



INSPECTION OF HIGHWAY OVERPASS CONSTRUCTION

CALTRANS PROJECT, WALNUT CREEK, CA

PROJECT GOALS

- Assess viability of *Cyrax* for inspection of highway construction

PROJECT FACTS

- Scan time: 2 hours
- Six ground level scans
- Highways 680 and 24 interchange
- 100 ft. columns with exposed rebar
- Project performed March 1997

CYRAX BENEFITS

- Ability to map entire project site in minimal time
- Ability to capture geometric data for unfinished freeway columns
- Improved safety for obtaining column measurements
- Availability of rebar details above column

A feasibility study of the *Cyrax*[™] laser scanning technology was conducted to assess its capabilities for construction site inspection work for the California Department of Transportation (Caltrans).

With six ground-level scans, the *Cyrax* system was able to map the overall site configuration, and in particular, the unfinished columns. Once the scans were completed, *Cyra* software allowed the operator/inspector to rotate, pan, and zoom in on the entire scene, or to concentrate on specific details of the project,

such as characteristics of the rebar pattern and internal tie-wires. The operator/inspector also had flexibility to perform on-screen, dimensional verification of collected data directly in the field.

With this capability demonstrated, *Cyrax* was considered to be a potentially valuable tool for assisting with inspection of highway construction projects. *Cyrax* demonstrated particular value in capturing data on structures that are inaccessible or have complex, irregular geometries.

CYRA

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