

Wisconsin Freight Advisory Committee Intermodal Subcommittee

Meeting Notes

March 6, 2018

9:00 AM - 12:00 PM

Host: Wisconsin Department of Agriculture, Trade and Consumer Protection

Subcommittee Members Attending In-Person:

- Dave Simon, Wisconsin Department of Transportation (WisDOT) (co-chair)
- Cory Fish, Wisconsin Manufacturers and Commerce (WMC) (co-chair)
- Tom Bressner, Wisconsin Agri-Business Association
- Brian Buchanan, Canadian National Railway Company (CN)¹
- Jerry Deschane, League of Wisconsin Municipalities
- Kathy Heady, Wisconsin Economic Development Corporation (WEDC)
- Jack Heinemann, Department of Agriculture, Trade and Consumer Protection (DATCP)
- Peter Hirthe, Port of Milwaukee
- Larry Krueger, Lake States Lumber Association/Krueger Lumber
- Brad Peot, Watco/Wisconsin & Southern Railroad (WSOR; attending for Ken Lucht)

Subcommittee Members Attending by Phone:

- Dr. Ernie Perry, UW-Madison
- Dr. Richard Stewart, UW-Superior

Other Attendees:

- Secretary Sheila Harsdorf, DATCP
- Assistant Deputy Secretary Jen Esser, WisDOT
- Dean Prestegaard, WisDOT
- Matt Umhoefer, WisDOT
- Rich Kedzior, WisDOT
- Dave Leucinger, WisDOT

The first meeting of Wisconsin's Freight Advisory Committee's Intermodal Subcommittee was held in Madison on March 6, 2018 at the DATCP headquarters building. Secretary Harsdorf welcomed the attendees and positively reflected on the goals of the subcommittee. She expressed hope that key external voices, combined with cross-agency collaboration, would lead to a positive outcome for all. Assistant Deputy Secretary Esser discussed how the subcommittee was a continuation of Governor Walker's freight-friendly efforts, going back to the first Governor's Freight Industry Summit, through Freight Advisory Committee meetings, and most recently the development of the State Freight Plan.

¹ Canadian National Railway Company (CN) operates in Wisconsin as Wisconsin Central Ltd. (WCL), a wholly owned subsidiary operating company. CN is the ultimate parent company. The U.S. subsidiaries of CN such as WCL operate collectively under the CN brand name.

Dave Simon put forth the WisDOT strategy statement for the subcommittee:

[To] identify current and future opportunities and challenges to connect Wisconsin industries to world markets through the increased efficiency of containerized shipping.

He said the subcommittee will help build a report that will make a compelling case for intermodal options in Wisconsin through stakeholder-generated participation which may generate strategies and policies. He stated there is funding available from sources such as TIGER, the federal infrastructure plan, and public-private partnerships. He is looking for members to contribute ideas, brainstorming, and data throughout the process.

Member Introductions and Background

Members then briefly introduced themselves. Co-chair Cory Fish of WMC said his organization supports smoothing transportation for businesses as much as possible. He offered his organization's ability to bring resources to bear, including data gathering and outreach to members and other entities for additional information. In 2017, WMC assisted the Port of Milwaukee and the Metropolitan Milwaukee Association of Commerce in a brief survey of current and potential intermodal container users based in southeastern Wisconsin. That survey showed volumes for both import/export and domestic/North American containerized shipping substantially above the volumes of containers that were present at the port's facility prior to its closing in 2012. Jack Heinemann also noted the survey showed potential for increasing international trade.

Several of the other members offered brief perspectives from their companies or organizations. Kathy Heady from the Wisconsin Economic Development Corporation mentioned their efforts are built around sector strategies. Brad Peot, who comes from the commercial side of WSOR, works with customers to address their needs. Tom Bressner said that members of the Wisconsin Agri-Business Association did very little importing; most activity was exporting of soybeans (especially non-Genetically Modified Organisms [GMOs]) and particularly dried distillers grains (DDGs), a remnant of the ethanol production process suitable for animal feed. The DDGs are the primary backhaul for containers shipped from Wisconsin destined for Asia. Secretary Harsdorf added that she was excited to see how transportation can help farmers find additional markets for Wisconsin products. Peter Hirthe noted the Port of Milwaukee had a small but profitable intermodal operation through 2012. Jerry Deschane of the League of Wisconsin Municipalities observed that cities exist because of commercial activity. Larry Krueger from Krueger Lumber and the Great Lakes Lumber Association stated that half of the hardwood harvested in the US is exported, with China a primary customer, especially for open grains such as oak and ash.

Brian Buchanan noted his company, CN, had the largest number of track miles in the state, and served both of the state's current intermodal terminals (Arcadia and Chippewa Falls). He said he was happy that the intermodal policy was not being developed in a vacuum, as the landscape is littered with failed intermodal yards. For intermodal to be successful, it needs to make railroad business sense. Dr. Richard Stewart noted his 40 years of experience in the transportation sector. Dr. Perry noted his intermodal work as part of the 10-state Mid-America Freight Coalition.

Dave Simon discussed the upcoming schedule options for the next few meetings. Larry Krueger said that he would be on a trade mission to China until April 4. Brian Buchanan favored Option "B;" Dr. Stewart noted his Tuesday and Thursday classes; Tom Bressner noted the TDA fly-in to DC will be May 22-24.

Intermodal 101 Presentation

Dave Simon then led a PowerPoint presentation of intermodal basics, including definitions and other considerations. [Note: this presentation will be made available to members of the subcommittee.]

Among the key points of the presentation:

- Intermodal's share of rail traffic tripled between 1981 and 2012 (although the 48 percent share cited in the presentation seemed high to the rail professionals on the subcommittee; they thought somewhere in the mid-20s to low-30s was more accurate).
- There are different height configurations for the "standard" 40' intermodal container. The standard height is 8'6"; the high-cube is 9'6". When containers are stacked, three different configurations can be created (referred to by rail representatives as low-low, low-high, and high-high). The higher containers are an important consideration for overhead bridge clearances, especially when two high containers (high-high) are stacked together.
- Containers are designed to be double-stacked for rail transport; the container steel structural elements that permit overhead lifts and provide interlocking through retaining pins are spaced 40' from each other, even for longer (45', 48', and 53') containers.
- There is still use of trailer-on-flat-car (TOFC), historically referred to as piggyback cars.

Simon then went through seven "considerations" for intermodal freight transportation, i.e. major elements that would be significant in the development of the report and any related policy. These are:

- *Railroads are the experts.* They will be able to determine where a terminal should be built, when or if a terminal should be built, and if there's enough density (business/balance) to ensure it remains in operation.
- *Efforts to support intermodal transportation are already underway in southeastern Wisconsin.* A task force comprised of WMC, the Metropolitan Milwaukee Association of Commerce, and the Port of Milwaukee undertook a survey in 2017 to assess the potential container volumes, should a terminal re-open in southeastern Wisconsin. Peter Hirthe noted the former intermodal operation at the port, closed in 2012 by Canadian Pacific (CP) after a management change, was a niche business. He feels it would have benefitted from better marketing. The port owns 14 miles of track; both Union Pacific (UP) and CP serve it by rail for carload/bulk operations. Both railroads were not interested in discussing intermodal until recent management changes at both companies; both are more receptive now. The 'buzz word' they use is "density." Brian Buchanan said CN's comparable 'buzz word' is "balance."

Hirthe added that the port has asked both CP and UP to do a deep dive in their customer base, looking for a partnership to get demand measured. The 2017 survey (which also had support from the Milwaukee Logistics Council and the Gateway to Milwaukee [a transportation/trade initiative based near General Mitchell Airport]) showed significantly larger numbers than what had been there when the facility was operating. He said that the tolls trucks pay to get to and from Chicago have raised costs even more than regular drayage, and that the Foxconn project was announced after the survey results were collected. So, what does this mean to the demand curve? The port is working to answer that, engaging with potential customers. The effort has always been about getting intermodal back somewhere in southeastern Wisconsin. It's not about the port. There are many pieces of the pie; everyone is making their own calculation.

For the statewide survey, Hirthe noted the subcommittee could use the same approach that WMC and the other partners did for the southeastern area survey, and in turn get an updated

picture on southeastern Wisconsin, too. The subcommittee could probably get more than 100 responses just from the smaller survey area.

- *Intermodal facilities come in a wide range of scales and costs.* Facilities can be opened and operating with as little as \$500,000 invested, or upwards of \$100 million. Illinois has the most intermodal facilities in operation; Ohio is second. The Ohio DOT has dedicated \$10 million towards intermodal facilities. WisDOT's programs and budget cannot fund intermodal facilities, however with the availability of federal dollars, WisDOT could sponsor an application for funding assistance for an intermodal facility if there's a business case to be made. Duluth's facility is an example of the small end- it's a 'satellite' or 'boutique' terminal that is starting small, but has the opportunity to grow. The factors for putting a site together include a railroad, trucking service, an area to store containers and chassis, a lifter/picker/crane to transfer containers on and off of rail cars and truck trailers, and a market for the goods brought into the facility. Secretary Harsdorf asked if having access to water enhanced opportunities for intermodal operations. Hirthe replied that it could, but that the Great Lakes can't handle the large 18,000+ TEU vessels now in operation. The size of the St. Lawrence Seaway locks would only allow a vessel of 2,000 TEUs to move through them; at that scale, it's most cost-effective to move by rail. The water option is also not year-round. Secretary Harsdorf asked about the Mississippi River. Hirthe replied there are pilot programs to move barge-on-container and short sea (including containers or trailers across Lake Michigan, designated by U.S. DOT's Maritime Administration as M90 between Milwaukee and Muskegon). These operations could help with regional moves, especially if trucking costs go up. Milwaukee could be a feeder to other yards in Wisconsin. But generally, containers need to go by rail to Montreal where they can get loaded into larger ocean-going container vessels. The Panama Canal expansion is also shifting economies for the east coast ports; during the winter when lake shipping stops, Milwaukee partners with Baltimore and Camden, New Jersey for maritime movement.
- *Lane balance (Matchback) is needed for intermodal operations.* Companies want business moving in both directions. A chart of intermodal volumes of the CN terminals at Arcadia and Chippewa Falls shows that for the past several years, there has been a matchback load for every inbound container. For Chippewa Falls, in the past two years exports – mostly grain products – have outnumbered imports. Thus, the limit for exports is based on the volume of imports and available containers; there is no shortage of Wisconsin products to export.
- *Intermodal terminals require terminal operators.* In most cases, yard operations are handled by a company other than the railroad; many railroads don't staff intermodal facilities. Sometimes, the operators are short-line railroad companies. Sometimes, they are the customers, as with Ashley Furniture in Arcadia, Wisconsin or Archer Daniels Midland (ADM) in Decatur, Illinois.
- *Existing access to intermodal terminals is a key consideration.* This is an issue most important to the shippers in eastern Wisconsin. Truck drayage to Chicago involves high costs, including tolls, surcharges, and potential terminal delays. The ELD mandate has affected the ability of drayage companies to make one-day round trips to the Chicago terminals. Work-arounds such as the use of shuttle drivers have led to raised costs for shipping. Secretary Harsdorf noted that Michigan's Upper Peninsula was also disadvantaged by the distance from Chicago's terminals, and asked if a Wisconsin facility would help them. Dave Simon replied that it would, because it would bring the "catchment area" (the area with most direct access for drayage) closer to the Upper Peninsula. That would lower the costs for shipping and make businesses more competitive.

- *Foxconn will have a significant effect on the intermodal business model for Wisconsin.* The freight considerations don't include only the freight movement generated by Foxconn itself, but also by the support network of suppliers that will be put into place, many of them likely to site operations close to Foxconn. One company already identified as a supplier who will be building in the area is Corning Glass. We don't have an idea of current container demand from Foxconn, but it could be significant. Their freight will move by all modes. Where will their container service be located? That's unknown, but it could be at the plant site. WisDOT and the State of Wisconsin are involved with key managers.

Jack Heinemann said one of the things that drove the need for the 2017 intermodal survey was the question: what are the state's imports? We know what we are exporting. Imports are higher-priced items; we needed to focus on who are the customers bringing in the goods. Brian Buchanan said they've really struggled with the same problem in their company. They can use waybills and other resources for some information, but even though CN hauls the containers, railroads are really wholesalers of railroad freight to the steamship companies. It can be difficult to determine where the final destination will be. One option mentioned was a zip code survey of drayage drivers- ask them what zip code will be their final destination as they leave the gate. Importers to the Midwest also pay three times what exporters do for container shipments from the Midwest. We need to identify who is bringing in the containers.

One member mentioned a company called Datamyne; it tracks containers and shows the name of the importer (but not the physical company/location acting as the receiver). The data does give the name of the contact person at the importing company, however, and that could be helpful.

Data Outline – Group Review

After a break, Cory Fish went through the initial draft outline for the final subcommittee report, identifying the core items in each section and where he felt committee members and consultant services could be of greatest help. In chapters I-IV, he said these act as background for the reader. For example, the history of intermodal terminals in Wisconsin is probably close to done, based on the Intermodal Background Paper written for the subcommittee by WisDOT. It shows that terminals have been viable in the past, and there's still a market for containerized imports. For the detailed information identified under IV.b.vii (which would be the sub-bullets for IV.b.i through IV.b.vi as well), there is data and analysis that could bring in some of the WMC survey data and/or consultant analysis. Chapters V and VI are where the analysis comes in, and that's where we can bring in information from members of the subcommittee, including an updated and expanded version of the WMC survey.

Brian Buchanan noted that if the report is going to examine domestic intermodal at length, it's important to be aware that different railroads have different intermodal business models. CN and CP are focused on moving containers to and from the Pacific Coast to the middle of the continent; neither has a large domestic (North American) intermodal presence. By comparison, BNSF and UP have a larger domestic intermodal presence and would be better to address the considerations involved in those markets.

Buchanan also noted the need for additional voices to be added to the conversation in the committee. Steamship lines are the decision-makers for intermodal transportation. They know which overseas ports they serve (and which they don't), and they own most of the international containers. It will be important to hear from them how they view Wisconsin in the overall supply chain, i.e. what their biases and thought processes are, and whether there's still a preference for railroads to take containers into Chicago instead of southeast Wisconsin. Drayage drivers and dispatchers also have key information.

Lastly, the intermodal third-party logistic providers understand the whole supply chain and see it in full. The suggestion was made that we might need to have a meeting where we go to them to learn more about their decision-making process.

Brainstorming Session

The floor was then opened to a brainstorming session, asking subcommittee members to react to and discuss the proposed goals of the subcommittee and content of the report. Brian Buchanan cautioned against assuming there should be an additional facility or facilities, noting that the landscape is littered with failed intermodal terminals. Examples include Stark County, Ohio, in the southeastern part of that state, on the Wheeling & Lake Erie. The breakup of Conrail between Norfolk Southern and CSX gave both companies better access for intermodal at other locations, negating the advantages at Stark County. La Porte, Indiana used a \$6 million grant to construct a spur track several miles long off of a CSX line, but no traffic came. The reasons for that aren't clear. He suspected that economic development and political leaders thought it would work, but that it was a duplication of existing operations. So, the railroads didn't buy into use of the facility.

He continued that railroads need to be part of determining the viability of any proposed project. The question was raised, what do the railroads need to demonstrate viability? He replied that entailed a certain base amount of business- at least 20,000 to 30,000 units per year. There was also discussion of the geography of the rail system- where train and crew exchange points are scheduled. Buchanan said the CN network is tailored towards international business. When CN evaluates a site, they identify what the base of traffic will be, and what inbound business or businesses will be the anchor. It's a tricky determination, because there's not a lot of good data for the endpoint of containers.

Buchanan was then asked to talk about Duluth- what is its basis for operation? He replied that a key piece of information was the poor service at the existing Minneapolis terminals; cartage companies coming from the Twin Ports to the Twin Cities would be waiting two hours to get their loads. He also said that Duluth can take in containers from both Atlantic and Pacific shipping lanes. There's a good inbound container flow, and the outbound flow includes DDGs, soybeans, and other non-GMO (genetically-modified organisms) products.

He said it gets complicated for matchbacks when there are issues with matching available containers with outbound loads. If the destination for a given matchback is for a port not served by the company that owns the available empty container, then a different empty container – from a different company – needs to be brought in to the terminal.

More comments ensued, from Peter Hirthe, Larry Krueger, Dr. Stewart, and others. Overall yard operation questions include: How do you get the containers back to the yard from their destinations? Do you have a chassis pool? Do you have enough drayage drivers and trucks? The rail companies spend a lot of time as a matchmaker. You need to have a port in China to receive the matchback load. But not all steamship lines go to all ports. You need the right company's container, and to get that, you need to develop your inbound shipping to use the right company or it will require costly repositioning. You also need the density of importers and exporters. That's driven by the steamship lines. One good thing is that the alliances between steamship companies are making container movements easier.

One observation was that if you know where your agricultural exports are going, then you know who you need to work with as importers. You figure out what is driving the backhaul, and then you can find which manufacturer brings product in that matches the container routing. Buchanan said most of the CN

system goes west from Wisconsin, but if there are containers that need to go east, you need additional empty rail cars at your intermodal facility to take on those loads going in the other direction. Duluth will load its containers heavier than otherwise allowed for drayage, but not all well cars can take on the weight from a heavily-loaded double stack of containers. That's also a balance concern- does CN need to bring in these heavy well cars? Every empty move is a non-revenue move.

Railroads were one of the first adaptors of bar code technology, going back to the 1960s. The system worked when the cars were clean, but rail is a dirty environment, so the bar codes became too dirty to accurately read. The technology now is RFID through transponders, with the information about car location openly shared to all railroads via RailLink. Even if a car is on another railroad, a company can find out where it is.

One person questioned if the export contracts for ag products were spot-market shipments, or were they long-term. The reply was that long-term contracts dominate, but that there are spot market exports, such as soybeans from the Ashley ramp in Arcadia. One long-term shipper is Ace Ethanol in Stanley, exporting DDGs under long-term contracts. One challenge to increasing the agricultural exports via container is the proximity of the Illinois River Port at Channahon (near Joliet). Grain can be transported by truck to the port and loaded on barges to be taken down the Mississippi; it's an established market. Feed ingredients are also a long-term contract; most is going to Asia- that will be a long-term growth market. Some is blended with materials from companies like Vita Plus for domestic use. With the restrictions on GMOs from the European market, the potential for export there is limited. Wood going to Asia is also a typical matchback, but for the most part, grain is the backhaul.

Larry Krueger said he was looking for importers who were bringing in containers to within 100 miles of his sawmill, using the Datamyne database. One company alone had 10,000 containers per year, and that was off an incomplete list.

Dr. Stewart was asked to list the intermodal studies that he has conducted. The list included Duluth, Brown County, a container availability study, a study for MnDOT he's currently working on, and one on rural intermodal terminal failures and successes. He said the best data available comes from railroads and shippers, plus carriers such as JB Hunt. Data services such as PIERS and Transearch can tell you which port is the origin or destination, so from that it can be determined which railroad will be used to get to or from there. Gateway information can be tough to tell. Since no Wisconsin railroad serves the East Coast gateways, anything coming from those ports for Wisconsin will go to Chicago and that's what will be captured as an origin. Data sources differ if you are looking at domestic intermodal or import/export.

The most important data include railroad data on length of haul, volume, and the type of containers, including number loaded and empty. Shipments also need to be able to fit the rail company's network, profitably. Seasonal shipping peaks are another consideration. Other factors can arise- BNSF had an intermodal facility at Thief River Falls, Minnesota, but three straight bad harvests led to that operation closing. Shippers/logistics providers need to be aware which of the steamship carriers serve which North American west coast ports and which Asian ports.

Brian Buchanan was asked about the history of the Green Bay intermodal yard. The yard wasn't a big money-maker for Wisconsin Central Ltd. (WCL); it was profitable, but it required a lot of work for not a lot of profit. When CN purchased WCL, the Green Bay terminal didn't handle enough volume to be worthwhile. The yards at Neenah and Stevens Point never had much intermodal volume. The challenge

for bringing containers into any of those locations is that CN's Chicago yard is bursting; one more train to/from Wisconsin can't be absorbed into the business. Also, most of the old WCL business went east, so there wasn't much revenue for CN- it only got paid to take it to Chicago.

Buchanan was asked about the container movement to and from Duluth. He said that the Ports of Prince Rupert and Vancouver can only block² so many trains for dedicated destinations, such as Memphis, Detroit, or Chicago. There aren't enough containers to block trains for the smaller yards. CN blocks Superior-bound containers on trains going to Calgary, where they're blocked for an intermodal train to Winnipeg. At Winnipeg, they're combined into manifest (mixed freight) trains to Superior. This adds time to the overall delivery, and costs from extra handling. He was asked what provided the spark for service at the port- what did the port provide? He replied that the port of Duluth did most of the work, including site prep. CP actually provides the last-mile service to the yard- it dates to a 1950s-era agreement for a belt railroad that once operated at the port. Duluth is not a 'classic' intermodal rail terminal, but more of a container freight station. The terminal operators do a lot of work on the side, including warehousing and other customer service.

Brad Peot said that talking with shippers is required for any effort to be a success. Railroads are working with shippers on supply chain solutions that involve more than just cost. Companies who ship need to share more of their data with their transportation partners.

Domestic intermodal was raised as an issue; the Intermodal Background Paper didn't get into that area. One person said WisDOT doesn't have any awareness of where, if anywhere, it is a factor at present for Wisconsin companies. The 2017 southeastern Wisconsin survey showed that when you look at the volume, it's possible to have both domestic and international intermodal operations- for example, moving products from Wisconsin to Memphis or to New Orleans. Domestic intermodal opportunities appear more balanced than import/export. The equipment used for domestic intermodal could also be used to support international terminal operations.

Brad Peot said the theory of Wisconsin freight is that more products move outbound than inbound, whether that includes raw materials or processed products. That's why trucking in Wisconsin is more expensive than elsewhere, although it varies by part of the state. In the Milwaukee area, there's a better balance of inbound and outbound freight. It gets more unbalanced the further north you go. But Milwaukee has the challenge of being close to Chicago. And the drivers who run drayage want balance for loads as well. One logistical example was offered, regarding engines for the JLTV (Oshkosh Military Vehicle).

Most retail movement goes by truck. Menards' initial interest in getting an intermodal facility was based on bringing in overweight containers of tile from China. Menards has exemptions that allow them to operate from the intermodal terminal to their distribution center; that saves money on their supply chain. The use of connecting roads for overweight loads is important for the importers, and also for grain and forest product exporters. These roads are identified as part of the WisDOT study for an Oversize/Overweight (OS/OW) network of corridors.

² "Blocking" is a rail yard process that creates clusters of rail cars, sorted by their final destination. In intermodal yards, containers are loaded onto rail cars all bound for the same city/terminal, or for an intermediate terminal where a secondary sorting will occur. When there are sufficient clusters of cars for multiple cities along a corridor (as opposed to a single destination), multiple blocks will sometimes be combined into a single train. This train can then leave a block behind at each destination/terminal along the route.

The question was raised- what would give Wal-Mart or other retailers a reason to shift modes from truck to rail? The response was that the steamship lines are partners with retail importers, and they determine many aspects of the supply chain. We need to identify the carriers and bring them into the process for dialog. Another question was raised- what will railroads need to provide quotes for container shipping? The reply was ramp and origin are the key items; freight forwarders are probably a good starting point to get a sense of the market rates. Some names raised (which may be outdated) include Dorn in Neenah and Mark in Junction City. The caveat is that the price is predicated on shipping being two-way. Steamship lines should be another contact point for the dialog.

Larry Krueger noted that even with ship lines involved, Wisconsin still needs infrastructure for rail connections and to build economies of scale. Others agreed we need both rail and steamship company participation. Brian Buchanan said steamship lines usually give rates for the whole way. There are many hypotheticals that go into the quotes, including the assumption of rail access.

There was discussion of options for locating a hypothetical intermodal facility. Option One would be near a Class I railroad; Option Two would be using a short line – WSOR or another company – to service a facility and interchange with multiple Class I lines to bring in containers from many locations. It was noted that every time the container moves between rail companies, connection fees are imposed, and every connection adds costs. That's one of the challenges to intermodal in the Fox Valley- the rail lines go west, but the tissue products go east. There are different railroads used. Also, some rail companies are okay with blocking parts of trains for specific destinations; others want a whole train. The suggestion was to explore these operational models with WSOR and others at the next meeting.

Members were asked to do "homework" over the next two weeks – with a due date of Tuesday, March 20th. The assignment is to look at the Draft Outline and identify:

- What things need to be added to the outline
- What things should be deleted from the outline
- What data will be needed to produce the report
- What data can subcommittee members provide to the report, or identify what services are available to provide that data.

The goal is to use the next meeting of the subcommittee to finalize the outline of the eventual report.