



Central  
Minnesota

Freight  
Study

December  
2012



*Your Destination... Our Priority*



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## 1.0 CENTRAL MINNESOTA FREIGHT PLAN

### 1.1 Introduction/Overview

An efficient freight system is essential to enhancing the Minnesota's economic competitiveness in the national and global marketplace. District 3 in central Minnesota plays an important role in facilitating the movement of freight and goods throughout the state. The primary modes of freight transportation in central Minnesota are truck, rail, air, and pipeline. Each of these modes provides different types of services, and move different types of cargo with various challenges.

Truck Transportation via Interstate 94 corridor - predominate corridor for truck traffic; decreasing truck speed, overnight truck parking availability

Rail Transportation - lack of intermodal facilities, limited rail access facilities

Air Transportation - challenges in retaining air passenger/air cargo facilities

Central Minnesota has the largest population base outside of the Minneapolis/St. Paul metro area and will experience the highest growth rate percentage in population and vehicle miles traveled; there are immediate concerns to address freight transportation in this study area.

This report identifies and explores the challenges facing freight transportation and provides recommendation for improvements.

### 1.2 Goals of the Study

The goal is to provide a framework to:

- Identify industry- and region-specific trends as they relate to freight transportation and their solutions;
- Plan for improvements to freight movements specific to the region; and,
- Strengthen freight considerations in public project planning and investment decision-making.

## 2.0 REGIONAL CONTEXT: DEMOGRAPHICS AND TRENDS

### 2.1 The Central Minnesota Region

This freight plan examines goods movement issues in a 12 county region of Central Minnesota, primarily defined as Mn/DOT Transportation District 3 (Mn/DOT D3), see **Exhibit 1**. The study area has the largest population base outside the Minneapolis/St. Paul metro area. The southern boundary of Mn/DOT D3 is located adjacent to the Twin Cities metropolitan area and is rapidly becoming part of the greater urbanized area with a strong commuter demand. That demand is currently served by highways, buses and park-and-ride lots. The central portion of the district wraps around the St. Cloud metropolitan area, which is one of Minnesota's fastest growing communities. To the north, there are hundreds of lakes and resorts surrounded by pine and birch forests.<sup>1</sup>

#### Exhibit 1: Central Minnesota Study Area

Insert a Map of District 3 / Study Area

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<sup>1</sup> Information taken from the Mn/DOT District 3 website: <http://www.dot.state.mn.us/d3/>

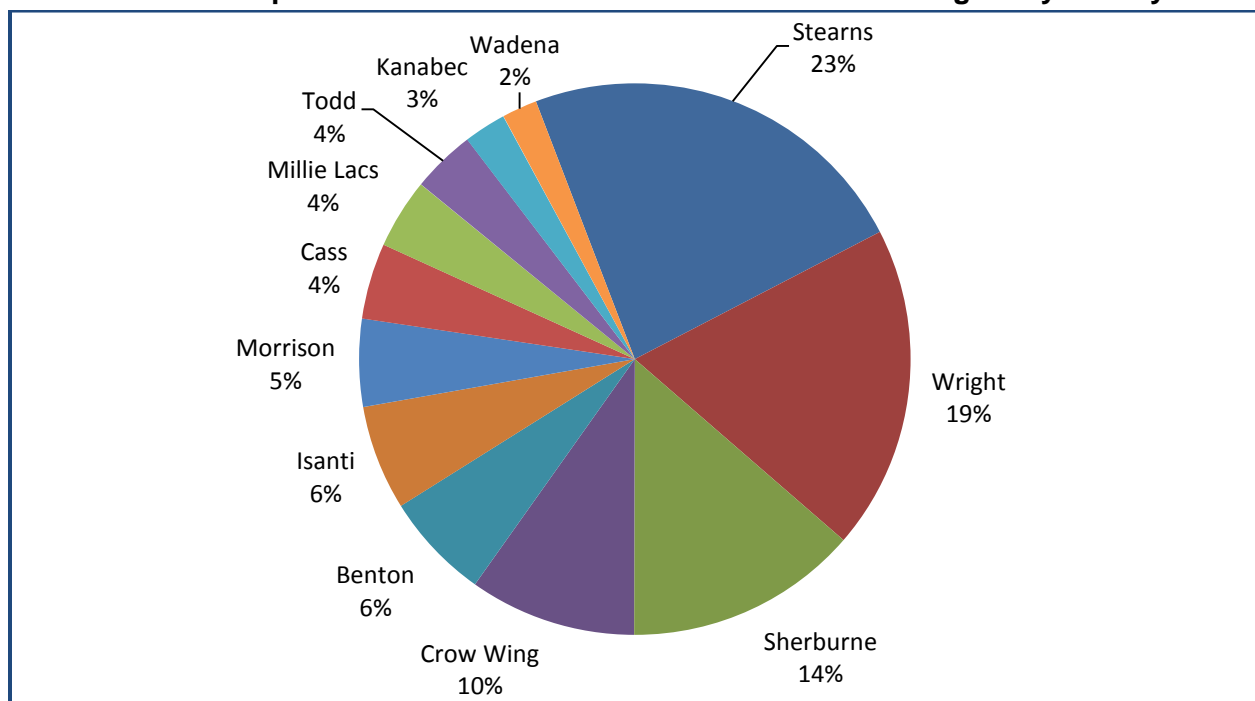
## 2.2 Central Minnesota Demographic and Economic Trends

One of the first steps to understanding the importance of freight to Central Minnesota’s regional economy is to understand population and employment growth and the associated impact on economic activities. The national economy in the U.S. has been in transition for several decades; migrating from a manufacturing-based economy to a service-based economy. As a result, Central Minnesota industries in the future are likely to experience growth rates that differ from historical patterns of the past. Therefore, it is important to determine the industries that will remain an integral part of Central Minnesota’s economy going forward. This section summarizes and interprets available demographic and economic data for that purpose and provides a high-level description of the study area’s economy.

### 2.2.1 Population

Between 2000 and 2009, the population of the Central Minnesota Study Area increased 14.65 percent raising the total population of the region to 641,889. **Exhibit 2** shows the distribution of population between the 12 counties in the study area. Three counties, Sherburne, Stearns and Wright, account for 55 percent of the population of the region. Between 2000 and 2009, Wright and Sherburne Counties were the second and third fastest growth counties in Minnesota respectively; only Scott County grew faster.

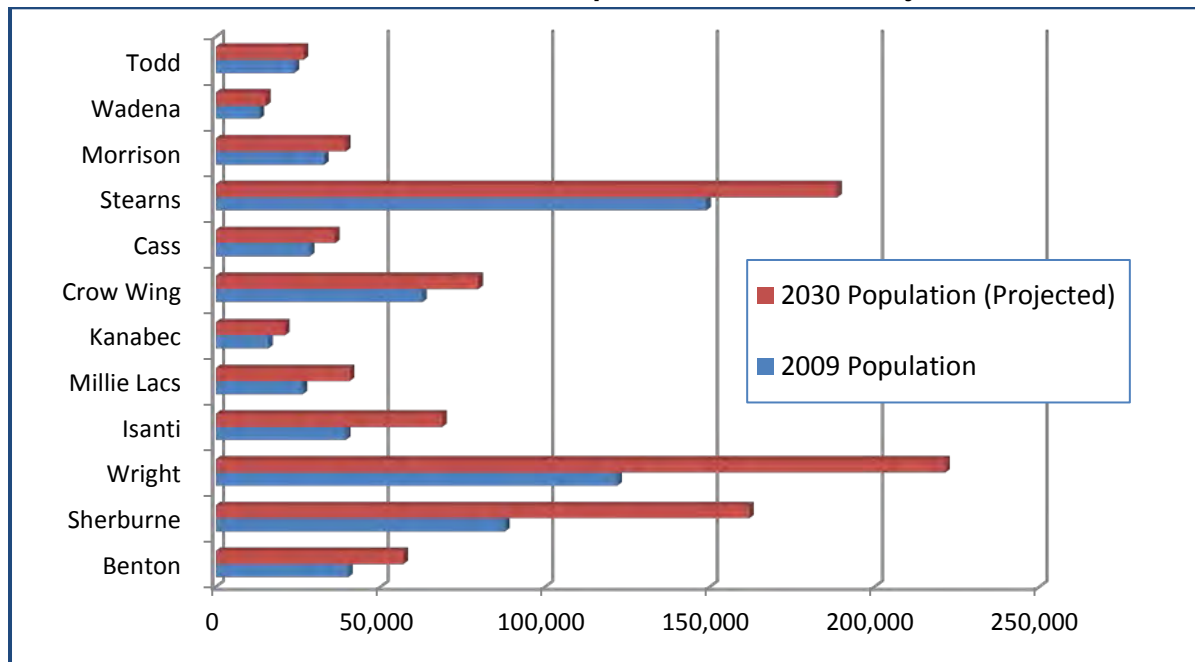
**Exhibit 2: Population Distribution in the Central Minnesota Region by County**



By 2030, population in the 12-county region is expected to increase 27 percent; approaching 1 million people (**Exhibit 3**).



**Exhibit 3: Central Minnesota Population, 2009 and Projected 2030**



Two of the three largest counties by population in the study area are expected to experience significant increases in population over the next 20 years. Sherburne and Wright part of the often referenced larger Twin Cities Region in the Twin Cities to St. Cloud Corridor are expected to account for approximately 40 percent of the population in the study area. The table in **Exhibit 4** shows all counties in Central Minnesota project to grow by more than 50 percent.

**Exhibit 4: Central Minnesota Counties Projected to Grow More than 50 Percent**

County	2030 Projected Population	Percentage Change
Sherburne	161,900	84.4%
Wright	221,490	81.7%
Isanti	68,780	74.4%
Mille Lacs	40,610	53.9%

Population growth is a significant driver of freight movements, especially truck traffic. *In the study area, the commercial vehicle traffic volumes are expected to increase significantly, and on some routes, truck traffic could increase in excess of 65 percent.*

**2.2.2 District 3 Heavy Commercial Vehicle Growth 2009-2034**

**Exhibit 5** summarizes projected heavy commercial (HC) traffic between the years 2009 and 2034. Interstate 94, passing through Stearns and Wright Counties, is project to have the highest average HC growth in the region at 2.6 percent per year, followed by trunk highway (TH) 10 through Benton, Morrison, Sherburne, Todd, and Wadena Counties and TH-12 through Wright County, both with projected HC growth at 2.2 percent. Other key routes in the region are all projected to experience average HC growth between 2009 and 2034 of less than 2 percent per year: TH-24 (1.8 percent) TH-169 (1.7 percent), TH-25 (1.6 percent) and TH-23 (1.1 percent).

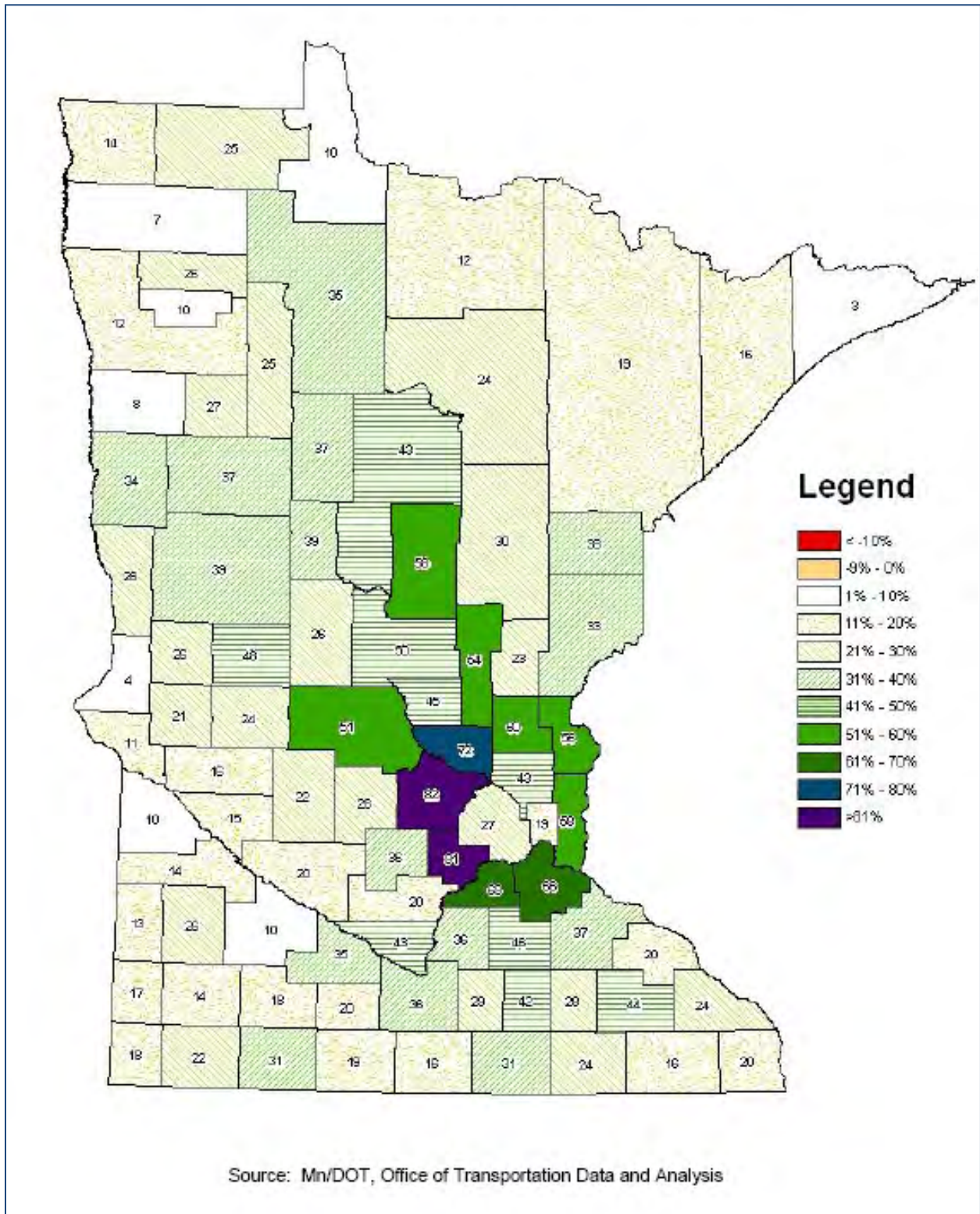
**Exhibit 5: Average Heavy Commercial Traffic Growth on Key Routes in Central MN**

Route	County	Average HC Growth
I-94	Stearns	2.6%
	Wright	
TH 10	Benton	2.2%
	Morrison	
	Sherburne	
	Todd	
	Wadena	
TH 12	Wright	2.2%
TH 169	Aitkin	1.7%
	Crow Wing	
	Mille Lacs	
	Sherburne	
TH 23	Kanabec	1.1%
	Benton	
	Mille Lacs	
	Stearns	
TH 24	Sherburne	1.8%
	Wright	
	Stearns	
TH 25	Benton	1.6%
	Crow Wing	
	Morrison	
	Sherburne	
	Wright	

### 2.2.3 VMT Growth

As shown in **Exhibit 6**, some of the highest percent growth in statewide vehicle miles traveled (VMT) has occurred in the Central Minnesota Study Area. The county with the highest total VMT growth from 1992 to 2009 is Sherburne at 81 percent. Isanti, Crow Wing, Mille Lacs, Stearns and Wright Counties each experienced VMT growth in excess of 50 percent; Cass, Morrison and Benton each grew VMT between 41 and 50 percent.

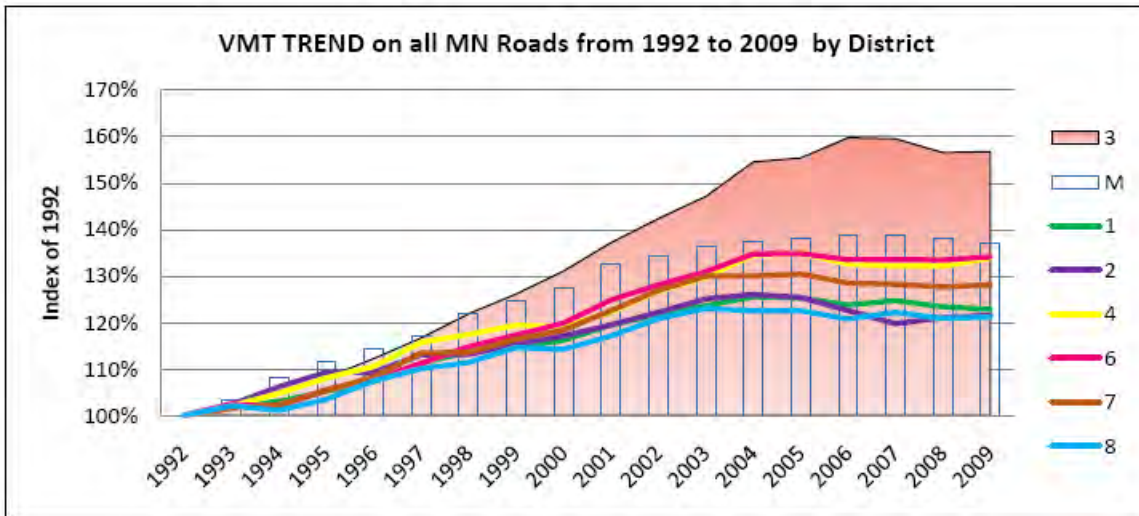
**Exhibit 6: Total Percent VMT Growth on all Roads in Minnesota, 1992-2009**



### 2.2.4 Vehicle Miles Traveled on all Minnesota Roads

The graphic in **Exhibit 7** shows that District 3 has led all Mn/DOT Districts in the state in terms of VMT growth. Prior to 1999, the Metro District grew faster than District 3, but VMT in the Metro Region peaked in 2007 and has been declining gradually since.

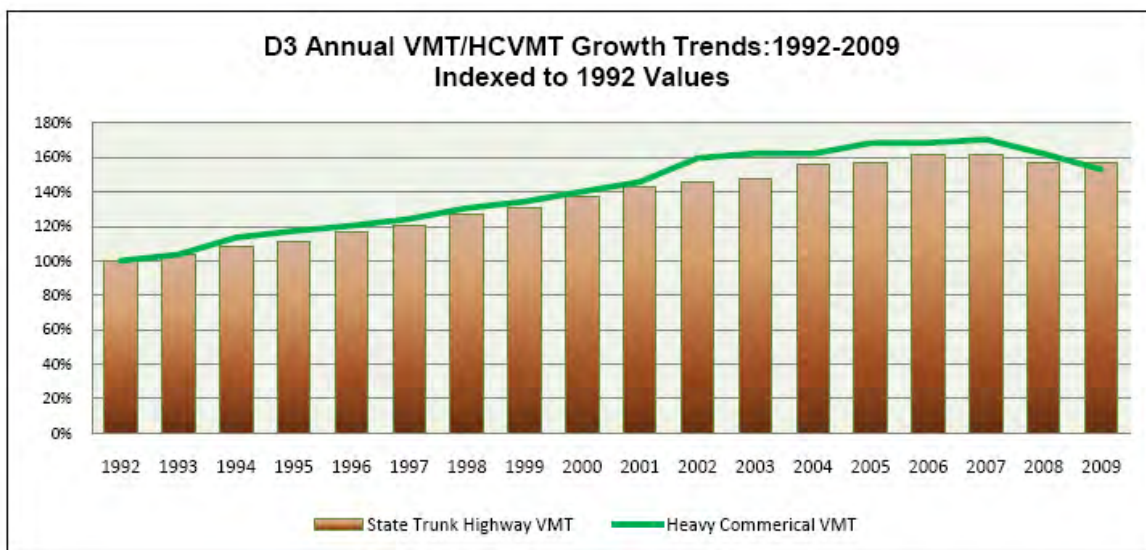
**Exhibit 7: Historical VMT Growth by Mn/DOT District, 1992-2009**



### 2.2.5 Vehicle Miles Traveled and Heavy Commercial Vehicle Miles Traveled Growth

The graph in **Exhibit 8** shows VMT and HCVMT trends in District 3 on the state trunk highways from 1992 to 2009. The solid line represents the heavy commercial VMT and the bar indicates VMT on the state trunk highway system.

**Exhibit 8: VMT/HCVMT Growth Trends, 1992-2009**

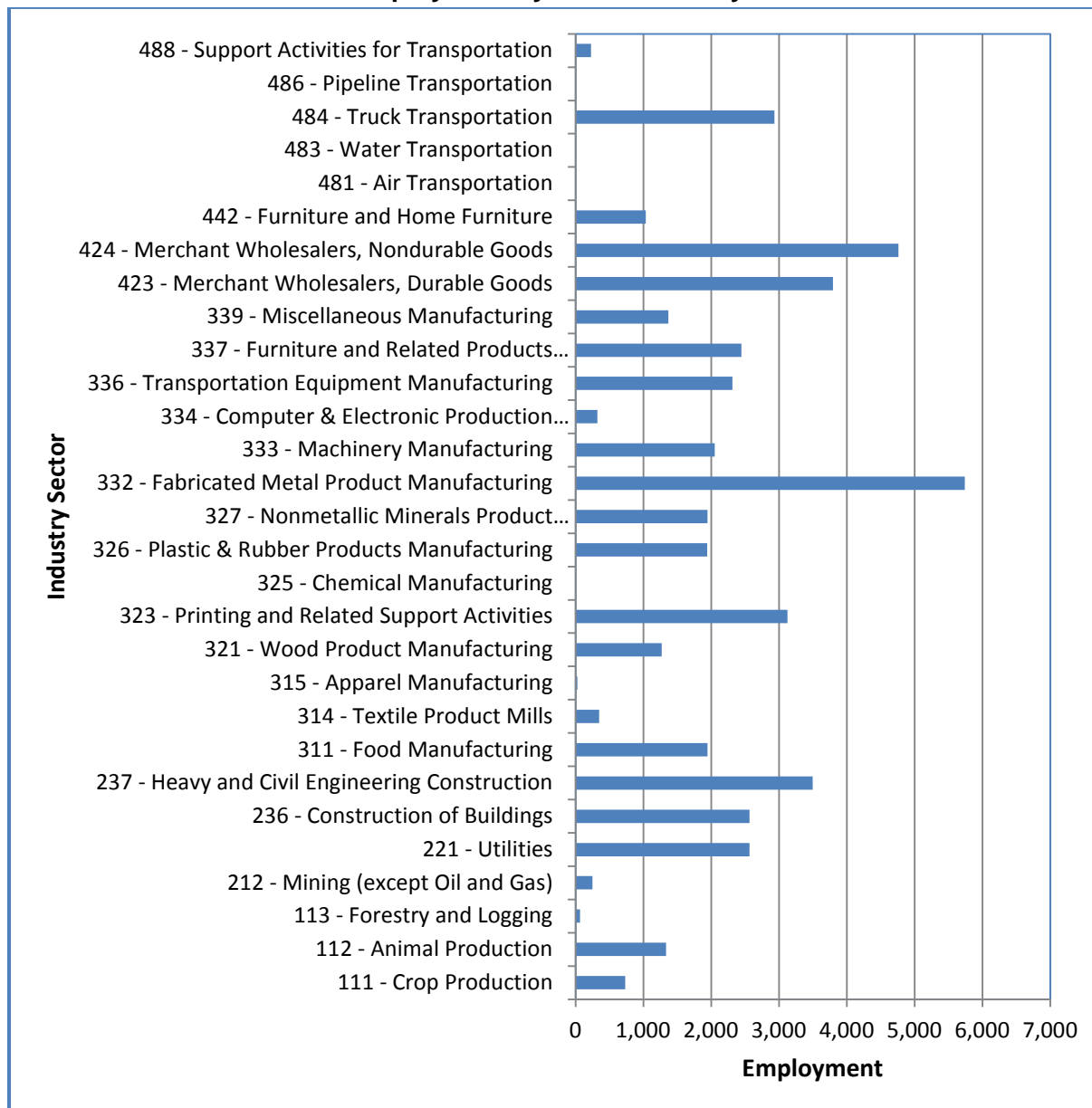


## 2.3 Freight and Economics

### 2.3.1 Employment and Economic Growth

The Central Minnesota Study Area is comprised of three Economic Development Regions (EDR): 5, 7E and 7W, as define for the Minnesota Department of Employment and Economic Development. The bar chart in **Exhibit 9** displays total employment for all three EDRs comprising the Central Minnesota Region for selected industries. Within the manufacturing and transportation related industries, *Fabricated Metal Product Manufacturing* is the leading employer in the region, followed by *Nondurable Goods Wholesaling*.

**Exhibit 9: Total Employment by Select Industry Sector – District 3<sup>2</sup>**

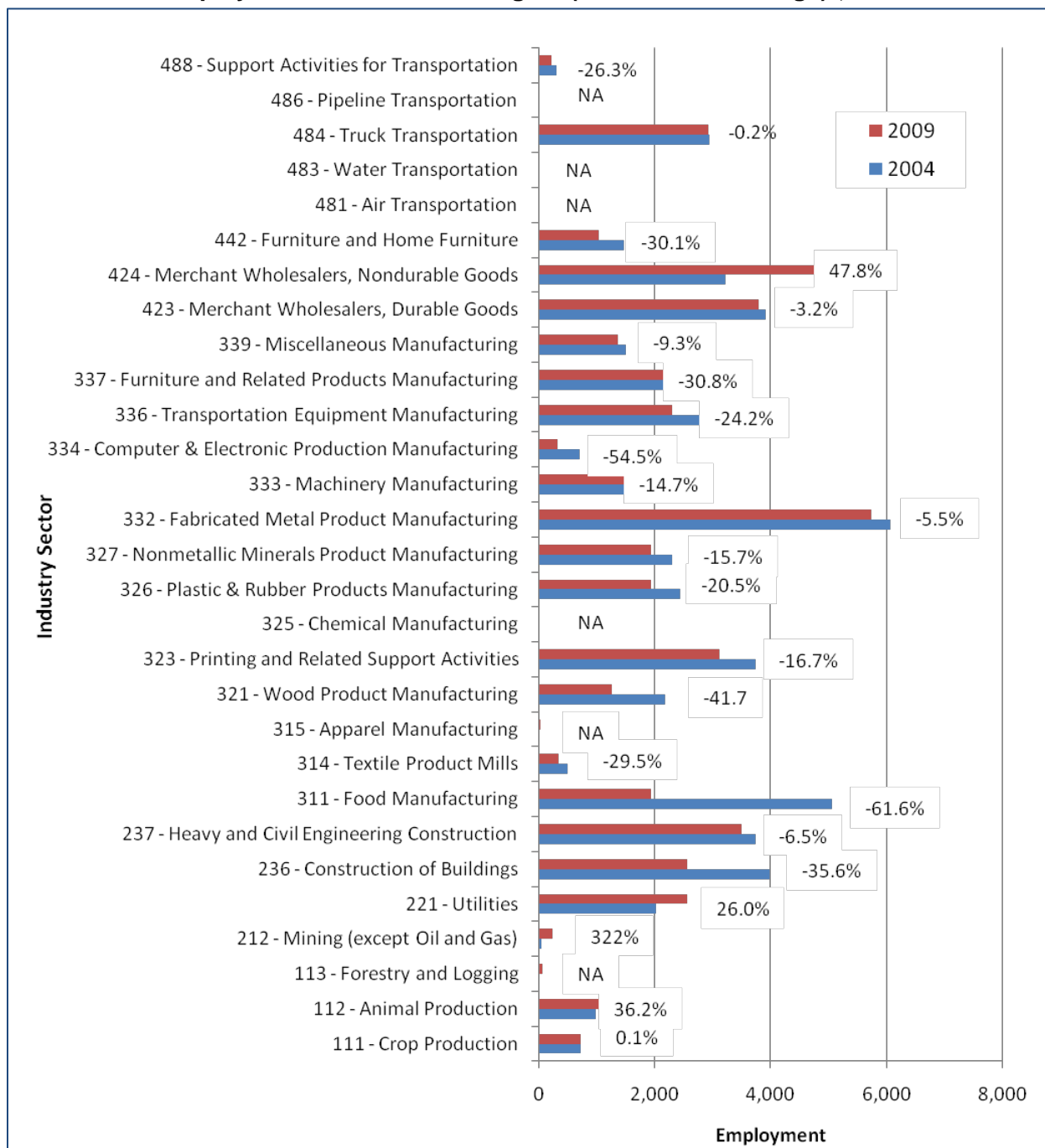


<sup>2</sup> Industry employment excludes most service and all government sectors.



The bar chart in **Exhibit 10** shows employment by select industry sector for the years 2004 and 2009, as well as the percentage change in employment for each sector. The Great Recession beginning in December of 2007 is evident in the Central Region’s employment figures. Among the selected industry sectors, total employment declined by 14.1 percent (-14.1%). The greatest decline among the sectors displayed was in *Food Manufacturing* (-61.6%), followed by *Computer and Electronic Product Manufacturing* (-54.5%).

**Exhibit 10: Employment in the Central Region (with Percent Change)<sup>3</sup>, 2004 and 2009**



<sup>3</sup> Industry employment excludes most service and all government sectors.

## 3.0 FREIGHT FLOW OVERVIEW

This analysis primarily uses IHS Global Insight's 2007 TRANSEARCH<sup>®</sup> database and the Surface Transportation Board's 2007 Rail Waybill Sample. These datasets provide county-level data for freight moves originating and terminating within Minnesota, and BEA-level information for those moves originating or terminating beyond state borders. This information provides a quantitative description of the movement of goods between regional origins and destinations by mode. The TRANSEARCH<sup>®</sup> database also provides traffic projections for the years 2020 and 2030. These forecasts predict goods movements between regions, and are not general economic projections. They take into account industry, regional and national economic trends to estimate commodity-level trade flows. This information can help identify transportation improvements, freight planning objectives and other strategies that will benefit the economic competitiveness of the region.

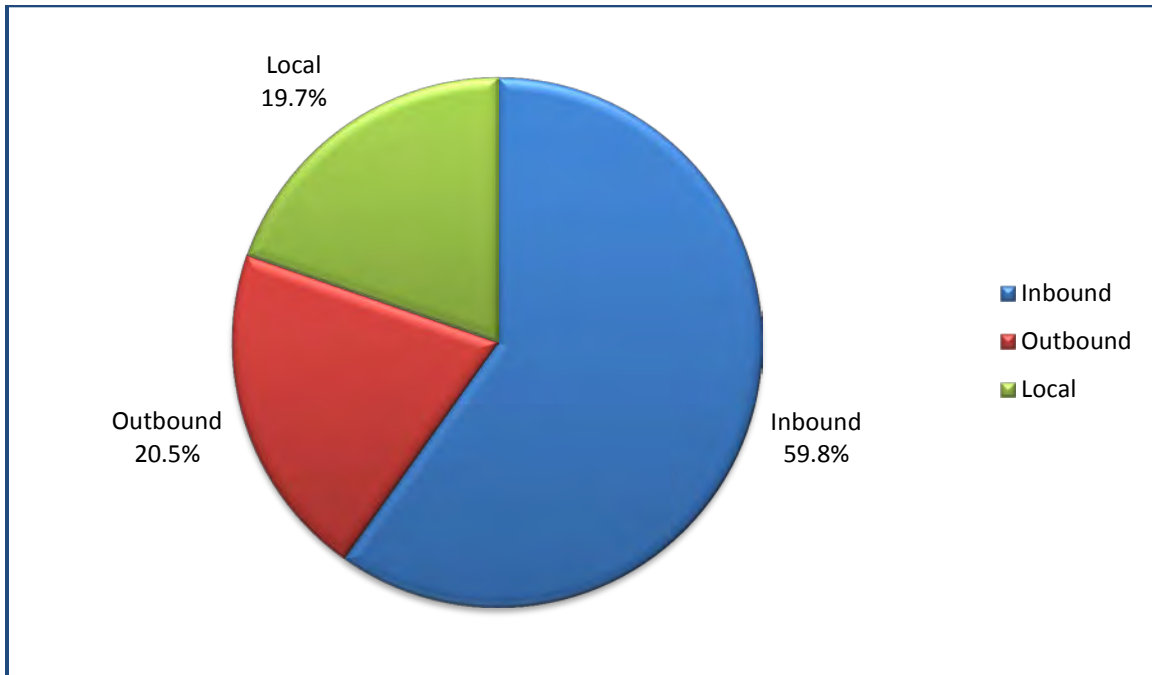
### 3.1 Directional Flows

According to data analysis, Central Minnesota moved 31 million tons of freight valued at \$16 billion in 2007. **Exhibits 11 and 12** indicate that 60 percent of the freight tonnage and 28 percent of freight value results from freight terminating in the region from origins outside the region. Twenty-one percent of the tonnage and 71 percent of the value originates in the region with destinations outside of the region. Twenty percent of the tonnage and one percent of the value were local freight movements that both originate and terminate in the region.

By 2030, the weight of freight moving into, out of and within Central Minnesota is projected to grow by 41 percent to over 43 million tons. A significant portion of this increase is expected to come from originating freight shipments, although terminating and local freight shipments are also expected to experience increased weights. The value of freight moving into, out of and within the region is projected to grow by 92 percent to approximately \$31 billion by 2030, resulting mainly from originating shipments.

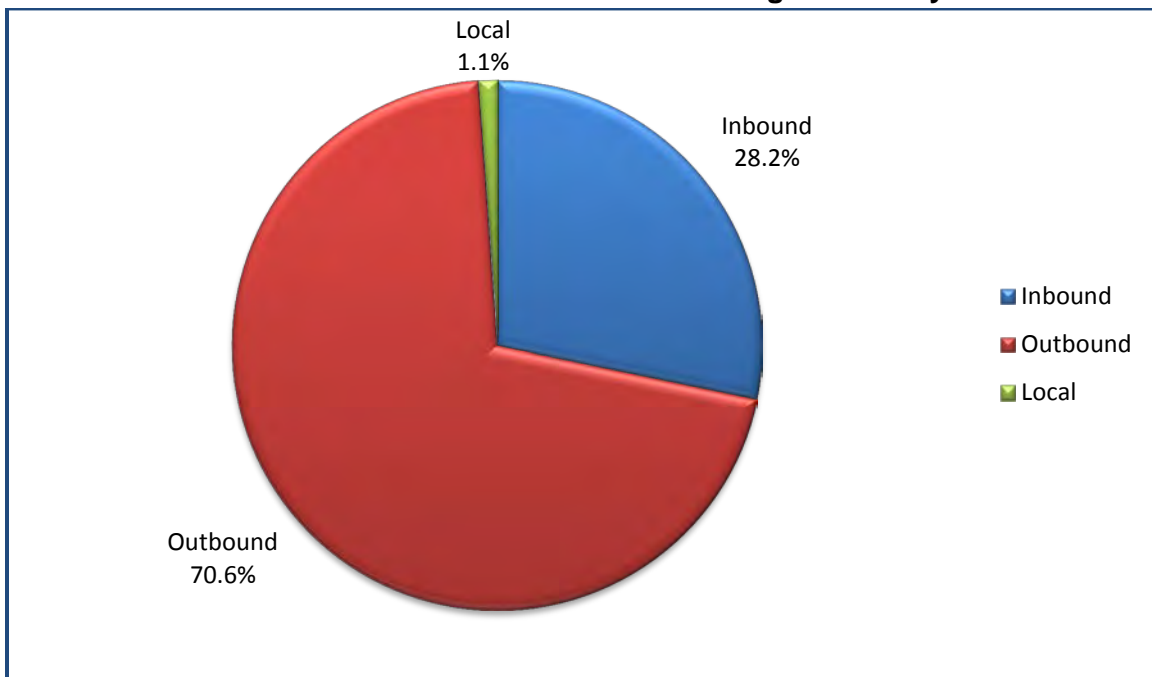
***The significant percentage difference between outbound tonnage and outbound value (regional exports) suggest that commodity exports from the region are generally higher value, low weight goods such as Electrical Equipment, Instruments and Transportation Equipment. In contrast, inbound commodities tend to be of lower value, higher weight commodities such as Coal and Non-metallicMinerals.***

**Exhibit 11: Central Minnesota Directional Flows by Tonnage**



Source: TRANSEARCH<sup>®</sup>

**Exhibit 12: Central Minnesota Directional Freight Flows by Value**



Source: Transearch<sup>®</sup>

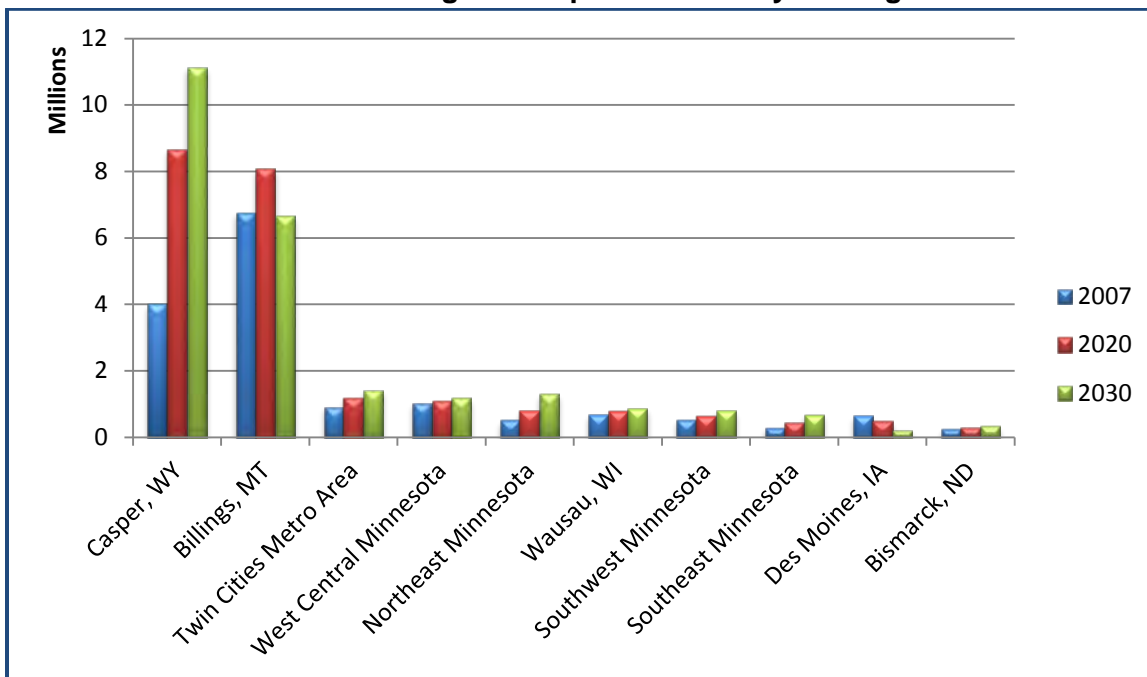
Freight shipments moving to Central Minnesota have many different origins. **Exhibit 13** lists the top 10 origins of freight moving to the region by tonnage. Most freight tonnage terminating in Central Minnesota originates in the Powder River Basin regions of Casper, Wyoming and Billings, Montana. These are primarily rail coal shipments destined for the power plant in Becker, Minnesota. Additional origins of freight moving to the district include the Twin Cities



Metro Area, other Minnesota locations, and other locations in the Upper Midwest such as Wausau, Wisconsin, Des Moines, Iowa and Bismarck, North Dakota. **Exhibit 14** lists the top 10 origins of freight moving to the region by value. Again, the Twin Cities is the largest origin, with the Los Angeles, New York, and Seattle areas and the Upper Midwest also representing significant import value.

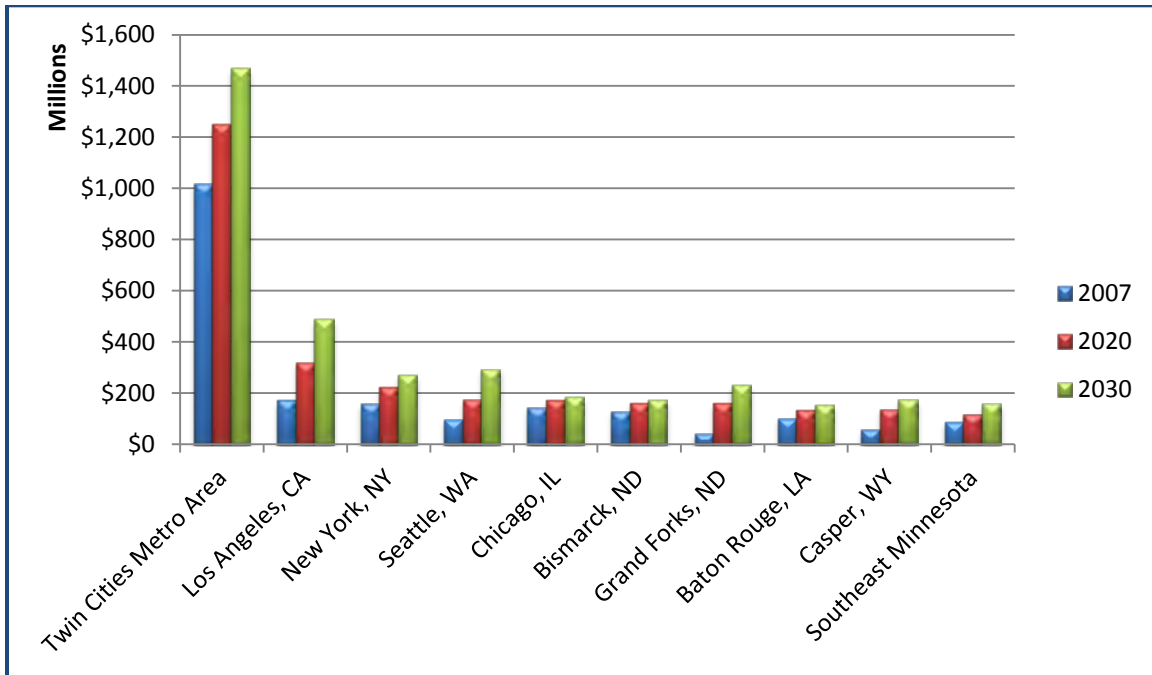
**Exhibit 15** lists the top 10 destinations of freight tonnage originating in Central Minnesota. The Twin Cities Metro Area receives the most amount of freight tonnage from Central Minnesota, with other areas in Minnesota and the Midwest also receiving notable tonnage. **Exhibit 16** lists the top 10 freight destinations by value. The Twin Cities Metro Area is the largest destination by value, with Los Angeles, New York, Washington, DC and Philadelphia also receiving notable freight value from Central Minnesota.

**Exhibit 13: Regional Import Markets by Tonnage**



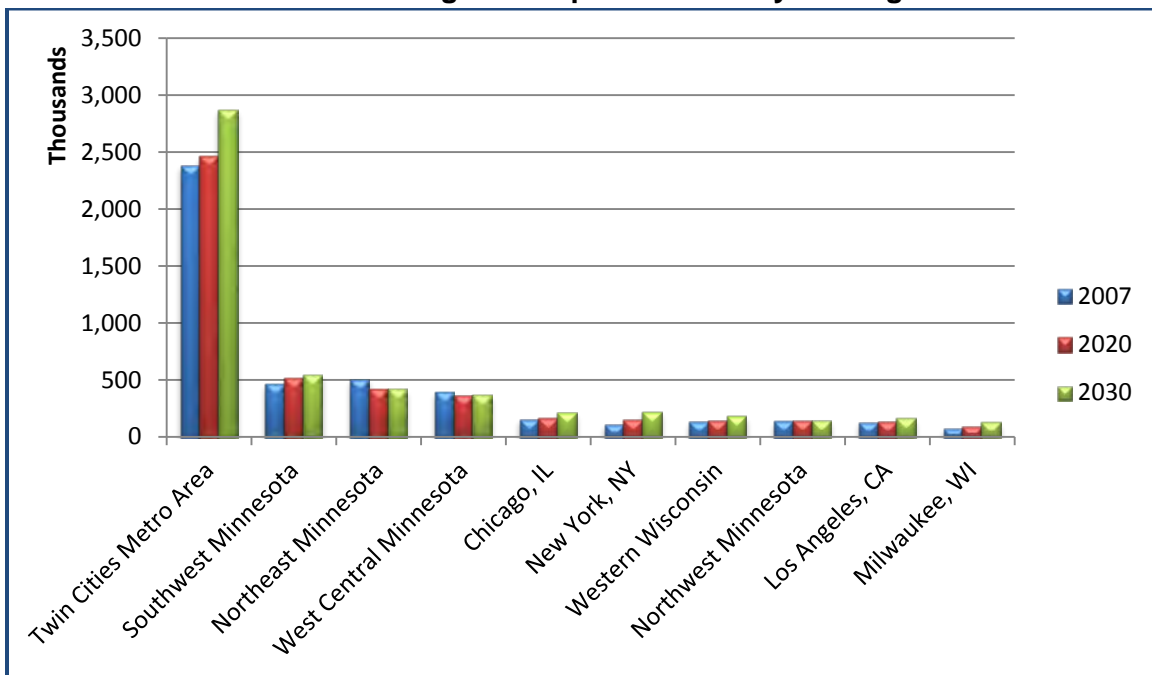
Source: TRANSEARCH®

**Exhibit 14: Regional Import Markets by Value**

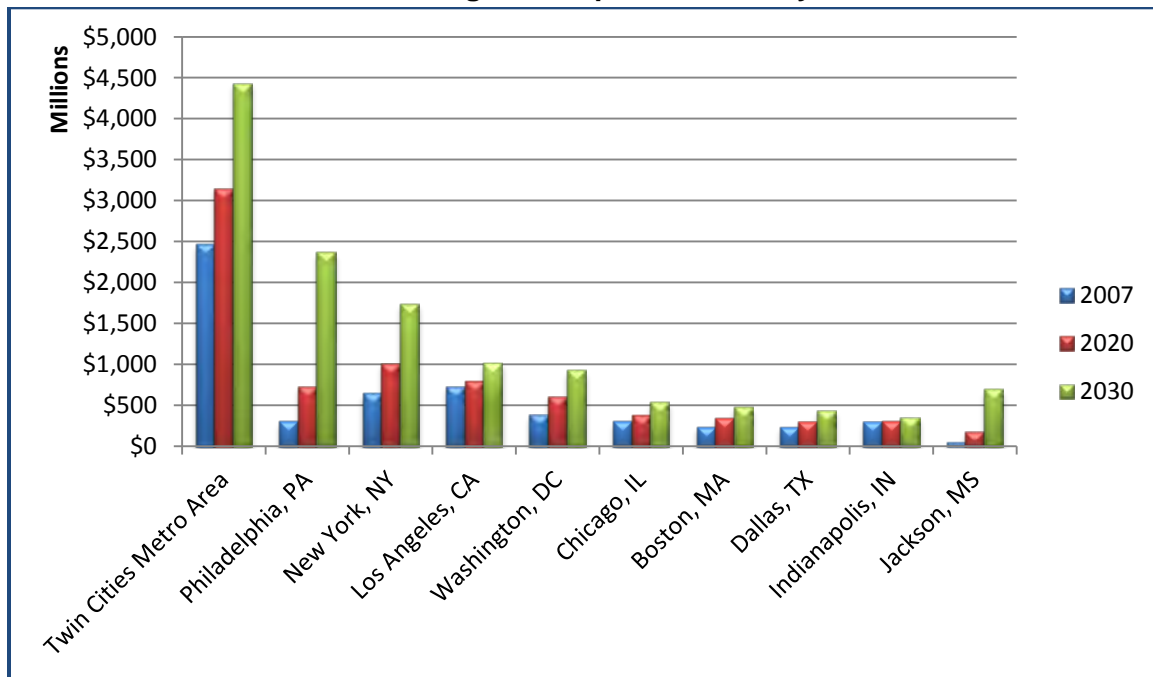


Source: TRANSEARCH®

**Exhibit 15: Regional Export Markets by Tonnage**



Source: TRANSEARCH®

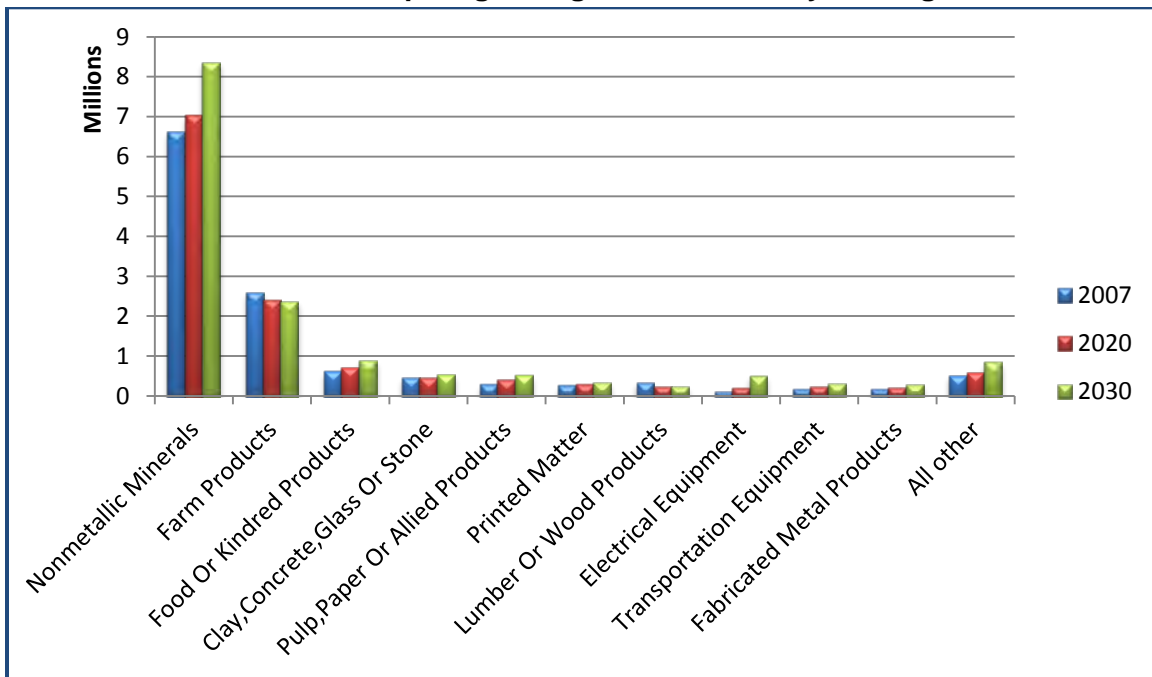
**Exhibit 16: Regional Export Markets by Value**Source: TRANSEARCH<sup>®</sup>

### 3.2 Key Originating Commodities

The largest commodities originating in Central Minnesota by tonnage are *Nonmetallic Minerals* and *Farm Products*, which together make up 75 percent of outbound tonnage. Included in the *Nonmetallic Minerals* group are products such as sand and gravel (including crushed granite), broken stone, riprap and dimension quarry stone. Most of this tonnage moves by truck, but a portion includes rock ballast quarried near Waite Park that moves by rail to locations throughout the U.S. The *Farm Products* group consists primarily of grain, field crops, nuts and seeds. Global Insight projections suggest moderate growth in *Nonmetallic Minerals* tonnage through 2030, while tonnage will remain fairly stable for most other commodities. Another notable commodity producing heavy outbound freight tonnage in the region is the *Food or Kindred Products* group, consisting primarily of soft drinks. **Exhibit 17** lists the top 10 commodities originating in Central Minnesota.

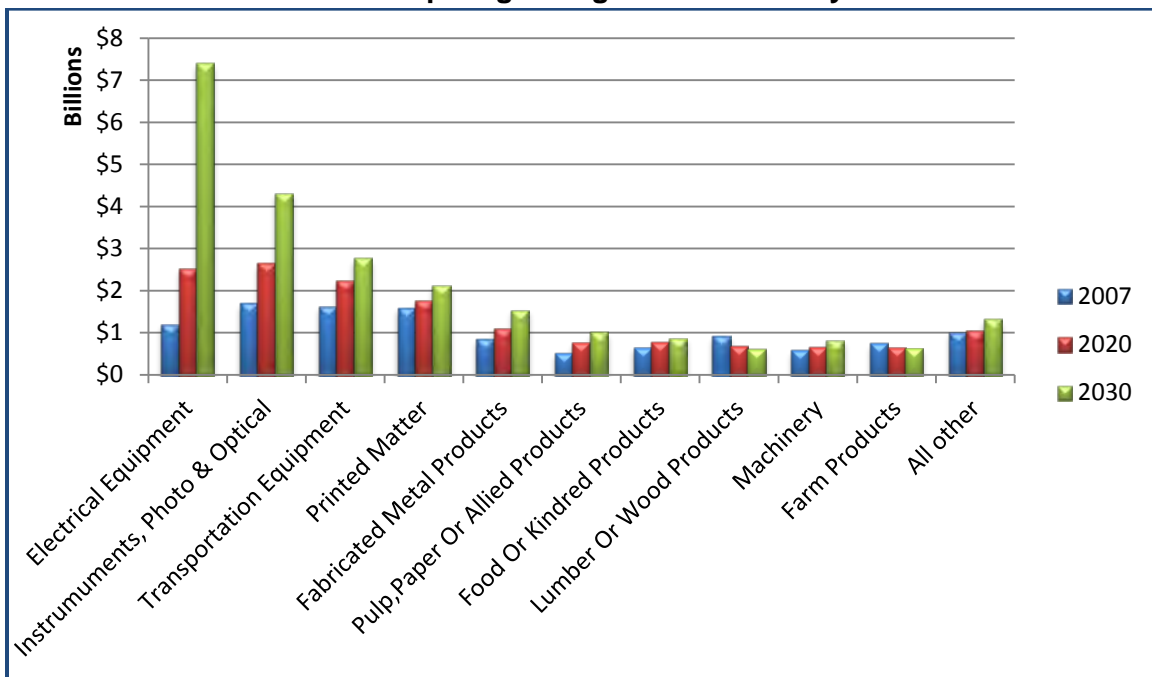
The largest commodities originating in Central Minnesota by value are *Electrical Equipment*, *Instruments*, *Photo and Optical Equipment*, *Transportation Equipment* and *Printed Matter*. The data indicates that *Electrical Equipment* value is expected to grow substantially by 2030. Products included in this group are telephones, refrigerators, appliances, and lighting. *Instruments*, *Photo and Optical Equipment* is also expected to experience moderate growth, and these products include surgical, medical and orthopedic equipment. **Exhibit 18** lists the top 10 commodities originating in Central Minnesota by value.

**Exhibit 17: Top Originating Commodities by Tonnage**



Source: TRANSEARCH®

**Exhibit 18: Top Originating Commodities by Value**



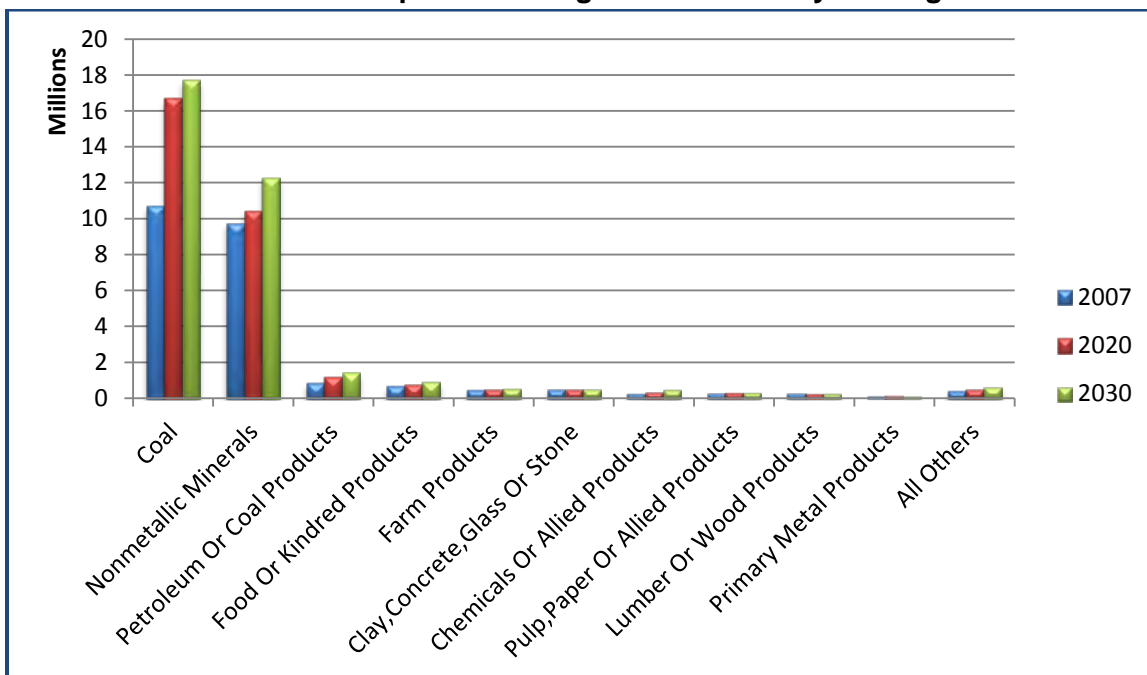
Source: TRANSEARCH®

### 3.4 Key Terminating Commodities

The largest commodity terminating in Central Minnesota by tonnage is *Coal*. These are mostly rail movements from the Power River Basin in Wyoming and Montana destined for the coal-fired power plant in Becker, MN. The *Nonmetallic Minerals* commodity group also generates significant tonnage. Products included in this commodity group included rip rap, sand and gravel. Much of this *Nonmetallic Minerals* terminating tonnage results from local truck movements that both originates and terminates within Central Minnesota. **Exhibit 19** lists the top 10 terminating commodities by tonnage.

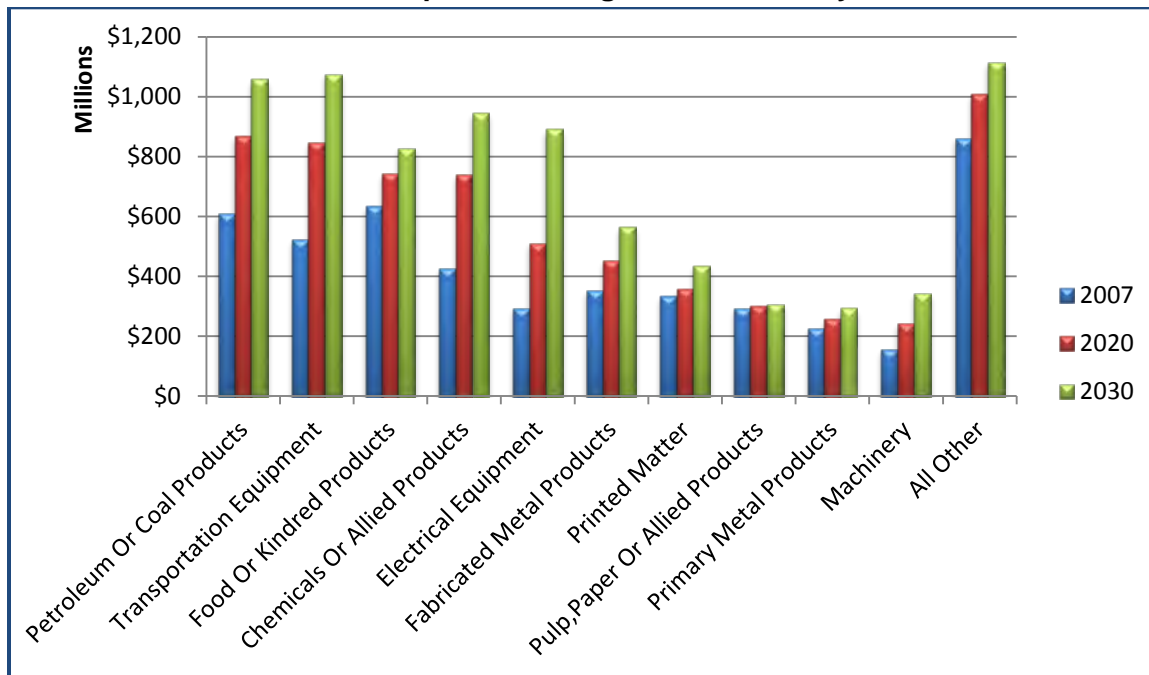
The largest commodities terminating in Central Minnesota by value are *Petroleum or Coal Products*, *Transportation Equipment*, and *Food or Kindred Products*. The *Petroleum or Coal Products* commodity group consists primarily of petroleum refining products. The *Transportation Equipment* group consists of parts for buses, boats and trailers. The *Food or Kindred Products* group consists mainly of soybean oil and cheese. **Exhibit 20** lists the top 10 commodities terminating in Central Minnesota by value.

**Exhibit 19: Top Terminating Commodities by Tonnage**



Source: TRANSEARCH®

**Exhibit 20: Top Terminating Commodities by Value**

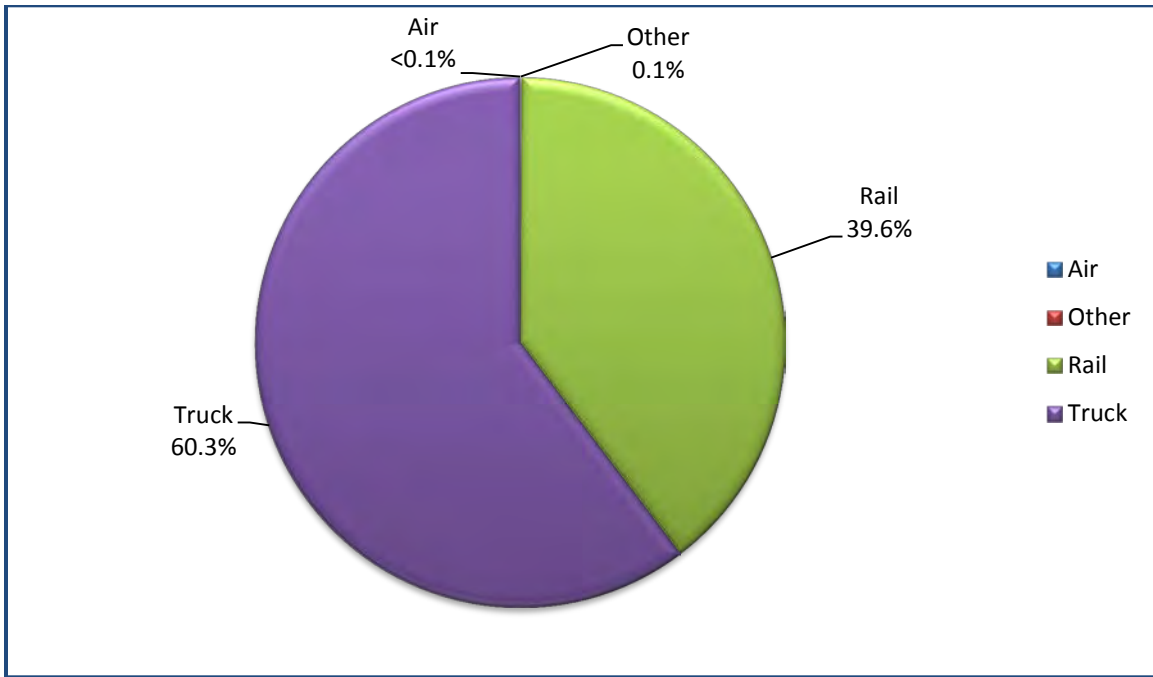


Source: TRANSEARCH®

### 3.4 Modal Split

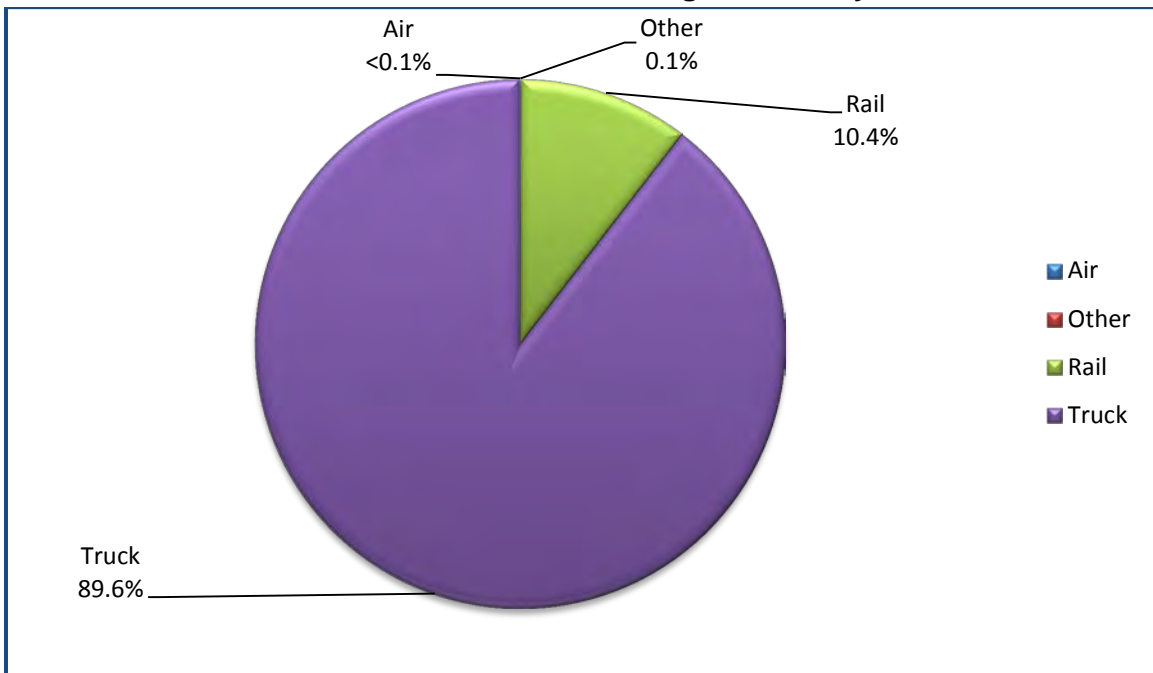
Trucking has the largest share of total originating and terminating tonnage in Central Minnesota. Trucks handled 60 percent of freight tonnage and 90 percent of freight value in the region in 2007. Rail also handled a significant amount of freight, with air and other modes handling much smaller tonnage and value. Waterways carried no freight in Central Minnesota because there are no waterway terminals in the region. **Exhibit 21** shows the 2007 modal split of inbound, outbound and local freight tonnage in Central Minnesota, and **Exhibit 22** shows this modal split by value.

**Exhibit 21: Central Minnesota Freight Modes by Tonnage**



Source: TRANSEARCH®

**Exhibit 22: Central Minnesota Freight Modes by Value**



Source: TRANSEARCH®

Trucking has a larger share of total freight tonnage in Central Minnesota than it does statewide. Rail's tonnage share in the region is comparable to that of Minnesota as a whole. **Exhibit 23** compares the 2007 modal split of freight tonnage and value in the region to that of the

Minnesota. There are several freight rail lines and highways in Central Minnesota that have significant volumes of through freight which this analysis does not capture. Data limitations prevent this analysis from including through freight movements at the regional level. This limitation results in underreporting of modal freight tonnage and value.

**Exhibit 23: Regional Mode Comparison (2007)**

	Tonnage		Value	
	Central MN	Minnesota	Central MN	Minnesota
Truck	60.3%	49.3%	89.6%	79.6%
Rail	39.6%	38.2%	10.4%	19.3%
Water	0.0%	5.9%	0.0%	0.5%
Air	<0.1%	<0.1%	<0.1%	0.5%
Other	0.1%	6.6%	0.1%	<0.1%

Source: TRANSEARCH<sup>®</sup>

Each mode offers a unique set of costs and benefits that appeal to different commodities. Goods carried by truck tend to have higher value-to-weight ratios than rail and water. Therefore, trucking carries a higher percent of value of freight shipped in the region than it does tonnage. Air cargo transports the highest value to weight ratio of all modes. These low weight, high value goods are extremely time sensitive and benefit from the added cost to utilize one of the fastest and most expensive modes of transport. Rail tends to transport heavier goods that are less time-sensitive than those shipped by air and truck, though these goods may also be high in value. Waterways carry the least time-sensitive goods, and are typically bulk goods. Other modes such as pipelines tend to ship specific commodities of varying value-to-weight ratios. **Exhibit 24** lists the top originating and terminating commodities by mode in Central Minnesota.



**Exhibit 24: Top Originating and Terminating Commodity Tonnage by Mode (2007)**

Mode	Originating Commodity	Terminating Commodity
Truck	Nonmetallic Minerals	Nonmetallic Minerals
	Farm Products	Petroleum Or Coal Products
	Food Or Kindred Products	Food Or Kindred Products
	Clay, Concrete, Glass Or Stone	Farm Products
	Lumber Or Wood Products	Clay, Concrete, Glass Or Stone
Rail	Pulp, Paper Or Allied Products	Coal
	Waste Or Scrap Materials	Clay, Concrete, Glass Or Stone
	Lumber Or Wood Products	Pulp, Paper Or Allied Products
	Transportation Equipment	Chemicals Or Allied Products
	Food Or Kindred Products	Lumber Or Wood Products
Air	Misc Mixed Shipments	Misc Mixed Shipments
		Machinery
		Farm Products
		Mail Or Contract Traffic

Source: TRANSEARCH®

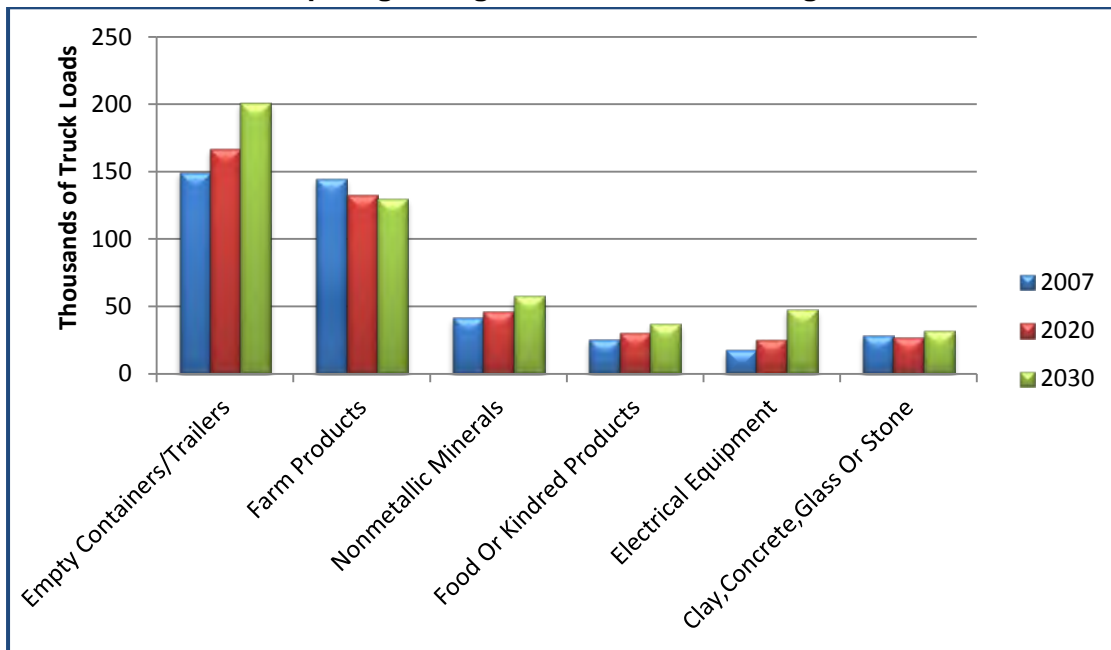
### 3.5 Trucking

In 2007, trucks moved over 18 million tons of freight moved to, from, and within the Twin Cities Metro Area. The percent of all freight tonnage in the region that moves by truck is significantly higher than the percentage of statewide freight tonnage that moves by truck. The value of freight moving by truck as a percentage of all freight modes is also above the average for the state. **Exhibit 25** lists *Nonmetallic Minerals*, *Farm Products*, *Food or Kindred Products*, *Clay, Concrete, Glass or Stone* and *Lumber or Wood Products* as major commodities by tonnage.

Tonnage and value are good measures of overall product flow in the region. Truck loads are a measure of the number of trucks moving on roadways, and are more directly related to roadway capacity and the amount of space that trucks utilize.

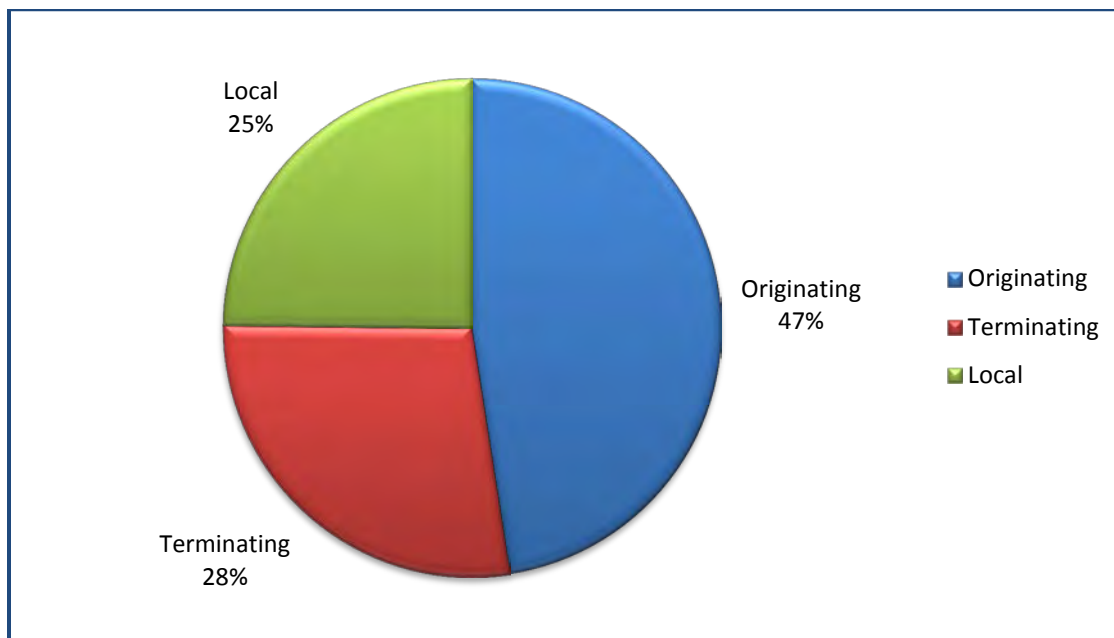
**Exhibit 26** indicates the originating, terminating, and local distribution of truck freight movements in Central Minnesota by truck loads. Most truck loads moving to, from, and within the region are originating truck movements. There is also a significant portion of terminating and local truck load movements in the region.

**Exhibit 25: Top Originating Truck Load Generating Commodities**



Source: TRANSEARCH®

**Exhibit 26: Distribution of Truck Loads**



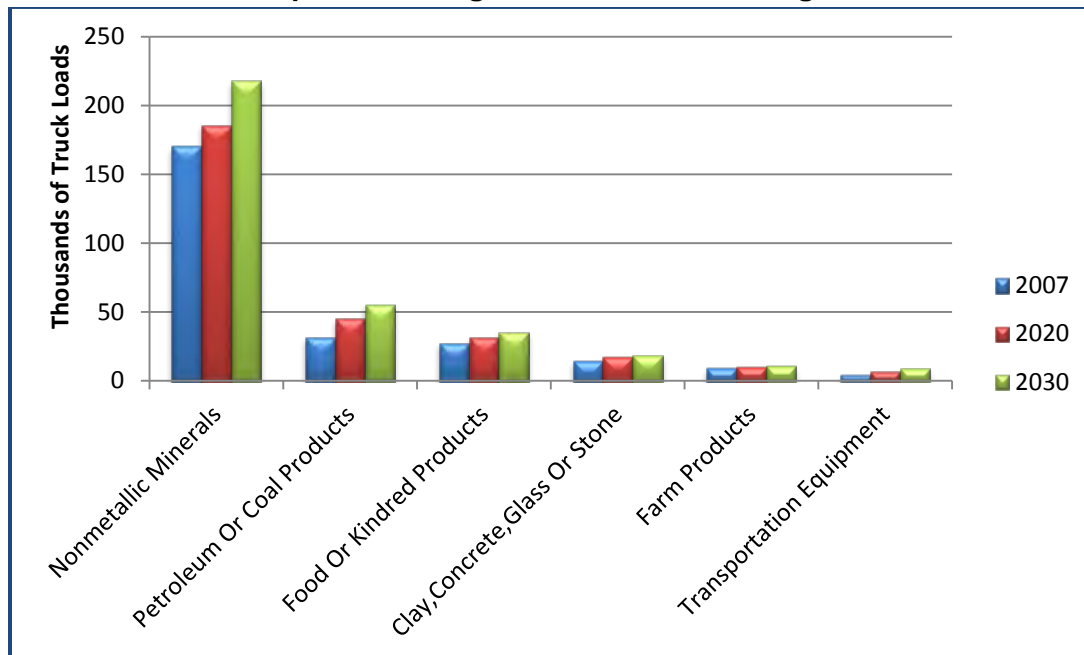
Source: TRANSEARCH®

In 2007, over 1 million trucks moved to, from, and within Central Minnesota. This Exhibit does not include through truck movements that pass through the region. **Exhibit 27** breaks down originating truck movements by empty moves and the top commodities by truck loads. Empty truck moves represent a significant portion of originating truck loads, and represent more loads than any other commodity group. *Farm Products*, *Nonmetallic Minerals* and *Food or Kindred Products* are major originating commodities. Many of these truck loads are destined for locations within Minnesota and the Upper Midwest, and New York is also a major destination.

Thirty-one percent of local, originating, and terminating truck loads in Central Minnesota are empty moves.

**Exhibit 28** identifies the top commodities by truck loads that terminate in the region. *Nonmetallic Minerals, Petroleum or Coal Products, and Food or Kindred Products* are major commodities terminating in the region. Most of these truck loads originate at locations within Minnesota and the Upper Midwest and Chicago, though Los Angeles and New Orleans also send a significant number of truck loads to the region.

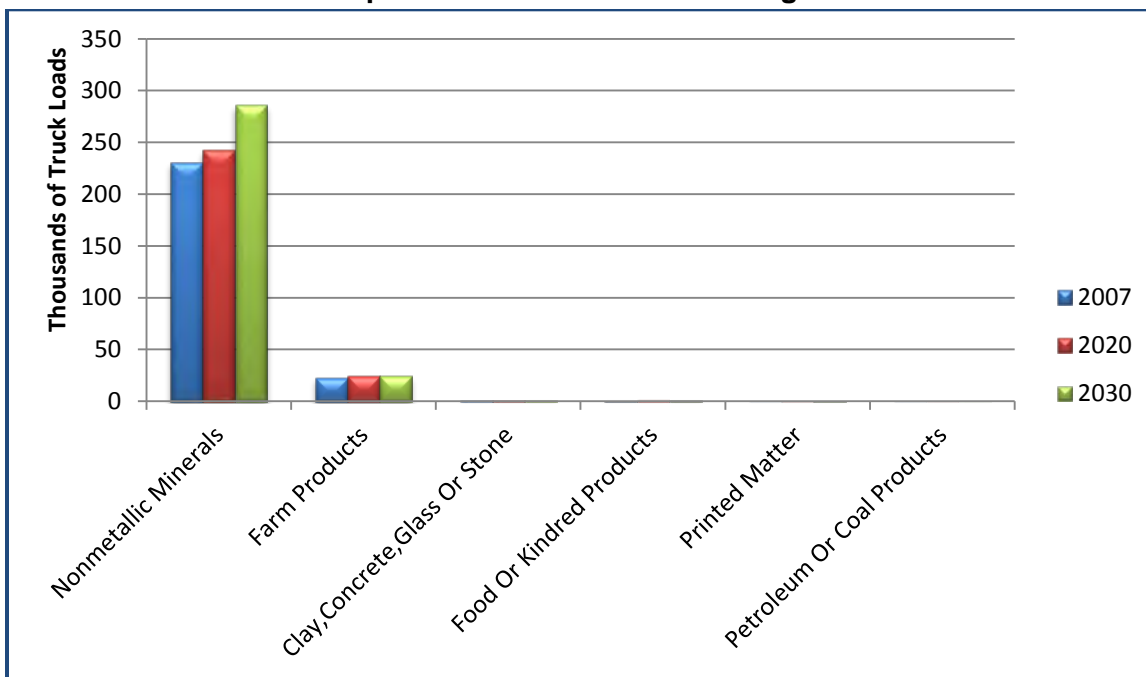
**Exhibit 27: Top Terminating Truck Load Generating Commodities**



Source: TRANSEARCH®

**Exhibit 28** identifies the top local truck commodities by truck loads. *Nonmetallic Minerals, Farm products, Clay, Concrete, Glass or Stone, Food or Kindred Products, Printed Matter and Petroleum or Coal Products* are major commodities moving locally within the region.

**Exhibit 28: Top Local Truck Load Generating Commodities**



Source: TRANSEARCH<sup>®</sup>

### 3.5.1 Truck Traffic Trends

The map in **Exhibit 29** provides information collected by the Minnesota Department of Transportation and indicates the average number of heavy commercial vehicles traveling on highway segments per day in the year 2008. The most significant corridors in Central Minnesota are the Interstate 94 Corridor, the US 10 Corridor, and the US 169 Corridor. Interstate 94 between Clearwater and the Twin Cities carries the most truck traffic in the region, and Interstate 94 from Clearwater to the west and US 10 between St. Cloud and Clear Lake also receive high truck volumes. The US 71, MN 371 and MN 23 Corridors are additional routes with significant amounts of truck traffic.

**Exhibit 30** displays annual truck tons for 2007 for the Central Minnesota Region. **Exhibit 31** shows projected truck tonnage growth between 2007 and 2030.

Exhibit 29: Truck Counts (Annual Average Daily Trucks), 2008

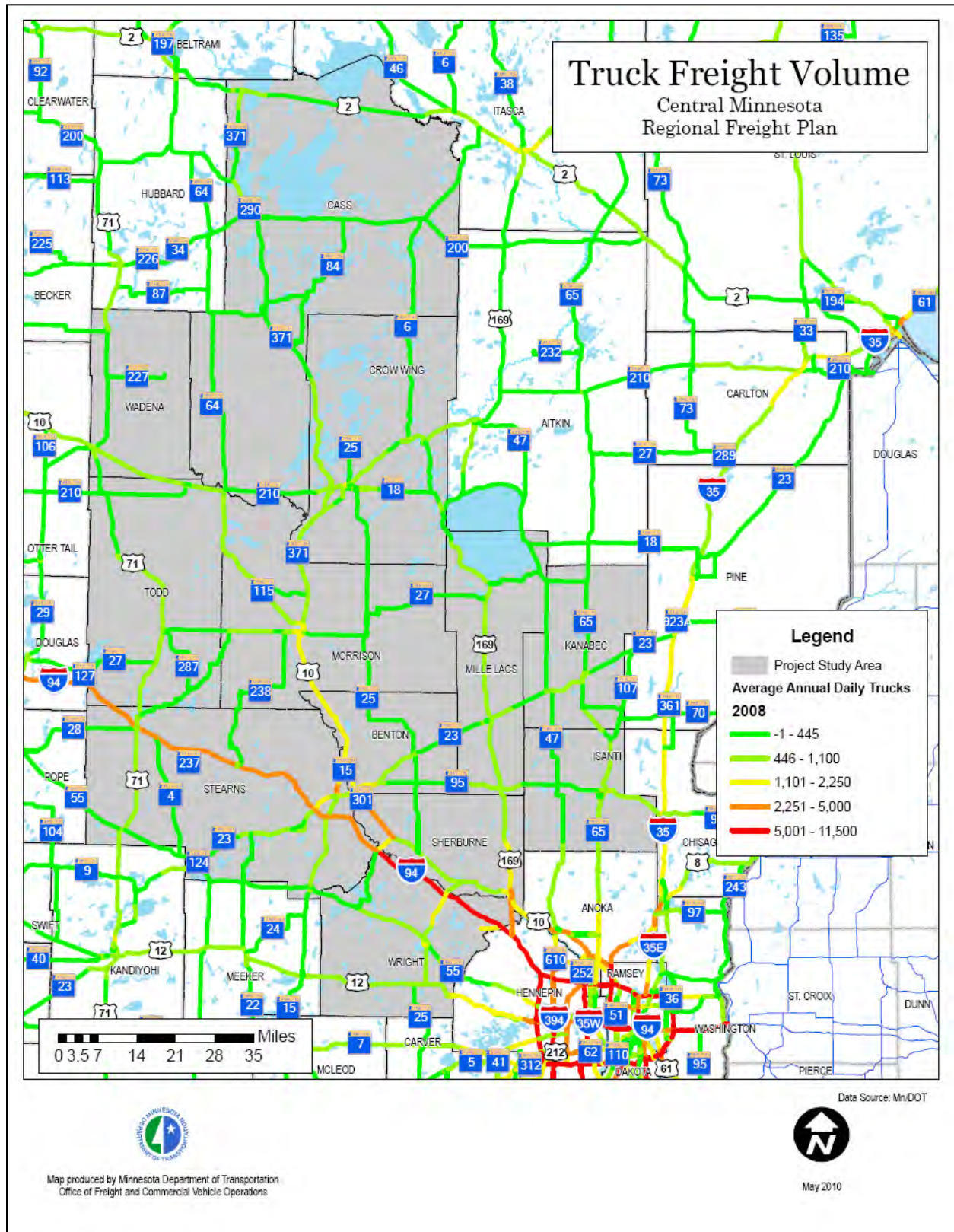




Exhibit 30: Annual Truck Tonnage, 2007

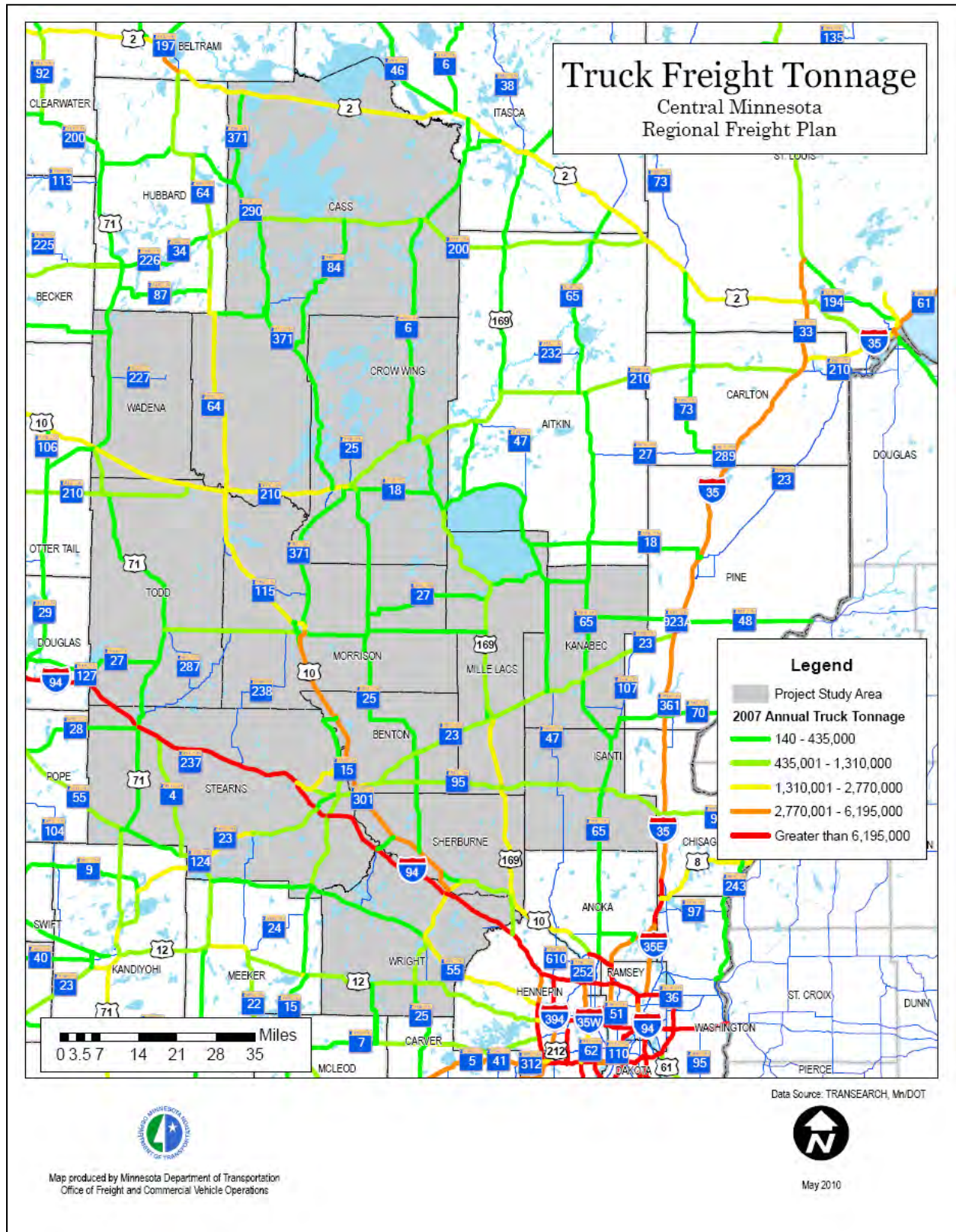
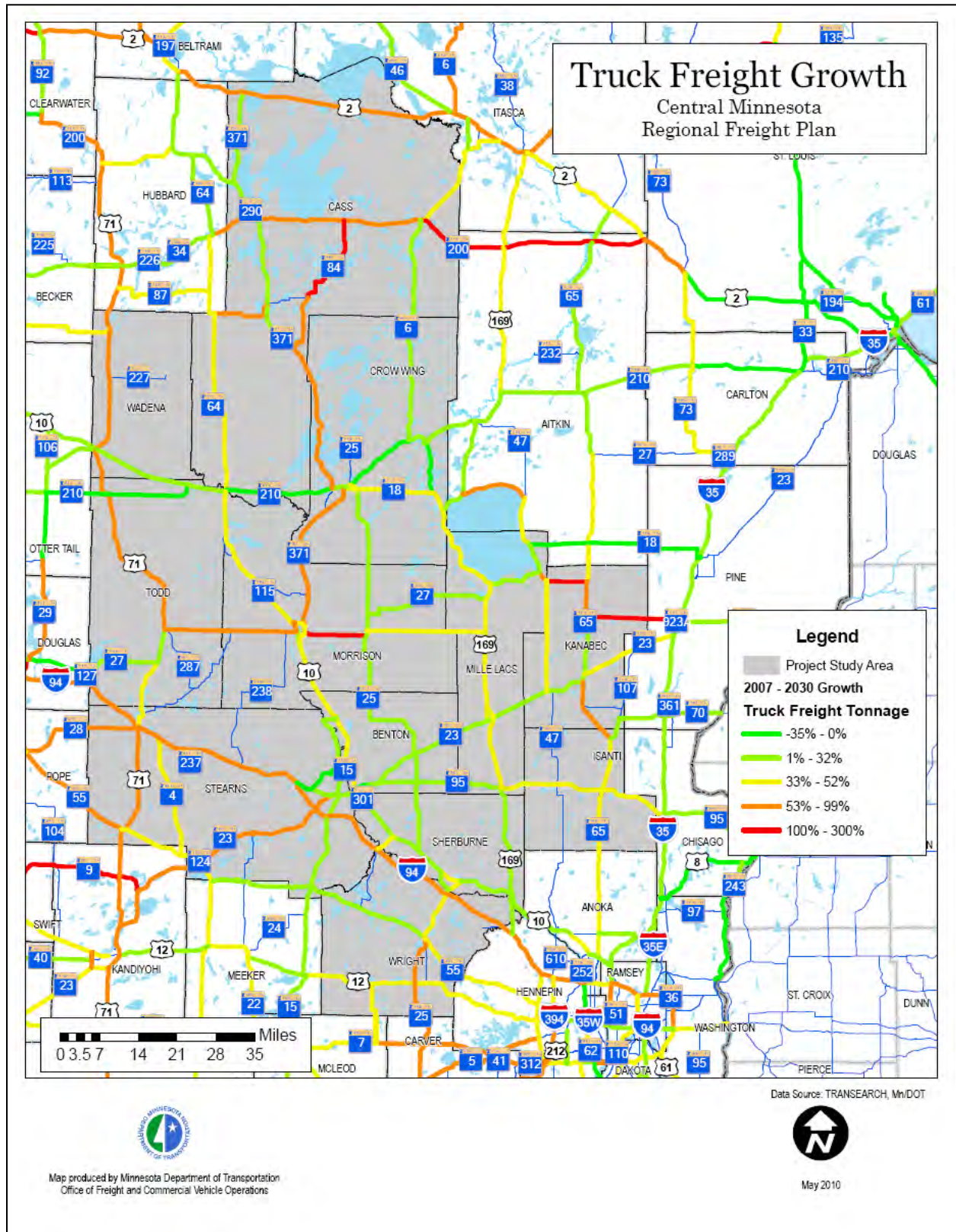




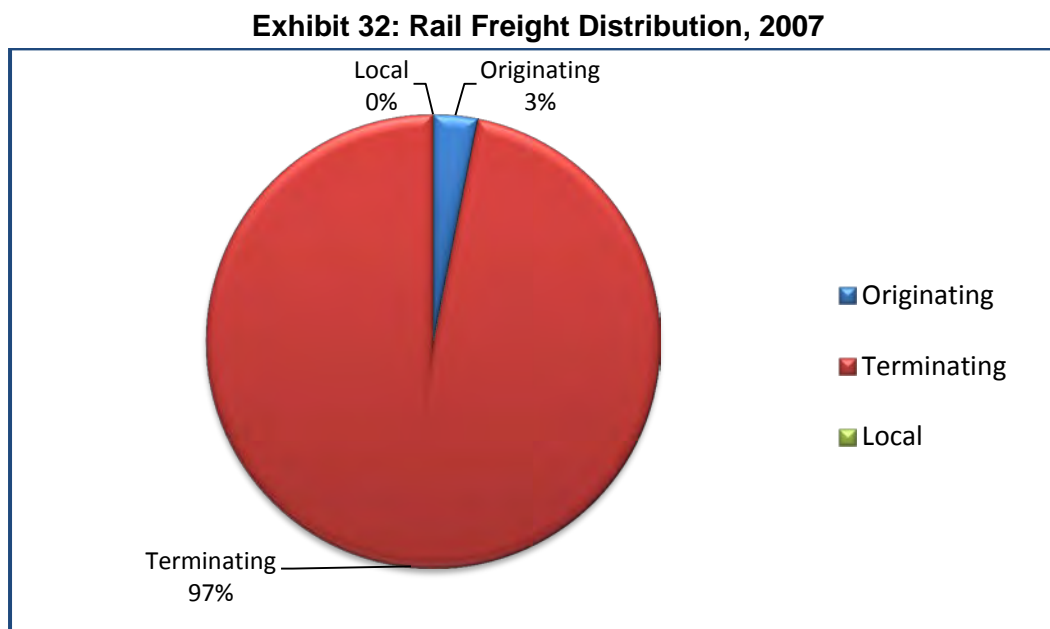
Exhibit 31: Projected Truck Freight Tonnage Growth, 2007-2030



### 3.6 Rail Freight

The Central Minnesota Region is home to the state's largest coal fired electric generation plant. Excel Energy's Sherburne County (Sherco) generating station, comprised of three power plants, has the capacity to generate 2,400 megawatts of electricity and consumes 30,000 tons or three unit trains of coal each day. Low-sulfur coal from Wyoming and Montana arrives daily at the Sherco Station where it takes just three minutes to unload an entire coal car, and just six hours to unload an entire train.<sup>4</sup>

**Exhibit 32** shows the distribution of rail commodities in the Central Minnesota Region, with 97% of all rail shipments by weight, as terminating trips.



**Exhibit 33** displays the rail commodities terminating by carload in the study region. Due to the overwhelming predominance of *Coal*, the graphic is shown in two-parts using different scales. In 2007, *Coal* accounted for more than 10 million tons of product moving in to the region by rail, while the next closest commodity group; *Clay, Concrete, Glass or Stone* accounting for just under 250 thousand tons, followed by *Paper or Allied Products* (approximately 200 thousand tons), and *Chemicals or Allied Products* accounting for just over 150 thousand tons. By 2030 *Chemicals or Allied Products* are projected to surpass all other terminating rail commodities by tonnage, with the exception of *Coal*.

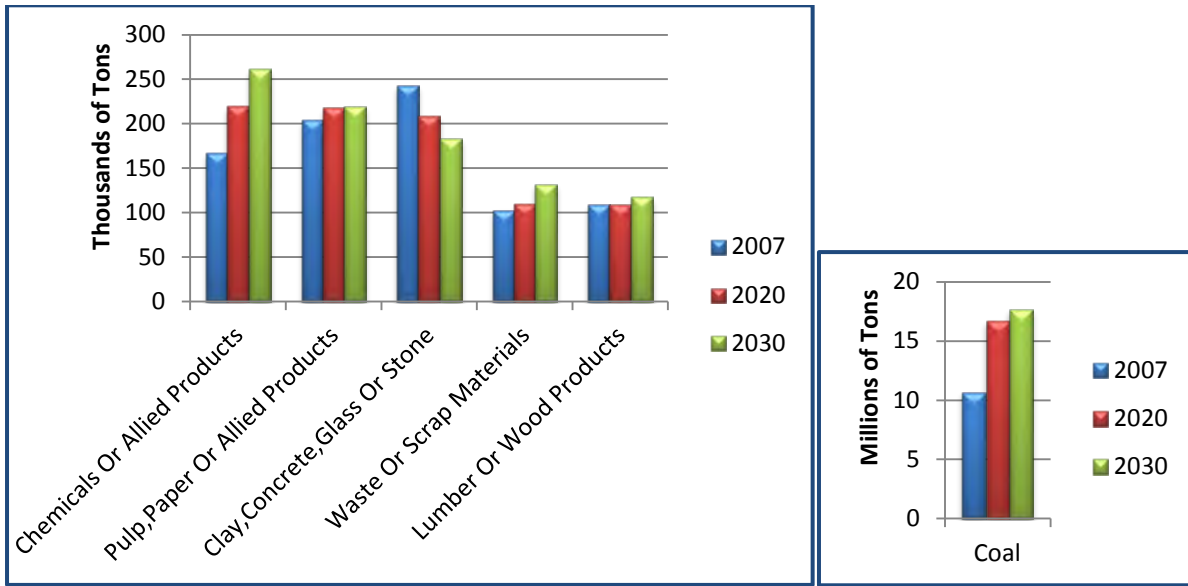
**Exhibit 34** displays the top commodities originating by rail in the Central Minnesota Region. *Pulp, Paper or Allied Products* accounted for just under 200 thousand tons in 2007, with volume projected to more than double by 2030. The next closest commodity group is *Waste or Scrap Materials* at approximately 70 thousand tons, with little project growth through 2030.

**Exhibits 35 and 36** present maps on subsequent showing current and projected commodity volumes by rail line in the Region.

<sup>4</sup> Information taken from Excel Energy website at: <http://www.xcelenergy.com/>

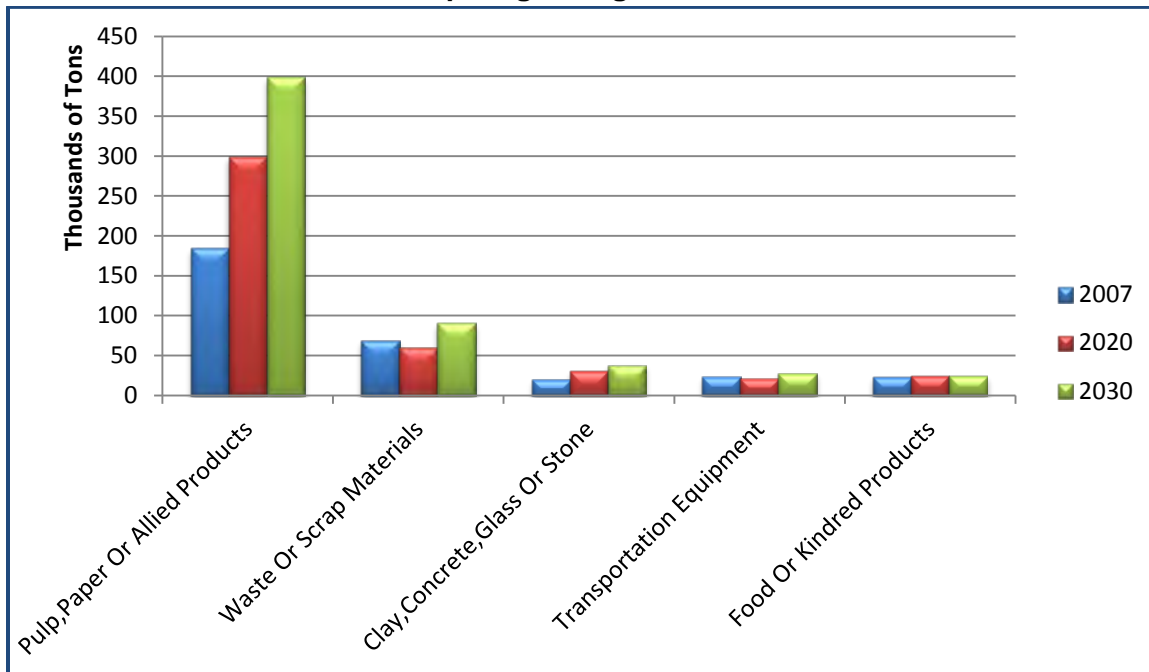


**Exhibit 33: Top Terminating Rail Carload Commodities**



Source: TRANSEARCH®

**Exhibit 34: Top Originating Rail Carload Commodities**



Source: TRANSEARCH®

Exhibit 35: Rail Freight Tonnage, 2007

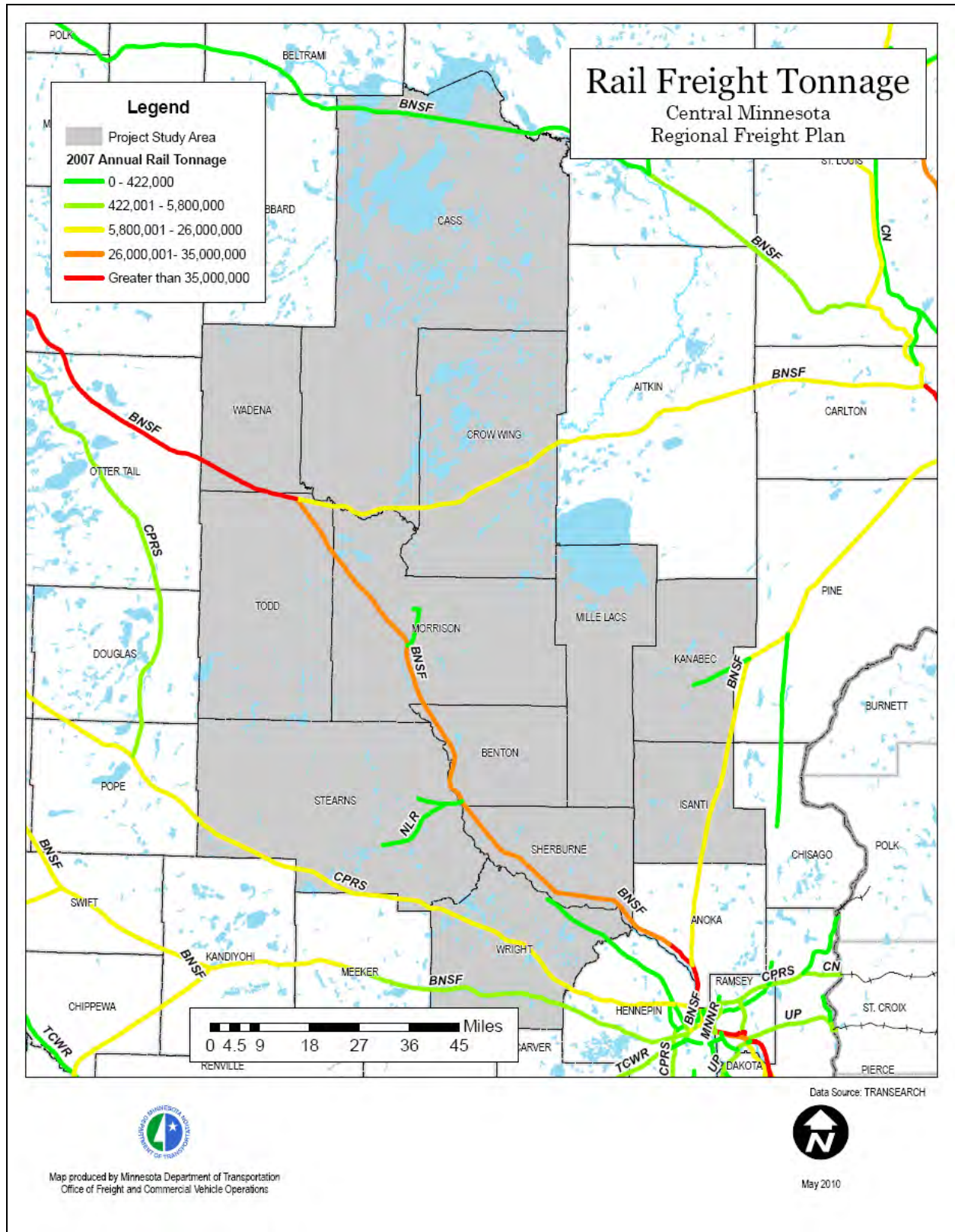
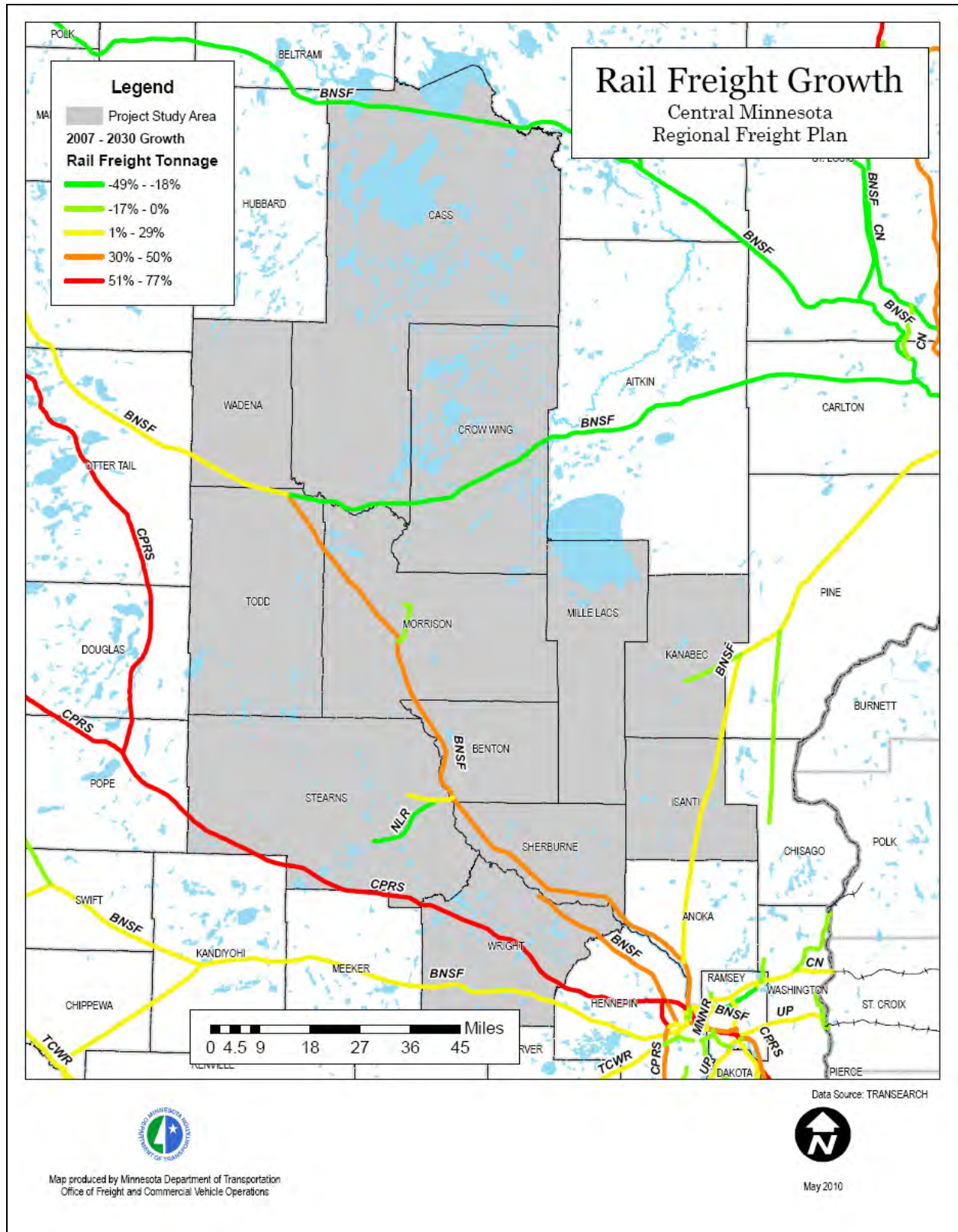


Exhibit 36: Projected Rail Tonnage Growth, 2007-2030



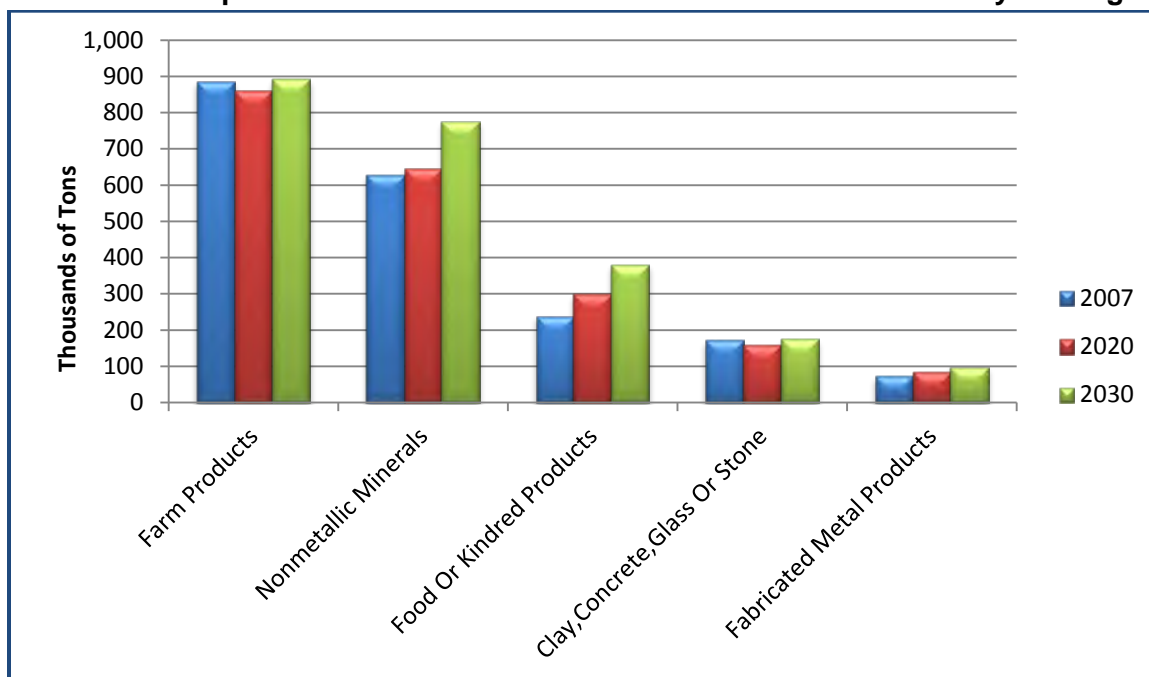


### 3.7 Trade with Twin Cities Metro Area

Nearly one million tons of freight moves from the Twin Cities in to Central Minnesota, while more than twice that volume moves from Central Minnesota to the Twin Cities. Ninety-three percent of freight by tonnage moving into the Region from the Twin Cities and 98 percent of freight tonnage to the Twin Cities from the Region moves by truck. The remaining tonnage is almost exclusively rail movements.

**Exhibit 37** below displays the top commodities moving from the study region to the Twin Cities Metro Area (TCMA) by tonnage. *Farm Products* are the top commodity group totaling just under 900 thousand tons in 2007, however growth in this commodity group is projected to remain flat through 2030. The next largest commodity groups moving from the study area to the Twin Cities are *Non Metallic Minerals* and *Food or Kindred Products* both groups are projected to show moderate growth over the forecast period.

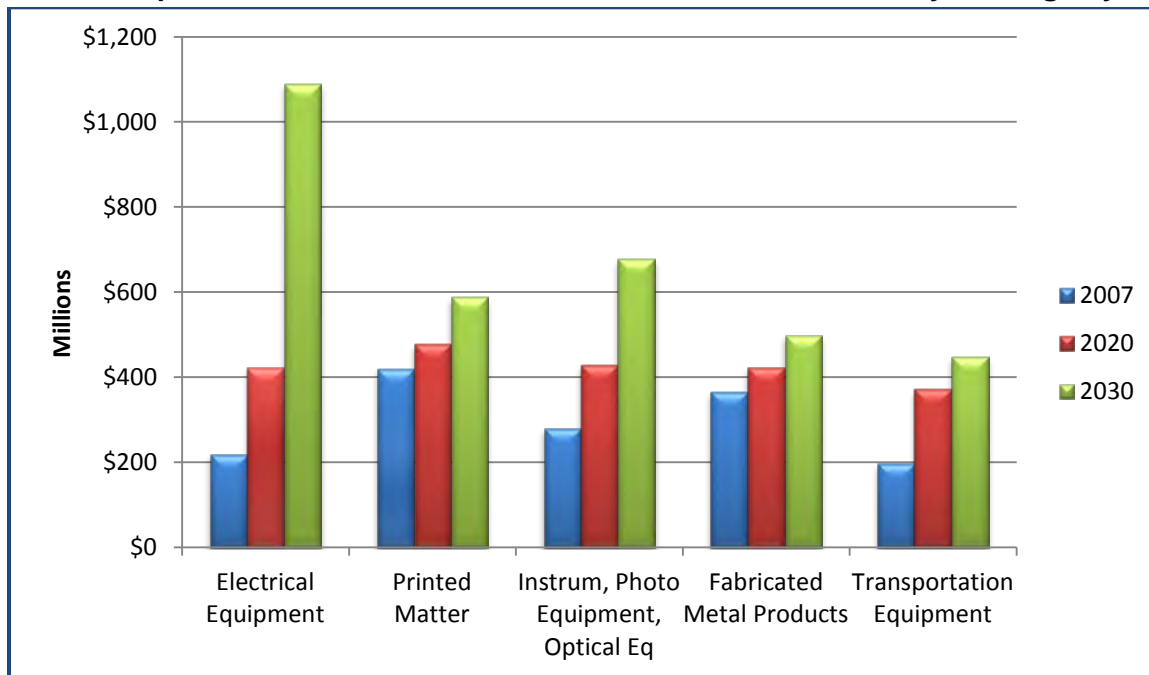
**Exhibit 37: Top Commodities from Central Minnesota to Twin Cities by Tonnage**



Source: TRANSEARCH®

**Exhibit 38** displays the top commodities moving from Central Minnesota to the TCMA by value. *Printed Matter, Fabricated Metal Products* and *Instruments, Photo Equipment and Optical Equipment* are currently the three top commodity groups imported to the region by value from the TCMA. However, by 2030 *Electrical Equipment* is projected to surpass all other commodity groups moving in this direction, with the value of these movements increasing approximately five fold. *Instruments, Photo Equipment and Optical Equipment* is projected to move into second place by value.

**Exhibit 38: Top Commodities from Central Minnesota to Twin Cities by Tonnage by Value**



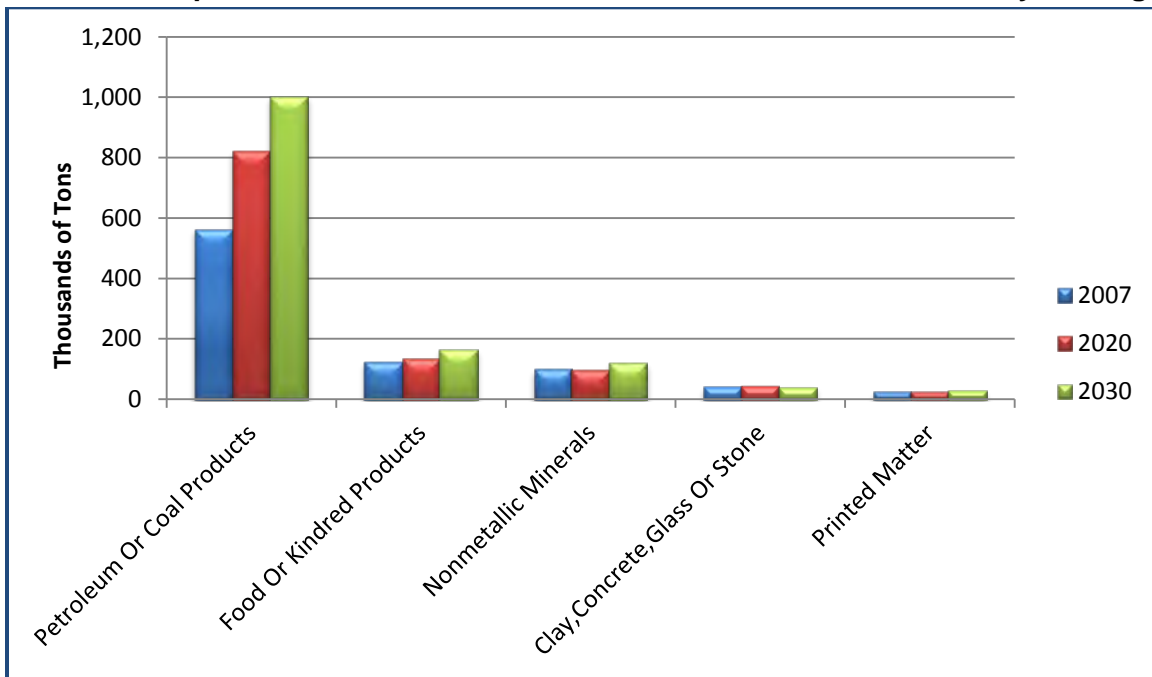
Source: TRANSEARCH<sup>®</sup>

**Exhibit 39** displays the top commodities moving into the study region from the TCMA by tonnage. *Petroleum or Coal Products* are the top commodity group totaling just under 600 thousand tons in 2007 with strong growth projected through 2030. The next largest commodity groups moving to the study area from the TCMA are *Food or Kindred Products* and *Nonmetallic Minerals* both groups are projected to show slow or no growth over the forecast period

**Exhibit 40** displays the top commodities moving into the study region from the TCMA by value. Again, *Petroleum or Coal Products* are the top commodity group totaling just over \$400 dollars in value for 2007. Unlike *Coal* moving into the Region by rail from beyond Minnesota, it is likely that movements in this commodity group from the TCMA are likely fuels such as gasoline, diesel and heating oil. *Printed Matter* and *Fabricated Metal Products* are the next most valued commodity groups moving from the Region to the TCMA.

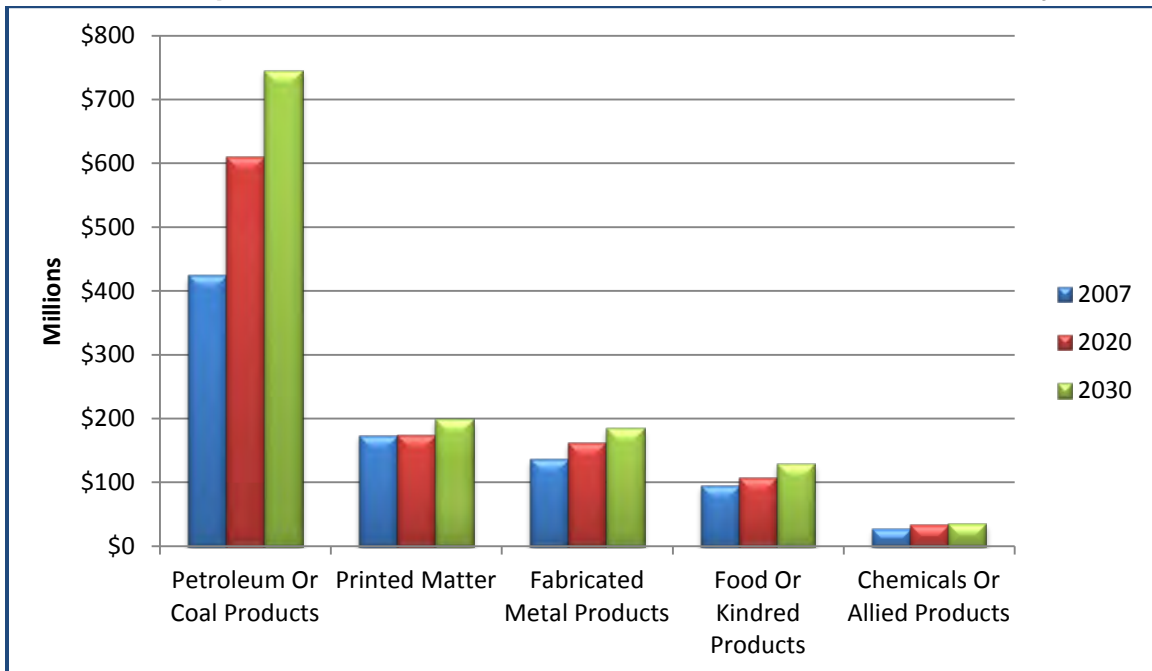
**Exhibits 41** and **42** show truckload movement volumes between Central Minnesota and the TCMA. *Farm Products* and *Shipping Containers* are the top outbound truckload movements to the TCMA, while *Petroleum or Coal Products* and *Food and Kindred Products* lead the volume of inbound truckloads from the TCMA. It is presumed that *Shipping Containers* are moving back to TCMA rail yards from regional manufacturing and retail businesses after their contents have been unloaded.

**Exhibit 39: Top Commodities from the Twin Cities to Central Minnesota by Tonnage**



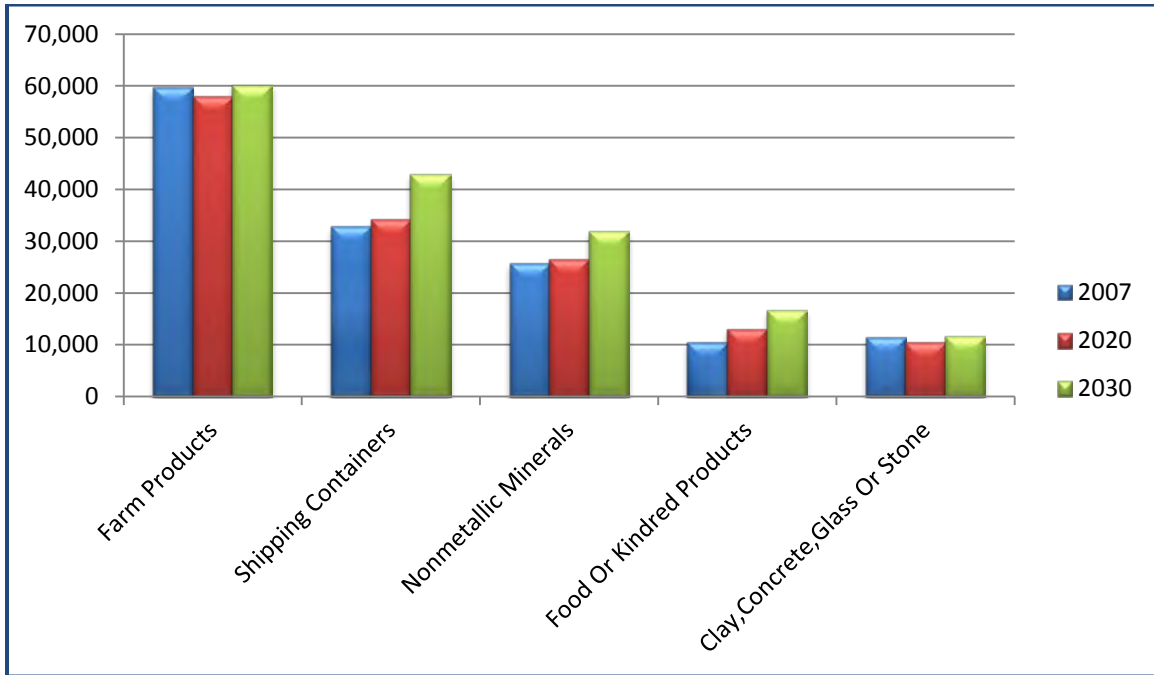
Source: TRANSEARCH<sup>®</sup>

**Exhibit 40: Top Commodities from the Twin Cities to Central Minnesota by Value**



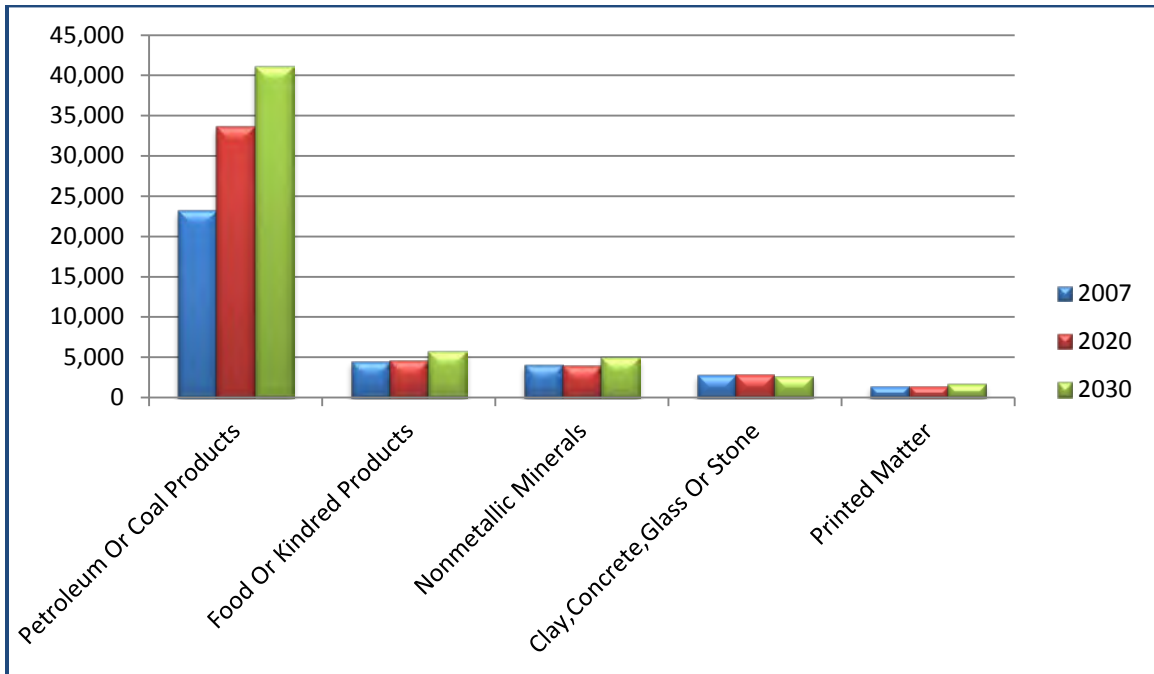
Source: TRANSEARCH<sup>®</sup>

**Exhibit 41: Truck Loads from Central Minnesota to the Twin Cities**



Source: TRANSEARCH®

**Exhibit 42: Truck Loads from the Twin Cities to Central Minnesota**



Source: TRANSEARCH®

### 3.8 Central Minnesota Top Ranking Livestock, Crops, and Sales by Commodity

Top *Livestock* include types of chicken production to include: broiler and other meat-type chickens, layers, and pullets for laying flock replacements. These chickens are primarily grown in Morrison, Benton, Stearns, and Wright Counties. Morrison, Stearns, and Benton Counties, respectively, are rank number 1, 2 and 3 in the production of broiler and other meat-type chickens.

Top agricultural crops in the study include *Forage (hay)*, *Corn for Silage* and *Oats for Grains*, these crops are used for livestock feed. These crops are primary grown in Cass, Todd, Morrison and Stearns Counties. Stearns County is ranked 1<sup>st</sup> out of Minnesota's 87 counties for their quantity of *Forage*, *Corn for Silage* (ranked 4<sup>th</sup> in the U.S.), and *Oats for Grain* (ranked 3<sup>rd</sup> in the U.S.).

Top Commodities by Sale Value include *Poultry and Eggs*, *Cattle and Calves* and *Milk* and other dairy products from cows. These commodities are primarily produced in Stearns, Morrison, Todd and Benton Counties. Stearns County is ranked number 1 in the state and 21<sup>st</sup> in the U.S. in it production of milk and other dairy product from cows.

**Exhibit 43: Central Minnesota Livestock, Crops and Sales by Commodity**

	Cass	Todd	Morrison	Benton	Stearns	Isanti	Sherburne	Wright
<b>Livestock</b>								
Boiler & other meat-type chickens			1	3	2			6
Turkey		7	6		3			4
Layers			5		3			
Pullets for laying flock replacement			3		4			
Cattle & Calves		10	3		1			
Pheasants		7					1	2
<b>Top Crop</b>								
Rye for Grain						5		
Forage (hay)	8	4	3		1			
Corn for Silage		4	2		1 <sup>**</sup>			
Wild Rice	2							
Oats for Grain		4	5		1 <sup>‡</sup>			
Potatoes							2	
Vegetables harvested for sale							5	
<b>Value of Sale by Commodity</b>								
Poultry & Eggs			3		2			
Cattle & Calves					3			
Milk & other dairy products from cows		8	3	9	1 <sup>++</sup>			

Other Notes: <sup>\*\*</sup> 4<sup>th</sup> in the US; <sup>‡</sup> 3<sup>rd</sup> in the US; <sup>++</sup> 21<sup>st</sup> in U S



## 4.0 INFRASTRUCTURE

This section describes Central Minnesota's primary freight transportation infrastructure, which is defined as follows:

- Roadways to include ancillary facilities;
- Railroads, Rail Bank Corridors, Public Rail Crossings;
- Intermodal facilities ;
- Airport facilities;
- Pipelines; and,
- Waterways

### 4.1 Roadways

This Central Regional Freight Plan will concentrate on roads under the control of Mn/DOT, roads that carry the largest volume of freight. The Plan will highlight the significance of local roads not under the control of Mn/DOT because of their importance in completing the freight trip between origin and destination.

The roadway networks include:

- Interstate/National Highway System/Strategic Highway Network;
- National Network and Minnesota Twin Trailer Network;
- Interregional Corridor (IRC) System;
- 10-Ton Roadways;
- Local Roadways (less than 10 tons); and,
- Minnesota Tiered Roadway Network (Designated State Trunk Network)

Trucks are an important mode for moving high-value goods in Central Minnesota, regionally, and nationally. Roadway designated by the state and federal governments, local roadways serve as important connectors between freight generating and receiving facilities (farms, processing plants, manufacturing centers, and distribution centers) and the significant roadway network. The following section describes the components of the highway system.

#### 4.1.1 Interstate/National Highway System/Strategic Highway Network

The National Highway System (NHS) was developed by the United States Department of Transportation in cooperation with states, municipalities and metropolitan planning organizations (MPO). The NHS includes the Interstate Highway System and the Strategic Highway Network (STRAHNET), which is a system of public highways that provides access, continuity and emergency capabilities for military personnel and equipment. Other principal arterials and connector routes are also part of the NHS. There is a total of 588 miles of NHS and STRAHNET system within the region. Routes in the region include Interstate 94, US 2, US 10, US 12, US 169, MN 23, MN 24 and MN 371.

#### 4.1.2 National Network and Minnesota Twin Trailer Network

The National Network (NN) consists of designated roadways throughout the United States that allow truck access including long combination vehicles (LCV), semi-trailer trucks with two trailers and single-trailer trucks with an extra-long trailer. In Minnesota, 4,904 miles of roadway

are part of the NN. The NN is supplemented by Minnesota's Twin Trailer Network (TTN), a system of other trunk and local highways on which LCVs may also operate. These networks permit oversize and overweight movements, usually within specific routes and travel times defined by a permit. The region is well-served by the NN and TTN, with a total of 820 miles. Routes in the region include Interstate 94, US 2, US 10, US 12, US 71, US 169, MN 23, MN 24, MN 55, MN 210 and MN 371.

#### 4.1.3 Interregional Corridor (IRC) System (Currently updating)

A statewide Interregional Corridor (IRC) system was first designated by Mn/DOT in 1999 to enhance the economic vitality of the state by providing safe, timely, and efficient movement of goods and people. The 2,939-mile IRC system is a subset of Minnesota's trunk highway system, consisting of the corridors of greatest significance for interregional travel. The system is grouped into two categories: high-priority and medium-priority interregional corridors.

High-priority IRCs connect the Twin Cities Metropolitan Area (TCMA) with primary Regional Trade Centers (RTCs) throughout the state, and medium-priority IRCs connect secondary RTCs to each other, to the TCMA, and to the primary RTCs. **Exhibit 44** displays the IRC system along with primary and secondary RTCs.

Saint Cloud is the only primary RTC located in the region. Secondary RTCs in this region include Brainerd, Buffalo, Elk River and Monticello-Big. High-priority IRCs within the region include I-94, US 10, US 169 and MN 24. Medium-priority IRCs in this area include US 2, US 53, US 169, MN 371, and MN 33. In general, the region is well served by the Interregional Corridor system.

**Exhibit 44: Minnesota's Inter-regional Corridor (IRC) System**

#### 4.1.4 Ten-Ton Roadways

Ten-ton roadways provide important connections between intermodal freight facilities/major freight generators and the IRC system. These roadways generally include city and county routes that receive state aid funding, as well as trunk highways, Interstates and some local roads. Year-round, 10-ton roadways make up virtually all of state and federal trunk highways and major county and local paved arterials. These provide a predictable core freight roadway network. Although recent Minnesota legislation named all paved county roads as nominally 10-ton rated, bridge ratings remained unchanged, and local counties have the authority to down-post any roads they deem necessary. As a result, a significant percentage of local paved roadways and essentially all unpaved roads have axle load limitations below 10 tons, especially when factoring in seasonal load restrictions. Mn/DOT State Aid, in partnership with the Minnesota County Engineers Association, is currently identifying an approach to develop an upgraded statewide network of year-round local 10-ton roadways to improve freight movements throughout the state and to limit routes with load restrictions.

Mn/DOT has identified Tier 1 and Tier 2 routes within the conceptual 10-ton roadway system. Tier 1 roads are those that currently are 10-ton with minor gaps, light bridges, or deficiencies that can be improved with relatively limited investments. The Tier 2 routes represent roads that would essentially complete a comprehensive year-round local 10-ton network, but which will require a more significant and longer-term investment strategy.

In general, Central MN has a fair amount of local 10-ton roadways identified for these system upgrades. Tier 1 roadways are mostly concentrated in the northern counties of the region, whereas Tier 2 roadways are located throughout the region. The current 10-ton paved local roads in the study area do not consistently connect with one another, resulting in routing challenges, and these system discontinuities are significantly worsened by extended spring thaw restrictions in the north. An expanded year-round 10-ton system would better serve freight movements throughout the region and the state.

#### 4.1.5 Local Roadway System (Less than 10-tons)

Local roadways, such as unpaved county roads, township roads, and village and city streets, play an important role in freight movement, as a large volume of freight shipments either begins or ends on this local roadway system. Many local roads may have posted maximum axle load ranges from five to nine tons, based upon design capacity and materials, and are not intended to consistently handle 10-ton shipments. Mn/DOT and local jurisdiction authorities can impose temporary limitations on local roadways due to seasonal variations and special circumstances.

Variations in actual weight capacity in roadbeds or road surfacing caused by ground thawing and water incursion can prohibit 10-ton freight, due to severe road damage or total failure that can result. However, local roadways with lower design strengths can function satisfactorily under heavy loads in periods of dry weather and with good substructure conditions.

The low weight capacity of these local roadways limits the ability to efficiently move freight across the region. Additionally, seasonal and other load limits have a notable impact on freight mobility. Expansion of the year-round 10-ton roadway network is widely recognized as a need to better serve freight movements, especially agriculture and forestry, within and between regions.

#### 4.1.6 Tiered Roadway Network (Proposed)

As described above, there are many different roadway networks, with differing levels of importance/significance to truck freight movement. Taken in combination, this roadway network proved too large to provide any specific and useful investment guidance. In May 2008, Mn/DOT began an analysis to identify trunk highways in Minnesota that are significant to the movement of freight. Developed as part of the 2008 Statewide Transportation Plan, this network was to be designated as a truck network that would supplement the Interregional Corridor (IRC) system. Therefore, Mn/DOT's Tiered Roadway Network identifies the roadways that are most important to truck traffic. The tiered approach combines truck traffic and roadway design characteristics to help identify the roadways essential to the efficient movement of freight.

Heavy commercial annual average daily traffic (HCAADT) was used to validate the existence of elevated levels of HCAADT on the existing systems. HCAADT is an estimate of the total number of vehicles with at least two axles and six tires, using a specific segment of roadway on any given day of the year. Heavy Commercial vehicles include trucks only. Based on observed statewide data, tiers were classified based on breaks of 650 and 300, resulting in the following tiers:

- Tier 1: Roads on the network with HCAADT greater than 650;
- Tier 2: Roads on the network with HCAADT between 301 and 650; and,
- Tier 3: Roads on the network with HCAADT less than 300

The three tiers together form the State's Designated Truck Network. Roadway design characteristics were used to verify appropriate design for each tier and to identify network deficiencies. Multi-lane segments of roadways provide a safe route for a vehicle envelope of 14 feet tall, 14 feet wide and 67 feet long. Almost all segments of multi-lane roadways are on Tier 1. In addition, shoulders of at least 10 feet in width provide a similar safety benefit. Roadway segments with shoulder width less than 10 feet are sporadically distributed across the network. Major truck corridors (e.g., Tier 1) in central Minnesota include I-94, US 10, US 169, MN 23, and MN 210. The Tier 1 network in northern MN supports adequate movements throughout the region as routes link major cities together allowing freight to be shipped in all directions.

## 5.0 HIGHWAY PROFILE

The highway system is an instrumental part of the transportation and logistics industry in the Central Minnesota region. Approximately 60 percent of the region's freight tonnage and nearly 90 percent of freight value travels by truck. Because of the region's heavy reliance on truck transportation, the highway system is paramount in the efficient movement of freight as motor carriers utilize the highway system to transport products to consolidation points and intermodal freight facilities. With major intermodal facilities located outside the region it is critical to have efficient and reliable freight transportation system. Therefore, the region's approximately XXX mile network of major interstate, state routes and local arterial roads is a vital factor in enabling effective connections for the region's economy.

For the purpose of this report, proper identification of the roadway segments providing motor carriers with access to the region's customers is vital to analyze and determine their ability to accommodate truck transportation. For the purpose of this analysis, this report will classify the highway network into Primary Highway Freight System. The Primary Highway Freight System consists of the Interstate System, Tier 1 Freight Routes, Super Route Corridors, and significant routes for agricultural and industrial materials.

### 5.1 Freight Significant Routes

The Central Minnesota Primary Freight System is comprised of one major Interstate: I-94, three US highways: US 10, US 12, US 169, one State highway: TH 23 and two state connectors: route TH 24 connects I-94 to TH 10 and TH 25 connects I-94 to TH 55.

The routes are used to transport the region's inbound and outbound freight. They serve as the primary truck corridors for through the region. Detailed description of the Primary Highway Freight System follows:

#### 5.1.1 Route Description

##### Interstate 94

I-94 is Minnesota's most heavily traveled corridor in Minnesota extending through Stearns and a portion of Todd Counties; a Tier 1 truck corridor and high priority IRC connecting two primary trade centers/metropolitan areas, St. Cloud and the Twin Cities. Eastbound, I-94 serves as a major regional and national trade corridor providing direct access to major intermodal terminals in the Twin Cities and onward to Chicago, IL, the Midwest national freight hub. Westbound, I-94 serves Minnesota Western Region providing access to the Fargo/Moorhead Area, a primary trade center and onward to the western United States. I-94 also connects to I-29 in North Dakota traveling north to provide access to the Pembina, ND border crossing into Canada. Commodities identified using I-94 for heavy hauling in Minnesota include: *Industrial Minerals* (crushed stone, limestone, peat, silica sand, kaolin clay, granite) and *Wheat*.

##### US 10

In the Central Minnesota region, US 10 extends through Benton, Morrison and Wadena Counties. US 10 is a Tier 1 truck corridor, high priority IRC (from St. Cloud to Little Falls) and medium priority (from Little Falls to the west) traveling from Elk River a secondary trade center through the St. Cloud a primary trade center to the City of Wadena. Eastward, US 10 provides access to the Twin Cities metropolitan area, a primary trade center, and to the west providing access to the Fargo/Moorhead a primary trade center. Commodities identified that use US 10



for heavy hauling in Minnesota include *Corn* (an operating corn ethanol plant operates Stearns county), *Soybean*, *Sugar Beet*, *Hay*, *Dairy* (major milk production in Stearns and Morrison Counties and large dairy processing facility in the City of Paynesville), *Cattle* (high concentration of beef cattle in Benton, Morrison and Todd Counties), and *Hogs and Pigs*.

### **US 169**

US 169 extends through Wright, Sherburne and Mille Lacs Counties, is a Tier 1 truck corridor between Mille Lacs Lake and Elk River, a secondary trade center. US 169 is a proposed super haul corridor from TH 219 to TH 200. Commodities identified the use of US 169 for heavy hauling in Minnesota include *Corn*, *Hay*, *Sweet Corn and Peas*, *Dairy*, *Cattle*, and *Hogs and Pigs*.

### **US 12**

US 12 a Tier 1 truck corridor extending along a southern portion of the region, in Wright County between the cities of Delano and Dassel. US 12 connects eastbound to the Twin Cities' primary trade center and westbound through Willmar to the Minnesota/South Dakota border.

### **TH 23**

TH 23 is a Tier 1 truck corridor and proposed super load corridor (from St. Cloud to Mora), extending from the City of Paynesville to Quamba, MN. Beyond the Central Minnesota, eastbound TH 23 connects I-35. Commodities identified that use TH 23 for heavy hauling in Minnesota are *Corn*, *Soybean*, *Hay*, *Sweet Corn and Peas*, *Dairy* (processing plant in Stearns County), and *Cattle* (high concentration of beef cattle in Benton and Kanabec Counties)

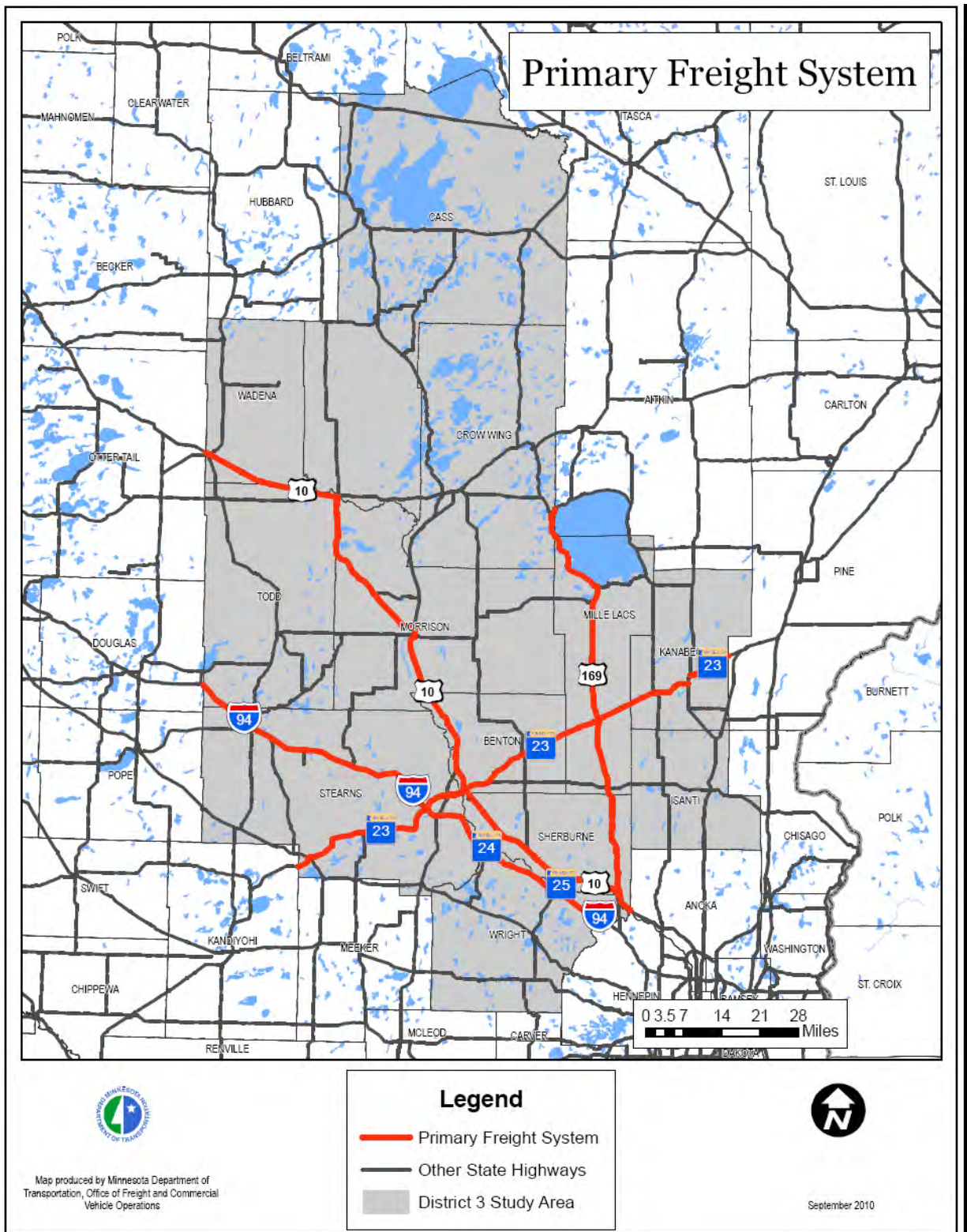
### **TH 24 – Connector**

TH 24 is a Tier 1 connector route between I-94 and TH 10. TH 24 is used heavily by both the agricultural and manufacturing industry to carry freight/goods to, from, and through the Twin Cities.

### **TH 25 – Connector**

TH 25 is a Tier 1 connector route between I-94 and TH 55. TH 25 connects two secondary trade centers: Monticello and Buffalo. TH 25 is used heavily by both the agricultural and manufacturing industry to carry freight/goods to, from, and through the Twin Cities.

Exhibit 45: Minnesota's Primary Freight System



## 5.2 Ancillary Roadway Facilities

### 5.2.1 Safety Rest Areas

Another important category of highway support facilities is safety rest areas suitable for commercial vehicles. An adequate system of rest areas is critical to highway safety. Due to the safety concerns identified by the USDOT and other agencies, regulations and rules regarding driver hours of operation have been recently strengthened. The new regulations underscore the importance of having enough high-capacity truck rest areas for long haul freight carriers. Recent change in the Minnesota 2009 Statutes now allow commercial vehicle drivers subject to hours of service regulation to stop and park continuously, for a period of up to ten hours as necessary to comply with the hours of service regulations, at any Department of Transportation safety rest area or travel information center that has stalls designated to accommodate a commercial motor vehicle.

**Exhibit 46: District 3 Safety Rest Areas in Minnesota**

District ID	Name	Hwy	Mile Post	Truck Stall Count	Owner	Operator
3	Big Spunk Lake (E.B.)	I94	151.7	17	Mn/DOT	Mn/DOT
3	Middle Spunk Lake (W.B.)	I94	151.9	18	Mn/DOT	Mn/DOT
3	Fuller Lake (W.B.)	I94	177.5	17	Mn/DOT	Mn/DOT
3	Enfield (E.B.)	I94	187.0	18	Mn/DOT	Mn/DOT
3	Brainerd Lakes Area Welcome Center	MN371	20.5	33	Mn/DOT	Mn/DOT/ Brainerd Lakes Area Chamber of Commerce
3	Central Minnesota (St. Cloud) TIC	US10	181.1	18	Mn/DOT	Mn/DOT
3	Rum River	US169	203.3	8	Mn/DOT	Mn/DOT

## 5.3 Military Installations

### Camp Ripley

The state-owned 53,000 acre Camp Ripley is a multi-faceted training center that balances the needs of the military, state agencies and communities statewide. Camp Ripley serves as a world-class military training center for all branches and components of service. Minnesota State Agencies also rely on Camp Ripley's exceptional facilities for training.



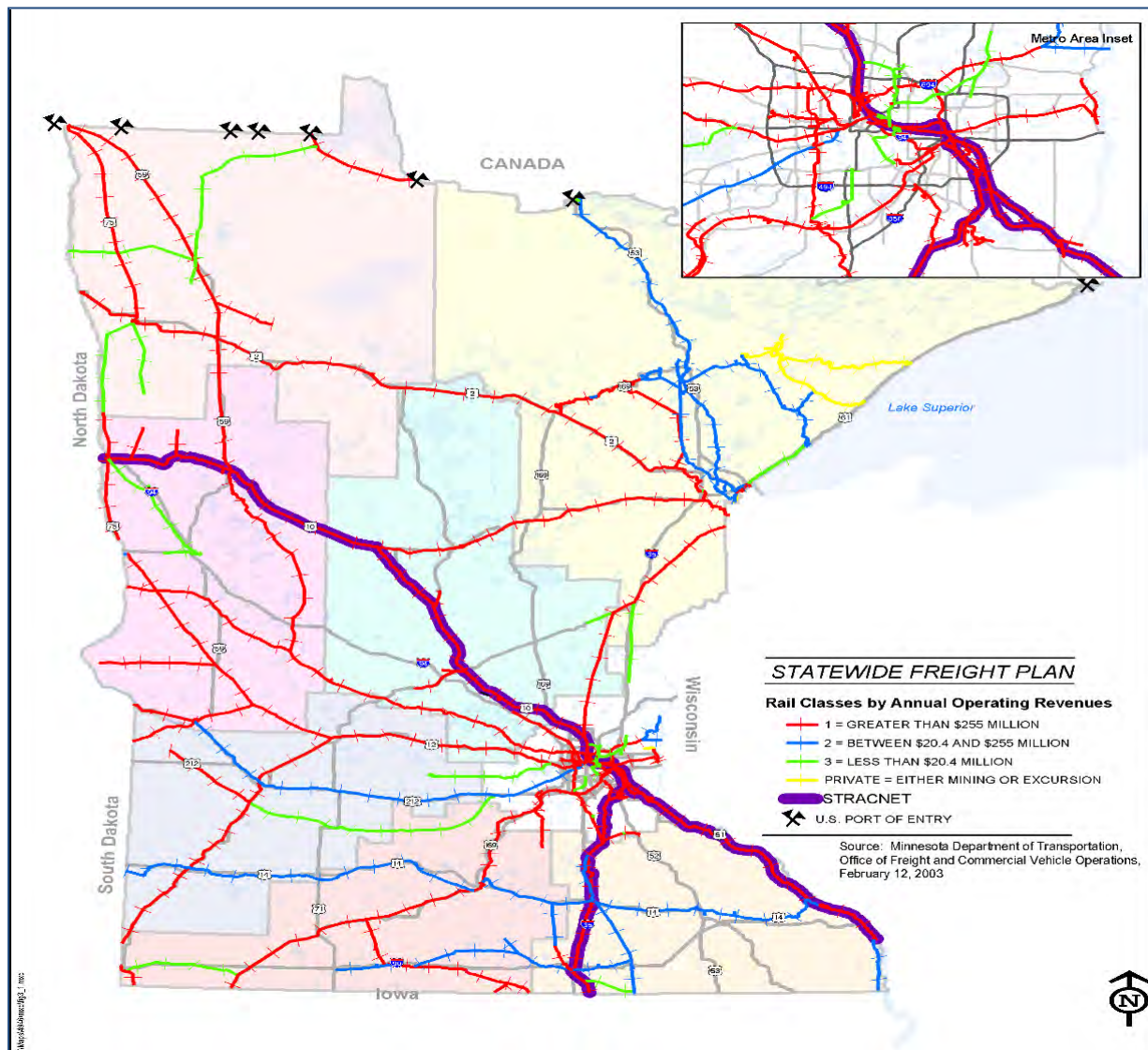
## 6.0 RAIL PROFILE

Statewide, Minnesota claims 4,481 miles of active railroad track in the state which ranks 8<sup>th</sup> in the nation. Two Class I railroads and one switching/terminal railroad operate 391 miles of railroad in the Central Minnesota Region. A map displaying the railroad networks is illustrated in **Exhibit 47**. Class I railroads in the study area include BNSF Railway (297 miles) and Canadian Pacific Railway (66 miles). Northern Lines Railway (NLR) is the region’s sole switching and terminal railroad operating 28 miles of track in the St. Cloud area. NLR interchanges with BNSF in St. Cloud.

In addition to the three rail classes, the Federal government has identified a system of railroads for purpose relating to defense of the United States. These railroads, shown in **Exhibit 47**, are part of the Strategic Rail Corridor Network (STRACNET).

The STRACNET consist of 38,800 miles of rail lines important to national defense and provides service to 193 defense installations to include Camp Ripley whose mission require rail service.

**Exhibit 47: Minnesota Rail System**



## 6.1 Rail Services Provider

### 6.1.1 Burlington Northern Santa Fe Railway (BNSF)

The BNSF railroad, based in Fort Worth Texas, operates in 28 states covering the western two-thirds of the United States, and two Canadian provinces. BNSF operates 32,000 rail miles serving major markets such as Chicago, St. Louis, Kansas City, Memphis, and New Orleans and several minor interchange locations, including a southeastern connection at Birmingham, Alabama. North American service is provided through connections with Canadian and Mexican railroads. The BNSF operates 1,686 miles (29 percent) of rail and employees 1,598 people in Minnesota. The BNSF in Minnesota emphasizes bulk freight, consisting of *Coal*, *Ore*, and *Agricultural* commodities, along with intermodal traffic on the northern corridor “High Line” between the Pacific Northwest, the Twin Cities and Chicago. BNSF intermodal is split between St. Paul’s Hub Center, which handles domestic traffic, and nearby Union Year in Minneapolis which services the international liner trade. BNSF extends through Wright, Sherburne, Benton, Morrison, Todd, and Wadena Counties, paralleling Minnesota TH 10, a significant highway freight corridor; however, there is no rail line access in the study area.

### 6.1.2 BNSF Subdivisions Impacting Central Minnesota

BNSF operates six subdivisions impacting the Central Minnesota study region: Staples Subdivision traverses the region from northwest to southeast, and is part of the company’s Chicago-Seattle transcontinental mainline. This line also hosts Amtrak’s Empire Builder service and the Northstar Commuter Line from Minneapolis to Big Lake. BNSF also operates the Hinckley Subdivision on the eastern end of the district. This line extends from Minneapolis to Duluth and is freight only, though it is currently being studied for passenger rail service. BNSF’s Brainerd Subdivision extends from Staples to Duluth and is freight only. BNSF’s Lakes Subdivision clips the northern end of the region. This freight-only line runs between Grand Forks and Duluth. BNSF’s Wayzata Subdivision clips the southern end of the region. This freight-only line runs between Minneapolis and Willmar, MN. BNSF’s freight-only Monticello Subdivision operates a few miles of trackage in the region.

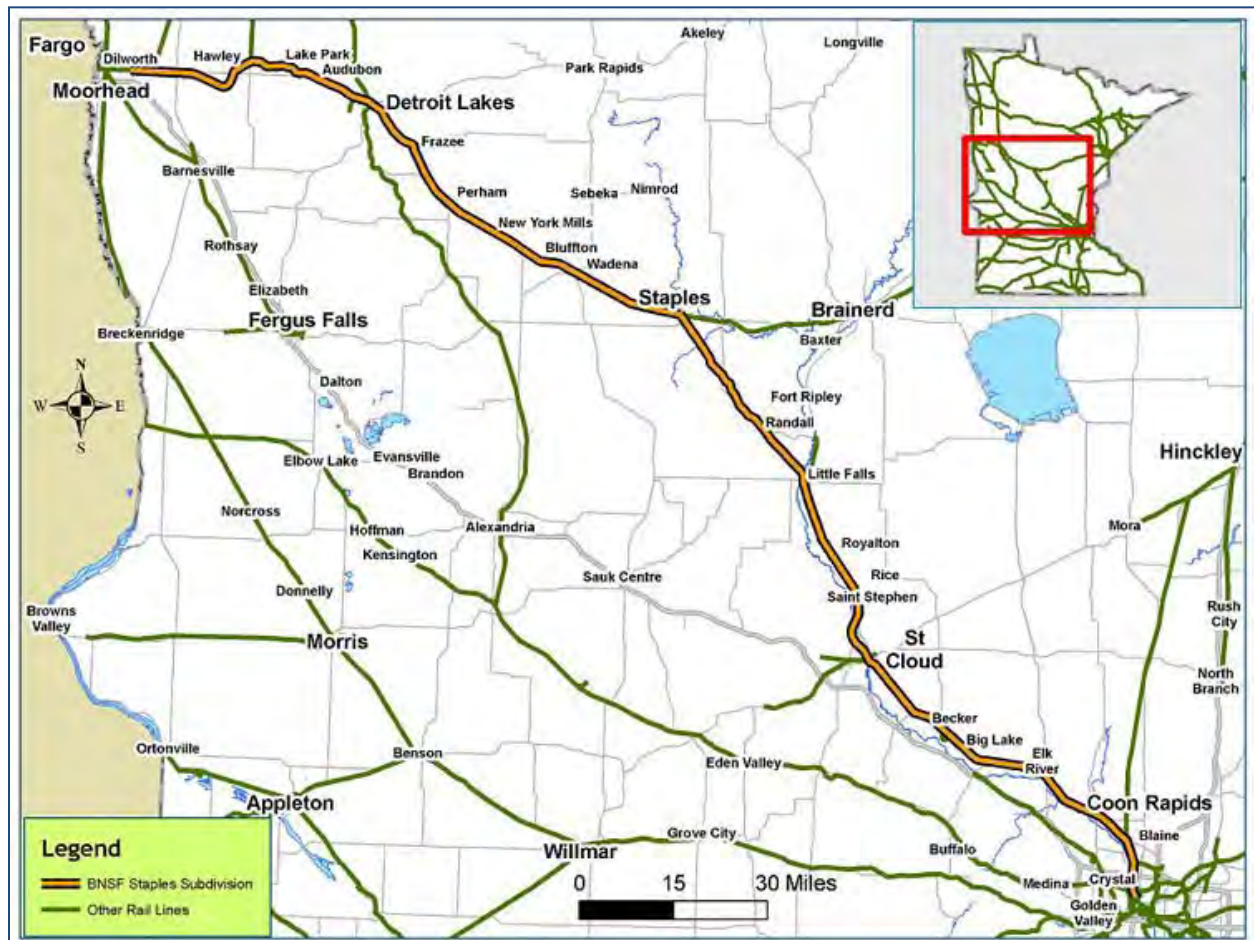
**Exhibit 48: Summary of BNSF Subdivisions in Central Minnesota**

Subdivision	Train/Day	At-Grade Crossing	Primary Signal System	FRA Track Class	286 Compliant
Staples	47	237	CTC	4	Yes
Hinckley	14	123	TWC	4	Yes
Brainerd	9	137	TWC	3	Yes
Lakes	7	110	CTC	4	Yes
Wayzata	15	98	CTC	3	Yes
Monticello	2	51	TWC	2	Yes

### Staples Subdivision

The Staples Subdivision line runs from University to Dilworth. It connects with the Midway and St. Paul Subdivisions at University as well as CP. At Coon Creek it connects with the Hinckley Subdivision. In St. Cloud, the Northern Lines Railway branches off this Subdivision. In Staples the Brainerd Subdivision connects to this subdivision. In Detroit Lakes it connects to CP and in Dilworth it connects to the KO Subdivision. There are yards at Northtown, St. Cloud, Staples, and Dilworth. Amtrak uses this route for the Empire Builder. CP and UP use the University-Coon Creek segment to get to the Hinckley Subdivision. NLR uses a short segment in St. Cloud to access different industries in town. It sees around 47 trains a day.

**Exhibit 49: Staples Subdivision (BNSF)**

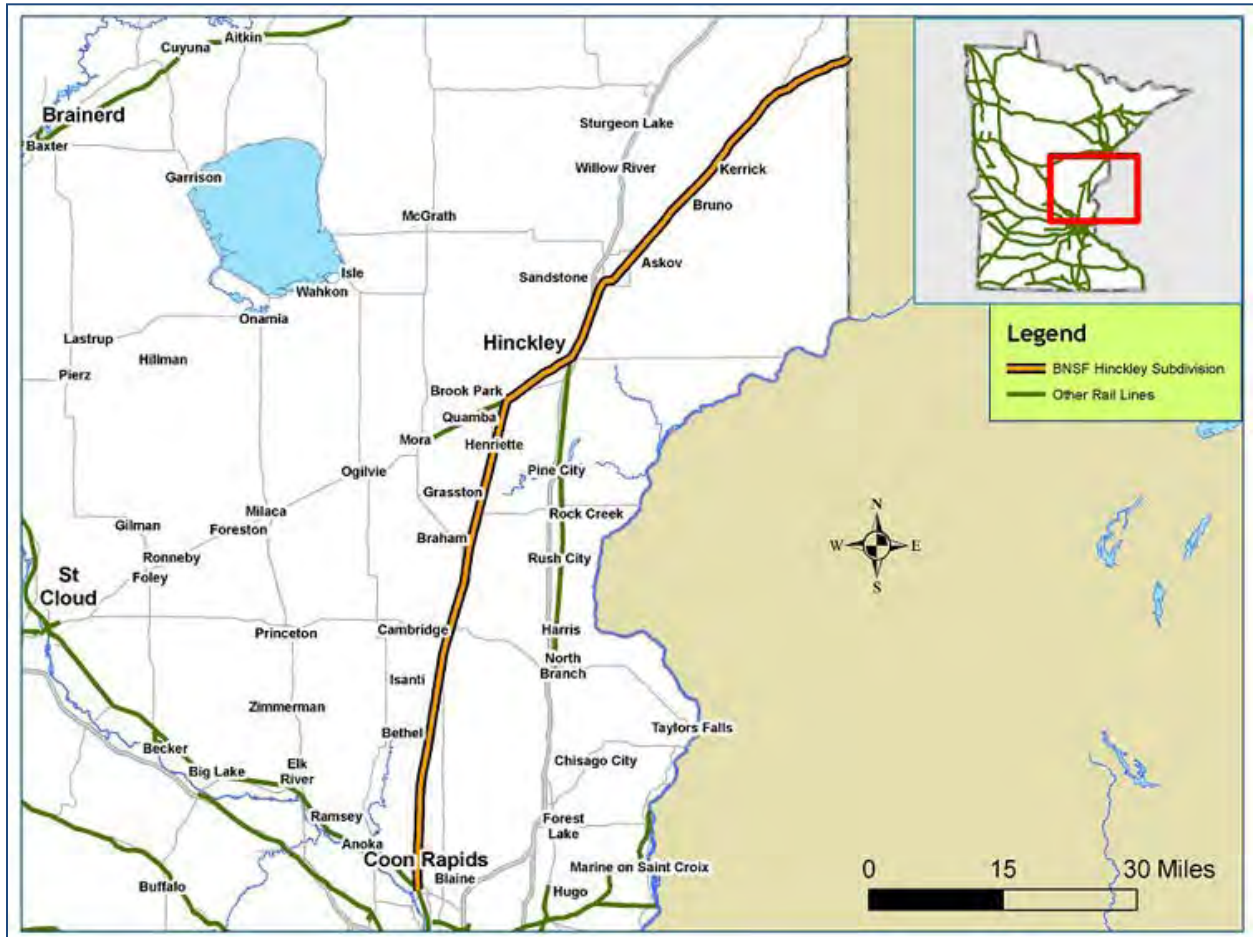


### Hinckley Subdivision

This line runs from Coon Creek in Coon Rapids, to the State line near Superior. It connects with the Staples Subdivision at Coon Creek. The St. Croix Valley interchanges with the BNSF in Hinckley. Besides BNSF, CP and UP use this line to access the Twin Ports. This line is the direct connection from the Twin Cities to the Twin Ports. It sees around 14 trains a day.



### Exhibit 50: Hinckley Subdivision (BNSF)



### Brainerd Subdivision

This line runs from Chub Lake to Staples. In Staples, it connects to the Staples Subdivision while at Chub Lake it connects to the Lakes Subdivision. This line is used to access the Twin Ports area from Fargo-Moorhead. There is a yard in Staples and a minor yard and shops in Brainerd. It sees around nine trains a day.

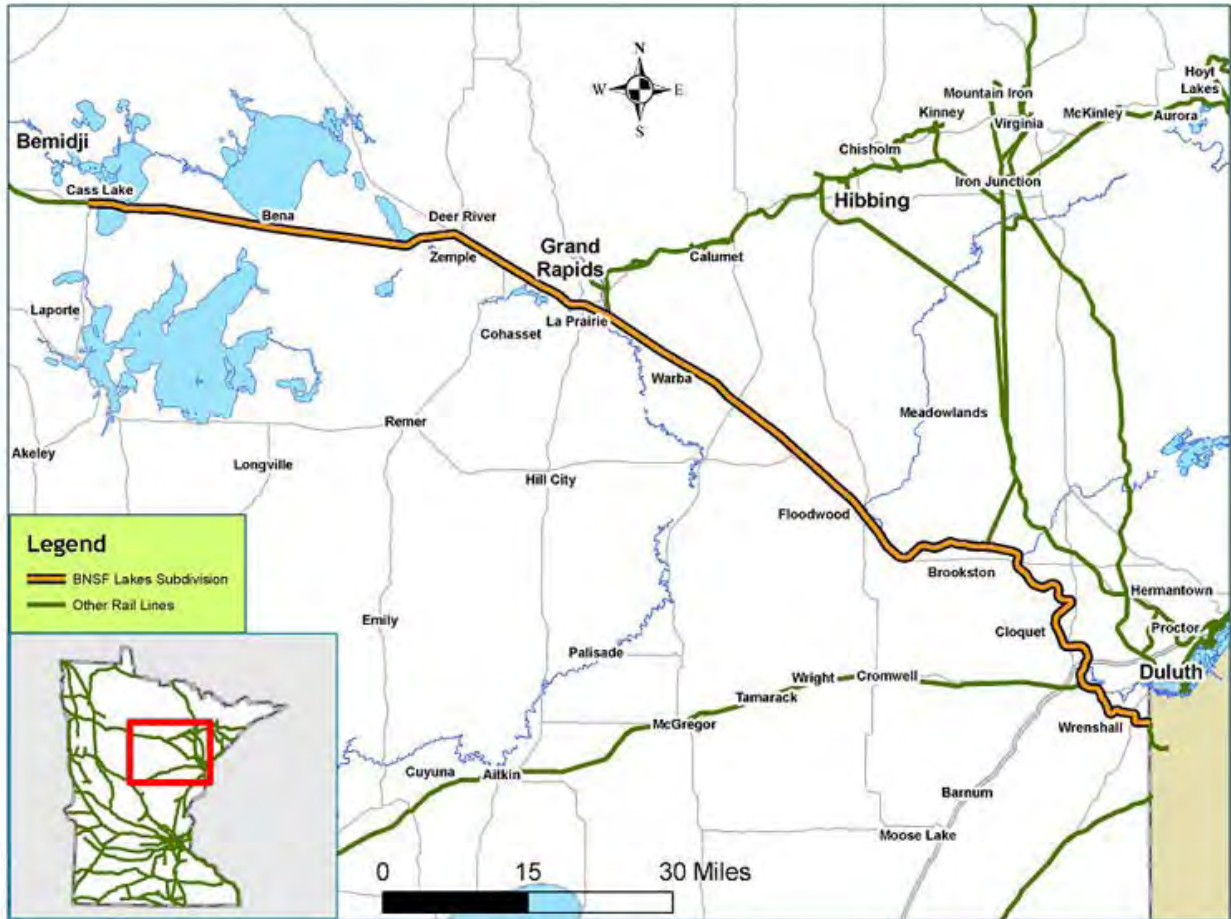
**Exhibit 51: Brainerd Subdivision (BNSF)**



**Lakes Subdivision**

This line runs from Cass Lake to the State border near Chub Lake. It connects to the Grand Forks Subdivision in Cass Lake and goes to Superior on the eastern end. It also connects with the Casco Subdivision at Gunn and Brookston. It connects with the Brainerd Subdivision in Chub Lake and the Cloquet Terminal in Cloquet. This line has a mix of traffic from coal to taconite. It sees around seven trains a day.

**Exhibit 52: Lakes Subdivision (BNSF)**



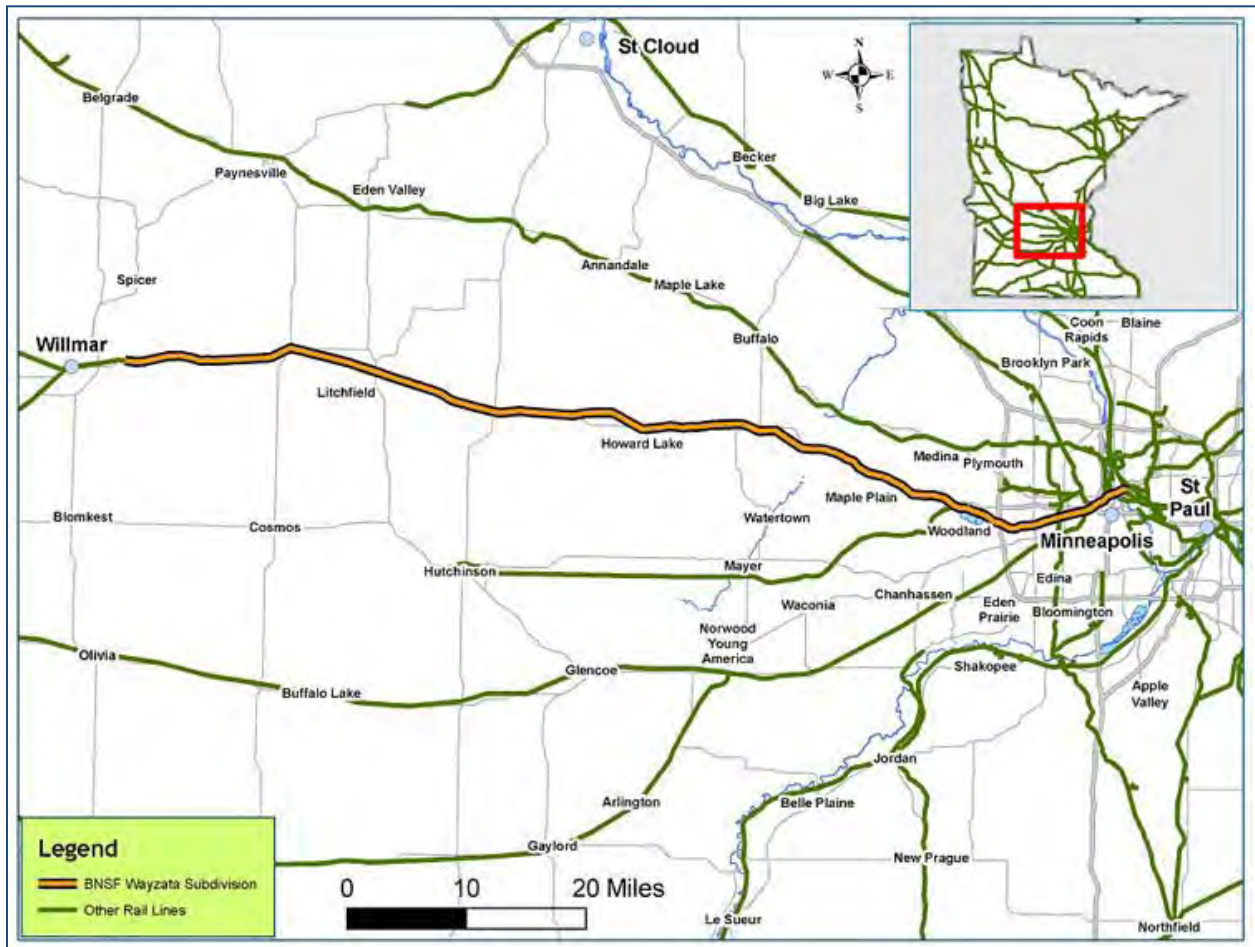
Source: Minnesota Statewide Comprehensive Freight and Passenger Rail Plan

**Wayzata Subdivision**

This line runs from Harrison Street in Minneapolis to Willmar where it connects with the Morris and Marshall Subdivisions. At Harrison Street it connects with the Midway Subdivision, at Lyndale Junction it connects with the Monticello Subdivision and at Cedar Lake Junction it connects with the TCWR. TCWR runs from Harrison Street to Cedar Lake, and UP runs from Harrison Street to Lyndale Junction.

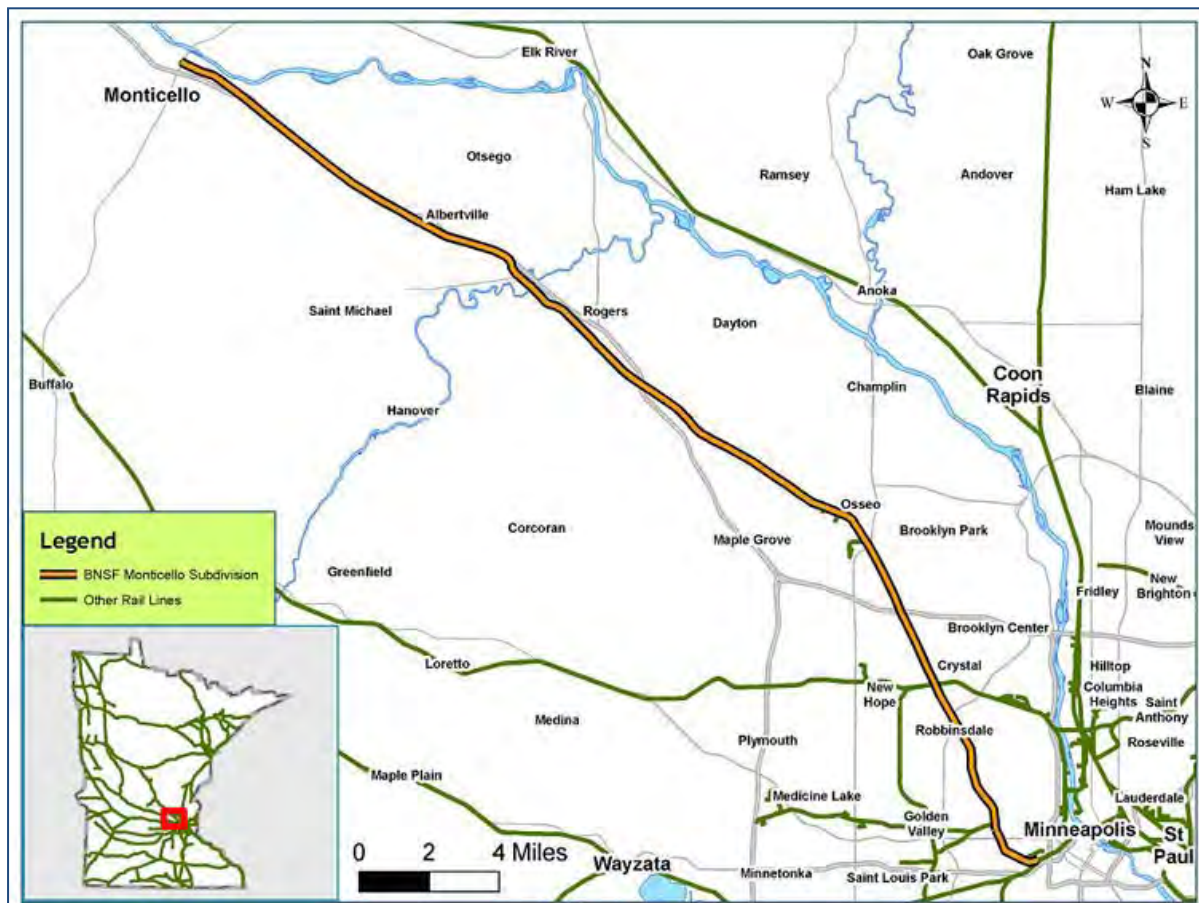


**Exhibit 52: Wayzata Subdivision (BNSF)**



**Monticello Subdivision**

This branch line runs from Lyndale Junction in Minneapolis to the end of the line in Monticello but is only in regular service to Albertville. The line between Albertville and Monticello is only used for special moves to the nuclear power plant in Monticello. At Lyndale Junction the line connects to the Wayzata Subdivision. From Lyndale Junction to MW Junction UP also uses this line to access its Golden Valley Industrial Lead. It sees around two trains a day.

**Exhibit 53: Monticello Subdivision (BNSF)**

## 6.2 Canadian Pacific Railway (CP)

The CP railroad based in Calgary, Alberta Canada, provides freight transportation over a 14,000-mile network in Canada and the United States. CP's rail network stretches from Vancouver to Montreal, and also services major cities in the United States such as Minneapolis, Chicago, and New York City. The CP, the largest rail operator in the state, operates 1,804 miles (31 percent) of the rail and employs 1,050 people in Minnesota. The majority of CP's freight traffic is in *Coal, Grain and Intermodal Freight*. They are also carrier for *Automotive Parts, Automobiles, Sulfur, Fertilizer and Other Chemicals, Forest Products*, and other types of commodities. CP extends through Wright and Stearns Counties; however, the rail line is not accessible in the study area. Intermodal service is available at Shoreham Yard in the Twin Cities, with access to all major markets on the CP, including Chicago, Calgary, Winnipeg, Vancouver, and points east.

### 6.2.1 CP Subdivisions Impacting Central Minnesota

CP operates one subdivision impacting the Central Minnesota study region: CP – Paynesville Subdivision. This line is a part of CP's mainline from Chicago to Portage, North Dakota, and western Canada. It runs from Glenwood to the interlocking at CP University in Minneapolis. At Glenwood it connects with the Elbow Lake Subdivision and the Detroit Lakes Subdivision. At University it connects with the BNSF's St. Paul, Midway, and Staples Subdivision. At MNS

Junction it connects with the MN&S Subdivision. There is a yard in Glenwood and Humboldt Yard and Shoreham Yard in Minneapolis. The line sees everything from intermodal to agricultural traffic. It sees around 20 trains a day.

**Exhibit 54: Summary of CP Subdivisions in Central Minnesota**

Subdivision	Train/Day	At-Grade Crossing	Primary Signal System	FRA Track Class	286 Compliant
Paynesville	20	105	CTC	4	Yes

### 6.3 Northern Lines Railway

The NLR is identified as a short-line railroad operating 25 miles of track in and near the St. Cloud interchanging with the BNSF railroad east of St. Cloud. NLR operates on former BSNF track from St. Cloud to St. Joseph and Cold Spring. It is part of the Anacostia & Pacific family of shortlines. Its main commodity is *Ballast*; it runs ballast trains for BNSF to the quarry in Waite Park. Besides *Ballast*, it also moves among *Scrap Metal* and *Building Materials*.

As referenced in Wikipedia encyclopedia, the railroad operates three connected lines. St. Joseph branch extends from the connection with BNSF in the east St. Cloud westward, crosses the Mississippi River on the St. Cloud Rail Bridge and continues on to St. Joseph, approximately 7 miles. The Cold Springs branch extends southwestward from its connection with the St. Joseph branch line west St. Cloud, passing through Waite Park and Rockville and terminating just west of Cold Springs, approximately 15 miles. The East St. Cloud branch extends from the connection with BNSF in east St. Cloud, crosses U.S. Route 10, and terminates at Quebecor World printing plant in east St. Cloud, approximately 2 miles. In addition the railroad serves several customers in east St. Cloud via right on BNSF track.

**Exhibit 55: Northern Lines Railway**



Source: <http://www.anacostia.com/nlr/nlr.html>

**Exhibit 56: Summary of BNSF Subdivisions in Central Minnesota**



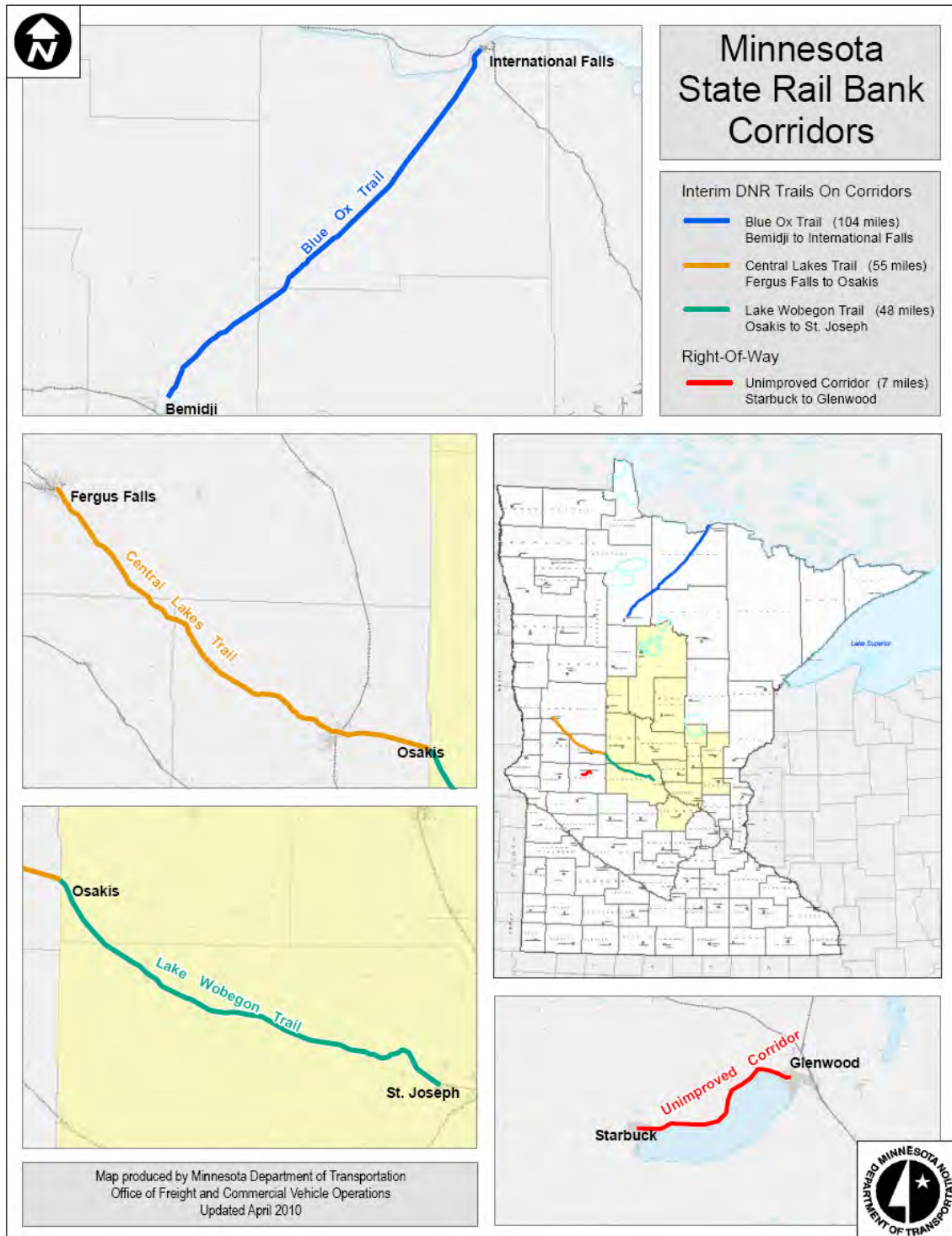
Lines	Train/Day	At-Grade Crossing	Primary Signal System	FRA Track Class	286 Compliant
St. Joseph					Yes
Cold Springs					Yes
East St. Cloud					Yes

## 6.4 Rail Bank Corridors

The Minnesota State Rail Bank Program is designed to acquire and preserve abandoned rail lines for a future transportation use. The Lake Wobegon Trail, located in the southern portion of the region, is the only Rail Bank property in the region. The trail runs 49.1 miles from St. Joseph in Stearns County to Osakis in Todd County. This line of railroad connects the rural station of Collegeville, Minnesota through the incorporated city of St. Cloud through a generally rural area.

There are no structures or bridges along the line. The St. Joseph to Collegeville line was built by the St. Paul Pacific Railroad Company, which was incorporated in 1862. The line was built to provide passenger and freight service to residents of central Minnesota between St. Cloud and Fergus Falls Minnesota. **Exhibit 57** shows Minnesota's Rail Bank Corridors.

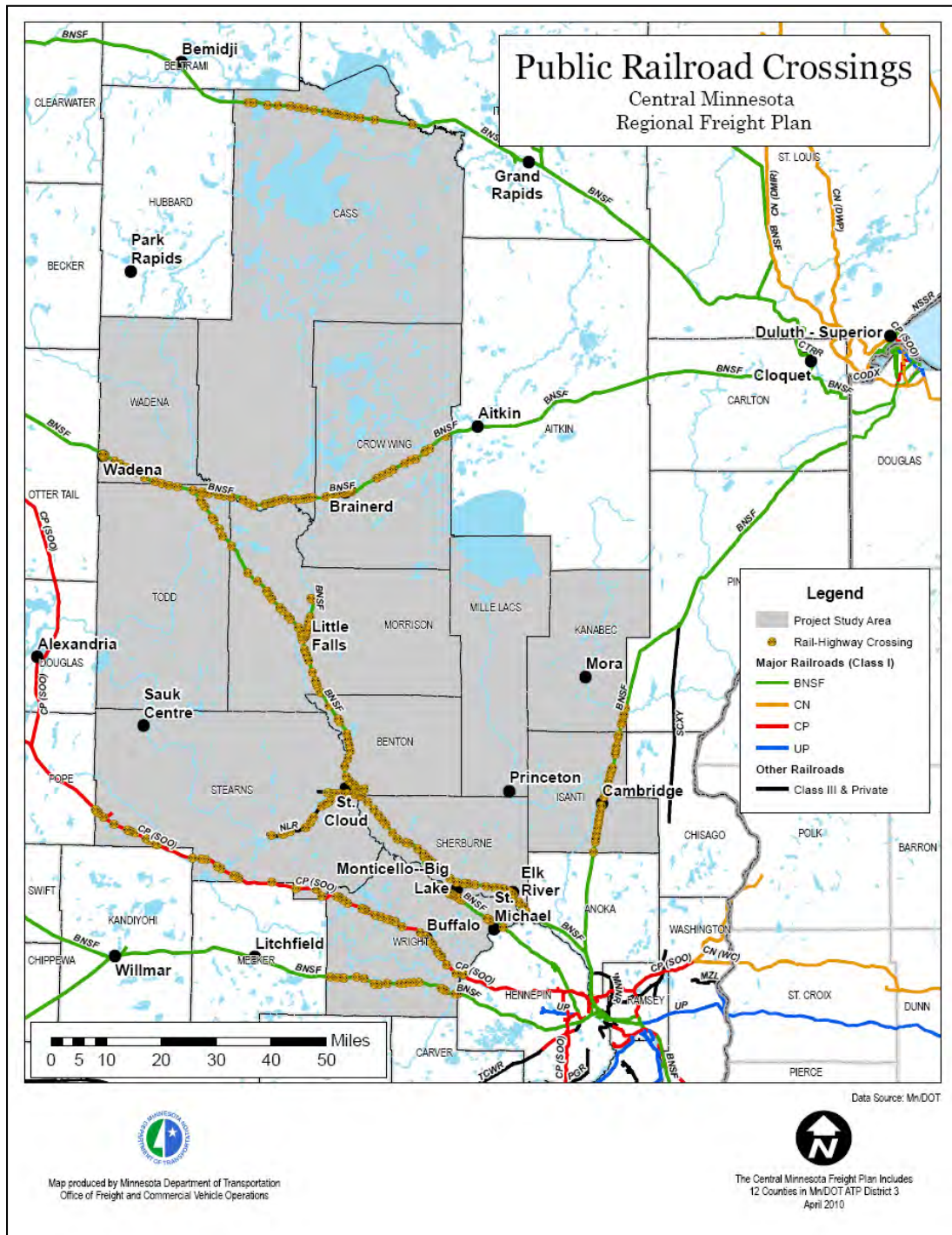
### Exhibit 57: Minnesota's Rail Bank Corridors



### 6.5 Public Rail Crossings

The purpose of the Minnesota Railroad Grade Crossing Safety Improvement Program is to enhance the safety of the traveling public by correcting, removing and improving unsafe conditions at railroad-highway grade crossings. There are currently 344 active public at-grade crossings in the region. **Exhibit 58** shows the active public crossings in the region.

**Exhibit 58: Public Railroad Crossings**



## 7.0 INTERMODAL TERMINALS PROFILE

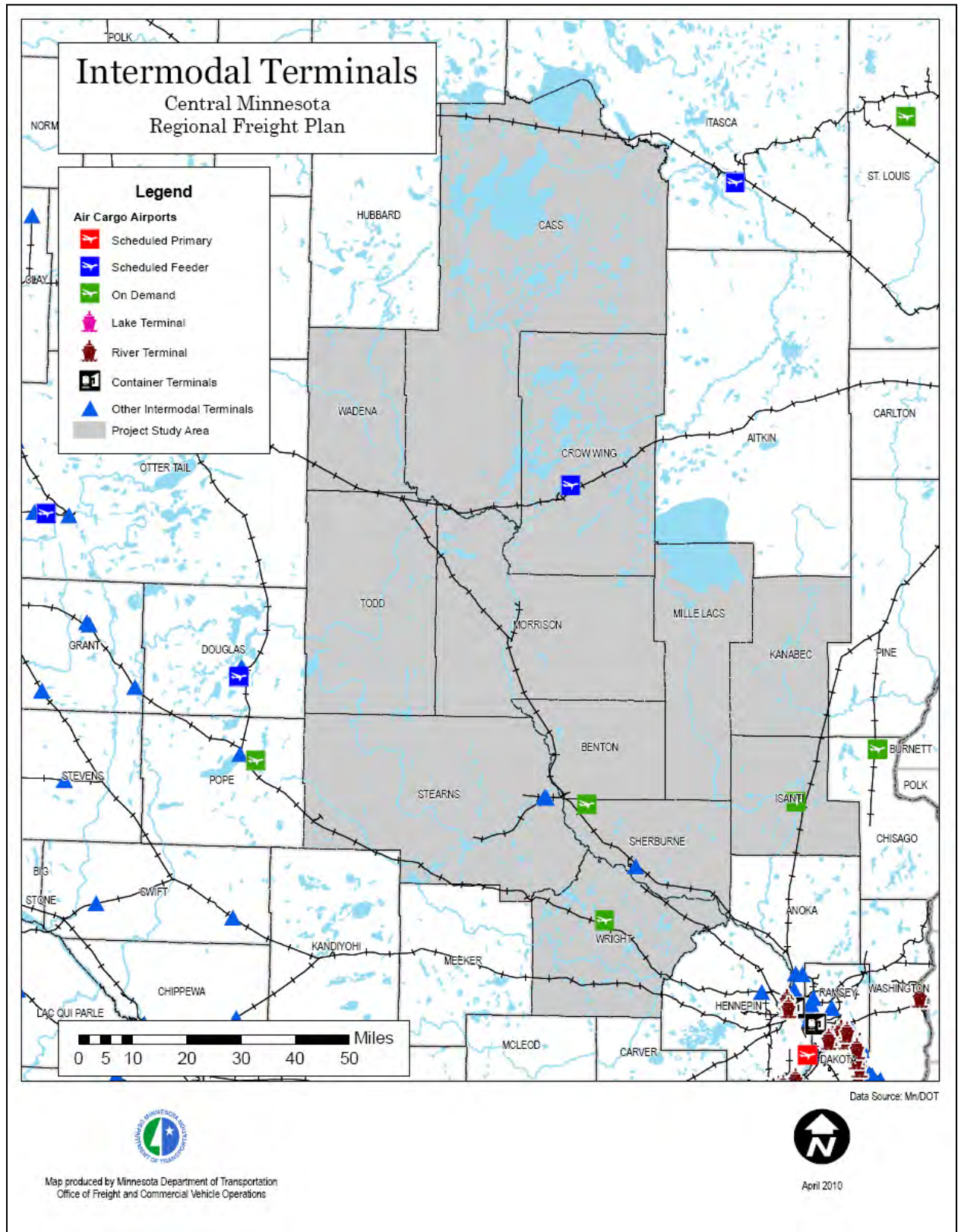
Intermodal terminals represent key nodes in the regional freight system, defined as locations where freight is transferred from one mode of transportation to another. Intermodal terminals include truck/rail, container (containers on flat cars, trailers on flat cars, bi-modal), pipeline terminals, air cargo terminals, grain shuttle terminals, and lake terminal/ports. **Exhibit 59** and **Exhibit 60** identify the intermodal terminals in the region. Notably, there are no intermodal container terminals or waterway terminals within the study area. Nearest access to intermodal container service is at the CP Shoreham Yard in Minneapolis and at the BNSF Railway Midway Yard in Saint Paul. Nearest access to waterway terminals is located in the Twin Cities (Minneapolis, St. Paul, Savage), and in Duluth/Superior.

**Exhibit 59: Intermodal Terminals in Central Minnesota**

Company Name	Type	Location	Commodities
Becker Warehouse & Reload (UMI, Inc)	Truck/Rail Terminal	Becker	Steel, Lumber, Bulk Plastics
Maiers Transport	Truck/Rail Terminal	St. Cloud	Building Prod, Food, Paper, Other Manufactured Goods
Waite Park Transload	Truck/Rail Terminal	Waite Park	Lumber, Steel, Stone



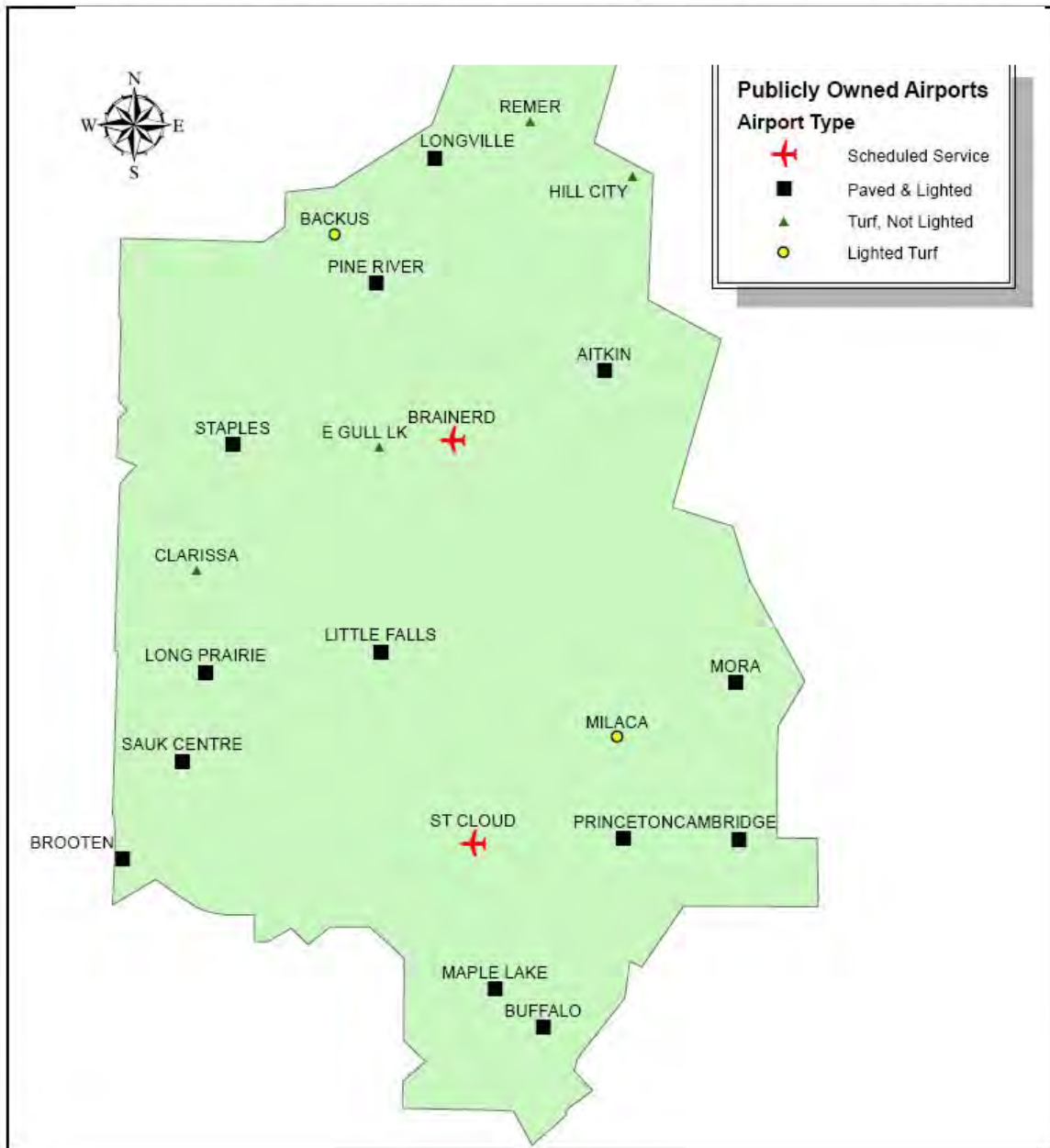
### Exhibit 60: Intermodal Terminals



## 8.0 Airport System

Airports in Minnesota provide a direct link to economic hubs and metropolitan areas throughout the United States and around the world. The aviation system in Minnesota is the preferred mode for moving high-value or time sensitive goods over long distances. This mode is critical to high-technical industries such as *Electronics, Medical, and Computers*. Firms in Central Minnesota are limited in their ability to connect with international destinations; however, because of more frequent international service available at Minneapolis/St. Paul Airport (MSP), air cargo is often shipped to MSP via truck, and then sent by air or truck to Chicago connecting to international destinations.

**Exhibit 61: Mn/DOT District 2 Publicly Owned Airports**





## 8.1 Air Cargo

High-value and/or time-sensitive goods are shipped via the aviation system, especially when moving over long distances. Freight airports fall into three categories: major, local/regional and on-demand air cargo service airports. Major airports, such as Minneapolis-Saint Paul International (MSP), have scheduled air cargo service with jet aircraft that provide a time-efficient and direct link to global destinations. Due to the relative close proximity to MSP, air cargo facilities are limited in the region, particularly in the southern portion.

In general, a large share of international air cargo travels in the baggage compartment of passenger aircraft. Air cargo services are provided by several types of carriers that are differentiated by the services they offer for a wide range of customer demands. There are four basic industry segments in the air cargo industry: Integrated express operators; All-cargo carriers; Commercial service passenger airlines; and, On-demand cargo charter carriers.

Of the four airports in the region, only Brainerd Lakes Regional Airport provides primary scheduled air cargo activity. Mesaba Airlines, a Northwest/Delta Airlines partner, operates daily service at Brainerd. This airport serves as local market stations, serving their respective surrounding market areas.

Cambridge Municipal Airport and Maple Lake Municipal Airport provide scheduled feeder air cargo activity. These airports serve as consolidation points for feeder aircraft and trucks.

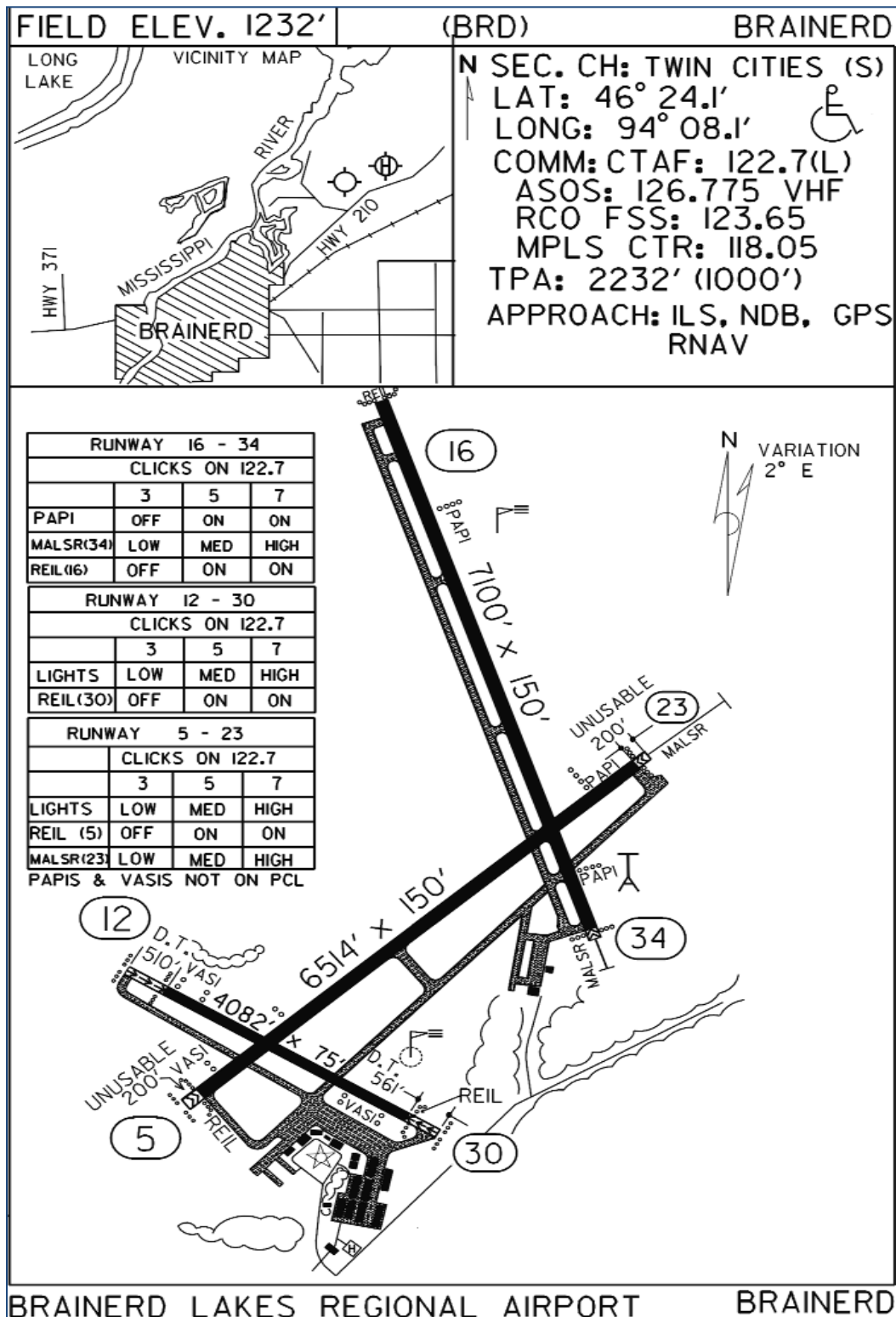
St. Cloud Regional Airport is an on-demand air cargo airport that provides belly-hold cargo activity. The airport has two runways and serves private, commercial, corporate, cargo and military operations. Approximately 100 aircraft are based at the field with over 200 aircraft operations averaged daily. Although this is the largest airport in the region and has two runways, it does not serve as a major freight airport due to its close proximity to MSP. At present, the St. Cloud Regional Airport does not have scheduled commercial air service.

### Brainerd Lake Regional Airport

The Brainerd Lake Regional Airport is located three miles east of Brainerd on Hwy 210 or Washington Street. Mesaba operates an advanced fleet of regional jet and jet-prop aircraft, consisting of the 34-passenger Saab SF340, the 50-passenger Bombardier CRJ200 and the 76-passenger Bombardier CRJ900 regional jet aircraft all with the ability to carry belly cargo. In 2007, the airline strengthened its future by entering into a relationship with longtime partner Northwest Airlines. The rapidly-expanding airline serves more than 75 cities in the United States and Canada from three major hubs: Detroit, Minneapolis/St. Paul and Memphis. In 2009, Northwest Airlines merged with Delta airline and now operates under a single certificate as Delta Airlines.

On July 1, 2010 express mail service from the Brainerd Airport offering guaranteed next-day delivery to about 10, cities within the U.S.

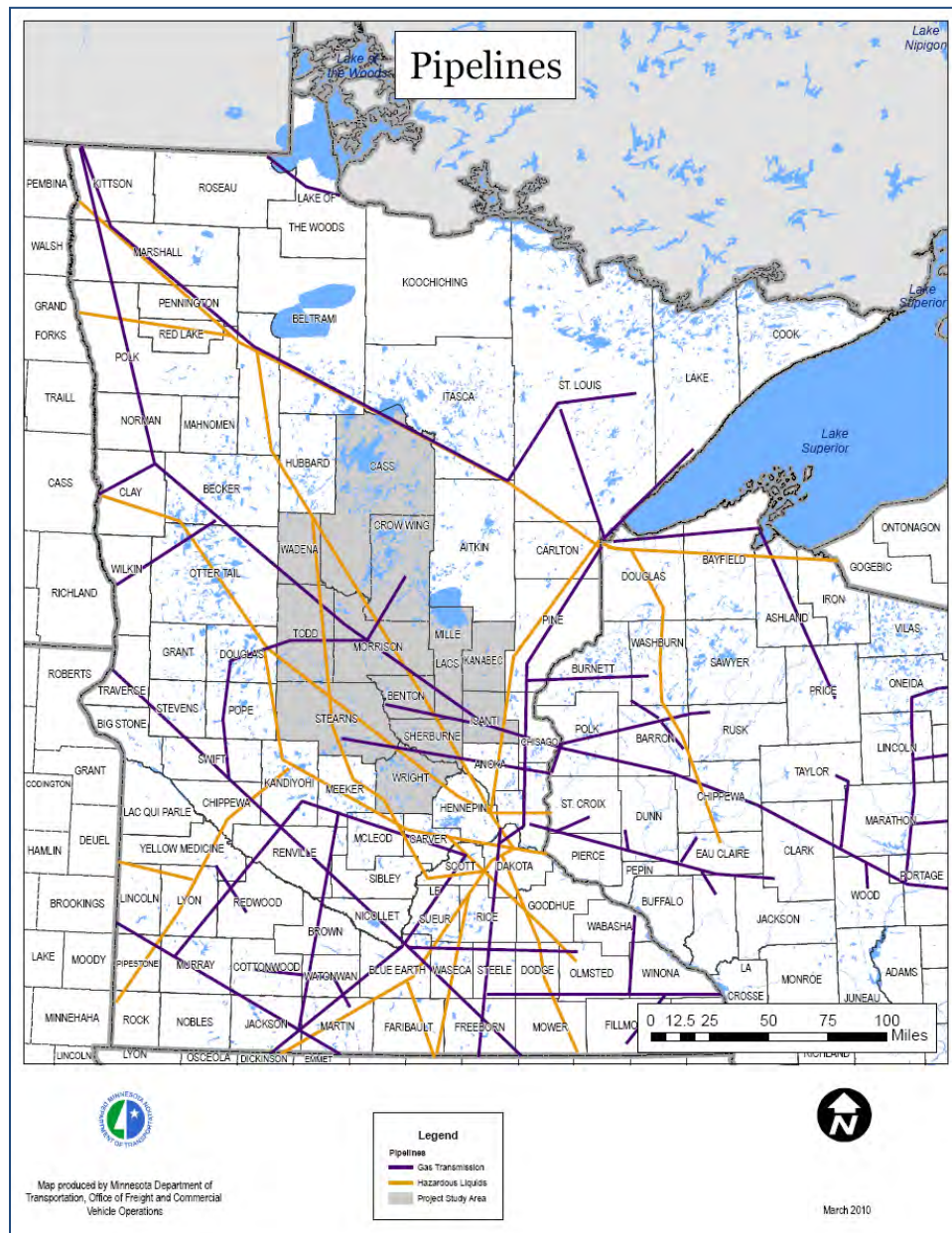
**Exhibit 62: Brainerd Lakes Regional Airport**



## 9.0 Pipeline Profile

The pipeline system moves a significant tonnage of *Gas* and *Hazardous Liquids* to and throughout the region, including the transportation of more than 75 different types of *Crude Oil* and *Natural Gas*. The end user receives the majority of this product ranging from power plants to private residences. Gas pipeline operators in the region include: CenterPoint Energy; Great Lakes Gas Transmission Company; Northern Natural Gas Company; Viking Gas Transmission Company; and Xcel Energy. Liquid pipeline operators, many of which carry crude oil to and from the two Twin Cities refineries, include: Enbridge Energy, Kaneb Pipeline Company; and Koch Pipeline Company. Exhibit X shows the pipeline network in the region.

**Exhibit 63: Minnesota Pipelines**



## 10.0 WATERWAYS PROFILE

There are no commercially navigable waterways in the study area. There are two commercially navigable waterways in Minnesota: the Great Lakes/Saint Lawrence Seaway and the Mississippi River system. Access to waterways that can carry freight vessels, e.g., barges and ships, is important to businesses in the region because of the affordability provided with waterborne freight.

Nearest access to the Great Lakes/Saint Lawrence Seaway is in Duluth/Superior. This 2,400-mile seaway comprised of the St. Lawrence River, St. Lawrence Seaway, and the Great Lakes and connects over 41 ports with roadways and rail lines, allowing freight to be shipped worldwide. Duluth/Superior is by far the largest port on the Great Lakes, and the 21st largest total tonnage port in the United States.

Nearest access to the Mississippi River system is at the head of the navigation channel in the Twin Cities metro area. There, the river system includes the Minnesota River and the Mississippi River. Freight travels 1,811 miles from the Twin Cities to the Port of New Orleans where it can be transloaded onto oceangoing vessels to reach global markets.

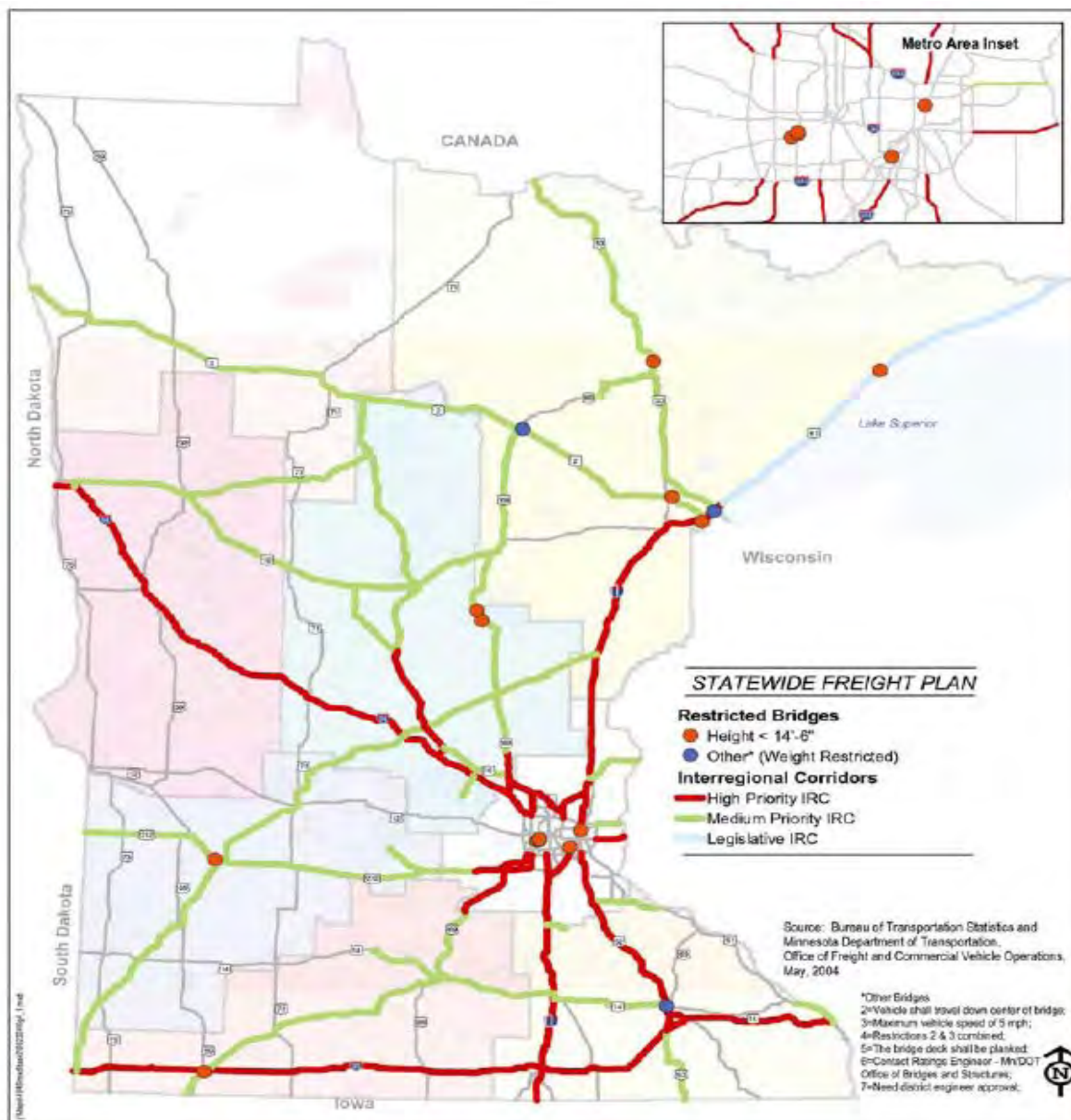


## 11.0 BOTTLENECK ANALYSIS

Bottlenecks impede or block the flow of freight, in Central Minnesota the following bottlenecks have been considered to be physical impediment to the freight system:

Highway Geometric Bottlenecks- Low clearance and other restricted bridges; fifteen bridges in the state have a high restriction of less than 14 feet, six inches. This height was selected because it is the height at which physical signing of a height restriction is provided, and concerns with decrease in clearance are critical with respect to maintenance and overlays. Two of the bridges are located in Central Minnesota both on truck highway 169.

**Exhibit 63: Bottlenecks in Minnesota**



## 11.1 Railroad Geometry Bottlenecks

At-grade railroad crossing bottlenecks at six at-grade rail crossings with IRC's, result in truck freight traffic delays when a train is present. These delays can be eliminated by reconstructing the at-grade crossing to grade-separated crossing. One location along US 10, the junction of TH 24 in the City of Clear Lake, shows up as having a high-exposure value. Areas with a high-exposure value also indicate the potential for safety concerns.

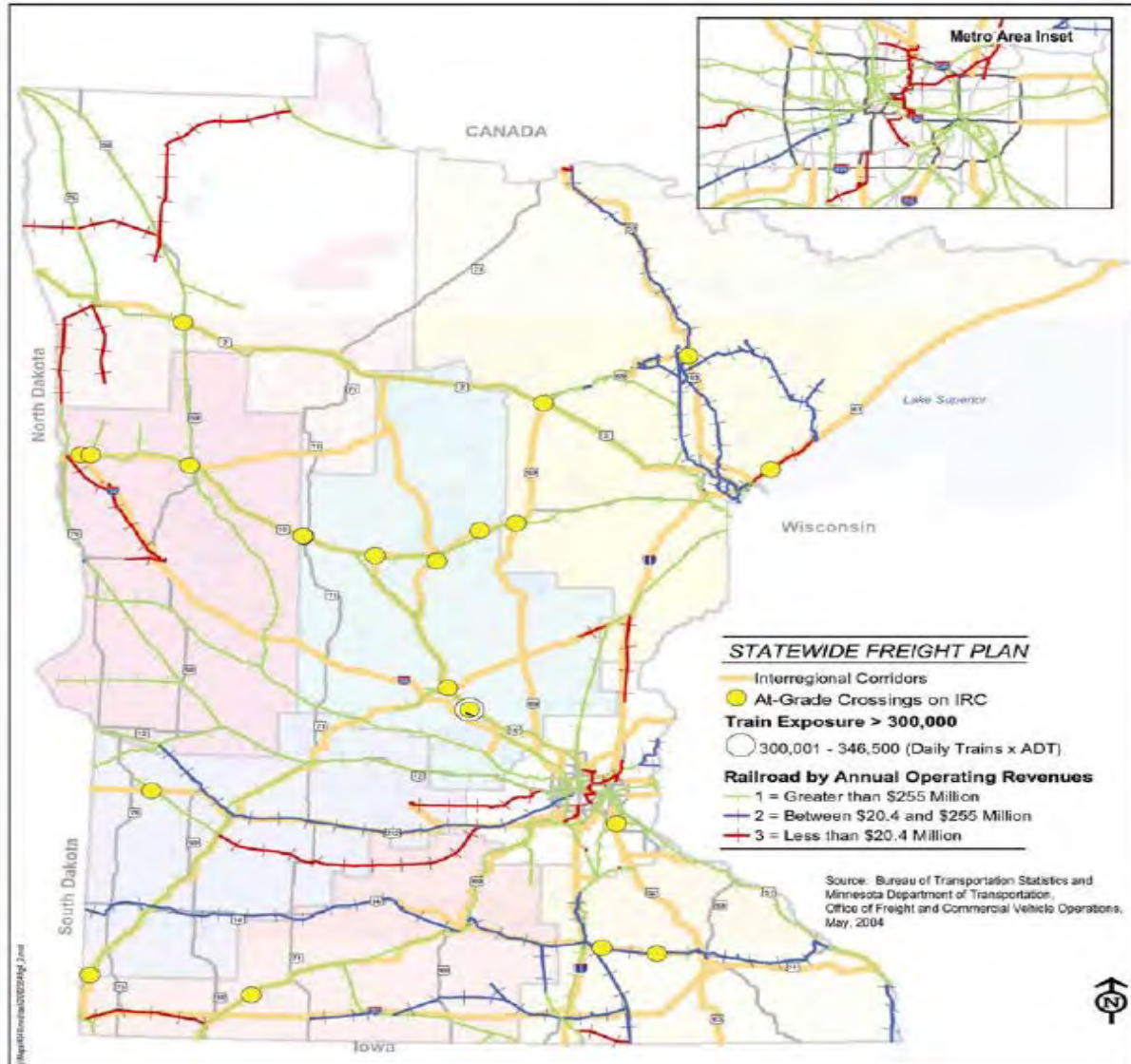
**Exhibit 64: At Grade Crossings on IRC in the Central Minnesota Study Area**

Crossing Number	Roadway	Location
076288V	TH 10	Motley
061646H	TH 10	St. Cloud
*067230N	TH 24	Clear Lake
9174335	TH 371	Baxter
076186C	US 71	Wadena

(\*) Train Exposure > 300,000



### Exhibit 65: At-Grade Crossings in Minnesota



### 11.2 Highway Operational Bottlenecks

Most congested corridors are located in and radiating from the Twin Cities metro area. The only exception is TH 23 in Central Minnesota. I-94 from the Twin Cities to the North Dakota border is the most congested corridor in the state radiating from the metro area. Despite planned future improvements by 2030, I-94 from the Twin Cities to St. Cloud is expected to perform below target.

### 11.3 Rest Area Analysis

#### Interstate 94 West Corridor (ref Mn/DOT Truck Parking Study: Phase 2)

The Interstate 94 West Corridor has the most rest areas of all six study corridors and has more congested rest areas (six) than any other corridor, two of which are over capacity more than 50

percent of the time. Elm Creek, the state's most congested public rest area, in terms of truck parking, is located near Interstate 94's confluence with Interstate 494. Twenty-eight miles up the road at Enfield is another eastbound rest area. This rest area has eighteen truck stalls and has minimal congestion. It may be possible to relieve much of the congestion in Elm Creek by making the parking availability information. In addition, providing additional truck parking capacity of about 5 to 8 spaces at Elm Creek, coupled with better information, could provide relief. A similar relationship exists between the Burgen Lake and Middle Spunk Lake rest areas. Making this information available to truckers may be the cheapest and least laborious means of relieving congestion, at least in the short-term. Another option for Burgen Lake is to expand truck parking capacity by 10 to 15 spaces. Capacity improvements of between 5 and 10 spaces could also be considered at the Fuller Lake rest area. Improved information could be useful in relieving congestion at the remaining facilities along this corridor, especially since the Lake Lakota, Lake Iverson, and Hansel Lake rest areas are not as favorable for capacity improvements. Suggested recommendations for this corridor are:

- Capacity enhancement of Elm Creek, Burgen Lake, and Fuller Lake facilities.
- Improved information regarding parking availability.

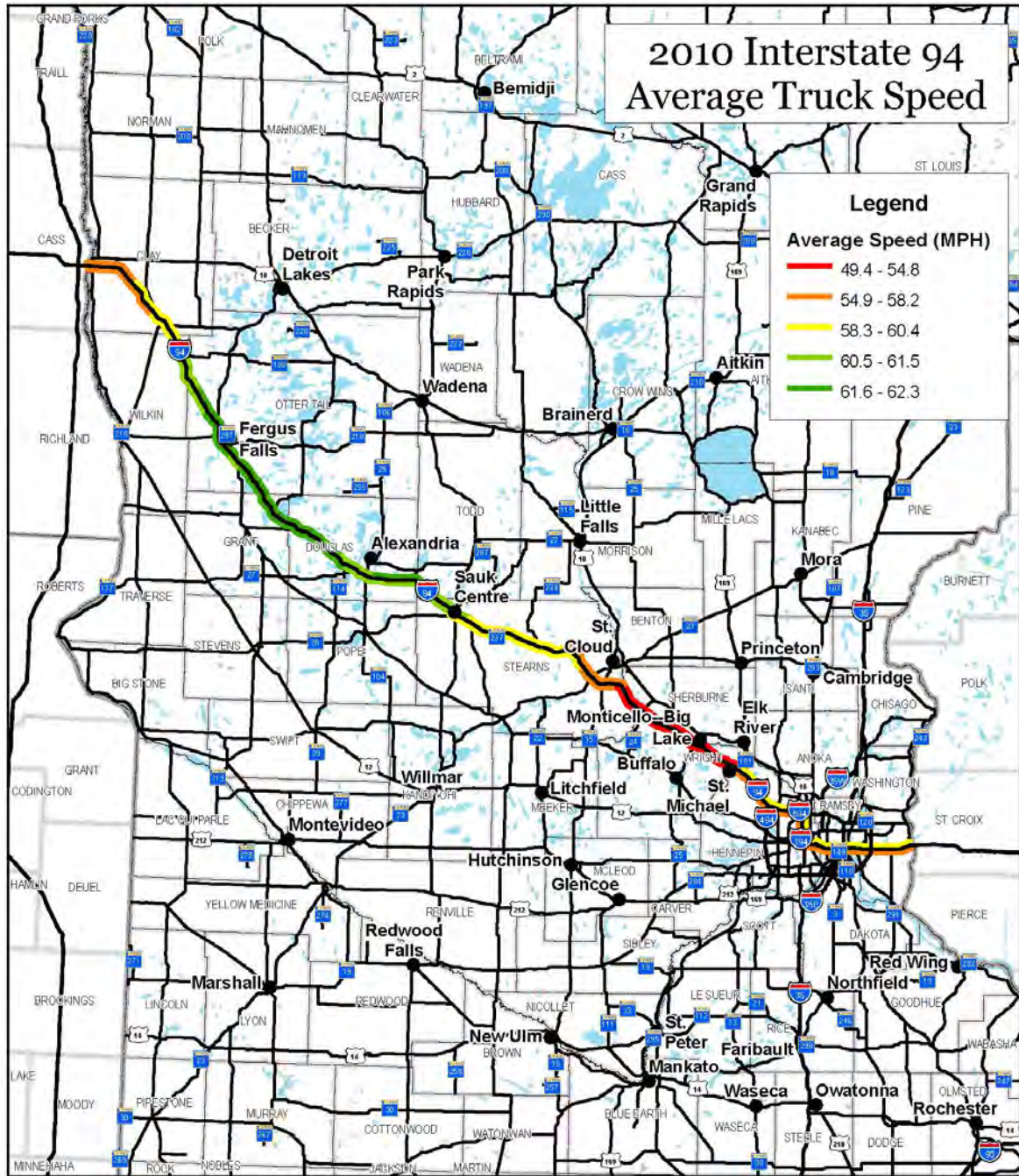
**Exhibit 66: Congested Rest Area**

State Rank	Site Name (Direction)	Corridor	Mile Post	Truck Stalls	Auto Stalls	Truck/Auto Stall Ratio	% Days at or over capacity
6	Fuller Lake (W.B)	I-94 West	177	17	80	0.21	45.8%

### 2010 Interstate 94 Average Truck Speed

In 2010, I-94 from the Twin Cities to St. Cloud average speed was between 49 and 54 miles per hour. St. Cloud to Twin Cities average speed was between 49 and 54 miles per hour.

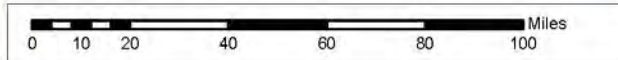
Exhibit 67: 2010 Interstate 94 Average Truck Speed



Data Source: Freight Performance Measures, Federal Highway Administration



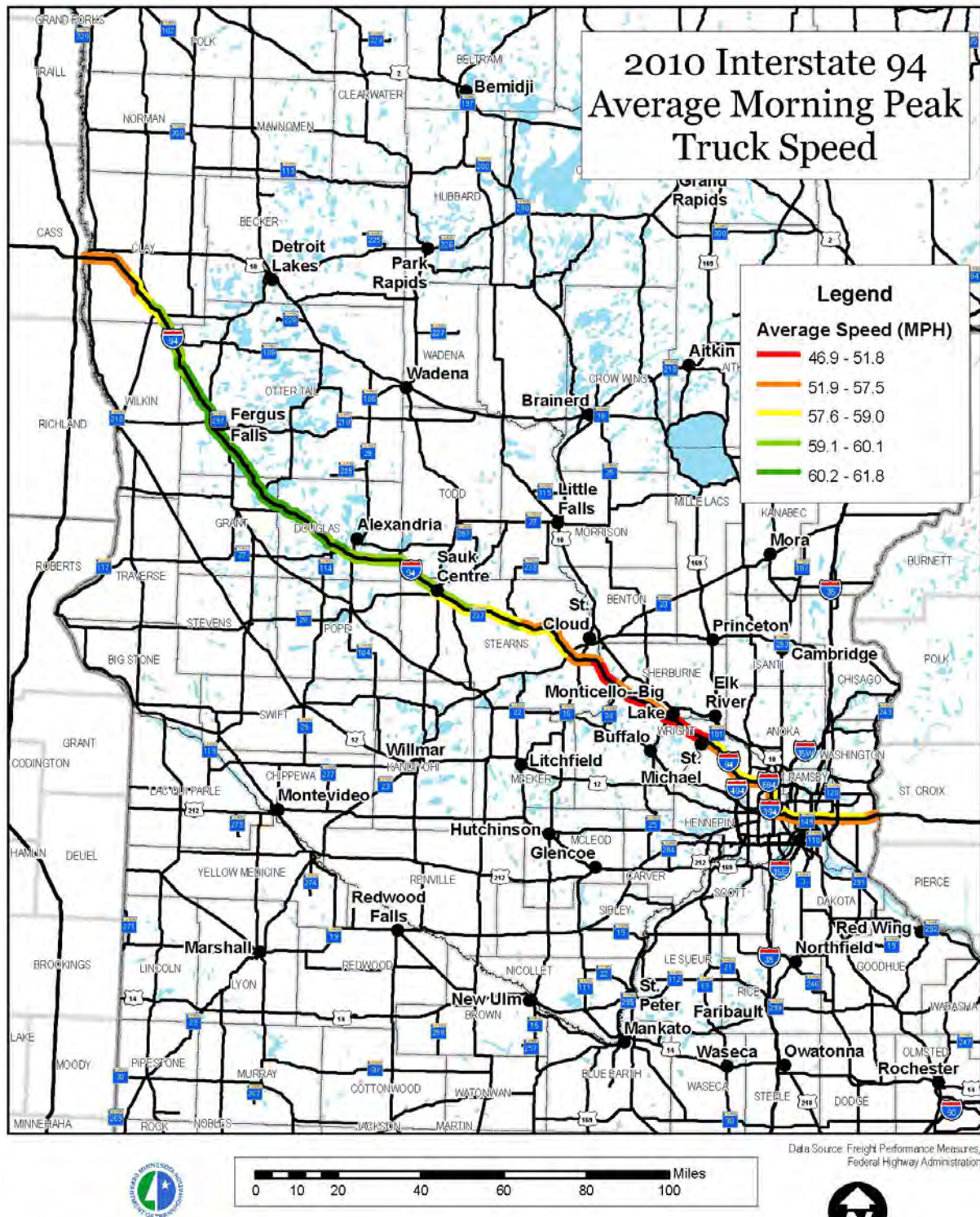
Map produced by Minnesota Department of Transportation  
Office of Freight and Commercial Vehicle Operations



October 2011



**Exhibit 68: 2010 Interstate 94 Average Morning Peak Truck Speed**



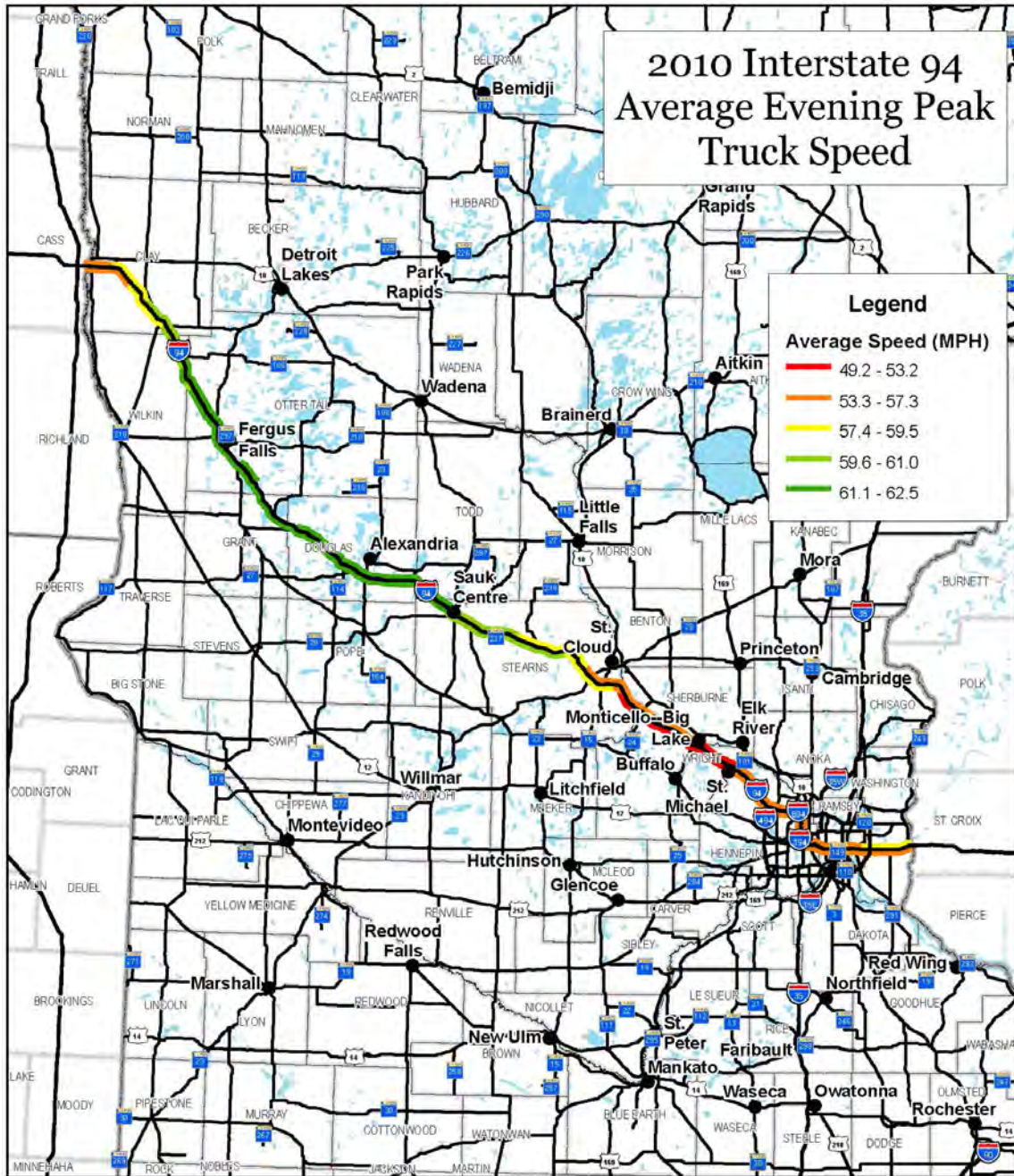
In 2010, I-94 from St. Cloud to the Twin Cities average speed was 51 to 57 miles per hour. From the Twin Cities to St. Cloud average speed was 46 to 51 miles per hour.



### 2010 Interstate 94 Average Evening Peak Truck Speed

In 2010, I-94 from St. Cloud to Twin Cities average speed was 53 to 57 miles per hour. From the Twin Cities to St. Cloud average speed was 49 to 53 miles per hour.

**Exhibit 69: 2010 Interstate 94 Average Evening Peak Truck Speed**



Map produced by Minnesota Department of Transportation  
Office of Freight and Commercial Vehicle Operations

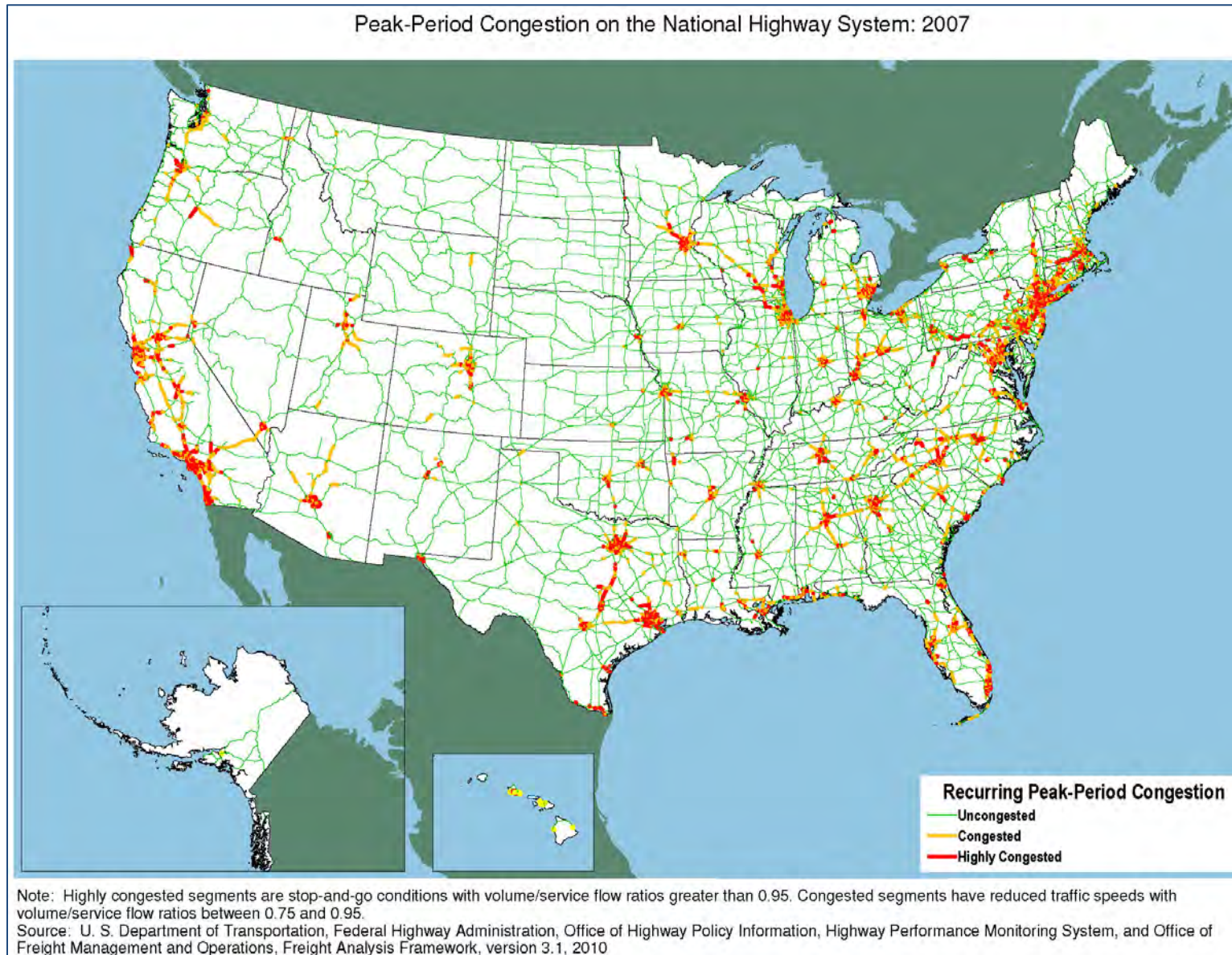
Data Source: Freight Performance Measures,  
Federal Highway Administration



October 2011

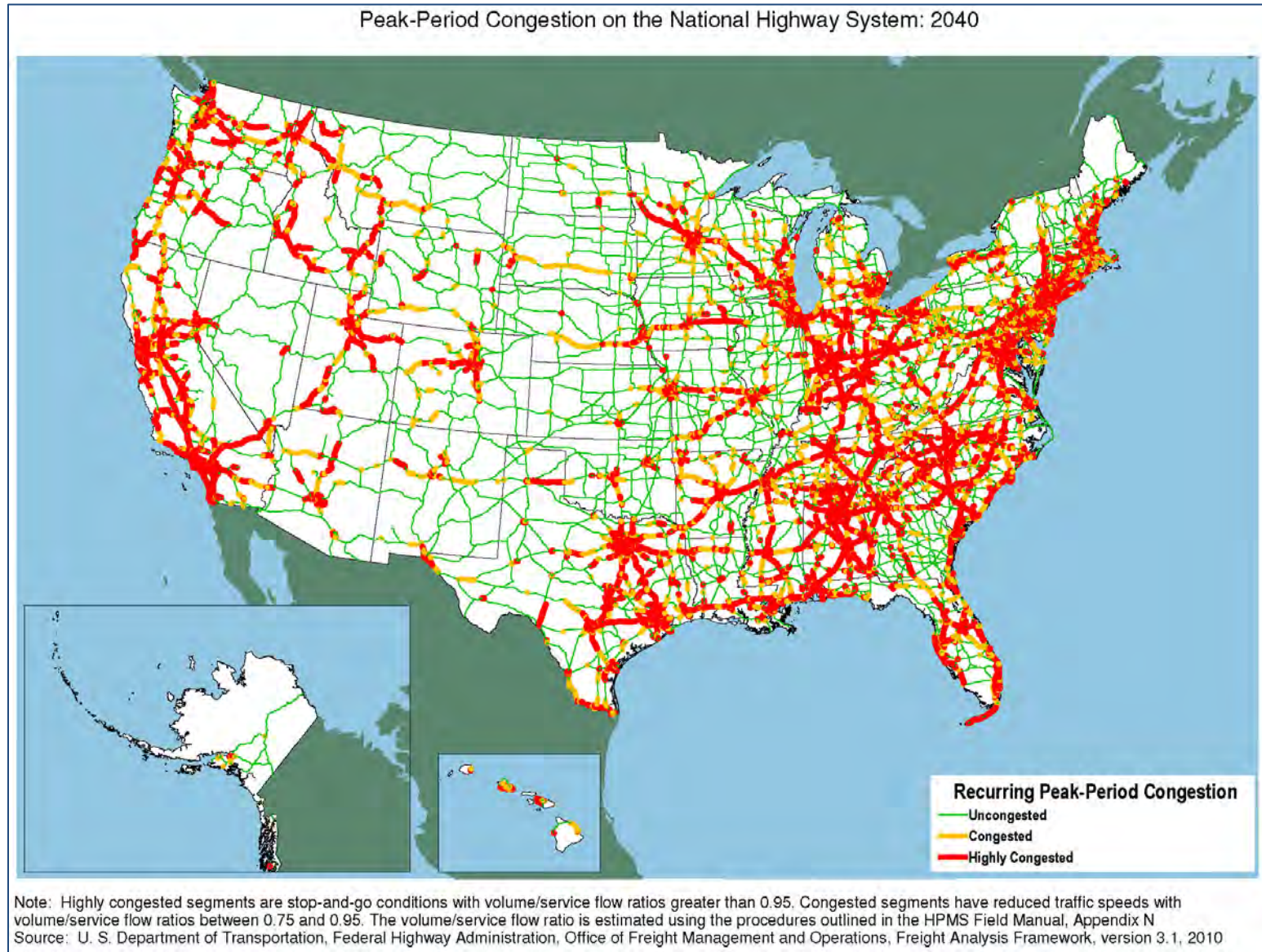


### Exhibit 70: Peak-Period Congestion on the National Highway System, 2007



**Exhibit 71:  
Period  
on the  
Highway  
2040**

**Peak-  
Congestion  
National  
System,**





## 11.4 Journey to Work

Hennepin County has a total of 35,107 commuters from the following counties: Benton, Cass, Crow Wing, Isanti, Mille Lacs, Morrison, Sherburne, Stearns, and Wright. The top three are from the following counties: Wright County 19,132, Sherburne County 9,548, Isanti 2,404.

**Exhibit 72: Commuters in Hennepin County**

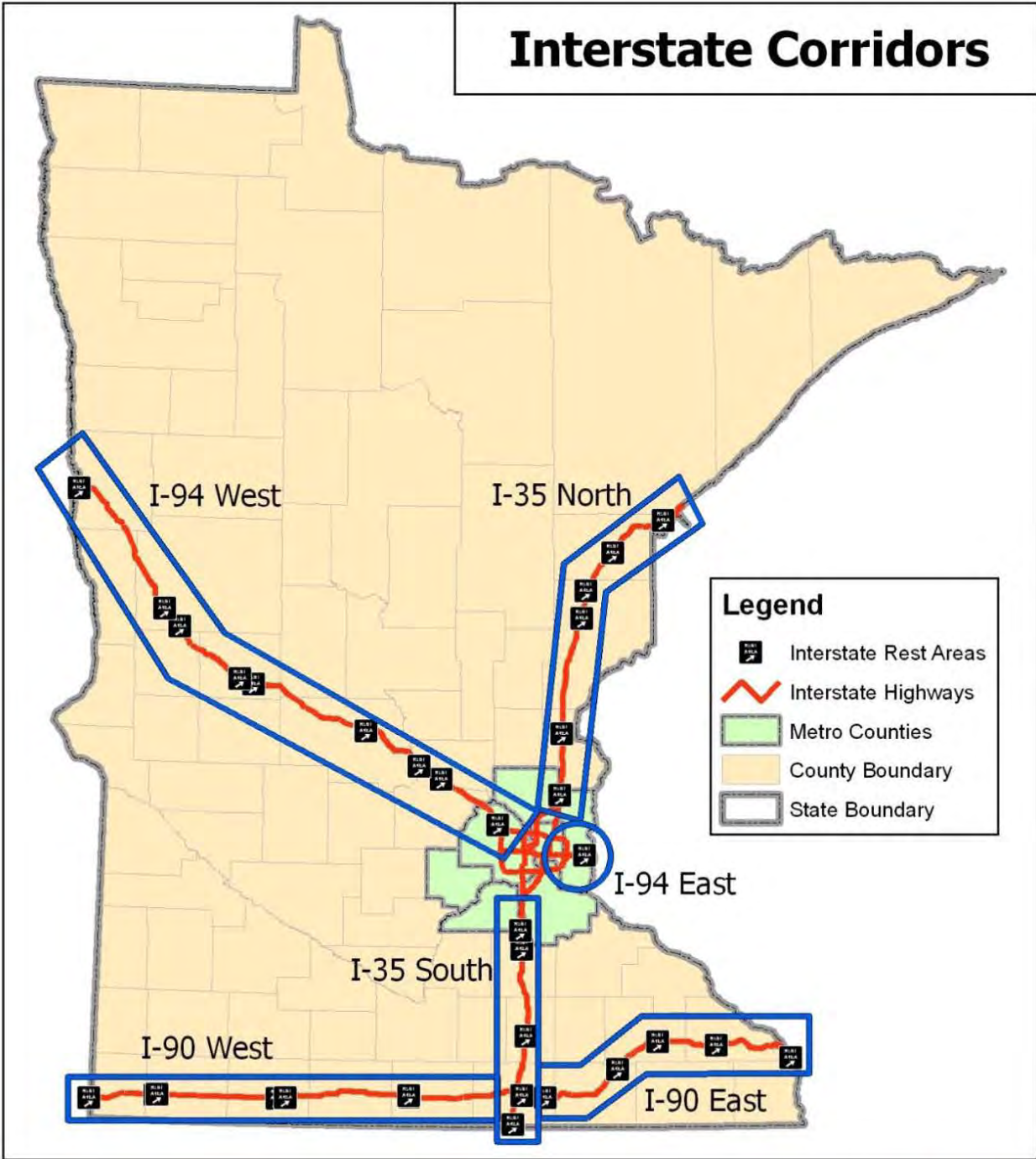
Residence State - County Name	Work State	Work County	Work (C)MSA	Work PMSA	Workplace State - County Name	Count
Benton Co. MN	027	053	5120	9999	Hennepin Co.	423
Cass Co. MN	027	053	5120	9999	Hennepin Co.	196
Crow Wing Co. MN	027	053	5120	9999	Hennepin Co.	338
Isanti Co. MN	027	053	5120	9999	Hennepin Co.	2,404
Mille Lacs Co. MN	027	053	5120	9999	Hennepin Co.	958
Morrison Co. MN	027	053	5120	9999	Hennepin Co.	215
Sherburne Co. MN	027	053	5120	9999	Hennepin Co.	9,548
Stearns Co. MN	027	053	5120	9999	Hennepin Co.	1,893
Wright Co. MN	027	053	5120	9999	Hennepin Co.	19,132
<b>Subtotal:</b>						35,107

Ramsey County has a total of 3,978 commuters from the following counties: Benton, Cass, Crow Wing, Isanti, Mille Lacs, Morrison, Sherburne, Stearns, and Wright. The top three are from the following counties: Isanti County 1,155, Wright County 1,125, Sherburne County 901.

**Exhibit 73: Commuters in Ramsey County**

Residence State - County Name	Work State	Work County	Work (C)MSA	Work PMSA	Workplace State - County Name	Count
Benton Co. MN	027	123	5120	9999	Ramsey Co.	101
Cass Co. MN	027	123	5120	9999	Ramsey Co.	34
Crow Wing Co. MN	027	123	5120	9999	Ramsey Co.	110
Isanti Co. MN	027	123	5120	9999	Ramsey Co.	1,155
Mille Lacs Co. MN	027	123	5120	9999	Ramsey Co.	149
Morrison Co. MN	027	123	5120	9999	Ramsey Co.	57
Sherburne Co. MN	027	123	5120	9999	Ramsey Co.	901
Stearns Co. MN	027	123	5120	9999	Ramsey Co.	346
Wright Co. MN	027	123	5120	9999	Ramsey Co.	1,125
<b>Subtotal:</b>						3,978

**Exhibit 74: Interstate Corridors in Minnesota**



 **Miles**  
0 12.5 25 50 75 100

Sources: Mn/DOT, MnDNR, Metropolitan Council  
Map Produced by: Bradley J. Grefe [18 May 2009]

**IOWA STATE UNIVERSITY**

**ctre**  
Center for Transportation Research and Education

**MINNESOTA**  
DEPARTMENT OF TRANSPORTATION

## 12.0 FREIGHT TRANSPORTATION PLANNING CHALLENGES

### 12.1 Just in Time (JIT)

Just-in-time is a production strategy that strives to improve a business' return on investment. As stated in the Western Minnesota Regional Freight Study, Just-in-time inventory is a supply chain system designed to maximize delivery and inventory efficiency. In many cases, a JIT system allow producers to deliver products and services directly to the customers based on their specified demands, typically bypassing an intermediate distributor; thus, trucks on the highways and the containers on the rails have become moving warehouses in the new economy.

As the U.S. economy becomes more service-oriented and U.S. producer's focus on more high-value or value-added products that are expensive to stock as inventory, companies are adopting modern supply chain management techniques with the following attributes.

- Demand Pull Supply Chains: The movement of product triggered by the consumer as opposed to the producer (supply-push).
- Customer-Focused Logistics: Tailoring logistics networks to respond to the unique needs and profitability requirements of each specific group of customers.
- Transportation Effectiveness: Leveraging the ability of integrated transportation to improve customer service and total supply chain cost and performance.

*Improvements in Transportation impacts Industry Productivity  
Transportation improvements allow for an efficient management inventory  
JIT provides a high level of customer service with dramatic reduction in inventory levels and cost*

Source: US DOT/FHWA report Freight Transportation Improvements and Economy

Macro-level transportation access and infrastructure are considered in the JIT strategies and include the following:

- Proximity to an airport, rail, port, or Interstate
- Proximity to suppliers (could be mandated rather than a consideration)
- Time Zone preference
- Relationship to other company facilities
- Relationship to competitor facilities; and
- Market access and center of sales activity

### 12.2 Transportation in Site Selection – How does Transportation fit in?

#### Increased Importance of Community Infrastructure and Quality of Life Factors

Communities must have an economy that is rich and diverse enough to provide long-term careers for both spouses. The community must have an equilibrium between income and housing cost, access to selective colleges for the knowledge workers' children, and a welcomeness to diversity.



### **Growing Importance of Passenger Aviation Services for Corporate Executives and Business Visitors**

Passenger aviation service is a crucial consideration for locating business facilities with executive staff or with international business connections. With the advance of the global economy, this requirement will most likely become more critical in the future.

### **Need for Transit and Commuter Options for Workers**

The increased focus on worker retention has led to greater consideration of the amount of time and options available for employee commuting. In several interviews noted the desired commuting time was less than 30 minutes and, preferably, less than 20 minutes. Where transportation has been improved, the effective labor shed increases. This helps employers access a large pool of prospective applicants.

### **New Business Attraction and Economic Development Strategies in Rural Areas**

Creating multi-jurisdictional arrangements to create a greater-sized entity for marketing and for facilitating projects. Working together, clusters of areas may be able to more aggressively market their region. Creating a world-class logistical center is all about passing through jurisdiction quickly and efficiently as possible.

### **Brownfield and Property Redevelopment**

Urban areas are densely developed and increasingly facing a scarcity of new land, or “green fields” for development. However, urban areas also are likely to contain fallow properties that were formerly used for primarily industrial purposes. These sites may be underutilized or may be environmentally contaminated from their previous uses.

## APPENDIX A: OUTREACH PLAN

### Project Background

The Minnesota Department of Transportation (Mn/DOT), several regional planning authorities, and area economic development agencies initiated a freight transportation planning effort to address freight concerns in Central Minnesota Regional Planning Area. The purpose of this freight planning effort is to build on prior planning activities and gain a better understanding of the demands from freight on regional transportation infrastructure and to identify projects that meet the demand of regional freight stakeholders. Information from this planning effort will help guide future investment decisions of the participating public planning agencies.

The planning effort is constructed to provide a framework that will:

- Examine local freight movements and trends not captured in larger planning studies, including region-specific and industry-specific trends and issues;
- Document existing freight transportation systems and how various elements are used by different industry sectors of the regional economy including agricultural, energy, timber, forest products; mining and manufacturing;
- Identify potential projects that address freight needs, as well as potential funding strategies and private sector partnerships; and,
- Strengthen relationships with freight and business community through outreach activities.

### Steering Committee

The Steering Committee is responsible for the overall directions and monitoring of the project. The make-up of the committee includes; County, City, Regional Development Commissions, Federal Highway Administration, Department of Employment and Economic Development, and Mn/DOT Staff representatives. A private sector representative will be added at a later date.

Name	Organization
Steve Backowski	Morrison County Engineer
Bob Bollenbeck	East Central Regional Development Commission
Joan Danielson	Department of Employment and Economic Development
Chris Etzler	Region 5 Development Commission
Henry Fischer	St. Cloud Area Economic Development Partnership
Cathryn Hanson	St. Cloud Area Planning Organization
Lee Miller	Region 5 Development Commission
Tom Moore	St. Cloud Area Economic Development Partnership
Jordan Zeller	East Central Regional Development Commission
Brad DeWolf	Region 7W Transportation Advisory Committee
Susan Moe	Federal Highway Administration
Steve Voss	Mn/DOT District 3 Planning Director
Mary Safgren	Mn/DOT District 3 Planner
Matthew Pahs	Mn/DOT Freight Planner
Peter Dahlberg	Mn/DOT Freight Planner
Ryan Gaug	Mn/DOT Multimodal Planner
Gene Hicks	Mn/DOT Transportation Data
John Tompkins	Mn/DOT Project Manager

## Central Minnesota Preliminary Freight Profile

Trucking is the dominant mode of freight transportation in the district, carrying 97 percent of originating and terminating tonnage in 2007. Significant tonnage also moves through the district on Interstate 94, US Highway 10 and the BNSF Railway corridor. District freight movement consists of large amounts of *Nonmetallic Minerals* which are mainly local moves. Other major freight commodities originating in the district include *Farm Products*, *Food Products*, *Cut Stone*, and *Paper Products*. *Electrical Equipment*, *Optical Equipment*, and *Transportation Equipment* are major valuable commodities originating in the district. The district is a major destination for *Coal Shipments*, with the power plant in Becker receiving shipments from BNSF Railway daily. St. Cloud is a major trade center for Minnesota's *Manufacturing* and *Service* industries. Major destinations of freight generated in the district include the Twin Cities, New York, Los Angeles, and Chicago.

## Objective of the Scope

Effectively engaging and communicating with key stakeholders and the public is an important step in building a common understanding about the important relationships between freight transportation and economic development. Input from stakeholders is an important component of transportation planning and programming resulting in better decision making for people and goods movement. In freight oriented transportation planning efforts, "engaging the private sector" is public involvement aimed at establishing two-way communication with private sector stakeholders most affected by freight-related transportation planning and investment decisions.

The SCOPE outlined below is designed to encourage stakeholders to share their knowledge and perspectives about their existing business transportation practices, challenges and opportunities affecting transportation and economic development in the region, and explore new opportunities that could enhance the economy in the future.

## Engaging the Private Sector

### In-Person Interviews

Traditional approaches to public involvement have had only limited success in generating the interest of freight stakeholders. In-person interviews of key freight stakeholders in the region will be a primary method of reaching out directly to businesses that rely on the region's transportation networks to receive production inputs and move finished products to consumer markets. Approximately 17 in-person interviews will be conducted by staff as part of the Plan effort. **Exhibit A-1** provides the initial sampling plan developed by the project Steering Committee for in-person interviews.

**Exhibit A-1: In-Person Interview and Electronic Survey Targets**

Industry Segment or Category	Face to Face Interviews	Electronic Survey's	
Agriculture	<ul style="list-style-type: none"> <li>▪ CHS</li> <li>▪ Ethanol Plant – Central MN Coop</li> </ul>		
General Manufacturing/ Production	<ul style="list-style-type: none"> <li>▪ C &amp; L Distribution</li> <li>▪ Cold Springs Brewery</li> <li>▪ Nahan Printing</li> <li>▪ Golden Plump</li> <li>▪ Trident Seafoods</li> <li>▪ Clow Stamping</li> <li>▪ Prescription Optical</li> </ul>	Dezurik Jennie-O New Flyer Sunny Fresh Dan's Prize Long Prairie Packing Co. Team Industries Lindar Pequot Tool	Lexington Artic Cat J & B Wholesale Park Industries Apperts Nasch Finch
Mining/Aggregate	<ul style="list-style-type: none"> <li>▪ Cold Springs Granite</li> <li>▪ Aggregate Industries</li> </ul>	Granite City Ready Mix (Knife River) MN Minerals	
Wood and Paper Products	<ul style="list-style-type: none"> <li>▪ Verso Paper</li> </ul>	Wausau Paper	
Transportation and Warehousing	<ul style="list-style-type: none"> <li>▪ Spee-dee Delivery</li> <li>▪ Yellow Freight</li> <li>▪ UPS</li> <li>▪ Anderson Trucking</li> <li>▪ Northern Lines Railway</li> <li>▪ St. Cloud Airport</li> </ul>	Daggett Trucking ABF Freight Vistar Corporation Con-Way Canadian Pacific RR Burlington Northern RR Meiers Transport & Warehousing Fingerhut	
Electrical Equipment	<ul style="list-style-type: none"> <li>▪ Remmele Engineering</li> </ul>	Electrolux - Electronics-Appliance	

The desire on the part is to expand the interview pool to include electronic surveys. Electronic surveys will be sent to as many private freight-intensive entities as possible. The electronic survey summary information will be consistent (general sense of what needs to be provided) with data gathered during the face-to-face interviews. The face-to-face interview attendance should be limited to no more than two or three persons: 1) Mn/DOT Central Office; 2) District office representative; and, 3) Steering Committee member. Surveys and interviews will provide real-world feedback for analyses conducted in other tasks of the study. Stakeholder interviews will also provide contextual information by providing insights about supply chain interactions and the adequacy/deficiency of the current transportation network. The interviews should be completed using the interview guides found at the [end of this Appendix](#).

### Web-Based Surveys

To provide the broadest opportunity for business sector input to the study, it is proposed that interviews be supplemented with on-line or web-based surveys that would be communicated to regional businesses by regional chambers of commerce and economic development agencies. Potential communication outlets for the Central Minnesota Regional Freight Plan may include:

- Local and Regional Chamber Newsletters
- Local Newspapers
- MPO Newsletters
- Municipal Websites
- Media Liaisons

The public planning partners involved in the planning effort will introduce these survey instruments to regional Chambers of Commerce and other business groups and ask that they communicate information about the study and the online surveys using the following text or similar overview in their newsletters or other publications:

### **Central Regional Minnesota Freight Plan**

*The Minnesota Department of Transportation (Mn/DOT) is undertaking a freight planning effort to learn more about business transportation needs across the central Minnesota region.*

*The purpose of this freight transportation planning effort is to gain a better understanding about freight demands on the regional infrastructure and identify projects that can accommodate current and future freight mobility needs of regional businesses. Information from this planning effort will help guide future investment decisions of the participating public planning agencies.*

*The project is highly dependent on input from regional businesses. We will seek information from regional businesses about freight activity levels, supply chain structures, and opinions on transportation services within the study area. Outreach with the business community is taking place under several activities including personal interviews, a web-based survey and a regional freight forum to be held in St. Cloud at the Mn/DOT Conference Center, 3725 12th Street North, St. Cloud, MN 56303, at 3:00 p.m. **on May 17, 2010.***

*We have established three survey instruments available via the web, or by mail. One survey is designed for companies that ship and/or receive products (shippers/receivers survey). Another survey has been developed for those businesses offering transportation services in the region (trucking companies, freight forwarders, etc.). And finally, a survey developed for motor carrier drivers with pick-up and delivery products.*

*Businesses within the region are encouraged to complete the survey and provide their input to the study. All responses will remain anonymous. Responses and information gathered from the interviews and surveys will be presented only in summary formats. The surveys take approximately 20 minutes to complete.*

*Shippers/receivers wishing to complete the survey may go to the following link: [http://www.surveymonkey.com/s.aspx?sm=yP\\_2b1FkoJw4YCKJa\\_2fwZu9RA\\_3d\\_3d](http://www.surveymonkey.com/s.aspx?sm=yP_2b1FkoJw4YCKJa_2fwZu9RA_3d_3d)*

*Transportation service providers wishing to provide input may go to: [http://www.surveymonkey.com/s.aspx?sm=MOkF\\_2bkqZhgnv9IDfzNdpng\\_3d\\_3d](http://www.surveymonkey.com/s.aspx?sm=MOkF_2bkqZhgnv9IDfzNdpng_3d_3d)*

*Truck Drivers wishing to complete the survey may go to the following link: [http://www.surveymonkey.com/s.aspx?sm=pwo3owJxlzePzse\\_2fkDz2lw\\_3d\\_3d](http://www.surveymonkey.com/s.aspx?sm=pwo3owJxlzePzse_2fkDz2lw_3d_3d)*

*To learn more about the freight planning effort or the upcoming freight forum visit: <http://www.dot.state.mn.us/planning/freightplan/>*



## District Freight Forum

To enhance the scope of freight stakeholder input within the existing budget, existing institutional relationships with organizations like the Minnesota Freight Advisory Committee (MFAC) and regional industry groups should be leveraged to sponsor a freight forum in the Mn/DOT District 3 area. The forum will be held in St. Cloud, MN.

The St. Cloud Freight Forum will be structured to share information from Tasks 1 and 2 of the study, as well as summary information gathered through interviews and web-based surveys. The goal of the forum is to seek the opinions of the region's business leaders about the information gathered and preliminary directions emerging from the data gathered through the mid-point of the planning effort. After several initial presentations on the study process and initial findings, forum attendees will be divided into small groups to probe key issues, and identify and prioritize potential projects. A proposed agenda for the St. Cloud Freight Forum is shown in **Exhibit A-2**.

To save on travel it is proposed that the St. Cloud Freight Forum would be held in conjunction with a Steering Committee Meeting that would occur before the forum. The purpose of the meeting would be to discuss issues, seek clarification and gather input on prioritization regarding issues that will be addressed in the forum, or gathered through previous stakeholder activities.

### Exhibit A-2: Sample Agenda for a Regional Freight Forum in St. Cloud

Meeting Agenda for the Freight Forum	
1:00 – 2:00	Steering Committee Meeting
2:45 – 3:00	Registration
3:00 – 3:15	Introductions and Welcome
3:15 – 3:45	Regional Freight Plan Overview and Purpose Presentation on Regional Freight Profile: demographics, key commodity flows, markets and modes. Presentation on Regional Freight Network Inventory: nodes, networks and bottlenecks
3:45 – 5:00	Small Group Breakout Sessions: <ul style="list-style-type: none"> <li>• Highway Issues – Truck size and weight, key corridors, operations and projects</li> <li>• Railroad Issues – Service, capacity and projects</li> <li>• Air Freight Issues – Capacity, future needs and projects</li> </ul>
5:00 – 5:30	Small Group report out and Wrap-up

If the meeting arrangements allow, the forums can also provide opportunities to complete additional interviews.

## Open House

Upon completion of the Draft Freight Plan Report, an Open House will be held to present the findings and recommendations. The Open House will be an informal setting in which the public and private sector interests will get information about the Plan. A short presentation will be

made. Participants will be encouraged to give opinions, comments, and preference to staff either orally or in writing.

### **Comment Period – 30 Days**

Public and Private comments on findings and recommendations will be collected within this 30-day period.

### **Response and Summary Period – 30 Days**

After the 30-day comment period, Mn/DOT will have 30 days to post comments and summarize responses in the final report.

### **Scenario Planning for Freight Planning**

- Globalization increase connectivity
- Fuel cost volatile – unpredictable
- Transportation is a response to demand
- Containerization – concentrates global shipping
- Freight infrastructure projects take many years to build at a substantial
- NIBY – BANANA
- Multi-jurisdictional

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## APPENDIX B: EXISTING FREIGHT PROGRAMS

The following sections review the Mn/DOT and private sector programs that have an impact on freight activity in the Central Minnesota study area:

### Trucking Programs

Commercial Vehicle Operations oversees truck regulatory and administrative programs. There are four primary focus areas within CVO: safety, conformity, efficiency, and mobility. The core activities that reside under these focus areas include, but are not limited to, the following:

- Conduct vehicle safety inspections; issue permits for vehicles that are oversize or overweight;
- Provide truck size and weight policy and coordinate maintenance of all weight scales facilities;
- Provide technical assistance at hazardous materials transportation incidents; review and audit carrier operating records;
- Conduct training classes; and,
- Provide outreach on technical topics related to driver qualifications, vehicle safety, carrier operating requirements and transportation regulations for hazardous materials.

In general, the CVO area is directed toward improving transportation safety operations of motor vehicles and compliance with laws, rules, and statutes related to those operations, rather than to specific freight system enhancement.

Several industries interviewed in Central Minnesota expressed concerns over the application of truck regulatory programs:

### Wind Turbine Equipment Hauling

Wind turbine equipment (both blades and tower sections) are moving frequently from the Port of Duluth to and from wind farms in southwestern Minnesota and manufacturing facilities in adjoining states to Minnesota has illuminated the need for routes support a variety of over-size loads.

St. Cloud, Minnesota is home to one of the nation's largest hauler, Anderson Trucking Service (ATS), of wind turbine equipment. Furthermore ATS is a recognized leader in Specialized/Flatbed Transportation.

### Milk and Dairy-Based Hauling

Stearns County is ranked 1<sup>st</sup> of Minnesota counties, and 21<sup>st</sup> in the U.S. for their "value of sales" in milk and other dairy products from cows. The movement of milk and other dairy products has been altered to their primary market, the Twin Cities metro area, to avoid congestion. A milk hauler interviewed expressed need to increase the capacity of milk hauled to the Twin Cities metro area. A suggestion by the hauler is to allow for an extension to be added to the trailer to increase weight capacity. An analysis is needed to evaluate the suggestion.

## Rail Programs

### Minnesota Rail Service Improvement Program

The Minnesota Rail Service Improvement Program was established in 1976 to prevent the loss of rail service on lines subject to abandonment. The five subprograms that fall under the broader MRSI program are presented below.

### Rail Line Rehabilitation Program

This program provides low- or no-interest loans to rehabilitate and preserve rail lines. Upon completion of the rail rehabilitation project, the railroad repays the state on a negotiated per-car basis or at a predetermined fixed rate.

### Rail Purchase Assistance Program

This program helps regional rail authorities purchase rail lines if a financial analysis shows that the line can operate at a profit, that purchase cost and necessary rehabilitation will not exceed benefits and that the regional railroad authority is capable of operating the rail line or can contract with an operator to do so.

### Rail User and Rail Carrier Loan Guarantee Program

This program helps shippers and carriers to obtain loans for rail rehabilitation and capital improvements. The program guarantees up to 90 percent of the loan.

### Capital Improvement Loans

This program lends rail users up to \$200,000 or up to 100 percent of the project, whichever is less, to improve rail facilities. Capital improvement loans are available to improve rail service through construction or improvements to rail line segments (i.e., side track and team track connections); and, to construct or improve facilities used to load, unload, store and transfer freight and commodities. Loans are repaid on a quarterly basis or a lump sum within 10 years.

**Exhibit B-2: Capital Improvement Loan Usage in Central Minnesota**

Year	Improvement	Location	Amount
1997	Track-upgrade	St. Cloud	\$196,833
2009	Track-upgrade & Extend track	Aitkin	\$166,900
2010	New Track	Cold Springs	\$200,000
<b>Total</b>			<b>\$563,733</b>

### Rail Safety – Grade Crossing Safety Improvement Program

The purpose of the Minnesota Railroad Grade Crossing Safety Improvement Program is to promote and enhance safety at highway-rail grade crossings in the state. Typical projects include installation of signals, signal upgrades, signage, pavement markings, lighting, crossing surface improvements, crossing closures and roadway relocations, improved sight conditions, improved crossing alignments, and grade separations.

Since the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991, 10 percent of Minnesota's federal Surface Transportation Program funds are set aside for safety activities. Of this amount, approximately \$4 million annually has been provided for highway-rail grade crossing safety improvements. Opportunities may also exist to partner with some of the private rail companies as they upgrade their tracks or make other improvements. Additional funding also is available through the federal government for crossings on high-speed rail corridors.

Mn/DOT develops an annual list of proposed grade crossing safety improvement projects and forwards it to the appropriate ATP for prioritization with other transportation-related projects. The appropriate road authorities are notified and asked to commit matching funds to leverage the federal transportation funds being sought for inclusion in the State Transportation Improvement Program.

While there is no specific criterion for identifying projects that are selected for funding under this program, consideration is given to the number of crashes and fatalities, sight distance, train speeds, the number of trains and the amount of vehicular traffic crossing the tracks.

The effectiveness of the grade crossing safety program is evidenced by the fact that, over the past 10 years, the number of crashes has continued to decline. Annual crash and fatality rates at highway-rail grade crossings has been a generally decreasing trend. In 1970, 392 crashes and 36 fatalities occurred. By 1990, 115 crashes and 14 fatalities occurred. This trend has continued into 2004, when only 67 crashes and 11 fatalities occurred.

#### **Exhibit B-2: Grade Crossing Crashes and Fatalities, 2004**

Year	Crashes	Fatalities
2005	56	7
2006	59	10
2007	46	3
2008	52	6
2009	35	4
2010	35	2

Source: Office of Freight and Commercial Operations

### **Private Freight Rail Programs/Initiatives**

#### **BNSF Commerce Corridors – [www.corridorsofcommerce.com](http://www.corridorsofcommerce.com)**

BNSF recently launched a new initiative, Commerce Corridors; these Corridors carry the raw materials that provide power to our homes, food and clothing for our families, agricultural products that feed the world, and the goods that drive our economy. Corridors of Commerce create jobs, deliver safety and environmental benefits, and promote U.S. economic competitiveness and growth. Corridors impacting Central Minnesota are the MidCon and Great Northern Corridor. This initiative spawned industrial development ideas in the cities of Big Lake, St. Cloud and Isanti Counties.



**Northern Line Railway** – [www.anacostia.com/nlr/n1r.html](http://www.anacostia.com/nlr/n1r.html)

A short line rail service provider operating BNSF trackage in Central Minnesota. NLR serves distribution facilities and connects daily with the BNSF mainline network. Primary Commodities handled are: *Aggregate Materials, Building Products, Chemicals, Coal, Food Products, Lumber, Manufacturing Goods, Paper, Scrap, and Stone*. Major customers include Borgert Products, Cold Springs Granite, Electrolux, Maiers Transport, Northern Metals, Knife River Corp., Manions Wholesale, Mathew Hall Lumber, Quad/Graphics, Martin Marietta, and Smufit-Stone Container Corp. Also operating transloading facilities in St. Cloud, Cold Springs and Waite Park, Minnesota.