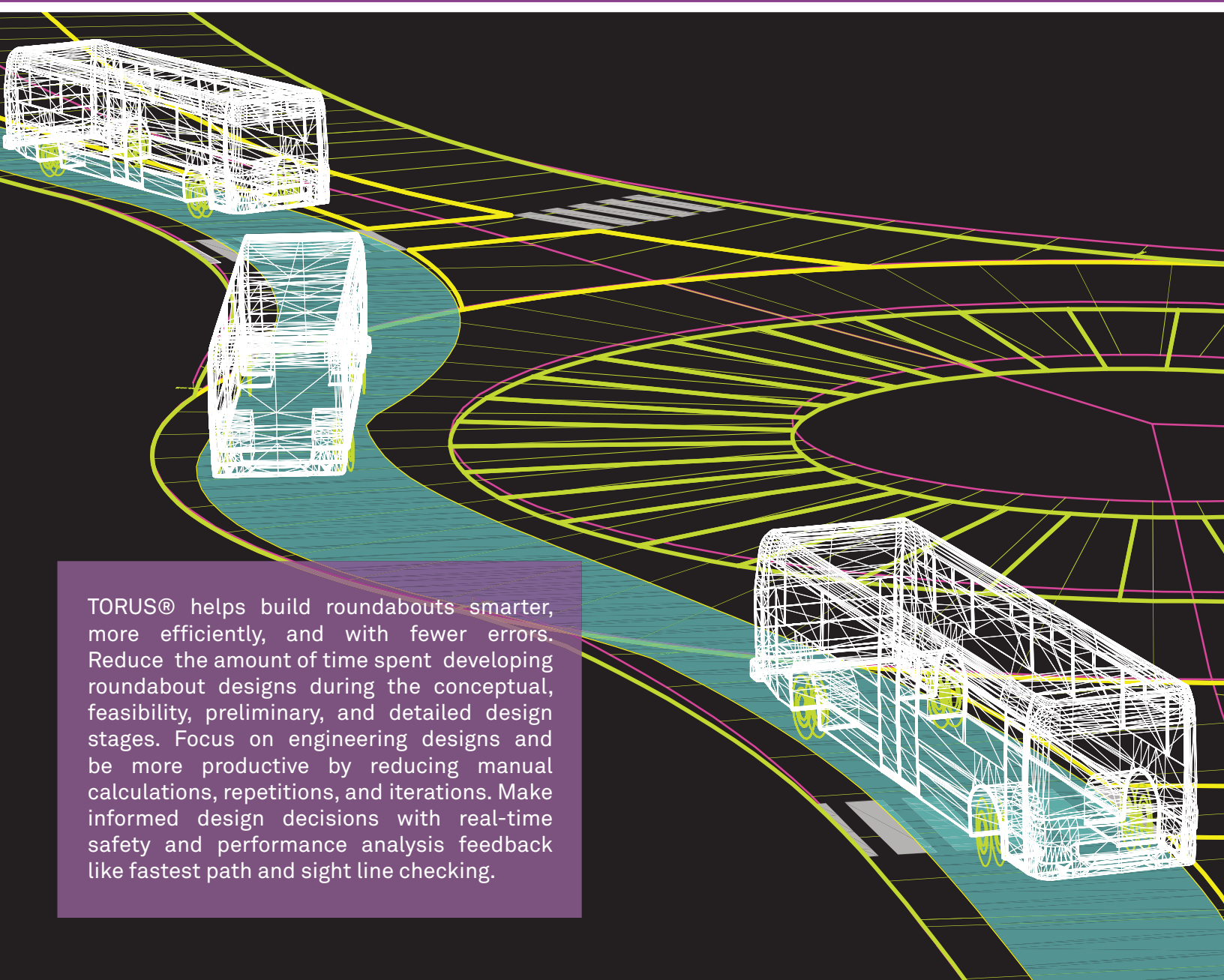




TORUS ROUNDABOUTS™

A comprehensive approach to your roundabout design

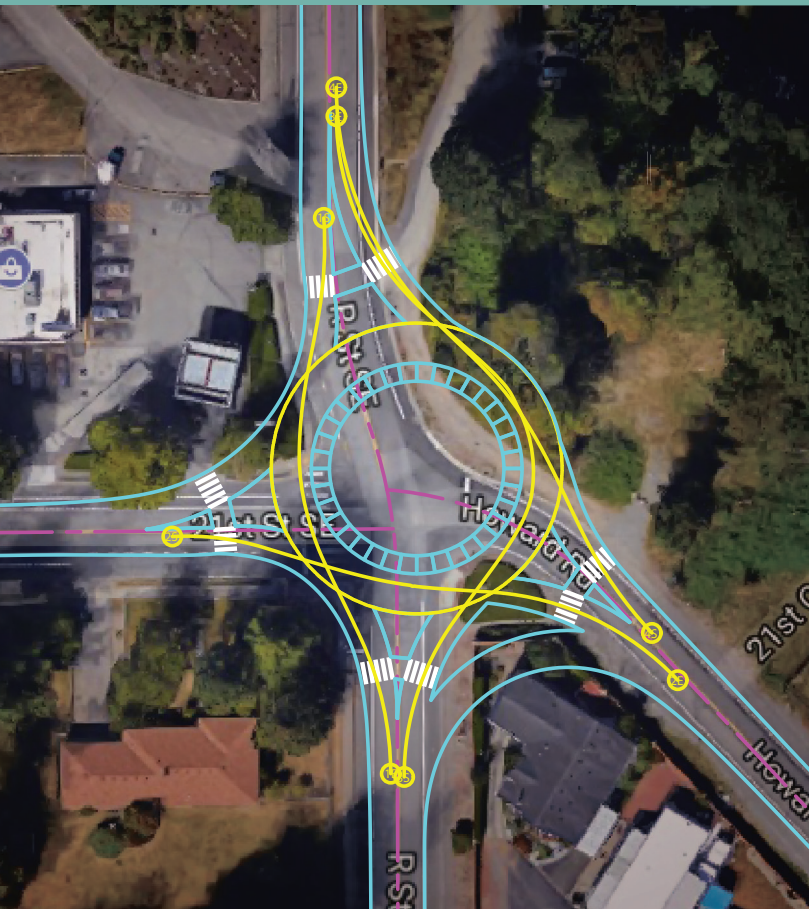


TORUS® helps build roundabouts smarter, more efficiently, and with fewer errors. Reduce the amount of time spent developing roundabout designs during the conceptual, feasibility, preliminary, and detailed design stages. Focus on engineering designs and be more productive by reducing manual calculations, repetitions, and iterations. Make informed design decisions with real-time safety and performance analysis feedback like fastest path and sight line checking.



TORUS® gives you the right tools to design roundabouts smarter and more efficiently. It generates initial geometry honoring reference criteria, and provides real-time feedback regarding recommended dimensional and analytical ranges. Make edits to your design parameters and get instant feedback during the process.

BENEFITS



Fastest Path.

TORUS reduces the amount of time spent developing roundabout design drawings and plans. The software provides a comprehensive solution that allows users to produce roundabout geometry, that incorporates speed, design vehicles, and sight distance checks. Real-time editing features and immediate feedback give engineers the ability to create optimal roundabout designs confidently and efficiently.

SOLUTIONS

- Supports multiple guidelines
- Tools for safety
- Powerful grading functions
- Increased productivity

THE COMPLETE ROUNDABOUT SOLUTION FOR PLANNING AND DESIGNING

Design Reference Support and Feedback

New Design Guidelines have been added to support practitioners using TAC 2017 – Canadian Roundabout Design Guide and NCHRP Report 672. TORUS generates geometry in line with these references and provides real-time feedback to help users stay within recommended dimensional and analytical ranges.

Tools for Quicker Geometric Design and Performance Analysis

TORUS' parametric, dynamic design and editing allows users to quickly implement ideas and make changes. Real-time analysis feedback from the fastest path, path overlap, sight lines, and vehicle movements informs designers promoting a more holistic approach to design.

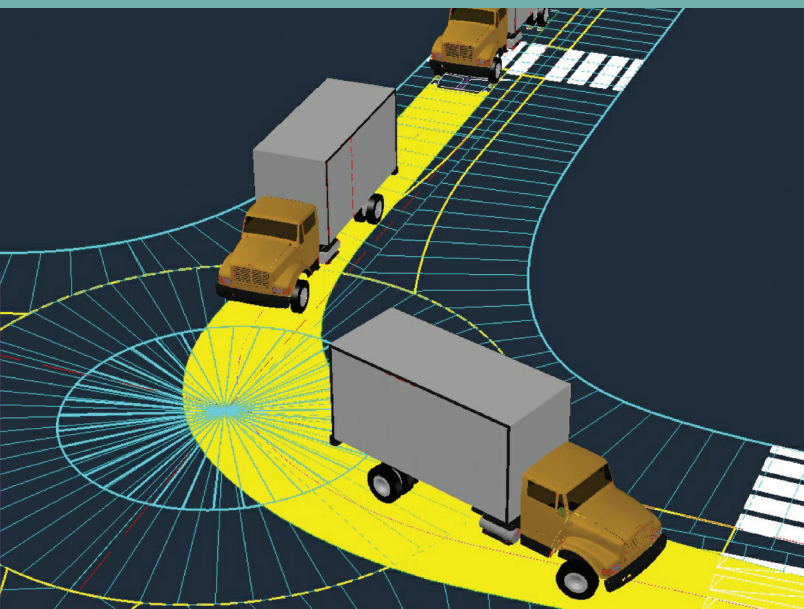
Powerful Grading Capabilities

TORUS' grading capabilities are powerful and easy to use. Design and review edges and cross slopes in full 3D, and generate contour lines that can expedite detailed modeling.

Increased Productivity

Be more productive with drafting designs using parametric drafting and dynamic design modeling.

FEATURES



Mini-Roundabout.



Custom Truck and Outer Aprons.

TAKE A CLOSER LOOK AT THE KEY FEATURES IN TORUS

Design Guidelines and Standards

- The software supports TAC 2017- Canadian Roundabout Design Guide and NCHRP Report 672.
- Designing mini-roundabouts.
- Get notified on potential design errors and inconsistencies. Parameters are based on a set range determined by the user.
- Create new roundabout design guidelines and edit, rename, or delete existing ones.

Analysis Tools

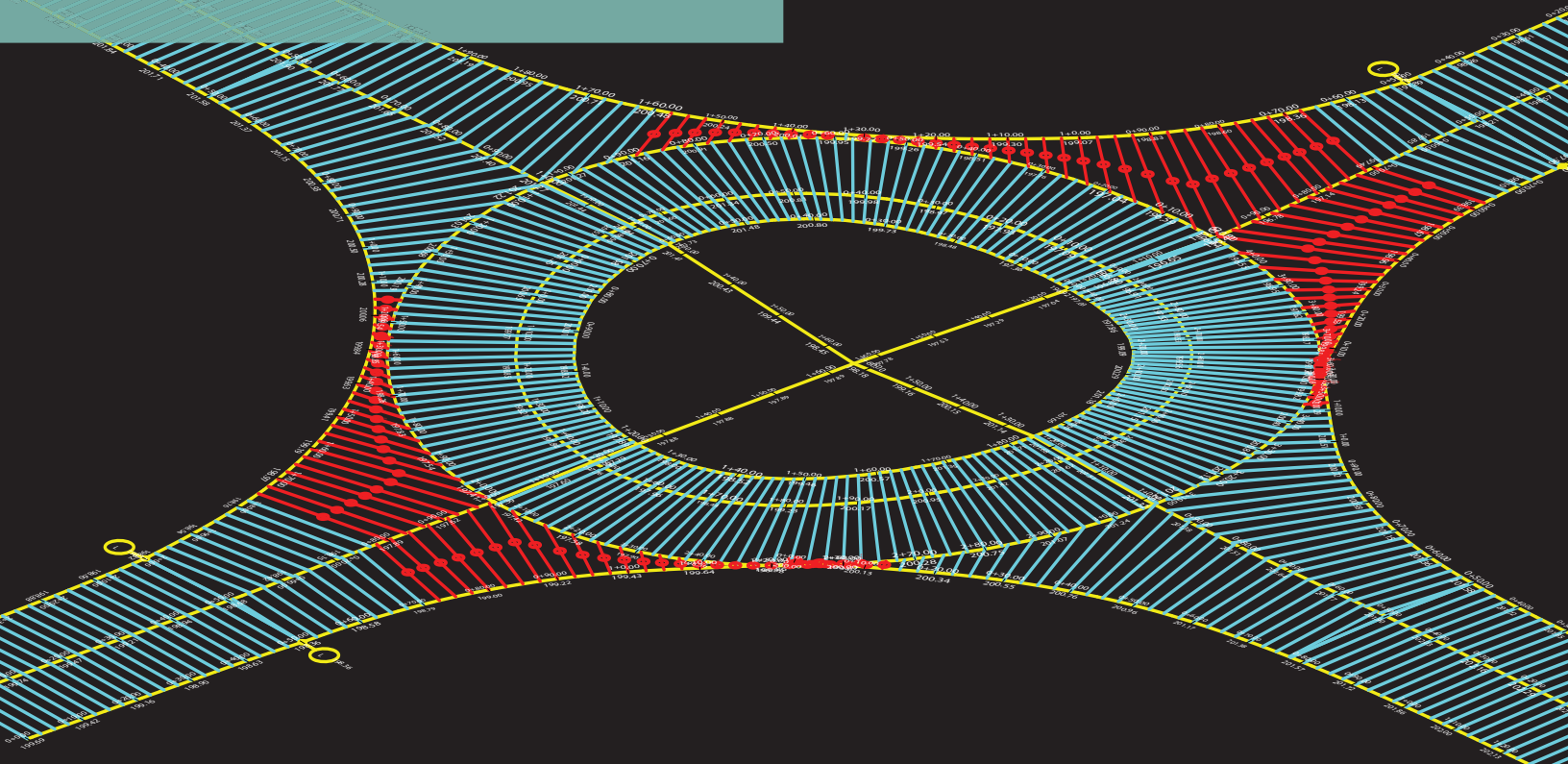
- Add, view, edit, and delete AutoTURN vehicle movements from a roundabout to determine vehicle movements specified in the current design guidelines.
- Simulate vehicle movement within the roundabout CAD drawing.
- TORUS approximates the fastest paths and calculates speeds, providing powerful feedback to control speeds and evaluate consistency and safety.
- Generate various sight lines like approaches to crosswalks, yield lines, circulatory lanes, and more.
- Analyze Path Overlap to determine if the natural paths of vehicles in adjacent lanes might overlap.

Geometric Design

- Vehicle Envelope Method is used to generate roundabouts and mini-roundabouts based on vehicle movement.
- Select region-specific roundabout templates to create their design.
- Editing tools for design parameters will instantly update your roundabout design and reports.
- Grips/Handles allow designers to quickly edit the reference alignment of an approach leg including vehicle entry deflection.
- Detect and analyze vehicle path overlap, TORUS offers multiple radius entries at roundabout entrances.
- TORUS allows you to save, recall, and display multiple design iterations for review and comparison.
- The Refined Edge tool can draw lines and arcs, which can be fine-tuned to closely represent the final edges.
- The Adaptive Roundabouts tool performs vehicle path and fastest path checks on manually drawn roundabouts in CAD (eg. circular and non-circular).
- Generate Turbo Roundabouts that have key geometric elements dictated by the design vehicle swept path envelope.

Grading Design

- Edit the vertical profile to ensure approach roads enter and exit the roundabout at matching existing grades.
- Grade the central regions either from the exterior (Inscribed Circle Diameter) to the interior (Central Island) or from the interior to the exterior.
- Generate Autodesk® AutoCAD® Civil 3D® surfaces and alignments from your TORUS design.



Grading of the Central Region

Reporting: Reports can be added into a CAD drawing or exported to text format files

- Generate area reports to review the total area of space taken up by a new roundabout site plan. Different sections of a roundabout can be reported on such as footprint, roundabout, inscribed circle, central island circulatory roadway, truck apron, and splitter island envelope.
- Create and insert the Fastest Path analysis, Curve tables, and Summary Reports with all design information.

ABOUT TRANSOFT SOLUTIONS

Transoft Solutions, Inc. develops innovative and easy to use software for transportation professionals. Since 1991, civil engineers and technologists, architects, and city planners across federal agencies, state DOTs, airport authorities, cities, ports, and infrastructure consultants have come to rely on Transoft's field-researched design solutions.

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