

**2030**

# Transit Master Study

# 2020 Transit Master Plan

- Prepared in 1999 in response to state legislation
- Planned for a strengthened bus system
- Evaluated 29 corridors for commuter rail, light rail, busways, and dedicated bus shoulders
- Addressed development issues that affect transit
- Basis for the transit policies of 2025 (adopted 2001) and 2030 (adopted 2004) Transportation Policy Plans

# 2030


## Transitway System Adopted 2004


### Tier 1

- Northstar
- Northwest (Bottineau)
- Cedar Avenue BRT
- I-35W BRT
- Central Corridor

### Tier 2

- Red Rock
- Rush Line
- Southwest

 Transit ways on Dedicated ROW

 Express Commuter Bus System



# 2030 Transit Master Study

- Began in summer 2007
- This study:
  - Updates plan for strengthened bus system
  - Updates evaluation of corridors for potential for transit investments
  - Examines land use issues affecting transit
- Plan to update this analysis every four years, with TPP

# Bus System Improvements

# Bus Plan Development

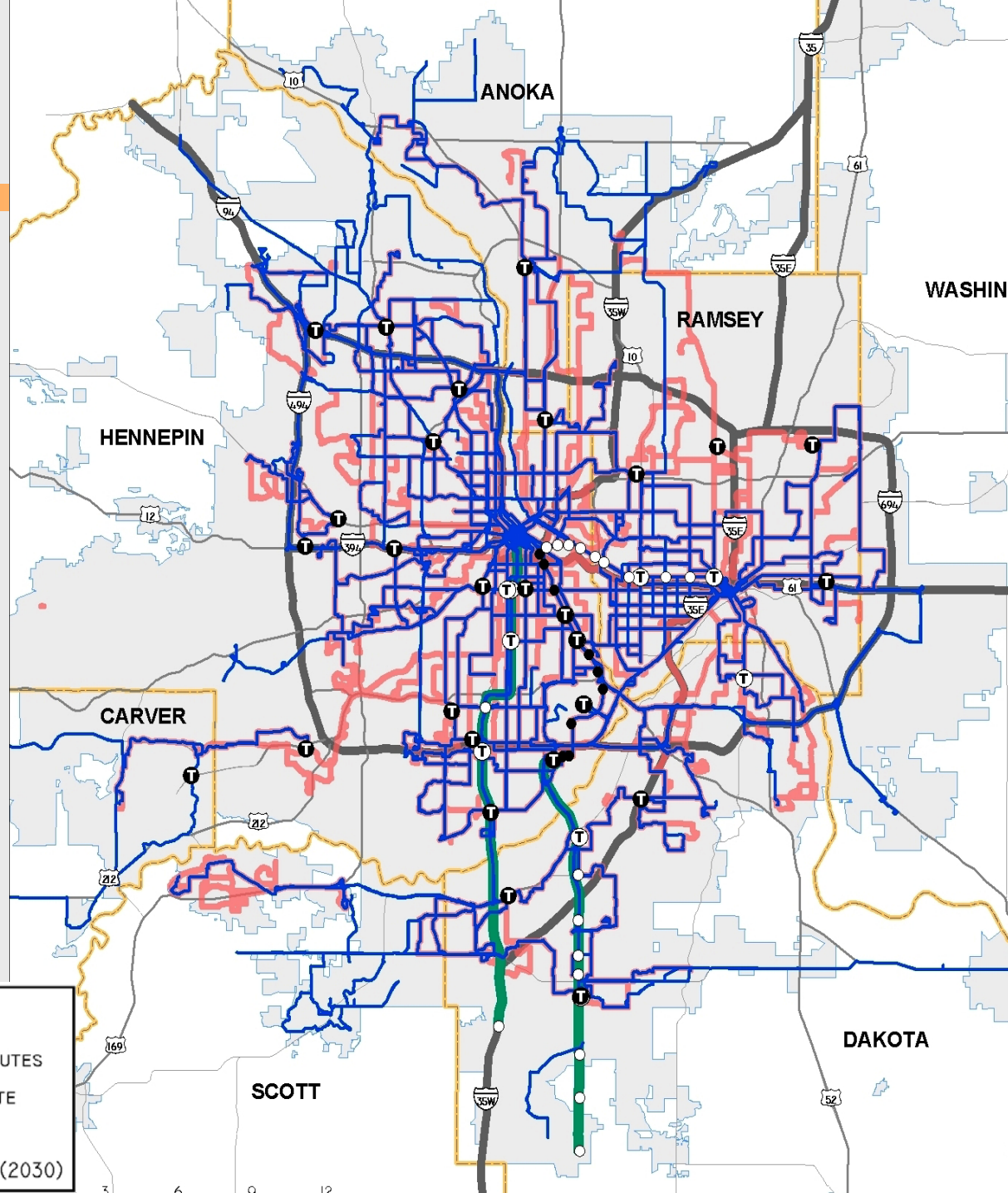
- Based on past planning efforts including 2020 MVST Spending Plan
- Reviewed population and employment growth projections (not limited to current TTD)
- Considered factors that make transit attractive: cost, travel time, convenience
- Solicited input from regional transit providers, MnDOT, counties, cities
- Identified opportunities for service improvements
  - New routes, expanded coverage
  - Increased frequency and hours of service
  - Integration with existing and planned transitways
- Maintained balance between equity and efficiency



# 2030 Local Routes

Increased frequency,  
span of service,  
coverage

- Improved service on over half of existing local routes
- Add 40+ new routes, primarily in suburban markets



**REGIONAL TRANSIT MASTER PLAN**

TRANSIT CENTER	NEW/IMPROVED ROUTES
TRANSITWAY STATION	FUTURE BRT ROUTE
FUTURE TRANSIT CENTER	CURRENT ROUTES
FUTURE TRANSITWAY STATION	MUSA BOUNDARY (2030)



# 2030 Arterial Network

Midday service 20 minutes or better

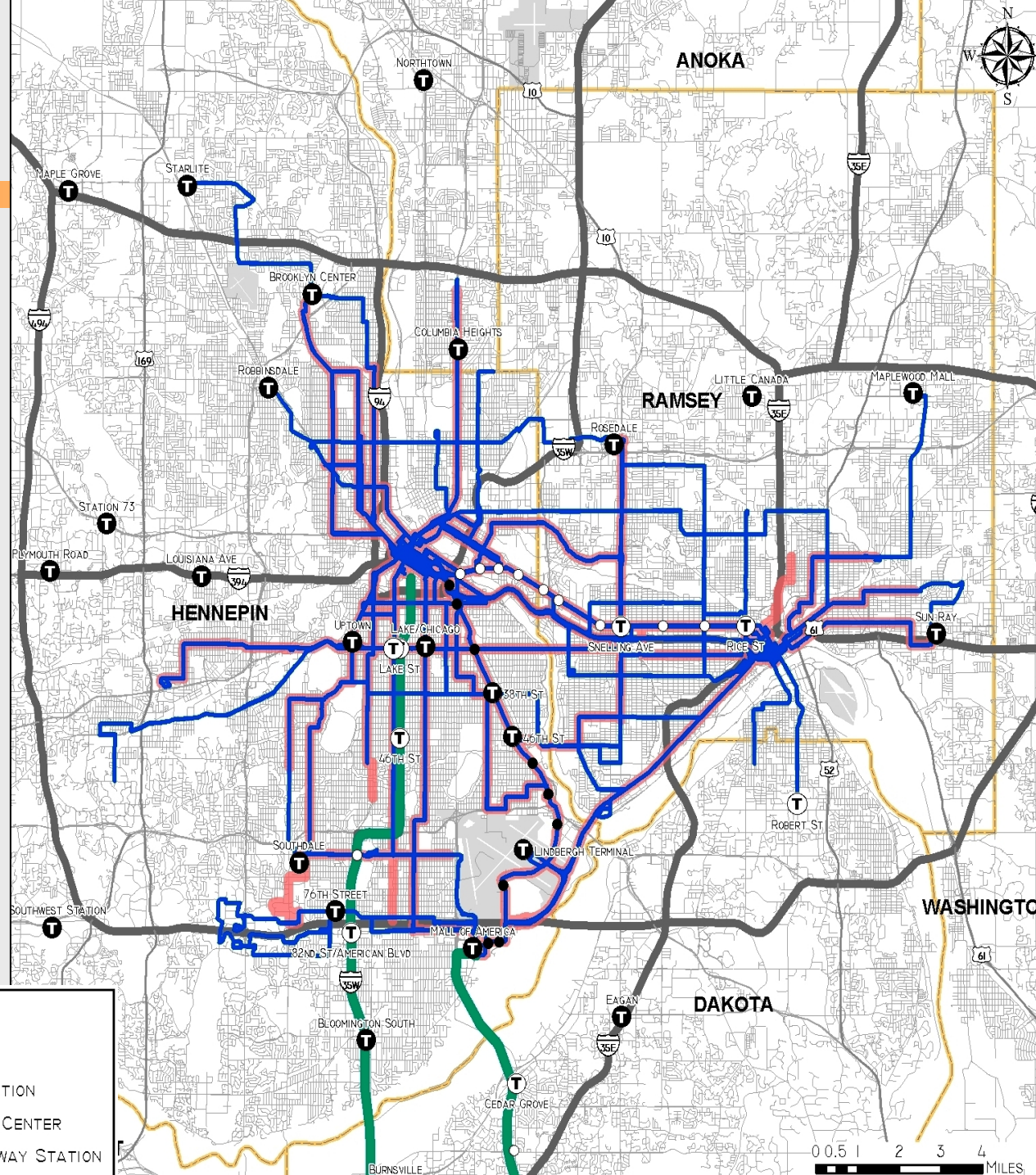
Connects regional centers

Expanded network








Better frequency & span of service

More limited stop routes

Identified future transit centers



**REGIONAL TRANSIT MASTER PLAN**

 NEW/IMPROVED ARTERIAL ROUTES	 TRANSIT CENTER
 PLANNED BRT ROUTE	 TRANSITWAY STATION
 CURRENT ARTERIAL NETWORK	 FUTURE TRANSIT CENTER
	 FUTURE TRANSITWAY STATION

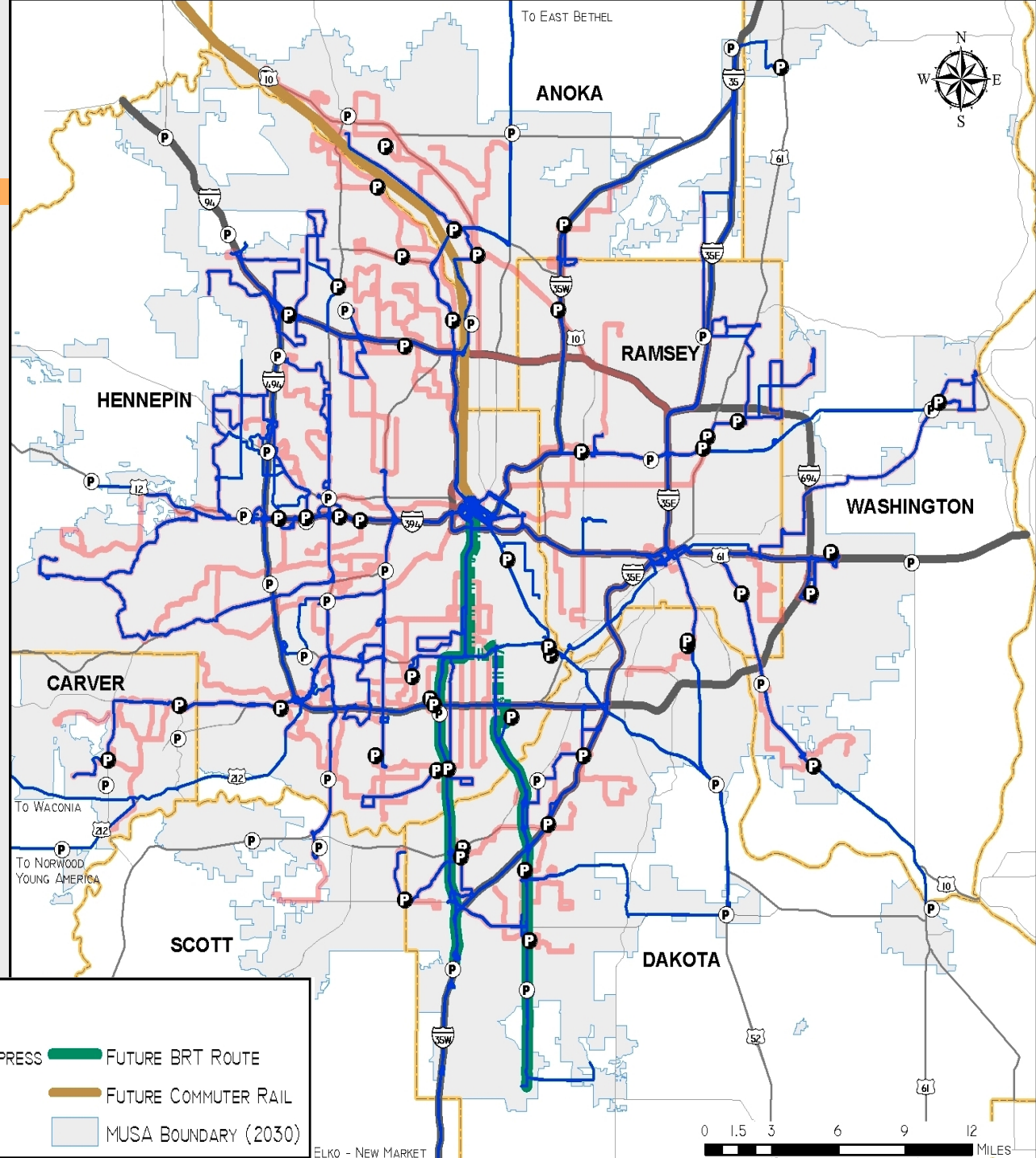
# 2030 Express Service

Increase service on existing routes to meet demand

Add service to new park & rides

Extend service beyond Transit Taxing District

Uses bus shoulders where available



**REGIONAL TRANSIT MASTER PLAN**

EXISTING PARK AND RIDE LOT (THOSE GREATER THAN 100 SPACES)	NEW/IMPROVED EXPRESS	FUTURE BRT ROUTE
FUTURE PARK AND RIDE LOT (THOSE GREATER THAN 100 SPACES)	CURRENT EXPRESS	FUTURE COMMUTER RAIL
COUNTY BOUNDARY	MUSA BOUNDARY (2030)	

ELKO - NEW MARKET

# Long Distance Express Service

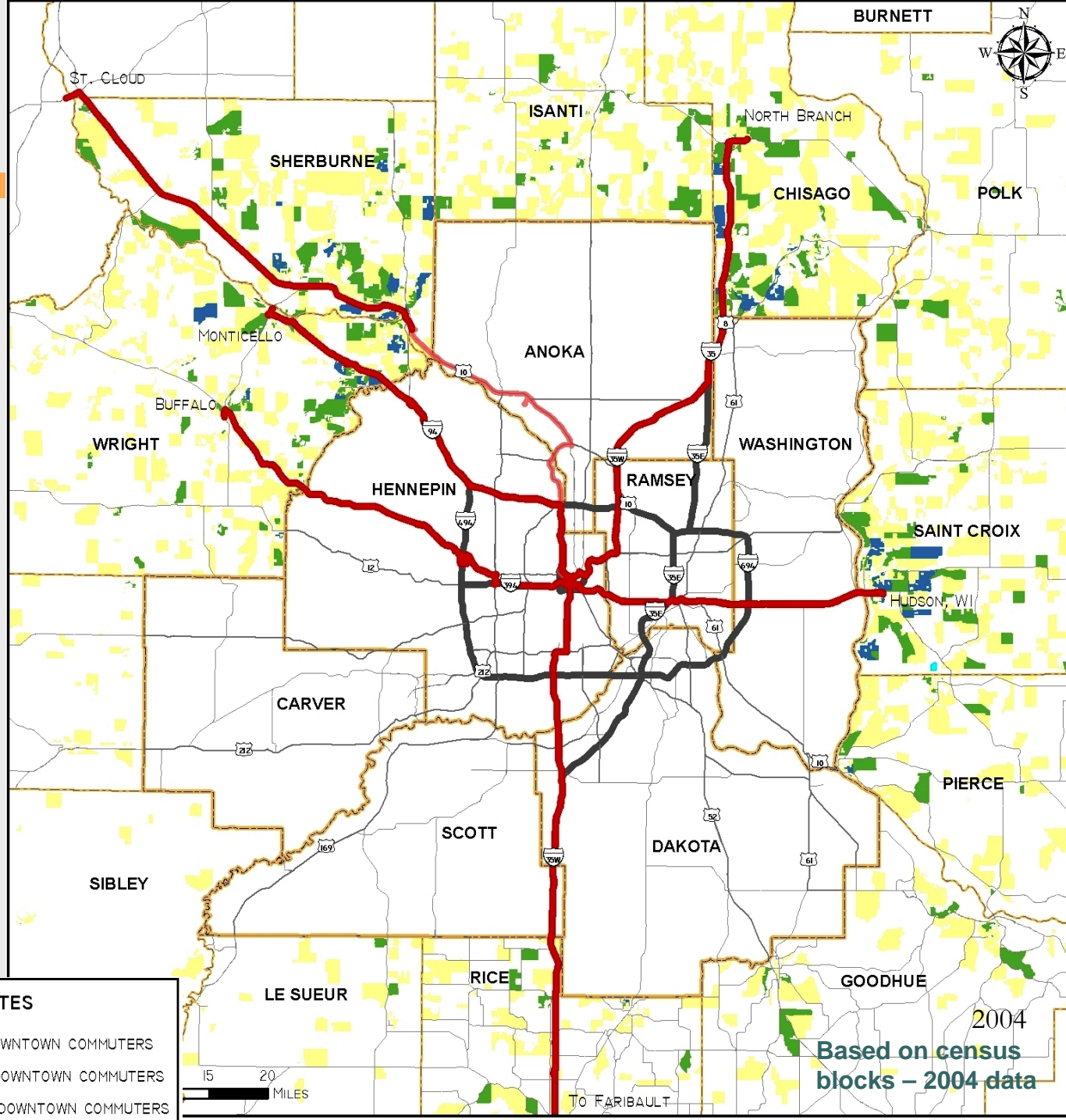
---

- Defined as routes outside the 7-county metro area
- Developed in coordination with MnDOT
- Limited to routes with the highest potential for ridership outside the 7-county area
- Not a commitment to funding
- Opens coordination with collar counties

# Potential Long Distance Routes

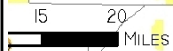
## Routes

- Monticello
- Buffalo
- Faribault
- Hudson
- North Branch
- Saint Cloud (Northstar)



**POTENTIAL LONG-DISTANCE EXPRESS ROUTES**

	POTENTIAL ROUTES		1 - 5 DOWNTOWN COMMUTERS
	CURRENT ROUTE (RT 856/888)		6 - 10 DOWNTOWN COMMUTERS
	COUNTY BOUNDARY		11 - 40 DOWNTOWN COMMUTERS



2004  
Based on census blocks - 2004 data

TO FARIBAULT

# Transitway Corridor Evaluation

# Corridor Identification

---

- Corridors in implementation (Northstar, Central, I-35W, Cedar Avenue) were not analyzed
- Used results of studies conducted by RRAs for Southwest, Red Rock and Robert St. corridors
- Regional Railroad Authorities, central cities & MnDOT helped identify 29 additional corridors for analysis

# Process for Corridor Analysis

- Agreed on modes to analyze for each corridor
- Agreed on criteria to evaluate corridors
  - Cost: Operating and Capital
  - Ridership
- Consultant conducted cost and ridership analysis
- Considered other implementation issues (i.e. right-of-way availability)
- Shared draft results with partners in December

# Transitway Corridor Modes

**Commuter Rail:** 5 mile station spacing, diesel locomotive power, rural or suburban

**Light Rail:** 1 mile station spacing, electric power, urban or suburban, all day service

**Bus Rapid Transit:** ½ -5 mile station spacing, usually urban or suburban

- Arterial Streets
- Limited Access Highways
- Dedicated Busways

**High Occupancy Vehicle (HOV)/High Occupancy Toll (HOT) Lanes:** Dedicated highway lanes for buses, HOVs or tolled-single occupant vehicles



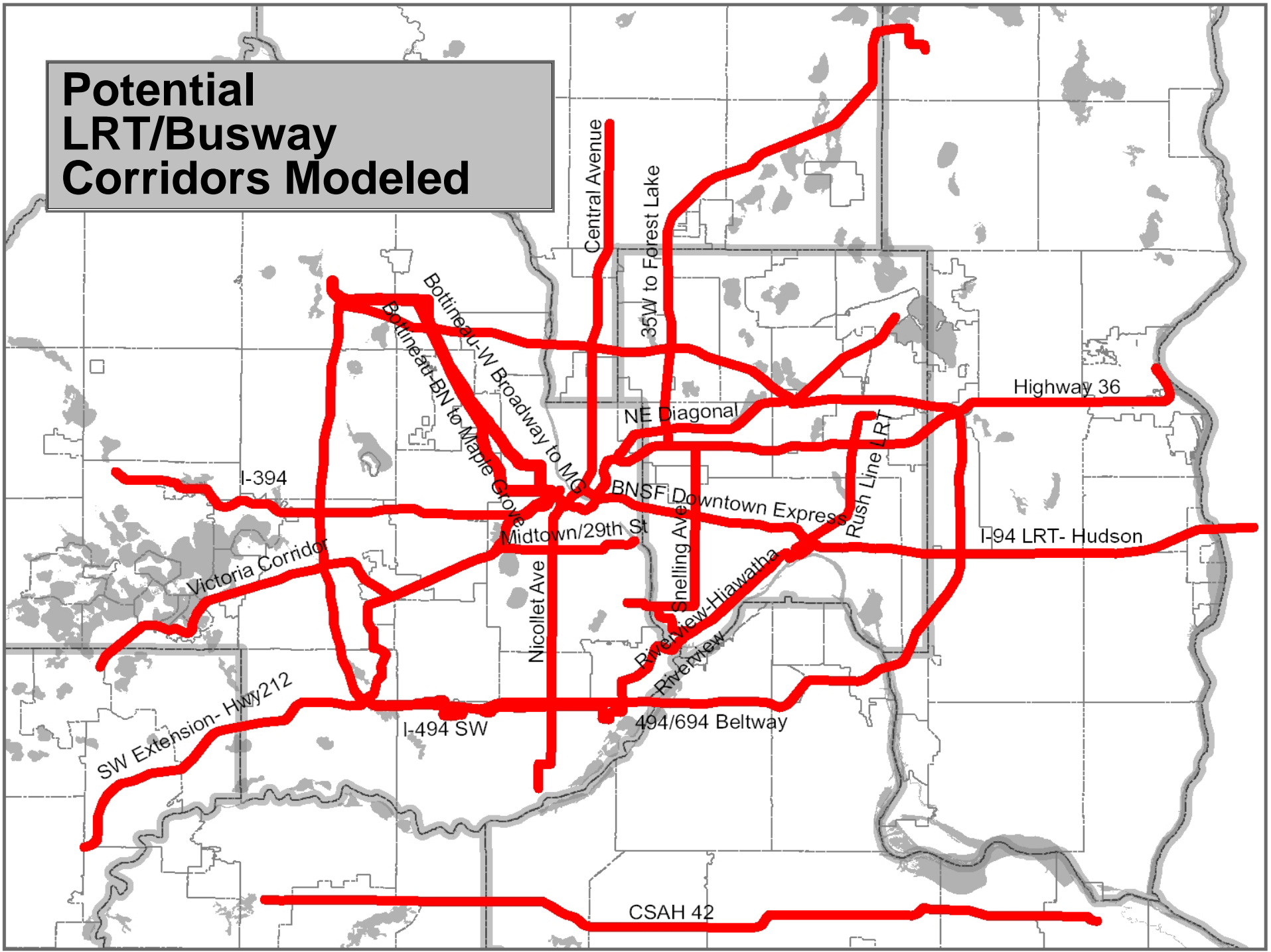
# BRT Characteristics

- **Service Operations:** High frequency, all day service
- **Running way:** Dedicated busway, HOT, HOV, dynamic shoulders, dynamic parking lanes, bus shoulders, or mixed traffic
- **Technology:** Signal priority, customer information displays, driver technology
- **Identity/Brand:** Unique branding = transit “line”
- **Stations:** Branded design, limited stops
- **Vehicles:** Unique design, fast boarding, convenient
- **Fare Collection:** Off-board where possible

# Ridership Modeling

- Used Regional Forecast Model
- Used Adopted 2030 population/employment forecasts
- Used model adjusted for 2005 Transit On-board Survey (Hiawatha LRT & bus riders)
- Does not assume development induced by transit
- Assumes increasing levels of congestion over time

# Potential LRT/Busway Corridors Modeled



# Results of LRT/Busway Analysis

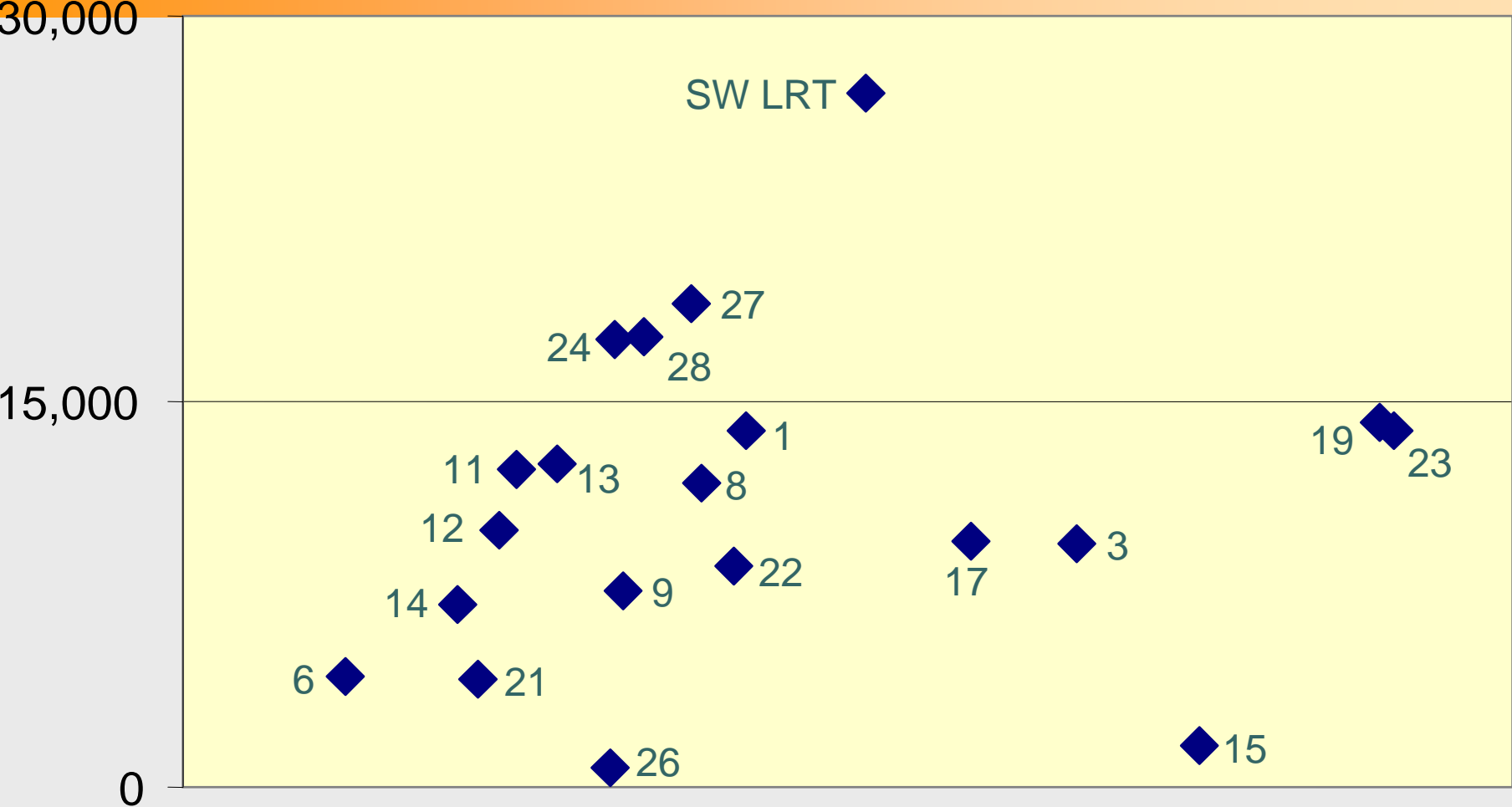
		Riders If LRT	Cost If LRT
1	Central Avenue	Medium	Medium
3	I-394	Medium	High
6	Midtown/29th St	Low	Low
8	Victoria Corridor	Medium	Medium
9	I-494 Southwest Quadrant	Low	Medium
10	I-494/I-694 Beltway LRT	Medium	Very High
11	Riverview Corridor - to MOA	Medium	Low
12	Riverview Corridor - to Hiawatha	Medium	Low
13	Snelling Ave & Ford Pkwy	Medium	Low
14	Rush Line LRT Corridor	Low	Low
15	CSAH 42	Low	High
17	I-94 East	Medium	High
19	Hwy 36	Medium	High
21	BNSF Between Downtowns	Low	Low
22	NE Diagonal	Medium	Medium
23	I-35W to Forest Lake	Medium	High
24	Nicollet Ave	High	Medium
26	Southwest LRT Extension	Low	Medium
27	Bottineau: Roadway	High	Medium
28	Bottineau: Rail ROW	High	Medium

Excludes ROW Costs

# LRT/Busway Corridors

(without I-494/I-694)

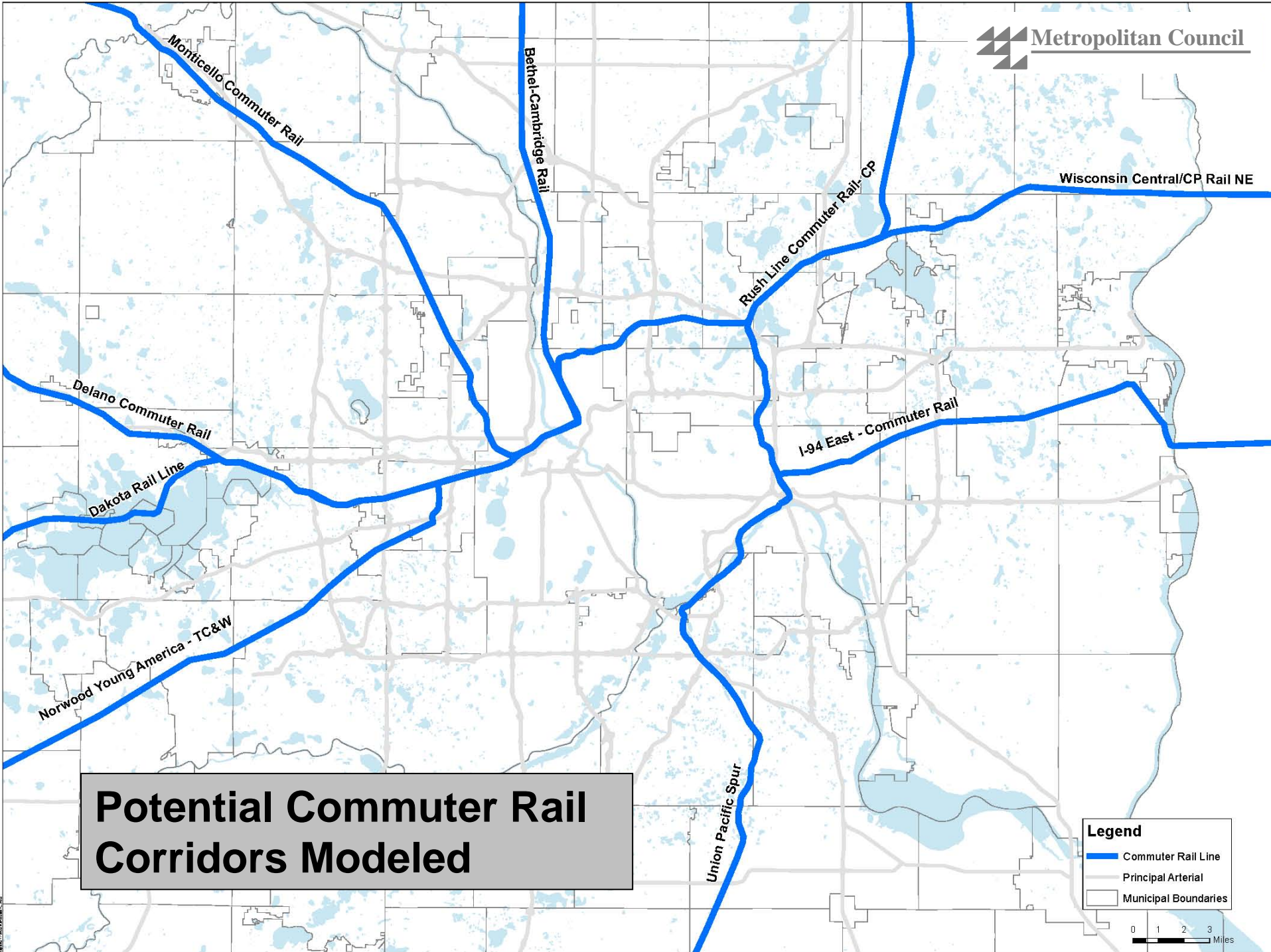
Riders



Annualized Cost

# Conclusions of Light Rail/Busway Analysis

- Southwest and Bottineau corridors show the highest potential for future rail investments.
- A number of other corridors have good ridership potential, but high costs or little available right-of-way make rail development unlikely.
  - Arterial corridors with good ridership potential should be studied for BRT investments.
  - Highway corridors with good ridership potential should be studied for HOV/HOT/dynamic shoulder lane investments.

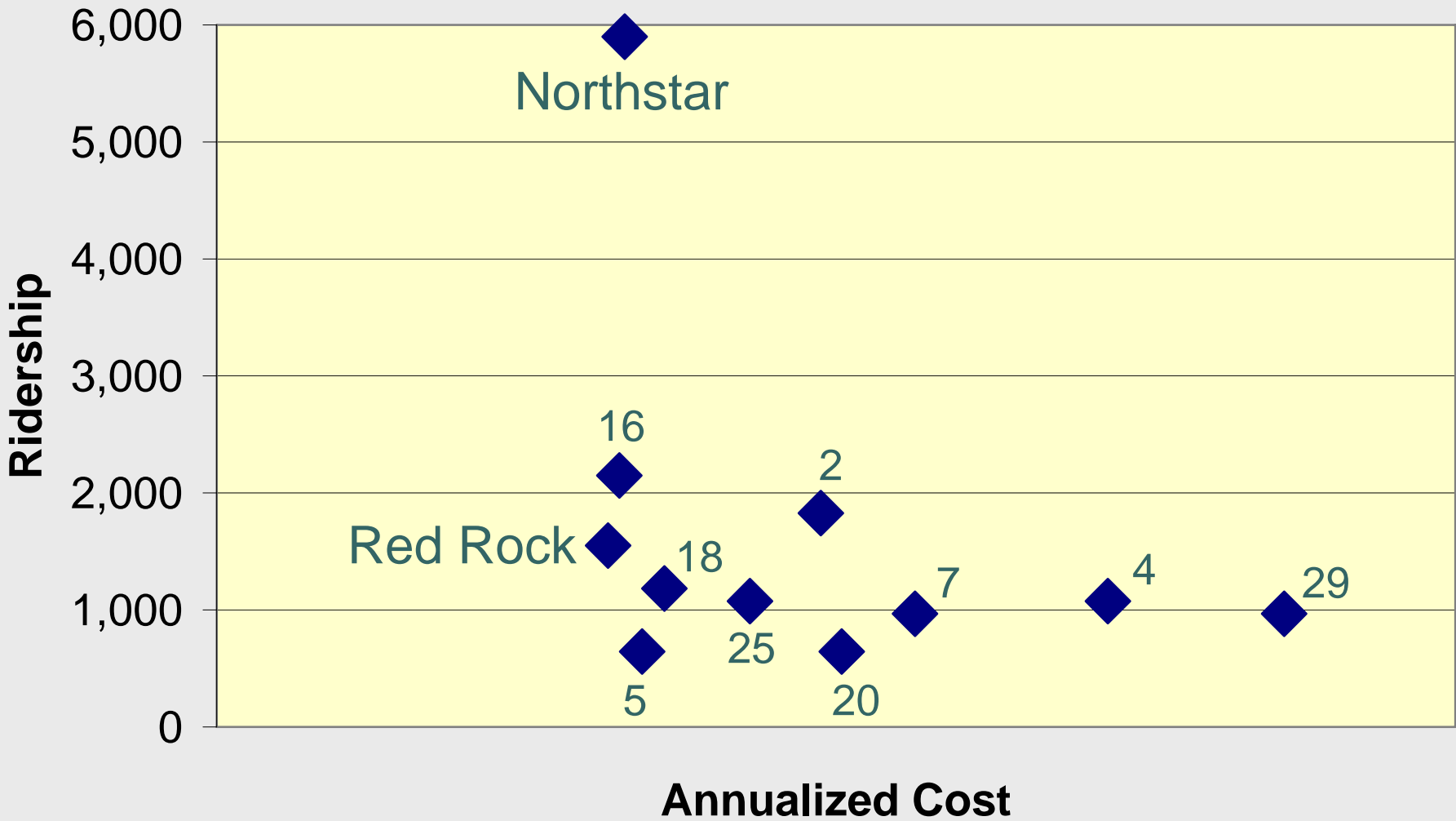


# Commuter Rail Analysis Results

	<b>Results for Commuter Rail</b>	<b>Riders if CR</b>	<b>Cost for CR</b>
2	Bethel-Cambridge	Low	Medium
4	Dakota Rail	Low	High
5	Delano	Low	Medium
7	Norwood YA - TC&W	Low	Medium
16	Union Pacific Spur	Low	Medium
18	I-94 East - Commuter Rail	Low	Medium
20	Wisconsin Central	Low	Medium
25	Monticello	Low	Medium
29	Rush Line Commuter Rail	Low	High



# Commuter Rail



# Conclusions of Commuter Rail Analysis

- No commuter rail corridor showed high or medium ridership potential
- No current regional data for commuter rail demand
- Council & MnDOT should reexamine corridors in four years, after Northstar is operating and updated census and travel data is available
- Some corridors have potential for long-distance express bus service

# Land Use

# Factors In Transit Success

- **Population:** Gross numbers of people in corridor
- **Population:** Density of persons
- **Employment:** Gross number of jobs
- **Employment:** Clustering of jobs/job node intensity
- **Fine grain land use:** Conducive to walking
- **Commute sheds split** between the two downtowns
- **Economic incentives** to use transit

# Strengthening Corridors for Transit

**Put plans in place now** to foster transit-supportive development between now and 2030:

- **Intensify employment density** where it makes sense
- **Intensify population density** where it makes sense
- **Develop** compact, interconnected, multi-modal, walkable **transit nodes**
- **Promote mixed use** to increase transit demand

**Assist local units** in designing transit-supportive land use policies now to guide development and redevelopment

# Recommended Next Steps

# Recommended Next Steps

- Present draft results and conclusions to county boards, MnDOT and other interest groups
- Continue corridor analysis with requested adjustments
- Incorporate results of Transit Master Study into TPP update
  - Develop implementation plan for various transit funding scenarios
- Continue and initiate new corridor studies

# Recommended Corridor Studies

- **Continue Implementation Studies on:**
  - Southwest Corridor
  - Bottineau Corridor
- **Initiate Corridor Studies on:**
  - I-35W North Corridor
  - TH 36/NE Corridor
  - I-94 East Corridor
  - Rush Line Corridor (AA underway)
- **Begin BRT Studies on:**

– Central Ave	– Nicollet Ave	– Robert Street
– Snelling Ave	– Chicago Ave	– West 7 <sup>th</sup> Street
– Broadway Ave	– East 7 <sup>th</sup> Street	– I-494/American Blvd
- **Other Studies**
  - Midtown Greenway: Study after SW complete
  - Commuter rail: Re-examine after Northstar begins



# Potential 2030 Transitway System

## Complete/In Development

Hiawatha, I-35W BRT,  
Cedar BRT, I-394 HOT  
Lane, Northstar, Central

## Implementation Studies

Southwest, Bottineau

## Initial Study

I-35W North, TH 36/NE,  
I-94 East, Rush Line

## Bus Rapid Transit Studies

Nicollet, Central Ave,  
Chicago, I-494/American  
Blvd, Broadway, Snelling,  
West 7th, East 7th, & Robert

## Express Bus Network

