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Design Advisory

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Index: CAD Workstation
Guides and Parameters of the
Road Design Manual

Questions regarding this
Design Advisory should be
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CAD Standards for MicroStationV8

The department has followed drafting standards for many years. Even prior to the use of automated drafting equipment, certain guidelines were used to develop consistency in our engineering drawings and ease of use by our construction staff and contractors. This practice continued as we moved into the age of automation as MDOT developed its Computer Aided Design (CAD) Drafting Standards. MDOT utilized a committee comprised of selected users from every region to develop the standards. The CAD Standards Drafting Committee now only meets on an as needed basis.

Several times over the past few months the Engineering Support Unit of Design has become aware of situations when the drafting standards have not been followed. In particular, several instances involve instruction to consultants to deviate from the standards and follow a project manager's preference toward drafting standards. Another example is utilizing plan scales for sheets that did not follow the standards of 20, 40, 50 or 100 scale drawings.

Although these may seem minor to designers, several concerns arise. Additional time is needed to create drawings that do not follow the standards. MicroStation resources were established allowing a single action to place elements and cells that automatically follow our symbology standards. Pay item quantities are calculated using element symbology. By creating your own detailing and not following the standard, we are being less efficient and could possibly make errors in interpreting plans because of unique details.

The drafting standards do not cover all circumstances and designers should feel free to create project specific detailing when the standards do not exist. However, the CAD Standards should be followed for all other drafting needs. The standards apply to all internal and external CAD users that develop and/or review engineering drawings for MDOT.

The standards are available on the intranet in Design Division's Plan Development Services page under Manuals and Guides and listed as "CAD Standards". Consultant access to the CAD Standards is available through www.michigan.gov/mdot portal "Doing Business with MDOT".

If you have a recommendation to change a current drafting standard, contact one of the drafting committee members and they will forward your request to the committee for review. The standards should be followed until the committee approves changes for use. A ProjectWise link to the current list of CAD drafting committee members can be found in the MDOT Plan Development Services intranet site.