

# BENTLEY® MXROAD®

The **v8** Generation

## Modeling tool for rapid and accurate road design

Bentley MXROAD is an advanced, string-based modeling tool that enables the rapid and accurate design of all road types. With MXROAD, you can quickly create design alternatives to build the ideal road system. After a final design alternative is selected, you can automate much of the design detailing process, saving time and money.

At its core, MXROAD uses 3D string modeling technology—a powerful yet concise method of creating 3D surfaces. The interoperable database allows engineers to create and annotate 3D project models in the most popular AEC platforms or in Windows. This means that you can work on the project within one environment, save it, and open it seamlessly in another environment with no loss of data. This promotes maximum productivity of trained staff.

### Design Creativity

Bentley MXROAD's dynamic placement and change functionality speeds the creation of 2D and 3D alignments. This "rubber band" flexibility promotes design creativity and the assessment of alternatives with quick cut/fill calculations. The end result is better quality design.

### Intersection Design

Intersection design, along with other functionality in MXROAD, is string-model based. This gives you the ability to dynamically re-grade intersections as needed. Problem areas can be resolved during the design phase rather than incurring the high cost of rework onsite.

### Superelevation Design

The Bentley MXROAD automated approach to superelevation design is fast and effective. Standards for superelevation can be put into a rules file for the quick application of the correct local, company, and project standards. This allows for efficiency without limiting your ability to use engineering judgement.

### Pavement Layer Generator and Volumetrics

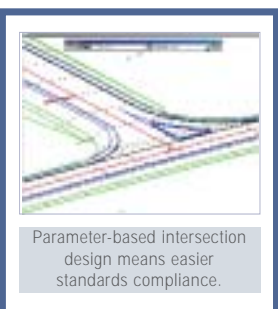
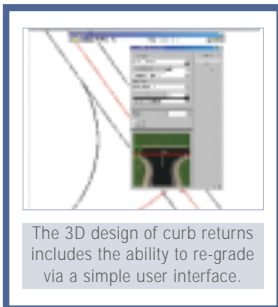
The Pavement Layer Generator models the roadway pavement construction complete with variable pavement configurations across and along the road. Volumes are produced as a by-product of the design process, delivering the information required for bids and enabling quick, accurate reactions to bid situations.

### Design Rules

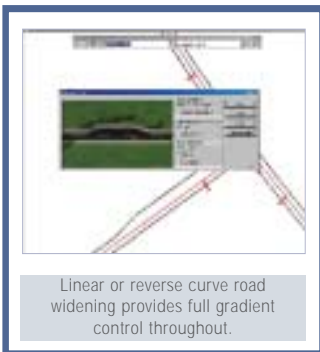
Built-in design rules allow you to apply local, company, and project standards, offering both time savings and greater flexibility. You can customize and override these standards as needed for greater flexibility in unusual design situations.

### MX Command Language and Input Files

The MX Command Language uses simple, repeatable commands that can be recorded and replayed using Wizards. This powerful, unique MXROAD feature saves time on reiterating designs. New designs can be quickly created through the use of input files.



## BENTLEY MXROAD AT-A-GLANCE



### Data Interoperability

- Seamless integration between AEC platforms—in both DGN and DWG environments
- Ability to import data from almost any source
- Available as a standalone Windows version

### Alignment Design

- Dynamic, advanced tools for interactive alignment creation
- Variety of transition types to international standards
- Comprehensive geometric reporting, including on-the-fly volumetrics allowing optimization of cut/fill percentages
- Ability to snap to existing terrain features with clearance checking
- Parallel alignment creation

### Roadway Design

- Library of standard roadway styles
- Ability to widen roadways using linear or reverse curves, controlling gradients throughout
- Built-in rules for fast and effective application of superelevation while maintaining your ability to apply control
- Intersection design in 3D with the ability to dynamically re-grade curb returns
- Storage of different styles and modeling of pavement construction

### Interactive Design Editing

- 3D design data editing via sections at individual or over a range of stations
- Ability to edit section elements by slope or push out points, updating cross section and plan views simultaneously
- Rapid design through the ability to restrict design to predefined boundaries (e.g. right-of-way limits)

### Reports

- Access to a wide range of reporting options from an expanding toolbar
- User-definable Horizontal and Vertical Alignment Geometry reports
- Ability to create reports from Volumetric Analysis tool for calculating cut/fill areas and volumes

### Earthworks

- Drag and drop styles to define cut/fill strategies
- Library of simple, multiple, and combination slopes
- Generation of single interface string, regardless of the cut/fill condition or separate strings for cut and fill
- Creation of custom earthworks styles specific to current design or local design rules
- Creation from any string, such as a curb return, edge of retention pond or retaining wall

### LandXML Support

- Support of industry-standard, LandXML
- Importing and exporting of alignments, surfaces, and other pertinent design information to other systems via XML

### Integration with Bentley Content Management and Publishing Solutions

- Tight integration with Bentley content management and publishing solutions to bring collaborative design data to the entire project team in a secure environment
- Integration of Digital InterPlot at the production end, enabling automated plot set generation and Web-based access to plot archives

## BENTLEY MXROAD SYSTEM REQUIREMENTS

- \*Software: MicroStation® V8 or higher, AutoCAD 2000 or higher
- Processor: Intel® Pentium® 500Hz minimum, Intel Pentium 900Hz recommended
- Operating System: Microsoft® Windows® 2000 SP2, Microsoft Windows XP
- Memory: 128 MB minimum, 256 MB recommended
- Disk Space: 450 MB
- Input Device: Mouse

\*For the MXROAD in Windows standalone version, no CAD software is required. All other requirements apply.

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