

## Five-Year Monitoring of Corrosion of Field Specimens

**Principal Investigator:**

Professor Ian Robertson

**Project Sponsor:**

Randal Hiraki

**Need:**

Corrosion affects reinforced concrete structures constructed in Hawaii because of their close proximity to the ocean. Need to determine which concrete mixtures provide the most resistance to corrosion in Hawaii's environment.

**Objective:**

Determine what concrete mixtures and corrosion-inhibiting admixtures work best for Hawaii's shoreline structures.

**Duration:**

October 1, 2002 – September 31, 2007

**Cost:**

\$ 50,035

**Update:**

- All 25 field panels were fabricated and deployed at Pier 38 in Honolulu Harbor as Phase III of the concrete durability study mentioned earlier
- The panels are inspected on a monthly basis and are currently in good condition
- Semi-annual series of half-cell measurements are conducted on all panels
- The third full annual test series will be conducted in December/January 2006
- Samples are recovered by core drilling and tested for chloride content and pH at various locations and depths on panel
- The accelerated laboratory corrosion study initiated as Phase II of the concrete durability study is ongoing, with 300 specimens remaining in the test program