

Appendix F

Sealing and Signing of Plans

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Appendix F

F.1 Digital Signatures and Seals

F.1.1 Introduction

All plans and documents as defined in [IIM-LD-243](#) submitted for Right of Way and Construction **on or after July 1, 2009** shall be sealed and signed by the Responsible Person(s) (Licensed Professional Engineer, Certified Landscape Architect or Licensed Land Surveyor).

Projects that meet the criteria above will require a **Digital Signature and Seal/Stamp**. Plans submitted for advertisement must be digitally sealed and signed by the dates shown in the “Cut-Off Dates for Advertisement” spreadsheet. For information on which sheets require signatures and by whom, refer to [IIM-LD-243](#).

F.1.2 Digital Signature Definition

Digital Signatures are used to sign electronic documents. A **Digital Signature** is a type of Asymmetric Cryptography used to simulate the security properties of a handwritten signature on paper. It's a method of encrypting a file so that the authenticity of the signed document can be publicly verified with the use of Public and Private Keys.

VDOT will utilize IGC Medium Assurance 2-Year Certificates* to sign and seal plans. IdenTrust Global Common (IGC) Certificates are cross-certified with the U.S. Federal Bridge Certification Authority, enabling trust by U.S. Federal, State and local governments, along with commercial entities or applications wishing to rely only Certificates proven to be issued in a standards-compliant manner. IGC certificates are approved by the General Services Administration to replace certificates that were previously issued under the ACES program.

IGC certificates are PKI Compliant (Public Key Infrastructure). An IGC Digital Certificate ensures authenticity and accountability in citizen-to-government, business-to-government and government-to-government electronic transactions. All plans and documents are to be signed with IGC Digital Certificates.

Additional information can be found at:

<http://www.identrust.com/virginia/vdot.html>

<https://www.identrust.com/support/faq/IGC>

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F.1.3 Digital Seal / Stamp

Each individual in a position of “Responsible Person” will be provided a Digital Seal / Stamp. It will look similar to the images below. Any changes to your Seal must be communicated back to the CADD Support Helpdesk so a new image can be created.



CADD Support will create the image file of the Seal for VDOT staff.

F.2 MicroStation

F.2.1 Interior Plan and Profile Sheets

The upper right corner next to the project information on interior Plan and Profile sheets is the preferred location for the **Sealing & Signing Blocks**. Additional blocks may be added as needed. When additional Sealing & Signing Blocks are required, a cell named PEBLOCK can be added from the cell library *sheet2000.cel*.

Preferred Location on Interior Plan Sheets

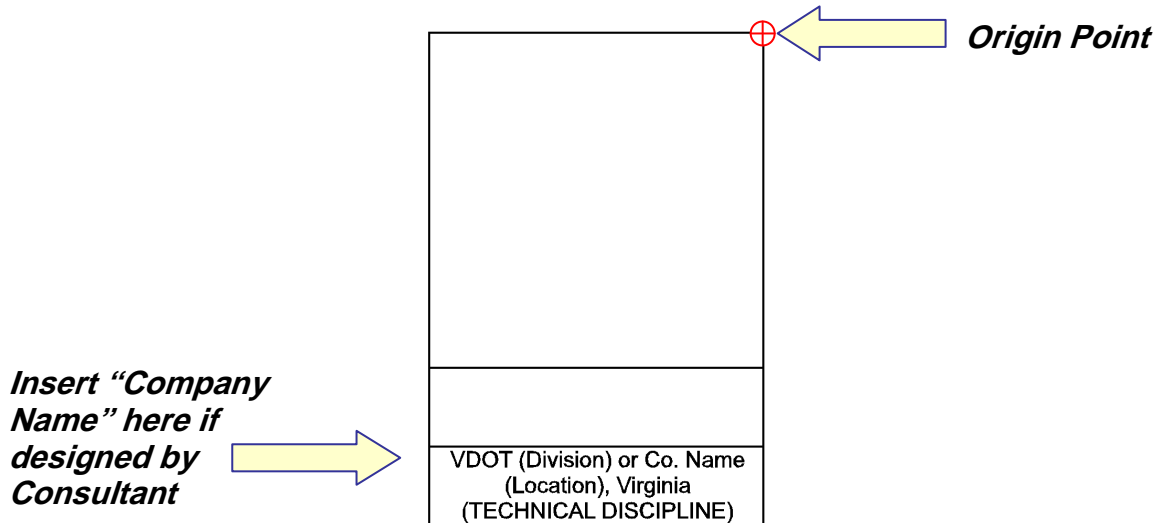
		REVISED	STATE	STATE		SHEET NO.
			ROUTE	PROJECT		
			VA.			
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT						
VDOT (Division) or Co. Name (Location), Virginia (TECHNICAL DISCIPLINE)	VDOT (Division) or Co. Name (Location), Virginia (TECHNICAL DISCIPLINE)					

Preferred Location on Profile Sheets

	REVISED	STATE	STATE		SHEET NO.
		ROUTE	PROJECT		
		VA.			
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT					
VDOT (Division) or Co. Name (Location), Virginia (TECHNICAL DISCIPLINE)					

F.2.2 MicroStation Cells

New projects or sheets created after July 1, 2009, can utilize sheet cells created with Sealing & Signing Blocks nested inside. The existing sheet cells have been updated to include the blocks. The blocks must be edited for **Division or Company Name, Location and Technical Discipline** while in MicroStation. The editing may be performed without dropping the sheet or cell status. The Sealing & Signing block is located in the cell library *sheet2000.cel*, and is named PEBLOCK. The origin is located in the upper right corner of the cell for ease of placement.



All editing must be done to the Sealing & Signing Block before the PDF file is created.

When a Sealing & Signing block needs to be deleted from a sheet cell, use the **Drop Element** tool in MicroStation. Place a check in the boxes for **Complex** and **Shared Cells**, then data on the sheet cell and data again to accept. In doing so, the individual components of the sheet itself remain intact and the unused Sealing & Signing block can be deleted.

The profile sheet is the only exception to this rule. The typical profile sheet will likely require one signature. Since the profile sheet is made up of primarily many parallel lines, when the cell status is dropped a single time, the only information that can be moved or deleted is the sheet text. The Sealing & Signing block and other sheet components remain intact. When additional Sealing & Signing blocks are required, the status must be dropped a second time, allowing the cropping of multiple grid lines around the block's perimeter.

F.2.3 Existing Projects

Sealing and Signing blocks can be added to old and current projects using the PEBLOCK cell as noted above. When the preferred placement is not possible, the blocks should be placed using the 'best fit' method.

F.2.4 Base Survey Files

The only MicroStation DGN File requiring a seal will be the base Survey File. This will be accomplished using the tools within MicroStation. For more detailed information on the Process, see the department's [Survey Manual](#).

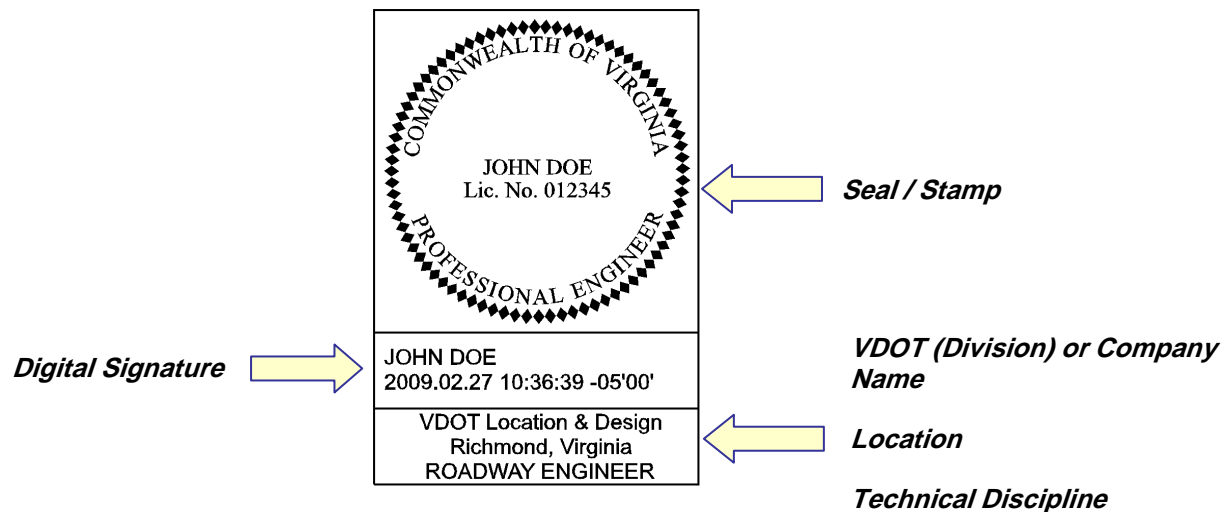
F.3 ProjectWise

F.3.1 File Submittal and File Management

Files requiring digital seals and digital signatures will be stored in **ProjectWise**^{*}. The PDF files must be Sealed and Signed in accordance with [IIM-LD-243](#) before being submitted to VDOT.

For VDOT Staff, files which need to be sealed and signed must be checked out of **ProjectWise** by the responsible person on his or her own computer. All files requiring digital seals and digital signatures will be located in **ProjectWise** under the **Plan File Room** Environment. Plans can be found by project number under the Road Plans, Bridge Plans or Right of Way Plans folder. They are also separated by District and project number.

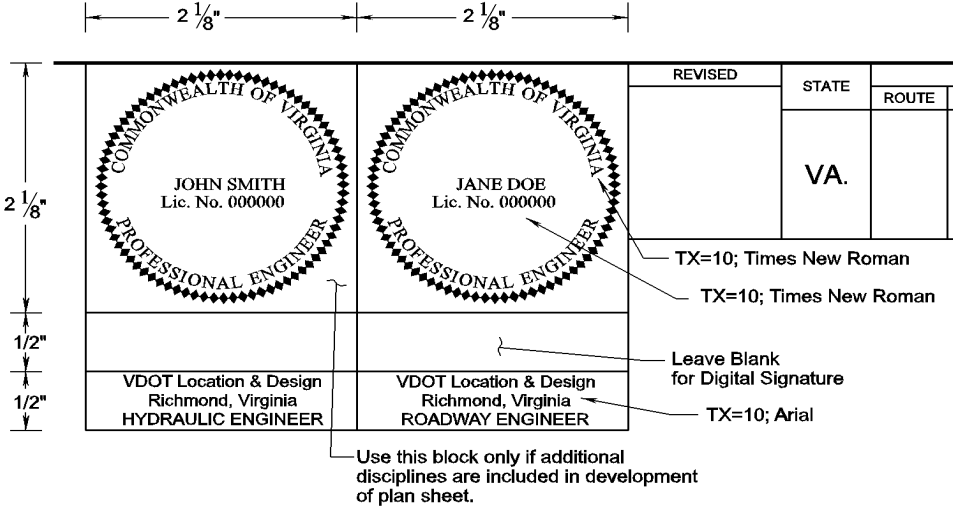
Those persons in a responsible position have **Bluebeam Revu** software necessary to digitally seal and sign plans. An image file created specifically for each responsible person is placed in the upper portion of the Sealing & Signing Block. The Digital Signature is placed in the box below the image and the PDF file is saved. Once the individual files have been sealed and signed, the files should be checked back into **ProjectWise**.



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F.4 Sealing & Signing Block Requirements

F.4.1 Dimensions and Text Sizes



F.4.2 Notes / Quick Reference Guide

1. The upper right corner next to the project information block is the preferred location of the blocks for sealing and signing.
2. While the preferred orientation is horizontal, these blocks may be placed vertically, or in an alternate location if necessary. Use best fit method.
3. Seal / Stamp to be placed with **Bluebeam Revu*** using the "Place Stamp" tool.
4. Digital Signatures are to be placed with **Bluebeam Revu** using the "Place Signature" tool.
5. The Sealing & Signing Blocks are part of the sheet cells. When additional Sealing & Signing blocks are required, a cell named PEBLOCK can be added from the cell library *sheet2000.cel*.
 - a. (Location) is determined by office location of Responsible Person.
 - b. (Technical Discipline) is defined as the Responsible Person sealing and signing plans and can include Roadway, Hydraulic, Civil, Bridge and

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Materials Engineers as well as Land Surveyor and Landscape Architect among others.

6. The edit text command can be used to modify text as needed. Editing must be done while in MicroStation and not in Adobe.

F.5 File Format Requirements*

F.5.1 File Format

Since July 1, 2009 PDF files have become the official format for plan submittals instead of TIF files. Additional information about Electronic Deliverables can be found at the following links: [Electronic Plan Submission Process Flow Chart](#) and [PDF Requirements \(Consultants\)](#)

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F.6 Other Type of Project Requirements

F.6.1 No Plan Projects

For information about Sealing & Signing “No Plan” Projects see the [Road Design Manual](#), Appendix A. For the current version of the "No Plan" title sheet, see the CADD No Plan Directory relocated in [ProjectWise](#)*.

F.6.2 Bridge Projects

For information about Sealing & Signing Bridge Plans, see the [IIM-S&B-79](#) and the [Structure and Bridge Division's Office Practices](#).

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