

DIRECT TESTIMONY OF JOHN R. GARRETSON

1 I am John Robert Garretson.

2 I am a Project Consultant for D.L. Adams Associates.
3 (DLAA). Since its formation in 1979, DLAA acted as acoustic
4 consultants. Our services include environmental acoustics
5 analysis, architectural acoustics recommendations, noise and
6 vibration recommendations, acoustical and vibration
7 measurements, as well as audio/visual, performing arts, and
8 information technology/telecommunications design. DLAA has
9 offices in Kailua as well as in Denver, Colorado.

10 I received my Bachelor of Arts degree in Acoustics
11 from Columbia College in May, 2011. I graduated summa cum
12 laude. Following college I worked as an acoustical engineer
13 with AeroSonics, a manufacturer of commercial and industrial
14 noise control products. In 2014, I started with DLAA and
15 provided noise modeling, measurement and design services on over
16 30 projects in Hawaii.

17 A copy of my current resume is attached as Exhibit
18 "34."

19 DLAA was contracted in 2013 to assess the
20 environmental noise conditions associated with the proposed
21 Waikapu Country Town development and provide a report that
22 presented our findings and any recommendations for mitigation of
23 the conditions created by the development. Aspects of the

1 assessment included documenting the existing environmental noise
2 levels associated with the site, projecting the noise levels
3 anticipated from the proposed development on the surrounding
4 areas, projecting the noise levels anticipated on the proposed
5 development site from the surrounding areas and sources, and
6 comparing these findings to various state, federal, and common
7 acoustical industry criteria. Our initial report was submitted
8 January 2015 and later amended in November 2016 when a waste
9 water treatment plant was added to the proposed project.

10 A copy of DLAA's report, as amended, is attached as
11 Appendix "D" to Exhibit "25."

12 For the purposes of the analysis, DLAA was provided
13 with a site Master Plan drawing, Land Use Plan table,
14 Transportation Impact Analysis Report (TIAR), including a
15 supplement to that report, and conceptual information regarding
16 the potential locations of the waste water treatment facility
17 and equipment.

18 The noise analysis included existing and future
19 traffic for surrounding roads affected by the project,
20 construction equipment operation and activities, typical
21 mechanical equipment expected to serve residential and
22 commercial properties within the development, mechanical

1 equipment expected for the waste water treatment.

2 **Noise Assessment Criteria**

3 As part of our assessment, acoustical criteria used to
4 analyze the proposed project included those from the Hawaii
5 Department of Health (HDOH) Community Noise Control Rule for
6 both construction noise and long term stationary equipment
7 noise, Federal Highway Administration (FHWA) 23 CFR 722 and
8 Hawaii Department of Transportation (HDOT) noise limits for
9 traffic noise sources, Environmental Protection Agency
10 (EPA) criteria and Department of Housing and Urban Development
11 (HUD) Site Acceptability Standards for overall environmental
12 site noise, as well as general acoustical industry criteria on
13 perceivable changes in noise level and regarding historical
14 community responses to increases in noise level.

15 **Noise Assessment Findings**

16 The existing noise levels at the project site were
17 found to range from 53-64 dBA, with the highest noise levels
18 closes to the adjacent Honoapiilani Highway. Noise sources
19 included traffic, wind, birds, aircraft flyovers, and
20 construction equipment. For comparative purpose, 20 dBA is
21 roughly the quietest that a natural exterior environment can
22 ever practically achieve and is commonly referenced to the noise

1 levels of faint rustling leaves. 120 dBA is where noise begins
2 to become painful for some listeners, and is similar to being
3 directly next to the speakers at a rock concert. Noise levels of
4 around 50 dBA are representative of those that typical suburban
5 neighborhood might experience or the levels near a refrigerator
6 or desktop computer. Noise levels around 60 dBA are typical of
7 those experienced during a conversation between two people or
8 from a slightly noisy window air conditioner unit or relatively
9 quiet dishwasher.

10 Noise from construction of the proposed development
11 was determined to most likely require a noise permit and
12 potentially a variance from HDOH depending on the dates and
13 times construction would take place, but construction noise
14 would be short-term and typical of similar residential and
15 commercial developments as far as construction methods,
16 equipment, and noise generated.

17 Long-term noise sources such as stationary mechanical
18 equipment that serves the HVAC, potential refrigeration for any
19 commercial spaces, and the mechanical equipment for the waste
20 water treatment plant will need to comply with the HDOH
21 Community Noise Rule requirements for maximum permissible noise
22 levels at the individual property lines. This will most likely

1 require a case-by-case analysis based on the specific location,
2 equipment, and system design and may require additional
3 mitigation to ensure that there are no noise impacts to
4 surrounding locations. Based on preliminary analysis of similar
5 waste water treatment plant equipment, no impact is expected
6 from the waste water treatment plant if located at either of the
7 two proposed locations presented to us as included in our
8 report.

9 Analysis of the long-term projected traffic noise due
10 to an increase in traffic from the development indicated that no
11 impact is expected based on FHWA or HDOT criteria and that no
12 noticeable change in perceived traffic noise is expected from
13 the project for existing residence located in the nearby
14 community.

15 In regard to the traffic impacts within the proposed
16 development, our analysis showed that the FHWA maximum noise
17 limit guideline will be satisfied for all homes located more
18 than 60 feet from the edge-of-pavement of Honoapiilani Highway.
19 Noise generated from development built access roads and future
20 Waiale Road extension are not expected to be significant enough
21 to impact the residential areas of the project.

22 The expected environmental site noise is expected to

1 be classified as "Acceptable" by HUD and, per HUD guidelines,
2 require no special acoustical design considerations for
3 mitigation of interior or exterior occupied spaces for distance
4 greater than 60 feet from the edge-of-pavement of the adjacent
5 highway. Noise levels at this distance from the highway also are
6 compliant with the EPA's Existing Design Goal.

7 Although compliance with the FHWA, HDOT, HUD, and EPA
8 criteria are not strict regulatory requirements of the project,
9 the setback distance of 60 feet was recommended to achieve
10 compliance with these criteria to minimize traffic noise without
11 additional mitigation such as noise barriers and modified
12 building constructions.

13 Summary

14 Based on various state, federal, and acoustical industry
15 analysis standards and criteria the project is not expected to
16 have any long-term noise impacts to the adjacent existing
17 properties. Some short-term impacts are expected to these areas
18 from the construction of the development and will need to be
19 permitted through the HDOH. Residential buildings in the
20 development are not expected to have traffic noise impacts if
21 located further than 60 feet from the edge of Honoapiilnai Highway.
22 Waste water treatment operations are not expected to produce noise

1 impacts on the existing residential areas nearby or future adjacent
2 properties in the proposed development.

3 Thank you for allowing me to speak with you about the
4 work done by DLAA.

5 DATED: Kailua-Kona, Hawaii, October __, 2017.

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John R. Garretson