Kamehameha Schools Motion for Modification, Time Extension, and Release and Modification of Conditions, LUC Docket No. A87-610

Written Direct Testimony of Sohrab Rashid, TE, February 23, 2022

1. **Please state your name and business address for the record.**

Sohrab Rashid
Fehr & Peers
555 West Beech Street, Suite 302
San Diego, CA 92101

2. **What is your current occupation?**

I am a traffic engineer and Principal with Fehr & Peers. I am also the Office Leader for our Honolulu and San Diego markets.

3. **How long have you specialized in transportation planning and traffic engineering?**

Over 33 years. My first experience was doing a four-year internship with the Santa Clara Valley Transportation Authority. After that, I spent seven years as a consultant with Barton-Aschman Associates (subsequently absorbed by the Parsons Corporation) working in San Jose, California, Honolulu, Hawai'i, and Sacramento, California. The remainder of my professional career has been as an employee and now part-owner of Fehr & Peers working in the firm's Roseville, San Jose and San Diego offices.

4. **Did you provide a copy of your resume for these proceedings?**

Yes, my resume was provided as Exhibit 21.

5. **Please briefly describe your educational background.**

I have a Bachelor of Science in Mechanical Engineering from San Jose State University. I am also a Licensed Traffic Engineer in California.

6. **Do you specialize in any particular areas?**

I have a wide range of experience in traffic engineering and transportation planning. Several key specialty areas include site planning and design, traffic operations, multimodal planning and design, and parking.

7. **To what professional organizations do you belong?**

I am a member of the Institute of Transportation Engineers (ITE), the American Planning Association (APA), and the Women's Transportation Seminar (WTS).

8. **Have you even been qualified as an expert witness in traffic engineering and traffic management before the Land Use Commission?**

Yes. In 2010 I was an expert witness before the State Land Use Commission in traffic planning and traffic engineering for a large, mixed-use project in Kona. In that context,

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after the Land Use Commission approved the Urban District reclassification for that project, I also prepared the final Traffic Impact Assessment Report that was accepted by the Hawaii State Department of Transportation ("**DOT**").

I have also done the traffic studies for the Kamehameha Schools property that is at issue in these pending proceedings. I prepared the traffic assessment that was before the Commission in the original 2014 proceedings to get approval for the two solar farm sites. I also prepared the traffic assessment study that was prepared for the 2019/2020 proceedings before the Commission for the renewal of that 2014 approval for the Clearway/Waiawa Solar Power, LLC solar farm. I also submitted written direct testimony for those proceedings.

9. **Are you familiar with the term "Petition Area" or "KS Property"?**

Yes. In this testimony, those terms are interchangeable. Both refer to the 1,395-acre area owned by Kamehameha Schools at Waiawa and Waipiʻo, ʻEwa, Oʻahu, Hawaiʻi. It is east of the H-2 Freeway/Ka Uka Boulevard interchange and west of Pearl City. These lands are in the State Land Use Urban District, per a reclassification approved by the Commission.

10. **Are you familiar with the solar farm project proposed within a portion of the Petition Area/KS Property?**

Yes. It is a 30 megawatt ("**MW**") alternating current (AC)/60 MW direct current (DC) solar farm, coupled with a 240 MW-hour battery energy storage system. The project will be within approximately 387 acres in the northwestern portion of the Petition Area. Access to the project will be from an existing gated entry off Waiawa Prison Road. Once within the KS Property, access to the site will be through a network of existing on-site access roads.

11. **Please identify the studies you prepared for the project.**

Fehr & Peers prepared a *Mobility Assessment for the Proposed Waiawa Phase 2 solar Plus Storage Project (Oahu, HI)* ("**Traffic Assessment**"), dated August 11, 2021, which was submitted as Exhibit 5.

12. **Please describe the scope of your study?**

We analyzed how construction and operation of the solar project would impact local and regional traffic near the Petition Area.

13. **Are the methodologies that Fehr & Peers used consistent with generally accepted industry standards?**

Yes. The Traffic Assessment analyzed the potential for both the construction and operation of the project to adversely impact traffic and alternate modes of access (e.g.,

bicycle and pedestrian travel, and public transit). The Traffic Assessment analyzed the potential for traffic-related impacts at three regional intersections during peak hours (between 7 – 9 a.m. and 4 – 6 p.m.) under four different scenarios.

The intersections studied are: (1) Ka Uka Boulevard/H-2 Southbound Off-Ramp/Moaniani Street; (2) Ka Uka Boulevard/H-2 Southbound On-Ramp; and (3) Ka Uka Boulevard/H-2 Northbound Ramps.

The four traffic scenarios analyzed were: (1) Existing Conditions; (2) 2023 No Project Conditions; (3) 2023 Plus Project Construction Conditions; and (4) 2023 Plus Project Typical Operating Conditions.

We analyzed the roadway operations based upon procedures presented in the Highway Capacity Manual (HCM) published by the Transportation Research Board (TRB). We used SYNCHRO 10 traffic analysis software to analyze intersection operations. Both are industry standards and consistent with analyses required by the State of Hawaii Department of Transportation Highways Division, which has jurisdiction over the study intersections noted above.

14. **How did you conduct your review?**

Existing traffic volumes were based on 2019 traffic volumes, which we then increased by a growth factor of one percent per year to estimate typical volumes for 2021. We did not use 2020 or 2021 traffic volumes because the COVID 19 pandemic created shifts in travel patterns that we did not want to skew our results.

The construction year traffic was evaluated by taking the volumes determined above and increasing them by an average growth factor of one percent per year to represent 2023 volumes. To this, we also added anticipated traffic from Phase 1 of the Koa Ridge development.

For the purposes of the study, we assumed construction would occur over 15 – 18 months. We assumed all construction worker traffic would occur during the peak hours so that we could measure the greatest possible impacts. We also assumed that with a labor force of 200 workers, carpooling would result in 134 construction worker vehicles arriving and leaving the project site. In actuality, it is likely there will be fewer vehicles coming and going from the site because more workers will carpool.

15. **What are the conclusions under the Traffic Assessment?**

During project operations after completion of construction, traffic impacts will be entirely negligible. We assumed up to five employees on-site at any given time. That is insufficient to generate any measurable impacts to traffic.

Even during construction, which we estimated could bring as many as 200 workers to the property, all the studied intersections are projected to continue to operate at existing levels of service. None of the studied intersections are projected to operate at a level of

service of E or F.

16. **What about impacts to non-automobile modes of access?**

The potential for conflict between project construction related traffic and non-automobile modes of transportation, such as walking and biking, is low.

The amount of pedestrian and bike activity north of the KS Property at Ka Uka Boulevard east of the H-2 freeway is negligible.

Neither Mililani Cemetery Road or Waiawa Prison Road have bike or pedestrian lanes. Additionally, considering the long distances between the H-2 interchange and both the cemetery (approximately 1.2 miles) and the correctional facility (approximately 2.9 miles), pedestrian and bike travel along those roads is expected to be very low.

Looking into the future, because no sidewalks or bike lanes are planned for the Ka Uka Boulevard overcrossing over H-2, little conflict between auto and non-auto modes of transportation is expected.

17. **Does your study recommend any traffic mitigation measures?**

During construction, to minimize any potential conflicts and maintain adequate traffic operations, we recommend implementation of a Construction Traffic Plan that addresses the following:

- Signage between the Ka Uka Boulevard interchange and the staging area off Waiawa Prison Road that trucks are travelling and entering/exiting the roadway.

- Measures to ensure that adequate sight distance is provided for drivers on Waiawa Prison Road approaching and departing the staging area. For example, traffic control signage (*e.g.*, stop or yield signs) and removal of vegetation that impedes standard approach, departure, and height sight distances.

- Coordination with the City and County of Honolulu if needed to prune or remove vegetation in the public right of way that might impede large construction vehicles on both Mililani Cemetery Road and Waiawa Prison Road.

- Use of manual traffic control on Waiawa Prison Road to manage construction and prison traffic and to minimize conflicts. This could include the use of radios, flag persons, and/or temporary signals and lighting to assist with the control of vehicles and the provision of adequate sight distance (as needed).

- Maintenance of access to the Waiawa Correctional Facility.

18. **In your professional opinion, will the project adversely impact regional traffic near the Petition Area/KS Property?**

No. Neither project construction nor project operations will adversely impact traffic conditions in the vicinity of the KS Property to a significant level. Additionally, the project site has adequate access and will not require the construction of any new access roads.

DATED: San Diego, California, February 23, 2022.

Respectfully submitted,

SOHRAB RASHID