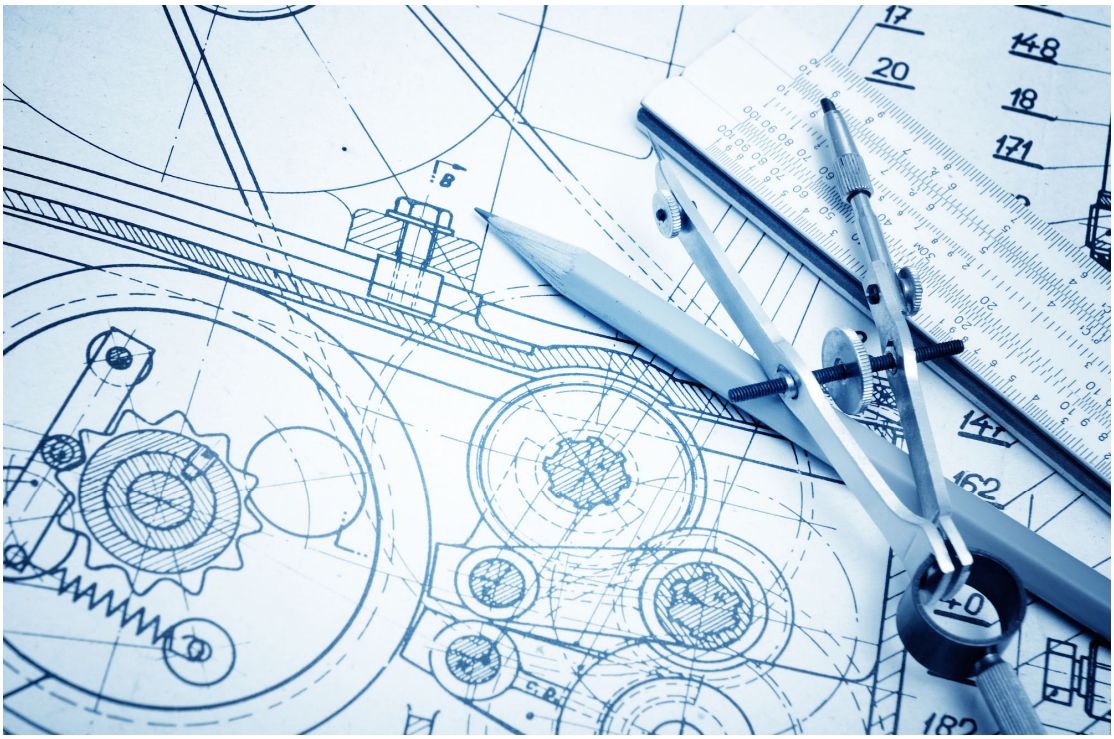
Effective 08/14/2024

US Army Corps of Engineers®

ARCHITECT-ENGINEER GUIDE RFP

SACRAMENTO DISTRICT

USACE



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Purpose

The purpose of the Architect-Engineer (A-E) Guides are to inform A-E firms of the general administrative and technical requirements for providing professional services and products relative to their contract(s) with the U.S. Army Corps of Engineers, Sacramento District (SPK). These guides provide guidance for what is required at each DBB submittal stage as well as for DB RFP package development. They are meant to supplement the statement of work in the project task order contract and not replace the specific contract requirements and other applicable codes and guidelines.

USACE Point of Contact

The Statement of Work indicates a Technical Lead assigned to the project who will function as the USACE Primary Point of Contact (POC).

Document Update - Point of Contact

The Quality Assurance, Specifications and A-E Services Section (QASAE, CESPK-EDS-Q) is responsible for coordinating updates to these A-E Guides. The QASAE Section is also responsible for ensuring contents reflect actual practices. Contact the QASAE Section if you have any questions, suggestions, or concerns about any part of these documents.

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Architect-Engineer Guide General Requirements

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Scope

The purpose of this Architect-Engineer (A-E) Guide is to inform A-E firms of the general administrative and technical requirements for providing professional services and products relative to their contract with the U.S. Army Corps of Engineers (USACE), Sacramento District (SPK). These Guides supplement *EP 715-1-7 Architect-Engineer Contracting* and the A-E Statement of Work.

Policy

The A-E Guide applies to A-E firms and members of the SPK staff involved in A-E contract management and administration as well as by A-E firms hired by a Design-Build Request For Proposal (DB RFP) contract holder. It is assumed that the A-E selection process has been completed and a notification of selection has been transmitted to the A-E either by USACE or by a DB RFP contract holder. The A-E firm will begin with the review of the statement of work, criteria and preparation of financial data, after the security clearance is obtained. This applies to all types of A-E contract actions including but not limited to: Fixed Price Contracts, Indefinite Delivery Contracts, Task Orders, and so forth.

Responsibility

The Chief of Quality Assurance, Specifications and A-E Services (QASAE) Section, at SPK, is responsible for administration of the A-E Guides.

The QASAE Section is responsible for coordinating any necessary revisions to the A-E Guide within SPK, Engineering Division and Engineering Support Branch. The A-E Services Unit of the QASAE Section will also assure that this publication is referenced within the statement of work, when applicable.

The Engineering Technical Lead is responsible for referring to this publication in the A-E statement of work, when applicable.

The A-E firm is responsible for thoroughly reviewing the A-E Guide prior to submission of an A-E cost proposal. The A-E Guide becomes part of the A-E firm's contract when referenced within the A-E statement of work. Therefore, it is essential that the A-E Guide be referred to

throughout the execution of the A-E contract. Should there be a conflict between the contract statement of work and the A-E guidance, the contract statement of work must take precedence. Special emphasis should be placed on scope and cost limitations and the requirements for contract deliverables. Questions and/or conflicts concerning the requirements of this publication should be immediately addressed to the SPK Contracting Officer's Representative (COR) designated within the statement of work.

Distribution (to applicable organizations)

A-E Firm

Chief of Quality Assurance, Specifications and A-E Services (QASAE) Section

Chief of Engineering Division

Assistant Chief of Engineering Division

Chief of Engineering Support Branch

Chief of Military Design Branch

Assistant Chief of Military Design Branch

Chief of Civil Design Branch

Chief of Geotechnical Branch

Chief of Environmental Engineering Branch

Chief of Service and Supply Branch, Contracting Division

Chief of A-E Section, Service and Supply Branch, Contracting Division

Project Management

Small and Disadvantaged Business Utilization (SADBU) Advisor

Safety Office

CAD/BIM Manager

Ownership

The Quality Assurance, Specifications and A-E Services Section (QASAE, CESPK-EDS-Q) is responsible for the administration and update of this A-E Guide. The QASAE is also responsible for ensuring that this document reflects actual practices. Contact the QASAE if you have issues, questions, suggestions, or concerns about any part of this document.

Chief, Quality Assurance, Specifications & A-E Services (Vincent.G.Andrada@usace.army.mil)

SPK A-E Coordinator Armi Pascua (MariaArmiCleo.N.Pascua@usace.army.mil)

SPK District Quality Manager (TBD)

References

Refer to:

- *Federal Acquisition Regulation (FAR) [https://www.acquisition.gov/]*
- *FAR Subpart 24.2 - Freedom of Information Act [https://www.acquisition.gov/far/part-24#FAR_Subpart_24_2]*
- *FAR Subpart 36.6 - Architect-Engineer Services [https://www.acquisition.gov/far/part-36#FAR_Subpart_36_6]*
- *FAR 52.227-14 Rights in Data - General https://www.acquisition.gov/far/part-52#FAR_52_227_14]*
- *FAR 52.232-10 Payments under Fixed-Price Architect-Engineer Contracts [https://www.acquisition.gov/far/52.232-10]*
- *FAR 52.232-26 Prompt Payment for Fixed-Price Architect-Engineer Contracts [https://www.acquisition.gov/far/52.232-26]*
- *FAR 52.236-23 - Responsibility of the Architect-Engineer Contractor [https://www.acquisition.gov/far/52.236-23]*
- *FAR 52.243-1 - Changes - Fixed-Price https://www.acquisition.gov/far/52.243-1]*
- *5 USC 552 - Freedom of Information Act (FOIA) [https://www.justice.gov/oip/blog/foia-update-freedom-information-act-5-usc-sect-552-amended-public-law-no-104-231-110-stat]*
- *DFARS 236.6 - Architect-Engineer Services [https://www.acquisition.gov/dfars/part-236-construction-and-architect-%E2%80%94-engineer-contracts#DFARS_SUBPART_236.6]*
- *AFARS Subpart 5136.6 - Architect-Engineer Services [https://www.acquisition.gov/afars/part-5136-construction-and-architect-engineer-contracts#AFARS_Subpart_5136.6]*
- *UAI – USACE Acquisition Instruction and Desk Guide. [http://cdm16021.contentdm.oclc.org/utils/getfile/collection/p16021coll11/id/2010]*
- *ECB 2023-9 Civil Works Design Milestone Checklists*
- *Executive Order E.O. 12906 - Coordinating Geographic Data and Acquisition and Access: The National Spatial Data Infrastructure [http://www.archives.gov/federal-register/executive-orders/pdf/12906.pdf]*
- *GeoPlatform - National Geospatial Clearinghouse [https://www.geoplatform.gov/]*
- *ISO Explorer [https://wiki.esipfed.org/MD_Metadata]*
- *Spatial Data Standards for Facilities, Infrastructure, and Environment (SDSFIE) [https://www.sdsfie.mil/]*
- *EM 385-1-1 Safety and Health Requirements [https://www.publications.usace.army.mil/Portals/76/Publications/EngineerManuals/EM_385-1-1.pdf?ver=7Cpck_22Ct_-w6QSGyOKVQ%3d%3d]*

- *EP 310-1-6 Graphic Standards Manual [https://www.publications.usace.army.mil/Portals/76/Publications/EngineerPamphlets/EP_310-1-6.pdf]*
- *EP 715-1-7 Architect-Engineer Contracting in USACE [https://www.publications.usace.army.mil/LinkClick.aspx?fileticket=9G9y3buGh3M%3d&tabid=16440&portalid=76&mid=43545]*
- *ER 5-1-11 U.S. Army Corps of Engineers Business Process [https://www.publications.usace.army.mil/Portals/76/Users/227/19/2019/ER_5-1-11.pdf?ver=2018-09-27-142333-540]*
- *ER 1110-1-12 Engineering and Design Quality Management [https://www.publications.usace.army.mil/LinkClick.aspx?fileticket=O36l4qTXv5M%3d&tabid=16441&portalid=76&mid=43546]*
- *ER 1110-1-8156 Engineering and Design Policies, Guidance, and Requirements for Geospatial Data and Systems [https://www.publications.usace.army.mil/LinkClick.aspx?fileticket=q80uUZBTYRU%3d&tabid=16441&portalid=76&mid=43546]*
- *EM 1110-1-2909 Engineering and Design GEOSPATIAL DATA AND SYSTEMS [https://www.publications.usace.army.mil/Portals/76/Publications/EngineerManuals/EM_1110-1-2909.pdf]*
- *ER 1110-1-8159 Engineering and Design DRCHECKS [https://www.publications.usace.army.mil/LinkClick.aspx?fileticket=32jzaekGsz4%3d&tabid=16441&portalid=76&mid=43546]*
- *ER 1110-2-1302 Civil Works Cost Engineering [https://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_1110-2-1302.pdf]*
- *ER 1110-345-700 Design Analysis, Drawings, and Specifications*
- *ENG Form 93 - Payment Estimate - Contract Performance [https://www.publications.usace.army.mil/Portals/76/Publications/EngineerForms/Eng_Form_93_2014Mar.pdf]*
- *CADD/BIM Center [https://cadbimcenter.erdc.dren.mil/]*
- *Geographic Information – Metadata Workbook [ftp://ftp.ncddc.noaa.gov/pub/Metadata/Online_ISO_Training/Intro_to_ISO/workbooks/MD_Metadata.pdf]*
- *Whole Building Design guide [http://www.wbdg.org/]*

Definitions

A-E	Architect-Engineer - Consulting Firms and their Subcontractors - A contractor hired by the District to provide architectural-engineering services requiring professional and/or architectural license, as defined by state regulatory agencies and laws.
AEC	Architectural, Engineering and Construction
APP	Accident Prevention Plan
BIM	Building Information Modeling

CADD	Computer Aided Design & Drafting
COE or Corps	Corps of Engineers a.k.a. USACE
COR	Contracting Officer Representative - A representative of the Contracting Officer who has the authority to administer a contract in accordance with the contract terms, as described in their letter of authority.
DrChecks	Design Review and Checking System (through ProjNet)
GIS	Geographic Information Systems
KO	Contracting Officer
LOD	Level of Development – Refers to the amount of detail contained within a model element, and to what level of accuracy the digital is to the real object.
MCACES	Micro Computer Aided Cost Estimating System
PDT	Project Delivery Team
PM	Project Manager - The individual in PPMD assigned to manage a project or program from the inception through completion. The PM is the leader of the PDT. The PM has the responsibility for the development of the PMP, which will include the project QCP.
POC	Point of Contact
PPMD	Programs and Project Management Division - PPMD consists of five Branches with Project Managers (PM) who are responsible for project execution within cost and schedules limits.
PMP	Project Management Plan
Project	A unique process, consisting of a set of coordinated and controlled activities with start and finish dates, undertaken to achieve an objective conforming to specific requirements, including the constraints of time, cost and resources. It can be any combination of work (products, services, and so forth) intended to produce a specific expected outcome or solution to a customer problem or need.
PxP	Project Execution Plan
Quality	The degree to which a set of inherent characteristics fulfills requirements.
QA	Quality Assurance - that part of quality management focused on providing confidence that project quality requirements defined in the PMP will be fulfilled.
QC	Quality Control - that part of quality management focused on fulfilling the project quality requirements defined in the PMP.
QCP	Quality Control Plan - The QCP is a written plan that defines how quality control will be executed for products.
RFPP	Request For Price Proposal
SADBU	Small and Disadvantaged Business Utilization
SPK	USACE Sacramento District

Definition of Common Deliverables

A-E contracts vary greatly in their types of acquisition strategy and execution but still have some processes and products that are the same or similar. Those similar processes and products are Common Deliverables that this A-E Guide will address. Examples are: reports, digital files, statement of work, the negotiation process, and Quality Control Plans (QCP). Refer to *other sections of the A-E Guides* for the detailed requirements of A-E submittal contents.

Submittal Content Requirements

Military Design Milestones

-Parametric (10%)

-Concept (35%)

-Preliminary (65%)

-Final (95%)

-Corrected Final (100%)

Civil Works Design Milestones

-Preliminary (35%)

-Intermediate (65%)

-Final (95%)

-Corrected Final (Design Complete) (100%)

For Military Design, see ER 1110-345-700 *Design Analysis, Drawings, and Specifications*. For Civil Works design, see ECB 2023-9 *Civil Works Design Milestone Checklists*

Statement of Work (SOW) Process

Description

After A-E selection, a copy of the statement of work will be forwarded to the A-E through the SPK Contracting office with a request for the A-E's cost proposal. The statement of work will indicate the extent of the work to be accomplished by the A-E and may contain references to project specific criteria. The statement of work serves as the basis for the A-E's fee proposal and the Government's estimate. The A-E's cost proposal is to include any related direct and indirect costs items, subcontractor costs profit factors and draft project-specific QCP to the SPK in accordance with the stated work requirements in the SOW. It will be the basis for a determination of fair and reasonable award price.

Importance of Statement of Work

The statement of work is a part of the contract between the A-E and the Government. Therefore, it is essential that the two parties mutually agree that the work to be accomplished as described therein is accurate and complete. The goal of the statement of work is to create a measurable

product. This means that efforts under a Scope must be quantified to the maximum extent possible. The intent will not be to say in the Scope "study Problem X and provide solutions." Instead, the Scope should say "study problem X and provide solutions at the minimum, optimum, and maximum levels." If an effort cannot be measured, then consider a different approach. For example, instead of "study and design a solution," there might have to be a base of "complete the study, and once the recommendations have been evaluated by the Government, the design may be awarded as an option." If the basic contract is an Indefinite Delivery Type Contract, some statement of work items may be more general in coverage because the Task Order will embody specific efforts. The statement of work must follow the format defined in *EP 715-1-7 Architect-Engineer Contracting*, and as supplemented within local policy under the guidance of the QASAE Section. Once the contract has been awarded, all changes to the statement of work, pertaining to schedule, price, or quality, when necessary, will be made by the Contracting Officer (KO) in writing in accordance with the relevant contract clauses.

Scope Limitations

Minor Deviations

The A-E must provide services and products in accordance with the statement of work. During the progress of the work, the A-E may expect minor changes in criteria within the general statement of the project and should make necessary adjustments accordingly. Minor technical deviations in the statement of supporting items may also be made to accommodate actual field conditions, changes in manufacturing which impact materials, and so forth.

Authorized Guidance

The A-E is cautioned to take no guidance from any source, other than the Contracting Officer, during the execution of work, which deviates from the requirements stated in the statement of work. The A-E must not depart from, or perform work beyond the scope, or change the criteria upon which it is based without written direction and/or consent from the Contracting Officer. The A-E must immediately notify the COR and/or the Contracting Officer of any such requests. Any problems relating to design, which endanger fulfillment of contractual requirements, must immediately be brought to the attention of the COR. Either the A-E or SPK COR must confirm oral understandings in writing, at request of either party. IN NO CASE ARE CHANGES IN SCOPE TO BE MADE AT THE ACTIVITY LEVEL.

Obtaining Approval for Deviations

The A-E must not deviate from the authorized statement of work unless directed otherwise by the KO. The statement of any feature must not be exceeded without written approval of the KO. THE A-E'S RESPONSIBILITY IS DIRECTLY TO THE GOVERNMENT'S CONTRACTING OFFICER AND ANY REQUESTED DEVIATION FROM THE SCOPE OR ELABORATIONS WITHIN THE SCOPE MUST BE BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER FOR RESOLUTION.

Changes in Scope

Process

The A-E must not perform services requested by any person in the COE, other than the Contracting Officer, which the A-E considers to be a change in work or services required by the contract and necessitating an adjustment in contract price until all the following are completed:

- Receipt of Revised Statement of Work and a Request for Proposal from the Contracting Officer.
- Submitted a proposal to COE covering such extra services,
- Negotiated with an authorized agent of the Government a mutually determined reasonable fee, and
- Received an official modification to the contract from the Government Contracting Officer.

Negotiations

Should MAJOR changes in the Scope be authorized by the Contracting Officer, appropriate modification to the A-E contract will be negotiated in accordance with the Contract Clause *FAR 52.243-1 - Changes - Fixed Price*

A-E Project Manager Designation

One individual of the A-E firm must be designated by the A-E as Project Manager. The Project Manager must be fully cognizant of the requirements of the A-E Contract, performance schedule and contents of this publication. The Project Manager will work directly with the SPK COR, who will furnish guidance necessary for the successful execution of the work.

Release of Project Information

Release by A-E to Public

At any stage of study, planning, design or construction, the A-E must contact the SPK Public Affairs Office, (916) 557-5100 / e-mail: spk-pao@usace.army.mil, to obtain a clearance and release before releasing any information for publication or giving public speeches concerning a project.

Document Ownership

Under the clause "Drawings and Other Data to Become Property of Government" of the Contract Clauses, the ownership of all studies, reports, findings, designs, drawings, specifications, notes, calculations, electronic files, computer programs/software developed specifically to satisfy scope requirements and provide acquired data or other work is vested in the Government.

The Freedom of Information Act

Of primary concern to the SPK is the release of cost and pricing data that A-Es may consider as privileged and essential to their competitive position in their respective economic sectors. The A-E is advised that the FOIA applies to the data provided for the purpose of negotiations. Therefore, in the event an A-E wishes their cost and pricing data to be privileged and exempt from public release, the SPK PM should be advised in writing and each page containing such data should be appropriately marked. Although the SPK treats all A-E furnished cost and pricing data as being of a confidential nature, the *5 USC 552 - Freedom of Information Act (FOIA),* as amended, requires the release of records held by Government Agencies or Offices when requested by interested parties, unless such records are covered by one of the "exemptions" listed in the law. The *FAR Subpart 24.2 - Freedom of Information Act*, provides DOD policy and guidance on handling requests for records and exemptions under this Act.

Correspondence and Transmittals

Submitting files via FTP does not relieve the A-E of having to fulfill any, or all, media requirements listed within the statement of work. The COR must be concurrently notified by e-mail of all FTP transmissions. For FTP transmissions to be considered as a valid deliverable, they must be acknowledged by the COR or PM with "confirmation of receipt" e-mail.

Service and/or Product Philosophy

Before beginning the work, the A-E should review current criteria, located on *Whole Building Design Guide,* and make a thorough study of the requirements of the project and, if applicable, the conditions at the site. If, after an analytical review, the A-E is of the opinion that a deviation from instructions would be of benefit to the Government, the A-E must bring the matter to the attention of the COR for a decision. SPK encourages the A-E to use ingenuity and professional expertise to provide the best possible service and/or product for all elements of the project within the constraints imposed.

Preproposal Conference/ Scoping Meeting (Scope Clarification)

The A-E may be requested, or may request, to participate in a preproposal conference/scoping meeting (a.k.a. Scope Clarification) between the customer and the key members of the A-E's project team. The purpose of the meeting is to discuss the customer's expectations, become more familiar with site conditions, better define the requirements, and if necessary, further clarify the scope for the project prior to preparation of a price proposal. This must include the types of design, deliverables, review process/responsibilities, and major project tasks and constraints. This meeting may be held in the immediate vicinity of the proposed project, at the SPK Office, or via teleconference. Currently, the A-E is encouraged to propose statement of work changes, which are considered to be in the best interest of the project. To assist in preparation for the meeting, the COR will provide the A-E information for obtaining the project specific criteria as referenced in the statement of work.

Preparation of Proposal

Price Proposal

A-E price proposals must be submitted to the Contracting Officer. Under no circumstance is the A-E to submit additional copies (hard or electronic) to other COE employees without the explicit consent or direction of the Contracting Officer. The proposal deliverable will typically be submitted electronically. See paragraph Electronic Files. If submitting a hard copy proposal, the A-E must submit the original and one copy to the COR who issued the request for proposal. If the proposal is more than $550,000, an additional copy must be sent to *A-E Section, Service and Supply Branch, Contracting Division*.

Quality Control Plan (QCP)

Purpose

The purpose of the A-E prepared QCP is to ensure development of a quality product or service from inception through completion of the Quality Control Certification (refer to paragraph A-E Quality Control (QC) Review). The QCP is a project specific document that provides a framework for developing a product and conducting the technical review of a product. The QCP is a living document and becomes part of the SPK's Project Management Plan that is developed for each project by the Project Manager. The A-E QCP establishes the documents and products to be reviewed, the review team and its responsibilities, and schedule and costs for review. It is prepared for every product/service except for those identified as small and low risk. A generic version may be used for routine, minor products, if the appropriate Sacramento District Functional Chief approves. With approval, the A-E updates the QCP as warranted.

Responsibility

The A-E is responsible for reviewing, checking and coordinating all submittals. The professional quality, technical accuracy and coordination of all design submittals and other services to be provided by the prime A-E and any subcontractors/consultants used is of major importance. A written QCP must be submitted concurrent with the price proposal, but under separate cover letter, unless the project is highly complex and would require more time for development. In this event, the A-E will be allowed to submit a generic plan with the price proposal followed by a completely detailed plan early in the first phase of work. The A-E's performance evaluation will be based on how the deliverables package reflects conformance with the A-E QCP. The A-E's contractual obligation to provide complete, well-coordinated, and error free documents has far-reaching consequences. Therefore, the A-E is cautioned to place special emphasis on this aspect of the QCP. In the event damage to the Government results from negligent performance of any of the services to be furnished under this contract, the A-E will be held liable for such damages. The Government's review effort in no way relieves the A-E of contractual responsibilities. For this reason, an effective quality control plan is critical.

Content

The content of the QCP is dependent on the complexity of the product or service being provided and can range from a generic QCP to a Project/Product/Service Specific QCP. As a minimum all QCP are to include a schedule of work to be accomplished, a budget, points of contact and their respective lines of authority/coordination, a brief discussion on plan execution with contingency measures when appropriate, A-E review effort, and a A-E quality control checklist. Refer to *ER 1110-1-12 Quality Management.*

Review of QCP

The COR will review the QCP. If comments are generated during this informal review, the A-E must respond to the comments by e-mail and/or revise the plan accordingly and resubmit prior to initiating design. The A-E will be expected to follow the approved QCP throughout the course of the project to assure a quality end-product. Should future events dictate revisions to the approved QCP, the A-E must notify the COR by e-mail and submit the revised plan for approval.

Advanced Modeling Project Execution Plan

Purpose

The purpose of having an Advanced Modeling Project Execution Plan (PxP) which also can be referred to as a BIM PxP is like having a QCP for the project but related specifically to BIM and is to ensure quality by the PDT to executing BIM effectively on the project. Having an in-depth plan outlining the project goals, standards, format, versions, deliverables, required and elective 'model uses', and modeling requirement for elements, ensures quality to the overall project by the effective understanding by the PDT to executing BIM on the project.

Responsibility

The A-E is responsible when required by contract to completing an Advanced Modeling PxP on the project which outlines the goals, responsibilities, and execution to the effective use of BIM on the project. Utilize the latest Advanced Modeling PxP available on the *CAD/BIM Center* at time of award to assist in developing an effective plan for the PDT and submit to Government for acceptance of the plan. With submittal, complete and include the Advanced Modeling PxP checklist and complete sections as the QC submitter. The checklist is available from the *CAD/BIM Center* website.

Content

The content contained in plan outlines the project information, key contacts, goals, model uses, means and methods for BIM, format and versions of BIM and CAD deliverables, and outlining the modeled elements under scope with the USACE required definable LOD for elements. The USACE M3 (Min Modeling Matrix) defines the min LOD of elements and is submitted as an appendix to the PxP.

Review of PxP

The A-E to submit the Advanced Modeling BIM PxP as required by contract to where the COR and the USACE District BIM Manager will review the plan. If comments are generated during review, the A-E is responsible to respond to all comments and correct items in plan as necessary and resubmit. The A-E is responsible to follow the PxP throughout the duration of the project. If during project execution situations arise where actual practice is not following the outlined plan, then A-E is responsible to notify the Government and submit an updated plan reflecting any changes to the project BIM execution for review and acceptance by the Government.

Fact-Finding Sessions

As with the Scoping Meeting, the A-E may be requested to participate in a fact-finding session with the COE's designated negotiator, the COR and key members of the A-E's project team and/or designated authorized representative. The purpose of fact-finding is to obtain information to better understand the proposal and its assumptions, and to clarify any ambiguities, omissions or uncertainties in the RFPP and SOW apparent after review of the proposal. After fact-finding, a revised proposal may be requested. Upon conclusion of the review and adjustment of the statement of work, an acceptable format and appropriate cost breakdown (typically broken down by each task identified by a Period of Service in the statement of work to be used by the A-E's proposal will be determined. This fact-finding meeting may also serve to address any other special contracting issues specific to this pending contract, as well as provide the A-E an opportunity to ask any questions, or express any concerns, regarding the requirements and administration of the contract. This meeting may be held at the SPK Office, virtually, or over the telephone.

Negotiation Conference

Negotiations may be held in SPK offices, virtually, or telephonically. The objective is to reach an agreement on a fair and reasonable price for the work and services required. This does not mean that there is agreement on every item, only major items and the overall cost to the Government. During negotiations the statement of work will again be reviewed as necessary, and the A-E's proposal will be examined and discussed in detail. Major changes in the statement of work are unacceptable at this time unless the A-E has previously notified the COR that certain scope changes are necessary. If a major scope change is needed, then the negotiation is stopped until the scope, and any revised proposal or revised IGE is completed.

Award of A-E Contract Action

Subsequent to the successful completion of negotiations and upon approval of the Contracting Officer (KO), the A-E will receive a written transmittal letter forwarding the unsigned contract to the A-E for signature approximately 10 days after completion of the negotiations. The signed contract must be faxed back to SPK before the effective contract date. The A-E is authorized to begin work as of the effective contract date. For task order awards, the fully executed task order will be sent to the A-E and is the authority for the A-E to commence work.

Submittal Schedule

The schedule for contract deliverable submissions is established in the statement of work. MEETING ESTABLISHED SUBMITTAL SCHEDULES IS ESSENTIAL. Late submissions may jeopardize project funding, construction contract award or user need dates and will have an adverse impact on the A-E's performance evaluation.

Review Process

Strategy

The Government review strategy is to accommodate *ER 5-1-11 U.S. Army Corps of Engineers Business Process* and utilize the A-E QCP. Refer to paragraph Quality Control Plan (QCP).

A-E Quality Control (QC) Review

The A-E is responsible for conformance with contract requirements and technical as well as functional criteria. Therefore, the A-E must provide a QC review of all submittals in accordance with the QCP prior to each submittal. Documentation must be provided with each required deliverable in the SOW demonstrating adequate completion of the A-E QC process outline in the QCP.

Documenting QC Review

The A-E designers must annotate all comments with responses and make the appropriate adjustments to all applicable documents prior to their resubmission to the Government. The A-E's documented QC comments and responses must be a separate document and accompany each required submittal.

Quality Control (QC) Certification

At the time that the completed submittal is provided to the Government, the A-E must provide a QC certification in accordance with the A-E contract.

Virus Free Certification

The A-E must also provide a written certification stating that each and all versions of any electronic submittal are virus free. The certification may be included on the Quality Control Certification Letter.

Government Quality Assurance (QA) Review

Electronic Process

The Government will provide a QA review of the A-E's work using the program described in *ER 1110-1-8159 DRCHECKS*.

Level of Detail

The Government and other agency review may range from a cursory review of the A-E's QC documentation for relatively straightforward projects to a more detailed review of A-E products for more complex or controversial projects. However, in all cases, the review will not identify each and every incidence of an important area needing attention. The comments will address the problem and some of the incidences. The A-E is expected to change all necessary and related items. The Government review effort in no way replaces the A-E's review and quality control requirements.

Coordination of Comments

All Government review comments will be coordinated by the COR prior to submittal to the A-E through the electronic process identified in the statement of work or paragraph Electronic Process. The POC will review the comments for applicability to the project against the project's design criteria, and then notify the prime A-E the comments are ready for evaluation. The A-E is responsible for coordinating comments with any subcontractors. Handwritten A-E responses to Government review comments will not be accepted. A-E responses must be made in the PROJNET DrChecks website. The A-E is encouraged to call and discuss any problematic comments with the appropriate reviewer. The Government will back check all A-E submittals after A-E corrections are made to ensure compliance with or resolution of comments to the satisfaction of the Government.

Accident Prevention Plan

The A-E must submit an Accident Prevention Plan (APP). An APP is a written Safety and Occupational Health plan that documents site-specific policies, responsibilities, and plan and program requirements. The plan must cover all A-E actions to ensure health and safety of A-E personnel during fieldwork. The plan must be submitted within 15 calendar days after contract award and prior to the start of any fieldwork. Refer to ENG Form 6293 (Accident Prevention Plan Worksheet) and *EM 385-1-1 Safety and Occupational Health (SOH) Requirements* for full APP requirements.

Consultation With the Client Activity

The COR is the focal point between all Government representatives and the A-E regarding technical and performance issues. The A-E may be required to consult with the sponsor or local activity having a jurisdiction and impact, or client team concerning local conditions or operational requirements. Technical and design considerations that conflict with the directions from the COR must be brought to the COR's attention immediately.

Informational Material

Any "typical" or "example" documents (design analysis, specifications, drawings, and so forth, from another project or just general in nature) shown to the A-E are for background information only and are not authorized criteria unless specifically stated within the statement of work.

Format, Content, and Packaging of Deliverables

General Instructions

The statement of work will define what types of deliverables are required. Follow the information below for the format of those types. Not all of these may be required by the A-E contract. Sometimes, the statement of work will also define special or additional format requirements. When conflicts arise between the statement of work and this A-E Guide, the statement of work governs. Please notify the COR for concurrence. The A-E must use SPECINTACT and UFGS guide specifications for the preparation of all technical specifications. All hard copy submissions must include a Project Cover Sheet. This applies to all sizes of paper (8.5”x11”, 11”x17”, 22”x34”, and so forth).

Type of Paper

Unless otherwise directed by the statement of work, if required, all final hard copy CAD drawings, maps, and plates larger than 8.5” x 11” must be printed full-size, unless otherwise requested, on reproducible white bond. All other submittals, including interim CAD submissions, must be on white paper with black print.

Electronic Files

Formats and Software

The statement of work should define the specific software programs and versions mandatory for the contract. If required by the contract, the A-E will further document the software and versions in the Advanced Modeling PxP and submit for Government acceptance.

Geospatial Meta Data

Geospatial data is any data referenced to a point on the Earth. Metadata documents are important aspects of the data, such as quality, completeness, and temporal information, enabling data to be used and reused; therefore, it is a critical component to geospatial data. Geospatial metadata development is required by DoDI 8320.02, EO 12906 and the GDA 2018. The GDA 2018 and EO 12906 require all federally funded geospatial data to have compliant metadata and, if appropriate, be discoverable by the public on the federal Geospatial Platform. Standardizing data collection activities and developing metadata must be included in the budget for Civil Works projects or, if appropriate, military program work.

The International Organization for Standardization (ISO) has developed ISO 19115-1, which defines the content standard required for describing geographic information and services. It provides information about the identification, extent, quality, spatial and temporal schema, spatial reference, and distribution of digital geographic data. ISO 19115-3 is the xml implementation standard, and the ISO metadata standard is often referred to as ISO 19115 1/19115-3. The DoD IT Standards Registry (DISR) requires the use of ISO 19115 1/19115-3. ISO 19115-1/19115-3 has superseded the FGDC Content Standard for Digital Geospatial Metadata, which the FGDC no longer supports. ISO 19115-2 is the geospatial metadata standard that provides extensions for acquisition and processing for gridded data and imagery.

The different ISO metadata fields and sections can be accessed at the ISO Explorer. The ISO Explorer, which is a web-based comprehensive explorer for ISO 19115-1/19115-3. Another resource is the National Oceanic and Atmospheric Administration (NOAA) ISO 19115-2 workbook.

All USACE-developed (collected or created, by contract or in-house) geospatial datasets (including CAD, BIM, and survey data) must have ISO 19115-1/19115-3 or ISO 19115-2 compliant metadata files associated with them. For large data collections with separate data files, it is acceptable under ISO to have a single "dataset" metadata file. The metadata file must meet at least the minimum standard for ISO 191151/19115-3, which includes the sections for identifying the dataset (mdb:identificationInfo), a point of contact for the dataset (mdb:contact), and a metadata file creation date (mdb:dateInfo).

AE design models are required to be geographically oriented to a geographic datum which includes models in Revit using shared coordinates and Civil 3d sharing a common project control point with a Northing, Easting, and Elevation. The geographic datum to be documented in the Advanced Modeling PxP, and if known, a control point for geographic model coordination. *Executive Order E.O. 12906 - Coordinating Geographic Data and Acquisition and Access: The National Spatial Data Infrastructure* requires that all federal agencies create and submit metadata, for all geospatial data collections, to a national clearinghouse. Submission of the metadata to the national clearinghouse is the responsibility of the SPK.

EM 1110-1-2909 Engineering and Design GEOSPATIAL DATA AND SYSTEMS, provides detailed technical guidance and procedures for compliance with the policy in Engineer Regulation (ER) 1110-1-8156, Policies, Guidance, and Requirements for Geospatial Data and Systems.

GIS Standards

The Spatial Data Standards for Facilities, Infrastructure, and Environment (SDSFIE) geospatial data standards define a DoD-wide set of semantics intended to maximize interoperability of geospatial information and services for Installation, environment, and Civil Works missions.

The SDSFIE standards meet requirements defined in DoDI 8130.01, Installation Geospatial Information and Services, under DoDD 5105.60, NGA (July 29, 2009). These requirements ensure IGI&S investments conform to DoD Business Enterprise Architecture, align with core business mission requirements, and are made visible, accessible, understandable, trusted, and interoperable throughout their life cycles for all authorized users as required by DoDI 8320.02, Sharing Data, Information, and Information Technology Services in the Department of Defense (August 5, 2013). The SDSFIE standards are mandated by DoD policy, are vendor neutral and reside in the public domain to the extent allowable by DoD policy.

The IGG, chaired by the IGI&S GIO for the Assistant Secretary of Defense for Energy, Installations, and Environment and with voting representation from all DoD Components including USACE, establishes and maintains IGI&S standards and guidelines, per DoDI 8130.01.

SDSFIE consists of six parts:

(1) SDSFIE Vector (SDSFIE-V): The vector data model

(2) SDSFIE Metadata (SDSFIE-M): A Class-2 profile of ISO 19115 and ISO 19115-2.

(3) SDSFIE Raster (SDSFIE-R): Defines the preferred and recommended raster standards.

(4) SDSFIE Data Quality (SDSFIE-Q): Specifies over-arching guidance for how DoD will implement a tiered approach to quality across the IGI&S community.

(5) SDSFIE Portrayal (SDSFIE-P): Specifies the presentation of geospatial information.

(6) SDSFIE Endorsed Standards (SDSFIE-E): A collection of consensus specifications, standards, models, and publications pertaining to geospatial information and services developed and managed by organizations other than the IGG, but which are vetted and endorsed by the IGG and are recommended for use across all DoD Installation, environment, and Civil Works missions.

Information on USACE SDSFIE implementation is provided within EM 1110-1-2909 Engineering and Design GEOSPATIAL DATA AND SYSTEMS. Information on SDSFIE is provided on the Spatial Data Standards for Facilities, Infrastructure, and Environment website.

CAD Standards

Follow the latest USACE Architectural, Engineering and Construction (AEC) CAD and Graphic standards at time of award which is available from the *CAD/BIM Center* website. To retain clarity and relevance when reproduced in black and white, any graphics prepared for drawings, reports or presentations must make use of distinguishing line types and/or hashing patterns to depict different features by utilizing the proper layers and line types. Proper text size and weights must be followed from standard.

Utilize the latest templates, and resource files from CAD/BIM Center to assist in proper adherence to these standards. If discrepancies occur in templates and resource files to that of a printed standard, then the A-E is responsible to matching to printed standard and notification given to District CAD/BIM Manager.

BIM Standards

Per ECB 2018-7, Military programs greater than 5,000 GSF and with a PA over $3M have to comply with Advanced Modeling Requirements. Follow standards provided by the *CADD/BIM Center* website.

USACE projects are currently not permitted to be hosted on Autodesk BIM 360. Autodesk's BIM 360 does not currently meet the cybersecurity requirements for FedRAMP Moderate plus DISA IL4 controls therefore it cannot be used. Cloud solutions used to upload/download/store Federal project files must comply with DFARS Clause 252.204-7012. Cloud platforms must be FedRAMP certified and meet DoD cloud security requirements. BIM data is Controlled Technical Information (CTI) and therefore CUI (formerly FOUO). Furthermore, CIO/G6 has made the determination that all USACE data should be handled as DISA impact level 4.

Per ECB 2018-7, 6.f (2), the Advanced Modelling PxP is a required submittal for A-Es.

Scale Factors and Units of Measurement

The required unit of measurement is Imperial. Drawings should be one-to-one and plotted to appropriate scale for the paper size. The template sheet size for a full-size drawing is ANSI D (34" x 22").

Border and Cover Sheets

Border and Cover sheets for CAD/BIM product deliverables are available from the *CAD/BIM Center* website. The USACE border sheets contain specific formats for Revit, AutoCAD, and MicroStation that must be followed.

USACE Revit and Civil 3d Templates

The USACE Revit and Civil 3d templates available at the *CAD/BIM Center* website are the required templates to use to begin work on design models and drawings if deliverables require this format. Utilize the latest available at time of contract award. Any variations in the beginning templates need to be documented in the Advanced Modeling PxP for government acceptance. Any additional discipline templates which are unavailable from the *CAD/BIM Center* website also need to be documented in the PxP.

USACE CAD Workspace

The USACE CAD Workspace is a download available from the *CAD/BIM Center* website and contains additional support files to effectively meet the requirements of USACE modeling and CAD standards which contains blocks, cells, borders, plot configs, worksets, and so forth. The USACE CAD Workspace was developed to integrate with Bentley-related products such as Microstation and OpenRoads. If these products are to be used, then the USACE CAD Workspace is required to be used. Content contained within the CAD Workspace can be used and adapted to other software formats as necessary by the A-E.

Content

The A-E has the responsibility to show all information necessary to completely describe the project. Regardless of local practice or procedures, the designer must prepare the drawings with the expectation that both the Corps of Engineers, in the role of product or service manager, and the customer will be able to proceed to the next level of project intent (such as, bidding, construction or funding) without numerous modifications to correct work deficiencies.

BIM Content

The A-E is to model to the LOD required in the USACE M3 Min Modeling Matrix. If attributing content with project and shared parameters, then including attributes for the facility data requirements throughout the contract is preferred.

The CAD/BIM Center has a UBOL (USACE BIM Object Library) which contains Revit family content which is commonly used on USACE projects and can be used as needed on the project.

Any A-E development of BIM content must follow the LOD in M3 and the AEC CAD Standards. Any BIM content obtained from third party manufacturers must meet both LOD requirements, and AEC CAD standards.

Interim Submittals

The amount of effort and detail required for interim submittals should be agreed to during negotiations. Some types of deliverables may have SPK Work Instructions that will describe the required details.

Cost Estimates and Construction Schedule per ER 1110-2-1302

Precautions

The A-E must be aware of and take such precautionary measures as necessary to maintain the confidential nature of all cost estimates. Refer also to paragraph RELEASE OF PROJECT INFORMATION.

Packaging and Mailing

All cost estimates must be prepared in accordance with this section of the A-E Guide (per ER 1110-2-1302) and will be bound (or stapled) separately from other submittal data. An electronic copy of the MCACES (Micro Computer Aided Cost Estimating System) project file (with related databases) must also be furnished to the District cost engineer via secure digital transmission.

Use of Micro Computer Aided Cost Estimating System (MCACES)

Cost Engineering

Engineering Regulation (ER) 1110-2-1302 provides policy, guidance, and procedures for cost engineering responsibilities for all projects assigned to the U.S. Army Corps of Engineers (USACE). All cost engineering products required to support USACE managed projects must be prepared in accordance with this regulation and all referenced regulations, policy and guidance, including engineering manuals, pamphlets and USACE memoranda.

Cost engineering products developed by architect-engineer (A-E) contractors or by other offices (i.e., Area Offices, Resident Offices, etc.) must conform to all cost ERs, EMs, and other applicable regulations (shown at Appendix A of ER 1110-2-1302).

The USACE approved estimating software programs, Microcomputer Aided Cost Engineering System (MCACES) and the Cost Engineering Dredge Estimating Program (CEDEP), are the required software programs for the preparation of Civil Works cost estimates throughout USACE.

To support the Civil Works missions addressed in ER 1105-2-100, cost estimates are required for all phases of a project. Detailed cost estimates should be considered For Official Use Only (FOUO) and managed in accordance with AR 25-55 and FAR 36.203.

The cost engineer must prepare reasonable construction schedules that reflect the construction estimates.

In general, cost estimates, at the earliest practical stage of project development, are to be prepared using the latest version of MCACES. When MCACES is waived on a given project by formal memorandum issued by the SPK Cost Engineering Section, the cost estimate must be prepared in accordance with the statement of work of the design contract.

Cost Growth

The unit costs of all construction cost estimates submitted must reflect the current pricing at the time of submittal. For all estimates prior to the Completed Design, cost growth (escalation) - using the Tri-Services Index - is to be added to the total project cost, projecting costs to the assumed midpoint of construction. For Completed Design and later cost estimates, cost growth may or may not be added as directed by the SPK Cost Engineering POC.

Engineering Considerations and Instructions for Field Personnel (ECIFP)

Unless otherwise specified within the statement of work, the A-E consultant must prepare an ECIFP. This report is used to transmit special design concepts, assumptions, and instructions on how to construct unique design details to field personnel. The report establishes a basis for communication and coordination between design and construction personnel. The ECIFP vary in the level of information necessary to get the field personnel familiar with the project. The following information should be included as a minimum:

- Existing Health and Safety concerns at the site
- Site access protocols
- Site security protocols
- Installation or site points of contact
- USACE points of contact for contract administration
- Regulatory points of contact for emergency notification

Report Format and Content

As applicable to your project, include the following information in your report:

- Title Page. List Project title, location and date of report.

- List of Design Personnel. Provide a list of key design personnel that could be contacted for technical assistance during construction. Include name, design specialty and telephone number.

- Special Design Considerations. Provide clear and concise explanation of special design concepts and/or unique features by discipline; Civil, Architectural, Structural, Mechanical, Electrical, etc. such that COE construction personnel can identify and properly inspect these special items of work. Examples of items to discuss include:
  - Step-by-step instructions for constructing complex building features, such as, do this before that, and so forth
  - Critical tolerances
  - Special testing requirements
  - Critical or unusual product and performance specifications such as high pressure, temperatures or capacities.
  - Situations where manufacturer should oversee equipment installation.
  - Long-lead procurement items.
  - Government-furnished equipment.
  - Special operational constraints, such as, utility outage periods, aircraft runway closures, phasing of work in occupied buildings or other special construction phasing required.
  - Any permits that must be obtained prior to and during construction.
  - Critical safety precautions required, especially in the areas of asbestos, or other minimum quality assurance testing amount/frequency for critical items.

- Shop Drawing Review. Provide a list of items or features of the project where you feel you alone have the expertise to properly review shop drawings involved.

- Schedule of Required Site Visits by Design Personnel. If you deem site visits on certain phases of construction are necessary, a site visitation schedule must be prepared identifying the critical construction stages and the number of days of notification required from the COE.

Significant Discussions and Meeting Minutes

Responsible Party

With the exceptions of the PREPROPOSAL CONFERENCE and FACT-FINDING SESSIONS, the A-E must prepare significant discussion documentation and distribute either electronic or hardcopies to all parties. The COR, whether they attended or participated in the meeting, must be provided copies of all information.

Timeframe for delivery

The COR must receive significant discussion materials within five to seven business days after date of occurrence. The COR should acknowledge by return e-mail with a "confirmation of receipt."

Types of Significant Discussions

- Meeting Minutes
- Telephone Conversations

  Only those telephone conversations relating to the technical phases of work under the contract are considered significant.

- Written Communications

  Furnish to the COR a copy of all written communications pertaining to the work under this contract received from other Government agencies. When it is clearly indicated that a copy of the communications has been furnished to the COR by the originator, concurrence of action must be obtained from the COR prior to performing such action.

- E-Mail Communications

  Immediately transmit to the COR a copy of all e-mail communications pertaining to the work under this contract received from other Government agencies. When it is clearly indicated that a copy of the communications has been furnished to the COR by the originator, concurrence of action will be obtained from the COR prior to performing such action.

- What to include
  - Name of Project
  - Subject of Meeting
  - Date of Meeting
  - Attendees
  - Record of Issues Discussed
  - Action Items
  - Suspense Date
  - Minutes taken by

Responsibility After Completion of Work

Errors or Omissions (A-E LIABILITY FAR 36.608 and 36.609)

The A-E is required to support the SPK after completion of the scoped work should errors or omissions in the documents prepared by the A-E create problems in the subsequent stages of the project, such as in bidding or administering the contract for construction, where the A-E has been tasked to complete the design. The support provided by the A-E must take whatever form is necessary to correct the errors or omissions in the original documents. Such required design corrections must be done in a timely manner at no additional cost to the Government.

Negligence (A-E LIABILITY FAR 36.608 and 36.609)

Neither the Government's review, approval or acceptance of, nor payment for, the services required must be construed to operate as a waiver of any rights under the design contract or any action arising out of the performance of the design contract, and the A-E must be and remain liable to the Government for all damages caused by the A-E's negligent performance of any of the services furnished. Design errors or omissions, which result in damages or extra cost to the Government, will be evaluated for potential A-E financial liability. If the Government determines that the A-E is financially liable for a design deficiency, the A-E will be so advised by official correspondence. Reimbursement of costs incurred by the Government because of the A-E's errors and/or negligent performance will be actively pursued by SPK. The preferred method of settlement of A-E financial liability is for the A-E to accept responsibility and negotiate directly with the Construction Contractor. Where the A-E cannot reach an agreement with the Contractor or if the A-E declines to negotiate or accept responsibility, SPK will arrange settlement directly with the Contractor and will bill the A-E.

Services During Construction

Additional services may be required in direct support of a project's construction, apart from that described as errors or omissions above. If required, these services will be defined in a Supplemental Statement of Work prepared by the Government. No services during construction work must be performed by the A-E until an appropriate price for the work has been negotiated and a written modification is issued by the contracting officer of the COE. Services may include monthly site visits to the project, conference attendance or special inspections.

Performance Evaluations (FAR & UAI)

Design Phase Evaluation

Rating Criteria

The Government will prepare A-E performance evaluations for all Design and Engineering Service Contracts in the Contractor Performance Assessment Reporting System (CPARS). A-E performance will be rated as Exceptional, Very Good, Satisfactory, Marginal, or Unsatisfactory, taking into consideration such things as technical quality, coordination of design documents, cost effectiveness, maintaining project schedules, cooperativeness, and so forth. Incomplete submissions, late submissions or resubmissions will have significant adverse impact on an A-E's performance evaluation. In addition, based on schedule and interim requirements, other evaluations may be performed.

Rating Disposition

Immediately upon completion of engineering services, at end of work or upon completion of each task order, the PM and the project team will evaluate the A-E performance on the services rendered using Contractor Performance Assessment Reporting System (CPARS). The A-E will be notified through the CPARS System when a draft evaluation is prepared for their review and response. The A-E is required to have a PKI certificate in order to open and maintain a CPARS account. The A-E must be familiar with the CPARS in order to respond to draft evaluations and

to access completed CPARS evaluations. Refer to *EP 715-1-7*, Paragraph 6-10 for A-E rebuttal procedures.

Interim Performance Evaluations

Interim evaluations may be prepared and used to advise the A-E of their performance during the execution of a contract as considered appropriate by the Contracting Officer. Refer to *EP 715-1-7*, Paragraph 6.6.

Construction Phase Evaluation

The Resident Engineer will submit an evaluation of the performance of the A-E and effectiveness of the A-E prepared contract documents. This evaluation is also maintained in the A-E Contract and Qualification Data File and DOD database. Refer to *EP 715-1-7*, paragraph 6-8.

Awards for Excellent Performance

A-E firms that perform contract services in an excellent manner may be considered for special recognition. The SPK Engineer gives Certificates of Appreciation and Certificates of Commendation. Certificates of Commendation are given for exemplary performance in one or more areas of contract services. In addition, Design Excellence Awards are given (after construction is underway) for exemplary performance in all areas of A-E services. Also, awards for Specifications are made by the evaluation of A-E performance to specifically recognize and reward achievement by A-Es in the preparation of construction specifications of superior quality.

Effect on Future Selection

Performance evaluations are available to future slate and selection boards and will be considered when subsequent A-E selections are made. Furthermore, copies of evaluations are available for the use of other Federal Design and Construction Agencies in selecting A-Es for their design contracts.

Payments (FAR 52.232)

The A-E is required to submit monthly pay estimates for the value of the design services performed to date. The SPK, QASAE Section will provide guidance for preparing and submitting payments in accordance with the Contract Clause *FAR 52.232-10 Payments under Fixed-Price Architect-Engineer Contracts*. Monthly or partial payments may be made as the work progresses subject to submission by the A-E of estimates of the value of completed services and certification by the A-E PM that the A-E's performance is satisfactory. The extent of supporting data required from the A-E will vary depending upon the amount of the invoice and past A-E performance. Completed *ENG Form 93 - Payment Estimate - Contract Performance* must be submitted via e-mail at ENG93.AE.PaymentEstimates@usace.army.mil with the subject line indicating the contract obligation number, task order number and invoice number.