Corridor Definition

- **Pulaski Skyway is 3 ½ miles long**
- **Direct Link to Holland Tunnel via Route 139**
- **Links Newark at Raymond Blvd. & Jersey City at Tonnele Ave Circle**
- **Broadway Ramp - southbound entrance, northbound exit to Jersey City**
- **Kearny Ramp - southbound exit, northbound entrance to Kearny**
Superstructure

Main Thru-Truss

Deck Truss

Multi-Girder Spans

Thru-Truss (Span 20)

Thru-Truss (Span 44)
Concrete Encased Piers

Reinforced Concrete Piers
Substructure

Steel Columns and Cross Frames

Steel Bent Pier
Existing Conditions
Superstructure

**Vehicular Impact to Diagonal Member**

**100% Loss to South Truss Lacing Bars and Horizontal Legs of Bottom Angles**

**Holed-Through Gusset Plate in Lower Chord**
Existing Condition
Superstructure

Section Loss and Holes on Hanger

Up to 50% Section Loss
Hanger Vertical Members

Up to 100% Section Loss
Floorbeam Member
Existing Conditions Superstructure
& Deck Components

Holes in adjacent web panels

Hole in stringer with entire end panel missing
Existing Condition
Substructure

Reinforced Concrete Abutments
- Exposed and Rusted Reinforcing Steel
- Concrete Delamination
- Random Medium to Wide Cracks

Exposed Bottom Flanges of Pier Caps Exhibit Moderate Corrosion and Efflorescence
Existing Condition
Substructure

Reinforced Concrete Piers

- Chipped and Split Concrete With Exposed Reinforcing Steel
- Areas of Delamination
- Vertical and Horizontal Cracks From 1/8 Inch to 1/4 Inch Wide
Existing Condition Substructure

Cracked Weld at Column / Pier Cap Connection

Up to 50% Anchor Bolt Section Loss at Base of Column for Pier Bent
Examples of severely deteriorated, cracked and patched concrete deck
$90M in interim construction projects:

- **No. 1** - Deck repairs Spans A0 to 44 - Complete - $22M
- **No. 2** - Deck repairs Spans 45 to 108 & overlay entire deck - Complete - $23M
- **No. 3** - Priority repairs from inspection report - Complete - $6M
- **No. 4** - Drainage protection repairs - Nearing Completion - $38M
Existing Traffic Flows

- Carries 67,000 vehicles per day
- Carries 3,500 NB/2,640 SB in AM peak hour
- Carries 3,035 SB/2,905 NB in PM peak hour
ALTERNATIVE ANALYSIS
Task Force Started the Assessment Process

- Task Force charged with developing a comprehensive plan to address the needs of this complex structure
- Members included representatives from NJ DOT, FHWA, SHPO, NJ TPK, PANYNJ, NJ DEP, NJ Transit, TRANSCOM
- First Task Force meeting held 11/2005
- Discussions during this collaborate effort formed the basis of the Concept Development alternatives.
2008 Concept Development Public Involvement Program

- Local Officials and Agency Meeting
- Public Info Center
- Newsletters
- NJ DOT website
- Fact Sheet
- Library Program
- Stakeholder databases
Local Officials & Agencies Meeting

- **Invitees:**
  - Essex and Hudson Counties
  - Hudson TMA
  - Newark
  - Jersey City
  - Kearny
  - Meadowlink
  - TRANSCOM
  - SHPO
  - NJ TPA
  - NJ TPK
  - PANYNJ
Alternatives Considered

- No Build – Bridge Closed and Removed - No Provision for Displaced Traffic
- No Build – Bridge Closed and Removed - Provide Alternate Route Improvements
- New Parallel Structure and Rehab Existing
- New Parallel Structure and Demolish Existing
- Rehabilitate Skyway
  - Rehabilitate and Widen Skyway
  - Rehabilitate and Relocate Center Ramps to Outside
  - Rehabilitate Skyway in Current Configuration (PPA)
Rehabilitate Structure in Current Configuration

- Selected based on:
  - Ability to roll-out Safety Improvements sooner
  - Improved Quality of final product
  - ROW cost is relatively low
  - Lowest Construction Cost ($1B)
  - Minimal environmental impacts

- Design for 75 year service life
DECK CONSTRUCTION
STAGING ALTERNATIVES
Deck Replacement
Alternatives Studied

- **Overnight/Weekend Construction**
  - Maintain peak period capacity
  - Night and Weekends Construction closes one bound
  - Estimated Construction Cost $571M
  - Construction Duration over 6 years

- **Close 1 Bound Full Time**
  - Either NB or SB direction closed
  - Options to maintain traffic on open bound
  - Estimated Construction Cost $355M
  - Construction Duration Approximately 24 months

**Close 1 Bound Preferred Due to Quality, Safety, Duration & Costs**
- Construction Costs Savings $216M
- Construction Duration Savings at least 4.5 years
Close 1 Direction

Alternatives Analyzed

- **Northbound direction full time closure**
  - Better facilitation of evacuation of Jersey City & NYC
  - More choices for NB traffic prior to closure point

- **Southbound direction full time closure**
  - Concern of backups thru Tunnel into NYC
  - Concern of impeding access to Newark Airport
  - Compounds conflict with Turnpike WB construction (1-lane reduction) resulting in additional impacts to Jersey City streets

- **Close 1 bound and maintain 1 lane in each direction**
  - Not enough width to safely provide 1 lane in each direction

- **Close 1 bound w/Peak Period reversible lanes**
  - Operational concerns and costs of moving barriers twice a day, safety related to motorist expectations
  - Difficult ramp access
  - Loss of all capacity during switching periods: would mean significant detouring of traffic into and through Jersey City and Newark during off-peak periods
Closing the Northbound Direction

Pulaski Contract 3

- Maintain SB direction of traffic leaving Jersey City & NY
- Northbound Traffic Impacts approximately 24 Months starting in March 2014.
- Completed before Route 7 Roadway Construction for the Wittpenn Bridge Replacement begins.
Weekday Morning Origin & Destinations

- 62% Destined to NJ Waterfront and NYC
- 80% Originate from South and West

**Legend**

- Origins
- Destinations
Traffic Mitigation Concepts

- Coordinate Pulaski Deck Construction with other Regional Construction Projects:
  - Pulaski Contract 2: East Approach (Route 139) Improvements
  - Wittppenn Bridge (Route 7)
  - NJ Turnpike Newark Bay Hudson County Extension (I-78/ NB-HCE)

- Transit and TDM measures estimated to result in 5% to 10% peak hour trip reductions.

- Optimize network to favor NB flow on other facilities including 1&9T. - ONGOING ANALYSIS

- Use NB Shoulder on I-78/ NB-HCE as Travel Lane.
<table>
<thead>
<tr>
<th>Project</th>
<th>2014 Start</th>
<th>2014 Finish</th>
<th>2015 Start</th>
<th>2015 Finish</th>
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**2014 and 2015 Regional Projects**

24 month Traffic Impact due to Deck Replacement
Expected Roadway Diversions

- Turnpike Eastern Spur (640)
- Route 7 (60)
- Route 139
- Route 440
- Route 1&9T (710)
- I-78/NJ Turnpike NB-HCE (1900)
- Turnpike
- Goethals Bridge (50)
Roadway Capacity Mitigation Strategies

Optimize network to favor NB flow on Route 1&9 Truck

NJ Turnpike Shoulder Lane Interchange 14 to 14C
Route 1&9 Truck NB Optimization

- Signal Optimization and Adaptive Signal Control
- Geometric/Striping Improvements at Hackensack Avenue and Newark Avenue
- Phasing Improvements at Newark Avenue
- Proposing Removing Left Turn phase at Duncan Avenue
- Additional Ramp Lane from 1&9 Local to 1&9 Truck creating a Two-Lane Ramp
Transportation Management Plan (TMP)

- Comprehensive planning effort to minimize traffic impacts to the region.
- Coordination among other regional agencies with planned projects.
- Examining ways to increase capacity on diversionary routes.
- Examining methods to increase transit services/options.
- User survey has gathered information on traveler’s alternate route/mode preference during lane closures.
- Task Force has been developed consisting of Locals and regional agencies to develop and implement the TMP.
TMP Subcommittees Formed

- Incident Management
- Travel Demand Management (TDM) and Transit
- Traffic Control and Operations
- ITS Management
- Construction and Contracting
- Public Information
Fifteen meetings have been held in Jan. & Feb. since the Local Officials Meeting on January 10th.

Attendees included:
- PANYNJ
- Turnpike Authority
- NJ Transit
- Hudson TMA
- Hudson County Improvement Authority
- Meadowlink
- TRANSCOM
- NYSDOT
- North Jersey Transportation Planning Authority
- Hudson County Engineering
- Kearny Police/Fire
- Newark Police/Fire
- NJ Motor Truck Association
- Jersey City
  - Engineering
  - Mayor’s Office
  - Emergency Management
  - Police
  - Planning
Sample of TMP Mitigation Strategies Advancing

- Addition of third shoulder lane on eastbound NB-HCE (I-78/Turnpike) to Exit 14C (Christopher Columbus Drive)
- Adaptive signal control on Route 1/9 Truck and other key intersections/corridors
- Temporary, full coverage cameras along length of Skyway and at key intersections on diversionary routes
- Provide a coordinated command center for First Responders
- Shuttles/vanpools run from selected locations
- Publicize available Transit options
During construction, Dynamic Message Signs to provide real time ‘travel times’ for alternate routes and incident information at select locations in the region using Open Reach system & NJ 511.

- Retime signal at Jersey Avenue to favor throughput on I-78/NB-HCE to accommodate volume associated with diverted traffic from Pulaski/Route 139 corridor.

- Construction and alternate route/mode information on NJ DOT’s website [www.pulaskiskyway.com](http://www.pulaskiskyway.com)
Continuing Coordination

- Currently, there are eight Subcommittee meetings scheduled for March.
- A new Subcommittee that will include Jersey City, Kearny and Hudson County officials is being formed.
- Additionally attendees for Subcommittee meetings are added as identified.
- Additional meetings with local officials and regional agencies are being scheduled.
- Anticipate Jersey City 1 TV adding a voice to the project in the near future.
The Public is encouraged to provide feedback and comments at:
http://www.state.nj.us/transportation/works/studies/pulaski/contact.shtm