North Terminal Intermodal Facility Development Project for Long-Term Regional Economic Growth

Port of New Bedford

2017 TIGER Grant Application

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CITY OF NEW BEDFORD
JONATHAN F. MITCHELL, MAYOR

October 16, 2017

Elaine Chao
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Ave., SE
Washington, DC 20590

Dear Secretary Chao:

On behalf of the City and Port of New Bedford, I am pleased to submit this application to the 2017 TIGER Program.

This proposal outlines a maritime infrastructure project that will spur significant investment in the Port of New Bedford for years to come. The project entails the construction of a multipurpose marine terminal as part of a larger berth dredging program funded by the City, the Commonwealth of Massachusetts, and maritime businesses. The completed terminal will help the Port meet the demand of several different industries:

- As the seafood hub of the East Coast, the Port of New Bedford plays a significant role in the global seafood supply chain and commercial fishing economies from Maine to Florida. The terminal will afford the fishing and fish processing industry space to grow.

- New Bedford has positioned itself to become a center of the offshore wind industry in the years ahead. As the industry gears up to deploy wind farms from New Bedford, it has become clearer that the Port will need additional space to stage components, a service that a new terminal could readily provide.

- The terminal will offer the Port to expand its break-bulk cargo business, which has grown significantly in the last four years and created numerous jobs.

- With a new terminal would come more opportunity to ship freight to the islands of Martha's Vineyard and Nantucket, which would alleviate truck traffic congestion in the small ports on Cape Cod.

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Because the project is situated in the midst of a Superfund cleanup and will enhance the cleanup of the harbor, the EPA has formally determined that the project may proceed under CERCLA's State Enhanced Remedy (SER) process, thereby obviating the need for any federal or state permits. In other words, the project is in effect fully permitted. It is an opportune time to complete this project because of the immense cost and time savings available through the SER process, of which the Port may avail itself only during the pendency of the Superfund cleanup.

We believe that this is a rare project that will yield investment from several industries, create jobs, and enhance the environment to boot. Thank you for your consideration.

Sincerely,

Jon Mitchell

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North Terminal Intermodal Facility Development Project for Long-Term Regional Economic Growth

Overview

This project is a transformative port infrastructure project that will spur economic development and leverage non-federal funding and create public-private partnerships to support the growth and increased efficiency of the commercial fishing industry which supports thousands of jobs from Maine to Florida, ultimately unlocking millions in additional private investment for many years to come, by creating a safer and more efficient connection between the New Bedford Harbor and the surface transportation system.

This project will result in significant long-term economic development, including at least 898 new and permanent jobs, an additional $65.1 million in additional wages and local consumption, and an additional $11.5 million in state and local tax revenue.

This project utilizes an innovative, fast-tracked permitting process. Because this project will enhance the cleanup of the harbor, the US Environmental Protection Agency (EPA) has agreed to permit it through the State Enhanced Remedy (SER) process:

> Thank you for your letter, dated April 25, 2017, regarding work associated with the New Bedford Harbor Superfund Site. Your letter described the construction of a proposed North Terminal Confined Disposal Facility, a confined aquatic disposal cell, and associated navigational dredging (collectively, the "North Terminal Project").
>
> EPA agrees that the Commonwealth can proceed with the North Terminal Project. This project may be conducted under the provisions of Section 121(e) of CERCLA, which does not require any Federal, State or local permits for work conducted within the Site. Consistent with the "First

Excerpt from attached Letter of Support from US Environmental Protection Agency

If funded, this project will be ready for construction in months, not years. The innovative SER permitting process, approved by the both the EPA and the Massachusetts Department of Environmental Protection has been utilized several times since 2005. As explained in the *2016 Economic Impact Report* (page 25): *"Through the streamlined SER process, regulatory agencies work cooperatively with the EPA and DEP to ensure that projects are adequately regulated and meet the requirements of local and federal laws while also ensuring that the remediation of the harbor is not unduly delayed by the normal permit application and approval process."*

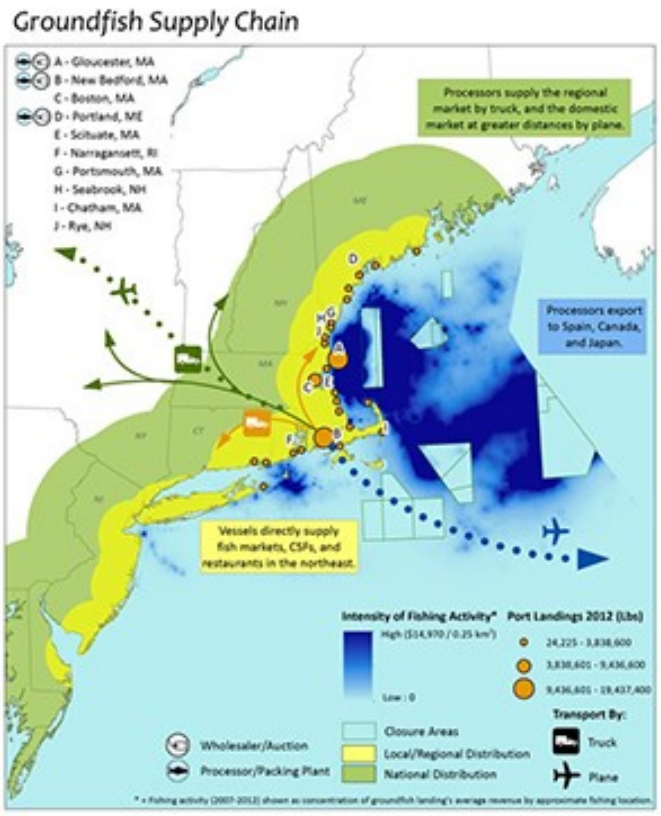
This project leverages $20 million in state and private business funding, equaling 60% of the total cost of the project. The Commonwealth of Massachusetts and the City of New Bedford have already invested approximately $50 million in Phases I-IV of this project since 2001, an award from TIGER would allow us to leverage the remaining funding from the state and private business to **complete the cleanup,** allowing the Port of New Bedford and private businesses to move forward with millions in private investment in their operations, workforce, and infrastructure.

Project Description

This project has three components:

1. Construction of 800 feet of additional bulkhead in the upper harbor's North Terminal to increase the efficiency of moving product directly from the harbor to offloading facilities, processing facilities, and to rail or truck to be distributed regionally, nationally, and globally via the surface transportation system
2. Backfill of the constructed bulkhead with clean material from Phase V maintenance berth deepening. This will maintain and expand the harbor's berthing capacity that allows for the efficient movement of goods (Phase V berth deepening is outside the purview of the US Army Corps of Engineering's federal channel)
3. Extend three more short-line rail spurs between the North Terminal bulkhead and railyard that will provide increased multi-modal transportation options, increasing transport efficiencies for direct boat to rail movement of goods

The Port of New Bedford is an integral part of a global seafood supply chain, handling millions of pounds of seafood on an annual basis. Direct and efficient connection to the surface transportation system from the harbor is integral to the industry. **An average of 1 million pounds of seafood enters and exits the port by freight, rail, and boat every day.** In addition to handling the majority of the seafood landed in the Atlantic, the Port also processes a growing amount of seafood landed in foreign waters, and shipped into processors located in the Port of New Bedford who then ship the final product back out to be sold globally.



Pinto da Silva, P., J.Olson, S. Benjiman, A. Baker and M.Ratzel. Draft. Following the Fish; Where the New England Catch Goes and Why it Matters. Northeast Fisheries Science Center. Woods Hole. MA.

In 2014 the Port handled 390 million pounds of seafood (140 million pounds of domestic seafood and 250 million pounds of foreign seafood). As reported in the *2015 Economic Impact Report*: "From the processor, the seafood can be trucked locally to wholesalers, go to a cold storage warehouse, trucked to an airport such as Boston's Logan International Airport or New York's John F. Kennedy International Airport where it is flown to various domestic and international destinations, or trucked to the Port of New York New Jersey where it is put on container vessel to be shipped internationally. It can also be trucked from New Bedford to Worcester where it is railed out to the West Coast for export to Asia."

The construction of 800 feet of additional bulkhead and maintenance berth deepening will enhance the Port of New Bedford's direct connection to the surface transportation system and are imperative to the continued growth and success of this industry against foreign competition.

The Port of New Bedford is the most valuable fishing port in the country and the leading seafood hub on the East Coast. A large number of commercial seafood processors are located within New Bedford and process seafood landed by commercial fishing vessels from up and down the coast, including Maine, New Jersey, Virginia, North Carolina, and Florida. As working waterfronts on the East Coast continue to disappear, the Port of New Bedford's industrial waterfront continues to thrive and support these other regional economies.

The *2016 Economic Impact Study found that the Port of New Bedford generates:*

- $9.8 billion in total economic value: 2% of the Commonwealth's GDP
- $1.6 billion in total economic impact (wages, salaries, re-spending & local consumption)
- 36,578 jobs (direct, induced, indirect & related)
- $1.2 billion in local, state, and federal taxes (direct, induced, indirect & related)

The Port of New Bedford is home to 45+ seafood processors and wholesalers with infrastructure for offloading, processing, and shipping seafood regionally, nationally, and internationally, and continues to attract commercial fishermen from up and down the coast. Without the Port of New Bedford, commercial fishing on the east coast of the United States would cease to exist, encouraging further demand for foreign-landed - sometimes illegally landed seafood products. Currently the United States runs a $13 billion seafood trade deficit, as 91% of seafood consumed in America is foreign landed.

In June 2017, President Trump discussed the importance of the domestic seafood industry: "The fisheries resources of the United States are among the most valuable in the world. Growing global demand for seafood presents tremendous opportunities for expansion of our seafood exports, which can reduce our more than US 13 billion seafood trade deficit."

To ensure commercial fishing remains a strong and thriving industry along the east coast, and a global competitor, we need to continue investing in the state of good repair and expansion of the Port of New Bedford's infrastructure. This project will allow the Port of New Bedford to expand operations and more efficiently move seafood, working toward the President's goal of greater exports and providing Americans with more American-caught seafood.

When completed, this project will also unlock millions of dollars in additional private investment from at least 22 waterfront business, while also completing the last phase of maintenance berth deepening to remove the remaining low level contaminated material that **will not be removed by the EPA as part of the Superfund cleanup.**

Once completed, commercial fishing businesses, as well as cargo businesses and the offshore wind industry, will be able to complete their own routine berth deepening in a simple and cost effective manner.

Component I: Construction of Bulkhead

Bulkhead infrastructure is key to meeting the full potential of any working waterfront because it provides waterfront businesses the necessary structure to safely tie up vessels and efficiently move product directly from the harbor to processing facilities and the surface transportation system for distribution. Bulkhead also helps control landside erosion and provides access to deeper water depths.

Portions of North Terminal illustrating lack of bulkhead

The bulkhead will be built within the Port's upper harbor, known as North Terminal, providing 5 private businesses that currently lack water access with infrastructure to directly access the harbor from their respective facilities. The new land and bulkhead will be able to berth 14 additional fishing vessels, providing them with direct and more efficient access to offloading and processing facilities, while also increasing the safety of all personnel working within the port.

This project will also support the growth of international cargo, and provide the Port with the capability to handle two separate offshore wind installation projects in the future.

Under this grant application, the Port of New Bedford is seeking to extend the existing North Terminal bulkhead by an additional 800 feet of straight north-south bulkhead. The project would be completed as a solid fill pier, constructed over hydraulically placed fill contained within geotextile fabric. Utilizing an innovative, environmentally friendly, and cost-effective process, clean fill sourced from Phase V maintenance berth deepening (see below), will be used to finalize construction of the bulkhead.

This innovative process reduces the overall environmental impact of removing contaminated sediments through the final phase of maintenance berth deepening. As used in previous phases by the EPA and Mass DEP, contaminated sediments captured through berth deepening will be sealed in a Confined Aquatic Disposal (CAD) Cell, eliminating significant CO2 emissions that would otherwise pollute the air if the contaminated materials were shipped by barge to the Rhode Island or Cape Cod Bay disposal sites. This method is also much less expensive than other disposal methods.

In MassDOT's 2014 *Ports of Massachusetts Strategic Plan*, the expansion of this bulkhead within North Terminal is cited numerous times as a way to increase berthing for fishing and cargo vessels (pages 34-41). Its expansion is identified as a key improvement needed to alleviate the problem of overcrowded dockage for fishing vessels, **which poses a safety hazard to personnel and significantly slows the efficiency of moving product from the port to the surface transportation system**. The bulkhead will also accommodate growth in the cargo industry.

Currently, the lower harbor is highly developed with sufficient bulkhead and infrastructure throughout for vessels to tie directly to offloading, processing, and transport facilities. However, as the industry has continued to consolidate, and more and more commercial fishing vessels from up and down the coast utilize New Bedford Harbor, the lack of space for additional vessels to tie up and offload directly has become a huge barrier to further growth.

Abundant bulkhead infrastructure at New Bedford's South Terminal. Source: Getty Images

As a stop-gap measure, fishing vessels tie up two, sometimes three in a row along the bulkhead - an extremely dangerous practice. Not only are vessels more likely to cause damage to each other and the adjacent bulkhead/pier, personnel on board are more likely to be hurt or fall overboard as they move from one vessel to another.

A number of privately-owned seafood processors and private businesses will benefit from this project. All of these businesses process millions of pounds of fish and shellfish every year, distributing it throughout the country and internationally – utilizing thousands of freight truck trips for transport. These businesses lease property owned by the city and managed by the Port of New Bedford. All properties involved in this project have language in their leases that give the Port of New Bedford ownership to all filled land and bulkheads and all of the businesses are aware and supportive of this project (see Partnerships).

Component II: Backfill of Bulkhead and Terminal Creation

To maximize cost savings, decrease regulatory burdens, and complete this project expeditiously, the backfill of the bulkhead and final construction of the North Terminal must be done in tandem with Phase V Maintenance Berth Deepening.

1. Completed together, the project will save the Commonwealth of Massachusetts and a number of regulatory agencies $9.7 million as opposed to completing them separately
2. Additionally, the EPA and Mass DEP have already approved the use of the innovative and expeditious SER process to complete this project - which helps keep permitting cost down and the timeline of the project fast.

Phase V Maintenance Berth Deepening will result in significant additional economic benefits, including:

- Continued private investment by at least 22 waterfront businesses
- 898 new and permanent jobs
- Waterfront access for at least 60 additional commercial fishing vessels that would supply about 7 million pounds of additional landings
- The ability to compete for about 100,000 tons of bulk cargo now handled at marine terminals in Providence, RI that are currently trucked to New Bedford

Also, once Phase V berth deepening is completed and the contamination sequestered in the CAD Cell, the Port of New Bedford and private businesses will be able to routinely remove the clean material in the berths themselves, and at a much lower cost - making routine berth deepening more simple and affordable.

Routine berth maintenance and deepening is essential to a healthy working port and waterfront. Without regular berth deepening, too much sediment builds up and boats are unable to tie up alongside the bulkhead, creating safety hazards and greatly reducing efficiencies in the movement of goods directly from the harbor to the surface transportation system.

Phase V berth maintenance and deepening is the **final** phase of the planned navigational berth deepening program to remove the remaining low level contaminated material that **will not be removed by the EPA as part of the Superfund cleanup.** Through this project, we will remove material that lies within the footprint of the North Terminal bulkhead extension and dispose of that material within a nearby CAD Cell. Removal of this material will also clear the bulkhead footprint of organic soils that would not be structurally or geotechnically suitable to support the bulkhead extension without additives or specialized work processes – another cost-saving measure. The clean fill sourced from Phase V berth maintenance and deepening will be used to finalize construction of the bulkhead.

From the 1930s to 1970s, New Bedford's harbor was heavily contaminated by polluters dumping millions of pounds of Polychlorinated Biphenyls (PCBs) directly into it, severely hampering development of the harbor's infrastructure and the City of New Bedford.

The harbor – particularly the north harbor - was devastated from an environmental perspective, and the pollution prevented any infrastructure projects from touching the waterway, creating an equally devastating economic situation. Regular maintenance berth deepening – which is imperative to a harbor's economic vitality – ceased, without a safe but cost-effective solution to the PCB-laden dredge material. In most industrial-use harbors, private businesses pay for routine maintenance berth deepening of their berths. However, in the New Bedford Harbor, today, private businesses cannot afford to routinely dredge their berths due to the extremely high cost of berth deepening and disposing of contaminated sediment.

Component III: Surface Finish of Appurtenances and Road & Rail Connections

On the land side, the North Terminal area houses a wide variety of industrial and commercial users, many of which are water-dependent. Access to and from the area via the roadway is through Herman Melville Boulevard and North Front Street. To the north lies the Hicks Logan residential/commercial neighborhood and the series of local streets which workers in the area utilize to walk, bike, or drive to work in the Port. Herman Melville Boulevard and the southernmost section of N. Front Street exist as 30-foot wide roadways, while the rest of N. Front Street and the other roadways in the area are 24-foot wide rights-of-way. Sidewalks and safe passageways for pedestrians, bicycles, and automobiles are lacking on those roadways causing a safety concern, and there is no dedicated lane for safe passage in spite of the fact that many residents of the Hicks-Logan area (and other neighborhoods nearby) walk or use bicycles for transport to downtown and to their jobs on the working waterfront. Due to the industrial nature of the North Terminal Area, the area is frequented by large trucks, and the combination of large numbers of freight fleet coupled with high mixed pedestrian/personal automobile usage of the same roadways, driveways, and turning areas leads to excessive congestion and delays for all parties, including freight trucks.

The New Bedford railyard is across Herman Melville Blvd from the North Terminal Site. The railyard is currently the southern terminus of the main rail line. There is an existing rail spur from North Terminal that is used by the USEPA to transport their dewatered sediment from the sediment cleanup project the EPA is conducting in the Harbor, and Maritime International (a stevedore and cold storage company) recently extended another rail spur to the south to their facility. There are plans in the future to extend rail service to the South Terminal in New Bedford, and in doing so connect the southern and northern portions of the Port via rail. Additionally, the MassDOT has plans to extend the South Coast Rail commuter line to Boston into this area, with a platform planned for the southern end of the railyard at the Whale's Tooth Parking lot.

The roadway improvements will provide a safer, smoother and easier passage to navigate to and from the Hicks Logan neighborhood and the trucking route at Interstate 195. Extension of the rail spurs will provide an additional tool for multimodal shipping options.

(See Design/Concept Drawing on page 28.)

Impact to Entire Port and Community

As touched upon earlier, the benefits of this project spread from the immediate City of New Bedford to the greater Commonwealth to the commercial fishing economies in Maine, New Jersey, Virginia, North Carolina, and Florida. The Port of New Bedford remains the growing epicenter of commercial fishing and the home port to a dozens of out-of-state fishing vessels, supporting their commercial fishing economies.

Locally and regionally this project will have a significant impact on the economy, adding high-paying jobs which create greater wealth, wage, and respending power.

Again, completing the final phase of berth deepening will also move the harbor out of its clean-up designation allowing all waterfront businesses a simpler and more affordable process to invest in their properties and the waterfront going forward.

Commercial fishing is a vital industry within the country, and under the current regulations, fishermen are often only able to land approximately 30-40% of their annual quotas. Through this project, fishermen can more easily invest in expanded operations that can increase the value of each fish they are still able to catch. It will also save them significant amounts of money as transport efficiency is greatly increased and multi-modal transport options are created.

Photo Source: Bergies Seafood

Project Location

New Bedford Harbor is located in the City of New Bedford, Massachusetts, which lies at the southern-most tip of Massachusetts, halfway between Providence, RI and Cape Cod. New Bedford has a population of 95,000 residents, and the harbor is at the epicenter of the city's economy and culture.

Since the first settlers came to the area, the New Bedford Harbor has been Southeastern Massachusetts' greatest economic asset. New Bedford is known internationally for its rich whaling history, which once made it the wealthiest city in the country. As with many industrial cities in the northeast, the decline in manufacturing led to a decline within our local economy during the middle of the 20th century; however, our harbor has always remained diverse and rich in its potential, and our leaders and community members have remained innovative and committed to the vision of a successful, thriving local community rich in culture and resilience.

For most of the 19th century, New Bedford's economy was focused on the whaling industry garnering the city's nickname of "The Whaling city." An economic industry mix was not introduced into the city until the late 1800s as the Industrial revolution expanded its reach across the Atlantic from England to the United States. The waterfront changed drastically in New Bedford's formative years, from boatyards and docks to different types of industrial land-uses, including factories and mills that also needed proximity to marine shipping and railways.– *New Bedford Waterfront Framework Plan*

Today, as **the most profitable commercial fishing harbor in the United States and the second largest cargo port in the Commonwealth of Massachusetts**, an average of 300 commercial fishing vessels are docked within the harbor on any given day, and hundreds more utilize the city's offloading services.

The Port of New Bedford is the commercial fishing hub of America's east coast. The Port's ability to efficiently and directly tie into the surface transportation system is imperative to the global movement of seafood into the Port and back out to be distributed globally.

The harbor is also called on by cargo ships making weekly trips in and out of the Port for much of the year – predominantly from North Africa to deliver clementines and other citrus.

Additionally, the harbor attracts recreational boaters from all over the region and up and down the Atlantic coast. The number of transient boaters visiting the Port of New Bedford grew by 50% from July 1, 2016 through June 30, 2017. Launch trips also increased by 300% during the same time period. More and more transient boaters are extending their stay once here to utilize all of New Bedford's amenities and shore side services, and to enjoy all of the tourist attractions in the city. And a growing number of cruise ships stop in the harbor carrying hundreds of tourists. More than 200,000 individuals travel in and out of the harbor each year.

New Bedford is rich in diversity, with large Portuguese and Cape Verdean communities, as well as a growing number of Central Americans. 19.7% of residents are foreign born, compared to 14.7% statewide, and 37.5% speak a language other than English at home, compared to 22.2% statewide.

While unemployment has steadily decreased, per capita income still lags far behind the state: $21,181 in New Bedford compared to $36,441 statewide.

While jobs have been added in the health care and service industries, the low per capita income provides further evidence of the need for well-paying, manufacturing-type jobs, which are exactly the kind created by expanded infrastructure within the harbor.

Project Parties

The New Bedford Harbor Development Commission/Port of New Bedford is partnering with a number of municipal and private agencies throughout this project. All partners have come together under this grant because they recognize the outcomes will be beneficial to not only them, but to the City as a whole. The proposed infrastructure improvements will result in economic development opportunities, increased efficiency in the movement of goods and people, easier access to jobs and services for disadvantaged residents, and will spur community revitalization and further economic development by encouraging further investment.

New Bedford Harbor Development Commission/Port of New Bedford

As the lead applicant, the HDC is charged with managing the Port of New Bedford. Autonomous from the municipality, the HDC is directed by seven commissioners, with the Mayor acting as Chair. The HDC manages and regulates all city-owned waterfront properties, including several wharves. The HDC also manages the Pope's Island Marina and nearly 200 recreational boating slips. We are heavily invested in the existing and creation of new infrastructure, policy, and systems that support existing industry and the development of new business within the port and working waterfront.

New Bedford Economic Development Council (NBEDC)

The NBEDC is made up of a number of New Bedford's public and private leaders; in partnership with the Mayor's office, it sets the agenda for the City's key strategic economic development areas. The HDC and NBEDC worked closely to complete the recently released *New Bedford Waterfront Framework Plan* that identifies this project – among others - as key to economic growth in the city. The NBEDC recognizes the harbor is the City's key asset, and continues to work closely with the HDC and other partners to develop initiatives that move toward reaching the full economic potential that the harbor offers.

AGM Marine Contractors, Fairhaven Shipyard Companies

The above listed privately owned companies have a long working history with the Port of New Bedford and will all be directly impacted by this project. All work within maritime supported industries: processing and distributing seafood nationally and internationally, vessel repairs, and commercial fishing gear manufacturers. They fully support the expansion of the North Terminal bulkhead because it increases the efficiency and safety of their work, and provides them with greater opportunity to expand their operations.

Grant Funds and Sources/Uses of Project Funds

Total Funding Cost Estimate

Item	Unit Price	Units	Extended price	% of Project
North Terminal / Phase V Design and Permitting Completion	$ 2,000,000.00	1.00	$ 2,000,000.00	6%
Waterside Mobilization-Dredging	$ 500,000.00	1.00	$ 500,000.00	1%
Waterside Mobilization-Sheetpile Wall Installation	$ 500,000.00	1.00	$ 500,000.00	1%
Dredging in Footprint	$ 30.00	17,500.00	$ 525,000.00	2%
CAD Cell Creation	$ 30.00	215,000.00	$ 6,450,000.00	18%
Dredge Phase V	$ 32.50	193,000.00	$ 6,272,500.00	18%
Backfill behind Bulkhead	$ 25.00	137,900.00	$ 3,447,500.00	10%
Sheet Pile Wall Construction	$ 8,100.00	1,100.00	$ 8,910,000.00	26%
Vibrocompaction	$ 15.00	123,274.80	$ 1,849,122.00	5%
Fendering	$ 20,000.00	20.00	$ 400,000.00	1%
Utilities	$ 350,000.00	1.00	$ 350,000.00	1%
Marginal Wharf	$ 3,000.00	800.00	$ 2,400,000.00	7%
Roadway Equipment Mob	$ 50,000.00	1.00	$ 50,000.00	.1%
Melville Blvd & N. Front St Improvements	$ 324.00	2,200.00	$ 712,800.00	2%
Rail Extension	$ 250.00	2,200.00	$ 550,000.00	2%
Total Cost			**$ 34,916,922.00**	**100.0%**

TIGER Requested Funding Cost Estimate

Items for TIGER Grant (Federal)	Cost	% of Project
North Terminal Bulkhead Portion Design and Permitting Completion	$ 500,000.00	3%
Waterside Mobilization-Sheetpile Wall / Bulkhead	$ 500,000.00	3%
Sheet Pile Wall Construction	$ 8,910,000.00	60%
50% of Backfill Behind Bulkhead for Wall Support	$ 1,723,750.00	12%
Marginal Wharf	$ 2,400,000.00	16%
Utilities	$ 350,000.00	2%
Rail Extension	$ 550,000.00	4%
TIGER Request	**$14,933,750**	**42.8%**

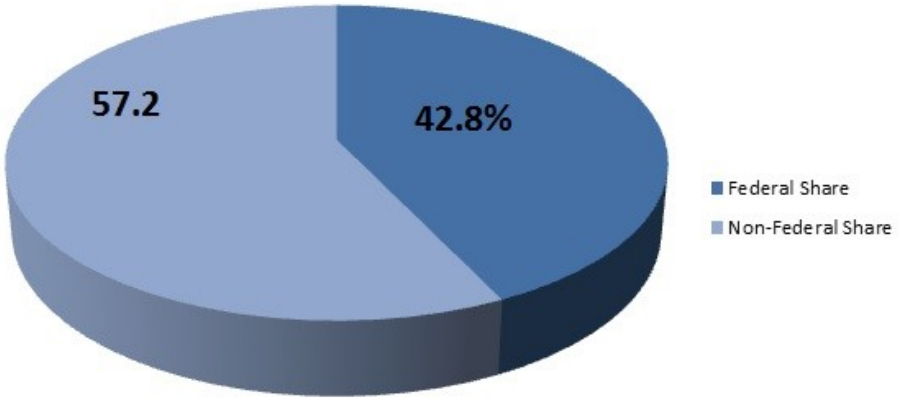
Non-Federal Funding Cost Estimate

Items for non-Federal (State and Local Match)	Cost	% of Project
North Terminal / Phase V Design and Permitting Completion	$ 1,500,000.00	8%
Waterside Mobilization-Dredging	$ 500,000.00	3%
Dredging in Footprint	$ 525,000.00	3%
CAD Cell Creation	$ 6,450,000.00	32%
Dredge Phase V	$ 6,272,500.00	31%
50% of Backfill Behind Bulkhead for Wall Support	$ 1,723,750.00	9%
Vibrocompaction	$ 1,849,122.00	9%
Fendering	$ 400,000.00	2%
Roadway Equipment Mob	$ 50,000.00	.1%
Melville Blvd & N. Front St Improvements	$ 712,800.00	4%
Amount of Match from State and Private Sources:	**$ 19,983,172.00**	**57.2%**

Non-federal Funding

The non-federal funds are approved in an Environmental Bond Bill and the Bond will be authorized and released upon commitment and approval of this TIGER grant application (see attached Letter of Match). All private businesses benefiting from maintenance berth deepening will also provide a 20% cash match to the cost of their individual berth deepening requirements.

In 2016 we applied for a similar project, but currently there are no other pending federal funding requests or funds granted for this project, however we are applying to the 2017 INFRA Grant Opportunity for the same project.

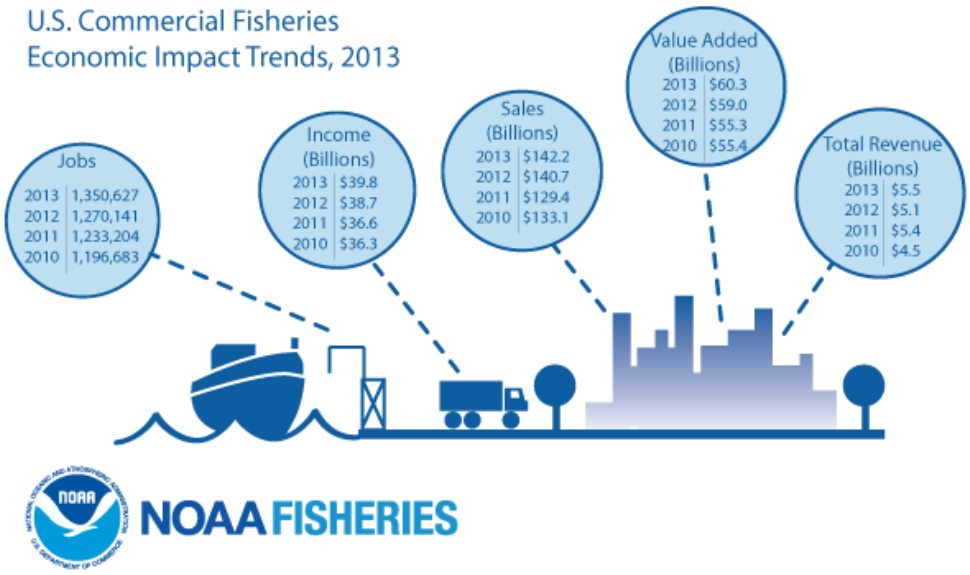


Merit Criteria

Merit Criteria - Economic Competitiveness

This project will generate significant long-term economic gains, including:

- 898 new and permanent jobs
- $65.1 million in additional annual wages and local consumption
- $11.5 million in additional state and local tax revenue
- Creating the conditions for at least 22 private businesses to further invest in their operations and infrastructure
- Completing the final phase of the berth deepening to remove contaminated sediments which will allow private businesses a simple and affordable process to complete routine berth deepening on their own going forward
- Ensuring the Port of New Bedford remains a highly competitive commercial fishing port that can further increase the domestic sale and international export of American seafood
- Supporting commercial fishing communities from up and down the coast, including Maine, New Jersey, Virginia, North Carolina, and Florida



A 2015 Technical Memorandum put together by FXM Associates found that bulkhead extensions would greatly enhance the ability of seafood processors to remain in the city and continue investing in the expansion of their businesses.

This project fulfills the above recommendations, setting the harbor up to flourish and grow for decades. **The final phase of berth deepening is the single barrier to a number of private businesses' ability to expand and grow - creating an abundance of economic development.**

Merit Criteria - Safety

Safety of all port personnel is a top concern of the HDC and of all waterfront businesses. Working on commercial fishing vessels poses unique hazards to personnel, and currently those hazards are increased due to the lack of adequate bulkhead in the port, which often forces commercial fishing vessels to berth three, sometimes four or five deep along the bulkhead, creating an extremely unsafe working environment.

Photo Source: Bergies Seafood

Not only does this situation pose a safety hazard for personnel who move from vessel to vessel on a daily basis, it also more quickly erodes the life expectancy of bulkhead and other infrastructure.

Berth deepening also creates improved access for all port personnel from the boat to the offloading facility or other landside connection which increases safety. The construction of additional bulkhead at North Terminal, an estimated 14 vessels will be able to tie up along the newly created bulkhead, freeing up the lower harbor which currently is extremely congested. Maintenance berth deepening will provide space for another 60 vessels to tie up directly, further enhancing safety and decreasing congestion.

Vessels tied up 5-deep; Photo Source: Ed Pepin Photography

Environmental Sustainability

The proposed project has significant environmental benefits and is environmentally sustainable. The project will be an asset and contribute to the overall harbor cleanup removing 200,000 CY of contaminated sediment. In addition, the project will avoid a significant amount of greenhouse gas emissions that would result from sending the dredge sediment to the Army Corps offshore disposal sites.

Based on our analysis from the World Shipping Council we anticipate that the release of up to 11,547 tons of carbon dioxide and 16 tons of sulfur dioxide emissions could be eliminated each year of construction by keeping the clean dredged material close to its source and reusing within the bulkhead alignment. Otherwise, the dredge sediment would be loaded into 3,000 CY yard scows and towed out 12 hours roundtrip to the Rhode Island Sound Disposal site. For the 215,000 CY being removed for the CAD Cell that could be used for backfill, that represents 66 roundtrips that would be saved, representing an undiscounted net environmental benefit of $5.3M of greenhouse gases not emitted.

All freight that is transported via the new rail extension from local businesses will take trucks off the road, decreasing their emissions and reducing congestion. This project also creates capacity for future potential to move freight between New Bedford and Cape Cod, which would also reduce truck congestion and therefore emissions. And as the Port of New Bedford continues to build capacity and attract more national and international cargo into the harbor, as a strategic alternative to the heavily trafficked New York City and New Jersey area ports, it will reduce freight traffic in that area, and instead will push freight through the region and into Canada by much more efficient roadways, or by rail.

And as stated above, all of these projects are located within the boundaries protected by the one-of-a-kind Hurricane Barrier, greatly increasing the environmental sustainability of infrastructure improvements from the threat of coastal flooding due to hurricanes and coastal storms, as well as softening or eliminating adverse impacts from climate change.

As stated in the American Association of Port Authorities' 2015 *Port Surface Transportation Infrastructure Survey: The State of Freight*:

"Seaports are the backbone of a thriving 21st century global economy. Yet, a nation's freight transportation system is only as good as its underlying infrastructure…Without this investment, the American economy, the jobs it produces and the international competitiveness it offers will erode and suffer, creating predictable and oftentimes severe hardships to the individuals who live and businesses that operate within its borders."

Merit Criteria - State of Good Repair

Under the existing conditions, the area where we are proposing to build bulkhead currently has no existing bulkhead or other infrastructure. This project will create 800 feet of bulkhead with a useful life of 50 years. As there is currently no existing bulkhead, there is subsequently no direct access to the surface transportation system. This project will provide that critical tie in, allowing for the efficient movement of goods directly from boat to rail or boat to truck.

Together with the rail spur extensions, North Terminal will provide users with increased inter-modal options and flexibility. The project also spurs public-private partnerships and further investment in the harbor by private users.

As reported in the report *Charting the Course: A Sustainable, Productive and Robust Port of New Bedford, put together by the New Bedford Regeneration Committee*: "The commercial fishing industry may be in contraction nationally, but it is expanding in the Port of New Bedford, where dockage is so valuable that vessels raft 3 or 4 deep. Investing in a new bulkhead along the North Terminal will provide safer and more expansive dockage for the port's growing fleet and activate parcels owned by the HDC and leased to active and expanding private companies that currently do not have water access. Investment in this new infrastructure is ripe for public-private partnerships."

The HDC does not receive any taxpayer money, but operates with revenue through dockage fees, parking fees, and recreational boating revenue. This project will create revenue that will provide adequate future funding to provide routine maintenance, repairs and expansion.

The harbor floor should be seen as additional infrastructure critical to any efficient industrial harbor and waterfront. Maintaining berth depths at a state of good repair is imperative for safe and efficient navigation by all port users, and has a significant impact on the efficient and direct access to landside facilities and the surface transportation system.

Photo Source: Bergies Seafood

Merit Criteria - Quality of Life

Together, this project will improve the quality of life for New Bedford residents through significant job creation, which in turn creates a significant tax and respending impact. Hundreds of small and local shoreside businesses, restaurants, and other retailers depend upon the respending of residents and visitors.

The project will create high-paying, manufacturing-type jobs that continue to disappear in this country. As identified in the FXM Technical Memo, the Port of New Bedford's large fishing, processing, and related industries "represent a classic business 'cluster' unrivaled by any other single related economic activity in New Bedford." This significant cluster also provides high paying jobs for a number of New Bedford residents with low educational attainment. FXM found that only 12% of personnel working on the waterfront has a college degree, and 45% have no high school diploma.

The Port of New Bedford presents great opportunity for residents with low educational attainment to work in high-paying, jobs akin to manufacturing industries - jobs that are disappearing throughout the country. The *2015 Economic Impact Report* further enumerates the significant job creation generated by this project.

Secondary Criteria - Innovation

This project is extremely innovative. To expand the bulkhead at the same time berth deepening is being completed creates an environmentally friendly, cost effective project. The innovative technique of using clean materials dredged from the harbor to fill the expanded bulkhead saves the HDC and the state a large amount of money by eliminating the need to transport the clean material out of state, while also reducing adverse environmental impact from full removal. This project provides a beneficial re-use of clean dredged sediment and costs savings to all parties involved, streamlining construction and reducing roadway traffic associated with importing backfill materials.

The use of CAD Cells is an innovative way of safely and cost-effectively dealing with contaminated sediments. CAD cells have been used in New Bedford Harbor for more than 12 years, and **other ports and entities dealing with contamination look at New Bedford as a case study of cost effective environmental remediation** that includes a significant economic development component. With each CAD cell constructed, we are pioneering new ways of constructing and consolidating material.

Again, the SER permitting process is also extremely innovative, greatly reducing the time and cost of often burdensome regulatory procedures. To date, we have permitted four similar projects through this process that have all been greatly successful, as illustrated in the *2015 Economic Impact Report* (page 27).

The Port of New Bedford is committed to innovation in policy and development to continuously support the commercial fishing and other industries to ensure they maximize their economic impact and opportunity. To this end, most recently, the HDC formalized the creation of the New Bedford Ocean Cluster to see where technology can help push cooperative research with academia and the commercial fleet, impacting stock assessments, gear research, and other initiatives that will be beneficial to both regulators and the fishing industry.

NEW BEDFORD OCEAN CLUSTER

Project Readiness

Design

This project will be ready to begin construction by June 1, 2018. Preliminary designs have been drawn, and after they are finalized, we will move directly into the SER permitting process - as already approved by the EPA and Mass DEP. The design is set to roll into construction so the project will be complete by August 2020.

Permitting

The SER provision was designed to allow the Port to emulate the Superfund process and was formulated and authorized through inclusion in the 1998 USEPA Record of Decision for the New Bedford Superfund Site. Through the streamlined SER process, regulatory agencies work cooperatively with the EPA and DEP to ensure that projects are adequately regulated and meet the requirements of local and federal laws while also ensuring that the remediation of the harbor is not unduly delayed by the normal permit application and approval process

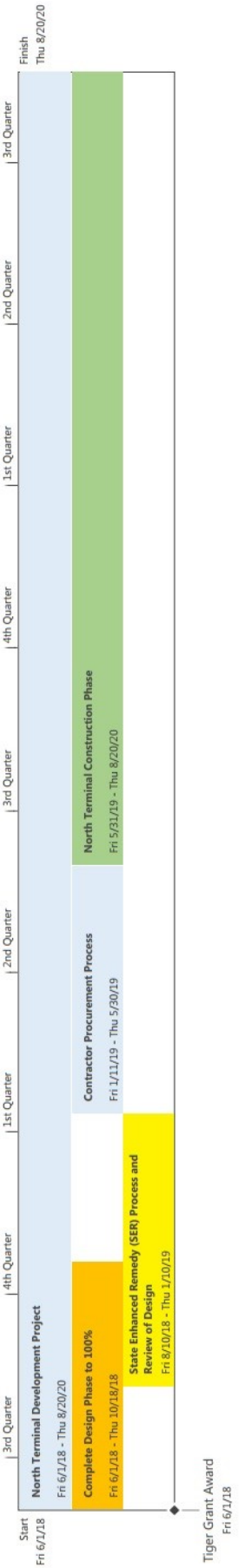
Traditional permitting requires the application processes of, and coordination with, multiple agencies. This permitting process can take anywhere from 6 months for a simple, straightforward project to more than a year to 18 months for a more typical project. The permitting process comes with significant costs for engineering and permitting support, and can cost anywhere from tens of thousands of dollars to several hundred thousand dollars.

One of the major benefits of the SER process is that all of the permitting agencies are present for the meetings, so the permitting is streamlined, all of the agencies review input from their regulatory peers, and the performance standards for SER projects are already established. Permitting a project under SER can typically be done in two to three meetings, which are held once per month on average. In addition, the HDC's approach of phased dredging projects allows the property owners to take advantage of the economies of scale of permitting the several properties together as one project.

The North Terminal project concept has already been presented to the SER committee and once the project receives authorization, designs can be finalized and permitting can be completed typically in a 6 month period.

With respect to the rail lines, any extensions onto the bulkhead will be permitted as part of the bulkhead work; however, the work involves reestablishing former rail lines or extending on previously improved roadways, thus minimizing any negative environmental impact.

****Please Note: The NEPA process is incorporated in the SER Permitting Process.**


Finish
Thu 8/20/20
3rd Quarter
2nd Quarter
1st Quarter
4th Quarter
3rd Quarter
2nd Quarter
1st Quarter
4th Quarter
3rd Quarter
North Terminal Development Project
Fri 6/1/18 - Thu 8/20/20
Complete Design Phase to 100%
Fri 6/1/18 - Thu 10/18/18
State Enhanced Remedy (SER) Process and Review of Design
Fri 8/10/18 - Thu 1/10/19
Contractor Procurement Process
Fri 1/11/19 - Thu 5/30/19
North Terminal Construction Phase
Fri 5/31/19 - Thu 8/20/20
Start
Fri 6/1/18
Tiger Grant Award
Fri 6/1/18

The SER Process in Practice

In 1998, the Environmental Protection Agency (EPA) released a plan designating the New Bedford Harbor as a Superfund Site, and outlined how partial cleanup would proceed. The Commonwealth of Massachusetts then put together the State Enhanced Remedy (SER) process to clean up the remainder of the contamination. The Commonwealth also approved a Dredge Material Management Plan, the process of removing contamination to maintain depths necessary to allow business to continue within the harbor.

The SER provision was created specifically to address the issues of contamination with which all future maintenance or improvement berth deepening projects in New Bedford harbor would have to deal – including this project, which significantly expedites the permitting process.

Building upon and working with the SER process, the Port of New Bedford issued the Final Environment Impact Report (FEIR) in 2004 for the Dredge Material Management Plan, laying out the methods with which the Port of New Bedford could site a series of Confined Aquatic Disposal (CAD) cells in the harbor. The ability to use CAD cells for sediment disposal solved a significant and costly dredged material disposal problem.

Under the SER process and through the creation of a series of CAD Cells, the Commonwealth of MA and the Port of New Bedford have conducted four phases of navigational and berth deepening to date, removing more than 620,000 cubic yards of contaminated material and 545,000 cubic yards of that material has been placed in the four CAD Cells created to date, greatly enhancing the EPA's cleanup efforts, and not including two additional CAD Cells or contaminated sediment removed under their cleanup.

Because New Bedford Harbor is a Superfund site, it represents unique opportunities and challenges with respect to planning. The implementation of the SER, provides a streamlined process, where regulatory agencies work cooperatively with the EPA and DEP to ensure that projects are adequately regulated and meet the requirements of local and federal laws, while also ensuring that the remediation of the harbor is not unduly delayed by the normal permit application and approval process.

PROJECT RISKS/MITIGATION

The project team has evaluated and prepared for potential risks identified within this project.

Potential Risk – Unknown Environmental Contamination
Mitigation – The conditions of the harbor sediments have been well documented throughout the Harbor. The EPA has done extensive sampling and testing, and the City and State have supplemented that testing as well. All material above the EPA's cleanup level of 50 mg/kg will be the responsibility of the EPA for removal, and they believe they have adequately characterized the sediments to know its extent. For this project, we have assumed none of the sediment is suitable for offshore disposal and have budgeted for the material to be dredged and placed in a CAD Cell, so there can be no additional unknown environmental contamination.

Potential Risk – Construction Cost Overruns
Mitigation – The project team has been involved in several multi-million dollar construction projects over the past several years and is well equipped and well versed in project management of these large infrastructure projects. The project management strategies, including thorough documentation of existing conditions, review of submittals, and construction oversight, will be effective in mitigating the risk of cost overruns.

Potential Risk – Infrastructure not used as intended
Mitigation – The Port of New Bedford and the City have done extensive outreach, conductive feasibility studies and incorporate several steering and strategy committees. The project team has documented support from the private businesses in the area. In addition, fishing vessels are currently berthed 3-4 vessels wide, so there is a clearly demonstrated need for berthing space.

Results of Benefit Cost Analysis

Baseline Condition

The North Terminal Area, which is the focus area of this project, lies just north of downtown New Bedford, MA and the east-west highway (Route 6) that connects the City with adjacent municipalities; and just south of Route I-195, the interstate highway that provides access to and from the Port to the markets that fuel the success of New Bedford Harbor, the largest per-dollar catch fishing Port in the Nation. The North Terminal Area is at the northern terminus of the Industrial portion of the Port of New Bedford, and as such is one of the northern-most areas to receive redevelopment attention. North of the North Terminal lies the Hicks Logan Area, a portion of the City that exists as a mixed residential and commercial neighborhood on the outskirts of the industrial Port, part of the City's working waterfront. Industries in the area include fish processing houses, cold storage warehouse, welding and metal fabricators, boat-breakers, bulk and aggregate cargo, and marine salvage and marine construction operations.

The waterside infrastructure of the north terminal varies greatly, and includes:

- A pile supported steel bulkhead at the EPA's dewatering facility at the southern end of the project site; and
- Several "lobes" of land that meet the water via rip rap slopes, timber piers, and older-style steel sheet pile bulkheads.

On the land side, the North Terminal area houses a wide variety of industrial and commercial users, many of which are water-dependent. Access to and from the area via the roadway is through Herman Melville Boulevard and North Front Street. To the north lies the Hicks Logan residential/commercial neighborhood and the series of local streets which workers in the area utilize to walk, bike, or drive to work in the Port. Herman Melville Boulevard and the southernmost section of N. Front Street exist as 30-foot wide roadways, while the rest of N. Front Street and the other roadways in the area are 24-foot wide rights-of-way. Sidewalks and safe passageways for pedestrians, bicycles, and automobiles are lacking on those roadways causing a safety con-

cern, and there is no dedicated lane for safe passage in spite of the fact that many residents of the Hicks-Logan area (and other neighborhoods nearby) walk or use bicycles for transport to downtown and to their jobs on the working waterfront. Due to the industrial nature of the North Terminal Area, the area is frequented by large trucks, and the combination of large numbers of freight fleet coupled with high mixed pedestrian/personal automobile usage of the same roadways, driveways, and turning areas leads to excessive congestion and delays for all parties, including freight trucks.

The New Bedford railyard is across Herman Melville Blvd from the North Terminal Site. The railyard is currently the southern terminus of the main rail line. There is an existing rail spur from North Terminal that is used by the USEPA to transport their dewatered sediment from the sediment cleanup project the EPA is conducting in the Harbor, and Maritime International (a stevedore and cold storage company) recently extended another rail spur to the south to their facility. There are plans in the future to extend rail service to the South Terminal in New Bedford, and in doing so connect the southern and northern portions of the Port via rail. Additionally, the MassDOT has plans to extend the South Coast Rail commuter line to Boston into this area, with a platform planned for the southern end of the railyard at the Whale's Tooth Parking lot.

Benefit Cost Analysis Results

Working with the five primary selection criteria noted above, and the inputs and guidance documents provided by the FHWA, the City has developed aseries spreadsheets (a workbook) to analyze these benefits and costs. The workbook uses only criteria and parameters listed in the guidance documents and have not taken into account transfers, such as jobs. The Table below indicate that for the portion of the project associated with this grant request ($14.9 Million FHWA investment), the medium to long-term (from project construction completion to 20-years beyond project completion) net economic benefit (excluding induced economic benefits) represents total net benefit of $101.6M undiscounted, and a net present value of $55.1M (using a 7% discount rate) and $76.3M (using a 3% discount rate).

Summary of BCA

Current Status / Baseline & Problem to be addressed	Change to Baseline/Alternatives	Type of Impacts	Population Affected by Impacts	Economic Benefit	Summary of Results (in dollars)	Page
No connection to Short Line Rail Spur	Rail Spur extension to bulkhead	Increase Cargo Handling capabilities	Shipping Companies, Stevedores, etc.	Reduced shipping costs, monetized value of emissions reductions, safety enhancements	Included Below	3
Waterside infrastructure in varying states of condition	Bulkhead extension and deeper water access	Increase Cargo Handling capabilities and berthing spaces	Fish processors, fishing vessels Dockworkers, Shipping Companies, Stevedores, etc.	Reduced shipping costs, monetized value of emissions reductions, safety enhancements	747,542.60	3
Vessels need to offload at South Terminal and go by roadway to be processed	Bulkhead and rail extensions	multi modal transport options arise	Fish Processors, cold storage	Less Logistical Issues, more efficient transport options	58,397,714.42	4
Offshore disposal of clean dredged sediment	Beneficial re-use of dredge material for backfill	Reduced Emissions	General Public	Reduced green house gases	5,557,348.76	5
Highway Congestion	Ability to use sea and rail for cargo	Reduced Emissions	General Public	Reduced green house gases	included above	5
Industrial Area with limited development and highway options	Increased marketability for industrial development, more land, easier access to interstate	Quality of Life	Local Government, Industrial users	Revitalization of Industrial Activities	8,062,200.00	6
Disconnected neighborhood from downtown and working waterfront. Dangerous Roadways for Pedestrians, Bikes, and Autos.	Traffic Controls, signalling, repair traffic patterns that cause dangerous congestion. Dedicated turn lanes, bike lanes, more shipping options to reduce truck traffic	Safety	General Public, Area Businesses	Less trucks on the highway, safer for other drivers and cyclists	28,797,120.00	7
Total					101,561,925.78	


Remove In-Water Debris and Vessels from Work Area
Dredge Area in Front of New Bulkhead to -25 ft MLLW
Install New Bulkhead 800 ft Extension
270' Return Wall Bulkhead
Place and Compact Fill Behind Bulkhead
Regrade New Terminal Area to Match Surrounding Grade
North Terminal
New Bedford, MA
Bulkhead Extension
Concept Plan
Major Construction
Elements
Install New Rail Lines (2) to the Property
Herman Mellville Blvd
Repair / Improve Roadway:
Herman Mellville Blvd. and North Front Street
10-16-2017