



# MATRIX **NEW**WORLD

Engineering Progress

## HIGH DEFINITION LASER SCANNING SURVEYING

### **Matrix is laser sharp.**

The Matrix team has extensive experience in utilizing high definition laser scanners (HDS) on a variety of projects. HDS is the state-of-the-art tool for data capture and Matrix has successfully implemented the technology in number of applications including rail corridor surveys, existing conditions roadway surveys, building façade and elevation surveys, plant and pipeline surveys. Matrix is able to integrate cutting edge HDS technology with our other surveying and measuring tools to provide our clients and team partners with the most comprehensive and complete data possible.

The scanner provides a very dense and complete data capture with the ability to collect a point at a <1 mm spacing in three dimensions. The resulting data is known as a point cloud, and has a resolution that resembles a photograph. The point cloud can then be utilized to create 3D renderings, Building Information Models (BIM), topographic surveys, and traditional 2D line drawings.

The Matrix team is experienced in utilizing HDS for civil/survey design projects, and also in utilizing point cloud data and Revit software to create 3D models for BIM. Matrix has provided Revit models of as-built conditions to clients in the health care and pharmaceutical industries for use in creation of BIM models. Matrix has prepared models of physical plants, building exteriors, and process rooms for asset inventory and retrofitting.

HDS provides a more complete data capture over traditional methods, reducing or eliminating return trips to the field for additional information. In addition, HDS is a safer means of collecting data. The data is collected using “reflector-less” technology reducing or eliminating the need for field personnel to enter dangerous or hazardous environments.

Matrix HDS experience allows our team to “think out of the box,” when we address a project’s needs and to apply the most appropriate tool to provide the best results.

### **Services provided**

- Boundary Surveys (large & small tracts)
- Topographic Surveys
- Wetlands Location & Stream Surveys
- Right-of-Way (ROW) & Route Surveys
- Road Cross Sections
- Tidelands & Riparian Surveys
- Hydrographic Surveys
- ALTA/ACSM Land Title Surveys
- Hazardous Waste Site Surveys
- Green Acres Program Surveys
- Architectural As-Built Surveys
- Farmland Preservation Surveys
- Aerial Photo Control
- As-built Record Surveys
- Expert Testimony
- High Definition Laser Scanning (HDS)
- Utility Surveys

### **Contact**

#### **Matrix New World Engineering**

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Certified WBE/DBE

