

# **Missile Defense Agency**

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**Fiscal Year 2016**

**President's Budget Submittal**

**Military Construction Exhibit**



**February 2015**

**MISSILE DEFENSE AGENCY  
FY 2016 MILITARY CONSTRUCTION  
PRESIDENT'S BUDGET SUBMITTAL  
DESCRIPTIVE SUMMARIES**

(\$ in Thousands)

<b><u>Program</u></b>	<b><u>Authorization</u></b>	<b><u>Appropriation</u></b>
Major Construction	169,153	169,153
Unspecified Minor Construction	0	0
MILCON Planning & Design	<u>0</u>	<u>0</u>
TOTAL MILITARY CONSTRUCTION	169,153	169,153

**MISSILE DEFENSE AGENCY  
FY 2016 MILITARY CONSTRUCTION  
PROJECT SUMMARY  
BY LOCATION**

(\$ in Thousands)

<u>State/Country/Installation/Project</u>	<u>Auth Request</u>	<u>Approp Request</u>	<u>New/Current Mission</u>
<b>Major Construction</b>			
<b>Poland</b>			
Redzikowo Base			
Aegis Ashore Missile Defense System Complex	169,153	169,153	New
<b>Unspecified Minor Construction</b>			
<b>MILCON Planning and Design</b>			
<b>TOTAL MILITARY CONSTRUCTION</b>	169,153	169,153	

1. COMPONENT MDA		FY 2016 MILITARY CONSTRUCTION PROJECT DATA						2. DATE Feb 2015																	
3. INSTALLATION AND LOCATION Redzikowo Base, Poland					4. COMMAND Missile Defense Agency			5. AREA CONSTR. COST INDEX 0.97																	
6. PERSONNEL  STRENGTH: N/A: Tenant of U.S. Navy		PERMANENT			STUDENTS			SUPPORTED																	
		OFFICER	ENLISTED	CIVILIAN	OFFICER	ENLISTED	CIVILIAN	OFFICER	ENLISTED	CIVILIAN	TOTAL														
7. INVENTORY DATA (\$000)																									
A. TOTAL ACERAGE ..... N/A B. INVENTORY TOTAL AS OF ..... N/A C. AUTHORIZATION NOT YET IN INVENTORY ..... 0 D. AUTHORIZATION REQUESTED IN THE FY2016 ..... 169,153 E. AUTHORIZATION REQUESTED IN THE FY2017 ..... 0 F. PLANNED IN NEXT THREE PROGRAM YEARS ..... 0 G. REMAINING DEFICIENCY ..... 0 H. GRAND TOTAL ..... 169,153																									
8. PROJECTS REQUESTED IN THE FY2016 PROGRAM: <table border="0"> <tr> <td>CATEGORY</td> <td>PROJECT TITLE</td> <td>SCOPE</td> <td>COST (\$000)</td> <td>DESIGN STATUS</td> </tr> <tr> <td>CODE</td> <td></td> <td></td> <td></td> <td>START COMPLETE</td> </tr> <tr> <td>1456</td> <td>Aegis Ashore Missile Defense System Complex</td> <td>1 EA</td> <td>169,153</td> <td>Apr 14 Apr 15</td> </tr> </table>											CATEGORY	PROJECT TITLE	SCOPE	COST (\$000)	DESIGN STATUS	CODE				START COMPLETE	1456	Aegis Ashore Missile Defense System Complex	1 EA	169,153	Apr 14 Apr 15
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10. MISSION OR MAJOR FUNCTIONS: The mission of the Missile Defense Agency (MDA) is to develop and field an integrated, layered Ballistic Missile Defense System (BMDS) to defend the United States, our deployed forces, allies, and friends against all ranges of enemy ballistic missiles in all phases of flight. The Aegis Ashore facility supports fulfilling the European Phased Adaptive Approach (EPAA) Phase III requirement for regional ballistic missile defense against medium and intermediate range threats to European Allies and deployed troops.																									
11. OUTSTANDING POLLUTION AND SAFETY DEFICIENCIES: A. Air Pollution: N/A B. Water pollution: N/A C. Occupational safety and health (OSH): N/A																									

1. COMPONENT MDA		FY 2016 MILITARY CONSTRUCTION PROJECT DATA				2. DATE Feb 2015	
3. INSTALLATION AND LOCATION Redzikowo Base, Poland				4. PROJECT TITLE Aegis Ashore Missile Defense System Complex			
5. PROGRAM ELEMENT 0603892C		6. CATEGORY CODE 1456		7. PROJECT NUMBER MDA 640		8. PROJECT COST (\$000) 169,153	
9. COST ESTIMATES							
ITEM		U/M (M/E)		QUANTITY		UNIT COST	
COST (\$000)							
PRIMARY FACILITIES							
Launch Area Infrastructure (14945)		EA		3		420,246	
HEMP Radar Support Building (89009)		m2 (SF)		2,703 (29,100)		10,802 (1,004)	
Deckhouse Area Foundation		LS					
Special Construction		LS					
Installed Equipment		LS					
HEMP Power Infrastructure		LS					
50Hz Backup Power Generation Equip		LS					
Missile Storage Facility (42172)		m2 (SF)		111 (1,200)		2,396 (223)	
Communications Equipment Pad (93210)		m2 (SF)		1,301 (14,000)		161 (15)	
Secure Warehouse (44120)		m2 (SF)		234 (2,520)		3,587 (333)	
Entry Control Facility (73025)		m2 (SF)		260 (2,800)		5,831 (541)	
Sec Fence/Lighting/ESS (81240/87211)		m (LF)		12,192 (40,000)		493 (150)	
Fuel System and Storage Fac (41130)		BL (GA)		4,127 (130,000)		107 (3)	
SUPPORTING FACILITIES							
Site Electrical		LS					
Power (50Hz) distribution		LS					
HEMP Power Distribution ductbank		LS					
Water, Sewer, Gas		LS					
Water Supply Building and Storage		LS					
Site Improvement/Demo		LS					
Pavements & Walks		LS					
Information/Communication Systems		LS					
Antiterrorism/Force Protection		LS					
Temporary Infrastructure Mob/Demob		LS					
SUBTOTAL						151,266	
CONTINGENCY (5.00%)						7,563	
TOTAL CONTRACT COST						158,829	
SIOH (6.50%)						10,324	
TOTAL REQUEST						169,153	
TOTAL ROUNDED REQUEST						169,153	
INSTALLED EQUIPMENT-OTHER APPROP						(402,079)	
10. DESCRIPTION OF PROPOSED CONSTRUCTION: This project constructs the second operational Aegis Ashore Missile Defense System site utilizing the Aegis shipboard weapon system; launcher, radar, and command and control components. The first site was constructed in Romania. The Poland site will consist of three Mark-41 launcher foundations, aprons and crane pads; Radar Deckhouse foundation and a reconstitutable High-Altitude Electromagnetic Pulse (HEMP) protected Aegis Radar Deckhouse Support Building; 4MW of HEMP protected backup power, with a redundant N+2 capacity using relocatable generators, switchgear and transformer components; HEMP protected power distribution system; communications equipment pad; missile storage facility; secure warehouse; 120,000 gallon diesel fuel storage for backup generators; 10,000 gallon diesel fuel storage tank and fuel truck offload facility; two 100,000 gallon fire water storage tanks and suppression pumps; entry control facility; electronic security system infrastructure; site boundary and restricted area security fencing, gates, patrol roads, and access paving.							

<b>1. COMPONENT</b> MDA	<b>FY 2016 MILITARY CONSTRUCTION PROJECT DATA</b>	<b>2. DATE</b> Feb 2015
<b>3. INSTALLATION AND LOCATION</b> Redzikowo Base, Poland		
<b>4. PROJECT TITLE :</b> Aegis Ashore Missile Defense System Complex		<b>5. PROJECT NUMBER</b> MDA 640
<b>10. DESCRIPTION OF PROPOSED CONSTRUCTION: (cont)</b> <p>Supporting facilities include overall site development: electrical services; water; sewer; paving; walks; storm drainage; fire protection and alarm systems; site improvements and demolition; telecommunication point of presence and information management systems. The project also includes a sewage lift station; water supply wells; water treatment plant; and a 40,000 gallon potable water storage tank. Access for handicapped will be provided. Temporary infrastructure will support mobilization, site activation, construction oversight, and equipment installation.</p> <p>The launcher pads, radar deckhouse, and deckhouse support building foundations include special features to meet technical stability requirements and fill material to provide positive drainage away from facilities.</p> <p>Special construction includes lightning protection, equipment grounding systems, and Electromagnetic Interference (EMI) shielding and testing in mission support areas. The radar deckhouse and support building will receive Nuclear/Biological/Chemical protection.</p> <p>Installed equipment includes special flooring, redundant mechanical and electrical systems, uninterruptable power system and electronic controls to monitor building systems and the base infrastructure.</p>		
<b>11. REQUIREMENT:</b> 1 EA                      ADEQUATE: None                      SUBSTANDARD: None <p><u>PROJECT:</u> Construct a new Aegis Ashore Missile Defense System Complex in Poland. (New Mission)</p> <p><u>REQUIREMENT:</u> This project is required to provide added regional ballistic missile defense through the European Phased Adaptive Approach Phase III against medium and intermediate range ballistic missile threats to European Allies and deployed troops.</p> <p><u>CURRENT SITUATION:</u> In keeping with the 17 September 2009 announcement by the President of the United States, this project is necessary to provide the European Phased Adaptive Approach of a land-based Aegis ballistic missile defense system configuration with additional capability in Poland by 2018.</p> <p><u>IMPACT IF NOT PROVIDED:</u> If this project is not provided, Aegis Ashore capability will not be deployed in Poland by 2018, and the Phased Adaptive Approach Phase III timeline to deploy additional land-based Aegis ballistic missile defense capability in Europe, as announced by the President of the United States, will not be met.</p> <p><u>ADDITIONAL INFORMATION:</u> The Navy is programming a parallel related project (FY16 Navy Worldwide P500, Aegis Ashore Missile Defense Complex) that will provide Base Operations Support for this Aegis Ashore Missile Defense System site. The Navy funded project will include living, dining, and recreation space for site personnel as well as central security control, administration, medical treatment, fire station, and base maintenance and warehouse space.</p> <p>Extension of upgraded commercial power to the site will be acquired during site activation, funded with other appropriations, and provided in accordance with applicable Defense Federal Acquisition Regulations (DFARs) for utility service contracts.</p> <p>Site activation requirements for site security and material surveillance will be RDT&amp;E funded.</p>		

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<p><b>11. REQUIREMENT: (cont)</b></p> <p>The reconstitutible Radar Deckhouse will be fabricated, erected and tested as a Procurement effort on the deckhouse foundation and integrated into the deckhouse support infrastructure on site.</p> <p>Cost estimates were derived based on similar designed facilities that are being constructed at the initial Aegis Ashore complex at Deveselu, Romania, and at the Pacific Missile Range Facility, HI. This project is being coordinated with the appropriate physical security plans. Required physical security and/or anti-terrorism and force protection measures will be included. All requirements of Executive Order 12114, Environmental Effects Abroad of Major Federal Actions, will be completed prior to construction start.</p> <p><b>12. SUPPLEMENTAL DATA:</b></p> <p>A. Estimated Design Data</p> <p>(1) Status:</p> <table border="0"> <tr> <td>(a) Date Design Started</td> <td>Apr 2014</td> </tr> <tr> <td>(b) Percent Complete As Of January 2015</td> <td>65%</td> </tr> <tr> <td>(c) Date 35% Design Complete</td> <td>Aug 2014</td> </tr> <tr> <td>(d) Date Design Complete</td> <td>Apr 2015</td> </tr> <tr> <td>(e) Parametric Cost Estimating Used To Develop Cost</td> <td>No</td> </tr> <tr> <td>(f) Type of Design Contract</td> <td>Design-Bid-Build</td> </tr> </table> <p>(2) Basis:</p> <table border="0"> <tr> <td>(a) Standard or Repetitive Design</td> <td>Yes</td> </tr> <tr> <td>(b) Where Design Was Most Recently Used</td> <td>Deveselu, Romania</td> </tr> </table> <p>(3) Total Design Cost (c) = (a)+(b) or (d)+(e) (\$000)</p> <table border="0"> <tr> <td>(a) Production of Plans and Specifications</td> <td>9,500</td> </tr> <tr> <td>(b) All Other Design Costs</td> <td>6,300</td> </tr> <tr> <td>(c) Total Design Costs</td> <td>15,800</td> </tr> <tr> <td>(d) Contract</td> <td>11,060</td> </tr> <tr> <td>(e) In-House</td> <td>4,740</td> </tr> </table> <p>(4) Contract Award Jan 2016</p> <p>(5) Construction Start Apr 2016</p> <p>(6) Construction Completion Apr 2018</p>			(a) Date Design Started	Apr 2014	(b) Percent Complete As Of January 2015	65%	(c) Date 35% Design Complete	Aug 2014	(d) Date Design Complete	Apr 2015	(e) Parametric Cost Estimating Used To Develop Cost	No	(f) Type of Design Contract	Design-Bid-Build	(a) Standard or Repetitive Design	Yes	(b) Where Design Was Most Recently Used	Deveselu, Romania	(a) Production of Plans and Specifications	9,500	(b) All Other Design Costs	6,300	(c) Total Design Costs	15,800	(d) Contract	11,060	(e) In-House	4,740
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<b>12. SUPPLEMENTAL DATA: (cont)</b>  B. Equipment associated with this project which will be provided from other appropriations:  <table border="1"> <thead> <tr> <th data-bbox="82 541 678 611">Equipment Nomenclature</th> <th data-bbox="678 541 938 611">Appropriation</th> <th data-bbox="938 541 1268 611">FY Appropriated or Requested</th> <th data-bbox="1268 541 1575 611">Cost \$ (000)</th> </tr> </thead> <tbody> <tr> <td>Aegis Weapon System Equipment</td> <td>Procurement</td> <td>FY14/15</td> <td>241,800</td> </tr> <tr> <td>Aegis Ashore Launch Equipment</td> <td>Procurement</td> <td>FY15</td> <td>36,000</td> </tr> <tr> <td>Non-Mission Communications Equipment</td> <td>Procurement</td> <td>FY15/16</td> <td>3,800</td> </tr> <tr> <td>Mission Communications Equipment</td> <td>Procurement</td> <td>FY15/16</td> <td>8,500</td> </tr> <tr> <td>Command and Control Equipment</td> <td>Procurement</td> <td>FY14/15</td> <td>27,000</td> </tr> <tr> <td>Ancillary Equipment</td> <td>Procurement</td> <td>FY15/16</td> <td>41,500</td> </tr> <tr> <td></td> <td></td> <td>SUB-TOTAL</td> <td>358,600</td> </tr> <tr> <td>Extension of Commercial Power Site Activation Facilities (Equipment)</td> <td>RDT&amp;E</td> <td>FY15/16</td> <td>4,700</td> </tr> <tr> <td></td> <td>RDT&amp;E</td> <td>FY15</td> <td>3,705</td> </tr> <tr> <td></td> <td></td> <td>SUB-TOTAL</td> <td>8,405</td> </tr> <tr> <td colspan="4"><u>Reconstitutable Deckhouse</u></td> </tr> <tr> <td>Deckhouse Procurement</td> <td>Procurement</td> <td>FY15</td> <td>24,584</td> </tr> <tr> <td>Deckhouse Install in Poland</td> <td>Procurement</td> <td>FY15/16</td> <td>10,490</td> </tr> <tr> <td></td> <td></td> <td>SUB-TOTAL</td> <td>35,074</td> </tr> <tr> <td colspan="3" style="text-align: right;">TOTAL:</td> <td>402,079</td> </tr> </tbody> </table>				Equipment Nomenclature	Appropriation	FY Appropriated or Requested	Cost \$ (000)	Aegis Weapon System Equipment	Procurement	FY14/15	241,800	Aegis Ashore Launch Equipment	Procurement	FY15	36,000	Non-Mission Communications Equipment	Procurement	FY15/16	3,800	Mission Communications Equipment	Procurement	FY15/16	8,500	Command and Control Equipment	Procurement	FY14/15	27,000	Ancillary Equipment	Procurement	FY15/16	41,500			SUB-TOTAL	358,600	Extension of Commercial Power Site Activation Facilities (Equipment)	RDT&E	FY15/16	4,700		RDT&E	FY15	3,705			SUB-TOTAL	8,405	<u>Reconstitutable Deckhouse</u>				Deckhouse Procurement	Procurement	FY15	24,584	Deckhouse Install in Poland	Procurement	FY15/16	10,490			SUB-TOTAL	35,074	TOTAL:			402,079
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US Army Corps  
of Engineers®

## Missile Defense Agency (MDA) Aegis Ashore Missile Defense Complex, Poland - Work In Progress (WIP) Curve, Revised 15 January 2015

