Since construction began in December 2009, Caltrans has made quick progress on Phase I of the Presidio Parkway, the Doyle Drive replacement. Phase I consists of construction of 1 a replacement bridge north of the MacArthur Tunnel, 2 a new southbound bridge east of the Highway 1/101 interchange, 3 the first of four tunnels, and 4 a temporary bypass.

**RUCKMAN BRIDGE REPLACEMENT**

**CAREFUL PHASING TO KEEP YOU MOVING**

Construction of the Presidio Parkway project has been carefully planned to allow mainline traffic to flow during construction of the new roadway. The images below show this strategy in action for the Ruckman Bridge replacement along Highway 1. Crews built a temporary bridge and shifted traffic onto it in order to demolish the old bridge and ultimately build its replacement.

**STAGE 1: Temporary Bridge Construction**

**STAGE 2: Traffic on the Temporary Bridge**

**STAGE 3: Demolition of Old Bridge**

**SOUTHBOUND BRIDGE CONSTRUCTION**

**INNOVATION UNDERGROUND**

Just like building a house, the first step in constructing a bridge is building the foundations. A brand new, first-of-its-kind, 180,000-pound machine was used to twist giant, 12-foot-wide steel casings into the ground, some to a depth of nearly 200 feet, to create the seismically safe foundations for the new southbound bridge. Called an oscillator, the machine’s unique twisting motion eliminates vibration, minimizing effects on nearby historic and natural resources, and greatly reduces the noise associated with traditional pile driving.

After completing the bridge foundations, crews poured the columns for the new bridge.

**Oscillator**

**Future High Viaduct Bridge**

**NEXT UP?** The new bridge deck will begin to take shape adjacent to the existing bridge between the Highway 1/101 interchange and National Cemetery.
**TUNNEL CONSTRUCTION**  
**ADDNG ACCESS TO HISTORIC BATTERIES**

The southbound Battery Tunnel will be built using the “cut and cover” method of construction rather than tunnel boring. Crews will build support walls, excavate the tunnel, lay the tunnel floor, install the lighting and ventilation systems, and then cover over the tunnel with new landscaping. The tunnel top will provide access to formerly isolated historic batteries. The northbound Battery and Main Post tunnels will be constructed in the same way beginning in early 2012.

**TEMPORARY BYPASS**  
**CARRYING TRAFFIC DURING CONSTRUCTION**

The temporary bypass will allow crews to efficiently demolish the existing Doyle Drive and construct the final roadway. Inclusion of the temporary bypass in the construction phasing shortened the duration of construction by 1.5 years.

**CLOSING DOYLE DRIVE FOR AN EXTENDED WEEKEND, LATE 2011**

Doyle Drive will be closed for an extended weekend in late 2011 in order to transfer traffic from the existing Doyle Drive onto the temporary bypass and completed southbound structures. During the closure, the connection between the Golden Gate Bridge and Park Presidio Boulevard/Highway 1 will remain open. After the extended weekend closure, seismic safety will be achieved.