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Construction Surveying • Survey & Mapping • Subdivision Mapping • Civil Engineering • High Definition Laser Scanning

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## HISTORIC / PRESERVATION

### Plaza de Cultura y Arte Olvera Street Historic Core

Mollenhauer Group provided highly accurate and detailed plans sections and elevations of three of the oldest buildings in Los Angeles that comprise the historic Plaza de Cultura y Arte complex at Olvera Street, Downtown LA.

The high definition (HDS) laser scanner generated a complete set of reliable and extremely accurate as-builts for the construction, design and management team to be able to both analyze these complex structures and develop a conservation and design strategy.

It also enabled an essential historic architectural record of a unique LA landmark, conforming to the requirements of local and national standards.



### Ennis Brown House

Frank Lloyd Wright's iconic, textile block Ennis Brown House is in a critical state. Years of California earthquakes and storms have severely weakened this unique Los Angeles masterwork to the point that it is now both unstable and in real danger of collapse.

Mollenhauer's 3D surveying department carried out a controlled laser scan survey resulting in a set of highly accurate 3D data maps of the complex exterior and interior façades - taking just a few days.

Any structural movement can now be identified and measured. In addition to the monitoring application, the data can now be used to generate accurate 3D modeling as well as critical as-built visuals of the highly detailed architectural plans and sections.





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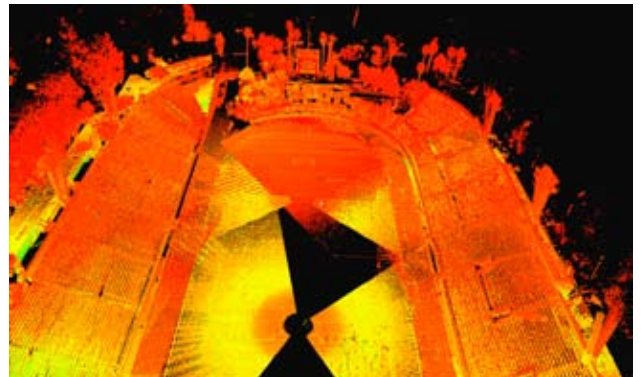
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## HISTORIC / PRESERVATION

### East LA College Stadium

East Los Angeles College is located in the suburban community of Monterey Park, California, ten miles east of downtown Los Angeles. The college has an international, multicultural student body, and many of its students transfer from East Los Angeles College to four-year universities in the area, such as California State University, Los Angeles, or the University of California, Los Angeles (UCLA). Campus facilities include an instructional center; bookstore; cafeteria; library; 20,000 seat sports stadium; 2,000 seat auditorium; and a 1,500 seat indoor swim stadium.

Mollenhauer's 3D surveying team provided comprehensive as-built data for the retrofit of ELAC's stadium to ADA requirements. 44 scans were combined with local ground survey control to create an accurate 3D model of the entire stadium in less than a week. Design and visualization were then possible in a much more timely and efficient manner.



### San Diego's Gas Lamp District

The Gas Lamp District is one of Southern California's premier dining, shopping and entertainment districts. Sidewalk cafes and open air restaurants, jazz clubs, late night dancing, resident artists and micro breweries all contribute to the festive spirit of the area.

Mollenhauer was asked to produce a survey-accurate registered point cloud of data to be used for urban redevelopment visualization and planning. In less than five days, 95 scans of an area comprising fourteen city blocks. This data was then used by the redevelopment agency to assist local architects in developing plans for an improved pedestrian traffic flow and streetscape design. Most importantly, this data collection eliminated the need for repeated site visits from the design professionals. This data was also used for visual presentation purposes to help the local merchants understand where the congestion and overall aesthetic problems existed.





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### Disney El Capitan Theater

The El Capitan Theatre has undergone a museum-grade restoration, and Mollenhauer provide a detailed survey as a foundation for an historical preservation design strategy. In so doing, Buena Vista Distribution was assured that the structure's historical significance was preserved prior to the commencement of renovations.

The project includes the stage (which has been restored to its original 1926 legitimate-theater dimensions); a newly installed high-speed lift center stage; lighting; recently remodeled dressing rooms; and state-of-the-art special effects.

