

Session 66

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T.Y. Lin International

Port of Miami Tunnel & Access Improvements

Topic Description

The Port of Miami is the world's largest cruise port and one of the major cargo ports in the U.S. The Port of Miami Tunnel would link the Port of Miami with the adjacent Interstate system, thereby improving the passenger and cargo movement to and from the Port.

The Florida Department of Transportation (FDOT) seeks to enter into a Concession Agreement with a concessionaire to Design, Construct, Finance, and Operate and Maintain the Facility over an extended period of time.

Speaker Biography

For nearly 35 years in a career that has included design awards and special recognition for innovation, Mr. Alvaro J. Piedrahita, a registered Professional Engineer, has served in the capacity of Project Executive responsible for multi-million dollar design and construction projects encompassing a broad range of transportation projects. His experience also includes the development of major infrastructure projects.



Port of Miami Tunnel & Access Improvements

A Public / Private Partnership

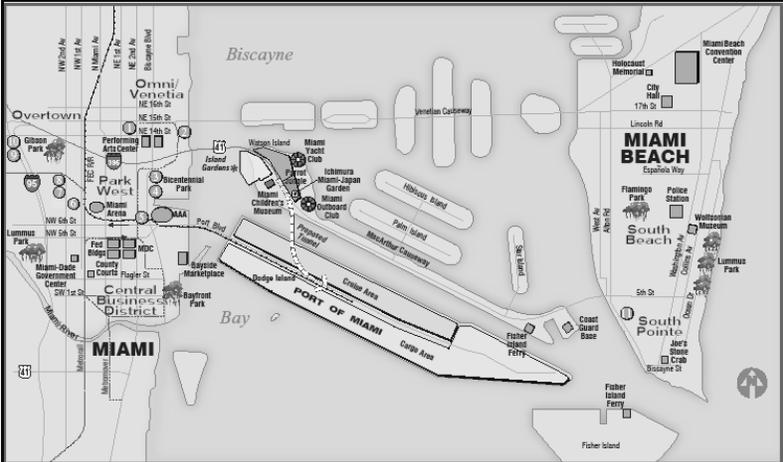
FIGE/FDOT Design Conference 2006



Designing For More Than Bridges and Roads

August 2, 2006

POM Tunnel – Project Map





**Port of Miami Tunnel Project
Public Affairs Program**

LEGEND

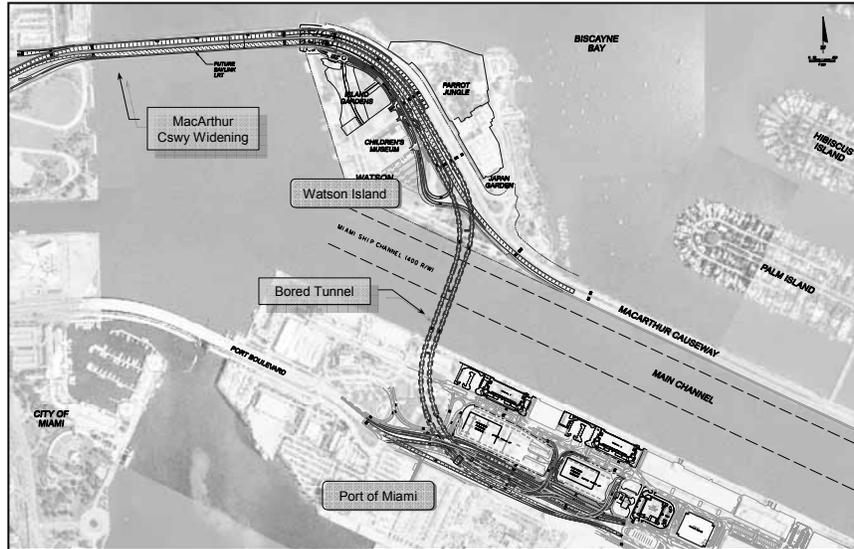
<ul style="list-style-type: none"> ① Miami-Dade School Board ② The Miami Herald ③ Miami Museum of Science ④ Miami Art Museum ⑤ Freedom Tower 	<ul style="list-style-type: none"> ⑥ Lync Theatre ⑦ Dorsey House ⑧ Dr. Orenti Dental Office ⑨ Booker T. Washington School ⑩ Chapman House 	<ul style="list-style-type: none"> ⑪ South Pointe Elementary School ⑫ Historic Overtown Folkville Village A Florida Main Street Community ⑬ Proposed Site
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POM Tunnel



Project Alignment



Key Project Issues

- Technical
- Financial
- Procurement
- Schedule

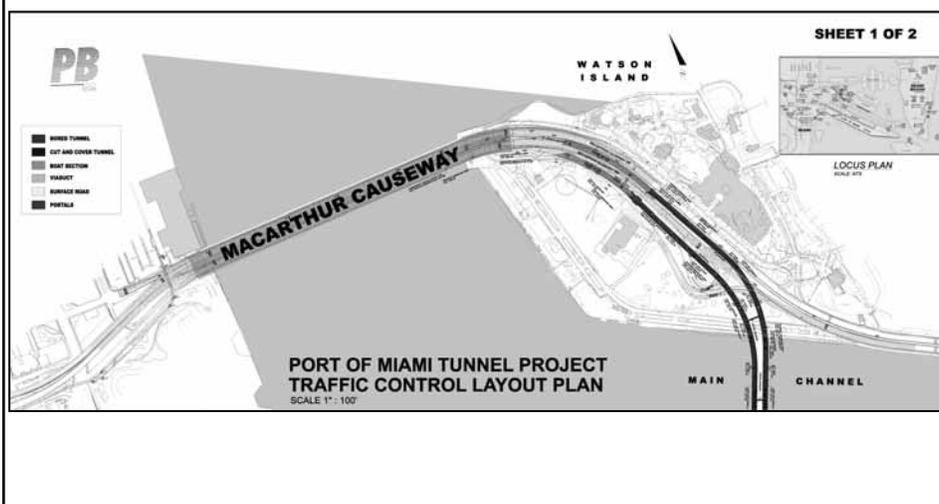
Key Project Issues

Technical

- Geometric Features
- Fire/Life/Safety
- MOT/ Construction Staging
 - Port of Miami Roadways
 - Waterway/Channel (Not Impacted)
- Aesthetics



MacArthur Cswy/Watson Island Plan



Fire / Life Safety & Traffic Control Systems

- Traffic Surveillance and Control Systems
- Incident Response Protocols
- Fire / Life Safety Features & Systems

Traffic Surveillance and Control System

- Closed Circuit TV Cameras (CCTV)
- Variable Message Sign (VMS)
- Lane Use Signals (LUS)
- Overheight Vehicle Detectors (OHVD)
- Vehicle Sensors
- Radio
- Control Center

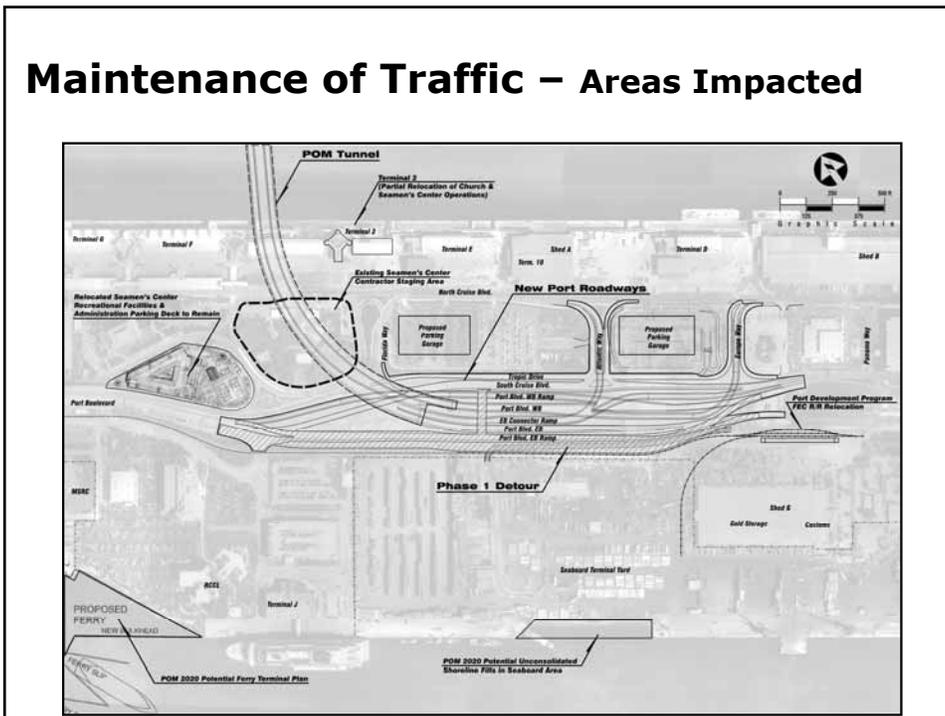
Incident Response Protocols

- A clear definition of the incident command structure and roles and responsibilities of each entity involved in responding to an incident is needed. These entities include the following:
 - Concessionaire
 - FDOT
 - PORT
 - City of Miami Fire Dept.
 - Miami Dade County Fire Dept
 - FHP
 - City of Miami Police Dept
 - Miami Dade County Police Dept

Fire Life Safety Features

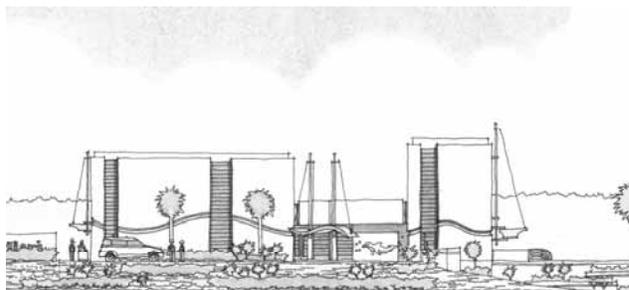
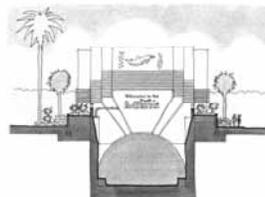
- Main Fire Life Safety Features/Systems
 - Fire Detection
 - Communication Systems
 - Traffic Control Systems
 - Standpipe Systems & Water Supply
 - Portable Fire Extinguishers
 - Emergency Ventilation
 - Drainage System
 - Emergency Response Plan

Maintenance of Traffic – Areas Impacted



Aesthetics

- Buildings
 - Operations Support Facilities
 - Electrical Substation
 - Flood Gates
 - Pump Stations
- Tunnel Interiors
- Tunnel Portals
- Retaining Walls
- U-Wall Sections
- Bridges
- Landscaping
- Lighting
- Signage



Key Project Issues

Financial

- \$ 1 Billion Dollar Project
- 35-year Concession
 - 5-year Construction Period
 - 30-year O&M Period
- Availability Payment of \$100 Million over the 30-year O&M Period
- Partnership Among FDOT, Miami-Dade County and City of Miami

Key Project Issues

Procurement

- Best Value Selection
 - Maximum Availability Payment
 - Approach to:
 - Project Management
 - Design and Construction
 - Quality Assurance and Control
 - Operations and Maintenance

Schedule – Procurement

- February 17, 2006 - FDOT publishes a Request for Qualifications (RFQ) for a DFBOM through a Concession Agreement.
- April 12, 2006 - FDOT receives Statement of Qualifications (SOQ) from potential proposers
- April 28, 2006 - FDOT announces Short-list of qualified proposers
 - ✓ Miami Mobility Group (Dragados / Odebrecht / Parsons)
 - ✓ Miami Access Tunnel (Bouygues / ABN-AMRO)
 - ✓ FCC/Morgan Stanley
- Early October, 2006 - FDOT publishes Final Request for Proposals (RFP)
- Mid January, 2007 - FDOT receives Proposals
- Late February, 2007 - FDOT makes Final Selection and Awards Contract

Schedule – Construction

• 5 Year Construction Period beginning in 2007

2007

- Contractor Mobilization
- Final Design / Permitting
- Utility Relocation
- Phase 1 Roadway Detour

2008

- U-Walls / Approaches
- Cut & Cover Tunnel Segment
- Commence TBM Heading No. 1 (EB)
- POM Roadways & Bridges

2009

- U-Walls / Approaches
- Cut & Cover Tunnel Segment
- Commence TBM Heading No. 2 (WB)
- POM Roadways & Bridges

2010 - 2011

- POM Roadways & Bridges
- Support Facilities
- Complete Tunnel & Roadways
- Tunnel Systems, Testing and Startup