DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
Washington, DC 20314-1000

CECW-CE

ER 1110-2-8163

Regulation
No. 1110-2-8163

30 September 2016

Organization and Functions
ROLES AND RESPONSIBILITIES
BALLISTIC MISSILE DEFENSE SYSTEM
MANDATORY CENTER OF EXPERTISE

TABLE OF CONTENTS

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MANDATORY CENTER OF EXPERTISE

1. Purpose. This Engineer Regulation (ER) sets forth the policies, roles, responsibilities and structure of the Ballistic Missile Defense System (BMDS) Mandatory Center of Expertise (MCX) located within the U.S. Army Engineering and Support Center, Huntsville (CEHNC). It also prescribes the roles and responsibilities of U.S. Army Corps of Engineers (USACE) Districts and their use of the BMDS-MCX in the execution of Missile Defense Agency (MDA) projects. The BMDS-MCX provides standard USACE support to the MDA in its mission "to develop and deploy a layered ballistic missile defense system to defend the United States, its deployed forces, allies, and friends from ballistic missile attacks of all ranges and in all phases of flight."

2. Applicability. This regulation applies to all Headquarters, USACE (HQ, USACE) elements and all USACE elements having responsibility for support to the MDA.

3. Distribution Statement. Approved for public release; distribution is unlimited.

4. References:

a. ER 5-1-10, Corps-wide Areas of Work Responsibility

b. ER 5-1-11, USACE Business Process

c. ER 1110-1-8158, Engineering and Design, Corps-wide Centers of Expertise Program

d. ER 1140-1-211, Support for Others: Non-Department of Defense Reimbursable Services

e. ER 1140-3-1, Support to Defense Departments and Agencies

f. CEMP-ZM, Directorate Policy Memorandum, Adherence to Mission Assignments and Alignment of Acquisitions with Missions, dated May 20, 2013

5. History/Background. The USACE formally organized Huntsville Division in October 1967 to support the Army's Sentinel/Safeguard Ballistic Missile System. A dedicated single purpose USACE Organization was required because of the size, multiple locations across the United States and technical complexity. The Huntsville location was chosen because it was the home of the Army's first missile defense systems. Although Huntsville Division supported many other types of programs in the years since its organization, it continues to provide the primary USACE support to the BMDS up to the present.

6. Mission. The BMDS-MCX provides technical expertise to MDA and serves as the mandatory center of expertise for BMDS projects to ensure standardization of design where applicable; to maintain technical expertise; to leverage technical knowledge; and to assure consistency and efficiency in delivery of BMDS facilities and infrastructure. MDA will assure that adequate funding is made available to cover all costs associated with the mandatory and optional centrally funded services as identified herein.

7. Policy. All work identified hereinafter shall be executed, reviewed or otherwise controlled in accordance with ER 1110-1-8158 and ER 5-1-10. USACE provides the highest quality support to the MDA utilizing the BMDS-MCX to provide standardization of deliverables and to ensure BMDS unique technical requirements are met. A Project Delivery Team (PDT) comprised of the appropriate technical resources needed to accomplish the BMDS requirements shall be established for each project. The Geographic District Project Manager (PM) leads the PDT by managing all project resources, information and commitments, and facilitating the PDT toward effective project development and execution. The PDT, consisting of the Geographic District, BMDS-MCX, and the MDA, will recommend the best approach to accomplish the mission at the beginning of each project, in accordance with the Directorate Policy Memorandum "Adherence to Mission Assignments and Alignment of Acquisitions with Missions" (reference 4.e).

8. Roles and Responsibilities:

a. HQ, USACE. The Chief of Engineering and Construction, Civil Works Directorate (CECW-CE) is assigned oversight responsibility of the BMDS-MCX. HQ, USACE National Program Manager (NPM) will work with the BMDS-MCX to effectively and efficiently manage the BMDS-MCX program. The NPM will manage and oversee the execution of programs by subordinate USACE elements, to serve as the primary point of contact for program management, performance, initiatives, and to report on program status. Upon receipt of the design and construction authorities' memorandums and corresponding funds using sub-allotments, the NPM will issue Directive Network (DIRNET) directives to the Major Subordinate Command (MSC) and include specific requirements from the MDA design and construction memorandums.

b. USACE Major Subordinate Commands. In accordance with ER 1110-1-8158, each MSC is responsible for monitoring the activities of their districts and ensuring appropriate use of the BMDS-MCX planning, engineering, design and construction activities. The MSC is also responsible for ensuring any proposed exceptions to the use of BMDS-MCX services are coordinated through the MSC. The MSC will review any proposed exceptions to the use of BMDS-MCX services prior to submitting to HQ, USACE (CECW-CE) for consideration.

c. USACE Districts. All geographic districts are responsible for engaging the BMDS-MCX in accordance with this ER and providing funding for execution to Huntsville Center for BMDS-MCX services. MILCON and non-MILCON projects are executed by the geographic district within their area of responsibility utilizing support from the BMDS-MCX in accordance with this ER. The District responsibilities will include:

(1) Serve as Project Manager and leader of the PDT.

(2) Prepare Project Management Plan and submit project specific design budget for review by PDT.

(3) Execute acquisition strategy. Responsible for the acquisition of Architect-Engineer AE or construction contracts or borrow capacity from existing contracts in other USACE organizations.

(4) Determine the appropriate chairperson for the AE or Design-Build (DB) contractor selection boards.

(5) Develop the design and construction budget and coordinates with the BMDS-MCX for concurrence with any deviations from the design scope, cost, schedules, and design submissions required by the design instruction.

(6) Obtain concurrence from the BMDS-MCX on all major design and construction issues related to BMDS weapon system integration requirements during the concept and final design development.

(7) Execute design, advertises, awards construction and provides construction management, supervision and inspection. Provide for thorough reviews, leads all technical design review conferences with appropriate district and technical discipline representation.

(8) Assure that supporting systems, equipment requirements, and all associated cost to execute the complete project are addressed in the procurement package, and are fully represented in the project Construction Working Estimate (CWE).

(9) Utilize PDT design team members to hold pre-construction meeting to ensure an informed hand-off of design package to the construction contractor to ensure BMDS unique features and mission critical system design and construction are understood.

(10) Coordinate with and involve BMDS-MCX on the construction status and proposed changes throughout the construction. Coordinate with BMDS-MCX on design during construction budgets if additional technical support is needed during construction.

(11) Perform Bid-ability, Constructability, Operability, Environmental and Sustainability (BCOES) reviews and Value Engineering (VE) reviews.

(12) Provide lessons learned input to BMDS-MCX.

(13) Develop Cross Walk Matrix to establish that BMDS Facility Requirement Document (FRD) requirements have been incorporated into the design and construction of the project.

(14) Organize and conduct Post Occupancy Evaluation on completed BMDS facilities and systems as requested by MDA, the Military Services, and/or the BMDS-MCX.

(15) Provide project execution and financial status to BMDS-MCX and HQ, USACE NPM monthly for centralized reporting to the MDA.

(16) Include statements in their project documentation certifying that BMDS-MCX services have been appropriately utilized in planning, design, and execution of the project per ER 1110-1-8158.

(17) Coordinate with BMDS-MCX to ensure standardization of design and lessons learned are incorporated into the project.

d. BMD-MCX Mandatory Services. The BMDS-MCX maintains state-of-the-art technical expertise in the unique aspects of BMDS facilities and leverages support from USACE labs, centers, districts and private industry as required to meet diverse and complex BMDS facility requirements. The BMDS-MCX will provide such services when requested and funded by the geographic district. The BMDS-MCX Organizational Structure is shown in Figure 1 of Appendix A. The team must have unique BMDS facilities' expertise as identified in Table 1 of Appendix B. Mandatory services provided by the BMDS-MCX are outlined below.

(1) Planning Phase. The BMDS-MCX is the lead for planning and programming Military Construction (MILCON) and non-MILCON MDA projects and is funded directly by the MDA. The BMDS-MCX serves as the primary liaison and coordinator between all USACE elements and MDA for major project planning, criteria development, facility requirement development, specialized studies, and site selection for mission and mission-support facilities and systems for the BMDS Program at CONUS and OCONUS locations. The BMDS-MCX specific responsibilities include:

(a) Participate in developing and reviewing FRD based on MDA and missile and radar contractors' system requirements.

(b) Review all Department of Defense (DD) 1391's that identify BMDS during the MDA DD 1391 review and certification process.

(c) Support MDA facility staff in key decisions, informational and status briefings to MDA Executive Leadership.

(2) Project Initiation Phase. BMDS-MCX will assist the Districts and the MDA in project initiation. Funding will be provided through the responsible geographic district for each project.

(a) Provide advice and assistance in determination of procurement methods (acquisition strategy).

(b) Participate as a technical advisor or voting member on any AE contract for BMDS.

(c) Provide assistance for development of facility performance criteria when design-build is selected as the appropriate acquisition strategy.

(d) Provide assistance in developing Federal Business Opportunity (FedBizOp) announcement, project execution schedule, project-specific BMDS Design Instructions, and design Submission Documentation Requirements for incorporation in the AE services scope of work.

(3) Design Phase. Serve as the USACE Technical Center for BMDS mission and mission-support facilities and infrastructure. BMDS-MCX provides design support to the District as determined by the District PM.

(a) Review designer of record (DOR) design scope of work: The BMDS-MCX shall review any scope of work for a DOR (AE or USACE).

(b) Review design documents: The BMDS-MCX shall review all design review submissions prepared by the DOR (AE or USACE). All comments provided by the BMDS-MCX must be adjudicated. Districts will include statements in their project documentation, signed by the Chief of the Engineering, certifying that the BMDS-MCX has been appropriately used in the design. This task is optional for projects with programmed amount under $1,000,000 USD.

(c) Coordinate and verify the technical adequacy and completeness of the concept and final designs, including construction cost and schedule.

(4) Site Activation and Construction Phase.

(a) The BMDS-MCX shall participate in pre-construction meetings.

(b) The BMDS-MCX shall participate in the ongoing configuration management process of BMDS baseline systems infrastructure and facilities.

(c) The BMDS-MCX shall review proposed construction modifications/changes to identify if functionality of BMDS and facilities are affected.

(d) The BMDS-MCX shall participate in the planning and review of commissioning activities.

(e) The BMDS-MCX shall participate in the site activation and turnover activities and transition to operational Warfighter.

(5) Standardization in USACE support and deliverables.

(a) The BMDS-MCX shall review MDA design and construction memorandums and provide concurrence before MDA issuance to HQUSACE NPM.

(b) The BMDS-MCX shall develop and maintain standard Design Instruction, Request for Proposal, Scope of Work, Program Management Plan, and standard BMDS mission and mission support facilities and infrastructure designs.

(c) The BMDS-MCX shall develop lessons learned and an After Action Review database.

(d) The BMDS shall develop a typical interface document for facility/infrastructure to weapon system components.

(e) The BMDS-MCX shall maintain configuration management of select BMDS facilities and infrastructure.

e. BMDS-MCX Optional Services. Optional services are those that do not fall under the mandatory services BMDS-MCX, but the BMDS-MCX will execute upon Geographic District request. Optional services provided by the BMDS-MCX are outlined below.

(1) Planning Phase.

(a) Execute complete BMDS planning and programming services for mission, mission support and non-mission support facilities and infrastructure; DD 1391 through Contract Solicitation and Contract Award.

(b) Perform special studies to aid in site selection to include environmental assessments; geophysical investigations including (UXO); topographical surveys; explosives safety quantity distance siting; seismic ground motion studies; power availability/reliability studies; and other feasibility and cost effectiveness studies as needed.

(c) Acquire, maintain and make available AE contracts for CEHNC and/or District utilization.

(d) Review National Environmental Policy Act (NEPA) submittal and/or other Environmental documentation reviews (i.e. Record of Environmental Consideration, Environmental Assessment, Environmental Impact Statement, etc.) for BMDS projects. Provide resources at public meetings to field technical questions regarding the environmental documentation.

(2) Design Phase.

(a) Perform design services: The BMDS-MCX is available to perform full design services whether in-house or through the use of A-E contracts managed by the BMDS-MCX.

(b) Attend design charrette: The BMDS-MCX is available to participate in design charrettes as needed.

(c) Attend review conferences. The BMDS-MCX is available to participate in review conferences as needed.

(d) Provide explosives safety and siting expertise and support to obtain approval from the Services explosives safety centers and the Department of Defense Explosives Safety Board.

(3) Site Activation and Construction Phase.

(a) Evaluation of Requests For Information (RFI) and submittals. The BMDS-MCX is available to support DOR construction phase services.

(b) Perform construction oversight. The BMDS-MCX is available to provide a wide range of construction support services to support the geographic district.

(c) Review design modifications. The BMDS-MCX is available to review design modifications for any USACE design-build and design-bid-build contract.

9. Method of Operation. Missile Defense Agency in coordination with HQUSACE may task the BMDS-MCX for the services identified in paragraph 8d and 8e above. In addition, any USACE District or Separate office may request BMDS-MCX support.

a. Administrative requirements, including transfer of funds, are the same as those usually performed for any reimbursable service.

b. Requests from customers other than the USACE for design services that include complete design projects will be coordinated with the appropriate USACE MSC, District, or Field Operating Activity (FOA) in accordance with ER 5-1-10.

c. All correspondence and requests for BMDS-MCX services should be directed to:

U.S. Army Engineering & Support Center, Huntsville
ATTN: CEHNC-Ordnance and Explosive (OE)
4820 University Square
Huntsville, AL 35816-1822

10. Customer Service Quality Standards. The BMDS-MCX will maintain the following customer service quality standards:

a. The BMDS-MCX provides services and maintains expertise in the service areas in paragraph 9.

b. Requests for service are completed on schedule.

c. Complaints and disputes from users/customers that are significant are resolved.

d. The BMDS-MCX.

(1) Measurably improves standardization, consistency, efficiency and quality for the function within the USACE.

(2) Measurably improves responsiveness to the customer.

11. Reporting Procedures. The BMDS-MCX will prepare an annual report for the HQ, USACE NPM. The report will include a summary of major programs, activities, and funds. The report will be on a fiscal year basis and will be completed and furnished to the NPM no later than 90 days after the end of the fiscal year. The BMDS-MCX will provide to HQUSACE NPM and MSCs a quarterly in-progress review giving current status of the major projects, activities, schedule and funds. Normal day-to-day operation and reporting will be on an informal, as-needed, project by project basis. The HQ, USACE NPM will host a Quarterly Line Item Review that provides current status on all projects (Execution, Cost, Schedule, Modifications/Contingencies, and Issues/Risks) as well as programmatic execution, cost and issues.

PAUL E. OWEN
COL, EN
Chief of Staff

Appendices
Appendix A - Figures
Appendix B - Tables

APPENDIX A

Figures

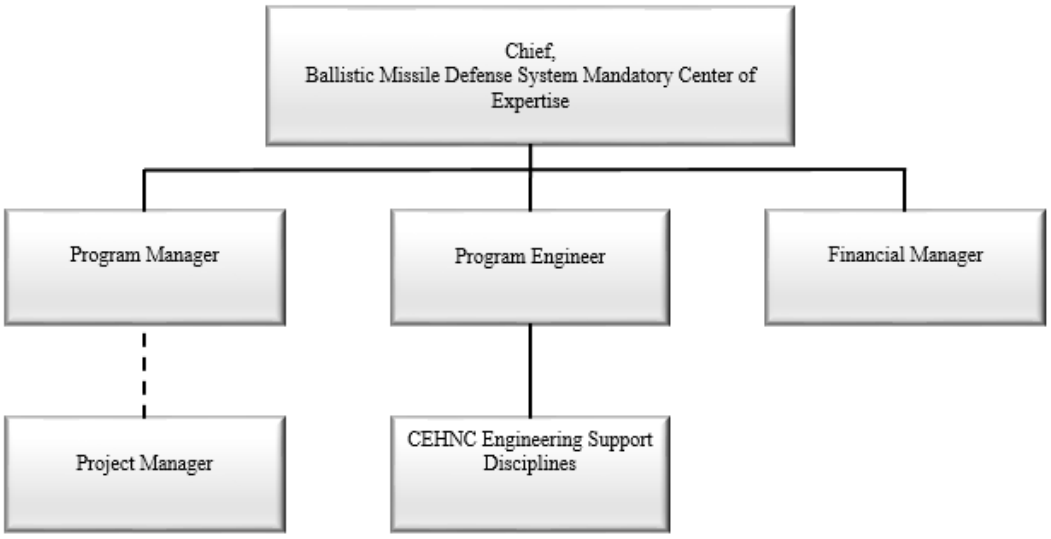

Figure A-1 – BMDS-MCX Organizational Structure

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APPENDIX B

Tables

Center	Unique Specialized Experience
Huntsville Center (CEHNC)	Ballistic Missile Defense System (BMDS) System Requirements
CEHNC	BMDS Facility Requirements
CEHNC	BMDS System Contractors' Interface Requirements
CEHNC	BMDS Complex, Multi-stakeholder Acquisition Strategies
CEHNC	BMDS Power Generation Requirements
CEHNC	BMDS Antiterrorism Requirements
CEHNC	BMDS Missile Field Operations and Infrastructure Requirements
CEHNC	BMDS Radar Facilities and Infrastructure Requirements
CEHNC	BMDS Explosives Safety & Protective Construction
CEHNC	BMDS Integrated Electronic Security Systems
CEHNC	BMDS System Controls and Integration
CEHNC	BMDS Infrastructure and Facility Cost Analysis
CEHNC	BMDS Electromagnetic Compatibility, (High-altitude Electro-Magnetic Pulse (HEMP) and Electro Magnetic Interference (EMI) Requirements

NOTE: List above not all inclusive.

Table B-1 – BMDS Unique Specialized Expertise

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