Joint DOT/FHWA Major Project Webinar

November 10, 2015

Sponsored by the FHWA Major Project Discipline
Agenda

1. Major Project Spotlight
   • Planning and Environmental Lessons Learned on I-5 North Coast Project
     – Caltrans
   • R-10 Project Management Strategies for Complex Projects & Project Management Plans
     – Michigan DOT
   • I-595 Express Corridor Improvements Project
     – Florida DOT

2. Build America Transportation Investment Center (BATIC)

3. Comments/Questions
Major Project Spotlight: DOT/FHWA Peer Exchange

Peer Exchange Featuring:

Caltrans
Michigan DOT
Florida DOT
Planning and Environmental Lessons Learned on I-5 North Coast Project

Clint Peace
Arturo Jacobs
Caltrans
I-5 North Coast Corridor

- 27 miles
- $6B 30 year project
  - Four Express Lanes on I-5
  - Completing LOSSAN Double track
  - Improve Coastal Access
  - Coastal Habitat Improvements
- Coastal Commission approval
  August 2014
North Coast Corridor Existing Condition

- Limited rail capacity and modal choice
- Low density and widely spread job centers
- Increasing population
- Heavy congestion limits coastal access, increases emissions and reduces quality of life
Existing Condition - Batiquitos Lagoon

- Degrading coastal resources
- Restricted tidal flushing
- Development demand for open space
- I-5 & LOSSAN corridors act as a barrier to east-west bike/ped movement
Multi-Agency Collaboration

• Recognize need to work together
• Presidential Order *******
• Corridor of the future
• Multiple Agency Partnership
• SB 468
  – Balanced rail, highway, community,
  – bike/ped improvements
  – “Get in, get out” of coastal lagoons
• One of six California CMGC pilot projects
Program Scope

A 30-year comprehensive and sustainable solution for the region.

– Express Lanes on I-5
– Double tracking the coastal rail line
– Integrated bike, pedestrian, and habitat improvements
Active Transportation
Site Purchased; Restoration Plan Underway
- Hallmark (east/west)
- Dean Family Trust
- Laser Property
- La Costa Property
- Deer Canyon II (site in escrow)
- San Dieguito Lagoon W19 (environmental review underway)

Restoration Projects in EIR/EIS Process
- San Elijo Lagoon (draft out for review)
- Buena Vista Lagoon (draft to be released November 2014)

Bridge Optimization Studies Complete
- San Elijo Rail/Highway
- Batiquitos Rail/Highway
- Buena Vista Rail/Highway

Endowment Account and Oversight Committee to be Established
- Batiquitos Lagoon Inlet Maintenance
- Los Peñasquitos Lagoon Inlet Maintenance
Opportunities and Integration

- Improve coastal access
- Improve tidal flushing

Manchester Ave. Bridge (before)

(after)
## Net Benefit

<table>
<thead>
<tr>
<th></th>
<th>No Build</th>
<th>Build</th>
<th>Highlights</th>
</tr>
</thead>
</table>
| **Coastal Access**   |          | 🟢     | • New 27-mile NCC Bike Trail and 7 miles of coastal rail trail  
• Completes east-west/north-south bike/ped trail links  
• Highway/rail improvements maximize coastal access  
• Alleviates demand/spillover traffic on local roadways, further improving coastal access and maintaining coastal character |
| **Coastal Habitat**  |          | 🟢     | • Regionally significant habitat restoration and preservation  
• Advanced no net loss mitigation prior to project impacts  
• Restores/preserves open space threatened by development  
• 78 acres of uplands and 55 acres of wetlands established and restored |
| **Water Quality/Wetlands** |          | 🟢     | • Improved tidal flushing  
• Long-term endowment for lagoon maintenance  
• Significantly improve run-off treatment  
• Improves hydrology of 10 coastal drainages |
| **Air Quality**      |          | 🟢     | • New bike/ped facilities creates non-vehicular links to transit and activity centers  
• Improved travel on rail and highway and local surface streets minimizes congestion, reducing emissions |
| **Multimodal Alternatives** |          | 🟢     | • Facilitates smart growth, ensuring transit, roads, bike&ped routes support infill development  
• Prioritizes alternates to SOV trips, including carpools, vanpools, rail and bus transit  
• Express Lane revenue supports corridor transit services  
• Increase options for non-motorized and transit access to the coast |
Where we are today
Construction Manager General Contractor

- Minimize impacts to the environment and public
- Maximize opportunities for construction alternatives
- Common understanding of project elements to reduce construction risks
- Design to cost
Entitlement Best Practices
• Holistic system approach
• Shared agency objectives
• Integration brings opportunity

CMGC Best Practices
• Good owner/contractor relationship results in design innovations
• Cost negotiations require new skills and knowledge
• Integration requires blending agency business practices
Next Steps

• Phase 1 Begin Initial GMP Jan 16

• Phase 1 Coastal Commission Hearing March 2016

• Begin Construction Late Spring 2016

• 5 year construction
Contact Information

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Clint.Peace@dot.ca.gov

Allan Kosup
Corridor Director for Interstate 5, State Route 76, and State Route 78
Caltrans
Allan.kosup@dot.ca.gov
Questions & Input

Submit a question using the chat box

Or

Dial *1 to call in your question by phone
Major Project Spotlight: R-10 Project Management
Strategies for Complex Projects & Project Management Plans

Sue Datta
Michigan DOT

Carlos Figueroa
FHWA - OIPD
SHRP2 Renewal (R10) Project Management Strategies for Complex Projects

Joint DOT/FHWA Major Projects Webinar

Carlos F. Figueroa, P.E.
FHWA Office of Innovative Program Delivery

November 10, 2015
What is SHRP2?

- Products developed from objective, credible research
- Solutions that respond to challenges of the transportation community – safety, aging infrastructure, congestion
- Collaborative effort of AASHTO, FHWA, and TRB
- Tested products, refined in the field

SHRP2 Solutions offer new technologies and processes to enhance the efficiency of transportation agencies.
Guide for Project Management Strategies for Complex Projects

- Outlines techniques for managing complex projects, e.g. Five dimensional project management model
- Tools:
  - Training program for DOT staff
  - Case studies on various types of projects
  - Forms (5 methods + 13 execution tools)

Link to Guidebook

Link to TRB Tuesdays webinars
Benefits:

- Early communication in the process
- Early identification of complexity based on needs of the specific project
- Early preparation of the financials, schedule, and resources
- Looking at context and financing as drivers of the project
- Earlier identification of critical success factors
- Creates a realistic balance between the available funding and scope
- Develop project action plans for success
Complexity mapping - a visual tool that helps identify and understand the dimension(s) with the most complexity.
Iterative Mapping Example

**Initial Complexity Map**
- Project Concept
- Complexity Footprint = 13434

**Second Complexity Map**
- Project Authorization
- Complexity Footprint = 10485

**Third Complexity Map**
- Project Execution
- Complexity Footprint = 7894

Average Complexity (all rated 50) = 5944; Maximum Complexity (all rated 100) = 23776
### 5DPM Methods

- **Method 1: Define Critical Project Success Factors**

<table>
<thead>
<tr>
<th>Most Complex</th>
<th>Technical</th>
<th>Context</th>
<th>Cost</th>
<th>Least Complex</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schedule</td>
<td>Technical</td>
<td>Context</td>
<td>Cost</td>
<td>Financing</td>
</tr>
<tr>
<td>Complete the project on time or early (Date 1/1/2002 in time for Olympics)</td>
<td>Define scope critical issues to allow early start of work immediately after notice to proceed (RR, utilities, ROW)</td>
<td>Get waiver of typical DBE requirements on federal aid portion and agree to yearly goals over five year project duration, based on local DBE capacity ($4 million/year)</td>
<td>Complete the project at or below cost (Total Cost &lt; $1.7 billion)</td>
<td>Change cash flow models and federal aid waivers to accommodate use of design build (approval by 1/1/1996)</td>
</tr>
</tbody>
</table>
Method 4: Prepare Early Cost Model and Finance Plan

- Process to map cash inflows and outflows
- Identify secured and unsecured sources of funds and when those funds will become available

Method 5: Develop Project Action Plans (PAPs)

- PAPs Goal: develop innovative solutions to remove or reduce constraints to project success
- Targeted Project Action Plans to anticipate and overcome project roadblocks and reduce speed bumps
Project Execution Tools

1. Incentivize Critical Project Outcomes
2. Develop Dispute Resolution Plan
3. Perform Comprehensive Risk Analysis
4. Identify Critical Permit Issues
5. Evaluate Applications of Off-Site Fabrication
6. Determine Required Level of Involvement in ROW/Utilities
7. Determine Work Package/Sequence
8. Design to Budget
9. Co-Locate Team
10. Establish Flexible Design Criteria
11. Evaluate Flexible Financing
12. Develop Finance Expenditure Model
13. Establish Public Involvement Plan
## R10 Current Users

<table>
<thead>
<tr>
<th>R10</th>
<th>Type</th>
<th>DOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round 1 – Feb. 2013</td>
<td>Lead Adopter</td>
<td>FHWA Federal Lands Georgia Massachusetts <strong>Michigan</strong> New Mexico</td>
</tr>
</tbody>
</table>
Carlos F. Figueroa, P.E.
Transportation Engineer
Office of Innovative Program Delivery
Project Delivery Team
Federal Highway Administration
(202) 366-5266

Carlos.figueroa@dot.gov

SHRP2 Implementation Assistance Website
http://www.fhwa.dot.gov/goshrp2
Comments or Questions?

goSHRP2@dot.gov

Save lives. Save money. Save time.
I-75 Modernization Project

R-10 Project Management Strategies for Complex Projects & Project Management Plans

Joint DOT/FHWA Major Project Webinar
November 10, 2015
1:30-3:30 PM
I-75 Modernization Project

- I-75 is an interstate freeway that runs north to south from Michigan’s upper peninsula to Florida
- Constructed in the 1960s and without any major upgrades in project corridor
- Both an urban (depressed) and rural/suburban (at-grade) section
• Six-lane facility with three travel lanes in each direction from M-102 to south of 12 Mile Road

• From 12 Mile Road to South Boulevard, it is a six-lane rural freeway with interchanges every few miles
Project covers about 18 miles within Oakland County, including 11 interchanges, 16 road crossings, traversing through six communities.

Contains one freeway to freeway interchange (I-696, not included in project improvements).

51 structures: 47 bridge replacements (41 vehicular and 6 pedestrian) with four new new structures.
Background

1992: I-75 Northern Oakland County Corridor Study
1999: I-75 SEMCOG/MDOT Corridor Study
2002: Draft Environmental Impact Statement
2005: Final Environmental Impact Statement
2006: Record of Decision
2009: Engineering Report for 12 Mile Road to M-59 (at-grade)
2010: Engineering Report for M-102 to 12 Mile Road (depressed)
2011: Success Management Workshops
2013: Design Modification Analysis
2013/2014: Community Aesthetic Workshops
Scope of Work

• Reconstruct existing three lanes
• Construct one new High-Occupancy Vehicle (HOV) lane for peak hour operation only
• Reconstruct Square Lake interchange to standard right exits and entrances
• Reconstruct 14 Mile and 12 Mile Road interchanges
• Reconstruct I-696 ramp to northbound I-75 by separating on-ramp from the northbound off-ramp to 11 Mile Road
Scope of Work

- Upgrade freeway geometrics
- Replace all vehicular and pedestrian bridges
- Reconstruct service drives (southern portion to 12 Mile Road)
- Construct corridor wide aesthetic improvements
- Improve drainage system
- Upgrade and construct carpool lots & ITS technologies
Cost

Total cost $1.32B
Year of Expenditure Dollars

- Roadway
- Bridges
- Right-of-way
- Maintenance of traffic
- Design
- Construction engineering
Construction Segments

- Due to funding limitations and mobility concerns, project corridor was divided into eight construction segments.

- First two construction segments address operations and crash concerns.

- Remaining segments are constructed from north to south in succession.
## 2016 Schedule

<table>
<thead>
<tr>
<th>TASKS</th>
<th>COMPLETION DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Estimate Review and Financial Plan</td>
<td></td>
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<tr>
<td>I-75 Modernization Cost Estimate Review</td>
<td>June 16-18, 2015</td>
</tr>
<tr>
<td>I-75 Modernization Initial Financial Plan (IFP)</td>
<td>August 21, 2015</td>
</tr>
<tr>
<td>FHWA Review and Approval of IFP</td>
<td>August 28, 2015</td>
</tr>
<tr>
<td>Interchange Access Justification Report (IAJR)</td>
<td></td>
</tr>
<tr>
<td>IAJR Submitted to MDOT</td>
<td>September 17, 2015</td>
</tr>
<tr>
<td>IAJR Submitted to FHWA</td>
<td>September 24, 2015</td>
</tr>
<tr>
<td>2016 Design Build Segment</td>
<td></td>
</tr>
<tr>
<td>Project Information Sheet Posted</td>
<td>June 5, 2015</td>
</tr>
<tr>
<td>Request for Qualifications Posted</td>
<td>September 8, 2015</td>
</tr>
<tr>
<td>Statements of Qualifications Received</td>
<td>October 26, 2015</td>
</tr>
<tr>
<td>Issue Final Preliminary Plans to MDOT</td>
<td>December 4, 2015</td>
</tr>
<tr>
<td>Issue Final RID to MDOT</td>
<td>December 4, 2015</td>
</tr>
<tr>
<td>Final MDOT Approval of Books, Plans and RID</td>
<td>December 18, 2015</td>
</tr>
<tr>
<td>RFP Advertisement</td>
<td>December 21, 2015</td>
</tr>
<tr>
<td>Proposal Due Date</td>
<td>April 4, 2016</td>
</tr>
<tr>
<td>Contract Award</td>
<td>June 1, 2016</td>
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</table>
## Corridor Schedule

<table>
<thead>
<tr>
<th>SEGMENTS</th>
<th>COMPLETION DATE</th>
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<tbody>
<tr>
<td>2016 - N of Coolidge to N of South Blvd</td>
<td></td>
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<tr>
<td>Design/Build Contract Award</td>
<td>June 1, 2016</td>
</tr>
<tr>
<td>Design/Build Construction &amp; Utilities</td>
<td>December 31, 2018</td>
</tr>
<tr>
<td>2018 - N of I-696 to S of 12 Mile Rd.</td>
<td></td>
</tr>
<tr>
<td>ROW</td>
<td>September 29, 2017</td>
</tr>
<tr>
<td>Design</td>
<td>December 31, 2017</td>
</tr>
<tr>
<td>Construction &amp; Utilities</td>
<td>December 31, 2020</td>
</tr>
<tr>
<td>2020 - N of Wattles to N of Coolidge</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>December 31, 2019</td>
</tr>
<tr>
<td>Construction &amp; Utilities</td>
<td>December 31, 2022</td>
</tr>
<tr>
<td>2022 - N of Rochester ot N of Wattles</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>December 31, 2021</td>
</tr>
<tr>
<td>Construction &amp; Utilities</td>
<td>December 31, 2023</td>
</tr>
<tr>
<td>2024 - N of 13 Mile Rd. to N of Rochester Rd.</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>December 31, 2023</td>
</tr>
<tr>
<td>Construction &amp; Utilities</td>
<td>December 31, 2025</td>
</tr>
<tr>
<td>2026 - S of 12 Mile Rd. to N of 13 Mile Rd.</td>
<td></td>
</tr>
<tr>
<td>ROW</td>
<td>December 31, 2023</td>
</tr>
<tr>
<td>Design</td>
<td>December 31, 2025</td>
</tr>
<tr>
<td>Construction &amp; Utilities</td>
<td>December 31, 2027</td>
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<tr>
<td>2028 - N of 9 Mile Rd. to I-696</td>
<td></td>
</tr>
<tr>
<td>ROW</td>
<td>December 31, 2025</td>
</tr>
<tr>
<td>Design</td>
<td>December 31, 2027</td>
</tr>
<tr>
<td>Construction &amp; Utilities</td>
<td>December 31, 2029</td>
</tr>
<tr>
<td>2030 - N of M-102 to N of 9 Mile Rd.</td>
<td></td>
</tr>
<tr>
<td>ROW</td>
<td>December 31, 2027</td>
</tr>
<tr>
<td>Design</td>
<td>December 31, 2029</td>
</tr>
<tr>
<td>Construction &amp; Utilities</td>
<td>December 31, 2031</td>
</tr>
</tbody>
</table>
Current Status

- Re-Evaluation, IFP, and IAJR in review
- PMP Executive Leadership Endorsement underway
- Design/Build Books and 30% plans under review
- RFQ advertised
- RFP to be issued late 2015/early 2016
- Selection and contract award expected Spring 2016
R10 Workshops

• Provided discussion and alternate perspectives at key points of plan development
• Reviewed the Five-Dimensional Project Management Planning method and applicability to mega-projects
• Highlighted financing issues
• Defined and reviewed context and implications to project advancement
• Provided expertise from other parts of the country to share experience and guide plan development
R10 Success

- Focused MDOT to develop feasible, reasonable funding for the mega-projects
- Identified & ensured context was identified, acknowledged, and addressed with a plan
- Introduced risk management planning
- Enabled early preparation of cost modeling and financial plan development
Other Elements

- Unable to easily transfer and apply to average or small sized projects
Lessons Learned

• Complexity mapping should be an electronic visual tool in project development and as checkpoints throughout the process.
Lessons Learned

• Context and financing are key elements that need to be planned for and addressed early
• Use of focused, strategic plans help guide development
• Incorporate expectations and R10 elements in PMP outline
Goals: Achieve a 90% success rating on the public engagement process by engage 100% of stakeholders so they know MDOT is listening to their concerns.

Engagement MUST be...
- Relevant, Credible and Inclusive

Triangulating for Success

- Residents
- Neighborhoods
- Community
- Groups
- Faith-based
- Organizations
- Federal
- State
- County
- City
- SEMCOG
- Public Transit
- Business
- Industry
- Trades
- Private Utilities
- Interest Groups
- Entertainment & Media
### STAKEHOLDER ENGAGEMENT PROCESS

- **Methods to engage the public**
  - Stakeholder meetings
  - Advisory committees
  - Public meetings
  - Surveys
  - Social media
  - Traditional media
  - Email/Direct mail
  - Newsletters

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*Please attend a community meeting about the 94 MODERNIZATION PROJECT.*

**What:**
An open house-style meeting to gather public input on the future I-94 Modernization Project in Detroit.

**Background:**
MDOT is leading a community input that will help determine the project's conceptual design. Areas for public input include continuous service drives, local bridges and aesthetics, lighting, etc. New construction will include additional lanes and on/off ramps in the area.

**Tuesday, July 14, 2015**
- 6:30-8:30 PM
- Grace Episcopal Church
- 9601 Cass Ave.
- Detroit, MI 48201

**Thursday, July 16, 2015**
- 6:30-8:30 PM
- Wayne County Community College Eastern Campus
- 5901 Conner Ave.
- Detroit, MI 48213

For special accommodations, please call 313-864-0550 or 711 (TDD) no later than 10 days prior to meeting date.
STAKEHOLDER ENGAGEMENT SUCCESSES

- July 2015 Public Meetings (184 attendees)
- Media Coverage by 12 media groups
- 600+ Facebook subscribers
- Published Summer 2015 Newsletter
- Outreach to 79 organizations
- 266 Stakeholder Survey participants

Next Steps:

- Fall 2015 Local Access coordination with City Detroit
- Community Connector Bridge Design Charrette
- Winter/Spring 2016 Public Meeting
- Advisory Committee Meetings
- Project Branding (logo, video)

Contact Us:
Rob Morosi, MDOT Communications Specialist, 248-483-5107
www.michigan.gov/drive
www.twitter.com/MDOT_MetroDet
www.facebook.com/MichiganDOT
Sign up for e-mail alerts from MDOT
Questions
Contact Information

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**Carlos Figueroa**
SHRP2 Project Management Program Manager
FHWA – Office of Innovative Program Delivery
Carlos.Figueroa@dot.gov
Questions & Input

Submit a question using the chat box

Or

Dial *1 to call in your question by phone
Major Project Spotlight: I-595 Express Corridor Improvements Project

Kelley Hall, P.E.
Paul Lampley, PE
Florida DOT
I-595 Express Corridor Improvements Project

Accelerating Innovation through Public-Private-Partnership (P3)

Kelley Hall, P.E.
595 Operations Project Manager

Paul Lampley, P.E.
595 Construction Project Manager

Florida Department of Transportation
Project Limits

I-595 from I-75/Sawgrass Expressway Interchange to west of the I-95 Interchange and Florida’s Turnpike from Griffin Road to Peters Road
• Three reversible express lanes
  – Direct connection to Florida’s Turnpike
  – Open Road Tolling
• SR 84 continuous connections
• Florida’s Turnpike Interchange

• Broward County greenway
• Ramp improvements
  – Auxiliary lanes
  – Braided ramps
  – Bypass bridges
• Sound barrier walls
PROJECT HIGHLIGHTS

1st DBFOM P3 in Florida
1st Availability Payment P3 in the US
Reversible toll lanes (six lanes for the price of three)
Congestion pricing
State-of-the-art emergency access and infrastructure
35-year operations and maintenance (O&M)
Direct connections to Florida's Turnpike
Bus rapid transit
Shared-use drainage
P3 INNOVATIONS

- Reuse of existing infrastructure
  - Third level ramp P salvaged
  - Third level ramp N lifted and lengthened
  - Tamp T-1 widened
  - Salvage of existing cross-road bridges
- Minimization of R/W impacts
- Minimization of utility impacts
- Bid price was $200 million below FDOT engineers estimate
- Less than 1% FDOT added work during construction
- Construction complete with zero claims
BENEFITS OF P3 DELIVERY METHOD

- Encourages innovation
- Advances project delivery
- Can provide significant cost savings
- Allows appropriate risk transfer
- Creates jobs and stimulates the economy
- Provides for performance-based O&M
**INITIAL PROJECT PHASING**

**P3 FIRM PROJECTS**

<table>
<thead>
<tr>
<th>SEGMENTS</th>
<th>SEGMENTS LIMITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (TPK A)</td>
<td>W. OF DAVIE RD. TO SR 7 (SR-7/TPK INT) (WB)</td>
</tr>
<tr>
<td>2 (TPK B)</td>
<td>E. OF UNIVERSITY DR. TO E. OF TPK (EB)</td>
</tr>
<tr>
<td>3</td>
<td>E. OF UNIVERSITY DR. TO W. OF DAVIE RD. (WB)</td>
</tr>
<tr>
<td>4</td>
<td>E. OF NOB HILL RD. TO E. OF UNIVERSITY DR. (WB)</td>
</tr>
<tr>
<td>5</td>
<td>E. OF PINE ISLAND RD. TO E. OF UNIVERSITY DR. (EB)</td>
</tr>
<tr>
<td>6</td>
<td>W. OF SW 136 AVE TO E. OF NOB HILL RD. (WB)</td>
</tr>
<tr>
<td>7</td>
<td>W. OF NOB HILL RD. TO E. OF PINE ISLAND RD. (EB)</td>
</tr>
<tr>
<td>8</td>
<td>W. OF SW 136 AVE. TO W. OF NOB HILL RD. (EB)</td>
</tr>
<tr>
<td>9</td>
<td>REVERSIBLE LANES FROM W. OF SW 136TH AVE. TO E. OF SR 7</td>
</tr>
<tr>
<td>10</td>
<td>DIRECT CONN. (EAST) FROM REV. LANE TO TPK MEDIAN N. &amp; S. OF I-595</td>
</tr>
<tr>
<td>10A</td>
<td>SEGMENTS 11 &amp; 12 INTERIM IMPROVEMENTS TO ACCOMMODATE REV. LANES (EAST)</td>
</tr>
<tr>
<td>TPKC</td>
<td>TPK FROM I-595 TO GRIFFIN RD. AND SB ON-RAMP (SB)</td>
</tr>
<tr>
<td>TPKD</td>
<td>TPK SB FLYOVER RAMP TO I-595</td>
</tr>
<tr>
<td>TPK E</td>
<td>TPK FROM GRIFFIN RD. TO I-595 (NB)</td>
</tr>
</tbody>
</table>

**PROJECTS BY OTHERS**

<table>
<thead>
<tr>
<th>SEGMENTS</th>
<th>SEGMENTS LIMITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>SR 7 TO I-95 (WB)</td>
</tr>
<tr>
<td>12</td>
<td>E. OF TPK TO I-95 (EB)</td>
</tr>
<tr>
<td>I-75 A</td>
<td>DIRECT CONN. (WEST) FROM REV. LANES TO I-75 MEDIAN SOUTH OF I-595</td>
</tr>
</tbody>
</table>
How Did P3 Advance I-595?

- Accelerated the schedule
  - Advanced noise wall construction
  - Provided capacity improvements a minimum of 15 years sooner than the initial (conventional) plan
  - Reduced MOT duration impacting public and businesses
- Provided finance mechanism for funding shortfall
• Execution of agreement: March 3, 2009
• NTP 2 (take over O&M): July 31, 2009
• Major construction begin: February 26, 2010
• Open Express lanes: March 26, 2014
• Substantial completion: March 26, 2014
• Final acceptance: September 5, 2014
• Construction ($1.2 billion) completed on schedule in 49 months
• Project completed with zero days added to original schedule (no weather days or holidays permitted per contract)
COST BENEFITS OF P3

- Encourages innovation and reuse of existing infrastructure
- Encourages long-term quality
- Allows economy of scale
- Provides fixed cost for design and construction
- Provides fixed cost for long-term O&M
- Includes renewal and hand-back requirements
- Provides financial mechanism to fund shortfall in agencies work program
SUCCESS OF 595 EXPRESS P3

• No payments made until the road was substantially complete and open to the public
• Less than 1% FDOT added work during construction
• Construction complete with zero claims
• Project finished on original schedule
PAYMENTS TO CONCESSIONAIRE

I-595 Express Payment Structure

Scheduled
Construction Completion
Sept. 2014

Final
Maximum Milestones Payment
Availability

Payments (Millions)

$0 $50 $100 $150 $200 $250 $300

Year


Design & Construction March 2009

20 50 66 71 95 123 217 4
# APPROPRIATE RISK ALLOCATION

<table>
<thead>
<tr>
<th>Risk Category</th>
<th>FDOT</th>
<th>Concessionaire</th>
<th>Shared</th>
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<tr>
<td>Political</td>
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<td>Financial</td>
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<tr>
<td>Traffic &amp; Revenue</td>
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<tr>
<td>Right-of-Way</td>
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<td>Permits/Government Approvals</td>
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<td>Utilities</td>
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<tr>
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<tr>
<td>Construction</td>
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<tr>
<td>Operations &amp; Maintenance</td>
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<td>X</td>
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<tr>
<td>Hand-Back</td>
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<tr>
<td>Force Majeure</td>
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<td>Change in Law</td>
<td>X</td>
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<tr>
<td>Contamination</td>
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<td></td>
<td>X</td>
</tr>
<tr>
<td>Geotechnical</td>
<td></td>
<td></td>
<td>X</td>
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</tbody>
</table>
ECONOMIC BENEFIT

• Employed over 2,000 people per month directly on the project
• Pumped over $18 million per month into local economy
• Contracted with over 275 local companies
• Over 11% of the construction cost awarded to disadvantaged business enterprises
• Graduated 164 trainees in the construction trades
EXPRESS LANES

- All motor vehicle types are allowed to use the I-595 Express lanes
- All users are charged a toll in the I-595 Express lanes
• Performance based O&M
  – Payment adjustments
  – Non-compliance points
• Higher level of service to users
• Added traffic management center operations 24/7 – 365 days
  – CCTV monitoring
  – Road rangers 24/7
  – Rapid incident scene clearance
  – Severe incident response vehicles
I-595 EXPRESS LANES LIMITS

Monday through Friday 4 a.m. to 1 p.m. and Saturday 4 a.m. through Monday 1 p.m.

Express Lanes Limits
I-595 EXPRESS LANES LIMITS

Monday through Friday
2 p.m. to 2 a.m.
Roadway Average Speed

2009
44.9 MPH

Average speeds show are the 8am to 9am average for the month of August
• 2015 Speed Distribution for I-595
  – 61% between 60-70 mph
  – 39% between 70-80 mph
  – 0% lower than 60 mph or over 80 mph

• 2015 Speed Distribution for Express Lanes
  • 88.7% between 70-80 mph
  • 9.0% between 80-90 mph
  • 2.3% between 60-70 mph
  • 0% lower than 60 mph or higher than 90 mph
595 EXPRESS TRAFFIC

595 EXPRESS LANE MONTHLY TRAFFIC VOLUMES

<table>
<thead>
<tr>
<th>Month</th>
<th>WB-VOLUME</th>
<th>EB-VOLUME</th>
<th>TOTAL-VOL</th>
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<tr>
<td>Sep-14</td>
<td>121840</td>
<td>129429</td>
<td>251269</td>
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<tr>
<td>Oct-14</td>
<td>134351</td>
<td>156750</td>
<td>291101</td>
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<td>Nov-14</td>
<td>112303</td>
<td>140013</td>
<td>252316</td>
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<td>Dec-14</td>
<td>127210</td>
<td>145225</td>
<td>272435</td>
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<td>Jan-15</td>
<td>131633</td>
<td>158341</td>
<td>289974</td>
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<td>Feb-15</td>
<td>134379</td>
<td>161635</td>
<td>296014</td>
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<tr>
<td>Mar-15</td>
<td>148191</td>
<td>180489</td>
<td>328680</td>
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<tr>
<td>Apr-15</td>
<td>146232</td>
<td>179936</td>
<td>326168</td>
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<tr>
<td>May-15</td>
<td>142322</td>
<td>177726</td>
<td>320048</td>
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<td>Jun-15</td>
<td>138333</td>
<td>166721</td>
<td>305054</td>
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<td>Jul-15</td>
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<td>158070</td>
<td>301457</td>
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<td>Aug-15</td>
<td>131773</td>
<td>157008</td>
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<tr>
<td>Sep-15</td>
<td>146114</td>
<td>176593</td>
<td>322707</td>
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</tbody>
</table>
595 EXPRESS TRUCK USE

595 EXPRESS MONTHLY TRUCK VOLUMES

- Sep-14
- Oct-14
- Nov-14
- Dec-14
- Jan-15
- Feb-15
- Mar-15
- Apr-15
- May-15
- Jun-15
- Jul-15
- Aug-15
- Sep-15

% OF TRUCKS

1.35%
I-595 Warning and Barrier Gates
For Reversible Ramps

5 Barrier Gate

34 Warning Gates
I-595 Warning Gate Hit History

MAR-14: 0
APR-14: 16
MAY-14: 23
JUN-14: 24
JUL-14: 9
AUG-14: 18
SEP-14: 10
OCT-14: 5
NOV-14: 3
DEC-14: 6
JAN-15: 12
FEB-15: 14
MAR-15: 18
APR-15: 14
MAY-15: 14
JUN-15: 12
JUL-15: 5
AUG-15: 5
SEP-15: 7
OCT-15: 8

Years: 2014, 2015

Graph showing the hit history of the warning gate from March 2014 to October 2015.
1. **Shortening the length of the first warning gates:** Originally, warning gates covered the entire width of the travel lanes. Gates were shorten by 18” on May 24th, 2014.

2. **Second shortening of the warning gates at Ramp R-3:** Despite the first shortening, vehicles continued to hit the warning gates of Ramp R-3. Gates were further shortened, to a length of no less than the middle point of the lane on June 16th, 2014.

3. **Additional Improvements to Ramp R-3 were considered:** Re-striping of Ramp R-3 was implemented in August 2014.

4. **Change of banners of the warning gates:** The color and the reflectivity of the original banners were improved by changing the color and the material. The new banners were implemented in September 2014.
I-595 BARRIER GATES FOR REVERSIBLE RAMPS

5 Barrier Gates

2 Barrier Gate hits since opening.

No vehicles have gotten past the barrier gate.
EMERGENCY ACCESS GATES

Longitudinal Sliding Gates
• 42 foot-wide opening
• Opened from the Traffic Management Center or manually

Emergency Access Gates
• There are five throughout the corridor
• Provide emergency vehicles access into the Express Lanes (three in the westbound direction, two in the eastbound direction)
www.595express.info

Questions?
Contact Information

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Paul Lampley, P.E.
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Questions & Input

Submit a question using the chat box

Or

Dial *1 to call in your question by phone
Build America Transportation Investment Center (BATIC)

Mark Sullivan
FHWA-OIPD
Build America Transportation Investment Center (BATIC)

We know BATIC can’t solve all our infrastructure problems.

But we also know that BATIC has already been a key driver for the funding and acceleration of infrastructure projects over the past year and its impact will increase with its continued momentum.

We have BILLIONS of dollars of infrastructure needs and better access to technical assistance and credit programs can’t fill that void alone.

Read the BATIC Blue Book.

The Build America Transportation Investment Center serves as the single point of contact and coordination for states, municipalities and project sponsors looking to utilize federal transportation expertise, apply for federal transportation credit programs and explore ways to access private capital in public private partnerships.
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**BATIC's Mission is to:**

**EXPAND**
The use of federal transportation credit programs such as TIFIA and RRIF.

**INNOVATE**
New approaches to project development processes and funding challenges and institutionalize technology and best practice across credit programs and modal teams.

**DELIVER**
Streamlined technical and financial assistance to accelerate project delivery.

Visit the BATIC Institute
In the Spotlight

Goethals Bridge Replacement

Eagle Project

SH 130 (Segments 5-6)

View all BATIC Project Highlights

Technical Assistance

The $1.5 billion Goethals Bridge Replacement Project involves the construction of a new bridge to replace the aging, existing Goethals Bridge...
Contact Information

Mark Sullivan

BATIC Project Development Lead
FHWA – Office of Innovative Program Delivery
Mark.Sullivan@dot.gov
Questions & Input

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Or

Dial *1 to call in your question by phone
Upcoming Webinars

Joint DOT/FHWA Major Project Webinar
Tuesday, May 10th
1:30 p.m. to 3:30 p.m. (ET)

Quarterly Major Project Webinar (FHWA)
Tuesday, February 2nd
1:30 p.m. to 3:30 p.m. (ET)

Recordings available at: http://www.fhwa.dot.gov/ipd/project_delivery/training/

Contact LaToya at latoya.johnson@dot.gov or 202-366-0479
if you have topic ideas for upcoming webinars
LaToya Johnson, P.E., PMP

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