

3 Project Directory Structure

3.1 Overview

The WSDOT standard project directory structure discussed in Section 3 is intended to consolidate all of a project's electronic files in one folder structure. Survey, design, drafting, and other support files will be located in this structure on a common computer resource for access by all project team members. This consolidated directory structure will simplify archiving project data in a consistent manner and facilitate future retrieval.

Typically, the project lead designer will create the standard project folder structure when creating a new project, and place it on the common network location for access by all stakeholders. WSDOT provides a project creation utility that automates the standard folder structure creation as well as setting up many of the other standards and files in this document. This utility is available in the cae_rsc\common folder and via the startup dialogs on all internal WSDOT workstations. It is also included in the resources for all WSDOT CAE applications (again under cae_rsc\common) for external customers. WSDOT projects should always be created with this project utility.

Although a working copy of this structure may reside on a local computer hard drive (e.g., field survey crew laptops), the master files should always be stored in the standard directory structure and the final deliverables must be delivered in the standard project directory structure.

Figure 3-1 is an expanded view of the standard project structure.

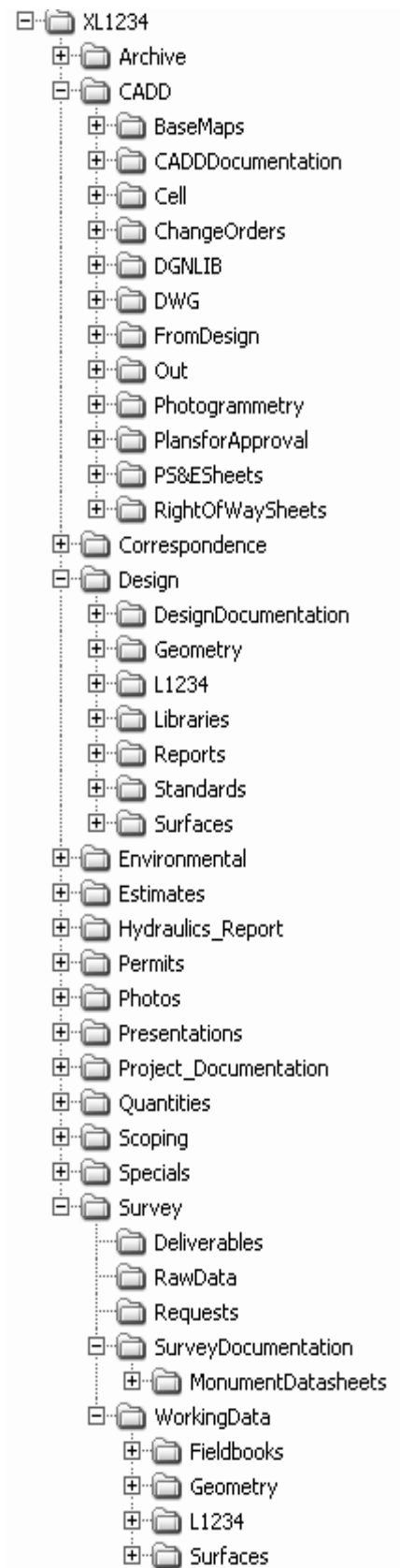
Each project is stored in a folder named for its unique WSDOT project ID (XL1234, OL4567, L2005).

In each project folder structure, there are three specific folders for WSDOT standard design applications. These folders are **CADD**, **Design**, and **Survey**. These three folders must remain intact, although subfolders may be added to them. It is recommended that no more than two additional levels be added to any folder beneath CADD, Design or Survey. The total number of nested folders anywhere in the project structure *must not exceed eight* to ensure compatibility with backup and data transfer media such as CD-R.

In addition to the three required project folders, each project structure may include additional folders that aid in organizing related project files in a consistent and logical manner. Subfolders may be utilized as needed in these folders. The WSDOT CAE standard project created by the Create Project Utility includes the following additional folders: **Archive**, **Correspondence**, **Project_Documentation**, **Environmental**, **Estimates**, **Hydraulics_Report**, **Permits**, **Photos**, **Presentations**, **Project Documentation**, **Quantities**, **Scoping**, and **Specials**. These are suggested folders and they may be deleted or added to as needed.

3.2 Required WSDOT CAE Standard Project Folders

The following sections include a more detailed description of requirements for the required WSDOT standard project folders **CADD**, **Design**, and **Survey**.



Standard Folder Structure
Figure 3-1

3.2.1 CADD

The CADD directory is the primary location for drafting files. This directory consists of the following required subfolders:

BasePlans – For all base plan files.

CADDDocumentation – For all drafting-related documentation including file indexes, journals, and filter and user level usage.

Cell – Location for project-specific cell libraries.

ChangeOrders – Change order DGN files are stored in this folder.

DGNLIB – Location for the project-specific DGNLIB file.

DWG – Location for DWG and other AutoCAD files.

FromDesign – Files from InRoads or CAiCE designers for access by drafters. This folder should only be used as a posting point for transmitting/receiving files from design to drafting.

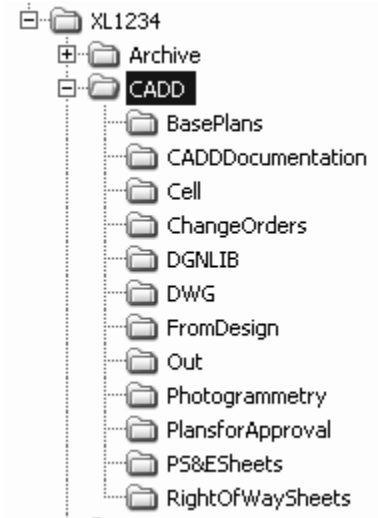
Out – Specified in the WSDOT configuration as the output location for files by certain drafting operations such as exports and translations.

Photogrammetry – Location for storing original or backup versions of photogrammetry files. This folder might include the 3D contour files supplied by Photogrammetry, and other intermediate files created as part of the process of incorporating the photogrammetry data into the project base plans.

PlansForApproval – For completed plans awaiting approval such as channelization plans, supporting drawings for permits and so on.

PS&ESheets – Sheet files for Plans, Specifications, and Estimates (PS&E). Sheet files in this location will be stand-alone or will reference base plan data from the BasePlans folder.

RightOfWaySheets – Sheet files for Right of Way. Sheet files in this location will be stand-alone or will reference base plan data from the BasePlans folder.



Standard CADD Folder Structure
Figure 3-2

3.2.2 Design

All InRoads and CAiCE design-related project files will be stored in the Design folder structure.

3.2.2.1 InRoads Design Projects

The InRoads project structure consists of:

Project Files (*.rwk) generated will be located at the same level as the parent project folder.

DesignDocumentation – For all design application-related project documentation including journals, element indexes, Design-generated project datum reports, etc.

FromSurvey – Files pulled temporarily by the designer from the Survey folder for review/analysis. This is a working location for designers and not a survey deliverable location.

Geometry – All design Geometry Project (*.alg) files will be stored in this folder.

L1234 – CAiCE Data folder - See Section 3.2.2.2

Libraries – All project-specific roadway template libraries will be stored in this folder including Typical Sections (*.tml), Template Libraries (*.itl), and Roadway Definitions (*.rwl, *.ird).

Reports – All design-generated output reports including XML reports, BIN reports, and any ASCII-formatted reports (*.txt, *.rpt, and others) will be stored in this folder.

Standards – All applicable current WSDOT standard references (found in C:\CAE_rsc\InRoads\INIFiles) will be copied to the Standards folder and prepended with the project name. This will create project-specific preferences (p1234_civ_wsdot.ini), styles (p1234_geo_wsdot.ini), survey feature tables (p1234_survey_wsdot.fwf), survey preferences (p1234_survey_pref_wsdot.fxp), and the WSDOT standards file (p1234_wsdot_standards.xin – version 8.7 and later), which will be stored in this folder and used in the project's design.

Surfaces – All design-generated surface (*.dtm) files will be stored in this folder.

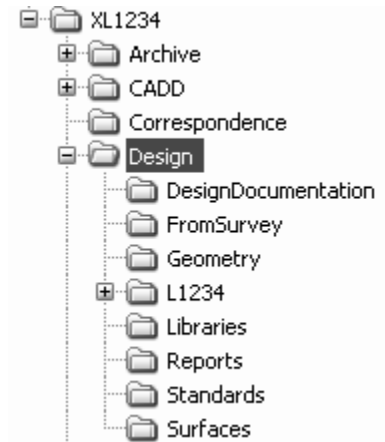


Figure 3-3: Standard InRoads Folder Structure

3.2.2.2 CAiCE Design Projects

All CAiCE projects will be created by the WSDOT Create Project Utility or through CAiCE's Project Manager. The CAiCE project should be created in the **Design** subfolder and or the **Survey** project folder (see Figure 3-4). There are two possible locations since both the surveyor and designer may need a dedicated CAiCE project.

The **Design** and **Survey** folders may contain multiple CAiCE projects. All CAiCE projects will be located at the same folder level. No two projects will have the same name.

If possible, the CAiCE project should be given the same name as the master project directory, but in all cases must be 5 characters or less and start with an alpha character. These requirements will sometimes necessitate the dropping of the leading "O" or "X" on some project names as shown in Figure 3-4.

Designers and surveyors should make a copy of the entire CAiCE project folder on the hard drive if working on the project locally rather than directly from the server. After the completion of any local work, the modified CAiCE project folder will be copied back to the network location in its entirety overwriting the previous file set.

Folders that are used in conjunction with a CAiCE project include:

DesignDocumentation – All the required documentation for the CAiCE project. Project journal, Project database documentation, and DTM history files will all be stored in this folder, as well as any other documentation pertinent to the project.

projname – This is the main CAiCE project folder as created by CAiCE's Project Manager. The majority of files in this folder will be files that CAiCE creates on its own for its internal use. This includes the main file set initialized when a CAiCE project is created. The original files created by CAiCE have the same name as the project with varying extensions and should not be modified or moved by the user. Files related to DTMs have the same name as the DTM with varying extensions and, again, should not be modified or moved by the user.

Many of the files created when using CAiCE can be organized into subfolders beneath the main project folder to make them easier to find and access. In general when a Save As option is displayed when creating a CAiCE file, the file should be saved to the appropriate subfolder, not the main project directory. Subfolders to the main project folder are described below and shown in Figure 3-5.

Projname\C01, C02, S01, S02... These are the segment folders as generated by the original location survey of photogrammetry. These folders are the individual segment folders generated by CAiCE as data is imported into the projects through Segments. Segments containing survey data should retain the names and data as generated by survey. Each segment must have an entry in the CAiCE project data documenting the segment data's source, traverse notes, backup data locations and datum

Use the following naming scheme when creating your segments. Names must be limited to 3 characters:

C01, C02, C03...	Control traverse segments
DM1, DM2, DM3	CEAL application DMM segments
P01, P02, P03...	Photogrammetry segments
S01, S02, S03...	Survey segments
T01, T02, T03...	Topography segments
TR1, TR2, TR3...	Survey control TR averse segments
All other prefixes	Available for other surveys

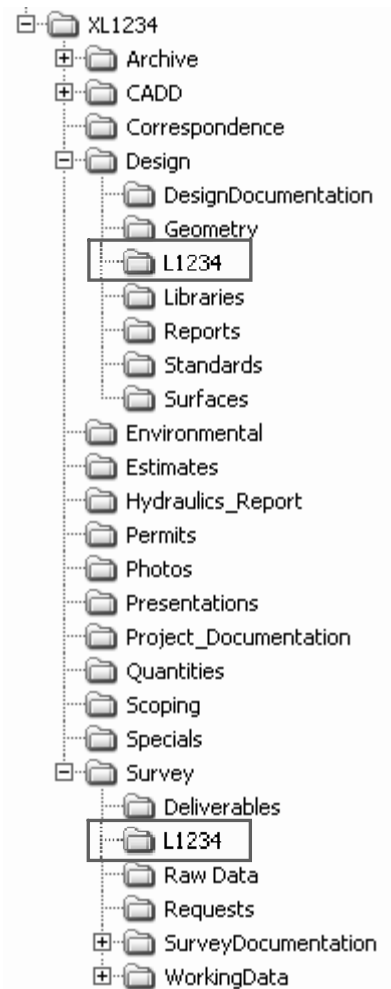
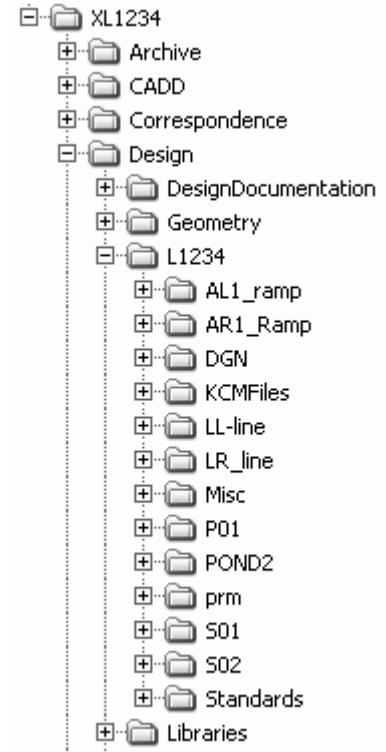


Figure 3-4: Standard CAiCE Folder Structure

Projname\LL_line, LR_line, POND2... These are the Alignment, Pond, and Bridge subfolders which contain individual portions of the design. Features that may require separate folders are main line, alignments both minor or sideline, ponds, and bridges. The idea is that the files that relate to specific features being designed are organized for easy retrieval. Typical files placed in these folders are:

CDG	CAiCE Drawing Graphics Files
CLP	DTM Clip Polygon Files
EAR	Base Cross Section and Design Cross Section Files
ERP	Endarea Report Files
ER2	Advanced Endareas/Volumes Exception Station Data Report
LIS	List Files
LOG	Log Files
PF\$	Terrain Profiles
RPT	Report Files
SRV	Survey files created when converting endareas to surfaces
STK	Staking report files created when converting endareas to surfaces
TBL	Alignment Specific Tables (e.g., Earthwork Classification Table)
VRB	Design VRS Backup Files
VRD	Design Template Files
VRS	Design Files
X#%	Edit Area Attributes Manual Material Envelope Definition
XCP	Advanced End Areas/Volumes Exception Station Details
XLS	Excel Spreadsheet Files



Standard CAiCE Project Subfolders
Figure 3-5

Projname\DGN – MicroStation files created specifically for use with CAiCE. These may be background image files (such as historical files, quad maps, and so on), snapshots of PS&E files, or specially created MicroStation files for use in import/export operations. Note that active MicroStation files being created in support of the PS&E package are to be stored in their correct locations per the CADD data organization standards in Section 3.2.1.

Projname\KCMFiles – Backup and transfer KCM files.

Projname\MISC—Miscellaneous subfolder – Designer-created files that do not specifically relate to a single horizontal alignment. Files typically placed in this folder are shown below. Also this folder could include files that would typically be in the Alignment folders but are common to multiple alignments:

CDG	CAiCE Drawing Graphics Files
DGN	Trim Mapping Background Image Files
DOC	Word Documents
INI	Parameter Files
FTB	Project-Specific Feature Table

LIS	List Files
LOG	Log Files
RPT	Report Files
RTF	Rich Text Format Documents
TBL	Tables (e.g., Non-Alignment-Specific Earthwork Classification Table)
TPR	Report Files
TXT	Text Files
XLS	Excel Spreadsheet Files

Project\PRM – Parameter files used within a CAiCE project. The original set of parameter files are created in this location automatically and this folder is the default location to save new parameter files. If certain parameter files pertain to specific alignments or other specific features of the design, make sure each file name reflects its usage. This folder will contain all the parameter files for all alignments.

Project\STANDARDS – Project-specific resource files such as a feature table, super calculation tables, or special fragments.

3.2.3 Survey

All survey files will be stored in the following Survey structure (see Figure 3-6).

Deliverables – Complete-to-date survey dataset(s) formatted for use in design.

RawData – All raw field survey data (*.crd, *.rw5, *.sdr) files will be stored here.

Requests – A copy of the survey request form will be stored and maintained in the project's Survey\Requests folder.

SurveyDocumentation – For all survey application-related project documentation including Survey-generated project datum reports, reports from processing of raw data, traverse analysis and adjustment reports, etc.

SurveyDocumentation\Monumentation – All project monumentation datasheets will be stored here.

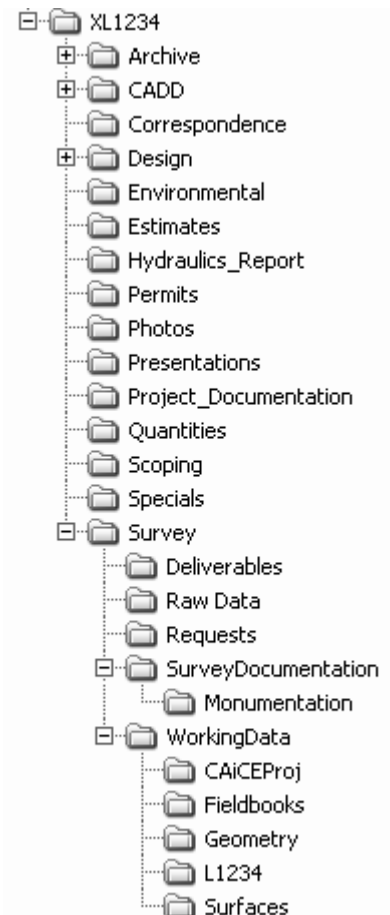
WorkingData – This folder contains all the surveyor's working data and is accessed by the surveyor only.

WorkingData\Fieldbooks – All survey fieldbook (*.fwd) files will be stored in this folder.

WorkingData\Geometry – All survey Geometry Project (*.alg) files will be stored in this folder.

WorkingData\[L1234] – Survey-specific CAiCE project.

WorkingData\Surfaces – All survey-generated surface (*.dtm) files will be stored here.



Standard Survey Subfolders
Figure 3-6