

Announcing the November 2009 San Francisco Section

Joint ASCE Meeting

**California Park Hill Tunnel:
A Multi-Modal Transportation Project**

David Crouthamel and Erin Hohenshelt

MEETING DETAILS

Restaurant:

Spenger's Fresh Fish Grotto
1919 Fourth Street
Berkeley, CA

Date and Time:

Thursday, November 19th, 2009
6:00 pm—Social Hour and Sign-in
7:00 pm—Dinner
8:00 pm—Presentation

Cost: \$40 (\$10 for Students)

Meal Choice: Salmon, London Broil, or Vegetarian Roasted Veggies – **Please indicate meal choice when placing your RSVP.**

Reservations*: RSVP to admin@asce-sf.org or 415-546-6546 by **Monday, November 16** with name, company, phone/email address, and meal choice. *Permanent RSVP list must RSVP as indicated above for this meeting.*

Driving Directions: From the northbound 80 Freeway, exit at University Avenue. Continue north on the off-ramp and turn right (east) onto Hearst Avenue. Cross the railroad tracks and turn right (south) onto Fourth Street. Spenger's is on the east side of Fourth Street.

Parking: You may park in the lot in front of the restaurant (sometimes it's free).

*To assist us with reservations and to help the restaurant with the set-up, please RSVP in advance. Walk-ins are welcome, but not guaranteed. No shows and late cancellations will be charged.

See next page for abstracts and speaker biographies.

California Park Hill Tunnel: A Multi-Modal Transportation Project

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ABSTRACT

California Park Hill Tunnel Rehabilitation and Multiuse Path Project is the first phase in the re-establishment of a 70-mile (113-kilometer) commuter corridor between Cloverdale in Sonoma County and Larkspur in Marin County. This project will construct the first 1.1 miles (1.8 kilometers) of the multiuse path between the Marin towns of Larkspur and San Rafael (Figure 1). Phase A consists of reconstructing the tunnel and constructing the multiuse path within the tunnel. Phase B consists of constructing the multiuse path outside of the tunnel and preparing the trackway for rail installation. The construction estimate for both phases is approximately \$21 million. Construction began in the summer of 2008 and is managed by the County of Marin under an agreement with Sonoma-Marina Area Rail Transit (SMART). AECOM is the designer, and Jacobs Associates is the construction manager of this two-phase project. Phase A construction was awarded to Drill Tech Drilling and Shoring Inc. from Antioch, California.

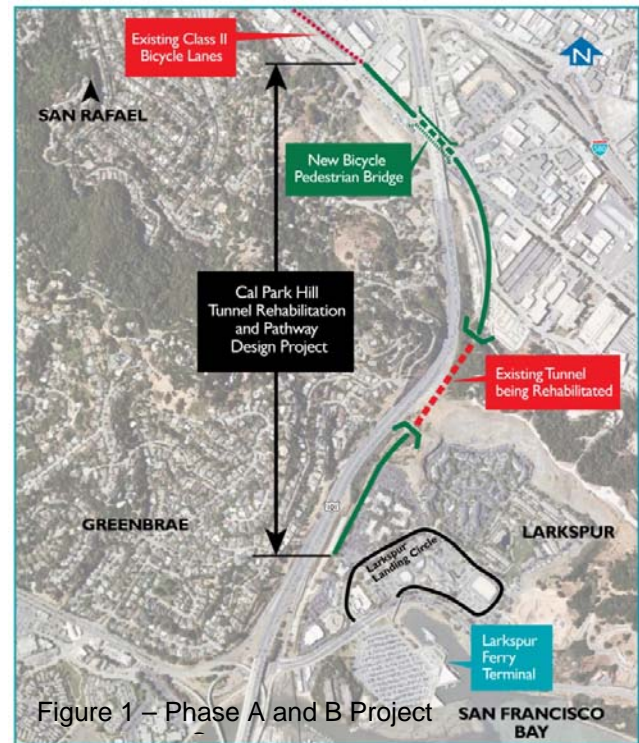


Figure 1 – Phase A and B Project

This presentation will focus on the technical challenges the project faced regarding the designers' and the contractors' ability to adjust construction methods as issues arose, with safety being the first priority. These included stabilizing existing sinkholes, reinforcing fully and partially collapsed tunnel sections, and working in the highly variable ground presented by the Franciscan Complex rock conditions and existing timber support (which had deteriorated due to fire, rot, and age). These challenges demanded a contract of shared risk and a collaborative effort between Contractor and Owner in order to perform necessary ground assessment and adapt the means and methods to the conditions.

The variety of methods used to stabilize the ground, deconstruct the existing timber support, and install the new steel support will be discussed, and approaches will be highlighted that were particularly successful in this heterogeneous ground. This tunnel rehabilitation project will show that tunneling through complex ground conditions can be successfully achieved with teaming between Contractor and Owner such that appropriate solutions can be efficiently selected and implemented.

SPEAKER BIOGRAPHIES

David Crouthamel

Mr. Crouthamel has more than 18 years of experience in tunnel and excavation design. He has worked on several design projects, site investigation tasks, and construction management duties for underground projects. As resident engineer, he has considerable experience in developing, implementing, and evaluating groundwater inflow control measures and their impact upon underground construction. As a field and tunnel engineer for construction management projects, he is skilled in evaluating and solving constructability issues for underground projects, particularly in regards to impacts due to groundwater inflows. Mr. Crouthamel is currently performing on-site construction management services for the rehabilitation of the Cal Park Hill Tunnel.

Erin Hohenshelt

Erin Hohenshelt is a staff engineer with Jacobs Associates and one of the tunnel inspectors for the Cal Park Hill Tunnel. She has a BS in Civil and Environmental Engineering from the University of California, Berkeley. Her design experience includes work as a Staff Engineer on the Lenihan Dam Outfall Tunnel, the New Irvington Tunnel, the Caldecott Tunnel Fourth Bore, and the University Link Project in Seattle, WA. Her previous construction experience was on the Claremont Tunnel, and she is currently supporting the New Crystal Springs Bypass (Polhemus) Tunnel.

Thank you for the RSVP! See you on Thursday, November 19th.