D-9

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Land Division
Honolulu, Hawai`i 96813

October 23, 2020

Board of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

OAHU

Approval of the Department's Draft East Kapolei Strategic Master Development Plan for the State-Owned Parcels Identified as Tax Map Keys (1) 9-1-016:008, 9-1-017:097, 9-1-018:008 & 014, Situated at Honouliuli, 'Ewa, O'ahu; and

Authorize the Chairperson to Execute a Contract for an Environmental Impact Statement for the Development of the Subject Parcels in Accordance with the Department's East Kapolei Strategic Master Development Plan.

BACKGROUND

At its meeting on June 23, 2017, under agenda item D-4, the Board authorized the Chairperson to enter into a Memorandum of Agreement (MOA) with the State Office of Planning (OP) for the use of Transit Oriented Development (TOD) capital improvement project (CIP) funds for a strategic master development plan for the Department's four parcels located in East Kapolei. The Board granted its approval as amended to require staff to return to the Board with the strategic master development plan for review and approval. The MOA was executed, and the Department contracted with R.M. Towill Corporation (RMTC) to develop the plan. As the draft plan is nearing finalization, staff believes it is appropriate to bring the draft plan to the Board for its review and approval. Should the Board approve the draft plan, staff will work with RMTC to finalize the draft plan, including non-substantive revisions for clarity and style.

The primary purpose for the development is to provide a long-term source of income to the Department, and the strategic master development plan is a critical component to facilitate development of the parcels. Additionally, the Department has been in consultation with multiple agencies regarding the development of the parcels, most notably through the Hawai'i Interagency Council for Transit Oriented Development (TOD Council). Act 130, Session Laws of Hawaii 2016 established the TOD Council within the Department of Business, Economic Development & Tourism to coordinate effective TOD planning on a statewide level. The act also designated the OP as the lead state agency for TOD coordination. The Department is an active participant of the TOD Council, with designated staff serving as a voting member.

D-9

PROPOSED DEVELOPMENT AREA

The Department's four parcels are located adjacent to or in close proximity of the Keone'ae rail station, the University of Hawaii West Oahu (UHWO) campus and the Ho'opili master planned community. The four parcels are identified as follows: (1) 9-1-016:008 (31.92 acres); (1) 9-1-017:097 (36.37 acres); (1) 9-1-018:008 (40.73 acres); and (1) 9-1-018:014 (59.09 acres). A map attached as **Exhibit A** shows the location of the four parcels. All parcels are State Land Use District Urban and are currently have County zoning of AG-1, Restricted Agriculture District.[1]

Parcel (1) 9-1-017:097 is located adjacent to the Keone'ae rail station (also known as the UHWO rail station), and bordered by Kualaka'i Parkway on the west, Farrington Highway on the north, and the future entrance to Ho'opili on the south. As this parcel is adjacent to the rail station, this parcel likely has the best potential for income generation. However, part of the parcel will be used for a required 1,000 stall park and ride facility, as well as the rail guideway.

Parcel (1) 9-1-018:014 is located directly mauka of (1) 9-1-017:097, and is bordered by Kualaka'i Parkway, Farrington Highway and the H-1 freeway. Kalo'i Gulch runs through parcels (1) 9-1-017:097 & 9-1-018:014, but the impact of the gulch is greater on parcel (1) 9-1-018:014, as it runs through close to the center of the parcel, essentially splitting the parcel in half.

Parcels (1) 9-1-016:008 and 9-1-018:008 are adjacent parcels located directly mauka of the UHWO campus and are bordered by Farrington Highway and the H-1 freeway. Hunehune gulch runs through both parcels and will require relocation to effectively utilize the parcels. Staff notes that a portion of parcel (1) 9-1-018:008 will be dedicated to house a Board of Water Supply water storage tank and an additional portion of the same parcel may be divested through a land exchange with neighboring landowner D.R. Horton (DRH) to increase the developable area of parcel (1) 9-1-017:097.

REMARKS

The plan recommends various land uses for the four parcels. Staff believes that the proposed uses would not only provide critically needed future lease revenues for the Department, but also serve as a foundation to build a thriving community in the East Kapolei/UHWO region by providing jobs and critically needed affordable housing. Uses for the properties include mixed use commercial, office and hotel, light industrial and affordable housing. A draft land use plan is included as **Exhibit B** and a copy of the draft report is attached as **Exhibit C**.

Parcel (1) 9-1-017:097, referred to hereafter as the "TOD parcel", is intended to be a mixed-use development inclusive of commercial, retail, office, hotel and multi-family rental units. The TOD parcel's close proximity to the rail station offers diverse potential

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[1] The parcels are currently in the process of being re-zoned via the City and County Honolulu's current review and anticipated approval of the East Kapolei Neighborhood TOD plan.

uses that would not only provide a lease rent income source to the Department, but also serve as a residential and employment center for the region. In addition to 50,000 sq. ft. of retail, there would be an additional 20,000 sq. ft. for office uses which could provide much needed services for the surrounding community as well as higher wage jobs. The increased height and density allowed under TOD zoning would also allow for critically needed affordable rental housing. The 720-unit, multi-story housing on the TOD parcel is contemplated to be workforce type housing, with rents approaching closer to market rates for higher level units. In terms of phasing, developing the TOD parcel would be the priority of the four parcels. Land Division has had initial discussions with the Hawaii Housing Finance and Development Corporation (HHFDC) to work together to develop this parcel, with the intent that the collaborative effort would assist in funding the significant infrastructure costs.

As parcel (1) 9-1-018:014 is split by Kalo'i gulch, the plan opts to use the more likely and cost-effective alternative of developing the parcel while leaving the ditch in its current location. The intent is to develop the west half of the parcel for light industrial use, and the east side of the parcel for an additional 280-unit affordable housing project. For the light industrial use, approximately 25.1 acres of the parcel would be developed. Based on pre COVID-19 projections, it is anticipated that there will be an increased demand for industrial land over the next 10-15 years. While the projections may be affected by the economic downturn, developing additional light industrial space could provide opportunities to diversify the State's economy. The affordable housing use portion of this parcel is intended to serve lower income residents as compared to the TOD parcel housing. Similar to the TOD parcel, Land Division intends to work with either HHFDC or another appropriate housing agency in order to assist with the costs to provide infrastructure for the entire parcel. In terms of phasing, the development of this parcel is intended to be second to the TOD parcel.

Finally, parcels (1) 9-1-016:008 and 9-1-018:008 would be developed for an additional 37.6 acres of light industrial use. This would be the final phase of the proposed development, as Hunehune gulch would need to be re-aligned in order to effectively develop these parcels. However, with the growth of the surrounding areas, including the UHWO University Village, there should be sufficient market demand for these lands. It is anticipated that the light industrial development could accommodate supplementary uses that arise from the future expansion of the UHWO campus and provide higher wage jobs.

If the Board approves the plan, staff will proceed on several important tasks to move the project forward. Once the plan is finalized, staff will seek to conduct procurement for an Environmental Impact Statement (EIS) to analyze the development of the parcels in accordance with the strategic master development plan. The Department has received an appropriation for of $1 million in CIP funds via Act 40, Session Laws of Hawaii 2019, Item D-17 for the EIS. The Department's request for the release of the funds is awaiting review and approval by the Department of Budget and Finance and the Governor. Therefore, in anticipation of the release of the funds, staff is requesting that the Board authorize the Chairperson to execute a contract for the EIS once the funds are available and procurement is conducted.

Staff will also proceed with processing several land transactions affecting the TOD parcel. First, staff will proceed to work with DRH on a land donation to increase the area of the southeastern corner of the TOD parcel. The purpose for this acquisition is to consolidate the entire area of the rail station park and ride under the sole ownership of the State. However, the acquisition would also provide development opportunities for the Department as a portion of the donated land would remain open for potential development, and the added land would provide frontage space to the planned main entry road into the Ho'opili development. In addition to the land donation, staff will also work with DRH to consummate a proposed land exchange which will provide additional acreage that will extend the east boundary of the TOD parcel to abut the planned roads in the Ho'opili development. In return for the DRH land, the Department intends to exchange a portion of parcel (1) 9-1-018:008, likely the southeastern corner along Farrington Highway adjacent to DRH owned land.

Staff will also work with the Honolulu Authority for Rapid Transit (HART) to complete long-term dispositions for the park and ride site and the rail guideway. As part of the park and ride disposition, the Department will retain development rights for the site that will allow redevelopment of the area, provided HART's parking requirements are met. Staff notes that the dispositions to HART at gratis are contingent on the final approval of the East Kapolei Neighborhood TOD plan that includes all four of the subject State parcels. Staff has worked with the City and County Department of Planning and Permitting (DPP) to incorporate the subject parcels in the neighborhood TOD plan in a manner consistent with the uses proposed in the Department's strategic master development plan. The neighborhood TOD plan was approved by the City Planning Commission on August 19, 2020 and is currently under review by the Honolulu City Council. Staff will return to the Board to seek approvals on the various land transactions when appropriate.

Staff is also working with the State Department of Transportation, Highways Division (DOT-H) to accommodate the Farrington Highway widening project as it affects the subject parcels. The widening project will be a critical factor in the future development of the parcels. Finally, staff will continue to work on addressing the infrastructure needs for the parcels. Given the significant costs, staff hopes to continue to partner with agencies such as the TOD Council, OP and HHFDC, to resolve this critical issue.

<u>RECOMMENDATION</u>: That the Board:

1. Approve the Draft East Kapolei strategic master development plan; and

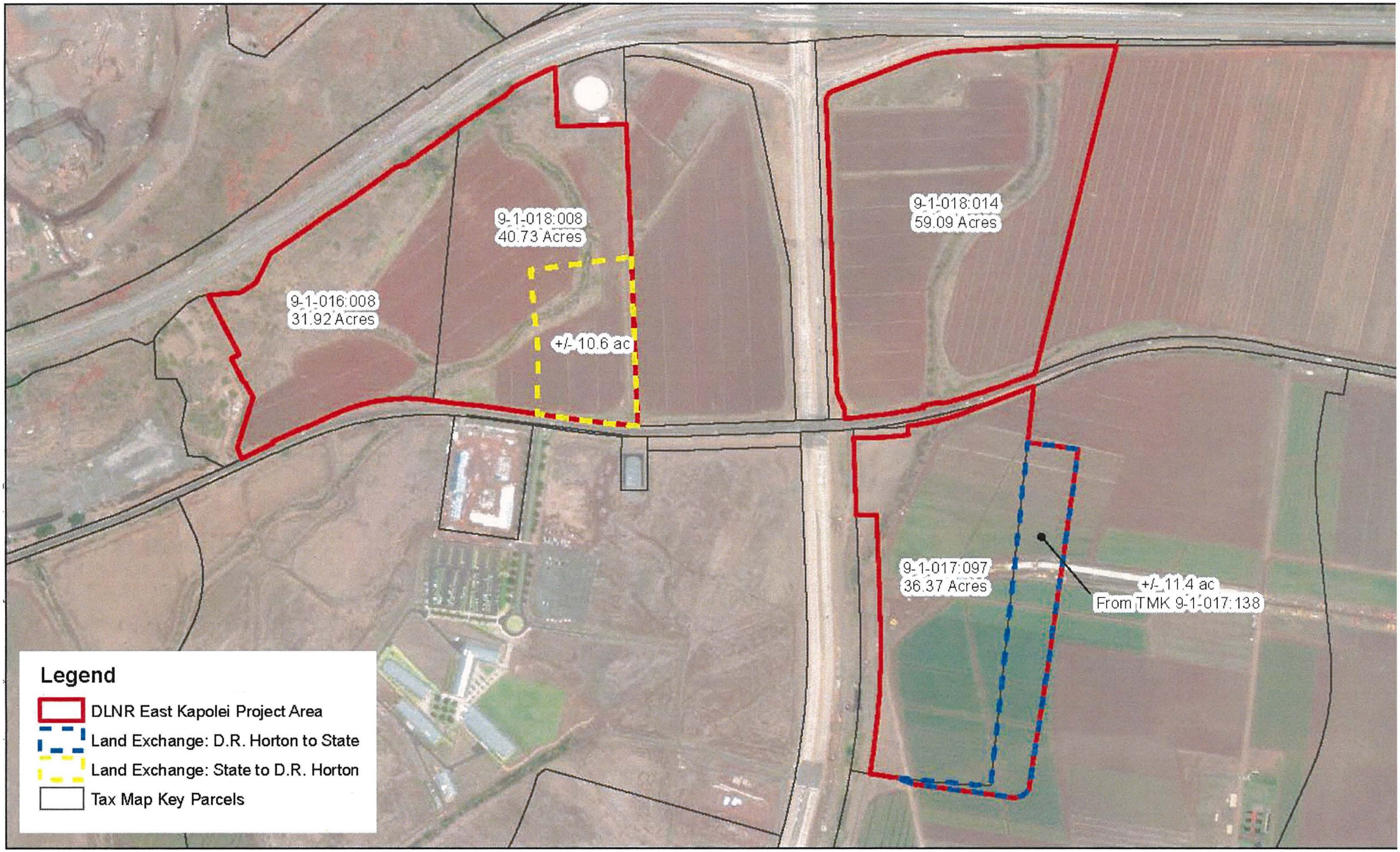
2. Authorize the Chairperson to execute a contract for an Environmental Impact Statement for the development of the subject parcels in accordance with the strategic master development plan.

Respectfully Submitted,

Ian Hirokawa
Special Project Coordinator

APPROVED FOR SUBMITTAL

Suzanne D. Case, Chairperson RT



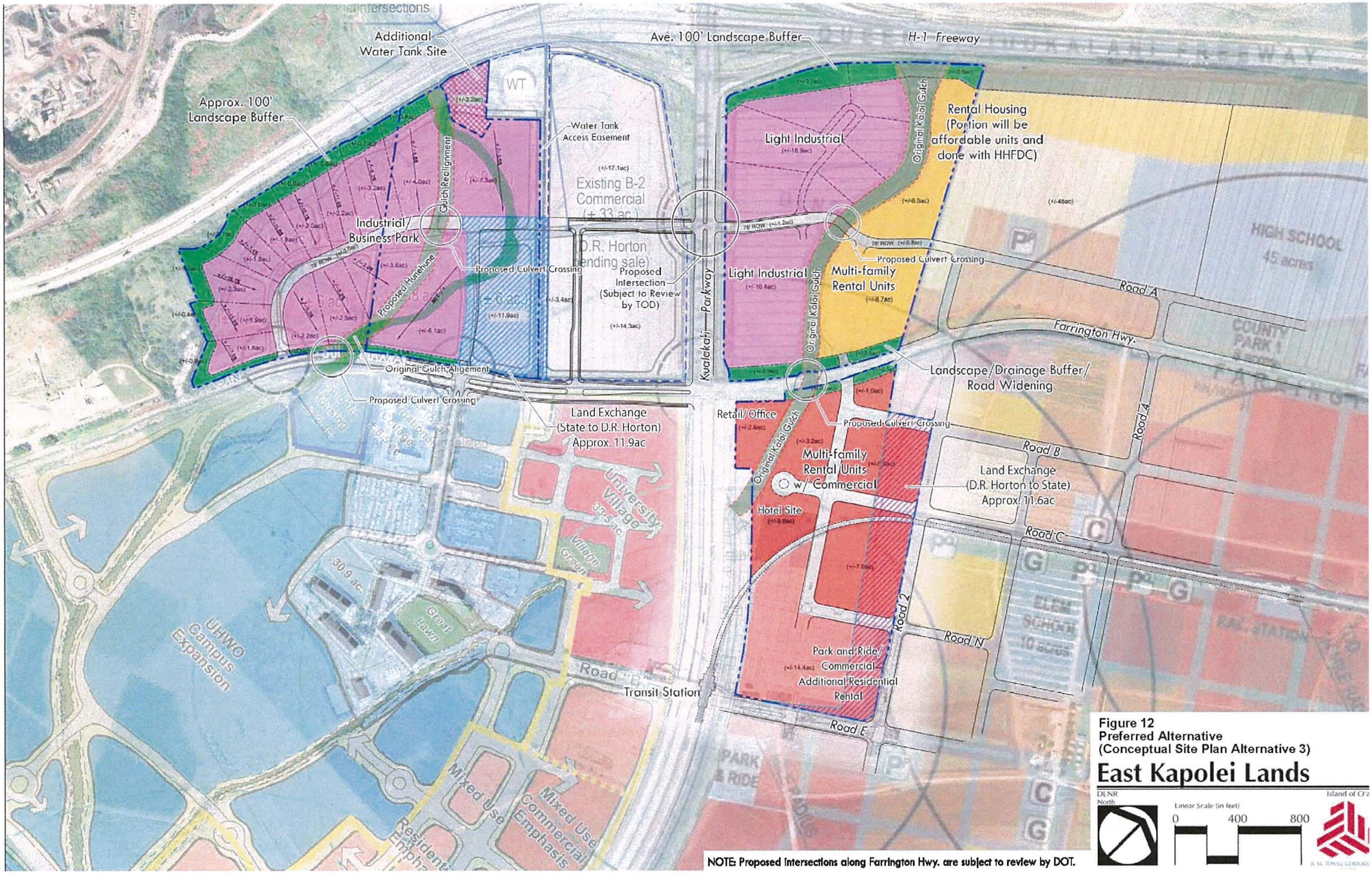
LOCATION MAP

DLNR EAST KAPOLEI

STRATEGIC DEVELOPMENT PLAN

EXHIBIT A

Image Source: RM Towill



CONCEPTUAL PLAN

DLNR EAST KAPOLEI

STRATEGIC DEVELOPMENT PLAN

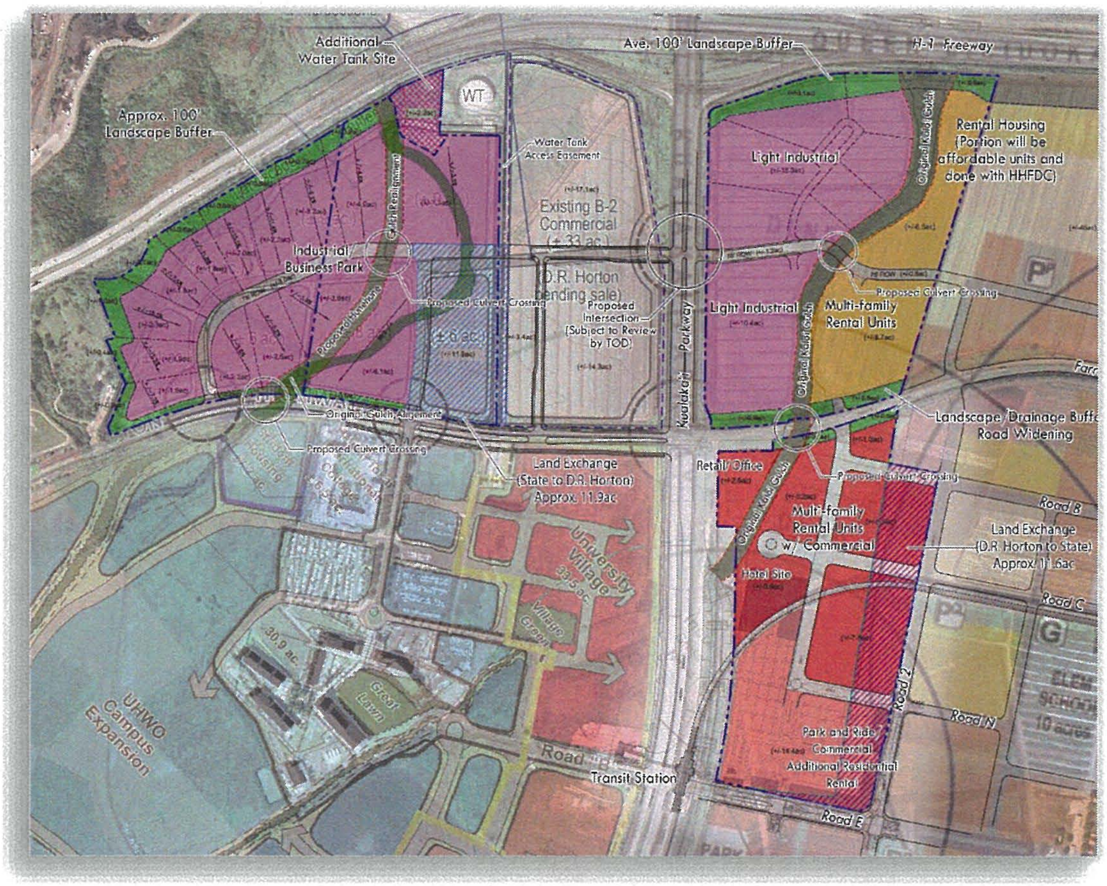
EXHIBIT

B

Image Source: RM Towill &PBR Hawaii

East Kapolei
Strategic Development Plan

Revised Draft Report



R. M. TOWILL CORPORATION

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EXHIBIT C

October 2020

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Appendix B: East Kapolei Affordable Rental Market Study, Ricky Cassiday, February 2020

Appendix C: Hotel Market Assessment and Development Outlook, Erik Kloninger Consulting, February 2019

Appendix D: Infrastructure Study, R. M. Towill Corporation, February 2020

Appendix E: Economic Impact Analysis, Colliers International Hawaii, February 2020

Study Context and Potential Impacts of the COVID-19 Pandemic

This report was drafted between November 2019 and August 2020, with reference to consultations, data collection, and analyses conducted between the third quarter of 2018 and the third quarter of 2020. From approximately February 2020, the COVID-19 pandemic caused major economic, social, and business disruptions in Hawai'i, as it did worldwide. At the time of this writing, little data exists on the pandemic's impacts on development markets and financing, and the timing of recovery is uncertain.

The development visions presented herein reflect the long-term goals and aspirations of the Department of Land and Natural Resources for its holdings in East Kapolei. Some of the projects described would not be expected to materialize for years or even decades of this study. The assessments presented in this report are tied to future implementation of the desired projects, and while some could be delayed, for purposes of this study, it is assumed that in this longer-term framework, conditions affecting such development in Hawai'i have recovered to be within the range of outcomes described herein. Nevertheless, prior to implementation of any particular project, as for any development, the conclusions presented herein should be reviewed in the context of then-current market, economic, fiscal, political, and social environments.

1 EXECUTIVE SUMMARY

The State of Hawai'i (State), Department of Land and Natural Resources (DLNR) is responsible for the utilization of its assets in support of its mission to protect natural, cultural, and historic resources in the State of Hawai'i. As the City and County of Honolulu (City) proceeds with its development of the Honolulu rail system, the location of certain DLNR land assets in the East Kapolei Transit-Oriented Development (TOD) area poses unique opportunities for DLNR.

Specifically, DLNR is planning to develop four tax map key parcels (TMKs: 9-1-016: 008, 9-1-017: 097, 9-1-018: 008 and 014) in East Kapolei. The parcels are situated in three nearby but non-contiguous areas that are generally bounded by the D.R. Horton development (Ho'opili) to the east and southeast, University of Hawai'i West O'ahu (UHWO) to the southwest, open lands to the west, and the Interstate Freeway 1 (H-1 Freeway) to the north. The H-1 Freeway is the primary corridor connecting west O'ahu to downtown Honolulu. Kualaka'i Parkway and Farrington Highway are major regional roadways that will provide the primary access points for the parcels. The three areas are referred to herein as "Kualaka'i Parkway West" (TMKs 9-1-016:008 and 9-1-018:008), "Kualaka'i Parkway East," (TMK 9-1-018-014), and the "Keone'ae Station Area" (TMK 9-1-017:097).

This strategic development plan includes conceptual development alternatives for the DLNR's holdings in the East Kapolei area, herein also referred to as "DLNR East Kapolei Lands." It is understood that the findings from this plan will assist DLNR in its refinement and further progression of its long-range plans for this area.

DLNR is currently negotiating with D.R. Horton for a land exchange involving approximately 11.9 acres within Kualaka'i Parkway West and approximately 11.6 acres of D.R. Horton land adjacent to the Keone'ae Station Area. The land exchange would provide D.R. Horton with improved access to its commercial zoned parcels adjacent to Kualaka'i Parkway West and would provide DLNR with a preferable land configuration, allowing frontage on the planned streets along the south and west edges of its Keone'ae Station Area.

Additional coordination is required between adjacent landowners for future UHWO and Ho'opili developments in order to adequately accommodate sewer, water, and drainage demands and connections. In particular, while the addition of proposed sewer extension improvements is expected to provide adequate capacities for the proposed DLNR development, as well as other proposed area developments, it requires that some capacity be reallocated from the UHWO's Mauka property located to the north of the H-1 Freeway. Vehicular circulation and access also need further evaluation and coordination with State and County agencies and local landowners, as many local roads and access points have not been constructed at the time of this report. Access to Kualaka'i Parkway West and Kualaka'i Parkway East will need to be coordinated with proposed intersections along Farrington Highway and Kualaka'i Parkway.

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2 STUDY FRAMEWORK

2.1 DLNR Background and Mission

The DLNR is responsible for managing, administering, and exercising control over public lands, water resources, ocean waters, navigable streams, coastal areas (except commercial harbors), minerals, and all related interests within the State. The DLNR's jurisdiction encompasses nearly 1.3 million acres of State lands, beaches, and coastal waters as well as 750 miles of coastline. It includes State parks; historical sites; forests and forest reserves; aquatic life and sanctuaries; public fishing areas; boating, ocean recreation, and coastal programs; wildlife and sanctuaries; game management areas; public hunting areas; and natural area reserves. This is embodied in DLNR's mission statement to:

"Enhance, protect, conserve and manage Hawai'i's unique and limited natural, cultural and historic resources held in public trust for current and future generations of the people of Hawaii nei, and its visitors, in partnership with others from the public and private sectors."

DLNR lands not directly protected or utilized for conservation may be made available for market uses if consistent with the above-stated mission of the agency. Income generated from these enterprises could be used for public benefit by helping to support DLNR's primary mission of protecting natural, cultural, and historic resources.

2.2 Purpose of this Study

The DLNR seeks to better understand and plan for the market, development, and income-generating potential of their land holdings in East Kapolei relative to plans initiated by the State and City for TOD. This study develops and assesses conceptual site development alternatives for the use of DLNR lands located near the City's Keone'ae Rail Station. These lands are currently vacant and generally unencumbered by ground leases, rights of entry (ROE), or licenses.

In June 2015, the DLNR selected the R. M. Towill Corporation (RMTC) to assist in preparing conceptual plans and supporting studies for the use of its lands in East Kapolei. These plans and studies facilitate the objective of generating revenues for public purposes consistent with future plans for the growth of TOD and rail service in East Kapolei. The study objectives of this project are to:

- Provide DLNR with information to evaluate the feasibility of future land uses, taking advantage of TOD opportunities;
- Optimize opportunities for revenue generation from the use of DLNR lands;
- Serve as a comprehensive guide for DLNR's TOD-related development;

- Support State and City planning for future infrastructure needs in the respective TOD areas; and
- Facilitate coordination of DLNR's plans with those of adjacent landowners.

The DLNR sought to accomplish these objectives by assembling an experienced project team with national and Hawai'i expertise in TOD, physical and economic site evaluation, planning, market assessment, and cost estimating. In this regard, the RMTC project team was comprised of its civil engineers and multidisciplinary consultants including PBR HAWAII (TOD planning and design), Colliers International (industrial and commercial market assessments, and economic impact analyses), Erik Kloninger Consulting (hotel market assessments), and Ricky Cassiday (affordable housing market assessments).

2.3 TOD Benefits

According to the State Office of Planning (OP), the potential benefits of TOD for residents and State agencies, such as the DLNR, include:

- A variety of new land uses to generate revenues from land sales, leases, and/or joint developments;
- Affordable rental housing opportunities through higher density mixed-use development;
- Improved access to State services for customers, employees and the public;
- Opportunities to incorporate alternative modes of transportation;
- Opportunities to incorporate social infrastructure; and
- Reducing capital and operating costs through efficient infrastructure development and reduced parking requirements.

2.4 Planning Parameters

2.4.1 Project Vision and Goals

The vision for the DLNR East Kapolei Lands is the creation of new opportunities for revenue generation and TOD-associated development, while maintaining DLNR's core mission to enhance and preserve the unique resources it holds in the public trust. This strategic development plan also addresses key goals of TOD related development since substantial portions of DLNR East Kapolei Lands are located within the City's Keone'ae Station Area. These goals would include the creation of affordable rental housing opportunities, improving access to public agencies and services, and incorporating alternative modes of transportation to reduce our reliance on automobiles.

The accomplishment of the project vision will require determining the development potential of the DLNR lands relative to land uses and services in support of TOD. This report will therefore examine the creation of rental housing, hotel, retail, and industrial developments, and the provision of transportation access via alternative modes of transportation.

2.4.2 Project Location and Sub-Areas

The DLNR East Kapolei Lands consist of approximately 168.3 acres located on the west side of the island of O'ahu, Hawai'i (approximately 169.1 acres upon completion of the land exchange). The parcels are in three nearby but non-contiguous areas that are generally bounded by the D.R. Horton development (Ho'opili) to the east and southeast, UHWO, to the southwest, open lands to the west, and the H-1 Freeway to the north. The H-1 Freeway is the primary corridor connecting west O'ahu to downtown Honolulu. Kualaka'i Parkway and Farrington Highway are two major regional roadways that provide direct access to the properties (see Figure 1).

The project is comprised of three distinct sub-areas, each of which will be phased based on the recommendations of the technical studies:

- Phase 1 (Yr. 2020 -2029) Keone'ae Station Area (TMK 9-1-017:097[1]) – 50.8 acres

  The Keone'ae Station Area is envisioned as a transit-oriented, mixed-use hub with a variety of proposed land uses such as commercial, retail, hotel, medical, and rental housing that embrace opportunities that would be provided by the future UHWO Rail Station. This area has been committed for a 1,000-stall park-and-ride facility to serve future rail operations per agreements involving the City.

- Phase 2 (Yr. 2030 – 2039) Kualaka'i Parkway East (TMK 9-1-018:014), 58.4 acres

  The Kualaka'i Parkway East area proposes up to two major land uses that include light industrial and single-family, and/or multi-family rental housing.

- Phase 3 (Yr. 2040 and beyond): Kualaka'i Parkway West (TMKs 9-1-016:008, 9-1-018:008 (por.)), 59.9 acres

  The Kualaka'i Parkway West area primarily proposes development for industrial/business park uses.

2.4.3 Proposed Land Exchange

DLNR is negotiating with D.R. Horton to exchange approximately 11.9 acres of its Kualaka'i Parkway West parcel (TMK: 9-1-18: 008) for approximately 11.6 acres of land adjacent to the Keone'ae Station Area (see Figure 2). This land exchange provides D.R. Horton with improved access to their B-2 (Business Community)-zoned parcel adjacent to Kualaka'i Parkway, and DLNR with an improved land configuration, along with increased street frontage in the Keone'ae Station Area.

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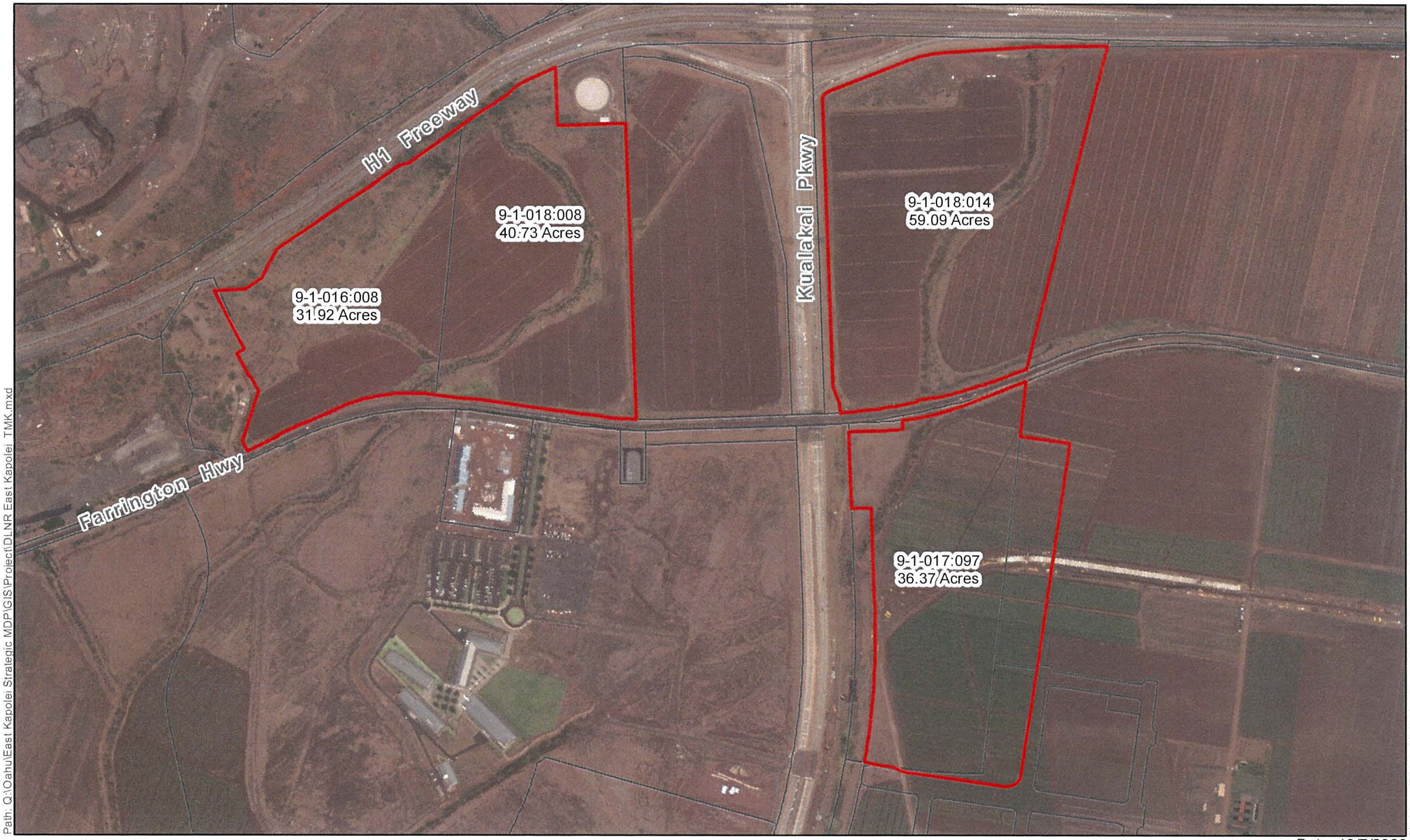
[1] Includes 11.6 acres from the adjacent parcel as part of the land exchange with D.R. Horton.



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Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

Date: 10/7/2020

Legend

DLNR East Kapolei Project Area

Tax Map Key Parcels

Source: City and County of Honolulu, 2019; USDA NRCS

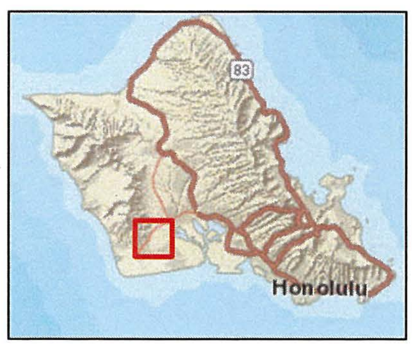

Figure 1

Tax Map Key Parcel

East Kapolei Lands

DLNR
North

Linear Scale (feet)

0 200 400 800

Island of Oyahu

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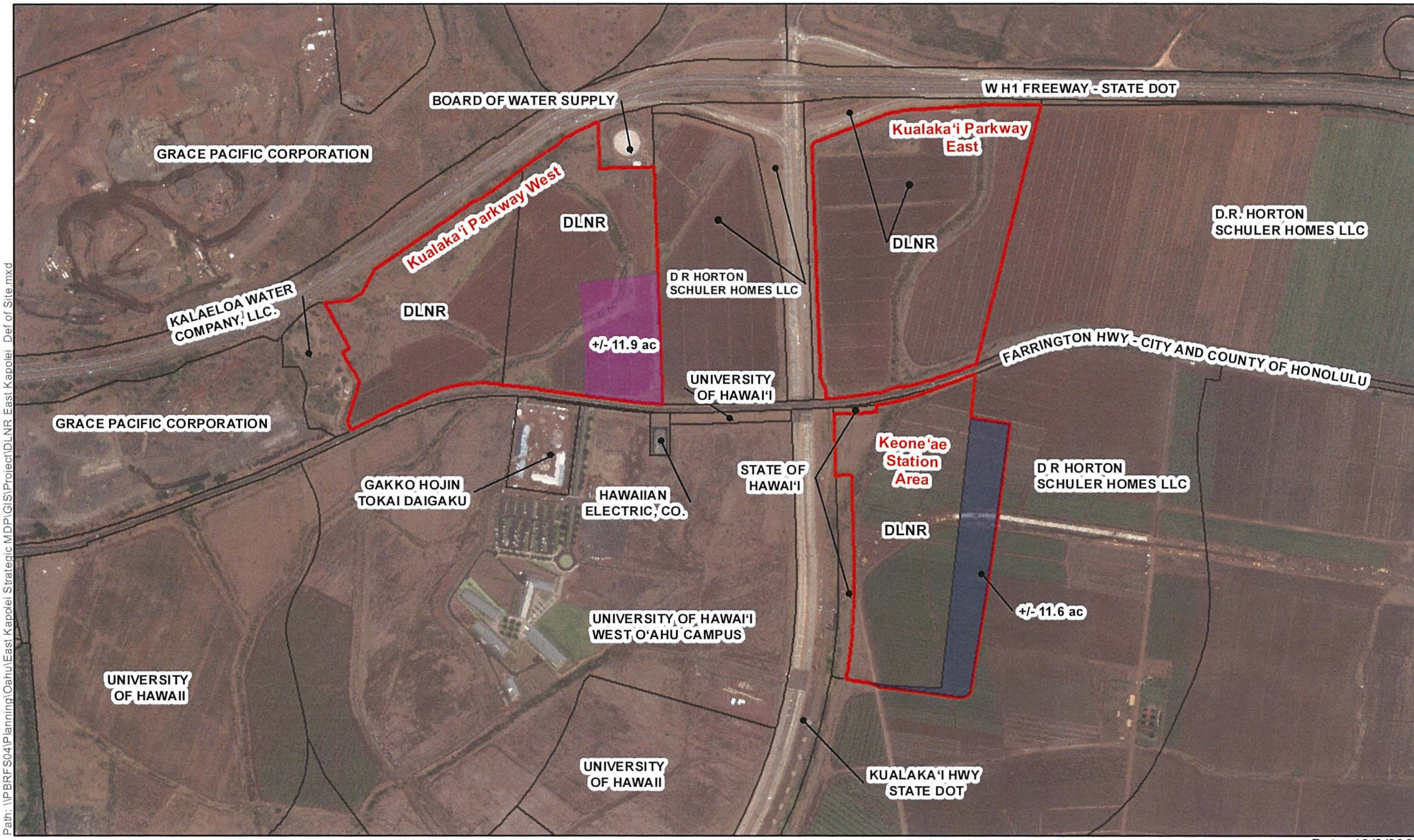

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Date: 10/6/2020

Legend

- DLNR East Kapolei Project Area
- Land Exchange D.R. Horton to State
- Land Exchange State to D.R. Horton
- Tax Map Key Parcels

Source: City and County of Honolulu, 2019; USDA NRCS

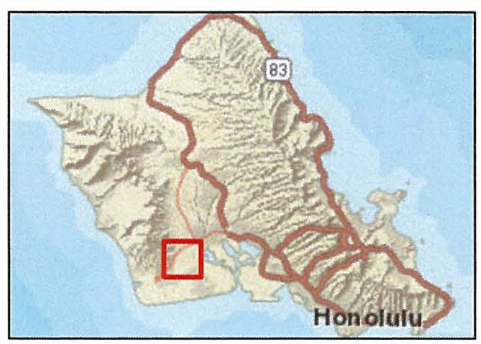


Figure 2

Definition and Location of Site

East Kapolei Lands

DLNR
North

Linear Scale (feet)

0 250 500 1,000

Island of Oyahu

Specifically, the land exchange provides D.R. Horton with Farrington Highway access for their B-2 parcel as other existing options are limited by the State Department of Transportation-Highways' (HDOT) regulations for sight distance and vehicle stacking. The proposed access road for the D.R. Horton B-2 parcel will also provide access into the Kualaka'i Parkway West industrial park.

The land D.R. Horton is exchanging to DLNR is located on the eastern boundary of the Keone'ae Station Area and will allow integration of the Keone'ae Station Area into the Ho'opili roadway network resulting in increased street frontages and access points for DLNR. The conceptual roadway network can be seen on the Preferred Alternative Conceptual Plans (Figures 10-12) discussed later in Chapter 6.

As a part of its efforts to add additional land value to the land swap, D.R. Horton is assisting DLNR through the design of infrastructure to accommodate future wastewater capacity, designing sewer systems based on meeting future projected land use capacity through upsized facilities.

2.4.4 Surrounding Roads and Land Uses

Kualaka'i Parkway and Farrington Highway are the two major regional roadways in the project vicinity. Kualaka'i Parkway is a divided highway with a raised median connecting H-1 Freeway and Kapolei Parkway, and is owned by the State. The City-owned portion of Farrington Highway between Kapolei Golf Course and Fort Weaver Road is a two-lane highway (one lane in each direction). The State owns and maintains jurisdiction of the Farrington Highway-Kualaka'i Parkway intersection. The main access to the DLNR project parcels is off Farrington Highway via the Kualaka'i Parkway H-1 Freeway exit. Farrington Highway borders Kualaka'i Parkway West and Kualaka'i Parkway East along their southern borders and separates Kualaka'i Parkway East from the Keone'ae Station Area.

Surrounding land uses are as follows:

North

- H-1 Freeway (directly adjacent)
- Grace Pacific Corporation's Makakilo Aggregate Quarry (across H-1)
- Vacant former agriculture lands owned by D.R. Horton and UHWO, respectively

East

- D.R. Horton's 11,700-unit Ho'opili community, which is mid-way in its development, and located along the eastern boundaries of Kualaka'i Parkway East and the Keone'ae Station Area

South

- Farrington Highway borders Kualaka'i Parkway West and Kualaka'i Parkway East along their southern borders, and separates Kualaka'i Parkway East from the Keone'ae Station Area

- UHWO campus and Tokai University located to the south/southwest of Kualakaʻi Parkway West, across Farrington Highway

West
- Undeveloped lands owned by the Kalaeloa Water Company are located immediately west of Kualakaʻi Parkway West

Land uses in and around the project parcels include:

- Approximately 36.5 acres of undeveloped land owned by D.R. Horton situated along Kualakaʻi Parkway between Kualakaʻi Parkway West and Kualakaʻi Parkway East
- A 2.5 million-gallon water tank owned by the Honolulu Board of Water Supply (BWS) located along the northeastern edge of Kualakaʻi Parkway West

2.4.5 Rail Service, HART Agreement, and TOD Housing

2.4.5.1 HART Agreement

The Honolulu Authority for Rapid Transportation (HART) was established in 2005 to provide an efficient and reliable transportation alternative for Honolulu's congested urban corridor. The project provides for a rail transit route from East Kapolei to Ala Moana Center, with stations at 21 key commuter and visitor destinations, including Aloha Stadium, Pearl Harbor, Daniel K. Inouye International Airport and downtown Honolulu, Oʻahu's commercial and business center. The rail station closest to the project, the Keoneʻae Station, is a part of the East Kapolei to Aloha Stadium section of the HART system and is scheduled to open in 2021.

In exchange for the "up-zoning" of the DLNR parcels (currently zoned for agricultural uses) by DPP, DLNR has agreed to provide HART with sufficient space at the Keoneʻae Station Area for a 1,000 stall parking lot and bus transfer area as part of the park-and-ride facility for the transit station.

2.4.5.2 TOD Affordable Housing Considerations

According to the 2018 "Implementing an Affordable Housing Requirement" document developed by the City, Oʻahu is experiencing a housing crisis and needs to build more than 24,000 housing units to address current demand; with over three quarters of the demand for households earning less than 80% of the area median income (AMI). The Mayor's Office has developed an affordable housing strategy to address these needs with new and revised policies, incentives, regulations, and investments in partnership with developers, building owners, and other stakeholders. Among the City's priorities are TOD infrastructure investments to support affordable housing, and new TOD zoning around future rail transit stations (Mayor's Office of Housing, 2018).

In 2018, an island-wide affordable housing requirement (Ordinance 18-10, Bill 58, 2017) and associated incentives (Ordinance 18-1, Bill 59, 2017) were adopted by the City Council to help address the critical affordable housing shortage on O'ahu and to provide incentives such as fee and property tax waivers for creating affordable units (Mayor's Office of Housing, 2018).

- **Ordinance 18-10, Bill 58, 2017, "Affordable Housing Requirement"** (AHR) Signed into law by Mayor Kirk Caldwell on April 3, 2018, the primary purpose of this ordinance is to increase the production of affordable housing throughout the City and maintain the units as affordable for a longer period. It regulates the development and use of real property to ensure that housing production, rehabilitation, and preservation address all income groups (City Council, 2018).

  The ordinance applies to for-sale projects of 10 or more dwelling units and individual conversions. Rental projects are exempt from the AHR, but affordable rental units may be provided to meet the requirement of for-sale projects. The AHR focuses on homebuyer households with incomes up to 120% of the AMI and renter households with incomes up to 80% of the AMI. Projects located in TOD zones requesting higher/bonus heights and/or density allowances are required to provide community benefits and have separate AHR requirements (This ordinance is set to be repealed on June 30, 2027).

- **Ordinance 18-1, Bill 59, 2017, "Affordable Housing Incentives"** Signed into law by Mayor Caldwell on February 15, 2019, the primary purpose of this ordinance is to provide financial support for the creation and maintenance of the affordable dwelling units provided through Ordinance 18-10 (2017). It provides financial incentives such as real property tax exemptions, tax holidays, and/or waiver of wastewater system facility charges, plan review and building permit fees, and park dedication requirements (City Council, 2018).

  The incentives apply to affordable units in AHR (for-sale) projects and all units in qualifying affordable rental projects. Qualifying rental projects include those where all units are affordable to households earning up to 140% of the AMI, including 20% of units affordable to households earning up to 80% of the AMI. Actual waivers are determined when building permits are submitted (This ordinance is set to be repealed on June 30, 2027).

The conceptual site development plans presented include provisions for some 1,000 rental units. Based on the market assessment for the project as described in Section 4.2 herein, the greatest housing demand is households earning up to 60% of the AMI. While the exact parameters of housing to be required of a developer have yet to be established, if implementation is expected before June 30, 2027, they should be designed to qualify for the waivers established by Ordinance 18-1. Although not evaluated by the project market study, should the housing alternatively be provided for-sale, such as under a long-term lease, it will need to conform with the for-sale requirements of Ordinance 18-10 if developed prior to June 30, 2027.

3 PROJECT INFORMATION

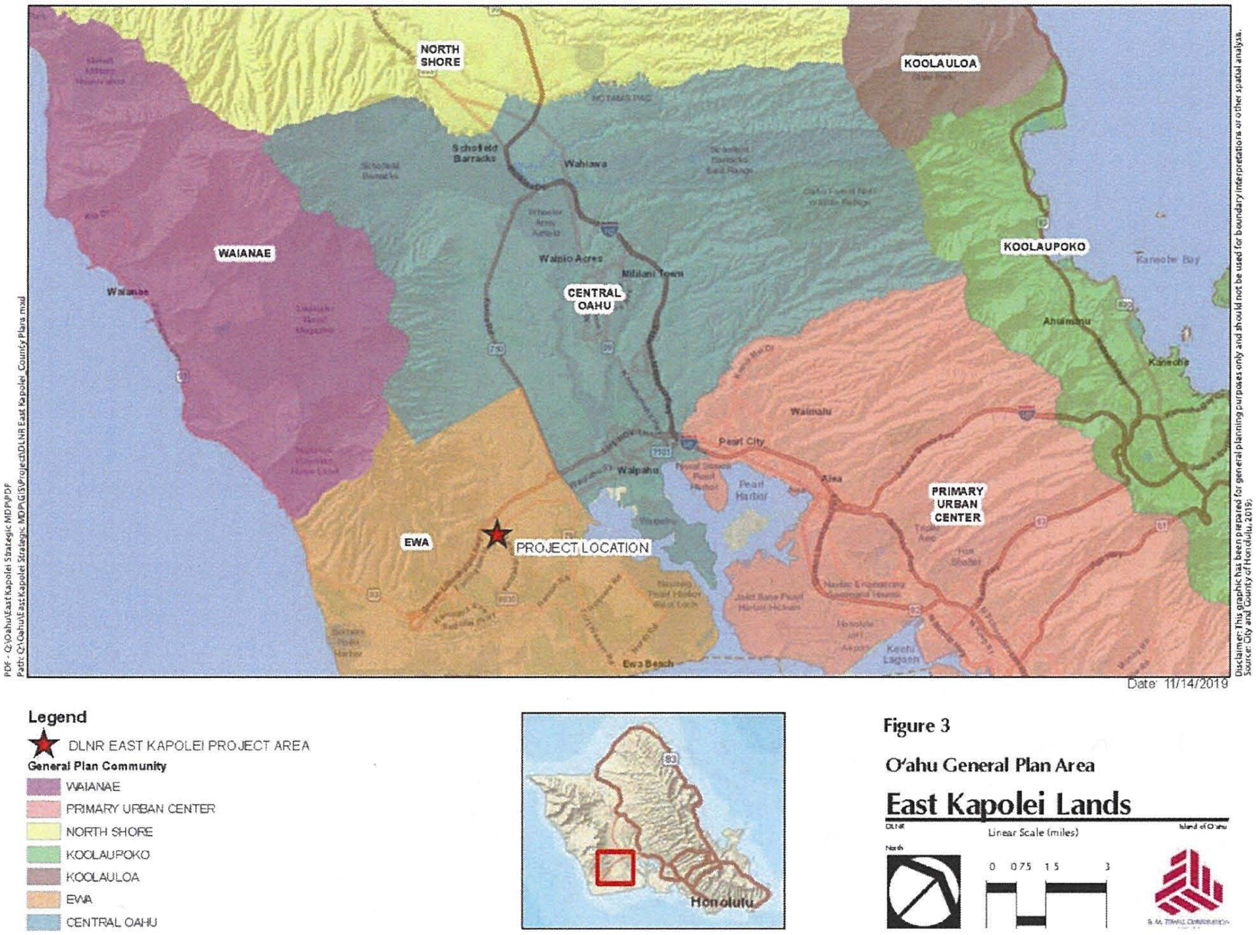
Table 1, below and continued with associated figures on subsequent pages following this page, summarizes project data and includes the land use designation of the site according to State and City controls and regulations.

Table 1: Project Information

	Existing DLNR Lands[2]	DLNR Lands After Land Exchange[3]
Location	Kualaka'i Parkway and Farrington Highway, Kapolei, HI 96707	
Tax Map Keys	9-1-16:008, 9-1-17:097, and 9-1-18:008 and 014 (Figure 2)	9-1-16:008, 9-1-18:008 (por.), 9-1-18:014, 9-1-17:097, and 9-1-017:138 (por.) (Figure 2)
Land Area	Approx. 168.3 acres	Approx. 169.1 acres
Landowner	DLNR	
Property Configuration	Three non-contiguous, irregularly shaped areas.	
Historic Use	According to an 'Ewa Plantation field map dated 1939, the property was formerly used for agricultural cultivation by the O'ahu Sugar Company (Kobori, 1940). In 1977, the Honolulu City Council approved a new General Plan, which designated 'Ewa as the location for a secondary urban center for O'ahu, to be centered in the Kapolei area.	
Existing Use	Undeveloped. The Hunehune and Kalo'i Gulches traverse Kualaka'i Parkway West and East, respectively.	

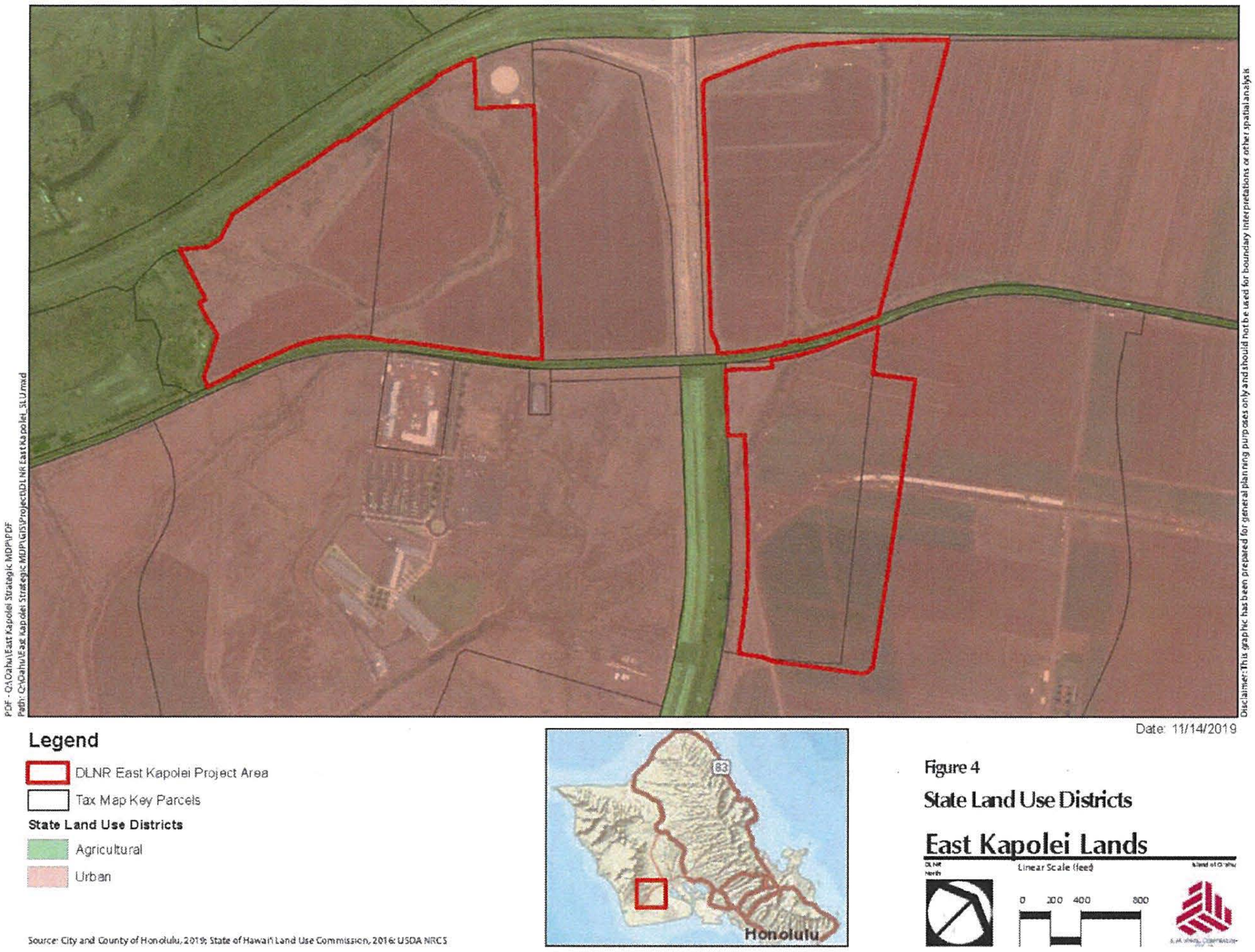
[2] Currently owned by DLNR.
[3] Includes lands proposed for exchange, currently owned by D.R. Horton.

Figure 3: O'ahu General Plan Area



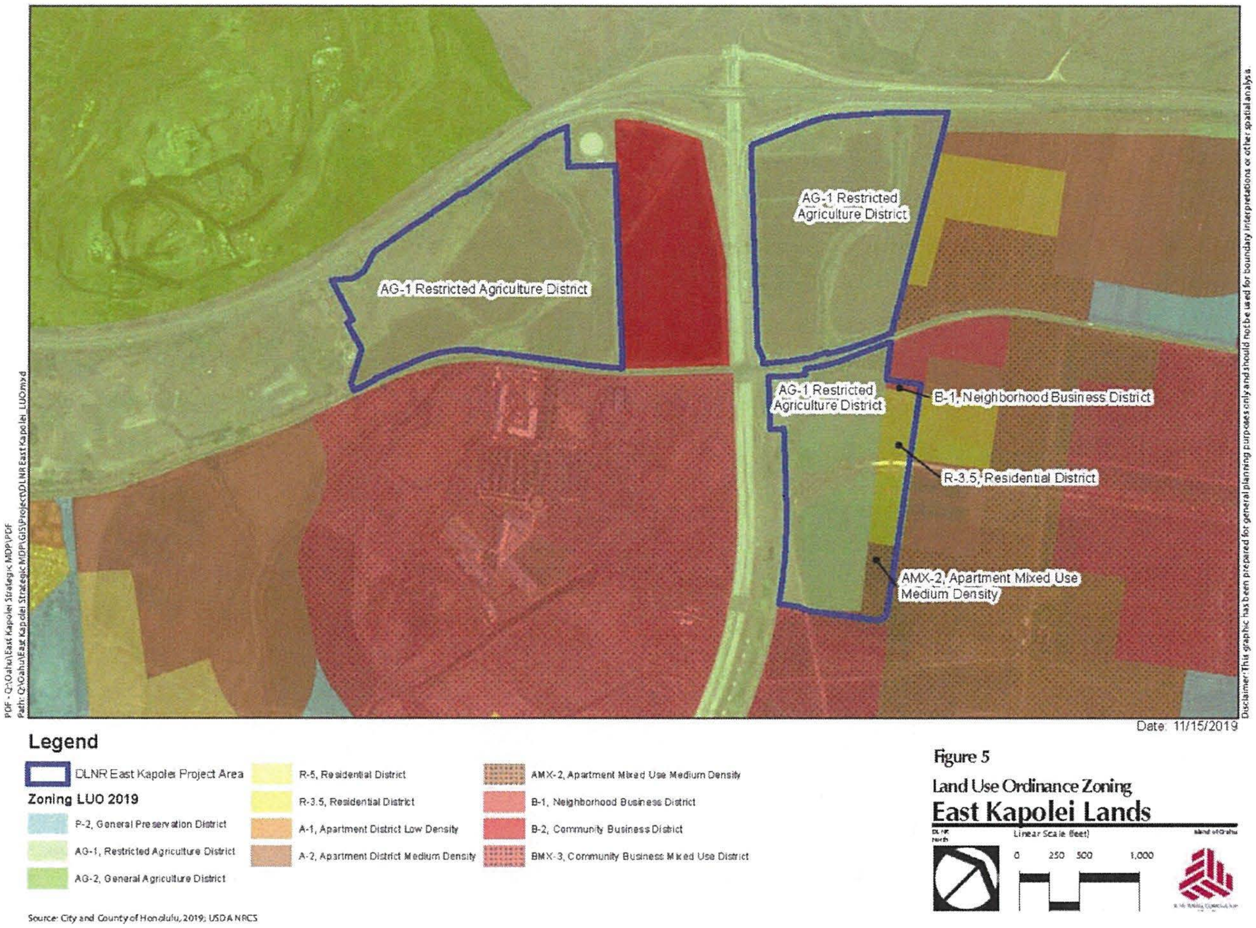
	Existing DLNR Lands
Island/District	O'ahu / 'Ewa District (Figure 3) The project supports the objectives and policies of the O'ahu General Plan through encouraging development within the secondary urban center at Kapolei to relieve developmental pressures in the remaining urban-fringe and rural areas and to meet housing needs not readily provided in the primary urban center, as well as integrating and supporting the proposed mass transit system that is also a policy of the O'ahu General Plan.

Figure 4: State Land Use Districts



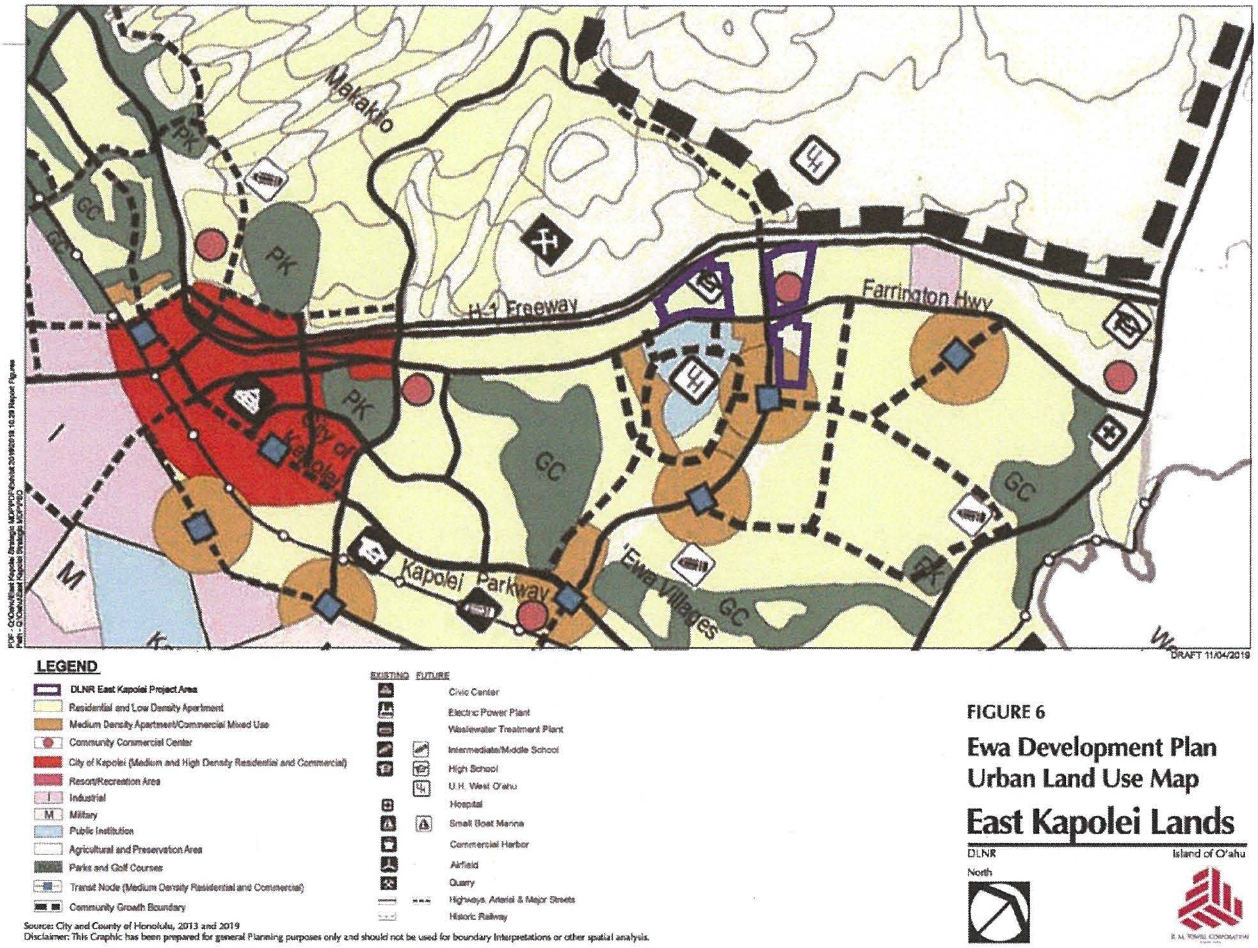
	Existing DLNR Lands
Current Land Use Designations	_State Land Use:_ Urban (Figure 4) The proposed project supports the goals and objectives of the Urban State Land Use Designation by providing master planning that characterizes a "city-like" concentration of people, structures and services, while also including vacant areas for future development.

Figure 5: Land Use Ordinance Zoning



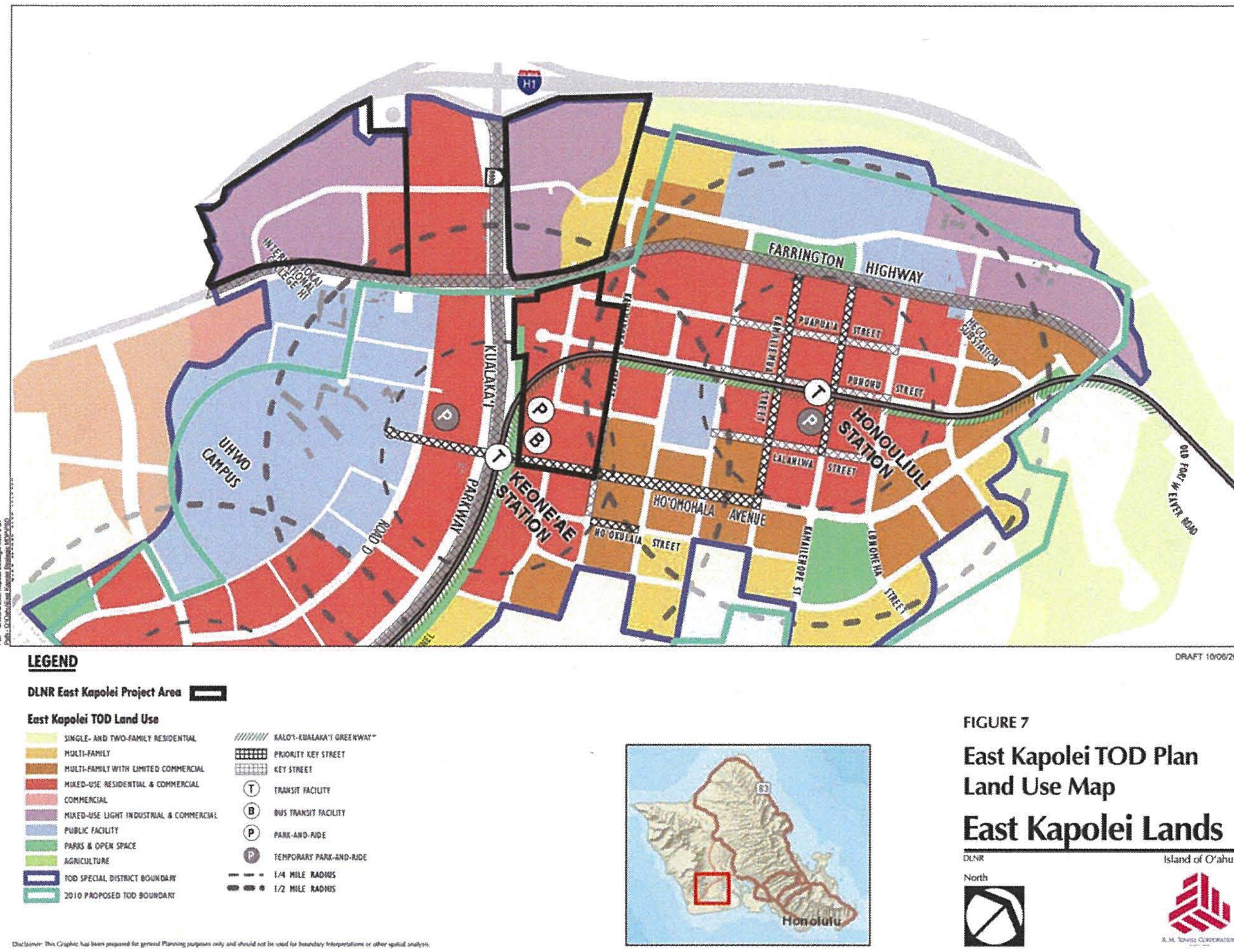
	Existing DLNR Lands	DLNR Lands After Land Exchange
Current Land Use Designations	*LUO Zoning:* "AG-1" (Restricted Agriculture District), 15 to 25-foot height limit, portions B-1 (Neighborhood Business District) R-3.5 (Residential District) and AMX-2 (Apartment Mixed Use Medium Density) (Figure 5).	Typically, all AG-1 portions of the project would require rezoning to allow DLNR planned development; however, as a result of DLNR's agreement with the City to provide land for HART's park-and-ride facility at the Keone'ae Station Area, DPP has included the DLNR parcels in the East Kapolei TOD plan allowing for commercial and residential uses.

Figure 6: ʻEwa Development Plan Urban Land Use Map



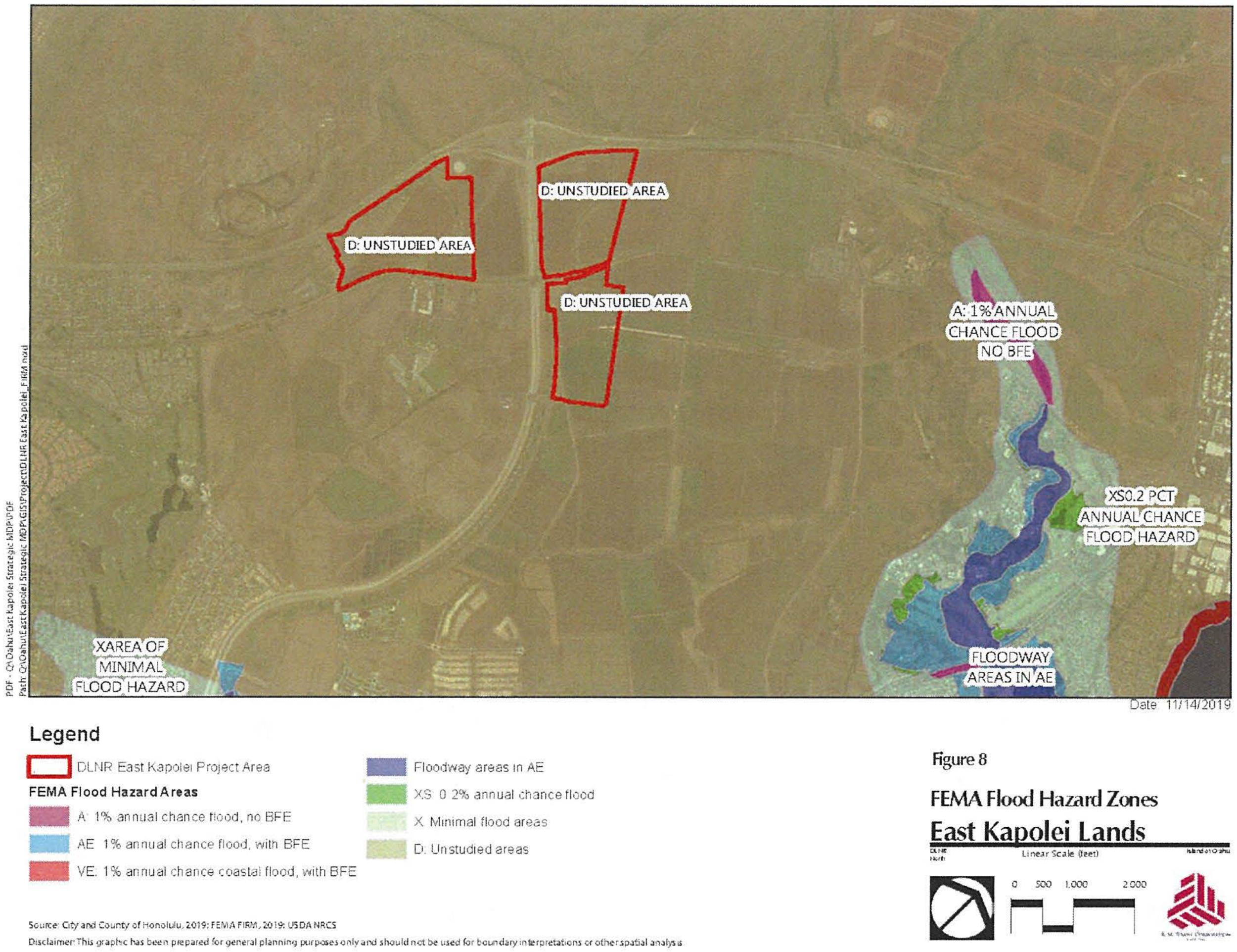
	Existing DLNR Lands
Current Land Use Designations	<u>City ʻEwa Development Plan:</u> Based on the Urban Land Use Map, the Kualakaʻi Parkway West and Kualakaʻi Parkway East parcels are designated as Residential and Low-Density Apartment. The Keoneʻae Station Area is designated as Residential and Low-Density Apartment and Medium-Density Apartment/Commercial Mixed Use (Figure 6). The project supports the goals and objectives of the City and County of Honolulu ʻEwa Development Plan by: - Helping to grow a second urban center for Oʻahu centered in Kapolei, with employment opportunities in job centers highlighted in the EDP including the University of Hawaiʻi West Oʻahu area and industrial areas, and; - Providing a wide range of master planned residential areas to relieve developmental pressures on Oʻahu's rural areas and provide housing types not readily provided in the Primary Urban Center.

Figure 7: East Kapolei TOD Plan Land Use Map



	Existing DLNR Lands
Current Land Use Designations	_East Kapolei TOD Plan:_ The City's East Kapolei TOD Plan currently under review by the City Council suggests land uses for the Keone'ae Station Area, including Commercial/Office, Active Retail Space, Park-and-Ride/Parking, Open Space/Drainage (Figure 7). For both the Kualaka'i Parkway West and East areas, the plan indicates mixed-used light industrial and commercial uses; along with some multi-family residential use specifically in the Kualaka'i East Area. Preliminary plans for this area support the goals of the East Kapolei TOD plan by providing commercial, office, active retail space, residential, park-and-ride and parking areas, and drainage support.

Figure 8: FEMA Flood Hazard Zones



	Existing DLNR Lands
Flood Zone Designation	All parcels, including lands part of the potential land swap with D.R. Horton, are in the Federal Emergency Management Agency (FEMA) Flood Hazard Zone D, areas where no analysis of flood hazards has been conducted (Figure 8)

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4 MARKET AND ECONOMIC CONTEXT

4.1 Industrial and Commercial Market Assessment

This section provides a summary of industrial and commercial market considerations based on an examination of the project site relative to present market conditions. RMTC engaged Colliers International Consulting (Colliers) to assess the potential market demand for various development options on DLNR lands, including industrial park, retail shopping center and office/medical office uses. The Colliers report was prepared in February 2020 and is included herein as Appendix A. The report findings are summarized below.

4.1.1 Industrial Market Assessment

The O'ahu industrial market as a whole remained one of the tightest industrial markets in the country at year-end 2018, even as vacancy rates rose above 2.0% for the first time in four years. Prospective tenants continued to face a challenging leasing environment, including a lack of prime available space, rising land prices, and a lack of warehouse development. The University of Hawai'i Economic Research Organization's fourth quarter economic forecast indicated that the State's gross domestic product would likely improve by a nominal 1.3% for 2019. The industrial market performs with the rise and fall of the economy.

The West O'ahu industrial marketplace (comprised of roughly 6.86 million square feet of inventory) posted a loss of 62,072 square feet of tenant occupancy at the end of 2018, resulting in vacancy rates increasing to 4.18% from 2017 rates of 3.27%. Nonetheless, the year end 2018 average asking base rent for West O'ahu industrial space rose by 5% to $1.25 per square foot per month. Colliers projects that rents will continue to escalate as warehouse development, which has been limited to a few speculative developments, will not materially change the severe shortage that currently exists.

By 2034, projections for total industrial demand for land will have risen to 176.3 acres of which a small percentage would be captured (conservative 10% to aggressive 20%) by the subject site's leasehold industrial park. Additionally, the best time to introduce an industrial park to the marketplace would be between 2029 and 2034 when economic and market conditions are projected to be advantageous for industrial land sales. In summary, there is potential market demand to support a 30-acre industrial park to be delivered between 2029 and 2034. Industrial park use would be developed within the Kualaka'i Parkway West and a portion of the Kualaka'i Parkway East area.

4.1.2 Commercial Market Assessment

The O'ahu retail market as a whole increased by more than 2.1 million square feet of new tenancy in 2018, as occupancy growth continued for the eighth consecutive year. For 2018, the retail market benefitted from occupancy growth for newly expanded regional retail centers, the delivery of several new strip centers, and the leasing of several large vacant big box stores.

O'ahu's job growth posted a gain of 20,600 new positions over 2018, keeping the island's unemployment rate at 2.3%, among the lowest in the country. In addition, tourist arrivals gained 4.6% over the prior year, with visitor expenditures rising to $8.162 billion, a gain of 7.2% over 2017 levels.

The overall O'ahu office space market posted vacancy rates ranging from 12% to 14% for more than seven years, and at year-end 2018 had not deviated from this trend. Typically, after an extended period of healthy office job growth, the office market responds with a decline in vacancy rates. The office sector has generated a gain of more than 16,000 jobs since the end of 2010, with 5,400 new office jobs added in the past year alone, the largest number or new jobs among the major industry sectors. Leeward, East and Windward O'ahu office submarkets have posted lower vacancy rates and stronger tenant demand than those located in the Central Business District of downtown Honolulu. Suburban office markets have been the primary driver of office rental rate increases between 2013 and 2017.

4.1.2.1 West O'ahu Retail and Commercial Office Market

The West O'ahu retail market is comprised of 1.74 million square feet of retail shopping centers and is situated among the island's fastest growing residential populations. At the end of 2018, the West O'ahu retail market generated its seventh consecutive year of positive net absorption resulting in vacancy rates falling to 7.24%. West O'ahu retail rents continued an upward path, gaining 27% since the end of 2012. The increase in retail rents contributes to the heightened interest by developers to build additional retail uses in the area.

The Leeward O'ahu office market is comprised of 719,228 square feet and encompasses a wide geographic area inclusive of Kapolei, 'Ewa Beach, Pearl City, Waipahu and Mililani. At year-end 2018, the Leeward O'ahu submarket generated a positive gain of 31,617 square feet of office tenancy resulting in a drop to the area's vacancy rate to 5.84%. Due to these healthy market conditions, the Leeward office market's asking rental rate range has exceeded those of urban Honolulu. At year-end 2018, most office rents in this market fell between $2.17 per square foot per month (psf/mo) and $2.39 psf/mo, compared to an island-wide average of $1.76 psf/mo. Tight market conditions are likely to push rental rates upward, however high costs of land and construction pricing, combined with overall low office rents will likely inhibit developers from building additional office in Kapolei.

There is limited consumer support for additional retail development in the West O'ahu market until after 2029. Retail demand will grow to support a retail center sized between 70,000 and 110,000 square feet by 2034 in the Keone'ae Station Area. Additional phases to this retail development could expand to a 120,000 to 168,000 square foot development by 2039. This retail center would focus on providing goods and services to transit passengers, hotel patrons and residents within 1-mile of the Keone'ae Rail Station.

In addition to retail development, there is market support for office development within the Keone'ae Station Area, ranging from approximately 8,000 square feet to 11,750 square feet delivered in 2029. By 2039, office demand is projected to increase to a conservative 16,000 to 23,500 square feet. Colliers recommends building 16,000 to 24,000 square feet of office space with a target delivery date between 2034 and 2039. The retail center development could potentially include second floor office space to accommodate this demand.

As part of this study, Colliers compiled a list of medical service tenants located within a 2-mile radius of the Keone'ae Station Area. Based on the number of medical services tenants and their respective number of employees, Colliers believes 20% to 25% of the proposed office space development could be allocated for medical office space (approximately 3,000 to 5,000 square feet).

4.2 Rental Housing Market Assessment

Hawai'i has one of the lowest home ownership rates in the nation and is considered to be among the least affordable housing markets. This can be attributed to the limited supply of land, very high costs of production and strong housing demand, resulting in low housing production and high prices. The problem is exacerbated by the fact that housing prices have exceeded household incomes for over 25 years.

Given high demand and low supply, low- to moderate-income households currently have limited options for housing. This condition has existed for over 25 years, and continues today, with Honolulu being named as the least affordable housing market in the nation in a number of studies.

Although for-sale housing was a consideration, DLNR has expressed a desire to maintain fee simple ownership of the project areas. Accordingly, real estate consultant Paul "Ricky" Cassiday was engaged by RMTC to describe and analyze the residential rental market demand for the City of Kapolei along with the surrounding areas of West O'ahu, Mililani, and Pearl City/Aiea, with particular consideration of the DLNR East Kapolei Lands. His report, dated November 2019, is attached as Appendix B. The report findings are summarized below.

4.2.1 Affordable Rental Demand

The Cassiday report examines in detail the rental market demand, both affordable and market rate rentals, for the project area. Interestingly, the data indicates that there will **not** be significant demand for rental units coming for those in the 100% or higher Area Median Income (AMI), or from market rate rentals. As discussed in the report, among other factors, current market rents in the area already are similar to the rents that are mandated by the Hawai'i Housing Finance & Development Corporation (HHFDC) affordable rental guidelines, thus it is unlikely those households will participate in a more restrictive affordable rental unit project. In addition, those making 100% of AMI have sufficient income to convert to home ownership, at least in a starter multi-family housing development in the area.

According to Cassiday, the "tipping point" for affordable rentals appears to be between 60% to 80% of AMI. By this it means that market rents are below what is mandated by the affordable rental guidelines. Essentially, the current market's rental production is taking care of households making above the 80% AMI level; thus, any type of affordable rental housing programs under consideration should address those below 80% AMI. Put in another way, the only households unable to afford units at market rents currently are those earning 30%—60% of AMI. The households in this income range constitute the demand for affordable units rented out below market level rates (*i.e.* households who will benefit from the HHFDC guideline rates).

The table below shows an estimated multi-family housing unit supply pipeline organized by market and location, including units that might be provided in the DLNR East Kapolei Lands. The report shows potential market support for DLNR to fulfill this need in West O'ahu based on the assumption that DLNR might be more proactive than other landowners in supporting affordable housing, offering builders and affordable housing developers better value packages (including a very low cost of leasing the land).

Table 2: Affordable Rental Multi-Family Unit Supply Pipeline and Market Opportunity

Year	East Kapolei HHFDC	Ho'opili Horton	Others (UHWO, Kalaeloa)	DLNR East Kapolei DLNR[4]	Total Units
2020	110		35		145
2021		90	35		125
2022	110		35		145
2023		90	35	150	275
2024	100		35	150	285
2025		90	35	150	275
2026	100		35	150	285
2027		90	35	150	275
2028	100		35	150	285
2029		90	35	150	275
2030	90		35	150	275
2031		90	35	150	275
2032			35	230	265
2033		90	35	150	275
2034			35	230	265
2035		90	35	150	275
TOTALS	**610**	**720**	**560**	**2,110**	**4,000**

[4] This represents Cassiday's estimate of supportable affordable rental units on the DLNR East Kapolei Lands. Note that the preferred plan for DLNR, as described below, provides for 1,000 units.

The recommendations outlined are based on historically observed market considerations and should be reviewed in the contexts of entitlement, physical planning, traffic, infrastructure, cost and other feasibility considerations. Federal, state and county policies in effect at the time of development will also affect considerations for underwriting and phasing of developments.

4.2.2 Conclusions

The Cassiday analysis showed potential demand in household segments making 30%, 50%, and 60% of AMI, potentially higher than 2,000 units. However, his analysis notes financing and construction costs present significant barriers to producing affordable rental units which will require significant subsidies to overcome such development costs. This strategic master development plan includes provisions for some 1,000 units.

4.3 Hotel Market Assessment

A Hotel Market Assessment and Development Outlook report was completed by Erik Kloninger Consulting (Kloninger) in February 2019 under subcontract to Colliers (See Appendix C). The purpose of the report was to analyze the potential for hotel development within land under jurisdiction and ownership of the DLNR in East Kapolei. These lands are in proximity to land utilized by the UHWO campus and the Keone'ae Rail Station.

4.3.1 O'ahu & West O'ahu: Hotel Room Supply and Market Performance

In 2018, O'ahu had one of the strongest hotel markets in the U.S. Among the top-25 national lodging markets, O'ahu achieved the second highest hotel occupancy (83.9%), third highest average daily rate (ADR) ($238.00/day), and second highest room revenue per available room ($200.00/room). The majority of this performance was centered in Waikīkī which has the majority of visitor accommodations on O'ahu:

Total Visitor Accommodations on O'ahu

Waikīkī	Percent	O'ahu	Percent
30,818	78.9%	39,089	100.0%

Although Waikīkī continues to have a dominant share of O'ahu's hotel rooms, capacity constraints in Waikīkī have limited the growth of new hotel supply. As a result, new hotel development has taken place elsewhere on the island, notably in the Kapolei sub-market.

West O'ahu, which includes the Kapolei sub-market, Ko Olina Resort and the Wai'anae Coast, has 3,270 visitor rooms, or 8.2% of O'ahu's total room count. The supply of rooms increased by 20.2% since 2014, driven by growth in hotel supply and Vacation Rentals. The two newest hotels on the island are located in the area, the 175-room Hampton Inn (2016) and the 180-room Embassy Suites (2017). Both hotels are reportedly performing well, achieving occupancies and ADRs comparable to the O'ahu market. The Kapolei hotels serve a mix of government/military, corporate and leisure segments. A third Kapolei hotel, the Residence Inn Kapolei, was opened in November 2019.

Traditionally, hotels located outside of Waikīkī tended to achieve lower occupancy rates than Waikīkī hotels but in 2018 the gap narrowed, with the other O'ahu visitor accommodations segment achieving 81.2% occupancy, an increase from the mid to upper 70% range achieved in the previous four years.

4.3.2 O'ahu Hotel Demand by Purpose of Visit

According to the Hawai'i Tourism Authority, about 3.1 million visitors to O'ahu in 2018 indicated they intended to stay in a hotel while on the island. Total nightly hotel demand on O'ahu is about 26,500 rooms on an annual basis. The leisure market accounts for 70.2% of nightly O'ahu hotel room demand. Of the non-leisure demand, the corporate market accounts for 6.1 % of demand, or some 1,631 occupied rooms each night, followed closely by the meeting, convention & incentive ("MCI") market, visit friends or relatives ("VFR") at 5.7% of demand and military & government demand also accounting for 5.7% of hotel room demand. (It should be noted that this analysis does not include demand for accommodations generated by O'ahu residents or visiting residents of the Neighbor Islands.)

Table 3: O'ahu Hotel Demand by Purpose of Visit: 2018

	Leisure	Visit Friends or Relatives	Meeting, Convention & Incentive	Corporate	Sporting Event	Military & Gov't.	Attend School	Other	Total
No. of Visitors	2,364,836	100,751	203,524	103,415	24,761	66,481	7,957	210,527	3,082,252
Average Length of Stay	6.4	9.1	5.1	7.6	6.6	10.1	18.3	5.5	
Visitor Nights	15,134,952	915,825	1,046,112	780,784	163,669	672,120	145,927	1,153,690	20,013,080
Average Party Size	2.4	1.8	2	1.4	2	1.3	2.3	3	
Hotel Room Demand	6,202,849	500,451	512,800	542,211	80,230	501,582	62,630	437,004	8,839,757
Nightly Hotel Room Demand	18,571	1,498	1,535	1,623	240	1,502	188	1,308	26,466
Percent of Total	70.20%	6%	5.80%	6.10%	0.90%	5.70%	0.70%	4.90%	100.00%

As noted by Kloninger (2019), any proposed new hotel must be capable of capturing demand from a number of demand segments; market interviews suggest that the existing hotels in Kapolei are capturing a part of the 70.2% leisure demand on O'ahu, in part due to their lower room rates compared to nearby beachfront resorts such as at Ko Olina.

Other demand segments that favor DLNR East Kapolei lands include the UHWO and Tokai University campuses, which could generate demand from students and visiting faculty. The

Central O'ahu Regional Park and Waipi'o Soccer Complex, and Aloha Stadium (via rail), could also provide a niche market for visiting teams, players, athletes and support staff. Other demand generators include corporate interests from the James Campbell Industrial Park and Ko Olina Resort, with a number of new resort destinations under consideration. The former Barbers Point Naval Air Station, now known as Kalaeloa Airport, is also an important demand generator for the military and government sector based on demand generated by U.S. Coast Guard personnel training at the airport.

The combined influence of the development and market trends noted are expected to drive the need for area housing and with it, the demand for visitors from various economic sectors in need of transient or hotel accommodations.

4.3.3 Profile of West O'ahu Hotel Supply

New hotel development in the area include the 175-room Hampton Inn opened at the Ka Makana Ali'i Mall in 2016, and the 180-room Embassy Suites in 2018. Changes to Honolulu's Land Use Ordinance in 2013 made hotels with up to 180 rooms possible on Business Mixed Use-Community (BMX-3) zoned land with an approved Conditional Use Permit from DPP, where previously hotel development was generally only allowed in resort zoned locations such as Waikīkī, Ko Olina, Turtle Bay, Downtown Honolulu, and the industrial area of the Daniel K. Inouye International Airport. These new hotels are often termed "limited-service hotels" since the services provided are limited and usually do not include facilities for hotel restaurants, room service, valet, and other traditional guest services typical of full-service establishments.

Early indications for the limited-service hotel segment in Kapolei are showing that such hotels have been achieving occupancies comparable to the O'ahu average of 84%, at average rates of $220 per night. According to Kloninger, 2019, the Hampton Inn & Suites Kapolei and Embassy Suites are receiving government/military business, primarily generated by Coast Guard personnel training at the nearby Kalaeloa Airport. The two hotels are also capturing demand from Kama'āina, VFR, and sports and leisure markets.

Table 4: West O'ahu Property Profile

Property	Rooms	Year Open	Type	Published Rates	
				Feb 2019	Apr 2019
Four Seasons Resort Ko Olina	371	1994	Luxury Hotel	$620	$570
Marriott Ko Olina Beach Club (1)	918	2003	Timeshare	$321	$356
Ko Olina Beach Villas	164	2008	Luxury Condo-Hotel	$606	$500
Aulani, A Disney Resort & Spa	359	2011	Resort Hotel	$539	$509
Hampton Inn & Suites Kapolei	175	2016	Limited-Service Hotel	$212	$246
Embassy Suites by Hilton Kapolei	180	2017	Limited-Service Hotel	$212	$166

Note: (1) Timeshare property that offers unused inventory for transient rental.

Sources: Hawai'i Tourism Authority, Erik Kloninger Consulting, Expedia

The map below shows existing hotels in the West O'ahu region in relation to the DLNR sites, UHWO, Ho'opili, and other surrounding potential demand centers.

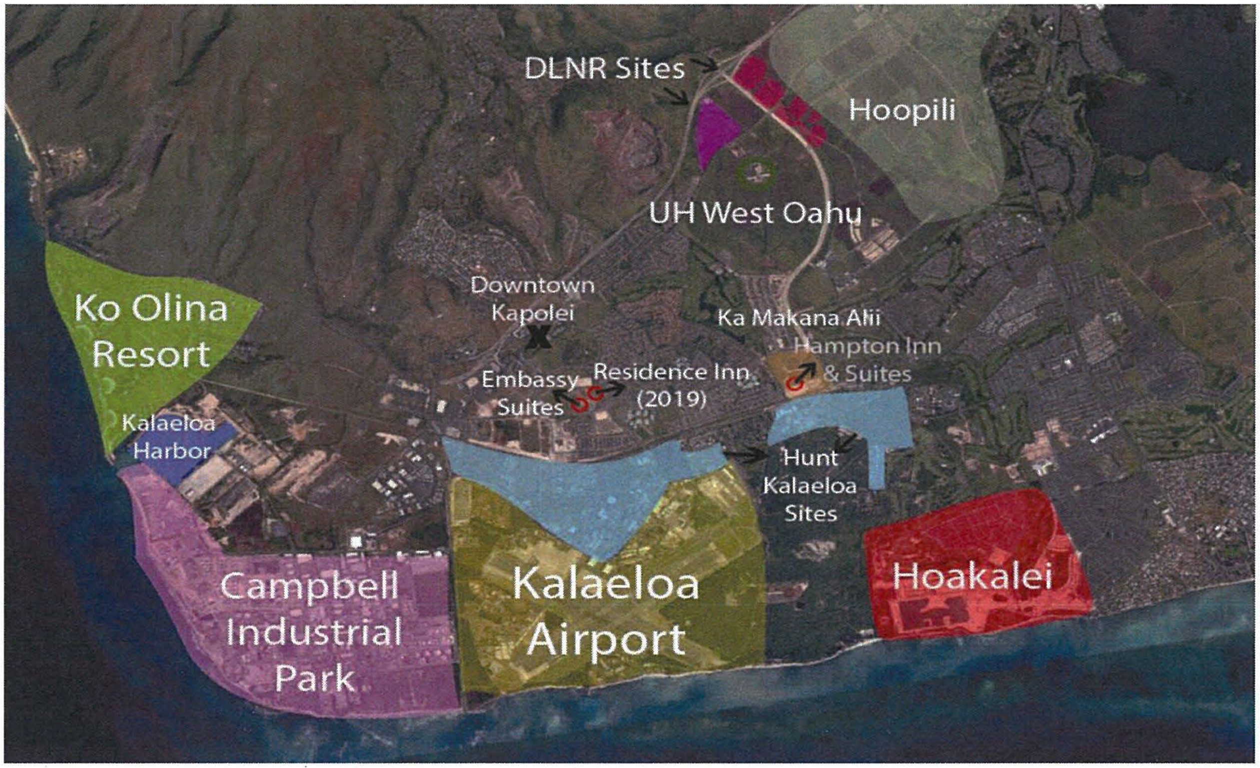

Figure 9: Hotels in West O'ahu
Source: Erik Kloninger Consulting, February 2019

4.3.4 Planned and Future Competitive Supply

Although the Keone'ae Station Area is considered a "...compelling opportunity for hotel development due to proximity to UHWO and Rail Station #2" (Kloninger, 2019), there is a limit to what the Kapolei area can support. Currently, there are three limited-service hotels: the 175-room Hampton Inn located at the Ka Makana Ali'i Mall; the 180-room Embassy Suites near downtown Kapolei; and the newest 180-room Residence Inn Kapolei located in the Leihano mixed-use Community. Other potential hotel sites include:

- UH West O'ahu Village – This site would generate demand from the build-out of the UHWO campus with the addition of academic programs and enrollment.
- Ho'opili – This master planned residential subdivision will have BMX-3 zoned land suitable for development.
- Ka Makana Ali'i Mall – Home to the Hampton Inn Kapolei, this regional shopping center has announced plans to add a second hotel during a later development phase.
- Hunt Kalaeloa – Hunt has initiated plans for the development of portions of land formerly under military control. A state Draft Environmental Assessment for the Kalaeloa Roads

project was published in February 2020 and a Final Environmental Assessment and Finding of No Significant Impact Statement is slated to be published on or before the end of 2020. This constitutes the start of infrastructure development to support future residential and commercial growth of the area. The location of Kalaeloa would be complimentary to demand generators such as nearby Kalaeloa Airport and the James Campbell Industrial Park.

- Hoakalei – This subdivision is primarily slated for residential development but has resort zoning for up to 950 hotel rooms.
- Ko Olina – Future development of the off-beach areas in Ko Olina Resort could include hotels considered competitive with a hotel on-site. At this time there have been no announcements of any competitive projects at the resort, as the focus has been on building out the prime beachfront areas.
- Other TOD – The future development of hotels in the area surrounding rail stations is possible. These hotels at nearby stations would be considered competitive to a hotel built within the Keone'ae Station Area.

4.3.5 Success Factors for New Supply

Early indications from the performance of the three Kapolei hotels are demonstrating that it is possible to service previously unaccommodated demand for visitor/transient accommodations in the 'Ewa/Kapolei region. Key factors that could influence the siting and successful operation of hotels in this area include:

- Continued Economic Growth in Kapolei – The growth of military, government, and business activity in the region will drive the demand for visitor accommodations. The maintenance of this growth as well as the ability to serve leisure markets will diversify the financial base of this support (see also below).
- Relationship to Demand Generators – Proximity and walking distance to major destinations such as UHWO will have a competitive advantage for capturing demand generated by the university. This is true whether the demand generator is an academic institution attracting students and faculty, or an industrial interest with frequent need of technical input and expertise from off-island specialists.
- Character of Surrounding Area – The character of the area around a hotel site should also determine whether a hotel is developed or not. Hotel sites that are part of mixed-use developments that offer dining and entertainment amenities will be more attractive than sites that do not.
- Access – Superior access to major area connector roads, H-1 or the rail line will confer advantage to potential hotel development sites.
- Brand – Access to a first-tier brand such as Marriott or Hilton, can provide a competitive advantage over independent purveyors or brands with less traction in the marketplace.

- Build out of UHWO – The build-out of the campus and new academic programs will be critical to the success of any new hotel development in the area.
- Ability to Capture Leisure Demand – O'ahu's hotel demand is primarily leisure-driven so the acceptance of non-resort locations by leisure visitors will help determine the pace of future hotel development in Kapolei.

5 Constraints and Opportunities

5.1 Constraints

Significant constraints for the property are related to the need to design infrastructure and the capital cost of implementation. This effort is expected to be high, requiring coordination between adjacent landowners for future UHWO and Ho'opili development, to adequately accommodate infrastructure demands, e.g., sewer, water, and drainage demands and connections.

Vehicular circulation and access to DLNR land also require further research and coordination with HDOT, Department of Transportation Services (DTS), and local landowners, as many local roads and access points are not yet complete at the time of this report. Due to the expected volume of traffic on Kualaka'i Parkway and Farrington Highway, as well as the need for expansion of the Farrington Highway, access and turn lanes must also be coordinated with HDOT and DTS.

Land use conformance, easements, and other development restrictions also need to be considered. For example, preliminary development plans have identified uses within the Keone'ae Station Area at heights taller than allowed in the existing Land Use Ordinance but are permitted in the East Kapolei TOD plan. Current LUO zoning limits the property height to 15 to 25 feet.

Further research on land use plans and policies should be conducted to determine the full range of conditions and constraints that could limit development. These plans and policies would include but are not limited to, HRS, Chapter 343, the State Land Use Law, the City General Plan and 'Ewa DP, the City Land Use Ordinance, and the East Kapolei TOD Plan.

5.2 Opportunities

DLNR lands are close to planned commercial, recreational, and residential uses, and the planned Keone'ae Rail Station. In addition, access to major transportation thoroughfares, such as the H-1 Freeway, Kualaka'i Parkway, and Farrington Highway, is advantageous to the project. A strong multi-modal network, including the future rail station and additional roadway connections to major thoroughfares, benefit the project.

Future rail service is expected to provide the community with connectivity to urban O'ahu, while planned village walks, trails, sidewalks, and bicycle facilities will promote localized connectivity independent of the use of motorized vehicles. Further, the development of pedestrian and bicycle facilities would include design measures that promote safety and accessibility for all residents.

Access to the B-2 zoned lands west of Kualaka'i Parkway, and the future Kualaka'i Parkway West Industrial/Business Park could be coordinated with the development of an access road off of Farrington Highway.

The flat topography of the surrounding area limits views from the property, however, design concepts can take advantage of prominent mauka views of the Wai'anae Mountain Range. In particular, significant views and vistas noted in the 'Ewa DP and offered from the property include views of Nā Pu'u at Kapolei, as well as mauka views of Pu'uokapolei, Pu'u Pālailai, and Pu'u Makakilo.

6 CONCEPTUAL SITE DEVELOPMENT PLANS

Three alternative conceptual site plans were developed through a series of charrettes, project consultant meetings, and design meetings as a part of the project's design process. The basis for the three alternatives was the consideration of existing conditions, and the constraints and opportunities from assessing local and regional land use policies, market studies, and available infrastructure data. The outcome was the identification of a single alternative with the most potential to succeed in the current West Oʻahu real estate market.

Common elements found in all three alternatives include the following:

- Proposals for new intersections at Kualakaʻi Parkway and the east-west industrial park collector road connecting Kualakaʻi Parkway West to Kualakaʻi Parkway East, as well as at Kualakaʻi Parkway and Farrington Highway.
- A new industrial/business park located in the Kualakaʻi Parkway West area, to be subdivided into approximately 1.6- to 7-acre parcels with an additional water tank site located west of the existing water tank.
    - A proposed realignment of the Hunehune Gulch in the Kualakaʻi Parkway West area to provide larger/usable land area east of the gulch.
- A 15- to 19-acre area of light industrial parcels directly adjacent to the southeast intersection of the H-1 Freeway and Kualakaʻi Parkway.
- An approximate 50.8-acre Keoneʻae Station Area, south of Farrington Highway. This area would be integrated with the proposed future HART Rail Station, including a park-and-ride area, multi-family rental units, a hotel site, as well as various retail and office space areas. This mixed-use area is intended to address critical housing needs on Oʻahu and provide synergy with State initiatives for housing and mass transit. Centering development around the future rail station allows the project to take full advantage of commuter office and retail traffic, while creating an anchor in the community to draw live, work, and play elements towards the center of East Kapolei.

Other Considerations:

The three alternatives assume an industrial/business park in the Kualakaʻi Parkway West area, but they differ with respect to development opportunities in the Kualakaʻi Parkway East and the Keoneʻae Station Area, depending on the plans for the Kaloʻi Gulch.

Rental Housing: According to Cassiday (2019), the potential rental housing demand could approach 2,110 units. However, after considering land and infrastructure constraints, the conceptual site plan would provide approximately 1,000 units. The gross building area of 661,200 square feet was calculated based on an average unit size of 950 square feet. The units would be incorporated as affordable rentals in Kualakaʻi Parkway East, and as a part of the Keoneʻae Station Area.

Drainage: Alternative 3 features the least amount of alteration to Kalo'i Gulch and seeks to maximize existing drainage patterns for development. The natural Kalo'i Gulch path between the proposed light industrial and affordable housing areas in Kualaka'i Parkway East remains intact, allowing for required setbacks from both the light industrial and proposed affordable rental housing areas, as well as an approximate 80'-0" parking bay for the affordable rentals with an additional required setback to the street. The proposed Hunehune Gulch realignment through Kualaka'i Parkway West features a roughly 100-foot realigned section with 10-foot setbacks that will drain into the future UHWO drainage.

For the Kualaka'i Parkway West industrial park, grading will be cut and filled to minimize the slope alteration. Grading for the lots have two basic options dependent on lot topography. The first option is one large pad with 3% slope across the entire 300'-0" rough pad area, while the second option is breaking up the lot into two 3% slope pad elevations with a two to one slope buffer area between them.

Due to the development's additional impervious surfaces, detention basins or underground flood control chambers are required for each phase of development to meet storm water requirements. There are approximately 2 to 3 acres of detention basins required for each Phase of development, with the detention basins at the Keone'ae Station Area being located underground to maximize above ground site utilization for parking and mixed-use structures. For the sake of engineering calculations, the project team has depicted the detention basin area for each development as one consolidated area. However, for marketability and efficiency of each project area, the team recommends spreading out the area needed for on-site water detention on an area by area basis, rather than locating the entire necessary detention basin area in one location.

Multi-modal and vehicular circulation: Vehicular circulation for DLNR's lands consists of roadways off Farrington Highway for Kualaka'i Parkway West and East, including an access road connected to the land exchange with D.R. Horton, and roadways off Kualaka'i Parkway for the makai Keone'ae Station Area.

As a part of the overall connectivity design, the project has taken into account multi-modal forms of circulation in addition to vehicular traffic. Main north/south pedestrian and bike access would be off Kualaka'i Parkway, with secondary access via a greenbelt trail along Kalo'i Gulch, and additional circulation throughout the Keone'ae Station Area interior roadways makai of Farrington Highway to activate the mixed-use development area.

Open Space: Landscape buffers are utilized around the steep topography of the industrial/business park, on the mauka and makai sides of the Kualaka'i Parkway West development, and alongside the Farrington Highway portion of the Keone'ae Station Area development to reduce the visual impact of the development, and emphasize the use of open space for a more aesthetically pleasing visual experience. Natural gulches, including the Hunehune and Kalo'i Gulches, are incorporated as part of the development in order to preserve natural open space setbacks. Neighborhood parks and open spaces will also be incorporated within the mixed use and residential housing developments.

6.1 Site Plan Alternatives Considered

6.1.1 Conceptual Alternative #1

A distinguishing feature of Conceptual Plan Alternative 1 is that the project would realign all parts of the Kalo'i Gulch through the properties, and focus Kualaka'i Parkway East on industrial uses (approximately 41 acres of light industrial), with presumed access from both Kualaka'i Parkway and off of D.R. Horton's planned "Road A", as shown in Figure 10. A remnant area of the realignment could result in a somewhat linear park (approximately 3.7 acres) on the west side of the gulch. In the Keone'ae Station Area, the gulch realignment allows maximum productivity with relatively large areas available for multi-family, commercial and hotel developments as well as the required park-and-ride facility. This area development extends closer to and encompasses more of the corner area at the main intersection of Kualaka'i Parkway and Farrington Highway than other alternatives, also due to the proposed Kalo'i Gulch realignment.

In this alternative, the industrial/business park area in Kualaka'i Parkway West remains largely the same as the preferred alternative that is described below.

6.1.2 Conceptual Alternative #2

In Conceptual Plan Alternative 2, the Kalo'i Gulch realignment was slightly less extensive, with only its lower portion within Kualaka'i Parkway East realigned in order to reduce construction costs compared to Alternative #1 (Figure 11). This resulted in less developable space for the Kualaka'i Parkway East project areas, and due to the irregular configuration of sites, areas on the eastern side of the gulch are assumed to be more suitable for residential than for industrial development. This resulted in approximately 19.6 acres shown for multi-family rental use, with direct access off Farrington Highway, and only 18.4 acres of light industrial land in this area. Kualaka'i Parkway East also has a park area of about 5.1 acres.

In this alternative, the industrial/business park area of Kualaka'i Parkway West is the same as under Alternative #1 and the preferred alternative. Also, the Keone'ae Station Area is unchanged from Alternative #1

6.1.3 Conceptual Alternative #3

Conceptual Plan Alternative 3 features no realignment of the Kalo'i Gulch in Kualaka'i Parkway East. The existing alignment allows a more developable project area at the southern edge of the Kualaka'i Parkway East on the west of the gulch, resulting in 29.5 acres of light industrial lands in this area. Kualaka'i Parkway East would also offer 15.2 acres for multi-family rental units, or space for some 280 units.

In the Keone'ae Station Area, this alternative has slightly less developable areas due to the alignment of the gulch, with approximately 9.7 acres for multi-family rental uses accommodating some 720 homes, and 11.4 acres of commercial/mixed use medical clinic, medical offices, and a potential hotel area makai of Farrington Highway. However, this option also results in 2.6 acres of prime commercial parcels at the southwest corner of the Kualaka'i Parkway and Farrington Highway intersection (Figure 12).

Like the other two alternatives, the preferred alternative offers 44.2 acres of industrial/business park in Kualaka'i Parkway West.

6.2 The Preferred Alternative (Conceptual Alternative #3)

The preferred conceptual development plan seeks to minimize up-front costs based on no realignment of the Kalo'i Gulch. Alternative 3 has a lower physical impact on existing conditions with less costly development features, including avoiding or lessening the modification of existing gulches in the area, thereby reducing costs for the owner and future land developers.

Alternative 3 features the greatest strengths of all three plans while taking into consideration efficient land development strategies through optimization of existing physical topography conditions, and balanced economic market potential through a variety of proposed land uses. Alternative 3 provides the greatest optimization of land development through maximization of available land use towards industrial, light industrial, housing, and TOD oriented land uses. Not only does this maximize the plan for the highest potential of revenue generation, it also provides flexibility for the site to anticipate and adjust to future regional growth trends in the East Kapolei Area.

6.2.1 Conceptual Land Uses

The DLNR East Kapolei Strategic Development Plan utilizes landscape buffers around the steep topography of the industrial/business park, on the mauka and makai sides of the Kualaka'i Parkway West development, and alongside the Farrington Highway portion of the Keone'ae Station Area development. The purpose is to reduce the visual impact of the development and emphasize open space for a more aesthetically pleasing visual experience. The presence of natural gulches, including Hunehune and Kalo'i Gulches, are incorporated as part of the development to preserve natural open space setbacks. The open space areas shown in the plan provides flexibility for future developers to integrate into the project's overall masterplan.

6.2.1.1 Keone'ae Station Area (Phase 1)

Alternative #3, Keone'ae Station Area, is envisioned to fulfill the HART park-and-ride requirement south of the project site, with an adjacent hotel development just mauka. In addition to retail, office, medical office, and potential residential rental as a part of the mixed-use blocks, the configuration of the original Kalo'i Gulch results in the Kualaka'i Parkway and Farrington Highway intersection portions of the project being cut-off by the gulch. This cut-off area provides open space for future developers to incorporate into their overall project program (Figure 12). Due to the land swap with D.R. Horton, the south and southeastern portions of the project area can be utilized to the full lot sizes bound by the proposed Road 2 and Road E.

This area is presumed to be the first phase of development due to HART's need for the park-and-ride facility and the interest in seizing commercial opportunities related to the commencement of rail service scheduled for 2020 (with full rail service assumed in 2025 or 2026).

6.2.1.2 Kualaka'i Parkway East (Phase 2)

In Alternative #3, Kualaka'i Parkway East is bisected by the existing configuration of the Kalo'i Gulch, resulting in irregularly shaped land to the east that is most likely suitable for single family housing and multi-family housing unit developments. Such development would also be compatible with the adjacent D.R. Horton planned community and could benefit from proximity to the planned Kapolei High School. The areas to the west of the gulch are designated for light industrial lots. Access to the project areas would be from Road A in the future D.R. Horton residential development, and direct access is provided from Farrington Highway. There could be potential right in, right out access to the site off Kualaka'i Parkway.

This area is presumed as the second phase of development, with sequencing potentially dependent on D.R. Horton's development of the adjacent areas to provide access via Road A.

6.2.1.3 Kualaka'i Parkway West (Phase 3)

In Alternative 3, like all three scenarios, Kualaka'i Parkway West is designated as an Industrial/Business park, with 10.6 acres of the southeast portion of the site being transferred in the proposed land exchange with D.R. Horton. The land exchange would give D.R. Horton or the developer they choose for the project area access to the B-2 site adjacent to Kualaka'i Parkway through a road off from Farrington Highway. The developer would be responsible for road improvements related to access off the land exchange area. As a part of this alternative, Hunehune Gulch would be modified to better align with the development of DLNR's lands. Areas that are located on steep slopes and that offer the least accessibility were chosen for the industrial/business park land use. This would provide DLNR the ability to lease smaller, irregular lots for industrial uses, and the industrial uses would generate less traffic demand.

6.2.2 Smart Growth Concepts

In 2018, the City requested technical assistance through the Environmental Protection Agency's Greening America's Communities Program to help imagine potential designs and strategies for more innovative, environmentally friendly streets and neighborhoods. Smart Growth design strategies are intended to help Honolulu achieve multiple community benefits as rail communities develop or redevelop. The designs include approaches that:

- Support economic development and public investment in transit;
- Address current and future disaster risk;

- Promote public art and placemaking;
- Better manage stormwater with green infrastructure; and
- Create streets that are safe, accessible, and usable by people of all abilities who are walking, taking transit, biking, or driving around the neighborhood.

The DLNR East Kapolei Strategic Development Plan incorporates Smart Growth concepts through supporting investment in transit with a TOD oriented mixed-use development area, providing opportunities for placemaking, creating safer/accessible streets for multiple modes of transportation, and better managing stormwater with green infrastructure where possible.

The Plan utilizes landscape buffers around the steep topography of the industrial/business park, on the mauka and makai sides of the Kualakaʻi Parkway West development, and alongside the Farrington Highway portion of the Keoneʻae Station Area. The purpose is to reduce visual impacts from construction by emphasizing open space for a more aesthetically pleasing visual experience. Natural gulches, including the Hunehune and Kaloʻi Gulches, are incorporated into the development to preserve natural open space setbacks. Neighborhood parks and open spaces are also incorporated within the mixed use and residential housing developments.

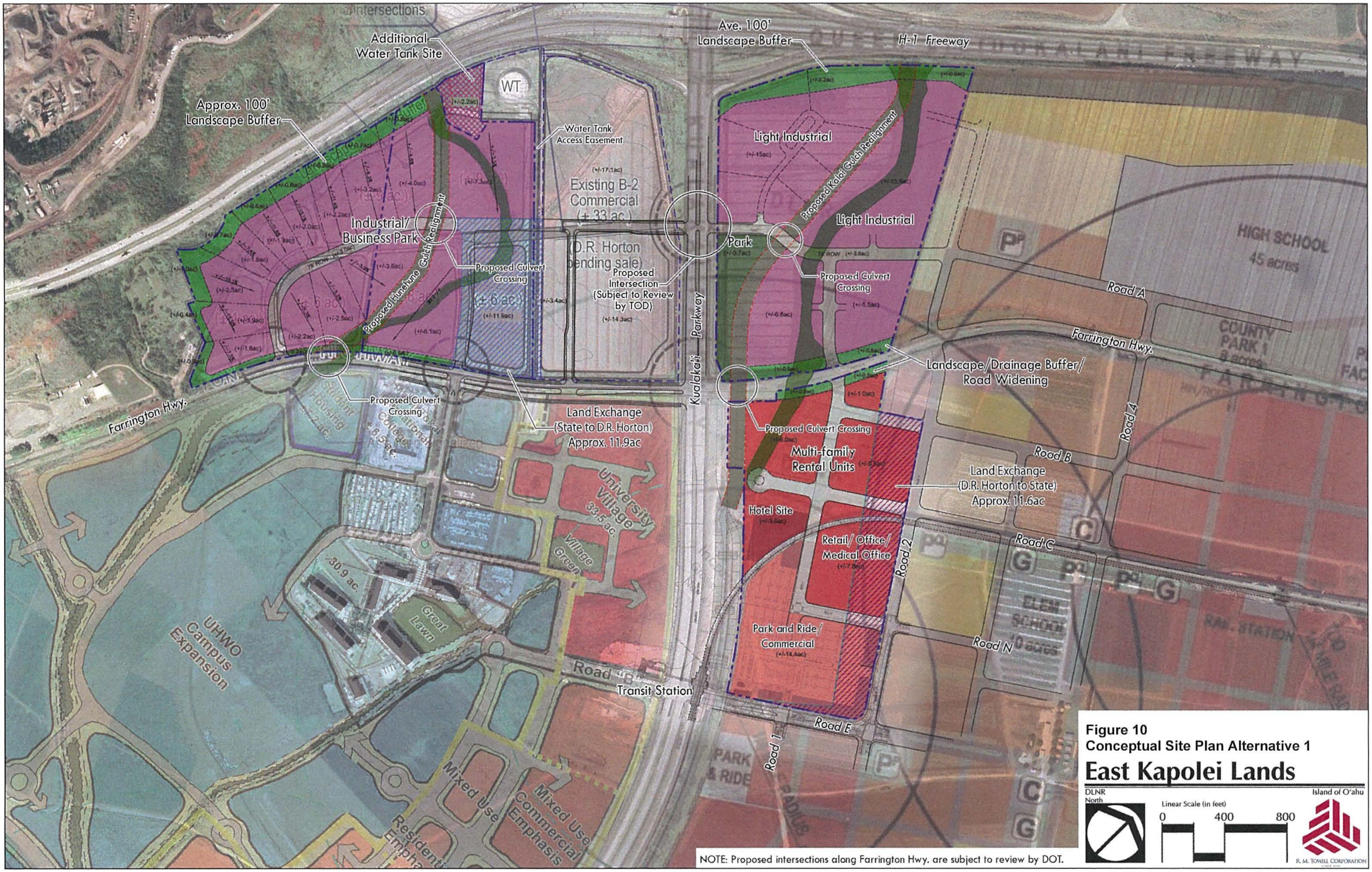

Figure 10
Conceptual Site Plan Alternative 1

East Kapolei Lands

DLNR
North
Linear Scale (in feet) 0 400 800
Island of O'ahu
R. M. TOWILL CORPORATION

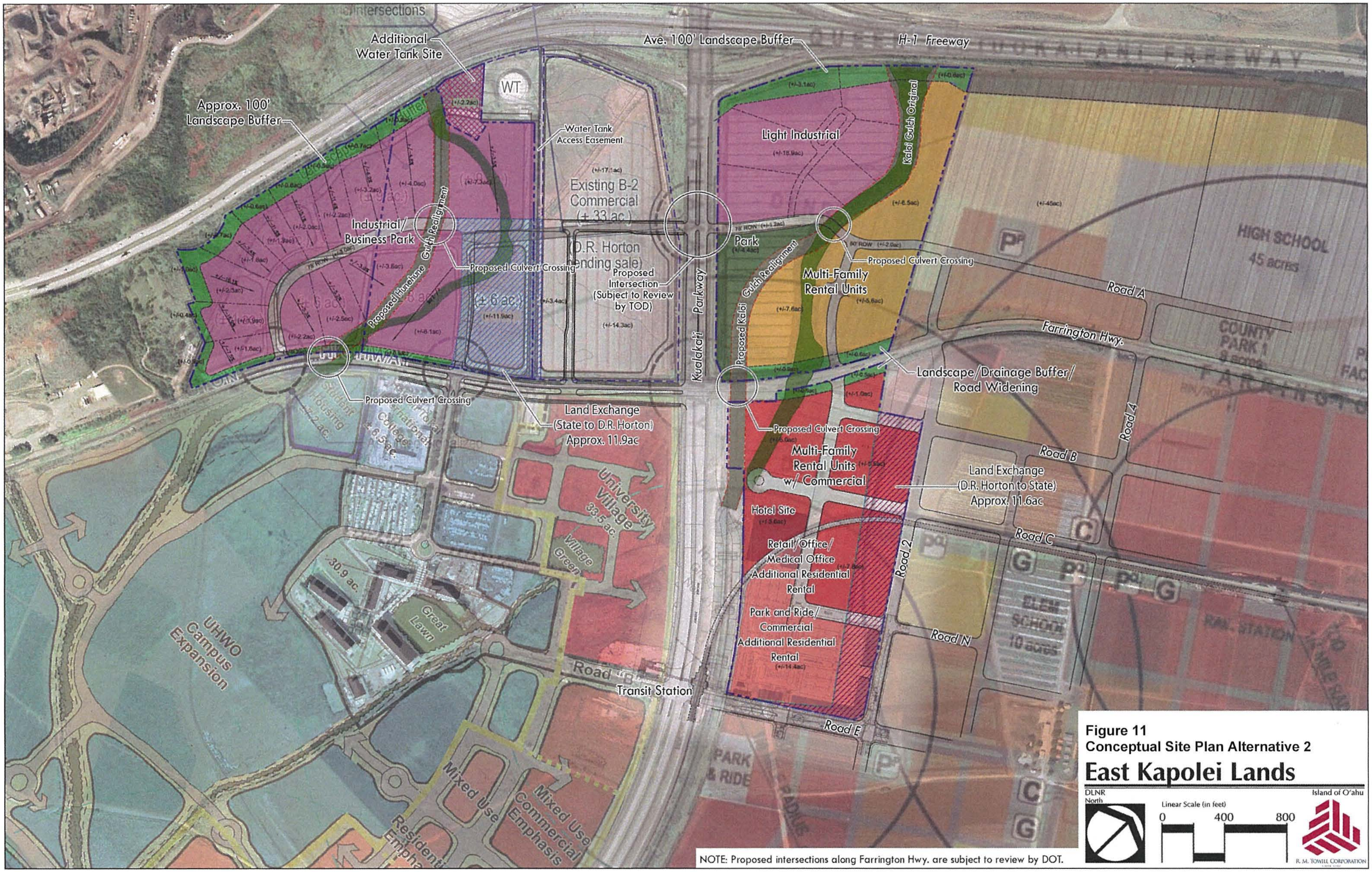

Figure 11
Conceptual Site Plan Alternative 2
East Kapolei Lands

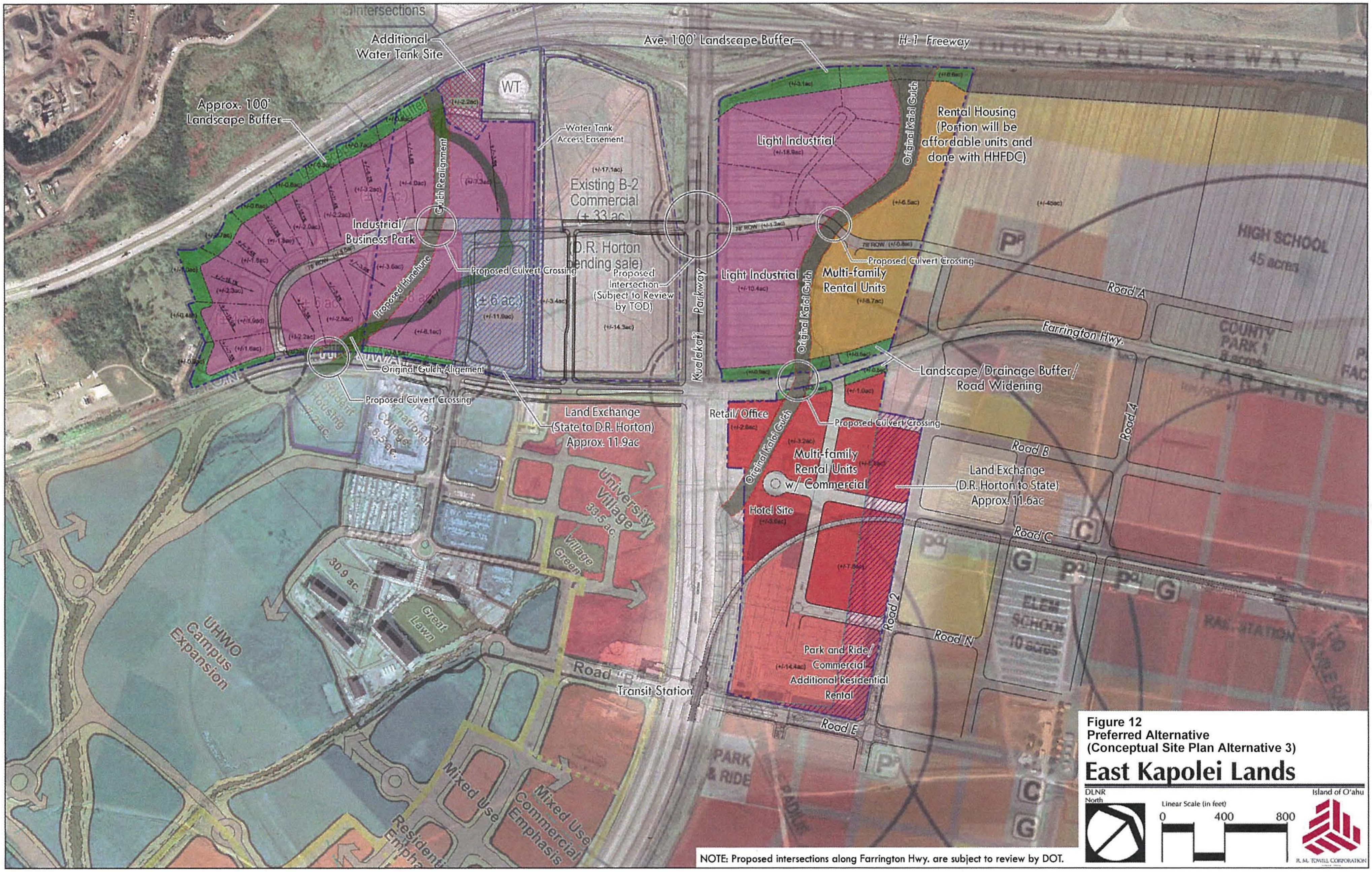

Figure 12
Preferred Alternative
(Conceptual Site Plan Alternative 3)
East Kapolei Lands

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7 Infrastructure Systems

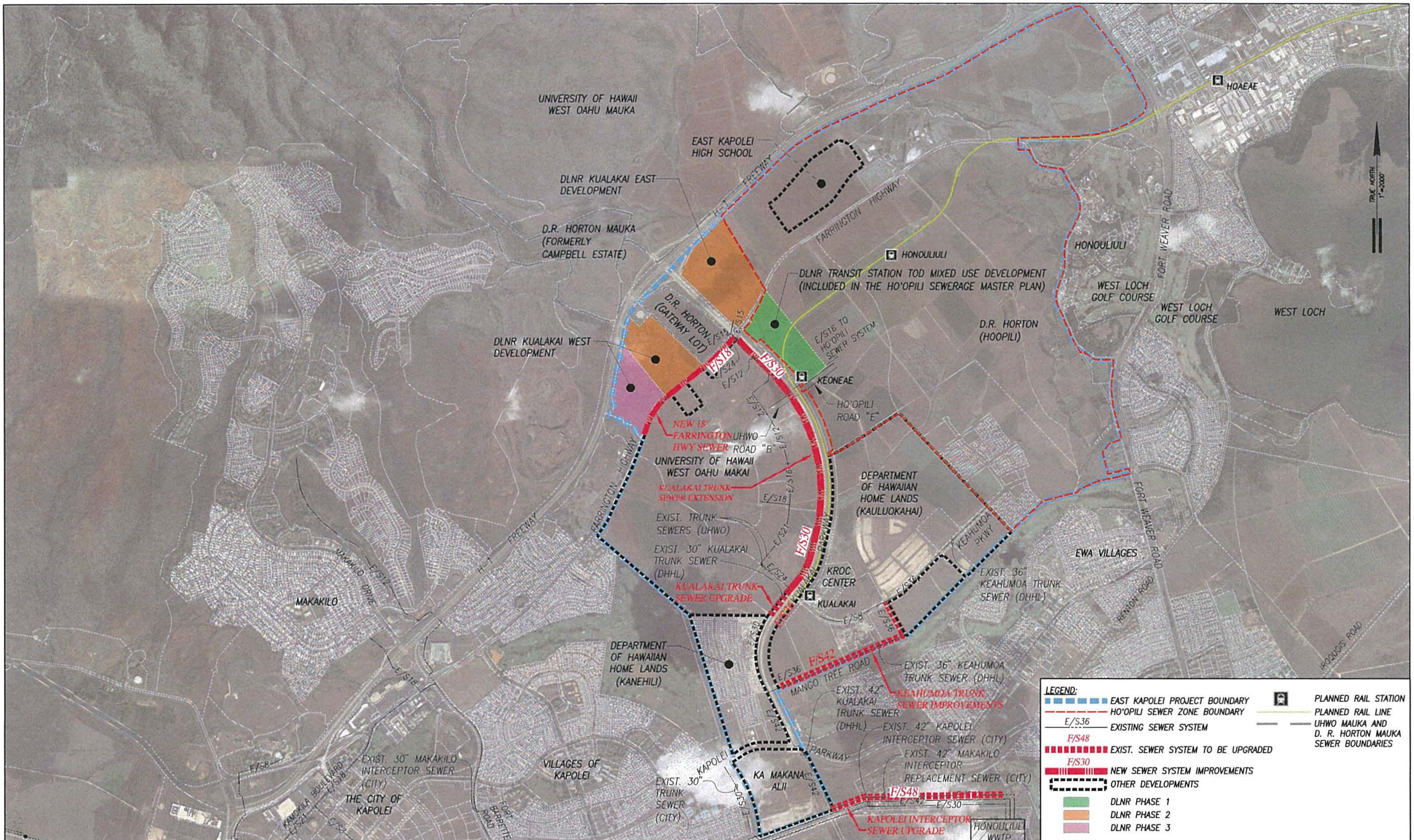
An Infrastructure Study was completed by RMTC in February 2020 to assess the existing utility systems based on available data, and provide recommended preliminary utility improvements that would be required to support the DLNR developments (See Appendix D).

7.1 Wastewater System

East Kapolei is served by a trunk sewer main located along the Kualaka'i Parkway (Kualaka'i Trunk Sewer). The sewer main ranges in size from 30 to 42 inches in diameter and terminates near the intersection of Kualaka'i Parkway and Keahumoa Parkway. An existing sewer system serving the UHWO property has pipe diameters ranging from 12 to 24 inches and connects to the existing Kualaka'i Trunk Sewer line near this intersection. An existing 36-inch trunk sewer (Keahumoa Trunk Sewer) located along the Keahumoa Parkway and Mango Tree Road, approximately 1,400 feet mauka of the intersection of Kapolei Parkway and Kualaka'i, serves the D.R. Horton developments and the State Department of Hawaiian Home Lands (DHHL) developments east of Kualaka'i Parkway. The existing Kualaka'i Trunk Sewer will be extended mauka along Kualaka'i Parkway (Kualaka'i Trunk Sewer Extension) to serve future developments as described in the Wastewater Master Plan for East Kapolei (Figure 13).

The design of the Ho'opili backbone sewer system incorporates the future demand for wastewater from the Keone'ae Station Area ("Wastewater Master Plan for East Kapolei, Community," Community Planning and Engineering, Inc., June 2006). Currently, there is no existing sewer system along Farrington Highway for connection with the DLNR Kualaka'i West lands, to the future Kualaka'i Trunk Sewer Extension. The D.R. Horton Gateway Lot has a permanent 24-inch sewer line crossing Farrington Highway, and a temporary connection through the UHWO Makai sewer system, that would be disconnected upon the construction of the Kualaka'i Trunk Sewer Extension. DLNR Kualaka'i East lands have a 15-inch stub out for connection with a permanent 24-inch sewer line crossing Farrington Highway. This connection would occur upon the construction of the future Kualaka'i Trunk Sewer Extension.

An analysis of sewer demands from each of the three East Kapolei conceptual alternatives was undertaken and compared against the existing Kapolei regional sewer system capacity. The results show that regional sewer system improvements, including the Kualaka'i Trunk Sewer Extension, Keahumoa Trunk Sewer Improvements, and new 18-inch Farrington Highway Sewer lines, are necessary to support the DLNR East Kapolei developments. With the addition of the proposed sewer extension improvements, the existing regional systems would provide adequate capacities for each one of the three DLNR conceptual alternatives, and other developments from UHWO Makai, D.R. Horton, and DHHL.



R. M. TOWILL CORPORATION

Planning – Engineering – Environmental Services – Photogrammetry – Surveying – Construction Management

808 842 1133 2024 North King Street Suite 200 Honolulu Hawaii 96819-3470

2000' 1000' 0 2000' 4000'

SCALE: 1" = 2000'

DLNR EAST KAPOLEI DEVELOPMENTS – INFRASTRUCTURE ANALYSIS

HONOULIULI, EWA, OAHU, HAWAII

SEWER SYSTEM IMPROVEMENTS

FIGURE 6

7.2 Water System

The UHWO Water Master Plan for the 440-foot Potable Water System indicates that this system would provide water to the DLNR East Kapolei parcels ("University of Hawai'i West O'ahu Water Master Plan of 440-Foot Potable Water System," Engineering Concepts, Inc., March 2007). See Figure 14, for a comprehensive overview of the potable water system. There is an existing 2.5-million-gallon (MG) reservoir at 440 feet elevation, providing the water source for the UHWO site. A future 2.5-MG reservoir next to this existing reservoir is also planned to address requirements. There is no water system currently serving the DLNR East Kapolei parcels. The new 2.5-MG reservoir can provide adequate water for the proposed developments in each of the three conceptual alternatives, based on criteria for a dual water system using potable and non-potable water. The use of non-potable water would require a booster pump for irrigation once the BWS increases the capacity of the non-potable system.

The on-site water system can service the Keone'ae Station Area via connection to an existing 20-inch water line at Kualaka'i Parkway. The 20-inch water line would be fed from the East Kapolei Reservoir 440-foot system per the UHWO Water Master Plan. However, a new water line (approximately 800 linear feet) along Farrington Highway would require coordination with the BWS and UHWO for construction.

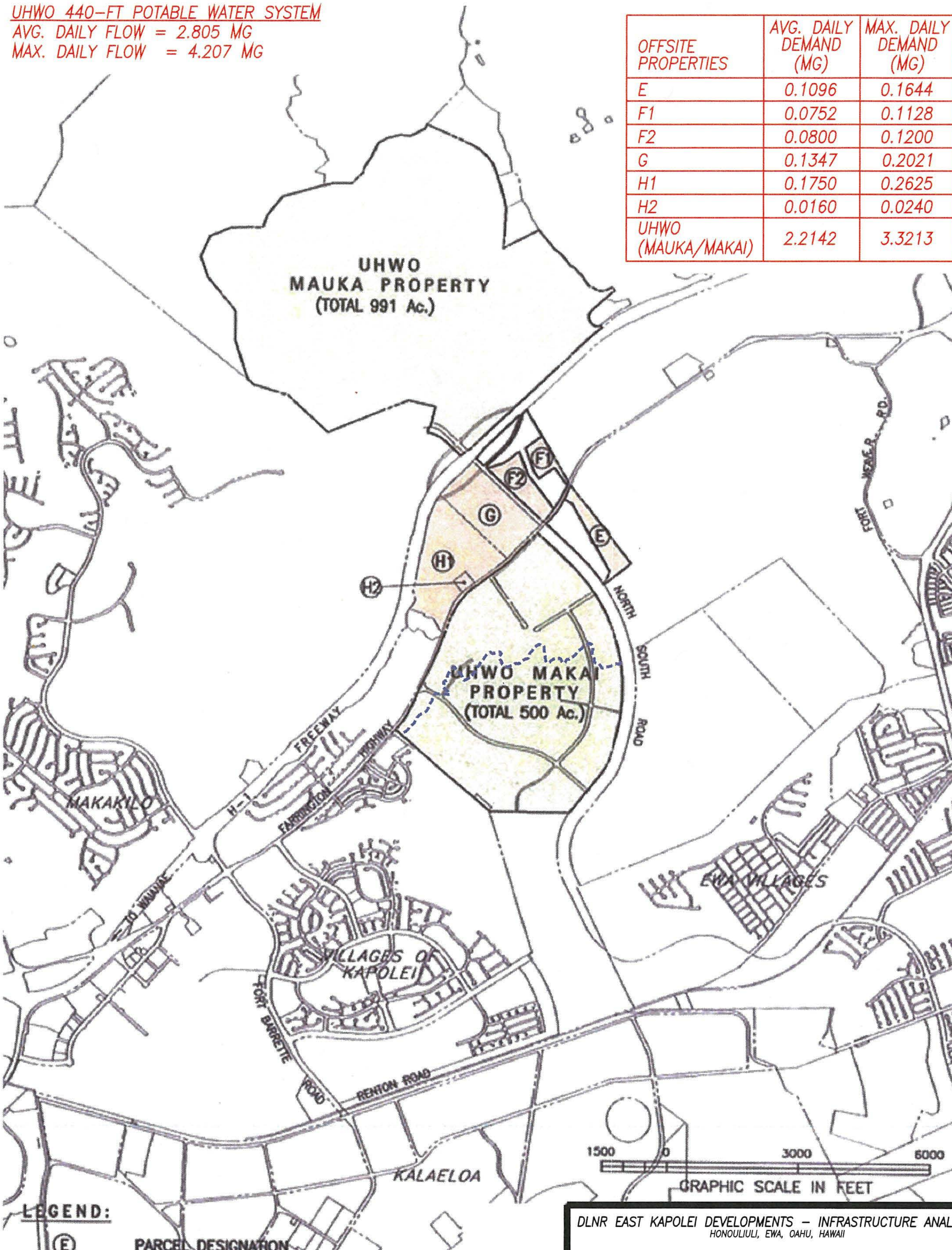
One potential option instead of constructing the 800 linear feet of water line, is to seek a connection with an existing 12-inch water line at Ho'opili Road "E", combined with the use of the Honouliuli Reservoir 440-foot system, to reduce demand from the East Kapolei Reservoir 440-foot system. This connection will require coordination with the BWS and D.R. Horton provided that the Honouliuli Reservoir 440-foot system has sufficient storage to accommodate the additional demand.

A second potential option is to utilize the existing 12-inch water line for connection to the East Kapolei Reservoir 440-foot system and install a valve separating the East Kapolei Reservoir 440-foot system and Honouliuli Reservoir 440-foot system. This second option would also require coordination with BWS and D.R. Horton.

For the Kualaka'i Parkway East and Kualaka'i Parkway West areas, the on-site water system will connect to the East Kapolei Reservoir 440-foot system per the UHWO Water Master Plan.

UHWO 440-FT POTABLE WATER SYSTEM
AVG. DAILY FLOW = 2.805 MG
MAX. DAILY FLOW = 4.207 MG

OFFSITE PROPERTIES	AVG. DAILY DEMAND (MG)	MAX. DAILY DEMAND (MG)
E	0.1096	0.1644
F1	0.0752	0.1128
F2	0.0800	0.1200
G	0.1347	0.2021
H1	0.1750	0.2625
H2	0.0160	0.0240
UHWO (MAUKA/MAKAI)	2.2142	3.3213



LEGEND:

Ⓔ PARCEL DESIGNATION

UH PROPERTIES

OFFSITE PROPERTIES

SOURCE: UNIVERSITY OF HAWAII WEST OAHU WATER MASTER PLAN OF 440-FOOT POTABLE WATER SYSTEM, MARCH 2007

DLNR EAST KAPOLEI DEVELOPMENTS – INFRASTRUCTURE ANALYSIS
HONOULIULI, EWA, OAHU, HAWAII

UHWO WATER MASTER PLAN OF 440-FOOT POTABLE WATER SYSTEM VICINITY MAP

FIGURE 7

7.3 Drainage System

The DLNR parcels are within the Kalo'i Watershed, and runoff is conveyed through the Kalo'i and Hunehune Gulches from mauka to makai through the project sites. Storm water runoff from the Kalo'i Gulch enters Kualaka'i Parkway East through two existing 12-foot x 12-foot box culverts at the H-1 Freeway. The flows continue south then drains towards the Keone'ae Station Area through an existing bridge at Farrington Highway. Kalo'i Gulch ultimately connects to the existing Kalo'i Channel east of the Kualaka'i Parkway. Similarly, storm water runoff from the Hunehune Gulch traverses Kualaka'i Parkway West through an existing 96-inch pipe culvert at the H-1 Freeway and an existing bridge at Farrington Highway. The flows then continue south to UHWO.

Proposed drainage improvements at Kalo'i and Hunehune Gulches within the DLNR parcels will serve regional and project-related requirements. Proposed improvements are summarized in Tables 5 and 6.

Table 5: Kalo'i Gulch Drainage Improvements

Proposed Improvement	Alternative 1	Alternative 2	Alternative 3
Realignment [1]	Full realignment [2]	Partial Realignment [2]	Retain current alignment [3]
New culvert at Kualaka'i Parkway East	Yes	Yes	Yes
New culvert at intersection of Kualaka'i Parkway and Farrington Highway	Yes	Yes	No

1. In lieu of a concrete-lined channel, all alternatives include a grass-lined channel, which is more land intensive and reduces the developable area. However, the grass-lined design significantly reduces construction costs, which outweighs the loss of developable land area.
2. Optimizes developable area.
3. Does not optimize developable area, however, this alternative will benefit from the new Kalo'i Gulch Bridge to be constructed as part of the Farrington Highway Improvement Project.

Table 6: Hunehune Gulch Drainage Improvements

Proposed Improvement	Alternative 1	Alternative 2	Alternative 3
Realignment [1]	Full realignment	Full realignment	Full realignment
New culvert at proposed on-site road	Yes	Yes	Yes
New bridge or culvert at Farrington Highway	No	No	No

1. In lieu of a concrete-lined channel, all alternatives include a grass-lined channel, which is more land intensive and reduces the developable area. However, the grass-lined design significantly reduces construction costs, which outweighs the loss of developable land area.
2. Located at the existing culvert under Farrington Highway.

The realignment of Kalo'i Gulch has significant drainage cost implications. Alternatives 1 and 2 would require realignment of the Kalo'i Gulch resulting in storm runoff diverted to a new box culvert at the intersection of Kualaka'i Parkway and Farrington Highway. This is a large intersection with multiple turning lanes, which would require a long and costly culvert or bridge.

Alternative 3 can utilize the upgraded bridge, which would be constructed by the Farrington Highway Improvements Project before Phase 2. The realignment of Hunehune Gulch currently terminates at an existing culvert under Farrington Highway, which would also be upgraded by the Farrington Highway Improvements Project.

The increase in impervious surfaces and the potential for flooding requires the installation of on-site detention basins or underground chambers. This would apply to each phase of development. The storm design recurrence interval is 10-years for drainage areas of 100 acres or less per the City's storm drainage standards.

HART requires the provision of 1,000 parking stalls at the future park-and-ride site near the transit station within the Keone'ae Station Area. An underground (storm water) chamber installed under the proposed ground parking lot is a preferred option to provide more developable surface land. No structure or building would be allowed directly above the underground chambers without providing overhead clearance for maintenance. The option of constructing a detention basin in place of the more expensive underground chambers is also possible. However, this option could reduce the total developable area by approximately 2 acres (1.4 acres of light-industrial area, and 0.7 acres of multi-family area). If space is limited, a vertical parking structure may be considered to provide the required amount of parking stalls. The parking design may incorporate open spaces that provide use for detention basins. For this study, the single detention basin is assumed to be 5 feet deep with 3H:1V side slopes.

For the Kualaka'i Parkway East area, the detention basin option will reduce the total developable area by approximately 2.1 acres (1.4 acres of light industrial area and 0.7 acres of multi-family area). For the Kualaka'i Parkway West area, the detention basin option will reduce the total developable area by approximately 2.8 acres. The detention basins for both Kualaka'i Parkway East and West, are assumed to be 5-feet deep with a 3H:1V side slope.

The detention basin area was calculated as one consolidated basin for each area. However, for marketability and efficiency of each parcel, the design may include open spaces that can be used as detention basins. Thus, the project team recommends that during the design process, DLNR considers distributing the area necessary for on-site water detention on a parcel-by-parcel basis, instead of locating the entire detention basin area in one location. The final layout and size of the detention basins or underground chambers will be determined during the design phase of each parcel.

7.3.1 Storm Water

The City's "Rules Relating to Water Quality" guidelines apply to all development and land-disturbing activities within the City and establish minimum requirements for use of Best Management Practices (BMPs).

Based on the rules, the DLNR project would be classified as a Priority A project and a Storm Water Quality Report (SWQR) must be submitted to the City Department of Planning and Permitting (DPP) for review and approval prior to the issuance of any building, grading, grubbing, and/or stockpile permit for development.

Post-construction treatment control may include BMPs for retention, biofiltration, and alternative compliance. The location and method of the post-construction treatment control BMPs will be determined during the design phase.

For retention BMPs, detention basins or underground chambers can be used for both flood control and storm water quality purposes, provided that the soil infiltration rate meets the minimum requirement of 0.5 inches per hour, and the ground water table is below the detention basin and invert of the underground chambers. As described for detention basins, open spaces available for detention can be spread out on a parcel by parcel basis.

7.4 Roadway Systems

Kualaka'i Parkway and Farrington Highway are two major regional roadways that traverse the DLNR East Kapolei Lands. Kualaka'i Parkway is a divided State highway with a raised median connecting the H-1 Freeway and Kapolei Parkway. The City owns the portion of the two-lane Farrington Highway (one lane in each direction) between the Kapolei Golf Course and Fort Weaver Road.

The City and HDOT are in the planning and design stages for the Farrington Highway Widening Improvements Project, and an HRS, Chapter 343, Final Environment Assessment (FEA)Finding of No Significant Impact (FONSI) is expected before the close of the 2020 calendar year. The Farrington Highway widening is expected to proceed in two phases and would widen the highway to four lanes (two lanes in each direction), with the potential for six lanes in the future, if warranted. Additional project areas are unspecified, as agreements with DTS and HDOT are subject to review and approval. The final location and width of the right-of-way (ROW) width (up to 140-feet) will determine the northern boundary of the Keone'ae Station Area. The City also requires a Traffic Impact Analysis Report (TIAR) to evaluate the potential for regional traffic impacts. Potential roadway improvements may include the construction of major intersections in the vicinity of the project sites that would serve regional and project-related purposes. There is the potential for improvements to four intersections; however, the final locations are subject to change:

- Farrington Highway connecting to the proposed on-site roads in the Keone'ae Station Area and Kualaka'i Parkway East. This intersection is currently under review with HDOT to determine if it can be included in the first phase of the Farrington Highway Widening Improvement Project.
- Kualaka'i Parkway connecting to the proposed on-site roads in Kualaka'i Parkway East - D.R. Horton is currently working with the HDOT to improve the western portion of the intersection to a signalized T-intersection. However, HDOT requires the T-intersection configured as right-in/right-out if projections for traffic conditions impact future traffic flow on the H-1 Freeway. Any developments involving Kualaka'i Parkway must, therefore, be coordinated with HDOT during the design phase to determine the scope of the intersection improvements.
- Two intersections along Farrington Highway connecting to the proposed on-site roads in Kualaka'i Parkway West - The east intersection would connect the DLNR proposed on-site roads to the UHWO master-planned on-site roads. The west intersection is to provide additional access to the parcel from Farrington Highway. The final locations of these intersections will be coordinated between DLNR and the City.

7.5 Electrical and Communication Systems

The Hawaiian Electric Company (HECO) is the main supplier of electricity on O'ahu. Most of the island's power is generated by plants located on the west side of the island and delivered through 138 kilo-Volt (kV) transmission corridors, and then from transmission and distribution substations to utility customers. In general, a distribution system consisting of a blend of underground electric utility lines and overhead utility lines supported by wood joint poles serve the East Kapolei TOD area. HECO also has several overhead lines through the district that are part of their regional transmission and sub-transmission systems. These regional facilities interconnect HECO substations interspersed throughout the island of O'ahu. Hawaiian Telcom and Spectrum also provide telecommunications services via these overhead and underground lines.

In the future all TOD areas will be part of the TOD Special Districts and new electric and telecommunications facilities will be required to be installed underground (ROH, Chapter 22). Existing overhead facilities installed prior to the addition of a station area to the TOD Special District may remain overhead and, if necessary, may be repaired and supplemented if such actions do not alter the character of such lines

HECO presently serves the residential, commercial and governmental customers in the East Kapolei TOD area from their 12-kV distribution system. The power sources for the 12-kV system are HECO's existing Kalo'i, Kapolei, 'Ewa Nui, and Kamokila Substations. HECO is currently planning to construct a new substation, Ho'opili Substation Site No. 2 and has a parcel near the existing Kroc Center which can be developed into the East Kapolei Substation. Additional tentative substation locations have been identified for the future development of Ho'opili Substation Sites Nos. 1 and 3, both within the Ho'opili Development, and one additional substation site located within the University District Lands parcel.

For new developments, Hawaiian Telcom and Spectrum typically require developers to provide underground telecommunications duct system infrastructure ("support structures") but will provide the cabling at their cost. In the most common scenario, the cost of new electrical facilities that are triggered by specific development projects, while nominally the responsibility of HECO, are paid for with funds provided by the developers of projects requesting service. These funds consist of a refundable advance and a non-refundable contribution with the advance portion covering the cost of an "equivalent" overhead system and the non-refundable contribution reflecting the cost difference between an overhead system and an underground system. Over a 10-year period after construction of such projects, HECO reimburses, on a year-by-year basis, the project developers for a sum equivalent to the electricity usage charges paid by the energized development during that year for the advance portion only. Another process, Community-Funded Development, is being contemplated, but the cost sharing formula and funding mechanisms are still being developed.

The improvements proposed in this section focus primarily on electrical capacity because current telecommunication technology generally allows Hawaiian Telcom and Spectrum to provide additional capacity to accommodate growth without new infrastructure.

The necessary electrical improvements identified by the analysis of the East Kapolei TOD area are to increase the quantity of existing 12-kV distribution lines extending from existing or proposed distribution substations, provide additional 46-kV transmission line extensions for the proposed substations, and develop additional distribution substations. For the DLNR parcels the on-site improvements include new electrical and communications infrastructure. The new above-grade 46-kV infrastructure is a system cost borne by HECO but the undergrounding of existing 46-kV infrastructure, if requested by a private party generally to improve its development, will need to be negotiated with the State and the City with the cost of the undergrounding borne by the requesting party.

7.6 Infrastructure Cost Estimates

The rough order-of-magnitude (ROM) infrastructure costs to support the three DLNR East Kapolei development alternatives are divided into three categories as follows:

- Regional improvements: Improvements that will provide benefits and enhancement to the region, not just for the specific project.
- Regional/project improvements: These are improvements consisting of onsite and/or offsite improvements that are required to support the project needs

- Project improvements: These are typical on-site improvements consisting of backbone roadway, drainage, sewer, water, landscape, electrical, storm water quality, and other ancillary developments.

The infrastructure costs (2019 dollars), not including building, demolition, and soft costs, are summarized in the Infrastructure Study (included as Table 6 in the study, and a detailed breakdown is also appended to the study). As shown in Section 8, Table 8 of the Infrastructure Study, the infrastructure costs for Alternative 1, Alternative 2, and Alternative 3 are $214.1 million, $213.9 million, and $194.6 million, respectively. It should be noted that the costs of the regional/project sewer improvements and regional water improvements will have to be negotiated and shared among the developers whose developments impact the regional system. The same is true for the proposed upgrade to the HECO 46 kV Underground Duct System.

8 Economic and Fiscal Impact Assessment

Colliers International Hawaii (Colliers Hawaii) was engaged by RMTC to study the economic impact resulting from the development of the DLNR Lands. Based on the demand studies, the analysis focused on the future development of the residential, commercial, industrial and hotel uses on DLNR's land. The analysis is based on the estimated developable area/gross floor areas for Alternative 3, the preferred site plan, which is shown in Table 7 below, and includes the following:

- Econometric model creation (model depicts the flow of capital, job creation (during construction and stabilized operations), probable number of patrons, on and off-site expenditures of workers and patrons).
- Identification of secondary impacts and their Influence on economic returns.
- Forecasts for tax revenues (project vs. public costs/services) and is a basic measure of whether a project may constitute a surplus of tax benefits accruing to the government, a deficit or liability of public costs to provide infrastructure, or a break-even where taxes and user fees may off-set the cost of providing public services.

Table 7: DLNR East Kapolei Lands Conceptual Plan Summary

Land Use	Developable Area/Gross Floor Area			Notes	Potential Mkt. Demand by 2039 (1)	Econ. Impact Analysis (2) (2020 - 2039)
	Kualaka'i Parkway West (70.5 acres)	Kualaka'i Parkway East (58.4 acres)	TOD Mixed Use (50.7 acres)			
Multi-family Rental		266,000 sf 280 units	684,000 sf 720 units	3- to 4-story bldg & 7- to 8-story bldg Avg unit size: 950 sf	2,110 units	1,000 units
Retail			50,000 - 64,000 sf	2-story w/upstairs office space 1- or 2-story in Park-and-Ride Area	120,000 sf - 168,000 sf	114,000 sf
Office			20,000 sf	Upstairs office	16,000 sf - 24,000 sf	20,000 sf
Industrial	37.6 acres	25.1 acres		Estimated bldg. area: 1.04 million sf	24 acres - 48 acres	48 acres
Hotel			144,000 sf 180 rooms	5-story bldg	180 rooms	180 rooms

(1) Conservative to aggressive range (rounded) based on Kloninger (Kloninger, 2019). There may be additional demand beyond 2039.
(2) Potential additional demand beyond 2039 was not addressed by the Colliers Hawaii study.
Source: Colliers Hawaii, 2020

Methodology

The methodology employed by Colliers Hawaii is based on estimating the major economic contributions from the development of apartments, retail centers, office buildings, industrial buildings, and hotels on the DLNR East Kapolei lands. Each of these proposed land uses result in economic impacts that were further subject to analysis based on the following:

Input-Output Study – The economic impacts from developing the various land uses were formulated based on data from the input-output (I-O) tables in the State's Department of Business, Economic Development & Tourism's Hawai'i State Input-Output (I-O) study (2012). The multipliers from the I-O tables formed the basis for estimating output, income, and employment.

Timing – The study spanned a 20-year timeframe, from January 1, 2020 through December 31, 2039. The baseline year is 2019 and the year-by-year summary was adjusted by 3.0% annually to account for price adjustment and inflation.

Economic Impacts – Economic growth is primarily from the operation of the planned buildings slated for construction. Construction of the buildings is considered a significant but temporary impact that would generally last for only the duration of construction. The operation of the buildings is therefore considered a permanent impact that is projected upon the completion and occupation of the buildings. The specific economic factors considered include:

Construction:

- Construction Costs - Direct output, plus indirect & induced impacts
- Employment & Wages - Direct output, plus indirect & induced full-time equivalent (FTE) employment and earnings
- Tax Revenues – General Excise Tax (GET) and income taxes from direct outputs

Operations

- New Consumer Spending (retail) - Direct output, plus indirect & induced impacts
- Building Operating Costs - Direct output, plus indirect & induced impacts
- Employment & Wages - Direct output, plus indirect & induced FTE employment and earnings
- Tax Revenues – GET, Transient Accommodations Taxes (TAT) and income taxes from direct outputs

8.1 Economic and Fiscal Impacts of Preferred Alternative 3

8.1.1 Construction

The total economic effect from direct and secondary construction impacts for the period 2020 through 2039 is summarized as follows, in 2019 dollars:

- Output $2.8 billion
- Employment FTEs 5,104 persons
- Employment Wages $603.4million
- State Fiscal Impacts $28.2 million

A detailed tabular representation of this data is provided below:

Table 8: Total Construction Economic and Fiscal Impacts (2019 dollars, 000s)

Period	2020-2024	2025-2029	2030-2034	2035-2039	Totals
Output					
Construction Costs	$332,543	$226,487	$220,866	$132,312	$912,209
Indirect & Induced	$698,252	$475,563	$463,761	$277,820	$1,915,395
Totals	$1,030,795	$702,050	$684,627	$410,132	$2,827,604
Employment & Wages					
Construction FTEs	1,057	523	1,057	863	3,501
Indirect & Induced FTEs	577	249	465	312	1,603
Totals	1,634	772	1,522	1,175	5,104
Construction Wages	$72,669	$29,999	$65,979	$43,494	$212,140
Indirect & Induced	$134,024	$55,327	$121,685	$80,217	$391,254
Totals	$206,692	$85,326	$187,664	$123,711	$603,394
Fiscal Impacts to State					
GET	$1,663	$1,132	$1,104	$662	$4,561
Income Taxes*	$9,311	$6,342	$4,406	$3,463	$23,521
Totals	$10,974	$7,474	$5,510	$4,124	$28,082

* Direct output FTEs

(Source: Colliers Hawaii, 2020)

Colliers Hawaii presents the estimated economic and fiscal impacts of construction activities by land use as detailed below:

Table 9: Construction Economic and Fiscal Impacts by Land Use (2019 dollars, 000s)

Land Use	Multi-family	Retail	Office	Industrial	Hotel	Totals
Output						
Construction Costs	$503,392	$39,338	$16,041	$257,643	$95,794	$912,209
Indirect & Induced	$1,056,989	$82,600	$33,681	$540,982	$201,143	$1,915,395
Total	$1,560,381	$121,938	$49,722	$798,626	$296,937	$2,827,604
Percent of Total	55%	4%	2%	28%	11%	100%
Employment & Wages						
Construction FTEs	1,269	242	38	1,690	262	3,501
Indirect & Induced FTEs	692	130	20	621	140	1,603
Totals	1,961	372	58	2,311	402	5,104
Construction Wages	$87,188	$26,654	$2,600	$71,683	$24,016	$212,140
Indirect & Induced	$160,801	$49,152	$4,800	$132,206	$44,295	$391,255
Totals	$247,989	$75,806	$7,400	$203,888	$68,311	$603,394
Fiscal						
GET	$2,517	$197	$80	$1,288	$479	$4,561
Income Taxes*	$14,095	$1,101	$207	$7,214	$904	$23,521
Totals	$16,612	$1,298	$287	$8,502	$1,383	$28,082

* Direct output FTEs
(Source: Colliers Hawaii, 2020)

8.1.2 Operations

Operational impacts are the long-term result of the construction of buildings and facilities on the DLNR East Kapolei lands, presented for each five-year interval between 2020 through 2039. Colliers Hawaii summarizes the total economic and fiscal impacts of direct and secondary operations as follows:

- Output $1.6 billion annually
- Employment FTEs 2,390 persons
- Employment Wages $1.8 billion annually
- State and County Fiscal Impacts $126.6 million annually

Table 10: Total Operational Economic and Fiscal Impacts (2019 dollars, 000s)

Period	2020-2024	2025-2029	2030-2034	2035-2039	Totals
Output					
Retail Spending			$75,464	$153,127	$228,591
Induced & Indirect			$141,234	$329,639	$470,873
Totals			$216,698	$482,766	$699,464
Building Operations	$5,940	$36,003	$105,891	$147,061	$294,895
Induced & Indirect	$12,153	$73,713	$217,107	$304,576	$607,550
Totals	$18,094	$109,715	$322,999	$451,637	$902,445
Total Output	$18,094	$109,715	$539,697	$934,403	$1,601,909
Employment & Wages					
Building Tenants FTEs		331	1,298	2,196	3,825
Building Operations FTEs	7	10	109	118	244
Indirect & Induced FTEs	13	17	54	76	160
Totals	20	358	1,462	2,390	4,230
Building Tenant Wages		$35,766	$409,653	$899,336	$1,344,755
Building Operations	$381	$2,256	$100,494	$219,001	$322,133
Indirect & Induced Wages	$681	$4,029	$52,861	$88,552	$146,123
Totals	$1,062	$42,051	$563,008	$1,206,889	$1,813,010
State and County Fiscal					
GET	$622	$3,895	$20,951	$33,748	$59,216
Property Taxes	$1,374	$8,798	$22,419	$34,789	$67,381
Income Taxes *	$127	$1,988	$15,196	$32,363	$49,673
Totals	$2,123	$14,681	$58,566	$100,900	$176,270

* Direct output FTEs

(Source: Colliers Hawaii, 2020)

Colliers Hawaii represents this same information tabulated by land use for the duration from 2020 and ending in 2039 as follows:

Table 11: Total Operational Economic and Fiscal Impacts by Land Use (2019 dollars, 000s)

Land Use	Multi-family	Retail	Office	Industrial	Hotel	Totals
Output						
Retail Spending		$228,591				$228,591
Induced & Indirect		$470,873				$470,873
Total	$0	$699,464	$0	$0	$0	$699,464
Building Operations	$154,034	$17,508	$1,255	$23,147	$98,951	$294,895
Induced & Indirect	$315,152	$38,636	$2,530	$48,779	$202,453	$607,550
Totals	$469,186	$56,144	$3,785	$71,926	$301,404	$902,445
Total Output	$469,186	$755,608	$3,785	$71,926	$301,404	$1,601,909
Employment & Wages						
Building Tenants FTEs		$255,381	$49,411	$1,089,373		$1,394,165
Building Operations FTEs	$9,884	$12,858			$5,839	$28,581
Indirect & Induced FTEs	$17,651	$14,142			$12,115	$43,909
Totals	$27,535	$282,381	$49,411	$1,089,373	$17,954	$1,466,655
Building Tenant Wages		$255,381	$49,411	$1,089,373		$1,394,165
Building Operations	$9,884	$12,858			$5,839	$28,581
Indirect & Induced Wages	$17,651	$14,142			$12,115	$43,909
Totals	$27,535	$282,381	$49,411	$1,089,373	$17,954	$1,466,655
State and County Fiscal						
GET	$14,360	$17,366	$216	$9,684	$17,589	$59,215
Property Taxes	$35,634	$7,523	$732	$18,273	$5,219	$67,381
Income Taxes*	$3,288	$3,855	$1,709	$37,681	$3,140	$49,673
Totals	$53,282	$28,744	$2,657	$65,638	$25,948	$176,269

* Direct output FTEs

(Source: Colliers Hawaii, 2020)

A general observation from the economic impacts associated with development are that there are immediate construction benefits from expenditures for construction labor, the purchasing of building materials, and professional services and other expenses such as survey, engineering, and specialty disciplines for the design and permitting process generally required prior to the start of construction. The total short-term expenditures generated for all projects associated with the development of the DLNR East Kapolei lands will be significant and would have a ripple effect within the economy from the infusion of approximately $2.8 billion in total output.

The long-term result from the operation of facilities and buildings that are developed will also be significant, as articulated for the approximately 20-year time horizon from 2020 to 2039. The project's ongoing economic impact could represent an additional $1.6 billion for the economy, while providing for 2,390 full-time equivalent employee positions.

The following summarizes the economic impact findings of each of the specific sectors under study by Colliers Hawaii (see Conceptual Plan Alternative 3, East Kapolei Lands, which provides the land use summary for the Kualaka'i Parkway West, Kualaka'i Parkway East, and Keone'ae Station Area).

8.2 Residential Findings

The Residential Rental Market Study for the DLNR East Kapolei Lands finds that there is an average annual demand of 162 units per year from 2023 to 2035. The study projects 720-units at the Keone'ae Station Area would be built first and delivered in 2024 after the rail is assumed to be operating. The second increment of 280 units would be delivered five years later in 2029.

The estimated economic impact from development of the two affordable rental projects (1,000 units) on the DLNR East Kapolei lands would bring an estimated $484.5 million to the economy in 2019 dollars in the period 2022/2023 and 2027/2028. Secondary impacts from indirect and induced effects of construction is projected to yield another $1.0 billion in economic output.

The construction of the two rental projects could create approximately 2,140 direct jobs during development, with an additional 1,170 indirect and induced jobs. Taxes and fees generated from development could account for approximately $16.0 million of GET and income taxes generated with the residential apartment construction. This includes $2.4 million in GET from rental revenues and $13.6 in income taxes.

The total economic impact from developing the two affordable rental projects is estimated at $1.9 billion from construction and $26.4 million annually from operations, in 2019 dollars. Job creation includes 2,140 direct FTE jobs, 1,170 indirect and induced job from development and construction, and 10 permanent FTEs from operations.

8.3 Retail Findings

The 2020 retail study indicates there is moderate market demand to support up to 146,000 square feet of retail space on DLNR's lands by 2039. The conceptual site plan presents 114,000 square feet of total retail space in two buildings in the Keoneʻae Station Area. There is an estimated 50,000 square feet of retail space in one commercial building bordered by Roads 2, N, and C, and approximately 64,000 square feet in a one to two story building on the park-and-ride lot. Final site configuration of the Keoneʻae Station Area will likely be determined the future developer for the site. The impact of this and other retail inventory was not analyzed by Colliers Hawaii as the projected retail demand was minimal within the timeframe for the delivery of the affordable rental units in the area.

The 2020 Colliers Hawaii, study estimates that a new retail center would generate retail sales in the range of $425 to $525 per square foot. Colliers Hawaii's projections assume a mid-range of $475 per square foot or $51.4 million per year in 2019 dollars. However, only a portion of these sales are a direct output into the economy as there is a wholesale margin to account for. Based on the margins from the 2012 I-O study, retail and transportation margins as a proportion of retail prices results in an estimated $23.5 million in direct additional expenditures in the state.

Colliers Hawaii finds there is no new projected retail demand at this location until 2029, but up to 109,000 square feet thereafter, through 2034. Additional demand of up to 58,000 square feet is projected from 2034 to 2039. The basis for this assessment is that the proposed park-and-ride retail center would be built first and delivered in 2031 and the other TOD center would be delivered in 2036.

The economic impact from construction of the two retail centers is an estimated $17.4 million in the 2029/2030 and 2034/2035 time horizons. Indirect and induced economic effects are projected to yield $264.2 million in new spending.

The construction of the two buildings could create 242 FTE jobs and approximately 130 indirect and induced jobs. Approximately $4.5 million of GET on construction costs and $1.5 million in income taxes could be generated from retail center development.

The total economic impact from developing two retail center properties is estimated at $222.9 million from construction and $19.6 million annually from operations ($2019). Jobs creation includes 372 FTE jobs from construction and 284 FTE jobs from operations.

8.4 Office Findings

Office business revenues are difficult to estimate due to the diverse types of businesses that occupy office spaces. The Colliers Hawaii's study focusses on typical office rents and operational expenditures to determine the economic impact of developing and operating an office building.

Office rents are typically comprised of a base rent and operating expense recovery. The current average market base rent for Kapolei office space is between $2.00 and $3.00 per square foot (psf)/month (mo). New developments would likely be in the upper end of this range. At $3.00 psf/mo, base rent revenue is equal to $684,000 per year.

Operating expenses include utilities, janitorial, maintenance and related services. This amounts to approximately $1.25 psf/mo or approximately $300,000 annually.

Demand for office space, particularly at this location, is projected to be minimal over the next 20 years, with only 23,653 square feet expected to be required through 2039. Development of office space is projected to coincide with retail/commercial development in the Keone'ae Station Area in the 2035 timeframe. The conceptual plan for DLNR includes 20,000 square feet of general office and medical office space located on the second floor of the commercial building at the Keone'ae Station Area.

When the new office space is scheduled to be developed, it is estimated to bring approximately $8.6 million to the economy with indirect and induced impacts of about $18.0 million.

The new construction will create an estimated 38 FTE jobs with approximately 20 induced and indirect jobs added. Construction is expected to add approximately $2.6 million ($2019) in new earnings/direct income. Approximately $43,000 in GET and $207,000 in income taxes are projected to be generated annually.

The total estimated economic impact from developing office space is $26.6 million from construction and $8.2 annually from operations, in 2019 dollars. Projected job creation includes 106 FTE from construction and 127 FTE from tenant operations.

8.5 Industrial Findings

The industrial market study indicates there is demand for up to 47.9 acres of the 62.7 acres of DLNR East Kapolei industrial lands in the 2024 to 2039 timeframe. This equates to an over 1.04 million square feet of industrial building area, assuming a 0.5 floor-area ratio (FAR). Additional demand beyond 2039 to fill the remaining 14.8 acres is possible but was beyond the scope of the 2020 Colliers Hawaii study.

Industrial rents are typically comprised of a base rent and operating expense recovery. The average market base rent for Kapolei warehouse space was estimated at $1.33 psf/mo in 2019, however, a new development is likely to command rents above the average rate. At $1.40 psf/mo, base rent, projected project revenue was estimated at $16.6 million per year at full buildout, in 2019 dollars.

Operating expenses are lower than office/retail as industrial uses generally have less common area to maintain. Expenses include utilities, maintenance and repair, professional services, real property taxes, and insurance. The then-current market average for operating expense rates was $0.36 psf/mo or about $4.28 million annually.

Colliers estimates development of the industrial lands could generate $175.3 million ($2019) to the economy over a 20-year period. Indirect and induced impacts could add another $337.4 million in new spending.

Construction employment would result in approximately 709 FTE jobs, plus approximately 390 indirect and induced jobs. This would result in up to approximately $48.8 million in new earnings and wages. GET could amount to $803,000 and income taxes of approximately $1.3 million would be generated from industrial warehouse development.

The total estimated economic and fiscal effect from the development of new industrial buildings at DLNR's East Kapolei lands could amount to $787.8 million from construction and $616 million annually from operations, in 2019 dollars. Jobs creation would amount to 1,924 FTE jobs from construction and 1,881 jobs from tenant businesses. The projected fiscal impact is $1.4 million in GET and income taxes from construction, and $1.8 million annually from new property taxes and operations.

8.6 Hotel Findings

According to Kloninger's 2019 study, there was market demand for two, 180-room hotels over the next 20-year time horizon. The proposed conceptual plan provides for at least one 180-room hotel in the Keone'ae Station Area along Kualaka'i Parkway.

The development of a new 180-room hotel is projected to bring up to approximately $71.3 million (2019 value) to the economy. Indirect and induced impacts could result in another $124.7 million being spent.

Construction could generate approximately 262 FTE jobs and approximately 400 indirect and induced FTE jobs. This would result in approximately $17.9 million in new earnings and direct income. Approximately $921,000 of GET and $500,000 in income taxes would also be generated.

The total estimated economic effect from the development of a new hotel would amount to $236.4 million from construction and $35 million annually from operations, in 2019 dollars. Job creation includes 402 direct and indirect and induced FTE jobs from construction and 106 jobs from operations.

9 Constraints, opportunities, and other considerations

9.1 Constraints

Generally, the major constraints associated with implementing the development plan are related to infrastructure and the costs for implementation. In addition, early coordination will be required between adjacent landowners for future UHWO and Ho'opili developments in order to effectively accommodate sewer, water, and drainage demands and connections for the DLNR East Kapolei lands.

Vehicular circulation and access for DLNR lands will also need further evaluation and coordination with HDOT, DTS, and local landowners, as many local roads and access points have not been constructed at the time of this report. Due to the volume of traffic to be accommodated on Kualaka'i Parkway and Farrington Highway, as well as pending expansion of the latter, access and turn lanes will also require coordination with HDOT and DTS as well.

Land use conformance, easements, and other development restrictions also need to be taken into consideration. For example, the proposed development plans being evaluated all have identified uses that does not conform to the current underlying zoning but would be allowed under the East Kapolei Neighborhood TOD plan currently under review by the City. Adoption of the plan will allow DLNR to proceed with its long-range planning and development for the area. Further research should be conducted to ensure compliance with applicable policies and determine if there are any conditions on the property due to the various regulatory documents including the State Environmental Review Law, State Land Use Law, City General Plan, the 'Ewa DP, the City LUO, and the East Kapolei TOD Plan.

9.2 Opportunities

DLNR's lands are located close to planned commercial, recreational, and residential uses, and the Keone'ae Rail Station. In addition, access to major transportation thoroughfares, such as the H-1 Freeway, Kualaka'i Parkway and Farrington Highway, will be advantageous to the project. A strong multi-modal transportation network, including the future rail station and additional roadway connections to major thoroughfares, provides the project areas with a substantial benefit.

Future rail service will connect the community to urban O'ahu, while the village walks, sidewalks and bicycle facilities will help promote localized connectivity that is not dependent on vehicles.

Views from the property are limited due to the flat topography, however, design concepts can take advantage of prominent mauka views of the Wai'anae Mountain Range. In particular, significant views and vistas noted in the 'Ewa DP and offered from the property include views of Nā Pu'u at Kapolei, as well as mauka views of Pu'uokapolei, Pu'u Pālailai, and Pu'u Makakilo.

9.3 Additional Considerations

DLNR will pursue opportunities to partner with private developers and other public agencies to implement the project. In addition, further refinement and development of its long-range plans will provide opportunities to thoroughly evaluate all environmental and socio-economic impacts. Regulatory, permitting, and funding requirements to implement the project.

Land use conformance, easements, and other development restrictions also need to be taken into consideration. For example, the preliminary land use program proposes uses and heights not permitted under the current LUO. Adoption of the East Kapolei Neighborhood TOD Plan by the City would allow development flexibility and DLNR's plans to proceed.

In addition, the project's estimated infrastructure demands are based on current design standards. Depending on the final development plans, the requirements may differ from the current proposals. Preliminary designs must be submitted at the time of permitting to determine sewer and water availability. The final design will require the review and approval of the HDOT, DPP, Department of Design and Construction, and utility agencies and organizations such as the BWS and HECO.

Being essentially greenfield, the main constraints associated with developing the land are related to infrastructure. The lack of adequate water, drainage, roadway and sewer capacity and the costs for implementation, present significant challenges to development. Additional coordination will be required between adjacent landowners for future UHWO and Ho'opili developments in order to adequately accommodate sewer, water, and drainage demands and connections. In particular, while the addition of proposed sewer extension improvements is expected to provide adequate capacities for DLNR lands, as well as other proposed area developments, some capacity may need to be reallocated from the UHWO's Mauka property.

Vehicular circulation and access for all DLNR lands also requires further coordination with State and County agencies and local landowners, as many local roads and access points have not been constructed at the time of this report. Community relations and previously designed elements in the Kapolei region should be recognized. In particular, the residents in the region may have concerns regarding "affordable rentals", so messaging will be important. Further, a robust community outreach program will also be required to properly vet the concepts and potential implications with residents, key stakeholders, elected officials, and the community at-large.

9.4 Study Context and Potential Impacts of the COVID-19 Pandemic

This report was drafted between November 2019 and August 2020, with reference to consultations, data collection, and analyses conducted between the third quarter of 2018 and the third quarter of 2020. From approximately February 2020, the COVID-19 pandemic caused major economic, social, and business disruptions in Hawai'i, as it did worldwide. At the time of this writing, little data exists on the pandemic's impacts on development markets and financing, and the timing of recovery is uncertain.

The development visions presented herein reflect the long-term goals and aspirations of the DLNR for its holdings in East Kapolei. Some of the projects described would not be expected to materialize for years or even decades of this study. The assessments presented in this report are tied to future implementation of the desired projects, and while some could be delayed, for purposes of this study, it is assumed that in this longer-term framework, conditions affecting such development in Hawai'i could have recovered to be within the range of outcomes described herein. Nevertheless, prior to implementation of any particular project, as for any development, the conclusions presented herein should be reviewed in the context of then-current market, economic, fiscal, political, and social environments.

9.5 Report Conditions and Use

This document presents site analyses and preliminary development concepts for DLNR's East Kapolei Lands. The effort was guided by the study purposes noted above, and by DLNR's mission and vision for lands, site and environmental conditions, market and development observations (prior to the initiation of rail service), and the team's long-standing experience in TOD planning and development on O'ahu and elsewhere. However, since DLNR does not intend to serve as developer, but rather may seek developer(s) and/or ground lessee(s), the goals, market environment and other factors relevant at such future time may be different than what are currently envisioned, and this could result in different development concepts and conclusions.

Accordingly, the assessments presented herein are based on conceptual designs and anticipated future environmental, market and development conditions, and therefore should be considered representative prototypes that can be envisioned on the property. The materials contained herein note several other areas in which additional study should be pursued before drawing conclusions regarding the feasibility of any development of DLNR's lands.

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Appendix A: **Industrial and Commercial Market Demand Assessment Study, Colliers International Consulting, February 2020**

Appendix B: **East Kapolei Affordable Rental Market Study, Ricky Cassiday, February 2020**

Appendix C: **Hotel Market Assessment and Development Outlook, Erik Kloninger Consulting, February 2019**

Appendix D: **Infrastructure Study, R. M. Towill Corporation, February 2020**

Appendix E: **Economic Impact Analysis, Colliers International Hawaii, February 2020**