



**US Army Corps
of Engineers®**

ENGINEERING AND CONSTRUCTION BULLETIN

No. 2010-3

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Subject: HQUSACE Led Design and Construction Evaluations

Applicability: Information

1. Reference:
 - a. [ER 415-1-13](#), Design and Construction Evaluation, 29 February 1996
 - b. [ER 1110-2-1150](#), Engineering and Design for Civil Works Projects, 31 August 1999
 - c. [ECB 2009-10](#), HQUSACE Led Design and Construction Evaluations
2. Purpose: The purpose of this ECB is to highlight the results of the FY09 HQUSACE led Design and Construction Evaluations of select projects/programs throughout the command.
3. Background: ECB 2009-10 outlined a plan to reestablish a HQ role in the DCE process, by requiring HQ involvement on selected MSC-led DCE Teams, and by establishing HQ-led DCEs for certain programs or projects. In CY 09, three HQ-led DCEs were conducted; HQ personnel participated in two MSC-led DCEs; and HQ personnel conducted a variety of individual project and installation visits. This ECB provides the summary level results of those DCEs. Lessons learned regarding the DCE Process, and proposed programs, projects, and focus areas for CY 10, are also included.
4. PROGRAM AND PROJECT SELECTION:

Programs selected for HQ-led participation were those outlined in ECB 2009-10: Civil Works in the New Orleans Vicinity; USAR Projects; and Milcon Transformation Projects. For MSC-led, HQ participation, a Civil Works Project in Ponce, Puerto Rico was chosen. Individual visits were also conducted to Fort Carson, Fort Belvoir, Fort Bliss, Fort Sam Houston, Fort Riley and Fort Jackson. For the HQ led DCEs, individual projects were selected to illustrate the breadth, geographic dispersion, and chronology of the program – normally the suite consisted of a project in the early stages of programming or design; one in design; one under construction; and one recently completed/occupied. Where a COS, CX, or other USACE element was in support of the program, the DCE process and team composition was adjusted to ensure that the overall product delivery process was evaluated.

5. **HQ-LED PROCESS:** The evaluation process for each DCE began with conference calls between HQ and the cognizant MSC Business Technical Directorate representatives, to determine initial focus areas. Once these were determined, MSCs queried their districts and developed a list of candidate projects for evaluation (using the criteria listed above). Subsequent meetings and calls were used to solidify the project selections, identify candidate team members, identify funding requirements, make travel plans, and outline data requirements. MSCs and District representatives posted relevant data (see para. 8 of ECB 2009-10) to ftp sites so that the team members could develop some advance familiarity with the projects, enabling them to make better use of their time on the ground. The evaluations focused on processes and controls to determine if the resulting projects were consistent and produced positive outcomes. The DCE members, working with technical representatives at the MSC and cognizant District and Area/Resident Offices, evaluated whether programming documents and selected design criteria resulted in coherent designs; whether the design and/or design criteria were current and adequate; whether the acquisition planning efforts and the acquisition strategy were appropriate; and whether the quality and fiscal management processes and systems were adequate to produce products and services that meet the customer's budget, schedule and mission requirements. Document and process reviewed included programming and funding documents, program and project management plans, design analyses and calculations; agency technical reviews, pre-award contract formation documents, contracts, plans, specifications, deliverables, constructed works and closeout procedures. Overall metrics for cost and time growth, safety work hours and incidence reports, etc. were also reviewed when available and applicable.
6. **BRIEFINGS and REPORTS:** DCE teams conducted preliminary out briefings on the last day of their visit at each of the locations (Districts, Area/Resident Offices) – conference calls were available for cognizant geographic district, MSC, COS and CX members who could not be physically present at the briefing. Team members continued their review of data back at home station, exchanging comments and gathering additional information as needed to produce the DCE Report. The DCE reports are sent first in draft form to representatives of the MSC Business Technical Division, Team Members, and to representatives from the districts, area and resident offices visited. After comments are addressed, the reports are sent under signature of the Chief, E&C to the cognizant regional Chief, Business and Technical Division. To date, two of the DCE reports has been fully processed. Based on our experience to date, standard template will be developed and published (see Lessons Learned below) for CY 10 DCE visits.
7. **SUMMARY FINDINGS - One Up (+) and One Down (-) Format**

PROGRAMMING and BUDGETING

+1391s, CW Authorization and other programming documents are increasingly available to USACE design and construction personnel, and more current than they have historically been.

-A myriad of funding bills, incremental and limited authorizations, coupled with expedited or accelerated completion dates, makes the determination of allowable scope, contingency amounts, available funds, etc. difficult.

PROGRAM MANAGEMENT PLANS

+ All of the specialized programs evaluated have specific management plans , MOU/MOA, and procedures, with detailed descriptions and assignment of roles, responsibilities, and duties.

-Most of the plans had at least one area which was out of date.

PLANNING DOCUMENTS

+ The fast pace funding for both CW and MILCON has led to the production of much more current/updated planning and master planning documents, with detailed analyses of environmental impacts, budget analyses, and scope definition.

-The fast pace of execution often leads to design and/or construction outpacing the development or updating of these plans.

DESIGN ACTIVITIES

+ USACE elements are showing remarkable ability to leverage the capabilities of the entire region/corps and the AE community.

-Design criteria are often outdated. At times criteria used is not fully vetted and properly documented.

+Private sector designers, especially in a DB relationship, have proven that they can provide cost effective yet sustainable design solutions, which fit the budget, schedule, and customer requirements.

-The disaggregation of design responsibilities among multiple firms, subcontractors, and vendors requires increased review and vigilance by all reviewers, and can lead to unintended conflicts and consequences.

ACQUISITION ACTIVITIES

+USACE elements are using all of the tools at their disposal, including the MT Wizard, ECI, and other innovative processes, to expedite the design and construction processes.

-Documentation of the rationale for selecting a certain acquisition method or contract mechanism, or arriving at a certain pricing structure, is often lacking.

+ Application of the tenets of MT have allowed USACE to meet timelines which would have previously been considered impossible. The use of the “wizard” RFP has saved time and introduced many new and innovative design and construction solutions.

-USACE QA Systems and processes need to keep pace with industry innovations.

+The use of prescriptive requirements (versus traditional guide specifications) has led to many innovative solutions.

-The evaluation of proposals (best value) and the enforcement of the resulting contract require more time, discipline, and diligence to ensure that the requirements are met/exceeded; that extraneous information or unwanted stipulations are not included in the proposal, that the order of precedence is observed, and that rigor is applied in the design review process.

CONSTRUCTION MANAGEMENT

+Field staff have adapted and grown to handle the unprecedented increases in workload, quickly assimilating and training many new personnel.

-Physical facilities (Resident and Project Offices) and support systems (IT, etc.) have not seen similar increases in size, quality, or capability.

+Many Districts are using representatives from CM Services or Construction Phase Services Contracts to supplement Government Staff and to perform specialized QA tasks (code compliance, LEED reviews, etc.)

-Additional emphasis is needed to ensure that these representatives have contractor supervision, and that they do not perform inherently governmental functions. In addition, these contracts should be solicited and awarded as Brooks Bill professional services, not as standard Services.

COORDINATION AMONG USACE ELEMENTS

+Centers of Standardization are increasing their participation in the design and construction processes, especially in programs with centralized/standardized procurement templates (such as the MT DB Wizard).

- The development and application of CoS centralized /regional contract mechanisms are being deferred to geographic district solutions (due to workload). This works against the concept of developing and maintaining in-house expertise at CoS, and transitioning that expertise to the next phase (Adapt Build) of the CoS / MT Model.

+Programmatic overview and reporting efforts show increasing responsiveness to customers like OACSIM and ASA. Metrics such as % of scope awarded, cost and time growth, etc. indicate remarkable improvements.

-Companion metrics for quality, energy conservation, and other less quantifiable measures are lacking.

- +Increasingly complex and costly code requirements, construction materials and techniques have advanced the capability of many individuals at Centers of Expertise.
- There is no reliable or continuous source of funding to maintain this expertise, nor is the utilization of these experts mandatory or uniform. Furthermore, the USACE central lessons learned system (eLL) is not being utilized to capture and share knowledge.

CONFORMANCE TO USACE DOCTRINE, REGULATIONS, AND STANDARDS

- + The concepts and tenets of Milcon Transformation are being liberally applied and utilized.
- The existing USACE guidance documents which are outdated or in conflict with MT and other current innovations are not being properly updated.

- +Much more reliance is being placed on performance-based outcomes (in lieu of prescriptive requirements and specifications)
- Many of these requirements are poorly written or incomplete – many contain a mixture of performance requirements and vestiges of prescriptive material, reducing their effectiveness and limiting enforceability.

8. LESSONS LEARNED – the DCE PROCESS

PREPARATION – The selection of focus areas, and projects which best reflect those areas, is very time consuming. It often occurs weeks before the visit dates, leaving little time for the cognizant district representatives to assemble documents and arrange for site visits and interviews.

LL: Select projects at least one month in advance of visit

PARTICIPANTS – DCE Team members are selected based on their expertise and availability. This process also happens much too late to allow the members to coordinate their regular work schedules, and to review the read-ahead information for the DCE.

LL: Select team members 2 months in advance, and ask them to participate in project selection.

READ-AHEAD MATERIAL – ECB 2009-10 contains a listing of potential documents required to support a DCE Visit. Some of these may not apply to every DCE. Sufficient information and guidance is not always provided for the cognizant district representatives to assemble the advance documentation.

LL: In advance conversations with MSCs, select the minimum documents required in each of the listed categories, then ask for additional data (as the need arises) during the DCE visit. Appoint an MSC POC to handle all follow-up requests for data, documents, or information.

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9. CY 10 PROGRAMS and FOCUS AREAS – the following are tentative selections for DCE Visits in CY 2010:

- Air Force Program – Locations TBD , likely candidates SPD SWD
- BRAC, Grow the Army, and Restationing Programs in SWD
- Civil Works O&M – ARRA Projects – location(s) TBD

10. STANDARD REPORT FORMAT - The DCE Report will be formatted as follows:

I . Purpose, Background, Participants – Statement of program, project, and focus areas, and a list of the organizations and individuals conducting the evaluations.

II. Program(s) and Projects Included - Statement of relevant project and program data.

III. DCE Process – Chronology of activities which comprised the DCE.

IV. Observations, Discussion, and Recommendations – a brief discussion of the issue, followed by analysis, recommendations for resolution, improvement, and any follow-up actions required.

11. Point of contact for ECB program is Paul Parsoneault, 202-761-7423.



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