

# A real solution for real-world challenges.

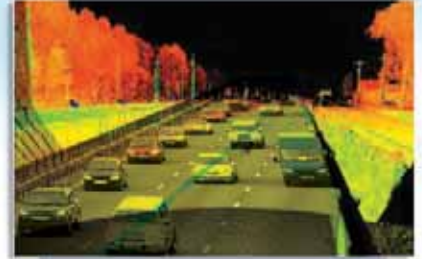
*Erdman Anthony's laser scanning technology is the ideal survey technique for busy transportation facilities, overhead utilities, active machinery, environmentally sensitive sites, and building façades.*

## **Need to see every detail of a big building from far away?**

*Kodak Office Tower Laser Scanning, Rochester, NY*

It took Erdman Anthony less than two weeks to scan the entire exterior of the building, obtaining approximately 84,000 square feet (surface area) of 3-D façade data.

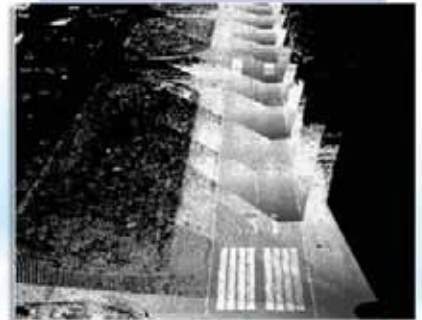
## What's Your Challenge?



### **Need to scan a busy road without interfering with traffic flow?**

*Rte 17 Upgrade to I-86, Survey*

Erdman Anthony scanned a busy highway without interrupting traffic.



### **Need to measure something at night?**

*City of Fort Lauderdale Executive Airport*

Erdman Anthony scanned this 4,000-ft.-long runway during a single night with no impact on airport operations.



### **Need to document existing internal conditions to design something spectacular?**

*Tommy Hilfiger, Manhattan*

Erdman Anthony's laser scans were the basis for the custom design of a new flagship store on Fifth Avenue in Manhattan.

**ERDMAN ANTHONY**

# The **technology** that makes it possible.

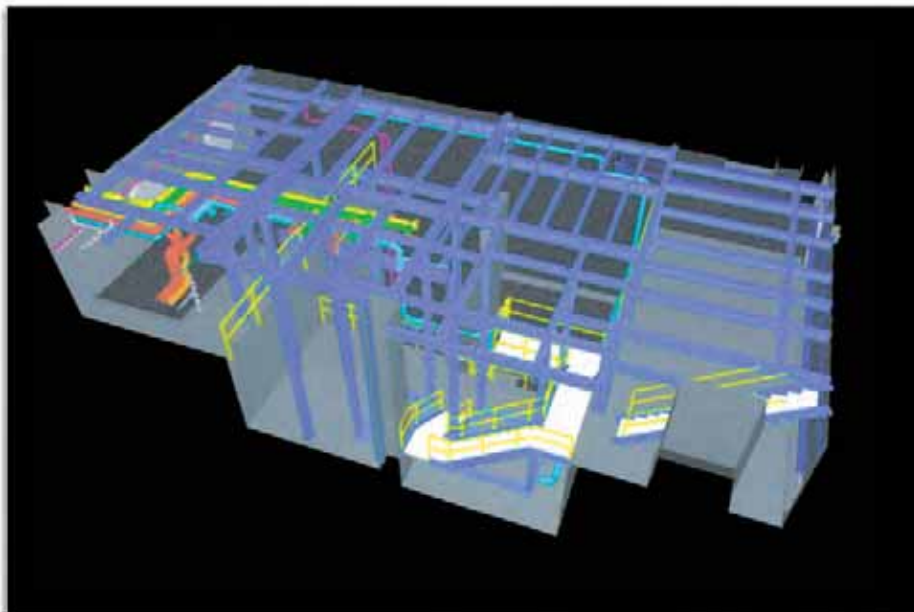
*Laser scanning, also known as LiDAR (Light Detection and Ranging), provides highly concentrated 3-D data points of site features. Cumulatively, the data points are referred to as “point clouds.” Erdman Anthony uses advanced scanners that collect data at a rate of 4,000 points per second. The process not only reduces data collection time, but also provides a much greater level of detail than conventional survey methods.*

## Scan these benefits.

- Provides highly concentrated 3-D data points of existing site features
- Measures directly to an object with a laser, so physical contact with that object is unnecessary
- Allows safer and less intrusive field data collection during daily site or facility operations
- Collects increased level of detail
- Reduces data collection time
- Eliminates the need, with overall point cloud, for return trips to the field should a client request additional data



*Scanner in use at the President's House Archeological Site in Philadelphia, PA.*



*3-D Model of Watervliet Arsenal, America's Cannon Factory.*

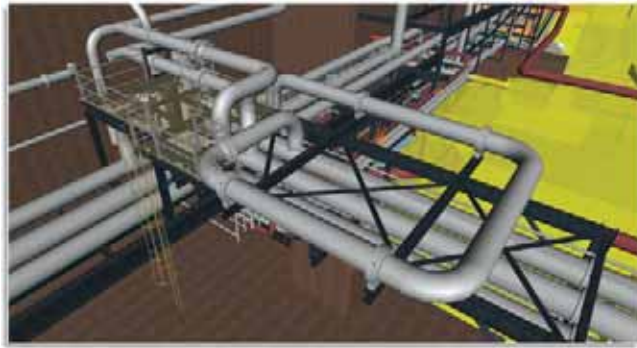
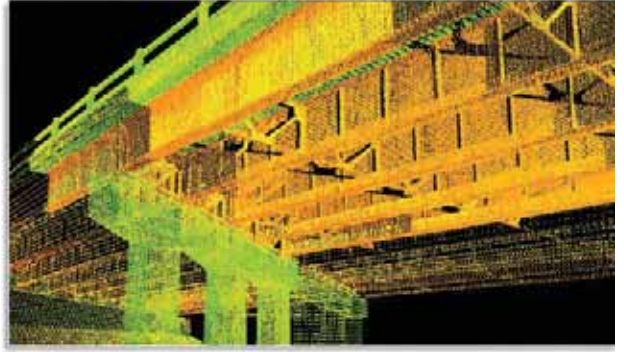
## Features

- Rapid Scan Rate: Up to 4,000 pps
- Effective Range: Up to 950 ft.
- Field of View:
  - 360° Horizontal
  - 270° Vertical
- Exceptional Detail: Spot spacing as close as 2mm

## Transportation Facilities (highways, bridges, airports, rails, ports, etc.)

### Interstate 684 Bridge Clearance Survey Westchester County, NY

This project was assigned under Erdman Anthony's term agreement for surveying services with the New York State Department of Transportation (NYSDOT), Region 8 to assist NYSDOT with highway reconstruction design on this heavily traveled Interstate in Westchester County. First, Global Positioning System (GPS) surveying and digital leveling established project control on-site. Then, terrestrial LiDAR (laser scanning) provided bridge clearance data on two bridges. **By utilizing laser scanning for the pavement DTM and bridge survey, there was no need for surveyors to access busy traffic lanes, request a lane closure, or use lifts to access the structural steel.** Laser scanning provided the client with quicker, safer, more detailed survey data.



## Industrial Facilities

### Kodak Footprint Reduction Program (FRP)

Erdman Anthony provided design services for a \$230 million program that included the design of utility rerouting, building demolition, and the relocation and consolidation of 4 million sq ft of production, storage, and office facilities. **The projects involved relocating and re-routing more than 15 miles of utility piping around buildings.** To support the design of these services, Erdman Anthony utilized state-of-the-art field laser scanning and 3-D modeling. With these computer models, the trade contractors were provided files that they could manipulate to view the work from any angle or point of view. This was a significant aid as they planned the execution and critical utility shutdowns required for this program.

## Architectural Applications (interior/exterior)

### Tompkins County Courthouse, Tompkins County, PA

The historic building known as the "Old Tompkins County Courthouse", built on the site of the first court house, is still used today as county offices and for periodic court sessions. The building owners became concerned about structural issues when they noticed large cracks in the masonry running along the front and back walls of the building. We provided 3-D modeling of the building exterior and second-story courtroom level. Detailed modeling of the original hammer beam trusses was also accomplished. **The 3-D model demonstrated to the structural engineers that the hammer trusses were bowing in the middle as well as leaning as much as 6" at the top.** As part of the structural renovations, the stucco façade will be repaired to fix the cracking that occurred on the exterior.



## Archeological Applications

### The President's House in Philadelphia, PA.

Philadelphia archeologists discovered the remains of the house where presidents George Washington and John Adams lived from 1790 to 1800. Given the sensitive nature of the dig, Erdman Anthony used the latest 3-D laser scanning technology to gather electronic images of the site. **The benefits of laser scanning survey services include highly detailed 3-D data, safer and less intrusive field operations, and enhanced visual quality.** The high level of detail means that if the NPS requests additional data from the site, it can be readily obtained from the original scan.

# Representative Clients



## Kodak Office Tower Laser Scanning, Rochester, NY

This project was awarded the Platinum Award for Engineering Excellence by the American Council of Engineering Companies of New York (ACECNY).



ACEC New York

## The President's House, Philadelphia, PA

This project was awarded the Diamond Honor Award for Engineering Excellence by the American Council of Engineering Companies of Pennsylvania (ACECPA).



ACEC/PA

## Genesee River Gorge, Letchworth State Park, Middle Falls, Castile, NY

This project was awarded the Platinum Award for Engineering Excellence by the American Council of Engineering Companies of New York



ACEC New York

**Let Erdman Anthony perform your survey faster, at a higher level of precision, and more economically.**