PRODUCTIVITY STUDY HIGHLIGHTS

Benefits of Using Civil 3D vs. AutoCAD
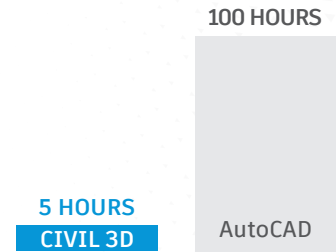
Autodesk Civil 3D brings dramatic time savings to civil engineers across a broad range of civil infrastructure project workflows.

STUDY SUMMARY

Autodesk commissioned a study that explored the productivity differentiations between AutoCAD® and Civil 3D® when performing civil engineering workflows including surface creation, alignment and profile design, grading, and schedule production.

Results showed that Civil 3D could allow a user to complete tasks up to **20 times faster** compared with AutoCAD, when these tasks were performed by an experienced Civil 3D user.

95% Overall Productivity Gain*

100 HOURS

5 HOURS
CIVIL 3D   AutoCAD

HOW CIVIL 3D HELPS SAVE TIME:

1. Survey, surface creation, and surface analysis
(Time savings with Civil 3D up to 96%)
Importing survey data and surface creation can be conducted faster and with greater accuracy using Civil 3D.

2. Parcel design
(Time savings with Civil 3D up to 74%)
Creating 2D parcel layouts is more accurately conducted in Civil 3D. When revisions are made, area and bearing calculations are dynamically updated. This results in time savings and reduced user effort.

3. Alignments & profiles
(Time savings with the Civil 3D up to 98%)
The dynamic relationships between horizontal and vertical design elements in Civil 3D facilitates keeping the project in sync during design creation and revisions, saving time and effort.

4. Piping & drainage design
(Time savings with Civil 3D up to 91%)
In Civil 3D, 3D pipe designs can be displayed in horizontal vertical and cross-sectional views, helping save time and minimizing errors and rework.

5. Grading design
(Time savings with Civil 3D up to 85%)
Civil 3D creates and maintains a complex surface based on slope, distance, and elevations, reducing the need for complex, time-consuming, and error-prone transitions throughout the course of a grading design workflow.

6. Corridor modeling
(Time savings with Civil 3D up to 97%)
The dynamic, intelligent road design models in Civil 3D are updated with the variable existing conditions of a project, helping reduce manual effort and improving accuracy in road designs.

7. Drawing production
(Time savings with Civil 3D up to 96%)
Civil 3D maintains project sheet output, updating labels throughout as changes are made to the project, saving an overwhelming amount of time and effort through the revision process.

8. Quantity takeoff
(Time savings with Civil 3D up to 11%)
As revisions are made to a project, volumes and item counts are dynamically calculated in Civil 3D, minimizing errors and omissions.

9. Schedules production
(Time savings with Civil 3D up to 72%)
Civil 3D tracks object data and keeps schedule tables up to date with complex construction information, helping to enhance project efficiencies and coordination.

10. Design review & coordination
(Time savings with Civil 3D up to 97%)
Project information in Civil 3D is more easily updated and shared with multiple designers and in multiple design and sheet files. Time is saved, errors avoided, and project coordination improved while changes are communicated with the design team.

These productivity gains highlight how Civil 3D provides the tools that enable more efficient civil infrastructure design and documentation workflows.