Gateway Infrastructure Development Programs in Urban Centers on the west coast of North America

- Capacity Improvements
- Congestion & Air Emissions
- Mitigation & Community Amenities

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Topic Outline

- Concept of Marine Gateway Regions
- Select West Coast Gateways
- Development Challenges
  - System Capacities
  - Environmental (Air Emissions)
  - Urban Congestion
- Building Capacity
  - Port terminals
  - Landside distribution networks
- Community Impact Mitigation Programs
  - Funding Mechanisms
Marine Gateway Region Concept

Marine Gateway Characteristics

- Deep water commercial port
- Load center (Urban context)
- National distribution networks
  - Rail, road, waterway (airway)

Select West Coast Gateway Regions

- Southern California
- Vancouver B.C.
Ports are gateways, not destinations

Many port projects are internally focused, when improvements to road and rail interfaces and corridor Capacity could be the answer!

THINK OUTSIDE!

The GATE
North America Gateways

United States

Trans-American Freight Network
North America Gateways

CANADA—Asian Pacific Gateway Corridor Initiative
North America Gateways

North America Land Bridge
North America Gateways

Transit Time (days, mode) from Asia

Approximate Transit Times. Source: ProLog. Note: Routes are approximate Class 1 Routes, WC String requires 5 vessels, EC String requires 2 vessels.
North America Gateways

BNSF Rail Corridor
Vancouver, British Columbia

Canadian Rail Network
North America Gateways

Gateway Truck Volumes

[Map of North America showing various cities and truck traffic volumes indicated by different colored dots.]
Southern California Gateway

Southern California Gateway Truck Flows

[Map of Southern California Gateway Truck Flows]
Development Challenge: System Capacities

Global Economic Performance

![Graph showing global economic performance with data points from 1972 to 2012. The graph includes two lines: one for Real GDP and another for Industrial Production. The Real GDP line is represented in blue, while the Industrial Production line is in red. The graph illustrates fluctuations in economic performance over the years.]
Development Challenge: System Capacities

Future Capacity = 43.2 @ 2035

Existing Capacity = 28.5 @ 2027

Million TEUs

Actual | 2009 Forecast | 2007 Forecast

Development Challenge: System Capacities

- **BC West Coast Capacity Forecast**
- **BC West Coast Capacity**
- **BC West Coast Traffic Forecast**

![Graph showing system capacities over time](image)

- Inner Harbour
- T2-2
- DPIY
- T2-1

Thousands of TEUs
Cancers Per Million People, So. California Areas

Cancers per million

Development Challenge: Environmental (Air Emissions)
Southern California Freight Rail Network
Urban Traffic Congestion

Interstate Highway 710, Los Angeles

Roberts Bank Corridor, British Columbia

Alex Fraser Bridge, British Columbia
Building Capacity: Port Terminals

Ports of Los Angeles and Long Beach
Building Capacity: Port Terminals

Ports of Los Angeles and Long Beach
Port of Los Angeles (POLA)

Major Terminal Projects

- **West Basin Yang Ming**
- **West Basin China Shipping B-100-102**
- **Cruise Terminals**
- **TraPac Berths 136-147 Improvements**
- **Pasha Terminals Berths 174 - 181**
- **YTI/NYK Redevelopment Berths 206-220**
- **Evergreen Container Terminal Redevelopment**
- **APL Terminal Improvements**
- **Pacific Energy Liquid Bulk Terminal**
Port of Long Beach (POLB)

POLB Terminal Map
The Middle Harbor Project:
consolidation of two aging
shipping terminals into a single,
state-of-the-art container
terminal with twice the current
cargo capacity of the two existing
Terminals.

- **Schedule**
  - Nine (9) years
  - Construction Start
    - 10/2010

- **Total Cost**
  - $1.0 billion

New on-dock rail yard
Shift 32% cargo from Trucks to Trains
POLB Pier S

Pier S Project:
dredging, wharf construction, container cranes; Back Channel improvements; container yard; terminal buildings; truck gates; intermodal rail yard; and utility and oil facility relocation.

- **Schedule**
  - 1999 POLB Board Approval
  - DEIR Released 09/16/2011

- **Total Cost**
  - $650 million
Port Metro Vancouver

Terminal 2 Roberts Bank (T2)
Terminal 2 Roberts Bank

T2 Conceptual Plan Alternative
Terminal 2 Roberts Bank

T2 Development Plan Alternative
Vancouver Landside Distribution Network

Vancouver Intermodal Rail Facility

DELTAPORT INTERMODAL YARD EXPANSION

- Deltaport Intermodal Yard Extension
- Deltaport Way Overpass Relocation

Coal Track & 3rd Berth Track Extensions (Not To Scale)

Fisher Yard Expansion (Not To Scale)
Vancouver Gateway Region

Congestion Mitigation Measure: Roberts Bank Rail Corridor (BC)

Creating More Intermodal Rail Capacity

Southern California International Gateway (SCIG)

Adding 1.5 Million Lifts Annual Capacity
Remove Million of Truck-Mile per year
USD $500 Million Project
Traffic Congestion Relief

Round-Trip Travel Time

<table>
<thead>
<tr>
<th>Miles</th>
<th>Minutes</th>
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<tbody>
<tr>
<td>Today</td>
<td>40</td>
</tr>
<tr>
<td>New SCIG</td>
<td>70</td>
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| Time Spent in Port | 35 |
| Time to Hobart | 40 |
| Time Spent in Hobart | 20 |
| Return to Port | 40 |
| Total Travel Time | 135 |

More Truck Trips

<table>
<thead>
<tr>
<th>Daily Truck Trips</th>
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</thead>
<tbody>
<tr>
<td>Today</td>
</tr>
<tr>
<td>New SCIG</td>
</tr>
</tbody>
</table>

| Time Spent in Port | 35 |
| Time to SCIG | 10 |
| Time Spent in SCIG | 15 |
| Return to Port | 10 |
| Total Travel Time | 70 |
Southern California Region

Alameda Corridor & Alameda Corridor East

[Map showing the Alameda Corridor and Alameda Corridor East with rail lines and intermodal railyards.]
Gerald Desmond Bridge Replacement

The GDB Project:
The $950 million project will be built with a cable-stayed design and 200 feet of clearance over the water to accommodate the newest generation cargo ships.
Vancouver: Community Mitigation

Twawwassen First Nation Treaty Lands
SoCal: Community Mitigations

Wilmington Waterfront Park

The $55-million park spans nine blocks with a fountain, lawn, promenade, barbecues and playground.
**Community Mitigation Trust Fund (POLA)**

- Trust Fund was established in the amount of $11,240,000.
- As part of this fund, $6 million has been set aside toward the installation and maintenance of air filtration systems in Wilmington area schools.

**Harbor Community Benefit Foundation**

- The Harbor Community Benefit Foundation will distribute up to $50 million in grants to the impacted region.
- The purpose of the Harbor Community Benefit Foundation (HCBF) is to address, through mitigation projects, off-port impacts from existing and future operations at the Port of Los Angeles in the communities of Wilmington and San Pedro.
The grants will fund projects in three broad categories:

(1) Air quality improvements and noise-reduction measures at schools and related sites;

(2) Air quality improvements at hospitals, clinics, medical centers and senior facilities; and

(3) greenhouse gas reductions through projects such as “green” power, energy efficiency, tree-planting, hybrid technology and more.
Summation and Recommendations

- Urban Gateway regions function as national economic assets and add value for both users and the larger community

- Maintain sufficient capacity to meet future demand both at the port terminal and throughout the landside distribution system

- Portion of value generated can be directed to mitigate adverse impacts of port operations on host communities

- Port authorities, local governments, the private sector and local communities can work together to advance and sustain the gateway region

- Engage industry partners and communities early and often in the planning process, ‘equitize’ industry and community partners

- Be flexible in identifying and addressing particular community concerns, needs
Thank You and Questions Please
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