

# Design Services Update

5/12/2016

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## Links to Previous “Design Services” & “MDOT\_02 Workspace” Update Memos

Web: [http://www.michigan.gov/mdot/0,4616,7-151-9625\\_21540\\_36037\\_69214---,00.html](http://www.michigan.gov/mdot/0,4616,7-151-9625_21540_36037_69214---,00.html)

## Workspaces

### MDOT\_01 Workspace

- Not to be used for any new project started after April 1, 2016.
- This workspace requires Power GEOPAK SS2 or GEOPAK Civil Engineering Suite SS2.

### MDOT\_02 Workspace

- This workspace is required for all new projects started after April 1, 2016.
- This workspace requires Power GEOPAK SS3/4 or GEOPAK Civil Engineering Suite SS3/4.
- The MDOT\_02 Workspace is available for download by consultants at the following link:  
[http://www.michigan.gov/mdot/0,4616,7-151-9625\\_21540\\_36037-259870--,00.html](http://www.michigan.gov/mdot/0,4616,7-151-9625_21540_36037-259870--,00.html)  
Consultant installation instructions are located in the “C:\MDOT\_02 Workspace\1\_Install” folder.
- The MDOT\_02 Workspace install procedure supports the following applications:
  - a) Power GEOPAK SS4
  - b) GEOPAK Civil Engineering Suite SS4
  - c) Stand-alone MicroStation (SS3 & SS4)

- If you are in the early stages of a project started using the MDOT\_01 Workspace and need assistance with upgrading of survey & design data for use with the MDOT\_02 Workspace, please contact [MDOT-CADDSupport@michigan.gov](mailto:CADDSupport@michigan.gov).

## Software

### Power Geopak SS2 or GEOPAK Civil Engineering Suite SS2

- Not to be used for any new project started after April 1, 2016.
- Requires the MDOT\_01 Workspace.

### Power Geopak SS4 or GEOPAK Civil Engineering Suite SS4

- Required for all new projects started after April 1, 2016.
- Requires the MDOT\_02 Workspace.
- Power GEOPAK SS3 & SS4 as well as Civil Suite SS3 & SS4 **cannot** coexist on the same machine. The SS3 version must therefore be uninstalled before installing SS4.
- The two key differences between SS3 and SS4 are as follow:
  1. The file format was changed by Bentley in order to support future development of i-models, which MDOT does not currently support. When opening an SS2/3 file containing “civil data” in SS4, the users will be prompted to upgrade to the SS4 file format, which is not backward compatible with SS2 or SS3.
  2. SS4 contains very few new enhancements, but does contain a number of bug fixes primarily involving 3D roadway modeling.

### Supported Software Versions

#### Power GEOPAK:

Power GEOPAK SS2 Update 2	(pgk081107615en.exe)
Power GEOPAK SS4 MR1 PB	(Setup_PowerGEOPAK_08.11.09.851PB.exe)

#### MicroStation + GEOPAK Civil Engineering Suite:

MicroStation SS3 MR1*	(ms081109714en.exe)
GEOPAK Civil Engineering Suite SS2 Update 2**	(pbda08110703en.exe + gkste081107615en.exe)
GEOPAK Civil Engineering Suite SS4 MR1 PB	(GPKSTE_08.11.09.851PB.zip, based on .845)
* Only available for download by clicking on the arrow to the left of the GEOPAK Civil Suite download.	
** Should not require an uninstall / reinstall.	

- “MR” in the version names above refers to Maintenance Release, indicating that the focus is on bug fixes rather than new enhancements.
- “PB” in the version names above refers to Priority Build, which is MR1 plus earthwork customizations requested by MDOT.
- The Priority Build software is available for download at

#### Priority Build Download Instructions:

The procedure for downloading of Priority Build software from MDOT’s FTP site is as follows:

1. Click on the following link: <ftp://ftpmidot.state.mi.us/>, which should open Windows Explorer (not Internet Explorer).
2. If Internet Explorer opens instead of Windows Explorer, go to “View > Open FTP Site in Windows Explorer” or “Page > Open FTP Site in Windows Explorer” in order to open Windows Explorer.
3. If the drop-down menu bar is not visible in Windows Explorer, go to Organize > Layout > Menu Bar.

4. In Windows Explorer go to File > Login As... and enter the following login information:  
User Name: geopak  
Password: !geopak!
5. Download one of the following two folders to your hard drive or server:
  - Civil Suite SS4 MR1 - 851 Priority Build
  - Power GEOPAK SS4 MR1 - 851 Priority Build

## **Development Guide Updates**

The following Sections/Files have been updated:

- Design Submittal Requirements [Chapter 1 - ProjectWise Pre-Bid Processes](#) has been updated to include the new RID Process of creating the RID\_Review.dgn for milestone submittals. The Letting Plan Process will remain the same.
- Design Submittal Requirements [Chapter 3 - Standard Naming Conventions](#) has been updated to show the naming convention for the general RID submittal files at the beginning of the 3.2 RID.
- Design Submittal Requirements [Chapter 5 - RID Process](#) has been updated to include the new RID Process and show how the RID\_Review.dgn should be created.

## **Workspace File Update Summary**

### Apps – Title Block Manager

File: HelpFile.docx  
File: HelpFile.pdf  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Apps\VBA\Title Block Manager  
Changes: Total rewrite of the Help document.

### Borings

File: Bo\_Borings.cel  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Elements\Cells\True Scale  
M:\MDOT\_02 Workspace\Projects\MDOT\_02\Elements\Cells\Annotation Scale  
Changes: Increased size of Boring\_NoID cell to improve readability.

### Environmental

File: Features\_General\_MDOT\_SS4.dgnlib  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Civil Standards\General\Features  
Changes: Changed transparency for Environ Contaminated Site level from 40 to 60.

### RID Review

File: Features\_General\_MDOT\_SS4.dgnlib  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Civil Standards\General\Features  
Changes: The Review and Scratch\_Note levels have been revised to improve clarity as follows:  
Review\_Comments\_Cloud  
Review\_Comments\_Misc  
Review\_Comments\_RID\_Final\_Designer  
Review\_Comments\_RID\_Final\_Reviewer  
Review\_Comments\_RID\_OEC\_Designer  
Review\_Comments\_RID\_OEC\_Reviewer

Review\_Comments\_RID\_Prelim\_Designer  
Review\_Comments\_RID\_Prelim\_Reviewer  
Scratch\_Note\_Misc  
Scratch\_Note\_Unresolved

### Roadway – Modeling

The following roadway modeling enhancements are not available in SS3 and require a software upgrade to SS4. MDOT employees will begin updating to SS4 during the third week of May.

File: MDOT\_BoulevardCrossRoad.dgnlib  
File: MDOT\_Dr\_atEOP.dgnlib  
File: MDOT\_Dr\_atEOP\_NoTangent.dgnlib  
File: MDOT\_Dr\_CnG\_wDetL.dgnlib  
File: MDOT\_Dr\_CnG\_wDetM.dgnlib  
File: MDOT\_Dr\_CnG\_wDetM\_NoTangent.dgnlib  
File: MDOT\_Dr\_CnG\_wShldr.dgnlib  
File: MDOT\_Dr\_Res\_atEOP.dgnlib  
File: MDOT\_Dr\_wShldr.dgnlib  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Civil Standards\Civil Cells\SS4  
Changes: Revised Civil Cell library including detailed placement notes and override features.

File: Old: MDOT\_RampTerm\_ProfReqd\_AltTypeA.dgnlib  
File: New: MDOT\_RampTerm\_ProfReqd\_wAltTypeA.dgnlib  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Civil Standards\Civil Cells\SS4  
Changes: Renamed and replaced Civil Cell.

File: MDOT\_RampTerm\_ProfReqd\_wTypeA.dgnlib  
File: MDOT\_SideRd\_CnG\_SideRdProfReqd\_wAltTypAShldr\_NoTaper.dgnlib  
File: MDOT\_SideRd\_CnG\_SideRdProfReqd\_wTypAShldr\_NoTaper.dgnlib  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Civil Standards\Civil Cells\SS4  
Changes: Added new Civil Cell libraries.

File: MDOT\_SideRd\_CnG\_SideRdProfReqd\_NoTaper.dgnlib  
File: MDOT\_SideRd\_CnG\_SideRdProfReqd\_wAltTypAShldrAndTaperedTie.dgnlib  
File: MDOT\_SideRd\_CnG\_wAltTypAShldrAndTaperedTie.dgnlib  
File: MDOT\_SideRd\_CnG\_wTypAShldrAndTaperedTie.dgnlib  
File: MDOTMaintenanceCrossOver.dgnlib  
File: MDOTMiLeft\_MedianCrossOver.dgnlib  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Civil Standards\Civil Cells\SS4  
Changes: Revised Civil Cell libraries, including detailed placement notes and override features.

File: MDOT\_RampTerm\_ProfReqd\_wAltTypeA.dgnlib  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Civil Standards\Civil Cells\SS4\  
Changes: Revised Civil Cells and changed the library name to match naming convention.

File: RoadwaySetup - Features.xsl  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Civil Standards\ReportBrowser\CorridorModeling  
Changes: Added New Corridor Report Style File - provides additional features to the standard Roadway Setup XML Report Style file for corridor models.

File: MDOT\_CorMod\_Template\_Library\_Master.itl  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Civil Standards\Roadway Templates  
Changes: Revised Template Library.

File: Features\_General\_MDOT\_SS4.dgnlib  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Civil Standards\General\Features  
Changes:

- Added levels, element templates, & features for 3D earthwork. Items added include Granular Material Class II, III, IIIA, Suitable Trench Backfill, Rock, Contaminated Earth, Peat, and Wetland.
- Added features for left & right guardrail.
- Changed the "Create Template Geometry" property from False to True for the following features: P\_Trvl\_HMA\_Prdctn\_Edge, P\_Trvl\_Conc\_Prdctn\_Edge, & P\_Trvl\_Agg\_Prdctn\_Edge.
- Updated level symbology for Slope\_BreakLine\_Pr\_TieDownLine~ (St2, Wt0, Color2).

### Roadway – Drafting

File: Rd\_Typical.cel  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Elements\Cells\True Scale  
Changes: Updated the Pavt\_Type\_1 though 7 cells, to eliminate the display of duplicate line work following the placement of text in data entry fields.

### Sheets & Sheet Labeling

File: Legend\_Sheets\_MDOT\_02\_2016-05-11.dgn  
Location: M:\MDOT\_02 Workspace\Sheets  
Location: ProjectWise: [Legend Sheets MDOT 02 2016-05-11.dgn](#)  
Location: Web: [http://www.michigan.gov/mdot/0,1607,7-151-9625\\_21540\\_36037\\_54428---,00.html](http://www.michigan.gov/mdot/0,1607,7-151-9625_21540_36037_54428---,00.html)  
Changes: Added/modified traffic signal/ITS handholes, ITS comm linestyles.

File: Sheet\_View\_Filters.dgnlib  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Civil Standards\General\Level Filters  
Changes:

- Added sheet view filters for single profile sheets.
- Reorganization all profile related sheet view filters.

File: Sh\_Sheet\_Borders.cel  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Elements\Cells\True Scale  
Changes:

- Separated the profile grid and data fields (station, elevation, legend) onto separate levels to resolve transparency issue.
- Added single profile grids for 40x & 50x scales.

File: Sh\_Sheet\_Labels.cel  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Elements\Cells\True Scale  
Changes: Renamed all line break, line mask, and line terminator cells, in order to group them together in one location within the cell library. New cell names are as follows:  
Line\_Break\_Wt0  
Line\_Break\_Wt0\_Masked  
Line\_Break\_Wt1\_Masked  
Line\_Dimension\_Mask  
Line\_Terminator\_Area  
Line\_Terminator\_Wt0

Line\_Terminator\_Wt1  
Line\_Terminator\_Wt1\_Double

File: Features\_General\_MDOT\_SS4.dgnlib  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Civil Standards\General\Features  
Changes:

- Created new sheet border levels for profile sheets, in order to separate the profile grid (with transparency) from the profile data fields (no transparency).
- Added levels for single profile grids.

Structures

File: St\_Symbols.cel  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Elements\Cells\True Scale  
Changes: Updated Note 8.09.04.BB.

SUE / SUDA

File: Features\_General\_MDOT\_SS4.dgnlib  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Civil Standards\General\Features  
Changes: Added levels, element templates, & features for utility trench design. Items added include Granular Material Class II, III, IIIA, & Suitable Trench Backfill.

File: All Design Seed Files  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Seed Files\Design  
Changes: Updated the Solids Area for all design seed files from 0.189 Miles to 1 Mile.

Survey

File: Features\_Survey\_MDOT.mdb  
File: Features\_Survey\_MDOT.smd  
File: Features\_Survey\_MDOT.xml  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Civil Standards\Survey  
Change: The following new survey features codes were added:

CROP	Field Crop Line	Veg_CropLine_Ex_GS
DMS	Dynamic Message Sign	ITS_Sign_DynamicMsg_Ex_NoID_GS
NWLKONE	Pedestrian NWLK 1 Head	Signal_Mt:All_TS:Ped_Ex_1Way_GS
NWLKTWO	Pedestrian NWLK 2 Head	Signal_Mt:All_TS:Ped_Ex_2Way_GS
SAP	Signal Mast Arm Pole	Signal_Mt:MastArm_Pole_Ex_GS
SCP	Spun Concrete Pole	ITS_Pole_Conc_Spun_Ex_GS
SIGFOUR	Traffic Signal 4 head	Signal_Mt:All_TS:Veh_Ex_4Way_GS
SIGONE	Traffic Signal 1 head	Signal_Mt:All_TS:Veh_Ex_1Way_GS
SIGTHREE	Traffic Signal 3 head	Signal_Mt:All_TS:Veh_Ex_3Way_GS
SIGTWO	Traffic Signal 2 head	Signal_Mt:All_TS:Veh_Ex_2Way_GS

File: Features\_General\_MDOT\_SS4.dgnlib  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Civil Standards\General\Features  
Changes:

- Added the above listed levels to support the survey features.
- Relinked survey features (Features\_Survey\_MDOT.xml).

### Traffic - ITS

File: Tr\_ITS.cel  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Elements\Cells\True Scale  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Elements\Cells\Annotation Scale  
Changes: Added/modified ITS handholes.

File: Features\_General\_MDOT\_SS4.dgnlib  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Civil Standards\General\Features  
Changes: Added the following levels:  
    ITS\_Pole\_Conc\_Spun\_Ex\_GS (added \_GS to ex level)  
    ITS\_Sign\_DynamicMsg\_Ex\_NoID\_GS

### Traffic - Pavement Markings

File: Tr\_Pavt\_Markings.cel  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Elements\Cells\True Scale  
Changes: Updated the pavement marking cell library as follows:

- Updated all pavement marking cells.
- Added roundabout cells.
- Added Ahead cell.

### Traffic - Signals

File: Features\_General\_MDOT\_SS4.dgnlib  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Civil Standards\General\Features  
Changes: Added the following levels:

- Signal\_Mt:All\_TS:Ped\_Ex\_1Way\_GS
- Signal\_Mt:All\_TS:Ped\_Ex\_2Way\_GS
- Signal\_Mt:All\_TS:Veh\_Ex\_1Way\_GS
- Signal\_Mt:All\_TS:Veh\_Ex\_2Way\_GS
- Signal\_Mt:All\_TS:Veh\_Ex\_3Way\_GS
- Signal\_Mt:All\_TS:Veh\_Ex\_4Way\_GS
- Signal\_Mt:MastArm\_Pole\_Ex\_GS

File: Sg\_Signal\_Plan.cel  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Elements\Cells\True Scale  
Location: M:\MDOT\_02 Workspace\Projects\MDOT\_02\Elements\Cells\Annotation Scale  
Changes:

- Added/modified traffic signal handholes.
- Added cells for traffic signal heads.

### **MDOT Technical Support**

Technical support email addresses are available on the [Development Guide Help](#) page, under Support Resources.