

AutoTrack Junctions

Roundabout Design & Analysis

Real-time link
to ARCADY
flow / capacity
Analysis!

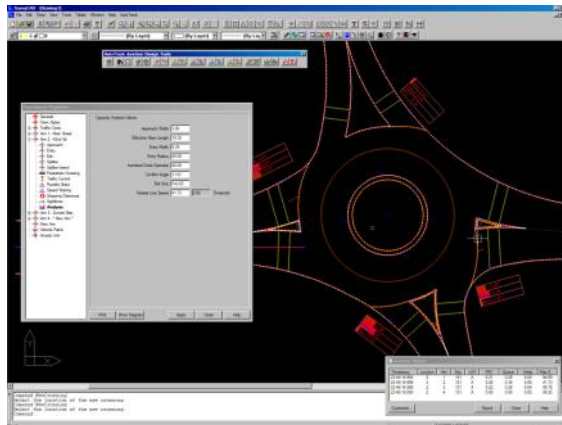
Interactive roundabout design that leaves the engineer in control!

Create roundabouts from existing alignments, place splitter islands, crossings, rumble strips & traffic controls. Adjust geometry and get immediate feedback on how it affects fastest path radii & speeds, capacity, queue lengths and level of service using the dynamic link to the industry standard ARCADY 7.

Junction design just got a whole lot easier. AutoTrack Junctions lets you create roundabouts to worldwide standards and assess them for fastest path radii and speeds in a fraction of time it would take using traditional methods. What's more, the unique dynamic link to ARCADY lets you carry out the flow/capacity analysis at the same time.

Interactive junction design

Generate and place roundabouts that use the existing arm alignments or allow AutoTrack to automatically create smooth approaches that blend perfectly with existing or proposed alignments. Add up to eight bi-directional, entry only or exit only arms. Optionally exclude service only entry or exit routes from analysis. Control entry deflection.



Roundabout design

Dynamic editing

Edit your roundabout using the toolbar functions, interactively using grips or using the Junction Properties dialog.

Grip editing

AutoTrack uses grips extensively to make it simple and intuitive for the designer to adjust geometry or place features. All grips are colour and shape coded and have grip tips (tooltips for grips) so it's really easy to make sure you are adjusting the right one.

Toolbar functions

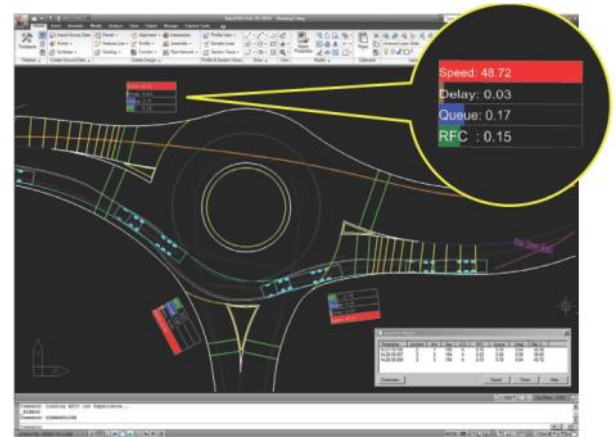
Simple toolbar functions let you add or remove physical features such as splitter islands, pedestrian crossings, rumble strips or speed stripes with a single click.

Junction Properties

For those values that need to be entered precisely there's the Junction Properties dialog. This hierarchical tabbed dialog displays all the information you need and can be left on screen or switched on and off as required.

Dynamic reporting for instant feedback

So you can keep tabs on how your design is performing we've provided you with a couple of reporting options. Both update automatically in real time when the data changes and both let you display fastest path radii and speeds, as well as other values passed back from ARCADY (if installed) such as level of service, flow capacity ratio, queue length and queue time.



Dynamic reporting showing 'Head-Up' display and tabular report

Head-Up display

Firstly, the resizable and customisable head up display shows you selected critical design information in colour coded bar charts on each arm or in a multi-column tabular format. As you'd expect all data coming from ARCADY is colour coded using the ARCADY defined colours.

Tabular report

Alternatively, there's a tabular report dialog that can be opened in a convenient location in the corner of your display and can be configured to show only the data you need and either be left on-screen or displayed as and when required.

Built-in junction standards

To help you stay within the regulations, AutoTrack includes various junction design standards and guidelines for the UK and US and allows you to set a default.

Create local standards

Create junctions standards from scratch or based upon one of the supplied standards using the Junction Standard Editor. Set limiting and default values for all geometric parameters, using the dockable diagram window to ensure that you are editing the correct value. Once created, it's a simple matter to share new standards locally or company wide and the AutoLoad feature lets you control which standards you see by default.

"What you have developed with TRL and Autodesk (Civil 3D) is very exciting and encompasses BIM Methodologies entirely based on Bi-Directional Design and Analysis workflows and processes"

Duncan Brannan
UK CAD Operations
Manager
WSP Group

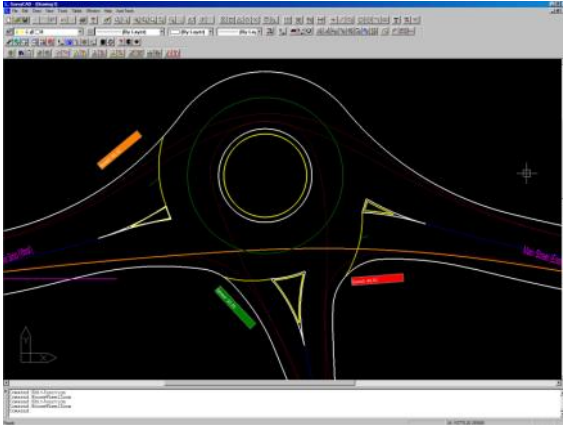


AutoTrack Junctions

Roundabout Design & Analysis

► Fastest paths

Achieving a balance between capacity and safe speeds is critical in roundabout design.



Fastest path (note excessive speed displayed in red)

AutoTrack lets you monitor the entry, circulating, exit, left and right turn radii and speeds as well as the fastest path from any arm to any other and the overall fastest path speed through the junction. All fastest path radii and speeds are updated dynamically as the geometry changes.

► Links to ARCADY 7 analysis software

The unique dynamic link to industry leading roundabout analysis program, ARCADY, allows the engineer to adjust the roundabout geometry and see instantly how the changes have affected the capacity of the roundabout. AutoTrack is the only program with this link. The link is initiated automatically by AutoTrack and ARCADY creates a new model if required. From then on the two programs talk seamlessly to each other ensuring that, whichever program is in use, the data is up to date. The link effectively allows the tasks of design and analysis, that are traditionally performed by different people, to be performed simultaneously by a single engineer.

► Other flow/capacity analysis systems

We strongly recommend the use of ARCADY but AutoTrack also displays the data for use by Rodel and other flow/capacity analysis programs.

► Links to AutoCAD Civil 3D 2010 or later

In AutoCAD Civil 3D AutoTrack creates the Civil 3D alignments required to create a corridor model of the roundabout. These alignments are updated dynamically as the roundabout geometry is changed ensuring that the ground model is updated. This incredibly powerful feature allows you to monitor how changes in the roundabout geometry affect the cut and fill, surface water runoff and much more.

► Customisable

If you don't like the default colours and line styles then select from a range of alternatives or create your own named style. Construction lines can be omitted as can elements of the design such as road markings that you may wish to draw using other programs.

► Integrates with AutoTrack Roads

You don't need AutoTrack Roads Pro to design roundabouts but the functionality overlaps to provide elegant value added features such as instant placement of any vehicle on valid routes through the roundabout or on any of the fastest lines. The alignment of paths placed in this way update automatically when the geometry changes. AutoTrack Roads Pro also lets you animate vehicles through your design to show a drivers-eye view for example.



Use AutoTrack Roads Pro to add vehicles

► Intuitive, so you work quicker

Intuitive by design, AutoTrack is really easy to use. Layer management, language detection, software updating, detection of drawing units and detection of driving convention are all automatic with manual over-rides. The runtime **Tutor** guides new users through the program and, if you do get stuck, the multimedia tutorial shows common tasks being performed.

► Compatible, comprehensive & portable

AutoTrack is supplied with support for all versions of AutoCAD from **AutoCAD 14 to 64-bit AutoCAD 2012** (including vertical derivatives), all versions of **MicroStation from 95 to V8i, MicroStation PowerDraft v7.0 to V8i, PowerCivil XM and V8i and MicroStation MX Roads XM and V8i**. We even give you a stand-alone version that reads and writes DXF files, so you can use it with other CAD systems such as **AutoCAD LT!** All data is saved in the drawing making it easy to share and archive. And don't worry if you work in both AutoCAD and MicroStation, your AutoTrack data is portable between all CAD systems.

► Better, Cheaper, Quicker!

AutoTrack Junctions allows you to design roundabouts quickly and intuitively. Used with the real-time links to ARCADY and/or AutoCAD Civil 3D it can dramatically reduce the time taken to design roundabouts by allowing tasks to be performed simultaneously. This allows the engineer to concentrate on the best layout leading to better designs, reduced costs and quicker turnaround; in short, a very fast return on investment.

Available in:

English
US English
French
Spanish
German
Italian
Portuguese

Autodesk
Preferred Industry Partner
AutoCAD® Civil 3D™



savoy
computing

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