Nicollet-Central Transit Alternatives Study

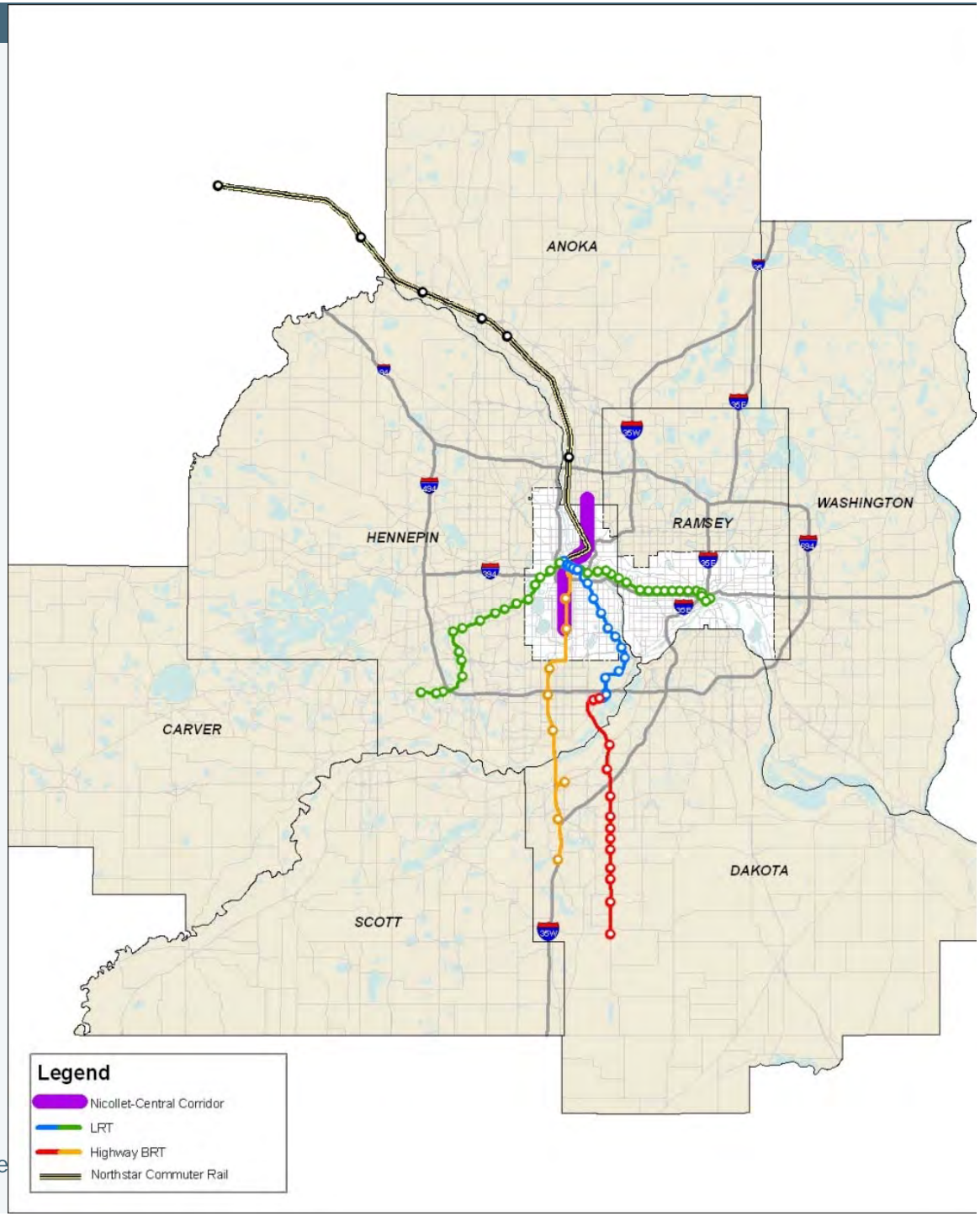
Policy Advisory Committee

September 24, 2012

STUDY OVERVIEW

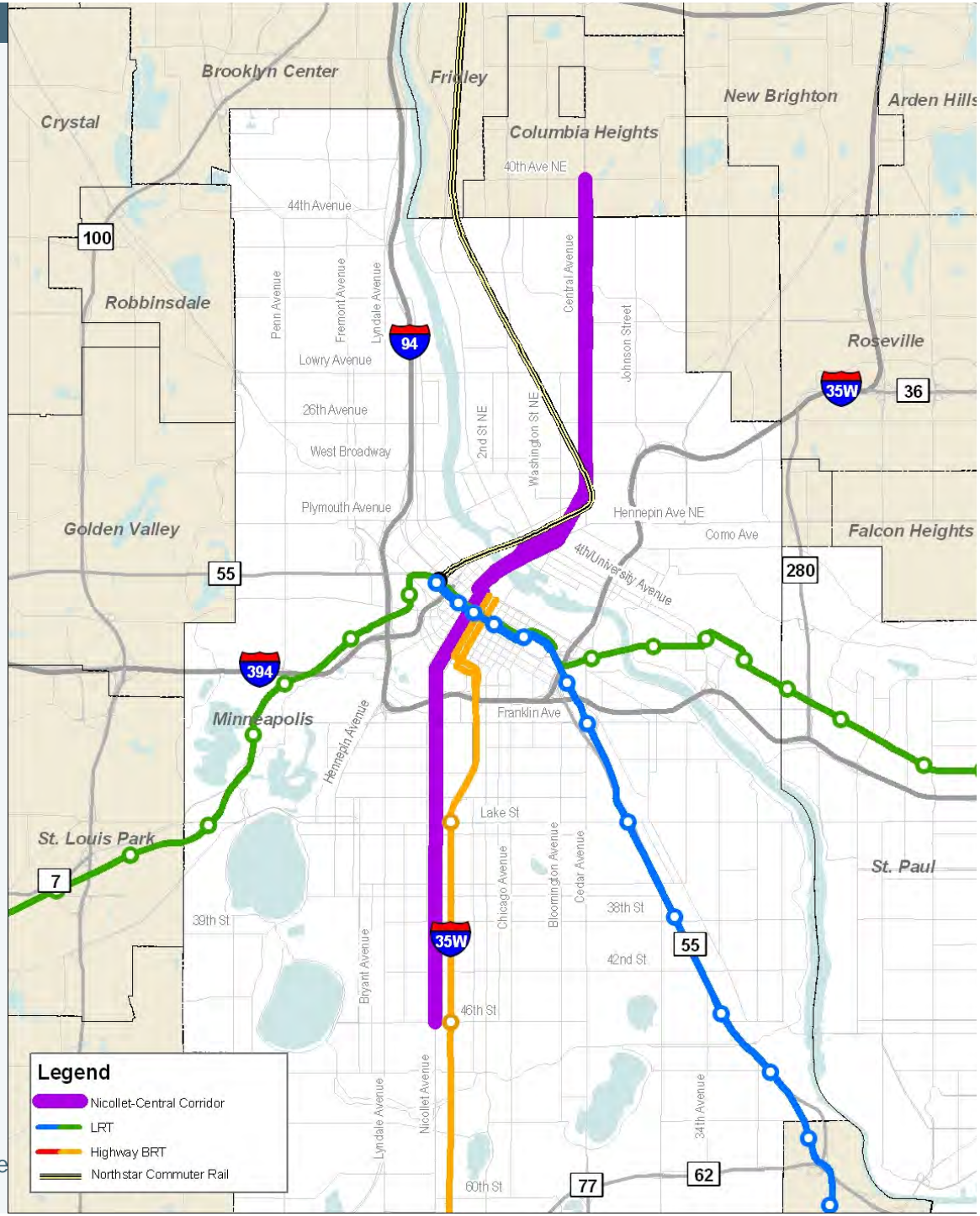
Study Corridor

Regional Context



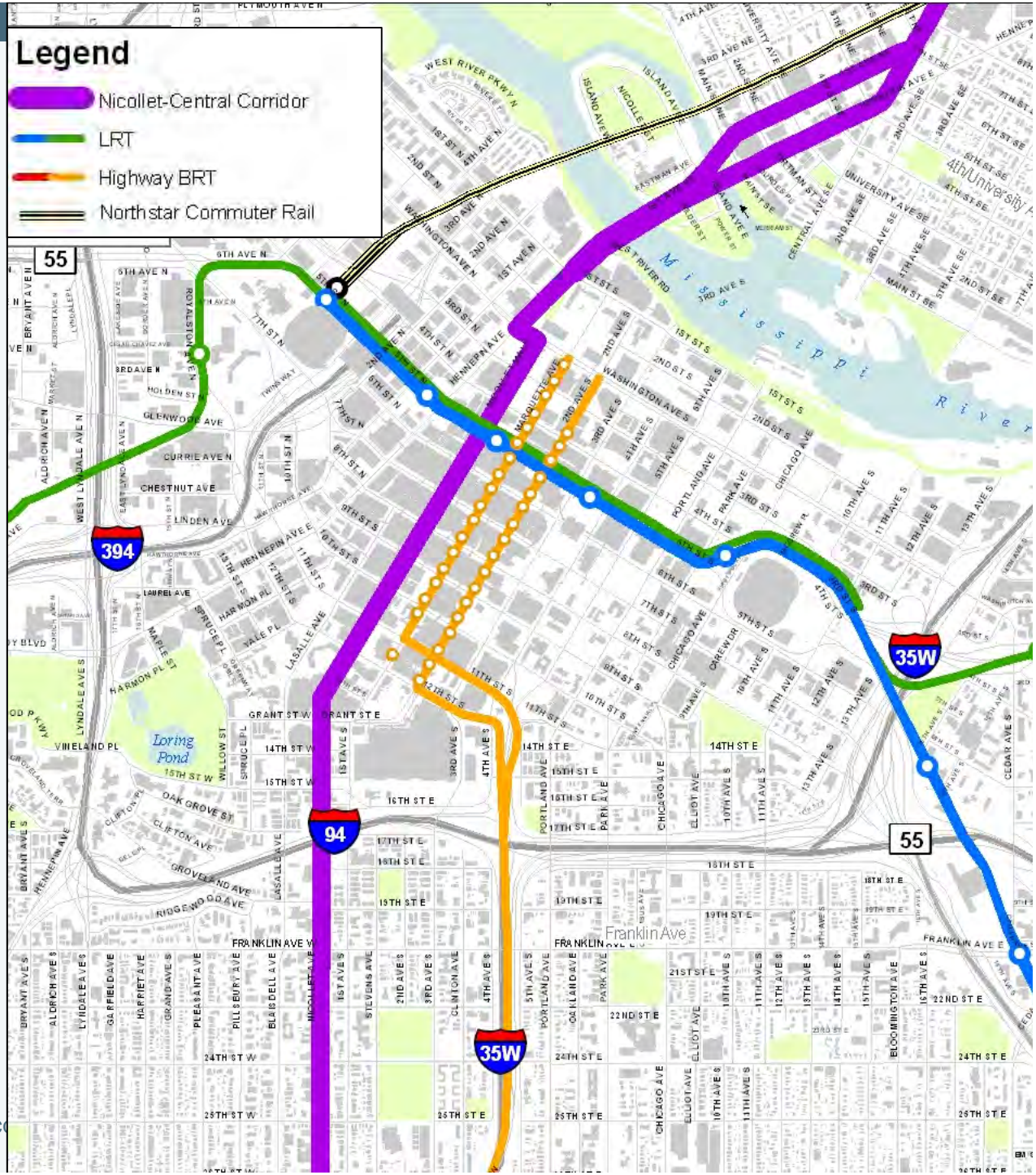
Study Corridor

Central Cities Context



Study Corridor

Downtown Context



minneapolis city of lakes

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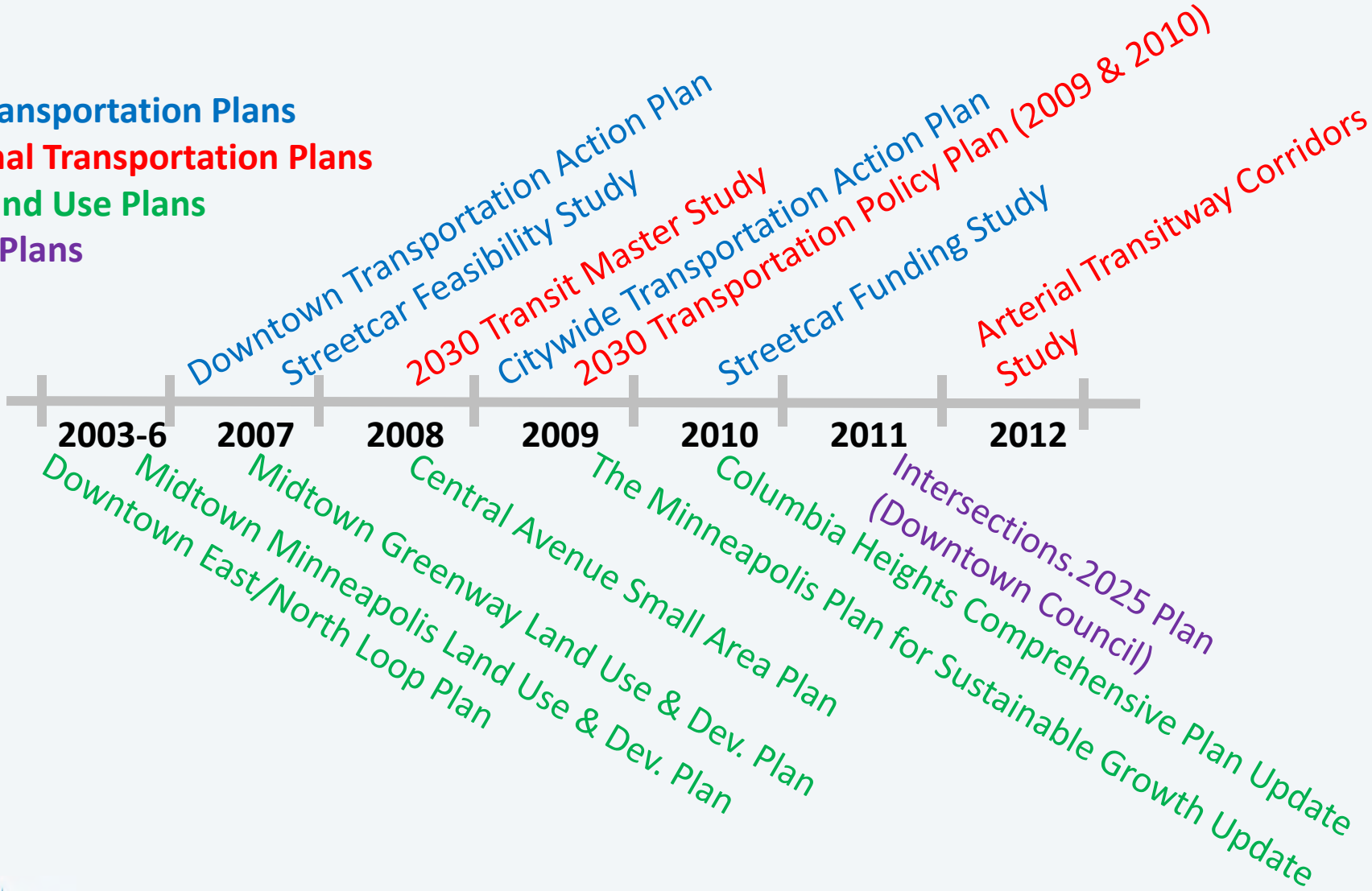
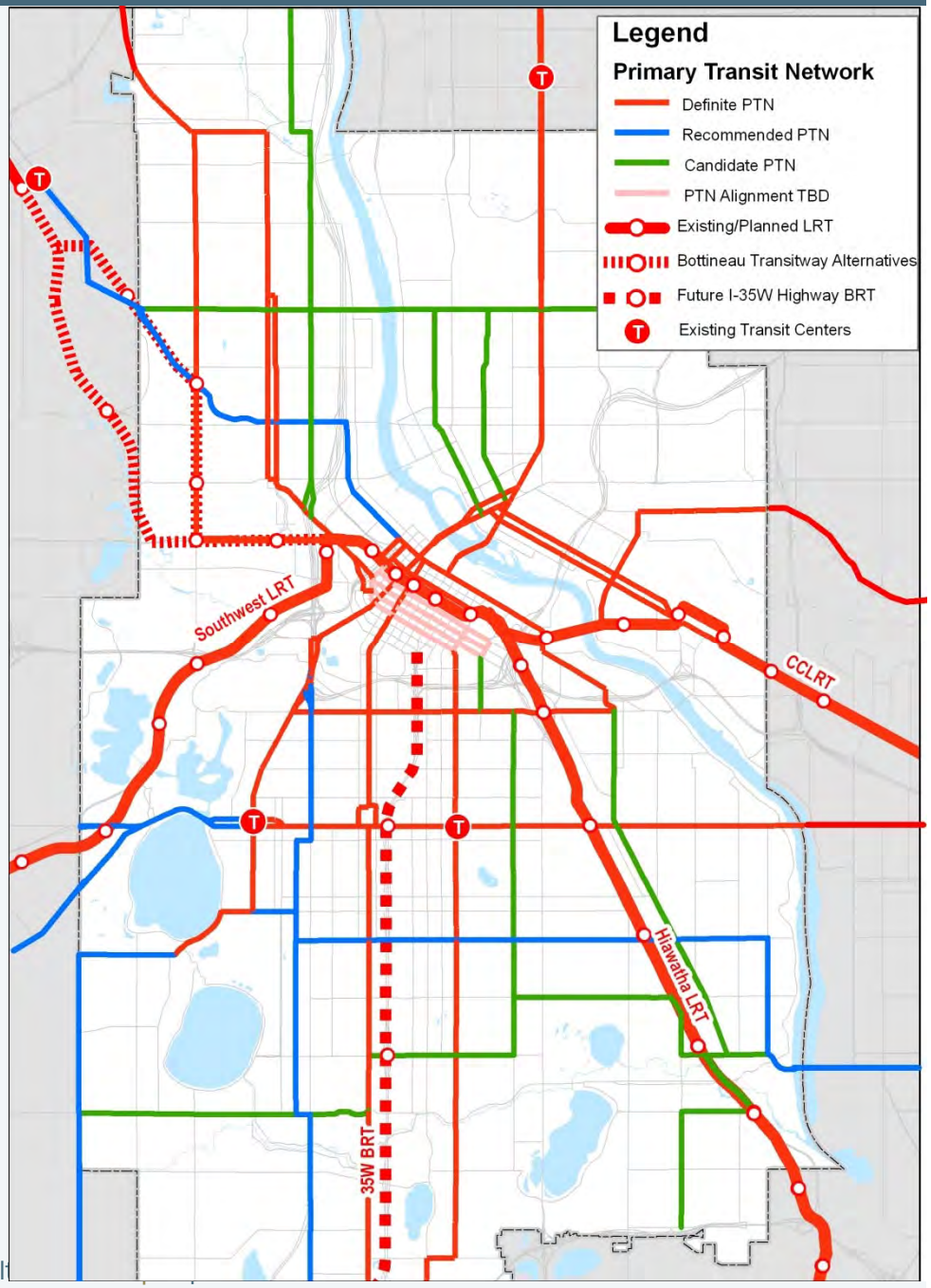
Previous Plans & Studies

City Transportation Plans
Regional Transportation Plans
City Land Use Plans
Other Plans



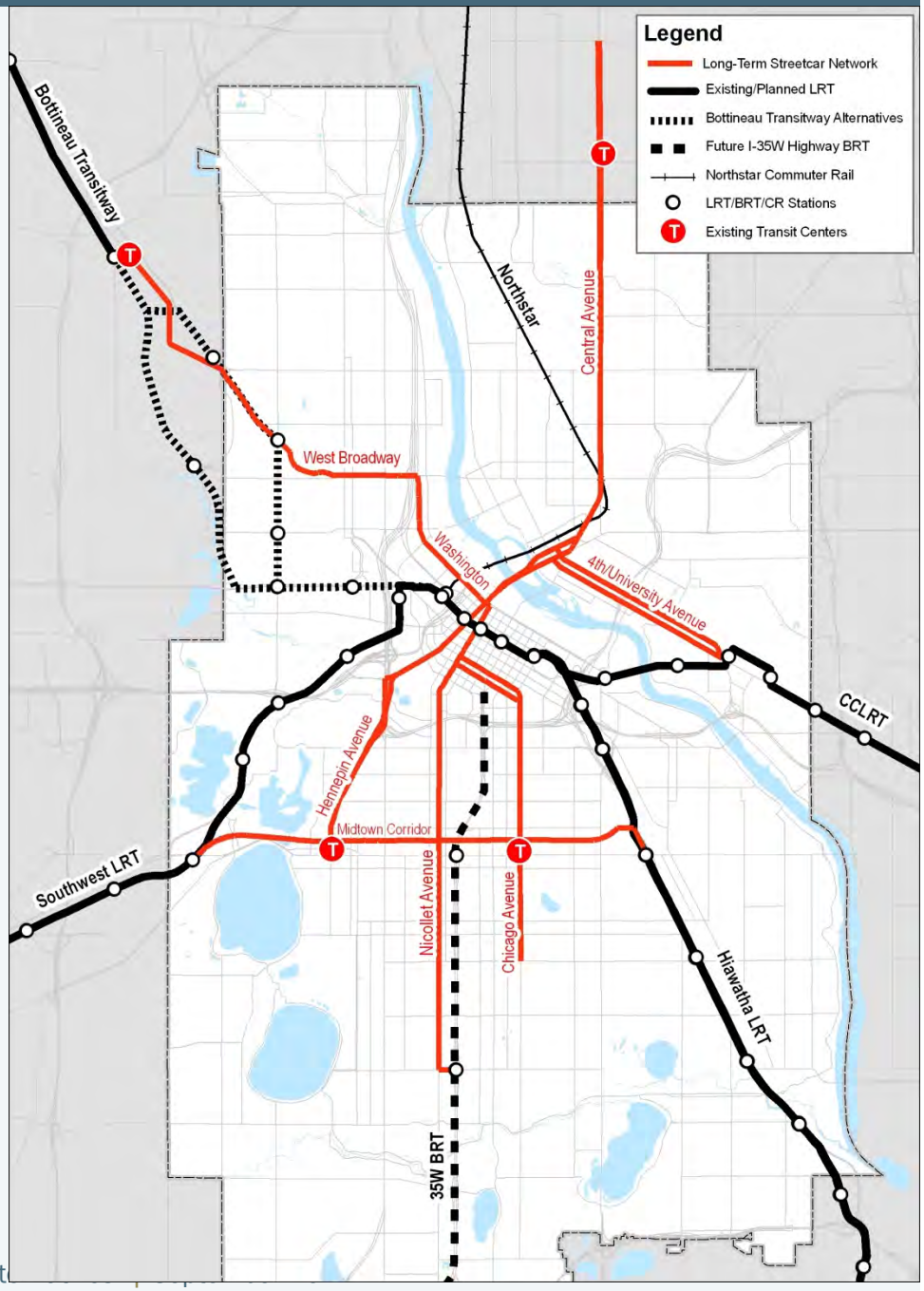
Access Minneapolis Primary Transit Network

- Performance Criteria
  - At least every 15 minutes, 18 hours a day, 7 days a week
  - Reliable, on-time
  - At least 30% of speed limit
- Bus or rail
- Land Use/Transit Coordination
  - Direct growth/density to transit
  - Grow/improve transit through density



Streetcar Feasibility Study

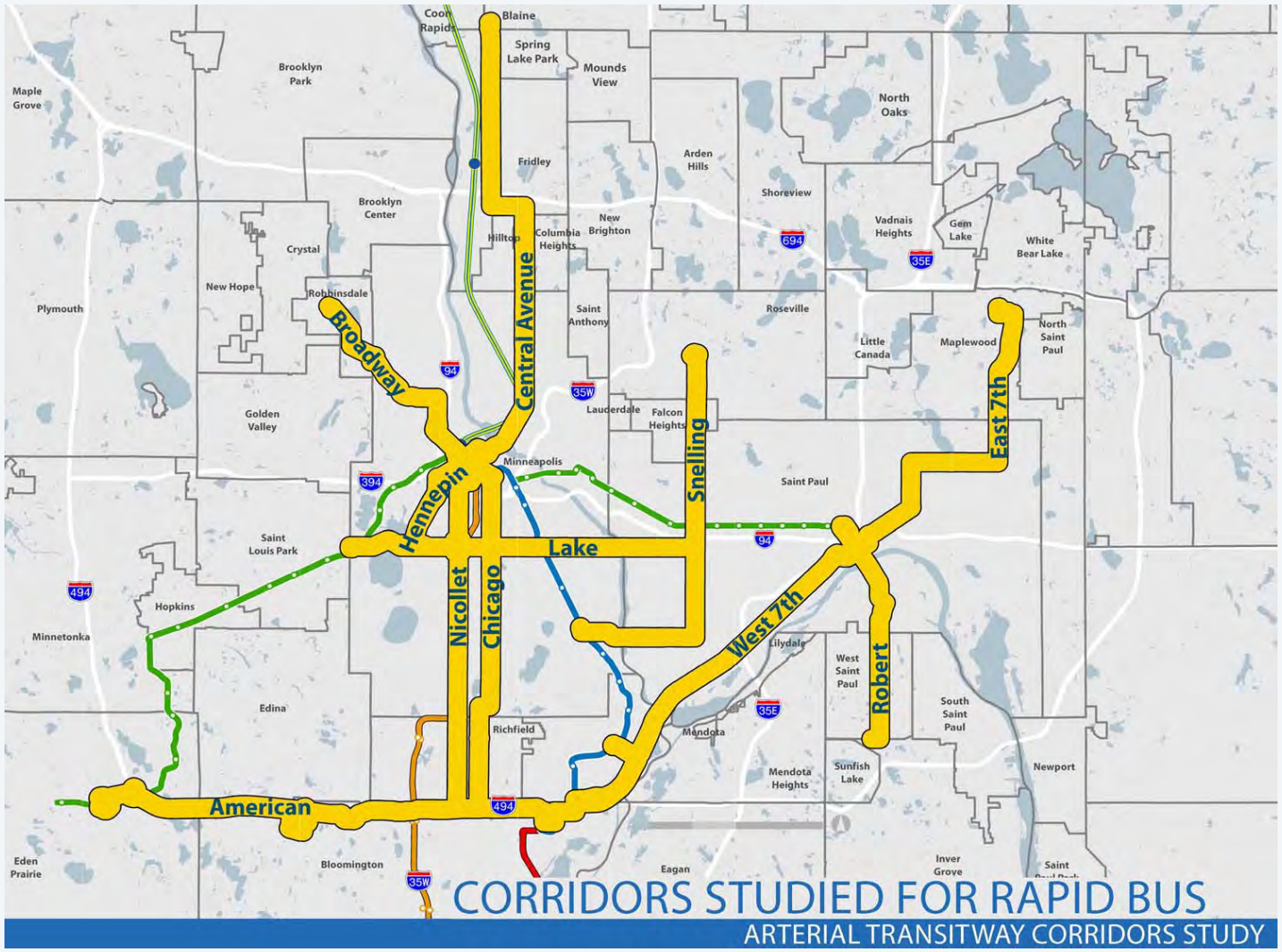
- 7 corridors recommended for long-term network in 2007
  - Central
  - 4th/University
  - Chicago
  - Nicollet
  - Hennepin
  - West Broadway/Washington
  - Midtown Corridor
- City Council prioritized Nicollet and Central avenues in 2010



2030 Transit Master Study

- 2008 Met Council study in preparation for 2030 TPP Update
- 2 dozen potential bus and rail corridors beyond SW LRT evaluated
  - 12-mile Nicollet Avenue LRT line ranked at top (similar to Bottineau LRT)
  - 17-mile Central Avenue LRT line ranked near the top
- Both corridors recommended for Arterial BRT due to significant right-of-way impacts of LRT

Arterial Transitway Corridors Study



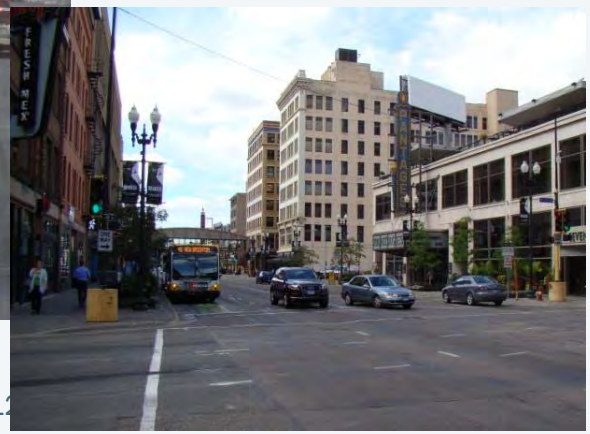
Downtown Transportation Action Plan

- 2007 Adopted Transportation Plan
  - multiple N-S transit alternatives evaluated
  - "yes" to local transit on Nicollet Mall
  - "yes" to express buses on Marquette/2nd
  - "yes" to 2-way traffic on Hennepin
- Marquette and 2nd avenues (MARQ2)
  - Double bus-only lanes constructed in 2009
  - Optimized for express bus service
  - Bus lanes nearing capacity in peak
- Hennepin Avenue S
  - Diagonal orientation - different transit and traffic travel market
  - 2009 conversion to two-way traffic
  - Buses operate in mixed traffic
- Nicollet Mall
  - Only car-free street in downtown Minneapolis
  - Peak hour bus volumes reduced 33% in 2009 with MARQ2 double bus lanes

Nicollet Mall

Marquette/2nd Ave

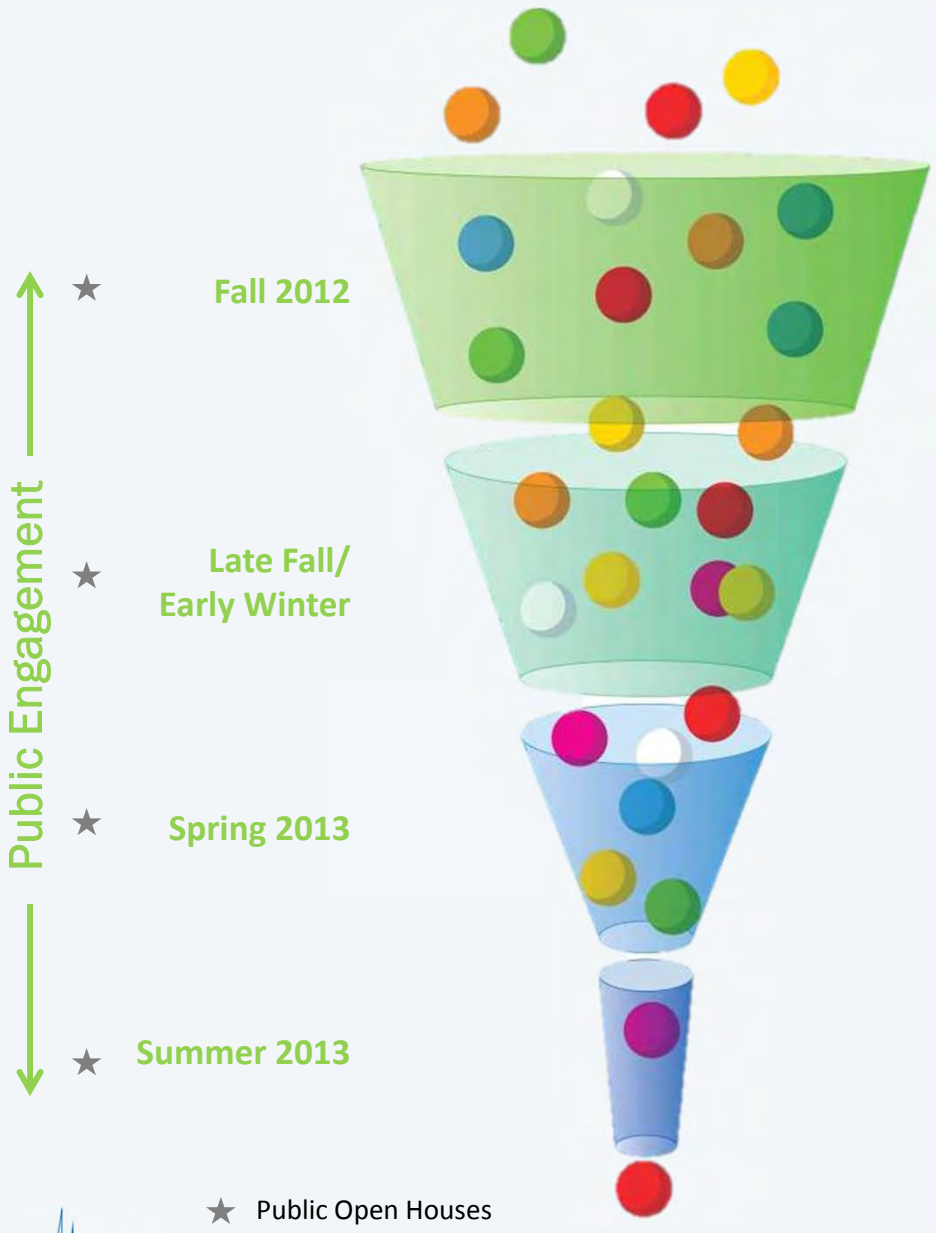
Hennepin Ave.



Study Overview

- identify a Locally Preferred Alternative (LPA)
- LPA to be adopted into the Metropolitan Council's *2030 Transportation Policy Plan*
- based upon evaluation of benefits, costs and impacts of transit alternatives
- alternatives to include (but not limited to):
  - Modern Streetcar
  - Enhanced Bus
- LPA first phase of a longer-range vision for transit service in 9.2 mile corridor

Project Study Process



Purpose and Need ← We Are Here

- Corridor Problems and Challenges
- Vision for the Corridor
- Goals and Objectives and Evaluation Criteria

Initial Development and Screening of Corridor Transportation Options

- Transit Mode Options
- Corridor Segment Options

Detailed Definition and Evaluation of Alternatives

Selection of Locally Preferred Alternative

Federally-Defined Study Process

- Alternatives Analysis required to be eligible for federal New Starts/Small Starts capital funding
- Locally Preferred Alternative must be incorporated into the long-range transportation plan for the region
- FTA Small Starts Program:
  - Total capital costs = Less than $250 million
  - Federal funding = up to 80% and max $75 million
  - More streamlined federal evaluation than New Starts

Some Modes Under Consideration

Mixed Traffic

Exclusive Guideway

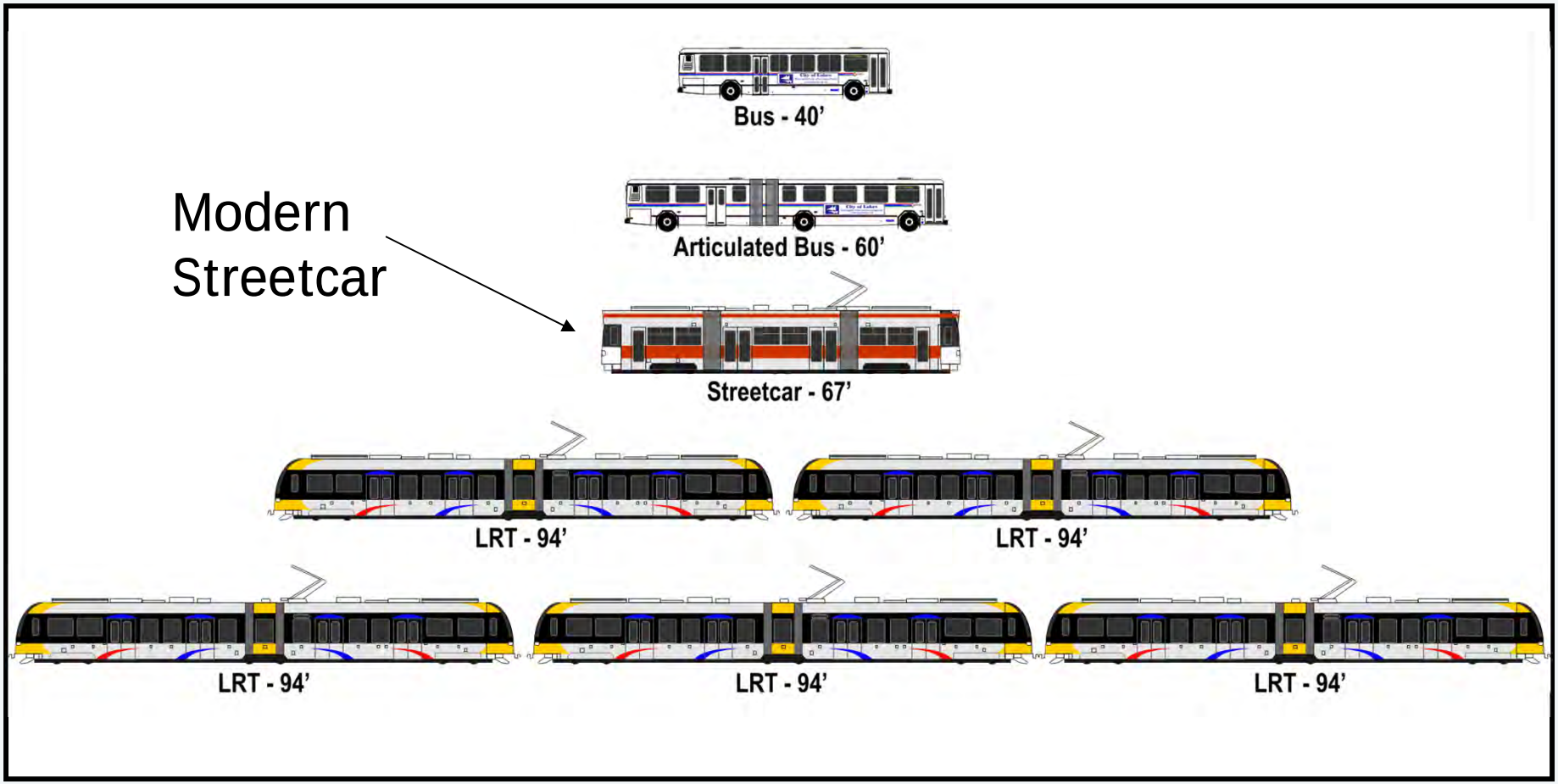
Enhanced Bus / Arterial BRT

Dedicated Busway

Modern Streetcar

Light Rail Transit

What is Modern Streetcar?



Modern Streetcar is NOT light rail.

- Light rail
  - exclusive tracks separate from cars
  - 2-3 car trains (each 94’ long)
  - ½ to 1 mile stop spacing
- Modern streetcar
  - tracks in mixed traffic lanes with cars
  - 1 car trains (67’ long)
  - ¼ to ½ mile stop spacing

Modern Streetcar is NOT historic streetcar

- Historic streetcar
  - Not accessible
  - Passengers boarded in the street

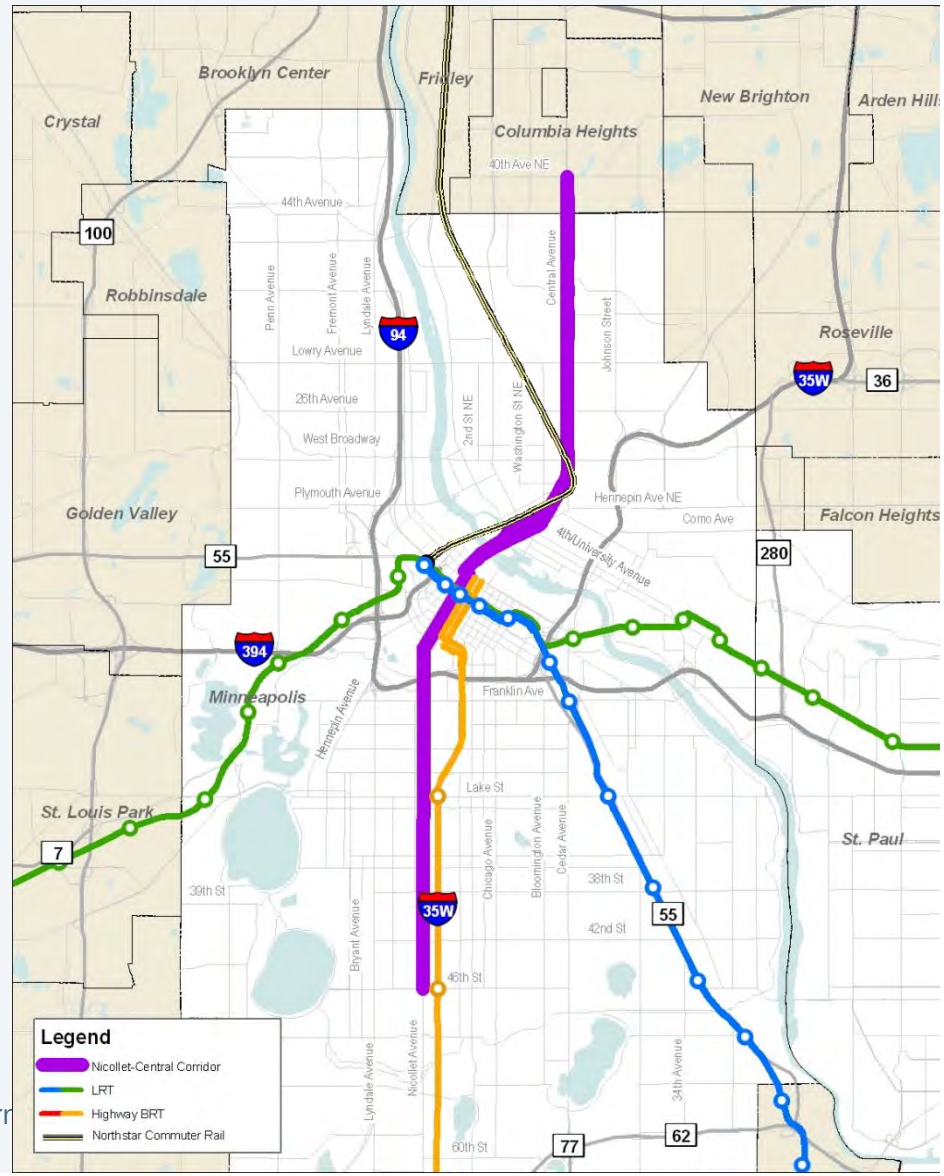
- Modern streetcar
  - Accessible
  - Passengers board from the sidewalk or median island

What is Enhanced Bus?

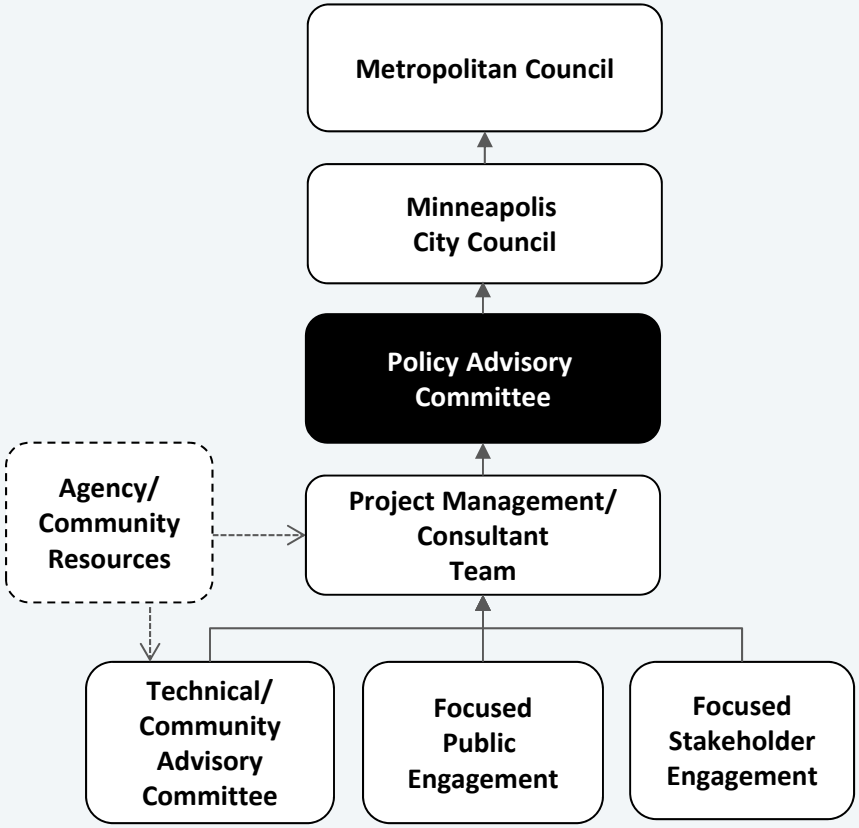
- Similar station and service characteristics as modern streetcar
  - Stations on curb extensions into parking lane
  - Level or near-level boarding
  - Off-board fare payment & ticket vending machines
  - Real-time transit information signs
  - Transit signal priority
  - Larger, branded vehicles
  - Operates in mixed traffic lanes with cars

Alternative Termini

- 9-mile study corridor
- Consider alternative minimum operating segments
- First phase of longer-term vision for implementation



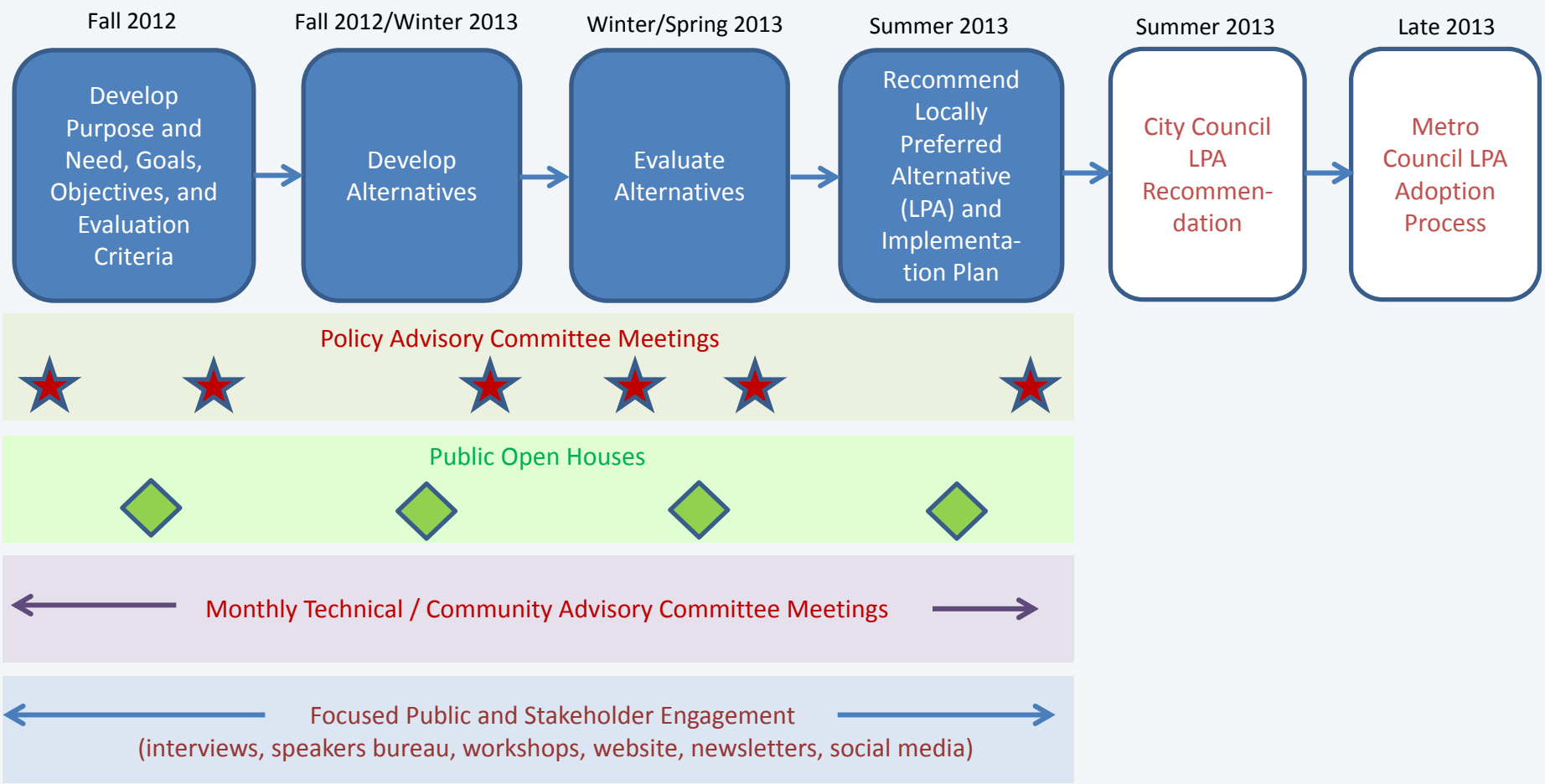
Decision-Making Structure



Key PAC Responsibilities

- Provide overall policy guidance and recommend a locally preferred alternative (LPA) to the Minneapolis City Council and Metropolitan Council.
- Attend all committee meetings or provide a voting alternate at all meetings.
- Make recommendations based on the purpose and need for the project and based on the performance criteria developed for the project.
- Make recommendations that are in the best interest of the entire Nicollet-Central corridor, the City and the region.

4 Phases of Engagement & Decision-Making



Phase 1 Engagement

- Stakeholder Interviews
- Presentations to Stakeholder Organizations
- Online survey
- Public Open Houses
  - Wednesday, Sept. 26, 11 a.m. to 1 p.m.
    Minneapolis Central Library, 300 Nicollet Mall
  - Wednesday, Sept. 26, 5:30 to 7:30 p.m.
    5th Precinct Police Station, 3101 Nicollet Avenue S
  - Thursday, Sept. 27, 5:30 to 7:30 p.m.
    Eastside Food Co-op, 2551 Central Avenue NE

DEVELOPING THE PROJECT RATIONALE (PURPOSE AND NEED)

Purpose and Need Statement

- Required for AA study
  - "…FTA requests the opportunity to review and comment upon the problem statement and corresponding goals and objectives developed for every alternatives analysis which is likely to result in the selection of a transportation improvement requiring Federal funding."
- Required by NEPA regulations

Why It is Important?

- Establishes the problems that must be addressed by the project
- Serves as the basis for development of project goals, objectives, and evaluation measures
- Provides framework for developing alternatives and subsequent analysis
- Articulates and justifies need to spend money to study and implement a project

Draft Purpose Statement

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.

The Need for the Project is Based On:

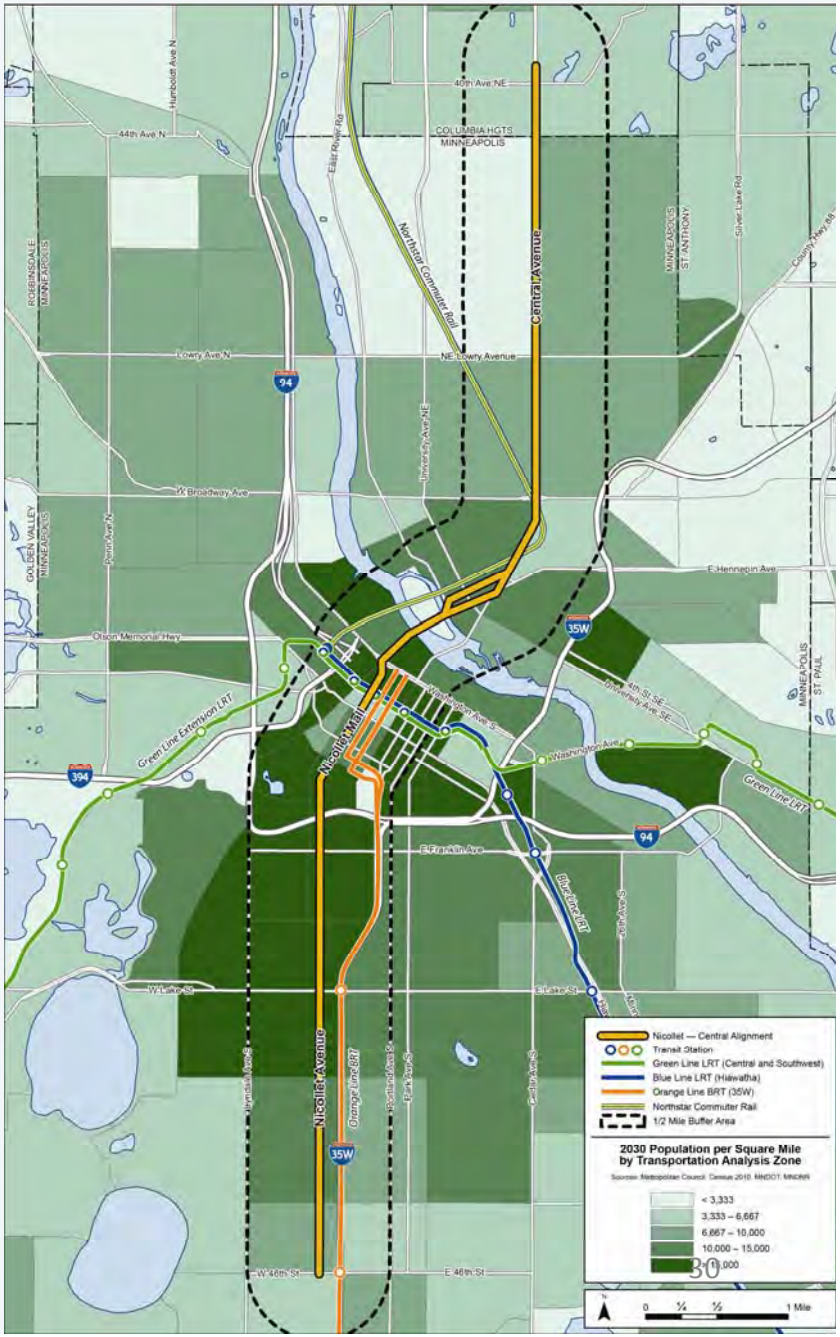
- **Strong and Growing Travel Demand**
  - Population and employment density and growth
  - Travel demand for short passenger trips
  - Diverse trip generators and trip purposes
  - People who rely on transit
- **Economic Development Trends and Objectives**
  - Compact, mixed-use development
  - Sustained economic vitality of downtown and Nicollet Mall
- **Deficiencies in Existing Bus Service**
  - Service legibility
  - Passenger facilities
  - Limited transit capacity
  - Boarding delay and reliability challenges

Population Density and Growth

- 91,000 population within ½ mile
- +25,000 population by 2030 projected (mostly downtown and near-downtown)

GEOGRAPHIC AREA	2010	2030 FORECAST
41st Avenue NE to Lowry Avenue	12,000	+ 0
Lowry Avenue to River	17,000	+ 5,000
Downtown (in corridor)	17,000	+13,000
I-94 to Lake Street	20,000	+ 7,000
Lake Street to 46th Street	25,000	+ 0
Corridor Total	**91,000**	**+ 25,000**
Downtown (outside corridor)	9,000	+ 8,000
Downtown (in corridor)	17,000	+13,000
Downtown-wide	**26,000**	**+21,000**

2030 Population Density

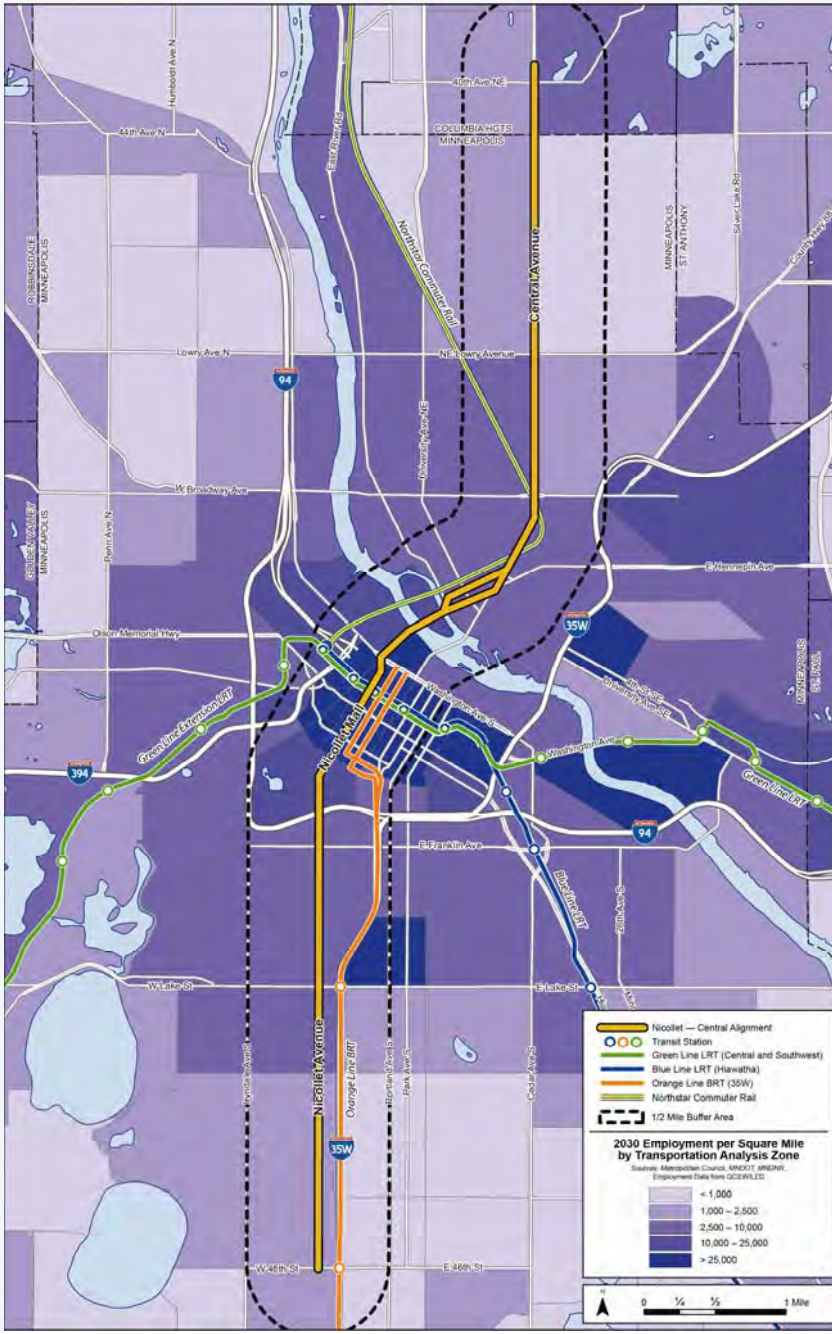


Employment Density and Growth

- 125,000 employees within ½ mile (most of downtown)
- +51,000 employees by 2030 projected

GEOGRAPHIC AREA	2010	2030 FORECAST
41st Avenue NE to Lowry Avenue	2,000	+ 1,000
Lowry Avenue to River	9,000	+ 3,000
Downtown (in corridor)	103,000	+ 43,000
1-94 to Lake Street	8,000	+ 3,000
Lake Street to 46th Street	3,000	+ 1,000
Corridor Total	**125,000**	**+ 51,000**
Downtown (outside corridor)	19,000	+7,000
Downtown (in corridor)	103,000	+ 43,000
Downtown-wide	**122,000**	**+ 50,000**

2030 Employment Density

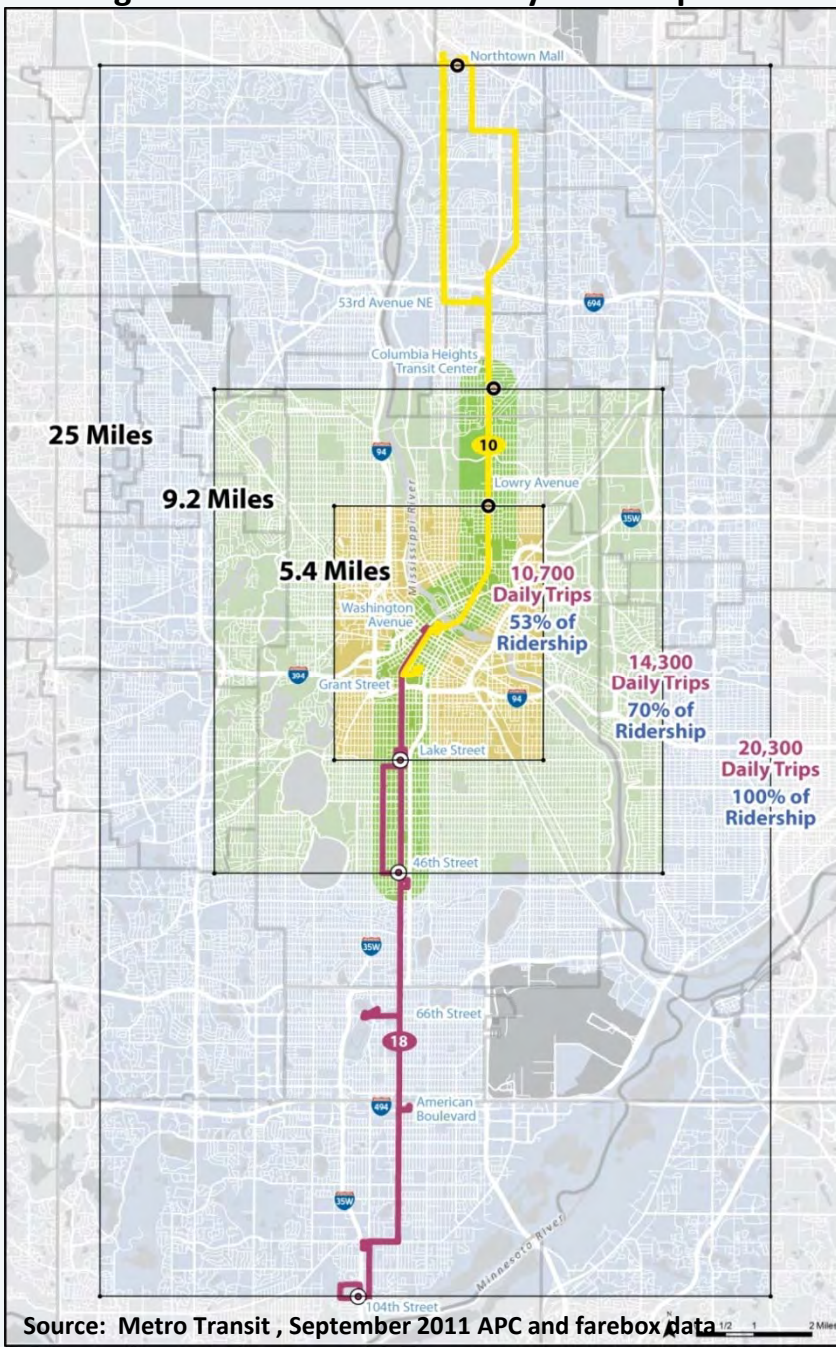


Travel Demand for Short Passenger Trips

Routes 10 and 18:

- 20,300 weekday passenger trips
- 70% (14,300 trips) begin and end entirely in 9.2-mile study corridor
- 53% (10,700 trips) begin and end entirely in 5.4-mile segment between Lake Street and Lowry Avenue

Existing Route 10 and 18 Weekday Ridership



Source: Metro Transit , September 2011 APC and farebox data

Diverse Trip Generators and Purposes

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

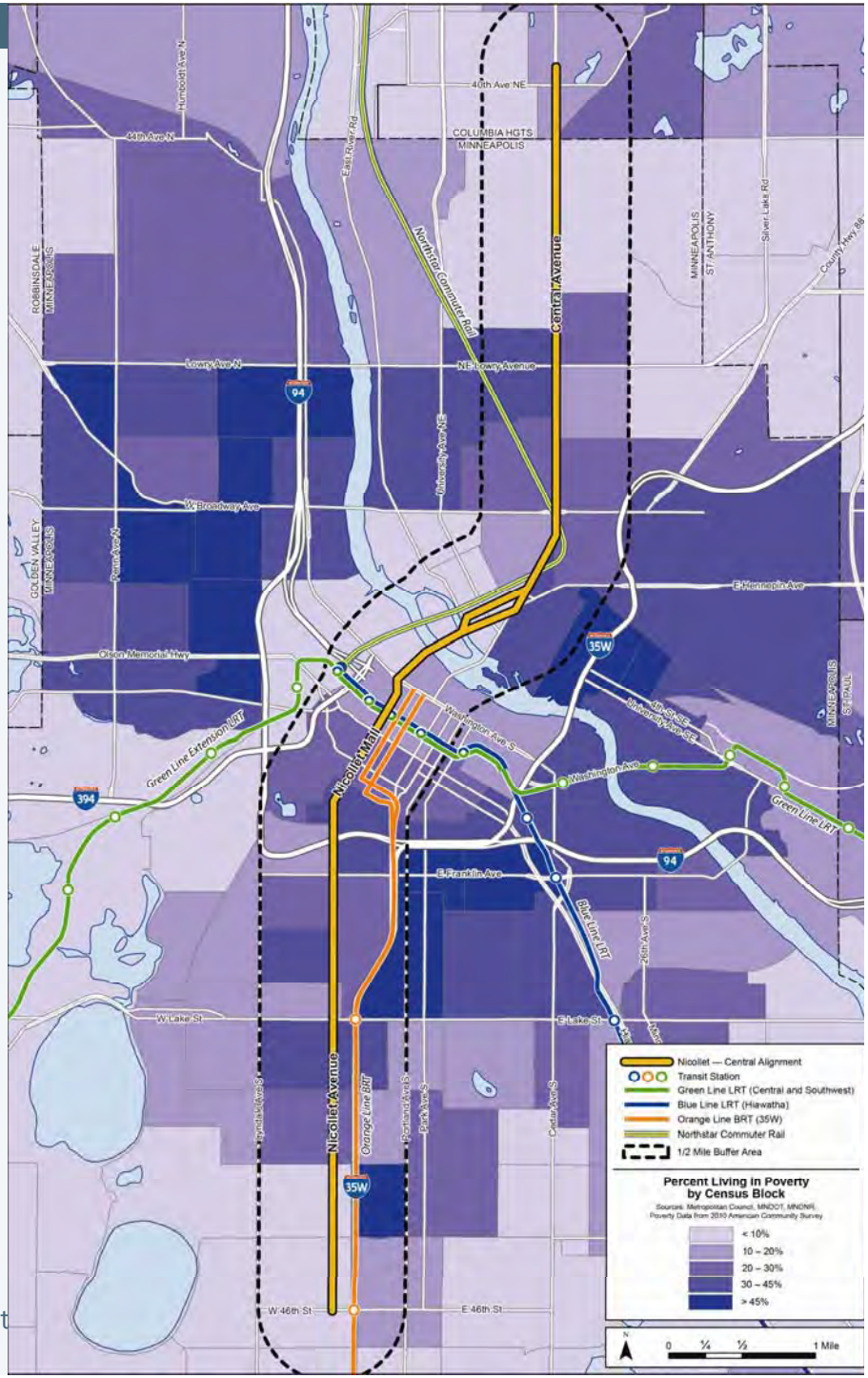
People who Rely on Transit

% Zero-Car Households:

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

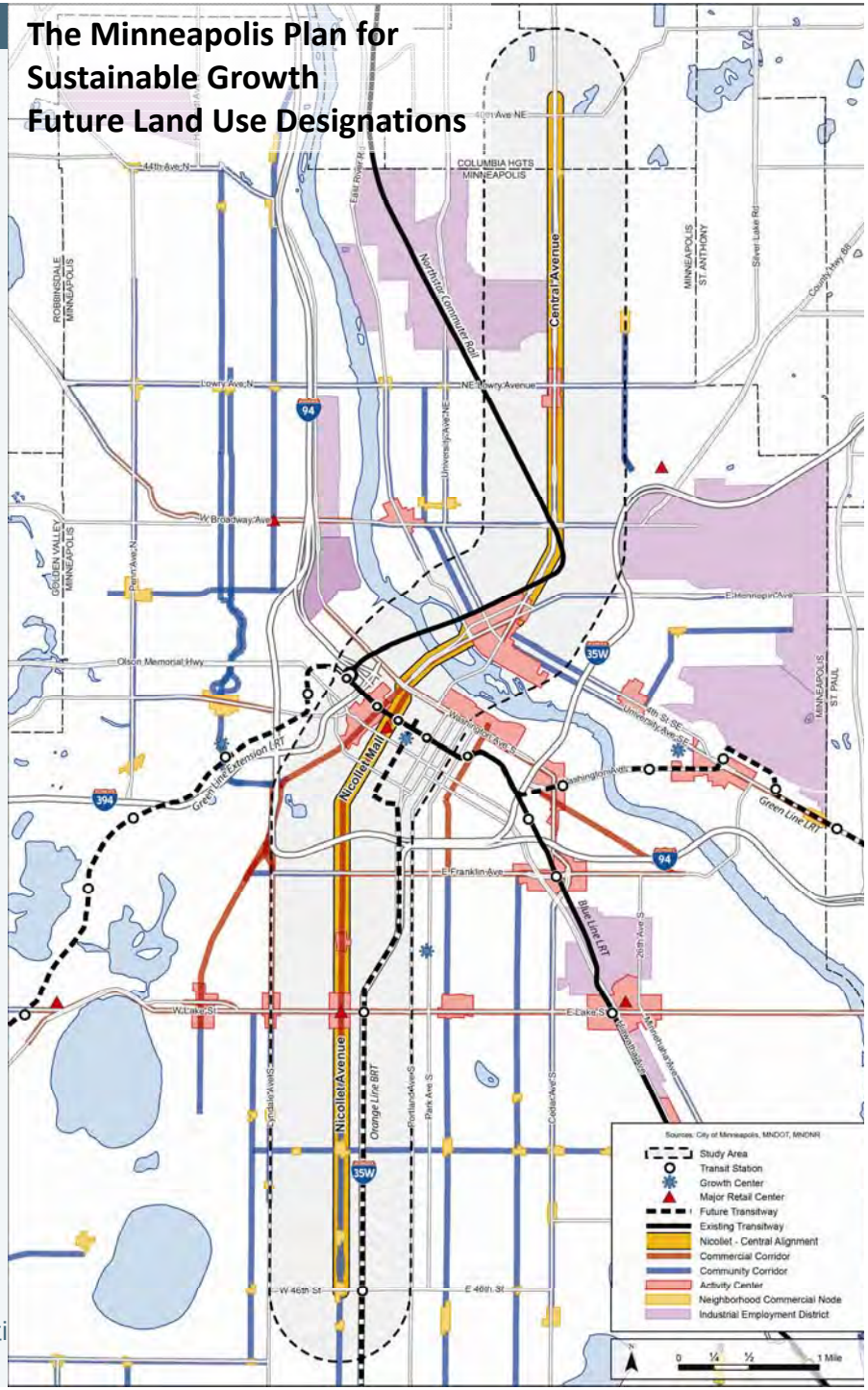
% Population Living in Poverty:

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



Compact, Mixed-Use Development

- Policy and regulatory tools are in place
- Market successes in some parts of corridor
- Need to extend and catalyze further development



Sustained Economic Vitality of Downtown

Nicollet Mall

- Economic spine of downtown
- Premiere public space
- Transit corridor

Public/private priorities to improve

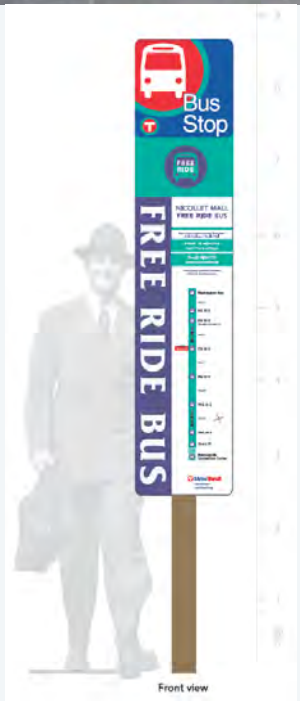
- Infrastructure
- Pedestrian experience
- Connectivity along and beyond Nicollet Mall

Legibility of Existing Bus Service

Hi-frequency, high-ridership, but not easily distinguishable from rest of bus system

Recent efforts to distinguish:

- Nicollet Mall Free Ride (inbound routes 10 and 18)
- Hi-Frequency Network branding



Existing Bus Passenger Facilities

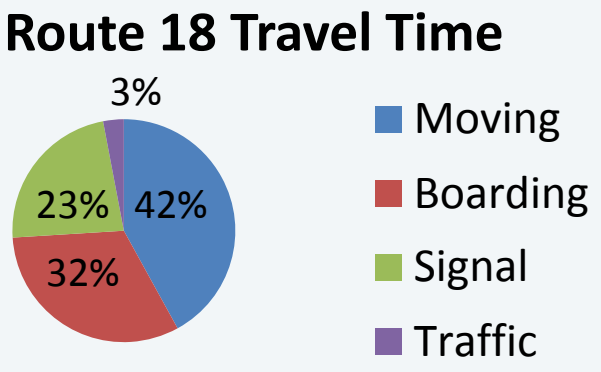
- Basic facilities
- Bus stop sign
- Sometimes shelter & printed schedule
- Quality not commensurate with high level of demand

Existing Bus Capacity Constraints

- 40’ buses
- Maximum capacity guidelines exceeded at some times of day
- Existing frequent service limits ability to add buses during peak
- Challenge with growing demand

Existing bus boarding delay

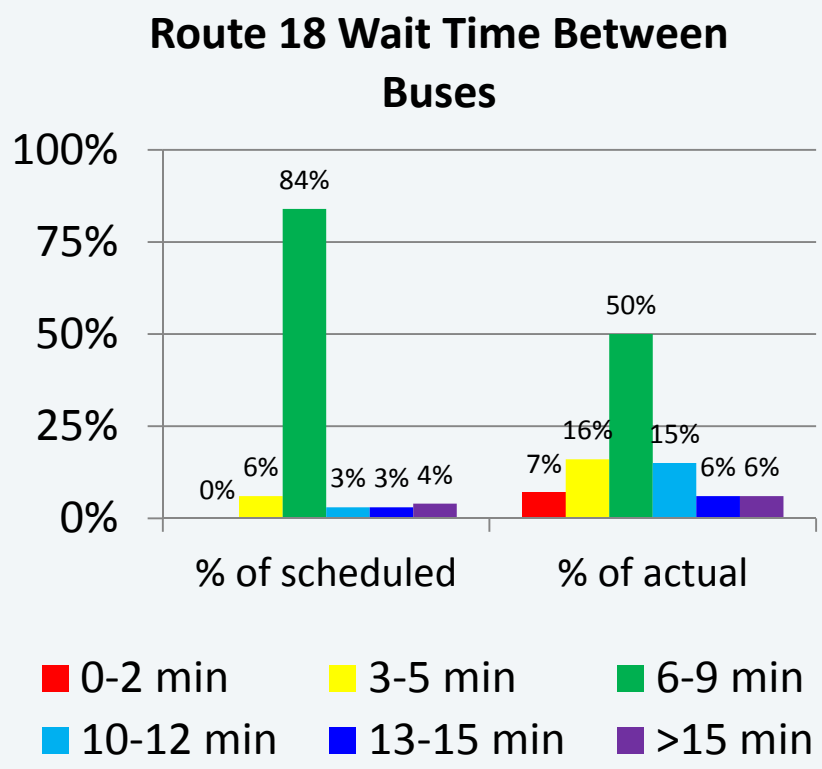
- Largest source of travel time delay
- Single-door boarding
- Pay fare as you enter the bus



Source: Arterial Transitway Corridors Study, 2012, Metro Transit

Existing reliability challenges

- On-time performance: 84-85% of route 10 and 18 trips no more than 5 min late
- Wait time between buses varies more than scheduled, and "bus bunching" occurs



Source: Metro Transit October 2011 AVL Data, 7am-7pm, 46th St to 3rd St

Draft Goals and Objectives

- **Connect People and Places**
  - Connect Downtown with nearby neighborhoods
  - Enhance connections between corridor activity centers and destinations
  - Improve connections between the corridor and the regional transit system
- **Increase the Attractiveness of Transit**
  - Provide transit capacity for future growth
  - Maximize transit ridership
  - Improve visibility and identification of the transit system
  - Provide improved passenger amenities and infrastructure
  - Provide reliable, frequent service
  - Provide transit service & facilities that are easy to use for both regular & occasional riders
- **Catalyze and Support Economic Development**
  - Support the economic vitality of downtown
  - Support the economic vitality of small neighborhoods businesses
  - Support local and regional goals to foster compact, mixed-used development along the corridor

Draft Goals and Objectives (cont.)

- **Integrate with the Transportation System**
  - Integrate with the existing transit network
  - Provide acceptable traffic operations and reasonable parking options
  - Support walkable neighborhoods and multimodal transportation choices
- **Support Healthy Communities and Environmental Practices**
  - Minimize impacts to historical and cultural resources and to disadvantaged communities
  - Minimize neighborhood and property impacts
  - Support improved transportation, housing and economic opportunities for people of all income levels
- **Develop an Implementable Project with Community Support**
  - Define transit improvements with strong public, stakeholder and agency support
  - Identify transit improvements that are financially feasible and competitive
  - Develop transit improvements that allow for phased implementation

Draft Evaluation Criteria

Phase I: Initial Development and Screening of Corridor Transportation Options

- Potential right-of-way impacts
- Ability to service corridor transit demand
- Compatibility with local and regional plans
- Conceptual capital cost of alternative
- Community and stakeholder sentiment

Phase II: Detailed Evaluation of Alternatives

- Number of passengers per service-hour
- Capital cost
- Operating and maintenance (O&M) cost
- Parking impacts
- Traffic impacts
- Transit-dependent population served
- Ridership
- Population density
- Employment
- Land use and economic development opportunities
- Estimated vehicle hours travelled (VHT)
- Bicycle and pedestrian safety
- Cost effectiveness
- Community and stakeholder sentiment
- Consistency with local and regional plans and policies
- Environmental impacts/benefits