

CATHY LEONG DIRECT TESTIMONY

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

A Cathy Leong, Licensed Professional Civil Engineer and Associate Director of Traffic Engineering, Wilson Okamoto Corporation (WOC).

Q How long have you held this position?

A I have been a Traffic Engineer with WOC since 1997. I became an Associate Director of the Traffic and Transportation Engineering Group in 2017.

Q Please describe your educational background and experience.

A Please see my resume, which is marked as an exhibit in this proceeding. 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. The TIR is marked as an exhibit in this proceeding.

Q Please summarize the aspects of the project relevant to the TIR.

A Victoria Place is included in Phase 2 of the overall Ward Village Master Plan. Under Phase 2, preliminary construction activities for 'A'ali'i and Kō'ula have commenced, and are expected to be completed by 2021 and 2022, respectively. Victoria Place, with 360 residential units, is expected to be completed in 2023.

Primary access to Victoria Place will be via a new two-way driveway off of Auahi Street, with residential and residential guest parking provided on-site. A secondary access for loading will be via an existing access shared with Waiea. In addition, a pull-out area for passenger loading is currently planned near the Mauka-'Ewa corner of the project adjacent to Auahi Street.

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:

EXHIBIT "M"

The TIR analyzes the potential traffic-related effects of the proposed cumulative development. A previous assessment, which included the proposed development, was included in the “Transportation Master Plan and Assessment for the Ward Villages Master Plan” dated October, 2018. This current TIR is a supplemental study to specifically address the proposed development and incorporate the most recent development plans.

Traffic conditions were evaluated for the following conditions: Baseline Year 2022, Year 2023 Without Project, Year 2023 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, the TIR makes several recommendations to mitigate project-related traffic impacts. The recommendations include the following:

1. Maintain sufficient sight distance for motorists to safely enter and exit the project driveways including consideration of visibility of pedestrians and bicyclists traveling along Auahi Street.
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. Provide directional signage for entering vehicles at the project driveway to facilitate traffic flow and vehicle circulation and to minimize confusion for motorists regarding the locations of the porte cochere and the parking garage. Appropriate lighting for the directional signage should be considered to ensure visibility during all hours of the day.
6. Provide adequate signage at the proposed drop-off area along Auahi Street adjacent to the project such as signs indicating a passenger loading area as well as citing maximum allowable vehicle dwell time and parking restriction.
7. Considering using on-site personnel to monitor the proposed drop-off area along Auahi Street to minimize vehicle dwell times and parking violations. In addition,

queuing from this drop-off area could be monitored to ensure that queues do not extend beyond the provided pull-out storage bay length.

8. Update the studies should development phasing, land use intensity, or land use mix change.
9. 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 October, 2018.

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.

Q Please summarize the level of service determinations made in connection with the TIR for the Victoria Place project?

A The intersections in the study area included:

- Ward Avenue and Queen Street
- Queen Street and Kamakee Street
- Queen Street and Queens Lane
- Ward Avenue and Halekauwila Street
- Ward Avenue and Auahi Street
- Kamakee Street and Auahi Street
- Auahi Street, Queens Lane, and Queen Street
- Ala Moana Boulevard and Ward Avenue
- Ala Moana Boulevard, Kamakee Street, and Ala Moana Park Drive

As more fully described in the TIR, the level of service operating conditions at the intersections in the vicinity of the Project are, with few exceptions, expected to remain similar to baseline and with and without the Project.

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 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. 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 Did you perform any other analysis in connection with this TIR?

A Yes. Due to the proposed project and the upcoming completion of other developments in Ward Village, we also did a traffic signal warrant analysis at the intersection of Auahi Street with the driveway that serves the adjacent Ward Entertainment Center, which will also lead to the driveway for Victoria Place to determine if a more extensive traffic signal assessment would be required.

Based on data collected, we applied Warrant 3 (peak hour volumes) to determine if a traffic signal would be warranted at this intersection. Under the project conditions and considering the modification of Auahi Street to one lane in each direction, the projected traffic volumes do not satisfy Warrant 3. Therefore, a more extensive traffic signal warrant study is not necessary at this time, but the intersection will be reassessed periodically.

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.

Q Did the City and County of Honolulu comment on the TIR?

A Yes, the City and County of Honolulu Traffic Review Branch confirmed in an email dated July 11, 2019 that the TIR is acceptable to the Traffic Review Branch and the City's Department of Transportation.

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