Freight (Rail) Transportation Challenges and Brief Update on UP Michigan Rail Study

Northwoods Rail Transit Commission
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Transportation

“Transportation creates value by connecting raw materials, production, and consumption”

• Importance of transportation is growing:
  • Growth of demand (larger quantities and longer distances)
  • Reduction of costs (unit cost has dropped, but economic share has remained)
  • Expansion of infrastructure (more and better infrastructure)
Current State of Truck and Rail Transportation Network

- Congestion creeping back
- Rising costs and rates
- Transportation part of global supply chain
  - Where is the best location for production today….how about tomorrow?
- New infrastructure OR major improvements – who pays and where to build?
- Still missing National Transportation Policy
  - Short term (2-year) legislation
Challenges - Trucks

- Regulations
- Driver shortage
- Insurance
- Aging fleets
- Fuel

*This wave could last through the rest of the decade.*
Fuel

• We need to keep perspective

Freight Railroad Challenges

- Most capital intensive industry
  - ~15% of capital spending for new capacity
- Concentration on main corridors!!
- Shortline infrastructure
- Rates & “Railroad Revenue Adequacy”

![Average Prices: RRs vs. Other Industries (Current Dollars, Index 1985=100)](chart)

Sources: Bureau of Labor Statistics, Energy Information Administration, AAR
### Railroad Business Model(s)

<table>
<thead>
<tr>
<th></th>
<th>Class I</th>
<th>Shortline</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business Type</strong></td>
<td>Whole sale</td>
<td>Retailer</td>
</tr>
<tr>
<td><strong>Types of shipments</strong></td>
<td>- Unit trains</td>
<td>- Car loads</td>
</tr>
<tr>
<td></td>
<td>- Large blocks (20-30 car min)</td>
<td></td>
</tr>
<tr>
<td><strong>Service frequency</strong></td>
<td>- Scheduled (especially mainlines)</td>
<td>- As needed</td>
</tr>
<tr>
<td></td>
<td>- Crew &amp; asset utilization</td>
<td>- Flexible</td>
</tr>
<tr>
<td><strong>Prime customers</strong></td>
<td>Large corporations</td>
<td>Small shippers</td>
</tr>
<tr>
<td><strong>Rate structure</strong></td>
<td>Large shipments</td>
<td>Individual car loads</td>
</tr>
</tbody>
</table>
rail intermodal traffic

➢ Intermodal - The fastest growing rail traffic segment
  (Millions of container trailers)

➢ Source: AAR
Q3 2013 marks the first time seasonally adjusted domestic intermodal shipments exceeded international shipments.

This milestone was achieved after a decade of domestic intermodal service improvement and five years of accelerated volume gains.

Q3 2013 Intermodal Market Trends & Statistics, Tara Mullen at tara@intermodal.org
The European “breakeven” mileage for intermodal versus truck is 250-600 miles; in US it is 500-1000 miles and going down in range.
Transportation in Michigan (Wisconsin)

- Do we have balanced system?
- Water transportation
  - Jones Act, Cabotage laws, Soo locks and winter weather
- Can trucks carry the burden?
  - High weight limits (164,000 lbs),
  - Long distance / interstate movements
  - Road condition
- Rail
  - Large network / low density (50% on small carriers)
  - Interchange requirements
- UP = 4% of truck tonnage
  - Rail: 20% outbound, 4% inbound, 94% “in-state

Figure 2 - Michigan Commodity Movement Totals: Modal Split by Tonnage (2009)

Figure 3 – Michigan Commodity Movement Totals: Modal Split by Value (2009)

Source: Michigan Department of Transportation Statwide and Urban Travel Analysis Section
Upper Peninsula Freight Rail Study
Task 1. GIS Infrastructure Map (Sidings)
Task 1. GIS Infrastructure Map (Segments)

- [Link](https://www.arcgis.com/explorer/?open=eef1aecd195849198fd72853cb6bcf80&extent=-10504654.3982735,5487884.54286327,-9179485.05827342,6110092.95953516)
Task 4. Shipper Survey (10/25/13)

Total Respondents: 128

- Fully Completed: 62
- Missing Volume Info only: 31
- Missing Commodity Type, Volume, and O-D: 20
- Missing O-D: 10
- Incomplete/Trash: 5

- SurveyMonkey: 26
- Paper Survey filled by Shippers: 20
- Phone Interview: 16
Type of business
92 out of 128 respondents answered this question

- Distribution: 46
- Logging/Timber: 4
- Manufacturing: 24
- Service: 12
- Other: 6

Business Types
Location and Modes
## Volumes

<table>
<thead>
<tr>
<th>County</th>
<th>Origin (Tons)</th>
<th>Destination (Tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rail</td>
<td>Truck</td>
</tr>
<tr>
<td>Alger</td>
<td>3,160</td>
<td>11,200</td>
</tr>
<tr>
<td>Baraga</td>
<td>155,920</td>
<td>2,340</td>
</tr>
<tr>
<td>Chippewa</td>
<td>39,080</td>
<td>691,512</td>
</tr>
<tr>
<td>Delta</td>
<td>770,544</td>
<td>31,665</td>
</tr>
<tr>
<td>Dickinson</td>
<td>27,240</td>
<td>206,520</td>
</tr>
<tr>
<td>Gogebic</td>
<td>10,600</td>
<td>5,475</td>
</tr>
<tr>
<td>Houghton</td>
<td>17,200</td>
<td>206,520</td>
</tr>
<tr>
<td>Iron</td>
<td>45,040</td>
<td>581,173</td>
</tr>
<tr>
<td>Keweenaw</td>
<td>0</td>
<td>279,032</td>
</tr>
<tr>
<td>Luce</td>
<td>309,600</td>
<td>72,640</td>
</tr>
<tr>
<td>Mackinac</td>
<td>66,640</td>
<td>460,606</td>
</tr>
<tr>
<td>Marquette</td>
<td>3,440</td>
<td>9,941,969</td>
</tr>
<tr>
<td>Menominee</td>
<td>95,000</td>
<td>224,210</td>
</tr>
<tr>
<td>Ontonagon</td>
<td>101,120</td>
<td>511,515</td>
</tr>
<tr>
<td>Schoolcraft</td>
<td>181,560</td>
<td>10,000</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th></th>
</tr>
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<tbody>
<tr>
<td></td>
<td>340,280</td>
<td>11,888,073</td>
</tr>
<tr>
<td></td>
<td>1,242,528</td>
<td>7,930,062</td>
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<tr>
<td></td>
<td>45,750</td>
<td>10,159,893</td>
</tr>
<tr>
<td></td>
<td>1,069,537</td>
<td>10,183,029</td>
</tr>
</tbody>
</table>

- Appx. 8% inbound traffic (For Rail and Truck) captured in the survey (58 responders)
- Appx. 5.5% outbound traffic (For Rail and Truck) captured in the survey (58 responders)
Railroad Issues

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**Shipper issues**

- **Infrastructure**
  - Rail users: 5
  - Non Rail users: 20

- **Service**
  - Rail users: 35
  - Non Rail users: 25

- **Cost**
  - Rail users: 10
  - Non Rail users: 15
“Barking up the Same Tree”

<table>
<thead>
<tr>
<th>Shipper Complaints</th>
<th>Railroad Complaints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliable and consistent car delivery; Provide cars in good shape</td>
<td>Abusing and damaging cars, not releasing empty cars cleaned out, using them as dumpsters</td>
</tr>
<tr>
<td>Needs to be time competitive and increase frequency</td>
<td>Not operating seven days a week and not having access to their facilities 24/7</td>
</tr>
<tr>
<td>Realistic demurrage period</td>
<td>Not loading and unloading consecutive cars causing excessive switching</td>
</tr>
<tr>
<td>Improved and expanded infrastructure</td>
<td>Not maintaining their side track properly</td>
</tr>
<tr>
<td>Better utilization of existing tracks</td>
<td>Holding onto cars for excessively long times when loading and unloading</td>
</tr>
<tr>
<td>Intermodal service within a reasonable distance</td>
<td>Poor management of their product pipeline, creating congestion at destination</td>
</tr>
<tr>
<td>Reasonable rates</td>
<td>Shipping before they have a rate or before the rate is published</td>
</tr>
<tr>
<td>Improved quote times, accurate billing and car tracking</td>
<td>Lack of proper shipping instructions</td>
</tr>
<tr>
<td>Start accepting relatively small volumes</td>
<td>Add volume</td>
</tr>
<tr>
<td>Improve customer service and easy of doing business. Have better communication</td>
<td>Designate a single “go-to” person for billing and status of cars information</td>
</tr>
</tbody>
</table>
Interesting Case Studies

- Interesting Cases for Detailed Investigations
  - Northern Hardwoods lumber shipments to Asia
  - Forest products industry and paper mills (shipping extensively by trucks)
  - Connor Sports exports wooden floors
  - Greymont – Port Inland and Rexton limestone activities
  - DA Glass in next to CMX
  - Holli Forest Products in Ishpeming.
  - Potlach Forest Products in Gwinn
  - L’Anse / Baraga area manufacturing
  - Mining opportunities
Small Intermodal / Transload Facilities

- Transloading has increased 5.5% annually since 2000
- Chippewa Falls in Wisconsin owned by CN
- Indianapolis (Indiana RR and CN)
  - 24,000 containers per year
  - Shortline / Class I collaboration
- Manly, Iowa (on hold)
  - Developed by Iowa Northern Railroad Company
  - Domestic and international containers
  - $54 million cost
Potential Transload Facility in the UP
Future Opportunities - Upper Peninsula Mining??
Some Lessons Learned to Date

- There is no single source of information for businesses in the region.
- Some shippers have given up on rail due to slow progress….shippers no longer interested in contributing to study looking into rail.
- Most of the shippers did not provide their volume, origin and/or destinations info in the survey….how to analyze freight from regional perspective
- In the end, is it mainly lack of understanding / communication?
What can we do?

- “Transportation = Economic Development”
  - Thinking big.....Network level investments
  - Rail Loan Assistance Program and Freight Economic Development Program (FEDP)
    - Simplified applications and get EDCs to help
- State support to maintain viability of light-density / rural lines?
- Flexible intermodal and transloading sites. Access to ports
- Better data, understanding and collaboration
  - Rail Operations 101, Shippers 101
Questions / comments?

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