



TESTIMONY OF EDWIN SNIFFEN

RE: PETITIONER DEPARTMENT OF EDUCATION, STATE OF HAWAII'S MOTION TO AMEND THE LAND USE COMMISSION'S FINDINGS OF FACT, CONCLUSIONS OF LAW AND DECISION AND ORDER FILED JULY 29, 2013 and DEPARTMENT OF EDUCATION, STATE OF HAWAII'S REQUEST FOR THE ISSUANCE OF WRITTEN FINDINGS AS TO ITS AUGUST 20, 2020 MOTION TO AMEND THE LAND USE COMMISSION'S FINDINGS OF FACT, CONCLUSIONS OF LAW AND DECISION AND ORDER FILED JULY 29, 2013

My name is Edwin H. Sniffen and I am the Deputy Director of the State of Hawaii Department of Transportation's Highways Division (HDOT).

1. This testimony is submitted in support of the Department of Education's (HIDOE) above-referenced Motion related to the construction of Kihei High School on the island of Maui, which seeks to remove the requirement from the Order granting Boundary Amendment which requires that HIDOE shall "cause to be constructed, or ensure that there is an available above or below ground pedestrian crossing and implement such mitigation or improvements as may be required or recommended by the study and analysis to the satisfaction of HDOT prior to opening Phase I of the Project" (the Motion) and the Request for the Issuance of Written Findings. It is HDOT's position that the Kihei High School should be allowed to open and operate Phase 1 of its development with a roundabout designed to provide safe at grade pedestrian, bicycle, and vehicular access to the school. HDOT also supports the requirement that HIDOE study the need for future transportation improvements to mitigate any impacts the school may have on the highway system prior to opening the second phase of its development.

2. It is HDOT's position that a multilane roundabout at the intersection of Piilani Highway and Kulanihako'i Streets, which provides at-grade crosswalks, will provide safe and efficient access for all modes of transportation for the first phase of the Kihei High School development, especially with projected initial enrollment of 167 students. The roundabout will be designed to slow vehicles into the intersection to 20-25 miles per hour (MPH), the raised median width will be maximized to accommodate a high number of pedestrians waiting to cross the street, and Rectangular Rapid Flashing Beacons (RRFB) will be used to alert drivers of pedestrian crossings. Raised pedestrian crossings will be added in the right-turn bypass lanes to further slow vehicles and highlight pedestrians in the bypass lanes.

3. In the past, HDOT was generally not supportive of roundabouts as the department required more local information and applied research. HDOT also included a policy that prohibited multi-lane roundabouts on the state system until proposed single lane roundabouts could be constructed and studied. Since that time, HDOT under the Ige Administration has built multiple single lane roundabouts using modern design standards. The first of these modern roundabouts was on Hawaii Island in Pahoa at Old Government Road, which had the most traffic fatalities of any intersections in the State system. Following the construction of the three-legged roundabout in that area in 2016, there have been no traffic fatalities at this intersection.

4. Based on the success of the Pahoa Roundabout, three more roundabouts were planned. The second was built in Keaau, Hawaii, the third was built in Kapaa, Kauai, and a fourth is being considered in Haleiwa, Oahu. There are several roundabouts on Oahu that the City and County of Honolulu has already constructed. All roundabouts

constructed by either the State or County have significantly improved safety through intersections while meeting operational efficiency requirements. The roundabout at the site of Kihei High School will be the first multi-lane roundabout in Hawaii, since a single lane roundabout cannot address the traffic capacity for the community in the area. The roundabout is currently under construction with a target completion date of July 2022.

5. Based on national studies and the information on roundabouts that we have in the system in Hawaii, both County and State, roundabouts reduce auto-pedestrian collisions by 95 percent. As indicated above, there have been no fatalities at roundabout locations in the state.

6. Roundabouts also reduce high critical crashes by 98 percent, mainly because the roundabout geometrics slow cars down sufficiently to prevent them from going through the intersection at more than 15 to 20 MPH.

7. Currently 85 percent of the vehicles will travel on that corridor, at about 48 MPH. The posted speed limit in the area has been reduced to 35 MPH approaching the intersection. The roundabout will slow traffic down significantly in the area of the new school.

8. The roundabout design would include crosswalks. HDOT is also adding RRFBs to alert drivers of pedestrians going across the crosswalk. High Intensity Activated Crosswalk beacon signals can also be added for enforcement in the event drivers disregard the RRFB.

9. If built, a grade separated pedestrian crossing (GSPC) is not likely to be used. As set forth in Exhibit 39 to the Motion, the Federal Highway Administration did a study with Texas Institute to establish guidelines for safe pedestrian crossing. In that

study, it was shown that if it takes a pedestrian more than 25 to 50 percent longer to use a structure versus a straight route, in general, 95 percent of the pedestrians will just use a straight route.

10. While GSPCs can eliminate conflict between pedestrians and motorists *if used*, HDOT cannot support the design and construction of an underpass in either of the two gulches proposed without modifications to the structures to remove pedestrians from the inundation zones outlined on area flood maps.

11. With reference to exhibits 14 and 16 to the Motion, those highway facilities were built to provide hydraulic flow freeboard in the event of 100-year storm. Those figures show that the freeboard or the space between the top of the 100-year storm, and the bottom of the bridge ranges from two-and-a-half to three feet, which is insufficient height for a pedestrian underpass. An underpass must go above the 100-year storm but below the deck; that would require significant adjustment to the structure itself or to the land to increase the hydraulic opening.

12. While a 100-year storm may seem like a rare occurrence, three have already occurred within the past five years.

13. At present the roundabout is finalized and construction will start in November 2021 with substantial completion by July 2022.

14. If the Motion is granted and future studies required by the Land Use Commission order should dictate that a GSPC needs to be provided in the area, HDOT will take the necessary steps, as required and/or permitted by law, to support the HIDEOE in the design and construction of the GSPC.

I hereby swear and affirm that the foregoing is true to the best of my knowledge
and belief.

DATED: Honolulu, Hawaii, October 26, 2021.

A handwritten signature in black ink, appearing to read 'E. H. Sniffen', written over a horizontal line.

EDWIN H. SNIFFEN