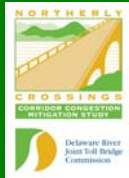


Northerly Crossings Corridor Congestion Mitigation Study

Public Information Forum #2
February 27, 2006



Introductory Remarks



Delaware River Joint Toll Bridge Commission

- **Mission:** The mission of the Delaware River Joint Toll Bridge Commission is to provide safe and efficient river crossings over 139 miles of river within its jurisdiction.



Project Team

- Delaware River Joint Toll Bridge Commission
- Michael Baker Jr., Inc.
Subconsultants
 - Bogart Engineers – Traffic Data Collection and Surveys
 - SKYCOMP



Study Purpose

- Identify Existing Transportation Conditions, Future Needs and Potential Problems and Develop Conceptual Alternatives to Mitigate Deficiencies
- Level of Service Criteria used to determine Acceptable versus Unacceptable Conditions
 - LOS A to LOS D → Acceptable
 - LOS E to LOS F → Unacceptable



LOS Criteria

LEVEL OF SERVICE Highway traffic congestion is measured in terms of Level of Service (LOS) as defined by the Highway Capacity Manual (HCM). LOS is a letter code ranging from "A" for excellent conditions to "F" for failure conditions. The conditions defining the LOS for roadways are summarized as follows:

<p>LOS A Represents the best operating conditions and is characterized by free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.</p>	<p>LOS D Represents traffic operations approaching available flow with high parking demand and passing capacity near zero, characterized by drivers being severely restricted in maneuverability.</p>
<p>LOS B Represents reasonably free-flowing conditions but with some influence by others.</p>	<p>LOS E Represents operations near capacity. LOS E often changes to LOS F any quickly because of disturbances (road conditions, accidents, etc.) in traffic flow.</p>
<p>LOS C Represents a constrained constant flow. Drivers must give additional attention to maintain safe operations. Comfort and convenience levels of the driver decline noticeably.</p>	<p>LOS F Represents the worst conditions with heavily congested flow and traffic-derived maximum capacity. Characterized by slow and stop-and-go traffic, poor travel time, low comfort and convenience, and increased accident exposure.</p>



Study Understanding

Milford-Montague Toll Bridge



Two lane bridge with sidewalk linking Route 206/15 in NJ to Route 209 and I-84 in PA



Study Understanding

Portland-Columbia Toll Bridge



Two lane facility connecting SR 611 and Route 46



Study Understanding

Portland-Columbia Pedestrian Bridge



Eight-foot wide bridge connecting Columbia, NJ and Portland, PA



Study Understanding

I-80 Delaware Water Gap Toll Bridge



Four-lane bridge through Delaware Water Gap National Recreation Area - one of the DRJTBC's 3 busiest bridges



Work Plan

- Technical Memorandum #1
 - Previous Studies and Plans
 - Planning Perspectives (Visions, Master Plans, Smart Growth)
 - Establish Study Area Limits
 - Develop Public Participation Plan
- IAC Meeting #1 – January 13, 2004
- NCF Meeting #1 – March 8, 2004



Work Plan

- Technical Memorandum #2
 - Inventory of Existing Transportation System
 - Base Year Analysis (2004)
 - Environmental Screening
- IAC Meeting #2 – September 14, 2004
- NCF Meeting #2 – October 5, 2004
- Public Information Forum – Nov. 17, 2004



Work Plan

- Technical Memorandum #3
 - Future Year Forecasts and No Build Analysis
 - Develop Conceptual Alternatives
 - Address Physical and Operational Deficiencies
 - Address Short and Long Term Demand
- IAC Meeting #3 – February 4, 2005
- NCF Meeting #3 – March 9, 2005



Work Plan

- Technical Memorandum #4
 - Range of Conceptual Improvements
 - Evaluation Criteria
 - Concept Evaluation and Results
- IAC Meeting #4 – May 18, 2005
- NCF Meeting #4/Public Information Forum #2 – February 27, 2006



Milford-Montague Toll Bridge Findings

- Operates at LOS C/D during Design Year 2030 peak hours
- Flanking intersections operate at LOS F during Design Year 2030 weekend peak hours

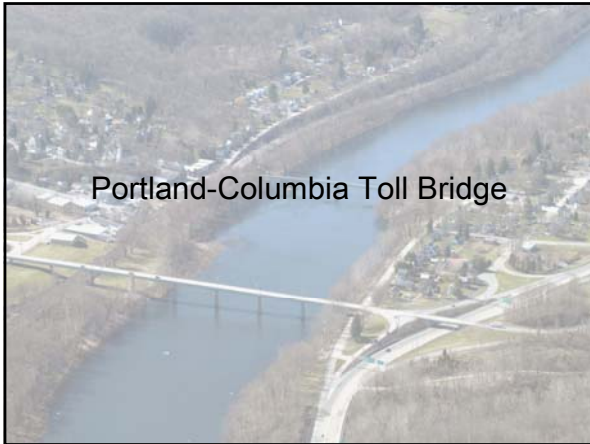


Milford-Montague Toll Bridge Recommendations

- Milford-Montague Bridge
 - Advance system preservation project for bridge structure
 - Signalize Route 206/SR 209 Intersection in PA and signalize Route 206/Old Mine Road Intersection in NJ (Design Year 2030)
 - Provides exclusive left turn lane from SR 209 southbound onto the bridge

Milford-Montague Toll Bridge Recommendations





Portland-Columbia Toll Bridge Findings

- Operates at LOS C/D during Design Year 2030 peak hours
- Flanking intersections operate at LOS C or better during Design Year 2030 peak hours

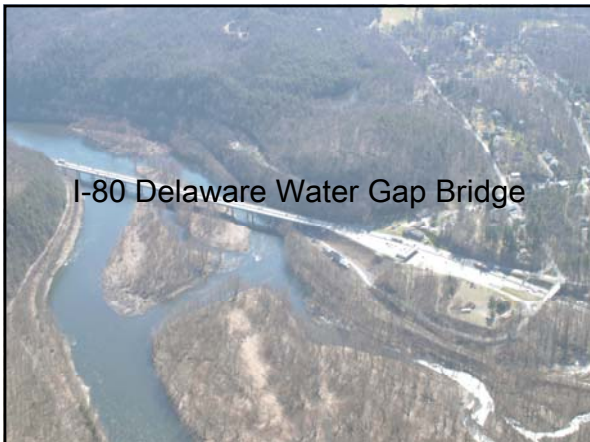


Portland-Columbia Toll Bridge Recommendation

- Portland-Columbia Bridge
 - Improve SR 611/Bridge Ramp Intersections
 - Striping enhancements at the intersections to provide exclusive left turn lanes



Portland-Columbia Toll Bridge Recommendation



I-80 Future No Build Analysis

- I-80 Westbound DWG Bridge currently operates at LOS F.
- I-80 Eastbound DWG Bridge will operate under unacceptable conditions by Year 2008.
- Motorists will experience extreme congestion and extensive queuing and delay during peak hours by Design Year 2030.
- Implementation of complementary strategies and the Lackawanna Cut-Off will not negate the need for congestion mitigation on I-80.



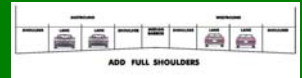
I-80 Corridor Level Improvements

- Concept Boundaries
 - I-80 M.P. 3.5 (Lackawanna Cut-Off Bridge) in NJ
 - I-80 Exit 309 (Route 209 North) in PA



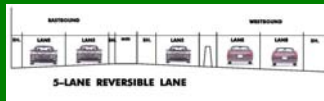
I-80 Improvement Concepts

- Concept 1A: Add full shoulders to I-80
- Concept 1B: Add moveable barrier on the existing bridge to allow reversible lane operation



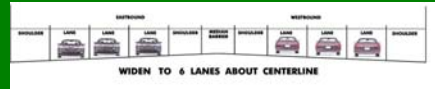
I-80 Improvement Concepts

- Concept 2A: Add one reversible lane on I-80
- Concept 2B: Add one westbound lane on I-80



I-80 Improvement Concepts

- Concept 3A: Add two lanes (one eastbound and one westbound) on I-80



- Concept 3B: Add two lanes (one eastbound and one westbound) with a Double Deck structure



I-80 Improvement Concepts

- Concept 3C: I-80 Split Alignment
 - Westbound direction on existing structure
 - Eastbound direction on new structure



- Concept 3D: I-80 Tunnel
 - Eastbound direction on existing structure
 - Westbound direction on new structure



I-80 Improvement Concepts

- Concept 3E: I-80 Alternate Alignment
 - New roadway to the south of existing DWG Bridge serving as a Stroudsburg Bypass or I-80 Express Route
- Concept 3F: I-80 Alternate Alignment
 - New roadway to the north of the existing DWG Bridge serving as a Stroudsburg Bypass or I-80 Express Route





Complementary Strategies

- Based on NJ Transit ridership forecasts, demand may be reduced by 7% with implementation of Lackawanna Cut-Off
- Implementation of other complementary strategies may reduce demand by an additional 3% including:
 - Toll Plaza Enhancements
 - ITS – Variable Message Signs
 - Lackawanna Cut-Off Railroad
 - New/Improved bus service to NYC and Morris County
 - Park and Rides, Carpool/Vanpool
 - Employee Trip Reduction Strategies



Evaluation Criteria

- Mission Statement (Pass/Fail)
 - Does the concept meet the mission statement of the study, which is to reduce congestion within the DRJTBC jurisdiction?
- Design Criteria
 - Qualitative assessment of expected difficulty of design
- Construction Criteria
 - Qualitative assessment of expected difficulty of construction



Evaluation Criteria

- Congestion/Mobility Criteria
 - Improve regional mobility
 - Improve peak period LOS
 - Improve travel time and travel speed
 - Impact on VMT



Evaluation Criteria

- Feasibility Criteria
 - Can the concept be designed to meet all current design standards with limited design exceptions?
 - Preliminary Construction Cost
 - Operational Costs
 - Right of Way Impacts/Costs
 - Requires time-consuming environmental permitting process



Evaluation Criteria

- Environmental Criteria
 - Impact to wetlands and surface water resources
 - Impact to wildlife and vegetation (T&E)
 - Increase noise levels to sensitive receptors
 - Impact to air quality
 - Impact to recreation areas/parks
 - Impact to cultural/historical resources
 - Impact to visual resources



Evaluation Criteria

- Public/Community Impact Criteria
 - Compatible with existing or proposed land use
 - Environmental Justice Impacts
 - Impact to existing traffic operations during construction
 - Require investment by agencies other than DRJTBC for improvements outside DRJTBC jurisdiction



Concept Evaluation Results

Ranking	Concept	Score
1	Concept 3A: 6 Lanes along Existing Alignment	14.9
2	Concept 2A: 5 Lanes with Moveable Barrier	14.1
3	Concept 2B: 5 Lanes, 3 Lanes Westbound, 2 Lanes Eastbound	14.0
4	Concept 3B: 6-Lane Double Deck Facility	10.4
5	Concept 3E: I-80 Alternate Alignment to the South	9.6
6	Concept 3F: I-80 Alternate Alignment to the North	9.5
7	Concept 3C: 6 Lanes, I-80 Eastbound New Bridge	9.4
8	Concept 3D: 6 Lanes, I-80 Westbound Tunnel	8.7

The following concepts were not scored because they failed the Mission Statement criteria:

No Build
Concept 1A: 4 Lanes with Full Shoulders
Concept 1B: 4 Lanes with Moveable Barrier



Concept Evaluation Summary

- The following three concepts were determined to be the most desirable and should be advanced for further study.
 - Concept 2A (5 lanes, moveable barrier)
 - > \$500 M
 - Concept 2B (3 lanes westbound, 2 lanes eastbound)
 - > \$490 M
 - Concept 3A (3 lanes westbound and 3 lanes eastbound)
 - > \$630 M



ROM Program Costs

Concept	Jurisdiction	ROM Program Cost
Concept 2A	DRJTBC	\$160 M
	NJ and PA	\$340 M
	Total	\$500 M
Concept 2B	DRJTBC	\$150 M
	NJ and PA	\$340 M
	Total	\$490 M
Concept 3A	DRJTBC	\$270 M
	NJ and PA	\$360 M
	Total	\$630 M



Concept Implementation Challenges

- NJDOT and PENNDOT do not currently have complementary congestion mitigation improvements in their Transportation Improvement Programs
- There currently exists a need for westbound congestion mitigation



Open Road Tolling Concept

- Reduce congestion at westbound toll plaza
 - Add one westbound lane within DRJTBC jurisdiction (5-lane DWG Bridge)
 - Reconstruct toll plaza to accommodate 2 Open Road Tolling lanes plus 5 or 6 cash/E-ZPass lanes

Open Road Tolling Concept



Open Road Tolling Concept



ROM Program Cost

Concept	Jurisdiction	ROM Program Cost
Open Road Tolling	DRJTBC	\$155 M

Recommendations

- Implement Open Road Tolling Concept
- Create a Task Force including representatives of DRJTBC, NJDOT and PENNDOT to address congestion mitigation along I-80

Next Steps

- Complete Study
 - Final Report - Spring 2006
- Implement Recommendations
 - Advance ORT Concept
 - Create Task Force

Northerly Crossings Corridor Congestion Mitigation Study

www.northerlycrossings.com

