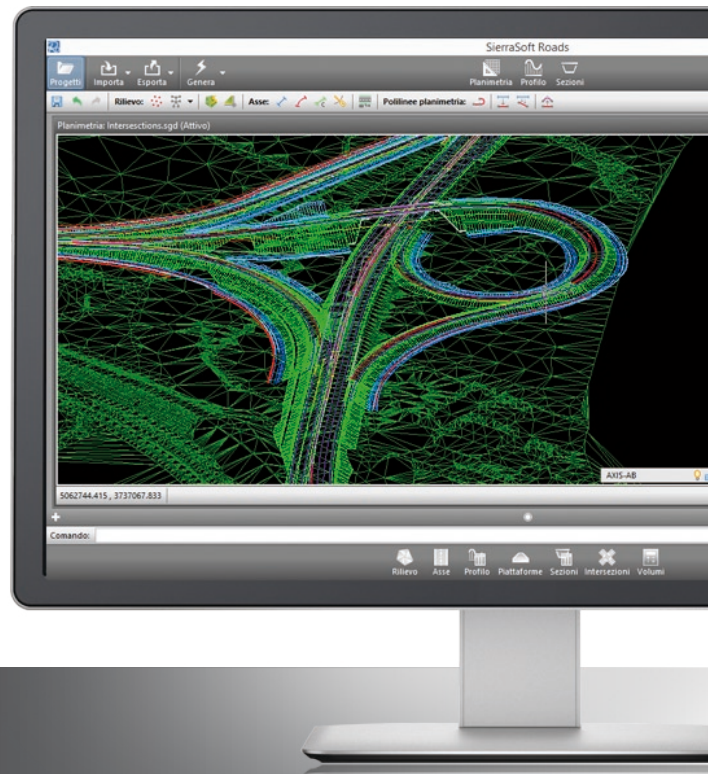# SierraSoft

Roads

SOFTWARE FOR ROAD DESIGN

Changing path is the only way to make a big step forward.

We changed everything starting and re-designing everything from the very beginning. We were looking for the most to give you the best: ease of use, extraordinary performance, functional design. We have decided to run with our know-how in order to create new technologies. We reflected and designed over and over as to give excellent: working environment, CAD, design of axis, input of longitudinal profiles and cross-sections, design of the road intersections. We neither gave up nor were satisfied until we found the best solution.
The future of road design starts from SierraSoft Roads.

MULTI. MULTI. MULTI.
Multiply your working space.

Extend at will the space where to manage your projects.
Split your project in several windows, pages and monitors.
All data and views are synchronized in real time.
Start a project in a window and continue working on it in another window on another monitor. Discover a new working dimension.

MEGA PROJECTS.
When size does matter.

Thanks to SierraSoft Roads it is possible to manage with big quantities of data: undreds of axis, thousands of sections, millions of triangles. Only necessary data are loaded into memory and the ones on the disk are automatically compressed in order to create small files. No more limits to your projects.

DESIGN OF THE AXIS.
Design the axis in a natural way.

A new system with a few essential commands allows to solve complicated cases in a natural way through grips, properties and intelligent objects. Everything is displayed in real time and can be verified due to the current policy.
The axis design has never been so easy.

MODIFICATION AND CONTROL IN REAL TIME.
Set to zero waiting times between the changes and the final results.

It is possible to control the design like never before, drastically reduce designing time thanks to 3D real time cross-section on planimetry. By changing a parameter everything is updated automatically. The result can be immediately checked even before creating the final project. Maximum control over the entire design and over every detail.

CREATION.
Create the project with one click.

It is possible to create a project with incredible ease. Insert axis and define the typical sections and you will have the finished project only with one click. Do you need to make some changes? You can do it just where you need it and then with one click everything is updated.

INTERSECTIONS.
Even simpler.

Whether it's roundabouts, at-grade intersections or complex interchanges, you can design them with SierraSoft Roads fast and accurately as never before. With a few click you can create and directly change them in 3D on planimetry.

POLICY.
Free to design where you prefer.

Design according to the road policy you need.
Thanks to an open and smart system, you can extend the policies with the new one you need. You can validate the calculations and verify the used functions and procedures. Thanks to this system you can work with no limits and have control over the project in real time.
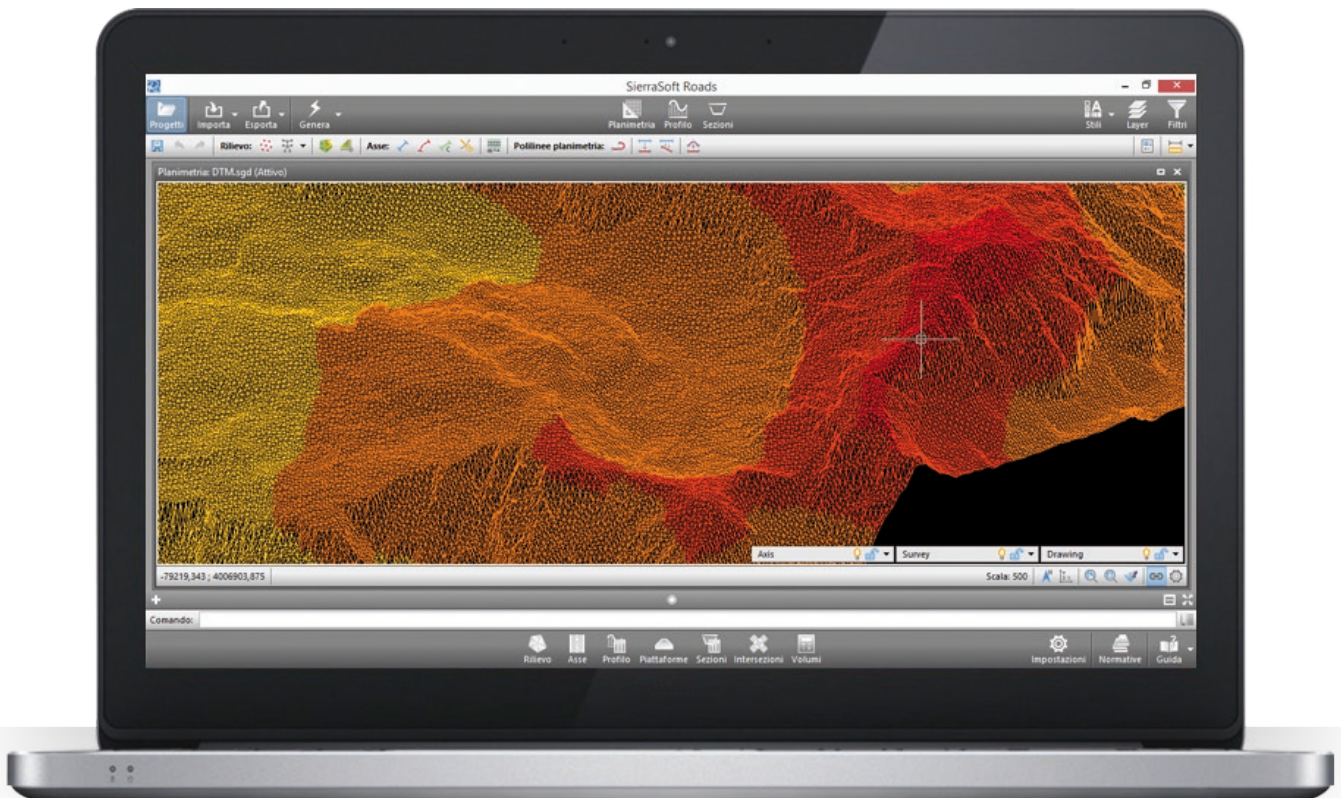
BIM.
Share data and expertise.

SierraSoft Roads is a BIM software for the infrastructure field. Data include physical and functional features of the several parts of a project becoming a database of sharing of knowledge, useful during the entire designing process.

Discover more
and watch the videos
on SierraSoft Roads web page!

GENERAL

- M3 Framework Platform.
- Ergonomic Interface.
- Customized sliding toolbar.
- Management of multiple windows, multi pages and multi monitors.
- Standard windows and full screen working method.
- Intelligent Command line.
- SmartSave system for the secure saving of data.
- International unit of measure management (Metrics and Imperials).
- SmartHelp system for learning by doing.

CAD

- High-performance 3D graphic engine.
- Management of drawing elements (Lines, Arches, Texts, etc.).
- Tools for editing drawing elements (Drag, Cut, etc.).
- Tools for the analysis of the drawing (Distance, Angles, etc.).
- Management of georeferenced images.
- Management of drawing styles.

SURVEY AND MODELS

- Management of survey points.
- Management of breaklines constraints.
- Management of boundary constraints.
- Constrained automatic triangulation.
- Creation of contour lines.

AXIS

- Definition of horizontal alignment: straights, circular curves, clothoids.
- Integrated policy control of horizontal alignment elements.
- Management of planimetry polylines.
- Tools to extract the planimetry polylines.
- Speed diagram.
- Policy control of speed diagram.
- Management of geometry annotation through customized styles.

PROFILE

- Definition of vertical alignment: grade lines, circular vertical curves, parabolic vertical curves.
- Integrated policy control of vertical alignment elements.
- Management of profile dimensioning through customized styles.
- Management of profile polylines.
- Extraction of profile polylines from customizable styles.

INTERSECTIONS

- Automatic management of at-grade intersections (crossroads, roundabouts, etc.).
- Automatic management of lane intersections (Interchanges, ramps, etc.).
- Definition of customized at-grade intersections schemes.
- Customized definition of superelevations in at-grade intersections.
- Graphic modification of intersection areas.

TYPICAL SECTIONS

- Management by station of the typical sections.
- Management by station of the zones of creation of the project planimetry.
- Complete and partial creation of the project planimetry.
- Management by station of default and customized features of typical sections (width of roadways, shoulders, sideslope, slope, etc.).
- Automatic calculation of superelevations according to policy.
- Customized management by curve and by station of superelevations.
- Automatic calculation of widenings according to law.
- Customized management by curve and by station of widenings.
- Definition of customized typical sections.
- Wide archive of parametric objects for the definition of the typical sections.

CROSS SECTIONS

- Manual entry of cross-sections.
- Management by station of the automatic entry of cross-sections.
- Management by station of the zones of creation of cross-sections.
- Management by station of extraction parameters of cross-sections.
- Management by station of calculation parameters of areas and volumes.
- Management of cross-sections dimensioning through customized styles.
- Management of polylines cross-sections.
- Extraction of cross-section polylines from customizable styles.
- Calculation of areas and volumes from customizable styles.

POLICY

- Specific environment for the definition of the policies.
- Customization of the policies.
- Check of policy controls.
- Integration of policy controls through horizontal alignment elements and vertical alignment elements.
- Library of road policies reference.

COMPATIBILITY

- Import and export of Geomatics Suite files (.PST).
- Import and export of AutoCAD files (.DXF,.DWG).

M3 FRAMEWORK

M3 framework is the new software platform aimed to create a new generation of applications for Topography, Infrastructures Design and for Constructions. M3 framework is a powerful, flexible and stable platform where fulfill products and services. SierraSoft Roads is the first product developed on M3 framework platform.

USER INTERFACE.
Beautiful and functional.

The ergonomic and refined Interface is focused on the user's experience.
The result is a simple and effective Interface with a wider graphic area and the access to features is natural and more intuitive.

GRAPHIC ENGINE.
Extraordinarily fast.

A special flexible and very high-performance 3D graphic engine. Based on this graphic engine, the CAD is extremely fast and convenient, even with huge quantities of vector data and images.

DATABASE.
A stable base for your projects.

M3 framework includes a powerful, stable and high-performance database, with an excellent level of data compression, in order to minimize the used space.
The security data is ensured by the backup function and SmartSave, which avoid the loss of information in case of unexpected stop of the software (for example a blackout).

MEMORY MANAGER.
Everything you need without waste.

M3 framework can use all the available memory on the system (2GB for Windows 32bit and 64GB for Windows 64bit).
It has an optimized management, which uses just the necessary memory and free memory as soon as possible.
The memory management is automatic and smart, in order to make the most of the resources of the computer.

SUPPORTED SYSTEMS.

M3 framework allows the development of products both for 32Bit and 64Bit Window platforms
(Windows 7 and Windows 8).

INTERNATIONAL.
Work without boundaries.

M3 framework is international by nature and manages different languages and several units of measure.
Thanks to the management of Unicode characters, it is possible to use all currently used writing systems, as Japanese, Chinese, Hindi, Arabic, etc. It is possible to choose from different languages among the Interface, the design data and the reports. In this way it will be possible to work with your favorite language and choose the one requested by the client for the finished work.

TEAMWORKING.
The advantage of working in team.

The M3 framework offers a messaging and notifications system among the users of the same project.
It is possible to access the same shared database, displaying the content and changing it.

HELP.
Learning by doing.

Learning tools are included in the M3 framework. The Smarthelp guides the user while working with the software by providing context-sensitive information. The user guide of the product is integrated in the Interface through retractable control panels and always available.

WEB SERVICES.
Improve functions with the web services.

Through the SierraSoft World platform it is possible to access the web services offered by SierraSoft.
It is also available the access to services provided by third parties.

Discover more
and watch the videos
on SierraSoft M3 framework web page!

SierraSoft
power and simplicity

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