Port Criteria: Facility

1. Facility Criteria
   - Draft
   - Size of Terminal
   - Type of Facility
   - Cranes Available: Adequate Capacity
   - Specialty Services: OOG, Reefer, Hazardous
   - Expansion Capabilities
   - Infrastructure Support: Rail/Truck Access (on dock with storage)
   - Chassis: Availability, Storage and Pool Options
   - Security/Environmental Policy
2. Operating Criteria (Cost/Productivity)
   - Berth Guarantee
   - Total Terminal Throughput
   - Crane Speed and Capacity
   - Productivity Guarantee
   - Gate Turn Times and Gate Operations Flexibility
   - Hours of Operation (PIERPASS)
   - Reduced Equipment Dwell Times
   - Demurrage
   - State-of-the-art Yard Equipment
   - Labor Environment, Work Rules (Flexible Shift Starts)
   - U.S. Customs and Agriculture Holds
   - EDI/Use of Technology (OCR/RFID/EDI)
   - Supply and cost of pilots and tug assistance
Port Criteria: Access

3. Access to Regional Metropolitan Markets
   - Population Growth
   - Port Capacity
   - Infrastructure Capacity
   - Seamless Handoffs
CONCERNS: Partnership

- Port Authorities
- Terminals
- Customers

➢ Need better coordination and communication to form effective partnership
CONCERNS: Draft

- Deep Water Draft is necessary to support new all-water services
- Requires public and private funding

➢ Deeper channel is required to accommodate the larger super post-Panamax vessels

Post Panamax 4700 - 9000 TEUs

Suez Max 1200 - 14500 TEUs

44 - 47 FT Draft 5

50 FT Draft 5

January 2008
CONCERNS: Expansion Capabilities

- Negatively impacted during recent growth spurt
  - Problems at the gate
  - Labor Shortage
  - Not enough equipment:
    - gantry cranes,
    - top handles, etc.

➢ Is there sufficient investment to support the emerging growth while expansion plans are implemented?
CONCERNS: Infrastructure Support

- On-Dock Rail Capabilities
  - Ideally need two Class 1 Railroads
- Good Interstate Highway Connection

➤ The right infrastructure is the ideal cost and service solution to manage growth and constrained terminal capacity while meeting customer needs.
CONCERNS: EDI/Use of Technology

- Technology can be applied to increase capacity:
  - In the vessel operation:
    - Crane speed and capacity – dual/tandem hoist
  - In the yard and on-dock rail operations:
    - Rail mounted gantry’s (faster, safer, denser, electric, non-polluting)
    - In-motion scales/portal systems
    - GPS on handling equipment
CONCERNS: EDI/Use of Technology

- In the Gate process:
  - Implement OCR and RFID
  - Appointment systems (integrated with yard planning)
  - PIERSPASS Creativity
- By the fast and accurate exchange of data between all key stakeholders:
  - Ports, Carriers, Rail, Truck, US Customs, FDA, and Customers

➢ Technology is an essential solution to effectively and efficiently manage growth and infrastructure constraints.
Security Requirements

- Establish response and recovery plans
- Mandate and conduct annual exercises that test the quality of each port’s response and recovery plans.
- Adopt federal legislation requiring Coast Guard Captain of the Port to implement a comprehensive risk-management plan
- Legislate for presidential appointment: National Port & Cargo Security Director
- Push for improved technology on cargo screening
Responsibility to the Environment

- Establish an environmental management system
- Conserve energy
- Recycle office and other wastes
- Participate in a ballast water initiative
- Form a voluntary green practices task force
- Conduct environmental training for on-port businesses
- Utilize alternatively-fueled vehicles for cleaner air

➢ Ports must be proactive in protecting water, land, air, and natural resources for generations to enjoy and utilize.
Challenges
Challenges

- World’s trade with North America continues to grow.
- Ports have limited physical capacity to expand.
- Vessel size continues to increase. Must manage the growth of increased all-water service to East Coast.
- Rail and road infrastructures reaching limits.
- Local communities concern over environmental issues.
- 2010: Existing capacity could be exceeded. Projected capacity shortfall of 4.1 M TEU.

Equals 1,000 additional acres of required new container terminals at today’s average productivity levels.
- Build more terminals
- Increase throughput through existing terminals:
  - Introduce new technology in vessel / yards / gate operations.
  - Reduce equipment dwell times.
  - Store / dispatch empties off-dock.
  - Rail “shuttles” to inland CY yards.
  - Move chassis out of terminals (global model).
  - Increase storage density.
  - Expand gate operations (PierPass model).
  - Reduce environmental impacts – electrify.

➢ Communicate with all key stakeholders to apply creative solutions, reduce costs, and deliver customer satisfaction.
Thank you
MEETING FUTURE INFRASTRUCTURE NEEDS

WATERSIDE AND TERMINAL

IAN CAIRNS

January 2008