



AIA
Florida

Provider #: A022

Electronic Signing and Sealing

for Florida Architects

Course Number: **WEB18ESIGN**

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Course Description

This how-to webinar will discuss what Architects can and cannot do electronically as well as review the security requirements imposed by Florida Rules. We will walk thru the process of actually applying your signature and seal electronically using off-the-shelf software and talk about options that may be available. We hope to be joined by representative building officials for a discussion of the limitations, and uses of this process from their perspective. This is a comprehensive review with one of the Florida Board members involved in the actual writing of the current rules.



Learning Objectives

At the end of the this course, participants will be able to:

1. Review Florida Laws and Rules regarding electronic signing and sealing of official documents by architects.
2. Learn how to apply these Rules in every day practice while ensuring that legal requirements are met. Put this process to work in your office right away.
3. Discuss ways to secure the electronic processes and prevent unlawful or unauthorized use of your seal.
4. Learn real-world issues regarding this process from both the practitioner and building regulation perspective.

History

Where did we start:

Original language added to the rules in April of 2006

- requested by FDOT to facilitate their project needs
 - ❖ *at the time, architect's were only consultants not allowed to s/s electronically*
- the text of all the requirements, including the security protocols came directly from them
 - ❖ FDOT published their own software (available freely) named:
PEDDS -Professional's Electronic Data Delivery System
 - ❖ really a delivery system for project documents which had the means to sign and seal electronically

History

Where did we start:

Problems:

- based on the FDOT program, our rule required that a “project index” or report be printed, which would be physically signed and sealed by the professional and submitted with the electronically signed/sealed documents
 - ❖ program was clunky-at-best!!
 - ❖ no one could figure out how to use it, and
 - ❖ never really took-off with architects
- *but the seeds had been planted.*

History

Where did we start:

Need for clarification:

- In 2011, I petitioned BOAID for a Declaratory Statement seeking formal clarification of the Board's intent regarding:
 - *“May the electronic signature described in Rule 61G1-16.005 be used in lieu of a physical signature and impression seal required by Rule 61G1-16.001?”, and*
 - *May an electronic image of the physical signature and impression seal, required by Rule 61G1-16.001 be made, and included on a secured electronic portable document file (.pdf) and used to meet the requirements of Section 481.221 FS*
- BOAID's answer to both: **Yes** (April 2011)
- *but, that still didn't satisfy everyone!*

Rules Changes

Changes in **2012** begin to refine the process of electronic (digital) signing and sealing:

61G1-16.005 Procedures for Signing and Sealing Electronically Transmitted Plans, Specifications, Reports or Other Documents.

(1) Information stored in electronic files representing plans, specifications, plats, reports, or other documents which must be sealed under the provisions of Chapter 481, F.S., shall be signed, dated and sealed by the architect or interior designer in responsible charge.

(a) A scanned image of an original signature shall not be used in lieu of a digital or electronic signature.

(b) The date that the electronic signature file was created or the digital signature was placed into the document must appear on the document in the same manner as date is required to be applied when a licensee uses the manual sealing procedure set out in Rule 61G1-16.003, F.A.C.

(2) An architect or interior designer utilizing a digital signature to seal construction documents shall assure that the digital signature is:

(a) Unique to the person using it;

(b) Capable of verification;

(c) Under the sole control of the person using it; and

(d) Linked to a document in such a manner that the electronic signature is invalidated if any data in the document are changed.

(3) Electronic files may be signed and sealed by creating a “signature” file that contains the architect’s or interior designer’s name and license number, a brief overall description of the documents, and a list of the electronic files to be sealed. Each file in the list shall be identified by its file name utilizing relative Uniform Resource Locators (URL) syntax described in the Internet Architecture Board’s Request for Comments (RFC) 1738, December 1994, which is hereby adopted and incorporated by reference by the Board and can be obtained from the Internet Website: ftp://ftp.isi.edu/in_notes/rfc1738.txt. Each file shall have an authentication code defined as an SHA-1 a message digest described in Federal Information Processing Standard Publication 180-4 180-3 “Secure Hash Standard,” 1995 April 17 October 2008, which is hereby adopted and incorporated by reference by the Board and can be obtained from the Internet Website: <http://www.itl.nist.gov/fipspubs/fip180-4.htm> http://csrc.nist.gov/publications/fips/fips180-3_final.pdf. A report shall be created that contains the architect’s or interior designer’s license number, a brief overall description of the documents in question and the authentication code of the signature file. This report shall be printed and manually signed, dated, and sealed by the architect or interior designer in responsible charge. The signature file is defined as sealed if its authentication code matches the authentication code on the printed, manually signed, dated and sealed report. Each electronic file listed in a sealed signature file is defined as sealed if the listed authentication code matches the file’s computed authentication code.

Rules Changes

Finally in **2013**, the refinements are completed:

61G1-16.005 Procedures for **Digitally** Signing and Sealing **and for** Electronically **Transmitting** Transmitted Plans, Specifications, Reports or Other Documents.

(1) Information stored in electronic files representing plans, specifications, plats, reports, or other documents which must be sealed under the provisions of Chapter 481, F.S., shall be signed, dated and sealed by the architect or interior designer in responsible charge.

(a) A scanned image of an original signature shall not be used in lieu of a digital or electronic signature.

(b) The date that the electronic signature file was created or the digital signature was placed into the document must appear on the document in the same manner as date is required to be applied when a licensee uses the manual sealing procedure set out in Rule 61G1-16.003, F.A.C.

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(d) Linked to a document in such a manner that the electronic signature is invalidated if any data in the document are changed.

(3) ~~Electronic files may be signed and sealed by creating a “signature” file that contains the architect’s or interior designer’s name and license number, a brief overall description of the documents, and a list of the electronic files to be sealed. Each **electronically signed** file shall have an authentication code defined as a message digest described in Federal Information Processing Standard Publication 180-3 **180-4** “Secure Hash Standard,” October 2008 **March 2012**, which is hereby adopted and incorporated by reference by the Board and can be obtained from the Internet Website: <http://csrc.nist.gov/publications/fips/fips180-3-final.pdf> <http://www.flrules.org/Gateway/reference.asp?No=Ref-01340>. A report shall be created that contains the architect’s or interior designer’s license number, a brief overall description of the documents in question and the authentication code of the signature file. This report shall be printed and manually signed, dated, and sealed by the architect or interior designer in responsible charge. The signature file is defined as sealed if its authentication code matches the authentication code on the printed, manually signed, dated and sealed report. Each electronic file listed in a sealed signature file is defined as sealed if the listed authentication code matches the file’s computed authentication code.~~

Rules Changes

Current language:

61G1-16.005 Procedures for Digitally Signing and Sealing and for Electronically Transmitting Plans, Specifications, Reports or Other Documents.

(1) Information stored in electronic files representing plans, specifications, plats, reports, or other documents which must be sealed under the provisions of Chapter 481, F.S., shall be signed, dated and sealed by the architect or interior designer in responsible charge.

(a) A scanned image of an original signature shall not be used in lieu of a digital or electronic signature.

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(3) Each electronically signed file shall have an authentication code defined as a message digest described in Federal Information Processing Standard Publication 180-4 "Secure Hash Standard," March 2012, which is hereby adopted and incorporated by reference by the Board and can be obtained from the Internet Website: <http://www.firules.org/Gateway/reference.asp?No=Ref-01340>.. or the internet website: <http://csrc.nist.gov/publications/fips/fips180-4/fips-180.4.pdf> .

Rules Changes

Changes in [2012](#) and [2013](#) allow implementation of electronic (digital) signing and sealing:

61G1-16.001 Architect's and Interior Designer's Seal.

Each architect and interior designer shall acquire a seal with which [she or](#) he shall identify all plans, specifications or reports prepared or issued by her or him and filed for public record. The seal shall be **capable of leaving a permanent ink representation or other form of embossing or opaque and permanent** of a type which will make an impression, **which also may be computer generated impressions**, on the surface of prints or other duplications of drawings, and, as appropriate, upon specification pages, and other articles of service. **Where required, electronic files may be sealed in accordance with Rule 61G1-16.005, F.A.C.**

Rules Changes

Current language:

61G1-16.001 Architect's and Interior Designer's Seal.

Each architect and interior designer shall acquire a seal with which she or he shall identify all plans, specifications or reports prepared or issued by her or him and filed for public record. The seal shall be capable of leaving a permanent ink representation or other form of embossing or opaque and permanent impression, which also may be computer generated impressions, on the surface of prints or other duplications of drawings, and, as appropriate, upon specification pages, and other articles of service. Where required, electronic files may be sealed in accordance with Rule 61G1-16.005, F.A.C.

Rule Changes

Getting the word out:

- *BOAID authorizes the writing of a letter, notifying building officials of the rule changes and clarifying how the changes affected architect's use of electronic signing and sealing:*

In a nutshell:

1. Architects and Interior Designers may now use graphic representations of their professional seals which include application by rubber stamp, electronic image or the inclusion of a seal printed directly onto drawings or other official documents.
2. Rule 61G1-16.001, FAC and 61G1-16.002, FAC have now been revised, effective November 11, 2013 to remove the requirement that seals be embossed or provide a raised impression.
3. It is no longer required that an architect or interior designer create, print and manually sign and seal a report to accompany the electronically signed and sealed document(s). The encrypted digital signature and seal is now sufficient for official submissions. Rule 61G1-16.005, FAC which determines the procedures for signing and sealing electronically transmitted plans has been revised, effective November 11, 2013, removing this requirement.

Legal Requirements

essentially the intent is to ensure the following:

- that the content has (can) not be altered: **Integrity**
- that the document is coming from the actual person who sent it: **Authenticity**
- that the individual who signed the document cannot deny the signature: **Repudiation**

how do we do this:

- most (if not all) mainstream – business pdf maker software has this “*basic*” capability built-in
 - ❖ *Adobe Acrobat (current version is “DC”) but capability has been available back to v. 6 or 7*
 - ❖ *Bluebeam Standard (CAD or Extreme) at least back to 2012*
- not necessary to buy anything fancy, the minimum requirements can be met with these basic capabilities
- enhanced security measures are available as “third party plug-ins:
 - ❖ *VeriSign*
 - ❖ *DocuSign, etc...*
- but, it is entirely the architect’s choice to do so.

Legal Requirements

building department considerations:

- agency concerns should not focus on type of file or security used to submit
- the rule does NOT require “third-party” authentication; rather it places that burden on the architect, saying:
 - ❖ the architect “shall assure that the digital signature is:
 - (a) *Unique to the person using it,*
 - (b) *Capable of verification,*
 - (c) *Under the sole control of the person using it, and*
 - (d) *Linked to a document in such a manner that the electronic signature is invalidated if any data in the document are changed.*
- however, they DO have valid concerns (*or issues*) regarding how they “use and process” the file, then make it available for use as an “approved” document, but:
 - ❖ as valid as that is, its **THEIR** problem to solve
- doing so, should not (cannot) impose additional burdens on the architect
 - ❖ (possible restriction of a state granted right?)

Options

many ways to go about it:

- *use a stamp style seal or the image of the seal to save on “squeezing” and manually sign the document (electronic submission will require scanning)*
- *use the image of the seal and sign electronically using a tablet*
- *use the image of the seal and sign with a scanned image of your signature*
- *use the image of the seal and sign digitally, using software*

This concludes The American Institute of Architects
Continuing Education Systems Course



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