



GUIDE TO CREATING & PROCESSING ELECTRONIC CONSTRUCTION DOCUMENTS

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Introduction

The City of Dunedin is implementing a new full-service online permitting system. Beginning in Fall 2020, all permits must be submitted online using the Dunedin Citizen Self Service (CSS) Portal. This guide is intended to help with creating and submitting construction documents in the CSS Portal for online permitting.

Overview

Advances in technology have made electronically created documents commonplace in today's construction industry. Computer Aided Design (CAD), Building Information Modeling (BIM), word processing (Word), Portable Document Format (PDF) management and other computer programs are familiar to most design professionals, contractors, and building code officials. A paperless online building permit process is now possible through advances in technology and updated state statutes and licensing regulations.

The building permit process builds an official public record of construction activity that relies on the authenticity of information. Certain documents must bear the mark of the person, persons or agency that created, reviewed or authorized them. Legislation and associated administrative rules mandate signatures, notarized signatures, and in the case of architects and engineers, an encrypted signature and seal must be affixed. It is the authenticity of these documents that must be safeguarded in an electronic building permit process. For these electronic documents to be used for permitting construction projects, design professionals must electronically secure, sign, and seal various documents to guarantee that the documents are authentic and cannot be altered.

This document provides guidance for design professionals and contractors regarding the best practices recommended for the creation and handling of secure electronic documents used in the online building permit process.

Creating Construction Documents for Permitting

Construction documents required for permitting are assembled into an application package by the contractor. For the purpose of this document the term "contractor" is used to represent the "applicant". While the contractor is ordinarily the applicant, in some circumstances the applicant could be a design professional or the owner. Drawings, calculations, and specification documents, in electronic format, prepared by Florida licensed architects and/or engineers are required to be signed and sealed with an encrypted electronic signature. Documents not prepared by an architect or engineer should contain an information block that identifies who created the document, and contact information if there are questions about the document.

Electronic construction documents can be delivered to the contractor, and in turn submitted to the permitting office through the CSS. The contractor must take great care not to alter any document signed with an encrypted signature, because any alteration will void the document signature.

Responsibilities of Design Professionals

The following sections will explain the responsibilities of design professionals when electronic construction documents are used in the permitting process.

Formatting Documents

Electronic construction documents can be created by any software as long as the documents produced can be saved in a file format that can be opened by the plans examiners. It is recommended that most documents be saved in a PDF format. Keep in mind that when the submittal is accepted as a signed and sealed multiple page PDF set, all future submittals will require the resubmittal of the entire updated set.

Digital Signatures by Architects and Engineers

Seals and signatures are used by Florida licensed architects and engineers to identify authentic documents. An electronic or digital signature serves the same purpose as wet seals and impression seals. An electronic or digital signature is an approved method of authenticating a document as long as it complies with applicable laws and rules.

Currently, architects and engineers must comply with their respective licensing board's rules and with Chapter 668, Part I, Florida Statutes when using an electronic signature. The statutes and rules require that an electronic signature be unique to the signee, be under the control of the signee, be created using an "asymmetric cryptosystem", and be recognizable through the use of a process called "Key pair" technology.

As mentioned above, when the legal requirements are met, both the signee and the recipient can be assured of the authenticity and integrity of the electronic signature. An electronic signature is password protected and cannot be copied or used by anyone except the signee.

An important feature of an electronic signature is that it can be verified as authentic when it is attached to an electronic file in a PDF format. Construction drawings or documents bearing an electronic signature may only be submitted to the City in an electronic format for use in permitting a project. An electronic signature on a printed copy of an electronic document cannot be verified as authentic, and is not valid as a permit submittal. Electronic documents bearing an electronic signature may be printed for use in the field only after the City has electronically stamped and secured the document.

The biggest obstacle to the use of electronic documents for permitting is a lack of understanding regarding digital, encrypted, electronic signatures using PKI or Public Key Infrastructure. The irony of that statement is that it is not a difficult process for either the signee or the recipient. An encrypted signature that complies with the requirements of the licensing boards can be created in one of two methods:

1. Use tools built into your design or PDF management software (AutoCAD, Adobe Acrobat Pro, BlueBeam, etc.) to create a visible and embedded signature file. This also requires the online purchase of a certificate from a Certificate Authority (eTrust, GeoTrust, Verisign, etc.)
2. Purchase a signature and Certificate online from a third party verification service (eTrust, GeoTrust, Verisign, etc.)

Document Security Settings

Electronic documents created by a design professional will likely pass through the contractor, and perhaps the owner, before being submitted to the City via the CSS. When a PDF file is created there is an opportunity to set the rights others will have when handling it. It is acceptable to lock the pages that include a digital signature so that the information cannot be altered (a digital signature does not lock the document). However, during the signing and sealing process, the design professional must choose the option that allows for annotation or adding comments to the document. By doing this, it allows our plans examiners to open, review, make comments and add approval stamps to the verified document.

Folder Structure & Bookmarking Documents

An orderly submittal of drawing files will assist the permitting office in determining the folders that contain drawing files from the folders that contain support information files. Documents should be bookmarked. Bookmarking must include sheet number and page description.