# HENNEPIN COUNTY FREIGHT STUDY

2016

*Task 1: Infrastructure and Network Use*

# Contents

# Introduction

Hennepin County is undertaking a Freight Study to understand how the County's transportation networks are being used for the handling of freight, how these uses are evolving, and what this means for the County's priorities, projects, and policies regarding the freight network. This study focuses on both the physical movement of freight, e.g. how is the network being used, where is the traffic coming from and going to, and also the economic and industry-related drivers underlying this movement.

This technical memo documents Task 1 of this study, which involved inventorying Hennepin County's highways and other freight-significant roadways, rail, air, and water network elements, profiling industrial regions and major freight-generating industries in the region, and interviewing public and private sector stakeholders that use or have a role in the County's freight network.

The remainder of this document is organized into three sections:

- **Inventory of Freight Assets:** This section documents the network infrastructure and facilities on the County's highway, rail, air, and water networks. It also documents the Federal Highway Administration's (FHWA) intermodal connectors, which connect the National Highway System (NHS) with major freight facilities.
- **Freight-Intensive Regions and Clusters:** This section describes "industry clusters" and areas of freight-intensive activities in the County. Freight-related industries (construction, manufacturing, transportation/warehousing, wholesale and retail trade) are each profiled in this section. Finally, four case studies of areas of significant freight activity are documented.
- **Stakeholder Outreach:** This section documents the outreach to stakeholders as part of this project. Both in-person and phone interviews were conducted with public and private sector stakeholders. This section presents a summary of key findings from the outreach.

# Inventory of Freight Assets

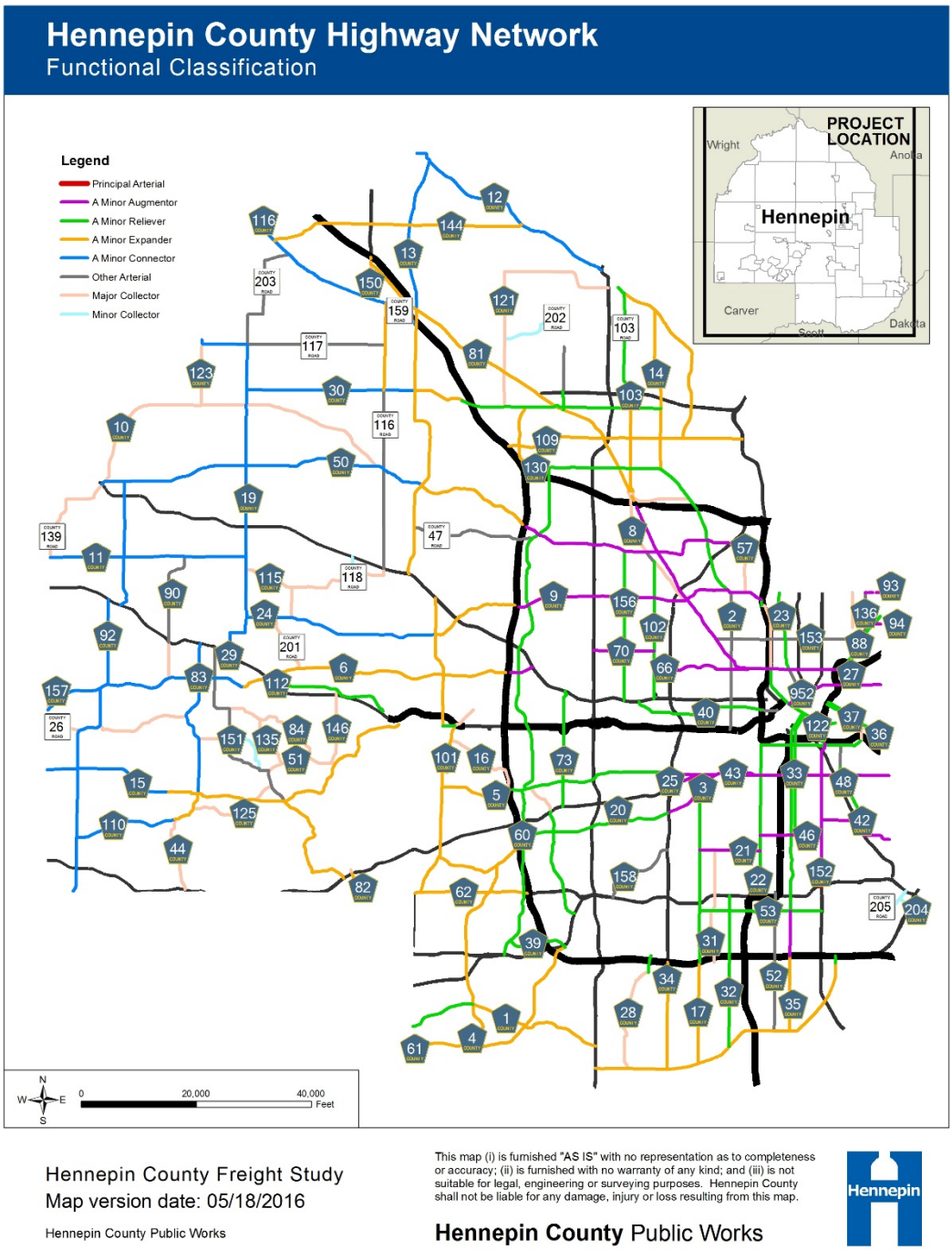
The first step in developing a freight plan for Hennepin County is to inventory the County's freight assets. Hennepin County's freight network encompasses multiple modes of transportation that work together to transport goods throughout the County. This section provides a physical inventory of the County's freight infrastructure and presents essential information on network use. Though all modes are covered, the primary focus of this section is on the highway network as it is the workhorse for moving goods within and across Hennepin County.

## ROADWAY ASSETS

This subsection presents the extent of Hennepin County's highway network. It distinguishes the County's roadways by type and provides traffic volumes. Much of the information presented in this section relies on data provided by the Minnesota Department of Transportation (MnDOT).

Hennepin County's roadway network is distinguished by functional classification. These classifications are as adopted by the Transportation Advisory Board of the Metropolitan Council of the Twin Cities: Principal Arterial, A-Minor Augmenter, A-Minor Reliever, A-Minor Expander, A-Minor Connector, Other Arterial, Major Collector, and Minor Collector. Figure 1 depicts Hennepin County's roadway network by functional classification.

**Figure 1: Hennepin County State and County Roadway Network**




Source: Hennepin County Public Works.

Table 1 provides a description of the County roadway network, shown graphically in Figure 1. There are approximately 566 centerline miles of roadway owned by Hennepin County. The majority of these roadways, 426 centerline miles (75 percent), are part of the County's 'A' arterial network. Less than 10 percent, approximately 53 centerline miles of roadway, are arterials of any other classification. The remainder of the Hennepin County roadway network, about 15 percent, consists of collectors.

The roadway network owned and maintained by Hennepin County represent important last-mile connections to the State and National Highway Systems.

**Table 1: Hennepin County Roadway Network**

| Functional Classification | Length | Percent of Total |
|---|---|---|
| A-Minor Expander | 147 | 26% |
| A-Minor Reliever | 127 | 22% |
| A-Minor Connector | 95 | 17% |
| Major Collector | 82 | 14% |
| A-Minor Augmentor | 58 | 11% |
| Other Arterial | 52 | 9% |
| Minor Collector | 6 | 1% |
| Total | 566 | 100% |

Source: Hennepin County Public Works.

## Traffic Volumes

While the previous section discussed Hennepin County's highway network in terms of its physical extent and functional classification, this section discusses traffic volumes on the County's network, using information supplied by MnDOT. The data consists of traffic volumes measured at various count stations dispersed throughout the County. Thus, the information presented in this section of the report represents point estimates, not corridor totals.

By total volume (measured in Average Annual Daily Traffic, or AADT), the most heavily utilized portions of the Hennepin County roadway network are clustered in the suburbs surrounding Minneapolis, in particular in the northeast and southeast portions of the County. Of the top 10 total traffic locations on County roadways, 5 are north of I-94/I-694 and 4 are south of I-494. The only top

10 location within the perimeter formed by the Mississippi River, I-494, and I-94/I-694 is CSAH[1] 3/ West Lake Street. In addition to the other 9 count stations being located outside of that perimeter, they are all proximate to the interstate highway network as well. This suggests that these locations are very important to providing primary access to the broader regional highway network.

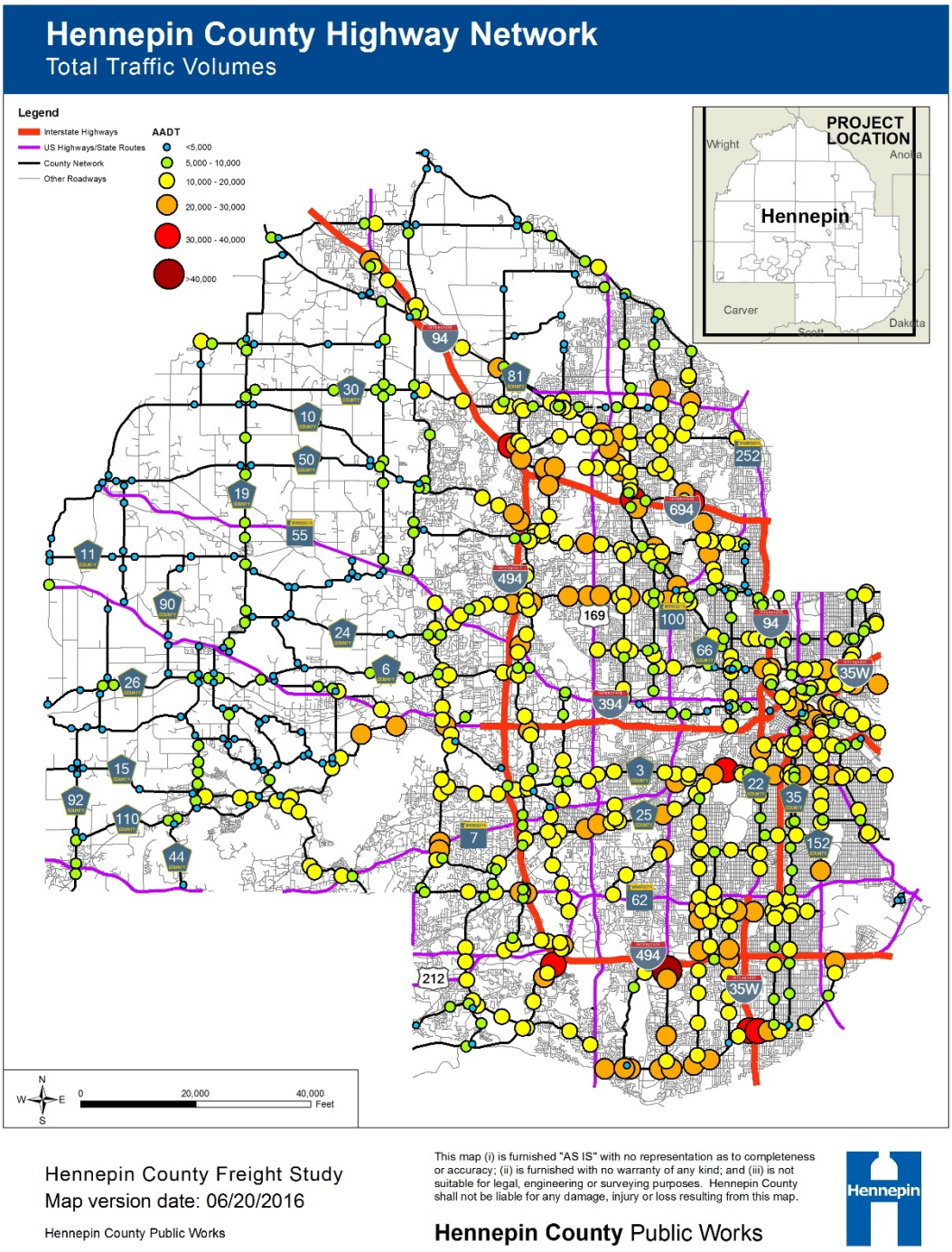
**Table 2: Top Total Traffic Count Locations**

| Roadway | Location | Average Annual Daily Traffic (AADT) |
|---|---|---|
| CSAH 34 (Normandale Boulevard) | South of I-494 | 41,500 |
| CSAH 3 (West Lake Street) | East of Thomas Avenue | 39,300 |
| CSAH 152 (Brooklyn Boulevard) | North of I-94/I-694 | 38,400 |
| CSAH 109 (Weaver Lake Road) | East of I-94 | 37,900 |
| CSAH 61 (Hemlock Lane) | South of CSAH 130 (Elm Creek Blvd.) | 32,800 |
| CSAH 1 (West 98th Street) | West of I-35W | 32,500 |
| CSAH 61 (Plymouth Road) | Southwest of I-394 Off Ramps | 32,000 |
| CSAH 1 (West 98th Street) | East of I-35W | 31,000 |
| CSAH 81 (Bottineau Boulevard) | North of I-94/I-694 | 30,100 |
| CSAH 152 (Brooklyn Boulevard) | North of CSAH 130 (69th Ave. N) | 29,900 |

Source: Minnesota Department of Transportation.

[1]Note: CSAH is the abbreviation for the phrase County State Aid Highway. These roadways are eligible to receive funding the Minnesota Department of Transportation's County State Aid Highway Fund. Alternatively, County Roads (CR) are not a part of the state aid network.

**Figure 2: Hennepin County Traffic Volumes on County Roadway Network**




Source: Hennepin County Public Works; Minnesota Department of Transportation.

Truck volume data for Hennepin County is also supplied by MnDOT. Currently, information on truck volumes on County owned roadways is not available; hence the following discussion is limited to Federal and State roads within the County. This is still useful information, however, as it is indicative of County roadways that may be used as last-mile connectors to the State and Federal networks.

The most heavily trafficked portions of the interstate highway network (measured in Average Annual daily Truck Traffic, or AADTT) in Hennepin County occur on I-35W, I-94, and I-494. Those highways represent the top ten truck count locations in Hennepin County and carry the bulk of the County's highway freight. In contrast, I-394 carries relatively few trucks throughout the County. Intuitively, truck volumes on Hennepin County's interstate highway network are much higher than on non-interstate highways.

**Table 3: Top Interstate Truck Count Locations**

| Roadway | Location | AADTT |
|---|---|---|
| I-35W | North of Minnesota River Bridge | 12,200 |
| I-35W | North of W 106th St. (Bloomington) | 11,500 |
| I-35W | North of 46th St./CSAH 46 (Minneapolis) | 10,800 |
| I-35W | North of Diamond Lake Road (Minneapolis) | 10,500 |
| I-35W | South of Diamond Lake Road | 10,400 |
| I-35W | North of Lake Street/CSAH 3 (Minneapolis) | 10,100 |
| I-94 | West of I-94/US 169 Interchange (Maple Grove) | 9,900 |
| I-94 | East of I-94/I-494 Interchange (Maple Grove) | 9,800 |
| I-494 | West of Penn Avenue/CSAH 32 (Bloomington) | 8,800 |
| I-494 | East of TH 100 (Bloomington) | 8,700 |

Source: Minnesota Department of Transportation.

The most heavily used non-interstate highway corridors in Hennepin County are TH 65 and US 169 as shown in Table 4. TH 65 provides last-mile access between downtown Minneapolis and I-35W. US 169 is a limited access roadway through most of Hennepin County thus it provides for uninterrupted traffic flows and a relatively high level of service. Of the top ten truck count locations, 9 of them are located on US 169. This is intuitive as US 169 is a corridor that abuts a number of industrial areas, as

described by analysis of Dun and Bradstreet Hoover's database and information provided by the Minnesota Department of Employment and Economic Development (DEED) later in this report. The Hoover's database, which is discussed in greater detail in *Freight-Intensive Regions and Clusters*, contains information on County businesses such as primary industry, number of employees, and location, among others. Analysis of this data shows that a significant number of manufacturing firms (primarily in the Printing, Fabricated Metal, Machinery, Computer and Electronic, and Miscellaneous Manufacturing industries) are located along US 169.

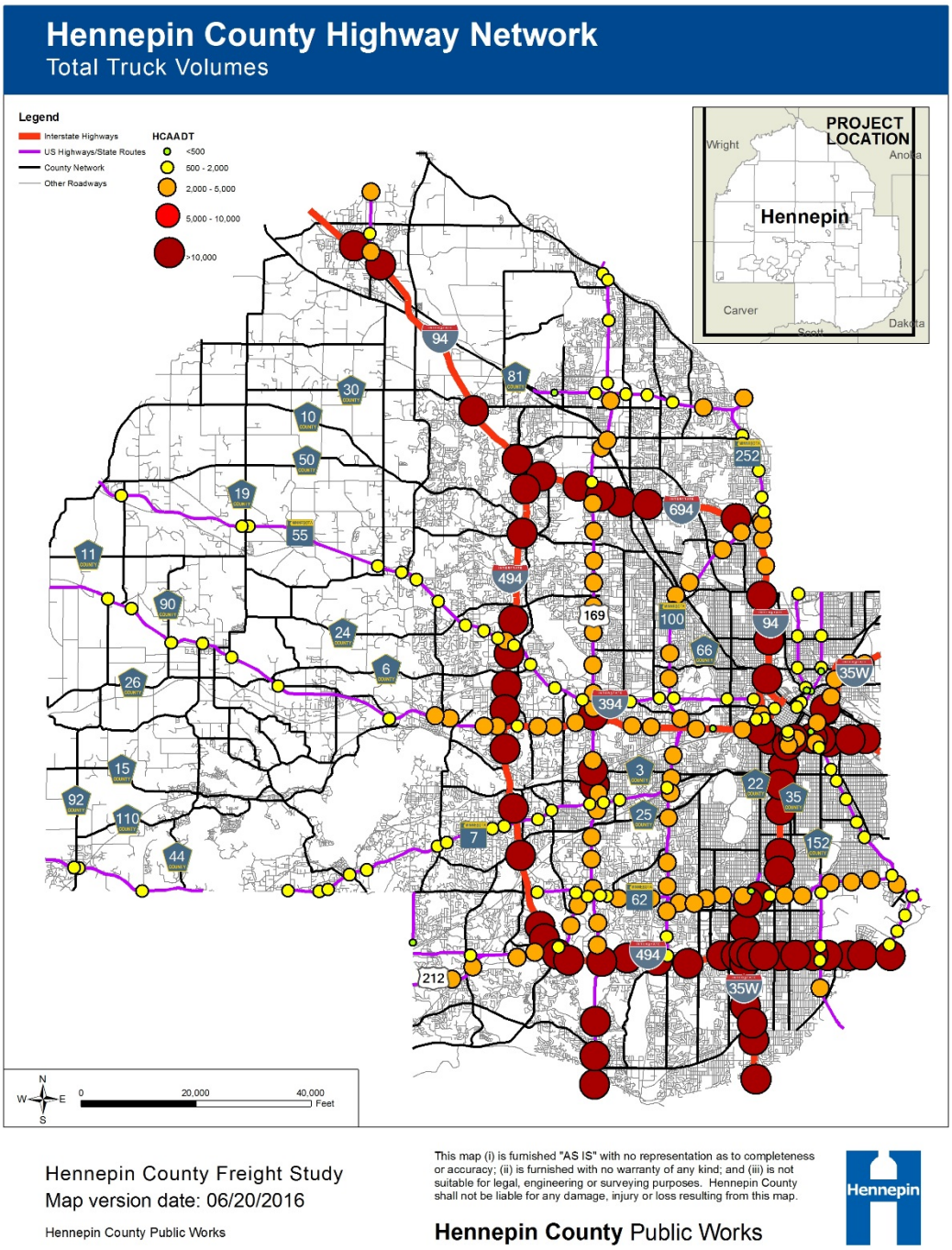
Similarly, using data on manufacturing-sector employment density, DEED identified manufacturing clusters throughout the Twin Cities Metropolitan Area. Three clusters are located directly along US 169 – Golden Triangle, US 169 and Bren Road, and US 169 and Excelsior Blvd. Furthermore, two commercial centers – Ridgedale Center Area and Eden Prairie Center Area – are located near US 169's interchanges with I-394 and I-494, respectively. These observations highlight the importance of US 169 to Hennepin County's multimodal freight network.

**Table 4: Top Non-Interstate Truck Count Locations**

| Roadway | Location | AADTT |
|---|---|---|
| TH 65 | Franklin Avenue (Minneapolis) | 6,700 |
| US 169 | South of Old Shakopee Road (Minnesota River Crossing – Bloomington) | 6,500 |
| US 169 | South of I-494 (Bloomington) | 6,200 |
| US 169 | South of Anderson Lakes Parkway (Bloomington) | 6,100 |
| US 169 | South of Pioneer Trail (Bloomington) | 6,000 |
| US 169 | South of Minnetonka Blvd./CSAH 5 (Hopkins) | 5,500 |
| US 169 | North of I-394 (St. Louis Park) | 5,200 |
| US 169 | North of Minnetonka Blvd./CSAH 5 (St. Louis Park) | 5,100 |
| US 169 | North of Cedar Lake Road (St. Louis Park) | 5,000 |
| US 169 | North of TH 7 (St. Louis Park) | 4,800 |

Source: Minnesota Department of Transportation.

**Figure 3: Hennepin County Total Truck Volumes**




Source: Hennepin County Public Works; Minnesota Department of Transportation.

## MULTIMODAL FREIGHT NETWORK

This section describes the Hennepin County rail, air, and waterway freight networks. This information is drawn from data created for the MN Statewide Freight Plan, Federal transportation databases, and supplemented by data provided by Hennepin County.

### Rail Network

Hennepin County is primarily served by two of the seven Class I railroads – Canadian Pacific (CP) and BNSF. However, small portions of the Union Pacific (UP) network do extend into the eastern and western parts of the County. Using data from the Hennepin County Public Works Department, there are approximately 172 track miles of freight rail infrastructure in Hennepin County (just over 2 miles of freight rail infrastructure is owned by the Hennepin County Railroad Authority). About 90 percent (155 miles) are owned by Class I rail carriers. Class I rail carriers are those railroads that have annual operating revenues of $475.75 million or more.[2]

Of the Class I rail carriers operating in Hennepin County, CP owns the largest share of track mileage – 76 miles (44 percent of the county total). CP is closely followed by BNSF which owns approximately 70 miles (41 percent) of rail in Hennepin County. As previously mentioned a very small share of rail infrastructure, 8.5 miles (5 percent), is owned by Union Pacific.

Class III railroads, so-called short line carriers, own about 10 percent of Hennepin County's freight rail infrastructure. The Twin Cities and Western Railroad Company (TCWR) is the largest short line in Minnesota operating over 229 miles of track statewide.[3] TCWR operates as far east as St. Paul, MN and as far west as Millbank, SD. Within Hennepin County, TCWR owns approximately 4 miles of track in Hennepin County (2 percent).

The Minnesota Commercial Railway (MNNR) operates 150 track miles within the Twin Cities metropolitan area. Within Hennepin County, MNNR owns about 3 miles (2 percent) of rail infrastructure. MNNR primarily serves manufacturers, warehouses, lumber and steel transloads, and grain mills, many of which are located on trackage owned by CP and BNSF.[4]

Progressive Rail Inc. (PGR) is a short line carrier that operates primarily in the suburbs of Minneapolis-St. Paul. Within Hennepin County, PGR owns approximately 10 track miles (6 percent).

[2]Revenue threshold for 2016 shown. See http://www.aar.org/Documents/Railroad-Statistics.pdf. Accessed March 31, 2016.

[3]Twin Cities and Western Railroad Company. http://tcwr.net/. Accessed January 7, 2016.

[4]Minnesota Commercial Railway. http://www.mnnr.net/. Accessed January 7, 2016.

PGR operates a transload facility in the City of Bloomington that specializes in bulk items, merchandise, and forest products, among other goods.[5]

The two largest rail yards in Hennepin County are Humboldt and Shoreham. Both are owned by Canadian Pacific. Humboldt Yard is primarily a switching yard with transloading facilities that specializes in Forest Products, Plastics, and Aggregates.[6] Shoreham Yard is the site of Canadian Pacific's Minneapolis Intermodal Terminal. It is one of two intermodal facilities in the Twin Cities Region, the other one being located in St. Paul and owned by BNSF. BNSF's Northtown Yard, the largest such facility in Minnesota, is mostly contained within Anoka County though a small portion extends into Hennepin County.

**Table 5: Railroad Infrastructure**

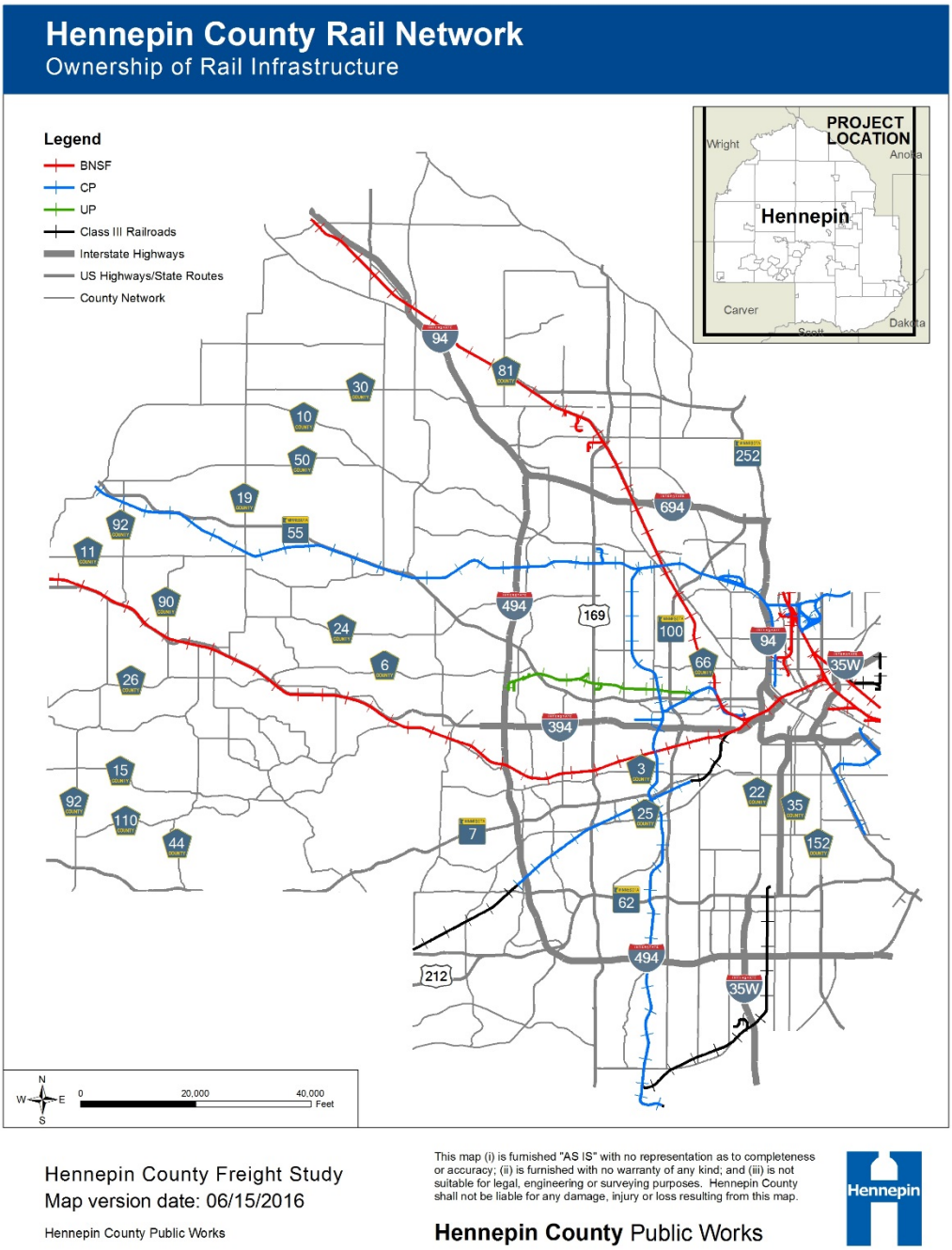
| Railroad | Miles | Percent of Total | Rail Yards in Hennepin County |
|---|---|---|---|
| CP | 76 | 44% | Shoreham, Humboldt |
| BNSF | 70 | 40% | Northtown (Partially in Hennepin County) |
| PGR | 10 | 6% | None |
| UP | 8.5 | 5% | East Minneapolis |
| TCWR | 4 | 2% | None |
| MNNR | 3 | 2% | None |
| Total | 172 | 100% | 2 |

Source: Hennepin County Public Works.

[5]Progressive Rail Incorporated. http://www.progressiverail.com/pgr.html. Accessed January 7, 2016.

[6]Canadian Pacific Railway. http://www.cpr.ca/en. Accessed January 7, 2016.

**Figure 4: Hennepin County Rail Network Ownership**




Sources: Hennepin County Public Works.

There are 272 public at-grade rail crossings for vehicles and pedestrians in Hennepin County.[7] Of those, 49 are located on the Hennepin County roadway network. Most of Hennepin County's grade-level crossings are contained within the perimeter formed by the Mississippi River, I-494, and I-694. This part of the County is the most densely populated and also has significantly higher traffic volumes than the Western portion of the County. However, as measured by total daily train volumes (as reported in the Federal Rail Administration's Highway-Rail Crossing Database), the busiest at-grade crossings are distributed throughout Hennepin County, as shown in Figure 5 and Table 6. Nine of the top 13 grade-level crossings by total train volumes occur on the Canadian Pacific network while the remaining four occur on the BNSF network.

Some of Hennepin County's grade-level crossings are on or near high traffic volume roadways as indicated by data from MnDOT. For instance, Winnetka Avenue in New Hope experiences daily traffic volumes of approximately 11,000 vehicles. Traffic volumes at this scale paired with 20 trains per day can result in significant vehicle delays at this location.

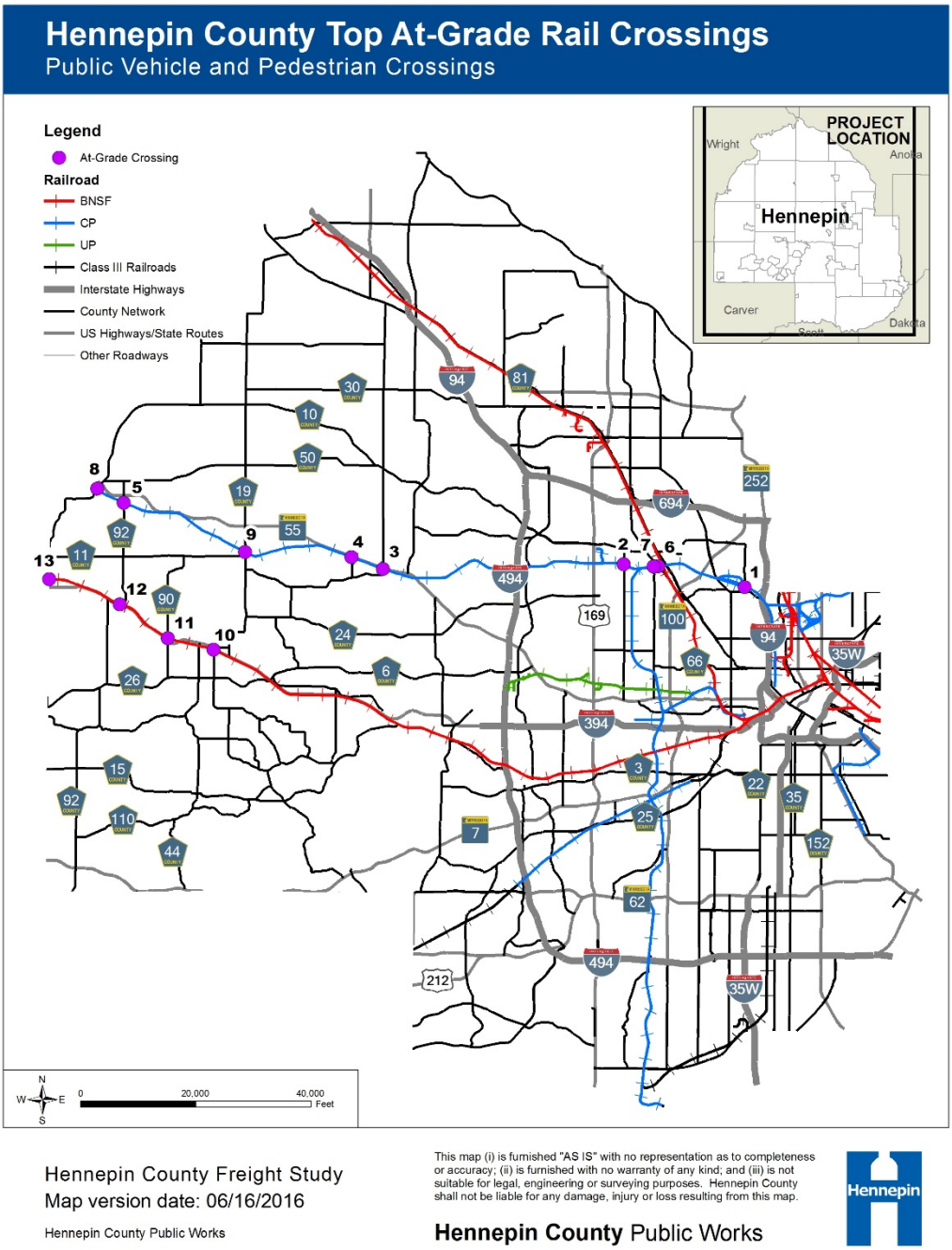
[7] Hennepin County Public Works.

**Table 6: Top At-Grade Crossings in Hennepin County by Total Daily Trains (including Switching Movements)**

| Rank/ Map ID | Railroad | Roadway | City | Total Daily Trains |
|---|---|---|---|---|
| 1 | CP | CSAH 57/ Humboldt Avenue | Minneapolis | 22 |
| 2 | CP | CSAH 156/ Winnetka Avenue | New Hope | 20 |
| 3 | CP | CSAH 115/ Pinto Drive | Medina | 20 |
| 4 | CP | CR 118/ Arrowhead Drive | Medina | 20 |
| 5 | CP | CSAH 92/ Dogwood Street | Greenfield | 20 |
| 6 | CP | CSAH 8/ Broadway Avenue | Crystal | 20 |
| 7 | CP | CSAH 102/ Douglas Drive | Crystal | 20 |
| 8 | CP | CSAH 50/ Rebecca Park Trail | Rockford | 20 |
| 9 | CP | CSAH 19/ Medina Street | Loretto | 20 |
| 10 | BNSF | CSAH 19/ Budd Avenue | Maple Plain | 16 |
| 11 | BNSF | CSAH 90 | Independence | 16 |
| 12 | BNSF | CSAH 92/ Lake Sarah Drive | Independence | 16 |
| 13 | BNSF | CR 139/ County Line Road | Independence | 16 |

Source: Hennepin County Public Works; Federal Railroad Administration Highway-Rail Crossing Inventory Database.

**Figure 5: Hennepin County Top At-Grade Rail Crossings by Total Daily Trains**




Source: Hennepin County Public Works; Federal Railroad Administration Highway-Rail Crossing Inventory Database.

## Airport Facilities

Minneapolis-St. Paul International Airport (MSP) is operated by the Metropolitan Airports Commission – a public corporation that provides coordinated aviation services throughout the Twin Cities metropolitan area. MSP primarily consists of two passenger terminals, four runways, and facilities for air cargo and general aviation. The two primary runways are parallel and generally run northwest-southeast, with an additional north-south and southwest-northeast runways.[8] In addition to MSP, the Metropolitan Airports Commission is also responsible for six general aviation airports two of which are located in Hennepin County: Crystal Airport and Flying Cloud Airport.

Currently, the Metropolitan Airports Commission is in the process of updating their most recent long-range plan. The most recent long-range plan, which was conducted in 2010, contains information on air cargo activities at MSP. Several third-party logistics firms operate air cargo services at MSP including DB Schenker, DHL Airways, Federal Express (FedEx), and United Parcel Service (UPS). In addition, many of the commercial airlines that serve MSP also have cargo operations including Delta Air Lines, American Airlines, United Airlines, and Southwest Airlines, among others.

According to the long-range plan, MSP's air cargo facilities are distributed across its campus but are generally located along Cargo Road, 77th Street, and 34th Avenue. Cargo activity occurs at MSP at three locations relative to the physical extent of the airport's footprint: "infield," west, and southwest. MSP's infield facilities are operated by FedEx and UPS which is comprised of 269,000 square feet of warehouse/office space and 154,000 square yards of apron space. In total, the infield air cargo area covers 100 acres of the MSP campus.

The second air cargo location is the 30-acre "west" cargo area. It contains a 26,000 square foot cargo building and a 75,000 square foot yard apron. Lastly, the southwest cargo area contains two 40,000 square foot cargo buildings. It does not have direct aircraft access. In total there are 480,000 square feet of warehouse space and 229,000 square yards of aircraft apron dedicated to air cargo operations.

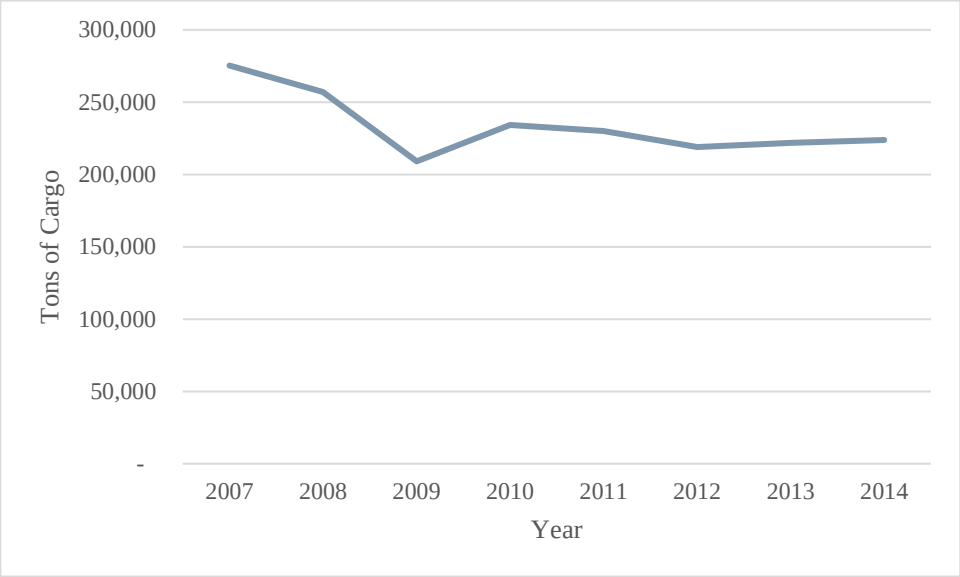
Overall, air cargo tonnage at MSP has declined since 2007 according to MSP's monthly operating reports for the year 2016.[9] Tonnage reached its lowest point in recent years in 2009 when the total tons of enplaned and deplaned cargo equaled 209,097. Since 2009, total cargo tons at MSP have hovered

[8]Metropolitan Airports Commission. *Minneapolis-St. Paul International Airport Final Long-Term Comprehensive Plan Update: 2030*. 2010. https://www.mspairport.com/about-msp/airport-improvements.aspx.

[9]Minneapolis-St. Paul International Airport. Monthly Operating Reports for 2016. http://mspairport.com/about-msp/statistics/operations-and-passenger-reports.aspx, Accessed January 19, 2016.

around 220,000 tons. However, MSP estimates that combined belly and all-cargo carrier enplaned tonnage is forecast to increase at an average annual rate of 1.6 percent between 2008 and 2030.[10]

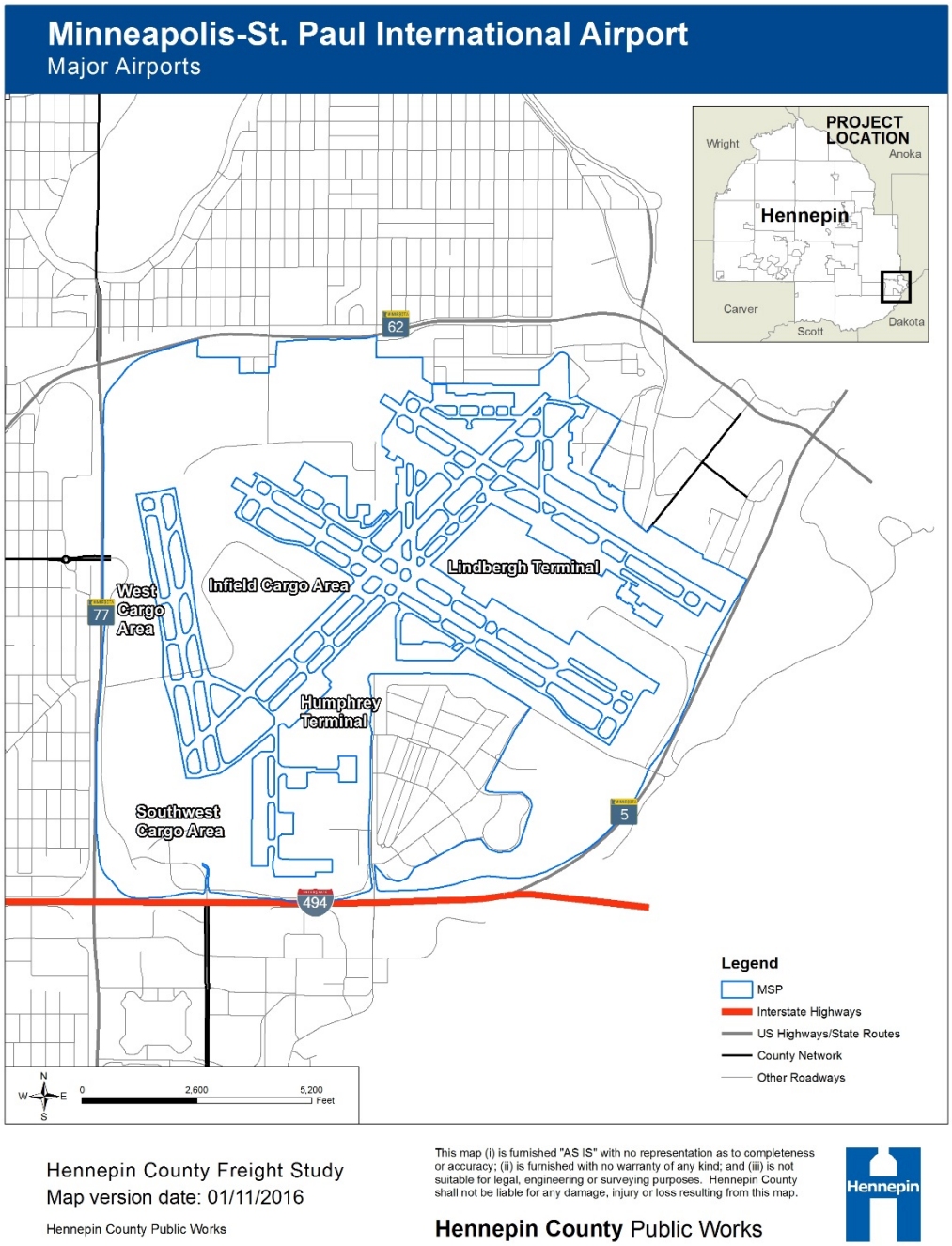
**Figure 6: Tons of Enplaned and Deplaned Cargo at MSP, 2007-2014**




Source: Metropolitan Airports Commission. 2010. Minneapolis-St. Paul International Airport Final Long-Term Comprehensive Plan Update: 2030.

[10]Metropolitan Airports Commission. *Minneapolis-St. Paul International Airport Final Long-Term Comprehensive Plan Update: 2030*. Chapter 2 – Forecasts. 2010. https://www.mspairport.com/docs/about-msp/long-term-comprehensive-plan/2010/04-Chapter-2-Forecasts.aspx, Accessed January 19, 2016.

**Figure 7: Minneapolis-St. Paul International Airport**




Sources: Hennepin County Public Works; ESRI. USA Airport Hub Size. http://www.arcgis.com/home/item.html?id=9973fea2e8324482a4f36d6186a5f381.

### Waterborne Freight

There are currently no ports in Hennepin County. With the closure of the Upper St. Anthony Falls Lock and Dam in late 2014, there is no longer access to the Mississippi River Network beyond River Mile 853.9 in downtown Minneapolis.[11]

Previously, three river terminals were located along the Mississippi River in the City of Minneapolis according to the Minnesota Department of Transportation's Minnesota Statewide Freight System Plan. These terminals processed under 600,000 tons annually. In comparison, the river ports in St. Paul processed 5.5 million tons and the terminals along the Minnesota River in Savage processed 2 million tons annually. [12] The closure of these facilities are not likely to heavily impact the county's shippers as demand for these terminals from flour mills and lumber processing facilities has declined over the years.

### Intermodal Connectors

Intermodal connectors are defined by the FHWA as roadways that provide access between the National Highway System (NHS) and intermodal terminals (both passenger and freight). Because they are considered to be critical roadways for providing last-mile connectivity, they are treated as official portions of the NHS in terms of eligibility for Federal funding. A freight-related intermodal terminal within Hennepin County with an intermodal connector is the Canadian Pacific's Shoreham Yard.

The Minneapolis-St. Paul International Airport has a designated intermodal connector for passenger service. In 2015, MnDOT examined the current intermodal connectors within the state and found that additional roadways may qualify for designation as freight intermodal connectors due to the volume of freight traffic, including for the MSP airport. The state is continuing to examine whether to pursue designation for additional roadways.

As mentioned in the Rail Network section, Shoreham Yard is one of two intermodal facilities serving the Twin Cities Region. Hennepin County owns and maintains one of the roadways designated as an intermodal connector for Shoreham Yard, CSAH 153/Lowry Avenue. The other roadways that form the intermodal connector are Dowling Avenue, 2nd Street, 4th Street, 30th Avenue, 32nd Avenue, and University Avenue. The connector roadways are depicted in Figure 8.

Using information from the 2013 version of the Highway Performance Management System (HPMS), Figure 9 depicts pavement conditions on the intermodal connectors serving Shoreham Yard. Among other roadway information, HPMS collects data on the International Roughness Index (IRI) measures of NHS roadways. IRI is a measure of a roadway's smoothness and is used as an indicator of its

[11] http://www.mvp.usace.army.mil/Missions/Navigation/LocksDams/UpperStAnthonyFalls.aspx

[12] Minnesota Department of Transportation, 2016 Statewide Freight System Plan.

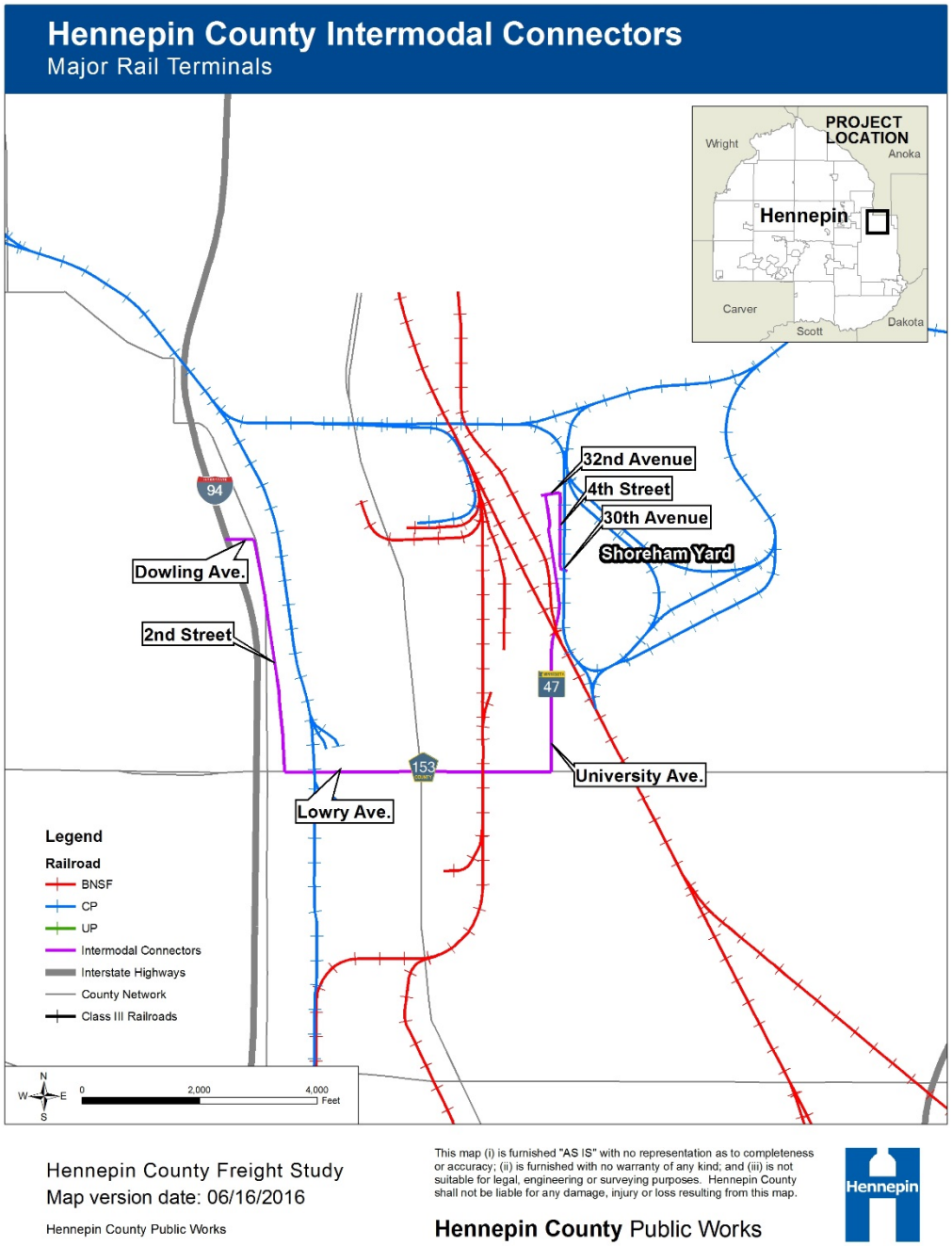
condition. Very low IRI values indicate that a roadway is in very good condition while very high values indicate the opposite. Ranges of IRI values are associated with pavement condition classifications as established by FHWA:[13]

- Very Good – Less than 60;
- Good – Between 60 and 94;
- Fair – Between 95 and 170;
- Mediocre – Between 171 and 220;
- Poor – Greater than 220.

As depicted in Figure 9, much of the extent of the intermodal connectors serving Shoreham Yard are in Poor and Mediocre condition. All of CSAH 153/Lowry Avenue receives a Poor or Mediocre rating. Small segments of 2nd Street and 4th Street are in Fair or Good condition. None of the TH 47/ University Avenue portion of the intermodal connector listed pavement data in the HPMS. Poor pavement conditions can cause damage to trucks and the goods they transport. This is a direct cost to motor carriers and an indirect cost to shippers. The HPMS pavement data suggests that heavy truck and passenger volumes have taken a toll on Shoreham Yard's intermodal connectors. However, the recent replacement of the Lowry Avenue Bridge, which reopened in 2012, has improved mobility within the area.

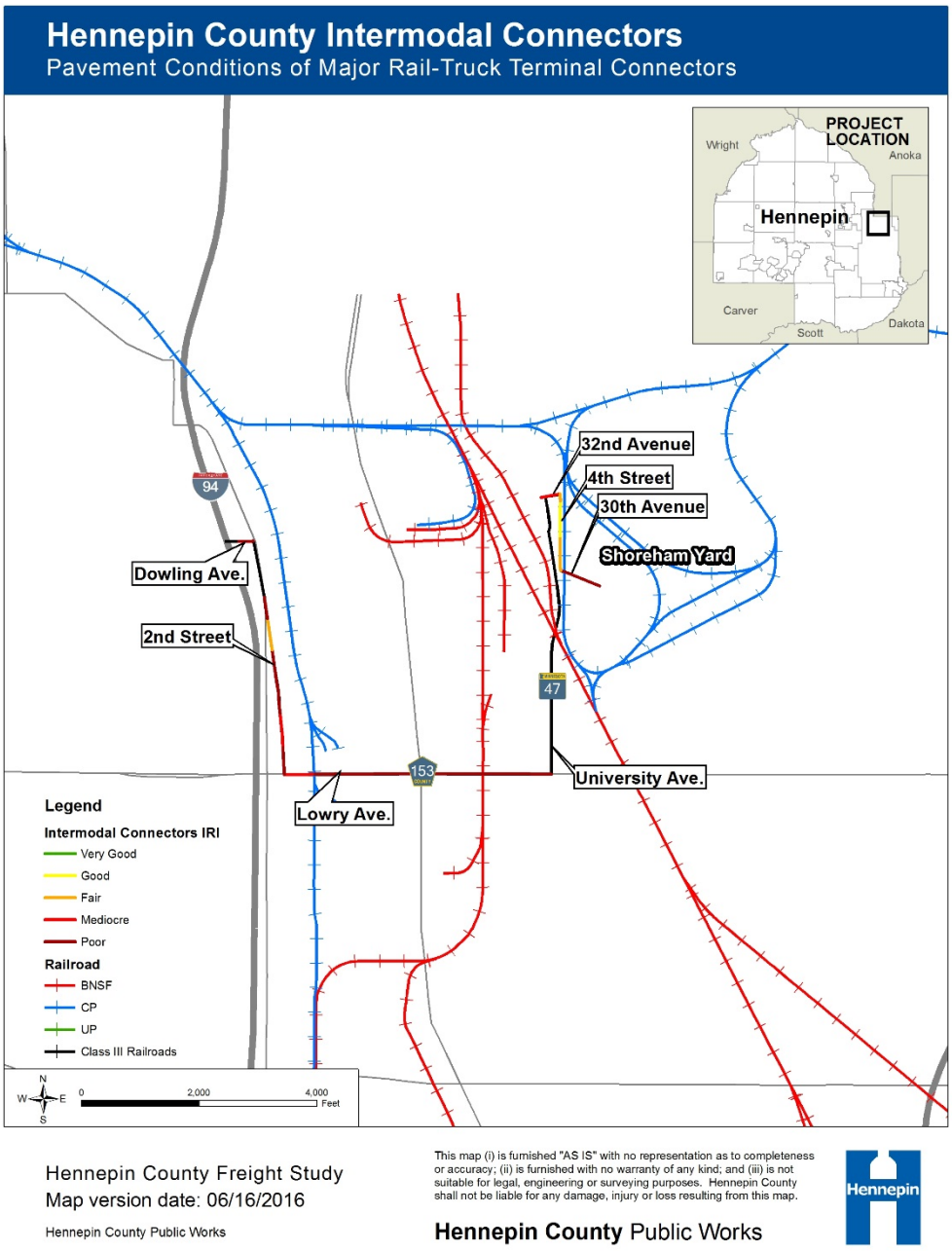
[13]Federal Highway Administration. Conditions and Performance Report, 1999. (Note: The ranges reported are applicable for Non-Interstate roadways.)

**Figure 8: Hennepin County Freight Rail Intermodal Connectors**




Sources: Hennepin County Public Works; Bureau of Transportation Statistics National Transportation Atlas Database; FHWA Office of Planning, Environment, and Realty National Highway System.

**Figure 9: Pavement Conditions of Hennepin County Freight Rail Intermodal Connectors**




Sources: Hennepin County Public Works; Bureau of Transportation Statistics National Transportation Atlas Database; FHWA Highway Performance Monitoring System Database; FHWA Office of Planning, Environment, and Realty National Highway System.

# Freight-Intensive Regions and Clusters

A primary component of the freight network inventory is to identify and quantify freight-intensive land uses. In this section the number, type, and location of freight-related business in the County are described. This information is sourced from data on manufacturing clusters and freight-related employment data by census tract provided by Hennepin County and Dun and Bradstreet Hoover's data.

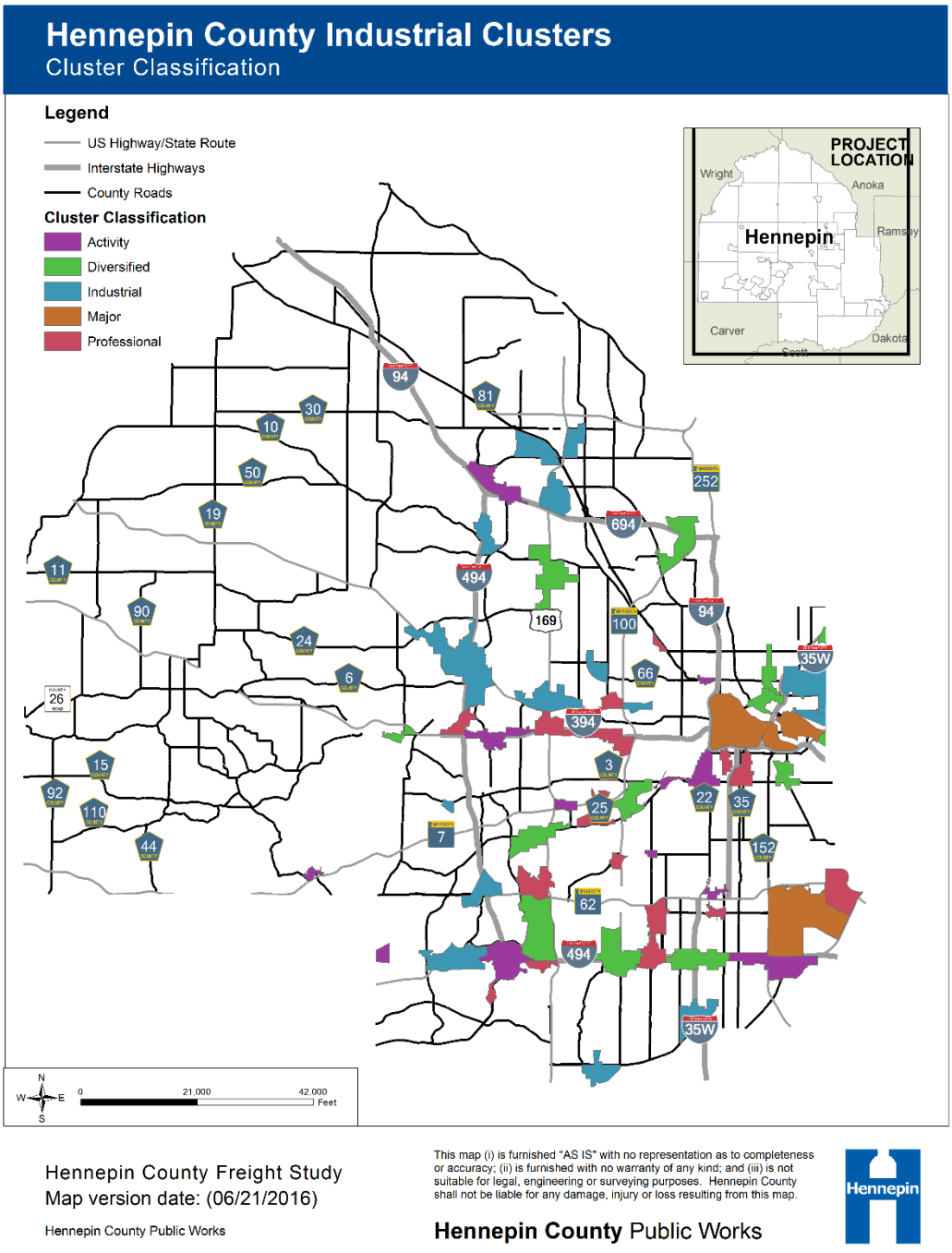
## HENNEPIN COUNTY ECONOMIC CLUSTERS

One way to analyze freight patterns is to evaluate concentrations of businesses throughout the County and identify trends. Figure 10 shows the economic clusters identified in Hennepin County by cluster classification. The five classifications which were identified and defined by the Minnesota Department of Employment and Economic Development (DEED), include

- Professional,
- Activity,
- Diversified,
- Industrial, and
- Major.

Out of 59 total clusters, the most (16) are classified as Professional, and are distributed within the central and southeastern areas of the County. Diversified clusters are similarly distributed throughout the eastern areas of the County. There are also 15 Industrial clusters, found throughout the eastern part of the County along major Interstates. The three Major clusters include MSP International Airport, University of Minnesota campus, and downtown Minneapolis.

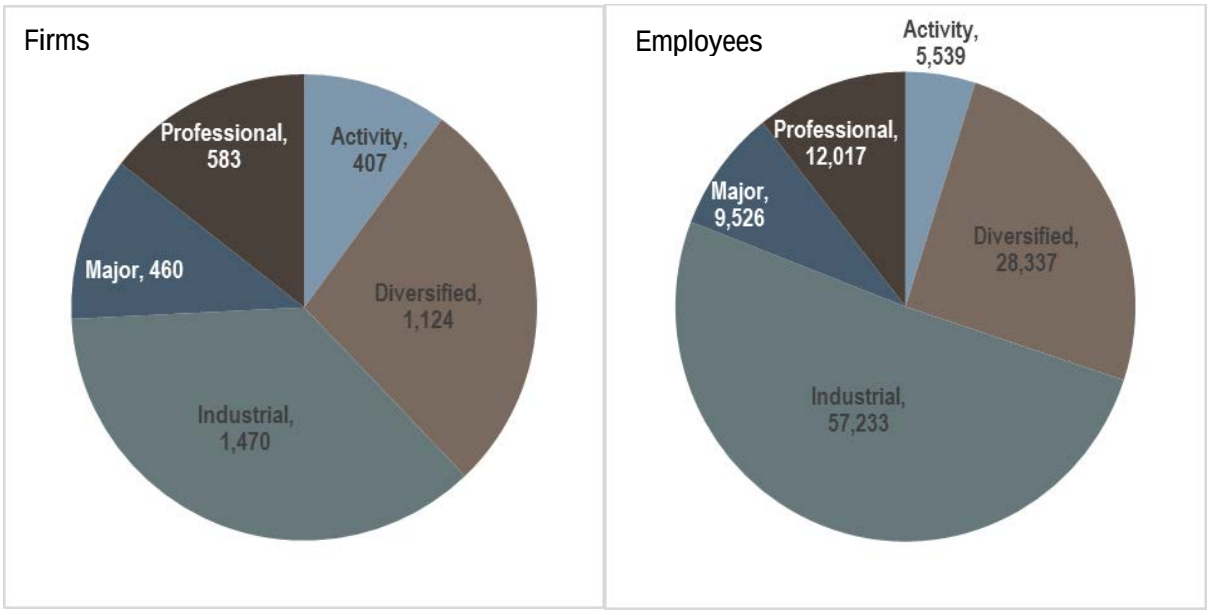
Figure 10: Location of Hennepin County Industrial Clusters




Sources: Hennepin County Public Works

Figure 11 shows the number of firms and the number of employees by each of the five cluster categories in the County. The industrial cluster category is the largest by firms and employees, with 1,470 firms and 57,233 employees. This type of cluster is highly dense with employment and economic opportunity compared to the other cluster types. The diversified cluster category is the second largest, with 1,124 firms employing 28,337 people.

**Figure 11: Number of Firms and Employees, by Cluster in Hennepin County**




Source: Dun and Bradstreet Hoover's Business Data (2014), Minnesota Department of Employment and Economic Development (DEED)

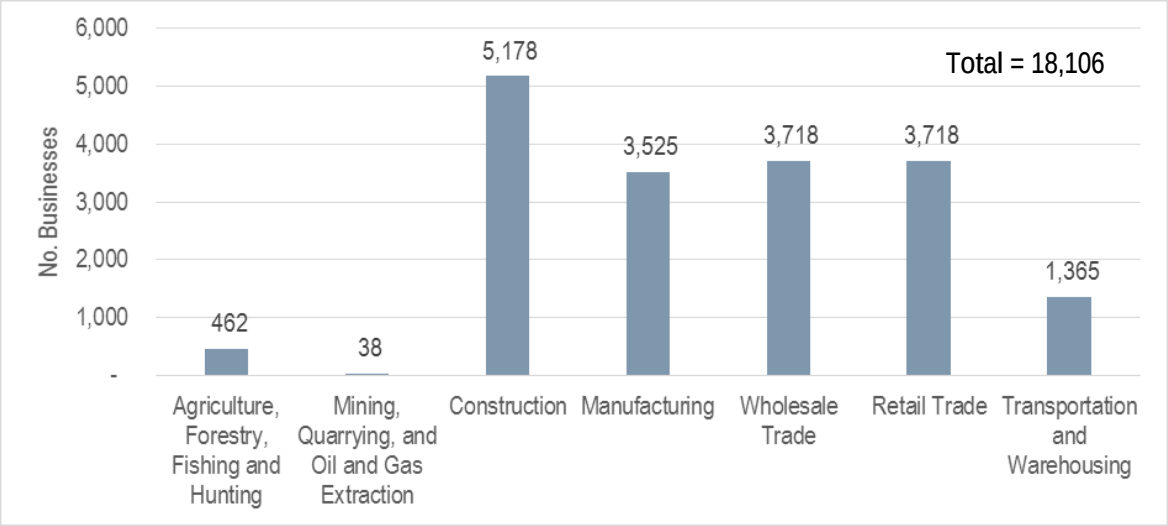
## FREIGHT-INTENSIVE INDUSTRIES

Some industries, known as "Freight-intensive" industries, generate large amounts of truck, rail, or intermodal activity. These industries, which are heavily represented in Hennepin County, increase the truck traffic on roadways in the County. "Freight-intensive" industries considered include agriculture, mining, construction, wholesale trade, retail trade, and transportation and warehousing.

There are nearly 78,000 businesses throughout the County in all sectors, with 23 percent comprising freight-intensive industries. The majority of businesses are in the construction sector, while mostly small- and medium-sized businesses, comprise 29 percent of freight-intensive businesses in the County. There are also high numbers of manufacturing, wholesale trade, and retail trade companies, each comprising between 19 and 21 percent of freight-intensive businesses. Figure 12 presents the distribution of businesses per sector. In addition, there are over 843,000 jobs in the County, with 33 percent comprising those in freight-intensive industries. The manufacturing sector employs the most number of people, 35 percent of those in freight-intensive industries, followed by retail trade (29 percent) and wholesale trade (16 percent). Figure 13 presents the distribution of employees per sector.

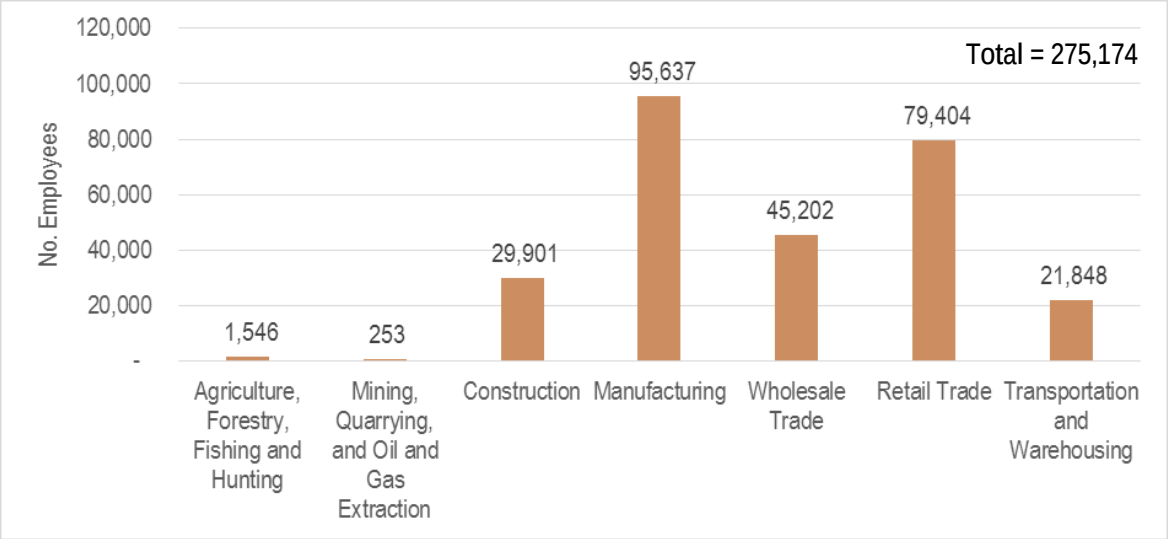
Although there are a large number of construction businesses relative to other industries, those in the manufacturing industry generally have larger companies with more activity. As a result, manufacturing businesses will be generating more freight overall compared to other industries.

**Figure 12: Number of Businesses in Hennepin County per Industry**




Source: Dun and Bradstreet Hoover's Business Data (2014)

**Figure 13: Number of Employees in Hennepin County per Industry**




Source: Dun and Bradstreet Hoover's Business Data (2014)

There are several businesses in the County that employ sizeable portions of the area's population. Within the manufacturing sector, Honeywell International has eight facilities with over 9,500 employees. Graco and General Mills each have nine facilities employing 2,195 and 1,297 people, respectively. The dominant company in the wholesale trade sector is Cargill, which has seven manufacturing facilities employing over 3,400 people. In retail trade, the grocery chain Supervalu has 13 facilities employing over 1,600 people. The company also has a strong presence in the transportation and warehousing sector, with 2,600 people employed under Supervalu Transportation. However, United Parcel Service (UPS) tops the sector with over 3,500 employees at two main facilities. Table 7 presents the top businesses by number of employees for each freight-intensive sector.

**Table 7: Top Businesses by Number of Employees and Freight-Intensive Sector**

| NAICS Industry Category | Business Name | No. Facilities in Hennepin County | No. Employees |
|---|---|---|---|
| (31 -33) Manufacturing | Honeywell International Inc. | 8 | 9,544 |
| | Graco Inc. | 9 | 2,194 |
| | Starkey Laboratories, Inc. | 1 | 1,700 |
| | General Mills, Inc. | 9 | 1,297 |
| | Toro Manufacturing Corp. | 2 | 1,001 |
| (42) Wholesale Trade | Cargill, Inc. | 7 | 3,462 |
| | Ziegler, Inc. | 1 | 790 |
| | Grocery Supply Acquisition Corp. | 1 | 600 |
| | Entronix International Inc. | 1 | 600 |
| | Wincom Systems, Inc. | 1 | 500 |
| (44-45) Retail Trade | Supervalu Inc. | 13 | 1,628 |
| | Bluestem Fulfillment, Inc. | 3 | 905 |
| | Select Comfort Retail Corp. | 6 | 823 |
| | Nordstrom, Inc. | 1 | 550 |
| | EVINE Live Inc. | 1 | 500 |
| (48-49) Transportation and Warehousing | United Parcel Service | 2 | 3,544 |
| | Supervalu Transportation, Inc. | 2 | 2,591 |
| | Delta Airlines, Inc. | 1 | 1,000 |
| | C.H. Robinson Worldwide, Inc. | 6 | 826 |
| | Canadian Pacific Railway | 1 | 475 |

Source: Dun and Bradstreet Hoover's Business Data (2014)

Note: Number of employees was calculated using the employment statistics reported for each facility. This figure does not include total number of employees at the company's headquarters.

## Construction

The construction industry has the most business establishments of all freight-intensive sectors in the County, and is clearly an important industry in the region. This section provides statistics and maps of the construction firms in the Hennepin County region. Figure 14 displays the commercial and manufacturing clusters as well as locations of individual manufacturing firms in the three construction sectors: construction of buildings, heavy and civil engineering construction, and specialty trade contractors. The firms are densely distributed throughout the eastern half of the County, particularly in the south between Minneapolis and Bloomington.

**Table 8: 3-Digit Business and Employment, Construction Sector**

| NAICS Code | 3-Digit Description | No. Businesses | % of Sector Total | No. Employees | % of Sector Total |
|---|---|---|---|---|---|
| 236 | Construction of Buildings | 2,243 | 43.3% | 10,858 | 36.3% |
| 237 | Heavy and Civil Engineering Construction | 292 | 5.6% | 2,485 | 8.3% |
| 238 | Specialty Trade Contractors | 2,643 | 51.0% | 16,558 | 55.4% |
| | TOTAL | 5,178 | 100.0% | 29,901 | 100.0% |

Source: Dun and Bradstreet Hoover's Business Data (2014)

Table 8 presents the number of businesses and number of employees for each construction subsector in the County. In total, there are nearly 30,000 people employed at 5,178 businesses in the County. Specialty trade contractors is the top business sector, comprising 51 percent of all construction businesses and 55 percent of all construction employees. Construction of buildings is also an important construction sector, with 43 percent of businesses and 36 percent of construction employees engaging in this activity. Finally, heavy and civil engineering construction comprises a small portion of construction activity in the County. The sector has 5.6 of the businesses and 8.3 percent of employees within the construction industry in the County.

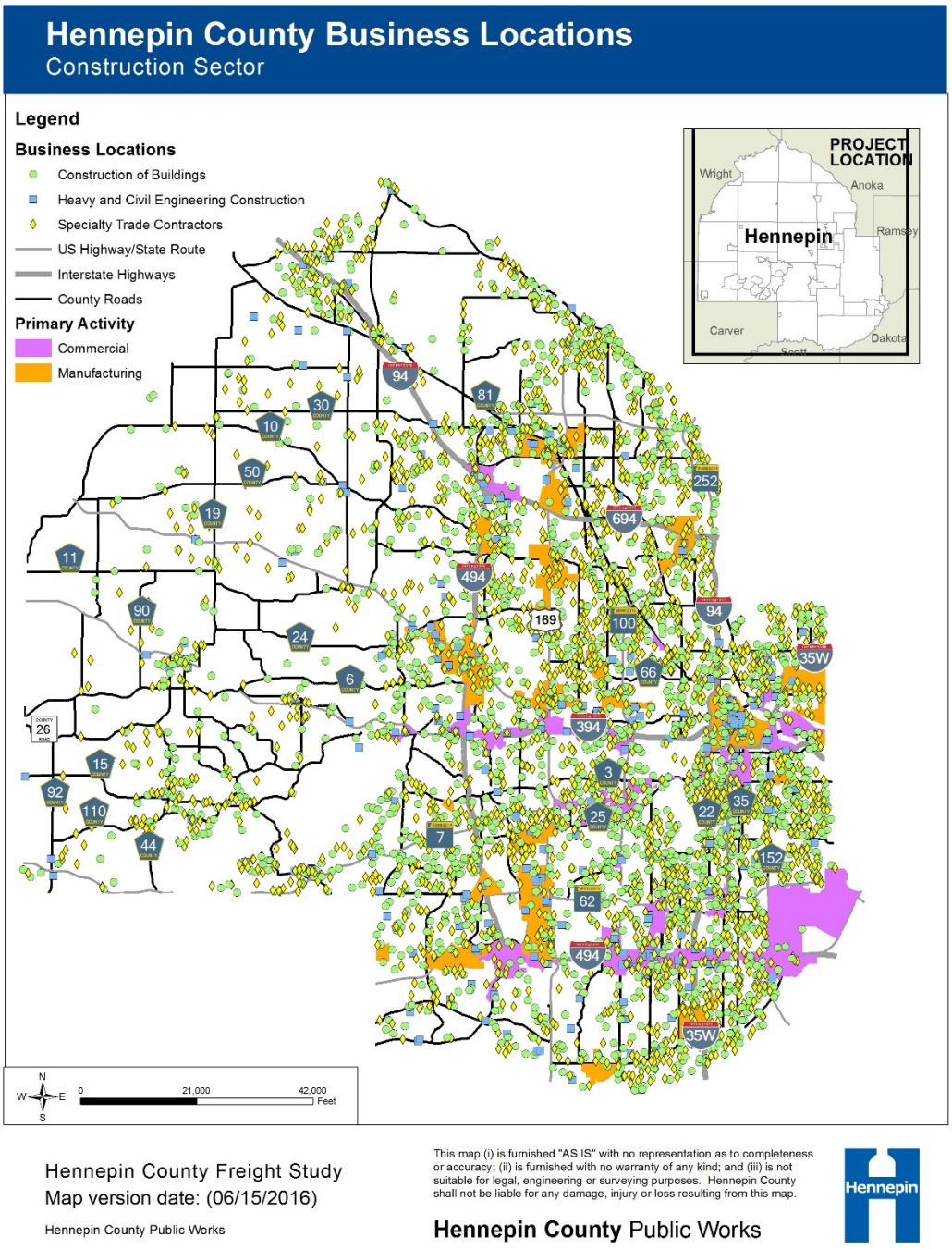
Table 9 features the top businesses in the County for the three construction sectors: specialty trade contractors, construction of buildings, and heavy and civil engineering construction. M.A. Mortenson Companies has a strong presence in the County, with 1,116 employees employed at 4 building construction facilities throughout the County. In addition, Metropolitan Mechanical Contractors and Yale Mechanical each employ 350 people at their specialty trade contractor facilities. Generally, construction businesses are smaller than those of other industries, such as manufacturing.

**Table 9: Top Construction Businesses by Number of Employees**

| NAICS Industry Category | Business Name | No. Top Facilities | No. Employees |
|---|---|---|---|
| (238) Specialty Trade Contractors | 1. Metropolitan Mechanical Contractors | 1 | 350 |
| | 2. Yale Mechanical LLC | 2 | 350 |
| | 3. Electric Resource Contractors | 1 | 255 |
| | 4. Dave Osborne Construction Contracting | 1 | 250 |
| | 5. A & M Business Interior Services | 1 | 210 |
| (236) Construction of Buildings | 1. M. A. Mortenson Companies, Inc. | 4 | 1,116 |
| | 2. Ryan Companies Us, Inc. | 1 | 300 |
| | 3. Bor-Son Construction, Inc. | 1 | 269 |
| | 4. Opus Corporation | 1 | 250 |
| | 5. Adolfson & Peterson, Inc. | 1 | 226 |
| (237) Heavy and Civil Engineering Construction | 1. Veit & Company, Inc. | 1 | 250 |
| | 2. C.S. McCrossan, Inc. | 1 | 150 |
| | 3. MSP Real Estate Inc. | 1 | 140 |
| | 4. Allied Blacktop Company | 1 | 93 |
| | 5. New Look Contracting, Inc. | 1 | 80 |

Source: Dun and Bradstreet Hoover's Business Data (2014)

Figure 14: Location of Construction Firms and Clusters




Sources: Hennepin County Public Works, Dun and Bradstreet Hoover's Business Data (2014)

## Manufacturing

This section provides information on manufacturing firms in the Hennepin County region. Figure 15 displays the commercial and manufacturing clusters as well as locations of individual manufacturing firms in five top manufacturing sectors: printing, fabricated metal, machinery, computer/electronic, and miscellaneous manufacturing. The firms are densely distributed throughout Minneapolis and along I-494 in the central and southern portions of the County, particularly near Plymouth, St. Louis Park, and Richfield. There are also smaller clusters in the north near Rogers and Osseo.

Table 10 presents the number of businesses and number of employees for each manufacturing subsector in the County. In total, there are over 95,000 people employed at 3,525 businesses in the County. As previously noted, miscellaneous manufacturing is the top business sector, comprising 17 percent of all manufacturing businesses. According to the Bureau of Labor Statistics, industries within this miscellaneous category make a wide range of products that cannot be readily classified, such as assembly used in making medical products, jewelry, sports equipment, and other goods. Printing is also an important manufacturing sector, with 11 percent of businesses engaging in this activity. Computer/electronic product manufacturing and fabricated metal product manufacturing each have a 11 percent share of businesses in this sector. Employment is highest in computer and electronic product manufacturing. This sector employs 16 percent of manufacturing employees, followed by transportation equipment manufacturing (14 percent) and machinery manufacturing (13 percent).

**Table 10: 3-Digit Business and Employment, Manufacturing Sector**

| NAICS Code | 3-Digit Description | No. Businesses | % of Sector Total | No. Employees | % of Sector Total |
|---|---|---|---|---|---|
| 311 | Food Manufacturing | 213 | 6.0% | 5,579 | 5.8% |
| 312 | Beverage and Tobacco Product Manufacturing | 22 | 0.6% | 234 | 0.2% |
| 313 | Textile Mills | 28 | 0.8% | 104 | 0.1% |
| 314 | Textile Product Mills | 99 | 2.8% | 844 | 0.9% |
| 315 | Apparel Manufacturing | 53 | 1.5% | 357 | 0.4% |
| 316 | Leather and Allied Product Manufacturing | 38 | 1.1% | 233 | 0.2% |
| 321 | Wood Product Manufacturing | 103 | 2.9% | 781 | 0.8% |
| 322 | Paper Manufacturing | 67 | 1.9% | 2,398 | 2.5% |
| 323 | Printing and Related Support Activities | 398 | 11.3% | 6,847 | 7.2% |
| 324 | Petroleum and Coal Products Manufacturing | 10 | 0.3% | 29 | 0.0% |
| 325 | Chemical Manufacturing | 213 | 6.0% | 5,569 | 5.8% |
| 326 | Plastics and Rubber Products Manufacturing | 129 | 3.7% | 5,767 | 6.0% |
| 327 | Nonmetallic Mineral Product Manufacturing | 84 | 2.4% | 679 | 0.7% |
| 331 | Primary Metal Manufacturing | 40 | 1.1% | 2,838 | 3.0% |
| 332 | Fabricated Metal Product Manufacturing | 375 | 10.6% | 6,652 | 7.0% |

| NAICS Code | 3-Digit Description | No. Businesses | % of Sector Total | No. Employees | % of Sector Total |
|---|---|---|---|---|---|
| 333 | Machinery Manufacturing | 356 | 10.1% | 12,818 | 13.4% |
| 334 | Computer and Electronic Product Mfg. | 374 | 10.6% | 15,649 | 16.4% |
| 335 | Electrical Equipment, Appliance, and Component Manufacturing | 110 | 3.1% | 3,493 | 3.7% |
| 336 | Transportation Equipment Manufacturing | 78 | 2.2% | 12,980 | 13.6% |
| 337 | Furniture and Related Product Manufacturing | 146 | 4.1% | 2,282 | 2.4% |
| 339 | Miscellaneous Manufacturing | 589 | 16.7% | 9,504 | 9.9% |
| | TOTAL | 3,525 | 100.0% | 95,637 | 100.0% |

Source: Dun and Bradstreet Hoover's Business Data (2014)

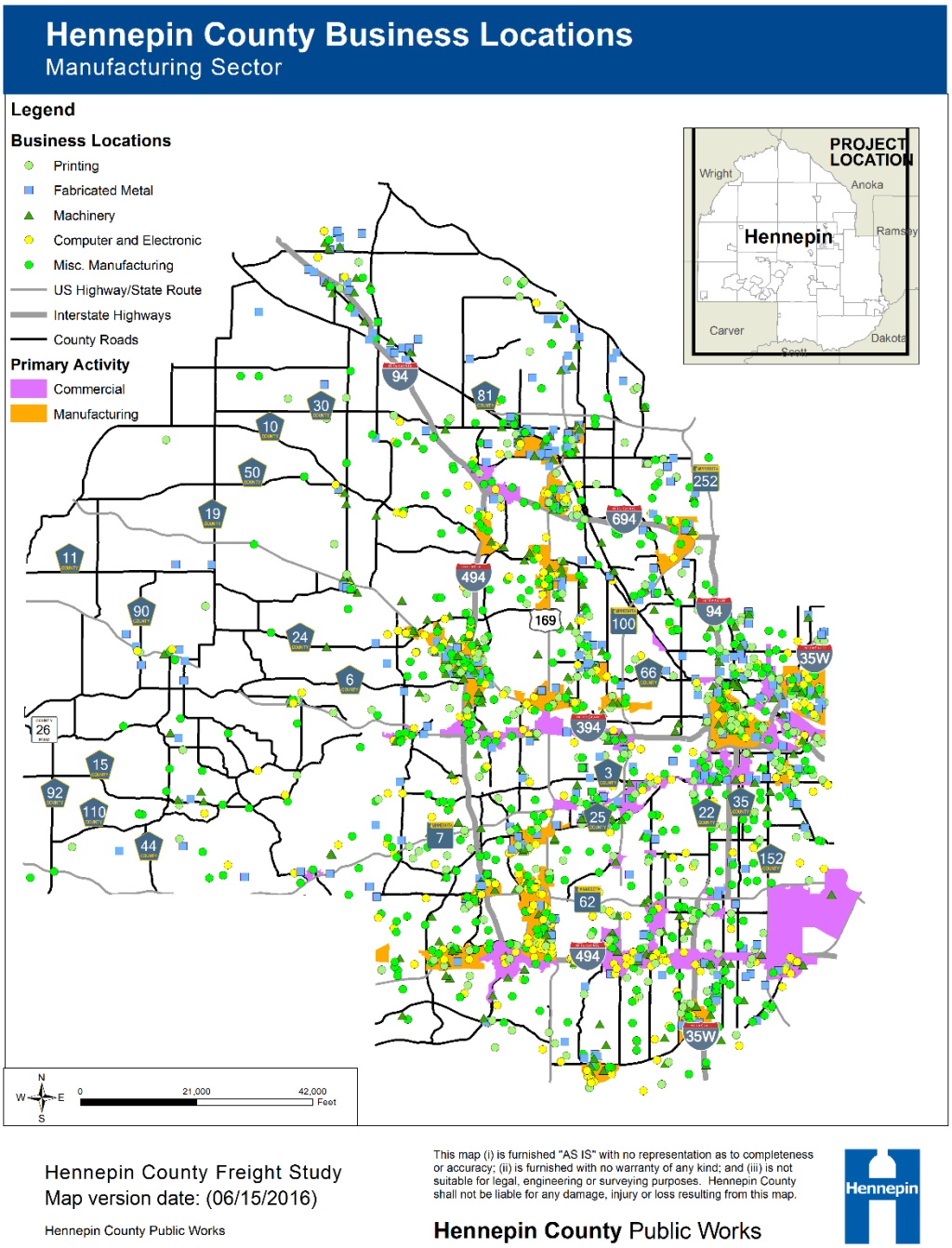
Table 11 features the top businesses in the County for the three highest employing manufacturing sectors: transportation equipment, computer and electronic product, and machinery. Honeywell International has a strong presence in the County, with nearly 10,000 employees in two of the top sectors. In addition, Graco has 8 primary manufacturing facilities with nearly 2,200 employees and Starkey Laboratories has one primary manufacturing facility employing 1,700 employees in the County.

**Table 11: Top Manufacturing Businesses by Number of Employees**

| NAICS Industry Category | Business Name | No. Top Facilities | No. Employees |
|---|---|---|---|
| (336) Transportation Equipment Manufacturing | 1. Honeywell International Inc. | 2 | 8,697 |
| | 2. Graco, Inc. | 1 | 1,000 |
| | 3. Donaldson Company Inc. | 1 | 800 |
| | 4. Polaris Industries, Inc. | 2 | 666 |
| | 5. Eaton Corporation | 1 | 500 |
| (334) Computer and Electronic Product Manufacturing | 1. Starkey Laboratories, Inc. | 1 | 1,700 |
| | 2. Honeywell International Inc. | 5 | 847 |
| | 3. MTS Systems Corporation | 1 | 800 |
| | 4. NCS Pearson Inc. | 1 | 600 |
| | 5. General Dynamics Advanced Information Systems, Inc. | 3 | 593 |
| (333) Machinery Manufacturing | 1. Graco, Inc. | 8 | 1,194 |
| | 2. Tennant Company | 2 | 830 |
| | 3. Caterpillar Paving Products Inc. | 1 | 600 |
| | 4. Nilfisk-Advance, Inc. | 3 | 551 |
| | 5. Thermo King Corporation | 1 | 550 |

Source: Dun and Bradstreet Hoover's Business Data (2014)

Figure 15: Location of Manufacturing Firms and Clusters




Sources: Hennepin County Public Works, Dun and Bradstreet Hoover's Business Data (2014)

## Transportation/Warehousing Firms

This section provides statistics and maps of transportation and warehousing firms in the Hennepin County region. Figure 16 displays the commercial and manufacturing clusters in addition to the location of individual transportation and warehousing firms for eight subsectors, including air, rail, water, truck, and others. The facilities are distributed in a few key areas, specifically the eastern region between Brooklyn Park and Minneapolis, as well as the southern region near Bloomington and Hopkins.

Table 12 displays the business and employment statistics for each transportation and warehousing subsector. In total, there are nearly 22,000 people employed at 1,365 businesses in the County. The most number of transportation and warehousing businesses are the support activities for transportation sector, nearly 40 percent of all sector businesses. Truck transportation has the second-highest number of businesses, totaling 29 percent. Employment is also highest in the support activities for transportation sector with 25 percent of all transportation jobs in the County, followed by truck transportation 20 percent), couriers and messengers (19 percent), and transit and ground passenger transportation (11 percent).

**Table 12: 3-Digit Business and Employment, Transportation and Warehousing Sector**

| NAICS Code | 3-Digit Description | No. Businesses | % of Sector Total | No. Employees | % of Sector Total |
|---|---|---|---|---|---|
| 481 | Air Transportation | 34 | 2.5% | 1,577 | 7.2% |
| 482 | Rail Transportation | 8 | 0.6% | 631 | 2.9% |
| 483 | Water Transportation | 5 | 0.4% | 26 | 0.1% |
| 484 | Truck Transportation | 396 | 29.0% | 4,339 | 19.9% |
| 485 | Transit and Ground Passenger Transportation | 194 | 14.2% | 2,335 | 10.7% |
| 487 | Scenic and Sightseeing Transportation | 2 | 0.1% | 22 | 0.1% |
| 488 | Support Activities for Transportation | 543 | 39.8% | 5,466 | 25.0% |
| 491 | Postal Service | 37 | 2.7% | 1,021 | 4.7% |
| 492 | Couriers and Messengers | 48 | 3.5% | 4,190 | 19.2% |
| 493 | Warehousing and Storage | 98 | 7.2% | 2,241 | 10.3% |
| | TOTAL | 1,365 | 100.0% | 21,848 | 100.0% |

Source: Dun and Bradstreet Hoover's Business Data (2014)

Table 13 features the top businesses in the County for the three highest employing transportation and warehousing sectors: support activities for transportation, truck transportation, and couriers and messengers. United Parcel Service (UPS) has a strong presence in the County, with 3,500 employees in the couriers and messengers sector. Supervalu Transportation, the grocery chain, also employs a high number of people (2,300) at its one facility in the County. In addition, C.H. Robinson has eight

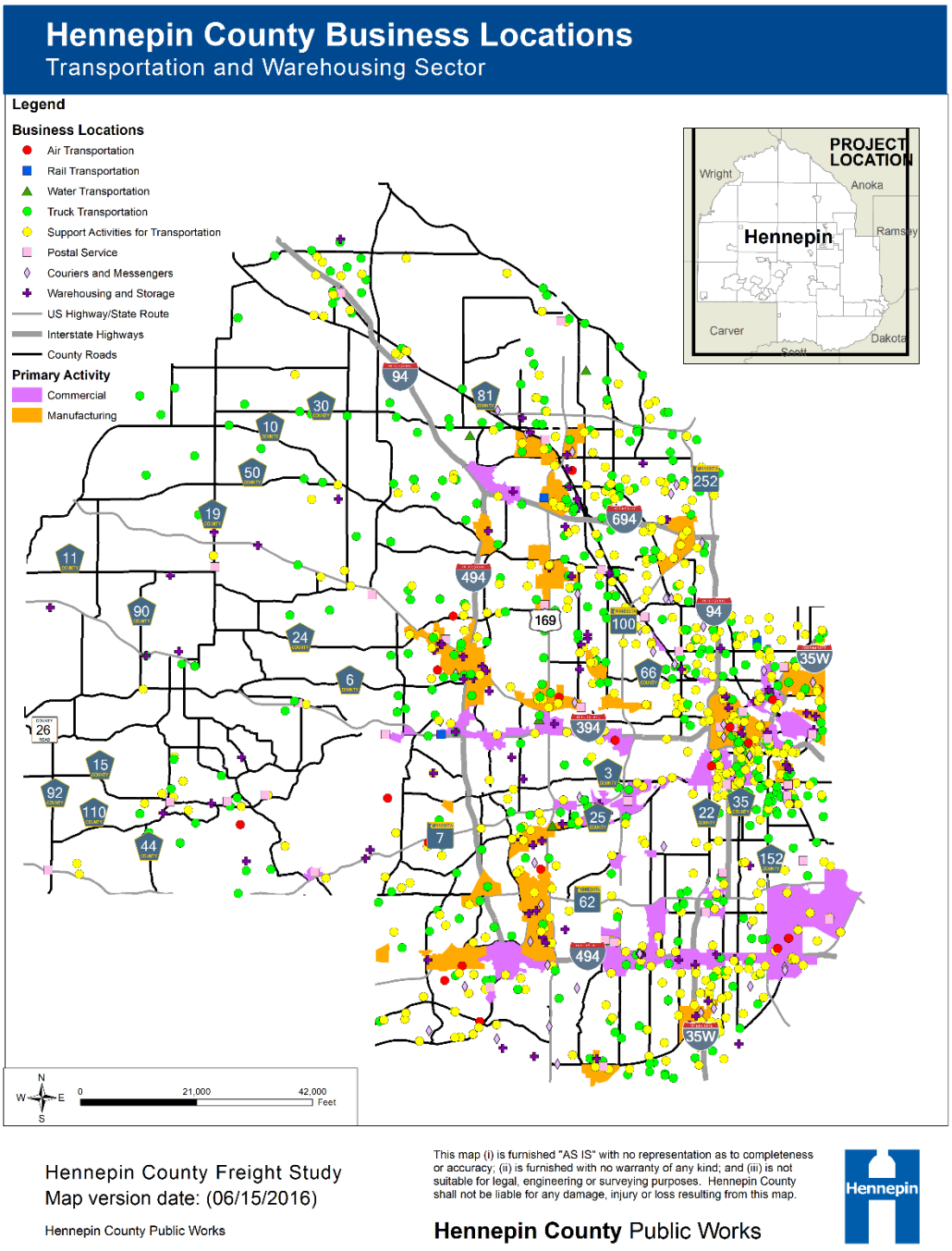
facilities that employ over 946 people, making it the largest provider of support activities for transportation in the County.

**Table 13: Top Transportation and Warehousing Businesses by Number of Employees**

| NAICS Industry Category | Business Name | No. Top Facilities | No. Employees |
|---|---|---|---|
| (488) Support Activities for Transportation | 1. C.H. Robinson | 8 | 946 |
| | 2. Loram Rail Services LLC | 1 | 400 |
| | 3. Signature Flight Support Corp | 1 | 388 |
| | 4. Stan Koch & Sons Trucking | 1 | 300 |
| | 5. Federal Aviation Administration | 7 | 270 |
| (484) Truck Transportation | 1. Supervalu Transportation, Inc | 1 | 2,300 |
| | 2. Xrs Corporation | 1 | 150 |
| | 3. DAKT Enterprises, Inc | 1 | 120 |
| | 4. AAA Movers Inc of Minnesota | 2 | 92 |
| | 5. Northstar Logistics, Inc. | 1 | 60 |
| (492) Couriers and Messengers | 1. United Parcel Service, Inc. | 1 | 3,500 |
| | 2. Twin Courier Corp | 1 | 175 |
| | 3. Federal Express Corp | 1 | 100 |
| | 4. Response Delivery, Inc. | 1 | 90 |
| | 5. Greyhound Lines, Inc. | 1 | 70 |

Source: Dun and Bradstreet Hoover's Business Data (2014)

Figure 16: Location of Transportation and Warehousing Firms and Clusters




Sources: Hennepin County Public Works, Dun and Bradstreet Hoover's Business Data (2014)

## Wholesale Trade Clusters

This section provides statistics and maps of wholesale trade firm locations in the Hennepin County region. Figure 17 displays the commercial and manufacturing clusters in relation to the three wholesale trade sectors: merchant wholesalers (durables), merchant wholesalers (non-durables), and wholesale electronic marketing/agents/brokers. These facilities are widely distributed throughout the eastern half of the county, particularly near Minneapolis.

Table 13 presents the business and employment information for the three subsectors of the wholesale trade sector. In total, there are over 45,000 people employed at 3,718 businesses in the County. Merchant wholesalers (durable goods) have the most number of businesses (67 percent) and employees (62 percent). According to NAICS definitions, these durable goods products are goods such as motor vehicles, furniture, construction materials, household-type appliances, sporting goods, and other items with a life expectancy of three years or more. Merchant wholesalers (nondurable goods) have 32 percent of businesses and 38 percent of wholesale jobs in the County. Nondurable goods are products such as chemical products, drugs, textiles, apparel, groceries, flowers, alcohol and tobacco products, magazines, and other items with a life expectancy of less than three years. The remaining sector, wholesale electronic markets, comprises a highly insignificant portion of economic activity in the County.

**Table 14: 3-Digit Business and Employment, Wholesale Trade Sector**

| NAICS Code | 3-Digit Description | No. Businesses | % of Total | No. Employees | % of Total |
|---|---|---|---|---|---|
| 423 | Merchant Wholesalers, Durable Goods | 2,507 | 67.4% | 28,130 | 62.2% |
| 424 | Merchant Wholesalers, Nondurable Goods | 1,204 | 32.4% | 17,060 | 37.7% |
| 425 | Wholesale Electronic Markets, Agents, and Brokers | 7 | 0.2% | 12 | 0.0% |
| | TOTAL | 3,718 | 100.0% | 45,202 | 100.0% |

Source: Dun and Bradstreet Hoover's Business Data (2014)

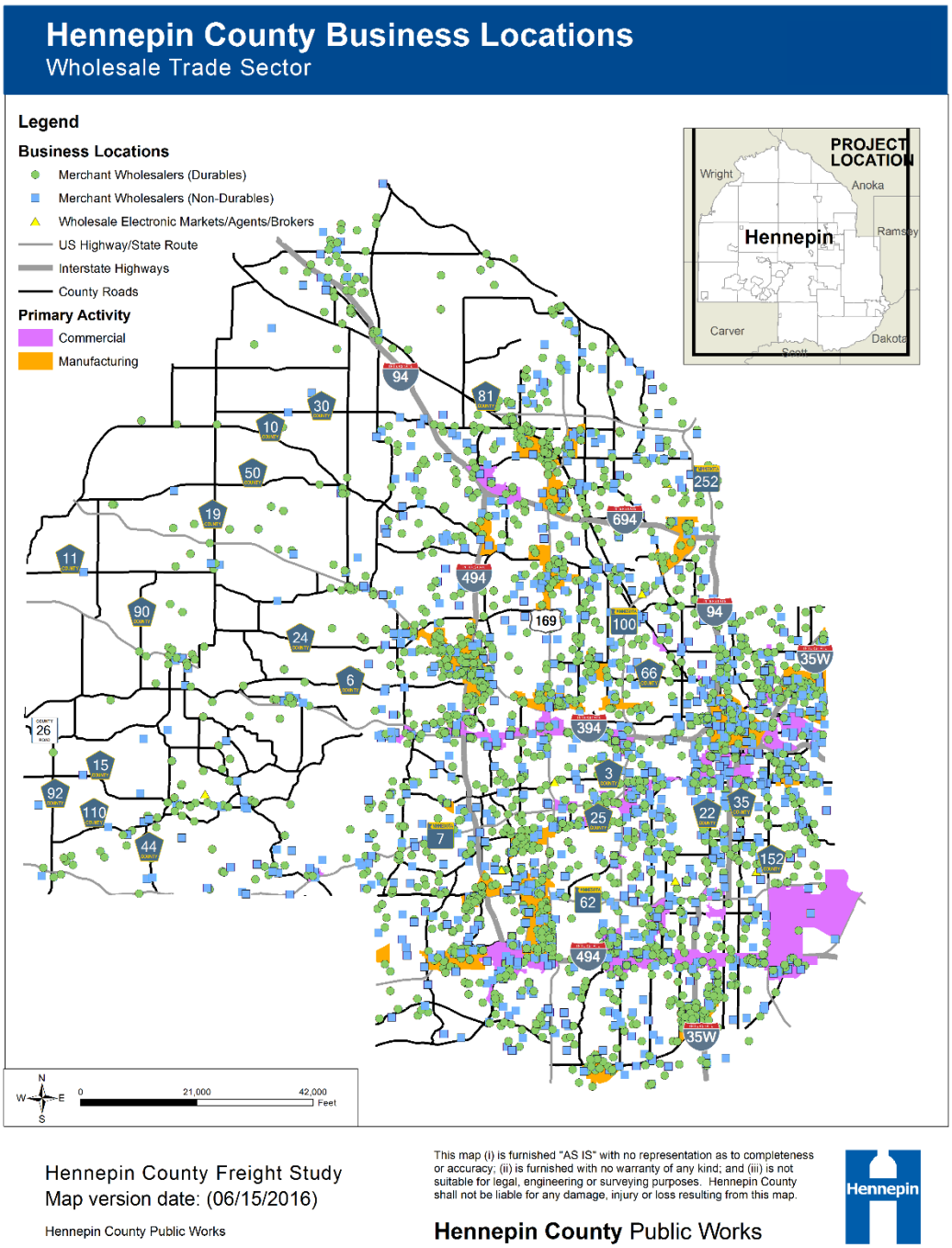
Table 14 features the top businesses in the County for the two highest employing wholesale trade sectors: merchant wholesalers for durable goods and merchant wholesalers for non-durable goods. Cargill, Inc. has a strong presence in the County, with 3,434 employees in the non-durable goods sector. In addition, Entronix International, Sterilmed, and Grocery Supply Acquisition each have one primary merchant wholesaler facility with 600 or greater employees in the County.

**Table 15: Top Wholesale Trade Businesses by Number of Employees**

| NAICS Industry Category | Business Name | No. Top Facilities | No. Employees |
|---|---|---|---|
| (423) Merchant Wholesalers, Durable Goods | 1. Ziegler Inc. | 1 | 790 |
| | 2. Entronix International Inc | 1 | 600 |
| | 3. Sterilmed, Inc. | 1 | 500 |
| | 4. Starkey Laboratories, Inc. | 1 | 417 |
| | 5. Cox Automotive, Inc. | 1 | 350 |
| (424) Merchant Wholesalers, Nondurable Goods | 1. Cargill, Inc | 6 | 3,434 |
| | 2. Grocery Supply Acquisition | 1 | 600 |
| | 3. Wincom Systems, Inc | 1 | 500 |
| | 4. Unisource Worldwide, Inc | 1 | 480 |
| | 5. East Asian Trading Company | 1 | 355 |

Source: Dun and Bradstreet Hoover's Business Data (2014)

Figure 17: Location of Wholesale Trade Firms and Clusters




Sources: Hennepin County Public Works, Dun and Bradstreet Hoover's Business Data (2014)

## Retail Clusters

This section provides statistics and maps of retail firms in the Hennepin County region. Figure 18 displays the commercial and manufacturing clusters in addition to the location of individual retail trade businesses for six subsectors, including motor vehicle and parts dealers, electronics and appliance stores, food and beverage stores, health and personal care stores, clothing and clothing accessory stores, and miscellaneous store retailers. The retail stores are distributed in a few key areas, specifically around downtown Minneapolis in the east, as well as the southern region.

Table 16 presents the business and employment information for the subsectors of the retail trade sector. In total, there are over 79,000 people employed at 6,542 businesses in the County. Miscellaneous store retailers have the most number of locations in the County, comprising 18 percent of retail stores. These types of retailers include stores with unique characteristics like florists, used merchandise stores, pet stores, and other store retailers. There are also a high number of clothing and clothing accessory stores (15 percent) and food and beverage stores (14 percent). Employment in the retail industry is highest in general merchandise stores; one out of every five retail employees works in this sector. Food and beverage stores also employ a significant amount of people, at 17 percent of retail employees in the County.

**Table 16: 3-Digit Business and Employment, Retail Sector**

| NAICS Code | 3-Digit Description | No. Businesses | % of Total | No. Employees | % of Total |
|---|---|---|---|---|---|
| 441 | Motor Vehicle and Parts Dealers | 476 | 7.3% | 7,447 | 9.4% |
| 442 | Furniture and Home Furnishings Stores | 421 | 6.4% | 3,336 | 4.2% |
| 443 | Electronics and Appliance Stores | 442 | 6.8% | 3,459 | 4.4% |
| 444 | Building Material and Garden Equipment and Supplies Dealers | 383 | 5.9% | 5,208 | 6.6% |
| 445 | Food and Beverage Stores | 886 | 13.5% | 13,711 | 17.3% |
| 446 | Health and Personal Care Stores | 490 | 7.5% | 6,359 | 8.0% |
| 447 | Gasoline Stations | 177 | 2.7% | 1,548 | 1.9% |
| 448 | Clothing and Clothing Accessories Stores | 956 | 14.6% | 7,236 | 9.1% |
| 451 | Sporting Goods, Hobby, Musical Instrument, and Book Stores | 542 | 8.3% | 4,244 | 5.3% |
| 452 | General Merchandise Stores | 216 | 3.3% | 16,035 | 20.2% |
| 453 | Miscellaneous Store Retailers | 1,184 | 18.1% | 5,931 | 7.5% |
| 454 | Nonstore Retailers | 369 | 5.6% | 4,890 | 6.2% |
| | TOTAL | 6,542 | 100.0% | 79,404 | 100.0% |

Source: Dun and Bradstreet Hoover's Business Data (2014)

Table 17 features the top businesses in the County for the three highest employing retail sectors: general merchandise stores, food and beverage stores, and motor vehicle parts and dealers. Target has a

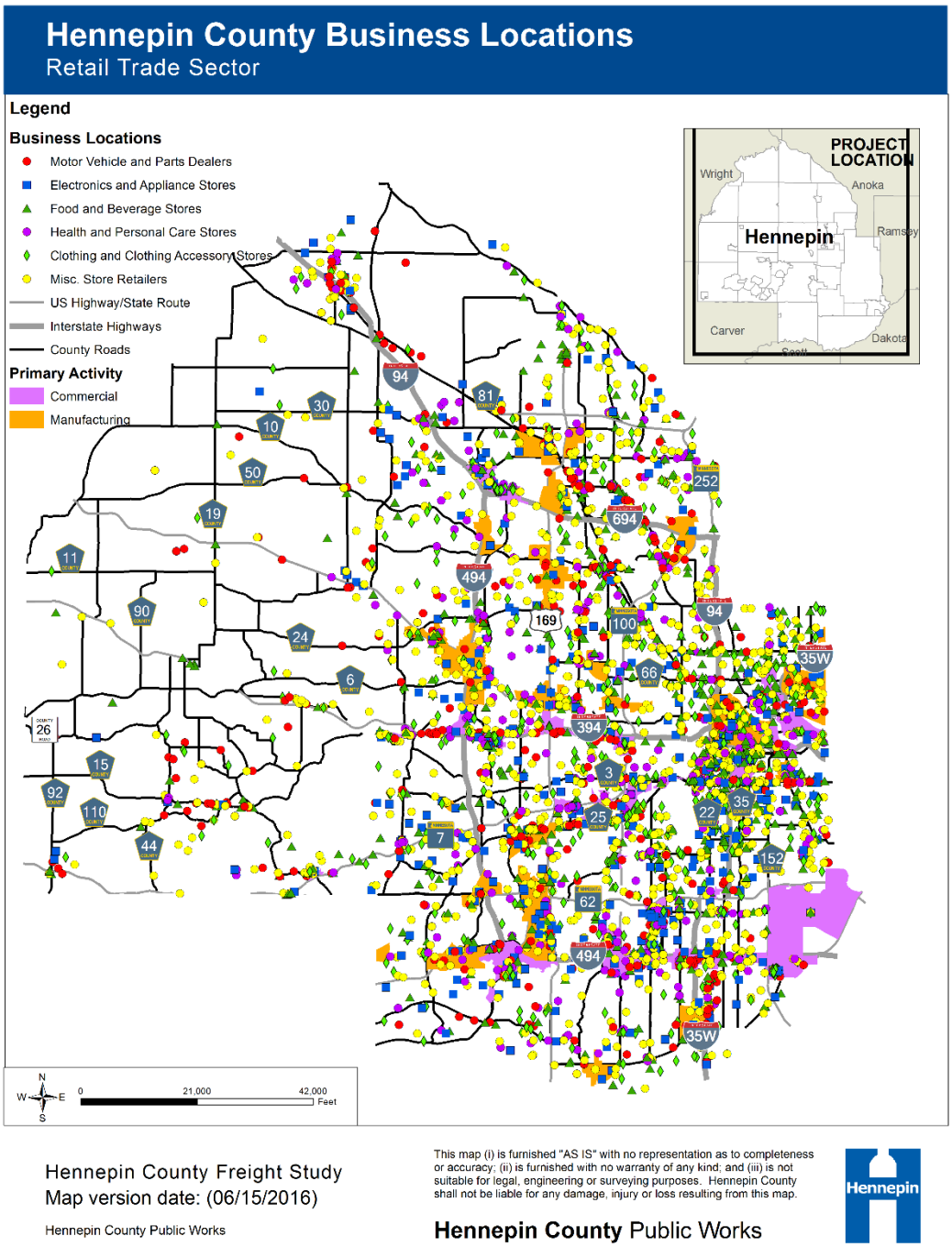
strong presence in the County, with over 8,000 employees in 36 stores throughout the County. Macy's and Wal-Mart also employ over 1,000 people locally in their stores. In the food and beverage industry, Supervalu, Cub Foods, Jerry's Enterprises, and Roundy's Supermarkets all employ over 1,000 employees each at 32 combined facilities. Finally, Metropolitan Corporation is the most significant motor vehicle and parts dealer, with 370 employees working at 7 retail locations.

**Table 17: Top Retail Businesses by Number of Employees**

| NAICS Industry Category | Business Name | No. Top Facilities | No. Employees |
|---|---|---|---|
| (452) General Merchandise Stores | 1. Target Stores/Target Corp. | 36 | 8,013 |
| | 2. Macy's | 7 | 1,472 |
| | 3. Wal-Mart Stores, Inc. | 5 | 1,130 |
| | 4. Kohl's Department Stores, Inc. | 8 | 964 |
| | 5. J.C. Penny Corporation, Inc. | 3 | 715 |
| (445) Food and Beverage Stores | 1. Supervalu Inc. | 7 | 1,565 |
| | 2. Cub Foods, Inc. | 9 | 1,231 |
| | 3. Jerry's Enterprises, Inc. | 7 | 1,126 |
| | 4. Roundy's Supermarkets, Inc. | 9 | 1,057 |
| | 5. Lunds, Inc. | 7 | 599 |
| (441) Motor Vehicle and Parts Dealers | 1. Metropolitan Corporation | 7 | 370 |
| | 2. Motors Management Corp | 3 | 283 |
| | 3. Lupient Oldsmobile Co | 1 | 240 |
| | 4. Brookdale Motor Sales, Inc | 1 | 200 |
| | 5. Advance Auto Parts, Inc. | 1 | 170 |

Source: Dun and Bradstreet Hoover's Business Data (2014)

Figure 18: Location of Retail Trade Firms and Clusters




Sources: Hennepin County Public Works, Dun and Bradstreet Hoover's Business Data (2014)

## CASE STUDY AREAS OF SIGNIFICANT FREIGHT ACTIVITY

In addition to the clusters of individual industries throughout the County, there are specific areas that have high concentrations of freight-generating industries. These areas are important because they serve as centers for both employment as well as the generation of truck trips in the County. This section will describe several "case study" areas that through analysis of freight clusters and firm locations that are identified to have significant freight activity in the Hennepin County region. The Case Studies are:

- Brooklyn Park: US 169 and CSAH 109
- Maple Grove: CSAH 81 and CSAH 109
- Plymouth: I-494 and TH 55
- Rogers: I-94 and TH 101

Three of these case studies – Brooklyn Park, Maple Grove, and Plymouth – were selected because they were identified by DEED as clusters of high economic activity. The last cluster, Rogers, was identified by the project team as an emerging area of industrial and economic activity. The infrastructure and businesses in the four case study areas are described in more detail in this section.

## Brooklyn Park: US 169 and CSAH 109

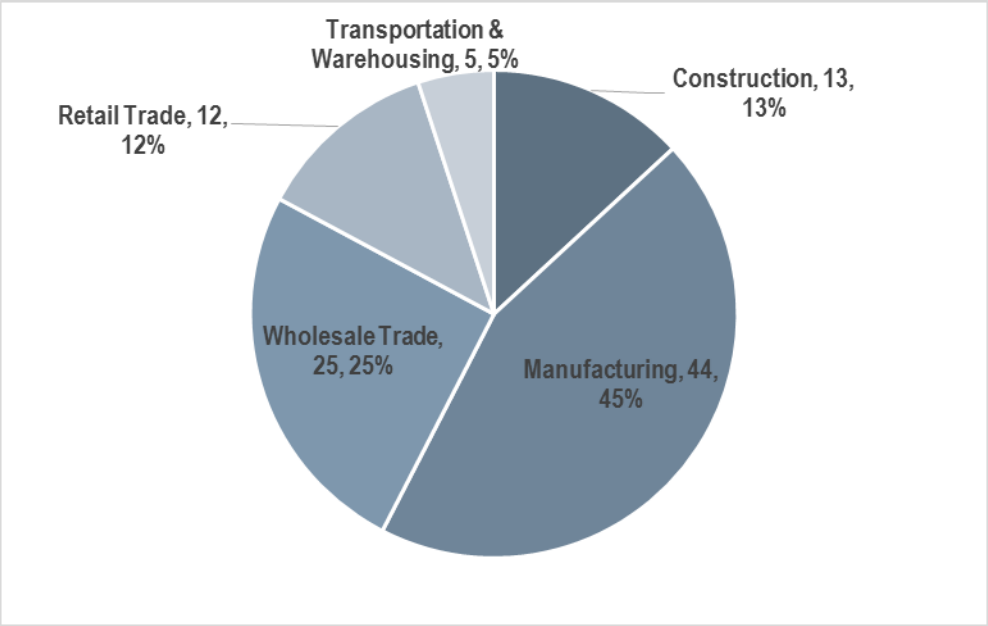
The first notable case study is near the intersection of US 169 and CSAH 109 in the northeast portion of the County, in the town of Brooklyn Park, which is approximately a 25-minute drive from downtown Minneapolis. US 169 borders the western portion of the case study area, and CSAH 109 borders the northern portion. It is encompassed by residential neighborhoods and agricultural properties. Figure 19 presents an aerial view of the site, which is outlined in orange to show the boundary of this manufacturing cluster. The majority of the facilities within the cluster are manufacturing sites, but there several transportation and warehousing facilities as well. There is also BNSF railroad track that runs on the west side of CSAH 81, southwest of the Brooklyn Park cluster. The County road infrastructure critical to access this site includes: CSAH 109 (85th Ave. N / Weaver Lake Rd.), CSAH 81, CSAH 30 (93rd Ave. N), and CR 202 (Zachary Ln. N).

**Figure 19: Aerial View of Brooklyn Park Cluster**


Source: ESRI World Imagery, ArcGIS map viewer, Minnesota Department of Employment and Economic Development (DEED)

The Brooklyn Park cluster has firms from a wide variety of industry sectors, including non-freight-intensive sectors such as administrative, accommodation and food service, professional and technical services, among others. However, over half of the companies are in freight-intensive sectors, as shown in Figure 20. Manufacturing companies comprise 27 percent of all companies in this cluster, and 45 percent of the freight-intensive sectors. Wholesale trade companies are also strongly represented in this cluster, comprising 25 percent of the freight-intensive sectors.

**Figure 20: Companies by Freight-Intensive Industry, Brooklyn Park Cluster**




Source: Dun and Bradstreet Hoover's Business Data (2014), Minnesota Department of Employment and Economic Development (DEED)

Figure 21 presents the number of employees for each freight-intensive sector in the cluster. Manufacturing and wholesale trade employ the most number of people, with 989 and 1,004 employees each, respectively. Retail trade is also an important source of employment in this cluster, with 787 employees. Although the construction and transportation/warehousing sectors have a presence in this cluster, they do not employ a significant number of people at these facilities.

**Figure 21: Employees by Freight-Intensive Industry, Brooklyn Park Cluster**


Source: Dun and Bradstreet Hoover's Business Data (2014), Minnesota Department of Employment and Economic Development (DEED)

There are several companies that dominate employment in the Brooklyn Park cluster, as shown in Table 18. Unisource Worldwide employs 480 people in its manufacturing facility within the cluster, followed by Medical Arts Press' 460 employees in its retail facility. Southern Graphic Systems also has facilities for professional, scientific, and technical services, employing 200 people. Target Printing Services, which is part of the larger Target Brands Company, also has a facility devoted to manufacturing services that employs 180 people.

**Table 18: Top Five Companies by Number of Employees, Brooklyn Park Cluster**

| Top 5 Companies | No. Cluster Employees | Industry |
|---|---|---|
| Unisource Worldwide, Inc. | 480 | Manufacturing |
| Medical Arts Press, Inc. | 460 | Retail Trade |
| Southern Graphic Systems, LLC | 200 | Professional, Scientific, and Technical Services |
| Target Printing Services | 180 | Manufacturing |
| Great Northern-Twin Cities, LLC | 161 | Administration |

Source: Dun and Bradstreet Hoover's Business Data (2014), Minnesota Department of Employment and Economic Development (DEED)

## Maple Grove: CSAH 81 and CSAH 109

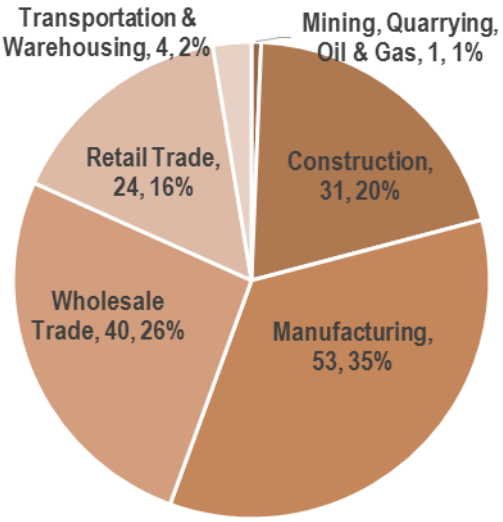
The next case study is near the intersection of CSAH 81 (Bottineau Blvd) and CSAH 109 (85th Ave. N / Weaver Lake Rd.) in the northeast portion of the County, in the town of Maple Grove, which is approximately a 20-minute drive from downtown Minneapolis. CSAH 81 borders the eastern portion of the case study area, and CSAH 109 borders the southern portion. It is encompassed by residential neighborhoods and an asphalt production site. Figure 22 presents an aerial view of the site, which is outlined in orange to show the boundary of this manufacturing cluster. The majority of the facilities within the cluster are manufacturing sites, but there are several transportation and warehousing facilities as well. There is also a BNSF railroad track that runs on the west side of CSAH 81, which borders the eastern side of the Maple Grove cluster. The County-owned road infrastructure critical to access this site includes: CSAH 109, CSAH 81, CSAH 30 (93rd Ave. N), and CR 202 (Zachary Ln. N).

**Figure 22: Aerial View of Maple Grove Cluster**


Source: ESRI World Imagery, ArcGIS map viewer, Minnesota Department of Employment and Economic Development (DEED)

The Maple Grove cluster has firms from a wide variety of industry sectors, including non-freight-intensive sectors such as finance and insurance, health care and social assistance, professional and technical services, among others. However, nearly half of the companies are in freight-intensive sectors, as shown in Figure 23. Manufacturing companies comprise 17 percent of all companies in this cluster, and 35 percent of the freight-intensive sectors. Wholesale trade and construction companies are also strongly represented in this cluster, comprising 26 percent and 20 percent of the freight-intensive sectors, respectively.

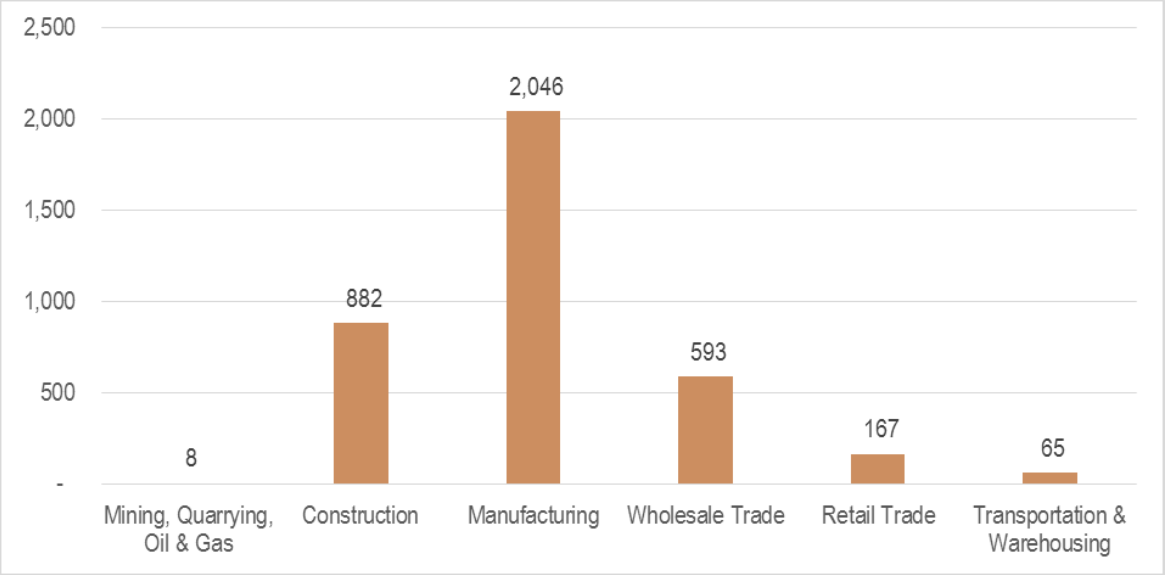
**Figure 23: Companies by Freight-Intensive Industry, Maple Grove Cluster**




Source: Dun and Bradstreet Hoover's Business Data (2014), Minnesota Department of Employment and Economic Development (DEED)

Figure 24 presents the number of employees for each freight-intensive sector in the cluster. Manufacturing employs the most number of people by far, with 2,046 in this cluster alone. Construction is also an important source of employment in this cluster, with 822 employees, followed by wholesale trade (593 employees), and retail trade (167 employees). Although the mining and transportation/warehousing sectors have a presence in this cluster, they do not employ a significant number of people at these facilities.

**Figure 24: Employees by Freight-Intensive Industry, Maple Grove Cluster**




Source: Dun and Bradstreet Hoover's Business Data (2014), Minnesota Department of Employment and Economic Development (DEED)

There are several companies that dominate employment in the Maple Grove cluster, as shown in Table 19. Caterpillar Paving Products employs 600 in its manufacturing facility within the cluster, followed by Garnett Co.'s 272 employees in its manufacturing and information facilities. Cornelius and Conagra Foods both have manufacturing facilities that employ 252 people and 170 people, respectively. Finally, Manor Concrete Construction has a sizable construction facility in this cluster that employs 150 people.

**Table 19: Top Five Companies by Number of Employees, Maple Grove Cluster**

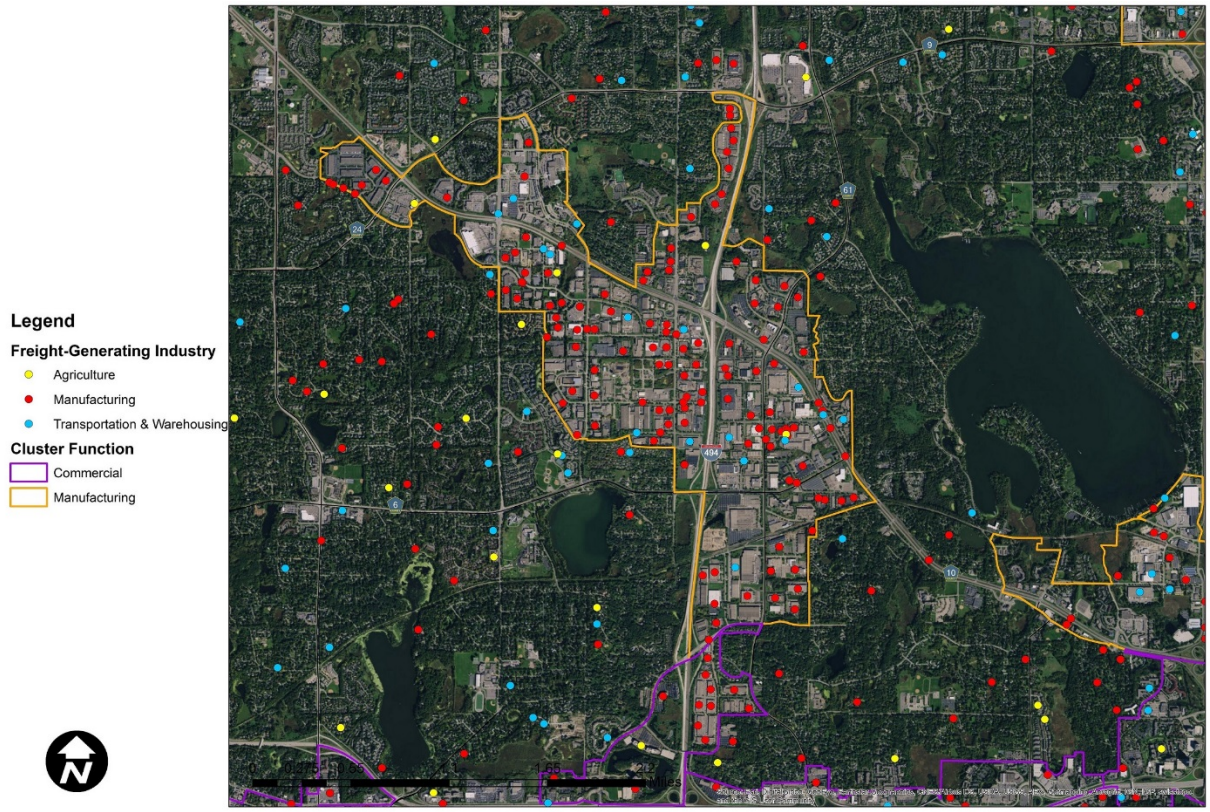
| Top 5 Companies | No. Cluster Employees | Industry |
|---|---|---|
| Caterpillar Paving Products Inc. | 600 | Manufacturing |
| Gannett Co., Inc. | 272 | Manufacturing/Information |
| Cornelius, Inc. | 252 | Manufacturing |
| Conagra Foods, Inc. | 170 | Manufacturing |
| Manor Concrete Construction, Inc. | 150 | Construction |

Source: Dun and Bradstreet Hoover's Business Data (2014) , Minnesota Department of Employment and Economic Development (DEED)

## Plymouth: I-494 and TH 55

The next case study is near the intersection of I-494 and TH 55 in the north-central portion of the County, in the town of Plymouth, which is approximately a 20-minute drive from downtown Minneapolis. I-494 extends north to south through the study area, and TH 55 crosses east to west. It is encompassed by mostly residential neighborhoods. Figure 25 presents an aerial view of the site, which is outlined in orange. This particular cluster is dense with freight-generating facilities, consisting primarily of manufacturing, transportation, and warehousing establishments, as well as a few agriculture facilities. There is also railroad track that cuts through the southern portion of the Plymouth cluster, crossing CSAH 10 (Bush Lake Rd.). The County-owned road infrastructure critical to access this site includes: CSAH 10, CSAH 24 (turns into CSAH 9), CSAH 6 (6th Ave.), CSAH 61 (Northwest Blvd. / Xenium Ln. N), and CSAH 9 (Rockford Rd.).

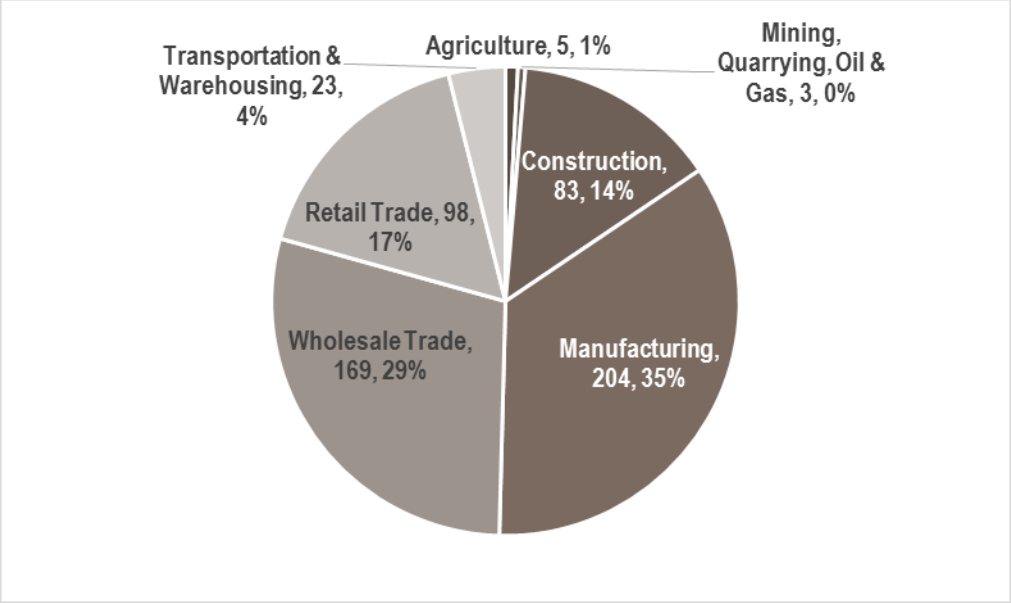
**Figure 25: Aerial View of Plymouth Cluster**




Source: ESRI World Imagery, ArcGIS map viewer, Minnesota Department of Employment and Economic Development (DEED)

The Plymouth cluster has firms from a wide variety of industry sectors, including non-freight-intensive sectors such as finance and insurance, health care and social assistance, administrative, professional and technical services, among others. However, a sizable portion of companies are in freight-intensive sectors, as shown in Figure 26. Manufacturing companies comprise 15 percent of all companies in this cluster, and 35 percent of the freight-intensive sectors. Wholesale trade and retail trade companies are also strongly represented in this cluster, comprising 29 percent and 17 percent of the freight-intensive sectors, respectively. This cluster also has a small element of agricultural and mining activity.

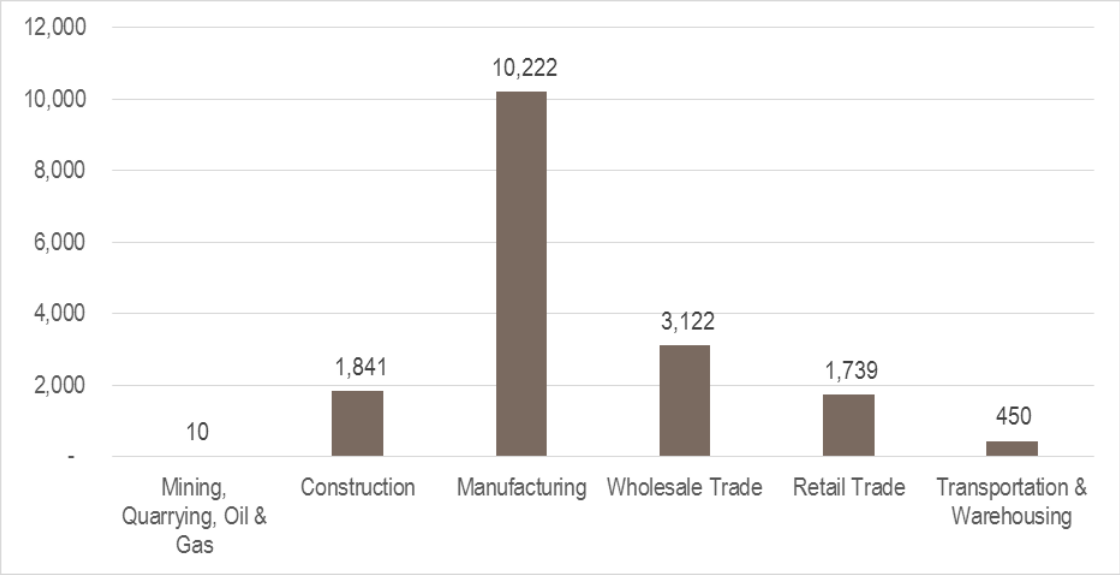
**Figure 26: Companies by Freight-Intensive Industry, Plymouth Cluster**




Source: Dun and Bradstreet Hoover's Business Data (2014), Minnesota Department of Employment and Economic Development (DEED)

Figure 27 presents the number of employees for each freight-intensive sector in the cluster. Manufacturing employs the most number of people by far, with 10,222 in this cluster alone. Wholesale trade is also an important source of employment in this cluster, with 3,122 employees, followed by construction (1,841 employees), and retail trade (1,739 employees). Although the mining and transportation/warehousing sectors have a presence in this cluster, they do not employ a significant number of people at these facilities.

**Figure 27: Employees by Freight-Intensive Industry, Plymouth Cluster**




Source: Dun and Bradstreet Hoover's Business Data (2014), Minnesota Department of Employment and Economic Development (DEED)

There are several companies that dominate employment in the Plymouth cluster, as shown in Table 20. Daikin Applied Americas employs 650 people in its wholesale trade and manufacturing facilities within the cluster, followed by Medivators's 623 employees in its manufacturing facility. Wagner Spray Tech has manufacturing and transportation/warehousing facilities employing 574 people, and Nilfisk-Advance employs 547 people in its manufacturing facility. Finally, Covidien Holding has facilities focusing on manufacturing and health care & social services in this cluster, employing just over 500 people.

**Table 20: Top Five Companies by Number of Employees, Plymouth Cluster**

| Top 5 Companies | No. Cluster Employees | Industry |
|---|---|---|
| Daikin Applied Americas Inc. | 650 | Wholesale Trade/Manufacturing |
| Medivators Inc. | 623 | Manufacturing |
| Wagner Spray Tech Corp. | 574 | Manufacturing/Transportation & Warehousing |
| Nilfisk-Advance, Inc. | 547 | Manufacturing |
| Covidien Holding Inc. | 504 | Manufacturing/Health Care & Social Services |

Source: Dun and Bradstreet Hoover's Business Data (2014)

## Rogers: I-94 and TH 101

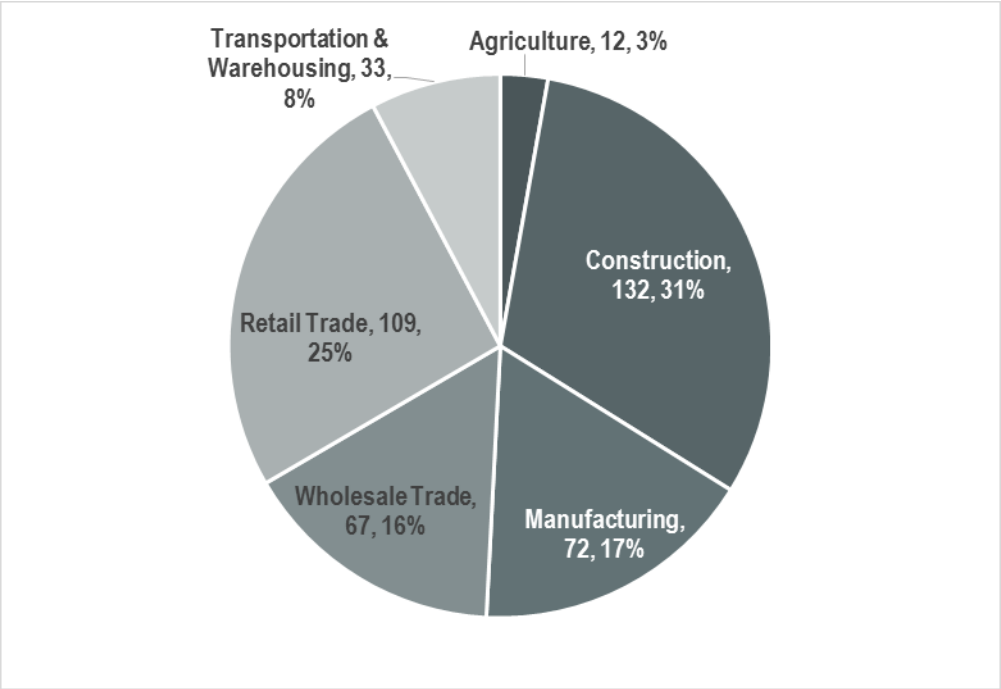
The final case study is near the intersection of I-94 and TH 101 in the northern portion of the County, in the town of Rogers, which is approximately a 30-minute drive from downtown Minneapolis. TH 101 extends north to south through the study area, and I-94 crosses east to west. It is encompassed by residential neighborhoods and agricultural land. Figure 28 presents an aerial view of the site. This cluster was not identified by DEED, but contains a rapidly growing mix of manufacturing, transportation and warehousing, and agriculture facilities. There is also a BNSF rail line that runs along the west side of CSAH 81, which is along the western border of the Rogers cluster. The County-owned infrastructure critical to access this site includes: CSAH 144 (141st Ave. N), CSAH 101 & 13 (Brockton Ln. N), CSAH 81 (Industrial Blvd. and Main St.), CSAH 150 (Main St.), CSAH 116 (Territorial Rd.).

**Figure 28: Rogers Area Cluster with Freight-Generating Industries**


Source: ESRI World Imagery, ArcGIS map viewer, Minnesota Department of Employment and Economic Development (DEED)

The Rogers cluster has firms from a wide variety of industry sectors, including non-freight-intensive sectors such as health care and social assistance, administrative, professional and technical services, among others. However, a sizable portion of companies are in freight-intensive sectors, as shown in Figure 29. Construction companies comprise 31 percent, the highest of the freight-intensive sectors. Retail trade and manufacturing companies are also strongly represented in this cluster, comprising 25 percent and 17 percent of the freight-intensive sectors, respectively. This cluster also has a small element of agricultural activity.

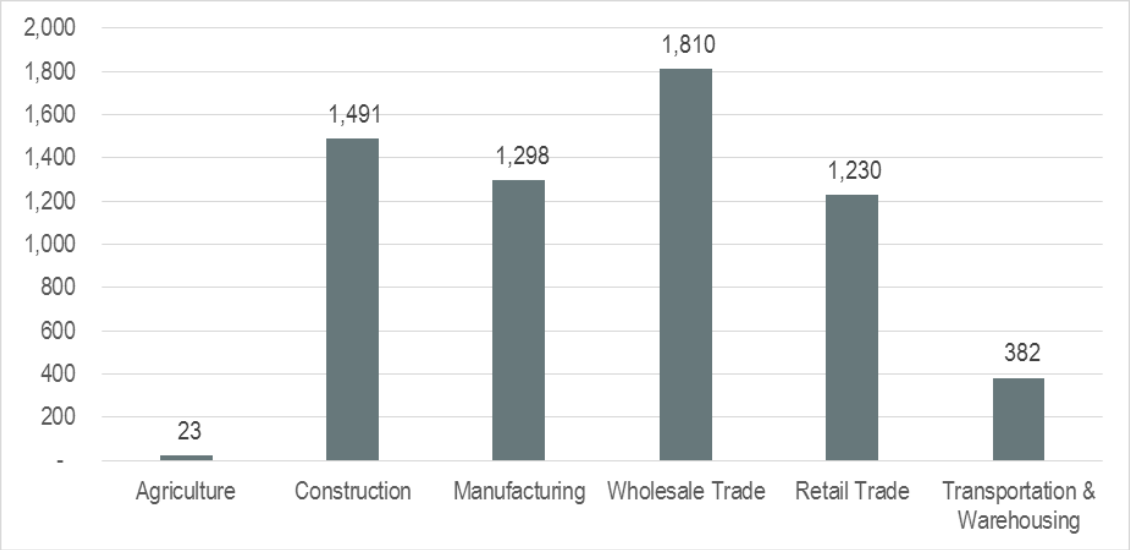
**Figure 29: Companies by Freight-Intensive Industry, Rogers Cluster**




Source: Dun and Bradstreet Hoover's Business Data (2014), Minnesota Department of Employment and Economic Development (DEED)

Figure 30 presents the number of employees for each freight-intensive sector in the cluster. Wholesale trade employs the most number of people, with 1,810 in this cluster alone. Construction is also an important source of employment in this cluster, with 1,491 employees, followed by manufacturing (1,298 employees), and retail trade (1,230 employees). Although the agriculture and transportation/warehousing sectors have a presence in this cluster, they do not employ a substantial number of people at these facilities.

**Figure 30: Employees by Freight-Intensive Industry, Rogers Cluster**




Source: Dun and Bradstreet Hoover's Business Data (2014), Minnesota Department of Employment and Economic Development (DEED)

There are several companies that dominate employment in the Interstate 495 and Highway 55 cluster, as shown in Table 21. Entronix International employs 600 people in its wholesale trade facility within the cluster, followed by Graco's 440 employees in its manufacturing facility. Veit & Company has construction and administrative facilities employing 350 people, and Reinhart Foodservice employs 300 in its wholesale trade facility. Finally, Archway Marketing Holdings has a facility focusing on professional, scientific, and technical services in this cluster, employing just over 200 people.

**Table 21: Top Five Companies by Number of Employees, Rogers Cluster**

| Top 5 Companies | No. Cluster Employees | Industry |
|---|---|---|
| Entronix International Inc | 600 | Wholesale Trade |
| Graco Inc. | 440 | Manufacturing |
| Veit & Company, Inc. | 350 | Construction/Administrative |
| Reinhart Foodservice, L.L.C. | 300 | Wholesale Trade |
| Archway Marketing Holdings, Inc. | 203 | Professional, Scientific, and Technical Services |

Source: Dun and Bradstreet Hoover's Business Data (2014), Minnesota Department of Employment and Economic Development (DEED)

# Stakeholder Outreach

Key stakeholders who are users of the freight network in Hennepin County were engaged in structured interviews to determine their use of the freight network, needs in the region, and policy/regulatory concerns. In conjunction with Hennepin County (HC), Cambridge Systematics (CS) identified key stakeholders with varying roles, including public sector/economic agencies, industry associations, motor carriers, third party logistics providers, bulk shippers, among others. A summary of findings from the interviews is included below, followed by a summary of the stakeholder outreach process.

In addition, with the help of the Minnesota Trucking Association (MTA), CS distributed a survey to MTA members requesting information on company operations, key origins and destinations, major corridors, bottlenecks, and expectations for the future. The survey responses are also integrated into the following section.

## SUMMARY OF STAKEHOLDER OUTREACH FINDINGS

This section describes key themes from the survey responses and interviews with stakeholders of Hennepin County's transportation network. The key themes that emerged from the stakeholder interviews are the following:

- Hennepin County serves as a regional trade center, and has a growing role in regional and global supply chains. Shifts in industrial trends and congestion and land use policies in the urban core are shifting freight-related development from Minneapolis to suburban and rural areas of Hennepin County, as well as adjacent counties to the north and west.
- Trucks are key for inbound, outbound, and through movements, as well as serving as first and last mile connections to multimodal freight hubs. Although the infrastructure, connectivity, and congestion levels in the County were generally reported as adequate to good as compared to other urban areas, the Interstates and Highways 100 and 169 were cited by several respondents as areas of high concern.
- In terms of policy and regulation, respondents were primarily concerned about national or state issues such as labor shortages, safety regulations, and truck size and weight limitations. Few local policies or regulations were mentioned as areas of concern, but some respondents noted concerns with the sudden implementation of tolls for freight vehicles, which has occurred recently in some states. Moreover, some noted local land use and zoning policies in Minneapolis which are leading to the de-industrialization of the urban core.
- Inadequate rail and intermodal rail access were listed as the top concerns regarding multimodal transportation infrastructure. Some respondents currently rely on draying to Chicago for both rail and air service, which leads to increased truck traffic on the roadways, noted that they would prefer increased multimodal service in the Minneapolis region.

### Hennepin County as a Regional and Global Center

Hennepin County is serving a growing role as a regional and global distribution center. As transportation costs have increased in recent years, industries and suppliers have increasingly located distribution centers in the Minneapolis region, serving a territory consisting of Minnesota, the Dakotas, eastern Montana, and to a lesser extent western Wisconsin and Iowa. The Minneapolis region serves as a distribution hub for these regions, as well as home to a large market of industries and customers. Interviewees discussed a number of aspects of the region's connection to the broader world via multimodal connections.

The freight that comes into Minneapolis – St. Paul International Airport (MSP) through a major shipper is distributed throughout the greater metropolitan area and to southern Minnesota and the Omaha market, and Hennepin County serves as a hub for much of this activity. The Twin Cities also continue to be the major regional trade center, and underlie the supply chain strategies of manufacturers and distributors located in Hennepin County and the broader Twin Cities. For example, firms like Quality Bicycle Products (QBP) distribute product nationally and even internationally from their base in the Twin Cities. As such, they must rely on efficient and reliable highway connections to reach major regional markets, as well as air and rail intermodal facilities.

The central location of MSP is considered to be an asset to freight operators in the Twin Cities region for carriers like FedEx. However, air freight has declined or remained flat at MSP in recent years, in part due to local trends such as the departure of Northwest Airlines, but overall mostly reflecting similar trends in air cargo nationwide. International and even some domestic freight is transported via truck to and from O'Hare Airport in Chicago. However, Bemidji Air contracts with United Parcel Service (UPS) to distribute smaller parcels in Minnesota and the upper Midwest territories, often flying off-hours to make these deliveries happen. Rural airports in this region help to connect MSP as an alternative to driving.

There is significant competition for industrial and warehousing development between greater Minnesota and the Twin Cities metropolitan area. Although Minneapolis needs industry in the urban area, many warehousing and other freight-related services are moving from the urban core. Being a major trade center and metropolitan area, there are many distribution centers in the region, including an Amazon facility on Kazota Avenue in Minneapolis to provide same-day delivery. However, the general trend has been for those to be moving out beyond the Twin Cities due to the lack of suitable land in the urban core. For example, Amazon has two facilities in Shakopee and Eagan.

In general, it is difficult to find space in Minneapolis for industrial activity due to both regulatory and space constraints, and the city has not welcomed growth in those types of businesses, though there is still some demand. Currently, the biggest push of industrial development is towards the northwest corner of the County. Rogers has more land available than the urban core, and during the past decade

warehouses and distribution centers (DCs) have begun moving there and to the northwest of Hennepin County. For example, Target has a major non-retail facility in Bloomington, and will begin to operate another major DC in Rogers by May 2016. However, the Rogers area is reportedly lacking in business incentives that are available in other areas, which stakeholders noted may eventually constrain growth in the region. In the southern portion of the county there aren't as many industrial sites available and the necessary infrastructure is missing, making it less attractive to businesses.

Outside the region, the main competitor to serve the MSP market is western Wisconsin. Taxes are lower in Wisconsin, but the lack of proximity to MSP reduces Wisconsin's competitiveness. There are far more Wisconsin residents that work in Minnesota than the other way around.

Another aspect of Hennepin County's position in global supply chains is its location on two major transcontinental rail corridors. Minnesota is a major producer of corn, soybeans, and oats, all of which require shipments to processors across North America and to ports for export. The rail network is critical for transporting these products, the demand for which is highly sensitive to global markets. During periods when demand is high, a considerable volume of commodity traffic will flow through Hennepin County along the transcontinental routes. Regional feeder lines also play an important role in adding locally produced commodities, grain in particular, to this traffic; for example, one rail carrier explained that an addition of another grain loading facility in the region could increase the maximum train volumes to four loaded trains per day through the Twin Cities.

### Key Routes for Trucks in the County

There are several key routes for trucks moving in, out, and through Hennepin County. The County's interstate routes connect the region to major markets, while county and local roads provide first and last mile connections. Interviewees described the types of connections that they used in the region, as well as identifying areas of concern or congestion.

Many shippers use multimodal supply chains to access gateways both in and out of the region, so are reliant on both the roadway and the multimodal network. One interviewee described their supply chain as consisting of products coming inbound via I-35W, and departing the region via I-94 to Chicago where it would be shipped by air to the final destination. Another supply chain consisted of products from Asian producers that are imported through the Puget Sound ports arriving by rail in the Twin Cities, and then being drayed from rail terminals via I-94 and I-35W to a distribution and manufacturing facility, with outbound freight being shipped via truck to the final destination. Rail was not used due to concerns about product damage.

Locally, for many industries the Minneapolis region serves as a distribution hub for areas for the urban area, state, and regionally within a one day trip, approximately to the outskirts of Chicago. One interviewee noted facilities in Arden Hills, Fridley, Plymouth, and Anoka. One logistics firm noted that

their predominant corridors are Minnesota to Texas, Minnesota to Florida, Minnesota to Georgia, and Minnesota to California. Several carriers noted that they place their warehouses and distribution centers strategically in locations that are proximate to the interstate highway network and not overwhelmed with traffic. At present, this includes locations such as Shakopee, Rogers, and Maple Grove.

Congestion on the roadway network was noted as a concern by many interviewees; however, for carriers and shippers moving product in and out of the region, many of the delays noted are not in Hennepin County, but are rather on the congested roadways near Chicago. Locally, roadways such as I-35W and US-69 to France Avenue were noted as having a lot of truck traffic on roadways that are not designed for heavy trucking. Trains crossing Old Shakopee Road at an at-grade crossing in the region were also cited as a concern. When traffic is bad, one interviewee noted using TH 100, US 169, or I-35E to get around these roadblocks.

Table 22 presents the complete list of corridors identified as bottlenecks by interviewees and survey respondents in Hennepin County. Interviewees repeatedly noted significant congestion at the intersection of I-35W and I-494, which adds to freight, consumer, and transportation costs across the community. The Minneapolis Regional Chamber of Commerce considers this intersection to be the most significant chokepoint in the network. One major carrier noted that they avoid I-494 and I-94W completely, and often bypass I-35. They tend to use TH 62, but felt that the existing corridors are not sufficient for their business needs, and experiences delays daily. FedEx main connecting points within Hennepin County are 66th St. and Cedar Ave., I-494 East and West, TH 62, and I-35W.

**Table 22: Roadway Chokepoints in Hennepin County, as Identified by Interviewees**

| Congested Corridor | No. Times Mentioned by Stakeholders |
|---|---|
| I-35W | 5 |
| I-494, both directions | 4 |
| TH 100 | 1 |
| US 169 | 1 |
| US 169 in Shakopee | 1 |
| US 169 / CR 81 Interchange | 2 |
| US 169 / Brooklyn Blvd. | 1 |
| US 169 / I-94 Interchange | 1 |

| Congested Corridor | No. Times Mentioned by Stakeholders |
|---|---|
| I-94 / I-35W Interchange | 2 |
| I-94 through Maple Grove | 2 |
| I-94 through Minneapolis (including Lowry Tunnel) | 3 |
| I-694 / I-94 / TH 252 interchange | 2 |
| I-394 in both directions | 2 |
| I-394 / I-94 Interchange | 1 |
| TH 12 westbound from Wayzata to the county line | 1 |
| University Ave. (TH 47) and 53rd Ave NE in Fridley | 1 |
| Walnut Street to St. Anthony Blvd. to I-35W in St. Anthony | 1 |

Source: Consultant analysis.

### Multimodal Infrastructure

In general, the condition and connectivity of infrastructure in Hennepin County was described as being good or adequate for the needs of industry. Issues by mode are described below.

Highway access in the county is generally good, with traffic moving fluidly in most locations, except for some major interstate and state routes. Some carriers noted traffic delays in and around the urban core, but others noted that the Twin Cities is not as bad as other metropolitan areas, and they do not consider it to be a problem in the region. I-694 was mentioned as a reliable route between warehouses. However, one carrier noted that the stop lights on TH 55 contribute to significant congestion.

Rail access was cited as an issue, as access is becoming increasingly limited in Hennepin County. Currently, the trend is towards consolidated rail, industrial, warehousing and distribution facilities, yet in Hennepin County the existing rail yards are in the urban core, and there is no location available to build a large sized (5 million SF or larger) distribution center or manufacturing industrial park near one of these facilities. Interviewees noted that finding land that size is challenging in Hennepin County, but it would be great for the County to be more aggressive in identifying and securing suitable properties. Twin Cities and Western Railroad noted that one bridge, the Lake Street Bridge in Hennepin County,

has a low clearance (19’ 6’’), prohibiting the transfer of large goods such as windmill blades. In addition, they noted several other bridges that need to be refurbished or replaced due to age.

The lack of intermodal rail service between the Twin Cities and other markets was noted as a concern. Transport via rail is primarily through traffic, and for intermodal, the available lanes are rather limited. Domestic traffic is largely routed through Chicago, with the one direct connection to an export market via the Pacific Northwest. Intermodal goods are routinely drayed to Chicago, instead of being loaded onto rail in the Twin Cities. More than one interviewee cited a longstanding lack of progress in expanding intermodal service options in the region. One interviewee noted several infrastructure opportunities as a result of the Southwest Light Rail Project. Redesigning roads to incorporate grade separation would help ensure safety of rail and motorized vehicles and minimize traffic disruption. Underdeveloped areas in the County could potentially become rail-served with the right planning. If CP or BNSF built an intermodal facility in Minneapolis/St. Paul or Carver County, it could change the dynamics of rail transport in the region.

There was some discussion about air and water freight, but few concerns were raised. MSP Airport has a modest volume of freight activity and access to markets serving the needs of industries and customers in the region. There is some desire for better rail/barge intermodal connectivity for the region, but opportunities for this this would probably not happen in Hennepin County.

### Policy & Regulatory Needs

Several policy and regulatory needs were identified during the interviews with Hennepin County stakeholders. Although many of these are state or national in nature, Hennepin County can play a role in supporting strategies that support freight growth in line with the County’s priorities. Similarly, the County can support land use and zoning strategies that are undertaken at a local level.

Safety was a top concern for all respondents, in particular carriers. Some interviewees noted that they would want to access safety data from the Federal Motor Carriers Safety Administration (FMCSA), however it was also noted that this data can be inconsistent, inaccurate, and used for enforcement inconsistently. It was also noted that the training of law enforcement has been an issue for some carriers. In particular, the definitions for fatigue are seen as arbitrary, which can lead to reputational issues when rules for truck driver fatigue are enforced inconsistently.

The general need for policies and regulations that support an industrial climate was also cited as a top concern. Some carriers noted that the average length of notice that they get from their clients is 48 hours to deliver a shipment, although roughly 30 percent of business is 24 hours or less. The transportation business is reactionary by nature, and there is only so much logistical planning that can be done in this short timeframe. Above all, for businesses serving Hennepin County and beyond, service is king. Given the competitive nature of this business, carriers felt that policy makers need to

understand and appreciate these complexities and refrain from making the process more complicated. In addition, some shippers noted that sudden regulations, particularly a toll or fine, can have a huge impact on their bottom line, though recent instances of this have occurred in other states.

In addition to traffic challenges noted in the previous section, land use in the Metro region was cited as a third area of concern. Industries feel it is difficult to find space in Minneapolis for industrial uses due to regulatory and space constraints. Several interviewees noted that the city has not welcomed growth in heavy industry, which the public sees as noisy and polluting. However, zoning was a strategy noted to help mitigate incompatible uses in the downtown core. Greater MSP noted that the city has many infill opportunities, in addition to some greenfield sites which may be suitable for freight facilities that may serve the city. Additionally, land use was discussed as a component of freight transport, as proactive and well-designed land use strategies can create efficient freight spaces, whereas poor land use planning can disrupt flows and increase congestion. The best freight environment is where flows are balanced between inbound and outbound traffic. For example, building a store which receives inbound shipments next to a manufacturing plant which ships products outbound can create opportunities for logistical synergies.

Several other regulatory issues described by carriers include the allowance of 33-foot trailers, which are currently banned in the State of Minnesota. One carrier noted that they frequently pull two 28-foot trailers, but allowing 33-foot trailers would decrease the number of trailers on the road. The nationwide truck driver shortage was also described as an issue, however not necessarily in the Twin Cities region. In Hennepin County specifically, it is difficult for people living in the urban core to access jobs that are located in the outskirts of the city, where much of the recent development is being built. An improved transit system would help mitigate this issue. One carrier also requested an exit ramp from I-94 to Brockton Lane (located between Rogers and Dayton), in conjunction with a bus line to bring people from the city directly to the job sites in Rogers. Finally, one motor carrier noted one way that technology was hampering the movement of freight through Hennepin County. The carrier opined that the HOV/MnPass lanes was reducing the number of roadways space available to commercial vehicles, contributing to congestion.

## SUMMARY OF STAKEHOLDER OUTREACH PROCESS

Table 23 presents the complete list of target interviews, noting those that participated in this project. After identifying the companies/organizations to interview, Hennepin County sent an initial introduction to the project via email to several target public sector agencies, shippers, and carriers. Interviews were conducted in December 2015 through April 2016.

**Table 23: Stakeholder Outreach Summary**

| Type of Agency/Industry | Company / Organization | Interview Date |
|---|---|---|
| Public sector / economic agencies | Minneapolis Regional Chamber of Commerce | 2/3/16 |
| | Greater MSP | 12/9/15 |
| Industry Associations | Minnesota Trucking Association | 1/16; survey distributed |
| | MN Regional Rail Association | 12/10/15 |
| | Northern Cargo Association | No response |
| Motor Carriers operating in Hennepin County | JB Hunt | Declined |
| | Schneider National | No response |
| | Dart Transit Company | 12/10/15 |
| Integrated carriers | FedEx Ground | 2/23/16 |
| | FedEx Express | 2/10/16 |
| | UPS | No response |
| | U.S. Postal service | No response |
| 3rd party logistics providers | CH Robinson | 12/10/15 |
| | Reviva Logistics / Freight Buddy | 12/18/15 |
| | Koch Logistics | No response |
| | RR Donnelley | No response |
| | Total Logistics Corporation | No response |
| | Kinghorn Logistics Hub (Scannell Properties) | No response |
| | Rail Transfer Inc | No response |
| | Benchmark Logistics | No response |
| | King Solutions Global | No response |
| | XPO Logistics | No response |
| | Priority Courier Experts / VANEX | Responded to Survey |

| Type of Agency/Industry | Company / Organization | Interview Date |
|---|---|---|
| | Midwest Motor Express, Inc. | Responded to Survey |
| Industry – Shippers/distributors with operations in Hennepin County | Amazon | Declined |
| | Target | 4/5/16 |
| | Best Buy | No response |
| | Sysco | No response |
| | Quality Bicycle Products | 12/10/15 |
| | SuperValu, Inc. | No response |
| | Graco | Declined |
| | Murphy Warehouse | No response |
| | Mortenson Construction | No response |
| Industry –bulk shippers | ADM | Declined |
| | General Mills | No response |
| | Cargill | Provided informal comments |
| | Kaufman Container | No response |
| | Liberty Carton | No response |
| Other Modes or Stakeholders | Metropolitan Airports Commission | 2/4/16 |
| | BNSF | No response |
| | Twin Cities and Western Railroad | 2/2/16 |

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