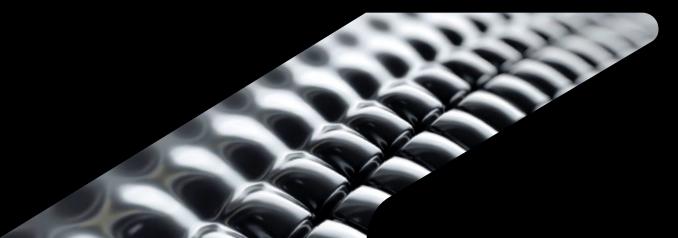# Autodesk BIM Collaborate Pro for Civil 3D

CES502774

Sean Hulbert, PE
Principal Implementation Consultant |
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LOCATION

Portland, Oregon

CONTACT DETAILS

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in Sean's Profile

Sean Hulbert, PE

Principal Implementation Consultant

#CivilEngineering #Civil3D #InfraWorks

- Civil engineer with 30 years of industry experience
- Combines IT and software expertise with a background in CAD and BIM training
- Current focus includes the rollout of BIM Collaborate Pro for Civil 3D

INDUSTRY FOCUS

AEC, Civil Engineering

EXPERTISE

Civil 3D, InfraWorks, BIM 360, Hydrology and Hydraulic Analysis tools

Sean is a registered Professional Engineer in Oregon and holds an Associate's Degree from South Florida Community College. He is an Autodesk University Certified Professional in BIM for Transportation.

> My passion remains working with our end users, rolling my sleeves up and getting my hands dirty on real projects, and embracing their successes—as well as their deltas.

BIM Collaborate Pro for Civil 3D

- Set up your team for success using Autodesk BIM Collaborate Pro for Civil 3D.

- Learn about system requirements and setting expectations with our team.

- Prepare a Civil 3D project for migration to the cloud.

- Learn about managing drawings and dependencies in the Cloud.

AUTODESK BIM Collaborate Pro
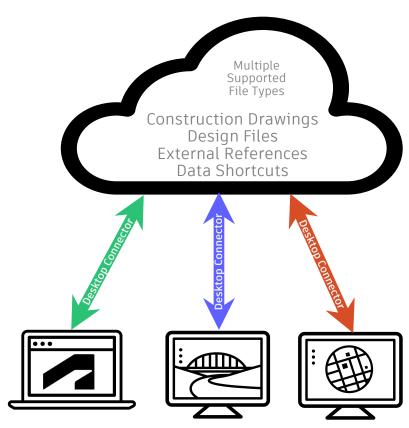
AUTODESK Civil 3D

BIM Collaborate Pro for Civil 3D

Setting up for Success

Success Journey

1 What is BIM Collaborate Pro

2 Starting New / Migrating a Project

3 Planning your Trust Environment

4 Change Management

What is BIM Collaborate Pro for Civil 3D

Common Data Environment

- Functionality inside BIM 360 Design / Autodesk Construction Cloud that allows project teams to collaborate securely on Civil 3D projects.

- Store drawing and design files, data shortcuts, and external references in a common data repository.
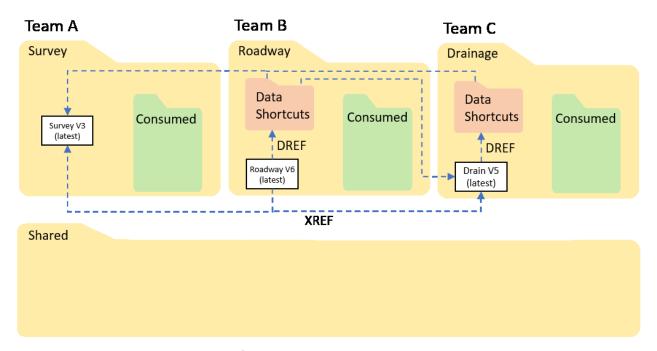
- Automated file locking of Civil 3D drawings.

Multiple Supported File Types

Construction Drawings
Design Files
External References
Data Shortcuts

Desktop Connector

Desktop Connector

Desktop Connector

What is BIM Collaborate Pro for Civil 3D

Starting a New Project or Migrating an Existing Project

Existing Civil 3D Project | Project | Sharing Environment Project Setup | ng Environ roject Setu | Project Migration | Begin D | Resume Design

What is BIM Collaborate Pro for Civil 3D

Planning your Trust Environment

What is BIM Collaborate Pro for Civil 3D

- **Train the Trainer**
  - Developing Internal Subject Matter Experts
  - Best Practices Documentation

- **End User Training**
  - BIM Collaborate Pro

- **Project Setup, Implementation and Adoption**
  - Project support at kick-off

- **Office Hours**
  - Scheduled Question and Answer Sessions

- **Expand Outreach**
  - Reach out to other internal groups

Prosci
PEOPLE. CHANGE. RESULTS.

A	Awareness of the need for change
D	Desire to support the change
K	Knowledge of how to change
A	Ability to demonstrate skills & behavior
R	Reinforcement to make the change stick

BIM Collaborate Pro for Civil 3D

System Requirements and Establishing Expectations
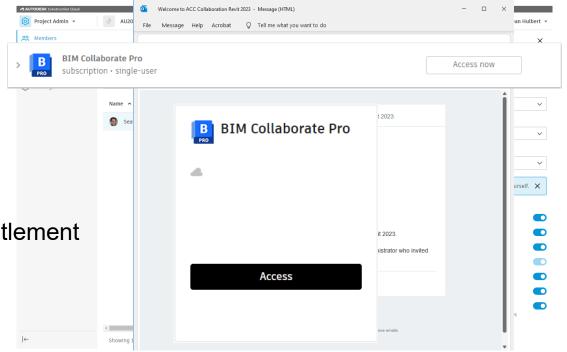
System Requirement

And Establishing Expectations

1 BIM 360 / ACC Project and Invitation

2 BIM Collaborate Pro Entitlement

3 Civil 3D / AutoCAD / Desktop Connector

4 Hardware Recommendations

5 Desktop Connector

System Requirements

Autodesk Construction Cloud / BIM 360 Collaborate Pro Entitlement

1   BIM 360 / ACC Project

2   Project Invitation

3   BIM Collaborate Pro Entitlement

System Requirements

Versions for AutoCAD and Civil 3D

AUTODESK AutoCAD

Recommended

- AutoCAD 2023.1
  - Supports Sheet Set Manager in the Cloud
- AutoCAD 2022.1.2
  - Optimized for performance

Minimum Requirements

- AutoCAD 2021
- AutoCAD 2020

AUTODESK Civil 3D

Recommended

- Civil 3D 2023.1
  - Supports Sheet Set Manager in the Cloud
- Civil 3D 2022.1.3
  - Optimized for performance

Minimum Requirements

- Civil 3D 2021
- Civil 3D 2020

AUTODESK Desktop Connector

Recommended

- 15.7.1.1780

Minimum Requirements

- 15.5.0.1684 (for 2023 Products)

System Requirements
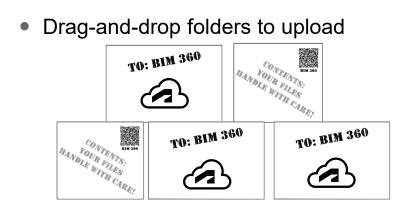
Hardware Recommendations
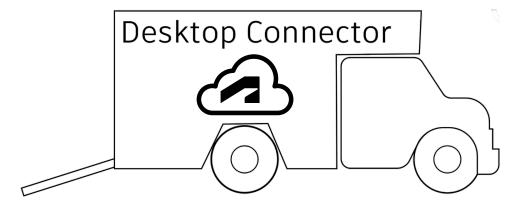
	Basic Recommendation	Recommendation
CPU	3GHz Intel Xeon	4GHz Intel i9
OS	Windows 10	Windows 10
RAM	16GB	32GB+
Graphics card	NVIDIA Quadro 1000 AMD Radeon Pro	NVIDIA Quadro 2000 AMD RX or better with 4GB VRAM+
Free disk space	6gb on SSD* (50gb+ on drive storing BIM 360 / ACC Cache)	10gb+ on SSD (50gb+ on drive storing BIM 360 / ACC Cache)

AUTODESK Desktop Connector

System Requirements – Desktop Connector

Basics to Understanding Desktop Connector

- Desktop Connector is the Autodesk application that relays information between Windows and the Cloud.

- Must be running for BIM 360 / ACC functionality in Civil 3D

- Needed for Windows uploads

- Drag-and-drop folders to upload

System Requirements – Desktop Connector

File Explorer File Icon Statuses

Icon	Label	Description
🔄	New	The local file has not been uploaded.
✅	Synced	The local file is up-to-date with the file in the data source.
☁️	Online	The file has not been downloaded locally (the file will be downloaded on demand).
🔄	Modified	The existing file has been modified locally and the modification has not uploaded.
❗	Conflict	Edits have been made to the file both locally and in the data source. Next time the file is read, the local file will be sent to recycle bin.
⛔	Stale	The local file is an older version than what is in the cloud (the file will be downloaded on demand).
❓	Error	There was an error obtaining the local file Status value.
⚠️	Non-conforming	The file name doesn't conform to the naming standard (BIM 360 and Autodesk Docs).
🔒	Locked	The file is currently locked by a user (BIM 360 and Autodesk Docs).

AUTODESK Desktop Connector

System Requirements – Desktop Connector

System Tray Symbols

Desktop Connector Symbol	Description	Action Needed
	Desktop Connector is online, or you are not signed in yet	None! You are ready to upload files or run your BIM 360 enabled software.
	Desktop Connector is starting up.	Wait a moment while your login is verified.
	Desktop Connector is in <u>offline mode</u>.	Uncheck 'Work Offline'
	Desktop Connector experienced an error while processing. Check for failed <u>pending actions</u> for more information. or Desktop Connector requires an <u>update</u>. You must update to the latest version of Desktop Connector to continue using your connected drives.	Check the Pending Actions queue inside desktop connector for details. In most cases, you can continue working in Civil 3D.
	Desktop Connector is processing.	Wait while Desktop Connector works on your request. In most cases, you can continue working in Civil 3D.

System Requirements – Desktop Connector

Desktop Connector Content Refresh Rates

There is a delay before changes made in the BIM 360 web interface are reflected in the Desktop Connector content on your desktop. The minimum delay is 1 minute.

The maximum delay varies for different changes:
- Accounts: 12 minutes
- Projects: 3 minutes
- Folders and documents: 3 minutes
- User permissions: 35 minutes

Note: The Desktop Connector view needs to be refreshed for changes to be displayed. The view is automatically refreshed every 10 minutes.

Source: http://help.autodesk.com/view/BIM360D/ENU/?guid=GUID-B03E9A4F-8DC4-46C2-AA75-79B46AEF8C4A

BIM Collaborate Pro for Civil 3D

Prepare a Project for Migration to the Cloud

Project Migration to the Cloud

1 Drawing Hygiene

2 Autodesk DWG Migration for Docs

3 Migrating to BIM 360 / ACC

Project Migration to the Cloud

Drawing Hygiene

- <u>PURGE</u>   Removes unused items, such as block definitions and layers, from the drawing.

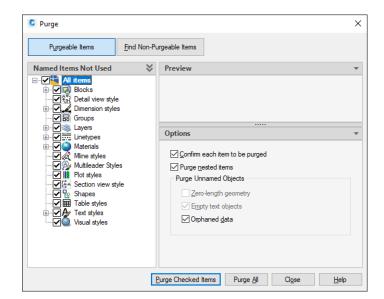- <u>AUDIT</u>   Evaluates the integrity of a drawing and corrects some errors.
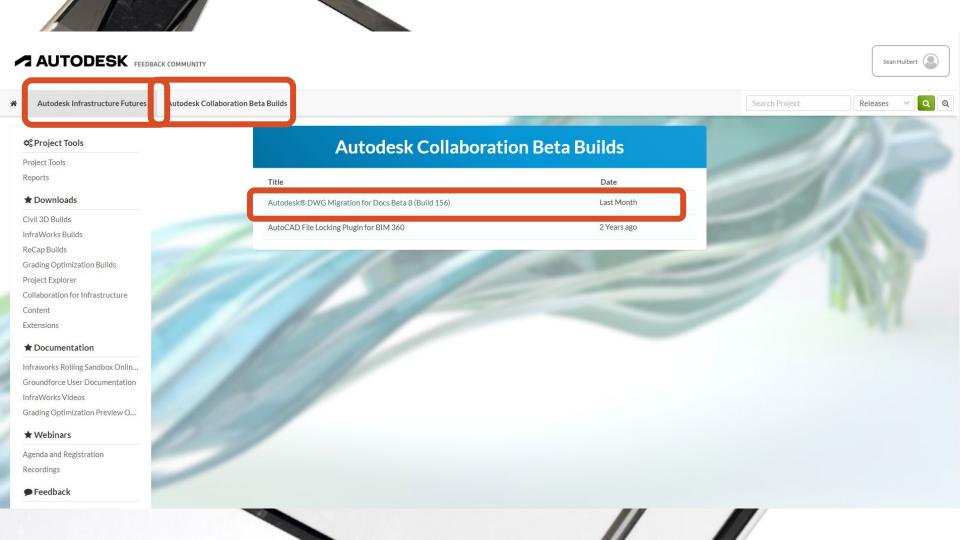
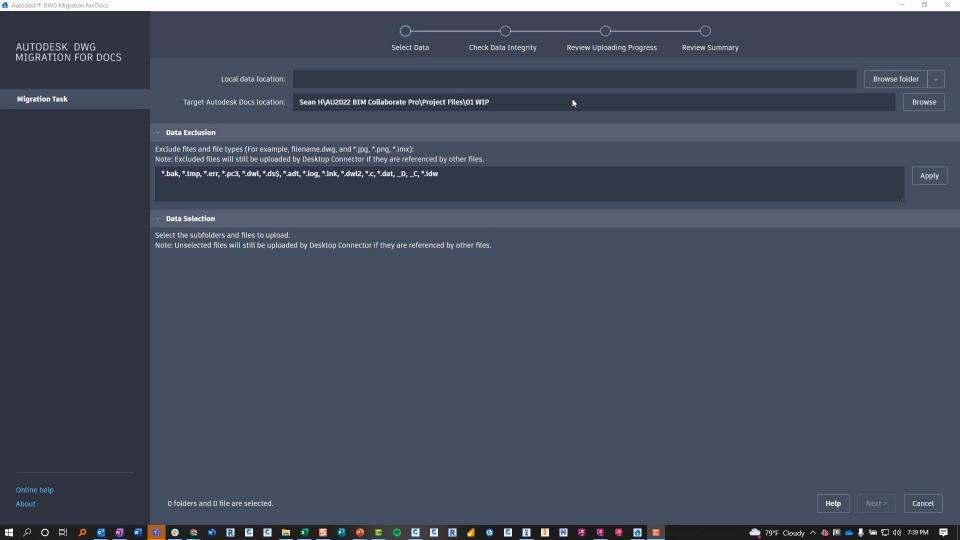- <u>-PURGE</u>   Removes unused named objects, such as block definitions and layers, from the current drawing using the command line.

Sean Hulbert

Search Project | Releases

Project Tools

Project Tools

Reports

⭐ Downloads

Civil 3D Builds

InfraWorks Builds

ReCap Builds

Grading Optimization Builds

Project Explorer

Collaboration for Infrastructure

Content

Extensions

⭐ Documentation

Infraworks Rolling Sandbox Onlin...

Groundforce User Documentation

InfraWorks Videos

Grading Optimization Preview O...

⭐ Webinars

Agenda and Registration

Recordings

💬 Feedback

Autodesk Collaboration Beta Builds

Title	Date
Autodesk® DWG Migration for Docs Beta 8 (Build 156)	Last Month
AutoCAD File Locking Plugin for BIM 360	2 Years ago

Select Data   Check Data Integrity   Review Uploading Progress   Review Summary

Migration Task

Local data location:

Browse folder

Target Autodesk Docs location: Sean H\AU2022 BIM Collaborate Pro\Project Files\01 WIP

Browse

Data Exclusion

Exclude files and file types (For example, filename.dwg, and *.jpg, *.png, *.imx):
Note: Excluded files will still be uploaded by Desktop Connector if they are referenced by other files.

*.bak, *.tmp, *.err, *.pc3, *.dwl, *.ds$, *.adt, *.log, *.lnk, *.dwl2, *.c, *.dat, _D, _C, *.idw

Apply

Data Selection

Select the subfolders and files to upload.
Note: Unselected files will still be uploaded by Desktop Connector if they are referenced by other files.

0 folders and 0 file are selected.

Online help

About

Help   Next >   Cancel

BIM Collaborate Pro for Civil 3D

Data Management

Project and Data Management

1 AutoCAD Commands and Settings

2 Reference Explorer

3 Working with drawings in the Cloud

Project and Data Management

AutoCAD Commands and Settings
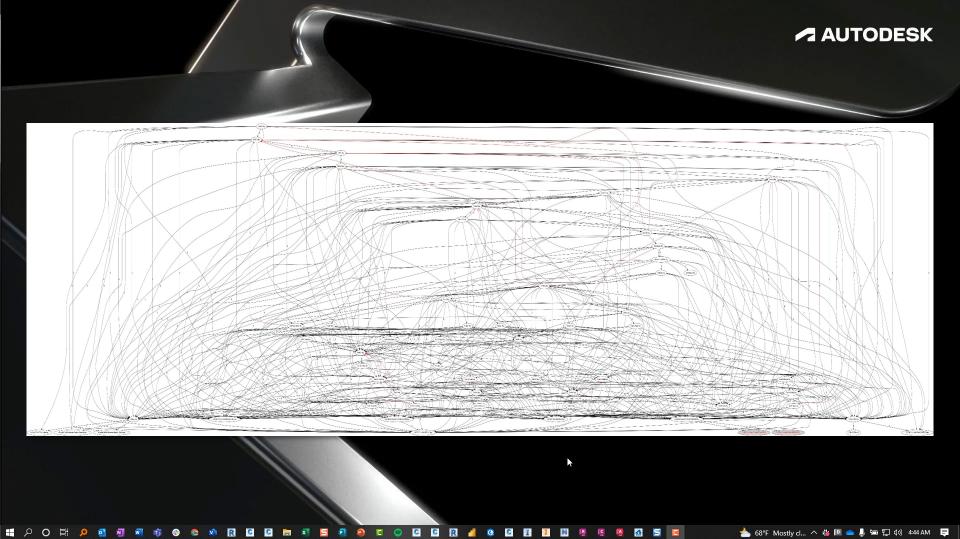
AutoCAD Commands

- Unlock Cloud Drawing
    - <u>AECCUNLOCKCURRENT DRAWING</u>

- Drawing statistics
    - <u>STATUS</u>

- Determine if the drawing can be extracted in BIM 360 / ACC
    - <u>DWGEXTRACTORSCRIPTED</u>

AutoCAD Setting

- Use more processor power
    - <u>WHIPTHREAD</u> =1

- Turn off Tooltips
    - <u>TOOLTIPS</u>=0
    - <u>ROLLOVERTIPS</u> =0

- Let arcs looks "chunky"
    - <u>VIEWRES</u> = 10

- Turn off smooth view transitions
    - <u>VTENABLE</u>=0

- Let 3D curves look "chunky"

- <u>FACETRES</u>=4

- Demand load XREFs enabled with copy
    - <u>XLOADCTL</u> = 2
    - <u>INDEXCTL</u> = 3

- Cache layout and Model tabs
    - <u>LAYOUTREGENCTL</u>=2

- Turn off other visual effects
    - <u>SELECTIONPREVIEW</u>=0 (or 2)

Demonstration

Working with drawings in the Cloud

BIM Collaborate Pro for Civil 3D

Conclusion, Reference Material, and Q & A

BIM Collaborate Pro for Civil 3D

- We discussed setting up your team for success using Autodesk BIM Collaborate Pro for Civil 3D.

- Learned about system requirements and setting expectations with our team.

- Prepared a Civil 3D project and dependencies for migration to the cloud.

- Learn about managing drawings and dependencies in the Cloud.

AUTODESK BIM Collaborate Pro

AUTODESK Civil 3D

Public Roadmap

- Opportunity for customers and partners to help set priorities

- Augments Autodesk Ideas and direct customer feedback

- Spans all areas of Infrastructure products / segments

https://trello.com/b/tafIRGcN/autodesk-civil-infrastructure-product-roadmap
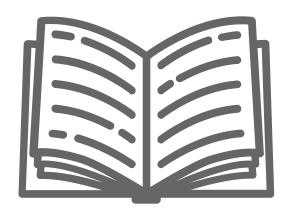
Reference Material

- [Autodesk Customer Success Hub](#)

- [Migrating an Existing Project to Autodesk Docs for Collaboration for Civil 3D](#)

- [Autodesk Collaboration for Civil 3D](#)

- [Best Practices for Working With Autodesk Collaboration for Civil 3D](#)

- [Autodesk_Civil_3D_Drawing_Maintenance](#)

- [Model Linking in BIM Collaborate Pro for Civil 3D](#)

Questions & Answers