

# STAGE 2 DEVELOPMENT ASSESSMENT

## KEALAKEHE HIGH SCHOOL 74-5000 PUOHULIHULI STREET, KAILUA-KONA, HAWAII, HI 96740



| Description              | Estimated Area (m <sup>2</sup> ) | Scaling Factor | Useable Area (m <sup>2</sup> ) | # of Panels | Panel Watts | Total (kW)      |
|--------------------------|----------------------------------|----------------|--------------------------------|-------------|-------------|-----------------|
| <b>Roof</b>              | 20207                            | 80%            | 16165.6                        | 8988        | 240         | 2157            |
| <b>Parking</b>           | 13348                            | 50%            | 6674.0                         | 3711        | 265         | 983             |
| <b>TOTAL SYSTEM SIZE</b> |                                  |                |                                |             |             | <b>3,141 kW</b> |

Buildings are outlined in **RED**. Parking lots are outlined in **BLUE**.

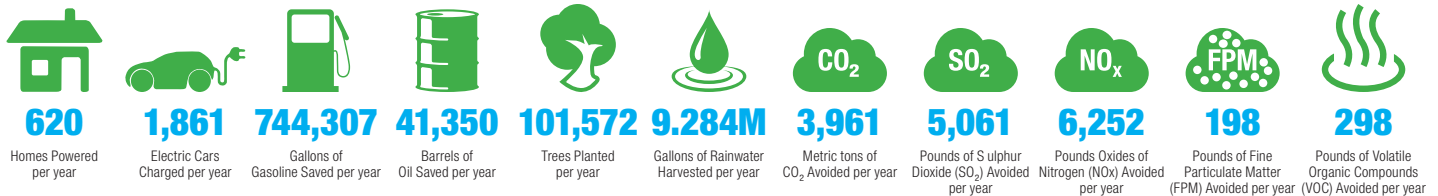
### PROJECT SUMMARY

Kealakehe High School is to be found on the north-west side of Hawaii island, close to the town of Kailua Kona, and not far from Kona International Airport. It serves the largest geographical spread in the whole state, stretching over 40 miles, including the communities of Kailua-Kona, Holualoa, Waikoloa, and Puako. The school has a large intake of approximately 1600 students, from Grade 9 to Grade 12, who are taught by 90 teachers.

The students are from a mix of backgrounds, including Hawaiian, Filipino and Caucasian. The school is sited within 50 acres of grounds, and was built relatively recently. Starting in 1997, each grade was added incrementally, until all four grades were accommodated in 2001. The school has a football stadium, built in 2004.

With the available roof-space from the school's building facilities and car parking, the school could harvest **9,284,461 gallons of rainwater** per year, with an overall solar system size for the site estimated at **3,141 kW**.

This would generate **4,962,045 kWh** of clean solar energy annually, with a net value of **\$1,091,649**. This energy generated on-site would be equivalent to having:



## PUAPUAA AHUPUA'A

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