



INTERMOUNTAIN CONSUMER PROFESSIONAL ENGINEERS (ICPE), UNITED STATES

Key Facts

Company: Intermountain Consumer Professional Engineers (ICPE)

Website: www.icpeinc.com

Industry: Oil & Gas - Onshore

Country: United States

Products Used:

- CAESAR II®
- Intergraph Smart® 3D
- I-Configure™
- CADWorx® Plant Professional

Key Benefits:

- Maintained baseline material list according to project's breakdown structure and segmented by area
- Updated plans and sections using CADWorx running on BricsCAD®
- Took advantage of isometrics project configuration using I-Configure and automatic attribute population
- Generated material estimates for alternative layouts according to client requests

ICPE REDUCES MAN-HOURS WITH CADWORX® ON DESIGN OF CRUDE-BY-RAIL FACILITY

Based in Midvale, Utah, U.S., Intermountain Consumer Professional Engineers, Inc. (ICPE) provides mechanical, electrical, civil, and structural engineering and design services to a wide sector of industries. Founded in 1979, the firm's 12 professional engineers and 20 project managers and engineers focus on delivering results safely, on time and within budget.

DESIGNING VANCOUVER FACILITY TO DELIVER CRUDE OIL TO U.S. REFINERIES

Tesoro Refining & Marketing Company LLC, a Tesoro Corporation subsidiary, and Savage Companies entered into a joint venture on a 360,000 barrel-per-day (bpd) crude-by-rail uploading and marine loading facility at the Port of Vancouver, Washington. The Tesoro-Savage Joint Venture will own the facility. Savage oversaw the design, construction, and operation. The facility will provide crude oil to U.S. refineries to help offset declining production from Alaska and California and more expensive foreign imports. The project included modeling all tank storage areas, piping, train unloading, and marine vessel loading facilities.

LOWERING OVERALL COSTS WITH CADWORX ON BRICSCAD PLATFORM

With stringent environmental and energy regulations, the project faced a long approval process involving extensive reviews and revisions. These often increase costs and delay schedules, with the 3D model under review for a period of time. Once approved, the project needed to ramp-up quickly through the software and detail design groups. The software team had to update the 3D model metadata and create and transfer new pipe specifications.



They decided to evaluate BricsCAD as an alternative CADWorx foundation. The design team, new to the project, had to develop material take-offs for estimates and evaluate alternative site layouts to deliver material savings and balance costs with efficient operation. They used CADWorx Plant with CADWorx Specification Editor and I-Configure. Deliverables included the baseline materials list, plans, sections, isometric project configurations, and materials estimates.

SAVING 960 MAN-HOURS WITH CADWORX

Using CADWorx, ICPE improved internal processes without increasing staffing.

“We determined that we could reduce costs by using CADWorx on the more affordable BricsCAD platform,” explained Javier Barrios, senior designer and software engineer.

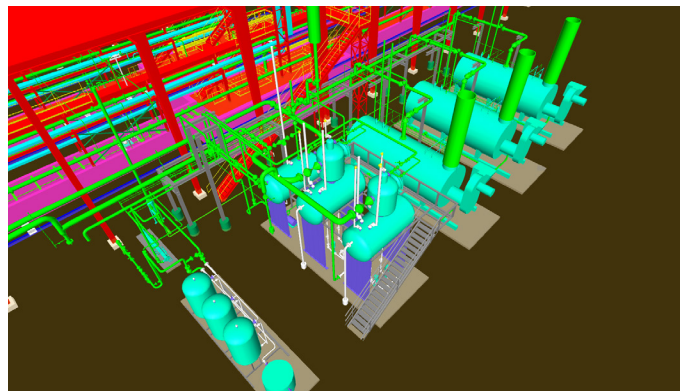
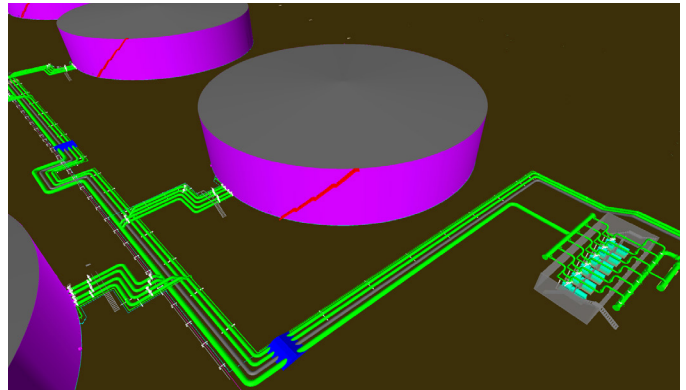
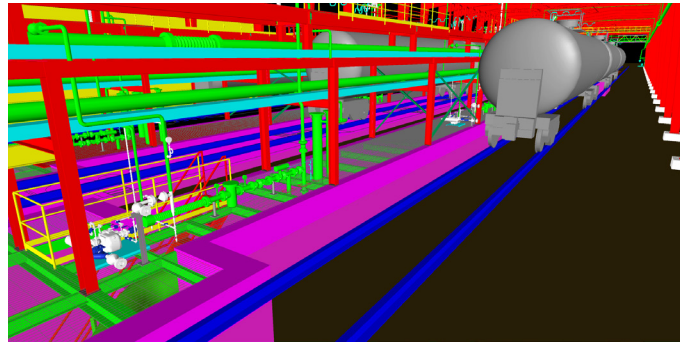
With CADWorx, the team eliminated incorrect and inconsistent data between pipe specifications and 3D models because they could push updates from the pipe catalogs to the model. They avoided manual corrections of the materials list and isometric drawings.

“Our designers could proceed with the model without waiting on specs, saving significant time,” added Barrios.

An internal estimate projected a savings of approximately \$6,500 per CADWorx user over five years. Overall, CADWorx helped them save an estimated 960 man-hours.

AWARD-WINNING PROJECT

ICPE received the 2017 CADWorx Drivers of Success Runner-up Award for its use of the software. The annual Drivers of Success competition recognizes innovative applications of Hexagon PPM products, impressive project results, and significant benefits from collaboration among disciplines and the integration of the products.



ABOUT HEXAGON

Hexagon is a global leader in digital solutions that create Autonomous Connected Ecosystems (ACE). Our industry-specific solutions create smart digital realities that improve productivity and quality across manufacturing, infrastructure, safety and mobility applications.

Hexagon's PPM division empowers its clients to transform unstructured information into a smart digital asset to visualize, build and manage structures and facilities of all complexities, ensuring safe and efficient operation throughout the entire lifecycle.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 3.8bn EUR. Learn more at [hexagon.com](https://www.hexagon.com) and follow us @HexagonAB.