

1. Component NAVY	FY 2005 MILITARY CONSTRUCTION PROGRAM	2. Date 13 JAN 2004
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3. Installation and Location/UIC: N00109 ATLANTIC ORDNANCE COMMAND YORKTOWN, VIRGINIA	4. Project Title ORDNANCE VEHICLE MAINTENANCE SHOP
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5. Program Element 0703676N	6. Category Code 21420	7. Project Number P518	8. Project Cost (\$000) 9,870
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9. COST ESTIMATES

Item	UM	Quantity	Unit Cost	Cost(\$000)
ORDNANCE VEHICLE MAINTENANCE SHOP (50,041 SF)	m2	4,649		6160
BATTERY SHOP (5,823 SF)	m2	541	1,356.94	(730)
ORDNANCE-HANDLING VEHICLE MAINTENANCE SHOP (26,619 SF)	m2	2,473	1,501.50	(3710)
VEHICLE STORAGE SHED (9,548 SF)	m2	887	369.95	(330)
MAINTENANCE STORAGE FACILITY (7,212 SF)	m2	670	1,076.31	(720)
EQUIPMENT HOLDING SHED (840 SF)	m2	78	477.41	(40)
BUILT-IN EQUIPMENT	LS			(500)
TECHNICAL OPERATING MANUALS	LS			(60)
INFORMATION SYSTEMS	LS			(40)
ANTI-TERRORISM/FORCE PROTECTION	LS			(30)
SUPPORTING FACILITIES				2710
ELECTRICAL UTILITIES	LS			(600)
MECHANICAL UTILITIES	LS			(490)
PAVING AND SITE IMPROVEMENTS	LS			(580)
SITE PREPARATIONS	LS			(310)
DEMOLITION	LS			(230)
ENVIRONMENTAL MITIGATION	LS			(500)
SUBTOTAL				8870
CONTINGENCY (5%)				440
TOTAL CONTRACT COST				9310
SIOH (6%)				560
SUBTOTAL				9870
TOTAL REQUEST ROUNDED				9870
TOTAL REQUEST				9870

10. Description of Proposed Construction

Construct a two story, slab on-grade, concrete block, finished steel-frame/masonry ordnance-handling vehicle and equipment maintenance facility complete with necessary high-bay shop, storage and administrative support space. Facility will include administrative support areas which are heated and air-conditioned; maintenance shops and direct support spaces; overhead radiant heat and mechanical ventilation system, 5-ton overhead bridge crane in battery charging area, 10-ton overhead bridge crane in the crane/rigger/weight test handling shop. The facility will include an in-line vertical 400-500gpm fire pump, and all spaces will be equipped with a fire protection/suppression system. Existing oil/water separator in Building #683 will remain and be used by the new facility. Project will provide a fenced parking area for organizational and nonorganizational vehicles and equipment in conjunction with landscaped storm water collection and retention pond to permit natural purification of storm water run-off and eliminate environmental risks to local water table. Built-in equipment will include

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<p>hoists, vehicle lifts and compressed air system. The facility will be designed to meet the current Department of Defense (DOD) Anti-Terrorism/Force Protection (AT/FP) criteria and will meet the minimum setbacks. Project will connect new facility to existing utility systems at the site and will demolish Buildings #372, 426, 427, 449, 496, 529, 622, 683, 1446, and 1505 totaling 7,505 m2. There will be some asbestos abatement associated with project demolition. Landscaping and other 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 manuals are included.</p>				
<p>11. Requirement: <u>4649m2</u> Adequate: <u>0m2</u> Substandard: <u>0m2</u></p> <p>PROJECT: This project constructs a consolidated ordnance-handling vehicle/equipment maintenance and repair facility with the necessary holding sheds, parking areas and storage facilities. (Current Mission)</p> <p>REQUIREMENT: Adequate, consolidated facilities are needed to conduct efficient and safe vehicle and equipment maintenance operations in direct support of Naval Weapons Station (WPNSTA) Yorktown's primary ordnance mission and Cheatham Annex's (CAX) fleet industrial supply system (FISC) mission. All railroad transportation services at Yorktown were terminated in 1999. The majority of the 1,139 vehicles and pieces of equipment that the Norfolk Public Works Center transportation shop at Yorktown services are needed and used to handle and transport ordnance to and from storage magazines and to the Fleet's ships as they return/depart on deployment. All vehicles and equipment devoted to ordnance movement, transport or storage handling must meet stringent criteria for availability, reliability and safety. A modern maintenance and repair facility is essential to ensure the safety and readiness of an increasingly advanced and technologically sophisticated inventory of vehicles and weight/material handling equipment.</p> <p>Reliable and available vehicles and transportation equipment is critical to the success of the FISC mission and other tenant commands at CAX. The mission of the FISC is to receive, store, issue, pack, and ship Navy stock materials, including particularly large, bulky, and often unique shipboard equipment such as submarine periscopes, ship propellers, bull gears antennae, sonar domes, and other equipment. In addition, CAX provides warehouse and material distribution services for 39 storage authorization programs.</p>				

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<p>The transportation shop at Yorktown also services civil engineering support equipment vehicles in support of the Navy Fleet Hospital command at CAX. Included in their inventory are the vehicles necessary to support 10 marine preposition force enhanced Navy Fleet hospitals which require regular cyclical maintenance to remain operationally ready. Each year 2 of the 10 hospitals are cycled through the vehicle maintenance and the heavy equipment shop for preventative maintenance and system checks. Each hospital includes 133 vehicles and generators.</p> <p>In total, the Yorktown transportation shop has an annual throughput of approximately 3,226 vehicles. These figures include all the work done servicing vehicles and equipment to support the Naval Weapons Station's ordnance operations and its tenant commands, the FISC and Navy Fleet hospital at Cheatham Annex as well as the other CAX tenant commands.</p> <p>CURRENT SITUATION: Currently, vehicle and maintenance operations at Yorktown are conducted in ten different facilities, all of which were built between 1942-1944. All of the facilities are deteriorated beyond the point of economic repair and pose a variety of safety and environmental hazards. The majority of the vehicles are repaired and maintained in Building 372. Heavy equipment is maintained and repaired in Building #683. The crane riggers, weight testing and heavy equipment operations operate in Buildings #426, 427 and 529. Buildings #449, 496, 622, 1446, and 1505 are transportation-related storage facilities.</p> <p>Building #372 (2,381 SM), ordnance-handling vehicle maintenance shop, has undergone numerous major repairs over the years and a 1991 comprehensive structural analysis of the entire building documented severe structural deficiencies that required immediate remedial action. Current standard operating procedures call for the Peninsula Site Regional Engineer to issue instructions to close the building when snow predictions of greater than 6 inches and winds of greater than 60 mph are forecast, due to the risk of building collapse. Current plans require personnel and services to be relocated at the first indication that the base may receive severe weather.</p> <p>Additionally, the facility has the following major defects: It has no fire suppression system. The building does not have a vehicle exhaust system to remove deadly vehicle exhaust fumes from the building. Consequently, during winter weather, the garage doors must be left open to allow the gases to escape the building. The roof leaks in numerous locations, including the main administrative area of the entire transportation division. The facility is not in compliance with the Americans with Disabilities Act, as the building contains no handicap accessible features.</p>				

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<p>Building #683, Heavy Equipment Shop, incurred structural damage when a bucket truck struck the east entry door transom. The concrete door transom was fractured and the front wall is cracked in several locations. The front wall must be replaced to include widening and raising the height of the door, and relocating the building's electrical distribution system. The door has been shored and blocked off. When bulldozers require maintenance and repair, they must enter the building from the west entry door. Due to their size and the facility's physical configuration, the presence of bulldozers severely limits the shop from bringing other equipment into the building for repairs. Building #683 does not have a fire suppression system.</p> <p>Buildings #426 and 427 house the crane/rigger/weight test handling shop and heavy equipment operations shop. The weight test facility tests general-purpose non-ordnance and explosive ordnance related rigging gear. In addition to testing and inspection, this shop also fabricates and repairs rigging gear. The crane shop is required to provide crane and rigging service for local and ocean-going tugboats, Army, Air Force, Marines, Coast Guard ships, police boats, and friendly foreign ships. Both buildings have structural damage to existing 12" x 12" wooden roof supports and extensive damage to the roof trusses. The concrete masonry units (CMU) block wall in Building 426 is secured by sandwiching 2"x 6" lumber on both sides of the wall and tying the lumber to the bottom cord of the wooden roof rafter. The overhead roll-up doors have been damaged beyond economic repair and have been secured. The building walls are not insulated, causing excessive heat loss in winter conditions.</p> <p>Building #529 houses the forklift charging and repair shop required to maintain the battery-powered weight handling equipment. The battery charging stations do not have a ventilation exhaust system that is required to remove the hydrogen gas, which is produced while recharging batteries.</p> <p>There are 50 people who work at this complex. Consolidating under one roof will help with scheduling and improve energy efficiency.</p> <p>IMPACT IF NOT PROVIDED: Continued use of the facilities in their current condition will continue to jeopardize the safety of assigned personnel and critical ordnance handling equipment. The requirement to evacuate central maintenance facility (Building #372) during adverse weather will cost \$226,000 per year and significantly detract from the transportation department's ability to efficiently support the base and its tenant command's critical missions. Relocation effort will cause \$126,000 per year in lost Public Works Center (PWC) Navy Working Capital Fund revenues to be incurred and have a significant negative</p>				

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impact on employee morale and quality of life. Additionally, during times of adverse weather conditions, undetermined costs will be incurred by the relocation of maintenance and utility shop functions to Norfolk. Age and poor physical condition of the facilities will cause annual maintenance and utility costs to far exceed the average cost for similarly sized and configured modern facilities.

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) : \$709

(A) Production of Plans and Specifications	\$532
(B) All other Design Costs	\$177
(C) Total	\$709
(D) Contract	\$443
(E) In-House	\$266

4. Contract Award 112004

5. Construction Start 122004

6. Construction Complete 042006

B. Equipment associated with this project which will be provided from other appropriations:
NONE

JOINT USE CERTIFICATION:

The Regional Commander certifies that this project has been considered for joint use potential. Joint Use is recommended.

Activity POC: DAVID DAVIS

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