Case Study

Simpson-Wisser Neighborhood, LEED ND Pilot
Fort Shafter, Honolulu, HI

Location: Honolulu, HI

Owner: Army Hawaii Family Housing

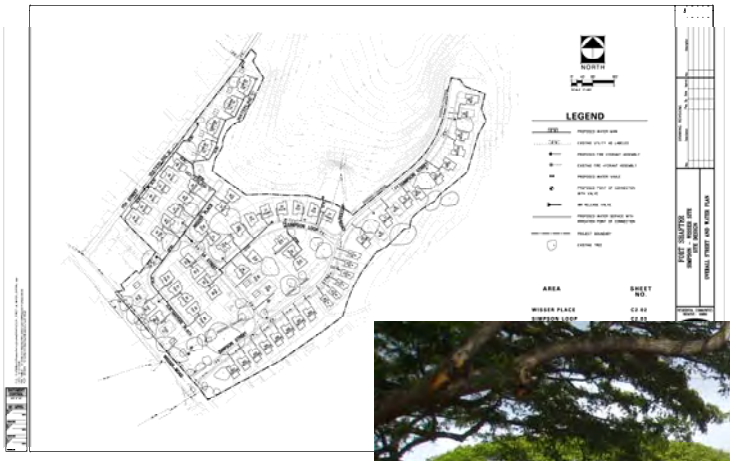
"We've been leading the charge on sustainability, and KASL has been integral in that process, learning the requirements that qualify a project as sustainable, following the LEED guidelines. It is clear that KASL has a good grasp of the importance, as well as the requirements, to guide a project in that direction."

Alan Toll, Principal Architect, Town and Home, Inc.

Fort Shafter has been home to the senior Army headquarters in Hawaii for nearly a century. Today Fort Shafter remains the focal point for command, control, and support of Army forces in the dynamic Asia-Pacific region.

The Army initiated a project to replace all of the existing family housing units with new homes within the 15.7-acre Simpson-Wisser Neighborhood. The project is a US Green Building Council LEED for Neighborhood Development (ND) Pilot Project, one of about 240 such projects located throughout the world.

KASL Consulting Engineers served as an active member of the LEED design team responsible for the design of new site improvements for 77 single family housing units, children play areas and other site amenities to conform to the LEED pilot objectives.

Specific services provided by KASL Consulting Engineers for this project included:

- design of mass grading to balance cut and fill
- fine grading design to protect improvements, to prevent erosion and for on-site management of stormwater
- design of stackable block retaining walls
- computer modeling and design of new utility distribution and collection systems including water, sewer and storm drain systems
- site design for Americans with Disability Act (ADA) compliant sidewalks, access to living quarters and children's play areas
- surveying services to locate and protect existing trees and other improvements
- obtained National Pollutant Discharge Elimination System (NPDES) permits from the State of Hawaii Department of Health Clean Water Branch
- site sustainability and low impact design features of the project included:
  - crushing and reutilization of all existing concrete slabs, footings, driveways and asphalt roadways
  - grassy swales, infiltration trenches and evapotranspiration for on-site storm water management
  - preparation of Storm Water Pollution Prevention Plans (SWPPP)