



Danville Freight Study

Prepared for: City of Danville, Illinois

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DANVILLE
ILLINOIS

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Executive Summary

The City of Danville is seeking to leverage the unique multimodal transportation assets in the region to facilitate economic growth. Hanson was engaged to conduct a freight study to determine the feasibility of freight-related development. The primary goals of this freight study are to:

- Identify ways to provide an economic advantage to freight stakeholders;
- Encourage freight-related development and economic growth; and
- Identify locations where investment in multimodal infrastructure is economically justified and feasible.

The analysis of freight data provided the foundation for the freight study. Freight data was obtained from IHS Markit, an industry leader in US freight flow data. The Transearch freight data obtained from IHS Markit consisted of existing freight movements (for calendar year 2017) and projections of 2045 freight movements. Truck freight data was obtained for Vermilion County, which provided information regarding freight entering, leaving, passing through, and moving within the Vermilion County by truck. Similarly, rail freight data was obtained for the Champaign-Urbana Economic Area (CUEA), which provided information regarding freight entering, leaving, passing through, and moving within the CUEA by rail. The freight data did not include any freight movements by air for 2017 or 2045. Several observations can be made regarding the overall composition of the freight data.

- Truck tonnage is expected to increase by 45% from 2017 to 2045.
- Rail tonnage is expected to increase by 79% from 2017 to 2045.
- Freight moved by truck represents 97% of total freight tonnage in 2017 and 96% in 2045.
- Freight moved by rail represents only 3% of total freight tonnage in 2017 and 4% in 2045.

The majority of freight tonnage moved by truck passes through Vermilion County (around 85% of truck freight), as opposed to the much smaller percentage having an origin or destination in Vermilion County. Conversely, the majority of freight tonnage moved by rail in the CUEA has either an origin or destination in the CUEA (around 85% of rail freight), as opposed to passing through the CUEA. Several commodities that have origins/destinations in, or pass through the Danville region and that have significant tonnage were identified. Those commodities with significant tonnage transported by truck consist of the following:

- Grain
- Oil Kernels, Nuts or Seeds
- Broken Stone or Riprap
- Gravel or Sand
- Cereal Preparations
- Misc. Industrial Organic Chemicals
- Misc. Plastic Products
- Primary Iron or Steel Products
- Misc. Waste or Scrap

Commodities identified with significant tonnage transported by rail consist of the following:

- Misc. Industrial Organic Chemicals
- Misc. Industrial Inorganic Chemicals
- Petroleum Refining Products
- Liquefied Gases, Coal, or Petroleum

Intermodal freight (i.e. containerized cargo) represents a very small percentage of the overall truck and rail freight tonnage in Vermilion County and the CUEA, respectively.

As part of this freight study, Hanson reached out to many freight stakeholders in the Danville area. Freight stakeholder outreach provided insight from freight stakeholders in the Danville area regarding perceived freight needs, issues, and constraints. No specific freight needs were identified by stakeholders. Freight transportation issues focused on safety improvements recommended by stakeholders for Lynch Road, a corridor generally surrounded by industrial development. The only freight-related constraint identified by stakeholders was the poor levels of service from the railroads, primarily related to railcar switching at their respective facilities. Overall, freight stakeholders were supportive of freight-related development in the Danville region.

A review of the existing transportation system indicated that the Danville region has many assets that could be beneficial for freight-related development. The three I-74 interchanges in Danville provide direct access to the Interstate Highway System and connect Danville to several major Midwest cities. The two Class I railroads (CSX and Norfolk Southern) and two shortline railroads (Kankakee, Beaverville, & Southern Railroad and Vermilion Valley Railroad) that operate in Danville provide shippers with freight transportation options. The Vermilion Regional Airport could be used for air freight; however, air freight typically consists of high-value products that are relatively small in size, which is not generally consistent with the raw commodities/finished products that are currently (and forecasted to continue to be) consumed/produced in the Danville region. No commercially navigable waterways pass through or near Danville. Thus, Danville does not have direct access to waterborne transportation on the inland river system.

An industrial analysis reviewed industrial trends over the 19-year period, from 1998 to 2016. It showed a continued strong presence in manufacturing components for the aerospace and automotive industries (metals and plastics) in the Danville area, as well as production of chemicals.

No specific modal shift opportunities were identified. The likelihood of developing a successful, major intermodal freight facility or an inland port near Danville appears to be low, primarily due to the lack of a major population center that typically drives the success of such facilities. The logistics plans that currently support Danville industries are clearly established, and changes are likely to occur only if significant transportation savings could be realized.

Overall, development of a transload facility appears to have the highest likelihood of success in the Danville area. Several commodities were identified that are produced, consumed, and/or pass through the Danville region in significant volumes, particularly grain, industrial chemicals, and steel. A site near the intersection of Lynch Road and East Main Street was identified for potential development, primarily due to the potential to connect to a Class I railroad, close proximity to I-74, and existing industrial zoning.

Due to the significant grain tonnage moved by truck that either passes through or has a Vermilion County origin (7.0M tons in 2017 and a projection of 8.6M tons by 2045; a 1.6M ton increase), a truck-to-rail grain transload facility conceptual site plan was developed. Primary features of the concept plan include an access road, rail loop, and significant grain storage capacity/capability. The concept plan also provides the versatility to expand the facility for additional grain throughput and/or the addition of further infrastructure to support transloading other commodities/products. The preliminary opinion of probable construction cost for the truck-to-rail grain transload facility concept is about \$62M.

The potential success of a grain transload facility is far from guaranteed – this should not be viewed as a “build it and they will come” scenario. Significant grain storage capacity (over 154M bushels, or over 4.6M tons) exists within a 100-mile radius of Danville. In addition to the Bunge facility located in

Danville, two other rail-served facilities are located in Vermilion County – one in Hoopston, about 23 miles north of Danville; and one in Ridge Farm, about 16 miles south of Danville. Potential grain facility competition is further emphasized by existing feed grain elevators serviced by CSX unit trains in the region.

It is unknown to Hanson if the existing facilities within a 100-mile radius of Danville have sufficient capacity to accommodate the additional 1.6M tons of grain projected to be transported via truck by 2045, either passing through or with a Vermilion County destination. It is also unknown to Hanson if there is sufficient grain production within the potential draw area to warrant development of a grain transload facility in Danville.

Significant planning and coordination with stakeholders will be required to further gauge the potential success of a grain transload facility in Danville. However, the versatility of the transload facility shown in the concept plan may increase the likelihood of success if infrastructure to support the transloading of other commodities/products, in addition to grain, is also constructed for relatively minimal additional construction cost. Regardless of the commodities/products involved, the potential success of a transload facility in the Danville area will be challenged to provide a sufficient logistics advantage to the industries it may serve. Without a logistics advantage, particularly in the form of transportation cost savings, a transload facility is not likely to succeed. Many public transload facilities that ignore this market principle have been built, and without exception, none have been able to attract freight movements.

1.0 Introduction

The City of Danville is seeking to leverage the unique multimodal transportation assets in the region to facilitate economic growth. However, the viability of multimodal transportation and freight development is generally driven by the economic advantages it provides to the industries served. Thus, the primary goals of this freight study are to:

- Identify ways to provide an economic advantage to freight stakeholders;
- Encourage freight-related development and economic growth; and
- Identify locations where investment in multimodal infrastructure is economically justified and feasible.

Additional objectives of this freight study include:

- Preservation or improvement of the existing transportation system;
- Obtain public and private-sector input regarding feasibility, size, and location of potential freight facility development;
- Increase connectivity between rail, highways, and potentially air modes of freight transportation; and
- Identify improvements necessary to cost-effectively benefit constituents and support potential freight facility development.

Finally, this freight study meets the “Economy” goal of the Long Range Transportation Plan by analyzing opportunities for freight development within the City of Danville. This freight study identifies potential challenges to multimodal freight development, determines if and how those challenges could be mitigated, provides preliminary data and analysis required to begin the development process, and provides the City of Danville with a document that may assist in attracting investors and/or applying for grants to fund freight-related improvements.

This freight study accomplished these goals and objectives through the analysis of freight data, freight stakeholder outreach, transportation system review, and freight development, as described in the following sections.

2.0 Freight Data Analysis

Freight data was obtained from IHS Markit, an industry leader in US freight flow data. The Transearch freight data obtained from IHS Markit consisted of existing freight movements (for calendar year 2017) and projections of 2045 freight movements. Truck freight data was obtained for Vermilion County (note, county-level data is the most refined data set available from IHS Markit); this data provided information regarding freight entering, leaving, passing through, and moving within the Vermilion County by truck.

Unfortunately, rail freight data was not available on the county level. The US Department of Commerce Bureau of Economic Analysis (BEA) divides the US into economic areas for the purpose of statistical analyses that reflect regional economic activity. The Champaign-Urbana Economic Area (CUEA), which includes Champaign, Urbana, Decatur, Effingham, and Danville, is shown in Figure 1. The rail freight data was obtained from IHS Markit for the CUEA; this data provided information regarding freight entering, leaving, passing through, and moving within the CUEA by rail.

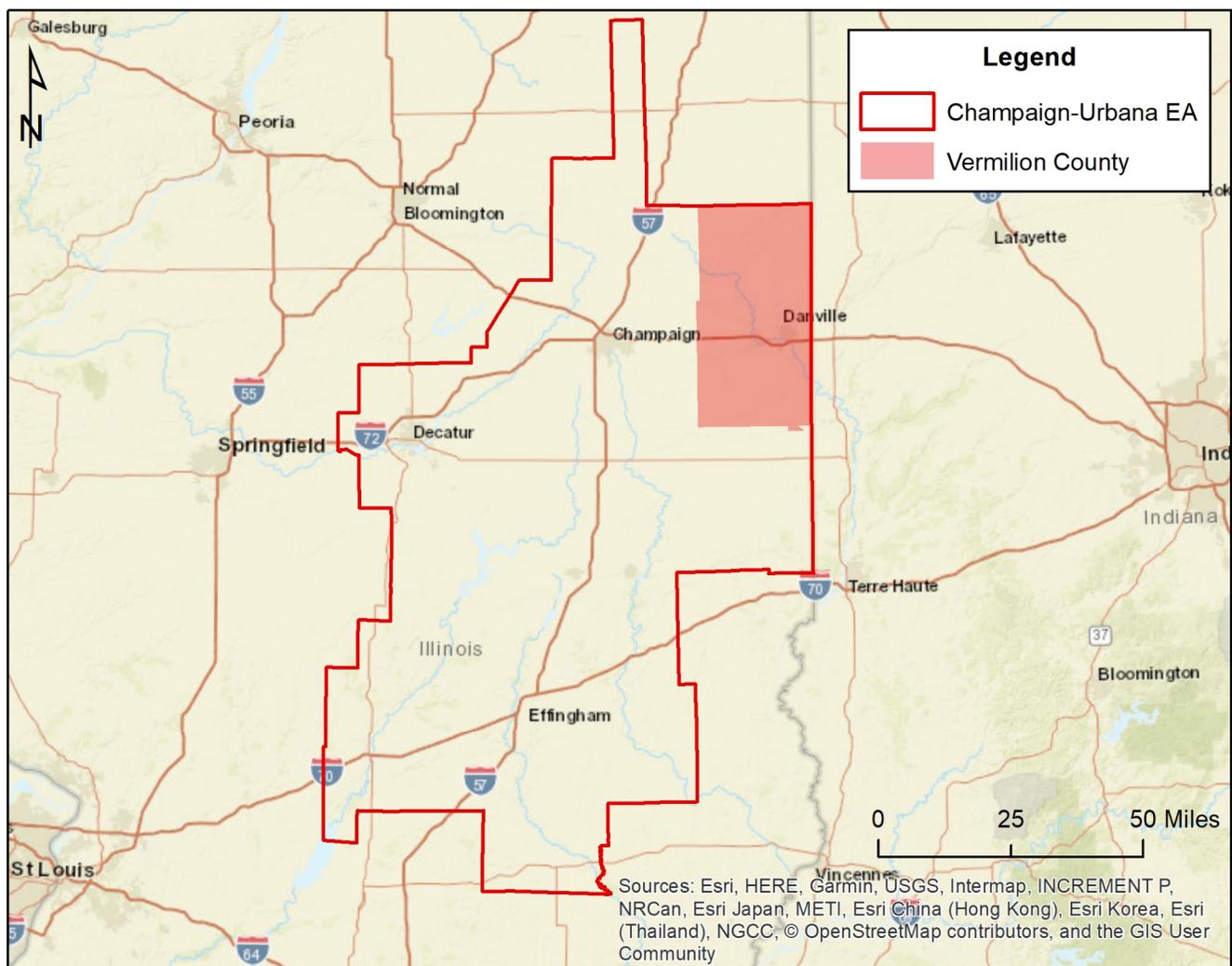


Figure 1 – Champaign-Urbana Economic Area (CUEA)

Note, the freight data did not include any freight movements by air for 2017 or 2045. This indicates that no freight moved through the Vermilion Regional Airport in 2017, and no freight is anticipated to move through the airport in 2045.

2.1 Overall Freight Data Summary

The overall composition of the Transearch freight data received from IHS Markit is summarized in Table 1.

Table 1 – Overall Freight Data Composition

Year	Mode	Records	Tonnage	Tonnage % Increase 2017 to 2045	Value	Value % Increase 2017 to 2045
2017	All	272,214	54,888,476	---	\$52,783,724,150	---
	Truck	270,893	53,316,526	---	\$51,622,913,825	---
	Rail	1,308	1,570,593	---	\$1,158,848,059	---
2045	All	272,007	80,248,912	46%	\$88,588,835,122	68%
	Truck	270,681	77,431,761	45%	\$86,585,247,750	68%
	Rail	1,313	2,815,118	79%	\$1,999,280,648	73%

Source: Transearch, IHS Markit

Several observations can be made regarding the overall composition of the freight data.

- Total tonnage is expected to increase by 46% from 2017 to 2045.
- Truck tonnage is expected to increase by 45% from 2017 to 2045.
- Rail tonnage is expected to increase by 79% from 2017 to 2045.
- Freight moved by truck represents 97% of total freight tonnage in 2017 and 96% in 2045.
- Freight moved by rail represents only 3% of total freight tonnage in 2017 and 4% in 2045.
- The overall value per ton of freight for both years is roughly \$1,000 per ton.

The data summarized in Table 1 and the observations above regarding projected tonnage increases are positive indicators for the future of industrial and economic development in Vermilion County and the Champaign-Urbana Economic Area. Note, the number of database records shown in Table 1 does not correspond to truck or train trips. For example, trucks transporting grain from Vermilion County to Sangamon County – in the database, these freight movements will show as one record, regardless of whether it is one truck trip, 500 trips, or 5,000 trips. The difference in the database is reflected in the tonnage moved.

Additional information regarding truck freight movements is provided in Table 2. As shown, the overwhelming majority of truck freight in Vermilion County is pass-through traffic (84% in 2017). Considering I-74 passes through Danville and connects to the major freight hub of Indianapolis (roughly 100 miles east of Danville), this is to be expected. Truck freight with a Vermilion County destination or origin accounts for 7% and 9% of the total truck tonnage, respectively. Table 2 also shows that truck freight with both an origin and destination in Vermilion County is very small (0.1% of

the total). For this reason, freight movements with both the origin and destination in Vermilion County were not included in other freight analyses herein.

Although total tonnage is projected to increase by about 45% from 2017 to 2045, the composition of those tonnages, as percentages of the respective totals, is expected to remain relatively consistent.

Table 2 – Truck Freight Movements Summary

Year	Freight with...	Tonnage	% of Total	Total (tons)
2017	Vermilion County Destination	3,501,804	7%	52,968,769
	Vermilion County Origin	4,717,450	9%	
	Vermilion County O & D	40,002	0.1%	
	Vermilion County Pass-Thru	44,709,513	84%	
2045	Vermilion County Destination	4,344,741	6%	76,809,357
	Vermilion County Origin	5,507,734	7%	
	Vermilion County O & D	54,645	0.1%	
	Vermilion County Pass-Thru	66,902,237	87%	

Source: Transearch, IHS Markit

Note, the total truck tonnage in Table 2 (52,968,769 in 2017, for example) is not the same tonnage total shown above in Table 1 (53,316,526 in 2017). The reason for this discrepancy is the manner in which IHS Markit assigns truck freight moving to/from Mexico. These freight movements are assigned on the county level for the purpose of developing flow routing assignments only, so they are not necessarily actual freight movements specific to Vermilion County. Thus, Vermilion County truck freight movements to/from Mexico were removed from the data summarized in Table 2 and other analyses herein. Rail freight movements with a Vermilion County origin or destination were removed from the analyses herein for the same reason.

Additional information regarding rail freight movements is provided in Table 3. As previously indicated in Table 1, rail freight is a small portion (3% and 4% for 2017 and 2045, respectively) of the freight total, and Table 3 shows that the composition differs significantly from truck freight movements with regards to Champaign-Urbana Economic Area origins, destinations, and pass-through traffic.

Table 3 – Rail Freight Movements Summary

Year	Freight with...	Tonnage	% of Total	Total (tons)
2017	CUEA Destination	449,744	31%	1,456,872
	CUEA Origin	795,395	55%	
	CUEA Origin & Destination	10,656	1%	
	CUEA Pass-Thru	201,077	14%	
2045	CUEA Destination	783,738	29%	2,739,453
	CUEA Origin	1,637,476	60%	
	CUEA Origin & Destination	60,393	2%	
	CUEA Pass-Thru	257,846	9%	

Source: Transearch, IHS Markit

Unlike the truck freight movements, the majority of rail freight tonnage (55% in 2017) has an origin in the CUEA, and almost one-third (31% in 2017) of rail freight movements have a destination in the

CUEA. Only 9% of rail freight movements was pass-through traffic in 2017, and less than 1% of rail freight had both an origin and destination in the CUEA. Similar to the truck freight movements, rail freight movements with both origins and destinations within the CUEA were not used in other freight analyses herein, due to the very low tonnage.

As previously shown in Table 1, rail freight traffic is projected to increase by about 79% from 2017 to 2045. Table 3 indicates a slight decline in rail freight movements with a CUEA destination and pass-through traffic, as percentages of the total. However, rail freight movements with a CUEA origin are projected to increase by about 5%. This could indicate expected increases in manufacturing and/or distribution of products from the CUEA that has the potential to move by rail.

2.2 Commodity-Level Freight Data Analysis – Trucks

In order to determine industries that have the potential to benefit from freight development in the Danville area, a more detailed analysis of the Transearch freight data was required. Commodities in the Transearch database are organized using four-digit Standard Transportation Classification Codes (STCC). Based on a review of the 2017 and 2045 truck freight movements and the identified freight study stakeholders (see Section 3.1), nine “target” truck freight commodities were identified. Note, the database included over 400 commodity codes. The top (i.e. highest tonnage) truck freight movements in 2017 with a Vermilion County destination are summarized in Table 4. Also shown are 2045 projections for the same “target” commodities with a Vermilion County destination.

Table 4 – Top Truck Freight Movements with a Vermilion County Destination

Commodity Class	STCC	2017		2045		% Increase from 2017 to 2045
		Tonnage	% of Total	Tonnage	% of Total	
Grain	0113	1,520,213	43%	1,927,186	44%	27%
Oil Kernels, Nuts or Seeds	0114	161,452	5%	125,517	3%	-22%
Broken Stone or Riprap	1421	272,299	8%	265,264	6%	-3%
Gravel or Sand	1441	231,194	7%	256,635	6%	11%
Cereal Preparations	2043	1,569	0%	1,330	0%	-15%
Misc Industrial Organic Chemicals	2818	0	0%	0	0%	---
Misc Plastic Products	3071/72	18,059	1%	30,185	1%	67%
Primary Iron or Steel Products	3312	40,641	1%	57,765	1%	42%
Misc Waste or Scrap	4029	164,520	5%	246,890	6%	50%
Total of Select Commodities		2,409,947	69%	2,910,772	67%	21%
All Commodities		3,501,804	---	4,344,741	---	24%

Source: Transearch, IHS Markit

Note, two STCC’s are designated as “Misc Plastic Products” with no differentiation. Thus, the tonnages in the database for STCC’s 3071 and 3072 were combined for the purposes of the analyses herein. Also, the “Misc Industrial Organic Chemicals” commodity was included as a “target” commodity with no tonnage in Table 4 and Table 5 (below) due to the pass-through tonnage shown below in Table 6, as well as the tonnage of this commodity transported via rail (see Section 2.3).

The nine “target” commodities identified in Table 4 totaled over 2.4M tons and represent 69% of all truck freight tonnage in 2017 with a Vermilion County destination. Further, over half of that tonnage was grain (over 1.5M tons, or 43% of the overall total). To put this into perspective, 1.5M tons could

equate to over 50,500 truck trips per year on Vermilion County roadways (assuming 60,000 lbs. per trailer) in 2017. Grain tonnage is projected to increase 27% by 2045 to over 1.9M tons, which could equate to over 64,000 truck trips per year on Vermilion County roadways. This grain tonnage likely represents feedstock for the Bunge milling facility in Danville. These grain movements have origins primarily located throughout the Midwest.

For purposes of this discussion, STCC’s 1421 and 1441 (“Broken Stone or Riprap” and “Gravel or Sand,” respectively) are combined as “aggregates.” As shown in Table 4, aggregates account for about 500,000 tons (15%) of 2017 truck freight with a Vermilion County destination. Truck movements of aggregates are projected to minimally increase (about 4% combined) in 2045. This tonnage likely represents materials used in construction around the Danville region. Movements of aggregates primarily originate in the Indianapolis and Chicago Economic Areas (EA’s).

Truck movements of plastic and iron/steel products are expected to increase substantially from 2017 to 2045 (67% increase and 42% increase, respectively). However, these commodities make up a very small portion (about 2%) of the overall truck freight movements with a Vermilion County destination. These movements have origins primarily located throughout the Midwest.

Waste/scrap materials represent about 5% of truck tonnage with a Vermilion County destination in 2017. Although this tonnage is projected to increase 50% by 2045, waste/scrap is anticipated to account for about 6% of the total. This tonnage likely represents materials recycled by Mervis Industries in Danville.

The top truck freight movements in 2017 with a Vermilion County origin are summarized in Table 5. Also shown are 2045 projections for the same “target” commodities with a Vermilion County origin. Similar to the “target” commodities with a Vermilion County destination, “target” commodities with a Vermilion County origin represent about two-thirds of the total truck tonnage in 2017 and 2045 (68% and 62%, respectively).

Table 5 – Top Truck Freight Movements with a Vermilion County Origin

Commodity Class	STCC	2017		2045		% Increase from 2017 to 2045
		Tonnage	% of Total	Tonnage	% of Total	
Grain	0113	899,860	19%	1,241,687	23%	38%
Oil Kernels, Nuts or Seeds	0114	442,516	9%	378,802	7%	-14%
Broken Stone or Riprap	1421	1,458,278	31%	1,450,115	26%	-1%
Gravel or Sand	1441	399	0%	411	0%	3%
Cereal Preparations	2043	221,900	5%	170,269	3%	-23%
Misc Industrial Organic Chemicals	2818	0	0%	0	0%	---
Misc Plastic Products	3071/72	52,109	1%	101,622	2%	95%
Primary Iron or Steel Products	3312	0	0%	0	0%	---
Misc Waste or Scrap	4029	124,427	3%	87,753	2%	-29%
Total of Select Commodities		3,199,489	68%	3,430,659	62%	7%
All Commodities		4,717,450	---	5,507,734	---	17%

Source: Transearch, IHS Markit

As shown in Table 5, the composition of the “target” commodities with a Vermilion County origin varies significantly from those with a Vermilion County destination discussed above. Although still significant, grain represents 19% of the total tonnage in 2017 and is projected to increase by 38% to a

total of about 1.2M tons by 2045. This could represent almost 30,000 truck trips per year on Vermilion County roadways in 2017 and over 40,000 truck trips per year by 2045. The majority of this tonnage is likely going to Midwest ethanol plants (corn), soybean processing facilities, and/or transload terminals for export (corn and soybeans).

Aggregates represent almost one-third (31%) of the total tonnage with a Vermilion County origin moved by truck in 2017, and aggregates tonnage is expected to remain at about 1.45M tons through 2045.

Truck movements of plastic products are projected to increase substantially (95% increase) from 2017 to 2045. However, these movements make up a very small portion (about 1% in 2017 and 2% in 2045) of the overall truck freight movements with a Vermilion County origin. These movements have destinations primarily located throughout the Midwest.

The top truck freight movements in 2017 that pass through Vermilion County are summarized in Table 6. Also shown are 2045 projections for the same “target” commodities that pass through Vermilion County. “Target” commodities that pass through Vermilion County represent over one-third of the total truck tonnage in 2017 and 2045 (37% and 35%, respectively).

Table 6 – Top Truck Freight Movements that Pass Through Vermilion County

Commodity Class	STCC	2017		2045		% Increase from 2017 to 2045
		Tonnage	% of Total	Tonnage	% of Total	
Grain	0113	6,112,737	14%	7,379,867	11%	21%
Oil Kernels, Nuts or Seeds	0114	2,662,721	6%	2,328,527	3%	-13%
Broken Stone or Riprap	1421	1,127,806	3%	1,381,410	2%	22%
Gravel or Sand	1441	678,341	2%	728,112	1%	7%
Cereal Preparations	2043	167,029	0%	127,393	0%	-24%
Misc Industrial Organic Chemicals	2818	3,458,765	8%	7,409,836	11%	114%
Misc Plastic Products	3071/72	530,038	1%	1,028,330	2%	94%
Primary Iron or Steel Products	3312	626,128	1%	839,820	1%	34%
Misc Waste or Scrap	4029	1,349,733	3%	2,179,959	3%	62%
Total of Select Commodities		16,713,298	37%	23,403,254	35%	40%
All Commodities		44,709,513	---	66,902,237	---	50%

Source: Transearch, IHS Markit

Grain represents the majority of the “target” commodities that pass through Vermilion County via truck (14% of the overall total in 2017), and the tonnage is projected to increase by 21% to almost 7.4M tons by 2045. Similar to grain with a Vermilion County origin, the majority of this pass-through tonnage is likely going to Midwest ethanol plants (corn), processing facilities (soybeans), and/or transload terminals for export (corn and soybeans).

Almost 3.5M tons of “Misc Industrial Organic Chemicals” (STCC 2818) passed through Vermilion County via truck in 2017 (8% of the overall total), and tonnage is projected to increase by 114% by 2045 to over 7.4M tons.

Truck movements of plastic products are expected to increase substantially (94% increase) from 2017 to 2045. However, these movements make up a very small portion (about 1% in 2017 and 2% in 2045) of the overall truck freight movements passing through Vermilion County.

Similarly, truck movements of waste/scrap materials are projected to increase by 62% from 2017 to 2045. However, these movements make up a very small portion (about 3% in 2017 and 2045) of the overall truck freight movements passing through Vermilion County.

2.3 Commodity-Level Freight Data Analysis – Rail

The Danville region is served by two Class I railroads: CSX and Norfolk Southern Railway (NS). The region is also served by two shortline railroads: Kankakee, Beaverville, & Southern Railroad (KBSR) and Vermilion Valley Railroad (VVR). Figure 2 shows an overview of existing rail infrastructure in the Danville region.

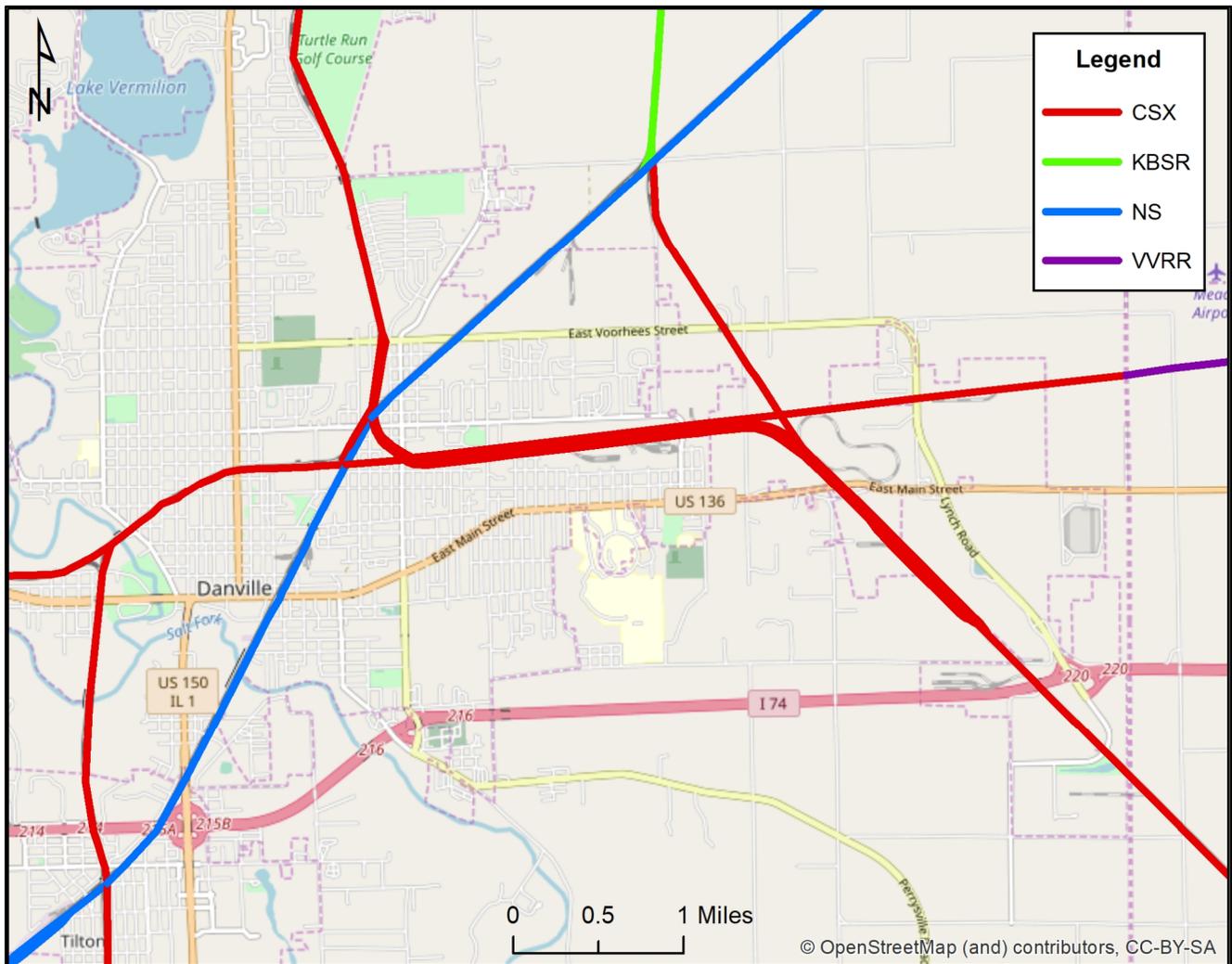


Figure 2 – Danville Region Rail Infrastructure Overview

As previously stated, rail freight data was not available on the county level and is instead based on the Champaign-Urbana Economic Area (CUEA; see Figure 1). As previously shown in Table 1, rail freight represents only 3% of total freight entering, leaving, passing through, or moving within the CUEA in 2017 (projected to be 4% by 2045).

Based on a review of the 2017 and 2045 rail freight movements and the identified freight study stakeholders (see Section 3.1), four “target” rail freight commodities were identified. The top (i.e. highest tonnage) rail freight movements in 2017 with a CUEA destination are summarized in Table 7. Also shown are 2045 projections for the same “target” commodities with a CUEA destination.

Table 7 – Top Rail Freight Movements with a CUEA Destination

Commodity Class	STCC	2017		2045		% Increase from 2017 to 2045
		Tonnage	% of Total	Tonnage	% of Total	
Misc Industrial Organic Chemicals	2818	130,247	29%	309,208	39%	137%
Misc Industrial Inorganic Chemicals	2819	121,666	27%	158,951	20%	31%
Petroleum Refining Products	2911	33,867	8%	51,860	7%	53%
Liquefied Gases, Coal or Petroleum	2912	56,701	13%	65,117	8%	15%
Total of Select Commodities		342,481	76%	585,136	75%	71%
All Commodities		449,744	---	783,738	---	74%

Source: Transearch, IHS Markit

The four “target” commodities identified in Table 7 totaled over 342,000 tons in 2017 and represented 76% of all rail freight tonnage with a CUEA destination. Rail freight tonnage of these commodities is projected to increase to more than 585,000 tons by 2045, a 71% increase.

Industrial organic and inorganic chemicals represent over half (56%) of the overall rail freight tonnage in 2017 with a CUEA destination. Rail movements of organic chemicals are projected to more than double (137% increase) by 2045, representing 39% of rail freight movements with a CUEA destination. A portion of these commodities likely represent feedstock chemicals used by Brainerd Chemical and KIK Custom Products. These commodities primarily originate in the Midwest and the Gulf Coast.

STCC’s 2911 and 2912 represent 21% of rail freight tonnage in 2017 with a CUEA destination, and rail movements of petroleum refining products are projected to increase by 53% by 2045. These commodities are likely used in the manufacturing of various materials/products within the CUEA. Similar to the chemicals, these commodities primarily originate in the Midwest and the Gulf Coast.

The top rail freight movements in 2017 with a CUEA origin are summarized in Table 8. Also shown are 2045 projections for the same “target” commodities with a CUEA origin. “Target” commodities with a CUEA origin represent 93% of the total rail tonnage in 2017 and 2045, and they are projected to more than double (108% increase) from 2017 to 2045.

Table 8 – Top Rail Freight Movements with a CUEA Origin

Commodity Class	STCC	2017		2045		% Increase from 2017 to 2045
		Tonnage	% of Total	Tonnage	% of Total	
Misc Industrial Organic Chemicals	2818	648,756	82%	1,409,865	86%	117%
Misc Industrial Inorganic Chemicals	2819	63,820	8%	83,469	5%	31%
Petroleum Refining Products	2911	21,325	3%	32,750	2%	54%
Liquefied Gases, Coal or Petroleum	2912	1,942	0%	2,142	0%	10%
Total of Select Commodities		735,843	93%	1,528,226	93%	108%
All Commodities		795,395	---	1,637,475	---	106%

Source: Transearch, IHS Markit

Industrial organic chemicals represent 82% of the overall rail freight tonnage in 2017 with a CUEA origin. Rail movements of this commodity are projected to more than double (117% increase) by 2045, representing 86% of rail freight movements with a CUEA origin. A portion of this commodity tonnage, along with industrial inorganic chemicals, likely represent chemicals produced by Brainerd Chemical. These commodities are primarily destined for the East Coast, likely to ports for export.

Although rail transportation of petroleum refining products is projected to increase by 54% from 2017 to 2045, the tonnage represents only 3% and 2% of the overall total rail tonnage with a CUEA origin in 2017 and 2045, respectively. This commodity is primarily destined for the Gulf Coast and New England states.

The top rail freight movements in 2017 that pass through the CUEA are summarized in Table 9. Also shown are 2045 projections for the same “target” commodities that pass through the CUEA.

Table 9 – Top Rail Freight Movements that Pass Through the CUEA

Commodity Class	STCC	2017		2045		% Increase from 2017 to 2045
		Tonnage	% of Total	Tonnage	% of Total	
Misc Industrial Organic Chemicals	2818	36	0%	57	0%	58%
Misc Industrial Inorganic Chemicals	2819	51	0%	52	0%	2%
Petroleum Refining Products	2911	168	0%	136	0%	-19%
Liquefied Gases, Coal or Petroleum	2912	0	0%	0	0%	---
Total of Select Commodities		255	0.1%	245	0.1%	-4%
All Commodities		201,077	---	257,846	---	28%

Source: Transearch, IHS Markit

“Target” commodities that pass through the CUEA represent less than 1% of the total rail tonnage in 2017 and 2045. This, combined with the very low overall rail pass-through tonnage (201,077 tons in 2017 and 257,846 tons in 2045), indicates the majority of rail freight has either a specific origin or destination within the CUEA and very little tonnage passes through the CUEA.

2.4 Intermodal Freight

The Transearch database contained two types of intermodal freight: intermodal drayage (truck transportation of containers to/from rail ramps) and intermodal rail freight (rail transportation of containers). Intermodal drayage is summarized in Table 10. The majority of the intermodal tonnage

shown represents drayage between Vermilion County and intermodal rail ramps in Chicago, St. Louis, Louisville, and Cincinnati.

Table 10 – Intermodal Drayage Summary

Year	Truck Drayage...	Tonnage	% of Total	Total (tons)
2017	Vermilion County to Rail Ramp	21,667	61%	35,496
	Rail Ramp to Vermilion County	13,829	39%	
2045	Vermilion County to Rail Ramp	24,472	56%	43,315
	Rail Ramp to Vermilion County	18,843	44%	

Source: Transearch, IHS Markit

For reference and assuming a container net weight capacity of about 60,000 lbs., the 2017 tonnage shown in Table 10 equates to more than 1,150 truck trips on Vermilion County roadways, and the 2045 tonnage equates to more than 1,400 truck trips on Vermilion County roadways.

Intermodal rail freight accounts for a very small portion of the overall rail freight movements in the CUEA (2% in 2017 and 1% in 2045). However, intermodal rail freight is projected to increase 41% from 2017 to 2045, as shown in Table 11.

Table 11 – Intermodal Rail Freight Movements Summary

Year	Freight with...	Tonnage	% of Total	Total (tons)
2017	CUEA Destination	17,891	74%	24,047
	CUEA Origin	6,156	26%	
	CUEA Origin & Destination	0	0%	
	CUEA Pass-Thru	0	0%	
2045	CUEA Destination	21,473	63%	33,847
	CUEA Origin	12,374	37%	
	CUEA Origin & Destination	0	0%	
	CUEA Pass-Thru	0	0%	

Source: Transearch, IHS Markit

Additional discussion regarding intermodal freight is presented in Section 5.4.

3.0 Freight Stakeholder Outreach

The preceding freight data analysis provided a general understanding of freight movements to, from, through, and within Vermilion County and the Champaign-Urbana Economic Area for truck and rail freight, respectively. Additionally, insight from freight stakeholders in the Danville area provides for a more complete understanding of current freight needs, issues, and constraints.

3.1 Identification of Freight Stakeholders

Danville freight stakeholders consist of industries that ship and/or receive freight, freight distribution centers, and freight carriers, including trucking companies and railroads. In order to identify appropriate freight stakeholders for this study, an extensive search was conducted using aerial imagery, various industry databases, and input from the City of Danville and Vermilion Advantage, a non-profit Vermilion County economic development organization.

The initial freight stakeholders were identified by searching for companies that met one or more of the criteria listed below.

- Consumes commodities/products in significant volumes.
- Produces commodities/products in significant volumes.
- Carries a significant volume of freight.
- Has a facility that is or could be served by a railroad.
- Has a facility with truck unloading and/or loading bays.

The search initially identified nearly 20 industrial companies, five companies with distribution centers, and five freight carriers (one trucking company and four railroads), as potential Danville area freight stakeholders.

The initial inventory of freight stakeholders, particularly the industrial companies, was refined by analyzing the potential synergy of commodities/products currently utilized and/or produced by those stakeholders. Synergies could also exist with regards to origins/destinations and mode/type of transportation. The initial inventory of freight stakeholders was also provided to the City of Danville and Vermilion Advantage for their review, refinement, and input.

The refined list of Danville Freight Study stakeholders consists of the companies listed in Table 12; the locations of the stakeholder facilities are shown in Figure 3. The locations of the railroad stakeholder assets in the Danville area were previously shown in Figure 2 and are shown again in Figure 3. The refined stakeholder inventory includes 13 industrial companies, five distribution companies, and five freight carriers.

Table 12 – Freight Stakeholders

Category	Company	Business Type
Industries	Brainerd Chemical	Chemical Manufact./Distrib.
	Bunge	Grain Milling
	Danville Metal	Aerospace Components
	Flex-N-Gate	Plastic Automotive Components
	Hyster-Yale	Lift Equipment
	KIK Custom Products	Consumer Packaged Goods
	Mervis Industries	Metal & Plastic Recycling
	Quaker Oats	Food Products
	REG Danville	Biodiesel Production
	ThyssenKrupp	Vehicle Crankshafts
	ThyssenKrupp	Vehicle Steering Systems
	Viscofan USA	Food Casings
Watchfire	Video Boards/Signs	
Distribution Centers	AutoZone	Vehicle Parts
	Central States	General Distribution Services
	Dawson Logistics	Warehousing & Fulfillment
	McLane	Supply Chain Management
	SYGMA Network	Foodservice Distribution
Carriers	CSX	Class I Railroad
	Holland	Trucking
	KBSR	Shortline Railroad
	NS	Class I Railroad
	VVRR	Shortline Railroad

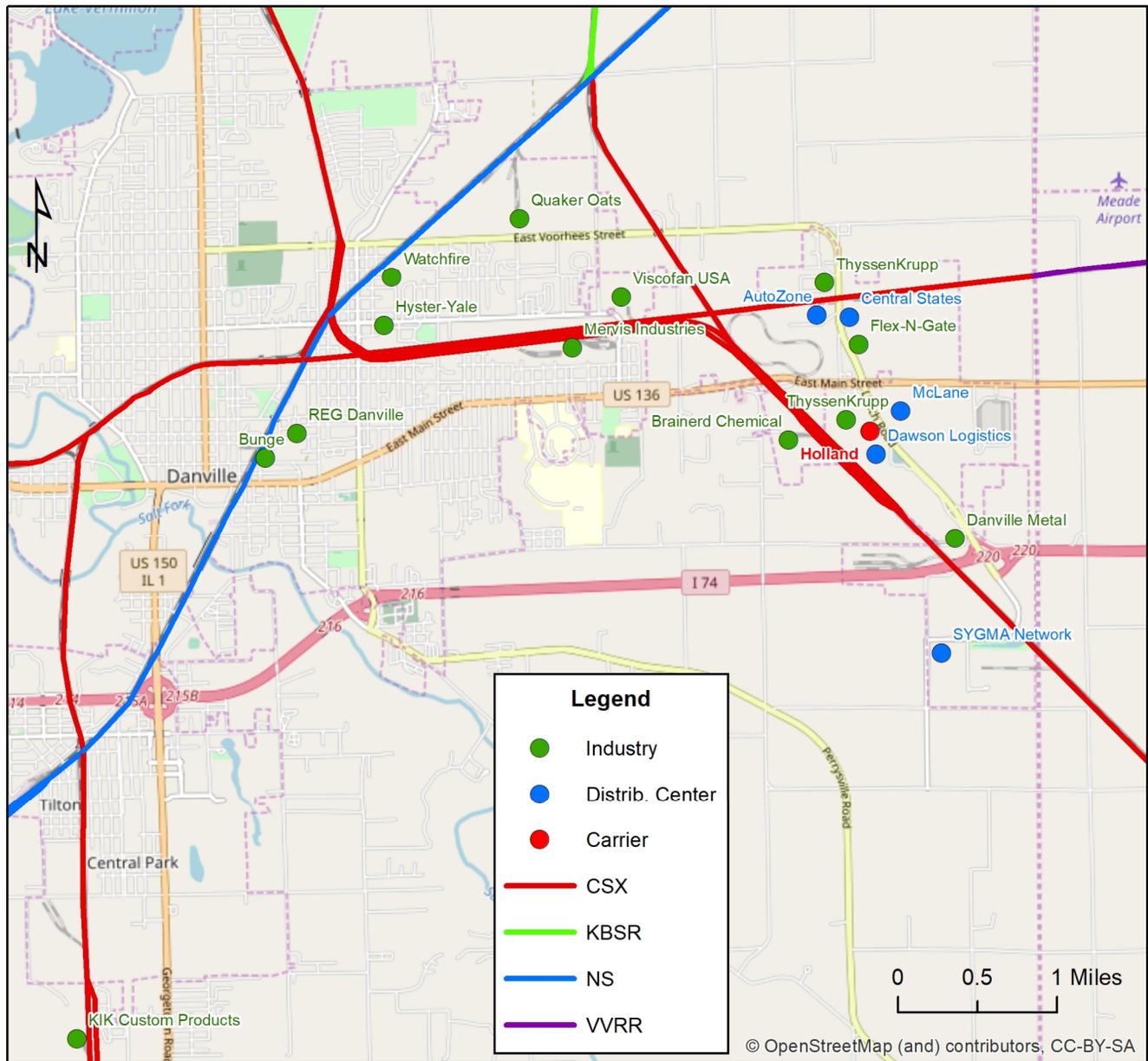


Figure 3 – Freight Stakeholders

3.2 Stakeholder Outreach Summary

Two meetings were conducted with freight stakeholders on April 17, 2019. The first meeting was conducted for the industry stakeholders listed in Table 12, while the second meeting was conducted for the distribution center and carrier stakeholders listed in Table 12. A copy of the presentation (attached as Appendix A) was sent to the freight stakeholders that attended the meeting, as well as those that were unable to attend the meeting but requested information regarding the project. The presentation primarily summarized the freight data analysis of Section 2.0, but it also requested input from the stakeholders. The presentation also introduced a few freight development ideas for discussion (see Section 5.0 for additional information on freight development).

The following industry stakeholders were represented at the first meeting on April 17, 2019:

- Danville Metal
- Viscofan USA

Industry stakeholder input was also obtained via post-meeting telephone conversations with a representative of ThyssenKrupp Presta (vehicle steering systems).

The following distribution center and carrier stakeholders were represented at the second meeting on April 17, 2019:

- AutoZone
- Dawson Logistics
- Vermilion Valley Railroad

Distribution center and carrier stakeholder input was also obtained via post-meeting telephone conversations with a representative of the Norfolk Southern Railway.

Note, a portion of the discussions involved stakeholder disclosures related to how materials and products are currently transported, as well as general origins and destinations. No detailed freight tonnage information was disclosed by any stakeholder. However, in order to protect their business interests, detailed information related to specific stakeholders is not conveyed herein.

The following summarizes the freight stakeholder discussions.

- The ability to move freight, inbound or outbound, is not generally perceived to be a constraint.
- Most stakeholders that have rail access use it for either shipping or receiving products.
 - Several stakeholders utilize rail service for delivery of raw materials, but use trucks to transport finished products.
 - Some raw products originate overseas and are transported from coastal ports to the Danville region via rail.
 - Railcar switching (moving in/out of full/empty railcars) by the railroads is perceived to be a limiting factor in the use of rail transportation by stakeholders – the railroads are not consistent.
 - Industry stakeholders perceive themselves to be “at the mercy of” the railroads.
 - One stakeholder that has rail access at a facility no longer utilizes rail service.
- Some stakeholders indirectly utilize rail transportation – in this case, products are transported via rail from coastal ports to regional rail ramps and drayed (i.e. transported) to the Danville region via truck (note, these movements were captured in Table 10 above). The Transearch data indicated the majority of this tonnage was drayed to/from rail ramps located in Chicago, St. Louis, Louisville, and Cincinnati, although the stakeholders specifically stated Chicago.
- The grain and steel markets are likely to be best served through a dedicated facility, which may attract additional businesses that specialize in these markets.

- The chemicals and plastics markets may be opportunities for economic development in the region by potentially attracting businesses that specialize in these markets.
- Development of a rail-connected site consisting of a paved lay-down area with lighting and fencing for security could serve a variety of purposes/industries for relatively minimal cost (compared to multiple facilities, each dedicated to a particular purpose/industry/commodity).
- Stakeholders with multiple facilities in the region often transport materials/products between facilities using their own trucks.
- Rail-connected sites are considered an asset; as such, stakeholders encouraged the City to protect rail-connected sites from non-rail use and/or removal of existing rail assets.
- Several stakeholders expressed the need for improvements (primarily safety-related) to Lynch Road. Stakeholder recommended improvements included:
 - Widening Lynch Road from two lanes (one in each direction) to three lanes (one in each direction, plus a two-way left-turn lane).
 - Adding northbound left-turn lanes for access to the AutoZone and ThyssenKrupp facilities.
 - Installing protective gates at the existing at-grade railroad crossing.
- All freight stakeholders that provided input were supportive of the project and freight-related development in the Danville region.

4.0 Transportation System Review

The existing Danville area transportation system is shown in Figure 4. Interstate 74 (I-74) traverses the south side of Danville in an east-west orientation. I-74 has three interchanges in Danville – from west to east, at IL 1 (Gilbert Street), Bowman Avenue, and Lynch Road (note, IL 1 shifts from Gilbert Street to Vermilion Street at Main Street). Main Street generally parallels I-74 through Danville, about 1.25 miles to the north of I-74. IL 1 and Bowman Avenue are the two primary north-south corridors in Danville. I-74 and IL 1 are designated as truck routes by the Illinois Department of Transportation (IDOT). Lynch Road traverses about 2.25 miles north of I-74, where it transitions to an east-west orientation as Voorhees Street. Lynch Road and Voorhees Street are the primary industrial corridors in Danville. Additional information regarding these roadways is provided in Table 13.

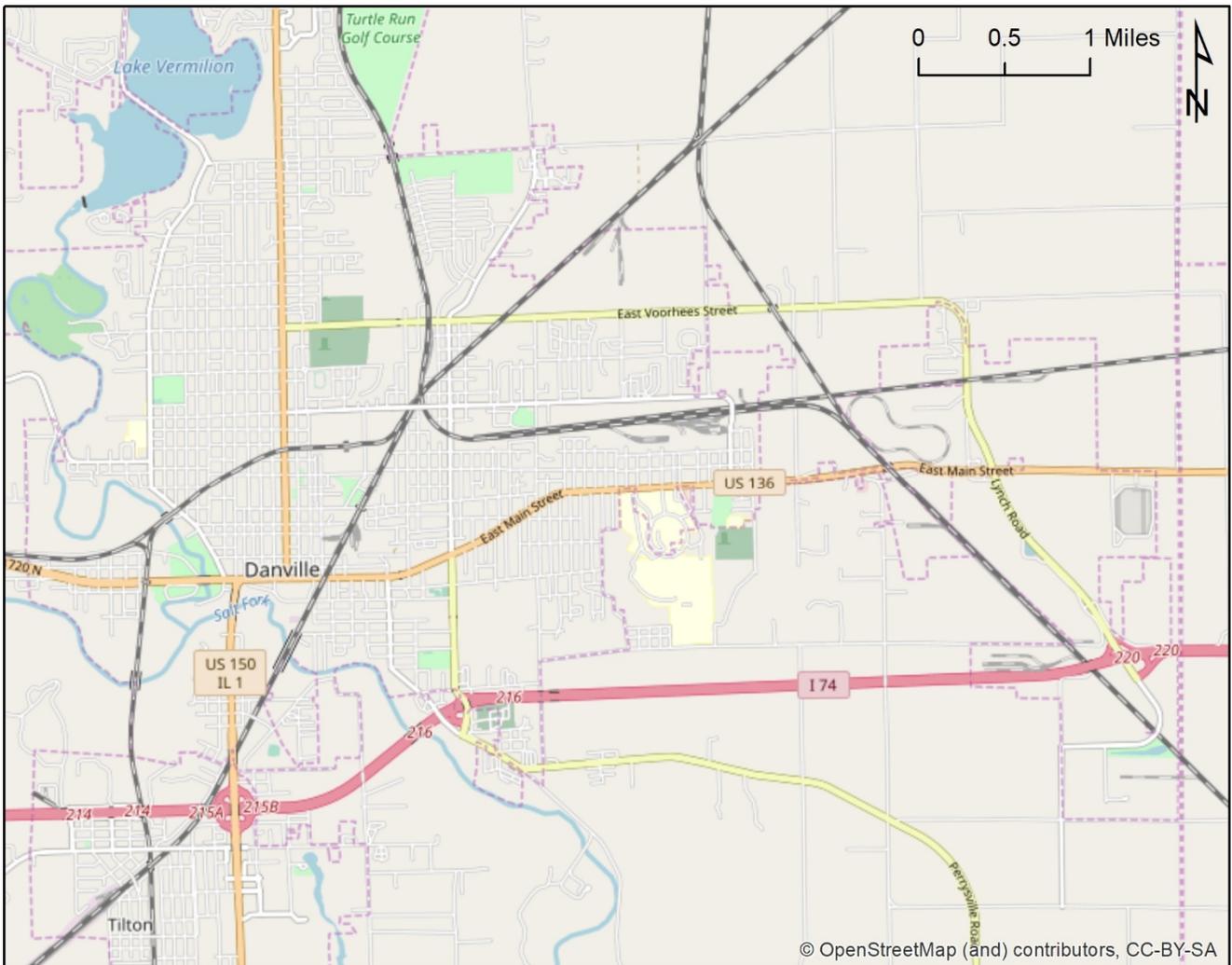


Figure 4 – Existing Transportation System

Table 13 – Roadway Characteristics

Roadway	Location	Functional Classification	2017 Annual Avg. Daily Traffic	Number of Lanes (total)
I-74	W of IL 1	Interstate	24,400	4
	W of Bowman Ave.	Interstate	27,600	4
	E of Bowman Ave.	Interstate	18,900	4
	E of Lynch Rd.	Interstate	18,500	4
Main St.	W of IL 1	Principal Arterial	13,500	4
	W of Bowman Ave.	Principal Arterial	10,200	5
	E of Bowman Ave.	Principal Arterial	13,500	5
	W of Lynch Rd.	Principal Arterial	5,000	3
Voorhees St.	W of IL 1	Minor Arterial	4,150	2
	E of Bowman Ave.	Minor Arterial	10,000	3
	W of Lynch Rd.	Minor Arterial	4,950	2
IL 1	N of I-74	Principal Arterial	20,800	5
	N of Main St.	Principal Arterial	19,600	2
	N of Voorhees St.	Principal Arterial	17,100	4
Bowman Ave.	N of I-74	Minor Arterial	9,700	4
	N of Main St.	Minor Arterial	8,900	3
	N of Voorhees St.	Minor Arterial	8,500	3
Lynch Rd.	S of I-74	Minor Collector	1,350	2
	S of Main St.	Principal Arterial	5,300	2
	N of Main St.	Minor Arterial	6,000	2

Source: IDOT

The Danville area is served by four railroads, consisting of two Class I railroads (CSX and NS) and two shortline railroads (Kankakee, Beaverville, & Southern Railroad and Vermilion Valley Railroad). The existing rail network can be seen in Figure 4, while an overview of track ownership was previously shown in Figure 2.

The Vermilion Regional Airport is located adjacent to Bowman Avenue, about 3.5 miles north of the intersection with Voorhees Street. The airport has two runways, with the primary runway having a length of about 6,000 feet and the secondary runway having a length of about 4,000 feet. As previously stated in Section 2.0, the Transearch data reported no air freight moving through the airport in 2017 and projected no air freight in 2045.

No commercially navigable waterways pass through or near Danville. Thus, Danville does not have direct access to waterborne transportation on the inland river system.

5.0 Freight Development

The preceding freight data analyses, freight stakeholder outreach, and existing transportation system review provided the foundation for potential freight-related development in the Danville area. This section specifically addresses freight development concepts for consideration by the City of Danville and its freight stakeholders.

5.1 Danville Industrial Analysis

An industry cluster analysis identifies industries that are geographically concentrated in an area, or of a similar nature, such that they can make use of related buyers, suppliers, infrastructure, and workforce. By identifying industry clusters, economic development efforts can focus on companies that complement existing businesses or that complement each other. The analysis identifies sectors and clusters that have competitive advantages based upon the concentration of establishments and employment compared to the nation as a whole. Note, the analysis herein is only preliminary, as a typical industry cluster assessment requires a much “deeper dive,” which is beyond the scope of this project. However, the results of this analysis are indicative of potential target industry groups in which Danville may have a competitive advantage in the market.

Three (3) benchmarks are traditionally used to identify industries that may have a competitive advantage: location quotients, high wage levels, and average annual wage. The subject effort only examines location quotients, which is defined as a ratio that compares employment or establishments in a particular industry in the region to the employment or establishments in that same industry in the nation as a whole. If the location quotient exceeds 1.0, the region’s share exceeds the national share, which means it is more concentrated.

Industry clusters for the Danville Metropolitan Area in 1998 and 2016 (note, 2016 is the most current year that this data is available) are shown in Figure 5 and Figure 6, respectively. Coloring of the clusters are defined below.

- Gray indicates that the area is at or below the national average.
- Yellow indicates a slight concentration of industries, but not enough to skew transportation demand.
- Light green indicates that the area has a concentration of industries, due to its natural resources or location within a specific distribution network.
- Dark green indicates the area has an expertise in a specific industry, would be considered a manufacturing region, and would draw in significant products to support the manufacturing.

A high employment concentration (location quotient greater than 1.25, shown as light green) also indicates a specialization in that sector, industry, or cluster when compared to the national average. Sectors, industries, and clusters with concentration of 1.50 or greater are shown as dark green, which indicates the region has a concentration of 50% or greater than that found in the US as a whole.

Comparing the two industry cluster figures, the manufacturing base in the Danville region has made some shifts over the 19-year period. For purposes of this analysis, industry clusters that do not drive transportation of freight commodities and product demand (such as education, finance, performing arts, etc.) are not considered. Observations related to the shift in manufacturing are summarized below.

- Expansion has occurred in the Aerospace & Defense, Automotive, Downstream Chemicals, Metalworking, Plastics, and Upstream Chemicals industries.
- Contraction has occurred in the Agriculture, Coal Mining, Lighting, Trailers & Appliances, and Upstream Metals industries.
- Most other applicable industries remained unchanged at this aggregate level.

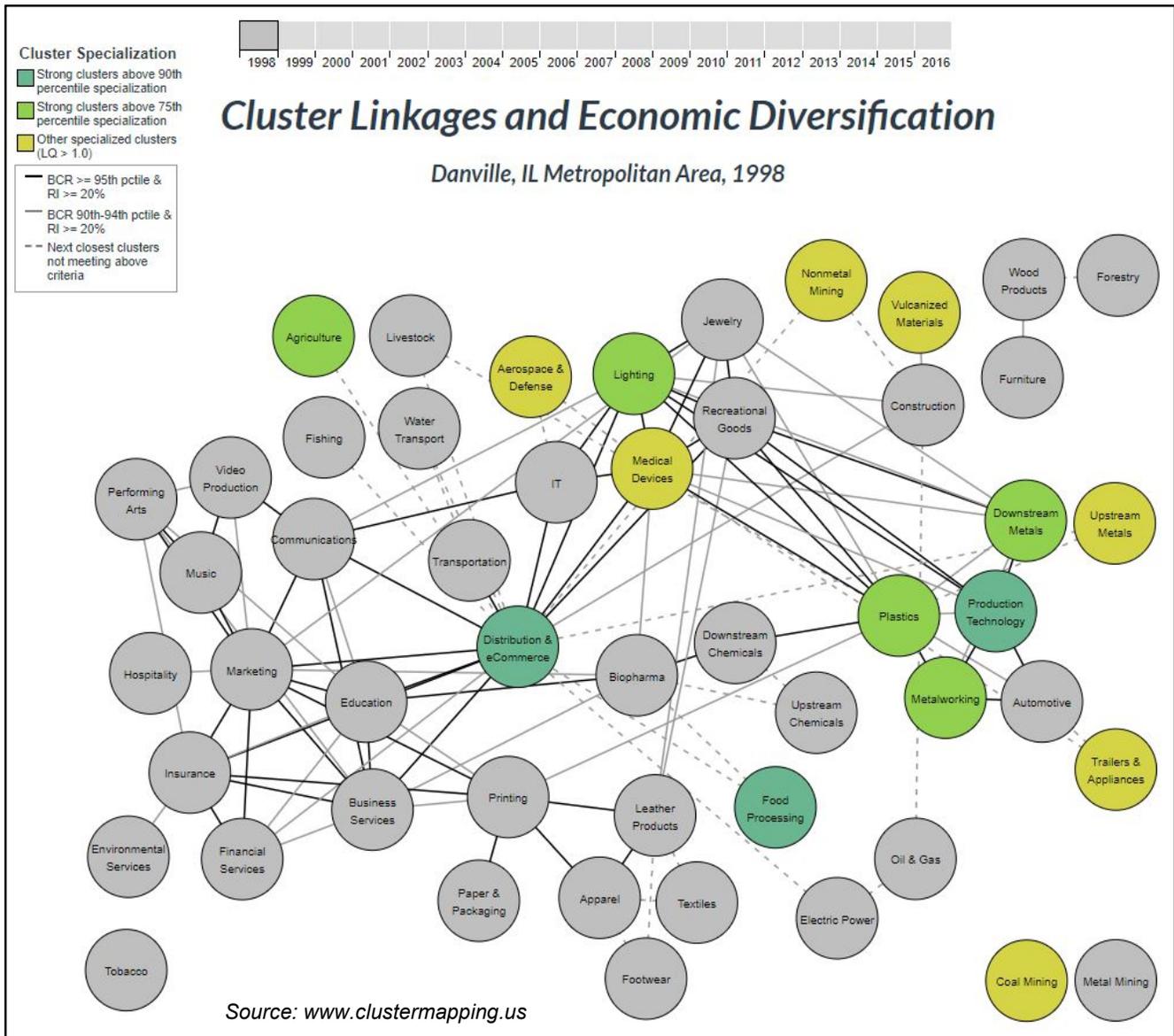


Figure 5 – Industry Clusters, 1998

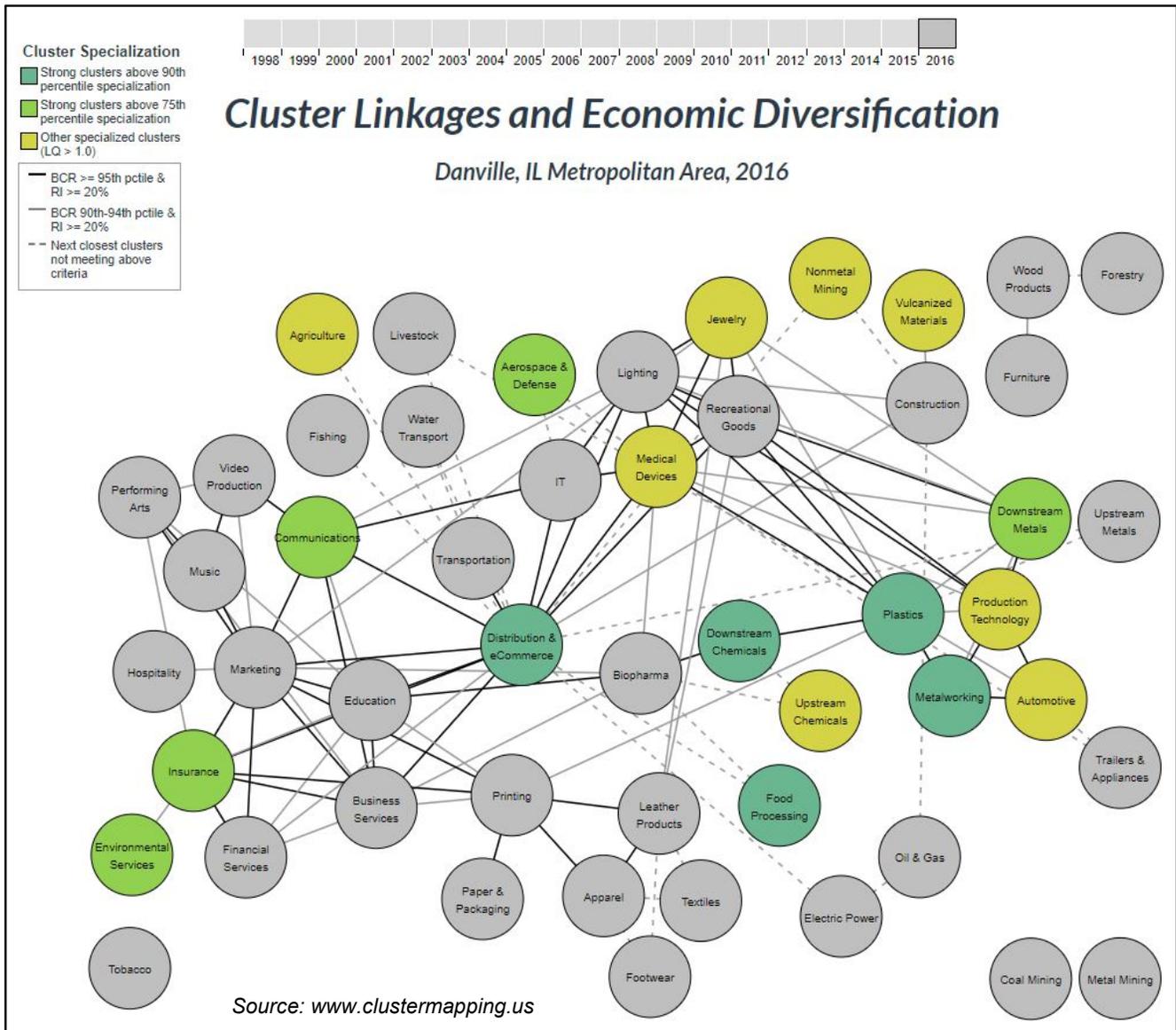


Figure 6 – Industry Clusters, 2016

The information presented in the industry clusters above is further conveyed by a review of job creation and decline for specific industries. Job creation by industry cluster from 1998 to 2016 is shown in Figure 7. Job creation generally corresponds with the industries that experienced expansion in the industry clusters above, and job decline generally corresponds with the industries that experienced contraction in the industry clusters above. As shown, the Downstream Chemicals, Automotive, and Metalworking industries experienced significant job creation. From a freight perspective in the Danville region, this could indicate increases in commodities such as chemicals for making plastics and base metals for manufacturing steel components, both of which could supply the automotive-related industry. An anomaly observed is the continued strong Distribution & eCommerce industry cluster, which had a corresponding decline in job creation. This may be a result of automation.

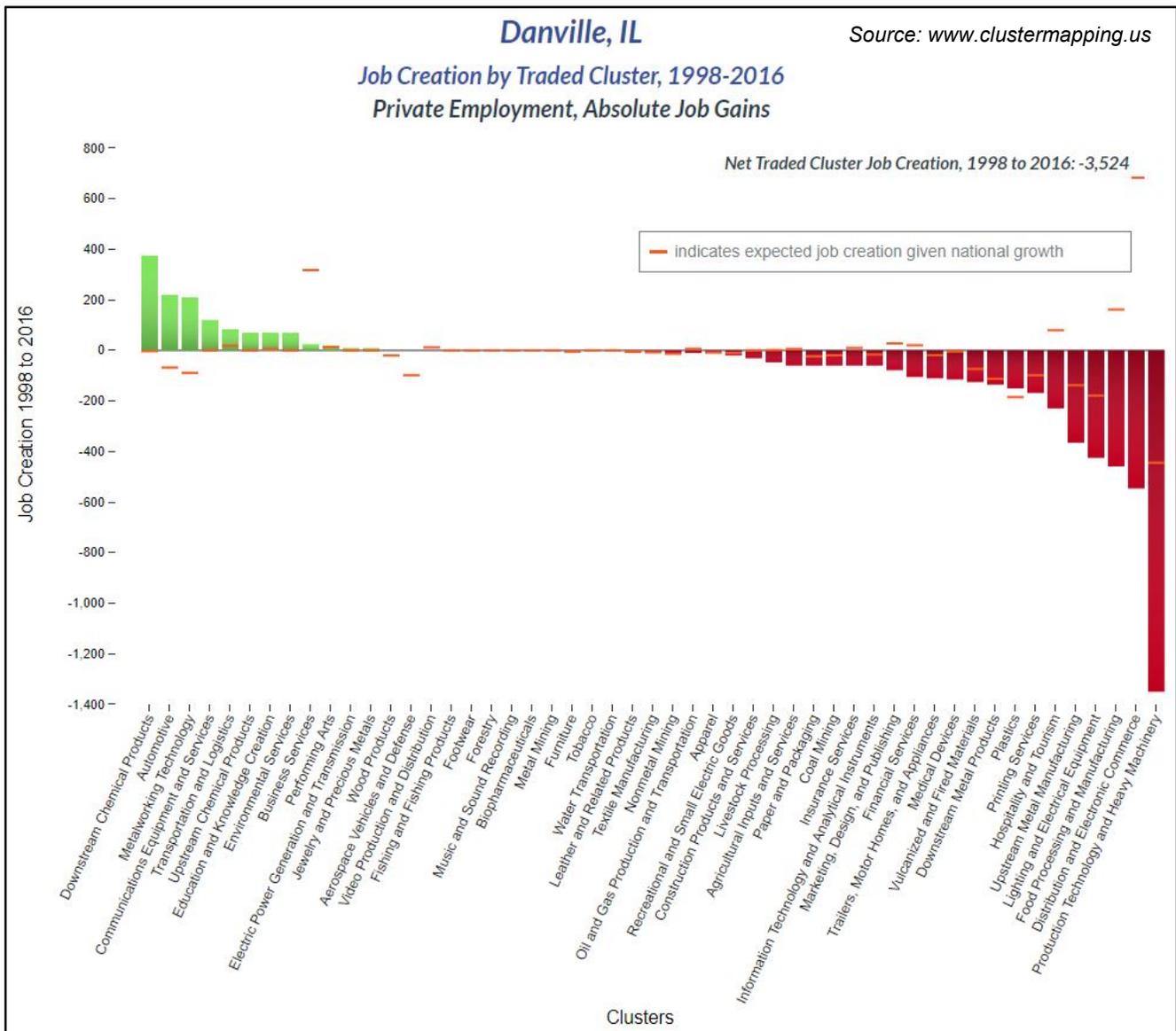


Figure 7 – Danville Job Creation/Decline, 1998-2016

5.2 Transload Opportunities

Transloading is the transfer of materials/products from one mode of transportation to another, due to the inability or inefficiency of transporting freight from an origin to a destination using only one mode. Based on the freight data analyses summarized in Section 2.0 and the commodities/products that are consumed/produced by the freight stakeholders identified in Section 3.1, three potential transload opportunities were identified.

- Grain transload facility (truck-to-rail)
- Industrial chemicals transload facility (truck-to-rail)
- Steel transload facility (rail-to-truck)

In 2017, over 8.5M tons of grain had an origin, destination, or passed through Vermilion County via truck; that tonnage is projected to increase 24% to more than 10.5M tons by 2045. As previously stated in Section 2.2, a significant portion of grain with a Vermilion County destination is likely going to the Bunge milling facility in Danville. However, a grain transload facility in Danville may have the potential to capture a portion of the grain tonnage that passes through or has a Vermilion County origin.

Combined, pass-through and Vermilion County origin grain tonnage was about 7.0M tons in 2017; that tonnage is projected to increase 23% to about 8.6M tons per year by 2045. If 20% of this tonnage (about 1.4M tons in 2017 and over 1.7M tons by 2045) was captured by a truck-to-rail grain transload facility in Danville, 150 unit trains per year could be filled by 2045. This estimate is based on a net weight limit of about 225,000 lbs. per railcar and 100-railcar unit trains. Significant rail-to-barge grain transload facility development has occurred in the St. Louis region over the last decade. As such, it may be feasible for CSX or NS to operate a unit train shuttle between Danville and the St. Louis region.

In 2017, over 700,000 tons of industrial chemicals originated in the CUEA via rail; that tonnage is projected to increase 110% to almost 1.5M tons per year by 2045. Of greater significance is the 3.5M tons of industrial chemicals that passed through Vermilion County via truck in 2017, which is projected to increase 114% to over 7.4M tons per year by 2045. It may be feasible to capture a portion of this truck pass-through tonnage, adding it to the rail tonnage already originating in the CUEA through a truck-to-rail transload facility. Capturing 20% of the truck pass-through tonnage could shift almost 700,000 tons of industrial chemicals to rail in 2017 and almost 1.5M tons per year by 2045.

A number of Danville freight stakeholders use steel as a raw material in their respective production processes. Truck pass-through and Vermilion County destination steel tonnage combined was over 666,000 tons in 2017 and is projected to increase 35% to almost 900,000 tons per year by 2045. It may be feasible for these industries to group together, buy larger quantities of steel, and transport the steel to the Danville region via rail. The steel would then be transloaded from rail to truck for local distribution. This may result in volume discounts on the purchase price of the steel and/or lower transportation costs. If 20% of the combined steel tonnage that passes through or has a Vermilion County destination were transported to the Danville area via rail, this could equate to almost 1,300 railcars of steel in 2017 and over 1,750 railcars per year by 2045 (based on an assumed maximum net railcar capacity of 205,000 lbs.).

5.3 *Modal Shift Opportunities*

A modal shift describes the scenario when a commodity/product that is typically transported by one mode (truck, for example) is moved to a different mode of transportation (rail, for example). All of the Danville freight stakeholders identified in Section 3.1 have truck access to their facility, eight of the 13 industry stakeholders (62%) have rail access, and one distribution center has rail access. Hanson assumes that most of these facilities ship and/or receive commodities/products via both truck and rail (as stated in Section 3.2, one industry stakeholder with rail access does not currently utilize rail service). Additionally, two industry stakeholders and one distribution center do not currently have rail access, but they are located adjacent to a railroad.

No specific modal shift opportunities were identified through the freight data analyses or stakeholder outreach. In general, freight stakeholders with rail access utilize rail service. However, as stated in Section 3.2, several rail-connected industry stakeholders expressed frustration with the relatively poor level of service received from the railroads. Thus, unless rail levels of service in the Danville region are improved, industry stakeholders have little incentive to consider a modal shift for transportation of their materials/products.

5.4 *Intermodal Freight*

In practice, freight movements follow the most economical route. Each time freight is handled or delayed, additional costs are incurred and efficiency is diminished. For example, if freight moving from Chicago to Indianapolis were to stop in Danville, this longer route and the delay that would be experienced for all of the freight on the particular truck/train while stopped in Danville would decrease the overall freight efficiency and increase the overall transportation costs for the overall freight movement. While a stop in Danville would likely be beneficial for the freight being delivered or picked up there, the overall costs for the entire shipment on the given truck/train would increase, thereby decreasing overall freight efficiency and increasing overall freight costs.

Intermodal freight involves the transportation of commodities/products in shipping containers using multiple modes of transportation, typically ship, rail, and truck. Further, intermodal freight typically remains in the shipping container when transferred from one transportation mode to another, with the commodities/products inside the container only being handled at the origin and final container destination.

A 2015 database of intermodal freight facilities was obtained from the USDOT. These existing facilities, along with 2016 truck volumes on the National Highway Freight Network (NHFN) are shown in Figure 8. Significant truck traffic is shown between Chicago and the other major Midwest metropolitan areas, as well as on I-74 passing through Danville. However, based on the data presented in Section 2.1, this truck traffic appears to be primarily pass-through traffic and not representative of freight destined for/originating in Danville or the immediately surrounding area.

Noteworthy in Figure 8 is the concentration of intermodal freight facilities around major metropolitan areas. In general, and particularly with distribution centers, the success of a facility is dependent on the close proximity of a consumption market, typically in the form of a large population base. To emphasize this point, the same intermodal freight facilities shown in Figure 8 are also shown in Figure 9. However, Figure 9 also shows the population of Midwest cities with a population greater than 12,500 people. For reference, the 2017 population estimate for Danville was 33,424 according to the US Census Bureau. Existing intermodal freight facilities are clearly clustered around larger population bases.

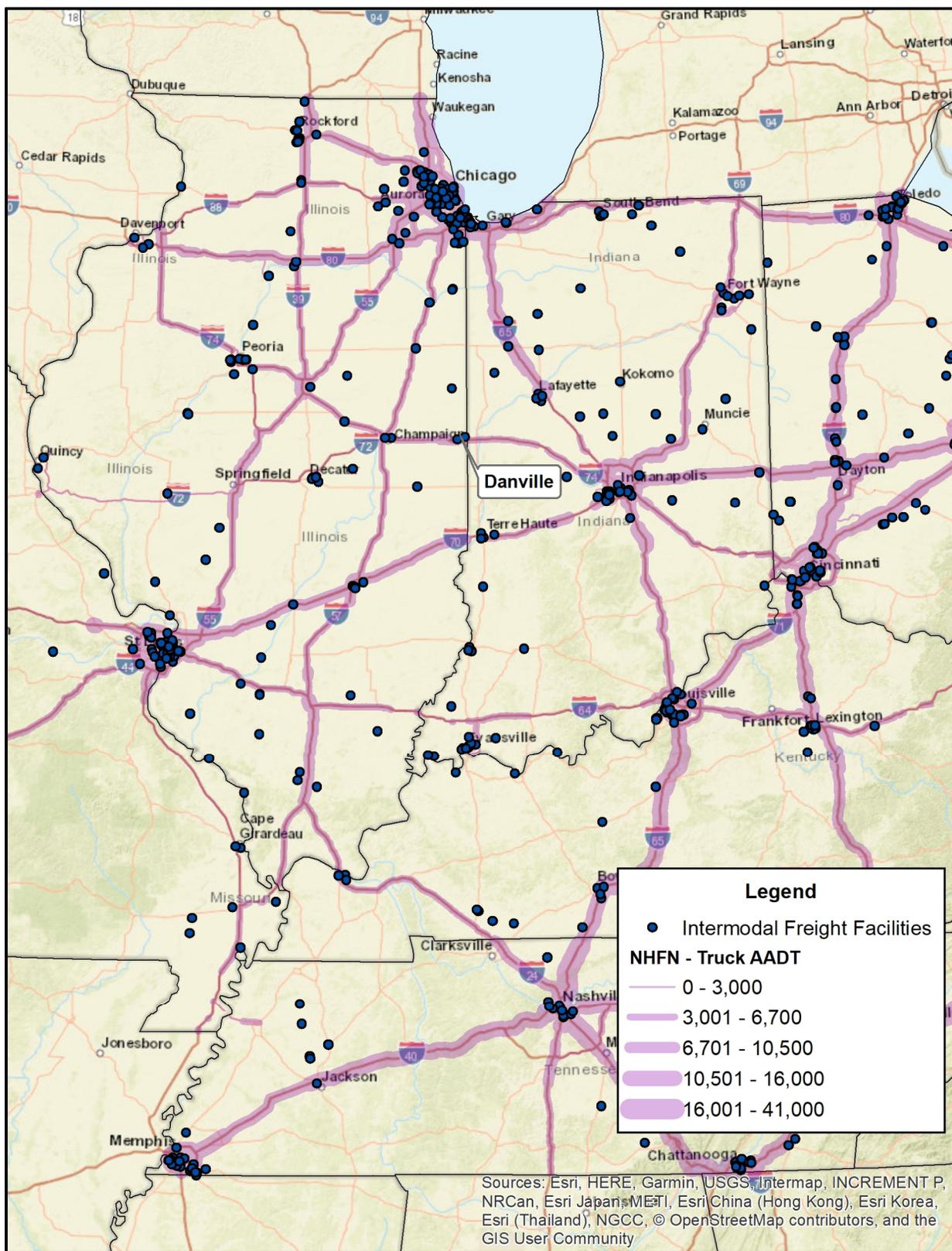


Figure 8 – Highway Truck Volumes & Intermodal Freight Facilities

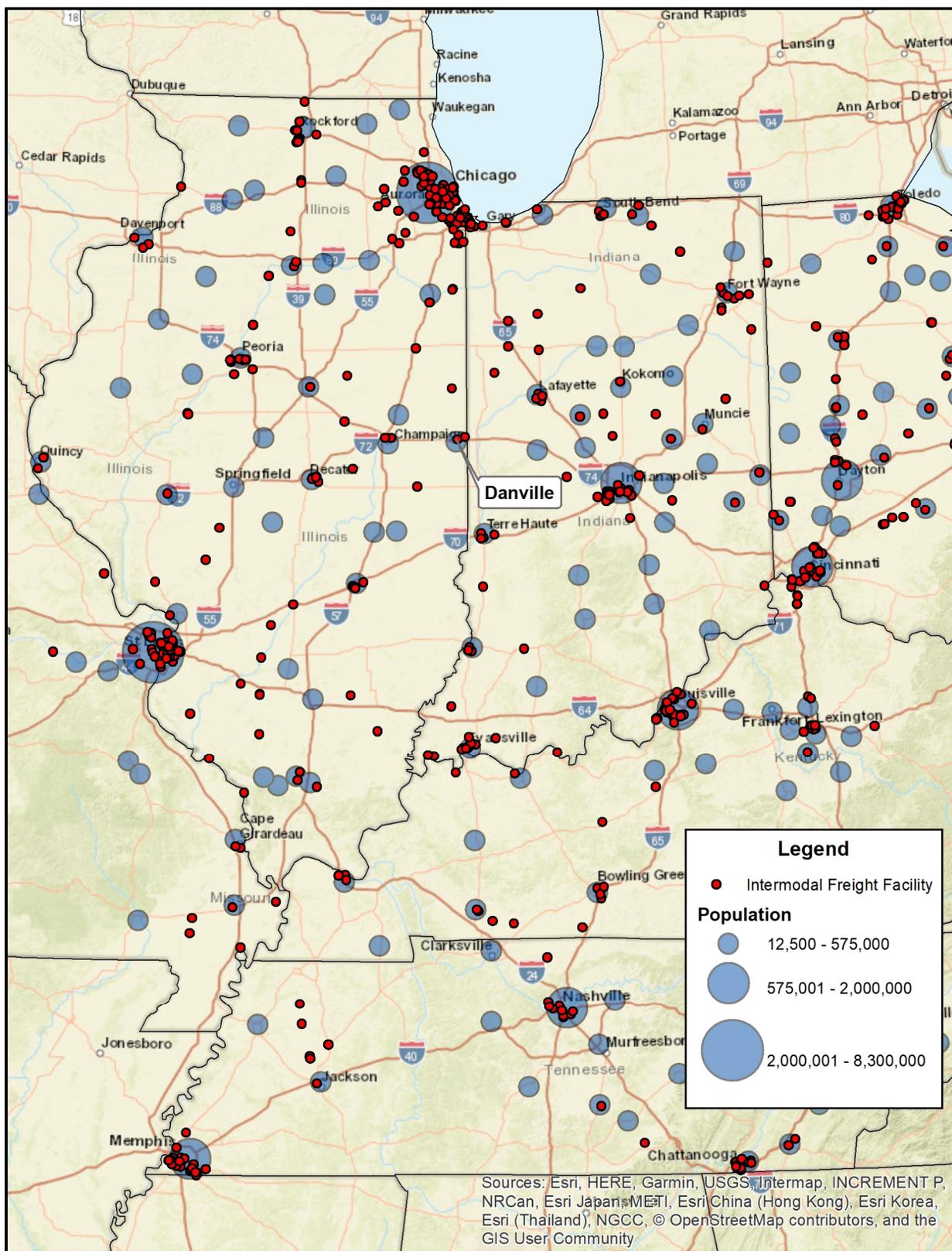


Figure 9 – Population & Intermodal Freight Facilities

Based on the information above and the intermodal freight previously identified in Table 10 and Table 11, the likelihood of developing a successful, major intermodal freight facility near Danville appears to be low. Danville industries that are experiencing growth, as identified in the industry clusters in Section 5.1, may benefit by receiving raw materials at or shipping finished products from a local multimodal facility. However, the logistics plans that currently support these industries are clearly established, and changes are likely to occur only if significant transportation savings could be realized by these industries.

5.5 *Inland Port Concept*

An inland port is “a site located away from traditional land, air, and coastal borders with the vision to facilitate and process international trade through strategic investment in multi-modal transportation assets and by promoting value-added services as goods move through the supply chain” (Center for Transportation Research, University of Texas). Examples of existing successful inland ports include those located in or adjacent to the cities listed below.

- Chicago, IL
- Atlanta, GA
- Memphis, TN
- Kansas City, MO
- Columbus, OH
- Dallas/Ft. Worth, TX

Inland ports are typically located near multiple interstate highways and the mainlines of multiple Class I railroads. All of the cities mentioned above have those characteristics; from this perspective, Danville may be an ideal location for an inland port.

However, one common characteristic of these successful inland ports that is lacking for Danville is their location in or adjacent to major population centers. As previously shown in Figure 9, the nearest major population centers to Danville are Chicago to the north, Indianapolis to the east, and St. Louis to the southwest; the latter two of these could be considered emerging inland ports themselves. Inland ports that do not meet the highway, railroad, and population criteria are typically either unsuccessful or can take a decade or more to achieve success. Absent the major population center, Danville is not likely to attain success as an inland port for the foreseeable future.

5.6 *Facility Type & Location*

Any freight-related development within the City of Danville should be focused in areas zoned for “industrial” land uses. Danville has two industrial land uses, as described below (source: Danville Zoning Ordinance, 2008).

- Industrial 1, Light Industrial – “The purpose of this District is to provide for the establishment of less intensive areas of industrial development within specific areas of the community in order to accommodate assembly and warehousing activities at a scale and intensity of use compatible with adjacent areas.”
- Industrial 2, General Industrial – “The purpose of this District is to provide for the establishment of larger scale, higher intensity areas of industrial development within specific areas of the community in order to accommodate any type of manufacturing, processing, fabricating, assembling or warehousing operations which generally exhibit higher levels of objectionable external effects and ensure they are carried out in a manner that will not endanger the public health, safety, and general welfare.”

Areas within Danville that are zoned for industrial uses are shown in Figure 10. As shown, the Danville industrial areas are primarily concentrated near the I-74 interchange at Lynch Road, the Lynch Road corridor, the Voorhees Street corridor, and along the south side of Fairchild Street, between Bowman Avenue and Michigan Avenue. As would be expected, a railroad passes through or is adjacent to most of the industrial areas in Danville.

Until the existing Danville industrial areas are built-out, any new freight-related development should focus on areas that are currently zoned for industrial land uses. Further, close proximity to I-74 and at least one railroad would enhance the desirability of the freight-related development site. The Lynch Road corridor fits this criteria, including near the I-74 interchange. Portions of the Voorhees Street corridor also fit the criteria from a rail perspective, but it is further away from I-74 and truck traffic could be inhibited periodically by the existing at-grade railroad crossing on Lynch Road.

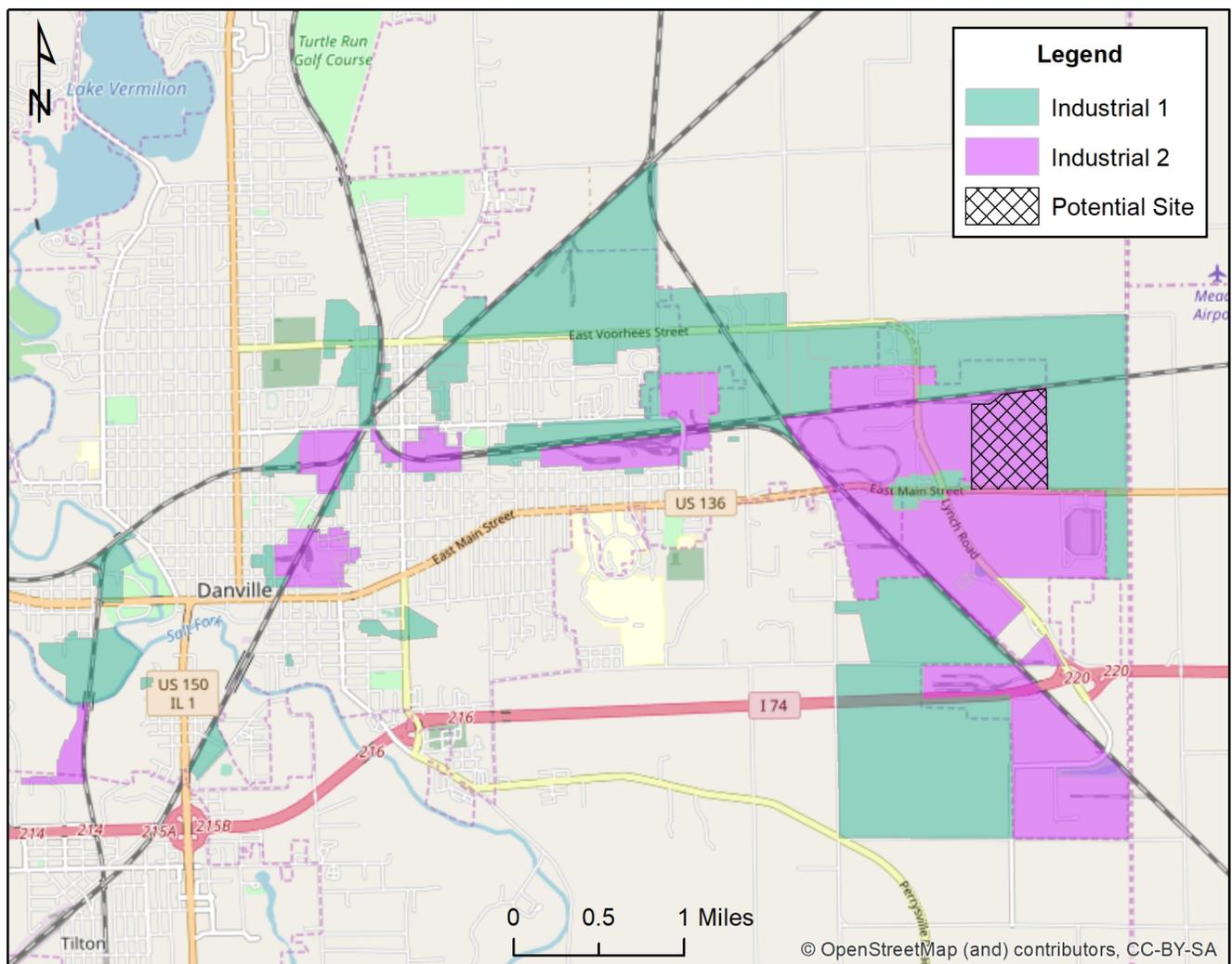


Figure 10 – Danville Industrial Zoning & Site Location

Based on the analyses and information presented in this section, the development of a transload facility appears to have the highest likelihood of success in Danville. Further, of the transload facility

types presented in Section 5.2, a grain transload facility (truck-to-rail) is recommended for further consideration. A potential site for development of the transload facility is shown in Figure 10.

5.7 Concept Plan

A conceptual site plan was created to depict the potential development of grain transload facility (see Figure 11). The concept plan involves development of the site previously shown in Figure 10, north of East Main Street and east of Lynch Road. The facility's access road would connect to East Main Street near the entrance to the existing McLane facility. This site, currently used for agriculture, provides direct access to a Class I railroad (CSX), and it is located in close proximity to I-74 (about 1.5 miles).

The potential grain transload facility consists of a long access road, which would provide sufficient truck queuing space to minimize impacts to traffic on East Main Street. The concept plan includes scales for both inbound and outbound trucks. Initial on-site grain storage consists of two grain bins with a capacity of about 800,000 bushels each, or a total of about 1.6M bushels. This storage capacity is sufficient to fill about two unit trains. The initial phase of the plan includes only a single truck dump pit; however, sufficient space is provided for additional truck dump pits for either facility expansion or to provide improved facility efficiency.

The concept plan also shows a rail loop of about 8,000 feet in length, which connects to the existing CSX tracks along the north side of the site (note, Hanson understands that this portion of the CSX tracks is serviced by the VVRR). The proposed track arrangement would allow the facility to operate without impacting the CSX tracks. The existing rail spur to the Central States facility is not impacted by the potential transload facility development.

An opinion of probable construction cost (OPCC) was developed for the grain transload facility concept plan (see Table 14). As shown, more than half of the cost is related to grain storage, at about \$35M. A thorough investigation of the site was not included in the scope of this freight study, so a contingency of 35% is included in the OPCC to account for unknown factors. The total OPCC, including the contingency, is about \$62M. As noted, the OPCC assumes required utilities are immediately adjacent to the site and that they are of sufficient capacity to support the facility. Additionally, the OPCC does not include site acquisition or any other offsite work, such as utility main extensions to the site.

Although not shown in the conceptual site plan, the area between the access road and the west side of the rail loop could be developed as a lay-down area for general transloading when the rail loop is not being used for grain transloading. With the addition of pavement, lighting, and security (i.e. fencing/gates), this roughly 4.5-acre area could further be used to transload wind farm components from rail to truck, for example. Addition of a structure (a fabric-roofed building, for example) could facilitate the development of a steel or industrial chemicals transload/distribution facility (note, a chemicals facility would likely require additional development costs related to spill containment and safety). In summary, this grain transload facility concept plan provides flexibility to further develop the site for transloading of other commodities/products, in addition to grain.

As indicated in Figure 11, the grain transload facility concept plan is a 3D model. A video "fly-thru" of the concept plan was provided to the City of Danville with the submittal of this report.

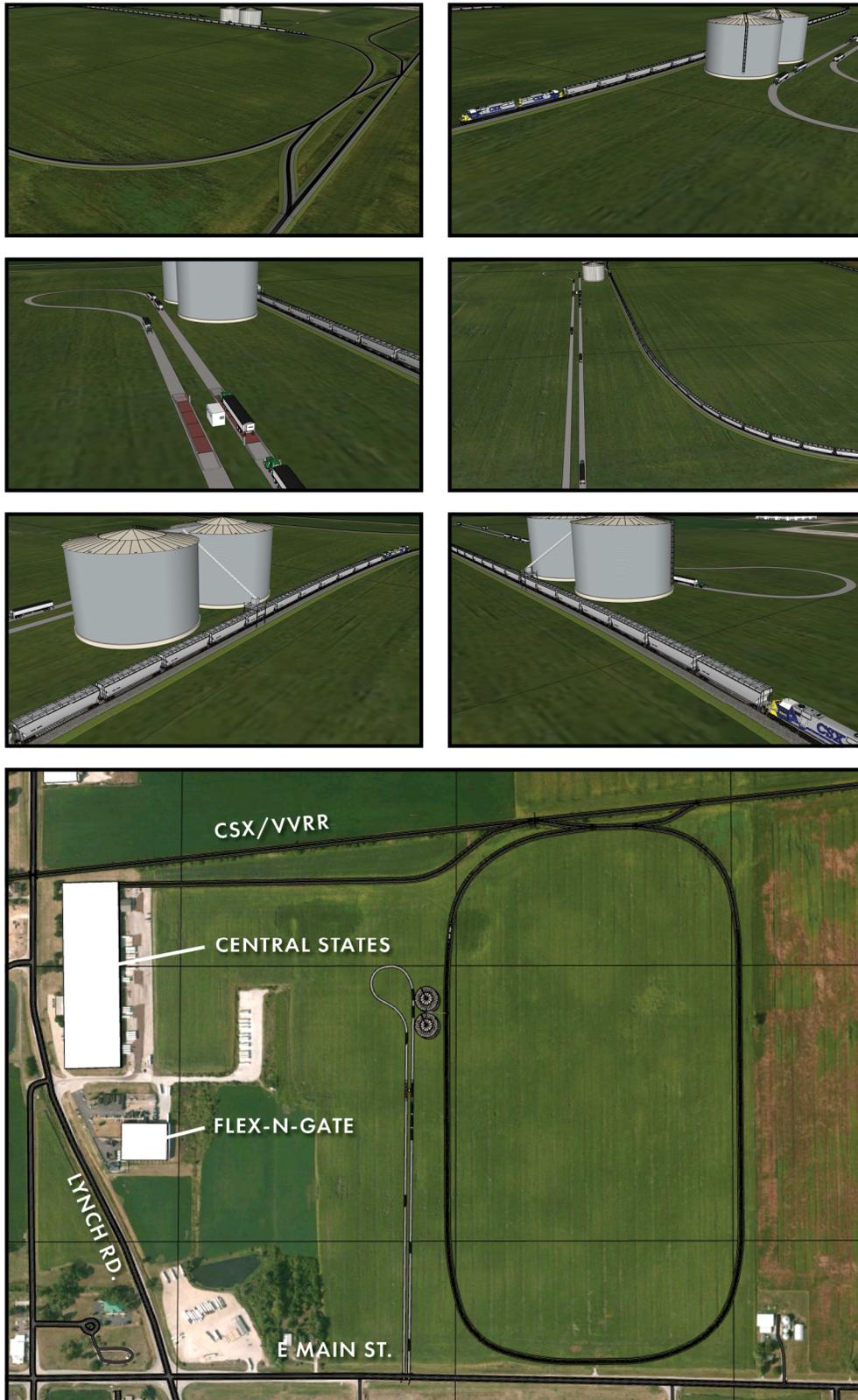


Figure 11 – Grain Transload Facility Concept Plan

Table 14 – Grain Transload Facility Opinion of Probable Construction Cost

QTY.	UNIT	DESCRIPTION	UNIT COST	TOTAL COST
7,780	SY	Access Road (concrete)	\$55	\$427,900
2,050	LF	Utility Service (electricity, water, sewer)	\$155	\$317,750
1	EA	Storage Bins (1.6M bushels) & Conveyance	\$35,200,000	\$35,200,000
1.50	MILE	Rail/Track	\$1,850,000	\$2,775,000
4	EA	Rail Turnout	\$100,000	\$400,000
1	EA	Truck Dump Pit	\$225,000	\$225,000
2	EA	Scales/Testing Equipment	\$325,000	\$650,000
1	LS	Mobilization/Engineering/Permitting/Surveying	15%	\$5,999,348
1	LS	Contingency	35%	\$16,098,249
			TOTAL:	\$62,093,247

NOTES: Opinion of Probable Construction Costs (OPCC) are shown in 2019 Dollars. Utilities assumed to be underground from beginning of access road. OPCC does not include site acquisition.

5.8 Traffic Projections & Analysis

Traffic impact on Danville area roadways associated with the potential transload facility development is anticipated to be minimal. To quantify this impact, the 1.7M tons of grain identified for potential transload by 2045 (see Section 5.2) was used as a worst-case scenario for this analysis. The mathematical analysis and assumptions are as follows:

$$1,700,000 \text{ tons} \times \frac{2,000 \text{ lbs}}{1 \text{ ton}} = 3,400,000,000 \text{ lbs of grain}$$

Assuming 60,000 lbs. per grain truck:

$$\frac{3,400,000,000 \text{ lbs}}{60,000 \text{ lbs/truck}} = 56,667 \text{ trucks/year}$$

Based on Hanson research of typical grain movements and the associated variability/seasonality, we assume about 50% of these trucks utilize the grain transload facility during the 4-month peak harvest season:

$$56,667 \text{ trucks/year} \times 50\% = \frac{28,333 \text{ trucks}}{4 \text{ months}} = 7,083 \text{ trucks/month}$$

Assuming operations of 30 days per month and 12 hours per day:

$$7,083 \text{ trucks/month} \times \frac{1 \text{ month}}{30 \text{ days}} = 236 \text{ trucks/day} \times \frac{1 \text{ day}}{12 \text{ hrs}} = 20 \text{ trucks/hr}$$

As shown, the potential impact to Danville area roadways is anticipated to be about 236 trucks per day, which equates to about 20 trucks per hour or 1 truck every 3 minutes, during the 4-month peak harvest season. Employment by a grain transload facility is likely on the order of 10 to 20 people. Thus, traffic associated with employees is also anticipated to be minimal.

The truck traffic is anticipated to primarily access the site from I-74, limiting impacts to Lynch Road (south of East Main Street) and East Main Street (east of Lynch Road). According to IDOT, the annual average daily traffic (AADT) volumes in 2017 for these portions of Lynch Road and East Main Street was 5,300 vehicles for both roadways, with a truck percentage of about 16% reported on East Main Street (no truck percentage was reported by IDOT for Lynch Road south of East Main Street). Adding 236 trucks per day is an increase of only 4% overall and increases the truck percentage from about 16% to about 20%. In the site vicinity, both Lynch Road and East Main Street currently operate at acceptable levels of service, and both roadways are anticipated to continue operating at acceptable levels of service with the additional truck traffic associated with the potential grain transload facility. However, a detailed traffic impact analysis was beyond the scope of this freight study.

Note, the intersection of Lynch Road and East Main Street is currently unsignalized (stop-controlled). Freight-related development in the area, including the potential grain transload facility, may warrant signalization of this intersection at some point in the future. These costs are not included in the OPCC presented in Table 14.

5.9 Site Certification

Site certification has become a valuable tool for land developers and economic development agencies seeking to promote industrial development. “Certifying sites confirms site readiness to a point that creates a benefit in the site selection process, leverages job creation, and attracts capital investment. For corporations desiring to locate manufacturing facilities, access to certified sites presents a unique site screening advantage that reduces overall site location risk, saves time, and reduces site development costs” (“Site Certification: Now More than Ever, A Critical Tool for Successfully Locating Projects,” *Site Selection Magazine*, May 2012). Site certification generally consists of the following aspects of site development:

- The property shape and terrain should be conducive to development, with an appropriate buffer between it and adjacent properties.
- The property should have favorable transportation access.
- The property should be acquired or have an option in place to quickly acquire the property.
- All required studies, such as geotechnical and environmental, should be completed.
- The property should have utilities, or the ability to quickly install utilities, that are of capacity appropriate for industrial development.

The certification of an industrial site, or multiple sites, may give the City of Danville a competitive advantage for future potential industrial development.

6.0 Conclusions

The Freight Data Analysis (Section 2.0) provided the foundation for analyzing existing and projected freight movements in the Danville region. The majority of freight tonnage moved by truck passes through Vermilion County (around 85% of truck freight), as opposed to the much smaller percentage (about 15% of truck freight) having an origin or destination in Vermilion County. Conversely, the majority of freight tonnage moved by rail in the Champaign-Urbana Economic Area (CUEA) has either an origin or destination in the CUEA (around 85% of rail freight), as opposed to passing through the CUEA. Several commodities that have origins/destinations in, or pass through the Danville region and that have significant tonnage were identified. The significant truck pass-through freight, particularly grain, may represent an opportunity to capture a portion of that tonnage through freight development in the Danville region.

The Freight Stakeholder Outreach (Section 3.0) provided insight from freight stakeholders in the Danville area regarding perceived freight needs, issues, and constraints. No specific freight needs were identified by stakeholders. Freight transportation issues focused on safety improvements recommended by stakeholders for Lynch Road, a corridor generally surrounded by industrial development. The only freight-related constraint identified by stakeholders was the poor levels of service from the railroads, primarily related to railcar switching at their respective facilities. Overall, freight stakeholders were supportive of freight-related development in the Danville region.

The Transportation System Review (Section 4.0) indicated that the Danville region has many assets that could be beneficial for freight-related development. The three I-74 interchanges in Danville provide direct access to the Interstate Highway System and connect Danville to several major Midwest cities. The two Class I and two shortline railroads that operate in Danville provide shippers with freight transportation options. The Vermilion Regional Airport could be used for air freight; however, air freight typically consists of high-value products that are relatively small in size, which is not generally consistent with the raw commodities/finished products that are currently (and forecasted to continue to be) consumed/produced in the Danville region.

The Danville Industrial Analysis (Section 5.1) showed a continued strong presence in manufacturing components for the aerospace and automotive industries (metals and plastics), as well as production of chemicals. The raw materials and finished products associated with these industries could be observed in the Freight Data Analysis.

No specific modal shift opportunities (see Section 5.3) were identified. The likelihood of developing a successful, major intermodal freight facility (see Section 5.4) or an inland port (see Section 0) near Danville appears to be low, primarily due to the lack of a major population center that typically drives the success of such facilities. The logistics plans that currently support Danville industries are clearly established, and changes are likely to occur only if significant transportation savings could be realized.

Based on the preceding, a transload facility (see Section 5.2) appears to have the highest likelihood of success in the Danville area. Several commodities were identified that are produced, consumed, and/or pass through the Danville region in significant volumes, particularly grain, industrial chemicals, and steel. A site near the intersection of Lynch Road and East Main Street was identified for potential development, primarily due to the potential to connect to a Class I railroad, close proximity to I-74, and existing industrial zoning (see Section 5.6).

Due to the significant grain tonnage moved by truck that either passes through or has a Vermilion County origin (7.0M tons in 2017 and a projection of 8.6M tons by 2045; a 1.6M ton increase), a truck-to-rail grain transload facility conceptual site plan was developed (see Section 5.7). Primary features of the concept plan include an access road, rail loop, and significant grain storage capacity/capability. The concept plan also provides the versatility to expand the facility for additional grain throughput and/or the addition of further infrastructure to support transloading other commodities/products. The preliminary opinion of probable construction cost for the truck-to-rail grain transload facility concept is about \$62M.

The potential success of a grain transload facility is far from guaranteed – this should not be viewed as a “build it and they will come” scenario. The typical limit for which it may be economically feasible to transport grain via truck to a processing facility is about 100 miles; this distance is on the order of 50 miles if the grain will be transloaded to another mode of transportation. Significant grain storage capacity (over 154M bushels, or over 4.6M tons) exists within a 100-mile radius of Danville, as shown in Figure 12. Note, Figure 12 only shows federally licensed grain storage facilities; more may exist that are licensed on the state level.

In addition to the Bunge facility located in Danville, two other rail-served facilities are located in Vermilion County – one in Hoopston (829,000 bushel storage capacity), about 23 miles north of Danville; and one in Ridge Farm (6.5M bushel storage capacity), about 16 miles south of Danville. Due to this potential competition, a potential area from which a Danville grain transload facility may draw (“draw area”) is also shown in Figure 12. Potential grain facility competition is further emphasized by Figure 13, which shows existing feed grain elevators serviced by CSX unit trains.

It is unknown to Hanson if the existing facilities within a 100-mile radius of Danville have sufficient capacity to accommodate the additional 1.6M tons of grain projected to be transported via truck by 2045, either passing through or with a Vermilion County destination. It is also unknown to Hanson if there is sufficient grain production within the potential draw area shown in Figure 12 to warrant development of a grain transload facility in Danville.

Significant planning and coordination with stakeholders will be required to further gauge the potential success of a grain transload facility in Danville; this type of in-depth market assessment is beyond the scope of this freight study. However, the versatility of the transload facility shown in the concept plan (Figure 11) may increase the likelihood of success if infrastructure to support the transloading of other commodities/products, in addition to grain, is also constructed. It is believed this additional infrastructure could be added for relatively minimal additional construction cost. Regardless of the commodities/products involved, the potential success of a transload facility in the Danville area will be challenged to provide a sufficient logistics advantage to the industries it may serve. Without a logistics advantage, particularly in the form of transportation cost savings, a transload facility is not likely to succeed. Many public transload facilities that ignore this market principle have been built, and without exception, none have been able to attract freight movements.

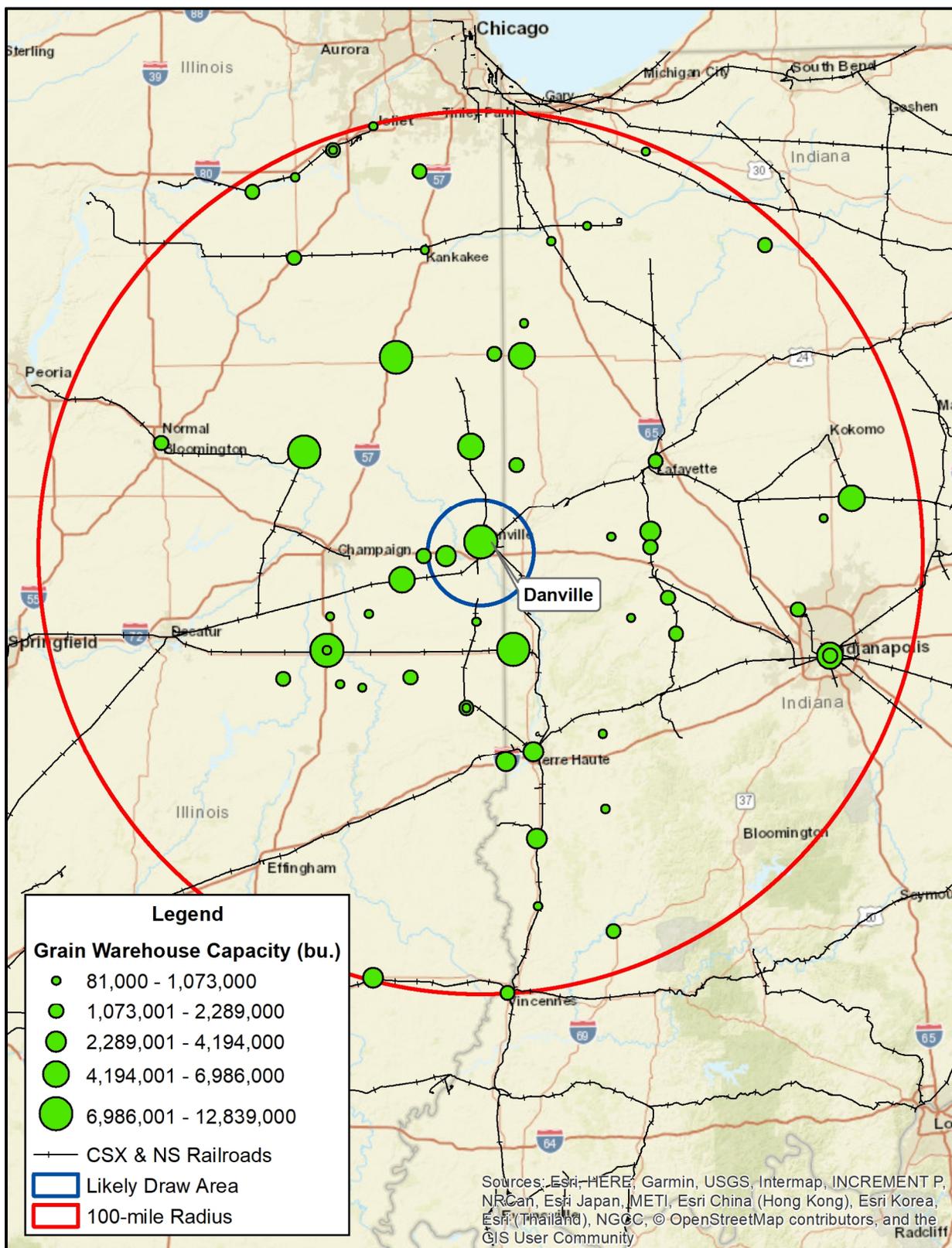


Figure 12 – Federally Licensed Grain Warehouse Capacity within 100-Mile Radius

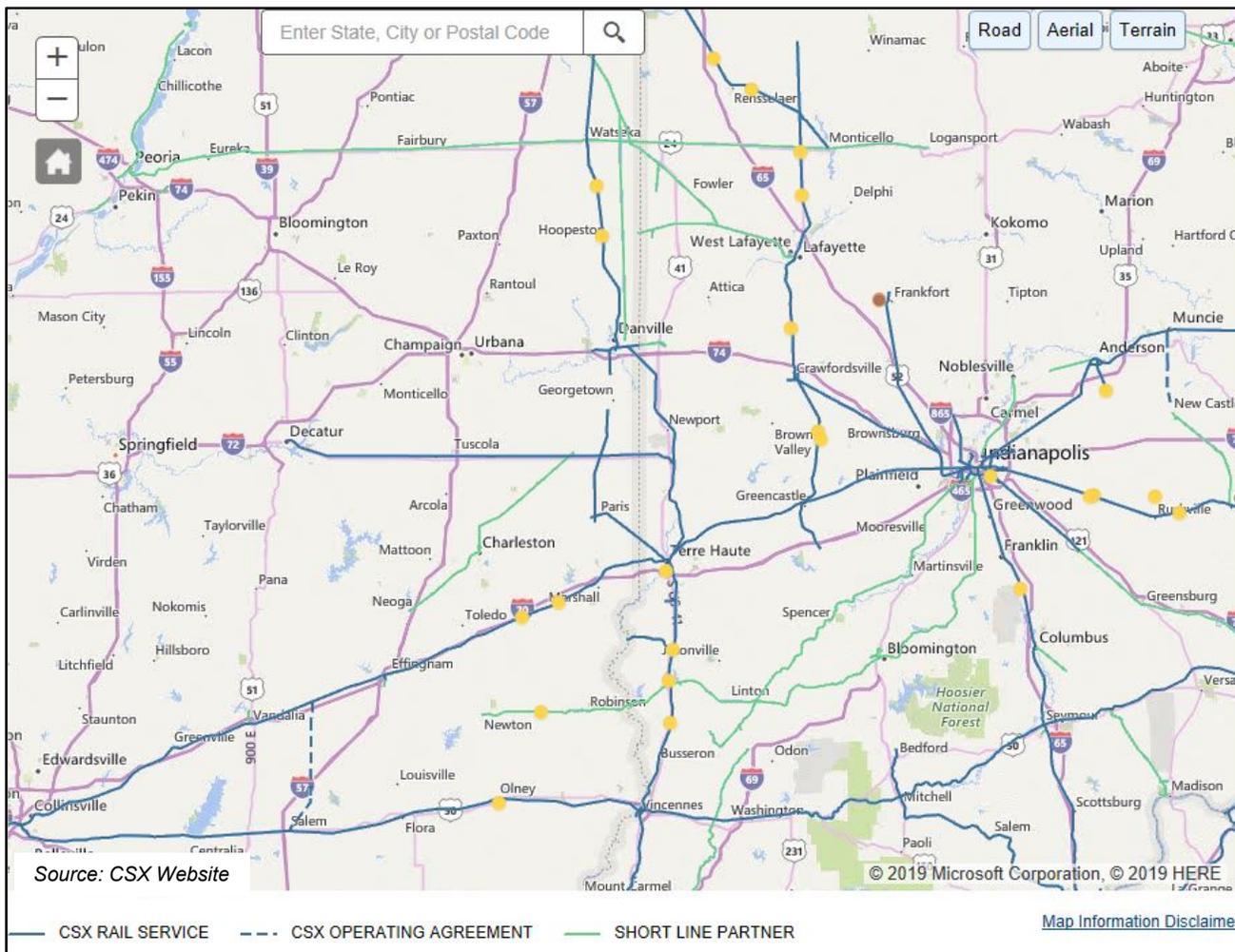


Figure 13 – CSX Feed Grain Elevators

Appendix A

Freight Stakeholder Presentation





DANVILLE
ILLINOIS

Danville Freight Study Stakeholder Outreach

April 17, 2019



Project Goals & Objectives

- Goals

- Provide an economic advantage to stakeholders
- Encourage freight-related development & economic growth
- Identify locations where investment in multimodal infrastructure is economically feasible

- Objectives

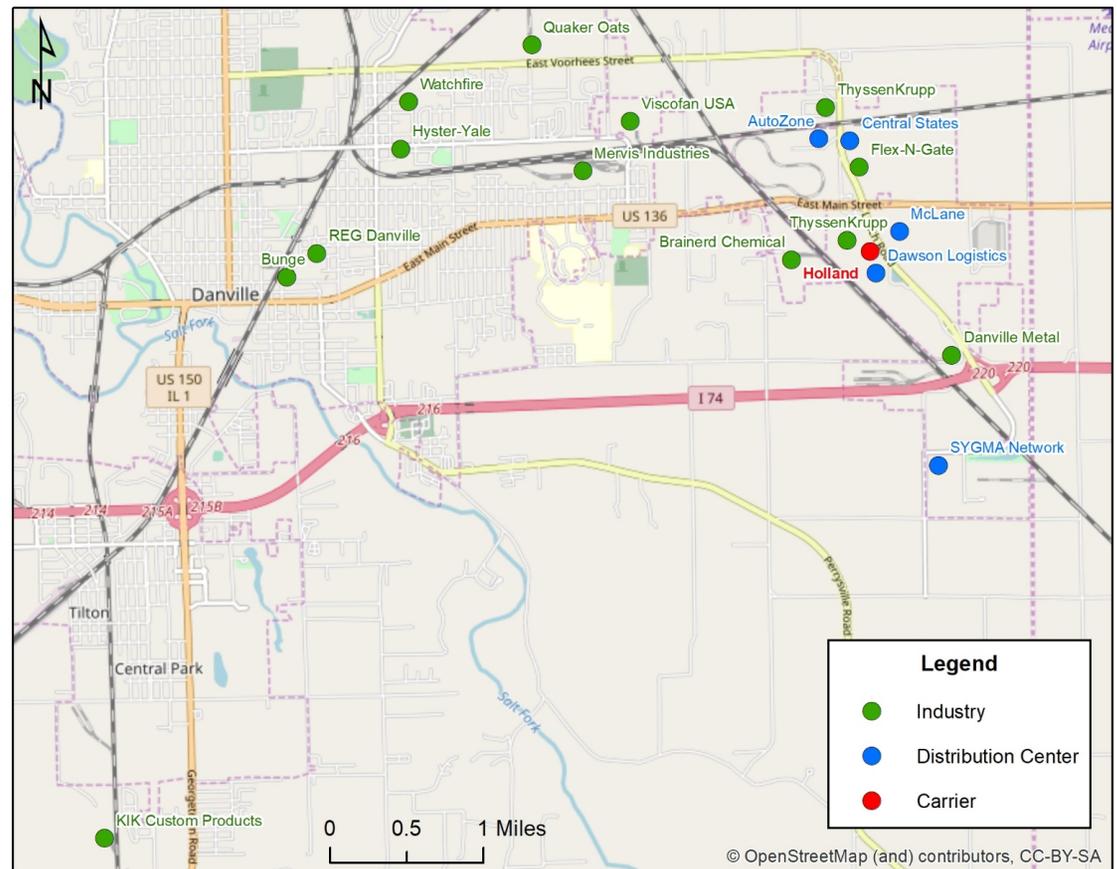
- Preservation or improvement of existing transportation system
- Obtain stakeholder input regarding feasibility & location of potential freight facility development
- Increase connectivity between transportation modes
- Identify improvements needed to benefit Danville constituents & support development

Identification of Freight Stakeholders

- Where did we look &/or seek input?
 - Greater Danville area only
 - Aerial imagery
 - Industry databases
 - City of Danville
 - Vermilion Advantage
- What characteristics did we look for? Companies that...
 - Consume &/or produce commodities/products in significant volumes
 - Carry a significant volume of freight
 - Have a facility with truck bays
 - Have a facility that is rail connected

Invited Stakeholders

Category	Company	Business Type
Industries	Brainerd Chemical	Chemical Manufact./Distrib.
	Bunge	Grain Milling
	Danville Metal	Aerospace Components
	Flex-N-Gate	Plastic Automotive Components
	Hyster-Yale	Lift Equipment Parts
	KIK Custom Products	Consumer Packaged Goods
	Mervis Industries	Metal & Plastic Recycling
	Quaker Oats	Food Products
	REG Danville	Biodiesel Production
	ThyssenKrupp Crankshaft	Vehicle Crankshafts
	ThyssenKrupp Presta	Vehicle Steering Systems
	Viscofan USA	Food Casings
Watchfire	Video Boards/Signs	
Distribution Centers	AutoZone	Vehicle Parts
	Central States	General Distribution Services
	Dawson Logistics	Warehousing & Fulfillment
	McLane	Supply Chain Management
	SYGMA Network	Foodservice Distribution
Carriers	CSX	Class I Railroad
	Holland	Trucking
	KBSR	Shortline Railroad
	NS	Class I Railroad
	VVRR	Shortline Railroad



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Freight Data

Year	Mode	Records	Tonnage	Tonnage % Increase 2017 to 2045	Value	Value % Increase 2017 to 2045
2017	All	272,214	54,888,476	---	\$52,783,724,150	---
	Truck	270,893	53,316,526	---	\$51,622,913,825	---
	Rail	1,308	1,570,593	---	\$1,158,848,059	---
2045	All	272,007	80,248,912	46%	\$88,588,835,122	68%
	Truck	270,681	77,431,761	45%	\$86,585,247,750	68%
	Rail	1,313	2,815,118	79%	\$1,999,280,648	73%

Trucks:
97% of Total

Rail:
3% of Total

Avg. Value:
\$1,000/ton

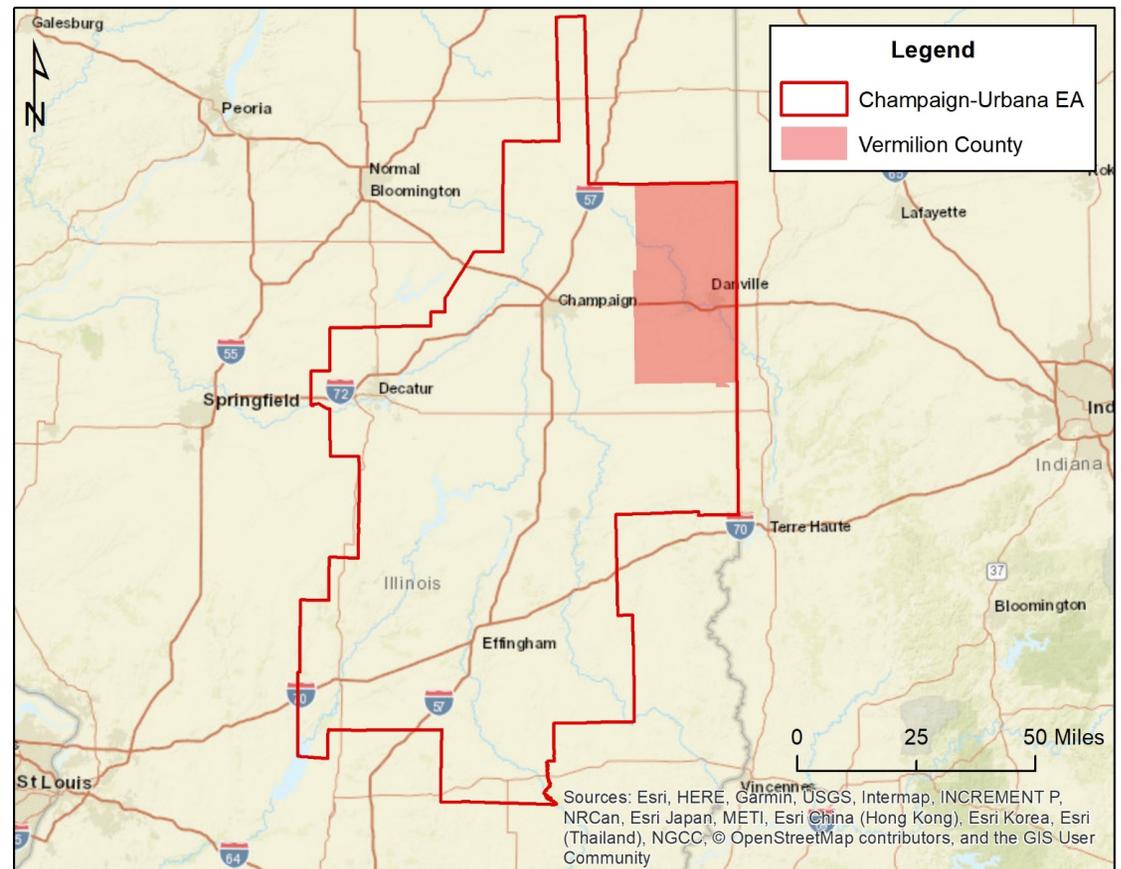
Source: Transearch, IHS Markit

* NOTE: No air or water freight in 2017 data; none projected in 2045.



Freight Data Analysis

- Truck Data
 - Vermilion County
- Rail Data
 - Champaign-Urbana Economic Area (CUEA)



Truck Freight Data Summary

Year	Freight with...	Tonnage	% of Total	Total (tons)
2017	Vermilion County Destination	3,501,804	7%	52,968,769
	Vermilion County Origin	4,717,450	9%	
	Vermilion County O & D	40,002	0.1%	
	Vermilion County Pass-Thru	44,709,513	84%	
2045	Vermilion County Destination	4,344,741	6%	76,809,357
	Vermilion County Origin	5,507,734	7%	
	Vermilion County O & D	54,645	0.1%	
	Vermilion County Pass-Thru	66,902,237	87%	

Source: Transearch, IHS Markit

Origin & Dest.
Tonnage Nearly
Balanced

Majority is
Pass-Thru &
Projected to
Increase
50% by 2045

Truck Freight – Vermilion County Destination

Commodity Class	STCC	2017		2045		% Increase from 2017 to 2045
		Tonnage	% of Total	Tonnage	% of Total	
Grain	0113	1,520,213	43%	1,927,186	44%	27% ★
Oil Kernels, Nuts or Seeds	0114	161,452	5%	125,517	3%	-22%
Broken Stone or Riprap	1421	272,299	8%	265,264	6%	-3%
Gravel or Sand	1441	231,194	7%	256,635	6%	11%
Cereal Preparations	2043	1,569	0%	1,330	0%	-15%
Misc Industrial Organic Chemicals	2818	0	0%	0	0%	---
Misc Plastic Products	3071/72	18,059	1%	30,185	1%	67% ★
Primary Iron or Steel Products	3312	40,641	1%	57,765	1%	42%
Misc Waste or Scrap	4029	164,520	5%	246,890	6%	50% ★
Total of Select Commodities		2,409,947	69%	2,910,772	67%	21%
All Commodities		3,501,804	---	4,344,741	---	24%

Source: Transearch, IHS Markit

Truck Freight – Vermilion County Origin

Commodity Class	STCC	2017		2045		% Increase from 2017 to 2045
		Tonnage	% of Total	Tonnage	% of Total	
Grain	0113	899,860	19%	1,241,687	23%	38% ★
Oil Kernels, Nuts or Seeds	0114	442,516	9%	378,802	7%	-14%
Broken Stone or Riprap	1421	1,458,278	31%	1,450,115	26%	-1% ★
Gravel or Sand	1441	399	0%	411	0%	3%
Cereal Preparations	2043	221,900	5%	170,269	3%	-23%
Misc Industrial Organic Chemicals	2818	0	0%	0	0%	---
Misc Plastic Products	3071/72	52,109	1%	101,622	2%	95% ★
Primary Iron or Steel Products	3312	0	0%	0	0%	---
Misc Waste or Scrap	4029	124,427	3%	87,753	2%	-29%
Total of Select Commodities		3,199,489	68%	3,430,659	62%	7%
All Commodities		4,717,450	---	5,507,734	---	17%

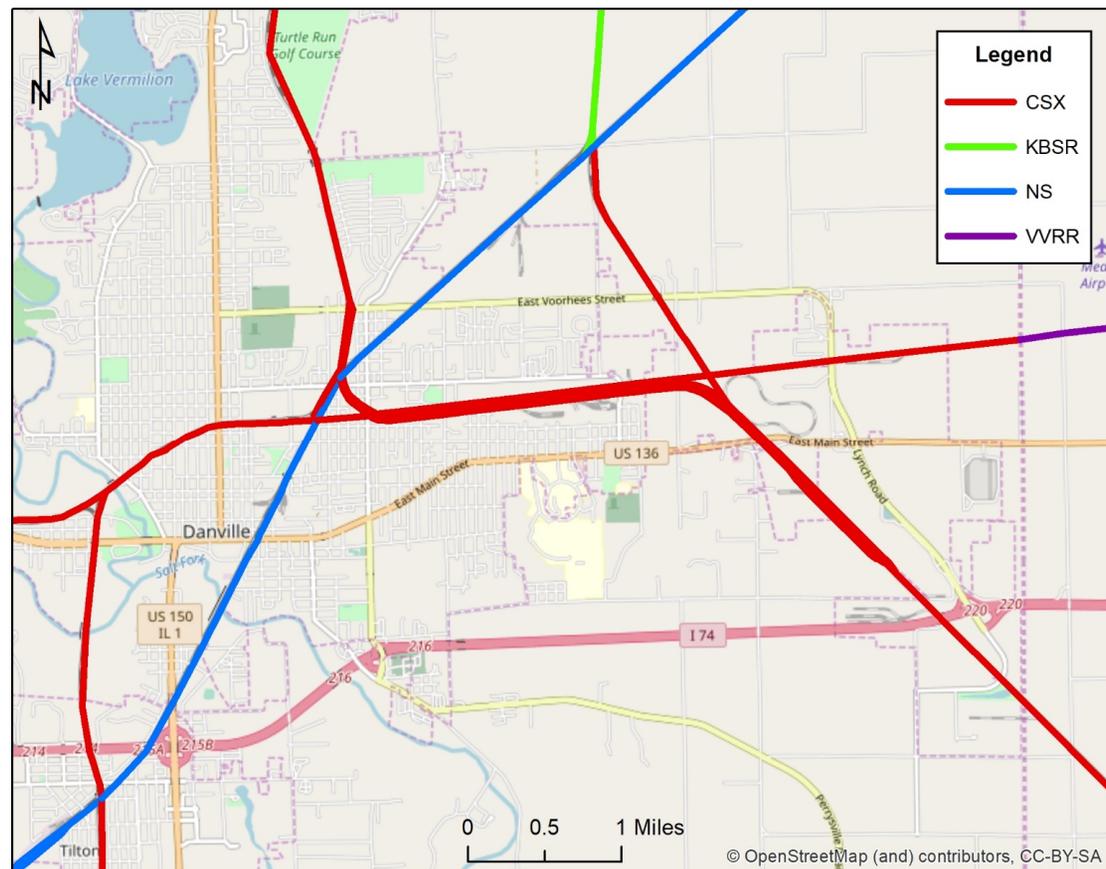
Source: Transearch, IHS Markit

Truck Freight – Vermilion County Pass-Thru

Commodity Class	STCC	2017		2045		% Increase from 2017 to 2045
		Tonnage	% of Total	Tonnage	% of Total	
Grain	0113	6,112,737	14%	7,379,867	11%	21% ★
Oil Kernels, Nuts or Seeds	0114	2,662,721	6%	2,328,527	3%	-13%
Broken Stone or Riprap	1421	1,127,806	3%	1,381,410	2%	22%
Gravel or Sand	1441	678,341	2%	728,112	1%	7%
Cereal Preparations	2043	167,029	0%	127,393	0%	-24%
Misc Industrial Organic Chemicals	2818	3,458,765	8%	7,409,836	11%	114% ★
Misc Plastic Products	3071/72	530,038	1%	1,028,330	2%	94% ★
Primary Iron or Steel Products	3312	626,128	1%	839,820	1%	34%
Misc Waste or Scrap	4029	1,349,733	3%	2,179,959	3%	62%
Total of Select Commodities		16,713,298	37%	23,403,254	35%	40%
All Commodities		44,709,513	---	66,902,237	---	50%

Source: Transearch, IHS Markit

Rail Freight Data Summary



Rail Freight Data Summary

Year	Freight with...	Tonnage	% of Total	Total (tons)
2017	CUEA Destination	449,744	31%	1,456,872
	CUEA Origin	795,395	55%	
	CUEA Origin & Destination	10,656	1%	
	CUEA Pass-Thru	201,077	14%	
2045	CUEA Destination	783,738	29%	2,739,453
	CUEA Origin	1,637,476	60%	
	CUEA Origin & Destination	60,393	2%	
	CUEA Pass-Thru	257,846	9%	

Trucks:
~53M tons

Trucks:
~77M tons

Majority is
NOT Pass-Thru

Source: Transearch, IHS Markit

Rail Freight – CUEA Destination

Commodity Class	STCC	2017		2045		% Increase from 2017 to 2045
		Tonnage	% of Total	Tonnage	% of Total	
Misc Industrial Organic Chemicals	2818	130,247	29%	309,208	39%	137% ★
Misc Industrial Inorganic Chemicals	2819	121,666	27%	158,951	20%	31%
Petroleum Refining Products	2911	33,867	8%	51,860	7%	53%
Liquefied Gases, Coal or Petroleum	2912	56,701	13%	65,117	8%	15%
Total of Select Commodities		342,481	76%	585,136	75%	71% ★
All Commodities		449,744	---	783,738	---	74%

Source: Transearch, IHS Markit

Rail Freight – CUEA Origin

Commodity Class	STCC	2017		2045		% Increase from 2017 to 2045
		Tonnage	% of Total	Tonnage	% of Total	
Misc Industrial Organic Chemicals	2818	648,756	82%	1,409,865	86%	117% ★
Misc Industrial Inorganic Chemicals	2819	63,820	8%	83,469	5%	31%
Petroleum Refining Products	2911	21,325	3%	32,750	2%	54%
Liquefied Gases, Coal or Petroleum	2912	1,942	0%	2,142	0%	10%
Total of Select Commodities		735,843	93%	1,528,226	93%	108% ★
All Commodities		795,395	---	1,637,475	---	106%

Source: Transearch, IHS Markit

Rail Freight – CUEA Pass-Thru

Commodity Class	STCC	2017		2045		% Increase from 2017 to 2045
		Tonnage	% of Total	Tonnage	% of Total	
Misc Industrial Organic Chemicals	2818	36	0%	57	0%	58%
Misc Industrial Inorganic Chemicals	2819	51	0%	52	0%	2%
Petroleum Refining Products	2911	168	0%	136	0%	-19%
Liquefied Gases, Coal or Petroleum	2912	0	0%	0	0%	---
Total of Select Commodities		255	0.1%	245	0.1%	-4%
All Commodities		201,077	---	257,846	---	28%

Negligible
Tonnage
Overall

Source: Transearch, IHS Markit

Rail Freight – Intermodal

Year	Freight with...	Tonnage	% of Total	Total (tons)
2017	CUEA Destination	17,891	74%	24,047
	CUEA Origin	6,156	26%	
	CUEA Origin & Destination	0	0%	
	CUEA Pass-Thru	0	0%	
2045	CUEA Destination	21,473	63%	33,847
	CUEA Origin	12,374	37%	
	CUEA Origin & Destination	0	0%	
	CUEA Pass-Thru	0	0%	

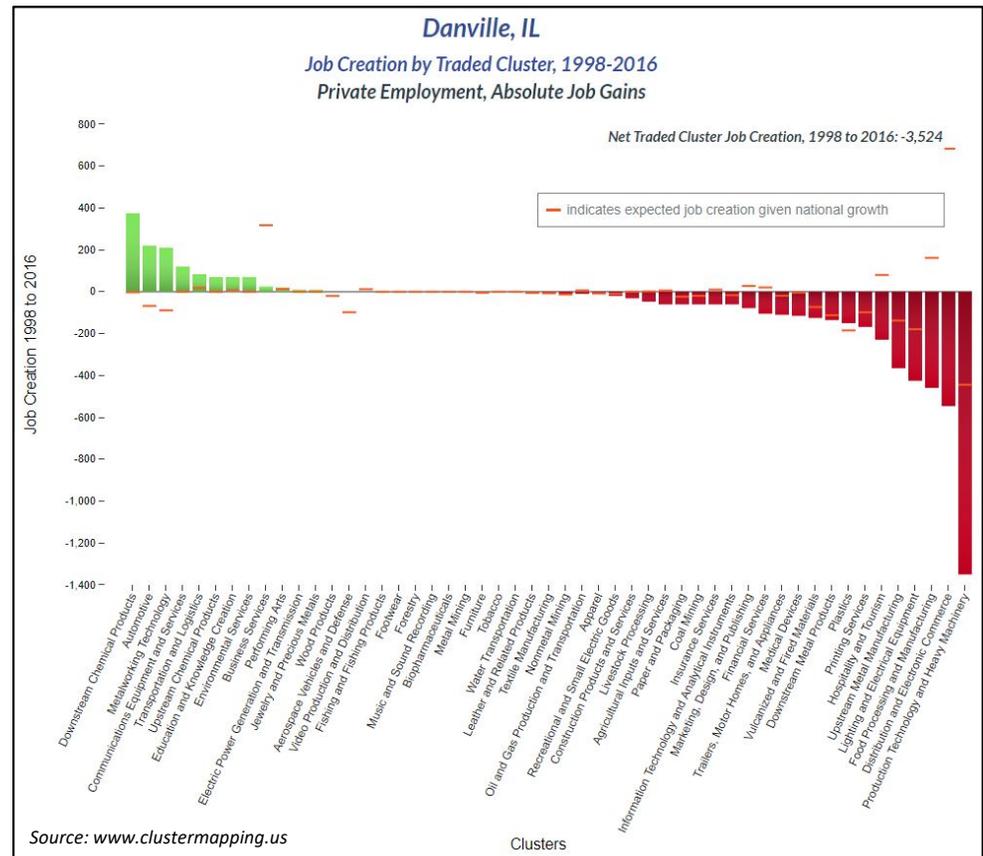
2% of
Rail Total

1% of
Rail Total

Source: Transearch, IHS Markit

Danville Job Creation (1998-2016)

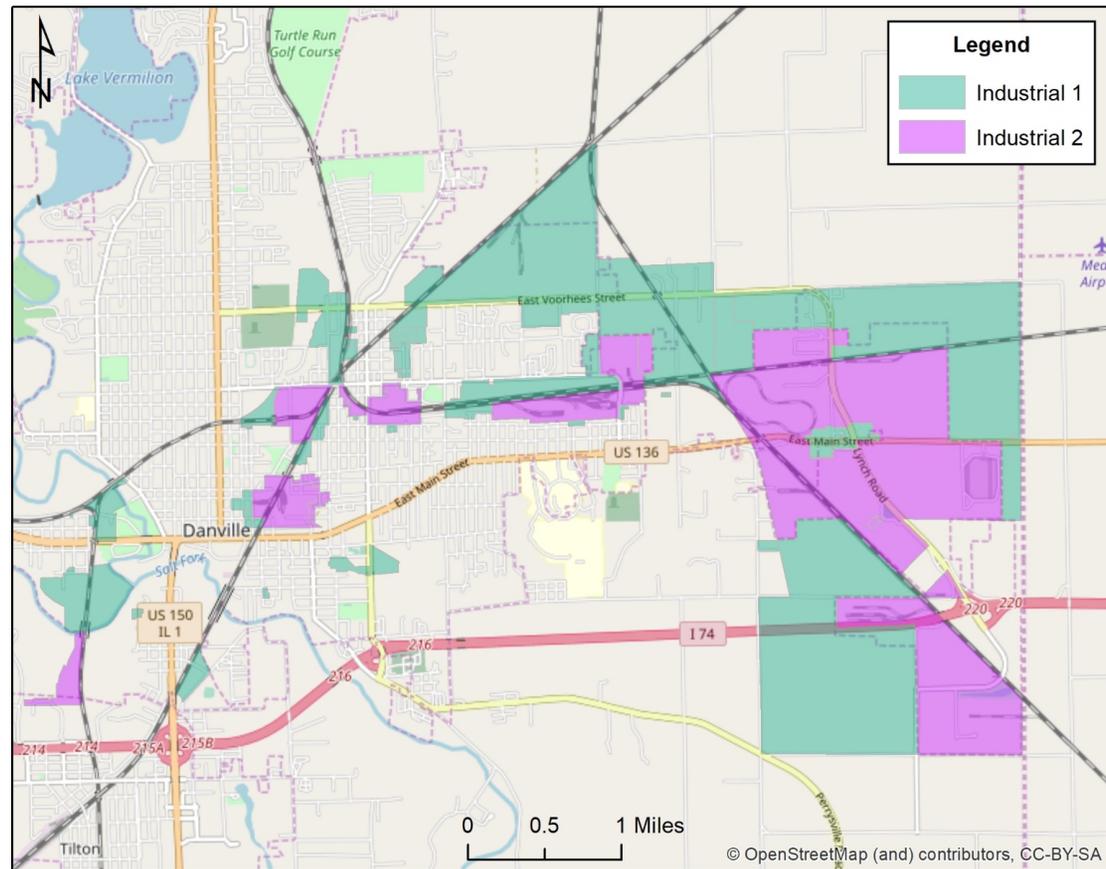
- Job Expansion
 - Chemicals Products
 - Automotive
 - Metalworking Technology
 - Transportation & Logistics
- Job Contraction
 - Heavy Machinery
 - Distribution & eCommerce
 - Metal Products
 - Plastics



Analysis Summary

- What does all the freight data tell us?
 - Capture a portion of the truck pass-thru freight? **Maybe...**
 - Capture a portion of the rail pass-thru freight? **No...**
 - Intermodal freight facility? **No...**
 - “Hot Commodities”
 - Grain
 - Industrial Chemicals
 - Plastic Products
 - Steel/Scrap
- Ideas...
 - Grain transload facility (truck-to-rail) with shuttle train to STL?
 - Industrial chemicals transload/distribution facility (truck-to-rail)
 - Plastics transload/distribution facility (rail-to-truck)?
 - Steel transload/distribution facility (rail-to-truck)?

Danville Industrial Development



Freight Stakeholder Input

- What are your current freight transportation...
 - Needs?
 - Issues?
 - Constraints?
- What freight transportation improvements in the Danville region could benefit your business?
- Could any of the “Ideas” help your business?



DANVILLE
I L L I N O I S

Thank you!

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