

Overcoming the Biggest Site Design Challenges for Engineering Firm Owners



Introduction

The land development industry is advancing quickly, and you need to be prepared to meet demand and win new business. In this e-book we will explore the challenges, the solutions, and the answers to your most pressing questions, so that you can explore your next steps toward faster decision-making and shorter project completion timescales.



Engineering Firm Owners Obstacles



Meeting project deadlines

To keep your clients happy, you need to meet project deadlines, which requires your staff to have the right knowledge and skillsets. The right skillsets cost money and finding the right person takes time, but time is not something you have when clients are waiting for you to deliver projects. You need to be able to get the job done quickly without hiring specialists.



Identifying and communicating site constraints and solutions

Every site has different constraints that need to be worked around, but identifying them and deciding on the optimal solution is not an easy feat. You need to understand the options available and choose the one that makes the most sense for the design and budget.



Difficulty creating and understanding budgets

Clients want to know exactly where their money is being spent. If you cannot provide that information, you will not be able to justify the budget. Communication is key to developing a positive working relationship, and helps ensure there are no unwanted surprises down the line.



Conveying design intent to stakeholders

Conveying to your client, your stakeholders, and the community what your design will look like is one of the biggest challenges when designing a site. If they cannot see it, understand it, or realize how much risk is involved, they will not proceed – and you risk losing business.

What if you could overcome these obstacles faster and finish projects days to weeks sooner?

Meet OpenSite®

Complete projects 20% faster with existing staff

OpenSite is the only purpose-built software created specifically for site design and land development, but that does not mean you have to be a CAD expert or have specialist skills to use it. You can use the application's simple automation capabilities with parametrics to quickly create design elements including but not limited to parcels, roadways, parking lots, golf courses, and clubhouses to finish site designs 20% faster.

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How can the number of single-family parcels be maximized?

The parceling feature can define parcel sizes, draw your desired roadway, and automatically create lots. If a lot configuration is not possible, the software will not draw it. OpenSite tells you what is feasible and what is not, so you can quickly finalize your design. OpenSite provides:

- ◆ Rules-based/relational modeling to capture, store, and maintain design elements
- ◆ Easy configuration and customization capabilities
- ◆ Dynamic change management
- ◆ Automated project deliverables





Quickly and cost effectively solve site constraints

OpenSite's capabilities can solve site constraints in hours to days, instead of weeks to months. The application will tell you what is possible and what is not early in the conceptual stage so you can quickly understand if a site is viable, then create solutions to deliver a feasible project for your clients.



How will the site drain?

OpenSite will analyze grading and stormwater design at the same time to optimize the cost of the stormwater piping solution. OpenSite has capabilities to help conceptually design stormwater basin ponds and make sure your layout has considered the pond location and grading cost for pond earthwork movement. OpenSite provides:

- ◆ Precise data acquisition
- ◆ Drainage and underground utility design
- ◆ Enhanced project transparency
- ◆ Reality meshes for continuous context of real-world conditions

Create detailed budgets

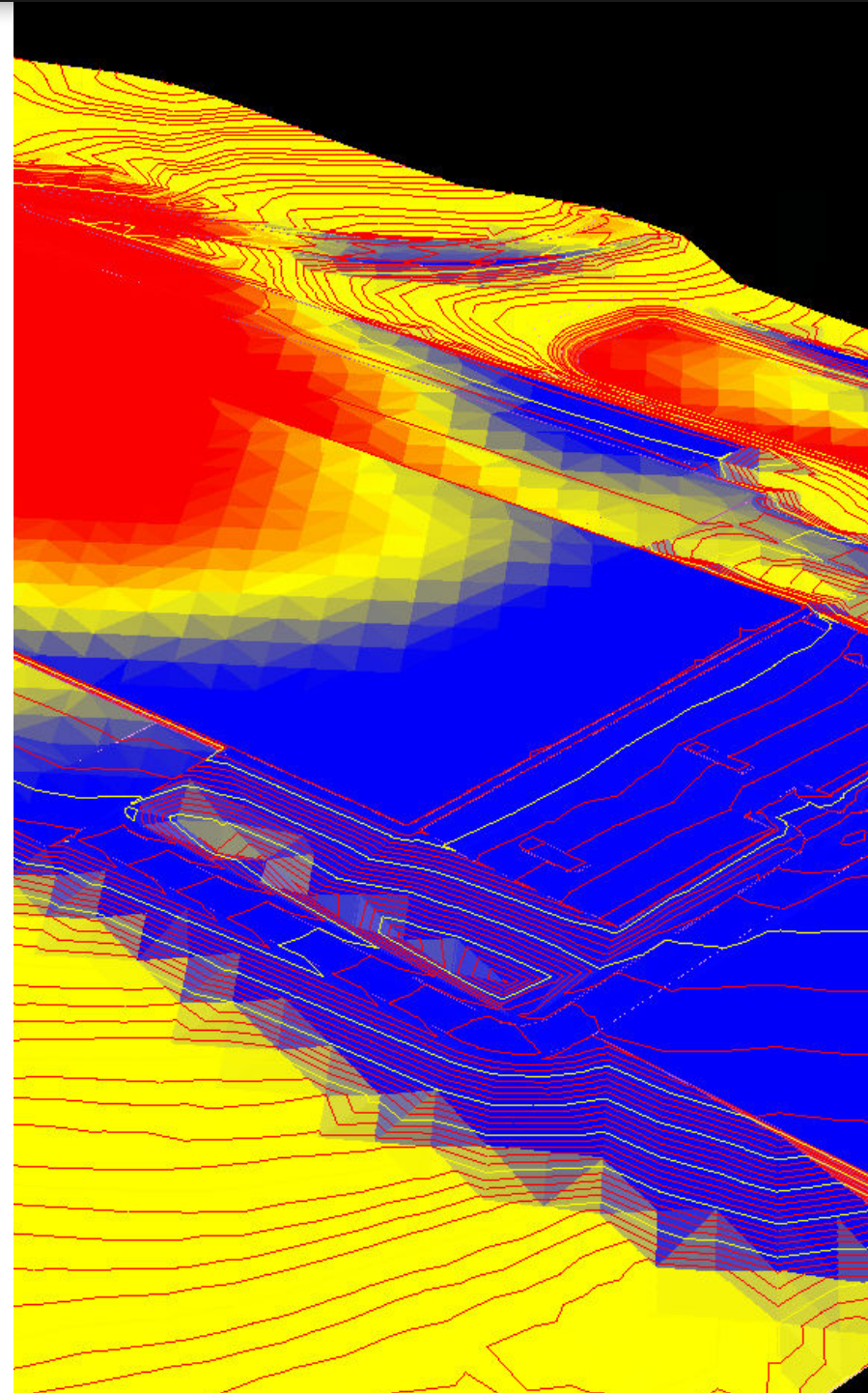
OpenSite can create detailed budgets in just one click. The application's grading solver optimizes earthworks based on construction costs by comparing thousands of design scenarios to find the best cost of construction based on your requirements. You can show your clients exactly what work is required and how much it will cost to keep the budget on track.



How can project risk be reduced?

OpenSite's grading solver outlines exactly how much cut, fill, import, and export is required for your design. Detailed cost estimates are automatically generated to find the lowest cost of construction based on your requirements. OpenSite can generate reports with deeper economic insights for your project, including cost estimates for rock exports, retaining walls, curbs, gutters, asphalt paving, and even piping to give a total cost of site construction and accurately assess the economic feasibility of your project. OpenSite provides:

- ◆ Rapid site modeling and analysis
- ◆ Earthwork optimization and quantification
- ◆ Fast identification of site constraints
- ◆ Design alternatives to limit revisions and reduce rework





Seal the deal with stunning visualizations

You can leave traditional 2D CAD design behind and advance to 3D modeling using LumenRT™, which is included with OpenSite. Stunning animations and 3D visualizations will clearly communicate your project's intent and quickly secure stakeholder buy-in. These visualizations will show what your design will look like, wow your clients, and set you apart from the competition.



What will the design look like?

With LumenRT, you can convey your design intent to stakeholders and communicate your plans for the project. High-definition images and videos will show exactly what your design will look like. You can add moving vehicles, pedestrians, and even trees that change with the seasons. When they can see it, they believe it. OpenSite provides:

- ◆ Rich environmental context for your designs
- ◆ Cinematic quality skies, weather, and atmospheric effects
- ◆ Library of animated characters, vehicles, vegetation, and more
- ◆ Variety of export options

Engineering firm owners like you trust OpenSite

“What [OpenSite] SITEOPS® allows us to do which other systems don’t... is it allows us to look at options.”

Hear how Michael Semeraro, Jr. of Langan Engineering and Environmental Services, Inc. used OpenSite to optimize the design process and solve what-if scenarios.

Watch Video



Michael A. Semeraro, Jr., PE, PP
Managing Principal / Executive Vice President
Langan Engineering and Environmental Services, Inc.

The smart choice for owners



OpenSite will get the job done faster

When designing a site, you need site design software, not road software. OpenSite is the only true site design software built specifically for site and land development. Using the right software for the task allows for improved projects and improved outcomes.



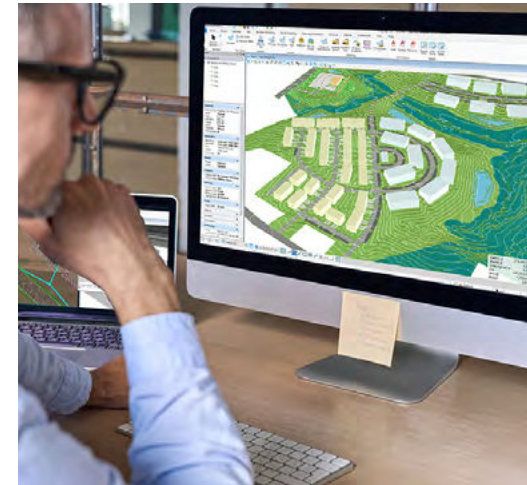
OpenSite is affordable

You will be surprised by how little a 12-month subscription license of OpenSite costs. Businesses of all sizes can now compete with the industry's leading players.



Bentley has your back

Support and standard training are included with your license, so you can seamlessly onboard your team. Need customized training or help with a specific project? We have options for that too.

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