

WRITTEN TESTIMONY OF
GAVIN MASAKI, PE of GRAY HONG NOJIMA & ASSOCIATES, INC.

LAND USE COMMISSION
STATE OF HAWAII

2013 MAY 17 P 2: 21

I am Gavin Masaki, PE, a civil engineer employed by Gray Hong Nojima & Associates, Inc. I offer the following written testimony regarding civil engineering aspects of the Kihei High School Project:

Water Infrastructure

There are no on-site public or private water systems serving the property. Kihei High School will get its potable water and fire water supply through the Central Maui Water System by connecting to the existing 18-inch water main on Liloa Drive and upgrading the existing 8-inch water main in the Pi'ilani Subdivision. Irrigation will be supplied by on-site brackish wells. The potable, fire, and irrigation lines will consist of separate looped distribution systems following the main roadways and sidewalks throughout the campus.

Drainage Infrastructure

The Petition Area is currently undeveloped so there is no existing drainage system aside from that on Pi'ilani Highway. The majority of existing runoff drains towards a 72-inch diameter culvert under Pi'ilani Highway with the remainder flowing into either Kulanihakoi Gulch or Waipuilani Gulch. Petitioner will seek to minimize further drainage into Kulanihakoi Gulch.

Kihei High School is expected to increase storm water runoff into Waipuilani Gulch from a 50-year, 24-hour storm event from 8,881 to 8,902 CFS or by 21 CFS; and from a 100-year, 24-hour storm event from 10,796 to 10,822 CFS or by 26 CFS.

Petitioner proposes to construct both on and off-site drainage infrastructures. Petitioner plans to build an off-site ditch along the upper boundary of the Petition Area to divert sheet flow storm water runoff from mauka areas into Waipuilani Gulch.

Petitioner also plans to build an on-site storm water detention basin on the lower end of the Petition Area adjacent to Pi'ilani Highway. This detention basin is will be approximately 90 feet wide and 480 feet long, with an overall depth of 10 feet. The basin is expected to be able to hold 145,314 CF at a 3 foot depth, which capacity is greater than the estimated 112,807 CF needed to be detained based on a 50-year 1-hour storm event.

Wastewater Infrastructure

The wastewater system at Kihei High School will be designed to a capacity required by applicable Maui Department of Environmental Services standards.

There are no existing wastewater facilities on-site or sewer connections on Pi'ilani Highway. Petitioner plans to construct on-site wastewater collection facilities and an extension to connect to the County system and the Kihei Wastewater Reclamation Facility, preferably at the intersection of Kulanihakoi Street and Mahealani Street, or as approved by the County.