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WWW.F3-INC.COM



3D SCANNING
3D PRINTING
3D CAD MODELING
LAND SURVEYING
BIM SERVICES
CONSTRUCTION SERVICES
RAPID PROTOTYPING
METROLOGY

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## **3D SCANNING**





#### 3D SCAN & MODELING

Our patent pending workflow, AUGMENTED INDUSTRIAL<sup>™</sup>, allows for an array of possible deliverables for your project. F3 provides solutions for your as-built environments.

- Historical Preservation
- Industrial Plant Solutions
- Building Information Modeling
- Land Development
- Topographic Scanning
- Volume Scanning
- Deviation Analysis
- Inspection Scanning
- Surface Modeling

#### **SURVEY CONTROL**

Surveying techniques are used to create a horizontal and vertical control network on the project datum. We utilize a variety of scanners such as Leica C10, Trimble, Faro Laser Tracker, and Faro Edge ScanArm.

Geo-referenced scans are then stitched together to create a high-precision point cloud. 3D models are created from the point clouds, resulting in accurate depictions of as-built conditions. The 3D models can be delivered in a variety of software formats:

- AutoCAD 3D Solids & 2D Linework
- Autodesk Plant 3D, Revit, Navisworks, & Inventor
- Trimble SketchUp
- Rapidform



### **FARO LASER TRACKER**

The FARO Laser Tracker is a portable coordinate measuring machine that allows us to make accurate measurements over long distances. The Tracker has an accuracy of 0.0027" at a distance of 30 feet. Its maximum working range is 230 ft.



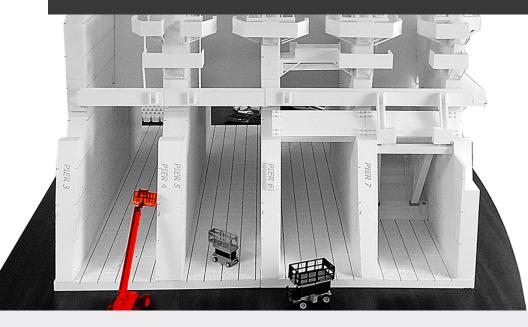
### **FARO EDGE**

The Edge is a portable measurement arm that allows F3 to verify client's product quality by performing inspections, tool certifications, CAD-to-part analysis, and reverse engineering. We can scan any object to produce an as-built CAD model.



## **3D PRINTING**





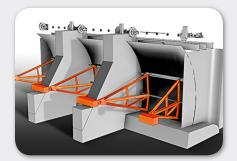
### **HOW WE PRINT:**

F3 uses additive manufacturing technology to create industrial grade plastic models based on computer models created in Autocad, SolidWorks, etc. Any design can come to life with our dedicated team of modeling technicians. Models can be printed in ABS, Polycarbonate, or Ultem.

We also offer quality painting for our 3D-printed models. Take your prototype to the next level by adding custom colors.

### **F3 PRINTER LINEUP:**

- Fortus 400
- UPRINT
- Fortus 250
- UPRINT+



### **CLIENTS INCLUDE:**

















# FROM MODELING TO COORDINATION:

F3 collaborates with owners, designers, and contractors to assist in delivering complete, high quality information models. With a firm understanding of BIM technology, we help implement BIM coordination effectively to reduce time and lower cost on projects.

### **SERVICES:**

- 3D Laser Scanning
- Point Cloud Data Modeling
- 2D Plans to 3D (Design)
- Clash Detection
- 4D & 5D Services
- 3D Modeling & Coordination

### **SOFTWARE:**

- Revit
- Navisworks
- Autodesk Infrastructure Suite
- Autodesk Plant Suite
- Cyclone
- Rapidform
- RealWorks

We convert point cloud data and 2D plans to an intelligent 3D model.

## LAND SURVEYING





# CONSTRUCTION SURVEY SOLUTIONS:

- Heavy Civil
- Refineries
- Residential / Commercial
- Environmental / Landfills

### **SERVICES INCLUDE:**

- Construction Staking
- Automated Machine Control Support
- Earthwork Support Quantity Surveys
- Quality Control

# PROFESSIONAL SURVEYING SOLUTIONS:

- High Precision GPS Control Network
- Boundary Survey
- Topographic Survey
- ALTA Surveys



### **SUPPORT FIELD OPERATIONS:**

- DTM Modeling & Site Calibrations
- On/Off-Board Equipment Setup, **Calibration & Troubleshooting**
- On-Site GPS Training & Support

## **SUPPORT CONTRACTORS** & ESTIMATORS:

- Quantity & Construction Surveys
- Certification & Verification Surveys
- Estimate / Takeoff Quantity Checks
- Targeted Material Takeoffs
- Earthwork & Concrete Takeoffs

### **SUPPORT SOFTWARE:**













# RAPID PROTOTYPING









### **OUR MATERIALS:**

Our industrial strength parts provide high detail at a low cost. High heat tolerances allow these prototypes to be used for thermal testing. Our materials include:

### **ABS**:

Typical industrial plastic with low cost and good durability. Comes in multiple colors.

### POLYCARBONATE:

Very high tensile and flexural strength. Great for tooling and fixtures. High strength with superior mechanical properties.

#### **ULTEM:**

Highest quality plastic. Outstanding strength with a high FST rating, strength-to-weight ratio and heat resistance.

### **OUR PROCESS:**

- Concept Design
- SolidWorks Modeling
- Product Development
- 3D Printing

