



COLORADO

Department of Transportation

Office of the Chief Engineer

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MEMORANDUM

**TO: CDOT ENGINEERS AND ALL PERSONNEL WHO HANDLE CONSTRUCTION
ENGINEERING RECORDS**
FROM: JOSHUA LAIPPLY, CHIEF ENGINEER
DATE: SEPTEMBER 11, 2017
**SUBJECT: GUIDANCE REGARDING ARCHIVING OF CONSTRUCTION / ENGINEERING
RECORDS DURING THE 2018 AND 2019 CONSTRUCTION SEASONS**

Background

We have been working with the RTDs and Regions to determine how engineering/construction records should be archived. In addition, moving to the new Headquarters building has required rethinking the role of Central Files, which will become the Records Center in the new Headquarters building. Our smaller space in the new building has led to the requirement of maintaining electronic documents as the "official" record when legally practicable for key construction/engineering records. This is in keeping with FHWA's guidance to move toward electronic records. It is our long-term goal to develop a cohesive, statewide Electronic Document Management System ("EDMS") for construction engineering records applicable to engineering capital projects. Over time, this EDMS will become a virtual "Central Files" office. An EDMS must meet both state and federal legal requirements and also provide our design, construction, and engineering staff with access to accurate, legible, and GIS searchable documentation. We are currently taking steps to stabilize and increase the speed and functionality of ProjectWise. ProjectWise will not replace LIMS, Site Manager, Sales Force, SAP or other software systems currently being used as a repository for certain documents. We anticipate being in transition for some time and request your patience and willingness to work as a united, statewide team. We recognize the need for training and will make it available regarding the creation of electronic As-Constructed/As-Built Plans, ProjectWise skills, and Smart Scanning, a technique for making PDF documents available and searchable indefinitely. This superior method of scanning will allow CDOT to use the electronic document as its "Official Record."



1. Transition to Archiving Records in ProjectWise

This memo provides direction for archiving all capital engineering projects as we transition to electronic archiving. The scope includes Local Agency projects and P3 projects.

1.1. Projects awarded after January 1, 2018 and through December 31, 2018:

First, it is RECOMMENDED that project staff use the As-Constructed/As-Built Plan template found in ProjectWise under the specific Project Folder/Plans_and_Specs-PDFs/As-Built to create electronic As-Constructed/As-Built Plans in ProjectWise.

Second, it is RECOMMENDED that project staff archive those documents listed in the Record File Plans found in ProjectWise under Governing Construction Related Documents located here:

<pw:\\VHQPWZ01.dot.state.co.us:PwiseProduction\Documents\Governing Construction Related Records> This address listed above can be cut and pasted into the ProjectWise address bar to find the Record File Plan. These record file plans are intended to ensure that CDOT's most critical documents have correct retention periods assigned to them and that CDOT project staff are trained statewide on their legal retention. This includes, but is not limited to, design documents, Record Sets, As-Constructed/As-Built Plans, ROW, Survey, Materials and Geotechnical, and specialty groups. These record file plans will continue to develop and improve based on statewide feedback, which should be directed to PDAC or TAC or sent to the Records Management Team at dot_records_mgmt@state.co.us. To begin our advance towards building an EDMS, the following steps shall be taken.

A. All projects awarded after January 1st 2018 should have an As-Constructed/As-Built Plan Template located under each project code (see below) in the **Plans_and_Specs-PDFs** subfolder. Select the **6-As_Built** subfolder. Use the electronic template to update As-Constructed/As-Built Plans electronically or print the As-Constructed/As-Built Plan, update manually, Smart Scan (see below) and file back in the folder.

B. Projects will retain an electronic record of the As Constructed Plan set in ProjectWise. These will either be electronic As-Constructed/As-Built Plans or a scanned version of the As-Constructed/As-Built Plans if manually updated from a printed copy.



C. Field Project Engineers shall notify the Region Finals Engineer in writing which documents listed in the Construction/Engineering File Plan are being archived in ProjectWise for their respective projects.

D. Local Agency projects which connect to or are part of the State Highway system shall be included on a voluntary basis. It is **RECOMMENDED** that Local Agency As-Constructed/As-Built Plans and documents listed in in the Construction/Engineering File Plan be archived in ProjectWise. It is CDOT's goal that by January 1, 2019, all Local Agency projects which either connect to or are part of the State Highway system be archived in ProjectWise. Those selected to be archived in 2018 shall be communicated to the Local Agency administrators, who shall be responsible for quality control over the archiving of Local Agency projects within the respective Region. Quality control consists of checking to make sure that the documents listed in the respective record file plan are placed in ProjectWise and are legible, accurate, and located in the correct folder.

1.2. Projects awarded after January 1, 2019:

First, it is **REQUIRED** that Project Staff use the As-Constructed/As-Built Plan template found in ProjectWise under the specific Project Folder/Plans_and_Specs-PDFs/As-Built to create electronic As-Constructed/As-Built Plans in ProjectWise.

Second, it is **REQUIRED** that project staff archive those documents listed in the Record File Plans found in ProjectWise under Governing Construction Related Documents located here.

<pw:\\VHQPWZ01.dot.state.co.us:PwiseProduction\Documents\Governing Construction Related Records> This address listed above can be cut and pasted into the ProjectWise address bar to find the Record File Plan. These record file plans will continue to develop and improve based on statewide feedback, which should be directed to dot_records_mgmt@state.co.us or communicated to PDAC or the TAC.

1.3 Quality Control of Archived Documents: When archiving of project documents in ProjectWise, project staff shall notify their Region Finals Engineer. Region Finals Engineers shall be responsible for performing Quality Control (QC) checks on the files as part of the project closing process. QC checking shall be done in close coordination with the HQ Records Management Program Digital Archivist and the ProjectWise team. If project staff members have questions, they may ask the ProjectWise Local Data Administrators (LDA)



for their Region or the Records Management Team. See <http://intranet.dot.state.co.us/engineering/projectwise/local-data-administrators>

2. Summary of Important Developments Regarding Archiving and Records Retention

2.1. Retention Period Change for Certain Construction / Engineering Records:

A. Records with a Retention Period of 3.5 Years or Less

Historically at CDOT, all construction documents were retained for 7 years, even though some documents had shorter or longer retention requirements and some were required to be kept permanently. When researching the legal basis for this 7 year period, it was established that legal requirements had changed. In working with the FHWA, the Office of the Attorney General, and the DAF, it has been established that for documents that do not have a longer or permanent retention period, all construction engineering and specialty group documents shall be retained 3.5 years from the Form 950 close date. The date is noted on the Form 950 in the Record Retention Expiration Date field. Absent a litigation hold or emergency project status, 3.5 years applies to the short-term retention of capital engineering project documentation which must be retained per audit requirements.

B. Requirement to Keep Paper Records. Commencing in January 2018, construction, engineering and specialty group records which have been generated in paper that were traditionally sent to the HQ Central Files Office must be retained by the Region. Copies historically sent to HQ Central Files will no longer be sent. While the Central Files Office (the future Records Center) will continue to support Regions and HQ, its function will be oversight of paper and electronic official records statewide for retention purposes, providing guidance statewide to Records Coordinators and project staff on retention, and on meeting CDOT's legal requirements with regard to the Office of the State Archives. The Records Management Team will work with Regions and Headquarters through designated Records Coordinators to analyze records and assign retention periods to documents through the record file plans. Prior authorization for destruction of documents must be approved by both the supervisor over the records as well as the HQ Records Management Team. A Destruction Form must be completed and must be signed by the supervisor with authority over the record in addition to the HQ Records Management Team prior to destroying the documents. This form is available on the Records Management Program website, <http://intranet.dot.state.co.us/business/records-management/records-management>



2.2. Electronic Signature Use at CDOT: CDOT is in a transition phase regarding electronic signatures, while work continues with the Governor’s Office to explore one software option that will be used by all state agencies. All CDOT employees who are authorized to sign documents on behalf of CDOT may utilize Adobe Acrobat DC “Certificate-Based Signatures” to electronically sign documents. This applies to all divisions, Regions and programs of CDOT.

A. Note that electronic signatures may not be used on any document requiring a State Controller’s signature, the CDOT Controller’s signature, or on contractual documents. This includes speed memos (CDOT Form 105), change orders (CDOT Form 90), or any document that explicitly requires a hand-written signature under state or federal law.

B. The Adobe Acrobat DC signature function which only requires a picture of a conventional handwritten signature and does not include certificate-based signature authentication may be used on documents that have no binding legal, financial or administrative effect on CDOT. This signature feature has no authentication attribute and is not the preferred method of electronically signing a document. The preferred electronic signature method is the Adobe Acrobat DC “Certificate-Based Signature.” Documents signed by 3rd parties outside CDOT, where acceptable to CDOT, shall only be Certificate-Based signatures.

C. If you have questions on whether an Adobe signature may legally be used on a document, contact the CDOT Controller Liliya Gershman, the Deputy Controller Lori Copeland, or Records Management Program Manager Mary Frances Nevans.

D. CDOT is under contract with an electronic software company to confidentially and securely house CDOT professional engineer, architect and surveyor stamps and signatures for use on electronic Record Sets as well as other official documents. HQ Project Support will announce the availability of this application when testing and integration within ProjectWise has been completed.

We anticipate having this electronic stamp and seal functionality in place for use by early 2018. I ask everyone involved in this important initiative to be patient and open to new processes as we move to modernize our construction and engineering processes. We can only accomplish this if we stand together as one team. Each of you will have a part in the successes of this transition. The end goal is to provide our staff the best tools technologically available, and carefully transition our processes using them, in order to develop the best transportation system in the country.



APPENDIX A

I. Guidance on As-Constructed/As-Built Plan Templates in ProjectWise. These instructions are intended to assist you in using an As-Constructed/As-Built Plan template in ProjectWise.

A. If you have a direct connection to ProjectWise: In order to update an As-Constructed/As-Built Plan:

1. Open the As-Constructed/As-Built template file in ProjectWise located in the “**6-As_Built**” folder found under the “**Plans_and_Specs-PDFs**” folder and begin making updates. Note: Electronic As-Constructed/As-Built Plan templates will only be available for projects awarded after January 1, 2017 with a few projects before this date.
2. Save your work (File Save) when your current updates are complete.
3. Select the ProjectWise option “Check In” when prompted by ProjectWise. This will update the Master File Copy in ProjectWise and close the file in ProjectWise.
4. When all project updates to As-Constructed/As-Built Plans are complete, make sure to remove the text box which indicates that the electronic As-Constructed/As-Built Plans are only a template.

B. If you do not have access to an internet connection: To manually update an As-Constructed/As-Built Plan template remotely:

1. When a direct connection to ProjectWise is available, open the As-Constructed/As-Built template file in ProjectWise located in the “**6-As_Built**” folder found under the “**Plans_and_Specs-PDFs**” folder and use the option “**Export – Locks file.**” This option allows for re-importing file changes to the As-Constructed/As-Built master file.
2. When prompted, use “Browse” to place a copy of the As-Constructed/As-Built Plan template at a location on your desktop, laptop, or tablet.
3. Do not move or save the As-Constructed/As-Built file to any other location on your local computer other than the location selected in B above. ProjectWise refers to the original location where the file was located for updates when you select “Check In” or “Update Server Copy.”



4. Do not use the ProjectWise option “Export” “**Send to Folder.**” This creates an “unmanaged” copy of the As-Constructed/As-Built Plan. Your updates will not be monitored by ProjectWise.
5. Complete interim updates remotely.
6. After interim updates are completed, save your work (File Save).
7. Update the Master File Copy in ProjectWise when an internet direct connection is available:
 - a. Select the Master As-Constructed/As-Built file in ProjectWise and right click on the file and select “Check In” from the list; or
 - b. If the As-Constructed/As-Built Plan should remain checked out to prevent modification by others, select the option: “Update Server Copy” from the list.
 - c. If “Free” is selected when prompted by ProjectWise, the Master File Copy will **not** be updated with your changes.
 - d. Do **not** use the ProjectWise option “Export” “Send to Folder.” This creates an “unmanaged” copy of the As-Constructed/As-Built plan. If you make this error, your updates will not be monitored by ProjectWise.

II. Guidance on Digital Signatures Using Adobe Acrobat DC

A. What are Digital Signatures?

1. Digital Signatures are certificate-based signatures (sometimes called a “Digital ID”) that verify both the integrity and authenticity of the document. Certificate-based signatures are harder to forge because they are encrypted with information unique to the signer. When you create your digital ID (that you would use to digitally sign), you are actually creating a file that is stored on your computer. Adobe Acrobat DC allows you to create a digital ID that you can use to digitally sign a PDF. “Certificate-Based Signatures” comply with data protection standards which ensure that documents are not modified after signing, authenticate that the signer is in fact who is represented by the signature, requires a password to assign unique identification information to signatures, and includes an audit trail that allows tracking the use of signatures. Contact the CDOT Help Desk for tutorials on using this Adobe tool.

B. How to Load the Adobe Acrobat DC Software on Your Computer



1. Adobe Acrobat DC is currently available on all CDOT computers from the Software Installation Center. Go to the Microsoft icon on the bottom left of your computer and left click.
2. In the search window, spell "software" and the Software Center will appear. Select it.
3. Under the **Available Software** Tab, select the following software: **Adobe Acrobat DC 15.006.30033 – Unattended**. If this option is not available, the program is already loaded on your computer.
4. Click "install" at the bottom right of your computer screen.
5. If you are unsuccessful installing this program on your computer, contact the CDOT Help Desk.

C. How to Digitally Sign a PDF Using Adobe Acrobat DC

1. If you are digitally signing a PDF, the signature field will be marked with a red border and have a red arrow on the upper left corner of the field.
2. If clicking within a predefined digital signature field (as found on many forms), Adobe will ask whether you want to digitally sign. If you already have a digital ID set up in Adobe, the prompt window will automatically show your digital signature. You will need to enter your password to complete the digital signature in this field.

D. Creating a Digital ID in Adobe Acrobat DC

1. If you have never created a Digital ID in Adobe Acrobat DC before, you can do so when you try to sign in the predefined signature field.
2. Click on the signature field, and you will be asked whether you want to create a new digital ID. Follow the instructions to set up your digital ID.

