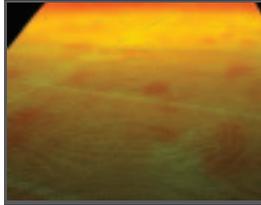


Parking Lot Survey at Strip Mall, WA

100% productivity increase and much greater detail with Cyrax®

Scope Topographic survey of 10-acre site & nearby intersections; AutoCAD site map deliverable
Date 2001



"I was pretty skeptical. I really didn't think it would go as quick as it did... but Cyrax would be my choice for this type of project going forward. What I see as one of the biggest benefits of this technology, however, is being able to avoid return visits to the site. When a client says, 'Can you get this additional information for me?' we can just go into our scans and retrieve it and produce the information they need in a couple of hours instead of having to spend another day to go back out and do more surveying."

Sean Douthett, P.L.S., David Evans and Associates

Project Facts

Field: 3 days; 2-person crew (for Cyrax portion); 42 scans

Office: 3 days; 1 person

Deliverables: AutoCAD plan drawings; SoftDesk surfaces

Customer Benefits

- 100% productivity increase in the field compared to traditional methods
- No lane closures and surveyors didn't have to stand in traffic
- For the same cost or less, much more information was obtained
- If the client needs additional site information, chances are good that it's already been captured

Background: David Evans and Associates' (DEA, Tacoma, WA) Civil Engineering Dept. was ready to begin design work on a modification of a strip mall, including a large parking lot. Before they could begin their design, they needed a detailed topographic survey of part of the mall area. They presented the opportunity to an internal DEA survey group that had just acquired a Cyrax 3D Laser Scanning system; the internal team took advantage of the opportunity to evaluate the use of the Cyrax system on this type of project. The full project was 28 acres, 10 acres of which was parking lot and nearby intersections and the rest of which was a wooded area.

Project Workflow: DEA decided to deploy Cyrax on the open parking lot area and to use traditional total station methods on the wooded area. Scans were supplemented with digital photos to enable designers to safely identify specific attributes (e.g., water vs. gas vs. sewer cleanout valve). Scans were tied to local control using hemispherical scan/survey targets, which were also shot with total stations. The fact that the parking lot area was vacant enabled the scanner to be used very effectively.

The tripod-mounted scanner was also used to survey three (3) major intersections adjacent to the mall, even while traffic was flowing. Each intersection required three scans from setups around the berms/medians near the intersections. Using Cyrax was also a big safety advantage for the intersection surveys: there were no lane closures and no one had to stand on the roadway. A two-person crew did both the scanning and the surveying of the registration/geo-referencing targets. In the office, Cyclone™ was used to produce drawings for export to AutoCAD and surfaces for

export to SoftDesk. Data was incorporated into the overall base map with terrestrial data. Overall, the Cyrax team needed 3 days in the field; it was estimated that the same job done conventionally would have taken an average two-person crew 5–7 days. With Cyclone, another 3 days (one person) were needed in the office, the same as would have been required conventionally.



In consideration of end client confidentiality, images are general parking lot images, not client's specific parking lot.

CYRA

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