WELCOME

Please Register Here
Thank you for joining the Federal Highway Administration, the New York State Department of Transportation, and the New York State Thruway Authority for public scoping briefings on the proposed infrastructure improvements for the Tappan Zee Hudson River crossing. You will have an opportunity to provide written and oral comments on the project.

Schedule of Events
4:00 pm to 9:00 pm: Displays
5:00 pm: First formal presentation, followed by public comment
7:00 pm: Second formal presentation, followed by public comment
After each presentation, the public will have an opportunity to comment on the scope of the EIS. Those wishing to speak must pre-register.

Comments will be received and recorded:
- Orally, in public, as previously described. Please sign up when you register.
- Orally, privately, with a stenographer. Please sign up when you register.
- In writing, via email at www.tzbsite.com, or by filling out the available comment cards on site or mailing them out at your convenience to:
  
  Michael P. Anderson, P.E.
  New York State Department of Transportation
  4 Burnett Boulevard
  Poughkeepsie, NY 12603
  tzbsite@dot.state.ny.us

  Written comments will be accepted until November 15, 2011
  www.tzbsite.com

Spanish/English translators are available. Intérpretes de español e inglés están disponibles.
PROJECT UPDATE

- In 2011, while advancing a financial analysis, it was determined that funding for the corridor project was not possible at this time.

- The financing of the crossing alone, however, was considered affordable.

- **Rescinded Notice of Intent** issued to advise the public that FHWA and FTA will not be preparing an Environmental Impact Statement (EIS) for the Tappan Zee Bridge/I-287 Corridor project.

- **New Notice of Intent** issued to advise the public that an EIS will be prepared to compare alternatives for the Tappan Zee Hudson River Crossing between Rockland and Westchester Counties. Invites participation in the DEIS process, including scoping.
PROJECT’S PURPOSE AND NEED

**Purpose of the Project**

To maintain a vital link in the regional and national transportation network by providing an improved Hudson River crossing between Rockland and Westchester Counties.

**Need for the Project**

The bridge is safe to the traveling public but does not meet current design or traffic operations standards.

Project would address the need to correct the bridge’s substandard structural, operational, safety, security, and mobility deficiencies.
PROJECT’S GOALS AND OBJECTIVES

Project development is being guided by three goals with objectives that address the deficiencies of the existing bridge. The goals and their supporting objectives are as follows:

**Ensure the long-term vitality of this Hudson River crossing by:**
- Providing for sufficient strength and stability compliant with current standards to carry transport loading;
- Providing for a robust and redundant structure to survive extreme natural events, including earthquakes and hurricanes;
- Providing for a robust and redundant structure to survive extreme man-made events, including fires, vessel collisions, and vehicular accidents;
- Ensuring compliance with NYSTA operational requirements; and
- Providing for a serviceable structure with a life span in excess of 100 years before major maintenance is required.

**Improve transportation operations and safety on the crossing by:**
- Ensuring compliance of horizontal and vertical geometry with current engineering design standards, as practicable;
- Providing for horizontal geometry that maximizes sight distances;
- Providing for vertical geometry that minimizes grade changes;
- Providing for standard, 12 foot traffic lanes;
- Providing for adequate separation of eastbound and westbound traffic;
- Providing for shoulders that meet current engineering design standards;
- Eliminating reversible traffic lanes;
- Providing for security infrastructure to monitor bridge operations; and
- Providing for improved emergency response.

**Maximize the public investment in a new Hudson River crossing by:**
- Providing a cost-effective crossing that maximizes value over the lifespan of the structure;
- Minimizing effects on existing highways;
- Maximizing the use of existing right-of-way;
- Sequencing construction to minimize effects on vehicular traffic operations;
- Reducing maintenance requirements and operating costs;
- Providing for trans-Hudson access for cyclists and pedestrians; and
- Providing a crossing that does not preclude future trans-Hudson transit services.
What Is Scoping?

- Scoping occurs at the start of the National Environmental Policy Act (NEPA) process after the Notice of Intent is issued.
- Scoping allows the public and agencies to participate in the development and review of the project purpose and need, alternatives to be considered, and the range and environmental issues to be studied in the DEIS.
- Scoping also identifies how the public and agencies will be involved in the decision making process.
ENVIRONMENTAL IMPACT STATEMENT: SUBJECT AREAS TO BE EVALUATED

What categories of potential impact will be analyzed in the Environmental Impact Statement?

- Transportation - Vehicular Traffic; Marine Traffic; Transit; Pedestrians; and Freight
- Community Character
- Land Acquisition, Displacement, and Relocations
- Parklands and Recreational Resources
- Socioeconomic Conditions
- Visual Resources
- Historic and Cultural Resources
- Air Quality
- Noise and Vibration
- Energy and Climate Change
- Topography, Geology and Soils
- Water Resources

- Ecology
- Hazardous and Contaminated Materials
- Construction Effects
- Environmental Justice
- Coastal Zone Management
- Indirect & Cumulative Effects
- Other NEPA Considerations
- Section 4(f) Evaluation

Additional categories:
- Water resources, visual resources
- Coastal Zone Management
- Community character and socioeconomic conditions
WHY REPLACE THE TAPPAN ZEE BRIDGE?

**Main Span Issues**
- Foundations need to be replaced
- Significant number of structural members need to be replaced or retrofitted
WHY REPLACE THE TAPPAN ZEE BRIDGE?

Approach Span Issues

- Extensive work required in foundations, substructure, steel superstructure
- Ongoing deck replacement addresses riding surface but not other significant deterioration concerns
- Future risks would remain

- Repairs of outer column and cross beam connection on at 166 piers
- Repeating repairs at base of columns due to corrosion resulting from marine environment
- Concrete repairs to cracks on 166 pile caps
- Modification of 8 column-to-beam connections on each of the 166 piers
- Connection between timber pile caps unproven in seismic event
- Concrete cross beam repair from salt leaks through joints at 166 piers
- Future risk of marine borers affecting condition and capacity of timber piles
- Remaining 166 joints across highway are prone to failure resulting in continuous leakage of road salts onto the structure below and continuing deterioration of supporting pier concrete
- 4 bearings on each of the 166 piers to be replaced
- Addition of 3-4 piles on each side of each of the 166 piers, removal of existing ship protection and expansion of existing pile caps

Physical modifications required
Future risks
ALTERNATIVES CONSIDERED BUT NOT ADVANCED

Rehabilitation Alternative
The Rehabilitation Alternative would upgrade elements of the existing bridge to meet current design standards and improve the bridge’s safety and mobility. It will not be considered in the DEIS because of:

- Shorter life span than replacement
- Lacks redundancy and would remain vulnerable in extreme events
- Lacks ductility (the ability to bend without breaking) and would be vulnerable in major earthquakes even with seismic upgrades
- Construction length would be one year longer than that of replacement
- Uncertainty about condition of components increases likely construction risks
- Lacks service redundancy
- Lacks load path redundancy

Rehabilitation Is Not Reasonable Because:

- The rehabilitation option with 2 bridges would be more costly than an entirely new bridge and have the same deficiencies in life cycle and vulnerabilities
- Construction would be complex
- Rehabilitation has higher maintenance costs and lower performance than a new bridge
ALTERNATIVES CONSIDERED BUT NOT ADVANCED

**Tunnel Alternative**
The Tunnel Alternative would replace the existing Tappan Zee Bridge with a new tunnel between Rockland and Westchester Counties. It will not be considered in the DEIS because of:

- Greater disruption of surrounding land uses from construction of tunnel portals
- No shared use path
- Potential impacts to Talleyrand swamp and Hudson River shorelines
- Interchanges 9, 10, and 11 would need to be removed, considerably impairing connectivity in both counties
- Less flexibility to maintain traffic and separated emergency access
- Immersed tunnel would also require extensive shoreline and in-water work

![Diagram showing Tunnel: 7 Miles and Existing Bridge: 3 Miles](image-url)
ALTERNATIVES TO BE STUDIED IN DRAFT ENVIRONMENTAL IMPACT STATEMENT

No Build Alternative
- Would continue operation of the existing seven-lane bridge with extraordinary maintenance and significant capital expenditures (approx. $1.3B) required.
- Serves as baseline alternative against which all build alternatives are compared.

Replacement Bridge Alternative
- Would replace the existing Tappan Zee Bridge with a new bridge with parallel structures to the north of its existing location.

Two options of the Replacement Bridge Alternative will be considered:

Long Span Replacement Bridge
Two Parallel Structures | Span Length of 430 feet
Separated by 46 foot Gap

Short Span Replacement Bridge
Two Parallel Structures | Span Length of 230 feet
Separated by 46 foot Gap
ALTERNATIVES DEVELOPMENT AND EVALUATION

Options Explored

Evaluation and Screening Using Goals and Objectives

Bridge Replacement Alternative (Two Options)

Long Span Replacement Bridge
Two Parallel Structures | Span Length of 430 feet
Separated by 46 foot Gap

Short Span Replacement Bridge
Two Parallel Structures | Span Length of 230 feet
Separated by 46 foot Gap
REPLACEMENT ALTERNATIVE

The two options to be evaluated in the EIS include the following elements:

- Replacement TZB is on the north of the existing TZB
- At the landings the replacement TZB will remain within the existing right-of-way
- Replacement of Broadway bridge in South Nyack will be required
REPLACEMENT ALTERNATIVE

Tappan Zee Bridge Profile

- Both Long and Short Span Replacement options have a more constant profile than does the existing TZB.
- From 2001 to 2009, more than 2,700 accidents occurred between Interchange 9 (Route 9) in Tarrytown and Interchange 10 (Route 9W) in Nyack, the segment that includes the Tappan Zee Bridge, its approaches and its toll plaza, resulting in an accident rate that is more than twice the NYSTA’s statewide average.
- Recognizing the need to improve safety in this region, the design of the replacement bridge will have a more constant grade, providing better sight distances.
REPLACEMENT ALTERNATIVE

Cross-Sections
To facilitate construction, the north structure will be built first, followed by the south structure.
REPLACEMENT ALTERNATIVE

The EIS will consider reasonable alternatives that do not preclude transit. The following options would not preclude future transit on this corridor:

1) Provide the infrastructure for future transit on the new highway bridges without reducing the number of general traffic lanes;

2) Provide the infrastructure for future transit across a third parallel bridge that would be constructed at a later date and would serve as an exclusive right-of-way;

3) Span the gap between the two new highway bridge structures at a later date to provide the infrastructure for future transit modes.

Therefore, in support of the project’s goal to “maximize the public investment in a new Hudson River crossing” and to preserve flexibility for the planning of any future transit service, it is considered appropriate to provide for a 46 foot gap between the new bridge structures. The implementation of any of these options for future transit modes would require a separate and independent environmental review process when and if a proposal for transit services is foreseeable.
REPLACEMENT ALTERNATIVE

**Pedestrian and bicycle shared path**
The pedestrian and bicycle shared path is located on the northern side of the north structure.

![Diagram of shared path along the Hudson River]

The path is marked with a yellow line, indicating its location along the north structure of the replacement bridge. The path is designed for both pedestrians and cyclists, providing a safe and accessible route along the river.

**Location:**
- **NYACK**
- **ROCKLAND COUNTY**
- **SOUTH NYACK**
- **SLEEPY HOLLOW**
- **WESTCHESTER COUNTY**
- **IRVINGTON**
- **TARRYTOWN**

This alternative offers a unique opportunity for residents to enjoy the scenic Hudson River while engaging in physical activity, promoting a healthier lifestyle and enhancing community engagement.
REPLACEMENT ALTERNATIVE

Rockland Landing

- S. Broadway Bridge Replacement
- Realigned Elizabeth Pl
- Expected Project Limit
- Permanent Platform
- Shared-Use Path
- Maintenance Ramp
- Proposed Bridge Abutment
- Existing Abutment
- Shared-Use Path
- Maintenance Ramp
- Proposed Bridge Abutment
REPLACEMENT ALTERNATIVE

Westchester Landing

- Shared-Use Path
- Maintenance Facility
- Possible On-Ramp Closure: Duration TBD
- Existing Abutment
- Expected Project Limit
REPLACEMENT ALTERNATIVE

Main Span

- The EIS will evaluate two main span types: the cable-stay and arch type. The main span over the navigation channel would have a length of approximately 1,200 to 1,400 feet, compared to 1,212 feet for the existing bridge. Each bridge type would have short back spans up to 700 feet in length on either side of the main span.

Cable-stay

Views are of bridge’s south side looking north

Arch

Views are of bridge’s south side looking north
REPLACEMENT ALTERNATIVE

Area of Potential Effect

Section 106 of the National Historic Preservation Act of 1966

- Initiated when there is a federal undertaking
- Requires that Federal agencies consider the effects of their actions on historic properties within the Project’s Area of Potential Effect
- Consultation process among project sponsors, SHPO, Advisory Council on Historic Preservation and other consulting parties

![Map of Tappan Zee Bridge and Hudson River with Area of Potential Effect (APE) highlighted.]
PUBLIC AND AGENCY OUTREACH

Public involvement activities will build upon the extensive outreach efforts already undertaken to:
- Solicit early and continued feedback from the public and from agencies;
- Encourage open discussion of project details and issues; and
- Provide opportunities for comments and questions.

Agency Participation
- Cooperating Agencies
- Participating Agencies
- Section 106 Consulting Parties

Public Involvement Tools
- Public meetings / open houses at project milestones
- Targeted meetings with stakeholders
- Project hot line: 877-TZB-DOT5 (877-892-3685)
- Project website: www.tzbsite.com
- Email: tzbsite@dot.state.ny.us
- 5,000 + Mailing List
- Informational Materials/Repositories throughout the project area
- Environmental Justice outreach
- Media outreach