In the U.S. Mainland market, Hawai'i growers have sustained the value of their sales in recent years, but have lost significant export value of sales to Japan. Significant impediments to agricultural development in Hawai'i include high labor costs, high transportation costs, high energy costs and high land costs.

Despite major challenges, Hawai'i's growers are competitive in many niche products and opportunities are available. Because 85% of food consumed in Hawai'i is imported, a significant market exists for farmers who can find creative ways to displace imports. Moreover, Hawai'i's seed crop industry has demonstrated that Hawai'i agriculture can have significant comparative advantage in some sectors. Substituting locally grown biofuels for imported petroleum may also provide opportunities for Hawai'i farmers over the coming decades.

State and County Agricultural Lands

Since 1960, there has been a release of approximately 316,590 acres from crop farming, primarily sugar and pineapple. [xiii] While some of these lands have been absorbed by urban development and other agricultural uses, much is fallow and available for agricultural use on Oahu, Maui, Moloka`i, Lana`i and Kauai.

The County of Maui has approximately 402,354 acres within the State Agricultural District. Of these lands, approximately 244,088 acres, or 61%, is located on Maui. [xiv] Using the LSB rating system, Maui alone has approximately 82,592 acres that are classified "A", "B", or "C".[xv] Since 1960, there has been a release of approximately 64,150 acres from crop farming, primarily sugar and pineapple, within the County.[xvi] While some of these lands have been absorbed by urban development and other agricultural uses, much is fallow and available on the islands of Maui, Moloka`i, and Lana`i. Moreover, in January 2016 HC&S announced that its sugar plantation on Maui would be closed after a final harvest. This event will release approximately 33,000 acres from sugarcane production, which will dramatically increase the supply of land available for diversified agriculture on Maui.

Although there is an abundant supply of productive agricultural land throughout the State, access to affordable agricultural lots offering long-term tenure remains an impediment to

agricultural development in Hawai'i. The current shortage of available State and County agricultural park lots is symptomatic of this issue.

WCT, including its adjoining agricultural lands, comprises approximately 1,576 acres, 14 acres of which are within the State Urban District. Over 90% of the project's agricultural lands are rated "A" or "B" by the Land Study Bureau and "Prime" by the Agricultural Lands of Importance to the State of Hawai'i rating systems (**See:** Figure Nos. 41 ~~36~~ and 42 ~~37~~, "Land Study Bureau Map" and "ALISH Map"). WCT agricultural lands are of very high quality and it has been determined that these lands are important resources to the State of Hawai'i.

Potential Impacts and Mitigation Measures. The Project will result in the urbanization of approximately 485 acres of prime agricultural land. This represents a very small percentage of agricultural lands statewide and on Maui. There are approximately 2 million acres in the State Agricultural District. The subject development represents just .024% of this area. On Maui, there are approximately 82,582 acres of agricultural lands rated by the LSB as A, B, or C. The subject development represents just 0.59% of these lands. Within Maui County, approximately ~~64,150~~ 97,483 acres, which includes the HC&S lands that are being taken out of production, has been released from crop production since 1987. The subject development represents just ~~0.76%~~ 0.50 percent of these lands. Thus, the urbanization of the subject 485 acres should have minimal long-term impact on the availability of agricultural land within the County and/or State since an abundance of other land, of a similar or higher quality, is currently fallow and available for production elsewhere. As noted, the MTP Master Plan's agricultural component includes nearly 1,077 acres of land that will remain in agricultural use. Of these lands, approximately 800 acres will be permanently dedicated to agricultural use with no residential structures to be permitted. The remaining 277 acres may be subdivided into as many as five large agricultural lots where a farm dwelling may be permitted. Within the agricultural lands, several hundred acres may be developed as a public and/or private agricultural park to help facilitate Maui's agricultural development.

There are currently ~~three~~ four commercial farms farming MTP lands. These include Kumu Farms, Hoaloa Farms, Makani Olu Ranch, and Beef and Bloom. ~~Hawai'i Taro LLC, and HC&~~S. The

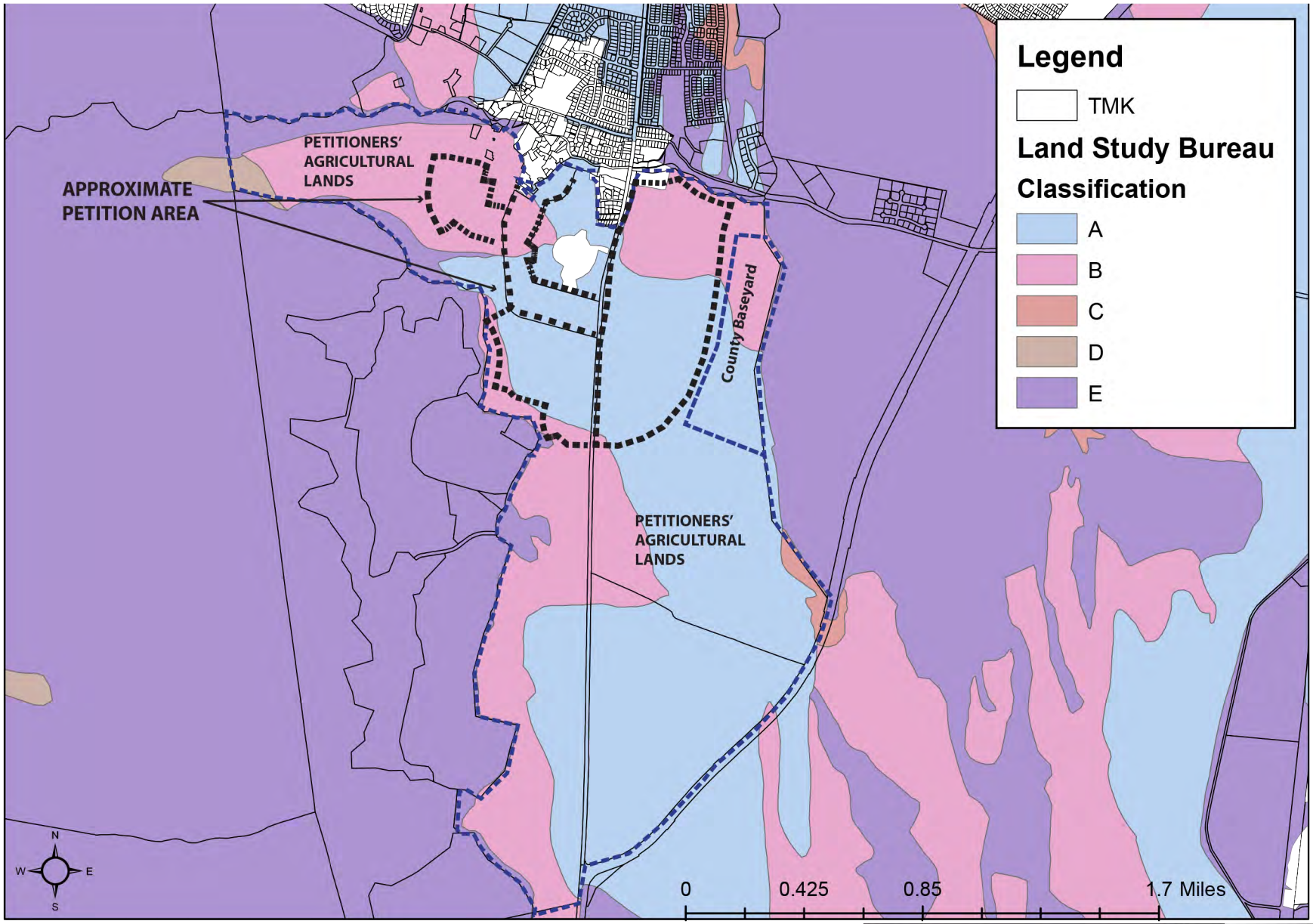

Figure 41
LAND STUDY BUREAU
DETAILED LAND CLASSIFICATION

Not to Scale

WAIKAPŪ COUNTRY TOWN

PLANNING CONSULTANTS HAWAII, LLC

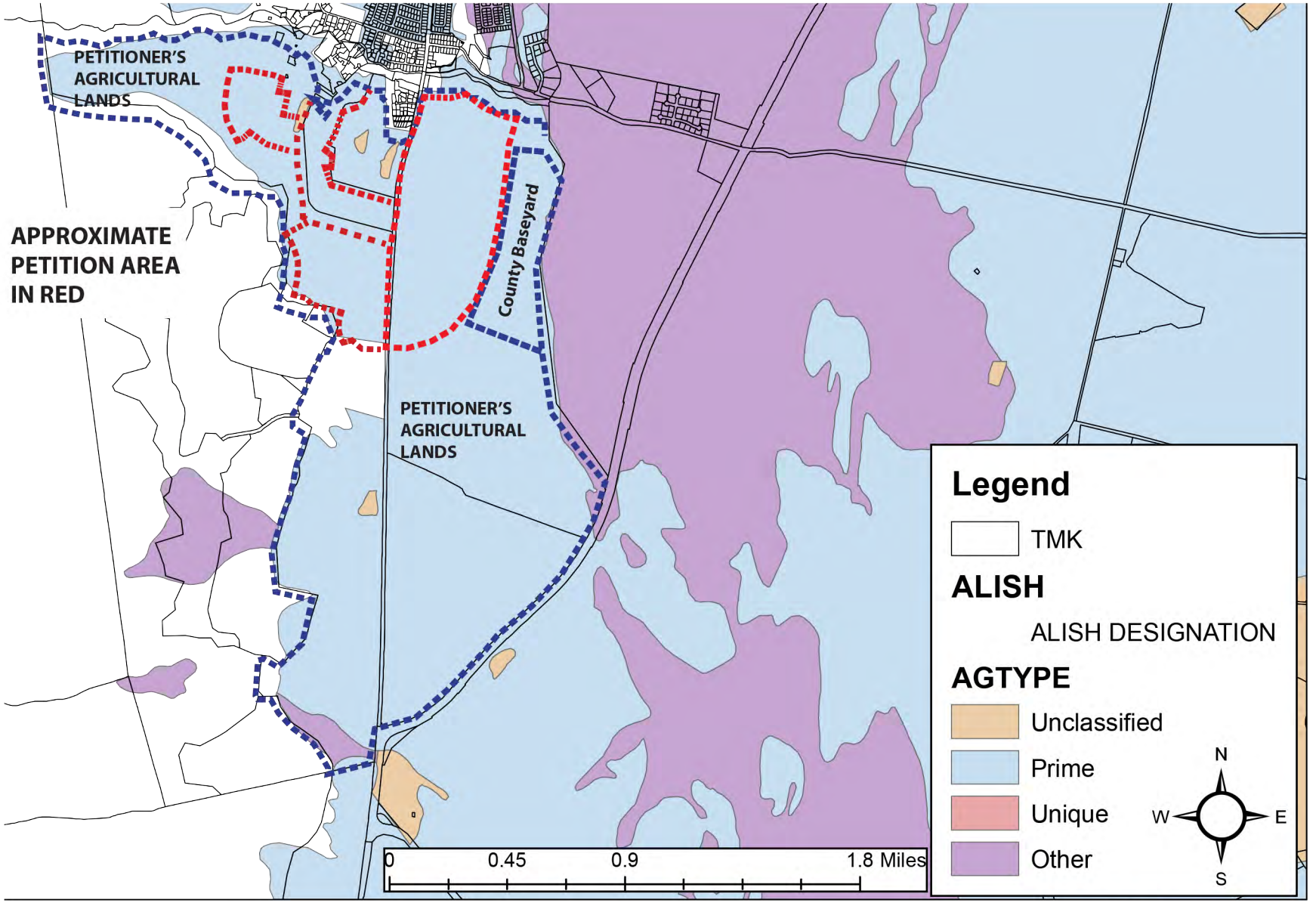

Figure 42
AGRICULTURAL LANDS OF IMPORTANCE TO THE STATE OF HAWAII

Not to Scale

WAIKAPŪ COUNTRY TOWN

PLANNING CONSULTANTS HAWAII, LLC

proposed urbanization will require both Kumu Farms and Hoaloa Farms ~~Hawai'i Taro~~ to relocate their agricultural operations to the proposed agricultural park and other suitable agricultural lands within the Project's agricultural district. ~~The Project will also impact a portion of the current lands being leased by HC&S.~~

~~It is anticipated that these lands will gradually begin to be impacted in about three to five years. Over the long-term, HC&S may lose approximately 330 acres to urbanization and some additional acres to a private agricultural park. According to HC&S General Manager, Mr. Rick Volner, HC&S would desire to continue farming its MTP lands to maximize its current economy of scale in production. However, Mr. Volner acknowledged that HC&S has additional lands available that are currently fallow and that urbanization of a portion of its MTP leased lands will not significantly impact the Plantation's long-term economic viability.~~

It has been noted that a significant impediment to agricultural development on Maui, and throughout the state, is the scarcity of agricultural land that is both readily available and affordable for long-term lease to diversified farmers. The establishment of a centrally located agricultural park, with productive lands and affordable irrigation water, should help Maui farmers compete in local, mainland and international markets.

Consistency with State and County Agricultural Policies

The Hawai'i State Plan and State Functional Plans establish policy to protect the viability of the sugar and pineapple industries, protect agriculturally suitable lands for future agricultural needs, and promote the growth of diversified agriculture.

The Maui County General Plan (County-wide Policy Plan, Maui Island Plan, and Wailuku-Kahului Community Plan) seek to preserve productive agricultural lands and facilitate agricultural self-sufficiency in food production. The General Plan also recognizes the need to provide sufficient land areas to accommodate future population growth. Goal 7.1.1.f of the MIP states, "Strongly discourage the conversion of productive and important agricultural lands (such as sugar, pineapple, and other produce lands) to rural or urban use, unless justified during the General Plan update, or when other overriding factors are present."[xvii]

The subject land was placed into an Urban Growth Boundary during the General Plan 2030 update, when other overriding factors were present. These factors included the forecasted demand for additional urban lands to accommodate projected population growth, the development suitability of the subject land, as well as its proximity to existing employment, infrastructure, public facility systems and existing urban development. Moreover, as documented in the Agricultural Impact Assessment, the urbanization of the subject lands will not significantly impact the future viability of the sugar or pineapple industries or the growth of diversified agriculture on Maui or throughout the State.

The proposed action has been carefully analyzed for its short- and long-term impacts upon the agricultural industry. While the proposed action will result in the loss of prime agricultural lands, it will not significantly impact the short- or long-term viability of agriculture in Hawai‘i since an abundance of currently fallow former sugar and pineapple land is currently available elsewhere. The project will, however, help to address the current shortage of agricultural park lots by establishing an approximate 800-acre agricultural preserve that will be used to establish a new private and/or public agricultural park within Central Maui.

~~As described in the AIS (Appendix G), agricultural operations can produce nuisance impacts to neighboring residential communities. The Applicant is committed to identifying appropriate counter measures to reduce potential impacts to future homeowners while providing assurances to farmers that their operations will be protected from such complaints. Some measures that can help to minimize these conflicts include:~~

- ~~Advising prospective homeowners in advance of purchasing property that neighboring lands are in agricultural use, that nuisance impacts may occur, and that agricultural uses are protected under HRS Chapter 165, the Hawaii Right to Farm Law.~~
- ~~Establishing appropriate buffers between actively used agricultural lands and homes.~~
- ~~Planting windbreaks planting within the buffer areas to further mitigate agricultural impacts to homeowners.~~
- ~~Locating residential communities upwind of agricultural operations.~~

- ~~Where feasible, locating the least noxious agricultural activities in closer proximity to urban uses while locating the more noxious activities further away.~~
- ~~Requiring farmers to implement agricultural best management practices to reduce the potential for overspray from the use of pesticides and to implement erosion control measures to reduce dust and agricultural runoff from impacting neighboring properties.~~

Agricultural Nuisances, Air Quality, and Chemical Application BMP's

As described in the AIS (Appendix G), agricultural operations can produce nuisance impacts to neighboring residential communities. The Applicant is committed to identifying appropriate counter measures to reduce potential impacts to future homeowners while providing assurances to farmers that their operations will be protected from such complaints. All future prospective homeowners and leases will be advised in advance of purchasing or leasing property that neighboring lands are in agricultural use, that nuisance impacts may occur, and that agricultural uses are protected under HRS Chapter 165, the Hawai'i Right-to-Farm Law. Moreover, pursuant to Section 205-4.6, the farmers will be informed that the Project's agricultural lands will not be subject to restrictions that limit the types of agricultural uses that may be conducted on these lands.

The proposed urban and rural development will be bound by agricultural lands along the Project's southern and western boundaries. This is a common pattern of development in Hawai'i. Historically, villages and small towns were established throughout Hawai'i to support the pineapple, sugar and livestock industries. These agricultural land uses invariably came into close proximity of agricultural operations. In comparison to sugarcane, it is expected that air pollution emissions will be significantly reduced. Unlike sugarcane, there will be no burning of the sugarcane fields every two years, and there would be no large sugarcane haul trucks generating significant amounts of fugitive dust. Moreover, it is expected that much of the agricultural areas are expected to engage in and promote organic farming, which may reduce or prohibit pesticide use. In addition, the bulk of the WCT's agricultural preserve is located to the south of the WCT's urban development. This allows for the predominant northeast trade winds to carry dust and any agricultural chemicals or pesticides away from the proposed development.

However, during Kona or southwest winds, agricultural dust and chemical emissions could be carried over the Project's residential areas. The proposed elementary school is located approximately one-mile to the northeast of the agricultural fields. The closest residential and rural residences are located in close proximity to WCT's agricultural lands. Airborne dust generated by agricultural activities can cause nuisance and health impacts to neighboring residences if not property mitigated through BMPs. Likewise, the improper application of pesticides may cause drift that could negatively impact environmental and human health. The Applicant will work closely with its farmers to develop appropriate BMPs to help mitigate airborne dust and chemical drift from potentially impacting neighboring land uses. BMPs that are often implemented by farmers to mitigate windblown dust include:

- Establishing appropriate buffers between actively used agricultural lands and homes.
- Planting windbreaks planting within the buffer areas to further mitigate agricultural impacts to homeowners.
- Locating residential communities upwind of agricultural operations.
- Where feasible, locating the least noxious agricultural activities in closer proximity to urban uses while locating the more noxious activities further away.
- Limiting vehicle speeds on unpaved access roads within the agricultural area.
- Requiring farmers to implement agricultural best management practices and erosion control measures to reduce dust and agricultural runoff from impacting neighboring properties.

BMPs that are often implemented by farmers to mitigate pesticide drift include:

- Instituting a dust and chemical drift education and management program to ensure that farmers are properly trained in BMP's that can reduce airborne emissions from their activities.
- Establishing suitable buffer zones between agricultural lands where pesticides might be applied and sensitive environments that could be negatively impacted.
- Establishing windbreaks to capture windblown emissions and to slow the movement of wind.

- Conducting spraying and other nuisance related activities when winds are blowing away from sensitive environments and limiting spraying to periods of low wind speeds to reduce drift distance.
- Ensuring that nozzles used in the application of pesticides and/or herbicides produce the largest or coarsest size droplets possible.
- Encouraging the use of the lowest end of the pressure range when spraying pesticides.
- Following all pesticide application directions as shown on the product labels.
- Using drift control additives, when needed, to increase the size of droplets in order to reduce drift.
- Directing recreation uses, such as off-road biking, hiking and jogging, to the perimeter of agricultural areas where chemical drift would not be a concern.

B. SOCIO-ECONOMIC ENVIRONMENT

1. Population

The resident population of Maui County has experienced rapid growth. According to census figures the resident population of Maui County has grown by approximately 56% since 1990, from 100,504 to 156,764 in 2011.[xviii] These robust growth rates are expected to continue through 2040. According to the State of Hawai'i, Department of Business, Economic Development, and Tourism, "Population and Economic Projections for the State of Hawai'i to 2040", the County's population is expected to reach 232,863 by 2040, which is an increase of 46%.[xix]

Wailuku-Kahului is the island's largest population and employment center. In 2010 the region's population was approximately 53,456[14], which was about 37% of the island's 2010 population of 144,444. Like the rest of Maui, the Wailuku-Kahului region has experienced high growth rates. In 1990 the region's population was 32,816 and by 2010 it had grown to approximately 53,456, which is an increase of 63% over 20 years. Between 2010 and 2030 the region's population is projected to grow to 65,616, which is a much more modest increase of 21%. As of mid-year

[14] Includes Census Designated Places of Kahului, Waihe`e-Waiehu, Waikapū, and Wailuku

2015, there were approximately 57,616 residents in the Wailuku-Kahului region and projections of the resident population by 2035, based on County and State Forecasts range from circa 78,800 to 97,100 as shown below:

Table 29 ~~26~~: Projected Wailuku-Kahului Population

	Year-End	Projected Wailuku-Kahului Population				
Scenario	**2013**	**2015**	**2020**	**2025**	**2030**	**2035**
One: Minimum Based on Adjusted Planning Department Baseline Population Forecasts						
Residents	56,919	57,618	62,642	67,909	73,269	78,764
Two: Maximum Based on Planning Department Historical Trend Run Population Forecast						
Residents	56,919	60,114	68,010	76,850	86,679	97,080

Source: Hallstrom Appraisal Group | CBRE, Inc.

Kahului is home to the island's only major airport and commercial harbor. The Central Maui Wastewater Treatment Facility is located in Kahului. Kahului is also home to the 78-acre University of Hawai'i Maui College, which offers Associate, Bachelor and Master Degree programs to more than 4,400 full- and part-time students. Several "Big Box" retail stores are also located in Kahului, including Costco, Walmart, Lowes, Target, K-Mart and Home Depot.

Wailuku is the island's civic center. Most State and County offices are located in Wailuku, along Main and High Streets. The Wailuku Police Station, which services Central and Upcountry Maui, is located in Wailuku as is the Maui Memorial Hospital. Maui Memorial Hospital is the island's sole hospital, offering 240 inpatient beds. The island's only State Correctional Facility, Maui Community Correctional Center (MCCC), is also located in Wailuku, along Wai`ale Road. A small "main street" commercial district that dates to the 1880s is located in Wailuku along Main, Market, Vineyard and Church Streets. Both Wailuku and Kahului have supporting shopping centers, parks, recreation facilities, educational facilities, libraries, industrial districts and residential districts.

Potential Impacts and Mitigation Measures. A Market Study and Economic and Fiscal Impact Assessment report was prepared by the Hallstrom Appraisal Group | CBRE, Inc. (**See**: Appendix

A, Market Study, Economic Impact Analysis and Public Fiscal Assessment). The report estimates that at buildout the de facto population of the Project will be approximately ~~3,511~~ 4,085 persons[15], comprised of ~~3,362~~ 3,921 full-time residents and some ~~148~~ 163 part-time residents and second home owners.[16] The Project's resident population ~~project population~~ represents from approximately ~~8.40%~~ 9.93 percent to ~~15.40%~~ 18.51 percent of the region's projected resident population growth to 2035. It is not expected there will be meaningful in-migration to Maui as a direct result of the operating components of the project. The project population will create short- and long-term economic impacts and will generate an increase in demand for public infrastructure and facilities. These impacts are documented in Sections V.C and V.D of the ~~DEIS~~ FEIS.

2. **Housing**

Existing Conditions. Median home prices on Maui, like in most other regions of the Country, rose sharply between 1998 and 2006 and then fell precipitously between 2007 and 2010. In January 1998 the median sales price of a fee simple condominium on Maui was $160,000 and a single-family residence was $258,068. By 2006 the median sales price of a fee simple condominium had increased by over 300% to $505,000 and a single-family residence by 269% to $693,000. By December 2012, prices had come down from their peak by about 32% for single-family homes to $470,000 and by 28% for fee simple condominium units to $366,086. However, by December 2012 prices for single-family residences were still over 88% higher than prices in 1998, and for fee simple condominiums the prices were over 228% higher than in 1998.

Like the rest of Hawai'i, housing affordability on Maui is a significant concern. It is generally recommended that no more than 30% of monthly income be spent on rent. However, nearly

[15] Assumes 85% of single- and multi-family units are occupied by residents and the remaining 15% are occupied by part-time residents. It is assumed that part-time residents occupy their units 25% of the time. The population multiplier per single-family unit is 3.2 persons per unit and for multi-family units it is 2.6 persons per unit. It is assumed that all Ohana units are occupied by residents at 1.5 persons per unit. As such the calculation was made as follows: [(1050 * .85)*3.2] + [(1050 * (.15)*(3.2)*(.25)] + [383*.85)*2.6] + [(383*(.15)*(2.6) *(.25)] + (146*1.5)

[16] See Appendix A, Exhibit III-Table 5 of the Market Study, Economic Impact Analysis and Public Fiscal Assessment for the methodology used to calculate the Project's population

half of all Maui residents exceed this threshold and, compared to the other counties, Maui residents spend more of their monthly income on housing. In 2011, 18% of Maui residents spent between 30 and 40% of their household income on shelter and 30.2% spent over 40%, while only 40.8% spent less than 30% of their income on shelter. By comparison, 54.1% of Oahu residents and 49.1% of Hawai'i County residents spent less than 30% of their income on shelter. According to the US Census Bureau, 2007-2011 American Community Survey 5-Year Estimates, 65% of renters in Wailuku spend over 30% of their income on gross rent and 44% spend over 50% of their income on gross rent.[xx]

According to the County of Maui, Department of Housing and Community Concerns, Affordable Sales Price Guidelines, in February 2014 a Maui family earning 100% of the median income ($75,800 as determined by the United States Department of Housing and Urban Development), could afford a $393,700 three-bedroom single-family residence at a 4.5% interest rate. The median single-family sales price in Central Maui between January and September 2014 was $433,787 (Realtors Association of Maui). Maui County's 2014 Affordable Sales Price Guidelines for a 1-bedroom condominium for a family earning 100% of the median income is $248,010. The median fee simple condominium sales price in Central Maui between February and September 2014 was $267,655.

According to the MIP (December 2012), there will be a demand for an additional 29,589 housing units on Maui through 2030. Of these units, approximately 10,845 are expected to be built on lands not currently entitled for urban development.[xxi]

Potential Impacts and Mitigation Measures. The WCT proposes the development of up to 1,433 residential dwelling units, plus the potential for up to 146 Ohana units, targeted at the full spectrum of workers in the development. It will offer a mix of single and multi-family housing types to address the diverse housing needs of Maui residents. The project will comply with the County's workforce housing ordinance, which will require that at least twenty percent of the Project's housing to be sold to low, low-moderate and gap groups in accordance with sales price and resale restrictions enumerated in Chapter 2.96, MCC. Chapter 2.96, MCC also prescribes how Residential Workforce Housing is be marketed, who may qualify to purchase the subject housing and the selection process (See: Appendix O, MCC Chapter 2.96 "Workforce Housing

Policy). The Applicant intends to comply with the County's Residential Work Force Housing Policy by selling or renting residential units within the Project. Relevant sections of Chapter 2.96 that will direct the quantity and pricing of the Project's Residential Workforce Housing includes the following:

"2.96.040 - Residential workforce housing requirements.

A. Developers shall be required to provide a number of residential workforce housing units equivalent to at least twenty-five percent, rounding up to the nearest whole number, of the total number of market rate lots, lodging units, time share units, or dwelling units, excluding farm labor dwellings or a second farm dwelling, as defined in section 19.04.040 of this code, created. If a developer satisfies the requirements of this chapter through subsection (B) (3) and the units shall remain available only to income-qualified groups in perpetuity, the developer shall provide at least twenty percent, rounding up to the nearest whole number, of the total number of market rate lots, lodging units, time share units, or dwelling units, excluding farm labor dwellings or a second farm dwelling, as defined in section 19.04.040 of this code, created.

B. Prior to final subdivision approval or issuance of a building permit for a development subject to this chapter, the department shall require the developer to enter into a residential workforce housing agreement. The agreement shall set forth the method by which the developer satisfies the requirements of this chapter. The requirements may be satisfied by one or a combination of the following, which shall be determined by the director and stated in the agreement:

1. Offer for sale, single-family dwelling units, two-family dwelling units, or multi-family dwelling units as residential workforce housing within the community plan area;

2. Offer for rent, multi-family dwelling units as residential workforce housing units within the community plan area; …"

Regarding income restrictions, Chapter 2.96.040.C "Income Distribution" stipulates that for sale and rental units be distributed as follows:

"C. Income group distribution.

1. Unless an exemption is granted by the director, the percentage of ownership units within each income group shall be as follows:

a. Thirty percent of the ownership units shall be for "below-moderate income" residents.

b. Fifty percent of the ownership units shall be for "moderate income" residents.

c. Twenty percent of the ownership units shall be for "above-moderate income" residents.

2. Unless an exemption is granted by the director, the percentage of rental units within each income group shall be as follows:

a. One-third of the rental units shall be for "very low income" and "low income" residents.

b. One-third of the rental units shall be for "below-moderate income" residents.

c. One-third of the rental units shall be for "moderate income" residents."

Pursuant to the ordinance requirements, the Applicant will be required to enter into a Residential Workforce Housing Agreement with the County prior to Final Subdivision Approval. Assuming that the Applicant decides to commit twenty percent of the units to Residential Workforce Housing and that half would be for sale 3-bedroom single-family units and half would be for rent 1-bedroom multi-family units the pricing structure would be as follows:

Table 30: For Sale Residential Workforce Housing Units by Income Category

Single-Family For Sale Residential Workforce Housing Units (WFH)[17]			
Income Category	Percent of WFH Units	Number of Units	Price Range
Below-Moderate	30	43	$392,400 - $436,000
Moderate	50	71	$479,600 - $523,200
Above Moderate	20	30	$566,800 – 610,400

Table 31: For Rent Residential Workforce Housing Units by Income Category

Multi-Family For Rent Residential Workforce Housing Units (WFH)[18]			
Income Category	Percent of WFH Units	Number of Units	Price Range per Month
Very Low	33	48	Up to $764
Below Moderate	33	48	Up to $1528
Moderate	33	48	Up to $1834

Moreover, because of the Project's Central Maui location and proposed lot and unit size configurations, the Applicant expects that about 80 percent of the Project's market priced housing will be sold at prices deemed affordable to Maui County residents earning between 100 and 140 percent of the County's median income as determined by the United States Department of Housing and Urban Development. Housing types are expected to include multi-family condominiums, live-work units, small cottage homes on small lots with common open spaces, 'Ohana dwellings[19], traditional single-family lots within a variety of home and lot size

[17] Prices based on County of Maui Affordable Sales Price Guidelines for 2016. Prices assume a 3-bedroom unit with a 4.25% interest rate.

[18] Rents based on County of Maui Affordable Rent Price Guidelines for 2016. Rents assume a 1-bedroom unit with utilities included.

[19] For planning purposes, it is assumed that about ~~15~~ 14 percent of single-family and rural homeowners may decide to build an Ohana unit. The Ohana units may be developed concurrently with the primary residence or at some undetermined future date by the property owner. Through the Project District Ordinance the total number of Ohana units can be regulated by lot size, through a restriction to the permitted uses, requirement of special use permit, or by a quota. However, since Ohana units generate an important source of affordable housing, the infrastructure and public facility impacts of additional Ohana units beyond those addressed in the FEIS may also be addressed through Project District Ordinance stipulations and the building permit processes.

configurations, rental apartments, townhomes and larger estate rural lots. The goal is to serve the demands of all Maui residents. When developed, the Project will accommodate approximately 4.8 percent of the projected housing demand through 2030.

3. **General Economy**

Existing Conditions. Tourism is the predominant component of Maui County's economy. In 2011 there was an annual average job count of 62,900 on Maui. At 29% of all jobs, the Accommodations and Food Service Industry accounts for the largest proportion of jobs on the island. This is followed by federal, state, and county government at 14%. The retail trade, also highly dependent upon tourism, ranks third at 13%. Professional and business services ranks fourth at 10%.[xxii] Agriculture generates just 2.1% of Maui County jobs but is disproportionately important for its historic and cultural legacy and its contribution to the island's scenic beauty and quality of life.

According to the Economic Development Issue Paper (October 2007) prepared for the County of Maui, Department of Planning, in support of the Maui County General Plan 2030 update, Maui County is much more dependent upon tourism than other Hawai'i Counties. Of Maui County's Gross County Product (GCP), 39 percent is attributed to tourism, versus a range of 19-29% for the other counties (Economic Development Issue Paper, 2007). The Economic Development Issue Paper further notes that most Maui households support themselves on two or more jobs. Based on a living wage study of Maui County, a family of four (two adults, two children) would have needed an annual income of $61,650 to support itself in 2005. A corresponding analysis of 2005 jobs and wage data for Maui found that the average wage of 78 occupations – representing 54 percent of all jobs – fell below the $30,800 living wage standard.[xxiii]

Maui County had 2,446,084 visitor arrivals in the year 2011 and hotels on Maui Island experienced a 70.1 percent occupancy rate.[xxiv] In June of 2013 Maui's occupancy rate was 69.1 percent. In the aftermath of the great recession, Maui County's unemployment rate rose to a high of 9.5% in June 2009 but has decreased to a currently level of about 4.2 percent. In Central Maui, economic activity centers on wholesale and retail trade, transportation services, business

and professional services, education and government. HC&S is also a major employer in Central Maui.

According to the Economic Development Issue Paper (October 2007), diversifying Maui's economy has been a key, longstanding County policy. Chapter 4, Economic Development, of the MIP, December 2012, states the following in its analysis of the island's challenges and opportunities:

> *The Island of Maui, like the County as a whole, faces two fundamental challenges in economic development: (1) diversification; and (2) increasing the number and proportion of living wage jobs. There is a subset of more specific challenges, such as the high cost of housing and the need to strengthen public education.*[xxv]

Potential Impacts and Mitigation Measures. The WCT is expected to indirectly support Maui's existing economic base activities by providing much needed housing to serve the island's workforce. The WCT is intended to provide housing along with supporting commercial, employment and institutional uses that will allow for Maui's economic base industries to grow, diversify and become more sustainable - including the island's agricultural industry. By providing much needed housing in a format that will create a high quality of life for Maui's working families, and by generating both short- and long-term employment in the construction, trade and agricultural industries, the project is directly supportive of the State and County's economic development. Development of WCT is expected to generate short-term economic benefits in the form of construction-related employment, as well as long-term benefits that include increased permanent employment and tax revenues. Short- and long-term economic benefits will be more thoroughly analyzed in the following sections of the ~~DEIS~~ FEIS.

4. **Project Induced Economic Impacts[20]**

A market study and economic and fiscal impact assessment was conducted by the Hallstrom Appraisal Group | CBRE, Inc. and is included as Appendix A. The Economic Impact Assessment (EIA) constructs a model depicting the economic impact of the WCT project on the Maui and Statewide community during the course of the Project's "lifespan" from anticipated ground-breaking in 2016, through build-out and full absorption (2026-27), and reaching full "stabilization" by 2030. The model builds on the absorption estimates and data contained in the market study.

The following are the expected short- and long-term economic impacts documented in the EIA:

- The WCT development will bring in ~~$609.1~~ $644.1 million[21] of new capital investment into the Maui economy.
- The construction of the WCT components will directly create an estimated ~~2,320~~ 2,476 "worker-years" of employment (the equivalent of 52 work weeks at 40 hours per week) in the trades and associated businesses during build-out~~,~~ an average of 165 Full Time Equivalent (FTE) positions per year for the 15 years of building. Most of these positions will not be new jobs for new businesses, but work flowing to existing contractors and suppliers. ~~averaging about 193 worker years annually, with an estimated $188.3 million in wages (averaging about $15.7 million per year).~~
- The 169,000 square feet of new commercial operation will generate some 4,251 FTE worker years during the 2016-2030 projection period, providing stabilized employment for 531 permanent positions. These jobs will be new positions in the Maui economy. This total does not include the employment, wages or business activity contributions of the existing 29,250 square feet of commercial space in the Maui Tropical Plantation which will be retained.
- The Project will require an estimated 66 worker years of maintenance and common area element employment on a continual basis, and will generate some ~~1,750~~ 1,789 worker

[20] The Hallstrom Appraisal Group | CBRE, Inc. updated the methodology used to determine the Project's economic and fiscal impacts. The change to the methodology is explained in detail on pages 8 and 9 of the Market Study, Economic Impact Analysis, and Public Fiscal Assessment incorporated into the FEIS. (See: Appendix A).

[21] Estimates shown are in constant 2015 dollars.

years of off-site employment from 2016-2030 and a stabilized demand for 149 FTE positions.

- In aggregate, during the development of the WCT ~~8,750~~ 8,946 worker years of employment will be created during construction and operations, on-site/direct and off-site/indirect, with stabilized employment after completion of 746 jobs.
- During the 15 years projection period, WCT will have a base economic impact on Maui of some $817.1 million in new monies with a stabilized annual benefit of $32.1 million thereafter.
- ~~During the 15 years projection period, WCT will have a base economic impact of $1.3 billion with a stabilized annual benefit of $137.3 million thereafter~~.

~~The above-referenced figures do not include the direct and off-site employment, wages and business activity generated by the in-place 29,000 square feet of the MTP commercial spaces, or the potentials associated with the possible 'Ohana units envisioned in the master planning concept.~~ Table 32 ~~27~~ summarizes WCT's employment impacts during the construction and operation phases:

Table 32 ~~27~~: WCT Projected Employment Impacts

~~WCT Employment Impacts~~			
	~~Construction Period (12 Years)~~		~~Stabilization 2030 +~~
~~Employment Multiplier~~	~~Construction Jobs/Year~~	~~Operations Jobs/Year~~	~~Operations Jobs/Year~~
~~Direct~~	~~193~~	~~314~~	~~597~~
~~Indirect~~	~~149~~[22]		~~149~~

WCT Employment Impacts		
	Construction Period (15 Years)	Stabilization 2030 +

[22] Indirect off-site jobs created through the modelling period from construction and operations

Employment Multiplier	Construction Jobs/Year	Operations Jobs/Year	Operations Jobs/Year
Direct	165	312	597
Indirect	119[23]		149

Table 33 ~~28~~ summarizes the Project's cumulative economic impacts during the projection period (2016-2030) and stabilized thereafter. The column on the left summarizes the cumulative impacts during the initial 15-year projection period (2016-2030) covering build-out/absorption and ramp-up to stabilization, and the right hand column the annual impacts after stabilization.

Table 33 ~~28~~: Summary of Economic Impacts

~~SUMMARY COMPARISON OF MAJOR ECONOMIC IMPACTS All Amounts Expressed in Constant, Uninflated 2015 Dollars~~		
~~Analysis Item~~	~~Cumulative During Projection Period 2016-2030~~	~~Stabilized Annually Thereafter~~
~~Direct Capital Investment~~	~~$609,097,502~~	
~~Local Contractor's Profits~~	~~$60,909,750~~	
~~Local Supplier's Profits~~	~~$24,363,900~~	
~~Worker Years of Jobs~~	~~8,750~~	~~746~~
~~Employee Wages~~	~~$451,200,219~~	~~$27,096,572~~
~~Resident Population~~		~~3,362~~
~~Full-Time Resident Household Income~~	~~$1,290,464,422~~	~~$147,857,819~~
~~De Facto Population Expenditures (On & Off Site)~~	~~$684,361,379~~	~~$78,260,291~~
~~Total Operating Gross Receipts~~	~~$778,598,969~~	~~$106,061,686~~
~~Outside Patronage Expenditures~~	~~$424,077,299~~	~~$59,019,756~~
~~Total Maui "Base" Economic Impact~~	~~$1,348,042,748~~	~~$137,280,047~~

[23] Indirect off-site jobs created through the modelling period from construction and operations

SUMMARY COMPARISON OF MAJOR ECONOMIC IMPACTS
All Amounts Expressed in Constant, Uninflated 2015 Dollars

Analysis Item	Cumulative During Projection Period 2016-2030	Stabilized Annually Thereafter
Direct Capital Investment	$644,304,552	
Local Contractor's Profits	$64,430,455	
Local Supplier's Profits	$25,772,182	
Worker Years of Jobs	8,949	746
Employee Wages	$495,899,240	$27,096,572
Resident Population		3,921
Full-Time Resident Household Income	$1,334,332,822	$156,629,499
De Facto Population Expenditures (On & Off Site)	$675,920,535	$78,314,749
Total Operating Gross Receipts	$172,813,024	$32,090,792
Total Maui "Base" Economic Impact	$817,117,576	$32,090,792

Application of the State Input-Output Model macro multipliers depicting direct, indirect and induced economic impacts arising from development of the WCT results in significantly higher economic out-flow indicators than those from the direct, subject-specific micro model developed by the Hallstrom Appraisal Group | CBRE, Inc. The total State economic impact from construction of the project would reach ~~$1.28~~ $1.37 billion, there would be ~~8,424~~ 8,911 total worker-years of jobs created, and the total increase in earnings statewide would be ~~$371.5~~ $406.1 million.

The State model also estimates that the total annual economic output from business operations within WCT would be more than double the gross revenues at ~~$221.7~~ $67.1 million annually on a stabilized basis, the total number of worker years attributable to the subject dollars flowing through the economy would be ~~2,015~~ 609 positions annually, and the increase in direct earnings would be ~~$51.2~~ $21.2 million per year.

5. Project Induced Fiscal Impacts[24]

A market study and economic and fiscal impact assessment (FIA) was conducted by the Hallstrom Appraisal Group | CBRE, Inc. and is included as Appendix A.

The following are the conclusions of the FIA:

- The County of Maui will realize Real Property Taxes ($27.7 million) ~~($28.3 million)~~, other secondary receipts, and impact fees of ~~$48.8~~ $47.9 million during the 15-year projection period (2016-2030), and ~~$5.0~~ $4.9 million annually on a stabilized basis thereafter. After new per capita costs for services are considered the County will earn a net "profit" $42.2 million during build-out and $4.2 million annually after stabilization. In addition, the WCT includes approximately 32.5 acres of active and passive park land within the project site, of which at least 16.5 acres will be dedicated to the County.

- The State of Hawai'i will receive Gross Excise and Income taxes, secondary revenues, and impact fees of ~~$228.0~~ $95.4 million during the 2016-2030 period, and ~~$20.0~~ $4.4 million per year thereafter. Overall, after new per capita governmental costs are deducted, the State will generate net benefits of $82.6 million during build-out and $2.9 million annually on a stabilized basis. The WCT will also be providing a 12-acre elementary school site to the State.

~~As is typical of a residential-focused master planned community, with limited commercial components, and having a significant percentage of affordably-priced housing units for local families, the expense to the State and County from a "per capita basis" of all governmental operating costs perspective may exceed the specific on-site tax/fee revenue benefits. However, given~~ Given the existing emergency services and social services infrastructure available in nearby Wailuku and Kahului, the provision of a school site within WCT, payment of impact fees, and young age of the project components, it is ~~unlikely~~ likely the "actual" public cost burden associated with the project would be less than the per capita assessment or independently

[24] The Hallstrom Appraisal Group | CBRE, Inc. updated the methodology used to determine the Project's economic and fiscal impacts. The change to the methodology is explained in detail on pages 8 and 9 of the Market Study, Economic Impact Analysis, and Public Fiscal Assessment incorporated into the FEIS. (See: Appendix A).

require the need for major new public facilities. ~~exceed the revenues generated or independently require the need for major new public facilities.~~

C. PUBLIC SERVICES

1. Recreational Resources

Existing Conditions. The MIP (December 2012) notes that Wailuku-Kahului has approximately 186 acres of sub-regional park land and 377 acres of regional park land. In projecting future park needs, the County used a standard of 10-acres of sub-regional park land per 1,000 persons and 15-acres of regional park land per 1,000 persons. This standard was adapted from standards recommended by the National Recreation and Parks Association (NRPA), Urban Land Institute, and the City and County of Honolulu. Using these standards, the MIP states that Wailuku-Kahului is currently deficient in sub-regional park land by approximately 322-acres and that future projections to 2030 indicate the deficit will increase to 541-acres. However, the MIP also acknowledges that the NRPA's updated 1996 guidelines recommend that communities develop individualized Level-of-Service standards and the MIP notes that LOS standards that recognize Maui's unique "assets, conditions, and resources" may "more accurately reflect the island's park land and facility needs". It should be noted that based on the mid-year 2015 Wailuku-Kahului population of 57,616, there are just 3.22 acres of sub-regional park land per 1,000 persons and 6.54 acres of regional park land per 1,000 persons.

There is a diverse selection of both active recreational parks and beach parks in Central Maui. Table No. 34 ~~29~~ identifies select sub-regional active recreation parks within proximity of the project site.

Table 34 ~~29~~: Sub-Regional Parks within Proximity of the WCT

Central Maui Regional Parks				
Park	Acres	Location	Facilities	Approx. Miles to WCT
Waikapū	2.4	Waikapū	Community Center; softball; basketball;	0.5

Central Maui Regional Parks				
Community Center & Park			restroom	
Kahului Community Center	31	Kahului	Community Center; soccer, baseball, tennis, playground, walking and jogging paths	5
Kahului Park	7.1	Kahului	Baseball, basketball, softball	5.5
Maui High School	13	Kahului	Baseball; multi-purpose fields	5.75
Pomaika`i	4.7	Kahului	Open fields	3.5
Wai`ale	3	Wailuku	Baseball, softball, basketball, tot lot	2.75
Wailuku Elementary	3.9	Wailuku	Baseball, basketball, playground	2.75
Wailuku Gymnasium	0.8	Wailuku	Basketball, gymnasium, weights, pool	3.0
Wailuku Heights	1.4	Wailuku	Playground, picnic areas	2.75
Wells Community Complex	6.6	Wailuku	Tennis courts, basketball courts, baseball	3.0

Table No. 35 ~~30~~ identifies select regional active recreation parks within proximity of the project site.

Table 35 ~~30~~: Regional Parks within Proximity of the WCT

Central Maui Regional Parks				
Park	Acres	Location	Facilities	Miles to WCT
War Memorial Complex	51	Wailuku	Football and baseball stadiums, aquatic center, tennis courts, gymnasium	3.0
Keopuolani	110	Wailuku	Softball, soccer, playground, walking and jogging paths	3.0

Table No. 36 ~~31~~ identifies select beach parks within proximity of the project site.

Table 36 ~~31~~: Central Maui Beach Parks within Proximity of the WCT

Central Maui Beach Parks				
Park	Acres	Location	Facilities	Miles to WCT
Ho'aloha Park	2	Kahului	Beach Park with Canoe Hale; Restroom; volleyball, exercise facility	5.0
Kanahā Beach Park	94	Kahului	Beach park with canoe hale; volleyball; picnic areas; camping; windsurfing, kite surfing and surfing destination	7.0

Moreover, the County of Maui recently acquired 209 acres in Waikapū, near the project site, for a regional park. According to the Mayor's proposed 2013 capital improvement plan, the park will include soccer, baseball, and softball fields and will be built out in phases. This park would be located within approximately one-half mile of the project site.

A central Maui sports complex is also being planned in Waikapū on 65 acres by the State of Hawai'i. The complex will be built in phases and may include a full-sized baseball field, a quad of softball fields, a little league baseball quad, an area for soccer fields, comfort stations, concession buildings, and new infrastructure.[xxvi] This facility would be located about two miles from the WCT.

Potential Impacts and Mitigation Measures. The resident population of Wailuku-Kahului as of mid-year 2015 was 57,616. According to County and State Forecasts, the 2035 resident population of Wailuku-Kahului may range from 78,764 to 97,080 persons. This is an increase in population of 21,148 to 39,464, which is an increase of 36.7% to 68.5%. The projected resident population of the Project is 3,921 persons, ~~which projected project population is expected to be about 3,511 persons~~, which represents from ~~16.6%~~ 18.51 percent to 9.93 percent ~~8.9%~~ of the projected resident population growth through 2035.

As noted in Section V.B.1 "Population", the project will generate a defacto population of approximately ~~3,511~~ 4,085 persons. The population generated by the development will produce

an increase in demand for park facilities. Using the standard of 10-acres of sub-regional park land per 1,000 persons and 15-acres of regional park land per 1000 persons, the project would need to incorporate approximately ~~35-acres~~ 40.85 acres of sub-regional park land and approximately ~~52-acres~~ 62.17 acres of regional park land to accommodate the project population.

If the WCT is to provide 3.22 acres of sub-regional park land per 1,000 persons and 6.54-acres of regional park land per 1,000 persons, which is the ratio of park land to population that currently exists within Wailuku-Kahului, then the project should provide approximately ~~11-acres~~ 13.15 acres of sub-regional park land and about ~~23-acres~~ 26.72 acres of regional park land.

In order to comply with the County's park land dedication requirement of 500 square feet of park land per unit (not including the initial three units), the project would be required to dedicate approximately ~~16.5-acres~~ 18-acres of land for park use. The WCT proposes to dedicate approximately 32.5 acres of sub-regional park land. This land will comprise a variety of park types including mini-parks, neighborhood parks and a community park. The parks are strategically located to provide easy pedestrian and bicycle access from the project's single- and multi-family residential neighborhoods and the school site to these facilities (See Section III.B.4 of the ~~DEIS~~) FEIS. The project will also provide approximately 50-acres of greenways and open-space, which will include pedestrian and bicycle paths and will create additional opportunities for passive recreation. Moreover, within the abutting 1,077-acres of agricultural lands owned by the Applicant, opportunities for various forms of open-land recreation such as horseback riding, mountain biking, trail running, hiking and community gardening may also exist. With the incorporation of the proposed on-site passive and active park facilities, the WCT should produce minimal impact upon existing park facilities within Wailuku-Kahului.

2. Medical Facilities

Existing Conditions. Maui Memorial Medical Center, located in Wailuku approximately 4 miles from the WCT, is the island's only acute care hospital. It is an approximate 251-bed hospital that is part of the Hawai'i Health System Corporation, which is supported by the State. The Maui Memorial Medical Center provides 24-hour emergency services. It also provides intensive care, oncology, maternity and other specialized units.

Various private medical offices and facilities are located throughout Wailuku-Kahului. These facilities provide non-emergency medical care. Kaiser Permanente has clinics in Wailuku and in Maui Lani and Maui Medical Group has offices in Wailuku.

Potential Impacts and Mitigation Measures. The resident population of Wailuku-Kahului as of mid-year 2015 was 57,616. According to County and State Forecasts, the 2035 resident population of Wailuku-Kahului may range from 78,764 to 97,080 persons. This is an increase in population of 21,148 to 39,464, which is an increase of 36.7% to 68.5%. The projected project population is expected to be about ~~3,511~~ 4,085 persons, which represents from ~~16.6%~~ 19.32 percent to ~~8.9%~~ 10.35 percent of the projected population growth through 2035.

The projected increase in Wailuku-Kahului's population will produce a demand for additional medical facilities. An estimate of the increase in demand for hospital facilities can be calculated based on the existing level-of-service. For acute and critical care, 0.0809 beds are needed to maintain the current level-of-service for every 100 persons on Maui Island. Based on this standard, the WCT would generate a demand for about of ~~2.84~~ 3.30 beds.

To maintain current levels of ambulatory service, 0.0045 ambulances would be needed per 100 persons. Therefore, about ~~.157~~ .184 additional ambulances, with staffing, would be required to service the project population.

3. Police Protection

Existing Conditions. The Waikapū area falls within the MPD's District I. This police district is served by the Wailuku (Central) Station, which houses the MPD headquarters for the entire County. The Central Station is located approximately 4 road miles from the project site.

The Police Department includes the following four programs:

- *The Administration Program*. The Administrative Program is responsible for recruitment of personnel; compliance with The Commission on Accreditation for Law Enforcement Agencies (CALEA) standards; and addressing personnel matters.
- *Technical and Support Services Program.* The Technical and Support Services Program conducts recruit training, maintains reliable radio communications; promotes the use of

technology to improve law enforcement services; and promotes community involvement and crime prevention.

- *Investigative Services Program.* Conducts juvenile crime prevention; investigates vice and drug activities, prepares for a responds to critical incidents; conducts specialized and detailed criminal investigations; and investigates domestic violence incidents.
- *Uniformed Services Program*. Suppresses drug trafficking; conducts DUI enforcement; issues traffic citations; and enforces laws and ordinances.

Table No.37 ~~32~~ identifies full time equivalent personnel identified for each program in the County's adopted fiscal year 2015 budget.

Table 37 ~~32~~: Full-time Equivalent Police Department Personnel

Program	Full Time Equivalent Personnel	
	2012 Adopted	2015 Adopted
Administration Program	23.0	24.0
Investigative Services Program	89.0	106.0
Technical and Support Services Program	110.5	104.5
Uniformed Patrol Services Program	295.1	290.5
Department Total	517.6	525

Potential Impacts and Mitigation Measures. The de facto population of the County of Maui as of July 2012 was 201,870. Therefore, the level-of-service for Police Department Personnel in 2012 was one Police Department personnel per 390 persons.

The resident population of Wailuku-Kahului as of mid-year 2015 was 57,616. According to County and State Forecasts, the 2035 resident population of Wailuku-Kahului may range from 78,764 to 97,080 persons. This is an increase in population of 21,148 to 39,464, which is an increase of 36.7% to 68.5%. The projected resident population of the Project is 3,921 persons, ~~which projected project population is expected to be about 3,511 persons~~, which represents from ~~16.6%~~ 18.51 percent to 9.93 percent ~~8.9%~~ of the projected resident population growth through 2035. Using a standard of one Police Department personnel per 390 persons, the

project population would generate a need for about ~~9~~ 10.47 personnel and accessory facilities. As noted in the Fiscal Impact Assessment prepared for the project (Appendix A), after new per capita costs for services are considered the County will earn a net "profit" of $4.2 million annually after stabilization. ~~A portion of these revenues should be allocated to help address the increase in demand for police protection services generated by the project.~~

4. Fire Protection

Existing Conditions. The Department of Fire and Public Safety includes the following five programs:

- The Administration and Maintenance Program;
- The Training Program;
- The Fire/Rescue Operation Program; and
- The Fire Prevention Program.

There are two fire stations that are within a five road mile service area of Waikapū. These include Wailuku Station at 21 Kinipopo Road and the Kahului Fire Station at 200 Dairy Road. The Wailuku Station is an Engine Company. The Kahului Fire Station is an Engine, Tanker and Rescue Company.

The County uses a distance standard of 2 to 3 miles to provide adequate coverage to residential districts. Waikapū is approximately 3 road miles from the Wailuku Fire Station and 4.5 road miles from the Kahului Fire Station.

In order to reduce response times for both fire and medical emergencies, construction of a new fire station is planned in Waikapū. According to the Mayor's proposed 2013 capital improvement program, the fire station will be situated on approximately 5 acres of the 100 acres recently acquired in Waikapū to accommodate a County campus for various departments, police and fire stations. The CIP states that the 5-acre fire station will be located along the proposed Waiko Road Extension. The development of a fire station within Waikapū will bring the proposed project well within the County's desired response time standard.

Potential Impacts and Mitigation Measures. The de facto population of the County of Maui as of July 2012 was 201,870. Therefore, the County-wide level-of-service for Fire Department Personnel in 2012 was one Fire Department personnel per 518 persons.

The resident population of Wailuku-Kahului as of mid-year 2015 was 57,616. According to County and State Forecasts, the 2035 resident population of Wailuku-Kahului may range from 78,764 to 97,080 persons. This is an increase in population of 21,148 to 39,464, which is an increase of 36.7% to 68.5%. The projected resident population of the Project is 3,921 persons, ~~which projected project population is expected to be about 3,511 persons~~, which represents from ~~16.6%~~ 18.51 percent to 9.93 percent ~~8.9%~~ of the projected resident population growth through 2035. Using a standard of one Fire Department personnel per 518 persons, the project population would generate a need for ~~7~~ 7.89 personnel and accessory facilities. As noted in the Fiscal Impact Assessment prepared for the project (Appendix A), after new per capita costs for services are considered the County will earn a net "profit" of $4.2 million annually after stabilization. ~~the project will generate approximately $3.1 million in real property tax receipts on a stabilized basis following build-out of the project. A portion of these revenues should be allocated to help address the increase in demand for fire protection services generated by the project.~~

5. Schools

Existing Conditions. Maui schools are organized into complexes and complex-areas. A complex consists of a high school and all of the intermediate/middle and elementary schools that flow into it. Groups of two to four complexes form a "complex area" that is under the supervision of a complex area superintendent.

The WCT is located within the State Department of Education's Baldwin-Kekaulike-Maui Complex-Area. The Complex is comprised of the schools shown in Table 38 ~~33~~:

Table 38 ~~33~~: Baldwin-Kekaulike-Maui Complex Area Schools

Baldwin-Kekaulike-Maui Complex Area			
Name	Grades	2013 Enrollment	Approx. Road Miles from WTC
Pu'u Kukui Elementary	K - 5	541	2
Waihe'e Elementary	K - 5	775	6
Wailuku Elementary	K - 5	740	2.75
ʻĪao Intermediate	6 - 8	886	3
Baldwin High School	9 - 12	1538	3.5

Current and projected enrollment and capacities for area schools were provided by the Planning Section of the Department of Education's Facilities Development Branch and are shown in Table 39 ~~34~~, "DOE School Enrollment & Capacity" below.

Table 39 ~~34~~: DOE School Enrollment & Capacity

DOE School Enrollment & Capacity					
Schools	2013 Enrollment	2013 Capacity	Surplus / Deficit	2018 Projected Enrollment	**2018 Surplus / Deficit**
Wailuku Elementary	740	958	218	695	**263**
Pu'u Kukui Elementary	541	550	9	603	**-53**
ʻĪao Intermediate	886	999	113	972	**27**
Baldwin High School	1538	1809	271	1606	**203**
Kahului Elementary	1064	915	149	992	**-77**
Lihikai Elementary	943	1036	93	933	**103**
Pōmaikaʻi Elementary	550	760	210	545	**215**
Maui Waena Intermediate	1095	1276	181	1197	**79**
Maui High School	**1908**	**2035**	**127**	**1394**	**641**

Potential Impacts and Mitigation Measures. The resident population of Wailuku-Kahului as of mid-year 2015 was 57,616. According to County and State Forecasts, the 2035 resident population of Wailuku-Kahului may range from 78,764 to 97,080 persons. This is an increase in population of 21,148 to 39,464, which is an increase of 36.7% to 68.5%. The projected project population is ~~3,511~~ 4,085 persons, which represents from 19.32 percent ~~8.9%~~ to ~~16.6%~~ 10.35 percent of the projected population growth through 2035.

The projected increase in Wailuku-Kahului's population will produce a demand for additional educational facilities. Pursuant to Act 245, the State Department of Education adopted Impact Fees to develop funding for educational facilities required to support new residential development. The Board of Education has designated Central Maui as one of four School Impact Districts. The DOE uses the following student generation rates for Central Maui.

Table 40 ~~35~~: DOE Student Generation Rate Multipliers

DOE Student Generation Rate Multipliers		
Type of School	Generation Rate Per Unit	
	S.F.	M.F.
Elementary	0.23	0.13
Middle	0.11	0.04
High	0.15	0.05

Based upon these standards, the WCT would increase the student population as shown in Table 41 ~~36~~. Expected WCT construction cost impact fees are shown in Table 42 ~~37~~ and land dedication requirements in Table 43 ~~38~~.

Table 41 ~~36~~: WCT Projected Student Generation

WCT Projected Student Generation					
Type of School	Generation Rate Per Unit		WCT Residential Units		Student Generation
	S.F.	M.F.	S.F.	M.F.	

Elementary	0.23	0.13	241.5	49.79	291
Middle	0.11	0.04	115.5	15.32	131
High	0.15	0.05	157.5	19.15	177

Table 42 ~~37~~: WCT Construction Cost Impact Fee

WCT Construction Cost Impact Fee							
Type of School	Fee (dollars)		No. Units		Amount		TOTAL
	SF	MF	SF	MF	SF	MF	
Elementary School	791	447	1050	383	830550	171201	$1,001,251
Middle School	405	147	1050	383	425250	56301	$481,551
High School	957	319	1050	383	1004850	122177	$1,124,027
TOTAL							**$2,606,829**

Table 43 ~~38~~: WCT DOE Land Dedication Requirement

WCT Land Dedication Requirement							
Type of School	Land (acres)		No. Units		Acres		TOTAL
	SF	MF	SF	MF	SF	MF	
Elementary School	.003588	.002028	1050	383	3.767	0.777	4.544
Middle School	.00121	.00044	1050	383	1.271	0.169	1.44
High School	957.00459	.00153	1050	383	4.820	0.586	5.406
TOTAL ACRES							**11.39**

The WCT will comply with State DOE impact fee requirements, which will mitigate the Project's impacts upon State educational facilities. The Applicant is in the process of finalizing an Educational Contribution Agreement (ECA) with the DOE that confirms the applicable construction cost and land dedication impact fees required of the Project. The elementary school is proposed to be constructed in the Phase I development, which is between 2017 and 2021 (See Section 3.B.7). The State Department of Education's Facilities Planning Branch is managing and coordinating the education facilities needs of the region, including the facilities

that will be required of the Project and the neighboring Wai'ale development proposed by A&B Properties.

6. Solid Waste

Existing Conditions. The Central Maui Landfill services the residential waste stream for Central Maui, including Waikapū. The privately owned and operated Decoite Landfill services the island's construction and demolition waste stream. According to the County of Maui's Integrated Solid Waste Management Plan (ISWMP) (February 2009), the amount of waste generated in 2006 was 345,000 tons of which 124,000 tons was diverted for recycling.[xxvii] In 2006, the Central Maui Landfill received 213,993 tons of residential waste, the Maui Construction and Demolition Landfill (Decoite Landfill) received 50,000 tons of construction waste, and the Eco Compost Facility received 54,243 tons of yard waste. It is projected that by 2030 the total generated waste on Maui will be 499,381 tons per year (TPY) of which approximately 31 percent, or 147,309 TPY, would be recycled. Thus, by 2030 it is projected that approximately 353,632 TPY of solid waste would be entering the island's landfills. In comparing planned capacity versus projected solid waste generation, the ISWMP projects that the planned capacity is sufficient to accommodate demand through 2026.

The County of Maui is currently assessing the feasibility of developing a waste-to-energy facility in Central Maui, on land near the Central Maui Landfill. The facility could have the potential to divert up to 80% of the waste generated on Maui with the byproduct used as a renewable fuel. Such a capital improvement would significantly mitigate the need for additional landfill space to accommodate the projected population growth.

The ISWMP also uses residential and commercial waste generation rates for its projections. The residential generation rate in tons per household per year for Maui (excluding Hana) is 2.3. The Commercial Generation Rate (tons per employee per year) for Maui (excluding Hana) is 1.58.

Potential Impacts and Mitigation Measures. The resident population of Wailuku-Kahului as of mid-year 2015 was 57,616. According to County and State Forecasts, the 2035 resident population of Wailuku-Kahului may range from 78,764 to 97,080 persons. This is an increase in population of 21,148 to 39,464, which is an increase of 36.7% to 68.5%. The projected resident

population of the Project is 3,921 persons, ~~which projected project population is expected to be about 3,511 persons~~, which represents from ~~16.6%~~ 18.51 percent to 9.93 percent ~~8.9%~~ of the projected resident population growth through 2035.

The projected increase in Wailuku-Kahului's population will produce a demand for solid waste disposal. Waste generated by site preparation will primarily consist of vegetation, rocks and debris from clearing, grubbing, and grading. Very little demolition material is expected, as the site is essentially vacant.

During the construction phase, construction activities will require the disposal of the existing on-site waste, as well as cleared vegetation and construction-related solid waste. Using a 2003 publication by the Environmental Protection Agency (EPA) entitled "Estimating 2003 Building-Related Construction and Demolition Materials Amounts", factors of 4.39 pounds per square feet of construction for residential and 4.34 pounds per square feet of construction for commercial buildings were used to determine potential construction waste generated by the Project. Using these factors, it is estimated that during the construction phase (2017-2026) residential construction waste might total approximately 8.7 million pounds or 4,350 tons of waste. The commercial component would generate approximately 736,000 pounds or 368 tons of waste through 2026.

A solid waste management plan will be coordinated with the County's Solid Waste Division for the disposal of onsite and construction-related waste material. The Developer will work with the contractor to minimize the amount of solid waste generated during the construction of the project. Using the ISWMP's residential generation rate of 2.3 tons per household per year and the commercial generation rate of 1.58 tons per employee per year, total solid waste generated during the operation phase of the project at stabilization in 2026 is ~~3,715~~ 4,051 tons per year. Using a diversion rate of 31 percent, total waste from the project site is estimated to be approximately ~~2,563~~ 2,795 tons per year.

The WCT will support the County's recycling, reuse and composting activities. In addition, the Applicant will explore the opportunity for establishing a community composing facility where the recycled by product could be made available to WCT's farmers. The ISWMP provides

strategies for diverting solid waste from landfills to reduce landfill dependency, save landfill capacity and improve operational efficiency. The WCT will implement these strategies by providing options for recycling, such as collection systems and bin space, within the project, and promoting sound recycling strategies among residents and businesses.

D. INFRASTRUCTURE

1. Roadways and Traffic

Existing Conditions. Existing regional roadway conditions are described in detail in the Preliminary Engineering Report, Appendix H, prepared by Otomo Engineering and in the Traffic Impact Analysis Report (TIAR), Appendix I, prepared by Fehr & Peers.

Figure No. 43 ~~38~~ shows the location of regional roadways that serve the project area. The primary regional access to the Waikapū area is provided by Honoapi'ilani Highway, Highway 30, (Figure 42 ~~37~~, Location 1), which traverses through the project site. Honoapi'ilani Highway divides the project site into the mauka and makai sections. It is a two-lane undivided State Highway which runs in the north-south direction into Wailuku. The speed limit is 30 miles per hour (mph) in the vicinity of the project site and Waiko Road. The Waiko Road intersection is signalized with existing left turn pockets into East and West Waiko Road. There is a left turn pocket on Honoapi'ilani Highway at its intersection with the driveway for the existing MTP.

Kūihelani Highway, Highway 380, (Figure 42 ~~37~~, Location 7) is located immediately east of the project site. It is a two-way, four-lane divided State arterial highway which also runs in a north-south direction. The posted speed limit on Kūihelani Highway at Waiko Road is 55 mph. There is an existing traffic signal at the Kūihelani Highway-Waiko Road intersection. The southern terminus of Kūihelani Highway is its intersection with Honoapi'ilani Highway. The northern terminus is at its intersection with Pu`unēnē Avenue, where it turns into Dairy Road.

Waiko Road (Figure 42 ~~37~~, Location 2 and 3) is a two-lane County-owned collector roadway that runs in an east-west direction and connects Honoapi'ilani Highway and Kūihelani Highway. The posted speed limit on Waiko Road is 20 mph. Immediately east of Honoapi'ilani Highway, Waiko

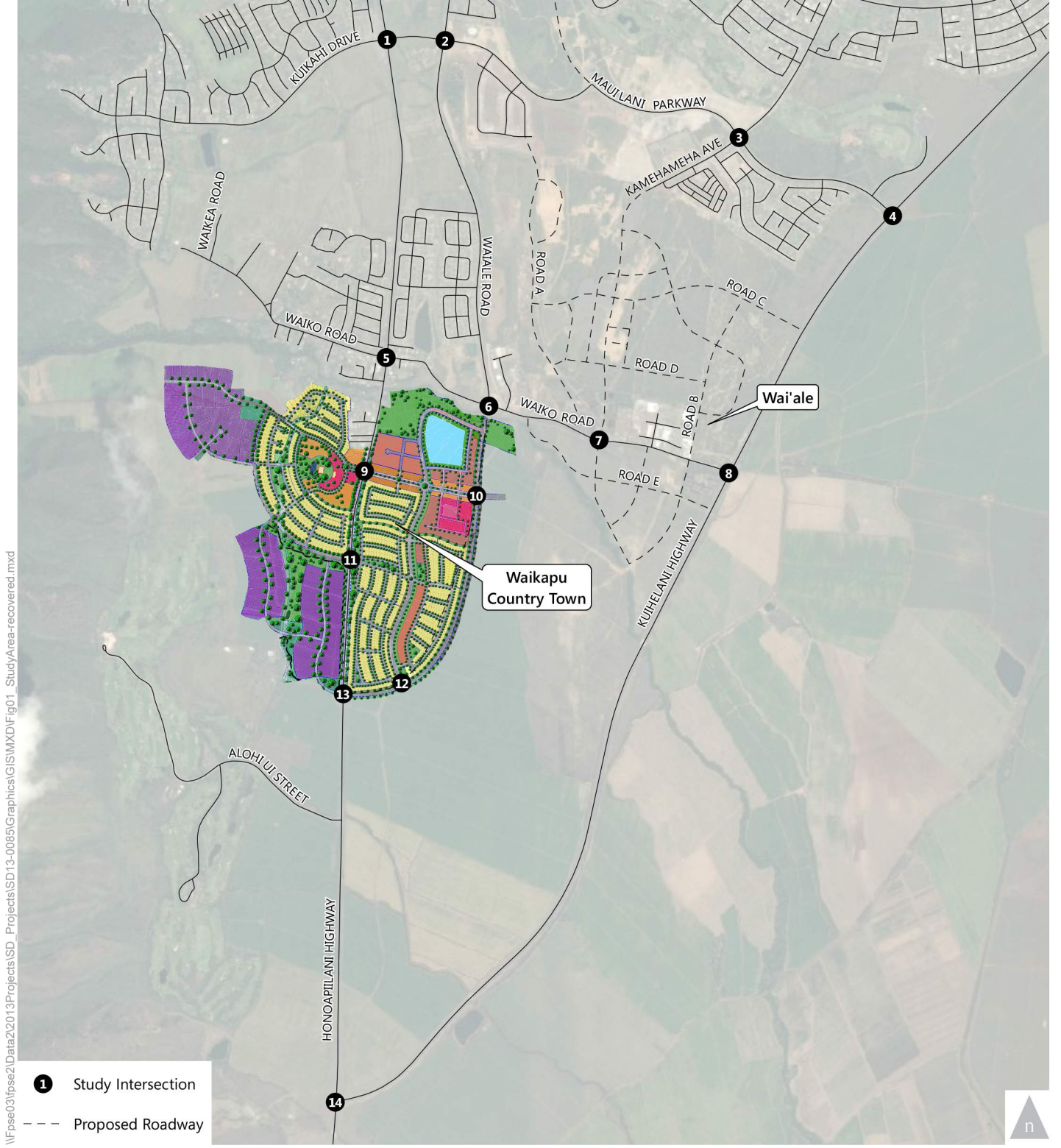

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Figure 43:
Study Area and Analyzed Intersections

Road provides access to the Waikapū Gardens residential community. Further east, Waiko Road provides access to industrial and livestock land uses. There is a weight limit of 10,000 pounds for vehicles entering and exiting Waiko Road from Honoapi'ilani Highway.

Wai`ale Road (Figure 43 ~~38~~, Location 5) is a north-south, undivided collector road that starts as an extension of Lower Main Street and terminates at Waiko Road. The roadway provides two travel lanes (one in each direction) and serves as the only access road for residents of the Waikapū Gardens neighborhood located between Kuikahi Drive and Waiko Road. The posted speed limit is 20 mph. The section of Wai`ale Road from Waiko Road to Kuikahi Drive is privately owned. The segment from Kuikahi Drive to Lower Main Street is County owned and used as a collector road.

Kuikahi Drive (Figure 43 ~~38~~, Location 6) is an east-west collector road. West of its intersection with Honoapi'ilani Highway, Kuikahi Drive passes through the Wailuku Heights Subdivision and terminates in a cul-de-sac at the top of the subdivision. Approximately 1,000 feet east of Honoapi'ilani Highway, it intersects with Wai`ale Road. The eastern terminus of Kuikahi Drive is at its intersection with Maui Lani Parkway.

Kamehameha Avenue (Figure 43 ~~38~~, Location 7) is a County-owned north-south collector road. It is a two-lane roadway which begins at its intersection with Hana Highway and extends southward through the Maui Lani development with its terminus just south of Pomaika`i Elementary School.

Maui Lani Parkway (Figure 43 ~~38~~, Location 8) is a two-lane, east-west collector road with a raised median. It connects Kūihelani Highway with Kuikahi Drive. When completed, Maui Lani Parkway will extend to Kaahumanu Avenue near Baldwin High School. Upon completion of Maui Lani Parkway, it will connect Kūihelani Highway and Kaahumanu Avenue. The mauka side of the Project at the MTP is accessible from Honoapi'ilani Highway. The makai side of the property is undeveloped and in sugar cane cultivation.

Access to the makai land is from Honoapi'ilani Highway, East Waiko Road and Kūihelani Highway from cane haul roads. Access for the proposed project will be from the roadway connections on

Honoapi'ilani Highway for both the mauka and makai development sites, as well as the future Wai`ale Road extension for the makai development.

Traffic Impact Analysis Report (TIAR)

~~As noted, a~~ A TIAR was prepared by Fehr & Peers in December 2014 to document the traffic impacts of the project and to propose mitigation measures (**See**: Appendix L ~~I~~, "Traffic Impact Analysis Report"). The TIAR was incorporated into the DEIS and transmitted to agencies for comment. The County Department of Public Works (DPW) commented in their May 23, 2016 letter (**See**: Appendix S, DEIS Agency and Community Comment and Response Letters) that the timing of the Wai'ale Bypass is uncertain and that the Applicant should assume that the roadway may not be constructed.

In response to the DPW's letter, the Applicant contracted with Fehr & Peers to conduct an analysis of the Project's traffic impacts at full buildout without the Wai'ale Bypass Road. Feher & Peers completed the analysis in October 2016. The "No Wai'ale Bypass Scenario" analysis demonstrates that even under a worst-case scenario where the subject roadway isn't in place, the Project can achieve an acceptable level-of-service through off-site intersection improvements. The "No Wai'ale Bypass" analysis is summarized in this section of the FEIS, following the summary of the December 2014 TIAR, and is also included in the FEIS as Appendix M (**See**: Exhibit M, Fehr & Peers Memorandum dated October 17, 2016).

The December 2014 TIAR analyzed the typical weekday AM and PM traffic conditions under existing conditions and potential project-related traffic impacts at partial buildout in 2022 and at full buildout in 2026. The analysis evaluated the operations at eight existing and six future intersections (a total of 14 study intersections) in the vicinity of the proposed project. The analyzed intersections are shown in Figure 44 ~~39~~ and are listed below.

1. Honoapi'ilani Highway (Highway 30)/Kuikahi Drive
2. Wai`ale Road/Kuikahi Drive
3. S. Kamehameha Avenue/Maui Lani Parkway
4. Kūihelani Highway (Highway 380)/Maui Lani Parkway
5. Honoapi'ilani Highway (Highway 30)/Waiko Road
6. Wai`ale Road/Waiko Road

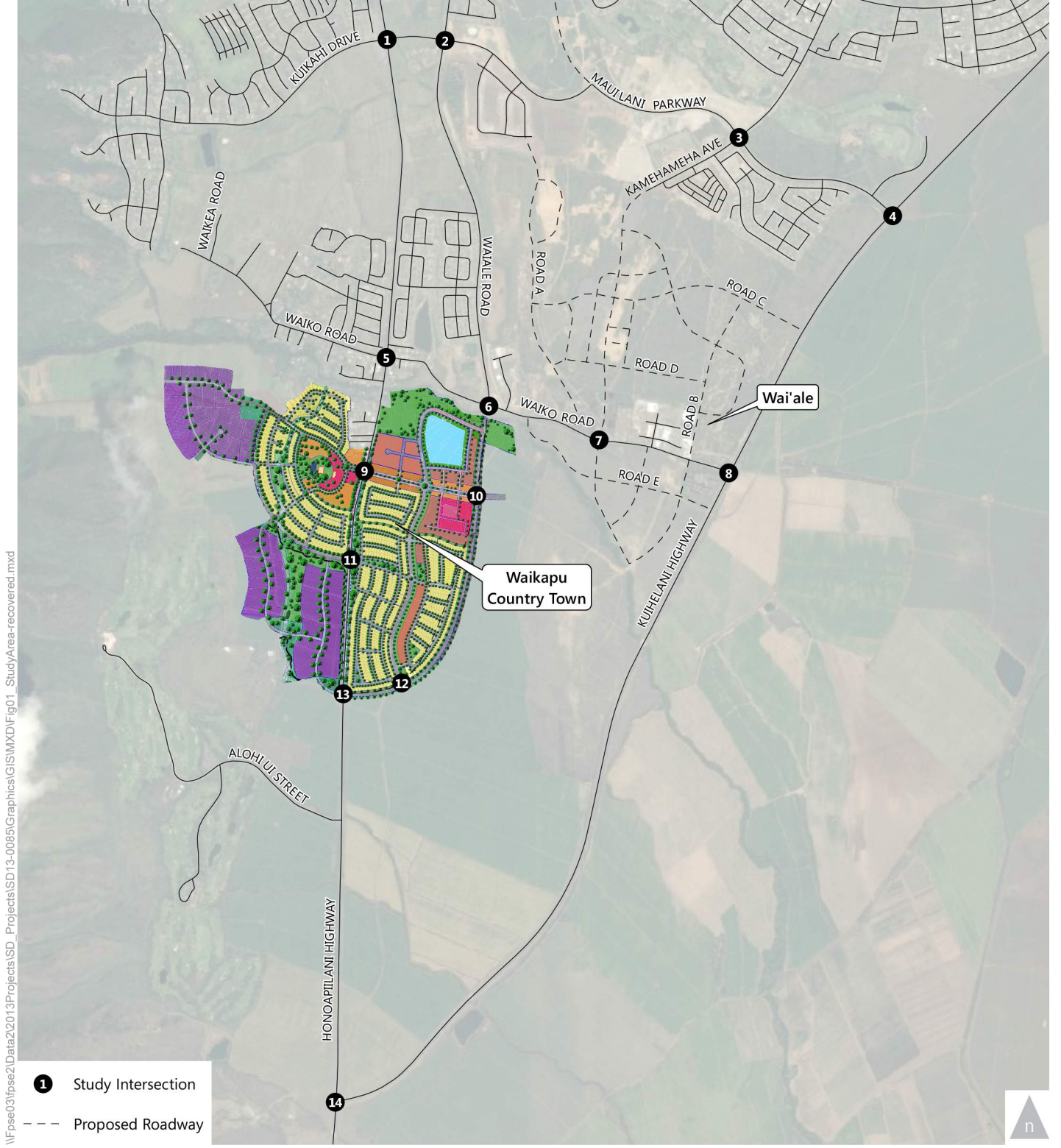

Figure 44:
Study Area and Analyzed Intersections