Problem Statement

Highway 10 is a principal arterial roadway providing a significant transportation connection from Minneapolis - St. Paul to the northwest suburbs and beyond. The 4-lane roadway (Anoka/Sherburne County line to the Rum River) carries average daily traffic volumes ranging from 33,500 to 61,000 vehicles per day.

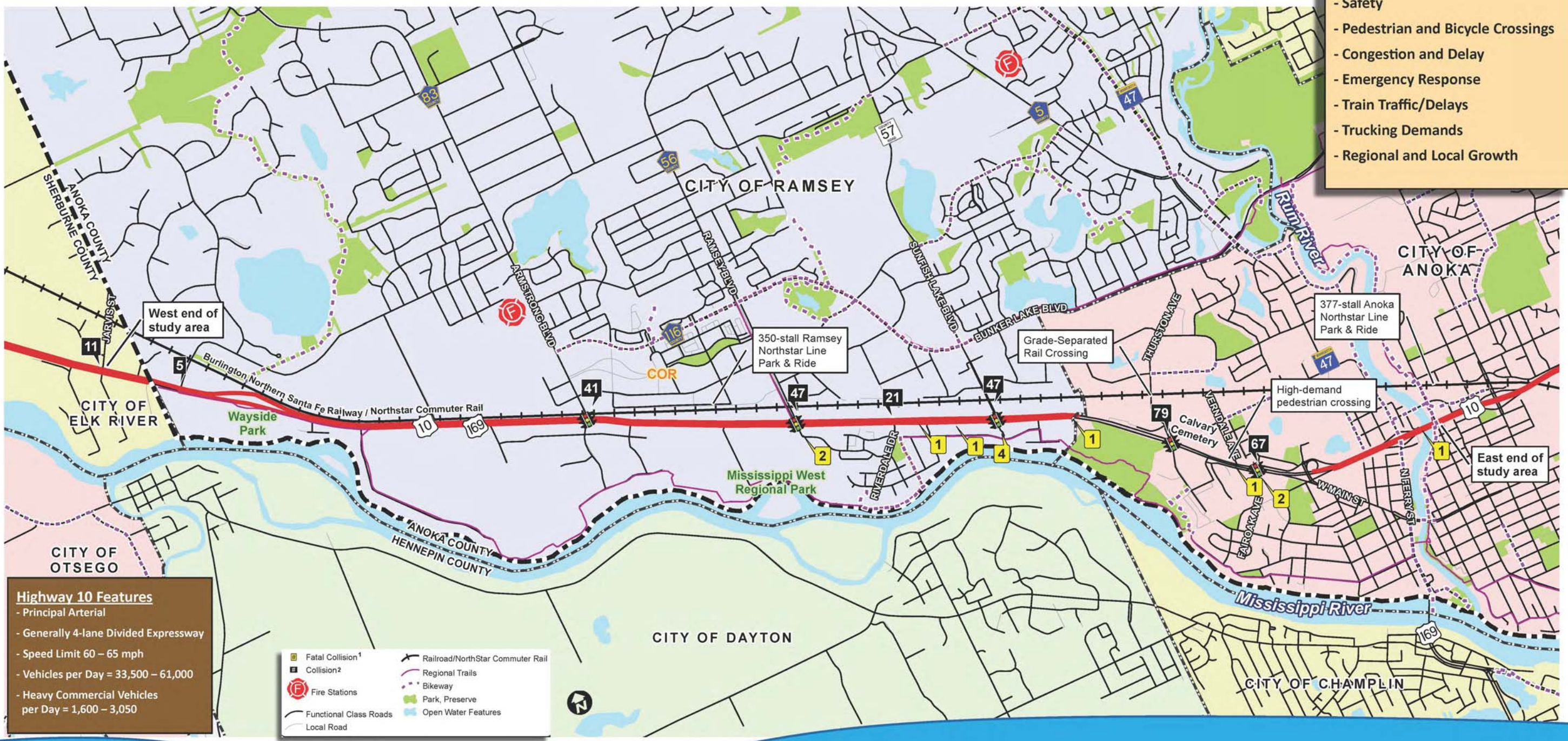
Highway 10 has been studied numerous times over the past decade, each time furthering the planning for conversion to a full freeway. Based upon traffic volumes and safety concerns, a freeway is the proper vision for this corridor. The corridor is commonly congested and has much higher than average crash and severity rates than comparable corridors. In addition, the corridor has five signalized intersections and numerous other access points (14.5 per mile) contributing to the degradation of the facility. Over the past 10 years, 13 people have died in crashes on the 7-mile corridor. Four of these fatalities were pedestrians, including three in the past 18 months.

Considering current overall state and federal funding levels, it will be difficult to achieve the vision of a freeway facility on this portion of Highway 10 within the next 20 years. To reduce crashes and improve mobility issues, it is reasonable and responsible to implement lower-cost, interim measures that incrementally improve safety and operations for all users of the Highway 10 corridor.

The intent of this study is to identify high-benefit improvements that are fiscally responsible so that improvements can be funded, programmed, and implemented incrementally. The price paid for waiting for funding to construct expensive, comprehensive improvements will be continued congestion, numerous conflict points, and continued severe and fatal crashes.

HIGHWAY 10 ACCESS PLANNING STUDY

Issues Map



HIGHWAY 10 ACCESS PLANNING STUDY

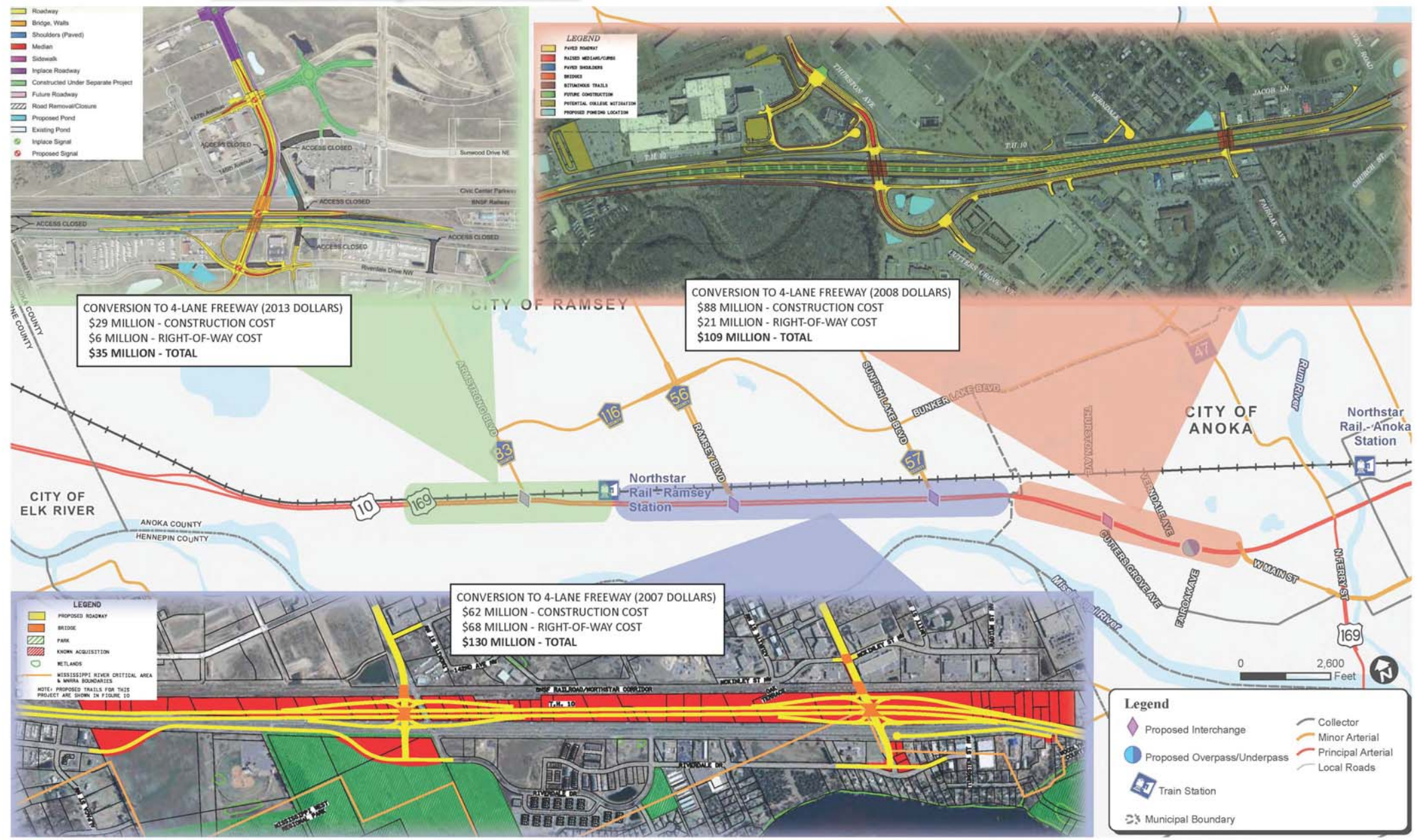
Current Investment:

- The segment of Highway 10 west of Fairoak Avenue was last resurfaced in 2006
- The segment east of Fairoak Avenue is being resurfaced summer 2013
- These resurfacing improvements are expected to last for 15-20 years. At that time, another resurfacing project would likely serve the pavement needs for another 15-20 years
- A reconstruction of the study corridor is not anticipated for 30+ years

Freeway Investment:

- Proposed improvement costs exceed $300 million when adjusted for inflation including acquisition of over $100 million of private property
- There are no funds programmed in the 20-year investment plan for expansion of Highway 10 to a freeway
- Armstrong Blvd Interchange is significantly funded
- City of Ramsey has purchased 15 properties (over $8 million) along Highway 10 to preserve for future freeway

Freeway Vision

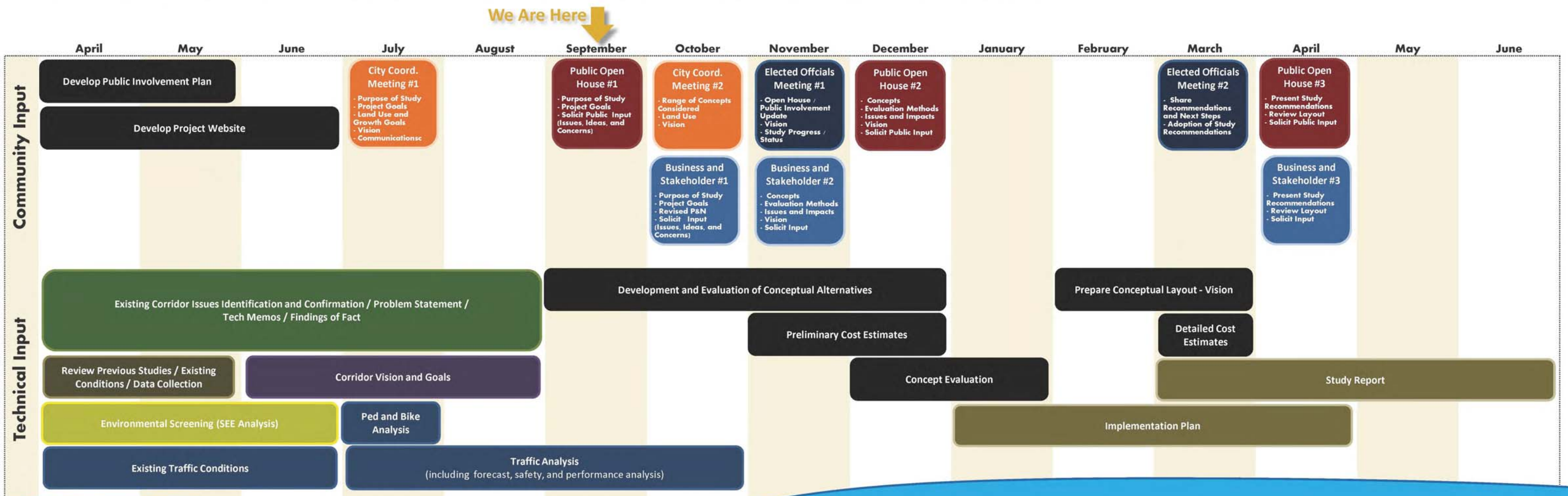


Conclusion: Considering current overall state and federal funding levels, it will be difficult to achieve the vision of a freeway facility on this portion of Highway 10 in the next 20 years.

HIGHWAY 10 ACCESS PLANNING STUDY

Study Goals & Schedule

- Identify high-benefit, lower-cost improvements along Highway 10 to:
  - Improve safety for motorists and pedestrians
  - Address mobility and congestion issues to preserve the regional function of the road
- Recommend improvements at a scale that can be funded and maintained
- Prioritize investment recommendations for incremental implementation beginning in the short-term



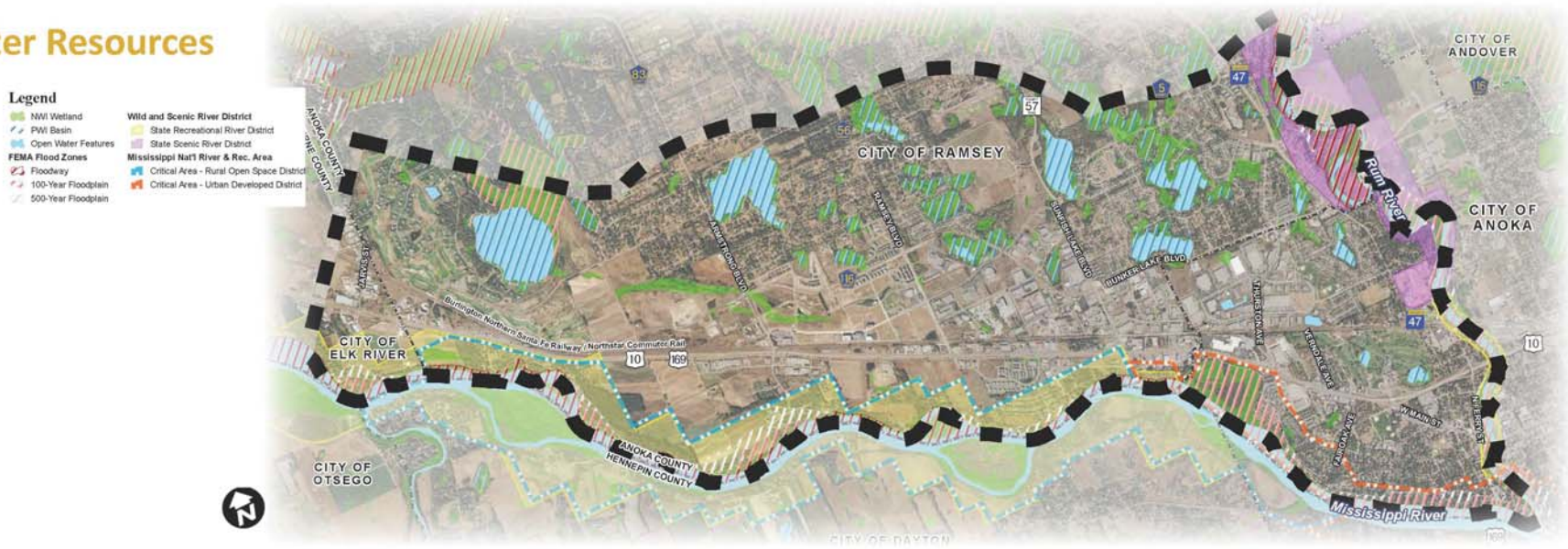
HIGHWAY 10 ACCESS PLANNING STUDY

Environmental Considerations

Environmental resources such as cultural resources, contaminated sites, wetlands/water resources, parks, schools and recreation sites can influence the location of roadway improvements. These maps illustrate known resources within the study area.

Regionally Significant Ecological Areas

Water Resources



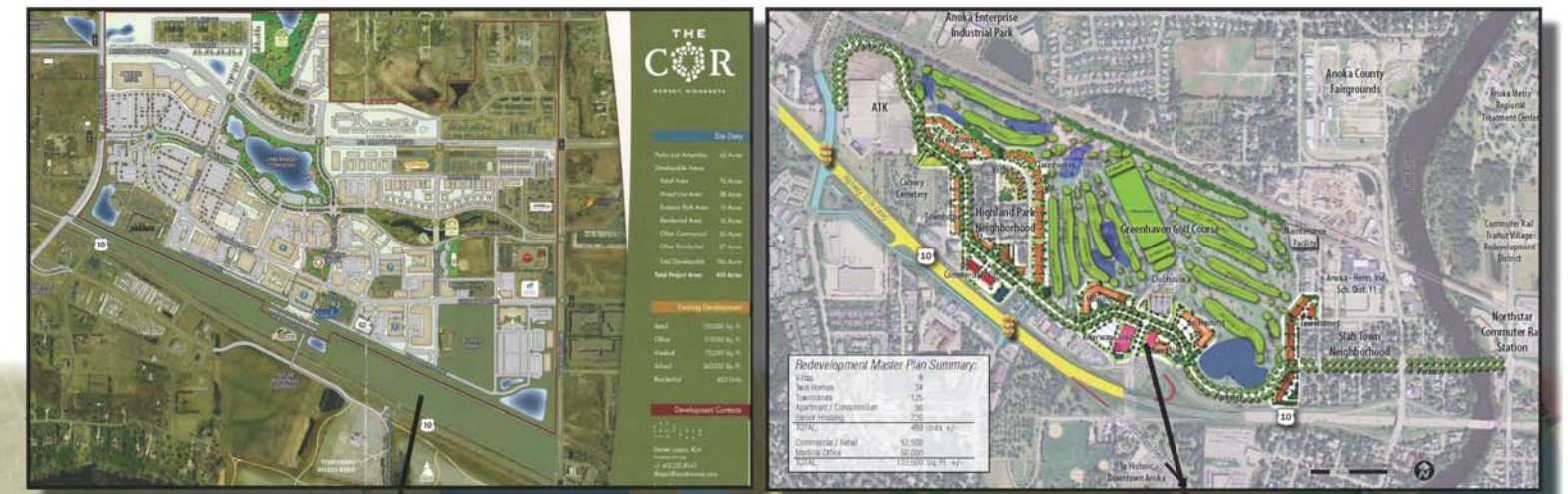
Recreation & Natural Areas

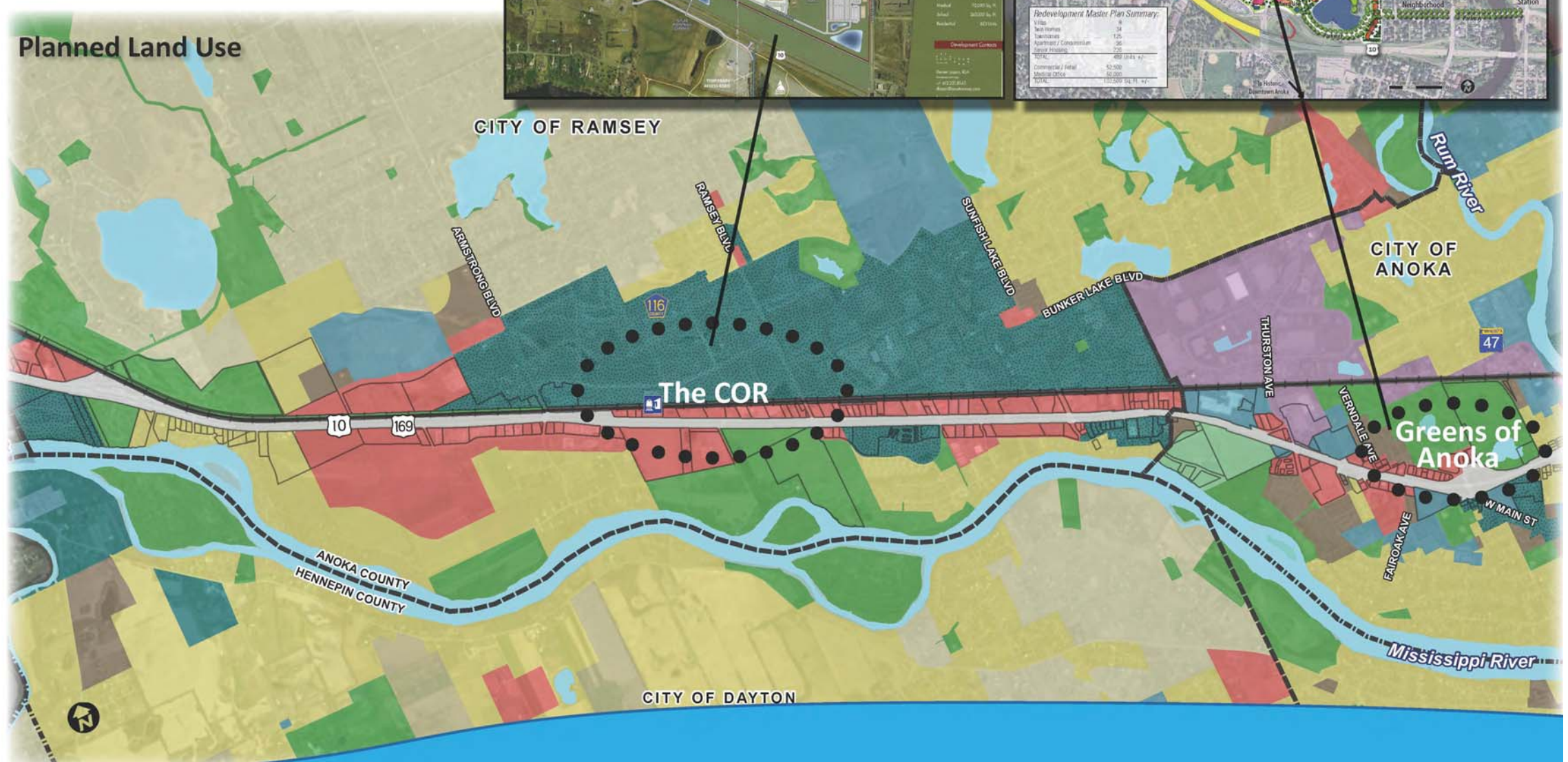
Conclusion: Areas adjacent to Highway 10 contain protected and valuable environmental and social resources.

HIGHWAY 10 ACCESS PLANNING STUDY

Land Use

- Substantial growth expected in Ramsey
  - 2010 Population = 28,000
  - 2030 Population Forecasts = 43,000
- Ramsey growth focused in The COR and commercial/ industrial development along Highway 10
- Anoka is largely developed but redevelopment projects such as the Greens of Anoka are anticipated



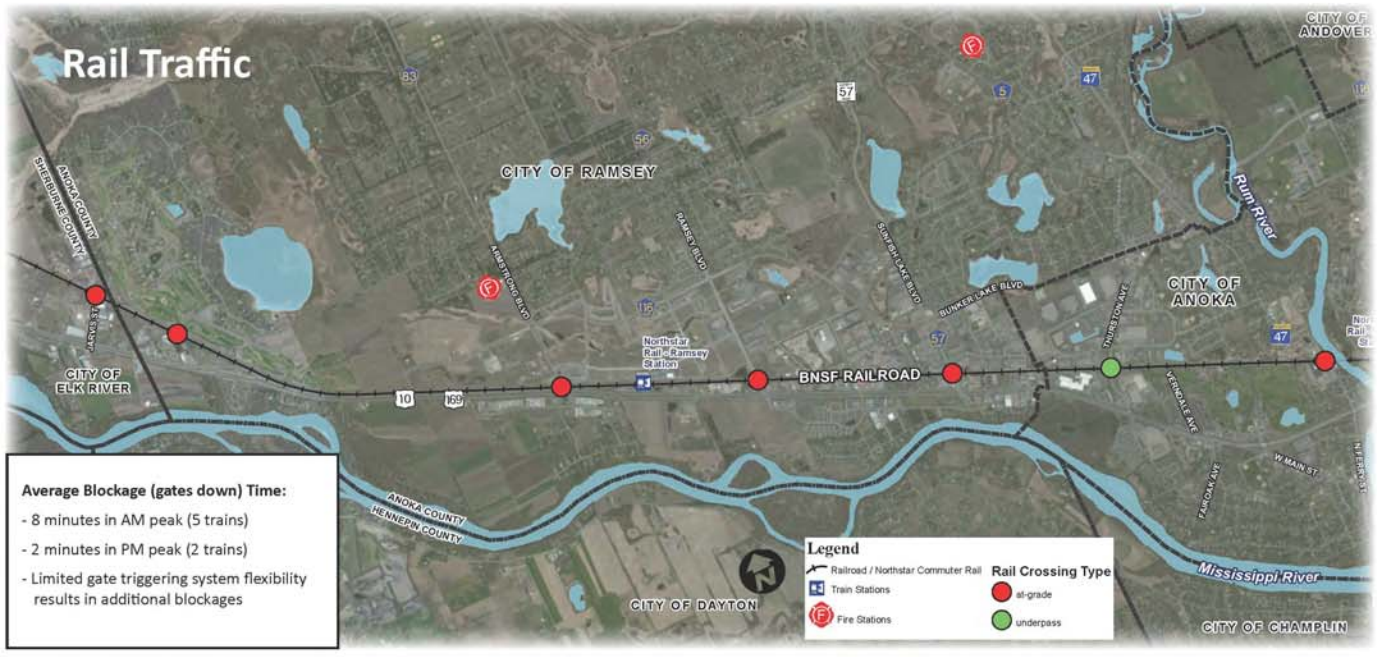


Conclusion:

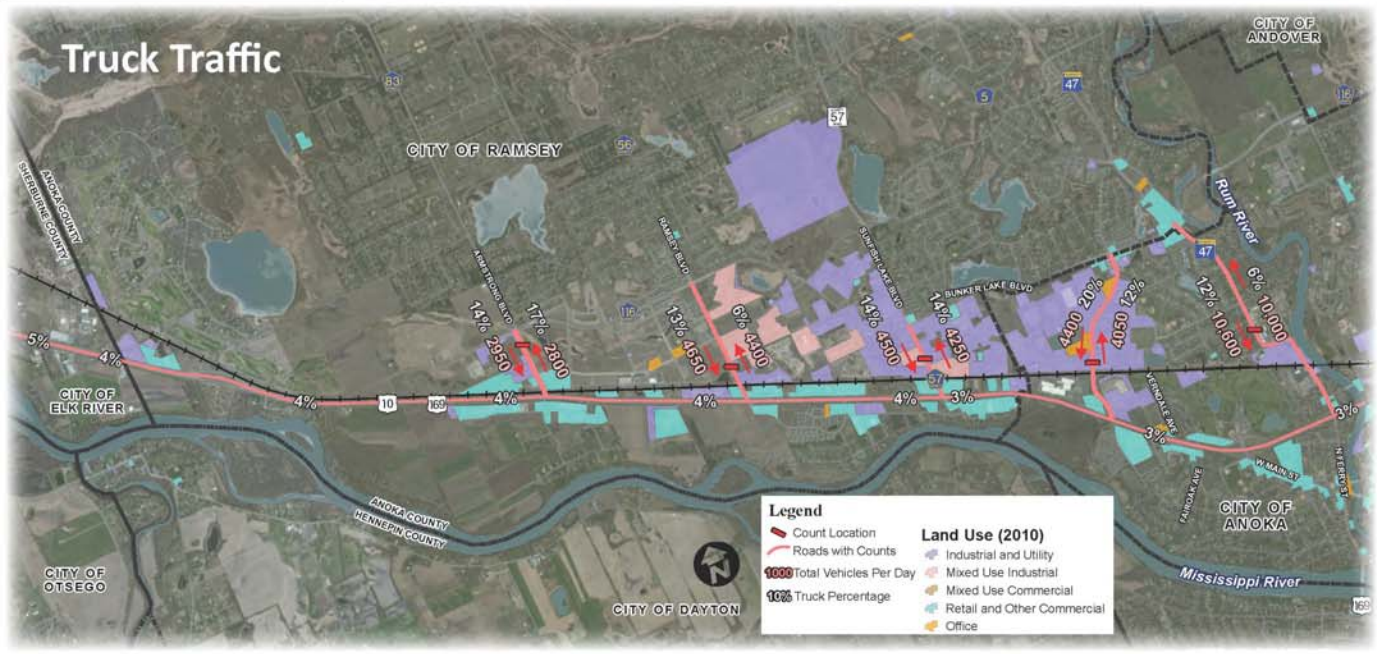
The Highway 10 corridor includes a wide range of interdependent land uses. Expected growth and redevelopment within the corridor will bring more people and further challenge the corridor's transportation infrastructure.

HIGHWAY 10 ACCESS PLANNING STUDY

Freight, Trains and Transit



- BNSF Railway is one of the largest U.S. railroads covering the western half of the U.S.
- BNSF Railway serves 32,500 route miles in 28 states
- BNSF runs 67 freight trains per day at 75 mph through study area
- Average freight train is 2.6 miles long



- Several freight generators exist in study area
- The percentage of heavy trucks on north-south intersecting roadways is high

- 12 Northstar trains per day (6 each direction)
- Additional Northstar trains for special events (i.e, Twins, Vikings games)
- 2 Amtrak trains per day (1 each direction)
- 3 Metro Transit Bus routes per day

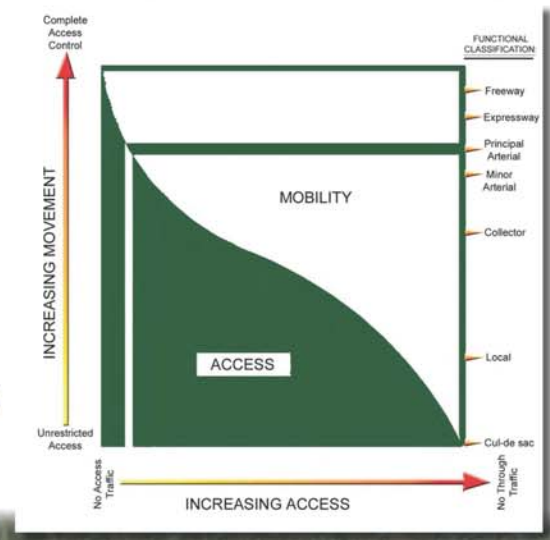
Conclusion: Highway 10 is an important multi-modal corridor serving vehicular, freight, transit and 81 trains per day.

HIGHWAY 10 ACCESS PLANNING STUDY

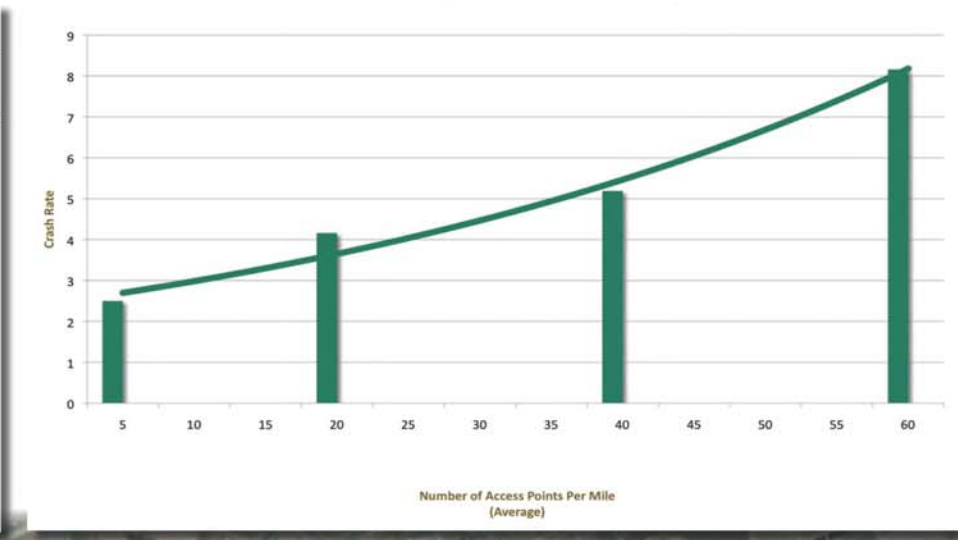
Access Inventory

- 106 access points
- 7.3 mile study corridor
- 14.5 accesses per mile
- 92 properties adjacent to Highway 10
- 60 properties have direct access to Highway 10

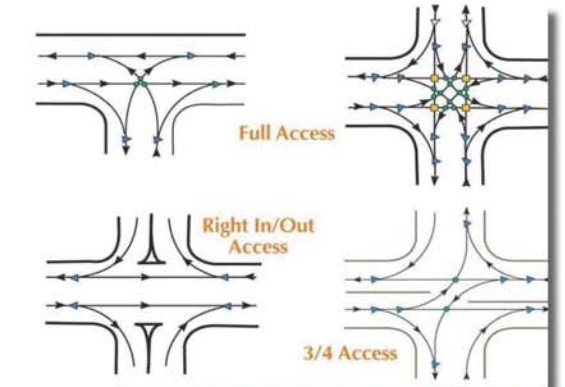
Roadway Mobility/Access Relationship



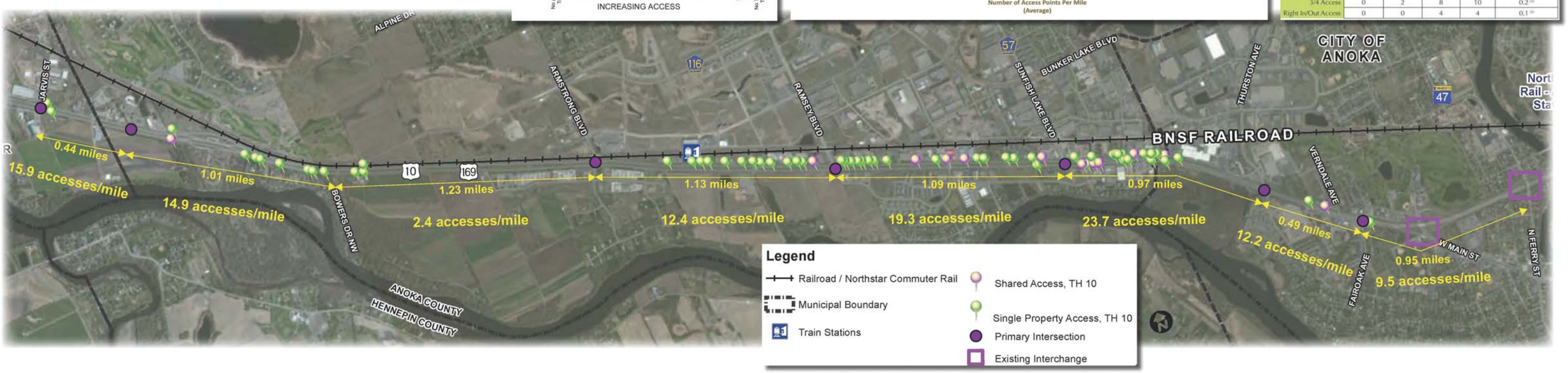
Crash Rate/Access Frequency



Intersection Conflict Points



	Crossing	Turning	Merge/ Diverge	Total	Typical Crash Rate (crashes per mil entering vehicles)
Full Access +	4	12	16	32	0.3 (1)
Full Access T	0	3	6	9	0.3 (2)
3/4 Access	0	2	8	10	0.2 (3)
Right In/Out Access	0	0	4	4	0.1 (3)

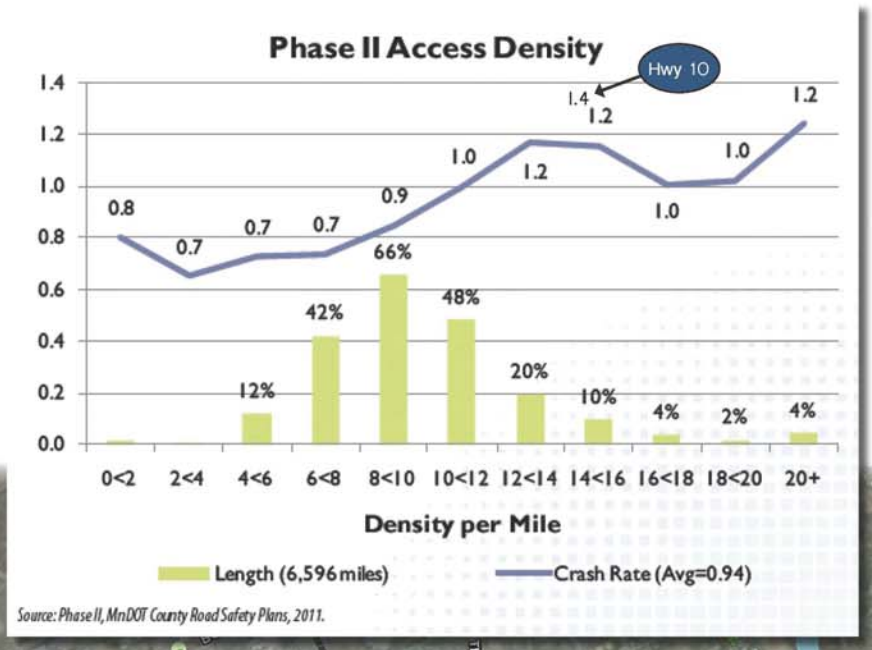


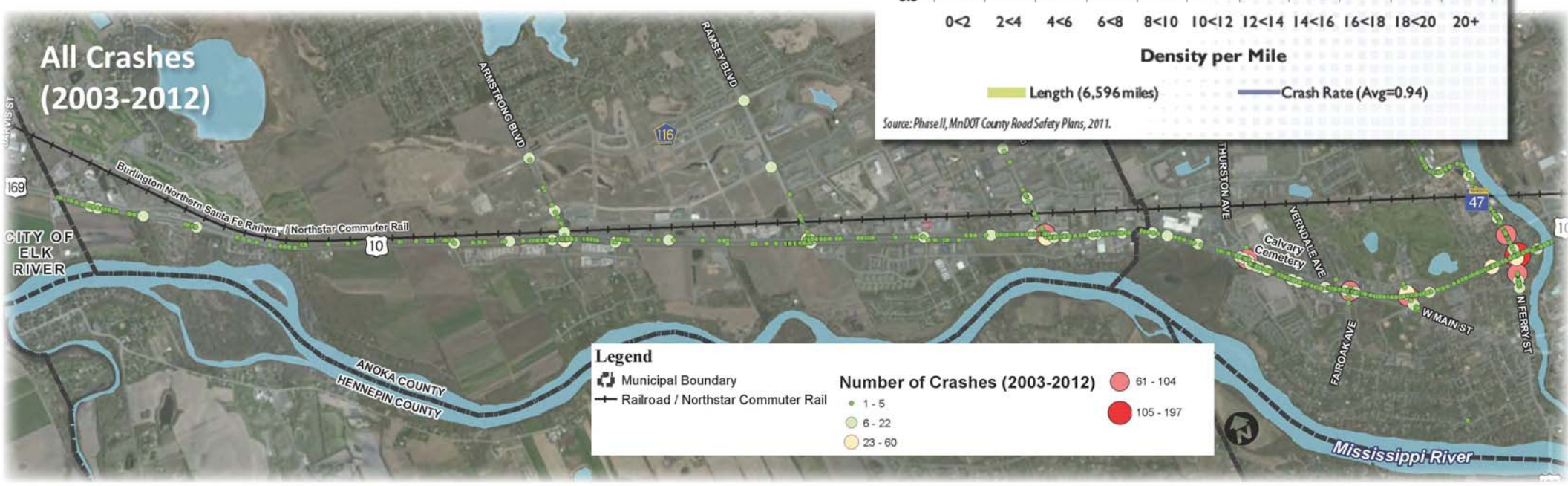
Conclusion: Highway 10 has numerous public and private accesses that cumulatively degrade the safety and performance of the corridor.

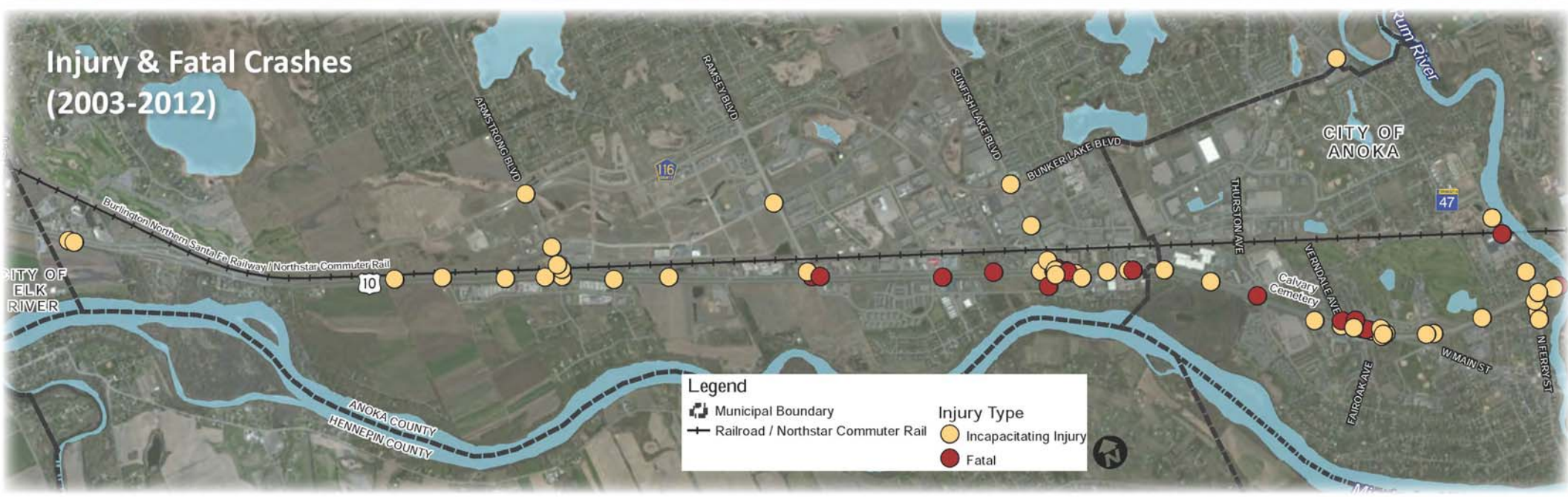
HIGHWAY 10 ACCESS PLANNING STUDY

Crash Analysis

- Corridor crash rate twice that of similar metro area facilities
- 1,621 crashes in the past 10 years
  - 58% were rear-ends at traffic signals
  - 55% involved a westbound vehicle
  - 13 fatalities
  - 494 crashes occured during morning or evening peak periods on weekdays
    - Average of 1 every 5 days
    - Significant congestion during many crashes
  - 5 crashes involved a train
  - 6 crashes involved a bicyclist
  - 5 crashes involved a pedestrian
- High density of closely spaced accesses







Conclusion: High numbers of crashes and fatalities are occurring on the Highway 10 corridor.

HIGHWAY 10 ACCESS PLANNING STUDY

Pedestrian & Bicycle Analysis

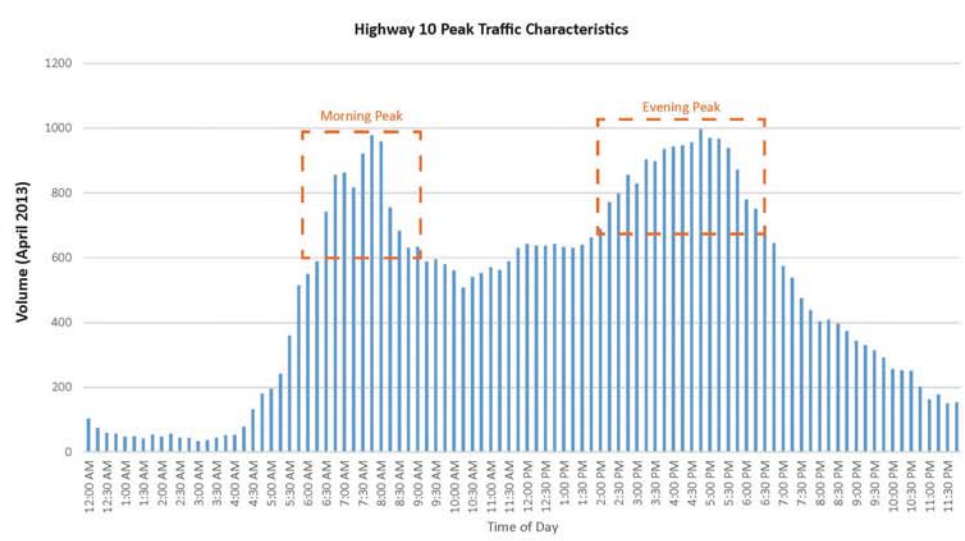
- High traffic volumes and high speeds make Highway 10 intimidating for pedestrians and bicyclists
- Many pedestrians do not cross properly due to delays or inconvenience
- Lack of trail/sidewalk coverage in the Highway 10 corridor
- Lack of Americans with Disabilities Act (ADA) infrastructure
- 6 bicycle crashes and 5 pedestrian crashes within last 10 years
  - 4 pedestrian fatalities
    - 2 fatalities at locations without marked crosswalks
    - 2 fatalities at a marked crosswalk

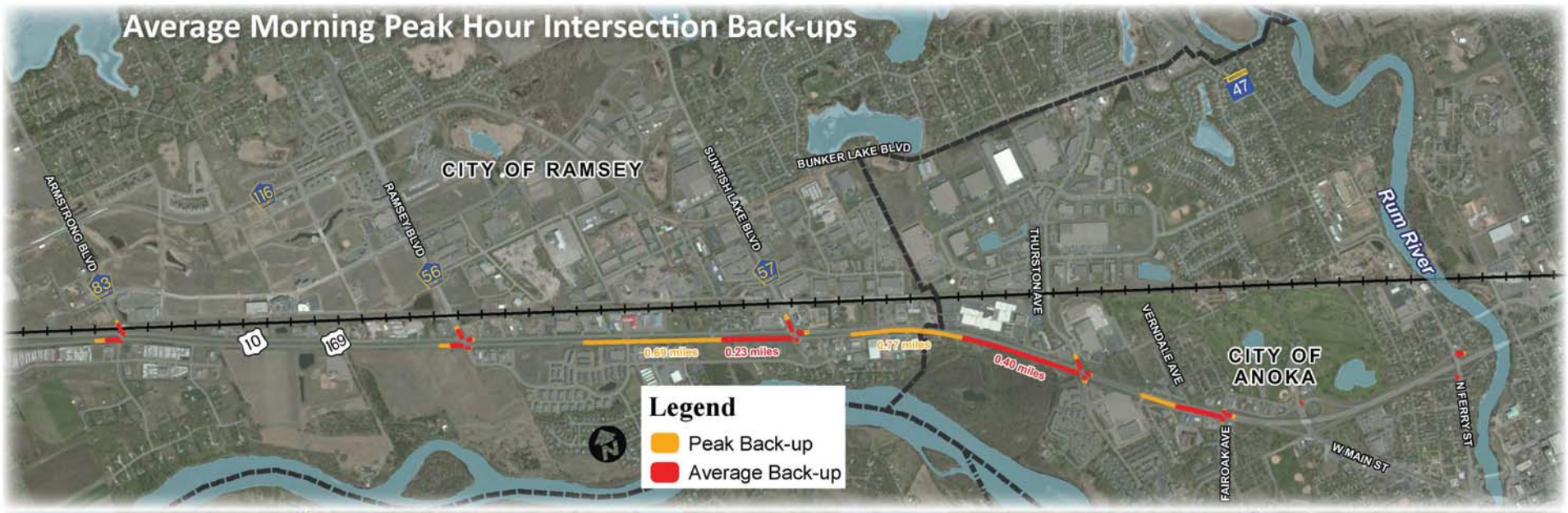
Conclusion: Highway 10 is a challenging corridor for pedestrians and bicyclists.

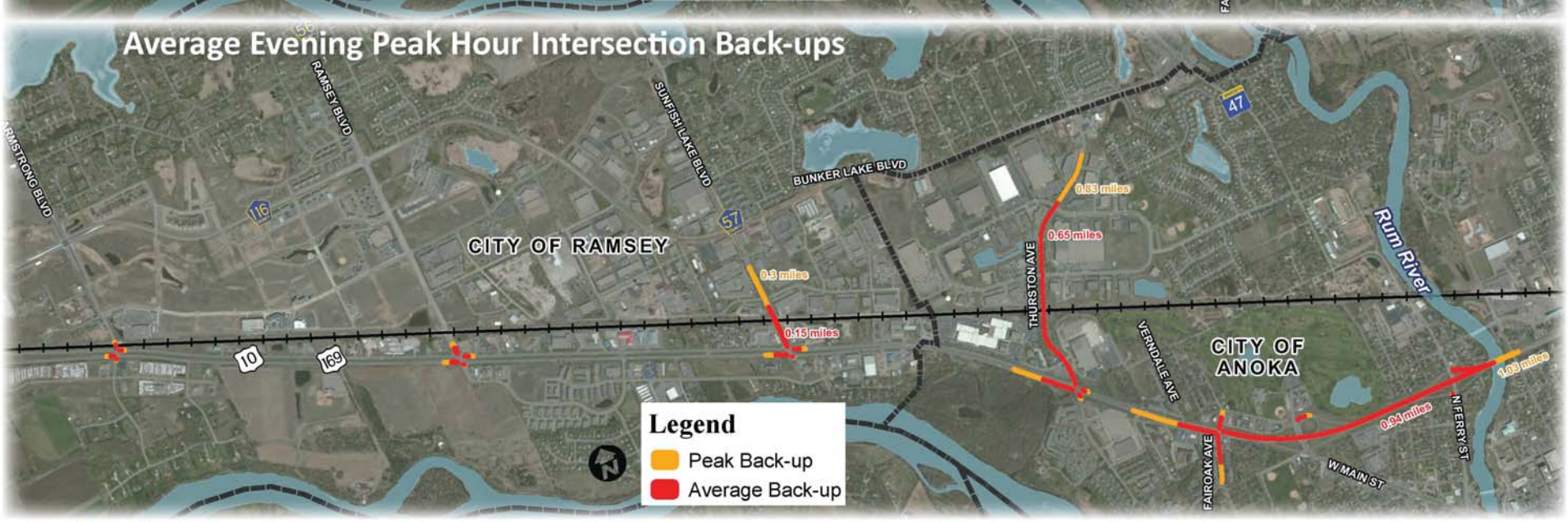
HIGHWAY 10 ACCESS PLANNING STUDY

Traffic Operations

- Highway 10 is a principal arterial with a primary purpose of providing direct, relatively high speed service for longer trips and large traffic volumes
- Highway 10 carries an average of 33,500 vehicles per day on west end to 61,000 vehicles per day on the east end
- Speeds for eastbound traffic in the morning peak average 41 mph while speeds for westbound traffic in the evening peak average 35 mph – both compared to 61 mph average speeds in uncongested conditions
- Evening back-ups on westbound Highway 10 extend from Fairoak Ave to the Rum River, more than a mile
- Significant peak hour back-ups occur on cross streets
- Crashes, emergency responders and weather significantly impact travel time
- Train crossings frequently cause delay on the cross streets and limit access to Highway 10





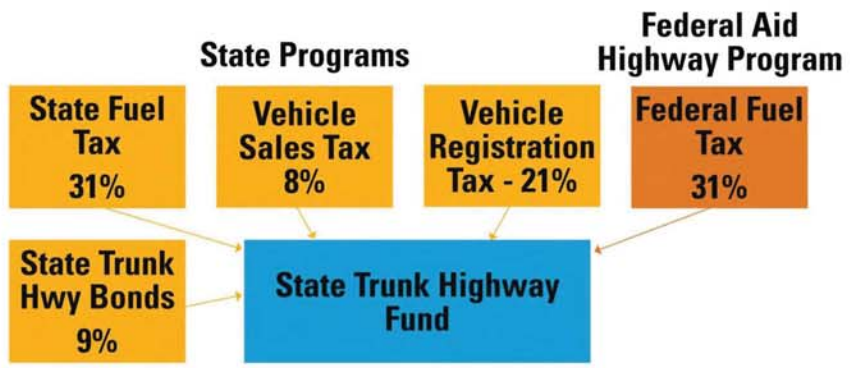


Conclusion: The capacity and mobility demands of the Highway 10 corridor are underserved.

HIGHWAY 10 ACCESS PLANNING STUDY

State Highway System Revenue and System Management

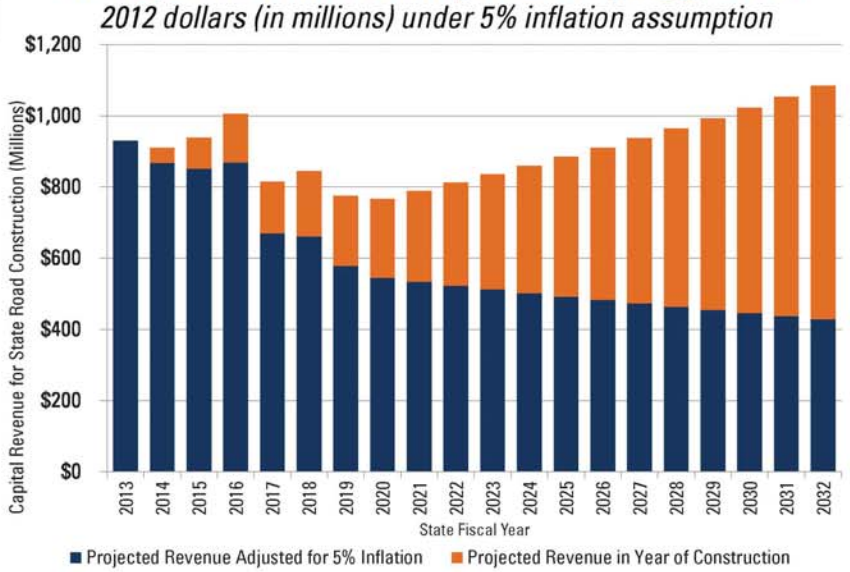
State highway revenue sources



Capital revenue 2013 – 2032 = $18 billion

Changes in inflation impacts buying power

2012 dollars (in millions) under 5% inflation assumption



Transportation Needs/Funding Gap:

- Needs = $30.2 Billion
- Revenue = $18 Billion
- Funding Gap = $12 Billion

Investment Category		20-Year Outcomes Based on Aspirational Performance Targets or Other Key System Goals	20-Year Need	Total (%)
Asset Management	Pavement Condition	Meet pavement performance targets of 2% Poor condition and 70% Good condition on NHS and 3% Poor condition and 65% Good condition on non-NHS roads.	$10.76 billion	35.6%
	Bridge Condition	Invest in state highway bridges at optimal points in their life cycles; meet performance targets of ≤2% Poor condition and ≥84% Good or Satisfactory condition on NHS bridges, ≤8% Poor and ≥80% in Good or Satisfactory condition on non-NHS bridges.	$5.11 billion	16.9%
	Roadside Infrastructure Condition	Reduce the number of poor culverts, maintain rest areas, and meet federal standards.	$1.71 billion	5.7%
Traveler Safety		Meet an aggressive traffic fatalities target by implementing District Safety Plans more quickly than current rate (2012), address most sustained crash rate locations, and invest $3 million/year for Toward Zero Deaths programming.	$1.34 billion	4.4%
Critical Connections	Twin Cities Mobility	Implement the Metropolitan Council's Transportation Policy Plan, which includes Active Traffic Demand Management, build-out of the MnPASS system, spot mobility improvements, and strategic capacity enhancements.	$3.90 billion	12.9%
	Interregional Corridor Mobility	Meet system performance targets by completing major improvements on three of four underperforming corridors (I-94, US 10, US 63, and MN 210).	$810 million	2.7%
	Bicycle Infrastructure	Strategically improve the bicycle network and continue implementing bicycle accommodations as part of pavement and bridge projects.	$540 million	1.8%
	Accessible Pedestrian Infrastructure	Install accessible pedestrian signals at all signalized intersections by 2030, bring all intersections into compliance with Americans with Disabilities Act (ADA) curb ramp standards, and fund identified priority pedestrian projects.	$490 million	1.6%
Regional + Community Improvement Priorities (RCIP)		Partner with stakeholders to address regional and local priorities through several stand-alone projects and design add-ons, deliver projects that respond to non-performance-based needs and enhance the state's transportation network, and allocate money for statewide and district-level programs.	$1.75 billion	5.8%
Project Support		Efficiently deliver projects through adequate consultant services, supplemental agreements, construction incentives, and right-of-way acquisition.	$2.88 billion	9.5%
Small Programs		Continue to fund unforeseen issues and one-time specialty program needs.	$900 million	3.0%
			TOTAL = $30.19 BILLION	

Minnesota 20-Year State Highway Investment Plan:

Overview

Minnesota's 12,000-mile state highway system plays a critical role in supporting the state's economic vitality and quality of life. Economic vitality, as well as quality of life, depends upon a strong, well-connected transportation network. To compete economically and to position Minnesota for the future, MnDOT needs to maintain the state highway system. The size and the age of Minnesota's transportation system demonstrate the scope of the state highway system's investment need:

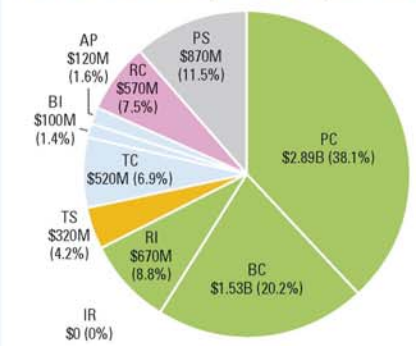
- 50 percent of state highway pavements are more than 50 years old.
- 35 percent of state highway bridges are more than 50 years old.
- Minnesota ranked 38th nationally for pavement condition (Interstates) .
- Minnesota ranked 9th (tied) nationally for state highway bridges.

The Minnesota Department of Transportation (MnDOT) is directly charged with constructing, operating, maintaining, and managing this system, which is 74 percent of the State's capital assets. The **Minnesota 20-Year State Highway Investment Plan (MnSHIP)** is MnDOT's vehicle for deciding and communicating capital investment priorities for the system for the next 20 years. MnSHIP is a fiscally constrained plan, meaning its planned expenditures must align with expected revenues, which total $18 billion. Meanwhile, the projected transportation needs on the state highway system total $30 billion.

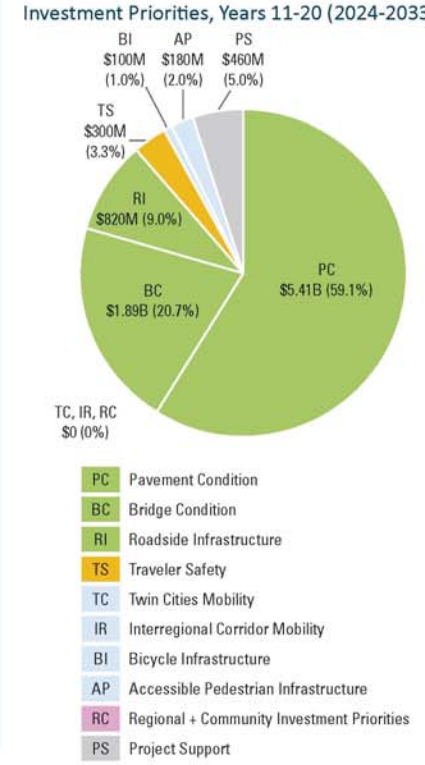
MnDOT must account for many factors when setting priorities, including federal and state law, system conditions, and public input. The result is a set of investment priorities that vary over the next 20 years. MnDOT's priorities for the next 10 years balance preservation of existing infrastructure with investments in safety, new connections for multiple modes of transportation, and other projects that advance economic development and quality of life objectives.

However, investments in the second 10 years focus almost exclusively on preserving existing infrastructure. Despite this focus, the number of roads and bridges in poor condition will more than double and perhaps even triple within 20 years. Given the projected $12 billion funding gap, there will be many unfunded priorities within the 20-year horizon.

Investment Priorities, Years 1-10 (2014-2023)



Investment Priorities, Years 11-20 (2024-2033)



Conclusion: Considering current overall state and federal funding levels, it will be difficult to achieve the vision of a freeway facility on this portion of Highway 10 in the next 20 years.

HIGHWAY 10 ACCESS PLANNING STUDY

Provide Your Input:

- Talk to project staff tonight
- Submit a written comment
  - Leave in comment box
  - Mail comment form
  - Email comment form
- Sign-up for October Business & Stakeholder Meetings

Upcoming Meetings:

- Business & Stakeholder Meetings –October 2013
- Open House #2 – December 2013

COMMENT FORM

Highway 10 Access Planning Study

Public Open House

September 12, 2013

(OPTIONAL)

Your Information:

Name:

Address:

City, State, Zip:

E-Mail:

Comments/Concerns: (Use back of form or additional pages for more space)

Please drop comments in box at the meeting or submit comment via one of the following means:

Mail to: Bolton & Menk, Inc.
Attn: Chris Chromy
12224 Nicollet Avenue
Burnsville, MN 55337

Email to: chrisch@bolton-menk.com

Study Website: http://www.dot.state.mn.us/metro/projects/hwy10study/index.html