

CHARLES ANDERSON MEMORIAL BRIDGE PROJECT UPDATE

January 2022





Project Overview

The City of Pittsburgh, in cooperation with the Federal Highway Administration (FHWA) and Pennsylvania Department of Transportation (PennDOT), is advancing the Charles Anderson Memorial Bridge project.

The bridge is a critical link on the Boulevard of the Allies, a roadway connecting Pittsburgh's Oakland and Squirrel Hill neighborhoods with downtown. The bridge serves as a key entrance to Schenley Park and carries the Boulevard of the Allies over the CSX Railroad and the Junction Hollow and Upper Panther Hollow trails (within Schenley Park).

The existing continuous, three-span, steel structure (built in 1939) is individually eligible for listing in the National Register of Historic Places (NRHP) under Criterion C for its engineering significance as a Wichert Truss bridge. The structure is also a contributing element of the NRHP-listed Schenley Park Historic District.



Project Location





Project Purpose & Need

Project Purpose

The purpose of this project is to provide an efficient and effective crossing of the CSX Railroad and the Junction Hollow and Bridle trails that accommodates legal loads while providing access for all vehicular modes of transportation as well as pedestrians and bicyclists.

Project Need

Facility Deficiencies

The structure was originally constructed in 1938 and rehabilitated in 1987. The sidewalks and bridge vehicular barrier at the curb line were replaced in 2006 along with installation of the bridge lighting standards. In 2011, minor deck repairs were completed. In 2012 and 2014, due to advanced deterioration of the gusset plate connections at the lower chord, additional gusset plates were bolted to the inside faces of some members. In 2019, emergency deck repairs were required.



Project Need (continued)

Major deteriorated elements of the Charles Anderson Memorial Bridge include the following:

- The concrete deck condition is rated as poor. This condition exhibits advanced deck deterioration, full-depth deck cracking at gutter lines and joint locations, water leakage, and failing or failed joint materials.
- The steel truss superstructure condition is rated as poor, with advanced section loss throughout the structure including at connection areas and bearing areas.
- The concrete substructure is rated as poor, with advanced deterioration at the pier caps, numerous concrete delamination, and spall areas with exposed rusted rebar throughout the substructure units.

Based on the condition, the bridge is posted at 32 tons. The weight of the City of Pittsburgh, Bureau of Fire's 100+ foot ladder truck (which is their heaviest apparatus) is 82,000 pounds or 41 tons. Therefore, the bridge cannot accommodate all emergency service vehicles.



Project Need (continued)

System Linkage

The bridge provides access that is important for connecting pedestrians (residents, students, and workers) who use it to walk to work, school, the park, and other area destinations within the Oakland and Squirrel Hill neighborhoods. Both sides of the bridge have 5-foot sidewalks. These sidewalks are shared by walkers, joggers, and other pedestrians (e.g., senior citizens, baby strollers, and special needs pedestrians).

Bicyclists who use the bridge either share the approximately 10-foot roadway lanes or share the 5-foot sidewalks. Both shared use conditions affect the safety for bicycle traffic and pedestrians. Based on public outreach, pedestrian and bicycle conflicts are a major concern on the existing bridge due to narrow sidewalks and high vehicular speeds. The high vehicular speeds encourage bicyclists to use the sidewalk as opposed to the traffic lanes.

Public transportation (i.e., Port Authority of Allegheny County) utilizes this bridge extensively and there are plans to expand service routes. Standard public transit buses are approximately 8.5 feet wide and the existing lane widths are approximately 10 feet wide. The curve that ties into the northwest bridge approach is difficult for buses to navigate. Buses either encroach into adjacent lanes of traffic or come into contact with the existing



Project Need (continued)

concrete barrier as evidenced by scrape marks on the face of the concrete barrier. For safe transit access, the bridge needs to have sufficient lane widths to adequately accommodate transit use according to the Port Authority.

The Charles Anderson Memorial Bridge also provides access to the Boulevard of the Allies corridor for school buses that serve the central portion of the school district. The City of Pittsburgh School District covers 58.3-square miles. As the largest of 43 school districts in Allegheny County and second largest in Pennsylvania, Pittsburgh Public Schools serves approximately 25,000 students in Kindergarten through Grade 12 in 54 schools. It is critical to maintain access for school buses.



Advantages of Bridge Rehabilitation

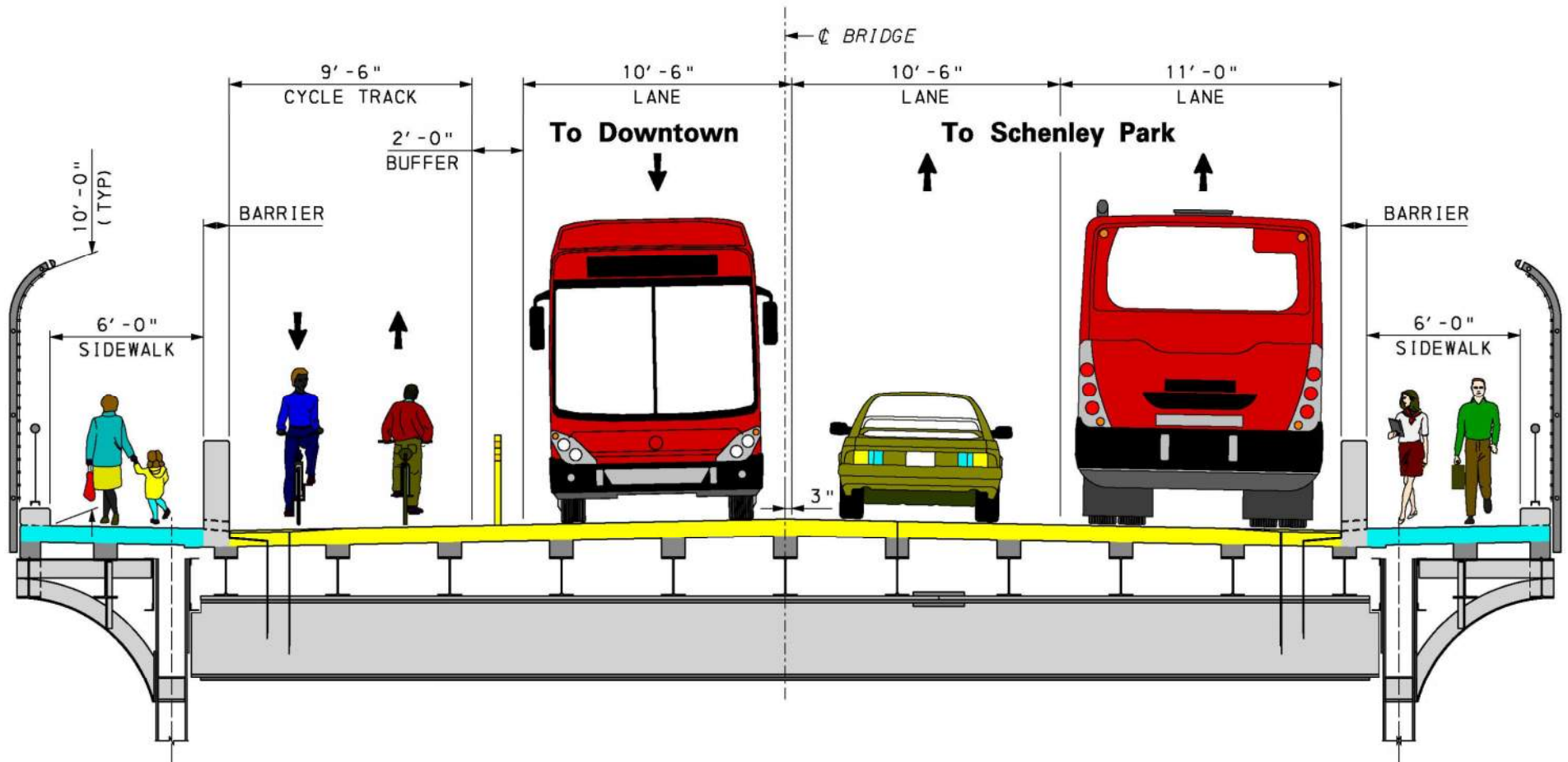


- + Meets Project Purpose & Need
- + Meets Secretary of Interior's Standards for Rehabilitation for historic bridges
- + Compatible with all modes of transportation
- + Less roadway network modification
- + Improved lane configuration for Port Authority buses
- + Separate, protected lanes for bikes, pedestrians, and traffic (i.e., bikes are separated from pedestrians and traffic)
- + Less right-of-way impacts
- + Less impact to Schenley Park
- + Less earthwork disturbance

Secretary of
Interior's
Standards for
Rehabilitation

Rehabilitation acknowledges the need to alter or add to a historic property to meet continuing or changing uses while retaining the property's historic character.

Bridge Rehabilitation (Preferred Alternative)



REHABILITATED TYPICAL SECTION – 3 LANE PLUS CYCLE TRACK



Other Options Considered



Other replacement and rehabilitation options with added travel lanes/designated bike lanes/sidewalks were considered but are not being advanced due to:

- Greater potential impacts to Schenley Park
- Longer design schedule/environmental clearance process
- Increased right-of-way and utility acquisitions/relocations
- Increased construction complexity
- Longer construction durations



Next Steps

