

NEIL ABERCROMBIE  
GOVERNOR



PATRICIA McMANAMAN  
DIRECTOR

BARBARA A. YAMASHITA  
DEPUTY DIRECTOR

STATE OF HAWAII  
DEPARTMENT OF HUMAN SERVICES  
Benefit, Employment & Support Services Division  
820 Mililani Street, Suite 606  
Honolulu, Hawaii 96813

March 27, 2012

Refer to 12-0149

Olowalu Town, LLC and Olowalu Ekolū, LLC  
2045 Main Street, Suite 1  
Wailuku, Hawaii 96793

To Whom It May Concern:

Thank you for your letter that requests the Department of Human Services (DHS) review the Draft Environmental Assessment (DEA) for the proposed Olowalu Town Master Plan located at TMK (2)4-8-003:084, 098 through 118 and 124, Olowalu, Lahaina, Maui, Hawaii.

We have reviewed your DEA and we do not have any comments or recommendations to approve the project. However, we do foresee a potential impact on the need for child care services in the community for children under kindergarten ages due to new residents moving into the project. We believe that it is important to plan for child care as this project may have the potential to result in supply gaps to families who shall live and work in the planned project community.

If you have any questions or need further information, please contact Mr. Robert Reed, Child Care Program Specialist, at (808) 586-0978.

Sincerely,

A handwritten signature in black ink, appearing to read "Pankaj Bhanot".

Pankaj Bhanot  
Administrator

c: Patricia McManaman, Director  
Orlando "Dan" Davidson, Land Use Commission  
Colleen Suyama, Munekiyo and Hiraga, Inc.

2012 MAR 29 A 9:08  
LAND USE COMMISSION  
STATE OF HAWAII



# West Maui Taxpayers Association

P.O. Box 10338 • Lahaina, HI 96761 • Office (808) 661-7990 • Fax (808) 661-7992 • Visit [www.WestMaui.org](http://www.WestMaui.org)

April 24, 2012

## Board of Directors

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TO: Mr. Bill Frampton  
Mr. David Ward  
Frampton and Ward  
2035 Main Street, Suite 1  
Wailuku, HI 96793

FROM: West Maui Taxpayers Association

RE: Olowalu Town DEIS

ALOHA;

The West Maui Taxpayers Association (WMTA) apologizes for missing the response date for comment on this DEIS, but we do want to participate in any future reviews. WMTA would appreciate your adding us to the list of commenters and reviewers as the project progresses. Thank you.

WMTA has no specific comments on the DEIS, but we do participate in West Maui development that will impact quality of life, public safety, the tax base, and infrastructure demands in our community.

WMTA looks forward to bringing more specific comments on Olowalu Town to the table at the appropriate time.

Donald E. Lehman  
President, WMTA

cc: Orlando "Dan" Davidson, Executive Director, Land Use Commission  
235 S. Beretania St.  
Leiopapa A Kamehameha, Room 406  
Honolulu, HI 96813

Colleen Suyama  
305 High Street, Suite 104  
Wailuku, HI 96793

WMTA is a non profit 501 c  
4. WMTA, as a dedicated  
Lobbyist organization, has  
a mission for our West  
Maui Community. The  
objectives of this  
Organization are to  
associate the interests,  
concerns, and efforts of  
residents and taxpayers of  
the West Maui area, and  
others interested in the  
orderly development and  
improvement of the area,  
in a cooperative effort,  
whether provided by, or  
to be provided by, the  
State or County  
governments, or by  
others.

LAND USE COMMISSION  
STATE OF HAWAII  
2012 APR 26 P 2:42



DEPARTMENT OF  
**HOUSING AND HUMAN CONCERNS**  
HOUSING DIVISION  
COUNTY OF MAUI

ALAN M. ARAKAWA  
Mayor  
JO-ANN T. RIDAO  
Director  
JAN SHISHIDO  
Deputy Director

35 LUNALILO STREET, SUITE 102 • WAILUKU, HAWAII 96793 • PHONE (808) 270-7351 • FAX (808) 270-6284

April 16, 2012

Mr. William Frampton  
Olowalu Town, LLC and Olowalu Ekolu, LLC  
2035 Main Street, Suite 1  
Wailuku, Hawaii 96793

LAND USE COMMISSION  
STATE OF HAWAII  
2012 APR 24 A 7:28

**Subject: Draft Environmental Impact Statement (EIS) For Olowalu Town  
Master Plan at TMK (2)4-8-003:084, 098 through 118, and 124,  
Olowalu, Lahaina, Maui, Hawaii**

Dear Mr. Frampton:

Thank you for the opportunity to review the above Environmental Impact Statement. The Department would like to offer the following comments:

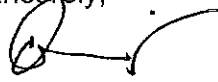
1. It is indicated at the top of page 24 that the anticipated average price of the market units will be \$600,000.00 or below. The applicant needs to determine if more than 50% of the dwelling units and/or new lots in the development will be offered for sale for less than \$600,000.00 or for \$600,000.00 or more, and if the Residential Workforce Housing units will be provided on-site or off-site.
2. The following is pursuant to Section 2.A. of Ordinance No. 3719:
  - a. If the Residential Workforce Housing units are provided on-site and if more than 50% of the dwelling units are offered for sale for less than \$600,000.00, then at least 25% of the total number of units and/or lots shall be Residential Workforce Housing units.
  - b. If the Residential Workforce Housing units are provided on-site and if more than 505 of the residential Workforce Housing units are offered for sale for \$600,000.00 or more, at least 50% of the total number of units and/or lots shall be Residential Workforce Housing units.
  - c. If the Residential Workforce Housing units are provided off-site and if more than 50% of the dwelling units and/or new lots in the development are offered for sale for less than \$600,000.00, then the number of off-site Residential Workforce Housing units due shall be equal to 50% of the total number of on-site market rate units.
  - d. If the Residential Workforce Housing units are provided off-site and if more than 50% of the dwelling units and/or new lots in the development are offered for sale for \$600,000.00 or more, then the number of off-site Residential workforce Housing units shall be equal to 50% of the total number of on-site market rate units.

Mr. William Frampton  
Page 2  
April 16, 2012

3. The Residential Workforce Housing Agreement for the subject project needs to be fully executed and recorded at the Bureau of Conveyances prior to the final subdivision or building permit approval, whichever is applicable and occurs first.

Please call Mr. Veranio Tongson of our Housing Division at 270-1741 if you have any questions.

Sincerely,

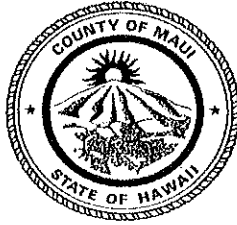
  
*Way.* WAYDE T. OSHIRO  
Housing Administrator

cc      Director of Housing and Human Concerns  
         Orlando "Dan" Davidson, State of Hawaii Land Use Commission  
         Colleen Suyama, Munekiyo & Hiraga, Inc.

ALAN M. ARAKAWA  
Mayor

KYLE K. GINOZA, P.E.  
Director

MICHAEL M. MIYAMOTO  
Deputy Director



TRACY TAKAMINE, P.E.  
Solid Waste Division  
ERIC NAKAGAWA, P.E.  
Wastewater Reclamation Division

**COUNTY OF MAUI  
DEPARTMENT OF  
ENVIRONMENTAL MANAGEMENT**  
2200 MAIN STREET, SUITE 100  
WAILUKU, MAUI, HAWAII 96793

April 25, 2012

Olowalu Town, LLC  
Olowalu Ekolu, LLC  
2035 Main Street, Suite 1  
Wailuku, Hawaii 96793

LAND USE COMMISSION  
STATE OF HAWAII  
2012 APR 27 A 7:57

Dear Gentlemen,

**SUBJECT: OLOWALU TOWN MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS)  
TMK (2) 4-8-003:084, 098 – 118, & 124, OLOWALU, LAHAINA**

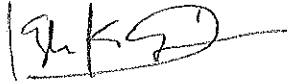
We reviewed the subject application and have the following comments:

1. Solid Waste Division comments:
  - a. Address any solid waste/recycling concerns.
2. Wastewater Reclamation Division (WWRD) comments:
  - a. The project is outside of the County Sewer Service Area.
  - b. The Wastewater Reclamation Division will not have any responsibility for the collection, treatment or disposal of sewage, sludge, final effluent or reclaimed water from this project. The developer shall work with the Department of Health for the approval of its collection system and treatment facility.

Olowalu Town, LLC  
April 25, 2012  
Page 2

If you have any questions regarding this memorandum, please contact Mike Miyamoto at 270-8230.

Sincerely,

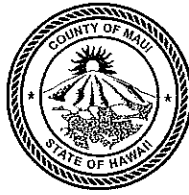
A handwritten signature in black ink, appearing to read 'K. Ginoza', with a horizontal line extending from the end of the signature.

KYLE K. GINOZA, P.E.  
Director of Environmental Management

xc: Mr. Orlando "Dan" Davidson  
Executive Director  
Land Use Commission  
P.O. Box 2359  
Honolulu, Hawaii 96813

Ms. Colleen Suyama  
Munekiyo & Hiraga, Inc.  
305 High Street, Suite 104  
Wailuku, Hawaii 96793

ALAN M. ARAKAWA  
MAYOR



JEFFREY A. MURRAY  
CHIEF

ROBERT M. SHIMADA  
DEPUTY CHIEF

**COUNTY OF MAUI**  
DEPARTMENT OF FIRE AND PUBLIC SAFETY  
FIRE PREVENTION BUREAU

313 MANEA PLACE • WAILUKU, HAWAII 96793  
(808) 244-9161 • FAX (808) 244-1363

April 25, 2012

**To :** Colleen Suyama  
Munekiyo & Hiraga, Inc.  
305 High St.  
Wailuku, HI 96793

**Re :** **Draft EIS: Olowalu Town Master Plan**  
**Olowalu, Lahaina, Maui, HI**  
**TMK: (2) 4-8-003:084, 098 through 118, and 124**

LAND USE COMMISSION  
STATE OF HAWAII  
2012 APR 27 A 7:57

Dear Colleen:

Thank you for the opportunity to comment on the subject draft EIS. At this time, our office provides the following comments:

- In review of this document, it has been noted that there are accommodations in the Master Plan to address the impacts placed upon the Fire Dept. by this project. Discussion and inquiries on this provision shall be addressed with Fire Administration.
- Our office confirms that the proposed water supply for fire protection is in line with the department's current standards. We reserve the right to comment directly on this provision when detailed plans are submitted in the subdivision process or finalization of the project's design.
- Our office also reserves the right to comment on fire apparatus access during the subdivision process or finalization of the project's design. Current requirements can be requested from the Fire Prevention Bureau.

- As noted in your document, the Olowalu area has been the site of several large incidents of wildland fires. Although this project should diminish the likelihood of such fires, the project's design should include measures to address impacts to this project from wildland fires that originate on surrounding areas. Such measures could consist of designed greenways that provide defensible space for the outer edges of the project. Firewise is a great resource for information on this matter.

Copies of this letter have been provided to the following entities as requested: Olowalu Town, LLC; Olowalu Ekolu, LLC; & Orlando "Dan" Davidson, Land Use Commission.

If there are any questions or comments, please feel free to contact me at 244-9161 ext. 23. Thank you for your attention to fire prevention and public safety.

Sincerely,



Paul Haake  
Captain, Fire Prevention Bureau  
Department of Fire & Public Safety  
313 Manea Place  
Wailuku, HI 96793

cc: Olowalu Town, LLC  
Olowalu Ekolu, LLC  
Orlando "Dan" Davidson, Land Use Commission



ALAN M. ARAKAWA  
Mayor

WILLIAM R. SPENCE  
Director

MICHELE CHOUTEAU McLEAN  
Deputy Director



COUNTY OF MAUI  
**DEPARTMENT OF PLANNING**

April 17, 2012

LAND USE COMMISSION  
STATE OF HAWAII  
2012 APR 24 A 7:27

Mr. William Frampton, Olowalu Town, LLC  
Ms. Heidi Bigelow, Olowalu Ekolu, LLC  
2035 Main Street, Suite 1  
Wailuku, Hawaii 96793

Dear Mr. Frampton and Ms. Bigelow:

**SUBJECT: COMMENTS REGARDING THE DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS) FOR THE PROPOSED OLOWALU TOWN MASTER PLAN, OLOWALU, MAUI, HAWAII; TMK(S): (2) 4-8-003:084, 098-118, AND 124 (EAC 2012/0002)**

The Department of Planning (Department) has the following comments in regards to your letter dated March 6, 2012 requesting comments on the Draft EIS.

The Department understands the proposed action includes the following:

- A State District Boundary Amendment (DBA) from Agriculture to Urban and Rural for approximately 460 acres; we note that the Environmental Impact Statement Preparation Notice (EISPN) proposed approximately 320 acres of land;
- The amendment would provide for the development of the Olowalu Town project on approximately 636 acres which is now proposed to be phased over a period of approximately ten (10) years; we note that the EISPN proposed a 30-year period; and
- The Olowalu Town project would include approximately 1,500 residential units, commercial and civic uses, parks and recreation sites, a cultural preserve, agricultural uses, a private domestic water system, a private wastewater system, and the relocation of Honoapi'ilani Highway.

Based on the foregoing, the Department provides the following comments on the Draft EIS:

1. If the Maui Island Plan is adopted prior to the submittal of the Final EIS, then include in the Final EIS an analysis of how the proposed project complies with the Maui Island Plan;
2. On pages 24, 160, 165, and 167 (and possibly other pages within the document) - It is stated that both the General Plan Advisory Committee (GPAC) and the Maui Planning Commission (Commission) recommended that the Master Plan be included in the Maui Island Plan's (MIP) growth boundaries. However, more complete information is warranted. Although the GPAC and Commission approved the inclusion of the Master Plan (as proposed) in a growth boundary, the Commission did not support any development makai of the existing Honoapi'ilani Highway.

Furthermore, whenever this information is mentioned in the Draft EIS, the fact that the Department did not support the inclusion of the Master Plan in a growth boundary should also be stated. We note that the Department's recommendation to Council to not include this Master Plan in a growth boundary is mentioned on page 176;

3. On page 23 - It is represented that the GPAC and Commission recommended inclusion in the MIP to "meet this estimated housing need". This is again not a completely accurate statement. The proposed directed growth areas proposed by the Department, without the inclusion of this project, meet 116 percent (4,024 units proposed, 3,456 needed) of the demand for the West Maui area. The inclusion of the Master Plan by both the GPAC and Commission would further exceed the projected housing demand. Please restate this information to reflect that the project will exceed the Department's estimated housing need and provide a rationale for exceeding the demand;
4. On page 27 - Please justify how this project, located four miles away from the edge of Lahaina, meets "Smart Location" for LEED Neighborhood Development standards. Specifically, "Smart Location" intent, "encourage(s) development within and near existing community and public transit infrastructure." Furthermore, requirements for all projects are to, "Either (a) locate the project on a site served by existing water and wastewater infrastructure or (b) locate the project within a legally adopted, publicly owned, planned water and wastewater service area, and provide new water and wastewater infrastructure for the project." The requirements further state that the project shall either be, "on an infill site", or "on site adjacent" (a site that is adjacent to previously developed lands);
5. Pages 33-38 - As stated by the Department in the EISPN comment letter dated August 6, 2010, obtain a Zoning and Flood Confirmation Form for all parcels within the entire Olowalu Town Master Plan project area. Please include a zoning map as an exhibit. Please also include in Table 5 the area for each Tax Map Key (TMK); the area that will need state land use reclassification within each TMK and what reclassification is needed (Urban or Rural);
6. On page 41 (and within other portions of the Draft EIS) - Olowalu is referred to as having been a "thriving plantation town" (e.g., "As recently as the 1930's, Olowalu was a thriving plantation town"). Throughout its history, Olowalu was a "camp" and at most a "village". Its plantation-era population was recorded as being "less than 500" persons. In 1899, on the eve of annexation, T.G. Thrum described the population at Olowalu in detail and noted that there were 167 persons residing there. They included 145 men, 22 women, and no children (Table of Sugar Plantation Laborers, October 31, 1899; Hawaiian Almanac and Annual, Thrum, 1899:176). In 1930, census-taker Kenichi Takayama recorded the population at Olowalu as being 447 persons. They consisted of 237 men, 79 women, and 131 children (Fifteenth Census of the United States, "Olowalu Village," Sheets 116-120A, April 1-11, 1930).

Mr. William Frampton, Olowalu Town, LLC  
Ms. Heidi Bigelow, Olowalu Ekolu, LLC  
April 17, 2012  
Page 3

We have extensive information about West Maui's camps, villages, and towns, including Lahaina, Olowalu, Puukolii, and Ukumehame if you would like further clarification.

Given the available information, including census data, as well as Olowalu Company (OCo) and Pioneer Mill Company (PMCo) period documents, please change the references to the historical enclave of Olowalu from "Olowalu Town" to "Olowalu Camp" or "Olowalu Village" throughout the Draft EIS.

7. On page 49 – Figure 10 – This figure indicates that the majority – 80 percent - of the Master Plan Site Area has 'A' and 'B' classified soils, while about 19 percent of the site is of the lowest, least productive classification 'E'. It is noted that this area where the least productive AG soil exists is the area surrounding the Olowalu Stream – the precise area where the Master Plan proposes to retain as AG land within the Olowalu Cultural Reserve. Please explain why the area with the least productive AG soil is being retained as AG while the most productive AG soil areas would be rezoned;
8. Pages 32-55 – Given the State's desire to improve and increase the long-term sustainability of Hawaii's economy, the Draft EIS inadequately justifies the removal of 621 acres of agricultural land, including 121 acres of Prime Agricultural Land. The Final EIS should more carefully examine the loss of this particularly valuable prime and other important agricultural land with excellent soil characteristics. Suggesting that these 621 acres are a small percent of Maui's Agricultural lands neglects the fact that these are prime lands that demand special protection.

In addition, the Applicant should also make reference to Hawaii Revised Statutes (HRS) Ch. 226-13 regarding objectives and policies for the physical environment – land, air and water quality; and HRS Ch. 226-104 (b).1 through 5 – regarding priority guidelines for growth and land resources when discussing the redesignation of prime AG lands. Please explain how developing AG land, including Prime AG land, fits with these State policies.

9. On pages 55 and 66 - "BMPs will be implemented both prior to and during grading and construction to minimize opportunities for soil erosion; Olowalu Stream will not be altered during implementation of the Master Plan". Generally stating that BMPs will be implemented is vague. Please provide a detailed plan for how grading and construction activities will not adversely impact Olowalu Stream or the associated tributaries;
10. On page 60 - Please explain and justify why the proposed project, with some high-density areas, should be created in a known tsunami and flood hazard area;
11. On pages 60, 100, 102, 159, 218, and 220 (and possibly other pages within the Draft EIS) - There is a reference that the Applicant will adhere to a 50' or 150' setback along the shoreline. It should be noted that this is already a pre-existing condition for the area (shoreline) based on previous SMA approvals. It is noted that this

information regarding these existing conditions is finally presented on page 222 of the document. Please restate or reword this information on previous pages to accurately reflect existing conditions;

12. On page 62 - It is stated that there was evidence that Nene were present during the flora and fauna study. Additionally, it is noted that water features or temporarily irrigated areas may attract more Nene. There is no mention of incidental take or cooperation with the United State Fish and Wildlife Services (USFWS) under the Endangered Species Act. Please address this concern and what steps will be taken to address the protection of this endangered species;
13. On page 67 – Over the course of the GPAC and Commission review of the MIP, the Department received hours of oral testimony relating to the Master Plan. One (1) of the most frequent concerns discussed was for the coral reef health and nearshore water quality. A baseline study published in 2003, prior to upland development in the area, categorized the reef as “the best leeward reef in Maui and probably the whole state.” The recommendation of the report was that continued monitoring was necessary to determine the specified stressors that cause reef decline. “Monitoring reefs to develop indices of reef ‘health’, examining human impacts and placement of artificial reefs to reduce stress on natural reefs will provide tools for more effective management of tropical ecosystems. This work takes on particular relevance within boundary waters of the Hawaiian Islands Humpback Whale National Marine Sanctuary and as nearshore development encroaches upon the marine habitat” (Brown, et al). Please clarify if there will be additional plans for monitoring programs and analysis to mitigate impacts to nearshore water quality and coral reef health;
14. On pages 41, 72 -73 (and possibly other pages within the Draft EIS) - “In 1831, missionaries estimated 831 Hawaiians lived at Olowalu. Based [up] on the 1831 population, it is estimated that 2,000 or more Hawaiians resided at Olowalu before Western contact.” Please explain or provide a reference for this estimate;
15. On page 74 – “By 1878....the continuing decline in the number of Hawaiians...compelled Olowalu Plantation to hire Chinese workers.” The correct company name would be West Maui Plantation (1871-1881) (Olowalu Company was not established until 1881. (See Dorrance and Morgan, Sugar Islands, 2000:60-61, 64; and “Historic Context” in Wo Hing Society, Lāhainā, Maui. Yip and Solamillo, 2009:8). Please revise;
16. On page 75 – “In early 1931, Olowalu Company was sold to American Factors, Ltd...” PMCo acquired OCo for \$400,000.00 in May 1931 and the latter was dis-incorporated on December 31 of that year (*Annual report of the Pioneer Mill Company, Limited for the Year Ending December 31, 1931*:4, 15). Please revise and incorporate;

17. On page 75- "(Ainsworth)" as a citation. In order to meet standard reference requirements, one (1) must include author, followed by year, and page number. In addition, there are ten (10) pages of text that include quotes without citations. Please revise and add citations per examples included in these comments;
18. On page 112 – "The irrigation system in Olowalu is quite dated, with portions of it built in the late 19th and early 20th centuries..." The history of water development by OCo/PMCo is not included in a historical context and the infrastructure is not delineated on any map or graphic. Given its age and associations, the infrastructure may be eligible for listing in the National Register of Historic Places and may have an adverse impact on this resource, which will have to be mitigated before improvements and a new water development program are implemented. Please add a section on the history of OCo/PMCo water development and associated cultural resources, as well as potential impacts and mitigation measures proposed for consideration. These will have to be submitted to State Historic Preservation Division (SHPD) for review, concurrence, and approval;
19. On page 114 – "In 1876 two Maui residents started the Olowalu Plantation..." Please clarify and cite the dates and persons named in the Draft EIS for consistency throughout the document;
20. On pages 115 and 116 – There is little or no historical information provided for the years spanning 1932-1962, which is required to fully document the fifty-year terminus for the Period of Significance, and little information on what transpired through 1990. Please include and revise text accordingly;
21. On page 128 - Although the information provided on the Socio-Economic housing demand forecast is correct, please also include that the need for housing in West Maui to be only 3,456 additional units by the year 2030, beyond those lands already entitled. Please also include new information that this number is now further reduced to 2,574 units (or 2,307 units if 267 ohana units are also built) with the inclusion of entitled lands at Pulelehua;
22. On pages 129-154 – The Draft EIS superficially discusses the likely impacts to public services and infrastructure that will result from the project. In most cases the Draft EIS merely states that the services (e.g., police, emergency response, solid waste) will be provided in West Maui or even more remotely, in the Wailuku/Kahului area.

The Final EIS must include a more meaningful discussion of the impact of providing public services to the proposed new community, particularly since many of those services are located several miles away and/or would have to be expanded to meet these new demands. It is insufficient to merely state that the hospital or police facilities are located a certain distance from Olowalu, or that a fire station site will be discussed for possible inclusion in the public/quasi-public area. The Final EIS should provide qualification of the anticipated impacts to these public services, similar to how traffic impacts and educational impacts are qualified by the number of trips or number of students that the project will generate. For example, the Final EIS

could indicate how many additional police, fire, emergency response and solid waste personnel and vehicles would be needed to maintain their current level of service in the region. If the Final EIS were to also include estimated costs for the provision of these expanded services, it could also estimate the Real Property Tax revenue that the project would generate and that could serve to offset some of these costs.

23. On pages 134-136 – The Draft EIS estimates 462 new students, from elementary to high school. As part of this discussion, the Olowalu Town Master Plan states that (p.135) a 10-15 acre site for an educational facility will be provided. Please indicate whether this site will conform to Department of Education (DOE) standards for Elementary, Middle, and High School locations. Please also provide information on what DOE standards and ‘warrants’ are for new school construction, for example, whether the new school-age child population anticipated at Olowalu will include enough children to warrant the construction of a new elementary, middle and/or high school within the Olowalu Town Master Plan.

Furthermore, traffic Impacts of children commuting off-site to attend school indicates that there will be 462 new students within Olowalu; unless a school facility is built within the Olowalu Town, these students will all have to travel off-site to attend school. Please provide a discussion of the traffic impacts to Honoapi’ilani Highway – north and south of Olowalu Town – as a result of 462 students traveling to school(s) located in Lahaina or elsewhere.

24. On page 137 – Please clarify if the recreational activities and parks proposed for the master plan will be private or public;
25. On page 140 - Please expand your analysis to include the impact to visitors and residents who commute and use Honoapi’ilani Highway, both north (to Puamana) and south (to Maalaea) of the project, when the highway in these areas will remain at one (1) lane in each direction. We note that the highway will continue to operate at a level of service of E and F, as indicated in other traffic reports received by the Department. Further, the statement, “It is estimated that the level of service of the highway will be “C” or better” should be clarified that this prediction is only for the section of the highway being relocated, and not for the length of the entire highway (specifically from Maalaea to Lahaina). Impacts and mitigation for traffic impacts to Honoapi’ilani Highway, between Maalaea and Lahaina, should be evaluated;
26. On page 161 (and other pages within the Draft EIS) - It is repeatedly stated that the Master Plan is consistent with the County's Pali to Puamana Parkway Master Plan. However, this is misleading as the County's plan does not propose any additional development (e.g., urban uses) makai of the existing highway; does not comport exactly as depicted in the Master Plan; and did not include the many acres of development located mauka of the existing highway. Furthermore, as mentioned on pages 166 and 167, to compare the 28 acres of proposed park in the Pali to Puamana Parkway Master Plan to the 223 acres of green space in the entire proposed Olowalu Master Plan is apples-to-oranges and should be modified to reflect that the plans do not encompass the same project area;

27. On page 166 – Although the Hawaii Department of Transportation (HDOT) has begun the initial stages of drafting an EIS for the relocation of Honoapiʻilani Highway (from Maalaea to Launiupoko), the effort has been on-going and tedious. The Applicant's language in this section gives the impression that the project is underway; however, the Draft EIS has yet to be finished and there has been no planning or funding secured for the project. Please verify with HDOT, and include information in this section on the status of the project and its estimated timeline;
28. On pages 165-169 – The Department notes that the project is located several miles from major regional activity centers on the island, including Maui's larger employment centers. Further, the Draft EIS does not clearly address the level of public infrastructure, services and facilities needed to support the project. Without this information being provided, the projects potential impacts upon public services, facilities and resources cannot be clearly determined;
29. There are a number of references made throughout the Draft EIS that refer to incorrect Table numbers. The Department suggests that a thorough review of any reference to a Table be made for the entire document (e.g., on pages 210 and 211, Table 6 is referenced for land use designations. Table 6, however, is the "Master Plan Preliminary Implementation Time Schedule");
30. Please include a map of the Draft Flood Insurance Rate Map (FIRM) and provide an analysis between the current map and the proposed Draft FIRM and its impact on the Master Plan;
31. Please provide a map of the tsunami inundation zone;
32. Appendix J: View Analysis. As stated by the Department in the EISPN comment letter dated August 6, 2010, please provide computer generated photos of the area with the proposed development. The Draft EIS should provide a more detailed written analysis of the affect of 1,500 residences, 375,000 square feet of commercial space, and public facilities on existing scenic resources. This analysis should include 'Photoshop' and/or SketchUp model renderings of the primary view corridors through the site with building envelopes of Olowalu Town mocked up as it would be completely built out. Photographs 1 – 6 especially should provide both 'before' and 'after' images of the scenic resources, i.e., as they exist at present (before) and as they will be impacted with the addition of Olowalu Town development (after);
33. Appendix K - The consultant for the Market Study bases their assertion that all 1,500 units at Olowalu would be absorbed by the real estate market in eight (8) to ten (10) years on the assumption that future development projects that are within the Maui Island Plan's Directed Growth boundaries could meet with community resistance or financial difficulties, and not be built, thus leaving room for Olowalu's units to be absorbed in the market (page iii). The Draft Maui Island Plan already includes a surplus of dwelling units in the West Maui Community Plan area. Please provide an analysis of market absorption that does not rely on other projects not being constructed – that is, what would be the market absorption rate if all approved future

projects within the current growth area boundaries are built and entered into the West Maui real estate market;

34. Appendix L – This assessment neglects to account for numerous CIP and operational expenditures that will be necessitated by the Olowalu Town project, and it overestimates government revenues.

Missing from the calculations are the County's costs to provide the following services: police, fire, civil defense, housing and human concerns, solid waste, public works, development services, and planning. Notably lacking was the cost of providing facilities and vehicles (fire, police, solid waste) that would be needed to serve these 4,000+ residents and 1,500 homes.

Similarly, there is an underestimate of the costs to provide many additional State services for the 4,000+ new residents. These range from schools, medical facilities, prisons and highways, and the maintenance of these and many other CIP projects. Just as the costs to government were underestimated, projected County and State revenues have been overestimated. The Final EIS should correct these calculations and present an accurate projection of the economic costs and realistic potential revenues to Maui County and to the State of Hawaii.

35. The Countywide Policy Plan and West Maui Community Plan objectives and policies - The Department notes that the Applicant did not adequately address or respond to many relevant objectives and policies contained within these documents that appear to be in conflict with the Master Plan. The Department asks that the Applicant further expand its analysis on those policies and objectives discussed and include others that were completely omitted from the Draft EIS; and

36. The following are general comments and recommendations are provided regarding Cultural Resources:

Olowalu Draft EIS Vol II Appendices, "Pu'u honua: The Legacy of Olowalu" and "Archaeological Literature Review" are both well-researched and well-written documents. The latter report in particular presents data in formats which benefit both the professional and the layperson and establishes new thresholds for the use of applied GIS and data collection. In addition, the recommendations that are included are consistent with Cultural Resource Management best practices and for that reason, provide an excellent example on how to integrate new development with cultural resource preservation.

However, one important recommendation for the Olowalu Cultural Reserve (OCR) remains absent and should be included: a multi-property nomination to the Hawai'i and National Registers of Historic Places for all sites contained in the OCR as well as sites identified along the shoreline. Please include.

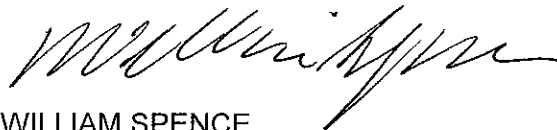


Mr. William Frampton, Olowalu Town, LLC  
Ms. Heidi Bigelow, Olowalu Ekolu, LLC  
April 17, 2012  
Page 9

In addition, given the quality of the Draft EIS appendices, it is problematic that the historical information presented in Olowalu Draft EIS, Vol. I includes a number of errors and inconsistencies. The historical narrative found on the Applicant's website "Olowalu Town," written by Gail Ainsworth, is well-written and contains much important information. Aside from an absence of sources and references, Ms. Ainsworth's complete text should have been incorporated into Vol. I or, at minimum, should have been provided as an appendix in Vol. II, with references added as either footnotes or endnotes. Time constraints do not allow a more in-depth review of the material; however, some of the most obvious errors in the narrative have been provided in this comment letter for revision and or correction. Please add Ms. Ainsworth's text as an appendix to Vol. II.

Thank you for the opportunity to comment. If you require further clarification, please contact Staff Planner Kathleen Ross Aoki at [kathleen.aoki@mauicounty.gov](mailto:kathleen.aoki@mauicounty.gov) or at (808) 270-5529.

Sincerely,



WILLIAM SPENCE  
Planning Director

xc: Clayton I. Yoshida, AICP, Planning Program Administrator (PDF)  
John F. Summers, Planning Program Administrator (PDF)  
Kathleen Ross Aoki, Staff Planner (PDF)  
David Yamashita, Long Range Division Planner Supervisor (PDF)  
Orlando "Dan" Davidson, Executive Director, State Land Use Commission  
Colleen Suyama, Munekiyo & Hiraga, Inc.  
EAC File  
General File

WRS:KRA:sa

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April 25, 2012

Olowalu Town, LCC and Olowalu Ekolu, LCC  
Attn: Mr. William Frampton and/or Ms. Heidi Bigelow  
2035 Main Street, Suite 1  
Wailuku, HI 96793

LAND USE COMMISSION  
STATE OF HAWAII  
2012 APR 27 A 7:57

Subject: Proposed Olowalu Town Master Plan – Draft Environmental Impact Statement  
Tax Map Key: (2) 4-8-003:084, 98 through 118, and 124  
Honoapi'ilani Highway  
Olowalu, Maui, Hawaii

Dear Mr. Frampton and/or Ms. Bigelow:

Thank you for allowing us to comment on the Draft Environmental Impact Statement for the subject project.

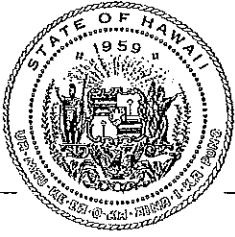
In reviewing our records and the information received, Maui Electric Company (MECO) has no additional comments at this time. Please refer to our MECO letter addressed to Mr. Dan Davidson of the Hawaii State Land Use Commission and dated May 18, 2010, in response to a prior request for this project.

Should you have any questions or concerns, please call me Kelcie Kawamura at 871-3246.

Sincerely,

Ray Okazaki  
Supervisor, Engineering

c: Orlando "Dan" Davidson, Executive Direction, Land Use Commission  
Colleen Suyama, Senior Associate, Munekiyo & Hiraga, Inc



## DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

NEIL ABERCROMBIE  
GOVERNOR  
RICHARD C. LIM  
DIRECTOR  
MARY ALICE EVANS  
DEPUTY DIRECTOR  
JESSE K. SOUKI  
DIRECTOR  
OFFICE OF PLANNING

### OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813  
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846  
Fax: (808) 587-2824

Ref. No. P-13579

April 20, 2012

Mr. Bill Frampton  
Olowalu Town, LLC and Olowalu Ekolu, LLC  
2035 Main Street, Suite 1  
Wailuku, Hawaii 96793

Dear Mr. Frampton:

Subject: Land Use Commission Docket No. A10-786  
Draft Environmental Impact Statement  
Olowalu Town Master Plan  
TMK(s) (2) 4-8-003: 084, 098 through 1218, and 124  
Olowalu, Lahaina, Maui, Hawaii

Olowalu Town, LLC and Olowalu Ekolu LLC (Applicant) proposes to develop the Olowalu Town Master Plan (Master Plan); a small scale, mixed use community of approximately 1,500 housing units, 375,000 square feet of retail/commercial use, public/quasi-public use, parks, open space, and associated infrastructure improvements on approximately 636 acres of land.

Munekiyo & Hiraga, Inc. has prepared a Draft Environmental Impact Statement (DEIS) to support an Amendment to the West Maui Community Plan (CPA), use of State Lands, use of Conservation District Lands, construction of a wastewater treatment facility, a Land Use District Boundary Amendment (LUDBA), and a Change in Zoning. The State Land Use Commission (LUC) is the accepting authority for the DEIS. A petition to reclassify approximately 460 acres of land from the State Agricultural District to the State Urban and Rural District has been submitted to the LUC.

The Office of Planning (OP) has reviewed the DEIS and has the following comments:

1. We commend the Olowalu Town Master Plan design based on smart growth and sustainable land use principles, and which seeks to meet the certification requirements of LEED for Neighborhood Development. This is highly supportive of recent amendments to the Hawaii State Plan, pursuant to Act 181, Session Laws of Hawaii 2011. Please revise the Hawaii State Plan section of the DEIS to include reference to Hawaii Revised Statutes Section 226-108, regarding Sustainability.

2012 APR 24 A 7:28  
LAND USE COMMISSION  
STATE OF HAWAII

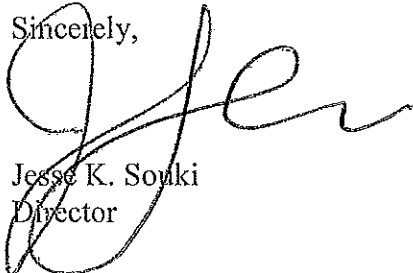
2. Please revise DEIS Figure 4, *Conceptual Master Plan*, to clearly delineate the 150-foot shoreline setback line.
3. Population, page 102: Please provide the current population count for Olowalu Town.
4. Agriculture, page 123: Please provide and compare the Island of Maui acreage of Land Study Bureau (LSB) A and B rated soils and Agricultural Lands of Importance to the State of Hawaii (ALISH) Prime lands, with the acreage of LSB A and B rated soils and ALISH Prime lands within the Petition Area.
5. Housing, pages 127- 128: Please provide the current dwelling unit count for Olowalu Town. Additionally, the EIS should identify major planned and proposed developments in the West Maui region to assess impacts of and absorption rates relative to the planned number of residential units identified in the Master Plan.
6. Roadways, page 138-142: Given the magnitude of the project and potential impacts to the only arterial roadway serving West Maui, a complete Traffic Impact Analysis Report (TIAR) rather than a "Preliminary" TIAR should be prepared as part of the EIS for public review. The complete TIAR should include at a minimum the items listed on page 142 regarding peak hour traffic conditions, traffic movements, and analysis of options. There should also be a detailed discussion and analysis on the State Department of Transportation's plans for the regional highway system, as well as a discussion and analysis on the option of building the inland highway while retaining the existing coastal alignment for Honoapiilani Highway as a secondary or bypass road.
7. Archaeological and Cultural Resources, page 159: Please explain why only a "Preliminary" cultural impact study was undertaken.
8. Maui Island Plan, page 203: A number of sections within the DEIS should be revised to clearly state that the Draft Maui Island Plan currently being reviewed by the Maui County Council does not include the Master Plan within its proposed Urban Growth Boundaries.
9. Unresolved Issues, page 236: Please clarify the anticipated timing for proceeding with the LUDBA in relation to the adoption of the Maui Island Plan by the Maui County Council.

Mr. Bill Frampton  
Page 3  
April 20, 2012

Thank you for the opportunity to provide comments.

Should you have any questions, please contact Ms. Robyn Loudermilk, AICP, at (808) 587-2821, or by email at [Robyn.L.Loudermilk@dbedt.hawaii.gov](mailto:Robyn.L.Loudermilk@dbedt.hawaii.gov).

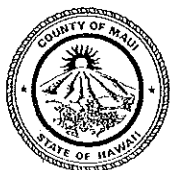
Sincerely,

A handwritten signature in black ink, appearing to read 'Jesse K. Souki', written over the printed name and title.

Jesse K. Souki  
Director

Enclosures

c: Ms. Colleen Suyama, Munekiyo & Hiraga, Inc.  
✓ Mr. Orlando Davidson, LUC  
Department of Planning, County of Maui



ALAN M. ARAKAWA  
MAYOR

OUR REFERENCE

YOUR REFERENCE

# POLICE DEPARTMENT

COUNTY OF MAUI

55 MAHALANI STREET  
WAILUKU, HAWAII 96793  
(808) 244-6400  
FAX (808) 244-6411

April 5, 2012



GARY A. YABUTA  
CHIEF OF POLICE

CLAYTON N.Y.W. TOM  
DEPUTY CHIEF OF POLICE

Olowalu Town, LLC and  
Olowalu Ekolu, LLC  
2035 Main Street, Suite 1  
Wailuku, HI 96793

Dear Sirs:

Re: Draft Environmental Impact Statement (EIS) for Olowalu Town,  
Master Plan at TMK (2)4-8-003:084, 098 Through 118, and 124,  
Olowalu, Lahaina, Maui, Hawaii

LAND USE COMMISSION  
STATE OF HAWAII  
2012 APR 10 A 8:04

In response to your letter of March 6, 2012, we took the opportunity to review the above-mentioned subject. After a careful review of the project description and the accompanying maps and diagrams, we are submitting our comments as follows:

Increase in Population: With the construction of 1,500 residential dwellings and the estimated addition of 4,239 residents to the West Maui population, the Olowalu Town project would necessitate the addition of another beat for the Lahaina Patrol District of the Maui Police Department to ensure adequate police services to the community.

Currently, there are five (5) patrol beats responsible for servicing the entire population of West Maui, to include the visitors as well as the local residents.

Traffic: Although the proposed relocation and widening of Honoapiilani Highway will provide additional capacity to accommodate additional traffic volume, the four-lane highway may create hazardous driving conditions by encouraging people to drive very fast on very short portion of the highway.

The speed of free-flow traffic on a four-lane highway will increase within the project area. As the highway on both ends of the project area tapers down from four lanes to two lanes, the traffic may see the potential to "bottleneck" in those areas.

O-Turns: The concept of "O-Turns" is relatively new, particularly in the county, and the initial response from the public could cause confusion.

Olowalu Town, LLC, and  
Olowalu Ekolu, LLC  
April 5, 2012  
Page 2

Emergency Situations: Alternate routing of traffic, in the event of fatal or near-fatal traffic accident investigations or natural disasters.

During fatal and near-fatal traffic accidents, the Maui Police Department's policies and procedures dictate the closure of the roadway for several hours while specially trained investigators and reconstructionists conduct a complete investigation. In addition, during natural disasters (i.e. wild fires, flooding, tsunamis, etc.) the Maui Police Department may have to close certain roadways or redirect traffic to ensure the public's safety.

It may be necessary to divert traffic onto one of the separated two-lane roadways so that traffic may continue moving in both directions, or to divert traffic to the secondary roadway (the existing Honoapiilani Highway).

Policing Powers: Parking and other traffic enforcement within the project roadways need to be strictly enforced.

Dedicating the roadways in the project area to the County of Maui or an agreement with the county to allow traffic enforcement by the police department could be a solution. The decision to enter into an agreement would be at the discretion of the County of Maui.

Thank you for allowing our department to provide input concerning your project. Should you have any questions, please feel free to contact our Lahaina District Commander, Captain John Jakubczak, at (808) 661-4441.

Sincerely,



GARY YABUTA  
Chief of Police

cc: ✓ Orlando "Dan" Davidson, Land Use Commission  
Colleen Suyama, Munekiyo & Hiraga, Inc.



NEIL ABERCROMBIE  
GOVERNOR



DEAN H. SEKI  
ACTING COMPTROLLER

JAN S. GOUVEIA  
DEPUTY DIRECTOR

**STATE OF HAWAII**  
**DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES**

P.O. BOX 119, HONOLULU, HAWAII 96810-0119

MAR 21 2012

(P)1056.2

Mr. William Frampton  
Ms. Heidi Bigelow  
Olowalu Town, LLC and Olowalu Ekolu, LLC  
2035 Main Street, Suite 1  
Wailuku, Hawaii 96793

Dear Mr. Frampton and Ms. Bigelow:

Subject: Draft Environmental Impact Statement for Olowalu Town  
Master Plan at TMK (2) 4-8-003: 084, 098 through 118, and 124  
Olowalu, Lahaina, Maui, Hawaii

Thank you for the opportunity to provide comments for the subject project at Olowalu Town on Maui. The proposed project does not impact any of the Department of Accounting and General Services' projects or existing facilities in the general area, and we have no comments to offer at this time.

If you have any questions, please call me at 586-0400, or have your staff call Mr. Alva Nakamura of the Public Works Division at 586-0488.

Sincerely,

A handwritten signature in black ink, appearing to be "DHS", followed by a horizontal line.

DEAN H. SEKI  
Acting Comptroller

c: Mr. David Victor, DAGS-Maui District  
Mr. Orlando "Dan" Davidson, Director, Land Use Commission ✓  
Ms. Colleen Suyama, Munekiyo & Hiraga, Inc.



STATE OF HAWAII  
DEPARTMENT OF EDUCATION  
P.O. BOX 2360  
HONOLULU, HAWAII 96804

OFFICE OF THE SUPERINTENDENT

April 27, 2012

Olowalu Town, LLC and Olowalu Ekolu, LLC  
2035 Main Street, Suite 1  
Wailuku, Maui, Hawaii 96793

To Whom It May Concern:

SUBJECT: Draft Environmental Impact Statement for the proposed  
Olowalu Town Master Plan

The Department of Education (DOE) has reviewed the Draft Environmental Impact Statement (EIS) for the proposed Olowalu Town Master Plan.

The DOE anticipates an impact on its facilities as a result of the Olowalu Town Master Plan. The Olowalu Town project is within the present boundaries of the West Maui School Impact Fee District (District) which was established by the Board of Education (BOE) in November 2010. The project is expected to provide contributions based on the per-unit rate established for the district.

The DOE would like to clarify what appears to be two misunderstandings about school needs and the impact of the Olowalu project on area public schools. In the Educational Facilities section of the EIS, on page 134, Table 19 lists the actual and projected enrollment of schools in the Lahainaluna complex and their "Rated Capacity". The DOE doesn't generate a figure called "Rated Capacity" and is unsure of the source of those figures.

The DOE last generated a Classroom Utilization Report (CUR) for the 2009-2010 school year. It measured a school's student capacity based on teaching, program and support staff requirements. It is not a true measure of how crowded a school is. The DOE acknowledges that the EIS does not make that conclusion, but the figures lend themselves to that conclusion. That being said, the DOE is concerned with the growing enrollment in West Maui Schools and that prompted the creation of the District.

Table 20 in the Educational Facilities section of the EIS applies a set of student generation rates (SGR) to the proposed number of Olowalu residential units. However the set of SGRs are for the District, based on the average SGR for the entire area. They may give a very rough idea of the number of students expected to reside in the project at maturity, but they were really generated to

LAND USE COMMISSION  
STATE OF HAWAII  
2012 MAY -1 A 7:53

Olowalu Town, LLC and Olowalu Ekolu, LLC

Page 2

April 27, 2012

determine school impact land and construction fee amounts. The Olowalu project, based on the details of its housing products, could have an Olowalu SGR which is different from the District-wide averages.

Although the EIS states that project calls for a provision of approximately 10 to 15 acres for an educational or learning facility, no specifics or a formal proposal been discussed with the DOE. The developer should contact the DOE to discuss details of proposed schools site and impact fees and enter into a written agreement with the DOE.

Thank you for the opportunity to provide comments. If you have any questions, please call Roy Ikeda of the Facilities Development Branch at 377-8301.

Very truly yours,



Kathryn S. Matayoshi  
Superintendent

KSM:jmb

c: ✓ Orlando "Dan" Davidson, SLUC  
Colleen Suyama, Senior Associate, Munekiyo & Hiraga, Inc.  
Randolph G. Moore, Assistant Superintendent, OSFSS



**STATE OF HAWAII**  
**DEPARTMENT OF TRANSPORTATION**  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

GLENN M. OKIMOTO  
DIRECTOR

Deputy Directors  
JADE T. BUTAY  
FORD N. FUCHIGAMI  
RANDY GRUNE  
JADINE URASAKI

IN REPLY REFER TO:

STP 8.0821

April 26, 2012

Olowalu Town, LLC  
Olowalu Ekolu, LLC  
2035 Main Street, Suite 1  
Wailuku, Hawaii 96793

To Whom It May Concern:

Subject: Olowalu Town Master Plan  
Draft Environmental Impact Statement (DEIS)

The State Department of Transportation (DOT) previously commented on the Environmental Impact Statement Preparation Notice (EISPN) in its letter HWY-PS 2.6554, dated September 10, 2010 (see Section X of the DEIS).

While the subject Master Plan is not currently within the West Maui Growth Boundary and has not been included in the Maui Island Plan (MIP) Urban and Rural Growth for West Maui, we understand the applicant is pursuing the adoption of the Master Plan into the Draft MIP that is currently under review by the Maui County Council.

In reviewing the information provided within the DEIS and the pending actions by the Maui County Council, we have the following initial comments:

1. DOT requests that the applicant provide status updates regarding the Council's adoption of the subject Master Plan into the MIP.
2. The Traffic Impact Analysis Report (TIAR) dated September 16, 2011, is unacceptable and shall be revised for DOT's review and approval prior to issuance of the Final Environmental Impact Statement (FEIS). The revision should include but not be limited to the analysis for the existing roadway conditions, future year peak hour traffic volumes with and without the project, bicycle and pedestrian movements, and all recommendations for required improvements to mitigate project related transportation impacts.
3. Although mentioned in the DEIS, the TIAR shall include analysis for the Honoapiilani Highway realignment and its relationship to the Pali to Puamana Plan, as well as the DOT project to realign and widen Honoapiilani Highway from Maalaea to Launiupoko.

4. The TIAR should reflect the existing alignment and future alignment of Honoapiilani Highway as a principal arterial roadway. Access to Honoapiilani Highway shall be limited to three (3) locations, as previously discussed between DOT Highway Division staff and the applicant.
5. The assumptions provided with the TIAR for items such as the internal capture rate of the development, and the capacity for Honoapiilani Highway appear to be flawed and shall be reanalyzed with sufficient supporting data to reinforce such assumptions.
6. No additional storm water runoff shall be allowed to enter the State highway right-of-way. Storm water entering State drainage facilities shall follow DOT current Storm Water Permanent Best Management Practices Manual.
7. A Traffic Management Plan discussing traffic management procedures for construction activity on State Highway facilities shall be coordinated with and provided to the DOT Highway Division for review and approval.

DOT appreciates the opportunity to provide comments. If there are any questions or the need to meet with DOT staff, please contact Mr. Garrett Smith of the DOT Statewide Transportation Planning Office at (808) 831-7976.

Very truly yours,



GLENN M. OKIMOTO, Ph.D.  
Director of Transportation

- c: Mr. Orlando "Dan" Davidson, State Land Use Commission  
Ms. Colleen Suyama, Munekiyo & Hiraga, Inc.

April 19, 2012

LAND USE COMMISSION  
STATE OF HAWAII

Mrs. Colleen Suyama  
Munekiyo & Hiraga  
305 High Street  
Wailuku, HI. 96793

2012 APR 20 A 7:59

Dear Mrs. Suyama:

**Subject: Comments re. Draft EIS for Olowalu Master Plan**

I have reviewed the Draft EIS with Appendices and have the following comments and questions:

**Page 12** – The EIS says that Olowalu once had a population of “several thousand”. How was this number verified? People lived in Olowalu while there was a sugar cane mill there. Once that mill and the Lahaina mill were closed almost all residents moved out of Olowalu.

**Pages 15 & 164** – The EIS says that a “portion of the pre-development stormwater will be captured”. To protect future development, all stormwater should be captured.

**Page 18** – The project is described as including public amenities such as community centers, educational facilities, police/fire, medical, library, museum, cultural centers and post office. Are the developers willing to donate land for any or all of these public facilities? Are they willing to build all or any of these facilities at their expense?

**Page 23** – Where are 4 story buildings with 50 feet of height proposed? Are any hotels proposed for Olowalu Town?

**Page 25** – Are there 3456 new housing units needed in West Maui in 2030? 1500 of those units or almost half of the units are proposed in Olowalu?

All 3456 of the new units can be provided in existing and proposed West Maui projects that are much more in conformance than Olowalu with State and County planning policies concerning development near jobs and infrastructure.

**Page 28** – The EIS says that portions of the proposed development are subject to flooding. Why is any new development proposed in Olowalu be allowed where flooding is anticipated?

**Page 28** – The EIS says that 1,000 long term jobs would be created in Olowalu. This number seems too high. How was this number arrived at? How many of the proposed 4,239 Olowalu residents are expected to commute to work out of Olowalu?

**Page 48** – The EIS says that 81% of the Master Plan area is within the UH soil productivity designations A and B. How much of this very productive land is proposed in the Olowalu Master Plan to be in future agricultural use?

**Page 58** – The EIS says that potential impacts from shoreline erosion and future sea level rise have not been identified. This is a very serious omission and the Final EIS should include analysis of both shoreline erosion and sea level rise.

**Pages 61 & 132** – The EIS says that the Master Plan proposes areas and provides land where a new fire station and emergency services can be accommodated. Are the developers willing to donate land and build a new fire station at their expense?

**Page 134 & 135** – The EIS says that all public schools in Lahaina are already over capacity and that this project would produce 213 elementary students, 108 middle school students and 141 high school students. The EIS also says that the Master Plan has 10-15 acres for school facilities. Are the developers willing to donate land for a school and build a new school at their expense?

**Page 140-142** – I agree with all of the comments submitted April 15, 2012 by registered traffic engineers Walton and Victoria Huffman and incorporate them all here by reference. The EIS' traffic report (TIAR) also generates the following comments and questions:

- \* The project's impacts on the State highway outside of the project area are inadequately analyzed.
- \* The project's trip generation numbers should be approximately triple the numbers in the TIAR.
- \* Future projected traffic volumes on the State highway are too low.
- \* The internal capture rate should be approximately 15%, not 55%.
- \* Traffic from other developments between Lahaina and Maalaea, such as Launiupoko, Makila and Ukumehame were not included.
- \* What bicycle, bus and pedestrian facilities are proposed?
- \* The Alternative section of the EIS should include analysis of a smaller Olowalu project.
- \* The TIAR should include analysis of impacts from project construction.
- \* What are State highway traffic counts during peak tourist season?

**Pages 160 & 165** – The General Plan Advisory Committee (GPAC) and Maui Planning Commission supported only the portion of this project mauka of the old State highway. The project area between the ocean and the old State highway should be open space.

**Page 161** – Contrary to the EIS, the Olowalu Master Plan is **NOT** consistent with the Pali to Puamana Parkway Master Plan. The Pali to Puamana Plan shows more open space through Olowalu between the ocean and the old State highway.

**Pages 176 & 203** – The County Planning Department did not recommend that Olowalu be within Urban Growth Boundaries because the Olowalu plan is inconsistent with the adopted Countywide Policy Plan stating that growth must be located in areas with infrastructure and near employment.

**Page 187** – The project's workforce housing numbers include units costing 160% of median income. Houses 160% of median income are not affordable to Maui's workforce.

**Pages 199 & 202** – The EIS incorrectly states that there are inadequate areas in West Maui for needed housing. The Pulelehua project, Wainee project and Kaanapali 2020 project are three large projects more appropriately located to provide future West Maui housing near jobs and infrastructure.

**Page 200** – The expense figures in the EIS do not include any funds for a new school or a new fire station.

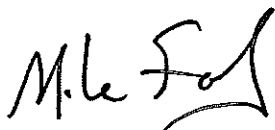
**Page 204** – The adopted West Maui Community Plan designates the Olowalu Master Plan area for agriculture and open space, not a development with 1500 housing units plus commercial.

IV. Alternatives – the EIS says the project area could be developed into agricultural subdivisions. How many additional agricultural lots would be allowed by County regulations?

V. Unavoidable Impacts & VII. Unresolved Issues -- These sections should both include land and construction of a new school and a new fire station.

Thank you for the opportunity to comment on this Draft EIS.

Respectfully submitted,



Michael W. Foley  
Former Maui County Planning Director  
3625 Piikea Place  
Makawao, Maui, Hawaii, 96768

Cc: Will Spence, Maui County Planning Director  
Mayor Alan Arakawa  
State Land Use Commission



9909 Lemon Ave  
La Mesa, CA 91941  
April 15, 2012

Mr. Orlando "Dan" Davidson  
State Land Use Commission  
P.O. Box 2359  
Honolulu, Hawaii 96804

**Subject: *Draft Environmental Impact Statement for the Proposed Olowalu Town Master Plan (TMK Nos. (2)4-8-003:84,98 through 118, and 124)***

Dear Mr. Davidson:

We appreciate the opportunity to review the Draft Environmental Impact Statement (DEIS) for the proposed Olowalu Town Master Plan. We visit Maui frequently and enjoy driving north to Kapalua on Honoapi'ilani Highway (State Route 30). We are very concerned by the lack of existing or planned roadway infrastructure to support a development the size of the proposed Olowalu Town Master Plan. As California Registered Traffic Engineers with a combined 60 years experience in a variety of traffic engineering fields including reviewing traffic studies and environmental documents for development projects, we are sending you these comments in an effort to provide you with an understanding of this project's impacts to circulation. If this project is approved as proposed, traffic flow between West Maui and Central and South Maui will become extremely constrained. Honoapi'ilani Highway between Pali and Ma'alaea (which is not identified for improvements in the draft Maui Island Plan) would be a critical choke point restricting island circulation. This could have a profound negative economic impact on the island.

**The DEIS does not disclose the proposed project's impacts to Honoapi'ilani Highway (State Route 30) outside the project site and the substantial affect this impact could have on public safety and on the economic welfare of the community and the State. Additionally, the DEIS does not analyze each phase of the development as required by HAR Section 11-200-17. For these reasons, we have found the DEIS for the Olowalu Town Master Plan to be inadequate.**

Traffic Impacts Not Disclosed:

The DEIS and its Preliminary Traffic Impact Analysis Report ("TIAR") does not acknowledge or disclose any significant impact to Honoapi'ilani Highway for the following reasons:

- The TIAR assumes Honoapi'ilani Highway is widened to four lanes north of the project site; however, there is no identified funding for this costly infrastructure improvement.

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- The TIAR assumes Honoapi'ilani Highway can accommodate substantially more traffic than it actually can before failing. The TIAR assumes Honoapi'ilani Highway south of the project site can accommodate 33,300 average daily vehicle trips (ADT) based on the assumption that this highway is an uninterrupted flow highway rather than an arterial with access points to the beach and to scenic lookouts. *The Proposed Roadway Development Program* dated January 2007 prepared for the County of Maui Planning Department for the draft *Maui Island Plan* assumed Honoapi'ilani Highway south of the Olowalu Town Master Plan site could accommodate about 22,000 ADT before failing.
- An unreasonably high, and technically unjustified, internal capture rate of 55% for project generated trips is assumed in the TIAR. Consequently, not enough project trips are distributed to Honoapi'ilani Highway. The Institute of Traffic Engineers (ITE) defines internal trip capture rate as a percentage reduction that can be applied to the trip generation estimates for the individual land uses to account for trips internal to the site. A nationally recognized methodology used by traffic engineers, such as the *Trip Generation Handbook, 2<sup>nd</sup> Edition, by the Institute of Traffic Engineers (ITE)* should be used to calculate internal capture. This methodology was used to calculate internal capture for both the *Wail'e* project in Central Maui and the *Honoua'ula* project in South Maui. The internal capture rates for *Wail'e* and *Honoua'ula* were about 10% and 15%, respectively. (See Attachment A). Using the *Trip Generation Handbook* methodology, the internal capture of the Olowalu Master Plan would be about 15%.
- An unreasonably high, and technically unjustified, number of pass-by and diverted linked trips were assumed in the TIAR. Consequently not enough project trips are distributed to Honoapi'ilani Highway. Pass-by trip reductions should not be applied to re-aligned Honoapi'ilani Highway because it is not anticipated driveways would be allowed on this access controlled facility. The diverted linked trip reductions are high compared to documented rates in ITE and other credible sources.
- Future traffic volumes on Honoapi'ilani Highway are underestimated, due to the following:
  - Existing traffic counts used by the TIAR to develop future traffic volumes are too low. These existing counts were gathered in October 2010 during low tourist season and after the Great Recession of 2008. The TIAR states Honoapi'ilani Highway south of the project site carried 22,840 vehicles per day in October 2010. In contrast, this roadway west of the Pali tunnel is shown as carrying 24,422 ADT in Year 2003 in the *Proposed Roadway Development Program* prepared for the County of Maui Planning Department for the draft *Maui Island Plan*.
  - Traffic from other known projects in the area, such as Ukumehame, and traffic from other reasonably foreseeable projects were not assumed in the future analysis
  - Additionally, it cannot be confirmed whether the 1% annual growth factor used in the TIAR to estimate future volumes on Honoapi'ilani Highway is reasonable,

since no supporting data was provided showing how the 1% annual growth factor was determined.

As an example demonstrating how the future volumes are underestimated in the TIAR, the future volumes estimated on Honoapi'ilani Highway south of the project site in the TIAR without project traffic is 24,670 ADT, but this roadway segment is shown to carry 24,422 in 2003 in the *Proposed Roadway Development Program* prepared for County of Maui Planning Department for the draft *Maui Island Plan*. (See Attachment B.) This is an increase of only 248 vehicles on Honoapi'ilani Highway in 17 years.

It should also be noted that the TIAR indicates that Honoapi'ilani Highway south of the project site would operate at level of service (LOS) E at full build out of the project, but the *Proposed Roadway Development Program* shows this segment to be failing in the peak hour in Year 2003.

Using professionally accepted standards, we estimate that the proposed project would add about 12,000 ADT to Honoapi'ilani Highway north of the project site and about 8,000 ADT to Honoapi'ilani Highway south of the project site. This is more than three times the amount of project traffic estimated in the TIAR. Honoapi'ilani cannot accommodate this much added traffic.

The TIAR should be revised to use nationally recognized and accepted methodologies for determining project trip generation and analyzing transportation impacts. When this is done, it will be clear that the Olowalu Master Plan would have significant impacts to Honoapi'ilani Highway.

#### Potential Substantial Affects on Public Health Not Disclosed or Discussed:

Traffic safety impacts to Honoapi'ilani Highway from the development of the proposed Olowalu project were not addressed. Honoapi'ilani Highway would be heavily congested with stopped queues of vehicles, and there would be fewer gaps for vehicles to turn into. Consequently, there would be an increased potential for a higher accident rate along this highway.

Additionally, the proposed "O-turns" along Honoapi'ilani Highway may also compromise public safety. Therefore, the DEIS should evaluate and discuss:

- The potential increase in vehicular accidents on Honoapi'ilani Highway caused by the weaving and merging maneuvers of O-turns.
- The potential increase in pedestrian and bicycle accidents on Honoapi'ilani Highway since pedestrians would not be provided a safe crossing as would be provided by traffic signals. The DEIS should address how pedestrians and bicyclists will be prevented from crossing Honoapi'ilani Highway.

#### Phased Analysis Not Provided

The DEIS indicates in many places that the project would be developed in phases spread out over a period of approximately 10 years. However, only one scenario, Full Buildout Year 2020, was analyzed in TIAR. The TIAR should be revised to include an analysis of each phase of the project; otherwise, the DEIS does not comply with Hawaii Administrative Rules (HAR) Section 11-200-17 I which states that a DEIS, "... shall include a statement of the probable impact of the proposed action on the environment, and impacts of the natural or human environment on the project, which shall include consideration of all phases of the action and consideration of all consequences of the environment; direct and indirect effect shall be included."

It should also be noted that the internal capture rate of the project would vary with different phases of the development. For example, if the residential phase of the project were to be constructed first with no commercial, then the project's internal capture rate would be zero. This variation in internal capture rate by phase should be accounted for in the analyses.

#### Other Specific Comments to the DEIS:

1. The DEIS should provide more details to support its claim that the proposed project is a smart growth development. For example, it should describe what specific design features would be incorporated to ensure the development is a pedestrian & bicycle friendly community. Specifically, the DEIS should describe whether roadways within the project site would provide non contiguous sidewalks, street trees, and traffic calming features such as bulb-outs, road humps, traffic circles. The DEIS should also describe what type of bicycle amenities (e.g. bicycle racks, lockers, showers, bicycle corrals) and bicycle facilities (e.g. bicycle paths, bicycle lanes) would be provided to ensure the site is a bicycle friendly community.
2. The DEIS should state the "Purpose and Need" for the proposed action as required by HAR Section 11-200-17 D. The DEIS only states the project's need (which the DEIS states is to increase the supply of housing for Maui residents) but does not state the project's purpose. Without a statement of purpose, it is impossible to identify reasonable alternatives since reasonable alternatives are those that substantially meet both the purpose and the need.
3. A reduced project alternative should be proposed, since a reduced project alternative may have fewer impacts to Honoapi'ilani Highway.
4. The TIAR conclusions are contingent on specific land uses with precise square footage being constructed on the proposed project site. The DEIS should indicate how it would be assured that these land uses, and their square footages, would be constructed.
5. Should the Olowahu Master Plan be approved, the project should be conditioned to construct development not to exceed the ADT, a.m. peak-hour inbound trips, a.m. peak-hour outbound trips, p.m. peak-hour inbound trips, and the p.m. peak-hour outbound trips evaluated in the Final TIAR. Additionally, these thresholds should be tracked as the project site is developed. If the project site were to generate more traffic than assumed and analyzed in the Final TIAR, then the project could have other traffic impacts not disclosed to the approving agency in the Master Plan's FEIS.

6. The DEIS should discuss the effects of construction traffic on Honoapi'ilani Highway.
7. The DEIS should discuss the effect the proposed O-turns would have on pedestrian connectivity mauka and makai of Honoapi'ilani Highway.
8. A Transportation Demand Management Plan (TDM) should be provided by this project in an effort to meet the goals and objectives of the *Maui General Plan*. The DEIS should provide a discussion of this TDM Plan.

Specific Comments to the TIAR:

1. Page 1, Introduction, Purpose and Methodology: The TIAR states the TIAR utilizes data from several other TIARs which have been done for other projects on the west side of Maui over the last five years. The TIAR should specifically name which reports it utilized.
2. Page 1, Introduction, Purpose and Methodology: The TIAR states the TIAR uses information from studies done by Maui County. The TIAR should name which studies it utilized.
3. Page 1, Introduction, Purpose and Methodology: The TIAR states, "The Final TIAR will address peak hour traffic flows and utilize the methods that are normally employed in standard traffic assessments. That TIAR will also analyze in detail the predicted traffic operations at the access points to Honoapi'ilani Highway. It will assess the need for any mitigation and analyze the need for traffic control measures and devices that may be required for proper functioning of the street system. This preliminary report will not cover all items that may be studied and analyzed in the future detailed TIAR and it is not intended to substitute for that more comprehensive analysis." The TIAR provided in this DEIS should provide a full analysis to determine significant impacts of the proposed project, and these impacts should be disclosed to the public during the public review period.
4. Page 2, Introduction, Purpose and Methodology: The TIAR states that the level of analysis in the TIAR does not include detailed analysis of all traffic movements at individual intersections. The TIAR provided in this DEIS should provide a full analysis to determine significant impacts of the proposed project, and these impacts should be disclosed to the public during the public review period.
5. Page 2, Introduction, Purpose and Methodology: The TIAR states that the TIAR is intended to illustrate that the increase in vehicular traffic along the Honoapi'ilani Highway attributed to Olowalu Town will be successfully mitigated by way of implementing the proposed transportation plan and the related improvements, including the relocation and widening of the segment of Honoapi'ilani Highway which traverses the subject property. Clarify in this section of the TIAR what is specifically meant by the "proposed transportation plan."
6. Page 3, Description of Olowalu Town: The first paragraph of this section should describe how much square footage of office and how much square footage of commercial retail is proposed by this project rather than just describing the number of dwelling units proposed.

7. Page 3, Description of Olowalu Town: The TIAR states the design of Olowalu Town incorporates smart growth principles. One of the 10 accepted principles that define Smart Growth is to create walkable neighborhoods. The TIAR should describe specific examples of design features that would be incorporated to create walkable neighborhoods.

8. Page 8, Figure 5, Summary of Trip Generation for Olowalu Town: For ITE Code 730, Government Office Building, the proper trip rate per unit is 68.93 trips per 1,000 sf; therefore, the estimated traffic generated by that component of the site is of 1034 trips. Therefore, the total traffic generated by the site would be 33,655 ADT rather than the 32,800 ADT shown in the table. Revise the TIAR and its analyses accordingly.

9. Page 10, Background Traffic Growth: The TIAR states that several studies were made available which analyzed traffic growth trends on Honoapi'ilani Highway and that these studies are included in the appendices. However, this data was not included in the appendices. This data should be included in an appendix.

10. Page 10, Background Traffic Growth: In determining future volumes for the Year 2020 analysis, other reasonably foreseeable development project traffic be added to Honoapi'ilani Highway in addition to using an appropriate growth rate based on historical data.

11. Page 10, Background Traffic Growth: Provide a copy of the existing count data for Honoapi'ilani Highway in the appendix of the TIAR.

12. Page 10, Background Traffic Growth: Existing counts on Honoapi'ilani Highway were taken during October 2010 during low tourist season. However, existing counts should be taken during peak tourist season.

13. Page 10, Background Traffic Growth: The 24,667 ADT assumed on Honoapi'ilani Highway in Year 2020 is only 248 ADT more than existed in Year 2003 per the *Proposed Roadway Development Program* prepared for County of Maui Planning Department for the draft *Maui Island Plan*. Provide an explain why only 248 more vehicles per day would be expected to use Honoapi'ilani Highway in Year 2020.

14. Page 10, Traffic Analysis in Year 2020 without Olowalu Town Project: HighPlan software is not appropriate to use to determine the capacity and level of service of Honoapi'ilani Highway, since it has beach access points and driveways to scenic lookouts, and therefore should not be considered an uninterrupted flow highway.

15. Page 11, Figure 6, Output from Highplan Software for Honoapi'ilani Highway for Year 2020 without Project in Place:

- Clarify why the output sheet says "yes" under median type
- Clarify why the output sheet says "no" under left turn impact when no left turn pockets are provided for the beach access points or scenic outlooks
- The assumed maximum capacity at LOS E of 1500 vehicles per hour per lane (vphpl) is too high. Per the FDOT 2009 Quality/Level of Service Handbook which provides

guidance on using the FDOT software, the maximum capacity at LOS E should be assumed to be 850 vphpl. (See Attachment C). It should be noted that agencies in southern California assume much lower capacities for roadways constructed and functioning similar to Honoapi'ilani Highway. As an example, the County of San Diego assigns the capacity of 16,200 ADT to a two-lane rural facility. (See Attachment D).

16. Page 12, Traffic Generation for Olowalu Town: The TIAR takes a 15% reduction in trip generation to account for walking and bicycling within the project site and cites other local governments such as the City of Frederick, Maryland as allowing this as well. However, the reduction allowed by the City of Frederick includes walking, bicycling, and internal capture. (See Attachment E). Therefore, using the City of Frederick as an example is not correct and this reference (as well as the associated page included in Appendix 4 of the TIAR) should be removed from the TIAR.

17. Page 12, Traffic Generation for Olowalu Town: Reducing the ITE trip generation rate by 15% for walking and bicycling is not appropriate. The internal capture rate already accounts for this reduction.

18. Page 12, Traffic Generation for Olowalu Town: The TIAR states that based on the anticipated plan for the proposed project, the TIAR determined that significant proportions of total travel could and would be made within the town itself, without any requirement to travel on Honoapi'ilani Highway to Lahaina, Ma'alea or elsewhere on the island. Please clarify how this statement can be supported since:

- Facilities such as schools, a library, and a post office are not assured but require public funds to be constructed and/or operated.
- There is no assurance that the Olowalu Master Plan would provide land uses to serve all residents day to day needs such as a grocery store, pharmacy, and restaurants.
- The proposed project would not provide enough jobs for all its residences.

19. Page 12, Traffic Generation for Olowalu Town: The amount of internal capture rate assumed by the TIAR should be calculated using worksheets in the *ITE Trip Generation Handbook*, 2nd edition, and completed worksheets should be provided in an appendix of the TIAR. Alternatively, the methodology outlined in the NCHRP Report 684, *Enhancing Internal Trip Capture Estimation for Mixed-Use Developments*, by the Transportation Research Board of the National Academies could be used although its researchers do not recommend its use on sites over 300 acres. (See Attachment F).

20. Page 12, Traffic Generation for Olowalu Town: The TIAR states that due to the design of the town and its street network, many of the trips within the town will likely be made via walking or cycling and not require use of the automobile. This element will be addressed in detail in the final TIAR. This element of the TIAR should be addressed in the DEIS rather than the FEIS.

21. Page 13, Traffic Generation for Olowalu Town, Table 1, Internal Capture of Trips in Olowalu Town: The internal capture rates shown for each land use in Table 1 should be

supported by appropriate technical data; otherwise, the *ITE Trip Generation Handbook*, 2nd edition methodology should be used for computing internal capture.

**22. Page 13, Traffic Generation for Olowalu Town:** The TIAR states that the Maui LRTP was used to assist in estimating the amount of "pass-by" trips to Olowalu Town. However, "Pass-by trips" are defined by ITE as trips made as intermediate stops on the way from an origin to a primary trip destination without a route diversion. Since the proposed project's land uses have no direct access to Honoapi'ilani Highway, the number of pass-by trips for this project would be zero.

**23. Page 13, Traffic Generation for Olowalu Town:** Revise the name of Table 2 from "Pass-by and Diverted Trips on Honoapi'ilani Highway" to simply, "Diverted Linked Trips on Honoapi'ilani Highway."

**24. Page 13, Traffic Generation for Olowalu Town:** The percent of diverted linked trips for each land use should be based on empirical data from a reliable source such as the *ITE Trip Generation Handbook* or San Diego Association of Government's (SANDAG) *(Not So) Brief Guide of Vehicular Traffic Generation Rates For The San Diego Region*, available on-line at the following URL:

[http://www.sandag.org/uploads/publicationid/publicationid\\_1140\\_5044.pdf](http://www.sandag.org/uploads/publicationid/publicationid_1140_5044.pdf)

Most of the diverted linked rates shown in Table 2 are very high compared to the rates shown in the SANDAG document. (See Attachment G). Diverted linked rates used in the TIAR should be documented.

**25. Pages 12 - 14, Tables 2 - 4:** Table 2, Table 3, and Table 4 list an elementary school as a land use but Figure 5 on Page 8, which is the trip generation summary, does not. Please explain this apparent discrepancy.

**26. Page 16, Trip Distribution:** Table 4 should be renamed, "Trip Distribution for Diverted Linked Trips" assuming there are no proposed land uses with direct access to Honoapi'ilani Highway.

**27. Page 17, Traffic Assignment:** The TIAR does not include analysis of travel from the mauka side to/from the makai side of the Olowalu Town and the trips made between mauka and makai side via the connector street, and that these items will be reviewed in detail in the final TIAR. These analyses should be provided in this DEIS and available for public review and comment.

**28. Page 18, Development of Future Traffic Data:** Clarify why a 15% growth rate is used for Figure 10 and the access analyses in Appendix 3, but other portions of the document indicate an 8% growth rate was used.

**29. Page 19, Figure 7, Existing Traffic Volumes on Honoapi'ilani Highway:** Provide another figure depicting the traffic volumes on Honoapi'ilani Highway from counts taken during



February which is peak tourist season. Use whichever figure has the higher volumes to develop future volumes .

**30.** Page 20, Figure 8, Future Year 2020 Traffic Volumes without Project on Honoapi'ilani Highway: Revise this figure to include traffic from other reasonably foreseeable projects that would be constructed and occupied by Year 2020 (in addition to the background growth factor already assumed).

**31.** Page 21-22, Figures 9-10, Traffic Added from Olowalu Town Project and Olowalu Town Study Network Traffic with Full Buildout of Project in Place: Revise these figures to address our comments regarding trip generation, internal capture, and diverted linked trip rates.

**32.** Page 23, Future Roadway Network: Conduct a weaving analysis for the proposed "O-turns." The results of these weaving analyses should be provided in an appendix of the TIAR. Additionally, the effects of weaving on capacity of the proposed re-aligned Honoapi'ilani Highway should be evaluated.

**33.** Page 23, Future Roadway Network: Provide a queuing analysis to determine if the proposed left turn pockets for the proposed O-turns are sufficient to accommodate the vehicular demand without having vehicles spill into the through lane.

**34.** Page 23, Future Roadway Network: Provide calculations to determine the appropriate length of the acceleration and deceleration lanes of the proposed O-turns.

**35.** Page 23, Future Roadway Network: Data should be provided demonstrating the proposed "O-turns" weaving will not comprise public safety by creating a higher incidence of side swipe and rear end collisions caused by merging.

**36.** Page 23, Future Roadway Network: Discuss the effects of the proposed O-turns on pedestrian connectivity between the mauka and makai side of Honoapi'ilani Highway.

**37.** Page 23, Future Roadway Network: Evaluate pedestrian safety issues of the proposed O-turns , since the O-turns do not provide protected pedestrian crossings across Honoapi'ilani Highway as would be provided by signalized intersections. Also discuss how pedestrians would be prevented from crossing Honoapi'ilani Highway.

**38.** Page 25, Analysis of Impacts of Olowalu Town Project: HighPlan software is not appropriate to use to determine the capacity and level of service of Honoapi'ilani Highway south of the project site, since it would still have beach access points and scenic lookout points in Year 2020 and therefore cannot be considered an uninterrupted flow highway. If FDOT software were to be used, ArtPlan would be the appropriate software to utilize.

**39.** Page 25, Analysis of Impacts of Olowalu Town Project: The estimated daily maximum capacity of 56,600ADT and predicted speed of 50 mph Honoapi'ilani Highway within the project site is too high since there would be weaving, merging, acceleration, and deceleration associated with the proposed O-turns.

40. Page 25, Analysis of Impacts of Olowalu Town Project: The predicted speed of 29 mph for Honoapi'ilani Highway and maximum capacity of 33,300 ADT south of the project is too high as this highway segment would not have uninterrupted flow.

41. Page 25, Analysis of Impacts of Olowalu Town Project: The TIAR indicates detailed program outputs for the Highplan analyses sheets shown are Figures 12 - 14 are provided in the appendices. However, these sheets are not provided in the appendices.

42. Page 26, Figure 14, Output from Highplan Software for Portion of Honoapi'ilani Highway with Existing Roadway Configuration:

- The roadway variables portion of the data sheet shows "yes" for median type but this portion of Highway 30 has no median.
- The LOS E maximum capacity of 1,500 vehicles per hour per lane (vphpl) is too high. The *Proposed Roadway Development Plan* by Fehr & Peers assumed 1000 vehicles per hour at level of service E, using the *Highway Capacity Manual*. (See Attachment H).
- The LOS E maximum capacity of 33,300 ADT is too high.

43. Page 27, Figure 13, Output from Highplan Software with Relocated and Widened Honoapi'ilani Highway in Place at Full Buildout of Olowalu Town:

- The data sheet indicates the segment from the Old Land Fill to Mile 14 is 5 miles long but this same segment is shown as 2.6 miles long on Figure 6.
- The LOS E maximum capacity of 2,950 vphpl is too high.
- The LOS E maximum capacity of 56,600 ADT is too high.

44. Page 28, Figure 14, Output from Highplan Software for Portion of Honoapi'ilani Highway South of the Project Site at Full Buildout of Olowalu Town:

- The data sheet indicates the number of through lanes is 4 but this is a two-lane facility.
- The data sheet shows "yes" for median type but this portion of Highway 30 has no median.
- The assumed free flow speed of 50 miles/hour is too high.
- The LOS E maximum capacity of 1500 vphpl is too high. The LOS E maximum capacity of 33,300 ADT is too high.

45. Page 29, Table 6, Capacity, ADTs and Levels of Service for Honoapi'ilani Highway In Full Buildout Year of 2020:

- The assumed daily maximum capacity of 56,600 for the segments between the southern project boundary and north of the transfer station is too high.
- The assumed daily maximum capacity of 33,300 for the segment called "existing roadway south of Olowalu Town Project" is too high.
- The table indicates the segment north of the transfer station is widened to two through lanes in each direction. Clarify in the TIAR on what basis this is assumed. Only projects

that are fully funded and scheduled for construction prior to Year 2020 should be assumed.

46. Appendix 3, Intersection Turning Movements: Clarify why the data sheets indicate 15 percent growth when the TIAR indicates an 8 percent growth rate was used to develop Year 2020 ADT volumes.

47. Appendix 4, Traditional Development of Trip Generation Characteristics: The internal capture rates for the developments discussed in this paper do not support the 55% internal capture assumed in the TIAR.

48. Appendix 4, Traditional Development of Trip Generation Characteristics: The conclusion of this paper indicates the authors support the use of internal capture estimates produced using the ITE *Trip Generation Handbook* methodologies. The TIAR should use this method to determine internal capture.

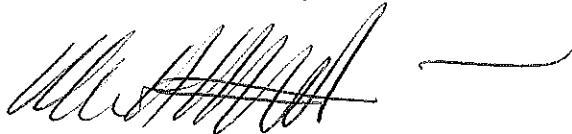
Thank you once again for providing us the opportunity to review and comment on the DEIS.

We hope that these comments help the approving agency make an informed decision when determining whether to approve the proposed Olowalu Master Plan development project.

Sincerely,

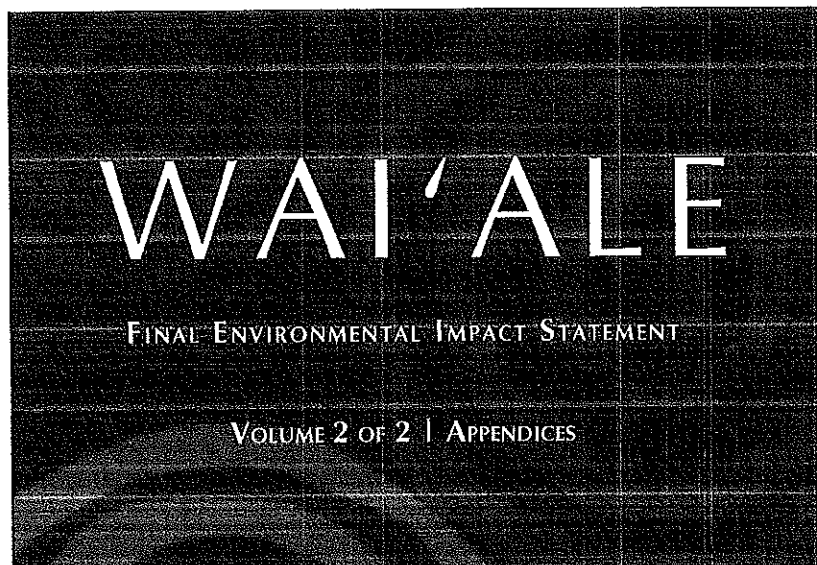
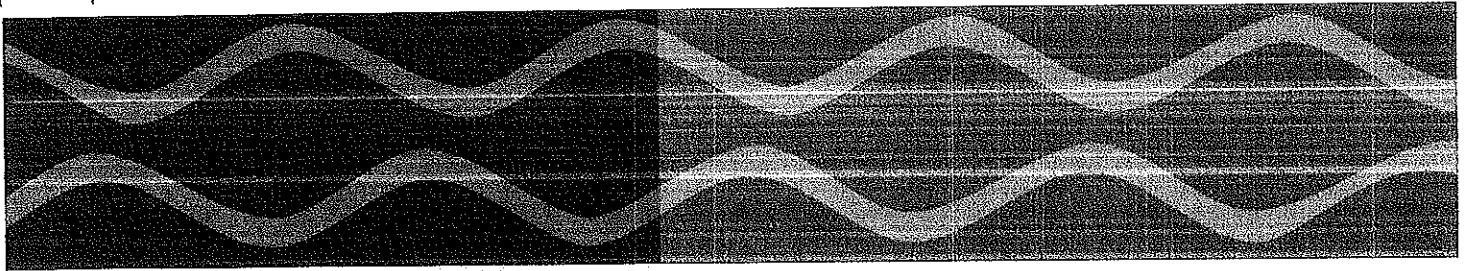


Victoria A. Huffman, P.E.



Walton H. Huffman JR, P.E.

cc: Olowalu Town, LLC  
Colleen Suyama, Munekiyo & Hiraga, Inc.



PREPARED BY:



OCTOBER 2011



Table 6: Year 2022 with Project Trip Generation

| Land Use<br>(ITE Code)                     | Independent<br>Variable | AM Peak hour of<br>traffic |               | PM Peak hour of<br>traffic |               |
|--|-------------------------|----------------------------|---------------|----------------------------|---------------|
|  |                         | Enter<br>(vph)             | Exit<br>(vph) | Enter<br>(vph)             | Exit<br>(vph) |
| Single Family (210)                        | 1,420 (DU)              | 253                        | 760           | 750                        | 441           |
| SF   | 1,240 (DU)              | 219                        | 658           | 638                        | 375           |
| County SF                                  | 180 (DU)                | 34                         | 102           | 112                        | 66            |
| Multi-Family (230)                         | 1,130 (DU)              | 76                         | 364           | 352                        | 174           |
| MF   | 481 (DU)                | 31                         | 151           | 147                        | 72            |
| VMX MF                                     | 529 (DU)                | 34                         | 163           | 158                        | 78            |
| County MF                                  | 120 (DU)                | 11                         | 50            | 47                         | 24            |
| Commercial (820)                           | 230,000 (GFA)           | 154                        | 99            | 545                        | 567           |
| Village Mixed Use (815)<br>AM and (814) PM | 250,000 (GFA)           | 181                        | 85            | 274                        | 349           |
| General Industrial (130)                   | 175,000 (GFA)           | 131                        | 29            | 38                         | 140           |
| Middle School (522)                        | 820 (Students)          | 244                        | 199           | 64                         | 67            |
| <b>Total</b>                               |                         | <b>1,039</b>               | <b>1,536</b>  | <b>2,024</b>               | <b>1,738</b>  |
| Internal Capture                           | N/A                     | -                          | -             | 164                        | 164           |
| Diverted Link Trip                         | N/A                     | -                          | -             | 82                         | 82            |
| <b>TOTAL</b>                               |                         | <b>1,039</b>               | <b>1,536</b>  | <b>1,778</b>               | <b>1,492</b>  |

**B. Trip Distribution**

Trips generated by the Project were assigned onto the network based on the future employment zones. Similar to Figure 4 in Section III, trips were assigned to the four (4) major employment areas as follows:

- Kahului/Hana/Upcountry at 35 percent
- Wailuku at 30 percent
- Lahaina/West Maui at 20 percent
- Kihei /South Maui at 15 percent



The project is planned as a mixture of housing, commercial, industrial and school land uses. The multi-use of the Project is aimed at providing close proximity between these land uses to reduce the amount of external trips.

The Institute of Transportation Engineers, Trip Generation Handbook second edition (2004) provides internal capture rates for multi-use developments for the (PM) peak hour of traffic only. Rates provided for retail to/from retail and retail to/from residential were applied. Overall, the internal capture was assumed to account for less than 10 percent of the total Project generated entering and exiting trips during the PM peak hour of traffic. Internal capture was not applied to AM peak hour traffic. }

Diverted linked trips were also assumed to occur for 4 percent of the trips generated by the Project during the PM peak hour of traffic. This is where commercial trips are considered existing trips (i.e. on Kuihelani Highway) that make intermediate stops at commercial land uses on their way to their final destinations.

# HONUA'ULA



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## DRAFT ENVIRONMENTAL IMPACT STATEMENT

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VOLUME 3 OF 3  
(APPENDICES L-Q)

Prepared for:  
Accepting Authority  
Maui Planning Department / Maui Planning Commission

Applicant:  
Honua'ula Partners, LLC

Prepared by:



**PBR HAWAII**  
® ASSOCIATES, INC.

March 2010



#### IV. FUTURE YEAR TRAFFIC CONDITIONS WITH THE PROJECT

##### A. Trip Generation

Trip generation estimates the total number of trips produced by a given land use. Trip rates contained in the nationally published ITE, Trip Generation, 8th Edition were used to estimate the number of trips generated by the Project. Additionally, the Resort Residential Trip Generation Rate Development prepared by Parsons Brinkerhoff Quade & Douglas, Inc. dated October 2, 2006 as accepted by the SDOT, is utilized to estimate the number of trips generated by resort residential units. Table 5, as shown in the previous section, shows these trip generation rates and Table 6 shows the number of peak hour trips that are expected to be generated by the Project.

\* An estimation of the percentage of internal trip capture was obtained from the ITE Trip Generation Handbook, Second Edition, which was determined to be approximately 15 percent. The internal trip capture was only applied to the PM peak hour of traffic since commercial areas are typically closed during the AM peak hour of traffic. The 15 percent internal trip capture rate was applied to the number of residential trips and the result was applied to the commercial trips, in order to match the number of internal trips between the residential areas and commercial areas. Internal trips are assumed within the Project. \*

##### B. Trip Distribution

The Project generated trips were distributed based on the distribution utilized by the Maui Travel Demand Forecasting Model; Figure 8 shows the general distribution. Phase I of the Project proposes to construct the east leg of the Piilani Highway/Wailea Ike Drive intersection and Kaukahi Street will be extended into the Project. Since Kaukahi Street is a private street, it is planned to be gated within the Project site to address concerns of current owners along the street. Phase II of the Project proposes to extend Piilani Highway, forming the south leg of the Piilani Highway/Wailea Ike Drive intersection. Figures 9, 10, and 11 show the Project generated traffic volumes during Year 2016, 2018, and 2022, respectively.



Attachment B

1 of 2

## **PROPOSED ROADWAY DEVELOPMENT PROGRAM**

JANUARY 2007

PREPARED FOR

**COUNTY OF MAUI PLANNING DEPARTMENT**

PREPARED BY

  
**FEHR & PEERS**  

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**KAKU ASSOCIATES**

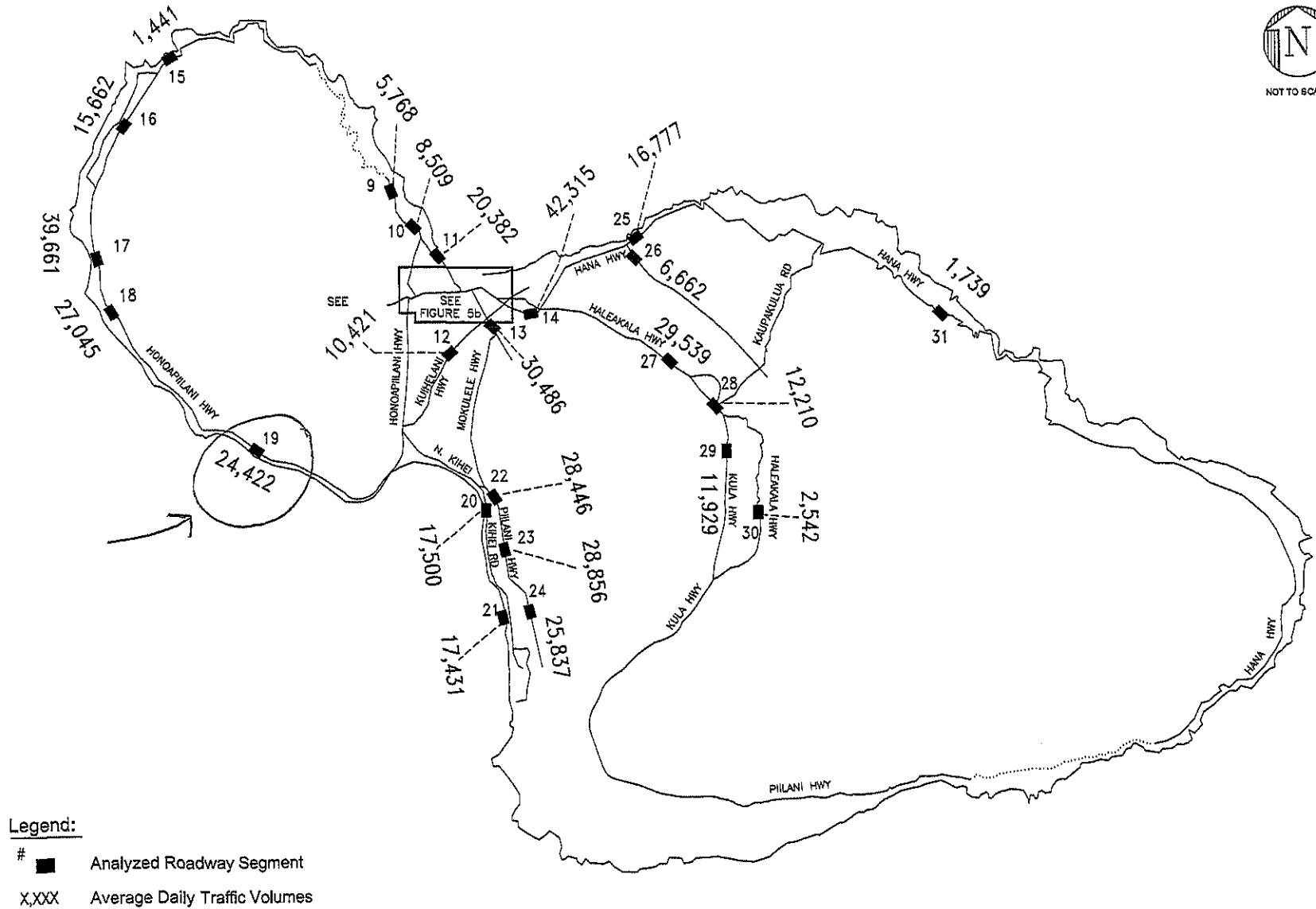
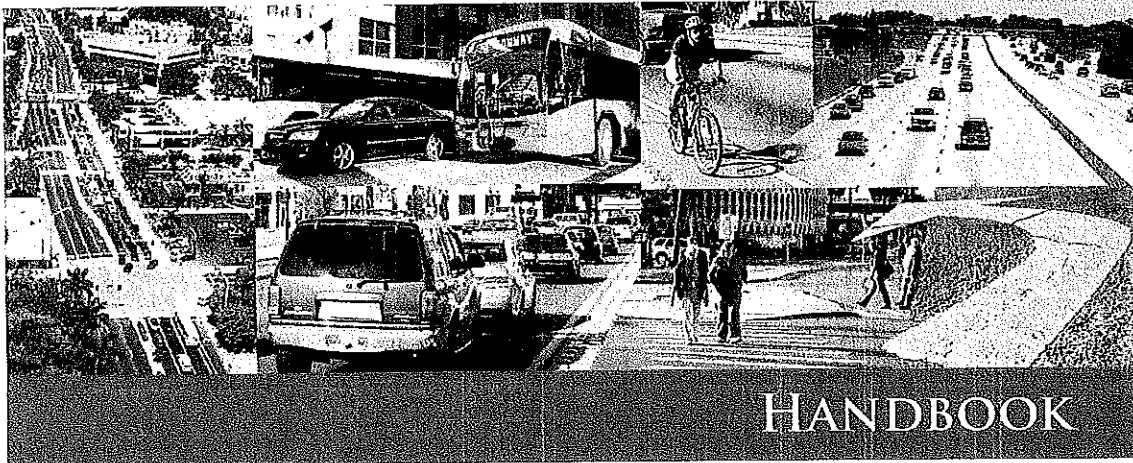
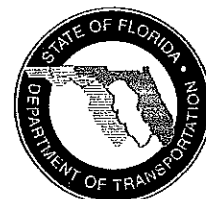


FIGURE 5A  
ISLAND-WIDE 2003 AVERAGE DAILY TRAFFIC VOLUMES

# 2009 QUALITY/LEVEL OF SERVICE



2009  
State of Florida  
Department of Transportation



## 7

**MAXIMUM ACCEPTABLE CAPACITY VOLUMES**

Use of highway capacity and LOS tools, whether applied appropriately or not, has resulted in projected traffic volumes beyond normal capacity ranges found on Florida facilities. The causes are many-fold, but to aid analysts and reviewers on what capacity values will normally be acceptable, FDOT the following guidance. These values are based on site specific freeway studies and counts, and arterial maximum acceptable thru movement effective green ratios (g/C). For the benefit of users conducting LOS analyses, FDOT's updated LOSPLAN programs will automatically check capacity and provide warnings and messages if acceptable capacities are exceeded. (Note: Under most circumstances the maximum service volume for LOS E equals capacity.)

**7.1 Maximum Acceptable Capacity Volumes for Facilities**

For arterial facilities the maximum generally acceptable per lane approach volumes are as follows:

- Large urbanized – 1,000 vehicles per hour per lane (vphpl)
- Other urbanized – 950 vphpl
- Transitioning – 920 vphpl
- Urban – 920 vphpl
- Rural – 850 vphpl

Note: arterial segments and sections may have higher values.

For freeway facilities and sections, the maximum generally acceptable volumes are as follows:

- Large urbanized – 2,100 vphpl (1900 vphpl if oversaturated)
- Other urbanized – 2,000 vphpl (1900 vphpl if oversaturated)
- Transitioning – 1,900 vphpl
- Urban – 1,800 vphpl
- Rural – 1,800 vphpl

For highway (generally uninterrupted flow highways) segments, the maximum generally acceptable per lane approach volumes are as follows:

- Two-lane
  - Developed – 1,600 vphpl
  - Undeveloped – 1,500 vphpl
- Multilane
  - Developed – 1,850 vphpl
  - Undeveloped – 1,600 vphpl

# **PUBLIC ROAD STANDARDS**



## **COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS**

March 3, 2010

**PUBLIC ROAD STANDARDS  
COUNTY OF SAN DIEGO**

**TABLE 1**  
**AVERAGE DAILY VEHICLE TRIPS\***

| CIRCULATION ELEMENT ROADS                    |                                     | LEVELS OF SERVICE |         |         |         |          |
|--|-------------------------------------|-------------------|---------|---------|---------|----------|
| Road Classification                          | # of Travel Lanes                   | A                 | B       | C       | D       | E        |
| Expressway (6.1)                             | 6                                   | <36,000           | <54,000 | <70,000 | <86,000 | <108,000 |
| Prime Arterial (6.2)                         | 6                                   | <22,200           | <37,000 | <44,600 | <50,000 | <57,000  |
| Major Road (4.1A)                            | 4                                   | <14,800           | <24,700 | <29,600 | <33,400 | <37,000  |
| Major Road w/ Intermittent Turn Lanes (4.1B) | 4                                   | <13,700           | <22,800 | <27,400 | <30,800 | <34,200  |
| Collector                                    | 4                                   | <13,700           | <22,800 | <27,400 | <30,800 | <34,200  |
| Boulevard w/ Raised Median (4.2A)            | 4                                   | <18,000           | <21,000 | <24,000 | <27,000 | <30,000  |
| Boulevard w/ Intermittent Turn Lanes (4.2B)  | 4                                   | <16,800           | <19,600 | <22,500 | <25,000 | <28,000  |
| Town Collector                               | 2                                   | <3,000            | <6,000  | <9,500  | <13,500 | <19,000  |
| Community Collector                          | w/ Raised Median (2.1A)             | 2                 | <10,000 | <11,700 | <13,400 | <15,000  |
|  | w/ Continuous Left Turn Lane (2.1B) | 2                 | <3,000  | <6,000  | <9,500  | <13,500  |
|  | w/ Intermittent Turn Lane (2.1C)    | 2                 | <3,000  | <6,000  | <9,500  | <13,500  |
|  | w/ Passing Lane (2.1D)              | 2                 | <3,000  | <6,000  | <9,500  | <13,500  |
|  | No Median (2.1E)                    | 2                 | <1,900  | <4,100  | <7,100  | <10,900  |
| Light Collector                              | w/ Raised Median (2.2A)             | 2                 | <3,000  | <6,000  | <9,500  | <13,500  |
|  | w/ Continuous Left Turn Lane (2.2B) | 2                 | <3,000  | <6,000  | <9,500  | <13,500  |
|  | w/ Intermittent Turn Lane (2.2C)    | 2                 | <3,000  | <6,000  | <9,500  | <13,500  |
|  | w/ Passing Lane (2.2D)              | 2                 | <3,000  | <6,000  | <9,500  | <13,500  |
|  | No Median (2.2E)                    | 2                 | <1,900  | <4,100  | <7,100  | <10,900  |
|  | w/ Reduced Shoulder (2.2F)          | 2                 | <1,900  | <4,100  | <7,100  | <10,900  |
| Rural Collector                              | 2                                   | <1,900            | <4,100  | <7,100  | <10,900 | <16,200  |
| Rural Light Collector                        | 2                                   | <1,900            | <4,100  | <7,100  | <10,900 | <16,200  |
| Rural Mountain                               | 2                                   | <1,900            | <4,100  | <7,100  | <10,900 | <16,200  |
| Recreational Parkway                         | 2                                   | <1,900            | <4,100  | <7,100  | <10,900 | <16,200  |
| Minor Collector                              | w/ Raised Median (2.3A)             | 2                 | <3,000  | <6,000  | <7,000  | <8,000   |
|  | w/ Intermittent Turn Lane (2.3B)    | 2                 | <3,000  | <6,000  | <7,000  | <8,000   |
|  | No Median (2.3C)                    | 2                 | <1,900  | <4,100  | <6,000  | <7,000   |
| NON-CIRCULATION ELEMENT ROADS**              |                                     | LEVELS OF SERVICE |         |         |         |          |
| Residential Collector                        | 2                                   | -                 | -       | <4,500  | -       | -        |
| Rural Residential Collector***               | 2                                   | -                 | -       | <4,500  | -       | -        |
| Residential Road                             | 2                                   | -                 | -       | <1,500  | -       | -        |
| Rural Residential Road***                    | 2                                   | -                 | -       | <1,500  | -       | -        |
| Residential Cul-de-Sac or Loop Road          | 2                                   | -                 | -       | <200    | -       | -        |

\* The values shown are subject to adjustment based on the geometry of the roadway, side frictions, and other relevant factors as determined by the Director, Department of Public Works.

\*\* Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.

\*\*\* Rural Residential Collectors and Rural Residential Roads are intended to serve areas with lot sizes of 2 acres or more which do not have a demand for on-street parking. On-street parking is not assured for these cross sections. Additional right-of-way is needed if on-street parking is in paved area.

\*\*\*\* See Tables 2A and 2B for roadway surfacing and right-of-way widths.

# TABLE 2A: COUNTY OF SAN DIEGO - PUBLIC ROAD STANDARDS

## CLASSIC CIRCULATION ELEMENT ROAD CLASSIFICATIONS

| ROAD CLASSIFICATION   | # LANES /<br>LANE WIDTH | MEDIAN<br>WIDTH | ROAD<br>SURFACING<br>WIDTH | R.O.W.<br>WIDTH | PAVED<br>SHOULDER<br>(# / WIDTH) | PARKWAY<br>WIDTH | MIN.<br>CURVE<br>RADIUS | MAX.<br>DESIRABLE<br>GRADE | MIN. DESIGN<br>SPEED (MPH) |
|-----------------------|-------------------------|-----------------|----------------------------|-----------------|----------------------------------|------------------|-------------------------|----------------------------|----------------------------|
| Expressway (6.1)      | 6 / 12'                 | 34'             | 126'                       | 146'            | 2 / 10'                          | 10'              | 1,700'                  | 6%                         | 65                         |
| Prime Arterial (6.2)  | 6 / 12'                 | 14'             | 102'                       | 122'            | 2 / 8'                           | 10'              | 1,700'                  | 6%                         | 65                         |
| Major Road (4.1A)     | 4 / 12'                 | 14'             | 78'                        | 98'             | 2 / 8'                           | 10'              | 1,200'                  | 7%                         | 55                         |
| Collector             | 4 / 12'                 | -               | 64'                        | 84'             | 2 / 8'                           | 10'              | 1,200'                  | 7%                         | 55                         |
| Town Collector        | 2 / 12'                 | 12'             | 54'                        | 74'             | 2 / 8'                           | 10'              | 500'                    | 9%                         | 40                         |
| Light Collector       | 2 / 12'                 | -               | 40'                        | 60'             | 2 / 8'                           | 10'              | 700'                    | 9%                         | 45                         |
| Rural Collector       | 2 / 12'                 | -               | 40'                        | 84'             | 2 / 8'                           | 22'              | 500'                    | 12%                        | 40                         |
| Rural Light Collector | 2 / 12'                 | -               | 40'                        | 60'             | 2 / 8'                           | 10'              | 500'                    | 12%                        | 40                         |
| Rural Mountain        | 2 / 12'                 | -               | 40'                        | 100'            | 2 / 8'                           | 30'              | 500'                    | 12%                        | 40                         |
| Recreational Parkway  | 2 / 12'                 | -               | 40'                        | 100'            | 2 / 8'                           | 30'              | 400'                    | 12%                        | 25                         |

## MODERN CIRCULATION ELEMENT ROAD CLASSIFICATIONS

### Major Road

|                                       |         |   |           |           |        |     |        |    |    |
|---------------------------------------|---------|---|-----------|-----------|--------|-----|--------|----|----|
| * With Intermittent Turn Lanes (4.1B) | 4 / 12' | - | 64' - 78' | 84' - 98' | 2 / 8' | 10' | 1,200' | 7% | 55 |
|---------------------------------------|---------|---|-----------|-----------|--------|-----|--------|----|----|

### Boulevard

|   |         |     |           |            |        |     |      |    |    |
|---|---------|-----|-----------|------------|--------|-----|------|----|----|
| *** With Raised Median (4.2A)           | 4 / 12' | 14' | 78'       | 106'       | 2 / 8' | 14' | 500' | 9% | 40 |
| *** With Intermittent Turn Lanes (4.2B) | 4 / 12' | -   | 64' - 78' | 92' - 106' | 2 / 8' | 14' | 500' | 9% | 40 |

### Community Collector

|  |         |     |           |           |        |     |      |    |    |
|--|---------|-----|-----------|-----------|--------|-----|------|----|----|
| ** With Raised Median (2.1A)             | 2 / 12' | 14' | 54'       | 74'       | 2 / 8' | 10' | 700' | 9% | 45 |
| ** With Continuous Left Turn Lane (2.1B) | 2 / 12' | 14' | 54'       | 74'       | 2 / 8' | 10' | 700' | 9% | 45 |
| *** With Intermittent Turn Lanes (2.1C)  | 2 / 12' | -   | 40' - 54' | 60' - 74' | 2 / 8' | 10' | 700' | 9% | 45 |
| *** With Passing Lane (2.1D)             | 2 / 12' | -   | 40'       | 84'       | 2 / 8' | 10' | 700' | 9% | 45 |
| * No Median (2.1E)                       | 2 / 12' | -   | 40'       | 60'       | 2 / 8' | 10' | 700' | 9% | 45 |

### Light Collector

|  |         |     |           |           |        |     |      |    |    |
|--|---------|-----|-----------|-----------|--------|-----|------|----|----|
| ** With Raised Median (2.2A)             | 2 / 12' | 14' | 54'       | 78'       | 2 / 8' | 10' | 500' | 9% | 40 |
| ** With Continuous Left Turn Lane (2.2B) | 2 / 12' | 14' | 54'       | 78'       | 2 / 8' | 10' | 500' | 9% | 40 |
| *** With Intermittent Turn Lanes (2.2C)  | 2 / 12' | -   | 40' - 54' | 64' - 78' | 2 / 8' | 10' | 500' | 9% | 40 |
| *** With Passing Lane (2.2D)             | 2 / 12' | -   | 40'       | 88'       | 2 / 8' | 10' | 500' | 9% | 40 |
| ** No Median (2.2E)                      | 2 / 12' | -   | 40'       | 64'       | 2 / 8' | 10' | 500' | 9% | 40 |
| *** With Reduced Shoulder (2.2F)         | 2 / 12' | -   | 40'       | 52'       | 2 / 2' | 10' | 500' | 9% | 40 |

### Minor Collector

|   |         |     |           |           |        |     |      |     |    |
|---|---------|-----|-----------|-----------|--------|-----|------|-----|----|
| *** With Raised Median (2.3A)           | 2 / 12' | 14' | 54'       | 82'       | 2 / 8' | 10' | 350' | 12% | 35 |
| *** With Intermittent Turn Lanes (2.3B) | 2 / 12' | -   | 40' - 54' | 68' - 82' | 2 / 8' | 10' | 350' | 12% | 35 |
| *** No Median (2.3C)                    | 2 / 12' | -   | 40'       | 68'       | 2 / 8' | 10' | 350' | 12% | 35 |

- NOTES:
- 1 Minimum longitudinal gradient shall be 1.0 percent for all road classifications shown above.
  - 2 The maximum grade for a permanent cul-de-sac street turning area shall be 6 percent.
  - 3 The maximum grade for a temporary cul-de-sac street turning area shall be that of the classification of the road being constructed.
  - 4 For standards, see County Design Standard Drawing DS-2, DS-3, DS-4, and Section 4.5N of these Standards.
  - 5 Additional pavement and ROW may be required for CE Collectors (4 feet) and Light Collectors (12 feet) in Industrial/Commercial Zones.
  - 6 CE roads needing additional turn lanes will require an additional 12 to 14 feet of pavement and ROW for each lane.
  - 7 The maximum superelevation allowed on CE roads is 6%. Superelevation is not normally required on Non-CE roads.
  - 8 CE roads designated with Bike Lanes will require an additional 10 feet of pavement and ROW. This may be increased to 12' for Collector Roads and above based upon the provisions in Section 7.3 of these standards.
  - 9 The minimum curve radii, shown in the table above, are based on the design speed with 6% superelevation.
  - 10 Interim roads are to be a minimum of 28 feet A.C. within a 40 feet graded roadbed. They may be larger if traffic volumes require more travel lanes.

- LEGEND:
- \* Similar to existing Collector Road
  - \*\* Similar to existing Town Collector
  - \*\*\* Similar to existing Rural Collector
  - + Same as existing Light Collector
  - ++ Similar to existing Rural Light Collector
  - +++ New Classification Standard

Attachment D  
3 of 3

**(c) Density**

Density shall be calculated as provided in §405.

**(d) Floor Area Ratio**

- (1) For development of an individual platted lot, "floor area ratio" means the ratio of the total building floor area to the total lot area, in square feet.
- (2) For a subdivision plat, master plan, or site plan that includes multiple buildings, "floor area ratio" means ratio of the total building floor area to the total area of the development site, in square feet.
- (3) Floor Area ratio of PND relates to entire portion of the nonresidential component of the development.

**(e) Trip Generation**

- (1) The total number of average daily trips (ADT) generated by the proposed development shall not exceed the amount prescribed in the Performance Standards Matrix (Table 407-1), Column (D), per acre of development site. The applicant shall calculate total trips using the procedures established for Traffic Impact Studies (see Article 12.
- (2) Because mixed use development involves a balance between residential and non-residential facilities and a high level of pedestrian infrastructure, many trips are typically captured on-site or are made by non-vehicular modes such as walking or public transportation. In addition, the City finds that design standards for buildings, streets, and building-street relationships are an important factor in reducing the number of trips generated. Accordingly, an application using a TND, PND, or MXE may reduce the projected trips for all eligible uses (see subsection (4), below), as computed in accordance with the *ITE Manual*, by the amount shown in Table 407-2 below. In order to reduce the number of trips as provide in this subsection, the applicant shall provide a phasing schedule consistent with the following:



- A. Following approval of a final site plan and subdivision plat, the first seventy five percent (75%) of all certificates of occupancy for dwelling units shall be issued prior to the establishment of any non-residential use.
- B. No certificate of use and occupancy may be issued for the remaining dwelling units until a certificate of use and occupancy has been issued for one-hundred percent (100%) of the non-residential floor area.

**Table 407-2 Trip Reductions for Mixed Use Development**

| Percent Residential Equivalent Units | Percent Non-residential Equivalent Units | Percent Trips Reduced |
|--------------------------------------|--|-----------------------|
| 85-100%                              | 0-14%                                    | Not Applicable        |
| 75-84%                               | 15-25%                                   | 10%                   |
| 65-74%                               | 25-35%                                   | 20%                   |
| 35-65%                               | 35-74%                                   | 30%                   |
| 25-34%                               | 65-74%                                   | 20%                   |
| 15-24%                               | 75-84%                                   | 10%                   |
| 0-14%                                | 85-100%                                  | Not Applicable        |

**Rules of Interpretation for Table 407-2:**

For purposes of computing the percentage established above, one dwelling unit or 800 square feet of non-residential space shall equal one (1) equivalent unit. The equivalent units shall be located within the boundaries of the proposed development.

- (3) For purposes of this section, the overall trip generation for an eligible use (see subsection (4), below) in the DR, DB, or DBO district shall be reduced by thirty percent (30%).
- (4) For purposes of this subsection, an "eligible use" includes any residential, retail, institutional or industrial use except Auto-Oriented Uses as defined in Article 10 of this Code.

**(f) Stormwater management**

Stormwater credits are defined in the Maryland Department of Environment, 2000 Maryland Stormwater Design Manual, which is hereby incorporated by reference. Credits are calculated for using non-structural practices including Natural Area Conservation, Disconnection of Rooftop Runoff, Disconnection of Non Rooftop Runoff, Sheet Flow to Buffers, Open Channel Use, and Environmentally Sensitive Development. The percentage refers to the reduction in Water Quality Volume (WQv) from a development.

# NCHRP

## REPORT 684

### Enhancing Internal Trip Capture Estimation for Mixed-Use Developments

TRANSPORTATION RESEARCH BOARD  
OF THE NATIONAL ACADEMIES

NATIONAL  
COOPERATIVE  
HIGHWAY  
RESEARCH  
PROGRAM

With the increase in emphasis on livability, compact cities, and smart growth in general, MXDs have become more popular. Many are found in midtown-type urban areas (i.e., the central portion of a city or urban area that is outside the CBD but has higher densities than suburban or general urban and may include an outlying business district). Others are found in suburban locations and a few in urban peripheries. The research team did not include downtowns because they would be very difficult to survey and do not develop as one project or development and, therefore, would not need a TIA for the downtown.

During the period this project was active, the research team received dozens of calls asking for internal capture data for land uses and time periods not included in the ITE method. Requests were most frequently received for

- A.M. peak-hour internal capture rates;
- Land uses not included in the ITE method—most notably hotels, cinemas, and restaurants; and
- Very large MXDs in outlying areas.

### Available Data

There are very limited data available that are capable of supporting internal capture rate estimation methodology that can use information that is *available at the time of zoning*. Three Florida surveys plus three pilot studies conducted for this project were the only surveys with enough detail to develop internal capture methodology

- For both A.M. and P.M. peak hours;
- For use with information that is available at the time of zoning requests and can be reliably projected;
- That provides the ability to analyze the effect of proximity of land uses to each other; and
- That is sensitive to differences in land use mix.

Some cordon counts have been completed for various periods and could be used for validation testing, but, by themselves with land use information, they do not provide what is needed to develop a sensitive procedure. More data are needed.

### Internal Capture Estimation Methodology

#### Expanded ITE Methodology

This project expanded the database from three to six developments and, after considering options, expanded the ITE method to

- Add the weekday A.M. peak hour;
- Add restaurant, cinema, and hotel land uses;

- Create a land use classification structure that would permit disaggregation of the six land uses to more detailed categories should enough data become available;
- Include the effects of proximity (i.e., convenient walking distance) among interacting land uses to represent both compactness and design; and
- Provide a method that could easily be put in spreadsheet form.

This method was tested for its ability to estimate external vehicle trip generation. The existing ITE method estimates produce about one-half of the estimation error that raw ITE trip generation rates produce. The method developed in this project cuts the estimation error in half again, or roughly to about one-fourth of the raw trip generation rates.

The recommended method is described in Chapter 3. The researchers recommend its use for developments of up to 300 acres. Additional data and/or further testing could validate its use for larger developments, but that has not yet been attempted. The researchers do not recommend use of this method for downtowns, SACs, or new town types of development; the researchers do not believe it will be applicable.

The method produced has a component that estimates the effects of proximity. Unfortunately, the database is small enough for the P.M. period that factors could only be developed for some land use pairs. Absence of A.M. peak-hour data from the Florida studies precluded any A.M. proximity factors from being developed. This project's estimation method generally produced slightly closer P.M. estimates with the proximity factor included. It is recommended for use, but it is also recommended that when additional data becomes available, attempts should be made to develop proximity factors for more land use pairs.

### Suggested Modifications to Existing ITE Procedures

As mentioned previously, the recommended estimation method builds on the current ITE internal trip capture procedures contained in the second edition of the *Trip Generation Handbook* (1). Incorporation of this project's recommendations could be accomplished by performing the following:

- Expanding Tables 7.1 and 7.2 of the *Trip Generation Handbook* (1) to include all six land uses covered in this report; and
- Adding the proximity adjustment to be made after the unconstrained internal capture estimates are performed but before the balancing process.

The data collection procedures could be modified to include those recommended in this project, including the next section.

**(NOT SO)**  
**BRIEF GUIDE OF VEHICULAR TRAFFIC GENERATION RATES**  
**FOR THE SAN DIEGO REGION**

APRIL 2002

401 B Street, Suite 800  
San Diego, California 92101  
(619) 699-1900 • Fax (619) 699-1950

NOTE: This listing only represents a *guide* of average, or estimated, traffic generation "driveway" rates and some very general trip data for land uses (emphasis on acreage and building square footage) in the San Diego region. These rates (both local and national) are subject to change as future documentation becomes available, or as regional sources are updated. For more specific information regarding traffic data and trip rates, please refer to the San Diego Traffic Generators manual. *Always check with local jurisdictions for their preferred or applicable rates.*

| LAND USE   | TRIP CATEGORIES<br>(PRIMARY: DIVERTED: PASS-BY)* | ESTIMATED WEEKDAY VEHICLE<br>TRIP GENERATION RATE (DRIVEWAY)                                     | HIGHEST PEAK HOUR % (plus IN:OUT ratio)<br>Between 6:00-9:30 A.M. Between 3:00-6:30 P.M. |                       | TRIP LENGTH<br>(Miles)* |
|--|--|--|--|-----------------------|-------------------------|
| AGRICULTURE (Open Space) .....   | [80:18:2]  | 2/acre**   |  |                       | 10.8                    |
| AIRPORT .....  | [78:20:2]  |  |  |                       | 12.5                    |
| Commercial   |  | 60/acre, 100/flight, 70/1000 sq. ft.* **   | 8% (6:4)   | 8% (5:5)              |                         |
| General Aviation   |  | 6/acre, 2/flight, 6/based aircraft* **   | 9% (7:3)   | 15% (5:5)             |                         |
| Heliports  |  | 100/acre**   |  |                       |                         |
| AUTOMOBILE*  |  |  |  |                       |                         |
| Car Wash   |  |  |  |                       |                         |
| Automatic  |  | 900/site, 600/acre**   | 4% (5:5)   | 9% (5:5)              |                         |
| Self-serve   |  | 100/wash stall**   | 4% (5:5)   | 8% (5:5)              |                         |
| Gasoline .....   | [21:51:28]                                       |  |  |                       | 2.8                     |
| with/Food Mart   |  | 160/vehicle fueling space**  | 7% (5:5)   | 8% (5:5)              |                         |
| with/Food Mart & Car Wash  |  | 155/vehicle fueling space**  | 8% (5:5)   | 9% (5:5)              |                         |
| Older Service Station Design   |  | 150/vehicle fueling space, 800/station**   | 7% (5:5)   | 9% (5:5)              |                         |
| Sales (Dealer & Repair)  |  | 50/1000 sq. ft., 300/acre, 60/service stall* **  | 8% (7:3)   | 8% (4:6)              |                         |
| Auto Repair Center   |  | 20/1000 sq. ft., 400/acre, 20/service stall*   | 8% (7:3)   | 11% (4:6)             |                         |
| Auto Parts Sales   |  | 60/1000 sq. ft.*   | 4%   | 10% (5:5)             |                         |
| Quick Lube   |  | 40/service stall**   | 7% (6:4)   | 11% (5:5)             |                         |
| Tire Store   |  | 25/1000 sq. ft., 30/service stall**  | 7% (6:4)   | 11% (5:5)             |                         |
| CEMETERY   |  | 5/acre*  |  |                       |                         |
| CHURCH (or Synagogue) .....  | [64:25:11]                                       | 9/1000 sq. ft., 30/acre** (quadruple rates for Sunday, or days of assembly)                      | 5% (6:4)   | 8% (5:5)              | 5.1                     |
| COMMERCIAL/RETAIL*   |  |  |  |                       |                         |
| Super Regional Shopping Center<br>(More than 80 acres, more than<br>800,000 sq. ft., w/usually 3+<br>major stores)   |  | 35/1000 sq. ft., <sup>c</sup> 400/acre*  | 4% (7:3)   | 10% (5:5)             |                         |
| Regional Shopping Center .....   | [54:35:11]                                       | 50/1000 sq. ft., <sup>c</sup> 500/acre*  | 4% (7:3)   | 9% (5:5)              | 5.2                     |
| (40-80 acres, 400,000-800,000<br>sq. ft., w/usually 2+ major stores)   |  |  |  |                       |                         |
| Community Shopping Center .....  | [47:31:22]                                       | 80/1000 sq. ft., 700/acre* **  | 4% (6:4)   | 10% (5:5)             | 3.6                     |
| (15-40 acres, 125,000-400,000 sq. ft.,<br>w/usually 1 major store, detached<br>restaurant(s), grocery and drug store)  |  |  |  |                       |                         |
| Neighborhood Shopping Center<br>(Less than 15 acres, less than<br>125,000 sq. ft., w/usually grocery<br>& drug store, cleaners, beauty & barber shop,<br>& fast food services) |  | 120/1000 sq. ft., 1200/acre* **  | 4% (6:4)   | 10% (5:5)             |                         |
| Commercial Shops .....   | [45:40:15]                                       |  |  |                       | 4.3                     |
| Specialty Retail/Strip Commercial  |  | 40/1000 sq. ft., 400/acre*   | 3% (6:4)   | 9% (5:5)              |                         |
| Electronics Superstore   |  | 50/1000 sq. ft.**  |  | 10% (5:5)             |                         |
| Factory Outlet   |  | 40/1000 sq. ft.**  | 3% (7:3)   | 9% (5:5)              |                         |
| Supermarket  |  | 150/1000 sq. ft., 2000/acre* **  | 4% (7:3)   | 10% (5:5)             |                         |
| Drugstore  |  | 90/1000 sq. ft.**  | 4% (6:4)   | 10% (5:5)             |                         |
| Convenience Market (15-16 hours)   |  | 500/1000 sq. ft.**   | 8% (5:5)   | 8% (5:5)              |                         |
| Convenience Market (24 hours)  |  | 700/1000 sq. ft.**   | 9% (5:5)   | 7% (5:5)              |                         |
| Convenience Market (w/gasoline pumps)  |  | 850/1000 sq. ft., 550/vehicle fueling space**  | 6% (5:5)   | 7% (5:5)              |                         |
| Discount Club  |  | 60/1000 sq. ft., 600/acre* **  | 7% (7:3)   | 9% (5:5)              |                         |
| Discount Store   |  | 60/1000 sq. ft., 600/acre**  | 3% (6:4)   | 8% (5:5)              |                         |
| Furniture Store  |  | 6/1000 sq. ft., 100/acre* *  | 4% (7:3)   | 9% (5:5)              |                         |
| Lumber Store   |  | 30/1000 sq. ft., 150/acre**  | 7% (6:4)   | 8% (5:5)              |                         |
| Home Improvement Superstore  |  | 40/1000 sq. ft.**  | 5% (6:4)   | 9% (5:5)              |                         |
| Hardware/Paint Store   |  | 60/1000 sq. ft., 600/acre**  | 3% (6:4)   | 10% (5:5)             |                         |
| Garden Nursery   |  | 40/1000 sq. ft., 90/acre**   | 3% (6:4)   | 9% (5:5)              |                         |
| Mixed Use: Commercial (w/supermarket)/Residential  |  | 110/1000 sq. ft., 2000/acre* (commercial only)<br>15/dwelling unit, 200/acre* (residential only) | 3% (6:4)<br>9% (3:7)   | 9% (5:5)<br>13% (6:4) |                         |
| EDUCATION  |  |  |  |                       |                         |
| University (4 years) .....   | [91:9:0]   | 2.4/student, 100 acre*   | 10% (8:2)  | 9% (3:7)              | 8.9                     |
| Junior College (2 years) .....   | [92:7:1]   | 1.2/student, 24/1000 sq. ft., 120/acre* **   | 12% (8:2)  | 9% (6:4)              | 9.0                     |
| High School .....  | [75:19:6]  | 1.3/student, 16/1000 sq. ft., 60/acre* **  | 20% (7:3)  | 10% (4:6)             | 4.8                     |
| Middle/Junior High .....   | [63:25:12]                                       | 1.4/student, 12/1000 sq. ft., 50/acre* *   | 30% (6:4)  | 9% (4:6)              | 5.0                     |
| Elementary .....   | [57:25:10]                                       | 1.6/student, 14/1000 sq. ft., 90/acre* **  | 32% (6:4)  | 9% (4:6)              | 3.4                     |
| Day Care .....   | [28:58:14]                                       | 5/child, 80/1000 sq. ft.**   | 17% (5:5)  | 18% (5:5)             | 3.7                     |
| FINANCIAL*   | [35:42:23]                                       |  |  |                       | 3.4                     |
| Bank (Walk-in only)  |  | 150/1000 sq. ft., 1000/acre* **  | 4% (7:3)   | 8% (4:6)              |                         |
| with Drive-Through   |  | 200/1000 sq. ft., 1500/acre*   | 4% (6:4)   | 10% (5:5)             |                         |
| Drive-Through only   |  | 250 (125 one-way)/lane*  | 3% (5:5)   | 13% (5:5)             |                         |
| Savings & Loan   |  | 60/1000 sq. ft., 600/acre**  | 2%   | 9%                    |                         |
| Drive-Through only   |  | 100 (50 one-way)/lane**  | 4%   | 15%                   |                         |
| HOSPITAL .....   | [73:25:2]  |  |  |                       | 8.3                     |
| General  |  | 20/bed, 25/1000 sq. ft., 250/acre*   | 8% (7:3)   | 10% (4:6)             |                         |
| Convalescent/Nursing   |  | 3/bed**  | 7% (6:4)   | 7% (4:6)              |                         |
| INDUSTRIAL   |  |  |  |                       |                         |
| Industrial/Business Park (commercial included) .....   | [79:19:2]  | 16/1000 sq. ft., 200/acre* **  | 12% (8:2)  | 12% (2:8)             | 9.0                     |
| Industrial Park (no commercial)  |  | 8/1000 sq. ft., 90/acre**  | 11% (9:1)  | 12% (2:8)             |                         |
| Industrial Plant (multiple shifts) .....   | [92:5:3]   | 10/1000 sq. ft., 120/acre*   | 14% (8:2)  | 15% (3:7)             | 11.7                    |
| Manufacturing/Assembly   |  | 4/1000 sq. ft., 50/acre**  | 19% (9:1)  | 20% (2:8)             |                         |
| Warehousing  |  | 5/1000 sq. ft., 60/acre**  | 13% (7:3)  | 15% (4:6)             |                         |
| Storage  |  | 2/1000 sq. ft., 0.2/vault, 30/acre*  | 6% (5:5)   | 9% (5:5)              |                         |
| Science Research & Development   |  | 8/1000 sq. ft., 80/acre*   | 16% (9:1)  | 14% (1:9)             |                         |
| Landfill & Recycling Center  |  | 6/acre   | 11% (5:5)  | 10% (4:6)             |                         |

(OVER)

MEMBER AGENCIES: Cities of Carlsbad, Chula Vista, Coronado, Del Mar, El Cajon, Encinitas, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, San Diego, San Marcos, Santee, Solana Beach, Vista and County of San Diego.

ADVISORY/LIAISON MEMBERS: California Department of Transportation, County Water Authority, U.S. Department of Defense, S.D. Unified Port District and Tijuana/Baja California.

| LAND USE   | TRIP CATEGORIES<br>(PRIMARY:DIVERTED:PASS-BY)* | ESTIMATED WEEKDAY VEHICLE<br>TRIP GENERATION RATE (DRIVEWAY)   | HIGHEST PEAK HOUR % (plus IN/OUT ratio)<br>Between 6:00-9:30 A.M. Between 3:00-6:30 P.M. |       |     |       | TRIP LENGTH<br>(Miles)* |
|--|--|--|--|-------|-----|-------|-------------------------|
| LIBRARY .....  | [44:44:12]                                     | 50/1000 sq. ft., 400/acre**                                    | 2%   | (7:3) | 10% | (5:5) | 3.9                     |
| LODGING .....  | [58:38:4]                                      |  |  |       |     |       | 7.6                     |
| Hotel (w/convention facilities/restaurant)                       |  | 10/occupied room, 300/acre                                     | 6%   | (6:4) | 8%  | (6:4) |                         |
| Motel  |  | 9/occupied room, 200/acre*                                     | 8%   | (4:6) | 9%  | (6:4) |                         |
| Resort Hotel   |  | 8/occupied room, 100/acre*                                     | 8%   | (6:4) | 7%  | (4:6) |                         |
| Business Hotel   |  | 7/occupied room**  | 8%   | (4:6) | 9%  | (6:4) |                         |
| MILITARY .....   | [82:16:2]                                      | 2.5/military & civilian personnel*                             | 9%   | (9:1) | 10% | (2:8) | 11.2                    |
| OFFICE .....   |  |  |  |       |     |       |                         |
| Standard Commercial Office .....                                 | [77:19:4]                                      | 20/1000 sq. ft., 300/acre*                                     | 14%  | (9:1) | 13% | (2:8) | 8.8                     |
| (less than 100,000 sq. ft.)                                      |  |  |  |       |     |       |                         |
| Large (High-Rise) Commercial Office .....                        | [82:15:3]                                      | 17/1000 sq. ft., 600/acre*                                     | 13%  | (9:1) | 14% | (2:8) | 10.0                    |
| (more than 100,000 sq. ft., 6+ stories)                          |  |  |  |       |     |       |                         |
| Office Park (400,000+ sq. ft.)                                   |  | 12/1000 sq.ft., 200/acre* **                                   | 13%  | (9:1) | 13% | (2:8) |                         |
| Single Tenant Office   |  | 14/1000 sq. ft., 180/acre*                                     | 15%  | (9:1) | 15% | (2:8) | 8.8                     |
| Corporate Headquarters   |  | 7/1000 sq. ft., 110/acre*                                      | 17%  | (9:1) | 16% | (1:9) |                         |
| Government (Civic Center) .....                                  | [50:34:16]                                     | 30/1000 sq. ft.**  | 9%   | (9:1) | 12% | (3:7) | 6.0                     |
| Post Office  |  |  |  |       |     |       |                         |
| Central/Walk-In Only   |  | 90/1000 sq. ft.**  | 3%   |       | 7%  |       |                         |
| Community (not including mail drop lane)                         |  | 200/1000 sq. ft., 1300/acre*                                   | 6%   | (6:4) | 8%  | (5:5) |                         |
| Community (w/mail drop lane)                                     |  | 300/1000 sq. ft., 2000/acre*                                   | 7%   | (5:5) | 10% | (5:5) |                         |
| Mail Drop Lane only  |  | 1500 (750 one-way)/lane*                                       | 7%   | (5:5) | 12% | (5:5) |                         |
| Department of Motor Vehicles                                     |  | 180/1000 sq. ft., 900/acre**                                   | 8%   | (6:4) | 10% | (4:6) |                         |
| Medical-Dental .....   | [60:30:10]                                     | 50/1000 sq. ft., 500/acre*                                     | 8%   | (8:2) | 11% | (3:7) | 6.4                     |
| PARKS .....  | [66:28:6]                                      |  |  |       |     |       | 5.4                     |
| City (developed w/meeting rooms and sports facilities)           |  | 50/acre*   | 4%   |       | 8%  |       |                         |
| Regional (developed)   |  | 20/acre*   | 13%  | (5:5) | 9%  | (5:5) |                         |
| Neighborhood/County (undeveloped)                                |  | 5/acre (add for specific sport uses), 6/picnic site* **        |  |       |     |       |                         |
| State (average 1000 acres)                                       |  | 1/acre, 10/picnic site**                                       |  |       |     |       |                         |
| Amusement (Theme)  |  | 80/acre, 130/acre (summer only)**                              |  |       | 8%  | (6:4) |                         |
| San Diego Zoo  |  | 115/acre*  |  |       |     |       |                         |
| Sea World  |  | 80/acre*   |  |       |     |       |                         |
| RECREATION .....   |  |  |  |       |     |       |                         |
| Beach, Ocean or Bay .....  | [52:39:9]                                      | 600/1000 ft. shoreline, 60/acre*                               |  |       |     |       | 6.3                     |
| Beach, Lake (fresh water)  |  | 50/1000 ft. shoreline, 5/acre*                                 |  |       |     |       |                         |
| Bowling Center   |  | 20/1000 sq. ft., 300/acre, 30/lane**                           | 7%   | (7:3) | 11% | (4:6) |                         |
| Campground   |  | 4/campsite**   | 4%   |       | 8%  |       |                         |
| Golf Course  |  | 7/acre, 40/tee, 700/course* **                                 | 7%   | (8:2) | 9%  | (3:7) |                         |
| Driving Range only   |  | 70/acre, 14/tee box*   | 3%   | (7:3) | 9%  | (5:5) |                         |
| Marinas  |  | 4/berth, 20/acre* **   | 3%   | (3:7) | 7%  | (6:4) |                         |
| Multi-purpose (miniature golf, video arcade, batting cage, etc.) |  | 90/acre  | 2%   |       | 8%  |       |                         |
| Racquetball/Health Club  |  | 30/1000 sq. ft., 300/acre, 40/court*                           | 4%   | (6:4) | 9%  | (6:4) |                         |
| Tennis Courts  |  | 16/acre, 30/court**  | 6%   |       | 11% | (5:5) |                         |
| Sports Facilities  |  |  |  |       |     |       |                         |
| Outdoor Stadium  |  | 50/acre, 0.2/seat*   |  |       |     |       |                         |
| Indoor Arena   |  | 30/acre, 0.1/seat*   |  |       |     |       |                         |
| Racetrack  |  | 40/acre, 0.6/seat*   |  |       |     |       |                         |
| Theaters (multiplex w/matinee) .....                             | [66:17:17]                                     | 80/1000 sq. ft., 1.8/seat, 360/screen*                         | 13%  |       | 8%  | (6:4) | 6.1                     |
| RESIDENTIAL .....  | [86:11:3]                                      |  |  |       |     |       | 7.9                     |
| Estate, Urban or Rural   |  | 12/dwelling unit**   | 8%   | (3:7) | 10% | (7:3) |                         |
| (average 1-2 DU/acre)  |  |  |  |       |     |       |                         |
| Single Family Detached   |  | 10/dwelling unit**   | 8%   | (3:7) | 10% | (7:3) |                         |
| (average 3-6 DU/acre)  |  |  |  |       |     |       |                         |
| Condominium  |  | 8/dwelling unit**  | 8%   | (2:8) | 10% | (7:3) |                         |
| (or any multi-family 6-20 DU/acre)                               |  |  |  |       |     |       |                         |
| Apartment  |  | 6/dwelling unit**  | 8%   | (2:8) | 9%  | (7:3) |                         |
| (or any multi-family units more than 20 DU/acre)                 |  |  |  |       |     |       |                         |
| Military Housing (off-base, multi-family)                        |  |  |  |       |     |       |                         |
| (less than 6 DU/acre)  |  | 8/dwelling unit  | 7%   | (3:7) | 9%  | (6:4) |                         |
| (6-20 DU/acre)   |  | 6/dwelling unit  | 7%   | (3:7) | 9%  | (6:4) |                         |
| Mobile Home  |  |  |  |       |     |       |                         |
| Family   |  | 5/dwelling unit, 40/acre*                                      | 8%   | (3:7) | 11% | (6:4) |                         |
| Adults Only  |  | 3/dwelling unit, 20/acre*                                      | 9%   | (3:7) | 10% | (6:4) |                         |
| Retirement Community   |  | 4/dwelling unit**  | 9%   | (4:6) | 7%  | (6:4) |                         |
| Congregate Care Facility   |  | 2.5/dwelling unit**  | 4%   | (6:4) | 8%  | (5:5) |                         |
| RESTAURANT* .....  | [51:37:12]                                     |  |  |       |     |       | 4.7                     |
| Quality  |  | 100/1000 sq. ft., 3/seat, 500/acre* **                         | 1%   | (6:4) | 8%  | (7:3) |                         |
| Sit-down, high turnover  |  | 160/1000 sq. ft., 6/seat, 1000/acre* **                        | 8%   | (5:5) | 8%  | (6:4) |                         |
| Fast Food (w/drive-through)                                      |  | 650/1000 sq. ft., 20/seat, 3000/acre* **                       | 7%   | (5:5) | 7%  | (5:5) |                         |
| Fast Food (without drive-through)                                |  | 700/1000 sq. ft.* **   | 9%   | (6:4) | 7%  | (5:5) |                         |
| Deli/Caterers (7am-4pm)  |  | 150/1000 sq. ft., 11/seat*                                     | 9%   | (6:4) | 3%  | (3:7) |                         |
| TRANSPORTATION .....   |  |  |  |       |     |       |                         |
| Bus Depot  |  | 25/1000 sq. ft.* **  |  |       |     |       |                         |
| Truck Terminal   |  | 10/1000 sq. ft., 7/bay, 80/acre**                              | 9%   | (4:6) | 8%  | (5:5) |                         |
| Waterport/Marine Terminal  |  | 170/berth, 12/acre**   |  |       |     |       |                         |
| Transit Station (Light Rail w/parking)                           |  | 300/acre, 2 1/2/parking space (4/occupied)* **                 | 14%  | (7:3) | 19% | (3:7) |                         |
| Park & Ride Lots   |  | 400/acre (600/paved acre),<br>5/parking space (8/occupied)* ** | 14%  | (7:3) | 19% | (3:7) |                         |

\* Primary source: San Diego Traffic Generators.

\* Other sources: ITE Trip Generation Report (6th Edition), Trip Generation Rates (other agencies and publications), various SANDAG & CALTRANS studies, reports and estimates.

\* Trip category percentage ratios are daily from local household surveys, often cannot be applied to very specific land uses, and do not include non-resident drivers (dnr SANDAG Analysis of Trip Diversion, revised November, 1990):

PRIMARY - one trip directly between origin and primary destination.

DIVERTED - linked trip having one or more stops along the way to a primary destination whose distance compared to direct distance  $\geq 1$  mile.

PASS-BY - undiverted or diverted < 1 mile.

\* Trip lengths are average weighted for all trips to and from general land use sites. (All trips system-wide average length = 6.9 miles)

\* Fitted curve equation:  $\ln(T) = 0.502 \ln(x) + 6.945$  } T = total trips, x = 1,000 sq. ft.

\* Fitted curve equation:  $\ln(T) = 0.756 \ln(x) + 3.950$  }

\* Fitted curve equation:  $\ln(T) = -2.169 \ln(x) + 12.85$

T = trips/DU, d = density (DU/acre), DU = dwelling unit

\* Suggested PASS-BY (undiverted or diverted < 1 mile) percentages for trip rate reductions only during P.M. peak period (based on combination of local data review and other sources\*\*):

|   |     |
|---|-----|
| COMMERCIAL/RETAIL                         |     |
| Regional Shopping Center                  | 20% |
| Community                                 | 30% |
| Neighborhood                              | 40% |
| Specialty Retail/Strip Commercial (other) | 10% |
| Supermarket                               | 40% |
| Convenience Market                        | 50% |
| Discount Club/Store                       | 30% |
| FINANCIAL                                 |     |
| Bank                                      | 25% |
| AUTOMOBILE                                |     |
| Gasoline Station                          | 50% |
| RESTAURANT                                |     |
| Quality                                   | 10% |
| Sit-down high turnover                    | 20% |
| Fast Food                                 | 40% |

\* Trip Reductions - In order to help promote regional "smart growth" policies, and acknowledge San Diego's expanding mass transit system, consider vehicle trip rate reductions (with proper documentation and necessary adjustments for peak periods). The following are some examples:

[1] A 5% daily trip reduction for land uses with transit access or near transit stations accessible within 1/4 mile.

[2] Up to 10% daily trip reduction for mixed-use developments where residential and commercial retail are combined (demonstrate mode split of walking trips to replace vehicular trips).

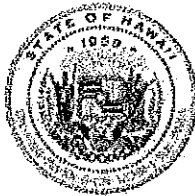
TABLE 7  
2004 ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS

|    | Location  | Peak Hour | Lanes N/E | Lanes S/W | Capacity N/E | Capacity S/W | Volume N/E   | Volume S/W   | V/C N/E      | V/C S/W      | LOS N/E | LOS S/W |
|----|---|-----------|-----------|-----------|--------------|--------------|--------------|--------------|--------------|--------------|---------|---------|
| 18 | Honoapiilani Hwy @ Fleming Rd & Front St (S Junction) | AM<br>PM  | 2<br>2    | 2<br>2    | 850<br>850   | 850<br>850   | 1069<br>1155 | 778<br>1142  | 0.63<br>0.68 | 0.46<br>0.67 | B<br>B  | A<br>B  |
| 19 | Honoapiilani Hwy 1.07 Mi W of Tunnel                  | AM<br>PM  | 1<br>1    | 1<br>1    | 1000<br>1000 | 1000<br>1000 | 655<br>1105  | 993<br>1001  | 0.66<br>1.11 | 0.99<br>1.00 | B<br>F  | E<br>F  |
| 20 | South Kihei Rd @ Mokulele Hwy                         | AM<br>PM  | 1<br>1    | 1<br>1    | 800<br>800   | 800<br>800   | 935<br>641   | 540<br>914   | 1.17<br>0.80 | 0.68<br>1.14 | F<br>D  | B<br>F  |
| 21 | South Kihei Rd @ Keonekal Rd                          | AM<br>PM  | 1<br>1    | 1<br>1    | 750<br>750   | 750<br>750   | 482<br>672   | 498<br>651   | 0.64<br>0.90 | 0.66<br>0.87 | B<br>D  | B<br>D  |
| 22 | Pilihi Hwy @ Mokulele Hwy                             | AM<br>PM  | 2<br>2    | 2<br>2    | 850<br>850   | 850<br>850   | 857<br>1168  | 1305<br>1069 | 0.50<br>0.69 | 0.77<br>0.63 | A<br>B  | C<br>B  |
| 23 | Pilihi Hwy @ Lipoa St & Lipoa Pkwy                    | AM<br>PM  | 1<br>1    | 1<br>1    | 1200<br>1200 | 1200<br>1200 | 969<br>1195  | 1079<br>1046 | 0.81<br>1.00 | 0.90<br>0.87 | D<br>E  | D<br>D  |
| 24 | Pilihi Hwy between Kanani & Alanui Ke Alii Rds        | AM<br>PM  | 1<br>1    | 1<br>1    | 1200<br>1200 | 1200<br>1200 | 943<br>1107  | 928<br>1005  | 0.79<br>0.92 | 0.77<br>0.84 | C<br>E  | C<br>D  |
| 25 | Hana Hwy & Baldwin Av                                 | AM<br>PM  | 1<br>1    | 1<br>1    | 1000<br>1000 | 1000<br>1000 | 463<br>729   | 890<br>557   | 0.46<br>0.73 | 0.89<br>0.56 | A<br>C  | D<br>A  |
| 26 | Hana Hwy & Baldwin Av                                 | AM<br>PM  | 1<br>1    | 1<br>1    | 400<br>400   | 400<br>400   | 294<br>262   | 193<br>271   | 0.74<br>0.66 | 0.48<br>0.68 | C<br>B  | A<br>B  |
| 27 | Haleakala Hwy @ Halimaile Rd                          | AM<br>PM  | 2<br>2    | 2<br>2    | 1200<br>1200 | 1200<br>1200 | 2076<br>918  | 545<br>1918  | 0.87<br>0.38 | 0.23<br>0.80 | D<br>A  | A<br>C  |
| 28 | Haleakala Hwy @ Makawao Av & Loha St                  | AM<br>PM  | 1<br>1    | 1<br>1    | 600<br>600   | 600<br>600   | 461<br>516   | 588<br>552   | 0.77<br>0.86 | 0.98<br>0.92 | C<br>D  | E<br>E  |
| 29 | Kula Hwy @ Omaoplo Rd                                 | AM<br>PM  | 1<br>1    | 1<br>1    | 1000<br>1000 | 1000<br>1000 | 729<br>471   | 447<br>546   | 0.73<br>0.47 | 0.45<br>0.55 | C<br>A  | A<br>A  |
| 30 | Haleakala Hwy & Kekaulike Av @ Haleakala Crater Rd    | AM<br>PM  | 1<br>1    | 1<br>1    | 850<br>850   | 850<br>850   | 147<br>110   | 94<br>88     | 0.17<br>0.13 | 0.11<br>0.10 | A<br>A  | A<br>A  |
| 31 | Hana Hwy & Kailua Bridge                              | AM<br>PM  | 1<br>1    | 1<br>1    | 300<br>300   | 300<br>300   | 28<br>120    | 101<br>39    | 0.09<br>0.40 | 0.34<br>0.13 | A<br>A  | A<br>A  |

NEIL ABERCROMBIE  
GOVERNOR

MAJOR GENERAL DARRYL D. M. WONG  
DIRECTOR OF CIVIL DEFENSE

DOUG MAYNE  
VICE DIRECTOR OF CIVIL DEFENSE



**STATE OF HAWAII**  
**DEPARTMENT OF DEFENSE**  
**OFFICE OF THE DIRECTOR OF CIVIL DEFENSE**  
3949 DIAMOND HEAD ROAD  
HONOLULU, HAWAII 96816-4495



PHONE (808) 733-4300  
FAX (808) 733-4287

April 10, 2012

LAND USE COMMISSION  
STATE OF HAWAII  
2012 APR 12 P 1:42

Olowalu Town, LLC and  
Olowalu Ekolu, LLC  
2035 Main Street, Suite 1  
Wailuku, Hawaii 96793

Gentlemen:

Draft Environmental Impact Statement (DEIS) for Olowalu Town  
Master Plan at TMK (2)4-8-003:084, 098 through 118, and 124,  
Olowalu, Lahaina, Maui, Hawaii

Thank you for the opportunity to comment on the subject project.

As acknowledged and restated in the DEIS, the proposed regional mixed-use development parcels are located within areas designated Flood Zone X, AE, AO and AEF. As portions of the project are subject to possible but undetermined flood risks, we strongly recommend the implementation of flood mitigation measures, as appropriate, during the planning and design phases of the development. In addition, the incorporation of design elements to mitigate the effect of high-wind events on structures should also be considered for this development.

The existing siren coverage encompasses the center area of Olowalu Town Master Plan. However, two additional omni-directional 121 db(c) sirens are required for complete coverage of the proposed development. State Civil Defense will work with the developer on placement of these additional sirens.

If you have any questions, please call Ms. Havinne Okamura, Hazard Mitigation Planner, at (808)733-4300, extension 556.

Sincerely,

DOUG MAYNE  
Vice Director of Civil Defense

c: Mr. Orlando Davidson, Land Use Commission ✓  
Ms. Colleen Suyama, Munekiyo & Hiraga, Inc.

LAND USE COMMISSION  
STATE OF HAWAII

2012 MAY -9 A 8:08

Surfrider Foundation Maui Chapter  
PO Box 790549 Paia, Maui HI 96779

May 7, 2012

To: State Land Use Commission  
PO Box 2359  
Honolulu, HI 96804  
Attention: Dan Davidson



Re: Comments on DEIS for Proposed Olowalu Town Master Plan  
on TMK (2) 4-8-003: 84, 98-118 and 124

Greetings Land Use Commissioners:

Surfrider Foundation Maui Chapter (SFMC) is concerned with issues that affect our oceans and shorelines. We are grateful for a chance to offer these comments on the proposed project. Our comments concern several topics: Impacts to Beach Access and Water Quality and Good Planning Design. We apologize for being beyond the comment deadline. We had to have board approval to send the comments.

**Beach Access:**

The Olowalu Draft EIS shows a new alignment of Honoapiilani Hwy that will be created to serve the proposed development. It also indicates that the existing road will remain as a low speed coastal road, but two sections of the existing highway will be removed at the north and south ends of the proposed project. Both stretches of Honoapiilani Hwy that proposed to be removed appear to be in areas well used for recreational access.

It seems from the map, that anyone wanting to access those shoreline areas after the proposed highway re-alignment was built would need to drive down a separate road from the new alignment to the coastal road. We didn't really see this discussed in the DEIS document, but it seems to us that this is a big change to people's ease of coastal access. Here's how a local website describes Olowalu:

"Just off the Honoapiilani Highway, Olowalu is the easiest spot to access on the island. You can literally go from driving on the highway to riding a wave in less than 2 minutes."

It's true, right now a shoreline user just has to pull over their vehicle, park and access the beach. Under the new arrangement a person needs to leave Honoapiilani Hwy and go on another road around the new development, and then follow that road back down to the remaining end of the old Honoapiilani Hwy. This is an impact that should be discussed.

We request that the Final EIS give specific information on the new proposed beach access routes, the length of road a beachgoer has to travel to get to the old road; the amount of traffic a beachgoer will have to go through to get to the shoreline if the route passes through the "new town;" the amount of parking available on the shore; and whether those on the new upper alignment will be able to still see the coast and check out the wave and weather conditions? We also request that the FEIS discuss how much of any



future beach parks along the Olowalu coast will be the publicly owned 100 ft wide State Beach Reserve and how much will be additional land provided by the landowner for park purposes?

Will there be new shoreline access points created? If so where and how many? Better Maps Please!

#### **Water Quality:**

We see that a sewage treatment plant is proposed across from a popular surf spot. The DEIS doesn't seem concerned that this location could effect the ocean water quality or ocean users like fishermen and women, surfers and divers. We would like to see information in the EIS about how large a storm it would take to overwhelm the treatment plant and its wetland storage site. What happens if there is a hurricane or tsunami on the West side?

Where is the wetland going to be? How will the odor of the plant affect ocean users? Will it have a constant odor like the plants in Lahaina and Kihei? The DEIS said that the plant location was chosen to get it far away from new housing and stores, and over near the old Olowalu Dump site. That's great for them, but what about folks who have used this shoreline for generations with no sewage smells? We are very surprised that none of this seems to be discussed in such a large document. There's no sewage treatment plant in Olowalu now. It seems unreasonable for the DEIS to pretend that building a wastewater plant will not expose the ocean to impacts. Nothing is perfect. We request that the FEIS discuss the plants vulnerabilities in more detail.

#### **Good Planning Design:**

SFMG representatives attended the Planning Commission meeting in Lahaina where the Maui Island Plan was discussed. We heard the debate and we understand that the Commission only recommended Olowalu be in the growth boundary if everything makai of the Honoapiilani Hwy was left out of the urban development boundary. We see in the DEIS maps that the Planning Commission recommendation does not show up on any of your "proposed project" maps. They all have urban development shown makai of the current Honoapiilani Hwy.

Shouldn't the EIS show what the Planning Commission voted for: the whole project all set mauka of the current Honoapiilani Hwy, as an Alternative? How can this not be discussed when the DEIS tells the Land Use Commission that the Maui Planning Commission supports the project? Can you show a different project and pretend the Planning Commission supported it? Please show and discuss all the choices in the Final EIS.

Mahalo nui loa



Kyle Juk, Vice-Chair

Surfrider Foundation, Maui Chapter

NEIL ABERCROMBIE  
GOVERNOR



DWIGHT TAKAMINE  
DIRECTOR

AUDREY HIDANO  
DEPUTY DIRECTOR

**STATE OF HAWAII  
DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS**

830 PUNCHBOWL STREET, ROOM 321  
HONOLULU, HAWAII 96813  
www.hawaii.gov/labor  
Phone: (808) 586-8844/Fax: (808) 586-9099

March 15, 2012

Olowalu Town, LLC and Olowalu Ekolū, LLC  
2035 Main Street, Suite 1  
Wailuku, HI 96793

To Whom It May Concern:

This is in response to the request for comments dated March 6, 2012 on the Draft Environmental Impact Statement for the Olowalu Town Master Plan located in Lahaina, island of Maui.

The Department of Labor and Industrial Relations has no comments, and we foresee no impact on our existing or proposed programs. Should you have any questions, please call me at (808) 586-8844.

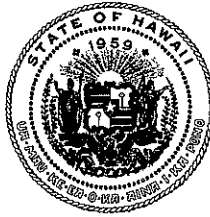
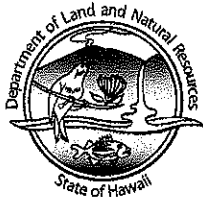
Sincerely,

DWIGHT TAKAMINE  
Director

c: ✓ Orlando Davidson, Executive Director, LUC  
Colleen Suyama, Munekiyo & Hiraga, Inc.

LAND USE COMMISSION  
STATE OF HAWAII  
2012 MAR 20 A 10:45

NEIL ABERCROMBIE  
GOVERNOR OF HAWAII



**STATE OF HAWAII**  
**DEPARTMENT OF LAND AND NATURAL RESOURCES**  
**Office of Conservation and Coastal Lands**  
POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

WILLIAM J. AILA, JR.  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

GUY H. KAULUKUKUI  
FIRST DEPUTY

WILLIAM M. TAM  
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

REF: OCCL: AJR

COR: MA-12-197

Colleen Suyama  
c/o Munekiyo and Hiraga, Inc.  
305 High Street, Suite 104  
Wailuku, Hawaii 96793

APR 23 2012

**SUBJECT: Draft Environmental Impact Statement (EIS) for Olowalu Town Master Plan**  
Olowalu, Lahaina, Island of Maui, Hawaii  
TMK(s): (2) 4-8-003:084, 098-118 and 124

Dear Ms. Suyama,

The Department of Land and Natural Resources, Office of Conservation and Coastal Lands (OCCL) is in receipt of your letter regarding a Draft Environmental Impact Statement (EIS) for the Olowalu Town Master Plan. Further review of the subject parcels reveal that the Olowalu Stream area (*parcel 108*) is located within the Conservation District Resource Subzone and that the shoreline area, including Hekili Point and the Olowalu Camp (*parcel 84*) are located within the Conservation District Limited Subzone. As always lands located *makai* of the shoreline are considered to be within the Conservation District.

At this time it is unclear of the proposed extent of specific land uses on *parcel 108* (Olowalu Cultural Reserve) and *parcel 84* (Hekili Point and Camp Olowalu) both of which have portions of land located within the Conservation District. Pursuant to Hawaii Administrative Rules (HAR) §13-5-6 (c) *No land uses shall be conducted in the conservation district unless a permit or approval is first obtained from the department or board.* Identified land uses for the Conservation District can be found in Hawaii Administrative Rules (HAR) §13-5, Subchapter 3.

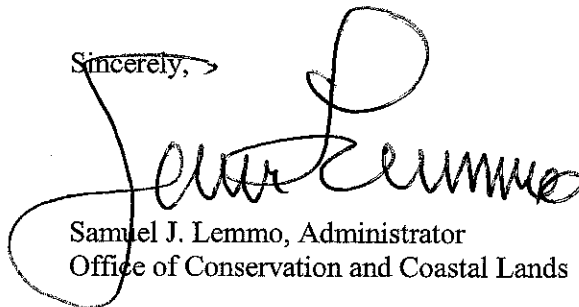
Based on an initial assessment of the proposed project the following identified land uses may or may not be designated to this project depending on the final plan; please refer to our rules (HAR §13-5) for complete descriptions of the following land uses:

1. HAR §13-5-22, P-6, **PUBLIC PURPOSE USES, D-1**
2. HAR §13-5-22, P-10, **SUBDIVISION AND CONSOLIDATION, D-1**
3. HAR §13-5-23, L-2, **LANDSCAPING, D-1**
4. HAR §13-5-24, R-8, **PRIVATE PARKS and NATURE CENTERS, D-1**

LAND USE COMMISSION  
STATE OF HAWAII  
2012 APR 24 A 7:29

Should you have any questions, please feel free to contact Alex J. Roy of our Office of Conservation and Coastal Lands at (808) 587-0316 or via email at [alex.j.roy@hawaii.gov](mailto:alex.j.roy@hawaii.gov)

Sincerely,

A handwritten signature in black ink, appearing to read "Samuel J. Lemmo". The signature is fluid and cursive, with a large loop at the end.

Samuel J. Lemmo, Administrator  
Office of Conservation and Coastal Lands

CC:

*County of Maui, Planning Department*

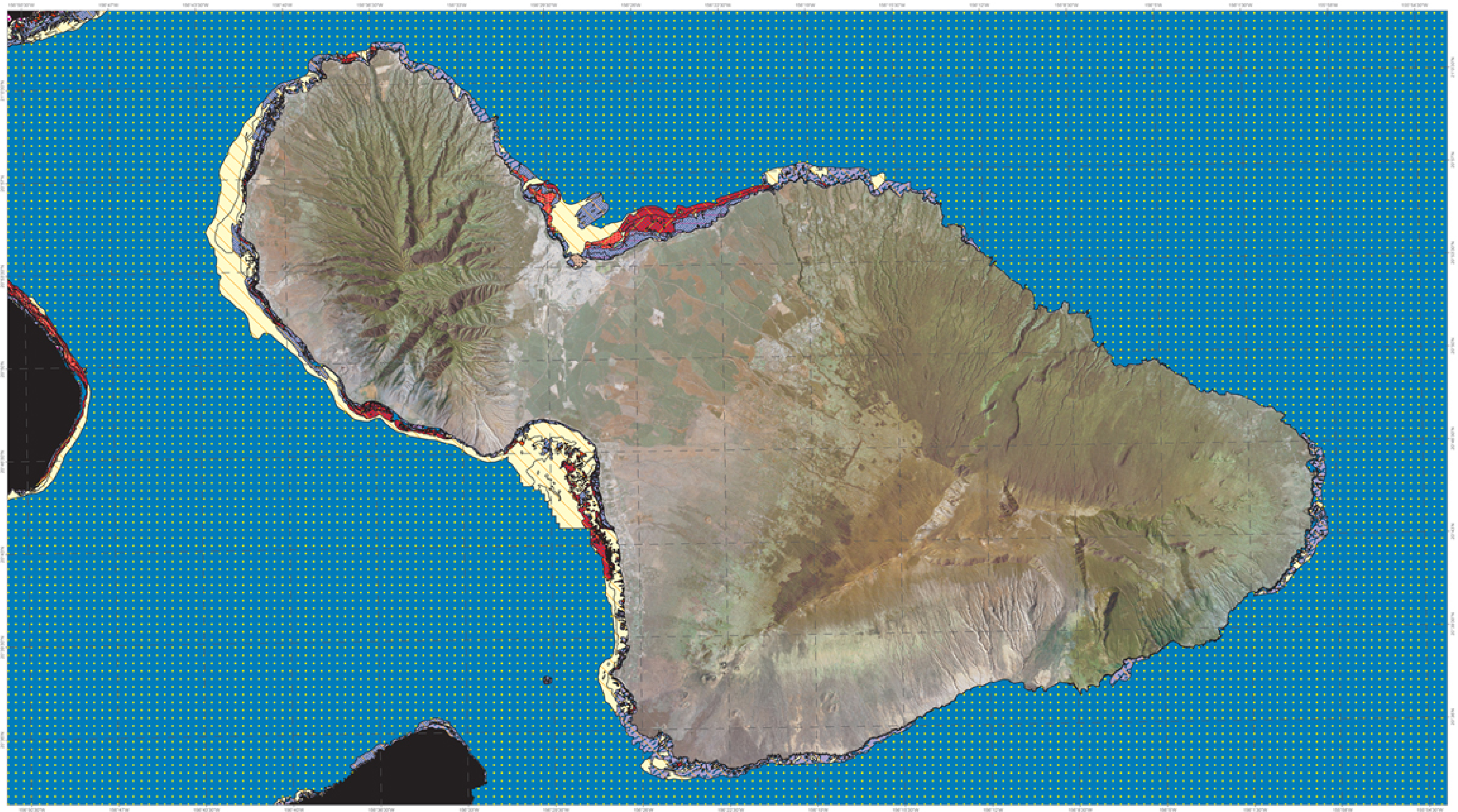
*MDLO*

*Olowalu Town, LLC, 2035 Main St., Suite 1, Wailuku, HI 96793*

*Orlando Davidson, Land Use Commission, P.O. Box 2359, Honolulu, HI 96813*

# Main 8 Hawaiian Islands (Maui) : Shallow-water Benthic Habitats

Frame 59



Map prepared by the National Ocean Service, Biogeography Branch,  
in cooperation with Analytical Laboratories of Hawaii. 2007

For more information: [http://ccma.nos.noaa.gov/ecosystems/coralreef/main8hi\\_mapping.html](http://ccma.nos.noaa.gov/ecosystems/coralreef/main8hi_mapping.html)





U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
Pacific Islands Regional Office  
1601 Kapiolani Blvd., Suite 1110  
Honolulu, Hawaii 96814-4700  
(808) 944-2200 • Fax (808) 973-2941

Olowalu Town, LLC and Olowalu Ekolu, LLC  
Atten: Mr. Bill Frampton  
2035 Main St., Suite 1  
Wailuku, HI 96793

MAR 27 2012

2012 MAR 29 A 9:07  
LAND USE COMMISSION  
STATE OF HAWAII

Dear Mr. Frampton,

This letter provides comments on the Draft Environmental Impact Statement (DEIS) for the proposed Olowalu Town Master Plan development project on the island of Maui. The National Marine Fisheries Service (NMFS) Pacific Islands Region's Protected Resources Division provides the following comments about how the development may affect protected marine species under its jurisdiction.

There are three marine species protected under the Endangered Species Act (ESA) that frequent the area in question and may potentially be affected by the project: the threatened green sea turtle (*Chelonia mydas*), the endangered hawksbill sea turtle (*Eretmochelys imbricata*), and the endangered Hawaiian monk seal (*Monachus schauinslandi*).

In addition to these ESA-listed species, 9 species of corals found in Hawaii were petitioned for listing under the ESA, and a 90-day finding was issued on February 10, 2010, that substantial information was provided to determine listing was warranted. These 9 corals are now considered to be candidate species under the ESA. NMFS is currently working on a status review for these species to determine whether they should be listed as threatened or endangered. One of these coral species, *Montipora patula*, was found to occur in the nearshore waters off of the project area and is listed in Appendix D: Assessment of Marine Water Chemistry and Biotic Community Structure in the Vicinity of the Olowalu Town Master Plan, Olowalu, Maui, Hawaii, in section III.B.2., Results – Quantification of Benthic Cover (Appendix D, pg. 17).

In section III. B. 6. of Appendix D, under the title Threatened and Endangered Species, (Appendix D, pg. 21), it is stated that the ESA-listed green sea turtle, hawksbill sea turtle, and Hawaiian monk seal are found within the project area, and it also says that "Several green turtles were encountered during the course of fieldwork". However, nowhere in the main body of the DEIS does it mention the fact that these protected marine species are found within the project area, and there are no mitigation measures specified to reduce potential impacts to these species.

Hawaiian monk seals are known to occur in the area around the proposed development, and have been frequently sighted hauled out on beaches in the area. These critically endangered animals are sensitive to human disturbance and could be negatively affected by increased human presence if not properly mitigated. Mitigation measures to minimize human disturbance and interactions with the seals should be discussed in detail in the EIS.



The island of Maui hosts a nesting population of hawksbill sea turtles on the southern shore of the island. Green turtles also occur off shore of the action area and may bask onshore. There has been at least one anecdotal account of sea turtle nesting at the Olowalu area; however, this report was not confirmed. Nevertheless, it is possible that the area provides suitable shoreline habitat that could support sea turtle nesting.

One mitigation measure could reduce impacts to sea turtle nesting areas is the installation of wildlife-friendly lighting. Lights shining on the beach or ocean are of concern, as is any artificial light source that can be seen from the beach. The EIS and project developers should determine the types of bulbs and shields to be used, the potential of many light sources working together to create skyglow, and a monitoring system to determine impacts from artificial lighting. Roadways and traffic plans should also address lighting issues from streetlamps and headlights so they cannot be seen from the beach to disorient nesting sea turtles or hatchlings during the nesting season. Detailed lighting mitigation to eliminate this impact should be included in the EIS. Additionally, temporary lighting impacts that may persist for several years during the different construction phases for this project should also be addressed and mitigated.

There are many resources available to help developers install wildlife-friendly lighting that is also more effective in terms of safety and security, and in many cases more energy efficient. General rules to keep in mind for wildlife-friendly lighting are:

1. Mount lights as low as is practicable to minimize light trespass (trespass = light shining where you do not want or need it). Directing light with shields usually increases the amount of light in the area you are targeting, increasing its utility for safety and security purposes;
2. Use only the lumens output necessary for the particular application (most of the time, this can be minimal);
3. Keep lights shielded to direct light exactly where you want or need it to eliminate point source light (full cut-off shields whenever possible; bulbs should not be directly visible); and
4. Use long wavelength lights; many manufacturers offer “turtle friendly bulbs”, “yellow bug bulbs”, or amber LEDs for outdoor light fixtures that appear yellow, amber, or red to the human eye. This light is not only better for wildlife, but it does less damage to humans’ natural night adaptive vision, allowing for better eyesight at night for residents and visitors. Low pressure sodium lights are also a good option, especially for areas like parking lots (again, with full cut-off shields). Many of these lights are also the most energy efficient options, reducing utility costs.

Please contact Kim Maison of my staff ([kimberly.maison@noaa.gov](mailto:kimberly.maison@noaa.gov), 808-944-2278) or Joy Browning of the US Fish and Wildlife Service ([Joy\\_Browning@fws.gov](mailto:Joy_Browning@fws.gov), 808-792-9429) for more information or recommendations on potential mitigation methods for lighting.

Measures should be taken to prevent run-off from grading, excavation, or other construction activities, particularly in the event of bad weather during construction. Run-off can alter or destroy off shore sea turtle foraging habitat, and alter sand composition of beaches, making them



unfavorable for sea turtle nesting. Run-off can also have negative impacts on corals by smothering them with silt or increasing algae blooms. More information on mitigation of potential impacts to protected marine species and their habitats during construction should be provided.

If you should have any questions regarding these comments, please contact Jayne LeFors on my staff at (858) 546-5653 or at the e-mail address [jayne.lefors@noaa.gov](mailto:jayne.lefors@noaa.gov).

Sincerely,



Lisa Van Atta  
Assistant Regional Administrator  
for Protected Resources

cc: State Land Use Commission  
Munekiyo & Hiraga, Inc.  
Loyal Merholf, USFWS/Pacific Islands Fish and Wildlife Office



NEIL ABERCROMBIE  
GOVERNOR



PATRICIA McMANAMAN  
DIRECTOR

BARBARA A. YAMASHITA  
DEPUTY DIRECTOR

STATE OF HAWAII  
DEPARTMENT OF HUMAN SERVICES  
Benefit, Employment & Support Services Division  
820 Mililani Street, Suite 606  
Honolulu, Hawaii 96813

March 27, 2012

Refer to 12-0149

Olowalu Town, LLC and Olowalu Ekolu, LLC  
2045 Main Street, Suite 1  
Wailuku, Hawaii 96793

To Whom It May Concern:

Thank you for your letter that requests the Department of Human Services (DHS) review the Draft Environmental Assessment (DEA) for the proposed Olowalu Town Master Plan located at TMK (2)4-8-003:084, 098 through 118 and 124, Olowalu, Lahaina, Maui, Hawaii.

We have reviewed your DEA and we do not have any comments or recommendations to approve the project. However, we do foresee a potential impact on the need for child care services in the community for children under kindergarten ages due to new residents moving into the project. We believe that it is important to plan for child care as this project may have the potential to result in supply gaps to families who shall live and work in the planned project community.

If you have any questions or need further information, please contact Mr. Robert Reed, Child Care Program Specialist, at (808) 586-0978.

Sincerely,

A handwritten signature in black ink, appearing to read "Pankaj Bhanot".

Pankaj Bhanot  
Administrator

c: Patricia McManaman, Director  
Orlando "Dan" Davidson, Land Use Commission  
Colleen Suyama, Munekiyo and Hiraga, Inc.

2012 MAR 29 A 9:08  
LAND USE COMMISSION  
STATE OF HAWAII



# West Maui Taxpayers Association

P.O. Box 10338 • Lahaina, HI 96761 • Office (808) 661-7990 • Fax (808) 661-7992 • Visit [www.WestMaui.org](http://www.WestMaui.org)

April 24, 2012

## Board of Directors

### Officers:

Donald Lehman, *President*  
Bob Pure, *Vice President*  
Richard Starkweather,  
*Secretary*  
Joseph Pluta, *Treasurer &*  
*President Emeritus*

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Paul Brown  
Pam English  
Jim Hentz  
Richard Jarman  
Ezekiela Kalua  
Byron (Pat) Kelly  
Gregg Nelson  
Uwe Schulz

TO: Mr. Bill Frampton  
Mr. David Ward  
Frampton and Ward  
2035 Main Street, Suite 1  
Wailuku, HI 96793

FROM: West Maui Taxpayers Association

RE: Olowalu Town DEIS

ALOHA;

The West Maui Taxpayers Association (WMTA) apologizes for missing the response date for comment on this DEIS, but we do want to participate in any future reviews. WMTA would appreciate your adding us to the list of commenters and reviewers as the project progresses. Thank you.

WMTA has no specific comments on the DEIS, but we do participate in West Maui development that will impact quality of life, public safety, the tax base, and infrastructure demands in our community.

WMTA looks forward to bringing more specific comments on Olowalu Town to the table at the appropriate time.

Donald E. Lehman  
President, WMTA

cc: Orlando "Dan" Davidson, Executive Director, Land Use Commission  
235 S. Beretania St.  
Leiopapa A Kamehameha, Room 406  
Honolulu, HI 96813

Colleen Suyama  
305 High Street, Suite 104  
Wailuku, HI 96793

WMTA is a non profit 501 c  
4. WMTA, as a dedicated  
Lobbyist organization, has  
a mission for our West  
Maui Community. The  
objectives of this  
Organization are to  
associate the interests,  
concerns, and efforts of  
residents and taxpayers of  
the West Maui area, and  
others interested in the  
orderly development and  
improvement of the area,  
in a cooperative effort,  
whether provided by, or  
to be provided by, the  
State or County  
governments, or by  
others.

LAND USE COMMISSION  
STATE OF HAWAII  
2012 APR 26 P 2:42



DEPARTMENT OF  
**HOUSING AND HUMAN CONCERNS**  
HOUSING DIVISION  
COUNTY OF MAUI

ALAN M. ARAKAWA  
Mayor  
JO-ANN T. RIDAO  
Director  
JAN SHISHIDO  
Deputy Director

35 LUNALILO STREET, SUITE 102 • WAILUKU, HAWAII 96793 • PHONE (808) 270-7351 • FAX (808) 270-6284

April 16, 2012

Mr. William Frampton  
Olowalu Town, LLC and Olowalu Ekolu, LLC  
2035 Main Street, Suite 1  
Wailuku, Hawaii 96793

LAND USE COMMISSION  
STATE OF HAWAII  
2012 APR 24 A 7:28

**Subject: Draft Environmental Impact Statement (EIS) For Olowalu Town  
Master Plan at TMK (2)4-8-003:084, 098 through 118, and 124,  
Olowalu, Lahaina, Maui, Hawaii**

Dear Mr. Frampton:

Thank you for the opportunity to review the above Environmental Impact Statement. The Department would like to offer the following comments:

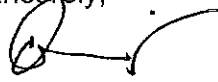
1. It is indicated at the top of page 24 that the anticipated average price of the market units will be \$600,000.00 or below. The applicant needs to determine if more than 50% of the dwelling units and/or new lots in the development will be offered for sale for less than \$600,000.00 or for \$600,000.00 or more, and if the Residential Workforce Housing units will be provided on-site or off-site.
2. The following is pursuant to Section 2.A. of Ordinance No. 3719:
  - a. If the Residential Workforce Housing units are provided on-site and if more than 50% of the dwelling units are offered for sale for less than \$600,000.00, then at least 25% of the total number of units and/or lots shall be Residential Workforce Housing units.
  - b. If the Residential Workforce Housing units are provided on-site and if more than 505 of the residential Workforce Housing units are offered for sale for \$600,000.00 or more, at least 50% of the total number of units and/or lots shall be Residential Workforce Housing units.
  - c. If the Residential Workforce Housing units are provided off-site and if more than 50% of the dwelling units and/or new lots in the development are offered for sale for less than \$600,000.00, then the number of off-site Residential Workforce Housing units due shall be equal to 50% of the total number of on-site market rate units.
  - d. If the Residential Workforce Housing units are provided off-site and if more than 50% of the dwelling units and/or new lots in the development are offered for sale for \$600,000.00 or more, then the number of off-site Residential workforce Housing units shall be equal to 50% of the total number of on-site market rate units.

Mr. William Frampton  
Page 2  
April 16, 2012

3. The Residential Workforce Housing Agreement for the subject project needs to be fully executed and recorded at the Bureau of Conveyances prior to the final subdivision or building permit approval, whichever is applicable and occurs first.

Please call Mr. Veranio Tongson of our Housing Division at 270-1741 if you have any questions.

Sincerely,

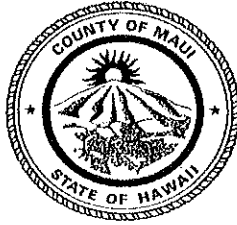
  
*Way.* WAYDE T. OSHIRO  
Housing Administrator

cc      Director of Housing and Human Concerns  
         Orlando "Dan" Davidson, State of Hawaii Land Use Commission  
         Colleen Suyama, Munekiyo & Hiraga, Inc.

ALAN M. ARAKAWA  
Mayor

KYLE K. GINOZA, P.E.  
Director

MICHAEL M. MIYAMOTO  
Deputy Director



TRACY TAKAMINE, P.E.  
Solid Waste Division

ERIC NAKAGAWA, P.E.  
Wastewater Reclamation Division

**COUNTY OF MAUI  
DEPARTMENT OF  
ENVIRONMENTAL MANAGEMENT**  
2200 MAIN STREET, SUITE 100  
WAILUKU, MAUI, HAWAII 96793

April 25, 2012

Olowalu Town, LLC  
Olowalu Ekolu, LLC  
2035 Main Street, Suite 1  
Wailuku, Hawaii 96793

LAND USE COMMISSION  
STATE OF HAWAII  
2012 APR 27 A 7:57

Dear Gentlemen,

**SUBJECT: OLOWALU TOWN MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS)  
TMK (2) 4-8-003:084, 098 – 118, & 124, OLOWALU, LAHAINA**

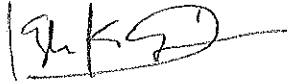
We reviewed the subject application and have the following comments:

1. Solid Waste Division comments:
  - a. Address any solid waste/recycling concerns.
2. Wastewater Reclamation Division (WWRD) comments:
  - a. The project is outside of the County Sewer Service Area.
  - b. The Wastewater Reclamation Division will not have any responsibility for the collection, treatment or disposal of sewage, sludge, final effluent or reclaimed water from this project. The developer shall work with the Department of Health for the approval of its collection system and treatment facility.

Olowalu Town, LLC  
April 25, 2012  
Page 2

If you have any questions regarding this memorandum, please contact Mike Miyamoto at 270-8230.

Sincerely,

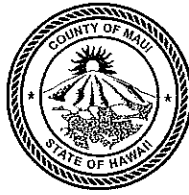
A handwritten signature in black ink, appearing to read 'K. Ginoza', with a horizontal line extending to the right.

KYLE K. GINOZA, P.E.  
Director of Environmental Management

xc: Mr. Orlando "Dan" Davidson  
Executive Director  
Land Use Commission  
P.O. Box 2359  
Honolulu, Hawaii 96813

Ms. Colleen Suyama  
Munekiyo & Hiraga, Inc.  
305 High Street, Suite 104  
Wailuku, Hawaii 96793

ALAN M. ARAKAWA  
MAYOR



JEFFREY A. MURRAY  
CHIEF

ROBERT M. SHIMADA  
DEPUTY CHIEF

**COUNTY OF MAUI**  
DEPARTMENT OF FIRE AND PUBLIC SAFETY  
FIRE PREVENTION BUREAU

313 MANEA PLACE • WAILUKU, HAWAII 96793  
(808) 244-9161 • FAX (808) 244-1363

April 25, 2012

**To :** Colleen Suyama  
Munekiyo & Hiraga, Inc.  
305 High St.  
Wailuku, HI 96793

**Re :** **Draft EIS: Olowalu Town Master Plan**  
**Olowalu, Lahaina, Maui, HI**  
**TMK: (2) 4-8-003:084, 098 through 118, and 124**

LAND USE COMMISSION  
STATE OF HAWAII  
2012 APR 27 A 7:57

Dear Colleen:

Thank you for the opportunity to comment on the subject draft EIS. At this time, our office provides the following comments:

- In review of this document, it has been noted that there are accommodations in the Master Plan to address the impacts placed upon the Fire Dept. by this project. Discussion and inquiries on this provision shall be addressed with Fire Administration.
- Our office confirms that the proposed water supply for fire protection is in line with the department's current standards. We reserve the right to comment directly on this provision when detailed plans are submitted in the subdivision process or finalization of the project's design.
- Our office also reserves the right to comment on fire apparatus access during the subdivision process or finalization of the project's design. Current requirements can be requested from the Fire Prevention Bureau.

- As noted in your document, the Olowalu area has been the site of several large incidents of wildland fires. Although this project should diminish the likelihood of such fires, the project's design should include measures to address impacts to this project from wildland fires that originate on surrounding areas. Such measures could consist of designed greenways that provide defensible space for the outer edges of the project. Firewise is a great resource for information on this matter.

Copies of this letter have been provided to the following entities as requested: Olowalu Town, LLC; Olowalu Ekolu, LLC; & Orlando "Dan" Davidson, Land Use Commission.

If there are any questions or comments, please feel free to contact me at 244-9161 ext. 23. Thank you for your attention to fire prevention and public safety.

Sincerely,



Paul Haake  
Captain, Fire Prevention Bureau  
Department of Fire & Public Safety  
313 Manea Place  
Wailuku, HI 96793

cc: Olowalu Town, LLC  
Olowalu Ekolu, LLC  
Orlando "Dan" Davidson, Land Use Commission



ALAN M. ARAKAWA  
Mayor

WILLIAM R. SPENCE  
Director

MICHELE CHOUTEAU McLEAN  
Deputy Director



COUNTY OF MAUI  
**DEPARTMENT OF PLANNING**

April 17, 2012

LAND USE COMMISSION  
STATE OF HAWAII  
2012 APR 24 A 7:27

Mr. William Frampton, Olowalu Town, LLC  
Ms. Heidi Bigelow, Olowalu Ekolu, LLC  
2035 Main Street, Suite 1  
Wailuku, Hawaii 96793

Dear Mr. Frampton and Ms. Bigelow:

**SUBJECT: COMMENTS REGARDING THE DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS) FOR THE PROPOSED OLOWALU TOWN MASTER PLAN, OLOWALU, MAUI, HAWAII; TMK(S): (2) 4-8-003:084, 098-118, AND 124 (EAC 2012/0002)**

The Department of Planning (Department) has the following comments in regards to your letter dated March 6, 2012 requesting comments on the Draft EIS.

The Department understands the proposed action includes the following:

- A State District Boundary Amendment (DBA) from Agriculture to Urban and Rural for approximately 460 acres; we note that the Environmental Impact Statement Preparation Notice (EISPN) proposed approximately 320 acres of land;
- The amendment would provide for the development of the Olowalu Town project on approximately 636 acres which is now proposed to be phased over a period of approximately ten (10) years; we note that the EISPN proposed a 30-year period; and
- The Olowalu Town project would include approximately 1,500 residential units, commercial and civic uses, parks and recreation sites, a cultural preserve, agricultural uses, a private domestic water system, a private wastewater system, and the relocation of Honoapi'ilani Highway.

Based on the foregoing, the Department provides the following comments on the Draft EIS:

1. If the Maui Island Plan is adopted prior to the submittal of the Final EIS, then include in the Final EIS an analysis of how the proposed project complies with the Maui Island Plan;
2. On pages 24, 160, 165, and 167 (and possibly other pages within the document) - It is stated that both the General Plan Advisory Committee (GPAC) and the Maui Planning Commission (Commission) recommended that the Master Plan be included in the Maui Island Plan's (MIP) growth boundaries. However, more complete information is warranted. Although the GPAC and Commission approved the inclusion of the Master Plan (as proposed) in a growth boundary, the Commission did not support any development makai of the existing Honoapi'ilani Highway.

Furthermore, whenever this information is mentioned in the Draft EIS, the fact that the Department did not support the inclusion of the Master Plan in a growth boundary should also be stated. We note that the Department's recommendation to Council to not include this Master Plan in a growth boundary is mentioned on page 176;

3. On page 23 - It is represented that the GPAC and Commission recommended inclusion in the MIP to "meet this estimated housing need". This is again not a completely accurate statement. The proposed directed growth areas proposed by the Department, without the inclusion of this project, meet 116 percent (4,024 units proposed, 3,456 needed) of the demand for the West Maui area. The inclusion of the Master Plan by both the GPAC and Commission would further exceed the projected housing demand. Please restate this information to reflect that the project will exceed the Department's estimated housing need and provide a rationale for exceeding the demand;
4. On page 27 - Please justify how this project, located four miles away from the edge of Lahaina, meets "Smart Location" for LEED Neighborhood Development standards. Specifically, "Smart Location" intent, "encourage(s) development within and near existing community and public transit infrastructure." Furthermore, requirements for all projects are to, "Either (a) locate the project on a site served by existing water and wastewater infrastructure or (b) locate the project within a legally adopted, publicly owned, planned water and wastewater service area, and provide new water and wastewater infrastructure for the project." The requirements further state that the project shall either be, "on an infill site", or "on site adjacent" (a site that is adjacent to previously developed lands);
5. Pages 33-38 - As stated by the Department in the EISPN comment letter dated August 6, 2010, obtain a Zoning and Flood Confirmation Form for all parcels within the entire Olowalu Town Master Plan project area. Please include a zoning map as an exhibit. Please also include in Table 5 the area for each Tax Map Key (TMK); the area that will need state land use reclassification within each TMK and what reclassification is needed (Urban or Rural);
6. On page 41 (and within other portions of the Draft EIS) - Olowalu is referred to as having been a "thriving plantation town" (e.g., "As recently as the 1930's, Olowalu was a thriving plantation town"). Throughout its history, Olowalu was a "camp" and at most a "village". Its plantation-era population was recorded as being "less than 500" persons. In 1899, on the eve of annexation, T.G. Thrum described the population at Olowalu in detail and noted that there were 167 persons residing there. They included 145 men, 22 women, and no children (Table of Sugar Plantation Laborers, October 31, 1899; Hawaiian Almanac and Annual, Thrum, 1899:176). In 1930, census-taker Kenichi Takayama recorded the population at Olowalu as being 447 persons. They consisted of 237 men, 79 women, and 131 children (Fifteenth Census of the United States, "Olowalu Village," Sheets 116-120A, April 1-11, 1930).

Mr. William Frampton, Olowalu Town, LLC  
Ms. Heidi Bigelow, Olowalu Ekolu, LLC  
April 17, 2012  
Page 3

We have extensive information about West Maui's camps, villages, and towns, including Lahaina, Olowalu, Puukolii, and Ukumehame if you would like further clarification.

Given the available information, including census data, as well as Olowalu Company (OCo) and Pioneer Mill Company (PMCo) period documents, please change the references to the historical enclave of Olowalu from "Olowalu Town" to "Olowalu Camp" or "Olowalu Village" throughout the Draft EIS.

7. On page 49 – Figure 10 – This figure indicates that the majority – 80 percent - of the Master Plan Site Area has 'A' and 'B' classified soils, while about 19 percent of the site is of the lowest, least productive classification 'E'. It is noted that this area where the least productive AG soil exists is the area surrounding the Olowalu Stream – the precise area where the Master Plan proposes to retain as AG land within the Olowalu Cultural Reserve. Please explain why the area with the least productive AG soil is being retained as AG while the most productive AG soil areas would be rezoned;
8. Pages 32-55 – Given the State's desire to improve and increase the long-term sustainability of Hawaii's economy, the Draft EIS inadequately justifies the removal of 621 acres of agricultural land, including 121 acres of Prime Agricultural Land. The Final EIS should more carefully examine the loss of this particularly valuable prime and other important agricultural land with excellent soil characteristics. Suggesting that these 621 acres are a small percent of Maui's Agricultural lands neglects the fact that these are prime lands that demand special protection.

In addition, the Applicant should also make reference to Hawaii Revised Statutes (HRS) Ch. 226-13 regarding objectives and policies for the physical environment – land, air and water quality; and HRS Ch. 226-104 (b).1 through 5 – regarding priority guidelines for growth and land resources when discussing the redesignation of prime AG lands. Please explain how developing AG land, including Prime AG land, fits with these State policies.

9. On pages 55 and 66 - "BMPs will be implemented both prior to and during grading and construction to minimize opportunities for soil erosion; Olowalu Stream will not be altered during implementation of the Master Plan". Generally stating that BMPs will be implemented is vague. Please provide a detailed plan for how grading and construction activities will not adversely impact Olowalu Stream or the associated tributaries;
10. On page 60 - Please explain and justify why the proposed project, with some high-density areas, should be created in a known tsunami and flood hazard area;
11. On pages 60, 100, 102, 159, 218, and 220 (and possibly other pages within the Draft EIS) - There is a reference that the Applicant will adhere to a 50' or 150' setback along the shoreline. It should be noted that this is already a pre-existing condition for the area (shoreline) based on previous SMA approvals. It is noted that this

information regarding these existing conditions is finally presented on page 222 of the document. Please restate or reword this information on previous pages to accurately reflect existing conditions;

12. On page 62 - It is stated that there was evidence that Nene were present during the flora and fauna study. Additionally, it is noted that water features or temporarily irrigated areas may attract more Nene. There is no mention of incidental take or cooperation with the United State Fish and Wildlife Services (USFWS) under the Endangered Species Act. Please address this concern and what steps will be taken to address the protection of this endangered species;
13. On page 67 – Over the course of the GPAC and Commission review of the MIP, the Department received hours of oral testimony relating to the Master Plan. One (1) of the most frequent concerns discussed was for the coral reef health and nearshore water quality. A baseline study published in 2003, prior to upland development in the area, categorized the reef as “the best leeward reef in Maui and probably the whole state.” The recommendation of the report was that continued monitoring was necessary to determine the specified stressors that cause reef decline. “Monitoring reefs to develop indices of reef ‘health’, examining human impacts and placement of artificial reefs to reduce stress on natural reefs will provide tools for more effective management of tropical ecosystems. This work takes on particular relevance within boundary waters of the Hawaiian Islands Humpback Whale National Marine Sanctuary and as nearshore development encroaches upon the marine habitat” (Brown, et al). Please clarify if there will be additional plans for monitoring programs and analysis to mitigate impacts to nearshore water quality and coral reef health;
14. On pages 41, 72 -73 (and possibly other pages within the Draft EIS) - “In 1831, missionaries estimated 831 Hawaiians lived at Olowalu. Based [up] on the 1831 population, it is estimated that 2,000 or more Hawaiians resided at Olowalu before Western contact.” Please explain or provide a reference for this estimate;
15. On page 74 – “By 1878....the continuing decline in the number of Hawaiians...compelled Olowalu Plantation to hire Chinese workers.” The correct company name would be West Maui Plantation (1871-1881) (Olowalu Company was not established until 1881. (See Dorrance and Morgan, Sugar Islands, 2000:60-61, 64; and “Historic Context” in Wo Hing Society, Lāhainā, Maui. Yip and Solamillo, 2009:8). Please revise;
16. On page 75 – “In early 1931, Olowalu Company was sold to American Factors, Ltd...” PMCo acquired OCo for \$400,000.00 in May 1931 and the latter was dis-incorporated on December 31 of that year (*Annual report of the Pioneer Mill Company, Limited for the Year Ending December 31, 1931*:4, 15). Please revise and incorporate;

17. On page 75- "(Ainsworth)" as a citation. In order to meet standard reference requirements, one (1) must include author, followed by year, and page number. In addition, there are ten (10) pages of text that include quotes without citations. Please revise and add citations per examples included in these comments;
18. On page 112 – "The irrigation system in Olowalu is quite dated, with portions of it built in the late 19th and early 20th centuries..." The history of water development by OCo/PMCo is not included in a historical context and the infrastructure is not delineated on any map or graphic. Given its age and associations, the infrastructure may be eligible for listing in the National Register of Historic Places and may have an adverse impact on this resource, which will have to be mitigated before improvements and a new water development program are implemented. Please add a section on the history of OCo/PMCo water development and associated cultural resources, as well as potential impacts and mitigation measures proposed for consideration. These will have to be submitted to State Historic Preservation Division (SHPD) for review, concurrence, and approval;
19. On page 114 – "In 1876 two Maui residents started the Olowalu Plantation..." Please clarify and cite the dates and persons named in the Draft EIS for consistency throughout the document;
20. On pages 115 and 116 – There is little or no historical information provided for the years spanning 1932-1962, which is required to fully document the fifty-year terminus for the Period of Significance, and little information on what transpired through 1990. Please include and revise text accordingly;
21. On page 128 - Although the information provided on the Socio-Economic housing demand forecast is correct, please also include that the need for housing in West Maui to be only 3,456 additional units by the year 2030, beyond those lands already entitled. Please also include new information that this number is now further reduced to 2,574 units (or 2,307 units if 267 ohana units are also built) with the inclusion of entitled lands at Pulelehua;
22. On pages 129-154 – The Draft EIS superficially discusses the likely impacts to public services and infrastructure that will result from the project. In most cases the Draft EIS merely states that the services (e.g., police, emergency response, solid waste) will be provided in West Maui or even more remotely, in the Wailuku/Kahului area.

The Final EIS must include a more meaningful discussion of the impact of providing public services to the proposed new community, particularly since many of those services are located several miles away and/or would have to be expanded to meet these new demands. It is insufficient to merely state that the hospital or police facilities are located a certain distance from Olowalu, or that a fire station site will be discussed for possible inclusion in the public/quasi-public area. The Final EIS should provide qualification of the anticipated impacts to these public services, similar to how traffic impacts and educational impacts are qualified by the number of trips or number of students that the project will generate. For example, the Final EIS

could indicate how many additional police, fire, emergency response and solid waste personnel and vehicles would be needed to maintain their current level of service in the region. If the Final EIS were to also include estimated costs for the provision of these expanded services, it could also estimate the Real Property Tax revenue that the project would generate and that could serve to offset some of these costs.

23. On pages 134-136 – The Draft EIS estimates 462 new students, from elementary to high school. As part of this discussion, the Olowalu Town Master Plan states that (p.135) a 10-15 acre site for an educational facility will be provided. Please indicate whether this site will conform to Department of Education (DOE) standards for Elementary, Middle, and High School locations. Please also provide information on what DOE standards and ‘warrants’ are for new school construction, for example, whether the new school-age child population anticipated at Olowalu will include enough children to warrant the construction of a new elementary, middle and/or high school within the Olowalu Town Master Plan.

Furthermore, traffic Impacts of children commuting off-site to attend school indicates that there will be 462 new students within Olowalu; unless a school facility is built within the Olowalu Town, these students will all have to travel off-site to attend school. Please provide a discussion of the traffic impacts to Honoapi’ilani Highway – north and south of Olowalu Town – as a result of 462 students traveling to school(s) located in Lahaina or elsewhere.

24. On page 137 – Please clarify if the recreational activities and parks proposed for the master plan will be private or public;
25. On page 140 - Please expand your analysis to include the impact to visitors and residents who commute and use Honoapi’ilani Highway, both north (to Puamana) and south (to Maalaea) of the project, when the highway in these areas will remain at one (1) lane in each direction. We note that the highway will continue to operate at a level of service of E and F, as indicated in other traffic reports received by the Department. Further, the statement, “It is estimated that the level of service of the highway will be “C” or better” should be clarified that this prediction is only for the section of the highway being relocated, and not for the length of the entire highway (specifically from Maalaea to Lahaina). Impacts and mitigation for traffic impacts to Honoapi’ilani Highway, between Maalaea and Lahaina, should be evaluated;
26. On page 161 (and other pages within the Draft EIS) - It is repeatedly stated that the Master Plan is consistent with the County's Pali to Puamana Parkway Master Plan. However, this is misleading as the County's plan does not propose any additional development (e.g., urban uses) makai of the existing highway; does not comport exactly as depicted in the Master Plan; and did not include the many acres of development located mauka of the existing highway. Furthermore, as mentioned on pages 166 and 167, to compare the 28 acres of proposed park in the Pali to Puamana Parkway Master Plan to the 223 acres of green space in the entire proposed Olowalu Master Plan is apples-to-oranges and should be modified to reflect that the plans do not encompass the same project area;

27. On page 166 – Although the Hawaii Department of Transportation (HDOT) has begun the initial stages of drafting an EIS for the relocation of Honoapiʻilani Highway (from Maalaea to Launiupoko), the effort has been on-going and tedious. The Applicant's language in this section gives the impression that the project is underway; however, the Draft EIS has yet to be finished and there has been no planning or funding secured for the project. Please verify with HDOT, and include information in this section on the status of the project and its estimated timeline;
28. On pages 165-169 – The Department notes that the project is located several miles from major regional activity centers on the island, including Maui's larger employment centers. Further, the Draft EIS does not clearly address the level of public infrastructure, services and facilities needed to support the project. Without this information being provided, the projects potential impacts upon public services, facilities and resources cannot be clearly determined;
29. There are a number of references made throughout the Draft EIS that refer to incorrect Table numbers. The Department suggests that a thorough review of any reference to a Table be made for the entire document (e.g., on pages 210 and 211, Table 6 is referenced for land use designations. Table 6, however, is the "Master Plan Preliminary Implementation Time Schedule");
30. Please include a map of the Draft Flood Insurance Rate Map (FIRM) and provide an analysis between the current map and the proposed Draft FIRM and its impact on the Master Plan;
31. Please provide a map of the tsunami inundation zone;
32. Appendix J: View Analysis. As stated by the Department in the EISPN comment letter dated August 6, 2010, please provide computer generated photos of the area with the proposed development. The Draft EIS should provide a more detailed written analysis of the affect of 1,500 residences, 375,000 square feet of commercial space, and public facilities on existing scenic resources. This analysis should include 'Photoshop' and/or SketchUp model renderings of the primary view corridors through the site with building envelopes of Olowalu Town mocked up as it would be completely built out. Photographs 1 – 6 especially should provide both 'before' and 'after' images of the scenic resources, i.e., as they exist at present (before) and as they will be impacted with the addition of Olowalu Town development (after);
33. Appendix K - The consultant for the Market Study bases their assertion that all 1,500 units at Olowalu would be absorbed by the real estate market in eight (8) to ten (10) years on the assumption that future development projects that are within the Maui Island Plan's Directed Growth boundaries could meet with community resistance or financial difficulties, and not be built, thus leaving room for Olowalu's units to be absorbed in the market (page iii). The Draft Maui Island Plan already includes a surplus of dwelling units in the West Maui Community Plan area. Please provide an analysis of market absorption that does not rely on other projects not being constructed – that is, what would be the market absorption rate if all approved future

projects within the current growth area boundaries are built and entered into the West Maui real estate market;

34. Appendix L – This assessment neglects to account for numerous CIP and operational expenditures that will be necessitated by the Olowalu Town project, and it overestimates government revenues.

Missing from the calculations are the County's costs to provide the following services: police, fire, civil defense, housing and human concerns, solid waste, public works, development services, and planning. Notably lacking was the cost of providing facilities and vehicles (fire, police, solid waste) that would be needed to serve these 4,000+ residents and 1,500 homes.

Similarly, there is an underestimate of the costs to provide many additional State services for the 4,000+ new residents. These range from schools, medical facilities, prisons and highways, and the maintenance of these and many other CIP projects. Just as the costs to government were underestimated, projected County and State revenues have been overestimated. The Final EIS should correct these calculations and present an accurate projection of the economic costs and realistic potential revenues to Maui County and to the State of Hawaii.

35. The Countywide Policy Plan and West Maui Community Plan objectives and policies - The Department notes that the Applicant did not adequately address or respond to many relevant objectives and policies contained within these documents that appear to be in conflict with the Master Plan. The Department asks that the Applicant further expand its analysis on those policies and objectives discussed and include others that were completely omitted from the Draft EIS; and

36. The following are general comments and recommendations are provided regarding Cultural Resources:

Olowalu Draft EIS Vol II Appendices, "Pu'u honua: The Legacy of Olowalu" and "Archaeological Literature Review" are both well-researched and well-written documents. The latter report in particular presents data in formats which benefit both the professional and the layperson and establishes new thresholds for the use of applied GIS and data collection. In addition, the recommendations that are included are consistent with Cultural Resource Management best practices and for that reason, provide an excellent example on how to integrate new development with cultural resource preservation.

However, one important recommendation for the Olowalu Cultural Reserve (OCR) remains absent and should be included: a multi-property nomination to the Hawai'i and National Registers of Historic Places for all sites contained in the OCR as well as sites identified along the shoreline. Please include.

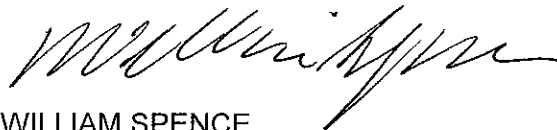


Mr. William Frampton, Olowalu Town, LLC  
Ms. Heidi Bigelow, Olowalu Ekolu, LLC  
April 17, 2012  
Page 9

In addition, given the quality of the Draft EIS appendices, it is problematic that the historical information presented in Olowalu Draft EIS, Vol. I includes a number of errors and inconsistencies. The historical narrative found on the Applicant's website "Olowalu Town," written by Gail Ainsworth, is well-written and contains much important information. Aside from an absence of sources and references, Ms. Ainsworth's complete text should have been incorporated into Vol. I or, at minimum, should have been provided as an appendix in Vol. II, with references added as either footnotes or endnotes. Time constraints do not allow a more in-depth review of the material; however, some of the most obvious errors in the narrative have been provided in this comment letter for revision and or correction. Please add Ms. Ainsworth's text as an appendix to Vol. II.

Thank you for the opportunity to comment. If you require further clarification, please contact Staff Planner Kathleen Ross Aoki at [kathleen.aoki@mauicounty.gov](mailto:kathleen.aoki@mauicounty.gov) or at (808) 270-5529.

Sincerely,



WILLIAM SPENCE  
Planning Director

xc: Clayton I. Yoshida, AICP, Planning Program Administrator (PDF)  
John F. Summers, Planning Program Administrator (PDF)  
Kathleen Ross Aoki, Staff Planner (PDF)  
David Yamashita, Long Range Division Planner Supervisor (PDF)  
Orlando "Dan" Davidson, Executive Director, State Land Use Commission  
Colleen Suyama, Munekiyo & Hiraga, Inc.  
EAC File  
General File

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April 25, 2012

Olowalu Town, LCC and Olowalu Ekolu, LCC  
Attn: Mr. William Frampton and/or Ms. Heidi Bigelow  
2035 Main Street, Suite 1  
Wailuku, HI 96793

LAND USE COMMISSION  
STATE OF HAWAII  
2012 APR 27 A 7:57

Subject: Proposed Olowalu Town Master Plan – Draft Environmental Impact Statement  
Tax Map Key: (2) 4-8-003:084, 98 through 118, and 124  
Honoapi'ilani Highway  
Olowalu, Maui, Hawaii

Dear Mr. Frampton and/or Ms. Bigelow:

Thank you for allowing us to comment on the Draft Environmental Impact Statement for the subject project.

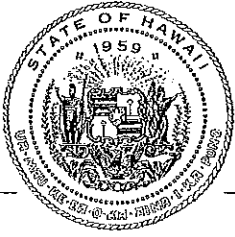
In reviewing our records and the information received, Maui Electric Company (MECO) has no additional comments at this time. Please refer to our MECO letter addressed to Mr. Dan Davidson of the Hawaii State Land Use Commission and dated May 18, 2010, in response to a prior request for this project.

Should you have any questions or concerns, please call me Kelcie Kawamura at 871-3246.

Sincerely,

Ray Okazaki  
Supervisor, Engineering

c: Orlando "Dan" Davidson, Executive Direction, Land Use Commission  
Colleen Suyama, Senior Associate, Munekiyo & Hiraga, Inc



## DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

NEIL ABERCROMBIE  
GOVERNOR  
RICHARD C. LIM  
DIRECTOR  
MARY ALICE EVANS  
DEPUTY DIRECTOR  
JESSE K. SOUKI  
DIRECTOR  
OFFICE OF PLANNING

### OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813  
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846  
Fax: (808) 587-2824

Ref. No. P-13579

April 20, 2012

Mr. Bill Frampton  
Olowalu Town, LLC and Olowalu Ekolu, LLC  
2035 Main Street, Suite 1  
Wailuku, Hawaii 96793

Dear Mr. Frampton:

Subject: Land Use Commission Docket No. A10-786  
Draft Environmental Impact Statement  
Olowalu Town Master Plan  
TMK(s) (2) 4-8-003: 084, 098 through 1218, and 124  
Olowalu, Lahaina, Maui, Hawaii

Olowalu Town, LLC and Olowalu Ekolu LLC (Applicant) proposes to develop the Olowalu Town Master Plan (Master Plan); a small scale, mixed use community of approximately 1,500 housing units, 375,000 square feet of retail/commercial use, public/quasi-public use, parks, open space, and associated infrastructure improvements on approximately 636 acres of land.

Munekiyo & Hiraga, Inc. has prepared a Draft Environmental Impact Statement (DEIS) to support an Amendment to the West Maui Community Plan (CPA), use of State Lands, use of Conservation District Lands, construction of a wastewater treatment facility, a Land Use District Boundary Amendment (LUDBA), and a Change in Zoning. The State Land Use Commission (LUC) is the accepting authority for the DEIS. A petition to reclassify approximately 460 acres of land from the State Agricultural District to the State Urban and Rural District has been submitted to the LUC.

The Office of Planning (OP) has reviewed the DEIS and has the following comments:

1. We commend the Olowalu Town Master Plan design based on smart growth and sustainable land use principles, and which seeks to meet the certification requirements of LEED for Neighborhood Development. This is highly supportive of recent amendments to the Hawaii State Plan, pursuant to Act 181, Session Laws of Hawaii 2011. Please revise the Hawaii State Plan section of the DEIS to include reference to Hawaii Revised Statutes Section 226-108, regarding Sustainability.

2012 APR 24 A 7:28  
LAND USE COMMISSION  
STATE OF HAWAII

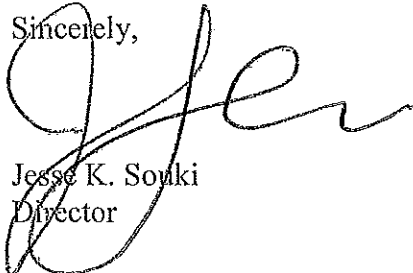
2. Please revise DEIS Figure 4, *Conceptual Master Plan*, to clearly delineate the 150-foot shoreline setback line.
3. Population, page 102: Please provide the current population count for Olowalu Town.
4. Agriculture, page 123: Please provide and compare the Island of Maui acreage of Land Study Bureau (LSB) A and B rated soils and Agricultural Lands of Importance to the State of Hawaii (ALISH) Prime lands, with the acreage of LSB A and B rated soils and ALISH Prime lands within the Petition Area.
5. Housing, pages 127- 128: Please provide the current dwelling unit count for Olowalu Town. Additionally, the EIS should identify major planned and proposed developments in the West Maui region to assess impacts of and absorption rates relative to the planned number of residential units identified in the Master Plan.
6. Roadways, page 138-142: Given the magnitude of the project and potential impacts to the only arterial roadway serving West Maui, a complete Traffic Impact Analysis Report (TIAR) rather than a "Preliminary" TIAR should be prepared as part of the EIS for public review. The complete TIAR should include at a minimum the items listed on page 142 regarding peak hour traffic conditions, traffic movements, and analysis of options. There should also be a detailed discussion and analysis on the State Department of Transportation's plans for the regional highway system, as well as a discussion and analysis on the option of building the inland highway while retaining the existing coastal alignment for Honoapiilani Highway as a secondary or bypass road.
7. Archaeological and Cultural Resources, page 159: Please explain why only a "Preliminary" cultural impact study was undertaken.
8. Maui Island Plan, page 203: A number of sections within the DEIS should be revised to clearly state that the Draft Maui Island Plan currently being reviewed by the Maui County Council does not include the Master Plan within its proposed Urban Growth Boundaries.
9. Unresolved Issues, page 236: Please clarify the anticipated timing for proceeding with the LUDBA in relation to the adoption of the Maui Island Plan by the Maui County Council.

Mr. Bill Frampton  
Page 3  
April 20, 2012

Thank you for the opportunity to provide comments.

Should you have any questions, please contact Ms. Robyn Loudermilk, AICP, at (808) 587-2821, or by email at [Robyn.L.Loudermilk@dbedt.hawaii.gov](mailto:Robyn.L.Loudermilk@dbedt.hawaii.gov).

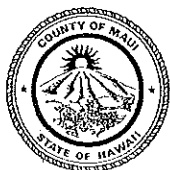
Sincerely,

A handwritten signature in black ink, appearing to read "Jesse K. Souki". The signature is stylized with a large, looped initial "J" and a long, sweeping horizontal stroke at the end.

Jesse K. Souki  
Director

Enclosures

c: Ms. Colleen Suyama, Munekiyo & Hiraga, Inc.  
✓ Mr. Orlando Davidson, LUC  
Department of Planning, County of Maui



ALAN M. ARAKAWA  
MAYOR

OUR REFERENCE

YOUR REFERENCE

# POLICE DEPARTMENT

COUNTY OF MAUI

55 MAHALANI STREET  
WAILUKU, HAWAII 96793  
(808) 244-6400  
FAX (808) 244-6411

April 5, 2012



GARY A. YABUTA  
CHIEF OF POLICE

CLAYTON N.Y.W. TOM  
DEPUTY CHIEF OF POLICE

Olowalu Town, LLC and  
Olowalu Ekolu, LLC  
2035 Main Street, Suite 1  
Wailuku, HI 96793

Dear Sirs:

Re: Draft Environmental Impact Statement (EIS) for Olowalu Town,  
Master Plan at TMK (2)4-8-003:084, 098 Through 118, and 124,  
Olowalu, Lahaina, Maui, Hawaii

LAND USE COMMISSION  
STATE OF HAWAII  
2012 APR 10 A 8:04

In response to your letter of March 6, 2012, we took the opportunity to review the above-mentioned subject. After a careful review of the project description and the accompanying maps and diagrams, we are submitting our comments as follows:

Increase in Population: With the construction of 1,500 residential dwellings and the estimated addition of 4,239 residents to the West Maui population, the Olowalu Town project would necessitate the addition of another beat for the Lahaina Patrol District of the Maui Police Department to ensure adequate police services to the community.

Currently, there are five (5) patrol beats responsible for servicing the entire population of West Maui, to include the visitors as well as the local residents.

Traffic: Although the proposed relocation and widening of Honoapiilani Highway will provide additional capacity to accommodate additional traffic volume, the four-lane highway may create hazardous driving conditions by encouraging people to drive very fast on very short portion of the highway.

The speed of free-flow traffic on a four-lane highway will increase within the project area. As the highway on both ends of the project area tapers down from four lanes to two lanes, the traffic may see the potential to "bottleneck" in those areas.

O-Turns: The concept of "O-Turns" is relatively new, particularly in the county, and the initial response from the public could cause confusion.

Olowalu Town, LLC, and  
Olowalu Ekolu, LLC  
April 5, 2012  
Page 2

Emergency Situations: Alternate routing of traffic, in the event of fatal or near-fatal traffic accident investigations or natural disasters.

During fatal and near-fatal traffic accidents, the Maui Police Department's policies and procedures dictate the closure of the roadway for several hours while specially trained investigators and reconstructionists conduct a complete investigation. In addition, during natural disasters (i.e. wild fires, flooding, tsunamis, etc.) the Maui Police Department may have to close certain roadways or redirect traffic to ensure the public's safety.

It may be necessary to divert traffic onto one of the separated two-lane roadways so that traffic may continue moving in both directions, or to divert traffic to the secondary roadway (the existing Honoapiilani Highway).

Policing Powers: Parking and other traffic enforcement within the project roadways need to be strictly enforced.

Dedicating the roadways in the project area to the County of Maui or an agreement with the county to allow traffic enforcement by the police department could be a solution. The decision to enter into an agreement would be at the discretion of the County of Maui.

Thank you for allowing our department to provide input concerning your project. Should you have any questions, please feel free to contact our Lahaina District Commander, Captain John Jakubczak, at (808) 661-4441.

Sincerely,



GARY YABUTA  
Chief of Police

cc: ✓ Orlando "Dan" Davidson, Land Use Commission  
Colleen Suyama, Munekiyo & Hiraga, Inc.

NEIL ABERCROMBIE  
GOVERNOR



DEAN H. SEKI  
ACTING COMPTROLLER

JAN S. GOUVEIA  
DEPUTY DIRECTOR

**STATE OF HAWAII**  
**DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES**

P.O. BOX 119, HONOLULU, HAWAII 96810-0119

MAR 21 2012

(P)1056.2

Mr. William Frampton  
Ms. Heidi Bigelow  
Olowalu Town, LLC and Olowalu Ekolu, LLC  
2035 Main Street, Suite 1  
Wailuku, Hawaii 96793

Dear Mr. Frampton and Ms. Bigelow:

Subject: Draft Environmental Impact Statement for Olowalu Town  
Master Plan at TMK (2) 4-8-003: 084, 098 through 118, and 124  
Olowalu, Lahaina, Maui, Hawaii

Thank you for the opportunity to provide comments for the subject project at Olowalu Town on Maui. The proposed project does not impact any of the Department of Accounting and General Services' projects or existing facilities in the general area, and we have no comments to offer at this time.

If you have any questions, please call me at 586-0400, or have your staff call Mr. Alva Nakamura of the Public Works Division at 586-0488.

Sincerely,

A handwritten signature in black ink, appearing to read "DHS", followed by a horizontal line.

DEAN H. SEKI  
Acting Comptroller

c: Mr. David Victor, DAGS-Maui District  
Mr. Orlando "Dan" Davidson, Director, Land Use Commission ✓  
Ms. Colleen Suyama, Munekiyo & Hiraga, Inc.





STATE OF HAWAII  
DEPARTMENT OF EDUCATION  
P.O. BOX 2360  
HONOLULU, HAWAII 96804

OFFICE OF THE SUPERINTENDENT

April 27, 2012

Olowalu Town, LLC and Olowalu Ekolu, LLC  
2035 Main Street, Suite 1  
Wailuku, Maui, Hawaii 96793

To Whom It May Concern:

SUBJECT: Draft Environmental Impact Statement for the proposed  
Olowalu Town Master Plan

The Department of Education (DOE) has reviewed the Draft Environmental Impact Statement (EIS) for the proposed Olowalu Town Master Plan.

The DOE anticipates an impact on its facilities as a result of the Olowalu Town Master Plan. The Olowalu Town project is within the present boundaries of the West Maui School Impact Fee District (District) which was established by the Board of Education (BOE) in November 2010. The project is expected to provide contributions based on the per-unit rate established for the district.

The DOE would like to clarify what appears to be two misunderstandings about school needs and the impact of the Olowalu project on area public schools. In the Educational Facilities section of the EIS, on page 134, Table 19 lists the actual and projected enrollment of schools in the Lahainaluna complex and their "Rated Capacity". The DOE doesn't generate a figure called "Rated Capacity" and is unsure of the source of those figures.

The DOE last generated a Classroom Utilization Report (CUR) for the 2009-2010 school year. It measured a school's student capacity based on teaching, program and support staff requirements. It is not a true measure of how crowded a school is. The DOE acknowledges that the EIS does not make that conclusion, but the figures lend themselves to that conclusion. That being said, the DOE is concerned with the growing enrollment in West Maui Schools and that prompted the creation of the District.

Table 20 in the Educational Facilities section of the EIS applies a set of student generation rates (SGR) to the proposed number of Olowalu residential units. However the set of SGRs are for the District, based on the average SGR for the entire area. They may give a very rough idea of the number of students expected to reside in the project at maturity, but they were really generated to

LAND USE COMMISSION  
STATE OF HAWAII  
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Olowalu Town, LLC and Olowalu Ekoru, LLC

Page 2

April 27, 2012

determine school impact land and construction fee amounts. The Olowalu project, based on the details of its housing products, could have an Olowalu SGR which is different from the District-wide averages.

Although the EIS states that project calls for a provision of approximately 10 to 15 acres for an educational or learning facility, no specifics or a formal proposal been discussed with the DOE. The developer should contact the DOE to discuss details of proposed schools site and impact fees and enter into a written agreement with the DOE.

Thank you for the opportunity to provide comments. If you have any questions, please call Roy Ikeda of the Facilities Development Branch at 377-8301.

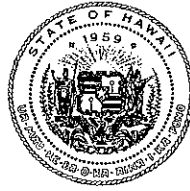
Very truly yours,



Kathryn S. Matayoshi  
Superintendent

KSM:jmb

c: ✓ Orlando "Dan" Davidson, SLUC  
Colleen Suyama, Senior Associate, Munekiyo & Hiraga, Inc.  
Randolph G. Moore, Assistant Superintendent, OSFSS



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

GLENN M. OKIMOTO  
DIRECTOR

Deputy Directors  
JADE T. BUTAY  
FORD N. FUCHIGAMI  
RANDY GRUNE  
JADINE URASAKI

IN REPLY REFER TO:

STP 8.0821

April 26, 2012

Olowalu Town, LLC  
Olowalu Ekolu, LLC  
2035 Main Street, Suite 1  
Wailuku, Hawaii 96793

To Whom It May Concern:

Subject: Olowalu Town Master Plan  
Draft Environmental Impact Statement (DEIS)

The State Department of Transportation (DOT) previously commented on the Environmental Impact Statement Preparation Notice (EISPN) in its letter HWY-PS 2.6554, dated September 10, 2010 (see Section X of the DEIS).

While the subject Master Plan is not currently within the West Maui Growth Boundary and has not been included in the Maui Island Plan (MIP) Urban and Rural Growth for West Maui, we understand the applicant is pursuing the adoption of the Master Plan into the Draft MIP that is currently under review by the Maui County Council.

In reviewing the information provided within the DEIS and the pending actions by the Maui County Council, we have the following initial comments:

1. DOT requests that the applicant provide status updates regarding the Council's adoption of the subject Master Plan into the MIP.
2. The Traffic Impact Analysis Report (TIAR) dated September 16, 2011, is unacceptable and shall be revised for DOT's review and approval prior to issuance of the Final Environmental Impact Statement (FEIS). The revision should include but not be limited to the analysis for the existing roadway conditions, future year peak hour traffic volumes with and without the project, bicycle and pedestrian movements, and all recommendations for required improvements to mitigate project related transportation impacts.
3. Although mentioned in the DEIS, the TIAR shall include analysis for the Honoapiilani Highway realignment and its relationship to the Pali to Puamana Plan, as well as the DOT project to realign and widen Honoapiilani Highway from Maalaea to Launiupoko.

4. The TIAR should reflect the existing alignment and future alignment of Honoapiilani Highway as a principal arterial roadway. Access to Honoapiilani Highway shall be limited to three (3) locations, as previously discussed between DOT Highway Division staff and the applicant.
5. The assumptions provided with the TIAR for items such as the internal capture rate of the development, and the capacity for Honoapiilani Highway appear to be flawed and shall be reanalyzed with sufficient supporting data to reinforce such assumptions.
6. No additional storm water runoff shall be allowed to enter the State highway right-of-way. Storm water entering State drainage facilities shall follow DOT current Storm Water Permanent Best Management Practices Manual.
7. A Traffic Management Plan discussing traffic management procedures for construction activity on State Highway facilities shall be coordinated with and provided to the DOT Highway Division for review and approval.

DOT appreciates the opportunity to provide comments. If there are any questions or the need to meet with DOT staff, please contact Mr. Garrett Smith of the DOT Statewide Transportation Planning Office at (808) 831-7976.

Very truly yours,



GLENN M. OKIMOTO, Ph.D.  
Director of Transportation

- c: Mr. Orlando "Dan" Davidson, State Land Use Commission  
Ms. Colleen Suyama, Munekiyo & Hiraga, Inc.

April 19, 2012

LAND USE COMMISSION  
STATE OF HAWAII

Mrs. Colleen Suyama  
Munekiyo & Hiraga  
305 High Street  
Wailuku, HI. 96793

2012 APR 20 A 7:59

Dear Mrs. Suyama:

**Subject: Comments re. Draft EIS for Olowalu Master Plan**

I have reviewed the Draft EIS with Appendices and have the following comments and questions:

**Page 12** – The EIS says that Olowalu once had a population of “several thousand”. How was this number verified? People lived in Olowalu while there was a sugar cane mill there. Once that mill and the Lahaina mill were closed almost all residents moved out of Olowalu.

**Pages 15 & 164** – The EIS says that a “portion of the pre-development stormwater will be captured”. To protect future development, all stormwater should be captured.

**Page 18** – The project is described as including public amenities such as community centers, educational facilities, police/fire, medical, library, museum, cultural centers and post office. Are the developers willing to donate land for any or all of these public facilities? Are they willing to build all or any of these facilities at their expense?

**Page 23** – Where are 4 story buildings with 50 feet of height proposed? Are any hotels proposed for Olowalu Town?

**Page 25** – Are there 3456 new housing units needed in West Maui in 2030? 1500 of those units or almost half of the units are proposed in Olowalu?

All 3456 of the new units can be provided in existing and proposed West Maui projects that are much more in conformance than Olowalu with State and County planning policies concerning development near jobs and infrastructure.

**Page 28** – The EIS says that portions of the proposed development are subject to flooding. Why is any new development proposed in Olowalu be allowed where flooding is anticipated?

**Page 28** – The EIS says that 1,000 long term jobs would be created in Olowalu. This number seems too high. How was this number arrived at? How many of the proposed 4,239 Olowalu residents are expected to commute to work out of Olowalu?

**Page 48** – The EIS says that 81% of the Master Plan area is within the UH soil productivity designations A and B. How much of this very productive land is proposed in the Olowalu Master Plan to be in future agricultural use?

**Page 58** – The EIS says that potential impacts from shoreline erosion and future sea level rise have not been identified. This is a very serious omission and the Final EIS should include analysis of both shoreline erosion and sea level rise.

**Pages 61 & 132** – The EIS says that the Master Plan proposes areas and provides land where a new fire station and emergency services can be accommodated. Are the developers willing to donate land and build a new fire station at their expense?

**Page 134 & 135** – The EIS says that all public schools in Lahaina are already over capacity and that this project would produce 213 elementary students, 108 middle school students and 141 high school students. The EIS also says that the Master Plan has 10-15 acres for school facilities. Are the developers willing to donate land for a school and build a new school at their expense?

**Page 140-142** – I agree with all of the comments submitted April 15, 2012 by registered traffic engineers Walton and Victoria Huffman and incorporate them all here by reference. The EIS' traffic report (TIAR) also generates the following comments and questions:

- \* The project's impacts on the State highway outside of the project area are inadequately analyzed.
- \* The project's trip generation numbers should be approximately triple the numbers in the TIAR.
- \* Future projected traffic volumes on the State highway are too low.
- \* The internal capture rate should be approximately 15%, not 55%.
- \* Traffic from other developments between Lahaina and Maalaea, such as Launiupoko, Makila and Ukumehame were not included.
- \* What bicycle, bus and pedestrian facilities are proposed?
- \* The Alternative section of the EIS should include analysis of a smaller Olowalu project.
- \* The TIAR should include analysis of impacts from project construction.
- \* What are State highway traffic counts during peak tourist season?

**Pages 160 & 165** – The General Plan Advisory Committee (GPAC) and Maui Planning Commission supported only the portion of this project mauka of the old State highway. The project area between the ocean and the old State highway should be open space.

**Page 161** – Contrary to the EIS, the Olowalu Master Plan is **NOT** consistent with the Pali to Puamana Parkway Master Plan. The Pali to Puamana Plan shows more open space through Olowalu between the ocean and the old State highway.

**Pages 176 & 203** – The County Planning Department did not recommend that Olowalu be within Urban Growth Boundaries because the Olowalu plan is inconsistent with the adopted Countywide Policy Plan stating that growth must be located in areas with infrastructure and near employment.

**Page 187** – The project's workforce housing numbers include units costing 160% of median income. Houses 160% of median income are not affordable to Maui's workforce.

**Pages 199 & 202** – The EIS incorrectly states that there are inadequate areas in West Maui for needed housing. The Pulelehua project, Wainee project and Kaanapali 2020 project are three large projects more appropriately located to provide future West Maui housing near jobs and infrastructure.

**Page 200** – The expense figures in the EIS do not include any funds for a new school or a new fire station.

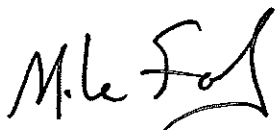
**Page 204** – The adopted West Maui Community Plan designates the Olowalu Master Plan area for agriculture and open space, not a development with 1500 housing units plus commercial.

IV. Alternatives – the EIS says the project area could be developed into agricultural subdivisions. How many additional agricultural lots would be allowed by County regulations?

V. Unavoidable Impacts & VII. Unresolved Issues -- These sections should both include land and construction of a new school and a new fire station.

Thank you for the opportunity to comment on this Draft EIS.

Respectfully submitted,



Michael W. Foley  
Former Maui County Planning Director  
3625 Piikea Place  
Makawao, Maui, Hawaii, 96768

Cc: Will Spence, Maui County Planning Director  
Mayor Alan Arakawa  
State Land Use Commission

9909 Lemon Ave  
La Mesa, CA 91941  
April 15, 2012

Mr. Orlando "Dan" Davidson  
State Land Use Commission  
P.O. Box 2359  
Honolulu, Hawaii 96804

**Subject: *Draft Environmental Impact Statement for the Proposed Olowalu Town Master Plan (TMK Nos. (2)4-8-003:84,98 through 118, and 124)***

Dear Mr. Davidson:

We appreciate the opportunity to review the Draft Environmental Impact Statement (DEIS) for the proposed Olowalu Town Master Plan. We visit Maui frequently and enjoy driving north to Kapalua on Honoapi'ilani Highway (State Route 30). We are very concerned by the lack of existing or planned roadway infrastructure to support a development the size of the proposed Olowalu Town Master Plan. As California Registered Traffic Engineers with a combined 60 years experience in a variety of traffic engineering fields including reviewing traffic studies and environmental documents for development projects, we are sending you these comments in an effort to provide you with an understanding of this project's impacts to circulation. If this project is approved as proposed, traffic flow between West Maui and Central and South Maui will become extremely constrained. Honoapi'ilani Highway between Pali and Ma'alaea (which is not identified for improvements in the draft Maui Island Plan) would be a critical choke point restricting island circulation. This could have a profound negative economic impact on the island.

**The DEIS does not disclose the proposed project's impacts to Honoapi'ilani Highway (State Route 30) outside the project site and the substantial affect this impact could have on public safety and on the economic welfare of the community and the State. Additionally, the DEIS does not analyze each phase of the development as required by HAR Section 11-200-17. For these reasons, we have found the DEIS for the Olowalu Town Master Plan to be inadequate.**

Traffic Impacts Not Disclosed:

The DEIS and its Preliminary Traffic Impact Analysis Report ("TIAR") does not acknowledge or disclose any significant impact to Honoapi'ilani Highway for the following reasons:

- The TIAR assumes Honoapi'ilani Highway is widened to four lanes north of the project site; however, there is no identified funding for this costly infrastructure improvement.



- The TIAR assumes Honoapi'ilani Highway can accommodate substantially more traffic than it actually can before failing. The TIAR assumes Honoapi'ilani Highway south of the project site can accommodate 33,300 average daily vehicle trips (ADT) based on the assumption that this highway is an uninterrupted flow highway rather than an arterial with access points to the beach and to scenic lookouts. *The Proposed Roadway Development Program* dated January 2007 prepared for the County of Maui Planning Department for the draft *Maui Island Plan* assumed Honoapi'ilani Highway south of the Olowalu Town Master Plan site could accommodate about 22,000 ADT before failing.
- An unreasonably high, and technically unjustified, internal capture rate of 55% for project generated trips is assumed in the TIAR. Consequently, not enough project trips are distributed to Honoapi'ilani Highway. The Institute of Traffic Engineers (ITE) defines internal trip capture rate as a percentage reduction that can be applied to the trip generation estimates for the individual land uses to account for trips internal to the site. A nationally recognized methodology used by traffic engineers, such as the *Trip Generation Handbook, 2<sup>nd</sup> Edition, by the Institute of Traffic Engineers (ITE)* should be used to calculate internal capture. This methodology was used to calculate internal capture for both the *Wail'e* project in Central Maui and the *Honoua'ula* project in South Maui. The internal capture rates for *Wail'e* and *Honoua'ula* were about 10% and 15%, respectively. (See Attachment A). Using the *Trip Generation Handbook* methodology, the internal capture of the Olowalu Master Plan would be about 15%.
- An unreasonably high, and technically unjustified, number of pass-by and diverted linked trips were assumed in the TIAR. Consequently not enough project trips are distributed to Honoapi'ilani Highway. Pass-by trip reductions should not be applied to re-aligned Honoapi'ilani Highway because it is not anticipated driveways would be allowed on this access controlled facility. The diverted linked trip reductions are high compared to documented rates in ITE and other credible sources.
- Future traffic volumes on Honoapi'ilani Highway are underestimated, due to the following:
  - Existing traffic counts used by the TIAR to develop future traffic volumes are too low. These existing counts were gathered in October 2010 during low tourist season and after the Great Recession of 2008. The TIAR states Honoapi'ilani Highway south of the project site carried 22,840 vehicles per day in October 2010. In contrast, this roadway west of the Pali tunnel is shown as carrying 24,422 ADT in Year 2003 in the *Proposed Roadway Development Program* prepared for the County of Maui Planning Department for the draft *Maui Island Plan*.
  - Traffic from other known projects in the area, such as Ukumehame, and traffic from other reasonably foreseeable projects were not assumed in the future analysis
  - Additionally, it cannot be confirmed whether the 1% annual growth factor used in the TIAR to estimate future volumes on Honoapi'ilani Highway is reasonable,

since no supporting data was provided showing how the 1% annual growth factor was determined.

As an example demonstrating how the future volumes are underestimated in the TIAR, the future volumes estimated on Honoapi'ilani Highway south of the project site in the TIAR without project traffic is 24,670 ADT, but this roadway segment is shown to carry 24,422 in 2003 in the *Proposed Roadway Development Program* prepared for County of Maui Planning Department for the draft *Maui Island Plan*. (See Attachment B.) This is an increase of only 248 vehicles on Honoapi'ilani Highway in 17 years.

It should also be noted that the TIAR indicates that Honoapi'ilani Highway south of the project site would operate at level of service (LOS) E at full build out of the project, but the *Proposed Roadway Development Program* shows this segment to be failing in the peak hour in Year 2003.

Using professionally accepted standards, we estimate that the proposed project would add about 12,000 ADT to Honoapi'ilani Highway north of the project site and about 8,000 ADT to Honoapi'ilani Highway south of the project site. This is more than three times the amount of project traffic estimated in the TIAR. Honoapi'ilani cannot accommodate this much added traffic.

The TIAR should be revised to use nationally recognized and accepted methodologies for determining project trip generation and analyzing transportation impacts. When this is done, it will be clear that the Olowalu Master Plan would have significant impacts to Honoapi'ilani Highway.

#### Potential Substantial Affects on Public Health Not Disclosed or Discussed:

Traffic safety impacts to Honoapi'ilani Highway from the development of the proposed Olowalu project were not addressed. Honoapi'ilani Highway would be heavily congested with stopped queues of vehicles, and there would be fewer gaps for vehicles to turn into. Consequently, there would be an increased potential for a higher accident rate along this highway.

Additionally, the proposed "O-turns" along Honoapi'ilani Highway may also compromise public safety. Therefore, the DEIS should evaluate and discuss:

- The potential increase in vehicular accidents on Honoapi'ilani Highway caused by the weaving and merging maneuvers of O-turns.
- The potential increase in pedestrian and bicycle accidents on Honoapi'ilani Highway since pedestrians would not be provided a safe crossing as would be provided by traffic signals. The DEIS should address how pedestrians and bicyclists will be prevented from crossing Honoapi'ilani Highway.

#### Phased Analysis Not Provided

The DEIS indicates in many places that the project would be developed in phases spread out over a period of approximately 10 years. However, only one scenario, Full Buildout Year 2020, was analyzed in TIAR. The TIAR should be revised to include an analysis of each phase of the project; otherwise, the DEIS does not comply with Hawaii Administrative Rules (HAR) Section 11-200-17 I which states that a DEIS, "... shall include a statement of the probable impact of the proposed action on the environment, and impacts of the natural or human environment on the project, which shall include consideration of all phases of the action and consideration of all consequences of the environment; direct and indirect effect shall be included."

It should also be noted that the internal capture rate of the project would vary with different phases of the development. For example, if the residential phase of the project were to be constructed first with no commercial, then the project's internal capture rate would be zero. This variation in internal capture rate by phase should be accounted for in the analyses.

#### Other Specific Comments to the DEIS:

1. The DEIS should provide more details to support its claim that the proposed project is a smart growth development. For example, it should describe what specific design features would be incorporated to ensure the development is a pedestrian & bicycle friendly community. Specifically, the DEIS should describe whether roadways within the project site would provide non contiguous sidewalks, street trees, and traffic calming features such as bulb-outs, road humps, traffic circles. The DEIS should also describe what type of bicycle amenities (e.g. bicycle racks, lockers, showers, bicycle corrals) and bicycle facilities (e.g. bicycle paths, bicycle lanes) would be provided to ensure the site is a bicycle friendly community.
2. The DEIS should state the "Purpose and Need" for the proposed action as required by HAR Section 11-200-17 D. The DEIS only states the project's need (which the DEIS states is to increase the supply of housing for Maui residents) but does not state the project's purpose. Without a statement of purpose, it is impossible to identify reasonable alternatives since reasonable alternatives are those that substantially meet both the purpose and the need.
3. A reduced project alternative should be proposed, since a reduced project alternative may have fewer impacts to Honoapi'ilani Highway.
4. The TIAR conclusions are contingent on specific land uses with precise square footage being constructed on the proposed project site. The DEIS should indicate how it would be assured that these land uses, and their square footages, would be constructed.
5. Should the Olowahu Master Plan be approved, the project should be conditioned to construct development not to exceed the ADT, a.m. peak-hour inbound trips, a.m. peak-hour outbound trips, p.m. peak-hour inbound trips, and the p.m. peak-hour outbound trips evaluated in the Final TIAR. Additionally, these thresholds should be tracked as the project site is developed. If the project site were to generate more traffic than assumed and analyzed in the Final TIAR, then the project could have other traffic impacts not disclosed to the approving agency in the Master Plan's FEIS.

6. The DEIS should discuss the effects of construction traffic on Honoapi'ilani Highway.
7. The DEIS should discuss the effect the proposed O-turns would have on pedestrian connectivity mauka and makai of Honoapi'ilani Highway.
8. A Transportation Demand Management Plan (TDM) should be provided by this project in an effort to meet the goals and objectives of the *Maui General Plan*. The DEIS should provide a discussion of this TDM Plan.

Specific Comments to the TIAR:

1. Page 1, Introduction, Purpose and Methodology: The TIAR states the TIAR utilizes data from several other TIARs which have been done for other projects on the west side of Maui over the last five years. The TIAR should specifically name which reports it utilized.
2. Page 1, Introduction, Purpose and Methodology: The TIAR states the TIAR uses information from studies done by Maui County. The TIAR should name which studies it utilized.
3. Page 1, Introduction, Purpose and Methodology: The TIAR states, "The Final TIAR will address peak hour traffic flows and utilize the methods that are normally employed in standard traffic assessments. That TIAR will also analyze in detail the predicted traffic operations at the access points to Honoapi'ilani Highway. It will assess the need for any mitigation and analyze the need for traffic control measures and devices that may be required for proper functioning of the street system. This preliminary report will not cover all items that may be studied and analyzed in the future detailed TIAR and it is not intended to substitute for that more comprehensive analysis." The TIAR provided in this DEIS should provide a full analysis to determine significant impacts of the proposed project, and these impacts should be disclosed to the public during the public review period.
4. Page 2, Introduction, Purpose and Methodology: The TIAR states that the level of analysis in the TIAR does not include detailed analysis of all traffic movements at individual intersections. The TIAR provided in this DEIS should provide a full analysis to determine significant impacts of the proposed project, and these impacts should be disclosed to the public during the public review period.
5. Page 2, Introduction, Purpose and Methodology: The TIAR states that the TIAR is intended to illustrate that the increase in vehicular traffic along the Honoapi'ilani Highway attributed to Olowalu Town will be successfully mitigated by way of implementing the proposed transportation plan and the related improvements, including the relocation and widening of the segment of Honoapi'ilani Highway which traverses the subject property. Clarify in this section of the TIAR what is specifically meant by the "proposed transportation plan."
6. Page 3, Description of Olowalu Town: The first paragraph of this section should describe how much square footage of office and how much square footage of commercial retail is proposed by this project rather than just describing the number of dwelling units proposed.

7. Page 3, Description of Olowalu Town: The TIAR states the design of Olowalu Town incorporates smart growth principles. One of the 10 accepted principles that define Smart Growth is to create walkable neighborhoods. The TIAR should describe specific examples of design features that would be incorporated to create walkable neighborhoods.

8. Page 8, Figure 5, Summary of Trip Generation for Olowalu Town: For ITE Code 730, Government Office Building, the proper trip rate per unit is 68.93 trips per 1,000 sf; therefore, the estimated traffic generated by that component of the site is of 1034 trips. Therefore, the total traffic generated by the site would be 33,655 ADT rather than the 32,800 ADT shown in the table. Revise the TIAR and its analyses accordingly.

9. Page 10, Background Traffic Growth: The TIAR states that several studies were made available which analyzed traffic growth trends on Honoapi'ilani Highway and that these studies are included in the appendices. However, this data was not included in the appendices. This data should be included in an appendix.

10. Page 10, Background Traffic Growth: In determining future volumes for the Year 2020 analysis, other reasonably foreseeable development project traffic be added to Honoapi'ilani Highway in addition to using an appropriate growth rate based on historical data.

11. Page 10, Background Traffic Growth: Provide a copy of the existing count data for Honoapi'ilani Highway in the appendix of the TIAR.

12. Page 10, Background Traffic Growth: Existing counts on Honoapi'ilani Highway were taken during October 2010 during low tourist season. However, existing counts should be taken during peak tourist season.

13. Page 10, Background Traffic Growth: The 24,667 ADT assumed on Honoapi'ilani Highway in Year 2020 is only 248 ADT more than existed in Year 2003 per the *Proposed Roadway Development Program* prepared for County of Maui Planning Department for the draft *Maui Island Plan*. Provide an explain why only 248 more vehicles per day would be expected to use Honoapi'ilani Highway in Year 2020.

14. Page 10, Traffic Analysis in Year 2020 without Olowalu Town Project: HighPlan software is not appropriate to use to determine the capacity and level of service of Honoapi'ilani Highway, since it has beach access points and driveways to scenic lookouts, and therefore should not be considered an uninterrupted flow highway.

15. Page 11, Figure 6, Output from Highplan Software for Honoapi'ilani Highway for Year 2020 without Project in Place:

- Clarify why the output sheet says "yes" under median type
- Clarify why the output sheet says "no" under left turn impact when no left turn pockets are provided for the beach access points or scenic outlooks
- The assumed maximum capacity at LOS E of 1500 vehicles per hour per lane (vphpl) is too high. Per the FDOT 2009 Quality/Level of Service Handbook which provides

guidance on using the FDOT software, the maximum capacity at LOS E should be assumed to be 850 vphpl. (See Attachment C). It should be noted that agencies in southern California assume much lower capacities for roadways constructed and functioning similar to Honoapi'ilani Highway. As an example, the County of San Diego assigns the capacity of 16,200 ADT to a two-lane rural facility. (See Attachment D).

16. Page 12, Traffic Generation for Olowalu Town: The TIAR takes a 15% reduction in trip generation to account for walking and bicycling within the project site and cites other local governments such as the City of Frederick, Maryland as allowing this as well. However, the reduction allowed by the City of Frederick includes walking, bicycling, and internal capture. (See Attachment E). Therefore, using the City of Frederick as an example is not correct and this reference (as well as the associated page included in Appendix 4 of the TIAR) should be removed from the TIAR.

17. Page 12, Traffic Generation for Olowalu Town: Reducing the ITE trip generation rate by 15% for walking and bicycling is not appropriate. The internal capture rate already accounts for this reduction.

18. Page 12, Traffic Generation for Olowalu Town: The TIAR states that based on the anticipated plan for the proposed project, the TIAR determined that significant proportions of total travel could and would be made within the town itself, without any requirement to travel on Honoapi'ilani Highway to Lahaina, Ma'alea or elsewhere on the island. Please clarify how this statement can be supported since:

- Facilities such as schools, a library, and a post office are not assured but require public funds to be constructed and/or operated.
- There is no assurance that the Olowalu Master Plan would provide land uses to serve all residents day to day needs such as a grocery store, pharmacy, and restaurants.
- The proposed project would not provide enough jobs for all its residences.

19. Page 12, Traffic Generation for Olowalu Town: The amount of internal capture rate assumed by the TIAR should be calculated using worksheets in the *ITE Trip Generation Handbook*, 2nd edition, and completed worksheets should be provided in an appendix of the TIAR. Alternatively, the methodology outlined in the NCHRP Report 684, *Enhancing Internal Trip Capture Estimation for Mixed-Use Developments*, by the Transportation Research Board of the National Academies could be used although its researchers do not recommend its use on sites over 300 acres. (See Attachment F).

20. Page 12, Traffic Generation for Olowalu Town: The TIAR states that due to the design of the town and its street network, many of the trips within the town will likely be made via walking or cycling and not require use of the automobile. This element will be addressed in detail in the final TIAR. This element of the TIAR should be addressed in the DEIS rather than the FEIS.

21. Page 13, Traffic Generation for Olowalu Town, Table 1, Internal Capture of Trips in Olowalu Town: The internal capture rates shown for each land use in Table 1 should be

supported by appropriate technical data; otherwise, the *ITE Trip Generation Handbook*, 2nd edition methodology should be used for computing internal capture.

**22. Page 13, Traffic Generation for Olowalu Town:** The TIAR states that the Maui LRTP was used to assist in estimating the amount of "pass-by" trips to Olowalu Town. However, "Pass-by trips" are defined by ITE as trips made as intermediate stops on the way from an origin to a primary trip destination without a route diversion. Since the proposed project's land uses have no direct access to Honoapi'ilani Highway, the number of pass-by trips for this project would be zero.

**23. Page 13, Traffic Generation for Olowalu Town:** Revise the name of Table 2 from "Pass-by and Diverted Trips on Honoapi'ilani Highway" to simply, "Diverted Linked Trips on Honoapi'ilani Highway."

**24. Page 13, Traffic Generation for Olowalu Town:** The percent of diverted linked trips for each land use should be based on empirical data from a reliable source such as the *ITE Trip Generation Handbook* or San Diego Association of Government's (SANDAG) *(Not So) Brief Guide of Vehicular Traffic Generation Rates For The San Diego Region*, available on-line at the following URL:

[http://www.sandag.org/uploads/publicationid/publicationid\\_1140\\_5044.pdf](http://www.sandag.org/uploads/publicationid/publicationid_1140_5044.pdf)

Most of the diverted linked rates shown in Table 2 are very high compared to the rates shown in the SANDAG document. (See Attachment G). Diverted linked rates used in the TIAR should be documented.

**25. Pages 12 - 14, Tables 2 - 4:** Table 2, Table 3, and Table 4 list an elementary school as a land use but Figure 5 on Page 8, which is the trip generation summary, does not. Please explain this apparent discrepancy.

**26. Page 16, Trip Distribution:** Table 4 should be renamed, "Trip Distribution for Diverted Linked Trips" assuming there are no proposed land uses with direct access to Honoapi'ilani Highway.

**27. Page 17, Traffic Assignment:** The TIAR does not include analysis of travel from the mauka side to/from the makai side of the Olowalu Town and the trips made between mauka and makai side via the connector street, and that these items will be reviewed in detail in the final TIAR. These analyses should be provided in this DEIS and available for public review and comment.

**28. Page 18, Development of Future Traffic Data:** Clarify why a 15% growth rate is used for Figure 10 and the access analyses in Appendix 3, but other portions of the document indicate an 8% growth rate was used.

**29. Page 19, Figure 7, Existing Traffic Volumes on Honoapi'ilani Highway:** Provide another figure depicting the traffic volumes on Honoapi'ilani Highway from counts taken during

February which is peak tourist season. Use whichever figure has the higher volumes to develop future volumes .

**30.** Page 20, Figure 8, Future Year 2020 Traffic Volumes without Project on Honoapi'ilani Highway: Revise this figure to include traffic from other reasonably foreseeable projects that would be constructed and occupied by Year 2020 (in addition to the background growth factor already assumed).

**31.** Page 21-22, Figures 9-10, Traffic Added from Olowalu Town Project and Olowalu Town Study Network Traffic with Full Buildout of Project in Place: Revise these figures to address our comments regarding trip generation, internal capture, and diverted linked trip rates.

**32.** Page 23, Future Roadway Network: Conduct a weaving analysis for the proposed "O-turns." The results of these weaving analyses should be provided in an appendix of the TIAR. Additionally, the effects of weaving on capacity of the proposed re-aligned Honoapi'ilani Highway should be evaluated.

**33.** Page 23, Future Roadway Network: Provide a queuing analysis to determine if the proposed left turn pockets for the proposed O-turns are sufficient to accommodate the vehicular demand without having vehicles spill into the through lane.

**34.** Page 23, Future Roadway Network: Provide calculations to determine the appropriate length of the acceleration and deceleration lanes of the proposed O-turns.

**35.** Page 23, Future Roadway Network: Data should be provided demonstrating the proposed "O-turns" weaving will not comprise public safety by creating a higher incidence of side swipe and rear end collisions caused by merging.

**36.** Page 23, Future Roadway Network: Discuss the effects of the proposed O-turns on pedestrian connectivity between the mauka and makai side of Honoapi'ilani Highway.

**37.** Page 23, Future Roadway Network: Evaluate pedestrian safety issues of the proposed O-turns , since the O-turns do not provide protected pedestrian crossings across Honoapi'ilani Highway as would be provided by signalized intersections. Also discuss how pedestrians would be prevented from crossing Honoapi'ilani Highway.

**38.** Page 25, Analysis of Impacts of Olowalu Town Project: HighPlan software is not appropriate to use to determine the capacity and level of service of Honoapi'ilani Highway south of the project site, since it would still have beach access points and scenic lookout points in Year 2020 and therefore cannot be considered an uninterrupted flow highway. If FDOT software were to be used, ArtPlan would be the appropriate software to utilize.

**39.** Page 25, Analysis of Impacts of Olowalu Town Project: The estimated daily maximum capacity of 56,600ADT and predicted speed of 50 mph Honoapi'ilani Highway within the project site is too high since there would be weaving, merging, acceleration, and deceleration associated with the proposed O-turns.



40. Page 25, Analysis of Impacts of Olowalu Town Project: The predicted speed of 29 mph for Honoapi'ilani Highway and maximum capacity of 33,300 ADT south of the project is too high as this highway segment would not have uninterrupted flow.

41. Page 25, Analysis of Impacts of Olowalu Town Project: The TIAR indicates detailed program outputs for the Highplan analyses sheets shown are Figures 12 - 14 are provided in the appendices. However, these sheets are not provided in the appendices.

42. Page 26, Figure 14, Output from Highplan Software for Portion of Honoapi'ilani Highway with Existing Roadway Configuration:

- The roadway variables portion of the data sheet shows "yes" for median type but this portion of Highway 30 has no median.
- The LOS E maximum capacity of 1,500 vehicles per hour per lane (vphpl) is too high. The *Proposed Roadway Development Plan* by Fehr & Peers assumed 1000 vehicles per hour at level of service E, using the *Highway Capacity Manual*. (See Attachment H).
- The LOS E maximum capacity of 33,300 ADT is too high.

43. Page 27, Figure 13, Output from Highplan Software with Relocated and Widened Honoapi'ilani Highway in Place at Full Buildout of Olowalu Town:

- The data sheet indicates the segment from the Old Land Fill to Mile 14 is 5 miles long but this same segment is shown as 2.6 miles long on Figure 6.
- The LOS E maximum capacity of 2,950 vphpl is too high.
- The LOS E maximum capacity of 56,600 ADT is too high.

44. Page 28, Figure 14, Output from Highplan Software for Portion of Honoapi'ilani Highway South of the Project Site at Full Buildout of Olowalu Town:

- The data sheet indicates the number of through lanes is 4 but this is a two-lane facility.
- The data sheet shows "yes" for median type but this portion of Highway 30 has no median.
- The assumed free flow speed of 50 miles/hour is too high.
- The LOS E maximum capacity of 1500 vphpl is too high. The LOS E maximum capacity of 33,300 ADT is too high.

45. Page 29, Table 6, Capacity, ADTs and Levels of Service for Honoapi'ilani Highway In Full Buildout Year of 2020:

- The assumed daily maximum capacity of 56,600 for the segments between the southern project boundary and north of the transfer station is too high.
- The assumed daily maximum capacity of 33,300 for the segment called "existing roadway south of Olowalu Town Project" is too high.
- The table indicates the segment north of the transfer station is widened to two through lanes in each direction. Clarify in the TIAR on what basis this is assumed. Only projects

that are fully funded and scheduled for construction prior to Year 2020 should be assumed.

46. Appendix 3, Intersection Turning Movements: Clarify why the data sheets indicate 15 percent growth when the TIAR indicates an 8 percent growth rate was used to develop Year 2020 ADT volumes.

47. Appendix 4, Traditional Development of Trip Generation Characteristics: The internal capture rates for the developments discussed in this paper do not support the 55% internal capture assumed in the TIAR.

48. Appendix 4, Traditional Development of Trip Generation Characteristics: The conclusion of this paper indicates the authors support the use of internal capture estimates produced using the ITE *Trip Generation Handbook* methodologies. The TIAR should use this method to determine internal capture.

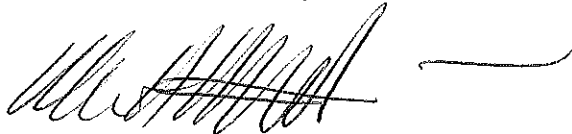
Thank you once again for providing us the opportunity to review and comment on the DEIS.

We hope that these comments help the approving agency make an informed decision when determining whether to approve the proposed Olowalu Master Plan development project.

Sincerely,

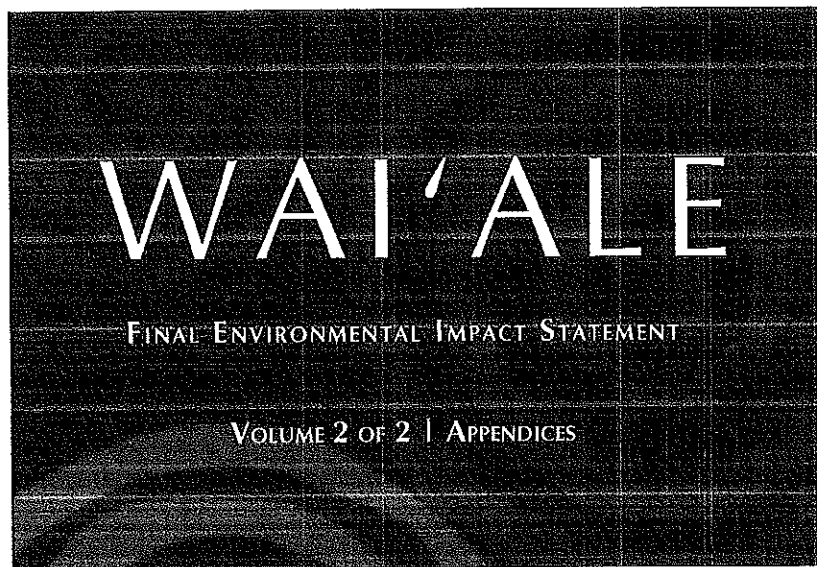
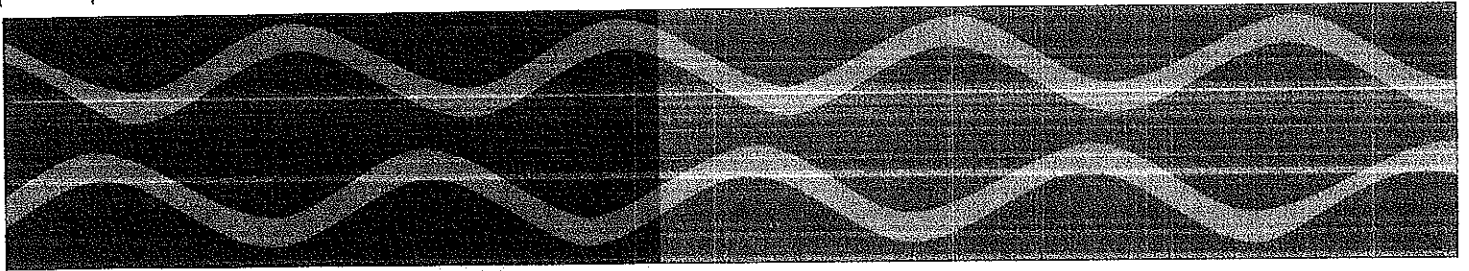


Victoria A. Huffman, P.E.



Walton H. Huffman JR, P.E.

cc: Olowalu Town, LLC  
Colleen Suyama, Munekiyo & Hiraga, Inc.



PREPARED BY:



OCTOBER 2011

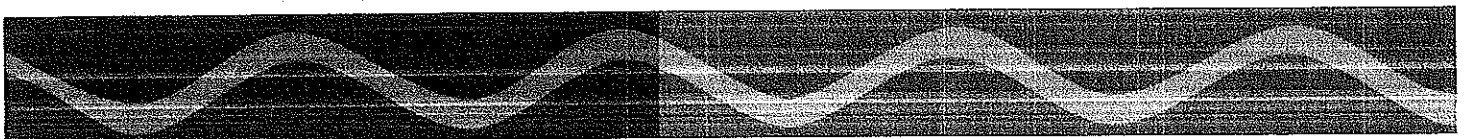


Table 6: Year 2022 with Project Trip Generation

| Land Use<br>(ITE Code)                     | Independent<br>Variable | AM Peak hour of<br>traffic |               | PM Peak hour of<br>traffic |               |
|--|-------------------------|----------------------------|---------------|----------------------------|---------------|
|  |                         | Enter<br>(vph)             | Exit<br>(vph) | Enter<br>(vph)             | Exit<br>(vph) |
| Single Family (210)                        | 1,420 (DU)              | 253                        | 760           | 750                        | 441           |
| SF   | 1,240 (DU)              | 219                        | 658           | 638                        | 375           |
| County SF                                  | 180 (DU)                | 34                         | 102           | 112                        | 66            |
| Multi-Family (230)                         | 1,130 (DU)              | 76                         | 364           | 352                        | 174           |
| MF   | 481 (DU)                | 31                         | 151           | 147                        | 72            |
| VMX MF                                     | 529 (DU)                | 34                         | 163           | 158                        | 78            |
| County MF                                  | 120 (DU)                | 11                         | 50            | 47                         | 24            |
| Commercial (820)                           | 230,000 (GFA)           | 154                        | 99            | 545                        | 567           |
| Village Mixed Use (815)<br>AM and (814) PM | 250,000 (GFA)           | 181                        | 85            | 274                        | 349           |
| General Industrial (130)                   | 175,000 (GFA)           | 131                        | 29            | 38                         | 140           |
| Middle School (522)                        | 820 (Students)          | 244                        | 199           | 64                         | 67            |
| <b>Total</b>                               |                         | <b>1,039</b>               | <b>1,536</b>  | <b>2,024</b>               | <b>1,738</b>  |
| Internal Capture                           | N/A                     | -                          | -             | 164                        | 164           |
| Diverted Link Trip                         | N/A                     | -                          | -             | 82                         | 82            |
| <b>TOTAL</b>                               |                         | <b>1,039</b>               | <b>1,536</b>  | <b>1,778</b>               | <b>1,492</b>  |

**B. Trip Distribution**

Trips generated by the Project were assigned onto the network based on the future employment zones. Similar to Figure 4 in Section III, trips were assigned to the four (4) major employment areas as follows:

- Kahului/Hana/Upcountry at 35 percent
- Wailuku at 30 percent
- Lahaina/West Maui at 20 percent
- Kihei /South Maui at 15 percent



The project is planned as a mixture of housing, commercial, industrial and school land uses. The multi-use of the Project is aimed at providing close proximity between these land uses to reduce the amount of external trips.

The Institute of Transportation Engineers, Trip Generation Handbook second edition (2004) provides internal capture rates for multi-use developments for the (PM) peak hour of traffic only. Rates provided for retail to/from retail and retail to/from residential were applied. Overall, the internal capture was assumed to account for less than 10 percent of the total Project generated entering and exiting trips during the PM peak hour of traffic. Internal capture was not applied to AM peak hour traffic. }

\*  
}

Diverted linked trips were also assumed to occur for 4 percent of the trips generated by the Project during the PM peak hour of traffic. This is where commercial trips are considered existing trips (i.e. on Kuihelani Highway) that make intermediate stops at commercial land uses on their way to their final destinations.

# HONUA'ULA



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## DRAFT ENVIRONMENTAL IMPACT STATEMENT

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VOLUME 3 OF 3  
(APPENDICES L-Q)

Prepared for:  
Accepting Authority  
Maui Planning Department / Maui Planning Commission

Applicant:  
Honua'ula Partners, LLC

Prepared by:



**PBR HAWAII**  
® ASSOCIATES, INC.

March 2010



#### IV. FUTURE YEAR TRAFFIC CONDITIONS WITH THE PROJECT

##### A. Trip Generation

Trip generation estimates the total number of trips produced by a given land use. Trip rates contained in the nationally published ITE, Trip Generation, 8th Edition were used to estimate the number of trips generated by the Project. Additionally, the Resort Residential Trip Generation Rate Development prepared by Parsons Brinkerhoff Quade & Douglas, Inc. dated October 2, 2006 as accepted by the SDOT, is utilized to estimate the number of trips generated by resort residential units. Table 5, as shown in the previous section, shows these trip generation rates and Table 6 shows the number of peak hour trips that are expected to be generated by the Project.

\* An estimation of the percentage of internal trip capture was obtained from the ITE Trip Generation Handbook, Second Edition, which was determined to be approximately 15 percent. The internal trip capture was only applied to the PM peak hour of traffic since commercial areas are typically closed during the AM peak hour of traffic. The 15 percent internal trip capture rate was applied to the number of residential trips and the result was applied to the commercial trips, in order to match the number of internal trips between the residential areas and commercial areas. Internal trips are assumed within the Project. \*

##### B. Trip Distribution

The Project generated trips were distributed based on the distribution utilized by the Maui Travel Demand Forecasting Model; Figure 8 shows the general distribution. Phase I of the Project proposes to construct the east leg of the Piilani Highway/Wailea Ike Drive intersection and Kaukahi Street will be extended into the Project. Since Kaukahi Street is a private street, it is planned to be gated within the Project site to address concerns of current owners along the street. Phase II of the Project proposes to extend Piilani Highway, forming the south leg of the Piilani Highway/Wailea Ike Drive intersection. Figures 9, 10, and 11 show the Project generated traffic volumes during Year 2016, 2018, and 2022, respectively.

Attachment B

1 of 2

## **PROPOSED ROADWAY DEVELOPMENT PROGRAM**

JANUARY 2007

PREPARED FOR

**COUNTY OF MAUI PLANNING DEPARTMENT**

PREPARED BY

  
**FEHR & PEERS**  

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**KAKU ASSOCIATES**



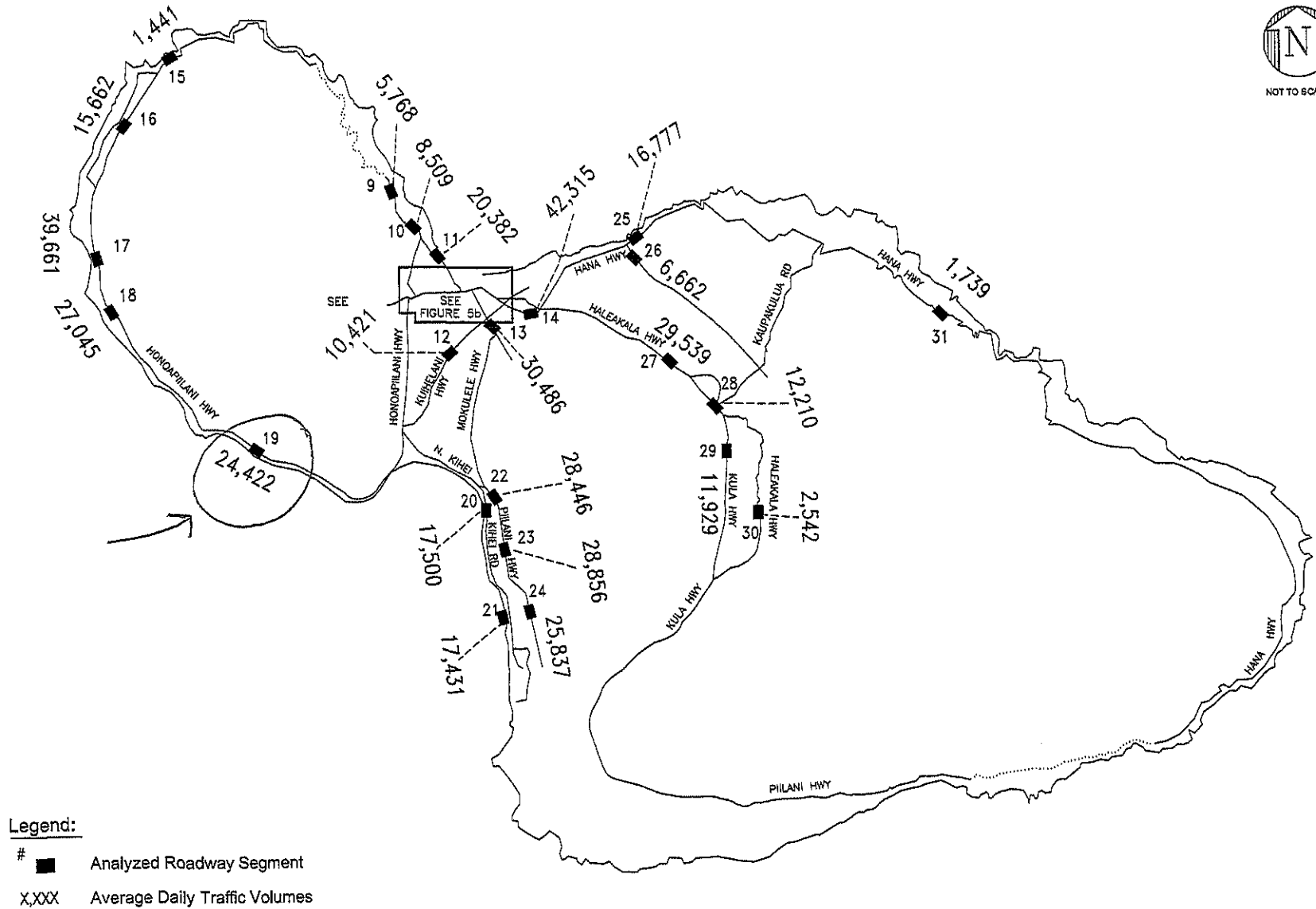
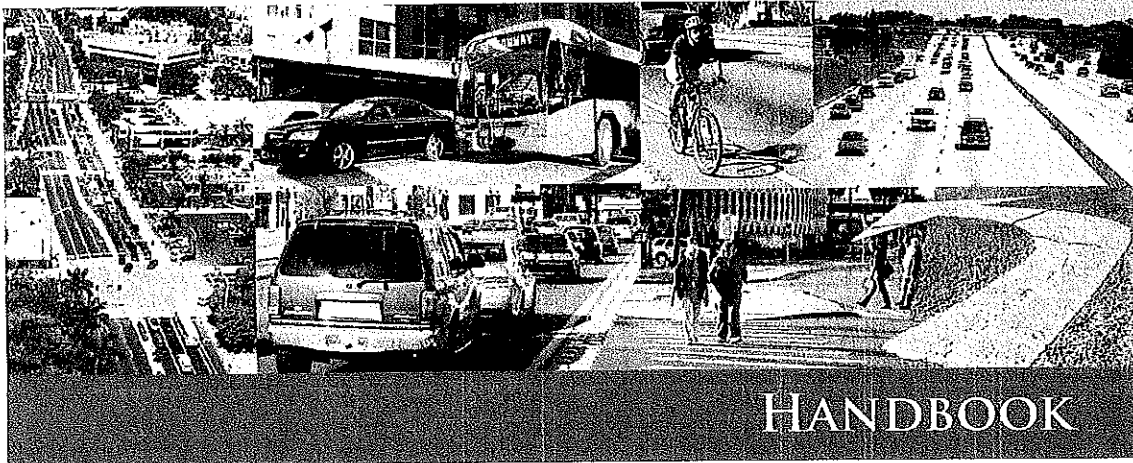
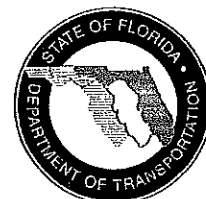


FIGURE 5A  
ISLAND-WIDE 2003 AVERAGE DAILY TRAFFIC VOLUMES

# 2009 QUALITY/LEVEL OF SERVICE



2009  
State of Florida  
Department of Transportation



## 7

**MAXIMUM ACCEPTABLE CAPACITY VOLUMES**

Use of highway capacity and LOS tools, whether applied appropriately or not, has resulted in projected traffic volumes beyond normal capacity ranges found on Florida facilities. The causes are many-fold, but to aid analysts and reviewers on what capacity values will normally be acceptable, FDOT the following guidance. These values are based on site specific freeway studies and counts, and arterial maximum acceptable thru movement effective green ratios (g/C). For the benefit of users conducting LOS analyses, FDOT's updated LOSPLAN programs will automatically check capacity and provide warnings and messages if acceptable capacities are exceeded. (Note: Under most circumstances the maximum service volume for LOS E equals capacity.)

**7.1 Maximum Acceptable Capacity Volumes for Facilities**

For arterial facilities the maximum generally acceptable per lane approach volumes are as follows:

- Large urbanized – 1,000 vehicles per hour per lane (vphpl)
- Other urbanized – 950 vphpl
- Transitioning – 920 vphpl
- Urban – 920 vphpl
- Rural – 850 vphpl

Note: arterial segments and sections may have higher values.

For freeway facilities and sections, the maximum generally acceptable volumes are as follows:

- Large urbanized – 2,100 vphpl (1900 vphpl if oversaturated)
- Other urbanized – 2,000 vphpl (1900 vphpl if oversaturated)
- Transitioning – 1,900 vphpl
- Urban – 1,800 vphpl
- Rural – 1,800 vphpl

For highway (generally uninterrupted flow highways) segments, the maximum generally acceptable per lane approach volumes are as follows:

- Two-lane
  - Developed – 1,600 vphpl
  - Undeveloped – 1,500 vphpl
- Multilane
  - Developed – 1,850 vphpl
  - Undeveloped – 1,600 vphpl

# **PUBLIC ROAD STANDARDS**



## **COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS**

March 3, 2010

**PUBLIC ROAD STANDARDS  
COUNTY OF SAN DIEGO**

**TABLE 1**  
**AVERAGE DAILY VEHICLE TRIPS\***

| CIRCULATION ELEMENT ROADS                    |                                     | LEVELS OF SERVICE |         |         |         |          |
|--|-------------------------------------|-------------------|---------|---------|---------|----------|
| Road Classification                          | # of Travel Lanes                   | A                 | B       | C       | D       | E        |
| Expressway (6.1)                             | 6                                   | <36,000           | <54,000 | <70,000 | <86,000 | <108,000 |
| Prime Arterial (6.2)                         | 6                                   | <22,200           | <37,000 | <44,600 | <50,000 | <57,000  |
| Major Road (4.1A)                            | 4                                   | <14,800           | <24,700 | <29,600 | <33,400 | <37,000  |
| Major Road w/ Intermittent Turn Lanes (4.1B) | 4                                   | <13,700           | <22,800 | <27,400 | <30,800 | <34,200  |
| Collector                                    | 4                                   | <13,700           | <22,800 | <27,400 | <30,800 | <34,200  |
| Boulevard w/ Raised Median (4.2A)            | 4                                   | <18,000           | <21,000 | <24,000 | <27,000 | <30,000  |
| Boulevard w/ Intermittent Turn Lanes (4.2B)  | 4                                   | <16,800           | <19,600 | <22,500 | <25,000 | <28,000  |
| Town Collector                               | 2                                   | <3,000            | <6,000  | <9,500  | <13,500 | <19,000  |
| Community Collector                          | w/ Raised Median (2.1A)             | 2                 | <10,000 | <11,700 | <13,400 | <15,000  |
|  | w/ Continuous Left Turn Lane (2.1B) | 2                 | <3,000  | <6,000  | <9,500  | <13,500  |
|  | w/ Intermittent Turn Lane (2.1C)    | 2                 | <3,000  | <6,000  | <9,500  | <13,500  |
|  | w/ Passing Lane (2.1D)              | 2                 | <3,000  | <6,000  | <9,500  | <13,500  |
|  | No Median (2.1E)                    | 2                 | <1,900  | <4,100  | <7,100  | <10,900  |
| Light Collector                              | w/ Raised Median (2.2A)             | 2                 | <3,000  | <6,000  | <9,500  | <13,500  |
|  | w/ Continuous Left Turn Lane (2.2B) | 2                 | <3,000  | <6,000  | <9,500  | <13,500  |
|  | w/ Intermittent Turn Lane (2.2C)    | 2                 | <3,000  | <6,000  | <9,500  | <13,500  |
|  | w/ Passing Lane (2.2D)              | 2                 | <3,000  | <6,000  | <9,500  | <13,500  |
|  | No Median (2.2E)                    | 2                 | <1,900  | <4,100  | <7,100  | <10,900  |
|  | w/ Reduced Shoulder (2.2F)          | 2                 | <1,900  | <4,100  | <7,100  | <10,900  |
| Rural Collector                              | 2                                   | <1,900            | <4,100  | <7,100  | <10,900 | <16,200  |
| Rural Light Collector                        | 2                                   | <1,900            | <4,100  | <7,100  | <10,900 | <16,200  |
| Rural Mountain                               | 2                                   | <1,900            | <4,100  | <7,100  | <10,900 | <16,200  |
| Recreational Parkway                         | 2                                   | <1,900            | <4,100  | <7,100  | <10,900 | <16,200  |
| Minor Collector                              | w/ Raised Median (2.3A)             | 2                 | <3,000  | <6,000  | <7,000  | <8,000   |
|  | w/ Intermittent Turn Lane (2.3B)    | 2                 | <3,000  | <6,000  | <7,000  | <8,000   |
|  | No Median (2.3C)                    | 2                 | <1,900  | <4,100  | <6,000  | <7,000   |
| NON-CIRCULATION ELEMENT ROADS**              |                                     | LEVELS OF SERVICE |         |         |         |          |
| Residential Collector                        | 2                                   | -                 | -       | <4,500  | -       | -        |
| Rural Residential Collector***               | 2                                   | -                 | -       | <4,500  | -       | -        |
| Residential Road                             | 2                                   | -                 | -       | <1,500  | -       | -        |
| Rural Residential Road***                    | 2                                   | -                 | -       | <1,500  | -       | -        |
| Residential Cul-de-Sac or Loop Road          | 2                                   | -                 | -       | <200    | -       | -        |

\* The values shown are subject to adjustment based on the geometry of the roadway, side frictions, and other relevant factors as determined by the Director, Department of Public Works.

\*\* Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.

\*\*\* Rural Residential Collectors and Rural Residential Roads are intended to serve areas with lot sizes of 2 acres or more which do not have a demand for on-street parking. On-street parking is not assured for these cross sections. Additional right-of-way is needed if on-street parking is in paved area.

\*\*\*\* See Tables 2A and 2B for roadway surfacing and right-of-way widths.

# TABLE 2A: COUNTY OF SAN DIEGO - PUBLIC ROAD STANDARDS

## CLASSIC CIRCULATION ELEMENT ROAD CLASSIFICATIONS

| ROAD CLASSIFICATION   | # LANES /<br>LANE WIDTH | MEDIAN<br>WIDTH | ROAD<br>SURFACING<br>WIDTH | R.O.W.<br>WIDTH | PAVED<br>SHOULDER<br>(# / WIDTH) | PARKWAY<br>WIDTH | MIN.<br>CURVE<br>RADIUS | MAX.<br>DESIRABLE<br>GRADE | MIN. DESIGN<br>SPEED (MPH) |
|-----------------------|-------------------------|-----------------|----------------------------|-----------------|----------------------------------|------------------|-------------------------|----------------------------|----------------------------|
| Expressway (6.1)      | 6 / 12'                 | 34'             | 126'                       | 146'            | 2 / 10'                          | 10'              | 1,700'                  | 6%                         | 65                         |
| Prime Arterial (6.2)  | 6 / 12'                 | 14'             | 102'                       | 122'            | 2 / 8'                           | 10'              | 1,700'                  | 6%                         | 65                         |
| Major Road (4.1A)     | 4 / 12'                 | 14'             | 78'                        | 98'             | 2 / 8'                           | 10'              | 1,200'                  | 7%                         | 55                         |
| Collector             | 4 / 12'                 | -               | 64'                        | 84'             | 2 / 8'                           | 10'              | 1,200'                  | 7%                         | 55                         |
| Town Collector        | 2 / 12'                 | 12'             | 54'                        | 74'             | 2 / 8'                           | 10'              | 500'                    | 9%                         | 40                         |
| Light Collector       | 2 / 12'                 | -               | 40'                        | 60'             | 2 / 8'                           | 10'              | 700'                    | 9%                         | 45                         |
| Rural Collector       | 2 / 12'                 | -               | 40'                        | 84'             | 2 / 8'                           | 22'              | 500'                    | 12%                        | 40                         |
| Rural Light Collector | 2 / 12'                 | -               | 40'                        | 60'             | 2 / 8'                           | 10'              | 500'                    | 12%                        | 40                         |
| Rural Mountain        | 2 / 12'                 | -               | 40'                        | 100'            | 2 / 8'                           | 30'              | 500'                    | 12%                        | 40                         |
| Recreational Parkway  | 2 / 12'                 | -               | 40'                        | 100'            | 2 / 8'                           | 30'              | 400'                    | 12%                        | 25                         |

## MODERN CIRCULATION ELEMENT ROAD CLASSIFICATIONS

### Major Road

|                                       |         |   |           |           |        |     |        |    |    |
|---------------------------------------|---------|---|-----------|-----------|--------|-----|--------|----|----|
| * With Intermittent Turn Lanes (4.1B) | 4 / 12' | - | 64' - 78' | 84' - 98' | 2 / 8' | 10' | 1,200' | 7% | 55 |
|---------------------------------------|---------|---|-----------|-----------|--------|-----|--------|----|----|

### Boulevard

|   |         |     |           |            |        |     |      |    |    |
|---|---------|-----|-----------|------------|--------|-----|------|----|----|
| *** With Raised Median (4.2A)           | 4 / 12' | 14' | 78'       | 106'       | 2 / 8' | 14' | 500' | 9% | 40 |
| *** With Intermittent Turn Lanes (4.2B) | 4 / 12' | -   | 64' - 78' | 92' - 106' | 2 / 8' | 14' | 500' | 9% | 40 |

### Community Collector

|  |         |     |           |           |        |     |      |    |    |
|--|---------|-----|-----------|-----------|--------|-----|------|----|----|
| ** With Raised Median (2.1A)             | 2 / 12' | 14' | 54'       | 74'       | 2 / 8' | 10' | 700' | 9% | 45 |
| ** With Continuous Left Turn Lane (2.1B) | 2 / 12' | 14' | 54'       | 74'       | 2 / 8' | 10' | 700' | 9% | 45 |
| *** With Intermittent Turn Lanes (2.1C)  | 2 / 12' | -   | 40' - 54' | 60' - 74' | 2 / 8' | 10' | 700' | 9% | 45 |
| *** With Passing Lane (2.1D)             | 2 / 12' | -   | 40'       | 84'       | 2 / 8' | 10' | 700' | 9% | 45 |
| * No Median (2.1E)                       | 2 / 12' | -   | 40'       | 60'       | 2 / 8' | 10' | 700' | 9% | 45 |

### Light Collector

|  |         |     |           |           |        |     |      |    |    |
|--|---------|-----|-----------|-----------|--------|-----|------|----|----|
| ** With Raised Median (2.2A)             | 2 / 12' | 14' | 54'       | 78'       | 2 / 8' | 10' | 500' | 9% | 40 |
| ** With Continuous Left Turn Lane (2.2B) | 2 / 12' | 14' | 54'       | 78'       | 2 / 8' | 10' | 500' | 9% | 40 |
| *** With Intermittent Turn Lanes (2.2C)  | 2 / 12' | -   | 40' - 54' | 64' - 78' | 2 / 8' | 10' | 500' | 9% | 40 |
| *** With Passing Lane (2.2D)             | 2 / 12' | -   | 40'       | 88'       | 2 / 8' | 10' | 500' | 9% | 40 |
| ** No Median (2.2E)                      | 2 / 12' | -   | 40'       | 64'       | 2 / 8' | 10' | 500' | 9% | 40 |
| *** With Reduced Shoulder (2.2F)         | 2 / 12' | -   | 40'       | 52'       | 2 / 2' | 10' | 500' | 9% | 40 |

### Minor Collector

|   |         |     |           |           |        |     |      |     |    |
|---|---------|-----|-----------|-----------|--------|-----|------|-----|----|
| *** With Raised Median (2.3A)           | 2 / 12' | 14' | 54'       | 82'       | 2 / 8' | 10' | 350' | 12% | 35 |
| *** With Intermittent Turn Lanes (2.3B) | 2 / 12' | -   | 40' - 54' | 68' - 82' | 2 / 8' | 10' | 350' | 12% | 35 |
| *** No Median (2.3C)                    | 2 / 12' | -   | 40'       | 68'       | 2 / 8' | 10' | 350' | 12% | 35 |

- NOTES:
- 1 Minimum longitudinal gradient shall be 1.0 percent for all road classifications shown above.
  - 2 The maximum grade for a permanent cul-de-sac street turning area shall be 6 percent.
  - 3 The maximum grade for a temporary cul-de-sac street turning area shall be that of the classification of the road being constructed.
  - 4 For standards, see County Design Standard Drawing DS-2, DS-3, DS-4, and Section 4.5N of these Standards.
  - 5 Additional pavement and ROW may be required for CE Collectors (4 feet) and Light Collectors (12 feet) in Industrial/Commercial Zones.
  - 6 CE roads needing additional turn lanes will require an additional 12 to 14 feet of pavement and ROW for each lane.
  - 7 The maximum superelevation allowed on CE roads is 6%. Superelevation is not normally required on Non-CE roads.
  - 8 CE roads designated with Bike Lanes will require an additional 10 feet of pavement and ROW. This may be increased to 12' for Collector Roads and above based upon the provisions in Section 7.3 of these standards.
  - 9 The minimum curve radii, shown in the table above, are based on the design speed with 6% superelevation.
  - 10 Interim roads are to be a minimum of 28 feet A.C. within a 40 feet graded roadbed. They may be larger if traffic volumes require more travel lanes.

- LEGEND:
- \* Similar to existing Collector Road
  - \*\* Similar to existing Town Collector
  - \*\*\* Similar to existing Rural Collector
  - + Same as existing Light Collector
  - ++ Similar to existing Rural Light Collector
  - +++ New Classification Standard

Attachment D  
3 of 3

**(c) Density**

Density shall be calculated as provided in §405.

**(d) Floor Area Ratio**

- (1) For development of an individual platted lot, "floor area ratio" means the ratio of the total building floor area to the total lot area, in square feet.
- (2) For a subdivision plat, master plan, or site plan that includes multiple buildings, "floor area ratio" means ratio of the total building floor area to the total area of the development site, in square feet.
- (3) Floor Area ratio of PND relates to entire portion of the nonresidential component of the development.

**(e) Trip Generation**

- (1) The total number of average daily trips (ADT) generated by the proposed development shall not exceed the amount prescribed in the Performance Standards Matrix (Table 407-1), Column (D), per acre of development site. The applicant shall calculate total trips using the procedures established for Traffic Impact Studies (see Article 12.
- (2) Because mixed use development involves a balance between residential and non-residential facilities and a high level of pedestrian infrastructure, many trips are typically captured on-site or are made by non-vehicular modes such as walking or public transportation. In addition, the City finds that design standards for buildings, streets, and building-street relationships are an important factor in reducing the number of trips generated. Accordingly, an application using a TND, PND, or MXE may reduce the projected trips for all eligible uses (see subsection (4), below), as computed in accordance with the *ITE Manual*, by the amount shown in Table 407-2 below. In order to reduce the number of trips as provide in this subsection, the applicant shall provide a phasing schedule consistent with the following:

- A. Following approval of a final site plan and subdivision plat, the first seventy five percent (75%) of all certificates of occupancy for dwelling units shall be issued prior to the establishment of any non-residential use.
- B. No certificate of use and occupancy may be issued for the remaining dwelling units until a certificate of use and occupancy has been issued for one-hundred percent (100%) of the non-residential floor area.

**Table 407-2 Trip Reductions for Mixed Use Development**

| Percent Residential Equivalent Units | Percent Non-residential Equivalent Units | Percent Trips Reduced |
|--------------------------------------|--|-----------------------|
| 85-100%                              | 0-14%                                    | Not Applicable        |
| 75-84%                               | 15-25%                                   | 10%                   |
| 65-74%                               | 25-35%                                   | 20%                   |
| 35-65%                               | 35-74%                                   | 30%                   |
| 25-34%                               | 65-74%                                   | 20%                   |
| 15-24%                               | 75-84%                                   | 10%                   |
| 0-14%                                | 85-100%                                  | Not Applicable        |

**Rules of Interpretation for Table 407-2:**

For purposes of computing the percentage established above, one dwelling unit or 800 square feet of non-residential space shall equal one (1) equivalent unit. The equivalent units shall be located within the boundaries of the proposed development.

- (3) For purposes of this section, the overall trip generation for an eligible use (see subsection (4), below) in the DR, DB, or DBO district shall be reduced by thirty percent (30%).
- (4) For purposes of this subsection, an "eligible use" includes any residential, retail, institutional or industrial use except Auto-Oriented Uses as defined in Article 10 of this Code.

**(f) Stormwater management**

Stormwater credits are defined in the Maryland Department of Environment, 2000 Maryland Stormwater Design Manual, which is hereby incorporated by reference. Credits are calculated for using non-structural practices including Natural Area Conservation, Disconnection of Rooftop Runoff, Disconnection of Non Rooftop Runoff, Sheet Flow to Buffers, Open Channel Use, and Environmentally Sensitive Development. The percentage refers to the reduction in Water Quality Volume (WQv) from a development.



# NCHRP

## REPORT 684

### Enhancing Internal Trip Capture Estimation for Mixed-Use Developments

TRANSPORTATION RESEARCH BOARD  
OF THE NATIONAL ACADEMIES

NATIONAL  
COOPERATIVE  
HIGHWAY  
RESEARCH  
PROGRAM

With the increase in emphasis on livability, compact cities, and smart growth in general, MXDs have become more popular. Many are found in midtown-type urban areas (i.e., the central portion of a city or urban area that is outside the CBD but has higher densities than suburban or general urban and may include an outlying business district). Others are found in suburban locations and a few in urban peripheries. The research team did not include downtowns because they would be very difficult to survey and do not develop as one project or development and, therefore, would not need a TIA for the downtown.

During the period this project was active, the research team received dozens of calls asking for internal capture data for land uses and time periods not included in the ITE method. Requests were most frequently received for

- A.M. peak-hour internal capture rates;
- Land uses not included in the ITE method—most notably hotels, cinemas, and restaurants; and
- Very large MXDs in outlying areas.

### Available Data

There are very limited data available that are capable of supporting internal capture rate estimation methodology that can use information that is *available at the time of zoning*. Three Florida surveys plus three pilot studies conducted for this project were the only surveys with enough detail to develop internal capture methodology

- For both A.M. and P.M. peak hours;
- For use with information that is available at the time of zoning requests and can be reliably projected;
- That provides the ability to analyze the effect of proximity of land uses to each other; and
- That is sensitive to differences in land use mix.

Some cordon counts have been completed for various periods and could be used for validation testing, but, by themselves with land use information, they do not provide what is needed to develop a sensitive procedure. More data are needed.

### Internal Capture Estimation Methodology

#### Expanded ITE Methodology

This project expanded the database from three to six developments and, after considering options, expanded the ITE method to

- Add the weekday A.M. peak hour;
- Add restaurant, cinema, and hotel land uses;

- Create a land use classification structure that would permit disaggregation of the six land uses to more detailed categories should enough data become available;
- Include the effects of proximity (i.e., convenient walking distance) among interacting land uses to represent both compactness and design; and
- Provide a method that could easily be put in spreadsheet form.

This method was tested for its ability to estimate external vehicle trip generation. The existing ITE method estimates produce about one-half of the estimation error that raw ITE trip generation rates produce. The method developed in this project cuts the estimation error in half again, or roughly to about one-fourth of the raw trip generation rates.

The recommended method is described in Chapter 3. The researchers recommend its use for developments of up to 300 acres. Additional data and/or further testing could validate its use for larger developments, but that has not yet been attempted. The researchers do not recommend use of this method for downtowns, SACs, or new town types of development; the researchers do not believe it will be applicable.

The method produced has a component that estimates the effects of proximity. Unfortunately, the database is small enough for the P.M. period that factors could only be developed for some land use pairs. Absence of A.M. peak-hour data from the Florida studies precluded any A.M. proximity factors from being developed. This project's estimation method generally produced slightly closer P.M. estimates with the proximity factor included. It is recommended for use, but it is also recommended that when additional data becomes available, attempts should be made to develop proximity factors for more land use pairs.

### Suggested Modifications to Existing ITE Procedures

As mentioned previously, the recommended estimation method builds on the current ITE internal trip capture procedures contained in the second edition of the *Trip Generation Handbook* (1). Incorporation of this project's recommendations could be accomplished by performing the following:

- Expanding Tables 7.1 and 7.2 of the *Trip Generation Handbook* (1) to include all six land uses covered in this report; and
- Adding the proximity adjustment to be made after the unconstrained internal capture estimates are performed but before the balancing process.

The data collection procedures could be modified to include those recommended in this project, including the next section.

**(NOT SO)**  
**BRIEF GUIDE OF VEHICULAR TRAFFIC GENERATION RATES**  
**FOR THE SAN DIEGO REGION**

APRIL 2002

401 B Street, Suite 800  
San Diego, California 92101  
(619) 699-1900 • Fax (619) 699-1950

NOTE: This listing only represents a *guide* of average, or estimated, traffic generation "driveway" rates and some very general trip data for land uses (emphasis on acreage and building square footage) in the San Diego region. These rates (both local and national) are subject to change as future documentation becomes available, or as regional sources are updated. For more specific information regarding traffic data and trip rates, please refer to the San Diego Traffic Generators manual. *Always check with local jurisdictions for their preferred or applicable rates.*

| LAND USE   | TRIP CATEGORIES<br>(PRIMARY: DIVERTED: PASS-BY)* | ESTIMATED WEEKDAY VEHICLE<br>TRIP GENERATION RATE (DRIVEWAY)                                     | HIGHEST PEAK HOUR % (plus IN:OUT ratio)<br>Between 6:00-9:30 A.M. Between 3:00-6:30 P.M. |                       | TRIP LENGTH<br>(Miles)* |
|--|--|--|--|-----------------------|-------------------------|
| AGRICULTURE (Open Space) .....   | [80:18:2]  | 2/acre**   |  |                       | 10.8                    |
| AIRPORT .....  | [78:20:2]  |  |  |                       | 12.5                    |
| Commercial   |  | 60/acre, 100/flight, 70/1000 sq. ft.* **   | 8% (6:4)   | 8% (5:5)              |                         |
| General Aviation   |  | 6/acre, 2/flight, 6/based aircraft* **   | 9% (7:3)   | 15% (5:5)             |                         |
| Heliports  |  | 100/acre**   |  |                       |                         |
| AUTOMOBILE*  |  |  |  |                       |                         |
| Car Wash   |  |  |  |                       |                         |
| Automatic  |  | 900/site, 600/acre**   | 4% (5:5)   | 9% (5:5)              |                         |
| Self-serve   |  | 100/wash stall**   | 4% (5:5)   | 8% (5:5)              |                         |
| Gasoline .....   | [21:51:28]                                       |  |  |                       | 2.8                     |
| with/Food Mart   |  | 160/vehicle fueling space**  | 7% (5:5)   | 8% (5:5)              |                         |
| with/Food Mart & Car Wash  |  | 155/vehicle fueling space**  | 8% (5:5)   | 9% (5:5)              |                         |
| Older Service Station Design   |  | 150/vehicle fueling space, 800/station**   | 7% (5:5)   | 9% (5:5)              |                         |
| Sales (Dealer & Repair)  |  | 50/1000 sq. ft., 300/acre, 60/service stall* **  | 8% (7:3)   | 8% (4:6)              |                         |
| Auto Repair Center   |  | 20/1000 sq. ft., 400/acre, 20/service stall*   | 8% (7:3)   | 11% (4:6)             |                         |
| Auto Parts Sales   |  | 60/1000 sq. ft.*   | 4%   | 10% (5:5)             |                         |
| Quick Lube   |  | 40/service stall**   | 7% (6:4)   | 11% (5:5)             |                         |
| Tire Store   |  | 25/1000 sq. ft., 30/service stall**  | 7% (6:4)   | 11% (5:5)             |                         |
| CEMETERY   |  | 5/acre*  |  |                       |                         |
| CHURCH (or Synagogue) .....  | [64:25:11]                                       | 9/1000 sq. ft., 30/acre** (quadruple rates for Sunday, or days of assembly)                      | 5% (6:4)   | 8% (5:5)              | 5.1                     |
| COMMERCIAL/RETAIL*   |  |  |  |                       |                         |
| Super Regional Shopping Center<br>(More than 80 acres, more than<br>800,000 sq. ft., w/usually 3+<br>major stores)   |  | 35/1000 sq. ft., <sup>c</sup> 400/acre*  | 4% (7:3)   | 10% (5:5)             |                         |
| Regional Shopping Center .....   | [54:35:11]                                       | 50/1000 sq. ft., <sup>c</sup> 500/acre*  | 4% (7:3)   | 9% (5:5)              | 5.2                     |
| (40-80 acres, 400,000-800,000<br>sq. ft., w/usually 2+ major stores)   |  |  |  |                       |                         |
| Community Shopping Center .....  | [47:31:22]                                       | 80/1000 sq. ft., 700/acre* **  | 4% (6:4)   | 10% (5:5)             | 3.6                     |
| (15-40 acres, 125,000-400,000 sq. ft.,<br>w/usually 1 major store, detached<br>restaurant(s), grocery and drug store)  |  |  |  |                       |                         |
| Neighborhood Shopping Center<br>(Less than 15 acres, less than<br>125,000 sq. ft., w/usually grocery<br>& drug store, cleaners, beauty & barber shop,<br>& fast food services) |  | 120/1000 sq. ft., 1200/acre* **  | 4% (6:4)   | 10% (5:5)             |                         |
| Commercial Shops .....   | [45:40:15]                                       |  |  |                       | 4.3                     |
| Specialty Retail/Strip Commercial  |  | 40/1000 sq. ft., 400/acre*   | 3% (6:4)   | 9% (5:5)              |                         |
| Electronics Superstore   |  | 50/1000 sq. ft.**  |  | 10% (5:5)             |                         |
| Factory Outlet   |  | 40/1000 sq. ft.**  | 3% (7:3)   | 9% (5:5)              |                         |
| Supermarket  |  | 150/1000 sq. ft., 2000/acre* **  | 4% (7:3)   | 10% (5:5)             |                         |
| Drugstore  |  | 90/1000 sq. ft.**  | 4% (6:4)   | 10% (5:5)             |                         |
| Convenience Market (15-16 hours)   |  | 500/1000 sq. ft.**   | 8% (5:5)   | 8% (5:5)              |                         |
| Convenience Market (24 hours)  |  | 700/1000 sq. ft.**   | 9% (5:5)   | 7% (5:5)              |                         |
| Convenience Market (w/gasoline pumps)  |  | 850/1000 sq. ft., 550/vehicle fueling space**  | 6% (5:5)   | 7% (5:5)              |                         |
| Discount Club  |  | 60/1000 sq. ft., 600/acre* **  | 7% (7:3)   | 9% (5:5)              |                         |
| Discount Store   |  | 60/1000 sq. ft., 600/acre**  | 3% (6:4)   | 8% (5:5)              |                         |
| Furniture Store  |  | 6/1000 sq. ft., 100/acre* *  | 4% (7:3)   | 9% (5:5)              |                         |
| Lumber Store   |  | 30/1000 sq. ft., 150/acre**  | 7% (6:4)   | 8% (5:5)              |                         |
| Home Improvement Superstore  |  | 40/1000 sq. ft.**  | 5% (6:4)   | 9% (5:5)              |                         |
| Hardware/Paint Store   |  | 60/1000 sq. ft., 600/acre**  | 3% (6:4)   | 10% (5:5)             |                         |
| Garden Nursery   |  | 40/1000 sq. ft., 90/acre**   | 3% (6:4)   | 9% (5:5)              |                         |
| Mixed Use: Commercial (w/supermarket)/Residential  |  | 110/1000 sq. ft., 2000/acre* (commercial only)<br>15/dwelling unit, 200/acre* (residential only) | 3% (6:4)<br>9% (3:7)   | 9% (5:5)<br>13% (6:4) |                         |
| EDUCATION  |  |  |  |                       |                         |
| University (4 years) .....   | [91:9:0]   | 2.4/student, 100 acre*   | 10% (8:2)  | 9% (3:7)              | 8.9                     |
| Junior College (2 years) .....   | [92:7:1]   | 1.2/student, 24/1000 sq. ft., 120/acre* **   | 12% (8:2)  | 9% (6:4)              | 9.0                     |
| High School .....  | [75:19:6]  | 1.3/student, 16/1000 sq. ft., 60/acre* **  | 20% (7:3)  | 10% (4:6)             | 4.8                     |
| Middle/Junior High .....   | [63:25:12]                                       | 1.4/student, 12/1000 sq. ft., 50/acre* *   | 30% (6:4)  | 9% (4:6)              | 5.0                     |
| Elementary .....   | [57:25:10]                                       | 1.6/student, 14/1000 sq. ft., 90/acre* **  | 32% (6:4)  | 9% (4:6)              | 3.4                     |
| Day Care .....   | [28:58:14]                                       | 5/child, 80/1000 sq. ft.**   | 17% (5:5)  | 18% (5:5)             | 3.7                     |
| FINANCIAL*   | [35:42:23]                                       |  |  |                       | 3.4                     |
| Bank (Walk-in only)  |  | 150/1000 sq. ft., 1000/acre* **  | 4% (7:3)   | 8% (4:6)              |                         |
| with Drive-Through   |  | 200/1000 sq. ft., 1500/acre*   | 4% (6:4)   | 10% (5:5)             |                         |
| Drive-Through only   |  | 250 (125 one-way)/lane*  | 3% (5:5)   | 13% (5:5)             |                         |
| Savings & Loan   |  | 60/1000 sq. ft., 600/acre**  | 2%   | 9%                    |                         |
| Drive-Through only   |  | 100 (50 one-way)/lane**  | 4%   | 15%                   |                         |
| HOSPITAL .....   | [73:25:2]  |  |  |                       | 8.3                     |
| General  |  | 20/bed, 25/1000 sq. ft., 250/acre*   | 8% (7:3)   | 10% (4:6)             |                         |
| Convalescent/Nursing   |  | 3/bed**  | 7% (6:4)   | 7% (4:6)              |                         |
| INDUSTRIAL   |  |  |  |                       |                         |
| Industrial/Business Park (commercial included) .....   | [79:19:2]  | 16/1000 sq. ft., 200/acre* **  | 12% (8:2)  | 12% (2:8)             | 9.0                     |
| Industrial Park (no commercial)  |  | 8/1000 sq. ft., 90/acre**  | 11% (9:1)  | 12% (2:8)             |                         |
| Industrial Plant (multiple shifts) .....   | [92:5:3]   | 10/1000 sq. ft., 120/acre*   | 14% (8:2)  | 15% (3:7)             | 11.7                    |
| Manufacturing/Assembly   |  | 4/1000 sq. ft., 50/acre**  | 19% (9:1)  | 20% (2:8)             |                         |
| Warehousing  |  | 5/1000 sq. ft., 60/acre**  | 13% (7:3)  | 15% (4:6)             |                         |
| Storage  |  | 2/1000 sq. ft., 0.2/vault, 30/acre*  | 6% (5:5)   | 9% (5:5)              |                         |
| Science Research & Development   |  | 8/1000 sq. ft., 80/acre*   | 16% (9:1)  | 14% (1:9)             |                         |
| Landfill & Recycling Center  |  | 6/acre   | 11% (5:5)  | 10% (4:6)             |                         |

(OVER)

MEMBER AGENCIES: Cities of Carlsbad, Chula Vista, Coronado, Del Mar, El Cajon, Encinitas, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, San Diego, San Marcos, Santee, Solana Beach, Vista and County of San Diego.

ADVISORY/LIAISON MEMBERS: California Department of Transportation, County Water Authority, U.S. Department of Defense, S.D. Unified Port District and Tijuana/Baja California.

| LAND USE   | TRIP CATEGORIES<br>(PRIMARY:DIVERTED:PASS-BY)* | ESTIMATED WEEKDAY VEHICLE<br>TRIP GENERATION RATE (DRIVEWAY)   | HIGHEST PEAK HOUR % (plus IN/OUT ratio)<br>Between 6:00-9:30 A.M. Between 3:00-6:30 P.M. |       |     |       | TRIP LENGTH<br>(Miles)* |
|--|--|--|--|-------|-----|-------|-------------------------|
| LIBRARY .....  | [44:44:12]                                     | 50/1000 sq. ft., 400/acre**                                    | 2%   | (7:3) | 10% | (5:5) | 3.9                     |
| LODGING .....  | [58:38:4]                                      |  |  |       |     |       | 7.6                     |
| Hotel (w/convention facilities/restaurant)                       |  | 10/occupied room, 300/acre                                     | 6%   | (6:4) | 8%  | (6:4) |                         |
| Motel  |  | 9/occupied room, 200/acre*                                     | 8%   | (4:6) | 9%  | (6:4) |                         |
| Resort Hotel   |  | 8/occupied room, 100/acre*                                     | 8%   | (6:4) | 7%  | (4:6) |                         |
| Business Hotel   |  | 7/occupied room**  | 8%   | (4:6) | 9%  | (6:4) |                         |
| MILITARY .....   | [82:16:2]                                      | 2.5/military & civilian personnel*                             | 9%   | (9:1) | 10% | (2:8) | 11.2                    |
| OFFICE .....   |  |  |  |       |     |       |                         |
| Standard Commercial Office .....                                 | [77:19:4]                                      | 20/1000 sq. ft., 300/acre*                                     | 14%  | (9:1) | 13% | (2:8) | 8.8                     |
| (less than 100,000 sq. ft.)                                      |  |  |  |       |     |       |                         |
| Large (High-Rise) Commercial Office .....                        | [82:15:3]                                      | 17/1000 sq. ft., 600/acre*                                     | 13%  | (9:1) | 14% | (2:8) | 10.0                    |
| (more than 100,000 sq. ft., 6+ stories)                          |  |  |  |       |     |       |                         |
| Office Park (400,000+ sq. ft.)                                   |  | 12/1000 sq.ft., 200/acre* **                                   | 13%  | (9:1) | 13% | (2:8) |                         |
| Single Tenant Office   |  | 14/1000 sq. ft., 180/acre*                                     | 15%  | (9:1) | 15% | (2:8) | 8.8                     |
| Corporate Headquarters   |  | 7/1000 sq. ft., 110/acre*                                      | 17%  | (9:1) | 16% | (1:9) |                         |
| Government (Civic Center) .....                                  | [50:34:16]                                     | 30/1000 sq. ft.**  | 9%   | (9:1) | 12% | (3:7) | 6.0                     |
| Post Office  |  |  |  |       |     |       |                         |
| Central/Walk-In Only   |  | 90/1000 sq. ft.**  | 3%   |       | 7%  |       |                         |
| Community (not including mail drop lane)                         |  | 200/1000 sq. ft., 1300/acre*                                   | 6%   | (6:4) | 9%  | (5:5) |                         |
| Community (w/mail drop lane)                                     |  | 300/1000 sq. ft., 2000/acre*                                   | 7%   | (5:5) | 10% | (5:5) |                         |
| Mail Drop Lane only  |  | 1500 (750 one-way)/lane*                                       | 7%   | (5:5) | 12% | (5:5) |                         |
| Department of Motor Vehicles                                     |  | 180/1000 sq. ft., 900/acre**                                   | 8%   | (6:4) | 10% | (4:6) |                         |
| Medical-Dental .....   | [60:30:10]                                     | 50/1000 sq. ft., 500/acre*                                     | 8%   | (8:2) | 11% | (3:7) | 6.4                     |
| PARKS .....  | [66:28:6]                                      |  | 4%   |       | 8%  |       | 5.4                     |
| City (developed w/meeting rooms and sports facilities)           |  | 50/acre*   | 13%  | (5:5) | 9%  | (5:5) |                         |
| Regional (developed)   |  | 20/acre*   |  |       |     |       |                         |
| Neighborhood/County (undeveloped)                                |  | 5/acre (add for specific sport uses), 6/picnic site* **        |  |       |     |       |                         |
| State (average 1000 acres)                                       |  | 1/acre, 10/picnic site**                                       |  |       |     |       |                         |
| Amusement (Theme)  |  | 80/acre, 130/acre (summer only)**                              |  |       | 8%  | (6:4) |                         |
| San Diego Zoo  |  | 115/acre*  |  |       |     |       |                         |
| Sea World  |  | 80/acre*   |  |       |     |       |                         |
| RECREATION .....   |  |  |  |       |     |       |                         |
| Beach, Ocean or Bay .....  | [52:39:9]                                      | 600/1000 ft. shoreline, 60/acre*                               |  |       |     |       | 6.3                     |
| Beach, Lake (fresh water)  |  | 50/1000 ft. shoreline, 5/acre*                                 |  |       |     |       |                         |
| Bowling Center   |  | 20/1000 sq. ft., 300/acre, 30/lane**                           | 7%   | (7:3) | 11% | (4:6) |                         |
| Campground   |  | 4/campsite**   | 4%   |       | 8%  |       |                         |
| Golf Course  |  | 7/acre, 40/tee, 700/course* **                                 | 7%   | (8:2) | 9%  | (3:7) |                         |
| Driving Range only   |  | 70/acre, 14/tee box*   | 3%   | (7:3) | 9%  | (5:5) |                         |
| Marinas  |  | 4/berth, 20/acre* **   | 3%   | (3:7) | 7%  | (6:4) |                         |
| Multi-purpose (miniature golf, video arcade, batting cage, etc.) |  | 90/acre  | 2%   |       | 8%  |       |                         |
| Racquetball/Health Club  |  | 30/1000 sq. ft., 300/acre, 40/court*                           | 4%   | (6:4) | 9%  | (6:4) |                         |
| Tennis Courts  |  | 16/acre, 30/court**  | 5%   |       | 11% | (5:5) |                         |
| Sports Facilities  |  |  |  |       |     |       |                         |
| Outdoor Stadium  |  | 50/acre, 0.2/seat*   |  |       |     |       |                         |
| Indoor Arena   |  | 30/acre, 0.1/seat*   |  |       |     |       |                         |
| Racetrack  |  | 40/acre, 0.6/seat*   |  |       |     |       |                         |
| Theaters (multiplex w/matinee) .....                             | [66:17:17]                                     | 80/1000 sq. ft., 1.8/seat, 360/screen*                         | 13%  |       | 8%  | (6:4) | 6.1                     |
| RESIDENTIAL .....  | [86:11:3]                                      |  |  |       |     |       | 7.9                     |
| Estate, Urban or Rural   |  | 12/dwelling unit**   | 8%   | (3:7) | 10% | (7:3) |                         |
| (average 1-2 DU/acre)  |  |  |  |       |     |       |                         |
| Single Family Detached   |  | 10/dwelling unit**   | 8%   | (3:7) | 10% | (7:3) |                         |
| (average 3-6 DU/acre)  |  |  |  |       |     |       |                         |
| Condominium  |  | 8/dwelling unit**  | 8%   | (2:8) | 10% | (7:3) |                         |
| (or any multi-family 6-20 DU/acre)                               |  |  |  |       |     |       |                         |
| Apartment  |  | 6/dwelling unit**  | 8%   | (2:8) | 9%  | (7:3) |                         |
| (or any multi-family units more than 20 DU/acre)                 |  |  |  |       |     |       |                         |
| Military Housing (off-base, multi-family)                        |  |  |  |       |     |       |                         |
| (less than 6 DU/acre)  |  | 8/dwelling unit  | 7%   | (3:7) | 9%  | (6:4) |                         |
| (6-20 DU/acre)   |  | 6/dwelling unit  | 7%   | (3:7) | 9%  | (6:4) |                         |
| Mobile Home  |  |  |  |       |     |       |                         |
| Family   |  | 5/dwelling unit, 40/acre*                                      | 8%   | (3:7) | 11% | (6:4) |                         |
| Adults Only  |  | 3/dwelling unit, 20/acre*                                      | 9%   | (3:7) | 10% | (6:4) |                         |
| Retirement Community   |  | 4/dwelling unit**  | 9%   | (4:6) | 7%  | (6:4) |                         |
| Congregate Care Facility   |  | 2.5/dwelling unit**  | 4%   | (6:4) | 8%  | (5:5) |                         |
| RESTAURANT* .....  | [51:37:12]                                     |  |  |       |     |       | 4.7                     |
| Quality  |  | 100/1000 sq. ft., 3/seat, 500/acre* **                         | 1%   | (6:4) | 8%  | (7:3) |                         |
| Sit-down, high turnover  |  | 160/1000 sq. ft., 6/seat, 1000/acre* **                        | 8%   | (5:5) | 8%  | (6:4) |                         |
| Fast Food (w/drive-through)                                      |  | 650/1000 sq. ft., 20/seat, 3000/acre* **                       | 7%   | (5:5) | 7%  | (5:5) |                         |
| Fast Food (without drive-through)                                |  | 700/1000 sq. ft.* **   | 9%   | (6:4) | 7%  | (5:5) |                         |
| Deli/Caterers (7am-4pm)  |  | 150/1000 sq. ft., 11/seat*                                     | 9%   | (6:4) | 3%  | (3:7) |                         |
| TRANSPORTATION .....   |  |  |  |       |     |       |                         |
| Bus Depot  |  | 25/1000 sq. ft.* **  |  |       |     |       |                         |
| Truck Terminal   |  | 10/1000 sq. ft., 7/bay, 80/acre**                              | 9%   | (4:6) | 8%  | (5:5) |                         |
| Waterport/Marine Terminal  |  | 170/berth, 12/acre**   |  |       |     |       |                         |
| Transit Station (Light Rail w/parking)                           |  | 300/acre, 2 1/2/parking space (4/occupied)* **                 | 14%  | (7:3) | 19% | (3:7) |                         |
| Park & Ride Lots   |  | 400/acre (600/paved acre),<br>5/parking space (8/occupied)* ** | 14%  | (7:3) | 19% | (3:7) |                         |

\* Primary source: San Diego Traffic Generators.

\* Other sources: ITE Trip Generation Report (6th Edition), Trip Generation Rates (other agencies and publications), various SANDAG & CALTRANS studies, reports and estimates.

\* Trip category percentage ratios are daily from local household surveys, often cannot be applied to very specific land uses, and do not include non-resident drivers (dnr SANDAG Analysis of Trip Diversion, revised November, 1990):

PRIMARY - one trip directly between origin and primary destination.

DIVERTED - linked trip having one or more stops along the way to a primary destination whose distance compared to direct distance  $\geq 1$  mile.

PASS-BY - undiverted or diverted < 1 mile.

\* Trip lengths are average weighted for all trips to and from general land use sites. (All trips system-wide average length = 6.9 miles)

\* Fitted curve equation:  $\ln(T) = 0.502 \ln(x) + 6.945$  } T = total trips, x = 1,000 sq. ft.

\* Fitted curve equation:  $\ln(T) = 0.756 \ln(x) + 3.950$  }

\* Fitted curve equation:  $\ln(T) = -2.169 \ln(x) + 12.85$

T = trips/DU, d = density (DU/acre), DU = dwelling unit

\* Suggested PASS-BY (undiverted or diverted < 1 mile) percentages for trip rate reductions only during P.M. peak period (based on combination of local data review and other sources\*\*):

|   |     |
|---|-----|
| COMMERCIAL/RETAIL                         |     |
| Regional Shopping Center                  | 20% |
| Community                                 | 30% |
| Neighborhood                              | 40% |
| Specialty Retail/Strip Commercial (other) | 10% |
| Supermarket                               | 40% |
| Convenience Market                        | 50% |
| Discount Club/Store                       | 30% |
| FINANCIAL                                 |     |
| Bank                                      | 25% |
| AUTOMOBILE                                |     |
| Gasoline Station                          | 50% |
| RESTAURANT                                |     |
| Quality                                   | 10% |
| Sit-down high turnover                    | 20% |
| Fast Food                                 | 40% |

\* Trip Reductions - In order to help promote regional "smart growth" policies, and acknowledge San Diego's expanding mass transit system, consider vehicle trip rate reductions (with proper documentation and necessary adjustments for peak periods). The following are some examples:

[1] A 5% daily trip reduction for land uses with transit access or near transit stations accessible within 1/4 mile.

[2] Up to 10% daily trip reduction for mixed-use developments where residential and commercial retail are combined (demonstrate mode split of walking trips to replace vehicular trips).

TABLE 7  
2004 ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS

|    | Location   | Peak Hour | Lanes N/E | Lanes S/W | Capacity N/E | Capacity S/W | Volume N/E   | Volume S/W   | V/C N/E      | V/C S/W      | LOS N/E | LOS S/W |
|----|--|-----------|-----------|-----------|--------------|--------------|--------------|--------------|--------------|--------------|---------|---------|
| 18 | Honoapiʻilani Hwy @ Fleming Rd & Front St (S Junction) | AM<br>PM  | 2<br>2    | 2<br>2    | 850<br>850   | 850<br>850   | 1069<br>1155 | 778<br>1142  | 0.63<br>0.68 | 0.46<br>0.67 | B<br>B  | A<br>B  |
| 19 | Honoapiʻilani Hwy 1.07 Mi W of Tunnel                  | AM<br>PM  | 1<br>1    | 1<br>1    | 1000<br>1000 | 1000<br>1000 | 655<br>1105  | 993<br>1001  | 0.66<br>1.11 | 0.99<br>1.00 | B<br>F  | E<br>F  |
| 20 | South Kihei Rd @ Mokulele Hwy                          | AM<br>PM  | 1<br>1    | 1<br>1    | 800<br>800   | 800<br>800   | 935<br>641   | 540<br>914   | 1.17<br>0.80 | 0.68<br>1.14 | F<br>D  | B<br>F  |
| 21 | South Kihei Rd @ Keonekal Rd                           | AM<br>PM  | 1<br>1    | 1<br>1    | 750<br>750   | 750<br>750   | 482<br>672   | 498<br>651   | 0.64<br>0.90 | 0.66<br>0.87 | B<br>D  | B<br>D  |
| 22 | Piliāni Hwy @ Mokulele Hwy                             | AM<br>PM  | 2<br>2    | 2<br>2    | 850<br>850   | 850<br>850   | 857<br>1168  | 1305<br>1069 | 0.50<br>0.69 | 0.77<br>0.63 | A<br>B  | C<br>B  |
| 23 | Piliāni Hwy @ Lipoa St & Lipoa Pkwy                    | AM<br>PM  | 1<br>1    | 1<br>1    | 1200<br>1200 | 1200<br>1200 | 969<br>1195  | 1079<br>1046 | 0.81<br>1.00 | 0.90<br>0.87 | D<br>E  | D<br>D  |
| 24 | Piliāni Hwy between Kanani & Alanui Ke Alii Rds        | AM<br>PM  | 1<br>1    | 1<br>1    | 1200<br>1200 | 1200<br>1200 | 943<br>1107  | 928<br>1005  | 0.79<br>0.92 | 0.77<br>0.84 | C<br>E  | C<br>D  |
| 25 | Hana Hwy & Baldwin Av                                  | AM<br>PM  | 1<br>1    | 1<br>1    | 1000<br>1000 | 1000<br>1000 | 463<br>729   | 890<br>557   | 0.46<br>0.73 | 0.89<br>0.56 | A<br>C  | D<br>A  |
| 26 | Hana Hwy & Baldwin Av                                  | AM<br>PM  | 1<br>1    | 1<br>1    | 400<br>400   | 400<br>400   | 294<br>262   | 193<br>271   | 0.74<br>0.66 | 0.48<br>0.68 | C<br>B  | A<br>B  |
| 27 | Haleakala Hwy @ Halimaile Rd                           | AM<br>PM  | 2<br>2    | 2<br>2    | 1200<br>1200 | 1200<br>1200 | 2076<br>918  | 545<br>1918  | 0.87<br>0.38 | 0.23<br>0.80 | D<br>A  | A<br>C  |
| 28 | Haleakala Hwy @ Makawao Av & Loha St                   | AM<br>PM  | 1<br>1    | 1<br>1    | 600<br>600   | 600<br>600   | 461<br>516   | 588<br>552   | 0.77<br>0.86 | 0.98<br>0.92 | C<br>D  | E<br>E  |
| 29 | Kula Hwy @ Omaoplo Rd                                  | AM<br>PM  | 1<br>1    | 1<br>1    | 1000<br>1000 | 1000<br>1000 | 729<br>471   | 447<br>546   | 0.73<br>0.47 | 0.45<br>0.55 | C<br>A  | A<br>A  |
| 30 | Haleakala Hwy & Kekaulike Av @ Haleakala Crater Rd     | AM<br>PM  | 1<br>1    | 1<br>1    | 850<br>850   | 850<br>850   | 147<br>110   | 94<br>88     | 0.17<br>0.13 | 0.11<br>0.10 | A<br>A  | A<br>A  |
| 31 | Hana Hwy & Kailua Bridge                               | AM<br>PM  | 1<br>1    | 1<br>1    | 300<br>300   | 300<br>300   | 28<br>120    | 101<br>39    | 0.09<br>0.40 | 0.34<br>0.13 | A<br>A  | A<br>A  |

NEIL ABERCROMBIE  
GOVERNOR

MAJOR GENERAL DARRYL D. M. WONG  
DIRECTOR OF CIVIL DEFENSE

DOUG MAYNE  
VICE DIRECTOR OF CIVIL DEFENSE



PHONE (808) 733-4300  
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**STATE OF HAWAII**  
**DEPARTMENT OF DEFENSE**  
**OFFICE OF THE DIRECTOR OF CIVIL DEFENSE**  
3949 DIAMOND HEAD ROAD  
HONOLULU, HAWAII 96816-4495

April 10, 2012

LAND USE COMMISSION  
STATE OF HAWAII  
2012 APR 12 P 1:42

Olowalu Town, LLC and  
Olowalu Ekolu, LLC  
2035 Main Street, Suite 1  
Wailuku, Hawaii 96793

Gentlemen:

Draft Environmental Impact Statement (DEIS) for Olowalu Town  
Master Plan at TMK (2)4-8-003:084, 098 through 118, and 124,  
Olowalu, Lahaina, Maui, Hawaii

Thank you for the opportunity to comment on the subject project.

As acknowledged and restated in the DEIS, the proposed regional mixed-use development parcels are located within areas designated Flood Zone X, AE, AO and AEF. As portions of the project are subject to possible but undetermined flood risks, we strongly recommend the implementation of flood mitigation measures, as appropriate, during the planning and design phases of the development. In addition, the incorporation of design elements to mitigate the effect of high-wind events on structures should also be considered for this development.

The existing siren coverage encompasses the center area of Olowalu Town Master Plan. However, two additional omni-directional 121 db(c) sirens are required for complete coverage of the proposed development. State Civil Defense will work with the developer on placement of these additional sirens.

If you have any questions, please call Ms. Havinne Okamura, Hazard Mitigation Planner, at (808)733-4300, extension 556.

Sincerely,

A handwritten signature in black ink, appearing to read "Doug Mayne".

DOUG MAYNE  
Vice Director of Civil Defense

c: Mr. Orlando Davidson, Land Use Commission ✓  
Ms. Colleen Suyama, Munekiyo & Hiraga, Inc.

LAND USE COMMISSION  
STATE OF HAWAII

2012 MAY -9 A 8:08

Surfrider Foundation Maui Chapter  
PO Box 790549 Paia, Maui HI 96779

May 7, 2012

To: State Land Use Commission  
PO Box 2359  
Honolulu, HI 96804  
Attention: Dan Davidson



Re: Comments on DEIS for Proposed Olowalu Town Master Plan  
on TMK (2) 4-8-003: 84, 98-118 and 124

Greetings Land Use Commissioners:

Surfrider Foundation Maui Chapter (SFMC) is concerned with issues that affect our oceans and shorelines. We are grateful for a chance to offer these comments on the proposed project. Our comments concern several topics: Impacts to Beach Access and Water Quality and Good Planning Design. We apologize for being beyond the comment deadline. We had to have board approval to send the comments.

**Beach Access:**

The Olowalu Draft EIS shows a new alignment of Honoapiilani Hwy that will be created to serve the proposed development. It also indicates that the existing road will remain as a low speed coastal road, but two sections of the existing highway will be removed at the north and south ends of the proposed project. Both stretches of Honoapiilani Hwy that proposed to be removed appear to be in areas well used for recreational access.

It seems from the map, that anyone wanting to access those shoreline areas after the proposed highway re-alignment was built would need to drive down a separate road from the new alignment to the coastal road. We didn't really see this discussed in the DEIS document, but it seems to us that this is a big change to people's ease of coastal access. Here's how a local website describes Olowalu:

"Just off the Honoapiilani Highway, Olowalu is the easiest spot to access on the island. You can literally go from driving on the highway to riding a wave in less than 2 minutes."

It's true, right now a shoreline user just has to pull over their vehicle, park and access the beach. Under the new arrangement a person needs to leave Honoapiilani Hwy and go on another road around the new development, and then follow that road back down to the remaining end of the old Honoapiilani Hwy. This is an impact that should be discussed.

We request that the Final EIS give specific information on the new proposed beach access routes, the length of road a beachgoer has to travel to get to the old road; the amount of traffic a beachgoer will have to go through to get to the shoreline if the route passes through the "new town;" the amount of parking available on the shore; and whether those on the new upper alignment will be able to still see the coast and check out the wave and weather conditions? We also request that the FEIS discuss how much of any

future beach parks along the Olowalu coast will be the publicly owned 100 ft wide State Beach Reserve and how much will be additional land provided by the landowner for park purposes?

Will there be new shoreline access points created? If so where and how many? Better Maps Please!

#### **Water Quality:**

We see that a sewage treatment plant is proposed across from a popular surf spot. The DEIS doesn't seem concerned that this location could effect the ocean water quality or ocean users like fishermen and women, surfers and divers. We would like to see information in the EIS about how large a storm it would take to overwhelm the treatment plant and its wetland storage site. What happens if there is a hurricane or tsunami on the West side?

Where is the wetland going to be? How will the odor of the plant affect ocean users? Will it have a constant odor like the plants in Lahaina and Kihei? The DEIS said that the plant location was chosen to get it far away from new housing and stores, and over near the old Olowalu Dump site. That's great for them, but what about folks who have used this shoreline for generations with no sewage smells? We are very surprised that none of this seems to be discussed in such a large document. There's no sewage treatment plant in Olowalu now. It seems unreasonable for the DEIS to pretend that building a wastewater plant will not expose the ocean to impacts. Nothing is perfect. We request that the FEIS discuss the plants vulnerabilities in more detail.

#### **Good Planning Design:**

SFMG representatives attended the Planning Commission meeting in Lahaina where the Maui Island Plan was discussed. We heard the debate and we understand that the Commission only recommended Olowalu be in the growth boundary if everything makai of the Honoapiilani Hwy was left out of the urban development boundary. We see in the DEIS maps that the Planning Commission recommendation does not show up on any of your "proposed project" maps. They all have urban development shown makai of the current Honoapiilani Hwy.

Shouldn't the EIS show what the Planning Commission voted for: the whole project all set mauka of the current Honoapiilani Hwy, as an Alternative? How can this not be discussed when the DEIS tells the Land Use Commission that the Maui Planning Commission supports the project? Can you show a different project and pretend the Planning Commission supported it? Please show and discuss all the choices in the Final EIS.

Mahalo nui loa



Kyle Juk, Vice-Chair

Surfrider Foundation, Maui Chapter



NEIL ABERCROMBIE  
GOVERNOR



DWIGHT TAKAMINE  
DIRECTOR

AUDREY HIDANO  
DEPUTY DIRECTOR

**STATE OF HAWAII  
DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS**

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HONOLULU, HAWAII 96813  
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Phone: (808) 586-8844/Fax: (808) 586-9099

March 15, 2012

Olowalu Town, LLC and Olowalu Ekolu, LLC  
2035 Main Street, Suite 1  
Wailuku, HI 96793

To Whom It May Concern:

This is in response to the request for comments dated March 6, 2012 on the Draft Environmental Impact Statement for the Olowalu Town Master Plan located in Lahaina, island of Maui.

The Department of Labor and Industrial Relations has no comments, and we foresee no impact on our existing or proposed programs. Should you have any questions, please call me at (808) 586-8844.

Sincerely,

DWIGHT TAKAMINE  
Director

c: ✓ Orlando Davidson, Executive Director, LUC  
Colleen Suyama, Munekiyo & Hiraga, Inc.

LAND USE COMMISSION  
STATE OF HAWAII  
2012 MAR 20 A 10:45

NEIL ABERCROMBIE  
GOVERNOR OF HAWAII



**STATE OF HAWAII**  
**DEPARTMENT OF LAND AND NATURAL RESOURCES**  
**Office of Conservation and Coastal Lands**  
POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

WILLIAM J. AILA, JR.  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

GUY H. KAULUKUKUI  
FIRST DEPUTY

WILLIAM M. TAM  
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

REF: OCCL: AJR

COR: MA-12-197

Colleen Suyama  
c/o Munekiyo and Hiraga, Inc.  
305 High Street, Suite 104  
Wailuku, Hawaii 96793

APR 23 2012

**SUBJECT: Draft Environmental Impact Statement (EIS) for Olowalu Town Master Plan**  
Olowalu, Lahaina, Island of Maui, Hawaii  
TMK(s): (2) 4-8-003:084, 098-118 and 124

Dear Ms. Suyama,

The Department of Land and Natural Resources, Office of Conservation and Coastal Lands (OCCL) is in receipt of your letter regarding a Draft Environmental Impact Statement (EIS) for the Olowalu Town Master Plan. Further review of the subject parcels reveal that the Olowalu Stream area (*parcel 108*) is located within the Conservation District Resource Subzone and that the shoreline area, including Hekili Point and the Olowalu Camp (*parcel 84*) are located within the Conservation District Limited Subzone. As always lands located *makai* of the shoreline are considered to be within the Conservation District.

At this time it is unclear of the proposed extent of specific land uses on *parcel 108* (Olowalu Cultural Reserve) and *parcel 84* (Hekili Point and Camp Olowalu) both of which have portions of land located within the Conservation District. Pursuant to Hawaii Administrative Rules (HAR) §13-5-6 (c) *No land uses shall be conducted in the conservation district unless a permit or approval is first obtained from the department or board.* Identified land uses for the Conservation District can be found in Hawaii Administrative Rules (HAR) §13-5, Subchapter 3.

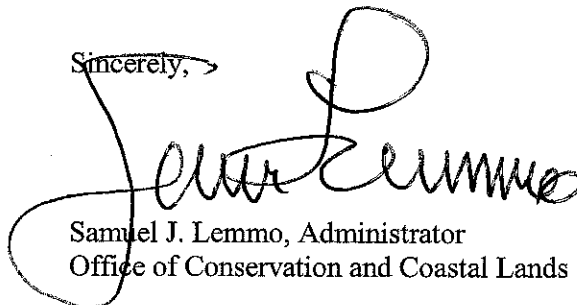
Based on an initial assessment of the proposed project the following identified land uses may or may not be designated to this project depending on the final plan; please refer to our rules (HAR §13-5) for complete descriptions of the following land uses:

1. HAR §13-5-22, P-6, **PUBLIC PURPOSE USES, D-1**
2. HAR §13-5-22, P-10, **SUBDIVISION AND CONSOLIDATION, D-1**
3. HAR §13-5-23, L-2, **LANDSCAPING, D-1**
4. HAR §13-5-24, R-8, **PRIVATE PARKS and NATURE CENTERS, D-1**

LAND USE COMMISSION  
STATE OF HAWAII  
2012 APR 24 A 7:29

Should you have any questions, please feel free to contact Alex J. Roy of our Office of Conservation and Coastal Lands at (808) 587-0316 or via email at [alex.j.roy@hawaii.gov](mailto:alex.j.roy@hawaii.gov)

Sincerely,

A handwritten signature in black ink, appearing to read "Samuel J. Lemmo". The signature is fluid and cursive, with a large loop at the end.

Samuel J. Lemmo, Administrator  
Office of Conservation and Coastal Lands

CC:

*County of Maui, Planning Department*

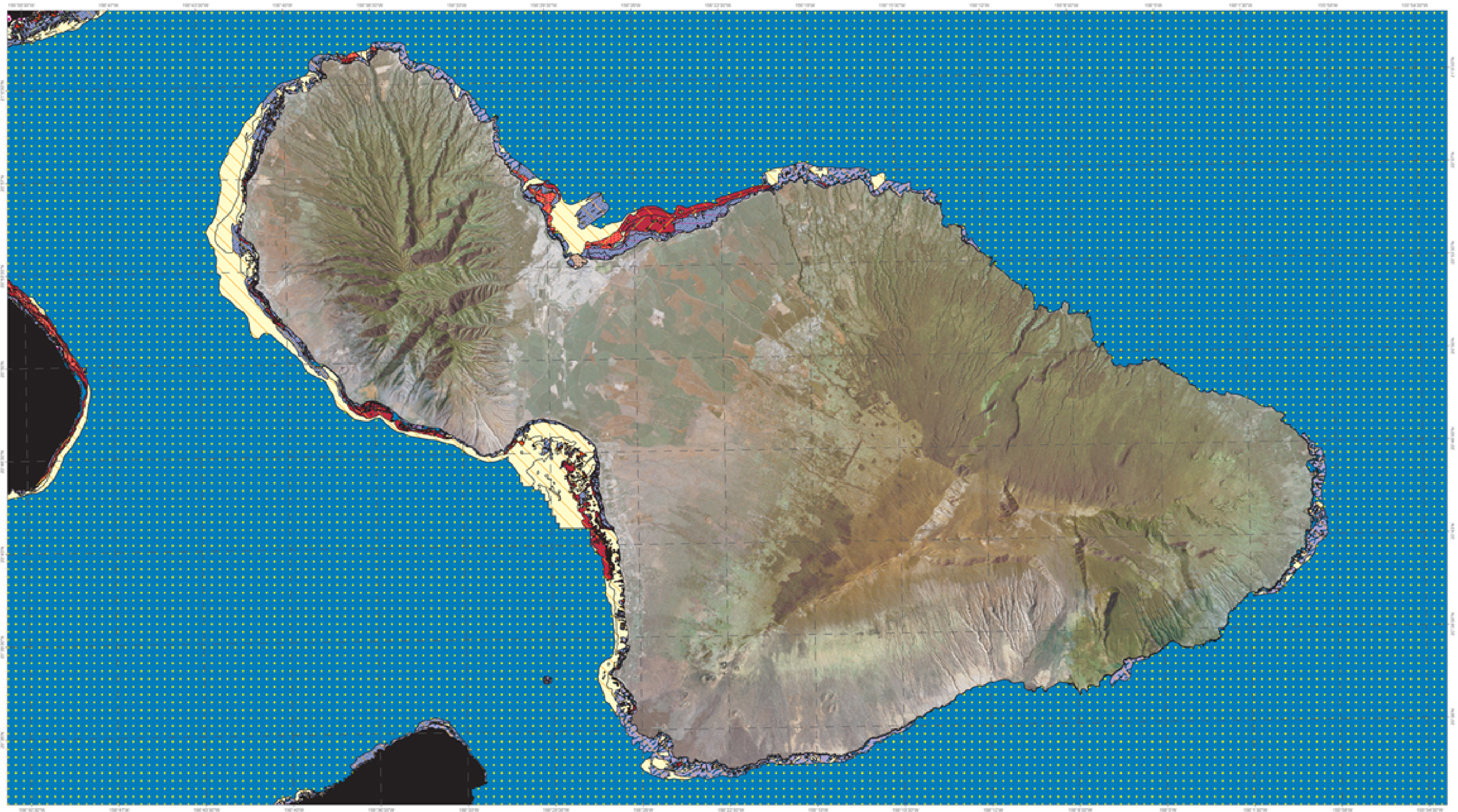
*MDLO*

*Olowalu Town, LLC, 2035 Main St., Suite 1, Wailuku, HI 96793*

*Orlando Davidson, Land Use Commission, P.O. Box 2359, Honolulu, HI 96813*

# Main 8 Hawaiian Islands (Maui) : Shallow-water Benthic Habitats

Frame 59



0 5 10 15 km



Map prepared by the National Ocean Service, Biogeography Branch,  
in cooperation with Analytical Laboratories of Hawaii. 2007

For more information: [http://ccma.nos.noaa.gov/ecosystems/coralreef/main8hi\\_mapping.html](http://ccma.nos.noaa.gov/ecosystems/coralreef/main8hi_mapping.html)





U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
Pacific Islands Regional Office  
1601 Kapiolani Blvd., Suite 1110  
Honolulu, Hawaii 96814-4700  
(808) 944-2200 • Fax (808) 973-2941

Olowalu Town, LLC and Olowalu Ekolu, LLC  
Atten: Mr. Bill Frampton  
2035 Main St., Suite 1  
Wailuku, HI 96793

MAR 27 2012

2012 MAR 29 A 9:07  
LAND USE COMMISSION  
STATE OF HAWAII

Dear Mr. Frampton,

This letter provides comments on the Draft Environmental Impact Statement (DEIS) for the proposed Olowalu Town Master Plan development project on the island of Maui. The National Marine Fisheries Service (NMFS) Pacific Islands Region's Protected Resources Division provides the following comments about how the development may affect protected marine species under its jurisdiction.

There are three marine species protected under the Endangered Species Act (ESA) that frequent the area in question and may potentially be affected by the project: the threatened green sea turtle (*Chelonia mydas*), the endangered hawksbill sea turtle (*Eretmochelys imbricata*), and the endangered Hawaiian monk seal (*Monachus schauinslandi*).

In addition to these ESA-listed species, 9 species of corals found in Hawaii were petitioned for listing under the ESA, and a 90-day finding was issued on February 10, 2010, that substantial information was provided to determine listing was warranted. These 9 corals are now considered to be candidate species under the ESA. NMFS is currently working on a status review for these species to determine whether they should be listed as threatened or endangered. One of these coral species, *Montipora patula*, was found to occur in the nearshore waters off of the project area and is listed in Appendix D: Assessment of Marine Water Chemistry and Biotic Community Structure in the Vicinity of the Olowalu Town Master Plan, Olowalu, Maui, Hawaii, in section III.B.2., Results – Quantification of Benthic Cover (Appendix D, pg. 17).

In section III. B. 6. of Appendix D, under the title Threatened and Endangered Species, (Appendix D, pg. 21), it is stated that the ESA-listed green sea turtle, hawksbill sea turtle, and Hawaiian monk seal are found within the project area, and it also says that "Several green turtles were encountered during the course of fieldwork". However, nowhere in the main body of the DEIS does it mention the fact that these protected marine species are found within the project area, and there are no mitigation measures specified to reduce potential impacts to these species.

Hawaiian monk seals are known to occur in the area around the proposed development, and have been frequently sighted hauled out on beaches in the area. These critically endangered animals are sensitive to human disturbance and could be negatively affected by increased human presence if not properly mitigated. Mitigation measures to minimize human disturbance and interactions with the seals should be discussed in detail in the EIS.



The island of Maui hosts a nesting population of hawksbill sea turtles on the southern shore of the island. Green turtles also occur off shore of the action area and may bask onshore. There has been at least one anecdotal account of sea turtle nesting at the Olowalu area; however, this report was not confirmed. Nevertheless, it is possible that the area provides suitable shoreline habitat that could support sea turtle nesting.

One mitigation measure could reduce impacts to sea turtle nesting areas is the installation of wildlife-friendly lighting. Lights shining on the beach or ocean are of concern, as is any artificial light source that can be seen from the beach. The EIS and project developers should determine the types of bulbs and shields to be used, the potential of many light sources working together to create skyglow, and a monitoring system to determine impacts from artificial lighting. Roadways and traffic plans should also address lighting issues from streetlamps and headlights so they cannot be seen from the beach to disorient nesting sea turtles or hatchlings during the nesting season. Detailed lighting mitigation to eliminate this impact should be included in the EIS. Additionally, temporary lighting impacts that may persist for several years during the different construction phases for this project should also be addressed and mitigated.

There are many resources available to help developers install wildlife-friendly lighting that is also more effective in terms of safety and security, and in many cases more energy efficient. General rules to keep in mind for wildlife-friendly lighting are:

1. Mount lights as low as is practicable to minimize light trespass (trespass = light shining where you do not want or need it). Directing light with shields usually increases the amount of light in the area you are targeting, increasing its utility for safety and security purposes;
2. Use only the lumens output necessary for the particular application (most of the time, this can be minimal);
3. Keep lights shielded to direct light exactly where you want or need it to eliminate point source light (full cut-off shields whenever possible; bulbs should not be directly visible); and
4. Use long wavelength lights; many manufacturers offer “turtle friendly bulbs”, “yellow bug bulbs”, or amber LEDs for outdoor light fixtures that appear yellow, amber, or red to the human eye. This light is not only better for wildlife, but it does less damage to humans’ natural night adaptive vision, allowing for better eyesight at night for residents and visitors. Low pressure sodium lights are also a good option, especially for areas like parking lots (again, with full cut-off shields). Many of these lights are also the most energy efficient options, reducing utility costs.

Please contact Kim Maison of my staff ([kimberly.maison@noaa.gov](mailto:kimberly.maison@noaa.gov), 808-944-2278) or Joy Browning of the US Fish and Wildlife Service ([Joy\\_Browning@fws.gov](mailto:Joy_Browning@fws.gov), 808-792-9429) for more information or recommendations on potential mitigation methods for lighting.

Measures should be taken to prevent run-off from grading, excavation, or other construction activities, particularly in the event of bad weather during construction. Run-off can alter or destroy off shore sea turtle foraging habitat, and alter sand composition of beaches, making them

unfavorable for sea turtle nesting. Run-off can also have negative impacts on corals by smothering them with silt or increasing algae blooms. More information on mitigation of potential impacts to protected marine species and their habitats during construction should be provided.

If you should have any questions regarding these comments, please contact Jayne LeFors on my staff at (858) 546-5653 or at the e-mail address [jayne.lefors@noaa.gov](mailto:jayne.lefors@noaa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read 'Lisa Van Atta', with a stylized flourish at the end.

Lisa Van Atta  
Assistant Regional Administrator  
for Protected Resources

cc: State Land Use Commission  
Munekiyo & Hiraga, Inc.  
Loyal Merholf, USFWS/Pacific Islands Fish and Wildlife Office