

Purpose and Need Statement

Purpose

The overall purpose of this project is to address the deficiencies of the structure carrying County Road 619 (Ocean Drive) over Townsend's Inlet (Townsend's Inlet Bridge) to provide a safer and more efficient and reliable crossing for all users and modes of transportation.

Identified Needs

Bridge and Roadway Deficiencies

Structure #3100-003, located between the Borough of Avalon to the south and the City of Sea Isle to the north in Cape May County, at Milepost (MP) 19.88, carries County Route 619 (Ocean Drive) over Townsend's Inlet. Built in 1948, Townsend's Inlet Bridge is a steel bascule bridge with 23-fixed approach spans composed of a mixture of steel multi-girder spans, prestressed concrete girder spans, and girder-floor beam-stringer systems with reinforced concrete decks and one single leaf bascule span. The bridge is both structurally deficient and functionally obsolete, has a current Sufficiency Rating of 23.0, and has undergone a series of recent rehabilitations with Spans 1 through 7 replaced in July 2019, the bridge railings replaced in 2018-2019, and the bascule span and toll span rehabilitated in 2014-2015. The bridge is posted due to its inability to carry loads greater than 15 tons. Due to its age, routine maintenance can no longer address the bridge's deficiencies.

According to the most recent bridge inspection report (Bridge Re-Evaluation Survey Report, 18th Cycle, dated October 1, 2023):

- The **overall** condition of the Townsend's Inlet Bridge is "poor" due to the condition of the superstructure, substructure, and low inventory ratings.
- The **superstructure** is in "poor" condition due to painted over section loss with several holes and deep pitting in many elements; pack rusted bearing elements; and rusted and potentially frozen pin and hanger assemblies.
- The **substructure** is in "poor" condition due to heavy collision damage to the existing fender system, severely corroded caisson casings, and large spalls in reinforced concrete piles.
- The **deck** is in "satisfactory" condition due to medium and wide transverse cracks and several shallow spalls.
- The **approach roadways** are in "satisfactory" condition with large spalls, severe settlements (1 to 2"), and moderate slope embankment erosion.
- The **channel/channel protection** is in good condition with no significant defects.
- The bridge is classified as both **Scour Critical** and **Fracture Critical**.
- The bridge's **mechanical machinery** and **electrical system** are in fair condition.

Substandard roadway controlling design elements were identified as follows within the project study limits:

- The lanes and shoulders have a substandard cross slope of 1.25 percent
- The left turn intersection sight distance at the 94th Street unsignalized intersection in Sea Isle City is substandard.

In addition, the following deficiencies were identified within the project limits:

- Lack of current standard MASH compliant roadside protections



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- Lack of dedicated bicycle and pedestrian facilities
- There is currently no guiderail to protect the bridge parapet.

System Linkage

The Townsend Inlet Bridge serves as a vital link between Avalon and Sea Isle City that attract thousands of visitors each year. Sea Isle City and the Borough of Avalon are prominent summer tourist destinations situated along the southern coastline of New Jersey. Many businesses in these areas operate on a seasonal basis or rely predominantly on summer tourism as their primary source of revenue. As such, maintaining access to businesses and tourist amenities is critical to maintaining the economy of the municipalities. When the bridge is closed, drivers must follow a 17-mile/30-minute detour via the Garden State Parkway or Route 9 for trips between both towns.

The connection provided by the Townsend Inlet Bridge is economically important, linking customers with local businesses. Local residents and business owners rely on the bridge for their daily needs. Due to its local and regional importance, especially during the peak summer tourist season, bridge closures due to aging infrastructure will continue to be highly burdensome to the communities particularly because of the lack of convenient detour routes. Due to the age of the bridge, emergency repairs requiring a full closure of the bridge will become more frequent, leading to the continued use of lengthy detours.

The rehabilitation or reconstruction of Townsend Inlet Bridge to provide more reliable conditions that can serve the community as a vital economic connection is paramount to this Local Concept Development Study.

Goals and Objectives

- Upgrade bridge and approach roadway conditions to meet AASHTO and NJDOT safety standards including new parapets and guide rail
- Reduce the frequency of major bridge maintenance activities that result in detours and/or disruption of traffic flow
- Correct the controlling substandard design elements and the highway deficiencies
- Modernize bridge mechanical and electrical components to meet current design standards
- Provide accommodation for current and future users of Townsend Inlet in accordance with the completed Navigation Impact Report
- Avoid or minimize long-term roadway closures during construction
- Provide ADA-compliant pedestrian facilities and bicycle accommodation
- Avoid or minimize impacts to social, economic and environmental resources
- Address the high rate of vehicular crashes on the Sea Isle City approach roadway

