

Regional Freight System Planning Recommendations Study

Appendices

prepared for

Chicago Metropolitan Agency for Planning (CMAP)

prepared by

Cambridge Systematics, Inc.

with

Vicki W. Bretthauer
Carl D. Martland

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date

June 30, 2010

A. Stakeholder Interview Summaries

Stakeholder interviews are summarized below. The 14 separate interviews include both group and individual consultations. Interviews are organized by mode/sector and presented alphabetically though questions were not restricted to specific areas. See Appendix B for the interview discussion guide.

A.1 AIR

Table A.1 Air Cargo Managers Association Interview Summary

Stakeholder: Air Cargo Managers Association
Attendees Daniel Gadow, Chairman of Chicago Air Cargo Managers Association; Regional Manager for Air France Cargo, Midwest. NOTE: Interview conducted in role as Chairman of Air Cargo Managers Association
Date and Location September 29, 2009
Project Team Members Audrey Wennink
Key Findings <ul style="list-style-type: none">• The freighter business is anticipated to continue to grow, particularly given the upcoming security requirement to screen cargo on passenger planes 100% beginning in August 2010.• Heavy Cargo Industry would like a representative on the “top committee” of key airline tenants and management. This committee decides how operating revenues including landing fees are spent. Currently freight is represented by FedEx and UPS, which are integrators with different business models than heavy cargo.• Peotone would be a viable option for only dedicated cargo operators without passenger service. Those with passenger service need to keep passengers at O’Hare and wouldn’t want to split operations to have freighters at Peotone. Peotone might be an option for passenger-only carriers trying to enter the Chicago market.• The industry is at its worst point in 20 years. Air France/KLM are down from 10 freighters per week in spring 2009 to 4 freighters per week in September 2009.• A new North Cargo area is planned for O’Hare but not yet financed. This would provide 18 new freighter slots. Its location is not ideal since it’s the farthest point from the freight forwarders, but this was the only land available.• O’Hare is a very customer-oriented toward its freight operators. Customs at O’Hare is a very good operation – better than some other large airports.• Transit operations around O’Hare are a major barrier to employee retention – it’s very hard to handle the last mile.

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- Dedicated freight/transit roadways around O'Hare would be beneficial.
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Business Characteristics (Location/Size/Revenue)

- Air France Cargo and KLM are now combined. Air France is oldest international operator in Chicago. They fly 4 freighters per week from Chicago.
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Shipping Movements and Quantities

- Air France and KLM have 4 freighters per week from Chicago. One goes direct to Paris, two go to Scotland and then Paris. One goes to Dublin and then to Paris. Air France doesn't do any freighter operations from NYC.
 - Lufthansa – all flights go to Frankfurt.
 - British Airways – all flights go to London.
 - 95% of airlines' customers are freight forwarders, not many walk-ups. The only airlines that will get walk-ups are freighters.
 - The master airway bill governs where responsibility starts and stops based on origin and destination.
 - 75% of export freight has an origin in Chicago (but may have been shipped from other U.S. locations).
 - 25% of export freight has an origin other than Chicago (collected by Air France at a city other than Chicago).
 - On import – a customer gives the cargo to Air France overseas; 75% is cleared via customs in Chicago and goes to a customs broker and they truck it.
 - International carriers don't do any domestic flights. On the Paris-Chicago-Houston route Air France is prohibited due to regulations from carrying domestic cargo on the Chicago-Houston leg.
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Obstacles to Efficiency for Freight Movement (Trucking, Rail, Intermodal, Water, Air)

- The O'Hare Modernization Plan formerly included no increase to parking spots for freighters, although the percentage of freight flown on freighters versus on passenger is expected to continue to grow. This has been mitigated by the new North Cargo Plan, which will put in a new North Cargo complex including 18 freighter slots and 2 million square feet of cargo space. This location is on the old Air Guard area on the north side. It is currently awaiting financing. The air cargo community is glad to have new freighter parking slots but the negatives are:
 - Freight forwarders will continue to have to deliver freight to a variety of cargo areas (primarily 3 locations). (e.g., British on East, Lufthansa on South) The SW area of the airport wasn't available because of litigation (cemeteries and Bensenville issues). The North Cargo area is was the only space they had. They could expand the S. Cargo area in the future but this is in DuPage County. Long term plans are for parking and other revenue generators associated with the Western Terminal.
 - The master lease with the airport for all existing cargo buildings is up on the same day in 2018. There is concern that the airport, in an effort to make the proposed North Cargo area viable, will require airlines to move up there and free up the south side of the airport. This would be a major concern if it were going to increase ground lease costs.
 - The NE side of the airport is the farthest location from freight forwarders. FedEx is putting up a new building now in the South Cargo area.
 - O'Hare is potentially moving in the direction of JFK where there are cargo areas all over the airport.
 - Air cargo operators always concerned about landing fees and airport costs. Several airports have responded to drops in volume by increasing landing fees last year.
 - TSA in Chicago is fairly pragmatic and good to work with.
 - USDA is part of Customs and there is not good connectivity between systems. Cargo gets on hold more often just in case something falls under USDA authority. USDA is one of the more problematic agencies – they can't see the data that U.S. Customs can.
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Needed Improvements to System (Trucking, Rail, Intermodal, Water, Air)

- At-grade rail crossing at York and Irving Park –This is the only way to get to the airport and is the #1 issue for airport access.
- The Airport must consider the impact of cargo ground transportation for the potential North Cargo Area. On average, every 747 freighter has 50 inbound truck movements and 50 outbound movements. There could be potential for almost 2,000 truck movements in and out of N. Cargo every day mixing with passenger at Touhy and Higgins in the future if all 19 freighter parking spots are utilized at least once/day.
- Potential for Peotone: the Peotone concept is no different than other alternative airports such as Rockford or St. Louis or Milwaukee. People will congregate where the aircraft are. Forwarders are not going to have 2 offices, (e.g., one at Peotone and one at O’Hare). For Peotone to be a success it would need to have a critical mass of aircraft lift. It is hard to foresee how international passenger carriers with heavy jets and combination carriers, (e.g., Air France, and Lufthansa) would reach critical mass at Peotone. Only freight carriers could move to Peotone or another airport because they are not tied to a passenger flow.
 - There still would be a need to collect freight at O’Hare and move it down to Peotone if freight operations were there. If belly freight came in on passenger flights, they would need to truck it to Peotone.
 - If Peotone wanted to be an airport serving freighters only, that could work. But freight from Peotone would still need to be trucked to O’Hare for the freight forwarders to handle.
 - It would take a big airline like American or United to make Peotone an option for other passenger carriers. Could see Peotone for domestic access to Chicago if a new airlines is entering the market, e.g., JetBlue (i.e., Hooters flew into Gary for 1.5 years).
- Need for dedicated freight roadway on airport property:
 - From the new North Cargo area and 2 off-airport facilities on Touhy, there is no road to get to the passenger aircraft (there is a runway in the way). If new North Cargo is built there will be a need to have a way for finished cargo to drive to passenger planes – they are studying an internal road from North Cargo to passenger ramp without going outside the fence.
 - Cargo on passenger planes into terminals that must get to cargo areas can go in an existing tunnel and driven inside a secure area into the back of cargo buildings. This is a secure road with badged employees allowing ground traffic from one side of the airport to the other. Not aware of a public road option being explored or a NW to SE road.
- A perimeter road all around the airport for restricted traffic – including trucks and public transit would be good for air cargo and public transit.
- On Mannheim Rd there has been discussion of a separate freight truckway outside the fence, limited to truck traffic. This could allow traffic from W. Higgins on Mannheim to Irving Park without any stops. This would be very beneficial.
- Railroads must be taken into account when public roads are considered.

Trends in Industry (Trucking, Rail, Intermodal, Water, Air)

- This is the worst time in the air cargo business in 20 years.
 - Air France and KLM used to have 10 747 freighters per week in March 2009. As of September 2009, they are down to 4 freighters per week.
- Types of operations
 - Combination carriers have both passenger and freighter operations (e.g., Air France Lufthansa, British). They need to maintain operations at O’Hare because they don’t want to split their business operations apart. If freight is on a freighter the customer may prefer to switch it to passenger freight.
 - Freight operations – Freight operations can land anywhere and can truck freight. They would be the first to go if there were any major increase in costs at O’Hare or if Peotone were a new option.

Rockford has offered free landing fees for a year to attract freighters.

- Pure passenger operations – United and American don't have freighters – they have to stay at O'Hare no matter what. If Chicago becomes more expensive for passengers than Milwaukee or Midway, that could change passenger airport choices.
- Because of TSA, if cargo comes from an unknown shipper, it cannot go on passenger airlines – must go on a freighter. (Unknown shippers are typically infrequent corporate shippers.) An unknown corporate shipper gets freight to a freight forwarder and they give it to Air France. By giving cargo to a freight forwarder, it doesn't make it a known shipper.
- August 2010 is big day for security. From then on all passenger freight must be screened at 100% regardless of who it comes from. Now some freight is not screened on passenger airplanes, but it will be more restrictive. This will push freight off passenger planes.
- Size limitations affect use of cargo freighters versus passenger aircraft belly space – 64 inches is the height limit for most passenger planes. (except for the Combi aircraft with upper deck space for 7 pallets. Behind passenger compartment there is another 40 feet for main deck freight). If a crate is taller than 64 inches it must go on a freighter. Dangerous goods are permitted on cargo aircraft only for some types of goods depending on the quantity or type of freight (e.g., one gallon of paint can go in passenger cargo but 50 gallons must go on a freighter).
- Projections by Boeing and others for how air cargo will fly over next 10 to 20 years are that use of freighters will increase (5 to 6% annual growth in air cargo before economy tanked. Now projections are 3-4% annual growth).
- Rockford markets itself as a place where freight shipped out of after it is built in Chicago.
- Mid-America (St. Louis) is trying to get perishables traffic from South America but just a couple planes is not enough.
- The air delays have been reduced in past couple of years due to reductions in travel.
- American and United have lots of authority. United is getting a new cargo building because they are demolishing their old one for the new OMP 10C runway.

Critical Factors for Business Location and Success

- Cargo operations has a good working relationship with authorities at airport. When operators have a need and communicate it to the Department of Aviation (DOA) staff, it gets done.
- Customs Ports Chicago is the most friendly customs port in the Midwest. Compared to Cincinnati and Detroit, Chicago is much better. Consider air cargo to be customers. Very responsive to Chicago. It's a plus to be in Chicago versus other ports. JFK and Miami have worse relationships with Customs than Chicago.

Best Options for Funding System Improvements

- The airport gets paid by landing weight, which is down now in a down economy. If the airport is running short of funds, the solution is not to increase landing fees – this is the last thing industry needs now. Any government entity associated with the airport can decide they don't have enough revenue (e.g., Cook County) and the first choice should not be to raise landing fees.

Workforce Issues

- Air France has been involved with the City Colleges, Chicagoland Chamber initiative to train air cargo workforce. Air France has interviewed potential workers coming out of the program. Two years ago a lot of the warehouses were having 80 to 100 percent turnover every year. Part of that was not finding the right people. Workers could get to O'Hare to work in passenger operations. But there is no way to get workers to cargo areas on transit. That last mile to the cargo areas is a problem. Wages were \$11 per hour, with 401Ks – good jobs. But they couldn't fill the jobs.
 - The current certificate program at City Colleges is for warehouse workers only. It is easier to find warehouse workers than to find computer trained workers that need to understand manifests and

work with customers in the office. That will be the next phase of training, once the economy rebounds and demand for employees increases.

- Air France has placed people from the program.
- Now the economic conditions are much different. Air France laid off 30 people out of 70 in the warehouse in the past 6 months. But business will come back.
- Transportation is a barrier to workforce retention. Pace Bus is looking at some new options for O'Hare area transportation, which would be very helpful. The City of Chicago did study on zipcode distribution of airport badges and most come from the City of Chicago, in part because of the transportation system (Adam Rodham Assistant Commissioner for Planning at DOA did the study).

Land Use and Regulatory Issues

- Air cargo carriers don't currently have issues with municipalities.
- Moving forward, noise issues could be a problem. Cargo flights happen at night – this is the nature of the air cargo industry. Customers deliver to air cargo in the late afternoon and they operate flights from 10pm – 6am. Fedex and UPS have flights coming back from hubs. O'Hare should not set any noise restrictions overnight.
- All passenger traffic is during the day. Night traffic is from freighters. When residents near the airport hear loud airplanes during the night some people call their elected officials to complain. Industry would hate to see nighttime noise restrictions enacted, which would dramatically alter the cargo business.
 - New airplanes are more fuel efficient and are quieter. As time goes on freighters will become quieter.
 - A number of airports around the world have recently taken a huge hit on this, e.g., Frankfurt.

Public Sector Impacts on Business

- The "top committee" at O'Hare decides how usage fees that fund the airport will be spent. Fedex and UPS represent air cargo on the committee because they have the most flights per day. However, as integrators they don't represent the majority of consolidated cargo operators' business models. Industry would very much like an appropriate heavy cargo operator on the committee.
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Table A.2 Channel Distribution Corporation Interview Summary

Stakeholder: Channel Distribution Corporation Interview Summary

Attendees

Herman Ruiz Jr. (president of International Air Cargo Association of Chicago)

Date and Location

9/17/09, CDC Office in Itasca

Project Team Members

Audrey Wennink, Sam Van Hecke

Key Findings

- Air cargo industry is contracting/declining in Chicago; it's more efficient to truck cargo to coasts for transport to international destinations. Many airlines are merging with passenger operations becoming dominant.
 - Air cargo is shifting from dedicated cargo carriers, which are ceasing to exist, to transport in the belly of passenger planes.
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- Development of Peotone airport would be good to secure the region as a transport hub as it would enable close coordination among modes (near Elwood and Joliet rail facilities and interstate highways).
 - TSA presents significant challenges to efficiency.
 - O'Hare is much more oriented to passengers than to cargo.
 - The organization of infrastructure at O'Hare is challenging.
 - Cargo facilities are on the east of the airport while freight forwarders are to the west.
 - Cargo facilities are scattered in multiple locations, requiring multiple stops to consolidate freight.
 - Trucks must drive on public roads around the airport to access freight facilities and face delays due to traffic congestion and rail conflict.

Business Characteristics (Location/Size/Revenue)

- CDC is a large freight distribution group in Ithaca just west of O'Hare.

Shipping Movements and Quantities

- CDC's goods typically arrive in Chicago on either passenger planes or freighters (such as the 747 freighter). The 747 freighter carries a range of volumes based on model #. A rough average of the -100, -200, and -400 models shows a maximum cargo capacity of about 105,000 pounds or 5,000 square feet.
- A typical move for CDC consists of the following: CDC is contacted by freight forwarder regarding a pallet or container, CDC goes over to cargo site (either O'Hare or an intermodal terminal or rail yard) with a permit to transfer, CDC loads a truck, returns to the warehouse, breaks down the load and makes it available to the customer for pick-up, the customer typically send a truck to pick up the load.
- CDC handles all kinds of goods including apparel, electronics, aircraft parts, and occasionally household goods. They don't handle perishables.
- Products are distributed all over the country, but primarily within a roughly 600-mile radius from Chicago (Kansas City, Minneapolis, Milwaukee, Detroit, Dallas).

Obstacles to Efficiency for Freight Movement (Trucking, Rail, Intermodal, Water, Air)

- O'Hare is much more oriented to passengers than cargo. (See Trends section).
- There is limited west side access to O'Hare. Most freight forwarders are located on west side (all west of the railroad) but the four major existing and planned cargo centers are on the east side. Surface, public roads around the airport are used to access O'Hare and are subject to significant congestion and delay. It can take one hour to drive all the way around O'Hare. Also, the York and Irving intersection has trains passing through that sometimes create up to 45 minutes of delay.
- O'Hare planners have gotten some input from industry but there are still design problems with the planned warehouse facilities (not large enough to accommodate trucks).
- Freighters are downsizing and being replaced by passenger planes, which carry cargo in the belly. (See Trends section).
- Customs is not regarded as a major obstacle by CDC but still requires significant work/coordination. The customs process takes place at few locations in Chicago including the Port of Chicago and O'Hare, where customs will examine some goods physically and clear others electronically.
 - A steamship exporter will transmit to customs electronically 10 required documents before departing the foreign country, and the steamship line will provide another 2. (known as 10+2 process). The broker will type up a clearance application and transmit to U.S. customs.
 - The air cargo industry uses an automatic manifest system (AMS); all information goes to U.S. customs at once (like a pre-approval), the carrier reconfirms at O'Hare; and then brokers submit to customs.
 - All cargo that enters the U.S. must clear customs within 15 days. Sometime customs will redirect packages to CDC's warehouses to be held for review; cargo confiscated for review is under a

General Order (GO). CDC is the only GO warehouse in Chicago now so ends up storing significant freight for clearance in metal cages (charging the shippers/brokers/customers for the storage).

- Some Transportation Security Administration (TSA) procedures are regarded as an obstacle to efficiency. CDC and the Air Cargo Association find the TSA model of communicating policies only on a need-to-know basis difficult. TSA shares the protocol for freight forwarders only with freight forwarders and does the same with truckers and airline carriers. They rarely speak with or seek help from industry. Rules are constantly changing and TSA fines firms that fail to follow rules closely. Inspector turnover is high and rarely do two inspectors interpret rules exactly the same way.
- As freighters are phased out and more air cargo relies on available space on passenger flights, there are greater inspection requirements (inspections are required for 100% of cargo going on passenger planes, compared to much lower inspection requirements for cargo on freighters). This means that loads for belly cargo must be delivered much earlier (arriving approximately four hours before lock-out). Additionally, with passenger aircraft, the amount of freight that can fit on any given flight is determined immediately before the flight departs based on the weight of passenger baggage and mail, which are both given preference.
- Municipal regulations are not a major constraint. There are some minor issues (such as the customs requirement of floor-to-ceiling fences/cages clashing with local regulations requiring access for safety personnel such as firefighters). Hazmat restrictions (such as in place in Bensenville) cause some difficulties. Industry feels that Bensenville does not want them in their town.

Needed Improvements to System (Trucking, Rail, Intermodal, Water, Air)

- South Suburban Airport has the potential to present be a significant advance for air cargo industry and freight forwarder community in the Chicago region, due to:
 - Proximity to BNSF's Logistics Park Chicago in Elwood as well as the planned Global IV intermodal facilities.
 - Proximity to freeways, especially if the Illiana Corridor is developed as an alternative to I-80.
 - Available cheap land for cargo handlers to develop.
- To accommodate freight successfully, Peotone would need to be designed with a 10,000 foot runway (2 miles).
- Freight forwarders are said to be buying property in the vicinity of Peotone.
- An internal freight roadway within O'Hare would be helpful in expediting freight movements and delivery versus having trucks have to use public roads outside the airport (for examples, look to JFK, Indianapolis, San Francisco).
- An O'Hare region truck stop with truck parking would be very beneficial. There are no truck parking facilities in the general area near O'Hare.
- A connection from Route 394, south of I-80, with I-65 would be beneficial for truck traffic.

Trends in Industry (Trucking, Rail, Intermodal, Water, Air)

- Air cargo is decreasing out of Chicago, notably O'Hare. There is a significant shift away from freighters (dedicated freight airplanes) to carrying freight in the belly of passenger planes (which only allow freight in remaining space/weight...passengers come first, then mail, then cargo).
 - Several airlines are out of or getting out of the freight business (NW was absorbed by Delta which only does belly freight, American Airlines no longer is in the freighter business, Nippon Cargo Airlines is merging with Japan Airlines (passenger focused) and it is unclear whose business model will dominate). There is general merging of carriers and downsizing of air freight operations.
 - Large cargo airlines no longer exist. The only dedicated freighters now are charters. This represents a shift back to how the air cargo business was structured in the 1960s.
 - Lufthansa faces major issues with potential local regulations in Frankfurt that would prevent them from flying at night which would cut their cargo movements by 50% throughout the world.
-

- O'Hare may face empty warehouse facilities (warehouses are owned by O'Hare, leased to carriers) if cargo reductions occur.
- Freight forwarders are considering Rockford airport as an alternative to O'Hare but hesitant because it is 90 miles away and requires a costly satellite office. Additionally, Rockford is less desirable from the perspective of 3PLs because there is no rail access. Freight forwarders commonly handle freight at Elwood and O'Hare.
- International carriers are more likely to truck cargo to gateway airports (JFK, LAX) than to fly it there and transfer it to an international carrier. It only takes 18 hours to truck from Chicago to JFK. Five main deck pallets can fit on a truck. Costs are lower due to avoiding landing costs, better access to international carriers, fewer delays, lower crew and fuel costs.
 - One example of trucking as a substitute for air freight is Polar Air Cargo, which has shifted operations to Cincinnati and trucks goods between there and the Chicago region.
- Growth in ocean shipping is affecting the Chicago market as more trucks are doing drayage for the steamship lines.
- The trend is likely to include true intermodal service in Chicago – greater coordination between trucking, rail, ocean, air.
- Given economic pressures, some new models are emerging, e.g., steamship lines were selling “door to door” service but having trouble with the “last mile.” Some air freight trucking companies have started to work for steamship lines delivering cargo to the final.

Critical Factors for Business Location and Success

- Keeping costs low.
 - On labor, it was noted that Chicago has few unions left. Most of the cargo labor is provided to the airlines through companies such as Swissport, Menzies Aviation, and Alliance Air.

Best Options for Funding System Improvements

- CDC doesn't support tolls or many other usage fees, believing that the costs just are transferred from the carrier to the shipper to the customer. For example, in CA, CDC says invoices include roadway toll charges.
- It might be possible to develop a PPP to fund infrastructure such as a dedicated freightway through O'Hare.

Workforce Issues

- Minimal, but costs of labor are important impact on air cargo costs (see Critical Factors section).

Land Use and Regulatory Issues

- See Obstacles section.
- Delivery time restrictions are not a problem in communities near O'Hare.

Public Sector Impacts on Business

- See Obstacles section.

Additional Notes

- Another suggestion was the development of a viewing area at O'Hare for aviation enthusiasts to watch planes take off/land. There are obvious security concerns but CDC believes there is high demand.
- See map below for highlighted cargo areas at O'Hare. These areas are scattered, with different carriers in each area, and require multiple truck trips to collect cargo rather than being consolidated into one location so a single truck could pick up a consolidated load. Some locations are near Rosemont, and it's very difficult to operate if there is a concert in Rosemont.

Figure A.1 Locations of Air Cargo Facilities at O’Hare



A.2 BUSINESS

Table A.3 DeLong Company Interview Summary

Stakeholder: The DeLong Company, Inc.

Attendees

Bo DeLong

Date and Location

8/5/09, phone

Project Team Members

Sam Van Hecke

Key Findings

- Major supply chain: purchase grain/corn products/soy from farmers in northern IL, WI, as far away as IA; pick up grain at grain elevators and other collection points; truck to transload facilities (DeLong owns 12 in region and has cooperative arrangements with another 25 in there region) where product is loaded into containers; once containerized the products is trucked to intermodal rail yards via DeLong's fleet or through contracted drayage companies; most of the product is headed to BNSF's Logistic Park Chicago (LPC) in Elwood, the second most significant destination is UP's Global II in Northlake; once at intermodal yard, containers are loaded onto trains; primary BNSF destination is Los Angeles including

Port of LA, Long Beach, and San Pedro, sometimes Oakland or Seattle; primary UP destinations are similar West Coast ports; containers are then shipped via container ship to Asian markets, including Taiwan, Indonesia, China, Vietnam, Malaysia, etc.

- Biggest issue is overweight permits; while the State is reasonable (\$250 per truck per quarter), the Will County overweight permits required to enter LPC are more expensive (\$20 per container) and the local permits required for Elwood Village are much more expensive (\$750 per truck per month). This averages out to \$40-50 per container, 95% of which goes to local and county coffers. DeLong finds this very frustrating, as LPC is probably the largest inland intermodal center in the world, but the cost of getting there is sometime prohibitive. Rochelle and Global II were cited as being much easier (less expensive) to enter as it is all state roads in. DeLong sees costs of permits as major inhibitor to Illinois' agricultural business.

Business Characteristics (Location/Size/Revenue)

- From website: "With annual sales exceeding \$100 million, the company generates its revenue in 5 major areas: Agronomy (fertilizer and ag chemicals), Grain, Seed, Wholesale Distribution (feed and pet foods) and Transportation."
- On a given day, DeLong has 150 trucks operating in the Chicago region.
- In grain, DeLong has approximately 150 employees total, 35 or so in Chicago area facilities (Northlake, Minooka, Chanahan).
- Containerized grain business to Asian market is only 4-5 years old but continues to look stable and profitable.

Shipping Movements and Quantities

- Primarily discussed containerized grain and feed stuff (including dry distillers grain (DDG), other ethanol derivatives, and soybean meal).
- Major supply chain: purchase grain/corn products/soy from farmers in northern IL, WI, as far away as IA; pick up grain at grain elevators and other collection points; truck to transload facilities (DeLong owns 12 in region and has cooperative arrangements with another 25 in there region) where product is loaded into containers; once containerized the products is trucked to intermodal rail yards via DeLong's fleet or through contracted drayage companies; most of the product is headed to BNSF's Logistic Park Chicago (LPC) in Elwood, the second most significant destination is UP's Global II in Northlake; once at intermodal yard, containers are loaded onto trains; primary BNSF destination is Los Angeles including Port of LA, Long Beach, and San Pedro, sometimes Oakland or Seattle; primary UP destinations are similar West Coast ports; containers are then shipped via container ship to Asian markets, including Taiwan, Indonesia, China, Vietnam, Malaysia, etc.
- Approximately 75% of product goes via BNSF to LA.
- In addition to BNSF and UP, DeLong also uses CN via the Gateway Intermodal Yard in Harvey, containers are then shipped through Prince Rupert Port in Canada.
- Containerized grain business to Asian market is driven largely by container shipping lines looking to fill their backhaul to Asia.
- Approximately 1-2% of grain is shipped to East Coast ports for shipment to the Middle East.
- DeLong utilizes barges locally when more economical, contracting barges from the Northern Illinois River to haul grain from downstate IL into Chanahan facility off Des Plaines River; they offload barge, containerize, and truck containers to LPC.
- DeLong tries to fill backhauls where possible, but estimates less than 5% of backhauls are loaded.

Obstacles to Efficiency for Freight Movement (Trucking, Rail, Intermodal, Water, Air)

- Generally happy with Chicago region freight system, believe Chicago is a great hub with great distribution centers, good access to equipment and containers, highway structure is good, DeLong facilities have good highway access.

- Biggest issue is overweight permits; while the State is reasonable (\$250 per truck per quarter), the Will County overweight permits required to enter LPC are more expensive (\$20 per container) and the local permits required for Elwood Village are much more expensive (\$750 per truck per month). This averages out to \$40-50 per container, 95% of which goes to local and county coffers. DeLong finds this very frustrating, as LPC is probably the largest inland intermodal center in the world, but the cost of getting there is sometime prohibitive. Rochelle and Global II were cited as being much easier (less expensive) to enter as it is all state roads in. DeLong sees costs of permits as major inhibitor to Illinois' agricultural business.
- Imports are slowing down and access to containers is becoming an issue.
- Roads into LPC are new so no complaints about condition.
- No significant complaints about delivery time restrictions, toll rates, construction and other delays.

Needed Improvements to System (Trucking, Rail, Intermodal, Water, Air)

- See Obstacles.

Trends in Industry (Trucking, Rail, Intermodal, Water, Air)

- DeLong anticipates continued growth in intermodal market.

Public Sector Impacts on Business

- Overweight permitting.

Additional Notes

- None.
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Table A.4 LaFarge Cement Interview Summary

Stakeholder: LaFarge Cement
Attendees Larry Brewer
Date and Location September 18, 2009, via telephone
Project Team Members Audrey Wennink
Key Findings
<ul style="list-style-type: none"> • Would benefit from more truck routes to transport their heavy cargo.
Business Characteristics (Location/Size/Revenue)
<ul style="list-style-type: none"> • LaFarge has a distribution terminal in Waukegan Harbor on the water. • Only distributor of bagged cement in the region. <ul style="list-style-type: none"> – Bagged cement used by mason and bricklayers. – Bulk cement used for road construction.
Shipping Movements and Quantities
<ul style="list-style-type: none"> • Process 230,000 tons per year total.

- Receive products via water transport on Lake Michigan from Alpena, MI.
- Bulk cement trucked to customers in Lake and Cook County.
- Bagged cement trucked to customers from Chicago to Peoria, IL and into Iowa.
- Cement also trucked to distribution centers in IA, WI, MN.

Obstacles to Efficiency for Freight Movement (Trucking, Rail, Intermodal, Water, Air)

- LaFarge doesn't own the trucking – all are independent operators
- When water levels in Waukegan harbor are low they need to split their loads of materials because there is less draft in Harbor.

Needed Improvements to System (Trucking, Rail, Intermodal, Water, Air)

- Would like more truck routes – with the weight limits they can only travel on designated truck routes.

Trends in Industry (Trucking, Rail, Intermodal, Water, Air)

- None identified other than this company is greatly affected by the economy and building trends.

Critical Factors for Business Location and Success

- Located in Waukegan in 1962 – plan to be there for foreseeable future.
 - Water and highway access.
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Table A.5 Prairie Creek Grain Company Interview Summary

Stakeholder: Prairie Creek Grain Company

Attendees

John Hinrich

Date and Location

8/26/09, telephone

Project Team Members

Sam Van Hecke, CS

Key Findings

Business Characteristics (Location/Size/Revenue)

- Grain elevator/transload facility near Elwood.
- Approximately 30 employees.
- Do containerization on site.
- Receive about 100 trucks per day.
- Grain comes in from farmers within a 15-20 mile radius.
- Load about 2000 containers per month.
- Also handle feed.
- Operate about 20 hours per day, no delivery restrictions.

Shipping Movements and Quantities

- Containerized grain transferred to rail yards, shipped to West Coast for delivery to Asian markets.
-

Obstacles to Efficiency for Freight Movement (Trucking, Rail, Intermodal, Water, Air)

- No major problems
- Need local and state overweight permits.

Trends in Industry (Trucking, Rail, Intermodal, Water, Air)

- See “grain -> Asia” supply chain growing in future.
-

Table A.6 Shure Stakeholder Interview Summary

Stakeholder: Shure

Attendees

Reinder Van der Schoot and Nick (logistics)

Date and Location

September 4, 2009 via telephone

Project Team Members

Audrey Wennink

Key Findings

- Shure has considered shipping via intermodal (truck on rail) from El Paso to Chicago but transit time is 5 days versus 48 hours on truck and the price difference is only 10 percent currently. Rail offers fast service to west coast but not fast service to the south. Shure has done intermodal shipments to Laredo that take 5 days and sometimes there are delays.
 - It's cheaper to import products through Canada but it creates customs problems. Imported or exported merchandise that is on a potential high-alert list (e.g., electronics from Philippines, China) runs a higher risk that customs will flag containers. In the worst case customs does an intense exam that takes 2 extra days or costs \$1,000 in handling fees. On paper shipping through Canada saves \$200 per container but in reality it's not cheaper.
 - Manufacturing is still migrating to China and Mexico. The cost of labor is 8 times more expensive in the U.S. Foreign labor is also more productive than U.S. labor.
 - Labor costs in China have gone up and have gone down in Mexico due to the exchange rate. Transportation will become more of a factor now. Shure is keeping both China and Mexico manufacturing plants so they can be agile.
 - At O'Hare Airport some airlines choose not to operate their own consolidation center because of the cost. Lots of consolidators recover freight, break down pallets off-site, then deliver. This adds time to delivery and doesn't seem most cost efficient. Most airlines don't want to handle cargo directly within the airport because of cost.
 - Seattle to Chicago is one of most reliable rail routes.
-

Business Characteristics (Location/Size/Revenue)

- HQ – Niles, IL.
- Under 2,000 employees.
- \$300 million – \$500 million in revenue.
- Manufacturing locations – Juarez, Mexico (near El Paso), outside of Shanghai, China; Wheeling, IL.
- They make microphones, wireless systems, personal monitoring systems, high-end professional audio products, headphones, earphones.

Shipping Movements and Quantities

- Volumes and modes.
 - 40% small parcel – truck UPS.
 - 25% air freight from various international locations inbound and outbound.
 - 10% trucking LTL and full truckload.
 - ocean freight – LB or Seattle to Chicago.
- Outbound from distribution to customer.
 - 70% of outbound is small parcel.
- Inbound is heavily ocean freight – materials.
- They source materials regionally from adjacent states – WI, MI, WI, MO feed into Wheeling or into a consolidation point and then truck to El Paso.
- Shure manufactures different products in each of their 3 manufacturing locations.
- Internationally they have 8 or 10 primary origins.
 - Shanghai, Hong Kong, and Taiwan are largest.

Obstacles to Efficiency for Freight Movement (Trucking, Rail, Intermodal, Water, Air)

Rail/Intermodal

- Rail yards within the city used to be much closer to their operations. Now rail yards are moving out of the city, e.g., to Elwood. There used to be a \$100 per load surcharge for Elwood and \$150 surcharge per load for Rochelle; now the greater distance is incorporated into overall costs.. This trend of facilities moving farther out has added costs for shippers and adds lead time -it takes a half day to get a container now.
- In Northlake and in Schiller Park there are steamship ramps but all the rest of the cargo goes to Elwood.
- Rail lines allow only 2 free days of container storage. If you don't collect a container within 2 days they charge for storage.
- Shure has considered shipping via intermodal (truck on rail) from El Paso to Chicago. However, they need to have transit time of 48 hours. They currently use team truck drivers and drive straight through. Via intermodal the trip would take 5 days in transit plus recovery at container yard and delivery. The difference in price wouldn't be very great; the difference is only 10 percent between truckload and intermodal currently. Rail offers fast service to west coast but not fast service to the south. Shure has done intermodal shipments to Laredo that take 5 days and sometimes there are delays.
- From LA to Chicago on BNSF transit time is 4 days. Right now there are few delays. But in past years there were backlogs of 5 days at Kansas City, through which this route passes. From LA on UP shipments go through Wyoming (UP also picks up coal).
- Seattle to Chicago is one of most reliable rail routes.
- It's cheaper to go through Canada but it creates customs problems. Whenever you import or export merchandise that is on a potential high-alert list (e.g., Electronics from Philippines, China), customs flags containers. Shure is a certified importer (have CD Pass), but even so, customs is still flagging

containers. In the worst case they do an intense exam that takes 2 extra days or costs \$1,000 in handling fees. On paper shipping through Canada saves \$200 per container but in reality it's not cheaper.

Air

- At O'Hare Airport some airlines will choose not to operate their own consolidation center because of the cost. Lots of consolidators recover freight, break down pallets off-site, then deliver. This adds time to delivery and doesn't seem most cost efficient. Most airlines don't want to handle cargo directly within the airport because of cost.
- Most companies recover their freight at a Container Freight Station near O'Hare. Once a day they sweep and recover products. This is an industry compromise. This is not conducive for high-end service. They are not sure if infrastructure has anything to do with this arrangement. With technology, now companies wait until they're sure of arrival.
- has arrived before going to collect it.
- All air freight forwarders are in Bensenville, Elk Grove.
- In General O'Hare is one of most congested airports but not one of the highest in terms of cost. The more volume, the lower rates.

Truck

- Availability of chassis is an issue.
- Congestion on I-55 is an issue.

General

- Within the City of Chicago the business environment (red tape) is difficult. It is easier to do business in other locations in the region.

Needed Improvements to System (Trucking, Rail, Intermodal, Water, Air)

- There is a need to have more grade crossing separations. When they drive to Elwood they hit delays from trains crossing highways.

Trends in Industry (Trucking, Rail, Intermodal, Water, Air)

- The amount of manufacturing Shure is doing in Wheeling is declining because of labor costs.
- In general, more manufacturing operations are going to Mexico and China.
- Labor costs in China have gone up and have gone down in Mexico due to the exchange rate. Transportation will become more of a factor now. Shure is keeping both China and Mexico manufacturing plants so they can be agile.
- Shure, and other companies, need to maintain manufacturing in Asia given the huge market in Asia.
- Shure still distributes primarily out of Chicago. Now they are looking to move a distribution center potentially closer to customers. They will consider network considerations in making this decision. A lot of customers are in NY, LA. There are lots of customers in the Chicago region also – BestBuy, Apple, Guitar Center.
- They foresee more airlines merging.
- Third party distribution and warehousing is preferable for less exposure to financial risk. It is better to use a third party than owning your own infrastructure.
 - One example is Expeditors (3PL), which is building a warehouse in Bensenville. They are investing in their own asset for distribution.

Critical Factors for Business Location and Success

- Proximity to customers.
- Labor costs.
- Proximity to transportation infrastructure. The Shure warehouse in Wheeling is 10 to 20 miles from a trucking hub and served by truckers located very nearby. Wheeling is also close to O'Hare, within 15 miles or less from the airport to access products flying in.

Workforce Issues

- Workforce issues – cost of labor. It's 8 times more expensive to do work in the U.S. than other locations.
- Chicago is a very diverse community. Greater Chicago still has inexpensive labor given the population diversity.
- Shure needs to have qualified and educated labor. The workforce is skilled and given expensive training. The manufacturing process involves fine motor skills. All products are assembled manually.
- In Juarez and China the quality of labor is higher and the speed is higher. In the U.S. plant the average age of people is 40. In China the average age is 18 (mostly females 18-24) and they have better eyesight.

Land Use and Regulatory Issues

- The Wheeling location is next to Palwaukee airport. They are restrained on building a second floor.
- They deal with electronics, which may have lead. They do work with hazmats and have to deal with compliance issues.

Public Sector Impacts on Business

- They are active members of the local Chamber of Commerce and have a good relationship with the community. There are no significant limitations to their business based on the public sector or community issues.
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A.3 LOCAL GOVERNMENT

Table A.7 Council of Mayors Executive Committee Meeting Summary

Stakeholder: Council of Mayors Executive Committee

Attendees

Executive Committee Members in Attendance:

Mayor Jeffery Schielke (Batavia), Mayor Leon Ockingham, Jr. (North Chicago), Mayor George VanDusen (Skokie), President Kerry Cummings (Glenview), President Al Larson (Schaumburg), Mayor Jeffrey Sherwin (Northlake), Mayor Ben Mazzulla (Stone Park), President Jim Discipio (LaGrange Park), President William Rodeghier (Western Springs), President Dave Brady (Bedford Park), Mayor John Mahoney (Palos Park), Mayor Eugene Williams (Lynwood), President Mike Einhorn (Crete), Mayor Kenneth Johnson (Wood Dale), President Larry Keller (West Dundee), Mayor Jim Holland (Frankfort)

Date and Location

9/15/09, CMAP

Project Team Members

Tom Murtha, Audrey Wennink, Sam Van Hecke

Top Freight-Related Issues

- At-grade rail-highway crossings.
- Train whistles (one community has 1,200-1,400 whistles per night).
- Concern about increases in train frequencies and lengths and impacts at crossings.
- Desire potential rerouting of freight around Chicago region or configuring trains/infrastructure to limit impacts of through traffic.
 - Desire for a truck bypass around the region, e.g., Prairie Parkway.
 - Desire freight rail not terminating in the region to bypass the region as much as possible – improvements should be made to smooth flow of through traffic and minimize impacts.
- Viaducts.
 - Viaduct repair and maintenance, both for aesthetics and foundation, issue of viaducts not “looking safe.”
 - Often narrow viaducts create bottlenecks on the roadways passing under them.
- EJ & E purchase and corresponding train traffic increases, corridor should be a priority for grade separation projects.
- Western access to O’Hare Airport is limited and new access is needed.
- Truck congestion and roadway impacts need to be considered and mitigated around Centerpoint intermodal Facility in Elwood and future Joliet facility serving UP.

Policies that Affect Freight on Municipal Level

- Municipal delivery time restrictions – generally targeted to freight zones adjacent to residential development.
- Roadway weight restrictions.
 - Need to coordinate planning with neighboring communities to avoid conflict – adjacent communities sometimes have different weight restrictions resulting in a “checkerboard” effect, so some communities get disproportionate truck traffic. Communities without home rule must adhere to IDOT guidelines while those with home rule may enact their own ordinances.
- Comprehensive planning should be used to direct truckers to best roads and prevent damage to infrastructure.
- Federal regulations on train whistles.
 - Locals jurisdictions have no power to pass local ordinances.
 - Expensive to make quiet zones a reality because local jurisdictions that request designation must pay for improvements.
 - Mayors would like to see more funding sources for safety improvements at-grade crossings to enable quiet zone designation.
 - In past, railroads have proposed medians to prevent cars from driving around gates and onto tracks when gates are down but these create local access problems, sometimes with driveways within 150 feet of crossings.

Factors that Will Influence Rail Traffic

- The Metropolitan Mayors Caucus recently made a decision (September 2009) that “CREATE Phase II” should be a priority. The goal is identify a detailed inventory of rail issues throughout the 7-county region, beyond those in the current CREATE program focused on Cook County.
- Star Line – What will the impacts of CREATE be on the Star Line? How will CN’s freight shifts affect it?
- Panama Canal renovation could potentially reduce rail freight moving through Chicago as more freight

from Asia might go directly to the Coasts via water.

- Pace's partnership with the Illinois State Highway Toll Authority (ISHTA) to allow shoulder-running may take ridership from Metra.
- The impacts of New ports in Canada and Mexico should be considered.

Other Thoughts

- Discussion of a bypass around Chicago strategy should consider the role of the Prairie Parkway, possibly coordinated with rail service.
 - Intermodal centers are going up with minimal consideration of the truck traffic impacts on local/county roads, mostly rural.
 - The importance of freight-related jobs (manufacturing and transportation) needs to be balanced with the nuisance impacts on municipalities.
 - One objection to increased CN traffic (or any traffic delays at at-grade crossings) is the inability of emergency vehicles such as ambulances to get through.
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A.4 RAIL

Table A.8 Norfolk Southern Interview Summary

Stakeholder: Norfolk Southern

Attendees

Jeff Harris, Superintendent, NS/CTCO

Date and Location

8/6/09, CS Office

Project Team Members

Audrey Wennink, CS; Sam Van Hecke, CS; Roseann O'Laughlin

Key Findings

- Chicago is the #1 gateway for NS, followed by Kansas City. NS foresees Chicago remaining a critical location.
 - NS is seeing more partnerships with shippers such as JB Hunt and 3PLs. For example, a NS employee sits at a JB Hunt office with the objective of getting long-haul trucks on intermodal cars.
 - NS finds expansion difficult within the City of Chicago (where their facilities are located), and this constrains their ability to expand. They are currently trying to increase efficiency in order to grow. Concerns with expansion include lack of available land and the need for a yard to be elevated in order to limit highway-rail at-grade crossings – new ones are prohibited by City of Chicago regulations. Any new yards would have to be elevated, an expensive requirement.
 - The new **rail business exchange**, put in place six months ago, allows command centers to input trains and crew locations and availability to coordinate cargo/train, transfer. All Class I RRs participate and this has proven to be a significant help. NS sees this as reflective of a general shift in rail attitude towards increased coordination for mutual benefit.
 - NS owns the Triple Crown System (<http://www.triplecrownsvc.com/Bimodal.html>) and uses road-railers (specially configured trailers that can ride the rails with special equipment) predominately for just-in-time delivery of auto parts.
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- One of largest shippers is UPS; loads go from Chicago to East Coast consumers on NS, NS coordinates with BNSF for transcontinental UPS loads, major transfer facility is Willow Springs.
 - NS is moving toward automating gates at intermodal yards to increase efficiency (can handle trucks twice as fast) and reduce staff costs.

Business Characteristics (Location/Size/Revenue)

- Eastern railroad, relies on Chicago as a place to exchange goods with Western railroads.
- Has 5 yards within the City of Chicago.
 - 47th/51st St. – intermodal.
 - 63rd St. – intermodal.
 - Ashland Avenue – freight yard also used as an intermodal staging/block swap (they don't load or unload there). Predominantly service for industrial customers near stockyards. Accept intermodal deliveries that stays on steel wheels.
 - Calumet (103rd/Stony Island) – manifest freight yard – also have intermodal facility and Triple Crown.
 - Landers – intermodal with a little freight work.
 - Colehour (106th and Indianapolis Blvd) on IN border Stage and traffic all intermodal going westbound; freight switching yard.
 - At Burns Harbor – yard for primarily steel work.
- Major origins on the East Coast include New York/Newark, Norfolk, VA; Wilmington, DE; New Orleans.
 - New York/Newark is most significant, a big receiver of intermodal loads.
 - Estimated transit time from Chicago to NJ is 32 hours.
- NS originates a lot of UPS traffic going to the East Coast. UPS trains can make it from NJ to LA (with a transfer to BNSF at Willow Springs) in 72 hours.
- NS owns the Triple Crown System (<http://www.triplecrownsvc.com/Bimodal.html>) and uses road-railers (specially configured trailers that can ride the rails with special equipment) predominately for just-in-time delivery of auto parts. One supply chain includes parts from the Minnesota-St. Paul area, which travel to Calumet, Fort Wayne, Detroit, Kansas City, and Pennsylvania. One issue with the TCS is the high potential for damage to the loads.

Shipping Movements and Quantities

- One of largest shippers is UPS; loads go from Chicago to East Coast consumers on NS, NS coordinates with BNSF for transcontinental UPS loads, major transfer facility is Willow Springs. NS cites their proximity to UPS due to location in Chicago rather than Joliet (or other outlying area) as a competitive advantage.
- Serve steel mills (Burns Harbor/Acme) with 1-3 trains per day of hot molten steel running from mill-to-mill (currently 1 train per day, previously 3).
- Steel products originate in Chicago and are shipped east.
- NS receives coal from western railroads, ships east, NS has approximately 18 receivers of coal such as Detroit-Edison, Toledo, Monroe, Cleveland. Further east, more receivers use Appalachian coal and some use blends or eastern and western coal to fight air quality problems. NS sometimes ships scrubber stone, which coal burners use to mitigate air quality impacts.
- Grain through Chicago not a big ticket item for NS; it typically moves through southern IL.
- Ethanol from IA is shipped via NS on unit trains; they receive it from shortlines; they are seeing increasing ethanol flows and IA is becoming a big source for biodiesel.
- NS serves the Ford Plant in Chicago Heights (though currently operations in this area have slowed down). Inputs to the plant come in by truck (no rail ramps), but NS carries autos to eastern markets and also carries autos for transfer to western railroads (UP, BNSF) at IHB's Gibson Yard.
- NS is seeing more partnerships with shippers such as JB Hunt and 3PLs. For example, a NS employee

sits at a JB Hunt office with the objective of getting long-haul trucks on intermodal cars.

Obstacles to Efficiency for Freight Movement (Trucking, Rail, Intermodal, Water, Air)

- CREATE is seen as key to relieving Chicago congestion.
- NS was experiencing delays at entry to their intermodal terminals, have redesigned the gate at the 47th St. yard to be combined with 51st St. yard to facilitate entry.
- An automated gate is being installed at Landers to prevent trucks from backing up onto the highway and to facilitate quicker entry with fewer human resources needed. Automated gate replaces previous system involving manual inspection by gatekeeper with automated inspection system followed by electronic sign guidance to driver of where to proceed. NS sees that as an increase in efficiency that is likely to be a trend in all railroads.
- Truckers often race to meet cutoff times for train loads to maximize their loads. One of the benefits of the automated gate is more assurance to shippers that their loads can enter the gate in a timely fashion.
- Exchange of traffic between rail lines is difficult; there are frequently scheduling problems and back-ups; the Belt Railway Company (BRC), which is owned by all Class I railroads, allows railroads to exchange whole trains but railroads frequently run into issues of not having a crew prepared to receive a train. The BRC has a policy now that the receiver must have facilities and crew available before a train to be transferred to them is allowed to get on the BRC. Jeff cited the issue of trains requiring “24 to get to Chicago, 24 hours to get through Chicago.”
- The new **rail business exchange**, put in place six months ago, allows command centers to input trains and crew locations and availability to coordinate cargo/train, transfer. All Class I RRs participate and this has proven to be a significant help. Jeff sees this as reflective of general shift in rail attitude towards increased coordination for mutual benefit.
- Common Operational Picture – This effort for increased visibility of train operations is part of CREATE and will help receivers see where traffic is coming from.
- NS finds expansion difficult within the City of Chicago (where their facilities are located), and this constrains their ability to expand. They are currently trying to increase efficiency in order to grow. Concerns with expansion include lack of available land and the need for a yard to be elevated in order to limit highway-rail at-grade crossings – new ones are prohibited by City of Chicago regulations. Any new yards would have to be elevated, an expensive requirement. (Note on elevation: NS cites truck damage to viaducts as a significant concern.)
- Being in the city reduces the length of truck trips to intermodal yards. Trucks need to make more than one trip per day. NS’s Chicago location is a benefit due to the advantage of requiring shorter truck trips.

Needed Improvements to System (Trucking, Rail, Intermodal, Water, Air)

- CREATE encompasses the most immediate needs for increased efficiency.

Trends in Industry (Trucking, Rail, Intermodal, Water, Air)

- Foresee length of trains increasing (from 125 cars to 175 cars). The current limiting factor is tensile strain on drawbars. Railroads are getting better at operating locomotives at the middle of and end of train (known as distributed power or DP) which allows them to operate longer trains because each drawbar doesn’t have to pull as much load. With longer trains, the limiting factor is fitting into the infrastructure (such as sidings for passing) which is frequently designed for a maximum train length of 10,000 feet and is now exceeded by many longer trains.
- Foresee more potential for interline, coordinated service and more partnerships generally, as railroads identify opportunities for mutual profitability. (Note: One area where railroads are maximizing their own profit, however, frequently at the expense of efficiency, is trying to move loads for the greatest distance on their own network to increase linehaul revenue.)
- Chicago is the #1 gateway for NS, followed by Kansas City. If they could, NS would shift more traffic to

Kansas City because they can get more mileage on NS, but UP and BNSF prefer Chicago.

- Sees Chicago as remaining the #1 gateway for years to come and efficiency increasing, particularly for traffic that doesn't have to stop in Chicago. Shippers want cars to get through Chicago because the route results in the shortest total mileage. NS's Elkhart, IN facility (hump yard) already does classifications for BNSF before entering Chicago and handing off trains in order to increase efficiency. UP performs similar service for NS, sending trains to Elkhart or as far as Pittsburg for reclassification.
- See growth potential for intermodal, although intermodal has a much smaller profit margin than other types of rail traffic (e.g., tank cars).

Critical Factors for Business Location and Success

- NS is fairly limited in new location opportunities in that little land exists in Chicago for expansion and they need to be here for interchanges with the Western railroads.

Workforce Issues

- No major issues, NS had some employee retention issues before the economic slowdown due to the rigorous requirements of rail work. These have become less of an issue due to the economic slowdown.

Land Use and Regulatory Issues

- See Obstacles.

Public Sector Impacts on Business

- See Obstacles.
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Table A.9 Union Pacific Interview Summary

Stakeholder: Union Pacific

Attendees

Dave Grewe, Chicago Transportation Coordination Office
 Michael Payette, Assistant VP – Government Affairs, Central Region

Date and Location

7/30/2009, CS Chicago Office

Project Team Members

Audrey Wennink; Sam Van Hecke

Key Findings

- Conflict with passenger trains is difficult in Chicago, and is an issue with respect to growth of both.
 - Maintenance of intermodal connectors is important, but not a primary concern of UP (tend to worry about freight once it arrives at the gate).
 - Time sensitive goods have begun moving on “high priority” trains which are tracked more closely and avoid delays due to reconfiguration. Goods can move from the west coast to the east coast in 3-4 days.
 - In general, UP sees possibility for more through trains with better handling and speed within the Chicago region.
 - UP doesn't support significant taxation of railroads. Taxes will ultimately just be passed on to consumer
-

and hurt economy.

- CREATE addresses 95% of the rail industry's Chicago needs (for now), so UP fully supports CREATE funding.
- UP has encountered significant Not In My Back Yard (NIMBY) opposition during siting of rail facilities.
- UP feels Chicago region is very competitive for rail freight movements. It is the only place where six Class 1s come together and is critical to the rail network.
- UP feels CMAP/CATS is excellent planning organization. In the 23 states where UP operates, CMAP/CATS does the most to include railroads, giving RRs a seat at the table and including them on the policy committee.

Business Characteristics (Location/Size/Revenue)

- Union Pacific is a western railroad (connects from west coast to Chicago, Gulf of Mexico to Chicago).
- Headquarters are in Omaha, Nebraska.
- Major Chicago facilities at Rochelle (Global 3), Global 1 (1425 S. Western Ave, Chicago); Global 2 (301 W. Lake St., Northlake); new facility planned for Joliet to open June 2010.

Obstacles to Efficiency for Freight Movement (Trucking, Rail, Intermodal, Water, Air)

- CREATE program already highlights most of the existing bottlenecks and capacity constraints.
- Conflicts with passenger trains are a significant issue in Chicago.
- UP-West Line has approx. 60 freight trains/day and 60 commuter trains/day. To address West Line conflicts, UP has coordinated with Metra to identify \$130 M of capital improvements needed before more passenger trains can run (Metra is interested in running more UP-West Line Trains). UP representatives meet monthly with Metra, feel they have a strong relationship, coordinate capital programs. Other shared Metra lines: UP-NW (2 freight trains/day, 60 commuter), UP-N (no freight trains south of Lake Bluff, very few freight trains (approx. 8: 3 loaded coal, 3 empties, 1 manifest service train daily each way) north of Lake Bluff, 60 commuter trains).
- Some minor track sharing with Amtrak (From east: CSX – CN – Thornton Junction – UP – Union Station).
- Midwest Rail Initiative could generate additional freight/passenger conflicts unless needed infrastructure improvements are made. Corridor is St. Louis to Joliet on UP rail, then Joliet to Chicago on CN rail. UP recently worked with IDOT to identify the \$2.1 B needed to enable a high speed rail connection between Chicago and St. Louis (approx. 86% of track capable of operating at 110 mph). Additional conflicts are not a major source of concern to UP as long as capital investments are taken seriously.
- Maintenance of intermodal connectors is important, but not a primary concern of UP (tend to worry about freight once it arrives at the gate). Drayage companies worry about this and UP only hears about it if they have trouble accessing an intermodal yard.
- There is minimal transfer between UP rail and water. The only likely commodity involved would be coal. UP has no service with Port of Chicago. Port's rail infrastructure is reputed to be poorly maintained.

Needed Improvements to System (Trucking, Rail, Intermodal, Water, Air)

- See Conflicts Section.

Trends in Industry (Trucking, Rail, Intermodal, Water, Air)

- UP has gotten more into market for perishable goods, mainly agriculture from California, Oregon, and Washington.
- Time-sensitive goods have begun moving on "high priority" trains which are tracked more closely and avoid delays due to reconfiguration. Goods can move from the west coast to the east coast in 3-4 days; UP/CSX offer priority "Blue Streak" Service.
- In general, UP sees possibility for more through trains with better handling and speed within the

Chicago region.

- The new Joliet intermodal yard will shift UP traffic patterns in Chicago region. There was significant demand for a facility by UP customers. “Apparently, Joliet is the place everyone wants to be.” 70 percent of traffic to Joliet will probably continue East via steel-wheel transfer to Eastern RR.
- Intermodal will continue to grow – intermodal service is all time sensitive; 30 percent of intermodal terminates in Chicago.
- UP and BNSF compete for international service (Asia); price is not only criterion – location and convenience are critical.
- UP used CenterPoint to develop Joliet location – they are contracting out land acquisition and development more due to NIMBY issues.

Critical Factors for Business Location and Success

- Proximity to customers.
- Freeway Access.
- Proximity to other Class I railroads.

Best Options for Funding System Improvements

- UP doesn’t support significant taxation of railroads. Taxes will ultimately just be passed on to consumer and hurt economy.
- CREATE addresses 95% of the rail industries Chicago needs (for now), so UP fully supports CREATE funding.

Workforce Issues

- Diesel mechanics are difficult to find and retain.

Land Use and Regulatory Issues

- Quiet zones are an issue, but generally not problematic. Communities generally pay for upgrades if they impose a quiet zone. UP encourages center barriers and pylons at crossings (which prevent vehicles from driving around barriers). Communities are required to upgrade crossings to safe levels (as safe as if horn were sounding) based on Federal Rail Administration (FRA) standards. Most of Chicago has quiet zones. Only Villa Grove Line doesn’t have quiet zones.
- Some City of Chicago regulations on land owners require UP to devote resources to cleaning up land, cutting weeds, picking up garbage. UP generally does more weed-cutting in Chicago than other places (non-urban areas) and responds to any complaints by picking up trash.
- During siting of Rochelle facility (2-3 years ago), UP encountered significant Not In My Back Yard (NIMBY) opposition, which pushed the facility from near the DuPage County Airport to Maple Park to Dekalb to Rochelle. Rochelle has excellent highway access but high drayage costs into Chicago. It is frequently used for block-swapping (switching blocks of cars from inbound train to various outbound trains) prior to entering Chicago.

Public Sector Impacts on Business

- On safety issues, FRA makes major decisions. UP is generally happy with FRA and the fact that they are a Federal agency, which creates uniform rules and trumps local municipality rules.

Performance Measures

- Measurements through the Chicago Terminal are Crosstown transit time, train re-crews.

Additional Notes

- UP feels Chicago region is very competitive for rail freight movements. It is the only place where six Class Is come together and is critical to the rail network.
-

- UP feels CMAP/CATS is excellent planning organization. In the 23 states where UP operates, CMAP/CATS does the most to include railroads, giving RRs a seat at the table and including them in policy committees.
 - Supply chain route: Coal from west via rail, transfer to water via Belt Railway of Chicago, goes to power plants within region.
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A.5 TRUCK

Table A.10 Illinois Trucking Association Members Interview Summary

Stakeholder: Illinois Trucking Association Members
<p>Attendees</p> <p>George Billows, ITA Exec Director; Randy Thomas, ITA Safety and Enforcement; Randy Vaughn, Superior Bulk Logistics, Inc.; Jay Thomas, Packard Transport, Inc.; Sean Jones, Eby-Brown; Sebastian “CB” Zangara, Dominick’s; Al Borgman, Ideal Deliveries, Inc. / Kingsway Logistics, Inc.</p>
<p>Date and Location</p> <p>7/31/2009, Illinois Trucking Association Office</p>
<p>Project Team Members</p> <p>Audrey Wennink, CS; Sam Van Hecke, CS; Brett Baden, CMAP</p>
Key Findings
<ul style="list-style-type: none"> • Key problems include: congestion in the Loop; delays due to congestion; construction and construction zone management; restrictions on delivery times by municipalities; lack of parking; operating costs; unclear information for non-locals; and infrastructure. • Recommended solutions include: better construction management; better advanced traveler information; better parking resources; encouraging night delivery; and Travel Demand Management strategies. • Operating costs: The combination of four problems (congestion delays, construction zones, delivery time restrictions, and lack of parking in areas close to deliveries) was cited as a major contributor to cost. Trucking companies have to spend more money in fuel and payroll and maintain extra equipment. Trucking companies are struggling and many have been going out of business (3,000 companies with 5 or more trucks went out of business last year). Fees for missing delivery times due to delay or restrictions can significantly hurt trucking companies thru hefty fines and loss of contracts. Difficulty in predicting operating times can also impact oversize-overweight permits, which sometimes expire during a delayed trip. • Infrastructure: Potholes and poor pavement conditions hurt speed and raise costs for equipment. Several dangerous intersections exist (such as Arsenal Road-N. I-55 entrance). Viaducts cause problems, requiring rerouting due to vertical clearance issues. • Interviewees recommended looking at the model of Atlanta prior to and during the 1996 Summer Olympics. The City suspended night delivery restrictions and developed policies to encourage night delivery. For a three-month period, this was a very successful model. Interviewees urged that this be considered both in the run-up to Chicago’s bid for the 2016 Olympics and as a general freight system improvement strategy. • Several Travel Demand Management ideas were advanced including: providing better transit service to get passenger vehicles off the road, RideShare programs such as those for Federal employees in Baltimore-Washington-Virginia and Pace’s Van Pool program should be expanded, encourage employers to stagger start times.
Business Characteristics (Location/Size/Revenue)
<ul style="list-style-type: none"> • Superior Bulk Logistics, Inc. (Randy Vaughn) – Operate on highway, rail, and water, primarily focused on three goods: rail sidings, food grade, and chemicals. Have approximately 1,500 units (vehicles). Some primary origins/destinations include Chicago, New Jersey, and Texas. • Packard Transport, Inc. (Jay Thomas) – Primarily long-haul, try to avoid Chicago (urban area) when

possible, operate 300 vehicles, frequently run on I-80 across region.

- Eby-Brown (Sean Jones) – Delivers to convenience stores (biggest client is Speedway), has 400 units nationally, 100 in IL, all operating on delivery routes and spending significant time on arterial/local streets and in Chicago’s urban area. Other offices are in Atlanta, Baltimore, Springfield (OH), Eau Claire, Indianapolis. Dist. Centers are Montgomery, IL, Atlanta, Baltimore, Springfield, OH, Detroit, Eau Claire, WI.
- Dominick’s (CB Zangara) – Has 95 drivers in Chicago, 70 tractors, 300 trailers, regular deliveries to stores (2 per day, one perishables very late or very early, one dry goods in middle of day). Generally operate within a 50-60 mile radius of North Lake.
- Kingsway Logistics (Al Borgman) – Has 45 units operating in three states, does significant LTL work.
- Ideal Delivery Services (Al Borgman) – Small company headquartered near O’Hare (Elk Grove Village), specializes in air freight, considers O’Hare its “lifeline.”

Shipping Movements and Quantities

- See above.

Obstacles to Efficiency for Freight Movement (Trucking, Rail, Intermodal, Water, Air)

- “**The Loop.**” All interviewees pointed directly to downtown Chicago as a challenging place to move goods via highway.
- **Delays due to congestion:** Interviewees emphasized the high costs of delays. When caught in unexpected traffic due to incidents or construction it creates significant problems including fines for late shipments, missing of tight delivery windows, truckers running out of time under hours of service (HOS) restrictions, and problems with supply chains (shipment A is late which makes shipment B late which costs everyone money and time). The cost of maintaining extra drivers and equipment to counter possible delays is significant.
- **Construction zones:** Several interviewees are dissatisfied with construction zone management including unnecessary blocking of lanes when work is not being performed, speed limits of 45 mph even when work is not being performed, and long stretches of closures where shorter closures might be sufficient. Interviewees were happy with level of information available from IDOT on closures via e-mail alerts, but would like better information available on construction delays while traveling.
- **Restrictions on delivery times by municipalities:** Town by town curfews on truck traffic severely impact trucking schedules and cost. Many municipalities have curfews of 10 p.m. – 6:30 a.m. In many cases, truckers feel these curfews are unrealistic and unproductive as many of the delivery locations (such as Dominick’s store locations) are far from residential development. In many cases, truckers feel delivery restrictions are unsafe, forcing truck traffic into congested and less safe situations. The example of a 24-hour Walgreens at 135th and Ridgeland near a high school was given. Delivery time restrictions force drivers to deliver in the morning and maneuver around heavy traffic and high school children crossing the street. The restrictions lead to more cost in tolls (Eby-Brown estimates their monthly toll cost at \$11,000, with much of that being due to forced operation during peak periods because of delivery time restrictions) and more costs in payroll. In addition to municipality restrictions, some truck routes (such as IL 47) have operating time restrictions (no vehicles over 54,000 pounds from 11 p.m.-3 a.m.).
- **Lack of parking:** Interviewees felt there is a severe lack of available truck parking in the Chicago region. This is particularly problematic when truckers face restrictions on delivery times but cannot find a place to stop near the delivery site. Lack of parking forces drivers to operate while fatigued and to operate in congested situations. The ITA has advanced several proposals to add truck parking at current under-utilized facilities (Soldier’s Field, U.S. Cellular Arena, Rosemont Horizon) but has not had any success. ITA also contended for the Tollway to put in a rest area before first toll (on I-94 near WI/IL border) so drivers were not forced to pay peak period tolls (necessary to reach Lake Forest rest area). Interviewees believe trucks are frequently seen as not desirable for municipalities and they face Not In My Back Yard (NIMBY) obstacles to locating new sites.

- **Operating costs:** The combination of the four previously mentioned problems (congestion delays, construction zones, delivery time restrictions, and lack of parking in areas close to deliveries) was cited as a major contributor to cost. Trucking companies have to spend more money in fuel and payroll and maintain extra equipment. Trucking companies are struggling and many have been going out of business (3,000 companies with 5 or more trucks went out of business last year). Fees for missing delivery times due to delay or restrictions can significantly hurt trucking companies thru hefty fines and loss of contracts. For example, Eby-Brown's deliveries to Speedway are contractually bound to occur within a two-hour window and failure to meet this window 97% of the time within a given month results in penalties. Difficulty in predicting operating times can also impact oversize-overweight permits, which sometimes expire during a delayed trip.
- **Unclear information for non-locals:** There is poor information about regulations (particularly where trucks can legally operate, i.e., Which lanes) and travel conditions for over-the-road truckers.
- **Regulations forcing trucks off of left lanes/express lanes:** Interviewees felt trucks should be allowed on express lanes on Dan Ryan. They do not like differential speed limits.
- Lack of crosstown expressway:
- **Local weight regulations:** The example of Harvey ticketing drivers entering/exiting Union Pacific's Gateway Intermodal Terminal was given. Truckers feel weight regulations should be a uniform 80,000 pounds for State highways.
- **Local permit costs:** Interviewees felt it is unfair for municipalities to charge for local permits on top of the State's price.
- **Infrastructure:** Potholes and poor pavement conditions hurt speed and raise costs for equipment. Several dangerous intersections exist (such as Arsenal Road-N. I-55 entrance). Viaducts cause problems, requiring rerouting due to vertical clearance issues. Roads in Chicago area are generally in "terrible shape," much worse than other metro regions such as Indianapolis and Nashville. Cicero Avenue between Midway Airport and I-55 was cited as a particularly bad roadway.

Needed Improvements to System (Trucking, Rail, Intermodal, Water, Air)

- **Better construction management:** Night construction was cited as a possible method of faster, lower impact construction. The example of I-894 in Milwaukee was given as a successful night construction project. Better construction coordination between projects is needed.
- **Better advanced traveler information.** Interviewees were interested in more advanced traveler information to let travelers know about highway delays (due to incidents or construction) in time to access alternate routes. Dynamic Message Signs (DMS) are considered very helpful but there are not enough in Chicago region and they should be located further out. Maryland and Indiana were cited as states that do a better job of advanced traveler information. In addition to DMS, radio broadcasts are an effective tool, notably when coupled with flashing yellow light signs.
- **Better parking:** Some of the City of Chicago ideas (such as having Loop designated delivery areas for every 2-3 blocks) do not reflect the reality of trucks needing to get all the way from point A to point B.
- Interviewees recommended looking at the **model of Atlanta** prior to and during the 1996 Summer Olympics. The City suspended night delivery restrictions and developed policies to encourage night delivery. For a three-month period, this was a very successful model. Interviewees urged that this be considered both in the run-up to Chicago's bid for the 2016 Olympics and as a general freight system improvement strategy.
- Interviewees met the idea of **truck-only lanes** with some caution. They note that they need to be dependable, need to have at least two lanes, and need to address the safety concerns of shifting all the way across traffic to the left-hand lanes. If the lanes are properly barricaded, there needs to be plans for snow removal. They felt Illinois' money should not be spent on truck lanes for I-70 (which has minimal benefit for Illinois) but instead spend money on I-55, I-57, and/or I-80.
- **Better enforcement** of cars operating aggressively near trucks would be helpful.
- Several **Travel Demand Management** ideas were advanced including: providing better transit service

to get passenger vehicles off the road, RideShare programs such as those for Federal employees in Baltimore-Washington-Virginia and Pace's Van Pool program should be expanded, encourage employers to stagger start times.

Trends in Industry (Trucking, Rail, Intermodal, Water, Air)

- More trucks and equipment on the roads.
- There are some worries about carbon footprint regulation. Trucks are currently doing as much as they can to reduce idling given fuel prices.
- Trucks are happy with rail growth and growth of intermodal. They see it as an opportunity for additional short-haul work, but emphasize that it doesn't reduce local congestion.
- CREATE for trucks – they feel that it's challenging to coordinate this among trucking firms because of their different operations.
- Trying to increase backhauling but it is difficult on a local basis.
- Seeing increasing conflicts with municipalities, even those heavily dependent on truck deliveries such as Schaumburg.

Critical Factors for Business Location and Success

- See challenges section.

Best Options for Funding System Improvements

- Interviewees are not interested in paying increased tolls. They feel trucks already cover a disproportionate share of the Tollway's costs (15-18% of Tollway traffic is commercial vehicles and they generate 60% of Tollway revenue). Tollway currently charges significant peak period tolls for trucks (from \$7.50-9.50). Chicago is a very expensive region. Dealing with the Tollway is difficult. When tolls are increased, trucks shift to arterials and operate on less safe roadways.

Workforce Issues

- No issues.

Land Use and Regulatory Issues

- See municipality regulations discussion.

Performance Measures

- Costs.
-

A.6 WATER

Table A.11 American River Transportation Company Interview Summary

Stakeholder: American River Transportation Company
Attendees
Todd Hudson, Commercial Director, American River Transportation Company (subsidiary of Archer Daniels Midland)
Date and Location
July 13, CS Office
Project Team Members
Audrey Wennink; Sam Van Hecke
Key Findings
<ul style="list-style-type: none"> • Currently seeing more exports than imports, due to low domestic demand and good crop year for grain • Generally when economy is stronger there is more inbound than outbound barge traffic • Chicago market for barge traffic closely tied to construction activity and steel mill operation, both of which are down • Chicago barge market is almost entirely asphalt and concrete right now • Barge traffic seeing more activity with containerized vessels • Olympics would have a big impact due to construction – there would be more movement of aggregates for construction. Barges carry lots of building products (raw products for wallboard). Move more dirt from Chicago excavation via barge to disposal areas.
Business Characteristics (Location/Size/Revenue)
<ul style="list-style-type: none"> • ARTCO has 100+ employees in Chicago. • Barge line is headquartered in Decatur, with offices in St. Louis, New Orleans. • ARTCO owns 16 harbor services, 2,000 barges, 50 shuttle boats (600 to 2,000 horsepower). • ADM’s commercial harbor is in Lemont, IL – at I-355 and the IL River.
Shipping Movements and Quantities
<ul style="list-style-type: none"> • Annually, overall, ARTCO ship about 17-20 million tons total (inbound and outbound). • Illinois River – Mississippi River – Gulf Coast. • Major Commodities are salt; coal; petroleum coke (last product of oil production) – send inbound to steel mills; furnace coke; alloys; hard brick iron (HBI); sugar; scrap; steel (coils, banded, pipe, rod); Cement – inbound; ethylene glycol; aggregate (sand for cement or asphalt) – mostly intrastate moves from southern IL – customer is Ozinga. • Supply Chain Example: Coal from Powder River Basin inbound via rail and to Will County power plant, Romeoville. • Major destination in Chicago: Morton Salt and Gozinga on Goose Island. • ADM owns grain elevators. ADM buys grain – doesn’t grow it. ATCO loads grain into shipping containers at Ottawa and Morris. • Travel time Chicago to or from Lemont/Joliet is 24 hours. • Barge operators track barge movement daily and report it to customers. Near the end of the trip they give an exact docking time to the customer so they can have crews to unload.

Obstacles to Efficiency for Freight Movement (Trucking, Rail, Intermodal, Water, Air)

- Fish barriers in Romeoville. Huge generators provide electrical current to prevent Asian Carp from getting into Lake Michigan. Electric current causes barges that make contact to spark. Requires special handling to prevent explosions due to nearby refinery.
- Factors affecting travel time are: Wind; High water; Running water; Fog; **Ice** -Lake Calumet freezes in the winters – usually they stop operations. If they run during winter ice they charge an “ice rate.”

Needed Improvements to System (Trucking, Rail, Intermodal, Water, Air)

- Cal Sag channel is shallow (about 9 feet) – some dredging may be needed.
- Lockport Lock wall rehab is going on now.

Trends in Industry (Trucking, Rail, Intermodal, Water, Air)

- Currently seeing more exports than imports, due to low domestic demand and good crop year for grain.
- Generally when economy is stronger there is more inbound than outbound barge traffic.
- Chicago market for barge traffic closely tied to construction activity and steel mill operation, both of which are down.
- Chicago barge market is almost entirely asphalt and concrete right now.
- Barge traffic seeing more activity with containerized vessels.
- Olympics would have a big impact due to construction – there would be more movement of aggregates for construction. Barges carry lots of building products (raw products for wallboard). Move more dirt from Chicago excavation via barge to disposal areas.

Critical Factors for Business Location and Success

- Location near steel plants, locations where construction is occurring.

Land Use and Regulatory Issues

- No land use issues – Village of Lemont hasn't hampered business, though they “don't like” mulch barges due to risk of fire/odor.

Additional Notes

- Chicago doesn't have any large grain accumulation points –grain elevators are outside Chicago. There are no grain elevators on the river.
- Every barge carries 70 truckloads of volume.
- Rate calculations:
 - Determine the days to unload/load.
 - Travel to.
 - Travel from.
 - Fuel 30%.
 - Fleeting (parking).
 - Total price divided by tons = ton-rate.
 - Also do rates x miles.
 - Trading grain they do rates from specific points on the river–grain shipping rates are traded on the market.

Table A.12 Illinois River Carriers Association Interview Summary

Stakeholder: Illinois River Carriers Association

Attendees

Darren Melvin, Manager, Marine Operations Hanson Material Svc.; Terry Doyle, Calumet River Fleeting; Terry Wiltz, FL Marine Transporters; Aaron Ozinga, President, Ozinga Materials; Jim Walters, Operations Mgr, Ozinga; Marty Hettel (Assoc. Pres.) AEP River Operations

Date and Location

September 8, 2009, Willowbrook Holiday Inn following Association meeting

Project Team Members

Audrey Wennink

Key Findings

- City of Chicago presents several barriers to industry growth/success:
 - Buffer zone of 30 feet at water’s edge.
 - Increase in bridges that do not open.
 - Promotion of residential development along waterways.
 - Promotion of recreational activity in commercial waterways.
- Industry sees little potential for container on barge movements.
- Electrified fish barrier installation in Sanitary and Ship Canal in Romeoville is a significant issue for waterway movements. Cost to industry of \$700 per tow in this area due to USCG safety regulations will place major burden on industry when the USACE budget runs out to pay for this in FY 2010.
- Preventive maintenance is a great need. Reliability of locks is decreasing as more failures are occurring due to deferred maintenance.
- The industry is moving toward developing a prioritized National Backlog of Maintenance list, given limited resources and need to invest in projects of national and regional significance.
- Chicago is not suitable for import/export businesses. It is much easier to locate near the seaports.
- Fleeting (parking) areas are deficient. There are 6-7 slips in Lemont and no other fleeting areas north of Lemont.

Shipping Movements and Quantities

- Commodities shipped via water:
 - Salt products originate from Morgan City, LA where salt vessels are imported and terminate in Lemont for storage and ultimately goes to Chicago DOT.
 - Aggregates terminate in Chicago.
 - Steel – raw products come from New Orleans and final products ship from Gary, IN. Mittal Steel owns its own ships and transports steel from Burns Harbor IN to Chicago.
 - Fertilizers.
 - Finished steel.
 - Grain from Morris, IL to the south for export.
 - Corn gluten meal (byproduct of ethanol) for poultry feed – transload into containers for export to Asia via train departing from Elwood.
 - Petroleum coke from refineries (last product of crude oil) to feed power plants.
 - Scrap steel originates in Chicago.
-

- Sugar for Tootsie Roll plant near Cicero and 68th Streets.
- Most barge traffic is between midnight and 6am because most companies deliver at 6am.
- From Dec. 24 to Mar. 24 the locks shut down in the St. Lawrence Seaway.
- Locks have 600 foot chambers but tows are 1,200 feet in length. There is a need to rebuild locks to accommodate longer tows; however, north of Peoria it has been determined that it is not economically feasible to increase lock size.
- To traverse a lock takes 1-3 hours. For a double lock, where the tow must be split into two, it takes 2 ½ hours.

Obstacles to Efficiency for Freight Movement (Trucking, Rail, Intermodal, Water, Air)

- Fish barriers to prevent entry of invasive species (Asian Carp) into Lake Michigan have been installed on the Chicago Sanitary and Ship Canal and are in testing stages. These are located just north of Midwest Generation and south of the Romeo Road Bridge in Romeoville. The U.S. Coast Guard established a safety zone with regulated navigation in the area adjacent to and over the electrified fish barriers. (Temporary Final Rule issued September 9, 2009 – see www.uscg.fishbarrierinfo.com) During Midwest Generation loading operations, vessels require a bow boat to ensure safe transit of the area and prevent contact with other vessels and sparking. The USACE has funded bow boats through September but future funding is undetermined and it is expected industry will need to fund bow boats starting in FFY10 starting October 1 2009. The cost of a bow boat is \$700 per vessel tow. Approximately 7 vessels pass through this location per day. Under a normal economy traffic is usually 12-15 vessels per day through the nearby Lockport Lock.
- Joliet Bridge can be a barrier depending on the height of cargo.
- The Lemont RR bridge owned by BNSF is not required to open and can be a barrier.
- The City of Chicago may close more downtown bridges. The lowest have 19 to 20 foot clearance. In the City of Chicago barges must have pilot houses that can lower below their usual operating height.

Needed Improvements to System (Trucking, Rail, Intermodal, Water, Air)

- The association continually generates a list of needed improvements in the region, largely related to dredging, which is shared with USACE (see attached list). USACE addresses this list with its ongoing dredging and maintenance program.
- Three waterways projects are being funded with stimulus money: Lockport wall (\$88 mil.), Dresden/Brandon Road Locks lighting replacement; replacement of work flats barges) at 8 locks in Illinois.
- The industry is moving toward developing a National Backlog of Maintenance list and prioritizing it, given limited resources and need to invest in projects of national and regional significance.
- industry claims delays at railroad bridges have gotten worse, although currently documented levels of delays are low. If the boat calls for the railroad bridge to open and it doesn't do so in time, the rail company can be fined with a civil penalty. Barge operators need to do a better job of reporting delays in real time so that they can be documented. There is a Coast Guard reservist assigned to civil penalties to facilitate this process.
- Fleeting (parking) areas are deficient. There are 6-7 slips in Lemont and no other fleeting areas north of Lemont.

Trends in Industry (Trucking, Rail, Intermodal, Water, Air)

- Ozinga Materials:
 - Ozinga handled 1500 barges per year, with half traveling past the Lockport Lock. They process 2 million tons of concrete each year.
 - Ozinga is building a 100-acre open water port in Henry (between LaSalle and Peoria) where they will do mining.

- Ozinga’s manufacturing is in Chinatown. They need to have their manufacturing in Chicago close to building locations because certain types of concrete must be used within 1 hour or less of manufacture and they cannot travel a long distance.
- There is a growth market in Northern IN; and tows and heavy lift equipment are operating more on the Great Lakes:
 - There are exemptions for dry cargo barges on the Great Lakes but at certain frequencies this is considered Great Lakes Trade. Barges must be documented to operate on the Great Lakes.
 - USCG is going to review the definition of “Great Lakes Operation/Trade.”
 - Vessels with an inland river license cannot go past the O’Brien Lock. A “Great Lakes Extension” allows operation to the break wall.
 - Some River barges travel between Milwaukee and Burns Harbor, IN.
- Decreasing reliability of locks is an issue. Many river locks need just-in-time delivery. Delays that are many hours or even multiple days (e.g., those caused by the fish barrier) can result in a manufacturer running out of materials. Ozinga operations at Armitage has materials for 24 hours and needs a delivery every day. The fish barrier and other breakdowns due to minor issues has closed locks for a day or more recently.
- Plans for high –speed rail could affect drawbridges. Currently the regulations are that the train is supposed to stop for a drawbridge to open if needed. The Rock Island Bridge may handle high-speed rail traffic in the future.
- There is little activity with intermodal containers on barges:
 - When the economy is very busy, products are shipped via barge to New Orleans, and some are transloaded into containers.
- The shipment time may never be competitive-to transport a container by water – from New Orleans to Chicago takes 21 days on barge, versus 2-5 days on rail. Liquid tows from New Orleans to Chicago take 14 days.
- Agriculture has moved outside Chicago region – the first grain elevator is in Morris.
- More corn processing plants are in the area – 3-4 ethanol plants are on the Illinois River.
- The Panama Canal may bring bigger vessels into the center Gulf. Now Panamax vessels are handled there. However New Orleans harbor has a 45 foot draft limit and it’s unlikely it would be dredged out much more to handle Post –Panamax vessels.
- Currently there is not much transfer between modes:
 - There is no good dock near Elwood that would enable rail connections.
 - There are some transfer docks such as those in Lemont. E.g., salt arrives via water and then is trucked to Chicago.
 - Burns Harbor does a lot of transfers between modes.
 - Truck to barge movements are largely construction debris and scrap steel.

Critical Factors for Business Location and Success

- Emissions regulations have had a big impact on industry/waterborne freight, e.g., steel industry. It is cheaper to ship materials from the other side of the globe than to buy locally.
- Unions have affected the cost of operating plants in the Chicago region. Many plants are moving to the Southern U.S. due to labor cost issues.
- Chicago is not suitable for import/export businesses. It is much easier to locate near the seaports.
 - There is some volume of exports from the Great Lakes to Montreal with transloading to ocean ships.

Best Options for Funding System Improvements

- Fuel Users Tax for Waterway Trust Fund was established in 1986, with a tax of 20 cents per gallon for rehab and new construction. This fund has been used for major rehabs thus depleting funds for

maintenance/operations.

- USACE has a major funding problem and is not doing preventive maintenance.

Workforce Issues

- Work schedules on barges are generally 21 days of work at a period (21 days on and 21 days off). This is a difficult schedule and generates turnover (Lake Calumet staff work one week on and one week off).
- The time to move up from deckhand (\$38K salary) to having a license to operate (\$100K salary) used to be 4 years; now it's 10 years and it's less of an incentive to retain people. The lengthening of this time period is largely due to U.S. Coast Guard regulations.
- USCG has tougher licensing rules. Prescription drugs are now an issue. It's harder to keep a license.

Land Use and Regulatory Issues

- Along the Calumet River there is no vacant land for industrial development.
- No large parcels are available in proximity to Chicago.

Public Sector Impacts on Business

- The City of Chicago presents several challenges to waterborne freight movement and industry growth.
 - Promotes condo development and incentivizes recreational traffic (kayaks, canoes, waverunners. Some condo developments have proposed dock space that would have restricted commercial vehicle movements
 - Chicago put in place an ordinance 10-12 years ago requiring 30-foot clearance at the water's edge to accommodate riverwalks. With a 30-foot setback, it is not possible to operate a crane.
 - Chicago's emphasis on environmental friendliness seems not to recognize that every barge takes 70 trucks off the road
 - The City seems to want to relocate all water-based industry to Lake Calumet so they don't have to open bridges.
- City of Chicago bridges are generally not manned, so it takes longer to call to open a bridge.

Performance Measures

- Operators' key measure is ton-miles per day.
 - Sometimes operators charge a daily rate and then they eat the cost of unanticipated delays.
 - The cost per ton was \$23 but due to the economy it's now \$14 per ton.
-

Table A.13 Lake Carriers Association Interview Summary

Stakeholder: Lake Carriers Association
Attendees Glenn Nekvasil
Date and Location September 21 via telephone
Project Team Members Audrey Wennink
Key Findings
<ul style="list-style-type: none">• Three major needs are:<ul style="list-style-type: none">– Dredging.– Second lock at Sault St. Marie, Michigan for redundancy to Poe Lock.– More U.S. Coast Guard Ice breakers.
The U.S. <ul style="list-style-type: none">• The solution to the dredging crisis is getting legislation that will require the Harbor Maintenance Trust fund to spend what it takes in. Now there is an unspent surplus.
Chicago Region Freight System Performance <ul style="list-style-type: none">• Calumet Harbor is third biggest harbor on the Great Lakes and 33rd largest nationally.• They largely move products for the energy and construction industries, which are heavily hit by the recession.
Important Routes/Facilities <ul style="list-style-type: none">• Association Represents U.S. flagged vessel operators in Great lakes.• 18 companies are members with 55 vessels.• Ship 115 million tons of cargo per year.• Members use Lake Calumet.• Mostly ship iron ore, coal, construction materials.
Biggest Obstacles (Trucking, Rail, Intermodal, Water, Air) <ul style="list-style-type: none">• Dredging crisis – USACE has not been properly funded for decades. On the Great Lakes they need to move more than 200 million cubic yards of sediment to get the system back to “project dimensions” When Congress authorizes a Port or Waterway, they say the navigation channel will be so many feet deep and wide – this is “project dimension..” In FY10 there is a need to remove almost a million cubic yards of sediment.<ul style="list-style-type: none">– Vessels lose cargo capacity when they have to lighten up. For every inch of draft, they lose 50 – 270 tons of cargo capacity. But there are several feet of deficiency in many locations When there are low water levels ships are losing 10 to 12 tons of cargo capacity.• Need a second large lock at Sault St. Marie, Mich. This lock allows ships to move from Lake Superior to other Great Lakes. 70% of U.S. flag carrying capacity is restricted to the Poe Lock and can’t go through other lock at the Soo Locks. If something happens to the Poe Lock (built in 1969) there is no redundancy. It is currently well maintained by USACE but aging.<ul style="list-style-type: none">– Congress has authorized building a second lock at full Federal expense. There has been a groundbreaking on the first step in the process, building Coffer Dams. However, the total cost of the

new lock is \$490 million dollars, and Congress has not appropriated that money yet.

- There is a need for more Coast Guard icebreakers. Ice season starts in December and can go through April. During ice cover periods ships can move cargo only if the Coast Guard breaks the ice. USCG has 8 icebreakers on Great Lakes. Only one is a modern vessel (built in 2006). Two vessels built in 2003 are not built to be icebreakers and not very effective.
 - In Spring of 2008, members lost \$1.3 million in ice damage to vessels. This year some companies delayed sailing until ice conditions could ease so they wouldn't suffer more vessel damage.

Needed Improvements to System (Trucking, Rail, Intermodal, Water, Air)

- Dredging:
 - The confined disposal facility will be filled in 4 years. Once it's full they can't dredge. It's difficult to location new CDFs because of NIMBY. For example In Indiana's harbor they haven't dredged since 1972 – this is because the CDF is full and they could not identify a new CDF due to NIMBY.
- Second lock at Soo St. Marie, Michigan for redundancy to Poe Lock.
- U.S. Coast Guard Ice breakers.

Trends in Industry (Trucking, Rail, Intermodal, Water, Air)

- Association cannot forecast trends.

Funding Options for Freight System Improvements

- The solution to the dredging crisis is getting legislation that will require the Harbor Maintenance Trust fund to spend what it takes in. Cargo is taxed and this money goes to Harbor Maintenance Trust Fund, which pays for dredging. The fund takes in \$1.4 billion per year. The Fund spends only \$700 million. The rest of the money just sits there. There is a surplus of nearly \$5 billion. The Federal government is using that surplus to balance the Federal Budget on paper. The need is about \$200 million to clear the dredging backlog on the Great Lakes. They could solve their problems with the existing funds.
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B. Stakeholder Interview Guides

This Appendix contains the two stakeholder interview guides used for facilitation. There are two separate guides, one for private sector stakeholders and one for public sector stakeholders. Generally, the interview guide was followed though flexibility was maintained to allow interviewees to speak in greatest detail about those areas they had the largest knowledge of and interest in. The interview guides are similar to the survey tool (see Appendix C) by design.



CMAP Regional Freight Planning Recommendations
Interview Guide for Private Sector Freight Stakeholders

Contact Information

Date:
Name:
Title/Position:
Organization:
Address:
City:
Zip Code:
Phone:
Email:

1. Where is your headquarters located?
2. How many people does your business employ?
3. What is the annual revenue of your business?
4. What products does your company ship?
5. Which category does your company fit into?
 - a. Shipper
 - b. Manufacturer
 - c. Carrier
 - d. Freight handler (3PL)
 - e. Trade association
6. What percentage of your freight shipments are transported by each mode?
 - a. % truck?
 - b. % rail?
 - c. % water?
 - d. % air?
7. What volume of freight does your company ship annually by each mode?
 - a. Roadway - X truckloads
 - b. Rail- X carloads
 - c. Intermodal - X TEUs
 - d. Water - X tons
 - e. Air - X tons
8. What are the origins/destinations of your goods?
 - a. Where do your business's goods originate/terminate?
 - i. Chicago
 - ii. Midwest other than Chicago (IA, IL, IN, MI, MN, MO, OH, WI)
 - iii. Rest of U.S.
 - iv. Canada/Mexico

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- v. Europe
 - vi. Asia
 - vii. South America
 - viii. Africa
 - ix. Australia
 - b. What major facilities/routes does your business rely on in the Chicago metropolitan region?
 - c. What major facilities/routes does your business rely on outside of the Chicago metropolitan region?
 - d. Where are your major distribution centers/freight generators located in the Chicago metropolitan region?
 - e. Where are your major distribution centers/freight generators located outside the Chicago metropolitan region?
- 9. What do you see as the biggest obstacles to efficiency for trucking in the region?**
- a. How important are the following elements?
 - i. Access (truck route network adequacy, including connectivity)
 - ii. Capacity
 - iii. Roadway Condition/Maintenance
 - iv. Speed/Congestion
 - v. Reliability/Clokepoints (vertical clearance issues?)
 - vi. Cost
 - vii. Equipment availability
 - viii. Safety
 - ix. Other (please define)
 - b. What are specific trucking-related obstacles your business faces?
- 10. What improvements to trucking are needed in the region?**
- a. Infrastructure projects
 - i. Capacity – arterials?where?
 - ii. Intersection improvements – where?
 - iii. Interchange improvements such as condition, geometry – where?
 - iv. Roadway maintenance – where?
 - v. Dedicated truckways, truck lanes
 - vi. Urban and suburban design standards that consider truck turning radii,
 - vii. Vertical clearances,
 - viii. More truck parking – where?
 - ix. Increased routing options/redundancy
 - b. New system management and operational strategies (congestion pricing, managed lanes)
 - c. Highway traffic safety
 - d. More centralized information resources (such as real time congestion, truck stop parking availability, regional truck route mapping, better regulation information)
 - e. New policy strategies (e.g. reduced delivery time restrictions)
 - f. Public-private partnerships (general as well as specific program to reduce empty cross-town truck moves)
 - g. More emphasis on limiting impacts on local communities
 - h. What impacts would these improvements have on goods movement/your business/community?
- 11. What trends do you see in the trucking industry affecting your business?**
- a. What changes do you expect in 5 years?
 - b. In 20-30 years?

12. What do you see as the biggest obstacles to efficiency for the rail and intermodal system in the region?

- a. *How important are the following elements?*
 - i. *Access (to Class I services, short lines, intermodal services)*
 - ii. *Capacity (conflicts between freight and passenger rail?)*
 - iii. *System Condition/Maintenance*
 - iv. *Speed/Congestion*
 - v. *Reliability/Chokepoints*
 - vi. *Cost*
 - vii. *Access to shipping containers*
 - viii. *Increased routing options/redundancy*
 - ix. *Other (please explain)*
- b. *Where do you find the current system lacking?*
- c. *What are specific rail-related obstacles your business faces?*

13. What improvements to the rail and intermodal system are needed in the region?

- a. *Infrastructure investments to mitigate at-grade rail-highway crossing issues*
- b. *CREATE rail improvements and other infrastructure projects (explain CREATE)*
- c. *Greater intermodal investment*
- d. *Changes to address impacts of EJE rail acquisition*
- e. *Changes to address shifts in international freight flows*
- f. *Policies/investment to limit local community impacts*
- g. *Changes to address impacts of new intermodal developments*
- h. *What impacts would these improvements have on goods movement/your business/community?*

14. What trends do you see in the rail and intermodal industry affecting your business/community?

- a. *What changes do you expect in 5 years?*
- b. *In 20-30 years?*

15. What do you see as the biggest obstacles to efficiency for the waterborne freight system in the region?

- a. *How important are the following elements?*
 - i. *Access (to ports, to highway/rail connections)*
 - ii. *Capacity*
 - iii. *System maintenance*
 - iv. *Speed/Congestion*
 - v. *Reliability/Chokepoints*
 - vi. *Equipment availability*
 - vii. *Cost*
- b. *What are specific obstacles your business faces?*
- c. *Where do you find the current system lacking?*

16. What improvements to the waterborne freight system are needed in the region?

- a. *Lock improvements*
- b. *Improved harbor/channel maintenance*
- c. *Port facilities expansion*
- d. *Port access via highway or rail*

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- e. *Changes to taxation/fee structures*
 - f. *What impacts would these improvements have on goods movement for your business?*
- 17. What trends do you see in the waterborne freight industry affecting your business/community?**
- a. *What changes do you expect in 5 years?*
 - b. *In 20-30 years?*
- 18. What do you see as the biggest obstacles to efficiency for air cargo service in the region?**
- a. *How important are the following elements?*
 - i. *Airport landside capacity*
 - ii. *Trucker access to airport and freight forwarders*
 - iii. *Capacity*
 - iv. *System Condition/Maintenance*
 - v. *Speed/Congestion*
 - vi. *Reliability/Chokepoints*
 - vii. *Safety*
 - viii. *Cost*
 - b. *Where do you find the current system lacking?*
 - c. *What are specific obstacles your business faces?*
- 19. What improvements to the air cargo system are needed in the region?**
- a. *South Suburban Airport plans*
 - b. *O'Hare expansion*
 - c. *Smaller/regional airport improvements*
 - d. *What impacts would these improvements have on goods movement/your business?*
- 20. What trends do you see in the air cargo industry affecting your business?**
- a. *What changes do you expect in 5 years?*
 - b. *In 20-30 years?*
- 21. What are your critical factors for business location and operational success?**
- a. *What supply chain trends (such as manufacturing location changes and fuel prices) are impacting your business?*
 - b. *How do you anticipate your freight flows changing over time?*
 - c. *How do state/municipal regulations impact goods movement/your business?*
 - d. *In next five years, do you anticipate expansion/contraction/relocation?*
- 22. How competitive is Chicago compared to other regions as a freight and logistics hub?**
- a. *What other regions do you regard as close competitors?*
 - b. *What are the biggest strengths of the Chicago region relative to these other places?*
 - c. *What are the biggest weaknesses of the Chicago region relative to these other places?*
- 23. What do you see as the best options for funding freight system improvements?**

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- a. Which of the following methods are reasonable options for funding?
 - i. Increases in tolls (not related to congestion or road use)
 - ii. Congestion pricing applied to passenger vehicles
 - iii. Fees for vehicles miles traveled for registered Illinois drivers
 - iv. Operating taxes (container fees, lift fees, vehicle registration fees)
 - v. Property taxes
 - vi. Municipal contributions to pooled funds for regional freight projects
 - vii. Innovative public-private partnerships in financing
 - viii. Fuel tax increases
 - b. What conditions would need to be met for these to be acceptable?
- 24. What are the biggest workforce issues faced in your industry (trucking, water, air, or rail)?**
- a. How significant are the following issues?
 - i. Poorly trained workers
 - ii. Lack of education or training available specific to freight/logistical operations
 - iii. Lack of transportation for trained workers to job sites
 - iv. Expenses of training workers
 - v. Communication difficulties with educational institutions on workforce training
 - vi. Availability of a skilled workforce in 5-10 years
 - vii. Availability of a skilled workforce in 20-30 years
 - b. What does your business need in its workforce?
 - c. What will your business need in its workforce in 5-10 years?
- 25. Which land use issues and regulations have the most impact on your business?**
- a. Available land to expand existing facilities
 - b. Zoning restrictions on potential expansion or construction of new sites
 - c. Municipal government resistance to facility expansion or construction
 - d. Public resistance to facility expansion or construction
 - e. Government incentives/subsidies
 - f. Availability of land in proximity to intermodal facilities for related uses (such as warehouses)
 - g. Local ordinances that restrict land uses (such as noise ordinances)
- 26. How does the public sector affect the freight industry in the region?**
- a. Are there regulatory/policy/institutional barriers that affect your industry?
 - b. What are the most difficult issues at the state level?
 - c. What are the most difficult issues at the county level?
 - d. What are the most difficult issues at the municipal level?
 - e. Are there specific improvements that would help make things better?
- 27. What performance measures does your business rely on to gauge the system's effectiveness (e.g. the percent of shipments that arrive more than 1 hour late)?**
- 28. Who else should we be speaking with as part of this outreach effort?**



CMAP Regional Freight Planning Recommendations

Interview Guide for Public Sector Freight Stakeholders

Contact Information

Date:

Name:

Title/Position:

Organization:

Address:

City:

Zip Code:

Phone:

Email:

1. **How well do you think the greater Chicago freight system performs (all modes)?**
 - a. *Where is the system generally working well?*
 - b. *Where is the system generally not working well?*

2. **What routes/facilities does your community rely on for goods movement?**
 - a. *Where do goods originate/terminate within your community?*
 - b. *What major freight facilities/routes does your community rely on in the Chicago metropolitan region?*

3. **What are the factors you consider related to the freight industry (truck, rail, water, air) within and through your community?**
 - a. *How important are the following?*
 - i. *Freight as an economic engine for local businesses*
 - ii. *Freight as a driver of employment*
 - iii. *Freight volume increases as a result of new business locations*
 - iv. *Safety*
 - v. *Traffic delays at at grade highway rail crossings*
 - vi. *Noise impacts*
 - vii. *Congestion impacts*
 - viii. *Pollution impacts*
 - ix. *Land use impacts*
 - x. *Redevelopment opportunities for brownfields*

4. **What are the biggest obstacles to efficiency for trucking in the region?**
 - a. *How important are the following elements?*
 - i. *Access (good connections between routes)*
 - ii. *Capacity*
 - iii. *System Condition/Maintenance*
 - iv. *Speed/Congestion*
 - v. *Reliability/Chokepoints (vertical clearance issues?)*
 - vi. *Routing options/redundancy*
 - vii. *Cost*
 - viii. *Other (please define)*

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- b. *What are specific trucking-related issues in your community?*
 - c. *Where is the system lacking?*
- 5. What improvements to trucking are needed in the region?**
- a. *Infrastructure projects*
 - i. *General capacity – where? which arterials?*
 - ii. *Intersection improvements – where?*
 - iii. *Interchange improvements – where?*
 - iv. *Roadway maintenance*
 - v. *Dedicated truckways, truck lanes*
 - vi. *Urban and suburban design standards that consider truck turning radii*
 - vii. *Vertical clearances*
 - viii. *More truck parking*
 - b. *New system management and operational strategies (congestion pricing, managed lanes)*
 - c. *More centralized information resources (such as real-time congestion, truck stop parking availability, regional truck route mapping, better regulation information)*
 - d. *New policy strategies (e.g. reduced delivery restrictions)*
 - e. *Public-private partnerships (general as well as specific program to reduce empty cross-town truck moves)*
 - f. *More emphasis on limiting impacts on local communities*
 - g. *What impacts would these improvements have on goods movement/ your community?*
- 6. What trends do you see in the trucking industry affecting your community?**
- a. *What changes do you expect in 5 years?*
 - b. *In 20-30 years?*
- 7. What do you see as the biggest obstacles to efficiency for the rail and intermodal system in the region?**
- a. *How important are the following elements?*
 - i. *Access (Class I, short lines, intermodal facilities)*
 - ii. *Capacity (conflicts between freight and commuter/passenger rail?)*
 - iii. *System Condition/Maintenance*
 - iv. *Speed/Congestion*
 - v. *Reliability/Chokepoints*
 - vi. *Cost*
 - vii. *Other (please explain)*
 - b. *Where do you find the current system lacking?*
 - c. *What are specific rail-related obstacles your community faces?*
- 8. What improvements to the rail and intermodal system are needed in the region?**
- a. *Infrastructure investments to mitigate at-grade rail-highway crossing issues*
 - b. *CREATE rail improvements and other infrastructure projects (explain CREATE)*
 - c. *Greater intermodal investment*
 - d. *Changes to address impacts of EJ&E rail acquisition*
 - e. *Changes to address shifts in international freight flows*
 - f. *Policies/investment to limit local community impacts*
 - g. *Changes to address impacts of new intermodal developments*
 - h. *What impacts would these improvements have on goods movement/your community?*

Page 3

9. **What trends do you see in the rail and intermodal industry affecting your community?**
 - a. *What changes do you expect in 5 years?*
 - b. *In 20-30 years?*

10. **What do you see as the biggest obstacles to efficiency for the waterborne freight system in the region?**
 - a. *How important are the following elements?*
 - i. *Access (to ports, to highway/rail connections)*
 - ii. *Capacity*
 - iii. *System Condition/Maintenance*
 - iv. *Speed/Congestion*
 - v. *Reliability/Chokepoints*
 - vi. *Cost*
 - b. *What are specific obstacles your community faces?*
 - c. *Where do you find the current system lacking?*

11. **What improvements are needed to the waterborne freight system in the region?**
 - a. *Lock improvements*
 - b. *Improved harbor/channel maintenance*
 - c. *Port facilities expansion*
 - d. *Port access via highway or rail*
 - e. *Changes to taxation/fee structures*
 - f. *What impacts would these improvements have on goods movement in your community?*

12. **What trends do you see in the waterborne freight industry affecting your community?**
 - a. *What changes do you expect in 5 years?*
 - b. *In 20-30 years?*

13. **What do you see as the biggest obstacles to efficiency for air freight service in the region?**
 - a. *How important are the following elements?*
 - i. *Access*
 - ii. *Capacity*
 - iii. *System Condition/Maintenance*
 - iv. *Speed/Congestion*
 - v. *Reliability/Chokepoints*
 - vi. *Cost*
 - b. *Where do you find the current system lacking?*
 - c. *What are specific obstacles your community faces?*

14. **What improvements to the air cargo system are needed in the region?**
 - a. *South Suburban Airport plans*
 - b. *O'Hare expansion*
 - c. *Smaller/regional airport improvements*
 - d. *What impacts would these improvements have on your community?*

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15. What trends do you see in the air cargo industry affecting your business/community?

- a. *What changes do you expect in 5 years?*
- b. *In 20-30 years?*

16. What do you see as the best options for funding freight system improvements?

- a. *Which of the following methods are reasonable options for funding?*
 - i. *Increases in tolls (not related to congestion or road use)*
 - ii. *Congestion pricing applied to passenger vehicles*
 - iii. *Fees for vehicles miles traveled for registered Illinois drivers*
 - iv. *Operating taxes (container fees, lift fees, vehicle registration fees)*
 - v. *Property taxes*
 - vi. *Municipal contributions to pooled funds for regional freight projects*
 - vii. *Innovative public-private partnerships in financing*
 - viii. *Fuel tax increases*
- b. *What conditions would need to be met for these to be acceptable?*

17. Which land use issues and regulations have the most impact on businesses in your community?

- a. *Available land to expand existing facilities*
- b. *Zoning restrictions on potential expansion or construction of new sites*
- c. *Municipal government resistance to facility expansion or construction*
- d. *Public resistance to facility expansion or construction*
- e. *Availability of land in proximity to intermodal facilities for related uses (such as warehouses)*
- f. *Local ordinances that restrict land uses (such as noise ordinances)*

18. What existing policies have the most impact on freight movement in your community?

19. What additional policies would you like to see explored?

20. Do you coordinate planning efforts (related to freight) with adjacent municipalities?

21. How can CMAP engage communities to work together for freight policy development?

22. Do you ever communicate with the freight industry or industry reps?

23. Who else should we be speaking with as part of this outreach effort?

C. Survey

The survey in its entirety is shown on the following pages.

The survey precedes a summary of the survey responses given.

CMAP Freight Transportation Survey

Welcome

As part of development of GO TO 2040, a long-range regional plan for transportation and land use in the 7-county Chicago region, the Chicago Metropolitan Agency for Planning (CMAP) is developing Regional Freight Planning Recommendations to ensure that Chicago's goods movement needs are met in the future. CMAP is focused on giving stakeholders who have an interest in the region's freight system ample opportunity to provide meaningful input. Please make your needs understood by completing the following survey. You may remain anonymous if you like. However, if you make specific comments or recommendations and provide contact information, we may follow up for additional information if necessary. Questions or comments can be directed to Audrey Wennink at awennink@camsys.com, or to Tom Murtha at tmurtha@cmap.illinois.gov.

This survey will take approximately 15 minutes.

This survey protects the privacy of its participants through anonymity (at your discretion). However, we also need to understand the context of responses based on geographic location. Most contact information is optional, but ZIP CODE IS REQUIRED TO COMPLETE THE SURVEY.

Name:	<input type="text"/>
Company:	<input type="text"/>
Address:	<input type="text"/>
Address 2:	<input type="text"/>
City/Town:	<input type="text"/>
State:	<input type="text"/>
ZIP/POSTAL CODE:	<input type="text"/>
Country:	<input type="text"/>
Email Address:	<input type="text"/>
Phone Number:	<input type="text"/>

Which of the following categories best describes your occupation?

- Private sector
- Public sector
- Non-profit

CMAP Freight Transportation Survey

Private Sector Stakeholders: General Questions

How well does the Chicago freight system meet your business needs?

	1 (Very Poorly)	2	3	4	5	6	7	8	9	10 (Very Well)	N/A
Overall freight system	<input type="radio"/>										
Roadway freight system	<input type="radio"/>										
Railroad/intermodal freight system	<input type="radio"/>										
Waterborne freight system	<input type="radio"/>										
Air freight system	<input type="radio"/>										

What are strengths of the Chicago freight system?

How does Chicago's freight transportation system perform compared to other regions?

Name 1 or 2 cities with freight systems competitive with Chicago

Name 1 or 2 other cities that have better freight systems than Chicago

CMAP Freight Transportation Survey

Private Sector Stakeholders: About Your Business

Which of the following categories best describes your private sector affiliation?

- Shipper
- Manufacturer
- Carrier
- Freight handler (3 PL)
- Trade association
- Engineering consultant

Other (please specify)

Where is your headquarters located?

- 7-county Chicago region
- Midwest (IA, IL (not Chicago region), IN, MI, MN, MO, OH, WI)
- Elsewhere in the United States
- Canada or Mexico
- Outside North America

What is the annual revenue of your business?

- < \$5 million
- \$5-\$20 million
- \$21-\$100 million
- \$101-\$500 million
- > \$500 million

CMAP Freight Transportation Survey

How many people does your business employ?

- Fewer than 10 employees
- 10-49 employees
- 50-249 employees
- 250-999 employees
- More than 999 employees

What products does your company ship/receive?

In the next five years, how do you anticipate your business changing in the Chicago region?

- Expansion
- Contraction
- Relocation within region
- Relocation to another region
- None of the above

What is the reason for this change?

What percentage of your freight volume is transported by each mode?

Roadway	<input type="text"/>
Railroad	<input type="text"/>
Intermodal Rail	<input type="text"/>
Water	<input type="text"/>
Air	<input type="text"/>

Approximately what annual volume of freight does your business transport by each mode?

Roadway (truck loads)	<input type="text"/>
Railroad (carloads)	<input type="text"/>
Intermodal Rail (TEUs)	<input type="text"/>
Water (tons)	<input type="text"/>
Air (tons)	<input type="text"/>

CMAP Freight Transportation Survey

Where do your shipments originate and terminate?

	Originate	Terminate
Chicago	<input type="checkbox"/>	<input type="checkbox"/>
Midwest (IA, IL (not Chicago), IN, MI, MN, MO, OH, WI)	<input type="checkbox"/>	<input type="checkbox"/>
Elsewhere in U.S.	<input type="checkbox"/>	<input type="checkbox"/>
Canada/Mexico	<input type="checkbox"/>	<input type="checkbox"/>
Central America/Caribbean	<input type="checkbox"/>	<input type="checkbox"/>
Europe	<input type="checkbox"/>	<input type="checkbox"/>
Asia	<input type="checkbox"/>	<input type="checkbox"/>
South America	<input type="checkbox"/>	<input type="checkbox"/>
Africa	<input type="checkbox"/>	<input type="checkbox"/>
Australia	<input type="checkbox"/>	<input type="checkbox"/>

**What are the biggest workforce impediments faced in your industry related to transport of goods?
(1 is Unimportant, 10 is Very Important)**

	1	2	3	4	5	6	7	8	9	10	N/A
Poorly trained workers	<input type="radio"/>										
Lack of education or training available that is specific to freight/logistics	<input type="radio"/>										
Expense of training workers	<input type="radio"/>										
Lack of transportation for workers to job sites	<input type="radio"/>										
Communication difficulty with educational institutions on workforce training	<input type="radio"/>										
Availability of a skilled workforce in near term (approx. 5-10 years)	<input type="radio"/>										
Availability of a skilled workforce in long term (up to 30 years into the future)	<input type="radio"/>										

Are there any additional workforce impediments?

What are freight-oriented policies/regulations (local, county, state) that are barriers to business success in the Chicago region?

CMAP Freight Transportation Survey

Which land use issues have the most impact on your business? (1 is Least Impact, 10 is Most Impact)

	1	2	3	4	5	6	7	8	9	10	N/A
Available land for expansion	<input type="radio"/>										
Zoning restrictions to expansion or construction	<input type="radio"/>										
Local government resistance to expansion or construction	<input type="radio"/>										
Government incentives/subsidies for development	<input type="radio"/>										
Public resistance to expansion or construction	<input type="radio"/>										
Availability of land near intermodal facilities, warehouses, etc.	<input type="radio"/>										
Local ordinances restricting land uses (such as noise ordinances, delivery time restrictions, building codes)	<input type="radio"/>										

Are there any other land use issues you find important?

Does your business rely on trucking for goods movement?

- Yes
- No

CMAP Freight Transportation Survey

Roadway Freight Transportation

**Which trucking factors need improvement in the Chicago region?
(1 is Does Not Need Improvement, 10 is Needs Significant Improvement)**

	1	2	3	4	5	6	7	8	9	10	N/A
Highway access (good connections between routes)	<input type="radio"/>										
Available truck parking facilities	<input type="radio"/>										
Highway system condition/maintenance	<input type="radio"/>										
System speed	<input type="radio"/>										
System reliability (consistent travel times)	<input type="radio"/>										
Available data on current traffic conditions	<input type="radio"/>										
Highway traffic safety	<input type="radio"/>										
Low cost per trip	<input type="radio"/>										

Are there any other important trucking factors?

**Which options to improve trucking in the Chicago region are most important?
(1 is Unimportant, 10 is Very Important)**

	1	2	3	4	5	6	7	8	9	10	N/A
Capacity expansion (new lanes and roads)	<input type="radio"/>										
Dedicated freight corridors (such as truck-only lanes)	<input type="radio"/>										
Investment in additional truck parking	<input type="radio"/>										
Better system maintenance	<input type="radio"/>										
Expanded congestion management strategies (such as tolls that vary based on time of day)	<input type="radio"/>										
More centralized traffic information resources	<input type="radio"/>										
Fewer delivery time regulations	<input type="radio"/>										
Better enforcement of truck size, weight, speed, and safety regulations	<input type="radio"/>										
Public-private partnerships for capacity improvements	<input type="radio"/>										
More emphasis on limiting impacts on local communities	<input type="radio"/>										

Please list any other trucking needs.

CMAP Freight Transportation Survey

Does your business rely on railroad/intermodal transportation for goods movement?

Yes

No

CMAP Freight Transportation Survey

Rail/Intermodal Freight Transportation

**Which rail/intermodal factors need improvement in the Chicago region?
(1 is Does Not Need Improvement, 10 is Needs Significant Improvement)**

	1	2	3	4	5	6	7	8	9	10	N/A
Access to Class 1 rail services	<input type="radio"/>										
Access to Short Line rail services	<input type="radio"/>										
Access to intermodal services/facilities	<input type="radio"/>										
Access to shipping containers	<input type="radio"/>										
Rail system condition/maintenance	<input type="radio"/>										
Rail/intermodal system safety	<input type="radio"/>										
Rail system speed (ability to move goods swiftly within/through Chicago region)	<input type="radio"/>										
Rail system reliability (limited chokepoints and delay-causing conflicts)	<input type="radio"/>										
Increased rail routing options (redundancy)	<input type="radio"/>										
Limiting impacts on local communities (noise, delay, pollution)	<input type="radio"/>										
Low cost per trip	<input type="radio"/>										

Are there any other important rail/intermodal factors?

**Which options to improve rail/intermodal transport in the Chicago region are most important?
(1 is Unimportant, 10 is Very Important)**

	1	2	3	4	5	6	7	8	9	10	N/A
Infrastructure investments to mitigate at-grade rail-highway crossing issues	<input type="radio"/>										
Greater intermodal investment (e.g., intermodal yards, roads serving intermodal facilities)	<input type="radio"/>										
More focus on impacts of new intermodal developments	<input type="radio"/>										
More focus on impacts of E1&E rail acquisition	<input type="radio"/>										
More focus on shifts in international freight flows	<input type="radio"/>										
Policies/investments to limit local community impacts	<input type="radio"/>										
Public-private partnerships for rail improvements and related infrastructure projects	<input type="radio"/>										

Please list any other rail/intermodal needs.

CMAP Freight Transportation Survey

Does your business rely on waterborne freight transportation?

Yes

No

CMAP Freight Transportation Survey

Waterborne Freight Transportation

**Which waterborne freight factors need improvement in the Chicago region?
(1 is Does Not Need Improvement, 10 is Needs Significant Improvement)**

	1	2	3	4	5	6	7	8	9	10	N/A
Connectivity between port and rail services	<input type="radio"/>										
Connectivity between ports and highways	<input type="radio"/>										
Improved harbor/channel maintenance	<input type="radio"/>										
Marine system speed (ability to move/transfer goods swiftly)	<input type="radio"/>										
Marine system reliability (limited chokepoints and delays)	<input type="radio"/>										
Low cost per trip	<input type="radio"/>										

Are there any other important waterborne freight factors?

**Which options to improve waterborne freight transport in the Chicago region are most important?
(1 is Unimportant, 10 is Very Important)**

	1	2	3	4	5	6	7	8	9	10	N/A
Improvements to lock system on inland waterways	<input type="radio"/>										
Port facilities expansion	<input type="radio"/>										
Better connections between ports and rail services	<input type="radio"/>										
Better connections between ports and highways	<input type="radio"/>										
Improved maintenance of waterborne freight system	<input type="radio"/>										
Changes to taxation/fee structures	<input type="radio"/>										

Please list any other waterborne freight needs.

CMAP Freight Transportation Survey

Does your business rely on air transportation for goods movement?

Yes

No

CMAP Freight Transportation Survey

Air Freight Transportation

**Which air cargo factors need improvement in the Chicago region?
(1 is Does Not Need Improvement, 10 is Needs Significant Improvement)**

	1	2	3	4	5	6	7	8	9	10	N/A
Access to air cargo services	<input type="radio"/>										
Air freight system condition/maintenance	<input type="radio"/>										
Air freight system speed (ability to move/transfer goods swiftly)	<input type="radio"/>										
Air freight system reliability (limited delays)	<input type="radio"/>										
Air freight system safety	<input type="radio"/>										
Low cost per trip	<input type="radio"/>										

Are there any other important air cargo factors?

**Which options to improve air cargo transport in the Chicago region are most important?
(1 is Unimportant, 10 is Very Important)**

	1	2	3	4	5	6	7	8	9	10	N/A
O'Hare expansion	<input type="radio"/>										
South Suburban Airport development	<input type="radio"/>										
Smaller/regional airport capacity increases	<input type="radio"/>										
Better connections between airports and highways	<input type="radio"/>										
Better connections between airports and rail services	<input type="radio"/>										
Refined system monitoring to reduce delay/improve safety and reliability	<input type="radio"/>										
Refinements to U.S. customs and government inspections	<input type="radio"/>										

Please list any other air cargo needs.

CMAP Freight Transportation Survey

Public Sector Stakeholders: General Questions

Which of the following categories best describes your role?

- Elected or appointed official
- Economic Development staff
- Transportation planner/engineer
- Community planner

Other (please specify)

What best describes the organization you represent?

- Municipality
- Regional agency/organization
- State agency/organization
- National agency/organization

Other (please specify)

How well does the Chicago freight system meet your community's needs?

	1 (Very Poorly)	2	3	4	5	6	7	8	9	10 (Very Well)	N/A
Overall freight system	<input type="radio"/>										
Roadway freight system	<input type="radio"/>										
Railroad/intermodal freight system	<input type="radio"/>										
Waterborne freight system	<input type="radio"/>										
Air freight system	<input type="radio"/>										

What are strengths of the Chicago freight system?

CMAP Freight Transportation Survey

**How significant are the following freight factors to your community?
(1 is Unimportant, 10 is Very Important)**

	1	2	3	4	5	6	7	8	9	10	N/A
Traffic delays at at-grade highway-rail crossings	<input type="radio"/>										
Safety	<input type="radio"/>										
Noise impacts	<input type="radio"/>										
Air quality impacts	<input type="radio"/>										
Conflicts with other land uses	<input type="radio"/>										
Redevelopment of brownfields for freight use	<input type="radio"/>										
Freight as a driver of employment	<input type="radio"/>										
Freight as an economic engine for local businesses	<input type="radio"/>										
Freight volume increases as a result of new business locations	<input type="radio"/>										

Are there any other significant factors?

CMAP Freight Transportation Survey

Public Sector: Roadway Freight Transportation

**Which trucking factors need improvement in the Chicago region?
(1 is Does Not Need Improvement, 10 is Needs Significant Improvement)**

	1	2	3	4	5	6	7	8	9	10	N/A
Highway access (good connections between routes)	<input type="radio"/>										
Available truck parking facilities	<input type="radio"/>										
Infrastructure design to accommodate trucks	<input type="radio"/>										
Highway system condition/maintenance	<input type="radio"/>										
Highway system speed	<input type="radio"/>										
Highway system reliability/congestion	<input type="radio"/>										
Highway system safety	<input type="radio"/>										
Increased routing options (redundancy)	<input type="radio"/>										
Skilled labor force availability	<input type="radio"/>										
Effective government policies and regulations	<input type="radio"/>										
Low cost per trip	<input type="radio"/>										

Are there any other important trucking factors to your community?

CMAP Freight Transportation Survey

**Which options to improve trucking in the Chicago region are most important?
(1 is Unimportant, 10 is Very Important)**

	1	2	3	4	5	6	7	8	9	10	N/A
Capacity expansion (new lanes and roads)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dedicated freight corridors (such as truck-only lanes)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Investment in additional truck parking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Design of infrastructure to accommodate trucks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Better system maintenance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Expanded congestion management strategies (such as tolls that vary based on time of day or level of demand)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More centralized traffic information resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Changes to delivery time regulations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Better enforcement of truck size, weight, speed, and safety regulations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public-private partnerships for capacity improvements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More emphasis on limiting impacts on local communities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Are there other trucking needs?	<input style="width: 95%; height: 25px;" type="text"/>										

CMAP Freight Transportation Survey

Rail/Intermodal Freight Transportation Planning

**Which rail/intermodal factors need improvement in the Chicago region?
(1 is Does Not Need Improvement, 10 is Needs Significant Improvement)**

	1	2	3	4	5	6	7	8	9	10	N/A
Access to Class I rail services	<input type="radio"/>										
Access to Short Line rail services	<input type="radio"/>										
Access to intermodal services/facilities	<input type="radio"/>										
Rail system condition/maintenance	<input type="radio"/>										
Rail system speed (ability to move goods swiftly within/through Chicago)	<input type="radio"/>										
Rail system reliability (limited chokepoints and delay-causing conflicts)	<input type="radio"/>										
Rail system safety	<input type="radio"/>										
Increased routing options (redundancy)	<input type="radio"/>										
Consideration of passenger rail needs	<input type="radio"/>										
Effective government policies and regulations	<input type="radio"/>										
Skilled labor force availability	<input type="radio"/>										
Limiting impacts on local communities (noise, delay, pollution)	<input type="radio"/>										
Low cost per trip	<input type="radio"/>										
Are there any other important rail/intermodal factors to your community?											
<input style="width: 100%; height: 20px;" type="text"/> <input style="float: right; width: 20px; height: 20px; border: 1px solid #ccc;" type="button"/> <input style="float: right; width: 20px; height: 20px; border: 1px solid #ccc;" type="button"/>											

CMAP Freight Transportation Survey

Which options to improve rail/intermodal transport in the Chicago region are most important?
(1 is Unimportant, 10 is Very Important)

	1	2	3	4	5	6	7	8	9	10	N/A
Infrastructure investments to mitigate at-grade rail-highway crossing issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Greater intermodal investment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Changes to address impacts of new intermodal developments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Changes to address impacts of EJ&E rail acquisition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Changes to address shifts in international freight flows	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rail safety improvements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Policies/investments to limit local community impacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public-private partnerships for rail improvements and related infrastructure projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvements to reduce freight/passenger conflict	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Changes to government policies on railroad operations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Are there other rail/intermodal freight needs?	<div style="float: right; text-align: right;"> <input type="button" value="Up"/> <input type="button" value="Down"/> </div>										

CMAP Freight Transportation Survey

Waterborne Freight Transportation Planning

**Which waterborne freight factors need improvement in the Chicago region?
(1 is Does Not Need Improvement, 10 is Needs Significant Improvement)**

	1	2	3	4	5	6	7	8	9	10	N/A
Connectivity between port and rail services	<input type="radio"/>										
Connectivity between ports and highways	<input type="radio"/>										
Marine system condition/maintenance	<input type="radio"/>										
Marine system speed (ability to move/transfer goods swiftly)	<input type="radio"/>										
Marine system reliability (limited chokepoints and delays)	<input type="radio"/>										
Marine system safety	<input type="radio"/>										
Effective government policies and regulations	<input type="radio"/>										
Skilled labor force availability	<input type="radio"/>										
Low cost per trip	<input type="radio"/>										

Are there any other important waterborne freight factors to your community?

**Which options to improve waterborne freight transport in the Chicago region are most important?
(1 is Unimportant, 10 is Very Important)**

	1	2	3	4	5	6	7	8	9	10	N/A
Improvements to lock system on inland waterways	<input type="radio"/>										
Port facilities expansion	<input type="radio"/>										
Better connections between ports and rail services	<input type="radio"/>										
Better connections between ports and highways	<input type="radio"/>										
Improved maintenance of waterborne freight system	<input type="radio"/>										
Changes to taxation/fee structures	<input type="radio"/>										
Regulatory policy changes	<input type="radio"/>										

Are there other waterborne freight needs?

CMAP Freight Transportation Survey

Air Freight Transportation Planning

**Which air cargo factors need improvement in the Chicago region?
(1 is Does Not Need Improvement, 10 is Needs Significant Improvement)**

	1	2	3	4	5	6	7	8	9	10	N/A
Access to air cargo services	<input type="radio"/>										
Air freight system condition/maintenance	<input type="radio"/>										
Air freight system speed (ability to move/transfer goods swiftly)	<input type="radio"/>										
Air freight system reliability (limited chokepoints and delays)	<input type="radio"/>										
Air freight system safety	<input type="radio"/>										
Skilled labor force availability	<input type="radio"/>										
Effective government policies and regulations	<input type="radio"/>										
Low cost per trip	<input type="radio"/>										

Are there any other important air cargo factors to your community?

**Which options to improve air cargo in the Chicago region are most important?
(1 is Unimportant, 10 is Very Important)**

	1	2	3	4	5	6	7	8	9	10	N/A
O'Hare expansion	<input type="radio"/>										
South Suburban Airport development	<input type="radio"/>										
Smaller/regional airport capacity increases	<input type="radio"/>										
Better connections between airports and highways	<input type="radio"/>										
Better connections between airports and rail services	<input type="radio"/>										
Refined system monitoring to reduce delay/improve safety and reliability	<input type="radio"/>										
Changes to air cargo policies	<input type="radio"/>										

Are there other air cargo needs?

CMAP Freight Transportation Survey

Policy and Coordination

Which of the following actions does your community take regarding freight transportation?

	Our community does not do this	Our community intends to do this	Our community does this now
Consider freight in transportation planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consider freight transportation in land use policies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coordinate freight transportation planning with neighboring jurisdictions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coordinate freight transportation planning with local businesses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What existing policies have the most impact on freight movement in your community?

What additional freight transportation policies would you like to see explored?

CMAP Freight Transportation Survey

Funding

**To what extent do you support the following options for funding highway system improvements?
(1 is Not Supportive, 10 is Very Supportive)**

	1	2	3	4	5	6	7	8	9	10	N/A
Property taxes	<input type="radio"/>										
Fuel taxes	<input type="radio"/>										
Tax on vehicle miles traveled (all vehicles)	<input type="radio"/>										
Tolls for passenger vehicles	<input type="radio"/>										
Tolls - congestion pricing (higher toll rates during periods of higher demand)	<input type="radio"/>										
Tolls - cordon pricing (flat daily rate to enter Chicago Loop)	<input type="radio"/>										
Vehicle registration revenue	<input type="radio"/>										
Impact fees	<input type="radio"/>										

Do you have any other highway funding suggestions?

**To what extent do you support the following options for funding freight system improvements?
(1 is Not Supportive, 10 is Very Supportive)**

	1	2	3	4	5	6	7	8	9	10	N/A
Fuel taxes	<input type="radio"/>										
Tax on vehicle miles traveled (all vehicles)	<input type="radio"/>										
Tolls on dedicated truck lanes	<input type="radio"/>										
Operating taxes such as container or lift fees	<input type="radio"/>										
Truck registration revenue	<input type="radio"/>										
Municipal contributions to pooled funds for regional freight projects	<input type="radio"/>										
Innovative public-private partnerships in financing	<input type="radio"/>										

Do you have any other freight funding suggestions?

CMAP Freight Transportation Survey

Thank You

Thank you for participating in the development of CMAP's GO TO 2040 long-range regional transportation plan. Your survey is now complete! Please take the time to answer the following optional questions before you leave. You may contact Audrey Wennink at awennink@camsys.com or Tom Murtha at tmurtha@cmap.illinois.gov with any additional comments or inquiries.

Who else should we speak with as part of this outreach effort?

Do you have any additional comments?

Additional Survey Responses (Not Included in Tech Memo)

Answers to individual questions are not included in this section if:

- They have already been covered in the Technical Memorandum, via graph or incorporated into the text;
- Their purpose is for navigation through the survey; and/or
- They were utilized for outreach interpretation but reporting them would potentially violate survey participants' privacy.

Private Sector: General Questions

Which of the following categories best describes your private sector affiliation?		
Answer Options	Response Percent	Response Count
Shipper	10.0%	1
Manufacturer	10.0%	1
Carrier	40.0%	4
Freight handler (3 PL)	30.0%	3
Trade association	0.0%	0
Engineering consultant	10.0%	1
Other (please specify)		2
<i>answered question</i>		10

Where is your headquarters located?		
Answer Options	Response Percent	Response Count
7-county Chicago region	41.7%	5
Midwest (IA, IL (not Chicago region), IN, MI, MN, MO, OH, WI)	8.3%	1
Elsewhere in the United States	41.7%	5
Canada or Mexico	0.0%	0
Outside North America	8.3%	1
<i>answered question</i>		12

What is the annual revenue of your business?		
Answer Options	Response Percent	Response Count
< \$5 million	8.3%	1
\$5-\$20 million	16.7%	2
\$21-\$100 million	16.7%	2
\$101-\$500 million	0.0%	0
> \$500 million	58.3%	7
<i>answered question</i>		12

How many people does your business employ?		
Answer Options	Response Percent	Response Count
Fewer than 10 employees	8.3%	1
10-49 employees	8.3%	1
50-249 employees	0.0%	0
250-999 employees	25.0%	3
More than 999 employees	58.3%	7
<i>answered question</i>		12

In the next five years, how do you anticipate your business changing in the Chicago region?		
Answer Options	Response Percent	Response Count
Expansion	75.0%	9
Contraction	0.0%	0
Relocation within region	8.3%	1
Relocation to another region	8.3%	1
None of the above	8.3%	1
What is the reason for this change?		8
<i>answered question</i>		12

Public Sector: General Questions

Which of the following categories best describes your role?		
Answer Options	Response Percent	Response Count
Elected or appointed official	16.0%	4
Economic Development staff	12.0%	3
Transportation planner/engineer	48.0%	12
Community planner	24.0%	6
Other (please specify)		7
<i>answered question</i>		25

What best describes the organization you represent?		
Answer Options	Response Percent	Response Count
Municipality	36.0%	9
Regional agency/organization	24.0%	6
State agency/organization	16.0%	4
National agency/organization	24.0%	6
Other (please specify)		7
<i>answered question</i>		25

D. Sketch-Planning Tool

Description

D.1 DEVELOPMENT OF THE FUTURE TRUCK FLOWS ANALYSIS TOOL

Description of the Tool

The sketch planning analysis tool is designed to provide a general view of future truck flows on the CMAP regional highway system. The tool is best described as a sketch planning tool that assigns TRANSEARCH truck trips to the CMAP regional highway network. Travel demand modeling software is used as a framework for the analysis tool. While the selected software package contains all of the functionalities that are required in four-step travel demand modeling, its basic functionalities are also compatible with sketch-level planning analysis. For the future truck flows analysis, the software framework was used to convert truck trips into highway volumes, which are then analyzed quantitatively.

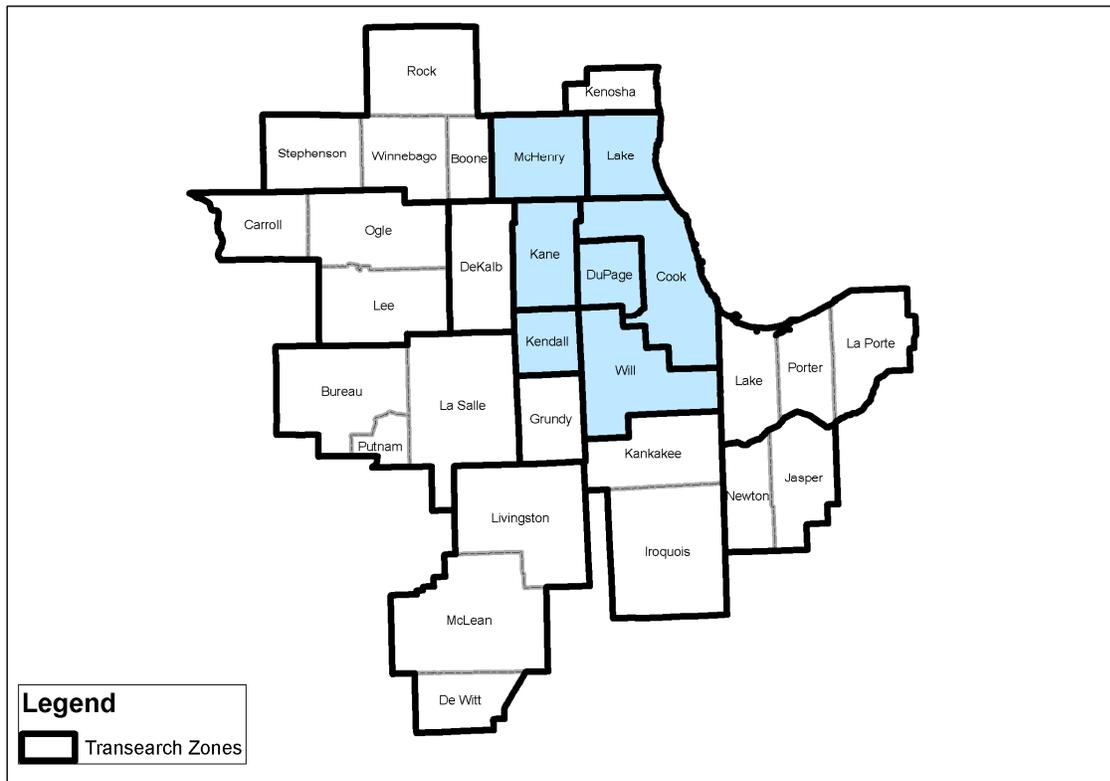
The analysis tool was developed by creating a truck trip table, a highway network, and an assignment procedure for assigning the truck trips. The tool generates an estimate of truck volumes on roadways throughout the highway network for years 2007 and 2040 as well as the growth in volume between the two years. Ultimately, the percentage growth will be used in conjunction with the base-year multi-unit (MU) truck count to derive a forecast volume for infrastructure project locations.

TRANSEARCH Truck Trips

TRANSEARCH truck trip tables were obtained by CMAP from Global Insight. The finest level of detail available from Global Insight in this dataset is the county, and the broadest is the Bureau of Economic Analysis (BEA) region. The CMAP dataset is based on truck trips that travel through the 1995 Chicago BEA region, or that begin and/or end in the region. The Chicago BEA region contains a total of 30 counties.

Trip data for the seven-county CMAP region were provided to CMAP at the county level. For the outer counties of the BEA area, trip data were either provided for individual counties or for groups of counties. For example, data for Grundy, DeKalb, and Kenosha Counties were provided for each of these counties individually. The remaining outer counties were grouped together into seven additional areas, or zones. As a result, for the Chicago BEA region, truck trip origins and destinations are represented by a total of 17 "TRANSEARCH Zones" (Figure E.1).

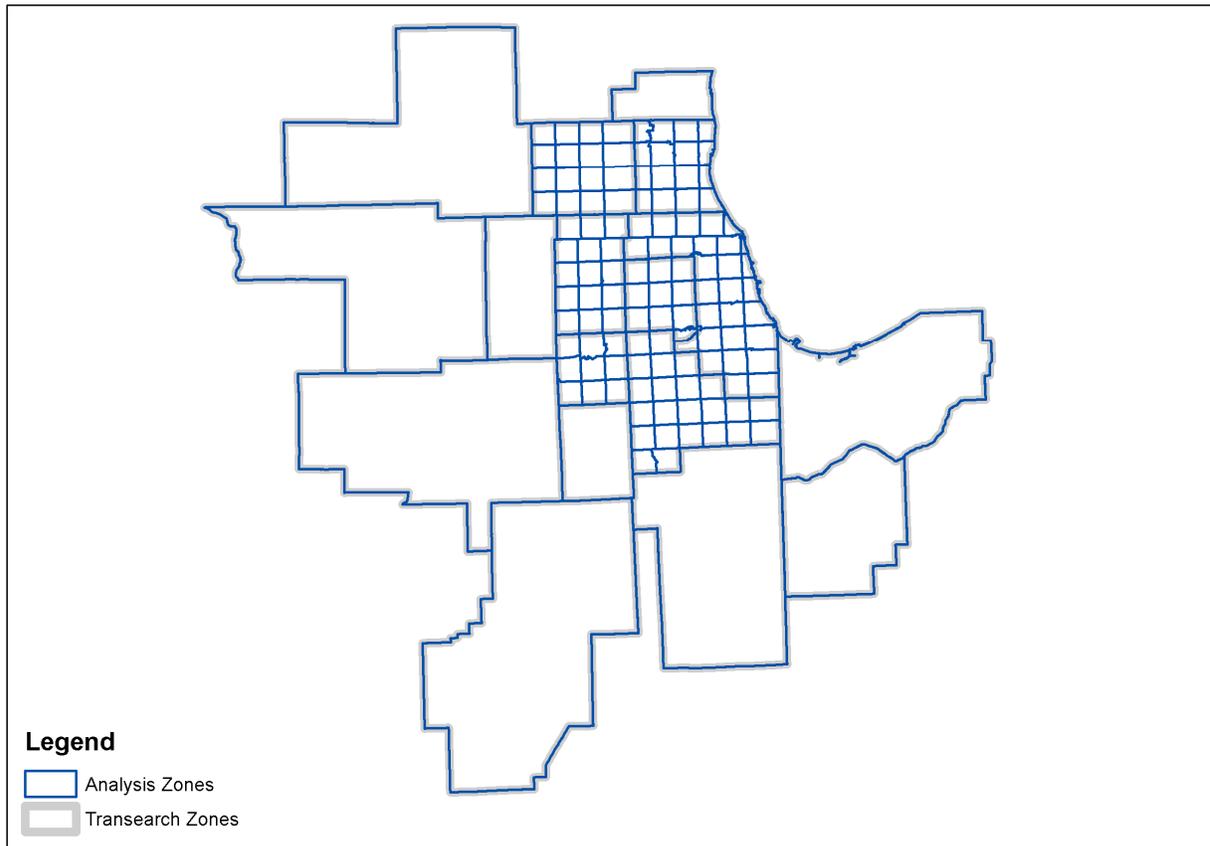
Figure D.1. The 30-County Chicago BEA (1995) Represented by 17 “TRANSEARCH Zones”



Preparation of the Truck Trip Table

Zone system development

For the seven-county CMAP region, a greater level of detail than the county was desired for analysis purposes. A finer zone system consisting of about 200 zones for the seven-county CMAP area (Figure E.2) was developed for the analysis tool. These zones correspond roughly to townships in the region, which are typically 36 sq. mi., or 6 miles by 6 miles square. These zones are larger than CMAP traffic analysis zones (TAZs) but are much smaller than a county. Using a zone system of this size allows the tool to generate truck volumes on important arterial roadways such as Cicero Avenue. Outside of the seven-county area, the boundaries of the “TRANSEARCH Zones” that were provided by Global Insight were maintained for the analysis, as this area is outside the focus of the study.

Figure D.2. Zone System Used in the Future Truck Flows Analysis

Truck trip disaggregation

Truck trips that begin or end in the seven-county area were disaggregated from the county to the analysis zone level shown in Figure E.2. The trips were apportioned to each zone based on socio-economic data.

A linear regression analysis was conducted in order to decide which socio-economic factors would be used to apportion the trips among the zones. The raw truck production and attraction data for the seven counties in the CMAP area were regressed against socio-economic totals¹ at the county level. A number of socio-economic factors were considered: households, jobs, manufacturing employment, TCUW (transportation, communications, utilities, and warehousing) employment, sales volume reported by freight-related businesses, and number of employees in freight-related businesses.

¹ All socio-economic data were provided by CMAP.

The linear regression results showed that at the production end², manufacturing employment is a strong explanatory variable in determining the number of truck trips that are produced. Additional regressions that used other employment categories and freight sales volume were conducted, but the results from these regressions did not provide a better set of explanatory variables. As a result, truck trip productions were disaggregated based on the proportion of manufacturing employment in each zone compared to total manufacturing employment in the county for year 2007.

The linear regression results demonstrated that at the attraction or consumption end³, the number of households is a strong explanatory variable in determining the number of truck trips that are attracted to a county. Ideally, an employment variable would be included in the regression as well; however, at the county level, households and employment are heavily correlated, which led to a negative coefficient for the employment variable. Therefore, the number of households alone is used to disaggregate truck trip attractions from the county level to each zone in the county.

Converting annual to daily trucks

A factor of 304 was used to convert annual truck trips to daily truck trips. This factor is based on the assumption that commodity-carrying trucks are in operation primarily on weekdays plus one weekend day (52 weeks/year x 6 working days/week) and that they do not operate for any of the eight major holidays per year.

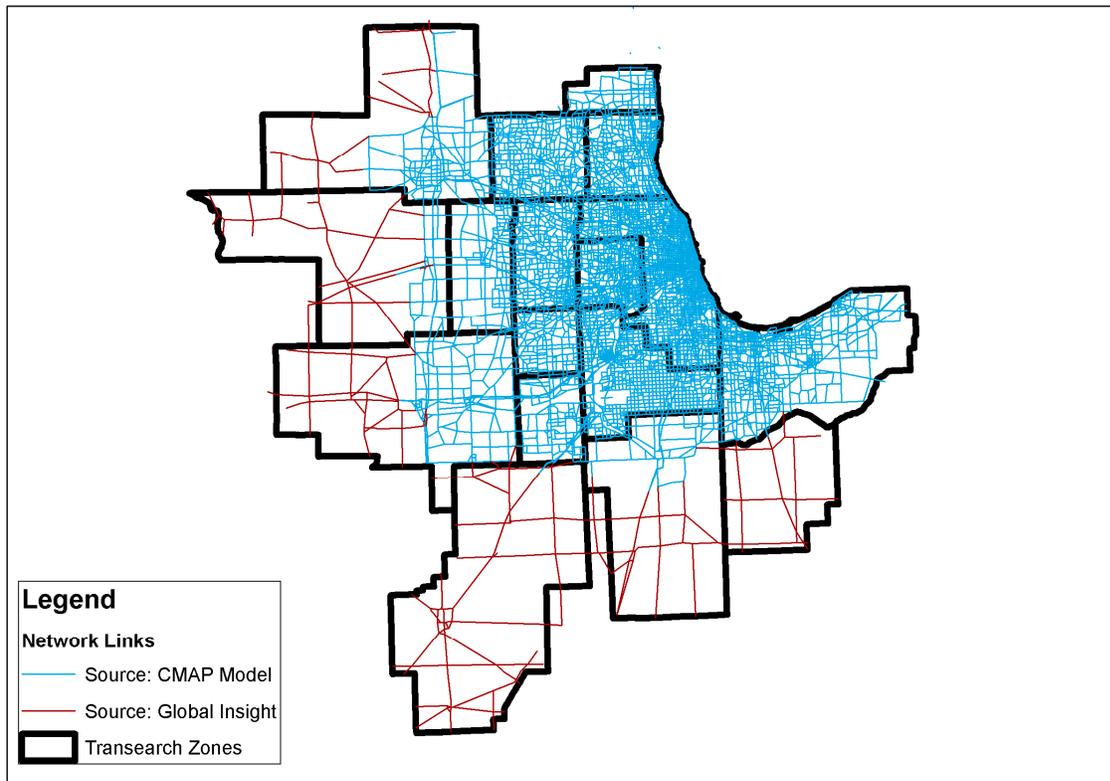
Network Development

The network development combined data from the CMAP model network and the Global Insight routing network. Figure E.3 shows the network that was developed for the sketch planning tool assignment. The CMAP model network was used for the seven-county CMAP area. The highway network that was provided by IHS-Global Insight was used for the outer area.

² This is considered the origin end in the TRANSEARCH database.

³ This is considered the destination end in the TRANSEARCH database.

Figure D.3. Analysis Network



Some basic adjustments were required to make the IHS-Global Insight network compatible with the CMAP network. For example, capacity and volume-delay functions were added or modified. Additionally, free-flow speeds from the CMAP and IHS-Global Insight networks were used to compute free-flow travel time for the assignment.

Additional adjustments were performed to equip the network with the information that is necessary for input into a daily truck trip assignment procedure. These adjustments include introduction of truck tolls and calculation of daily truck capacity.

Truck Tolls

Truck tolls were calculated by applying factors to the passenger vehicle tolls that are already coded in the existing CMAP network. Ideally, the truck toll that is coded represents the average daily toll that is actually paid by commodity-carrying trucks that pass through the toll plaza.

However, the exact percentage of commodity-carrying trucks by axle class at each toll location is unknown. Therefore, commodity-carrying trucks that utilize the toll roads are assumed to have five or more axles. This assumption is based on the TRANSEARCH dataset, which indicates that about 97 percent of commodity-carrying trucks have five or more axles (Table E.1).

Table D.1. Annual Tonnage and Corresponding Truck Loads by Vehicle Configuration

Config-uration	Description	Trailer Type	Axles	Truck Tons	% Truck Tons	Truck Loads	% Truck Loads
CS4	Combination	Semi-Trailer	4	27,275,767	3.7%	2,016,247	3.3%
CS5	Combination	Semi-Trailer	5	628,629,053	84.2%	51,541,147	84.9%
CS6	Combination	Semi-Trailer	6	58,207,751	7.8%	4,956,162	8.2%
CS7	Combination	Semi-Trailer	7	1,538,228	0.2%	79,549	0.1%
DS5	Double	Semi-Trailer	5	5,578,667	0.7%	334,426	0.6%
DS6	Double	Semi-Trailer	6	11,615,861	1.6%	1,010,731	1.7%
DS7	Double	Semi-Trailer	7	3,186,746	0.4%	187,924	0.3%
DS8	Double	Semi-Trailer	8	1,954,614	0.3%	105,316	0.2%
DS9+	Double	Semi-Trailer	9	5,246,558	0.7%	260,319	0.4%
TS7+	Triple	Semi-Trailer	7	2,964,546	0.4%	228,217	0.4%
All Trucks				746,197,790	100.0%	60,720,037	100.0%

Source: IHS-Global Insight and Cambridge Systematics

Additionally, the proportion of trucks by time-of-day is not available. This required some assumptions to be made about the average toll that is paid by truck drivers throughout the day. Toll data for year 2009 were obtained from the websites of each of the toll operators (Table E.2). Since most commodity-carrying trucks have five axles, the tolls shown in Table E.2 are used to determine the factors to apply to the existing passenger vehicle tolls to calculate the truck tolls. Factors that range from approximately 4 to 10 times passenger car tolls were estimated. The resulting truck toll values at mainline toll plazas range from about \$4 on ISTHA and Indiana Toll Road facilities to up to \$10 on the Chicago Skyway.

Table D.2. Passenger Car and Heavy Commercial Vehicle Tolls⁴ Comparison

Vehicle Characteristics				
Vehicle Type:	Passenger Car		Heavy Commercial Vehicle	
Axles:	2	5	6	7+
Toll Facility	Mainline Tolls (2009)			
Skyway	\$3.00	\$9.00-\$12.60	\$10.80-\$15.20	\$12.60-\$17.70
IN Toll Road (entire 157 miles)	\$4.65	\$32.00	\$37.50	\$69.75
ISTHA (per plaza)	About \$0.40- \$0.50	About \$2.00-\$5.00		
Tolls coded in 2007 CMAP model (for autos at mainline plazas):				
Skyway	\$2			
IN Toll Road	About \$0.50 per mainline plaza			
ISTHA	About \$0.50 per mainline plaza			

Sources: Websites for Chicago Skyway, Indiana Toll Road, and ISTHA (Accessed November, 2009) and the CMAP 2007 Model

Available Truck Capacity

The amount of roadway capacity that is available to truck vehicles was derived. Capacity is an important input for the assignment procedure because it is used in determining how fast vehicles can travel in high volume conditions. For this analysis, hourly capacity was multiplied by 14 to derive daily total capacity. Next, auto and light truck volumes (which include B-plate trucks and light trucks) from the CMAP model were effectively subtracted from the total capacity to derive the amount of remaining capacity that is available to truck traffic.

The available truck capacity was further refined in two ways. First, for most roads, it was assumed that at least 10 percent of the daily computed capacity of each roadway is available for trucks. If the remaining capacity was less than 10 percent of the original capacity, the capacity was set to 10 percent. Second, for severely congested freeways or tollways, daily truck capacity was reduced to better represent the extreme congestion found on these roads. Available truck capacity was calculated as five percent of total capacity in cases where the CMAP model volume-to-capacity (v/c) ratio was between 1.1 and 1.2, and as one percent of total capacity where the CMAP model v/c ratio was greater than 1.2.

⁴ For facilities with toll variations by time-of-day, Table E.2 displays the minimum and maximum values.

Truck Trip Assignment

The truck trip table and network were then used as inputs into the sketch planning tool. A daily assignment procedure was used to assign truck trips to the network. The assignment used the following parameters:

Standard BPR functions with $\alpha = 0.15$ and $\beta = 4$ were used;

Additional generalized cost was added to paths that use toll roads by converting each toll value to a generalized cost (in minutes) based on a value-of-time of \$90/hour; and

Between 15 and 30 seconds of red light delay per mile was introduced to arterials and expressways. These delays were introduced in order to generate more realistic travel patterns for the relatively long-distance truck trips in the TRANSEARCH dataset. Without this delay component, the tool generated a handful of unrealistic paths that spurred the abandonment of freeways for less congested arterials⁵. The delay component was introduced as a generalized cost that is equal to 0.5 times the link length (for arterials) or 0.25 times the link length (for expressways). These formulas generate 30 seconds of additional travel time for every mile of arterial street that is traversed on a given path and 15 seconds for every mile of expressway. This component of the tool had the desired effect of generating more realistic travel paths.

Quality Control Checks

After running the application, the resulting truck volume assignments were examined for reasonableness. The truck flows analysis tool is a high-level, sketch planning tool. As such, it is not subject to the same validation procedures and targets that are used in traditional four-step model development. Nevertheless, some of the tools that are used in traditional model validation are useful to perform basic quality control checks to ensure that the tool is behaving reasonably well. These tools include:

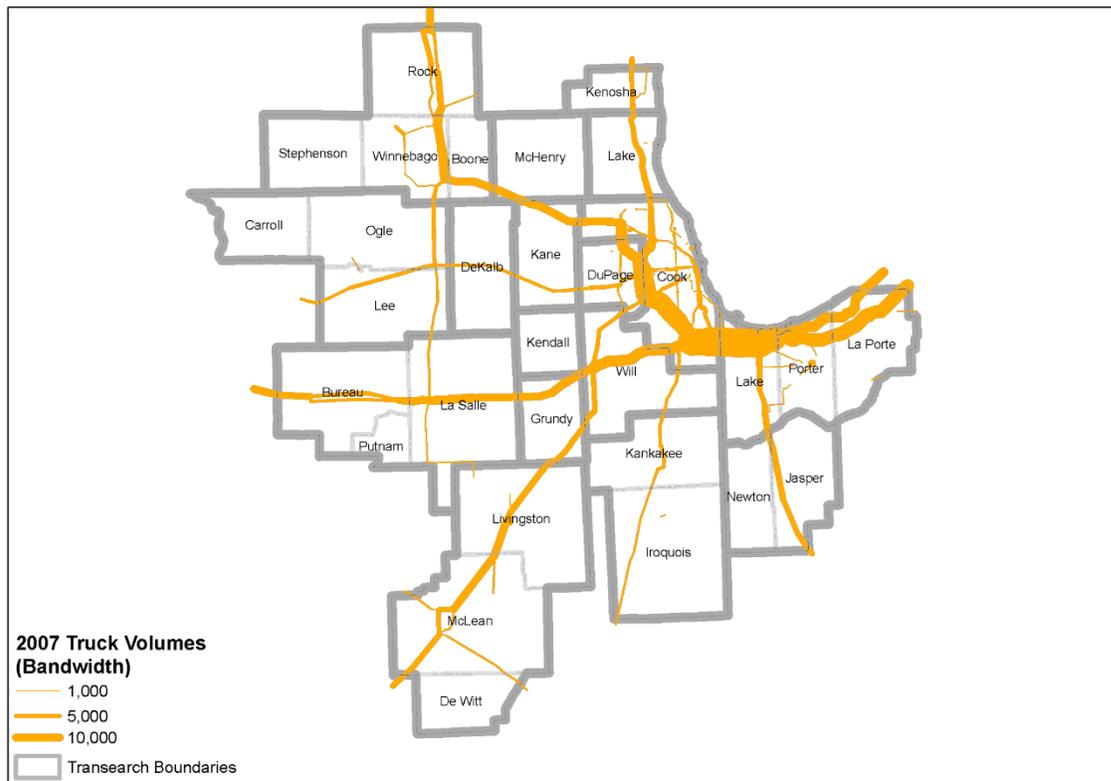
- A high-level examination of regional commodity-carrying truck volume trends;
- A more detailed review of modeled truck volumes on interstate facilities;
- A high-level review of the volumes that are generated on local roadways by the tool; and
- Examining the future-year forecast volume to ensure that growth patterns are reasonable.

⁵ This type of path deviation occurred fairly readily with automobile trips, but much less so with commodity-carrying truck trips.

Regional Trends

Commodity-carrying trucks in the Chicago region are predicted to travel mostly on interstate highways and to a lesser degree on principal arterials. Indeed, this is reflected in the assignment results shown in Figure 4, which shows the relative magnitude of assigned truck volumes throughout roadways in the region. As this graphic illustrates, the interstate system carries significant volumes of commodity trucks. Roadways with less than 1,000 assigned daily trucks are not shown.

Figure D.4. Bandwidth Plot of 2007 Modeled Truck Volumes



Note: Volumes < 1,000 daily trucks are not pictured

Source: Sketch Planning Tool by Cambridge Systematics

The pattern of commodity-carrying trucks in the region is expected to exhibit higher volumes in the east-west direction. One reason for this pattern is that the Chicago region is a logical gateway for pass-through trips that are traveling between the Northwest/Upper Midwest and Northeast U.S. In addition, the Chicago region also serves as an origin or destination of goods that travel to or from these two areas. As a result, these pass-through trips generate a level of truck traffic in the east-west direction that is greater than the truck volumes that are generated by trip exchanges between the Chicago region and the Southeast, Central Midwest, and Southwest U.S.

The analysis tool results show substantial numbers of trucks in the east-west I-80/94 connection and the east-northwest connection from I-80/94 to I-90/94, which serve as gateways between the Northwest/Upper Midwest and the Northeast regions.

Freeway and Tollway Review

For the year 2007 assignment (Figure 4), the modeled truck volume was compared to the Multi-Unit⁶ (MU) truck volume at various locations around the region. The source of the observed MU volumes is count data from the Illinois Department of Transportation. This basic, high-level quality control check illustrated that the tool is producing truck volumes that reaffirm the trends that are observed on the roadways.

For example, two checks of interstate travel are:

- According to the sketch planning tool, I-80/94 has a substantial number of commodity-carrying trucks (Figure E.4). This highway, which carries very high MU volumes, services through trips as well as trips that are produced in or attracted to the northeastern U.S. Therefore, the analysis tool is generating very reasonable results at this location.
- In contrast to I-80/94, the analysis tool estimates that I-290 near downtown Chicago carries relatively few commodity-carrying trucks. In reality, this facility is heavily congested, but passenger cars comprise most of the traffic on this road. The analysis tool estimates along I-290 are reasonable because I-290 at this location is not a logical route for the relatively long-distance truck trips that comprise most of the Transearch dataset, such as through trips⁷, which can utilize less congested interstates such as I-294.
- Other locations, such as I-39, I-88, and I-355 were evaluated in a similar fashion and were found to be reasonable.

Trends on Non-Interstate Facilities

In addition to checking the overall trends and interstate volumes, the estimated truck flows on the local network were examined. It was confirmed that the analysis tool is

⁶ Most commodity-carrying trucks in the IHS-Global Insight dataset have at least five axles, which typically means that they are multi-unit trucks.

⁷ Although the commodity-carrying trucks that feature heavily in the IHS-Global Insight dataset are not as likely to use I-290 as other interstates, the I-290 corridor is in close proximity to several intermodal facilities and other major truck generators. This makes this corridor strategically important from an accessibility standpoint.

generating reasonable results on local streets. For example, the modeled commodity-carrying trucks are more prevalent on principal arterials such as Western Avenue and Cicero Avenue than on local neighborhood streets.

Future-Year Forecast

After evaluating the year 2007 truck trip patterns, the analysis tool was used to evaluate the forecast 2040 truck trips. The 2040 application was identical to the 2007 year except for the trip tables that were used. The same network⁸, tolls, and assignment procedure were used for each year.

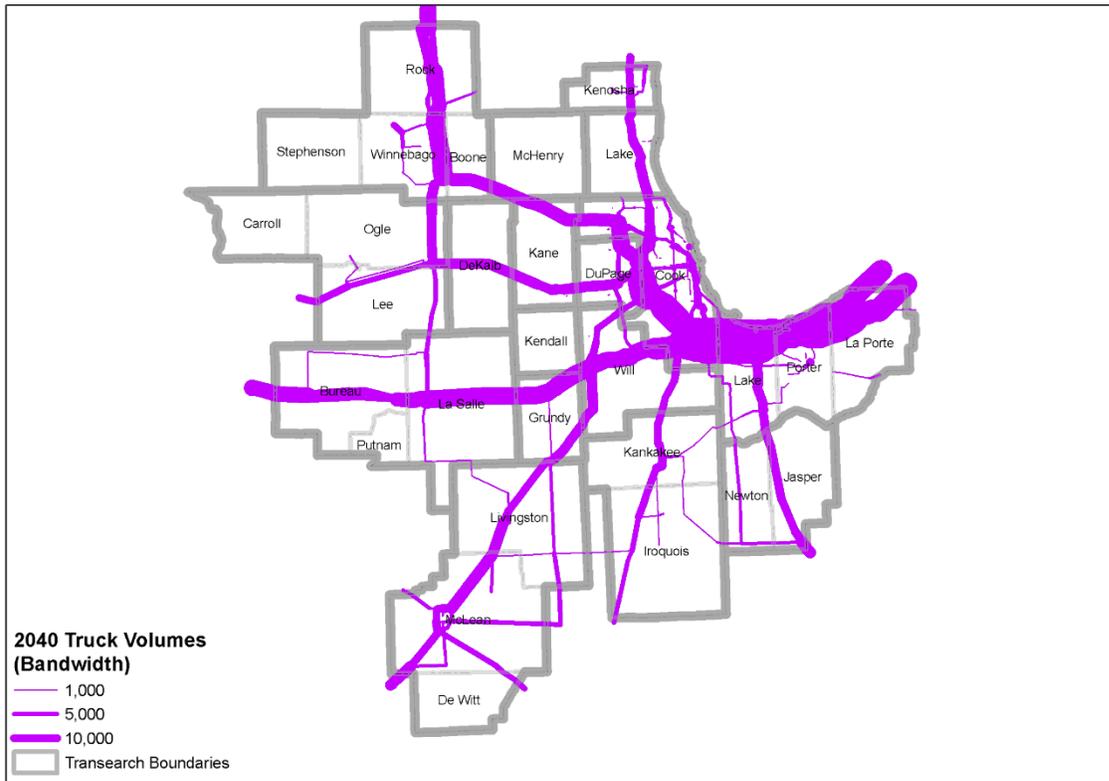
The results were checked for reasonableness by examining the 2040 volume patterns and comparing them to the year 2007. The patterns were similar to the patterns exhibited by the 2007 results. Growth between the two analysis years was also reviewed to ensure that it too was reasonable. Both the future trip patterns and the growth rates were concluded to be reasonable.

Summary

The quality control checks demonstrated that the sketch planning tool generates reasonable estimates of heavy truck traffic. Therefore, the heavy truck traffic flows that are generated by the sketch planning tool will be used to evaluate whether the Transearch data are supportive of the highway infrastructure recommendations. The following sections describe the application of the sketch planning tool for the analysis.

⁸ The future year network was under development at the time of this study.

Figure D.5. Bandwidth Plot of 2040 Modeled Truck Volumes



Note: Volumes < 1,000 daily trucks are not pictured
Source: Sketch Planning Tool by Cambridge Systematics