FLOODPLAIN MAPPING

INTERMAP

CASE STUDY

CUSTOMER PROFILE: CORNERSTONE ENGINEERING, INC.

Cornerstone Engineering, Inc., a civil engineering and land surveying firm, has designed, managed and constructed infrastructure systems, including transportation, wastewater, and storm drain facilities, for nearly 30 years. Headquartered in Bakersfield, California, the company supports municipalities and governmental agencies, school districts and universities, water management agencies, commercial developers and architects, as well as select private land developers.

> *"Now that we have Intermap's current and cost-effective datasets, we've been able to reduce the expense of a typical $10,000 to $15,000 flood study by one-third. We couldn't turn out the quality flood studies that we have today without Intermap's enhanced and accurate data."*
>
> Alan Whitten, Engineering Supervisor
> Cornerstone Engineering

THE CHALLENGE

Cornerstone Engineering requires high-quality digital terrain model (DTM) datasets to map alluvial fan floodplain areas that can impact multi-million dollar land development projects. In order to conduct vital floodplain studies, the firm's engineers needed large topographical datasets that detail expansive areas across California's complex and varied terrain – from rugged mountain ranges and farm-rich valleys to arid deserts and coastal plains. "We had been using the outdated U.S. Geological Survey data," said engineering supervisor Alan Whitten. "We would have to combine this old topographic information with time-consuming field surveys just to get basic data. Basically, we needed quality data in order to serve our customers better and reduce costs."

THE SOLUTION

The floodplain supervisor for Kern County, California recommended Intermap Technologies as a solution, according to Whitten. After Intermap's representative presented various options and samples of its datasets, Cornerstone Engineering purchased digital elevation models created by Intermap's proprietary interferometric synthetic aperture radar (IFSAR) technology. The company now uses NEXTMap® products, including DTMs and orthorectified radar images (ORIs) for its numerous, high-stakes mapping projects. "We've cut out a lot of labor costs that we had in the past to prepare base maps for these studies," Whitten commented. "Now that we have Intermap's current and cost-effective datasets, we've been able to reduce the expense of a typical $10,000 to $15,000 flood study by one-third. We couldn't turn out the quality floodplain studies that we have today without Intermap's enhanced and accurate data."

SUMMARY

CHALLENGE

In order to conduct vital alluvial fan floodplain studies, Cornerstone Engineering needed large topographical datasets that detail expansive areas across California's complex and varied terrain.

SOLUTION

The firm uses Intermap's NEXTMap products, including DTMs and ORIs for its numerous, high-stakes mapping projects.

RESULTS

Now a repeat customer, Cornerstone Engineering continues to rely on Intermap for its superior-quality digital elevations datasets and ORIs.

IMPLEMENTING THE SOLUTION

Cornerstone Engineering integrated Intermap's data into its current system "quite easily," said Whitten. He added, "Because we use FLO-2D® and AutoCAD®, we need XYZ-coordinate files in state plane coordinates for use with our software. Intermap went out of its way to convert the aerial imagery and provided it in the format we needed." Whitten also mentioned that the biggest challenge was "trying to relate Intermap's NEXTMap data with existing field surveys. Intermap created an algorithm to scrub surface features and recombined the datasets to address this issue."

THE RESULTS

Now a repeat customer, Cornerstone Engineering relies on Intermap because the "geospatial data definitely meets our expectations and they provide great customer service to accommodate our specific needs," Whitten noted.

NEXTMap Digital Terrain Model (DTM), colorized and shaded to show relief.

THE INTERMAP ADVANTAGE

ACCURACY

Cornerstone Engineering turns out quality floodplain studies with "Intermap's enhanced and accurate data."

AFFORDABILITY

Intermap's datasets are so cost-effective that the firm continues to save thousands of dollars and still creates high-quality floodplain studies.

AVAILABILITY

Cornerstone Engineering now has Intermap's "current and cost-effective" datasets to serve its customers better.

USABILITY

The firm integrated Intermap's data into its system "quite easily."

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