

1. Component NAVY	FY 2005 MILITARY CONSTRUCTION PROGRAM	2. Date 13 JAN 2004
----------------------	--	------------------------

3. Installation and Location/UIC: N60201 NAVAL STATION MAYPORT, FLORIDA	4. Project Title AIRFIELD CONTROL TOWER
---	--

5. Program Element 0203176N	6. Category Code 13372	7. Project Number P189	8. Project Cost (\$000) 6,200
--------------------------------	---------------------------	---------------------------	----------------------------------

9. COST ESTIMATES

Item	UM	Quantity	Unit Cost	Cost(\$000)
AIRFIELD CONTROL TOWER (10,376 SF)	m2	964		4180
MTRACON (7,416 SF)	m2	689	3,277.51	(2260)
AIRCRAFT CONTROL TOWER (2,960 SF)	m2	275	5,464.55	(1500)
BUILT-IN EQUIPMENT	LS			(330)
TECHNICAL OPERATING MANUALS	LS			(80)
ANTI-TERRORISM/FORCE PROTECTION	LS			(10)
SUPPORTING FACILITIES				1190
SPECIAL FOUNDATION FEATURES	LS			(80)
ELECTRICAL UTILITIES	LS			(370)
MECHANICAL UTILITIES	LS			(210)
PAVING AND SITE IMPROVEMENTS	LS			(40)
DEMOLITION	LS			(490)
SUBTOTAL				5370
CONTINGENCY (5%)				270
TOTAL CONTRACT COST				5640
SIOH (6%)				340
SUBTOTAL				5980
DESIGN/BUILD - DESIGN COST				210
TOTAL REQUEST ROUNDED				6190
TOTAL REQUEST				6200

10. Description of Proposed Construction

Aviation Control Tower: Separate 6 story steel frame building with control tower cab and ground electronic spaces, precast concrete wall panel, uninterruptible power system (UPS) w/back-up generator, built-up modified bitumen roof, pile foundation, fire protection system, information system, elevator, utilities and mechanical heating, ventilation and air conditioning system (HVAC) and pedestrian paving. The project will demolish the existing tower at building 90 (199 m2), building 450 (97 m2) and building 437 (349 m2).

MTRACON Building: Single story masonry construction, open web steel roof joists with built-up modified bitumen roof, concrete footings and slab on grade, fire protection system, information system, raised computer flooring, utilities, HVAC, metal stud and sheetrock interior wall partitions, lighting, plumbing, security fencing, concrete sidewalks.

The construction of this project will include anti-terrorism force protection features. These standards require structural enhancements to the control tower to prevent progressive collapse, reinforced exterior masonry walls, structural glazing, mass notification systems, emergency cutoff switches for HVAC systems, internal utility routing and improved equipment bracing.

1. Component NAVY	FY 2005 MILITARY CONSTRUCTION PROGRAM			2. Date 13 JAN 2004
3. Installation and Location/UIC: N60201 NAVAL STATION MAYPORT, FLORIDA		4. Project Title AIRFIELD CONTROL TOWER		
5. Program Element 0203176N	6. Category Code 13372	7. Project Number P189	8. Project Cost (\$000) 6,200	
Technical operating manuals will be provided.				
11. Requirement: <u>964m2</u> Adequate: <u>0m2</u> Substandard: <u>0m2</u> PROJECT: This project constructs a Control Tower collocated with a Military Terminal RADAR Approach Control Facility (MTRACON). (Current Mission) REQUIREMENT: Adequate and efficiently configured facilities are required to collocate air traffic control and ground electronics functions and support future upgrades incorporating National Airspace Modernization (NAS Mod) and Digital Air Surveillance Radar (DASR-11, AN/GPN-30, STARS, AN/FSQ-204 and VIDS AN/FYC-22). New facilities will supplement those already existing at building 90. NAVSTA Mayport's mission is to maintain and operate facilities and provide services and materials to support aviation operations of CINCLANTFLT and COMSECONDFLT operating forces. NAVSTA Mayport is the East Coast tactical helicopter hub for six Helicopter Anti-Submarine squadrons (a total of 85 H-60 helicopters). Yearly, NAVSTA Mayport averages 90 days of carrier divert services and hosts over 650 transient aircraft supporting 3 flag staffs, 1 aircraft carrier, and 21 ships homeported in Mayport's basin. Annual air operations have grown steadily the past 3 years (from ~90,000 to ~100,000) given the additional mission requirements for HSL helicopters (armed helo, Night Vision Goggle). Each year, Mayport also provides support for 12 detachments averaging 4 aircraft. CURRENT SITUATION: Air Traffic Control Tower Building 90: The existing air traffic control tower was constructed in 1954. The air traffic control tower height does not provide adequate line of sight to all airfield surfaces as required by FAA 6480.4 criteria, which poses an operational safety hazard. The Control Tower Cab (22ft x 22ft), commonly manned with 4 qualified controllers and 3 trainees, violates Fire Inspection Division (NFPA 101 LIFE SAFETY CODE) space and access requirements. Current tower cab equipment spacing arrangement is not adequate to house recently installed modern aviation control equipment and further exacerbates the cramped workspace thus impacting the quality of the workplace. The recent installation of the Emergency Communication System (ECS) on the tower's fourth deck has resulted in a cramped workspace with potential for electric shock safety hazards. One equipment rack has been partially disassembled to allow for safe access to electronic equipment for maintenance and troubleshooting purposes. The poor design and condition of the heating, ventilation and air conditioning system (HVAC) results in temperature differences between equipment spaces and the manned tower cab that have caused humidity problems in the electronic spaces with moisture build up on the				

1. Component NAVY	FY 2005 MILITARY CONSTRUCTION PROGRAM			2. Date 13 JAN 2004
3. Installation and Location/UIC: N60201 NAVAL STATION MAYPORT, FLORIDA		4. Project Title AIRFIELD CONTROL TOWER		
5. Program Element 0203176N	6. Category Code 13372	7. Project Number P189	8. Project Cost (\$000) 6,200	
<p>equipment. The tower HVAC has no dampers, and temperatures in the tower vary greatly between afternoon and midnight operations. Window condensation is a persistent problem affecting controller visibility, which is a safety of flight concern. Metal on the cab base, roof, catwalk, ladders, safety railings, and windows continue to rust away. The structural condition of the external metal structures present safety issues for maintenance personnel when on the tower cab catwalk and roof due to crumbling cement and loose safety railings. The lightning protection system is judged to be ineffective due to excessive corrosion.</p> <p>NAVSTA Mayport's Radar Traffic Control Facility (Building 437) is a converted communications center that houses ATC IFR capability and a portion of required terminal equipment. Due to space limitations, building 90 contains the remaining terminal equipment. This radar facility building was designed as a communications center and constructed in 1969. Air Operations personnel conducted a self-help project to convert the building to house IFR control operations and terminal equipment. Flight data input output (FDIO) was relocated to Building 90 due to space deficiencies. Inadequate space exists for a controller training room, debriefing room, and the 15G33 ATC training device. Equipment spaces are set up for maximum cooling, and the HVAC system is not zoned and cannot be balanced. Lack of environmental controls result in an unsatisfactory workplace environment, requiring electric space heaters being used year round in the occupied spaces. The building is considered to be inadequate as a result of it being encumbered by the Explosive Safety Quantity Distance arc for the Naval Station's primary ammunition loading berth at wharf B-2.</p> <p>IMPACT IF NOT PROVIDED: Air Traffic Control (ATC) will operate in violation of FAA 6480.4 criteria for minimum eye level elevation for tower cab, which will degrade the safety, and efficiency of the air traffic control operations. The planned installation of National Airspace Modernization (NAS Mod) equipment will not be incorporated. The existing tower will continue to suffer from significant structural deterioration causing potential safety hazards to maintenance personnel. The tower will eventually require tower reinforcement and a new cab. Humidity and potential lightning damage will continue to present significant risks to equipment. The insufficient space, poor interior configuration, and lack of zoning of the air conditioning will continue to present hazardous working conditions and directly impact the quality of the workplace, thus negatively impacting morale and productivity. An Explosive Safety waiver will continue to be required for personnel exposed to the ESQD arc from wharf B-2.</p>				
12. Supplemental Data:				

1. Component NAVY	FY 2005 MILITARY CONSTRUCTION PROGRAM			2. Date 13 JAN 2004
3. Installation and Location/UIC: N60201 NAVAL STATION MAYPORT, FLORIDA		4. Project Title AIRFIELD CONTROL TOWER		
5. Program Element 0203176N	6. Category Code 13372	7. Project Number P189	8. Project Cost (\$000) 6,200	
A. Estimated Design Data:				
1. Status:				
(A) Date Design Start				082002
(B) Date Design 35% Complete				092004
(C) Date Design Completed				042005
(D) Percent Completed as of SEPTEMBER 2003				3%
(E) Percent Completed as of JANUARY 2004				3%
(F) Type of Design Contract				Design 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) :				\$240
(A) Production of Plans and Specifications				\$200
(B) All other Design Costs				\$40
(C) Total				\$240
(D) Contract				\$40
(E) In-House				\$200
4. Contract Award				012005
5. Construction Start				042005
6. Construction Complete				102006
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. 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: CDR Michael Huggins		Phone No: 904-270-5252		