Container Terminal Planning and Operations

Moving Today’s Cargo Volumes

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2015 Marine Terminal Management Training Program

Landside Transport
Rail is Key to Port of the Future

- Green Port Policy
- Clean Air Action Plan
- Emission Reduction Program
- Tier 3+ Switching Locomotives
- CARB/EPA Compliant Class I

On-dock Rail

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PARSONS
Industry Leading On-dock

$2B Rail Enhancement Program

• On-dock Rail Yards
• Support Rail Yards
• Rail Network Infrastructure
Rail Modeling

- Intermodal Yard
  - MPC Model
  - Simulation
- Network Performance
  - Track Utilization
  - RTC
• Lead Length
  – arrival/departure
• Yard Protection
• Mainline Protection
Wide-Span Gantry Cranes
On-dock Projects

Port of Long Beach
MHRP
Port of Los Angeles
Middle Harbor Terminal

- Long Beach Container Terminal
- $1.2B Construction over 10 years
- 304-Acres
- 3.3M TEU Capacity
- 1.1M On-dock Rail
On-dock Environment

- High-Value Property
- Constrained Space
- Longshore Labor
- Railcar Repairs
- Marine Terminal Interface
- Engineering Challenges
Yard Operations

- Train Arrival
- Secure Train/Yard
- Unload Containers
- Inspect Railcars
- Repair Railcars
- Load Containers
- Build Train
- Train Departure
Facility Layout

- Yard Track Lengths
- Track Spacing
- Work Areas
Safety Features
Construction Phasing
Conclusions

WSC Intermodal Yards

• Efficient and Green
• Developing Technology
• Critical Design Issues
• Complex Operations will Benefit from Modeling
Conclusions

Bigger Ships

• Quay Cranes
• Container Yards
• Intermodal Yards
• Landside Transport