RICK ENGINEERING COMPANY

3D Laser Scanning



MARKETS

- Civil Infrastructure
- Site Planning
- Building RetroBIM
- Architectural
- Structural
- Mechanical/Electrical/Plumbing
- Academic
- Commercial
- Industrial/Plant
- Healthcare
- Energy
- Heritage/Cultural
- Geotechnical
- Forensic
- Gaming/Movie

SERVICES

- Terrestrial Laser Scanning
- Scan to BIM
- 3D Modeling
- Revit Modeling
- CAD Conversion
- Aerial LiDAR
- Time-of-Flight/Phased Based Scanning
- Construction Coordination
- Web Publishing
- 3D Animations
- Facility Management Integration





3D Laser Scanning... "A Glimpse"

Excellence in design begins with comprehensive understanding of existing conditions. Our 3D laser scanning scanners collect up to 1,000,000 points per-second to produce a very dense and accurate collection of individual measurements known as a "point cloud" with a positional accuracy of 6mm. 3D laser scanning measures existing building interiors and exteriors, pipe networks, construction sites, bridges, historical sites, topography and more and can produce a 2D or 3D CAD model; a dependable starting point to test and verify design concepts that account for existing conditions. A single 3D laser scan session builds a foundation and enhances coordination among architects, engineers, planners, developers, and contractors with everyone working from the same database while simultaneously maintaining the utmost in work place safety because you don't have to "touch" the objects to scan them. Deliverables may include:

3D Point Clouds

3D Object Modeling

- 2D/3D CAD & Revit Models
- Dimensioned Exhibits Plan, Profile, Elevation
- Terrain Modeling and Contouring
- Interactive Panoramic Web Maps

• As-Built Building Information Modeling (BIM)

• 3D Computer Animations & Holographic Displays

RICK ENGINEERING COMPANY

RICK, founded in 1955, serves our clients from various locations in the Western United States. Our full scope of planning, design and engineering services supports millions of dollars of public and private sector projects performed for hundreds of clients each year.

RICK's strength is based upon our large, comprehensive, trained staff capable of producing superior complex work products in a timely fashion.

In five decades of service throughout the West, we have forged strong relationships with public and private clients, regulators, and owners who have come to value our expertise, seasoned professional judgment, and innovation, led by principals who are actively engaged in project development.



Site

3D laser scanning spans the barrier between existing conditions and design conceptualization. A 3D laser scan produces as-builts supporting a wide range of surveying, engineering and architectural designs. 3D laser scanning details all visible site features where planimetrics, breaklines, and spot elevations are compiled to create precise topographic maps. A 3D laser scan site survey serves the project team's multiple disciplines, providing architectural details for rehabilitation projects and allowing urban designers and city planners to simultaneously integrate design concepts into surrounding conditions. Real world accuracy is achieved while producing 3D renderings and animations; the heart of engaging project presentations to clients, stakeholders, and decision makers.

Building

Buildings often deviate from their original blueprints as they age and incur small changes. Undocumented changes can become huge problems when they crop up in the construction phase. 3D laser scanning captures these changes by collecting millions of laser-generated measurements of the interior, subterranean, and interstitial spaces of a building, its mechanical equipment, pipe networks, steel members, concrete structures and architectural details.

3D laser scanning data is one of the foundational building blocks to the Building Information Modeling (BIM) process. Before design and construction can begin with any modernization or rehabilitation project, the existing conditions must be captured.

Plant

3D laser scanning is an ideal tool for central plants, petroleum, and industrial plants, as well as mechanized settings. Phase-based 3D laser scanners capture complex piping and steel networks for even the most difficult-to-reach areas. The results of 3D laser scanning are tied to the plant's coordinate system and can be directly loaded into most industry leading software. 3D modeled objects can be created and integrated into various design packages to give a true, real world "as-built" of the facility. This "as-built" model supports design, coordination, facility maintenance, management planning, and future virtual design and construction activities.

- Arizona Tile Phoenix, AZ Balboa Park, San Diego Zoo, SeaWorld - San Diego, CA California Baptist University - Riverside, CA Cedars-Sinai Medical Center - Los Angeles, CA CYMER - San Diego, CA Disneyland - Anaheim, CA Downtown San Luis Obispo - San Luis Obispo, CA Kaiser Permanente West Los Angeles Medical Center - Los Angeles, CA
- Kaiser Permanente Woodland Hills Medical Center Woodland Hills, CA Kaiser Permanente San Diego Medical Center - San Diego, CA
 - Los Angeles County Sanitation District Los Angeles, CA
 - Los Angeles Unified School District Los Angeles, CA
 - Neutrogena, Exide, LAX Los Angeles, CA
 - Northrop Grumman Woodland Hills, CA North Santa Monica Boulevard - Beverly Hills, CA
 - Platform Irene Offshore Santa Maria, CA
 - San Diego Unified School District San Diego, CA
 - San Jose State Central Plant San Jose, CA
 - San Vicente Dam Raise San Diego, CA
 - Stanford University Bing Concert Hall Palo Alto, CA Tucson Convention Center Arena - Tucson, AZ
 - University of Arizona Tucson, AZ
 - Westfield Century City & Villages at Topanga Los Angeles, CA
 - Westfield University Towne Center San Diego, CA

Web

Field walks can now be performed virtually from the comfort of your chair. A 3D laser scan is published in a user-friendly, interactive Internet Explorer-based environment that allows you to pan 360° around your project. Visit the TruView Portal on our website to learn more.

Technology

We leverage our time-of-flight and phase-based scanners to fit your project's needs. Point Cloud information is stored in large data files and is made available to a multitude of software platforms including but not limited to AutoCAD, Microstation, Navisworks, Revit, 3ds Max, Google Sketchup, Project Wise, Navigator and many others either directly or through third party software plugins. Contact us for your software's specific requirements.

For over half a century, Rick Engineering Company...

has served clients in both the public and private sectors with dependable innovative design expertise. With our multiple offices, and state-of-the-art technologies, we provide award-winning planning, engineering and surveying throughout the Western United States.

Contact us at any of these locations:

San Diego Office

5620 Friars Road San Diego, CA 92110 (619) 291-0707

Sacramento Office

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Riverside Office

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Phoenix Office

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CIVIL ENGINEERING

COMMUNITY PLANNING & SUSTAINABLE DEVELOPMENT CONSTRUCTION MANAGEMENT SERVICES FORENSIC SERVICES GIS & GEOSPATIAL TECHNOLOGY SERVICES LANDSCAPE ARCHITECTURE PHOTOGRAMMETRY REDEVELOPMENT & COMMUNITY REVITALIZATION STORM WATER / ENVIRONMENTAL SERVICES SURVEYING & MAPPING 3D LASER SCANNING TRAFFIC ENGINEERING TRANSPORTATION ENGINEERING URBAN DESIGN & PLANNING WATER RESOURCES ENGINEERING



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