Port Operations

- Harbor Commissioners appointed by mayor; confirmed by City Council
- Commissioners set policy/Exec. Director administers
- Council approval required *only* for bonded indebtedness; annual budget.
- Port follows provisions of State tidelands law
- Landlord port
- Receive no tax revenue; revenue *only* from commerce, navigation, marine fisheries and marine recreation
- Spend money *only* on the same.
Top U.S. Containerports
Calendar Year 2000

Twenty-Foot Equivalent Units (TEU) (millions)

- Los Angeles: 4.88
- Long Beach: 4.60
- New York: 3.05
- Oakland: 1.78
- Charleston: 1.63
- Seattle: 1.49
- Tacoma: 1.38
- Hampton Roads: 1.34
- Houston: 1.07
Top World Containerports
Calendar Year 2000

Hong Kong: 18.1
Singapore: 17.1
LB/LA: 9.5
Pusan: 7.5
Kaohsiung: 7.4
Rotterdam: 6.3
Shanghai: 5.6
Hamburg: 4.3
Antwerp: 3.1

Twenty-Foot Equivalent Units (TEU) (millions)
Ports of Long Beach/Los Angeles
National Benefits

- Employment: 2.5 Million
- Customs Revenue: $4 Billion
- State & Local Taxes: $5.4 Billion
- 500,000 regional jobs linked to Ports of LB/LA
Value of Foreign Trade by U.S. Port (2000)

Billions of Dollars

- Long Beach: 88.96
- Los Angeles: 83.07
- N.Y./N.J.: 71.71
- Houston: 34.11
- Seattle: 32.23
National Significance of POLB/POLA

Locations of Shippers
Using the Ports of Los Angeles and Long Beach
With U.S. Congressional Districts
The Intermodal Advantage

Eight Day Savings
Future Growth
Port of Long Beach – Los Angeles
Container Forecast
(1998 Mercer Management/DRI)

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual</th>
<th>Asian Crisis</th>
<th>High Growth</th>
<th>2001 POLB-POLA Transportation Study—High Growth w/Empty Adjustment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>9.5</td>
<td>9.6</td>
<td>9.0</td>
<td>9.5</td>
</tr>
<tr>
<td>2001</td>
<td>9.6</td>
<td>9.6</td>
<td>10.8</td>
<td>10.8</td>
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<tr>
<td>2005</td>
<td>9.0</td>
<td>10.8</td>
<td>12.0</td>
<td>12.0</td>
</tr>
<tr>
<td>2010</td>
<td>12.0</td>
<td>15.5</td>
<td>16.7</td>
<td>16.7</td>
</tr>
<tr>
<td>2015</td>
<td>17.0</td>
<td>22.8</td>
<td>24.0</td>
<td>24.0</td>
</tr>
<tr>
<td>2020</td>
<td>24.0</td>
<td>33.3</td>
<td>36.1</td>
<td>36.1</td>
</tr>
</tbody>
</table>
Non-Container Terminal Trips
(10% of total truck trips)

- liquid bulk
- dry bulk
- autos
- lumber
- steel
Accommodating Growth - Terminal Infrastructure

Port of Long Beach Mega-Terminal Plan

Container Terminal Area

<table>
<thead>
<tr>
<th>Year</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>900 ac</td>
</tr>
<tr>
<td>2020</td>
<td>2,400 ac</td>
</tr>
</tbody>
</table>

POLB: 900 2,400 ac

new landfill (2020)
Accommodating Growth - Terminal Infrastructure

Proposed Port of Los Angeles Growth

Container Terminal Area

<table>
<thead>
<tr>
<th>Year</th>
<th>Area (ac)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>1,000</td>
</tr>
<tr>
<td>2020</td>
<td>2,300</td>
</tr>
</tbody>
</table>
Accommodating Growth - Terminal Infrastructure
Cargo Growth - Carrier Needs

Hanjin 1996: 59 acres
Hanjin 1997: 170 acres
Hanjin 2003: 395 acres
Accommodating Growth - Terminal Infrastructure

- Landfill requires wetland mitigation ($150k/ac); finite area
- Construction cost: $1.5-$2.0M/ac
- $1.1B for capital projects 1994 – 2000 (current debt)
- $3 B (current $) for needed expansion (excludes off-terminal roadway/rail needs)
- $1.5 Billion in construction spending between 1998 and 2002
- Average daily construction costs exceeds $1 million at Long Beach
Accommodating Growth
Transportation System
**Intermodalism (2002)**

- **Rail (50%)**
  - On-Dock: 15% - 20%
  - Off-Dock: 30%- 35%

- **Truck (80%- 85%)**
  - Off-Dock: 30%-35%
  - Local: 50%
Intermodalism (2020)

Rail (50%)
- On-Dock: 30% - 35% (capacity)
- Off-Dock: 15% - 20%
  - Currently only 12% capacity

Truck (65% - 70%)
- Off-dock: 15% - 20%
- Local: 50%
Accommodating Growth

POLB/POLA Daily Trips

<table>
<thead>
<tr>
<th>Year</th>
<th>Auto</th>
<th>Truck</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>32,085</td>
<td>34,010</td>
<td>66,090</td>
</tr>
<tr>
<td>2010</td>
<td>39,565</td>
<td>50,510</td>
<td>90,075</td>
</tr>
<tr>
<td>2020</td>
<td>63,475</td>
<td>91,655</td>
<td>155,130</td>
</tr>
</tbody>
</table>
Ports Truck Distribution – Key Routes

Other Facilities:
13%
9%
17%

24% 23% 19%

10% 11% 8%

7% 8% 6%

46% - 2020
49% - 2010
50% - Existing
YR 2010 Transportation System Deficiencies
(20% gate movements outside day shift)

24/7 gate ops
YR 2020 Transportation System Deficiencies
(24/7 gate operations; 60% movements outside day shift)
Accommodating Growth
Transportation Solutions

1. **Trip Reduction Measures**
   - increased on-dock rail (Ports/Industry)
   - more near/off-dock rail capacity (UP/BNSF)
   - empty container management (industry)

2. **Transportation System Management**
   - Intelligent Transportation Systems (Ports/Industry)
   - internet app’t system (Industry)
   - *hrs of operation of warehouses, terminals, etc.; requires cooperation of entire supply chain*

3. **Physical Capacity Improvements**
   - ROW limited/funds scarce
Port Transportation Projects

$370 million investment
Port Transportation Projects

• Trenched central segment
• 30 grade separations

Alameda Corridor Project
Container Flows are Very Complex!

Northern & Central California

SOUTHERN CALIFORNIA PORTS

IMPORT LOADS

EXPORT EMPTIES

IMPORT LOADS

WESTBOUND EMPTIES

EXPORT LOADS

IMPORT LOADS

LOCAL CONSIGNEES

LOCAL SHIPPERS

RAIL INTERMODAL

IMPORT LOADS

EMPTIES

LOADS

LOADS

EMPTIES

EMPTIES

LOADS

EXPORT LOADS

IMPORT LOADS

EMPTIES
Empty Container Management

Concept
• virtual CY using internet system
  – direct interchange of MT between importers/exporters
• off-dock depot using internet system
  – indirect interchange

eModal
• Website to improve intermodal logistics; provide container availability; bulletin board
• Appointments: ↓ peak period trips; queues
• MT Management: ↓ trips
• Integration with Port ITS project

Study
• Gateway Cities COG Study
Barriers to Container Reuse

- Ownership mismatch (e.g. wrong steamship line)
- Type mismatch (e.g. wrong size, wrong type, or tri-axle chassis required for heavy exports)
- Different drayage company (steamship line does not control choice)
- Timing and detention cost
- Terminals used as warehouses for MTYs
- Difficulty of tracking per diem and M&R charges
- Steamship line contracts that do not allow interchange or make the first trucker responsible
- Skeptics foresee administrative headaches
- System has to be “good for everybody” to work, and benefits may not be apparent to all
POLB/POLA Intelligent Transportation Systems Project

- Total cost: $10.2M
- POLB, POLA, ACTA to provide $3M in matching funds
- Awarded $4.236 M from MTA (FY04/05)
- Awarded $0.4 M FY02 Federal Appropriations Bill Earmark
Planned Port Regional Projects

- TI Fwy/Ocean Bl Interchange
  - PADP, ISTEA Project, TEA 21 “High Priority” Project, Governor’s TCRP Project ($50 M)

- Gerald Desmond Bridge Widening
  - Federally Enacted Port Access Demo Project (PADP) ($12 M)

- Alameda Corridor Terminus Intermodal Yard ($60 M)
Terminal Island Fwy/Ocean Blvd. Interchange ($50M)

- PADP, ISTEA Project, TEA 21 “High Priority” Project, Governor’s TCRP Project
Gerald Desmond Bridge Replacement

• State DOT & Port agree bridge should be replaced
  - Insufficient traffic capacity
  - Insufficient channel vertical clearance
  - Low Year 2000 “Sufficiency Rating” (54.3); replacement recommended at 50

• $50 million painting job abandoned – Port returned $28 million federal/state funding

• Prelim. Eng begun (6 to 8 lanes req’d)

• Est. cost: $370M
  - can be built next to existing bridge, minimizing closure

• Est. Schedule: 2006/07
By 2010

• 6 → 8 to 10 lanes (or truck lanes)

PLUS

• 24/7 gate operations (60% outside day shift)
• 30% -35% on-dock rail
I-710 Major Corridor Study

- Part of Economic Recovery Program
- Intelligent Transportation Systems
- Truck lane alternative
- Interchanges
- Adjacent arterial streets
- Study Cost: $3.9 million
- Improvement Costs: +$4 billion
- Study Completion: 2003
- Port on policy & technical committees

- Gateway Cities COG to seek TEA 21 Reauthorization Earmark Funds