AAPA
Cruise Conference
Cruise Ship Newbuilding Trends & Changes in Store for Ports and Cruise Terminals
San Diego
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CH2M HILL
Presentation Outline

• Ship Trends
• Issues for Existing Terminals
• Terminal Design Trends
• Passenger Access Issues
• Summary
General Cruise Ship Design Trends

- Longer & Wider
- Deeper Draft
- Larger Airdraft
- More Capacity
- More Balconies & Amenities
Physical Trends in Cruise Ship Layout

- Deeper Draft
- More Overhanging Structures
- Life Boats Overhanging Hull
- Multiple Main PAX doors
- More Powerful Maneuvering Systems
Carnival Destiny

Voyager

Freedom

Freedom about 15% bigger than Voyager
Freedom of the Seas

Flow Rider
Even Bigger –
RCI Project Genesis

- 220,000 Gross Tons - a Quarter Mile Long,
  240 ft high, 6,200 Guests - 2,400 Staff -- a "Floating City"
New Cruise Ships will tend toward:

- LOA 1200 ft +++
- Beam at Water Line – 160 ft
- Beam over all – 220 ft
- Draft - 32 ft ++
- Air Draft – 240 ft
- Life Boats outside hull
- Gross Tonnage – 220,000

By Comparison

- World City
  - LOA – 1268 ft
  - Beam at water line – 172 ft
  - Life Boats outside hull – 245 ft
  - Gross Tonnage – 250,000
Terminal Design Trends

Passenger Terminal
- More footprint
- More parking
- More gangways
- More Stand off distance from berth
- Urban CT even more $$$ now

Berth
- Sturdier structures – lateral and deadload (more 150T bollards)
- Survivability for Cat 5
- Larger VSZ areas
- More areas for vessel stores staging
- Sour Protection issues

Waterside
- Wider Channels
- Larger Turning Circle
Terminal Design Trends

Urban
- San Diego – Lane Field Mixed Use CT
- New Orleans

Greenfield
- Port of Houston – Bayport
- Jacksonville
San Diego Cruise Terminal
Development of Lane Field,
B Street Cruise Ship Terminal and Adjacent Properties
Site Plan
Functional Massing
Erato Street Terminal
Port of Houston
Bayport Cruise Terminal

- **Greenfield Cruise Terminal Development**
Port of Houston
Port of Houston
Jacksonville Cruise Terminal
Passenger Access Trends

- Multiple Units to handle passenger volumes
- ASAD – Capable
- Higher Capacity per hour (now 600-900/hour)
- Higher live loads on berth
- Innovation in Airport systems will spill over to Cruise Terminals
- More Expensive
Passenger Access Trends
Cruise Terminal of the Future Wish List

• Fully Automatic Customs/Immigration Processing
• Standardized Main PAX Location on Cruise Ship Fleet
• Ship Based Passenger Access System
• 1 Hour Ship Clearance Capability from Ship to Terminal
• Fast Claim System for Luggage
• Container Based Vessel Stores System
Summary

- As Ships get Bigger, Terminals must Adapt to New Physical and Operational Issues
- Ship Berths must get Larger and Sturdier
- More Private Destinations will be Built to Enhance the Passenger Experience and Include Revenue for Lines
- More Home Ports in Caribbean and Gulf of Mexico
Thanks !
Effects of New Ships on Existing Terminals

New Cruise Ships will tend toward….

• LOA 1270 ft
• Beam at Water Line – 140 ft
• Beam over all – 200 ft
• Draft 32 ft
• Life Boats outside hull
• Gross Tonnage – 200,000

By Comparison

• World City
  • LOA – 1268 ft
  • Beam at water line – 172 ft
  • Life Boats outside hull – 245 ft
  • Gross Tonnage – 250,000
Cruise Ship Innovation - Bigger gets Bigger
Megas become Ultra Megas

About 15% larger than Voyager