MONTANA
Department of Transportation

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MDT State Kit Updater

OPERATIONAL GUIDE

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OVERVIEW

The Montana Department of Transportation (MDT) has developed a Civil 3D State Kit that contains standards, resources, and customizations necessary for completing plans in Civil 3D that conform to MDT standards.

To manage State Kit installations and updates, MDT has created a custom Civil 3D State Kit file directory structure and the **MDT State Kit Updater** application. Once installed, the Updater allows standard users the ability to install and update the State Kit without the need for administrative rights to the local computer. This State Kit delivery method works equally for internal MDT users and external MDT consultants.

INSTALLATION

The MDT State Kit Updater application can be installed via a Windows MSI installer program. The default installation folder for the MSI install is **C:\Program Files\MDT\MDT StateKit Updater**

For flexibility or in instances where an MSI installer cannot be run, the application can also be installed in portable mode by simply copying **MDT_StateKit_Updater.exe, Ionic.Zip.dll**, and **StandardDesktopConfiguration.ini** file to a desired local folder.

OPERATION

The MDT State Kit Updater can be launched from the Windows Start menu, the Desktop shortcut, or via a user login script. Once launched, the main dialog is displayed showing the MDT State Kit installation statuses for the supported Civil 3D versions.

Select a Civil 3D version from the list and click the ***Install*** button. Any version with an **Update Pending** status will be selected (highlighted) automatically. After the installation is complete the dialog automatically closes, and the program exits.

No versions of Civil 3D can be running on the local computer during the install/update process. The Updater will check for any open Civil 3D sessions and present a warning message if Civil 3D is open. To continue, the user must exit all open Civil 3D sessions, then select ***Install*** again.

LIST VIEW COLUMNS

CIVIL 3D VERSION

Lists the version(s) of Civil 3D for which there is an MDT State Kit available for installation or update. Only MDT State Kit supported Civil 3D versions will be listed. Versions of Civil 3D that exist on the local machine but are not supported by MDT will not be listed.

CIVIL 3D RELEASE

Lists the Autodesk update release of Civil 3D that the most current MDT State Kit was built with. **MDT recommends using the Civil 3D update release listed or newer for maximum compatibility with the State Kit.**

C3D IS INSTALLED

Notifies the user if an MDT supported version of Civil 3D is installed. If the version of Civil 3D is not installed, the entry is grayed out, and is not available to be selected.

C3D IS INITIALIZED

This column is set to **False** if the current user has not yet initialized (first run) Civil 3D on the computer. When this column is **False**, both the Civil 3D and Storm and Sanitary applications are initialized prior to installing the State Kit.

STATE KIT STATUS MESSAGES

- **Up to date –** The State Kit is installed and is up to date.
- **Update Pending –** The State Kit is either not installed or is not up to date. The update version number to be installed is listed.
- **Civil 3D Not Installed -** This version of Civil 3D is not installed on the computer.

Versions with the **Update Pending** status are automatically selected (highlighted) for installation when the dialog is displayed.

INSTALLED VERSION

Displays the version number of the **currently installed** State Kit.

VERSION DATE

Displays the version date of the **currently installed** State Kit.

REFRESHING AN INSTALLATION

If a previous unzipped State Kit download (local cache) is found, the ***Refresh*** button will be visible in the lower right corner of the main dialog.

To quickly reinstall the State Kit, select ***Refresh***. It will bypass the downloading and unzipping of the State Kit package from the source and reinstall the State Kit from the local cache. There are two main reasons a user may want to perform a refresh:

1. An installation or update was interrupted **after** downloading and unzipping the State Kit package.
2. State Kit files have been altered, deleted, or become corrupt.

WHAT'S NEW

Click the ***What's New*** button for a list of changes made between State Kit versions. The What's New document will be displayed in the default web browser.

HELP

Click the Help **[?]** icon to display the MDT State Kit Updater User's Guide in the default PDF reader application.

PROCESSING LOG FILE

A processing log file is created detailing every action of the installer program. This file can be used to verify files were copied correctly, to review error messages, or to troubleshoot a failed installation. The log file is created in the Windows user **%TEMP%** folder:

\%TEMP%\Montana Department of Transportation\MDT StateKit Updater\MDT StateKit Updater.log

ADVANCED CONFIGURATION

The Updater can be configured beyond what the default MSI install provides.

- Additional companion apps can be included and installed with the State Kit.
- Additional scripts can be run before or after download or update.
- Group Policy can be updated.
- Registry entries can be added or removed.

- The State Kit source or install locations can be changed.

There are two files used to configure the MDT State Kit Updater application, a startup configuration file and a deployment configuration file.

STARTUP CONFIGURATION FILE

The **StandardDesktopConfiguration.ini** file can be used to set the parameters for the Updater application. After initial MSI installation, the file is set up for default use of the Updater.

```
[GLOBAL_OPTIONS]
StartUpdateAutomatically = False
AddDesktopIcon = False
SupportedVersions = 2022,2024,2026
DownloadsFolder = C:\MDOH\StateKit\Downloads
StateKitHomeFolder = C:\MDOH\StateKit
WhatsNewURL = https://www.mdt.mt.gov/other/webdata/external/CaddResources/StateKit/Updates_C3DStateKit.pdf
HelpFile =
StateKit_HasApps = False

[C3D_VERSION_ID]
2022 = R24.1
2024 = R24.3
2026 = R25.1

[PROFILE_FOLDERS]
2022 = ACAD-5100:409
2024 = ACAD-7100:409
2026 = ACAD-9100:409

[C3D_APPS]
Apps_SourceZIP=https://www.mdt.mt.gov/other/webdata/external/CaddResources/StateKit/Apps/MDTapps.zip
AppsFolder = Apps
AppsShortcut = C:\MDOH\StateKit\Apps\MDT Civil 3D Apps.lnk

[C3D_2022_OPTIONS]
ForceUpdate = False
UpdateGroupPolicy = False
ScriptToRunBeforeDownload = ""
ScriptToRunAfterDownload = ""
ScriptToRunBeforeUpdate = ""
ScriptToRunAfterUpdate = ""
ProfileName = MDT
StateKit_SourceZIP=https://www.mdt.mt.gov/other/webdata/external/CaddResources/StateKit/MDStateKit_2022.zip
StateKit_DateFile=https://www.mdt.mt.gov/other/webdata/external/CaddResources/StateKit/MDStatekit_2022_Date.txt
StateKitFolder_Download = MDTStateKit_2022
StateKitIni_Download = Source\App\MDTSK2022.bundle\Content\MDTStatekit.txt
StateKitIni_Deployed = C:\ProgramData\Autodesk\ApplicationPlugins\MDTSK2022.bundle\Content\MDTStatekit.txt
RegistryTextFile_Download = MDTStateKit_Reg.txt
Civil3D_Shortcut = C:\ProgramData\Autodesk\ApplicationPlugins\MDTSK2022.bundle\Resource\Civil 3D 2022 Montana.lnk
StormAndSanitaryPath = C:\Program Files (x86)\Autodesk\SSA 2022\StormSanitary.exe

[C3D_2024_OPTIONS]
ForceUpdate = False
UpdateGroupPolicy = False
ScriptToRunBeforeDownload = ""
ScriptToRunAfterDownload = ""
ScriptToRunBeforeUpdate = ""
ScriptToRunAfterUpdate = ""
ProfileName = MDT_2024
StateKit_SourceZIP=https://www.mdt.mt.gov/other/webdata/external/CaddResources/StateKit/MDTStateKit_2024.zip
StateKit_DateFile=https://www.mdt.mt.gov/other/webdata/external/CaddResources/StateKit/MDTStatekit_2024_Date.txt
StateKitFolder_Download = MDTStateKit_2024
StateKitIni_Download = Source\App\MDTSK2024.bundle\Content\MDTStatekit.txt
StateKitIni_Deployed = C:\ProgramData\Autodesk\ApplicationPlugins\MDTSK2024.bundle\Content\MDTStatekit.txt
RegistryTextFile_Download = MDTStateKit2024_Reg.txt
Civil3D_Shortcut = C:\ProgramData\Autodesk\ApplicationPlugins\MDTSK2024.bundle\Resource\Civil 3D 2024 Montana.lnk
StormAndSanitaryPath = C:\Program Files (x86)\Autodesk\SSA 2024\StormSanitary.exe

[C3D_2026_OPTIONS]
ForceUpdate = False
UpdateGroupPolicy = False
ScriptToRunBeforeDownload = ""
ScriptToRunAfterDownload = ""
ScriptToRunBeforeUpdate = ""
ScriptToRunAfterUpdate = ""
ProfileName = MDT_2026
StateKit_SourceZIP=https://www.mdt.mt.gov/other/webdata/external/CaddResources/StateKit/MDTStateKit_2026.zip
StateKit_DateFile=https://www.mdt.mt.gov/other/webdata/external/CaddResources/StateKit/MDTStatekit_2026_Date.txt
StateKitFolder_Download = MDTStateKit_2026
StateKitIni_Download = Source\MDTSK2026.bundle\Content\MDTStatekit.txt
StateKitIni_Deployed = %appdata%\Autodesk\ApplicationPlugins\MDTSK2026.bundle\Content\MDTStatekit.txt
RegistryTextFile_Download = MDTStateKit2026_Reg.txt
Civil3D_Shortcut = %appdata%\Autodesk\ApplicationPlugins\MDTSK2026.bundle\Resource\Civil 3D 2026 Montana.lnk
StormAndSanitaryPath = ""
```

The Updater application will automatically search for the .ini file in the same folder as the **MDT StateKit Updater.exe** file. Different startup configuration files can be used by specifying an -ini switch on the command line or shortcut target line.

C:\Program Files\MDT\MDT StateKit Updater\MDT StateKit Updater.exe -ini=full path to.ini file

STANDARDDESKTOPCONFIGURATION.INI FILE SECTIONS

GLOBAL OPTIONS

- **StartUpdateAutomatically** – When set to **TRUE,** installs will be processed automatically when the updater is started for any versions with an **Update Pending** status. By adding the program command line to the users' login script and setting the StartUpdateAutomatically option to **TRUE** in the .ini file, the program will run every time the user logs in to their computer. If an update is pending, it will automatically be installed.
- **AddDesktopIcon** – When set to **FALSE**, no desktop icon will be created.
- **SupportedVersions** – A comma separated list of Civil 3D versions for which an MDT State Kit download is available. Entries can be added, but existing entries should not be removed.
- **DownloadsFolder** – Full path to where the State Kit zip packages are downloaded to, unzipped, and available for installing. The filepath can be changed if the default location cannot be used.
- **StateKitHomeFolder** – Home path to where the State Kit is installed. **Changing this path is not recommended**, but the option is available if the default location cannot be used. (Changing this path will cause some State Kit features to stop functioning. Contact MDT for guidance on how to proceed if the default State Kit installation location must be changed.)
- **WhatsNewURL** – Path to MDT web resource containing information on version updates.
- **HelpFile** – Not implemented. <blank> by default.
- **StateKit_HasApps** –When set to **TRUE**, Updater looks to the [C3D_Apps] section for additional applications to download and unzip.

C3D_VERSION_ID

This section is used for locating Civil 3D version information in the Windows Registry. Entries can be added, but existing entries should not be removed.

PROFILE_FOLDERS

This section is used for locating Civil 3D profile information in the Windows Registry. Entries can be added, but existing entries should not be removed.

C3D_20XX_OPTIONS

- **ForceUpdate** – Not implemented. Set to **FALSE** by default.
- **UpdateGroupPolicy** –If set to **TRUE,** the **gpupdate /force** process is run during the install.
- **ScriptToRunBeforeDownload** – Full path to a script or .exe file to be run prior to downloading a zip package.
- **ScriptToRunAfterDownload** – Full path to a script or .exe file to be run after downloading and extracting a zip package.
- **ScriptToRunBeforeUpdate** – Full path to a script or .exe file to be run after download, but prior to installing an update.
- **ScriptToRunAfterUpdate** – Full path to a script or .exe file to be run after installing an update.
- **ProfileName** – Name of the AutoCAD profile associated with the State Kit.
- **StateKit_SourceZIP** – Full path to the State Kit .zip file. This .zip file contains all the application and content files for the State Kit. The default is to download from the MDT website. This entry is for those who wish to save the zip file separately and place in an alternate download location. The StateKit_SourceZIP path value can then be modified to the alternate location.
- **StateKit_SourceDateFile** – Full path to an .txt file containing the update date of the source zip file and version/build number. This file is downloaded at updater launch. The date in this file is compared to the date of the installed State Kit to determine if an update is needed. The default is to download from the MDT website. This entry is for those who wish to save the .txt file separately and place in an alternate download location. The StateKit_SourceDateFile path value can then be modified to the alternate location.
- **StateKitFolder_Download** – This folder stores the downloaded State Kit files for installation and also serves as a local cache for refreshing or reinstalling the State Kit. This folder is created in the filepath listed in the **DownloadsFolder** specified in the GLOBAL_OPTIONS section.
    - The default setup is:
        - **DownloadsFolder** – C:\MDOH\StateKit\Downloads

    - **StateKitFolder_Download** – MDTStateKit_20xx
    - **Full path** - C:\MDOH\StateKit\Downloads\MDTStateKit_20xx

- **StateKitIni_Download** – Name and location of the State Kit Deployment configuration .txt file in the downloads folder.
- **StateKitIni_Deployed** – Full path to the installed version of the State Kit Deployment configuration .txt file. During the install process the StateKitIni_Download file is copied to the StateKitIni_Deployed location. On Updater startup the StateKitIni_Deployed file is compared to the StateKitIni_Download file to determine if the StateKit is installed and is up to date.
- **RegistryTextFile_Download** – **(Optional)** The relative path under the DownloadsFolder specifying the name of a text file that contains registry edits to be processed during update.
- **Civil3D_Shortcut** – Full path to a Windows shortcut for launching Civil 3D with the MDT State Kit AutoCAD profile. This shortcut is copied to the user's Windows Desktop.

DEPLOYMENT CONFIGURATION FILE

The path to the State Kit Deployment configuration file is specified in the Startup configuration file. The purpose of **MDTStatekit.txt** is to direct the Updater to each State Kit component in the downloads folder and the corresponding install location.

MDTSTATEKIT.TXT FILE SECTIONS

REGISTRY_SETTINGS

(Optional) Defines a text file containing registry entries to add to the HKEY_CURRENT_USER section of the registry during the installation. (The Updater does not use Windows Administrator rights, so it cannot write to HKEY_LOCAL_MACHINE.) The filepath is relative to the **StateKitFolder_Download** entry in the **StandardDesktopConfiguration.ini** file.

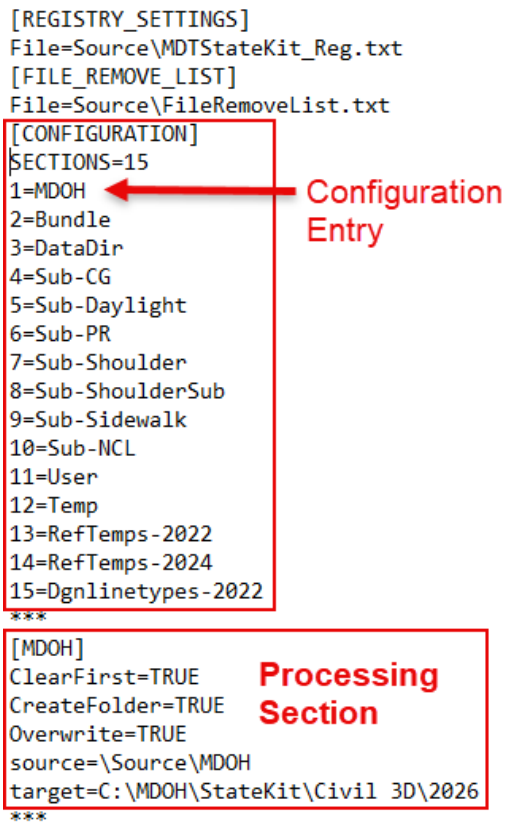
FILE_REMOVE_LIST

(Optional) Defines a text file containing a list of files, folders, and/or registry keys to be removed prior to installation of the State Kit. The list is created by adding one file, one folder, or one registry entry per line to the file. The filepath is relative to the **StateKitFolder_Download** entry in the **StandardDesktopConfiguration.ini** file.

CONFIGURATION

The [CONFIGURATION] processing entries are a dynamic listing of each separate section to be processed. For each Configuration entry, there must be a corresponding processing section. The number of processing sections listed must match the [CONFIGURATION] SECTIONS value.

The SECTIONS value defines how many processing sections will follow. Each number listed below the SECTIONS value defines the name for each processing section. In the default setup, each processing section name corresponds to the name of a top-level folder in the.zip file.



PROCESSING SECTIONS

Processing sections define the parameter values the Updater will use when copying files from the download location to the install location. Each processing section must be named **exactly** as defined in each [CONFIGURATION] entry.

- **ClearFirst** – When the target is a **folder**, a setting of **TRUE** will remove the files and subfolders in the target folder prior to copying in the new/updated files. When the target is a **file**, only the individual file will be removed.

- **CreateFolder** – When set to **TRUE,** the folder is created.
- **Overwrite** – When set to **TRUE,** existing files are overwritten.
- **source** – The relative path under the **StateKitFolder_Download** path defining the source file or folder to be copied. For folders, all files and subfolders under the path will be copied.
- **target** – The full installation path for the file/folder defined in the **source** definition.

DATE FILE

The date file in the location listed under **StateKit_SourceDateFile** is compared to the date file of the installed State Kit to determine if an update is needed.

- DATE – This required field is the release date of the State Kit zip file. It must be in the format: MM/DD/YYYY
- VERSION – This required field is the version number of the State Kit zip file. It can be any numeric string.
- RELEASE – This is the Civil 3D update release number that the version of the State Kit was built with. It can be any numeric string.

INSTALLATION SEQUENCE

When the install process is initiated, the following steps are performed:

1. Checks for any active Civil 3D process. Stops install if found and displays warning message.
2. Initializes Storm and Sanitary, if necessary.
3. Initializes Civil 3D, if necessary.
4. Executes script(s) prior to update, if found.
5. Removes any previous download files and folders for the selected version(s), if found.
6. Downloads the State Kit zip file to the Download location.
7. Unzips the downloaded State Kit zip package.
8. Updates the date in the deployment configuration file with the date from the StateKit_SourceDateFile.

9. Deletes any files, folders, and registry keys defined in the FileRemoveList.txt.
10. Installs the update files as defined in the deployment configuration file.
11. Clears the AutoCAD Profile entries from the Windows Registry as named in the ProfileName entry of the startup configuration file. (Profile information will be rebuilt using the .arg file installed with the State Kit update on the first run of Civil 3D after an update.)
12. Adds any registry entries defined in the StateKit_reg.txt file.
13. Executes script(s) after update, if found.
14. Updates Group Policy, if set to TRUE.
15. Displays update complete message, application exits.