

PETE PASCUA DIRECT TESTIMONY

Q Please state your name, place of employment, and position.

A Pete Pascua, Licensed Professional Civil Engineer and Vice President & Director of Traffic Engineering, Wilson Okamoto Corporation (WOC).

Q How long have you held this position?

A I have been a Traffic Engineer since 1986. I became Director of the Traffic and Transportation Engineering Group in 2006, and also Vice President in 2006.

Q Please describe your educational background and experience.

A Please see my resume, attached as **Exhibit K-1**. I have prepared various types of traffic reports such as impact studies, parking and loading studies, construction traffic management plans, queuing and delay studies, transportation management plans, and other types of traffic-related documents; including the design of roadways, intersections, and traffic signal systems.

Q How have you been involved in this Project?

A WOC was retained by The Howard Hughes Corporation (HHC) to undertake the preparation of a traffic impact report (TIR) to identify and assess the potential traffic impacts as a result of the proposed Project, and to identify necessary measures to mitigate such impacts.

Q Please summarize the methodology, findings, and recommendations of the TIR.

A The following is a summary of the methodology, findings and recommendations of the report:

The TIR analyzes the potential traffic-related effects of the proposed cumulative development. Traffic conditions were evaluated for the following conditions: Baseline Year 2020, Year 2021 Without Project, Year 2021 With Project (date of expected project completion). Traffic projections were based on the Institute of Transportation Engineers (ITE) methodology for trip generation and on the Oahu Metropolitan Planning Organization (OMPO) regional travel forecast model for network distribution. Capacity analyses procedures were performed to identify the operational traffic impacts to the surrounding intersections as a result of the proposed development.

Based on the regional growth rates as well as the anticipated traffic generation as a result of the proposed development, several recommendations are provided to mitigate project-related traffic impacts. The recommendations include the following:

EXHIBIT K

1. Maintain sufficient sight distance for motorists to safely enter and exit the project driveways.
2. Provide adequate on-site loading and off-loading service areas and prohibit off-site loading operations.
3. Provide adequate turn-around area for service, delivery, and refuse collection vehicles to maneuver on the project site to avoid vehicle-reversing maneuvers onto public roadways.
4. Provide sufficient turning radii at all project driveways to avoid or minimize vehicle encroachments to oncoming traffic lanes.
5. If access at the entrance to the parking garage is controlled, provide sufficient storage for entering vehicles at the parking area access controls to ensure that queues do not extend onto the adjacent public roadways.
6. Consider modifying the south driveway along Private Drive to a one-way exit driveway with one-way circulation through the development's on-site drop-off/pick-up area to minimize conflicts between turning movements at that driveway.
7. Update the TIR should development phasing, land use intensity, or land use mix change.
8. Continue to develop and/or enhance bicycle and pedestrian facilities, as well as, public transportation services in the project vicinity as described in the "Transportation Master Plan for the Ward Villages Master Plan," dated May 2016.

Q As part of the TIR you made a level of service determination. What is a level of service determination and how is that prepared?

A Level of Service (LOS) is a quantitative and qualitative assessment of traffic operations. Levels of Service are defined by LOS "A" through LOS "F"; where LOS "A" represents ideal or free-flow traffic operating conditions and LOS "F" representing unacceptable or potentially congested traffic operating conditions. The LOS rating is generally based on delays experienced by motorists associated with movements at an intersection. LOS "D" or higher are generally acceptable operating conditions.

Q Please summarize the level of service determinations made in connection with the TIR for the Kō'ula Project?

A The intersections in the study area include:

- Ward Avenue at Queen Street
- Ward Avenue at Halekauwila Street
- Ward Avenue at Queen Street
- Kamakee Street at Queen Street
- Kamakee Street at Auahi Street
- Queen Lane at Auahi Street
- Queen Lane at Queen Street
- Private Drive at Queen Street
- Private Drive at Auahi Street
- Halekauwila Extension at Kamakee Street

All traffic movements at the study intersections are expected to operate at LOS "D" or better with the proposed project and implemented recommendations.

Q The TIR also describes the concept of "trip generation". What is "trip generation" and how is that relevant to your analysis?

A Trip generation is an estimate of the number trips that would be generated by the proposed project during the commuter peak hours of traffic on the surrounding roadways. The methodology to calculate the generation rates are based on generally accepted techniques developed by the Institute of Transportation Engineers (ITE). The ITE rates are developed empirically by correlating vehicle trip generation data with various land use characteristics such as the number of trips generated per dwelling unit, or per 1,000 square feet of commercial development. The calculated trips are then superimposed and added to the projected trips to measure the traffic impacts associated with the proposed project utilizing the concept of LOS.

Q Do you know if VWL intends to implement all of the recommended mitigation measures that you have proposed?

A Yes. It is my understanding that VWL intends to implement all of the recommended mitigation measures identified in the TIR.

Q In summary, is there an impact to traffic from this specific Project?

A Yes, but any impacts can be mitigated by the intersection and roadway improvements recommended in the TIR, which VWL intends to pursue and implement.

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