D3 Freight Plan Update

Area Transportation Partnership (ATP) Meeting

January 16, 2020

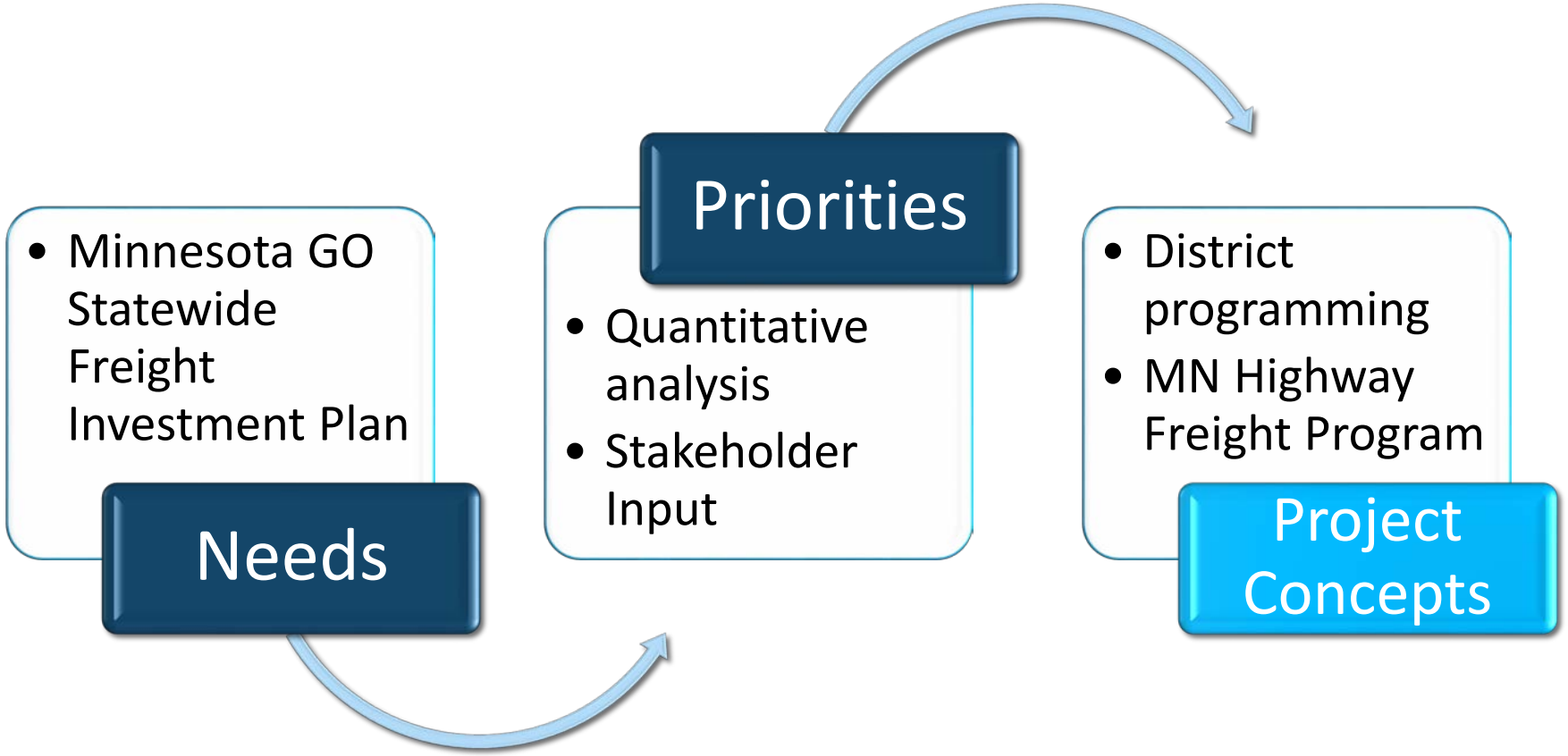
Agenda

- Project Overview
- Project Status
- Key Findings
- Next Steps

MnDOT District Freight Plans

- Developing District Freight Plans for all districts
  - D1 completed; D2/D3/D8 underway
- Pre-cursor effort to prepare for next Statewide Freight Plan
- Identify key issues/opportunities for each district

Freight Plan Objective(s)



MnDOT District 3 Freight Plan

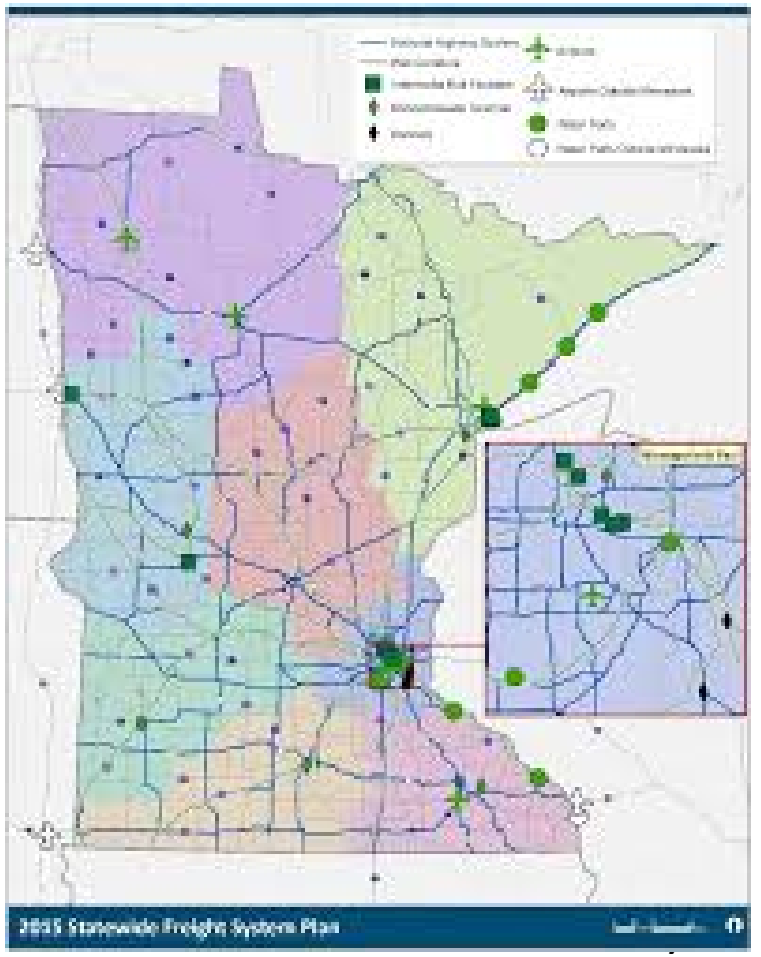
- **Task 1: Stakeholder Engagement** — ONGOING
- Task 2: MN Freight and Investment Plan Synthesis
- Task 3: Data Analysis — COMPLETED
- Task 4: SWOT Analysis
- **Task 5: Implementation Plan** — WE ARE HERE
- Task 6: Project Feasibility
- Task 7: District 3 Freight Plan Development

Task 2.0 – Plan Synthesis

- Review previous plans and documents relevant for District 3
  - Statewide Freight Plan
  - State Highway Investment Plan
  - State Rail Plan
  - Others as necessary
- Review/Synthesize freight network maps, data, and trends

Task 2.0 – Plan Synthesis

- KEY FINDINGS
  - Increased freight demand is expected to strain the capacity of key road and rail corridors
  - Trucks face delay and a shortage of truck parking along the I-94 corridor
  - At-grade rail crossings are major safety corner, especially in Sherburne County
  - District 3 has limited rail facilities and no major intermodal/container yards



Task 3.0 – District Profile

- Combination of input from stakeholders and data sets
  - Physical conditions
  - System usage and performance
  - Economic & demographic trends
- Develop key deliverables
  - Economic and supply chain profile
  - Physical system profile
  - Highway freight demand profile

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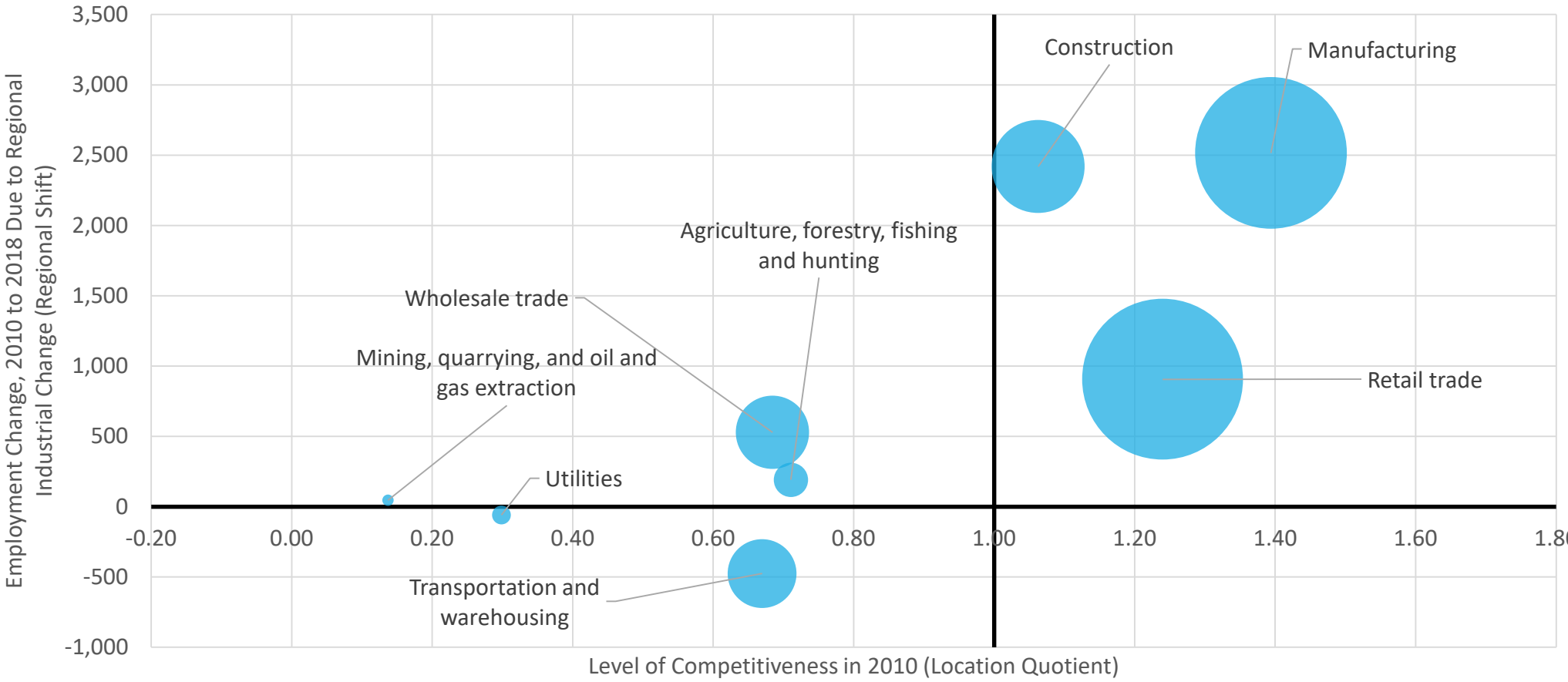
District 3 Economic Profile



District 3 Freight Demand

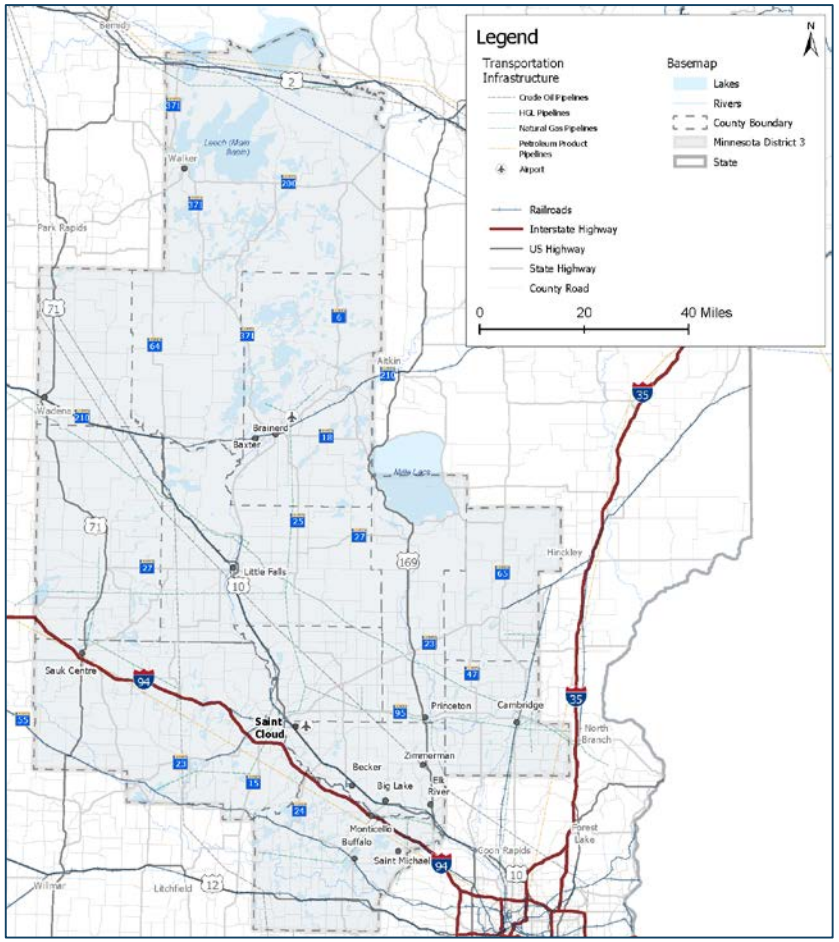
2017 Top Commodities by Tonnage	Share	2045 Top Commodities by Tonnage	Share	2017 Top Commodities by Value	Share	2045 Top Commodities by Value	Share
Cereal Grains	21%	Cereal Grains	27%	Mixed Freight	8%	Electronics	9%
Coal-n.e.c.	10%	Coal-n.e.c.	16%	Electronics	6%	Mixed Freight	8%
Other Ag prods.	9%	Other Ag prods.	11%	Cereal Grains	6%	Machinery	7%
Gravel	9%	Gravel	12%	Other foodstuffs	6%	Other foodstuffs	6%
Nonmetal min. prods.	8%	Nonmetal min. prods.	12%	Motorized Vehicles	5%	Precision Instruments	6%

District 3 Freight Mode Split

Freight Mode	2017 Tonnage	Projected 2045 Tonnage	2017 Value	Projected 2045 Value
Truck	59%	62%	67%	65%
Rail	13%	11%	4%	5%
Pipeline	27%	25%	20%	15%
Multiple modes & mail	2%	2%	8%	12%
Water	0%	0%	0%	0%
Air (include truck-air)	0%	0%	1%	3%
Total	100%	100%	100%	100%

District 3 Freight Multimodal System

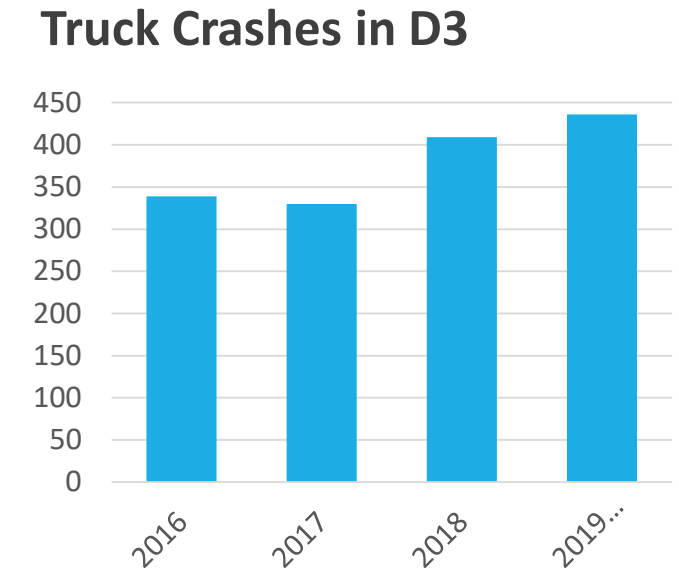
- KEY FINDINGS
  - 8,913 centerline miles of roadway (CR and above
  - 427 bridges, but just 2 between St. Cloud & Elk River
  - 8 public and 36 private rest steps
  - 367 miles of Class I railroad; 335 at-grade crossings, many along US10
  - 2 cargo airports (Brainerd and St. Cloud); Nearby ports in Duluth & MSP



System Performance & Condition

Key Findings – Safety

- Truck-specific
  - 1,416 truck crashes reported during the study period
  - Total truck crashes trending upward since 2017
- Rail crossing-specific
  - District 3 has the highest injury rate per AADT of any district in Minnesota related to rail crossings
  - 40 active crossings (19% of total) and 12 passive crossings (12% of total) have a high-risk rating

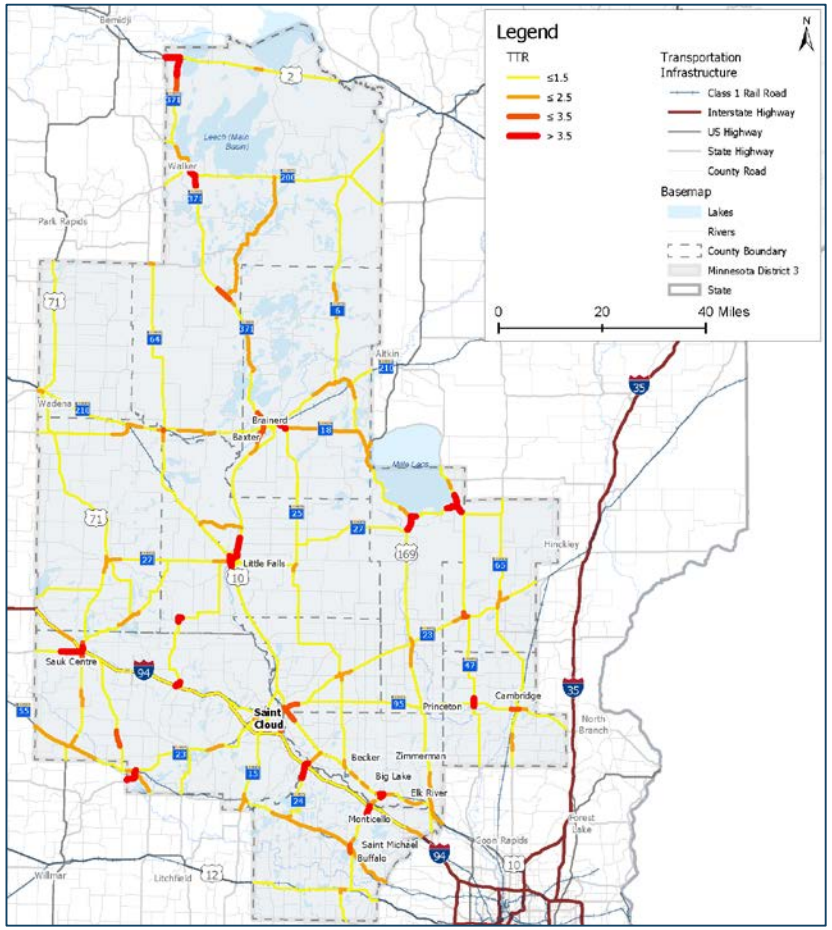


System Performance & Condition

Key Findings – Mobility

- Truck Average Speeds
  - Truck speeds in District 3 are at or near the posted speed limit overall, including many of the key truck corridors
- Truck Travel Time Reliability
  - Most areas that experience a lack of reliability are focused at intersections and selected other locations

TTTR AM Peak Period



System Performance & Condition

Key Findings – D3 Freight Corridor Bridges

- 20 bridges with clearance less than 16’4”
- 0 bridges weight restricted
- 5 deficient bridges (3 functionally obsolete and two structurally deficient)

Strengths

- Few congestion issues
- Centralized location; proximity to MSP
- Strong manufacturing sector, which is a key economic driver (jobs and GDP)

Weaknesses

- At-grade rail crossings, especially along US-10
- Limited rail access and no intermodal facilities, increasing truck traffic
- Limited broadband access
- Lack of controlled access/divided highways

Present

Positive

Negative

Future

Opportunities

- Make rail crossing safety improvements
- Expand broadband access
- Construct intermodal facilities
- Expand air cargo capacity
- Plan to support growth and technology advancement

Threats

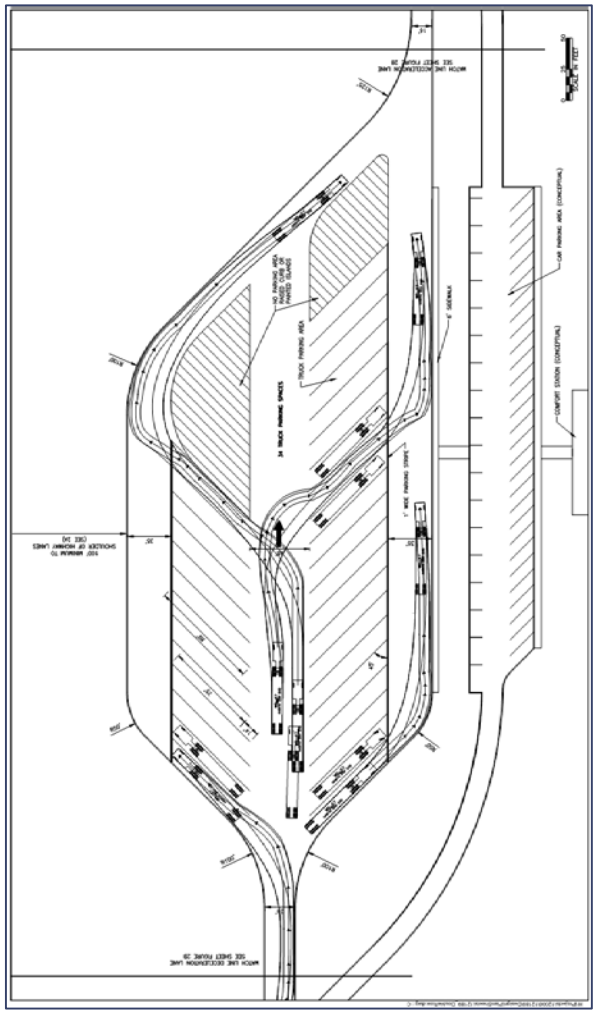
- Workforce shortages, esp. in manufacturing
- Congestion moving up the I-94 corridor
- Mode shift and/or more truck parking demand
- E-commerce and a shift of retail distribution centers closer to population centers
- Climate change/flooding

Task 5: Implementation Plan

Project Title	Project Description
TH 169 SUE in Elk River	The Contractor will perform Subsurface Utility Engineering (SUE) for both underground and overhead utilities on a project located on T.H. 169 in Sherburne County in the City of Elk River. All utilities will be located to Quality Level B Designating along with up to 100 hours of Quality Level A locates as directed by the Project Manager. Pre-Qualification Announcement Spring of 2019.
TH 210 Corridor Study in Baxter	Conduct corridor study for MN 210 from the west Baxter city limits near Cass CR 36 to the east Baxter city limits near Baxter Drive that will identify traffic conditions and a design feasibility assessment to assist the State in identifying a preferred access improvement concept for MN 210 in Baxter. PreQual Direct Select in 2019
Geometric Layout, Environmental Documentation, and Wetland Services for 7703-16. TH 27 Reclamation with shoulder widening.	MN 27, from JCT Douglas CSAH 82 in Osakis to JCT US 71, Reclamation with shoulder widening; and Replace Wobegon Trail Bridge# 758 and Bridge# 92372 with new box culvert 0.1 mi N of JCT CSAH82; and Replace Bridge# 8915 with new box culvert 0.4 mi E of JCT CSAH37; and Replace Culvert# 867915 with new box culvert 0.6 mi N of JCT CSAH82. Pre-Qual. with anticipated start in April 2019.
Plans/Design Pre- and Final-Design) and Environmental Documentation for SP 0504-20 TH 23 UBCO and Roundabout Construction	Unbonded concrete overlay on TH 23 from 6th St. in Foley to the Rum River bridge west of Milaca. Includes pipe replacements, box culvert replacements and extensions, guardrail replacements, widening for several rural turn lanes, new curb and storm sewer in Foley and construction of a round-a-bout at 8th Ave. in Foley. Letting for project in spring of 2022. RFP process.

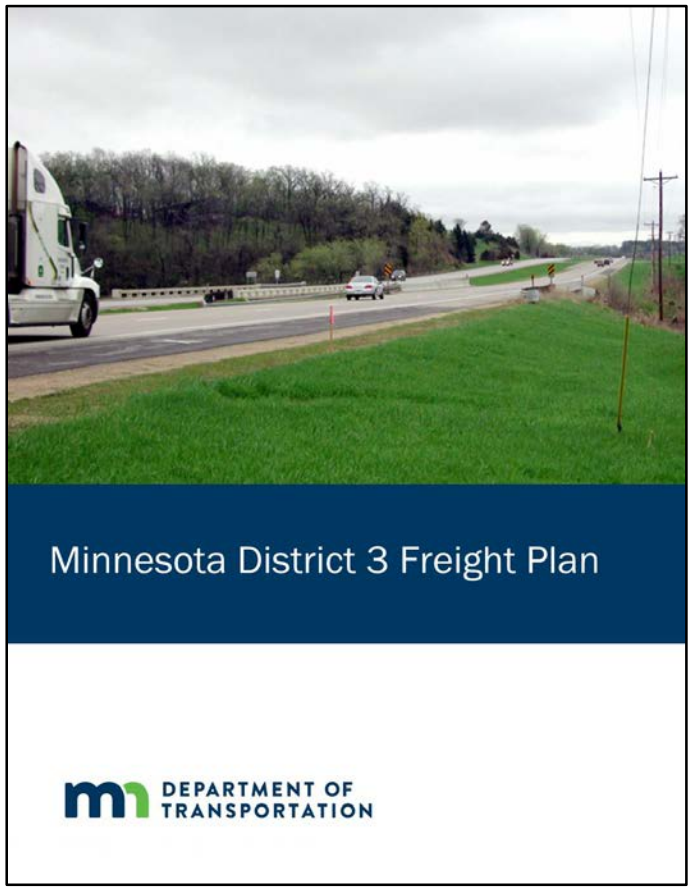
- Identify D3 needs and issues not being addressed in MnDOT/local programs
- Rank needs/issues using statewide freight plan guidance criteria
- Assign needs/issues to Minnesota Highway Freight Program categories
- Work with D3 staff and the freight plan advisory committee to rank needs/issues within MHFP investment categories

Task 6: Project Feasibility



- Review proposed investments and identify existing project examples
- Resolve potential freight issues/concerns associated with typical layouts
- Provide enhanced layouts for freight accommodations
- Develop preliminary cost estimates for design and construction

Task 7: District Freight Plan Development



- Develop Draft District Freight Plan for comment and review by MnDOT staff, Policy Advisory Committee, Technical Committee, and others as necessary
- Submit Final District Freight Plan

Project Schedule

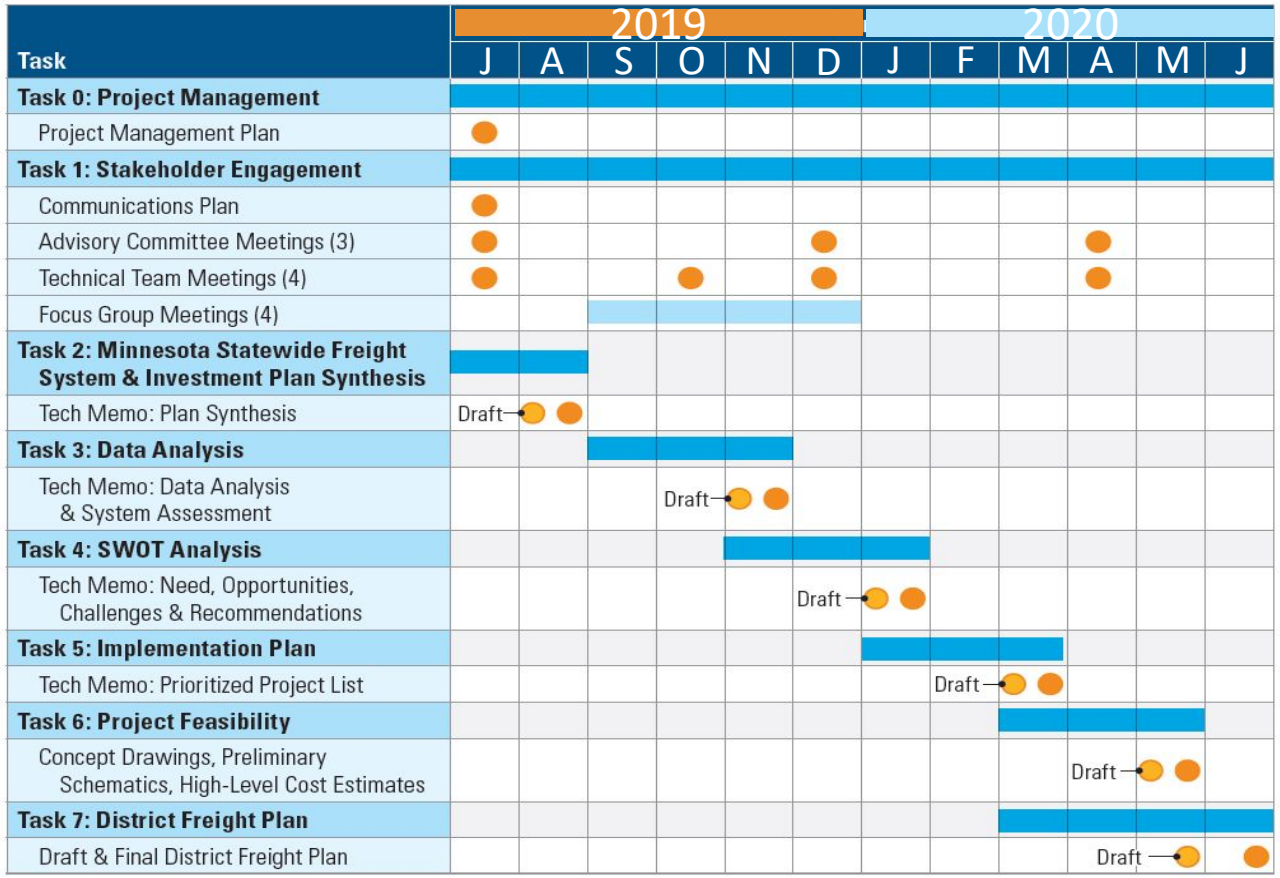
- Jan – March

  Identify and prioritize project level needs/issues

- AC Meeting #3

- March – May

  Develop project concepts for incorporation in final plan



Questions

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