

POLICY IMPLEMENT
STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
P.I. Number D-04
Engineering Plan Approval Policy

INDEX FILING CODES

References:

Issued: 03/14/1995
Revised: 08/01/2018
Effective: 08/31/2018
Primary Responsibility:
Chief Engineer

Table of Contents

- I. Purpose**
- II. Policy**
- III. Procedures**
- IV. Justification**
- V. Effective Date**

I. Purpose

To define procedures for the use of the Professional Engineering Seal on Delaware Department of Transportation (DelDOT) construction and maintenance contracts containing engineering design and specifications. This procedural directive applies to all divisions and offices of DelDOT. It also applies to consulting engineering firms contracting engineering work for DelDOT as well as any Local Agencies or Third Parties performing engineering work to be procured by DelDOT or administered through DelDOT's competitive bidding process.

II. Policy

A. Signatory Requirements

At DelDOT, all construction and maintenance contracts containing engineering design and specifications must be signed and sealed by a Delaware Professional Engineer as defined in *24 Del. C. Ch. 28* prior to advertisement for bid as required by *29 Del. C. §6962*. In Delaware, public works contracting is further regulated under *24 Del. C. §2822*.

B. Sealing of Engineering Documents

All construction and maintenance contract plans that require engineering design shall carry, at a minimum, a signature block for the Delaware Professional Engineer who designed the work and prepared the plans as required by 24 Del. C. §2830 who shall be the Engineer of Record. Plans signed and sealed electronically shall conform to DeIDOT guidance for electronic signature of engineering documents in effect at the time of plan approval.

C. Responsible Charge of Engineering Work

Professional Engineers employed by DeIDOT may only affix their engineering seal to documents prepared under their responsible charge as defined in 24 Del. C. §2803 (27).

D. Improper Sealing of Engineering Documents

Professional Engineers employed by DeIDOT who deviate from this policy will be subject to disciplinary action in accordance with State of Delaware Merit Rules. In addition, cases of improper use of a Professional Engineering seal may be referred to the Delaware Association of Professional Engineers for potential disciplinary action under 24 Del. C. §2823.

III. Procedures

1. Project plans designed and prepared by private consulting firms ("Consultant Plans"), or portions of plan sets, will be signed, dated and sealed by the consultant who shall be the Engineer of Record.
2. Project plans designed and prepared by DeIDOT employees ("In-House Plans"), or portions of plan sets, will be signed, dated and sealed by the DeIDOT Professional Engineer who prepared them. This individual will be the Engineer of Record. In-House Plans prepared by non-registered engineers and/or technicians shall be prepared under the responsible charge of a Delaware Professional Engineer who shall sign, date and seal the final plans and, as necessary, other documents prepared under their direction.
3. Both Consultant Plans and In-House Plans shall be signed, but not sealed, by the Division Director responsible for the programming and management of the project. Such signature shall indicate "Approved for Advertisement". The Director's signature indicates the project is programmed, budgeted, and ready for advertisement. It is not an engineering approval.
4. DeIDOT project level staff and their managers will provide their recommendation to approve for advertisement to their Division Director in accordance with **Appendix 'A' Project Design Quality Assurance and Quality Control Standard**.
5. Addendums and Plan Revisions shall be reviewed and approved by the Engineer of Record who will sign, date and seal the addendum or revision.
6. Successor Engineers (i.e., engineers who inherit the responsibility to prepare changes to previously signed and sealed plans) will be expected to sign and seal all the plans for which

they had responsible charge of the design and/or design changes. Title blocks may be annotated to describe the scope of the work attributable to any Successor Engineer.

7. For projects re-assigned from one design engineer to another design engineer, due to vacancy or otherwise, the new design engineer who will be the Engineer of Record, will be required to sign, date and seal the plans, subject to the following conditions:

- a) The new design engineer has completely reviewed and accepted that the work products of the previous design engineer meets engineering requirements and standards; or
- b) The new design engineer has re-designed the project in whole or in part to meet appropriate engineering requirements and standards.

9. Changes during the course of construction shall be handled as follows:

- a) Changes that modify the design, specifications, materials, or project limits during the course of construction must receive concurrence from the Engineer of Record or Successor Engineer prior to implementation. See DelDOT's Plan Revision Guidelines.
- b) Changes that do not require engineering modifications may be processed without concurrence of the Engineer of Record.
- c) The procedures above are separate from and do not supersede any financial approval procedures required by each Division or federal agency.
- d) The procedures above are separate from and do not supersede any permit modification procedures required by the permit issuing agency.

10. Unless specifically exempted under the 5101 Delaware Sediment and Stormwater Regulations, designer and owner certifications are required on DelDOT construction plans as follows:

- a) Designer Certification - In accordance with Section 3.8.1 of the regulations, the Engineer of Record shall sign, seal, date and certify the Plans as follows:

"I certify to the best of my knowledge and belief that the design of these plans meets the requirements of the Delaware Sediment & Stormwater Regulations."

Note, this could be the same person as the Engineer of Record under 24 Del.C. 2830. It shall be clearly indicated as to which aspects of the plans that person's seal applies.

- b) Owner Certification - In accordance with Section 3.8.2 of the regulations, the DelDOT Stormwater Engineer will sign, date and certify on behalf of DelDOT as follows:

"I certify to the best of my knowledge and belief that these plans meet the requirements of the Delaware Sediment and

Stormwater Regulations and that all clearing, grading, and construction will be accomplished pursuant to the plan.”

IV. Justification

Delaware Code requires proper approval of contract plans that require engineering design. This policy is needed to make DelDOT staff aware of these requirements and to clarify approval requirements for DelDOT contracts.

V. Effective Date

This policy shall become effective August 31, 2018 after signature by the Secretary.

Appendix 'A'

Project Design Quality Assurance and Quality Control Standard

This Project Design Quality Assurance and Quality Control Standard is based on a four step process:

1. Creator;
2. Checker;
3. Reviewer; and
4. Endorsement.

Definitions:

Standard of Care – Is the degree of skill and care ordinarily used by competent practitioners of the same professional discipline under similar circumstances, taking into consideration the contemporary state of the practice and the project conditions.

Engineer of Record – Is the individual who creates, or causes to be created, engineering work products. The Engineer of Record is in responsible charge of the project design and construction plan development, will meet the standard of care, and will comply with all applicable engineering standards, guidelines, policies, regulations, and laws for their project. The Engineer of Record may be responsible for development of all the plans or only portions of plan sets. Complex projects may have an Engineer of Record for each section of the plan set prepared by different engineering disciplines such as roadway, bridge, traffic, etc.

Quality Control Checker – Is the individual(s) who checks documents, computations, plans, and the engineer's proposed responses to comments for accuracy and completeness. Quality Control Checkers may be peers or supervisors or both. Projects may utilize multiple Quality Control Checkers.

Quality Assurance Reviewer – Is the individual(s) who reviews and certifies the documents, plans, computations, specifications, responses to comments and supporting engineering work products are complete, of high quality, and meet the Standard of Care. Quality Assurance Reviewers are typically managers of Groups or Sections within a Division. Complex projects involving multiple engineering disciplines may have multiple Quality Assurance Reviewers.

Endorser – Is the individual who will certify to the Division Director that the project is ready for advertisement. Endorsement will be made by the Section head or Assistant Director.

QA/QC Certification – Is a written statement to the Division Director that appropriate quality controls were followed to ensure the project was designed and plans prepared in accordance with governing standards by properly licensed professionals.

Procedures:

1. The Engineer of Record shall create, or cause to be created, all the various elements and components required to prepare a complete and accurate set of construction plans and supporting documents. The Engineer of Record shall seek quality control checks as each element

of the project is created. The Engineer of Record will seek quality assurance reviews prior to each plan distribution.

2. Quality Control Checks shall be made continuously and throughout the project design and development phase as each element of the project is created such as coordinate geometry, grades, modeled surfaces, drainage, stormwater management, hydrology & hydraulics, structural analysis, special provision specifications, material quantities, cost estimates, etc. A record of each quality control check shall be kept in either hard copy or electronic formats. That record may be kept in any format (e.g., standard form, title block, checklist, email, etc.), however, it must at least bear the name, title, and date of the individual who performed the quality control check.
3. Quality Assurance Reviews shall be performed throughout the project development and design phase, and especially prior to each plan distribution. A record of each quality assurance review shall be kept in either hard copy or electronic formats. That record may be kept in any format (e.g., standard form, title block, checklist, email, etc.), however, it must at least bear the name, title, and date of the individual who performed the quality assurance review.
4. QA/QC Certification by the Quality Assurance Reviewer and Endorser will only be required prior to submission of the construction plans to the Division Director for approval to advertise for bids. QA/QC Certification may be made either in hard copy or electronic format. Certification will not be made on the plans. It will be made on a separate memorandum to the Endorser and Division Director. **See QA/QC standard memo templates below.**
5. The Division Director shall not approve the project for advertisement prior to receiving the appropriate QA/QC Certifications from the Quality Assurance Reviewer and Endorser. The Division Director shall sign and date the title sheet of the construction plans "Approved for Advertisement".
6. Successor Engineers shall follow the above QA/QC procedures for changes they make to previously signed and sealed plans.

MEMORANDUM

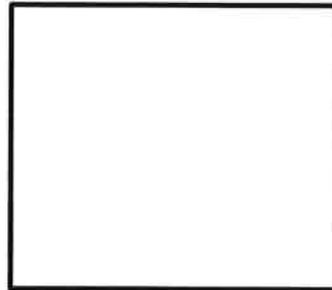
To: Division Director
Via: Assistant Director as Endorser,
Via: PM II as Quality Assurance/Quality Control Reviewer
From: PM I as Quality Assurance/Quality Control Reviewer
Date: Month, Day, Year
Subject: T20XX-XXX-XX, Project Name

QA/QC Certification:

I certify to the best of my knowledge and belief that all elements required for advertisement are complete, accurate, and meet the Standard of Care required. DelDOT's quality control processes were followed and a record of quality control checks are available in project files.

Signature (PM I)

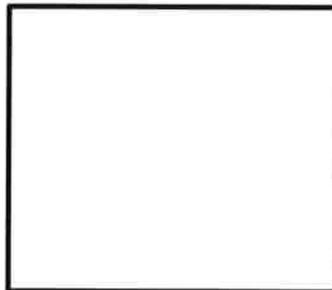
Date



Seal

Signature (PM II)

Date



Seal

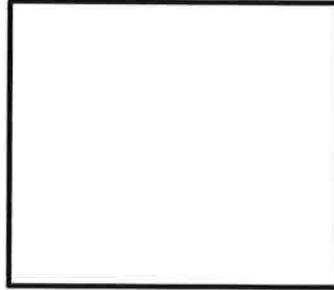
For the Division of Transportation Solutions
QA/QC Standard Certification Memo Template – In-House Plans

Endorsement:

I certify to the best of my knowledge and belief that the quality control and quality assurance process was followed; that the Engineer of Record is properly licensed; and that the project design, construction plans, specifications and cost estimates are complete and ready for advertisement.

Signature (AD Level)

Date



Seal

MEMORANDUM

To: Division Director
Via: Assistant Director as Endorser,
Via: PM II as Quality Assurance/Quality Control Reviewer
From: PM I as Quality Assurance/Quality Control Reviewer
Date: Month, Day, Year
Subject: T20XX-XXX-XX, Project Name

QA/QC Certification:

This project was designed under the responsible charge of a consultant engineer. I have reviewed the documents provided by the consultant to verify the required quality control processes were followed in accordance with the consultant's quality control and quality assurance policy. I certify to the best of my knowledge and belief that all required elements needed to construct this project are complete and ready for advertisement.

Signature (PM I level)

Date

Signature (PM II level)

Date

Endorsement:

This project was designed under the responsible charge of a consultant engineer. I have reviewed the documents and certify to the best of my knowledge and belief that the required quality control processes were followed in accordance with the consultant's policy; that the Engineer of Record is properly licensed; and that the project design, construction plans, specifications and cost estimates are complete and ready for advertisement.

Signature (AD Level)

Date

MEMORANDUM

To: Division Director
Via: Assistant Director as Endorser
From: DeIDOT Project Manager as Quality Assurance/Quality Control Reviewer
Date: Month, Day, Year
Subject: T20XX-XXX-XX, Project Name

QA/QC Certification:

This project was designed under the responsible charge of a consultant engineer. I have reviewed the documents provided by the consultant to verify the required quality control processes were followed in accordance with the consultant's quality control and quality assurance policy. I certify to the best of my knowledge and belief that all required elements needed to construct this project are complete and ready for advertisement.

Signature (DeIDOT Project Manager)

Date

Endorsement:

This project was designed under the responsible charge of a consultant engineer. I have reviewed the documents and certify to the best of my knowledge and belief that the required quality control processes were followed in accordance with the consultant's policy; that the Engineer of Record is properly licensed; and that the project design, construction plans, specifications and cost estimates are complete and ready for advertisement.

Signature (AD Level)

Date

MEMORANDUM

To: Division Director
Via: District Engineer/Assistant Director as Endorser,
Via: Maintenance Engineer/PM II as Quality Assurance/Quality Control Reviewer
From: PM I as Quality Assurance/Quality Control Reviewer
Date: Month, Day, Year
Subject: T20XX-XXX-XX, Project Name

QA/QC Certification:

I certify to the best of my knowledge and belief that all elements required for advertisement are complete, accurate, and meet the Standard of Care required. DeIDOT's quality control processes were followed and a record of quality control checks are available in project files.

Signature (PM I)

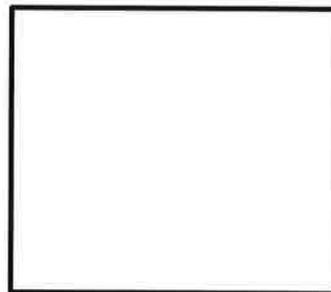
Date



Seal

Signature (Maintenance Engineer/PM II)

Date



Seal

For the Division of Maintenance & Operations
QA/QC Standard Certification Memo Template – In-House Plans

Endorsement:

I certify to the best of my knowledge and belief that the quality control and quality assurance process was followed; that the Engineer of Record is properly licensed; and that the project design, construction plans, specifications and cost estimates are complete and ready for advertisement.

Signature (District Engineer/AD Level)

Date



Seal