Shifting International Trade Routes

American Association of Port Authorities

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AVP Ports & International

January 19, 2012
A few words about Norfolk Southern

I promise, just a few....
2011 Norfolk Southern Revenue Breakout

- Coal: 31%
- Agriculture: 19%
- Metals: 11%
- Chemicals: 12%
- Paper: 7%
- Automotive: 7%
- Intermodal: 13%
Description of Business

- 4th Largest Class 1 Railroad in North America
- Operations in 22 states and the District of Columbia
- NS serves every major container port in the eastern United States
- Safest railroad in North America
- Largest automotive and steel franchises in North America by volume
- Largest Intermodal franchise in the east
Norfolk Southern Network
Ports and International Trade Balance

How does Norfolk Southern see the trade routes shifting after the expansion of the Panama Canal?
We don’t have a clue

“If one were to ask 10 experts to give you their opinion regarding the impact of the opening of the third set of new, improved, and larger Panama Canal locks (effectively slated for 2015), they would likely receive 10 different, well thought, thorough prognostications.”

- John Larkin, Stifel Nicolaus
But doing nothing is not an option

So how do we prepare for the unknown?
Ports and International Trade Balance

Spend Money
Total Capital Program ($ millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>Budget</th>
<th>Lease Replacements</th>
<th>PTC</th>
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</thead>
<tbody>
<tr>
<td>2007</td>
<td>$1,341</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>$1,558</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>$1,299</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>$1,470</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>$2,223</td>
<td>$146</td>
<td>$334</td>
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</table>

- Baseline
- Lease Replacements
- PTC
2011 Baseline Capital Program
Replacement/Core vs. Growth

Total Spending = $1.7 billion

- Replacement/Core: 83%
- Growth/Productivity: 17%
2011 Baseline Capital Program ($ Millions)

Total Spending = $1.7 billion
2011 Capital Program Objectives

- Maintain the franchise
- Strengthen the coal fleet
- Invest in business growth
- Optimize capital efficiency (purchase versus lease)
Major Port Categories

- Container/Intermodal
- Ro Ro
- Bulk
- Break Bulk
Key Drivers for Continued Container/Intermodal Investment

• Rising demand for logistics savings from shippers and BCOs

• Shifting long-term supply chain patterns
  – Shorter haul service (250 – 1200 mi) or (400-1930 km)
  – Higher quality service demands
  – International from both coasts

• Continued, but tempered, U.S. economic growth

• Increasing environmental awareness

• Increasing motor carrier costs and capacity constraints
Total US Intermodal Units Originated

Source: AAR
Changing International Trade Characteristics

NS East Coast vs. West Coast Market Share

NS International Length of Haul

Share growth in points from 2001 to 2011
NS Norfolk Port Services

Existing Norfolk Port Served Points
Existing Norfolk Port Service Routes
Planned Norfolk Port Service Point

Norfolk
Norfolk International Terminal
Portsmouth APMT Terminal
Newport News Marine Terminal
In preparation for the Panama Canal widening, NS will have completed:

- The Heartland Corridor
  - New Columbus Terminal
- The Meridian Speedway
- The PanAm Southern Corridor
- The Crescent Corridor
  - New Birmingham Terminal
  - New Memphis Terminal

Our capacity initiatives will continue with a focus on enhancing network efficiency and eliminating cost.
Completion Dates

<table>
<thead>
<tr>
<th>Project</th>
<th>Completion Date</th>
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</thead>
<tbody>
<tr>
<td>Premier</td>
<td>1995</td>
</tr>
<tr>
<td>MSLLC</td>
<td>2011</td>
</tr>
<tr>
<td>Heartland</td>
<td>2011</td>
</tr>
<tr>
<td>PanAm Southern</td>
<td>2012</td>
</tr>
<tr>
<td>Crescent Phase I</td>
<td>2012</td>
</tr>
</tbody>
</table>
The 1st Corridor Project: “The Premier Corridor”

- Raised clearances at 130+ locations
- Total Cost: $94M (~$139M in 2010)
- $5.8 billion initial NS investment in Conrail
Meridian Speedway
Joint venture with KCS
The Heartland Corridor

<table>
<thead>
<tr>
<th></th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mainline Clearance</td>
<td>$150M</td>
</tr>
<tr>
<td>Roanoke Terminal</td>
<td>$22M</td>
</tr>
<tr>
<td>Prichard Terminal</td>
<td>$19M</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$191M</strong></td>
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</tbody>
</table>
GLP – Rickenbacker is NS’ first integrated logistics park

Located 18 miles from Columbus

Over 15,000 acres of existing or planned development

Anchored by NS’ new 300 acre intermodal facility and the Rickenbacker airport

Integrates intermodal, carload and logistics capabilities

Accommodates the delivery of overweight containers throughout the facility
Rickenbacker Logistics Park

- 300 Acres available
- 4 Support Tracks (14,000’)
- 3 Pad Tracks (9,300’)
- Expanded Leads to/from Mainline

- 1,888 Wheeled Parking Spots
- 408 Stacked Spaces (2 high)
- 4 Overhead Cranes / 1 Sideloader
With the completion of Heartland, less than 3% of NS Intermodal freight moves on routes with clearance restrictions.
PanAm Southern JV

<table>
<thead>
<tr>
<th>Investment</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Track Upgrades</td>
<td>$50M</td>
</tr>
<tr>
<td>Terminal Capacity</td>
<td>$40M</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$90M</strong></td>
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</table>
The Crescent Corridor

Birmingham, AL (McCalla)

Construction Start Date: Q4 2010

- 165,000 lift capacity
- Average pad length 4,300'
- 3 pad tracks
- Investment – $100+ Million
- Opening 2012

Q1 2010: $53M TIGER Award
Q2 2010: NEPA, Design, Permitting Complete
Q1 2011: Sitework Complete
Q4 2011: Paving, Buildings Complete
Q1 2012: Trackwork/C&S Complete
Terminal Opening
Birmingham, AL (McCalla)

- 165,000 lift capacity
- Average pad length – 4,300’ (1,311 m)
- 3 pad tracks
- Investment - $100+ million
- Opening 2012
Birmingham, AL

Looking west, panorama of Birmingham Intermodal site

North and South views from McAshan overpass
Memphis, TN (Rossville)

Construction Start Date: Q4 2010

- 327,000 lift capacity
- 4,000’ pad tracks
- 4 pad tracks – expandable to 6
- Investment – $112 Million
- Opening 2012

Q1 2010: $53M TIGER Award
Q2 2010: NEPA, Design, Permitting Complete
Q3 2011: Sitework, Bridge Work Complete
Q4 2011: Paving, Buildings Complete
Q1 2012: Trackwork/C&S Complete
Terminal Opening

TOTAL: $546.7 $282.9

5 Terminals funded and in various stages of permitting. Completion expected in 2012.

The Crescent Corridor
Memphis, TN (Rossville)

- 327,000 lift capacity
- 4,000’ (1,219 m) pad tracks
- 4 pad tracks – expandable to 6
- Investment - $112 million
- Opening 2012
Aerial of Memphis Site
What does this all mean?

• Our largest volume impact might *not be* due to route shifting and the opening of the canal
  – Rail growth will likely be rooted in:
    • Sustainability, making rail a “green” option
    • Ability to offer truck competitive service with shorter length of haul
    • Support through expansion of existing infrastructure and construction of new facilities
  – Increased number of T&E employees will support improved velocity efforts and service
We are working to reduce greenhouse gas emissions by 10% per RTM between 2009 and 2014.

2010 Progress: 3.9% reduction, goal 40% complete.
Norfolk Southern Carbon Mitigation Strategy

- Hybrid and fuel cell technologies
- Computer technology
- Reduced friction on rail through lubrication improvements (with solar lubricators)
- Reduced locomotive/heavy equipment idling time
- Avoidance of “stretch” braking
- “Pacing” of trains by dispatchers
Conservation Initiatives: Green Trees

6.04 MILLION TREES WILL BE PLANTED.
For NS, that represents:

One Employee = 211
One Track Mile = 299
One Locomotive = 1,450
Potential Port Opportunities

- Wood Pellets
- Rail/Container Transload Facility
  - Grain/Grain Products
  - Other Commodities
- Export Coal
  - Many export facilities full
  - How long will the boom last?
- Export Automobiles
  - BMW, Mercedes Benz, Toyota
  - Vehicles to/from Mexico
Thank You