

## II. PROJECT PURPOSE AND NEED

### A. Project Purpose

The purpose of the Christina River Bridge project is to ensure that infrastructure enables the Wilmington Riverfront area to continue to effectively redevelop, while accommodating the growing transportation demands from increased development. A new bridge crossing would provide a critical link for development on both sides of the River and would enable continued revitalization of the Riverfront and beyond. The project would also improve mobility within the Riverfront area for passenger vehicles, transit, pedestrians, and bicyclists. By adding a new river crossing between the west and east banks of the Christina River, the project would provide additional regional connectivity to Martin Luther King, Jr. (MLK) Boulevard, US 13, I-495, and I-95 (refer to **Figure 1**).

### B. Project Need

Existing conditions in the project area have led to the development of six specific needs to be addressed by this project: 1) economic development; 2) livability and sustainable communities; 3) system linkage between both banks of the River; 4) community mobility and multi-modal access; 5) congestion relief; and 6) consideration of US congressional direction represented by Item 3883 in SAFETEA-LU. Although the appropriation prioritizes the project, it does not eliminate the requirement to comply with the National Environmental Policy Act (NEPA), including consideration of alternatives to the proposed action.

**FHWA Livability Initiative-** *In June 2009, the US Department of Housing and Urban Development, US Department of Transportation, and the US Environmental Protection Agency joined together to form the Partnership for Sustainable Communities, an unprecedented agreement to coordinate federal housing, transportation and environmental investments, protect public health and the environment, promote equitable development, and help address the challenges of climate change. The three agencies have worked together to coordinate federal policies, programs, and resources to help urban, suburban, and rural areas and regions build more sustainable communities. The agencies are working together to identify opportunities to build more sustainable communities in Delaware. Six Livability Principles are guiding their work and have been applied in the development of Purpose and Need for the project: Provide more transportation choices; Promote equitable and affordable housing; Enhance economic competitiveness of neighborhoods; Target federal funding toward existing communities; Coordinate federal policies and funding; and Enhance the unique characteristics of communities.*

#### 1. Support Planned Economic Development

A viable east-west transportation connection would support the attraction and retention of business and residential development to the Riverfront area. Notable improvements on the west bank of the Riverfront include the Riverwalk and Shipyard Shops; the Russell W. Peterson Wildlife Refuge and Dupont Environmental and Education Center; the Chase Center; Christina Landing residences; Christina Crossing retail; Justison Landing residences; Delaware Children's Museum; and the Frawley Stadium, home of the Wilmington Blue Rocks Minor League Baseball Team. The Christina River Bridge project is consistent with development plans that include a bridge crossing and infrastructure to support the Wilmington Riverfront and the adjacent communities of Southbridge and Browntown. A new Christina River crossing would integrate the redevelopment efforts along both banks of the Christina River, support continued economic

development, and enhance access to the existing Riverfront redevelopment. The residents of Southbridge and Browntown would have improved access on the east and west banks of the Christina River to employment, entertainment, and recreation opportunities. This project is consistent with Delaware Strategies for State Policies and Spending.

## **2. Livability and Sustainable Communities**

The new connection between the east and west banks of the Christina River would increase the livability and sustainability of South Wilmington. A new bridge would increase mobility options in Wilmington for city residents, the local communities, and regional visitors to the attractions along the Riverfront such as the convention center and Frawley Stadium. A new bridge would support existing communities like Southbridge and Browntown, while encouraging continued redevelopment efforts and infrastructure investments.

Traffic congestion relief as a result of the new connection would yield air quality benefits, therefore improving the livability of South Wilmington. The bridge would offer an alternative to MLK Boulevard. The bridge would also offer improved access to the I-95, I-495 and US-13 corridors increasing access to jobs and other opportunities for the Southbridge and Browntown communities and Wilmington residents. It will also offer an alternative to MLK Boulevard, Beech Street and Maryland Avenue for Riverfront event traffic, which has negative effects on center city traffic and pedestrian / bike safety.

A new bridge would improve the walkability of the area by providing a more direct route between the west and east banks of the Christina River. It will improve the connectivity and walkability to the Southbridge and Browntown communities. The bridge could also provide a link to the Riverwalk and East Coast Greenway along the west bank of the Christina River. This would provide safe access to destinations north and south for bikes traveling from the east bank redevelopment and Southbridge.

## **3. System Linkage**

There is no direct connection between the east and west banks within the Wilmington Riverfront. All vehicular traffic between the east and west side of the Riverfront must use MLK Boulevard and Second Street in downtown Wilmington. The current travel distance between the east bank redevelopment and Frawley Stadium is two miles through downtown Wilmington. This distance could be reduced to roughly one half of a mile with the completion of a new bridge crossing. A new connection across the Christina River would create the only connection that avoids downtown Wilmington. The new connection would improve emergency response times and access to the stadium and redevelopment areas.

## **4. Community Mobility/Multi-Modal Access**

There are currently no pedestrian links across the River upstream of the Market Street Bridge. The current pedestrian route between the Shipyard Shops on the west bank and the ShopRite grocery store on the east bank is 1.4 miles. A bridge across the River could reduce this trip to half a mile. The bridge would allow the east bank redevelopment area and Southbridge neighborhood to access the Riverwalk and East Coast Greenway along the west bank.

Delaware Transit Corporation operates two local (No. 16 and No. 17) bus routes along the east bank (South Market Street), and one route (No. 32 Trolley) along the west bank (South Madison Street). A connection across the Christina River would allow a more direct circulation route for

buses. Bus Route No. 32 could be modified to a longer loop utilizing a new bridge to serve more destinations on the west and east banks of the Christina River.

The proposed bridge would not interfere with existing uses of the River. The project would be designed to accommodate existing waterway uses by allowing for 14 feet of clearance above mean high tide. This is discussed in the Navigation on the Christina River Technical Memorandum, which can be found in **Appendix A**.

## 5. Congestion Relief

Traffic volumes in the Riverfront area are expected to grow substantially as economic development continues on both sides of the Christina River. Riverfront redevelopment generated an additional 11,000 daily trips in 2007 and is projected to continue to increase by 2030 (**Table 1**).

**Table 1: Existing and Projected Peak Hour Link Volumes**

Location	2007				2030			
	Eastbound		Westbound		Eastbound		Westbound	
	AM	PM	AM	PM	AM	PM	AM	PM
MLK at Madison	1,340	965	--	--	1,925	1,505	--	--
MLK at Justison	2,035	1,335	325	1,190	2,880	2,460	420	1,765
MLK at West	1,950	1,270	310	920	2,975	2,750	825	1,780
MLK at Market	1,590	1,150	695	1,730	2,685	2,825	1,220	2,860
Location	Northbound		Southbound		Northbound		Southbound	
	AM	PM	AM	PM	AM	PM	AM	PM
Walnut at US 13	2,055	1,065	935	1,570	2,795	1,630	1,175	2,555
Maryland at Madison	1,310	645	--	--	1,730	925	--	--

--indicates this movement does not occur at this intersection

All access to the east (Market Street, Walnut Street) and west (Madison Street, Justison Street, West Street) is served by the arterial MLK Boulevard, in center city Wilmington. Existing Levels of Service (LOS) are considered acceptable (LOS A through D) within the grid of streets that serve the east and west banks of the Riverfront; however, all intersections are forecast to operate at LOS F by 2030 (**Table 2**).

**Table 2: Intersection Existing and Projected Levels of Service**

Intersection Location	2007		2030	
	AM	PM	AM	PM
MLK at Madison	E	C	F	F
MLK at Justison	C	D	F	F
MLK at West	C	D	F	F
MLK at Market	C	D	F	F
MLK at Walnut	E	C	F	F
2 <sup>nd</sup> at Walnut	D	B	F	F

At full build-out conditions in 2030, the entire Riverfront development area is expected to generate up to 72,000 daily trips (4,700 AM peak hour trips and 8,600 PM peak hour trips). The

traffic model projects increases in traffic volumes resulting in LOS F by 2030 for all intersections serving the Riverfront.

Special events at the Frawley Stadium and Chase Center result in higher volumes of traffic than commuter peak traffic. A typical weeknight baseball game at the Frawley Stadium is attended by 4,900 fans. Nearly all vehicles reach the stadium via Maryland Avenue and MLK Boulevard. Traffic counts conducted in 2005 during a weeknight home game indicated that southbound traffic volumes along Madison Street are up to ten times higher during a weeknight event than during typical PM peak hour conditions, exceeding 1,000 vehicles per hour.

An alternative east-west route between the banks of the Christina River would provide drivers an option besides MLK Boulevard by providing a more direct connection to US 13 (Market Street), I-95 and I-495. This connection is projected to relieve congestion on MLK Boulevard by relocating the east/ west trips onto the new bridge with access to US 13 and I-495; thereby relieving traffic congestion in the city center and improving safety.

## **6. Congressional Earmark**

During the most recent reauthorization of the Transportation Funding Bill in Congress known as SAFETEA-LU, Delaware Senator Carper requested the inclusion of \$20 million in funding to provide access across the Christina River and improve the roadway network to the Riverfront area. The Christina River crossing and network connections would fulfill the intention for these earmarked funds.