterprise report

Notes: Individual contractors are at varying stages of contract goals and timelines. Therefore, these percentages represent incomplete information about the percentage of DBE dollars paid by each contractor, and should not be considered final performance. Individual contractors have different goals for DBE payments. Carl Bolander, Walsh, Ames/McCrossan and MnDOT have 15 percent goals while HDR and AECOM have 17 percent goals.

** All Central Corridor LRT contractors have a state goal for contract dollars paid to Disadvantaged Business Enterprises (DBEs), although goals differ slightly across contractors.*

Overall Corridor:

- Among all the contractors, Graham, HDR, and AECOM have met their goals for contracting with Disadvantaged Business Enterprises (DBEs), while to date the Minnesota Department of Transportation, Ames/McCrossan, Walsh, and Carl Bolander have not.
- On the whole, with over 50 percent of all the project's amended-contracts having been paid, 16.2 percent of those payments have been to DBEs. This is above the average contract goal of 15.5 percent (contract goals are 15 or 17 percent, depending on the contract).

Outcome: **Minimal economic disruption from construction**

Indicator: **Street-level business change***

Key Question: **What is the impact of construction on business openings and closings?**

Street-Level Business Change (Feb – Dec 2011)

	Feb-May-11	Jun-11	Jul-11	Aug-11	Sept-11	Oct-11	Nov-11	Dec-11	Cumulative
Openings	22	5	4	7	3	4	7	1	53
Closings	-14	-4	-4	-2	-1	-8	-9	-6	-48
Relocations Off Corridor	-3	0	-2	0	-1	-1	-1	0	-8
	Net Gain/Loss of businesses along the Corridor: Feb 2011-Dec 2011								**-3**
Relocations within Corridor	6	2	1	1	0	3	0	2	15

Source: Metropolitan Council "Status Report on the Implementation of Mitigation Measures – CCLRT Construction –Related Business Impacts," May 2011 – October 2011 reports.

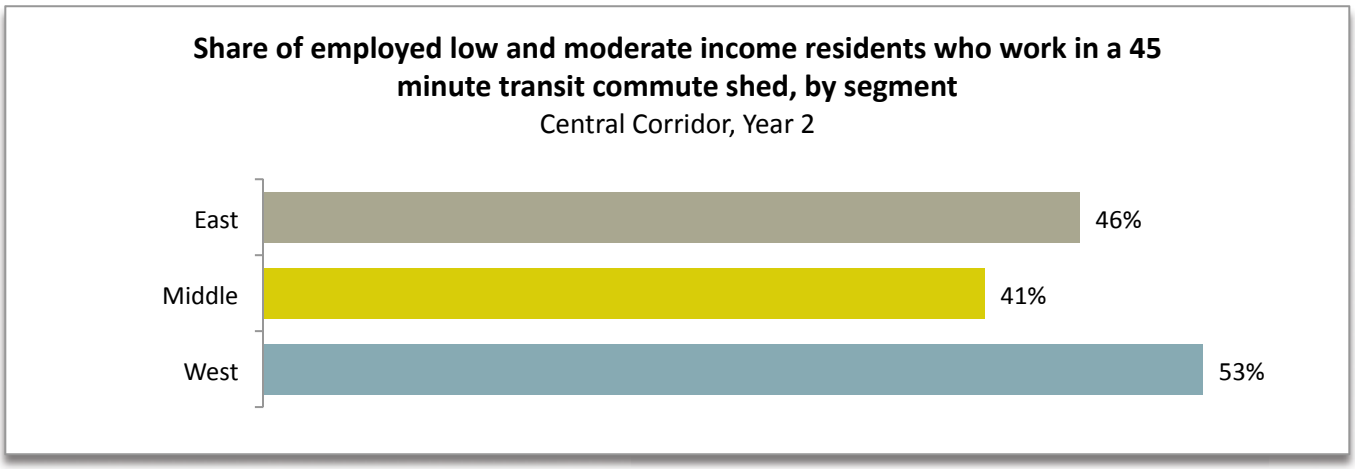
Overall Corridor:

- Overall, the Central Corridor's street-level business saw the largest month-over month business loss in November 2011 when 9 businesses closed. That same month, 7 new businesses opened in the Corridor, which along with August 2011 is the largest month over month increase.
- Business openings and closings/relocations along the Corridor nearly cancel each other out (53 new businesses opened, while 56 businesses closed or relocated off the Corridor).

Outcome: **Many residents living and working in the Corridor**

Indicator: **Percentage of low- and moderate-income* Corridor residents who work within a commute-shed reachable within 45 minutes by public transit**

Key Question: **Does the Corridor light rail provide access to employment for low- and moderate-income residents?**



Source: Local Employment Dynamics, 2009. Commute-sheds prepared by Chen-Fu Liao, University of Minnesota's Center for Transportation Studies.
** "Low- and moderate-income" is defined as workers earning less than $3,333 per month in 2009 $ (gross income of approximately $40,000 annually).*

Overall Corridor:

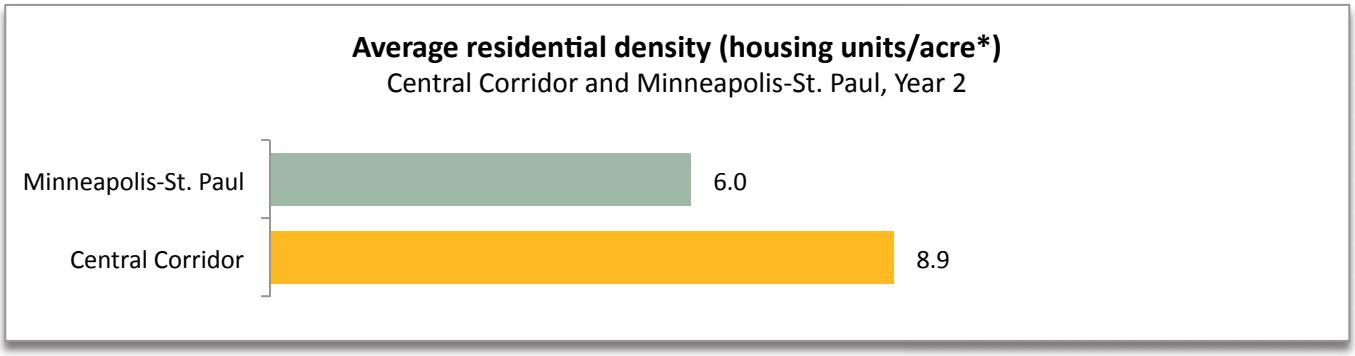
- About 21,000 low- and moderate-income employed residents lived in the Central Corridor. Of these, 62 percent worked in a transit commute-shed reachable within 60 minutes by transit (bus and/or Central Corridor light rail once operating). These figures are virtually unchanged since the Baseline measure, indicating that patterns of work and home changed very little over the year (2008-2009).
- There was also very little change in any segment in the share of employed residents who have access to their jobs within a smaller, 45 minute commute shed. It is notable that high-income employed residents are more likely to work within a 45 minute commute shed (53 percent) than their very low-income counterparts (45 percent).
- Both the West and Middle segments saw net increases in high-income employed residents, while all segments had a net loss in low- to moderate-income employed residents from the Baseline to Year 2. The East segment lost employed residents in every income level.
- Residents of the Middle segment who are in low- to moderate- income jobs are the least likely of any segment to work within their 45-minute commute-shed (41 percent). The East segment is close behind with less than half (46 percent) of low- and moderate- income residents able to reach their place of employment within 45 minutes.

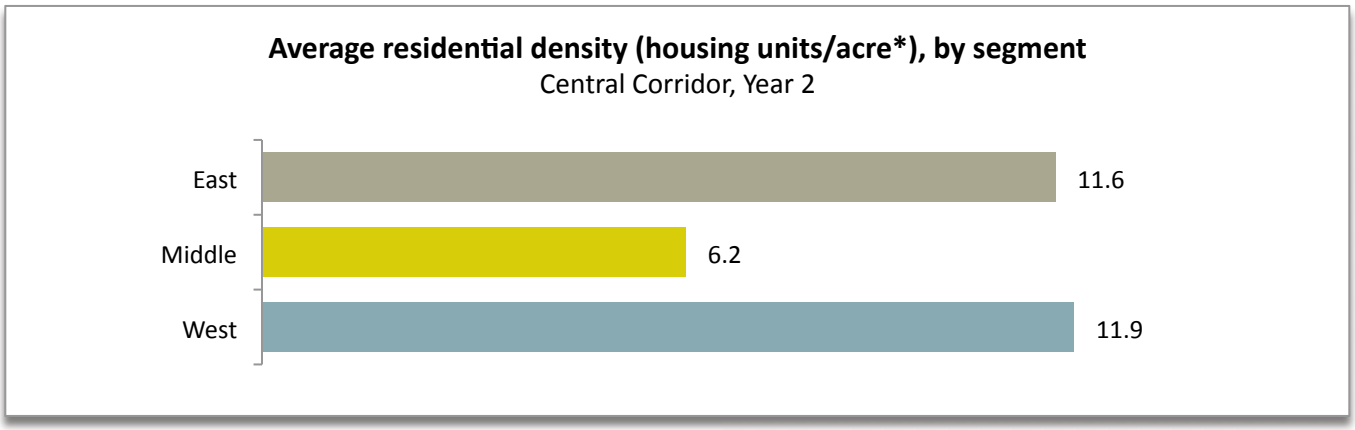
Vibrant, transit-oriented places

Outcome: Increase in housing units and business addresses (density)

Indicator: Total number of occupied residential and commercial addresses*

Key Question: Are Central Corridor neighborhoods becoming more transit-oriented?





Housing density

	West	Middle	East	Central Corridor	Minneapolis-St. Paul
Baseline (2010)					
Total housing units	17,195	15,478	10,208	42,881	299,082
Housing units/acre	11.8	6.2	11.5	8.9	6.0
Year 2 (2011)					
Residential units added in 2010	89	-	108	197	1,130
Total housing units	17,284	15,478	10,316	43,078	300,212
Housing units/acre	11.9	6.2	11.6	8.9	6.0

Source: US Census Bureau, 2010 Housing Unit counts provides the baseline figure for housing units. Additional housing units for Year 2 figures are based on Metropolitan Council's Residential Permit Survey, 2010. Demolitions and residential conversions are not reflected in these numbers. Please see appendix for more information.
**Density refers to housing units per land acre as calculated using tract-level geography, aggregated to the segment.*

Business density

	West	Middle	East	Central Corridor	Minneapolis-St. Paul
Baseline (2010)					
Total business establishments	3,508	1,526	1,365	6,300	16,794
Business establishments/acre	1.5	0.6	0.9	1.0	0.2
Year 2 (2010)					
Business establishment change	-255	-109	-96	-460	-1,297
Total business establishments	3,253	1,417	1,269	5,840	15,497
Business establishments/acre	1.4	0.5	0.8	0.9	0.2

Source: Metropolitan Council, Minnesota Department of Employment and Economic Development (DEED). See Appendix for additional information

Overall Corridor:

- The Corridor added nearly 200 residential units from the Baseline to Year 2. In addition, there were an additional 300 residential units near the U of M campus and extremely close (within one block) of the Central Corridor boundaries, which are not reflected in the Corridor totals.
- From Baseline to Year 2 the Corridor lost some business density, due to the closure of several establishments. A similar pattern metro-wide suggests that these losses were not related to the light rail line.
- Overall, residential density in the Central Corridor is much higher than that of Minneapolis-St. Paul (8 units versus 6 units per acre). Likewise, the density of businesses is higher along the Corridor.
- The Corridor added nearly 200 residential units from the Baseline to Year 2. In addition, there were an additional 300 residential units near the U of M campus and extremely close (within one block) of the Central Corridor boundaries.

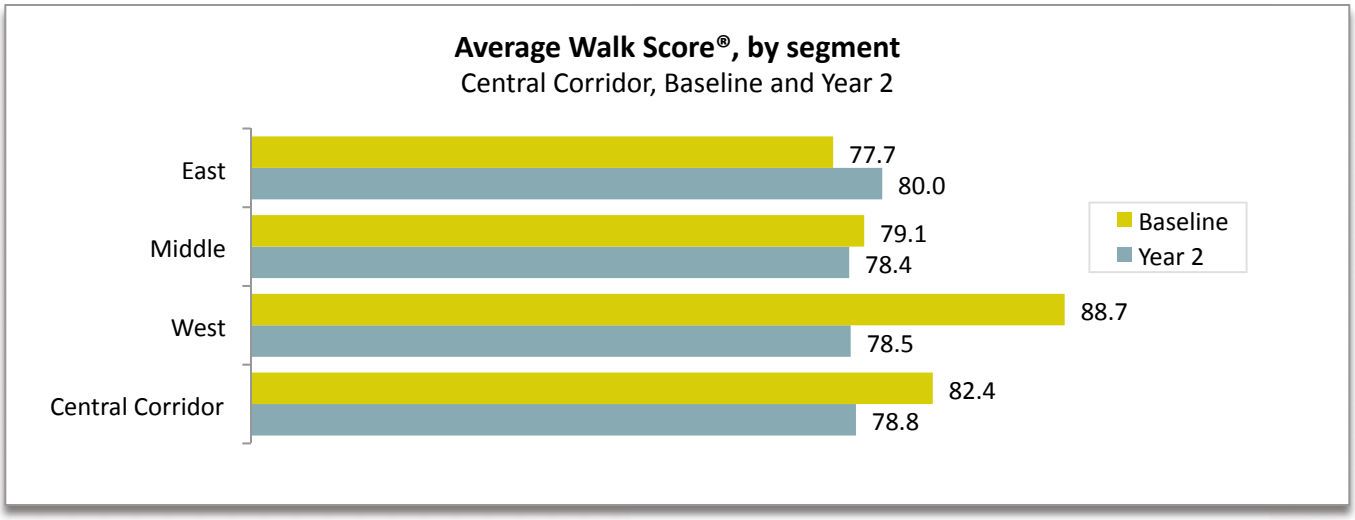
By Segment:

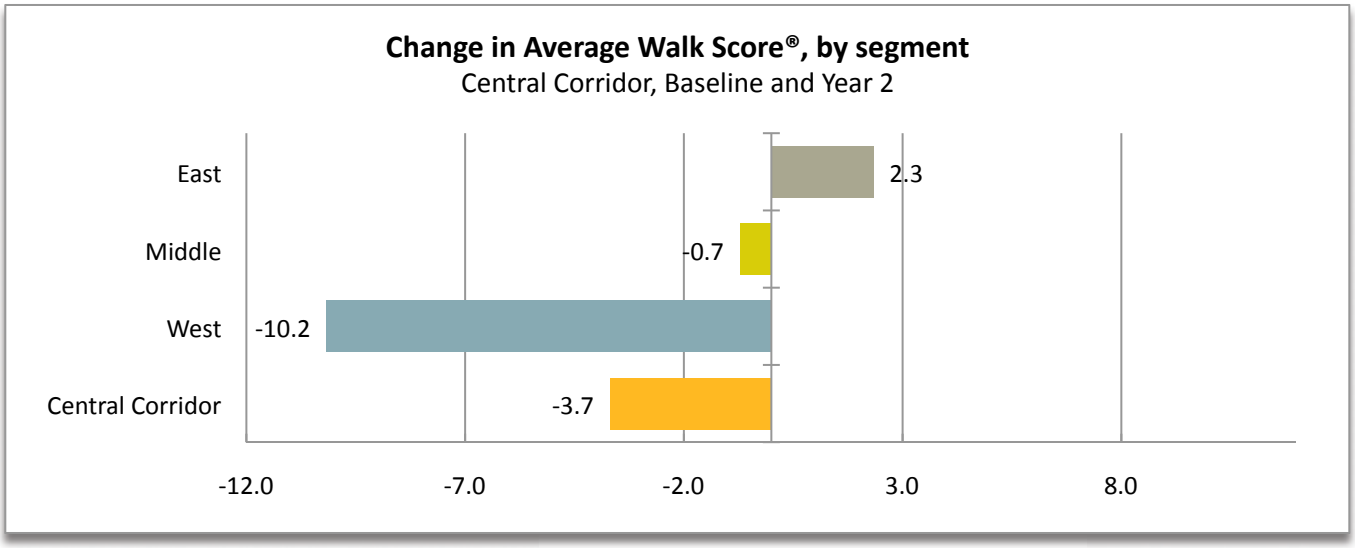
- The West segment of the Corridor has the highest residential density with 11.9 units per acre; much of this density is concentrated in the downtown area (see map). This is also true of the density in the East segment.
- The Middle segment, the least dense of the Corridor segments, is still denser than Minneapolis-St. Paul.
- These patterns follow for business density, with the Middle segment with the fewest business establishments per acre.

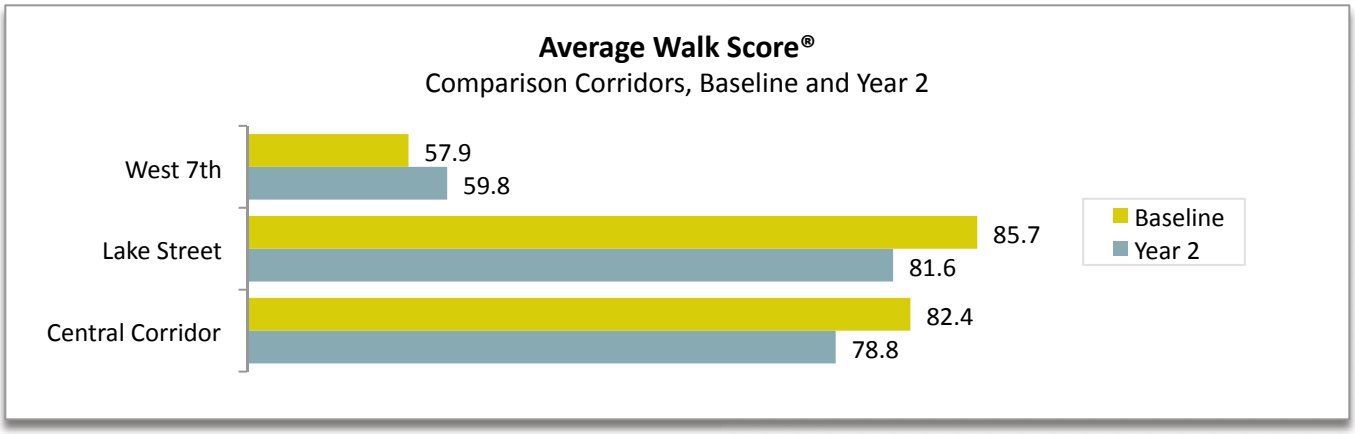
Outcome: Walk friendly

Indicator: Average Walk Score® in the Central Corridor compared to Lake Street in Minneapolis and West 7th Street in Saint Paul*

Key Question: Are Central Corridor neighborhoods becoming more transit-oriented?







Source: www.WalkScore.com, October 2010 and October 2011

Overall Corridor:

- The Central Corridor's average Walk Score® is 78.8 out of a possible 100, about 4 points lower than the year prior. While 78.8 points is considered "very walkable," the decrease in the points awarded indicates a decrease in accessibility. (Changes in the Walk Score® could be a result of a change in amenities across the Corridor or, as Walk Score® is based on Google Maps information, a change in the way Google maps classifies a particular establishment.)
- On average, all three segments are "very walkable" with the East segment the most walkable on average. Within the West Segment, the highest ranking stations are Target Field and West Bank, which receive a Walk Score® of 91, while the Prospect Park station has the lowest Walk Score® with 60 points. Prospect Park and the Westgate stations had the largest point change from the Baseline to Year 2 with 20- and 14-point declines, respectively.
- In the Middle segment, the Snelling Avenue station lost the most points (11) and in the East segment, the Capitol East station also lost 11 points, topping out Walk Score® changes for the segment.

Comparison to Central Corridor:

- The Lake Street corridor between Hennepin Avenue and West River Parkway as an average Walk Score® of 81.6; while the Walk Score® has gone down since the Baseline, it is still higher than the Central Corridor's 2011 Walk Score®.
- The West 7th Corridor between Davern Street and Smith Ave S. has an average Walk Score® of just 59.8 points, indicating that despite a two point increase from the year before, the Central Corridor continues to enjoy a higher presence of amenities than its St. Paul comparison corridor.

Effective coordination and collaboration

To gauge the effectiveness of coordination and collaboration among groups working on the Central Corridor initiative Wilder Research once again conducted telephone interviews with 50 Central Corridor stakeholders representing the following sectors: non-profit/human services; city, county, regional, and state government; neighborhood groups; advocacy groups; businesses; transit; and housing/real estate development.

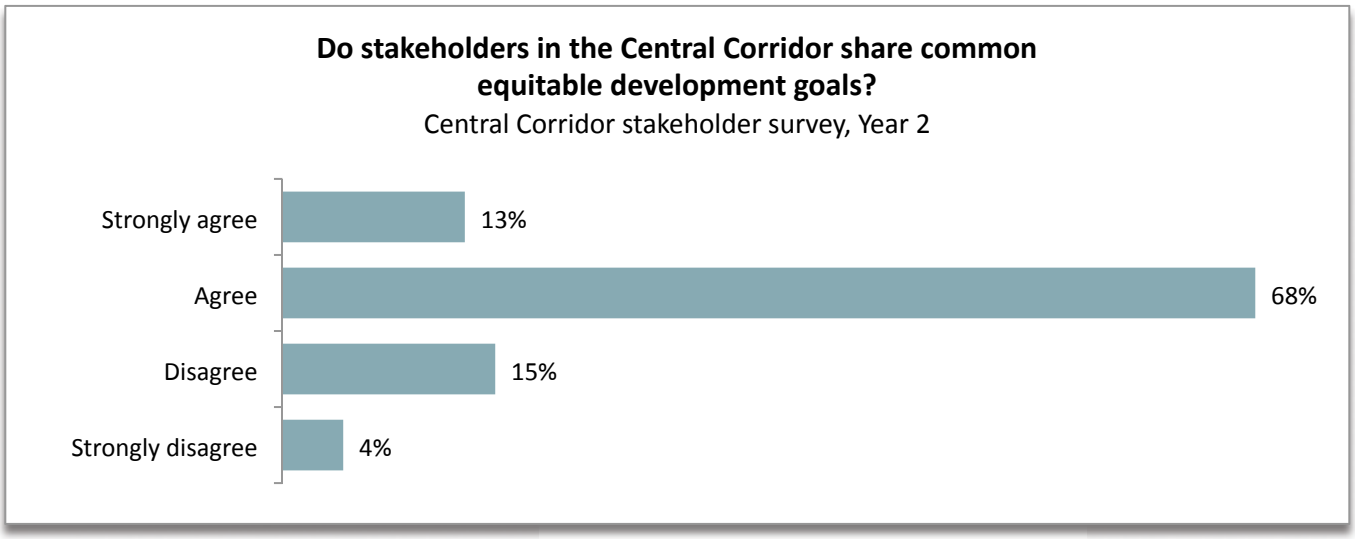
While the key informant survey done in winter 2011-2012 largely replicated the one done at baseline, year to year changes in the survey responses should not be given too much weight. This is for two reasons: first, the survey is not scientifically representative of all opinions along the Corridor. Second, a somewhat different group of stakeholders was interviewed this year as opposed to last, which means that shifts in the results could be due as much to different people answering the questions as to changes in the actual effectiveness of coordination and collaboration along the Corridor. Still, the survey does provide some insight into the current perceptions of key participants in the Corridor's development.

Overall the key informant survey suggests that the various stakeholders, and the sectors they represent, are coordinating and collaborating effectively, and that some progress has been made in this area over the past year. In addition to the results below, see the appendix for more detailed results, including quotations of some answers that key respondents gave to open-ended questions included in the survey.

Outcome: Common vision and priorities

Indicator: Perspectives of representatives of key stakeholder groups

Key Question: Do stakeholders recognize shared goals?



"HOW WOULD YOU DESCRIBE THE COMMON EQUITABLE GOALS FOR THE CENTRAL CORRIDOR?"

Central Corridor stakeholder survey, Year 2

Top five goals cited	Number of responses
Benefit/support for existing businesses	18
Benefit/support for current residents	15
Neighborhood preservation, vitalization	13
Affordable housing	11
Employment opportunities (local residents, minorities)	11
Transportation	11

Source: Stakeholder interviews conducted by Wilder Research, 2011
Note: Responses to this open-ended question were grouped into categories; responses sometime included more than one category and are reported in each. Based on responses from 50 stakeholders.

Findings:

- Thirty-nine out of 47 survey respondents either agreed or strongly agreed that Corridor stakeholders share common equitable development goals, up from just 32 out of 50 last year.
- More survey respondents this year mention benefit for existing businesses and residents as goals for equitable development. Additional goals frequently mentioned were neighborhood preservation, affordable housing, employment opportunities, and transportation.
- When respondents were asked what they thought could be done to increase Corridor stakeholder recognition of- and work toward- shared equitable development goals, similar themes to last year emerged. These included a desire for increased coordination and communication of the many

efforts; a greater inclusion of Corridor residents and grassroots groups in the planning process; and making tangible progress and establishing specific accountability for goal accomplishment.

Outcome: **Collaboration across issues and geography**

Indicator: **Perspectives of representatives of key stakeholder groups**

Key Question: **Are stakeholders working together effectively to achieve positive outcomes?**

LEVEL OF AGREEMENT ABOUT COLLABORATION ON EQUITABLE DEVELOPMENT

Central Corridor stakeholder survey, Year 2

	Strongly disagree	Disagree	Agree	Strongly agree
Central Corridor stakeholders collaborate effectively	4%	23%	64%	9%
Central Corridor collaborations and partnerships integrate efforts from multiple sectors (i.e., government, transit, business, environmental groups, etc.)	2%	4%	71%	23%
Central Corridor collaborations and partnerships integrate efforts from all geographies and jurisdictions	4%	22%	65%	9%
Central Corridor collaborations and partnerships integrate efforts across multiple issue areas	2%	13%	70%	15%

Source: Stakeholder interviews conducted by Wilder Research, 2011
Note: Based on responses of 47 to 49 stakeholders, depending on the statement.

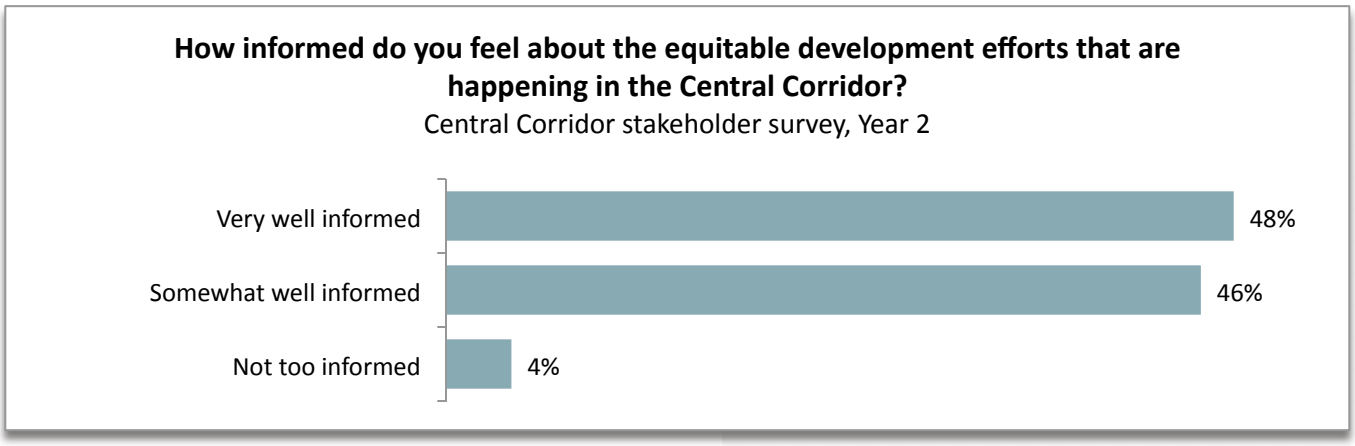
Findings:

- Nearly three-quarters (34 of 47 respondents) of this year's respondents "agreed" or "strongly agreed" that Corridor stakeholders collaborate effectively on equitable development.
- As compared to last year's survey respondents, this year's respondents "disagree" or "strongly disagree" less often when asked if stakeholders collaborate effectively (13 of 47 respondents in 2011, 18 of 49 in the 2010). Additionally, a greater number of this year's respondents "strongly agree" that stakeholders collaborate effectively (1 of 49 respondents the Baseline, 4 of 47 in Year 2).
- Among the series of questions on assessing collaboration along the Corridor, the biggest change in results from Baseline to Year 2 was an increase in the number of respondents who agreed or strongly agreed that "Central Corridor collaborations and partnerships integrate efforts from multiple sectors" (45 out of 48 respondents this year, compared with 34 out of 47 respondents last year).
- Respondents were asked to provide examples of how organizations were working together effectively to achieve equitable development goals in the Corridor. Several examples cited were: the Big Picture project and affordable housing; District Council Collaborative; the effort to add three stations to the route; and business-impact mitigation efforts.

Outcome: **Corridor redevelopment successes are shared and celebrated**

Indicator: **Perspectives of representatives of key stakeholder groups**

Key Question: **Are stakeholders informed of what is happening in the Central Corridor?**



Source: Stakeholder interviews conducted by Wilder Research, 2011
Note: Based on responses of 49 stakeholders.

"WHAT SOURCES OF INFORMATION DO YOU USE TO STAY INFORMED ABOUT WHAT IS HAPPENING IN THE CENTRAL CORRIDOR?"

Central Corridor stakeholder survey, Year 2

Meetings	39
Newspapers	28
Central Corridor Funders Collaborative website	22
Newsletters	16
Twin Cities Daily Planet	9
Other websites	14
The Line (online magazine)	13
CityScape blog on MinnPost	9

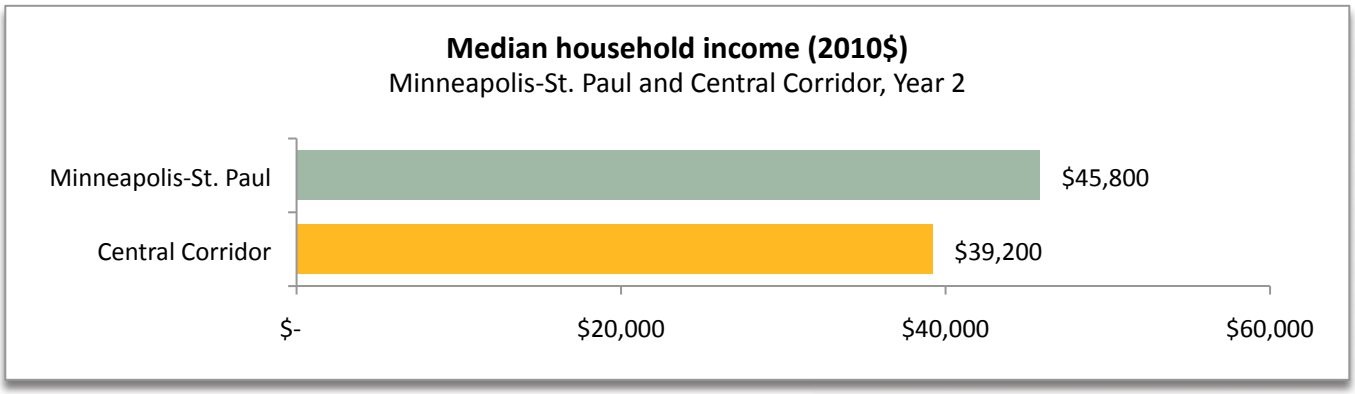
Note: Based on responses of 50 stakeholders.
Source: Stakeholder interviews conducted by Wilder Research

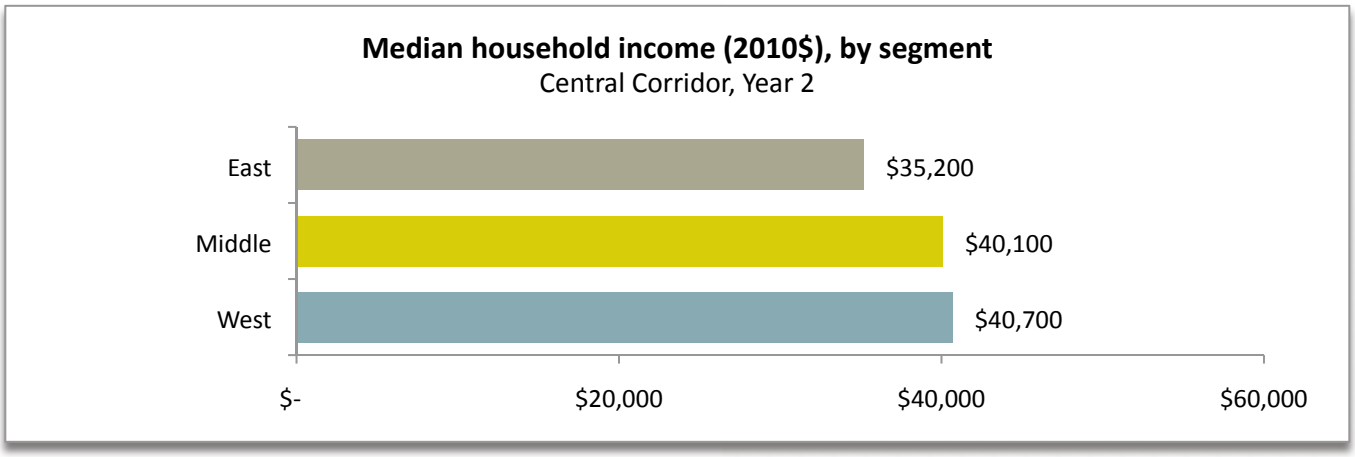
Findings:

- Overall, stakeholders are using fewer media sources than they were last year. That said, more respondents feel very well informed about what is happening in the Central Corridor, potentially indicating an improvement in information sharing or communication patterns.
- The same share of survey respondents are not well informed about what is happening in the Central Corridor (2 respondents each year).

Demographic context

Context Measure: **Median Household Income**



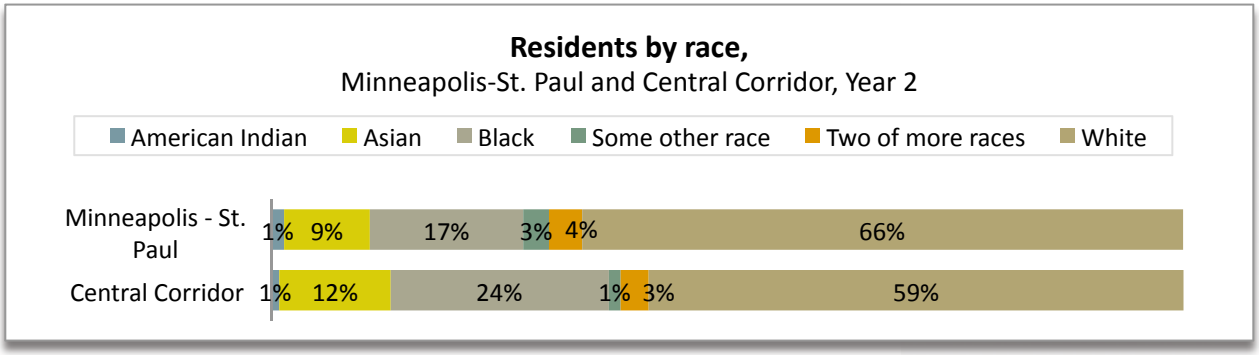


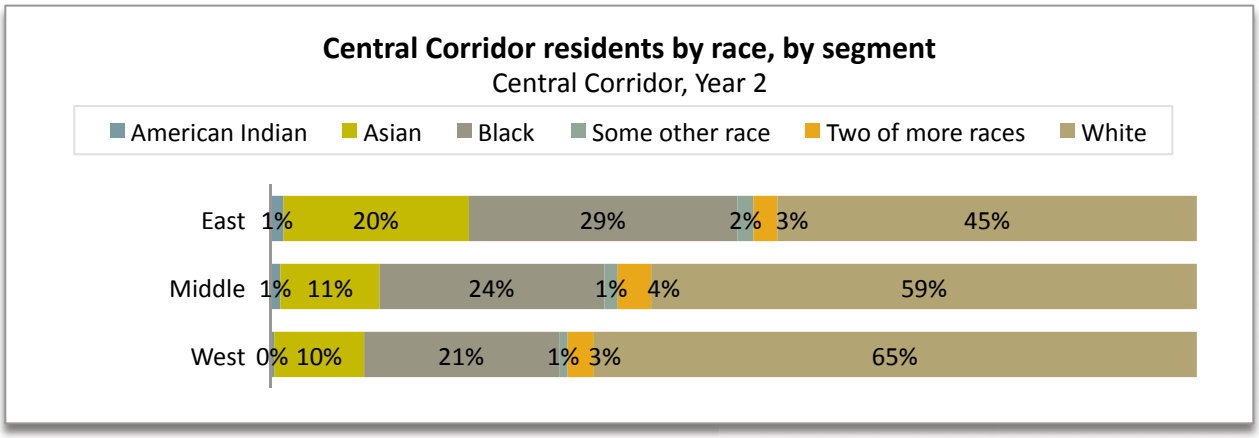
Source: US Census Bureau, American Community Survey, 2006-10

Findings:

- Median income in the Central Corridor is more than $5,000 lower than that of Minneapolis-St. Paul.
- The West segment has the highest median income, while the middle segment is fully $10,000 less than the Minneapolis-St. Paul overall median.
- Looking closer at median income in the Central Corridor, tracts with the highest median income are located in the West segment, with the highest in downtown Minneapolis.
- Of note in the Middle segment is the mix of median income near the Snelling, Lexington, and Dale stops.

Context Measure: **Population by race and ethnicity**





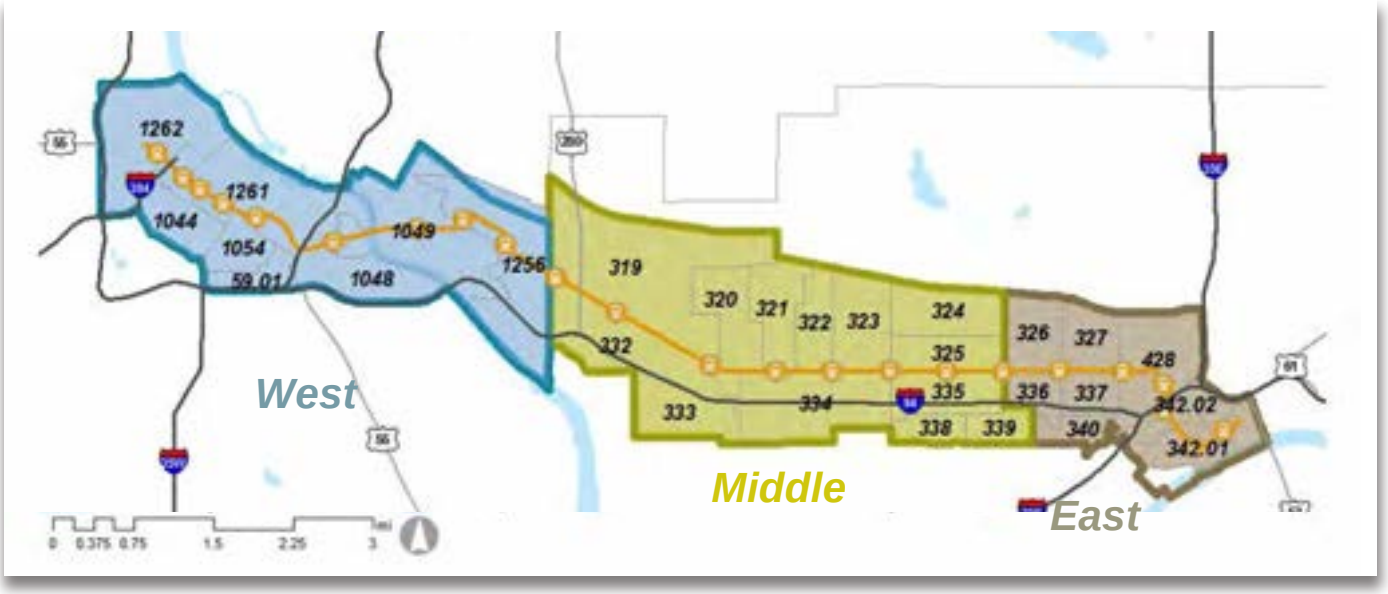
Source: US Census Bureau, American Community Survey, 2006-10
Note: Racial categories shown include residents of Hispanic ethnicity. See Findings for the share of population that is Hispanic.

Findings:

- The Central Corridor's racial and ethnic composition continues in its historical diversity. The shares of Asian and Black residents are higher than Minneapolis-St. Paul, which contribute to that diversity. Distinct from the pattern with other racial groups, the Corridor share of Hispanic residents (of any race) is smaller than that of Minneapolis-St. Paul (5% and 9%, respectively).
- The Central Corridor's population from the Baseline to Year 2 indicates stability but a possible growth trend emerging.
- Looking specifically at the racial makeup of the corridor, there are some signs of shifting composition throughout, but especially in the Middle and East segments. These segments show a slight decline in the numbers and percent of white residents and increase in residents of color (predominantly Asian and Black residents).
- The Central Corridor is uniquely diverse as compared to Minneapolis-St. Paul in that 1 of every 5 residents throughout the Corridor is foreign born. In the East segment, that increases to 1 in 4.
- The East segment has the highest share of population that is Hispanic (any race), with 6%. Five percent of the Middle segment is Hispanic (any race) and just 3 percent of the West segment is Hispanic (any race).

Appendix

CENTRAL CORRIDOR CENSUS TRACTS (2010)



Data notes

American Community Survey Data: The U.S. Census Bureau's American Community Survey (ACS) is the source of several indicators used in this report. The ACS program publishes 1-, 3-, and 5-year estimates. This report relies exclusively on the 5-year estimates, since they are the only estimates available for areas with fewer than 20,000 residents. To date the Census Bureau has made available two sets of 5-year estimates, 2005-09 and 2006-10. Note that there are four years in common between the two sets (2006, 2007, 2008, and 2009).

The ACS program does not collect data from every resident; instead the data are collected through a sample survey. Thus, there is a margin of error associated with each point estimate reported in the survey. The ACS publishes margins of error with a 90 percent confidence interval, or range in which the true value will fall if data were collected from the entire population group in question. For example, if the ACS estimates that 49 percent of the residents in a certain area are female, and reports a margin of error of +/-7 percentage points, one can be 90 percent confident that the actual percentage lies between 42 and 56 percent. This means that in many instances where point estimates appear to differ, the differences between the two estimates are not statistically significant.

The overlapping sample of the 2 sets of 5-year ACS estimates released to date, along with the margin of error associated with each reported point estimate make it extremely unlikely that any changes will be detected among the indicators that rely on the ACS in this second year of the report. However, while it may not yet be possible to draw year-to-year changes from these numbers, the ACS will be a valuable means of tracking changes that occur along the corridor over the next several years.

Indicators sourced from ACS are: household income, median household income, total population, and foreign-born as a percent of total population. Please contact Wilder Research directly for more information on the margins of error associated with the indicators in this report.

Housing + Transportation index: Due to methodological changes implemented by Center for Neighborhood Technology (CNT) between the original H+T Index (used in the Baseline report and Tracker), and the second version of the H+T index (which is used in this, Year 2 report and Tracker), the two sets of numbers are not comparable. Numbers in this report reflect a dataset created by CNT specifically to compare the original and second version of H+T index. This dataset is different from that which is on the H+T website. Please contact us with additional questions regarding H+T index.

Minnesota Department of Employment and Economic Development's summarized file of the Quarterly Census of Employment and Wages (QCEW): This dataset is summarized of second-quarter, 2010 employment data by 2010 Census Geography from DEED Quarterly Census of Employment and Wages (QCEW) Employment Data. DEED compiles quarterly counts of employees, employer reporting establishments, and aggregate wages, covered by Unemployment Insurance in Minnesota, as part of a uniform nationwide reporting effort administered in partnership with the U.S. Bureau of Labor Statistics (BLS). DEED publishes data by North American Industrial Classifications (NAICS), by 'ownership' (total government, federal government, state government, local government, private). The

original raw data is restricted. Summary data is only available for those geographies where at least three employers exist and no one employer represents 80% or more of the total employment.

Data for business establishments with more than 999 employees are not available at the segment scale. Business establishments with "Fewer than 5" employees could technically have less than one employee (one part-time employee, for example).

Street-level Business Change (Metropolitan Council): The update on number of Central Corridor business openings, closings, and relocations uses data gathered by Central Corridor Project Office Central Corridor Project Office Outreach staff. Outreach staff maintains an inventory of Central Corridor businesses, which serves as a comprehensive contact database. This inventory is a list of street-level business establishments that are found along the Central Corridor alignment from the West Bank area of Minneapolis to downtown St. Paul. Relocations within the Corridor are not counted in the cumulative change of business establishments.

Walk Score ®: Walk Score ® is a measure of walkability for a single address that uses multiple data sources (such as Google maps) in order to determine access to amenities within a walkable distance (.25-1 miles). For more information, go to www.walkscore.com/methodology.shtml.

Changes in data sources: This second-year report presents updated data for the four outcomes defined by the Collaborative, using the most recently available data. In order to increase accuracy, sensitivity, and replace datasets which are no longer available, several sources have been changed from the Baseline report. In these instances, tables with the Baseline figure are made available in this document. Changes in data sources are as follows:

Household income: Previously, household income was sourced using IRS tax-return filing data and had household breakdowns by the adjusted gross IRS. This year, in order to standardize our data sources and geographies, we have used the American Community Survey data. The Baseline data is from ACS 2005-09 and Year 2 is from ACS 2006-10.

Businesses by industry type and establishment size: Previously, we sourced business data using the U.S. Census Bureau's ZIP Code Business Pattern data. This year, in an effort to move away from ZIP-code level data toward data that more precisely matches the geographic boundaries of the Central Corridor, we use the Minnesota Department of Employment and Development (MN DEED) summarized file of the Quarterly Census of Employment and Wages (QCEW) data. These data are made available via the Metropolitan Council. This same data source is used for the business density data (see below). In order to achieve maximum coverage of establishments, the data are summarized by the six largest industries for Minneapolis-St. Paul (grouped according to NAICS code).

Residential density: Previously, we sourced residential density using the U.S. Department of Housing and Urban Development's (HUD) Aggregated United States Postal Service (USPS) Administrative Data on Address Vacancies dataset. Since that dataset is no longer available we now use Census 2010 housing units for Baseline data. Year 2 data is additive to the Baseline and depends on the Metropolitan Council's Residential Permit survey for new housing units. Additionally, we have added a density measure using land acres of occupied blocks to calculate

housing units per acre for the Central Corridor, its three segments, and Minneapolis-St. Paul. Conversions and demolitions are not currently reflected in the residential permit survey.

Business density: Previously, we sourced residential density using the U.S. Department of Housing and Urban Development's (HUD) Aggregated United States Postal Service (USPS) Administrative Data on Address Vacancies dataset. Since that dataset is no longer available we now use business data from the Minnesota Department of Employment and Economic Development's summarized file of the Quarterly Census of Employment and Wages (QCEW). These data are made available via the Metropolitan Council. This same data source is used for the businesses by industry type and establishment size (see above).

New indicator – Street level business change: One concern of many Central Corridor stakeholders is the impact of construction on businesses in the Corridor. To that end, and as a part of implementing mitigation measures, the Metropolitan Council began tracking street-level business change in the forms of business openings, closings, and relocations (on/off corridor) in the Central Corridor. Data collection began in February of 2011 and is available from February-May 2011 as one number and then monthly, thereafter. Collection is done in the Central Corridor alignment from the West Bank area of Minneapolis to downtown St. Paul and available only for street-level businesses.

Data timeline:

Indicator number	Measure	Baseline	Year 2	Source
1	Household Income	2005-09	2006-10	American Community Survey
2	H+T index	2000	2005-09	Center for Neighborhood Technology
3	Business establishments (size/type/density)	2009	2010	MN DEED via Metropolitan Council
4	Business establishments (size/type/density)	2009	2010	MN DEED via Metropolitan Council
5	Women/minority/DBE	2010	2011	Metropolitan Council
6	Women/minority/DBE	2010	2011	Metropolitan Council
7	Street-level business change	N/A	Feb-Dec 2011	Metropolitan Council
8	Commute shed for employed residents in commute shed	Projected 2014	same	University of Minnesota
8	Residents for employed residents in commute shed	2008	2009	Local Employment Household Dynamics
9	Walk Score ®	October 2010	October 2011	www.walkscore.com
10	Residential units	2010	2011	Metropolitan Council, Residential Permit Survey
10	Business establishments	2009	2010	MN DEED via Metropolitan Council
11 to 13	Stakeholder Questions (11-13)	Winter 2010	Winter 2011	Wilder Research
14	Median income	2005-09	2006-10	American Community Survey

15	Race and ethnicity	2005-09	2006-10	American Community Survey
16	Population	2005-09	2006-10	American Community Survey

Access to affordable housing

A1. Share of household by income in the past 12 months (in 2010 dollars)
Central Corridor and Minneapolis-St. Paul, 2005-09, 2006-10

	Central Corridor	Minneapolis-St Paul
2005-09		
Less than $10,000	18%	11%
$10,000-$29,999	26%	23%
$30,000-$49,999	18%	21%
$50,000-$99,999	24%	29%
$100,000+	13%	17%
Total	100%	100%
2006-10		
Less than $10,000	18%	11%
$10,000-$29,999	27%	23%
$30,000-$49,999	16%	19%
$50,000-$99,999	25%	29%
$100,000+	14%	18%
Total	100%	100%

Source: US Census Bureau American Community Survey 2005-09, 2006-10

A2. Household income (in 2010 dollars), by segment
Central Corridor, 2005-09, 2006-10

	West	Middle	East
2005-09			
Less than $10,000	21%	14%	21%
$10,000-$29,999	27%	25%	26%
$30,000-$49,999	15%	19%	19%
$50,000-$99,999	20%	29%	25%
$100,000+	17%	13%	9%
Total	100%	100%	100%
2006-10			
Less than $10,000	21%	13%	21%
$10,000-$29,999	27%	27%	27%
$30,000-$49,999	13%	19%	17%
$50,000-$99,999	21%	28%	26%

$100,000+	18%	12%	9%
Total	100%	100%	100%

Source: US Census Bureau American Community Survey 2005-09, 2006-10

A3. Median household income, by segment

Central Corridor and Minneapolis-St. Paul, 2006-10

	Corridor	West	Middle	East	Minneapolis-St. Paul
In 2010 dollars	$39,201	$40,703	$40,104	$35,166	$45,820

Source: U.S. Census Bureau, American Community Survey

A4. Housing and transportation costs as a percentage of income for households at 60 percent area median income

Central Corridor and Minneapolis-St. Paul, 2000, 2005-09

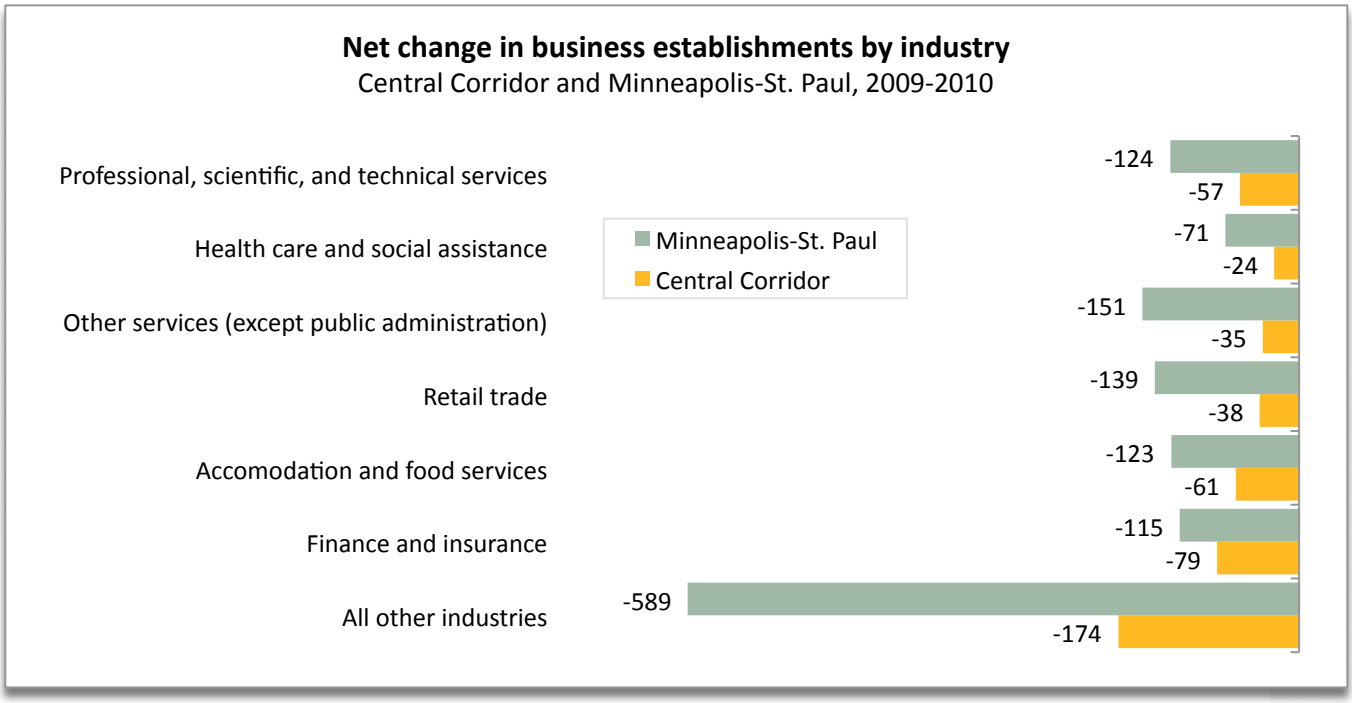
	60% of Area Median Income	
	2000	2005-09
West	33%	39%
Middle	38%	45%
East	25%	39%
Central Corridor	34%	41%
Minneapolis-St. Paul	41%	47%

Source: Housing + Transportation Affordability Index, online at htaindex.cnt.org. Center for Neighborhood Technology, Chicago, IL. (Data available by block group and aggregated to census tracts.)

Notes: Income is in 2009 dollars. Area Median Income relates to the median for the nation. Results reported in the figure assume an average household size of 2.59 people and 1.14 commuters. Sixty percent of national median income in 2000 was $31,912 (2010 dollars) and was $31,372 in 2009 (2010 dollars). Please see 'Changes in data sources' for more information.

Strong local economy

A5. Share of businesses by industry
Central Corridor, 2009-2010



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A5. Share of businesses by industry (continued)

Central Corridor, 2009-2010

	NAICS code*	Central Corridor	Minneapolis-St. Paul
2009			
Professional and technical services	54	20%	15%
Other services**	81	9%	11%
Health care and social assistance	62	10%	11%
Accommodation and food services	72	9%	9%
Finance and insurance	52	10%	6%
Retail trade	44-45	7%	10%
All other industries***	11, 21, 22, 23, 31-32, 42, 48-49, 51, 53, 55, 56, 61, 71	35%	38%
2010			
Professional and technical services	54	21%	16%
Other services**	81	9%	11%
Health care and social assistance	62	11%	11%
Accommodation and food services	72	8%	9%
Finance and insurance	52	9%	6%
Retail trade	44-45	7%	10%
All other industries***	11, 21, 22, 23, 31-32, 42, 48-49, 51, 53, 55, 56, 61, 71	35%	37%

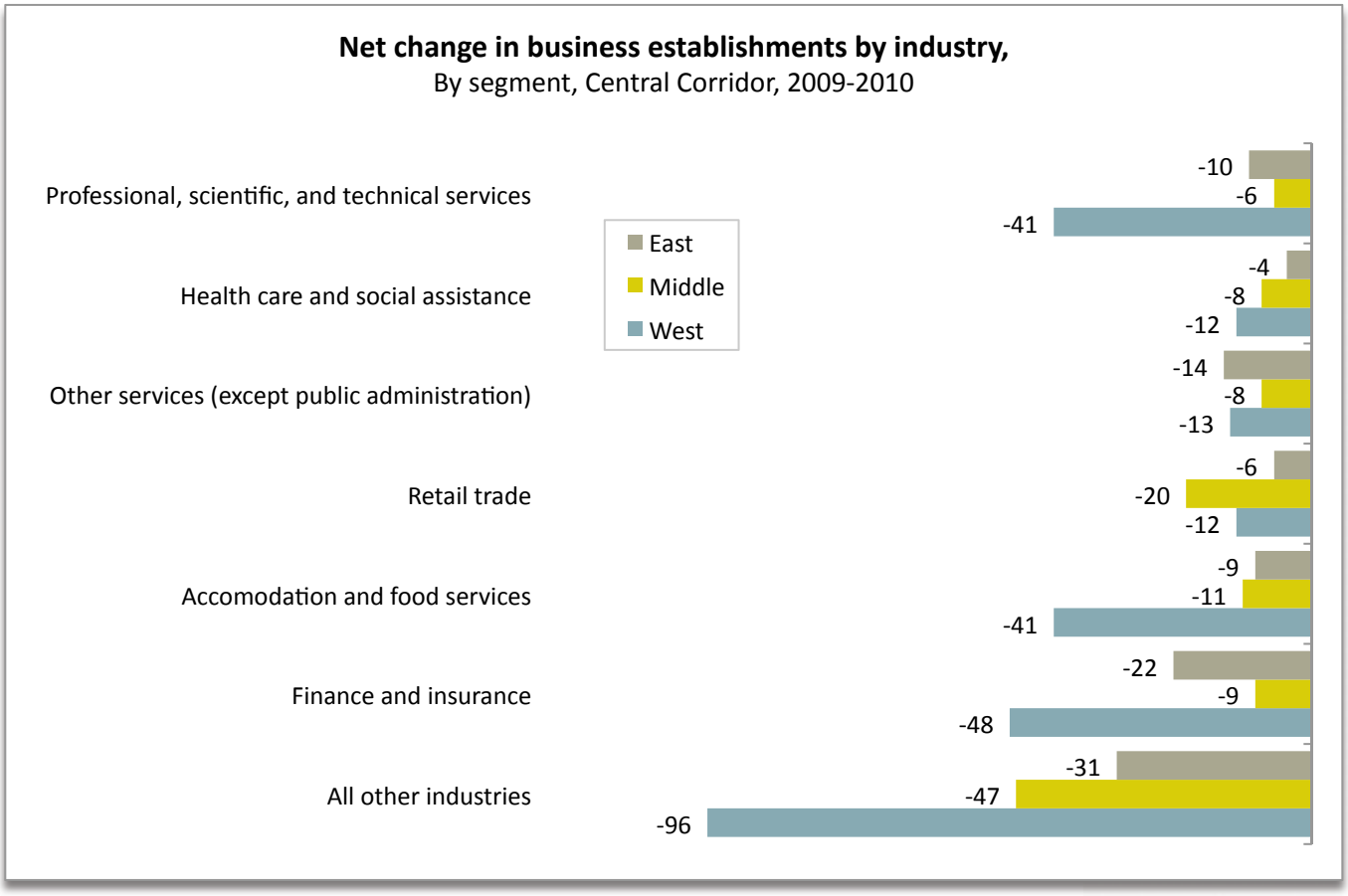
Source: Metropolitan Council summary of MN DEED/QCEW Data

**Data for six largest industries of Minneapolis-St.Paul shown in order to decrease suppression.*

*** This dataset is a summarized of second-quarter, 2010 employment data by 2010 Census Geography from DEED Quarterly Census of Employment and Wages (QCEW) Employment Data. DEED compiles quarterly counts of employees, employer reporting establishments, and aggregate wages, covered by Unemployment Insurance in Minnesota, as part of a uniform nationwide reporting effort administered in partnership with the U.S. Bureau of Labor Statistics (BLS). DEED publishes data by North American Industrial Classifications (NAICS), by 'ownership' (total government, federal government, state government, local government, private). The original raw data is restricted. Summary data is only available for those geographies where at least three employers exist and no one employer represents 80% or more of the total employment.*

A6. Share of businesses by industry, by segment (in order of rank, Corridor-wide)

Central Corridor, 2009-2010



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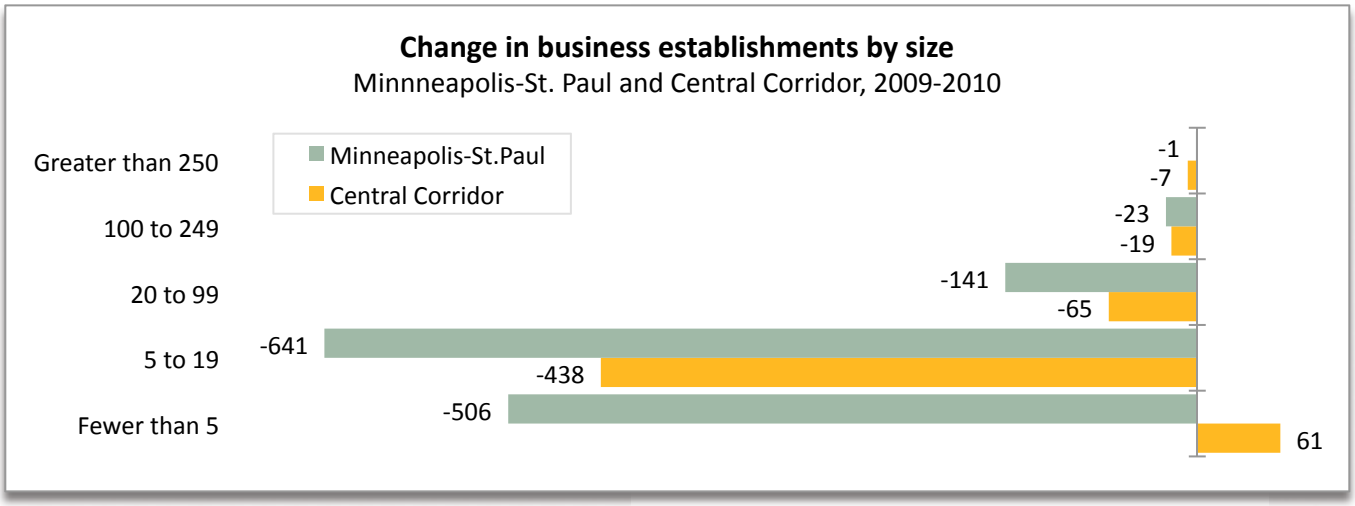
A6. Share of businesses by industry, by segment (continued)
Central Corridor, 2009-2010

	West	Middle	East
2009			
Professional and technical services	25%	11%	17%
Other services**	7%	11%	12%
Health care and social assistance	7%	16%	12%
Accommodation and food services	10%	6%	8%
Finance and insurance	12%	3%	10%
Retail trade	6%	12%	5%
All other industries***	32%	40%	36%
2010			
Professional and technical services	26%	11%	17%
Other services**	7%	12%	12%
Health care and social assistance	7%	17%	13%
Accommodation and food services	10%	6%	8%
Finance and insurance	12%	3%	9%
Retail trade	6%	11%	5%
All other industries***	32%	40%	36%

Source: Metropolitan Council summary of MN DEED/QCEW Data
**Data for six largest industries of Minneapolis-St.Paul shown in order to decrease suppression.*
*** This dataset is a summarized of second-quarter, 2010 employment data by 2010 Census Geography from DEED Quarterly Census of Employment and Wages (QCEW) Employment Data. DEED compiles quarterly counts of employees, employer reporting establishments, and aggregate wages, covered by Unemployment Insurance in Minnesota, as part of a uniform nationwide reporting effort administered in partnership with the U.S. Bureau of Labor Statistics (BLS). DEED publishes data by North American Industrial Classifications (NAICS), by 'ownership' (total government, federal government, state government, local government, private). The original raw data is restricted. Summary data is only available for those geographies where at least three employers exist and no one employer represents 80% or more of the total employment.*

A7. Share of businesses by size

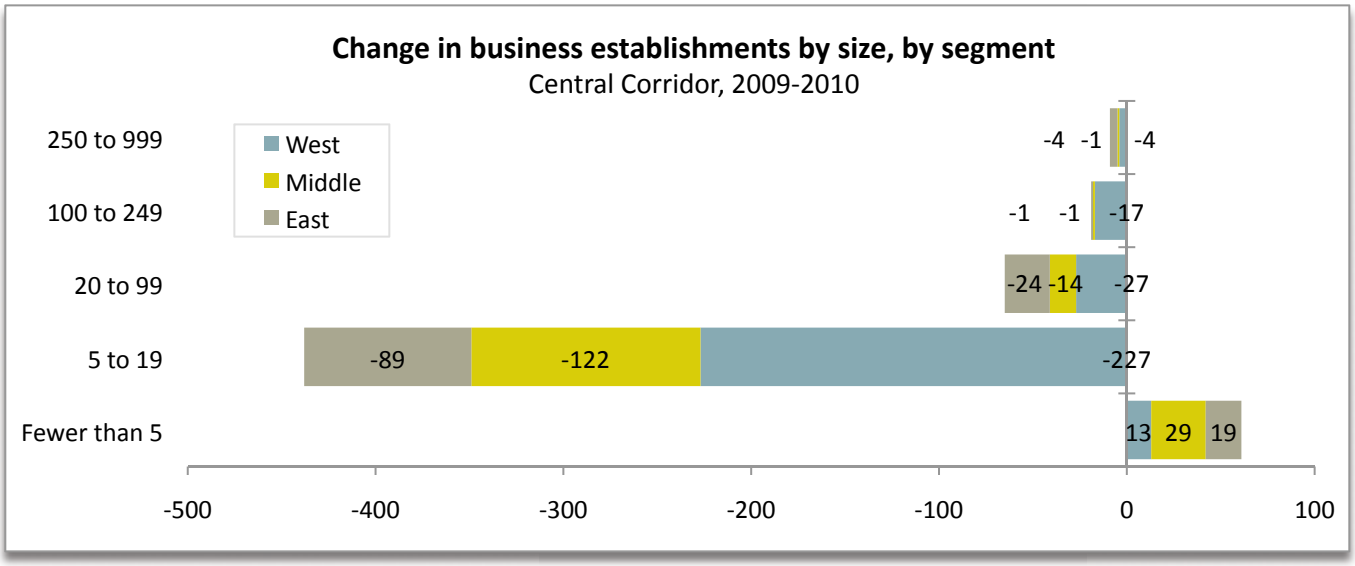
Central Corridor and Minneapolis-St. Paul, 2009-2010



	Central Corridor	Minneapolis-St Paul
2009		
Fewer than 5 employees	44%	52%
5 to 19 employees	33%	29%
20 to 99 employees	17%	15%
100 to 249 employees	4%	3%
250+ employees	3%	2%
2010		
Fewer than 5 employees	48%	53%
5 to 19 employees	28%	27%
20 to 99 employees	17%	15%
100 to 249 employees	4%	3%
250+ employees	2%	1%

Source: Metropolitan Council summary of MN DEED data.

A8. Share of businesses by size, by segment
Central Corridor, 2009-2010



	West Segment	Middle Segment	East Segment
2009			
Fewer than 5 employees	45%	41%	45%
5 to 19 employees	32%	38%	31%
20 to 99 employees	17%	17%	17%
100 to 249 employees	4%	3%	4%
250 to 999 employees	2%	1%	3%
2010			
Fewer than 5 employees	49%	46%	50%
5 to 19 employees	27%	33%	27%
20 to 99 employees	17%	17%	17%
100 to 249 employees	4%	3%	4%
250 to 999 employees	2%	1%	2%

Source: Metropolitan Council summary of MN DEED/QCEW Data

**Data for business establishments with more than 999 employees are not available at the segment scale. Business establishments with "Fewer than 5" employees could technically have less than one employee (one part-time employee, for example).*

A9. Share of CCLRT construction contracts' work hours performed by women and minorities to-date, by major contractor

	Total hours	Minority hours	Female hours	Minority work hours	Female work hours	Dates
Walsh	447,828.5	80,061.3	27,348.3	17.9%	6.1%	Aug 10-Dec 11
PCL	37,364.3	7,117.1	2,233.7	19.0%	6.0%	Mar 11-Dec 11
Aldridge/Collisys	1,843.5	7.5	33.0	0.4%	1.8%	Jan 11-Dec 11
Ames/McCrossan	160,067.5	27,407.8	12,186.8	17.1%	7.6%	Nov 10-Dec 11
Total	**647,103.8**	**114,593.7**	**41,801.7**	**17.7%**	**6.5%**	
Goal				**18.0%**	**6.0%**	

A10. Share of CCLRT contracts paid to disadvantaged business enterprises to-date, by contractor

	Amended Contract $	DBE Goal $	Total payments to-date	DBE payments to-date	% paid to-date to DBEs	DBE goal	Cumulative work done Through:
DMJM Harris (AECOM), (design)	$98,175,175	$16,689,780	$88,047,678	$15,797,939	17.94%	17%	9/30/2011
MnDOT (design)	$1,214,592	$182,189	$634,748	$58,828	9.27%	15%	6/30/2011
Ames/McCrossan (construction)	$114,740,382	$17,211,057	$42,274,071	$7,536,852	14.15%	15%	11/15/2011
Carl Bolander, (construction)	$13,768,232	$2,065,235	$13,768,202	$1,631,238	11.85%	15%	11/31/2011
Graham (construction)	$4,246,305	$636,946	$4,246,305	$545,284	12.84%	15%	11/3/2011
HDR (closed)	$3,718,345		$3,718,345	$632,119	17.00%	17%	closed
PCL (construction)	$45,786,656	$6,867,998	$11,202,199	$271,952	2.43%	15%	11/25/2011
Walsh (construction)	$216,333,334	$32,450,000	$98,813,690	$16,034,826	14.15%	15%	1/15/21012
All open and closed contracts	$497,983,021	$76,103,205	$262,705,238	$42,509,038	16.2%	15.5% (average)	

Source: Metropolitan Council

Notes: Individual contractors are at varying stages of contract goals and timelines. Therefore, these percentages represent incomplete information about the percentage of DBE dollars paid by each contractor, and should not be considered final performance. Data for Walsh Construction is through 1/15/2012.

*** Closed contract regarding environmental impact*

A11. Street-level business change

Central Corridor, February 2011-December 2011

	Feb-May-11	Jun-11	Jul-11	Aug-11	Sept-11	Oct-11	Nov-11	Dec-11	Cumulative
Openings	22	5	4	7	3	4	7	1	53
Closings	-14	-4	-4	-2	-1	-8	-9	-6	-48
Relocations Off Corridor	-3	0	-2	0	-1	-1	-1	0	-8
	Net Gain/Loss of businesses along the Corridor: Feb 2011-Dec 2011								**-3**
Relocations within Corridor	6	2	1	1	0	3	0	2	15

Source: Metropolitan Council "Status Report on the Implementation of Mitigation Measures – CCLRT Construction –Related Business Impacts," May 2011 – October 2011 reports.

**Note: The update on number of Central Corridor business openings, closings, and relocations uses data gathered by CCPO Outreach staff. Outreach staff maintains an inventory of Central Corridor businesses, which serves as a comprehensive contact database. This inventory is a list of street-level business establishments that are found along the Central Corridor alignment from the West Bank area of Minneapolis to downtown St. Paul.*

A12. Employed residents by income group, by segment

Central Corridor, 2009

	Entire Corridor	West segment	Middle segment	East segment
Low-income workers who live in this area (less than $1,250 monthly)	7,570	2,585	3,373	1,612
Moderate-income workers who live in this area ($1,250-$3,333 monthly)	12,598	3,672	6,060	2,866
High-income workers who live in this area ($3,333 monthly or more)	13,219	5,684	5,333	2,202

Source: Local Employment Dynamics obtained through Minnesota Department of Employment and Economic Development (DEED).

A13. Share of employed low- and moderate-income residents who work in a 45-minute transit commute-shed, by segment

Central Corridor, 2009

	Entire Corridor	West segment	Middle segment	East segment
Low- and moderate-income workers who live in this area	20,168	6,257	9,433	4,478
Low- and moderate-income workers who live in this area and work in a 45-minute public transit commute-shed.	9,296	3,345	3,871	2,080
Share of low-and moderate-income workers who live in this area who work in a 45-minute public transit commute-shed.	46%	53%	41%	46%

Sources: Local Employment Dynamics obtained through Minnesota Department of Employment and Economic Development (DEED). Commute-sheds prepared by Chen-Fu Liao, University of Minnesota's Center for Transportation Studies.

A14. Share of employed low- and moderate-income residents who work in a 60-minute transit commute-shed

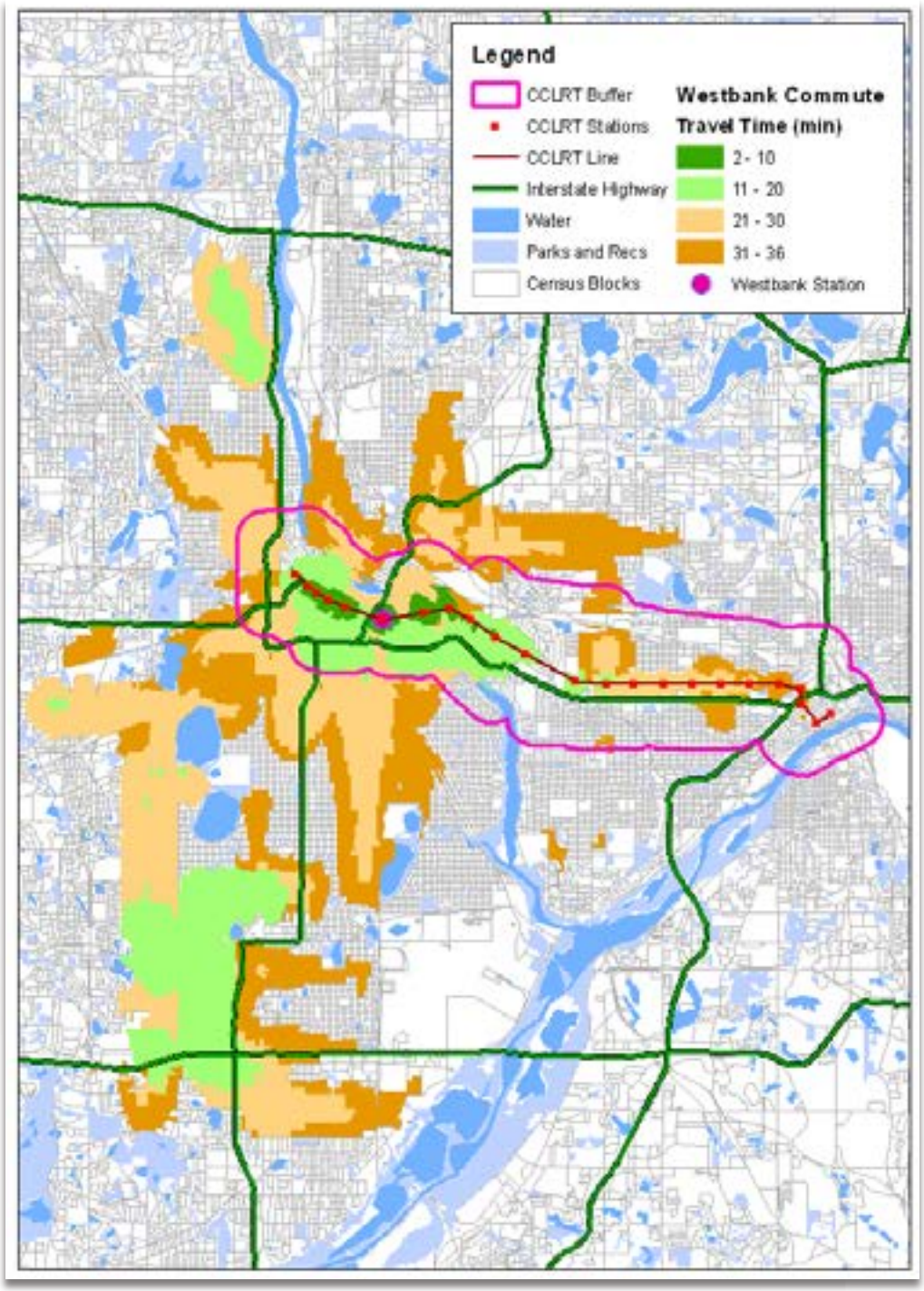
Central Corridor, 2009

	Entire Corridor
Low- and moderate-income workers who live in the Central Corridor	20,168
Low- and moderate-income workers who live in the Central Corridor and work in a 60-minute transit commute-shed	12,463
Share of low- and moderate-income workers who live in the Central Corridor who work in a 60-minute transit commute-shed	61.8%

Sources: Local Employment Dynamics obtained through Minnesota Department of Employment and Economic Development (DEED). Commute-sheds prepared by Chen-Fu Liao, University of Minnesota's Center for Transportation Studies.

A15. Commute-shed reachable within 45 minutes by transit for residents of the West segment of the Corridor

Projected public transit system in 2014

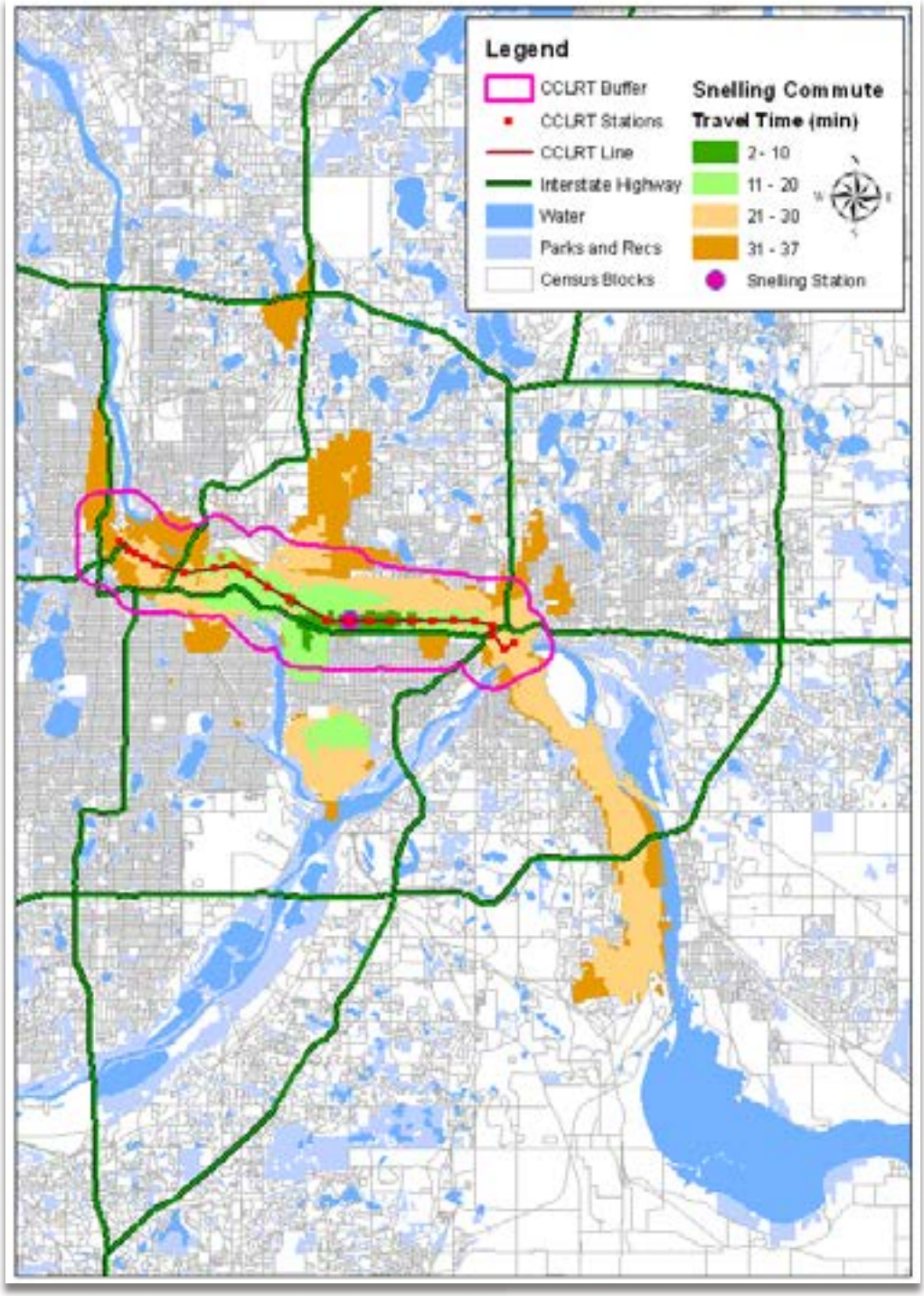


Sources: Local Employment Dynamics obtained through Minnesota Department of Employment and Economic Development. Commute-sheds prepared by Chen-Fu Liao, University of Minnesota's Center for Transportation Studies.

Note: "Reachable by transit" refers to travel permitted by Central Corridor light rail (once operating) and/or up to two transfers by bus.

A16. Commute-shed reachable within 45 minutes by transit for residents of the Middle segment of the Corridor

Projected public transit system in 2014

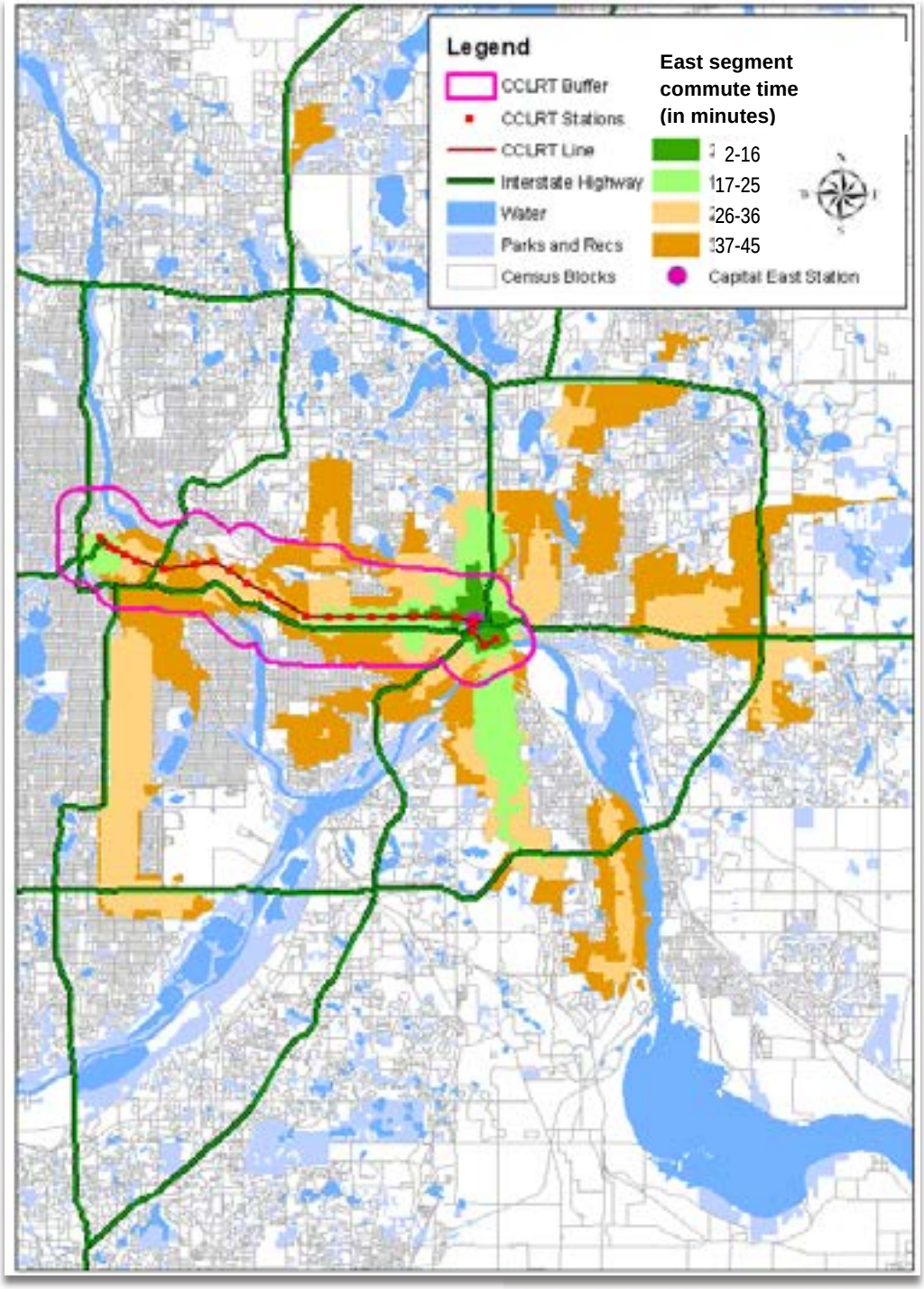


Sources: Local Employment Dynamics obtained through Minnesota Department of Employment and Economic Development. Commute-sheds prepared by Chen-Fu Liao, University of Minnesota's Center for Transportation Studies.

Note: "Reachable by transit" refers to travel permitted by Central Corridor light rail (once operating) and/or up to two transfers by bus.

A17. Commute-shed reachable within 45 minutes by transit for residents of the East segment of the Corridor

Projected public transit system in 2014

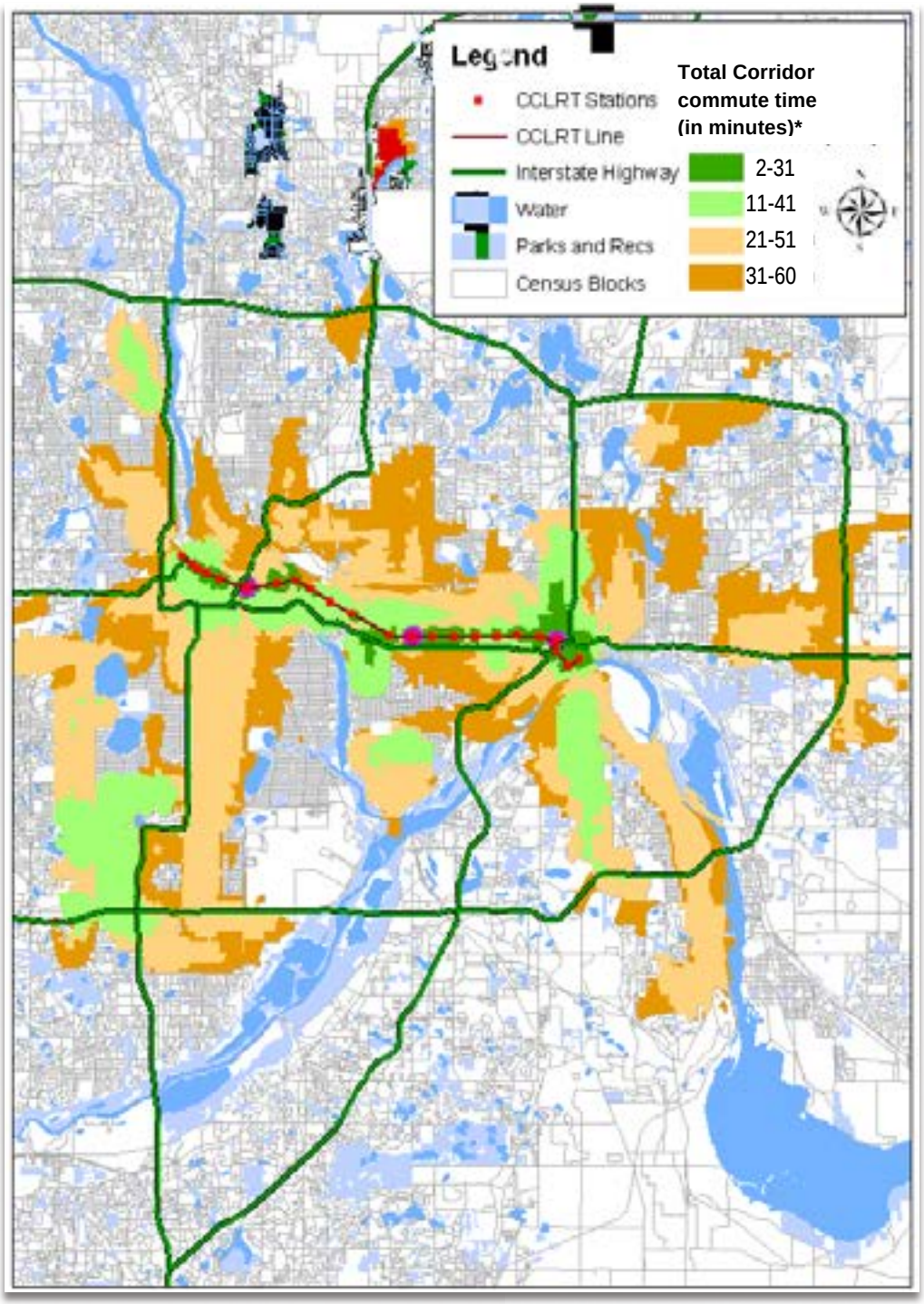


Sources: Local Employment Dynamics obtained through Minnesota Department of Employment and Economic Development. Commute-sheds prepared by Chen-Fu Liao, University of Minnesota's Center for Transportation Studies.

Note: "Reachable by transit" refers to travel permitted by Central Corridor light rail (once operating) and/or up to two transfers by bus.

A18. Commute-shed reachable within 60 minutes by transit for residents of the entire Central Corridor

Projected public transit system in 2014



Sources: Local Employment Dynamics obtained through Minnesota Department of Employment and Economic Development. Commute-sheds prepared by Chen-Fu Liao, University of Minnesota's Center for Transportation Studies.

*Notes: *Commuting times (in minutes) overlap in the legend because this map merges three potential starting points—from the West, Middle or East segment. Therefore, the same destination requires three different commuting times. "Reachable by transit" refers to travel permitted by Central Corridor light rail (once operating) and/or up to two transfers by bus.*

Vibrant, transit-oriented places

A19. Housing density

Central Corridor and Minneapolis-St. Paul, 2010-2011

	Central Corridor	Minneapolis-St. Paul
2010		
Total housing units	42,881	299,082
Land acres of occupied blocks	4,829	49,844
Housing units/acre	8.9	6.0
2011		
Residential units added in 2010	197	1,130
Total housing units	43,078	300,212
Land acres of occupied blocks	4,829	49,844
Housing units/acre	8.9	6.0

**Density refers to housing units per land acre. To calculate density, only blocks with at least one housing unit were used.*
Source: US Census Bureau, Census 2010. Census 2010 Housing Unit counts provide the baseline figure for housing units. Additional housing units for year 2 are based on Metropolitan Council's Residential Permit Survey, 2010. The figure does not include residential conversions or demolitions which were available only as city-level counts. It is possible that some of the residential permits were issued before the April 2010 Census.

A20. Housing Density, by segment

Central Corridor, 2010-2011

	West	Middle	East
2010			
Total housing units	17,195	15,478	10,208
Land Acres of occupied blocks	1,452	2,490	887
Housing Units/Acre	11.8	6.2	11.5
2011			
Residential units added in 2010	89	-	108
Total housing units	17,284	15,478	10,316
Land Acres of occupied blocks	1,452	2,490	887
Housing Units/Acre	11.9	6.2	11.6

Source: US Census Bureau, Housing Unit counts provides the baseline figure for housing units. Additional housing units for year 2 figures are based on Metropolitan Council's Residential Permit Survey, 2010. Please see appendix for more information.

**Density refers to housing units per land acre. To calculate density, only blocks with at least one housing unit were used.*
Source: US Census Bureau, Census 2010. Census 2010 Housing Unit counts provide the baseline figure for housing units. Additional housing units for year 2 are based on Metropolitan Council's Residential Permit Survey, 2010. The figure does not include residential conversions or demolitions which were available only as city-level counts. It is possible that residential permits were issued before the April 2010 Census.

A21. Business density

Central Corridor and Minneapolis-St. Paul, 2009-2010

	Central Corridor	Minneapolis-St. Paul
2009		
Business establishments	6,300	16,791
Establishments/acre	1.0	0.2
2010		
Business establishments	5,840	15,497
Establishments/acre	0.9	0.2

Source: Metropolitan Council, Minnesota Department of Employment and Economic Development (DEED).
Note: This dataset is a summarized of second-quarter, 2010 employment data from DEED Quarterly Census of Employment and Wages (QCEW) Employment Data. DEED compiles quarterly counts of employees, employer reporting establishments, and aggregate wages, covered by Unemployment Insurance in Minnesota, as part of a uniform nationwide reporting effort administered in partnership with the U.S. Bureau of Labor Statistics (BLS). Summary data is only available for those geographies where at least three employers exist and no one employer represents 80% or more of the total employment. 'Density' refers to employment site by acre as calculated using land acres of census tracts.

A22. Business Density, by segment

Central Corridor, 2009-2010

	West	Middle	East
2009			
Business establishments	3,508	1,526	1,365
Establishments/acre	1.5	0.6	0.9
2010	**West**	**Middle**	**East**
Business establishments	3,253	1,417	1,269
Establishments/acre	1.4	0.5	0.8

Source: Metropolitan Council, Minnesota Department of Employment and Economic Development (DEED).
Note: This dataset is a summarized of second-quarter, 2010 employment data from DEED Quarterly Census of Employment and Wages (QCEW) Employment Data. DEED compiles quarterly counts of employees, employer reporting establishments, and aggregate wages, covered by Unemployment Insurance in Minnesota, as part of a uniform nationwide reporting effort administered in partnership with the U.S. Bureau of Labor Statistics (BLS). Summary data is only available for those geographies where at least three employers exist and no one employer represents 80% or more of the total employment. 'Density' refers to employment site by acre as calculated using land acres of census tracts.

A23. Average Walk Score•, by segment

Central Corridor, October 2011

	Score
West	78.5
Middle	78.4
East	80
Central Corridor	78.8

Source: www.walkscore.com

A24. Average Walk Score•, by corridor

Central Corridor, October 2011

	Score
Lake Street Corridor	81.6
West 7th Corridor	59.8
Central Corridor	78.8

Source: www.walkscore.com

Effective coordination and collaboration

Detailed results related to the Key Question: Do stakeholders recognize shared goals?

HOW MUCH DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENT ABOUT EQUITABLE DEVELOPMENT IN THE CENTRAL CORRIDOR? WOULD YOU SAY…

	Strongly disagree	Disagree	Agree	Strongly agree
Stakeholders in the Central Corridor share common equitable development goals	4%	15%	68%	13%

Source: Stakeholder survey conducted by Wilder Research, Winter 2012.
Note: Based on responses of 50 stakeholders.

WHAT DO YOU THINK CAN BE DONE TO INCREASE THE DEGREE TO WHICH THE CENTRAL CORRIDOR STAKEHOLDERS RECOGNIZE, AND WORK TOWARD, SHARED EQUITABLE DEVELOPMENT GOALS?

Respondents used different words to describe a desire for increased coordination and communication of the many efforts undertaken in the Central Corridor. One suggested a coordinating body; another noted that there are many opportunities to participate but there is a challenge of "plugging people in" or organizing the work so "people can see where they fit in and the progress that's being made." Still others felt that the establishment and statement of clear goals was absent from the process. Illustrations of these themes based on respondents' comments are provided below.

Making tangible progress and specific accountability for goal accomplishment. *A number of respondents wanted to see implementation move forward with accountability for results and ways to assess accomplishment of goals.*

> A goals document, or some type of mission statement for a collaborative group would be helpful- something that lays out all those goals.
>
> It would help having; if there existed; which it doesn't, a reliable go -to source for comprehensive information. It would be helpful to have a credible clearing house of what was happening along the central corridor.
>
> We need a better understanding of what equity means.
>
> Put the community agreements in writing.

Greater inclusion of community residents and community-based organizations in the process.

Some respondents saw a need for more participation of residents and grassroots groups in the planning process. This included efforts to better communicate with these groups. Comments by respondents illustrating this theme follow:

> Invest more resources in community organizing. Find strong community-based organizations along the corridor, and engage them in conversation about how to reach out. Have a clear strategy about how to surface community concerns and hopes along the corridor. It needs to be continuous-it's happened before, it's happening today, and it needs to keep happening into the future. Just because it's been done well, and is being done well now doesn't mean it should not continue into the future. The reason this is important is because the main community groups along our transit way corridors in the region are poised and ready to embrace the social and economic opportunities in these corridors, and our challenge is to figure out how to tap into that enthusiasm.
>
> More effective communication engagement, especially residents that live in Central Corridor. Voices of diverse community along Central Corridor could be better represented. Low income and immigrant tend to not be represented to the level that they should be.
>
> There could be involvement and has been from grassroots and communities partners. What we need is more involvement and integrating those groups into the formal structures. In my experience, these grassroots groups are invited to give input but tend not to be included at the decision making level... There can sometimes be a gap between well-intentioned political representatives and people on the ground. Especially for equity goals to be achieved there needs to be more of a connection.
>
> We have to find a way that politicians, technicians, professionals and other participants, including consultants can spend more time up-front in the communities involved to develop awareness of the social issues involved with equity—bring the people with the pencils and layer that with the issues—we are working on how we can do that.

WHAT WOULD YOU RECOMMEND CHANGING ABOUT THE CENTRAL CORRIDOR EQUITABLE DEVELOPMENT WORK TO IMPROVE ITS FUNCTIONING AND/OR EFFECTIVENESS?

Some of the themes emerging in response to this question were very similar to those just described above and are similar to those from 2010.

Responses to this question included the following themes:

- Having more engagement of community residents (or those most affected by the LRT project) in the process, including participation in decision-making.
- Moving forward now with implementation, clarifying responsibility for various areas of implementation, and measuring results.
- Clarifying what is meant by equitable development and holding the relevant organizations accountable for it.
- Bringing people together and better coordinating efforts across sectors and issues.

Comments illustrating some of these themes:

> I think we had a great Central Corridor Agreements group, which is gone now, due to lack of funding. [There needs to be] more of a conversation, table-talk type of thing would be very productive, where no one is up on a stage-a round table approach, where people, all people are welcome to be in on the discussions.
>
> One of the obstacles is what are the policy tools and efforts to make sure we are tapping the national resources and being willing to try new things.
>
> You have to divide it into equitable process and equitable outcomes. Equitable process is community inclusion, public outreach at the decision-making table. Equitable outcomes are projects or outcomes that are tangible; bricks and mortar, like workforce development, affordable housing, and transit—things you can see or touch. Process questions: Are we reaching enough of the people and the right ones? Outcomes questions: How are our communities benefitting? There are implications in implementation and evaluation—we could be doing better on both of those.
>
> It goes back to same things, clearer shared understanding of vocabulary.
>
> Admit that there are gentrification issues that are a real threat to current residents, homeowners and existing businesses. Admit that small businesses are being and will continue to be severely impacted and threatened during the construction season
>
> There is a need for one-on-one conversations and really listening to the people who really live and work in the Central Corridor. Paying attention to and experiencing first-hand what the Central Corridor is like during construction and how that is impacting business, residents, visitors, patrons, etc.
>
> There are many voices, residents, renters, and small businesses that are not in the process. The process is flawed and it is extremely difficult to reach those people through conventional means.
>
> Bringing alternative voices into the process that haven't been that involved, which would include funding going to these alternative types of organizations rather than what appears to be a relatively small group of organizations that seem to lock up most of the funding that is available.
>
> Because a lot of the issues I speak of are in the spaces between major policy spots, it would be nice to have a place to talk about it specifically-having a discussion straight up on a topic, in meaningful, non-self-editing way
>
> I think we need a broader public service campaign to sell the ideas to the community residents. The meetings should include staff members from organizations. Even though the values are good, we need to alleviate the disconnect between the organizations and the community residents.
>
> Earlier and more robust recognition of the negative impact that both construction and the long term reality of LRT is likely to have on the small businesses.

Additional results related to the Key Question: Are stakeholders working together effectively to achieve positive outcomes?

PLEASE BRIEFLY DESCRIBE AN EXAMPLE OF HOW ORGANIZATIONS ARE WORKING TOGETHER EFFECTIVELY TO ACHIEVE THE EQUITABLE DEVELOPMENT GOALS OF THE CENTRAL CORRIDOR

Mentioned by more than 15 respondents
Collaboration, dialogue, relationship building across sectors
Affordable housing
Mentioned by 4-7 respondents
Shared goals on equity
Business mitigation
Corridors of Opportunity
Big Picture Project (also included in affordable housing counts)
Mentioned by 2-3 respondents.
Frogtown Square
MetCouncil TOD Fund
Public/Private investment strategy
District Council Collaborative
Addition of three stops

TO DATE, HOW SUCCESSFUL DO YOU THINK CENTRAL CORRIDOR COLLABORATIONS AND PARTNERSHIPS HAVE BEEN AT MAKING PROGRESS IN EACH OF THESE GOAL AREAS? WHAT ABOUT…(N=50)

	Not at all successful	Somewhat successful	Very successful	I am unaware of the goals and/ or progress in this area/Don't know
a. Affordable housing	8%	76%	6%	10%
b. Business mitigation	8%	72%	16%	4%
c. Business development	20%	50%	0%	30%
d. Workforce and job development	24%	38%	6%	32%
e. Land use	10%	62%	12%	16%
f. Bike/pedestrian/transit connections	12%	56%	10%	22%
g. Developing cultural or historic destinations	30%	48%	2%	20%

> Respondents who believed that Central Corridor collaborations and partnerships have been somewhat/very successful in affordable housing increased by 16 percent from the last year.

> More respondents report they are unaware of the goals in business development and workforce development but the percent of respondents who feel collaborations and partnerships have been somewhat/very successful in business mitigation increased by ten percent.
>
> Respondents were most likely to say that collaborations and partnerships have not been successful at all in 'developing cultural or historic destinations.'

ARE THERE OTHER GOAL AREAS IN WHICH YOU FEEL THE CENTRAL CORRIDOR COLLABORATIONS AND PARTNERSHIPS HAVE MADE PROGRESS?

	Number	Percentage
Yes	26	56%
No	22	44%
Total	49	100%

OTHER GOAL AREAS IN WHICH YOU FEEL COLLABORATIONS AND PARTNERSHIPS HAVE MADE PROGRESS (N=28)

	Number
Business engagement/issues	6
Community/citizen engagement	4
Regionalism	3
Environment	2
Bringing in education sector	2

> Community cohesion between folks with different interests, like businesses and residential. We have come a long way but still have a ways to go to get there.
>
> I think they've made progress connecting the corridor concerns from just what impact the small community into a regional vision.
>
> They've done a good job on the planning but so far the implementation is still to come. If we develop as planned, we'd be in great shape.
>
> Alignment between two cities has been a success. Before the two cities didn't talk, particularly on affordable housing, business and land use, not just transit piece. In early planning, it was around transit issue that they came together and it expanded to include affordable housing, business and land use. Before they didn't share as broadly.
>
> They've helped neighborhoods and stakeholders come together about what kind of development should happen along the line and worked with community to create dialogue. It is too early to measure the other goals. It is not surprising that we have no affordable housing yet, it is too early in seeing housing. I think there has been a good job by Living Cities and Corridor of Opportunities as far as good resources to leverage our local money.
>
> Integration of medical and educational facilities into the dialogue has been important.

Note: Other respondents mentioned: Minneapolis and St. Paul working together, development along the Corridor, political advocacy to the State government, and storm water management.

WHAT GROUPS WOULD YOU INCLUDE THAT ARE NOT CURRENTLY REPRESENTED [IN EQUITABLE DEVELOPMENT WORK IN THE CENTRAL CORRIDOR]?[a] (N=17)

	Number
Renters/families/residents	5
Racial/ethnic minorities and immigrants	4
Community based groups	2
Real estate developers and general development investors	1
Developers	1
Legislature	1

a Respondents could list more than one group.
Note. Includes only respondents who felt there were people or organizations that should be working on equitable development in the Central Corridor who were not. Other groups mentioned were: Housing Preservation Project, District Councils collaborative, developers, and businesses.

I AM GOING TO READ TO YOU THE LIST OF SOME EQUITABLE DEVELOPMENT GOAL AREAS FOR THE CENTRAL CORRIDOR AND I'D LIKE YOU TO TELL ME THE EXTENT TO WHICH YOU HAVE BEEN INVOLVED IN WORKGROUPS THAT ARE SPECIFICALLY FOCUSED IN THESE AREAS. WHAT ABOUT… (N=50)

	No involvement	Minor involvement	Significant involvement
a. Affordable housing?	12%	44%	44%
b. Business mitigation?	22%	38%	40%
c. Business development?	32%	36%	32%
d. Workforce and job development?	34%	48%	18%
e. Land use?	16%	42%	42%
f. Bike/pedestrian/transit connections?	26%	50%	24%
g. Developing cultural or historic destinations?	34%	42%	24%

OVERALL, HAS YOUR INVOLVEMENT IN CENTRAL CORRIDOR EQUITABLE DEVELOPMENT WORK MET YOUR EXPECTATIONS? WHY OR WHY NOT? (N=50)

Yes	56%
No	34%
Don't know/not sure	<1%

Why respondents said it <u>met</u> their expectations

- We have a regional agenda instead of a city agenda.
- I started in it about 6 years ago. We had a vision of engagement and involvement. The CCFC have bought into the idea of a cross-sector network, so I think the work is getting done and getting done well.
- There is a gap in definition and a way to go on that but we have come a long way. Talking to groups on Central Corridor everyone has a different definition for equitable development and we have made great strides but still have a ways to go. I feel positive in involvement and establishing trust with all the stakeholders.
- I believe we've been able to work toward the business mitigation goals we have laid out (more specific). Before the mitigation group, there was no marketing campaign in place.
- I am impressed with the breath of the issues that the partners have tackled and the complexity of them as well. Implementing what are showcase examples across the country, it is unique and innovative implementation areas.
- The political realist says yes and the policy idealist says no…The MET Council has directed funds toward TOD projects, but for political reasons, they had to send money out to the suburbs for park & rides and high-frequency bus lines. In doing so, they weakened the plan itself. They ended up setting ranking criteria, so not a single transit stop qualifies for that TOD money. So, a program that was designed for development in the corridor can't be used in the corridor. A lot of the marks I gave it are benefit of doubt because we are in the process but we have a lot of work to do.
- The Central Corridor can be a model for how to do things right on future corridors in the areas of community engagement, affordable housing policy, workforce opportunities and transit oriented development. So while it got off to a shaky start, it is now meeting my expectations. Part of the reason is there is strong leadership by corridor management and particularly by staff at the City of Saint Paul.
- For all my crankiness about some of these issues, it is the best effort I have ever seen, bringing people to the table, listening, and responding. It has a long way to go to be ideal. I tip my hat to all parties, being engaged, responding, trying to respond in new ways and our community will be better because of it.

Why respondents said it <u>did not meet</u> their expectations

- I had unrealistically high expectations for how much coordination there could actually be. And there hasn't been much more unity. People and organizations have always broken off from the common good and moved more to individual concerns.
- Part of why it hasn't; is that funding decisions for different types of initiatives seems based more on political considerations than the merits a of particular proposal, politics is driving funding decisions rather than merit.

- We have been a little surprised at some of the obstacles … the willingness of policy makers to make equity a priority and even if it is a priority, there is hesitancy or a caution about trying new policy measures.
- I feel it is too much talking.
- The stakeholders who have the power haven't really responded to the needs of the businesses.
- The political realist says yes and the policy idealist says no…The MET Council has directed funds toward TOD projects, but for political reasons, they had to send money out to the suburbs for park & rides and high-frequency bus lines. In doing so, they weakened the plan itself. They ended up setting ranking criteria, so not a single transit stop qualifies for that TOD money. So, a program that was designed for development in the corridor can't be used in the corridor. A lot of the marks I gave it are benefit of doubt because we are in the process but we have a lot of work to do.

Demographic context

A25. Median Household Income
Central Corridor and Minneapolis-St. Paul, 2005-09, 2006-10

	West	Middle	East	Central Corridor	Minneapolis-St. Paul
2005-09	$39,239	$40,505	$34,426	$38,580	$44,300
2006-10	$40,702	$40,104	$35,116	$39,201	$45,820

Source: U.S. Census Bureau, American Community Survey, 2005-09, 2006-10.

A26. Residents by race/ethnicity and nativity, by segment
Central Corridor and Minneapolis-St. Paul, 2006-10

	West	Middle	East	Central Corridor	Minneapolis-St. Paul
American Indian	<1%	1%	1%	1%	1%
Asian	10%	11%	20%	12%	9%
Black	21%	24%	29%	24%	17%
White	65%	59%	45%	59%	66%
Some other race	1%	1%	2%	1%	1%
Two or more races	3%	4%	3%	3%	4%
Hispanic/Latino (of any race)	3%	5%	6%	5%	9%
Foreign-born (outside of U.S.)	22%	13%	26%	20%	16%
Total	**37,211**	**34,548**	**18,663**	**90,422**	**661,710**

Source: U.S. Census Bureau, American Community Survey, 2006-10.

APPENDIX F:
Change in the Number of Occupied Storefronts Along University Avenue, 1st Quarter 2011 And UABA Vacancy Report Correspondence

Report: Change in the Number of Occupied Storefronts along University Avenue, 1st Quarter 2011
University Avenue Business Association, with technical support from U-PLAN
www.universityavenuebiz.com
www.u-plan.org

Released: 4/18/2011

Executive Summary

On April 6, 2011, staff from the University Avenue Business Association (UABA) and U-PLAN conducted an inventory of the storefronts along University Avenue. The inventory draws on a comprehensive set of data on University Avenue businesses that was updated in August and December of 2010. As of December 15th, 2010, there were 429 occupied storefronts along University Avenue, with 145 between Emerald Street and Snelling Avenue, the area currently under light rail construction. By April 6th, 2011, 63 businesses left the corridor between Emerald Street and the Capitol and 13 new businesses formed, resulting in a net loss of 50 occupied storefronts when compared to December. This represents a loss of 11.7% of the businesses along the corridor that operate in storefronts in under a 4 month period. When storefronts in the construction zone are isolated, 17.2% fewer storefonts are now occupied, as compared to a reduction of 8.8% in the area not currently under construction. Moreover, 20 storefonts turned over to new businesses east of Snelling, while 3 storefronts in the construction zone turned over during this period. Most of the businesses lost were retail or professional services.

Background

Several community organizations are working to provide outreach and technical support to the Corridor's small businesses. As construction progresses, it is important to understand exactly how many businesses are operating on the Avenue, how fiscally sound they might be, and how many workers they employ, among other factors. These and other baseline items will be addressed as part of a Business Occupancy Survey, a proposal prepared through a collaboration of the Hamline University School of Business, business groups and U-PLAN community planning studio.

After five weeks of light rail construction, UABA and U-PLAN have partnered to conduct a limited census of the storefronts along the Saint Paul section of University Avenue for comparison with data collected in December, 2010

Methodology

In 2010, U-PLAN developed a data set that represents a current tally of businesses operating along the Central Corridor alignment as of July 2010, including the University of Minnesota East Bank through the Capitol area along University Avenue. Data were drawn from many sources, including Directories USA (DUSA), a data clearinghouse that sources information from direct phone calls, lists from Secretaries of State, and credit card companies, among others. A DUSA subscription was purchased by the Neighborhood Development Center of St. Paul. While this data set is likely one of the most comprehensive available, there can sometimes be a 3-month gap between the opening or closure of a business and when they are reported by DUSA. To ground-truth DUSA information, we added membership information from the University Avenue Business Association and Asian Economic Development Association. Other recently-tabulated data lists came from a capstone project at the University of Minnesota, which surveyed businesses from Lexington to Rice.

In December, 2010, U-PLAN worked with interns and UABA to update this list with business closures, new businesses and information on employees and revenues. In that data set, U-PLAN estimated that 1138 businesses were operating within the study area. Of those businesses, 438 were operating in storefronts along University Avenue in Saint Paul.

For this study, UABA sought to estimate the reduction in occupied storefronts by April 6th, 2011, or 5 weeks into light rail construction. To do this, UABA and U-PLAN utilized the following methodology:

STEP ONE: add businesses known to have been in operation prior to December 15th, 2010 to December 2010 list

STEP TWO: using updated December 2010 list, conduct inventory of corridor to identify:

Businesses operational in December 2010 that occupy storefronts **429** 	Storefronts that have closed since December 2010 **63** 	SPECIAL CASE: Businesses along the corridor that have relocated to Frogtown Square **3**
New storefront businesses that have opened since December 2010 **13** 	Storefronts that have turned over to new businesses Since December 2010 **23** 	

STEP THREE: using new information, isolate the businesses operating in storefronts between Emerald and Rice Streets. Calculate the following:

Total Number of Businesses in Storefronts, December
minus
The number of businesses in storefronts that have closed as of April 6th, 2011
plus
New businesses that have opened
equals
The net gain or drop in occupied storefronts since December

STEP FOUR: perform the calculation in step three for the construction zone (Emerald to Snelling) and non construction zone (Snelling to Rice)

Results

CORRIDOR-WIDE RESULTS (Emerald to Rice Streets)									
Storefronts, Dec. 2010	429	Closed	63	Opened	13	Net gain (loss)	(50)	% gain (loss)	(11.7%)

CONSTRUCTION ZONE vs. NON-CONSTRUCTION ZONE		
	CONSTRUCTION ZONE (Emerald to Snelling)	NON-CONSTRUCTION ZONE (Snelling to Rice)
Storefronts, Dec. 2010	145	284
Closed	25	38
New	0	13
Net gain (loss)	(25)	(25)
% gain (loss)	(17.2%)	(8.8%)
Turnover	3	20

Figure 1: Occupied Storefronts, December 2010 vs. April 2011

As shown in Figure 1, in under four months, the corridor has seen a 11.7% reduction in the number of occupied storefronts. Of the 63 businesses that have closed, a majority were clothing stores, full-service restaurants, general retail or provided a professional service (lawyers, medical providers, etc.). Further, the area under construction as of April 2011 saw a disproportionately larger reduction in the number occupied storefronts when compared to the area east of Snelling. Without additional information such as historic revenue trends, customer counts and other data directly from the businesses, it is difficult to know to what extent light rail construction was a factor. However, given that the rate of attrition in the construction zone is more than double that of the non-construction zone, it is likely that construction plays a significant factor. More information will be collected as part of a Business Occupancy Study proposed by U-PLAN and the Hamline School of Business.

More Information

For more information, contact UABA:

University Avenue Business Association
(651) 641-0334
www.universityavenuebiz.com

For questions on the technical aspects of this study, contact U-PLAN:

U-PLAN community planning studio
(651) 641-0293
www.u-plan.org

August 9, 2012

Jack McCann
UABA Board President
C/O Update Company
2380 Wycliff, #200
St. Paul, MN 55114

Dear Jack:

Here are the results of UABA's sixth quarterly storefront vacancy survey from Emerald to Rice Street conducted on August fourth and fifth, 2012.

	May	August	November	February	May	August
Occupied	312	314	308	314	311	311
Vacant	86	95	98	86	93	96
Total	398	409	406	400	404	407
Vacancy Rate	21.6%	23.3%	24.1%	21.5%	23.0%	23.6%

Some comments. From May 2012 to August 2012 my sample saw little change. An Enterprise Car Rental store opened up where the offices of Brother's Auto used to be. Work is in progress on Culver's. The segment of my sample that is malls with surface parking – 59 total storefronts – is virtually unchanged from May 2011.

What I am counting. In general terms, I am counting whatever the average person would observe to be a University Avenue storefront shop window business space.

Doing this type of field observation survey you encounter lots of variations, so establishing and refining the survey sample is important. Beginning with the first survey in May 2011, I established a fairly extensive list of inclusions and exclusions based on some basic definitions. This is what keeps the survey apples-to-apples each quarter.

Here are some examples of my protocol. I include storefronts that face University in Midway Center (Defined as the malls from Snelling to Hamline.) and Unidale.

I exclude office buildings, government, nonprofits (except where buildings owned or rented by nonprofits have private sector shops), and religious uses (where it is obvious that is the primary use).

Businesses that face streets that bisect University are not included with the exceptions of Flamingo Restaurant and 474 Hamline. Businesses in buildings with parking lots that have entrances right off of University and businesses that present as storefronts, but face perpendicularly to University are included (712 University is an example.). Buildings that require driving on a bisecting street to enter the parking lot, like Griggs Midway, are not counted. Sunrise Mercantile is not included because I decided it does not present as a storefront.

There is some flex in the survey's total sample count every quarter due to retail spaces being consolidated, sub-divided, or rehabbed and re-opened.

It is worth noting that when a building is demoed, I remove it from the sample. So, we can expect the total sample to shrink in the future; particularly when the Zimmerman Building is demolished.

Jack, I can be reached at 612-408-7418 or jandjvaugfhn@comcast.net. Thank you.

Sincerely,

John Vaughn

APPENDIX G:
Assessing Neighborhood and Social Influences of Transit Corridors

Report #6 in the series
Transitway Impacts Research Program

Program sponsors:

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Assessing Neighborhood and Social Influences of Transit Corridors

CTS Report 12–19

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Technical Report Documentation Page

1. Report No. CTS 12-19	2.	3. Recipients Accession No.
4. Title and Subtitle Assessing Neighborhood and Social Influences of Transit Corridors		5. Report Date July 2012 6.
7. Author(s) Yingling Fan and Andrew Guthrie		8. Performing Organization Report No.
9. Performing Organization Name and Address Humphrey School of Public Affairs University of Minnesota 301 19th Ave S Minneapolis, MN 55455		10. Project/Task/Work Unit No. CTS Project #2010078 11. Contract (C) or Grant (G) No.
12. Sponsoring Organization Name and Address Transitway Impacts Research Program University of Minnesota 200 Transportation and Safety Building 511 Washington Ave. SE Minneapolis, Minnesota 55455		13. Type of Report and Period Covered Final Report 14. Sponsoring Agency Code
15. Supplementary Notes http://www.cts.umn.edu/Publications/ResearchReports/		

16. Abstract (Limit: 250 words)

This research investigates neighborhood and social influences of major transit improvements in the Twin Cities metropolitan area. To delineate a comprehensive picture, this research focuses on four transit corridors—Hiawatha LRT, NorthStar Commuter Rail, Cedar Avenue BRT, and Central Corridor LRT—each of which is at a different stage of planning, construction, or operation. The project undertakes a general quantification of neighborhood social change in transit served areas. For each corridor, the researchers also investigate inter-neighborhood and inter-corridor variations in social change, and examine residents' and business owners' perceptions of neighborhood social change, as well as of the specific impacts of transit corridors. A mix of quantitative analysis and survey research is used. By examining a wide range of system development stages including planning, construction, and operation, research findings will help policy makers determine at what point in the timelines of major transit capital projects policy responses are needed and likely to be most effective. By covering a variety of transit technologies including LRT, BRT and Commuter Rail, as well as a diverse range of urban and suburban neighborhoods, results from this research will help policy makers make more informed decisions about how to prevent and mitigate socially harmful neighborhood changes associated with various types of transitways. The research also presents strategies for engaging residents and businesses with negative, neutral and positive perceptions of transit projects in the transitway development process.

17. Document Analysis/Descriptors Public transit, Transitway, Guideways, Light rail transit, Commuter Rail, Railroad commuter service, Bus rapid transit, Twin Cities, Minneapolis, Saint Paul, Minnesota, Neighborhoods, Social impacts, Social change, Residents, Small business, Accessibility, Gentrification, Equity (justice), Perceptions, Public opinion, Surveys		18. Availability Statement No restrictions. Document available from: National Technical Information Services, Alexandria, Virginia 22312	
19. Security Class (this report) Unclassified	20. Security Class (this page) Unclassified	21. No. of Pages 206	22. Price

Assessing Neighborhood and Social Influences of Transit Corridors

Final Report

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July 2012

Published by:

Center for Transportation Studies
University of Minnesota
200 Transportation and Safety Building
511 Washington Avenue SE
Minneapolis, Minnesota 55455

This report represents the results of research conducted by the authors and does not necessarily reflect the official views or policies of the Center for Transportation Studies, the University of Minnesota, or the sponsoring organizations of the Transitway Impacts Research Program.

The authors, the Center for Transportation Studies, the University of Minnesota, and the sponsoring organizations of the Transitway Impacts Research Program do not endorse products or manufacturers. Any trade or manufacturers' names that may appear herein do so solely because they are considered essential to this report.

Acknowledgments

The authors wish to thank Transitway Impacts Research Program (TIRP) Technical Advisory Group and Project Management Team members for their many thoughtful comments and advice throughout the project, as well as Chris Berrens, Kirti Das, Matt Fyten, Lewis Kuhlman, Sarah Swingley and Rose Teng for their skill and hard work during data collection.

TIRP sponsors:

- Anoka County
- Center for Transportation Studies, University of Minnesota
- Central Corridor Funders Collaborative
- Dakota County
- Hennepin County
- Minnesota Department of Transportation
- Ramsey County
- University Metropolitan Consortium, University of Minnesota
- Washington County

In cooperation with:

- Center for Urban and Regional Affairs, University of Minnesota
- City of Bloomington
- City of Minneapolis
- City of Saint Paul
- Federal Transit Administration
- Hennepin-University Partnership
- Metropolitan Council / Metro Transit
- Minneapolis Regional Chamber of Commerce
- Saint Paul Area Chamber of Commerce
- State and Local Policy Program, Hubert H. Humphrey School of Public Affairs, University of Minnesota

Table of Contents

1 Introduction **1**
1.1 Study Area and Corridors 2
2 Mechanisms Underlying Transit-Induced Neighborhood Change **4**
2.1 Transit and Neighborhood Change 4
2.1.1 Physical Changes *4*
2.1.2 Property Values—Residential *4*
2.1.3 Property Values—Commercial *5*
2.1.4 Gentrification *5*
2.1.5 Demographic Shifts *7*
2.1.6 Transportation Access *7*
2.1.7 Behavioral Changes *8*
2.2 Processes: How Neighborhood Social Change Occurs 8
2.2.1 The Wave Model *9*
2.2.2 Opposing Pulls *9*
2.2.3 Neoliberal Urbanism *9*
2.3 How Transitways Fit In 10
2.3.1 Growing Demand for Transit *10*
2.3.2 Attraction of Diverse Population Groups *11*
2.3.3 Transformative Potential *12*
2.3.4 Transit-Oriented Development *12*
2.4 Previous Research on the Twin Cities 13
3 Quantifying Neighborhood Change **15**
3.1 LEHD Social Change Indicators 15
3.1.1 Changes in Worker Characteristics *15*
3.1.2 Changes in Industries of Workers *21*
3.2 Census Data Social Change Indicators 24
4 Survey of Residents **30**
4.1 Questionnaire 30
4.1.1 The Four Key Questions *30*
4.1.2 Topics Covered *31*
4.1.3 Versions *32*
4.2 Survey Process 32
4.2.1 Choosing the Study Neighborhoods *32*
4.2.2 Sampling and Recruitment *35*
4.3 Results 35
4.3.1 Interview Totals and Locations *35*
4.3.2 Data Distribution *39*
5 Perceptions of Neighborhood Change **41**
5.1 Frequencies of Responses to Key Questions 41
5.1.1 Overall Perceptions: *41*
5.1.2 Inter-Neighborhood Differences in Perceptions *42*

5.1.3 Racial Differences in Perceptions *43*
5.1.4 Differences in Perception by Current Transit Use *44*
5.1.5 Differences in Perception by Income *45*
5.2 Regression Models 45
5.2.1 Descriptive Statistics *47*
5.2.2 Regression Results *47*
5.2.3 Model Predictions *49*
5.3 Specific Neighborhood Changes 57
5.3.1 Importance-Change-Relevance—Central Corridor *57*
5.3.2 Importance-Change-Relevance—Hiawatha *59*
5.3.3 Importance-Change-Relevance—Cedar Avenue *59*
5.3.4 Importance-Change-Relevance—Northstar *60*
5.4 Discussion 61
6 Development Preferences 64
6.1 Visual Preference Survey Design 64
6.2 Responses 65
6.3 How Preferences Differ 66
6.3.1 Inter-Neighborhood Differences in Preferences *66*
6.3.2 Racial Differences in Preferences *71*
6.4 Discussion 74
7 Travel Behavior 76
7.1 Mode Choice 76
7.1.1 Transit Use by Neighborhood *80*
7.2 Workplace Locations and Transit Commuting 81
7.3 Respondents' Experience with Transitways 83
7.4 Perceptions of Transit Service—Importance-Satisfaction 85
7.5 Pedestrian Infrastructure and Conditions 90
7.6 Discussion 91
8 Survey of Businesses 93
8.1 Questionnaire 93
8.2 Survey Process 94
8.2.1 Study Neighborhoods *94*
8.2.2 Sampling and Recruitment *94*
8.3 Characteristics of Interviewed Businesses 94
8.3.1 Interview Totals and Locations *94*
8.3.2 Data Distribution *100*
8.4 Results 103
8.4.1 Response Frequencies to Key Questions *103*
8.4.2 Construction Concerns *105*
8.4.3 Travel Behavior *106*
8.5 Business Perceptions—Regression Modeling 107
8.5.1 Descriptive Statistics *108*
8.5.2 Regression Results *109*

8.5.3 Model Predictions *111*
8.6 Business Perceptions—Specific Impacts 118
8.6.1 Importance-Change-Relevance Analysis *119*
8.7 Discussion 122
9 Conclusions 125
9.1 Overall Perceptions 125
9.1.1 Getting to Yes—Addressing Negative Perceptions *125*
9.1.2 Why it All Matters—Addressing the Neutrals *126*
9.1.3 Playing to Strengths—How Positive Perceptions Factor In *126*
9.2 Transit Use and Perceptions 127
9.3 Community-Sensitive Planning Needed 127
References 129
Appendix A: Example Residential Questionnaire
Appendix B: Example Business Questionnaire

List of Tables

Table 4-1: Key Questions 31
Table 4-2: Study Neighborhoods 33
Table 5-1: Inter-Neighborhood Perception Differences—Wilcoxon Mann-Whitney Test 43
Table 5-2: Racial Perception Differences—Wilcoxon Mann-Whitney Test 44
Table 5-3: Transit Users' Perception Differences—Wilcoxon Mann-Whitney Test 44
Table 5-4: Perception Differences by Household Income—Wilcoxon Mann-Whitney Test 45
Table 5-5: Descriptive Statistics 46
Table 5-6: Ordered Probit Regression Models, Urban Corridors 48
Table 5-7: Ordered Probit Regression Models, Suburban Corridors 50
Table 5-8: Predicted Probabilities of Neighborhood Change Variables 53
Table 5-9: Predicted Probabilities of Transit Corridor Impacts Variables 56
Table 6-1: Visual Preference Survey Questions and Images 64
Table 6-2: Inter-Neighborhood Differences in Development Preferences— Wilcoxon Mann-Whitney Test 67
Table 6-3: Racial Divides in Development Preferences—Wilcoxon Mann-Whitney Test 72
Table 7-1: Travel Behavior Topics & Information 76
Table 7-2: Mode Choice Questions—Wordings and Answer Choices 77
Table 7-3: Aspects of Transit Service Quality Considered 86
Table 8-1: Business Survey Neighborhoods 95
Table 8-2: Employment Per Business, by Corridor 102
Table 8-3: Descriptive Statistics 109
Table 8-4: Regression Results 110
Table 8-5: Model Predictions, Neighborhood Change Perceptions 112
Table 8-6: Model Predictions, Transitway Impacts Perceptions 113

List of Figures

Figure 1-1: Proposed Twin Cities 2030 Regional Transitway System 2
Figure 1-2: Implementation Timelines of Study Corridors 3
Figure 2-1: Social Change Processes 13
Figure 3-1: Raw Changes, Workers 16
Figure 3-2: Relative Changes in Workers by Corridor 17
Figure 3-3: Change in Workers Earning <$1,200/Month 18
Figure 3-4: Change in Workers Earning $1,200 - $3,400/Month 19
Figure 3-5: Change in Workers Earning >$3,400/Month 20
Figure 3-6: Overall Change in Industries of Workers 21
Figure 3-7: Relative Changes in Industries of Workers by Corridor 23
Figure 3-8: Baseline Census Demographics (Year 2000) 24
Figure 3-9: Census Demographics, 2010 25
Figure 3-10: Percentages of Minority Residents, 2000 26
Figure 3-11: Percentages of Minority Residents, 2010 27
Figure 3-12: Percentages of Owner-Occupied Housing, 2000 28
Figure 3-13: Percentages of Owner-Occupied Housing, 2010 29
Figure 4-1: Interview Locations, Central Corridor and Hiawatha 36
Figure 4-2: Interview Locations, Cedar Avenue BRT 37
Figure 4-3: Interview Locations, Northstar Commuter Rail 38
Figure 4-4: Data Distribution as Compared with Census 2010 and 2005-2009 ACS— Central Corridor and Hiawatha 39
Figure 4-5: Data Distribution as Compared with Census 2010 and 2005-2009 ACS— Cedar Avenue and Northstar 40
Figure 5-1: Past and Future Perceptions of Neighborhood Change, by Corridor 41
Figure 5-2: Past and Future Perceptions of Transitway Impacts, by Corridor 42
Figure 5-3: Future Urban Neighborhood Change, by Current Transit Use 51
Figure 5-4: Future Suburban Neighborhood Change, by Current Transit Use 52
Figure 5-5: Future Urban Transitway Impacts, by Race and Nativity Status 54
Figure 5-6: Urban Respondents' Perceptions, by Transitway Experience/Auto Ownership 55
Figure 5-7: Importance-Change-Relevance—Central Corridor 58
Figure 5-8: Importance-Change-Relevance—Hiawatha 59
Figure 5-9: Importance-Change-Relevance—Cedar Avenue 60
Figure 5-10: Importance-Change-Relevance—Northstar 61
Figure 6-1: Percentages of Respondents Who Like Each Housing Type 65
Figure 6-2: Percentages of Respondents Who Like Each Commercial Development Type 66
Figure 6-3: Percentages of Positive Responses by Neighborhood—Central Corridor 68
Figure 6-4: Percentages of Positive Responses by Neighborhood—Hiawatha 69
Figure 6-5: Percentages of Positive Responses by Neighborhood—Cedar Avenue 70
Figure 6-6: Percentages of Positive Responses by Neighborhood—Northstar 71

Figure 6-7: Positive Opinions of Housing Types—Racial Differences 73
Figure 6-8: Positive Opinions of Commercial Development types—Racial Differences 74
Figure 7-1: Commute Mode Choice, Urban Corridors 78
Figure 7-2: Commute Mode Choice, Suburban Corridors 78
Figure 7-3: Personal Trip Mode Choice, All Corridors 79
Figure 7-4: Overall Transit Use along Urban Corridors, by Neighborhood 80
Figure 7-5: Overall Transit Use along Suburban Corridors, by Neighborhood 81
Figure 7-6: Workplace Locations, by Corridor 82
Figure 7-7: Transit Use Frequency, by Workplace 83
Figure 7-8: Urban Respondents' Transitway Experiences, by Neighborhood 84
Figure 7-9: Suburban Respondents' Transitway Experiences 85
Figure 7-10: Importance-Satisfaction, Central Corridor 87
Figure 7-11: Importance-Satisfaction, Hiawatha 88
Figure 7-12: Importance-Satisfaction, Cedar Avenue 89
Figure 7-13: Importance-Satisfaction, Northstar 90
Figure 7-14: Positive Perceptions of Pedestrian Environment, by Corridor 91
Figure 8-1: Approximate Interview Locations, Central Corridor and Hiawatha Light Rail 97
Figure 8-2: Approximate Interview Locations, Cedar Avenue Bus Rapid Transit 98
Figure 8-3: Approximate Interview Locations, Northstar Commuter Rail 99
Figure 8-4: Industry Sectors—Survey Sample 100
Figure 8-5: Industry Sectors—Survey Population 101
Figure 8-6: Annual Sales: Sample and Population 102
Figure 8-7: Perceptions of Neighborhood Change, by Corridor 103
Figure 8-8: Perceptions of Transitway Impacts, by Corridor 104
Figure 8-9: Levels of Concern over Transitway Construction, by Corridor 105
Figure 8-10: Specific Construction Concerns, by Corridor 105
Figure 8-11: Alternative Mode Use among Employees and Customers 106
Figure 8-12: Employees' and Customers' Use of Transitways 107
Figure 8-13: Predicted Perceptions of Transitway Impacts, by Corridor 114
Figure 8-14: Transitway Impacts Perceptions, by Distance from Alignment 115
Figure 8-15: Transitway Impacts Perceptions, by Business Age 115
Figure 8-16: Future Transitway Impacts Perceptions, by CY2010 Sales 116
Figure 8-17: Future Perceptions of Auto Sales/Service Businesses 117
Figure 8-18: Perceptions by Race and Nativity 117
Figure 8-19: Future Perceptions by Customers' Transitway Use 118
Figure 8-20: Importance-Change-Relevance, Central Corridor 120
Figure 8-21: Importance-Change-Relevance, Hiawatha 121
Figure 8-22: Importance-Change-Relevance, Cedar Avenue 121
Figure 8-23: Importance-Change-Relevance, Northstar 122

Executive Summary

Major transit investments such as new Light Rail Transit (LRT) or Bus Rapid Transit (BRT) lines often bring significant accessibility benefits to surrounding neighborhoods and lead to the physical upgrading of those neighborhoods. Researchers have also begun to explore the social changes and community upheaval that occur alongside the physical upgrading of neighborhoods.

Neighborhood changes are generally associated with many things—including housing conversions, racial and demographic changes, and shifts in occupational character and social prestige. Most existing research focuses on quantifying neighborhood changes using objective data; few studies examine self-reported perceptions of transit-induced neighborhood change among neighborhood residents.

With intentions to fill knowledge gaps and capitalize on the unique opportunities in the Twin Cities to better understand individual perceptions of transit-induced neighborhood change, the authors surveyed residents in selected neighborhoods along four existing and planned Twin Cities transit corridors, including:

- The existing Hiawatha LRT line,
- The existing Northstar commuter rail line,
- The planned Cedar Ave BRT line, and
- The planned Central Corridor LRT line.

Mechanisms Underlying Transit-Induced Neighborhood Change

Although improved transit service can be particularly beneficial to poor and/or transit-dependent households, it may have unintended social consequences. Growing demand for transit may strengthen competition among residents with differing needs and means. Fixed-guideway transit's ability to attract choice riders is frequently discussed in the literature. Multiple studies find poor residents moving into station areas in significant numbers. This potential competition for access leads to different types of neighborhood change to occur in different neighborhoods. The neighborhood may become dominated by low-income households as more affluent households move away. In other cases, affluent households can out-bid low-income households. In others still, low-income households can live in gentrifying station areas, spending more on housing for transit access. These changes can generate social tensions between neighborhood residents. It is therefore important to undertake the individual-level investigations into residents' perceptions of and reactions to transit-induced neighborhood change. Such investigations will help policy makers to identify "winners" and "losers" within neighborhood change processes and further help to propose population-specific solutions for improving social equity.

Quantifying Neighborhood Change

Though this study is primarily concerned with exploring residents' and business' perceptions of neighborhood social change processes as they relate to major transit projects, an analysis of basic social change indicators in the Twin Cities metropolitan area provides valuable context. Analysis of changes in Census Bureau Longitudinal Employer and Housing Dynamics (LEHD) database shows the following trends for the study corridors:

- Younger workers increase more than in the transit-served area as a whole.
- Low-income workers increase along Cedar Avenue and Northstar, change little along Central Corridor, decrease along Hiawatha.

- Middle-income workers decrease by similar percentages along the study corridors to the metro as a whole, with the exception of the Cedar Avenue corridor, where they decrease less.
- High-wage workers increase more than in the metro as a whole or the transit service area along the two light rail corridors.

Low-wage workers increase significantly in the suburbs.

Survey of Residents

A key part of the study was examining how residents of neighborhoods near transitway stations perceive neighborhood change, as well as how socioeconomic characteristics shape those perceptions. This research task involved a random-sampled survey of 750 households located in 16 neighborhoods along existing and planned Twin Cities transitways.

The questionnaire sorts respondents into "winners" and "losers" based on their responses to key questions about past and future change in the neighborhood and transitway impacts. The remainder of the questionnaire explores what respondent characteristics shape perceptions of neighborhood change and specific transit impacts

Results

The survey produced 750 responses. Central Corridor yielded 195; Hiawatha, Cedar Avenue and Northstar generated 192, 190 and 173, respectively. The response rate of the survey was 35%—meaning 35% of households reached by door-to-door recruiting agreed to participate. Using descriptive statistics and ordered probit regression analysis, the following conclusions can be drawn about residents' perceptions:

- Both urban and suburban corridor residents expect positive changes from transitways. However, significant differences appear in *how* positive from corridor to corridor.
- Inter-neighborhood and length-of-residency differences call for community-sensitive station-area and TOD planning.
- Racial differences in perceptions highlight need for community-sensitive planning, and involvement of minority communities in the process.
- People who have any experience with fixed-guideway transit corridors overwhelmingly had positive experiences, suggesting the importance of focusing on non-users to build support.
- Current frequent transit users and transit-dependent residents see themselves and their neighborhoods gaining from rail/BRT development
- Fixed-guideway transit corridors should not avoid high transit-dependency neighborhoods, but strive to serve existing residents.
- Current riders and transit-dependent could be strong base of support if seriously involved in planning process early on.
- Appropriate interventions—
    - Need to be corridor-, neighborhood-, and population-specific.
    - Can include actual policy changes and/or public education campaigns.

Survey of Businesses

Transitways can have profound impacts on the business environments of the neighborhoods they serve. Following the completion of the resident survey, the research team conducted a similar survey of station-area businesses located in or near the study neighborhoods.

The business survey questionnaire largely mirrors the questionnaire employed in the resident survey. Once again, the survey revolves around key questions intended to sort respondents into those who see themselves as “winners” and “losers” in the transitway development process. The remaining questions cover changes in the neighborhood, concerns about transitway construction impacts for planned corridors, employee and customer characteristics, and general background information on both the business and the respondent.

Results

One-hundred sixty businesses responded to the survey, with an even distribution between corridors. Response rates varied by corridor from 43% to 22%. Using descriptive statistics and ordered logistic regression analysis, the following conclusions can be drawn about residents’ perceptions:

- Businesses are generally more positive about the future than the past.
- Significant concerns about construction impacts are present in incomplete corridors.
- Positive perceptions of future impacts out-number negatives for all corridors, but-
    - Significant corridor-to-corridor differences appear in number of positives, and
    - Number and strength of negatives.
- Some businesses might feel like they’re being “planned out” of transitway areas based on sector, size and/or age.
- Racial/nativity status divisions are powerful, but complex, underscoring need for community outreach and dialogue.
- Belief that customers ride or will ride has a major, positive impact on perceptions.

Conclusions

Overall, perceptions of transitways’ neighborhood impacts are positive. Even so, variation from corridor to corridor and from neighborhood to neighborhood in the precise mix of positive, benign and negative expected impacts demonstrates the existence of groups who see themselves as “losers” in the transitway development process. Residents and businesses with positive, neutral and negative perceptions all call for targeted outreach efforts.

Outreach to those with negative perceptions could seek to address concerns about transitway projects. The survey results suggest that neighborhood security, continued automotive access and pedestrian safety are crucial issues for public involvement. Many suburban residents and businesses expect no impact at all from transitways; outreach to these groups should nonetheless seek to involve them in the planning process. Community members who expect positive impacts should be proactively included in outreach as well to ensure all voices in the neighborhood are heard, to tap into a base of community support for transit improvements, and as links with the local community to help bring other community members to the table. The survey results suggest community development and placemaking impacts of transitways such as attraction of more businesses and residents are valuable anchor issues to engage community members with positive perceptions.

Multiple findings of both business and residential surveys demonstrate a need for local community-sensitive planning of and around transitways. In addition, the results demonstrate that local communities requiring planning consideration and outreach efforts can be defined in multiple ways, including geography, cultural identity and time in the neighborhood.

1 Introduction

Major transit investments such as new light rail or bus rapid transit lines often bring significant accessibility benefits to surrounding neighborhoods and lead to the physical upgrading of those neighborhoods. Much research has been conducted on land use changes associated with transit improvements (Cervero & Landis, 1997; Polzin, 1999). Researchers have also begun to explore the social changes and community upheaval that occur alongside the physical upgrading of neighborhoods (Freeman, 2009; Hubbard, 2009; Ley & Dobson, 2008; Perkins, Larsen, & Brown, 2009).

Despite substantial progress in understanding transit-induced neighborhood change, several limitations exist. First, neighborhood changes are generally associated with many things—including housing conversions, racial and demographic changes, and shifts in occupational character and social prestige (Atkinson, 2000; Figueroa, 1995). Many existing studies on transit and neighborhood change only investigate one dimension (Kahn, 2007; Knaap, Ding, & Hopkins, 2001; Lin, 2002), not capturing all impacts of transit improvements on neighborhood change. Second, much existing research focuses on gentrification and displacement issues (Atkinson, 2000; Immergluk, 2009), with a trend towards separating them from the wider neighborhood change processes associated with transit improvements. Such a trend limits understanding of the wider processes at work, and tends to either paint an overly optimistic or overly pessimistic picture of transit-induced neighborhood change. Third, most existing research focuses on quantifying neighborhood changes using objective socio-demographic data (Pucher & Renne, 2003; Sullivan, 2007). Few studies examine self-reported perceptions of transit-induced neighborhood change among neighborhood residents.

The Twin Cities area in Minnesota is in the midst of constructing a regional "transitway" system—a series of fixed-guideway transit corridors aimed at providing high quality transit service on a regional scale. Figure 1-1 shows the extent of the system proposed for development in the years up to 2030. The Twin Cities offer an excellent opportunity to study the neighborhood level impacts of transit corridors, as they are in the process of developing multiple transitways through varying neighborhood types, utilizing different transit modes.

Previous research on premium transit in the Twin Cities finds that light rail attracts both low-income transit-dependent riders as well as middle- and high-income choice riders (Cao & Jordan, 2009). In addition, residential property values in light rail station areas increased significantly after light rail implementation (Goetz, Hagar, Ton, Ko, & Matson, 2010). It has also been found that transit accessibility to low-wage jobs increased significantly after the opening of light rail; accessibility benefits extend beyond station areas via bus connections (Fan, Guthrie, & Levinson, 2011). However, accessibility to high-wage jobs increased even more than accessibility to low-wage jobs after light rail (Fan et al., 2011). Low-wage workers and jobs showed net in-migration to some light rail station areas (Fan, Guthrie, & Teng, 2010). Other station areas, however, show net out-migration of low-wage workers and net in-migration of high-wage workers (Fan et al., 2010). The transportation equity and neighborhood change implications of these studies make the current research particularly necessary, especially considering they do not directly address individual variations in perceived neighborhood change.

With intentions to fill knowledge gaps and capitalize on the unique opportunities in the Twin Cities to better understand individual perceptions of transit-induced neighborhood change, the authors surveyed residents in selected neighborhoods along four existing and planned Twin Cities transit corridors.

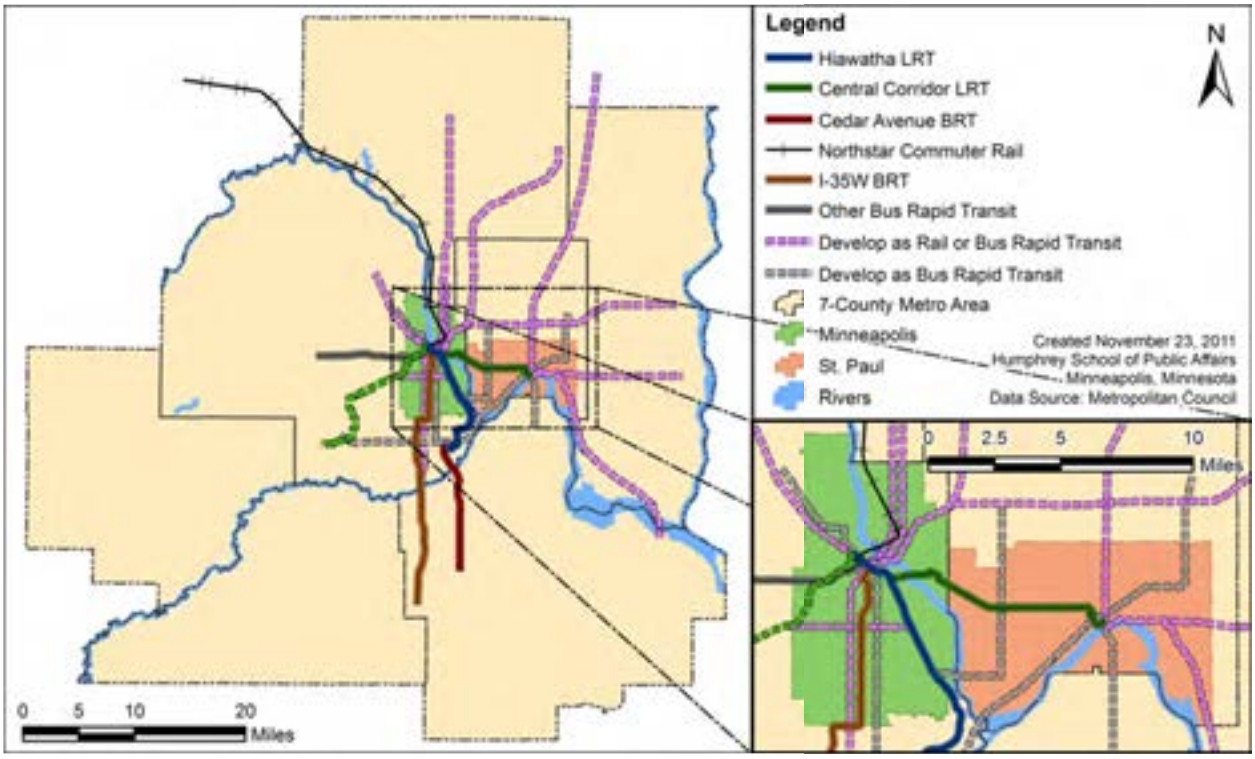

Figure 1-1: Proposed Twin Cities 2030 Regional Transitway System

1.1 Study Area and Corridors

The study covered neighborhoods along four existing and planned fixed-guideway transit corridors in the Twin Cities, including:

- The Hiawatha light rail line serving downtown Minneapolis, several urban residential neighborhoods, MSP International Airport and the Mall of America—opened in 2004. (Shown in blue.)
- The Northstar commuter rail line, connecting downtown Minneapolis with inner and outer suburbs—opened in 2009. (Shown as railroad line.)
- The Cedar Avenue bus rapid transit corridor, running from the Mall of America to the outer suburbs—partly operational at the time of data collection. Full-featured BRT is scheduled to open in 2015. (Shown in red.)
- The planned Central Corridor light rail line, which will connect downtown Minneapolis with downtown Saint Paul—in final design during data collection. Though the alignment and station locations were selected, no construction had begun. (Shown in green, with solid line.)

As shown in Figure 1-2, each of the four corridors was observed at a different point on its timeline of implementation. These timeline differences offer opportunities to examine perceptions of neighborhood change in relation to the timeline of each transit project, as well as to explore events and processes that act as leading indicators of neighborhood change. In addition, two of the corridors (Hiawatha and Central Corridor LRT) are primarily in urban, central-city areas, while two (Cedar Avenue BRT and Northstar commuter rail) primarily serve suburban areas. This contrast allowed the survey to explore urban-suburban differences in perceptions.

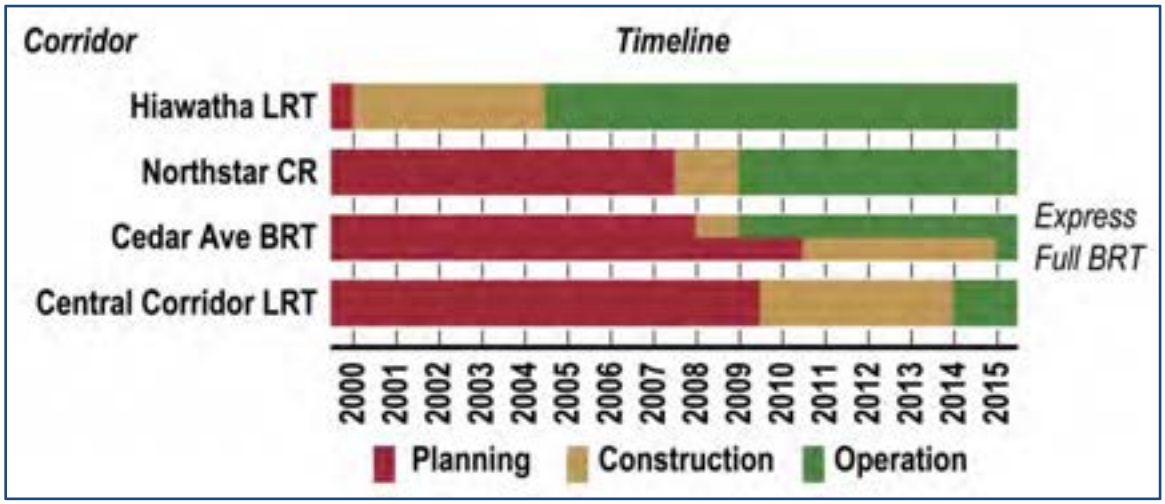

Figure 1-2: Implementation Timelines of Study Corridors

2 Mechanisms Underlying Transit-Induced Neighborhood Change

2.1 Transit and Neighborhood Change

Transitways can have profound impacts on the neighborhoods they serve. The areas immediately surrounding transitway stations receive accessibility benefits that set them apart from other areas. When a new transitway is constructed through existing neighborhoods, it can drive major changes in physical, economic and social characteristics. A review of planning literature finds a large body of research on physical neighborhood changes driven by transit, particularly focusing on land use, development and urban form impacts. Less research exists on the social impacts of transitways. Even so, existing research provides important context for analyzing the social impacts of Twin Cities transitways.

2.1.1 Physical Changes

A large body of research already exists on how transitways influence physical changes in the neighborhoods they serve. Common research topics include the ability of transitways to promote denser development and/or greater mixing of land uses, (Cervero, 1984; Guthrie & Fan, 2010; Knight & Trygg, 1977; Loukaitou-Siders & Banarjee, 2000; Porter, 1998) as well as the potential for such development to support higher levels of transit use. (Cervero, 1996; Holtzclaw, Clear, Dittmar, Goldstein, & Haas, 2002; Lund, Cervero, & Willson, 2004) Transit-Oriented Development (TOD), along with conditions that contribute to its success, is another common topic. (Boarnet & Compin, 1999; Hess & Lombardi, 2004; Porter, 1998) Research on physical changes as ends in themselves is beyond the scope of this study. From here on we discuss physical changes in terms of how they contribute to specific social change processes.

2.1.2 Property Values—Residential

Previous studies have found increased property values in transitway station areas. Goetz, Ko, Hagar, Ton and Matson, find that residential properties in station areas on the west side of Minneapolis' Hiawatha light rail line sold for significantly higher prices than properties more than 800m from stations. However, the authors also found that properties in station areas to the east of the light rail line do not receive any selling-price premium from proximity to light rail. (These properties are isolated from light rail stations by an arterial street and an industrial corridor.) Single-family properties sold for $5,229 more on average than homes outside station areas after the opening of light rail. On average, multifamily properties in station areas commanded a $15,755 price premium. In addition, the study found a much smaller negative impact on values of properties near the LRT line but not near a station. (Goetz, Hagar, Ton, Ko, & Matson, 2010)

Hess and Almeida find that residential property values in Buffalo, New York increase by $2.31 for every foot closer to a light rail station. Their study used a hedonic model to compare selling prices for properties at varying distances from stations while controlling for multiple size and design characteristics. (Hess & Almeida, 2007) Cervero also finds that apartments near BART rapid transit stations in the east San Francisco Bay area rent for 10-15% more per square foot than similar apartments outside station areas. (Cervero, 1996) Other studies in the Bay Area, as well as multiple studies of San Diego, California and Portland, Oregon consistently find higher property values near transit stations. (Al-Mosaind, Dueker, & Strathman, 1993; Chen, Rufolo, &

Dueker, 1998; Dueker & Bianco, 1999; Landis, Cervero, Guhathukurta, & Huang, 1995; Lews-Workman & Brod, 1997)

The trend towards increased property values near transitway stations is not universal. Nelson finds that residential properties near Atlanta, Georgia rapid transit stations increase in low-income neighborhoods but decrease in high-income neighborhoods. (Nelson, 1992) Also in a study of the Atlanta area, Bowes and Ihlanfeldt found modest property value gains between one and three miles from transit stations, but a 19% decrease for properties within a quarter mile. (Bowes & Ihlanfeldt, 2001) Landis, et al, find no statistically significant relationship between distance to Sacramento, California LRT stations and home values in a study of home sales throughout the city. (Landis et al., 1995)

Goetz, et al, find that the property value increases they identified with proximity to LRT stations did not occur before the start of light rail construction, though plans for the line had received significant media coverage before ground was broken. (Goetz et al., 2010) However, recent studies in Atlanta, Georgia and Portland, Oregon find increases in station are housing prices along planned light rail routes. (Immergluk, 2009; Knaap, Ding, & Hopkins, 2001) Both Atlanta and Portland already had other rail transit lines in operation at the time of these studies. Goetz, et all identified lack of an example of modern rail transit in the Twin Cities as a possible obstacle for pre-construction increases in property values near the Hiawatha line. (Goetz et al., 2010)

2.1.3 Property Values—Commercial

The literature also includes examples of commercial property value premiums near transitway stations. Ko and Cao find increased values for commercial properties in Hiawatha light rail station areas. Their study finds no statistically significant relationship between property values and distance from stations before light rail; after light rail, the study finds a significant relationship extending roughly 1,400m from stations. (Ko & Cao, 2010)

Cervero and Duncan compared commercial property values near light rail and commuter rail stations as well as freeway interchanges in Santa Clara County, California using hedonic price models. They find that commercial parcels within 0.25mi of a commuter rail station sold for roughly $25 per square foot more than parcels farther away, while parcels within the same distance of light rail stations commanded a $4 per square foot premium. Parcels within 0.5mi of freeway interchanges, by contrast, sold for around $2 per square foot less than parcels farther away. (Cervero & Duncan, 2002) Cervero also finds, in a study of joint public-private transit oriented development in Atlanta and Washington D.C., that office rents in joint development projects near stations rose by an average of $3 per square foot as rail ridership increased over an eleven year period. (Cervero, 1994)

2.1.4 Gentrification

Gentrification occurs when new middle- or high-income residents move into low-income neighborhoods, upgrade their homes, and cause housing prices to increase throughout the neighborhood. Eventually, rising rents and property values can force long-time residents to move, leading to major changes in neighborhood demographics and social structures. (Chapple, 2009; Newman & Ashton, 2004; Newman & Wyly, 2006; Podagrosi & Vojnovic, 2009; Wyly & Hammel, 2004) Gentrification can occur in any area where the market will bear significantly

higher rents than existing tenants currently pay. (Such a situation is referred to as a rent-gap.) (Glass, 1964) Since much of the literature associates transitways with increased property values and rents, transitway projects can raise concerns about gentrification.

Lin finds a significant relationship between gentrification and proximity to rapid transit stations in Chicago between 1975 and 1991. He finds that property values adjacent to transit stations increased 20% more than property values half a mile distant. (Lin, 2002) In a review of the 2001 National Household Travel Survey (NHTS), Pucher and Renne describe the incomes of rapid transit riders as "bipolar [...] with usage concentrated most among the poor and the affluent." They also report that rail transit's mode share increased among the highest income households between the 1995 NHTS and the 2001 NHTS. The rail mode share among the lowest income households declined over the same period. The authors link this change in travel behavior to gentrification of urban neighborhoods and increased higher-income transit use. This shift has consequences: "low-income households can no longer afford the rising housing costs near some rail stations, forcing them to move to areas with less transit accessibility." (Pucher & Renne, 2003) Other studies echo this analysis. (Danyluk & Ley, 2007; Kahn, 2007; Podagrosi & Vojnovic, 2009)

In addition to finding general increases in property values near Atlanta's proposed Beltline light rail, Immergluck also finds specific evidence of gentrification. Immergluck tests for differences in the rates of property value appreciation between census tracts near the proposed line and the rest of the city. Tracts near the Beltline Tax Increment Finance (TIF) district with mostly low-income, minority populations demonstrated significantly higher rates of property value gains than the city at large. Predominantly high-income and white tracts near the TIF district did not. Immergluck identifies this pattern as "consistent with a notion of the Beltline project spurring speculation and gentrification in lower-income areas very close to the TIF district". (Immergluk, 2009)

Not all researchers see the outcomes of gentrification in a negative light, even in relation to long-time residents. Sullivan finds that residents of two gentrifying neighborhoods in Portland, Oregon have positive views about the past changes in their neighborhoods and expect further positive changes in the future. These positive views are shared by whites, minorities, newcomers, long-time residents, homeowners and renters, as well as residents with different education levels. However, renters and long-time African-American residents have less strongly positive views. (Sullivan, 2007) Vigdor, Massey and Rivlin argue that gentrification can make inner city neighborhoods more attractive to low-income households, as well as to middle- and high-income households. The physical upgrading of neighborhoods, potential for increased local employment and improved public services are identified as possible benefits for low-income households. (Vigdor, Massey, & Rivlin, 2002) Though a strong critic of gentrification, Smith acknowledges that many recent urban revitalization initiatives are genuine attempts to improve inner-city conditions, even where the boundary between revitalization and gentrification is not always clear. (Smith, 2002)

2.1.5 Demographic Shifts

Most research on the neighborhood social impacts of transitways focuses on gentrification. Aside from demographic changes of income groups included in gentrification studies, little existing research attempts to measure how transit impacts neighborhood demographics. Cervero finds that Bay Area households living in new developments near rapid transit stations "tend to be you professionals, singles, and childless couples, with typically one car per household." Residents of rail-based developments were also much more likely than others to work in the central business district or other areas with high levels of transit service. (Cervero, 1996) Pucher and Renne echo the latter point in terms of the demographics of transit riders, stating that rail transit users who are not transit dependent tend to work in central business districts. (Pucher & Renne, 2003) In fact, most demographic research with a transit focus concentrates either on the demographics of transit users or the station area demographic conditions that support transit.

2.1.6 Transportation Access

Transitways are intended to improve access to important destinations by public transportation. (Bent, Hiatt, & Singa, 2008; Cervero, 1984; Fan, Guthrie, & Teng, 2010) However, some raise concerns about potential negative effects of transitway development on transit-dependent populations. (Black, 1993; Fan et al., 2010) Transitway projects often include a realignment of surrounding local bus routes to act as feeder/distributor services. Some transitway projects also lead to outright reductions of bus service. Transitways (and rail transit in particular) are often seen as primarily serving affluent, white, suburbanites who generally own cars. By contrast, local bus service is seen more as serving transit-dependent inner city residents who are often members of politically marginalized minority groups. (Cao & Jordan, 2009; Fan et al., 2010; Grengs, 2002; Pucher & Renne, 2003) Transit accessibility can have profound social impacts on poor, transit-dependent individuals, as it determines what employment opportunities they can reach. (Alam, 2009; Fan et al., 2010; Lipman, 2006)

This divide can incite bitter conflicts: one of the best known examples is the case of the Los Angeles Bus Riders Union. During development of a regional rail-based rapid transit system, the Los Angeles MTA undertook a series of local bus service reductions and bus and rail fare increases. A large well-organized protest movement among urban bus users formed, demanding a rollback of fare increases and improvement to inner-city bus service. Legal action undertaken by the Bus Riders Union eventually led to a landmark civil rights decision and produced a consent decree requiring the MTA to reduce fares and upgrade its bus fleet. (J. Brown, 1998; Grengs, 2002; Taylor & Garret, 1998)

The contention that transitway investments harm transit-dependent populations is contested, however. Fan, Guthrie and Levinson find that the construction of the Hiawatha light rail line in the Twin Cities significantly improved access to jobs for the working poor. These accessibility improvements are not confined to LRT station areas, but extend out from stations along connecting bus routes. Even routes diverted to serve rail stations show significant accessibility improvements. (Fan, Guthrie, & Levinson, 2011) The Transit Coalition, a less-publicized Los Angeles citizen activist group also argues that many of the problems experienced by bus riders result from overly rigid service management requirements of the consent decree. The Coalition contends that expanded rail service is a necessary partial solution to slow, overcrowded bus travel. (*Consent Decree White Paper to Special Master.*2002) Cao and Jordan also find that low-

income and transit-dependent individuals use Twin Cities LRT service in large numbers. Though they find that a smaller percentage of light rail riders are low-income and transit-dependent compared with local bus riders, the difference is largely due to light rail attracting more middle- and upper-income riders, not fewer low-income riders. (Cao & Jordan, 2009) Pucher and Renne also find that significant numbers transit riders from very low income households use transitways. (Pucher & Renne, 2003)

2.1.7 Behavioral Changes

Transitway investments can also impact behavior patterns in the neighborhoods they serve. The bulk of research on the behavioral impacts of transitways focuses on travel behavior and/or physical activity. Many studies show significantly higher rates of transit use among residents of station areas and/or TOD projects than respective cities or regions. Lund, Cervero and Williams find that surveyed residents of five station areas from four different California rail systems commute by transit almost five times as often as residents of surrounding cities. (Lund et al., 2004) Cervero, Ferrell and Murphy echo this statement for residents of station areas in the San Francisco Bay Area, metropolitan Washington, D.C. and Toronto. (Cervero, Ferrell, & Murphy, 2002) In a study of a Portland, Oregon light rail station area that has been a major focus of TOD efforts, Arrington finds that roughly 80% of residents increased their transit usage rates after moving into the area. (Arrington, 2000) Cao and Jordan find that most transitway riders in the Twin Cities walked more than the quarter mile generally accepted as the maximum pedestrian access distance for bus stops. (Cao & Jordan, 2009) Cervero, as well as O'Sullivan and Morrall find similar patterns of walking access to transitway stations. (Cervero, 2001; O'Sullivan & Morrall, 1996)

Increased rates of transit use and pedestrian access to transit may also lead to higher rates of physical activity in station areas. Brown and Werner find significantly increased rates of physical activity and significantly reduced rates of obesity among transit riders compared with non-riders in a study of Salt Lake City light rail station areas. Their study made pre- and post-LRT opening observations. Twenty-three percent of residents surveyed started using transit after opening, and new riders had significantly lower rates of obesity compared with non-riders. (B. Brown & Werner, 2009) Besser and Dannenberg, Moudon, et al, and Werner and Evans also find higher physical activity rates among transit riders than non-riders, though none of them also consider health outcomes. (Besser & Dannenberg, 2005; Moudon et al., 2007; Werner & Evans, 2007)

2.2 Processes: How Neighborhood Social Change Occurs

Transit's growing relevance to neighborhood social change is occurring in the context of more general urban social changes. One social change that is particularly relevant to renewed political and economic interest in transit is the renewed interest in urban living on the part of the middle class. (Belzer et al., 2006; Chapple, 2009; Dittmar et al., 2004) This change in demand for homes in cities can raise planners' hopes for neighborhood revitalization. It can also raise concerns about gentrification and displacement of low-income residents. Though they imply different value judgments, gentrification and neighborhood revitalization share many basic processes. (Smith, 2002) The follow section summarizes different processes through which neighborhood social change can occur.

2.2.1 The Wave Model

At the most basic level, gentrification occurs when a neighborhood characterized by low-cost housing and low-income residents becomes desirable to middle- and high-income households. This change in desirability creates leads to physical upgrading of residential properties and increased housing costs. (Chapple, 2009; Glass, 1964; Ley, 1986; Slater, 2004) In the traditional wave model of gentrification as proposed by Rose Glass, households on the lower income end of the middle class move into inner city neighborhoods that have suffered long-term disinvestment. (Glass, 1964) As these newcomers purchase and refurbish dilapidated homes, they form the first wave of gentrification. This first wave may make the neighborhood attractive to a second wave of more solidly middle class households who desire access to the central business district and "quality" neighborhood surroundings. The second wave is often accompanied by some degree of real estate speculation. The third wave arrives in the form of high-income households and developers attracted by the increasing desirability and improved physical condition of the neighborhood. With each successive wave, property values and rent tend to rise, leading to displacement of low-income residents. Low-income renters tend to be impacted first, though even home-owners may be driven out in time due to rising property tax burdens. (Glass, 1964; Ley, 1986; Lin, 2002; McKinnish, Walsh, & White, 2010; Newman & Wyly, 2006; Podagrosi & Vojnovic, 2009; Slater, 2004)

2.2.2 Opposing Pulls

Lin's empirical test of the relationship between rail transit and gentrification builds on a theory proposed by LeRoy and Sonstelie, who propose that suburbanization of affluent households is a situation created by advances in transportation that are not universally affordable. In their theory, the affluent always prefer to live near the CBD, all else equal. However, high housing consumption encourages affluent households to locate far from the CBD, where land values are lower. (Alonso, 1964; LeRoy & Sonstelie, 1983; Muth, 1969) When a new transportation mode is introduced, it is both faster and more expensive than previous modes: it gives affluent workers exclusive access to new, outer suburbs where competition for housing is lower. This situation leads to suburbanization of affluent households. However, LeRoy and Sonstelie point out that the automobile had been almost universally adopted by the late Twentieth Century. They explain social change in inner city neighborhoods as a consequence of no-longer-exclusive suburbs: when most workers commute by the same mode, the advantages of living close to the CBD drive the location decisions of more affluent households. (LeRoy & Sonstelie, 1983) DeSalvo and Huq use different methods to arrive at the same conclusions. They contended, however, that rising wages over time may contribute to residential location and mode choice, as well. (DeSalvo & Huq, 1996)

2.2.3 Neoliberal Urbanism

Some researchers contend that modern-day neighborhood social changes are not caused entirely by market forces, but are actively promoted by public policy. These changes are generally called "urban regeneration" or "neighborhood revitalization" by their proponents. The word "gentrification" is generally absent. (Newman & Ashton, 2004; Smith, 2002) Newman and Ashton go so far as to argue that "a neoliberal policy regime, emphasizing poverty deconcentration, mixed-income neighborhoods, homeownership support, and reliance on the private market rather than the state, has played a key role[.]" They find that such policies

produce benefits for homebuyers in impacted neighborhoods, but may lead to displacement of long-time residents as very low cost housing is replaced with housing of more moderate value. (Newman & Ashton, 2004) Smith identifies gentrification as a central economic development strategy of the modern globalized city. With the effective collapse of Keynesian urban policies such as social housing and other welfare state programs, Smith points to an emerging "neoliberal urbanism." In this new system, cities in the developed world are no longer major centers of production, nor are they functional parts of economic regions such as the industrial Midwest. (Smith, 2002) In this system, cities are effectively interchangeable. These cities do not compete for development and investment based on proximity to raw materials or freight transportation nodes; they compete by making themselves attractive places to live, work, play and visit. This is actually a basic analysis shared by neoliberal urbanism's boosters and its critics. (Florida, 2002; Katz, 2001; Smith, 2002)

In the neoliberal urbanism model, real estate development—particularly for residential uses—is a primary means of wealth creation for post-industrial cities. (Smith, 2002) To promote this, public-sector revitalization initiatives often focus on creating spaces for middle-class residences and recreation. These spaces can be created in vacant areas or at the expense of existing working-class spaces. (Newman & Ashton, 2004; Smith, 2002) Curran identifies a "narrative of obsolescence" in the planning field as driving cities to actively plan for the conversion of remaining, viable industrial uses into upscale residential uses. This "gentrification of work" can force many of the few remaining family-wage, working-class jobs to relocate to suburban areas inaccessible to transit-dependent workers. (Curran, 2004; Curran, 2007)

Other researchers even find implicit racial overtones in public policies aimed at the revitalization of largely low-income, minority neighborhoods. Gonzalez and Lejano claim that planners' concepts of neighborhood revitalization needs are often strongly rooted in Anglo-American history and culture. They find that residents of minority neighborhoods do not necessarily share the average planner's concept of needs for redevelopment or desirable development types. (Gonzalez & Lejano, 2009) Podagrosi and Vojnovic contend that a recent Houston, Texas redevelopment, poverty deconcentration and home ownership initiatives, including the construction of a light rail line, have undertones of "social upgrading" as well as physical upgrading. Though removal of low-income, minority residents from neighborhood bordering downtown Houston is not a stated goal of these initiatives, it is a consistent result. (Podagrosi & Vojnovic, 2009)

2.3 How Transitways Fit In

Many researchers have found major social changes to be empirically associated with transitways. Still, how do these changes come about? Why does high-quality transit once again play a significant role in shaping neighborhood social structures? What chains of events leading to social change can occur in neighborhoods served by a transitway? The following section describes the processes through which transitways can lead to neighborhood social change in the context of changes in the larger urban system.

2.3.1 Growing Demand for Transit

Transit is no longer only the mode of last resort in the United States. According to the Center for Transit-Oriented Development:

> *Whatever the reason — high gas prices, frustration over sitting in traffic or newfound convenience and easy access — people who have choices are choosing to use transit and regions with and without rail transit are working to accommodate this choice. (Belzer et al., 2006)*

In part, renewed demand for transit may be a consequence of renewed demand for urban living. As Pucher and Renne point out, transitways can outperform the automobile in inner-city areas due to road congestion. (Pucher & Renne, 2003) Transitways also offer a high level of service to the CBD jobs held by many individuals participating in the "back to the city" phenomenon. (Cervero, 1996; Chapple, 2009; Fan, Guthrie, & Levinson, 2011; Lin, 2002) Even for those who do not work in the CBD, access to the CBD for entertainment and cultural events is an increasingly desired amenity. (Belzer et al., 2006) Other key reasons for the growth in demand for transit include:

Changes in Consumer Demand—Young people who have recently entered the housing market tend to desire denser development and more vibrant urban locations than earlier generations. (*The New Transit Town: Best Practices in Transit-Oriented Development*2004; Dittmar et al., 2004; Florida, 2002)

Household Composition Changes—Households composed of singles, childless couples, and empty-nesters comprise more of the population than ever before. Traditional nuclear families now account for less than one-in-four American households. Car-dependent, suburban landscapes designed around domesticity and child-rearing are less relevant. (Cervero, 1996; Dittmar et al., 2004)

Aging Population—The general aging of the population contributes to transit demand. As baby boomers move towards retirement, many desire neighborhoods where they will not need to depend on driving as they age.(Belzer et al., 2006; Dittmar et al., 2004)

2.3.2 Attraction of Diverse Population Groups

Transitways attract residents with differing needs and means. Though transitways' ability to attract choice riders is frequently discussed in the literature, (Cao & Jordan, 2009; Lund, Cervero, & Willson, 2004; Pucher & Renne, 2003) transitways are attractive to low-income individuals as well. Multiple studies find low-income residents moving into transitway station areas in significant numbers. (Bowes & Ihlanfeldt, 2001; Fan, Guthrie, & Teng, 2010; Nelson, 1992) This attractiveness of transitways to very different income groups can lead to different types of social change. The neighborhood may come to be dominated by low-income households as more affluent households move away. (Bowes & Ihlanfeldt, 2001; Nelson, 1992) In other cases, more affluent households may consistently out-bid low-income households, leading to the gentrification of station areas. (Immergluk, 2009; Lin, 2002) In other cases still, low-income households may live in gentrifying station areas, spending increased percentages of their incomes on housing for access to the transit service they need. (Belzer et al., 2006; Vigdor, Massey, & Rivlin, 2002) The latter may lead to social tension between neighborhood residents, particularly when both income groups feel a sense of attachment to/ownership of the neighborhood. Low- and high-income residents may have differing social norms. As a result, high-income residents may perceive normal low-income social activities as disorderly and uncivil. Low-income residents may perceive high-income concern for neighborhood quality of life as intrusive. (Sullivan & Padin, 2008) This pattern can even occur in neighborhoods where

both low- and high-income residents view past and expected future neighborhood changes in a positive light. (Sullivan, 2007)

2.3.3 Transformative Potential

Transitways can stimulate transformative station-area land use changes. These changes primarily take the form of increased densities and diversified land uses. (Cervero, 1984; Guthrie & Fan, 2010; Hess & Lombardi, 2004; Landis, Cervero, Guhathukurta, & Huang, 1995) Both market forces and public policy decisions drive these changes. (*The New Transit Town: Best Practices in Transit-Oriented Development*2004; Cervero, 1994)

As discussed earlier, transitway investments can lead to significant increases in station-area property values. When this occurs, land near transitway stations becomes more attractive for intense development. (Cervero & Duncan, 2002; Kahn, 2007) Since development intensity is determined both by market demand and local zoning, public policy decisions can have profound impacts as well. (*The New Transit Town: Best Practices in Transit-Oriented Development*2004; Kahn, 2007) Kahn finds that public policy can channel transit-oriented housing demand into new high-density developments if local governments use zoning to facilitate their construction. He also finds that zoning can lead to greater inflation of surrounding housing prices if used to restrict density in station areas. When this is the case, the pent-up demand for housing near transitway stations can lead to more rapid and/or complete gentrification of surrounding neighborhoods. (Kahn, 2007) The development of a transitway can also provide the initial increase in neighborhood desirability that sets successive waves of gentrification in motion, even if zoning prohibits major land-use changes. (Belzer et al., 2006; Immergluk, 2009; Kahn, 2007)

2.3.4 Transit-Oriented Development

By creating the market demand for major redevelopment of station areas, and/or providing reasons for zoning to allow it, transitway investments also create opportunities to develop the types of communities that are highly in demand among growing numbers of middle-class and affluent households. (Chapple, 2009; Dittmar et al., 2004; Immergluk, 2009; Kahn, 2007) Transit-Oriented Development (TOD) projects have gained favor in recent years as a way to improve utilization of transit, encourage more sustainable development patterns, and create communities with desirable characteristics of urban life in suburban areas. (*The New Transit Town: Best Practices in Transit-Oriented Development* 2004; Arrington, 2000; Dittmar et al., 2004)

TOD projects can lead to community conflict, however. Residents of surrounding neighborhoods may object strongly to increases in density. (*The New Transit Town: Best Practices in Transit-Oriented Development* 2004; Kahn, 2007) In addition, neighborhood residents may be wary of large-scale public-private developments around transit stations, especially if the private partner is perceived as having too much power. The Lindbergh City Center development in Atlanta offers a particularly stark example of community opposition to a TOD for such reasons. Even if TOD projects so opposed are built, planners may attempt to soothe surrounding residents by physically isolating the development from them, leading to social isolation between neighborhood and newcomers. (*The New Transit Town: Best Practices in Transit-Oriented Development*2004)

Transit-Oriented Development can also serve as an important tool for accommodating pent-up demand for housing near transit without leading to rampant gentrification of surrounding neighborhoods. By providing large numbers of new housing units within a relatively small land area, TOD's that include high-density housing can act as "safety-valves" for demand in nearby neighborhoods. (Kahn, 2007) In addition, the inherent efficiency of high-density development can create opportunities for the provision of affordable housing in station areas, acting as a further check on gentrification. The rezonings often required for TOD projects to proceed also give local governments some leverage to encourage developers to include affordable housing in TOD projects. (*The New Transit Town: Best Practices in Transit-Oriented Development*2004; Belzer et al., 2006)

Figure 2-1 summarizes some of the social change processes a transitway can set in motion.

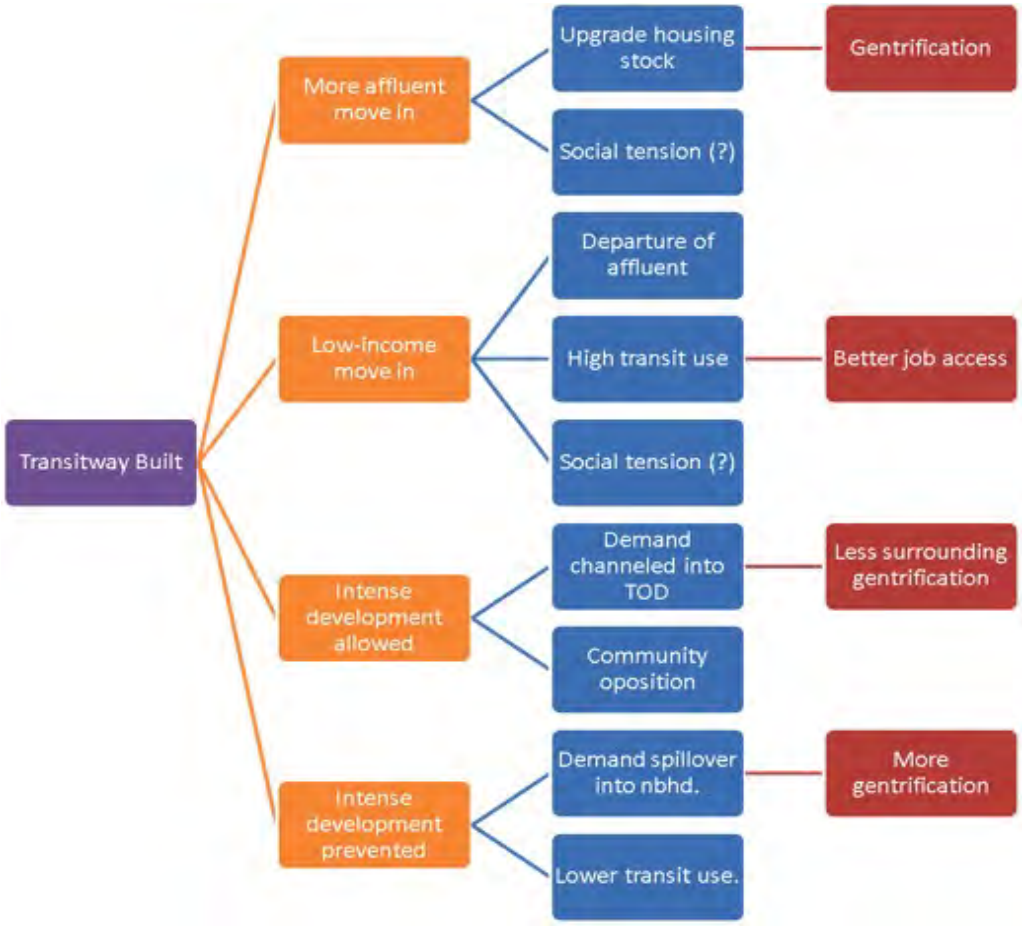

Figure 2-1: Social Change Processes

2.4 Previous Research on the Twin Cities

Previous Transitway Impacts Research Program studies have investigated several neighborhood change processes in the specific context of the Hiawatha light rail line, the first modern transitway to be built in the Twin Cities metropolitan area. Key findings from these studies related to the present research include:

- Low-income and transit-dependent riders use the Hiawatha light rail line in significant numbers. (Cao & Jordan, 2009)

- The Hiawatha line also carries significant numbers of reverse-commuters toward suburban employment centers where many entry-level jobs are located. (Cao & Jordan, 2009)

- However, light rail attracts larger percentages of middle- and high-income choice riders than surrounding local bus routes. (Cao & Jordan, 2009)

- Residential property values in light rail station areas increased significantly after light rail implementation. (Goetz et al., 2010)

- Commercial and industrial properties also increased in value after LRT implementation.(Ko & Cao, 2010)

- Transit accessibility to low-wage jobs increased significantly after the opening of light rail; accessibility benefits are extended beyond station areas by bus connections. (Fan et al., 2010)

- However, accessibility to high-wage jobs increased even more than accessibility to low-wage jobs after light rail. (Fan et al., 2010)

- Low-wage workers and jobs showed net in-migration to some light rail station areas. (Fan et al., 2010)

- Other station areas, however, show net out-migration of low-wage workers and net in-migration of high-wage workers. (Fan et al., 2010)

The Twin Cities' first modern transitway appears to be driving social changes in the neighborhoods it serves. The present research will build on what is already known about Hiawatha light rail neighborhood impacts, and focus directly on neighborhood social change around transitways as a unified process.

3 Quantifying Neighborhood Change

As discussed in the preceding chapter, neighborhood social change processes can take many different forms. Though this study is primarily concerned with exploring residents' and business' *perceptions* of neighborhood social change processes as they relate to major transit projects, an analysis of basic social change indicators in the Twin Cities metropolitan area provides valuable context. This context will aid the interpretation of individual perceptions within the overall trajectory of social change in the region.

3.1 LEHD Social Change Indicators

The Longitudinal Employer and Housing Dynamics (LEHD) Residence Area Characteristics (RAC) dataset offers important social status indicators at the geographical precision of the census block level. The RAC data include:

- Numbers of workers in three age groups (<30, 30-54, >55)
- Numbers of workers in three monthly income groups (<$1,200, $1,200-$3,400, >$3,400)
- Numbers of workers in each industry group, as defined by 2-digit NAICS codes

LEHD data are available annually from 2002 to 2008, allowing for "before-after" analysis of the Hiawatha light rail corridor. While no other Twin Cities transitway was complete at the time the latest data were collected, the 2008 data provide a snapshot of the Twin Cities region at a time when the Northstar commuter rail line was already under construction and when the Cedar Avenue Transitway and Central Corridor were both approaching the status of "sure things" so to speak. In addition, Census data are included to provide context for social status indicators not addressed by LEHD, such as racial identity and home ownership

3.1.1 Changes in Worker Characteristics

As the graphs on the following page show, social standing indicators are changing both along the study corridors and in the metro area as a whole. Figure 3-1 shows that numbers of workers in the middle age range and low and middle income ranges decline noticeably in both the metro area as a whole and the transit-service area (defined as blocks intersecting a 0.5 mile buffer around existing transitway stations, or a 0.25 mile buffer around regular bus stops), while older workers and (especially) higher-income workers increase significantly. While total workers and workers under 30 increase for the metro area as a whole, they change relatively little in the transit-served portion of it. Though metro-wide figures continue to be displayed for context, we feel the transit-served metro area offers a better comparison to the transitway corridors due to urban form characteristics shared between them.

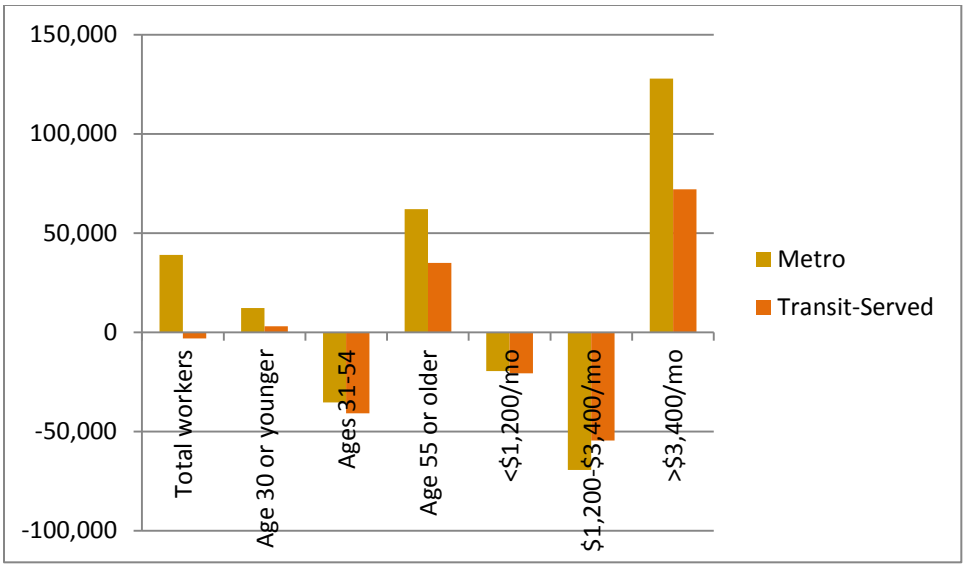

Figure 3-1: Raw Changes, Workers

Figure 3-2 shows relative (percentage relative to 2002 value) changes for each of these variables, broken down by the four study corridors as well. Overall, the corridors show the same general trends as the metro, but several interesting points can be made from the comparison:

- Younger workers increase by much larger percentages along the study corridors than in the transit-served area as a whole. This increase is particularly prominent along the Cedar Avenue and Hiawatha corridors.
- Low-income workers actually increase along the Cedar Avenue and Northstar corridors, remain almost constant along Central Corridor and decrease less along Hiawatha than in the transit service area as a whole.
- Middle-income workers decrease by similar percentages along the study corridors to the metro as a whole, with the exception of the Cedar Avenue corridor, where they decrease less.
- In spite of these last two trends, high-wage workers increase by noticeably larger percentages than in the metro as a whole or the transit service area along the two light rail corridors. This is of particular interest, as it suggests that neighborhood change along these corridors is not necessarily be a zero-sum game.

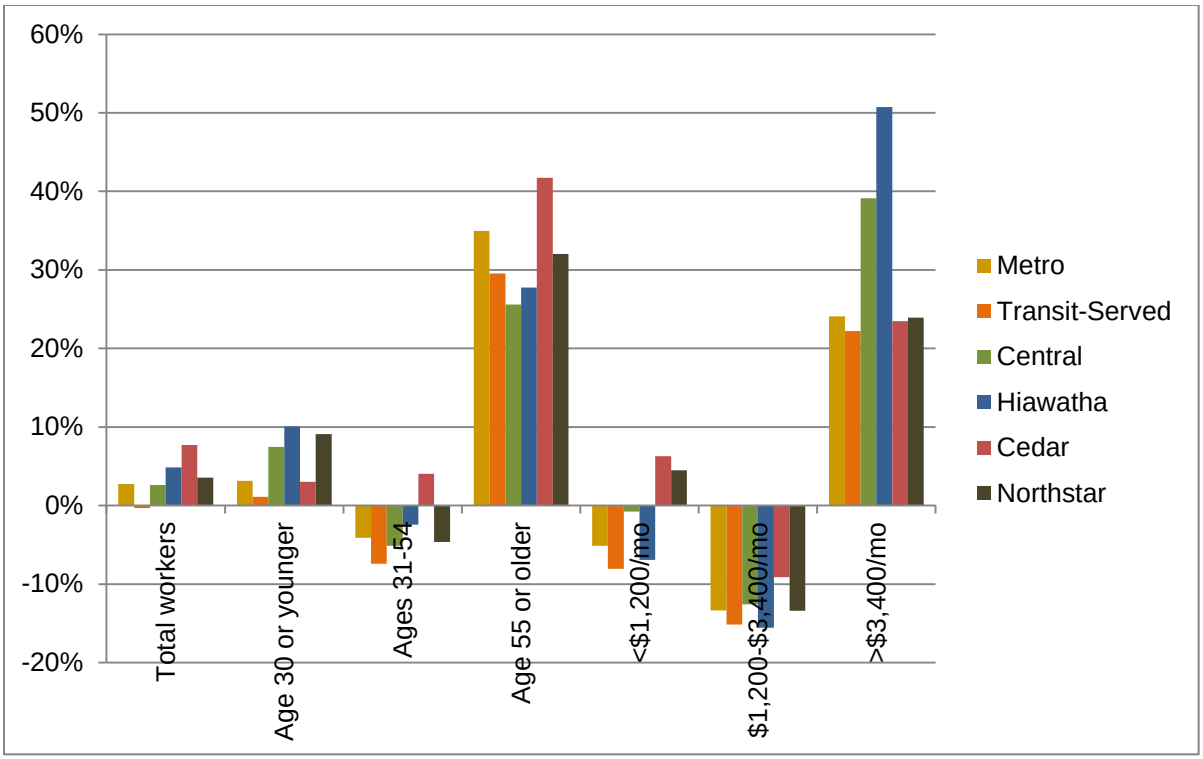

Figure 3-2: Relative Changes in Workers by Corridor

Figures 3-3, 3-4 and 3-5 show localized percentage changes in numbers of workers falling into the three income categories. Though they demonstrate the same broad pattern as Figures 3-1 and 3-2, several interesting local trends do appear:

- Low-wage workers increase significantly in the suburbs. This trend holds for the impact areas of the suburban study corridors, but does not appear vastly different from the baseline trend.
- Numbers of low-wage workers either remain roughly constant or increase in most blocks along both urban light rail corridors, particularly toward the northern end of the Hiawatha corridor and the eastern end of the Central Corridor.
- Workers in the middle income group decrease in number throughout the metro. The trend holds for the study corridors, with the exception of a small concentration of growth/stasis near the northern end of the Hiawatha line. This concentration extends beyond the transitway impact area, as defined here, and appears tied to the Lake Street corridor.
- Workers in the highest LEHD wage category increase in almost all areas. Some of the largest increases percentage-wise occur near the northern end of the Hiawatha corridor and the eastern end of the Central Corridor route.

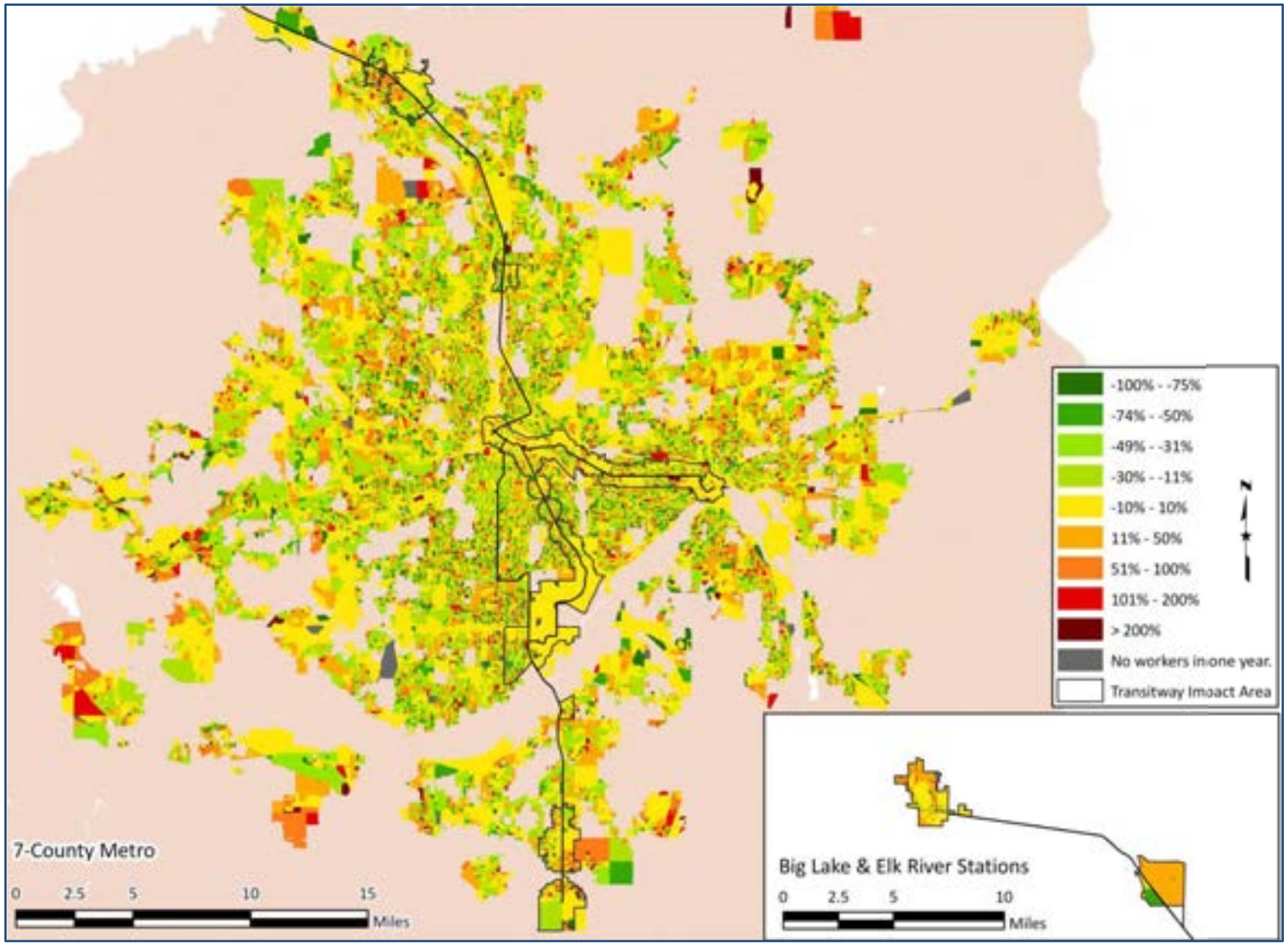

Figure 3-3: Change in Workers Earning <$1,200/Month

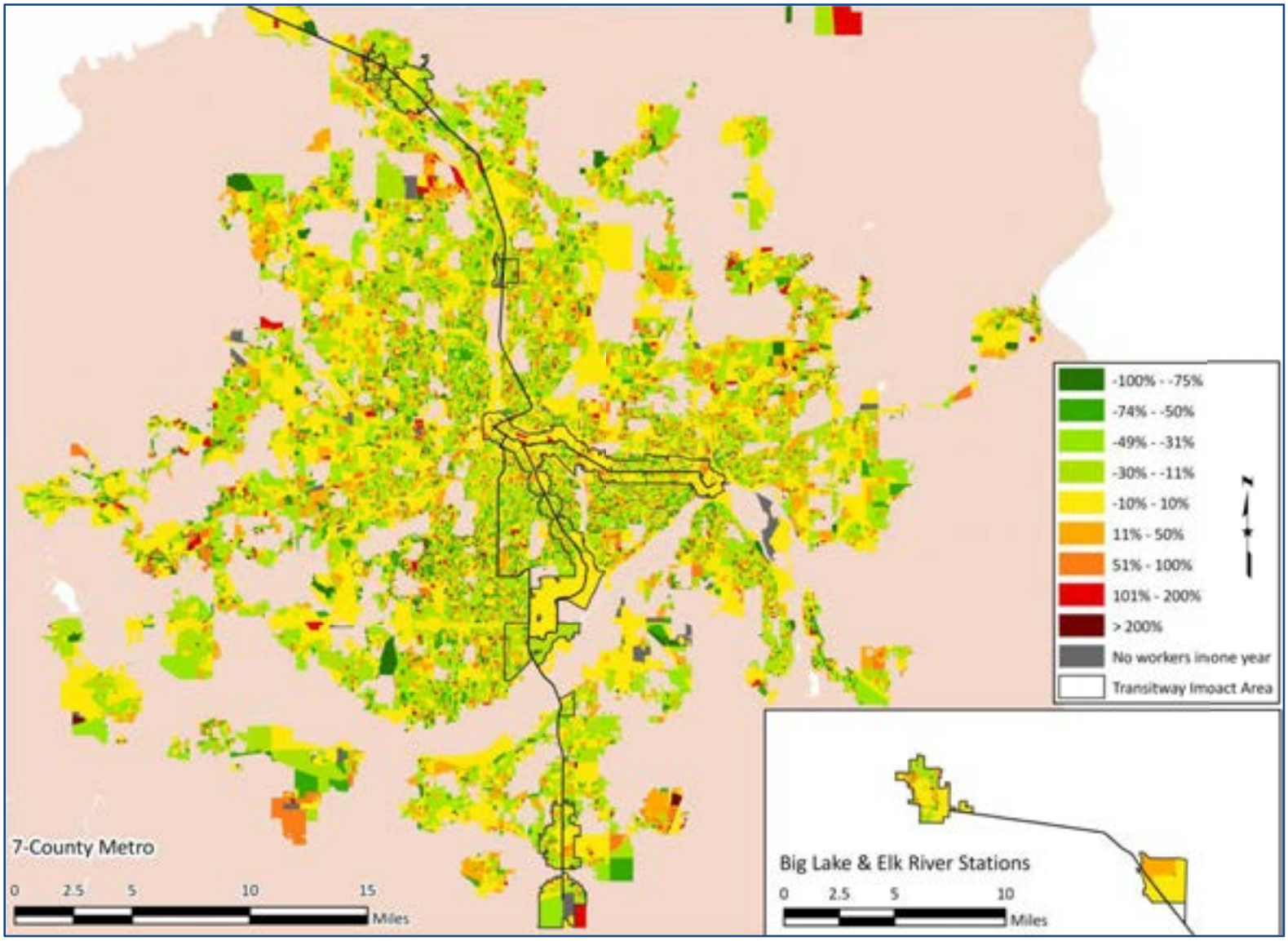

Figure 3-4: Change in Workers Earning $1,200 - $3,400/Month

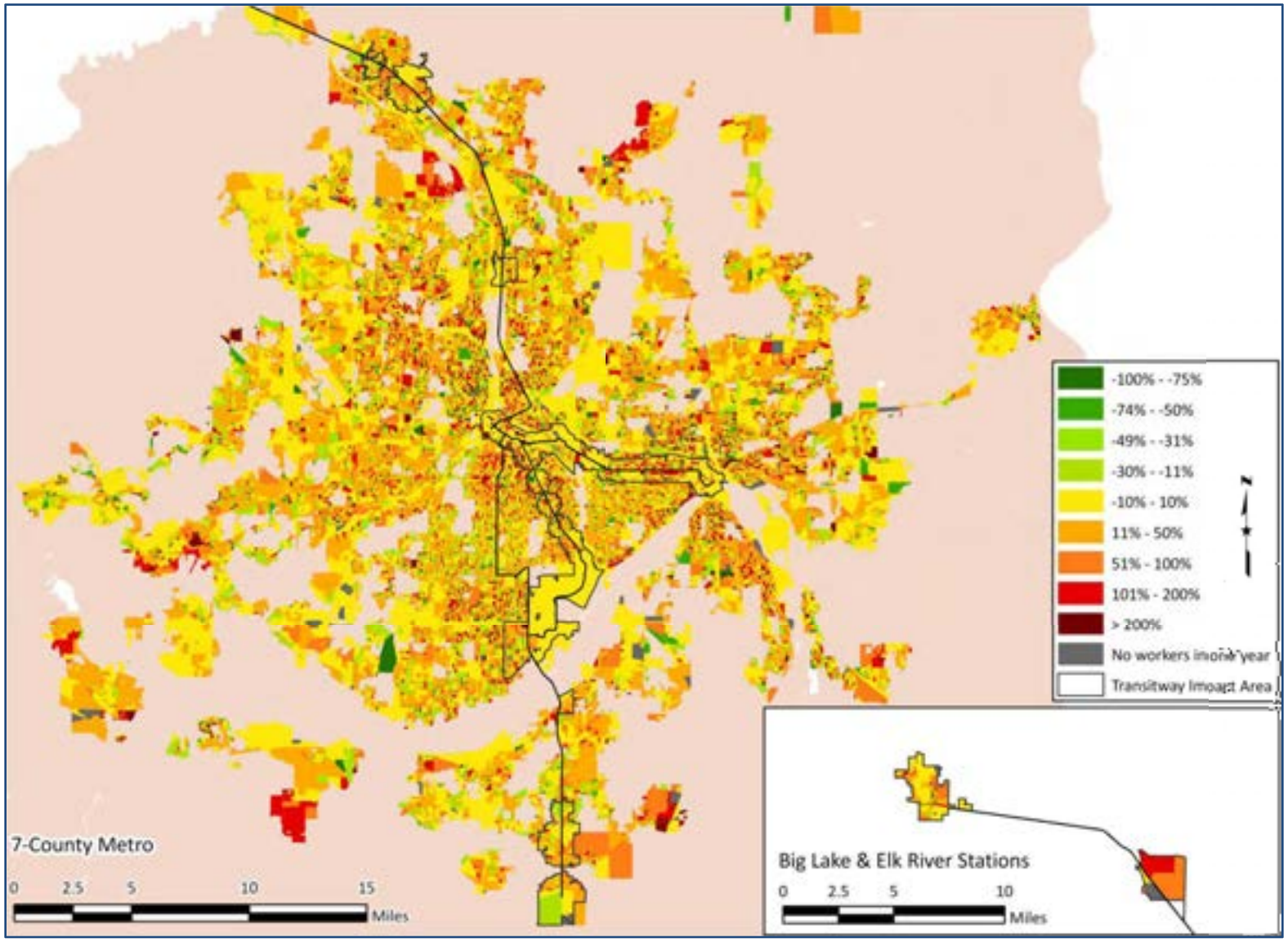

Figure 3-5: Change in Workers Earning >$3,400/Month

3.1.2 Changes in Industries of Workers

Figures 3-6 and 3-7 show changes in workers employed in twenty industry groups, as defined by two-digit NAICS codes. Overall, the graph of raw changes in metro-wide and transit-served area totals shows that declining industries (such as manufacturing and construction) decline by roughly equal absolute numbers in the metro as a whole and the transit-served area. In other words, the transit-served area accounts for most of the net declines in residents employed in these sectors. Growth industries (such as professional, scientific and technical services, educational services, as well as health care and social assistance) do grow significantly in the transit served area, but often show nearly double that growth in the metro as a whole: roughly half the new workers in these industries (in net terms) live outside the transit-served area.

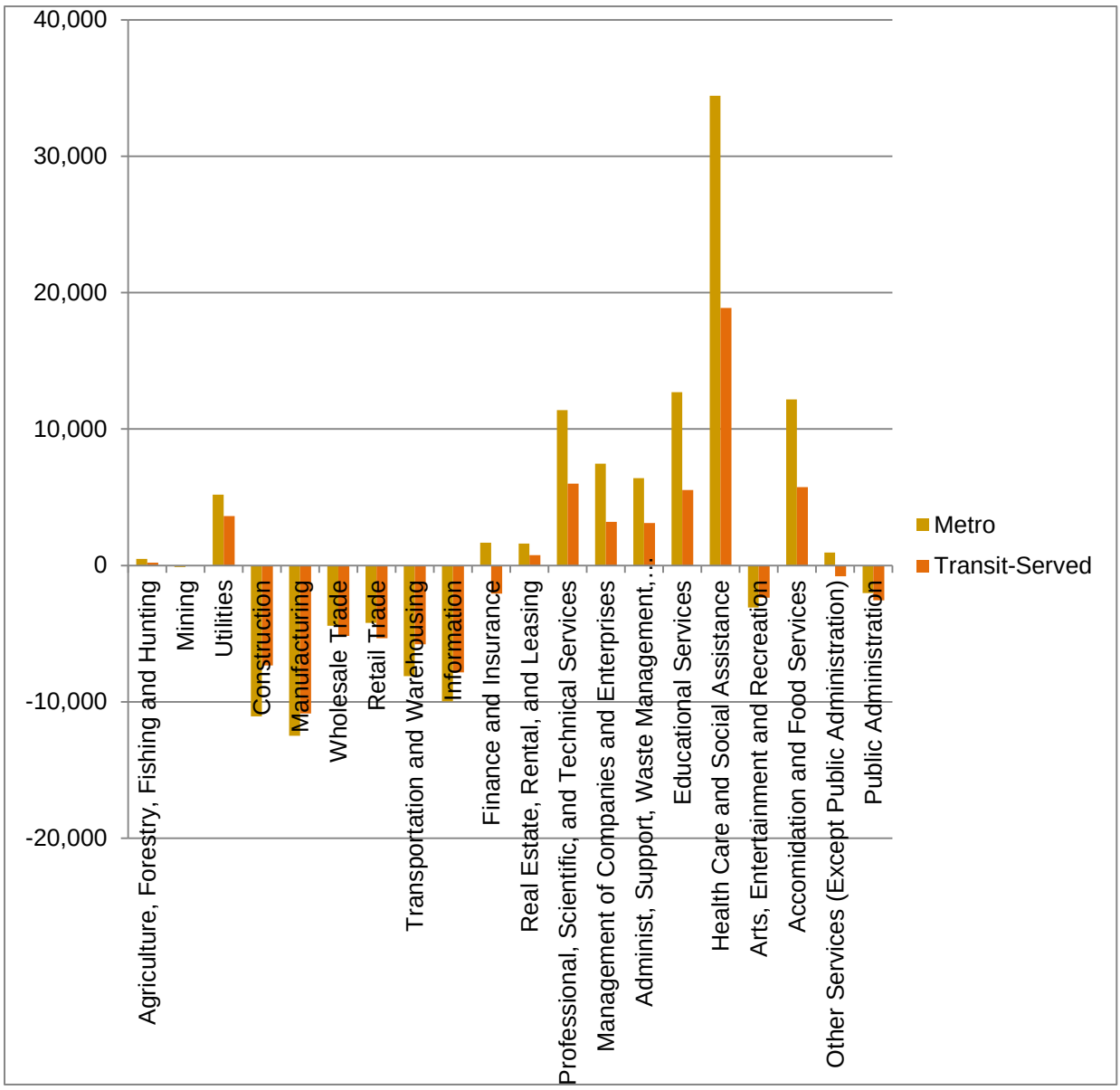

Figure 3-6: Overall Change in Industries of Workers

Figure 3-7 shows that residents employed in most industry groups change by generally similar percentages in transitway impact areas as in both the transit served area and the metro. The Hiawatha corridor and the suburban corridors demonstrate somewhat larger gains in several industry groups associated with white-collar professional jobs, while the Central Corridor area show a much smaller gain in managerial employees than any of the other areas, though the Hiawatha corridor is the only area that fails to show significant growth in the administration, services, waste management and remediation industry group. For the most part, however, trends are nearly always in the same direction for the corridors as for the metro and the transit-served area, and magnitudes tend to be similar. (Please note: The forestry, fishing and hunting, mining, and utilities industry groups experience relatively small absolute growth, but grow from very small bases. They are omitted from the relative change graph to avoid distorting the scale.)

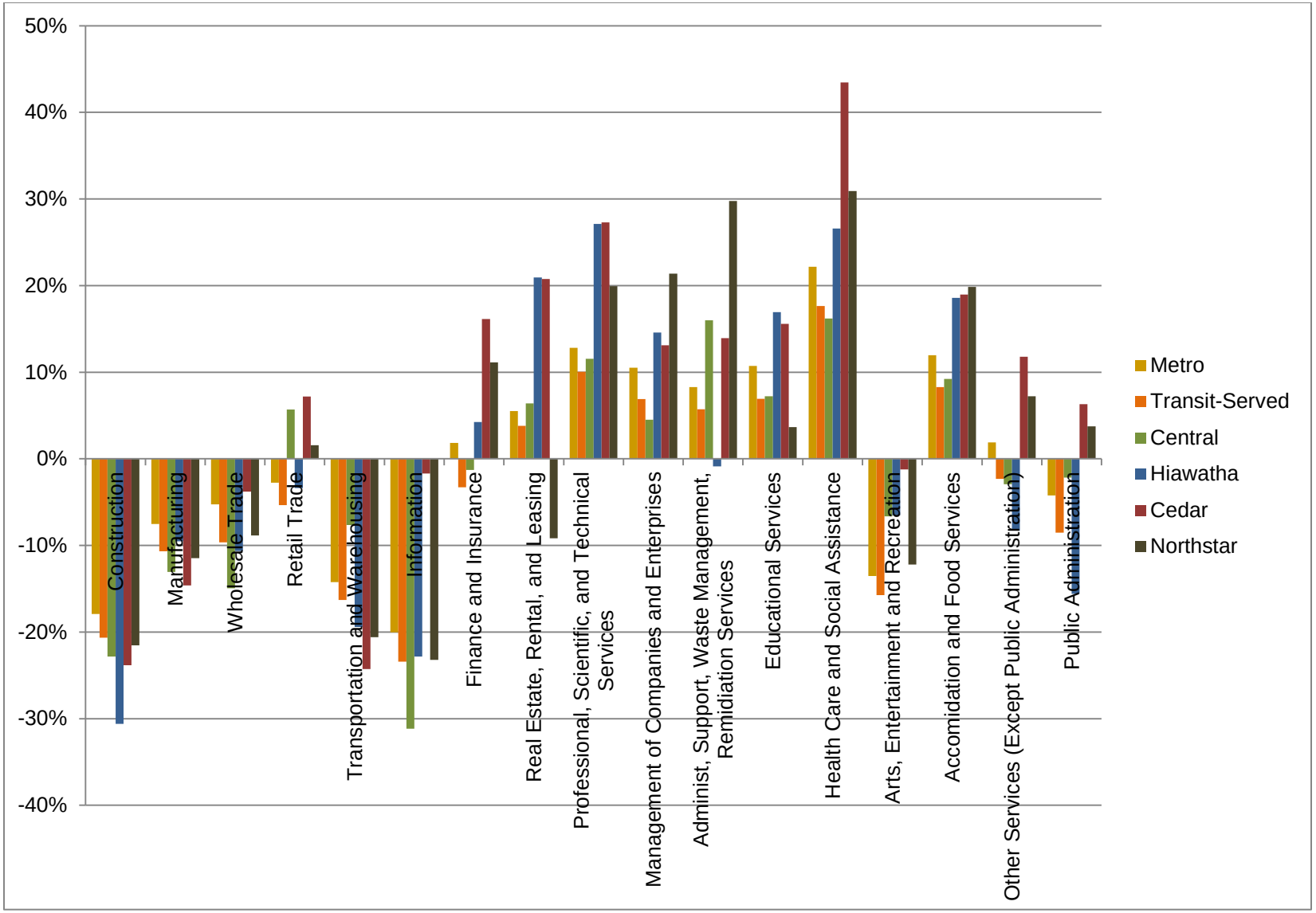

Figure 3-7: Relative Changes in Industries of Workers by Corridor

3.2 Census Data Social Change Indicators

Figure 3-8 shows Census demographics that are accurate at the block level for the entire metro, the transit served area, and each study corridor in 2000. Only data held constant during data swapping (and therefore accurate at the block level) are included. The Cedar Avenue and Northstar impact areas show very similar demographics to both the metro area as a whole and the transit served area. Hiawatha and Central Corridor, however, differ significantly from the former two in terms of racial makeup and home ownership rates. Both urban LRT corridors have significantly lower white and higher African American percentages, and slightly higher Latino percentages. In addition, the Central Corridor impact area has a much larger Asian population percentage than any other area, while the Hiawatha impact area has a noticeably larger—though still small—percentage of American Indian residents than any other area. Differences in home-ownership are equally striking: the Central Corridor and Hiawatha impact areas are the only areas in which a majority of occupied housing units are not owner-occupied. This pattern may point to more favorable conditions for rapid neighborhood social change along these corridors due to less secure housing tenure, and traditionally high turnover rates for rental housing.

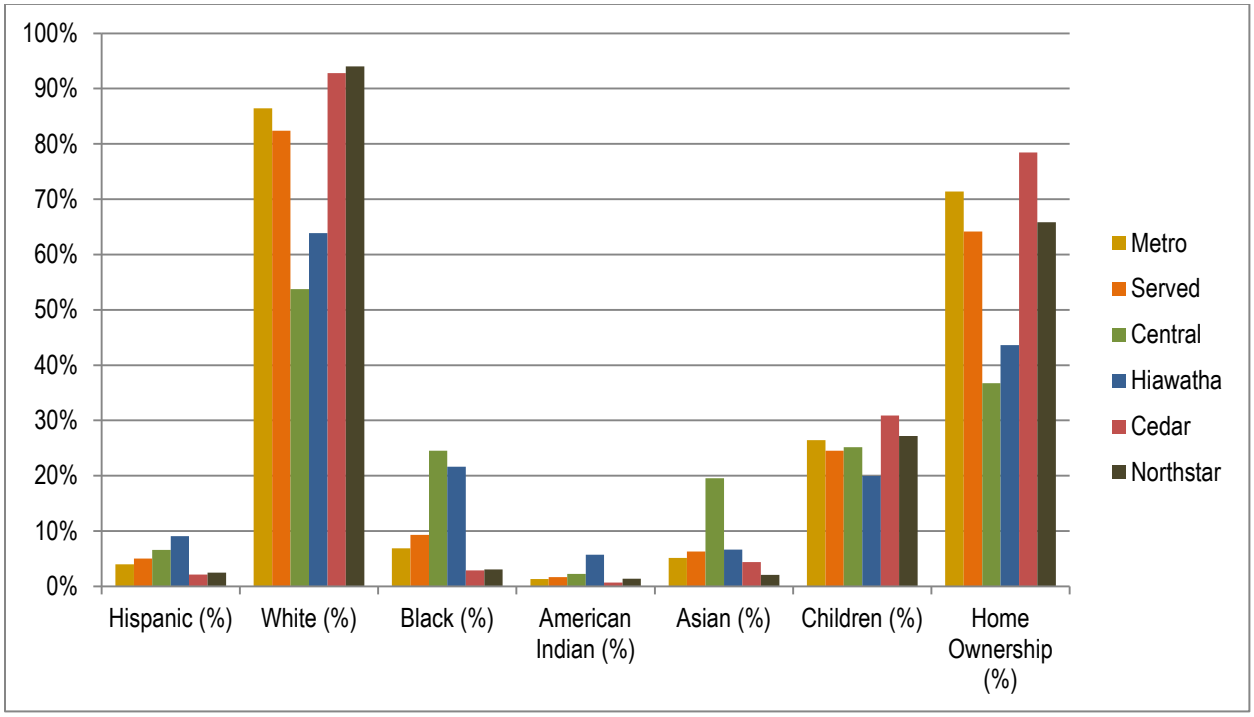

Figure 3-8: Baseline Census Demographics (Year 2000)

Figure 3-9 shows the same Census demographics for 2010. Overall, the Twin Cities metropolitan area has become somewhat more racially diverse, with non-Hispanic whites accounting for roughly ten percentage points less of the metro population as compared with 2000. Modest increases in Hispanics', African Americans' and Asians' respective percentages account for much of the difference. Children account for a slightly smaller percentage of the population, while home ownership rates change little. Most inter-corridor differences are quite similar to those seen in 2000, with the exceptions of Hispanics and African Americans. Hiawatha shows a greater difference for Hispanics, while the urban-suburban difference lessens for African Americans.

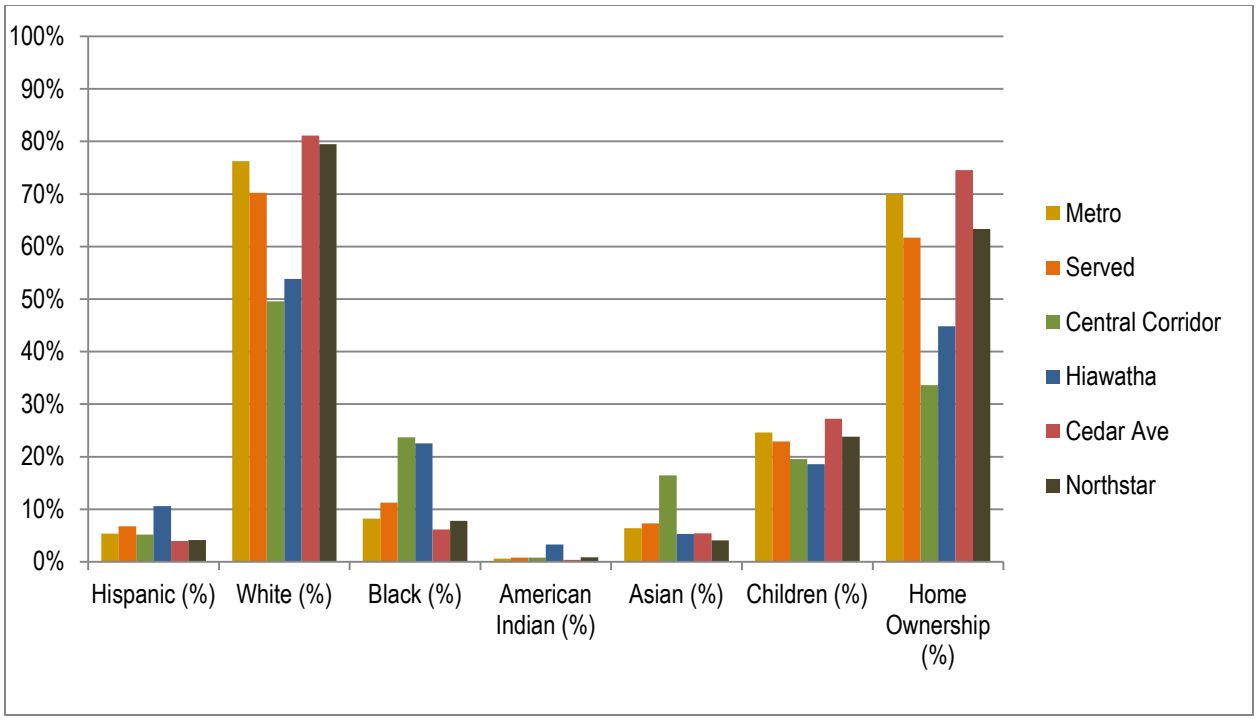

Figure 3-9: Census Demographics, 2010

Figures 3-10 and 3-11 show percentages of minority residents in Twin Cities census blocks in 2000 and 2010, respectively. Significant concentrations of racial minority residents are present near the northern end of the Hiawatha corridor and the eastern end of the Central Corridor route. These high-minority (often majority-minority) areas stand out from their surroundings. Suburban blocks with high minority percentage become much more common in 2010, especially in the northwest metro. Figures 3-12 and 3-13 show percentages of owner-occupied housing in the same years. Many areas with high concentrations of minority residents match up strikingly well with the largest areas of consistently low home-ownership rates in the metro, though less change is apparent in housing tenure patterns than in minority residents' places of residence.

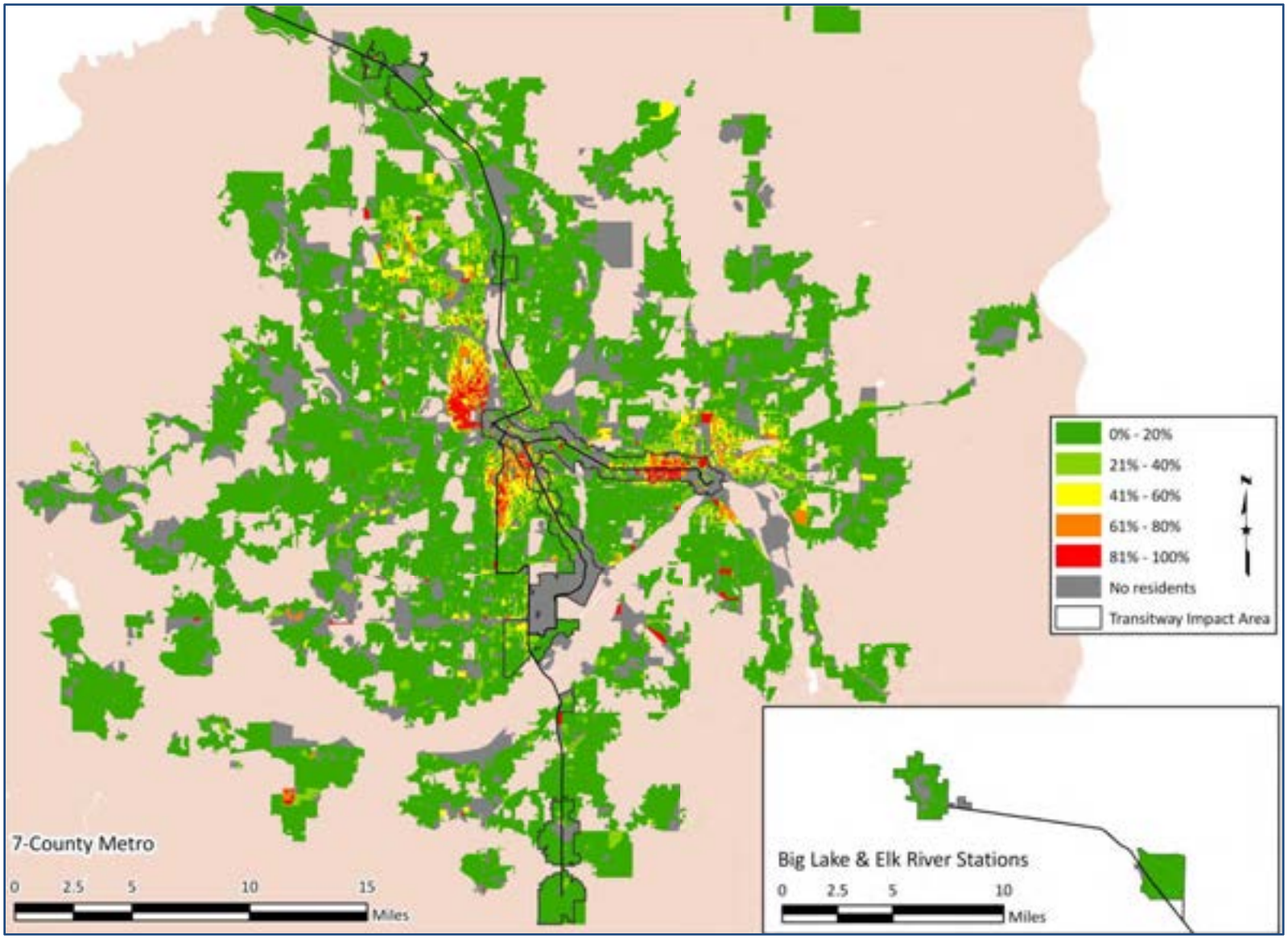

Figure 3-10: Percentages of Minority Residents, 2000

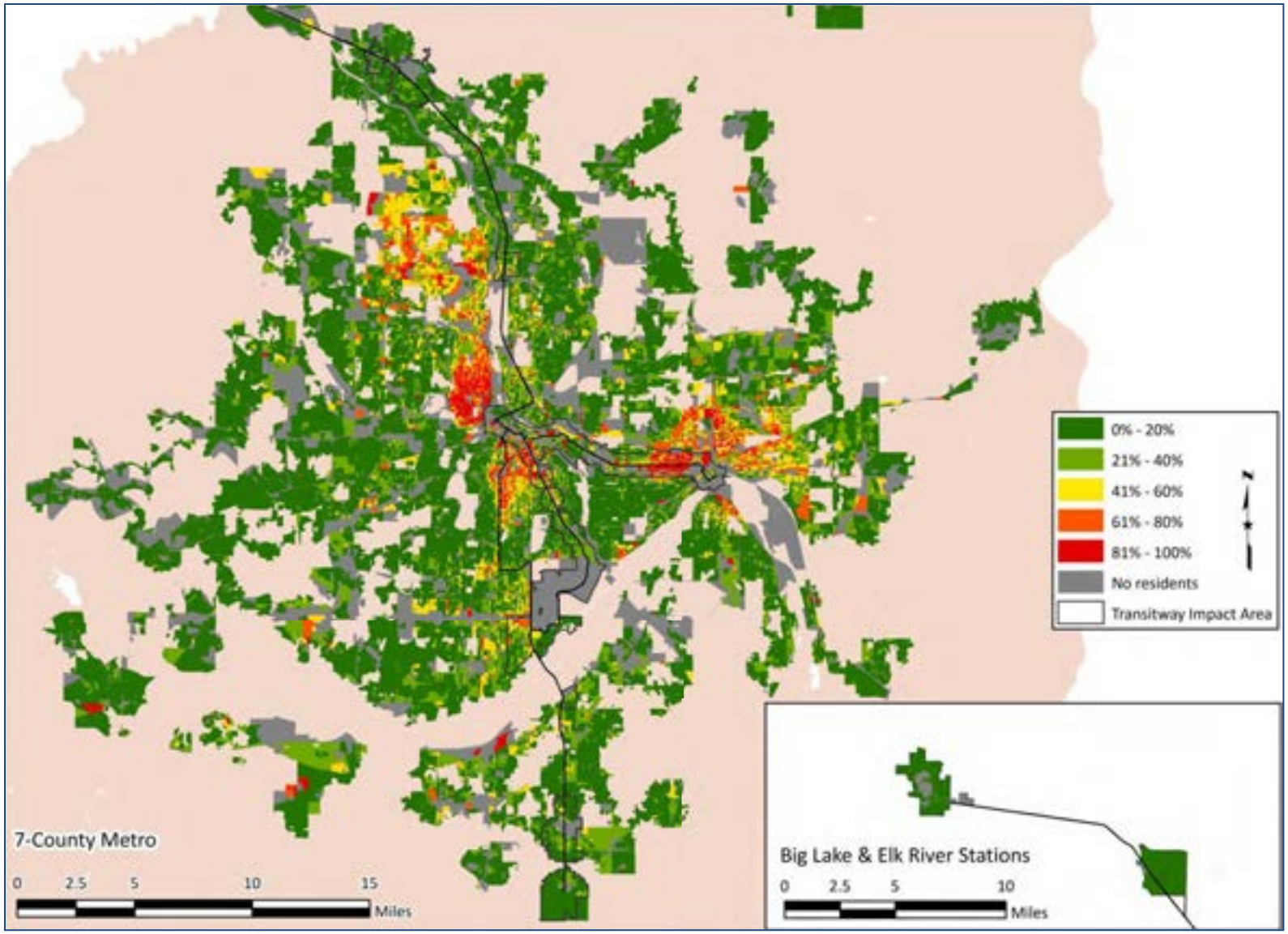

Figure 3-11: Percentages of Minority Residents, 2010

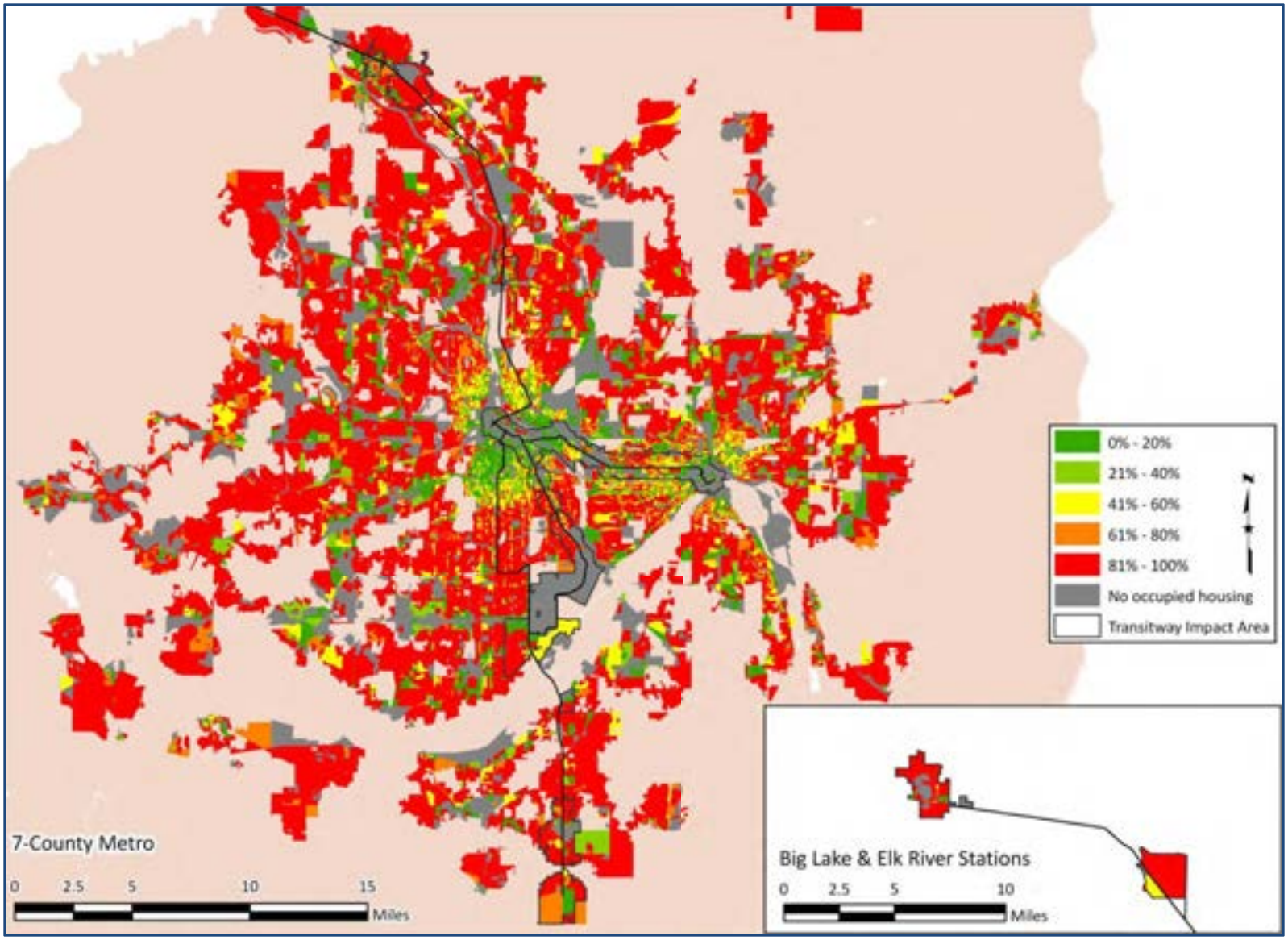

Figure 3-12: Percentages of Owner-Occupied Housing, 2000

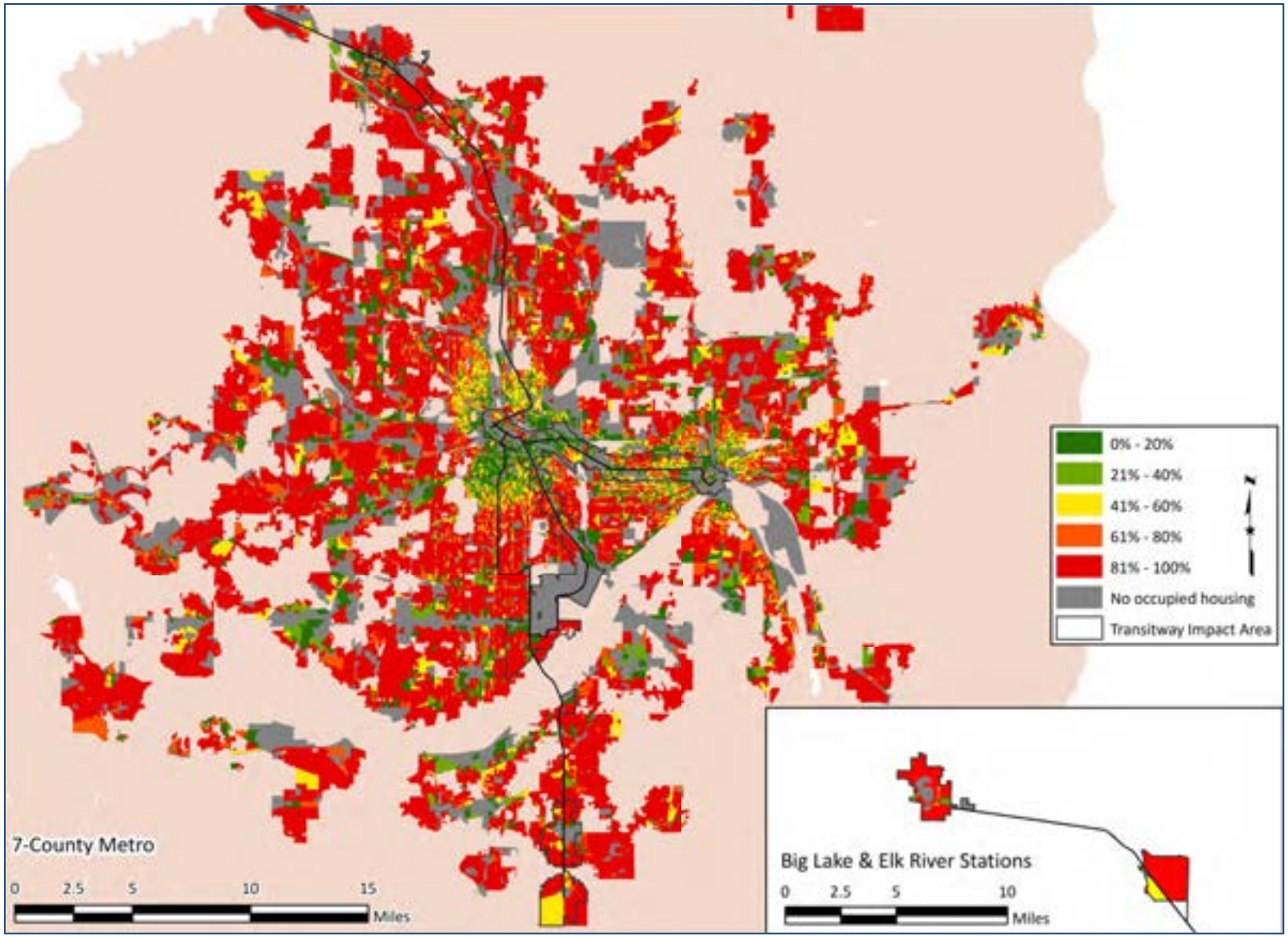

Figure 3-13: Percentages of Owner-Occupied Housing, 201

4 Survey of Residents

A key part of the study was examining how residents of neighborhoods near transitway stations perceive neighborhood change, as well as how socioeconomic characteristics shape those perceptions. This research task involved a random-sampled survey of 750 households located in sixteen neighborhoods along existing and planned Twin Cities transitways. This chapter describes the questionnaire and survey process employed.

4.1 Questionnaire

The questionnaire revolves around identifying respondents who see themselves "winning" or "losing" from changes in their neighborhoods and transitway development. The four study corridors are all at different stages of development, and transitways may continue to drive neighborhood changes long after completion. To address these issues, the survey instrument asks respondents about changes they observed over the past five years and changes they expect over the next five years. The questionnaire also asks respondents about specific changes in their neighborhoods, their preferences of development types, their travel behavior and perceptions of transit, as well as background demographic information.

4.1.1 The Four Key Questions

The questionnaire sorts respondents into "winners" and "losers" based on their responses to four key questions: (Note: Each questionnaire identifies the transitway corridor in question by name.)

> *Overall, has this neighborhood become a better or worse place to live over the PAST five years—or since you moved in—or has it stayed about the same?*
>
> *Overall, what is your opinion of any effects the [transitway] has had on the neighborhood so far?*
>
> *Overall, will this neighborhood become a better or worse place to live over the NEXT five years, or will it stay about the same?*
>
> *Overall, what is your opinion of how the [transitway] will affect this neighborhood in the future?*

Answers are multiple-choice, using a five-point Likert scale as follows: much worse, somewhat worse, about the same, somewhat better, much better (for the neighborhood questions); strongly negative, somewhat negative, neither negative nor positive, somewhat positive, strongly positive (for the transitway questions). Based on these answers, respondents can be grouped into those who suffer due to overall neighborhood changes and the transitway, those who suffer due to overall neighborhood change but gain (or suffer less) due to the transitway, those who gain from overall neighborhood change but suffer (or gain less) due to the transitway and those who gain from overall neighborhood change and the transitway, as shown in Table 6-1.

Table 4-1: Key Questions

		Transitway Impact	
		Positive	**Negative**
Neighborhood Change	**Better**	Gain, augmented by transitway.	Gain, offset by transitway.
	Worse	Loss, alleviated by transitway.	Loss, compounded by transitway.

These questions allow us to distinguish between respondents' perceptions of changes in the neighborhood as a whole and their perceptions of the specific impacts of transitways. Asking both the neighborhood and transitway questions in the past tense, then repeating them in the future tense allows us to better compare transitways at different stages of development.

4.1.2 Topics Covered

The questionnaire is divided into three sections by broad topics of questions. The first section deals with questions about the neighborhood. These questions cover changes the respondent has observed in the past five years, current conditions and changes the respondent expects in the next five years. Regarding changes observed/expected in the neighborhood, respondents are asked how related each is to the transitway. The goal of this section is to determine how respondents perceive:

- The trajectory of neighborhood change in the recent past,
- Current social conditions in and physical attributes of the neighborhood,
- The ways they expect their neighborhood to change in the future, and
- The specific impacts the transitway has had and will have on the neighborhood.

The second section of the questionnaire asks respondents about their travel behavior, including place of work and/or school, mode choice for commute and personal trips and attitudes toward transit. Key goals of this section include:

- Establishing how well respondents' commutes are served by current and planned transit,
- Determining how often respondents travel by transit, walking, bicycling and driving for commute and personal trips,
- Examining how respondents perceive the quality of transit service,
- Measuring how often respondents use/plan to use the transitway in their neighborhood, and
- Exploring what factors drive respondents' decisions to use/not use the transitway.

The final section of the questionnaire collects detailed demographic, social and economic background information on the respondent and his or her household. Topics covered include age, family type, housing costs and tenure, as well as education, occupation, income, vehicle ownership, gender, race/ethnicity and nativity status. The information gathered by this section allows the research team to:

- Determine how representative the survey sample is of the study areas' population through comparisons with census data, and to
- Explore how respondents' perceptions of neighborhood change and transitways differ along the lines of various social groups.

See Appendix A for an example of the questionnaire employed.

4.1.3 Versions

Data collection employed a unique version of the questionnaire for each study corridor, so as to reflect key differences in timeline and circumstances. However, these versions were extremely similar, and in most cases identical except for verb tense, etc. In limited cases, a question deemed important for one or more corridors was clearly not applicable to the others and only appeared in the questionnaires it was relevant to. (For example: the Central Corridor questionnaire asks if the availability of rail in the neighborhood would make transit more attractive; this question was not applicable to completed rail corridors.)

Due to varying levels of education and English language proficiency along the Central Corridor and Hiawatha light rail lines, the survey team conducted a full in-person interview for every response on these corridors. Respondents in Cedar Avenue and Northstar neighborhoods were offered a choice an in-person interview or a self-administered written questionnaire. (In the end, all but four chose the latter.) The personal interview and self-administered versions of the questionnaire for each of these corridors were identical with one exception: the self-administered versions included formatting, directions and branching instructions intended to make the survey experience for a respondent as clear and easy as possible without the aid of a trained interviewer.

4.2 Survey Process

4.2.1 Choosing the Study Neighborhoods

The first stage of applying the survey involved selecting sixteen study neighborhoods: four individual neighborhoods along each of the four corridors. The major differences between corridors required some differences in precise selection criteria; however, the selection process always revolved around the following core principles:

Representativeness—The authors selected neighborhoods to cover the full range of social conditions and development types in areas served by each of the study corridors.

Relevant definitions—When defining neighborhood boundaries, the authors applied existing boundaries of neighborhood planning districts, station areas and park and ride catchment areas, as appropriate for areas and development types.

Oversampling of vulnerable populations—The authors chose neighborhoods to include more than a representative portion of populations vulnerable to displacement and other potential negative consequences of transit-related neighborhood change.

Table 4-2 lists study neighborhoods by corridor, as well as their key geographic, physical and social characteristics.

Table 4-2: Study Neighborhoods

Corridor	Neighborhood	Definition	Description	Social Mix
Central Corridor	*Prospect Park*	Neighborhood planning district	Urban neighborhood; mostly single-family, some student apartments and public housing.	Affluent single-family homeowners; student renters; low-income public housing occupants.
	Hamline-Midway	Neighborhood planning district, ≤0.5mi from stations	Urban neighborhood; primarily single-family, some small-scale apartments.	Predominantly middle-class; low-income residents mixed in
	Thomas-Dale	Neighborhood planning district	Urban neighborhood; single family homes/duplexes, some apartments & public housing	Diverse income mix; many African-Americans and Asian immigrants
	Summit-University	Neighborhood planning district, ≤0.5mi from stations	Urban neighborhood; single family homes/duplexes, some apartments & public housing	Diverse income mix; many African-Americans and Asian immigrants
Hiawatha	*North Loop*	Neighborhood planning district	Downtown edge, apartments, condos, lofts. Former industrial	Largely affluent, some low-income
	Phillips	Neighborhood planning district, ≤0.5mi from stations	Urban neighborhood. Ranges from single-family to high-density public housing	Highly diverse in income, race/ethnicity, nativity. Large American-Indian community.
	Standish	Neighborhood planning district, ≤0.5mi from stations	Urban neighborhood. Primarily single-family; some duplexes and small apartments	Predominantly middle-class and white, though other income and racial groups present.
	Mall of America	Neighborhood planning district	Inner suburb. Mostly single-family, some apartments.	Overwhelmingly white & middle class; aging.

Table 4-2 (Cont'd)

Corridor	Neighborhood	Definition	Description	Social Mix
Cedar Ave	*Cedar Grove*	Bounded by freeway and major streets ~0.5mi from station.	Post-war suburb. Single family, with some townhomes and low-rise apartments.	Middle-class, white.
	Apple Valley Walk & Ride	Half-mile radius of planned on-line local stations.	Late 20th Century suburb. Single family, with some townhomes and apartments near Cedar Ave.	Middle-class, white.
	Apple Valley Park & Ride	> 0.5mi, <1mi radius from Apple Valley Transit Station park and ride.	Late 20th Century suburb. Predominantly single-family	Middle-class, white.
	Lakeville-Cedar	1mi radius from station	Leading edge of development. Large single-family homes, some townhomes.	Middle-class, white.
Northstar	*Fridley*	Bounded by Mississippi River and major streets ~0.5 mi from station.	Post-war suburb. Single family, with some townhomes and low-rise apartments.	Middle-class, white.
	Coon Rapids	1mi radius from station	Late 20th Century suburb. Single family, with some townhomes and apartments along major streets.	Middle-class, white.
	Anoka	0.5mi radius from station; stretched on one side to include Main Street	Suburbanized small town. Modest sized single-family, duplexes and low-rise apartments	Middle-class, white.
	Big Lake	City limit	Small town beyond continuous development. Single-family, some townhomes	Middle-class, white.

4.2.2 Sampling *and Recruitment*

The survey process used a geographic cluster sample, with census blocks as the sampling unit. The sampling process aimed for fifty responses per neighborhood. Sampling included three stages: 1) the random drawing of census blocks; 2) the recruitment of households; 3) selection for gender balance within households.

Drawing census blocks In the first stage of sampling, the authors drew a random sample of census blocks within each of the sixteen study neighborhoods. This process began with the selection of all census blocks with centroids inside each survey neighborhood using Geographic Information Systems (GIS) software. The research team then drew a probability-proportional-to-size (PPS) random sample of blocks. A PPS sample is a weighted random sample where a sampling unit with a larger "size"—or sampling weight—has a greater probability of being selected. In this case, the number of households in each block (obtained from the 2000 census) served as the sampling weight.

Recruiting households To begin the recruitment process, households on the sampled blocks received a postcard or flyer advertising the study and promoting the importance of studying transitway impacts in their neighborhood. Several days later, researchers went door-to-door on sampled blocks, recruiting as many households as possible. If no one answered the door, researchers made repeat attempts, varying time of day and day of the week, until they either reached a member of the household or made three attempts without success.

Sampling for gender balance Door-to-door recruited surveys commonly recruit a disproportionately large number of female respondents. This occurs because women tend to answer the door more often than men. To compensate for this, when a household agreed to participate, the researcher would ask to speak to the adult in the household who had the most recent birthday. Since birthdays are randomly distributed for both men and women, this technique provides gender balance. For the sake of practicality, if the adult with the most recent birthday was not home, or not interested in participating, any adult member of the household would be allowed to participate.

4.3 Results

4.3.1 Interview Totals and Locations

The survey produced 750 responses. Central Corridor yielded 195; Hiawatha, Cedar Avenue and Northstar generated 192, 190 and 173, respectively. The lower total for Northstar reflects the time-consuming nature of door-to-door surveying in the outer suburbs. The response rate of the survey was 35%—meaning 35% of households reached by door-to-door recruiting agreed to participate. Interviewers did not record reasons for refusal: consent to participate in research was not obtained in such cases. The survey obtained a relatively even distribution of responses—42 to 60 per neighborhood. Figures 4-1, 4-2, and 4-3 show neighborhood-by-neighborhood breakdowns of response totals, as well as approximate locations and densities of responses. (Responses are aggregated to a 100m grid for Central Corridor, Hiawatha and Cedar Avenue so as to respondents' privacy; Northstar responses use a 200m grid due to a smaller map scale.)

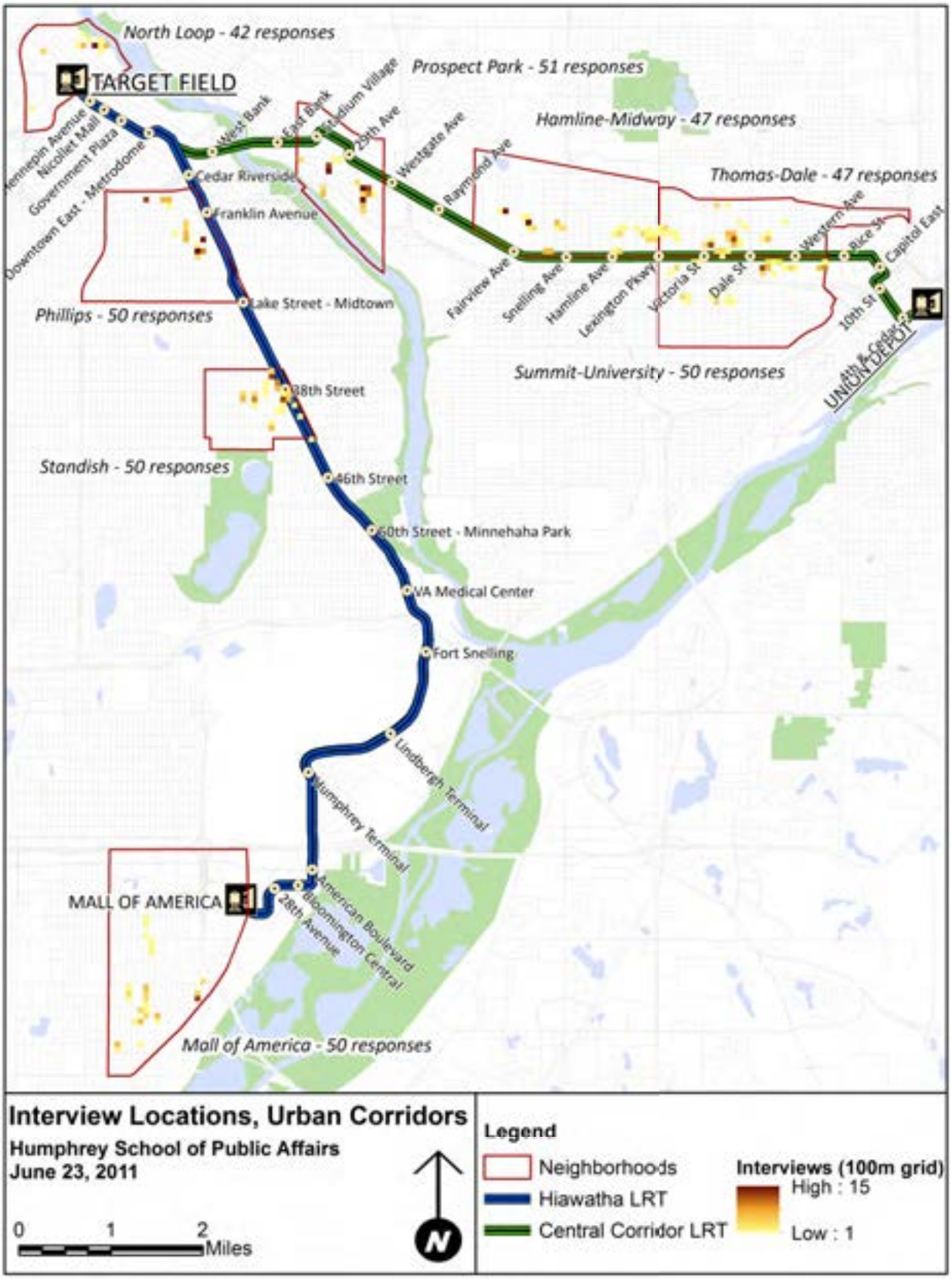

Figure 4-1: Interview Locations, Central Corridor and Hiawatha

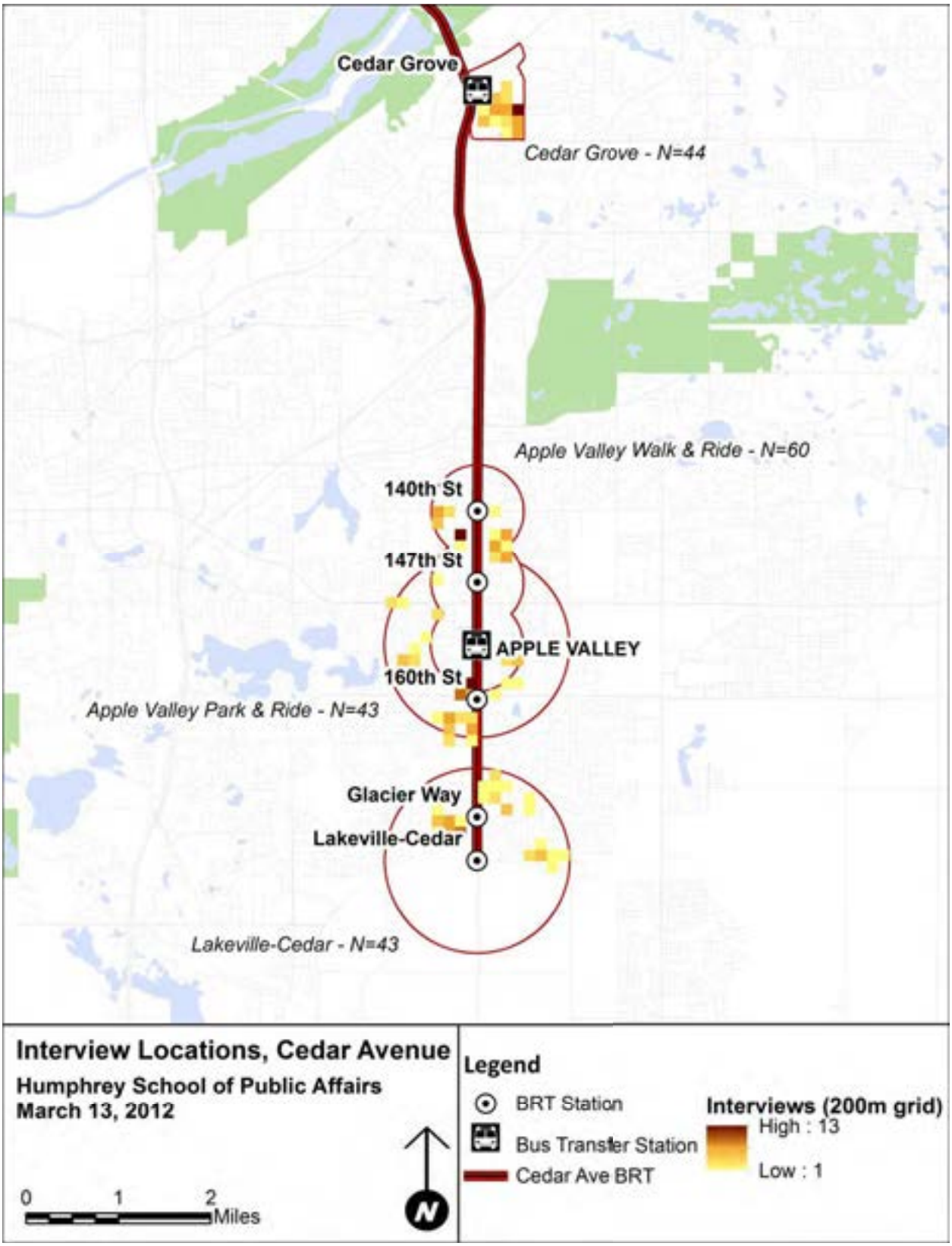

Figure 4-2: Interview Locations, Cedar Avenue BRT

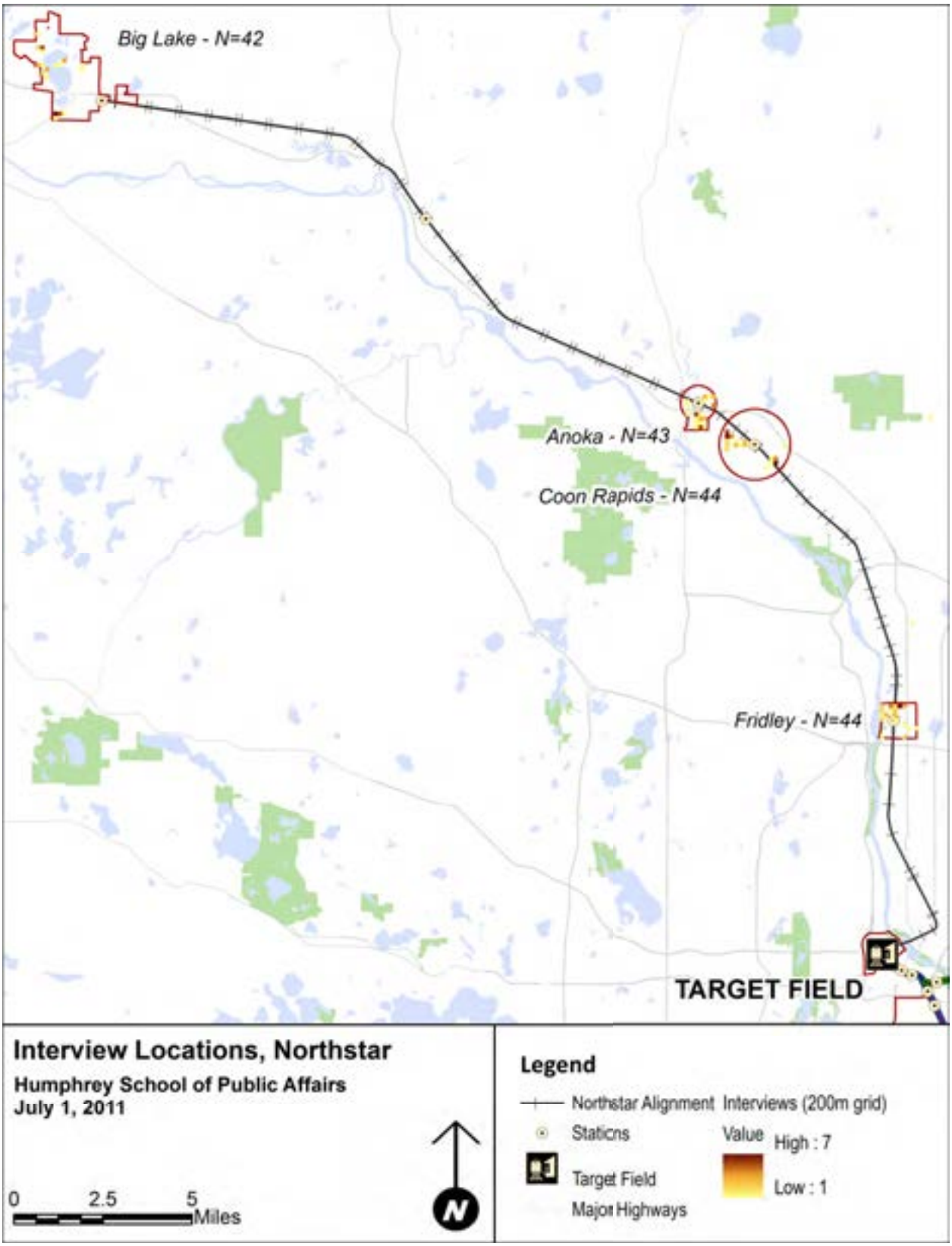

Figure 4-3: Interview Locations, Northstar Commuter Rail

4.3.2 Data Distribution

Figure 4-4 shows key demographic characteristics of the Central Corridor and Hiawatha survey samples as compared with race and gender data from Census 2010 and income data from the American Community Survey 2005-2009 5-year estimates. Census/ACS data used are at the block-group level, for block-groups with centroids inside the sixteen survey neighborhoods.

The Central Corridor sample distribution follows the distribution of the Census/ACS data relatively closely. Though skewed towards white, higher income and female respondents, the disparities are not large. These are also all generally common sampling biases in door-to-door surveys.

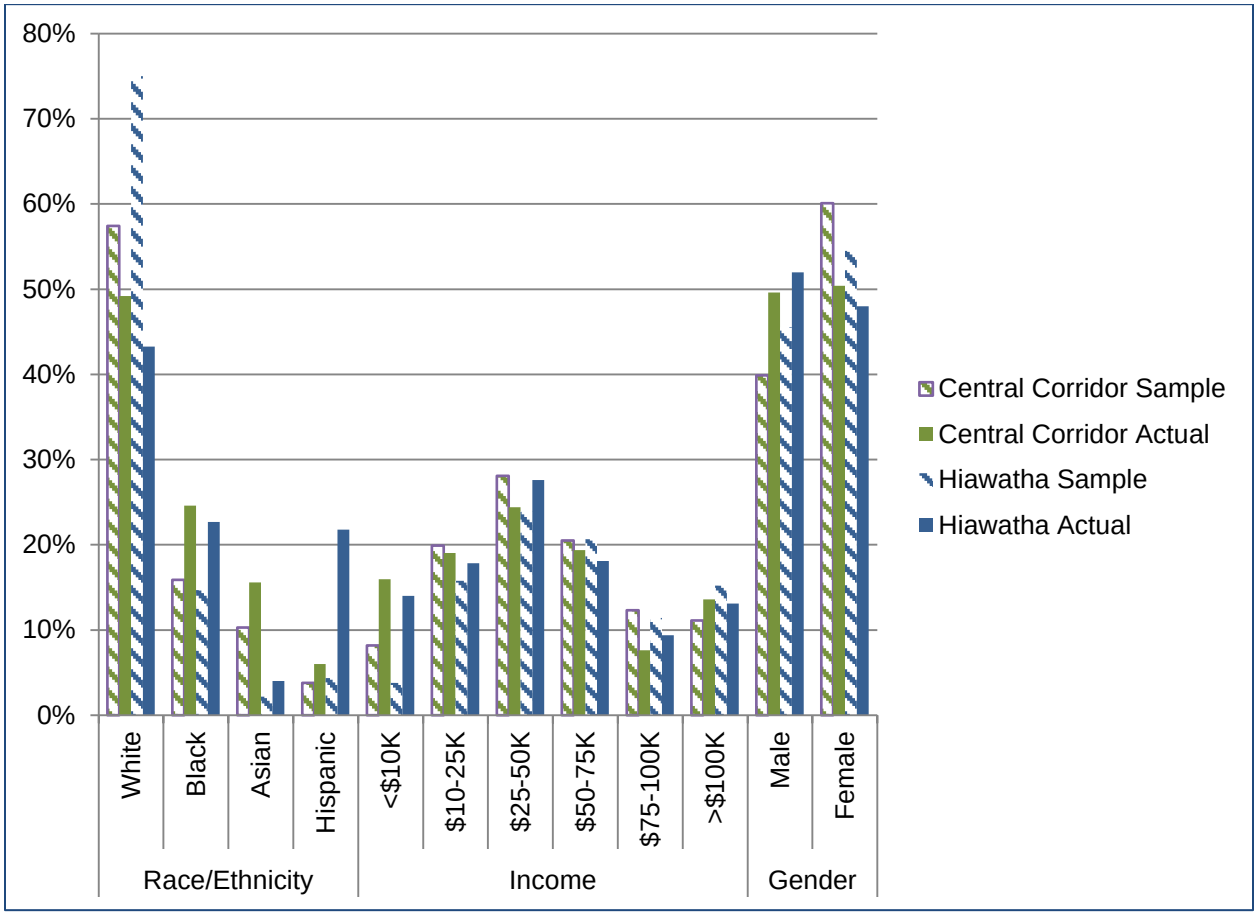

Figure 4-4: Data Distribution as Compared with Census 2010 and 2005-2009 ACS—Central Corridor and Hiawatha

The Hiawatha distribution departs somewhat more from the Census/ACS data for whites and Hispanics, though other categories are generally close together. It is possible that some significant concentration of Hispanic residents may exist in blocks that were not sampled. In addition, language barriers may have been a factor in low recruitment of Hispanic respondents.

Figure 4-5 shows the same data distribution for Cedar Avenue and Northstar. Both corridors produce very similar distributions to Census/ACS data. Though whites are slightly over-represented, the Census/ACS percentages for the major minority groups show that

neighborhoods along these corridors are quite homogeneous racially. Higher income households are slightly over-represented for Cedar Avenue neighborhoods, while middle-to-high income households are somewhat over-represented for Northstar neighborhoods, with both low- and very-high-income households under-represented. The disparities of gender balance almost disappear for the Cedar Avenue and Northstar samples. This may be a result of the strong preference of respondents from these corridors for self-administered questionnaires, which could be filled out by any adult member of the household.

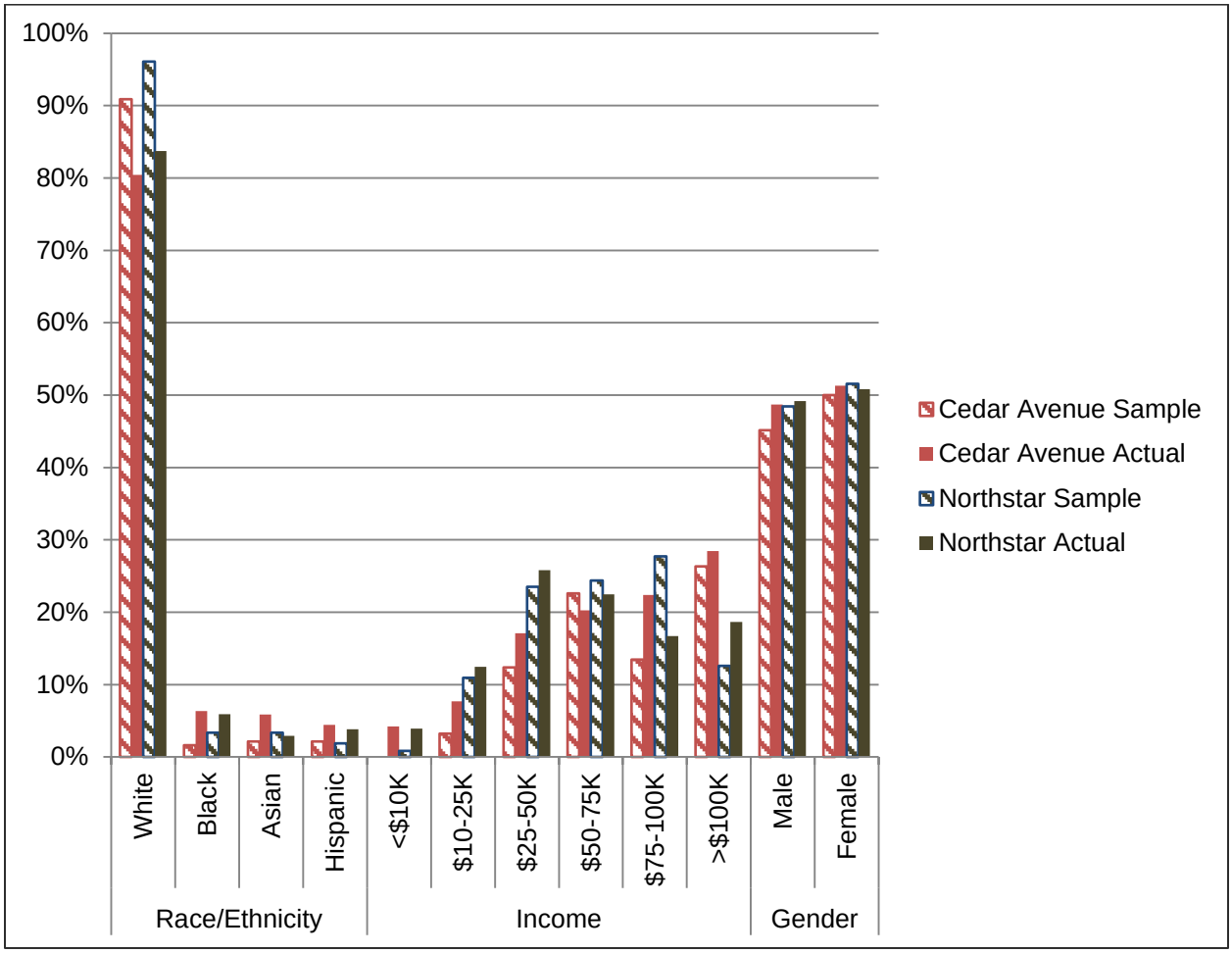

Figure 4-5: Data Distribution as Compared with Census 2010 and 2005-2009 ACS—Cedar Avenue and Northstar

5 Perceptions of Neighborhood Change

5.1 Frequencies of Responses to Key Questions

5.1.1 Overall Perceptions:

Figure 5-1 shows the percentages of respondents from each study corridor with positive, negative and neutral views of past and future change in their neighborhoods. There is an unmistakable divide between urban (Central Corridor and Hiawatha) respondents on the one hand and suburban (Cedar Avenue and Northstar) respondents on the other. Urbanites report more positive and fewer negative perceptions of the overall change in their neighborhoods than suburbanites. In addition, more urbanites expect positive change in the future than report having seen positive change in the past. This pattern is absent for suburban respondents.

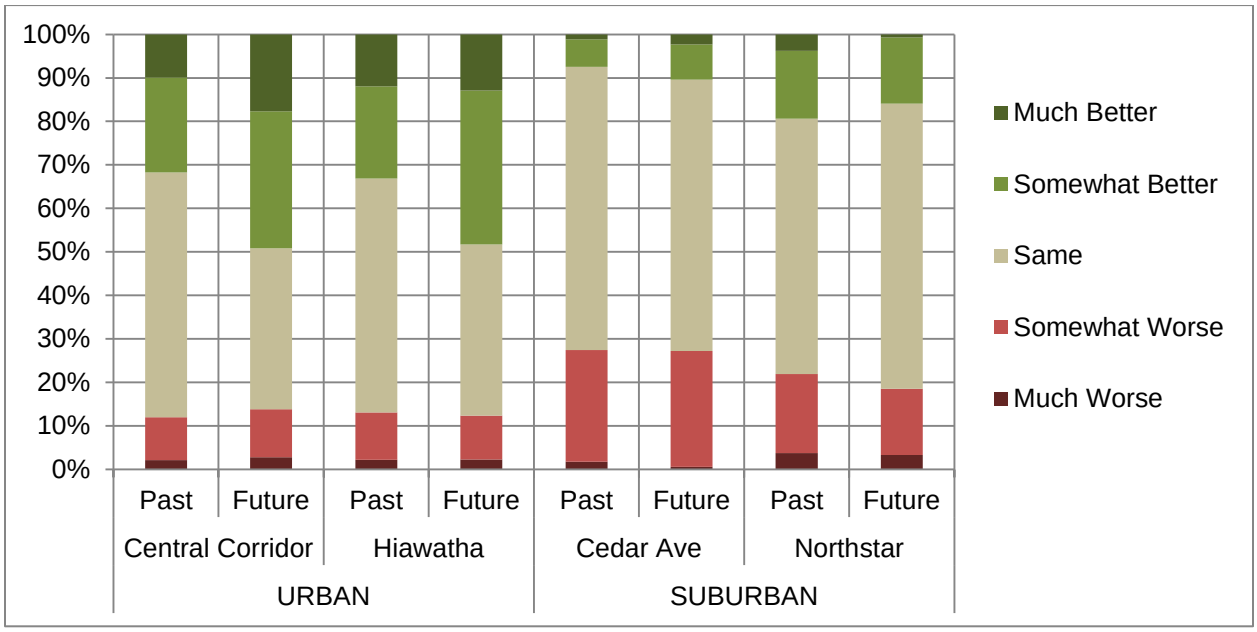

Figure 5-1: Past and Future Perceptions of Neighborhood Change, by Corridor

Figure 5-2 shows respondents' perceptions of the specific effects they have seen and expect on their neighborhoods from their transitway. Perceptions—particularly perceptions of future impacts—are quite positive overall. More respondents from each corridor (urban or suburban) expect positive impacts in the future than report positive impacts in the past, especially for Central Corridor. Hiawatha respondents are the most positive about transit impacts. Cedar Avenue is notable as the only corridor without a majority of respondents expecting positive future impacts. Modest majorities of Northstar respondents see positive impacts, past and future. Once again, there is a major urban-suburban divide.

The divide between Hiawatha respondents and others is not surprising. The Hiawatha line had been operating over five years at the time of data collection—Hiawatha neighborhoods had rail transit for the entire "past" period. The divide between urban and suburban perceptions may relate to the fact that the suburban neighborhoods studied have low levels of basic bus service—suburbanites likely have much less experience with any form of transit.

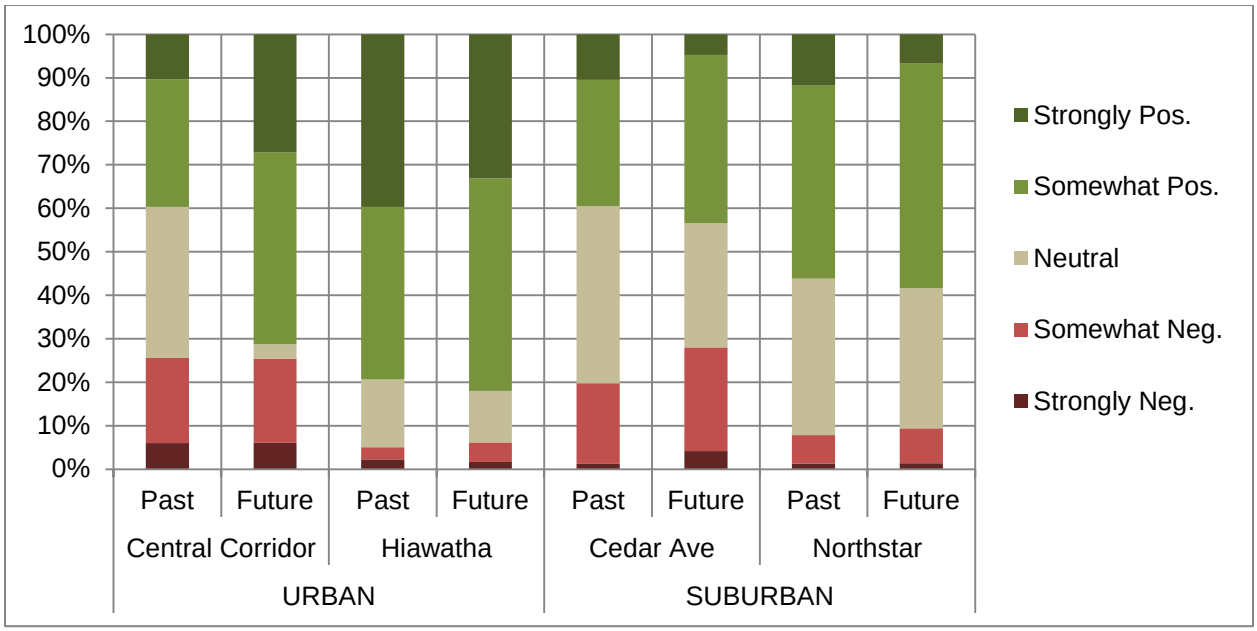

Figure 5-2: Past and Future Perceptions of Transitway Impacts, by Corridor

5.1.2 Inter-Neighborhood Differences in Perceptions

Perceptions of both neighborhood change and transitway impacts vary somewhat between neighborhoods. Table 5-1 shows mean differences for each neighborhood, as well as which differences are statistically significant. Mean difference refers to the mean value for the neighborhood in question minus the mean value for all other responses in the corridor along which that neighborhood is in question. Significance levels stem from a Wilcoxon Mann-Whitney test, an independent samples test which produces valid results for an ordinal variable.

In Central Corridor neighborhoods, only Prospect Park and Thomas-Dale demonstrate statistically significant differences from the rest of the corridor, and at that only for respondents' expectations of future changes in the neighborhood. Prospect Park demonstrates a less positive view of the neighborhood's future, while Thomas-Dale demonstrates a more positive view.

The Hiawatha line produces more statistically significant neighborhood-to-neighborhood differences. Both North Loop and Mall of America have statistically significant differences in perceptions of past neighborhood change, future neighborhood change and future transitway impacts. (Those differences are positive in the case of the former, negative in the case of the latter.) In addition, Phillips shows a significant positive difference for future neighborhood change.

None of the Cedar Avenue neighborhoods have statistically significant differences on any of the four key questions. Along the Northstar line, however, Coon Rapids has a significant positive difference for past transitway impacts, while Anoka also has a significant positive difference for past neighborhood change.

Table 5-1: Inter-Neighborhood Perception Differences—Wilcoxon Mann-Whitney Test

		Past		*Future*	
		Neighborhood	*Transitway*	*Neighborhood*	*Transitway*
Central Corridor	*Prospect Park*	-0.14	0.08	**-0.37****	0.08
	Hamline-Midway	-0.06	-0.1	0.01	-0.06
	Thomas-Dale	0.05	0.11	**0.29***	0.29
	Summit-University	0.16	-0.1	0.1	-0.31
Hiawatha	*North Loop*	**0.55*****	0.19	**0.67*****	**0.5*****
	Phillips	0.07	-0.03	**0.38****	-0.13
	Standish	0.06	0.01	-0.02	-0.07
	Mall of America	**-0.63*****	-0.16	**-0.93*****	**-0.24*****
Cedar Avenue	*Cedar Grove*	0.07	0.15	0.06	0.18
	A.V. Walk-Ride	-0.04	-0.03	0.01	-0.08
	A.V. Park-Ride	-0.04	-0.17	-0.21	-0.14
	179th St	0.05	0.09	0.17	0.09
Northstar	*Fridley*	-0.12	-0.15	-0.16	-0.11
	Coon Rapids	-0.14	**0.42*****	-0.01	0.18
	Anoka	**0.39*****	-0.23	0.09	-0.05
	Big Lake	-0.1	-0.11	0.08	-0.04

Legend: * p<1; ** p<0.05; *** p<0.01

5.1.3 Racial Differences in Perceptions

Particularly with regard to Central Corridor, race has been a significant issue in the Twin Cities transitway planning process. Concerns raised by minority communities over gentrification, initial plans for especially long station spacings in historically minority neighborhoods, planned reductions in local bus service along University Avenue and fears of local business displacement due to light rail construction and the permanent loss of most on-street parking have received significant media coverage throughout the planning stages of the Central Corridor project. In addition, the construction of a major piece of transportation infrastructure along University Avenue raises painful memories for some of the demolition of the historically African American Rondo neighborhood (part of Summit-University) to make way for Interstate 94 in the nineteen-sixties. {{182 Yuen, L. 2009}}

The survey data permit us to test for statistically significant differences in perceptions along racial lines. Table 5-2 shows the results of Wilcoxon Mann-Whitney tests for racial differences along both Central Corridor and Hiawatha. (The numbers of minority respondents in the Cedar Avenue and Northstar samples are too small to permit analysis of racial differences for these corridors.)

Though much media coverage of the Central Corridor process—especially regarding the specter of Rondo—has focused on concerns expressed by the African-American community, African-American respondents only differ significantly from the rest of the sample in the case of past overall neighborhood change, though interestingly in the opposite direction from white respondents. Notably, African-American respondents do not demonstrate any statistically

significant differences from the rest of the sample regarding future changes in the neighborhood or past or future transitway impacts.

Table 5-2: Racial Perception Differences—Wilcoxon Mann-Whitney Test

		Past		*Future*	
		Neighborhood	*Transitway*	*Neighborhood*	*Transitway*
Central Corridor	*White*	**-0.23***	-0.06	0.09	0.14
	African-American	**0.31***	0.16	0.15	0.29
	Asian	-0.04	-0.08	-0.34	**-0.77****
Hiawatha	*White*	-0.25	0	**-0.38****	-0.16
	African-American	0.18	-0.09	**0.35****	0.1

Legend: * p<1; ** p<0.05

Asian respondents, however, underscore publicly expressed concerns over potential negative consequences for minority communities. Asians in the Central Corridor sample have a statistically significant, negative difference from other respondents for anticipated future impacts of light rail. In addition, the difference of means is relatively large (given a variable with a range of 4) at -0.77. It is also significant at the 5% level, as opposed to the 10% level for the significant differences found for whites and African-Americans.

The Hiawatha sample does not include a sufficient number of Asian respondents (only 4) to allow analysis of Asians' perceptions as a group. Even so, white and African-American Hiawatha respondent each have a statistically significant difference in perceptions of future neighborhood change. This difference is negative for whites and positive for African-Americans.

5.1.4 Differences in Perception by Current Transit Use

Though it may at first seem obvious that transit users would be likely to support transit improvements such as transitways, there is evidence that this is not universally the case. In fact, movements such as the Los Angeles Bus Riders Union and concerns expressed in the Twin Cities over proposed reductions to local bus service along the route of Central Corridor suggest that transit users' perceptions of transitways may be more complex. Table 5-3 shows mean differences and significance tests comparing frequent transit users with the remainders of their respective samples.

Table 5-3: Transit Users' Perception Differences—Wilcoxon Mann-Whitney Test

		Past		*Future*	
		Neighborhood	*Transitway*	*Neighborhood*	*Transitway*
Central Corridor	*Ride ≥ 1x/mo*	0.1	**0.48*****	0.17	**0.65*****
	Ride ≥ 2x/wk	-0.12	0.23	0.02	**0.44***
Hiawatha	*Ride ≥ 1x/mo*	0.04	**0.3****	**0.51*****	**0.29*****
	Ride ≥ 2x/wk	-0.01	**0.44*****	**0.56*****	**0.42*****
Cedar Avenue	*Ride ≥ 1x/mo*	-0.07	0.19	0.22	**0.42***
Northstar	*Ride ≥ 1x/mo*	0.1	0.37	**0.45****	0.03

Legend: * p<1; ** p<0.05; *** p<0.01

Statistically significant differences appear in multiple instances for past transitway impacts as well as both future neighborhood changes and future transitway impacts. In all cases, these differences actually show more positive views of change in the neighborhood as a whole and the specific impacts of transitways among current frequent transit users than among other respondents. This pattern persists even for Central Corridor, though the most frequent transit users only differ significantly from the rest of the sample in their views of future transitway impacts.

Table 5-4: Perception Differences by Household Income—Wilcoxon Mann-Whitney Test

		Past		*Future*	
		Neighborhood	*Transitway*	*Neighborhood*	*Transitway*
Central Corridor	*< $50K*	0.05	-0.09	-0.24	-0.03
	≥$50K <$100K	0.02	0.1	0.21	-0.13
	≥ 100K	-0.15	-0.01	0.12	0.35
Hiawatha	*< $50K*	**-0.24***	-0.16	0.1	-0.13
	≥$50K <$100K	-0.09	-0.01	**-0.32****	0.01
	≥ 100K	**0.57*****	**0.31***	**0.33***	0.21
Cedar Avenue	*< $50K*	**0.19***	0.13	-0.04	0.08
	≥$50K <$100K	0.08	0.21	0.07	0.04
	≥ 100K	**-0.23****	**-0.31****	-0.05	-0.1
Northstar	*< $50K*	**0.28***	0.18	0.13	-0.03
	≥$50K <$100K	-0.26	-0.19	-0.18	0.01
	≥ 100K	0.03	0.07	0.12	0.03

Legend: *p<0.1; **p<0.05; ***p<0.01

5.1.5 Differences in Perception by Income

Table 5-4 shows how respondents' perceptions differ based on their household's income. No income-based differences in average perceptions achieve statistical significance for Central Corridor. At least some differences with respect to past neighborhood change are significant for the other three corridors. Past transitway impacts are significant for Hiawatha and Cedar Avenue respondents with household incomes of $100,000 per year or more. Interestingly, the former have more positive perceptions than other respondents, while the opposite is true for the latter. Differences in perceptions of expected future neighborhood change are significant only for respondents with household incomes from $50,000 to $99,999 and $100,000 or more who live along the Hiawatha line. The middle-income group of Hiawatha respondents has a less positive perception than the remainder of the sample, while the high-income group's perceptions are more positive. No income-based differences in perceptions of future transitway impacts are statistically significant for any corridor or income group.

5.2 Regression Models

The authors estimated a set of ordered probit regression models, with the key questions as dependent variables, including separate models for urban and suburban corridors and for each key question—eight models in all. Explanatory variables focused on respondents' locations, demographics, socioeconomic status and travel behavior. Demographic variables included years living in the neighborhood, distance (in meters) to the nearest station or planned station site,

household income (ordinal, scale: 1= <$10,000/yr to 6= >$100,000/yr), and education level (ordinal, scale: 1 [less than a high school diploma] to 6 [graduate degree]). Also included were the following dummy variables where 1=true and 0=false: Home Owner, Married, Children Present, Male, Not Employed, African-American, Asian, Other Non-white, Hispanic, and 1st/2nd Generation Immigrant (Names indicate the condition identified by a value of 1). Ten percent of urban and 25% of suburban respondents refused to provide their household income; income values for these respondents were imputed based upon neighborhood, home ownership, presence of children, gender, occupation, race, nativity and automobile ownership.

Travel behavior variables included Transit Frequency (ordinal, scale 0-4, from "Never" to "More than 4 times a week") and the dummy variables Work in Downtown Minneapolis, Never Ridden a Transitway (of the same mode as the one in each respondent's neighborhood), Strongly Positive Previous Experience with Transitways, Commute During Peak (defined as 6:00-9:00am/3:00-6:30pm), and No Car (in the household).

Table 5-5: Descriptive Statistics

		Urban				*Suburban*			
	Variable	**Mean**	**Std. Dev.**	**Min**	**Max**	**Mean**	**Std. Dev.**	**Min**	**Max**
Dependent Variables	Past Neighborhood Change	3.2865	0.8707	1	5	2.8873	0.7001	1	5
	Past Transit Impacts	3.6207	1.0827	1	5	3.3944	0.8649	1	5
	Future Neighborhood Change	3.4509	0.9584	1	5	2.9099	0.6490	1	5
	Future Transit Impacts	3.8143	1.1025	1	5	3.3183	0.8782	1	5
Demographics	Years Living in Neighborhood	12.6489	15.1664	0	65	13.8931	12.4641	0	61
	Dist. to Nearest Station (meter)	747.3086	668.7043	85	3436	1047.4070	700.7937	105	4057
	Home Owner	0.5995	0.4907	0	1	0.8958	0.3060	0	1
	Married	0.4907	0.5006	0	1	0.7239	0.4477	0	1
	Children Present	0.3422	0.4751	0	1	0.3746	0.4847	0	1
	Male	0.4282	0.4955	0	1	0.4793	0.5003	0	1
	Not Employed	0.0690	0.2537	0	1	0.1634	0.3702	0	1
	Household Income	3.5174	1.4001	1	6	4.3242	1.1487	1	6
	Education	4.0997	1.4059	1	6	3.9189	1.4550	1	6
	African-American	0.1883	0.3915	0	1	0.0197	0.1392	0	1
	Asian	0.0637	0.2445	0	1	0.0225	0.1486	0	1
	Other Non-white	0.0477	0.2135	0	1	0.0028	0.0531	0	1
	Hispanic	0.0398	0.1957	0	1	0.0197	0.1392	0	1
	1st/2nd Gen. Immigrant	0.2202	0.4149	0	1	0.1183	0.3234	0	1
Travel Behavior	Work in Dntwn Minneapolis	0.1326	0.3396	0	1	0.0394	0.1949	0	1
	Never Ridden Transitway	0.1592	0.3663	0	1	0.5014	0.5007	0	1
	Strong Pos. Transitway Exp.	0.5836	0.4936	0	1	0.2028	0.4027	0	1
	Commute During Peak	0.5570	0.4974	0	1	0.4676	0.4997	0	1
	Frequency of Transit Use	1.6472	1.3330	0	4	0.5662	0.9101	0	4
	No Car	0.0928	0.2906	0	1	0.0056	0.0750	0	1

Also included were dummy variables identifying each respondent's neighborhood. Standish and Apple Valley Park & Ride were omitted as reference categories for urban and suburban corridors, respectively. The authors feel these neighborhoods represent the best archetypal urban and suburban residential neighborhoods in the study area: they have demographic and income mixtures near overall averages for the urban and suburban areas, and have easily recognizable built forms readers will likely have a concept of without lengthy descriptions.

5.2.1 Descriptive Statistics

Table 5-5 shows descriptive statistics for the model variables. Means for the dependent variables are higher for the urban corridors than for the suburban corridors. Larger standard deviations for the urban corridors reflect a broader distribution of perceptions and greater numbers of strongly-positive and -negative perceptions than for the suburban corridors.

Mean and standard deviation for distance to transit stations are considerably higher for the suburban corridors than the urban corridors. Other large urban-suburban divides appear for home ownership, service industry employment, household income, minority racial/ethnic identity, nativity status, working in downtown Minneapolis, transit use and access to automotive transportation.

5.2.2 Regression Results

Raw coefficients from the ordered probit model cannot be easily interpreted in the manner of OLS regression coefficients. To ease interpretation, Table 5-7 reports both the raw coefficients (column "β" in each model) and semi-standardized coefficients (column "βSy*" in each model) for the urban corridors (Long & Freese, 2005). With the semi-standardized coefficients, one *unit* increase in x yields βSy* *standard deviations* increase in y.

Ordered probit regression also requires different interpretation of goodness-of-fit: though reported here, pseudo R2 values are mainly used for choosing between possible models—they do not provide an absolute measure of model fit as with OLS regression. The LR X^2 statistics are significant across all models, indicating that the explanatory variables of each model are significant predictors of the dependent variable.

As shown in Table 5-6, several neighborhood dummy variables are significant. Central Corridor neighborhoods achieve significance most often—all four for past transit corridor impacts, Thomas-Dale for future neighborhood change and both Prospect Park and Summit-University for future corridor impacts. In the past transit corridor model, Central Corridor neighborhoods have significant and negative coefficients, indicating Central Corridor residents have less positive perceptions of past transit impacts than Hiawatha residents.

Table 5-6: Ordered Probit Regression Models, Urban Corridors

		Past				Future			
	N=344	*Neighborhood*		*Transit Corridor*		*Neighborhood*		*Transit Corridor*	
	LR X^2	47.8500		122.4200		87.4300		99.3900	
	Prob > X^2	0.0080		0.0000		0.0000		0.0000	
	Pseudo R^2	0.0571		0.1240		0.0935		0.1073	
		β	**βS*y****	**β**	**βS*y****	**β**	**βS*y****	**β**	**βS*y****
Demographics	Years in the Neighborhood	-0.0066	-0.0061	**-0.0096**	**-0.0078**	-0.0060	-0.0052	**-0.0089***	**-0.0075**
	Dist. to Nearest Station	0.0003	0.0003	0.0003	0.0002	0.0002	0.0002	0.0003	0.0002
	Home Owner	0.2422	0.2230	0.2028	0.1659	0.2347	0.2030	0.1088	0.0914
	Married	0.0707	0.0651	0.0513	0.0420	-0.0468	-0.0405	**0.2938***	**0.2467**
	Children Present	-0.1001	-0.0922	-0.0181	-0.0148	-0.1081	-0.0934	0.0831	0.0698
	Male	0.1535	0.1413	0.1971	0.1612	0.1799	0.1555	0.1523	0.1279
	Not Employed	-0.0257	-0.0236	0.3423	0.2800	-0.1479	-0.1279	0.1943	0.1632
	Household Income	0.0724	0.0667	0.0362	0.0296	0.0257	0.0223	0.0104	0.0087
	Education	-0.0711	-0.0655	-0.0107	-0.0088	**0.1125***	**0.0973**	0.0416	0.0349
	African-American	**0.3701****	**0.3407**	0.0694	0.0567	0.2915	0.2521	0.1802	0.1513
	Asian	-0.2072	-0.1908	0.1949	0.1594	-0.1120	-0.0969	**-0.5624***	**-0.4723**
	Other Non-white	0.1227	0.1130	0.0811	0.0663	-0.1115	-0.0965	**0.6787***	**0.5700**
	Hispanic	-0.2541	-0.2339	0.3126	0.2557	0.5878	0.5083	0.2396	0.2012
	1st/2nd Gen. Immigrant	**0.3713***	**0.3419**	0.0325	0.0266	0.0939	0.0812	**0.3741***	**0.3141**
Travel Behavior	Work in Downtown Mpls	-0.2827	-0.2603	-0.1702	-0.1392	-0.1759	-0.1521	-0.2080	-0.1747
	Never Ridden Transitway	-0.1349	-0.1242	0.0496	0.0405	0.0928	0.0803	-0.1887	-0.1585
	Strong Pos. Experience	0.0483	0.0444	**0.5265*****	**0.4306**	**0.4648****	**0.4020**	**0.5713*****	**0.4798**
	Commute During Peak	**-0.2575***	**-0.2371**	-0.2196	-0.1796	-0.1312	-0.1134	-0.1147	-0.0963
	Frequency of Transit Use	-0.0434	-0.0400	**0.1490***	**0.1218**	**0.1146***	**0.0991**	0.0844	0.0709
	No Car	0.1056	0.0972	0.2840	0.2323	0.3498	0.3025	**0.6119***	**0.5139**
Location	Prospect Park	-0.2517	-0.2317	**-0.9222*****	**-0.7542**	-0.3042	-0.2631	-0.3391	-0.2847
	Hamline-Midway	-0.1716	-0.1579	**-1.0647*****	**-0.8708**	0.0971	0.0840	-0.3071	-0.2579
	Thomas-Dale	-0.0408	-0.0375	**-1.0243***	**-0.8378**	**0.4404***	**0.3809**	-0.0997	-0.0837
	Summit-University	0.0410	0.0377	**-1.0118*****	**-0.8275**	0.2970	0.2569	-0.3452	-0.2899
	North Loop	0.3101	0.2855	0.0659	0.0539	0.3988	0.3449	0.4332	0.3638
	Phillips	-0.0916	-0.0843	-0.1616	-0.1321	0.3239	0.2801	**-0.5052***	**-0.4243**
	Mall of America	**-1.3730*****	**-1.2642**	-0.6308	-0.5160	**-1.1291****	**-0.9764**	-0.6894	-0.5790
Thresholds	*y* = 1	-2.1200***		-1.8330***		-0.8271*		-1.0850**	
	y = 2	-1.1820**		-1.0230**		0.0178		-0.2939	
	y = 3	0.5367		0.0472		1.4370***		0.1519	
	y = 4	1.4350***		1.1840**		2.5050***		1.5910***	

Legend: *p<0.1; **p<0.05; ***p<0.01

Among the Hiawatha LRT neighborhoods, the Mall of America neighborhood is significant for past and future neighborhood change, with large negative coefficients. This finding was expected as the neighborhood's residential areas are separated from the station by mall parking and transportation infrastructure, and as local light-rail use is largely park-and-ride. Isolated park-and-ride facilities may make the neighborhood seem unconnected to the rail line.

Strongly positive fixed-guideway transit experience and frequency of transit use are significant in multiple instances, with positive coefficients. No Car is also significant, with a positive coefficient, for future corridor impacts.

Other significant variables in the urban corridor models include African-American (positive), 1st/2nd Generation Immigrant (positive), and Commute During Peak (negative) for past neighborhood change, Education (positive) for future neighborhood change, Years in the Neighborhood (negative) for past and future transit corridor impacts, along with Phillips (negative), Married (positive), Asian (negative), Other non-white (positive) and 1st/2nd Generation Immigrant (positive) for future transit corridor impacts.

Table 5-7 shows regression results for the suburban corridors. Once again, multiple neighborhood dummy variables are significant: Anoka for past neighborhood change, Cedar Grove and Coon Rapids for past transit corridor impacts, Cedar Grove and Anoka for future neighborhood change, and Cedar Grove, Fridley, Coon Rapids and Anoka for future corridor impacts. All produce positive coefficients, predicting that their residents have more positive perceptions than residents of the reference neighborhood, Apple Valley park-and-ride.

Frequency of Transit Use is significant for all suburban corridor models except past neighborhood change; its coefficients are positive. Other significant variables include Male (positive) and Work in Downtown Minneapolis (negative) for past neighborhood change, Strongly Positive Transitway Experience (positive), and Commute During Peak (negative) for past transit corridor impacts, as well as Years in the Neighborhood (negative) for future neighborhood change.

In contrast to the urban corridors, no demographic variables are significant other than gender for past neighborhood change and length of residency for future neighborhood change. The suburban sample is quite homogenous in demographic terms, leading to small sample sizes for most demographic groups besides relatively well-educated, middle-class, white family households. Though accurate, according to Census/ACS data, this homogenous sample limits our ability to determine how demographics relate to suburbanites' perceptions.

5.2.3 Model Predictions

Tables 5-8 and 5-9 shows predicted probabilities for values of the dependent variables when the values of statistically significant explanatory variables are manipulated. Explanatory variables except the one being manipulated are held at medians, except for mutually exclusive dummy variables (such as the neighborhoods), where others are set equal to zero. Reference categories for dummy variables are shown in parentheses; though they are not explicitly included in the models, reference category probabilities can be predicted by setting all other categories equal to zero.

Table 5-7: Ordered Probit Regression Models, Suburban Corridors

		Past				*Future*			
	N=312	*Neighborhood*		*Transit Corridor*		*Neighborhood*		*Transit Corridor*	
	LR X^2	38.9800		62.4400		47.1700		40.5100	
	Prob > X^2	0.0636		0.0001		0.0095		0.0459	
	Pseudo R^2	0.0623		0.0788		0.0767		0.0511	
		β	**βS*y****	**β**	**βS*y****	**β**	**βS*y****	**β**	**βS*y****
Demographics	Years in the Neighborhood	-0.0004	-0.0003	-0.0013	-0.0011	**-.0126***	**-0.0109**	0.0015	0.0014
	Dist. to Nearest Station	0.0002	0.0001	0.0003	0.0003	0.0001	0.0001	0.0002	0.0001
	Home Owner	0.1353	0.1250	-0.2827	-0.2427	0.0390	0.0338	-0.1103	-0.0982
	Married	-0.0332	-0.0306	0.0191	0.0164	-0.2362	-0.2044	-0.0943	-0.0840
	Children Present	-0.0351	-0.0324	0.2106	0.1808	-0.1947	-0.1685	0.0738	0.0657
	Male	**0.3766*** **	**0.3478**	-0.0004	-0.0003	0.1754	0.1518	0.0213	0.0190
	Not Employed	0.0935	0.0863	-0.0938	-0.0805	-0.1235	-0.1069	-0.0703	-0.0626
	Household Income	-0.0694	-0.0641	-0.0298	-0.0255	0.0669	0.0579	0.0390	0.0347
	Education	-0.0285	-0.0263	-0.0565	-0.0485	-0.0288	-0.0249	0.0135	0.0120
	African-American	0.3224	0.2978	0.5560	0.4772	0.8212	0.7108	0.7996	0.7118
	Asian	-0.1252	-0.1156	0.4509	0.3870	-0.2157	-0.1867	-0.2693	-0.2397
	Other Non-white	-0.5538	-0.5115	4.9370	4.2371	5.9010	5.1080	5.7150	5.0872
	Hispanic	0.3518	0.3249	0.4213	0.3616	0.5716	0.4948	0.2149	0.1913
	1st/2nd Gen. Immigrant	0.1817	0.1678	0.0810	0.0695	0.2288	0.1980	0.1820	0.1620
Travel Behavior	Work in Downtown Mpls	**-0.6568***	**-0.6067**	0.0281	0.0241	-0.5330	-0.4614	-0.4595	-0.4090
	Never Ridden Transitway	-0.2090	-0.1930	0.0972	0.0834	0.0804	0.0696	0.0009	0.0008
	Strong Pos. Experience	0.0772	0.0713	**0.4616** **	**0.3962**	0.2405	0.2082	0.1870	0.1665
	Commute During Peak	-0.0927	-0.0856	**-0.3079** **	**-0.2642**	-0.1329	-0.1151	-0.1580	-0.1406
	Frequency of Transit Use	0.1217	0.1124	**0.1817** **	**0.1560**	**.3175*** **	**0.2748**	**0.2145*** **	**0.1910**
	No Car	-1.4800	-1.3670	-0.9079	-0.7793	0.1997	0.1728	-0.5480	-0.4879
Location	Cedar Grove	0.3431	0.3169	**0.5189** **	**0.4454**	**0.4927***	**0.4265**	**0.4677***	**0.4163**
	Apple Valley Walk & Ride	0.1147	0.1059	0.2465	0.2115	0.4420	0.3825	0.2240	0.1994
	Lakeville-Cedar	0.1585	0.1464	0.1140	0.0979	0.3062	0.2651	0.2400	0.2136
	Fridley	0.0924	0.0853	0.3815	0.3275	0.2117	0.1832	**0.5098***	**0.4538**
	Coon Rapids	0.2032	0.1877	**0.8001*** **	**0.6867**	0.4265	0.3691	**0.7084*** **	**0.6306**
	Anoka	**0.7437** **	**0.6870**	0.2555	0.2193	**0.6237** **	**0.5398**	**0.6049** **	**0.5384**
	Big Lake	0.0557	0.0515	-0.2078	-0.1783	0.2401	0.2078	0.2572	0.2289
Thresholds	*y* = 1	-1.976***		-2.258***		-1.645***		-1.3470**	
	y = 2	-0.6475		-1.0820*		-0.2796		-0.2523	
	y = 3	1.4300**		0.3684		1.8030***		0.8268	
	y = 4	2.428***		1.581***		3.1280***		2.4720***	

Legend: *p<0.1; **p<0.05; ***p<0.01

Neighborhood Change Table 5-8 shows predicted probabilities for neighborhood change perceptions with the urban corridors listed first, and the suburban corridors below. Only significant explanatory variables are shown. As shown in Table 5-8, the urban corridor model predicts higher probabilities of positive past overall neighborhood change perceptions for African-Americans and first- or second-generation immigrants than for whites and non-immigrants. Predicted probabilities of positive neighborhood change in the future increase gradually with a resident's level of education.

Among urban corridor neighborhoods, the difference between Standish, the reference neighborhood, and Mall of America is stark, with only a 3% probability of positive past perceptions and a 10% of probability of positive future perception for Mall of America residents. Thomas-Dale residents show many more strong positives and fewer negatives than Standish residents when it comes to future neighborhood change perceptions.

Urban, rush-hour commuters are slightly less likely to have positive perceptions of past neighborhood change than non-rush-hour commuters. For future neighborhood change, strongly positive experiences with transit corridors increase probabilities of positive perceptions. The predicted probabilities of positive perceptions increase with the frequency of a resident's transit use, growing from 39% for residents who never use transit to 56% for residents who use transit more than four times a week. Figure 5-3 shows how urbanites' perceptions of future neighborhood change vary with frequency of transit use in graphic form.

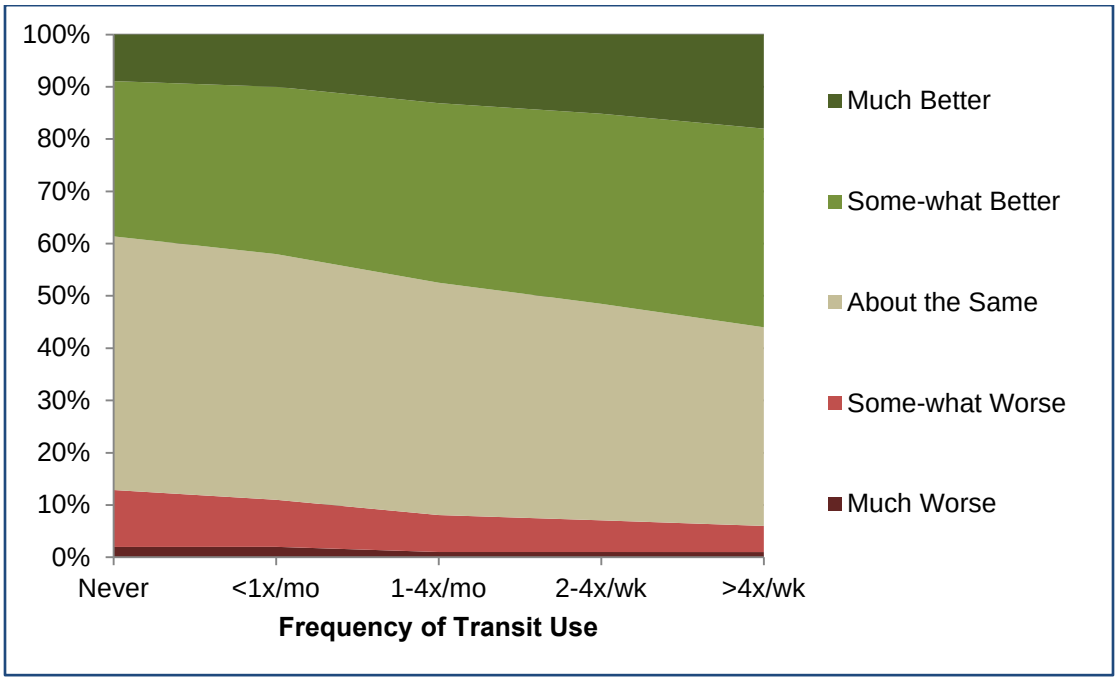

Figure 5-3: Future Urban Neighborhood Change, by Current Transit Use

Along the suburban corridors, men are ten percentage points more likely than women to perceive their neighborhoods as being about the same as they were five years previously, while women are ten percentage points more likely than men to perceive their neighborhoods as slightly worse. Long-time suburban residents have a higher probability of negative perceptions regarding future neighborhood change compared to newer residents in the same neighborhoods. This pattern may

partly be caused by self-selection on the part of recently-arrived residents, some of whom may have deliberately moved near transit corridors.

Along the suburban corridors, downtown commuters are much more likely to have negative perceptions of past neighborhood change than others. Frequency of transit use has a much larger impact on future neighborhood change perceptions among suburban corridor residents than urban corridor residents—the suburban model predicts a 3%-28% gap in positive perception between non-transit users and those who use transit more than four times a week, as compared to a 39%-56% gap predicted by the urban model. Figure 5-4 shows how suburbanites' perceptions of future neighborhood change vary with frequency of transit use in graphic form. Comparison of the two graphs underscores the difference found in the relationships.

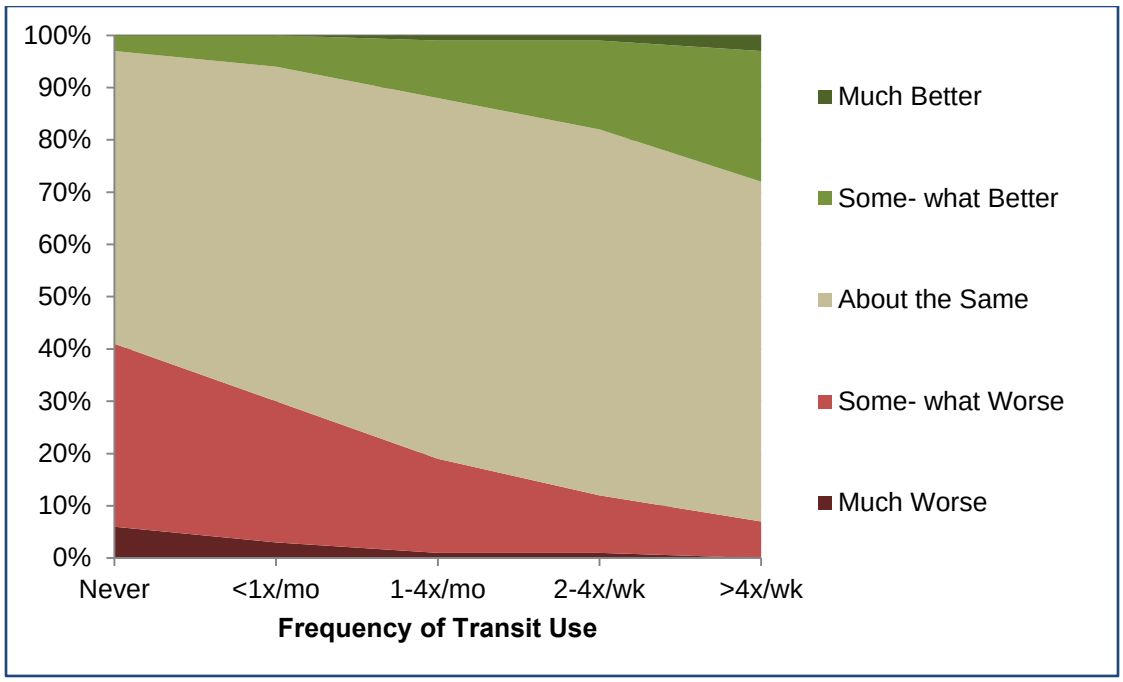

Figure 5-4: Future Suburban Neighborhood Change, by Current Transit Use

For the suburban corridors, Anoka residents are more likely than residents of the reference neighborhood (Apple Valley park-and-ride) to have positive perceptions of past and future neighborhood change, and less likely to have negative perceptions, though "About the same" has the highest probability. Cedar Grove residents are more likely to expect no future change, and less likely to expect negative changes. In all suburban neighborhoods, the models predict the highest probability for no change.

Table 5-8: Predicted Probabilities of Neighborhood Change Variables

			Past					Future				
			Much Worse	Some-what Worse	About the Same	Some-what Better	Much Better	Much Worse	Some-what Worse	About the Same	Some-what Better	Much Better
Urban	Demographics	<High School	-	-	-	-	-	4%	14%	51%	24%	6%
		H.S. Diploma	-	-	-	-	-	3%	13%	50%	27%	7%
		Some College	-	-	-	-	-	2%	11%	49%	30%	9%
		Assoc./Tech.	-	-	-	-	-	2%	9%	47%	32%	10%
		Bachelors	-	-	-	-	-	1%	8%	44%	34%	13%
		Graduate	-	-	-	-	-	1%	6%	41%	36%	15%
		(White)	1%	8%	56%	24%	9%	-	-	-	-	-
		African-American	0%	4%	47%	31%	17%	-	-	-	-	-
		(Not Immigrant)	1%	8%	56%	24%	9%	-	-	-	-	-
		1st/2nd Gen. Immigrant	0%	4%	47%	31%	17%	-	-	-	-	-
	Travel Behavior	(Ridden, Not Strong Pos.)	-	-	-	-	-	5%	17%	52%	21%	4%
		Strong Pos. Experience	-	-	-	-	-	2%	9%	47%	32%	10%
		(No Peak Commute)	1%	5%	50%	29%	15%	-	-	-	-	-
		Commute During Peak	1%	8%	56%	24%	9%	-	-	-	-	-
		Transit Never	-	-	-	-	-	2%	11%	49%	30%	9%
		Transit <1x/mo	-	-	-	-	-	2%	9%	47%	32%	10%
		Transit 1-4x/mo	-	-	-	-	-	1%	7%	44%	34%	13%
		Transit 2-4x/wk	-	-	-	-	-	1%	6%	41%	36%	15%
		Transit >4x/wk	-	-	-	-	-	1%	5%	38%	38%	18%
	Location	(Standish)	1%	8%	56%	24%	9%	2%	9%	47%	32%	10%
		Thomas-Dale	-	-	-	-	-	1%	4%	35%	39%	21%
		Mall of America	19%	34%	44%	3%	0%	17%	29%	45%	9%	1%
Suburban	Demographics	0 Years in Nbhd	-	-	-	-	-	4%	32%	60%	4%	0%
		5 Years in Nbhd	-	-	-	-	-	5%	34%	58%	4%	0%
		10 Years in Nbhd	-	-	-	-	-	6%	35%	56%	3%	0%
		20 Years in Nbhd	-	-	-	-	-	7%	39%	52%	2%	0%
		(Female)	6%	35%	56%	3%	0%	-	-	-	-	-
		Male	3%	25%	66%	6%	1%	-	-	-	-	-
	Travel Behavior	(Not Work DT Mpls)	6%	35%	56%	3%	0%	-	-	-	-	-
		Work in Downtown Mpls	19%	48%	33%	1%	0%	-	-	-	-	-
		Transit Never	-	-	-	-	-	6%	35%	56%	3%	0%
		Transit <1x/mo	-	-	-	-	-	3%	27%	64%	6%	0%
		Transit 1-4x/mo	-	-	-	-	-	1%	18%	69%	11%	1%
		Transit 2-4x/wk	-	-	-	-	-	1%	11%	70%	17%	1%
		Transit >4x/wk	-	-	-	-	-	0%	7%	65%	25%	3%
	Location	(Apple Valley Park & Ride)	6%	35%	56%	3%	0%	6%	35%	56%	3%	0%
		Cedar Grove	-	-	-	-	-	2%	22%	68%	8%	0%
		Anoka	1%	16%	70%	12%	2%	1%	18%	69%	10%	1%

Transit Corridor Impacts Table 5-9 shows predicted probabilities for perceptions of transit corridor impacts with the urban corridors listed first, and the suburban corridors below. Only significant explanatory variables are shown. Long-time residents of urban neighborhoods are less likely to have strongly positive perceptions of either past or future transit corridor impacts than recent arrivals. Differences vary 6-7 percentage points between 0 and 20 years' residency. No other demographic variables are significant for past urban transit corridor impacts. Asian respondents are only half as likely as whites to expect strongly positive impacts in the future; Asians are also significantly more likely to expect negative impacts than whites. The Central Corridor study neighborhoods are home to a large Southeast Asian immigrant community, with local businesses and community organizations, as well as Hmong and other Asian-language newspapers. Asian small business owners have repeatedly expressed concerns that visions for the revitalization and redevelopment of the Central Corridor area do not give impacts on their businesses sufficient consideration (Yuen, 2011). In addition, language barriers may hamper project planners' outreach efforts. It must be noted, however, that the model still predicts a 52% probability of Asian urban residents expecting somewhat positive future impacts. First- and second-generation immigrants are fourteen percentage points more likely than non-immigrants to have strongly positive perceptions of future transit corridor impacts—the model predicts a 50% probability for this value alone. Figure 5-5 shows race- and nativity-based perception differences in graphic form.

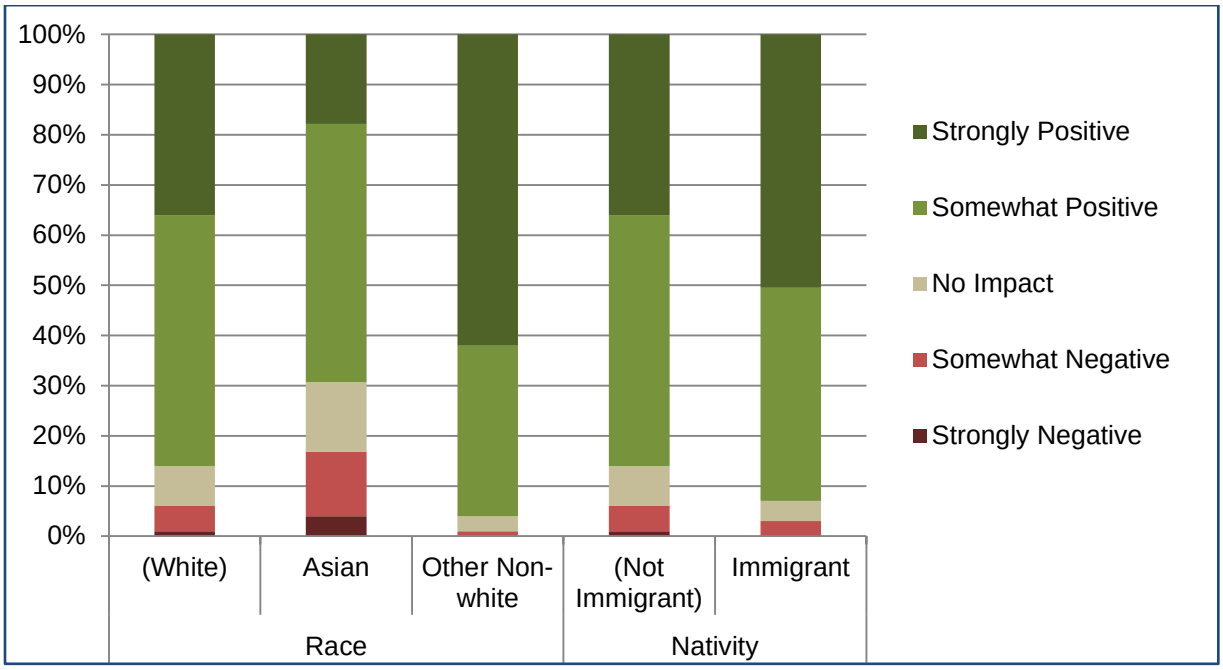

Figure 5-5: Future Urban Transitway Impacts, by Race and Nativity Status

Regarding urban travel behavior variables, perceptions of transit corridor impacts are similar to perceptions of neighborhood change: residents with strongly positive transit corridor experiences, frequent transit users and residents of carless households are much more likely to have positive perceptions of past and/or future corridor impacts.

Urban residents with strongly positive past transit experiences are slightly more likely to have a somewhat positive view of past and future corridor impacts, and much more likely to have a

strongly positive view than residents without strongly positive transit experiences—36% as opposed to 17% for future impacts. In addition, though similar percentages of frequent, infrequent and non-transit users perceive past transit corridor impacts as somewhat positive, frequent users are more likely to perceive these impacts as strongly positive. Figure 5-6 shows the relationships between previous transitway experience and perceptions of transitway impacts, with perceptions of future neighborhood change included for comparison. Household automobile ownership is also included for future perceptions of transitway impacts.

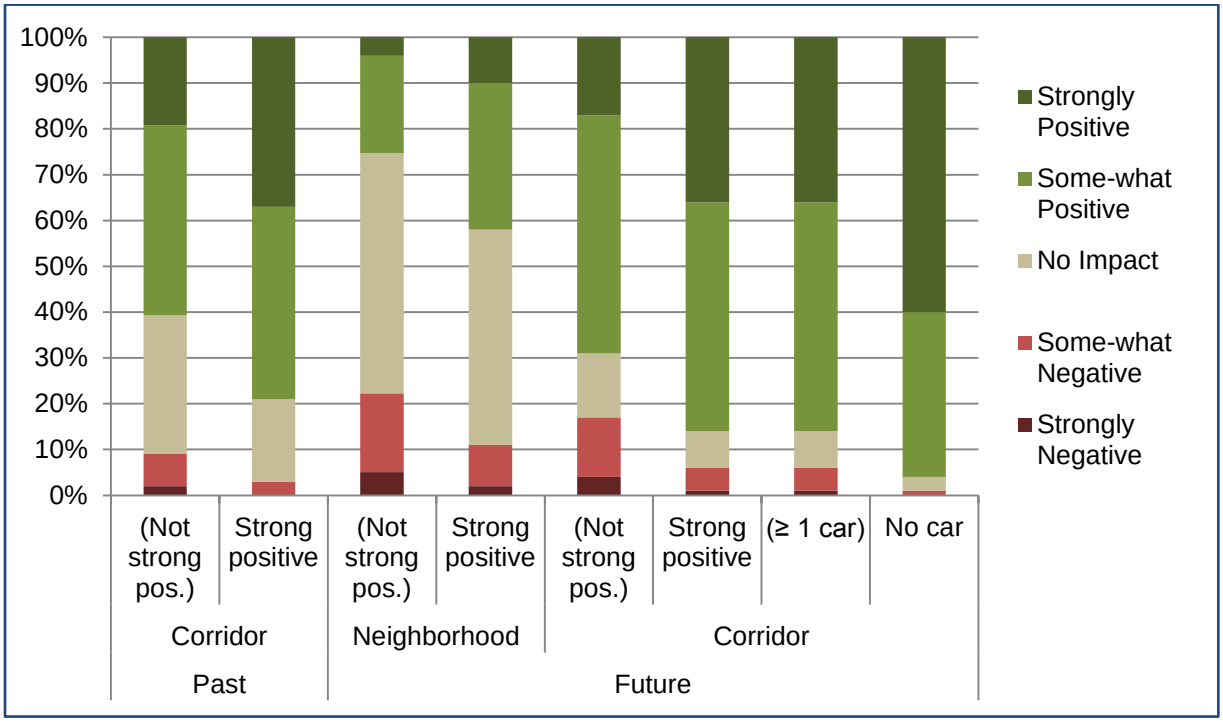

Figure 5-6: Urban Respondents' Perceptions, by Transitway Experience/Auto Ownership

Regression modeling predicts much lower probabilities of positive perceptions of past corridor impacts for all Central Corridor neighborhoods than for Hiawatha Standish residents. In the Central Corridor neighborhoods, the model predicts 40%-45% probabilities of positive perceptions, compared with a 79% probability of positive perceptions for Standish. For predicted expectations of future transit corridor impacts, however, none of the Central Corridor neighborhoods are significant. The Phillips neighborhood along the Hiawatha light rail line has significantly lower probabilities than Standish of strongly positive perceptions of future corridor impacts: only 19% of Phillips residents will expect strongly positive future transit corridor impacts, compared with 36% of Standish respondents.

Table 5-9: Predicted Probabilities of Transit Corridor Impacts Variables

			Past					Future				
			Strongly Negative	Some-what Neg.	No Im-pact	Some-what Pos.	Strongly Positive	Strongly Negative	Some-what Neg.	No Im-pact	Some-what Pos.	Strongly Positive
Urban	Demographics	0 Years in Nbhd	0%	2%	17%	41%	39%	1%	5%	7%	49%	38%
		5 Years in Nbhd	0%	3%	18%	42%	38%	1%	5%	8%	50%	36%
		10 Years in Nbhd	0%	3%	19%	42%	36%	1%	6%	8%	51%	35%
		20 Years in Nbhd	1%	4%	21%	43%	32%	1%	7%	9%	52%	32%
		(Unmarried)	-	-	-	-	-	2%	9%	11%	53%	25%
		Married	-	-	-	-	-	1%	5%	8%	50%	36%
		(White)	-	-	-	-	-	1%	5%	8%	50%	36%
		Asian	-	-	-	-	-	4%	13%	14%	52%	18%
		Other Non-white	-	-	-	-	-	0%	1%	3%	34%	62%
		(Not Immigrant)	-	-	-	-	-	1%	5%	8%	50%	36%
		Immigrant	-	-	-	-	-	0%	3%	4%	42%	50%
	Travel Behavior	(Not Strong Pos.)	2%	7%	30%	41%	19%	4%	13%	14%	52%	17%
		Strong Pos. Experience	0%	3%	18%	42%	37%	1%	5%	8%	50%	36%
		Transit Never	1%	4%	21%	43%	31%	-	-	-	-	-
		Transit <1x/mo	0%	3%	18%	42%	37%	-	-	-	-	-
		Transit 1-4x/mo	0%	2%	15%	40%	43%	-	-	-	-	-
		Transit 2-4x/wk	0%	1%	12%	38%	49%	-	-	-	-	-
		Transit >4x/wk	0%	1%	10%	35%	54%	-	-	-	-	-
		(≥1 Car)	-	-	-	-	-	1%	5%	8%	50%	36%
		No Car	-	-	-	-	-	0%	1%	3%	36%	60%
	Location	(Standish)	0%	3%	18%	42%	37%	1%	5%	8%	50%	36%
		Prospect Park	4%	13%	38%	35%	10%	-	-	-	-	-
		Hamline-Midway	5%	16%	39%	32%	8%	-	-	-	-	-
		Thomas-Dale	5%	15%	39%	32%	9%	-	-	-	-	-
		Summit-University	5%	15%	39%	33%	9%	-	-	-	-	-
		Phillips	-	-	-	-	-	4%	12%	13%	52%	19%
Suburban	Travel Behavior	(Not Strong Pos.)	4%	25%	53%	17%	2%	-	-	-	-	-
		Strong Pos. Experience	1%	14%	51%	28%	5%	-	-	-	-	-
		(No Peak Commute)	2%	19%	53%	23%	3%	-	-	-	-	-
		Peak Commute	5%	26%	52%	16%	2%	-	-	-	-	-
		Transit Never	3%	22%	53%	19%	2%	8%	30%	40%	22%	1%
		Transit <1x/mo	2%	18%	53%	24%	3%	5%	24%	41%	28%	1%
		Transit 1-4x/mo	1%	14%	51%	28%	5%	3%	19%	40%	35%	2%
		Transit 2-4x/wk	1%	11%	48%	33%	7%	2%	15%	38%	42%	4%
		Transit >4x/wk	1%	8%	44%	37%	10%	1%	11%	34%	48%	6%
	Location	(Apple Valley P & R)	3%	22%	53%	19%	2%	8%	30%	40%	22%	1%
		Cedar Grove	1%	11%	49%	32%	7%	3%	18%	40%	36%	3%
		Fridley	-	-	-	-	-	3%	18%	39%	37%	3%
		Coon Rapids	0%	7%	42%	39%	11%	2%	13%	37%	44%	5%
		Anoka	-	-	-	-	-	2%	16%	38%	40%	4%

Many fewer variables are statistically significant in suburban neighborhoods than in urban neighborhoods for transit corridor impacts. This pattern echoes the lower expectations of either positive or negative transit impacts found in the suburbs and the limitation of a demographically homogenous suburban sample. Non-rush hour commuters and residents with strongly positive previous transit corridor experiences are more likely to have positive perceptions of past transit corridor impacts than others. For past and future, the probability of a suburban corridor resident having positive perceptions of corridor impacts increases substantially with transit use frequency.

The Coon Rapids neighborhood on the Northstar line and the Cedar Grove neighborhood on the Cedar Avenue BRT corridor have consistently higher predicted probabilities of positive perceptions of past transitway impacts than the reference neighborhood. For future transit corridor impacts, Cedar Grove, Fridley, Coon Rapids and Anoka all have significantly lower predicted probabilities of negative perceptions than the reference.

5.3 Specific Neighborhood Changes

In addition to asking respondents about the overall trajectory of change in their neighborhoods, the survey also asked respondents to rate the importance of eighteen specific neighborhood qualities. Respondents also identified whether each quality had increased, decreased or remained constant over the previous five years, and whether they expected it to increase decrease or remain constant over the next five years. Finally, respondents rated how related those changes were to the transitway.

The fine-grained, longitudinal data gained from these questions allow us to examine respondents' observations and expectations of neighborhood change on multiple dimensions at once. The following section contains a series of *importance-change-relevance* graphs intended to identify potential targets for policy interventions around transitways based on their importance to neighborhood residents, the types of changes observed and expected, and the relevance of transitways to those changes.

5.3.1 Importance-Change-Relevance—Central Corridor

Figure 5-7 shows changes Central Corridor respondents have observed in their neighborhoods and expect to see in the future, as well as the importance they ascribe to those changes, and how related they believe plans for light rail have been/will be to those changes. As with all the graphs in this section, Figure 5-7 plots the mean observed direction of change on the horizontal axis, with positive values representing increases, and negative values representing decreases. The mean importance respondents ascribe to each quality is plotted on the vertical axis. For both change and importance, a reference line shows the mean of means (the mean of the mean values for all neighborhood qualities). These reference lines divide the graph into four quadrants. Clockwise from the upper left, these quadrants represent neighborhood qualities perceived as having high importance and negative change, high importance and positive change, low importance and positive change, and low importance and negative change. In similar fashion, the color of each point represents whether the mean relevance of transitway development to each change is greater or less than the mean of means.

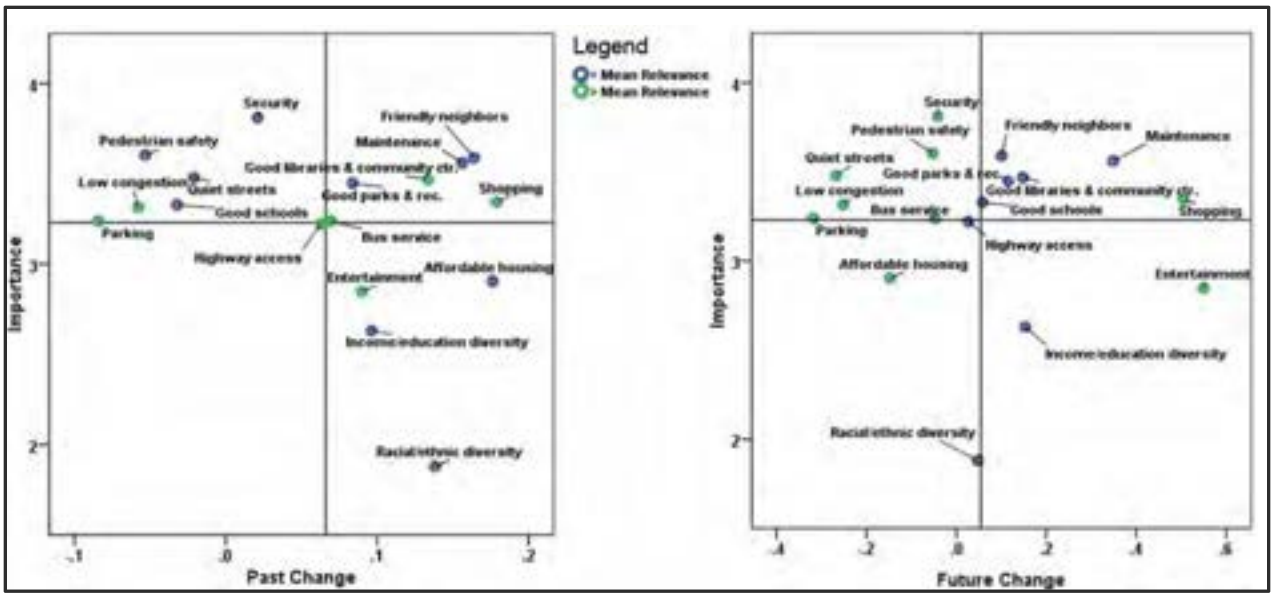

Figure 5-7: Importance-Change-Relevance—Central Corridor

Though the actual survey questions only asked respondents whether they had seen/expected to see more or less of each quality, those qualities were deliberately worded so that increases can generally be taken as changes for the better and decreases as change for the worse. For example, few respondents are likely to view a reduction in the number of good schools as an improvement. As such, the upper left quadrant of the graph can be said to represent aspects of the neighborhood which residents see as more important than most, and as either showing decline or less-than average improvement. This top-left quadrant identifies key neighborhood qualities to target for intervention. With particular regard to transitway planning and related community development planning, *green* points in the upper left quadrant are particularly notable. These points represent changes with a stronger-than-average relationship to the transitway, above-average importance and below-average improvement.

A few caveats before proceeding: this focus on more-important, less-satisfying changes should not be taken as casting transitways' neighborhood impacts in a negative light. The consistently positive perceptions of transitways' overall impacts discussed previously demonstrate that respondents tend strongly to view transitways as beneficial to their neighborhoods. In spite of those overall positive perceptions, however, many respondents identify specific negative impacts they believe transitways have had or may have on their neighborhoods. Focusing on these concerns is mainly a question of helping neighborhoods served by transitways achieve the maximum possible benefit. In addition, many of the neighborhood qualities that fall into the quadrant targeted for intervention actually have positive mean values—more respondents see them improving than declining. Respondents simply do not see these aspects of their neighborhoods improving as much as others.

Regarding the past graph for Central Corridor, most changes in the critical high-importance, less improvement quadrant are not seen as highly related to plans for light rail. A perceived increase in congestion (on major streets) stands out as one highly important negative change that respondents do perceive as related to light rail plans, even before construction.

Regarding future changes, the critical upper-left quadrant contains most of the same changes for the future as for the past. However, all of those expected changes are seen as highly related to light rail in the future. In fact, light rail has above-average relevance to most of the specific changes perceived as both negative and important. Increased neighborhood shopping opportunities stands out as an important, strongly positive change expected to be highly related to light rail. Overall, Central Corridor respondents expect light rail will be more related to physical and transportation changes in their neighborhoods than to social changes.

5.3.2 Importance-Change-Relevance—Hiawatha

Figure 5-8 shows the specific changes Hiawatha respondents have observed and expect in their neighborhoods. The past period includes most of the time since the line opened. In contrast with past observations from Central Corridor, Hiawatha respondents see light rail as having been relevant to important and unimportant positive and negative changes in the recent past. Many of the critical-quadrant changes are the same as for Central Corridor, including pedestrian safety, security, congestion on major streets and quiet neighborhood streets.

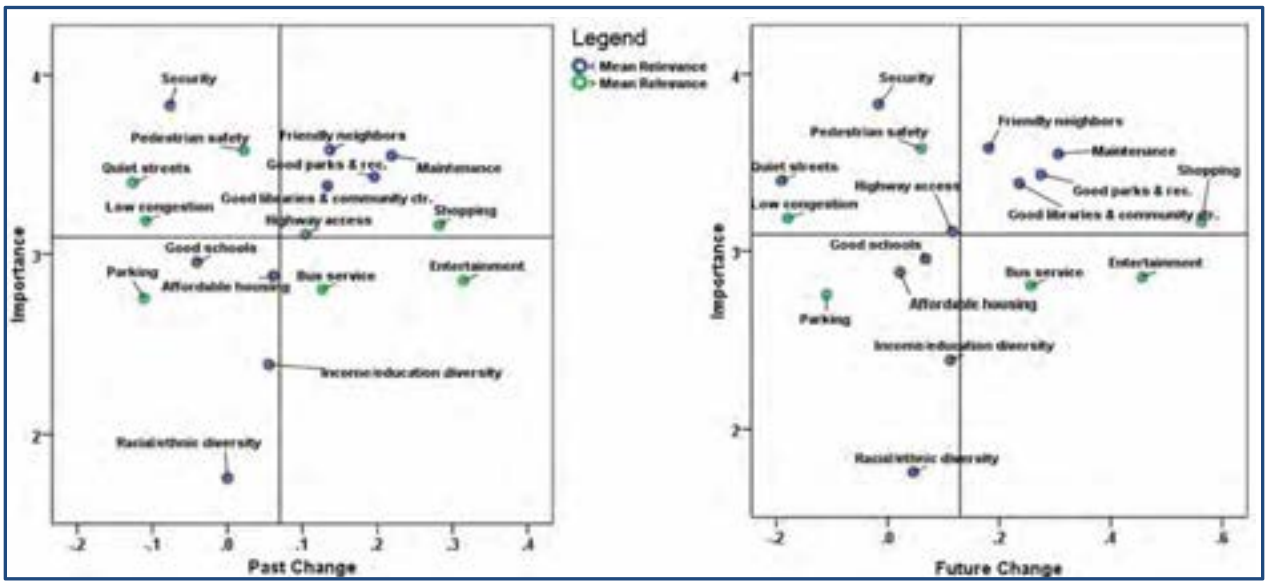

Figure 5-8: Importance-Change-Relevance—Hiawatha

Though respondents do expect light rail will continue to be relevant to future changes in their neighborhoods, they also expect fewer changes will be highly related to light rail than in the past. In the critical quadrant, only congestion and pedestrian safety are seen as highly related to light rail. Once again, physical and transportation changes are perceived as more related to light rail than social changes. In a notable difference from Central Corridor's future expected changes, worsening neighborhood security is not seen as highly related to light rail. Though respondents do expect parking to get more difficult, and consider the change highly related to light rail, they do not consider it highly important. Parking actually has the lowest importance of any change with above-average relevance.

5.3.3 Importance-Change-Relevance—Cedar Avenue

Figure 5-9 shows Cedar Avenue respondents' past and future perceptions of specific changes. Plans for and early phases of bus rapid transit are perceived as highly related to important

negative changes and less-important positive changes. Though most changes with high mean relevance have to do with physical characteristics of neighborhoods and transportation, neighborhood security is also perceived as highly related to BRT. In addition, security has the highest importance and most negative observed change of any neighborhood quality the questionnaire asked respondents about.

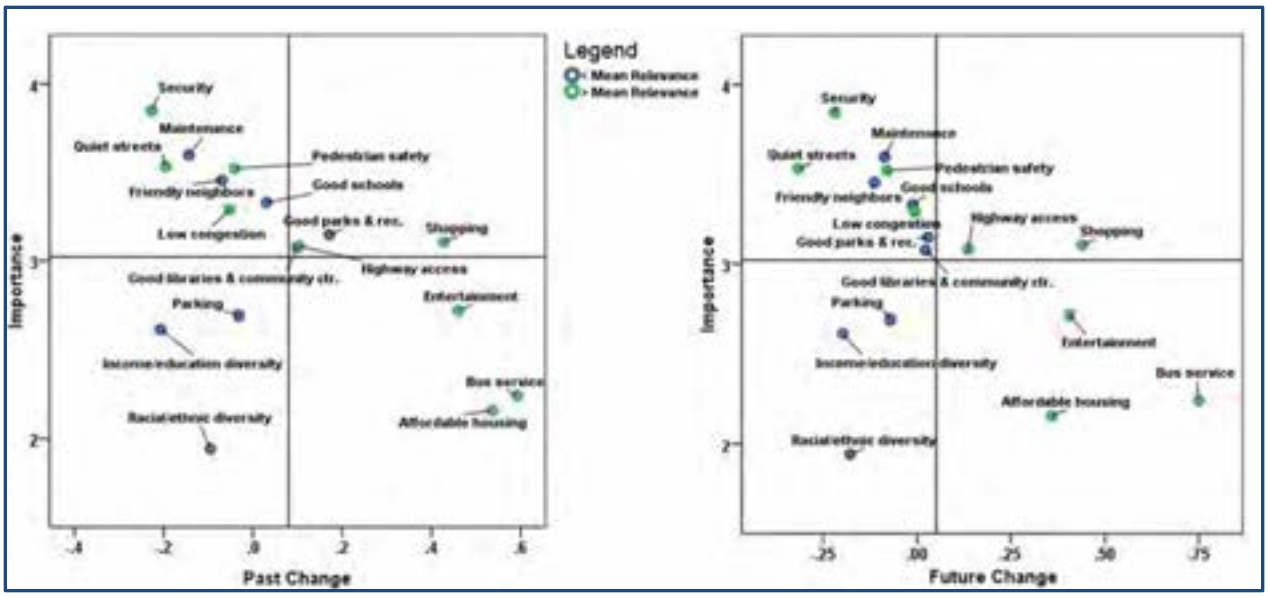

Figure 5-9: Importance-Change-Relevance—Cedar Avenue

Overall, the pattern of expected future changes is quite similar to the pattern of observed past changes. However, the mean values of the positive changes respondents expect to see in the future are smaller than the mean values for those same changes in the past. The one exception to this pattern is bus service, which is a high-end outlier for positive change in the future and highly related to bus rapid transit, but not perceived as highly important.

Once again, neighborhood security stands out as highly important and highly related to BRT, and, once again, respondents expect it to change for the worse. For the future, an expected decline in quiet neighborhood streets overtakes neighborhood security for the most negative change, but is not perceived to be as important.

5.3.4 Importance-Change-Relevance—Northstar

Figure 5-10 shows respondents' observations of past neighborhood changes and expectation of future neighborhood changes from neighborhoods around Northstar commuter rail stations. Overall, residents' perceptions form a very similar pattern to those of Cedar Avenue respondents. Again, neighborhood security is seen as declining, highly important and highly related to the transitway. Also, echoing all three other corridors, commuter rail is perceived as being more relevant to transportation changes and changes in neighborhood physical characteristics than to changes in neighborhood social characteristics. In contrast to the other three corridors, both positive and negative change mean values are closer to zero, suggesting that fewer Northstar respondents observed either positive or negative changes.

More changes are expected to be highly related to commuter rail in the future than were in the past. Again, the transitway is seen as highly relevant primarily to important, negative changes and less-important positive changes. In a departure from the trend of the highest relevance values almost exclusively belonging to physical and transportation changes, Northstar respondents expect to see a decline in the diversity of neighborhood residents which they also expect to be highly related to commuter rail (even though most do not consider the change highly important). More Northstar respondents expect neighborhood security to decline than any other important change; they also assign it the highest average importance and expect its decline to be highly related to commuter rail.

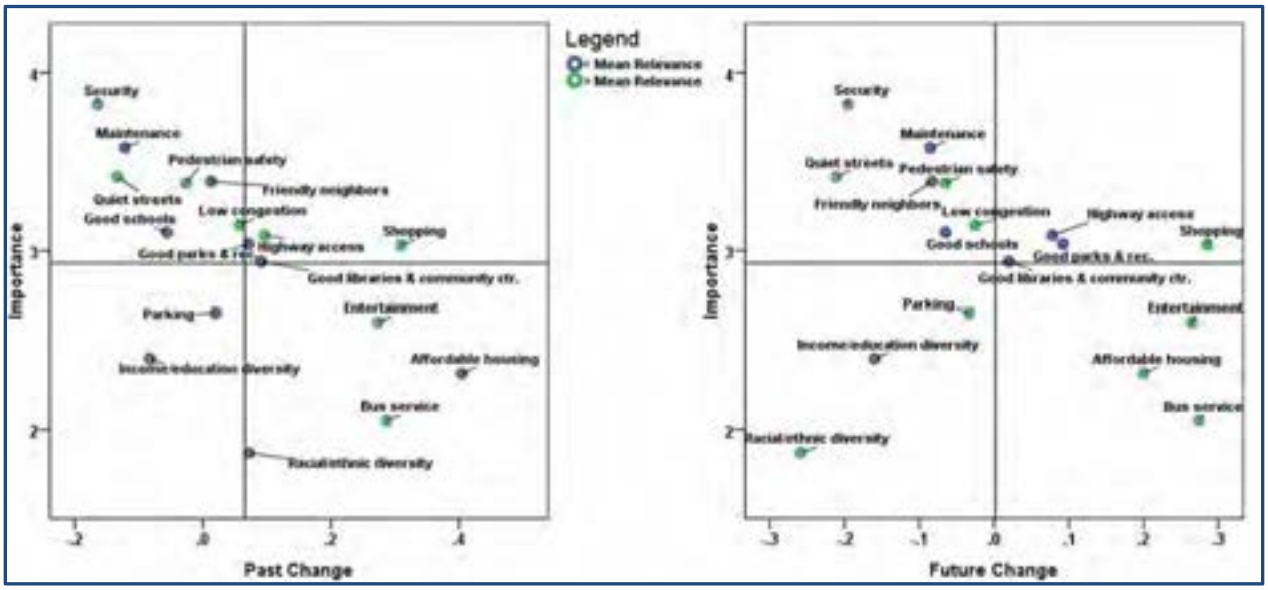

Figure 5-10: Importance-Change-Relevance—Northstar

5.4 Discussion

Overall, residents of the study neighborhoods perceive fixed-guideway transit corridors as having positive impacts on their neighborhoods. Residents also expect transit corridors to have more positive impacts in the future than in the past. Significant differences exist between urban and suburban areas and between individual neighborhoods. Urban residents are considerably more likely to expect positive change in their neighborhoods, and somewhat more likely to expect positive specific impacts from transit corridors. These findings are not surprising as urban neighborhood residents likely have more experience of transit service in general. It is possible that suburban residents may need more exposure to premium transit to see it as a positive for their neighborhoods.

Central Corridor residents were less likely than Hiawatha residents to perceive positive past impacts of transit development. However, this pattern does not persist for expectations of future transit corridor impacts. Similar percentages of Central Corridor and Hiawatha residents expect positive transit corridor impacts in the future. This pattern is not surprising either, given the timeline differences between the two corridors: indeed, many Central Corridor residents may base their concept of how light rail will affect their neighborhoods on the nearby Hiawatha line.

When it comes to suburban corridors, Northstar respondents have more positive perceptions of transit corridor impacts than Cedar Avenue respondents. Cedar Avenue's phased implementation is unique among the corridors studied—it may confuse residents over what the final form of the corridor will be. Cedar Avenue is also the only bus corridor studied. Unlike Central Corridor, following another light rail line, it will be the first BRT service in Minnesota. Experience with the fully-implemented corridor may be necessary to "win over" some residents.

The significant inter-neighborhood variation found in perceptions of transit corridor impacts, especially between central-city and suburban neighborhoods, shows that the characteristics, wishes and concerns of differing communities must be considered and addressed in the transit planning process. Addressing concerns may mean tailoring station-area planning and TOD activities to differing urban and suburban community types; it may also mean tailoring public outreach and education efforts to those communities based on neighborhood concerns and levels of experience with transit.

Planning for transit corridors should also consider the wishes and concerns of long-time station area residents. The negative relationships found between length of residency in a neighborhood and expectations of transit impacts are likely due in part to self-selection among recently arrived residents. Still, the results show it is critical for planners to treat station-area neighborhoods as existing, functioning, valued communities as well as show places for transit-oriented revitalization and transformation. Planners should integrate the preservation of current neighborhood characteristics valued by existing residents into station area planning goals.

The demographic variables were much less consistent predictors of respondents' perceptions in regression analysis than in simple tests of significance. This indicates that some racial differences observed in the significance tests may actually be explained—at least in part—by other factors the regression models are better able to account for. In addition, though tests of significance find multiple perception differences based on income, the income variable is not significant in any of the regression models. Though some race variables do achieve significance in regression analysis, they do not do so consistently. Also, when significant, these variables often predict higher probabilities of positive perceptions for minorities (such as African Americans) or immigrants than for whites or non-immigrants—with the notable exception of Asian residents of urban neighborhoods. This finding runs against some local media coverage articulating strongly-held community concerns over gentrification and displacement of minority residents from Central Corridor neighborhoods. (Havens, 2010; Yuen, 2009; Yuen, 2011)

The finding that residents in the historically low-income Phillips neighborhood and Asian urbanites have significantly lower levels of positive perceptions compared with other residents is cause for concern. Transit planners should pay special attention to ethnic and cultural communities as well as geographic areas with concentrated poverty. The starkest departure from the overall highly positive perceptions of fixed-guideway transit projects found in the survey was among Asian residents of urban neighborhoods. The model finds this departure from the trend to be separate from income, education, automobile ownership and other factors that might influence perceptions. When a transit project passes through historic minority communities, planners should involve community members in the planning process, and recognize such communities as having desires and concerns to be addressed just as with physical neighborhoods.

Several travel behavior variables are consistently significant for both urban and suburban corridors, all pointing to the same conclusion: current frequent transit users and transit-dependent residents of the study area have significantly more positive perceptions of transit corridor impacts than infrequent or non-users and residents with access to a motor vehicle. Residents of the study neighborhoods whose lives are most directly affected by transit planning decisions see themselves and their neighborhoods as benefiting from fixed-guideway transit projects. These results demonstrate that planners of fixed-guideway transit corridors should not shy away from neighborhoods with high levels of transit dependency over concerns about impacts on existing, conventional bus service. Planners of major transit projects should instead specifically involve transit-dependent station-area residents and current bus riders to help build a coalition of support in the community as well as to ensure that the future transit system continues to meet the needs of current transit users.

In the importance-change-relevance analysis of respondents' perceptions of specific neighborhood changes, pedestrian safety and traffic congestion are the only two changes that appear in the critical, high importance/negative change quadrant for all four corridors. These are also the only highly important, negative and related changes that Hiawatha respondents expect in the future. Given that Hiawatha respondents are likely to have significantly more experience with an operating transitway than others, these may be important areas to focus on in the planning of future transitways, as well as any traffic engineering or pedestrian design changes in the Hiawatha corridor. For Central Corridor and Cedar Avenue, this finding may also call for better communication of the pedestrian improvements included in transitway plans. The consistent appearance of security/crime and street quietness with the notable exception of Hiawatha suggests a need for further public outreach. The Hiawatha line had been operating for nearly seven years at the time of data collection. The fact that residents of Hiawatha neighborhoods did not perceive these factors as major problems provides an opportunity to present a real-world example of transitway implementation in the Twin Cities *not* leading to perceived increases in crime or losses of quiet streets.

6 Development Preferences

In addition to investigating perceptions of neighborhood change and transitway impacts, the survey included a brief visual preference survey to investigate respondents' preferences for future development/redevelopment in their neighborhoods. The results find both obstacles and opportunities for the acceptance of Transit-Oriented Development (TOD) on the part of neighborhood residents, as well as differences between areas and socio-demographic groups.

6.1 Visual Preference Survey Design

The visual preference survey comprised two four-part questions in which respondents were asked to rate how they would like to see various types of residential and commercial development in or near their neighborhoods. Precise question wordings and answer choices are shown in Table 6-1.

Table 6-1: Visual Preference Survey Questions and Images

Residential question:	*How would you like to see each of the following types of residential development in your neighborhood? Would you not like it at all, not like it much, like it or like it a lot?*			
Residential types:				
Names used in results:	Single family	Townhomes	High-density apartments	Small apartment building
Commercial question:	*How would you like to see each of the following types of commercial development in or near your neighborhood? Would you not like it at all, not like it much, like it or like it a lot?*			
Commercial types:				
Names used in results:	Traditional storefront	Automobile-oriented detached	High-density mixed-use	Contemporary storefront

Respondents rated each development type independently, rather than ranking them. In other words, a respondent could like all eight development types a lot, not like any of them at all or give any combination of answers in between. Answer choices were on a one-to-four scale as follows:

1 = Not like it at all

2 = Not like it much

3 = Like it

4 = Like it a lot

The directions for the commercial question asked respondents to focus on whether or not they would like to see each general type of commercial building in or near their neighborhood, and not to base their answers on the type of business they believed to be present.

6.2 Responses

For residential types, the single-family home is invariably the most popular and least controversial. There is also relatively little variation between respondents (with the exception of Hiawatha) about the high-density apartment building: they consistently dislike it. The small apartment building does reasonably well among Central Corridor and Hiawatha respondents—better than the townhomes, in fact. This pattern does not persist for Cedar Avenue and Northstar. The townhomes do second-best for these corridors, though they are significantly less popular than the single-family home.

Figure 6-1 compares the popularity of each housing type between the four study corridors in graphic form. The high popularity of the single family home is quite apparent, as are the lower levels of support for the other choices. The graph also underscores the divide over the two apartment buildings between Central Corridor and Hiawatha on the one hand and Cedar Avenue and Northstar on the other. Also underscored are the relatively small differences of opinion on the single family and townhome examples.

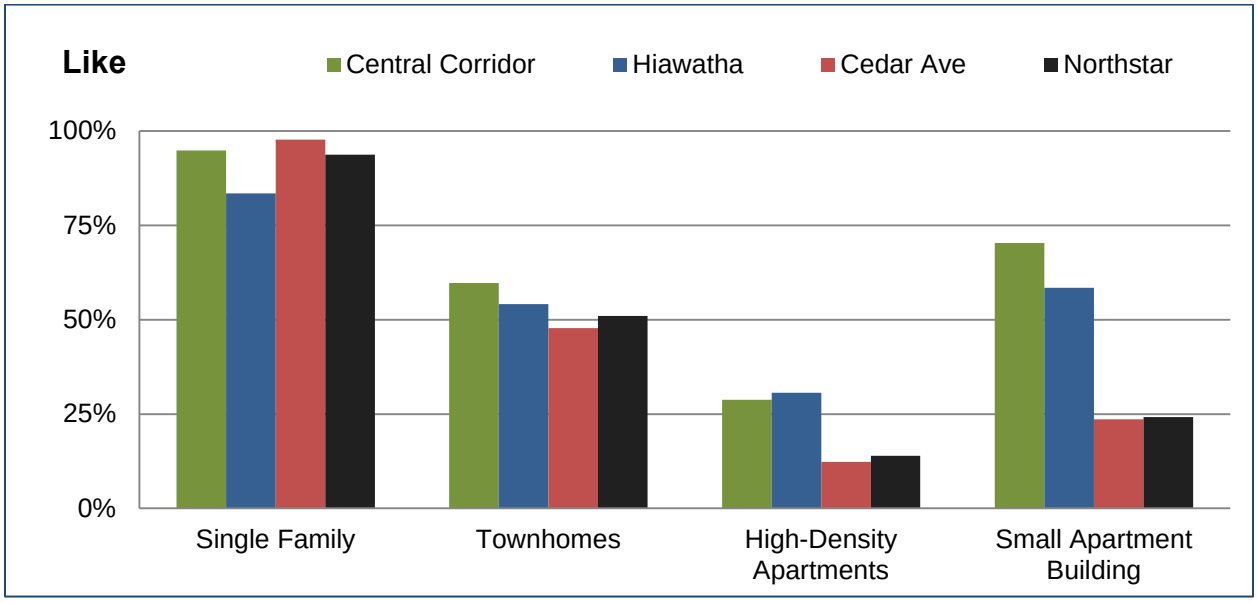

Figure 6-1: Percentages of Respondents Who Like Each Housing Type

For commercial development, the high-density mixed-use development is consistently the most popular. For Central Corridor and Hiawatha, the traditional storefront is the second most popular, followed relatively closely by the contemporary storefront. In both cases, the automobile-oriented detached building is least popular. Cedar Avenue and Northstar responses paint a very different picture. For these corridors, the automobile-oriented detached building has the second highest percentage of "like" responses, after the high-density mixed-use choice. For Cedar Avenue and Northstar, the two storefronts are both generally unpopular, with the traditional storefront the least popular of all.

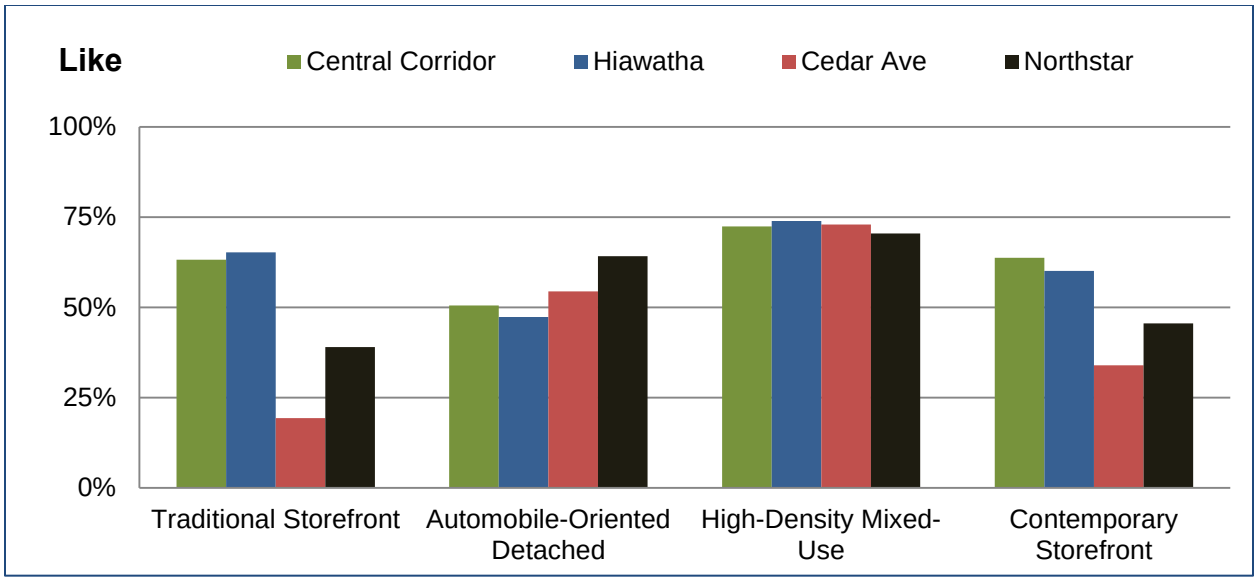

Figure 6-2: Percentages of Respondents Who Like Each Commercial Development Type

Percentages of positive responses to the four commercial development types are shown in Figure 6-2. The uniformly high popularity of the high-density mixed-use development is especially clear, with barely any variation between corridors. The urban-suburban divide over the other three development types is also apparent, particularly for the two storefront-style buildings, which receive nearly as many positive responses as the high-density mixed-use development.

6.3 How Preferences Differ

6.3.1 Inter-Neighborhood Differences in Preferences

In addition to varying significantly between corridors, respondents' preferences for development types show considerable variation between individual neighborhoods. Table 6-2 shows mean differences in development preferences between each neighborhood and the rest of its corridor, with statistically significant differences identified.

In Central Corridor neighborhoods, several divides appear between Prospect Park and/or Hamline-Midway on the one hand, and Thomas-Dale and/or Summit-University on the other. In terms of differences that achieve statistical significance, this divide is completely consistent. The automobile-oriented commercial building is an excellent example, less popular than in the rest of the corridor for Prospect Park and Hamline-Midway, more popular for Thomas-Dale and Summit-University. The traditional storefront commercial building presents another example of the pattern with all four neighborhood's differences significant. At least one neighborhood has a statistically significant difference in development preferences from the others for all residential and commercial development types with the exceptions of the small apartment building and the contemporary storefront. In every case, Prospect Park and Hamline-Midway react more favorably to less intense, neighborhood scale development types, while the opposite is true for Thomas-Dale and Summit-University.

Table 6-2: Inter-Neighborhood Differences in Development Preferences—Wilcoxon Mann-Whitney Test

		Housing				Commercial			
		Single Family	Town-homes	High-Density Apart-ments	Small Apart-ment Building	Traditional Storefront	Auto-Oriented Detached	High-Density Mixed-Use	Contemp-orary Storefront
Central Corridor	Prospect Park	-0.18	-0.22	**-0.63*** **	-0.21	**0.28***	**-0.57*** **	**-0.3** **	-0.01
	Hamline-Midway	**0.23***	**-0.31***	-0.22	0.07	**0.26***	**-0.42** **	0.1	0.2
	Thomas-Dale	-0.07	**0.27***	**0.43*** **	0.15	**-0.3***	**0.51*** **	**0.26** **	-0.07
	Summit-University	0.03	**0.28***	**0.47** **	0	**-0.28***	**0.56*** **	-0.05	-0.14
Hiawatha	North Loop	**-1.39*** **	0.24	**1.00*** **	**1.05*** **	0.14	**-0.51*** **	0.17	**0.74*** **
	Phillips	0.16	**0.37** **	-0.11	0.16	**0.3***	0.24	0.08	**-0.3***
	Standish	**0.48*** **	**-0.49*** **	**-0.43*** **	**-0.38***	0.23	**-0.46*** **	**-0.3***	0.22
	Mall of America	**0.44*** **	-0.07	-0.26	**-0.64*** **	**-0.65*** **	**0.62*** **	0.14	**-0.53*** **
Cedar Avenue	Cedar Grove	0.44	0.41	0.1	**0.69** **	**0.85** **	0.31	0.13	0.56
	A. V. Walk-Ride	-0.65	**0.25***	-0.05	-0.39	-0.97	-0.16	-0.47	**-0.97** **
	A.V. Park-Ride	**0.95***	-0.15	0.1	0.09	0.12	-0.1	-0.02	0.35
	Lakeville-Cedar	-0.34	-0.44	0.12	-0.06	0.1	-0.07	0.47	**0.58***
Northstar	Fridley	-0.05	0.23	0.19	0.28	**-0.28***	0.19	**0.42** **	-0.05
	Coon Rapids	-0.14	0.14	-0.14	-0.24	-0.19	0.18	-0.12	-0.08
	Anoka	-0.02	-0.26	-0.01	0.06	0.22	**-0.61*** **	**-0.46*** **	-0.09
	Big Lake	0.21	-0.12	-0.02	-0.06	**0.28***	0.22	0.15	0.22

Legend: *p<0.1; **p<0.05; ***p<0.01

In Hiawatha neighborhoods, a similar, polarized pattern appears with North Loop on the one hand and Standish and Mall of America on the other. Each statistically significant difference between North Loop and the other Hiawatha neighborhoods is accompanied by a significant difference in the opposite direction for one or both of the latter two. The sole exception is for the automobile-oriented commercial building; here, North Loop and Standish both have less positive opinions, while Mall of America has more positive opinions. Phillips only produces three significant differences from the other neighborhoods, more positive for the townhomes and the traditional storefront, less positive for the contemporary storefront.

Fewer inter-neighborhood differences are significant for Cedar Avenue and Northstar. Among the Cedar Avenue neighborhoods, only three significant differences appear for housing types, all of them positive: Apple Valley Park-and-Ride for the single-family home, Apple Valley Walk-and-Ride for the townhomes, and Cedar Grove for the small apartment building. No differences in housing preferences are significant in Northstar neighborhoods.

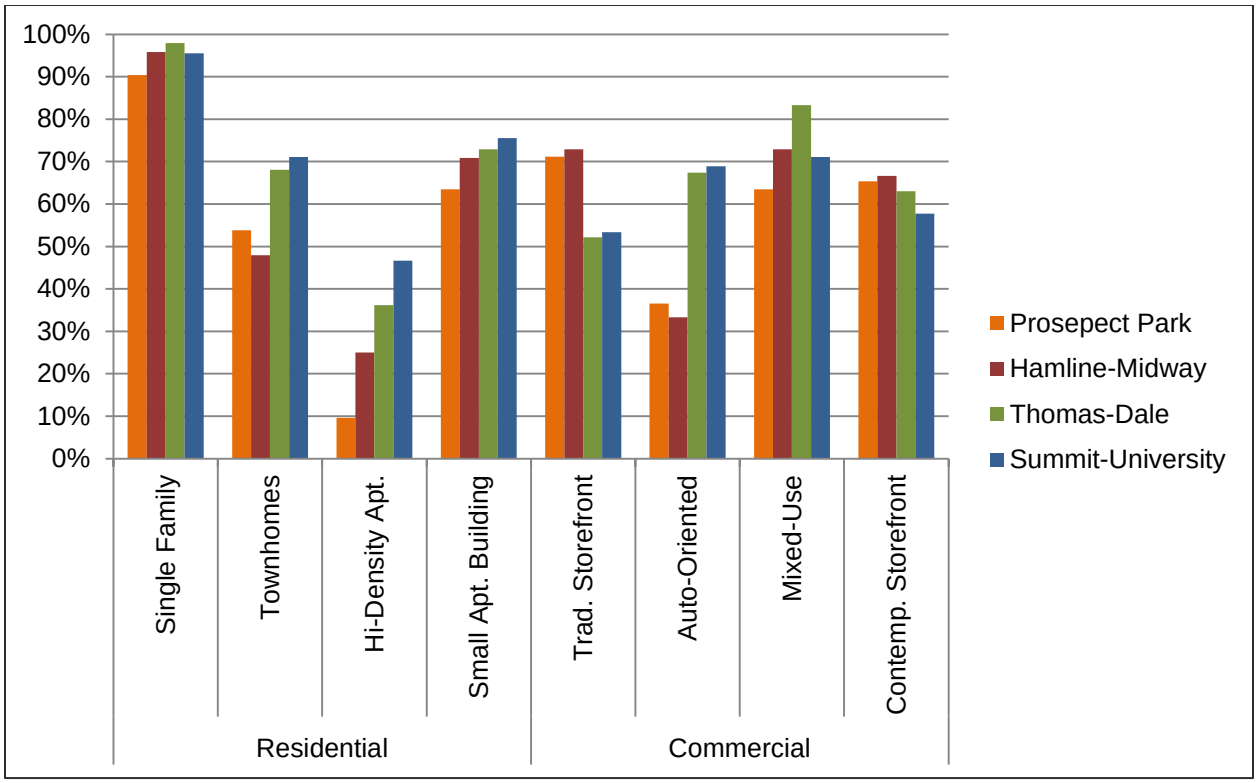

Figure 6-3: Percentages of Positive Responses by Neighborhood—Central Corridor

For commercial development, Cedar Grove respondents have more positive opinions than others from the Cedar Avenue corridor of the traditional storefront. Respondents from the Apple Valley Walk-and Ride-neighborhood have less positive opinions of the contemporary storefront, while Lakeville-Cedar respondents have more positive opinions of it. Among Northstar neighborhoods, Fridley respondents have less positive views of the traditional storefront and more positive views of the high-density mixed-use development, while Anoka respondents have less positive reactions to both the automobile-oriented detached building and the high-density mixed-use development. Big Lake respondents have significant, more favorable views of the traditional storefront than respondents from other Northstar neighborhoods.

Figure 6-3 shows percentages of Central Corridor respondents who answered either “like it” or “like it a lot” for each type of development in the visual preference survey. Large differences between neighborhoods are apparent for the high-density apartments and the automobile-oriented detached commercial building. In both cases, Thomas-Dale and Summit-University have many more positive responses than Prospect Park and Hamline-Midway. There is also a stark divide in the other direction regarding the traditional storefront.

Figure 6-4 shows percentages of positive responses for Hiawatha neighborhoods. Here, the differences between the North Loop and the other neighborhoods found in the significance tests are dramatically illustrated. In terms of residential development preferences, North Loop respondents give responses nearly opposite those of the other three neighborhoods. North Loop is the only neighborhood on any corridor to have a majority negative view of single-family development, or a majority positive view of the high-density apartments. The popularity of the

small apartment building is striking, approaching 100%. The other neighborhoods actually demonstrate a similar pattern to Central Corridor on residential development.

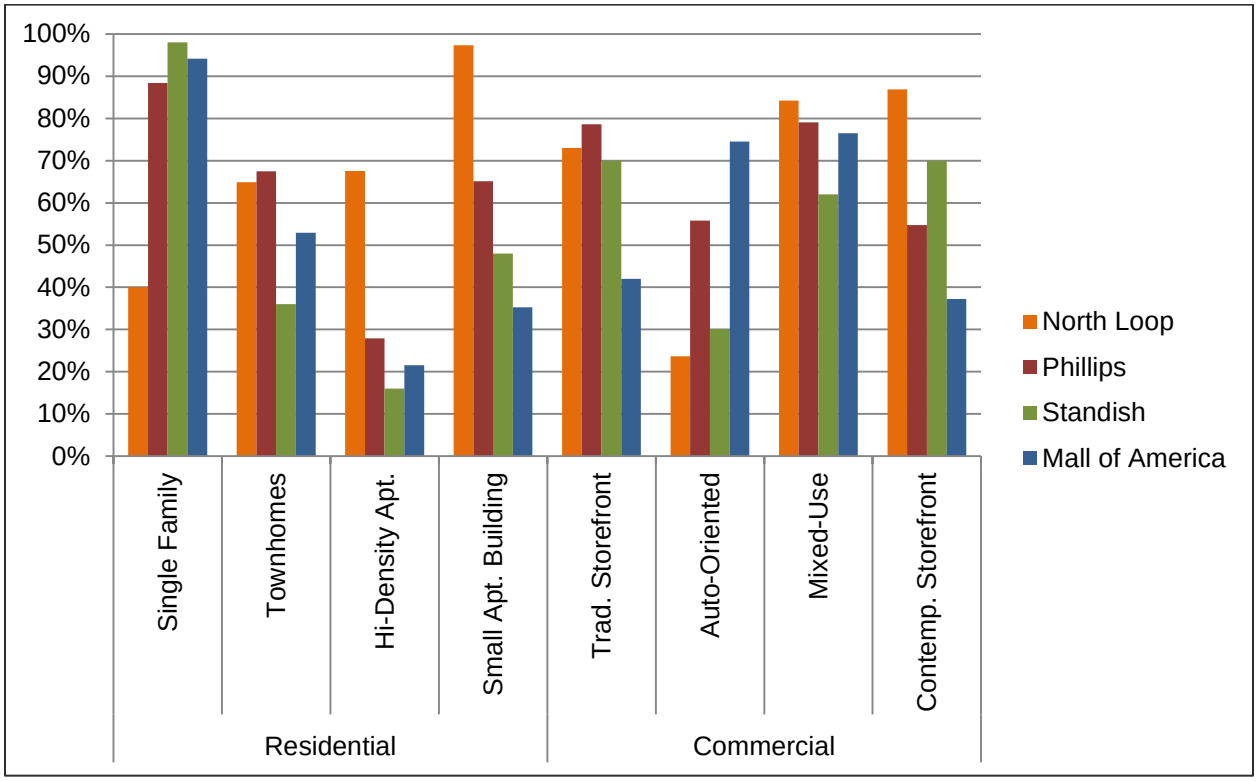

Figure 6-4: Percentages of Positive Responses by Neighborhood—Hiawatha

In terms of commercial development, traditional storefronts are highly popular everywhere except in the suburban Mall of America neighborhood, though surprisingly large differences appear for the contemporary storefront. The high-density mixed-use development is popular in all four neighborhoods. As one might expect, the automobile-oriented detached commercial building is popular in the Mall of America neighborhood and unpopular in the North Loop and Standish. It is surprisingly popular, however, in Phillips.

Figure 6-5 shows positive responses from Cedar Avenue neighborhoods. In contrast to the two urban light rail corridors, Cedar Avenue neighborhoods demonstrate very little variation in development preferences. For residential development, only the townhomes and the small apartment building show any real variation. The Apple Valley Walk-and-Ride neighborhood shows more positives for the townhomes, and is the only Cedar Avenue neighborhood with a majority positive view of any residential type other than single family. Cedar Grove has more positive responses to the small apartment building than the other neighborhoods, though those positives are still in the minority.

Regarding commercial development, Cedar Avenue neighborhoods are in general agreement on their strongly negative view of the traditional storefront, their positive view of the automobile-oriented detached building and their strongly positive view of the high-density mixed-use development. Only the contemporary storefront shows much variation, with Cedar Grove and Lakeville-Cedar having somewhat less negative views than the other two neighborhoods.

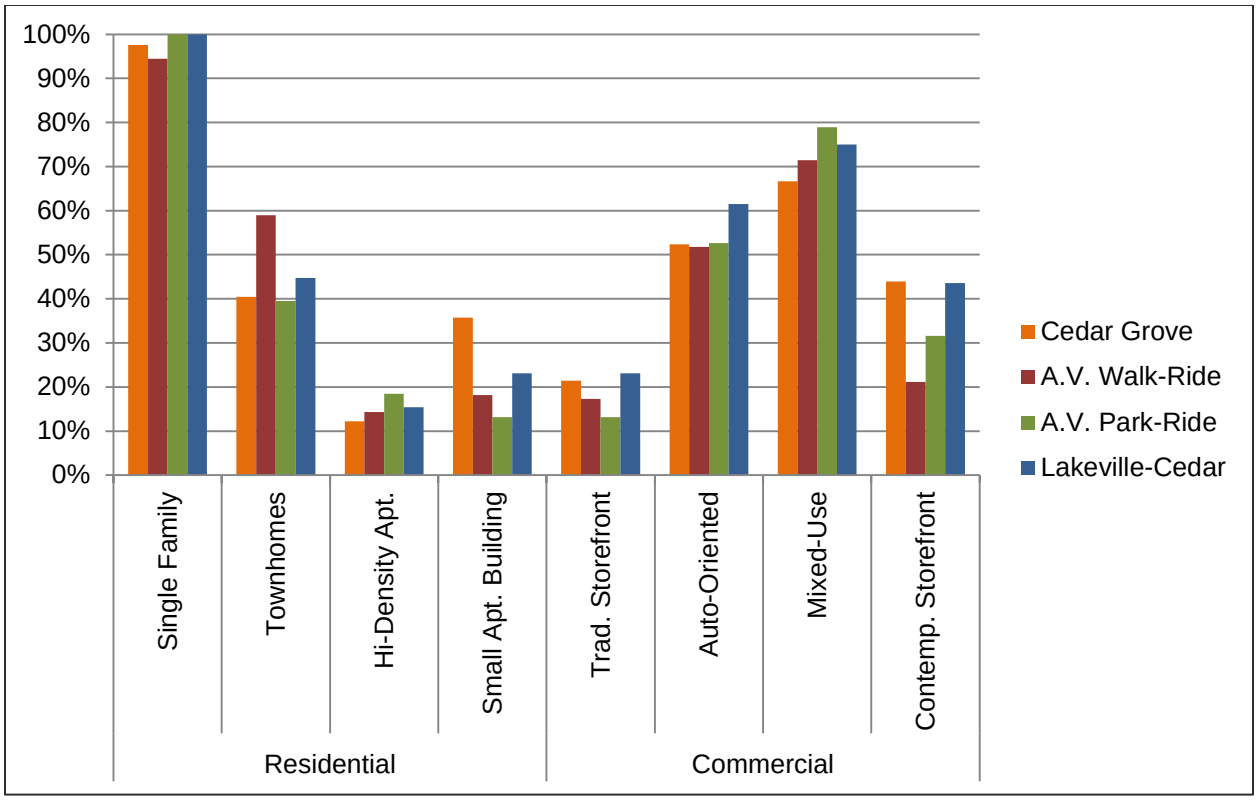

Figure 6-5: Percentages of Positive Responses by Neighborhood—Cedar Avenue

Figure 6-6 shows percentages of positive responses for Northstar neighborhoods. Once again, little variation is apparent between neighborhoods. For residential development, Fridley is slightly more positive—and majority positive, as well—about the townhomes, while Coon Rapids is even more negative than the others about both types of apartments.

Slightly more variation appears for commercial development. Anoka, in particular breaks from the overall corridor trend, and is roughly half positive for traditional storefronts, along with Big Lake. Anoka is the only Northstar neighborhood with a majority of negative responses to the automobile-oriented development type, and is also less positive than the others about the high-density mixed-use development, though this is still the most popular commercial development type for Anoka.

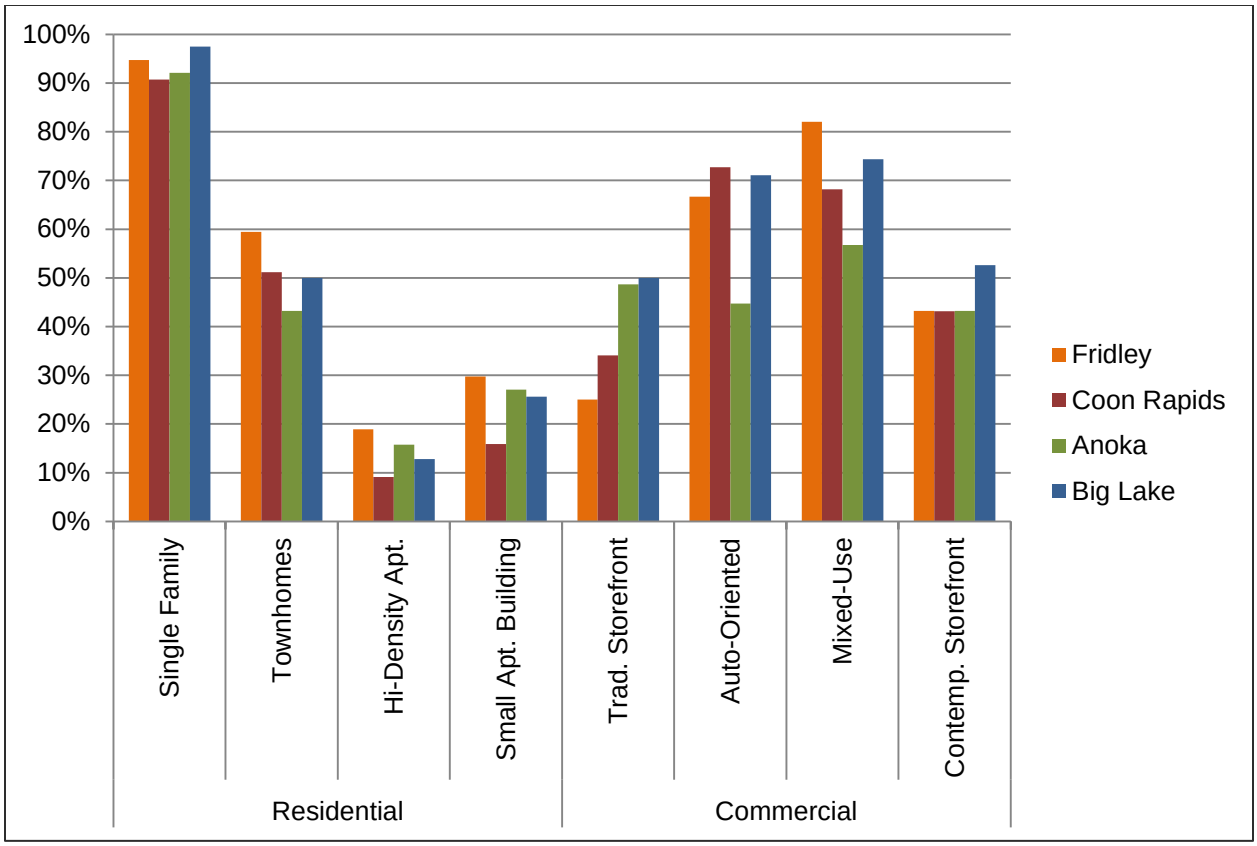

Figure 6-6: Percentages of Positive Responses by Neighborhood—Northstar

6.3.2 Racial Differences in Preferences

Future development and redevelopment are likely to have a profound impact on future neighborhood change in transitway station areas. In addition, transit-oriented development entailing changes to the character of development is a goal of station area planning along all four study corridors. In light of the racial differences in perceptions of neighborhood change and transitway impacts observed for Central Corridor and Hiawatha respondents, an exploration of racial differences in development preferences is warranted. Table 6-3 shows differences from corridor means for the visual preference survey, with statistically significant differences identified.

Table 6-3: Racial Divides in Development Preferences—Wilcoxon Mann-Whitney Test

		Housing				Commercial			
		Single-family	Town-homes	Hi-density apartments	Small apartment building	Trad. storefront	Auto-oriented detached	Hi-density mixed-use	Contemp. storefront
Central Corridor	White	**0.218****	**-0.420*****	**-0.527*****	-0.165	**0.402****	**-0.763*****	0.022	**0.439*****
	Black	-0.135	**0.652*****	**0.517*****	0.182	-0.291	**0.764*****	-0.07	-0.202
	Asian	**-0.252***	0.009	**0.443****	0.105	**-0.550****	**0.429***	0.234	**-0.728*****
Hiawatha	White	-0.024	**-0.541*****	0.015	-0.183	-0.035	**-0.826*****	**-0.433*****	**0.269***
	Black	0.091	**0.678*****	**0.491***	**0.474****	0.107	**0.861*****	**0.375****	-0.115

Note: * p<0.1; ** p<0.05; *** p<0.01.

Many racial differences in development preferences are statistically significant. Differences over housing types are particularly prevalent. In general, minority respondents rated attached and multi-family housing types significantly higher than others, while white respondents tended to rate them lower than others. In Central Corridor neighborhoods, differences over the high-density apartments are especially stark: all three major racial groups represented in the sample have statistically significant differences from the rest of the sample. Whites, as a group, have a significantly lower opinion of the high-density apartment building than others, while African-Americans and Asians both have significantly higher opinions of it. The differences over single-family homes and townhomes are more complex. For the single family residential image, white respondents have a significant, higher opinion than the remainder of the sample, while Asian respondents have a significant, lower opinion. African-American respondents do not show a statistically significant difference from the rest of the sample. For townhomes, whites show a significant, negative difference from other members of the sample, while African-Americans show a significant, negative difference. In this case, Asian respondents do not show a statistically significant difference from the remainder of the sample. Along Central Corridor, no racial differences are statistically significant for the small apartment building.

Along the Hiawatha line, a somewhat different pattern of differences between white and African-American respondents appears. For townhomes, the same directions of significant differences appear as in Central Corridor neighborhoods, and each group's difference from other members of the sample is slightly larger still. For the two types of apartment buildings included in the visual preference survey, African-Americans have statistically significant, more positive views than other members of the sample, while whites' differences from others are not significant. Differences in opinions of the single family home are insignificant.

Regarding commercial development, the automobile-oriented detached building produced the most race-based differences: along both corridors, every group tested has a statistically significant difference from the rest of the sample. In both cases, white respondents have a significantly lower opinion of the automobile-oriented development example. All minority groups tested have significantly higher opinions. The high-density mixed-use development—most popular over all—shows a striking difference in racial divides between the two corridors. For this development type, no racial differences are statistically significant among Central Corridor respondents. Among Hiawatha respondents, however, African-American and white respondents both show statistically significant differences from other members of the sample: white opinions are more favorable as a group, African-American opinions less so. Both

traditional and contemporary storefronts are significantly more popular among whites and less popular among Asians along Central Corridor. In Hiawatha neighborhoods, only the contemporary storefront is significantly more popular among whites.

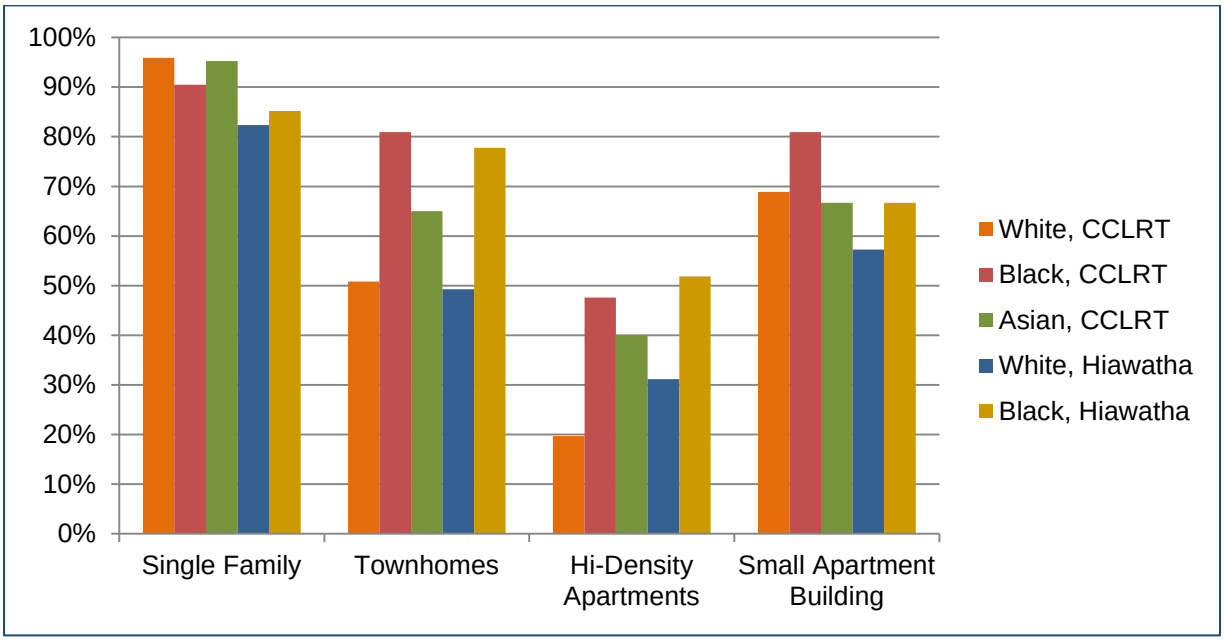

Figure 6-7: Positive Opinions of Housing Types—Racial Differences

Figure 6-7 shows the percentage of favorable responses given by each racial group to each residential development type. The size of the racial divides on townhomes and high-density apartments are striking, especially between white and black respondents. African-American Central Corridor respondents actually rate the townhomes and the small apartment building almost as highly as the single-family home. African-Americans are also almost as tolerant of high-density apartments as whites are of townhomes in Central Corridor Neighborhoods. Asian Central Corridor respondents fall in between whites and African-Americans on the townhomes and high-density apartments. Asians' responses mirror those of whites quite closely for the single-family home and small apartment building. As suggested by the significance tests, racial divides along the Hiawatha line form a similar pattern to black-white differences along Central Corridor, with slightly smaller differences between groups.

Favorable responses by race to the four commercial development types appear in Figure 6-8. Once again, the high-density mixed-use development is universally popular, with only relatively small differences of opinion between groups. In Central Corridor neighborhoods, the other three types all show large racial divides, as suggested by the significance tests. The largest differences for both corridors occur with regard to the automobile-oriented detached building, with more than thirty percentage points between the most favorable group of whites and the least favorable minority group. There is a notable difference between corridors regarding both types of storefronts. Moderate racial divides appear for both traditional and contemporary storefronts in Central Corridor neighborhoods. Among Hiawatha respondents, only a small racial difference appears for contemporary storefronts, while positive responses to traditional storefronts are nearly identical between whites and African-Americans.

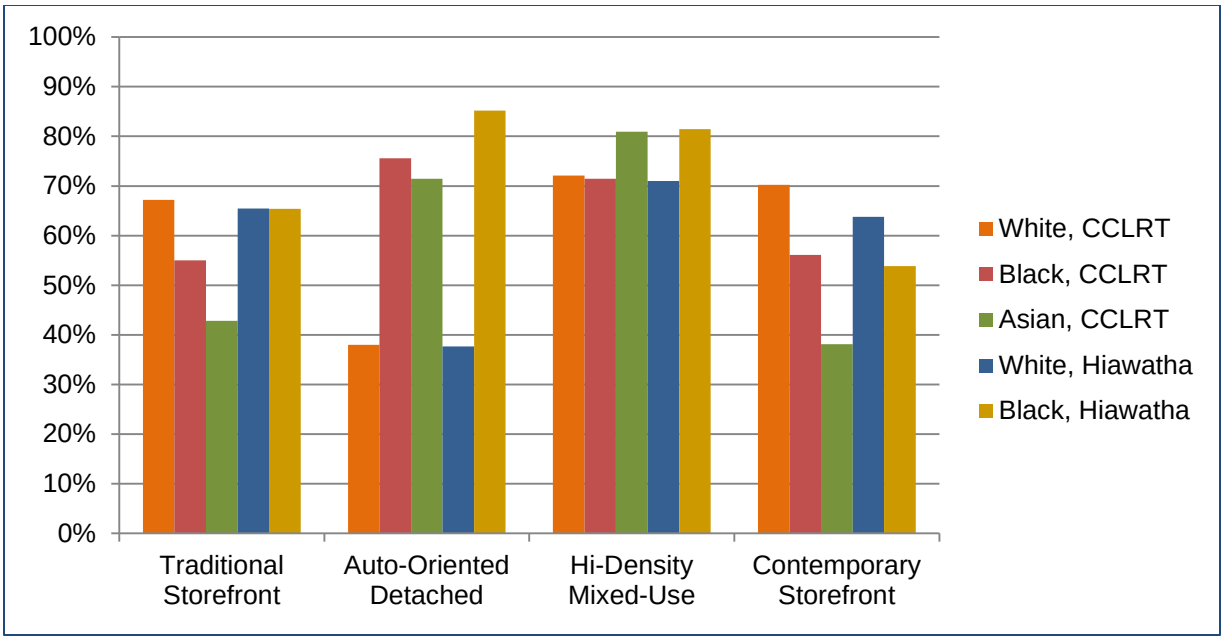

Figure 6-8: Positive Opinions of Commercial Development types—Racial Differences

6.4 Discussion

The most critical finding from the visual preference survey is that desirable and even tolerable types of development around transitways vary widely between different areas of the region, individual neighborhoods and even individual residents' own backgrounds. This result has important implications for Transit Oriented Development planning going forward, particularly because several types of development consistent with TOD are appear likely to face significant neighborhood resistance in many case.

The general unpopularity of the high-density apartments, a popular TOD component due to the high residential densities they permit within optimal walking distance of stations suggests there may be some limits to very high-intensity TOD projects in the Twin Cities, at least in cases where TOD projects are in or directly adjacent to existing residential neighborhoods. (The Reflections condominium development at the Hiawatha Line's Bloomington Central Station offers an example of a very high-intensity transit-oriented redevelopment project in an area unlikely to face neighborhood opposition, due to its separation from existing residential areas. The large parcels of vacant land around several Northstar stations, as well as disused industrial sites along Central Corridor may offer similar opportunities.) It must be noted that security measures common among large apartment buildings—and even smaller suburban apartment buildings—hampered recruitment of apartment dwellers, especially in the suburbs. The popularity of the high-density apartments may be somewhat understated as a result, since suburbanites who live in apartments are likely under-represented in the survey sample.

The considerably higher popularity of the small apartment building along the two light rail corridors, however, suggests that residents may be willing to accept higher densities as long as they are more in scale and integrated with the existing neighborhood. Developments of this type may prove quite valuable for increasing densities near urban transitway stations because of their

popularity among residents, and because they can be feasibly built on the small parcels prevalent in urban neighborhoods.

In addition, the universally high popularity of the high-density mixed-use commercial development is a positive sign for the TOD prospects of neighborhoods along Twin Cities transitways, even in suburban areas. It is particularly interesting that suburban residents consistently rated this development type almost as highly as urban residents did despite consistently rating even the small apartment building much lower. Unfortunately, the survey data do not permit direct examination of the reasons behind this pattern. One possibility is that suburban residents, accustomed to large shopping centers and segregated land uses, may simply assume their neighborhoods will be afforded some degree of separation from any development containing commercial uses. Another is that suburban residents might be more willing to accept density nearby if they see it as including something for them—such as an attractive commercial and entertainment district they might see themselves patronizing.

The racial differences in development preferences found along Central Corridor and Hiawatha drive home the point that where a parcel of land is located is not the only factor in determining what type of development nearby residents will support or oppose for it. The considerably higher opinion minority respondents have of multi-family housing compared with whites is instructive: On the one hand, this finding suggests that African-American and Asian communities may be valuable partners in TOD efforts. Such partnerships can only succeed, however, if members of minority communities are directly included in the benefits of TOD project. Indeed, on the other hand, the finding suggests a need to pay special attention to environmental justice and social equity concerns in the interest of ensuring TOD projects do not harm the potentially vulnerable communities that appear most likely to welcome them in.

Over all, the visual preference survey demonstrates that plans for development around transitways must be context-sensitive. Moreover, it seems critical that Twin Cities TOD projects be sensitive to multiple different types of context, from location within the metro area and immediate neighborhood to the community structures and cultural norms of existing residents.

7 Travel Behavior

In addition to gathering data on residents' perceptions of neighborhood change and transitway impacts, as well as their development preferences, the survey explored residents' travel behavior and perceptions of transit service in their neighborhoods. Specifically, the survey collected detailed information on mode choice for commute and personal trips, commute destinations, personal trip purposes, respondents' assessments of the pedestrian environment in their neighborhoods, importance of and satisfaction with multiple aspects of transit service, along with respondents' use of the transitway serving their neighborhood and the quality of their experience with it. (Respondents from Central Corridor and Cedar Avenue indicated how often they expected to use the transitway in their neighborhood after its completion.) Table 7-1 summarizes the travel behavior information collected by the survey.

Table 7-1: Travel Behavior Topics & Information

General Topic	Specific Data
Commute trips	**Work and/or school location**
	Distance(s)
	Trip time(s)
	Times of day
	Frequency by mode
Personal trips	**Frequency by mode**
	Trip purposes by mode
Perceptions of non-auto modes	**Perception of pedestrian infrastructure and conditions**
	Importance of transit service characteristics
	Perception of transit service quality
	Experience using transitways

7.1 Mode Choice

Along with respondents' perceptions and preferences, respondents' choices of transportation modes are an additional important outcome variable of the survey. The questionnaire asked respondents who stated they were employed and/or in school how frequently they make their commute by transit, walking, bicycle, automobile, taxi, telecommuting or some other mode. Answer choices—borrowed from the Metropolitan Council's regular on-board survey of Twin Cities transit users—range from "Never" to "More than four times a week." Table 7-2 shows all answer choices, as well as specific modes grouped into categories.

Table 7-2: Mode Choice Questions—Wordings and Answer Choices

Modes		***Answer choices (for each)***	
General	**Specific**	**Category**	**Answer**
Transit	*"Walk or bike to a stop and then take a bus or train"*	Non-user	*Never*
	"Drive to a stop and then take a bus or train."	Occasional user	*<1 time/month*
Non-motorized	*"Walking for your whole commute"*		*1-4 times/month*
	"Bicycling for your whole commute"	Frequent user	*2-4 times/week*
Motor vehicle	*"Car or motorcycle for your whole commute"*		*>4 times/week*
	"Taxi"		
No travel	*"Telecommuting or working from home"*		
Other	*"Any other type of transportation" (Specify)*		

By asking respondents how frequently they use each mode for their commute, rather than what mode they use most often, the survey captures respondents who do not always use the same commute mode. Though commuting is often quite habitual, many cases may exist of respondents who use different modes for travel to work and school, or depending on errands to be run after work, or due to the weather, etc. In addition, the questionnaire splits transit into walk/bike-and-ride transit users and park-and-ride transit users to prevent confusion for transit users due to varying access modes.

Figure 7-1 shows commute mode choices for the urban corridors. Both Central Corridor and Hiawatha neighborhoods show significant percentages of respondents commuting by transit at least twice a week—23% for the former and 28% for the latter, even considering only walk/bike-and-ride users. It is interesting to note that Hiawatha's transit mode share is actually larger than Central Corridor's, in spite of higher income levels and lower levels of transit dependency. Park and ride mode shares are quite small, though urban corridor neighborhoods were selected largely based on walk-ride access. Significant minorities report frequently commuting on foot or by bicycle as well—ranging from nine to fourteen percent. While driving—either alone or in a carpool—has the largest mode share for both corridors, it is worth noting that 26% of employed Central Corridor respondents and 32% of employed Hiawatha respondents report *not* commuting by automobile more than once a week. Roughly 8% of Central Corridor respondents and 10% of Hiawatha respondents report telecommuting or working from home at least twice a week.

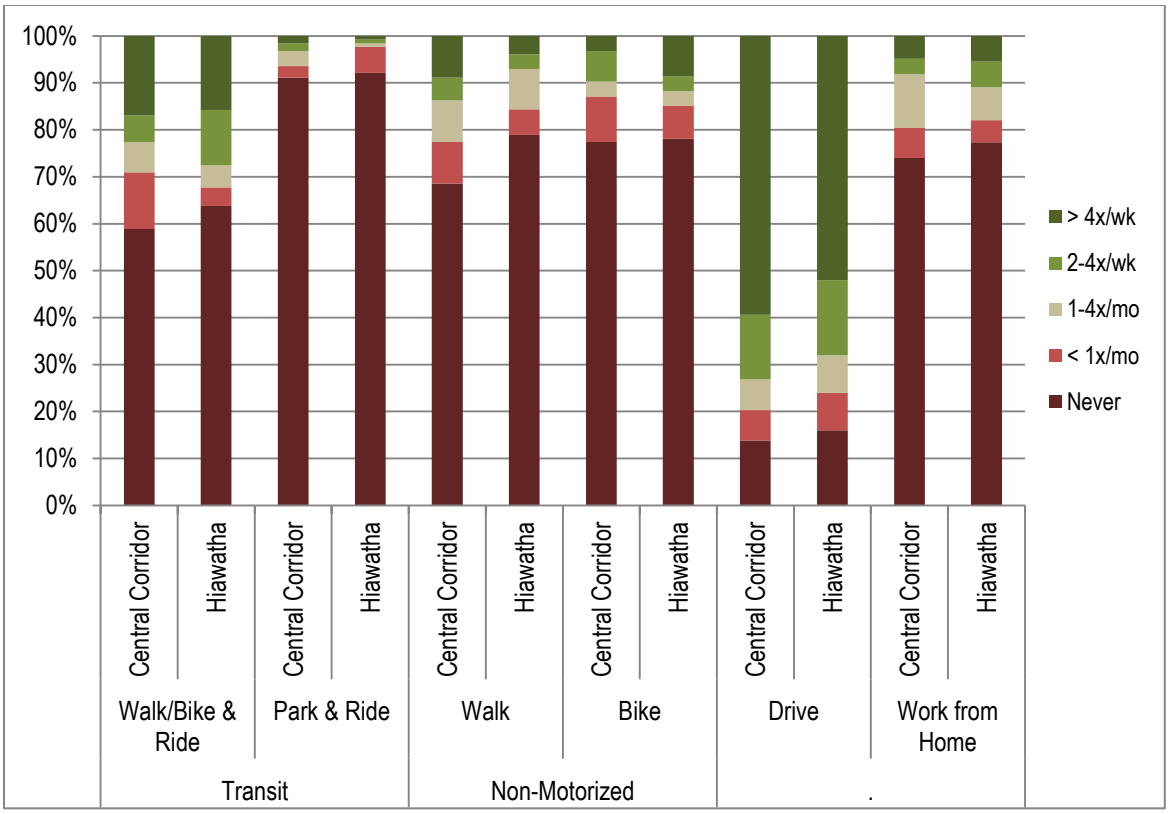

Figure 7-1: Commute Mode Choice, Urban Corridors

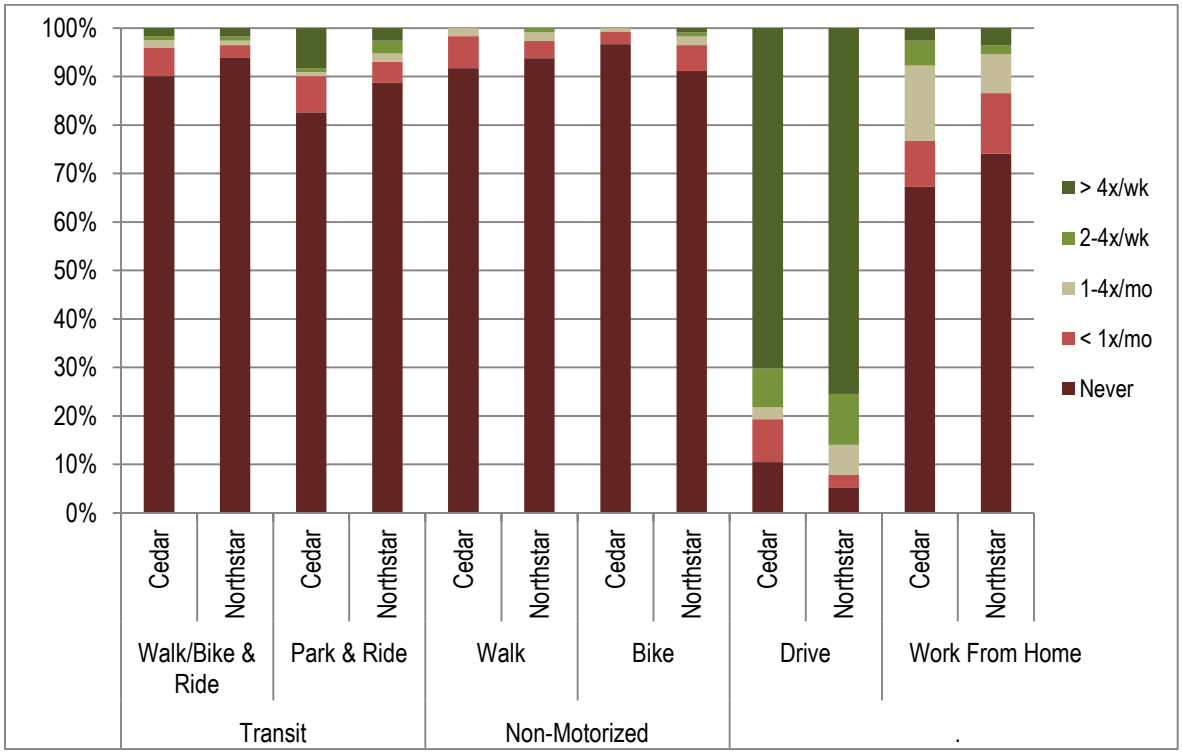

Figure 7-2: Commute Mode Choice, Suburban Corridors

Figure 7-2 shows commute mode choice for the suburban corridors. Major differences are present from urban corridor mode choice patterns. All alternative modes have less than ten percent of employed respondents reporting use at least twice a week, though 9% of Cedar Avenue respondents and 6% of Northstar respondents report frequent park and ride use. Roughly 8% of Cedar Avenue respondents and 6% of Northstar respondents work from home at least twice a week. In spite of low use rates for individual alternative modes in the suburban neighborhoods, 21% of employed Cedar Avenue respondents and 14% of employed Northstar respondents report driving to work *no more than* once a week.

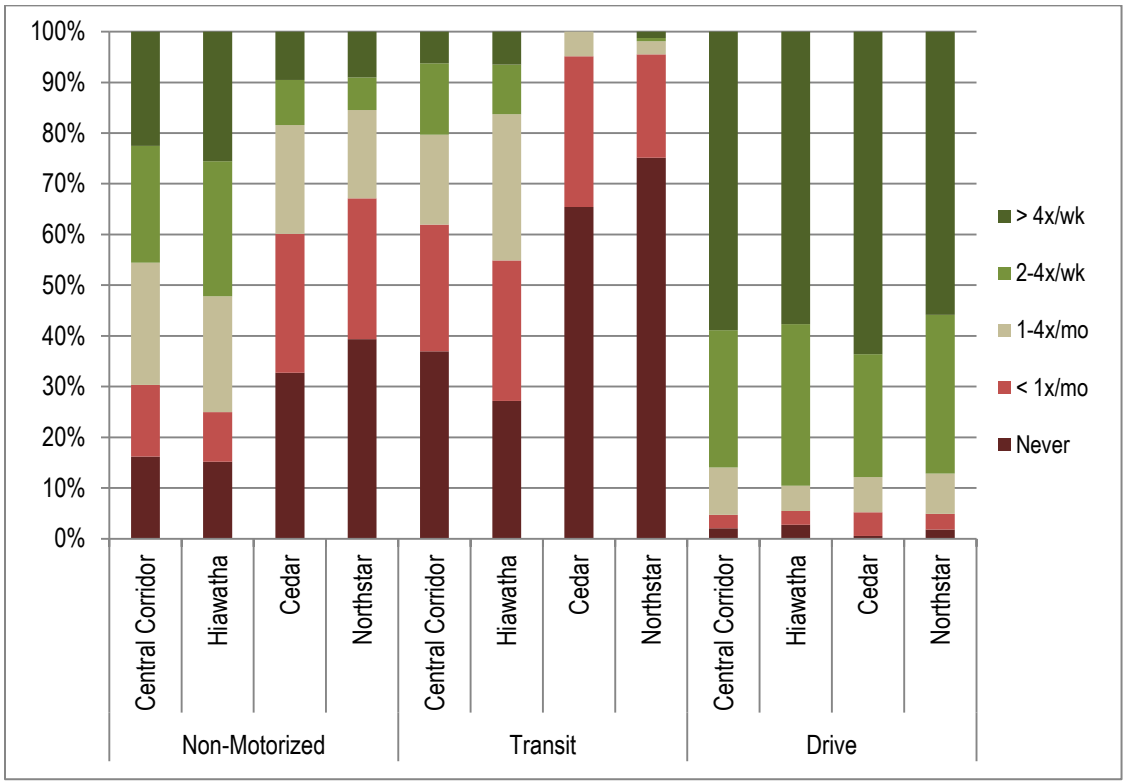

Figure 7-3: Personal Trip Mode Choice, All Corridors

Figure 7-3 shows mode choices for personal trips along all four study corridors. Significant urban-suburban divides appear for non-motorized transportation and transit. While 46% of Central Corridor respondents and 52% of Hiawatha respondents make personal trips by walking or bicycling at least twice a week, only 18% and 15%, respectively, of Cedar Avenue and Northstar respondents do. The urban-suburban divide for personal transit trips is, if anything, even more stark. Twenty percent of Central Corridor respondents and 16% of Hiawatha respondents make personal trips via transit at least twice a week. Roughly 2% of Northstar respondents do likewise; no Cedar Avenue respondents use transit for personal trips more than once a week.

Surprisingly, however, no urban-suburban divide appears for personal trips made by driving. At least in the urban neighborhoods, it appears that frequent use of automobiles and alternative modes are not mutually exclusive for personal transportation. It must be noted that there is some room for variation within each of the frequency categories. Even so, the lack of significant inter-corridor differences for automotive personal travel is striking.

7.1.1 Transit Use by Neighborhood

Figure 7-4 shows overall transit use rates (for any trip purpose) for individual urban neighborhoods, with neighborhoods whose rates of use show a statistically significant difference from the others identified based on a Wilcoxon Mann-Whitney test.

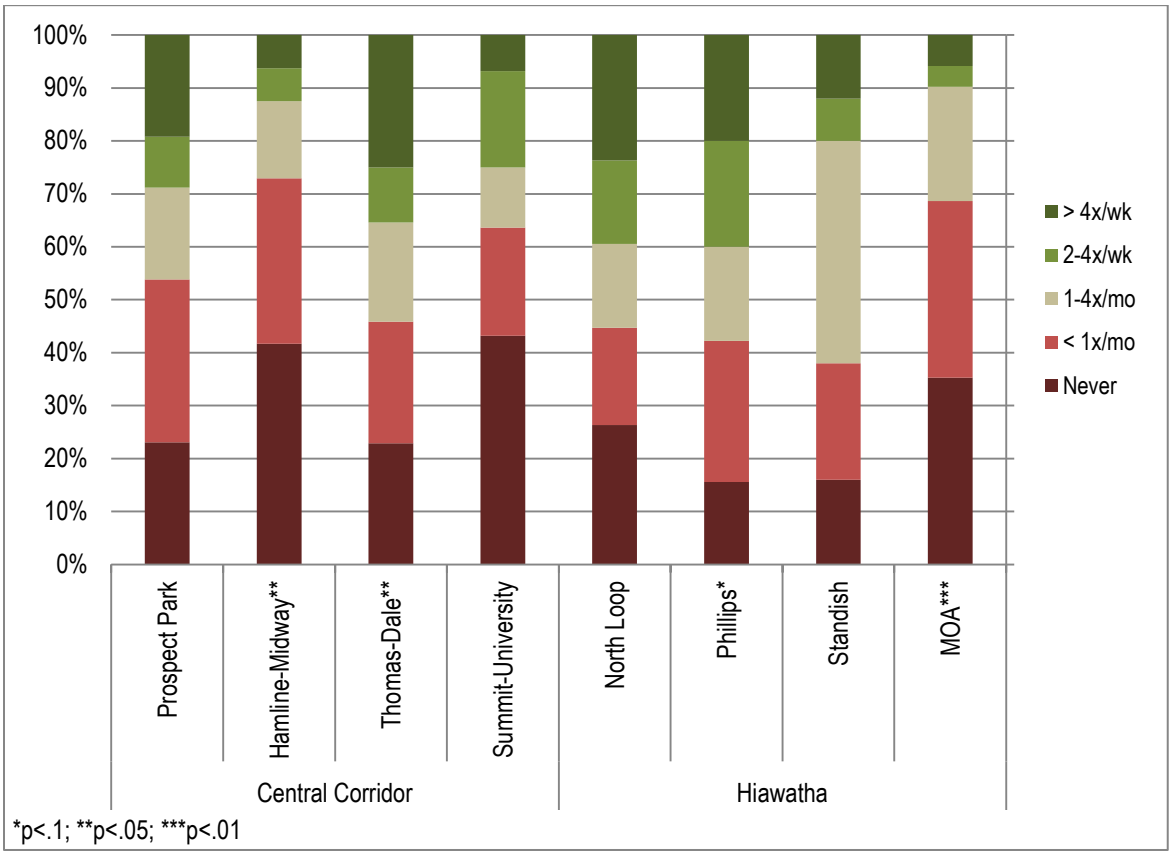

Figure 7-4: Overall Transit Use along Urban Corridors, by Neighborhood

Several inter-neighborhood differences appear; four neighborhoods' transit use rates differ from the remainder of the urban corridor sample in a statistically significant manner. While 35% of Thomas-Dale respondents use transit at least twice a week—and 54% do at least once a month—only 12% of Hamline-Midway respondents ride twice a week or more; the rate only increases to 28% for all respondents using transit at least monthly. Along the Hiawatha line, 40% of respondents from the Phillips neighborhood use transit at least twice a week, and 59% do at least once a month. Ten percent of Mall of America area respondents, however, ride at least twice a week; 31% do so at least monthly.

Figure 7-5 shows overall transit use rates along the suburban corridors by neighborhood. No suburban neighborhood's use rates differ from the remainder of the suburban sample in a statistically significant manner. No suburban neighborhood has more than 10% of respondents reporting transit use more than twice a week.

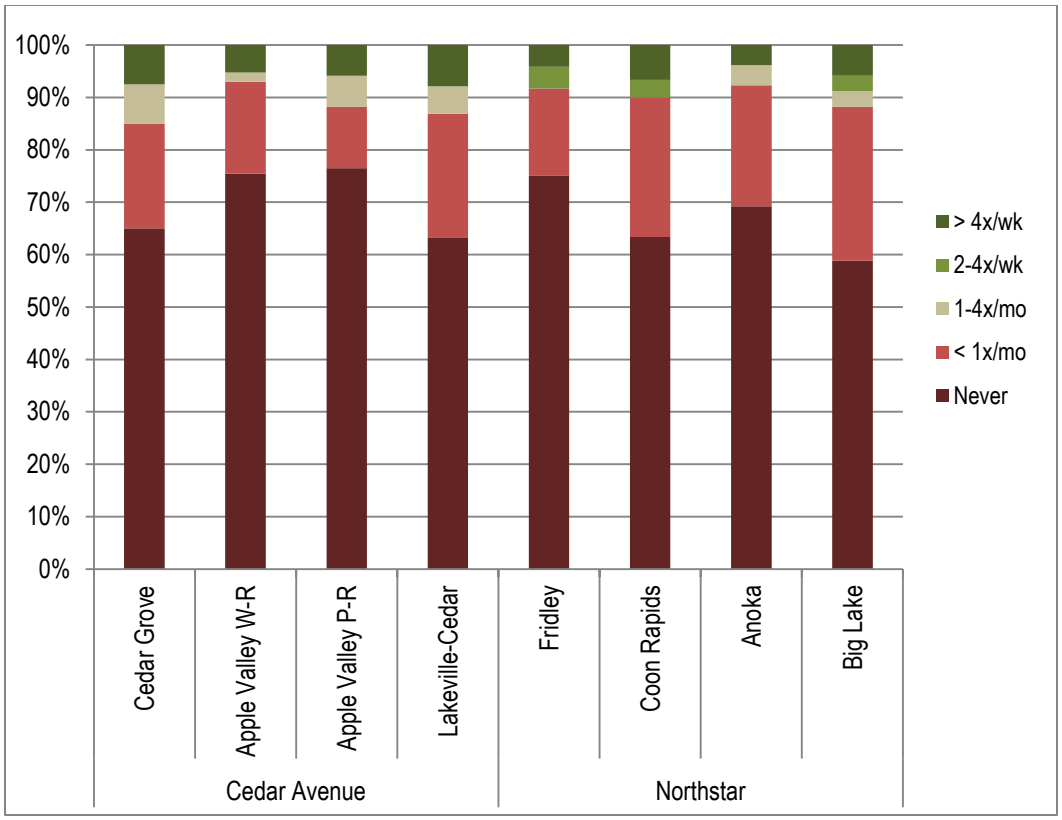

Figure 7-5: Overall Transit Use along Suburban Corridors, by Neighborhood

7.2 Workplace Locations and Transit Commuting

Transit use patterns among workers are often strongly influenced by workplace locations. Certain areas—such as central business districts—tend to have high levels of transit service, as well as congested roads and expensive parking. Figure 7-6 shows percentages of employed respondents from each of the four study corridors who work in three areas of the Twin Cities metropolitan area where all of these conditions are present: downtown Minneapolis, downtown Saint Paul (defined here as Metro Transit's downtown fare zones) and the University of Minnesota. For comparison, the graph also shows percentages of workers who do not work in any of these three areas.

While a majority of employed respondents from all four corridors do not work in either downtown area or the University, a significant urban-suburban divide does appear. Workers in the Central Corridor and Hiawatha samples are significantly more likely to work in one of the three popular transit destinations shown than workers in the Cedar Avenue and Northstar samples. Hiawatha respondents are by far the most likely to work in downtown Minneapolis—28% do—while Central Corridor respondents are most likely to work either in downtown Saint Paul or at the University. Similar percentages of Central Corridor and Cedar Avenue respondents work in downtown Minneapolis, 10% and 9%, respectively. Few Northstar respondents work in any of the three areas.

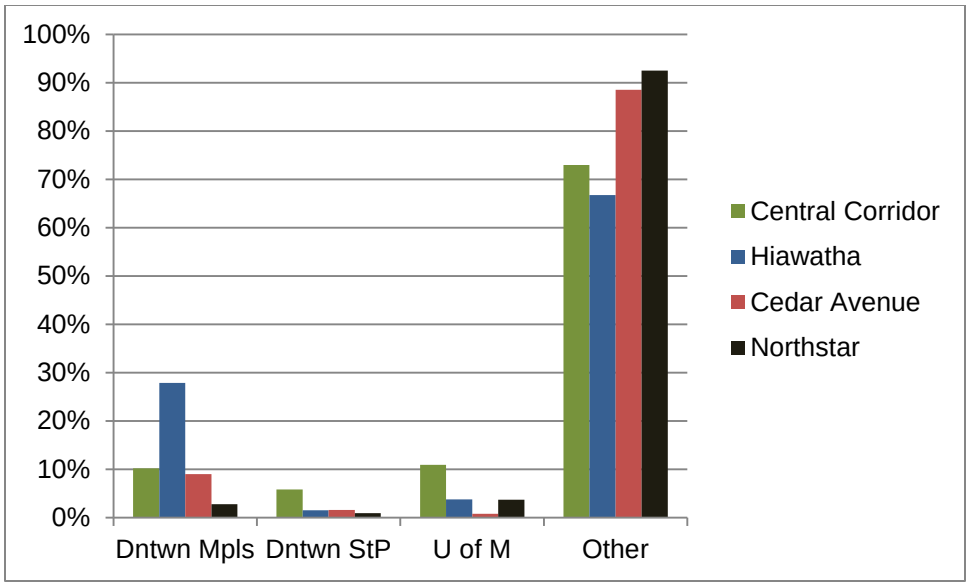

Figure 7-6: Workplace Locations, by Corridor

Figure 7-7 shows the percentages of employed respondents who commute via transit frequently by workplace and corridor. Based on a Wilcoxon Mann-Whitney test, the difference in transit commuting between respondents who work in either downtown area or at the University of Minnesota and those who work elsewhere is statistically significant for all four corridors. It is interesting to note that the urban-suburban divides observed for overall transit use are absent—Cedar Avenue actually has the highest rate of transit use, 69%, for commute trips when only respondents who work downtown or at the University are considered. At least half of all Hiawatha and Northstar respondents who work in one of these three areas commute by transit at least twice a week, compared with 42% for Central Corridor. The urban-suburban divide one might be more inclined to expect does appear, however, for workers who work elsewhere. Sixteen and seventeen percent of employed Central Corridor and Hiawatha respondents, respectively, who do not work in either downtown or at the University are frequent transit commuters, compared with 4% of similar workers on Cedar Avenue and Northstar.

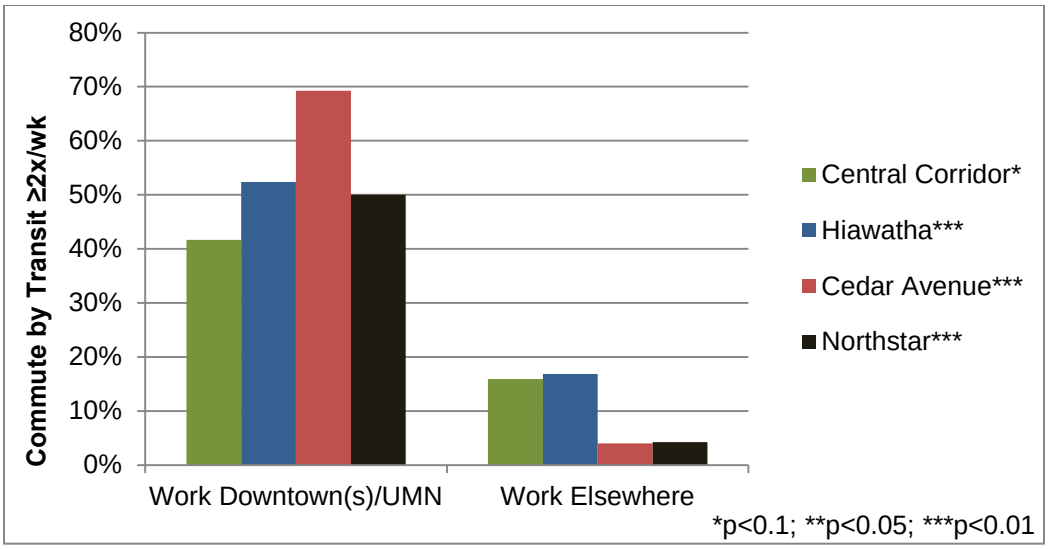

Figure 7-7: Transit Use Frequency, by Workplace

7.3 Respondents' Experience with Transitways

Given the different neighborhood types surveyed and the timeline differences between study corridors, determining respondents' level of experience with transitways is crucial to fully understanding how transitways are perceived throughout the study area. Figure 7-8 shows urban respondents' previous experience with light rail transit—the mode in operation in the Hiawatha corridor and planned for the Central Corridor. Positive experiences are overwhelmingly common across both corridors and neighborhoods. In fact, the only neighborhood in which "Strongly Positive" is not the most common response is Summit-University, where slightly more respondents have never used light rail than had strongly positive experiences with it. Even in this neighborhood, the positive responses put together account for a majority of respondents. The results for Hiawatha neighborhoods are impressive, with 65% to 79% of all respondents having both ridden light rail and had a strongly positive experience with it.

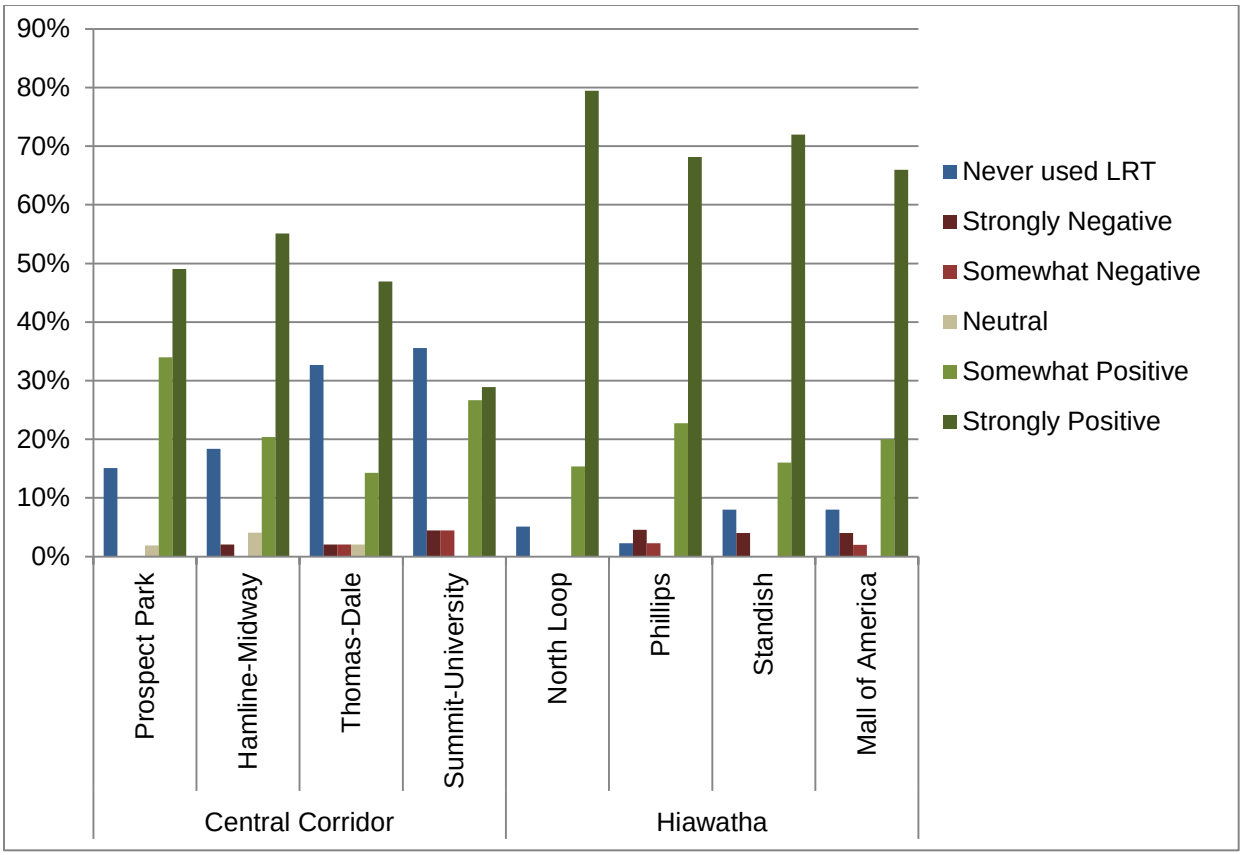

Figure 7-8: Urban Respondents' Transitway Experiences, by Neighborhood

Figure 7-9 shows Cedar Avenue and Northstar respondents' experiences with bus rapid transit and commuter rail, the respective modes of the transitways in their neighborhoods. Though respondents have most commonly never used the mode of transit in question, positive experiences are generally the next most common, with the exception of the Apple Valley Park and Ride neighborhood in the Cedar Avenue corridor. In general, more residents of Northstar neighborhoods than residents of Cedar Avenue neighborhoods have used a transitway before, and the experiences of those who have are more positive in Northstar neighborhoods.

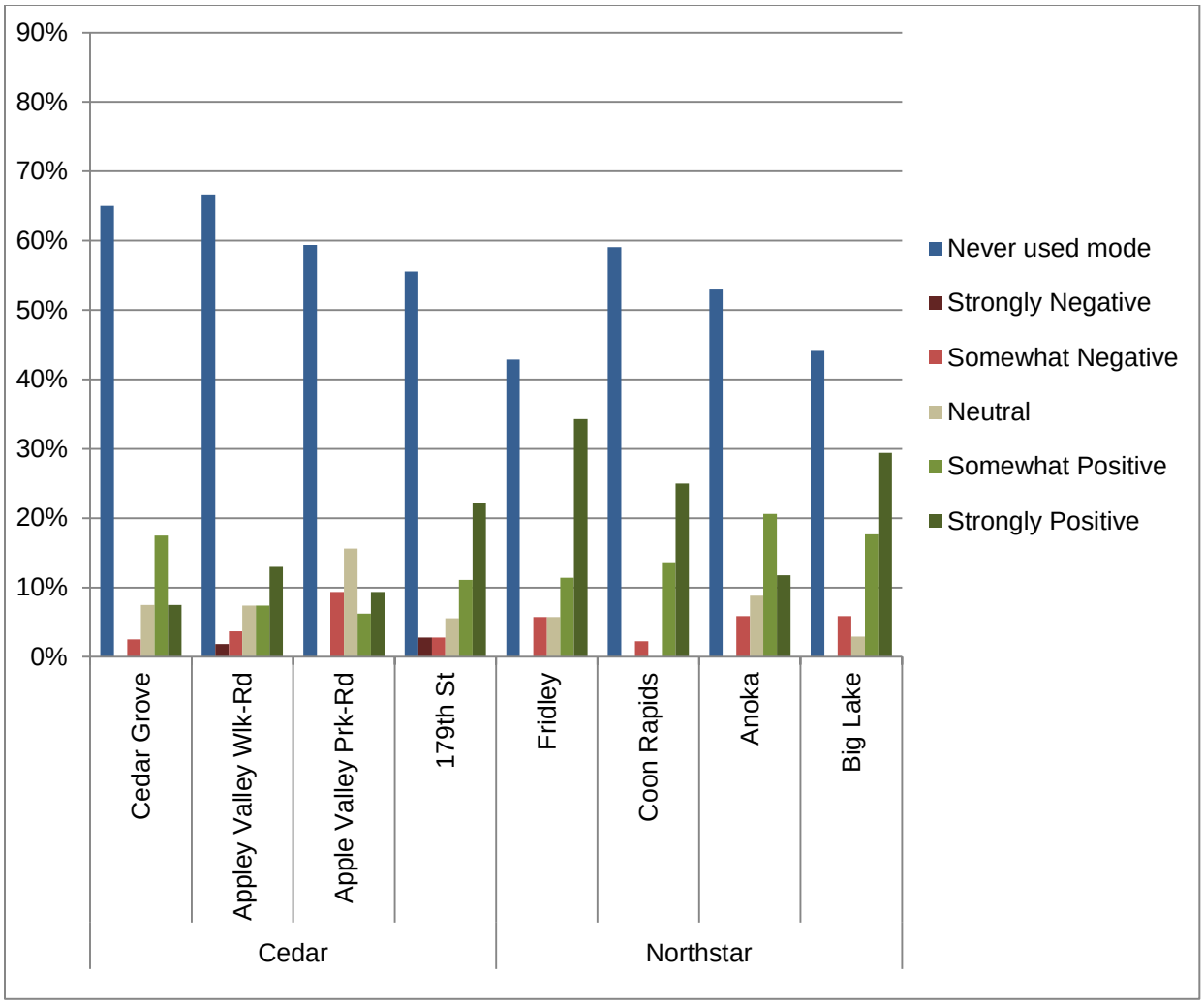

Figure 7-9: Suburban Respondents' Transitway Experiences

7.4 Perceptions of Transit Service—Importance-Satisfaction

Two questions in the travel behavior section asked respondents about their perceptions of transit service in their neighborhoods:

> *For public transit to be a better option for you than it is now, how important would the following things be? Not important at all, slightly important, somewhat important or very important?*
>
> *Do you agree or disagree with each of the following statements about public transit service in this neighborhood? Strongly disagree, somewhat disagree, somewhat agree or strongly agree?*

The first question was followed by a list of possible improvements to transit service, the second by a parallel list of *positive* statements about transit service quality. Table 7-3 shows the individual aspects of transit service covered in the survey. In analyzing the results, the former question provides the importance dimension, while the latter question provides the satisfaction dimension.

Table 7-3: Aspects of Transit Service Quality Considered

Aspects	***Wordings***	
	Importance	**Satisfaction**
Accessing Transit	Closer stops to home and/or destination	Stops are close to your home and destinations
	Safer or more pleasant walking routes to stops	Walking routes to stops are safe and pleasant
	More attractive stops, stations or waiting areas	Waiting areas at stops are attractive and pleasant
Vehicle Characteristics	More comfortable buses/trains	Buses and/or trains are comfortable
	Easier boarding and exiting of buses/ trains	Buses and/or trains are easy to board and exit
Service Characteristics	Service to more places you go	You can get everywhere you need to go by public transit
	Faster travel speeds/quicker trips	You can get around quickly by public transit
	More frequent service at the times you travel	Service is frequent at the times you travel
	Buses or trains that run on time more often	Buses and/or trains are almost always on time
Information	Better information on where routes go and when they run	It is easy to find out where routes go and when they run
Cost	Lower fare	Public transit is a good value for the fare
Automotive Negatives	Higher gas prices	Riding public transit costs less than driving
	Increasing road congestion or worse traffic	Buses and/or trains can get around traffic jams quickly

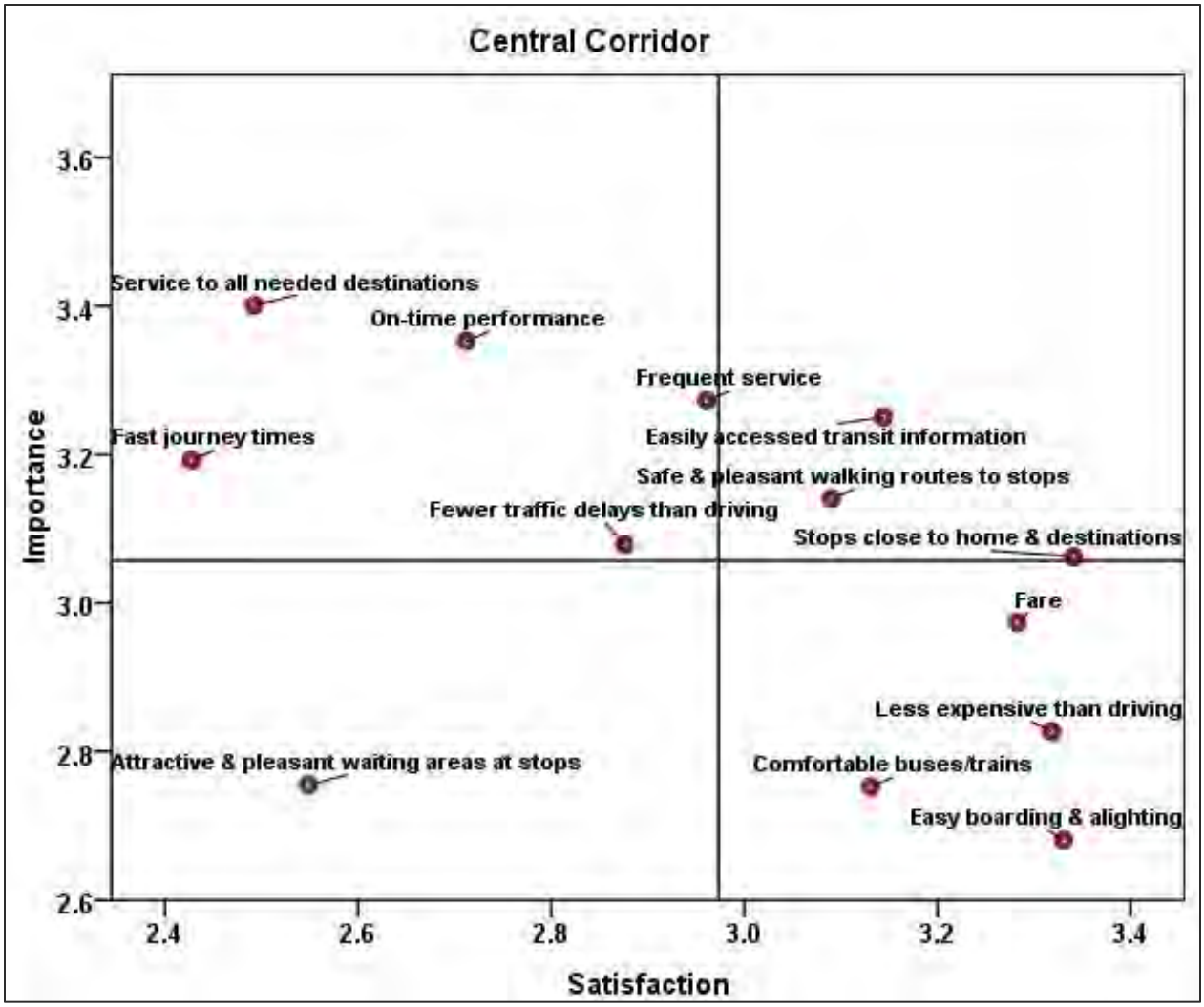

Figure 7-10: Importance-Satisfaction, Central Corridor

Figure 7-10 shows mean results of the importance-satisfaction questions for Central Corridor respondents. The aspect of transit service with the highest importance, and second-lowest satisfaction is service to all needed destinations, possibly reflecting relatively low levels of cross-town service in some areas along Central Corridor. Of the four remaining aspects in the top left, above-average importance/below-average satisfaction quadrant, three (fast journey times, on-time performance and frequent service) relate to transit schedules. Fewer traffic delays than driving is also in the high-importance/low-satisfaction quadrant.

Respondents also rated easily accessed transit information, safe and pleasant walking routes to stops, and stops close to home and destinations as having above-average importance, but also reported high levels of satisfaction. Respondents were also generally satisfied with transit fares, cost compared with driving and transit vehicle characteristics, but ascribed them lower importance.

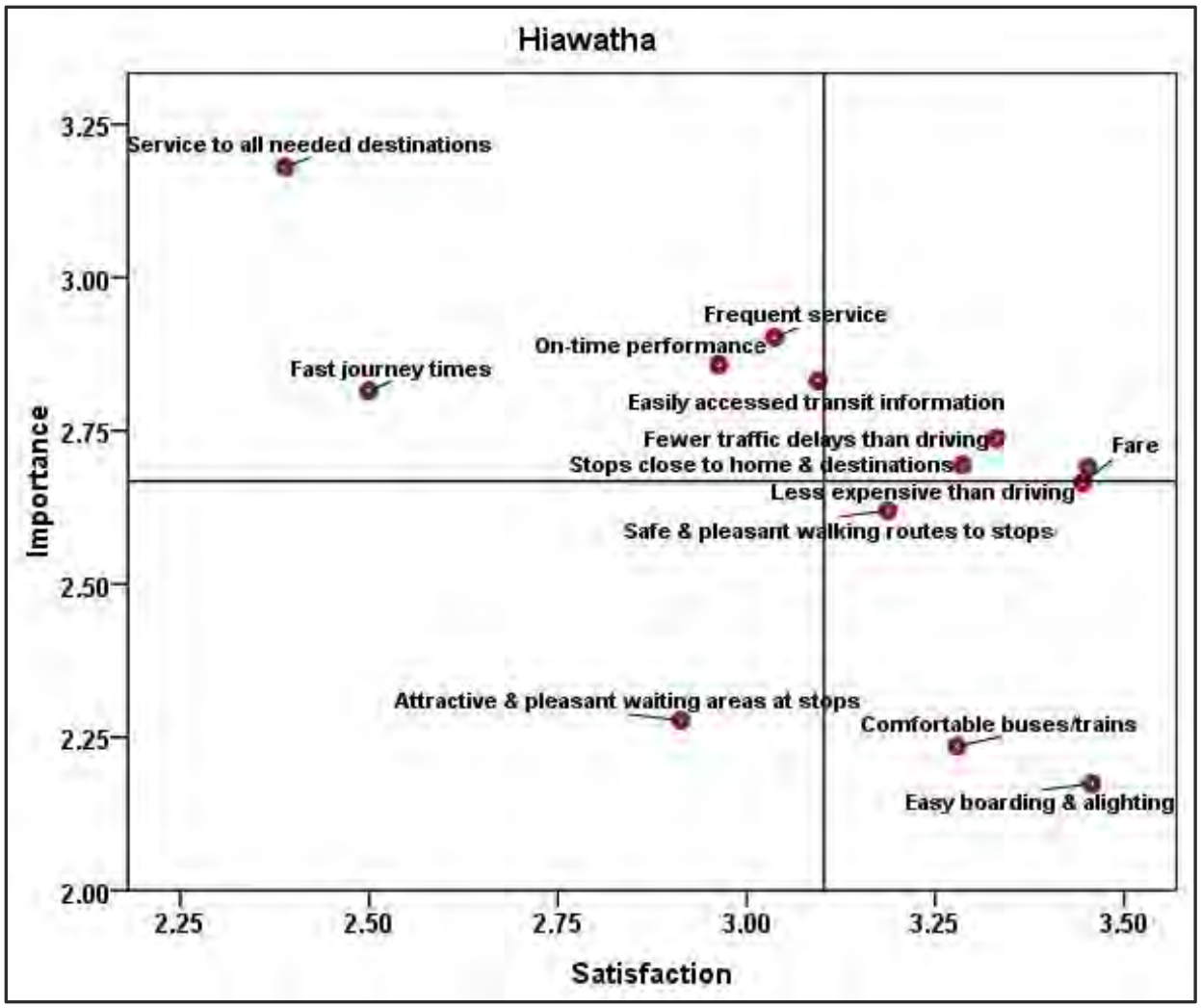

Figure 7-11: Importance-Satisfaction, Hiawatha

Figure 7-11 shows mean results of the importance-satisfaction questions for Hiawatha respondents. Service to all needed destinations has both the highest average importance and lowest average satisfaction for Hiawatha respondents. The three schedule factors—fast journey times, on-time performance and frequent service—are all in the high-importance/low-satisfaction quadrant. Easily accessed transit information also rates highly in terms of mean importance, and just below the mean-of-means line in terms of satisfaction.

Favorable price and travel time comparisons with driving, as well as stops close to home and destinations all have above-average importance, but respondents also report above-average satisfaction. Transit fares, safe and pleasant walking routes to stops, and transit vehicle characteristics show high satisfaction, but relatively low importance. As with Central Corridor, only attractive & pleasant waiting areas at stops shows both below average importance and below average satisfaction.

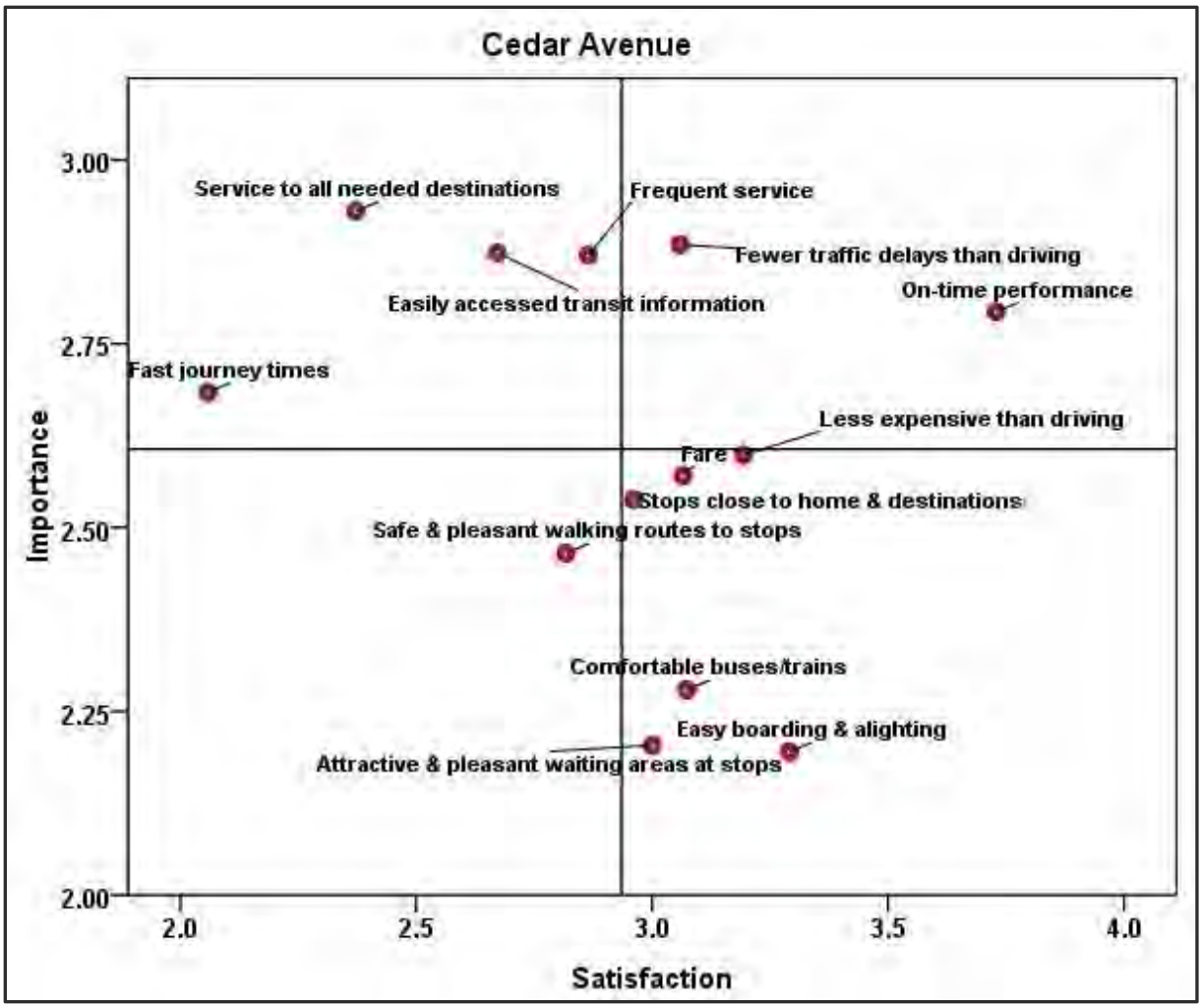

Figure 7-12: Importance-Satisfaction, Cedar Avenue

Figure 7-12 shows mean results of the importance-satisfaction questions for Cedar Avenue respondents. Service to all needed destinations, fast journey times and frequent service once again fall into the high-importance/low-satisfaction quadrant; they are joined in this instance by easily accessed transit information. Service to all needed destinations once again ranks as having the highest importance, but fast journey times has the lowest satisfaction level.

Fewer traffic delays than driving and on-time performance are the only aspects of transit service to fall into the high-importance/high-satisfaction quadrant for Cedar Avenue. Transit vehicle characteristics demonstrate high satisfaction coupled with low importance, as do cost factors, attractive and pleasant waiting areas at stops and nearness of stops—the latter may reflect significant park and ride access in the corridor. Safe and pleasant walking routes to stops is the only aspect of transit service to have both low average importance and low average satisfaction among Cedar Avenue respondents, again possibly reflecting the importance of park and ride access to transit in the area.

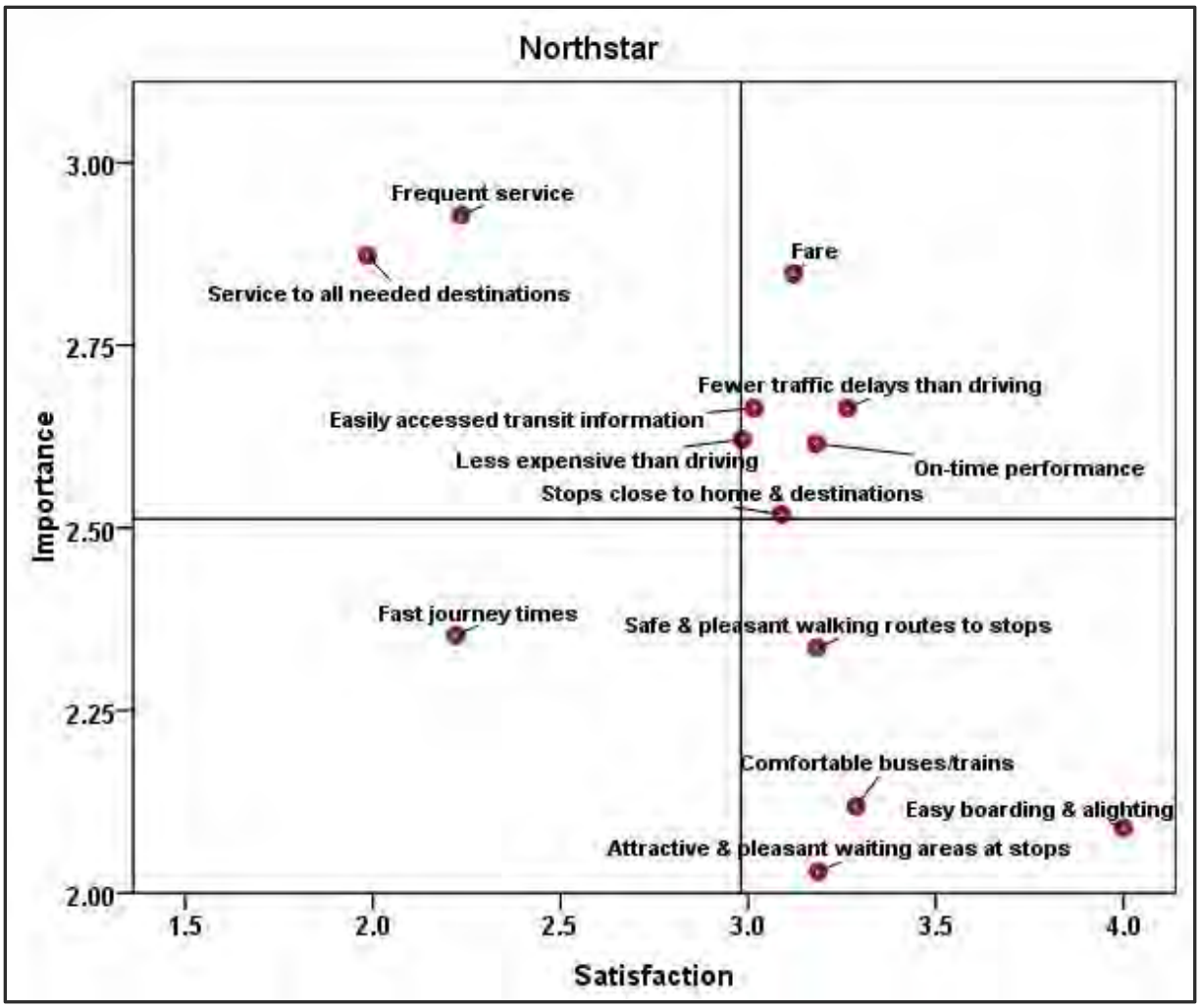

Figure 7-13: Importance-Satisfaction, Northstar

Figure 7-13 shows mean results of the importance-satisfaction questions for Cedar Avenue respondents. Only service to all needed destinations and frequent service fall into the high-importance/low-satisfaction quadrant. This fact may reflect the fast, high quality service provided by the Northstar line at infrequent intervals to a limited number of destinations.

Cost factors, comparisons with driving, transit information, on-time performance and nearness of stops all have high average importance, but also high average satisfaction. Characteristics of stations, stops and transit vehicles also have high average satisfaction, but low average importance. Fast journey times is the only aspect of transit service in Northstar neighborhoods to have below average satisfaction and importance.

7.5 Pedestrian Infrastructure and Conditions

Figure 7-14 shows percentages of respondents who gave positive assessments of specific aspects of the pedestrian environment in their neighborhoods. A large urban-suburban divide appears for the presence of sidewalks, with 98% of Central Corridor respondents and 77% of Hiawatha respondents reporting that most or all streets in their neighborhoods have sidewalks, compared

with less than half the sample for Cedar Avenue and Northstar. Shade along sidewalks in summer, as well as interesting buildings show a similar divide, though of a smaller magnitude.

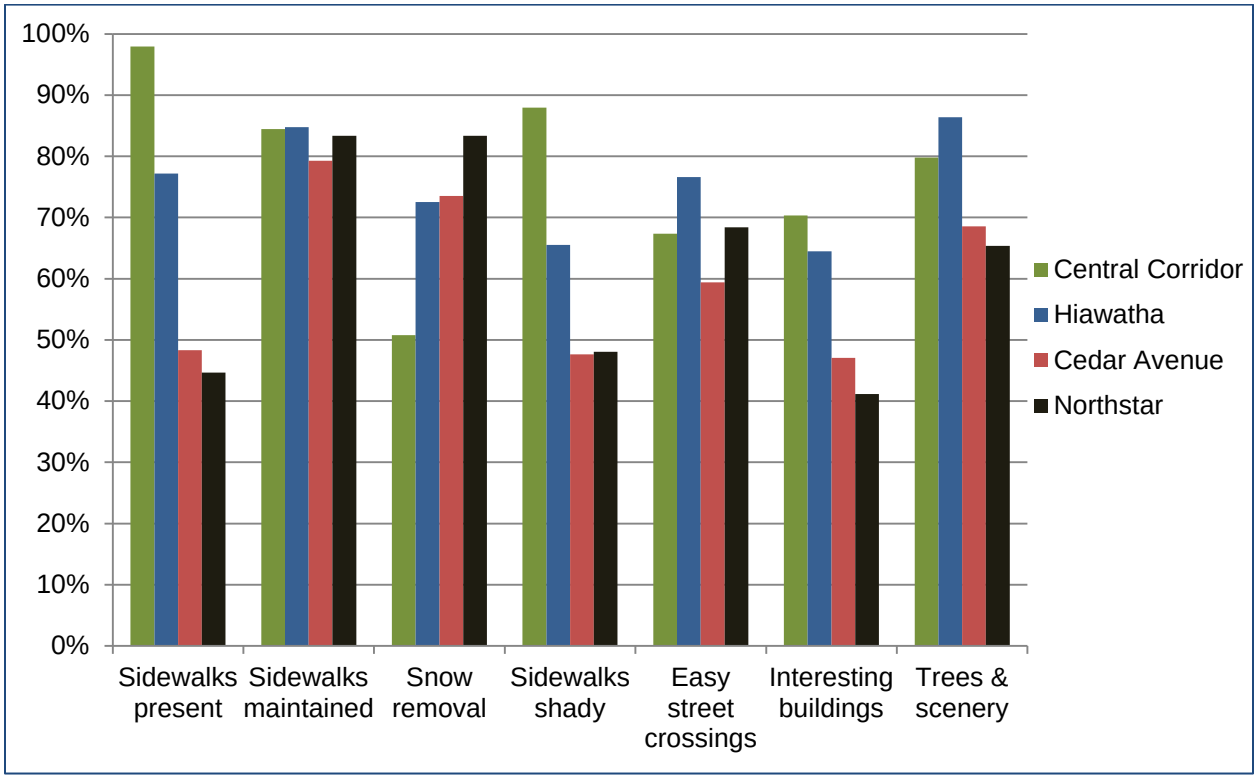

Figure 7-14: Positive Perceptions of Pedestrian Environment, by Corridor

Snow removal actually shows the opposite pattern, with barely half of all Central Corridor respondents giving positive assessments, as compared with over 70% each for Hiawatha and Cedar Avenue, and over 80% for Northstar. It must be noted, however, that data collection followed a relatively harsh winter, during which the City of Saint Paul experienced significant budgetary strains related to snow removal. This fact may depress positive perceptions among Central Corridor respondents.

Sidewalk maintenance, however, shows little difference between corridors at all. Though a slight urban-suburban divide appears on the presence of trees and scenery, it is small overall, and smaller than several other differences between individual urban or suburban corridors.

Easy street crossings produces a more complex pattern of inter-corridor differences. While Central Corridor and Northstar respondents have similar perceptions—67% and 68% respectively—Hiawatha respondents have somewhat more positive perceptions (77%) and Cedar Avenue respondents have fewer (59%).

7.6 Discussion

Large differences appear between corridors for numbers of frequent transit users, particularly between urban and suburban corridors. This pattern is present for both commuting and personal trips. However, the urban-suburban divide disappears—at least for commute trips—when only

respondents who work at three popular, well-served transit destinations are considered. Though more such workers live along the urban corridors, on the whole, they commute by transit at similar rates whether they live along urban or suburban corridors. On the other hand, most employed respondents do not work in either downtown area or at the University of Minnesota, and a large urban-suburban divide *is* present for that majority. While these findings demonstrate premium transit's ability to attract trips to major regional destinations, they also underscore the importance of maintaining and strengthening downtown employment and of providing local transit connections to transitways, as well as cross-town service.

Respondents who have had any experience with transitways overwhelmingly report having had positive experiences. The experiences of Hiawatha respondents in particular illustrate the power of transitways to attract people to try transit—and also to instill positive perceptions in riders. These findings point to non-users as an important avenue for ridership growth in transitway corridors.

Though urban-suburban divides do appear for respondents' perceptions of the pedestrian environment in their neighborhoods, they are not as stark as the urban-suburban differences found for non-motorized travel. Though significant minorities of suburban respondents do report frequently making personal trips by walking or bicycling, very few do so for commute trips. This difference based on trip purpose is much greater than that found for urban respondents. In general, the findings suggest that lower rates of non-motorized travel among suburban respondents may have more to do with distances than pedestrian and bicycle infrastructure.

Regarding respondents' perceptions of transit service, coverage (number of destinations reachable) and service frequency, speed and/or reliability consistently dominate the group of transit service aspects to which respondents ascribe high importance and low satisfaction. The latter three factors—for the incomplete corridors, at least—are likely to be significantly addressed by transitway implementation. The eventual build-out of the regional transitway network would also significantly increase the numbers of destinations reachable from study neighborhood, at least in a reasonable amount of time. However, these findings also underscore the importance for transit of serving complex trip patterns with a combination of transitways and other radial routes, cross-town service and local connections.

8 Survey of Businesses

Transitways can have profound impacts on the business environments of the neighborhoods they serve. Prior to the implementation of a transitway, businesses along the route often express concerns about construction. Following the completion of the resident survey, the research team conducted a similar survey of 160 station-area businesses located in or near the study neighborhoods. Owners and managers of businesses were eligible to participate. This chapter will describe the survey process and results, as well as policy implications suggested by business perceptions of transitways.

8.1 Questionnaire

The business survey questionnaire largely mirrors the questionnaire employed in the resident survey. Once again, the survey revolves around four "key questions" intended to sort respondents into those who see themselves as "winners" and "losers", so to speak, in the transitway development process. As in the resident survey, these questions cover the overall trajectory of change in the neighborhood and the specific impacts of the transitway, and both are asked twice: once concerning *observed* changes and impacts over the *last* five years, once concerning *expected* changes and impacts over the *next* five years. All four ask about changes and impacts as they affect the respondent's business, with exact wordings as follows: (Note: each questionnaire mentions the relevant transitway by name.)

> *Overall, has the neighborhood become a better or worse place for your business over the PAST five years or since you've been in business here, or has it stayed about the same?*
>
> *Overall, what is your opinion of any effects the [transitway] may have had on your business over the PAST five years or since you've been in business in the neighborhood?*
>
> *Overall, do you think the neighborhood will become a better or worse place for your business over the long term—in the NEXT five years, or will it stay about the same?*
>
> *Overall, what is your opinion of any effects you think the [transitway] will have on your business over the long term—in the NEXT five years?*

The remaining questions cover:

- Changes in the neighborhood;
- Short-term concerns about transitway construction impacts (for Central Corridor and Cedar Avenue businesses only);
- Employee and customer characteristics; and
- General background information on both the business and the respondent.

The sections covering employee and customer characteristics, as well as respondent background included questions dealing with current perceived travel behavior and perceived or expected use of the relevant transitway. (See Appendix B)

All respondents had their choice of an in-person interview or a self-administered questionnaire. However, the research team obtained the vast majority of responses through in-person interviews, due to a low retrieval rate for self-administered surveys.

8.2 Survey Process

8.2.1 Study Neighborhoods

The business survey relied on the same neighborhood definitions as the resident survey to the greatest extent possible. Recruitment of participants always began within the boundaries used in the resident survey. In the cases of Standish, Cedar Grove, Fridley and Big Lake, low rates of response and/or limited numbers of businesses within the original neighborhood necessitated the inclusion of some businesses outside the resident survey neighborhood. In all such cases, the nearest businesses outside the resident survey neighborhood were approached first. Table 8-1 lists the built form and predominant business types of each study neighborhood.

8.2.2 Sampling and Recruitment

The survey employed a simple random sample of businesses drawn at the neighborhood level. Owners and managers of sampled businesses were eligible to participate. The sampling frame was based on a Dunn and Bradstreet database of metro-area businesses. Due to high turnover rates in multiple study neighborhoods, the research team confirmed each sample with an on-the-ground walk through of each study neighborhood.

Sampled businesses received a letter introducing the research, informing them of the voluntary nature of the study, assuring them all responses would be private and confidential, outlining options for participation, and encouraging them to contact the project manager with any questions. Businesses were then contacted by telephone and asked to participate, with repeat attempts made until receipt of either a firm assent or refusal, or until it became clear that an owner or manager could not be reached.

8.3 Characteristics of Interviewed Businesses

8.3.1 Interview Totals and Locations

The survey captured 160 responses, ten per neighborhood, with an even distribution between corridors and neighborhoods. Responses rates varied from corridor to corridor: Central Corridor had the highest response rate, at 43%, followed by Hiawatha, with 37%, Cedar Avenue, with 27% and Northstar, with 22%.

Figures 8-1, 8-2, and 8-3 show the approximate locations and concentrations of businesses that participated in the survey. (Responses are aggregated to a 100m grid for Central Corridor, Hiawatha and Cedar Avenue so as to protect respondents' privacy; Northstar responses use a 200m grid due to a smaller map scale.)

Table 8-1: Business Survey Neighborhoods

Corridor	Neighborhood	Built Form	Business Types
Central Corridor	*Prospect Park*	Mix of traditional storefronts, mid-rise office buildings and light industry	Food service, retail, small tech companies, light industry
	Hamline-Midway	Mostly traditional storefronts, light industrial, office conversion of large warehouses	Food service, retail, salons, publishing, wide variety of personal and business services
	Thomas-Dale	Traditional storefronts, auto shops/dealers, small office buildings	Food service, retail, auto repair/sales, personal & business services; many Asian immigrant owned/oriented businesses
	Summit-University	Traditional storefronts, auto shops/dealers, small office buildings, one mall	Food service, retail, auto repair/sales, personal & business services; many Asian immigrant owned/oriented businesses
Hiawatha	*North Loop*	Warehouses (many repurposed), light industrial plants, rail/transit/highway infrastructure, Target Field; mixed with upscale multifamily residential.	Diverse professional services—architects, design firms, publishers, commercial photographers; food service; light industry
	Phillips	Traditional storefronts, small strip centers, neo-traditional smart-growth storefronts, converted houses	Retail, food service, many businesses owned by/serving Native American and African immigrant communities.
	Standish	Traditional storefronts almost exclusively; a few detached auto shops & converted houses	Food service, retail, personal legal/financial services, auto repair, alternative health services
	Mall of America	Large regional mall dominates area. Some small-scale offices and auto-oriented suburban retail in surrounding area	Retail and food service. Some business services (IT, engineering, etc.)

Table 8-1 (Cont'd):

Corridor	Neighborhood	Built Form	Business Types
Cedar Avenue	*Cedar Grove*	Strip centers, office parks, some ground-floor retail in large apartment complex	Diverse business services, wholesalers, convenience retail, food service
	Apple Valley Walk-Ride	Strip centers, some mid-rise office building	Food service, retail, personal financial services, health services
	Apple Valley Park-Ride	Strip centers, big-box retail, some mid-rise office buildings	Food service, retail, personal financial services, health services, hair and nail salons
	179th St	Large strip center, some individual commercial buildings	Food service, retail, health services, hair and nail salons
Northstar	*Fridley*	Strip centers, light industrial plants, auto service stations	Food service, retail, personal financial services, health services, light manufacturing, auto repair
	Coon Rapids	Big box retail, strip centers	Food service, retail, personal financial services, health services
	Anoka	Traditional storefronts, repurposed industrial buildings, light and heavy industrial plants	Food service, retail, personal financial services, business services, entertainment, health services, light and heavy manufacturing, auto repair
	Big Lake	Strip centers, traditional storefronts, detached buildings, office parks, converted houses	Retail, food service, personal and business services, wholesale, light manufacturing, agriculture-oriented businesses, auto repair, hospitality

Figure 8-1: Approximate Interview Locations, Central Corridor and Hiawatha Light Rail

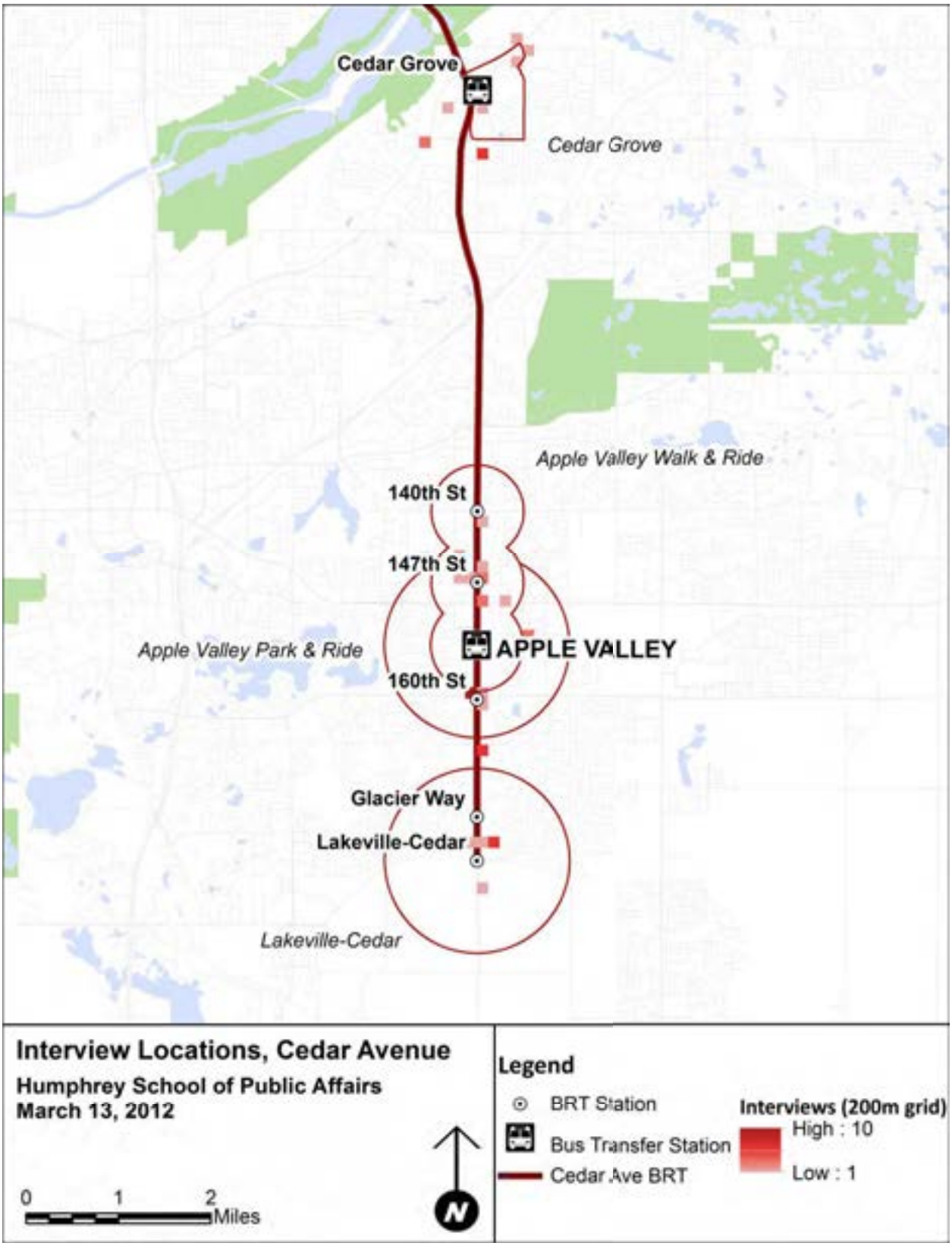

Figure 8-2: Approximate Interview Locations, Cedar Avenue Bus Rapid Transit

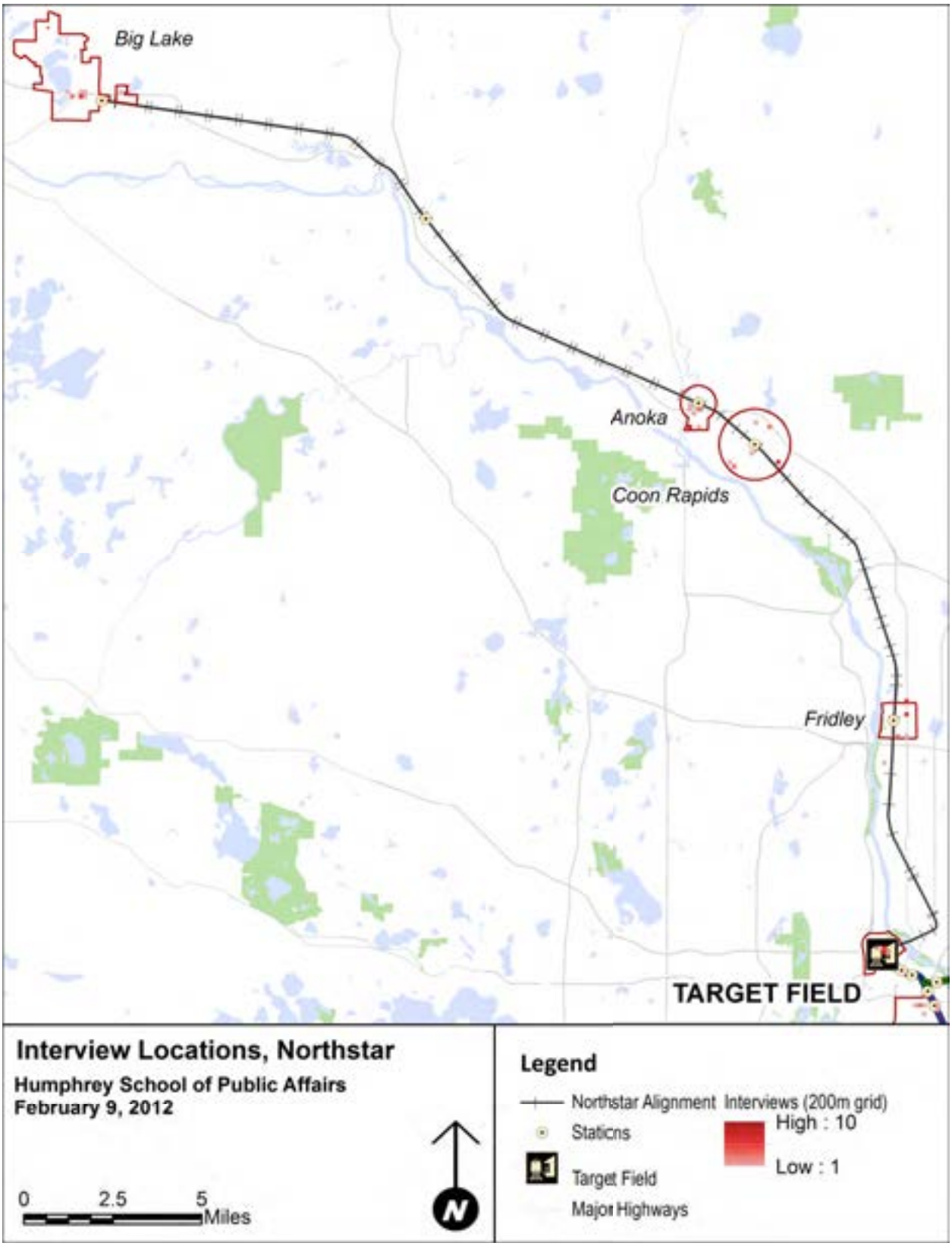

Figure 8-3: Approximate Interview Locations, Northstar Commuter Rail

8.3.2 Data Distribution

Figure 8-4 shows industry sectors for the survey sample by corridor. Predominant sectors vary considerably from corridor to corridor. Retail businesses account for a large percentage of the sample in all cases—16-36%. Percentages of Accommodation and Food Services businesses are surprisingly variable, however, ranging from only 5% of the Cedar Avenue sample to 25% of the Hiawatha sample. Though percentages of Health Care and Social Assistance, as well as Other Services businesses are also variable, this variation can largely be explained by differing mixes of businesses present in the four corridors. For example, University Avenue's traditional status as a significant regional location for car dealerships and repair shops is likely reflected in the large percentage of Other Services in the Central Corridor sample. The large percentages of businesses in this sector for Cedar Avenue—and Central Corridor as well—also partly reflect high numbers of hair and nail salons along these corridors, particularly Cedar Avenue.

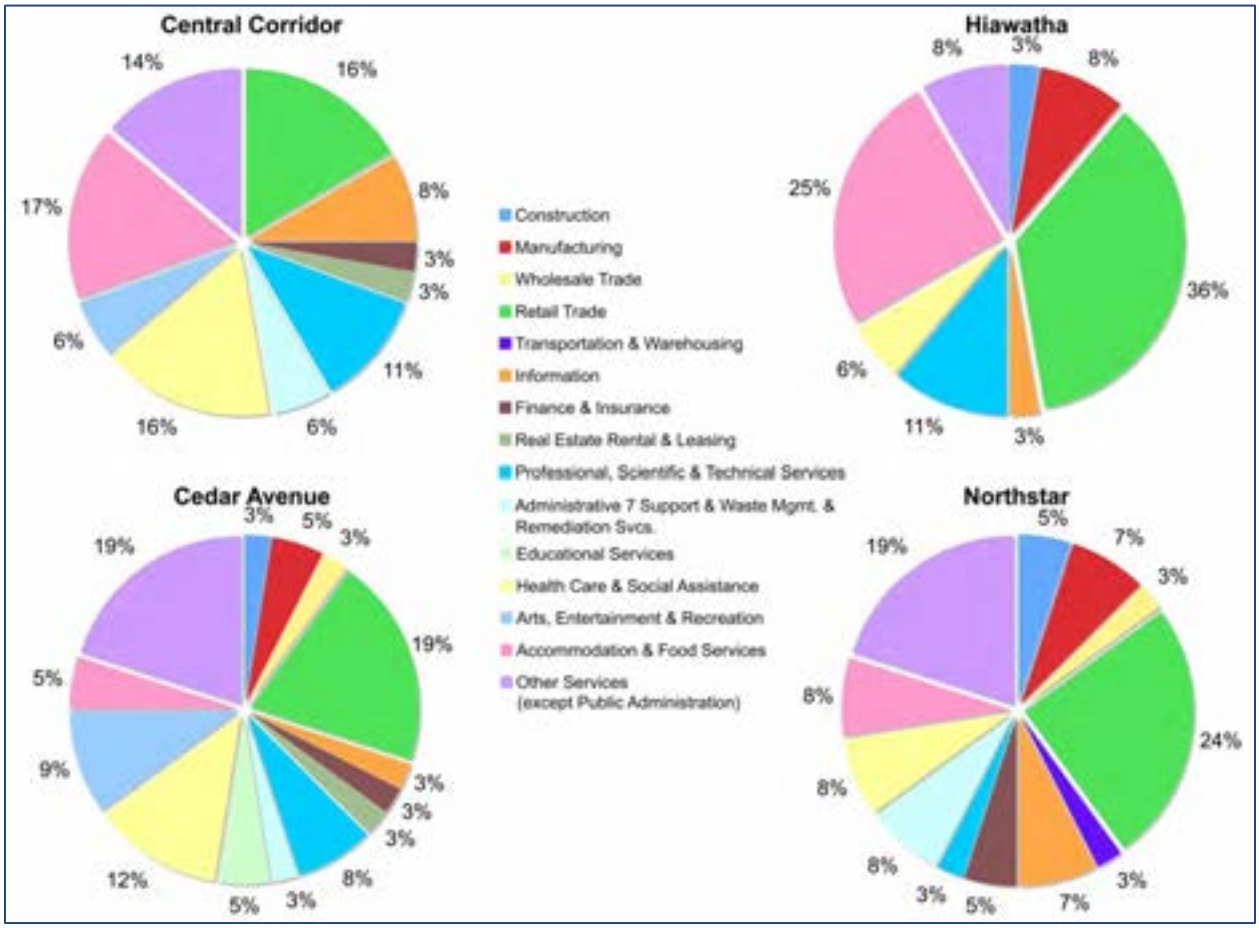

Figure 8-4: Industry Sectors—Survey Sample

Figure 8-5 shows industry sector breakdowns, by corridor, for the entire survey population. (Dunn & Bradstreet, 2012) Comparison of Figures 8-4 and 8-5 shows a moderate sample bias towards retail and personal service businesses. This may partly reflect differing levels of interest in the survey among businesses in different sectors. Retail, food service and personal service businesses, for example, are likely to experience both positive and negative impacts from transitways especially acutely.

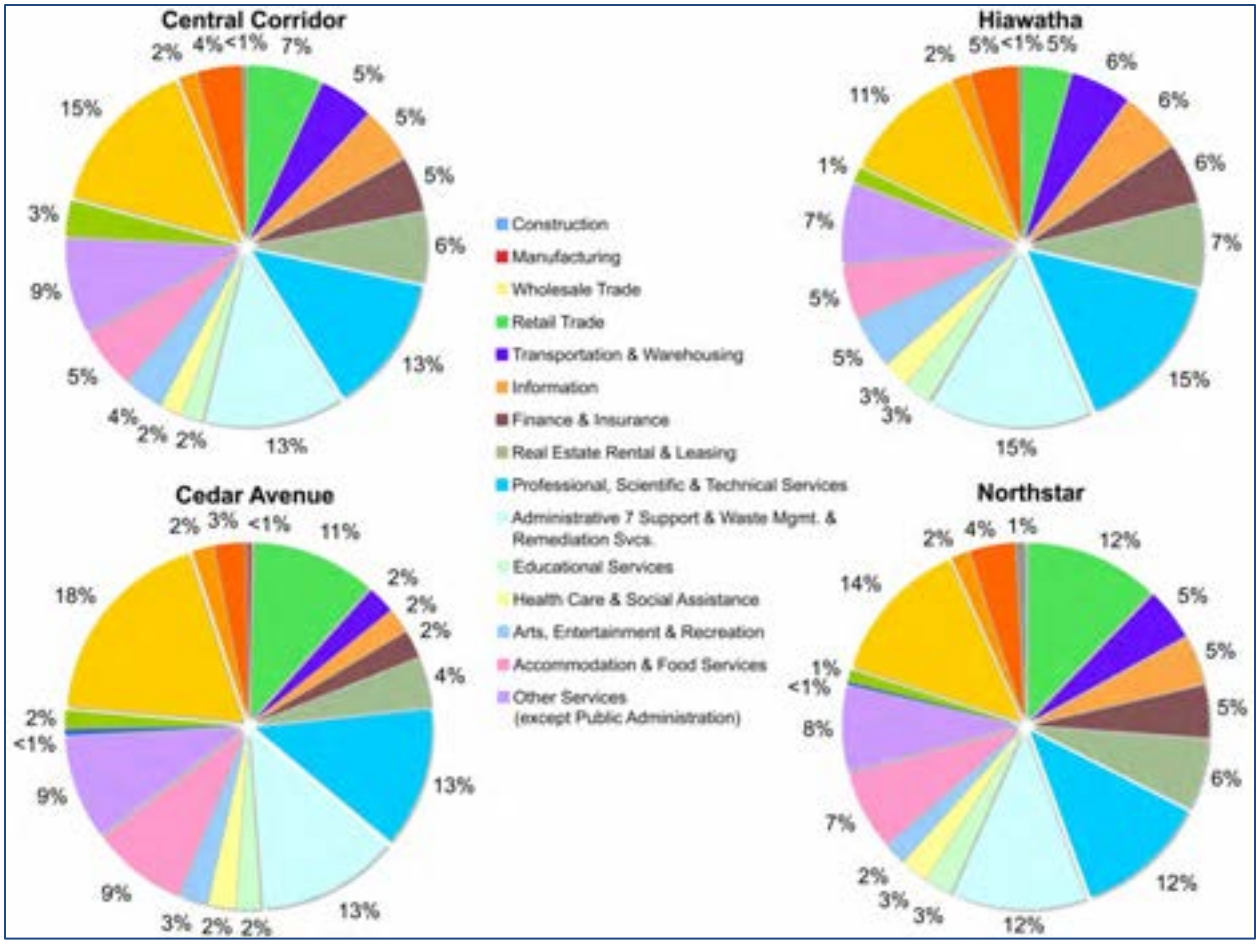

Figure 8-5: Industry Sectors—Survey Population

Regardless of the mix of sectors represented, the majority of businesses in all four corridors' samples were quite small. Table 8-2 lists descriptive statistics on employment for each of the four corridors. On average, businesses in the sample had eight to thirteen employees, depending on corridor, while the population as a whole averaged five to seven employees. Though all four corridors included some larger businesses, 59% to 77% of businesses surveyed in each corridor had less than ten employees total. Looking at the entire study area, 83% to 90% of businesses have less than ten employees. In the survey sample, Cedar Avenue businesses averaged the smallest, while Central Corridor businesses averaged the largest. Figure 8-6 shows annual sales, both for the survey sample, and the entire study area. The sample shows bias in favor of businesses with sales between $250,000 and $1,000,000, and against those with sales less than $250,000 and more than $1,000,000.

Table 8-2: Employment Per Business, by Corridor

		Mean	<10 total
Central Corridor	*Sample*	13.1	71%
	Population	6.4	87%
Hiawatha	*Sample*	10.1	59%
	Population	7.4	83%
Cedar Avenue	*Sample*	7.8	75%
	Population	5.1	90%
Northstar	*Sample*	10.9	77%
	Population	7.3	86%

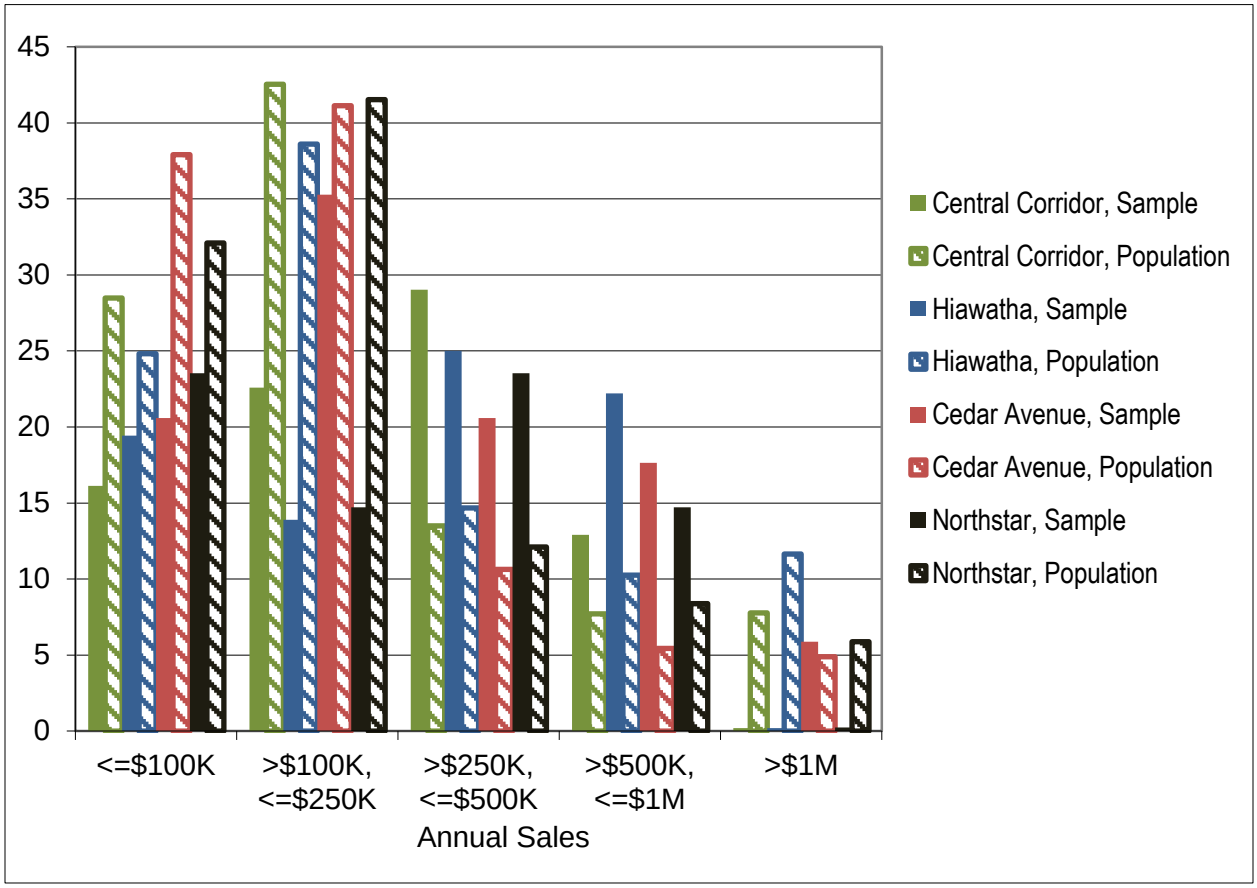

Figure 8-6: Annual Sales: Sample and Population

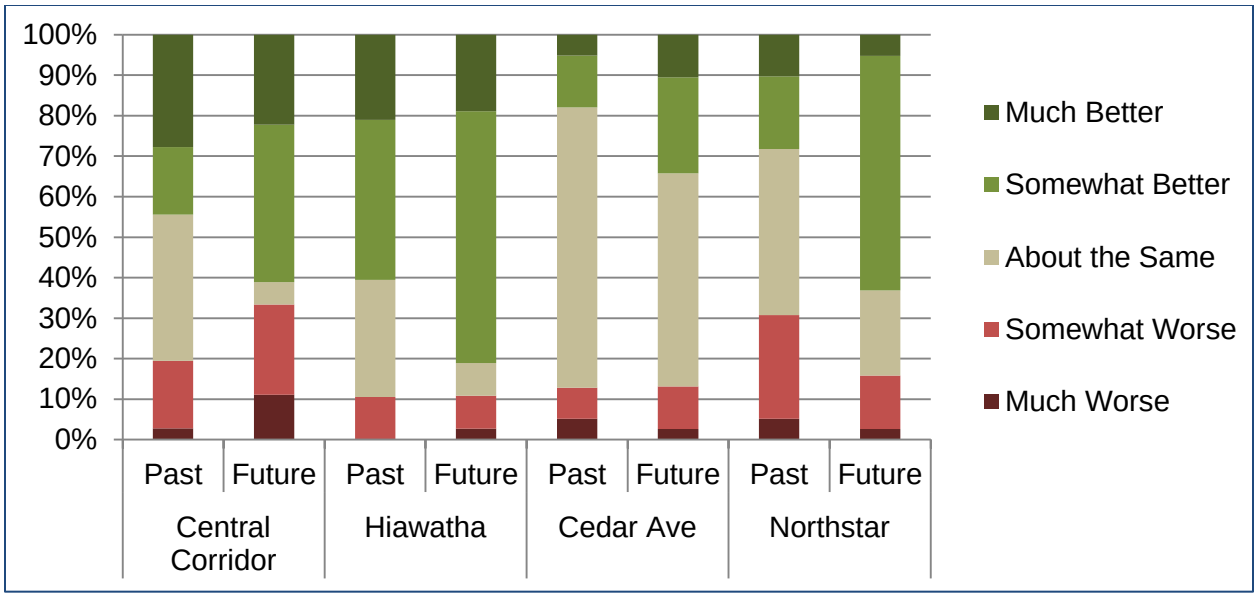

Figure 8-7: Perceptions of Neighborhood Change, by Corridor

8.4 Results

8.4.1 Response Frequencies to Key Questions

Figure 8-7 shows response frequencies for the neighborhood change questions, by corridor. A significant divide appears between urban and suburban businesses. However, differences in perceptions between individual corridors, as well as between past and future are significant as well. Central Corridor businesses show a distinct pattern of increasing polarization. While "about the same" is the most common answer concerning neighborhood change over the past five years, it accounts for less than five percent of responses to the question concerning expected changes over the next five years. While positive perceptions increase to just over 60% for future neighborhood change, negative perceptions increase significantly as well. Hiawatha businesses have highly positive perceptions of recent past change in their neighborhoods, and are overwhelmingly optimistic about the future. Roughly 80% of Hiawatha businesses expect positive changes in their neighborhoods as places to do business over the next five years. Most Cedar Avenue businesses perceive their neighborhoods as being about the same as they were five years ago, and most expect their neighborhoods to be about the same five years in the future. Northstar businesses show a similar pattern for their perceptions of past neighborhood change, but are more optimistic about the future, with over 60% expecting at least somewhat positive changes in the coming five years.

Figure 8-8 shows response frequencies for the key questions concerning perceptions of transitways' specific impacts. Once again, a significant urban-suburban divide appears, as well as clear differences between individual corridors. Though most Central Corridor businesses have seen no impacts from their light rail project over the past five years, roughly 90% expect to light rail to have some direct impact on them over the next five years. While positive perceptions increase to 50% from less than 10% for the future as compared with the past, negative perceptions only decline slightly overall; *strongly* negative perceptions actually increase. Hiawatha businesses are very positive about light rail. For both past and future impacts, over

70% of respondents have positive perceptions. No Hiawatha respondents reported having a strongly negative perception of either past or future impacts. Cedar Avenue and Northstar respondents generally see transitways as benign with regard to their businesses. Respondents from both suburban corridors do have more positive perceptions of future impacts than past impacts.

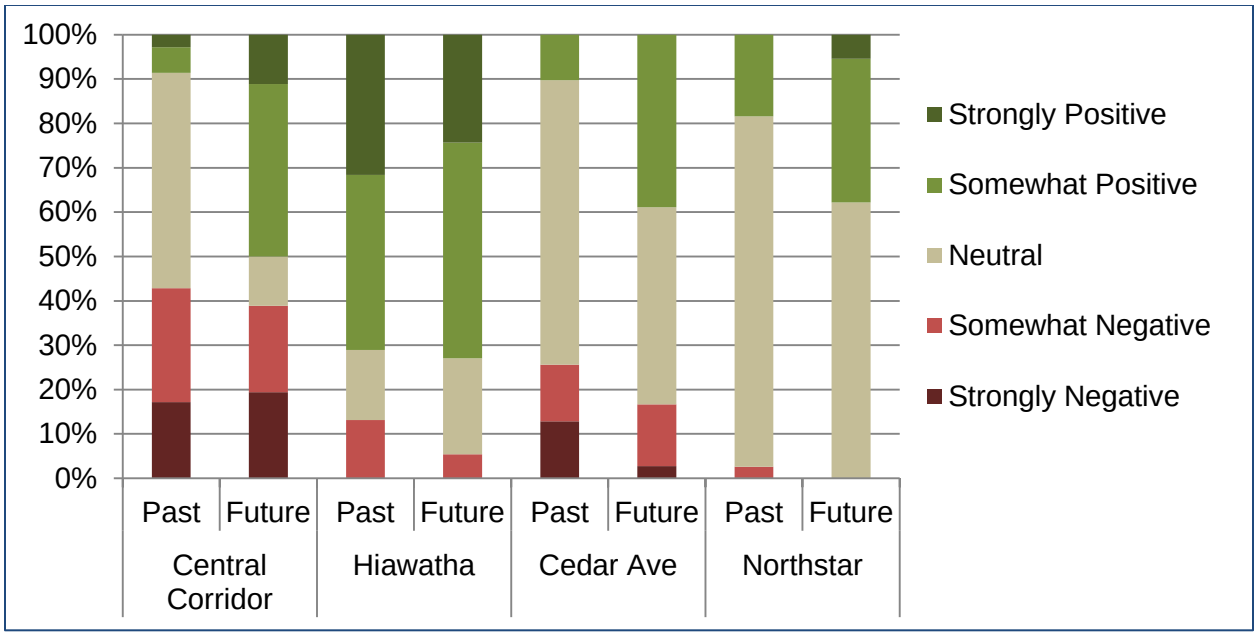

Figure 8-8: Perceptions of Transitway Impacts, by Corridor

With the exceptions of Hiawatha businesses reflecting on the past five years and Cedar Avenue businesses looking forward to the next five years, more businesses have positive perceptions of neighborhood change than of transitway impacts. This pattern is especially striking for businesses in Central Corridor neighborhoods. More than 40% of Central Corridor businesses perceive past neighborhood changes as positive, while less than 10% perceive positive impacts from the early phases of the light rail project. Though construction had not yet begun at the time of data collection, many businesses did perceive past transitway impacts—over 40% of them perceived *negative* impacts, more than twice as many as had negative perceptions of past neighborhood change.

Hiawatha businesses depart from the general pattern, with slightly more than 70% perceiving positive past and future transitway impacts, though nearly 10% fewer expect strongly positive impacts in the future than perceived them in the past. Positive perceptions of neighborhood change, however, increase from roughly 60% to slightly over 80% between the past and future questions. Hiawatha businesses appear to believe that the strongest effects of light rail have already occurred, but that their neighborhoods will continue to improve into the future.

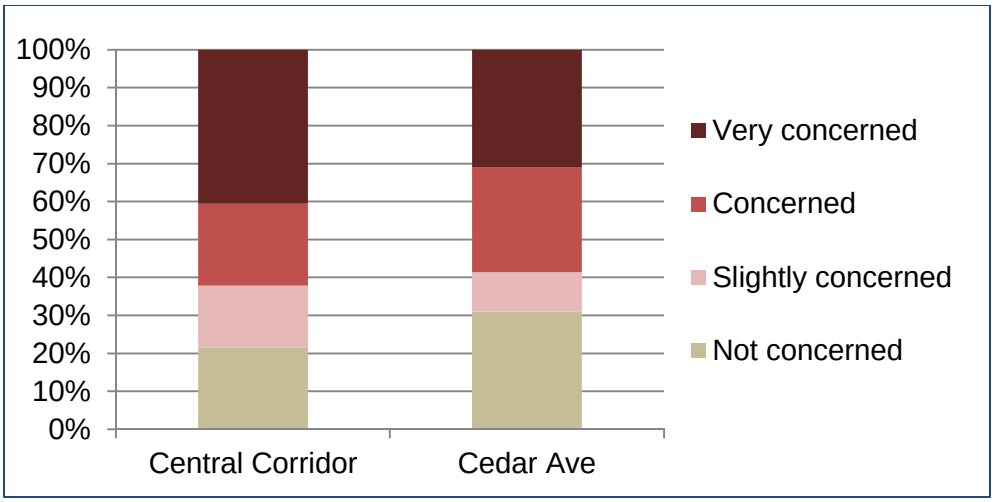

Figure 8-9: Levels of Concern over Transitway Construction, by Corridor

8.4.2 Construction Concerns

Businesses along planned fixed-guideway transit corridors often express concerns over lost business during transit construction. The survey included two questions about Central Corridor and Cedar Avenue business' concerns about construction impacts. One question asked respondents' levels of concern, on a scale from "Not concerned at all" to "Very concerned". Respondents who did not answer "Not concerned at all" were then asked a follow-up question about their specific concerns.

Figure 8-9 shows levels of construction concerns for businesses located along the two planned corridors in the study. In both cases, roughly 60% of businesses have moderate to serious concerns about transitway construction. Central Corridor businesses are somewhat more likely overall to be concerned, and almost ten percentage points more likely to be very concerned than Cedar Avenue businesses.

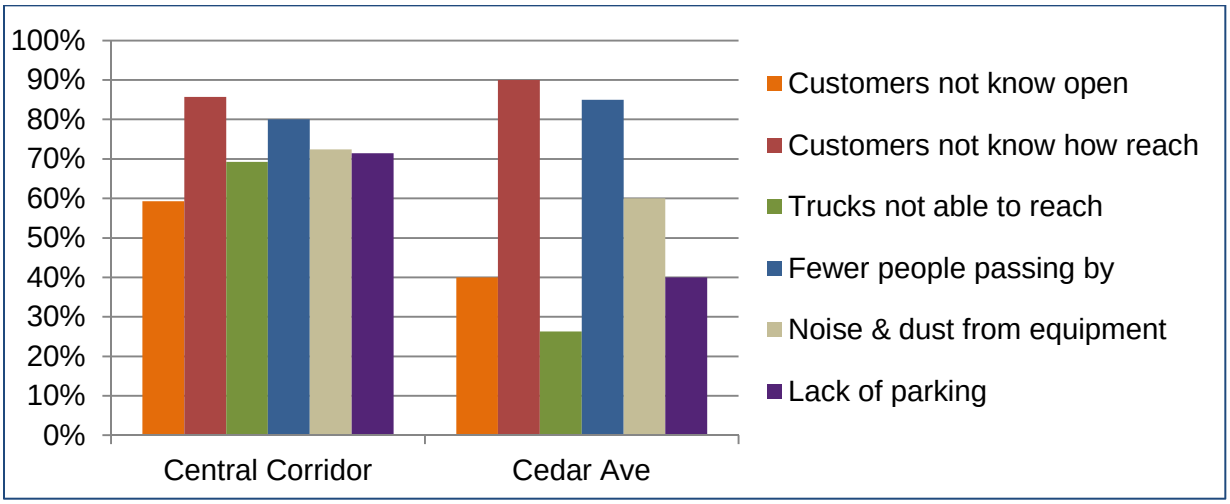

Figure 8-10: Specific Construction Concerns, by Corridor

Figure 8-10 shows respondents' levels of concern about potential specific construction impacts. Here, more differences appear between Central Corridor and Cedar Avenue businesses than do

for overall levels of concern. Central Corridor respondents are similarly concerned about most specific impacts, with slightly fewer concerns of customers not knowing their businesses will be open during construction, along with slightly more concerns of customers not knowing how to reach their businesses and fewer people passing by during construction. Cedar Avenue respondents' concerns, however, are dominated by concerns over customers not knowing how to reach their businesses and over fewer people passing by during construction.

8.4.3 Travel Behavior

Figure 8-11 shows current travel behavior of surveyed businesses' employees and customers, to the best of respondents' knowledge. To ease the task of estimating modes used by employees and customers (which may not be closely observed by respondents), the questionnaire used a four-point Likert scale: "None", "A few", "Many" or "Most". To simplify interpretation, Figure 8-11 aggregates these categories as follows:

- "Some Walk/Bike/Use Transit"—all respondents who answered "A Few", "Many" or "Most" to the pedestrian, bicycle or transit question.
- "Most Don't Drive"—all respondents who did not answer "Most" for the automotive question.

A major urban-suburban divide appears, with the somewhat surprising exception of suburban customers' use of non-motorized modes to reach surveyed businesses. Anecdotally, many suburban respondents mentioned that neighborhood children and teens walk and/or bike to their businesses. Business districts in both suburban corridors are surrounded by residential areas, which do tend to be dominated by family-sized single family homes. It must also be noted that business owners' and managers' perceptions of their customers' travel behavior may not always be accurate.

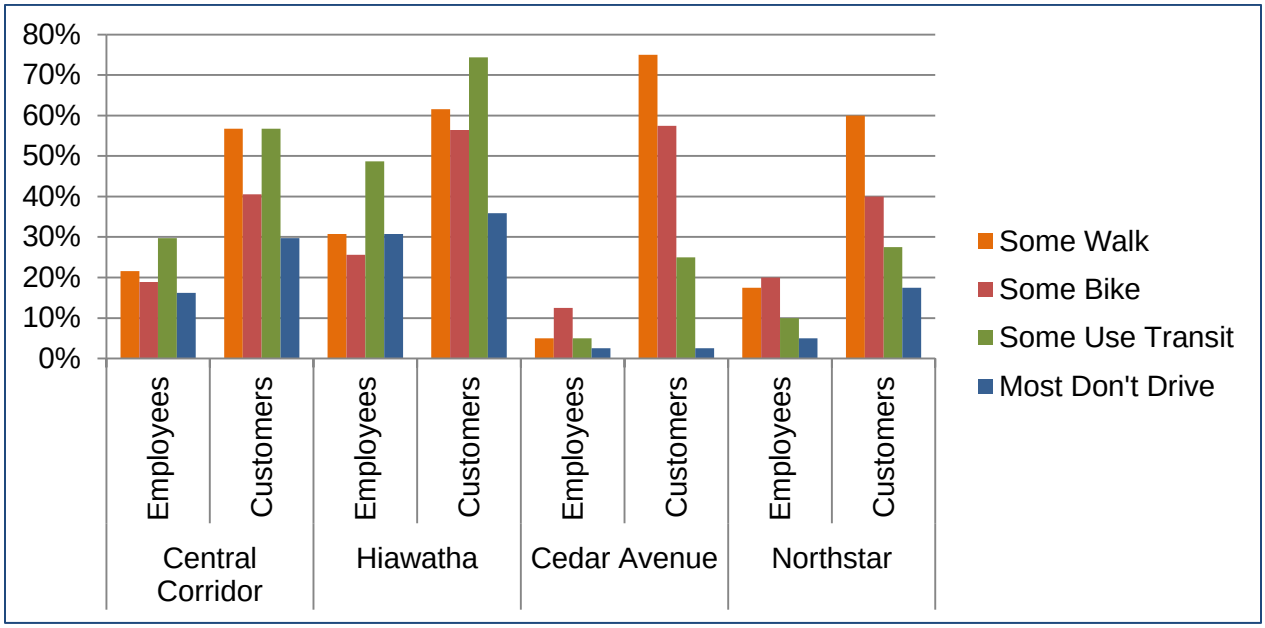

Figure 8-11: Alternative Mode Use among Employees and Customers

Though urban employees show more use of alternative modes than suburban employees, employees along all four corridors use alternative modes less than customers do. Hiawatha business' customers stand out: almost three quarters of Hiawatha respondents report that some of their customers reach their businesses by transit, and roughly 35% report that most of their customers *do not* drive to their businesses. Hiawatha respondents also report significantly higher rates of transit use for both employees and customers than Central Corridor respondents, even though Central Corridor businesses tend to be closer to transit stops.

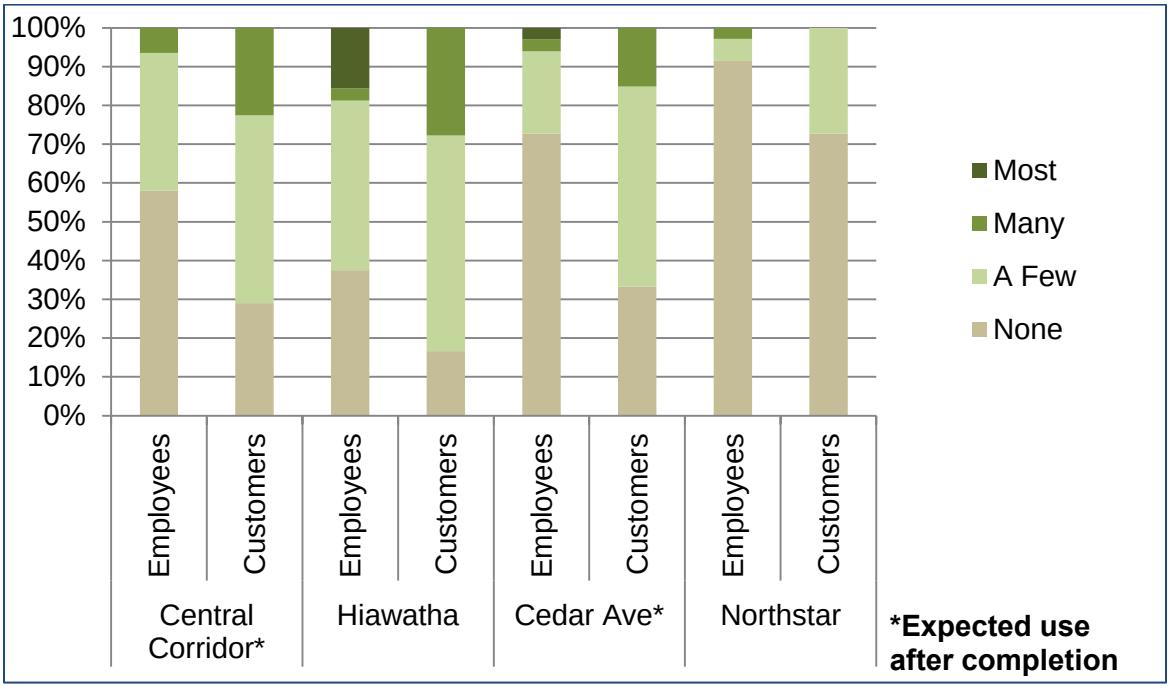

Figure 8-12: Employees' and Customers' Use of Transitways

Figure 8-12 shows employees' and customers' transitway use. Rates of use for Hiawatha and Northstar businesses reflect respondents' perceptions of how many of their employees and customers *currently* use their respective transitways. Central Corridor and Cedar Avenue respondents were asked how many of their employees and customers they expect will use their respective transitways once they are fully implemented.

8.5 Business Perceptions—Regression Modeling

The authors estimated a set of ordered probit regression models, with the key questions as dependent variables, including separate models for each key question—four models in all. (The business survey's smaller sample size compared with the resident survey prevented estimating separate models for urban and suburban corridors.) Explanatory variables focused on locations, business characteristics, respondents', employees' and customers' travel behavior, and respondents', employees' and customers' demographics. Location variables included dummy variables identifying which of the four study corridors each business is located on. Hiawatha is omitted as the reference category, allowing the other three corridors to be compared to the best known of the study corridors. The models also include the distance (in meters) between businesses and the transitway alignment. Earlier models using distance to stations did not

perform as well; in addition, businesses located along the two yet-to-be completed corridors may not know the location of the nearest planned station site as well as they know the location of the alignment itself.

Business characteristics considered in the models include Age (years in present location) and CY 2010 Sales (ordinal, scale: 1= <=$100,000 to 6= >$5,000,000), as well as the following dummy variables where 1=true and 0=false: Retail, Food-Service, Auto Sales/Service, Health Care, Traditional Storefront Building, Detached Building, Multi-Story Office Building, and Building Owned by Business.

Travel behavior variables included Customers' Transitway Use (ordinal, scale 1-4, from "None" to "Most") as well as the dummy variables Many Employees Use Alternative Transportation, Respondent Uses Alternative Transportation ≥2*x*/wk and Street Parking Important (meaning that many or most employees and/or customers park on the street).

All demographic variables were dummy variables, including: Minority Respondent, Many African-American Employees, Many Asian Employees, Many Hispanic Employees, Many African-American Customers, Many Asian Customers, Many Hispanic Customers and Many Immigrant Customers.

8.5.1 Descriptive Statistics

Table 8-3 shows descriptive statistics for the variables included in regression analysis. Mean values for the dependent variables are all greater than the mid-point of the response scale, indicating generally positive perceptions overall. Standard deviations consistently near 1 (for a scale with a range of 4) indicate the presence of significant differences in perceptions in the sample.

Though the mean distance to transitway alignments is relatively short, at 343m, a standard deviation of 400m shows the variation of distances resulting from studying both high-density urban corridors and low-density suburban corridors. A mean age of more than 15 years indicates a relatively well-established sample of businesses, though, once again, a greater standard deviation indicates significant variation in the age of sampled businesses.

It appears worth noting that roughly a third of all respondents report using some form of alternative transportation (transit and/or non-motorized) at least twice a week. A mean of 1.79 for Customers' Transitway Use also suggests a significant minority of businesses either believe some of their customers use the transitway or believe they will once their neighborhood's transitway opens.

Table 8-3: Descriptive Statistics

	Variable	Mean	Std. Dev.
Dependent Variables	Past Neighborhood Change	3.32	1.02
	Past Transitway Impacts	3.08	0.98
	Future Neighborhood Change	3.51	1.04
	Future Transitway Impacts	3.40	0.99
Location	Distance from Alignment (m)	343.19	399.99
Business Characteristics	Age (years in current location)	15.45	17.82
	CY 2010 Sales	2.94	1.32
	Retail	0.28	0.45
	Food Service	0.13	0.34
	Auto Sales/Service	0.09	0.28
	Health Care	0.08	0.27
	Traditional Storefront	0.20	0.40
	Detached Building	0.25	0.43
	Multi-Story Office Building	0.17	0.38
	Business Owns Building	0.36	0.48
Travel Behavior	Customers' Transitway Use	1.79	0.71
	Many Emp. Use Alt. Transportation	0.24	0.43
	Respondent Alt. Transportation ≥2x/wk	0.35	0.48
	Street Parking Important	0.22	0.41
Demographics	Minority Respondent	0.15	0.36
	Many African-American Emp.	0.26	0.44
	Many Asian Emp.	0.31	0.47
	Many Hispanic Emp.	0.25	0.43
	Many African-American Cust.	0.12	0.32
	Many Asian Cust.	0.12	0.32
	Many Hispanic Cust.	0.10	0.30
	Many Immigrant Cust.	0.13	0.34

8.5.2 Regression Results

Table 8-4 shows results of the four ordered logistic regression models. As in the ordered probit regression models estimated for the resident survey, ordered logistic regression coefficients cannot be easily interpreted in the manner of OLS regression coefficients. Once again, the authors report both raw coefficients (**β**) and semi-standardized coefficients (**β S***y******), where one *unit* increase in *x* yields β*sy** *standard deviations* increase in *y*.

Table 8-4: Regression Results

		Past				Future			
	N=105	*Neighborhood*		*Transitway*		*Neighborhood*		*Transitway*	
	LR X2	30.50		97.23		43.62		83.25	
	Prob > X2	0.25		0.00		0.02		0.00	
	Pseudo R2	0.10		0.37		0.15		0.31	
		β	**β Sy***	**β**	**β Sy***	**β**	**β Sy***	**β**	**β Sy***
Location	Central Corridor	-0.781	-0.363	**-3.505** ***	**-1.079**	0.144	0.063	-0.809	-0.278
	Cedar Avenue	-0.934	-0.435	**-4.294** ***	**-1.321**	-0.391	-0.170	**-1.748** **	**-0.601**
	Northstar	-0.727	-0.338	**-2.939** ***	**-0.905**	-0.748	-0.327	0.050	0.017
	Distance from Alignment (m)	0.000	0.000	**0.003** ***	**0.001**	**0.002** ***	**0.001**	**0.002** *	**0.001**
Business Characteristics	Age (years in current location)	-0.010	-0.005	**-0.050** ***	**-0.016**	-0.010	-0.004	**-0.022** *	**-0.008**
	CY 2010 Sales	0.108	0.050	0.294	0.090	**0.330** *	**0.144**	**0.606** ***	**0.208**
	Retail	0.317	0.148	0.007	0.002	0.507	0.221	-0.080	-0.028
	Food Service	0.845	0.393	0.069	0.021	-0.823	-0.359	0.045	0.015
	Auto Sales/Service	**-1.573** **	**-0.732**	**-2.002** **	**-0.616**	**-1.967** **	**-0.858**	**-2.995** ***	**-1.029**
	Health Care	0.173	0.081	1.097	0.338	0.333	0.145	0.526	0.181
	Traditional Storefront	0.657	0.306	-1.290	-0.397	-0.865	-0.377	**-1.798** **	**-0.618**
	Detached Building	0.035	0.016	-0.346	-0.106	-0.933	-0.407	**-1.702** **	**-0.585**
	Multi-Story Office Building	0.269	0.125	-0.086	-0.026	-0.856	-0.374	**-2.049** ***	**-0.704**
	Business Owns Building	0.549	0.255	0.848	0.261	0.609	0.266	**1.137** *	**0.391**
Travel Behavior	Employees' Alt. Transpo. Use	**-1.874** **	**-0.873**	0.450	0.139	**1.600** *	**0.698**	0.677	0.233
	Customers' Transitway Use	0.288	0.134	**1.400** ***	**0.431**	**0.677** **	**0.295**	**2.375** ***	**0.816**
	Respondent Alt. Transpo. ≥2x/wk	-0.135	-0.063	0.529	0.163	0.505	0.220	**-1.233** **	**-0.424**
	Street Parking Important	0.534	0.249	**-1.264** *	**-0.389**	-0.410	-0.179	-0.377	-0.130
Demographics	Minority Respondent	-0.046	-0.021	**-2.849** **	**-0.877**	**2.040** **	**0.890**	-1.648	-0.566
	Many African-American Emp.	0.108	0.050	**4.888** ***	**1.504**	0.414	0.181	**3.928** ***	**1.350**
	Many Asian Emp.	0.476	0.221	0.686	0.211	1.022	0.446	1.094	0.376
	Many Hispanic Emp.	1.124	0.523	**-4.386** ***	**-1.350**	-1.871	-0.816	**-3.947** ***	**-1.357**
	Many African-American Cust.	**2.311** *	**1.076**	0.207	0.064	1.404	0.613	**3.136** **	**1.078**
	Many Asian Cust.	-0.530	-0.247	-1.410	-0.434	-1.077	-0.470	-0.292	-0.100
	Many Hispanic Cust.	-1.680	-0.782	-0.534	-0.164	-0.022	-0.009	-0.991	-0.341
	Many Immigrant Cust.	-0.099	-0.046	0.258	0.080	-0.307	-0.134	**-2.263** **	**-0.778**
	Constants	**-3.363** ***		**-4.104** ***		-0.930		-0.683	
		-1.232		-2.160		0.735		1.206	
		0.977		**2.944** *		**2.144** *		**4.444** ***	
		2.453 **		**5.545** ***		**4.964** ***		**8.305** ***	

Legend: *p<0.1; **p<0.05; ***p<0.01

All three corridor dummy variables are significant, with negative coefficients, for past transitway impacts. With the Hiawatha corridor omitted as the reference category, this indicates that businesses along Central Corridor, Cedar Avenue and Northstar have less positive perceptions of how transitways have affected their businesses over the past five years than businesses along Hiawatha. Only Cedar Avenue is significant, however, for future transitway impacts, though once again with a negative coefficient. Distance from Alignment is significant for all models except past neighborhood change. Its coefficients are positive, indicating that businesses farther from transitways have more positive perceptions.

Age is significant for past and future transitway impacts, but not for either neighborhood change dependent variable. Coefficients are negative; the longer a business has been in its current location, the less positive perceptions of transitway impacts are likely to be. Calendar Year 2010 sales is significant for future neighborhood change and transitway impacts, with positive coefficients.

Only one of the sector dummy variables included—Auto Sales/Service—is significant, though it is significant in all four models, with negative coefficients. All the building type dummy variables are significant, with negative coefficients, for future transitway impacts. This likely reflects the fact that respondents from the Mall of America had overwhelmingly positive perceptions of future impacts. Attempts to include a "Mall" building type variable caused serious multicolinearity problems with the models, since all the mall businesses interviewed were part of the Hiawatha sample.

All of the travel behavior variables are significant in at least one instance—several in multiple instances. Whether or not many employees use alternative transportation is significant for both past and future neighborhood change perceptions, though with a negative coefficient for the past and a positive coefficient for the future. In addition, the number of customers who use the transitway is significant with positive coefficients for all perceptions except past neighborhood change.

The demographic variables present a more complex pattern; though most are significant for at least one dependent variable, they are less consistent than other categories of explanatory variables. For example, while the minority respondent dummy variable (identifying respondents who self-identified as non-white and/or Hispanic) has a negative coefficient for past transitway impacts, it has a positive coefficient for future neighborhood change and is statistically insignificant for the other two dependent variables. In a similar fashion for future transitway impacts, the dummy variables many African American employees and many African American customers both have positive coefficients, while many Hispanic employees and many immigrant customers both have negative coefficients.

8.5.3 Model Predictions

Tables 8-5 and 8-6 show predicted probabilities for values of the dependent variables when the values of statistically significant explanatory variables are manipulated. Explanatory variables except the one being manipulated are held at medians, except for mutually exclusive dummy variables (such as the neighborhoods), where others are set equal to zero. Reference categories for dummy variables are shown in parentheses; though they are not explicitly included in the models, reference category probabilities can be predicted by setting all other categories equal to zero.

Table 8-5: Model Predictions, Neighborhood Change Perceptions

		Past					Future				
		Much Worse	*Some-what Worse*	*About the Same*	*Some-what Better*	*Much Better*	*Much Worse*	*Some-what Worse*	*About the Same*	*Some-what Better*	*Much Better*
Location	0m from Alignment	-	-	-	-	-	4%	14%	30%	46%	6%
	500m from Alignment	-	-	-	-	-	1%	6%	16%	60%	16%
	1,000m from Alignment	-	-	-	-	-	0%	2%	7%	54%	37%
	1,500m from Alignment	-	-	-	-	-	0%	1%	2%	32%	64%
Business Characteristics	Sales <=$100K	-	-	-	-	-	5%	16%	31%	43%	5%
	Sales $100-250K	-	-	-	-	-	3%	12%	27%	50%	7%
	Sales $250-500K	-	-	-	-	-	2%	9%	24%	55%	10%
	Sales $500K-$1M	-	-	-	-	-	2%	7%	19%	59%	13%
	Sales $1-5M	-	-	-	-	-	1%	5%	16%	61%	17%
	Sales >$5M	-	-	-	-	-	1%	4%	12%	60%	23%
	(Not Auto Sales/Svc)	2%	11%	44%	29%	15%	2%	9%	24%	55%	10%
	Auto Sales/Svc	7%	33%	46%	10%	4%	15%	33%	31%	19%	2%
Travel Behavior	(Not Many Emp Alt Trans)	2%	11%	44%	29%	15%	2%	9%	24%	55%	10%
	Many Emp Alt Trans	10%	38%	42%	8%	3%	1%	2%	7%	55%	35%
	No Cust Use Transitway	-	-	-	-	-	5%	16%	31%	43%	5%
	A Few Cust Use Transitway	-	-	-	-	-	2%	9%	24%	55%	10%
	Many Cust Use Transitway	-	-	-	-	-	1%	5%	15%	61%	18%
	Most Cust Use Transitway	-	-	-	-	-	1%	3%	9%	58%	30%
Demo-graphics	(White Respondent)						2%	9%	24%	55%	10%
	Minority Respondent						0%	1%	5%	48%	46%
	(Not Many Black Cust)	2%	11%	44%	29%	15%	-	-	-	-	-
	Many Black Cust	0%	1%	10%	24%	64%	-	-	-	-	-

Though only three explanatory variables are significant for perceptions of past neighborhood change, interesting patterns of variation in perceptions based on explanatory variable values do appear. In particular, businesses where many or most employees commute by alternative modes are much more likely to perceive past changes in their neighborhoods as negative than other businesses. Businesses where many or most of the customers are African-American, however, are much more likely than others to perceive recent changes in their neighborhoods as positive.

For future neighborhood change perceptions, businesses further from transitway alignments and businesses with greater annual sales (as of calendar year 2010) are more likely to expect positive changes in their neighborhoods. Automobile sales and/or service businesses demonstrate a sharp divide from businesses in all other sectors, with nearly opposite trends in perceptions.

In contrast to perceptions of past neighborhood change, businesses where many or most employees commute by transit are actually more likely than others to expect *positive* future changes in their neighborhoods. In a similar pattern, businesses that observe/expect significant numbers of customers to use the transitways in their neighborhoods are much more likely to expect positive future change than businesses that do not.

Table 8-6: Model Predictions, Transitway Impacts Perceptions

		Past					Future				
		Strong Neg.	*Some-what Neg.*	*Neutral*	*Some-what Pos.*	*Strong Pos.*	*Strong Neg.*	*Some-what Neg.*	*Neutral*	*Some-what Pos.*	*Strong Pos.*
Location	(Hiawatha)	0%	0%	30%	55%	15%	0%	0%	9%	74%	16%
	Central Corridor	1%	7%	85%	6%	1%	-	-	-	-	-
	Cedar Avenue	3%	13%	81%	3%	0%	0%	2%	36%	58%	3%
	Northstar	1%	4%	84%	10%	1%	-	-	-	-	-
	0m from Alignment	0%	0%	46%	45%	8%	0%	1%	13%	75%	12%
	500m from Alignment	0%	0%	18%	57%	25%	0%	0%	7%	71%	22%
	1,000m from Alignment	0%	0%	5%	38%	57%	0%	0%	3%	59%	37%
	1,500m from Alignment	0%	0%	1%	15%	84%	0%	0%	2%	43%	56%
Business Characteristics	Age 0yrs	0%	0%	19%	57%	24%	0%	0%	8%	72%	20%
	Age 5yrs	0%	0%	23%	57%	20%	0%	0%	8%	73%	18%
	Age 10yrs	0%	0%	28%	56%	16%	0%	0%	9%	74%	16%
	Age 15yrs	0%	0%	33%	54%	13%	0%	0%	10%	74%	15%
	Age 20yrs	0%	0%	39%	50%	10%	0%	0%	11%	75%	14%
	Sales <=$100K	-	-	-	-	-	0%	1%	25%	68%	5%
	Sales $100-250K	-	-	-	-	-	0%	1%	16%	74%	10%
	Sales $250-500K	-	-	-	-	-	0%	0%	9%	74%	16%
	Sales $500K-$1M	-	-	-	-	-	0%	0%	5%	68%	26%
	Sales >$1M	-	-	-	-	-	0%	0%	3%	58%	39%
	(Not Auto Sales/Svc)	0%	0%	30%	55%	15%	0%	0%	9%	74%	16%
	Auto Sales/Svc	0%	2%	74%	21%	2%	1%	7%	61%	31%	1%
	(Strip Center)	-	-	-	-	-	0%	0%	9%	74%	16%
	Storefront	-	-	-	-	-	0%	2%	37%	57%	3%
	Detached	-	-	-	-	-	0%	2%	35%	59%	3%
	Multi-Storey Office	-	-	-	-	-	1%	3%	43%	52%	2%
	(Business Rents Space)	-	-	-	-	-	0%	0%	9%	74%	16%
	Business Owns Space	-	-	-	-	-	0%	0%	3%	59%	38%
Travel Behavior	No Cust Use Transitway	0%	1%	63%	32%	4%	1%	4%	50%	44%	2%
	A Few Cust Use Transitway	0%	0%	30%	55%	15%	0%	0%	9%	74%	16%
	Many Cust Use Transitway	0%	0%	10%	49%	41%	0%	0%	1%	32%	67%
	Most Cust Use Transitway	0%	0%	3%	24%	74%	0%	0%	0%	4%	96%
	(Resp Not Freq Alt Trans)	-	-	-	-	-	0%	0%	9%	74%	16%
	Resp Freq Alt Trans	-	-	-	-	-	0%	1%	26%	67%	5%
	(Street Prk Not Important)	0%	0%	30%	55%	15%	-	-	-	-	-
	Street Parking Important	0%	1%	60%	35%	5%	-	-	-	-	-
Demographics	(White Respondent)	0%	0%	30%	55%	15%	-	-	-	-	-
	Minority Respondent	1%	4%	84%	11%	1%	-	-	-	-	-
	(Not Many Black Emp)	0%	0%	30%	55%	15%	0%	0%	9%	74%	16%
	Many Black Emp	0%	0%	0%	4%	96%	0%	0%	0%	9%	91%
	(Not Many Latino Emp)	0%	0%	30%	55%	15%	0%	0%	9%	74%	16%
	Many Latino Emp	3%	15%	80%	3%	0%	3%	15%	67%	15%	0%
	(Not Many Black Cust)	-	-	-	-	-	0%	0%	9%	74%	16%
	Many Black Cust	-	-	-	-	-	0%	0%	0%	18%	82%
	(Not Many Immigrant Cust)	-	-	-	-	-	0%	0%	9%	74%	16%
	Many Immigrant Cust	-	-	-	-	-	1%	3%	47%	47%	2%

Though none of the corridor dummy variables were significant for either past or future neighborhood change perceptions, Hiawatha respondents are much more likely to report positive impacts from their transitway in the recent past than respondents from any other corridor. Hiawatha businesses are more likely to expect positive transitway impacts in the future than Cedar Avenue businesses, but the difference is considerably less than for past impacts, with a comfortable majority of Cedar Avenue businesses expecting at least somewhat positive future impacts. (The model does not predict a statistically significant difference in future impacts perceptions between Hiawatha businesses on the one hand and either Central Corridor or Northstar businesses on the other.) Figure 8-13 shows inter-neighborhood differences in perceptions in graphic form.

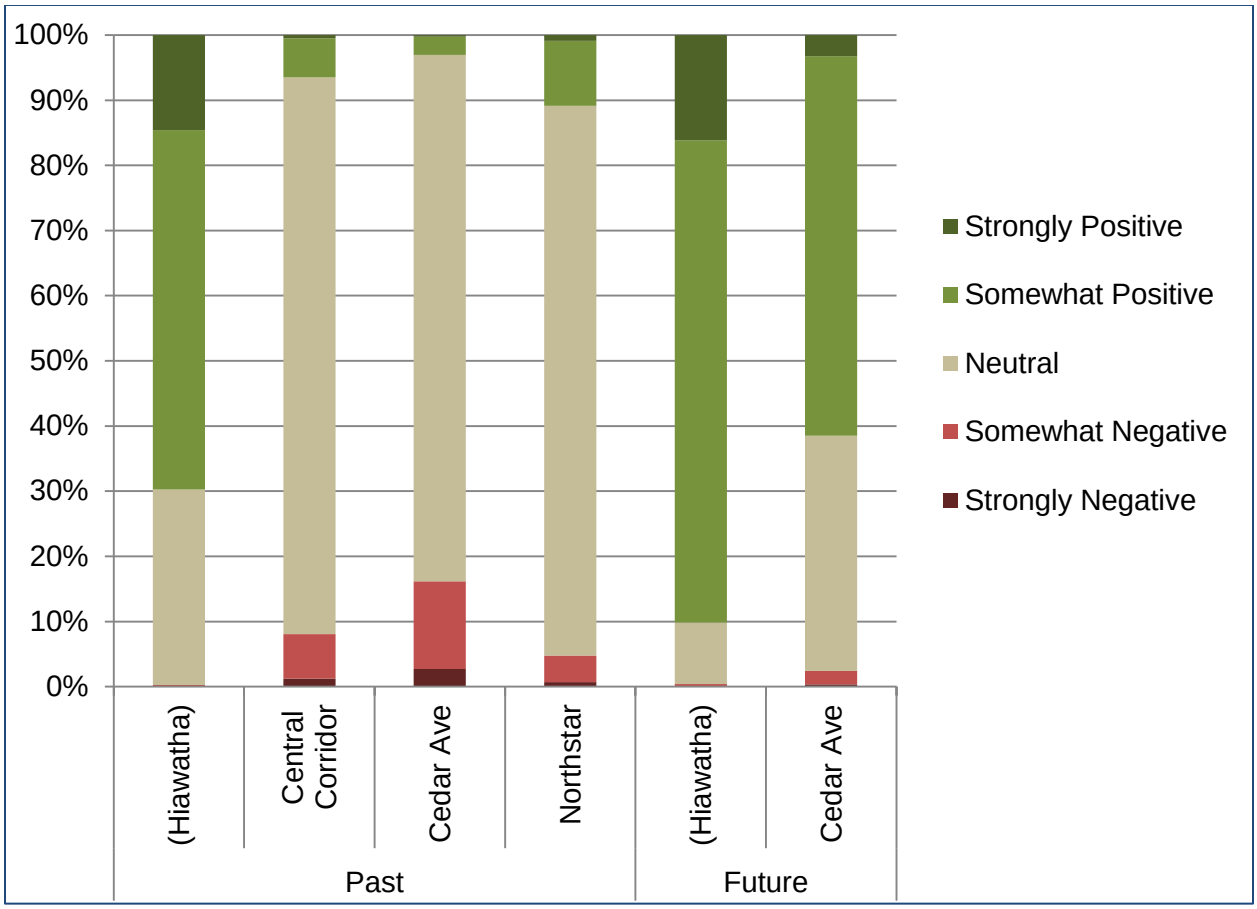

Figure 8-13: Predicted Perceptions of Transitway Impacts, by Corridor

For both past and future transitway impacts, businesses farther from transitway alignments and newer businesses are more likely to have positive perceptions of transitway impacts. Though this trend is present for both past and future impacts, it is much more moderate for future impacts in both cases. (Figures 8-14 and 8-15 show alignment distance and business age based perception differences in graphic form.) In both cases, though the slope of the dividing line between the green positive areas and the tan neutral areas is the same for past and future, it is much gentler and shifted down the graph for future perceptions.

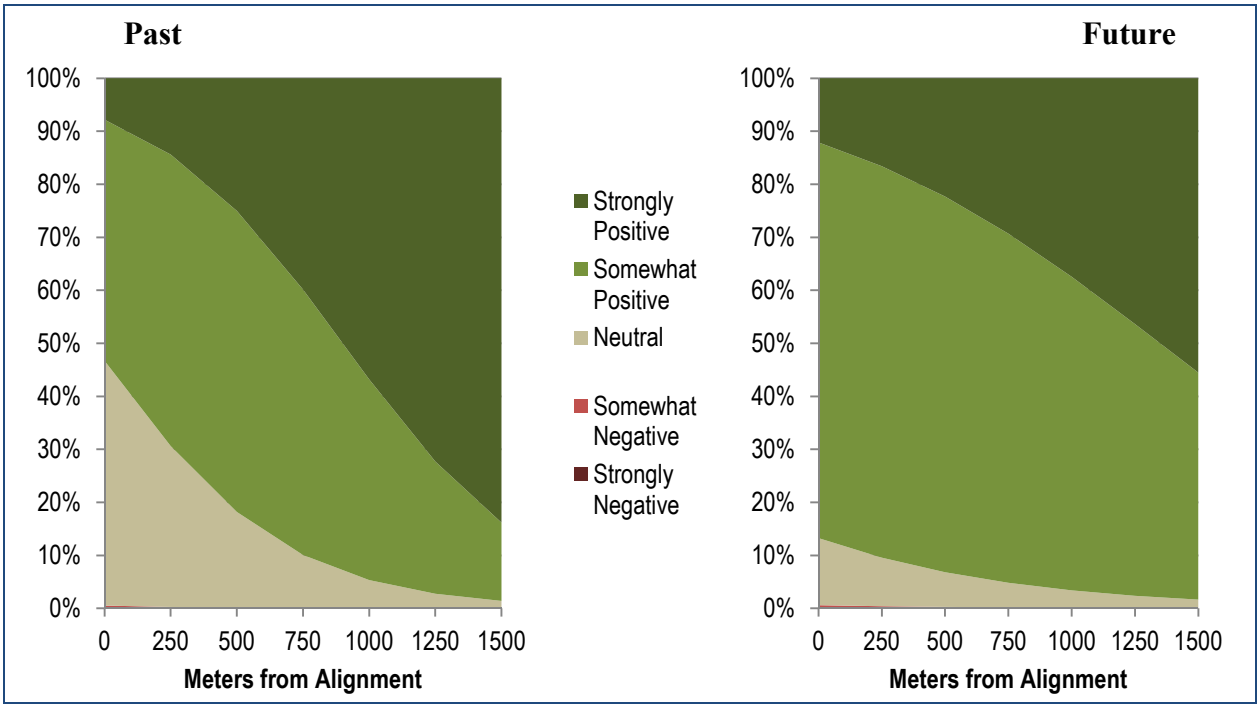

Figure 8-14: Transitway Impacts Perceptions, by Distance from Alignment

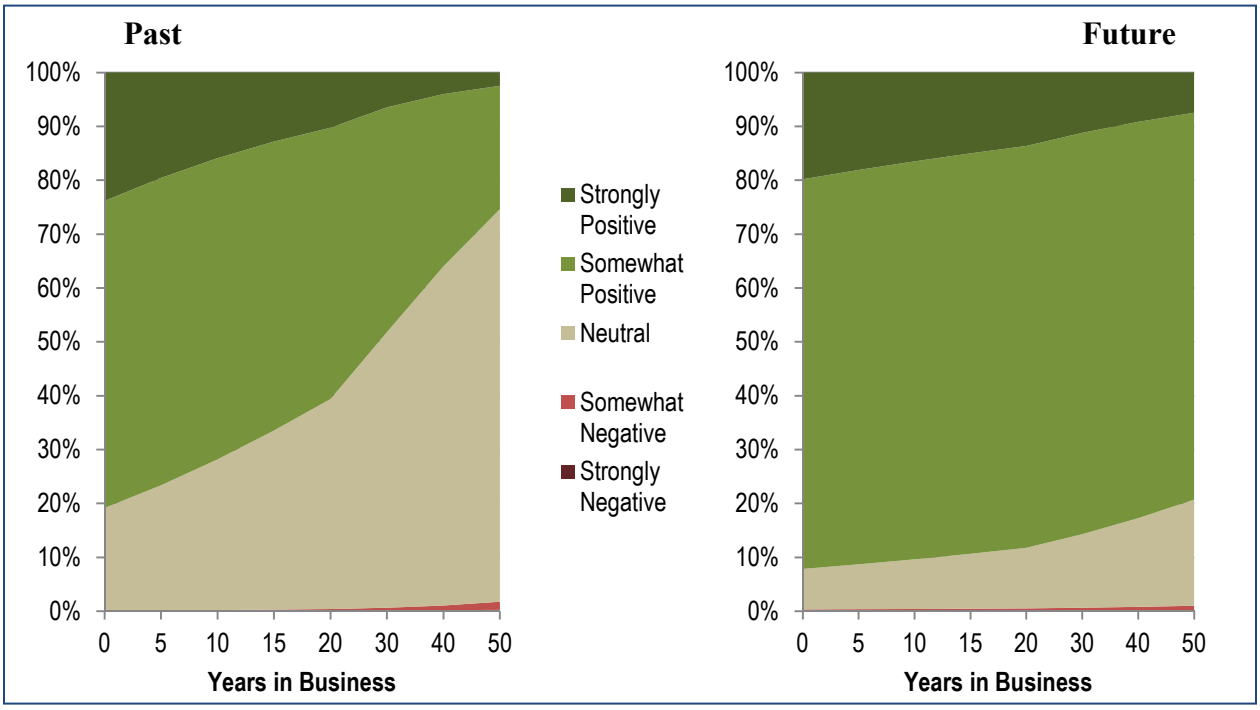

Figure 8-15: Transitway Impacts Perceptions, by Business Age

In addition, businesses with greater CY2010 sales volumes are more likely to expect positive future impacts. Figure 8-16 shows differences in perceptions based on sales in graphic form. Though perceptions are quite positive overall, there is a significant decline in the probabilities of positive perceptions for businesses with the smallest sales volumes, along with an increase in negative perceptions. All else equal, businesses with $100,000 or less in CY2010 sales were the only ones with less than a 50% probability of expecting positive future impacts from the transitways serving their neighborhoods.

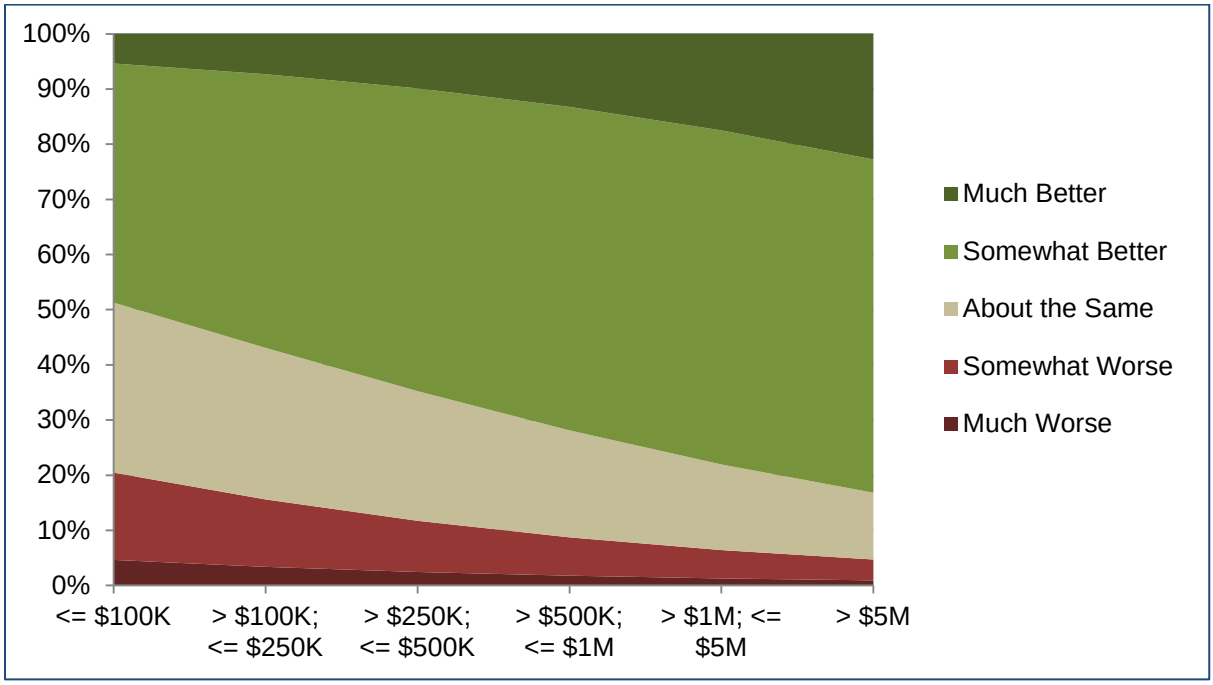

Figure 8-16: Future Transitway Impacts Perceptions, by CY2010 Sales

As seen for perceptions of neighborhood change, automobile sales and/or service businesses differ significantly from businesses in all other sectors, both for perceptions of past and future impacts. The divide is not, however, as stark as that found for neighborhood change perceptions. Figure 8-17 shows future perceptions for automotive businesses, compared with all other businesses in graphic form; the differences are striking. In particular, the fact that automotive businesses have nearly a 50% probably of perceiving their neighborhoods as becoming worse places to do business stands out, especially in comparison to such businesses' more benign perceptions of future transitway impacts.

Differences in perceptions along race and nativity status lines are present for the transitway impacts dependent variables, but are once again complex. Figure 8-18 shows selected race and nativity differences in graphic form. The differences in future impacts perceptions between businesses where many or most employees are African American and those where many or most of the employees are Hispanic are particularly striking, as well as the differences between businesses with no or few minority customers, businesses where many or most customers are African American customers, and businesses where many or most customers are immigrants.

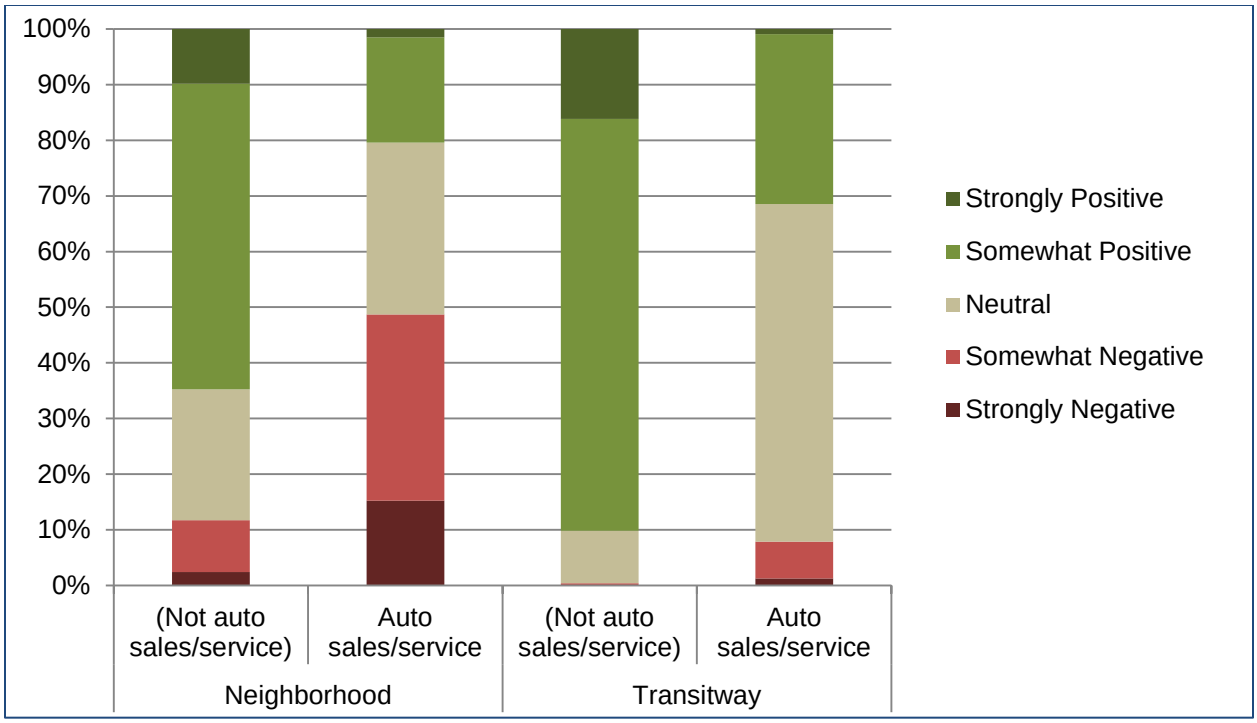

Figure 8-17: Future Perceptions of Auto Sales/Service Businesses

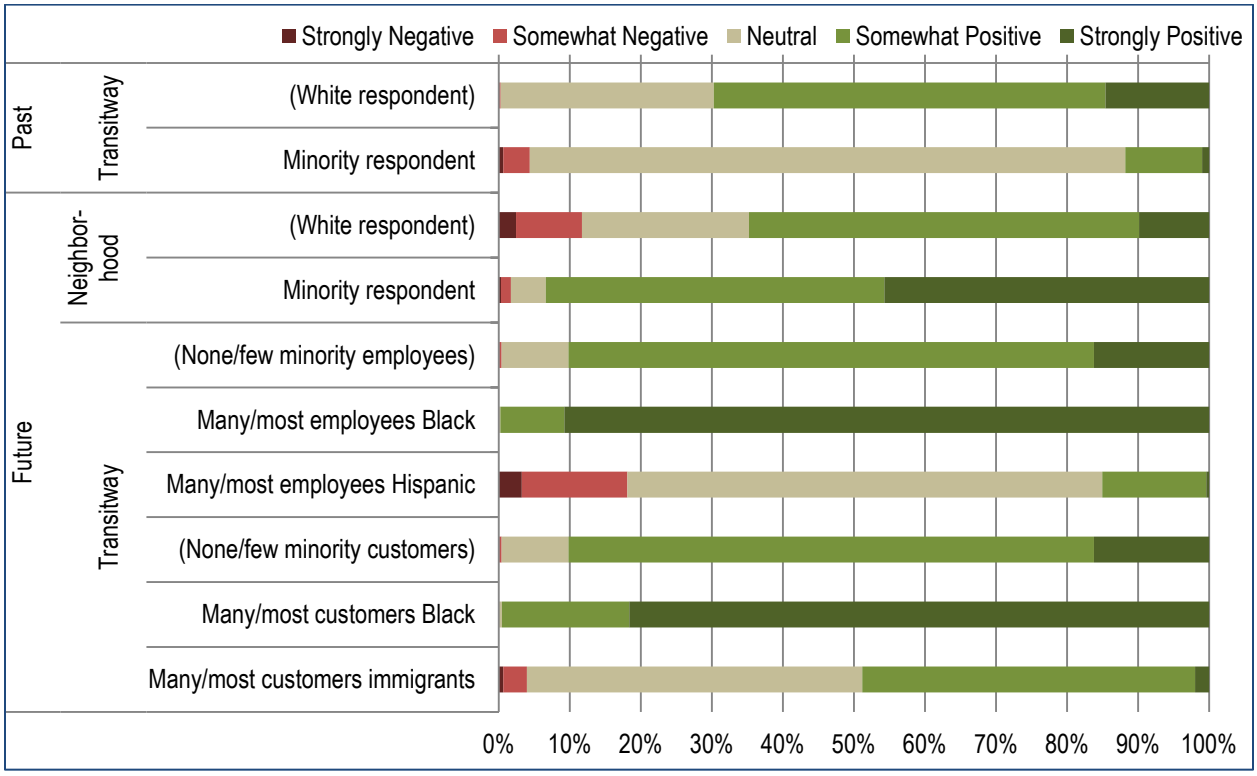

Figure 8-18: Perceptions by Race and Nativity

Striking differences in perceptions of transitway impacts also arise out of the travel behavior variables. Businesses where many or most of the customers who drive park on the street are much less likely than others to perceive past transitway impacts as positive, though this variable is not significant for future transitway impacts. Interestingly, respondents who themselves commute using alternative modes at least twice a week are less likely to expect positive future transitway impacts than respondents who use alternative modes once a week or less.

The differences in perceptions that appear based on a respondent's estimate of how many of their customers use or will use the transitway itself are particularly striking. Figure 8-19 shows differences in future perceptions by customers' transitway use in graphic form.

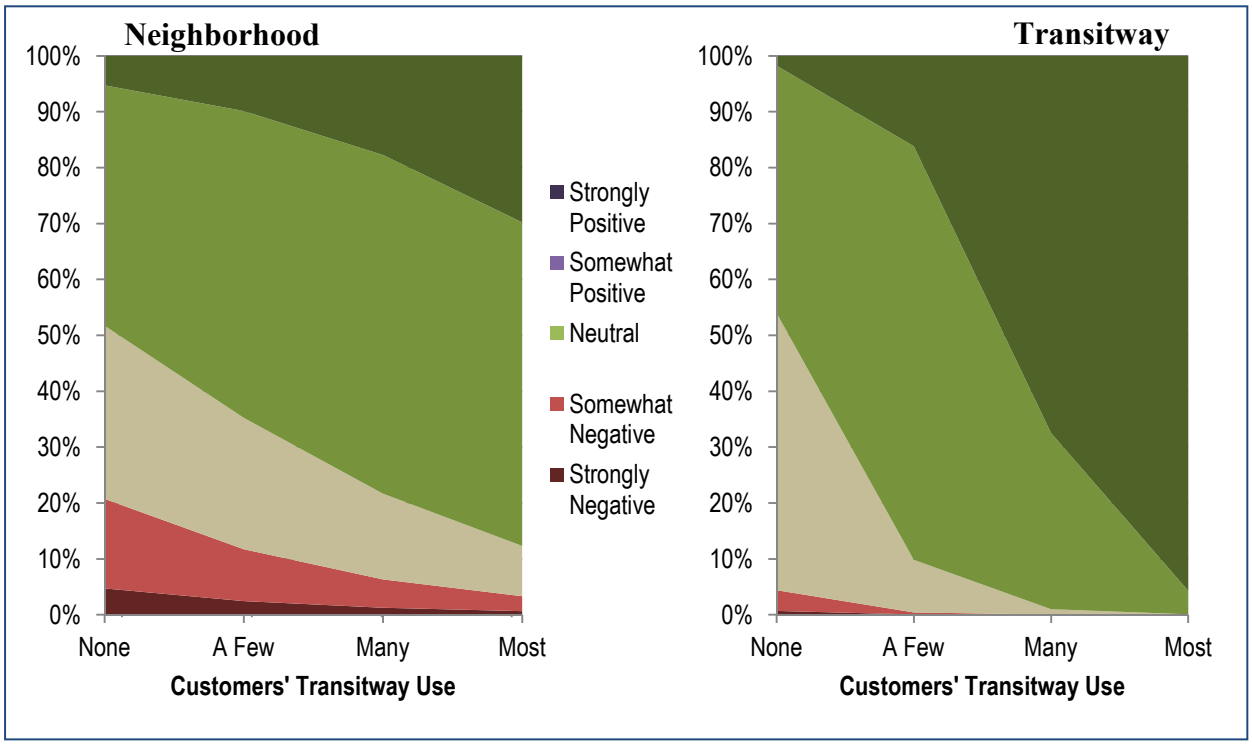

Figure 8-19: Future Perceptions by Customers' Transitway Use

A belief that customers use or will use the transitway leads to much high probabilities of positive perceptions of the overall trajectory of change in the neighborhood, even when all expected changes—including any unconnected with the transitway—are included. The trend is even more pronounced for perceptions of direct transitway impacts: even a shift in customers' transitway use from "none" to "a few" yields an increase in positive perceptions from 46% to 90%. Increases in strongly positive perceptions follow a similar pattern, with a 67% probability for businesses that believe many of their customers use or will use the transitway.

8.6 Business Perceptions—Specific Impacts

In addition to asking about the overall trajectory of change in their neighborhoods, the survey asked businesses to rate the importance of twelve specific neighborhood qualities. Businesses also identified whether each quality had increased, decreased or remained constant over the

previous five years, and whether they expected it to increase, decrease or remain constant over the next five years. Finally, businesses rated how related those changes were to the transitway.

The fine-grained, longitudinal data gained from these questions allow us to examine businesses' observations and expectations of neighborhood change on multiple dimensions at once. The following chapter contains a series of importance-change-relevance graphs intended to identify potential targets for policy interventions around transitways based on their importance to neighborhood businesses, the types of changes observed and expected, and the relevance of transitways to those changes.

8.6.1 Importance-Change-Relevance Analysis

Each importance-change-relevance graph plots the mean observed direction of change on the horizontal axis, with positive values representing positive changes, and negative values representing negative changes. The mean importance businesses ascribe to each quality is plotted on the vertical axis. For both change and importance, a reference line shows the mean of means (the mean of the mean values for all neighborhood qualities). These reference lines divide the graph into four quadrants. Clockwise from the upper left, these quadrants represent neighborhood qualities perceived as having high importance and negative change, high importance and positive change, low importance and positive change, and low importance and negative change. In similar fashion, the color of each point represents whether the mean relevance of transitway development to each change is greater or less than the mean of means.

As such, the upper left quadrant of the graph can be said to represent aspects of the neighborhood which businesses see as more important than most, and as either showing decline or less-than average improvement. This top-left quadrant identifies key neighborhood qualities to target for intervention. With particular regard to transitway planning and related community economic development planning, *green* points in the upper left quadrant are particularly notable. These points represent changes with a stronger-than-average perceived relationship to the transitway, above-average importance and below-average improvement. (For a more detailed explanation of importance-change-relevance analysis, please see Section 5.3 Specific Neighborhood Changes.)

Central Corridor Figure 8-20 shows past and future importance-change-relevance graphs for Central Corridor businesses. Concerns about automotive access and parking dominate the high-importance/negative-change quadrant, to the exclusion of all other highly relevant changes for the past. Looking to the future, affordable commercial space also moves into the critical quadrant, though still with less negative perceived change and lower rated importance than the automotive access variables.

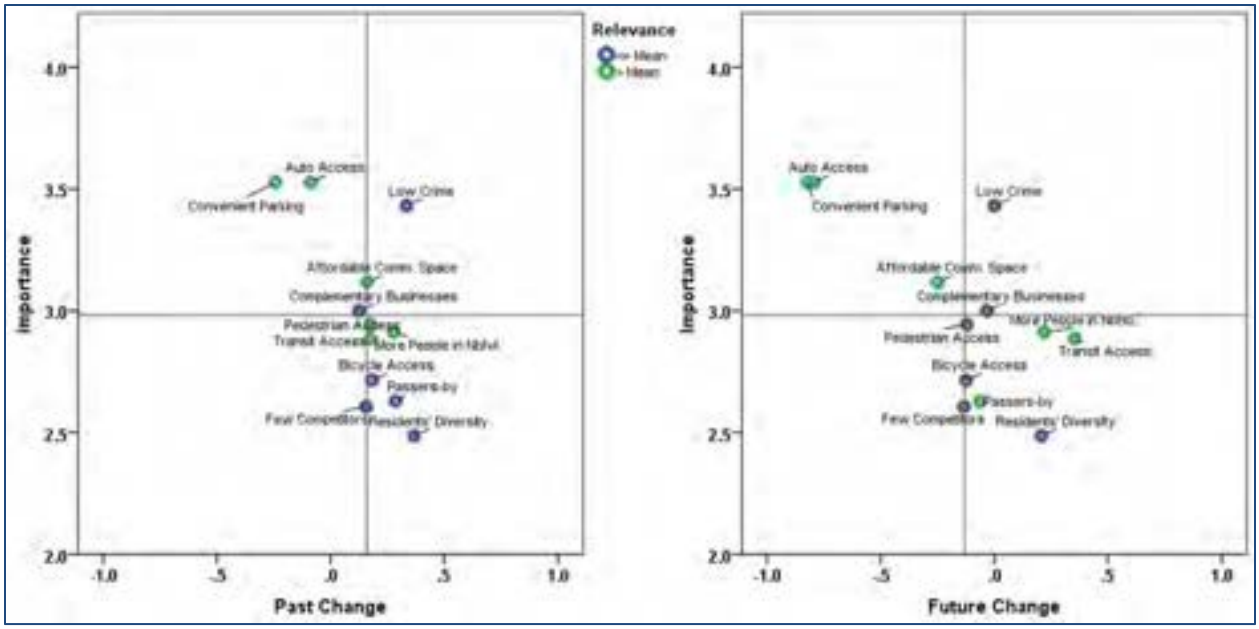

Figure 8-20: Importance-Change-Relevance, Central Corridor

A low crime rate has similar importance to automotive access, but respondents generally see positive change and low relevance to light rail. No other variable produces importance ratings as high as automobile access and convenient parking. In addition, businesses generally report more positive changes in the remaining variables, with most falling into the "overkill" (positive-change/low-importance) quadrant.

Hiawatha Figure 8-21 shows past and future importance-change-relevance graphs for Hiawatha businesses. For past changes, crime, automobile access, affordable commercial space and convenient parking are clustered together in the critical quadrant. All of these variables have higher importance ratings than any variable on the positive change side of the graph. Only automobile access, however, is perceived as highly related to light rail. Transit access is the only specific change perceived as having high importance and positive change; it is also seen as highly related to light rail.

Looking to the future, the same four specific changes occupy the high-importance/negative-change quadrant. However, issues with automobile access are no longer perceived as highly related to LRT, while affordable commercial space is. Once again, transit access is the only specific change perceived as having high importance and positive change. With the exception of few competitors nearby, the remaining specific changes are all perceived as less important, and showing positive changes.

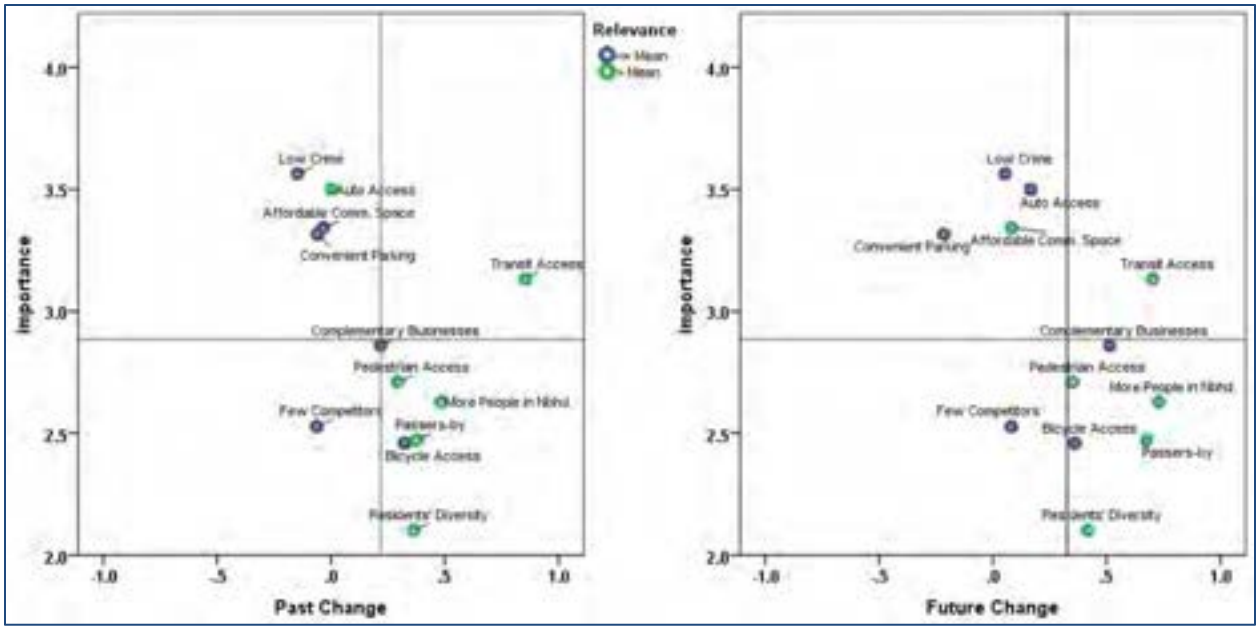

Figure 8-21: Importance-Change-Relevance, Hiawatha

Cedar Avenue Figure 8-22 shows past and future importance-change-relevance graphs for Cedar Avenue businesses. In the past, Cedar Avenue businesses perceive less change overall; of highly important changes, only a perceived decline in automotive access is seen as highly related to the BRT project. Auto access remains a key concern moving to the future, but is joined by an expected increase in the crime rate, which is also seen as highly related to BRT.

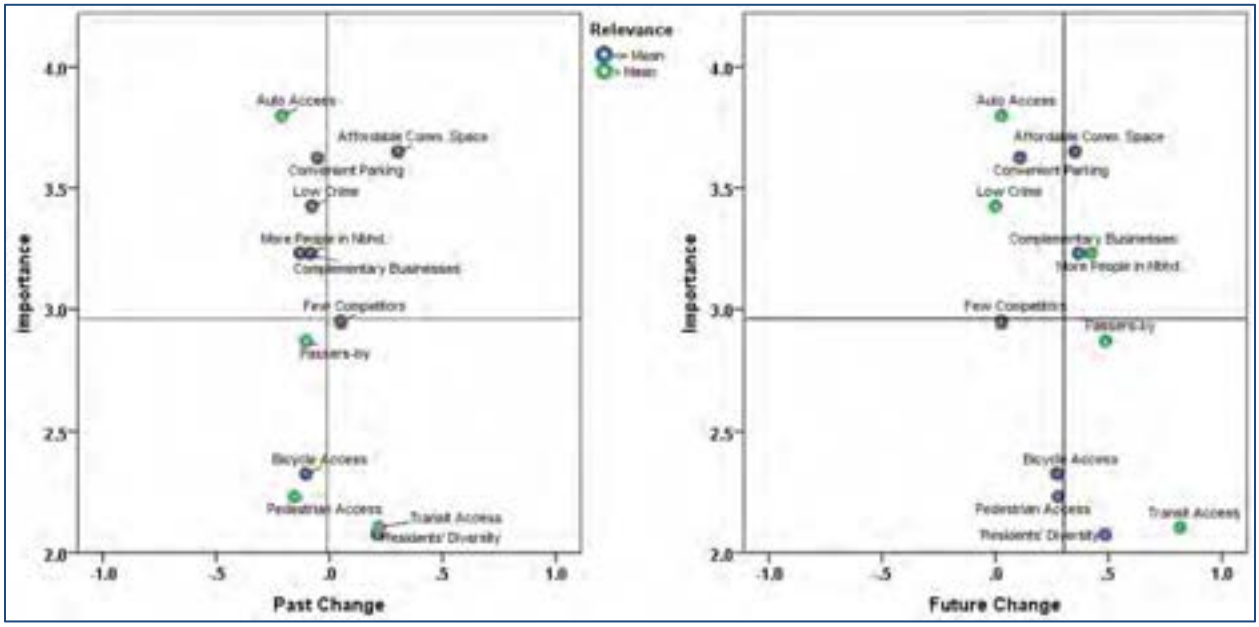

Figure 8-22: Importance-Change-Relevance, Cedar Avenue

Cedar Avenue businesses do expect consistently more positive specific changes in the future. In addition, "more people in the neighborhood" is perceived as important, changing in a positive

direction and highly related to BRT. Though transit access is expected to show positive changes, and to be highly related to BRT, it has one of the lowest importance ratings.

Northstar Figure 8-23 shows past and future importance-change-relevance graphs for Northstar businesses. Overall, a similar pattern to that found for Cedar Avenue businesses appears. Northstar businesses report little past change in the specific neighborhood qualities included in the questionnaire. Though crime and convenient parking are perceived as highly related to commuter rail and fall into the critical quadrant, they both actually show slightly positive *absolute* perceived changes. All perceived changes—with the exception of transit access, which has a low importance rating—are very close to the mean-of-means.

Looking to the future, the picture changes very little. In the high-importance/negative-change quadrant, convenient parking is no longer seen as related to commuter rail; crime, however is. (A similar pattern appeared for perceived crime impacts of transitways in the Cedar Avenue and Northstar residential surveys.) Expected increases in complementary businesses and people moving into the neighborhood are perceived to be important, as in the past graph. In a break from past perceptions, they are now expected to show positive changes and be highly related to commuter rail. Transit access in and of itself, however, is still perceived as improving, highly related to commuter rail and relatively unimportant.

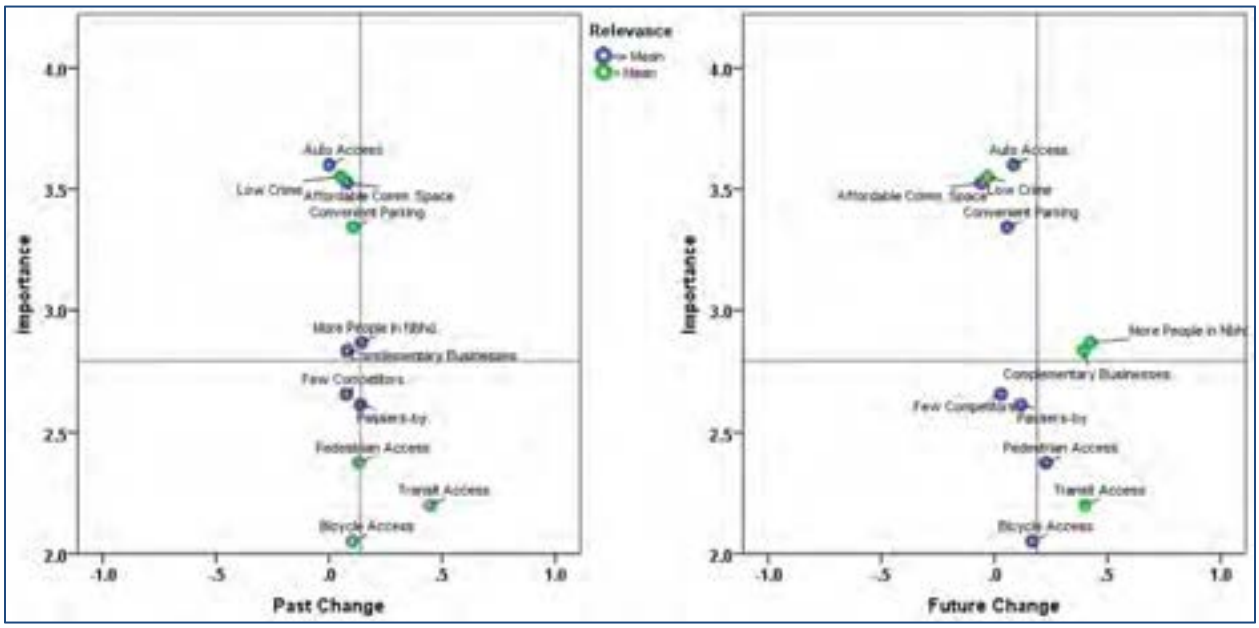

Figure 8-23: Importance-Change-Relevance, Northstar

8.7 Discussion

Overall, more businesses in the study neighborhoods are positive about the future than the past. This pattern holds for all four corridors, though significant differences appear in the precise numbers of positive perceptions from corridor to corridor, and between urban and suburban corridors.

Along Central Corridor and Cedar Avenue—the two corridors not yet complete at the time of data collection—most respondents are concerned about negative impacts on their businesses from transitway construction. Differences in specific construction concerns, however, suggest a need for community-specific business outreach and mitigation strategies. The two yet-to-be built corridors studied offer insights into how appropriate mitigation strategies may differ for urban and suburban transit corridors. For example, the dominance of "Customers not knowing how to reach your business during construction" and "Fewer people passing by during construction" for Cedar Avenue businesses may mean future business outreach and impact mitigation along suburban transitways should place extra focus on customer convenience concerns. The nearly even levels of concern about specific construction impacts reported by Central Corridor businesses, on the other hand, may suggest a more uniform strategy along future urban corridors, focusing heavily on all potentially disruptive aspects of construction.

Along all four study corridors, more businesses expect positive future impacts from transitways than negatives. However, large differences again appear between corridors in terms of precise numbers and strengths of both positive and negative perceptions. On the one hand, respondents along both urban corridors are nearly unanimous in their expectations that the transitway in their neighborhood will have impacts on their businesses, even if some disagree as to what those impacts will be. Among suburban respondents, on the other hand, there is no broad agreement that transitways will have any impact on their businesses. This divide suggests that planners in suburban areas have further work to do in terms of convincing station area businesses of the economic relevance of transitways. The pattern also likely reflects suburban station sites with fewer businesses nearby than are common in urban station areas.

Though significant majorities of businesses along the urban corridors expect positive future impacts from transitways, nearly 40% of businesses surveyed along Central Corridor expect negative impacts from light rail in the future. Though a minority, these respondents represent a sizeable portion of the Midway business community who are unconvinced that light rail will be beneficial to the neighborhoods it will soon serve. As a result, Central Corridor businesses remain key targets for outreach efforts.

In analysis of specific impacts businesses expect transitways to have on their neighborhoods, concerns about automotive access and convenient parking appear repeatedly, and are considered highly important. Though automobile access factors are not always considered highly relevant, this finding, along with the generally positive perceptions businesses have of transitways, shows a need for the current automobile-dominated transportation system to continue functioning well as the new regional transit system is built.

Regression modeling demonstrates that businesses with certain characteristics are less likely to share in the general optimism found by the survey. Specifically, automobile sales and service businesses, businesses with smaller sales volumes and older businesses are less likely than others to expect positive impacts from transitways. These businesses may feel they are being "planned out" of transitway neighborhoods, especially considering the history of University Avenue as a popular location for automobile dealers and repair shops. Certainly, some change in the type and intensity of neighborhood businesses may be a legitimate objective of the type of major redevelopment activities that often surround transitways. Even so, businesses that believe there

may not be a place for them in the future form of the neighborhood may present a significant opportunity to encourage further buy-in if they can be shown evidence to the contrary.

The regression models also suggest that demographic factors such as race, ethnicity and nativity status play significant roles in shaping perceptions of transitways' business impacts. The pattern of differences is complex, however, with white, native born respondents and businesses that have primarily white, native born employees and customers tending to have positive perceptions, some minority businesses having more positive perceptions still, and others having significantly less positive perceptions. These differences underscore the need for community outreach and dialogue.

Finally, the dramatic relationship between the belief that customers use (or will use) transitways and business' perceptions of their impacts shows that businesses believe transitways *can* be economically relevant. Further, this relationship demonstrates the importance of providing effective, convenient connections between transitway stations and surrounding businesses.

9 Conclusions

Residents and businesses in transitway station areas clearly have strong, complex perceptions of and opinions about transitways. Though individual perceptions vary widely, multiple overall trends of potential use to regional and local planners appear. The following chapter synthesizes major conclusions from the research and proposes policy recommendations arising out of them.

9.1 Overall Perceptions

Both residents and businesses in the study neighborhoods tend to have positive perceptions of the transitways that serve—or soon will serve—their neighborhoods. In particular, more residents and businesses along each of the four corridors expect positive future impacts from transitways than expect negative impacts. Even so, variation from corridor to corridor and from neighborhood to neighborhood in the precise mix of positive, benign and negative expected impacts demonstrates the existence of groups who see themselves as "losers" in the transitway development process. Though transit improvements are popular, planners must bear in mind that they are not a consensus position, even at the neighborhood level.

9.1.1 Getting to Yes—Addressing Negative Perceptions

Analysis of specific negative impacts residents and businesses expect transitways to have on their neighborhoods suggests that many negative perceptions of transitways may stem from anticipated issues which might be addressed by outreach and public involvement initiatives, as well as mitigation measures. Some negative perceptions may also stem from expected impacts unlikely to materialize at all—such as increased crime rates; in these cases, public education may be the most effective strategy for planners to use in addressing community members' concerns. While absolute unanimity of support need not be a requirement of transitway planning, opportunities appear to exist for making the process less contentious, and for increasing proportions of community members who perceive positive outcomes. By targeting specific impacts residents and businesses consider important, planners can make informed decisions about allocating finite outreach, mitigation and education resources. The importance-change-relevance analysis in Sections 5.3 and 8.6 suggests several specific impacts as focal points:

Crime—Residents and businesses both (especially in suburban neighborhoods) often expressed concerns that transitways would bring increased crime rates to their neighborhoods. Neighborhood security was invariably rated as highly important by community members. Public education efforts explaining the facts of the issue and demonstrating secure design features of transit stations may represent an especially low-cost/high-benefit strategy for allaying some community members' concerns.

Continued automotive access—Community members consistently reported expecting automobile access in their neighborhoods to worsen as a result of transitways. Though transitway projects invariably include significant traffic mitigation strategies intended to preserve automobile access, these mitigations may not be as widely publicized as the projects themselves. Improved communication of local traffic engineering and parking changes may be warranted. In addition, the prevalence of concerns about continued automotive access shows that community involvement is essential in planning the aspects of transitway projects that deal with the road system, as well as the transit and non-motorized systems.

Pedestrian safety—Residents consistently expressed concerns about transitways creating a less-safe environment for pedestrians, along with a loss of quiet neighborhood streets. All four corridors studied include major pedestrian-safety-oriented design features, and in many ways have improved/will improve pedestrian safety. As many more residents of the study neighborhoods currently walk in their neighborhoods regularly than use transit regularly, such concerns may have significant impacts on perceptions. Improved communication of pedestrian improvements may improve the situation. In addition, expansion of the geographic areas targeted for pedestrian improvements around stations—to the extent budgetary factors allow—may lead more station area residents to perceive transitways as positives for their neighborhoods.

9.1.2 Why it All Matters—Addressing the Neutrals

Though nearly all residents and businesses in the study neighborhoods along Central Corridor and Hiawatha expected their transitways to have impacts on their neighborhoods—whether for better or for worse—large percentages of respondents from Cedar Avenue and Northstar neighborhoods did not expect any impacts one way or the other. While an expectation of no impact may be arguably preferable to an expectation of negative impacts, the fact that significant proportions of the communities along the suburban corridors do not see transitways as relevant to them is cause for concern.

To some extent, this pattern may be a consequence of suburban transitways being relatively new to the Twin Cities, and the as-yet-unfinished Cedar Avenue BRT line being the first in the region intended to provide an all-day, bidirectional service in the manner of the Hiawatha LRT line. Looking to the future, Cedar Avenue may provide a valuable demonstration to other suburban areas of the metro. In the nearer term, drawing parallels between aspects of suburban corridors and aspects of the Hiawatha corridor may prove particularly valuable in increasing community engagement. Examples of the roles suburban transit corridors play in other regions may also prove useful.

9.1.3 Playing to Strengths—How Positive Perceptions Factor In

Residents and businesses who perceive transitways in a positive light may tempt planners with limited time and resources to leave well enough alone; there are compelling reasons, however, not to take such a course. Community members who expect positive impacts from transitways may offer a valuable base of grass-roots support, but may not be as strongly motivated to participate in public involvement efforts as residents and businesses with concerns. As such, they also represent real, sizeable segments of station area neighborhoods whose views may be ignored if all attention is focused on addressing the concerns of residents and businesses with negative perceptions. Finally, community members with positive perceptions of transitways may help lend credibility to outreach efforts, and help bring their neighbors to the table, so to speak, even if the latter have deeper concerns than the former. The importance-change-relevance analysis in Sections 5.3 and 8.6 suggests that both residents and businesses in the study neighborhoods see important community development and/or placemaking effects of transitways in a positive light, and as highly related to transit improvements. Specifically, residents consistently expect positive change in nearby shopping opportunities—and often entertainment opportunities as well—and generally believe these changes will be strongly related to the transitway projects in their neighborhoods. In addition, businesses consistently expect increased numbers of people—and

often complementary businesses—moving into study neighborhoods, and believe these changes will be related to transitways. Though these changes do not generally achieve as high relative importance ratings as shopping and entertainment opportunities do for residents, this is partly due to the high-end outlier importance ratings ascribed to automotive access factors. Importance ratings for more people in the neighborhood and complementary businesses nearby are moderately high overall.

These findings demonstrate one example of an instance in which individual residents' and businesses' interests appear to align in terms of specific, easily communicated benefits they expect from transitways. In addition, such community development impacts confer benefits on residents and businesses whether or not they, their employees or their customers use transit. If such residents and businesses can be actively engaged with and brought together early in the transitway planning process, they may offer planners both a strong anchor of support in local communities, as well as links with those communities to ease the opening of dialogue with more skeptical community members.

9.2 Transit Use and Perceptions

Residents who currently use transit frequently and businesses who believe/expect their customers use/will use transitways appear to represent another instance of local residents and businesses whose interests align around transitways. Based on the regression analyses in Sections 5.2.3 and 8.5.3 such residents and businesses are much more likely than others to expect positive future change in their neighborhoods and/or impacts from transitways. This pattern is present for both urban and suburban residents; all businesses are included in the business survey regression models. Though these residents and businesses may not represent as broad a potential base of support as those who expect positive community development and placemaking effects from transitways, the strength of the relationship between transit use and perceptions suggests the base of support and links with local communities they do offer may be quite deep. As such, current transit users and businesses likely to attract transitway users as customers should be key targets for outreach efforts in the planning process for future transitways.

9.3 Community-Sensitive Planning Needed

Multiple findings of both business and residential surveys demonstrate a need for local community-sensitive planning of and around transitways. In addition, the results demonstrate that local communities requiring planning consideration and outreach efforts can be defined in multiple ways, including:

Geography—In addition to the basic concept of station areas, both surveys show numerous urban-suburban differences in the ways residents and businesses perceive transitways and the types of development that may occur around them. Transformative, more sustainable redevelopment and travel behavior shifts are often a goal of transitway projects. The survey results are a reminder that such goals must be pursued with respect for the differing values residents and businesses in different areas place on various aspects of their communities.

Cultural Identity—Both surveys reveal powerful, complex differences in perceptions of transitways based on race, ethnicity and/or nativity status. These differences are often present within neighborhoods or corridors that have well-defined geographic identities of their own

in terms of perceptions. Though proactively bringing issues like race or nationality into the public involvement process for transitway planning may be a very delicate process for planners, the survey results demonstrate the importance of reaching out to the multiple communities of culture and identity that often exist within a single community of geography.

Time in the Neighborhood—According to the surveys, the more recently a resident or business has moved into a neighborhood, the more likely they are to perceive transitways as having positive impacts. Though some of this pattern is likely the result of self-selection among recent arrivals, the inclusion of one relatively new and two incomplete corridors suggests that self-selection may not explain the entire relationship. Though transitways may act as important symbols of progress for the transit system and the region, these findings demonstrate the importance of considering the present while planning for the future.

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Appendix A: Example Residential Questionnaire

TRANSIT & NEIGHBORHOOD SOCIAL CHANGE:

A Survey Conducted by the University of Minnesota for the Transitway Impacts Research Program

CENTRAL CORRIDOR

Light Rail Transit

Case # _____

Parcel ID #_____ Unit_____

Time & Date _____

(<u>INTERVIEWER</u>: There are two types of questions in this survey: those with a single, direct response and those with multiple sub-questions, each of which requires its own response. Sub-questions for multi-part questions are identified by LETTERS in parentheses. Answer choices are identified by NUMBERS in parentheses. ALWAYS read sub-questions to the respondent. ONLY read answer choices to the respondent IF directed to. Read everything else to the respondent EXCEPT text in parentheses.)

Introduction

Good afternoon. My name is **__[name of interviewer]__** and I'm a researcher at the University of Minnesota. We're studying how the Central Corridor light rail line along University Avenue will impact nearby neighborhoods. The results of the study will lead to policies that benefit neighborhood residents and improve their qualities of life.

Your block has been randomly selected to be part of the study. It is important that we interview every household on your block. Your participation is completely voluntary and confidential. None of the answers you give will be reported in any way that could identify you. The survey should take about 20- 30 minutes. At the end of the survey, we will offer you a gift of University merchandise to thank you for your participation.

QA.1 Could I talk to the person over age 18 who had the most recent birthday in this household? (If needed: "This helps us avoid biased results due to who we interview.") (Circle only ONE answer.)

(1) THAT'S ME (OR SIMILAR)	(ASK THE NEXT QUESTION.)
(2) YES (A DIFFERENT PERSON IN THE HOUSEHOLD)	(ONCE THEY ARRIVE, REREAD INTRODUCTION; ASK THE NEXT QUESTION)
(0) NO	(ASK QUESTION QA.3.)
(-8) D/K	
(-9) R/A	

QA.2 Would you be willing to participate in this study about Central Corridor? (Circle only ONE answer.)

(1) YES	(SKIP TO SECTION B.)
(0) NO	(ASK THE NEXT QUESTION.)

QA.3 Could I come back another time? (Circle only ONE answer.)

(1) COME BACK ANOTHER TIME	(ASK THE NEXT QUESTION.)
(0) NO	(THANK THE RESPONDENT FOR HIS/HER TIME AND STOP.)
(-8) D/K	
(-9) R/A	

QA.4 What would be a better day and time for me to return? _____
(Write answer. THANK the respondent and STOP.)

(-8) D/K

(-9) R/A

Section B: Your View of the Neighborhood

I'm going to begin with questions about how you view your neighborhood, and about what you see as its strengths and challenges.

QB.1 In what year did you move into this neighborhood? _____ **(Write answer.)** D/K (-8) R/A (-9)

QB.2 What was your old address BEFORE you moved into this neighborhood? (Write answer.)

(If respondent moved from a different metropolitan area, get their old CITY and STATE/COUNTRY as well.)

(1) ADDRESS _____

(If needed→) Street and cross-street? ZIP Code? Neighborhood? Landmark? (Circle ONE of the categories below & write answer.)

(2) STREET/CROSS-STREET _____

(3) ZIP CODE _____

(4) NEIGHBORHOOD _____

(5) LANDMARK _____

(-8) D/K

(-9) R/A

QB.3 What neighborhood would you say you live in? _____(Write answer.)

(-8) D/K

(-9) R/A

(Hand street map sheet to respondent.)

QB.4 Could you draw the boundaries of what you think of as your neighborhood on this map? There is no right or wrong answer. (Retrieve street map sheet; place in large, manila envelope.)

(-8) D/K

(-9) R/A

Next, I'm going to ask about changes you have seen in this neighborhood over the PAST five years or since you moved here if that was less than five years ago. To save time, I'd like you to mark your answers on this sheet. You may mark your answers in whatever order is easiest for you. I can also ask the question verbally if you prefer. (Hand the respondent the YELLOW response sheet, or ask the next three questions verbally, as directed by the respondent.)

QB.5 How important is each of the following neighborhood qualities to you? Not important at all, slightly important, somewhat important or very important? (Circle only ONE answer for each sub-question.)

	(1) NOT IMPORTANT AT ALL	(2) SLIGHTLY IMPORTANT	(3)SOMEWHAT IMPORTANT	(4) VERY IMPORTANT	(-8)D/K |	(-9)R/A |
(A) INEXPENSIVE HOUSING	☐	☐	☐	☐	☐	☐
(B) WELL-MAINTAINED/WELL-KEPT BUILDINGS AND YARDS	☐	☐	☐	☐	☐	☐
(C) SHOPPING AREAS NEARBY	☐	☐	☐	☐	☐	☐
(D) ENTERTAINMENT LIKE RESTAURANTS, CLUBS, THEATERS, EVENTS NEARBY	☐	☐	☐	☐	☐	☐
(E) ACCESS TO HIGHWAYS	☐	☐	☐	☐	☐	☐
(F) EASE OF DRIVING ON MAJOR STREETS OR LOW CONGESTION	☐	☐	☐	☐	☐	☐
(G) EASE OF FINDING A PARKING SPACE IN THE NEIGHBORHOOD	☐	☐	☐	☐	☐	☐
(H) QUIETNESS OF NEIGHBORHOOD STREETS	☐	☐	☐	☐	☐	☐
(I) TRAFFIC SAFETY ALONG WALKING ROUTES	☐	☐	☐	☐	☐	☐
(J) GOOD, FREQUENT BUS SERVICE	☐	☐	☐	☐	☐	☐
(K) GOOD SCHOOLS NEARBY	☐	☐	☐	☐	☐	☐
(L) GOOD PARKS, PLAYGROUNDS, RECREATION FACILITIES NEARBY	☐	☐	☐	☐	☐	☐
(M) GOOD LIBRARIES AND COMMUNITY CENTERS NEARBY	☐	☐	☐	☐	☐	☐
(N) NEIGHBORS W/ SIMILAR INCOMES AND EDUCATION LEVELS TO YOUR OWN	☐	☐	☐	☐	☐	☐
(O) NEIGHBORS FROM YOUR OWN RACE OR ETHNIC GROUP	☐	☐	☐	☐	☐	☐
(P) NEIGHBORS WHO ARE FRIENDLY AND GET ALONG WITH EACH OTHER	☐	☐	☐	☐	☐	☐
(Q) SENSE OF SECURITY, LIKE LOW CRIME	☐	☐	☐	☐	☐	☐
(R) ANY OTHER IMPORTANT QUALITY? _____	☐	☐	☐	☐	☐	☐

QB.6 Have you seen more, no change or less of each neighborhood quality over the PAST five years/since you moved in? (Circle only ONE answer for each sub-question.)

QB.7 How related do you think these changes are to the Central Corridor light rail project? Not related at all, slightly related, somewhat related or very related? Don't answer if you've seen no change. (Circle only ONE answer for each sub-question.)

	(QB.6)					**(QB.7)**					
	(1) MORE	(2)NO CHANGE	(3) LESS	(-8)D/K	(-9)R/A	(1)NOT RELATED AT ALL	(2)SLIGHTLY RELATED	(3)SOMEWHAT RELATED	(4) VERY RELATED	(-8)D/K |	(-9)R/A |
(A)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(B)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(C)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(D)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(E)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(F)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(G)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(H)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(I)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(J)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(K)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(L)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(M)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(N)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(O)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(P)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(Q)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(R)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

QB.8 Overall, has this neighborhood become a better or worse place to live over the PAST five years—or since you moved in—or has it stayed about the same? Much worse, somewhat worse, about the same, somewhat better or much better? (Circle only ONE answer.)

(1) MUCH WORSE

(2) SOMEWHAT WORSE

(3) ABOUT THE SAME

(4) SOMEWHAT BETTER

(5) MUCH BETTER

(-8) D/K

(-9) R/A

QB.9 Overall, what is your opinion of any effects the Central Corridor light rail project has had on the neighborhood so far? Strongly negative, somewhat negative, somewhat positive or strongly positive? (Circle only ONE answer. Do NOT read "Neither Negative nor Positive;" only circle if volunteered by respondent.)

(1) STRONGLY NEGATIVE

(2) SOMEWHAT NEGATIVE

(3) (NEITHER NEGATIVE NOR POSITIVE)

(4) SOMEWHAT POSITIVE

(5) STRONGLY POSITIVE

(-8) D/K

(-9) R/A

QB.10 How satisfied are you with each of the following aspects of your neighborhood? Not satisfied at all, mildly satisfied, somewhat satisfied or very satisfied? (Hold up YELLOW show-card. Circle ONE for each sub-question.)

	(1) NOT SATISFIED AT ALL	(2) MILDLY SATISFIED	(3)SOMEWHAT SATISFIED	(4) VERY SATISFIED	(-8)D/K |	(-9)R/A |
(A) AFFORDABILITY OF HOUSING	☐	☐	☐	☐	☐	☐
(B) MAINTENANCE OR UPKEEP OF BUILDINGS AND YARDS	☐	☐	☐	☐	☐	☐
(C) LOCAL SHOPPING OPPORTUNITIES	☐	☐	☐	☐	☐	☐
(D) LOCAL ENTERTAINMENT LIKE RESTAURANTS, CLUBS, THEATERS, EVENTS	☐	☐	☐	☐	☐	☐
(E) ACCESS TO HIGHWAYS	☐	☐	☐	☐	☐	☐
(F) EASE OF DRIVING ON MAJOR STREETS OR LOW CONGESTION	☐	☐	☐	☐	☐	☐
(G) EASE OF FINDING A PARKING SPACE IN THE NEIGHBORHOOD	☐	☐	☐	☐	☐	☐
(H) QUIETNESS OF NEIGHBORHOOD STREETS	☐	☐	☐	☐	☐	☐
(I) TRAFFIC SAFETY ALONG WALKING ROUTES	☐	☐	☐	☐	☐	☐
(J) QUALITY OF BUS SERVICE	☐	☐	☐	☐	☐	☐
(K) QUALITY OF LOCAL SCHOOLS	☐	☐	☐	☐	☐	☐
(L) QUALITY OF NEARBY PARKS, PLAYGROUNDS, RECREATION FACILITIES	☐	☐	☐	☐	☐	☐
(M) QUALITY OF NEARBY LIBRARIES AND COMMUNITY CENTERS	☐	☐	☐	☐	☐	☐
(N) MIX OF NEIGHBORS WITH DIFFERENT INCOMES AND EDUCATION LEVELS	☐	☐	☐	☐	☐	☐
(O) MIX OF NEIGHBORS FROM DIFFERENT RACIAL OR ETHNIC GROUPS	☐	☐	☐	☐	☐	☐
(P) FRIENDLINESS OF NEIGHBORS/HOW WELL NEIGHBORS GET ALONG	☐	☐	☐	☐	☐	☐
(Q) NEIGHBORHOOD SECURITY, LIKE LOW CRIME	☐	☐	☐	☐	☐	☐
(R) ANY OTHER IMPORTANT ASPECT? _____	☐	☐	☐	☐	☐	☐

QB.11 What portion of the people in your neighborhood do you think are your own race? (Hold up WHITE show-card. If needed, read the following categories:) Practically all, nine of every ten, eight of every ten, seven of every ten, six of every ten, five of every ten, four of every ten, three of every ten, two of every ten, one of every ten, less than one of every ten or none but yourself or family? (Circle only ONE answer.)

(1) PRACTICALLY ALL
(2) NINE OF EVERY TEN
(3) EIGHT OF EVERY TEN
(4) SEVEN OF EVERY TEN
(5) SIX OF EVERY TEN
(6) FIVE OF EVERY TEN
(7) FOUR OF EVERY TEN
(8) THREE OF EVERY TEN
(9) TWO OF EVERYT TEN
(10) ONE OF EVERY TEN
(11) LESS THAN ONE OF EVERY TEN
(12) NONE BUT YOURSELF OR FAMILY
(-8) D/K
(-9) R/A

QB.12 In your ideal neighborhood, what portion of the people would be from your own race? (Hold up WHITE show-card. If needed, read the following categories:) Practically all, nine of every ten, eight of every ten, seven of every ten, six of every ten, five of every ten, four of every ten, three of every ten, two of every ten, one of every ten, less than one of every ten or none but yourself or family? (Circle only ONE answer.)

(1) PRACTICALLY ALL
(2) NINE OF EVERY TEN
(3) EIGHT OF EVERY TEN
(4) SEVEN OF EVERY TEN
(5) SIX OF EVERY TEN
(6) FIVE OF EVERY TEN
(7) FOUR OF EVERY TEN
(8) THREE OF EVERY TEN
(9) TWO OF EVERYT TEN
(10) ONE OF EVERY TEN
(11) LESS THAN ONE OF EVERY TEN
(12) NONE BUT YOURSELF OR FAMILY
(-8) D/K
(-9) R/A

QB.13 How often do you do the following things? Never, less than once a month, one to four times a month, two to four times a week or more than four times a week? (Hold up GREEN show-card. Circle ONE for each sub-question.)

	(0) NEVER	(1) <1/MO	(2) 1-4/MO	(3) 2-4/WK	(4) >4/WK	(-8) D/K	(-9) R/A
(A) SAY HELLO TO A NEIGHBOR	☐	☐	☐	☐	☐	☐	☐
(B) TALK WITH A NEIGHBOR FOR 10 MINUTES OR MORE	☐	☐	☐	☐	☐	☐	☐
(C) INVITE YOUR NEIGHBORS TO YOUR HOME	☐	☐	☐	☐	☐	☐	☐
(D) BORROW THINGS FROM/LEND THINGS TO A NEIGHBOR	☐	☐	☐	☐	☐	☐	☐
(E) PARTICIPATE IN COMMUNITY ACTIVITIES LIKE CHURCH, SCHOOL EVENTS, SPORTS	☐	☐	☐	☐	☐	☐	☐

QB.14 How do the following groups of people get along in your neighborhood? Not at all, not well, well or very well? (Hold up BLUE show card. Circle ONE for each sub-question.)

	(1) NOT AT ALL	(2) NOT WELL	(3) WELL	(4) VERY WELL	(-8) D/K	(-9) R/A
(A) FAMILIES AND SINGLES	☐	☐	☐	☐	☐	☐
(B) LONG-TIME RESIDENTS AND NEW RESIDENTS	☐	☐	☐	☐	☐	☐
(C) RENTERS AND HOMEOWNERS	☐	☐	☐	☐	☐	☐
(D) STUDENTS AND NON-STUDENTS	☐	☐	☐	☐	☐	☐
(E) WHITE RESIDENTS AND MINORITY RESIDENTS	☐	☐	☐	☐	☐	☐
(F) RESIDENTS FROM DIFFERENT MINORITY GROUPS	☐	☐	☐	☐	☐	☐
(G) IMMIGRANTS AND NON-IMMIGRANTS	☐	☐	☐	☐	☐	☐
(H) RESIDENTS WITH DIFFERENT INCOME LEVELS	☐	☐	☐	☐	☐	☐

QB.15 Have you heard of any public meetings, open houses and/or other community events dealing with the Central Corridor? (Circle only ONE answer.)

(1) YES (Ask the next question.)

(0) NO (Skip the next question.)

(-8) D/K

(-9) R/A

QB.16 How many events have you or a member of your family attended, if any? _____ (Write answer.)

(-8) D/K

(-9) R/A

QB.17 How long do you expect to stay in this neighborhood? Less than a year, one to five years, six to ten years or more than ten years? (Circle only ONE answer.)

(1) LESS THAN A YEAR

(2) ONE TO FIVE YEARS

(3) SIX TO TEN YEARS

(4) MORE THAN TEN YEARS

(-8) D/K

(-9) R/A

Earlier, I asked you about changes you've seen in this neighborhood over the PAST five years or since you moved in. Now, I'm going to ask you about what changes you think will happen in this neighborhood over the NEXT five years.

(Either hand respondent the GREEN response sheet, or ask the next two questions verbally. Do the same as for QB.5, 6 & 7.)

QB.18 Do you think you'll see more, no change or less of each of the following neighborhood qualities over the NEXT five years? (Circle ONE for each sub-question.)

	(1) MORE	(2)NO CHANGE	(3) LESS	(-8)D/K	(-9)R/A
(A) INEXPENSIVE HOUSING	☐	☐	☐	☐	☐
(B) WELL-MAINTAINED/WELL-KEPT BUILDINGS AND YARDS	☐	☐	☐	☐	☐
(C) SHOPPING AREAS NEARBY	☐	☐	☐	☐	☐
(D) ENTERTAINMENT LIKE RESTAURANTS, CLUBS, THEATERS, EVENTS NEARBY	☐	☐	☐	☐	☐
(E) ACCESS TO HIGHWAYS	☐	☐	☐	☐	☐
(F) EASE OF DRIVING ON MAJOR STREETS OR LOW CONGESTION	☐	☐	☐	☐	☐
(G) EASE OF FINDING A PARKING SPACE IN THE NEIGHBORHOOD	☐	☐	☐	☐	☐
(H) QUIETNESS OF NEIGHBORHOOD STREETS	☐	☐	☐	☐	☐
(I) TRAFFIC SAFETY ALONG WALKING ROUTES	☐	☐	☐	☐	☐
(J) GOOD, FREQUENT BUS SERVICE	☐	☐	☐	☐	☐
(K) GOOD SCHOOLS NEARBY	☐	☐	☐	☐	☐
(L) GOOD PARKS, PLAYGROUNDS, RECREATION FACILITIES NEARBY	☐	☐	☐	☐	☐
(M) GOOD LIBRARIES AND COMMUNITY CENTERS NEARBY	☐	☐	☐	☐	☐
(N) NEIGHBORS W/ SIMILAR INCOMES AND EDUCATION LEVELS TO YOUR OWN	☐	☐	☐	☐	☐
(O) NEIGHBORS FROM YOUR OWN RACE OR ETHNIC GROUP	☐	☐	☐	☐	☐
(P) NEIGHBORS WHO ARE FRIENDLY AND GET ALONG WITH EACH OTHER	☐	☐	☐	☐	☐
(Q) SENSE OF SECURITY, LIKE LOW CRIME	☐	☐	☐	☐	☐
(R) ANY OTHER IMPORTANT QUALITY _____	☐	☐	☐	☐	☐

QB.19 How related do you think each change will be to the Central Corridor light rail project? Not related at all, slightly related, somewhat related or mostly related? Don't answer if you anticipate no change. (Circle ONE for each sub-question.)

	(1) NOT RELATED AT ALL	(2)SLIGHTLY RELATED	(3) SOMEWHAT RELATED	(4) MOSTLY RELATED	(-8)D/K |	(-9)R/A |
(A)	☐	☐	☐	☐	☐	☐
(B)	☐	☐	☐	☐	☐	☐
(C)	☐	☐	☐	☐	☐	☐
(D)	☐	☐	☐	☐	☐	☐
(E)	☐	☐	☐	☐	☐	☐
(F)	☐	☐	☐	☐	☐	☐
(G)	☐	☐	☐	☐	☐	☐
(H)	☐	☐	☐	☐	☐	☐
(I)	☐	☐	☐	☐	☐	☐
(J)	☐	☐	☐	☐	☐	☐
(K)	☐	☐	☐	☐	☐	☐
(L)	☐	☐	☐	☐	☐	☐
(M)	☐	☐	☐	☐	☐	☐
(N)	☐	☐	☐	☐	☐	☐
(O)	☐	☐	☐	☐	☐	☐
(P)	☐	☐	☐	☐	☐	☐
(Q)	☐	☐	☐	☐	☐	☐
(R)	☐	☐	☐	☐	☐	☐

QB.20 Overall, will this neighborhood become a better or worse place to live over the NEXT five years, or will it stay about the same? Much worse, somewhat worse, about the same, somewhat better or much better? (Circle only ONE answer.)

(1) MUCH WORSE

(2) SOMEWHAT WORSE

(3) ABOUT THE SAME

(4) SOMEWHAT BETTER

(5) MUCH BETTER

(-8) D/K

(-9) R/A

QB.21 Overall, what is your opinion of how the Central Corridor light rail project will affect this neighborhood in the future? Strongly negative, somewhat negative, somewhat positive or strongly positive? (Circle only ONE answer. Do NOT read "Neither Negative nor Positive;" only circle if volunteered by respondent.)

(1) STRONGLY NEGATIVE

(2) SOMEWHAT NEGATIVE

(3) (NEITHER NEGATIVE NOR POSITIVE)

(4) SOMEWHAT POSITIVE

(5) STRONGLY POSITIVE

(-8) D/K

(-9) R/A

Next, I'm going to show you several pictures of different types of neighborhoods.

(Hand HOUSING picture card to the respondent.)

A

B

C

D

QB.22 How would you like to see each of the above housing types in or near your neighborhood? Would you not like it at all, not like it much, like it or like it a lot? (Hold up ORANGE show-card. Circle only ONE answer for each sub-question.)

	(1) NOT LIKE IT AT ALL	(2) NOT LIKE IT MUCH	(3) LIKE IT	(4) LIKE IT A LOT	(-8)D/K	(-9)R/A
(A)	☐	☐	☐	☐	☐	☐
(B)	☐	☐	☐	☐	☐	☐
(C)	☐	☐	☐	☐	☐	☐
(D)	☐	☐	☐	☐	☐	☐

A

B

C

D

(Hand BUSINESS picture card to the respondent.)

QB.23 How would you like to see each of the above business districts in or near your neighborhood? Would you not like it at all, not like it much, like it or like it a lot? (Hold up ORANGE show-card. Circle only ONE answer for each sub-question.)

	(1) NOT LIKE IT AT ALL	(2) NOT LIKE IT MUCH	(3) LIKE IT	(4) LIKE IT A LOT	(-8)D/K	(-9)R/A
(A)	☐	☐	☐	☐	☐	☐
(B)	☐	☐	☐	☐	☐	☐
(C)	☐	☐	☐	☐	☐	☐
(D)	☐	☐	☐	☐	☐	☐

Section C: Transportation

Next, I'm going to ask you some questions about your job and how you get around.

QC.1 Which of the following describe your current employment status? There may be more than one category that applies. (Circle only ONE answer for each sub-question.)

	(1) YES	(0) NO	(-8) D/K	(-9) R/A	
(A) EMPLOYED FULL-TIME	◻	◻	◻	◻	(IF YES, Ask the next question.)
(B) EMPLOYED PART-TIME	◻	◻	◻	◻	(IF YES, Ask the next question.)
(C) FULL-TIME STUDENT	◻	◻	◻	◻	(IF YES, Ask the next question.)
(D) PART-TIME STUDENT	◻	◻	◻	◻	(IF YES, Ask the next question.)
(E) HOMEMAKER/NOT EMPLOYED BY CHOICE	◻	◻	◻	◻	(IF ONLY YES, skip to QC.8.)
(F) RETIRED	◻	◻	◻	◻	(IF ONLY YES, skip to QC.8.)
(G) UNEMPLOYED	◻	◻	◻	◻	(IF ONLY YES, skip to QC.8.)

QC.2 Where is your workplace or school LOCATED? We only need the address where you work not the name of your company. If you work AND go to school, please tell me about both. If you work more than one job, tell me about the job you work the most hours at.

(A) WORK:

(1) ADDRESS _____**(Write answer.)**

(B) SCHOOL:

(1) ADDRESS _____**(Write answer.)**

(If needed:) Could you tell me the street and cross-street, the ZIP code or a nearby landmark? (If U of M, ASK WHICH CAMPUS.)

(A) WORK: **(Circle ONE & write answer.)**

(2) STREET/CROSS-STREET _____

(3) ZIP CODE _____

(4) LANDMARK _____

(-8) D/K

(-9) R/A

(B) SCHOOL: **(Circle ONE & write answer.)**

(2) STREET/CROSS-STREET _____

(3) ZIP CODE _____

(4) LANDMARK _____

(-8) D/K

(-9) R/A

QC.3 How many miles is your commute to work and/or school? (Write answer for all that apply.)

(A) WORK _____ MILES (-8) D/K (-9) R/A

(B) SCHOOL _____ MILES (-8) D/K (-9) R/A

QC.4 How many minutes does your commute to work and/or school normally take? (Write answer for all that apply.)

(A) WORK _____ MINUTES (-8) D/K (-9) R/A

(B) SCHOOL _____ MINUTES (-8) D/K (-9) R/A

QC.5 What times of day do you usually make those commuting trips? (Write answer for all that apply.)

(A) GOING TO WORK _____ (-8) D/K (-9) R/A

(B) GOING TO SCHOOL _____ (-8) D/K (-9) R/A

(C) COMING HOME _____ (-8) D/K (-9) R/A

QC.6 How often do you make your commute in each of the following ways? Never, less than once a month, one to four times a month, two to four times a week or more than four times a week? (Hold up GREEN show-card. Circle only ONE answer for each sub-question.)

	(0) NEVER	(1) <1/MO	(2) 1-4/MO	(3) 2-4/WK	(4) >4/WK	(-8) D/K	(-9) R/A
(A) WALKING OR BICYCLING TO PUBLIC TRANSIT LIKE A BUS OR TRAIN	☐	☐	☐	☐	☐	☐	☐
(B) DRIVING TO PUBLIC TRANSIT—PARK & RIDE	☐	☐	☐	☐	☐	☐	☐
(C) WALKING	☐	☐	☐	☐	☐	☐	☐
(D) BICYCLING	☐	☐	☐	☐	☐	☐	☐
(E) AUTOMOBILE OR MOTORCYCLE AS DRIVER OR PASSENGER	☐	☐	☐	☐	☐	☐	☐
(F) TAXI	☐	☐	☐	☐	☐	☐	☐
(G) TELECOMMUTING OR WORKING FROM HOME	☐	☐	☐	☐	☐	☐	☐
(H) ANY OTHER TYPE OF TRANSPORTATION _____	☐	☐	☐	☐	☐	☐	☐

(Skip the next question if the respondent answered NEVER to PUBLIC TRANSIT for the last question.)

QC.7 Which bus or rail routes do you use for your commute to work and/or school? _____ (Write answer.)

(-8) D/K

(-9) R/A

Next, I'm going to ask you about personal trips, meaning any trips you make that are not related to work or school.

QC.8 How often do you make personal trips—that is, non-work or school related trips—by walking or bicycling? Never, less than once a month, one to four times a month, two to four times a week, or more than four times a week? (Circle only ONE answer.)

(0) NEVER

(1) LESS THAN ONCE A MONTH

(2) 1-4 TIMES A MONTH

(3) 2-4 TIMES A WEEK

(4) MORE THAN 4 TIMES A WEEK

(-8) D/K

(-9) R/A

QC.9 How often do you make personal trips—that is, non-work or school related trips—by public transit like a bus or train, including walking or biking to a stop or station AND park & ride? Never, less than once a month, one to four times a month, two to four times a week, or more than four times a week? (Circle only ONE answer.)

(0) NEVER (SKIP the next question.)

(1) LESS THAN ONCE A MONTH (ASK the next question.)

(2) 1-4 TIMES A MONTH (ASK the next question.)

(3) 2-4 TIMES A WEEK (ASK the next question.)

(4) MORE THAN 4 TIMES A WEEK (ASK the next question.)

(-8) D/K (ASK the next question.)

(-9) R/A (SKIP the next question.)

QC.10 Which bus/rail routes do you use for personal trips?_____ (Write answer.)

(-8) D/K

(-9) R/A

QC.11 How often do you make personal trips—that is, non-work or school related trips—by car, either as a driver OR a passenger? Never, less than once a month, one to four times a month, two to four times a week, or more than four times a week? (Circle only ONE answer.)

(0) NEVER

(1) LESS THAN ONCE A MONTH

(2) 1-4 TIMES A MONTH

(3) 2-4 TIMES A WEEK

(4) MORE THAN 4 TIMES A WEEK

(-8) D/K

(-9) R/A

QC.12 Please tell me if you have made any of the following kinds of personal trips within or starting from your neighborhood by bicycle or on foot, by public transit like a bus or train, or by car. Say all that apply.

(Circle ALL answers that apply.)

	(1) BICYCLE OR FOOT	(2)TRANSIT	(3) CAR	(-8)D/K	(-9)R/A
(A) WALK OR RIDE FOR FUN OR EXERCISE, NO PARTICULAR DESTINATION	☐			☐	☐
(B) SHOPPING	☐	☐	☐	☐	☐
(C) GETTING TO BANK, POST OFFICE, DOCTOR'S OFFICE, OR SIMILAR	☐	☐	☐	☐	☐
(D) TAKING CHILDREN TO/PICKING CHILDREN UP FROM SCHOOL OR DAYCARE	☐	☐	☐	☐	☐
(E) VISITING FRIENDS OR RELATIVES	☐	☐	☐	☐	☐
(F) DINING OUT OR GOING TO A BAR OR CLUB	☐	☐	☐	☐	☐
(G) GETTING TO PARKS, RECREATIONAL SPORTS OR FITNESS CENTER	☐	☐	☐	☐	☐
(H) GOING TO CHURCH, SYNAGOUGE, MOSQUE, OR SIMILAR	☐	☐	☐	☐	☐
(I) ATTENDING PUBLIC MEETINGS, VOTING OR OTHER CIVIC FUNCTIONS	☐	☐	☐	☐	☐
(J) ANY OTHER TYPE OF PERSONAL TRIPS _____	☐	☐	☐	☐	☐

QC.13 Do you agree or disagree with the following statements about walking conditions in this neighborhood? Strongly disagree, somewhat disagree, somewhat agree or strongly agree? (Hold up PINK show-card. Circle only ONE answer for each sub-question.)

	(1)STRONGLY DISAGREE	(2) SOMEWHAT DISAGREE	(3) SOMEWHAT AGREE	(4) STRONGLY AGREE	(-8)D/K	(-9)R/A
(A) ALL OR MOST STREETS IN THE NEIGHBORHOOD HAVE SIDEWALKS	☐	☐	☐	☐	☐	☐
(B) SIDEWALKS AND PAVEMENT ARE WELL MAINTAINED	☐	☐	☐	☐	☐	☐
(C) SNOW REMOVAL IS THOROUGH AND TIMELY	☐	☐	☐	☐	☐	☐
(D) SIDEWALKS ARE SHADY IN SUMMER	☐	☐	☐	☐	☐	☐
(E) MAJOR STREETS ARE EASY TO CROSS	☐	☐	☐	☐	☐	☐
(F) THERE ARE INTERESTING BUILDINGS OR OTHER THINGS TO LOOK AT	☐	☐	☐	☐	☐	☐
(G) THERE ARE MANY TREES AND MUCH ATTRACTIVE SCENERY	☐	☐	☐	☐	☐	☐
(H) ANY OTHER IMPORTANT WALKING CONDITION _____	☐	☐	☐	☐	☐	☐

QC.14 For public transit to be a better option for you than it is now, how important would the following things be? Not important at all, slightly important, somewhat important or very important? (Hold up LAVENDER show card. Circle only ONE answer for each sub-question.)

	(1) NOT IMPORTANT AT ALL	(2) SLIGHTLY IMPORTANT	(3)SOMEWHAT IMPORTANT	(4) VERY IMPORTANT	(-8)D/K |	(-9)R/A |
(A) CLOSER STOPS TO HOME AND/OR DESTINATION	☐	☐	☐	☐	☐	☐
(B) SAFER OR MORE PLEASANT WALKING ROUTES TO STOPS	☐	☐	☐	☐	☐	☐
(C) MORE ATTRACTIVE STOPS, STATIONS OR WAITING AREAS	☐	☐	☐	☐	☐	☐
(D) MORE COMFORTABLE BUSES/TRAINS	☐	☐	☐	☐	☐	☐
(E) EASIER BOARDING AND EXITING OF BUSES OR TRAINS	☐	☐	☐	☐	☐	☐
(F) AVAILABILITY OF RAIL TRANIST	☐	☐	☐	☐	☐	☐
(G) SERVICE TO MORE PLACES YOU GO	☐	☐	☐	☐	☐	☐
(H) FASTER TRAVEL SPEEDS/QUICKER TRIPS	☐	☐	☐	☐	☐	☐
(I) MORE FREQUENT SERVICE AT THE TIMES YOU TRAVEL	☐	☐	☐	☐	☐	☐
(J) BUSES OR TRAINS THAT RUN ON TIME MORE OFTEN	☐	☐	☐	☐	☐	☐
(K) BETTER INFORMATION ON WHERE ROUTES GO AND WHEN THEY RUN	☐	☐	☐	☐	☐	☐
(L) LOWER FARE	☐	☐	☐	☐	☐	☐
(M) HIGHER GAS PRICES	☐	☐	☐	☐	☐	☐
(N) INCREASING ROAD CONGESTION OR WORSE TRAFFIC	☐	☐	☐	☐	☐	☐
(O) ANY OTHER IMPORTANT FACTOR _____	☐	☐	☐	☐	☐	☐

(Ask the following question ONLY if the respondent has EVER used BUS or RAIL for commuting or personal trips.)

QC.15 Do you agree or disagree with each of the following statements about public transit service in this neighborhood? Strongly disagree, somewhat disagree, somewhat agree or strongly agree? (Hold up PINK show-card. Circle ONE answer for each sub-question.)

	(1)STRONGLY DISAGREE	(2) SOMEWHAT DISAGREE	(3) SOMEWHAT AGREE	(4) STRONGLY AGREE	(-8)D/K	(-9)R/A
(A) STOPS ARE CLOSE TO YOUR HOME AND DESTINATIONS	☐	☐	☐	☐	☐	☐
(B) WALKING ROUTES TO STOPS ARE SAFE AND PLEASANT	☐	☐	☐	☐	☐	☐
(C) WAITING AREAS AT STOPS ARE ATTRACTIVE AND PLEASANT	☐	☐	☐	☐	☐	☐
(D) BUSES AND/OR TRAINS ARE COMFORTABLE	☐	☐	☐	☐	☐	☐
(E) BUSES AND/OR TRAINS ARE EASY TO BOARD AND EXIT	☐	☐	☐	☐	☐	☐
(F) YOU CAN GET EVERYWHERE YOU NEED TO GO BY PUBLIC TRANSIT	☐	☐	☐	☐	☐	☐
(G) YOU CAN GET AROUND QUICKLY BY PUBLIC TRANSIT	☐	☐	☐	☐	☐	☐
(H) SERVICE IS FREQUENT AT THE TIMES YOU TRAVEL	☐	☐	☐	☐	☐	☐
(I) BUSES AND/OR TRAINS ARE ALMOST ALWAYS ON TIME	☐	☐	☐	☐	☐	☐
(J) IT IS EASY TO FIND OUT WHERE ROUTES GO AND WHEN THEY RUN	☐	☐	☐	☐	☐	☐
(K) PUBLIC TRANSIT IS A GOOD VALUE FOR THE FARE	☐	☐	☐	☐	☐	☐
(L) RIDING PUBLIC TRANSIT COSTS LESS THAN DRIVING	☐	☐	☐	☐	☐	☐
(M) BUSES AND/OR TRAINS CAN GET AROUND TRAFFIC JAMS QUICKLY	☐	☐	☐	☐	☐	☐
(N) ANYTHING ELSE IMPORTANT _____	☐	☐	☐	☐	☐	☐

QC.16 Have you ever used the Hiawatha light rail line, or a light rail line in a different city? (Circle all answers that apply.)

(1) HIAWATHA	(Ask the next question.)	(-8) D/K	(Skip the next question.)
(2) DIFFERENT LINE	(Ask the next question.)	(-9) R/A	(Skip the next question.)
(0) NO	(Skip the next question.)		

QC.17 What is your overall opinion of light rail? Strongly negative, somewhat negative, somewhat positive or strongly positive? (Circle only ONE answer. Do NOT read "Neither Negative nor Positive;" only circle if volunteered by respondent.)

(1) STRONGLY NEGATIVE

(2) SOMEWHAT NEGATIVE

(3) (NEITHER NEGATIVE NOR POSITIVE)

(4) SOMEWHAT POSITIVE

(5) STRONGLY POSITIVE

(-8) D/K

(-9) R/A

QC.18 (Not applicable to this corridor.)

QC.19 How often will you use the Central Corridor light rail line once it opens? Never, less than once a month, one to four times a month, two to four times a week, or more than four times a week? (Circle only ONE answer.)

(0) NEVER	(Ask question QC.20.)
(1) LESS THAN ONCE A MONTH	(Ask question QC.20.)
(2) 1-4 TIMES A MONTH	(Ask question QC.21.)
(3) 2-4 TIMES A WEEK	(Ask question QC.21.)
(4) MORE THAN 4 TIMES A WEEK	(Ask question QC.21.)
(-8) D/K	
(-9) R/A	

QC.20 How important to you is each of the following reasons to not ride Central Corridor, or not ride more often? Not important at all, slightly important, somewhat important or very important? (Hold up LAVENDER show-card. Circle only ONE answer for each sub-question.)

	(1) NOT IMPORTANT AT ALL	(2) SLIGHTLY IMPORTANT	(3)SOMEWHAT IMPORTANT	(4) VERY IMPORTANT	(-8)D/K |	(-9)R/A |
(A) DRIVING COSTS LESS THAN THE FARE	☐	☐	☐	☐	☐	☐
(B) THE ROADS YOU USE AREN'T BADLY CONGESTED	☐	☐	☐	☐	☐	☐
(C) YOU DON'T HAVE TROUBLE PARKING AT PLACES YOU GO	☐	☐	☐	☐	☐	☐
(D) YOU PREFER THE FLEXIBILITY OF YOUR CAR	☐	☐	☐	☐	☐	☐
(E) LIGHT RAIL WILL TAKE TOO LONG TO GET WHERE YOU'RE GOING	☐	☐	☐	☐	☐	☐
(F) LIGHT RAIL WON'T GO WHERE YOU NEED TO	☐	☐	☐	☐	☐	☐
(G) LIGHT RAIL STATIONS WILL BE FARTHER FROM HOME THAN BUS STOPS	☐	☐	☐	☐	☐	☐
(H) BAD EXPERIENCES WITH LIGHT RAIL	☐	☐	☐	☐	☐	☐
(I) ANY OTHER REASON _____	☐	☐	☐	☐	☐	☐

QC.21 How important to you is each of the following reasons to ride Central Corridor? Not important at all, slightly important, somewhat important or very important? (Hold up LAVENDER show-card. Circle only ONE answer for each sub-question.)

	(1) NOT IMPORTANT AT ALL	(2) SLIGHTLY IMPORTANT	(3)SOMEWHAT IMPORTANT	(4) VERY IMPORTANT	(-8)D/K |	(-9)R/A |
(A) BEING ABLE TO SAVE ON GAS, TIRES, CAR REPAIR, OR SIMILAR	☐	☐	☐	☐	☐	☐
(B) BEING ABLE TO AVOID ROAD CONGESTION OR TRAFFIC	☐	☐	☐	☐	☐	☐
(C) NOT NEEDING TO FIND A PARKING SPACE AT YOUR DESTINATION	☐	☐	☐	☐	☐	☐
(D) BEING ABLE TO REDUCE POLLUTION OR YOUR CARBON FOOTPRINT	☐	☐	☐	☐	☐	☐
(E) FASTER, MORE FREQUENT OR MORE RELIABLE SERVICE THAN THE BUS	☐	☐	☐	☐	☐	☐
(F) ABILITY TO READ OR WORK WHILE TRAVELING	☐	☐	☐	☐	☐	☐
(G) STATIONS WILL BE CLOSE TO YOUR HOME AND PLACES YOU GO	☐	☐	☐	☐	☐	☐
(H) GOOD EXPERIENCES WITH LIGHT RAIL	☐	☐	☐	☐	☐	☐
(I) ANY OTHER REASON _____	☐	☐	☐	☐	☐	☐

Section D: General Background

In conclusion, I'm going to ask you for some general background information. This information will give us a better overall understanding of the neighborhood. Once again, all of your answers will be kept strictly confidential, and will not be linked to your identity in any way.

QD.1 In what year were you born? 19_____ **(Write answer.)** (-8) D/K (-9) R/A

QD.2 Do you live with a spouse or partner in the same household? (Circle only ONE answer.)

(1) YES → (ASK THE NEXT QUESTION.)

(0) NO → (SKIP THE NEXT QUESTION.)

(-8) D/K → (SKIP THE NEXT QUESTION.)

(-9) R/A → (SKIP THE NEXT QUESTION.)

QD.3 Is your spouse/partner employed and/or a student? Full or part-time? (Circle only one answer for each sub-question.)

	(1) YES	(0) NO	(-8) D/K	(-9) R/A
(A) EMPLOYED FULL-TIME	☐	☐	☐	☐
(B) EMPLOYED PART-TIME	☐	☐	☐	☐
(C) FULL-TIME STUDENT	☐	☐	☐	☐
(D) PART-TIME STUDENT	☐	☐	☐	☐

QD.4 How many children under age 18 live with you in your home?_____ (Write answer.) (-8) D/K (-9) R/A

(If >0, ask the next question. If 0, skip the next question.)

QD.5 How old is your child/are your children? (Write answer.)

(A) CHILD 1	_____	(-8) D/K	(-9) R/A
(B) CHILD 2	_____	(-8) D/K	(-9) R/A
(C) CHILD 3	_____	(-8) D/K	(-9) R/A
(D) CHILD 4	_____	(-8) D/K	(-9) R/A
(E) CHILD 5	_____	(-8) D/K	(-9) R/A

QD.6 Do you own your home? (Circle only ONE answer.)

(1) YES (Ask the next question.)

(0) NO (Skip to QD.11.)

(-8) D/K (Skip to QD.13.)

(-9) R/A (Skip to QD.13.)

QD.7 Do you have a mortgage or home equity loan on your home? (Circle only ONE answer.)

(1) YES (Ask the next question.)

(0) NO (Skip to QD.13.)

(-8) D/K (Skip to QD.13.)

(-9) R/A (Skip to QD.13.)

QD.8 Which of the following categories does your monthly loan payment fall into? (Read answer choices to the respondent. Circle only ONE answer.)

(1) $1 - $499

(2) $500 - $749

(3) $750 - $999

(4) $1,000 - $1,499

(5) $1,500 - $1,999

(6) $2,000 - $2,499

(7) $2,500 OR MORE

QD.9 Does this include taxes and insurance? (Circle only ONE answer.)

(1) YES (Skip the next question.)

(0) NO (Ask the next question.)

(-8) D/K (Skip the next question.)

(-9) R/A (Skip the next question.)

QD.10 How much do you pay a year in taxes and insurance? _____ (Write answer.)

(-8) D/K

(-9) R/A

(Skip to question QD.13.)

(Ask the next two questions ONLY if the respondent DOES NOT own his/her home.)

QD.11 Which of the following categories does your monthly rent fall into: (Read answer choices to the respondent. Circle only ONE answer.)

(1) NO RENT

(2) $1 - $499

(3) $500 - $749

(4) $750 - $999

(5) $1,000 - $1,499

(6) $1,500 - $1,999

(7) $2,000 - $2,499

(8) $2,500 OR MORE

QD.12 Which utilities—if any—does the rent include? (Circle ONE for each sub-question.)

	(1) YES	(0) NO	(-8) D/K	(-9) R/A
(A) HEAT	☐	☐	☐	☐
(B) WATER	☐	☐	☐	☐
(C) NATURAL GAS	☐	☐	☐	☐
(D) ELECTRICITY	☐	☐	☐	☐
(E) NONE	☐	☐	☐	☐

QD.13 If you are currently employed, which of the following best describes the type of work you do? If retired or unemployed, which best describes the last job you worked in? (Read answer choices to the respondent. Circle only ONE answer.)

(0) NEVER BEEN EMPLOYED

(1) SALES OR SERVICE

(2) CLERICAL OR ADMINISTRATIVE SUPPORT

(3) MANUFACTURING, CONSTRUCTION OR MAINTENANCE

(4) PROFESSIONAL, MANAGERIAL OR TECHNICAL

(5) ANY OTHER TYPE OF WORK _____

(-8) D/K

(-9) R/A

QD.14 Which of the following categories describes your household's income in 2009, before taxes? (Read answer choices to the respondent. Circle only ONE answer.)

(1) $0 - $9,999

(2) $10,000 - $24,999

(3) $25,000 - $49,999

(4) $50,000 - $74,999

(5) $75,000 - $99,999

(6) $100,000 OR MORE

(-8) D/K

(-9) R/A

QD.15 What is your highest level of education? (Read answer choices to the respondent. Circle only ONE answer.)

(1) LESS THAN A HIGH SCHOOL DIPLOMA

(2) HIGH SCHOOL DIPLOMA

(3) ASSOCIATES OR TECHNICAL SCHOOL DEGREE

(4) SOME COLLEGE, NO DEGREE YET

(5) BACHELORS DEGREE

(6) GRADUATE DEGREE

(-8) D/K

(-9) R/A

QD.16 Do you have a valid driver's license? (Circle only ONE answer.)

(1) YES

(0) NO

(-8) D/K

(-9) R/A

QD.17 Besides yourself, how many licensed drivers are there in your household? _____ (-8) D/K (-9) R/A

QD.18 How many working cars are there available to your household?_____ (-8) D/K (-9) R/A

QD.19 Do you consider yourself Hispanic or Latino/a? (Circle ONE.)

(1) YES

(0) NO

(-8) D/K

(-9) R/A

QD.20 Which of the following racial groups do you consider yourself part of? There may be more than one category that applies. (Circle ONE for each sub-question.)

	(1) YES	(0) NO	(-8) D/K	(-9) R/A
(A) WHITE	☐	☐	☐	☐
(B) BLACK OR AFRICAN-AMERICAN	☐	☐	☐	☐
(C) ASIAN	☐	☐	☐	☐
(D) AMERICAN INDIAN	☐	☐	☐	☐
(E) ANY OTHER RACE _____	☐	☐	☐	☐

QD.21 Were you or either of your parents born outside the US? (Circle ONE for each sub-question.)

	(1) YES	(0) NO	(-8) D/K	(-9) R/A
(A) YOU	☐	☐	☐	☐
(B) YOUR MOTHER	☐	☐	☐	☐
(C) YOUR FATHER	☐	☐	☐	☐

(Ask the next question only if the respondent answered YES to at least one item in the last question.)

QD.22 Where did you/they immigrate from? There may be more than one category that applies. (Circle ONE for each sub-question.)

	(1) YES	(0) NO	(-8) D/K	(-9) R/A
(A) EUROPE	☐	☐	☐	☐
(B) LATIN AMERICA	☐	☐	☐	☐
(C) AFRICA	☐	☐	☐	☐
(D) ASIA	☐	☐	☐	☐
(E) CANADA	☐	☐	☐	☐
(F) SOMEWHERE ELSE _____	☐	☐	☐	☐

Next, I'm going to ask you a question about your sexual orientation. This information is useful because many studies have indentified relationships between the sexual orientations of neighborhood residents and some types of neighborhood changes. Your answer will be completely confidential. I won't see it because the page with your answer will be sealed in this envelope. Still, please feel free not to answer if you are at all uncomfortable. Could I get you to fill in the question on this page, then place the page in the envelope and seal it?

(Hand the BLUE response sheet and the small envelope to respondent.)

QD.23 Which of the following best describes your sexual orientation? (Circle only ONE answer.)

(1) STRAIGHT

(2) GAY/LESBIAN

(3) BISEXUAL

(4) ANY OTHER ORIENTATION _____

Thank you very much for your time and cooperation. Have a good evening.

(Interviewer Observations:)

(QD.24 What is the respondent's gender?) (Circle only ONE answer.)

(1) MALE (SKIP the next question.)

(0) FEMALE (SKIP the next question.)

(-8) D/K (ASK the next question.)

(ONLY ask the next question if you are unsure of the respondent's gender.)

QD.25 What gender do you consider yourself? (Circle only ONE answer.)

(1) MALE

(0) FEMALE

(-8) D/K

(-9) R/A

(QD.26 What type of home does the respondent live in?) (Circle only ONE answer.)

(1) SINGLE FAMILY, DETACHED HOUSE

(2) DUPLEX—A BUILDING COMPRISING TWO DWELLING UNITS EITHER SIDE-BY-SIDE OR ON DIFFERENT FLOORS

(3) TOWNHOUSE—A ROW-HOUSE THAT SHARES WALLS WITH NEIGHBORS BUT HAS ITS OWN ENTRANCE

(4) APARTMENT/CONDO

(Place all response materials in the large, manila envelope. Seal the large, manila envelope. STOP.)

Appendix B: Example Business Questionnaire

TRANSIT & NEIGHBORHOOD BUSINESS IMPACTS:

CENTRAL CORRIDOR

A Survey Conducted by the University of Minnesota for the Transitway Impacts Research Program

Light Rail Transit

Case # _____

Business Name _____

Address _____

Time & Date _____

(<u>INTERVIEWER</u>: There are two types of questions in this survey: those with a single, direct response and those with multiple sub questions, each of which requires its own response. Sub-questions for multi-part questions are identified by LETTERS in parentheses. Answer choices are identified by NUMBERS in parentheses. ALWAYS read sub-questions to the respondent. ONLY read answer choices to the respondent IF directed to. Read everything else to the respondent EXCEPT text in parentheses.)

Introduction

Good afternoon. My name is **__[name of interviewer]__** and I'm a researcher at the University of Minnesota. We're studying how the Central Corridor light rail line along University Avenue will impact nearby neighborhoods. The results of the study will inform policies affecting neighborhood businesses.

Your business has been randomly selected to be part of the study. It is important that we interview an owner or general manager of your business. Your participation is completely voluntary and confidential. None of the answers you give will be reported in any way that could identify you. The survey should take 15-20 minutes.

Section A: Consent

QA.1 Would you be willing to participate in this study about Central Corridor? (Circle only ONE answer.)

(1) YES ---------- *SKIP TO SECTION B.*

(0) NO ---------- *CONTINUE WITH QA.2.*

(SKIP TO SECTION B.)

QA.2 Could I come back another time? (Circle only ONE answer.)

(1) COME BACK ANOTHER TIME---------- *ASK THE NEXT QUESTION.*

(0) NO ---------- *THANK THE RESPONDENT FOR HIS/HER TIME AND STOP.*

QA.3 What would be a better day and time for me to return? _____
(Write answer. THANK the respondent and STOP.)

(-7) N/A

(-8) D/K

(-9) R/A

Section B: Your Business in the Neighborhood

QB.1 Are you the full owner, part owner or manager of the business? (Circle only ONE answer.)

(1) FULL OWNER (-7) N/A

(2) PART OWNER (-8) D/K

(3) MANAGER (-9) R/A

QB.2 Since what year has the business been open in this location? (Write answer or circle one.) _____

(-7) N/A (-8) D/K (-9) R/A

QB.3 Are you concerned about the short-term impacts light rail construction may have on your business? Not concerned at all, slightly concerned, concerned or very concerned? (Circle only ONE answer.)

(1) NOT CONCERNED AT ALL ---------- *SKIP TO QUESTION QB.5*

(2) SLIGHTLY CONCERNED

(3) CONCERNED *CONTINUE WITH QUESTION QB.4*

(4) VERY CONCERNED

(-7) N/A (-8) D/K (-9) R/A---------*SKIP TO QUESTION QB.5*

QB.4 Which of the following are you concerned about? Say yes to all that apply. (Circle only ONE answer for each part.)

	(1) YES	(0) NO	(-7) N/A	(-8) D/K	(-9) R/A
(A) CUSTOMERS NOT KNOWING YOU'LL BE OPEN DURING CONSTRUCTION	☐	☐	☐	☐	☐
(B) CUSTOMERS NOT KNOWING HOW TO REACH YOUR BUSINESS	☐	☐	☐	☐	☐
(C) TRUCKS NOT BEING ABLE TO REACH YOUR BUSINESS	☐	☐	☐	☐	☐
(D) FEWER PEOPLE PASSING BY	☐	☐	☐	☐	☐
(E) NOISE AND DUST FROM CONSTRUCTION EQUIPMENT	☐	☐	☐	☐	☐
(F) LACK OF PARKING DURING CONSTRUCTION	☐	☐	☐	☐	☐
(G) ANY OTHER CONCERN _____	☐	☐	☐	☐	☐

Next, I'm going to ask you about specific qualities of the neighborhood. We first want to know how important each quality is to your business, then how satisfied you are with that quality AS THINGS ARE NOW.

	QB.5 How important is each of the following neighborhood qualities to your business? Not important at all, slightly important, important or very important? (Circle only ONE answer for each part.)							**QB.6 How satisfied are you with each of the following neighborhood qualities? Not satisfied at all, slightly satisfied, satisfied or very satisfied? (Circle only ONE answer for each part.)**						
	(1) NOT IMPORT-ANT	(2) SLIGHTLY IMPORT-ANT	(3) IMPORT-ANT	(4) VERY IMPORT-ANT	(-7) N/A	(-8) D/K	(-9) R/A	(1) NOT SATISFIED AT ALL	(2) SLIGHTLY SATISFIED	(3) SATISFIED	(4) VERY SATISFIED	(-7) N/A	(-8) D/K	(-9) R/A
(A) AFFORDABLE COMMERCIAL SPACE	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(B) CONVENIENT PARKING	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(C) EASY ACCESS BY CAR	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(D) EASY ACCESS BY PUBLIC TRANSIT	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(E) EASY ACCESS BY WALKING	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(F) EASY ACCESS BY BIKING	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(G) PEOPLE PASSING BY/WINDOW SHOPPERS	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(H) COMPLEMENTARY BUSINESSES NEARBY	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(I) FEW COMPETITORS NEARBY	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(J) RESIDENTS MOVING IN; MORE PEOPLE IN NEIGHBORHOOD	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(K) DIVERSITY AMONG NEARBY RESIDENTS	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(L) SENSE OF SECURITY, LIKE LOW CRIME	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(M) ANY OTHER IMPORTANT QUALITY _____	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Next, I'm going to ask you about changes you may have seen in this neighborhood over the PAST five years and whether you think they were related to the Central Corridor light rail project.

(Circle only ONE answer for each part. ONLY ask the parts of QB.8 that correspond with parts of QB.7 to which the respondent answered "LESS" or "MORE".)	**QB.7 Have you seen less or more of each of the following in this neighborhood over the PAST five years, or since you've been in business, or have you seen no change?**						**QB.8 How related do you think that change was to the Central Corridor light rail project? Not related at all, related or very related?**						
	(1) LESS	(2) NO CHANGE	(3) MORE	(-7) N/A	(-8) D/K	(-9) R/A	(1) NOT RELATED AT ALL	(2) SLIGHTLY RELATED	(3) RELATED	(4) VERY RELATED	(-7) N/A	(-8) D/K	(-9) R/A
(A) AFFORDABLE COMMERCIAL SPACE	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(B) CONVENIENT PARKING	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(C) EASY ACCESS BY CAR	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(D) EASY ACCESS BY PUBLIC TRANSIT	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(E) EASY ACCESS BY WALKING	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(F) EASY ACCESS BY BIKING	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(G) PEOPLE PASSING BY/WINDOW SHOPPERS	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(H) COMPLEMENTARY BUSINESSES NEARBY	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(I) FEW COMPETITORS NEARBY	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(J) RESIDENTS MOVING IN; MORE PEOPLE IN NEIGHBORHOOD	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(K) DIVERSITY AMONG NEARBY RESIDENTS	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(L) SENSE OF SECURITY, LIKE LOW CRIME	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(M) ANY OTHER IMPORTANT QUALITY _____	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

QB.9 Overall, has the neighborhood become a better or worse place for your business over the PAST five years or since you've been in business here, or has it stayed about the same? Much worse, somewhat worse, about the same, somewhat better or much better? (Circle only ONE answer choice.)

(1) MUCH WORSE
(2) SOMEWHAT WORSE
(3) ABOUT THE SAME
(4) SOMEWHAT BETTER
(5) MUCH BETTER

(-7) N/A
(-8) D/K
(-9) R/A

QB.10 Overall, what is your opinion of any effects the Central Corridor light rail project may have had on your business over the PAST five years or since you've been in business in the neighborhood? Strongly negative, somewhat negative, neither negative nor positive, somewhat positive or strongly positive? (Circle only ONE answer choice.)

(1) STRONGLY NEGATIVE
(2) SOMEWHAT NEGATIVE
(3) NEITHER NEGATIVE NOR POSITIVE
(4) SOMEWHAT POSITIVE
(5) STRONGLY POSITIVE

(-7) N/A
(-8) D/K
(-9) R/A

QB.11 How many open houses, meetings or other public engagement events dealing with the Central Corridor project has your business participated in, if any? (IF NEEDED: Include all events, regardless of organizer. Write answer or circle one.)

_____ (-8) N/A (-9) D/K-R/A

Next, I'm going to ask you about changes you anticipate over the long term—in the next five years, and whether you think those changes will be related to the line.

(Circle only ONE answer for each part. ONLY ask the parts of QB.13 that correspond with parts of QB.12 to which respondent answers "LESS" or "MORE".)	**QB.12 Do you expect to see less or more of each of the following in this neighborhood over the long term, or do you anticipate change?**						**QB.13 How related do you think that change will be to the Central Corridor light rail project? Not related at all, related or very related?**						
	(1) LESS	(2) NO CHANGE	(3) MORE	(-7) N/A	(-8) D/K	(-9) R/A	(1) NOT RELATED AT ALL	(2) SLIGHTLY RELATED	(3) RELATED	(4) VERY RELATED	(-7) N/A	(-8) D/K	(-9) R/A
(A) AFFORDABLE COMMERCIAL SPACE	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(B) CONVENIENT PARKING	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(C) EASY ACCESS BY CAR	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(D) EASY ACCESS BY PUBLIC TRANSIT	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(E) EASY ACCESS BY WALKING	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(F) EASY ACCESS BY BIKING	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(G) PEOPLE PASSING BY/WINDOW SHOPPERS	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(H) COMPLEMENTARY BUSINESSES NEARBY	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(I) FEW COMPETITORS NEARBY	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(J) RESIDENTS MOVING IN; MORE PEOPLE IN NEIGHBORHOOD	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(K) DIVERSITY AMONG NEARBY RESIDENTS	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(L) SENSE OF SECURITY, LIKE LOW CRIME	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(M) ANY OTHER IMPORTANT QUALITY _____	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

QB.14 Overall, do you think the neighborhood will become a better or worse place for your business over the long term—in the next five years, or will it stay about the same? Much worse, somewhat worse, about the same, somewhat better or much better? (Circle only ONE answer.)

(1) MUCH WORSE

(2) SOMEWHAT WORSE

(3) ABOUT THE SAME

(4) SOMEWHAT BETTER

(5) MUCH BETTER

(-7) N/A

(-8) D/K

(-9) R/A

QB.15 Overall, what is your opinion of any effects you think the Central Corridor light rail project will have on your business over the long term—in the next five years? Strongly negative, somewhat negative, neither negative nor positive somewhat positive or strongly positive? (Circle only ONE answer.)

(1) STRONGLY NEGATIVE

(2) SOMEWHAT NEGATIVE

(3) NEITHER NEGATIVE NOR POSITIVE

(4) SOMEWHAT POSITIVE

(5) STRONGLY POSITIVE

(-7) N/A

(-8) D/K

(-9) R/A

Section C: Your Employees and Customers

QC.1 Not including yourself, how many full-time and part-time employees does your business have? (Write answer, or circle one for each part.)

(A) FULL-TIME—35 HOURS/WK. OR MORE: _____	(-7) N/A	(-8) D/K	(-9) R/A
(B) PART-TIME: _____	(-7) N/A	(-8) D/K	(-9) R/A

QC.2 How many of your business' employees fall into each of the following categories? None, a few, many or most?

	(1) NONE	(2) A FEW	(3) MANY	(4) MOST	(-7) N/A	(-8) D/K	(-9) R/A
(A) WAGES LESS THAN $1,200/MO. (LESS THAN $14,400/YR.)	☐	☐	☐	☐	☐	☐	☐
(B) WAGES $1,200/MO TO $3,400/MO. ($14,400/YR – $40,800/YR)	☐	☐	☐	☐	☐	☐	☐
(C) WAGES MORE THAN $3,400/MO (MORE THAN $40,800/YR.)	☐	☐	☐	☐	☐	☐	☐
(D) WHITE	☐	☐	☐	☐	☐	☐	☐
(E) BLACK OR AFRICAN AMERICAN	☐	☐	☐	☐	☐	☐	☐
(F) ASIAN	☐	☐	☐	☐	☐	☐	☐
(G) HISPANIC OR LATINO	☐	☐	☐	☐	☐	☐	☐
(H) AMERICAN INDIAN	☐	☐	☐	☐	☐	☐	☐
(I) ANY OTHER RACE _____	☐	☐	☐	☐	☐	☐	☐
(J) IMMIGRANTS	☐	☐	☐	☐	☐	☐	☐
(K) MALE	☐	☐	☐	☐	☐	☐	☐
(L) FEMALE	☐	☐	☐	☐	☐	☐	☐

QC.3 How many of your EMPLOYEES get to work using each of the following types of transportation? None, a few, many or most? (Circle only ONE answer for each part.)

	(1) NONE	(2) A FEW	(3) MANY	(4) MOST	(-7) N/A	(-8) D/K	(-9) R/A
(A) WALKING	☐	☐	☐	☐	☐	☐	☐
(B) BICYCLING	☐	☐	☐	☐	☐	☐	☐
(C) PUBLIC TRANSIT	☐	☐	☐	☐	☐	☐	☐
(D) CAR OR MOTORCYCLE	☐	☐	☐	☐	☐	☐	☐
(E) TAXI	☐	☐	☐	☐	☐	☐	☐
(F) TELECOMMUTING OR WORKING FROM HOME	☐	☐	☐	☐	☐	☐	☐
(G) ANY OTHER TYPE OF TRANSPORTATION _____	☐	☐	☐	☐	☐	☐	☐

QC.4 How many of your employees park in each of the following places? Please say all that apply. (Circle ALL answers that apply.)

	(1) NONE	(2) A FEW	(3) MANY	(4) MOST	(-7) N/A	(-8) D/K	(-9) R/A
(A) ON-STREET PARKING ON UNIVERSITY/WASINGTON AVENUE	☐	☐	☐	☐	☐	☐	☐
(B) ON-STREET PARKING ON SIDE STREETS	☐	☐	☐	☐	☐	☐	☐
(C) YOUR OWN PARKING LOT/RAMP	☐	☐	☐	☐	☐	☐	☐
(D) PARKING LOT/RAMP SHARED WITH THE BUILDING OR NEIGHBORING BUSINESSES	☐	☐	☐	☐	☐	☐	☐
(E) ANYWHERE ELSE _____	☐	☐	☐	☐	☐	☐	☐

QC.5 How many of your employees do you think will use the Central Corridor light rail line once it opens? None, a few, many or most? (Circle only ONE answer.)

(1) NONE (-7) N/A

(2) A FEW (-8) D/K

(3) MANY (-9) R/A

(4) MOST

QC.6 Which of the following BEST describes your most important customers? (Circle only ONE answer.)

(1) ONE OR TWO FIRMS (-7) N/A

(2) ONE OR TWO INDUISTRIES (SUCH AS FIRMS IN STEEL OR LUMBER, ETC.) (-8) D/K *SKIP TO QC.8.*

(3) BUSINESSES IN GENERAL (-9) R/A

(4) GOVERNMENTS, INCLUDING PUBLIC SCHOOLS AND HOSPITALS, ETC.

(5) THE GENERAL PUBLIC ---------- *CONTINUE WITH THE NEXT QUESTION.*

QC.7 Currently, how many of your CUSTOMERS belong to each of the following groups? None, a few, many or most? (Circle only ONE answer for each part.)

	(1) NONE	(2) A FEW	(3) MANY	(4) MOST	(-7) N/A	(-8) D/K	(-9) R/A
(A) PEOPLE FROM LOW-INCOME HOUSEHOLDS (IF NEEDED: <$30,000/YR)	☐	☐	☐	☐	☐	☐	☐
(B) PEOPLE FROM MIDDLE-INCOME HOUSEHOLDS (IF NEEDED: $30,000-$80,000/YR)	☐	☐	☐	☐	☐	☐	☐
(C) PEOPLE FROM HIGH-INCOME HOUSEHOLDS (IF NEEDED: >$80,000/YR)	☐	☐	☐	☐	☐	☐	☐
(D) WHITES	☐	☐	☐	☐	☐	☐	☐
(E) AFRICAN-AMERICANS	☐	☐	☐	☐	☐	☐	☐
(F) ASIANS	☐	☐	☐	☐	☐	☐	☐
(G) LATINOS	☐	☐	☐	☐	☐	☐	☐
(H) AMERICAN INDIANS	☐	☐	☐	☐	☐	☐	☐
(I) ANY OTHER RACE _____	☐	☐	☐	☐	☐	☐	☐
(J) IMMIGRANTS	☐	☐	☐	☐	☐	☐	☐
(K) MEN	☐	☐	☐	☐	☐	☐	☐
(L) WOMEN	☐	☐	☐	☐	☐	☐	☐
(M) ANY OTHER CUSTOMER GROUP _____	☐	☐	☐	☐	☐	☐	☐

QC.8 How many of your CUSTOMERS get to your business using each of the following types of transportation? None, a few, many or most? (Circle only ONE answer for each part.)

	(1) NONE	(2) A FEW	(3) MANY	(4) MOST	(-7) N/A	(-8) D/K	(-9) R/A
(A) WALKING	☐	☐	☐	☐	☐	☐	☐
(B) BICYCLING	☐	☐	☐	☐	☐	☐	☐
(C) PUBLIC TRANSIT	☐	☐	☐	☐	☐	☐	☐
(D) CAR OR MOTORCYCLE	☐	☐	☐	☐	☐	☐	☐
(E) TAXI	☐	☐	☐	☐	☐	☐	☐
(F) INTERNET, PHONE OR MAIL-ORDER	☐	☐	☐	☐	☐	☐	☐
(G) ANY OTHER TYPE OF TRANSPORTATION _____	☐	☐	☐	☐	☐	☐	☐

QC.9 Of your CUSTOMERS who drive, how many park in each of the following places? Please say all that apply. (Circle ALL answers that apply.)

	(1) NONE	(2) A FEW	(3) MANY	(4) MOST	(-7) N/A	(-8) D/K	(-9) R/A
(A) ON-STREET PARKING ON UNIVERSITY/WASINGTON AVENUE	☐	☐	☐	☐	☐	☐	☐
(B) ON-STREET PARKING ON SIDE STREETS	☐	☐	☐	☐	☐	☐	☐
(C) YOUR OWN PARKING LOT	☐	☐	☐	☐	☐	☐	☐
(D) PARKING LOT/RAMP SHARED WITH THE BUILDING OR NEIGHBORING BUSINESSES	☐	☐	☐	☐	☐	☐	☐
(E) ANYWHERE ELSE _____	☐	☐	☐	☐	☐	☐	☐

QC.10 How many of your CUSTOMERS do you think will use the Central Corridor light rail line once it opens?

(1) NONE
(2) A FEW
(3) MANY
(4) MOST
(-7) N/A
(-8) D/K
(-9) R/A

Section D: Business and Owner Background Information

In conclusion, I'm going to ask you for some general background information. This information will give us a better overall understanding of neighborhood business conditions. Once again, all of your answers will be kept strictly confidential.

QD.1 What is the form of business/ownership? (Read answer choices; circle only ONE answer.)

(1) SOLE PROPRIETORSHIP

(2) PARTNERSHIP

(3) CORPORATION; INC.

(4) "SUB-CHAPTER S" CORPORATION

(5) LIMITTED LIABILITY COMPANY

(6) OTHER _____

(-7) N/A

(-8) D/K

(-9) R/A

QD.2 Has each of the following measures of your business' size increased or decreased over the PAST five years, or since you've been in the neighborhood, or have they stayed about the same? Decreased a lot, decreased a little, stayed the same, increased a little or increased a lot? (Circle only ONE answer choice for each part.)

	(1) DECREASED A LOT	(2) DECREASED A LITTLE	(3) STAYED THE SAME	(4) INCREASED A LITTLE	(5) INCREASED A LOT	(-7) N/A	(-8) D/K	(-9) R/A
(A) SALES	☐	☐	☐	☐	☐	☐	☐	☐
(B) PROFITS	☐	☐	☐	☐	☐	☐	☐	☐
(C) NUMBER OF EMPLOYEES	☐	☐	☐	☐	☐	☐	☐	☐
(D) EMPLOYEES' WAGE LEVELS	☐	☐	☐	☐	☐	☐	☐	☐

QD.3 What was your net sales total in calendar year 2010? (Write answer or circle one. If needed, ask for their best CY estimate from FY totals.)

(1) $100,000 OR LESS

(2) MORE THAN $100,000, BUT LESS THAN OR EQUAL TO $250,000

(3) MORE THAN $250,000, BUT LESS THAN OR EQUAL TO $500,000

(4) MORE THAN $500,000, BUT LESS THAN OR EQUAL TO $1 MILLION

(5) MORE THAN $1 MILLION, BUT LESS THAN OR EQUAL TO $5 MILLION

(6) $5 MILLION OR MORE

(-7) N/A

(-8) D/K

(-9) R/A

QD.4 Do you expect each of the following measures of your business' size will increase or decrease over the NEXT five years, or will they stay about the same? Decrease a lot, decrease a little, stay the same, increase a little or increase a lot? (Circle only ONE answer choice for each part.)

	(1) DECREASE A LOT	(2) DECREASE A LITTLE	(3) STAY THE SAME	(4) INCREASE A LITTLE	(5) INCREASE A LOT	(-7) N/A	(-8) D/K	(-9) R/A
(A) SALES	☐	☐	☐	☐	☐	☐	☐	☐
(B) PROFITS	☐	☐	☐	☐	☐	☐	☐	☐
(C) NUMBER OF EMPLOYEES	☐	☐	☐	☐	☐	☐	☐	☐
(D) EMPLOYEES' WAGE LEVELS	☐	☐	☐	☐	☐	☐	☐	☐

QD.5 What are your hours? (Write answer or circle one for each part.)

	(I) OPEN	(II) CLOSE	(0) NOT OPEN	(-7) N/A	(-8) D/K	(-9) R/A
(A) MONDAY	_____	_____	☐	☐	☐	☐
(B) TUESDAY	_____	_____	☐	☐	☐	☐
(C) WEDNESDAY	_____	_____	☐	☐	☐	☐
(D) THURSDAY	_____	_____	☐	☐	☐	☐
(E) FRIDAY	_____	_____	☐	☐	☐	☐
(F) SATURDAY	_____	_____	☐	☐	☐	☐
(G) SUNDAY	_____	_____	☐	☐	☐	☐

QD.6 What are your busiest hours? (Write answer or circle one for each part.)

	(I) START	(II) END	(-7) N/A	(-8) D/K	(-9) R/A
(A) MONDAY	_____	_____	☐	☐	☐
(B) TUESDAY	_____	_____	☐	☐	☐
(C) WEDNESDAY	_____	_____	☐	☐	☐
(D) THURSDAY	_____	_____	☐	☐	☐
(E) FRIDAY	_____	_____	☐	☐	☐
(F) SATURDAY	_____	_____	☐	☐	☐
(G) SUNDAY	_____	_____	☐	☐	☐

QD.7 What months of the year are busiest for you? (Circle ALL relevant months based on the respondent's answer.)

(1) JANUARY	(5) MAY	(9) SEPTEMBER	(0) CONSTANT YEAR-ROUND
(2) FEBRUARY	(6) JUNE	(10) OCTOBER	(-7) N/A
(3) MARCH	(7) JULY	(11) NOVEMBER	(-8) D/K
(4) APRIL	(8) AUGUST	(12) DECEMBER	(-9) R/A

QD.8 Do you own or rent your business space?

(1) OWN	(-7) N/A	(-9) R/A
(0) RENT	(-8) D/K	

QD.9 How often do you make your commute to work in each of the following ways? Never, less than once a month, one to four times a month, two to four times a week or more than four times a week? (Circle only ONE answer for each sub-question.)

	(0) NEVER	(1) <1/MO	(2) 1-4X /MO	(3) 2-4X /WK	(4) >4X /WK	(-7) N/A	(-8) D/K	(-9) R/A
(A) WALK OR BIKE TO A TRANSIT STOP AND THEN TAKE A BUS OR TRAIN	☐	☐	☐	☐	☐	☐	☐	☐
(B) DRIVE TO A TRANSIT STOP AND THEN TAKE A BUS OR TRAIN	☐	☐	☐	☐	☐	☐	☐	☐
(C) WALKING FOR YOUR WHOLE COMMUTE	☐	☐	☐	☐	☐	☐	☐	☐
(D) BICYCLING FOR YOUR WHOLE COMMUTE	☐	☐	☐	☐	☐	☐	☐	☐
(E) DRIVE ALONE FOR YOUR WHOLE COMMUTE	☐	☐	☐	☐	☐	☐	☐	☐
(F) CARPOOL FOR YOUR WHOLE COMMUTE	☐	☐	☐	☐	☐	☐	☐	☐
(F) TAXI	☐	☐	☐	☐	☐	☐	☐	☐
(G) TELECOMMUTING OR WORKING FROM HOME	☐	☐	☐	☐	☐	☐	☐	☐
(H) ANY OTHER TYPE OF TRANSPORTATION _____	☐	☐	☐	☐	☐	☐	☐	☐

QD.10 How often do you expect to use the Central Corridor light rail line once it opens? Never, less than once a month, one to four times a month, two to four times a week, or more than four times a week? (Circle only ONE answer.)

(0) NEVER

(1) LESS THAN ONCE A MONTH

(2) 1-4 TIMES A MONTH

(3) 2-4 TIMES A WEEK

(4) MORE THAN 4 TIMES A WEEK

(-7) N/A

(-8) D/K

(-9) R/A

QD.11 Do you consider yourself Hispanic or Latino/a?

(1) YES

(0) NO

(-7) N/A

(-8) D/K

(-9) R/A

QD.12 Which of the following racial groups do you consider yourself part of? Please say all that apply. (Circle only ONE answer for each part.)

	(1) YES	(0) NO	(-7) N/A	(-8) D/K	(-9) R/A
(A) WHITE	☐	☐	☐	☐	☐
(B) BLACK OR AFRICAN-AMERICAN	☐	☐	☐	☐	☐
(C) ASIAN	☐	☐	☐	☐	☐
(D) AMERICAN INDIAN	☐	☐	☐	☐	☐
(E) ANY OTHER RACE _____	☐	☐	☐	☐	☐

QD.13 Were you or your parents born outside the US? (Circle only ONE answer choice for each part.)

	(1) YES	(0) NO	(-7) N/A	(-8) D/K	(-9) R/A
(A) YOU	☐	☐	☐	☐	☐
(B) YOUR MOTHER	☐	☐	☐	☐	☐
(C) YOUR FATHER	☐	☐	☐		☐

(Interviewer observation:
QD.14 What gender is the respondent?)

(1) MALE

(0) FEMALE

(-9) D/K

(Interviewer observation:
QD.15 Is the respondent's building best described as—)

(1) TRADITIONAL STORE-FRONT, FAÇADE AGAINST SIDEWALK

(2) DETACHED, PARKING IN FRONT

(3) STRIP-CENTER STORE-FRONT, PARKING IN FRONT

(4) MULTI-STOREY OFFICE BUILDING

(5) OTHER

_____

(-7) N/A

(-8) D/K

(-9) R/A

QD.16 How would you describe the industry your business is in? We need to know *both* the basic type of business you do—such as retail sales, manufacturing, personal services, etc—*and* your primary product or service. (Write answer or circle one.)

_____

_____

_____

(-7) N/A (-8) D/K (-9) R/A

Thank you very much for your time and cooperation. Have a good day. *STOP.*

APPENDIX H:
Central Corridor Light Rail Transit Construction: Impact Study for Pascal Street to Dale Street Sample, Saint Paul, Minnesota

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Received
AUG 22 2012
CCPO/Met Council

Central Corridor Light Rail Transit Construction

Impact Study for Pascal Street to Dale Street Sample
Saint Paul, MN

Report Prepared: August 16, 2012
By
Peter Rudemacher & Larry Peterson

FOR

UNIVERSITY AVENUE BETTERMENT ASSOCIATION

A report of the impact caused by light rail transit construction on business and property resulting along University Avenue between Pascal Street and Dale Street. Prepared by Peterson, Logren & Kilbury for the Metropolitan Council and the Federal Transit Authority, to be included in the Supplemental Draft Environmental Impact Statement for the Central Corridor Light Rail Transit project.

Table of Contents

Acknowledgements	§ 1
Introduction	§ 2
Method of Data Collection	§ 3
Data Results	§ 4
Revenue	§ 4.1
2011	§ 4.1.1
2012	§ 4.1.2
Access	§ 4.2
Navigation	§ 4.2.1
Physical Access	§ 4.2.2
Roads	§ 4.2.2.1
Sidewalks	§ 4.2.2.2
Crosswalks	§ 4.2.2.3
Utilities	§ 4.3
Electricity	§ 4.3.1
Gas	§ 4.3.2
Water	§ 4.3.3
Phone	§ 4.3.4
Sewer	§ 4.3.5
Trash	§ 4.3.6
Underground Pipeline	§ 4.3.7
Internet	§ 4.3.8
Cable Satellite	§ 4.3.9
Construction Related Disturbances	§ 4.4
Dust/Air	§ 4.4.1
Pollution	§ 4.4.2
Noise/Vibration	§ 4.4.3
Street Closures	§ 4.4.4

Table of Contents

Property Damage	§ 4.5
Real Property	§ 4.5.1
Personal Property	§ 4.5.2
Property Taxation/Rent	§ 4.6
2011	§ 4.6.1
2012	§ 4.6.2
Safety Concerns	§ 4.7
Communication	§ 4.8
Notice	§ 4.8.1
Notice of Land Use Change	§ 4.8.2
Forgivable Loan Program	§ 4.9
Strategic Adjustments and Costs	§ 4.10
Anomalous Reports	§ 4.11
Conclusions	**§ 5**
Appendix 1 (Maps)	
University Avenue Context	
Businesses' Neighborhood Context	
Appendix 2 (Data Collection)	
Sample Document A	
Sample Document B	
Appendix 3 (Interviews)	
Business A	
Business B	
Business C	
Business D	
Appendix 4 (Comments)	

§ 1: ACKNOWLEDGEMENTS

Peterson, Logren & Kilbury would like to thank the Metropolitan Council and the Federal Transit Authority for their reception to the data contained in this report. Additionally, Peterson, Logren & Kilbury would like to recognize Khaled Aloul, Sid Applebaum, Russ Battisto, Sawie Nebo, and Ryan Wilson for their willingness to participate in this report and their cooperation with the data collection process.

§ 2: INTRODUCTION

The remainder of this document is a report of the Central Corridor Light Rail Transit (CCLRT) construction's aggregate impact on businesses residing along the north and south sides of University Avenue. This report was conducted with willing and voluntary participation of four businesses. This sample of businesses lay between Pascal Street and Dale Street, in the City of Saint Paul, County of Ramsey, State of Minnesota.

The report is submitted to the Metropolitan Council and the Federal Transit Authority, to be included in the Supplemental Draft Environmental Impact Statement for the CCLRT project. It is the desire of Peterson, Logren & Kilbury that these government agencies give proper heed to the report and the information contained within it. Furthermore, Peterson, Logren & Kilbury wishes that the Metropolitan Council and the Federal Transit Authority provide notice as to their use of this document in the Supplemental Draft Environmental Impact Statement for the CCLRT project.

§ 3: METHOD OF DATA COLLECTION

This report was developed from interviews conducted with business owners only. All participants were willing and voluntary. Additionally, all participants were made aware that privileged or private information need not be disclosed, during the interview process.

Data was collected using a combination of interviewing techniques, including a social science method of questioning, titled semi-structured interviewing. This style of interview combines the structure of a set list of topical questions with the flexibility for follow-up questions intended to probe for further information.[1] This method served three distinct functions, for the purposes of this report: (1) it refreshed the interviewees' memories, and thus increased the level of truthfulness of answers,[2] (2) it prevented the need or

[1] TOM WENGRAF, QUALITATIVE RESEARCH INTERVIEWING 159 (2001).
[2] *See Id.* at 13.

temptation for the interviewer to make assumptions, [3] and (3) it uncovered relevant events that would not otherwise be discussed, due to their uniqueness.[4]

While discovering the particulars of individual business experiences was important, the interviews also included structured questioning, to ensure that information regarding universal parameters for measuring the CCLRT construction impact (e.g., loss of revenue and property tax increase) was valid and reliable.[5]

The interviews were performed face-to-face—with one exception—[6]during the period of August 1, 2012 to August 10, 2012. The interviews were conducted at the participants' respective places of business, along University Avenue, and took approximately thirty to thirty-five minutes each.

Appendix 3, *infra*, contains the completed interview surveys, from which one may decipher what questions were designed as open and semi-structured, versus what questions were structured and designed for specific data. All interviews that were conducted were included in this report and are represented in their full form.

§ 4: DATA RESULTS

The interviews conducted for this study were performed between August 1, 2012 and August 10, 2012. Most interviewees were contacted four times—schedule interview; perform interview; schedule reading and signing of statements; and signing of statements.[7]

The interviewees represented in this study, include businesses of the following types:

- Business A: Beauty salon/retail provider and beauty retail provider.[8]
- Business B: Customer service/retail provider.
- Business C: Gas station/convenience/car wash provider.
- Business D: Vacuum retail/service provider.

[3] *Id.* at 14.
[4] *See Id.* at 2 (quoting Leon Levy, "Understanding individual life histories requires not only the employment of general conceptual frameworks and theories but also methods for understanding what is particular, distinctive or unique about the individual.").
[5] NORMAND PETTERSEN & ANDRÉ DURIVAGE, THE STRUCTURED INTERVIEW 8 (2008).
[6] Business E requested to fill out the survey in private, to allow sufficient time for accuracy. After review of the completed survey, interviewer engaged in face-to-face follow-up to clarify ambiguous or incomplete answers.
[7] Business C was contacted once to schedule the interview and twice to schedule the signing of the statement.
[8] Business A operated as two businesses, registered under one entity.

The average time of existence for the sample businesses—in their locations on University Avenue—is twenty-one and a half years.[9]

This section is a summary of the empirical data collected through the processes described in section 3, *supra*. The summary is supported by Appendix C, documenting the four interviewees' responses to questioning.

§ 4.1: Revenue

All four businesses reported loss of revenue, resulting from the CCLRT construction. When asked if the businesses have records to support their findings, all interviewees responded yes.[10] Results for loss of revenue are divided by years, in the following sections.

§ 4.1.1: 2011

In 2011, all but one business experienced a loss in revenue, resulting from the CCLRT construction.[11] The average loss experienced by the three businesses reporting said loss was approximately thirty percent from the prior year. Note that this figure does not include expected gains in revenue.[12]

§ 4.1.2: 2012

In 2012, all but one business experienced either new revenue loss[13] or compounded loss of revenue from 2011.[14] The average loss experienced—for the term of January 2012 to August of 2012, compared to the same term in 2011—by the three businesses reporting said loss was an additional approximately eight percent on top of the 30 percent in 2011. Again, note that this figure does not include expected gains in revenue.[15]

---

[9] Business C has been located on University Avenue for 20 years, however the current ownership purchased the business in January of 2010.

[10] Business C was purchased in January of 2010. Thus, the records are less indicative of revenue patterns.

[11] While Business D experienced a decrease in revenue, due to expectations of construction, construction had not officially begun in front of the business in 2011.

[12] Business B possesses documentation, showing nationwide and statewide growth in revenue of eight percent from 2010 to 2011. The business suffered an eight percent loss. Section 4.1.1 does not account for the expected growth and therefore only reflects half of the potential loss suffered by the business.

[13] *See supra* note 11.

[14] Business A continued to experience the forty percent loss of revenue it had originally experienced. Revenue remained constant between 2011 and 2012.

[15] *See supra* note 12 for an explanation of why this figure may not accurately depict total loss experienced.

During 2012 CCLRT construction, one business reported a loss of revenue over seventy percent, for a two month span of time, when intense construction was occurring.

§ 4.2: Access

All four businesses reported problems related to access, resulting from the CCLRT construction. All four businesses claimed that these issues of access resulted in negative effects to business. The following sections break-down access issues.

§ 4.2.1: Navigation

All four businesses reported customer complaints about navigating the CCLRT construction on University Avenue. One business reported that the confusion was a result of outdated signs or signs that conflicted with each other.[16]

§ 4.2.2: Physical Access

Notwithstanding ability to navigate the CCLRT construction, each business has dealt with physical obstruction to access. The following is a breakdown of access issues reported for the three primary routes for ingress and egress to the sample businesses.

§ 4.2.2.1: Roads

All four businesses reported that their customer base consists of about ninety to one hundred percent vehicle traffic. Therefore, road access and parking issues were the greatest concerns for the interviewees.

Three businesses claimed nearly one hundred percent reduction in vehicle traffic during University Avenue road closures, which lasted between two and three months. In addition, one business reported that either the north or south side of University Avenue would remain closed for a period, while the other side would remain open. Thus, access to businesses on the opposite side of University Avenue became problematic. One business, which had endured the full University Avenue closure also claimed that vehicle traffic continues to be reduced by approximately fifty to sixty percent, while another business reports a continued decrease of approximately thirty percent.[17]

[16] *See supra* § 4.1 for cumulative percentages of lost revenue.
[17] *Id.*

Two businesses reported a loss of street parking, forcing the businesses to lease parking space from the City of Saint Paul.[18]

§ 4.2.2.2: Sidewalks

All four businesses reported issues pertaining to sidewalk access. Three of those businesses reported complete sidewalk closures without temporary walkways.[19] Of all the sidewalk closures, two businesses reported no notice and one business reported only three days notice. The businesses reported reduced pedestrian traffic, as a result of these closures. While most of the businesses' customers travelled by vehicle,[20] access to storefronts was an issue, notwithstanding customers' ability to reach the business by car.[21]

§ 4.2.2.3: Crosswalks

All four businesses reported issues with pedestrian access by crosswalks. Two businesses reported that crosswalks for entire intersections were closed.[22] One of those businesses also reported that no notice was provided for the crosswalk closure.[23]

§ 4.3: Utilities

All four businesses reported utility outages resulting from the CCLRT construction. However, only 3 businesses reported that the outages resulted in negative effects to business.

§ 4.3.1: Electricity

All four businesses reported electrical outages. No notice was provided to the businesses for any of these outages. One business did not report resulting damages and another reported minimal resulting damages. One business was forced to shut down for approximately three hours. Most notably, one business reported two to three outages and subsequent rebooting periods for equipment. It also reported a

[18] *See supra* § 4.10 for a discussion of strategic changes, including leasing parking space.
[19] The three reports were for one day, twenty one days on both the north and south side (consecutively), and two months.
[20] *See supra* § 4.2.2.1.
[21] *See supra* § 4.1 for cumulative percentages of lost revenue.
[22] The intersection of University Avenue/Hamline Avenue and University Avenue/Pascal Street. The only temporary walkway reported was across University Avenue at Hamline Avenue.
[23] *See supra* § 4.1 for cumulative percentages of lost revenue.

full day without access to its computers. During those times, the business was not able to sell gasoline (its primary goods).[24]

§ 4.3.2: Gas

Only two businesses reported gas outages. For one business, notice was provided and the business suffered no resulting damages. For the other business, the outage has remained an issue for approximately three months and delayed the business' ability to pass inspection for its replacement HVAC system.[25]

§ 4.3.3: Water

Three businesses reported water outages. However, notice was provided for all of the businesses and minimal damage was experienced by any business.

§ 4.3.4: Phone

Only one business experienced periodic telephone outages. No notice was provided for the outages.

§ 4.3.5: Sewer

Two businesses reported sewer outages. However, notice was provided to the businesses and the resulting damage to the businesses was minimal.

§ 4.3.6: Trash

One business reported having to move its trash collection to another side of the building. Another business reported that its trash collection was delayed by one to two weeks during a period of heavy construction, which lasted two months.

§ 4.3.7: Mail Delivery/Pickup

One business reported having daily delays for mail delivery and pickup.[26]

§ 4.3.8: Internet

No businesses reported internet outages.

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[24] *See supra* § 4.5 for expenses.
[25] *Id.*
[26] Business B deals heavily with deliveries, and thus relies on consistency with delivery and pickup schedules.

§ 4.3.9: Cable/Satellite

No businesses reported cable or satellite outages.

§ 4.4: Construction Related Disturbances

All four businesses reported problems relating to CCLRT construction disturbances. All four businesses reported that these disturbances resulted in negative effects to business. The following is a breakdown of the types of disturbances reported by the interviewees.

§ 4.4.1: Dust/Air

As a result of dust, two businesses reported having to replace or clean their HVAC systems.[27] Additionally, two businesses reported having to replace computers and related equipment.[28]

§ 4.4.2: Litter/Trash

One business reported issues with cleanliness and upkeep of the construction site. Additionally, the business experienced litter collection on the business property, which collected along the construction fencing. The business noted having to demand corrective action before the issues were remedied.

§ 4.4.3: Noise/Vibration

All four businesses reported issues pertaining to noise and vibration. Two businesses attributed vibration with failure of computers and other technical equipment.[29] One business attributed vibrations to a broken door and storefront window pane.[30] Lastly, one building attributed vibration to failure of its HVAC system.[31]

§ 4.4.4: Sewer Grates

No businesses reported issues relating to sewer grates.

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[27] *See infra* § 4.5.1 for expenses.
[28] *Id.*
[29] *Id.*
[30] *Id.*
[31] *Id.*

§ 4.5: Property Damage

All four businesses reported damage to property, resulting from the CCLRT construction. The results for questions about property damage are divided into type of property (real or personal) and business. The reason for this break-down is because the number and magnitude of reports are too much to summarize.

§ 4.5.1: Real Property

Business A reported that vibrations caused a door to break. The replacement door cost approximately seven hundred dollars. In addition, the front window pane cracked. The window has yet to be replaced.

Business B reported no damage to real property.

Business C reported that a large Walsh Construction vehicle cracked its underground fuel-tank cover. Replacing the cap will cost one thousand, five hundred dollars to replace. In addition, dust collection caused the HVAC system to overheat. Having the system cleaned cost approximately one thousand, two hundred dollars.

Business D reported that the construction vibrations caused the exterior façade of the building to crack. The business is documenting the damage but does not know the cost for repair. In addition, the flooring is damaged from foot traffic entering the business from the construction zone. The business anticipates replacement of the flooring. The business is unsure of the cost for replacement. Most notably, the business endured basement flooding, resulting from the CCLRT construction, during replacement of the sidewalk. During this time, the basement space could not be utilized.

§ 4.5.2: Personal Property

Business A reported no significant damage to personal property.

Business B reported that dust and vibrations caused damage to the business' computers and other technical equipment. The business spent approximately ten thousand dollars replacing all of its computers. Maintenance and inspections of other equipment have been covered under lease agreements with the equipment providers.

Business C reported its technical equipment is sensitive. As a result of vibrations and electrical outages from construction, the business has either replaced or repaired its computer, cash register, credit card system, and printer. The total cost of for these replacements and repairs is three thousand, eight hundred dollars. In

addition, the business' freezer and one gas pump has shut down. The freezer is not operating and the pump has not been repaired or replaced.[32]

Business D reported no damage to personal property.

§ 4.6: Property Taxation/Rent

Of the four businesses surveyed, two own the property on which their businesses rest, and two businesses lease their property. To accommodate both of these types of property interests, businesses were asked whether they experienced property tax increases (if owners), were told of property tax increases (if leasees), or experienced increases in rent (if leasees).

All four businesses reported prior or upcoming property tax increases or rent increases, resulting from the CCLRT construction. Results for property tax increases or rent increases are divided by years and whether the interviewee was a landowner or leasee, in the following sections.

§ 4.6.1: 2011

Only one of the two landowning businesses reported property tax increases.[33] However, the property tax increase reported was over one hundred percent. In addition, the business has been assessed multiple fees for lighting, pipe updates, and drainage updates.

Only one of the two leasing businesses reported rent increases, resulting from CCLRT construction.[34] The rent increase reported was approximately fifty percent, and the interviewee reported the rent increase to be direct result of a property tax increase.

§ 4.6.2: 2012

Only one of the two landowning businesses reported a property tax increase for the year of 2012.[35] That reported amount is six percent.

Only one of the two leasing businesses reported a property tax increase and potential rent increase. However, the interviewee was unsure as to the amount that either the property tax or rent would increase.

[32] Business C did pay six hundred dollars to have the pump inspected, with no results.
[33] Business D, one of the landowning businesses, did not experience CCLRT construction in 2011.
[34] Business B reported a periodic rent increase, but did not attribute it to the CCLRT construction.
[35] Business C is unsure of any upcoming property tax increases.

§ 4.7: Safety Concerns

Two businesses reported safety concerns, in correlation with the CCLRT construction. The most relevant reports of safety concerns are as follow:

- One business reported numerous safety concerns, including a large part of the sidewalk falling into the business' exposed basement.
- One business reported that a temporary walkway—forming a bridge over a trench—was made only of planks with little support. In addition, the interviewee reported that fencing was used, rather than sturdy railings.

§ 4.8: Communication

Four businesses reported communication issues, in correlation with the CCLRT construction. The surveyed businesses reported discontent with communication about the project and particular discontent with the hotline system.

§ 4.8.1: Notice

All four businesses reported discontent with the notice provided. When asked how they would like to be notified of construction issues, three businesses replied "in person" and one business replied "email."

§ 4.8.2: Metropolitan Council Hotline

All four businesses reported calling the hotline system. No businesses reported resolutions resulting from contacting the hotline. In addition, three businesses reported that responsibility for the situations was deflected back to the business by representatives of the hotline system.

§ 4.9: Forgivable Loan Program

Two businesses recently submitted for the forgivable loan and are currently awaiting results. However, because one of the businesses has annual revenue over two million dollars, it was told that receipt of the loan is unlikely.

Two businesses successfully applied for the forgivable loan. However, one business unsuccessfully argued that it should be awarded two loans.[36]

§ 4.10: Strategic Adjustments and Costs

[36] Business A operates as two businesses, utilizing two spaces, and paying two leases. However, because both businesses are registered as one entity, it was not awarded a second forgivable loan.

In response to the CCLRT project, all four businesses have taken steps to ensure that customers continue to visit. Three of the four businesses have personally made signs. The average cost for the three businesses is approximately three hundred, seventy dollars. In addition, three businesses have invested in "Open for Business" signs, averaging approximately four hundred, twenty dollars. All four businesses have contacted customer either buy phone, email, or mailings.

In response to reduced budgets, three of the four businesses have reduced their staffing.[37] This reduction ranges from ten percent to seventy five percent.[38] Two businesses reported that overhead costs have actually increased, as a result of CCLRT project, while one company has reduced its overhead. No values of cost increases or decreases were known. Two of the businesses reduced their marketing budget, while one business has invested in discount cards.[39]

In response to reduced or removed street parking, two businesses have leased parking space from the City of Saint Paul. The cost for leasing these spaces was not reported.

In response to reduced customer traffic and damaging construction disturbances, one business had to shut down an entire service (car wash). Three businesses were forced to reduce their inventory of products, either due to reduced revenue or because products were expiring.

§ 4.11: Anomalous Reports

Each business was given an opportunity to discuss concerns not properly addressed by the interview questioning. The following is a compilation of reports made (some of these reported issues are included elsewhere in this report):

- One business argued that for business entities operating as multiple businesses, one loan is not sufficient to support the aggregate losses of the business entity. However, the forgivable loan program will not allow the business to receive an additional loan for its second business operation.
- At least two businesses reported that they were told that construction would not take place in both 2011 and 2012, yet that is what is happening.

[37] Business C has involuntarily lost employees to other employment opportunities, due to reductions in hours.

[38] Businesses A and B were the only businesses to report percentages of reduced staff.

[39] Business A is discontent with the discount card marketing. The original cost was five hundred dollars, in addition to twenty five cent fees per transaction. These costs are compounded by the loss of revenue from the discounts, themselves.

- One business reported that the Metropolitan Council forced the sale of an easement on the business' property and intends to force a sale for an extension on that easement.
- Two businesses now lease parking space from the City of Saint Paul, to alleviate the difficulty for customers to find parking.
- The basement of one business extends underneath the sidewalk adjacent to University Avenue. As a result of construction, the ceiling of the basement was lowered four inches, and the outer wall of the basement was reduced inward four inches.

§ 5: CONCLUSIONS

The information compiled in section 4, indicates that businesses are suffering substantial damages as a result of the CCLRT construction. These damages take various forms and are in some instances caused by interferences not consistent among all the participating businesses. However, five factors showed signs of impact among all businesses:

(1) access;[40]
(2) construction disturbances;[41]
(3) property taxation and rent;[42]
(4) communication;[43] and
(5) decrease in revenue.

Additionally, anomalous conditions were reported by the majority of businesses interviewed. Such results are indicative of the diverse business needs, which stem from a diverse business environment. These results also suggest that the actions taken by the Metropolitan Council and the Federal Transit Authority—well intended as they may have been—to alleviate the harm felt by local businesses, are not universally effective. To the contrary, it suggests that a project of this magnitude requires attention at the level of business types or preferably at the individual business level, so as to properly address unique problems, as are listed in section 4.11.

As a result of the impact felt by businesses, the sample of participants voiced a general consensus that the CCLRT project is not being executed in a satisfactory manner. While this is only sentiment, and not empirical in nature, it reveals an attitude towards the Metropolitan Council's attempt to connect the Twin Cities through public transit. When asked what the Metropolitan Council and Walsh Construction could do to alleviate the damage felt by businesses, most interviewees stated that good communication was the key.

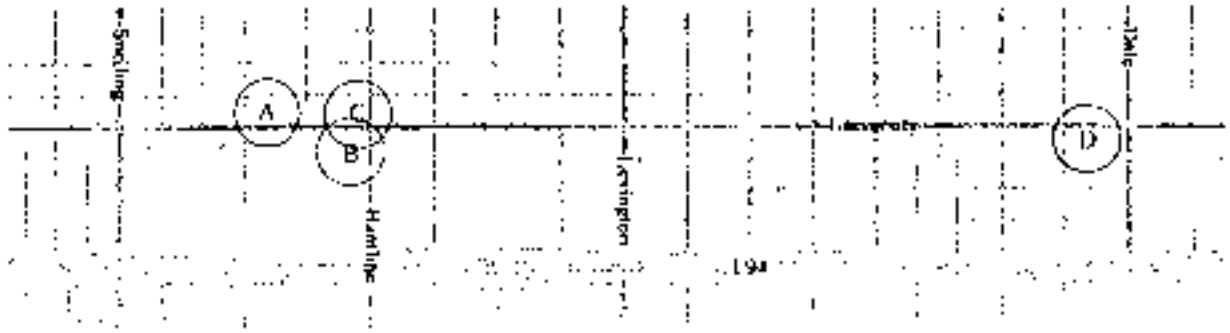
[40] *See supra* § 4.2.
[41] *See supra* § 4.4.
[42] *See supra* § 4.6.
[43] *See supra* § 4.8.

APPENDIX 1

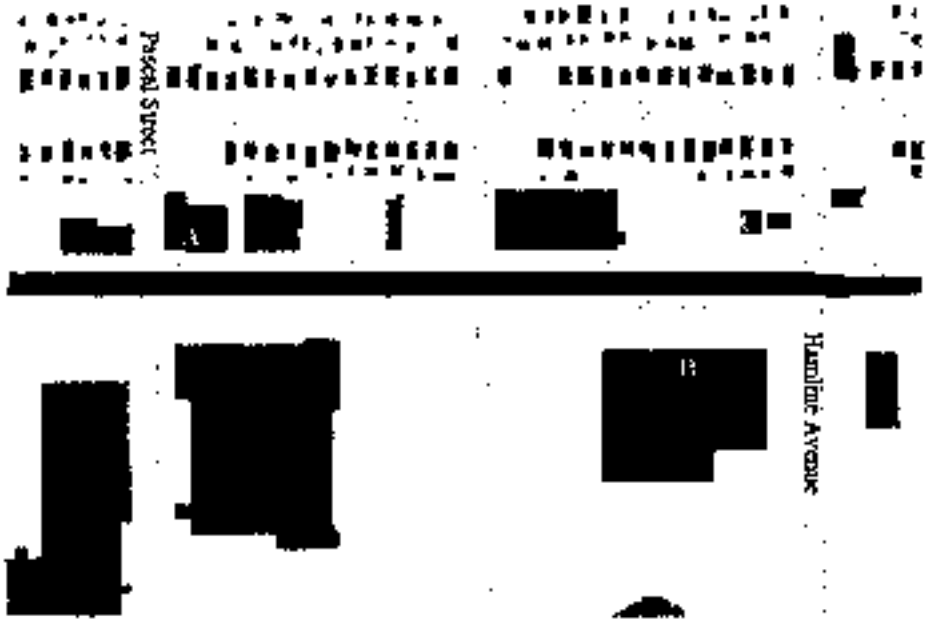
(MAPS)

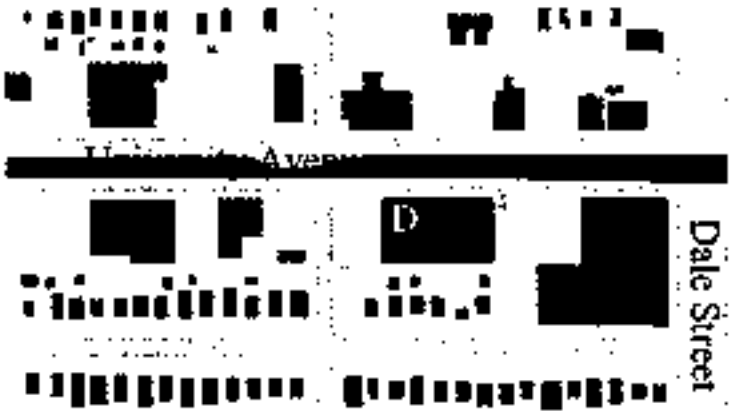
The following images provide visual context of the sample businesses to the CCLRT construction project on University Avenue.

University Avenue Context



Businesses' Neighborhood Context





APPENDIX 2

(DATA COLLECTION)

The following documents were utilized in designing the final semi-structured/structured interview documents.

Sample Document A

CLIENT INFORMATION

DATE

NAME OF BUSINESS:

LEGAL OWNER OF BUSINESS: [USE COMPLETE CORPORATION NAME OR INDIVIDUAL NAMES]

ADDRESS OF BUSINESS: ADDRESS OF OWNER(S):

TELEPHONE # OF BUSINESS: TELEPHONE # OF OWNERS:

EMAIL ADDRESS OF BUSINESS: EMAIL ADDRESS OF OWNERS:

CONTACT PERSON, TELEPHONE # AND EMAIL:

DESCRIBE THE BUSINESS: WHAT DOES IT SELL OR WHAT SERVICE DOES IT PROVIDE?

HOW LONG HAS THE BUSINESS BEEN IN EXISTANCE?

HOW LONG HAS THE BUSINESS BEEN LOCATED ON OR NEAR UNIVERSITY AVENUE?

DOES THE BUSINESS HAVE OVER $2,000,000 IN GROSS ANNUAL SALES OR REVENUE? YES OR NO

ARE THERE MONTHLY WRITTEN FINANCIAL RECORDS FOR THE PAST THREE YEARS SHOWING GROSS REVENUE, EXPENSES AND PROFIT? YES OR NO

DID THE BUSINESS HAVE A DECREASE IN GROSS REVENUE OR SALES IN 2011 COMPARED TO 2008, 2009, OR 2010? YES OR NO (CIRCLE ONE) WHAT PERCENT DECREASE?

WAS THERE LIGHT RAIL (LRT) CONSTRUCTION IN FRONT OF THE BUSINESS IN 2011? YES OR NO IF SO, HOW MANY MONTHS?

IS THERE LRT CONSTRUCTION IN FRONT OF THE BUSINESS NOW, IN 2012? IF SO, WHEN DID IT START?

IS THE BUSINESS EXPERIENCING A DECREASE IN SALES OR REVENUE AT THIS TIME? YES OR NO IF SO, WHAT PERCENT COMPARED TO PREVIOUS YEARS?

HAS THE BUSINESS APPLIED FOR A FORGIVABLE LOAN AND IF SO WHAT HAS BEEN THE OUTCOME? AWARDED? HOW MUCH? FOR WHAT YEAR?

DESCRIBE WHAT INTERFERENCE THE CONSTRUCTION ON UNIVERSITY AVENUE FOR THE LRT PROJECT HAS CAUSED THAT HAS LEAD TO A DECREASE IN YOUR BUSINESS REVENUE OR SALES. BE SPECIFIC.

Sample Document B

Business Name: _____ Street# _____ Street: _____ Spoke to: ☐ Owner/Mgr ☐ Staff
Number of attached pages: __ . Interviewer: __ __ Date: __ /__/__

[redacted]

☐ Electricity ☐ Gas ☐ Water ☐ Phone ☐ Sewer
☐ Internet ☐ Trash collection ☐ Mail delivery ☐ Cable Satellite ☐ Other _____
☐ Don't remember ☐ Don't know ☐ Refused ☐ NONE ☐ Nominal Impact

- Use additional form (When? Did you receive any notice? Did you call hotline? Impact on business?)

[redacted]

☐ Dust/Air ☐ Litter/Trash ☐ Noise/Vibration ☐ Sewer grates
☐ Other: _____ ☐ NONE ☐ Don't know ☐ Refused
☐ Nominal Impact

[redacted]

☐ Sidewalk ☐ Parking lot ☐ Incoming deliveries ☐ Handicap ramps ☐ Crosswalks
☐ 2-way traffic on Univ ☐ Other ☐ Don't remember ☐ Don't know ☐ Refused
☐ NONE ☐ Nominal Impact

[redacted]

4a. Have orange detection digest been kept up to date for navigating this area?

If not, please tell us what happened and how that impacted your business.

Have you ever called the hotline about this? To reid to a construction coordinator about this? If yes to either, please tell us the result.

b. Have you been able to ensure people know you are open for business? What is helpful to ensure customers find your business?

☐ Orange Construction signs
☐ Personally made signs (How many? __ Cost: ____)
☐ "Open for Business" signs
☐ Met Council marketing (Mod & Co)
☐ UP technical assistance
☐ Little Mekong support
☐ Talking to customers on phone
☐ Providing maps to customers
☐ Website
☐ Other _____

[redacted]

[redacted]

[redacted]

[redacted]

☐ Yes ☐ No

Comments:

How would you prefer to receive notices?

☐ Email ☐ Phone ☐ In person ☐ Notes on the door ☐ NO EMAIL ☐ Others _____

Email: _____ Phone _____

Business Name: Street#: Suite#: Spoke to: ☐ Owner/Mgr ☐ Staff
Number of attached pages: ___ Interviewer: ___ Date: ___/___/___

Utility/Issue: _____ Date(s) ___ / How long? ____ Days ____ Hours

Notice: How many days advance notice did you receive? ☐ None ☐ same day ☐ # day(s)
How did you get notice? ☐ No notice ☐ E-Mail ☐ Verbal (name) ☐ Other ___

Hotline: Called? ☐ No ☐ Yes Why/why not? _____
Response time: ☐ No response ☐ Day(s) Hours
Result

_____

Business Impact / Cost of Impact (lost sales/customers? Staff expenses? Add'l costs to overcome issue?): ☐ Min Impact

_____

Utility/Issue: _____ Date(s) _____ / How long? ____ Days ____ Hours

Notice: How many days advance notice did you receive? ☐ None ☐ same day ☐ # day(s)
How did you get notice? ☐ No notice ☐ E-Mail ☐ Verbal (name) ☐ Other

Hotline: Called? ☐ No ☐ Yes Why/why not? _____
Response time: ☐ No response ☐ Day(s) Hours
Result

Business Impact / Cost of Impact (lost sales/customers? Staff expenses? Additional costs to overcome issue/disruption?).

_____

_____

APPENDIX 3

(INTERVIEWS)

The following are summaries of the interviews, signed by the interviewees. They are the primary support for section 4, *supra*.

Business A

Date

08/01/2012

Interviewer

Savie Nebo

What is the name of your business, as it appears on financial records/tax information:

Demitrius, Inc.

Address of business:

1451 University Avenue West, St. Paul, MN 55104

Telephone number of business:

651-645-1665

Email address of business:

N/A.

Describe the business (e.g., type of business, products, and services):

There are 2 businesses under the 1 company name. The first business is a beauty salon, which also sells products. The second business is a retail store.

How long has the business existed

The businesses have existed for approximately 27 years

How long has the business been located on or near University Avenue:

The businesses have been located on University Avenue for approximately 17 years

---

Does the business make gross annual sales (revenue, not profit) over $2,000,000:

No

Does the business possess monthly written financial records for the past 3-5 years, documenting gross annual sales (revenue, not profit), expenses, and profit:

Yes. The business was profitable records dating back to its establishment.

Was there light rail construction in front of the business in 2010 or 2011:

Yes. Construction began approximately April of 2011.

[IF YES] Did the business have a decrease in gross annual sales (revenue, not profit) in 2010/2011 (depending on when construction began in the area) compared to the prior 2-3 years:

Yes.

[IF YES] What percent decrease in gross annual sales (revenue, not profit) did the business experience:

Equal to or greater than 40 percent.

[IF YES / LANDOWNING] Has the business experienced or been informed of any upcoming tax increases.

N/A.

[IF YES / RENTING] Has the business experienced or been informed of any upcoming tax increases or lease increases.

Yes. Rent increased by approximately 50 percent per store, as a result of property tax increases.

Has there been light rail construction in front of the business in 2012:

Yes. Construction has been occurring for the entirety of 2012.

[IF YES] That far, in 2012, has the business experienced a decrease in gross sales (revenue, not profit), as compared to the same period in the 2-3 years prior to construction:

Yes.

[IF YES] What percent decrease in gross sales (revenue, not profit) has the business experienced:

The businesses have continued to experience the approximate 40 percent decrease in gross annual sales.

[IF YES / LANDOWNING] Has the business experienced or been informed of any upcoming tax increases.

N/A.

[IF YES / RENTING] Has the business experienced or been informed of any upcoming tax increases or lease increases.

No

Describe what interference the construction on University Avenue (for the light rail construction) has caused that has led to your reported decrease in gross sales (revenue, not profit):

Access has to businesses has been greatly reduced periodically, by the construction. The level of access reduction has varied and resulted in proportional decreases in traffic. The greatest reductions took place in 2011

What type of traffic (pedestrian and vehicle) has decreased

Vehicle traffic (which supplies 90 percent of the business' income) has decreased by varying amounts between 30 percent at times construction times and 100 percent during University Avenue closures. Pedestrian and bus traffic has also decreased, particularly when the sidewalk has closed.

Has the business experienced any trouble with the following utilities:

Electricity (include when, timeframe, notice, impact, and use of hotline):

Yes. The business faces an electrical outage, in September of 2011. No notice was been provided for the electrical outage. The electrical outages lasted for a few hours, during which the businesses were forced to shut down. The business did not contact the hotline.

Gas (include when, timeframe, notice, impact, and use of hotline):

Yes. Notice was provided. The outage occurred in the morning, prior to business operation.

Water (include when, timeframe, notice, impact, and use of hotline):

Yes. Notice was provided. The outage occurred in the morning, for a short period of time.

Phone (include when, timeframe, notice, impact, and use of hotline)

No

Sewer (include when, timeframe, notice, impact, and use of hotline):

Yes. Notice was given

Trash collection (include when, timeframe, notice, impact, and use of hotline):

No.

Mail delivery/pickup (include when, timeframe, notice, impact, and use of hotline):

No.

Internet (include when, timeframe, notice, impact, and use of hotline):

No.

Cable/satellite (include when, timeframe, notice, impact, and use of hotline):

No

[DID THE INTERVIEWEE REMEMBER, KNOW, OR REFUSE TO ANSWER THESE QUESTIONS]

Has any of the following impacted the business during the light rail construction:

Dust/air (include when, impact, and use of hotline)

Yes. The businesses have dealt with large amounts of dust, which has reduced the quality of inventory, and the attractiveness of the businesses. As a result, the businesses have had to spend money for cleaning and washing (washing products that cannot be cleaned from dusting alone).

Litter/trash (include when, impact, and use of hotline).

No

Noise/vibration (include when, impact, and use of hotline)

Yes. There is constant vibration, which has resulted in a broken door and a broken window. The door has been replaced, but the window is too expensive to replace immediately. As a result, the businesses' street-front appeal has been reduced and decreased customer traffic.

Sewer gases (include when, impact, and use of hotline):

No.

[DID THE INTERVIEWEE REMEMBER, KNOW, OR REFUSE TO ANSWER THESE QUESTIONS]

Has the business experienced any of the following access issues:

Sidewalk (include when, timeframe, impact, and use of hotline):

During intense construction the University Avenue sidewalk was closed off. There was no notice for the closure and it lasted for a full day. During that time, no temporary walkways were made available to pedestrians.

Parking lot (include when, timeframe, impact, and use of hotline):

Street parking was removed. The business had been forced to lose parking space from the City of St. Paul to increase access to customers.

Incoming deliveries (include when, timeframe, impact, and use of hotline):

No.

Handicap ramps (include when, timeframe, impact, and use of hotline):

Yes. The handicap ramp leased by the parking lot, leased from the City of St. Paul, was closed.

Crosswalks (include when, timeframe, impact, and use of hotline):

Yes. During intense construction the crosswalks at the intersection of University Avenue and North Pascal Street were closed. No temporary walkways were created for pedestrians. No notice was provided to the businesses. The business did not contact the hotline.

2-way traffic on University Avenue (include when, timeframe, impact, and use of hotline):

Yes. During intense construction, University Avenue was closed for approximately 2 to 3 months. No notice was received by the businesses.

[DID THE INTERVIEWEE REMEMBER, KNOW, OR REFUSE TO ANSWER THESE QUESTIONS]

Have you been able to ensure that people know your business is open:

No.

Describe the business' experience with customer's finding your business, during the light rail construction:

Customers have complained about the difficulty navigating the roads, while construction has been going on. Additionally, customers have had difficulty reaching the business even when they were familiar with the routes.

Have any of the following helped with customer awareness and location of the business:

Orange construction signs:

No

Personally made signs (include how many and costs).

Yes

"Open for Business" signs:

Yes. The company has purchased multiple signs, totaling approximately $400

Met Council marketing (Mod & Co):

N/A

U7 credit assistance:

There is pending assistance. However, the business' expected assistance has been delayed by over 1 year

Little Melting support

No.

Talking to customers by phone.

The businesses have spoken with customers, in store, to assure them that the business is not closing during construction

Providing maps to customers:

Signs have been used to help direct customers

Website:

No

Has the company experienced any real property damage due to the light rail construction

Yes. The vibrations caused a door to break. The replacement for the door cost approximately $700. Additionally, one of the street-front windows was cracked by vibrations of the construction. The window has yet to be replaced

Has the company experienced any personal property damage due to the light rail construction:

No. Damage to personal property has been remedied by the businesses (cleaning and maintaining equipment and products)

Aside from customer access and property damage, what have been other challenges has the business faced during the light rail construction:

N/A

[IF APPLICABLE] What can or could prevent or reduce these challenges:

Noise has been the greatest issue. With the exceptions listed above (see gas, water, and sewer), no notice has been provided for closures and disruptions to utilities.

Has the company experienced any safety concerns due to the light rail construction (i.e., unmarked holes, heavy loads being hauled overhead, flooding, etc...).

While the sidewalks were closed, the temporary walkways were just planks set across trenches. There were no railings along these temporary walkways, only fences.

[IF YES] Have you taken any actions (including calling the hotline) in connection to these safety concerns:

The businesses have used the hotline, and emails to the mayor and city council.

Has the business made any strategic responses to business impact from the light rail construction:

Staffing

The businesses have reduced their staffing by approximately 10 percent.

Overhead:

Overhead has increased by $250 per month for use of the parking lot, leased from the City of St. Paul.

Reduced/increased store size.

No.

Marketing:

The businesses have an improved discount card. The initial cost of the cards was $500, plus charges of $.25 per transaction. In addition, the businesses are suffering the necessary discounts that they use to bring customers in.

Hours of operation:

No

Services offered

No

Products offered.

The businesses have reduced their inventory, because the products are not moving quickly enough.

Other

N/A

Has the business applied for a forgivable loan:

Yes. The business applied in 2011. The businesses are also applying for a façade loan.

What was the outcome of the application (e.g., awarded/not, how much, and what year):

The businesses were awarded $20,000 loans in 2011. However, because the businesses are both run under the same company name, they were not allowed to apply for 2 loans. The businesses have not applied for a forgivable loan in 2012. The façade loan is pending.

Have you made any calls to the hotline (include date, response time, and result):

Yes. The business has made multiple calls to no effect.

What would you say or show to the Metropolitan Council, in regards to the impact and process of the light rail construction:

You cannot explain the effects that this project is having on businesses. Without the salon, the beauty supply store would be out of business.

Do you feel the light rail construction provides sufficient notice of activities that will directly affect your business:

No.

In the future, how would you prefer to receive notice from the Metropolitan Council:

Email:

No

Phone:

No

In person or notice on door:

This seems like an appropriate form of notice

Other.

N/A

Any additional information to be shared?

The forgivable loan was poorly developed. For businesses that operate under multiple stores, the impact is twice what it would otherwise be. Offering one loan is insufficient, under these circumstances.

Statement of Truth

I certify that the above statements are a true and accurate reflection of the facts, to the best of my knowledge and belief.

Print: _____

Signature: _____

Date: _____

Business B

Date:

03/06/2012

Interviewee:

Ryan Wilson

What is the name of your business, as it appears on financial records/tax information:

Skill Corporation

Address of business:

1360 University Avenue West, St. Paul, MN 55104

Telephone number of business:

651-647-5972

Email address of business:

store2105@theupsstore.com.

Describe the business (e.g., type of business, products, and services):

Customer service and retail store

How long has the business existed:

UPS has existed for approximately 100 years. This franchise has existed for approximately 13 years.

How long has the business been located on or near University Avenue:

The business has been located on University Avenue for approximately 13 years.

Does the business make gross annual sales (revenue, not profit) over $2,000,000.

No.

Does the business possess monthly written financial records for the past 3-5 years, documenting gross annual sales (revenue, not profit), expenses, and profit:

The business possesses record dating back to its establishment in December of 1999.

Was there light rail construction in front of the business in 2010 or 2011:

Yes. Construction began approximately April of 2011 to approximately December of 2011.

[IF YES] Did the business have a decrease in gross annual sales (revenue, not profit) in 2010/2011 (depending on when construction began in the area) compared to the prior 2-3 years:

Yes.

[IF YES] What percent decrease in gross annual sales (revenue, not profit) did the business experience:

Approximately 8 percent. Also note that during this time, statewide and nationwide records showed approximately an 8 percent increase in gross annual sales. This indicates a probable decrease of approximately 16 percent.

[IF YES / LANDOWNING] Has the business experienced or been informed of any upcoming tax increases:

N/A.

[IF YES / RENTING] Has the business experienced or been informed of any upcoming tax increases or lease increases:

Period rent increases, but no indication of relation to tax increases.

Has there been light rail construction in front of the business in 2012:

Yes. Construction has been occurring since March of 2012. This is in direct conflict with promises made to the business by various officials at the Metropolitan Council. The business was told that construction would be completed in 2011.

[IF YES] Thus far, in 2012, has the business experienced a decrease in gross sales (revenue, not profit), as compared to the same terms in the 2-3 years prior to construction:

Yes (2012 finances are only compared to 2010 finances)

[IF YES] What percent decrease in gross sales (revenue, not profit) has the business experienced:

The business has suffered a compounded decrease in gross annual sales from the decrease suffered in 2011. The decrease for the term of January to August of 2012 from the term of January to August of 2011 is 2 percent.

[IF YES / LANDOWNING] Has the business experienced or been informed of any upcoming tax increases:

N/A.

[IF YES / RENTING] Has the business experienced or been informed of any upcoming tax increases or lease increases:

Yes. Property taxes are going to increase, but the landlord has not been informed as to the amount. In addition, the business is in negotiations with the landlord to establish a new rent, which will reflect any property tax increase.

Describe what interference the construction on University Avenue (for the light rail construction) has caused that has led to your reported decrease in gross sales (revenue, not profit):

Access to pedestrians has been closed to pedestrians during sidewalk closures, which occurred for a total of 42 consecutive days, in 2011. Access to vehicles has been intermittently closed on both Hamline Avenue and University Avenue. Hamline Avenue was closed for roughly a half month in March and May, and University Avenue was closed intermittently in 2011, and briefly in 2012. At times, traffic was only allowed on the north side of the light rail construction, making access to the business impossible.

What type of traffic (pedestrian and vehicle) has decreased:

Vehicle traffic (which supplies approximately 90 percent of the business' gross annual sales) has generally decreased. Pedestrian traffic has decreased and at times completely ceased, particularly while the sidewalks were closed.

Has the business experienced any trouble with the following utilities:

Electricity (include when, timeframe, notice, impact, and use of hotline):

Yes. The business had faced periodic electrical outages. These outages occurred in 2011. No notice was provided for the electrical outages. The outages lasted various amounts of time, but were minor. The business did not contact the hotline for these outages.

Gas (include when, timeframe, notice, impact, and use of hotline):

No.

Water (include when, timeframe, notice, impact, and use of hotline):

No.

Phone (include when, timeframe, notice, impact, and use of hotline):

No.

Sewer (include when, timeframe, notice, impact, and use of hotline):

No.

Trash collection (include when, timeframe, notice, impact, and use of hotline)

No.

Mail delivery/pickup (include when, timeframe, notice, impact, and use of hotline):

Yes. The business has had daily delays in mail delivery and pickup. These delays occurred in 2011. No notice was provided for these delays. The delays lasted typically a half hour. The business did not contact the hotline for these delays.

Internet (include when, timeframe, notice, impact, and use of hotline):

No.

Cable/satellite (include when, timeframe, notice, impact, and use of hotline):

No.

[DID THE INTERVIEWEE REMEMBER, KNOW, OR REFUSE TO ANSWER THESE QUESTIONS]

Has any of the following impacted the business during the light rail construction:

Dust/air (include when, impact, and use of hotline):

Yes. The business needs to clean its inventory to prevent dust buildup and maintain an attractive store, thus costing the business an extra labor cost. Additionally, the business' computer equipment has been replaced due to shutdowns from dust buildup. Lastly, leasing agreements for technical equipment have included maintenance plans, which have been grossly increased as a result of the dust. These maintenance and repair visits have been covered under the lease agreements. The hotline was not contacted.

Litter/trash (include when, impact, and use of hotline):

Yes. The business has faced large amounts of litter and trash, most heavily during construction in 2011. Trash collected along the fencing installed for the construction and was not removed in any timely fashion, without the diligent objection from the business. In addition, the business has faced lack of care for the landscaping along the curb. The eventual care that did occur was a result of the diligent objection from the business, as well. The effects of these problems was reduced pedestrian traffic, which during portions of the construction was the only way of access to the business. The hotline was contacted for this. No results were achieved.

Noise/vibration (include when, impact, and use of hotline)

Yes. There is constant vibration, which disrupts the businesses computer equipment and has forced the business to replace all of its computers

Sewer grates (include when, impact, and use of hotline):

No

[DID THE INTERVIEWEE REMEMBER, KNOW, OR REFUSE TO ANSWER THESE QUESTIONS]

Did the business experienced any of the following access issues

Sidewalk (include when, timeframe, impact, and use of hotline):

Yes. University Avenue and Hamline Avenue were both closed. For 21 days, the north side of the sidewalks was closed, and for the following 21 days, the south side of the sidewalks was closed. During that time, no temporary walkways were made available to pedestrians. The business was only given 3 days notice for the closure

Parking lot (include when, timeframe, impact, and use of hotline):

Street parking was taken. The business' private parking lot has not been taken. However, Walsh Construction has packed vehicles in the business' private lot, without the business' permission. The hotline was called for three weeks, and the business was told that it was not the Metropolitan Council's responsibility to have the vehicle towed. The business was told it would have to police its parking lot.

Incoming deliveries (include when, timeframe, impact, and use of hotline):

No. Only delays in deliveries

Handicap ramps (include when, timeframe, impact, and use of hotline):

No

Crosswalks (include when, timeframe, impact, and use of hotline).

Yes. The crosswalks were closed from the middle of March to the end of March and from the beginning of May to the middle of May. Temporary walkways were created. The reduced pedestrian access impacted the businesses gross sales (revenue, not profit)

2-way traffic on University Avenue (include when, timeframe, impact, and use of hotline):

Yes. Hamline Avenue was closed from the middle of March to the end of March and from the beginning of May to the middle of May. 3 days notice was given the first time the road was closed. After business complaint, appropriate notice was given the second time the road closed

University Avenue was closed intermittently during 2011 construction and briefly during 2012. No notice was provided for these closures. The business receives approximately 90 percent of its gross annual sales from vehicle traffic. Thus, these closures greatly reduced the business' gross annual sales.

[DID THE INTERVIEWEE REMEMBER, KNOW, OR REFUSE TO ANSWER THESE QUESTIONS]

Have you been able to ensure that people know your business is open.

No. Because of the lack of notice, there has been no opportunity for the business to prepare and address road closures, traffic redirects, and pedestrian interferences.

Describe the business' experience with customer's finding your business, during the light rail construction:

Customers have complained about both difficulties with navigating the construction and with actually reaching the business, regardless of familiarity with the roads. The difficulty has been a result of either lacking or confusing signage, resulting from poor or outdated signs. On occasion, signs have directly conflicted with the appropriate routes. Additionally, some customers that were aware that the business remained open, explicitly stated they would no longer do business there.

Have any of the following helped with customer awareness and location of the business.

Orange construction signs.

No

Personally made signs (include how many and costs)

Yes. The business created multiple canvas banners and pillar signs, totaling approximately $800.

"Open for Business" signs.

Yes. The company purchased plastic signs, totaling approximately $150

Met Council marketing (Mod & Co).

No

UT tech assistance

No

Little Mekong support:

No

Talking to customers by phone

Yes. The business has used email and coupon mailings to reach out to customers.

Providing maps to customers:

No.

Website:

No

Has the company experienced any real property damage due to the light rail construction:

No

Has the company experienced any personal property damage due to the light rail construction.

The dust and vibrations has caused damage to the business' computer equipment and other technical equipment. The business has had to replace all of its computers, totaling approximately $10,000. Additionally, other technical equipment (such as copy machines) has required extremely high levels of maintenance and repair. The maintenance and repair has been covered under lease agreements with the providers of the equipment, but has cost the business time of operability.

Aside from customer access and property damage, what have been other challenges has the business faced during the light rail construction

The biggest issue has been navigating lacking information, misinformation, and dishonest communication

[IF APPLICABLE] What can or could prevent or reduce these challenges:

The biggest solution to the business' issues would be good, open, and honest communication. Follow through with the promises made would also be of great benefit to the business

Has the company experienced any safety concerns due to the light rail construction (i.e., unmarked holes, heavy loads being hauled overhead, flooding, etc...):

No.

[IF YES] Have you taken any actions (including calling the hotline) in connection to these safety concerns:

N/A.

Has the business made any strategic responses to business impact from the light rail construction.

Staffing:

The business has decreased its staffing from 4 employees to 3 employees (a 25 percent decrease.

Overhead:

As a result of the construction, many costs have gone up. To combat these cost increases, the company is "running lean." Overhead expenses are being cut wherever possible.

Reduced/increased store size

No

Marketing:

Marketing has had to decrease by 5 percent, due to lacking funds.

Hours of operation

No.

Services offered:

The business has not cut services, however it has begun to offer discounts, where it would not have in the past. These discounts are a direct response to the reduced traffic in the store.

Products offered:

The business has increased the number of products it offers. However, the company has reduced its inventory, due to the extended time it takes to move its products.

Other:

N/A.

Has the business applied for a forgivable loan:

Yes. The business applied in 2011.

What was the outcome of the application (e.g., awarded/not, how much, and what year)

The business was awarded the $120,000 loan in 2011. The business has inquired about applying for another loan in 2012 (because construction has continued), but it has been turned away, because they already received a loan. Note that the construction was supposed to be completed in 2011. Thus, the forgivable loan was only intended to help with 2011.

Have you made any calls to the hotline (include date, response time, and result).

Yes. The business has made multiple calls, including at least 1 in March or May of 2012. The process was ineffective and often placed responsibility on the business to resolve its own problems.

What would you say or show to the Metropolitan Council, in regards to the impact and process of the light rail construction?

The business would show the Metropolitan Council records of its decreased customer counts and gross annual sales.

This was very poorly thought out. The last thought about this project was the businesses. How come it costs the business owning families so much, when it is benefiting everyone else?

The Metropolitan Council initiated the affected chambers of commerce, who then spoke positively of the project. This was deceptive.

Do you feel the light rail construction provides sufficient notice of activities that will directly affect your business?

Not at all.

In the future, how would you prefer to receive notice from the Metropolitan Council.

Email:

No

Phone:

No

In person or notice on door:

The business would like in person notice.

Other:

N/A

Any additional information to be shared

The business is not anti-rail. In fact, the business sees the rail as a "free puppy." However, the execution of the project has been crummy for the business. Even today, the business is afraid that

issues such as parking and snow removal have not been addressed and resolved and fears how those issues will impact the business.

The business does not believe that this light rail should be produced again, in other locations.

Statement of Truth

I certify that the above statements are a true and accurate reflection of the facts, to the best of my knowledge and belief.

Print: _____

Signature: _____

Date: _____

Business C

Date:

08/01/2017

Interviewee:

Shahed Ahmed

What is the name of your business, as it appears on financial records/tax information:

Midway University & Hamline Properties LLC

Address of business:

1347 University Avenue West, St. Paul, MN 55104.

Telephone number of business:

651-645 7101.

Email address of business:

N/A.

Describe the business (e.g., type of business, products, and services).

Gas station, convenience store, and car wash.

How long has the business existed?

Business has existed for approximately 20 years. Current owners purchased in January of 2010.

How long has the business been located on or near University Avenue?

The business has been located on University Avenue for approximately 20 years.

Does the business make gross annual sales (revenue, not profit) over $7,000,000

Yes

Does the business possess monthly written financial records for the past 3-5 years, documenting gross annual sales (revenue, not profit), expenses, and profit.

The business possesses record dating back to its purchase in January of 2010

Was there light rail construction in front of the business in 2010 or 2011:

Yes Construction began approximately February of 2011, until December 2011

[IF YES] Did the business have a decrease in gross annual sales (revenue, not profit) in 2010/2011 (depending on when construction began in the area) compared to the prior 2-3 years

Yes (2011 finances are only compared to 2010 finances)

[IF YES] What percent decrease in gross annual sales (revenue, not profit) did the business experience:

Equal to or greater than 50 percent

[IF YES / LANDOWNING] Has the business experienced or been informed of any upcoming tax increases:

Yes Property taxes have increased by over 100 percent. In addition, the business has been assessed fees for lighting, plumbing updates, and drainage updates.

[IF YES / RENTING] Has the business experienced or been informed of any upcoming tax increases or lease increases:

N/A

Has there been light rail construction in front of the business in 2012:

Yes Construction has been occurring since March of 2012

[IF YES] Thus far, in 2012, has the business experienced a decrease in gross sales (revenue, not profit), as compared to the same term in the 2-3 years prior to construction

Yes (2012 finances are only compared to 2010 finances)

[IF YES] What percent decrease in gross sales (revenue, not profit) has the business experienced:

Generally between 40 percent and 60 percent. Greater than 70 percent during intense construction beginning approximately 3 months ago and lasting for approximately 2 months

[IF YES / LANDOWNING] Has the business experienced or been informed of any upcoming tax increases:

Unsure of further property tax increases and assessments.

[IF YES / RENTING] Has the business experienced or been informed of any upcoming tax increases or lease increases:

N/A

Describe what interference the construction on University Avenue (for the light rail construction) has caused that has led to your reported decrease in gross sales (revenue, not profit):

Access has been closed to pedestrians and vehicles during intense construction beginning approximately 3 months ago and lasting for approximately 2 months. Access has otherwise been hindered by continuous construction

What type of traffic (pedestrian and vehicle) has decreased:

Vehicle traffic (which supplies approximately 90 percent of the business' income) has generally decreased by between 50 percent and 60 percent. Vehicle traffic was eliminated during intense construction beginning approximately 3 months ago and lasting for approximately 2 months. Pedestrian traffic has decreased, particularly during intense construction beginning approximately 3 months ago and lasting for approximately 2 months.

Has the business experienced any trouble with the following utilities:

Electricity (include when, timeframe, notice, impact, and use of hotline):

Yes. The business faced periodic electrical outages (at least 2 to 3 times), most recently on July 31, 2012. No notice has been provided for the electrical outages. The electrical outages last for various amounts of time, but affecting business equipment takes between 1 and 2 hours. Last month, the business experienced a whole day without access to its computer equipment. The business equipment is sensitive and has suffered damage (discussed in property damage section) from the electrical outages. In addition, the business is unable to sell gasoline without access to its equipment. The business called the hotline and was told by the operator that the equipment outage was not the concern of the CCLRT project.

Gas (include when, timeframe, notice, impact, and use of hotline):

No

Water (include when, timeframe, notice, impact, and use of hotline):

Yes. Between 2 and 3 months ago, for a duration of 2 to 3 hours. The business was given notice of 1 day. Affect was nominal.

Phone (include when, timeframe, notice, impact, and use of hotline):

Yes. The business faced period telephone outages approximately 2 months ago. No notice was provided. The business was unable to be accessed by customers or perform business communications, during the outages.

Sewer (include when, timeframe, notice, impact, and use of hotline):

No

Trash collection (include when, timeframe, notice, impact, and use of hotline)

Trash collection was delayed by durations of 1 to 7 weeks during intense construction beginning approximately 3 months ago and lasting for approximately 2 months. These delays were due result of road closure. No notice was provided. The business was unable to properly dispose of its waste

Mail delivery/pickup (include when, timeframe, notice, impact, and use of hotline):

No.

Internet (include when, timeframe, notice, impact, and use of hotline).

No

Cable/satellite (include when, timeframe, notice, impact, and use of hotline):

No

(DID THE INTERVIEWEE REMEMBER, KNOW, OR REFUSE TO ANSWER THESE QUESTIONS)

Has any of the following impacted the business during the light rail construction:

Dust/air (include when, impact, and use of hotline).

Yes. The business needs to clean its inventory roughly biweekly to prevent dust buildup and maintain an attractive store, thus costing the business in extra labor costs. Additionally, the HVAC system has overheated as a result of dust buildup, requiring cleaning and associated expenses

Litter/trash (include when, impact, and use of hotline)

No.

Noise/vibration (include when, impact, and use of hotline):

Yes. There is constant vibration, which disrupts the business's sensitive equipment and often forces the business to pay for repairs or replacements. The noise is periodic during times when construction requires machinery.

Sewer grates (include when, impact, and use of hotline).

No.

[DID THE INTERVIEWEE REMEMBER, KNOW, OR REFUSE TO ANSWER THESE QUESTIONS]

Has the business experienced any of the following access issues:

Sidewalk (include when, timeframe, impact, and use of hotline):

During intense construction beginning approximately 3 months ago and lasting for approximately 2 months, both University Avenue and Hamline Avenue sidewalks were closed off. During that time, no temporary walkways were made available to pedestrians. For the last 2 weeks, the Hamline Avenue sidewalk is closed off and no temporary walkway has been made available to pedestrians.

Parking lot (include when, timeframe, impact, and use of hotline):

No

Incoming deliveries (include when, timeframe, impact, and use of hotline)

During intense construction beginning approximately 3 months ago and lasting for approximately 2 months, deliveries were delayed between 1 and 2 weeks. This resulted in a shortage of product, which was the business's only form of income because cars could not access the gas pumps.

Handicap ramps (include when, timeframe, impact, and use of hotline).

N/A

Crosswalks (include when, timeframe, impact, and use of hotline):

During intense construction beginning approximately 3 months ago and lasting for approximately 2 months crosswalks across University Avenue and Hamline Avenue were closed. A temporary walkway was created across University Avenue, but no temporary walkway was made across Hamline Avenue. The reduced pedestrian access impacted the business's gross sales (revenue, not profit) because no vehicle access was available during that time.

2-way traffic on University Avenue (include when, timeframe, impact, and use of hotline):

During intense construction beginning approximately 3 months ago and lasting for approximately 2 months the entire intersection of University Avenue and Hamline Avenue was shut down and inaccessible to vehicles. During this time, gross sales (revenue, not profit) decreased by greater than 70 percent.

[DID THE INTERVIEWEE REMEMBER, KNOW, OR REFUSE TO ANSWER THESE QUESTIONS]

Have you been able to ensure that people know your business is open:

To some degree

Describe the business' experience with customer's finding your business, during the light rail construction.

Customers have complained about the difficulty getting onto the business premises. Customers have informed the business that it is more convenient for them to go elsewhere.

Have any of the following helped with customer awareness and location of the business:

Orange construction signs

No.

Personally made signs [include how many and costs]:

No

"Open for Business" signs:

Yes. The company has purchase 3 signs, totaling approximately $600.

Met Council marketing (Mad B Co)

N/A

U/ tech assistance:

No

Little Mekong support

No

Talking to customers by phone.

Yes. Regular customers have been contacted.

Providing maps to customers:

No.

Website

No

Has the company experienced any real property damage due to the light rail construction:

Yes. The underground gas tank cover was broken by a large truck, run by the construction crew. Because the cost to replace the gas tank cover would be approximately $1,500, the tank cover has been replaced with an orange cone to prevent any accidents. Additionally, the HVAC system has overheated due to dust buildup. Repairing the HVAC system has cost approximately $1,200.

Has the company experienced any personal property damage due to the light rail construction:

The dust, vibrations, and electrical outages have caused damage to the business' computer equipment, cash register, credit card system, and pumps. Between replacements and repairs, these damages have cost $3,800 to resolve. Additionally, the freezer and one of the gas pumps has been shut down, due to the dust, vibration, and electrical outages. The pump was inspected for approximately $600 but neither the freezer nor pump have or will be fixed.

Aside from customer access and property damage, what have been other challenges has the business faced during the light rail construction?

Retaining employees and maintaining hours

[IF APPLICABLE] What can or could prevent or reduce these challenges:

Access has been the greatest issue. Without access, there are no solutions.

Has the company experienced any safety concerns due to the light rail construction (i.e., unmarked holes, heavy loads being hauled overhead, flooding, etc.)

No

[IF YES] Have you taken any actions (including calling the hotline) in connection to these safety concerns?

N/A.

Has the business made any strategic responses to business impact from the light rail construction.

Staffing:

The business has lost employees who have taken other jobs. Additionally, because of the need for a security guard (see Hours of operation), the business has hired additional staff through necessity.

Overhead:

Overhead has remained the same, with the exception of employing a security guard during closed hours.

Reduced/increased store size

No

Marketing:

No.

Hours of operation

The company reduced its hours of operation from 24 hours a day to 6:00 am to 2:00 am

Services offered:

The business has indefinitely closed its carwash, due to power outages and damage done to the carwash as a result. Additionally, the business has closed one of its pumps, which was irreparably damaged by the construction, reducing its gas services by 25 percent

Products offered:

The business has reduced its inventory, due to slowed sales. This is in response to the accumulation of expired products that the business has not been able to distribute quickly enough

Other:

N/A

Has the business applied for a forgivable loan:

Yes. The business has just placed an application.

What was the outcome of the application (e.g., awarded/not, how much, and what year).

The response to the application is pending, but the business was informed that because it has gross sales (revenue, not profit) of over $2,000,000, it will likely not qualify for the loan

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Have you made any calls to the hotline (include date, response time, and result):

Yes. The business has made multiple calls, most recently in the last month. The operators have not offered adequate assistance and have essentially deflected responsibility onto the business.

What would you say or show to the Metropolitan Council, in regards to the impact and process of the light rail construction:

The businesses are suffering the most from the CCLRT project, and even though the businesses are what keeps the street alive, they are the last to be considered throughout this process.

Do you feel the light rail construction provides sufficient notice of activities that will directly affect your business:

No notice has been received for closures of Hamline Avenue or its sidewalks. While notice has been received for expected access and utilities disruptions on University Avenue, such notice has not been received for unexpected access and utilities disruptions.

In the future, how would you prefer to receive notice from the Metropolitan Council:

Email:

This is the preferred method of notice.

Phone:

No.

In person or notice on door:

No

Other:

N/A.

Any additional information to be shared:

The Metropolitan Council had forced the sale of an easement to place a sign on the real property of the business. Now the Metropolitan Council is requesting an extension of the time for the easement (through an additional sale). The business is reluctant to agree to the easement, due to the unexpected damages of the project and potential future damages.

Statement of Truth:

I certify that the above statements are a true and accurate reflection of the facts, to the best of my knowledge and belief.

Print: _

Signature: _____

Date: _____

Business D

Date:

08/06/2012

Interviewee:

Ross Rabinda

What is the name of your business, as it appears on financial records/tax information:

AVAL Corporation

Address of business:

666 University Avenue West, St. Paul, MN 55104.

Telephone number of business:

651-772-6316

Email address of business:

russ@A-1vacuum.com

Describe the business (e.g., type of business, products, and services)

Vacuum rental and service provider.

How long has the business existed:

The business was established in 1963.

How long has the business been located on or near University Avenue:

The business has been located on University Avenue for approximately 36 years.

Does the business make gross annual sales (revenue, not profit) over $2,000,000.

No

Does the business possess monthly written financial records for the past 3-5 years, documenting gross annual sales (revenue, not profit), expenses, and profit:

The business possesses record dating back approximately 5 years (or as its CPA advises).

Was there light rail construction in front of the business in 2010 or 2011:

No.

(IF YES) Did the business have a decrease in gross annual sales (revenue, not profit) in 2010/2011 (depending on when construction began in the area) compared to the prior 2-3 years:

N/A

(IF YES) What percent decrease in gross annual sales (revenue, not profit) did the business experience:

N/A

(IF YES / LANDOWNING) Has the business experienced or been informed of any upcoming tax increases:

N/A

(IF YES / RENTING) Has the business experienced or been informed of any upcoming tax increases or lease increases:

N/A

Has there been light rail construction in front of the business in 2012:

Yes. Construction has been occurring since March 15 of 2012

(IF YES) Thus far, in 2012, has the business experienced a decrease in gross sales (revenue, not profit), as compared to the same terms in the 2-3 years prior to construction.

Yes.

(IF YES) What percent decrease in gross sales (revenue, not profit) has the business experienced.

The decrease for the term of January to August of 2012 from the term of January to August of 2011 is approximately 11 percent

(IF YES / LANDOWNING) Has the business experienced or been informed of any upcoming tax increases

Yes. The property is facing a property tax increase of approximately 6 percent.

(IF YES / RENTING) Has the business experienced or been informed of any upcoming tax increases or lease increases.

N/A

Describe what interference the construction on University Avenue (for the light rail construction) has caused that has led to your reported decrease in gross sales (revenue, not profit)

Access to traffic was greatly reduced for 3 months during a complete closure of University Avenue

What type of traffic (pedestrian and vehicle) has decreased:

Vehicle traffic (which supposedly 100 percent of the business' gross annual sales) has generally decreased.

Has the business experienced any trouble with the following utilities.

Electricity (include when, timeframe, notice, impact, and use of hotline):

Yes. The business had faced 1 electrical outage, which lasted for 3 hours. This outage occurred on July 12 of 2012. No notice was provided for the electrical outage. The business did contact the hotline for these outages. None only from the hotline.

Gas (include when, timeframe, notice, impact, and use of hotline):

Yes. The gas service was disconnected in May of 2012 and has yet to be reconnected. The business has been dealing directly with XCEL Energy, but has yet to receive a resolution. The business suffered a delay in use of its new HVAC system, because the business could not pass inspection without having proper gas connection.

Water (include when, timeframe, notice, impact, and use of hotline):

Yes. The water was disconnected for a short period of time. Notice was provided to the business. The business was content with how the outage was handled, and the impact was minimal.

Phone (include when, timeframe, notice, impact, and use of hotline)

No.

Sewer (include when, timeframe, notice, impact, and use of hotline)

Yes. The water was disconnected for a short period of time. Notice was provided to the business. The business was content with how the outage was handled, and the impact was minimal.

Trash collection (include when, timeframe, notice, impact, and use of hotline):

No. However, the business has had to move its trash collection to the west side of the building, rather than through the front access.

Mail delivery/pickup [include when, time frame, notice, impact, and use of hotline].

No. However, the business has received complaints from Ours, UPS, SPEEDEE, and other delivery services regarding the difficulty in reaching the business.

Internet (include when, timeframe, notice, impact, and use of hotline)

No.

Cable/satellite (include when, time frame, notice, impact, and use of hotline)

No.

[DID THE INTERVIEWEE REMEMBER, KNOW, OR REFUSE TO ANSWER THESE QUESTIONS]

Has any of the following impacted the business during the Light rail construction:

Dust/air [include when, impact, and use of hotline]:

Yes. The business is constantly dealing with dust, which has impacted the business in a number of ways. The HVAC has broken due to dust build up and heaters, as caused by the doors being shut (a response to the dust and noise)

Litter/trash (include when, impact, and use of hotline]:

No

Noise/vibration [include when, impact, and use of hotline].

Yes. There is constant vibration and noise, which disrupts the business. The business attributes the vibration, in part, to the HVAC system breaking down

Sewer grates (include when, impact, and use of hotline]:

No. Sewer has been replaced, and awaiting costs

[DID THE INTERVIEWEE REMEMBER, KNOW, OR REFUSE TO ANSWER THESE QUESTIONS]

Has the business experienced any of the following access issues:

Sidewalk (include when, timeframe, impact, and use of hotline):

Yes. While construction was occurring in the businesses basement, the sidewalk along University Avenue was completely removed. This lasted for roughly 30 days, beginning approximately in mid June. No notice was given initially, but the business objected, due to the special basement condition (see additional information). Much more difficult to actually reach the business. Few pedestrians tried to reach the business. Temporary bridge was used, but moved consistently.

Parking lot (include when, timeframe, impact, and use of hotline):

Street parking was taken. However, the business was allowed to lease from a parking lot, owned by the City of St. Paul. The business attributes this access to its ability to survive the project.

Incoming deliveries (include when, timeframe, impact, and use of hotline)

Mid days, however deliveries continue to be an issue. The business was designed to take large deliveries from the front access. However, with the construction project and the resulting loss of street parking, the business has to adapt its building to receive deliveries from the rear of the building.

Handicap ramps (include when, timeframe, impact, and use of hotline).

The ramps were replaced. Temporary ramps were made available.

Crosswalks (include when, timeframe, impact, and use of hotline):

The crosswalks were replaced. No temporary crosswalks were available.

2-way traffic on University Avenue (include when, timeframe, impact, and use of hotline).

2-way traffic has been available on either the north side of University Avenue or the south side. The traffic is currently allowed on the south side (the side the business rents on), however 2 months ago, the traffic was on the north side.

[DID THE INTERVIEWEE REMEMBER, KNOW, OR REFUSE TO ANSWER THESE QUESTIONS]

Have you been able to ensure that people know your business is open

To some degree.

Describe the business' experience with customers finding your business, during the light rail construction:

The business had multiple complaints with navigating and reaching the business. However, the business has used signage and received compliments from multiple customers on ease of navigation, as well.

Have any of the following helped with customer awareness and location of the business:

Orange construction signs:

No.

Personally made signs (include how many and costs):

Yes. The business created multiple signs to direct traffic, totaling approximately $300.

"Open for Business" signs:

None in response to the construction.

Met Council marketing (Mod & Co):

Not to date.

U2 cash assistance:

No.

Little Mekong support:

No.

Talking to customers by phone:

Yes. The business has connected its customers by telephone. In addition, the business has used print updates, and emails.

Providing maps to customers:

Yes. A map is available on the business facebook page.

Website:

Yes (see maps).

Has the company experienced any real property damage due to the light rail construction:

Yes. The exterior structure has been damaged as a result of the vibrations. The business is continuing to evaluate further damage to the property. The value of the damage is not currently

known. In addition, the condition of the landscape around the business has led to damage within the business from foot traffic. The business is projecting a need to replace or repair flooring. Again, there is no estimated value to the damage done, thus far.

Additionally, the businesses basement flooded in the end of June. The flooding lasted for approximately a week. The impact on the business was loss of basement use. This lasted until the flooding was remedied.

Has the company experienced any personal property damage due to the light rail construction:

No.

Aside from customer access and property damage, what have been other challenges has the business faced during the light rail construction:

Operating a business is time consuming, with projects, employee needs, customer needs, and corporate compliance issues. Adding the interaction with the many different construction related projects and issues distracts from the tasks necessary to make a business profitable and attractive to potential customers.

[IF APPLICABLE] What can or could prevent or reduce these challenges:

At this point, it is too late to reduce the challenges. The Metropolitan Council should have used the findings presented by impacted businesses, prior to approving construction on University Avenue.

Has the company experienced any safety concerns due to the light rail construction (i.e., unmarked holes, heavy loads being hauled overhead, flooding, etc...):

Yes. The businesses has faced numerous safety concerns. During sidewalk construction, the company was concerned about people falling into the basement. In one instance, a part of the sidewalk dropped into the basement. No construction workers or people were hurt, but the drop was unanticipated.

[IF YES] Have you taken any actions (including calling the hotline) in connection to these safety concerns:

Yes. The business has called the hotline approximately 6 times for various issues. Most of the time the hotline responded to the concerns, not always within a timely manner.

Has the business made any strategic responses to business impact from the light rail construction:

Staffing:

The business has reduced staffing, temporarily, until customers return.

Overhead:

Costs have gone up, overall, and so the business has tried to cut overhead expenses, wherever possible.

Reduced/increased store size:

No.

Marketing:

Marketing has been severely reduced, temporarily.

Hours of operation:

No.

Services offered:

No.

Products offered:

No.

Other:

N/A.

Has the business applied for a forgivable loan:

Yes. The business recently applied for the forgivable loan.

What was the outcome of the application (e.g., awarded/not, how much, and what year):

The application is in progress.

Have you made any calls to the hotline (include date, response time, and results):

Yes. The business has made multiple calls, including at least 1 in March or May of 2022. The process was ineffective and often placed responsibility on the business to resolve its own problems.

What would you say or show to the Metropolitan Council, in regards to the impact and process of the light rail construction:

The Metropolitan Council initiated the affected chambers of commerce, who then spoke positively of the project. This was deceptive.

Do you feel the light rail construction provides sufficient notice of activities that will directly affect your business.

Not at all

In the future, how would you prefer to receive notice from the Metropolitan Council

Email

N/A

Phone:

N/A

In person or notice on door:

N/A.

Other

The business does not care how it is contacted, just that it is contacted.

Any additional information to be shared

The business' basement extends out under the sidewalk. As a result, the business suffered a greater impact during construction, which concluded with the basement ceiling being lowered 4 inches and the depth being reduced 4 inches. Additionally, the building had structural members added to it

---

Statement of Truth

I certify that the above statements are a true and accurate reflection of the facts, to the best of my knowledge and belief

Print: _____

Signature _____

Date _____

APPENDIX 4

(COMMENTS)

The following are statements provided by the sample businesses when asked what they would like to say to the Metropolitan Council about the CCLRT project.

Business A:

"You cannot explain the effects that this project is having on businesses. Without the salon, the beauty supply store would be out of business."

Business B:

"This was very poorly thought out. The last thought about this project was the businesses. How come it costs the business owning families so much, when it is benefitting everyone else?

The Metropolitan Council infiltrated the affected chambers of commerce, who the spoke positively of the project. This was deceptive."

Business C:

"The businesses are suffering the most from the CCLRT project, and even though the businesses are what keeps the street alive, they are the last to be considered throughout this process."

Business D:

"The Metropolitan Council and Walsh seem to communicate well. However, the crews doing the 'grunt' work are the 'left hand' and management (as usual) are the 'right hand' in some cases. Overall though they all are trying to get through this crap without pissing us off any more than they have to."

To: Kathryn O'Brien
Central Corridor Project Office

From: Beth Bartz, AICP

Date: September 4, 2012

Re: Review of ***Central Corridor Light Rail Transit Construction: Impact Study for Pascal Street to Dale Street Sample, Saint Paul, MN*** prepared by the University Avenue Betterment Association, August 16, 2012.

As requested, I have reviewed the report provided by the University Avenue Better Association (UABA) identified above for use in the Central Corridor LRT Supplemental EIS for business impacts during LRT construction. The report provides a summary as well as detailed notes of interviews with four University Avenue businesses regarding impacts experienced by these businesses as a result of LRT construction activities. The interviews covered a broad range of topics including business characteristics, access impacts, utility impacts, construction related disturbances, property damages, property taxes/rent, safety and communications as well as impacts to business revenue. The report concludes that businesses are suffering substantial damages as a result of CCLRT construction. The report acknowledges that it reports sentiment rather than empirical data; however "it reveals an attitude toward the Metropolitan Council's attempt to connect the Twin Cities through public transit." (p. 14).

SRF's approach to the Supplemental EIS seeks to incorporate all locally collected regarding business impacts during construction, including information collected by academic and community organizations. We are sorting this information into two categories:

1. Data collected with statistically valid sampling techniques which can be used to assess the collective impacts to all businesses in the corridor, and

2. Data which is not statistically valid for the purpose discussed above, but from an anecdotal standpoint can assist in illustrating the range and types of impacts experienced by businesses in the corridor.

In order to fit into the first category, data sources would need to have the following characteristics as discussed previously:

- Data would need to be collected from businesses that were operating during construction (2011 and 2012) immediately adjacent to the LRT corridor (fronting on University Avenue/Washington Avenue/4th Street in downtown St. Paul). Identification of the geographic area and/or business type for which the data was gathered is necessary. Data from businesses in place several years or more prior to construction would be most valuable to track historical information and to measure any changes in trends.

- The sample size (number of businesses) should be large enough to be representative of the broad experiences of businesses throughout the corridor. If the data has a very small sample

size it may be of limited usefulness in terms of extrapolating information on trends / effects. The data set should be consistent both in the types of information gathered, and the manner in which the data was collected.

- The data methodology must be unbiased and objective in terms of the sample selection, methodology, the data instrument and the reporting.

While this report does address businesses operating on Central Corridor during construction activities, and the data collection was done in a consistent and valid manner, the sample size at four is very limited. Also it is not clear how the sample was selected. Therefore, we cannot use this data for purpose 1 listed above; that is, it is not appropriate to extrapolate from these four examples to all businesses in the corridor.

However, this information is beneficial in illustrating the types and severity of impacts experienced by some business owners in the Central Corridor. We will incorporate this information into the Supplemental EIS as anecdotal information for illustrative purposes.

APPENDIX I:
Mitigating Business Losses: Services, Strategies, and Effectiveness

Mitigating business losses: services, strategies, and effectiveness

A survey of businesses affected by Central Corridor Light Rail construction

OCTOBER 2012

Mitigating business losses: services, strategies, and effectiveness

A survey of businesses affected by Central Corridor Light Rail construction

October 2012

Prepared by:
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Contents

Summary ... 1
Introduction and background ... 6
Central Corridor Light Rail ... 6
Central Corridor Funders Collaborative ... 6
Business Resources Collaborative ... 7
Methods ... 7
Characteristics and demographics ... 10
Survey respondents ... 10
Businesses ... 11
Construction-related impacts ... 13
Groups affected by construction ... 15
Geographic distribution of construction and businesses ... 16
External services ... 17
Service participants ... 20
Reasons for participation ... 21
Service effectiveness ... 21
Additional service needs ... 28
Internal strategies ... 29
Businesses implementing mitigation strategies ... 30
Effectiveness of mitigation strategies ... 32
Business perceptions of future outlook ... 34
Construction impact and future outlook ... 36
Service use and future outlook ... 38
Business strategies and future outlook ... 40
Issues to consider ... 42
Theory of construction mitigation ... 42
Successful implementation of services ... 43
Challenges and opportunities ... 43
Conclusion ... 44
Appendix ... 46
Figures ... 46
Survey instrument ... 65

Figures

1. Sampling and response rate 8
2. Respondent demographics 10
3. Business types and sizes 11
4. Length of time business has been in operation (at current location and at any location) 12
5. Level of construction and construction-related disruptions 13
6. How much was your business impacted because… 14
7. How informed were you about… 15
8. Map of 2011 construction and distribution of surveyed businesses 16
9. Participation in construction impact mitigation services (among all respondent businesses) 18
10. Awareness of services and communication efforts (among only the respondent businesses *not* sampled based on service participation) 19
11. Primary reasons for nonparticipation in services 20
12. Primary reasons for participation in services 21
13. How effective was the program in… 23
14. Overall, how would you rate the effectiveness of the program? 24
15. Overall, how would you rate the effectiveness of the program? 25
16. What was the best thing about the [program]? 26
17. How could the [program] be improved? 27
18. Interest in services 28
19. Construction mitigation strategies 29
20. Number of internal strategies implemented, by respondent demographics 30
21. Number of internal strategies implemented, by type of business 31
22. Number of strategies implemented by business characteristics 31
23. How effective was the [strategy] in… 33
24. Over the next five years, do you expect… 35
25. Do you expect this business will be operating in its current location in FIVE YEARS? 36
26. Over the next five years, do you expect… 37
27. Do you expect this business will be operating in its current location in FIVE YEARS? 38

Figures (continued)

28. Over the next five years, do you expect…. 39

29. Do you expect this business will be operating in its current location in FIVE YEARS? 40

30. Over the next five years, do you expect…. 41

31. Theory of construction mitigation 42

Acknowledgments

Wilder Research would like to thank the Central Corridor Funders Collaborative and Business Resources Collaborative for their generous guidance and support throughout this research process. In particular, thanks go to Jonathan Sage-Martinson and Chris Ferguson for their help strategizing and encouraging this important study. We would also like to thank the individuals and organizations that helped pull together information about the businesses, the services available, and service use on the corridor, or assisted in providing feedback or information for the survey instrument or report. This includes Nancy Homans at the Mayor's Office of the City of Saint Paul; Robin Caufman, Lee Shoua, and Daniel Pfeiffer at the Metropolitan Council; Kari Canfield of the Midway Chamber of Commerce; and Isabel Chanslor of the Neighborhood Development Center.

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Zeinab Khalif

And finally, a special thank you goes out to all of the business owners, managers, and other staff who took time out of their day during this critical time to answer our questions and provide this important information. Without them, this study would not have been possible.

Summary

In the fall of 2011, the Central Corridor Funders Collaborative (CCFC), on behalf of the Business Resources Collaborative (BRC), asked Wilder Research to conduct a survey about the services and strategies to mitigate business losses during construction of the Central Corridor Light Rail.

This study conducted surveys in person and over the phone with owners and managers of 201 businesses on the route of the Central Corridor Light Rail between March and June 2012. This survey is intended to help understand the types of assistance and mitigation efforts businesses utilized, the effectiveness of these efforts, the ways assistance can be improved, and lessons or knowledge to inform similar projects in the future. Respondents were asked about their experiences with specific services available including the Small Business Loan Program, the Parking Loan Program, services provided by the U7 collaborative, the "Buy Local" coupon book, and the Progressive Dinner organized in December 2012. Respondents were also asked about any mitigation efforts they had undertaken on their own including additional marketing, signage, and promotions as well as the Metropolitan Council Project Office's communications efforts to promote businesses on the corridor

Almost three-quarters (72%) of respondents were male, and 44 percent were people of color. Almost one-third (31%) were foreign-born, and another 10% were first-generation. Businesses were primarily retail, grocery, and convenience stores (30%); restaurants, bars and other hospitality or recreation (22%); nonprofessional services (21%); or professional services (15%). Two-thirds (64%) of the businesses had been at their location on the corridor since before 2005.

Most respondents reported either significant (63%) or minor (17%) construction in front of their business during the year before the survey. Types of disruptions included reduced sidewalk access in front of their business (53%), closure of the street for longer than a month (52%), loss of on-street parking (51%), and loss of off-street parking (27%). Respondents also reported their customers had difficulty navigating to their businesses (80%); fewer customers because they heard the business was hard to access (73%); less automobile traffic in front of their business (73%); excess noise, dust, and other disruptions (72%); and fewer pedestrians in front of their business (63%).

When asked about construction-related communications, one-half (49%) of respondents reported being very informed about who to contact about issues encountered, 44 percent were very informed about the construction schedule, 36 percent were very informed

about utility outages, and 35 percent were very informed about road and sidewalk closures.

Successful implementation of services

This study suggests that the services administered on the corridor have been successful in their implementation. In particular, there has been high general satisfaction with the services from what respondents consider to be well-designed programs.

- **General effectiveness and satisfaction.** Survey respondents gave relatively high ratings for the overall effectiveness of and their overall satisfaction with the services they received.
- **Well-designed programs.** Findings suggest that the services were designed well to encourage participation and be user-friendly.

Reasons for participation

Participants in the Parking (100%) and Small Business (76%) Loan Programs generally reported that a primary reason for their participation was that the programs met a specific need for the business. Many respondents (78% Parking and 62% Small Business) also reported that the favorable terms or requirements of the programs were primary reasons for participating. Among "Buy Local" coupon book participants, the most commonly reported reason for participation (52%) was that they were asked to do so.

Service effectiveness and strengths

The services available to corridor businesses aimed to serve two distinct but related purposes. While the Small Business Loan program, the Parking Loan program, and the U7 services generally aimed to compensate for lost revenue due to construction, the "Buy Local" coupon book, Progressive Dinner, and Project Office communication efforts were designed to increase customer traffic, thereby generating additional revenue.

In general, the services intended to compensate for revenue losses were rated higher in overall effectiveness (80-90% somewhat or very effective) compared to those intended to increase customer traffic (50-70%). The financial support provided was the primary strength identified for the revenue compensation services while the low cost and exposure to customers were the primary strengths identified for the services intended to increase customer traffic.

Internal strategies

Along with the external service and assistance the businesses may have received, they were also asked about any strategies they had implemented themselves that were intended to mitigate the negative effects of construction. Just over one-half (55%) of respondents reported that their business had implemented at least one strategy to mitigate the effects of construction.

- 32% put up **additional signage** near their business to help customers navigate traffic or to indicate the business was open during construction. On average, they spent $661 on this strategy and 60% report it was effective in increasing customer traffic.
- 29% provided **additional promotional offers** (coupons, deals, etc.) to help generate customer traffic during the construction. On average, they spent $2,115 on this strategy and 66% report it was effective in increasing customer traffic.
- 18% purchased **additional advertising** (TV, radio, or print) to help generate customer traffic during construction. On average, they spent $1,993 on this strategy and 57% report it was effective in increasing customer traffic.

Business perceptions of future outlook

Three-quarters (76%) of all the businesses surveyed reported that they expect their business to be operating in its current location in five years, 16 percent did not expect their business to be in operation at this location in five years, and 9 percent did not know if their business will be in operation at their current location in five years.

Respondents from businesses that had reported construction disruptions in the year before the survey were slightly less likely than those who had not experienced disruptions to report that they expect to be in business at their current location in five years (74% to 80%). This difference is due to a higher level of uncertainty (12% compared to 2% reporting "don't know") among those experiencing disruptions rather than the expectation that they will no longer be operating at their current location (15% compared to 19%). For the most part, the outlook of respondents was consistent whether they received services or not. However, the most positive response (82% reporting they will be in business in their current location in five years) was from businesses that had not received services *and* had not experienced construction.

The primary reasons respondents reported they did not think their business would be operating at that location in five years were an uncertain future; severe financial losses; not wanting to stay in the area; or a pending or future building eviction.

When asked to state expectations measures of business health over the coming years, the majority of respondents expected at least small increases in sales (64%), profits (61%), and employee wages (53%).

Challenges and opportunities

While the overall findings are positive, a couple of key areas to consider may help to strengthen the programs and ensure the greatest possible impact in future iterations of the programs.

- **Specific effectiveness is unclear.** Respondents rated the effectiveness of specific aspects of the services and assistance lower than their overall effectiveness. This suggests either that the services provide value beyond their specific goals or that the particularly valuable aspects of the program were not measured.
- **Outreach is critical to participation.** Many respondents who participated in programs indicated they did so because they were asked to. However, overall awareness of the programs was relatively low.

Suggestions for improvements to services

Participant suggestions for program improvement varied widely by program. In the case of the Small Business and Parking Loan Programs, respondents most commonly suggested that the programs disburse more funds, and many said they had no suggestions for program improvement. A few suggested, however, that the program broaden the eligibility criteria and improve the timeliness of service delivery.

Participants in the U7 services also suggested that the program improve the timeliness of service delivery, but nearly as many said they had no suggestions for program improvement. Those participating in the "Buy Local" coupon book and the Progressive Dinner suggested that the programs could be improved by getting greater participation (customers and businesses) in the programs. Those familiar with the Project Office's communication efforts suggested that the information provided be more timely and accurate, that the Project Office conduct more outreach, and that they communicate with businesses in person rather than via phone, mail, or email.

Additional service needs

Most respondents reported that financial assistance for marketing, promotion, or advertising (80%), low- or no-interest operating loans (75%), technical assistance for marketing or promotion (77%), and technical assistance for business planning or strategy (65%) would be at least somewhat helpful.

Conclusion

Many factors affect business health besides the services and strategies measured in this study. This prevents us from drawing a conclusive determination regarding the impact of the services offered to mitigate the negative effects of Central Corridor Light Rail construction. However, there is evidence that services effectively reach those who need them the most, and provide a diverse range of options to meet a variety of needs. The groups that experienced the most intense construction impact disproportionately received the most highly rated services.

In addition, the variation of participation rates among different types of owner characteristics and types of services is an indication that businesses were able to choose services that most closely met their needs. This range of service options is critical to the programs' success, both individually and as a package of services to benefit the corridor, and helps to efficiently allocate scarce support resources.

This study only focuses on the first year of Central Corridor Light Rail construction. Examination of services and impacts during subsequent years of construction, and into operational service of the line, will increase understanding of the total effect of the construction and mitigation efforts.

Introduction and background

In the fall of 2011, the Central Corridor Funders Collaborative, on behalf of the Business Resources Collaborative, asked Wilder Research to conduct a survey about services and strategies to mitigate business losses during the construction of the Central Corridor Light Rail.

This study is intended to address the following questions:

1. What types of assistance are businesses using? What other ways are businesses working to mitigate their losses? What are their reasons for using or not using the various types of mitigation?

2. Are efforts to mitigate losses due to light rail construction effective? If so, what are the most effective methods of mitigation and how have they been effective?

3. What can be improved with the assistance businesses received? How can the assistance more effectively address construction-related business needs?

4. What lessons or knowledge can be used to help businesses prepare for future light rail construction?

Central Corridor Light Rail

The "Central Corridor" is the common name used to refer to the 11-mile light rail line currently under construction between the Minneapolis and Saint Paul downtowns. The name is also sometimes applied to the neighborhoods surrounding the line. Construction on the rail line began in the spring of 2011 and is set to begin operations in 2014. This stretch will become the eastern portion of the Metro Transit Green Line, which will later also include a western portion extending from downtown Minneapolis into the southwestern suburbs.

Central Corridor Funders Collaborative

The Central Corridor Funders Collaborative (CCFC), established in 2008, is a collection of local and national funders working on development issues surrounding the Central Corridor Light Rail build-out. The CCFC describes their mission as "investing beyond the rail" by promoting learning, building shared solutions, and investing capital. The CCFC seeks to invest $20 million in the Central Corridor over 10 year through their Catalyst Fund. The Catalyst Fund primarily funds planning, implementation, research, and evaluation. The primary values that inform the CCFC and its work include *participation*,

fairness, *comprehensive solutions*, *sustainability*, and *healthy living*. For more information about the Central Corridor Funders Collaborative and its work, visit their website at www.funderscollaborative.org.

Business Resources Collaborative

The Business Resources Collaborative (BRC) convenes members of the business community, local nonprofit and community organizations, and public sector partners to focus on the economic and business health of the corridor. Its purpose, as described on the CCFC website, is as follows:

> The Business Resources Collaborative (BRC) was created to support businesses and property owners through this changing market. The BRC is a partnership of business coalitions, nonprofit community developers and local and regional governments. Our goal is to coordinate the delivery of a comprehensive, integrated mix of services that will support area businesses and property owners before, during, and after [light rail transit] construction. (http://www.funderscollaborative.org/partners/business-development-group)

Methods

As noted above, the intent of this study is to deepen understanding about the business loss mitigation strategies implemented in the Central Corridor, look for ways to improve on those strategies, and better prepare for future mitigation efforts. This section provides an overview of the methodology this study uses to address the research questions.

It is thought that the effects of light rail construction disproportionately affect those businesses fronting the light rail line, so this study only samples businesses with addresses on streets that will carry the Central Corridor Light Rail. For the downtown Saint Paul section of the corridor, this includes only businesses on the street level. Downtown Minneapolis businesses are excluded from this study because there is no significant Central Corridor light rail construction scheduled for that area. Businesses fitting these criteria were identified through three lists of businesses kept by organizations working with businesses on the corridor.

This study seeks to understand more about the conditions and effects of construction on for-profit business, so all nonprofit or community organizations and government offices were screened out of participation. Large nonprofit clinics and hospitals were also screened out, but small private practice offices (e.g., eye care, chiropractors, and dentists) and other professional offices are included in the sample. In total, 1,144 businesses were identified in the corridor.

Furthermore, because this study is intended to understand the effect of services in the mitigation efforts, businesses who received any of the four primary services associated with the mitigation efforts (see page 17) were automatically included in the sample. These businesses were identified through lists of participants provided by the various programs. Interviewers attempted to contact 73 Small Business Loan Program participants, 22 "Buy Local" coupon book participants, 20 Parking Loan Program participants, and 12 Progressive Dinner participants.

It was also important for the study to survey individuals with key roles and understanding of the businesses sampled. Therefore, it was requested that either an owner or manager complete the survey.

The survey instrument was developed with feedback from the Business Resources Collaborative and Central Corridor Funders Collaborative staff. Because of this study's focus on mitigation strategies, most of the survey instrument content consists of a series of questions about services and mitigation strategies implemented. However, additional questions were also asked about the level and types of construction disruption experienced by the businesses, characteristics of the business, demographics of the respondent, and the future outlook for the business. The complete survey instrument is available in the appendix.

Overall, 201 businesses were surveyed between March and June 2012 with a response rate of 60 percent (see Figure 1). Wilder's trained survey interviewer staff first contacted respondents at the location of their business, and completed the survey at that time if the respondents were available and willing. If the interview could not be completed during that visit, contact information was gathered to follow up by telephone.

1. Sampling and response rate

Total number of businesses identified in the corridor	1,144
Number of businesses attempted to contact	456
Not eligible (vacant, closed/moved, nonprofit or government, etc.)	119
Eligible: did not complete	136
Refusals	63
Language barrier	8
Unable to contact (8-12+ contacts)	57
Break-offs (started interview but did not complete)	8
Total completes	201
Total eligible sample (did not complete + completes)	337
Response rate (completes/eligible sample)	60%

Data from the surveys were cleaned, coded, and entered into a dataset, and analyzed using SPSS statistical analysis software. Statistical analyses primarily consisted of frequency distributions and cross-tabular analyses.

Characteristics and demographics

This section provides an overview of the characteristics of the individuals who completed the survey and of the businesses they represent.

Survey respondents

As noted in the methods section, this study specifically targeted survey respondents who were owners or managers of the businesses selected to participate. More than two-thirds (68%) of the respondents were either the sole owner (43%) or a co-owner (25%) of the business (Figure 2). Another 28 percent of survey respondents represent the business as a manager. Only five percent of survey respondents were neither an owner nor a manager, and these respondents included family members, administrative assistants, and other staff.

Sixty-nine percent of the survey respondents were born in the U.S., and 10 percent were first-generation (U.S.-born with at least one foreign-born parent). Over half were white, one-fifth Asian, one-tenth African-born, and several others were black, American Indian, multiracial, or some other race. Nearly three-quarters (72%) of respondents were male.

2. Respondent demographics

Gender (N=200)	**Number**	**Percent**
Male	144	72%
Female	56	28%
Race and ethnicity (N=194)		
African American or Black (non-Hispanic)	14	7%
African Born	21	11%
Asian or Pacific Islander (non-Hispanic)	35	18%
Other (includes American Indian and Multiracial, non-Hispanic)	9	5%
Hispanic (Any race)	7	4%
Respondents of color (total)	86	44%
White or Caucasian (non-Hispanic)	108	56%
Nativity (N=199)		
Foreign-born	62	31%
U.S.-born	137	69%
First-generation [a]	20	10%

Notes: Subtotals may not sum to 100% due to rounding. [a]U.S.-born with at least one foreign-born parent.

Businesses

A diverse representation of businesses participated in this study (Figure 3). Almost one-third of businesses (30%) were retail, grocery, and convenience stores. One-fifth (22%) were restaurants or bars, one-fifth (21%) nonprofessional services like auto repair and plumbing, and the remaining businesses were in professional services, finance, and property management (15%), and health and fitness (11%). Three-quarters (74%) of surveyed businesses employed fewer than 10 people; one-quarter employed more than 10, and 1 in 10 said the respondent/owner was the only employee. The median number of employees among respondent businesses was four employees and the mean was 10.

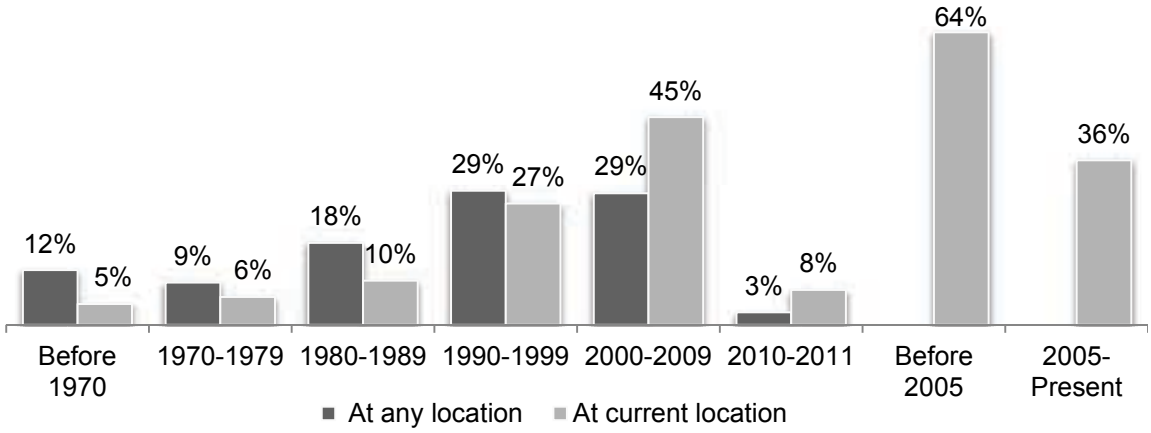
3. Business types and sizes (N=201)

Type (N=201)	Number	Percent
Retail, grocery, and convenience stores	61	30%
Restaurants, bars, hospitality, and recreation	44	22%
Nonprofessional services (e.g., auto, plumbing, etc.)	43	21%
Property management, professional services, and finance	31	15%
Health and fitness	22	11%
Number of employees (N=199)		
Owner only (no employees)	20	10%
1-9 employees	127	64%
10+ employees	52	26%

One-quarter (25%) of respondents reported owning the space in which the business operated and three-quarters (75%) rented the space.

The businesses surveyed were generally established businesses that have been in operation for several years (Figure 4). More than two-thirds (68%) have been in operation at any location since before 2000, and almost two-thirds of the businesses surveyed (64%) have been at their current location since before 2005. For the purposes of analysis, businesses are split into those that had been in their current location for at least five full years at the time of the 2011 construction (since before 2005) and those that had been in their current location for less than five years.

4. Length of time business has been in operation (at current location and at any location)



Construction-related impacts

Most respondents (80%) reported either minor or significant construction near their business in the year before the survey (Figure 5). About one-half of businesses reported reduced access to their sidewalk (53%), an extended closure of the street in front of their business (52%), and the loss of on-street parking (51%). One-quarter (27%) of businesses surveyed lost off-street parking. Two-thirds (68%) of businesses reported at least one of these disruptions near their business.

5. Level of construction and construction-related disruptions

Overall experience (N=201)	Number	Percent
There was no construction	41	21%
There was minor construction	33	17%
There was significant construction	126	63%
Types of disruptions (N=201)[a]		
Sidewalk in front of business had reduced access	107	53%
Business side of street was closed longer than a month	105	52%
Lost on-street parking	102	51%
Lost off-street parking	55	27%
One or more of the above disruptions	137	68%

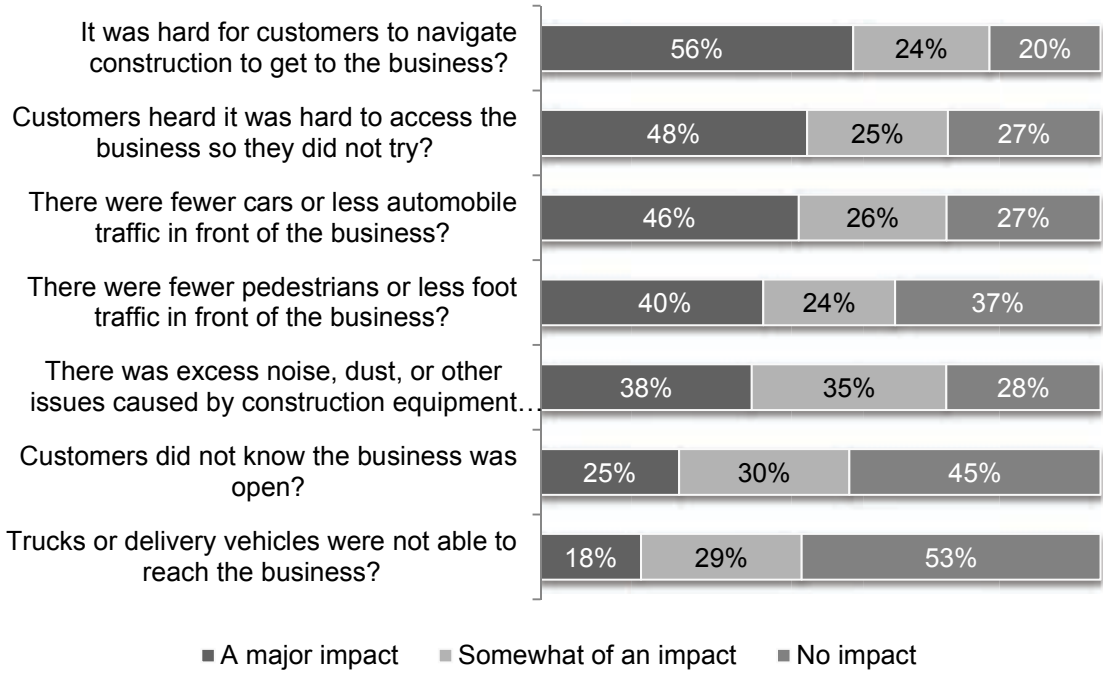
Note: *[a] These disruptions are self-reported and therefore based on the perceptions of the respondent. No additional information was gathered on the nature of these disruptions, such as the location or number of on- or off-street parking spaces lost.*

Through this report, the measure of any construction-related disruptions (one or more types) will be used to illustrate how service participation, strategy implementation, and outcomes differ between businesses that directly experienced construction and those that did not.

Most businesses (86%) reported at least one of the negative construction-related impacts listed in Figure 6, and 64 percent of respondents reported that at least one of the impacts was major (Figure A9). The primary negative impacts experienced by businesses were customer difficulty in accessing the business (80% reported any impact), reduced auto traffic in front of the business (73%), and perceived access challenges among customers (73%). About one-half of respondents reported each of these issues had a major impact on their business. Almost three-quarters (72%) reported that their business was impacted by construction noise and dust and almost two-thirds (63%) reported that reduced foot traffic in front of their business had an impact on their business.

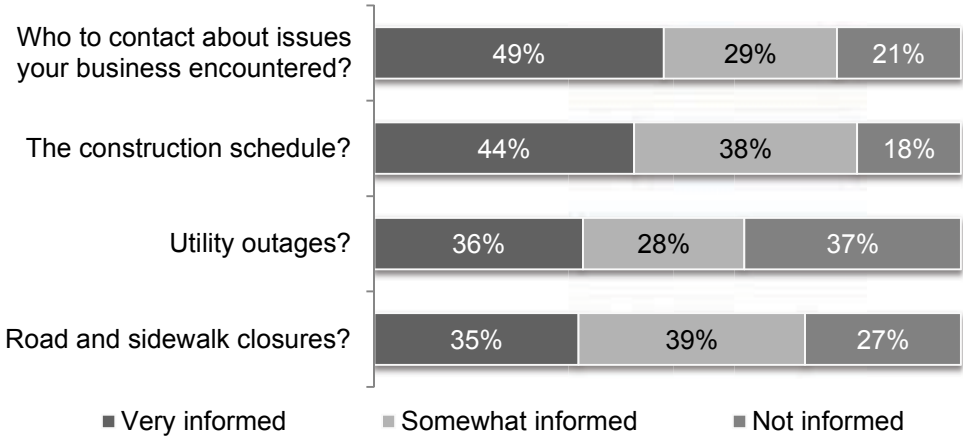
Of the businesses that reported no construction near their business, a few (11 businesses) reported at least one major impact of the construction on their business. The most commonly cited major impacts among these businesses were those that would be expected from businesses that experienced construction nearby but not directly in front of their business ("It was hard for Customers to navigate construction to get to the business" and "There were fewer cars or less automobile traffic in front of the business").

6. How much was your business impacted because…



Respondents reported receiving varying levels of information about construction-related issues (Figure 7). Respondents reported they were most informed about the construction schedule and who to contact about issues the business encountered. One-half (49%) of respondents reported they were very informed about who to contact about issues their business encountered, and another 29 percent reported they were somewhat informed. Almost one-half (44%) of respondents reported they were very informed about the construction schedule, and another 38 percent reported they were somewhat informed. More than one-third reported that they were very informed about utility outages (36%) and road or sidewalk closures (35%).

7. How informed were you about…



Groups affected by construction

In general, white (non-Hispanic) respondents were more likely to report any type of construction-related disruption and impact, while respondents of color were more likely to report multiple types of disruptions and a major impact. In addition, larger businesses (10+ employees) reported more types of disruptions and impacts, while small (owner-only) businesses reported more major impacts of construction. Finally, businesses that rent their space and businesses that have been in their current location since before 2005 were also more likely to experience disruptions and at least one major impact of construction.

As noted previously, two-thirds (68%) of businesses reported at least one type construction-related disruption. Some groups of respondents were more likely than others to report these construction-related disruptions and corresponding impacts of construction on their business. The following groups were more likely than others to report at least one construction-related disruption (Figure A1 in the Appendix):

- Larger businesses (10+ employees) (81%)
- White (non-Hispanic) respondents (74%)
- Businesses that have been at their current location since before 2005 (72%)
- Businesses that rent their space (71%)
- U.S.-born respondents (71%)

More than one-quarter (26%) of respondents of color reported all four types of construction-related disruptions (listed in Figure 5). This compares to nine percent of white respondents.

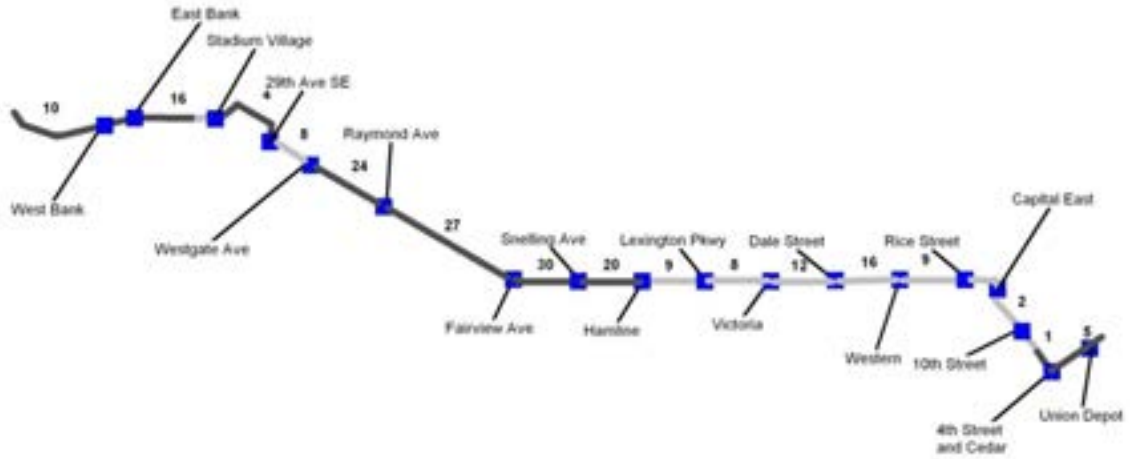
Respondents of color were also more likely than white respondents to report a loss of off-street parking (36% to 20%).

In answering questions about the impact of these (and other) construction-related disruptions on their business, respondents report similar patterns of more widespread impact on some groups but more focused and intense impact on others (see Figures A2-A9 in the Appendix). While 86 percent of respondents overall reported at least one of these impacts, rates were higher among white (non-Hispanic) respondents (90%), U.S.-born respondents (90%), nonprofessional services (91%), and larger (10+ employees) businesses (94%). On the other hand, while these groups only reported a median of 5 impacts, the median number of reported impacts was higher among respondents of color (6), foreign-born respondents (6), and retail, grocery, and convenience stores (7). These groups also report more major impacts than average (Figure A9 in the Appendix). In other words, construction-related disruptions and impacts were not evenly distributed, nor were their levels of intensity.

Geographic distribution of construction and businesses

Figure 8 shows a map of the Central Corridor Light Rail line with each station area from the Downtown Saint Paul Union Depot (eastern terminus) through the West Bank on the University of Minnesota campus (western most construction area). The darker areas are the segments that experienced construction during the 2011 construction season. The numbers between station areas represent the number of businesses surveyed in that segment. As shown on the map, 137 businesses surveyed (68%) were in segments that experienced construction in 2011, and another 19 businesses (9%) were in segments directly adjacent to segments experiencing construction.

8. Map of 2011 construction and distribution of surveyed businesses



External services

More than one-third (36%) of respondents reported participating in one or more of the construction mitigation services offered. These services include:

- ***Small Business Loan Program***. Administered by the Neighborhood Development Center (NDC) in Saint Paul and the Minneapolis Consortium of Community Developers (MCCD) in Minneapolis, this program provides a modest safety net for businesses that show a loss in sales due to the construction of the Central Corridor Light Rail construction.

- ***Parking Loan Program***. Administered by the City of Saint Paul, this program provides forgivable loans for improvements to off-street parking along University Avenue. The program is only available to businesses in Saint Paul.

- ***Services provided by the University Avenue Business Preparation Collaborative (U7).*** The U7 collaborative provides a wide range of services including marketing and business planning assistance, façade improvement, and technical assistance for technology and other business services.

- ***The "Buy Local" coupon book.*** Organized by the Midway Chamber of Commerce, the "Buy Local" coupon book was a component of the Chamber's Discover Central Corridor initiative to market local businesses.

- ***Progressive Dinner***. Organized by the Midway Chamber of Commerce, the progressive dinner took place in December 2011 and provided transportation to different restaurants on the corridor over the course of a single night.

In addition to the services described above, respondents were asked about their awareness and perceived effectiveness of the Metropolitan Council Central Corridor Project Office's communications efforts to highlight local businesses in their weekly newsletter. However, these communications efforts are not a program or service in which the businesses would actively participate, so respondents were not asked if their business had participated.

Figure 9 shows the participation rates among the sampled businesses based on their relative eligibility. The participation rates shown are higher than corridor-wide rates because all known program participants at the time of sampling were included in the survey sample.

9. Participation in construction impact mitigation services (among all respondent businesses)

	Number potentially eligible	Number participating	Percent of eligible participating
Small Business Loan Program	201	42	21%
Parking Loan Program[a]	158	9	6%
U7 services[b]	201	22	11%
"Buy Local" coupon book	201	27	13%
Progressive Dinner (Dec 11)[c]	43	10	23%
Any of the above	201	72	36%

Notes: *All businesses were assumed to be potentially eligible for the Small Business Loan Program, the U7 services, and the "Buy Local" coupon book, as data were unavailable to assess business eligibility based on program-specific criteria for these services. Similarly, while the potentially eligible population for the Parking Loan Program and the Progressive Dinner can be narrowed based on location and business type, some businesses listed as "potentially eligible" may be ineligible based on criteria for which data were unavailable for this study.*

[a] Only Saint Paul businesses were potentially eligible. [b] Respondent businesses participated in the following U7 services: technical support (8), printing of flyers, banners, etc. (7), advertising and marketing support (6), information sessions (6), business planning (3), and financial support (3).Because some participated in multiple services, individual service participation counts do not total the number of U7 services participants. [c] Only restaurants were potentially eligible to participate.

Among those businesses who were *not* program participants at the time of sampling, two-thirds (66%) were aware of the Small Business Loan Program, while about one-third (30%) were aware of the Parking Loan Program and the "Buy Local" coupon book (37%) (Figure 10). About two-fifths (42%) were aware of the Central Corridor Project Office's communication efforts (the features of local businesses and events in the Project Office's newsletter). Of the 21 restaurants that were not sampled for their participation in the Progressive Dinner or other programs, none were aware of the Progressive Dinner.

10. Awareness of services and communication efforts (among only the respondent businesses *not* sampled based on service participation, N=130)

	Number potentially eligible	Number aware	Percent aware
Small Business Loan Program	130	83	66%
Parking Loan Program [a]	107	32	30%
"Buy Local" coupon book	130	47	37%
Progressive Dinner (Dec 11)[b]	21	0	0%
Project Office communication efforts	130	55	42%

Note: *This figure includes only the 130 randomly selected respondents (those not selected for their participation in any of the first four services listed above; see* ***Methods*** *for more information). Respondents were not asked about awareness of U7 services.* [a] *Only Saint Paul businesses were eligible.* [b] *Only restaurants were eligible.*

Respondents who were aware of certain services but had not participated were asked why they had not participated. Perceived ineligibility was a primary reason why businesses had not participated in the Small Business Loan and Parking Loan Programs (Figure 11). About one-half (49%) of Small Business Loan Program nonparticipants reported that they were ineligible and almost two-thirds (64%) of Parking Loan nonparticipants reported they were ineligible. Ineligibility was less of a reason (19%) for nonparticipation in the "Buy Local" coupon book.

Nonparticipant businesses also reported that they did not need these particular types of services. This includes almost one-half (44%) of nonparticipants for the "Buy Local" coupon book, 27 percent of nonparticipant businesses for the Parking Loan Program, and one-fifth (19%) of nonparticipant businesses for Small Business Loan Program.

11. Primary reasons for nonparticipation in services

	Small Business Loan Program (N=77)	Parking Loan Program (N=33)	"Buy Local" coupon book (N=52)
Was not eligible [a]	49%	64%	19%
Did not need this type of assistance	19%	27%	44%
Did not have time to apply or found out too late	5%	0%	8%
Did not know how or where to apply	3%	3%	10%
There was no space left in the program	NA	0%	0%
Application process too much work	9%	0%	2%
Requirements of program were too restrictive	13%	0%	10%
Level of support did not match level of need	8%	3%	15%

Notes: *This series of questions was asked only of respondents who were aware of each program but had not participated in the program. Percentages may sum to more than 100% as respondents were permitted to select more than one primary reason. When respondents stated that their ineligibility was a primary reason, they were not asked about any additional reasons. This question was not asked about the U7 services, the Progressive Dinner, or the Project Office communication efforts.*

[a] *Respondents were not asked why they believed their business to be ineligible, and interviewers did not verify business' ineligibility based on program criteria.*

Service participants

The proportion of businesses participating in at least one service varied little across groups, generally falling between 30 and 40 percent (Figure A12 in the Appendix). Only restaurants and bars (52%) and retail, grocery, and convenience stores (41%) were significantly more likely than other types of businesses (25%) to participate in at least one service. Larger businesses (40%) were also slightly more likely than smaller businesses (34%) to participate in services overall.

Different services, however, served somewhat distinct populations. The Small Business Loan Program and the U7 services generally served relatively high proportions of restaurants and bars, businesses with foreign-born respondents and respondents of color, and businesses that rent their space. The U7 services were also used much more by businesses with fewer than ten employees.

The "Buy Local" coupon book, the Progressive Dinner, and the Parking Loan Program, on the other hand, served relatively high proportions of businesses with U.S.-born and white respondents, businesses that have been at their current location since before 2005, businesses that own their space, and businesses with at least one employee. The "Buy

Local" coupon book had especially high participation rates among restaurants and bars and businesses with 10 or more employees.

Reasons for participation

Participants in the Small Business and Parking Loan Programs generally reported that a primary reason for their participation was that the programs met a specific need for the business (Figure 12). All Parking Loan Program participants and three-quarters (76%) of Small Business Loan Program participants reported this was a primary reason for participating. Most participants also reported that the favorable terms or requirements of the programs were primary reasons for participating. "Buy Local" coupon book participants were most likely to report that they participated primarily because they were asked to do so (52%), though about two-fifths said each of the other two factors were primary reasons for their participation.

12. Primary reasons for participation in services

	Small Business Loan Program (N=42)	Parking Loan Program (N=9)	"Buy Local" coupon book (N=27)
The [program] met a specific need for your business	76%	100%	38%
The terms or requirements of the [program] were favorable	62%	78%	42%
You were asked to participate in the [program]	43%	22%	52%

Note: *Percentages may sum to more than 100% as respondents were permitted to select more than one primary reason. This question was not asked about the U7 services, the Progressive Dinner, or the Project Office communication efforts.*

Service effectiveness

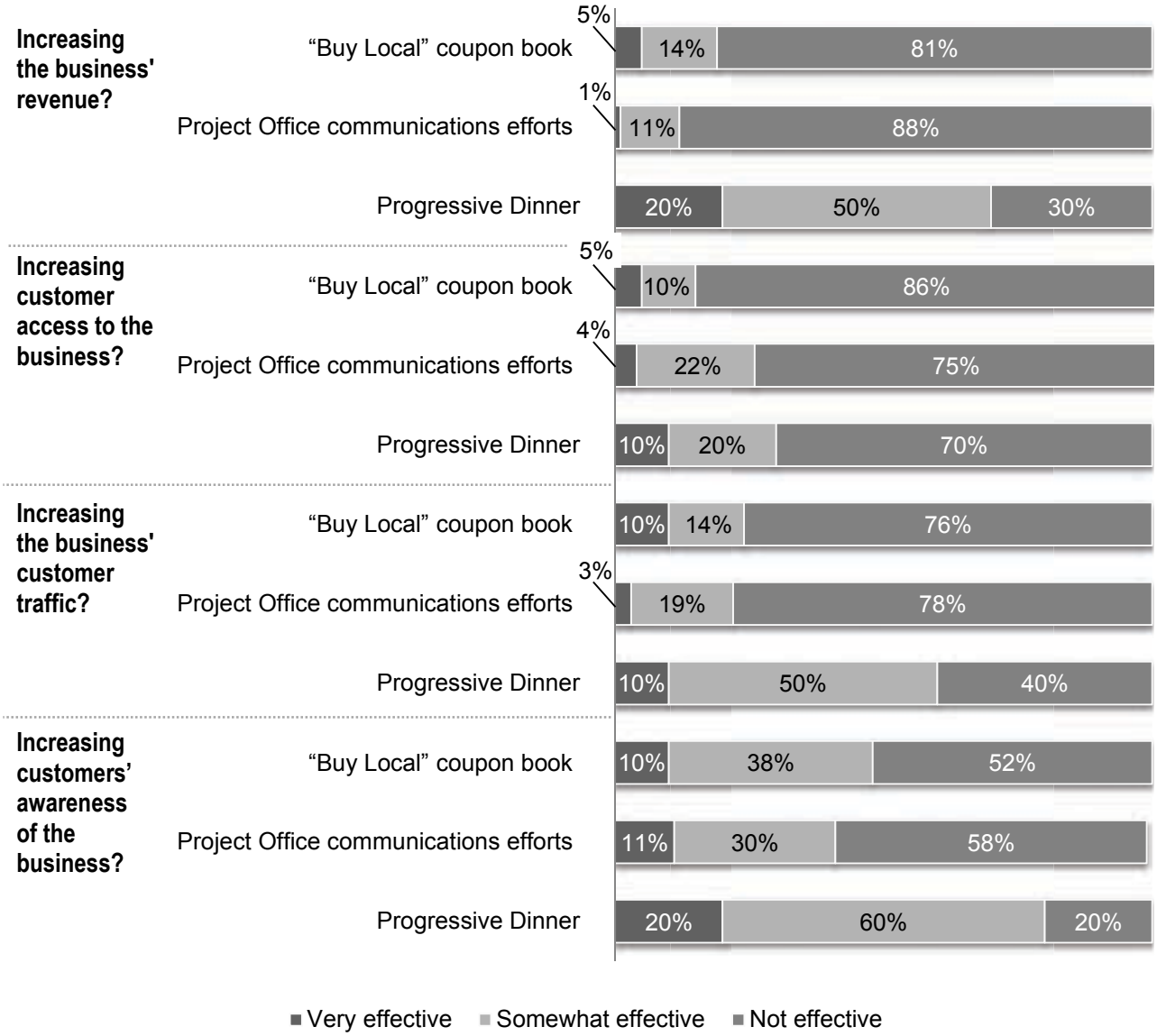
The services available to corridor businesses aim to serve two distinct but related purposes; while the Small Business Loan Program, the Parking Loan Program, and the U7 services generally aim to compensate for lost revenue due to construction, the "Buy Local" coupon book, Progressive Dinner, and Project Office communication efforts were designed to increase customer traffic, thereby generating additional revenue. As a result, we consider the effectiveness of these programs separately.

Programs intended to increase customer traffic

Of the service goals shown in Figure 13, respondents considered the "Buy Local" coupon book (48% somewhat or very effective) and Project Office communication efforts (41%) most effective in increasing customer awareness of the business. Fewer respondents reported that the "Buy Local" book was at least somewhat effective in increasing customer traffic (24%), customer access to the business (15%), and revenue (19%). Similarly, fewer respondents also reported that the Project Office communication efforts were at least somewhat effective in increasing customer traffic (22%), customer access to the business (26%), and revenue (12%).

Most of the respondents from the 10 restaurants that participated in the Progressive Dinner reported it was at least somewhat effective in increasing customer awareness of the business (80%), customer traffic (60%), and revenue (70%). However, only 30 percent reported the program was effective in increasing customer access to the business.

13. How effective was the program in…

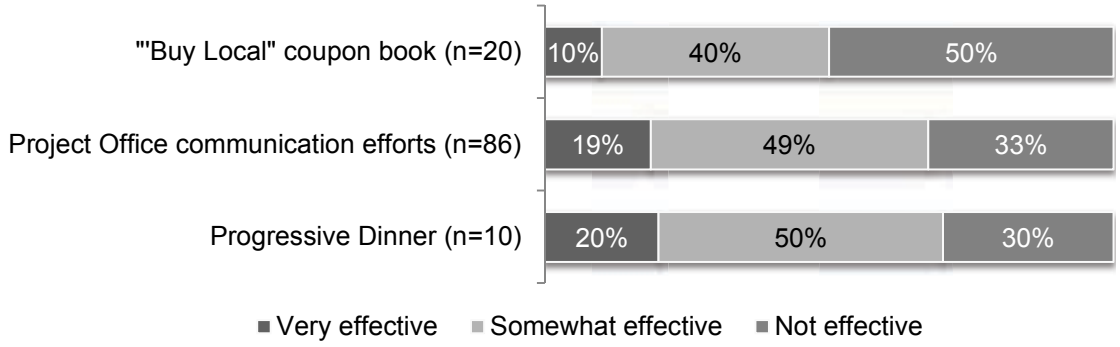


Notes: *Progressive Dinner (n=10) and "Buy Local" coupon book (n=21) ratings are from program participants only. Project Office communication efforts ratings are from respondents who were aware of these efforts (n=80). This question was not asked about the U7 services, the Small Business Loan program, or the Parking Loan program.*

Respondents rated the overall effectiveness of these programs much more favorably than the specific measures of effectiveness (Figure 14). The Progressive Dinner was rated especially high, with more than two-thirds (70%) describing this service as at least somewhat effective and 20 percent reporting the event was very effective. The overall effectiveness of the Project Office communication efforts was also rated particularly high

with two-thirds (67%) of respondents rating the communications as at least somewhat effective and 19 percent rating them very effective.

14. Overall, how would you rate the effectiveness of the program?

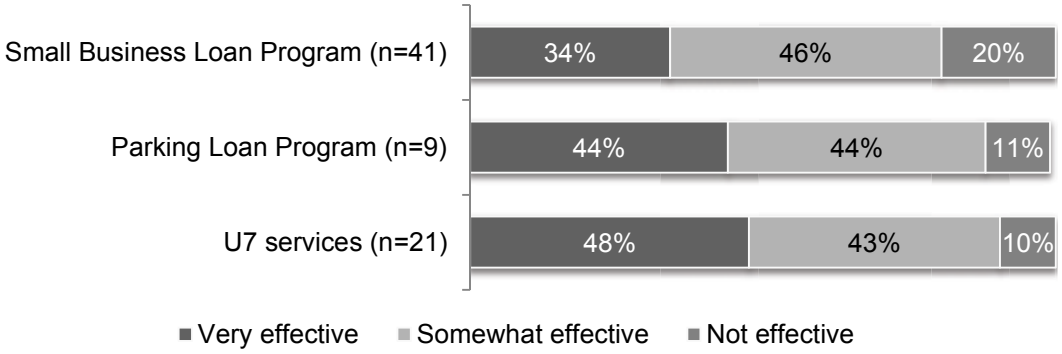


While the numbers of respondents who participated in the "Buy Local" coupon book and Progressive Dinner were too small to present disaggregated results by respondent and business categories, the overall average effectiveness ratings for the programs in Figure 14 tended to be highest among respondents of color and foreign-born respondents. Similarly, the disaggregated results for the Project Office communication efforts (shown in Figure A10 in the Appendix) show generally higher effectiveness ratings among respondents of color and foreign-born respondents.

Programs intended to compensate for revenue losses

The programs focused more on compensation for revenue losses were rated more positively overall than the programs that focus more on increasing customer traffic. Almost all respondents reported the U7 services (90%) and the Parking Loan Program (89%) were at least somewhat effective, and 80 percent rated the Small Business Loan Program as at least somewhat effective (Figure 15).

15. Overall, how would you rate the effectiveness of the program?



The sample sizes for the Parking Loan Program and the U7 services are insufficient to present disaggregated results by business and respondent type, but once again, the average overall effectiveness ratings across the services in Figure 15 tend to be highest among respondents of color and foreign-born respondents. Disaggregated results for the Small Business Loan Program are shown in Figure A11 in the Appendix. Consistent with the overall trend, the results show generally higher effectiveness ratings among respondents of color and foreign-born respondents. In addition, respondents from businesses that have been in their current location since 2005 or more recently also gave the program higher marks on average.

Strengths of the services

When asked what was the best thing about the programs, the responses varied by the type of service (Figure 16). The Small Business and Parking Loan Program participants most commonly noted the financial support as the best thing about those programs, with a few others noting the quality of service from the program or the ease of the application (Small Business Loan Program only). For the U7 services, respondents most frequently mentioned the service quality and the attention they received from the program. Many also mentioned the importance of the information about the available business assistance programs. Finally, among participants in the "Buy Local" coupon book and the Progressive Dinner, the most commonly noted best thing was that the programs generated business by getting greater customer exposure. A few of these participants also noted the financial gain from and low cost of the services.

16. What was the best thing about the [program]?

Open-ended responses, coded for themes	Small Business Loan Program (n=41)	Parking Loan Program (n=9)	U7 Services (n=19)	"Buy Local" Coupon Book (n=20)	Progressive Dinner (n=9)
Financial support (the money)	93%[a]	44%	5%	-	22%
No or low cost for services	2%	22%	11%	30%	11%
Generated new business (exposure to new customers, a couple of new accounts)	-	11%	-	45%	44%
Positive response by program (they reacted really quickly, anytime you called they got back to you right away, they cared)	2%	11%	47%	15%	-
Other (easy application process, information, the cards looked nice, they drove people to us, nice for the day)	7%[b]	22%	42%[c]	10%	22%
Nothing	-	11%	-	15%	-

Notes: *Based on coded open-ended responses. Columns may not sum to 100% because respondents were permitted to list more than one item.* [a] *Includes 56% of respondents who specifically noted the low-risk nature of the support (forgivable or low-interest loans).* [b] *All 7%noted the ease of the application process.* [c] *This includes 26%who said that the best thing about the U7 services was the information they provided about assistance for businesses.*

Those who were familiar with the Central Corridor Project Office's communication efforts were also asked about the best thing about those efforts. The most common features cited were the construction information and the consistency/regularity of receiving that information. Several others mentioned the support they received from Project Office staff.

Suggestions for improvement

Like participant responses regarding the strengths of the programs, participant suggestions for program improvement varied widely by program (Figure 17). In the case of the Small Business and Parking Loan Programs, respondents most commonly suggested that the programs disburse more funds, and many said they had no suggestions for program improvement. A few suggested, however, that the program broaden the eligibility criteria and improve the timeliness of service delivery.

Participants in the U7 services also suggested that the program improve the timeliness of service delivery, but nearly as many said they had no suggestions for program improvement. Several others said the program should have greater funding available.

Participants in the "Buy Local" coupon book and the Progressive Dinner, meanwhile, suggested that the programs could be improved by getting greater participation (of customers and businesses) in these programs.

Finally, those familiar with the Project Office's communication efforts suggested that the information provided be more timely and accurate, that the Project Office conduct more outreach, and that they communicate with businesses in person rather than via phone, mail, or email. A few others suggested broadening the population targeted in these communication efforts to reach a larger audience.

17. How could the [program] be improved?

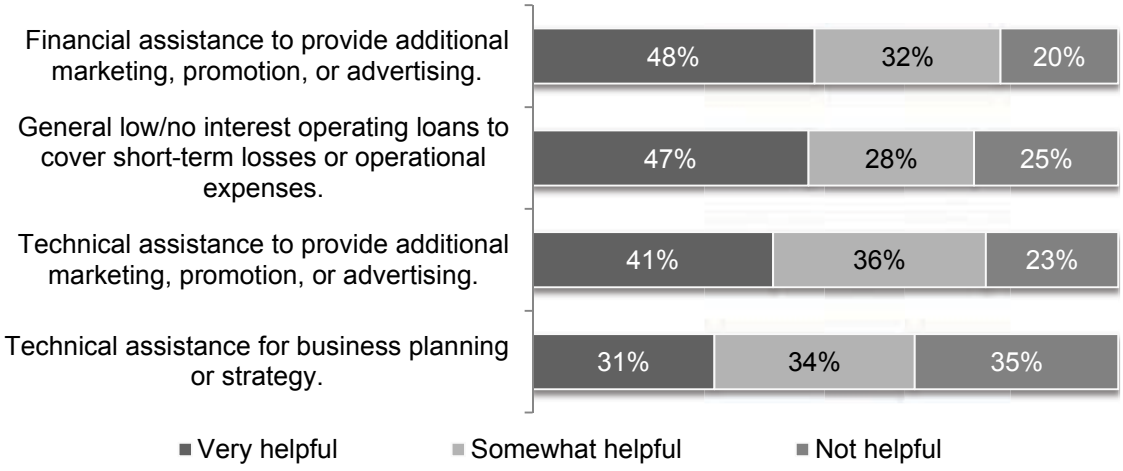
Open-ended responses, coded for themes	Small Business Loan Program (n=41)	Parking Loan Program (n=9)	U7 Services (n=19)	"Buy Local" Coupon Book (n=16)	Progressive Dinner (n=9)
Provide more funding	55%	33%	19%	-	-
Provide grants instead of a loan	5%	-	6%	-	-
Broaden eligibility criteria (how they figure out the %, more flexible in how they determine need, less paperwork)	23%	11%	-	-	-
Improve timeliness of service delivery	5%	22%	31%	6%	22%
Greater participation (event was poorly attended, poorly organized, go outside community, include more businesses or more customers)	-	-	-	38%	56%
Nothing - everything was great	13%	33%	25%	25%	11%
Other	11%	22%	38%	32%	11%

Notes: *Columns may not sum to 100% because respondents were permitted to list more than one item.*

Additional service needs

Most respondents reported that additional financial and technical assistance would be at least somewhat helpful (Figure 18). About three-quarters of respondents reported financial assistance for marketing (80%) and low- or no-interest operating loans (75%) would be helpful, and nearly one-half of respondents reported that these forms of financial assistance would be "very helpful." Most respondents also said technical assistance would be helpful, both for marketing and promotion (77%) and business planning or strategy (65%).

18. Interest in services



When asked for their opinion of which services provide the best support to businesses affected by Central Corridor Light Rail construction, respondents most frequently mentioned financial support, including grants or loans (22%), compensation for losses (11%), support for marketing (10%), and other unspecified forms of financial support (22%). Others suggested providing more information to businesses (15%), providing more parking (10%), ensuring better customer access to businesses (9%) or giving customers more information about business access (8%).

Internal strategies

Respondents were also asked about specific strategies their businesses may have implemented on their own to help mitigate the negative effects of construction (Figure 19). Just over one-half (55%) of respondents reported that their business implemented at least one strategy to mitigate the effects of construction. These strategies included additional signage (32%), promotional offers (29%), advertising (18%), and other strategies (25%) like customer outreach via phone and social media, reduced rates or enhanced services (e.g., delivery or meeting in clients' homes rather than at the business site), and improvements to the business space to enhance the customers' experience. Among the businesses who invested in these mitigation strategies, the average amount spent was $2,311 and the median was $725. Businesses spent the most on advertising ($1,993 on average) and promotional offers ($2,115 on average).

19. Construction mitigation strategies

Business invested in…	N=	Percent	Median $ spent	Mean $ spent
Additional signage to help customers navigate the construction or to indicate the business was open	64[a]	32%	$350	$661
Additional TV, radio, or print advertising to attract or retain customers because of construction	37[b]	18%	$1,000	$1,993
Additional coupons, deals, or other promotional offers to attract or retain customers to the business because of construction	58[c]	29%	$500	$2,115
Other activities intended to offset the effects of the rail construction	51	25%	NA	NA
One or more of the above	110[d]	55%	$725	$2,311
Two or more of the above	64[e]	32%	$1,000	$2,941

Notes: *Median $ spent does not include costs of "Other activities intended to offset the effects of the rail construction."* [a] *Mean and median based on 57 of 58 responses provided by respondents for amount spent. One outlying value omitted. Six respondents did not report the amount invested in additional signage.* [b] *Mean and median based on 32 of 33 responses provided by respondents for amount spent. One outlying value omitted. Four respondents did not report the amount invested in additional advertising.* [c] *Mean and median based on 46 of 47 responses provided by respondents for amount spent. One outlying value omitted. Eleven respondents did not report the amount invested in promotional offers.* [d] *Mean and median based on 86 cases due to missing and omitted values as described above.* [e] *Mean and median based on 59 cases due to missing and omitted values as described above.*

Businesses implementing mitigation strategies

Respondents of color and foreign-born respondents were slightly more likely than white respondents and U.S.-born respondents (respectively) to say their business implemented two or more of their own construction mitigation strategies (Figure 20). They were especially likely to use additional signage (40%) and promotional offers (34%) (Figure A13 in the Appendix).

20. Number of internal strategies implemented, by respondent demographics

	No strategies		1 strategy		2+ strategies	
	Number	Percent	Number	Percent	Number	Percent
Race						
Respondents of color	34	40%	20	24%	30	36%
White (non-Hispanic) respondents	52	49%	24	22%	31	29%
Nativity						
Foreign-born	25	41%	12	20%	24	39%
U.S.-born	61	45%	34	25%	40	30%

Businesses that are dependent on bringing in steady customers, like the retail and service industries, were more likely to invest in strategies to mitigate the negative effects of construction (Figure 21). Two-thirds (67%) of restaurants, bars, and other hospitality businesses implemented at least one strategy and more than one-half (53%) implemented multiple strategies. Sixty-one percent of retail stores (including grocery and convenience stores) and over one-half (56%) of nonprofessional service businesses (e.g., auto repair, plumbing) implemented at least one strategy.

21. Number of internal strategies implemented, by type of business

Type	No strategies		1 strategy		2+ strategies	
	Number	Percent	Number	Percent	Number	Percent
Retail, grocery, and convenience stores	23	38%	20	33%	17	28%
Restaurants, bars, hospitality, recreation	14	33%	6	14%	23	53%
Health and fitness	12	57%	7	33%	2	10%
Property management, professional services, and finance	20	65%	6	19%	5	16%
Nonprofessional services	19	44%	7	16%	17	40%

Businesses that rent their space were more likely than those that own their space to apply multiple strategies, while those that own their space were more likely to apply only one strategy (Figure 22). Businesses that rent their space were especially likely to use advertising (22%) and promotional offers (34%), compared to average implementation rates of 18 percent and 29 percent, respectively (Figure A13 in the Appendix). Larger businesses (10+ employees) were also more likely to use promotional offers (35%). Businesses that have been in their current location since 2005 or later were more likely to implement multiple strategies while more established businesses (in their current location since 2004 or earlier) were more likely to use a single strategy (Figure 22).

22. Number of strategies implemented by business characteristics

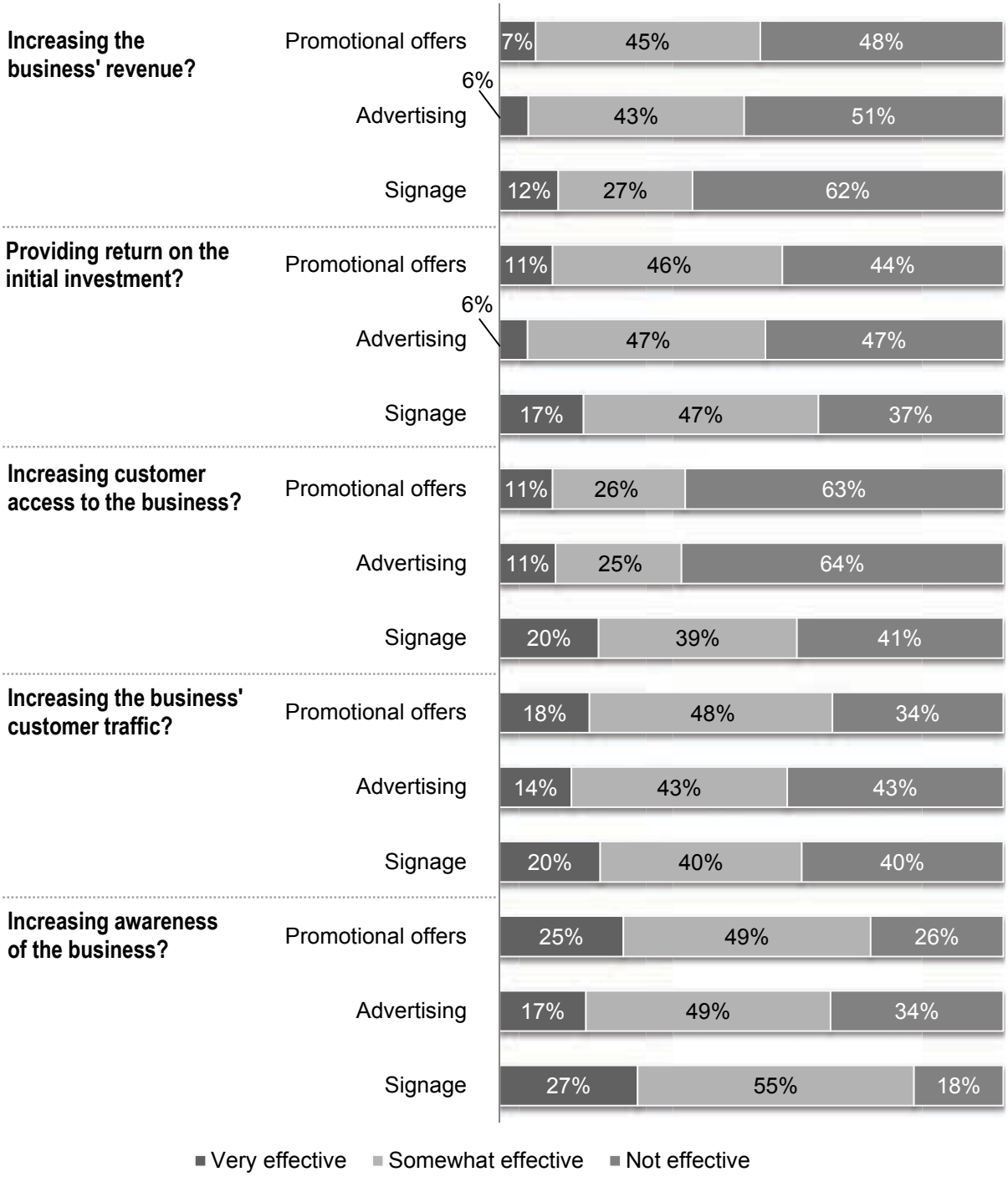
	No strategies		1 strategy		2+ strategies	
	Number	Percent	Number	Percent	Number	Percent
Number of employees						
Owner only (No employees)	9	45%	4	20%	7	35%
1-9 Employees	52	42%	33	26%	40	32%
10+ Employees	26	50%	9	17%	17	33%
Time at current location						
Since before 2005	55	44%	35	28%	35	28%
Since 2005 or later	30	44%	11	16%	27	40%
Property						
Own	21	42%	20	40%	9	18%
Rent	67	45%	26	18%	55	37%

Effectiveness of mitigation strategies

Respondents reported that the strategies were most effective in achieving intermediate goals like increasing customer awareness of the business and increasing the business' customer traffic, but were seen as less effective in the end goals of increasing revenue and providing a return on the initial investment in the strategy (Figure 23).

Most respondents (82%) reported that additional signage was effective in increasing awareness of the business and three-fifths reported that it was effective in increasing customer traffic (60%) and access (59%) to the business. Three-fifths (63%) also reported that the signage provided a return on the initial investment and two-fifths (38%) said the additional signage was effective in increasing revenue. On the other hand, about half of respondents reported that their additional advertising (49%) and promotional offers (52%) were effective in increasing revenue, and more than one-half reported these expenditures were at least somewhat effective in providing a return on their initial investment.

23. How effective was the [strategy] in…



Notes: *Promotional offers: n=57. Advertising: n=36. Signage: n=62.*

Business perceptions of future outlook

Three-quarters (76%) of the businesses surveyed reported that they expect their business to be operating in its current location in five years, 16 percent did not expect their business to be in operation at this location in five years, and 9 percent did not know if their business would be in operation at their current location in five years.

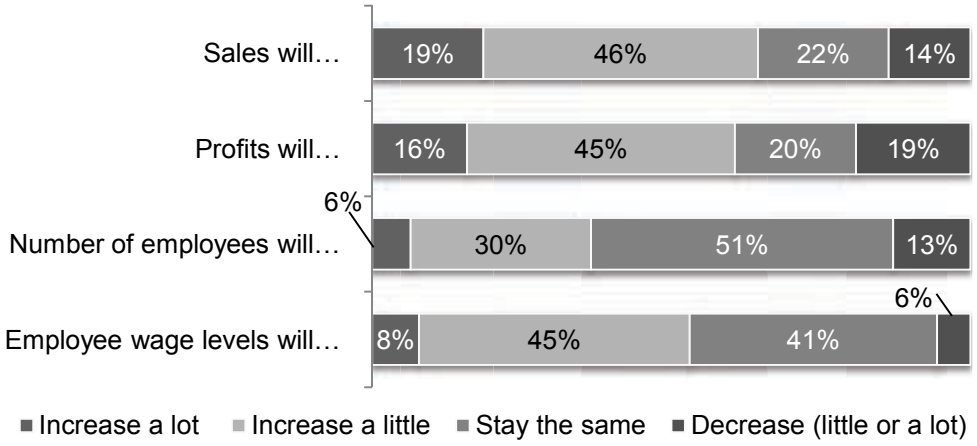
Larger businesses (85%) and businesses that own their space (82%) were more likely than average to expect their business to continue operating in its current location (Figure A14 in the Appendix). In addition, respondents of color (84%) and foreign-born respondents (85%) were more likely than white (69%) and U.S.-born respondents (71%) to say their business would be in its current location in five years. Restaurants and bars (84%) and health and fitness establishments (81%) were also more optimistic than other types of businesses about their future in their current location. Businesses that have been in their current location since before 2005 were no more likely to expect to continue operating in their current location than those who have been there for less time.

The 16 percent of businesses (n=32) who said they did not expect to be operating at their current location in five years reported the following reasons:

- An uncertain future (19 respondents)
- Severe financial losses (9)
- The business does not want to stay in the area (8)
- A pending or future building eviction - e.g., demolition, sale, new lease (4)

When asked about their expectations about future sales, profits, employee wages, and number of employees, most respondents expected at least small increases in sales (64%), profits (61%), and employee wages (53%). One-half of respondents (51%) expected the number of employees at their business to stay the same over the next five years (Figure 24). Relatively low proportions of respondents expected any decreases in sales (14%), profits (19%), number of employees (13%), or employee wages (6%).

24. Over the next five years, do you expect…

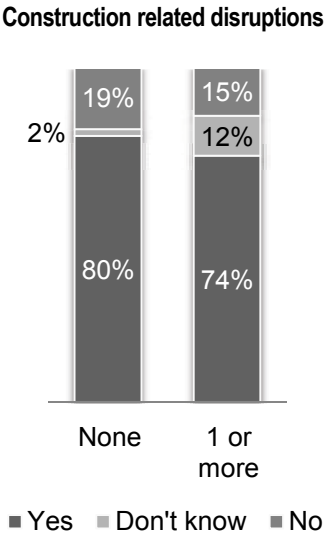


Figures A15-A18 in the Appendix show how these expectations vary by respondent group. For example, businesses with 10 or more employees were more likely than average to expect increases in sales (81% versus 64%), profits (79% versus 61%), number of employees (55% versus 37%), and employee wage levels (73% versus 53%). Owner-only businesses, however, were also more likely than average to expect increases in sales (71%). Businesses that have been in their current location since six years or less expressed greater-than-average optimism about their future sales (73%), profits (71%), and number of employees (49%). Restaurants and bars were more likely than average to expect increases in sales (71%) and number of employees (58%).

Construction impact and future outlook

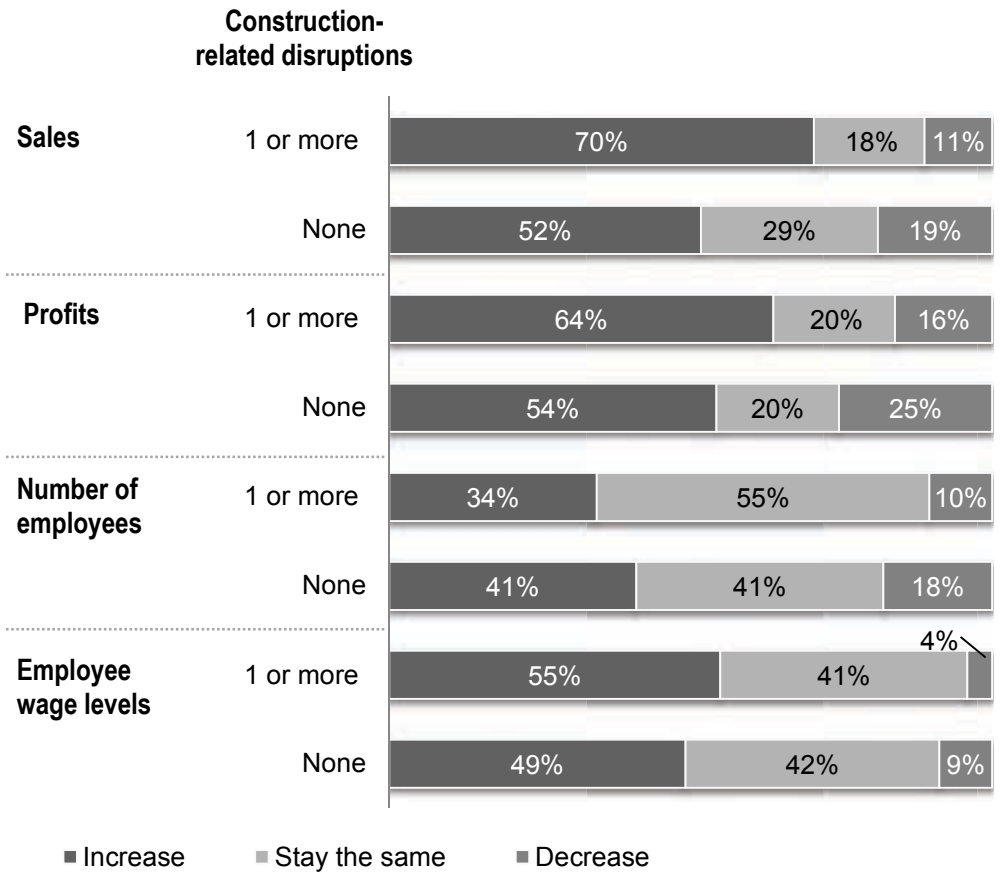
The impact of construction on Central Corridor businesses is unclear. While businesses that experienced none of the construction-related disruptions listed (see Figure 5) were slightly more likely than those who experienced one or more disruptions to report that their business would be around in five years (Figure 25), they were also *less* likely to report that sales, profits, and employee wage levels would increase in that time (Figure 26). Businesses experiencing none of these construction disruptions were more likely to report they would still be operating in their current location in five years and less likely to say they did not know, compared to businesses that experienced construction-related disruptions.

25. Do you expect this business will be operating in its current location in FIVE YEARS?



However, those experiencing at least one type of construction-related disruption were slightly more likely than those who reported no disruptions to expect increases in sales, profits, number of employees, and employee wage levels over the next five years (Figure 26).

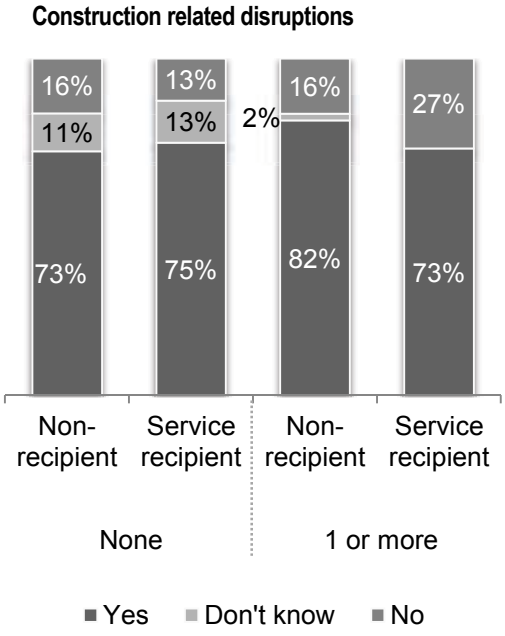
26. Over the next five years, do you expect…



Service use and future outlook

Figure 27 illustrates the relationship between the participation in services and future outlook while accounting for construction-related disruptions experienced by the businesses. Among those who experienced no construction disruptions, those who received services were *less* likely than non-recipients (73% versus 82%) to say they would be operating in their current location in five years. Among those who experienced at least one type of construction-related disruption, service recipients and non-recipients were similarly likely (75% versus 73%) to expect their business to be operating in its current location in five years.

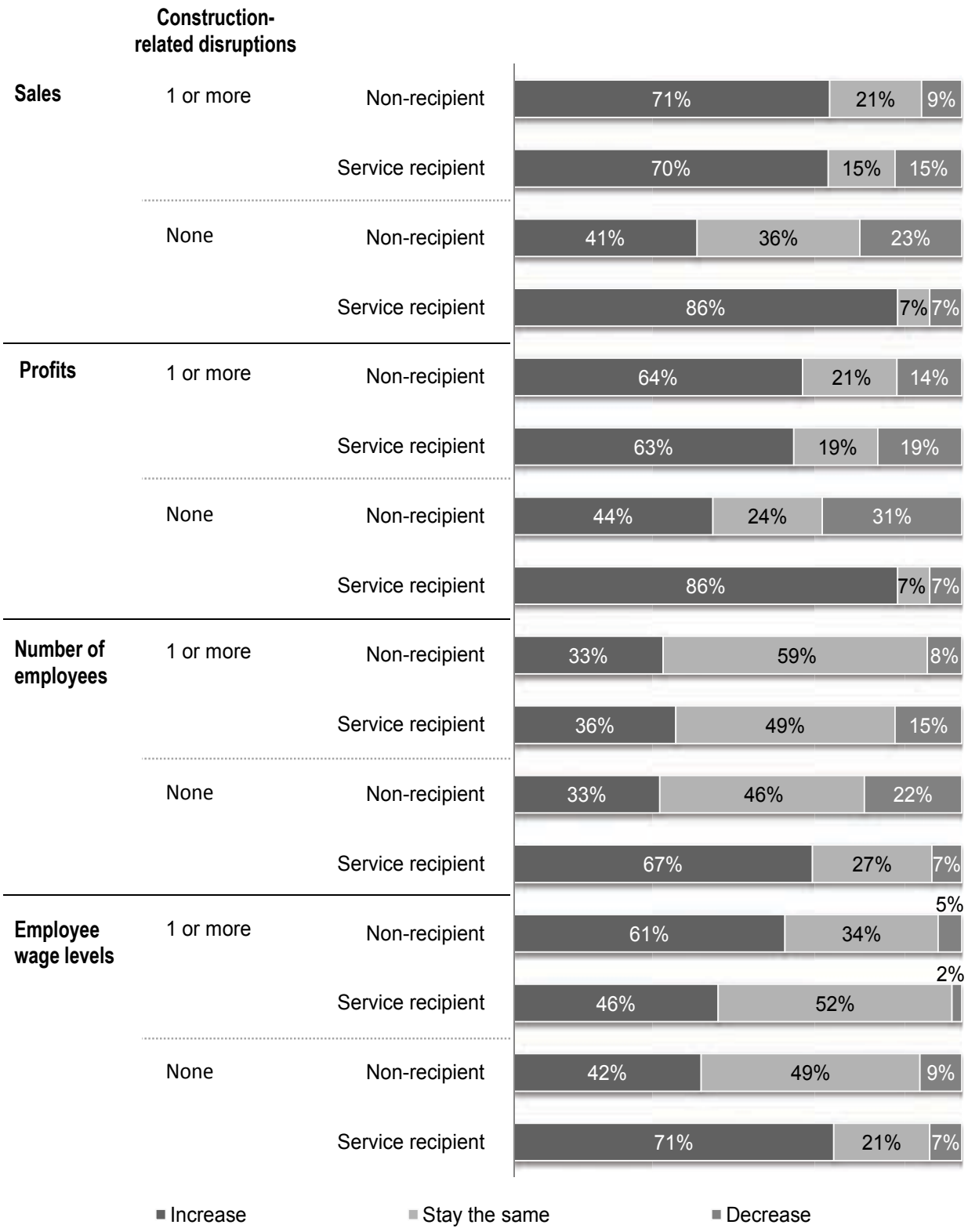
27. Do you expect this business will be operating in its current location in FIVE YEARS?



Among businesses that reported construction-related disruptions, service recipients were not noticeably different from non-recipients in their expectations for future sales, profits, or number of employees. However, service recipients were less likely than non-recipients to expect an increase in employee wages in the next five years (Figure 28).

Among businesses not directly affected by construction-related disruptions, service recipients were significantly more likely to expect increases in sales, profits, number of employees, and employee wage levels.

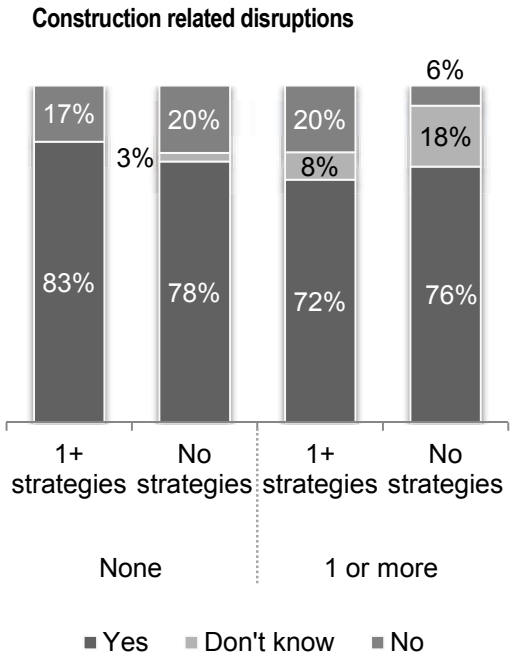
28. Over the next five years, do you expect…



Business strategies and future outlook

Businesses that experienced no construction-related disruptions and implemented at least one internal mitigation strategy were slightly more likely than those who had not implemented strategies (83% versus 78%) to expect their business to remain at its current location for the next five years (Figure 29). However, for the businesses experiencing at least one type of construction-related disruption, those implementing construction mitigation strategies like advertising, signage, and promotional offers appear slightly less likely (72% versus 76%) to expect to continue operating in their current location for the next five years.

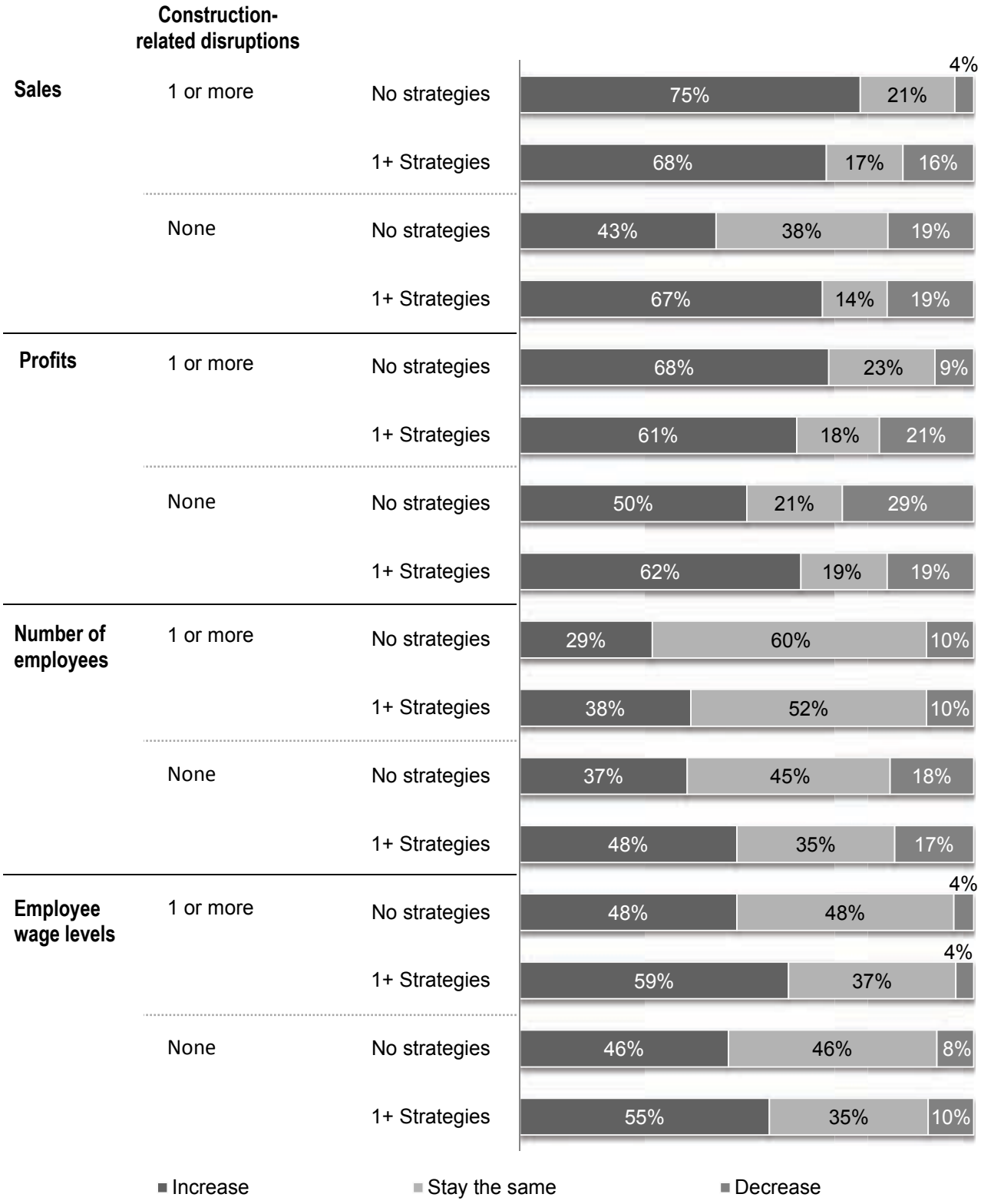
29. Do you expect this business will be operating in its current location in FIVE YEARS?



Among businesses that reported no construction-related disruptions, businesses that implemented mitigation strategies were more optimistic than average about future changes in sales, profits, number of employees, and employee wage levels (Figure 30).

The pattern among those that experienced one or more construction-related disruptions, however, was not as consistent. While the businesses applying mitigation strategies were slightly less likely than average to expect increases in sales and profits over the next five years, they were more likely than average to expect increases in the number and wages of their employees.

30. Over the next five years, do you expect…



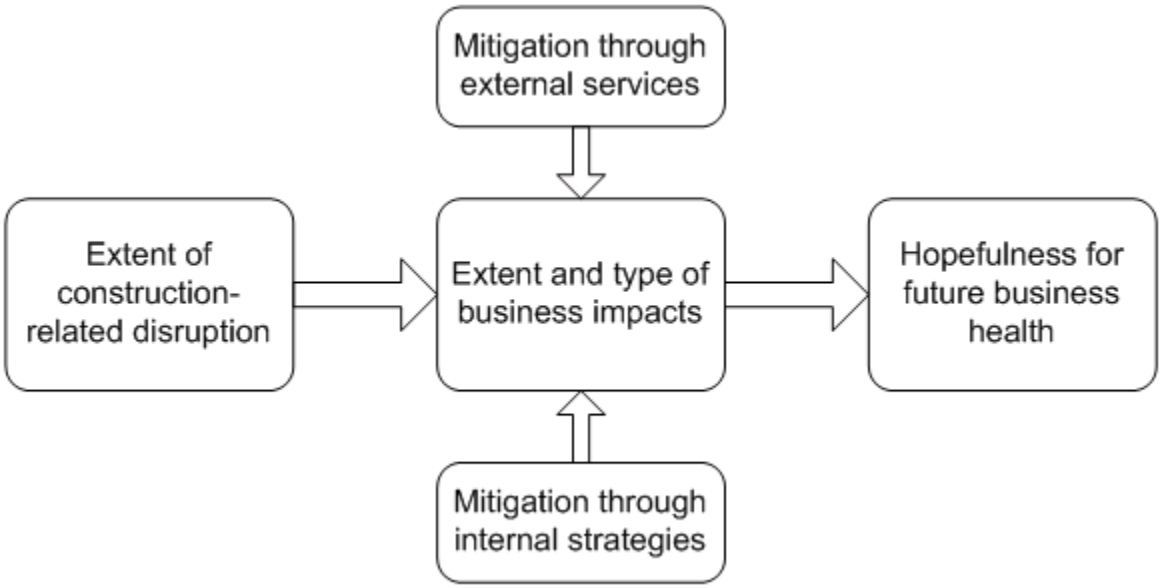
Issues to consider

Despite the anticipated future benefits for businesses located along the Central Corridor Light Rail line, construction of the line has potential negative impacts on the short-term success and viability of nearby businesses. Many local organizations have put forth a great deal of effort to help Central Corridor businesses survive during construction and thrive in the post-construction environment, and many businesses have invested in their own strategies to maintain and build their customer base. These services and strategies can help to reduce the negative impact of construction and improve the future prospects of corridor businesses.

Theory of construction mitigation

A simplified theory of construction mitigation is shown in Figure 31. Businesses experience construction-related disruptions (road or sidewalk closures, loss of on- or off-street parking), which may have impacts like reduced customer awareness of or access to the business, leading to declines in business revenue. Businesses may use several kinds of services to both compensate for declines in revenue or augment customer traffic to generate additional revenue. In addition, businesses may implement their own mitigation strategies, including signage, advertising, or promotional offers, to grow their customer base. These factors interact in varying and complex ways to form a respondent's view of the business' future; to analyze any piece individually without due attention to these interactions can only yield an incomplete version of the story.

31. Theory of construction mitigation



Successful implementation of services

Many of the findings listed in this report are encouraging. In particular, respondents report strong satisfaction and general effectiveness of the services as well as well-designed programs.

General effectiveness and satisfaction

In general, service recipients rated the services favorably, with the majority of respondents describing each service as at least somewhat effective overall in mitigating the effects of construction. In fact, overall effectiveness ratings frequently exceeded ratings on specific effectiveness measures (e.g. increasing customer traffic or business revenue), indicating that respondents saw some important overarching quality in these services despite perceiving most of them to be only minimally effective in their specific goals. The services thus appear to be effectively accomplishing something, if only primarily the generation of good will among recipients. This was especially true of the Project Office communication efforts, which at a minimal cost, received relatively high ratings of overall effectiveness.

Well-designed programs

In addition, results suggest that these services are designed fairly well to encourage participation and be user-friendly. Reasons for nonparticipation were generally attributed to ineligibility or a lack of need for the program, and very few respondents attributed their nonparticipation to perceived negative program attributes (e.g. the program's challenging application process, overly restrictive requirements, or inadequate support relative to their level of need). Furthermore, participants in the loan programs said that they participated at least in part because the programs met specific needs of the participant businesses and had favorable terms or requirements. In other words, feedback from both participants and nonparticipants indicates that the services were designed relatively well to meet business needs and encourage participation.

Challenges and opportunities

Still, findings reveal a few challenges and potential areas for improvement.

Specific effectiveness unclear

The ratings of service and strategy effectiveness on specific outcomes were relatively low, particularly the measures related to increasing revenue and providing a return on the initial investment. Respondents described both services and strategies as more effective

in increasing customer traffic, but tended to describe both as relatively ineffective in the end goal of generating business revenue.

Outreach is critical to participation

Results indicate that participant outreach is crucial and can potentially be improved. The importance of program outreach is illustrated by the fact that a sizeable minority of loan program participants, along with the majority of "Buy Local" coupon book participants, said they participated primarily because they were invited to participate. Program awareness was fairly low, however, among the businesses that were not sampled for their program participation. Only the Small Business Loan Program was known to more than half of the randomly sampled respondents, while less than one-third of randomly sampled Saint Paul businesses were aware of the Parking Loan Program and none of the randomly sampled restaurants were aware of the Progressive Dinner.

Conclusion

Many factors prevent affect business health besides the services and strategies measured in this study, which prevent drawing a conclusive determination of the services' and strategies' impact on businesses. Construction-affected businesses had very similar levels of optimism about their future in the Central Corridor, regardless of their receipt of services or implementation of mitigation strategies. However, it is likely the construction-impacted businesses that seek services and apply construction mitigation strategies are disproportionately those that experience more disruptive construction or face more non-construction related difficult circumstances. These businesses are also less likely to be optimistic about their business' future. As a result, the fact that these businesses display comparable optimism in the survey about the future when compared to other businesses could be interpreted to indicate a moderate level of effectiveness of these services and strategies among businesses impacted by construction. Without measures of businesses' optimism prior to requesting services, we are unable to make any conclusive statements about the impact of strategies and services on future outlook.

However, there is evidence that services effectively reach those that need them the most, and provide a diverse range of options to meet a variety of needs. The groups that experienced the most intense construction impact (more disruptions, more impacts, or more "major" impacts) – foreign-born respondents, respondents of color, businesses that rent their space, restaurants and bars, and retail (including grocery and convenience) stores – disproportionately received the most highly rated services (the Small Business Loan Program and the U7 services).

In addition, the distribution of participation rates among respondent groups and services is an indication that groups of businesses were able to choose services that most closely met their needs. The diversity of programs allowed smaller, minority-owned, renting businesses to take advantage of revenue replacement programs that offer grants and forgivable loans, while larger, more established businesses could benefit from services that increase customer awareness or traffic, thereby generating additional revenue. This range of service options is critical to the programs' success, both individually and as a package of services to benefit the corridor, and helps to efficiently allocate scarce support resources.

This study only focuses on the first year of light rail construction. Examination of services and impacts related to construction during subsequent years of construction, and into operational service of the Central Corridor Light Rail line, will increase understanding of the total effect of construction and mitigation efforts.

Appendix

Figures

A1. Construction disruptions

	The business side of the street was closed for more than one month.	The sidewalk in front of your business had reduced access because of fencing, narrowed width, or other obstacles.	Your business lost on-street parking.	Your business lost off-street parking.	One or more of these experiences	N
Race						
Respondents of color	49%	49%	50%	36%	60%	86
White (non-Hispanic) respondents	56%	56%	52%	20%	74%	108
Nativity						
Foreign-born	52%	48%	50%	39%	63%	62
U.S.-born	53%	55%	52%	23%	71%	137
Type						
Retail, grocery, and convenience stores	56%	51%	49%	38%	70%	61
Restaurants, bars, hospitality, recreation	48%	52%	50%	30%	70%	44
Health and fitness	41%	59%	55%	14%	68%	22
Property management, professional services, and finance	65%	55%	55%	13%	71%	31
Nonprofessional services	49%	53%	49%	28%	60%	43
Number of employees						
Owner only (No employees)	50%	55%	60%	30%	70%	20
1-9 Employees	54%	50%	48%	23%	63%	127
10+ Employees	50%	62%	54%	37%	81%	52
Time at current location						
Since before 2005	56%	56%	53%	30%	72%	126
Since 2005 or later	47%	50%	47%	21%	63%	70
Property						
Own	50%	44%	42%	24%	60%	50
Rent	53%	56%	53%	28%	71%	148
Total	**53%**	**52%**	**51%**	**27%**	**68%**	**201**

A2. How much was your business impacted because... Customers did not know the business was open?

	No impact	Somewhat of an impact	A major impact	N
Race				
Respondents of color	36%	30%	35%	84
White (non-Hispanic) respondents	51%	31%	17%	103
Nativity				
Foreign-born	32%	27%	42%	60
U.S.-born	50%	33%	17%	132
Type				
Retail, grocery, and convenience stores	29%	34%	36%	58
Restaurants, bars, hospitality, recreation	38%	40%	21%	42
Health and fitness	77%	14%	9%	22
Property management, professional services, and finance	60%	23%	17%	30
Nonprofessional services	45%	29%	26%	42
Number of employees				
Owner only (No employees)	56%	28%	17%	18
1-9 Employees	42%	28%	30%	124
10+ Employees	48%	38%	14%	50
Time at current location				
Since before 2005	42%	33%	26%	120
Since 2005 or later	49%	28%	23%	69
Property				
Own	42%	40%	19%	48
Rent	46%	27%	27%	143
Total	45%	30%	25%	194

A3. How much was your business impacted because... It was hard for customers to navigate construction to get to the business?

	No impact	Somewhat of an impact	A major impact	N
Race				
Respondents of color	22%	19%	59%	83
White (non-Hispanic) respondents	19%	28%	53%	107
Nativity				
Foreign-born	23%	15%	62%	60
U.S.-born	18%	28%	54%	135
Type				
Retail, grocery, and convenience stores	17%	22%	61%	59
Restaurants, bars, hospitality, recreation	14%	30%	57%	44
Health and fitness	18%	32%	50%	22
Property management, professional services, and finance	32%	19%	48%	31
Nonprofessional services	22%	22%	56%	41
Number of employees				
Owner only (No employees)	26%	11%	63%	19
1-9 Employees	20%	23%	57%	125
10+ Employees	18%	31%	51%	51
Time at current location				
Since before 2005	20%	21%	59%	123
Since 2005 or later	17%	30%	52%	69
Property				
Own	21%	33%	46%	48
Rent	20%	21%	59%	146
Total	20%	24%	56%	197

A4. How much was your business impacted because... Customers heard it was hard to access the business so they did not try?

	No impact	Somewhat of an impact	A major impact	N
Race				
Respondents of color	24%	26%	50%	82
White (non-Hispanic) respondents	31%	23%	46%	98
Nativity				
Foreign-born	24%	24%	52%	58
U.S.-born	28%	25%	46%	127
Type				
Retail, grocery, and convenience stores	22%	26%	52%	58
Restaurants, bars, hospitality, recreation	20%	25%	55%	40
Health and fitness	48%	24%	29%	21
Property management, professional services, and finance	43%	25%	32%	28
Nonprofessional services	20%	25%	55%	40
Number of employees				
Owner only (No employees)	13%	50%	38%	16
1-9 Employees	29%	21%	50%	119
10+ Employees	30%	24%	46%	50
Time at current location				
Since before 2005	26%	19%	55%	118
Since 2005 or later	28%	38%	34%	64
Property				
Own	27%	33%	40%	48
Rent	27%	21%	51%	136
Total	27%	25%	48%	187

A5. How much was your business impacted because... Trucks or delivery vehicles were not able to reach the business?

	No impact	Somewhat of an impact	A major impact	N
Race				
Respondents of color	48%	22%	30%	82
White (non-Hispanic) respondents	58%	34%	8%	106
Nativity				
Foreign-born	47%	26%	28%	58
U.S.-born	56%	30%	14%	135
Type				
Retail, grocery, and convenience stores	41%	31%	29%	59
Restaurants, bars, hospitality, recreation	45%	38%	17%	42
Health and fitness	67%	29%	5%	21
Property management, professional services, and finance	71%	19%	10%	31
Nonprofessional services	60%	24%	17%	42
Number of employees				
Owner only (No employees)	67%	17%	17%	18
1-9 Employees	53%	27%	20%	123
10+ Employees	50%	37%	13%	52
Time at current location				
Since before 2005	48%	30%	22%	124
Since 2005 or later	61%	29%	11%	66
Property				
Own	41%	37%	22%	49
Rent	57%	26%	17%	143
Total	53%	29%	18%	195

A6. How much was your business impacted because... There were fewer pedestrians or less foot traffic in front of the business?

	No impact	Somewhat of an impact	A major impact	N
Race				
Respondents of color	32%	26%	43%	82
White (non-Hispanic) respondents	42%	22%	36%	102
Nativity				
Foreign-born	34%	19%	47%	58
U.S.-born	37%	25%	37%	131
Type				
Retail, grocery, and convenience stores	29%	17%	53%	58
Restaurants, bars, hospitality, recreation	26%	36%	38%	42
Health and fitness	57%	14%	29%	21
Property management, professional services, and finance	55%	17%	28%	29
Nonprofessional services	34%	29%	37%	41
Number of employees				
Owner only (No employees)	47%	6%	47%	17
1-9 Employees	39%	20%	41%	122
10+ Employees	30%	34%	36%	50
Time at current location				
Since before 2005	33%	24%	44%	119
Since 2005 or later	43%	22%	34%	67
Property				
Own	31%	33%	35%	48
Rent	39%	19%	42%	140
Total	37%	24%	40%	191

A7. How much was your business impacted because... There were fewer cars or less automobile traffic in front of the business?

	No impact	Somewhat of an impact	A major impact	N
Race				
Respondents of color	27%	28%	44%	81
White (non-Hispanic) respondents	30%	25%	46%	105
Nativity				
Foreign-born	32%	21%	47%	57
U.S.-born	26%	28%	46%	134
Type				
Retail, grocery, and convenience stores	21%	24%	55%	58
Restaurants, bars, hospitality, recreation	24%	21%	55%	42
Health and fitness	29%	38%	33%	21
Property management, professional services, and finance	48%	19%	32%	31
Nonprofessional services	24%	34%	41%	41
Number of employees				
Owner only (No employees)	29%	12%	59%	17
1-9 Employees	28%	27%	46%	123
10+ Employees	27%	29%	43%	51
Time at current location				
Since before 2005	27%	21%	51%	121
Since 2005 or later	27%	34%	39%	67
Property				
Own	24%	31%	45%	49
Rent	29%	24%	47%	141
Total	27%	26%	46%	193

A8. How much was your business impacted because... There was excess noise, dust, or other issues caused by construction equipment or crews?

	No impact	Somewhat of an impact	A major impact	N
Race				
Respondents of color	29%	32%	39%	82
White (non-Hispanic) respondents	27%	36%	36%	107
Nativity				
Foreign-born	29%	28%	43%	58
U.S.-born	26%	38%	36%	136
Type				
Retail, grocery, and convenience stores	25%	37%	37%	59
Restaurants, bars, hospitality, recreation	21%	36%	43%	42
Health and fitness	27%	45%	27%	22
Property management, professional services, and finance	45%	16%	39%	31
Nonprofessional services	24%	38%	38%	42
Number of employees				
Owner only (No employees)	26%	21%	53%	19
1-9 Employees	32%	34%	34%	123
10+ Employees	17%	42%	40%	52
Time at current location				
Since before 2005	22%	33%	45%	124
Since 2005 or later	36%	40%	24%	67
Property				
Own	27%	29%	45%	49
Rent	27%	38%	35%	144
Total	28%	35%	38%	196

A9. Construction impacts

	1 or more of these impacts		# impacts	1 or more of these impacts was major		# major impacts
	Number	Percent	Median	Number	Percent	Median
Race						
Respondents of color	69	80%	6.0	55	64%	3.0
White (non-Hispanic) respondents	97	90%	5.0	68	63%	2.0
Nativity						
Foreign-born	48	77%	6.0	38	61%	3.0
U.S.-born	123	90%	5.0	90	66%	2.0
Type						
Retail, grocery, and convenience stores	53	87%	7.0	40	66%	4.0
Restaurants, bars, hospitality, recreation	38	86%	5.5	31	70%	3.0
Health and fitness	19	86%	4.0	13	59%	1.0
Property management, professional services, and finance	24	77%	4.0	17	55%	1.0
Nonprofessional services	39	91%	5.0	28	65%	2.0
Number of employees						
Owner only (No employees)	18	90%	4.0	14	70%	2.0
1-9 Employees	104	82%	5.0	81	64%	2.0
10+ Employees	49	94%	5.0	33	63%	2.0
Time at current location						
Since before 2005	110	87%	6.0	84	67%	3.0
Since 2005 or later	60	86%	5.0	43	61%	1.0
Property						
Own	43	86%	6.0	29	58%	1.5
Rent	127	86%	5.0	98	66%	2.0
Total	173	86%	5.0	129	64%	2.0

Notes: *Individual construction impacts are shown in Figures A2-A9, and include:*

- Customers did not know the business was open
- It was hard for Customers to navigate construction to get to the business
- Customers heard it was hard to access the business so they did not try

- Trucks or delivery vehicles were not able to reach the business
- There were fewer pedestrians or less foot traffic in front of the business
- There were fewer cars or less automobile traffic in front of the business
- There was excess noise, dust, or other issues caused by construction equipment or crews

A10. Overall, how would you rate the effectiveness of the Project Office communication efforts? Would you say…

	Very effective		Somewhat effective		Not effective	
	Number	Percent	Number	Percent	Number	Percent
Race						
Respondents of color	7	22%	18	56%	7	22%
White (non-Hispanic) respondents	8	16%	21	43%	20	41%
Nativity						
Foreign-born	5	21%	15	63%	4	17%
U.S.-born	10	17%	26	43%	24	40%
Number of employees						
Owner only (No employees)	2	25%	4	50%	2	25%
1-9 Employees	9	20%	19	41%	18	39%
10+ Employees	5	17%	17	57%	8	27%
Time at current location						
Since before 2005	11	18%	27	45%	22	37%
Since 2005 or later	5	21%	13	54%	6	25%
Property						
Own	5	17%	19	63%	6	20%
Rent	11	20%	22	40%	22	40%

A11. Overall, how would you rate the effectiveness of the Small Business Loan Program? Would you say…

	Very effective		Somewhat effective		Not effective	
	Number	Percent	Number	Percent	Number	Percent
Race						
Respondents of color	8	42%	10	53%	1	5%
White (non-Hispanic) respondents	5	25%	8	40%	7	35%
Nativity						
Foreign-born	7	41%	9	53%	1	6%
U.S.-born	7	29%	10	42%	7	29%
Number of employees						
Owner only (No employees)	2	40%	3	60%	0	0%
1-9 Employees	6	24%	13	52%	6	24%
10+ Employees	6	55%	3	27%	2	18%
Time at current location						
Since before 2005	8	31%	10	38%	8	31%
Since 2005 or later	5	36%	9	64%	0	0%
Property						
Own	1	14%	6	86%	0	0%
Rent	13	38%	13	38%	8	24%

A12. Service participation rates

	Small Business Loan Program		Parking Loan Program		U7 Services		"Buy Local" Coupon Book		Progressive Dinner		1+ Services received	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Race												
Respondents of color	19	23%	3	4%	16	20%	5	6%	3	15%	30	35%
White (non-Hispanic) respondents	21	20%	5	6%	6	6%	20	19%	7	30%	38	35%
Nativity												
Foreign-born	17	28%	3	6%	9	16%	2	3%	3	19%	21	34%
U.S.-born	25	19%	6	6%	13	10%	25	19%	7	26%	51	37%
Type												
Retail, grocery, and convenience stores	14	24%	3	6%	9	16%	7	12%	NA	NA	25	41%
Restaurants, bars, hospitality, recreation	17	40%	2	8%	5	13%	10	24%	10	24%	23	52%
Health and fitness	2	9%	2	11%	0	0%	2	9%	NA	NA	6	27%
Property management, professional services, finance	2	7%	1	4%	3	10%	3	10%	NA	NA	7	23%
Nonprofessional services	7	16%	1	3%	5	12%	5	12%	NA	NA	11	26%
Number of employees												
Owner only (No employees)	5	25%	0	0%	4	21%	0	0%	0	0%	7	35%
1-9 Employees	25	20%	7	7%	17	14%	13	10%	5	23%	43	34%
10+ Employees	12	24%	1	3%	1	2%	14	27%	5	24%	21	40%
Time at current location												
Since before 2005	27	22%	9	9%	12	10%	17	14%	8	36%	46	37%
Since 2005 or later	14	20%	0	0%	10	16%	10	14%	2	11%	25	36%
Property												
Own	7	15%	7	17%	4	9%	7	14%	2	29%	18	36%
Rent	35	24%	1	1%	18	13%	20	14%	8	23%	53	36%
Total	**42**	**22%**	**9**	**6%**	**22**	**12%**	**27**	**14%**	**10**	**23%**	**72**	**36%**

A13. During the first year of Light Rail construction, did your business…

	Purchase and display any additional signage to help customers navigate the construction or to indicate the business was open?		Purchase any additional TV, radio, or print advertising to attract or retain customers because of construction?		Run any additional coupons, deals, or other promotional offers to attract or retain customers to the business because of construction?		Do any other activities intended to offset the effects of the Central Corridor Light Rail construction?	
	Number	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Race								
Respondents of color	34	40%	16	19%	29	34%	18	22%
White (non-Hispanic) respondents	27	25%	20	19%	26	24%	31	29%
Nativity								
Foreign-born	24	39%	10	16%	21	34%	14	24%
U.S.-born	40	29%	27	20%	37	27%	37	27%
Type								
Retail, grocery, and convenience stores	23	38%	13	21%	17	28%	14	23%
Restaurants, bars, hospitality, recreation	21	48%	9	20%	21	48%	15	36%
Health and fitness	3	14%	3	14%	2	9%	3	14%
Property management, professional services, and finance	4	13%	3	10%	4	13%	6	20%
Nonprofessional services	13	30%	9	21%	14	33%	13	30%
Number of employees								
Owner only (No employees)	5	26%	6	30%	4	20%	7	35%
1-9 Employees	44	35%	23	18%	36	28%	32	26%
10+ Employees	15	29%	8	15%	18	35%	12	23%
Time at current location								
Since before 2005	36	29%	23	18%	34	27%	34	27%
Since 2005 or later	27	39%	13	19%	22	31%	16	24%
Property								
Own	17	34%	5	10%	7	14%	10	20%
Rent	47	32%	32	22%	51	34%	41	28%
Total	**64**	**32%**	**37**	**18%**	**58**	**29%**	**51**	**25%**

A14. Do you expect this business will be operating in its current location in FIVE YEARS?

	Yes	No	Don't know	N
Race				
Respondents of color	84%	7%	9%	85
White (non-Hispanic) respondents	69%	24%	7%	108
Nativity				
Foreign-born	85%	5%	10%	61
U.S.-born	71%	21%	8%	137
Type				
Retail, grocery, and convenience stores	72%	16%	11%	61
Restaurants, bars, hospitality, recreation	84%	7%	9%	44
Health and fitness	81%	14%	5%	21
Property management, professional services, and finance	74%	19%	6%	31
Nonprofessional services	70%	23%	7%	43
Number of employees				
Owner only (No employees)	65%	20%	15%	20
1-9 Employees	73%	19%	8%	127
10+ Employees	85%	8%	8%	52
Time at current location				
Since before 2005	74%	18%	8%	125
Since 2005 or later	77%	14%	9%	70
Property				
Own	82%	12%	6%	50
Rent	73%	18%	9%	148
Total	76%	16%	9%	200

A15. Over the next FIVE YEARS, do you expect sales will…

	Decrease		Stay the same		Increase	
	Number	Percent	Number	Percent	Number	Percent
Race						
Respondents of color	12	16%	16	21%	49	64%
White (non-Hispanic) respondents	13	13%	22	22%	64	65%
Nativity						
Foreign-born	10	18%	10	18%	35	64%
U.S.-born	15	12%	29	23%	82	65%
Type						
Retail, grocery, and convenience stores	8	14%	11	19%	38	67%
Restaurants, bars, hospitality, recreation	5	13%	6	16%	27	71%
Health and fitness	1	5%	7	33%	13	62%
Property management, professional services, and finance	4	14%	7	24%	18	62%
Nonprofessional services	7	18%	9	24%	22	58%
Number of employees						
Owner only (No employees)	1	6%	4	24%	12	71%
1-9 Employees	23	19%	28	24%	67	57%
10+ Employees	1	2%	8	17%	38	81%
Time at current location						
Since before 2005	21	18%	26	23%	68	59%
Since 2005 or later	4	6%	13	20%	47	73%
Property						
Own	9	20%	7	16%	29	64%
Rent	16	12%	33	24%	87	64%
Total	**25**	**14%**	**40**	**22%**	**118**	**64%**

A16. Over the next FIVE YEARS, do you expect profits will…

	Decrease		Stay the same		Increase	
	Number	Percent	Number	Percent	Number	Percent
Race						
Respondents of color	15	19%	16	21%	46	60%
White (non-Hispanic) respondents	20	20%	18	18%	61	62%
Nativity						
Foreign-born	12	22%	13	24%	30	55%
U.S.-born	23	18%	23	18%	80	63%
Type						
Retail, grocery, and convenience stores	10	18%	10	18%	36	64%
Restaurants, bars, hospitality, recreation	8	21%	6	15%	25	64%
Health and fitness	3	14%	6	29%	12	57%
Property management, professional services, and finance	6	21%	6	21%	17	59%
Nonprofessional services	8	21%	9	24%	21	55%
Number of employees						
Owner only (No employees)	1	6%	5	31%	10	63%
1-9 Employees	32	27%	24	20%	63	53%
10+ Employees	2	4%	8	17%	37	79%
Time at current location						
Since before 2005	28	24%	25	22%	63	54%
Since 2005 or later	7	11%	11	17%	45	71%
Property						
Own	10	22%	7	16%	28	62%
Rent	25	18%	30	22%	81	60%
Total	**35**	**19%**	**37**	**20%**	**111**	**61%**

A17. Over the next FIVE YEARS, do you expect number of employees will…

	Decrease		Stay the same		Increase	
	Number	Percent	Number	Percent	Number	Percent
Race						
Respondents of color	12	16%	31	40%	34	44%
White (non-Hispanic) respondents	12	12%	57	56%	33	32%
Nativity						
Foreign-born	9	16%	26	46%	21	38%
U.S.-born	15	12%	66	52%	47	37%
Type						
Retail, grocery, and convenience stores	6	11%	35	61%	16	28%
Restaurants, bars, hospitality, recreation	4	11%	12	32%	22	58%
Health and fitness	2	10%	16	76%	3	14%
Property management, professional services, and finance	6	19%	14	45%	11	35%
Nonprofessional services	6	15%	17	44%	16	41%
Number of employees						
Owner only (No employees)	-	-	13	72%	5	28%
1-9 Employees	20	17%	62	53%	36	31%
10+ Employees	4	8%	18	37%	27	55%
Time at current location						
Since before 2005	20	17%	62	53%	35	30%
Since 2005 or later	4	6%	29	45%	32	49%
Property						
Own	6	13%	24	52%	16	35%
Rent	18	13%	69	50%	51	37%
Total	**24**	**13%**	**94**	**51%**	**68**	**37%**

A18. Over the next FIVE YEARS, do you expect employee wage levels will…

	Decrease		Stay the same		Increase	
	Number	Percent	Number	Percent	Number	Percent
Race						
Respondents of color	6	8%	29	39%	39	53%
White (non-Hispanic) respondents	4	4%	40	41%	54	55%
Nativity						
Foreign-born	4	7%	22	40%	29	53%
U.S.-born	6	5%	50	41%	66	54%
Type						
Retail, grocery, and convenience stores	3	5%	26	47%	26	47%
Restaurants, bars, hospitality, recreation	1	3%	16	42%	21	55%
Health and fitness	-	-	10	50%	10	50%
Property management, professional services, and finance	2	7%	10	33%	18	60%
Nonprofessional services	4	11%	12	33%	20	56%
Number of employees						
Owner only (No employees)	1	6%	6	38%	9	56%
1-9 Employees	9	8%	54	47%	51	45%
10+ Employees	-	-	13	27%	35	73%
Time at current location						
Since before 2005	7	6%	49	43%	59	51%
Since 2005 or later	3	5%	23	38%	34	57%
Property						
Own	2	4%	17	37%	27	59%
Rent	8	6%	57	43%	67	51%
Total	10	6%	74	41%	95	53%

Survey instrument

Central Corridor Business Survey

Hello, my name is (NAME) from Wilder Research. We are working with the Central Corridor Funders Collaborative and their Business Resources Collaborative on a study to learn about the experiences and needs of businesses during the Central Corridor Light Rail construction. I would like to speak with the owner of this business, or the manager of this location, to complete a brief survey about this business's activities related to the 2011 Light Rail construction season.

This survey is voluntary. Individual answers to questions will not be shared, and your business's participation in the survey will remain confidential. You are also free to skip any questions on the survey you do not wish to answer.

Information about the study:
This study is intended to learn more about the services and other strategies that businesses have used to help offset the effects of the Light Rail construction. We are speaking with 200 businesses along the Central Corridor, and are specifically asking about construction-related activities during the 2011 construction season (March through November). The information from this study will be used to better assist businesses and prepare for future construction. The study is funded by the Central Corridor Funders Collaborative and is sponsored by their Business Resource Collaborative working group. If you have any question about the study feel free to contact Brian Pittman at Wilder Research (brian.pittman@wilder.org)

Information about the CCFC:
The Central Corridor Funders Collaborative is a group of local and national funders who works with local resident organizations, community groups, nonprofit and business coalitions, and public agencies to create and implement corridor-wide strategies aimed at ensuring the adjoining neighborhoods, residents and businesses broadly share in the benefits of public and private investment in the Central Corridor Light Rail Line.

The Funders Collaborative, through its Catalyst Fund, expects to invest $20 million over 10 years. Envisioned as a ten-year initiative, the Funders Collaborative supplements the programs and investment of the individual member foundations.
For more information: http://www.funderscollaborative.org/

Information about the BRC:
The Business Resources Collaborative (BRC) was created in 2008 to support businesses and property owners through the changing market of the Central Corridor. The BRC is a partnership of business coalitions, nonprofit community developers and local and regional governments. The goal of the BRC is to coordinate the delivery of a comprehensive, integrated mix of services that will support area businesses and property owners before, during, and after LRT construction.
For more information: http://www.funderscollaborative.org/partners/business-development-group

CASE ID#: _____

Central Corridor Business Survey

SECTION I: Introduction and background

First, I would like to ask a few questions about this business.

1a. Briefly, how would you describe your business? (PROBE: One sentence you use to explain the business.)

_____

1b. Who is your primary customer base?

_____

1c. What is your primary product or service?

_____

2a. Are you the full owner, part owner, manager, or some other position?

Manager 1
Owner (sole) 2
Co-owner, or partner 3
OTHER (SPECIFY:_____) 4
Refused 7
Don't know 8

3a. Since what year has this business been in operation at any location?_____

Refused ..... -7
Don't know ..... -8

3b. Since what year has this business been operating at this location? _____

Refused ..... -7
Don't know ..... -8

[NOTE: IF Q3a or Q3b = 2012 TERMINATE INTERVIEW]

SECTION II: Effects of Central Corridor Light Rail construction

Next, we would like to ask you about construction-related disruption <u>last year</u>. Last year's construction includes any construction that occurred between March and November, 2011.

4a. Overall, how would you rate the level of construction near your business last year? Would you say…

There was no construction, (GO TO Q5) 1
There was minor construction, or 2
There was significant construction? 3
Refused 7

Don't know 8

4b. We are interested in the ways in which construction disrupted your business last year. (March – November 2011) Please answer **yes** or **no** for each of the following items.

	Yes	No	REF	DK
1. The business side of the street was closed for more than one month.	1	2	7	8
2. The sidewalk in front of your business had reduced access because of fencing, narrowed width, or other obstacles.	1	2	7	8
3. Your business lost on-street parking	1	2	7	8
4. Your business lost off-street parking	1	2	7	8

4c. We are interested in the effectiveness of construction-related communications during last year's construction. For each item, please tell me how informed you were about various aspects of last year's construction.

	Would you say you were …				
How informed were you about…	**Very informed,**	**Somewhat informed, or**	**Not informed?**	**REF**	**DK**
1. The construction schedule	1	2	3	7	8
2. Road and sidewalk closures	1	2	3	7	8
3. Utility outages	1	2	3	7	8
4. Who to contact about issues your business encountered	1	2	3	7	8

5. I am going to read a list of possible construction-related impacts that might have affected businesses along the Central Corridor. For each item, please tell me if it had a **major impact**, **somewhat of an impact**, or had **no impact** on **YOUR business** last year (March-November 2011). **How much was your business impacted because…**

	Would you say there was . . .				
(How about . . .)	**No impact,**	**Somewhat of an impact, or**	**A major impact?**	**REF**	**DK**
1. Customers did not know the business was open	1	2	3	7	8
2. It was hard for Customers to navigate construction to get to the business	1	2	3	7	8
3. Customers heard it was hard to access the business so they did not try	1	2	3	7	8
4. Trucks or delivery vehicles were not able to reach the business	1	2	3	7	8
5. There were fewer pedestrians or less foot traffic in front of the business	1	2	3	7	8
6. There were fewer cars or less automobile traffic in front of the business	1	2	3	7	8
7. There was excess noise, dust, or other issues caused by construction equipment or crews	1	2	3	7	8

SECTION III: Services and assistance

We would like to ask you about some of the services, assistance, or programs you may have received or participated in during the first year of construction. The first year of construction was between March 2011 and November 2011.

Q6 ⇜⇜⇜

6b. [IF APPLIED/DIDN'T RECEIVE] Were you given a reason why you were not able to participate in the **Small Business Loan Program**?

Yes 1

No (GO TO Q7) 2

Refused (GO TO Q7) 7

Don't know (GO TO Q7) 8

6c. What was the reason you did not receive a loan?

_____

_____**(GO TO Q7)**

6d. [IF RECEIVED] I am going to read a list of potential reasons why a business might choose to participate in the **Small Business Loan Program**. Please tell me, for each reason, if it was a **primary reason** you chose to participate, **part of the reason**, or **not a reason**.

	Would you say it was . . .				
	Primary reason,	**Part of the reason, or**	**Not a reason?**	**REF**	**DK**
1. The **Small Business Loan Program** met a specific need for your business	1	2	3	7	8
2. The terms or requirements of the **Small Business Loan Program** were favorable	1	2	3	7	8
3. You were asked to participate in the **Small Business Loan Program**	1	2	3	7	8

6e. Overall, how would you rate the effectiveness of the **Small Business Loan Program**? Would you say…

Very effective, ... 1

Somewhat effective, or 2

Not effective? 3

Refused 7

Don't know 8

6f. What was the best thing about the **Small Business Loan Program**?

_____

_____

6g. How could the **Small Business Loan Program** be improved?

_____

_____

Q7 ⇐⇐⇐

7c. What was the reason you did not receive this assistance?

_____

_____(GO TO Q8)

7d. [IF RECEIVED] I am going to read a list of potential reasons why a business might choose to participate in the **Parking Loan Program**. Please tell me, for each reason, if it was a **primary reason** you chose to participate, **part of the reason**, or **not a reason**.

	Would you say it was. . .				
(What about . . .)	**Primary reason,**	**Part of the reason, or**	**Not a reason?**	**REF**	**DK**
1. The **Parking Loan Program** met a specific need for your business	1	2	3	7	8
2. The terms or requirements of the **Parking Loan Program** were favorable	1	2	3	7	8
3. You were asked to participate in the **Parking Loan Program**	1	2	3	7	8

(GO TO Q8)

7e. Overall, how would you rate the effectiveness of the **Parking Loan Program**? Would you say…

Very effective,.....1

Somewhat effective, or 2

Not effective?.....3

Refused 7

Don't know 8

7f. What was the best thing about the **Parking Loan Program**?

_____

_____

7g. How could the **Parking Loan Program** be improved?

_____

_____

Q8 ⇐⇐⇐

Q9 ⇐⇐⇐

9c. I would like to ask you a few questions about the effectiveness of the **coupon book** program.

How effective was the "Buy Local" coupon book program in…	**Would you say…**				
	Very effective,	**Somewhat effective, or**	**Not effective?**	**REF**	**DK**
1. Increasing customers' awareness of your business	1	2	3	7	8
2. Increasing your business's customer traffic	1	2	3	7	8
3. Increasing your business's revenue	1	2	3	7	8
4. Increasing customer access to your business	1	2	3	7	8

9d. Overall, how would you rate the effectiveness of the **"Buy Local" coupon book** program? Would you say…

Very effective,.....1

Somewhat effective, or 2

Not effective?.....3

Refused 7

Don't know 8

9e. What was the best thing about the **"Buy Local" coupon book** program?

_____

_____

9f. How could the **"Buy Local" coupon book** program be improved?

_____

_____

[IF BUSINESS IS NOT A RESTAURANT>>>> SKIP TO Q11]

APPENDIX J:
Little Mekong CCLRT Impact Study

ASIAN ECONOMIC DEVELOPMENT ASSOCIATION

Little Mekong CCLRT Impact Study

documentation of CCLRT construction impact on the small businesses on University Avenue in the Little Mekong business district between March-July 2012

August 1, 2012

Prepared by the Asian Economic Development Association (AEDA) for the Metropolitan Council and Federal Transit Authority for inclusion in the Supplemental Draft Environmental Impact Statement for the Central Corridor Light Rail Transit Project, Minneapolis and Saint Paul, MN.

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Table of Contents

Intro	3
Methods	3
Results	5
Discussion	8
Appendix A. Maps	10
Appendix B. Data collection tool	13
Appendix C. Case studies	18
Appendix D. Charts & graphs	28
Appendix E. Business Quotes	32

AEDA would like to thank Teng Ding, Sacha Chandavong, Thao Phuong Nguyen, Ngozi Njoku, Nancy Pomplun, Stephanie Rothstein, Va-Megn Thoj and Nick Wornson for their contributions to this report in the form data collection, data analysis, report writing, case study documentation, and editing. AEDA would also like to thank the University of Minnesota Center for Urban and Regional Affairs, Higher Education Consortium for Urban Affairs for their support of the Environmental Justice Monitoring Project, of which this report is a result. AEDA would also like to recognize all of the Little Mekong businesses, Business Resources Collaborative, Tom Hess, Dan Hess and May Shoua Moua for their expert and experiential input into this work.

Little Mekong CCLRT Impact Study

A documentation of CCLRT construction impact on the small businesses on University Avenue in the Little Mekong business district between March-July 2012

The Little Mekong CCLRT Impact Report represents the work of Asian Economic Development Association (AEDA) and its monitoring of the acute impacts by the Central Corridor Light Rail Transit (CCLRT) project on the small businesses that make up the Little Mekong business district - a 5 block strip of University Avenue from MacKubin Street to Galtier Street in Saint Paul.

Little Mekong has a unique makeup compared to the business districts surrounding the rest of the Central Corridor line. Little Mekong emerged on University Avenue surrounding Western Ave, due to its high concentration of Asian-owned businesses, most of which are very small both in revenue and staffing, as seen in Table 1. Little Mekong's unique ethnic makeup also reflects the diversity of its surrounding neighborhoods, Frogtown and Summit-University. Appendix A. Maps 1 and 2 show the density of the Asian community in these neighborhoods and the ethnic makeup of business owners in Little Mekong, respectively.

Table 1. Demographics of Little Mekong[1]

Race of owner (n=74)	
Asian-owned	*56 (76%)*
Other "minority"-owned	*11 (15%)*
Total "minority"-owned	67 (91%)
Annual Revenue (n=23)	
$0 - $250k	*15 (63%)*
$250k - $500k	*4 (17%)*
$500k - $2M	*4 (17%)*
Greater than $2M	*0 (0%)*
Number of full-time employees (n=37)	
0-10 FTE	*31 (84%)*
10-99 FTE	*5 (14%)*
100+ FTE	*1 (3%)*

AEDA was founded in 2006 by a group of Asian small business owners concerned with the development of the CCLRT project, and is a community driven nonprofit organization with special emphasis on Asian small businesses in low-income communities. AEDA's mission is to cultivate vibrant, diverse communities by creating economic opportunities for thriving sustainable multicultural neighborhoods based on strong community leadership and economic justice.

METHODS

The design for this study was developed by AEDA staff with input from an advisory committee made up of persons with research and construction monitoring experience. Additional input was sought from businesses who experienced CCLRT construction in 2011. Agreements made regarding the design, based upon the unique immigrant population of the Little Mekong business community, included:

- Use of semi-structured interview rather than strictly structured interview format or use of close ended or multiple choice questions– the reason for this is because of cultural preference by business owners to tellstories rather than answer very narrow questions,

[1] Asian Economic Development Association, ECONOMIC JUSTICE MONITORING PROJECT: Business Impact Study (T0). March 2012.

use of scales are challenging across different cultures, and felt a more open format would allow for deeper understanding of the impact of construction.

- Use of in-person interview rather than written or online surveys - given multiple languages used in Little Mekong, a written survey would be costly to translate, would be challenging to translate equally across languages and cultures
- A case study design is ideal for this study where we do not know what we will find. As case studies can lead to testable hypotheses and are a solid source of empirical evidence.[2] Thus, a case study design is well suited for drawing conclusions about the impact of the construction on Little Mekong businesses.
- The data collection tool is specially designed for the interviewer to allow them to quickly record any troubles experienced by the business and collect anecdotal information (see Appendix B)

Business owners were the targeted interviewees, but when not available, interviewers spoke with managers or available staff. When a business refused, interviewer would try to speak with a different individual at a later time. If a business was empty or no one responded to the interviewer's doorknock, nothing would be left behind at the property. It was to the discretion of the interviewer to go back.

The data collected reflected issues that occurred as a result of construction activities as well as on estimates of business revenue losses. Most data were collected anecdotally, and as it is the easiest way to capture firsthand information from business owners. When available we used business income records or loan application materials to get more accurate estimates. However, these records were not available in all situations.

Some interviews were written up in the form of case studies (see Appendix C)

Table 2. Ethnicity of owner for participating businesses compared to total population of Little Mekong[3]

	Study Sample (n=64)	Businesses in Little Mekong (N=80)
Asian-owned business	45 (70.3%)	56 (70.0%)
Minority (non-Asian) owned business	9 (14.1%)	11 (13.8%)
Caucasian owned business	7 (10.9%)	7 (8.8%)
Don't know race of owner	3 (4.7%)	6 (7.5%)

Table 3. Types of participating of businesses compared to total population of Little Mekong[4]

	Study Sample (n=64)	Businesses in Little Mekong (N=80)
Arts / culture	2 (3.1%)	2 (2.5%)
Beauty service	9 (14.1%)	11 (13.8%)
Grocer retail	4 (6.3%)	4 (5.0%)
Health-related service	12 (18.8%)	12 (15.0%)
Non-grocery retail	7 (10.9%)	9 (11.3%)
Religious place of worship	1 (1.6%)	1 (1.3%)
Restaurant	11 (17.2%)	13 (16.3%)
Social services / nonprofit	7 (10.9%)	9 (16.3%)
Other	11 (17.2%)	16 (20.0%)
Don't know	n/a	3 (3.8%)

[2] Eisenhardt, Kathleen M. "Building Theories from Case Study Research." *The Academy of Management Review*. 14.4 (1989): 532-550.
[3] Asian Economic Development Association, ECONOMIC JUSTICE MONITORING PROJECT: Business Impact Study (T0). March 2012.
[4] Asian Economic Development Association, ECONOMIC JUSTICE MONITORING PROJECT: Business Impact Study (T0). March 2012.

RESULTS

The data reflected in this report was collected between March 30, 2012 thru July 25, 2012. We found that most businesses experienced issues that interrupted their normal activities which may have caused revenue loss, while some businesses did not report any impact from the interruptions on their business activities. Appendix D contains graphs and charts to give a visual display of the counts and the percentages of the reports we found.

Respondents

During the data collection period, we made contact with 64 businesses one to three times, totaling 102 contacts. Contact means we were able to speak with a staff of the business. Of the 64 businesses with whom we made contact, three refused to participate. Table 3 shows the count breakdown of type of businesses participating in the study. The types of businesses represented in this sample mainly include restaurants, beauty services, and health services. Tables 2 and 3 compare the study sample in this report compared to all of the businesses identified in snapshot survey conducted by AEDA in February 2012, with every business in Little Mekong.[5]

Reports of trouble with utilities

During the data collection period, we had 36 reports of "no trouble" or "don't know" with utilities, and 47 reports of some form of trouble with a utility.

Water shut-off was the most common utility issue with 33 reports. Duration of shut-offs ranged from 10 minutes to 8.5 hours spanning the work day. Only two businesses reported not getting notice of the shut-off, but neither of those incidences resulted in a significant impact. Impacts reported include:

Table 4. Utility disruptions reported

Utility/Service disrupted	# of reports
Water	*33*
Gas	*6*
Electricity	*4*
Internet/Phone/Fax	*4*
Total disruptions	**47**

- Three businesses cited loss of customers due to water shutoff, including a laundromat who estimates loss of approximately $50
- Two businesses cited inconvenience of water shutoff due to inability to use bathroom by customers during shutoff
- One restaurant spent $100 on bottled water as an alternative.

No significant impact was reported as a result of the 6 gas shut-offs.

One business closed for the day and owners went home since they could not fix an electricity issue. Thus, they lost business for the day.

Four businesses had their internet, phone, and/or fax interrupted during construction. One of these businesses reported the internet being disconnected for an entire month, but they did not know about the Metropolitan Council Construction Hotline so did not know how to get help. Once their internet provider came to fix the problem, the provider said construction vibrations

[5] Asian Economic Development Association, ECONOMIC JUSTICE MONITORING PROJECT: Business Impact Study (T0). March 2012.

had loosened and disconnected the wires. This business estimates a 30-40% revenue loss for the month without internet. Another business whose customers rely upon the telephone to reach them felt they lost customers do to their phone lines going in and out.

Reports of trouble with construction activities
During the data collection period, we had 17 reports of "no trouble" with construction activities, and 77 reports of some form of trouble with construction activities.

Table 5. Trouble with construction activities

Trouble reported	# of reports
Dust/Air	*19*
Noise/Vibration	*52*
Other	*6*
Total reports	**77**

Of the 52 reports of trouble with "Noise/Vibration," four cited items vibrating and falling off shelves causing breakage of dishes or shelves. One restaurant estimates the damage costing "hundreds of dollars". Eight reports cited impacts of customer disturbance. One business reported the vibration causing their internet to be disconnected for one month (see further explanation under "Reports of trouble with utilities" section). Additional impacts include:

- basement flooding resulting in mold growth on walls;
- crack in building wall;
- cancellation of 15 customers' appointments at a health service business that conducts MRIs (magnetic resonance imaging), costing them about $22,000 each day.

There were 19 reports of dust and air quality trouble. Eight reports cited no impact, while 4 reported customer complaints. Others cited allergies, dirtiness, and having to keep the door closed as impacts.

Other troubles from construction activity included loss of pedestrian lighting outside of a business resulting in an estimated 30% customer decrease, and an offensive smell from sewer grates disturbing customers as they walk into the business.

Reports of trouble with access
During the data collection period, we had 22 reports of "no trouble" with access, and 79 reports of some form of trouble with access, including access to parking lot, pedestrian pathways, crosswalks, and access for delivery trucks..

Table 6. Trouble with access

Trouble reported	# of reports
Parking/parking lot access	*44*
Traffic	*10*
Sidewalk/handicap access	*14*
Truck access	*11*
Total reports	**79**

Of the 44 reports of trouble with parking access, eight sited inconvenience for customers as primary impact. While four reported loss of street parking as the issue citing the following impacts:

- Manager has to pay a fee to park in adjacent lot (only 10 spots) for customers to have access otherwise they have to use streets.
- People do not want to carry laundry long distances, only street parking on Mackubin and University available. Business down on weekends up to 40%.

Eleven reports were concerned about pedestrian pathways and four were concerned about crosswalks. Four of the businesses cited narrowed and blocked sidewalks as an inconvenience for customers, of which two felt it caused a loss in business. Another business helps community members cross streets when needed.

Ten businesses cited traffic as an issue, of which two reported sales loss as an impact. One estimated 30% sales decrease. Another reported a $10,000 decrease in April from the month before and a $30,000 decrease in May from a year ago.

There were eight reports of trouble with truck access. Impacts of this include trucks needing to park far away, disgruntled delivery drivers, and two reports of trash removal vehicles unable to access bins so trash could not be picked up. One business had to hire more people to deliver supplies as the delivery van could not get access to the business and some delivery trucks refused to come to the business to deliver goods.

Other troubles include road closure resulting in an estimated 30% decrease in business during the closure, sidewalk ramps were insufficient so the business needed to help people, and an overall frustration with driving through the construction zone.

Reports of trouble with way finding signage

There were 33 reports of orange way finding signage being sufficient and 24 reports of such signage being insufficient. Twenty-four people reported they did not know if the orange way finding signage was sufficient or had no opinion. Of those finding the signs insufficient, 4 cited limited English skills preventing customers from understanding the signage. There were 6 reports that the signs were confusing due to either not providing enough information about re-routes or conflicting detour signs, and 8 reports of signage not being helpful. Four businesses reported feeling that the signs were not big enough or were hard to see.

An additional challenge for businesses is ensuring customers know they are open and how to access their business. Nineteen businesses made their own signs, spending between $20 and $300. Eight businesses plan to make signs, while two do not have the money to make signs.

Reports of trouble with safety

Forty-six reported no problem with safety due to construction, and 19 reported safety concerns. Of the safety concerns, 4 included hazards to pedestrians such as rocks on sidewalks and uneven surfaces and 5 cited dangerous pedestrian crossing conditions. Other concerns included crime, air quality, poor lighting, cars parking on sidewalk, and access to bus stops.

Reports of trouble with communication of construction activities and resources

When asked if businesses felt they received sufficient communication regarding construction activities, 35 said yes, 8 said no, and 5 had no opinion. Comments made included:

- Construction is working hard to finish the project so there is nothing they can do. Each business is suffering.
- Need more connection and status of construction progress. Never get any updates about construction.
- Don't know about the hotline.
- The fence put up in front of business was sudden. Saw holes being put in front of business and had no prior notification.
- Not certain if business owners know about hotline but will share at staff meeting.
- Had 3 - 4 days' advance notice a number of times about construction.
- Notifications in advance of water being shut off since it is usually shut off at night
- Good notice ahead of time. Left note on door about water.

- No major complaints about Met Council but construction needs to work on better communication.
- Very pleased with Walsh.
- Very good. Gets emails about the progress of construction every Friday and share this with all employees.
- Have gotten notice in person and this works well for us.
- Really good with meetings, and helping with information.
- Feels more comfortable if approached directly.

Several immigrant business owners had difficulties in understanding information being distributed because of language barriers, they believe language is also a barrier to their customers thus affecting access and business activities.

Many businesses were unaware of the construction hotline and therefore had not utilized it when they experienced issues, while some who were aware of the hotline did not because of language barriers. Of the 237 troubles related to construction captured in this study, only 11 reported calling the construction hotline.

Many of the businesses were unaware of the assistance available to them from U7 or were unaware of how to apply for the Ready for Rail forgivable loan.

Other troubles identified
Additional findings worth noting include:

- Threatened moves and closures of businesses
  - one business is looking for a new location to move to and intends to leave University Avenue due to difficulties.
  - one store is about to close if nothing improves.
- Instability for workforce
  - 6 instances of employee lay-offs or reduced staff hours due to the inability to maintain staff employment on decreased business revenue.

DISCUSSION

"Our business can't afford to lose. We lost 40-50% and it's not only me! Many businesses experienced that."
"I know you are trying your best and I understand that there are not many things we can do about the construction, but I hope they will speed it up"

"In the past, we had 15 - 20 customers per day, but now it's only 4 - 5 customers per day. We're thinking of closing after 5 good years in business."

"Whatever is good for citizens and businesses please do. I'm happy to see the streets looking prettier and cleaner"."

"Walsh construction does a great job with communication. Very pleased with Walsh."

"Walsh Construction is doing a horrible job."

When asked what the hardest part of construction aside customer access, 24 still reported customer access as the hardest part. Traffic, including navigation, was second most reported, followed by parking. Eleven reported nothing being hardest.

These impacts could result in the loss of this thriving small business district and this violates the economic justice importance of maintaining the sustainability of small businesses.[6] Some of the businesses in Little Mekong rely on customers physically coming to their location, whereas others are able to provide their services offsite. Our study found that the businesses that rely on customers coming to them, which make up the majority of businesses in Little Mekong[7], were affected more than those that do not rely on these customers' physical presence as fewer customers are coming to the avenue during construction. Reasons for customers avoiding the avenue include confusing signage or lack of sufficient signage, language barriers in understanding signage, and difficulty in finding or accessing parking.

Table 7. Greatest challenge during construction

Loss of customers	24
Traffic	14
Parking access	12
Construction activities	6
Safety	1
Property taxes	1
Truck access	1
Broken promises	1
Nothing	11

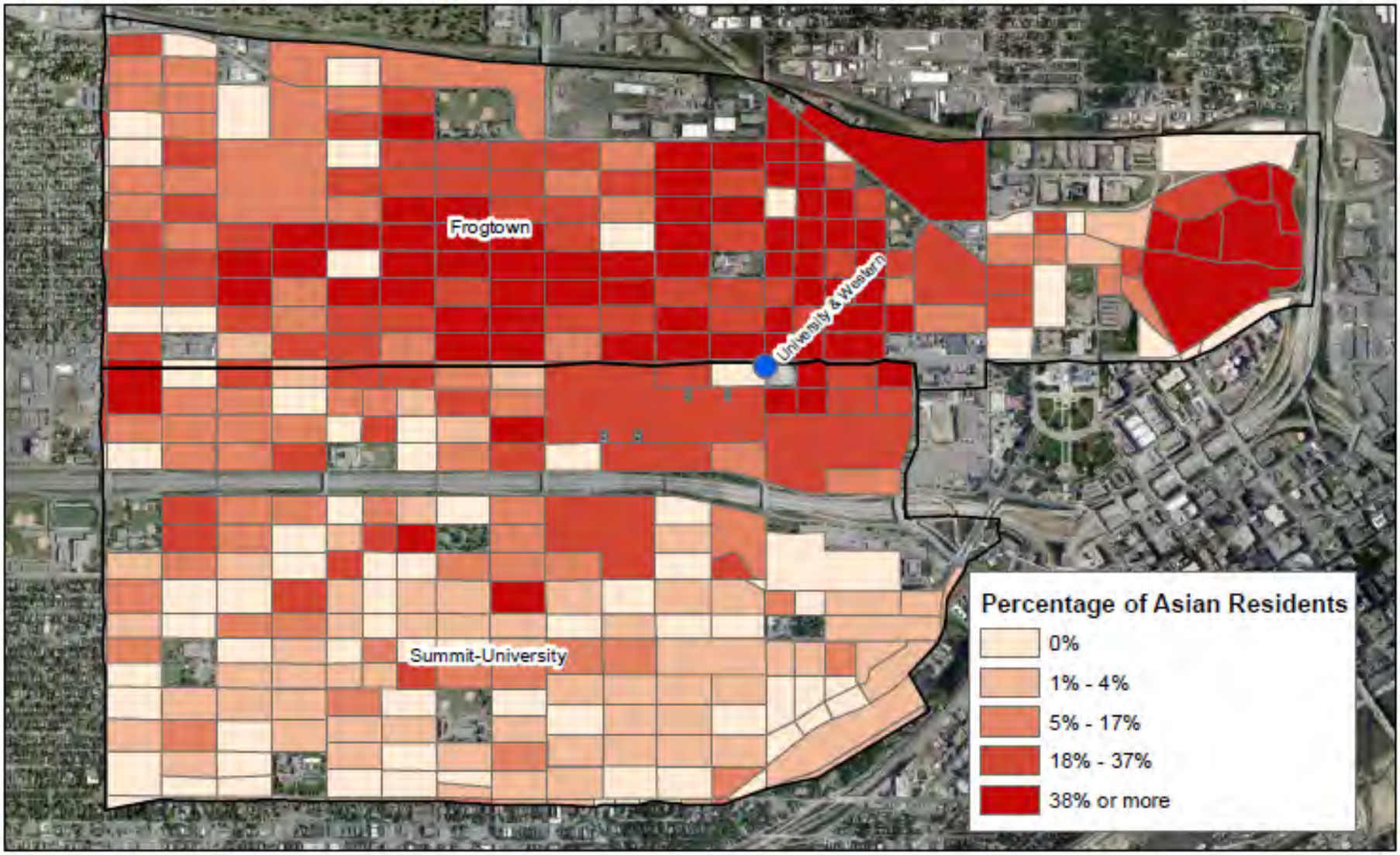
Business owners believe that most of the issues they encountered could have been minimized if the contractors had carried out more community engagement and communication before and during the construction. Business owners also had complaints about notifications concerning forthcoming changes and hoped for better notices in the future so they could plan ahead. In addition, business owners for whom English was not the primary language would have benefited from communication in their native language. Access issues were said to have been worsened by insufficient signage, making it quite difficult for customers and deliveries to find access to businesses. However, with the help of U7 and the Ready for Rail forgivable loan, there appears to be a ray of hope for business owners who hope to regain some of the losses with the aid of the loan.

[6] Council on Environmental Quality. *Environmental Justice: Guidance Under the National Environmental Policy Act*. 10 December 1997.

[7] Asian Economic Development Association, ECONOMIC JUSTICE MONITORING PROJECT: Business Impact Study (T0). March 2012.

APPENDIX A. Maps

Frogtown & Summit-University Planning Districts: Asian Residents



Percentage of Asian Residents

Frogtown: 34.1%
Summit-University: 9.8%
St. Paul: 14.9%

Other Planning Districts along the Central Corridor:
Downtown: 4.9%
Hamline-Midway: 5.3%
St. Anthony Park: 11.0%
Union Park: 3.2%

0 0.125 0.25 0.5 Miles

N

Center for Urban and Regional Affairs (CURA)
University of Minnesota

Map made by CURA Staff, July 2012
Data Source: US 2010 Census (block level data), Compass Neighborhood Profiles (District Council percentages)

Little Mekong Area: Asian-Owned and other Immigrant-Owned Businesses

Business Ownership in Non-Vacant Properties

- Asian-owned Businesses (Cambodian, Chinese, Hmong, Lao, Thai, Vietnamese), 54 Total
- Other Immigrant-owned Business (African, Hispanic, Jamaican, Latino, Nigerian, Somali), 10 Total
- Non-Immigrant Owned Business (African-American, Caucasian), 8 Total
- Don't Know or No Response, 6 Total
- Unoccupied commercial property
- Surveyed Properties

0 125 250 500 Feet

N

Map made by CURA Staff, July 2012
Data Source: AEDA (February 2012 Business Survey), Ramsey County (parcel data)

Center for Urban and Regional Affairs (CURA)
UNIVERSITY OF MINNESOTA

APPENDIX B. Data collection tool

Business Name: _____Street#: _____ Suite#: _____Spoke to: ☐ Owner/Mgr ☐ Staff
Number of attached pages: ___ Interviewer: __ __ Date: ___/___/___

1. In the last **month**, any trouble with **utilities**?

☐ Electricity ☐ Gas ☐ Water ☐ Phone ☐ Sewer
☐ Internet ☐ Trash collection ☐ Mail delivery ☐ Cable Satellite ☐ Other _____
☐ Don't remember ☐ Don't know ☐ Refused ☐ **NONE** ☐ Nominal Impact

- Use additional form (When? Did you receive any notice? Did you call hotline? Impact on business?)

2. In the last **month**, any trouble with **construction activities**?

☐ Dust/Air ☐ Litter/Trash ☐ Noise/Vibration ☐ Sewer grates
☐ Other _____ ☐ **NONE** ☐ Don't know ☐ Refused
☐ Nominal Impact

3. In the last **month**, any **access issues**?

☐ Sidewalk ☐ Parking lot ☐ Incoming deliveries ☐ Handicap ramps ☐ Crosswalks
☐ 2-way traffic on Univ ☐ Other_____ ☐ Don't remember ☐ Don't know ☐ Refused
☐ **NONE** ☐ Nominal Impact

4. Please tell us your experience with customers finding your business during the past month.

4a. Have ***orange direction signs*** been kept up to date for navigating this area? If not, please tell us what happened and how that impacted your business. Have you ever called the **hotline** about this? Talked to a construction **coordinator** about this? If yes to either, please tell us the result.	
b. Have you been able to ensure people know you are open for business? What is helpful to ensure customers find your business? ☐ Orange Construction signs ☐ Personally made signs (*How many? __ Cost:____)* ☐ "Open for Business" signs ☐ Met Council marketing (Mod & Co) ☐ U7 tech assistance ☐ Little Mekong support ☐ Talking to customers on phone ☐ Providing maps to customers ☐ Website: _____ ☐ Other: _____	

5. Have you had any **safety concerns** due to construction? (i.e. unmarked holes in ground, heavy loads being hauled overhead, flooding, etc.) If so, please share any actions you may have taken.

Have you ever called the **hotline** or talked to a construction **coordinator** about this? Please tell us the result.

6. Aside from customer access, what are the ***hardest things*** for your business during this reporting period? What can be done to prevent or reduce these challenges? Please be specific.

7. If you had the opportunity to speak to the Metropolitan Council or other decision makers today, what would you want to tell/ show them about the ***impact*** and ***process*** of construction on your business

8. Do you feel the construction project provides sufficient notice of activities that will directly affect your business, like utility disruptions, road closures, removing your sidewalks, etc.?

☐ Yes ☐ No

Comments:

How would you prefer to receive notices?

☐ Email ☐ Phone ☐ In person ☐ Notes on the door ☐ NO EMAIL ☐ Others_____

Email _____ Phone _____

Business Name: _____Street#: _____ Suite#: _____Spoke to: ☐ Owner/Mgr ☐ Staff
Number of attached pages: ___ Interviewer: __ __ Date: ___/___/___

Utility/Issue: _____ Date(s) _ / How long? _____ Days ____ Hours

Notice: How many days advance notice did you receive? ☐ None ☐ same day ☐ _____ # day(s)
How did you get notice? ☐ No notice ☐ (e-)Mail ☐ Verbal (name _____) ☐ Other _____

Hotline: Called? ☐ No ☐ Yes Why/why not? _____
Response Time: ☐ No response ☐ ____ Day(s) _____ Hours
Result: _____

Business Impact / Cost of Impact (lost sales/customers? Staff expenses? Add'l costs to overcome issue?): ☐ Min. Impact

Utility/Issue: _____ Date(s) _____ / How long? _____ Days ____ Hours

Notice: How many days advance notice did you receive? ☐ None ☐ same day ☐ _____ # day(s)
How did you get notice? ☐ No notice ☐ (e-)Mail ☐ Verbal (name _____) ☐ Other _____

Hotline: Called? ☐ No ☐ Yes Why/why not? _____
Response Time: ☐ No response ☐ ____ Day(s) _____ Hours
Result: _____

Business Impact / Cost of Impact (lost sales/customers? Staff expenses? Additional costs to overcome issue/disruption?):

APPENDIX C. Case studies

Central Corridor Construction Impacts on Little Mekong Businesses (MacKubin to Galtier)

AEDA
Asian Economic Development Association

These sample case studies are the result of face-to-face interviews conducted by the Asian Economic Development Association from April 2, 2012 *through* July 13, 2012.

April 2-20

Case #1: Restaurant
Impacts/Concerns:
- Significant loss of customers
- No lighting outside of storefront
- Alley behind store is closed to parking lot
- No signs to show open access

After a slow winter season, and countless efforts to recover from the recession of 2008, this small restaurant needed a strong spring and summer season to stay in business. So far they have had the slowest year in their 10+ years on University Avenue. Business has been down an estimated 50-60%, and shows no signs of improving. As a result, the owner has had to reduce the hours of most employees, and lay off others. Employees used to working full time now find themselves working only two or three days out of the week.

When asked about the forgivable loan, the owner explicitly stated that [$20,000] would not be enough to cover the damages of the current, and future construction seasons.

Case #2: Service-based business
Impacts/Concerns:
- Dust/Air quality
- Adapting to changing traffic directions

Amidst a flurry of complaints from near-by small businesses, the couple at the law office had more positive input than negative. The only disturbances to speak of were a gas shut off, that had virtually no effect, and a complaint that the dust was giving them allergy-like symptoms. Aside from that the business was happy to admit that they were impressed with how the construction crews were handling traffic complications and damaged sidewalks. Citing the Minneapolis portion of the corridor as having messy, and potentially dangerous conditions, the business believes overall the construction has a very good logistical structure, and was especially happy when they were told they may have a chance to have a back entrance opened up free of charge.

Although the office is located in the thick of construction, they are at an advantage relative to their neighbors. They explained that they have been in this location for nearly fifteen years, and at one point bought thick, glass windows from a former neighbor, which now insulate them from the noise outside. And, since they are only a two-person operation, working mostly from computers, they have no need for any large shipments, or even commercial garbage disposal (evidently it is easier just to bring garbage home). They also own the building and rent out the upstairs for extra income.

Case #3: Service-based business
Impacts/Concerns:
- Loss of Univ. Ave parking

- Loss of customers
- Water shut-off

For a laundry service that has served the community for years, the 2012 construction has made a costly impact. The loss of parking on University Avenue is likely to be a big reason for the loss of customers. The owners explained that many of the people who come in are carrying laundry with both hands, and are not willing, or able to walk long distances like that. The nearest cross street is also torn up where it meets University, and customers are more or less forced to walk through a portion of it. Business is estimated to have decreased about 40% on weekends since construction started. In addition, there was an instance where their water needed to be shut off on a Sunday morning, which is one of their busiest times of the week. [Wasn't the shut-off rescheduled??] Resulting loss from the shut-off was estimated at just over $50.

Case # 4: Religious center
Impacts/Concerns:
- Loss of Univ. Ave Drive in Customers
- Loss of customers
- Lack of signage

The religious service place has its regular customer base. The local community would visit at a regular basis. The construction on one side of the University Avenue, however, makes it seem like that the service center is closed. The center could tell the people who come on a weekly basis that the center is still open, yet those who come once a month cannot get the message. The lack of signage made it difficult for drivers to find the path to the center, so the center has made their own map to distribute to the community.

One group of the center's principle customers is taxi drivers. They would stop at the center for their daily religious activities when they pass through the avenue. After the construction, however, this customer group is lost—they drive to centers elsewhere. And this is the very customer group that pays. The loss of taxi driver leads to a direct reduction in revenue.

Although there are water shut-offs, the center's operation is not seriously affected. It is only an increase of workload, for the center has to now prepare water for use in the morning sometimes.

Case # 5: Retail business
Impacts/Concerns:
- Significant loss of customers

A video shop located on the first floor of the International Plaza is heavily dependent on customers that walk inside into the plaza. The construction on the south side of the University Avenue has caused a significant decrease of the number of people visiting the plaza. The video shop suffers a significant loss of customers. Customer traffic is down 70-80% per day; while sometimes not a single customer show up for a whole day. The owner is very much worried, and does not know how long the shop can stand such circumstances.

Case #6: Service-based business
Impacts/Concerns:
- Loss of customers
- Lack of signage

The travel agency is less reliant on on-site customers. The owner of the agency is not so worried as other business owners in the same building. The construction, however, still causes a loss of customers for the agency. The owner reports an estimated 30% loss of customers.

When asked about the presence of signage, the owner said he did not notice any. He believed that the building owner might put a large sign for the whole center.

Case #7: Retail business
Impacts/Concerns:
- Inconvenience
- Noise

The jewelry store has dedicated customers. The store, however, still suffers major loss of revenue after the construction with an estimation of 50-60% loss. The owner believes that the inconvenience for traffic and the noise has driven the customers away to go for jewelry stores in Minneapolis instead. The owner is quite pessimistic about the situation and does not think the difficulties can be mitigated.

Case # 8: Restaurant.
Impacts/Concerns:
- Significant loss of customers
- Lack of signage

The restaurant gets a significant customer loss after the construction—with only one table per day being the norm, the daily revenue falling to $50 from an average of $400. The owner says that people cannot drive to the restaurant from the west, yet often do not know it. He believes that there are not enough signs to guide the drivers. The owner has considered making his own signs, yet was not sure if the city would approve what he does and wanted to avoid violation.

Although there have been water shut-offs, it is usually during the morning, and does not cause much disruption to the business.

June 18-24

Case #9: Restaurant
Impacts/Concerns:
- Significant loss of customers
- Dirt and vibration
- Access issue
- Employees deduction
- Confusion of signage

The owner expressed negative feeling about the construction. For her, $20,000 forgivable loan is not enough especially when the business decrease about 40-50% in comparison with last year. This May compares to last May, they lost $30,000. This May compares to this April, they lost $10,000. The owner is frustrated about of the dirt and vibration. They stopped cleaning the window and customers were really unhappy about the noisy and unclean environment. The owner also had to reduce the numbers of employees in half without anyone dressing in traditional clothes which used to be a unique part of that restaurant. Even though cutting a lot of spending to maintain business, the owner also had to deal with access issue due to the confusion of signage (For example: two

signs at the same place shows different directions) and the blocking of construction trucks. The owner calls the hotline but it always takes so long for the problems to be solved.

Case #10: retail store
Impacts/Concerns:

- Slower business
- Truck delivery access
- Parking space
- Big concern about the impact of construction when it's moved to this side of the street.
- Difficulties for people walking and taking the bus

The construction hasn't moved to the business's side of the street so the owner hasn't experienced a lot of effect from the construction. Even though there is noise and vibration, the owner doesn't think that it makes a big influence on their slow business. According to the owner, he thinks that slow business is mainly because they don't have off street parking. The parking at front with several spots seems to be not enough. The delivery truck has to park far away from the store. Same with people who take the bus, they have to walk far distance carrying heavy grocery, which is not convenient.

Case #11: Restaurant
Impacts/Concerns:

- Significant loss of customers
- Access issues (deliveries, parking lot and sidewalk blocked)
- Lack of signage

Since construction began in early March of this year, the restaurant has struggled to compensate for the losses. The major concerns are the lack of customers, which has quickly decreased in numbers since the start of the construction season. With the lack of access through the back alley, deliveries and customer parking are limited. Additionally, the sidewalk has been torn up for several days, with no access for foot traffic. The owner worries that customers will not be able to see if the business is open even if there are signs up.

Case #12: Service-based business
Impacts/Concerns:

- Construction has not affected the business yet
- Minimal impact concerning safety/utilities

Despite the decrease in customers, the business has been doing well during this time. The construction has yet to affect any sort of business and the owner does not have many complaints other than the noise and vibration. The water turned off one time. However, the owner did not use the hotline because it turned back on and continued on with business as usual.

Case #13: Service-based business
Impacts/Concerns:

- Loss of customers
- Sidewalk access

The owner emphasized the loss of business over the last few months alone. Many customers do not visit the shop because of the overwhelming traffic and the imminent switch of construction zones to the opposite side of University Avenue. The owner fears that if business should proceed like this as usual, the shop will have to close for awhile and re-open at another time. Additionally, the owner feels that the sidewalk access is extremely dangerous, especially for children. The edge of the sidewalk that meets the street was once used for street parking along the avenue. The cars and

public transportation (especially buses) that drive by every day can easily collide with anyone who is walking too close to the edge.

June 25-27

Case #14: Service-based business
Impacts/Concerns:

- Significant loss of customers
- Internet and phone disconnection
- Access issue
- Lack of information about the construction

Access issue is one of the biggest problems for this business. The construction makes it really hard for customers to get access to the business especially this travel agent have many out of town customers (20% of their customers are from other states. 30% are not from the twin cities.). Also, reading construction signs is also a big challenge for older customers or customers with limited English. The manager said that some customer told her that they came to University Ave but couldn't figure out the way to get to the business so they normally ended up going back home or moving to other travel agent. Things got even harder when the business suffered internet and phone disconnection for a month. No business transaction and communication was done during that time. Finally, the internet and phone company came and concluded that the problem was caused by vibration from the construction. However, the business has no idea about the hotline and what to do when they have problems relating to the construction.

Case #15: Retail store
Impacts/Concerns:

- Vibration causing damage property
- Significant loss of customers and sales
- Difficulties with finance and maintaining the store
- Language barrier

Due to the vibration, a speaker dropped on a display cabinet and caused it to break. The owner is really mad about the whole damage from the construction. Before, they made about $200-$300 a day. Now, they make around $20-$30 a day. The business has to reduce the store size in half. They still owe the building manager $10,000 rent fee. They are tired of too much road closure and long process of applying for help. When trying to complain and asking information about the construction, the business owner has a big language barrier because there is no option for their language (not offered on hotline).

Case #16: Retail store
Impacts/Concerns:

- Concern about space rent increase
- Tremendous decrease in business
- Worry about shutting down the business

The owner showed big concern about the tremendous loss of their business. Besides the recession, the construction activities add up to make their business off about 70%. It has been 6 months since their last time ordering new stuff. At the same time, the building manager mentioned with the owner that the space rent might be increase during or after the construction due to the increase of tax. With all the difficulties, the owner is afraid that they will have to close the business soon.

Case #17: Service-based business
Impacts/concerns:
- Noticeable noise and vibrations though no impact on business
- Grateful that they have their own off-street parking lot

Thus far this business has no concerns with the construction and has not noticed a significant impact. They have had no trouble with utilities or access and do not have any safety concerns. They believe the construction signage is sufficient and have received sufficient notice about construction activities.

Case# 18: Health provider
Impacts/concerns:
- Phone and fax issues
- Parking lot issues

This business has had difficulties with their phone line losing customer phone calls. They have not contacted the construction hotline as they were unaware of it. Customers are having trouble finding the parking lot now that they can no longer park along the street. The staff member interviewed also had concerns that drivers do not pay attention to the construction signs which makes the area dangerous.

Case #19: Service-based business
Impacts/concerns:
- Noticeable noise and vibrations though no impact on business

This business has noticed very few impacts from the construction so far. The business owner noted that navigating the road under construction is difficult, especially now that it is only one lane in each direction and states that it is important for construction workers to keep signs posted and make sure that the signs are understandable.

July 1-10

Case #20: Health provider
Impacts/Concerns:
- Upset with light rail construction
- The construction project is unnecessary
- Rising tax rates
- Many patients complain that there is limited access

The owner expressed negative feedback about the light rail project. Due to rising tax rates, the owner is upset that the light caused the clinic and surrounding businesses to experience significant loss. Many patients complain that there is limited access and avoid University avenue altogether.

Case #21: Restaurant
Impacts/Concerns:
- Loss of customers
- Struggling to pay high tax rates
- Cutting costs but still making less

Although business is struggling during this time, the manager believes it is a hard time for all. Since the beginning of the year, sales have decreased with a loss of over 70-80%. There is another restaurant in Minneapolis that the management opened to keep the St. Paul business afloat. The

management and staff have done all they can to cut costs even with rising tax rates. However, they do not know how long they can stay.

Case #22: Service-based business
Impacts/Concerns:

- Families can choose to have their service elsewhere
- Impressed with construction outcomes
- No major concerns/complaints

The business manager did not express any major concerns with construction during this time. Also, the funeral home has the convenience of relocating if the family does not feel comfortable with the noise and vibration of construction outside. If a service is scheduled for a specific day, the construction crew is very respectful and continues their work elsewhere. Overall, there are no general complaints other than speeding up construction to install the light rail.

Case #23: Restaurant
Impacts/Concerns:

- Staff concerned with dust/air entering building
- Loss of customers
- Business has slowed down

Staff member expressed concern with dust and air entering the building during business hours. Many customers complained that the sidewalk access was limited and narrow, with occasional flying rocks overhead. Staff also stated that business decreased from 25%-50% over the past months adding to the loss of customers.

Case #24: Retail store
Impacts/Concerns:

- Significant loss of customers
- Incoming deliveries issue for UPS
- No trash collection for a week due to access issue
- Lack of parking lot
- Sufficient notice about the construction

This business suffers a significant loss of customers from 60-70 transactions/ a day to about 3 transactions/ a day. In general, this business location loses $20,000-30,000 a month. Access issue also causes a big impact on the business. The trash collection company couldn't access the business for a week. The hotline was called and problem was solved. However, until the date of the interview, UPS delivery still couldn't get access to the business. The delivery truck has to park far away and deliver person needs to walk a far distance. The manager also expressed concern about the lack of on street parking lot which for him might be a reason for the loss of customers. Nevertheless, the manager complimented on sufficient notice given by the construction company which made it easier for their business to get prepared.

Case #25: Service-based business
Impacts/Concerns:

- Significant loss of walk in customers
- Longer and inconvenient test drive

The manager expressed a big concern about losing all of walk-in customer which caused about 25-30% of their income. Besides, the business also has to deal with longer and more inconvenient test drive for their customers' cars. This not only caused more financial loss but also made it more time consuming for the business.

Case #26: Cultural Center
Impacts/Concerns:

- Flooding and mold in the basement room
- Significant loss of prayers and donations
- Violation of private parking and lack of parking spot
- Safety concern for kids' activities
- Distraction/ no quiet environment for religious purpose

There are a lot to say about the construction from this religious center especially the property damage and the significant loss of people visiting the center which leads to a big decrease in the income of the center. The construction causing noise, vibration creates distraction for prayers. At the same time, inconvenient parking and violation of the center's parking lot contributes to decrease the numbers of visitors. Friday is a big praying day but due to the construction, there are only around 100 people coming in comparison with more than 200 people before the construction. The interviewee, on behalf of other people coming to the center expressed the concern about the safety for outdoor kids' activities especially with many cracks on the sidewalk. Besides, the biggest issue relating to the construction is property damage in the basement room. The center reported the flooding issue in the basement about 2 months ago but it has not been addressed. Now, after cleaning all the water by their own, the center has to deal with mold on the walls. The room which was used for office and classroom now has to be closed because the center worries that people will get sick being in that room.

July 11-16, 2012

Case #27: Health provider
Impacts/ Concerns

- No major concerns at the moment

After following up for a second time in three weeks, the owner did not express any major concerns about construction but suggested that checking in at another time would be more beneficial as construction continues.

Case #28: Retail store
Impacts/ Concerns

- Business is very slow
- Personal signs are helping guide traffic/ customers

The manager expressed little concern about the construction other than a significant loss of customers and business is very slow. Also, the neon signs are helpful for customers who do not know where the shop is located. Otherwise, everything is going well for now.

Case #29: Service-based business
Impacts/ Concerns

- Parking access blocked
- Problems accessing internet/cable

Since the start of construction on the salon's side of University Avenue, the owner is concerned about the business's survival in the upcoming months due to the lack of customers. Also, parking access is limited because of the start of construction. Customers complain about the need to walk around the building just to access the front door of the shop. There are also problems with internet

and cable signals during the transition that are noteworthy but the owner does not know if it because of construction.

Case #30: Service-based business

Impacts/Concerns:

- Significant loss of customers
- Vibration causes property damage
- Incoming deliveries and parking lot issue

Even though the business experience some troubles with electricity, water and dust, the manager doesn't think it made a big impact on her business. For her, the vibration and the lack of parking lot as well as incoming deliveries are more noteworthy. The vibration made her display cabinet fall off. It wasn't damaged and it's wasn't too hard for the store to hang it up again but it made the manager really worried. She also concerns that the vibration might break her doors and windows which made it easier for people to break in. Besides, there is not enough parking lots for her customers. The truck deliveries of other businesses often block the alley and the parking lot. Her business no longer has incoming deliveries but they drive and pick up products by themselves. Thus, her business suffers significant loss of customers. Out of state customers who take about 30% don't come any more. Before, she has 15-20 customers/ a day. Now, just about 4-5/ a day. The manager has mentioned to the owner the idea of closing the service after 5 good years in business.

Case #31: Service-based business

Impacts/Concerns:

- Vibration
- Loss of customers
- Expectation to get more help from the city

The building was too shaky that people can't concentrate on working. It's also very time consuming for the manager to come out to pick up customers or give them the directions. Many of this business's customers have limited English vocabulary so they just avoid to deal with traffic on University Ave. The manager also expressed the need of getting more help from the city with instruction on how to apply for the forgivable loan as well as help for people with language barriers.

APPENDIX D. Charts & Graphs

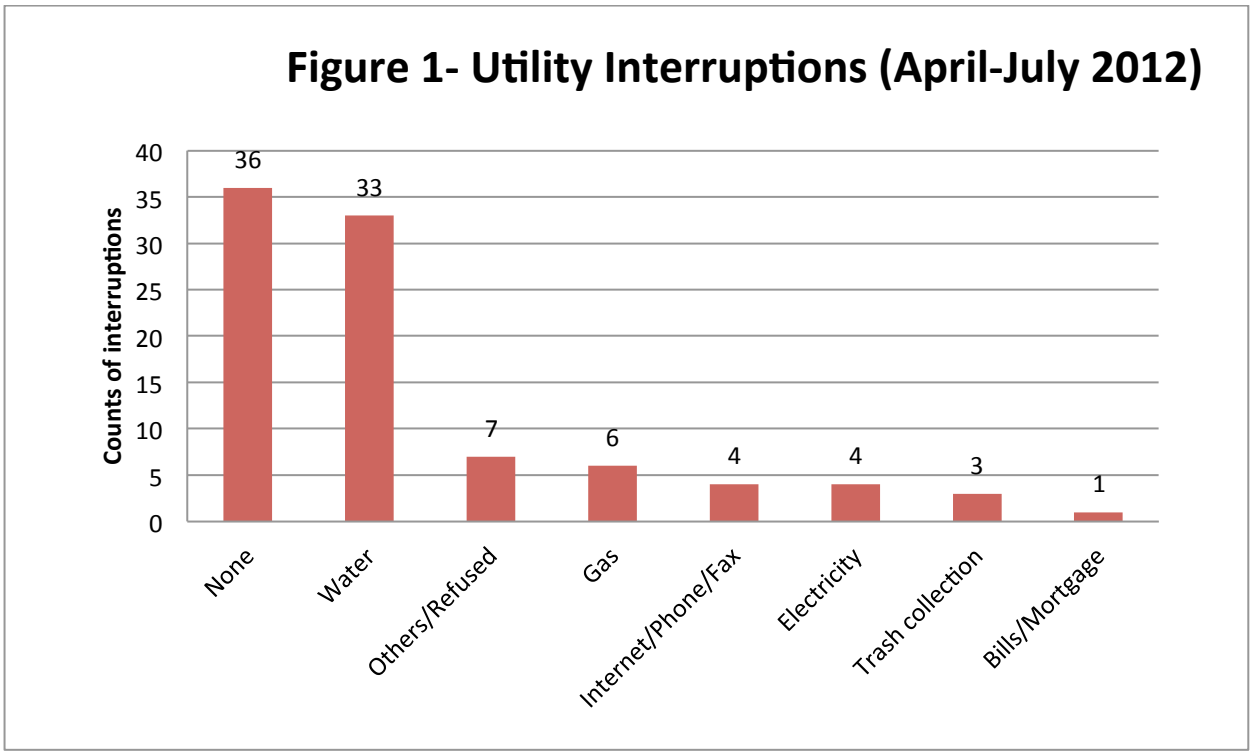


Figure 1- Utility Interruptions (April-July 2012)
Counts of interruptions
40
35
30
25
20
15
10
5
0
36
33
7
6
4
4
3
1
None
Water
Others/Refused
Gas
Internet/Phone/Fax
Electricity
Trash collection
Bills/Mortgage

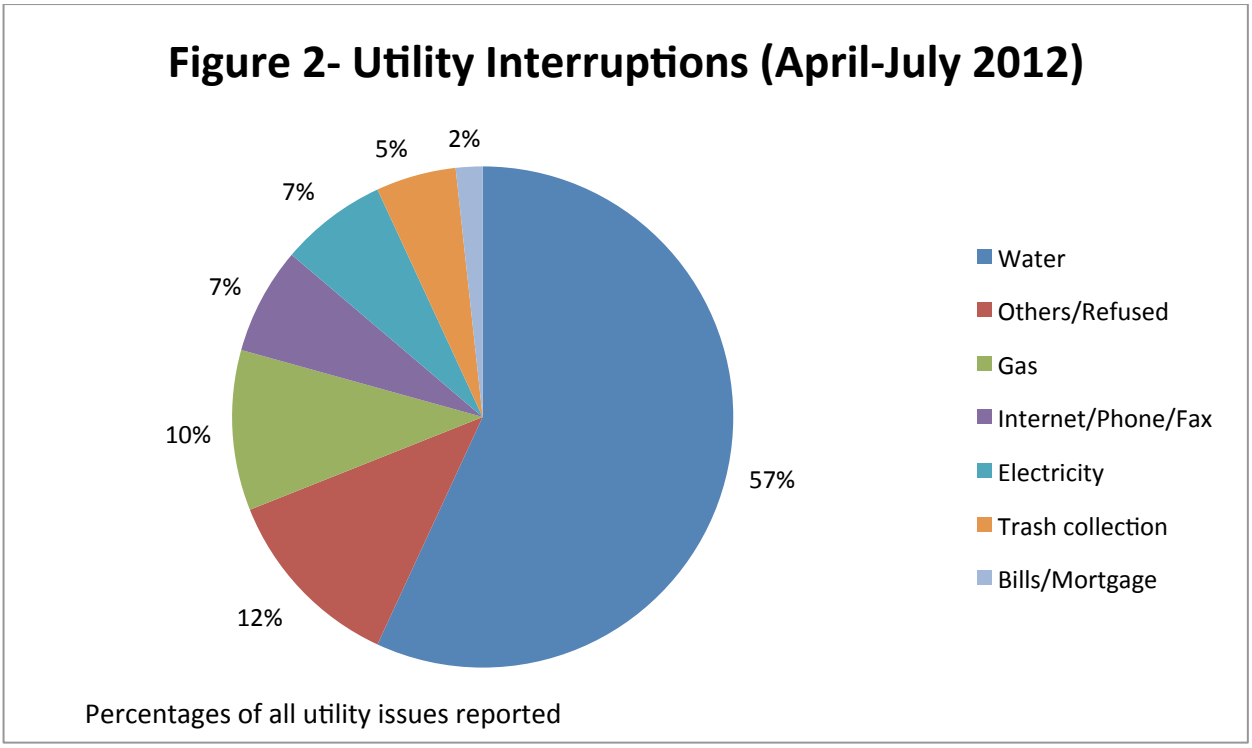


Figure 2- Utility Interruptions (April-July 2012)
5%
2%
7%
7%
10%
12%
57%
Water
Others/Refused
Gas
Internet/Phone/Fax
Electricity
Trash collection
Bills/Mortgage
Percentages of all utility issues reported

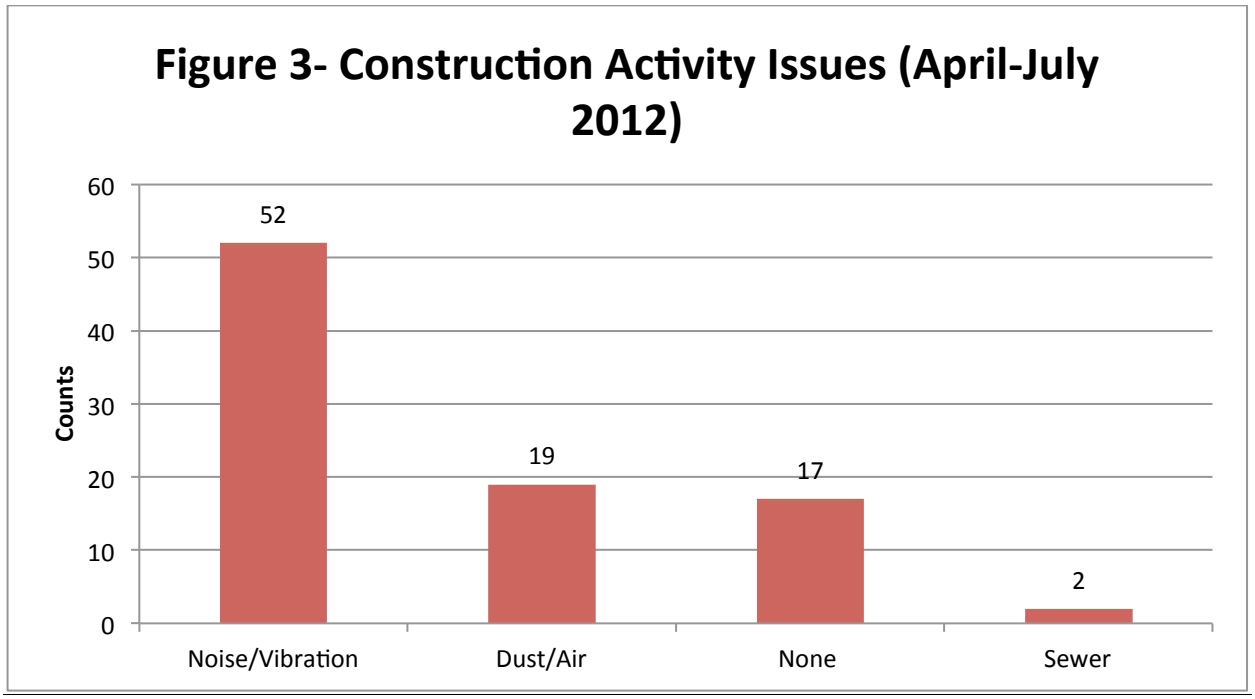


Figure 3- Construction Activity Issues (April-July 2012)
Counts
60
50
40
30
20
10
0
52
19
17
2
Noise/Vibration
Dust/Air
None
Sewer

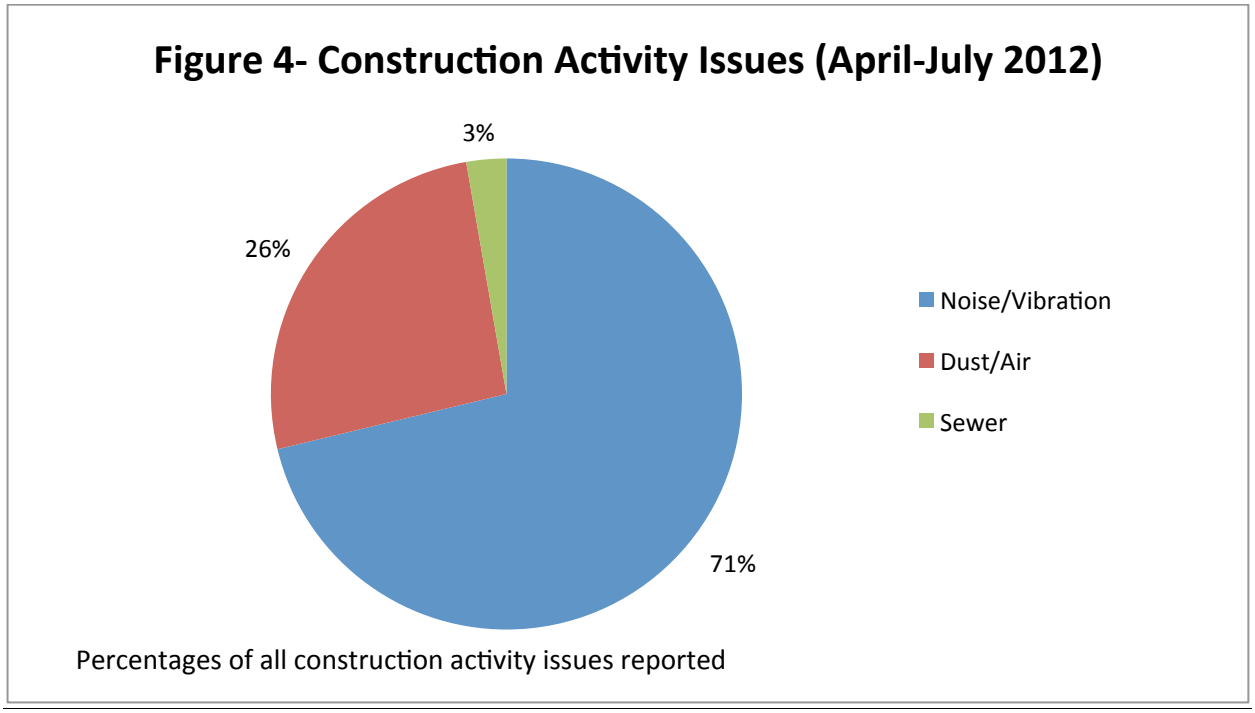


Figure 4- Construction Activity Issues (April-July 2012)
3%
26%
71%
Noise/Vibration
Dust/Air
Sewer
Percentages of all construction activity issues reported

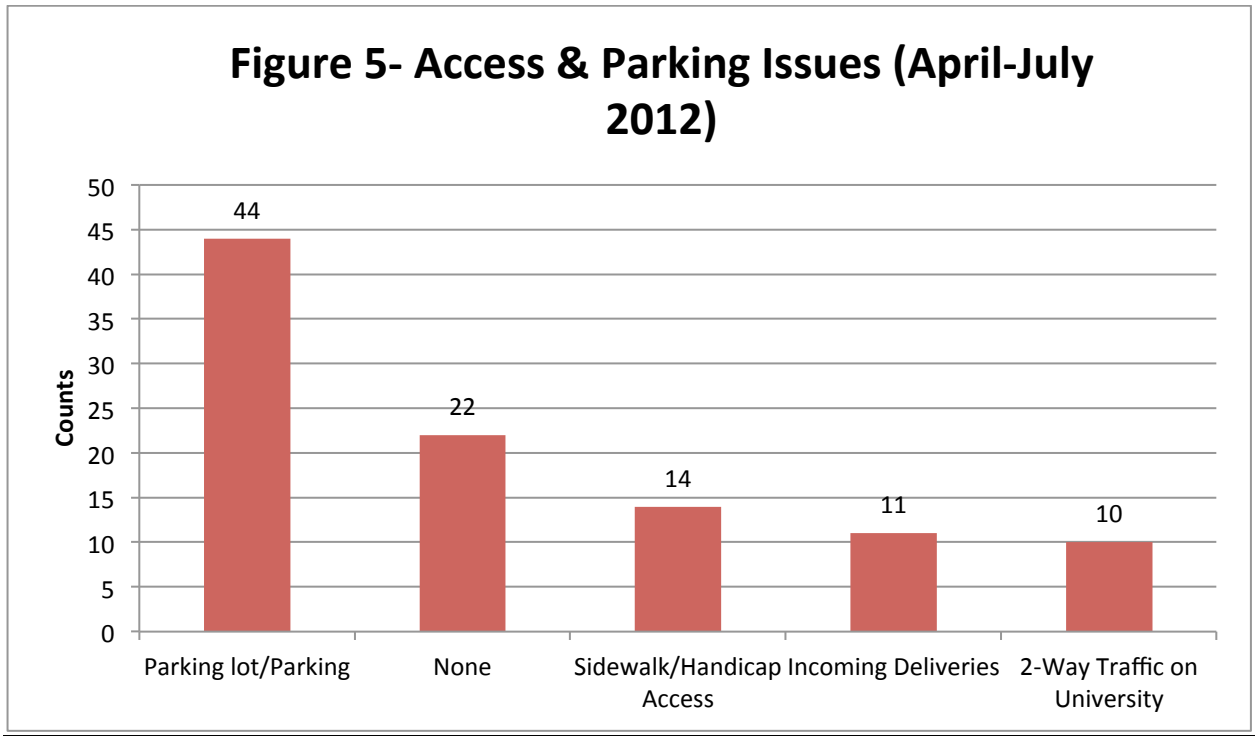


Figure 5- Access & Parking Issues (April-July 2012)
Counts
50
45
40
35
30
25
20
15
10
5
0
44
22
14
11
10
Parking lot/Parking
None
Sidewalk/Handicap Access
Incoming Deliveries
2-Way Traffic on University

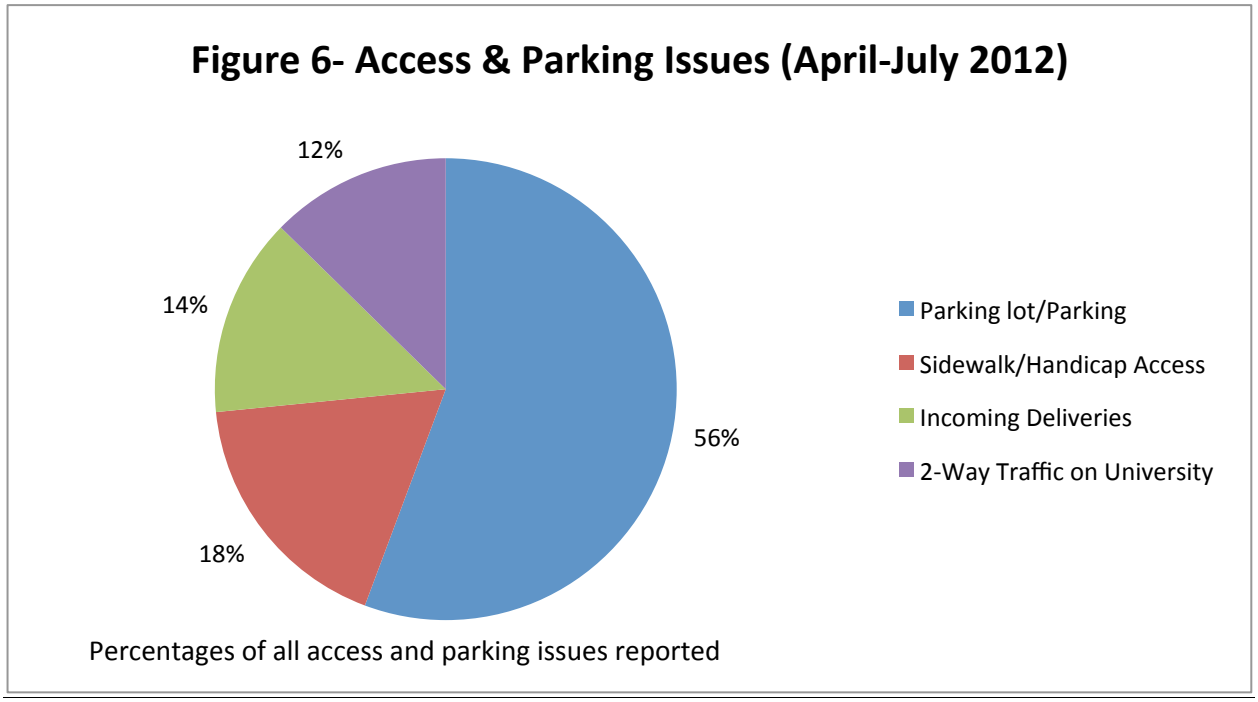


Figure 6- Access & Parking Issues (April-July 2012)
12%
14%
18%
56%
Parking lot/Parking
Sidewalk/Handicap Access
Incoming Deliveries
2-Way Traffic on University
Percentages of all access and parking issues reported

APPENDIX E. Business quotes

What businesses want the Met Council and decision-makers to know or see

Businesses' response when asked: "What do you want to TELL or SHOW Met Council or decision maker?"

- Don't approve. Wants beauty. Needs tourism, LRT does not promote tourism.
- Good directions, hole coverage (good sidewalk maintenance)
- About loss of parking on University Avenue, could be positive or negative for light rail.
- Workers seem to be working as fast as possible; entrance access; communication by construction workers are good and responsive. Would be worth the hassle if it gets done quicker.
- No comments
- Knows they are doing their best, but they should speed it up and keep up the work so they can be done by this year.
- Flow of traffic/road closures during construction
- Pollution from dust/air affects business some days
- Construction should be done faster. Work 7 days/week if possible
- Nothing for now
- Keep signs posted and make sure signs are understandable
- Nothing yet
- Create more signs otherwise it will be a major concern since construction has not moved to their side yet
- Make the construction schedule better. Do not operate construction during busy lunch rush.
- The Met Council gives bonus for the construction crews, why not for us? The construction damaged us a lot and $20,000 is not enough. We lost 40-50% and it's not only me because many businesses experienced that. Our business can't afford to lose. We need Met Council to take action right now. We have been waiting for so long. Help us advertise in local newspapers or advertise who is open via newspaper or radio. The survey finding no significant impact was a waste of time and money because she had not idea about construction yet.
- We can not do much, no parking.
- About our loss of customers and financial loss.
- Not yet affected so there is not a lot to say. However, when construction moves to this side, we hope decision makers make it easier for students to arrive by bus & driving. Hopefully no sidewalk will be closed and maybe more assistance for people with limited English.
- Advertise/market with Met Council directly to bring more customers/business. Provide more resources for small businesses for marketing/promotions.
- Nothing to say
- Not yet with their business but they want the Met Council to know how desperately businesses need customers (businesses put up signs miles away from their businesses). Also, it's hard for their customers, many of whom are refugees. These people have to take the bus and thus have to walk a lot.

- Maybe they would help with the shaking to fix stuff that got broken from shaking (fixed previously by owners but it opened up again)
- Property value is decreased/property taxes increased
- Customers are scared of University Ave. construction; provide signage, financial support, marketing plan to support small businesses. Feel like they are neglected. City not doing enough to engage community; expects city to go out & ask small businesses what they need.
- I want to show them all the report data and significant impact of the construction on us. Our business is clearly slower. Also, I want to ask them 3 questions: 1) Why build light rail again when we hadn them and got rid of them before? 2) Why University Ave? 3) How effective will the light rail be?
- Nothing Met Council can do specifically; we are cutting costs but still making less; we opened another restaurant in Minneapolis to keep St. Paul business going.
- No one will use the Light Rail System; waste of money at the owner's expense.
- None, was not too happy with the LRT project in the beginning but okay with how it's been handled. Very satisfied with progress and communicatino among construction workers and funeral home.
- Nothing now.
- Nothing now.
- Hope the construction will be done soon so things will be normal.
- $20,000 loan is not enough. These construction years are the hardset of their 24 years in the business.
- "I'm mad, LRT for what? Meeting for what?" Says people are moving; too many lies, nothing is being done to help; they had to narrow their store in half; used to make $200 - $300/day but now make $10 - $15/day; can not even pay rent; owe the building owner $10,000. If the surveys, talks and meetings are to help then do it, but if no help, don't bother them.
- Not sure how to get help and loan. Have no idea about the support from the city. Business is so slow, not enough customers. 3 employees quit.
- Whatever is good for citizens and businesses, please do them. I am happy to see the streets look prettier and cleaner.
- Business is slow (down 30-40%)
- Want to show them our financial difficulties
- Show them the financial report, significant losses, tell them we've lost customers. All small businesses are impacted. It takes many years to finish the construction and for small businesses to recover. Hope they can be more understanding.
- Show loss of financial support, $20,000 loan is not enough, Ask for smooth traffic, Ask to reduce property tax
- Hopefully when it's done there will be more business. Show them the financial report to show significant loss of 30-40%.
- The construction people did a good job but we lost a lot of customers.
- Significant loss of income 2)Damage to property because we now have mold on walls

- Loss of business, loss of 25-30% at least, financial report, loss of all walk in customers
- Thinks the light rail will be beautiful when completed. Wish it could be over faster. Construction workers are respectful. However, sometimes get no notification.

APPENDIX K:
Business Support Fund

Segment	Type	Pre-const Average Monthly Sales	Average Monthly Loss	Loan Approved	Percent Loss - Monthly	2012 Statu	# months	Total Loss Reported w/application	% of Reported Loss Covered	Year 1 Sales	Year 2 Sales	Year 3 Sales
1A	Restaurant	$66,742	$1,222	$9,777	2%		8	$9,777	100%	$699,857	$708,177	$800,909
1A	Restaurant	$53,923	$1,386	$11,088	3%		8	$11,088	100%	$595,563	$553,890	$578,382
1C	Restaurant	$141,280	$5,565	$20,000	4%		4	$22,260	90%	$1,498,088	$1,450,309	$1,453,323
Lowertwn	Retail	$17,134	$738	$2,954	4%		4	$2,954	100%	$201,583	$202,688	$205,608
1B	Retail	$2,589	$138	$1,105	5%		8	$1,105	100%	$40,211	$31,067	$21,938
Lwrtwn	Restaurant	$35,682	$1,970	$20,000	6%		17	$33,481	60%	$437,529	$418,831	$408,999
1B	Retail	$108,757	$6,236	$20,000	6%		5	$31,178	64%	$1,362,304	$1,301,357	$1,251,591
1C	Salon	$2,843	$210	$1,680	7%		8	$1,680	100%	$33,458	$36,024	$32,870
1C	Retail	$33,753	$2,556	$20,000	8%		8	$20,445	98%	$421,455	$404,922	$426,035
Mpls SV	Restaurant	$43,129	$3,492	$20,000	8%		7	$24,446	82%	$339,111	$532,290	$517,553
Lowertwn	Restaurant	$43,285	$3,791	$18,958	9%		5	$18,958	100%	$509,806	$484,202	$519,420
Lowertwn	Retail	$29,578	$2,635	$20,000	9%		12	$31,622	63%	$380,664	$329,202	$323,311
1A	Retail	$41,337	$3,725	$20,000	9%		9	$33,526	60%	$512,342	$500,869	$474,909
1A	Retail	$107,375	$11,130	$20,000	10%		5	$55,651	36%	$1,296,800	$1,214,710	$1,288,502
Mpls SV	Restaurant	$48,927	$5,119	$20,000	10%		6	$30,710	65%	$391,169	$431,561	$464,057
1B	Retail/Conv	$12,452	$1,323	$11,906	11%		9	$11,906	100%	$129,616	$156,900	$149,426
M - CR	Restaurant	$57,969	$6,298	$18,892	11%		3	$18,892	100%	$422,549	$607,261	$695,622
M - SV	Restaurant	$33,869	$4,048	$20,000	12%		8	$21,942	91%	$307,408	$363,626	$393,836
1B	Professional	$3,754	$456	$4,106	12%		9	$4,106	100%			$45,048
1C	Retail	$21,972	$2,705	$20,000	12%		8	$21,641	92%	$263,495	$248,471	$263,666
1B	Retail	$102,918	$12,937	$20,000	13%		4	$51,751	39%	$1,172,187	$1,151,278	$1,381,593
M - CR	Restaurant/Bar	$87,906	$11,076	$20,000	13%		3	$33,230	60%	$433,417	$602,580	$750,762
M - SV	Restaurant	$67,422	$8,615	$20,000	13%		5	$43,075	46%			$809,059
1C	Retail	$63,193	$8,798	$20,000	14%		4	$35,190	57%			$758,318
1C	Retail	$21,774	$3,301	$20,000	15%		7	$23,104	87%	$273,117	$240,348	$261,285
1B	Restaurant	$28,622	$4,522	$20,000	16%		8	$36,179	55%	$348,078	$325,110	$343,467
M - CR	Restaurant	$17,394	$2,791	$16,747	16%		6	$16,747	100%		$90,087	$87,616
1A	Restaurant	$9,751	$1,606	$12,846	16%		8	$12,846	100%		$103,963	$117,006
1B	Restaurant	$61,399	$10,232	$20,000	17%		6	$61,394	33%	$737,369	$738,945	$734,050
Lowertwn	Restaurant	$89,300	$14,965	$20,000	17%		16	$239,434	8%	$548,911	$851,550	$838,873
M - CR	Entertainment	$54,935	$9,376	$20,000	17%		3	$28,127	71%	$469,544	$630,275	$659,218
M - SV	Salon	$16,873	$2,905	$20,000	17%		7	$20,337	98%			$202,476
M - CR	Retail/Conv	$17,711	$3,216	$19,296	18%		6	$19,296	100%			$212,526
2E	Restaurant/Bar	$46,121	$8,521	$17,042	18%		2	$17,042	100%	$574,873	$532,021	$492,344
Lowertwn	Restaurant	$33,595	$6,419	$10,000	19%		3	$17,627	57%	$362,892	$408,870	$403,134
M - CR	Entertainment	$33,777	$6,540	$20,000	19%		6	$39,238	51%	$561,168	$382,278	$549,003
1A	Printing	$28,530	$5,659	$20,000	20%		4	$22,641	88%	$325,333	$288,679	$342,357
1C	Retail	$42,141	$8,373	$20,000	20%		6	$50,237	40%	$528,432	$458,016	$505,693
2E	Restaurant	$21,943	$4,419	$13,257	20%		3	$13,257	100%	$255,673	$263,315	$255,502
Mpls PP	Restaurant	$32,442	$6,708	$20,000	21%		4	$26,832	75%	$419,300	$389,667	$358,955

Segment	Type	Pre-const Average Monthly Sales	Average Monthly Loss	Loan Approved	Percent Loss - Monthly	2012 Statu	# months	Total Loss Reported w/application	% of Reported Loss Covered	Year 1 Sales	Year 2 Sales	Year 3 Sales
Mpls SV	Restaurant	$108,356	$23,307	$20,000	22%		2	$46,613	43%	$1,436,282	$1,329,041	$1,300,267
1C	Salon	$5,825	$1,314	$10,511	23%		8	$10,511	100%	$60,072	$62,567	$69,899
2F	Restaurant	$89,189	$20,845	$20,000	23%		3	$62,533	32%	$1,100,405	$1,040,122	$920,823
M - CR	Restaurant	$17,488	$4,101	$20,000	23%		6	$24,606	81%		$143,136	$196,408
1A	Restaurant	$27,980	$6,578	$19,737	24%	Closed	3	$19,737	100%			$335,760
1B	Retail	$87,957	$20,825	$20,000	24%		5	$104,123	19%	$829,708	$1,035,925	$1,055,482
M - SV	Retail	$27,556	$6,787	$20,000	25%		7	$47,505	42%			$330,669
1B	Professional	$19,577	$4,862	$20,000	25%		9	$43,757	46%	$313,525	$193,157	$198,100
M - CR	Retail	$8,625	$2,168	$8,672	25%		4	$8,672	100%	$63,656	$95,250	$69,076
2E	Restaurant	$6,681	$1,866	$3,732	28%		2	$3,732	100%			$80,172
1C	Retail	$7,000	$1,972	$5,918	28%		4	$5,918	100%	$92,409	$85,384	$74,220
1B	Retail/Conv	$15,314	$4,358	$20,000	28%		9	$39,223	51%	$184,520	$155,054	$183,771
M - CR	Professional	$14,171	$4,076	$20,000	29%		6	$24,456	82%	$164,410	$150,269	$170,048
1C	Salon	$2,672	$813	$6,506	30%		8	$6,506	100%	$32,154	$30,373	$32,064
M - SV	Restaurant	$44,140	$13,706	$20,000	31%		4	$54,824	36%	$533,100	$536,740	$519,210
1C	Salon	$12,584	$3,923	$20,000	31%		8	$31,383	64%	$164,956	$164,227	$123,851
1B	Professional	$4,625	$1,506	$13,550	33%		9	$13,550	100%	$43,200	$46,025	$55,500
2D	Restaurant	$95,947	$31,957	$20,000	33%		2	$63,915	31%	$1,156,187	$1,151,364	$944,650
M - CR	Restaurant	$25,181	$8,575	$16,397	34%		3	$25,725	64%	$287,792	$309,016	$299,614
M - CR	Retail	$5,338	$1,823	$9,114	34%		5	$9,114	100%		$69,603	$58,505
M - CR	Retail	$2,199	$758	$4,551	34%		6	$4,551	100%			$26,388
1C	Retail/Enter	$87,748	$30,350	$20,000	35%		4	$121,404	16%	$1,092,178	$1,035,211	$1,031,547
M- CR	Retail	$7,309	$2,539	$15,235	35%		6	$15,235	100%		$52,810	$75,000
1A	Retail	$11,251	$3,953	$19,765	35%		5	$19,765	100%			$135,013
1B	Restaurant	$12,854	$4,782	$19,130	37%		4	$19,130	100%	$160,014	$157,840	$144,887
1B	Restaurant	$6,274	$2,364	$20,000	38%		9	$21,269	94%	$68,722	$63,583	$75,282
1C	Professional	$26,665	$10,158	$20,000	38%		2	$20,316	98%	$298,400	$332,719	$328,838
M - CR	Retail	$4,602	$1,754	$8,772	38%		5	$8,772	100%	$42,562	$52,417	$50,142
1B	Professional	$10,472	$4,026	$20,000	38%		8	$32,208	62%	$124,203	$71,416	$125,668
1A	Retail/Conv	$23,343	$9,008	$20,000	39%		4	$36,034	56%	$238,145	$221,873	$280,120
1C	Restaurant	$37,772	$14,594	$20,000	39%		8	$116,747	17%	$471,066	$436,382	$452,337
1B	Retail	$38,320	$15,035	$20,000	39%		4	$60,141	33%	$564,993	$380,670	$433,855
2E	Retail	$10,362	$4,078	$12,234	39%		3	$12,234	100%	$97,992	$99,610	$124,348
Mpls SV	Retail	$60,099	$23,884	$20,000	40%		2	$47,768	42%	$634,993	$660,340	$721,187
1A	Retail	$1,486	$617	$5,556	42%		9	$5,556	100%	$12,905	$10,475	$17,833
M -CR	Retail	$6,110	$2,538	$12,688	42%		5	$12,688	100%			$64,470
Mpls SV	Retail	$56,026	$24,317	$20,000	43%		7	$66,320	30%	$182,503	$191,690	$392,180
2E	Salon	$5,248	$2,333	$4,668	44%		2	$4,668	100%	$67,519	$58,440	$50,980
1C	Retail/Conv	$13,241	$6,091	$20,000	46%		5	$30,455	66%			$72,000
1A	Professional	$1,164	$552	$4,968	47%		9	$4,968	100%	$20,423	$12,712	$8,771
2E	Retail	$3,913	$1,898	$3,796	49%		2	$3,796	100%	$47,390	$46,521	$36,010

Segment	Type	Pre-const Average Monthly Sales	Average Monthly Loss	Loan Approved	Percent Loss - Monthly	2012 Statu	# months	Total Loss Reported w/application	% of Reported Loss Covered	Year 1 Sales	Year 2 Sales	Year 3 Sales
2E	Retail	$15,956	$7,891	$20,000	49%		3	$23,673	84%	$200,970	$181,966	$122,841
1B	Retail	$2,306	$1,156	$9,252	50%		8	$9,252	100%	$38,865	$26,170	$17,991
M - CR	Retail	$17,371	$9,442	$20,000	54%		4	$37,769	53%	$241,845	$210,415	$173,097
1C	Retail	$17,660	$10,046	$20,000	57%		4	$30,139	66%	$221,887	$208,755	$205,103
1A	Auto repair	$3,983	$2,292	$20,000	58%		9	$20,627	97%		$25,775	$47,800
M - CR	Retail	$3,663	$2,113	$8,450	58%		4	$8,450	100%			$43,953
1B	Salon	$5,716	$3,377	$20,000	59%		8	$27,014	74%	$35,586	$42,814	$68,587
M- CR	Retail	$3,863	$2,370	$14,219	61%		6	$14,219	100%		$32,929	$42,219
M - CR	Restaurant	$4,281	$2,783	$16,792	65%		6	$16,792	100%	$42,100	$49,800	$51,005
1A	Retail/Studio	$705	$463	$4,169	66%		9	$4,169	100%			$8,461
1B	Retail/Svc	$3,931	$2,602	$20,000	66%		9	$23,420	85%			$47,169
1B	Retail	$19,675	$13,320	$20,000	68%		2	$26,642	75%	$302,729	$249,321	$156,274
1C	Salon	$3,863	$2,645	$20,000	68%		8	$21,161	95%	$67,954	$35,346	$35,760
1C	Retail	$1,417	$1,177	$9,421	83%		8	$9,421	100%	$21,245	$19,262	$10,514
1C	Retail	$3,213	$2,688	$20,000	84%		8	$21,504	93%	$37,191	$36,534	$38,556

n	96			
Mean	$30,670	$6,261.23	$16,015.18	30%
Median	$18,644	$3,990	$20,000	25%
Min	$705			2%
Max	$141,280			84%
Standard Deviation	$31,056			19%

Mean	$29,371	77%
Median	$21,792	90%
# of >90% covered		48

APPENDIX L:
List of Meetings

Central Corridor LRT Meeting Summary

Attachment B1

May 2011

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
5/4/11	3:00 PM	Stassen Building, 600 Robert Street North, Room 2000, Saint Paul, MN 55155	CCPO	Capitol Area LRT Public Construction Information Meeting	Capitol area employees and general public	20	Lee, Shoua
5/4/11	12:30 PM	Council Chambers, Met Council, 390 N Robert Street, St. Paul	TAAC	Met Council - Transportation Accessibility Advisory Committee (TAAC)	Members of the TAAC	20	Hill, Jessica
5/5/11	10:00 AM	Securian Building, 401 Robert Street, Xcel Training Room	CCPO	Downtown St. Paul Construction Communication Committee Meeting	CCC members, technical staff	5	Happel, Dana
5/11/11	1:00 PM	Council Chambers, Met Council, 390 N Robert Street, St. Paul	Met Council - CCMC	Construction Update, bus route changes/outreach, workforce update	CCMC membes, partner staff, general public	40	Caufman, Robin
5/11/11	5:30 PM	849 University Avenue, Brownstone Conference Room, St. Paul, MN 55104	CCPO	Victoria Station Art Committee Meeting	Station Art Committee members	5	Lee, Shoua
5/11/11	6:00 PM	Union Depot, Ramsey County meeting space, 214 East 4th Street, St. Paul, MN 55101	CCPO	Downtown Public Construction Information Meeting	Downtown employees and general public	10	Happel, Dana
5/11/11	6:30 PM	849 University Avenue, Brownstone Conference Room, St. Paul, MN 55104	CCPO	Victoria Station Public Art Meeting	residents, businesses, general public	15	Lee, Shoua
5/12/11	10:00 AM	Stassen Building, 600 Robert Street North, Cafeteria, Saint Paul, MN 55155	CCPO	Capitol Area Construction Communication Committee Meeting	CCC members, technical staff	5	Lee, Shoua
5/12/11	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO	East Bank/Stadium Village Construction Communication Committee Meeting	CCC members, technical staff	10	Hill, Jessica
5/17/11	10:00 AM	245 Cedar Avenue S, Minneapolis, MN 55414	Met Council	West Bank Construction Communication Committee Meeting	West Bank CCC Members	15	Pfeiffer, Daniel
5/17/11	2:00 PM	245 Cedar Avenue S, Minneapolis, MN 55414	Met Council	West Bank Public Construction Information Meeting (PCIM)	West Bank community	20	Pfeiffer, Daniel

 or information about a specific meeting, contact the identified outreach coordinator:

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Shoua Lee (651) 602-1014 Nkongo Cigolo (651) 602-1559 Rita Rodriguez (651) 602-1805 Dan Pfeiffer (651) 602-1952

Central Corridor LRT Meeting Summary

Attachment B1

May 2011

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
5/19/11	10:00 AM	Securian Building, 401 Robert Street, Xcel Training Room	CCPO – CCC	Downtown St. Paul Construction Communication Committee Meeting	CCC members, technical staff	5	Happel, Dana
5/25/11	3:00 PM	Central Corridor Project Office Room 2/3, 540 Fairview Ave. N. Suite 200, St. Paul, MN 55104	CCPO – PCIM	University Avenue Public Construction Information Meeting	University Avenue West Employees and General Public	20	Webb, Michelle
5/25/11	3:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO – PCIM	East Bank/Stadium Village Public Construction Information Meeting	General public, Stadium Village businessesl, UofM Stakeholders	10	Hill, Jessica
5/26/11	10:00 AM	Stassen Building, 600 Robert Street North, Room 2020, Saint Paul, MN 55155	CCPO – CCC	Capitol Area Construction Communication Committee Meeting	CCC members, technical staff	20	Lee, Shoua
5/26/11	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO – CCC	East Bank/Stadium Village Construction Communication Committee Meeting	CCC members, technical staff	10	Hill, Jessica
5/26/11	4:00 PM	Central Corridor Project Office 2/3, 540 Fairview Ave N, St. Paul, MN 55104	CCPO – CCC	University Avenue Construction Communication Committee Meeting	CCC members, technical staff	20	Webb, Michelle
5/5/11	12:00 PM	El Bravo, 538 Rice Street, St. Paul 55103	Midway Chamber	Lunch on the Avenue	Community, cooridor employees	30	Caufman, Robin
5/19/11	12:00 PM	On's Kitchen Thai Cuisine, 1613 University Ave, Saint Paul, MN	Midway Chamber	Lunch on the Avenue	Community, cooridor employees	30	Caufman, Robin
5/2/11	10:00 AM	Classic Retro At Pete's 2145 University Avenue West St. Paul,MN	CCPO – Access	Segment 1 Access meeting North	Property Owner	4	Browner, Joey
5/2/11	11:00 AM	Park Midway Bank 2171 University Avenue West St. Paul, MN	CCPO – Access	Segment 1 Access meeting North	Bank Manager	4	Browner, Joey
5/2/11	7:00 PM	Central Corridor Resource Center, 1080 University	District Councils Collaborative	Community Agreements Coordinating Committee	community, residential and business leaders,	30	Caufman, Robin

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Central Corridor LRT Meeting Summary

Attachment B1

May 2011

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
		Avenue W., Saint Paul			elected officials		
5/2/11	12:00 PM	Subway 2121 University Avenue West St. Paul, MN	CCPO – Access	Segment 1 Access meeting North	Property owner	4	Browner, Joey
5/3/11	10:00 AM	1647-1669-1671 University Avenue West St. Paul, MN	CCPO – Access	Segment 1 Access meeting North	Property Owner	4	Browner, Joey
5/3/11	1:00 PM	720 Washington Avenue SE, Minneapolis, MN, 55454	AMJV – Access	Business Access meeting: Bruegger's Bagels	AMJV, CCPO, Business Manager	3	Pfeiffer, Daniel
5/3/11	2:00 PM	Borders Books	Midway Shopping area property manager	Midway Shopping center access - confirmed	Heather Nelson, property manager	2	Caufman, Robin
5/3/11	7:00 PM	Profile Event Center, 2630 University Ave SE, Minneapolis, MN, 55454	City of Minneapolis	Stadium Village & University Ave LRT Station Area Plan Public Open House	City of Minneapolis, CCPO, residents	50	Pfeiffer, Daniel
5/3/11	12:00 PM	Holiday Gas Station 2199 University Avenue West St. Paul, MN	CCPO – Access	Segment 1 Access meeting North	Property Manager	4	Browner, Joey
5/4/11	3:00 PM	615 Washington Avenue SE, Minneapolis, MN, 55454	AMJV – Access	Business Access meeting: Great Clips	AMJV, CCPO, Business Manager	3	Pfeiffer, Daniel
5/4/11	4:00 PM	714 Washington Avenue SE, Minneapolis, MN, 55454	AMJV – Access	Business Access meeting: Steady Tattoo/Axis Body Piercing	AMJV, CCPO, Business Owner	3	Pfeiffer, Daniel
5/5/11	2:00 PM	720 Washington Avenue SE, Minneapolis, MN, 55454	AMJV – Acess	Business Access meeting: US Bank	AMJV, CCPO, Business Manager	3	Pfeiffer, Daniel
5/5/11	6:00 PM	Central Corridor Resource Center, 1080 University Avenue, St. Paul 55104	Community Agreements Coordinating Committee	Equitable Transit-Oriented Development Models	Community, residents	30	Caufman, Robin
5/6/11	11:00 AM	712 Washington Avenue SE, Minneapolis, MN, 55454	AMJV	Meeting at Sally's Saloon about fence removal	AMJV, CCPO, Business & Property Owner	4	Pfeiffer, Daniel
5/6/11	2:30 PM	200 Oak Street SE, Minneapolis, MN, 55454	AMJV – Access	Business Access meeting: U of M Alumni Center	AMJV, CCPO, CEO McNamara Alumni Center, Sales Managers	5	Pfeiffer, Daniel

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Central Corridor LRT Meeting Summary

Attachment B1

May 2011

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
5/6/11	12:00 PM	Thai Cafe, 371 University Avenue West, Saint Paul, MN 55103	Thai Café – Access	Construction and access meeting	business owner	2	Lee, Shoua
5/10/11	7:30 AM	Cupcake	Park Midway Bank, Business networking event	Project update	Corridor businesses	10	Caufman, Robin
5/10/11	11:00 AM	245 Cedar Avenue S, Minneapolis, MN, 55414	AMJV – Access	Business access meeting: Theatre in the Round	AMJV, CCPO, Business Manager	3	Pfeiffer, Daniel
5/10/11	6:00 PM	Central Corridor Resource Center, 1080 University Avenue, St. Paul	District Council's Collaborative	CACC Community Forum Panel on Equitable Economic Development and Jobs in the Central Corridor	Residents, community leaders	50	Caufman, Robin
5/11/11	2:00 PM	275 E. 4th Street	CCPO - Preconstruction	Preconstruction Survey	Property manager	1	Cigolo, Nkongo
5/12/11	1:00 PM	SugaRush, 712 University Ave W # B2, Saint Paul,	SugaRush	Construction and access	Keoni Nguyen, business owner	2	Lee, Shoua
5/12/11	5:00 PM	RiverCentre	Great River Gathering	Staff table with information about Central Corridor	St. Paul community leaders	50	Caufman, Robin
5/13/11	10:30 AM	610 Washington Avenue SE, Minneapolis, MN, 55414	CCPO	Meeting at Village Wok about moving electrical service	Central Corridor Project Office, Ames-McCrossan Joint Venture, Egan/Collisys, Xcel Energy	6	Pfeiffer, Daniel
5/17/11	10:00 PM	Big Top Liquor,	CCPO	Meeting to discuss Business Assistance Loan	Business Owner	3	Rodriguez, Rita
5/18/11	7:30 AM	Us bank center 101 e 5th street suite 240	CapitolRiver Council	Variance for Cedar Street, CapitolRiver Council	Board members	10	Happel, Dana
5/18/11	3:00 PM	Western Bank, 663 University Avenue, Saint Paul, MN 55103	Western Bank Vice President	Western Bank - Construction and access update	Mary Jo Simbeck	2	Lee, Shoua
5/18/11	6:00 PM	Dar al Quba, 1501 6th Street, Minneapolis, MN, 55454	Monthly Neighborhood Organization Meeting	West Bank Community Coalition	Community Members, CCPO Outreach	20	Pfeiffer, Daniel
5/19/11	8:00 AM	Gordon Parks High School, 1212 University Avenue, Saint Paul, MN 55104	Gordon Parks High School	Hiawatha LRT Tour with Gordon Parks High School students and faculty	students and faculty, transit riders	50	Lee, Shoua

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Attachment B1

May 2011

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
5/19/11	8:30 AM	MN Transportation Museum - 193 Pennsylvania Avenue East, Saint Paul, MN 55117 and the State Capitol	CCPO, Diversity/Workforce	Youth Outreach Event	Henry High School Students	45	Caufman, Robin
5/19/11	1:00 PM	Wells Fargo Place, 30 East 7th Street, St. Paul, MN 55101	Wells Fargo Place management	Construction schedule update	Employees	50	Happel, Dana
5/19/11	2:30 PM	4th and Jackson	Federal Courthouse	Meeting with Cha/Courthouse	Property manager	1	Cigolo, Nkongo
5/19/11	2:30 PM	Radisson Hotel, 615 Washington Avenue SE, Minneapolis, MN 55414	SCVA monthly meeting	Stadium Village Commercial Association Board Meeting	Business Owners of Stadium Village	20	Pfeiffer, Daniel
5/19/11	4:00 PM	Augsburg Gateway Center, 2211 Riverside Avenue, Minneapolis, MN 55414	Monthly WBBA Board Meeting	West bank Business Association Board Meeting	Business Owners and Community Members of West Bank	30	Pfeiffer, Daniel
5/20/11	8:30 AM	MN Transportation Museum - 193 Pennsylvania Avenue East, Saint Paul, MN 55117 and the State Capitol	CCPO, Diversity/Workforce	Youth Outreach Event	Washburn High School Students	45	Caufman, Robin
5/23/11	10:00 AM	SPI Printing & Graphics 2111 University Avenue West St. Paul, MN	CCPO – Acces	Segment 1 Aceess meeting North	Property Owner	4	Browner, Joey
5/23/11	11:00 AM	610 Washington Avenue SE, Minneapolis, MN, 55454	AMJV	Meeting with Bill Chan, Owner of Village Wok about moving electrical service	CCPO, AMJV, Egan/Collysis, Business Owner	6	Pfeiffer, Daniel
5/23/11	12:00 PM	Major Tire Company 1831 University Avenue West St. Paul, MN	CCPO – Access	Segment 1 Access meeting North	Property Owner	4	Browner, Joey
5/23/11	12:00 PM	Major Tire Company 1831 University Avenue West St. Paul, MN	CCPO – Access	Segment 1 Access meeting North	Property Owner	4	Browner, Joey
5/24/11	8:00 AM	St. Joe's hospital, 45 West Tenth Street, St. Joseph's Board Room, St. Paul, MN 55101	Fitzgeral Block Club	Fitzgerald Block Club	Neighborhood group	20	Happel, Dana

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Central Corridor LRT Meeting Summary

Attachment B1

May 2011

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
5/24/11	9:00 AM	606 Washington Avenue SE, Minneapolis, MN, 55454	AMJV	Meeting with Todd Dupont, Owner Big 10 about moving electrical service	CCPO, AMJV, Egan/Collysis, Business Owner	6	Pfeiffer, Daniel
5/24/11	10:00 AM	1825,1841,1845 University Avenue West St. Paul, MN	CCPO – Access	Segment 1 Access meeting North	GoodWill- Easter Seals property owner	4	Browner, Joey
5/24/11	1:30 PM	1919 University Avenue West St. Paul, MN	CCPO – Access	Segment 1 Access meeting North	Property Manager	4	Browner, Joey
5/24/11	12:00 PM	Open Cities Health Center on 409 North Dunlap Street	Midway Chamber	Project update	Midway businesses, leaders	15	Caufman, Robin
5/24/11	12:00 PM	1949,1951,1955 University Avenue West St. Paul, MN	CCPO – Access	Segment 1 Access meeting North	Property Owner	4	Browner, Joey
5/25/11	8:30 AM	Crowne Plaza St. Paul Riverfront Hotel, 11 East Kellogg Boulevard, St. Paul, Minnesota	CTS Annual Research Conference (May 24-25, 2010)	Conference: Outreach During Major Construction Projects	Transportation professionals	25	Caufman, Robin
5/26/11	1:00 PM	Alliance Bank Center, 55 East Fifth Street, Suite 200 , St. Paul, MN 55101	CCPO	Construction Update meeting with Cedar Street properties	Cedar Street property managers/owners	15	Happel, Dana
5/26/11	1:30 PM	1900 West County Road I, Shoreview, MN 55126	MNDOT	Business Outreach and How to Evaluate Your Efforts	MNDOT and other agency staff, transportation pla nners	30	Caufman, Robin

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Central Corridor LRT Meeting Summary

June 2011 Meetings

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
6/1/11	3:00 PM	Stassen Building, 600 Robert Street North, Room 2000, Saint Paul, MN 55155	CCPO – Public Construction Information Meeting	Capitol Area PCIM	State Capitol complex employees, general public	20	Lee, Shoua
6/7/11	10:00 AM	245 Cedar Avenue S, Minneapolis, MN 55414	CCPO - CCC	West Bank CCC	CCC members	15	Hill, Jessica
6/8/11	1:00 PM	Council Chambers, Met Council, 390 N Robert Street, St. Paul	Met Council - CCMC	Construction update, business support activities	CCMC membes, partner staff, general public	40	Caufman, Robin
6/9/11	10:00 AM	Stassen Building, 600 Robert Street North, Cafeteria, Saint Paul, MN 55155	CCPO - CCC	Capitol Area CCC	CCC members	3	Lee, Shoua
6/9/11	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO - CCC	East Bank/Stadium Village CCC	CCC members	15	Pfeiffer, Daniel
6/9/11	4:00 PM	CCPO-Room-2and3	CCPO - CCC	University Avenue CCC	CCC members	20	Webb, Michelle
6/16/11	10:00 AM	Saint Paul Area Chamber of Commerce, 401 Robert Street, Executive Room, St. Paul, MN 55101	CCPO - CCC	Downtown CCC	CCC members	15	Happel, Dana
6/21/11	10:00 AM	245 Cedar Avenue S, Minneapolis, MN 55414	CCPO - CCC	West Bank CCC	CCC members	15	Pfeiffer, Daniel
6/21/11	11:00 AM	245 Cedar Avenue S, Minneapolis, MN 55414	CCPO – Public Construction Information Meeting	West Bank PCIM	West Bank community	20	Pfeiffer, Daniel
6/22/11	3:00 PM	Grace Lutheran Church, 324 Harvard Street SE, Minneapolis, MN, 55454	CCPO – Public Construction Information Meeting	East Bank PCIM	CCPO,AMJV, Hennepin County, City of Minneapolis, University of Minnesota, Community Members	35	Pfeiffer, Daniel
6/22/11	3:00 PM	CCPO-Room-2and3	CCPO – Public Construction Information Meeting	University Avenue PCIM	University Avenue West employees and general public	20	Webb, Michelle

 or information about a specific meeting, contact the identified outreach coordinator:

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Central Corridor LRT Meeting Summary

June 2011 Meetings

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
6/23/11	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO - CCC	East Bank/Stadium Village CCC	CCC members	15	Pfeiffer, Daniel
6/23/11	4:00 PM	CCPO-Room-2and3	CCPO - CCC	University Avenue CCC	CCC members	12	Webb, Michelle
6/30/11	5:30 PM	Lao Family Community, 1st Floor Large Conf. Room, 320 University Avenue, Saint Paul	CCPO –Public Art	Western Station Art Committee Meeting	Western Station Art Committee members		Lee, Shoua
6/30/11	6:30 PM	Lao Family Community, 1st Floor Large Conf. Room, 320 University Avenue, Saint Paul	CCPO –Public Art	Western Station Art Public Meeting	General public	15	Lee, Shoua
6/16/11	11:30 AM	JJ Fish and Chicken	Midway Chamber of Commerce	Lunch on the Avenue	Local residents, employees supporting businesses	40	Caufman, Robin
6/16/11	4:00 PM	Corner of Dale and University in Saint Paul	Model Cities, Inc.; Neighborhood Development Center; Aurora Saint Anthony Neighborhood Development Corporation;	Frogtown Square Grand Opening	Community leaders, area residents and businesses	50	Caufman, Robin
6/22/11	10:00 AM	McKnight Foundation, Minneapolis	Corridors of Opportunity Policy Board	Business reporting, marketing and business support activities	POlicy Board members, elected officials, community development professionals, staff	40	Caufman, Robin
6/22/11	3:00 PM	Health Partners (South Falk Conference Room – 5th Floor, 2220 Riverside Avenue, Minneapolis, MN 55454	City of Minneapolis	Coordination of Public Works projects in Minneapolis	City of Minneapolis, Mn/DOT, Hennepin County, community leaders, University of Minnesota, Augsburg College	20	Pfeiffer, Daniel
6/27/11	2:30 PM	University Avenue betewen Emerald and Berry	Nice Riders/St. Paul/St. Paul Area Chamber of Commerce	Celebration welcoming Nice Rides to St. Paul and first new pavement on University Ave, press conference	Mayors, Nice Rides, CCFC, BCBS, TLC, media,	100	Caufman, Robin

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Central Corridor LRT Meeting Summary

June 2011 Meetings

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
6/28/11	9:00 AM	Cowles Auditorium, Humphrey School of Public Aff airs, University of Minnesota, 130 Humphrey Center, 301 - 19th Ave. S., Minneapolis	Cooridors of Opportunity/Met Council/Humphreyt Institute	Anchoring Equity to Achieve Sustainable Regional Development Outcomes	regional planners, elected officials	50	Caufman, Robin
6/30/11	9:00 AM	Wilder Foundation, Room 2510.	Business Resources Collaborative	Marketing, loan program	Business organizations, chambers, PED	15	Caufman, Robin
6/30/11	12:00 PM	Fortune Wok, 1812 University Avenue West	Midway Chamber	Lunch on the Avenue	Local residents,employees supporting local businesses, Chair Haigh, Met Council and CCPO executives	40	Caufman, Robin
6/1/11	11:00 AM	Wells Fargo Place, St. Paul, MN 55101	Smart Trips	Commuter Fair	Downtown Community	50	Happel, Dana
6/1/11	11:00 AM	Thoemke & Sons,LLC 1885 University Avenue West St. Paul, MN	CCPO	Segment 1 Access meeting North	Property Owner	4	Browner, Joey
6/1/11	11:30 AM	Profile Center, 2630 University Avenue SE, Minneapolis, MN 55406	President of Business Association	Southeast Business Association Meeting	Businesses of Prospect Park Area	40	Hill, Jessica
6/2/11	7:00 PM	890 Cromwell Avenue, St. Paul, MN 55104	ccpo	St. Anthony Park Land Use Committee	St. Anthony Park Land Use Committee Members	12	Rodriguez, Rita
6/2/11	7:30 PM	St. Anthony Park Recreation Center, 890 Cromwell Avenue	ccpo	CCLRT Construction Update Presentation	St. Anthony Park Land Use Committee	12	Rodriguez, Rita
6/6/11	11:30 AM	30 east 7th Street	ccpo	Loading dock Sensor at Wells Fargo Place	Property management	2	Happel, Dana
6/6/11	7:00 PM	Central Corridor Resource Center, 1080 University Avenue W.	District Councils Collaborative	Community Agreements Coordinating Committee	Community leaders, elected officials	20	Caufman, Robin
6/7/11	9:00 AM	30 East 7th Street, Suite 175, St. Paul, MN 55101	CCPO	Cedar Street Construction Update meeting	Cedar Street Property Managers	15	Happel, Dana

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Central Corridor LRT Meeting Summary

June 2011 Meetings

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
6/9/11	10:00 AM	1491, 1469 University Avenue West St. Paul, MN	CCPO	Segment 1 Access meeting North	Property Owner	4	Browner, Joey
6/9/11	1:00 PM	Details TBD	CCPO	Conference Call with MPR	MPR operations	1	Happel, Dana
6/9/11	1:00 PM	Athletic club 340 Cedar Street, St. Paul, MN	CCPO	Skyway	Owner	2	Happel, Dana
6/9/11	2:00 PM	Hubbs Center, 1030 University Ave. W., St. Paul, MN 55103	Tom Cytron-Hysom	St. Paul Community Literacy Consortium - Tom Cytron-Hysom	St. Paul Community Literacy Consortium partners	7	Lee, Shoua
6/13/11	8:30 AM	5th Fl. Diaz Room, 360 Robert Street	HIRE Minnesota	Workforce and DBE	HIRE staff, Chair Haigh, Wanda Kirkpatrick, Pat Born	5	Caufman, Robin
6/13/11	1:00 PM	Aurora/St. Anthony Neighborhood Development Corporation, 774 University Avenue, Saint Paul, MN	CCPO	Outreach for Faces of Rondo Victoria Station Art project	Nieeta Presley, Vaughn Larry, staff	2	Lee, Shoua
6/13/11	1:10 PM	Frogtown Neighborhood Association, 685 Minnehaha Avenue West, Saint Paul,	CCPO	Outreach for Faces of Rondo Victoria Station Art project	Tait Danielson-Castillo	0	Lee, Shoua
6/13/11	1:20 PM	Summit-University Planning Council, 627 Selby Avenue, Saint Paul, MN 55103	CCPO	Outreach for Faces of Rondo Victoria Station Art project	Irna Landrum, Executive Director	1	Lee, Shoua
6/13/11	1:30 PM	Hallie Q. Brown Center, 270 North Kent Street, Saint Paul, MN 55102	CCPO	Outreach for Faces of Rondo Victoria Station Art project	Linda White, Director of Finance and Operations	1	Lee, Shoua
6/13/11	1:40 PM	Penumbra Theatre, 270 North Kent Street, Saint Paul, MN 55102	CCPO	Outreach for Faces of Rondo Victoria Station Art project	ticket office staff	2	Lee, Shoua
6/13/11	12:00 PM	Model Cities, 839 University Avenue, Saint Paul, MN 55104	CCPO	Outreach for Faces of Rondo Victoria Station Art project	Kizzy Downie, staff	1	Lee, Shoua
6/13/11	12:15 PM	The Best Steak House, 860 University Avenue West, Saint Paul, MN 55104	CCPO	Outreach for Faces of Rondo Victoria Station Art project	Pam, staff	1	Lee, Shoua

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Central Corridor LRT Meeting Summary

June 2011 Meetings

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
6/13/11	12:30 PM	Tai Hoa BBQ, 854 University Avenue West, Saint Paul, MN 55104	CCPO	Outreach for Faces of Rondo Victoria Station Art project	Tran Le, co-owner	1	Lee, Shoua
6/13/11	12:45 PM	Rondo Community Outreach Library, 461 Dale Street North, Saint Paul,	CCPO	Outreach for Faces of Rondo Victoria Station Art project	Tayo Adefuye, library staff	1	Lee, Shoua
6/14/11	11:00 AM	Alliance Bank Center, 55 East Fifth Street, Skyway, St. Paul, MN 55101	Smart Trips	Smart Trips Commuter Fair	Downtown St. Paul employees and residents	200	Cigolo, Nkongo
6/15/11	10:30 AM	Embodied Health, 2506 University Ave W, St Paul, MN	CCPO and Walsh	Sideway Access Meeting	Businesses on University Ave	4	Webb, Michelle
6/15/11	11:30 AM	340 Cedar Street, St. Paul, MN 55102	CCPO	Athletic Club	Owner	2	Happel, Dana
6/15/11	3:15 PM	MN Geological Survey, 2642 University Ave W, St Paul, MN	CCPO and Walsh	Sideway Access Meetings	Businesses on University Ave	4	Webb, Michelle
6/15/11	3:30 PM	Dunn Brothers and SNAP Fitness, 2650 University Ave W, St Paul, MN	CCPO and WALSH	Sideway and General Access Meeting	Businesses at 2650 University	6	Webb, Michelle
6/15/11	6:00 PM	Dar al Quba, 1501 6th Street, Minneapolis, MN, 55454	Monthly Neighborhood Organization Meeting	West Bank Community Coalition	Community Members, CCPO Outreach	20	Pfeiffer, Daniel
6/15/11	7:00 PM	958 Aurora Avenue, Saint Paul, MN 55104	Aurora/Milton Block Club	Aurora/Milton Block Club	Aurora/Milton Block club members	10	Lee, Shoua
6/16/11	10:00 AM	First National Bank, 332 Minnesota Street, St. Paul, MN 55101	CCPO	First National Bank	Property Management	2	Happel, Dana
6/16/11	1:00 PM	See details below	CCPO	Conference Call with MPR	MPR	1	Happel, Dana
6/16/11	1:00 PM	Fantasy Gifts 1437 University Avenue St. Paul, MN	CCPO	Segment 1 Areaway survey North	Property Manager	6	Browner, Joey
6/16/11	1:00 PM	Fantasy Gifts, 1435/1437 University Ave W, St Paul, MN	CCPO	Fantasy Gifts Area Way Meeting	University Avenue Businesses	5	Webb, Michelle
6/16/11	2:30 PM	Radisson Hotel, 615 Washington Avenue SE, Minneapolis, MN, 55414	Stadium Village Commercial Association	Stadium Village Commercial Association	Stadium Village Commercial Assoc. Members,	15	Pfeiffer, Daniel

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Central Corridor LRT Meeting Summary

June 2011 Meetings

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
6/16/11	2:30 PM	Radisson Hotel, 615 Washington Avenue SE, Minneapolis, MN 55414	SCVA monthly meeting	Stadium Village Commercial Association Board Meeting	Business Owners of Stadium Village	20	Pfeiffer, Daniel
6/16/11	4:00 PM	Augsburg Gateway Center, 2211 Riverside Avenue, Minneapolis, MN 55414	Monthly WBBA Board Meeting	West bank Business Association Board Meeting	Business Owners and Community Members of West Bank	30	Pfeiffer, Daniel
6/17/11	9:00 AM	2300 block of University south side	CCPO	Sidewalk access during sidewalk replacement meeting	Brian, Michelle, Peter Hansen - Gremlin theater, Bill Miller - 2388 University, Peter D - Aikido	4	Callaghan, Laura
6/17/11	10:00 AM	Town House Bar, 1415 University Ave W, St Paul, MN	CCPO	Areaway Meeting with Town House Bar	University Ave Businesses with Area ways	6	Webb, Michelle
6/17/11	11:00 AM	W.E. Mowrey, 1435 University Ave, St Paul, MN 55104	CCPO	Areaway Meeting with W.E. Mowrey Company	University Ave businesses with areaways	5	Webb, Michelle
6/17/11	1:15 PM	Allegra Printing and Plaudit Design, 2512 University Ave W and 2470 University Ave W, St Paul, MN	CCPO	Sideway Access Meetings	University Ave Businesses	6	Webb, Michelle
6/20/11	11:00 AM	Christensen Bar, 1567 University Ave W, St Paul, MN	CCPO	Areaway Meeting with Big V's Saloon/Christensen Bar	University Ave Businesses with Areaways	6	Webb, Michelle
6/20/11	3:15 PM	2400 blocking of University (south side)	Outreach	walsh sidewalk access meetings	Business owners	3	Callaghan, Laura
6/20/11	7:00 PM	St. Anthony Park Recreation Center, 890 Cromwell Avenue, St. Paul, MN 55104	St. Anthony Park Community Council	St. Anthony Park Community Meeting regarding the CCLRT project	St. Anthony Park residents	35	Rodriguez, Rita
6/23/11	10:00 AM	CCPO Open Office, 540 Fairview Avenue North, Suite 200	District Councils Collaborative Staff	DCC Outreach discussion	DCC intern and staff	2	Caufman, Robin
6/23/11	1:00 PM	Wells Fargo Place, 110 Wells Fargo Place, 30 East 7th Street,	CCPO	Cedar Street Construction Update meeting	Cedar Street Property Management	15	Happel, Dana

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Central Corridor LRT Meeting Summary

June 2011 Meetings

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
		St. Paul, MN					
6/28/11	10:00 AM	Bangkok Market, 315 University Avenue, Saint Paul, MN 55103	CCPO	Areaway testing	Narin Vong, owner	1	Lee, Shoua
6/29/11	2:00 PM	Mai Village Restaurant, 394 University Avenue, Saint Paul, MN 55103	CCPO	Western Station Art Individual Meeting	Ngoan Doan, business and property owner	1	Lee, Shoua
6/30/11	9:00 AM	Old Home Foods, 370 University Avenue, Saint Paul, MN 55103	CCPO	Areaway inspection	Roger Parkhaurst, facilities contact	1	Lee, Shoua
6/30/11	10:00 AM	A-1 Vaccuum, 666 University Avenue, Saint Paul, MN 55103	CCPO	Areaway inspection	Russ Battisto, owner	1	Lee, Shoua

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Central Corridor LRT Meeting Summary

Meetings held in July 2011

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
7/6/11	3:30 PM	Regions Human Resources Building, 690 Robert Street North, Conference Room West 2016, Saint Paul, MN 55155	CCPO – Capitol Area QCEM	Capitol Area CCC Quarterly Evaluation Meeting	CCC members	3	Lee, Shoua
7/7/11	11:00 AM	Saint Paul Area Chamber of Commerce, 401 Robert Street, Executive Room, St. Paul, MN	CCPO – Downtown St. Paul QCEM	Downtown St. Paul CCC - Quarterly Evaluation Meeting	CCC members	15	Happel, Dana
7/12/11	10:00 AM	245 Cedar Avenue S, Minneapolis, MN 55414	CCPO – West Bank QCEM	West Bank- Minneapolis CCC Quarterly Evaluation Meeting	CCC members	7	Hill, Jessica
7/14/11	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO – East Bank QCEM	East Bank/Stadium Village CCC Quarterly Evaluation Meeting	CCC members	15	Pfeiffer, Daniel
7/14/11	4:00 PM	Central Corridor Project Office 2/3, 540 Fairview Ave N, St. Paul, MN 55104	CCPO – University Avenue QCEM	University Avenue CCC Quarterly Evaluation Meeting	CCC members	20	Webb, Michelle
7/19/11	10:00 AM	245 Cedar Avenue S, Minneapolis, MN 55414	CCPO – West Bank CCC	West Bank CCC	CCC members	15	Pfeiffer, Daniel
7/21/11	10:00 AM	Saint Paul Area Chamber of Commerce, 401 Robert Street, Executive Room, St. Paul, MN	CCPO - Downtown St. Paul CCC	Downtown St. Paul CCC	CCC members	15	Happel, Dana
7/26/11	4:00 PM	540 Fairview Avenue North, 2nd floor, Conference Room 4, Saint Paul, MN 55104	CCPO – Public Art	Selection Meeting for Faces of Rondo, Victoria Station Art project	Station Art Committee members	4	Lee, Shoua
7/27/11	3:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO – Civil West PCIM	Civil West PCIM	Project partners, UofM, Community members	35	Pfeiffer, Daniel
7/28/11	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO - East Bank/Stadium Village CCC	East Bank/Stadium Village CCC	CCPO East Bank/Stadium Village CCC members	15	Pfeiffer, Daniel

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Central Corridor LRT Meeting Summary

Meetings held in July 2011

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7/28/11	4:00 PM	Central Corridor Project Office 2/3, 540 Fairview Ave N, St. Paul, MN 55104	CCPO - University Avenue CCC	University Avenue CCC	CCC members	20	Webb, Michelle
7/7/11	7:00 PM	Midway stadium	Midway Chamber/U7/Discover Central Corridpor	St. Paul Saints - Central Corridor night	Minor league baseball fans	200	Caufman, Robin
7/14/11	9:00 AM	Dowling Studio Guthrie Theatre, Minneapolis	Corridors of Opportunity	Unleashing the Potential of the Central Corridor	Economic development professionals	40	Caufman, Robin
7/14/11	12:00 PM	University Buffet (225 University Ave. W	Midway Chamber	Lunch on the Avenue	Corridor residents and employees	40	Caufman, Robin
7/20/11	6:00 PM	Profile Event Center 2630 University Avenue SE	District Councils Collaborative of St Paul & Mpls	Housing plans along the corridor, prepararation recommendations and strategies for implementing	Minneapolis and St Paul LISC and CCFC	30	Caufman, Robin
7/21/11	4:00 PM	Central Corridor Resource Center, 1081 University Ave W, St. Paul	District Council's Collaborative	Seattle Community Engagement: Conversation with Ryan Currens	Community leaders, residents	30	Caufman, Robin
7/28/11	4:30 PM	Mai Village 394 University Ave W. St. Paul, MN	Midway Chamber	Lunch on the Avenue's one year Anniversary	Midway Chamber of Commerce, Central Corridor Project Office,	30	Caufman, Robin
7/29/11	9:00 AM	Wilder Foundation	Business Resources Collaborative	Loan program, budget, leadership and decision making structure, fundraising	City staff, business organizations	12	Caufman, Robin
7/6/11	10:30 AM	CCPO-Room-4	CCPO	Preparation meeting for African and African American Business Ready for Rail Resource Event	Preserve and Benefit Historic Rondo Committee staff	1	Lee, Shoua
7/8/11	9:00 AM	Impressive Print, 1754 University Ave W, St Paul, MN	Impressive Print	Meeting to discuss Wheeler and Parking	Stakeholders affected by Wheeler	5	Webb, Michelle

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Central Corridor LRT Meeting Summary

Meetings held in July 2011

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
					construction		
7/8/11	2:00 PM	Pioneer Press, 345 Cedar Street	Pioneer Press	Pioneer Press sidewalk closure discussion	Operations, Kevin Marquette	1	Happel, Dana
7/11/11	9:00 AM	Town House Bar, 1415 University Avenue, St. Paul, MN 55104	Town House Bar	Meeting to discuss Parking lot development	Owner and Manager of Town House and Council Member Stark	5	Rodriguez, Rita
7/13/11	9:00 AM	McDonald's, 2213 University Ave W, St Paul, MN	McDonald's	Site Visit	Businesses on Corridor	3	Webb, Michelle
7/13/11	1:00 PM	Jimmy John's, 2446 University Ave W, St Paul, MN	Jimmy John's	Site Visit	businesses on corridor	3	Webb, Michelle
7/13/11	1:30 PM	Ugaso Grocery, 2420 University Ave W, St Paul, MN	Ugaso	Site Visit	businesses on corridor	4	Webb, Michelle
7/13/11	2:00 PM	Hope Chest, 571 North Snelling Ave, St Paul, MN	Hope Chest	Site Visit	businesses near corridor	4	Webb, Michelle
7/13/11	2:30 PM	UPS, 1360 University Ave W, St Paul, MN	UPS	Site Visit	businesses on corridor	4	Webb, Michelle
7/13/11	6:30 PM	4300 West River Parkway, Minneapolis, MN	Becketwith Home	Presentation to Becketwith Home	CCPO, Community Members	70	Pfeiffer, Daniel
7/13/11	12:30 PM	Dunn Bros, 2650 University Ave W, St Paul, MN	Dunn Bros	Site Visit	Businesses on Corridor	4	Webb, Michelle
7/14/11	9:00 AM	Frogtown Square	Union Gospel Mission	Union Gospel Mission	Ben Johnson	12	Lee, Shoua
7/14/11	11:00 AM	Ax Man, 1639 University Ave W, St Paul MN	Ax Man	Site Visit	businesses on corridor	2	Webb, Michelle
7/14/11	11:15 AM	Travellers	Leadership St. Paul	Leadership St. Paul	Nathon Park	25	Lee, Shoua
7/14/11	1:00 PM	Wells Fargo, 3430 University Ave, Minneapolis, MN	Wells Fargo	Meeting to discuss Minneapolis Impacts of Civil East construction	Businesses on Corridor	4	Webb, Michelle
7/15/11	1:00 PM	SOS Office Furniture, 2441	SOS Office Furniture	Site Visit	businesses on corridor	3	Webb,

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Central Corridor LRT Meeting Summary

Meetings held in July 2011

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
		University Ave W, St Paul, MN					Michelle
7/15/11	12:30 PM	Dow and Wright Buildings, Hampden and University, St Paul, MN	Dow and Wright Building	Site Visit	businesses on corridor	3	Webb, Michelle
7/18/11	1:00 PM	Vandalia & University SE intersection	CCPO outreach	Sidewalk access meetings	walsh, outreach and stakeholder	3	Callaghan, Laura
7/18/11	2:30 PM	30 E. 7th Street, St. Paul, MN 55101	CCPO	Access and discuss upcoming work	Property Management	3	Happel, Dana
7/18/11	3:00 PM	On University between Hampden and Cleveland	CCPO Outreach	4 sidewalk access meetings	walsh, outreach and stakeholder	4	Callaghan, Laura
7/20/11	3:30 PM	Mai Village, 394 University Avenue, Saint Paul, MN 55103	Ngoan Dang, business & property owner	ROW meeting - Ngoan Doan	Ngoan Dang, business & property owner	1	Lee, Shoua
7/20/11	6:00 PM	Dar al Quba, 1501 6th Street, Minneapolis, MN, 55454	Monthly Neighborhood Organization Meeting	West Bank Community Coalition	Community Members, CCPO Outreach	20	Pfeiffer, Daniel
7/21/11	11:00 AM	Subway, 2121 University Ave W, St Paul, MN	Subway	Meeting to discuss curb/driveway	businesses on corridor	5	Webb, Michelle
7/21/11	2:30 PM	Radisson Hotel, 615 Washington Avenue SE, Minneapolis, MN 55414	SCVA monthly meeting	Stadium Village Commercial Association Board Meeting	Business Owners of Stadium Village	20	Pfeiffer, Daniel
7/21/11	4:00 PM	Augsburg Gateway Center, 2211 Riverside Avenue, Minneapolis, MN 55414	Monthly WBBA Board Meeting	West bank Business Association Board Meeting	Business Owners and Community Members of West Bank	30	Pfeiffer, Daniel
7/22/11	3:00 PM	Lasalle and University	CCPO	Meeting to discuss Lasalle and University	Building manager, Jack McCann	2	Webb, Michelle
7/23/11	11:00 AM	St. Paul	American Council on the Blind of Minnesota	Project update	Blind stakeholders	30	Hill, Jessica
7/25/11	10:00 AM	Central Corridor Resource Center, 1080 University Avenue, Saint Paul, MN 55104	Preserve and Benefit Historic Rondo Committee	African and African American Business Ready for Rail Event	African and African American business owners	30	Lee, Shoua

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Central Corridor LRT Meeting Summary

Meetings held in July 2011

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
7/25/11	4:00 PM	Central Corridor Resource Center, 1080 University Avenue, Saint Paul, MN 55104	Preserve and Benefit Historic Rondo Committee	African and African American Business Ready for Rail Event	African and African American business owners	30	Lee, Shoua
7/26/11	10:30 AM	698 University Avenue, Saint Paul, MN 55103	business owner	Payless Tires	business owner	1	Lee, Shoua
7/27/11	3:30 PM	340 Cedar Street, St. Paul, MN 55101	Athletic Club	Athletic Club	owner	2	Happel, Dana
7/27/11	4:30 PM	577 University Avenue, Saint Paul, MN 55103	Sia Lo	OMG Nails	Kevin Le, business owner	1	Lee, Shoua
7/27/11	6:00 PM	Lutheran Church of the Redeemer, 285 Dale Street North, Saint Paul, 55103	Songs of Hope event organizer	Songs of Hope Community Event	community residents & supporters	40	Lee, Shoua
7/28/11	1:00 PM	Athletic Club, 340 Cedar Street, Penthouse, St. Paul, MN 55101	Athletic Club	Cedar Street Construction Update meeting	Cedar Street Property Managers	15	Happel, Dana
7/28/11	1:00 PM	Westgate Business Center	Westgate Business Center	Meeting to Discuss Berry Street Closure and traffic issues	Westgate Business Center Manager	3	Rodriguez, Rita
7/28/11	2:00 PM	Episcopal Homes, 1840 University Avenue, St. Paul, MN 55104	Episcopal Homes	Meeting to discuss Access	Episcopal Homes Manager	3	Rodriguez, Rita
7/29/11	9:00 AM	US Bank, 101 East 5th Street, Suite 240, St. Paul, MN 55101	CapitolRiver Council	Skyway Committee meeting - update on Skyway demo	Skyway committee members	15	Happel, Dana

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Central Corridor LRT Meeting Summary

August 2011 Meetings

CCC=Construction Communication Cmte; PCIM=Public Construction Information Meeting; CCMC= Central Corridor Management Cmte

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
8/3/11	3:00 PM	Stassen Building, Room 2000, 600 Robert Street North, Saint Paul, MN 55146	CCPO - PCIM	Capitol Area Public Construction Information Meeting	general public	15	Lee, Shoua
8/3/11	3:30 PM	Stassen Building, Room 2000, 600 Robert Street North, Saint Paul 55146	CCPO - CCC	Capitol Area Construction Communication Committee Meeting	CCC members	6	Lee, Shoua
8/4/11	10:00 AM	401 Robert Street, St. Paul Chamber of Commerce, Executive Office, St. Paul, MN	CCPO	Construction Communication Committee Meeting	Construction Communication Committee Members	15	Happel, Dana
8/10/11	1:00 PM	Council Chambers, 390 N. Robert Street	Met Council - CCMC	Construction update, business reporting	Project partners, staff, public	30	Caufman, Robin
8/11/11	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO - CCC	East Bank/Stadium Village Construction Communication Committee	CCC members	15	Pfeiffer, Daniel
8/16/11	10:00 AM	245 Cedar Avenue S, Minneapolis, MN 55414	CCPO - CCC	West Bank Construction Communication Committee Meeting	CCC members	15	Pfeiffer, Daniel
8/18/11	10:00 AM	Saint Paul Area Chamber of Commerce, 401 Robert Street, Executive Room, St. Paul, MN	CCPO - CCC	Downtown St. Paul Construction Communiation Committee	CCC members	15	Happel, Dana
8/24/11	3:00 PM	Grace Lutheran Church, 324 Harvard Street SE, Minneapolis, MN, 55454	CCPO - PCIM	Civil West Public Construction Information Meeting	general public	35	Pfeiffer, Daniel
8/24/11	2:00 PM	Robert Street Council Chambers,	Met Council - CCMC	Contingency	Policy makers, project partner staff, public	20	Caufman, Robin
8/25/11	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO - CCC	East Bank/Stadium Village Construction Communication Committee	CCC members	15	Pfeiffer, Daniel
8/25/11 to 9/2/11	9:00 AM to 5:00 PM Daily	State Fair Grounds	Metro Transit/CCPO	Staff booth with information about Central Corridor LRT	Fair goers, Minnesota residents	500	Caufman, Robin

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Central Corridor LRT Meeting Summary

August 2011 Meetings

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
8/11/11	4:30 PM	Arnellia's 1183 University Ave W St Paul	Midway Chamber	Happy Hour on the Avenue	corridor community	35	Caufman, Robin
8/22/11	9:00 AM	Midway Chamber of Commerce conference room, 1600 University Avenue	Ramsey County/Met COuncil/UABA/AEDA	Business discussion	Business leaders	10	Caufman, Robin
8/24/11	6:00 PM	Wilder Center, 451 Lexington Pkwy N., St. Paul	Cities of Minneapolis and Saint Paul, Twin Cities LISC	The Big Picture Project Community Forum #2 – Reviewing the Options	Housing advocates, community leaders	50	Caufman, Robin
8/25/11	12:00 PM	Lucy's Cafe	Midway Chamber	Lunch on the Avenue	corridor community	40	Caufman, Robin
8/26/11	9:00 AM	Wilder Foundation	Business Resources Collaborative	Formation of Exec Cmte, recomendation for marketing funding	Corridor businesses	15	Caufman, Robin
8/1/11	10:00 AM	Strommen Building, 2469 University Ave W St Paul MN	CCPO	Meeting with Strommen Building Tenants about Temporary Water Shut Off	Businesses in Strommen Building	20	Webb, Michelle
8/1/11	7:00 PM	CCRC, 1080 University Avenue	CACC	Communication survey	community leaders, residents	15	Caufman, Robin
8/2/11	3:00 PM	Aurora Avenue and Victoria Street	National Night Out Event: Peace Garden at Aurora and Victoria	Project information	residents and community members	10	Lee, Shoua
8/2/11	3:00 PM	Various block parties in St. Paul	National Night Out	Project information	residents near or in the corridor	200	Caufman, Robin
8/2/11	4:15 PM	Galtier Avenue and Lafond Street	National Night Out Event: Galtier and Lafond	Project information	residents	15	Lee, Shoua
8/2/11	4:45 PM	Sherburne Avenue and Avon Street	National Night Out Event: Sherburne and Avon	Project information	residents	20	Lee, Shoua
8/2/11	5:15 PM	270 North Kent Street, Saint Paul, MN 55102	National Night Out Event: Hallie Q. Brown Center	Project information	residents and community members	20	Lee, Shoua
8/2/11	6:00 PM	Capitol Heights Park	National Night Out Event: Capitol Heights	Project information	residents and community members	20	Lee, Shoua
8/2/11	6:00 PM	Knox Presbyterian Church, 1536 Minnehaha Ave W	Exco	Project overview	Local residents, businesses	2	Caufman, Robin
8/2/11	6:45 PM	Milton Street and Aurora Avenue	National Night Out Event: Milton and Aurora	Project information	residents	7	Lee, Shoua

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Central Corridor LRT Meeting Summary

August 2011 Meetings

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
8/2/11	7:15 PM	500 North Dale Street, Saint Paul, MN 55103	National Night Out Event: Kings Crossing (Frogtown Square)	Project information	residents and community members	40	Lee, Shoua
8/3/11	9:00 AM	Wells Fargo Place, Unilev Management Office, 1st Floor, 30 E. 7th Street, St. Paul, MN 55101	CCPO	Site visit to verify utility locations	Facility Manager	2	Happel, Dana
8/3/11	1:00 PM	445 Minnesota STreet, enter loading dock at Cedar and 7th Street	CCPO	Site visit to verify utilities	Facility Manager	2	Happel, Dana
8/3/11	2:00 PM	Twin City Janitor Supply, University Ave W, St Paul	CCPO	Meeting with Twin City Janitor Supply to discuss contractor taking up parking spaces			Webb, Michelle
8/3/11	5:00 PM	US Bank, 101 E 5th St Suite #240, St. Paul, MN 55101	CapitolRiver Council	Discuss Noise Variance	Executive Committee	15	Happel, Dana
8/4/11	11:00 AM	1166 University Avenue West, Saint Paul, MN 55104	CCPO	Bally Total Fitness	Kevin Nicksic	1	Lee, Shoua
8/4/11	2:00 PM	540 Fairview Avenue North, Room 2 & 3, Saint Paul, MN 55104	National APIA Summit organizers	National Asian Pacific Islander American Summit	National APIA Summit attendees	70	Lee, Shoua
8/5/11	1:00 PM	Macy's, 411 Cedar Street, location to meet: corner of 6th and cedar, See contact info in notes	CCPO	Site visit to verify utilities	Maintenance staff	2	Happel, Dana
8/8/11	2:00 PM	University Avenue from Prior to Fairview, St Paul MN	CCPO	Sidewalk Notification and Outreach Prior to Fairview	businesses between Prior and Fairview along University	10	Webb, Michelle
8/9/11	1:15 PM	Fairview to Aldine on University Avenue West - south side	CCPO	Sidewalk Meetings with businesses from Fairview to Aldine	businesses from Fairview to Aldine on University	10	Webb, Michelle
8/9/11	12:45 PM	Handi Medical, 2505 University Ave West, St Paul, MN	CCPO	Meeting with Handi Medical Supply to discuss sidewalk		5	Webb, Michelle
8/10/11	9:00 AM	Porky's Parking Lot, University Ave West, St Paul, MN	CCPO/Walsh	Meeting with Marvin from Episcopal Homes/Porky's	meeting with owner/manager of	4	Webb, Michelle

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Central Corridor LRT Meeting Summary

August 2011 Meetings

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
					Episcopal Homes		
8/10/11	2:00 PM	2147 University Avenue, St Paul, MN	Property owner at 2147	2147 University Meeting about Bollards	Owner of 2147; Walsh; CCPO Outreach	4	Webb, Michelle
8/10/11	2:00 PM	1212 University Avenue, Saint Paul, MN 55104	CCPO	Gordon Parks High School pre-construction meeting	staff	1	Lee, Shoua
8/10/11	2:15 PM	1190 University Avenue, Saint Paul, MN 55104	CCPO	Abra Auto Body	Steve Hanson	1	Lee, Shoua
8/10/11	2:30 PM	1134 University Avenue, Saint Paul, MN 55104	CCPO	Aldi	Aldi staff	1	Lee, Shoua
8/10/11	2:45 PM	451 Lexington Parkway, Saint Paul, MN 55104	CCPO	Wilder Foundation	Wilder receptionist	1	Lee, Shoua
8/10/11	3:00 PM	459 Lexington Parkway, Saint Paul, MN 55104	CCPO	TCF Bank	TCF staff	1	Lee, Shoua
8/10/11	3:15 PM	1120 University Avenue, Saint Paul, MN 55104	CCPO	White Castle	Jesse Miller	1	Lee, Shoua
8/10/11	3:30 PM	1094 University Avenue, Saint Paul, MN 55104	CCPO	Ocean Spa Nails & Spa	Kim Nguyen, owner	1	Lee, Shoua
8/10/11	3:45 PM	472 Lexington Parkway, Saint Paul, MN 55104	CCPO	Mikel Cameras	Efe Mike Puegeren	1	Lee, Shoua
8/10/11	4:00 PM	470 North Lexington Parkway, Saint Paul, MN	CCPO	St. Paul Grocery & Meat Market	staff	1	Lee, Shoua
8/10/11	4:15 PM	474 Lexington Parkway North, Saint Paul, MN 55104	CCPO	New Asia Restaurant	Cindy Gao	1	Lee, Shoua
8/10/11	4:30 PM	460 Lexington Parkway North, Saint Paul, MN	CCPO	Twin Cities Rise	Cynthia Micolichek	1	Lee, Shoua
8/10/11	6:30 PM	1080 University Avenue	District Council's Collaborative	Construction with the District Councils Collaborative	District Council representatives	10	Caufman, Robin
8/11/11	6:00 PM	Frogtown Square, 500 North Dale Street, Saint Paul, 55104	AEDA	AEDA - Business Branding	business owners	25	Lee, Shoua
8/12/11	10:00 AM	Wheeler to Aldine on University Ave W -south side, St Paul, MN	CCPO	Sidewalk Outreach Wheeler to Aldine	businesses from Wheeler to Aldine on south side of University	4	Webb, Michelle

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Central Corridor LRT Meeting Summary

August 2011 Meetings

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
8/12/11	11:00 AM	Albert and University, St Paul, MN	CCPO	Albert Street Meeting with Lighting Contractor		6	Webb, Michelle
8/14/11	2:00 PM	Rondo Library, 461 North Dale Street, Saint Paul, MN 55103	Take Action MN	CCLRT Hmong Community Forum	Hmong residents & community members	30	Lee, Shoua
8/15/11	5:00 PM	CCRC, 1080 University Avenue	CACC Transportation and Communication Committee	Communication survey	Community leaders, residents	10	Caufman, Robin
8/16/11	10:00 AM	Abra Auto Body & Glass, 1190 University Avenue West, Saint Paul, MN 55104	CCPO	Pre-construction/access meeting	Steve Hanson, General Manager	1	Lee, Shoua
8/16/11	11:00 AM	Scale Model Supllies, 458 Lexington Parkway, Saint Paul, MN 55104	CCPO	Pre-construction meeting with Scale Model Supplies	Bruce, staff & brother of business owner	1	Lee, Shoua
8/16/11	11:45 AM	CSL Plasma, 1054 University Avenue, Saint Paul, MN 55104	CCPO	Pre-construction meeting with CSL Plasma	Brenda Steffen, Assistant Manager	1	Lee, Shoua
8/17/11	6:00 PM	Dar al Quba, 1501 6th Street, Minneapolis, MN, 55454	Monthly Neighborhood Organization Meeting	West Bank Community Coalition	Community Members, CCPO Outreach	20	Pfeiffer, Daniel
8/17/11	12:30 PM	685 Minnehaha Avenue West, Saint Paul, MN 55104	Tait Danielson	Drop off Discover Central Corridor coupon books to Frogtown Neighborhood Assoc.	Frogtown Neighborhood Association	1	Lee, Shoua
8/18/11	2:30 PM	Radisson Hotel, 615 Washington Avenue SE, Minneapolis, MN 55414	SCVA monthly meeting	Stadium Village Commercial Association Board Meeting	Business Owners of Stadium Village	20	Pfeiffer, Daniel
8/18/11	4:00 PM	Augsburg Gateway Center, 2211 Riverside Avenue, Minneapolis, MN 55414	Monthly WBBA Board Meeting	West bank Business Association Board Meeting	Business Owners and Community Members of West Bank	30	Pfeiffer, Daniel
8/23/11	2:30 PM	802 Washington Avenue SE, Minneapolis, MN 55414	Punch Pizza	Meeting with Punch Pizza about project & timeline	CCPO Outreach, Punch Pizza Management, AMJV	5	Pfeiffer, Daniel
8/23/11	6:30 PM	685 Minnehaha Avenue West, Saint Paul, MN 55104	CCPO	Frogtown Neighborhood Association Community Forum	residents, community members	15	Lee, Shoua
8/23/11	12:00 PM	Kings Crossing Apartments at Dale & University	Midway Chamber	Economic Development Committee	Corridor businesses	15	Caufman, Robin

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Central Corridor LRT Meeting Summary

August 2011 Meetings

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
8/24/11	6:00 PM	US Bank, 101 E 5th St Suite #240, St. Paul, MN 55101	CapitolRiver Council	Construction update meeting with CapitolRiver Council	Downtown community	15	Happel, Dana
8/25/11	1:00 PM	Wells Fargo Place, 110 Wells Fargo Place, 30 East 7th Street, Suite 175 St. Paul, MN 55101	CCPO	Cedar Street Construction Update meeting	Cedar Street Property Management	15	Happel, Dana
8/31/11	9:00 AM	McNamara Alumni Center	University of Minnesota School of Public Health	Student Orientation Event for UofM School of Public Health	CCPO, University of Minneasota Students & Staff	225	Pfeiffer, Daniel

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Central Corridor LRT Meeting Summary

September 2011 Meetings

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
9/1/11	10:00 AM	Saint Paul Area Chamber of Commerce, 401 Robert Street, Exec. Rm, St. Paul, MN 55101	CCPO - CCC	Downtown St. Paul Construction Communication Committee	Committee members	15	Happel, Dana
9/7/11	3:00 PM	Stassen Building, Room 2000, 600 Robert Street North, Saint Paul, MN 55146	CCPO - PCIM	Capitol Area Public Construction Informational Meeting	general public	10	Lee, Shoua
9/7/11	3:30 PM	Stassen Building, Room 2000, 600 Robert Street North, Saint Paul 55146	CCPO - CCC	Capitol Area Construction Communication Committee	Committee members	4	Lee, Shoua
9/8/11	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO - CCC	East Bank/Stadium Village Construction Communication Committee	Committee members	15	Pfeiffer, Daniel
9/8/11	4:00 PM	CCPO 2/3, 540 Fairview Ave. N, St. Paul	CCPO - CCC	University Avenue Construction Communication Committee	Committee members	15	Webb, Michelle
9/13/11	10:00 AM	245 Cedar Avenue S, Minneapolis, MN 55414	CCPO - CCC	West Bank Construction Communication Committee	Committee members	15	Pfeiffer, Daniel
9/13/11	4:30 PM	Westgate Business Center, 2575 University Avenue West Suite 130/135, St Paul, MN	CCPO - PCIM	University Avenue Public Construction Information Meeting	Westgate Businesses and Area residents		Webb, Michelle
9/14/11	3:00 PM	Saint Paul Area Chamber of Commerce, 401 Robert Street, Exec. Rm, St. Paul, MN 55101	CCPO - PCIM	Downtown St. Paul Public Construction Informational Meeting	general public	15	Happel, Dana
9/15/11	10:00 AM	Saint Paul Area Chamber of Commerce, 401 Robert Street, Exec. Rm, St. Paul, MN 55101	CCPO - CCC	Downtown St. Paul Construction Communication Committee	Committee members	15	Happel, Dana
9/20/11	10:00 AM	245 Cedar Avenue S, Minneapolis, MN 55414	CCPO - CCC	West Bank Construction Communication Committee	Committee members	15	Pfeiffer, Daniel
9/22/11	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO - CCC	East Bank/Stadium Village Construction Communication Committee	Committee members	15	Pfeiffer, Daniel
9/22/11	4:00 PM	CCPO 2/3, 540 Fairview Ave. N, St. Paul	CCPO - CCC	University Ave. Construction Communication Committee	Committee members	15	Webb, Michelle

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Central Corridor LRT Meeting Summary

September 2011 Meetings

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
9/1/11	10:00 AM	Central Corridor Project Office, Room 1, 540 Fairview Ave., St. Paul, MN 55104	CCPO	Introductory meeting	Pangia Vang, U7	1	Lee, Shoua
9/8/11	1:00 PM	CCPO 540 Fairview Avenue N, Suite 200	Met Council/Business Resources Collaborative	Business Marketing contract committee	Business representative	10	Caufman, Robin
9/19/11	9:00 AM	Union Depot Station	Federal Transit Administration	Project update, promote CCLRT and Union Depot work	Sect. Lahood, Admin. Rogoff, local elected officials, construction team, project staff, media	150	Caufman, Robin
9/21/11	6:00 PM	Goodwill Easterseals 533 Fairview Ave N St Paul, MN 55104	Twin Cities Local Initiatives Support Corporation	The Big Picture Project Community Forum 3 "Framing The Recommendations"			Richardson, Mary
9/22/11	12:00 PM	Perkins (1544 University Ave		Lunch on the Avenue on Thursday, September 22nd from noon-1:00			Richardson, Mary
9/22/11	9:30 AM	CCPO 4, Fairview Ave. N, St. Paul	CCPO, Marketing program committee	Marketing contract development	corridor businesses, business organization representatives	6	Caufman, Robin
9/30/11	9:00 AM	Wilder Foundation	Business Resources Collaborative	Adoption of completed norms, budget review	Corridor businesses, leaders	15	Caufman, Robin
9/6/11	12:00 PM	University Avenue from Snelling to Simpson, St Paul, MN		Outreach - Snelling to Simpson			Webb, Michelle
9/10/11	10:00 AM	Selby Avenue	Selby Avenue Jazz Fest	Staff table with CCLRT information, hand out coupon books	Community members, residents, event participants	200	Caufman, Robin
9/15/11	10:00 AM	Saint Paul Area Chamber of Commerce, 401 Robert Street, Executive Room, St. Paul, MN 55101	CCPO	Construction Communication Committee meeting	Construction Communication Committee members	15	Happel, Dana
9/15/11	2:30 PM	Radisson Hotel, 615 Washington Avenue SE, Minneapolis, MN 55414	SCVA monthly meeting	Stadium Village Commercial Association Board Meeting	Business Owners of Stadium Village	20	Pfeiffer, Daniel

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Central Corridor LRT Meeting Summary

September 2011 Meetings

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
9/15/11	4:00 PM	Augsburg Gateway Center, 2211 Riverside Avenue, Minneapolis, MN 55414	Monthly WBBA Board Meeting	West bank Business Association Board Meeting	Business Owners and Community Members of West Bank	30	Pfeiffer, Daniel
9/17/11	9:00 AM	The Tierney Brothers – 3300 University Avenue SE	Prospect Park 2020	Workshop on emerging development implementation plans for Prospect Park / 29th Ave LRT station area and Gateway area of University Avenue.	Prospect Park Stakeholders	20	Pfeiffer, Daniel
9/21/11	11:30 AM	Hilton Garden Inn, St. Paul	Women in Transportation Seminar	Corridors of Opportunity	Transportation professionals	40	Caufman, Robin
9/21/11	6:00 PM	Dar Al Quba, 1501 S. 6th Street, Minneapolis, MN, 55414	West Bank Community Coalition monthly meeting	West Bank Community Coalition	Community Members	25	Pfeiffer, Daniel
9/25/11	10:20 AM	308 Prince Street (Entrance Along Broadway)		Clouds in Water Zen Center Presentation on OMF			Cigolo, Nkongo
9/27/11	8:00 AM	555 Wabasha, fourth floor, Saint Paul Housing	Kay Baker, Saint Joesph's Hospital	Down town Saint Paul Light Rail update at Saint Joesph's Hospital Block Club Meeting			Callaghan, Laura
9/27/11	3:00 PM	Latuff Brothers Auto Body, 880 University Avenue, Saint Paul, MN 55104	Mike Latuff, co-owner	Access/pre-construction meeting	Mike Latuff, Pete Latuff - owners	2	Lee, Shoua
9/27/11	12:00 PM	Avalon School 700 Glendale Street; Saint Paul, MN 55114 (Raymond/University Avenue intersection)	Midway Chamber Economic Development Committee	Construction tour	Midway businesses. leaders	6	Caufman, Robin
9/29/11	1:00 PM	Wells Fargo Place, 110 Wells Fargo Place, 30 East 7th Street, Suite 175 St. Paul, MN 55101	CCPO	Cedar Street Construction Update meeting	Cedar Street Property Management	15	Happel, Dana
9/30/11	9:00 AM	US Bank, 101 East 5th Street, Suite 240, St. Paul, MN 55101	CapitolRiver Council	Skyway Committee Meeting	Skyway Committee Members	15	Happel, Dana

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Central Corridor LRT Meeting Summary

October 2011

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
10/4/11	10:00 AM	245 Cedar Avenue S, Minneapolis, MN 55414	CCPO – West Bank CCC	Quarterly evaluation	Committee Members	5	Hill, Jessica
10/5/11	3:00 PM	Stassen Building, Room 2000, 600 Robert Street North, Saint Paul, MN 55146	CCPO – Capitol Area PCIM	Capitol Area LRT Public Construction Information Meeting	General public	10	Lee, Shoua
10/5/11	3:30 PM	Stassen Building, Room 2000, 600 Robert Street North, Saint Paul, MN 55146	CCPO – Capitol Area CCC	Quarterly evaluation	Committee Members	5	Lee, Shoua
10/6/11	10:00 AM	Saint Paul Area Chamber of Commerce, 401 Robert Street, Executive Room, St. Paul, MN 55101	CCPO – Downtown St. Paul CCC	Quarterly evaluation	Committee Members	15	Cigolo, Nkongo
10/12/11	3:00 PM	Alliance Bank Center, 55 East 5th Street, Suite 200, St. Paul	CCPO – Downtown St. Paul PCIM	Downtown St. Paul Public Construction Information Meeting	Downtown businesses, employees, residents	30	Cigolo, Nkongo
10/13/11	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO – East Bank/Stadium Village CCC	Quarterly evaluation	Committee members	10	Hill, Jessica
10/13/11	4:00 PM	Central Corridor Project Office, 540 Fairview Avenue N, Room 2/3	CCPO – University Avenue West CCC	Quarterly evaluation	Committee members	10	Rodriguez, Rita
10/18/11	10:00 AM	245 Cedar Avenue S, Minneapolis, MN 55414	CCPO – West Bank CCC	Construction Communication Committee Meeting	Committee Members	10	Hill, Jessica
10/20/11	10:00 AM	Saint Paul Area Chamber of Commerce, 401 Robert Street, Executive Room, St. Paul, MN 55101	CCPO – Downtown St. Paul CCC	Construction Communication Committee Meeting	Committee Members	15	Cigolo, Nkongo
10/26/11	3:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO – Minneapolis PCIM	Minneapolis Public Construction Information Meeting (PCIM)	Project Staff, AMJV, and Community Members	25	Pfeiffer, Daniel
10/27/11	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO – East Bank/Stadium Village CCC	Construction Communication Committee Meeting	Committee members	10	Hill, Jessica
10/27/11	4:00 PM	Central Corridor Project Office, 540 Fairview Avenue N, Room	CCPO – University Avenue West CCC	Construction Communication Committee Meeting	Committee members	10	Rodriguez, Rita

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Central Corridor LRT Meeting Summary

October 2011

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
		2/3					
10/6/11	12:00 PM	Transfer Road Deli 654 Transfer Road, St Paul, MN 55114	Midway Chamber	Lunch on the Avenue	Corridor employees, business supporters	35	Caufman, Robin
10/18/11	9:00 AM	Frog Town Square 599 University Avenue St Paul, MN N.E. corner of Dale & University	City of St. Paul	City of Saint Paul Transit-Oriented Development Guidebook Release & Celebration			Caufman, Robin
10/20/11	11:30 AM	YMCA 1761 University Avenue St Paul, MN 55104	Midway Chamber	Lunch on the Avenue	Corridor employees, business supporters	35	Caufman, Robin
10/28/11	9:00 AM	Wilder Foundation	Business Resources Collaborative	Lessons Learned	corridor businesses, leaders	15	Caufman, Robin
10/31/11	11:30 AM	Goodwill Easter Seals	St. Paul Chamber	Regional transportation plans	Business community	100	Caufman, Robin
10/3/11	9:00 AM	709 University Avenue, Saint Paul, MN 55104	Lifetrack Resources	Lifetrack Resources Staff Meeting - CCLRT Update	Lifetrack Resources staff	15	Lee, Shoua
10/10/11	2:30 PM	Shuang Hur Supermarket, 654 University Avenue West, Saint Paul MN 55103	Daisy Haung	Access/pre-construction meeting	Thomas Haung		Lee, Shoua
10/13/11	3:00 PM	175 Kellogg Boulevard, Saint Paul, MN 55101	Minnesota Public Transit Association	Minnesota Public Transit Association Conference	Transit Organization	60	Cigolo, Nkongo
10/19/11	6:00 PM	Dar Al Quba, 1501 S. 6th Street, Minneapolis, MN, 55414	West Bank Community Coalition monthly meeting	West Bank Community Coalition	Community Members	25	Pfeiffer, Daniel
10/20/11	4:00 PM	Augsburg Gateway Center, 2211 Riverside Avenue, Minneapolis, MN 55414	Monthly WBBA Board Meeting	West bank Business Association Board Meeting	Business Owners and Community Members of West Bank	30	Pfeiffer, Daniel
10/21/11	1:00 PM	270 E. 4th Street, St. Paul, MN 55101		Lot 270 Inspection--Access Request	Property manager	2	Cigolo, Nkongo
10/21/11	3:00 PM	1578 University Avenue, Saint Paul, MN 55104	CCPO	American Bank - sidewalk, irrigation, tree concerns	Beth Mahalla, Facilities Manager	1	Lee, Shoua
10/24/11	10:00 AM	Central Corridor Project Office, Conference Room #1, 540 Fairview Avenue, Suite 200, Saint Paul, MN 55104	Asian Economic Development Association	Pre-construction and other issues meeting	Va-Megn Thoj; Nancy Pomplun	2	Lee, Shoua

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Central Corridor LRT Meeting Summary

October 2011

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
10/24/11	2:00 PM	1435 and 1415 University Avenue	CCPO	Areaway Meetings	business owners	4	Rodriguez, Rita
10/25/11	10:30 AM	Town House Bar, 1415 university Avenue, St. Paul, MN 55104	CCPO	Areaway Meeting	Business Owner	4	Rodriguez, Rita
10/25/11	11:00 AM	Ultimate Look, 1447 and 1455	CCPO	Meeting to discuss temp walkway and cracked window	Business Owner	2	Rodriguez, Rita
10/25/11	1:00 PM	1821 University and 540 Fairview, St Paul, MN 55104	CCPO	Flyering Griggs Midway and 540 Fairview with Information about Fairview Closure	Tenants of 1821 University and 540 Fairview	50	Webb, Michelle
10/25/11	2:45 PM	1951 University Avenue, Saint Paul, MN 55104	Paul McQuaid	Sidewalk concerns	Paul McQuaid	1	Lee, Shoua
10/26/11	2:30 PM	Royal Tire, 1831 University Avenue, St. Paul, MN 55104	CCPO	Meeting to discuss sidewalk removal and temp walkway	Business Owner	2	Rodriguez, Rita
10/27/11	9:00 AM	Sharett's Liquor, Security Building, Coffee Shop, Key's Resturant, Pedestrian Crossing	CCPO	Outreach Raymond Businesses	Business owners	5	Rodriguez, Rita
10/27/11	1:00 PM	Wells Fargo Place, 110 Wells Fargo Place, 30 East 7th Street, Suite 175, St. Paul, MN 55101	CCPO	Cedar Street Construction Update meeting	Cedar Street Property Management	15	Happel, Dana
10/28/11	9:00 AM	US Bank, 101 East 5th Street, Suite 240, St. Paul, MN 55101	CapitolRiver Council	Skyway Committe Meeting- update on skyway and Bremar Bank	Skyway Committee Members	15	Happel, Dana
10/31/11	12:00 PM	Dinnaken House, 900 Washington Avenue SE, Minneapolis, MN 55414	CCPO	Access Meeting Dinnaken	Business Owner/Property Manager	4	Hill, Jessica

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Central Corridor LRT Meeting Summary

November 2011

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
11/2/11	3:00 PM	Stassen Building, Room 2000, 600 Robert Street North, Saint Paul, MN 55146	CCPO	Capitol Area LRT Public Construction Information Meeting	general public	10	Lee, Shoua
11/2/11	12:30 PM	Council Chambers, 390 N. Robert Street. St. Paul	Transportation Accessibility Advisory Committee	Construction update	TAAC committee members. ADA community	15	Caufman, Robin
11/4/11	1:00 PM	Wells Fargo Place, 110 Wells Fargo Place, 30 East 7th Street, Management Office, St. Paul, MN 55101	Metropolitan Council	Follow Up Meeting with Wells Fargo Place	Wells Fargo Place	6	Cigolo, Nkongo
11/15/11	10:00 AM	245 Cedar Avenue S, Minneapolis, MN 55414	Met Council	West Bank CCC	West Bank CCC members	15	Pfeiffer, Daniel
11/16/11	3:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO	Minneapolis Public Construction Information Meeting (PCIM)	CCPO, AMJV, Community Members	25	Pfeiffer, Daniel
11/17/11	1:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	Met Council	East Bank/Stadium Village Construction Communication Committee	East Bank CCC members	15	Pfeiffer, Daniel
11/29/11	4:00 PM	Central Corridor Project Office, 540 Fairview Avenue North, Suite 200, Saint Paul, MN 55104	CCPO	Victoria Station Art Committee meeting - Faces of Rondo	Victoria Station Art Committee members	4	Lee, Shoua
11/1/11	6:00 PM	Prospect Park United Methodist Church 22 Orlin Avenue SE (On the corner of Orlin & Malcom)	Central Corridor Funders Collaborative	Housing Roundtable Discussions	Community leaders	40	Richardson, Mary
11/2/11	6:30 AM	Alliance Bank lobby, skyway level	City of St. Paul	Skyway reopening	BOMA, Alliance Bank Center, downtown businesses and employees	50	Caufman, Robin
11/3/11	6:00 PM	Central Corridor Resource Center 1080 University Avenue W, St Paul	Central Corridor Funders Collaborative	Housing Roundtable Discussions	Community leaders	40	Richardson, Mary

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Central Corridor LRT Meeting Summary

November 2011

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
11/7/11	8:00 AM	Midway Chamber conference room, Spruce Tree Center	Commissioner Carter, Chair Haigh	Business concerns and reports	AEDA/UABA/Chambers	15	Caufman, Robin
11/9/11	7:30 AM	1080 University Avenue St Paul, MN	Central Corridor Funders Collaborative	Community Development Conversations	Community leaders	40	Richardson, Mary
11/17/11	12:00 PM	Hoa Bien 1129 University Ave W St Paul, MN 55104	Midway Chamber	LUNCH on the AVENUE	Corridor employees, chamber members	20	Richardson, Mary
11/29/11	4:00 PM	Chocolate Celest 652 Transfer Road, Ste 16A, St. Paul, MN 55114	Midway Chamber	Business After Hours featuring Wine & Chocolate at Chocolat Celeste	Corridor employees, chamber members	20	Richardson, Mary
11/1/11	11:30 AM	Art and Archetecture, 3338 University Avenue SE, Minneapolis, MN 55414	CCPO	Access Meeting	Property/Business Owner	3	Hill, Jessica
11/1/11	2:00 PM	Caribou Coffee, 917 Washington Avenue SE, Minneapolis, MN 55414	CCPO	Access Meeting Caribou Coffee	CCPO, AMJV, Business Manager	3	Hill, Jessica
11/1/11	3:00 PM	Tierney Brothers, 3300 University Avenue SE, Minneapolis, MN 55414	CCPO	Access Meeting Tierney Brothers	CCPO, AMJV, Business Manager	3	Hill, Jessica
11/1/11	3:00 PM	Aldine to Snelling on North Side of University Avenue West, St Paul, MN	CCPO	Sidewalk and Fry Closure Outreach	Businesses	25	Webb, Michelle
11/1/11	12:00 PM	Great Brakes, 3326 University Avenue SE, Minneapolis, MN 55414	CCPO	Access Meeting Great Brakes	Business Owner	3	Hill, Jessica
11/2/11	4:00 PM	Wells Fargo Place, 110 Wells Fargo Place, 30 East 7th Street, Management Office, St. Paul, MN 55101	Project Office	Meeting with Wells Fargo Place	Wells Fargo Place Property Management/Univel Management Corp.	5	Cigolo, Nkongo
11/3/11	1:00 PM	General Nanosyestems, 3014 University Avenue SE, Minneapolis, MN 55414	CCPO	Access Meeting General Nanosystems	Business Owner, CCPO, AMJV	3	Hill, Jessica
11/3/11	1:00 PM	Midway Books, 1579 University Avenue, St. Paul, MN 55104	ccpo	site visit to discuss sidewalk access	business Owners	5	Rodriguez, Rita

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Central Corridor LRT Meeting Summary

November 2011

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
11/3/11	1:30 PM	Twin City Janitor, 2345 University Avenue	ccpo	Site Visit to discuss Construction Trucks on street parking and blocking delivery doors	Business Owner	2	Rodriguez, Rita
11/3/11	2:00 PM	Houses on Sherburne between Snelling and Hamline, St Paul, MN 55104	CCPO	Flyering Houses about Overnight Work	Residents on Sherburne		Webb, Michelle
11/3/11	2:00 PM	Punch Pizza, 802 Washington Avenue SE, Minneapolis, MN 55141	CCPO	Access Meeting Punch Pizza	Business Owner and Manager	5	Hill, Jessica
11/3/11	3:30 PM	Fraser, 3333 University Avenue SE, Minneapolis, MN 55414	Fraser	Fraser- recap of planning	New director of Fraser, CCPO	3	Hill, Jessica
11/3/11	12:15 PM	AxMans	CCPO/AxMan	Sidewalk replacement process	Business owner	2	Caufman, Robin
11/4/11	10:00 AM	WE Morwey, 1435 University Avenue, St. Paul, MN	ccpo	site visit to discuss areaway and water drainage	Business Owner	3	Rodriguez, Rita
11/4/11	11:00 AM	Mercil's, 630 Washington Avenue SE, Minneapolis, MN 55414	CCPO	Mercil's Auto Driveway and Vault	AMJV, CCPO, Property Owner	4	Hill, Jessica
11/7/11	1:00 PM	Spire, 3117 University Avenue SE, Minneapolis, MN 55414	CCPO	Access Meeting Spire Co-op	Property Manager, AMJV, CCPO	3	Hill, Jessica
11/7/11	1:00 PM	506 Cedar Street, Saint Paul, MN 55101	Metropolitan Council	Preconstruction Survey	St. Louis King of France Church	6	Cigolo, Nkongo
11/7/11	11:00 AM	500 Cedar Street, Saint Paul, MN 55101	Metropolitan Council	Preconstruction Survey	Central Presbyterian Church	6	Cigolo, Nkongo
11/8/11	1:00 PM	26 Exchange Street, Saint Paul, MN 55101	Metropolitan Council	Preconstruction Survey	Exchange Building	6	Cigolo, Nkongo
11/8/11	8:30 AM	506 Cedar Street, Saint Paul, MN 55101	Metropolitan Council	St. Louis King of France Church-Preconstruction Survey	St. Louis King of France Church	8	Cigolo, Nkongo
11/9/11	8:30 AM	500 Cedar Street, Saint Paul, MN 55101	Metropolitan Council	Central Presbyterian Church-Preconstruction Survery	Central Presbyterian Church	6	Cigolo, Nkongo
11/9/11	10:00 AM	80 Western Avenue, Saint Paul, MN 55103	Edina Realtors Association	Edina Realtors Association	Edina Realtors Association	40	Lee, Shoua

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Central Corridor LRT Meeting Summary

November 2011

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
11/10/11	10:00 AM	1578 University Avenue, Saint Paul, MN 55104	Beth Mahalla, facilities manager	American Bank - irrigation heads	Beth Mahalla	1	Lee, Shoua
11/10/11	4:00 PM	540 Fairview Ave N, Suite 2/3, St Paul, MN 55104	CCPO	Construction Communication Committee Meeting	CCC Members		Webb, Michelle
11/15/11	11:30 AM	Andersen Human Services Building, 540 Cedar Street, St. Paul, MN 55101	Department of Human Services-Continuity Planning	Department of Human Services-Continuity Planning	Department of Human Services	30	Cigolo, Nkongo
11/16/11	10:00 AM	First National Bank, Rick's Office, 332 Minnesota St., St. Paul, MN 55101	Metropolitan Council	Meeting with Rick Rossie to Discuss Areaway Plans and Construction for the 1st National Bank	First National Bank (332 Minnesota St.)	4	Cigolo, Nkongo
11/16/11	6:00 PM	Dar Al Quba, 1501 S. 6th Street, Minneapolis, MN, 55414	West Bank Community Coalition monthly meeting	West Bank Community Coalition	Community Members	25	Pfeiffer, Daniel
11/17/11	10:00 AM	Saint Paul Area Chamber of Commerce, 401 Robert Street, Executive Room, St. Paul, MN 55101	CCPO	Construction Communication Committee Meeting	Construction Communication Committee members	15	Happel, Dana
11/17/11	10:30 AM	825 Washington Avenue SE, Minneapolis, MN, 55414	CCPO & AMJV	Segment 5 Access Meeting Campus Pizza	Business Owner, CCPO, AMJV	3	Pfeiffer, Daniel
11/17/11	11:30 AM	Tea Garden, 825 Washington Avenue SE, Minneapolis, 55414	CCPO	Segment 5 Access Meeting Tea Garden	CCPO Outreach, AMJV, Business Manager	3	Pfeiffer, Daniel
11/17/11	1:00 PM	see details below	ccpo	Conference call with MPR	MPR	1	Happel, Dana
11/17/11	2:30 PM	University Hotel Minneapolis, 615 Washington Avenue SE, MN, 55454	Monthly Stadium Village Commercial Association Meeting	Stadium Village Commercial Association	Stadium Village Businesses, CCPO Outreach	20	Pfeiffer, Daniel
11/17/11	4:00 PM	Augsburg Gateway Center, 2211 Riverside Avenue, Minneapolis, MN 55414	Monthly WBBA Board Meeting	West bank Business Association Board Meeting	Business Owners and Community Members of West Bank	30	Pfeiffer, Daniel
11/17/11	12:30 PM	Burger King, 935 Washington Avenue S, Minneapolis, MN 55414	CCPO	Access Meeting- Burger King	CCPO, AMJV, Burger King Regional Manager	4	Hill, Jessica
11/21/11	9:00 AM	CSL Plasma, 1026 Washington Avenue SE, Minneapolis, MN,	CCPO	Segment 5 Access Meeting	CCPO Outreach, AMJV, Business	3	Pfeiffer, Daniel

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Central Corridor LRT Meeting Summary

November 2011

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
		55454			Management		
11/21/11	1:00 PM	Genesis II, 3036 University Avenue SE, Minneapolis, MN 55414	CCPO	Access Meeting Genesis II	Business Director, CCPO, AMJV	3	Hill, Jessica
11/21/11	12:30 PM	CorePower Yoga, 825 Washington Avenue SE, Minneapolis, MN, 55414	CCPO	Segment 5 Access Meeting- CorePower Yoga	CCPO Outreach, AMJV Outreach, Business Manager	3	Pfeiffer, Daniel
11/22/11	9:00 AM	Quiznos, 929 Washington Avenue SE, Minneapolis, MN, 55454	CCPO	Segment 5 Access	CCPO Outreach, AMJV, Business Manager	3	Pfeiffer, Daniel
11/22/11	10:30 AM	Darque Tan, 919 Washington Avenue SE, Minneapolis, MN, 55454	CCPO	Segment 5 Access	CCPO Outreach, AMJV, Business Manager	3	Pfeiffer, Daniel
11/22/11	11:00 AM	Hong Kong Noodle, 901 Washington Avenue SE, Minneapolis, MN, 55454	CCPO	Segment 5 Access	CCPO Outreach, AMJV, Business Manager	3	Pfeiffer, Daniel
11/22/11	11:30 AM	Sheffield's Floral, 807 Washington Avenue SE, MN, 55454	CCPO	Segment 5 Access Meeting Sheffield's Floral	CCPO Outreach, AMJV, Business Owner	3	Pfeiffer, Daniel
11/22/11	1:00 PM	Alliance Clinic, 3329 University Avenue SE, Minneapolis, MN 55414	CCPO	Access Meeting- Alliance Clinic	Center Manager, AMJV, CCPO	3	Hill, Jessica
11/22/11	2:30 PM	Chipotle, 800 Washington Avenue SE, Minneapolis, MN, 55454	CCPO	Segment 5 Access	CCPO Outreach, AMJV, Business Manager	3	Pfeiffer, Daniel
11/22/11	3:30 PM	Leo's Burritos, 921 Washington Avenue SE, Minneapolis, MN, 55454	CCPO	Segment 5 Access	CCPO Outreach, AMJV, Business Owner	3	Pfeiffer, Daniel
11/22/11	12:00 PM	700 Raymond Ave., Minnesota Literacy Council in suite # 180.	Midway Chamber of Commerce	Project update	Corridor businesses, leaders	15	Caufman, Robin
11/23/11	12:30 PM	Rondo Community Library, 461 North Dale Street, Saint Paul 55103	Alliance for Metropolitan Stability	Central Corridor Small Business Forum	small business advocates, business owners, public	20	Lee, Shoua

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Central Corridor LRT Meeting Summary

November 2011

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
11/28/11	9:00 AM	Textile Center, 3000 University Avenu SE, Minneapolis, MN 55414	CCPO	Access Meeting- Textile Center	Manager, CCPO, AMJV	3	Hill, Jessica
11/29/11	8:00 AM	540 Cedar Street, St. Paul, MN 55101	HeathEast Care System	Fitzgerald Park Block Club Meeting	Downtown Businesses	30	Cigolo, Nkongo
11/29/11	10:30 AM	CCPO-Open-Office	CCPO	Segment 5 Access Meeting-Stadium Village Plaza	CCPO Outreach, AMJV, Property Owner	4	Pfeiffer, Daniel
11/29/11	1:30 PM	Raising Canes, 825 Washington Avenue SE, Minneapolis, MN, 55454	CCPO	Segment 5 Access Meeting	CCPO Outreach, AMJV, Business Manager	3	Pfeiffer, Daniel
11/30/11	10:00 AM	CCPO-Room-4, 540 Fairview Ave N, Suite 200, St Paul, MN 55104	CCPO	Meeting to discuss Midway Shopping Center concerns	Midway Shopping Center Owners/Managers	7	Rodriguez, Rita

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Central Corridor LRT Meeting Summary

December 2011

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
12/1/11	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	Met Council	East Bank/Stadium Village Construction Communication Committee	East Bank CCC members	15	Pfeiffer, Daniel
12/7/11	5:30 PM	289 E 5th St, Suite 202, Saint Paul, MN 55101	Metropolitan Council	OMF Task Force-Brick Selection	Lowertown Stakeholders/OMF Task Force Members	15	Cigolo, Nkongo
12/8/11	4:00 PM	540 Fairview Ave N, Suite 200, Room 2/3, St Paul, MN 55104	CCPO	Construction Communication Committee Meeting	CCC Members	20	Webb, Michelle
12/13/11	10:00 AM	Theatre In The Round, 245 Cedar Avenue S, Minneapolis, MN, 55454	CCPO	West Bank CCC	West Bank CCC Members, Project Technical Staff	15	Pfeiffer, Daniel
12/1/11	12:00 PM	Peking Garden at 1488 University Ave W ST Paul, MN 55104	Midway Chamber	Lunch on the Avenue	Corridor businesses, residents	30	Richardson, Mary
12/7/11	9:00 AM	Wilder	Hamline	How Can Colleges Support Central Corridor Neighborhoods	Business community	40	Richardson, Mary
12/11/11	4:30 PM	Gordon Parks High School 1212 University Avenue West St Paul, MN	Stops for Us	Stops for Us EPA Award Ceremony	Corridor residents, advocated	100	Richardson, Mary
12/15/11	12:00 PM	Cupcake 3338 University Ave SE Mpls, MN 55414	Midway Chamber	Lunch on the Avenue	Corridor businesses, residents	30	Richardson, Mary
12/20/11	11:30 AM	Wilder Center St. Paul (Wilder Room)--451 Lexington Parkway North, Saint Paul, Minnesota 55104	Saint Paul Area Chamber of Commerce	Beyond the Barricades Luncheon	Corridor Businesses	60	Cigolo, Nkongo
12/20/11	12:00 PM	Wilder Center 451 Lexington Pkwy N St Paul	Midway Chamber	Look Beyond the Barricades Luncheon	Corridor Businesses	40	Richardson, Mary

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Central Corridor LRT Meeting Summary

December 2011

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
12/1/11	1:00 PM	Wells Fargo Place, 110 Wells Fargo Place, 30 East 7th Street, Suite 175, St. Paul, MN 55101	CCPO	Cedar Street Construction Update meeting	Cedar Street Property managers	15	Happel, Dana
12/1/11	12:45 PM	Stub and Herb's Bar, 227 Oak Street, Minneapolis, MN, 55454	CCPO	Segment 5 Access	CCPO Outreach, AMJV, Business Management	3	Pfeiffer, Daniel
12/2/11	9:00 AM	US Bank, 101 East 5th Street, Suite 240, St. Paul, MN 55101	CapitolRiver Council	Skyway Committee Meeting- Skyway/Bremar Building update	Skyway Committee Members	15	Happel, Dana
12/5/11	11:00 AM	Hong Kong Noodle, 901 Washington Avenue SE, Minneapolis, MN 55414	CCPO	Access Meeting- Hong Kong Noodle	Business Owner, Manager, CCPO, AMJV	4	Hill, Jessica
12/6/11	3:00 PM	Mark-It Graphics, 3033 University Avenue SE, Minneapolis, MN 55414	CCPO	Access Meeting- Mark-It Graphics	Property Owner, AMJV, CCPO	3	Hill, Jessica
12/6/11	11:00 AM	Four Star Auto, 3326 University Avenue SE, Minneapolis, MN 55414	CCPO	Access Meeting- Four Star Auto	AMJV, CCPO, Business Owner	3	Hill, Jessica
12/7/11	10:00 AM	2829 University Avenue SE, Minneapolis MN 55414	CCPO	Access Meeting- Scott	CCPO, AMJV, Property Manager	3	Hill, Jessica
12/8/11	12:00 PM	City Hall Annex. 25 West Fourth Street, 13th Floor, Gary's Office	Metropolitan Council	Meeting With Farmers' Market to Discuss Parking Reimbursement	Farmers' Market-Saint Paul Businesses	4	Cigolo, Nkongo
12/9/11	10:00 AM	Fraser, 3349 University Avenue SE, Minneapolis, MN 55414	CCPO	Access Meeting- Fraser	CCPO, AMJV, Business Manager	4	Hill, Jessica
12/9/11	11:00 AM	3008 University Avenue SE, Minneapolis, MN 55414	CCPO	Access Meeting- Nazneen	CCPO, AMJV, Property Owner	3	Hill, Jessica

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December 2011

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
12/13/11	9:00 AM	USPS, 2811 University Avenue SE, Minneapolis, MN, 55414	CCPO	Segment 5 Access Meeting	CCPO Outreach, AMJV, Business Manager	3	Pfeiffer, Daniel
12/13/11	11:30 AM	Planet Ink Tatoo, 1499 University Avenue, St. Paul, MN 55104	ccpo	Site visit	Owner	2	Rodriguez, Rita
12/14/11	6:00 PM	Dar Al Quba, 1501 S. 6th Street, Minneapolis, MN, 55414	West Bank Community Coalition monthly meeting	West Bank Community Coalition	Community Members	25	Pfeiffer, Daniel
12/15/11	2:00 PM	Campus Pizza, 825 Washington Avenue SE, Minneapolis, MN 55414	Stadium Village Commercial Association Monthly meeting	Stadium Village Commercial Association	Business Owners	25	Pfeiffer, Daniel
12/15/11	4:00 PM	Augsburg Gateway Center, 2211 Riverside Avenue, Minneapolis, MN 55414	Monthly WBBA Board Meeting	West bank Business Association Board Meeting	Business Owners and Community Members of West Bank	30	Pfeiffer, Daniel
12/20/11	2:00 PM	Church of St. Louis, King of France	CCPO	Discuss upcoming construction	Father Morrissey	3	Happel, Dana
12/21/11	3:30 PM	645 Randolph, St. Paul,	CCPO	Meeting with St. Paul Fire Department to discuss discuss Cedar/10th Street construction	Fire Department staff	5	Happel, Dana
12/22/11	1:30 PM	540 Cedar Street	CCPO	Department of Human Services	Jim Alexson	15	Happel, Dana

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Central Corridor LRT Meeting Summary

January 2012

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
1/10/12	10:00 AM	Theatre In The Round, 245 Cedar Avenue S, Minneapolis, MN, 55454	CCPO	West Bank Quaterly Contractor Evaluation Meeting	West Bank CCC members	8	Pfeiffer, Daniel
1/11/12	3:00 PM	Stassen Building, 600 N. Robert Street, Saint Paul, MN 55101, Room 2000	CCPO	Capitol Area Quarterly Contractor Evaluation Meeting	Capitol Area Stakeholders--CCC Members	10	Cigolo, Nkongo
1/12/12	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO	East Bank Quarterly Contractor Evaluation Meeting	East Bank CCC members	10	Pfeiffer, Daniel
1/12/12	4:00 PM	Central Corridor Office, 540 Fairview Avenue, St. Paul, MN 55104	CCPO	Ubniversity Avenue Quarterly Contractor Evaluation Meeting	Construction communication committee	11	Rodriguez, Rita
1/12/12	10:00 AM	Saint Paul Area Chamber of Commerce, 401 Robert Street, Board Room, St. Paul, MN 55101	CCPO	Downtown St. Paul Quarterly Contractor Evaluation Meeting	Construction Communication Committee Members	10	Happel, Dana
1/18/12	10:00 AM	Target Field in the Carew Atrium	Metropolitan Council	Chair's first State of the Region	Regional partners	200	Richardson, Mary
1/19/12	10:00 AM	Saint Paul Area Chamber of Commerce, 401 Robert Street, Board Room, St. Paul, MN 55101	CCPO	Construction Communication Committee	Construction Communication Committee members	15	Happel, Dana
1/12/12	12:00 PM	Caribe 791 Raymond ave St Paul MN 55104	Midway Chamber of Commerce	Lunch on the Avenue	Business owners, community	30	Richardson, Mary
1/12/12	3:00 PM	McKnight Foundation Office 710 S 2nd Street Suite #400, Minneapolis	Central Corridor Funders Collaborative	Central Corridor Funders Collaborative Learning Session	Business owners, community	15	Richardson, Mary
1/23/12	8:00 AM	Central Corridor Resources Center, 1080 University Avenue, St. Paul (SE corner of Lexington and University)	Commissioner Toni Carter	Business roundtable - NOTE LOCATION	business representatives.	10	Caufman, Robin

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Central Corridor LRT Meeting Summary

January 2012

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
1/26/12	12:00 PM	Noodles & Company 470 Hamline Ave N St Paul, MN 55104	Midway Chamber of Commerce	Lunch on the Avenue	Business owners, community	30	Richardson, Mary
1/3/12	2:00 PM	World Trade Center Parking Ramp	CCPO	Discuss upcoming construction on Cedar Street for World Trade center parking ramp	parking lot manager	2	Happel, Dana
1/4/12	10:00 AM	2929 University Avenue SE, Minneapolis, MN 55414	CCPO	Design Review Anytime Fitness	Business Owner, CCPO	2	Hill, Jessica
1/5/12	1:00 PM	Menlo Park, 1246 University Ave West, St Paul, MN 55104	CCPO	Access Meeting with Menlo Park	Menlo Park tenants and businesses	5	Webb, Michelle
1/9/12	1:00 PM	1271 University Avenue W, NAPA Auto Parts	Nkongo Cigolo	NAPA Auto Parts--Access Meeting with Manager	NAPA Auto Part-University Avenue Business	6	Cigolo, Nkongo
1/9/12	2:00 PM	1159 University Avenue W., Saint Paul, MN 55104	Nkongo Cigolo	Prestige Chiropractic and NGT Fine Art and Framing--Access Meetings Combined	Prestige Chiropractic--University Avenue Business	6	Cigolo, Nkongo
1/9/12	10:00 AM	866 University Avenue West, St Paul, MN 55104	CCPO	Access meeting with East and West Beauty Salon	East & West Beauty Salon	4	Webb, Michelle
1/9/12	10:30 AM	1161 University Avenue, Saint Paul, MN 55104	Nkongo Cigolo	Access Meeting for Brothers Auto Sales, Midway Car Wash and Auto World	Brothers Auto Sales, Midway Car Wash, Auto World--University Avenue Businesses	7	Cigolo, Nkongo
1/9/12	1:00 PM	1277 University Avenue W., St. Paul, MN 55104	Nkongo Cigolo	Access Meeting-Subway (combined with NAPA)	Subway-University Avenue Businesses	2	Cigolo, Nkongo
1/9/12	2:30 PM	1133 University Avenue W., Saint Paul, MN 55104	Nkongo Cigolo	Access Meeting--Twin City Monuments	Twin City Monuments--University Avenue Business	2	Cigolo, Nkongo

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Central Corridor LRT Meeting Summary

January 2012

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
1/9/12	3:00 PM	1105 University Avenue W., Saint Paul, MN 55104	Nkongo Cigolo	Access Meeting for Hoa Bien Vietnamese Restaurant	Hoa Bien Restaurant-University Avenue Business	2	Cigolo, Nkongo
1/9/12	3:30 PM	1075 University Avenue W., Saint Paul, MN 55104	Nkongo Cigolo	Access Meeting-AutoZone	AutoZone-University Avenue Business	6	Cigolo, Nkongo
1/10/12	2:00 PM	938 University Ave West, St Paul, MN 55104	CCPO	Access Meeting with Avenue Moter Sales and Economy Muffler	Avenue Motor Sales and Economy Muffler	5	Webb, Michelle
1/10/12	9:00 AM	1276 University Ave West, St Paul, MN 55104	CCPO	Access Meeting with Catholic Charities	Catholic Charities	5	Webb, Michelle
1/10/12	1:30 PM	970 University Ave West, St Paul, MN 55104	CCPO	Access meeting with Super America	Super America	5	Webb, Michelle
1/10/12	3:00 PM	880 and 900 University Avenue West, St Paul, MN 55104	CCPO	Access meeting with Enterprise and Latuff	Enterprise, Latuff	5	Webb, Michelle
1/10/12	9:30 AM	1190 University Ave West, St Paul, MN	CCPO	Access meeting with ABRA Auto Body	Abra	4	Webb, Michelle
1/10/12	10:00 AM	451 Lexington, St Paul, MN 55104	CCPO	Access Meeting with Wilder Foundation and Aldi and CSL Plasma	Wilder	5	Webb, Michelle
1/10/12	1:00 PM	1120 University Avenue West, St. Paul, MN	CCPO	Access meeting with White Castle	White Castle	5	Webb, Michelle
1/10/12	2:30 PM	928 University Avenue W., Saint Paul, MN 55104	Nkongo Cigolo	Access Meeting for Gil's Paint and Body	Gil's Paint and Body-University Avenue Business	6	Cigolo, Nkongo
1/11/12	10:30 AM	1089 University Avenue W., Saint Paul, MN 55104	Nkongo Cigolo	Access Meeting--KFC	KFC-University Avenue Business	6	Cigolo, Nkongo

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Shoua Lee (651) 602-1014 Dan Pfeiffer (651) 602- 1952 Rita Rodriguez (651) 602-1805 Michelle Webb (651) 602-1485

Central Corridor LRT Meeting Summary

January 2012

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
1/11/12	2:15 PM	1300 University Ave West, St Paul, MN 55104	CCPO	Access meeting for Target	Target	5	Webb, Michelle
1/11/12	5:30 PM	US Bank, 2nd floor, 101 East 5th Street, St. Paul, MN 55101	CapitolRiver Council	Noise Variance discussion with the CapitolRiver Council	CapitolRiver Council members	10	Happel, Dana
1/11/12	5:30 PM	1183 University Avenue W., Saint Paul, MN 55104	Nkongo Cigolo	Access Meeting for Arnellia's	Arnellia's Bar--University Avenue Business	5	Cigolo, Nkongo
1/12/12	11:30 AM	1141 University Avenue, Saint Paul, MN 55104	Nkongo Cigolo	Kimble Chiropractic--Access Meeting	Kimble Chiropractic--University Avenue Business	6	Cigolo, Nkongo
1/12/12	12:00 PM	459 Lexington Pkwy, St Paul, MN 55104	CCPO	Access meeting with TCF Bank	TCF Bank	5	Webb, Michelle
1/17/12	2:30 PM	1134 University Ave West, St Paul, MN		Aldi Access Meeting	Aldi	5	Webb, Michelle
1/18/12	6:00 PM	Dar Al Quba, 1501 S. 6th Street, Minneapolis, MN, 55414	West Bank Community Coalition monthly meeting	West Bank Community Coalition	Community Members	25	Pfeiffer, Daniel
1/18/12	3:00 PM	883 University Avenue W., Saint Paul, MN 55104	Nkongo Cigolo	Access Meeting for U-Haul	U-Haul-University Avenue Business	6	Cigolo, Nkongo
1/18/12	5:00 PM	432 University Ave West, St Paul, MN 55103	CCPO	Access Meeting with Al Hue's Bakery and Deli and Bangkok Thai and Wolter Brothers Liquors	Restaurant Owners	6	Webb, Michelle
1/18/12	9:30 AM	320 University Ave W, St Paul, MN 55103	CCPO	Access meeting with Lao Family Community Center	Owner	5	Webb, Michelle

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Central Corridor LRT Meeting Summary

January 2012

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
1/18/12	10:00 AM	490 University Avenue West, St Paul, MN 55103	CCPO	Access Meeting with Max It Pawn	University Ave businesses	6	Webb, Michelle
1/18/12	9:00 AM	471 Marion St, St Paul, MN	CCPO	Access Meeting with McDonalds	businesses on University Ave	6	Webb, Michelle
1/18/12	4:00 PM	448 University Ave West, St Paul, MN 55103	CCPO	Access meeting with Cheng Heng Restaurant and 422 University	businesses on University	5	Webb, Michelle
1/18/12	10:30 AM	262 University Avenue West, St Paul, MN 55103	CCPO	Access meeting with Hmong Studio	University Avenue businesses	5	Webb, Michelle
1/18/12	3:30 PM	612 University Avenue West, St Paul, MN	CCPO	Access meeting for Wendy's	University Avenue business	6	Webb, Michelle
1/19/12	4:00 PM	Augsburg Gateway Center, 2211 Riverside Avenue, Minneapolis, MN 55414	Monthly WBBA Board Meeting	West Bank Business Association Board Meeting	Business Owners and Community Members of West Bank	30	Pfeiffer, Daniel
1/19/12	2:30 PM	University Hotel Minneapolis, 615 Washington Avenue SE, MN, 55454	Monthly Stadium Village Commercial Association Meeting	Stadium Village Commercial Association	Stadium Village Businesses, CCPO Outreach	20	Pfeiffer, Daniel
1/23/12	2:30 PM	506 Cedar Street, St. Paul, MN 55123	CCPO	Discuss Vibration results with Church of St. Louis, King of France	Church leaders	3	Happel, Dana
1/23/12	10:30 AM	500 Cedar Street, St. Paul, MN 55101	CCPO	Updated: Discuss vibration results with Central Presbyterian Church	Church staff	3	Happel, Dana
1/23/12	6:30 PM	Prospect Park United Methodist Church, 66 SE Malcolm Ave, Minneapolis, MN 55414	community group	Prospect Park East River Road Improvement Association Community Meeting	Prospect Park residents and businesses, CCPO, AMJV	40	Hill, Jessica

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Central Corridor LRT Meeting Summary

January 2012

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
1/24/12	2:00 PM	1010 University Avenue West, St Paul, MN 55104	CCPO	Access meeting for 1000 University building and 1010 - My Home, Inc.	Property Manager and Tenants of 1000/1010	5	Webb, Michelle
1/24/12	10:00 AM	666 University Avenue West, St Paul, MN 55104	CCPO	Business Access and Areaway Meeting with A-1 Vacuum	businesses along corridor	6	Webb, Michelle
1/24/12	10:30 AM	698 University Ave West, St Paul, MN 55104	CCPO	Access meeting for Payless Tires	businesses	5	Webb, Michelle
1/24/12	3:00 PM	500 & 510 University Avenue West, St Paul, MN 55103	CCPO	Access meeting for Trieu Chau Restaurant and Discount Auto Glass	businesses along corridor	6	Webb, Michelle
1/24/12	4:30 PM	962 University Ave West, St Paul, MN 55104	CCPO	Access meeting with Midway Spine Care, EZY Urgent Care, and home health care business in 962 University	businesses along corridor	9	Webb, Michelle
1/24/12	6:30 PM	Minnehaha Recreation Center, 685 Minnehaha Avenue, Saint Paul 55103	Frogtown Neighborhood Association	Frogtown Neighborhood Forum	residents and business owners	15	Lee, Shoua
1/24/12	11:30 AM	University Bank- 200 University Avenue W, St. Paul, MN	Midway Chamber	Project Update to the Midway Chamber, Economic Development Cmte	corridor business leaders	15	Caufman, Robin
1/24/12	1:30 PM	468 University Avenue West, St Paul, MN 55103	CCPO	Access meeting with Le's Auto Tech	businesses along corridor	6	Webb, Michelle
1/24/12	2:30 PM	520 University Avenue West, St Paul, MN	CCPO	Access meeting for Midas Auto Service	businesses along corridor	6	Webb, Michelle
1/25/12	10:30 AM	145 University Avenue W., Saint Paul, MN 55104	Nkongo Cigolo	Access Meeting-League of Minnesota Cities	University Avenue Businesses	6	Cigolo, Nkongo

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Central Corridor LRT Meeting Summary

January 2012

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
1/26/12	1:00 PM	Wells Fargo Place, 110 Wells Fargo Place, 30 East 7th Street, Suite 175, St. Paul, MN 55101	CCPO	Cedar Street Construction Update meeting (7th to 4th Street)	Cedar Street property manaqers	15	Happel, Dana
1/27/12	9:00 AM	Wilder Foundation, 451 Lexington Parkway North, Saint Paul, MN 55104	Business Resources Collaborative partners	Business Resources Collaborative	Business Resources Collaborative partners	20	Lee, Shoua

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Central Corridor LRT Meeting Summary

February, 2012

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
2/6/12	12:00 PM	3400 University Ave SE, Minneapolis, MN 55414	CCPO	Precondition Survey	CCPO, Braun Intertec, Property Owner	4	Pfeiffer, Daniel
2/21/12	11:30 AM	Theatre in the Round, 245 Cedar Ave S, Minneapolis, MN, 55454	CCPO	West Bank Construction Communication Committee	CCPO Techinical Staff, Committee Members	9	Pfeiffer, Daniel
2/23/12	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO	East Bank Construction Communication Committee	CCPO, Techincal Staff, Committee Members	16	Pfeiffer, Daniel
2/28/12	9:00 AM	2950 University Avenue SE, Minneapolis, MN 55414	CCPO	Prospect Park Construction Communication Committee	CCPO Technical Staff, Committee Members	10	Pfeiffer, Daniel
2/28/12	10:00 AM	839 University Avenue W., Saint Paul, MN 55104	Nkongo Cigolo	Access Meeting for Model Cities	University Avenue Stakeholders	6	Cigolo, Nkongo
2/9/12	12:00 PM	The Red Sea 320 Cedar Ave S. Mpls, MN		Lunch on the Avenue		30	Richardson, Mary
2/9/12	12:00 PM	The Red Sea 320 Cedar Ave S. Mpls, MN		Lunch on the Avenue		30	Richardson, Mary
2/13/12	7:30 AM	Model Cities (the Brownstone Building) located at 839 University Avenue West.		BUSINESS-TO-BUSINESS FORUM on CENTRAL CORRIDOR CONSTRUCTION		40	Richardson, Mary
2/17/12	12:00 PM	Campus Pizza 825 Washington Ave SE Mpls, MN 55414		Lunch on the Avenue		30	Richardson, Mary
2/9/2011	3:00 PM	TBD	CCPO	Monthly Public Construction Information Meeting (PCIM)	Downtown St. Paul Community	50	Happel, Dana
2/1/12	9:00 AM	University Bank, 200 university Avenue, Saint Paul, MN 55104	Nkongo Cigolo	Access Meeting-University Bank	University Avenue Businesses	5	Cigolo, Nkongo
2/1/12	9:00 AM	University Bank, 200 university Avenue, Saint Paul, MN 55104	Nkongo Cigolo	Access Meeting-University Bank	University Avenue Businesses	5	Cigolo, Nkongo
2/1/12	9:00 AM	University Bank, 200 university Avenue, Saint Paul, MN 55104	Nkongo Cigolo	Access Meeting-University Bank	University Avenue Businesses	5	Cigolo, Nkongo

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Central Corridor LRT Meeting Summary

February, 2012

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
2/1/12	9:00 AM	200 University Avenue West, St Paul, MN 55103	CCPO	Canceled: Access Meeting with University Bank	businesses along corridor	5	Webb, Michelle
2/1/12	10:00 AM	654 University Ave West, St Paul, MN	CCPO	Updated: Access meeting for Shuang Hur Supermarket, 712 University, and 704 University	University Avenue Businesses	8	Webb, Michelle
2/1/12	2:15 PM	461 Dale St N, St Paul, MN 55104	CCPO	Access meeting for Rondo Community Outreach Library	businesses along corridor	5	Webb, Michelle
2/1/12	2:45 PM	680/690 University Avenue West, St Paul, MN 55104	CCPO	Access meeting for American Auto Radiator & AC and Capital City Auto Electric Co	businesses along corridor	6	Webb, Michelle
2/6/12	9:00 AM	3415 University Avenue SE, Minneapolis, MN 55454	CCPO	Precondition Survey at KSTP Studios	CCPO Outreach, Braun Intertec, Property Manager	3	Pfeiffer, Daniel
2/6/12	10:00 AM	666 University Ave W, St Paul, MN 55104	CCPO	Areaway Meeting with Russ Battisto at A-1 Vacuum		5	Webb, Michelle
2/7/12	10:00 AM	1080 University Ave W, St Paul, MN 55104	CCPO	Access meeting for 1080 University	businesses along corridor	6	Webb, Michelle
2/7/12	9:00 AM	740 University Ave W, St Paul, MN 55104	CCPO	Access meeting for Glasgow Automotive	businesses along corridor	5	Webb, Michelle
2/7/12	9:30 AM	946 University Ave W, St Paul, MN 55104	CCPO	Drop-in access meeting for Hodan Child Care	businesses along corridor	5	Webb, Michelle
2/8/12	2:30 PM	704 University Ave W, St Paul, MN	CCPO	Access meeting for Saigon	businesses along corridor	5	Webb, Michelle

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Central Corridor LRT Meeting Summary

February, 2012

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
2/8/12	3:00 PM	822 University Ave W, St Paul, MN 55104	CCPO	Access meeting for Fatima's Pyschic Visions and Ashama Grocery & Meat Market and Ashama Auto Repair	businesses along corridor	5	Webb, Michelle
2/8/12	3:30 PM	854 University Ave W, St Paul, MN 55104	CCPO	Access Meeting for Tai Hoa BBQ	businesses along corridor	5	Webb, Michelle
2/8/12	4:00 PM	786 University Ave West, St Paul, MN 55104	CCPO	Canceled: Access meeting with University Furniture	businesses along corridor	5	Webb, Michelle
2/9/12	11:00 AM	480 Cedar Street, St. Paul, MN 55101	MPR	Canceled: Construction update meeting with MPR	MPR staff	3	Happel, Dana
2/9/12	10:00 AM	946 University Ave West, St Paul, MN 55104	CCPO	Access meeting for Hodan Child Care Center	businesses along corridor	4	Webb, Michelle
2/13/12	1:00 PM	945 University Ave W, St Paul, MN 55104	Walsh	access meeting with Deeper Life Bible Church	businesses along corridor	5	Webb, Michelle
2/14/12	3:00 PM	591 University Avenue W., Saint Paul, MN 55104	Nkongo Cigolo	Frogtown Square Construction Update Meeting	Senior Tenants- University Avenue Residents & Businesses	60	Cigolo, Nkongo
2/15/12	9:00 AM	Administration Bldg, Room 116B, 50 Sherburne Ave.	CCPO	Meeting to discuss Xcel Rice Street work		10	Webb, Michelle
2/15/12	10:00 AM	105 University Ave W, St Paul, MN 55103	CCPO	Access meeting for Christ on Capitol Hill Church	businesses along corridor	10	Webb, Michelle
2/15/12	10:30 AM	422 University Ave West, St Paul, MN 55103	CCPO	Access meeting for Mai Village	businesses along corridor	5	Webb, Michelle

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Central Corridor LRT Meeting Summary

February, 2012

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
2/15/12	6:00 PM	Model Cities, 839 University Ave. W., Saint Paul, MN 55104	Aurora St. Anthony Development Coorporation	Construction Information Meeting	University Avenue Businesses	60	Cigolo, Nkongo
2/15/12	6:00 PM	Dar Al Quba, 1501 S. 6th Street, Minneapolis, MN, 55414	West Bank Community Coalition monthly meeting	West Bank Community Coalition	Community Members	25	Pfeiffer, Daniel
2/16/12	10:00 AM	Saint Paul Area Chamber of Commerce, 401 Robert Street, executive conference room., St. Paul, MN 55101	CCPO	Construction Communication Committee	Construction Communication Committee members	15	Happel, Dana
2/16/12	10:00 AM	1212 University Ave W, St Paul, MN 55104	CCPO	Access meeting for Gordon Parks High School (1212) and Agape (1037)	schools along corridor	10	Webb, Michelle
2/16/12	2:30 PM	University Hotel Minneapolis, 615 Washington Avenue SE, MN, 55454	Monthly Stadium Village Commercial Association Meeting	Stadium Village Commercial Association	Stadium Village Businesses, CCPO Outreach	20	Pfeiffer, Daniel
2/16/12	4:00 PM	Augsburg Gateway Center, 2211 Riverside Avenue, Minneapolis, MN 55414	Monthly WBBA Board Meeting	West Bank Business Association Board Meeting	Business Owners and Community Members of West Bank	30	Pfeiffer, Daniel
2/17/12	9:00 AM	839 University Avenue W., Saint Paul, MN 55104	Nkongo Cigolo	Access Meeting and Information Session for Model Cities	University Avenue Business	15	Cigolo, Nkongo
2/20/12	9:00 AM	500 Cedar Street, St. paul, mn 55101	CCPO	Discuss access with Central Presbyterian Church	Church staff	5	Happel, Dana
2/22/12	2:30 PM	CCPO-Room-4		Meeting with Nice Ride MN			Cigolo, Nkongo
2/23/12	1:00 PM	Wells Fargo Place, 110 Wells Fargo Place, 30 East 7th Street, Suite 175, St. Paul, MN 55101	CCPO	Cedar Street construction update meeting (4th to 7th)	Cedar STreet property managers	15	Happel, Dana

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Central Corridor LRT Meeting Summary

February, 2012

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
2/23/12	10:00 AM	663 University Ave West, St Paul, MN 55104	CCPO	Access Meeting with Western Bank	businesses along corridor	6	Webb, Michelle
2/23/12	11:00 AM	480 Cedar Street, St. Paul, MN 55101	MPR	Construction update meeting with MPR	MPR staff	3	Happel, Dana
2/23/12	11:00 AM	Gordon Parks High School, 1212 University Ave W, St Paul, MN	Gordon Parks High School	Gordon Parks Outreach Meetings	students and staff at Gordon Parks	100	Webb, Michelle
2/24/12	11:00 AM	Central Towers, 20 east exchange street, st. paul, mn	CCPO	Discuss alley way movements	Property management	5	Happel, Dana
2/24/12	1:30 PM	563 Phalen Blvd, St Paul, MN	CCPO	Access Meeting for Unidale Mall - NOTE LOCATION	properties on corridor	6	Webb, Michelle
2/27/12	9:00 AM	Wells Fargo Place, 30 East 7th Street, Unilev Management office, St. Paul, MN 55101	CCPO	Discuss Xcel vault and street light	Property management	5	Happel, Dana
2/27/12	11:00 AM	2829 University Avenue SE, Minneaplis, MN 55414	CCPO	Presentation to 2829 University- Final Design and Construction Access	Building Tenants, AMJV, CCPO	40	Hill, Jessica
2/27/12	3:00 PM	Central Corridor Resource Center, 1080 University Avenue, St. Paul 55104	District Council Collaborative	District Council Collaborative Walkability Survey Meeting	Walkabijlilty Group	15	Rodriguez, Rita
2/28/12	11:30 AM	American Engineering Testing, 550 Cleveland Ave North	Midway Chamber	Midway Chamber Economic development committee - construction schedule	business leaders	20	Caufman, Robin
2/28/12	1:00 PM	To be determined	CCPO	Construction Update meeting - Cedar Street 7th to 11th Street	Cedar Street Properties - 7th to 11th	15	Happel, Dana

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February, 2012

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
2/28/12	1:00 PM	Central Presbterian Church, Dining Room -Lower level	CCPO	Cedar Street Meeting (from 12th-7th Street Properties	property managers on Cedar Street north of Seventh Street	15	Callaghan, Laura
2/28/12	2:30 PM	Hunan Garden, 380 Cedar Street, St. Paul, MN 55101	Hunan Garden	discuss 6th Street closure with Hunan Garden	Owners	2	Happel, Dana
2/29/12	10:30 AM	Menlo Park, 1246 University Ave W, St Paul, MN 55104	CCPO	Meeting with Menlo Park to discuss bump-out	Menlo Park	6	Webb, Michelle

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Central Corridor LRT Meeting Summary

March, 2012

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
3/5/2012	5:00 PM	Hoa Bien Restaurant, Banquet Room, 1105 University Avenue, Saint Paul, MN 55104	City of St. Paul	Noise Variance Public Open House	residents/general public	30	Lee, Shoua
3/8/2012	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO	East Bank Construction Communication Committee	CCC Members, CCPO Technical Staff, Project Partners	16	Pfeiffer, Daniel
3/14/2012	12:00 PM	CCPO-Room-2and3	Metropolitan Council	CCC Meeting-University Avenue/Capitol Area	Construction Communication Committee Members	15	Cigolo, Nkongo
3/20/2012	11:30 AM	Theatre in the Round, 245 Cedar Ave S, Minneapolis, MN, 55454	CCPO	West Bank Construction Communication Committee	CCPO Techinical Staff, Committee Members	9	Pfeiffer, Daniel
3/22/2012	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO	East Bank Construction Communication Committee	CCC Members, CCPO Technical Staff, Project Partners	16	Pfeiffer, Daniel
3/28/2012	3:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO	Minneapolis Public Construction Information Meeting	CCPO Technical Staff, AMJV, Community Members	15	Pfeiffer, Daniel
3/6/2012	11:30 AM	Coffman Memorial Union, Third Floor Board Room, 300 Washington Avenue SE, Minneapolis, MN 55455	Metro Transit	Metro Transit Transit Service Study Open House	Transit Users	200	Pfeiffer, Daniel
3/8/2012	12:00 PM	Bangkok Cuisine Thai Restaurant located at 432 University Avenue W St Paul, MN 55103	Project Partner	Lunch on the Avenue		30	Richardson, Mary
3/22/2012	12:00 PM	The Best Steakhouse, 860 University Ave W St Paul, MN 55104	Project Partner	Lunch on the Avenue		35	Richardson, Mary

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Central Corridor LRT Meeting Summary

March, 2012

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
3/1/2012	1:00 PM	1212 University Avenue W. Saint Paul, MN 55104	Veronica Burt on Behald of Arnellia's	Meeting With Arnellia's at Gordon Parks	Arnellia's Bar-University Avenue Business	10	Cigolo, Nkongo
3/6/2012	2:00 PM	Dollar Store, 1420 University Avenue, St. Paul, Mn 55104	ccpo	Hamline Closure	Manager	2	Rodriguez, Rita
3/6/2012	2:00 PM	Tobacco Store, 1418 University Avenue, St. Paul, MN 55104	ccpo	Hamline Closure Notification	Owner	2	Rodriguez, Rita
3/6/2012	2:00 PM	Cub Foods, 1440 University Avenue, St. Paul, MN 55104	ccpo	Hamline closure notification	General Manager	2	Rodriguez, Rita
3/6/2012	2:00 PM	Herbergers, 1400 University Avenue, St. Paul, MN 55104	ccpo	Hamline closure notification	General Manager	2	Rodriguez, Rita
3/6/2012	3:00 PM	26 Exchange Streeet, 5th Floor	CCPO	Saint Paul Conservatory of Music	Director	1	Happel, Dana
3/6/2012	3:00 PM	Lee Ann Cin	ccpo	Hamline Closure Notification	Business Manager	2	Rodriguez, Rita
3/6/2012	3:15 PM	INS		Hamline Closure Notification			Rodriguez, Rita
3/6/2012	3:30 PM	UPS, 1360 University Avenue, Suite 104, St. Paul, MN 55104	CCPO	Hamline Closure Notification	Owner	2	Rodriguez, Rita
3/6/2012	4:00 PM	America's Best Contacts & Eyeglasses, 1360 University Ave, #106	ccpo	Hamline Closure Notification	Manager	2	Rodriguez, Rita

 or information about a specific meeting, contact the identified outreach coordinator:

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Shoua Lee (651) 602-1014 Dan Pfeiffer (651) 602- 1952 Rita Rodriguez (651) 602-1805 Michelle Webb (651) 602-1485

Central Corridor LRT Meeting Summary

March, 2012

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
3/6/2012	4:00 PM	Discount Tire, 1350 University, St. Paul, MN 55104	ccpo	Hamline Closure Notification	Manager	2	Rodriguez, Rita
3/6/2012	4:00 PM	Walmart, 1360 University Avenue, St. Paul, Mn 55104	ccpo	Hamline Closure Notification	Manager	2	Rodriguez, Rita
3/6/2012	4:00 PM	Ultimate Look, 1455 University Avenue, St. paul, MN 55104	ccpo	Hamline Closure Notification	Manager	2	Rodriguez, Rita
3/6/2012	4:00 PM	Elsa's House of Sleep, 1441 university Avenue, St. Paul, Mn 55104	ccpo	Hamline Closure Notification	Owner	2	Rodriguez, Rita
3/6/2012	4:00 PM	Urban Lights, 1449 University Avenue, St. Paul, MN 55104	ccpo	Hamline Closure Notification	Owner	2	Rodriguez, Rita
3/6/2012	4:00 PM	Earth's Beauty Supply, 1453 university Avenue, St. Paul, MN 55104	ccpo	Hamline Closure Notification	Owner	2	Rodriguez, Rita
3/6/2012	4:00 PM	Vitamin Shoppe, 472 University Avenue, St. Paul, MN 55104	ccpo	Hamline Closure Notification	Manager	2	Rodriguez, Rita
3/6/2012	4:00 PM	Noodle and Company, University & Hamline, St. Paul, MN 55104	ccpo	Hamline Closure Notification	Manager	2	Rodriguez, Rita
3/6/2012	4:00 PM	Cub Foods, 1440 University Avenue, St. Paul, MN 55104	ccpo	Hamline Closure Notification	Manager	2	Rodriguez, Rita
3/7/2012	11:00 AM	Science Museum	Smart Trips	Transportation Summit	Downtown Community	100	Happel, Dana
3/8/2012	10:00 AM	709 University Avenue West, Saint Paul, MN 55104	Metropolitan Council	Access Meeting for Lifetrack Resources	University Avenue Businesses	10	Cigolo, Nkongo

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Central Corridor LRT Meeting Summary

March, 2012

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
3/9/2012	1:00 PM	History Theatre	CCPO	Meet with History Theatre regarding traffic control on Wabasha	Ted Miller	1	Happel, Dana
3/9/2012	3:30 PM	Great Health Nutrition, 1360 University Avenue, #105, St. Paul, MN 55104	ccpo	Hamline Closure Notification	Manager	2	Rodriguez, Rita
3/9/2012	12:30 PM	Ramsey County Public Health Building	ccpo	Meet with Ramsey county to discuss drop off area	property management	1	Happel, Dana
3/12/2012	1:00 PM	Metro Sound and Lighting, 1731 University Avenue, St.Paul, MN 55104	ccpo	Aldine and Fry Closure Notification	General Manager	2	Rodriguez, Rita
3/12/2012	2:30 PM	Royal Tire, 1695 University Avenue, St. Paul, MN 55104	ccpo	Aldine and Fry Closure Notification	Owner	2	Rodriguez, Rita
3/12/2012	2:30 PM	Marsden Building, 1717 University Avenue, St. Paul, Mn 55104	ccpo	Aldine and Fry closure notification	Property Manager	2	Rodriguez, Rita
3/12/2012	2:30 PM	Good Year, 1671 University Avenue, St. Paul, Mn 55104	ccpo	Aldine and Fry Closure notification	General Manager	2	Rodriguez, Rita
3/12/2012	2:30 PM	German Emersion School, 1745 University Avenue, St. Paul, MN 55104	ccpo	Aldine and Fry Closure Notification	Site Administrative Manager	2	Rodriguez, Rita
3/12/2012	2:30 PM	YMCA, 1761 University Avenue, St. Paul, Mn 55104	ccpo	Aldine and Fry closure Notification	Executive Director	2	Rodriguez, Rita
3/12/2012	12:00 PM	The Saint Paul Hotel - Promenade Ballroom	St. Paul Building Owners and Managers	Project updates, 2012 construction	St. paul businesses and property managers	100	Caufman, Robin
3/12/2012	12:30 PM	JJ's Fish, 1674 University Avenue, St. Paul, MN 55104	ccpo	Aldine and Fry Closure notification	General Manager	2	Rodriguez, Rita

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Central Corridor LRT Meeting Summary

March, 2012

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
3/13/2012	3:00 PM	Midway Health East, 1690 University Avenue, St. Paul, MN 55104	ccpo	Aldine and Fry Closure Notification	Manager	2	Rodriguez, Rita
3/13/2012	3:00 PM	Resident, 1708 University Avenue, St. Paul, MN 55104	ccpo	Aldine and Fry Closure	Resident	2	Rodriguez, Rita
3/13/2012	3:00 PM	The CdDowell Agency, 1714 University Avenue, St. Paul, MN 55104	ccpo	Aldine and Fry closure	Owner	2	Rodriguez, Rita
3/13/2012	3:00 PM	USSI Video, 1716 University Avenue, St. Paul, MN 55104	ccpo	Aldine and Fry Notification	Owner	2	Rodriguez, Rita
3/13/2012	3:00 PM	Los Gallos, 1722 University Avenue, St. Paul, MN 55104	ccpo	Aldine and Fry Closure Notification	Manager	2	Rodriguez, Rita
3/13/2012	3:00 PM	Little Grocery, 1724 University Avenue, St. Paul, MN 55104	ccpo	Aldien and Fry Closure Notification	manager	2	Rodriguez, Rita
3/13/2012	3:00 PM	Twin Town, 1706 University Avenue, St. Paul, MN 55104	ccpo	Aldine and Fry Closure Notification	Manager	2	Rodriguez, Rita
3/14/2012	2:30 PM	Diva Hair Braiding	ccpo	Aldine and Fry Notivication	Owner	2	Rodriguez, Rita
3/14/2012	2:30 PM	Regina Vacuum, 1681 University Avenue, St. Paul, MN 55104	ccpo	Aldine and Fry Notification	Owner	2	Rodriguez, Rita
3/14/2012	6:30 PM	Central Corridor Resource Center, 1080 University Ave. W., St. Paul.	District Councils Collaborative of Saint Paul and Minneapolis	DCC Governing Council	DCC members, CCPO Staff, AMJV	30	Pfeiffer, Daniel
3/14/2012	6:30 PM	500 Dale St. N, St. Paul, MN 55100	Aurora St. Anthony Neighborhood Development Corporation	Construction Update Meeting with ASANDC	University Avenue Businesses	30	Cigolo, Nkongo

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Central Corridor LRT Meeting Summary

March, 2012

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
3/15/2012	10:00 AM	Saint Paul Area Chamber of Commerce, 401 Robert Street, Board Room, St. Paul, MN 55101	CCPO	Construction Communication Committee	Construction Communication Committee members	15	Happel, Dana
3/15/2012	10:30 AM	545 University ave w st paul mn 55103	CCPO	access meeting for 3N Enterprise	3 N Enterprises-University ave businesses	5	Abdi, Raqib
3/15/2012	11:00 AM	480 Cedar Street, St. Paul, MN 55101	MPR	Construction update meeting with MPR	MPR management	5	Happel, Dana
3/15/2012	11:00 AM	786 University Ave West, St Paul, MN 55104	CCPO	Access meeting for University Furniture and East African Bakery	businesses along corridor	6	Webb, Michelle
3/15/2012	1:00 PM	Mechanical Engineering Building, 1130, 111 Church Street SE, Minneapolis, MN, 55455	University of Minnesota Facilities Management	CCLRT Presentation University of Minnesota East Bank Customer Advisory Group	University of Minnesota Staff, CCPO Outreach	25	Pfeiffer, Daniel
3/15/2012	2:30 PM	University Hotel Minneapolis, 615 Washington Avenue SE, MN, 55454	Monthly Stadium Village Commercial Association Meeting	Stadium Village Commercial Association	Stadium Village Businesses, CCPO Outreach	20	Pfeiffer, Daniel
3/15/2012	2:30 PM	Milburn Clothing, 1685 University Avenue, St. Paul, MN 55104	ccpo	Aldine Closure Notification	Owner	2	Rodriguez, Rita
3/15/2012	3:00 PM	Pedro Jennico, 1605 University Avenue, St. Paul, Mn 55104	ccpo	Fry Closure Notification	Manager	2	Rodriguez, Rita
3/15/2012	3:00 PM	The Love Doctor, 1607 University Avenue, St. Paul, MN 55104	ccpo	Fry Closure Notification	Owner	2	Rodriguez, Rita
3/15/2012	3:00 PM	Ax-Man,	ccpo	Fry Closure Notification	Owner	2	Rodriguez, Rita

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Central Corridor LRT Meeting Summary

March, 2012

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3/15/2012	3:30 PM	Ax-Man, 1639 university Avenue, St. Paul, MN 55104	ccpo	Fry Closure Notification	Owner	2	Rodriguez, Rita
3/15/2012	3:30 PM	Denises Beauty Salon, 1623 University Avenue, St. Paul, MN 55104	ccpo	Fry Closure Notification	Owner	2	Rodriguez, Rita
3/15/2012	3:30 PM	Spruce Tree, 1600 University Avenue, St. Paul, MN 55104	ccpo	Fry Closure Notification	Manager	2	Rodriguez, Rita
3/15/2012	12:30 PM	Awards by Hammond, 1669 University Avenue, St. Paul, MN 55104	ccpo	Aldine and Fry Closure	Owner	2	Rodriguez, Rita
3/16/2012	2:00 PM	Udo's Grocery, 1456 university Avenue, St. Paul, MN 55104	ccpo	Hamline Closure Notification	Owner	1	Rodriguez, Rita
3/16/2012	3:00 PM	Turf Club, 1601 University Avenue St. Paul, Mn 55104	ccpo	Fry Closure Notification	Manager	2	Rodriguez, Rita
3/16/2012	3:00 PM	Chiro Medical Clinic, 1603 University Avenue, St. Paul, MN 55104	ccpo	Fry Closure Notification	Manager	2	Rodriguez, Rita
3/16/2012	3:00 PM	On's Kitchen, 1613 university Avenue, St. Paul, MN 55104	ccpo	Fry Closure Notification	Owner	2	Rodriguez, Rita
3/19/2012	10:00 AM	540 Fairview Avenue N., Open Office, Saint Paul, MN 55104	Nkongo Cigolo	Canceled: Meeting with U7 Manager	U7-University Avenue Organization	5	Cigolo, Nkongo
3/19/2012	2:30 PM	540 Fairview Avenue North, Suite 200, Open Office, Saint Paul, MN 55104	Metropolitan Council	Training for University Avenue CCC Member Hadi Khalif	Construction Communication Committee Member	3	Cigolo, Nkongo
3/19/2012	7:00 PM	The Pointe, 4th Floor party room, 78 10th Street, St. Paul, MN 55101	Dave Thune	Discuss evening/overnight work	Residents of The Pointe	20	Happel, Dana

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Central Corridor LRT Meeting Summary

March, 2012

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
3/20/2012	10:00 AM	935 University Ave W St Paul Mn 55104	CCPO	Marty's Second Hand Store business access.	Gilbert Marty.	6	Abdi, Raqib
3/20/2012	12:30 PM	45 West 10th Street, St. Paul, MN 55102	St. Joe's management	St. Joes Management Committee	St. Joe's Management Committee	10	Happel, Dana
3/21/2012	6:00 PM	Dar Al Quba, 1501 S. 6th Street, Minneapolis, MN, 55414	West Bank Community Coalition monthly meeting	West Bank Community Coalition	Community Members	25	Pfeiffer, Daniel
3/21/2012	12:00 PM	1047 Univeristy avenue W #101 st paul Mn 55104	RAQIB ABDI	Access meeting for Dr Bobby Yang Medical Clininc.LLC rescheduled.	Dr Bobby Yang Medical Clininc.LLC-University avenue businesses.	7	Abdi, Raqib
3/22/2012	11:00 AM	480 Cedar Street, St. Paul, MN 55101	MPR	Construction update with MPR	MPR Management	5	Happel, Dana
3/22/2012	1:00 PM	789 University Avenue W., Saint Paul, MN 55104	Nkongo Cigolo	Access Meeting for Phil Oriental	Phil Oriental-University Avenue Business	6	Cigolo, Nkongo
3/22/2012	1:45 PM	774 University Avenue W., Saint Paul, MN 55104	Nkongo Cigolo	Areaway Access for Old Home Combined with Access Meeting	Aurora/St. Anthony Neighborhood Development Corporation-University Avenue Business	8	Cigolo, Nkongo
3/26/2012	10:00 AM	811 university ave W St Paul Mn 55104	Raqib Abdi	Access meeting for Ryan Plumbing & Heating Co	Ryan Plumbing & Heating Co	5	Abdi, Raqib
3/26/2012	10:00 AM	471 Marion, Saint Paul, MN 5510103	Nkongo Cigolo	Meeting to Discuss Retaining Wall at McDonald's--Wall will likely fall during sidewalk removal	McDonald's-Corridor Business	3	Cigolo, Nkongo

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Central Corridor LRT Meeting Summary

March, 2012

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
3/27/2012	9:30 AM	CCPO-Open-Office; 540 Fairview Ave N, St Paul, MN	U7	Meeting with U7 to discuss access		7	Webb, Michelle
3/27/2012	1:00 PM	Central Presbterian Church, Dining Room -Lower level	CCPO	Cedar Street Meeting (from 12th-7th Street Properties)	Cedar Street properties between 12th Street and 7th Street	20	Callaghan, Laura
3/28/2012	12:00 PM	979 University Ave W St Paul mn 55104	Raqib Abdi	Canceled: Access meeting for Shear Pleasure Salon Of Beauty.	Shear Pleasure Salon Of Beauty	5	Abdi, Raqib
3/28/2012	12:00 PM	1080 University, Saint Paul, MN 55104	CCPO	Construction Communication Committee - University Avenue Hamline to Rice	CCC members	20	Webb, Michelle
3/29/2012	1:00 PM	Wells Fargo Place, 110 Wells Fargo Place, 30 East 7th Street, Suite 175, St. Paul, MN 55101	CCPO	Canceled: Cedar Street Construction Update meeting (7th to 4th)	Cedar Street property managers	15	Happel, Dana
3/29/2012	1:00 PM	: Wells Fargo Place, 110 Wells Fargo Place, 30 East 7th Street, Suite 175, St. Paul, MN 55101	CCPO	Cedar Street construction update Meeting (properties between 7th and 4th Street)	Cedar Street properties Between 7th and 4th Street	20	Callaghan, Laura
3/30/2012	1:00 PM	555 University avenue W St Paul Mn 55104	Raqib Abdi	Access meeting for Auto Max Brake & Muffler Specs	Jim Devis	5	Abdi, Raqib
3/30/2012	2:00 PM	500 Dale street N St Paul Mn 55104	Raqib Abdi	Acess meeting for Kings Crossing,Grooming House,Global Food Market and other businesses.	Lise Boyd,Abdiaziiz Mohamed,Johnson,Damen,Mike,Phyllis,and Nizar Mustafa	9	Abdi, Raqib

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Central Corridor LRT Meeting Summary

April, 2012

1. Metropolitan Council initiated public meetings/events							
Date	**Start Time**	**Meeting location and address**	**Group/Host**	**Topic/Purpose of Meeting**	**Stakeholder Attendees**	**Attendees Expected**	**Project Contact & Phone #**
4/3/12	11:30 AM	Theatre in the Round, 245 Cedar Avenue S, Minneapolis, MN, 55454	CCPO	West Bank Quarterly Evaluation Meeting	CCPO, AMJV, Committee Members	12	Pfeiffer, Daniel
4/9/12	11:30 AM	2900 University Avenue SE, Minneapolis, MN 55414	CCPO	Prospect Park Construction Communication Committee Evaluation Meeting	CCPO, AMJV, City of Minneapolis, Committee Members	15	Pfeiffer, Daniel
4/10/12	2:00 PM	630 Washington Avenue SE, Minneapolis, MN 55414	AMJV	Access Meeting Mercil's Campus Auto Repair	CCPO, AMJV, Minneapolis Staff, Property Owner	5	Pfeiffer, Daniel
4/10/12	8:00 AM	Arby's, 1016 Washington Avenue SE, Minneapolis, MN 55414	AMJV	Access Meeting Arby's	AMJV, CCPO, Business Owner	3	Pfeiffer, Daniel
4/10/12	9:00 AM	1024 Washington Avenue SE, Minneapolis, MN 55414	AMJV	Access Meeting CSL Plasma	CCPO, AMJV, Business Manager	4	Pfeiffer, Daniel
4/12/12	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO	East Bank Construction Communication Committee	CCC Members, CCPO Technical Staff, Project Partners	16	Pfeiffer, Daniel
4/17/12	11:30 AM	Theatre in the Round, 245 Cedar Ave S, Minneapolis, MN, 55454	CCPO	West Bank Construction Communication Committee	CCPO Techinical Staff, Committee Members	9	Pfeiffer, Daniel
4/23/12	11:30 AM	Tierney Brothers, 3300 University Avenue SE, Minneapolis, MN 55414	CCPO	Prospect Park Construction Communication Committee	CCPO Staff, Committee Members, AMJV Staff, City of Minneapolis Staff	15	Pfeiffer, Daniel
4/25/12	3:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO	Minneapolis Public Construction Information Meeting	CCPO Technical Staff, AMJV, Community Members	20	Pfeiffer, Daniel
4/26/12	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO	East Bank Construction Communication Committee	CCC Members, CCPO Technical Staff, Project Partners	16	Pfeiffer, Daniel

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Central Corridor LRT Meeting Summary

April, 2012

2. Project partner initiated meetings/events

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
4/5/12	12:00 PM	New Asia Express		Lunch on the Ave		30	Richardson, Mary
4/13/12	10:00 AM	Room 300 Morrill Hall, University of Minnesota East Bank	CCPO	Communication Coordination Meeting: Summer 12 Projects Minneapolis	Agency Partners	7	Hill, Jessica
4/19/12	12:00 PM	Quizno's Stadium Village 929 Washington Avenue, Minneapolis, MN 55414	Robin Caufman	Lunch on the Avenue		30	Cagaoan, Sandie
4/19/12	2:30 PM	540 Fairview Avenue North, St. Paul, MN 55104 Conference Room 2/3 on 2nd Floor	Robin Caufman	DBE/AA Joint Oversight Committee Meeting		30	Cagaoan, Sandie
4/24/12	11:30 AM	Regions Hospital--640 Jackson Street	Nkongo Cigolo	Updated: Midway Chamber of Commerce Economic Development Committee	Midway Chamber of Commerce-Project Partner	40	Cigolo, Nkongo

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Central Corridor LRT Meeting Summary

April, 2012

3. Meetings with Stakeholders							
Date	**Start Time**	**Meeting location and address**	**Group/Host**	**Topic/Purpose of Meeting**	**Stakeholder Attendees***	**Attendees Expected**	**Project Contact & Phone #**
4/2/12	8:30 AM	Midway Good Year, 1671 University Avenue, St. Paul, MN 55104	CCPO	Fry and Aldine Closure Notification	Manager and staff	4	Rodriguez, Rita
4/2/12	8:30 AM	Ax-Man, 1639 University Avenue, St. Paul, MN 55104	CCPO	Fry and Aldine Closure Notification	Manager	3	Rodriguez, Rita
4/2/12	9:00 AM	Milbern Clothing, 1685 University Avenue, St. Paul, MN 55104	CCPO	Fry and Aldine Notification	Owner	3	Rodriguez, Rita
4/2/12	9:30 AM	Diva Hair Braiding, 1679 University Avenue, St. Paul, MN 55104	CCPO	Fry and Aldine Closure Notification	OWNER	2	Rodriguez, Rita
4/2/12	9:30 AM	Pawn America, 1636 University Avenue, St. Paul, MN 55104	CCPO	Fry and Aldine Closure Notification	Manager	3	Rodriguez, Rita
4/2/12	9:30 AM	Midway Uniforms, 1625 University Avenue, St. Paul, MN 55104	CCPO	Fry and Aldine Closure Notification	Manager	3	Rodriguez, Rita
4/2/12	9:30 AM	Elise Salon, 1619 university Avenue, St. Paul, MN 55104	CCPO	Fry and Aldine Closing Notification	Owner	2	Rodriguez, Rita
4/2/12	10:00 AM	American Tire, 1671 University Avenue, St. Paul, MN 55104	CCPO	Fry and Aldine Closure Notification	Owner	2	Rodriguez, Rita
4/2/12	10:00 AM	US Bank, University Avenue, St. Paul, MN 55k104	CCPO	Pascal to Berry Overnight Notification	Manager	2	Rodriguez, Rita
4/2/12	10:30 AM	On's Kitchen, 1613 University Avenue, St. Paul, MN 55104	CCPO	Fry and Aldine closure Notification	Owner	2	Rodriguez, Rita

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Central Corridor LRT Meeting Summary

April, 2012

3. Meetings with Stakeholders

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
4/2/12	10:30 AM	Spruce Tree, 1600 University Avenue, St. Paul, MN 55104	CCPO	Fry and Aldine Closure Notification	Manager	2	Rodriguez, Rita
4/2/12	10:30 AM	Regina Vacuum, 1681 university Avenue, St. Paul, MN 55104	CCPO	Fry and Aldine Closure Notification	owner	3	Rodriguez, Rita
4/2/12	11:00 AM	Health East, 1700 University Avenue, St. Paul, MN 55104	CCPO	Fry and Aldine Closure	Manager	2	Rodriguez, Rita
4/2/12	11:30 AM	Twin Town, 1706 University Avenue, St. Paul, MN 55104	CCPO	Fry and Aldine Closure Notification	Manager	2	Rodriguez, Rita
4/2/12	11:30 AM	Awards by Hammond, 1669 University Avenue, St. Paul, MN 55104	CCPO	Fry and Aldine Closure Notification	Owner	2	Rodriguez, Rita
4/2/12	11:30 AM	Sharett's Liquor, 2389 University Avenue, St. Paul, MN 55104	CCPO	Pascal to Berry Overnight Notification and University Avenue Bridge Notification	Owner	3	Rodriguez, Rita
4/2/12	2:30 PM	433 University avenue W St Paul, MN 55104	Raqib Abdi	Access meeting for Tracie's All Auto	Tracie's All Auto	6	Abdi, Raqib
4/2/12	3:00 PM	Midway Commercial, 2500 University Avenue, St. Paul, MN 55104	CCPO	Overnight Notifications: Rail pull and University Avenue Bridge work	Manager	3	Rodriguez, Rita
4/2/12	4:00 PM	Court International, 2550 University Avenue, St. Paul, MN 55104	CCPO	Overnight Notifications: Rail Pull and University Avenue Bridge work	Manager	2	Rodriguez, Rita
4/3/12	4:30 PM	808 Berry Place, 808 Berry Street, St. Paul, MN 55114	CCPO	Overnight Notifications: Rail Pull and University Avenue Bridge work	Manager	2	Rodriguez, Rita

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Central Corridor LRT Meeting Summary

April, 2012

3. Meetings with Stakeholders

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
4/4/12	12:00 PM	475 University Avenue West, Saint Paul,	Nkongo Cigolo	Access Meeting for Hynan Chiropractic Clinic	Hynan Chiropractic Clinic-University Avenue Business	5	Cigolo, Nkongo
4/4/12	2:30 PM	461 University avenue W St Paul, MN 55104	Raqib Abdi	Access meeting for Ritter Law Office Pc	Susan Ritter	5	Abdi, Raqib
4/4/12	5:00 PM	Shuang Hur, 654 University Avenue, Saint Paul, MN 55103	CCPO	Meeting to discuss traffic concerns	Tim Poirier, Sam Haung	2	Lee, Shoua
4/5/12	10:00 AM	417 University avenue W St Paul, MN 55103	Raqib Abdi	Accesss meeting for Asian American Press	Nghi Huynh	5	Abdi, Raqib
4/5/12	11:00 AM	480 Cedar Street, St. Paul, MN 55101	MPR	Construction Update meeting with MPR	MPR management	5	Happel, Dana
4/5/12	12:00 PM	519 Unversity avenue W St Paul, MN 55103	Raqib Abdi	Accesss meeting for Asian Home Care Inc.	Pole(owner)	9	Abdi, Raqib
4/5/12	6:00 PM	Emerald Apartments, University Avenue, St. Paul, MN 55114	CCPO	Overnight Notifications: Pull Rail and University Avenue Bridge work	Manager		Rodriguez, Rita
4/6/12	11:30 AM	Menards, Prior and University	CCPO	Notification of Prior Closing	Manager	2	Cagaoan, Sandie
4/6/12	1:30 PM	Suite 204, 1955 Prior	CCPO	Notification for Prior Closing	Manager	2	Cagaoan, Sandie
4/6/12	12:00 PM	Days Inn - University	CCPO	Notification for Prior Closing	Owner	2	Cagaoan, Sandie

 or information about a specific meeting, contact the identified outreach coordinator:

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Shoua Lee (651) 602-1014 Dan Pfeiffer (651) 602- 1952 Rita Rodriguez (651) 602-1805 Michelle Webb (651) 602-1485

Central Corridor LRT Meeting Summary

April, 2012

3. Meetings with Stakeholders							
Date	**Start Time**	**Meeting location and address**	**Group/Host**	**Topic/Purpose of Meeting**	**Stakeholder Attendees***	**Attendees Expected**	**Project Contact & Phone #**
4/6/12	12:00 PM	475 Prior Avenue	CCPO	Notification for Closing Prior	Manager	2	Cagaoan, Sandie
4/6/12	12:00 PM	480 Prior	CCPO	Notification for Prior Closing	Manager	2	Cagaoan, Sandie
4/6/12	12:00 PM	460 Prior	CCPO	Notification for Prior Closing	Manager	2	Cagaoan, Sandie
4/6/12	12:00 PM	448 Prior	CCPO	Notification for Prior Closing	Manager	2	Cagaoan, Sandie
4/6/12	12:00 PM	444 Prior	CCPO	Notification for Prior Closing	Manager	2	Cagaoan, Sandie
4/6/12	12:00 PM	492 Prior	CCPO	Notification for Prior Closing	Manager	2	Cagaoan, Sandie
4/6/12	12:00 PM	516 Prior	CCPO	Notification for Prior Closing	Manager	2	Cagaoan, Sandie
4/6/12	12:00 PM	104 Prior	CCPO	Notification for Prior Closing	Manager	2	Cagaoan, Sandie
4/6/12	2:00 PM	Suite 209, 1955 Prior	CCPO	Notification for Prior Closing	Manager	2	Cagaoan, Sandie
4/6/12	2:00 PM	Suite 206, 1955 Prior	CCPO	Notification for Prior Closing	Manager	2	Cagaoan, Sandie

Central Corridor LRT Meeting Summary

April, 2012

3. Meetings with Stakeholders

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
4/6/12	2:00 PM	Suite 210, 1955 Prior	CCPO	Notification for Prior Closing	Manager	2	Cagaoan, Sandie
4/6/12	2:00 PM	Suite 201, 1955 Prior	CCPO	Notification for Prior Closing	Manager	2	Cagaoan, Sandie
4/6/12	6:00 PM	Dunn Bros, 2650 University Avenue, St. Paul, MN 55114	CCPO	Overnight Notifications: Rail Pull and University Avenue Bridge work	Manager	2	Rodriguez, Rita
4/7/12	5:00 PM	Hubbard Broadcasting, 2600 University Avenue, St. Paul, MN 55114	CCPO	Overnight Notifications: Pull Rail and University Avenue Bridge work	Manager	2	Rodriguez, Rita
4/7/12	5:30 PM	Westgate Business Center, 2575 University Avenue, St. Paul, MN 55114	CCPO	Overnight Notifications: Pull Rail and University Bridge Work	Manager	2	Rodriguez, Rita
4/7/12	6:00 PM	Jefferson at Berry Housing, 950 Jefferson Commons Circle, St. Paul, MN 55114	CCPO	Overnight Notifications: Pull Rail and University Avenue Bridge Work	Housing Manager	2	Rodriguez, Rita
4/9/12	10:00 AM	666 University Avenue W., Saint Paul, MN 55	Nkongo Cigolo	A-1 Vacuum--Areaway Work	A-1 Vacuum-University Businesses	10	Cigolo, Nkongo
4/10/12	12:00 PM	575 University avenue W St Paul, MN 55103	Raqib Abdi	Access meeting for Ken Mc Intosh & Assoc	Ken Mc Intosh		Abdi, Raqib
4/11/12	11:00 AM	Central Corridor Resource Center, 1080 University Ave W, St Paul, MN 55104	CCPO	Construction Communication Committee Quarterly Evaluation	Construction Communication Committee Members	20	Webb, Michelle
4/17/12	4:00 PM	Wellington Management, 2610 University Avenue, St. Paul, MN 55104	CCPO	Overnight Notifications: Rail pull and University Avenue Bridge work	Manager	2	Rodriguez, Rita

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Central Corridor LRT Meeting Summary

April, 2012

3. Meetings with Stakeholders

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
4/18/12	6:00 PM	Dar Al Quba, 1501 S. 6th Street, Minneapolis, MN, 55414	West Bank Community Coalition monthly meeting	West Bank Community Coalition	Community Members	25	Pfeiffer, Daniel
4/19/12	11:00 AM	480 Cedar Street, St. Paul, MN 55101	MPR	Construction update meeting with MPR	MPR management	5	Happel, Dana
4/19/12	2:30 PM	University Hotel Minneapolis, 615 Washington Avenue SE, MN, 55454	Monthly Stadium Village Commercial Association Meeting	Stadium Village Commercial Association	Stadium Village Businesses, CCPO Outreach	20	Pfeiffer, Daniel
4/20/12	2:00 PM	654 University Avenue, Saint Paul, MN 55104	Nkongo Cigolo	Meeting With Daisy (Shuang Hur) and Noel Nix to discuss driveway issues	Shuang Hur--University Avenue Businesses	5	Cigolo, Nkongo
4/24/12	1:00 PM	Central Presbyterian Church, Dining room - Lower level	CCPO	Cedar Street Meeting with Properties between 7th and 12th	Cedar Street Properties between 7th and 12th	20	Callaghan, Laura
4/24/12	5:30 PM	Suite 200 McNamara Alumni Center, 200 Oak Street SE, Minneapolis, MN 55414	U of M Stadium Area Advisory Group	Stadium Area Advisory Group Meeting	Community surrounding the new Gopher Stadium, U of M staff	40	Hill, Jessica
4/25/12	11:00 AM	Central Corridor Resource Center, 1080 University Ave W, St Paul, MN 55104	CCPO	Construction Communication Committee	CCC Members	20	Webb, Michelle
4/26/12	1:00 PM	Wells Fargo Place, 110 Wells Fargo Place, 30 East 7th Street, Suite 175, St. Paul, MN 55101	CCPO	Cedar Street Update Meeting (7th to 4th streets)	Cedar Street Property managers from 7th to 12th streets	20	Callaghan, Laura
4/30/12	10:30 AM	559 Capitol Boulevard, Saint Paul, MN 55103	Nkongo Cigolo	Update to Bethesda Hospital	Bethesda Hospital	300	Cigolo, Nkongo

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Central Corridor LRT Meeting Summary

May 2012 Meetings

1. Metropolitan Council initiated public meetings/events

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
5/10/12	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO	East Bank Construction Communication Committee	CCC Members, CCPO Technical Staff, Project Partners	16	Pfeiffer, Daniel
5/14/12	11:30 AM	Tierney Brothers, 3300 University Avenue SE, Minneapolis, MN 55414	CCPO	Prospect Park Construction Communication Committee	Staff, Committee Members, AMJV Staff, City of Minneapolis Staff	15	Pfeiffer, Daniel
5/15/12	11:30 AM	Theatre in the Round, 245 Cedar Ave S, Minneapolis, MN, 55454	CCPO	West Bank Construction Communication Committee	CCPO Techinical Staff, Committee Members	9	Pfeiffer, Daniel
5/23/12	3:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO	Minneapolis Public Construction Information Meeting	CCPO Technical Staff, AMJV, Community Members	20	Pfeiffer, Daniel
5/24/12	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO	East Bank Construction Communication Committee	CCC Members, CCPO Technical Staff, Project Partners	16	Pfeiffer, Daniel

2. Project partner initiated meetings/events

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
5/3/12	8:00 AM	Oxford Community Center/Jimmy Lee Recreation Center, 270 N Lexington, St. Paul, MN 55104		Ramsey County Lets Build		50	Cagaoan, Sandie
5/3/12	9:00 AM	Oxford Comm Center/Jimmy Lee Rec Center 270 North Lexington, St. Paul, MN 55104 Route 21	Robin Caufman	Ramsey County Job Fair		100	Cagaoan, Sandie

 or information about a specific meeting, contact the identified outreach coordinator:

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Central Corridor LRT Meeting Summary

May 2012 Meetings

2. Project partner initiated meetings/events

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
5/3/12	12:00 PM	Mai Village, 394 University Avenue, St. Paul, MN	Robin Caufman	Lunch on the Avenue		30	Cagaoan, Sandie
5/17/12	2:30 PM	540 Fairview Avenue North, St. Paul, MN 55104 Conference Room 2&3, Second Floor	Robin Caufman	DBE/AA Joint Oversight Committee Meeting		30	Cagaoan, Sandie
5/17/12	11:30 AM	Meet on the NW corner of Griggs and University	Nkongo Cigolo	Access Walk Griggs to Chatsworth	City, NDC	11	Cigolo, Nkongo
5/17/12	12:00 PM	Subway, 599 University Avenue, St. Paul, MN	Robin Caufman	Lunch on the Avenue		30	Cagaoan, Sandie
5/17/12	12:00 PM	Subway, 559 University Avenue, St. Paul, MN 55103	Robin Caufman	Lunch on the Avenue		30	Caufman, Robin

3. Meetings with Stakeholders

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
5/1/12	10:00 AM	Snelling to Hamline	ccpo	Site Visits	Business Owners	8	Rodriguez, Rita
5/3/12	11:15 AM	480 Cedar Street, St. Paul, MN 55101	MPR	Construction update with MPR	MPR staff	5	Happel, Dana
5/4/12	1:00 PM	152 University Avenue W, Saint Paul, MN 55103	Nkongo Cigolo	Construction Update Meeting	Abdishakur Hassan	3	Cigolo, Nkongo
5/4/12	2:00 PM	811 University Avenue W St Paul Mn 55104	Raqib Abdi	Access meeting for Ryan Plumbing & Heating Co	John Ryan	5	Abdi, Raqib
5/4/12	3:00 PM	823 Uiveristy Aenue W S Pul MN 55104	Raqib Abdi	Access meeting for A La Franciase	Nguyen Peter	5	Abdi, Raqib
5/4/12	4:00 PM	Second Deput, 1825 University Avenue, St. Paul, MN 55104	ccpo	Site Visit	Manager	2	Rodriguez, Rita
5/4/12	4:00 PM	Elsa's House of Sleep, 1441	ccpo	Site Visit	Owner	3	Rodriguez, Rita

 or information about a specific meeting, contact the identified outreach coordinator:

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Central Corridor LRT Meeting Summary

May 2012 Meetings

3. Meetings with Stakeholders							
Date	**Start Time**	**Meeting location and address**	**Group/Host**	**Topic/Purpose of Meeting**	**Stakeholder Attendees***	**Attendees Expected**	**Project Contact & Phone #**
		University Avenue, St. Paul, MN 55104					
5/4/12	10:00 AM	861 University Avnue w ST PAUL MN 55104	Raqib Abdi	Access meeting for Car-X Auto Service	Jeff	5	Abdi, Raqib
5/7/12	10:30 AM	Door to Door Washington Avenue between Ontario Street and Huron Boulevard	CCPO	Business Access after May 14th	CCPO, AMJV, Individual Business Owners	15	Pfeiffer, Daniel
5/7/12	11:00 AM	739 University Avenue W St Paul Mn 55104	Raqib Abdi	Access meeting for Trung Nam French Bakery	Tony Le	6	Abdi, Raqib
5/7/12	12:00 PM	633 University Avenue W St Paul Mn 55104	Raqib Abdi	Access meeting for Spectrum Staffing Svc Inc	Shawn	5	Abdi, Raqib
5/8/12	3:00 PM	Ngon Bistro, 799 University Ave., Saint Paul	Nkongo Cigolo	Construction Update Meeting with Hai Truong	Ngon Bistro--University Avenue Business	5	Cigolo, Nkongo
5/8/12	9:00 AM	300 Washington St SE Minneapolis, MN 55455	Leo Jackson	LRT Works Youth Career Exploration	high school students	50	Abdi, Raqib
5/8/12	11:00 AM	858 University Avenue St Paul Mn 55103	Raqib Abdi	Access meeting for Mi Linda Terra Supermercado	Jara Lucio	5	Abdi, Raqib
5/8/12	12:00 PM	455 University Avenue St Paul Mn 55103	Raqib Abdi	Access meetinfg for TT Salon	Pissany	5	Abdi, Raqib
5/9/12	9:00 AM	681 University Avenue St Paul Mn 55104	Raqib Abdi	An access meeting for Fire Station #18	Zaccard Steve	5	Abdi, Raqib
5/9/12	11:00 AM	Central Corridor Resource Center, 1080 University Avenue West, St Paul, MN 55104	CCPO	Construction Communication Committee Meeting	CCC Members	20	Webb, Michelle
5/10/12	9:00 AM	300 Washington St SE Minneapolis, MN 55455	Leo Jackson	LRT Works Youth Career Exploration	high school students	50	Abdi, Raqib
5/10/12	11:00 AM	291 University Ave W St Paul Mn 55103	Raqib Abdi	An access meeting for 88 Oriental Foods	Peter Ratsamy	5	Abdi, Raqib

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Central Corridor LRT Meeting Summary

May 2012 Meetings

3. Meetings with Stakeholders

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
5/10/12	11:00 AM	559 Capitol Boulevard, Saint Paul, MN 55103	Nkongo Cigolo	Construction Update Meeting Bethesda	Bethesda Hospital	200	Cigolo, Nkongo
5/15/12	2:00 PM	353 University avenue w ST PAUL MN 55103	Raqib Abdi	Access meeting for Ha Tieng Grocery	Son Dao	5	Abdi, Raqib
5/15/12	10:30 AM	811 University Avnenue W ST PAUL MN 55104	RAQIB ABDI	Access meeting for Vatou L Her Insurance Inc	Vatou L Her	3	Abdi, Raqib
5/16/12	6:00 PM	Dar Al Quba, 1501 S. 6th Street, Minneapolis, MN, 55414	West Bank Community Coalition monthly meeting	West Bank Community Coalition	Community Members	25	Pfeiffer, Daniel
5/17/12	2:30 PM	University Hotel Minneapolis, 615 Washington Avenue SE, MN, 55454	Stadium Village Commercial Association Monthly Meeting	Stadium Village Commercial Association	Business Owners, Community Members, CCPO, AMJV	20	Pfeiffer, Daniel
5/17/12	11:15 AM	480 Cedar Street, St. Paul, MN 55101	MPR	Construction update with MPR	MPR Management	5	Happel, Dana
5/21/12	8:30 AM	Bangkok Thai - 315 University Ave. West	Nkongo Cigolo	Bangkog Thai Areaway Follow up Meeting	University Avenue Business	5	Cigolo, Nkongo
5/21/12	10:00 AM	Judicial Lot (MLK and Robert)	Nkongo Cigolo	TPSS 11 Staging and DOA	Department of Administration	9	Cigolo, Nkongo
5/22/12	1:00 PM	Central Presbterian Church, Dining Room -Lower level	CCPO	Cedar Street Meeting (12th Street to 7th Street properties)	(12th Street to 7th Street properties)	20	Callaghan, Laura
5/23/12	6:30 PM	Mai Village, 394 University Ave W, St Paul, MN	City of St Paul	Community meeting about Western and Victoria construction	businesses and residents in the area	20	Webb, Michelle
5/23/12	10:00 AM	Capitol Building, Room 125, St Paul, MN	Department of Administration	Meeting to discuss University closure between Rice and Robert		15	Webb, Michelle
5/23/12	11:00 AM	Central Corridor Resource Center, 1080 University Ave W, St Paul, MN 55104	CCPO	Construction Communication Committee University Avenue	Construction Communication Committee Members	25	Webb, Michelle

 or information about a specific meeting, contact the identified outreach coordinator:

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Central Corridor LRT Meeting Summary

May 2012 Meetings

3. Meetings with Stakeholders							
Date	**Start Time**	**Meeting location and address**	**Group/Host**	**Topic/Purpose of Meeting**	**Stakeholder Attendees***	**Attendees Expected**	**Project Contact & Phone #**
5/24/12	1:00 PM	Wells Fargo Place, 110 Wells Fargo Place, 30 East 7th Street, Suite 175, St. Paul, MN 55101	CCPO	Cedar Street Update Meeting (7th-4th Street properties)	properties managers on Cedar Street between 7th street and 4th Street	20	Callaghan, Laura
5/31/12	10:00 AM	741 University Avenue West, Saint Paul, MN 55104	Nkongo Cigolo	Access Meeting for Milan's Motor Towing Services	Milan's Motor Towing Services	6	Cigolo, Nkongo
5/31/12	11:15 AM	480 Cedar Street, St. Paul, MN 55101	MPR	Construction update with MPR	MPR Management	5	Happel, Dana
5/31/12	12:00 PM	Cheng Heng Restaurant, 448 University Avenue W, St. Paul, MN 55103	CCPO	Lunch on the Avenue		30	Centralcorridor

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Central Corridor LRT Meeting Summary

June, 2012

1. Metropolitan Council initiated public meetings/events							
Date	**Start Time**	**Meeting location and address**	**Group/Host**	**Topic/Purpose of Meeting**	**Stakeholder Attendees**	**Attendees Expected**	**Project Contact & Phone #**
6/4/12	12:30 PM	University Hamline to Griggs	Nkonog Cigolo	Sidewalk Reconstruction Notification--University Avenue North Side Hamline to Griggs	University Avenue Businesses: Hamline to Griggs	15	Cigolo, Nkongo
6/11/12	11:30 AM	Tierney Brothers, 3300 University Avenue SE, Minneapolis, MN 55414	CCPO	Prospect Park Construction Communication Committee	CCPO Staff, Committee Members, AMJV Staff, City of Minneapolis Staff	15	Pfeiffer, Daniel
6/14/12	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO	East Bank Construction Communication Committee	CCC Members, CCPO Technical Staff, Project Partners	16	Pfeiffer, Daniel
6/19/12	11:30 AM	Theatre in the Round, 245 Cedar Ave S, Minneapolis, MN, 55454	CCPO	West Bank Construction Communication Committee	CCPO Techinical Staff, Committee Members	9	Pfeiffer, Daniel
6/19/12	4:00 PM	Brian Coyle Center, Multipurpose Room, 420 15th Avenue South, Minneaplis, MN	Robin Caufman	Central Corridor Transit Service Study Outreach		30	Centralcorridor
6/19/12	4:00 PM	Brian Coyle Center, 420 15th Ave S	Metro Transit Service Study	Central Corridor Transit Service Study	Metro Transit, CCPO Outreach,Community Members	50	Pfeiffer, Daniel
6/21/12	4:00 PM	Central Corridor Resource Center, 1080 University Avenue West, St. Paul, Minnesota	Robin Caufman	Central Corridor Transit Service Study Outreach		30	Centralcorridor
6/21/12	4:00 PM	Central Corridor Resource Center, 1080 University Ave W, St Paul, MN 55104	Metro Transit	Central Corridor Transit Service Concept Plan Meeting	Transit Riders	30	Webb, Michelle
6/23/12	1:00 PM	Goodwill/Easter Seals Community Mtg Room, 553 Fairview Avenue N, St. Paul, Minnesota	Robin Caufman	Central Corridor Transit Service Study Outreach		30	Centralcorridor

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Central Corridor LRT Meeting Summary

June, 2012

1. Metropolitan Council initiated public meetings/events

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees	Attendees Expected	Project Contact & Phone #
6/23/12	1:00 PM	553 Fairview Avenue N., Saint Paul, MN 55104	Nkongo Cigolo	Public Meeting on Planned Transit Service Changes	Corridor Residents	50	Cigolo, Nkongo
6/25/12	11:30 AM	Tierney Brothers, 3300 University Avenue SE, Minneapolis, MN 55414	CCPO	Prospect Park Construction Communication Committee	CCPO Staff, Committee Members, AMJV Staff, City of Minneapolis Staff	15	Pfeiffer, Daniel
6/26/12	11:00 AM	Hennepin County Central Library, Doty Board Room, 300 Nicollet Mall, Minneapolis, MN	Robin Caufman	Central Corridor Transit Service Study Outreach - Public Hearings		30	Centralcorridor
6/26/12	11:00 AM	Central Library, Doty Board Room, 300 Nicollet Mall, Minneapolis, MN	Metro Transit	Central Corridor Transit Service Concept Plan	Transit Riders	20	Webb, Michelle
6/27/12	3:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO	Minneapolis Public Construction Information Meeting	CCPO Technical Staff, AMJV, Community Members	20	Pfeiffer, Daniel
6/28/12	2:00 PM	Grace University Lutheran Church, 324 Harvard Street SE, Minneapolis, MN 55414	CCPO	East Bank Construction Communication Committee	CCC Members, CCPO Technical Staff, Project Partners	16	Pfeiffer, Daniel
6/28/12	4:00 PM	Rondo Community Outreach Library Multipurpose Room, 461 Dale Street North, St. Paul, MN	Robin Caufman	Central Corridor Transit Service Study Outreach - Public Hearing		30	Centralcorridor

2. Project partner initiated meetings/events

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
6/7/12	12:30 PM	NW corner of Chatsworth	CCPO and City of St Paul City Council	Access Walk-Through Chatsworth to Grotto		5	Webb, Michelle

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Central Corridor LRT Meeting Summary

June, 2012

2. Project partner initiated meetings/events

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
6/21/12	2:30 PM	540 Fairview Avenue North, St. Paul, MN 55104 Conference Room 2&3, Second Floor	Robin Caufman	DBE/AA Joint Oversight Committee Meeting		30	Cagaoan, Sandie
6/28/12	12:00 PM	University Buffet, 225 University Avenue, St. Paul, MN 55104	Robin Caufman	Lunch on the Avenue		30	Centralcorridor

3. Meetings with Stakeholders

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
6/1/12	10:00 AM	225 University Ave. W Saint Paul Mn 55103	RAQIB ABDI	An access meeting for Vang Dental Clinic.	Pete Vang	3	Abdi, Raqib
6/4/12	11:00 AM	277 University Ave W Saint Paul Mn 55103	RAQIB ABDI	An access meeting for Vietnamese Social Services	Peter Nguyen	3	Abdi, Raqib
6/4/12	11:45 AM	491 University Ave W saint paul mn 55103	Raqib Abdi	An access meeting for Lor Dental Clinic	Pase Lor	3	Abdi, Raqib
6/5/12	8:00 AM	Model Cities Brownstone Building, 849 University Ave West, St Paul, MN 55104	City of St. Paul	Community meeting to discuss Victoria staging plans	residents and businesses near Victoria and University	25	Webb, Michelle
6/6/12	9:00 AM	Subway, 2121 University Avenue West, St Paul, MN 55114	Jackie Lunde, Subway	Meeting with Jackie Lunde at Subway		5	Webb, Michelle

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Central Corridor LRT Meeting Summary

June, 2012

3. Meetings with Stakeholders

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
6/6/12	2:00 PM	301 University Avenue St PAUL MN 55103	RAQIB ABDI	An access meeting for Animal Emergency Clinic	Leslie A. Epstein	3	Abdi, Raqib
6/7/12	12:30 PM	Victoria and University intersection - NE corner, St Paul, MN	City of St Paul	Discuss Victoria Construction Staging with Stakeholders	Businesses along corridor	25	Webb, Michelle
6/12/12	2:00 PM	Marsden Building, 1717 University Avenue West, St Paul, MN	Marsden Building	Meeting to look at irrigation issues at Marsden Building	Property owner of Marsden Building	4	Webb, Michelle
6/13/12	11:00 AM	Central Corridor Resource Center, 1080 University Ave W, St Paul, MN 55104	CCPO	Construction Communication Committee - University Avenue West	CCC members	20	Webb, Michelle
6/14/12	11:15 AM	480 Cedar Street, St. Paul, MN 55101	MPR	Construction update with MPR	MPR management	5	Happel, Dana
6/14/12	2:30 PM	University Hotel Minneapolis, 615 Washington Avenue SE, MN, 55454	Stadium Village Commercial Association Monthly Meeting	Stadium Village Commercial Association	Business Owners, Community Members, CCPO, AMJV	20	Pfeiffer, Daniel
6/15/12	9:00 AM	Midway Shopping Center	Nkongo Cigolo	Meeting with Midway Shopping Center Management and Attorneys	University Avenue Businesses	6	Cigolo, Nkongo
6/18/12	9:00 AM	Four Star Auto, 3324 University Avenue SE, Minneapolis, 55414	CCPO	Business Access Meeting- University Avenue Traffic Switch	CCPO, AMJV, Business Owner	3	Pfeiffer, Daniel
6/18/12	10:00 AM	Seeley Legal, 3430 University Avenue SE, Minneapolis, 55414	CCPO	Business Access Meeting- University Avenue Traffic Switch	CCPO, AMJV, Business Owner	3	Pfeiffer, Daniel

 or information about a specific meeting, contact the identified outreach coordinator:

Sandie Cagaoan (651) 602-1968 Robin Caufman (651) 602-1457 Nkongo Cigolo (651) 602-1559 Dana Happel (651) 602-1954 Jessica Hill (651) 602-1840
Shoua Lee (651) 602-1014 Dan Pfeiffer (651) 602- 1952 Raqib Abdi (651) 602-1908 Michelle Webb (651) 602-1485

Central Corridor LRT Meeting Summary

June, 2012

3. Meetings with Stakeholders

Date	Start Time	Meeting location and address	Group/Host	Topic/Purpose of Meeting	Stakeholder Attendees*	Attendees Expected	Project Contact & Phone #
6/18/12	11:00 AM	Asphalt Driveway Corp, 3360 University Avenue SE, 55414	CCPO	Business Access Meeting- University Avenue Traffic Switch	CCPO, AMJV, Business Owner	3	Pfeiffer, Daniel
6/20/12	4:00 PM	Model Cities Brownstone Building, 849 University Avenue West, St Paul, MN	Business Resource Collaborative	Public Construction Information Meeting	public	20	Webb, Michelle
6/21/12	10:00 AM	Saint Paul Area Chamber of Commerce, 401 Robert Street, Board Room, St. Paul, MN 55101	CCPO	Construction Communication Committee meeting	Construction Communication Committee members	15	Happel, Dana
6/25/12	2:00 PM	NE corner of Grotto and University, St Paul, MN	City of St Paul	Access Walk from Grotto to Mackubin	City council members and small business consultants	10	Webb, Michelle
6/26/12	1:00 PM	Central Presbterian Church, Dining Room -Lower level	CCPO	Cedar Street Meeting Update Meeting (from 12th-7th Street Properties)	property managers from 12th-7th Street properties	20	Happel, Dana
6/27/12	11:00 AM	Central Corridor Resource Center, 1080 University Avenue West, St Paul, MN 55104	CCPO	Construction Communication Committee - University Avenue	CCC members	20	Webb, Michelle
6/28/12	11:15 AM	480 Cedar Street, St. Paul, MN 55101	MPR	Construction update with MPR	MPR management	5	Happel, Dana
6/28/12	1:00 PM	Wells Fargo Place, 110 Wells Fargo Place, 30 East 7th Street, Suite 175, St. Paul, MN 55101	CCPO	Cedar Street Construction Update Meeting (7th to 4th Street)	Cedar Street property managers between 7th and 4th Streets	20	Happel, Dana
6/29/12	12:30 PM	422 University Ave W, Suite 3, St Paul, MN	AEDA	Meeting to go over issues at Oriental Video	Tenant at 422 University	5	Webb, Michelle

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