

What is an Alternatives Analysis?

- Required by the Federal Transit Administration (FTA)
- Builds on previous locally-led planning work
- Evaluates modes and alignments within a study corridor
 - Alternatives are developed to meet locally-defined purpose and need for project
 - Alternatives are subjected to multiple levels of evaluation against pre-defined criteria, which may include:
 - Cost
 - Operations
 - Ridership
 - Land use and economic development impacts
 - Environmental impacts
 - Best-performing alternative becomes the Locally-Preferred Alternative (LPA)
- The Metropolitan Council needs to adopt the LPA
- Public input is critical

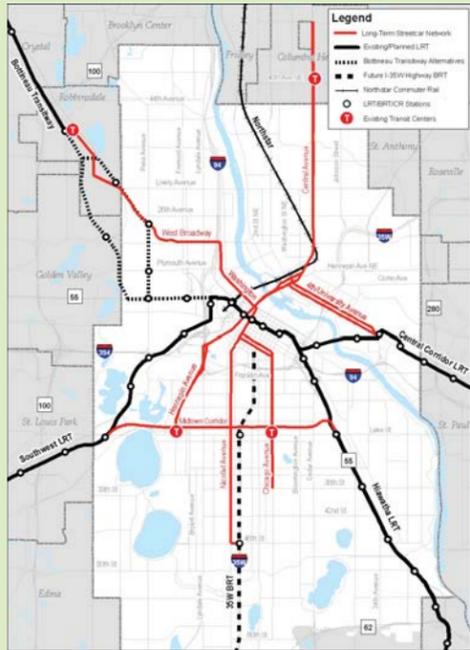
How long will it take?



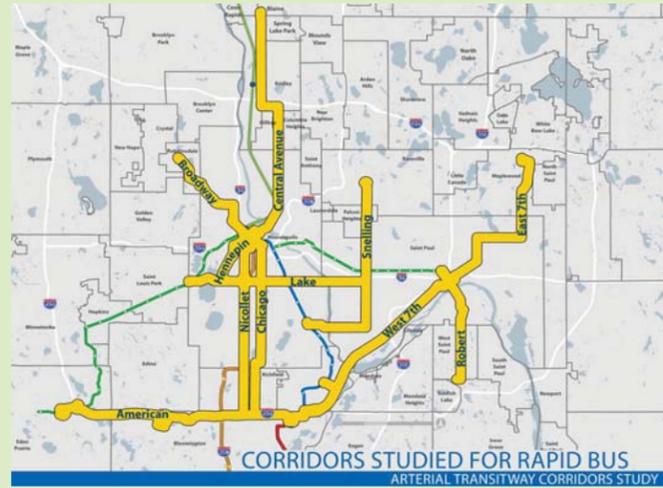
Project Development Process

Previous Work

December 2007:
Minneapolis Streetcar Feasibility Study

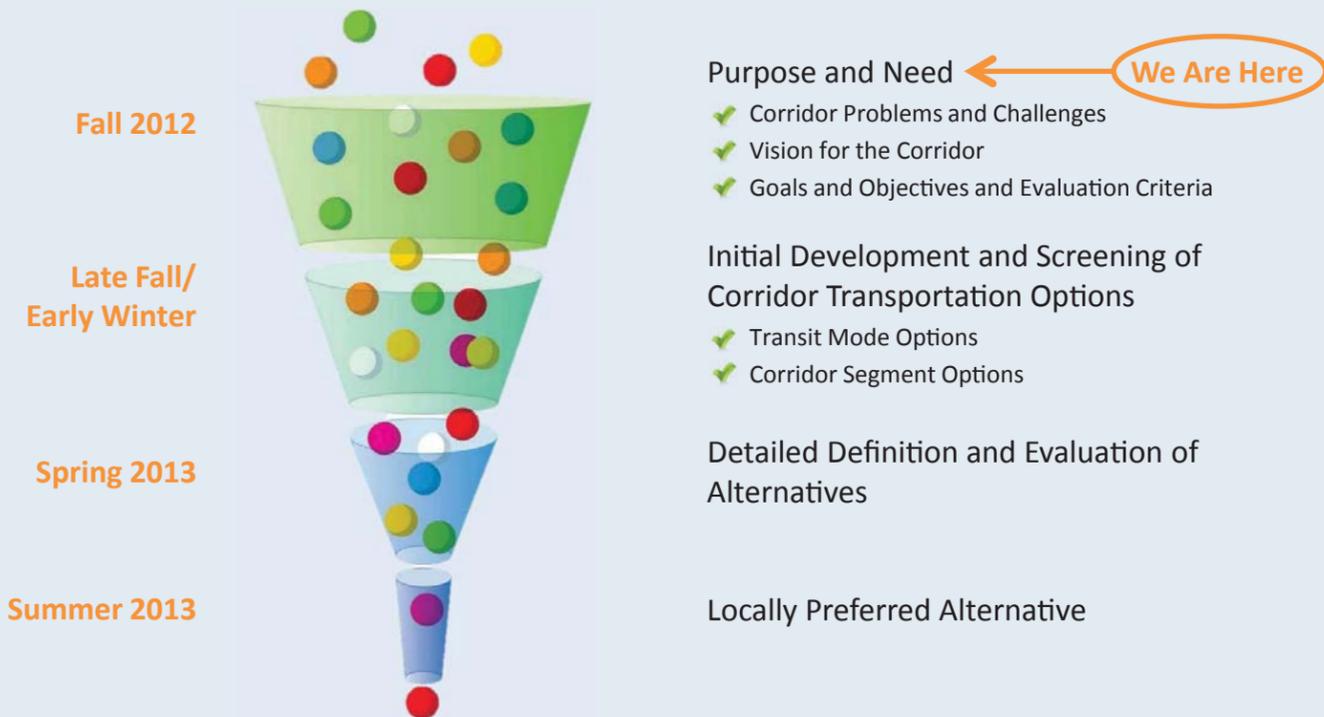


April 2012:
Arterial Transitway Corridors Study



Current Work

2012 – 2013: Nicollet-Central Transit Alternatives Study



Metropolitan Council - Approval of LPA

Next Steps

Design and Environmental Review

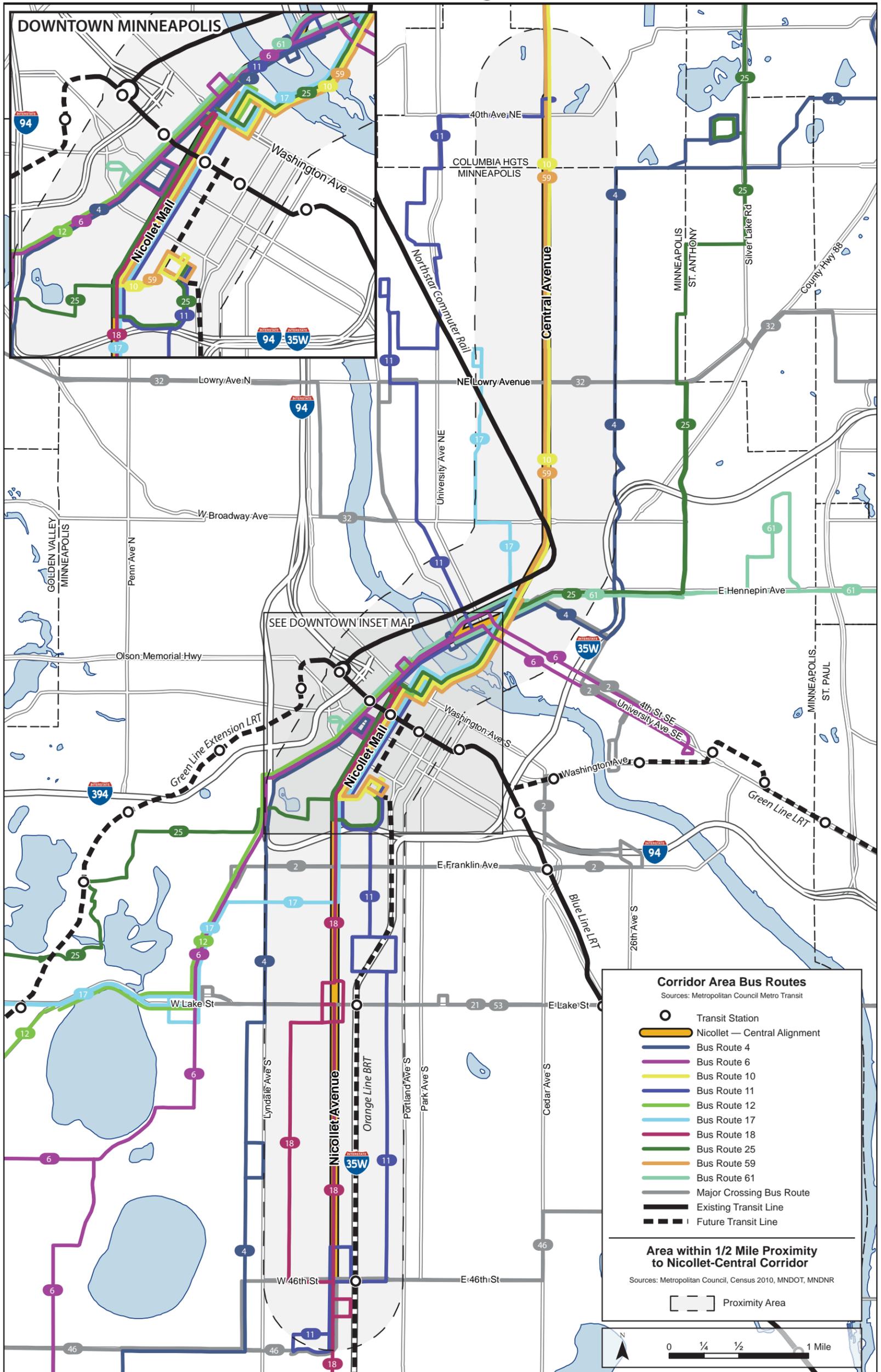
Construction

Operations

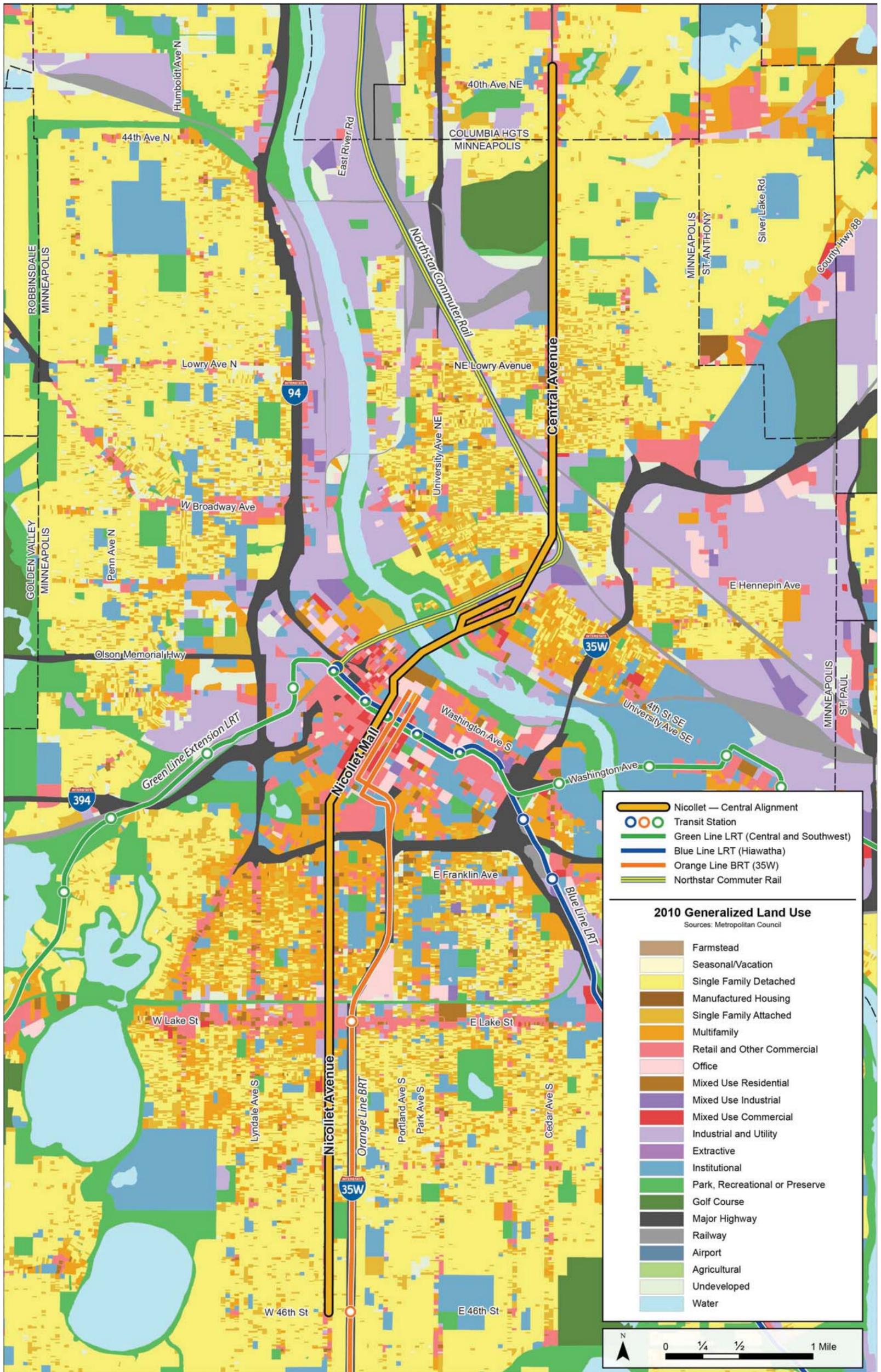
Secure Funding



Nicollet-Central Existing Transit Service

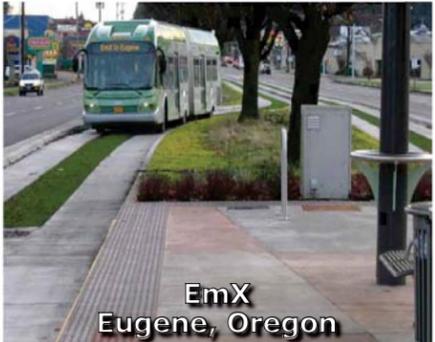


2010 Generalized Land Use



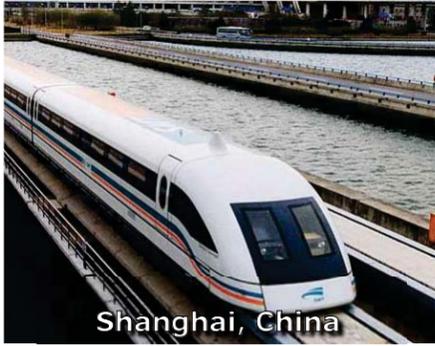
Potential Transit Options

These forms of transit could operate within the Nicollet-Central Transit Corridor.

	Conventional Bus	Mixed Traffic		Dedicated Guideway	
		Enhanced Bus	Modern Streetcar	Bus Rapid Transit in Dedicated Busway	Light Rail Transit
	 <p>Hybrid Bus Minneapolis, Minnesota</p>	 <p>Silver Line Boston, Massachusetts</p>	 <p>Portland Streetcar Portland, Oregon</p>	 <p>HealthLine BRT Cleveland, Ohio</p>	 <p>Hiawatha Line Minneapolis, Minnesota</p>
	 <p>Hybrid Bus Minneapolis, Minnesota</p>	 <p>MAX Kansas City, Missouri</p>	 <p>Seattle Streetcar Seattle, Washington</p>	 <p>EmX Eugene, Oregon</p>	 <p>DART Dallas, Texas</p>
Vehicle type/configuration	Single or articulated bus	Single or articulated bus	Single car train	Single or articulated bus	One to four car trains
Right-of-way	Mixed traffic lanes or bus-only lanes	Operates in mixed traffic	Rail tracks embedded within mixed traffic lane	Exclusive traffic lane or separate roadway; buses accommodate travel on streets beyond guideway	Exclusive rail corridor or tracks embedded within lane of roadway
Power source	Diesel, diesel/electric hybrid, or overhead electrical system	Diesel or diesel/electric hybrid	Overhead electrical system	Diesel or diesel/electric hybrid	Overhead electrical system
Top speed	Same as posted speed limit	Same as posted speed limit	Same as posted speed limit	55 mph	55 mph
Average corridor length	Varies	5 to 20 miles	2 to 5 miles	5 to 20 miles	10 to 20 miles
Station or stop spacing	1 to 3 blocks	1/4 to 1/2 mile	1/4 to 1/3 mile	Typically 1/2 to 1 mile	Typically 1 mile
Capital cost per mile	Vehicle cost plus shelter costs (<\$1 million)	\$1 to \$6 million	\$30 to \$60 million	\$10 to \$50 million	\$80 to \$125 million
Noteworthy operating locations	Cities throughout North America	<i>Operating:</i> New York Kansas City Los Angeles Oakland Boston Las Vegas Seattle <i>In Development:</i> El Paso Chicago Jacksonville San Diego	<i>Operating:</i> Portland Seattle Toronto <i>In Development:</i> Tucson Charlotte Atlanta Salt Lake City Washington DC	<i>Operating:</i> Boston Cleveland Los Angeles Orlando Ottawa Pittsburgh Sacramento Salt Lake City Eugene <i>In Development:</i> Fort Collins	<i>Operating:</i> Baltimore Buffalo Cleveland Dallas Los Angeles Minneapolis Portland San Diego San Jose St. Louis Salt Lake City

Potential Transit Options

These forms of transit could not operate within the Nicollet-Central Transit Corridor

	Heavy Rail	Maglev	Automated Guideway Transit		Commuter Rail
			Monorail	Personal Rapid Transit (PRT)	
	 <p>CTA Chicago, Illinois</p>	 <p>Shanghai, China</p>	 <p>Las Vegas, Nevada</p>	 <p>Heathrow Airport London, England</p>	 <p>Northstar Minneapolis, Minnesota</p>
	 <p>Metro Washington, D.C.</p>	 <p>Yamanashi, Japan</p>	 <p>Seattle, Washington</p>	 <p>London, England (Visualization)</p>	 <p>Sounder Seattle, Washington</p>
Vehicle type/configuration	Multiple car train	Multiple car train	Multiple car train	Small, single car vehicles	Locomotive unit plus three to ten passenger cars
Right-of-way	Underground or elevated network of corridors	Underground or elevated corridor	Elevated beam	Elevated guideway network	Freight rail corridor
Power source	Electrified third rail	Electromagnetism	Electrified third rails, contact wires, or channels attached to guidance beam	Battery	Diesel or overhead electrical system
Top speed	80 mph	268 mph	60 mph	30 mph	80 mph
Average corridor length	5 to 20 miles	300 miles	4 miles	3 miles	20 to 100 miles
Station or stop spacing	1 to 2 miles in outlying areas, closer in urban centers	50 to 100 miles	1 to 2 miles	<1/2 mile	2 to 5 miles
Noteworthy Operating Locations	Atlanta Chicago New York San Francisco Washington D.C.	Shanghai Maglev Train (No systems in operation in North America)	Disney World Las Vegas Newark Airport Seattle	Morgantown, West Virginia (1975) Heathrow Airport, London (2010) Masdar City, UAE (2011)	New York Chicago Philadelphia Dallas Los Angeles Minneapolis San Francisco

Elements of Enhanced Bus and Modern Streetcar

Mixed Traffic Operations



Eugene, OR



Portland, OR



Boston, MA



Seattle, WA

Enhanced Bus
Streetcar

Station & Urban Environment



Boston, MA

Enhanced Bus



Seattle, WA

Streetcar



Portland, OR

Streetcar

Boarding



Snohomish County, WA

Enhanced Bus



Portland, OR

Streetcar

Power System



Portland, OR

Streetcar

Vehicle Interior



Portland, OR

Streetcar



New York, NY

Enhanced Bus



Snohomish County, WA

Enhanced Bus



DRAFT - Purpose of Proposed Action

The purpose of the Nicollet-Central Transit Alternatives project is to improve connectivity, enhance the attractiveness of transit service, and catalyze development within the Nicollet-Central Corridor.

DRAFT - Problem Statement

Minneapolis is a dense urban built environment with a growing network of transportation alternatives. The Twin Cities region has several major transit investments in various stages of implementation, most of which directly serve downtown Minneapolis and are primarily oriented to serving long and medium distance trips. The Nicollet-Central corridor includes some of the region's most densely-developed and transit-oriented activity centers, including downtown, and is planned to continue to grow with compact, mixed-use development. The corridor has a significant demand for shorter distance transit trips and is currently served directly by several high-ridership bus routes. While bus service in the corridor is frequent, it does not connect the activity centers and destinations in the corridor with a legible, easy-to-use, reliable transit service that can serve the growing travel demand and support economic development objectives.

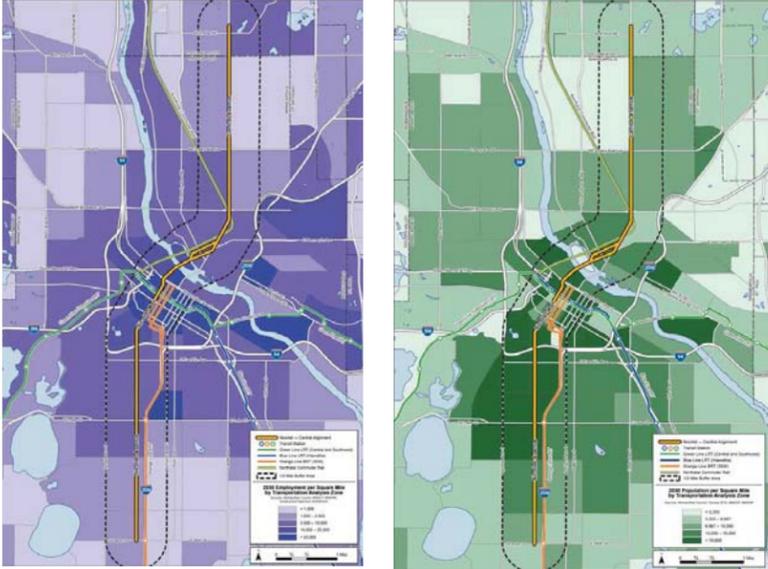
DRAFT - Project Goals and Objectives

Based on the Purpose and Need for transit improvements in the Nicollet-Central Corridor, the following Goals and Objectives have been developed:

- **Connect People and Places**
 - o Connect Downtown with nearby neighborhoods
 - o Enhance connections between corridor activity centers and destinations
 - o Improve connections between the corridor and the regional transit system
- **Increase the Attractiveness of Transit**
 - o Provide transit capacity for future growth
 - o Maximize transit ridership
 - o Improve visibility and identification of the transit system
 - o Provide improved passenger amenities and infrastructure
 - o Provide reliable, frequent service
 - o Provide transit service and facilities that are easy to use for both regular and occasional riders
- **Catalyze and Support Economic Development**
 - o Support the economic vitality of downtown
 - o Support the economic vitality of small neighborhood businesses
 - o Support local and regional goals to foster compact, mixed-used development along the corridor
- **Integrate with the Transportation System**
 - o Integrate with the existing transit network
 - o Provide acceptable traffic operations and reasonable parking options
 - o Support walkable neighborhoods and multimodal transportation choices
- **Support Healthy Communities and Environmental Practices**
 - o Minimize impacts to historical and cultural resources and to disadvantaged communities
 - o Minimize neighborhood and property impacts
 - o Support improved transportation, housing and economic opportunities for people of all income levels
- **Develop an Implementable Project with Community Support**
 - o Define transit improvements with strong public, stakeholder and agency support
 - o Identify transit improvements that are financially feasible and competitive
 - o Develop transit improvements that allow for phased implementation

DRAFT - Project Need: Strong and Growing Travel Demand

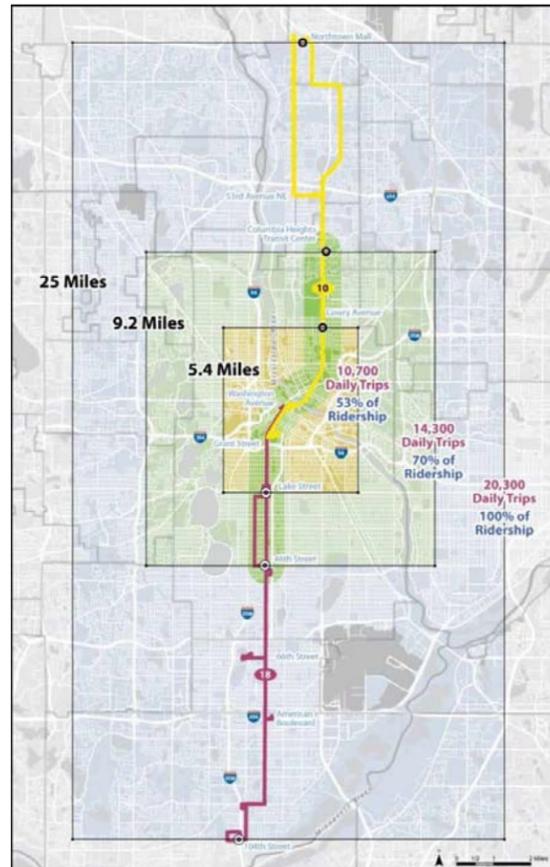
Population and employment are densely concentrated in the corridor and projected to grow significantly in and near downtown Minneapolis.



A lot of people living in the corridor rely on public transportation for access to jobs and economic opportunities and contribute to a strong transit market in the corridor.



Existing bus riders make a lot of short trips in the corridor already, and demand for short trips is expected to grow with population and employment growth.



Weekday Passenger Trips on Routes 10 and 18 by Segment



People who Rely on Transit

% Zero Car Households:

- ½ mile Corridor: 25%
- Minneapolis: 19%
- 7-County Metro: 8%

% Population Living in Poverty:

- ½ mile Corridor: 24%
- Minneapolis: 22%
- 7-County Metro: 10%



CULTURAL	INSTITUTIONAL/ EDUCATIONAL	RECREATIONAL/ TOURISM	SHOPPING/DINING
Minneapolis Institute of Arts	University of St. Thomas	Minneapolis Convention Center	Nicollet Mall shopping and restaurant district
Children's Theatre Company	Minneapolis Community and Technical College	St. Anthony Main/Mississippi River	"Eat Street" restaurant district
Hennepin Theatre Trust (Orpheum, State, Pantages, New Century Theatres)	Minneapolis College of Art and Design	Target Center	Central Avenue NE commercial district
The Cowles Center for Dance and the Performing Arts	Minneapolis Central Library	Target Field	East Hennepin commercial district
Orchestra Hall		6,000 hotel rooms in downtown	Northeast Arts District

The corridor serves a diverse range of destinations and reasons that people travel, contributing to a strong, all-day transit market.



Local land use policies direct compact, mixed-use development to the corridor, and the development market has shown those policies are being implemented.

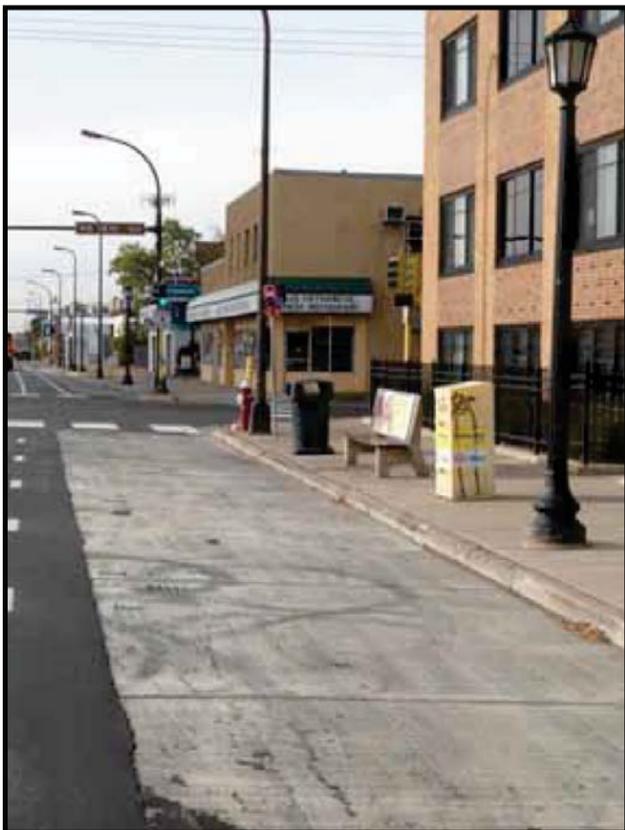


Nicollet Mall is a central component of economic vitality in downtown Minneapolis, and the public and private sectors have prioritized improving infrastructure, circulation options, and the pedestrian experience on the Mall.

DRAFT - Project Need: Deficiencies in Existing Bus Service



- The quality of existing passenger facilities in the corridor is basic and not commensurate with passenger demand.



- Boarding and fare payment on existing bus service is slow and contributes to inconsistent reliability of service in the corridor.



- The existing bus service in the corridor is not clearly distinguishable from other bus service in the region and does not connect all of the activity centers in the corridor in a way that makes it attractive and easy to use for both regular and occasional riders.



- Existing vehicles and service frequency contribute to capacity constraints for future growth.



Project Study Process

