

IPI Success Stories

IPI Presents . . . **AHA!** Moments—Project Success Stories from the Trenches

I-238 WIDENING & REHABILITATION

FAST FACTS

- Budget:** \$106,000,000
- Schedule:** After 6-month delay, finished 4 months early
- Claims:** None
- Owner:** Caltrans / Bay Area Toll Authority (BATA) / Alameda County Transportation Commission (ACTC)
- Contractor:** Flatiron West, Inc.
- Facilitator:** Pinnacle Leadership Group, Inc.
- Location:** Hayward, California

PARTNERING BEST PRACTICES

- Conducted kick-off and follow-up Partnering sessions with professional facilitator
- Monthly Scorecards throughout project
- Held issue-specific partnering meetings (like in the case of the Kent St. Bridge)
- Executive Commitment
- Engaged key stakeholders in Partnering
 - Funders (ACTC/BATA)
 - Bay Area Rapid Transit (BART)
 - United Pacific Railroad (UPRR)
- Used Dispute Review Ladder and DRB Process to finish job with zero claims!
- Saved more than \$1 million through Value Engineering Change Proposals (VECP's) and \$150,000 through the Kent Bridge Suspended Covers solution



THE I-238 KENT BRIDGE “SUSPENDED COVERS”

When one crane pick is better than two...

By all accounts, the I-238 Widening & Rehabilitation was a challenging and sensitive job. In 2006, the first year of construction, the Project Team fell behind schedule by six months. Fortunately, ongoing commitment to Partnering meant that by 2008, when questions arose in regards to Kent Bridge, the Project Team had a foundation of trust and felt comfortable working together.

Caltrans, Flatiron, and BART engineers realized that a typical falsework design would not work over BART tracks running beneath Kent Bridge. Traditionally, work crews would use a falsework design and build a protective cover to surround the tracks, to safely protect trains as construction continued overhead.

In response, Caltrans halted the falsework design and the conducted a **dedicated brainstorming process including BART and Flatiron engineers!** It would have been easy for each stakeholder to begin positioning themselves for claims. However, by sponsoring a dedicated, facilitated meeting focusing on this issue, Caltrans enabled BART and Flatiron to share their respective concerns and engineer a new design that maximized efficiency and increased safety for both workers and the commuting public.

The goal of the session was to design a cover integrated onto the girders themselves that could protect the BART tracks and allow trains to comfortably run beneath. And, ultimately, the integrated team of engineers came up with an elegant, win-win solution!

“Partnering takes the stress away. When you can go into situations and know that if you just bring good solutions to the table, then you don’t have to posture and you don’t have to figure out how you are going to work your [claim] positions.”

—Robert Ferrouge, Flatiron Project Manager

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“SUSPENDED COVERS” CONTINUED

Rather than build the falsework box around the tracks, Flatiron re-sequenced operations and performed the heavy girder assembly and deck pan installation on the ground. They then hoisted the pre-assembled units into place, dramatically reducing the amount of work conducted over the tracks. For the remaining work over the tracks, crews used platforms suspended between the pairs of pre-assembled girders.

This pre-assembled “suspended cover” design had multiple advantages: (1) By pre-assembling the girders and the protective cover on the ground (rather than two stories up) worker safety was increased significantly, (2) This design took less “track-time” to construct and remove than the original independent falsework design, significantly minimizing impact to BART operations (3) Though the pre-assembled girder design now required massive and much more expensive crane picks, it increased efficiency of the overall operation, netting a \$150,000 reduction in cost!

The I-238 Kent Bridge protective cover design was an elegant solution to a difficult set of circumstances. In this case, engineers from Caltrans, Flatiron and BART teamed up to think “out of the box”. By working together, the team ensured all safety concerns were met and the entire team could present the solution to stakeholders with a unified voice.

AWARD-WINNING TEAM

The I-238 Widening and Rehabilitation Project Team received the **IPI 2011 Partnered Project of the Year – Diamond Level Award** for its high level of Partnering in spite of difficult circumstances. The job started 6 months behind schedule and suffered many challenges along the way. However, through aggressive scheduling and high levels of Partnering, the job finished four months early—in time to help with the unexpected San Francisco Bay Bridge closures in October 2009.



Kent Bridge pre-assembled girders suspended by crane pick (Photo – Flatiron West, Inc.)

Five Tips for Project Issue Resolution

1. **Call First!** Do not surprise your partner by sending Friday night emails – speak to them in person or pick up the phone
2. **Expedite Solutions!** Project teams have a limited time to insert a technical solution before the issue will impact the schedule... make sure to keep that in mind.
3. **Specialize!** When your team is stuck on an issue, call a special meeting to negotiate a meaningful solution.
4. **Co-define the Problem!** When you attend the meeting – jointly define the problem – when all parties agree to the underlying issue, resolution is much easier.
5. **Come Prepared!** Make sure all parties have time to prepare and are able to negotiate on behalf of their company.



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