



DUNDALK MARINE TERMINAL RECONSTRUCTION OF BERTHS 11-13, PHASE 1

FY 2024 Nationally Significant Multimodal Freight &
Highway Projects Grant Program (INFRA)

PROJECT DESCRIPTION



*Maryland Department of Transportation
Maryland Port Administration*

MAY 2024

PROJECT DESCRIPTION

The Maryland Department of Transportation Maryland Port Administration (MPA) is requesting a \$30,906,076 grant from the FY 2024 Nationally Significant Multimodal Freight & Highway Projects Program (INFRA). The requested funding would support the construction of the **Dundalk Marine Terminal Reconstruction of Berths 11-13, Phase 1** (the Project). A large portion of MPA’s Dundalk Marine Terminal Berth 11 is severely restricted after an inspection in 2021 due to critical condition of the wharf infrastructure. Since that time, MPA has temporarily revised the berthing to accommodate two RORO vessels instead of three. As deterioration continues, it is anticipated the remainder of Berth 11 may be restricted and further limit the DMT Berths 11-13 to one ship thus losing 50% of its current cargo capacity and its economic sustainability. Without federal funding, the Dundalk Marine Terminal Reconstruction of Berths 11-13, Phase 1 Project will not proceed, causing Berth 11 to completely close.

Thirty-five percent of cargo at DMT is handled at Berths 11 – 13 so these berths are critical to the sustainability of the terminal operations. Phase 1, the reconstruction of components of Berth 11 is shown on Figure 1-1. Phase 1 is part of an overall six-phase plan to reconstruct Berths 11-13 for safety, productivity, and increased resiliency of operations. Table 1 outlines the phases which are illustrated in Figure 2. The design of Phase 1 is nearly complete (60%). This INFRA application is seeking funding for construction of those phase 1 components in Berth 11 illustrated in Figure 1.

Phase 1, consists of the rehabilitation and replacement of 597 linear feet of wharf deck including pilings, substructure, storm water drainage, utilities, and installation of new mooring bollards, cleats, pneumatic fenders, flood barriers, and tidal gates. This construction will enable the Port to safely reopen Berth 11 to accommodate automobile and High & Heavy Roll On/Roll-Off (RORO) cargo ships. The Project Narrative is divided into seven sections, consistent with the INFRA Notice of Funding Opportunity (NOFO), which describe the project and its alignment with merit criteria and other considerations of the INFRA program.

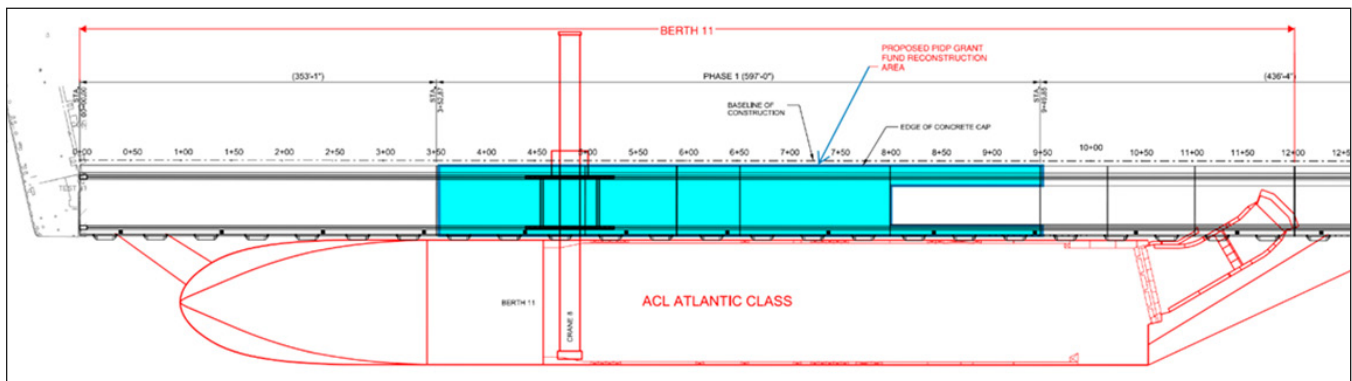


Figure 1: Project Limits

Table 1: Berths 11-13 Reconstruction Phasing

PHASE	TOTAL COST
Phase 1	\$51.5 M
Phase 2	\$50.3 M
Phase 3	\$54.1 M
Phase 4	\$55.2 M
Phase 5	\$52.5 M
Phase 6	\$51.2 M
Total	\$314.8 M

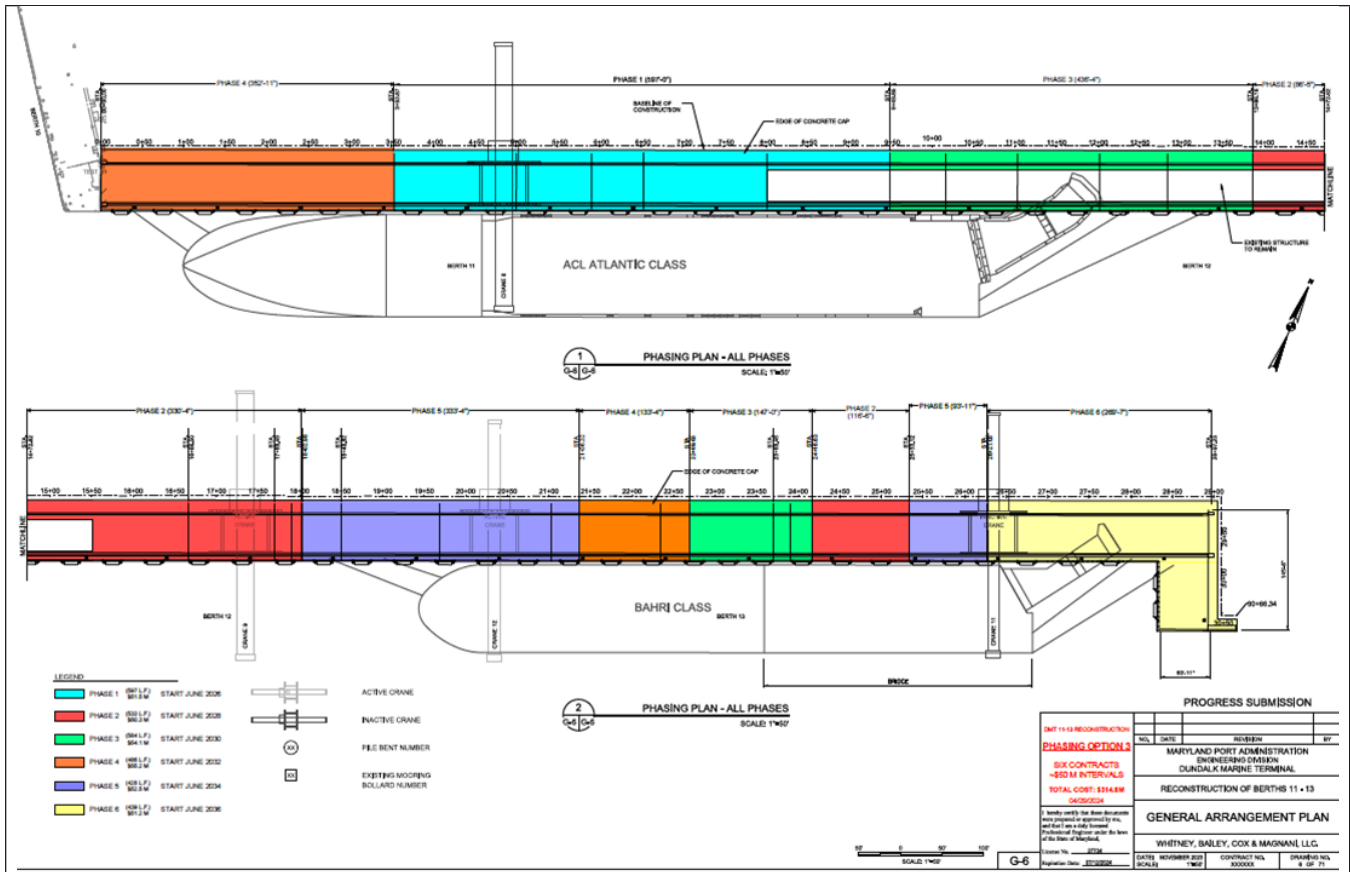


Figure 2: Reconstruction Phasing Berths 11-13

Transportation Challenges

The Port of Baltimore is the nation’s leading RORO destination. More than 35 percent of the cargo at DMT is handled by Berths 11 to 13. A waterfront inspection concluded the deck portion of Berth 11 was in critical condition and was closed for safety. The bollards along Berth 11 can continue to be used for mooring due to being recently upgraded. The Port temporarily reconfigured Berths 11-12 to retain the ability to service two vessels. As deterioration continues the bollards will become unusable and the ability to berth ships at DMT 11 will be lost. If MPA is only able to moor one vessel along Berths 11-13 then MPA will lose 50 percent of the cargo that currently docks there.

Challenge: The 50 percent reduction in capacity for automobile and High & Heavy RORO equipment handling, which accounts for thirty-five percent of the business line at the terminal, results in an unsustainable business climate for the Port.

Solution: This project will immediately repair and rehabilitate Berth 11 to restore the Port to full automobile and High & Heavy RORO capability. The automobile and High & Heavy RORO equipment cargo remains at the Port resulting in a sustainable business climate.

As the Port’s capacity diminishes, the supply chain for the automobiles and High & Heavy RORO equipment will be moved to other ports further from their ultimate destination. The extended supply chain will require an annual increase of 1,841,848 truck miles to reach the ultimate destination, as detailed in the Benefit Cost Analysis.

Challenge: The substantial increase in truck miles due to the extended supply chain increases green house gas (GHG) attributable to transportation. As noted above, if the MPA is forced to close this Berth 11 a larger amount of cargo will relocate to other ports resulting in even larger transportation -related GHG.
Solution: This project will immediately repair and rehabilitate Berth 11 to restore the Port to full automobile and High & Heavy RORO capability. The automobile and High & Heavy RORO equipment cargo remains at the Port preventing the 1,841,848 truck miles from increasing the GHG missions attributable to transportation.

Challenge: The substantial increase in truck miles due to the extended supply chain will result in more trucks on the road. In addition, some of the High & Heavy RORO equipment is considered over dimension requiring a permit and impacting free flow on roads. The congestion on the roadway will be increased by these trucks thus increasing the crash risk and commute time for all drivers on the roadway. If the MPA closes this terminal, the congestion, crash risk, and commute time will increase further.

Solution: This project will immediately repair and rehabilitate Berth 11 to restore the Port to full automobile and High & Heavy RORO capability. The automobile and High & Heavy RORO equipment cargo remains at the Port avoiding the increased truck miles and accompanying congestion and risk associated with the 1,841,848 truck miles.

Challenge: Cost of goods must account for all transportation costs in the supply chain. Truck freight has a higher cost per ton than waterborne freight. When the automobile and High & Heavy RORO equipment is forced to shift to other ports due to the Berth 11 closure, the truck freight cost will increase in the supply chain. This results in an increased price for consumers.

Solution: This project will immediately repair and rehabilitate Berth 11 to restore the Port to full automobile and High & Heavy RORO capability. The automobile and High & Heavy RORO equipment cargo remains at the Port resulting in the lower cost of goods remaining in place for consumers.

Challenge: When the Berth 11 closes, the weight and size of the High & Heavy RORO equipment increases wear and tear on the roads. This increases life cycle costs for these roads. The increased work zones needed for repairing the roads more frequently disrupt traffic flow and increase risk for highway workers and the traveling public.

Solution: This project will immediately repair and rehabilitate Berth 11 to restore the Port to full automobile and High & Heavy RORO capability. The automobile and High & Heavy RORO equipment cargo remain at the Port avoiding the increase in roads impacted by the over-dimension equipment and the corresponding increase in work zones and increased risk for highway workers and traveling public.

Dundalk Marine Terminal Background

Founded in 1706, the Port of Baltimore, located on the Patapsco River of the Chesapeake Bay, Maryland, handles multiple cargo types. It is the nation's leading automobile and High & Heavy RORO (including agricultural equipment and construction project equipment) port. While located in one of the country's strongest urban markets, the Port is also an important gateway for the import and export of automobiles and High & Heavy RORO equipment to and from rural areas, including farming and construction equipment such as combines, tractors, wheel loaders, and excavators providing critical connectivity to international markets. This multi-faceted facility serves as a vehicle for industrialization and modernization, growing both the urban and rural economies.

The Dundalk Marine Terminal at Port of Baltimore

The Dundalk Marine Terminal (DMT) is the largest general cargo facility at the Port of Baltimore and the primary reason for the Port's top port ranking for automobiles and High & Heavy RORO equipment in the US. The terminal's Berths 11 to 13 are focused on these two cargos and account for 35 percent of DMT's business.

Supporting these berths are 225 acres of auto and 93 acres of High & Heavy RORO equipment storage at the port.

DMT has close, easy intermodal access for trucks to I-95 and I-695. Direct rail access provides a convenient transfer point for farm and construction equipment traveling to and from the Midwest. In addition, it contains over eight miles of rail inside their secure facility. Both CSX and Norfolk Southern have the ability to move freight through DMT. These intermodal accesses attract shippers to DMT. Wallenius Wilhelmsen, the largest RORO carrier in the world recently signed a 20-year, 150-acre agreement with the MPA for DMT to serve as its East Coast hub thus supporting the need for sustained RORO facilities.

THE DUNDALK MARINE TERMINAL SERVES AS A KEY US ENTRY POINT FOR FARM AND CONSTRUCTION EQUIPMENT

Baltimore's proximity to the Midwest's major farm and construction equipment manufacturers has helped the Port become the leading U.S. port for combines, tractors and hay balers, and in importing excavators and backhoes. This equipment increases production and leads to the export of US goods

Project Location

The Port of Baltimore is strategically located in the Mid-Atlantic region of the U.S. East Coast and is in the northeast part of an expansive region that includes northeast Virginia, Washington D.C., and the cities of Baltimore, Columbia, and Annapolis in Maryland. This region, with over 9.7 million people, is the third-largest consumer market in the United States.

Although the greater Washington/Baltimore region is a thriving consumer market, Baltimore, where DMT at the Port is physically located, is a Historically Disadvantaged Community, Opportunity Zone, an Urbanized Area, and an Area of Persistent Poverty.

Geographic Location and Geospatial Information

The project's coordinates are **39.25543 N Latitude and -76.53314 W Longitude**. While the Port of Baltimore includes elements of both a coastal seaport and an inland seaport it is classified as a **Coastal Seaport** as defined by the NOFO. It is located in an **Urban Area**, on the Chesapeake Bay, in Baltimore City, Maryland. Figure 3 presents the location of the Dundalk Marine Terminal Reconstruction of Berths 11-13 Phase 1 Project.

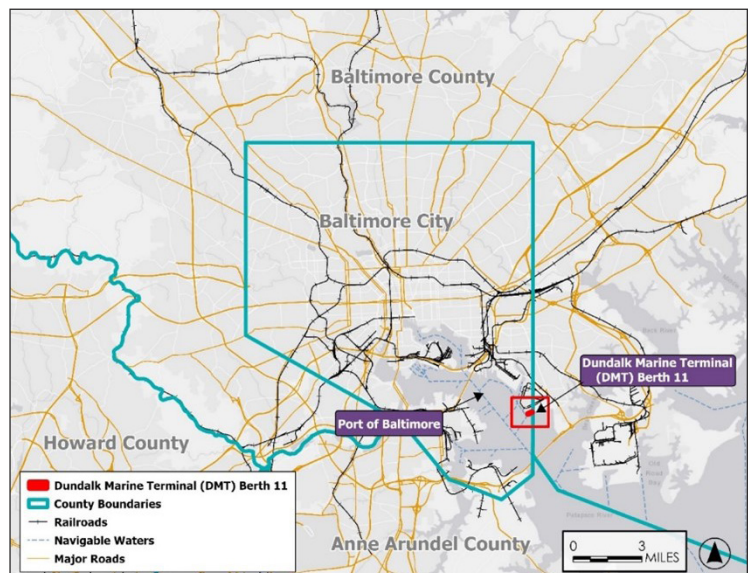


Figure 3: Project Location Map

DMT Berth 11 is in Baltimore City, Maryland (an Urban Area with a population of over 50,000 inhabitants, as defined by the 2020 Census and the 2024 NOFO). According to the 2020 Census, this Urban Area has a population of 2,203,663. The project is located in Census Tract 245102606.05, Baltimore City, Maryland, a

Historically Disadvantaged Community (HDC)¹ that meets both County and Census Tract Definitions of Areas of Persistent Poverty (APP)², is within a federally designated Opportunity Zone (ID 24510260605) and is adjacent to Empowerment Zones and Choice Neighborhoods in Baltimore, Maryland.

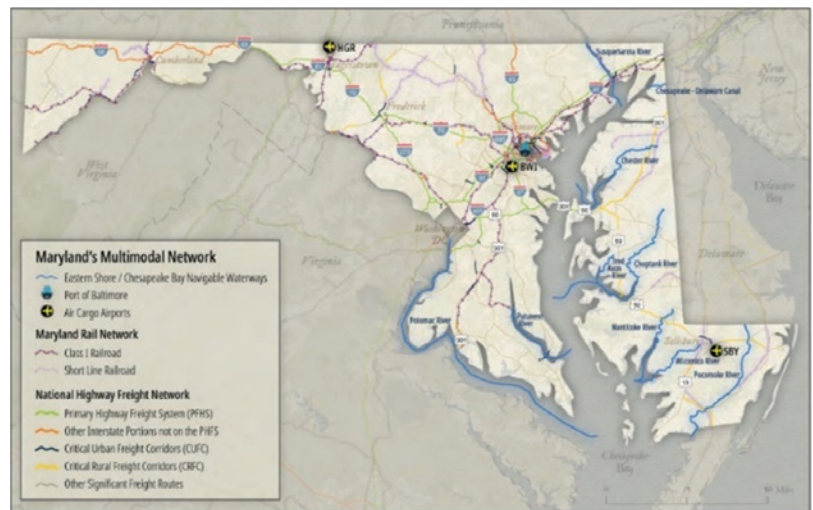
Connections to Existing Transportation Infrastructure

DMT has direct access to multiple modes of transportation, including local roads, state highways, the interstate highway system, the national freight rail network, the marine highway system, and Baltimore Harbor, as illustrated on Figure 2-2. Many major transportation arteries are within minutes of DMT. Baltimore has a confluence of several interstates that are part of the National Highway Freight Network and is part of the state of Maryland’s Multimodal Freight Network as illustrated in Figure 4, including the following by classifications (highways with segments in multiple classifications are listed under their highest classification):

- **Primary Highway Freight System:** I-695, I-70, I-95, S150, S173, S2, and the local road network surrounding the Port of Baltimore
- **Non-Primary Highway Freight System:** I-895, I-195, I-83, I-395, and I-795³
- **Rail Access:** DMT contains over eight miles of rail inside their secure facility. Both CSX and Norfolk Southern have the ability to move freight through DMT.

In addition, the region includes several local roads classified as Critical Urban Freight Corridors. DMT’s access to several routes on the National Highway Freight Network provides connectivity of goods and supplies throughout the eastern seaboard. DMT has direct access to Baltimore Harbor and other local waterways and is the designated automobile and High & Heavy RORO terminal at the Port. DMT is located on the M-95 Marine Highway.

While the Port is inland, it is directly connected to the Atlantic Ocean via the Chesapeake Bay. This unique characteristic makes the Port ideally located to receive overseas shipments for distribution to the Eastern and Midwest U.S. and is within a day’s reach of one third of U.S. households. Because of the outstanding highway access near the Port, trucks can reach 35% of America’s manufacturing base and 32% of its population overnight. The Port serves East Coast and Midwest locations with both its automobile and RORO imports. It is a vital port for equipment and automobile manufacturers and farmers in the Midwest that rely on the Port for their exported goods.



Source: Maryland Statewide Freight Plan, 2022

Figure 4: Maryland’s Multimodal Network

1 The Climate and Economic Justice Screening Tool (CEJST) identifies the project location within Census Tract 24510260605 as a Historically Disadvantaged Community¹³
 2 <https://maps.dot.gov/BTS/GrantProjectLocationVerification/>
 3 [NATIONAL HIGHWAY FREIGHT NETWORK VISUALIZATION TOOL \(arcgis.com\)](https://www.arcgis.com/apps/locate/index.html)