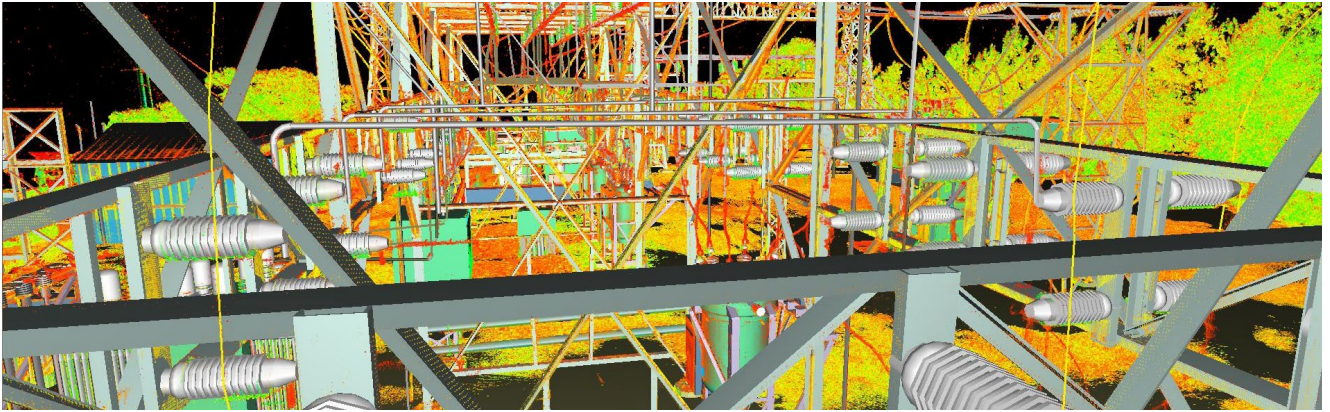


# POINTS & PIXELS



## » Combining Data from Multiple Platforms Provides Accurate Deliverables

Maser Consulting's Static Laser Scanning department was tasked with scanning and modeling an electrical substation located in the US Northeast. The field scanning portion of this job required set-ups at eight individual locations. Photography was collected at each set-up so a point cloud with RGB values and color Leica Tru-Views could be created. The client was also provided with a deliverable that included a model in AutoDesk Civil3D format.

The cleaned and unified point cloud consisted of 128.2 million points, contained within a roughly 10 GB database. Leica Cyclone was used to model all the substation components, and ClearEdge 3D's EdgeWise was used to model all of the steelwork. In our experience, we have found that utilizing multiple software applications and taking advantage of many programs' individual strengths enables us to create a comprehensive model deliverable while providing an affordable price. We've used similar strategies with Autodesk Revit and Cyclone in the past to produce other forms of modeling. Above all, laser scanning provides us with a method of obtaining accurate 3D object spatial data from challenging and potentially hazardous environments from a safe, remote distance.

The final model consists of over 13,000 individual Cyclone primitives and EdgeWise Steel objects. The individual Cyclone primitives are used as subunits, combined in such a way to accurately represent the components found on this site. Everything, from the insulators to the largest substation components can be modeled to provide a visually relevant, fully measurable, and geo-referenced model that can be used for object placement conflicts, inventory and emergency management.

*Maser Consulting P.A. is a privately owned, multi-discipline engineering and consulting firm with a unique balance of public and private sector experience. Headquartered in Red Bank, NJ the firm employs over 500 professionals in 18 offices nationwide. The firm's experienced survey professionals provide a complete array of services from conventional land measurement to geospatial survey including 3D hi-definition laser scanning, mobile LiDAR and Amberg System Technology for rail and tunnel measurement services.*

