



Connecticut DOT

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Office of Engineering

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ENGINEERING DIRECTIVE

Engineering Administrator

CONNECT Digital Design Environment (CAD Standards) for Capital Projects

This directive establishes the requirements to use Bentley's CONNECT Suite of products with CTDOT's CONNECT Digital Design Environment (CAD Standards) to prepare CAD models and contract plans for capital projects starting July 1st in accordance with the following:

- All new projects starting after August 1, 2020.
- Projects that have not reached design approval by August 1, 2020 should be moved to CONNECT, but at the discretion of the Project Manager (PM). AEC Applications is available to support the conversion of a project from V8i to CONNECT.
- Projects that have reached design approval by August 1, 2020 should remain in V8i, but can be moved at the discretion of the PM. AEC Applications is available to support the conversion of a project from V8i to CONNECT.

Training for the CONNECT suite of products will continue and be available to in-house designers as required.

AEC Applications will also continue to provide support for the existing V8i design environment.

Background

CTDOT is currently migrating its CAD software from Bentley Systems V8i Select Series platform to the CONNECT Edition platform due to Bentley Systems discontinuing support for its V8i products as of December 31st, 2020. This means that although V8i versions will still function in its current configuration, Bentley will not continue to certify it on future versions of the Windows Operating System.

In addition, CTDOT sees the advantage and the need to move into a 3D model-centric environment. This will allow CTDOT to increase productivity, reduce design errors, and adhere to industry trends of AMG (Automated Machine Guidance), eConstruction, GPS Inspection, and Asset Management.

As the transportation industry worldwide adapts to new technology, Transportation Agencies must ascertain their readiness to adapt to these industry trends. FHWA has elevated 3D modeling through its Every Day Counts initiative and has encouraged Transportation Agencies to adopt policy for delivering a digital product in lieu of a set of plans (paper, Mylar or PDF).

When a project is designed using current civil design software (InRoads SS2), it is created within a 3D model. Then,, as the design progresses, projects are often flattened to convey design intent in a 2D medium such as a PDF or paper plan set. During this conversion, data is lost and cannot be reused and precision is reduced.

With the CONNECT Edition products, designers are able to produce a product that retains the civil data and design intent through construction. This data, also known as Electronic Engineering Data (EED), can be consumed further in construction and then further downstream in Asset Management and Maintenance. However, for now, CTDOT recognizes that the contract document shall remain as PDF set of plans.

Reference Material

The following web page contains a link to the ***CTDOT DDE Guide – Bentley CONNECT Edition***, which provides documentation to be followed by both in-house and consultant designers. Also on this webpage is a link to download the CONNECT Digital Design Environment.

<https://portal.ct.gov/DOT/Engineering-Applications/CTDOT---CONNECT-DDE>

This web page also has a link to Frequently Asked Questions:

<https://portal.ct.gov/DOT/Engineering-Applications/CTDOT---CONNECT-DDE-FAQs>

New Requirement

CONNECT Project Request – All projects that use the CONNECT Suite of products require the creation of a CONNECT Project on Bentley’s CONNECT Center. The project manager shall request a CONNECT project by emailing a request to DOT.AECApplications@ct.gov.

Workset (Project Container) - CTDOT Employees Only

All projects that use the CONNECT Suite of products will work within their respective discipline folders under the project folder in COMPASS.

For questions, please contact Mathew Calkins @ 860-594-2988 or at Mathew.calkins@ct.gov