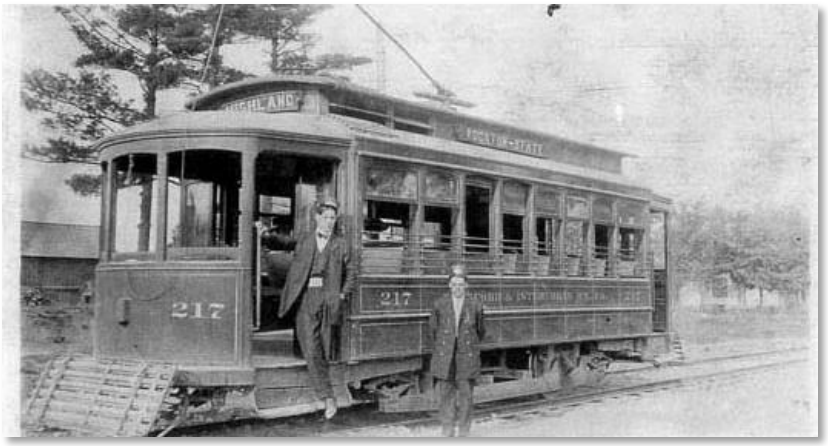
SLATS Passenger Rail Study

Stateline Area Transportation Study (SLATS)

February 22, 2021

AECOM

History



The Interurban Line (1902)

Streetcar on East Grand Avenue (1906)

SOURCE: https://www.beloittransit.com/history/

2002

Metra UP Northwest Line Harvard, IL / Clinton, WI Commuter Rail Extension Feasibility Study

2008

South Central Wisconsin Commuter Transportation Study (SCWCTS)

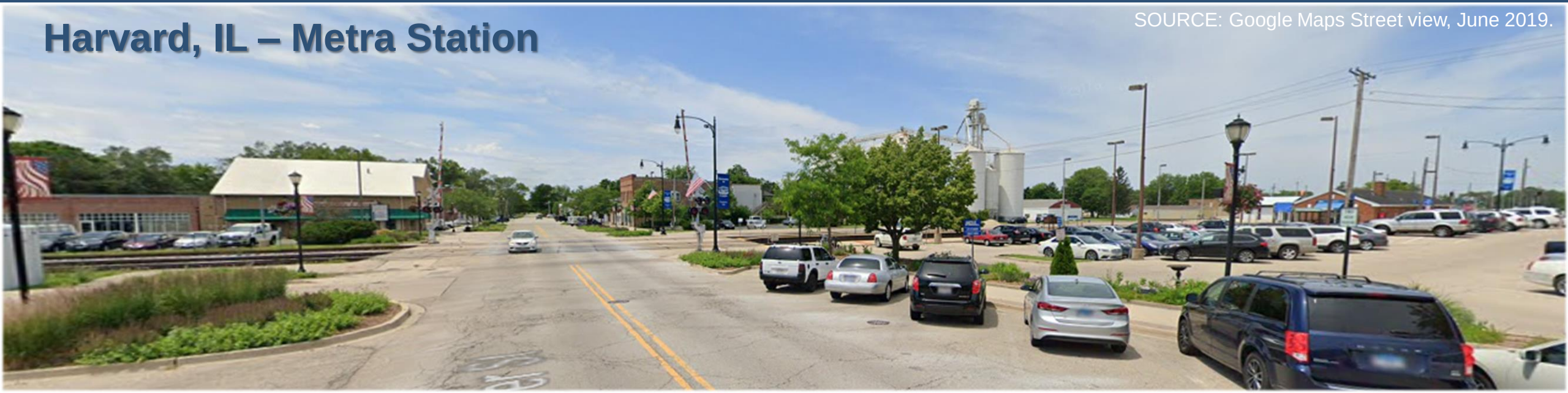
2020

IDOT restoring intercity passenger rail service between Rockford and Chicago

2021

SLATS Rail Study (incorporate into 2045 LRTP)

Background



Study Purpose

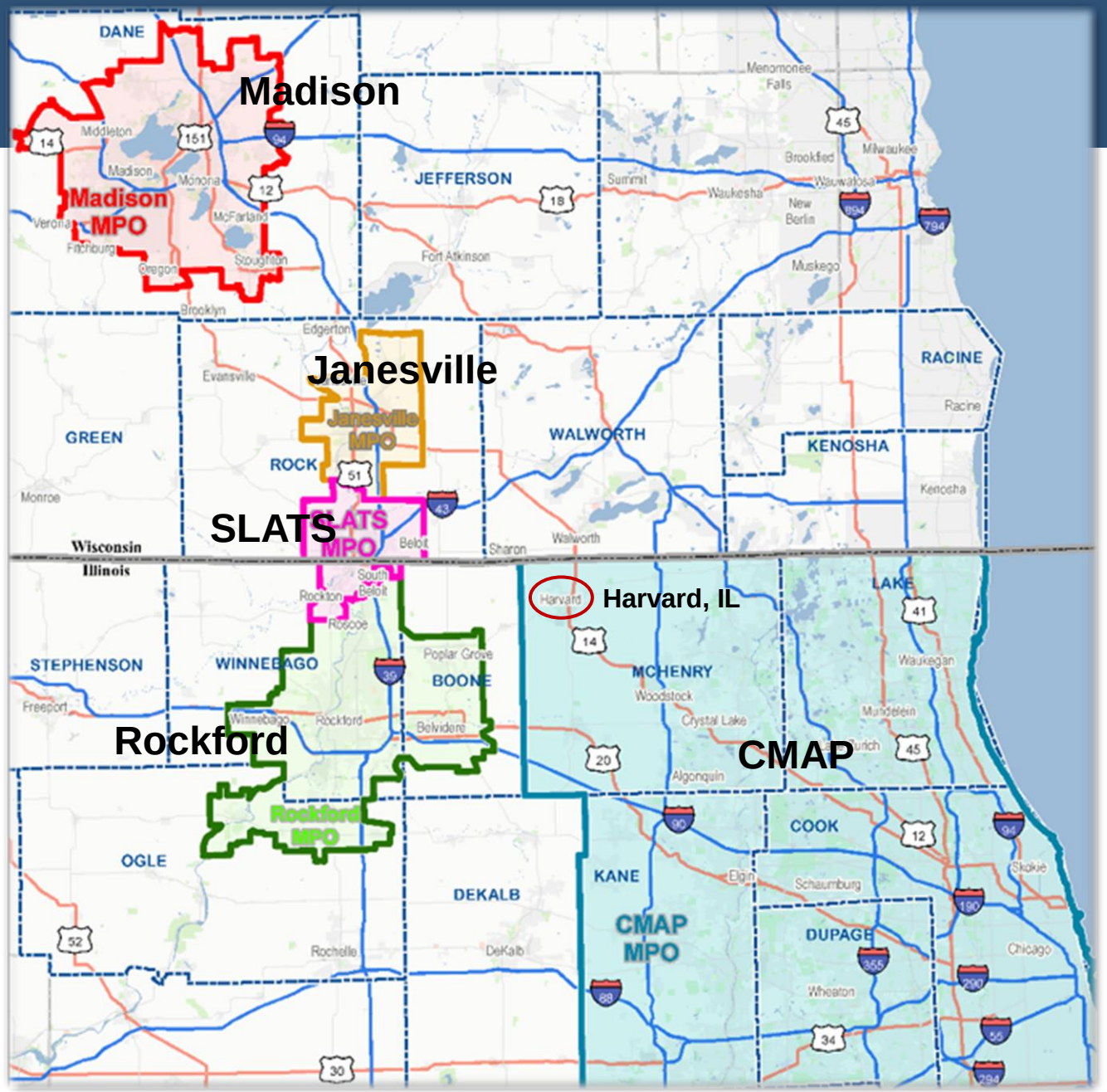
- Evaluate the feasibility of extending passenger/intercity and/or commuter rail to the Stateline Area
- Explore options that extend rail service through the Stateline Area
- Evaluate potential ridership

Potential Benefits

- Improve workforce mobility
- Support economic development
- Expand alternative travel options
- Reduce roadway congestion
- Encourage more compact development patterns

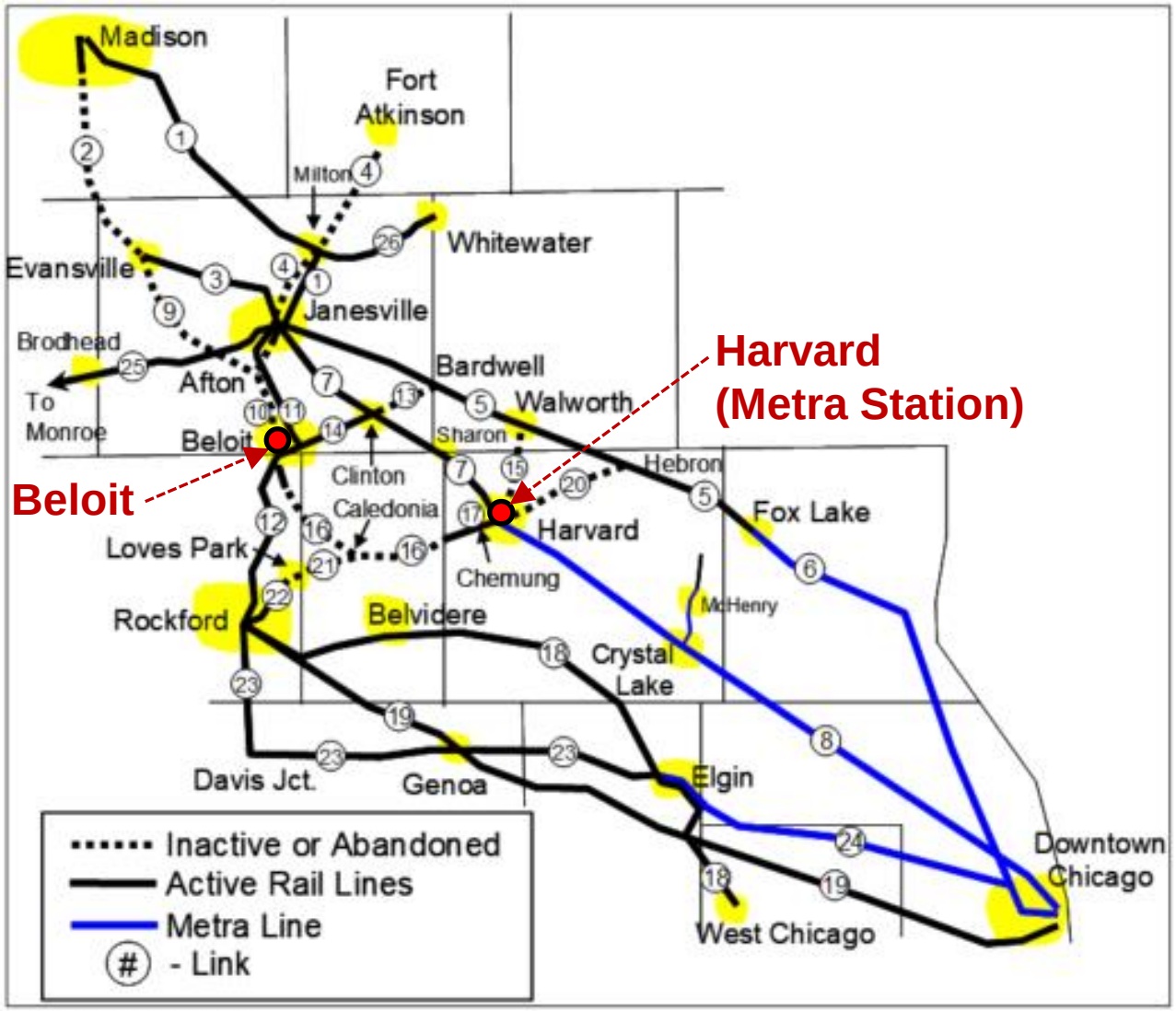
“Super Region”

- SLATS
- Janesville Area Metropolitan Planning Organization
- Region 1 Planning Council (Rockford)
- Greater Madison MPO
- Chicago Metropolitan Agency for Planning (CMAP)



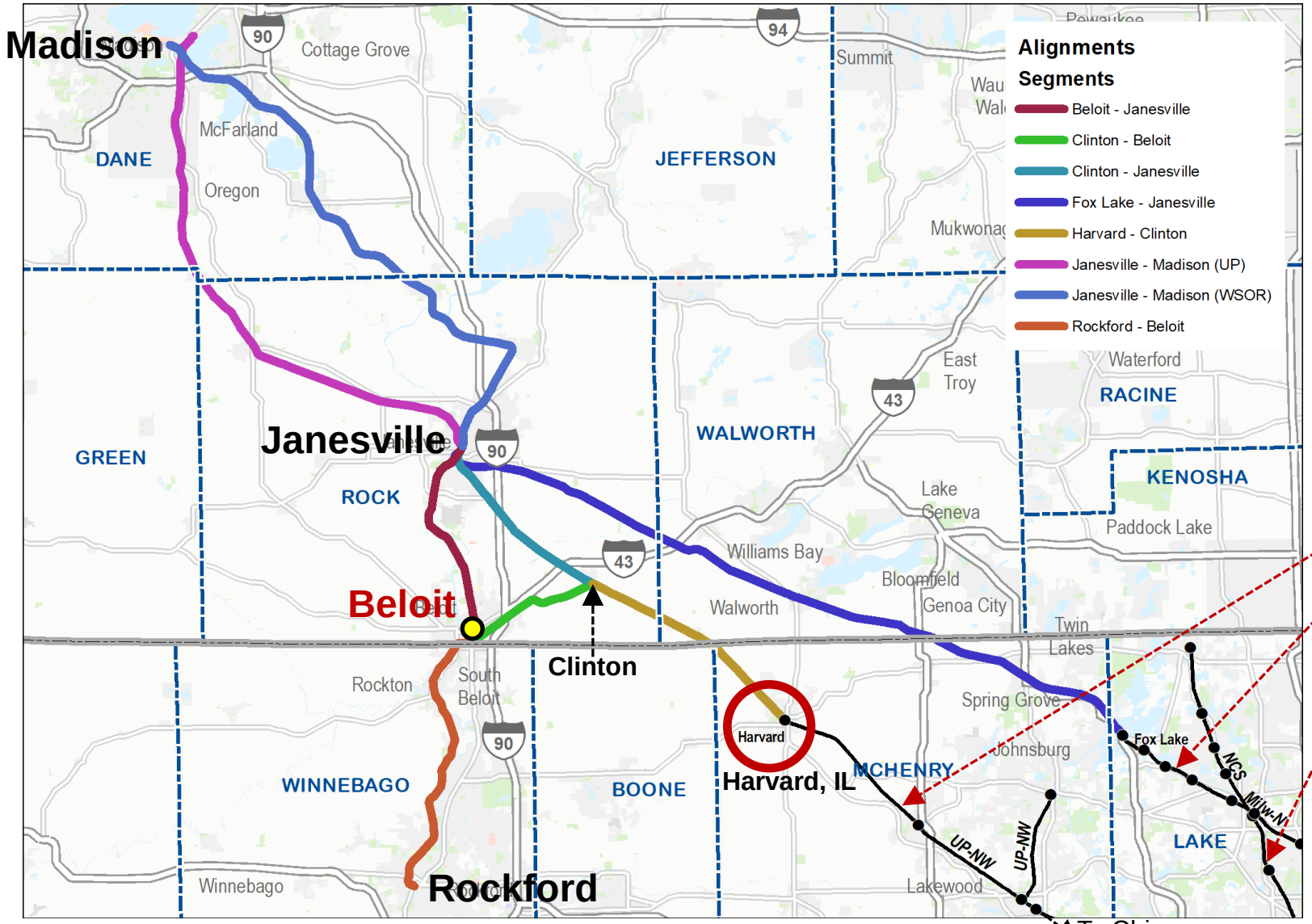
Universe of Rail Corridors

- Builds on 2008 *South Central Wisconsin Commuter Transportation Study* (SCWCTS)
  - 26 rail corridor links
  - Screened to five alignments
    - Madison-Evansville-Janesville
    - Madison-Milton-Janesville
    - Janesville-Beloit-Rockford
    - Janesville-Harvard
    - Beloit-Clinton Jct. (Harvard)
  - 25 station locations

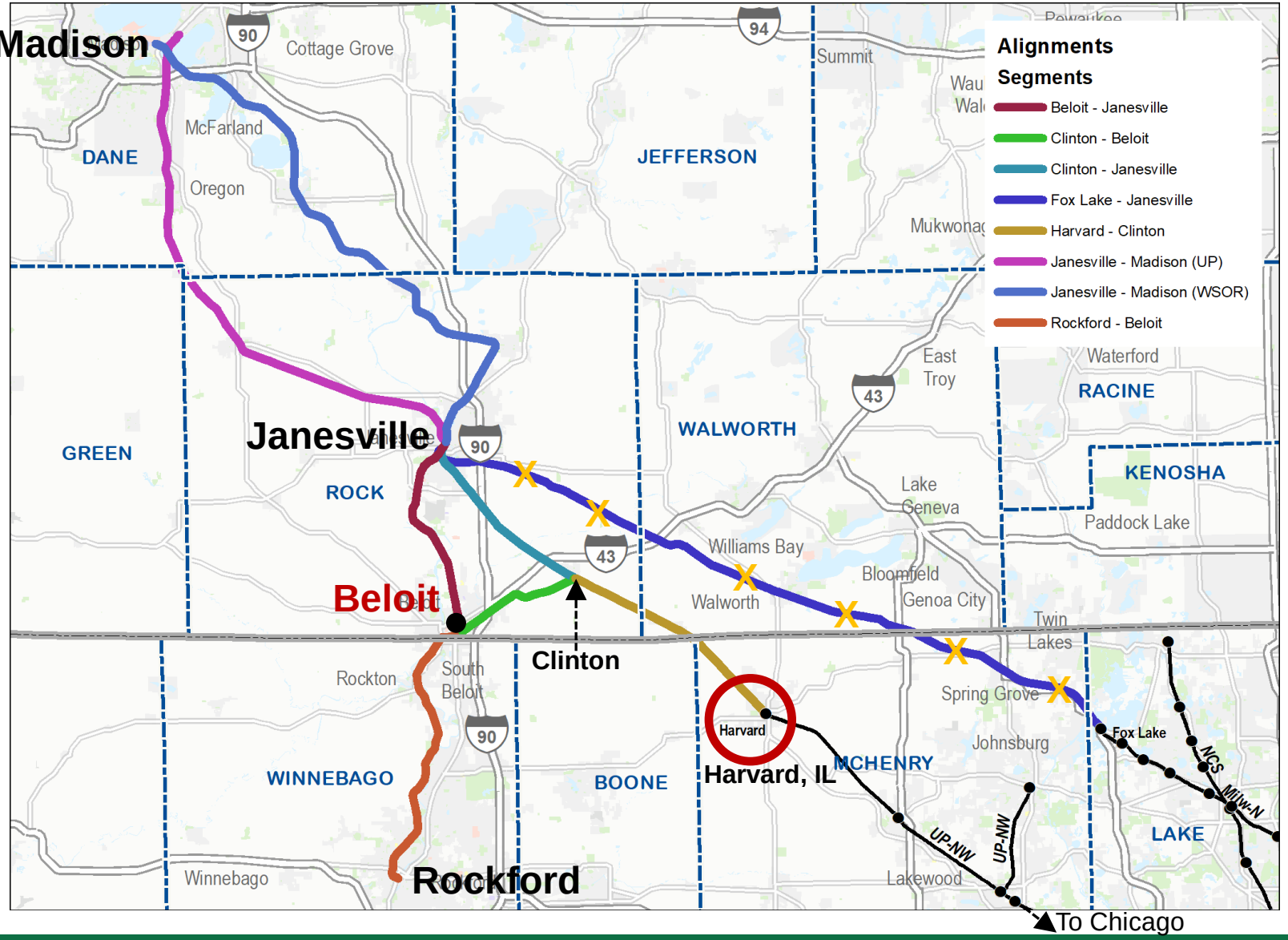


Source: SCWCTS, 2008.

2020 Rail Study Potential Rail Segments



2020 Rail Study Potential Rail Segments

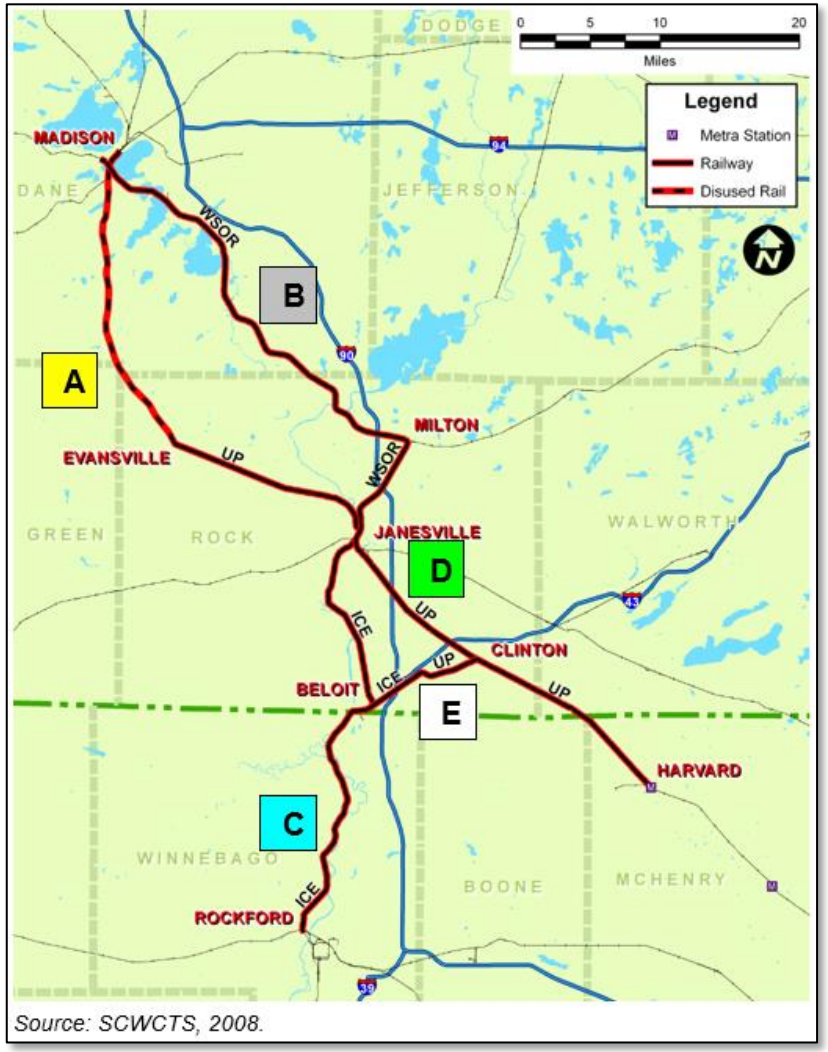


Consideration of Janesville-Fox Lake Rail Link

- Possible extension of the Milwaukee District North (MD-N) Metra Line
  - Screened out in 2008 SCWTCS
- Re-examined with a high-level assessment
  - UP-NW attracted in aggregate over 3x as many daily trips (~ 3,800 versus 900)
- Dropped from further consideration

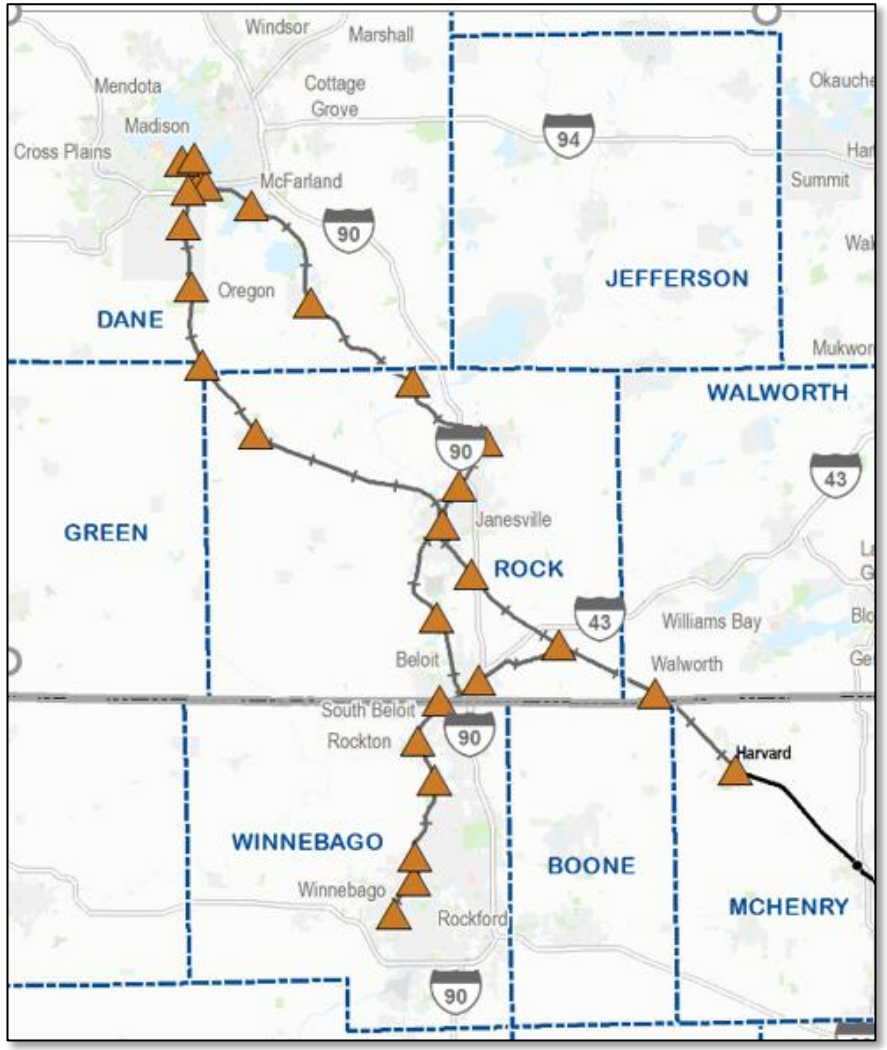
2020 Rail Study Corridors and Stations

Rail Corridors



Source: SCWCTS, 2008.

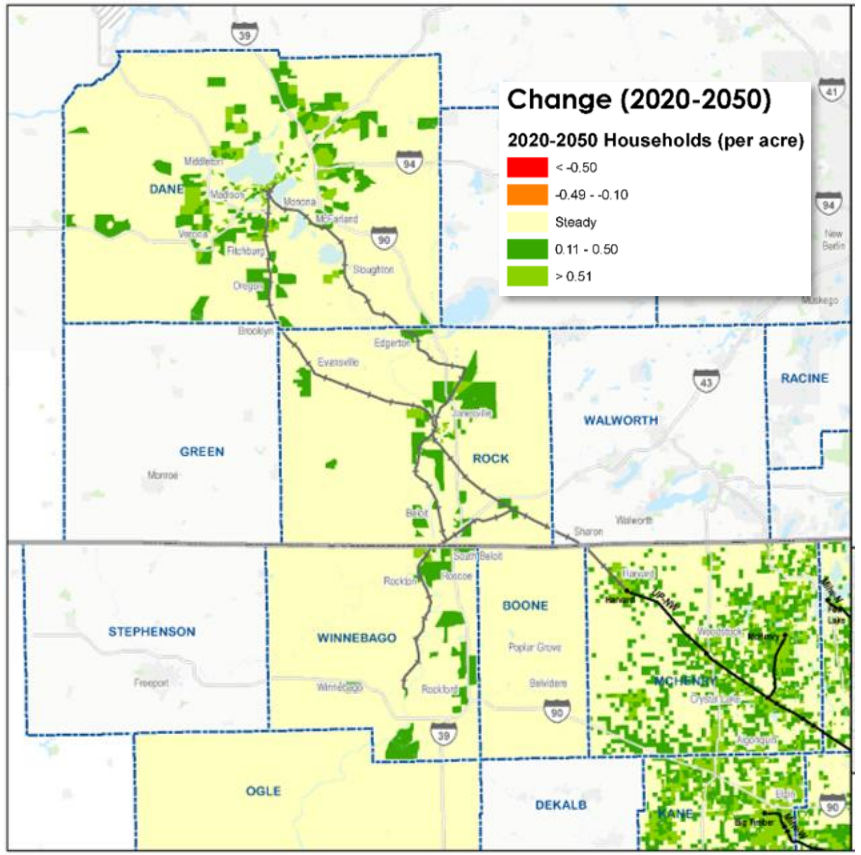
Rail Stations



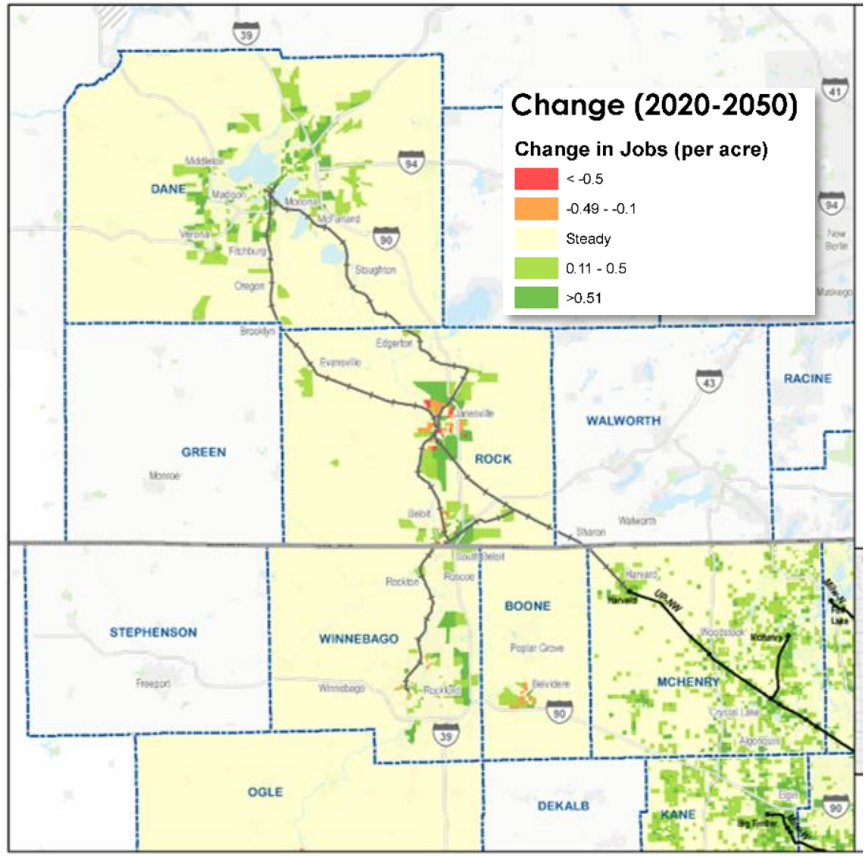
Future Year Analysis (2050)

- MPO approved forecasts
  (by Traffic Analysis Zones)
- Socioeconomic data adjusted to consistent horizon year (2050)
- Growth rates (2020 to 2050) used to estimate future year commuting patterns

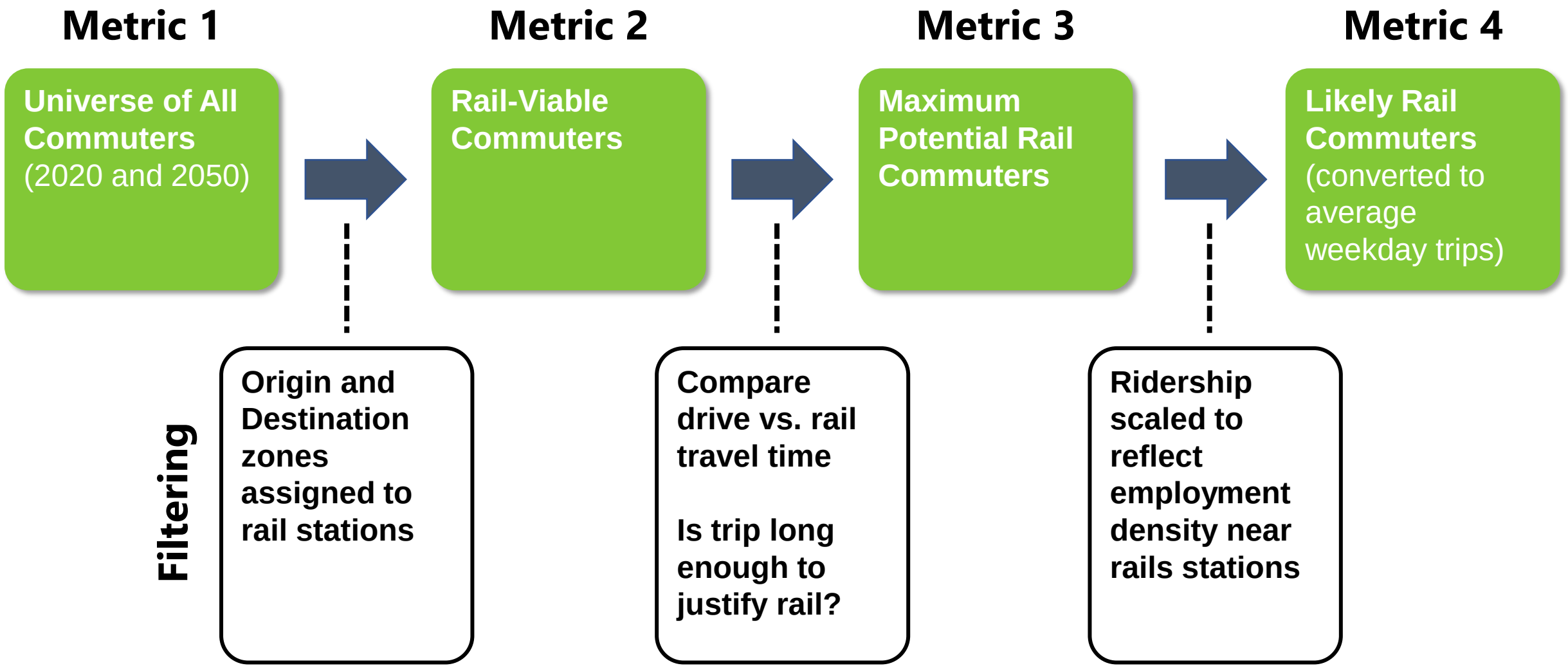
Household Density



Employment Density



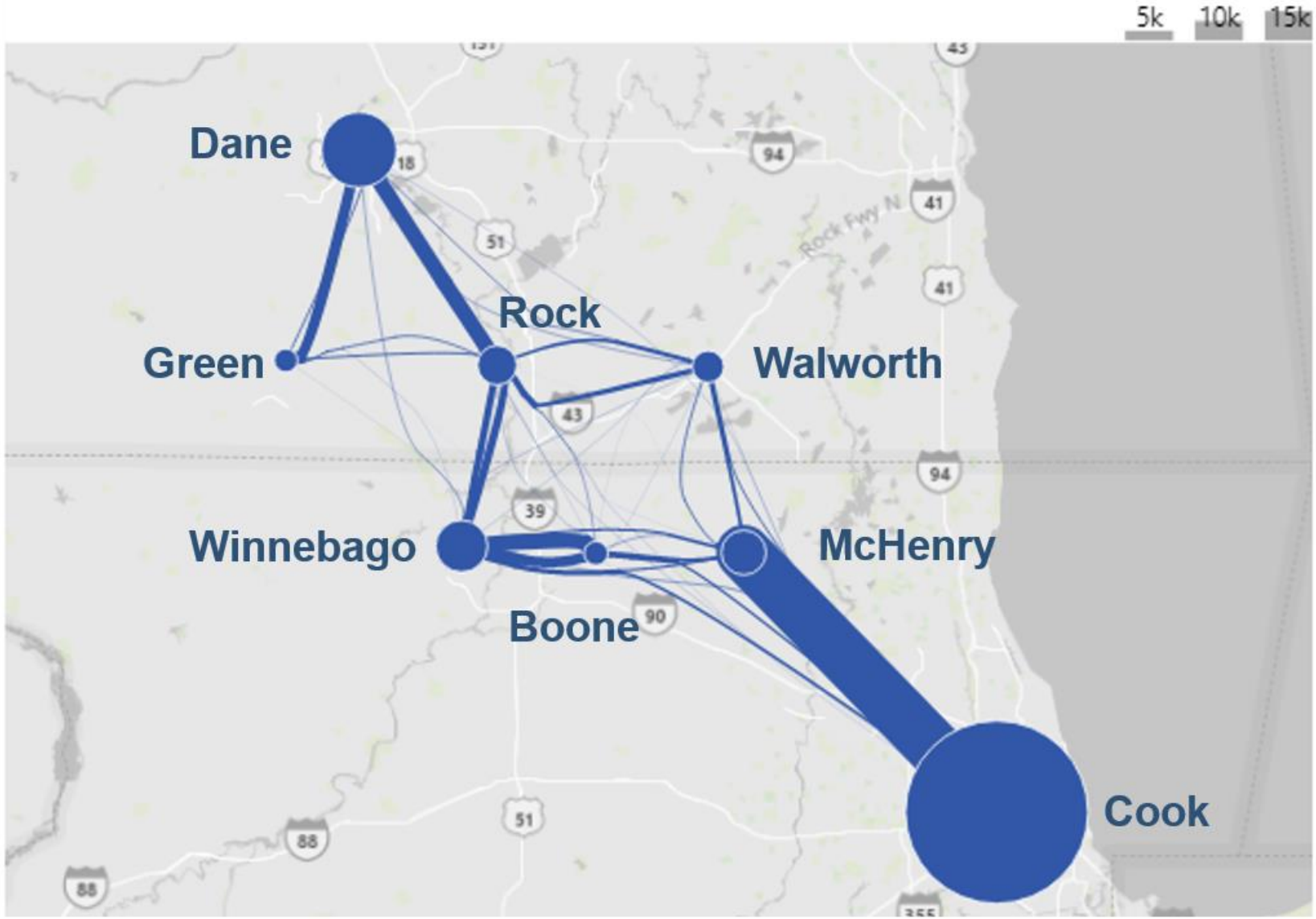
Identifying Potential Rail Ridership



Total All Commuters (All Alignments)

Metric 1

- Universe of all commuters
  - County-to-county work commute flows
    - Source: Census Transportation Planning Products (2012 – 2016 dataset)



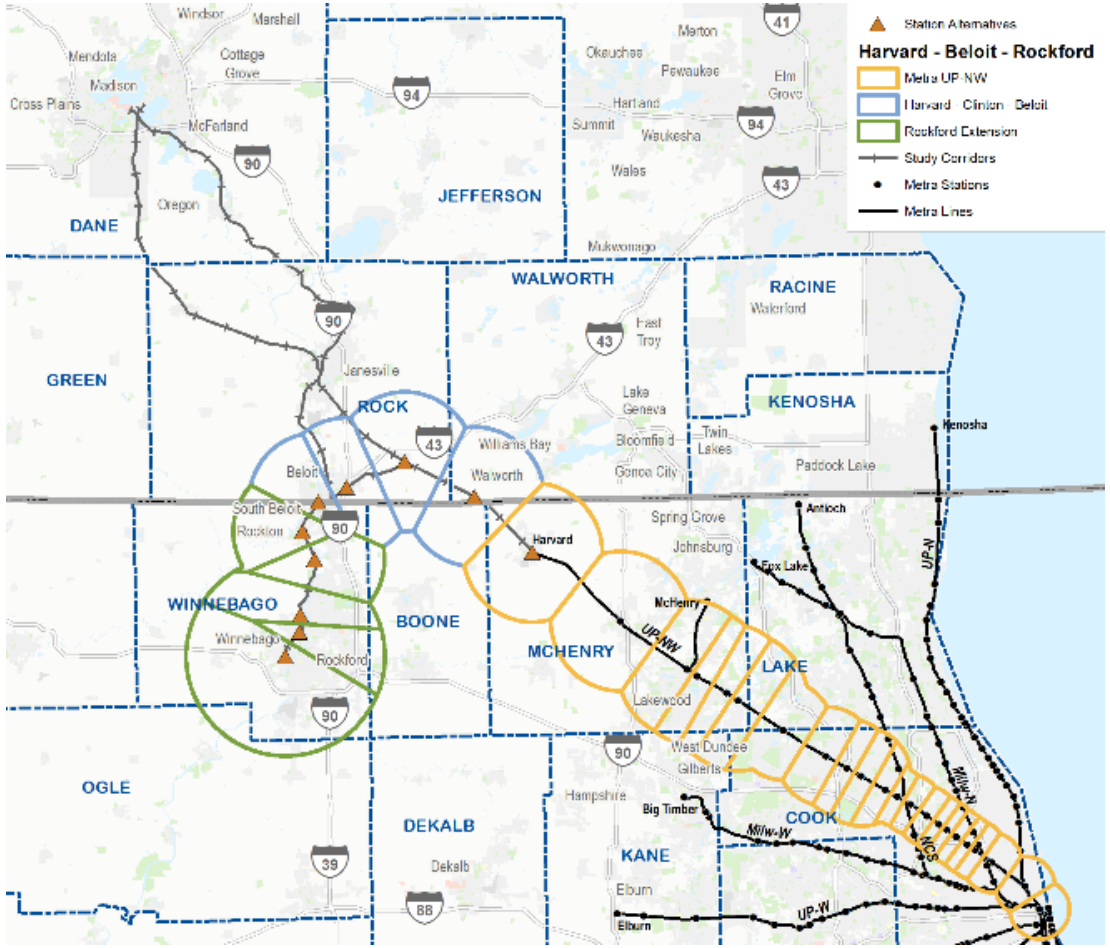
Origin Market Shed Analysis

Metric 1

- Commuters assigned to rail stations (Origin and Destination zones)

Station Type	Average Access Distance at Origin (miles)
Chicago (Near Suburbs)	3
Mid-Suburbs	5
Far Suburbs	7
Suburban Termini	10

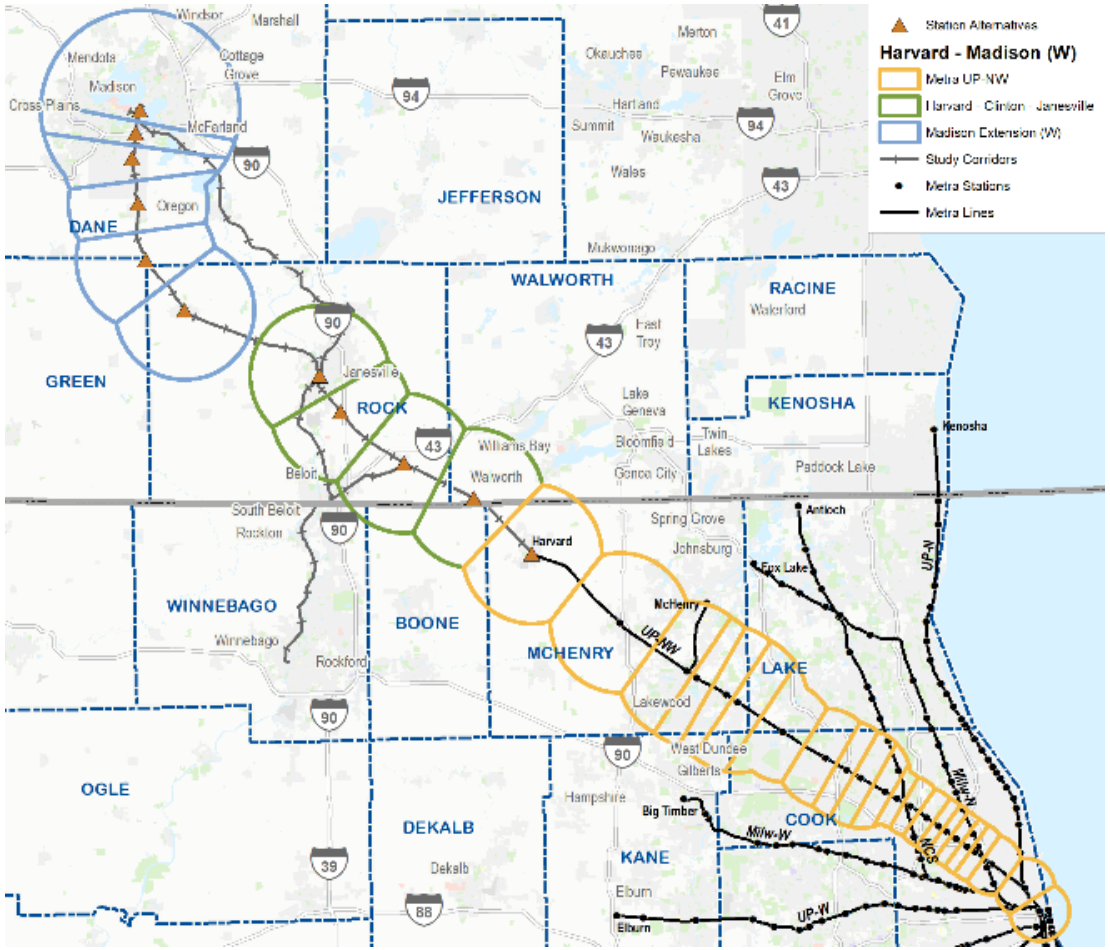
Harvard-Beloit-Rockford



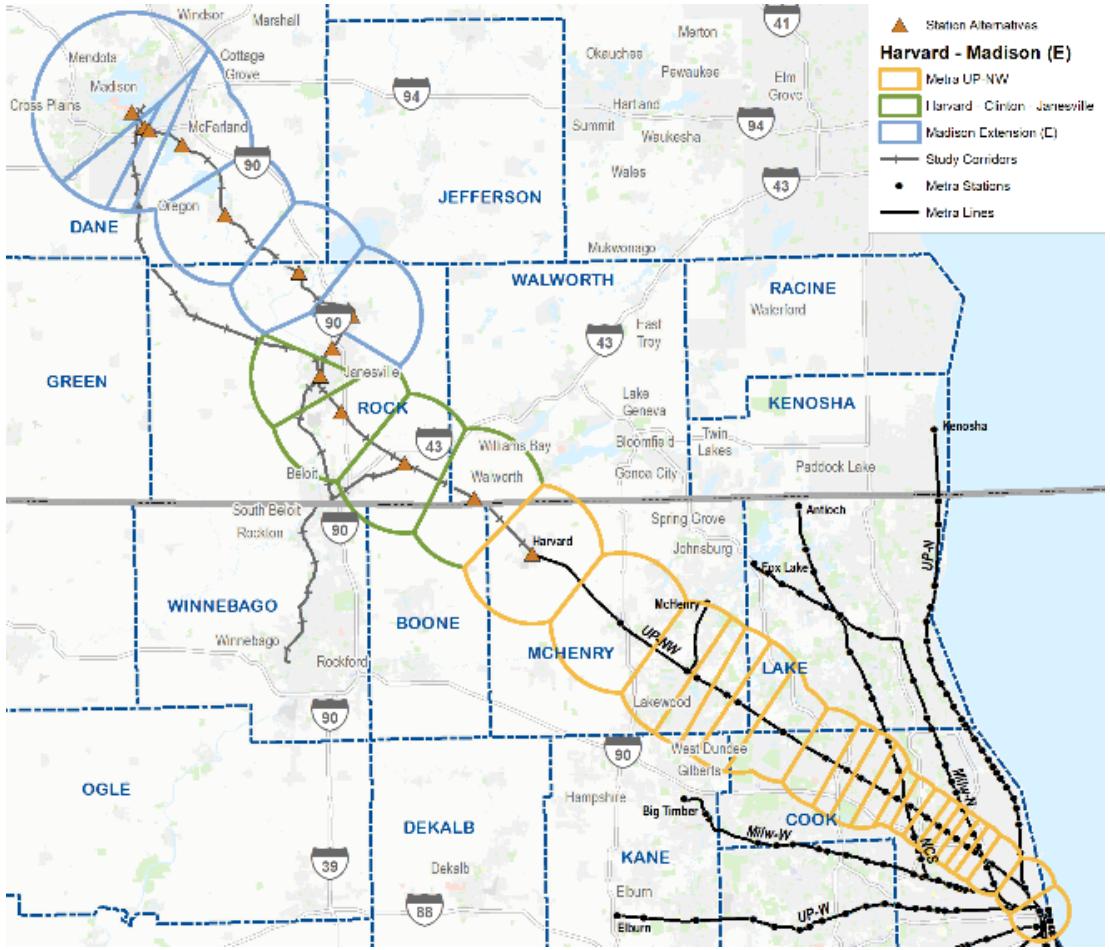
Origin Market Shed Analysis

Metric 1

Harvard-Janesville-Madison (West)



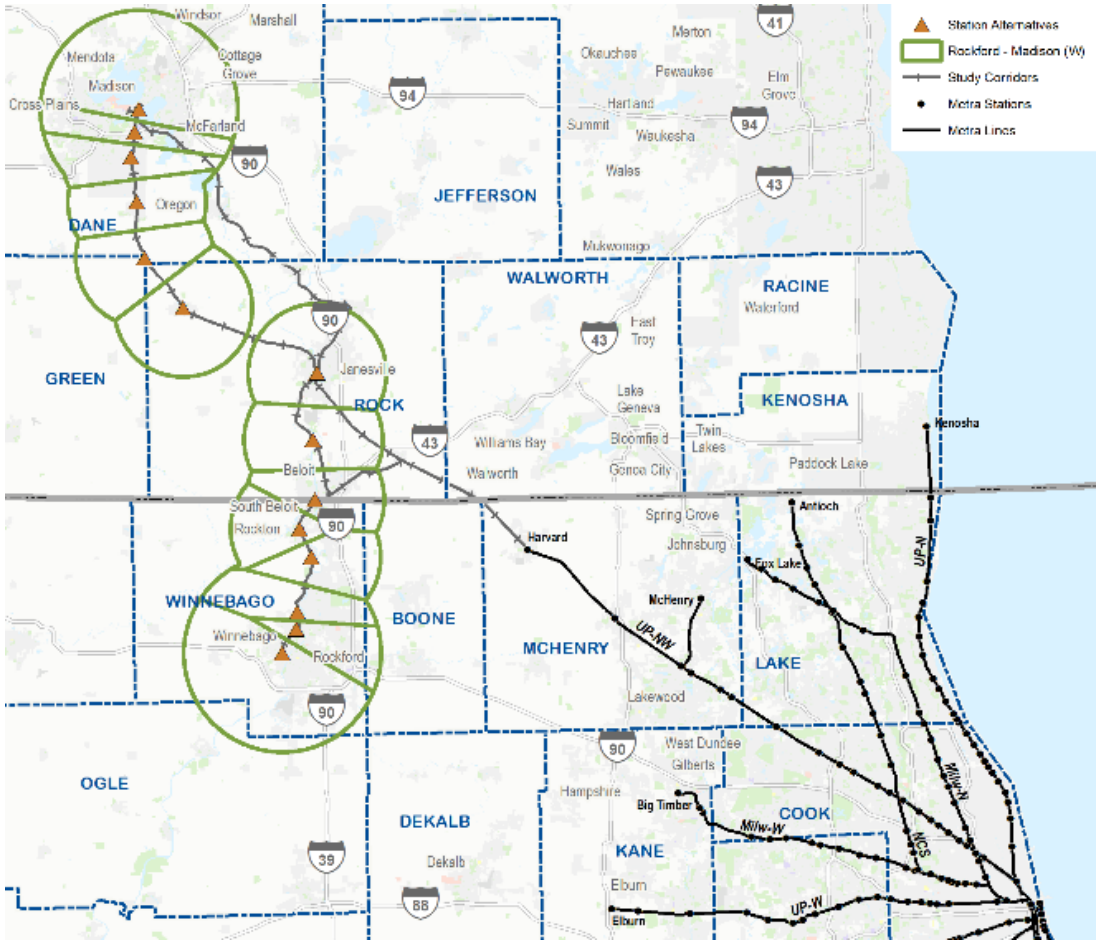
Harvard-Janesville-Madison (East)



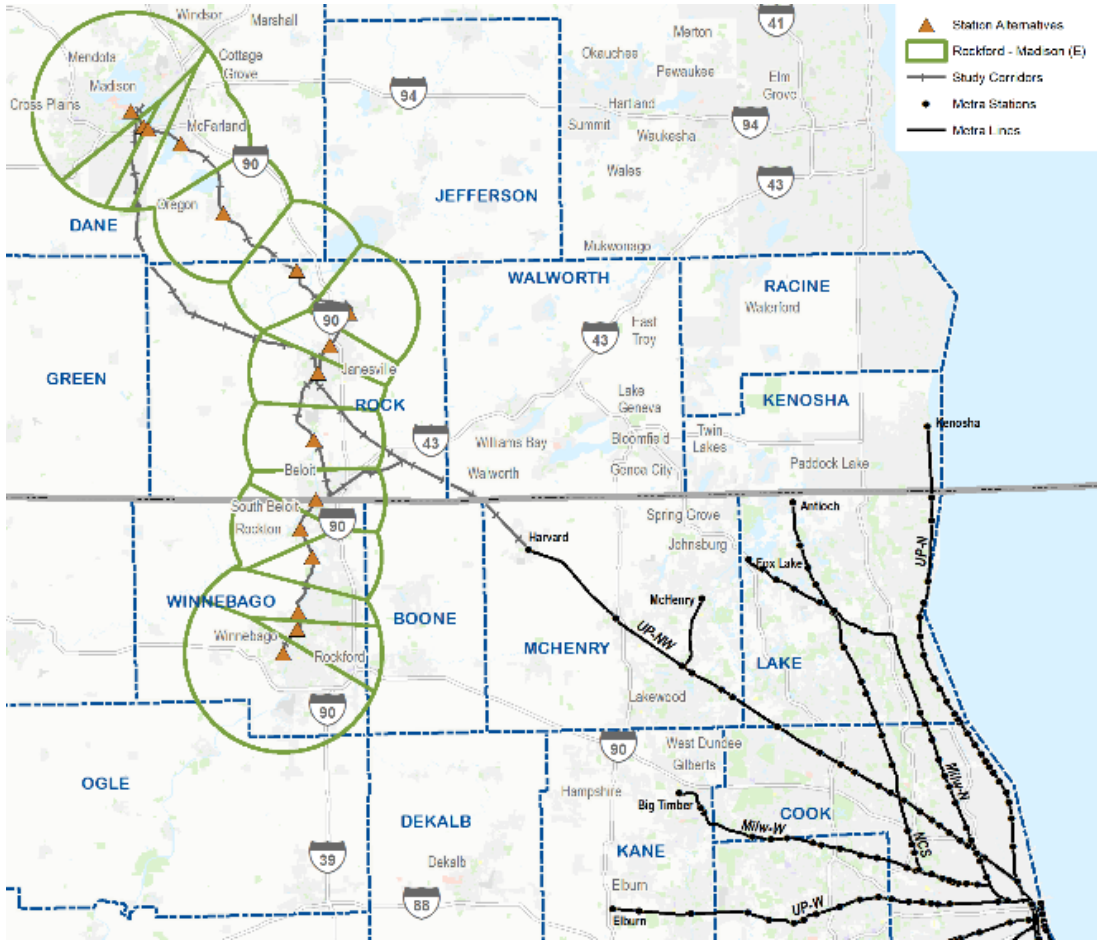
Origin Market Shed Analysis

Metric 1

Rockford-Madison (West)



Rockford-Madison (East)



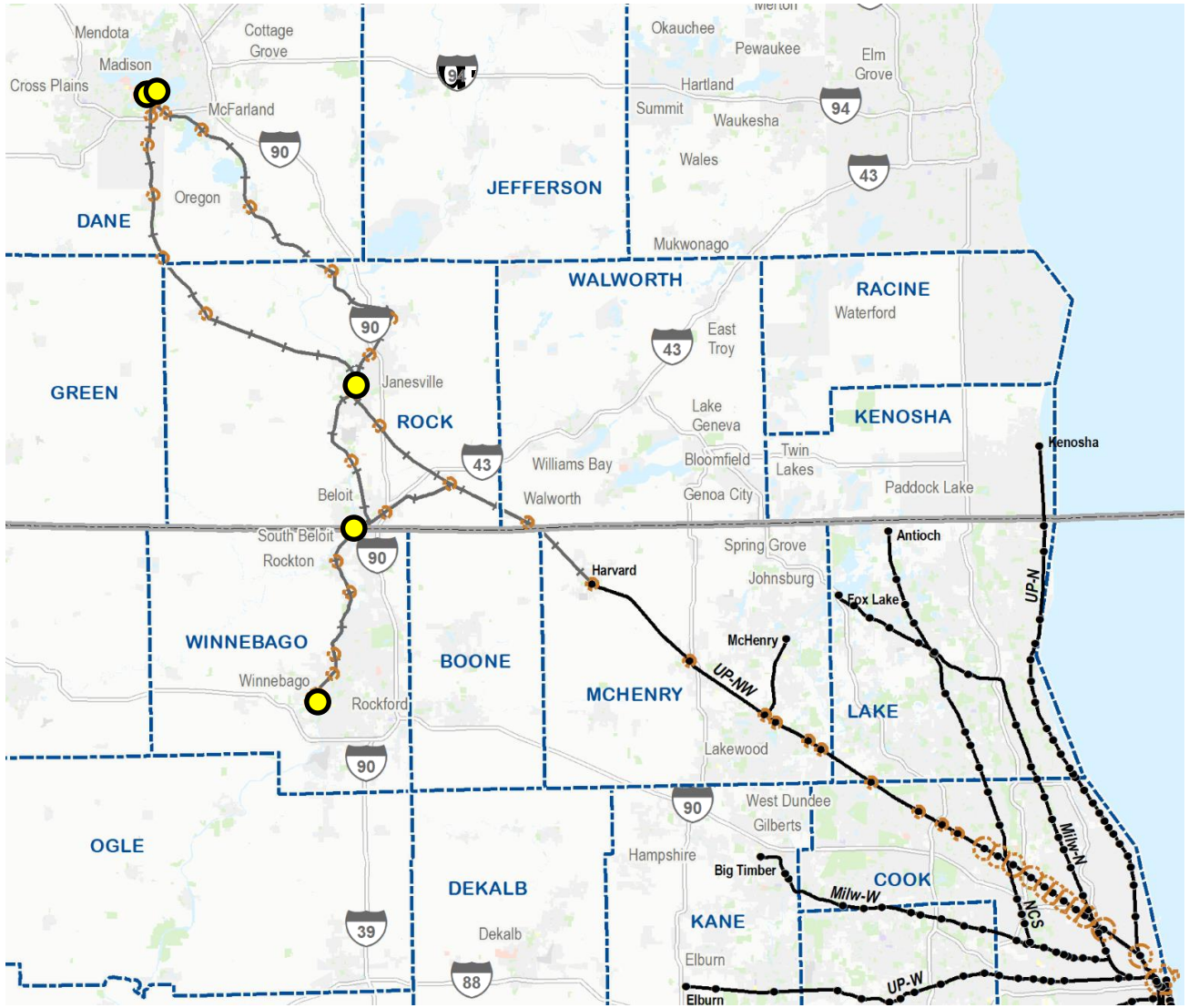
Destination Market Shed Analysis

Metric 1

Applies to all rail alignments

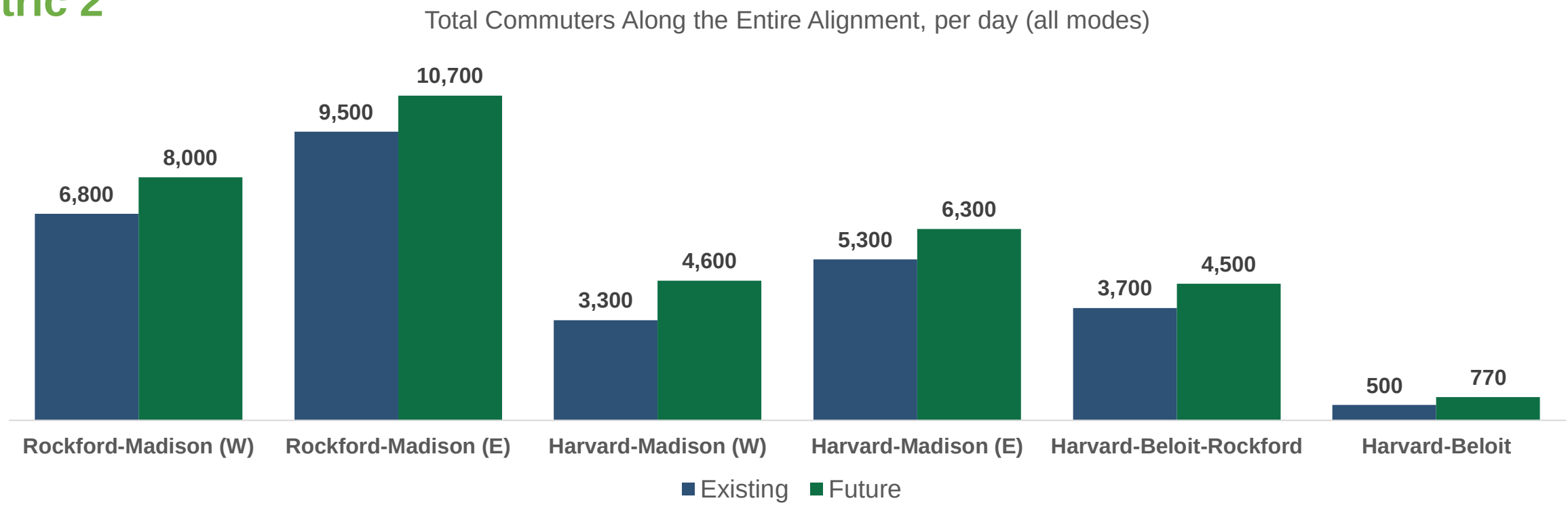
Criteria

Chicago CBD	Loop
Chicago, Near Suburbs	1.0 mile
Mid-Suburbs, Exurbs	0.5 mile
● Study Area Downtowns	1.0 mile



Rail-Viable Commuters (All Alignments)

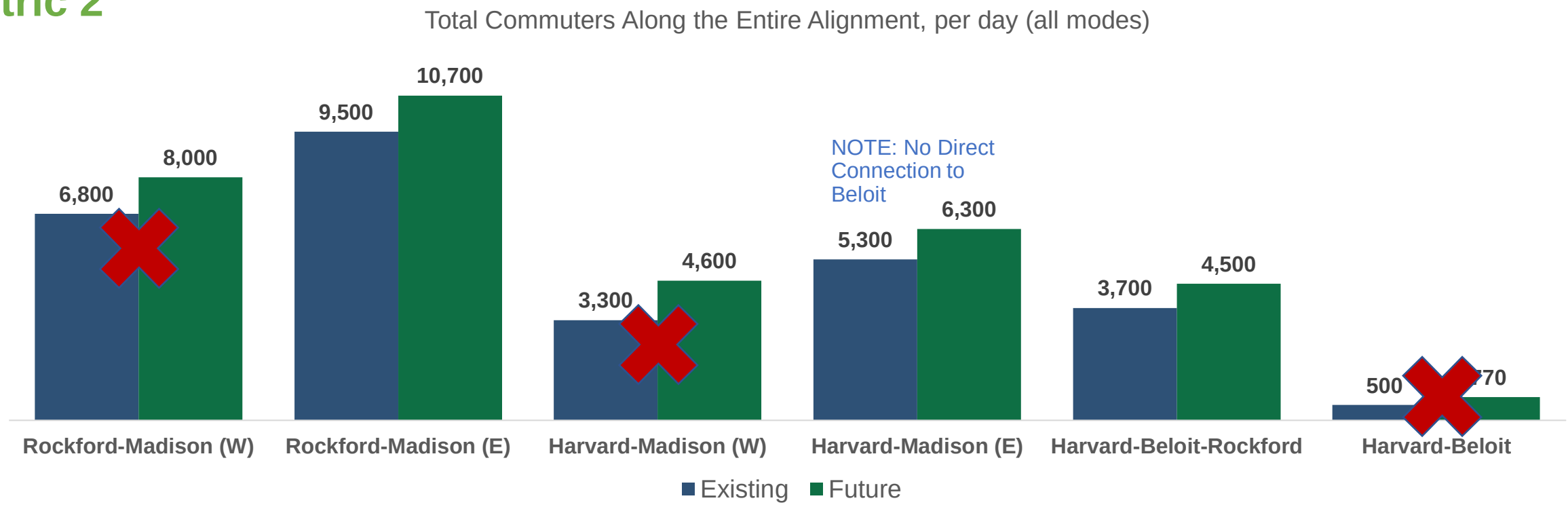
Metric 2



- Existing travel market ranges from 500 to 9,500 commuters
- Existing and future commuter flows are filtered to exclude:
  - Commuters traveling less than 10 miles in airline distance between home and work
  - Commuters whose boarding and alighting station locations are less than 10 miles apart

Alignments to Advance

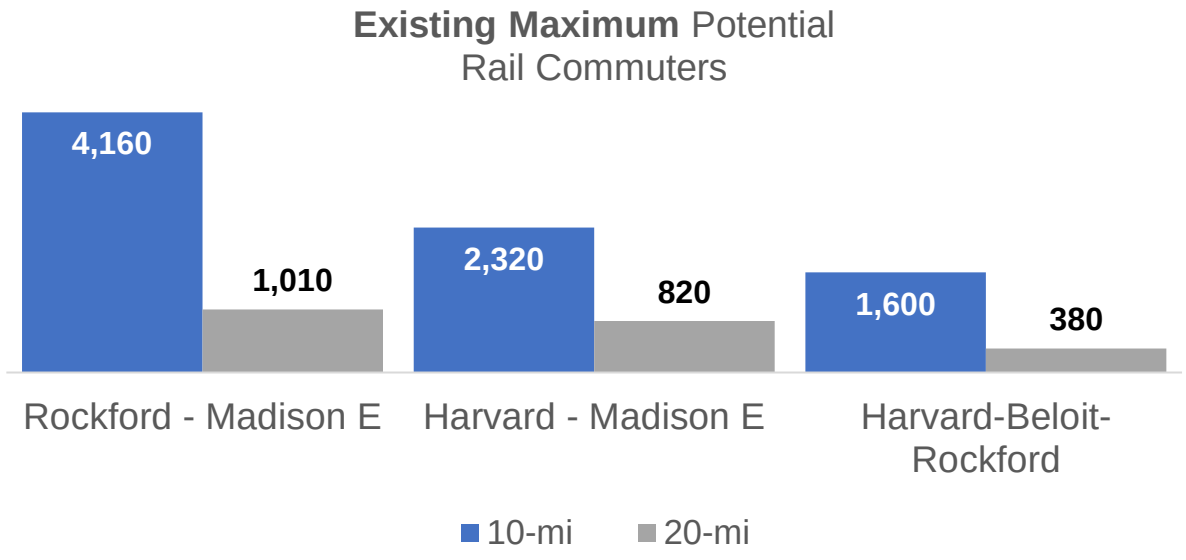
Metric 2

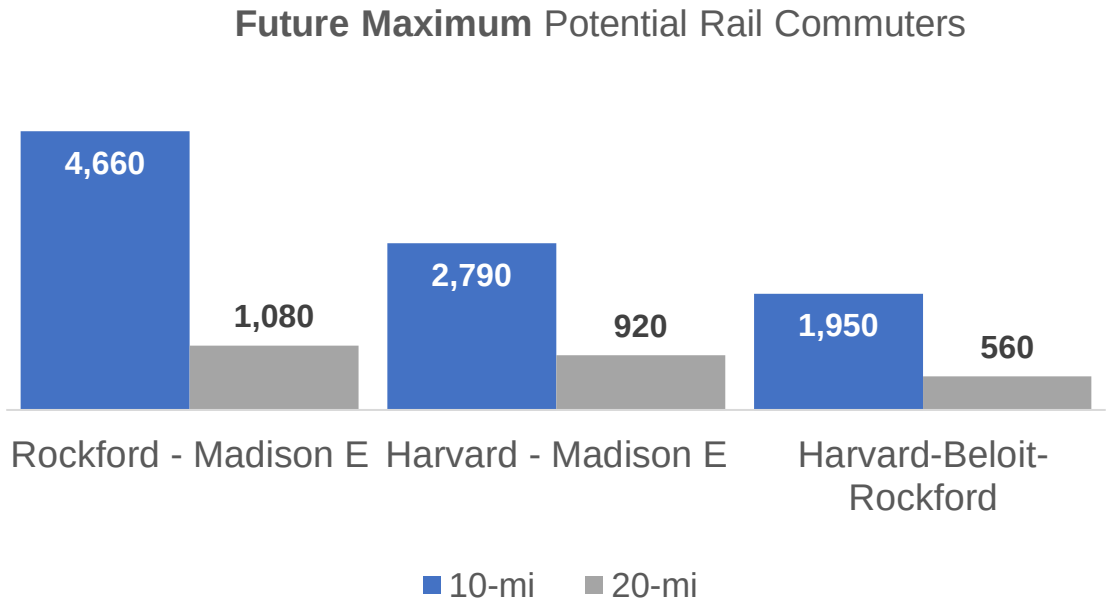


- Harvard-Beloit alignment dropped due to low ridership
- Janesville to Madison connections assume East alignment
- Harvard-Madison alignment does not have a direct Beloit connection

Maximum Potential Rail Commuters

Metric 3

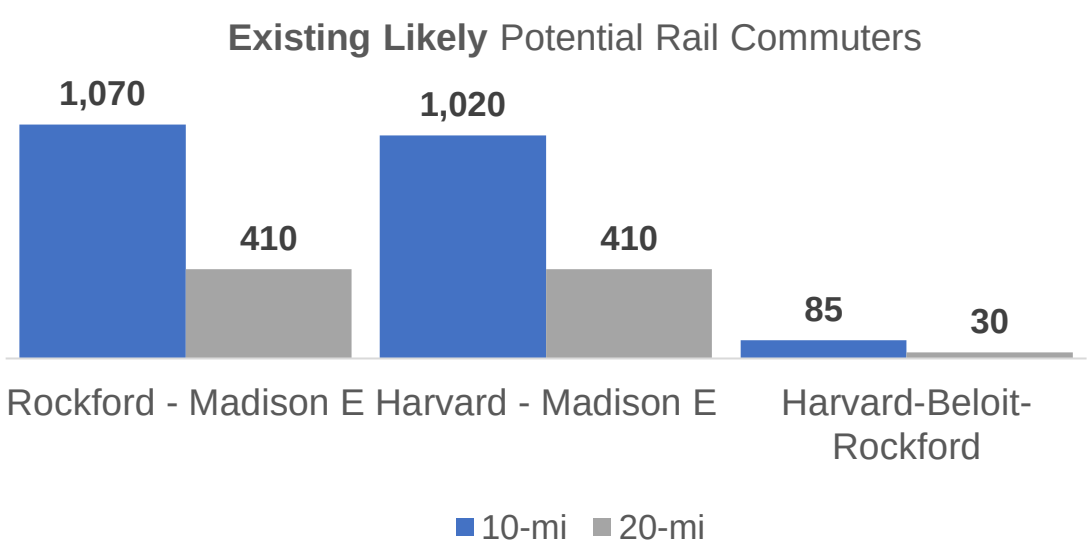


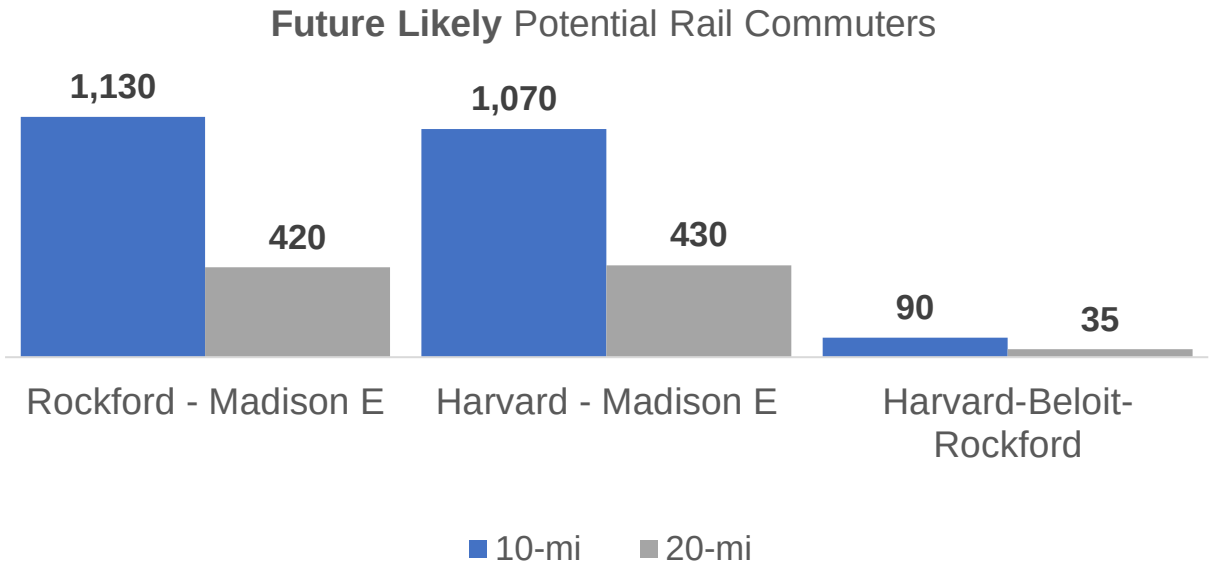


- How fast can you travel to your destination?
  - Driving vs. Passenger Rail
- Minimum rail trip distance set to 10 miles and 20 miles

Likely Potential Rail Commuters

Metric 4





- Ridership scaled to reflect attraction of rail stations
- Downtown stations vs. non-downtown

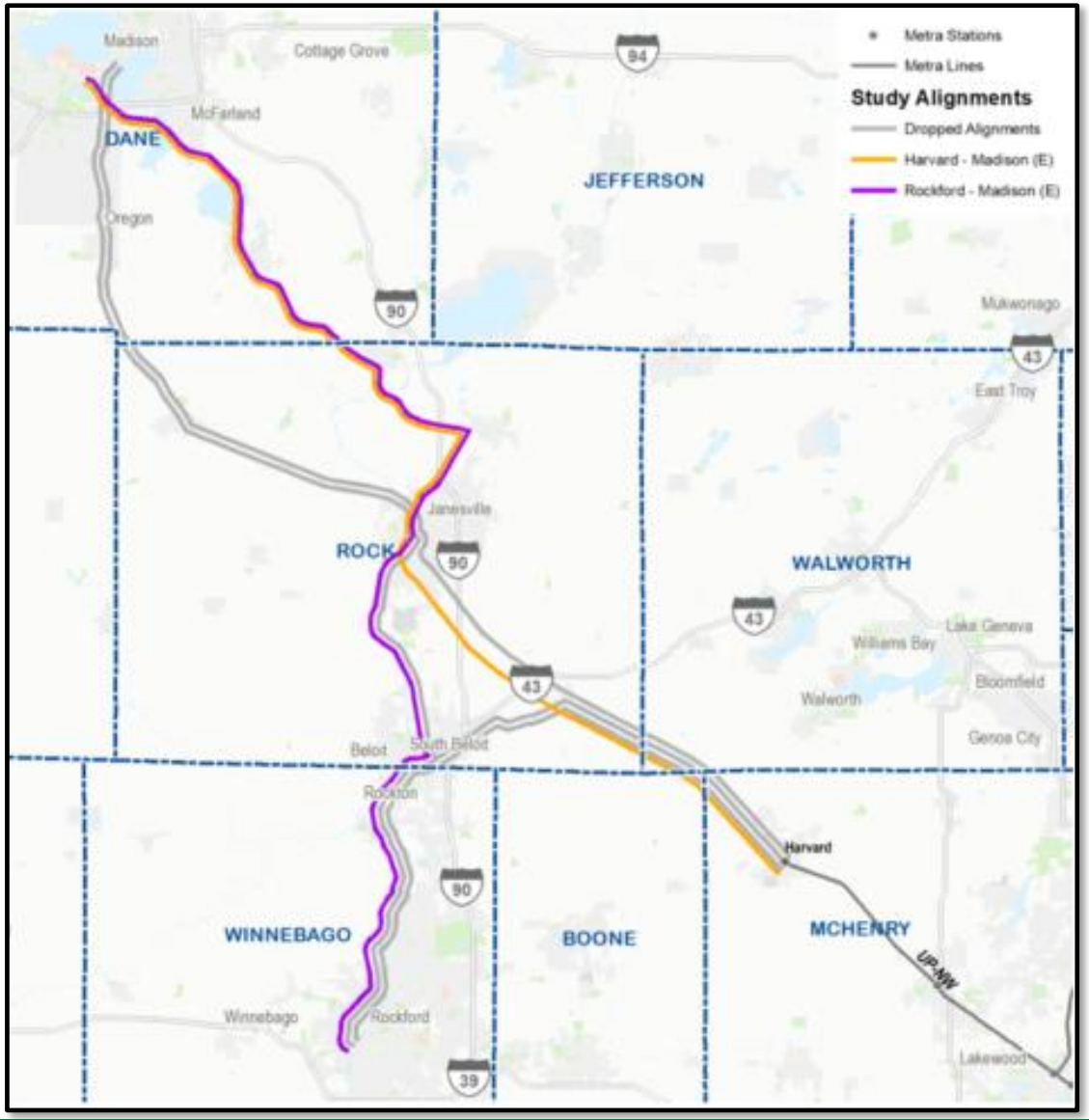
Potential Rail Ridership (per day)

- Estimated average weekday trips
  (Assuming Metra-like levels of service)

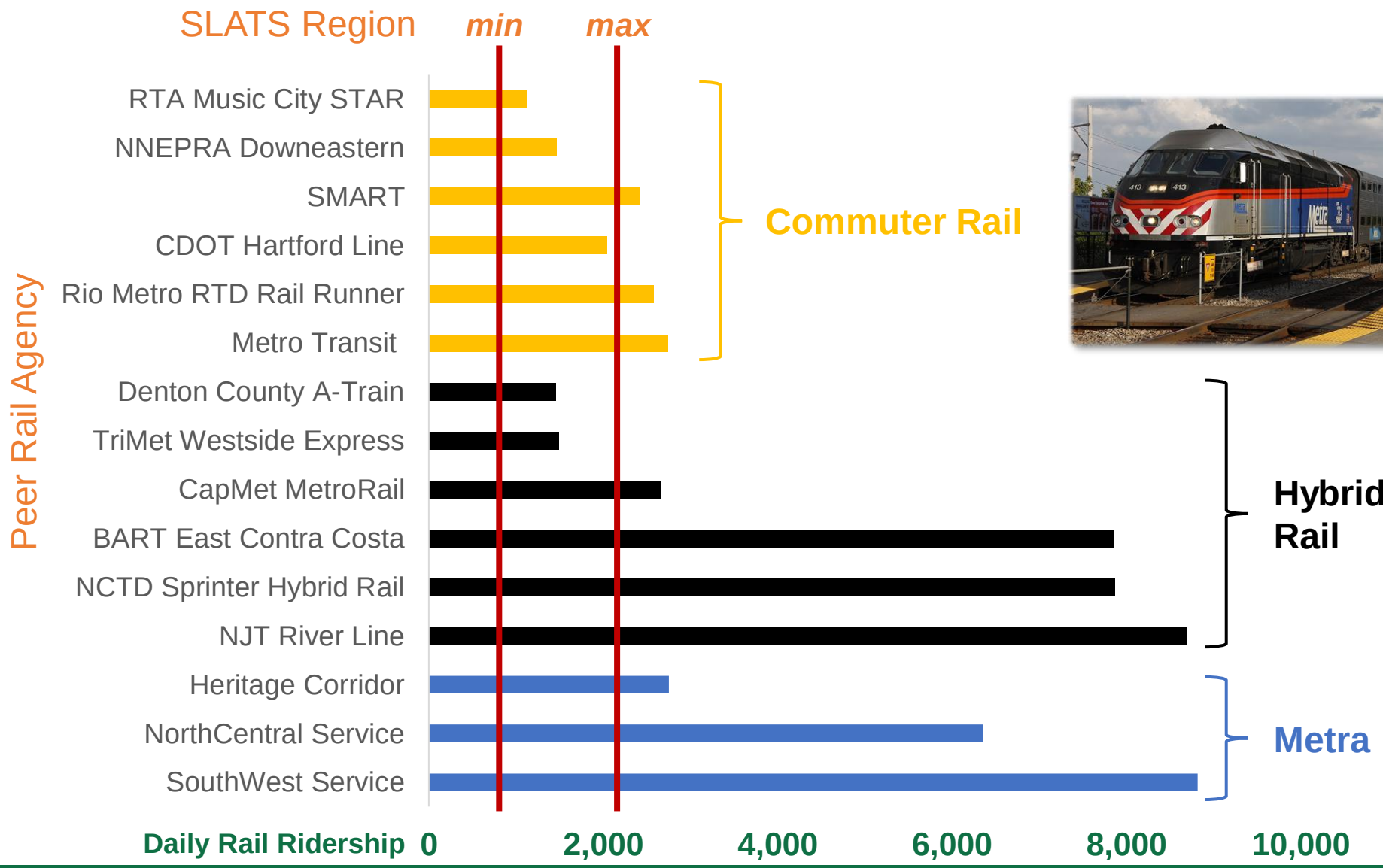
	Minimum	Maximum
Rockford-Madison (E)	840	2,260
Harvard-Madison (E)	860	2,140
Harvard-Beloit-Rockford	70	180

NOTE: Weekday trips = 2 X number of potential likely commuters

- Study Alignments to Advance
  - Rockford-Madison (East)
  - Harvard-Madison (East)
- Study Alignments to Drop
  - Harvard-Beloit-Rockford



Benchmarking the Region with Peers



Peer Agency – Lessons Learned

- Planning takes considerable time
- Preserving railroad ROW is important
- Need elected officials to champion the project (for decades)
- A lot of interest was in economic development, but have recognized other benefits
- Difficult to compare actual ridership to projected ridership
- Uncertain of the long-term impacts of the pandemic
  - Anticipate recovery but it may involve different riders
  - Workers relocating to live and work remotely
  - Believe that the work from home model will continue, but with workers using a combination of commuting to an office and working from home

Main Takeaways

- Regional service is critical
  - Connection to Madison
- Detailed analysis will provide greater insight into feasibility
  - Alignment costs, stations and supporting infrastructure (e.g., rail yards, etc.)
  - Identify future service (e.g., trains per day, fares, etc.)
  - Railroad owners' interest in hosting passenger rail service
  - Rail network capacity (existing and future freight and passenger needs)
  - Funding of the system (e.g., RTA would require change in WI law)
- Does estimated ridership warrant additional planning activities?
  - Implementation requires active involvement of all major governmental units
  - How does COVID-19 impact commuting, and where people live?
  - How does this impact future land use?

Next Steps

- Communication & Coordination
  - Other MPOs & State DOTs
  - Discussion with railroads
- Refinement of analysis
  - Ability to update study results (MPO Growth Projections)
  - Service level considerations and implications for ridership
  - Possible STOPS modeling
- Exploration of service models
  - Commuter or hybrid rail
- Supporting activities
  - ROW preservation
  - Transit supportive land use planning

SOURCE: Google Images – Keith Washington (2018)