

Readme for Advanced Road Design Imperial

V15.02.1

This readme contains important information regarding the installation and use of Advanced Road Design Imperial versions as described above.

This version of Advanced Road Design Imperial is available on Autodesk AutoCAD platforms (AutoCAD, AutoCAD Map 3D and AutoCAD Civil 3D) for versions 2011 to 2015.

Please note that different platform versions (eg: Civil 3D vs AutoCAD vs BricsCAD versions) require different installations to be selected.

Installation Instructions

You do not need to uninstall any previous versions of Advanced Road Design Imperial. This installation will install over the top of any previous ARD installation.

Resolved Issues

Roads

- Renaming a Road would result in orphaned curb strings

Known Issues

- When Advanced Road Design creates a Civil 3D surface, it removes and replaces the boundaries if the user has elected to not include Boundaries in the output from Advanced Road Design. Previously, only additional boundaries would be added to the surface if it already existed.

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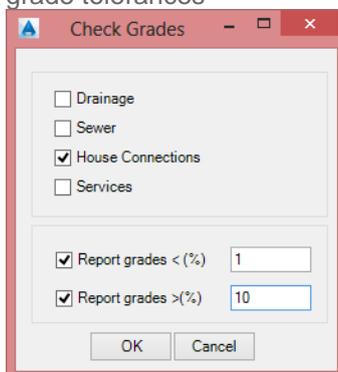
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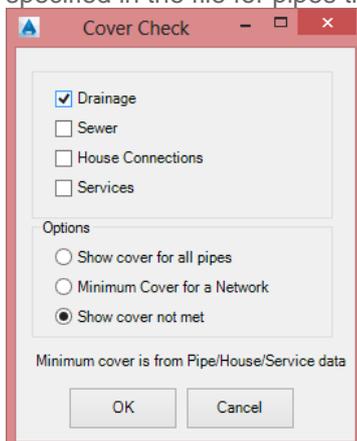
New Features

Pipes

- New Reports
 - Added a pipe grade report
 - Reports the minimum and maximum grade for pipes in a network, with pipe numbers specified in the file for pipes that are outside grade tolerances



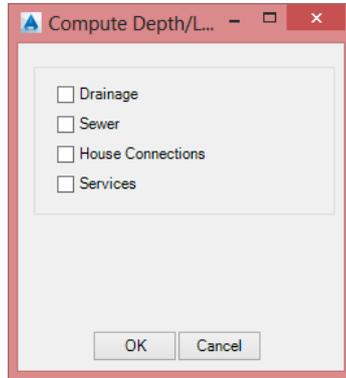
- Added a pipe cover report
 - Reports the cover achieved for pipes in a network, with pipe numbers specified in the file for pipes that are outside cover tolerances



Typical output

Network	Pipe Number	Actual Cover	Required	Distance from DS	Error Flag
Drainage Network 1	3	0.459	0.6		0 Error

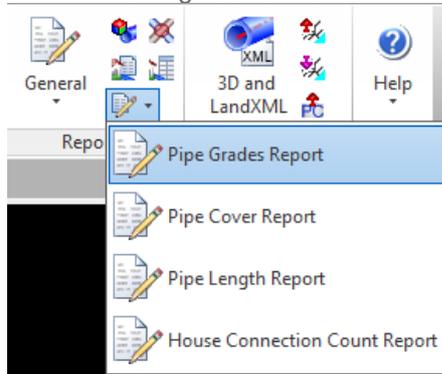
- Added pipe length reports based on user defined depth ranges
 - For each project, you need to create a text file in the Data folder named DrainageDepthList.txt. In this file you put in a depth on each line. These are used for the depth ranges



Typical Output (csv file opened in Excel)
 Drainage

P-Class 2 RRJ-1200	0.000 to 0.000	0
P-Class 2 RRJ-1200	0.000 to 1.000	0
P-Class 2 RRJ-1200	1.000 to 2.000	6.346
P-Class 2 RRJ-1200	2.000 to 3.000	57.031
P-Class 2 RRJ-225	0.000 to 0.000	0
P-Class 2 RRJ-225	0.000 to 1.000	12.237
P-Class 2 RRJ-225	1.000 to 2.000	51.824
P-Class 2 RRJ-525	0.000 to 0.000	0
P-Class 2 RRJ-525	0.000 to 1.000	0
P-Class 2 RRJ-525	1.000 to 2.000	8.434
P-Class 2 RRJ-600	0.000 to 0.000	0
P-Class 2 RRJ-600	0.000 to 1.000	0
P-Class 2 RRJ-600	1.000 to 2.000	31.847
P-Class 2 RRJ-600	2.000 to 3.000	0.969

- Added a House Connection Count report
 - Reports the number of house connections contributing to a drainage/sewer network.



These reports are currently undocumented in the help system

Resolved Issues

General

- An issue with the Share Data/Read Data commands removing pipes and pits has been resolved.
- Installation of Autodesk 2015 Service Pack 2 (for AutoCAD, Civil 3D and Map 3D) caused issues with the Civil Survey Solutions Network Licensing system. This has been resolved.
- Fixed a crash when switching/opening drawings containing ARD data and the AutoCAD variable STARTUP=2

Roads

- Multi stakeout was not allowing users to apply user defined spacing styles
- Multi stakeout was checking that all stakeout 'pages' were valid (had all the required data entered) , instead of just the one being stakeout
- There was an issue plotting 40,000+ sections
- There was an issue with profile view plots of kerbs/cul-de-sacs not reporting information at all sampled sections
- The Clean Up tool was missing some linework in the clean up routine.
- Using the Edit PVI form from the Vertical Grading Editor could result in an error.

Pipes

- Fixed a graphics issue in the Active Network Settings > Drainage > Pipe Tables tab that would result in the pit capture curve disappearing.

Changed/Enhanced Features

- The ARD Settings form will load much quicker than in previous versions.
- The Design Data form will load much quicker than in previous versions
- Clicking the X icon on the Vertical Grading Editor forms (both for Roads and Pipes) will result in a SAVE and EXIT. Previously a message would display for the user to choose whether to exit.
- During pipe plotting, you can now show more than two extra surfaces on the profile view output.

Known Issues

- Adding a curve to a service pipe that results in intersecting of a sewer or drainage network twice, will not register any intersections/clashes.
- The Cul-de-sac form is slow to open on 64bit machines, for first opening in a session
- The Active Network Settings form is slow to open on 64bit machines, for first opening in a session
- The update button that detects when alignment lengths have changed (Civil 3D version only) only displays upon first edit – after applying the update from the form, it will not display again in that session when any alignment used by ARD is edited
- In Advanced Road Design for BricsCAD, ensure MTFLAGS (for multi-threading), is turned OFF. Some users have experienced the software crashing when this system variable is turned on.
- When assigning Sewer Manhole symbols, it is possible to automatically assign the symbol from one Pit Type to the next selected Pit Type, if that second Pit Type did not already have a symbol actively defined. Once the symbol is set by the user, it does not get edited when toggling between Pit Types.

- If curved pipes are given a negative radius they will not update display on road long and section views, even if they are subsequently deleted. First, change the radius value on curved pipes to a positive value, then edit/delete as appropriate.

Readme for Advanced Road Design Imperial

V15.01

This readme contains important information regarding the installation and use of Advanced Road Design Imperial versions as described above.

This version of Advanced Road Design is available for multiple Civil 3D releases: Civil 3D 2011 to Civil 3D 2015.

Installation Instructions

You do not need to uninstall any previous versions of Advanced Road Design Imperial. This installation will install over the top of any previous ARD installation.

New Features

Roads

- R- in the Alignment Description is no longer a requirement when creating a road object. If the *Create/Edit Road* command is used, then the software will assume a road object is being created. If the *Create String/Profile* command is used, then the software will default to creating a string object.
- When running *Auto Road Creation*, the user specifies which Alignments are going to be created as road objects.
- A new *Switch Road* command exists to turn strings into road objects and visa versa.
- The load speed of the *Design Data Form* has improved.
- A new command named *Intelligent Sections* has been developed and can be used instead of *Multi Section Batters*. This command is used for decision based daylight control. It is planned to extend development of *Intelligent Sections* to be incorporated into the Template Editor to manage section creation within the template as well as for the batters/daylights
- Introduction of a section routine allowing for sections to be shown at any angle to multiple strings and string sections, using a line for the section control. This is currently in Beta stage and can be accessed using the command ARDUV7INDEXROAD.
- Design model output to a *Civil3D Corridor* has been improved. This allows designers to than export their design to programs such as 3ds Max for visualisation.
- Winrar is now an option for the backup for project files
- New 'Compliance Checking' report for driveways. This command will output the clearance check report for all driveways. If a clash is detected, than a symbol will be shown on the driveway in the drawing.
- The Vertical Grading Editor now includes a grid editor. The grid editor allows designers to view all VIP's in a table and quickly override information such as elevation, grade, or VC length. This interacts directly with the VGE window edits.
- New functionality in the VGE Grid Editor enables multiple PVI's to have their station adjusted (+ or -) by a user defined amount.

Pipes

- Added functionality to add pipe networks for stormwater, sewer and other underground services

Resolved Issues

Roads

- *Model Builder Edits* - The start station value will no longer revert to zero when specifying an end station. This issue would occur when specifying a station region for a model edit.
- Duplicate 3d polylines generated when a Civil 3D Surface was created has been resolved.
- If plotting sections from a model when *Always Create Civil3D Surface* is ticked on, the software will now produce an ARD model for purpose of plotting.
- Stopped Layer Isolate from flagging alignment co-ordinate change
- Red X on Roads *Vertical Grading Editor* now acts as a 'Save and Exit' instead of prompting to cancel
- Issue with *Copy Codes* addressed – there was an issue with an AutoCAD routine to find station/offset for an alignment
- Prevent data corruption when *Layer Isolate* is used. This was causing the software to move string data to the deleted folder because isolated alignments are not visible to the software.
- Multi Object Stakeout was not listing user defined stakeout spacings for them to be applied to strings.
- split datum plotting for road profiles was not allowing datums to be set for different pages properly. Also, the split datum elevation was not reported on the profile plot.

Changed/Enhanced Features

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Readme for Advanced Road Design ImperialImperial v15.00

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Installation Instructions

Install as a standalone and enable evaluation. If you have a license activation key you can elect to activate the software. License activation is requested when a command is run in ARD.

New Features

Changed/Enhanced Features

Roads

Vertical Grading Editor > Volume Optimizer

The Optimize Volumes button on the Vertical Grading Editor now supports optimisation over a selected station range. You can now 'keep' parts of your design and only move a station range of PVI's to achieve a final net volume result.

Section Sheet Production

Section Sheet Production has been totally revamped in line with plan production drafting requirements in the United States of America.

It is recommended that you review the Youtube video covering this new functionality:

<http://www.youtube.com/watch?v=JLnE5h2pjBs>

Profile Sheet Production

Profile Sheet Production has been totally revamped in line with plan production drafting requirements in the United States of America.

It is recommended that you review the Youtube video covering this new functionality:

<http://www.youtube.com/watch?v=asEy00XHoys>

Resolved Issues

Roads/All

- If users ticked on the option in the ARD Drawing Settings to 'Only Load Data when an ARD Command is Run', then no data would load even if a command was run. This is fixed.
- The Edit PVI form would fall behind the Vertical Grading editor window in certain circumstances, preventing editing of the form. This has been resolved.
- An issue with knuckles not re-establishing correct connection to road code elevations after the Reset button was pressed on the Vertical Grading Editor window has been fixed.
- An issue with Copy Codes has been resolved – if Copy Codes was applied beyond extents of the string being referenced, and error could occur.
- An issue with circular references in Copy Codes has been resolved.
- A bug in the Civil 3D API has been overcome – with certain geometry configurations ARD is given incorrect station information.
- User defined spacings in Multi Object Stakeout would result in an error message – this has been fixed and plotting works in these conditions