LaDOTD Software and Deliverable Standards for Electronic Plans

Revised May 2018

Function	LaDOTD Software Standards	Consultant Software Standards	Deliverables	Comments
CAD Drafting	Bentley MicroStation V8i V8.11.07.443 (SS2) or V8.11.09.832 (SS4) (AutoCAD where specifically authorized)	Bentley MicroStation V8i V8.11.07.443 (SS2) or V8.11.09.832 (SS4) or AutoCAD (See first comment)	MicroStation DGN	● MicroStation (one license) is required to translate all AutoCAD drawings to MicroStation format. ● At DOTD's discretion (when specified in the contract), MicroStation may be required for the entire plan production process and translations from AutoCAD format will not be allowed. ● Consultants must upload MicroStation plan submittals directly into the ProjectWise discipline "Plans" folder.
CAD Standards Management	Altiva CADconform V8.00.70 (MicroStation) Altiva CADconform V8.00.20 or higher (AutoCAD)	Altiva CADconform V8.00.70 (MicroStation) Altiva CADconform V8.00.20 or higher (AutoCAD)	MicroStation DGN (with valid CADconform certification stamp)	● If AutoCAD is used to produce the drawings, use MicroStation with the appropriate translation tables to produce deliverable DGN files. Then certify the DGN files as DOTD CAD Standard Compliant (indicated by valid compliance stamp) using CADconform running on MicroStation.
CAD Standards Quality Authentication	Altiva DMSconform "Check CAD Standards" (Administered by LaDOTD in ProjectWise)	Altiva DMSconform "Check CAD Standards" (Administered by LaDOTD in ProjectWise)	Approved ControlCAD Microsoft Excel report	● DOTD reviewers use the DMSconform "Check CAD Standards" function to check for valid CADconform certification stamps and for several other compliance factors. ● Status reports must reflect 100% compliance by 60% Final Plans (or sooner if specified by the Project Manager). Substandard deliverables must be approved and documented (as to reason) by the Project Manager.
CAD Attributes Quality Authentication	Altiva DMSconform "Check Attributes" (Administered by LaDOTD in ProjectWise)	Altiva DMSconform "Check Attributes" (Administered by LaDOTD in ProjectWise)	Approved ControlCAD Microsoft Excel report	● DOTD reviewers use the DMSconform "Check Attributes" function to check for completed indexing attribute values. ● Status reports must reflect 100% compliance by 60% Final Plans (or sooner if specified by the Project Manager). Substandard deliverables must be approved and documented (as to reason) by the Project Manager.
CAD Plotting	Bentley ProjectWise InterPlot Organizer V8i V8.11.11.XX (SS4)	Bentley ProjectWise InterPlot Organizer V8i V8.11.11.XX (SS4)	Paper format drawings (InterPlot can also be used to create PDFs)	● <u>Full Size Submittals</u>: Full size submittal sheets shall have an outside edge measuring 22" X 34". Provide a 0.50" margin on the top, bottom and right hand side of the sheet and a 2" margin on the left hand side of the sheet. ● <u>Half Size Submittals</u>: Half size submittal sheets shall have an outside edge measuring 11" X 17". Drawings shall be an exact 50% reduction of the full size scale drawing. Provide a 0.25" margin on the top, bottom and right hand side of the sheet and a 1" margin on the left hand side of the sheet. ● <u>Letter Size Submittals</u>: Letter size submittal sheets shall have an outside edge measuring 8.5" X 11".
Electronic Plans Publishing	Bentley Publish to PDF (Integrated with ProjectWise)	Bentley Publish to PDF (Integrated with ProjectWise)	PDF drawings in ProjectWise	● PDF format drawings are the formal electronic deliverable. ● Consultants must import (managed refresh) MicroStation format drawings into the appropriate ProjectWise discipline "Plans" folder (for each plan delivery milestone) in order to be able to publish PDF plan submittals. ● A .MSI setup file is needed to use the Publish to PDF tool. ProjectWise External PDF Publishing Downloads For Consultants
Road Design	Bentley Inroads V8i V8.11.07.615 (SS2)	Bentley Inroads V8i V8.11.07.615 (SS2)	InRoads DGN graphics, ALG, DTM	● DOTD only allows InRoads that runs on the MicroStation platform. ● InRoads SS4 and OpenRoads Designer are not supported at this time.
Hydraulic Design Drafting (Optional)	Bentley Inroads Storm & Sanitary V8i V8.11.07.615 (SS2)	Bentley Inroads Storm & Sanitary V8i V8.11.07.615 (SS2)	Hydraulics DGN Graphics	● Bentley Storm and Sanitary is recommended for generating graphics only. ● DOTD only allows InRoads Storm & Sanitary that runs on the MicroStation platform. ● The current design standard is HYDR, which is used to check hydraulic designs.
Electronic Survey	Bentley Inroads Survey V8i V8.11.07.615 (SS2)	Bentley Inroads Survey V8i V8.11.07.615 (SS2)	Survey DGN Graphics, FWD, DTM, ALG, TXT	● Any data collection tool and method that produces the required deliverable content and accuracy are acceptable. ● DOTD feature codes must be used during data collection to enable output of CAD survey graphics and associated Tag Data. ●DOTD only allows InRoads Survey that runs on the MicroStation platform.
PDF Plan Reader	Adobe Acrobat Reader	Adobe Acrobat Reader	N/A	
Digital Signatures	N/A (New Process In Developement)	N/A (New Process In Developement)	N/A (New Process In Developement)	N/A (New Process In Developement)
Collaboration Platform	Bentley ProjectWise Explorer V8i V8.11.11.XXX (SS4)	Bentley ProjectWise Explorer V8i V8.11.11.XXX (SS4)	Project plans and associated documents	● Consultants are required to manage their plan submittals within DOTD's ProjectWise system. ● Use the managed Export>Export (Locks File) and managed Import functions to manage CAD development between PDF submittals. This prevents unauthorized changes and loss of attribute indexing. ● The ProjectWise Explorer application is provided free of charge for consultants working on LA DOTD projects. The Bentley Passport License required to run ProjectWise will be the Consultant's responsibility to purchase.

Software versions posted herein are the latest supported version as of this document publishing. We will seek to keep this document as up to date as possible as we move forward.
Contact **Paul Mandella** at paul.mandella@la.gov (225-379-1566) for general information and assistance regarding LaDOTD electronic standards, ProjectWise workflow and electronic plan delivery, authentication and publishing.
Contact **David Ringuette** at david.ringuette@la.gov (or call 225-379-1880) for general information and assistance regarding ProjectWise, PDF publishing setup.
Browse to **http://www.dotd.la.gov** and then select **Doing Business with LaDOTD > Electronic Standards for Plans** for links to all DOTD electronic standards and software downloads.
Browse to **http://www.altivasoft.com/downloads/CADconform** for the latest CADconform software downloads and related CAD/OS platform compatibility information.
Contact **support@altivasoft.com** (or call 281-295-2254) for information and assistance regarding installation of LaDOTD CAD Resources and Altiva CADconform software.
Contact **Altiva Software** to purchase CADconform. **Contact Bentley Systems** to purchase MicroStation, ProjectWise InterPlot Organizer and Inroads products.