

BCOE Items

(documents needed for BCOE signature by Engineering Division (ED))

For A/E-Designs

Full size original drawing, with signatures/stamps for A/E with Louisville District Signature Block, signed by QA Team Leader, PE/A and Chief (LAST)

BCOE Certification – signed by Construction Division first, then ED

Certification of ITR and QA Review – signed by Chief(s)

BCOE Checklist – signed by PE/A

Certification of Independent Technical Review – signed by Principals of A/E Firm, A/E Design Team, and A/E ITR Team

Final Design & Certified Final Design Checklist – signed by A/E PM

Completion of ITR and QA Review – signed by QA Review Team

Certification of Legal Review – signed by OC

Environmental Permit Actions (Preconstruction) Checklist, document 1867 in PMBP – signed by Environmental team member(s)

(All comments should be closed in DrChecks!!)

Early Release of Product – signed by PM and PE – only required if project was printed and issued to contractors BEFORE BCOE occurred.

SAMPLE BCOE CERTIFICATION

Project Title:

Specification Number:

Installation:

I certify that all appropriate biddability, constructability, operability, and environmental comments received and reviewed by this office by (Date) have been incorporated into the bid package. Feedback has been provided to reviewers for all comments.

Date

Chief, Engineering Division

Date

Chief, Construction Division

(This form is for signature of Chief ED and any other Functional Element Chief whose organization will be affected by the project. Delete inapplicable organizational elements. Not required if only ED and CD are appropriate)

**CERTIFICATION OF INDEPENDENT TECHNICAL REVIEW
AND QUALITY ASSURANCE REVIEW**

Significant concerns and the explanation of the resolution are as follows:

(Describe the major technical concerns, possible impact, and resolution)

As noted above, all concerns resulting from the QC/QA of the project have been considered. These reviews include the independent technical review, BCOE review, User review and the Corps QA review.

<hr/> <i>(Signature)</i> Chief, Planning, Programs and Project Management Division	<hr/> Date
<hr/> <i>(Signature)</i> Chief, Engineering Division	<hr/> Date
<hr/> <i>(Signature)</i> Chief, Operations Division	<hr/> Date
<hr/> <i>(Signature)</i> Chief, Construction Division	<hr/> Date
<hr/> <i>(Signature)</i> Chief, Real Estate Division	<hr/> Date

BCOE CHECKLIST

A/E Products

- Corrected final drawings and specs Received and marked in red?
- Annotated final review comments from A/E received?
- All parties are satisfied with corrections.
- Have you received original final vellums?
- Have you received loose specifications?
- Do you have a **Certificate of Independent Technical Review?**
- Do you have a **Corrected Final Design Checklist?**

PE/A QA Products

- Check drawings for:
 - A/E signatures on every sheet
 - Professional stamp
 - Drawing status on each sheet
 - Louisville District signature block, exactly per LDDG

- Review A/E's **Final Design Checklist and ITR sig. sheet.**
- Receive **BCOE certification sheet from construction district** with signature.
- Do you have a signed **Completion of ITR signature sheet and QA Review?**
- QA Team Leader and All team members must sign and date this form.
- Do you have a signed **Contractor Statement of Technical Review?**
- ITR Team Leader and all ITR team members must sign and date this form

Have vellums signed by: PE/A
QA Team Leader Review

Explain any and all noncompliance with the Engineering Division QOS:

Prepared by: _____ Date: _____

CERTIFICATION OF INDEPENDENT TECHNICAL REVIEW

The (AE) (other Government contractor) has completed the (type of study) of (project name and location). Notice is hereby given that an independent technical review has been conducted that is appropriate to the level of risk and complexity inherent in the project, as defined in the Quality Control Plan. During the independent technical review, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of assumptions; methods, procedures, and material used in analyses; alternatives evaluated; the appropriateness of data used and level of data obtained; and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing Corps policy.

<u>(Signature)</u> _____	_____
Study/Design Team Leader and Team Members	Date

<u>(Signature)</u> _____	_____
Independent Technical Review Team Leader and Team Members	Date

Significant concerns and the explanation of the resolution are as follows:

(Describe the major technical concerns, possible impact, and resolution)

As noted above, all concerns resulting from independent technical review of the project have been considered.

<u>(Signature)</u> _____	_____
(Principal w/ AE firm or Engineer of Record with Gov Ctr)	Date

Project:

Date:

Attachment 7: Final Design and Certified Final Design Checklist

(Edit as needed)

1. GENERAL:

- a. Have all documents been prepared in accordance with the QC Plan?
- b. Have drawings and specifications been coordinated between engineering disciplines?
- c. Have drawings and specifications been checked and initialed by reviewer and designer?
- d. Have drawings and specifications been reviewed by a qualified engineer to assure fire protection engineering is in conformance with applicable portions of NFPA regulations and national, state, and local building codes?
- e. Are drawings, design analyses, etc., signed and dated?
- f. Are Government review comments on preliminary and/or concept design submittals annotated and incorporated into final drawings and specifications?
- g. Are review comments provided in DrChecks, or comments annotated on drawings (Final Submittal set)?
- h. Is construction bar chart included?
- i. Are "Engineering Consideration and Instructions to Field Personnel" included?

(NOTE: For projects containing metal buildings a special note to the field shall be included, requiring a "pre-submittal" meeting with Construction field personnel, Contractor, metal building supplier and Engineering Division representatives to discuss the specifications and submittal requirements.)

- j. ITR certification sheet signed and included?

2. DRAWINGS:

- a. Has CADD quality been checked to assure legible reproduction at full and half size?
- b. Does location plan include location of borrow pits, disposal areas, areas for contractor's office and storage, haul routes, location of Resident/Area Engineer and DEH office?

- c. Have deductive alternates (if appropriate) been identified on the drawings and coordinated with the unit price schedule?
- d. Have signature blocks been properly prepared?
- e. Has Quality Control Procedures been performed to assure that translated files are fully useable, complete and represent the design?

3. SPECIFICATIONS:

- a. Were latest guide specifications used?
- b. Are specifications prepared in accordance with the manual, Louisville District Design Guide for Military Construction, using required weight of paper, Standard Elite or other acceptable type face, the proper format, and with proper submittal notations in margin?

Name of person supervising specifications preparation: _____

- c. Has unit price schedule been prepared in conformance with the example shown?
- d. Have payment paragraphs been checked and coordinated with the Unit Price Schedule?

4. COST ESTIMATE:

- a. Have cost estimates been prepared in accordance with manual, Louisville District Design Guide for Military Construction?
- b. Is cost estimate within CCL? Have recommendations been made for cost reductions including deductive alternatives? Are deductive alternates clearly delineated on the drawings and unit price schedule?

5. MISCELLANEOUS:

- a. Have construction permits been applied for as required by the Clean Air Act and Clean Water Act Amendments?
- b. Has the Corrected (Certified) Final Submittal been made in accordance with every requirement of the Appendix A to your contract? _____ (If not, explain deviations on a separate sheet attached to this form.)

SIGNATURE AND DATE

(To be signed by the QAT)

(For use on products designed by an A/E or other Government contractor)

**COMPLETION OF INDEPENDENT TECHNICAL REVIEW
AND QUALITY ASSURANCE REVIEW**

The (AE) (other Government contractor) has completed the (type of study) of (project name and location). Notice is hereby given that an independent technical review has been conducted by staff of (add name of AE or other Government Contractor) that is appropriate to the level of risk and complexity inherent in the project, as defined in the Quality Control Plan. During the independent technical review, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of assumptions; methods, procedures, and material used in analyses; alternatives evaluated; the appropriateness of data used and level of data obtained; and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing Corps policy. The study/design was accomplished by (design agent's name) and the independent technical review was accomplished by (review agent's name). Their certification is attached. The District has completed a quality assurance audit and the subject project is in compliance with the contract requirements.

(Signature)

Quality Assurance Team Leader and Team Members

Date

(To be signed by OC. The same form is used for both In-House and A/E prepared designs.)

CERTIFICATION OF LEGAL REVIEW

The report for _____, including all associated documents required by the National Environmental Policy Act, has been fully reviewed by the Office of Counsel, _____ District and is approved as legally sufficient.

(Signature)
District Counsel

Date

MEMORANDUM FOR RECORD

SUBJECT: Early Release of Documents, associated with the following Project

1. It is hereby agreed between _____, the Customer, and _____, Project Engineer, ED-MA, to release the contract documents for this project for advertising prior to completion of the following requirements of the Louisville District Engineering Division Quality Operating System:

- A. _____
- B. _____
- C. _____
- D. _____

2. The Customer understands and accepts the risks associated with such early release of project documents. Listed below is a summary of the risks:

- A. Schedule _____
- B. Scope _____
- C. Budget _____
- D. Quality _____

3. It is our intent to have the above referenced documents completed in accordance with schedule listed below:

	Description	Completion Date
A.	_____	_____
B.	_____	_____
C.	_____	_____
D.	_____	_____

All the requirements of the Engineering Division Quality Operating System must be completed prior to Bid Opening/Receipt of Proposals.

Customer

Project Engineer

Date

Date