

1. Component NAVY	<b>FY 2005 MILITARY CONSTRUCTION PROGRAM</b>	2. Date 13 JAN 2004
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3. Installation and Location/UIC: N00129 NAVAL SUBMARINE BASE NEW LONDON GROTON, CONNECTICUT	4. Project Title PIER 6 REPLACEMENT
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5. Program Element 0203176N	6. Category Code 15120	7. Project Number P463	8. Project Cost (\$000) 28,782
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**9. COST ESTIMATES**

Item	UM	Quantity	Unit Cost	Cost(\$000)
PIER 6 REPLACEMENT (32,507 SF)	m2	3,020		7490
PIER 6 REPLACEMENT (32,507 SF)	m2	3,020	2,463.38	(7440)
TECHNICAL OPERATING MANUALS	LS			(50)
SUPPORTING FACILITIES				18370
SPECIAL CONSTRUCTION FEATURES	LS			(1040)
ELECTRICAL UTILITIES	LS			(3550)
MECHANICAL UTILITIES	LS			(2730)
ANTI-TERRORISM/FORCE PROTECTION	LS			(90)
BOLLARDS, CLEATS, JIB CRANE AND BROW	LS			(420)
CATHODIC PROTECTION	LS			(630)
DEMOLITION/DISPOSAL PIERS 4, 6 AND 13	LS			(2330)
DREDGING	LS			(6150)
FENDERING SYSTEM	LS			(1430)
SUBTOTAL				25860
CONTINGENCY (5%)				1290
TOTAL CONTRACT COST				27150
SIOH (6%)				1630
SUBTOTAL				28780
TOTAL REQUEST ROUNDED				28780
TOTAL REQUEST				28782
EQUIPMENT FROM OTHER APPROPRIATIONS (NON ADD)				(500)

**10. Description of Proposed Construction**

Project will provide a new 3,020 square meters (19.8m X 152.5m) pile supported pier with 305 meters of berthing (MB), concrete deck, a 500-foot explosive safety arc for weapons loadouts, electrical shore power, pier lighting, information technology communications and other fiber optic cabling, cable, telephone, water, sewer, compressed air, pure water and oily waste/ waste oil piping connections off pier, bollards and cleats, jib cranes, retractable brows, rubber faced steel fendering system and specialized equipment.

Dredging will be needed for berthing the 688-class, the new VIRGINIA-class and the SSN 21-class submarines on both the north and south side of the pier. Piers 6 and 4 will be demolished (463 MB) to make room for the new pier. Pier 13 will be demolished (281 MB) to open up required berthing on the North side of Pier 12. Special Construction Features include piles and rock sockets (where there is insufficient soil to achieve pile stability, the piles will be attached to the granite rock by drilling a hole for each pile and grouting the pile).

Anti-terrorism/Force Protection features will be included. Sustainable principles will be integrated into the design, development, and construction of the project in accordance with Executive Order 13123 and other laws and Executive Orders. Technical operating

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manuals are included.				
<b>11. Requirement:</b> <u>3020m2</u> <b>Adequate:</b> <u>m2</u> <b>Substandard:</b> <u>m2</u> <b>PROJECT:</b> The project will provide 305 m (two 500 Foot slips) of berthing for the 688-class, SSN21-class and the new VIRGINIA-class submarine at Naval Submarine Base (SUBASE) New London. <b>(Current Mission)</b> <b>REQUIREMENT:</b> Adequate, efficient and secured facilities are required to provide berthing and support for the existing and future submarine operations. SUBASE New London is the homeport for the SSN 21-class submarine, the majority of the 688-class submarines and will be the homeport for the new VIRGINIA-class submarines on the east coast. Intermediate maintenance is conducted pier-side by the Naval Submarine Support Facility, Electric Boat, Navy Shipyards and Warfare Centers. This requires efficient berthing to handle the 19 boats projected to be stationed here. <b>CURRENT SITUATION:</b> Pier 6 has a reinforced concrete deck supported by steel pipe piles, designed in 1968 and built in 1972 for the 637-class submarine. The depth of water on the south side is too shallow to properly berth the 688-class submarine. The wooden fendering system is under designed to berth the larger boats and is constantly being repaired. The pier length of 357 ft and the angle of the pier to the quaywall make the south side too short to properly accommodate a 688-class submarine. The north side of the pier will be too short for VIRGINIA-class submarines. The transformers and switchgear that supply power to the submarines are antiquated, parts for repairs on this equipment are no longer available, and the pier can no longer meet the maximum electrical demand of a SSN-688. The protective coating on the majority of the support piles is completely deteriorated exposing the steel to salt water and causing areas of severe corrosion. The utility trench located under this pier is deteriorated to the point where entire concrete areas are missing, allowing the trench to flood twice a day from the tidal action. Cranes can no longer provide support or weapon movements to the submarines in several areas where piles are missing or are severely deteriorated. Transformers have electrical grounds that can cause damage to the equipment on board the submarine.  The pier width is so narrow that any equipment or light cranes operating on the pier block the pier. This inadequate and unsafe existing facility needs to be demolished to accommodate a new state of the art pier. Disposal of Pier 6 and Pier 4 will allow room for the new Pier 6. Demolition of Pier 13, classified as inadequate, will be disposed of and will widen the slip for improved access to the north side of Pier 12.				

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<p><b>IMPACT IF NOT PROVIDED:</b> provided, there will be an inadequate number of piers to berth submarines, will not be able to support the submarine force of the 21st century. There will be potential systems or structural failures detrimental to personnel and equipment. Loss of this pier will result in nesting nuclear submarines inadequately and more dead stick moves to support weapons loadouts, supply operations, pier side maintenance and repairs. Submarines will continue to extend to and beyond the end of the existing pier, compromising the effectiveness of the pier sentry. Every move increases cost and increases the chance of damage to these submarines. Failure to provide adequately sized piers with sufficient load bearing capacity will severely impact SUBASE New London's ability to support loading of weapons on submarines and pier-side intermediate maintenance and other logistical support.</p>				

**12. Supplemental Data:**

A. Estimated Design Data:

1. Status:

(A) Date Design Start	082002
(B) Date Design 35% Complete	012004
(C) Date Design Completed	092004
(D) Percent Completed as of SEPTEMBER 2003	2%
(E) Percent Completed as of JANUARY 2004	35%
(F) Type of Design Contract	Design Bid Build
(G) Parametric Estimate used to develop cost	Yes
(H) Energy study/Life cycle analysis performed	Yes

2. Basis:

(A) Standard or Definitive Design:	No
(B) Where Design Was Most Recently Used:	N/A

3. Total Cost (C) = (A) + (B) = (D) + (E) :

(A) Production of Plans and Specifications	\$1,554
(B) All other Design Costs	\$518
(C) Total	\$2,072
(D) Contract	\$1,295
(E) In-House	\$777

4. Contract Award 112004

5. Construction Start 122004

6. Construction Complete 122006

B. Equipment associated with this project which will be provided from other appropriations:

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<u>Equipment</u> <u>Nomenclature</u>	<u>Procuring</u> <u>Appropriation</u>	<u>Fiscal Year</u> <u>Appropriated</u> <u>Or Requested</u>	<u>Cost</u> <u>(\$000)</u>
Power Cables/Hose/Lines	OMN	2005	500
JOINT USE CERTIFICATION:			
The Regional Commander certifies that this project has been considered for joint use potential. Unilateral Construction is recommended. This Facility can be used by other components on an as available basis; however, the scope of the project is based on Navy requirements.			
Activity POC: STEVE MEAGHER		Phone No: (860)-694-4912	