CITY COUNCIL
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII

ORDINANCE 21 - 3

BILL 41 (2019), CD2, FD1

A BILL FOR AN ORDINANCE

TO ADOPT THE REVISED CENTRAL OAHU SUSTAINABLE COMMUNITIES PLAN FOR THE CITY AND COUNTY OF HONOLULU.

BE IT ORDAINED by the People of the City and County of Honolulu:

SECTION 1. Purpose. The purpose of this ordinance is to repeal the existing Sustainable Communities Plan ("SCP") for Central Oahu, Article 5, Chapter 24, Revised Ordinances of Honolulu 1990, and to adopt a new Article 5 incorporating the revised Central Oahu Sustainable Communities Plan.

This development plan ordinance adopts a revised sustainable communities plan for Central Oahu that presents a vision for Central Oahu's future development consisting of policies, guidelines, and conceptual schemes that will serve as a policy guide for more detailed zoning maps and regulations and for public and private sector investment decisions.

This ordinance is enacted pursuant to the powers vested in the City and County of Honolulu by Chapter 46, and Section 226-58 of the Hawaii Revised Statutes.

SECTION 2. Article 5 of Chapter 24, Revised Ordinances of Honolulu 1990 ("Central Oahu"), is repealed.

SECTION 3. Chapter 24, Revised Ordinances of Honolulu 1990 ("Development Plans"), is amended by adding a new Article 5 to read as follows:

"Article 5. Central Oahu

Sec. 24-5.1 Definitions.

Unless the context otherwise requires, the following definitions govern the construction of this article:

"Central Oahu SCP" means the revised Central Oahu Sustainable Communities Plan attached hereto as Exhibit A and made a part hereof.

"Department" or "department of planning and permitting" means the department of planning and permitting of the city.

"Development" means any public improvement project, or any public or private project requiring a zoning map amendment.

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"Development plan" or "sustainable communities plan" means a plan document for a given geographic area which consists of conceptual schemes for implementing and accomplishing the development objectives and policies of the general plan for the several parts of the city.

"Director" means the director of the department of planning and permitting.

"Environmental assessment" or "EA" means a written evaluation prepared in compliance with the environmental council's procedural rules and regulations implementing HRS Chapter 343 to determine whether an action may have a significant environmental effect.

"Environmental impact statement" or "EIS" means an informational document prepared in compliance with the procedural rules and regulations of the environmental council established in HRS Section 341-3(c) for the implementation of HRS Chapter 343; and which discloses the environmental effects of a proposed action, effects of a proposed action on the economic and social welfare of the community and State, effects of the economic activities arising out of the proposed action, measures proposed to minimize adverse effects, and alternatives to the action and their environmental effects.

"Finding of no significant impact" or "FONSI" means a determination, based on an environmental assessment, that the subject action will not have a significant effect and, therefore, will not require the preparation of an environmental impact statement.

"Functional plan" means the public facility and infrastructure plans prepared by public agencies to further implement the vision, policies, and guidelines set forth in the revised Central Oahu SCP.

"General plan" means the general plan of the city as defined by Charter Section 6-1508.

"Planning commission" means the planning commission of the city.

"Project master plan" means a conceptual plan that covers all phases of a development project. The project master plan describes how the project conforms to the vision for Central Oahu, and the relevant policies and guidelines for the site, the surrounding lands, and the region.

"Significant zone change" means a zone change that involves at least one of the following:

(1) Changes in zoning of 25 or more acres of land to any zoning district or combination of zoning districts, excluding preservation or agricultural zoning districts;

(2) Any change in zoning of more than 10 acres to a residential or country zoning district;

(3) Any change in zoning of more than five acres to an apartment, resort, commercial, industrial, or mixed use zoning district; or

(4) Any development that may have a major social, environmental, or policy impact, or major cumulative impacts due to a series of applications in the same area.

"Special area" means a designated area within the Central Oahu SCP area that requires more detailed planning efforts beyond what is contained in the Central Oahu SCP.

"Special area plan" means a plan for a special area.

"Unilateral agreement" means a conditional zoning agreement made pursuant to ROH Section 21-2.80 or any predecessor or successor provision that imposes conditions on a landowner or developer's use of the property at the time of the enactment of an ordinance for a zoning change.

"Vision" means the future outlook for the Central Oahu region extending out to the year 2035 and beyond that encompasses the protection of agricultural lands and open space, the revitalization of Waipahu and Wahiawa, the expectation of master-planned residential communities designed to reduce automobile usage and with identifiable town centers, the provision of adequate infrastructure, and the protection of natural, historic, and cultural resources.

Sec. 24-5.2 Applicability and intent.

(a) The Central Oahu SCP area encompasses the upland plateau between the Waianae and the Koolau Mountain Ranges. The area includes the towns of Waipahu, Mililani, and Wahiawa and their surrounding communities.

(b) It is the intent of the Central Oahu SCP to provide a guide for orderly and coordinated public and private sector development in the Central Oahu SCP area in a manner that is consistent with applicable general plan provisions, including the designation of Central Oahu as an urban fringe area, which is to be developed to relieve development pressures in the remaining urban fringe and rural areas, and to meet housing needs not readily provided in the primary urban center.

(c) The provisions of this article and the Central Oahu SCP are not regulatory. Rather, they are established with the explicit intent of providing a coherent vision to guide resource protection and land use development for Central Oahu, public investment in infrastructure, zoning and other regulatory procedures, and the preparation of the city's annual capital improvement program budget.

Sec. 24-5.3 Adoption of the Central Oahu Sustainable Communities Plan.

(a) This article is enacted pursuant to Charter Section 6-1509 and provides a self-contained sustainable communities plan document for Central Oahu. Upon enactment of this article, all proposed developments will be evaluated against how well they fulfill the vision for Central Oahu set forth in the Central Oahu SCP, and how closely they satisfy the Central Oahu SCP policies and guidelines to implement that vision.

(b) The plan entitled, "Central Oahu Sustainable Communities Plan," attached as Exhibit A, is hereby adopted by reference and made a part of this article.

(c) Chapter 24, Article 1, entitled "Development Plan Common Provisions," in its entirety is no longer applicable to the Central Oahu SCP area. This article and the Central Oahu SCP, as adopted by reference in this article, supersede any and all common provisions previously applicable to the Central Oahu SCP area.

Sec. 24-5.4 Existing zoning and subdivision ordinances, approvals, and applications.

(a) All existing subdivisions and zoning approved prior to the effective date of this ordinance, including but not limited to those subject to unilateral agreements, continue to remain in effect following the enactment of this ordinance.

(b) Subdivision and zoning ordinances applicable to the Central Oahu SCP area enacted prior to the effective date of this ordinance continue to regulate the use of land within demarcated zones of the Central Oahu SCP area until such time as those subdivision and zoning ordinances may be amended to be consistent with the Central Oahu SCP.

(c) Notwithstanding adoption of the revised Central Oahu SCP, applications for subdivision actions and land use permits accepted by the department for processing prior to the effective date of this ordinance continue to be subject only to applicable ordinances and rules and regulations in effect at the time the application is accepted for processing.

Sec. 24-5.5 Consistency.

(a) In the performance of their prescribed powers, duties, and functions, all city agencies shall conform to and implement the policies and provisions of this article and the Central Oahu SCP. Pursuant to Charter Section 6-1511.3, public improvement projects, and subdivision and zoning ordinances must be consistent with the Central Oahu SCP.

(b) Any questions of interpretation regarding the consistency of a proposed development with the provisions of the Central Oahu SCP and the objectives and policies of the general plan will ultimately be resolved by the council.

(c) In determining whether a proposed development is consistent with the Central Oahu SCP, the responsible agency shall primarily take into consideration the extent to which the development is consistent with the vision, policies, and guidelines set forth in the Central Oahu SCP.

(d) Whenever there is a question regarding consistency between existing subdivision or zoning ordinances, including any unilateral agreement, and the Central Oahu SCP, the existing subdivision or zoning ordinances prevail until such time as they may be amended to be consistent with the Central Oahu SCP.

Sec. 24-5.6 Implementation.

Implementation of this article relating to the Central Oahu SCP will be accomplished by the following:

(a) Initiating zoning and development code amendments to achieve consistency with the policies, principles, and guidelines of the Central Oahu SCP;

(b) Guiding development in the special areas of Waipahu and Wahiawa through the special area plans for each area;

(c) Guiding public investment in infrastructure through functional plans that support the vision of the Central Oahu SCP;

(d) Recommending approval, approval with modifications, or denial of developments seeking zoning and other development approvals based on how well the developments support the vision of the Central Oahu SCP;

(e) Incorporating Central Oahu SCP priorities through the public infrastructure map and the city's annual budget process;

(f) Evaluating progress in achieving the vision of the Central Oahu SCP periodically and presenting the results of the evaluation in the biennial report that is required by Charter Section 6-1510.4; and

(g) Reviewing the vision of the Central Oahu SCP every five years, and, if necessary based on that review, revising the policies, guidelines, and capital improvement program investments set forth therein.

Sec. 24-5.7 Review of development and other applications.

The review of applications for zone changes and other development approvals will be guided by the vision of the Central Oahu SCP. Decisions on all proposed developments must be based on the extent to which the project enabled by the development approval supports the policies and guidelines of the Central Oahu SCP.

The director may review other applications for improvements to land to help the responsible agency determine whether a proposed improvement supports the policies and guidelines of the Central Oahu SCP.

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Sec. 24-5.8 Zone change applications.

(a) All zone change applications relating to land in the Central Oahu SCP area will be reviewed by the department for consistency with the general plan, the Central Oahu SCP, and any applicable special area plan.

(1) The director shall recommend either approval, approval with changes, or denial. The director's written review of the application must become part of the zone change report that will be sent to the planning commission and the city council.

(2) A project master plan must be part of an EA or EIS for any project involving 25 acres or more of land. The director shall review the project master plan for its consistency with the Central Oahu SCP.

(3) Any development or phase of development already covered by a project master plan that has been fully reviewed under the provisions of this article does not require a new project master plan' provided that the director determines the proposed zone change is generally consistent with the existing project master plan for the affected area.

(4) If a final EIS has already been accepted for a development, including one accepted prior to the effective date of this ordinance, then a subsequent project master plan is not required for the development.

(b) Projects that involve a significant zone change are required to submit an EA to the department prior to an application for a zone change being accepted. Any development or phase of a development that has already been assessed under the National Environmental Policy Act ("NEPA"), HRS Chapter 343 (Hawaii Environmental Policy Act, or "HEPA"), Chapter 25, or the provisions of this article, and for which a FONSI has been filed or a required EIS has been accepted, is not subject to further EA or EIS requirements under this article unless otherwise required by NEPA or HEPA.

(c) The department shall review the EA, and based on the review of the EA, the director shall determine whether an EIS will be required or whether a FONSI will be issued.

(d) If an EIS is required, the EIS must be accepted by the director before a zone change application may be initiated.

(e) Zone changes must be processed in accordance with this section; Section 5.4 of the Central Oahu SCP; Chapter 2, Article 24, Part A; and Chapter 21.

Sec. 24-5.9 Annual capital improvement program review.

Annually, the director shall work jointly with the director of budget and fiscal services and other city agencies to review all projects in the city's capital improvement program and budget for compliance and consistency with the general plan, the Central Oahu SCP and other development plans, any applicable special area plan provisions, and the appropriate functional plans. The director shall prepare a written report of findings to be submitted to the council in accordance with Charter Section 6-1503.

Sec. 24-5.10 Five-year review.

(a) The department shall conduct a comprehensive review of the Central Oahu SCP, adopted by reference in Section 24-5.3(b), every five years subsequent to the effective date of this ordinance, and shall report its findings and recommended revisions, if any, to the council.

(b) The Central Oahu SCP will be evaluated to assess the appropriateness of the plan's regional vision, policies, guidelines, and implementing actions, as well as its consistency with the general plan.

(c) Nothing in this section should be construed as prohibiting the processing of a revision to the Central Oahu SCP at any time in the event either the director's biennial report or the council recommends consideration of such a revision, pursuant to the Charter.

Sec. 24-5.11 Authority.

Nothing in this article should be construed as an abridgement or delegation of the responsibility of the director, or of the inherent legislative power of the council, to review or revise the Central Oahu SCP pursuant to the Charter and the above procedures.

Sec. 24-5.12 Severability.

If any provision of this article or the application thereof to any person or property or circumstances is held invalid, such invalidity does not affect the validity of the other provisions or applications of this article that can be given effect without the invalid provision or application, and to this end the provisions of this article are declared to be severable.

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Sec. 24-5.13 Conflicting provisions.

Any provision contained in this article as it pertains to land within the Central Oahu SCP area prevails should there be any conflict with the common provisions or any other provisions under Chapter 24."

SECTION 4. Effective Date of the Central Oahu SCP. The City Clerk is directed to date the Central Oahu SCP attached as Exhibit A to this ordinance with the effective date of this ordinance.

SECTION 5. In Section 3 of this ordinance, the Revisor of Ordinances shall, pursuant to the Revisor of Ordinances' authority under Section 1-16.3(b)(1), replace the phrase "effective date of this ordinance," with the actual effective date.

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SECTION 6. This ordinance takes effect upon its approval.

INTRODUCED BY:

Ron Menor

DATE OF INTRODUCTION:

July 9, 2019
Honolulu, Hawaii

Councilmembers

APPROVED AS TO FORM AND LEGALITY:

Deputy Corporation Counsel
JACOB L. GARNER
APPROVED this 30th day of March, 20 21.

RICK BLANGIARDI, Mayor
City and County of Honolulu

EXHIBIT A



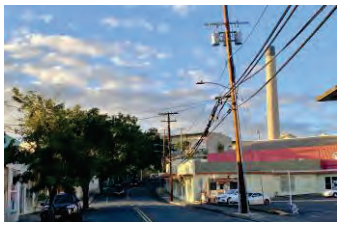
CENTRAL O‘AHU
SUSTAINABLE COMMUNITIES PLAN











City and County of Honolulu • Department of Planning and Permitting | February 2021

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PREFACE AND EXECUTIVE SUMMARY

PREFACE

The **Central O‘ahu Sustainable Communities Plan** has been prepared in accordance with the Charter-prescribed requirements for development plans and is to be accorded force and effect as such for all Charter-and ordinance-prescribed purposes.

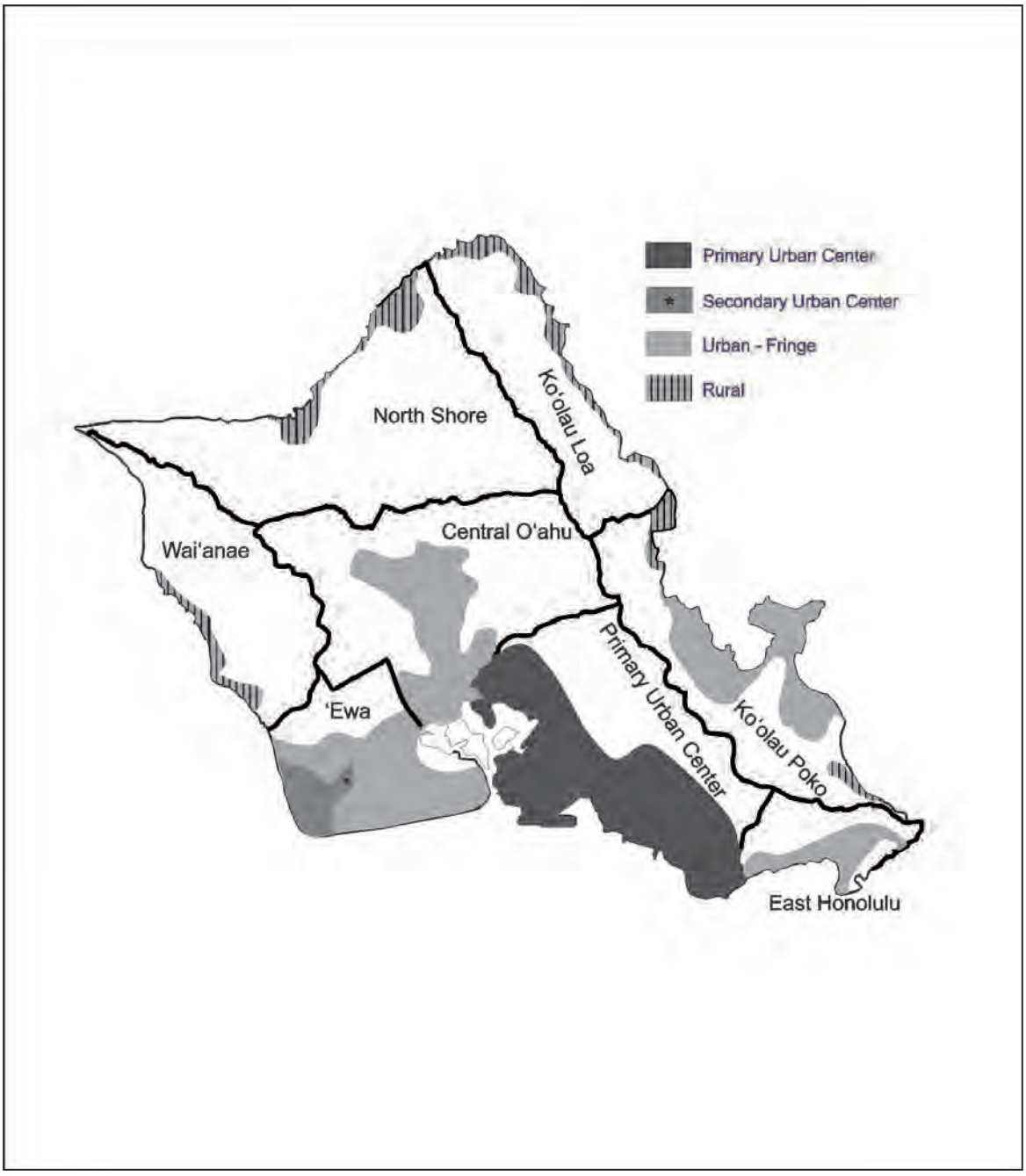
It is one of a set of eight community-oriented plans intended to help guide public policy, investment, and decision-making over the next 25 years. Each plan addresses one of eight planning regions of O‘ahu, responding to specific conditions and community values of each region. The map on the following page illustrates these planning regions.

Of the eight documents, the plans for ‘Ewa and the Primary Urban Center, to which growth and supporting facilities will be directed over the next 25 years, have been entitled “Development Plans”.

Plans for the remaining six areas, which are envisioned as relatively stable regions for which public actions will focus on supporting existing populations, have been entitled “Sustainable Communities Plans” in order to appropriately indicate their intent.

Central O‘ahu is one of the six Sustainable Communities Plan areas. The Plan's vision statement and policies sustain Central O‘ahu’s character, lifestyle, and economic opportunities by focusing future residential development on master planned suburban communities within a Community Growth Boundary and on redevelopment around two transit centers in Waipahū.

Exhibit ES-1
Development Plan and Sustainable Communities Plan Areas



The **General Plan** calls for development to be “encouraged” in Central O‘ahu and ‘Ewa urban-fringe (suburban residential) areas and in the Kapolei urban center in order to “relieve development pressures” on the East Honolulu, Windward, North Shore, and Wai‘anae areas and to “meet housing needs not readily provided in the primary urban center.”

THE SUSTAINABLE COMMUNITIES PLAN REVIEW PROCESS

This Plan is a revision of the **Central O‘ahu Sustainable Communities** Plan which was adopted by the City Council in 2002. The 2002 **Central O‘ahu Sustainable Communities Plan** was the seventh of the eight plans to be revised in response to a 1992 City Charter amendment which changed the nature of the eight regional plans from relatively detailed, parcel-specific plans to conceptual, visionary plans.

As required by the adopting ordinance, the Plan is to be reviewed five years after adoption to assess the appropriateness of the Plan's vision, policies, guidelines, and implementing actions as well as its consistency with the General Plan.

This document is the culmination of a community-based planning effort led by the Department of Planning and Permitting which involved public meetings and workshops, interviews, focus groups, and numerous meetings since 2007.

In its final form, the Plan incorporates and responds to comments received from public outreach to community leaders, business and labor representatives, landowners, developers, and public and private agency staff through a variety of formats since 2007.

The Central O‘ahu Sustainable Communities Plan Review Report provides documentation of the comments and suggestions received, and details the Department's assessments of what revisions or implementation improvements should be made as a result.

A SUSTAINABLE FUTURE FOR O‘AHU

There has been a recent surge in widespread community discussions, actions and laws adopted to address sustainability. In 2005, the Hawai‘i State Legislature convened a

statewide group to draft a **Hawai‘i 2050 Plan**, whose primary purpose is to provide policy recommendations for creating a sustainable Hawai‘i. In 2007, greenhouse gas emissions goals for 2020 were enacted. Public service announcements dealing with conserving water and electricity abound. The concept of buildings that are designed, built and occupied with environmental considerations at the forefront largely did not exist when the current Development Plans and Sustainable Communities Plans were adopted. This setting raises the question of the role of the Development Plans and Sustainable Communities Plans. Are they the City's version of a sustainability plan?

The answer is that they are the land development portion of a larger blueprint for sustainability. As discussed below, the **General Plan** sets long term goals for the City and County of Honolulu, across 11 major elements. Perhaps its most substantive chapter deals with population, and hence land development distribution. It sets the growth management strategy for O‘ahu. The Development Plans and Sustainable Communities Plans provide more detail on this land management strategy, assuring that how we use the land now, and in the future, will respond to the three major elements of a Sustainable Place: economic health, social equity, and environmental protection.

Since 1977, the City's policy, as adopted by the City Council in the O‘ahu **General Plan**, has been to "keep the Country country" by fully developing downtown Honolulu from Pearl City to Kāhala, by building O‘ahu's Second City in ‘Ewa, and by developing surrounding suburban "urban fringe" areas in ‘Ewa and Central O‘ahu. Millions of dollars of taxpayers' monies have been paid for roadways, schools, sewers, water systems, and other infrastructure to support this pattern of development.

Our most recent projections show that O‘ahu will need almost 79,500 new homes to meet expected population growth between 2010 and 2035. The **General Plan**, and the Development Plans, and Sustainable Communities Plans adopted by the City Council to implement the **General Plan**, provide capacity for most new homes to be built either in downtown Honolulu, ‘Ewa, or Central O‘ahu.

Inevitably, this requires that some prime agricultural land in Central O‘ahu inside the Community Growth Boundary be used to provide the required single and multi-family housing (even though the **Central O‘ahu Sustainable Communities Plan** does protect over 10,000 acres of high quality agricultural land outside the Community Growth Boundary). The loss of some prime agricultural land in Central O‘ahu and ‘Ewa is the

cost of insuring that the rural areas in Waiʻanae, North Shore, and the Windward side and along Kunia Road in Central Oʻahu are protected against development.

The issues addressed either directly or indirectly by these regional plans certainly overlap with other planning responsibilities of other City departments, such as water delivery and consumption, crime reduction, increasing public health, and developing responsive transportation systems. Collectively, these efforts comprise the strategy of developing a Sustainable Future for Oʻahu.

INTEGRATING PRINCIPLES OF SUSTAINABILITY INTO DECISION-MAKING PROCESSES

A community that can successfully manage change will flourish and prosper in the future. For this plan, this means ensuring that planned growth and development respects and adheres to the principles of sustainability.

These principles of sustainability are intended to promote the long-term health of the land and its people, and its community resources for current and future generations.

- Protect lands designated for agriculture, physical and biological resources, and where appropriate, open spaces and view planes.
- Use resources so they are not depleted, permanently damaged, or destroyed.
- Encourage planning, development, and construction technologies that minimize negative environmental impacts.
- Respect the cultural, social, and physical resources that shape and reinforce residents' sense of community and quality of life.
- Guide the process of change. Strive to make decisions based on an understanding of the effects such decisions will have on the land and community resources.
- Strive for balance between economic prosperity, social and community well-being, and environmental stewardship.
- As an integral part of the planning process, consider the long-term impact of proposed actions and prepare plans that can accommodate the needs of future generations accordingly.

THE HONOLULU LAND USE PLANNING AND MANAGEMENT SYSTEM

The City and County of Honolulu guides and directs land use and growth through a three-tier system of objectives, policies and guidelines, and regulations.

- The **General Plan** forms the first tier of this system. First adopted by resolution in 1977, the General Plan is a relatively brief document, consisting primarily of one-sentence statements of objectives and policies. It has been amended several times, but the basic objectives and policies set forth in the 1977 plan remain intact.
- The second tier of the system is formed by the Development Plans, and Sustainable Communities Plans, which are adopted and revised by ordinance. These plans address eight geographic regions of the island, including the Primary Urban Center, East Honolulu, Central O‘ahu, ‘Ewa, Wai‘anae, North Shore, Ko‘olau Loa and Ko‘olau Poko.
- The third tier of the system is composed of the **implementing ordinances and regulations**, including the **Land Use Ordinance** (Honolulu’s zoning code), the **Subdivision Rules and Regulations**, and the City’s **Capital Improvement Program**. Mandated by the **City Charter**, these ordinances constitute the principal means for implementing the City’s plans. These ordinances and regulations are required to be consistent with the **General Plan**, the Development Plans, and each other.

In addition to these three Charter-mandated tiers, the Development Plans are supplemented by two planning mechanisms that are not mentioned in the **Charter**:

- **Functional plans** (such as the **O‘ahu Regional Transportation Plan** or the **O‘ahu Water Management Plan**), some of which are mandated by state or federal regulations, provide long-range guidance for the development of public facilities and infrastructure; and
- **Special Area Plans** (such as the **Waipahu Town Plan** or the **Wahiawa Urban Design Plan**) give specific guidance for neighborhoods, communities or specialized resource areas.

AUTHORITY OF THE DEVELOPMENT AND SUSTAINABLE COMMUNITIES PLANS

The authority for the Development and Sustainable Communities Plans (hereinafter referred to as "Development Plans" for simplicity) is derived from the **City Charter**, which mandates preparation of a **General Plan** and Development Plans to guide "the development and improvement of the city."

Together with the **General Plan**, the Development Plans provide a policy context for the land use and budgetary actions of the City.

The **Charter** provides that "public improvement projects and subdivision and zoning ordinances shall be consistent with the development plan for that area." Although the Development Plans are not themselves regulatory and require implementing ordinances (the "third tier" discussed in the preceding section), they provide guidance that decision makers and administrators should follow to the extent it is sensible, in approving project development and in revising rules and regulations and standard policies. They are policy tools and are to be used, in conjunction with the programs and budgets of the City, to accomplish the objectives of the City and as guides for the decisions made in the private sector. Consistent with the Charter's description of the Development Plans as "conceptual schemes" and "a policy guide," the language, maps and illustrations of the Development Plans should not be deemed to be regulatory.

The plans are also intended to aid decisions made in the private sector by clearly indicating what the City's development priorities are, where development is appropriate, and what kinds of development are appropriate in each location.

The 1992 Charter amendments established that the Development Plans are to be conceptual plans whose purpose is to provide:

- "priorities . . . (for the) coordination of major development activities;" and
- sufficient description of the "desired urban character and the significant natural, scenic and cultural resources . . . to serve as a policy guide for more detailed zoning maps and regulations and public and private sector investment decisions."

The revised plan presented in this document conforms to that mandate.

EXECUTIVE SUMMARY

This plan is organized in five chapters and an appendix, as follows:

- Chapter 1: Central O‘ahu’s Role in O‘ahu’s Growth defines Central O‘ahu’s role and identity within the overall framework of island-wide planning and land management.
- Chapter 2: The Vision for Central O‘ahu's Future summarizes the community’s vision for the future of the region, and lists important elements of that vision.
- Chapter 3: Land Use Policies and Guidelines is the plan’s policy core, and provides the land use policies needed to implement the vision for Central O‘ahu described in Chapter 2.
- Chapter 4: Public Facilities and Infrastructure Policies provides the infrastructure policies needed to implement the vision for Central O‘ahu described in Chapter 2.
- Chapter 5: Implementation identifies the means through which the policies will be applied, including zone changes and infrastructure budgeting and development.
- **Appendix A** includes:
- Four conceptual maps (Open Space, Urban Land Use, Public Facilities, and Development Capacity) which illustrate the vision and policies of the Plan; and
- A glossary of terms used in the Plan and on those maps.

The following summary provides an overview to the vision and policies of the Plan.

CENTRAL O‘AHU’S ROLE IN O‘AHU’S DEVELOPMENT PATTERN

- Promotes and protects diversified agriculture on 10,350 acres of high-quality agricultural lands;
- Provides a variety of housing types in master planned suburban residential communities and mixed-use medium density centers in Waipahū;

- Promotes new employment in existing commercial and industrial areas, and in new commercial areas designed to support their surrounding residential communities;

THE VISION TO 2035

- Population growth from 168,600 in 2010 to 181,400 in 2035;
- Addition of almost 12,800 new housing units to the existing 51,000 homes in Central O‘ahu in 2010;
- Increase of jobs from 62,600 jobs in 2010 to 83,600 in 2035 (with nearly all the increase consisting of civilian jobs);
- New master planned residential developments at Royal Kunia, Koa Ridge Makai, and Waiawa; and
- Long-term protection for agricultural and preservation lands from urban encroachment.

ELEMENTS OF THE VISION

- **Protect Agricultural Lands and Open Space** by containing urban development for the foreseeable future within the existing Community Growth Boundary, and creating an Open Space Network within the Boundary which includes parks, golf courses, agricultural areas, deep ravines, natural habitat areas and greenways along major roads (See Open Space Map in Appendix A);
- **Revitalize Waipahū and Wahiawā** based on Special Area Plans and Community Vision Statements for each town prepared in partnership with their communities;
- **Build Master Planned Residential Communities** with identifiable town centers and homes that meet the needs of a wide range of families and age groups;
- **Design Communities to Reduce Automobile Usage** by providing easy access to transit, supporting moderate density housing and commercial development along the Waipahū rail transit corridor, implementing traffic calming design, and guiding development to encourage people to walk and bike.
- **Protect Natural, Historic, and Cultural Resources**; and

- **Provide Adequate Infrastructure** to address current deficiencies, and assure availability of key infrastructure prior to approval of new development.

IMPLEMENTING POLICIES AND GUIDELINES

Chapter Three provides **land use development policies and implementing guidelines** for:

- Open Space Preservation and Development;
- Regional Parks and Recreation Complexes;
- Community-Based Parks;
- Historic and Cultural Resources;
- Natural Resources;
- Waipahū Town;
- Wahiawā Town;
- Central O‘ahu Plantation Villages;
- Existing and Planned Residential Communities;
- Planned Commercial Retail Centers;
- Industrial Centers;
- Mililani Technology Park;
- Military Areas.

Chapter Four contains **infrastructure policies and implementing guidelines** for:

- Transportation;
- Water Allocation and System Development;
- Wastewater Treatment;
- Electrical Power Development;
- Solid Waste Handling and Disposal;
- Drainage Systems;
- School Facilities;
- Public Safety Facilities;
- Other Community Facilities.

Chapter Five describes **the means for implementing the Central O‘ahu Sustainable Communities Plan** through:

- Development Priorities;
- Special Area Plans;
- Functional Plans;
- Review of Zone Change Applications and Other Development Applications; and
- Review and Revision of Development Codes.

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1. CENTRAL O‘AHU’S ROLE IN O‘AHU’S DEVELOPMENT PATTERN

Central O‘ahu plays a key role in implementing the directed growth policies of the **General Plan of the City and County of Honolulu**.

The towns of Waipahū and Wahiawā serve as gateways to ‘Ewa and the North Shore. Historically, they have been headquarters for the sugar and pineapple plantations, and Wahiawā has served as a support center for the military.

Beginning in 1968, Central O‘ahu also began to play a role as a major area for housing development. At that time, Castle & Cooke began development of Mililani Town, a 3,500 acre planned low-density suburban community which offered affordable single family housing to first time buyers.

Subsequently, additional housing has been developed above Waipahū and the H-1 Freeway in Village Park, Gentry Waipi‘o, Waikele, Royal Kunia, and other development projects.

This residential development has been supported by State and City policy, land use approvals, and provision of key infrastructure like the H-2 Freeway.

In 1989, the Honolulu City Council approved changes to the **General Plan** which designated the urban fringe areas in Central O‘ahu as one of O‘ahu's principal residential development areas. Since then, Central O‘ahu, along with the Primary Urban Center (PUC) and the Secondary Urban Center and urban fringe areas in ‘Ewa, has provided the bulk of the new housing developed on the island.

The **General Plan** also calls for maintaining the viability of agriculture on O‘ahu, supports agricultural diversification in all agricultural areas on O‘ahu, and encourages

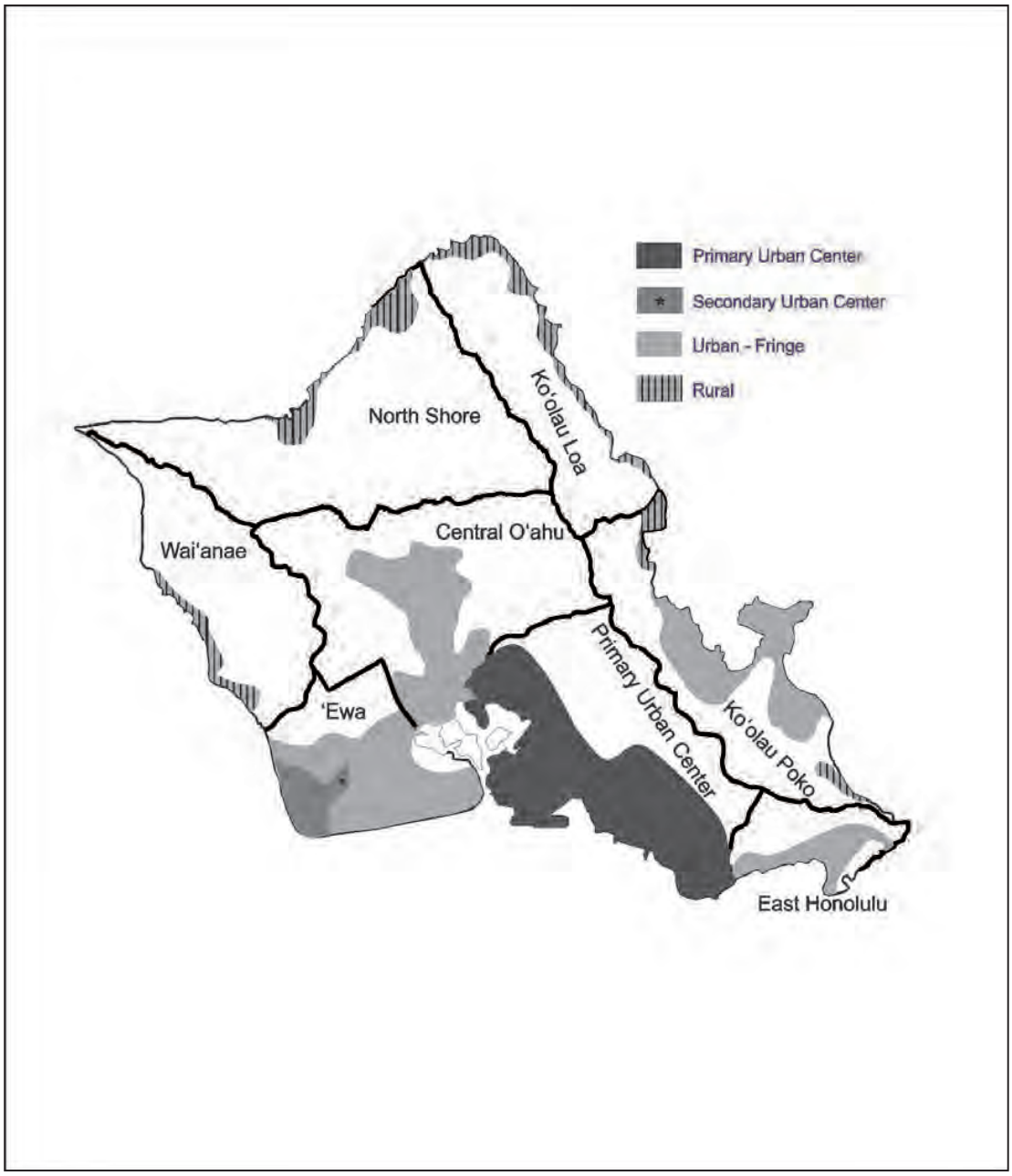
the continuation of a high level of military-related employment in the Hickam-Pearl Harbor, and Wahiawā areas.

It also calls for establishment of a green belt in Central O‘ahu and protection of the natural environment from incompatible development and from pollution.

This update of the **Central O‘ahu Sustainable Communities Plan** reaffirms those roles, and amplifies how they can be accomplished. In support of the **General Plan** policies, the **Central O‘ahu Sustainable Communities Plan**:

- Promotes diversified agriculture on approximately 10,350 acres of prime and unique agricultural lands along Kunia Road, north of Wahiawā, surrounding Mililani, and on the Waipi‘o Peninsula in accordance with the **General Plan** policies to support agricultural diversification in all agricultural areas;
- Provides for the eventual development of over 24,000 new homes in master planned residential developments at Koa Ridge Makai, Waiawa, and Royal Kunia, and in transit-oriented development around rail stations in Waipahū and at Leeward Community College;
- Provides for a variety of housing types from affordable units and starter homes to mid-size multi-family and single family units;
- Provides new employment in existing commercial and industrial areas (including Mililani Technology Park), and in new commercial areas designed to serve their surrounding residential communities;
- Identifies the infrastructure needed to meet the likely residential, commercial, and industrial development through 2035; and
- Helps relieve urban development pressures on rural and urban fringe Sustainable Communities Plan Areas (Wai‘anae, North Shore, Ko‘olau Loa, Ko‘olau Poko, and East Honolulu) so as to preserve the “country” lifestyle of the rural areas and sustain the stable, low density residential character of the urban fringe areas.

Exhibit 1.1
Development Plan and Sustainable Communities Plan Areas for O‘ahu



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2. THE VISION FOR CENTRAL O‘AHU’S FUTURE

This chapter presents a statement of the vision for Central O‘ahu’s future, discusses key elements of the vision, and presents illustrative maps and tables.

2.1 VISION STATEMENT

The vision for Central O‘ahu has two horizons. The first horizon extends from the present to the year 2035. This is the horizon that was used to project likely socio-economic change in Central O‘ahu, and to assess the infrastructure and public facility needs that will have to be met over that period.

The vision for Central O‘ahu reflects a nurturing of natural, agricultural and urban resources important to the well-being of the entire island. Its historic communities will be revitalized and the development of its urban areas will encourage vibrant community life and reduce dependence on automobile travel.

The Vision to 2035 - By 2035, the **Central O‘ahu Sustainable Communities Plan** Area shown in Exhibit 1.1 is expected to experience moderate growth as existing areas zoned for residential development and served by infrastructure are built out, and development begins on the remaining master planned areas within the Community Growth Boundary. Population will have grown from 168,600 people in 2010 to 181,400 in 2035. Almost 12,300 new housing units will have been built since 2010 in master-planned communities.

Significant job growth is also expected, rising from over 58,900 non-construction jobs in 2005 to almost 77,400 in 2035 (12% of O‘ahu total projected). The bulk of the private non-construction job growth is projected to be in services, retail, or transportation/ communication/utilities (91%) with another 6% in industrial occupations.

The Second Horizon: Beyond 2035 - In the course of the Sustainable Communities Plan revision in 2000, it became clear that there was value in looking beyond the planning horizon to identify what Central O‘ahu should look like when “fully” developed.

Such a perspective helped identify where open space should be preserved within the urbanized area, and where to set the limits to development in Central O‘ahu. As such, this second horizon might be called the “built-out” horizon and is probably 30 or 40 years in the future.

Protect Agricultural Lands and Open Space

Urban growth will be contained within a boundary which protects **prime agricultural lands** along Kunia Road, north of Wahiawā, surrounding Mililani, and on the Waipi‘o Peninsula for diversified agriculture. Preservation of these prime and unique agricultural lands for use in diversified agriculture will help to retain open space and views, in addition to supporting economic diversification and sustainability.

Within the Community Growth Boundary, a regional system of **open space and greenways** will give Central O‘ahu the feel of a network of communities “within a garden,” as opposed to an unbroken suburban sprawl from Wahiawā to Waipahū. Open space will be preserved in parks, golf courses, agricultural areas, deep ravines, and wildlife habitats which will also help to protect significant views.

The Patsy T. Mink Central O‘ahu Regional Park will provide significant active and passive recreation facilities and access to the Kīpapa and Waikele ravines which could help form part of a Central O‘ahu ravine recreational network. (See discussion of the ravines in Sec. 2.2.3.)

A Shoreline Parks and Preservation Area developed along the entire shoreline in Pearl Harbor's West Loch and Middle Loch will restore the shoreline in Waipahū to public use, provide active and passive recreation facilities, and help create the Pearl Harbor Historic Trail, a pedestrian path and bikeway running from Rainbow Marina near Aloha Stadium to the Wai‘anae Coast.

Prime agricultural land loss - Creation of master planned residential communities in the Central O‘ahu fringe areas has been a key element in the City’s growth management strategy adopted as part of the 1977 **General Plan** and reinforced by subsequent City actions approving land use plans and infrastructure investments since 1977. It is true that development of Central O‘ahu agricultural lands within the Community Growth Boundary has resulted in the conversion of hundreds of acres of highly productive agricultural land, formerly used for sugar and pineapple plantations, as new homes and job centers were developed.

However, this is the cost of protecting agricultural lands and open space in the rural areas of O‘ahu. By focusing new job growth and residential development in ‘Ewa, Central O‘ahu, and central Honolulu from Pearl City to Kāhala, the vision of “Keeping the Country country” can be achieved.

Thousands of acres of agricultural lands in the Sustainable Communities Plans (SCP) areas are protected by the Community Growth Boundaries in those plans, including 50,000 acres in the Central O‘ahu and North Shore Sustainable Communities Plan areas and hundreds of acres in other SCP areas, including Wai‘anae, near Kahuku, in Waiāhole/Waikāne, and in Waimānalo.

State purchase of good agricultural lands in Central O‘ahu has ensured the preservation of those lands for agricultural uses in perpetuity. In addition, the State and the City are both focusing on what can be done to nurture and strengthen the community of farmers conducting agricultural and related activities on that land. The objective of saving the agricultural lands is not for them to lie fallow and go wild, but to foster agricultural communities and viable agricultural and related activities on those lands.

Revitalize Waipahū and Wahiawā

Special Area Plans and the **Waipahū Neighborhood Transit-Oriented Development Plan** prepared in partnership with the Waipahū and Wahiawā communities will guide redevelopment of these important gateway towns. To support the revitalization of these towns, commercial and industrial development outside of Waipahū and Wahiawā will be limited to completion of the Mililani Technology Park development and building of new

commercial centers designed to meet the demand from their surrounding residential communities rather than a regional or island-wide market.

Development within Waipahū and Wahiawā is supported by two **Enterprise Zones** that provide State and County tax incentives to businesses which create new jobs within the zones.

Build Master-Planned Residential Communities That Support Walking, Biking and Transit Use

Growth in Central O‘ahu will mean **community building**, not just project development. Residential growth will occur primarily in master-planned communities (Royal Kunia, Koa Ridge and Waiawa). Almost 12,800 units will have been added by 2035 to the 2010 total of almost 51,000 homes.

The master plans and design of new developments must demonstrate how they would create **communities that interact with each other and support the vision** for development of the entire Central O‘ahu region. Such communities should be designed with identifiable and easily accessible town and village centers or “main street areas” and incorporate a mixture of residential and commercial/job center development. While not every community will have a “main street”, all should have a “gathering place.”

These communities are designed to meet the needs of a wide range of families and age groups. **Ample housing** should be provided for families needing affordable units and starter homes as well as for those seeking large multi-family and single-family units. **Housing for persons of all ages** will be needed, including young adults just moving out on their own, families seeking to buy their first home, and senior citizens wanting a retirement home close to their children and grandchildren. Such a desirable variety in housing types can be partially achieved through the inclusion of “granny flats” (small accessory dwelling units) and/or “ohana” units where infrastructure will support these additions, as permitted by Ordinance 15-41.

Separate identities should be created for existing and planned communities by using open space, architectural design, streetscape treatments, and landscaping which links to the regional open space and greenway network.

Design Communities to Reduce Automobile Usage

Central O‘ahu will be developed with a transportation system which:

- Reduces congestion by providing connectivity, both within and between subdivisions;
- Provides easy access to transit;
- Uses traffic calming design; and
- Encourages people to walk and bike, reducing the need for use of the automobile.

Where allowed by terrain, communities will be designed with multiple street/walkway connections to adjacent communities and collector roads at approximate 1/4 mile intervals, thereby facilitating and encouraging convenient auto, pedestrian and bikeway access to parks, schools, neighborhood shopping, and transit corridors. These connections will also reduce congestion on major regional roads by offering multiple alternative routes and facilitate improved neighborhood access for emergency and utility vehicles.

Moderate density housing and commercial development will be built along the portion of the Honolulu Rail Transit line from Kunia Road through Waipahū to Pearl Highlands in the Primary Urban Center. The moderate density residential and commercial uses centered around Honolulu Rail Transit stations in Waipahū and at Leeward Community College will support efficient use of bicycles, buses and rail transit, allowing residents and commuting workers to minimize automobile use.

The elevated Honolulu Rail Transit system will run on the median of Farrington Highway through Waipahū and will have two Waipahū stations (West Loch and Waipahū Transit Center) and a station at Leeward Community College.

Express buses will also run along the H-2 Freeway, from Waipahū to Wahiawā, connecting to the Honolulu Rail Transit Pearl Highlands Station by a flyover ramp from the H-2 Freeway.

Automobile usage will be reduced by seamlessly integrating bus service with rail service using local shuttles and Bus Rapid Transit to connect Central O‘ahu communities to rail stations.

Protect Natural, Historic and Cultural Resources

The **Central O‘ahu Sustainable Communities Plan** provides a vision for preservation, conservation, and enhancement of community resources.

Natural resources will be conserved through:

- Retaining natural drainageways;
- Protecting valuable plant and wildlife habitats;
- Cleaning up contaminated areas;
- Efficiently using all water supplies through conservation measures and distribution system leak repair;
- Developing a dual water distribution system with potable water for drinking and other clean water uses and non-potable water for irrigation and industrial uses;
- Reclaiming non-potable water from wastewater where feasible; and
- Supporting efforts to minimize degradation of protection provided to the environment by the Conservation District.

Cultural and Historic Resources will be preserved and enhanced by:

- Protecting panoramic views;
- Retaining visual landmarks and significant vistas;
- Preserving significant historic and pre-historic features from Central O‘ahu’s past; and
- As required by State law, conducting surveys to thoroughly assess the historical significance of sites and structures affected by development projects and to identify the appropriate measures to preserve the historic and cultural values of the resources.

Provide Adequate Infrastructure to Meet the Needs of New and Existing Development

Public agencies will work with the community (residents, businesses, developers, and landowners) to address current deficiencies in roads, schools, and parks and to create adequate infrastructure to meet the needs of the residential and working population of the area. Especially for public schools, emergency medical services, and peak hour roadway capacity, the construction schedule of new development that generates

increased service demands will be coordinated with the timing for the development of needed infrastructure capacity.

Completion of the first increment of the elevated Honolulu Rail Transit system (from East Kapolei to Ala Moana Shopping Center) is critical to the **O‘ahu General Plan** policy of relieving development pressure elsewhere on O‘ahu by developing the Second City in ‘Ewa and the Urban Fringe in ‘Ewa and Central O‘ahu. It is needed to provide an effective and reliable alternative to commuting by auto for a significant number of commuters. Without the project, traffic delays for Leeward O‘ahu commuters would increase by 46 percent compared to today, according to the 2010 **Honolulu High-Capacity Transit Corridor Project Environmental Impact Statement** (p. 3-28).

When applications for new projects are reviewed and approved, conditions will be included as a part of the land use approval, requiring that, before building permits are issued, a determination be made by the Department of Planning and Permitting that key infrastructure is developed in a timely manner to meet the needs resulting from the new projects.

Public-private mechanisms for financing infrastructure such as Tax Increment Financing (TIF) and Community Facilities Districts (CFD) will be developed to support timely development of infrastructure, in accordance with approved private project master plans and public agency functional plans and infrastructure facility development plans.

Public agencies’ planning for infrastructure needs will be guided by where the Sustainable Communities Plan indicates residential and commercial development should occur. See the discussion of development priorities in Section 2.2.10.

2.2 KEY ELEMENTS OF THE VISION

The vision for Central O‘ahu’s future will be implemented through the following key plan elements:

- 2.2.1 Community Growth Boundary
- 2.2.2 Retention of Agricultural Lands and Enhancement of Agricultural Productivity
- 2.2.3 Open Space and Greenways

2.2.4 Revitalization of the Waipahū and Wahiawā Town Centers
2.2.5 Economic Development and Enterprise Zones
2.2.6 Master-planned Residential Communities and Vital Rural Villages
2.2.7 Communities Designed to Support Non-Automotive Travel
2.2.8 Conservation of Natural Resources
2.2.9 Preservation and Enhancement of Historic and Cultural Resources
2.2.10 Adequate Infrastructure

Each of these elements is discussed in the following sections.

2.2.1 COMMUNITY GROWTH BOUNDARY

The Community Growth Boundary for Central Oʻahu gives long-range protection from urbanization for 10,350 acres of prime and unique agricultural lands and for preservation of open space, while providing adequate land for residential, commercial, and industrial uses needed in Central Oʻahu for the foreseeable future. It is the intent that urban zoning not be approved beyond this Boundary.

The Community Growth Boundary for Central Oʻahu is illustrated in Exhibit 2.1, shown in greater detail on the four conceptual maps in Appendix A, and described conceptually in the Appendix A Glossary.

Criteria – Criteria for establishing whether an area should be considered inside or outside the boundary are given below:

The boundary generally circumscribes the existing communities and the planned developments of Royal Kunia, Wahiawā, Mililani, Mililani Mauka, Koa Ridge Makai, Waiawa, Waipiʻo, Waikele and Mililani Technology Park.

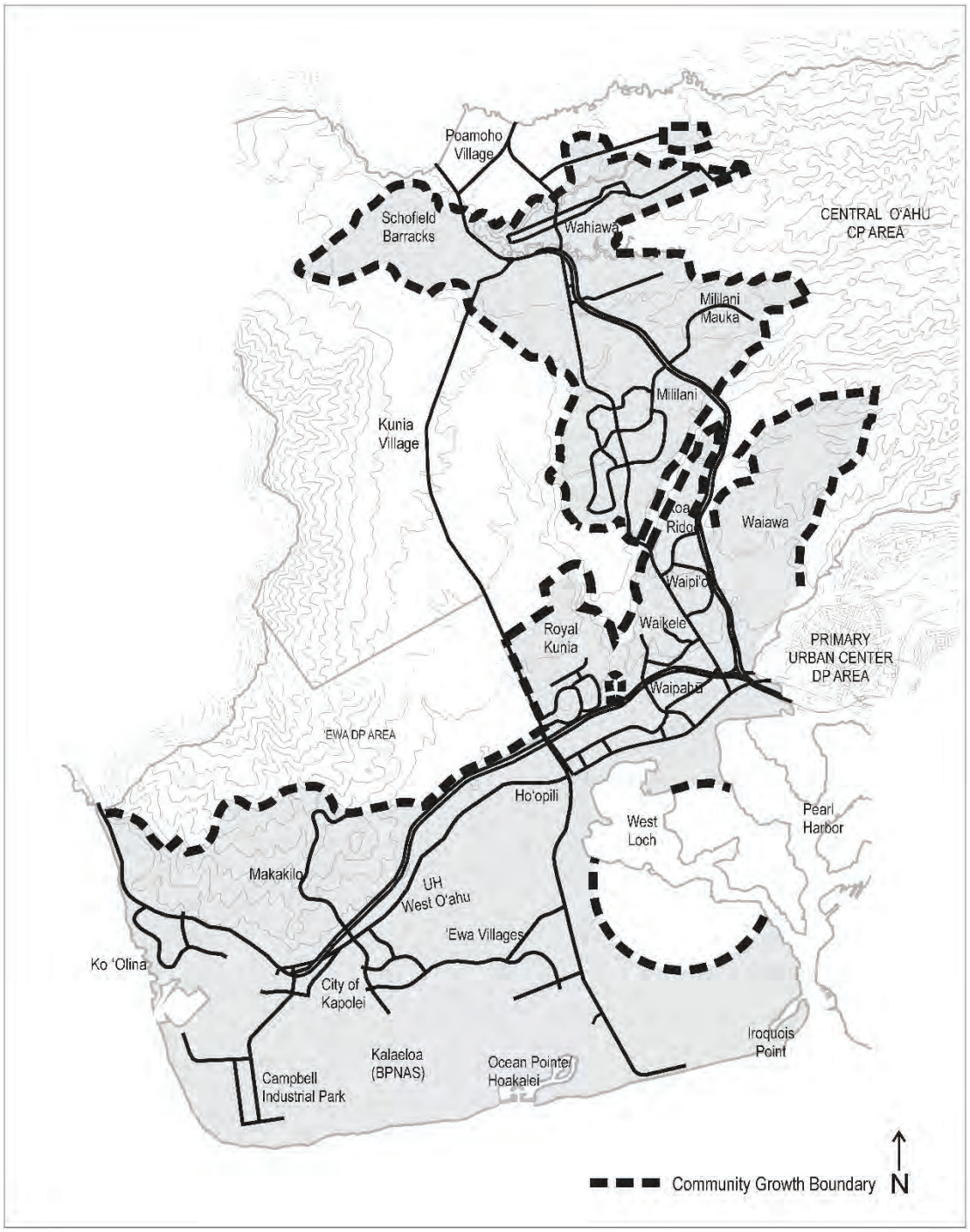
The boundary excludes:

- Areas outside of the State Urban District, with the exception of portions of Waiawa, and approximately 32 acres of Waikele Gulch formerly used for military operations that are currently approved for nonconforming industrial uses; and

- Areas inside the State Urban District which are in either the Preservation or Agriculture Zoning Districts, with the exception of Phase II of the Mililani Technology Park (which has Development Plan approval for urban use, but still has Ag-1 zoning), Waiawa Castle & Cooke, and portions of Waiawa that are planned for development but have not been rezoned.

Exhibit 2.1

COMMUNITY GROWTH BOUNDARY FOR ‘EWA AND CENTRAL O‘AHU



Objectives - The main objectives of the Central O‘ahu Community Growth Boundary are to:

- Support **General Plan** policy;
- Support diversification of agriculture in Central O‘ahu;
- Allow residential development in specified master-planned communities;
- Promote an efficient pattern of urban development and support the full development of the Primary Urban Center and the Secondary Urban Center;
- Avoid development of hazardous areas; and
- Protect natural and scenic resources.

Protection for Prime Agricultural Land - The Community Growth Boundary protects prime agricultural lands along Kunia Road, north of Wahiawā, surrounding Mililani, and on the Waipi‘o Peninsula from urban development for the foreseeable future, providing an incentive for landowners to give long term leases to farmers. No proposals for urban uses will be considered for these areas.

Open Space Network - Within the Urban Community Boundary, significant acreage will be retained in open space in parks, wildlife habitats, golf courses, agricultural lands, and natural and grass-lined drainageways. (Of the estimated 21,500 acres within the Urban Community Boundary, almost 5,250 acres or 24 percent of the acreage will be in open space.) Two agricultural areas within the Boundary, Pine Spur and Honbushin, which provide a green space break between Mililani and the Schofield Barracks/Wheeler Army Air Field/Wahiawā area will be retained in the Agricultural Zoning District, and no proposals for urban uses for these areas will be considered.

Capacity for Growth - Even with the amount of land reserved for agriculture, parks, and open space, there is ample capacity within the Urban Community Boundary for residential, commercial, and industrial development extending beyond the 20-year horizon (2035).

As shown in Table 2.1, almost 1,700 acres are available for residential development, 280 acres for retail and office development, 100 acres for industrial development, and almost 70 acres for high-technology and medical park development. Development will be approved in phases to match the provision of infrastructure.

2.2.2 RETENTION OF AGRICULTURAL LANDS AND ENHANCEMENT OF AGRICULTURAL PRODUCTIVITY

The closure of the O‘ahu Sugar Company in 1995 raised serious questions about how thousands of acres of former sugar lands in Central O‘ahu should be used in the future.

The withdrawal of Del Monte Corporation from pineapple cultivation on O‘ahu in 2006 added to the urgency of supporting viable agricultural uses.

The **Central O‘ahu Sustainable Communities Plan** protects the highest value prime and unique agricultural lands in Central O‘ahu from urban development.

These high value lands are located in four areas:

- Lands along both sides of Kunia Road,
- Lands north of Wahiawā,
- Lands surrounding Mililani, and
- Lands on the Waipi‘o Peninsula which are inside the Navy restricted area arc around the Joint Base Pearl Harbor-Hickam West Loch Annex.

State agencies indicated that these prime and unique agricultural lands in Central O‘ahu should be retained in agriculture because they are among the best in the State, are supported by an extensive, well-developed agricultural infrastructure, and are near the major transportation hub for export markets.

TABLE 2.1 CENTRAL O‘AHU DEVELOPMENT CAPACITY AND ENTITLEMENT STATUS

Projects [1]	Potential Housing Units	Number of Units Which		Developable Land Area (Gross Acres)				Total
		Need LUC	Need Zoning	Housing	Comm.	Ind.	Tech./ Med. Park	
Mililani Technology Park [2]							16	16
Royal Kunia Phase II	2,000			206	20	103		329
Royal Kunia Phase II expansion [3] [4]	1,600	1,600	1,600	161				161
Waiawa Phase I & II [3] [5]	5,900			546	119			665
Waiawa Phase III	6,500	6,500	6,500	600	10			610
Waiawa Castle & Cooke [6]	1,500	1,500	1,500	114				114
Koa Ridge Makai [7]	3,500			365	60	10		425
Koa Ridge Medical Park [7]							28	28
Waipahū TOD [8]	4,500							
Leeward Community College TOD [9]	820		820					
Waikele Storage Park[10]						32		32
Totals	**26,320**	**9,600**	**10,420**	**1,992**	**209**	**145**	**59**	**2,405**
Total Zoned	15,900			1,117	199	113	59	1,488

NOTES:

See Exhibit 2.3 for location of projects. Acreages and housing unit capacity estimates as of December 2017. Construction timing will depend on market conditions, approvals and permits.

(1) Projects on lands located inside the Community Growth Boundary which are eligible for processing zone change and other development applications and permits.

(2) 150 acres in Phase II of Mililani Technology Park were purchased by the State for a First Responder Technology Campus and Cybersecurity Data Center, and are no longer available.

(3) Development may be delayed due to long term leases for photovoltaic projects.

(4) When the application to place Royal Kunia Phase II in the State Urban District was before the State Land Use Commission (LUC), the applicant stated that this 161 acre area would be developed as a golf course. Now the developer proposes residential development instead. Because one condition of the LUC approval is to develop in "substantial compliance with representations" made to the LUC, LUC approval to develop for residential use instead of golf course development will be required.

(5) Commercial acreage includes 68 acres in Commercial/Industrial Mixed Use.

(6) The State LUC identified Waiawa Castle & Cooke as eligible for "incremental" reclassification to the State Urban District when and if further conditions are met. Community areas in Waiawa Castle & Cooke can contain small commercial centers.

(7) The LUC granted reclassification to the Urban District for Koa Ridge Makai in June 2012. Developable area estimates for Koa Ridge are based on zoning and recent Urban Design Plan submittals.

(8) The units estimate shown is the potential increase in development capacity based on the TOD overlay zoning regulations adopted for Waipahū by Ordinance 17-56 (October 26, 2017).

(9) The units estimate shown is the potential increase in development capacity if TOD overlay zoning regulations are adopted based on the **Aiea-Pearl City Neighborhood TOD Plan** (September 2014).

(10) Twelve condominium property regime parcels (32 acres) located in Waikele Gulch (former military installation) are currently being used as self-storage facilities, which the City approved as a non-conforming use when the federal government transferred ownership of the properties to a private entity. Future land use designation changes are anticipated to be sought for these 32 acres to allow industrial use of the properties (including for storage and accessory office use) without nonconforming status.

Source: Department of Planning and Permitting records and annual survey results.

These 10,350 acres of agricultural land protected by the Community Growth Boundary have been rated, in the most authoritative studies, as potentially among the most productive lands in the State for diversified agriculture, and as lands uniquely suited for pineapple production.

The State Department of Agriculture's November 1977 study, **Agricultural Lands of Importance to the State of Hawai‘i (Revised)** (ALISH), indicates that the lands along Kunia Road, north of Wahiawā, and surrounding Mililani are uniquely suited for agriculture. The ALISH study also identifies the former sugar lands along Kunia Road and a portion of the lands on the Waipi‘o Peninsula as “prime” agricultural lands which generally produce the largest yields and the best quality crops for the least expenditure of energy.

The University of Hawai‘i Land Study Bureau's December 1972 bulletin, **Detailed Land Classification - Island of O‘ahu**, rated productive capacity of the former sugar fields in Kunia as A and B and the Waipi‘o Peninsula lands as B and C. Former pineapple lands along Kunia Road, north of Wahiawā, and surrounding Mililani were predominately rated as B. (An A rating was given to the highest productivity lands and E was given to the lowest).

One reason for the high ratings for the Kunia lands is that they have unique advantages in infrastructure, water availability from the Waiāhole Ditch, and access to the local markets of Honolulu and to the export markets through Honolulu International Airport.

Successful agricultural operations are currently being pursued on the Kunia, Wahiawā, and Mililani lands. Seed crops, potatoes, melons, and other crops are being grown on the Kunia lands.

Agricultural activities on Navy lands on the Waipi‘o Peninsula ended with the shut down of the sugar plantations in ‘Ewa and Central O‘ahu. In the early 2000's, the Navy did request proposals for agricultural activities on its Waipi‘o Peninsula and ‘Ewa Plains lands around the Joint Base Pearl Harbor West Loch Annex. Leases have been let for farming of the ‘Ewa Plains lands within the Navy restricted area around the West Loch Annex, but not for the Waipi‘o Peninsula lands.

The Navy has recently approved a 30 year lease for a 42 acre site at the Waipi‘o Peninsula which will be developed as a solar farm. Details of the 2013 Final

Environmental Assessment for the project indicate the Navy is unlikely to seek to lease lands on the Peninsula for agricultural purposes due to various operational restrictions.

Additional protection for Central O‘ahu agricultural lands is provided by the State Important Agricultural Lands (IAL) program. Once identified as IAL, such lands cannot be rezoned without a “super majority” vote, and are eligible for incentives which encourage their retention in agricultural use.

State law also permits owners to submit a petition to the Land Use Commission (LUC) to reclassify up to 15 percent of the IAL area into a State Rural, Urban, or Conservation Land Use District. How this 15 percent of the IAL land is to be developed under City plans and zoning still needs to be determined by the City as part of the approval of the incentives for IAL.

In 2013, the State Land Use Commission, in response to an application from the landowner, approved Important Agricultural Land designation for over 400 acres of Castle & Cooke lands in Central O‘ahu.

The City is in the middle of the process of identifying additional IAL for O‘ahu, having identified the criteria and standards to be used in selecting the IAL. In the next phase of the process, specific IAL will be approved by the City Council and then submitted to the Land Use Commission for final approval. (See Exhibit 3.1 for a map of lands eligible for consideration as IAL under eight statutory criteria and one technical criterion.)

By protecting agricultural lands from urban development, an opportunity has been created for long-term retention and development of diversified agriculture on small farms, corporate lands, and agricultural parks. However, protection through land use plans and regulations, while necessary, is not sufficient to create a strong diversified agricultural sector in Central O‘ahu. Public-private partnerships are needed to solve problems of lease terms and tenure, access to capital, research, and marketing if this vision is to be realized.

State and City support for diversified agriculture activities is needed, and should include water system improvements, and economic infrastructure like grower cooperatives, storage and distribution systems, and an expanded network of farmers’ markets.

2.2.3 OPEN SPACE AND GREENWAYS

Large agricultural areas, parks, golf courses, and other open space areas are linked by a network of ravines and greenways to create an **Open Space Network**. See the Open Space Map in Appendix A. Table 2.2 lists the major components of the Central O‘ahu Open Space Network.

The **ravines** remain free of further urbanization, with the exception of approximately 32 acres in the Waikele Gulch outside of the 100-year flood plain that are approved for nonconforming industrial uses, preserving their scenic, natural resource, and recreational values. They provide natural open space breaks between the agricultural fields and urbanized areas, define boundaries, and provide view amenities for the master-planned communities. They have become part of a ravine recreational network featuring trails and passive open space.

Where possible, drainage, transportation, and utility corridors are used to create a system of linear greenbelts or **greenways** characterized by landscaping and bikeways which will connect existing and planned communities.

An important element in the Central O‘ahu Open Space Network is the **Patsy T. Mink Central O‘ahu Regional Park** which provides needed open space, recreational opportunities, and a point for access to the Kīpapa and Waikele Gulches when they become part of the proposed ravine recreational network.

The **Waipahū Shoreline Park and Preservation Area** will restore public access to the Pearl Harbor West Loch and Middle Loch shoreline, provide passive and active recreational facilities, and anchor one end of the Pearl Harbor Historic Trail; a path shared by bikers and pedestrians running from the Rainbow Marina near Aloha Stadium to Nānākuli. When redeveloped, the Trail could be a world-class facility, celebrating O‘ahu’s culture and history while providing recreation and encouraging healthy activity by local residents.

TABLE 2.2 CENTRAL O‘AHU OPEN SPACE NETWORK

Mountain and Agricultural Areas

- Waiʻanae Range Conservation District Lands
- Agricultural Lands along Kunia Road
- Agricultural Lands North of Wahiawā in Poamoho
- Agricultural Lands Surrounding Mililani
- Agricultural Lands in the Waipi'o Peninsula restricted area
- Military Training Areas (west of Schofield Barracks and East Range)
- Ko'olau Range Conservation District Lands

Natural Gulches and Drainageways

- Waiawa Stream
- Waikele Stream/Gulch
- Kīpapa Stream/Gulch
- Pānakauahi Gulch
- Waikakalaua Stream
- Kaukonahua Stream (North and South Forks)

Shoreline Areas

- Pearl Harbor access points
- Wetlands and Wildlife Habitats
  - Pouhala Marsh

TABLE 2.2 CENTRAL O‘AHU OPEN SPACE NETWORK
(Continued)

Parks

Waipahū Cultural Garden Park

Bill Balfour Jr. Waipahū District Park

Waipahū Shoreline Park and Preservation Area (planned)

Waipi‘o Peninsula Soccer Park

Patsy T. Mink Central O‘ahu Regional Park

Mililani District Park

Mililani Mauka District Park

Wahiawā State Freshwater Park

Wahiawā Botanical Garden

George Fred Wright Wahiawā District Park

Golf Courses

Ted Makalena

Royal Kunia

Waikele

Hawai‘i Country Club

Mililani

Leilehua (military)

Kalākaua (military, planned)

Green Way Corridors

Historic OR&L Railway/Pearl Harbor Historic Trail

H-2 Freeway

Kamehameha Highway (from Waipahū Street to Wahiawā)

Meheula Parkway

Wilikina Drive (from Kunia Road to Kaukonahua Stream)

2.2.4 REVITALIZATION OF WAIPAHŪ AND WAHIAWĀ

Waipahū and Wahiawā will be revitalized through policies and programs designed to attract new investment and increase levels of activity in their traditional commercial and civic centers. Additional mid-rise development will be allowed in both towns and encouraged around the Honolulu Rail Transit stations in Waipahū as part of an economic revitalization strategy.

Special Area Plans for Waipahū and Wahiawā have been prepared in partnership with the Waipahū and Wahiawā communities to provide a community-based strategy for the revitalization efforts.

More recently, a **Waipahū Neighborhood Transit-Oriented Development Plan** was prepared with community input and adopted in April 2014 by the City Council. It will serve as the basis for a zoning ordinance amendment to guide redevelopment for the area roughly within ½ mile of the two Honolulu Rail Transit stations in Waipahū.

As discussed in the following sections, two **Enterprise Zones** support job development in Waipahū and Wahiawā by offering businesses incentives to develop and create jobs within the zones (See Exhibit 2.2 for location).

2.2.5 ECONOMIC DEVELOPMENT AND ENTERPRISE ZONES

Outside of Waipahū, Wahiawā, and the Mililani Technology Park, new commercial and industrial development will be designed to meet the demand from surrounding residential communities rather than a regional or island-wide market, in order to support the development of the secondary urban center in ‘Ewa and the revitalization of the town centers of Waipahū and Wahiawā.

Three Enterprise Zones (as shown in Exhibit 2.2) were approved by the City Council in the Central O‘ahu Sustainable Communities Plan Area. The northernmost Zone includes industrial and commercial areas in Wahiawā and Mililani Technology Park. The southernmost Zone includes areas along Kunia Road, Waipahū, and the Waipi‘o Peninsula (as well as Pearl City's Mānana area and the Pearl City Peninsula which is located in the Primary Urban Center Development Plan Area). A new central Zone includes areas in Waipi‘o and Koa Ridge Makai.

EXHIBIT 2.2

CENTRAL O‘AHU ENTERPRISE ZONES *



Under enabling legislation approved by the City Council in 1995 (Resolution 95-292), in 2002 (Resolution 02-227), and in 2016 (Resolution 16-120), qualifying businesses receive rebates on City property taxes for two years, and waiver of certain county fees for seven years. In addition, under State law (Chapter 209E, Hawai‘i Revised Statutes), the businesses may receive exemptions from State excise taxes for seven years, a decreasing State income tax credit for seven years, and a State income tax credit for unemployment insurance premiums.

Joint Base Pearl Harbor-Hickam, Schofield Barracks/Wheeler Army Air Field, and the Joint Base Pearl Harbor-Hickam Wahiawā Annex are important job centers for Central O‘ahu which provide an alternative to commuting to downtown Honolulu, and need to be supported, as appropriate and consistent with the vision for Central O‘ahu.

2.2.6 MASTER-PLANNED RESIDENTIAL COMMUNITIES AND VITAL RURAL VILLAGES

A network of master-planned residential communities provides a wide variety of housing and can accommodate the need for affordable housing. Master plans guide developments in Royal Kunia, Waikele, Waiawa, Waiawa Castle & Cooke, and Koa Ridge Makai (See Exhibit 2.3 for project locations).

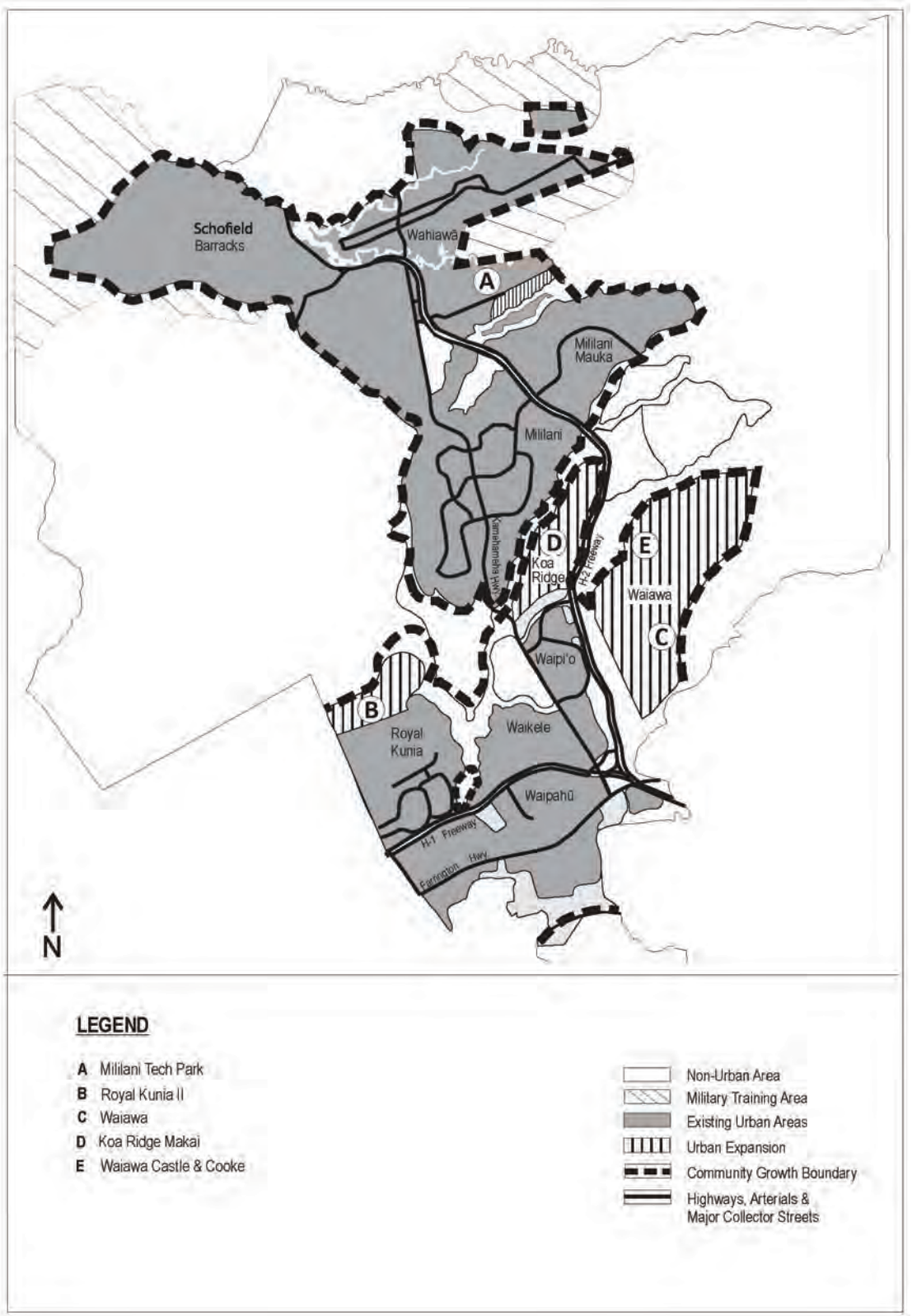
These master-planned communities should incorporate planning policies and guidelines to preserve historic and cultural values, establish open space and greenway networks, and create well designed, livable communities.

Such communities should be designed with an identifiable, distinct and easily accessible main street, town center or neighborhood center which may include a mixture of residential and small-scale community-related commercial development.

These master-planned communities should also be designed and developed in ways that protect and expand green infrastructure, and conserve water and reduce water pollution through use of low-impact development best practices.

Finally, the master-planned communities should be complete communities which provide jobs, affordable housing, and amenities so that more Central O‘ahu residents have the opportunity to live, work, and play without having to leave Central O‘ahu.

EXHIBIT 2.3
EXISTING AND NEW MASTER-PLANNED COMMUNITIES



In particular, affordable rental housing should be provided for students, families, seniors, and those with special needs.

Two rural villages with roots in O‘ahu’s plantation past, Kunia Village and Poamoho Village, have been protected as historical and cultural resources. However, they are more than nostalgic museum attractions, and are being refurbished and reinvented to be vital rural villages, providing homes and opportunities in a way reminiscent of their plantation days.

2.2.7 COMMUNITIES DESIGNED TO SUPPORT NON-AUTOMOTIVE TRAVEL

The master-planned residential communities will be designed or redeveloped to support **pedestrian and bike** use within the community and **transit use** for trips both within and outside of the community.

Connectivity will be established within subdivisions by use of walkable block sizes and street standards and between subdivisions by establishing and implementing a 1/4 mile collector/ connector master road plan, where permitted by terrain.

An east-west **Rail Transit Corridor** running through Waipahū will be part of a rapid transit system linking the Primary Urban Center with the University of Hawai‘i West O‘ahu Campus and the City of Kapolei.

Medium density mixed residential and commercial development will be developed around the two Honolulu Rail Transit stations located on Farrington Highway at Leokū Street and at Mokuola Street. (Their general location is indicated on Exhibit 3.4 and on the Public Facilities Map in Appendix A). Medium density mixed residential and commercial development will also be developed around the Honolulu Rail Transit station at the Leeward Community College campus.

The Honolulu Rail Station located at Pearl Highlands in Pearl City (which is in the Primary Urban Center Development Plan Area) will be important for Central O‘ahu residents who will be able to access the rail transit station park and ride lot from the H-2 highway.

The rail stations will serve as the hubs for bus routes and include bike sharing facilities, making it easy to transfer from one transportation mode to another. Access to the rail transit system from other Central O‘ahu communities will be provided by mass transit bus service, park and ride facilities, and express bus service running within High Occupancy Vehicle (HOV) lanes.

2.2.8 CONSERVATION OF NATURAL RESOURCES

Central O‘ahu’s natural resources, including endangered species habitats, ravines, potable water supply, and Pearl Harbor waters, will be conserved by:

- Protecting open space outside the Community Growth Boundary from urban development;
- Identifying and protecting endangered species habitats and other important ecological zones from threats such as fire, weeds, feral animals, and human activity;
- Retaining the major Central O‘ahu ravines as flood plains and open space resources by restricting further development and minimizing grading or other disturbance of the gulch walls;
- Designing the regional drainage and wastewater treatment system to minimize non-point source pollution of the ocean and Pearl Harbor;
- Protecting prime watershed recharge areas and the Pearl Harbor potable aquifer which underlies the Central O‘ahu area;
- Protecting valuable habitats for endangered waterbirds located on the shoreline of Pearl Harbor at Pouhala Marsh;
- Efficiently using all water supplies through conservation measures and distribution system leak repair;
- Cleaning up contaminated areas that pose hazards to soil and water quality; and
- Reducing light pollution's impact on wildlife by requiring use, where sensible, of fully shielded lighting fixtures using lower wattages.

See Exhibit 3.3 in Chapter 3 for a conceptual mapping of key natural resources.

2.2.9 PRESERVATION AND ENHANCEMENT OF HISTORIC AND CULTURAL RESOURCES

Central O‘ahu’s historic and cultural resources will be preserved and enhanced by:

- Preserving significant historic and pre-historic features from the plantation era and earlier periods, including:
  - The Waipahū Sugar Mill and surrounding related features;
  - The OR&L right-of-way;
  - Kunia and Poamoho Villages and other remnants of the plantation era;
  - Hawai‘i’s Plantation Village (at the Waipahū Cultural Garden), which brings together plantation-era buildings as an attraction; and
  - Native Hawaiian cultural and archaeological sites, notably the Kūkaniloko complex;
- Retaining visual landmarks and significant vistas, including:
  - Distant vistas of the shoreline and Pearl Harbor from the H-2 Freeway and Kunia Road above the ‘Ewa Plain;
  - Views of the Wai‘anae and Ko‘olau Mountains from Kunia Road, Kamehameha Highway, and H-2 Freeway;
  - Views of Pearl Harbor from Farrington Highway/H-2 Freeway access east of Waipahū High School;
  - The view of the Waipahū Sugar Mill stack and mill building from Waipahū Depot Road;
  - The view of the Wai‘anae Mountains from the Waipahū Cultural Garden;
  - The view of the Wai‘anae Mountains from Mililani High School, from Meheula Parkway near Keaolani Street, and from Mililani District Park;
  - The view of Diamond Head and Pearl Harbor from Mililani Recreation Center No. 2;
  - The view of the upper Central O‘ahu plains toward Waialua and of the Wai‘anae Mountains from the intersection of Kamehameha Highway and Whitmore Avenue, north of Wahiawā;

- The view of West Loch and of the Waiʻanae Range from Kamehameha Highway while passing the Central Oʻahu Regional Park; and

- Limiting building heights outside of Waipahū and Wahiawā to low-rise and mid-rise structures to protect panoramic views and the character of the built environment.

2.2.10 DEVELOPMENT PRIORITIES

Development in Central Oʻahu should be characterized by:

- Transit-Oriented Development in Waipahū, supporting the revitalization of Waipahū and transit ridership;
- Creation of new job centers for Wahiawā and Whitmore Village serving Central Oʻahu and North Shore diversified agriculture and age friendly communities;
- Completion of existing and approved master-planned residential developments and proposed developments at Royal Kunia, Koa Ridge Makai, and Waiawa (See the Development Capacity and Special Areas Map in Appendix A and Table 2.1);
- Moderate growth of commercial centers in Central Oʻahu Urban Fringe Areas to primarily serve the needs of the surrounding residential communities;
- Adequate Facilities Requirements adopted as a condition of zoning approvals to ensure that development does not outpace infrastructure development;
- Coordinated Public-Private Infrastructure and Project Development that supports the directed growth strategy of the **General Plan** (Examples include a number of transportation projects on the H-2 Freeway); and
- Adequate Funding for Infrastructure through methods such as Tax Increment Financing (TIF) and Community Facilities District (CFD) which provide funding for infrastructure concurrently with, or in advance of, residential and/or commercial development.

Table 2.1 provides estimates of the approximate size and scale of projects shown in Exhibit 2.3 and on the Land Use Map and Development Capacity and Special Areas Map in Appendix A. Several projects shown have previously received Development

Plan and zoning approval and are at various stages in the development process. A number of proposed projects would require land use approvals to proceed.

In addition, transit-oriented development zoning proposed for adoption for Waipahū and Leeward Community College may allow as many as 5,300 additional units.

The total potential residential development in the region is estimated to be almost 24,000 units, but zoning had been approved for only 10,800 units, as of December 2015.

Annual housing unit construction in Central O‘ahu averaged 930 units per year from 1990 to 1999, but slowed to about 520 per year between 2000 and 2009. (Since 2010, housing unit production by major developers has fallen to less than 50 units per year due to market conditions, build out of project areas, and difficulties in obtaining new entitlements.) At the higher 1990 - 1999 rate, over 25 years worth of development capacity is provided within the Community Growth Boundary in Central O‘ahu.

The Department's most recent projections of likely growth for O‘ahu, prepared in 2009, project annual housing absorption from 2010 to 2035 for Central O‘ahu to average approximately 510 units per year. At that rate, more than 45 years of residential development capacity is provided within the Community Growth Boundary in Central O‘ahu.

3. LAND USE POLICIES AND GUIDELINES

The land use policies and guidelines in this chapter should be used in the review and approval of public and private projects in Central O‘ahu in order to help implement the vision for Central O‘ahu’s development as described in the preceding chapter. These policies and guidelines are not regulations, but provide guidance that decision makers and administrators should follow, where sensible, in approving projects and revising rules, regulations, and best practice standards.

Policies are provided for:

3.1 Open Space Preservation and Development
3.2 Regional Parks and Recreation Complexes
3.3 Community-Based Parks
3.4 Historic and Cultural Resources
3.5 Natural Resources Protection
3.6 Waipahū Town
3.7 Wahiawā Town
3.8 Central O‘ahu Plantation Villages
3.9 Existing and Planned Residential Communities
3.10 Planned Commercial Retail Centers
3.11 Industrial Centers
3.12 Mililani Technology Park
3.13 Military Areas

3.1 OPEN SPACE PRESERVATION AND DEVELOPMENT

The open space system consists of both active and passive areas. Active areas include parks, golf courses and agricultural fields. Passive areas include lands in the State Conservation District, fallow land in the State Agricultural District, and drainage and utility corridors. Shoreline areas may be either active or passive.

After the withdrawal of plantation agriculture from nearly all of Central Oʻahu, a range of new uses have been introduced or proposed. These include seed crops, diversified agriculture, solar farms, and military uses.

Major changes in agricultural land ownership included the 2005 purchase of 2,400 acres of agricultural lands south of Schofield Barracks by Island Palm Communities (a joint venture of Lendlease and the U.S. Army), and the State's 2012 purchase of the 1,700 acre Galbraith Trust agricultural lands north of Wahiawā.

Much of the Island Palm Communities land is still available for agriculture, but portions of the lands may be used for replacement housing in the future to free up land on Schofield Barracks, Wheeler Army Airfield, and Helemano for military purposes.

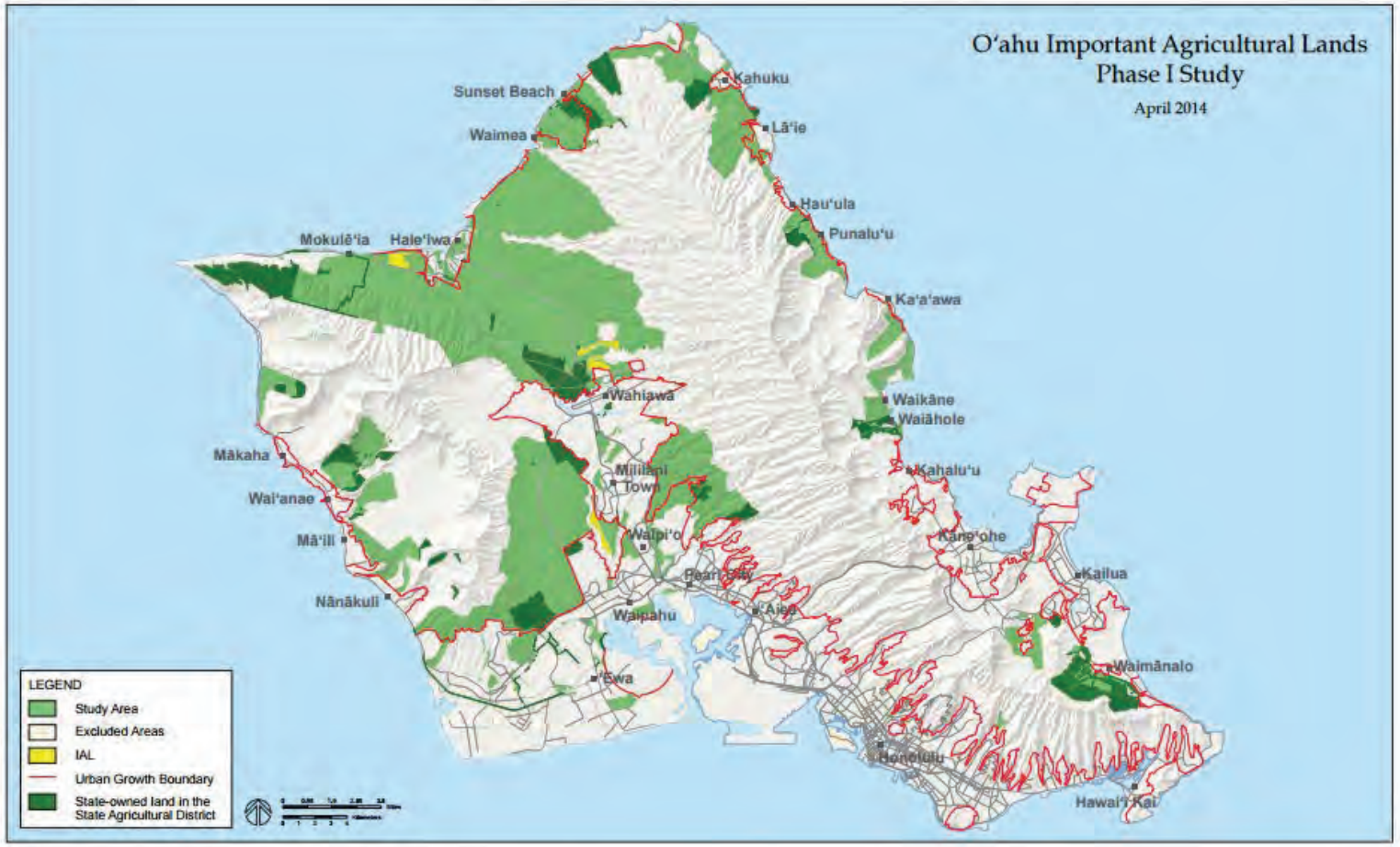
The Hawaiʻi Agricultural Foundation, with cooperation of Monsanto and Island Palm Communities, has established a Kunia Agricultural Park on 182 acres of the Island Palm Communities land.

The State Agribusiness Development Corporation (ADC) has responsibility for 1,200 acres of the Galbraith Trust lands, and has been preparing the soil and working on establishing water sources in hopes of offering leases to farmers in late 2016.

The Office of Hawaiian Affairs acquired the balance of the Galbraith Trust lands, around 500 acres surrounding the important Kūkaniloko site, and is reviewing possible uses for the lands around the site, including forestry, orchard crops and other forms of diversified agriculture, to determine which would be compatible with the Kūkaniloko site.

The ADC also has responsibility for another 91 acres adjacent to Schofield Barracks. In addition, the Department of Agriculture is constructing and will manage a 150 acre State agricultural park adjacent to Royal Kunia Phase 2 acquired in 2000 as a condition of zoning for Royal Kunia, and is managing almost 500 acres near Wheeler Army Air Field.

Exhibit 3.1
QUALIFIED LANDS IDENTIFIED IN THE O‘AHU IMPORTANT AGRICULTURAL LANDS STUDY



3.1.1 GENERAL POLICIES

Use open space to:

- Provide long range protection for diversified agriculture on lands outside the Community Growth Boundary and for two agricultural areas (Pine Spur and Honbushin) located inside the Community Growth Boundary (See Exhibit 3.1: Qualified Lands Identified in the O‘ahu Important Agricultural Lands Study);
- Protect scenic views, and natural, cultural, and historic resources;
- Provide recreation;
- Define the boundaries of communities by:
    - Using the large expanses of open space beyond the Community Growth Boundary to define the regional urban pattern,
    - Using the open space system within the Community Growth Boundary to visually distinguish and physically separate individual communities, neighborhoods, and land use area;
- Provide a fire safety buffer where developed areas border “wildlands” either in preservation or agricultural areas;
- Promote the accessibility of shoreline and mountain areas (as required by City Ordinance);
- Preserve natural gulches and ravines as drainageways and storm water retention areas; and
- Create major pedestrian and bikeway linkages between communities such as the OR&L / Pearl Harbor Historic Trail, through a network of greenways along transportation and utility corridors and drainageways.

3.1.2 RELATION TO OPEN SPACE MAP

The following areas shown on the Open Space Map in Appendix A are components of the regional open space system:

Mountain and Agricultural Areas - These are the areas outside of the Community Growth Boundary, including areas within the State Conservation District.

Natural Gulches and Drainageways - Within the Community Growth Boundary, the major gulches, as identified in Table 2.2, are indicated for preservation,

except for the portion of Waikakalaua Gulch that has been previously designated for urban use.

Shoreline Areas - Along the Pearl Harbor shoreline, coastal-dependent uses and features such as shoreline parks and wetlands are indicated as parks and preservation areas, respectively.

Parks - Only island-wide, regional and district parks are shown. Community and neighborhood parks are also part of the open space system, but are generally too small to display on a regional map. Their location is determined more by community design considerations (see Section 3.3).

Cemeteries - The existing Mililani Memorial Park and Mortuary is shown. Cemeteries are a permitted use in the P-2 General Preservation Zoning District and provide a form of landscaped open space.

Golf Courses - All golf courses are shown, whether public or private-owned, since their visual contribution to the open space system is the same.

Greenways or Open Space Corridors - These corridors are indicated on the map following certain public rights-of-way which make a significant contribution to the regional open space network as linear connectors.

Significant elements in the Central Oʻahu Open Space Network are listed in Table 2.2.

3.1.3 GUIDELINES

The following guidelines suggest how the general policies for Open Space Preservation and Development should be implemented:

3.1.3.1 Mountain Areas

- Acquire and maintain public campgrounds and access to hiking trails in the areas beyond the Community Growth Boundary on the slopes of both the Waiʻanae Range and the Koʻolau Range.
- Require public access to mountain areas where sensitive resources are not affected, including vehicular access to and parking at trail heads and public campgrounds, when new *mauka* developments are approved.

- Maintain the forest at higher elevations in the State Conservation District. Plan utility corridors and other uses to avoid disturbances to areas with high concentrations of native species.
- Identify endangered species, their habitats and other important ecological zones and protect them from threats such as fire, weeds, feral animals, and human activity.
- Protect areas proposed by the State Office of State Planning in the **State Land Use District Boundary Review** (1992) for addition to the State Conservation District to protect the Leeward Koʻolau Watershed and the hydrologic zone of contribution to the Navy Shaft in Waiawa from urban development; provided, however, that urban uses such as utility installations and public facilities specifically approved by the State Department of Health and the Honolulu Board of Water Supply may be permitted with the zone of contribution.
- Identify and protect areas that are important to Native Hawaiian cultural practices.

3.1.3.2 Natural Gulches And Drainageways

- Preserve the major natural gulches within the Community Growth Boundary, as listed in Table 2.2, as part of the open space system.
- Integrate planned improvements to Central Oʻahu drainage systems into the regional open space network by emphasizing the use of retention basins and recreational access in the design approach (See Chapter 4, Section 4.6).
- View drainageways and utility corridors as opportunities to link major open spaces with pedestrian and bike paths. Encourage shared use of these resources to realize both their environmental contribution and recreational value. (Table 2.2 lists the major gulches.)
- Where practical, retain drainageways as natural or man-made vegetated channels rather than concrete channels.
- Provide for pedestrian and bicycle access where these can be safely accommodated.

3.1.3.3 Shoreline Areas

- Provide public access to the Pearl Harbor shoreline at intervals of approximately 1/4 mile, except where access is restricted by the military for security reasons. To make this access usable by the public, provide adequate parking.
- Maintain and enhance, where necessary, nearshore wetlands and mangroves as wildlife habitats.
- Provide, at a minimum, a 60-foot setback along the shoreline; and, where possible, expand the setback to 150 feet where justified, based on historic or adopted projections of coastal erosion rates.
- Analyze the possible impact of sea level rise for new public and private projects in shoreline areas and incorporate, where appropriate and feasible, measures to reduce risks and increase resiliency to impacts of sea level rise.

3.1.3.4 Agricultural Areas

- Permit facilities necessary to support intensive cultivation of arable agricultural lands, including distribution, sales, or agri-tourism facilities.
- Permit facilities to support limited outdoor recreation use, such as camping, horseback riding and hiking, preferably in areas where agricultural use is least suitable.
- Permit residential use to the extent that it is accessory to the agricultural use. Where several farm dwellings are planned as part of an agricultural use, they should be sited and clustered to avoid the use of more productive agricultural lands and to reduce infrastructure costs.
- Ensure that uses of non-residential farm buildings are consistent with the intent and purpose of the agricultural zoning district and that the structures are in compliance with the regulations regarding flood hazards.
- Design and locate buildings and other facilities that are accessory to an agricultural operation to minimize impacts on nearby urban areas and roadways.

3.1.3.5 Parks

- Maintain distant views of the Waiʻanae Range from Kamehameha Highway in the development and siting of facilities and landscaping in the Patsy T. Mink Central Oʻahu Regional Park. (See Exhibit 3.2: Major Parks in the Central Oʻahu Sustainable Communities Plan Area.)

- Develop trails leading from Patsy T. Mink Central O‘ahu Regional Park to Waikele Gulch and connecting to a trail system throughout Central O‘ahu gulches.
- Establish a new shoreline park complex at Waipi‘o Peninsula, giving access from Waipahū to the Pearl Harbor shoreline on the West Loch and Middle Loch.
- Retain Wahiawā Botanical Garden as primarily a gulch in its natural state.
- Expand Wahiawā Freshwater Park to include most of the area adjacent to the Wahiawā Reservoir, limiting public access only as necessary to protect water quality and public safety.

3.1.3.6 Golf Courses

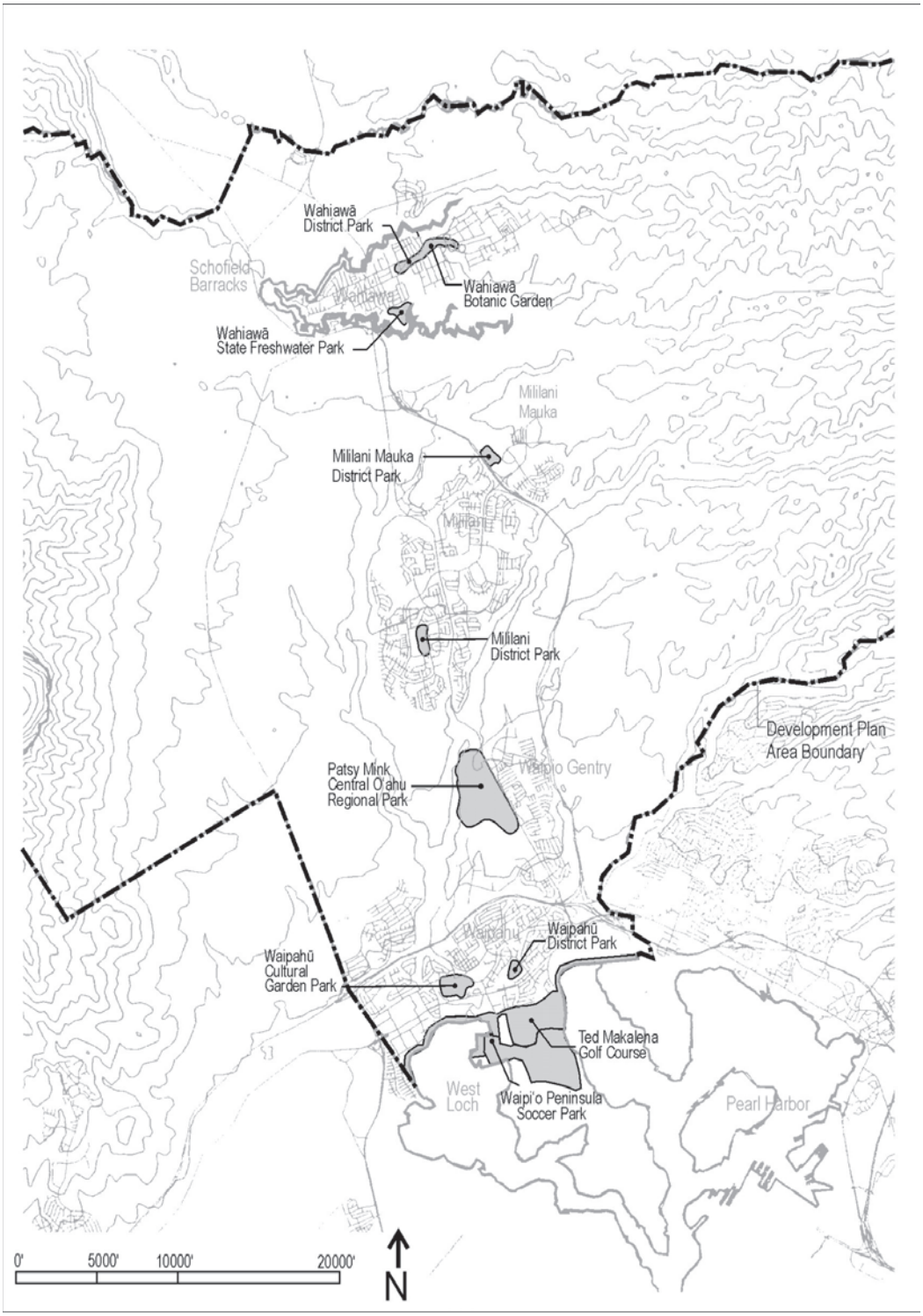
- Locate and design golf courses to optimize their function as drainage retention areas and as buffers between developments.
- Consider the impact on existing and proposed regional trails, paths, and bike routes in designing new golf courses. Provide safe corridors by or through the courses where necessary for those trails, paths, and bikeways.
- Design golf courses to provide view amenities for adjacent urban areas, including public rights-of-way.
- Use landscape treatment, setbacks, and modifications to golf course layout rather than fencing or solid barriers when screening is needed for safety reasons, where feasible.

3.1.3.7 Wildlands – Urban Fire Hazard Setbacks

- As determined appropriate by the Honolulu Fire Department, require residential or commercial developments that are adjacent either to preservation areas within the Community Growth Boundary or to lands within the State Conservation District to provide a setback to reduce the risk of fire spreading from the "wildlands" to the developed area. Typically, such a setback would be 20 to 30 feet wide and landscaped with low growth, low-burn plantings.

Exhibit 3.2

MAJOR PARKS IN THE CENTRAL O‘AHU SUSTAINABLE COMMUNITIES PLAN AREA



3.1.3.8 Greenways and Open Space Corridors

- Provide sufficient easement width for the major trunk lines and transmission and distribution lines for utility systems, when their alignment is not within a road right-of-way, to permit the growth of landscaping within and adjacent to the easement, consistent with all applicable operations, maintenance, and safety requirements.
- When overhead or underground transmission and distribution lines are located within or adjacent to a road right-of-way, provide sufficient width to permit the growth of landscaping adjacent to the transmission line, consistent with all applicable operations, maintenance, and safety requirements. The purpose of the landscaping is to divert attention from the overhead lines and, preferably, obscure views of the overhead lines from the travel way and adjacent residential areas.
- Place new transmission lines underground where possible under criteria specified in State law.
- Permit the use of utility easements for pedestrian and bicycle routes, consistent with all applicable operations, maintenance, and safety requirements.
- Design the rights-of-way for major and minor arterials as landscaped parkways or greenways, complete with a landscaped median strip, landscaped sidewalks, and bikeways. Major arterials should have separate bike paths, and minor arterials should have bike lanes. Suggested width for major arterials, including right-of-way and planting strips, is 120 feet wide and for minor arterials is 100 feet wide.
- Where urban development abuts the H-2 Freeway, provide an open space/landscaped buffer of sufficient size to preserve a view of green, minimize the visual intrusiveness of the development, and reduce the noise and air quality impact of the freeway traffic on the abutting development.
- Link Wahiawā Botanical Garden to the Wahiawā Freshwater Park on Lake Wilson by a trail through the gulch connecting the two areas.

3.2 REGIONAL PARKS AND RECREATION COMPLEXES

The following section presents general policies and guidelines for development of regional parks and recreation complexes.

Regional recreational sites include the Patsy T. Mink Central O‘ahu Regional Park, Wahiawā Botanical Garden, Wahiawā Freshwater Park, Waipahū Cultural Garden, the proposed Waipahū Shoreline Park Complex, and public and privately-owned golf courses.

Regional Parks - Patsy T. Mink Central O‘ahu Regional Park is a 269-acre park developed on a triangular area across Kamehameha Highway from the Waipi‘o Gentry planned community.
Key features of the Regional Park and sports complex include:

- Professional quality baseball, youth baseball, and softball complexes, each with four diamonds;
- Multi-purpose fields for soccer and other field sports;
- A championship tennis complex with center court and 20 tennis courts;
- A community center and aquatic center with Olympic-sized swimming and diving pools;
- An archery range; and
- Passive recreational areas for picnicking, kite-flying, and pedestrian paths.

Additional features planned for the park include:

- Basketball courts and sand volleyball fields;
- A four field in-line hockey complex;
- A skateboard park;
- A dog obedience and training facility; and
- A tree farm.

Wahiawā Botanical Garden is a 27-acre park with a unique collection of plants representing the mid-level rain forest habitat. It is located in a small ravine in the center of Wahiawā and is one of five botanical gardens operated by the City Department of Parks and Recreation. It includes a multi-purpose pavilion, office, maintenance buildings, comfort station, and parking stalls.

The Garden has experienced problems in the past with erosion, lack of financial support and patronage, vandalism, and illegal dumping. A new Master Plan was developed in 2003 for the Garden and much of the facility has been rehabilitated and expanded. Over the past few years, additional drainage culverts have been added to handle the volume of water flowing through the gulch.

Wahiawā Freshwater Park is a 66-acre State recreation area surrounding Lake Wilson (Wahiawā Reservoir) which has picnicking facilities and the only year-round freshwater shoreline and boat fishing area on O‘ahu. In addition to its recreation value, the park serves as an edge for the western end of Wahiawā and as a visual gateway to the North Shore.

Waipahū Cultural Garden is a 49-acre park site owned by the City. The private, non-profit Friends of Waipahū Cultural Garden Park has established and operates (as a concession) a recreated plantation village and museum to display the cultural traditions, physical forms, and lifestyles of plantation workers and their families. The park is not designed for active recreation, but does include a picnic area, an ethno-botanic garden, and an educational building with a crafts room.

Waipahū Shoreline Park Complex. A shoreline park and preservation area complex is under development for the entire length of shoreline in Pearl Harbor’s West Loch and Middle Loch. The complex currently includes:

- The Pearl Harbor Historic Trail (a shared use path running on the OR&L right-of-way);
- The Pouhala Marsh Wildlife Sanctuary; and
- The Waipi‘o Peninsula Soccer Park.

The Pearl Harbor Historic Trail running on the OR&L right-of-way will allow bikers and pedestrians to travel as far as Nānākuli to the west. Riding east, the path follows a greenbelt linking a network of shoreline parks stretching from West Loch to Rainbow Marina near Aloha Stadium. When redeveloped, the path will celebrate O‘ahu’s history and culture, provide recreational access, and encourage healthy activity.

Waipi‘o Peninsula Soccer Park, with a multi-field soccer complex, has been developed by the City and County on lands that are leased from the Navy. It includes a stadium, 20 play fields, and parking areas, and provides a venue for local, national, and international soccer players to train and compete year-round.

Additional elements proposed for the Waipahū Shoreline Park Complex include:

- A 19-acre passive park located makai of Leeward Community College and east of Waipahū High School; and.
- Connections to the shoreline proposed in the **Waipahū Neighborhood TOD Plan** (November 2012) which calls for eventual redevelopment of the urban area makai of the Leokū Street station with "green finger" parks at the end of streets linking them to the West Loch shoreline, and for creation of a new Stream Walk greenway near the Mokuola Street station which would extend along Kapakahi Stream to the Pouhala Marsh area.

The shoreline park could also potentially provide access to nearshore fishing and boating in the Pearl Harbor West Loch waters if permitted by the United States Navy.

(The locations of parks in Central Oʻahu are shown in Exhibit 3.2.)

Golf Courses - Central Oʻahu has six golf courses. The City operates the Ted Makalena Golf Course on the Waipiʻo Peninsula.

Privately-owned golf courses include the Hawaiʻi Country Club, the Mililani Golf Club, Royal Kunia Country Club, and the Waikele Golf Club. Additional privately-owned courses have been planned for Royal Kunia and for Waiawa, but it is not certain if those plans will go forward. Development of a planned second golf course at Royal Kunia is deterred by binding conditions of zoning requiring multi-million dollar contributions to the City and a local non-profit foundation before the golf course opens. Plans for golf courses at the Waiawa project are under review, and the areas may be used instead as open space areas designed for scenic values and retention of storm waters.

The U. S. military operates the Leilehua Golf Course near Wheeler Army Air Field. The Kalākaua golf course at Schofield Barracks has been closed because part of the course land area has been developed for family housing. The military is reviewing whether the course should be reopened and perhaps even expanded.

3.2.1 GENERAL POLICIES

- Consider using public-private partnerships to build and maintain park and recreation complexes in order to sustain economic development.
- Design the built environment to avoid adverse impacts on natural resources or processes in the coastal zone or any other environmentally sensitive area.
- Design physical features to maximize visibility, foster positive interactions among park and recreation complex users, and deter criminal acts by increasing the likelihood of being caught.

Regional Parks

- Construct facilities at Patsy T. Mink Central O‘ahu Regional Park incrementally, as funding allows. Use private funds, if possible, to construct some of the athletic facilities in the sports complex.
- Retain Wahiawā Botanical Garden primarily as a gulch in its natural state. Focus improvements to the Wahiawā Botanical Garden on promoting eco-tourism, environmental education, and conservation of tropical plants; undoing the effects of recent high waters; and mitigating the impacts of flooding.
- Expand and improve park facilities at Wahiawā Freshwater Park, including construction of the planned jogging path.
- Make improvements to the Waipahū Cultural Gardens which are consistent with the historical and cultural theme of the park and which enhance open space and passive recreational values.
- Establish a major new shoreline park complex, the Waipahū Shoreline Park and Preservation Area Complex, giving access from Waipahū to the Pearl Harbor shoreline by providing active and passive recreation facilities, completing the Pearl Harbor Historic Trail (Leeward O‘ahu Bikeway), and connecting the area to the rest of Waipahū with a network of pedestrian and bike paths.

Golf Courses

- Limit municipal golf course improvements in Central O‘ahu to enhancement of Ted Makalena Golf Course because of the need to use high-quality water for irrigation above the Pearl Harbor aquifer.
- Locate any new stand-alone municipal courses to serve the region in ‘Ewa where non-potable water for irrigation uses is available from the Honouliuli Wastewater Treatment Plant.
- Use golf courses, where appropriate, to provide protection for open space, and help reduce flooding and non-point pollution by helping retain storm waters.

Recreation Complexes

- Design recreation complexes to be compatible with surrounding land uses and environmental features.

3.2.2 GUIDELINES

The following guidelines suggest how the general policies for Regional Parks and Recreation Complexes should be implemented.

3.2.2.1 Appropriate Scale and Siting

- Use architectural elements and siting to heighten the visibility of major recreation events areas as they are approached from principal travel corridors.

3.2.2.2 Environmental Compatibility

- Locate and operate uses that generate high noise levels in a way that keeps noise to an acceptable level in existing and planned residential areas.
- To retain a sense of place, incorporate natural features of the site and use landscape materials that are indigenous to the area in the design of recreation areas where feasible.
- Use xeriscaping (the use of landscape materials with low water demand), non-potable water for irrigation, and efficient irrigation systems wherever possible to conserve groundwater resources. Give preference to use of drought-resistant native Hawaiian plants where feasible and appropriate.

3.2.2.3 Community Integration

- Although the design of recreational attractions may have a distinct identity and entry, link these destinations with surrounding areas using connecting roadways, bikeways, walkways, landscape features or architectural design.

3.2.2.4 Island-wide and Regional Parks

- Continue developing planned facilities at Patsy T. Mink Central O‘ahu Regional Park, a major park of approximately 270 acres, at the site known as “Waiola”, near Waikele and Waipi‘o. Maintain distant views of the Wai‘anae Range from Kamehameha Highway in the development and siting of park landscaping and facilities.
- Provide trails from the Patsy T. Mink Central O‘ahu Regional Park to Waikele Gulch, connecting to a trail system throughout Central O‘ahu’s gulches.
- Connect the Wahiawā Botanical Garden to the Wahiawā Freshwater Park at Lake Wilson by way of a trail in the gulch which connects the two facilities.
- Expand Wahiawā Freshwater Park to include most of the area adjacent to the Wahiawā Reservoir, limiting public access only as necessary to protect water quality and public safety.

(The locations of parks in Central O‘ahu are shown in Exhibit 3.2.)

3.2.2.5 Sports and Recreation Complexes

Definition of Use Areas

- Separate uses that attract a high number of people for events as much as possible from residential areas and wildlife habitats.
- Provide amenities and service facilities to accommodate "tailgate" picnics, as well as nearby picnic tables and outdoor grills in parking areas for sporting events.

Transportation Facilities

- Locate bus loading areas, shelters, and bicycle parking facilities as close as possible to entry gates for special events areas.
- Locate bus stops at all principal activity areas.

Views

- Locate and design facilities for special events to be readily visible and identifiable from the principal transportation corridors that lead to them.
- Establish the visual identity of the complex through distinctive architecture, landscaping, or natural setting.

Landscape Treatment

- Minimize the visibility of perimeter fencing, parking lots and garages, and other utilitarian elements through plantings or other appropriate visual screens along roadway frontages.
- Plant canopy trees to provide shade in large parking lots. Use special paving or pavement markings to indicate pedestrian routes to destinations and differentiate sections of the parking area.

Natural Environment

- Retain, protect, and incorporate wetland and other wildlife habitat areas as passive recreational resources.

3.2.2.6 Siting

- Island-wide and regional parks and golf courses are shown on the Open Space Map and the Public Facilities Maps in Appendix A.
- Require a City review and approval process which provides adequate public notice and opportunity for input for any change in the location of an island-wide or regional park or a golf course.
- Allow additional regional sports and recreation complexes in areas designated for commercial, industrial, or park use, subject to a City review and approval process that provides public review and complete analysis.

3.3 COMMUNITY-BASED PARKS

The following section provides general policies and guidelines for community-based parks and recreation areas.

As of 2014, Central O‘ahu had over 1,100 acres in existing or planned parks, of which 370 acres are in community-based public and private parks. Table 3.1 lists the existing and planned public and private parks and golf courses in Central O‘ahu.

Community-based parks (and associated recommended size and service area radius) include:

- Mini-parks (no size specified and 1/2 mile),
- Neighborhood parks (5 acres, 1/2 mile),
- Community parks (10 acres, one mile), and
- District parks (20 acres, two miles).

The primary method of acquiring the needed additional park land will be through the park dedication ordinance which requires developers to dedicate land for parks and playgrounds. The ordinance requires dedication of a minimum of 110 square feet per apartment, multi-family building, and planned development dwelling unit, and 350 square feet per one-family, two-family, and duplex unit as part of the subdivision approval process.

The following section provides general policies and guidelines for community-based parks and recreation areas.

Table 3.1 Central Oʻahu Public and Private Parks and Golf Courses

Name and Type of Park	Acreage
Regional Parks and Facilities	
Patsy T. Mink Central Oʻahu Regional Park	269
Wahiawā Botanical Garden	27
Wahiawā Freshwater Park (State)	66
Waipahū Cultural Garden Park	49
Waipahū Shoreline Park and Preservation Area	
Pearl Harbor Historic Trail	NA
Pouhala Marsh Wildlife Sanctuary (State)	70
Waipiʻo Peninsula Soccer Park	234
Shoreline Park Expansion Area	19
Regional Park Total	***734***
Community Based Parks	
District Parks	
Mililani District Park with Gym	21
Mililani Mauka District Park	16
George Fred Wright Wahiawā District Park with Gym and Pool	10
Waiawa District Park (planned)[2]	20
Bill Balfour Jr. Waipahū District Park with Gym and Pool	14
District Park Total	**81**
Community Parks	
Crestview Community Park	8
Hōʻaeʻae Community Park	10
Koa Ridge Community Park (planned)	17
Makaʻunulau Community Park	16
Mililani Mauka Community Park	13
Royal Kunia Phase 2 Community Park	11
Waiawa Community Park #11 (planned)[2]	10
Waiawa Community Park #33 (planned)[2]	12
Waikele Community Park with Pool	13
Whitmore Community Park with Gym	1
Community Park Total	**111**
Neighborhood Parks	
Ala Hula Square	< 1
Hans L'Orange Neighborhood Park	7
Hōkūahiahi Neighborhood Park	4
Hōlanialiʻi Neighborhood Park	4
Honowai Neighborhood Park	6
ʻIliahi Neighborhood Park	3
Kaʻala Neighborhood Park	2
Kahi Kani Neighborhood Park	3
Kamāʻiʻo Neighborhood Park	4
Kaomaʻaikū Neighborhood Park	12
Keʻalohi Neighborhood Park	4

Table 3.1 (Continued) Central O‘ahu Public and Private Parks and Golf Courses

Name and Type of Park	Acreage
Kīpapa Neighborhood Park	5
Kūahelani Neighborhood Park	4
Kunia Neighborhood Park	6
Kupuohi Neighborhood Park	9
Melemanu Neighborhood Park	4
Mililani Neighborhood Park	5
Michael S. Nakamura Neighborhood Park	8
Mililani Waena Neighborhood Park	7
Noholoa Neighborhood Park	7
Pūpū‘olē Mini-park	8
Waiawa Neighborhood Park #16B (planned)[2]	2
Waiawa Neighborhood Park #18 (planned)[2]	7
Waiawa Neighborhood Park #40 (planned)[2]	6
Mitsuo “Mits” Shito Waikele Neighborhood Park	5
Waipahū Uka Neighborhood Park	4
Waipi‘o Neighborhood Park	12
Whitmore Neighborhood Park	2
Neighborhood Park Total	**151**
Private Parks[1]	
Koa Ridge Neighborhood Parks (planned)	3
Mililani Recreation Centers	12
Royal Kunia Recreation Center	12
Private Park Total	**28**
Community Based Park Total	***370***
REGIONAL AND COMMUNITY BASED PARK TOTAL	***1075.69***
Golf Courses	
Hawai‘i Country Club	136
Mililani Golf Club	165
Leilehua Golf Course	193
Royal Kunia Country Club	163
Ted Makalena Golf Course	151
Waikele Golf Club	135
Golf Course Total	***943***
PARK AND GOLF COURSE TOTAL	***2,049***

KEY:

[1]Private park listings are from DPP’s listing of parks recognized for purposes of the Park Dedication Ordinance, and may be incomplete.

[2]Waiawa parks and acreages as proposed in 2007 Urban Design Plan, and may change with project design changes under consideration by Kamehameha Schools.

Sources: Department of Parks and Recreation; Department of Design and Construction, Department of Planning and Permitting

3.3.1 GENERAL POLICIES

- Provide adequate parks to meet residents' recreational needs. The Department of Parks and Recreation (DPR) standard for community-based parks is that a minimum of two acres of community-based parks should be provided per 1,000 residents, with one acre per thousand needed for district parks and one acre needed for community parks, neighborhood parks, and mini-parks. Even if these standards are met, there may still be unmet park needs due to demographic or other community conditions.
- Currently, Central O'ahu needs significantly more district park acreage to meet the DPR standard, but has more acreage in the smaller community-based parks than is called for by the DPR standard.
- To meet the DPR standard, Central O'ahu's population of 168,539 in 2010 needed 337 acres in community-based parks with 169 needed in district parks and 168 in other community-based parks.
- The combined total of Central O'ahu's public and private community-based parks in 2010 was 294 acres, with 61 in district parks and 233 acres in the other community-based parks. Some of the shortage in district park acreage is made up by the facilities in the Patsy T. Mink Central O'ahu Regional Park.
- Central O'ahu's population is expected to grow to 181,400 by 2035. Based on the DPR standards, 363 acres of community-based parks will be needed to meet the projected growth, including 181 acres in district parks. To meet the district park standard, an increase of 120 acres would be needed over the 2010 level.
- The need for community-based parks can be met either through public parks operated by the City and County or private community parks and recreation centers operated by home owner associations.
- The primary method of acquiring the needed additional park land will be through the park dedication ordinance which requires developers to dedicate land for parks and playgrounds.
- The ordinance requires dedication of a minimum of 110 square feet per apartment, multi-family building, and planned development dwelling unit, and 350 square feet per one-family, two-family, and duplex unit as part of the subdivision approval process.

- Use community-based parks as sites for farmer's markets and community gardens.
- Protect and expand access to recreation resources in the mountains, at the shoreline, and in the ocean. Trails to and through the gulches and the mountains are an important public recreational asset. Some areas are difficult to access because of landowner restrictions. New development projects are an opportunity to provide public access to trail heads from the streets extending toward the mountain slopes or approaching the edges of the gulches.
- Support efforts to expand access to mountain and gulch trails in areas where urban development will not occur.

3.3.2 GUIDELINES

The following guidelines suggest how the general policies for Community-Based Parks should be implemented:

3.3.2.1 Development of Community-Based Parks

- Co-locate Neighborhood or Community Parks with elementary or intermediate schools and coordinate design of facilities when efficiencies in development and use of athletic, recreation, meeting, and parking facilities can be achieved, traffic impacts reduced, and pedestrian safety increased.
- Coordinate the development and use of athletic facilities such as swimming pools and gymnasiums with the State Department of Education (DOE) where such an arrangement would maximize use and reduce duplication of function.
- Where feasible, site Community and Neighborhood Parks near the center of neighborhoods, in order to maximize accessibility.
- Provide accessible pathways from surrounding streets to facilitate pedestrian and bicycle access to parks.
- Use xeriscaping (the use of landscape materials with low water demand), non-potable water for irrigation, and efficient irrigation systems wherever possible to conserve groundwater resources. Give preference to use of drought-resistant native Hawaiian plants where feasible and appropriate.

- Include passive areas for picnicking and large, outdoor community gatherings in district parks within master-planned residential communities.
- Use community-based parks in Central O‘ahu as sites for community gardens.

3.3.2.2 Access to Ravines and Mountain Trails

- Where appropriate, new developments should provide a public access easement and parking area for hikers from the *mauka* boundary to a public mountain trail easement.
- Where appropriate, new developments should provide a means for a safe trail to major Central O‘ahu gulches which are either within or adjacent to the project area. (These gulches which are part of the Central O‘ahu Open Space Network include Waiawa, Pānakauahi, Kīpapa, Waikele, and Waikakalaua Gulches.)

3.3.2.3 Siting

- Conceptual locations for district parks are shown on the Open Space Map in Appendix A. These locations may be revised without needing to amend the Sustainable Communities Plan when more detailed site information and planning analysis is available.
- Community and neighborhood parks are part of the open space system, but their location is determined more by community facility design considerations than by their relationship to the regional open space network. Siting of Community and Neighborhood Parks should be reviewed and decided at the time the Project Master Plan is submitted, prior to the granting of a zone change.

3.4 HISTORIC AND CULTURAL RESOURCES

Central O‘ahu contains several different types of historic and cultural sites, which are representative of its history and valuable as historic records and cultural references. In addition, public views which include views along streets and highways, mauka-makai view corridors, panoramic and significant landmark views from public places, views of natural features, heritage resources, and other landmarks, and view corridors between significant landmarks, can be important cultural resources.

OR&L Historic Railway - The railroad right-of-way runs along the edge of Pearl Harbor, with a spur that leads up to the Waipahū Cultural Garden Park site.

Waipahū Sugar Mill Environs - The location of the mill site is indicated as the Old Waipahū Town Anchor on the map of Waipahū Town in Exhibit 3.4. Related features nearby include the Waipahū Cultural Garden Park, the grouping of storefronts on Waipahū Depot Road and Waipahū Street, and the OR&L Historic Railway.

Kunia and Poamoho Villages - These plantation villages, still occupied and functioning as housing areas, are both shown on the Urban Land Use Map, but they are both located beyond the designated Community Growth Boundary in areas where agriculture is expected to remain a viable land use.

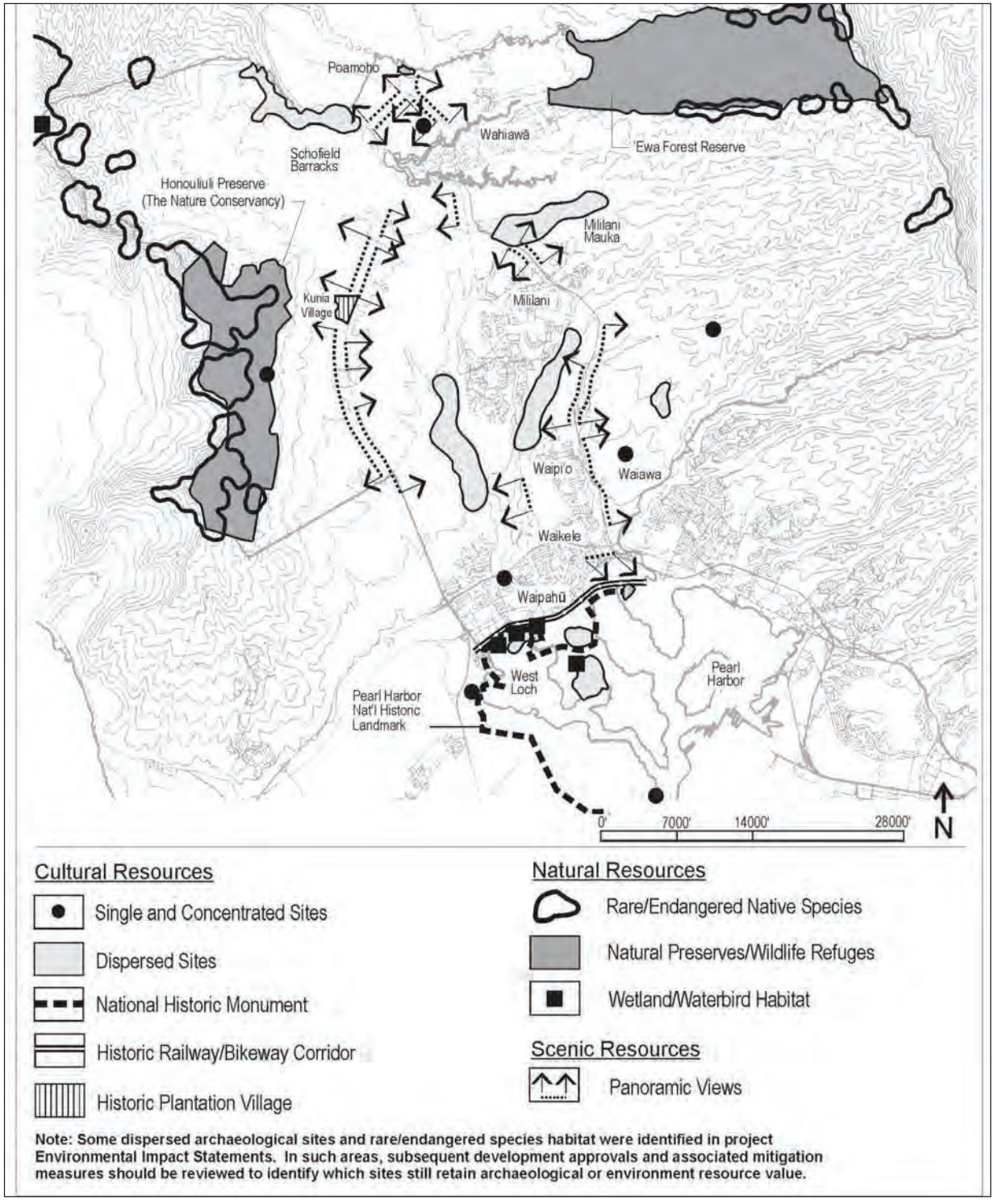
Native Hawaiian Cultural and Archaeological Sites - Kūkaniloko, a site where high chiefs were born, is located north of Wahiawā. It has been preserved by the State Office of Hawaiian Affairs (OHA) in collaboration with the Department of Land and Natural Resources and maintained by the Hawaiian Civic Club of Wahiawā, and the Friends of Kūkaniloko as an interpretive site. The 500 acres surrounding the site was acquired by the OHA in 2012 as part of the State's purchase of the Galbraith Trust lands north of Wahiawā. OHA's purpose in acquiring the surrounding acres was to protect the site.

Other sites are located throughout Central O'ahu, particularly in the ravines.

Exhibit 3.3 indicates the locations of some of these historic and cultural resources which are also listed in Table 3.2.

Exhibit 3.3

Natural, Cultural, and Scenic Resources in the Central O‘ahu Sustainable Communities Plan Area



Honouliuli Forest Reserve

Table 3.2 Significant Central O‘ahu Historic And Cultural Resources

Historic And Cultural Features

- OR&L Historic Railway Right-Of-Way
- Waipahū Sugar Mill and surrounding related features
- Waipahū Cultural Garden Park
- Kunia Village
- Kīpapa Gulch Tunnel Complex
- Poamoho Village
- Pearl Harbor National Historic Landmark

Native Hawaiian Cultural And Archaeological Sites

- Kūkaniloko
- Kīpapa Gulch Archaeological Sites
- Waikele Gulch Archaeological Sites
- Waikakalaua Gulch Archaeological Sites

Significant Views And Vistas

- Distant vistas of the shoreline and Pearl Harbor from the H-2 Freeway and Kunia Road above the ‘Ewa Plain.
- Views of the Wai‘anae and Ko‘olau Mountains from Kunia Road, Kamehameha Highway, and the H-2 Freeway.
- Views of Pearl Harbor from Farrington Highway in the vicinity of Waipahū High School.
- The view of the Waipahū Sugar Mill from Waipahū Depot Road.
- The view of the Wai‘anae Mountains from the Waipahū Cultural Garden.
- The view of the Wai‘anae Mountains from Mililani High School, from Meheula Parkway near Keaolani Street, and from Mililani District Park.
- The view of the upper Central O‘ahu plains toward Waialua from the intersection of Kamehameha Highway and Whitmore Avenue.
- The view of West Loch and of the Wai‘anae Range from Kamehameha Highway while passing the Patsy T. Mink Central O‘ahu Regional Park.

This section provides policies, and guidelines for the preservation and development of historic and cultural resources in Central Oʻahu.

3.4.1 GENERAL POLICIES

- Emphasize physical references to Central Oʻahu's history and cultural roots to help define Central Oʻahu's unique sense of place.
- Protect existing visual landmarks and support creation of new culturally appropriate landmarks.
- Preserve significant historic features from the plantation era and earlier periods.
- Vary the treatment of sites according to their characteristics and potential value.
- Use in-situ preservation and appropriate protection measures for historic, cultural, or archaeological sites with high preservation value because of their good condition or unique features, as recommended by the State Historic Preservation Officer. In such cases, the site should be either restored or remain intact out of respect for its inherent value.
- Ensure protection of Kūkaniloko. Determine the appropriate form of that protection through consultation with the Hawaiian Council of Elders, the Wahiawā Hawaiian Civic Club as the longtime caretakers of the site, the Office of Hawaiian Affairs as owner of the lands surrounding the site, the State Historical Preservation Officer, and others.
- For other native Hawaiian cultural and archaeological sites located throughout Central Oʻahu, particularly in the ravines, review, on a case-by-case basis, to determine if they should be preserved and protected or if an adaptive reuse of the site is appropriate.
- Retain significant vistas, as identified in Table 3.2., whenever possible.
- Where known archaeological and cultural sites have been identified and impact mitigations approved as part of prior development approvals, assume that these mitigations carry out the Plan vision and policies for preservation and development of historic and cultural resources in Central Oʻahu.

3.4.2 GUIDELINES

The following guidelines suggest how the general policies for Historic and Cultural Resources should be implemented:

3.4.2.1 Sites under Review

- **Adaptive Reuse -** Allow historic sites to be converted from their original intended use to serve a new function if it can be done without destroying the historic value of the site, especially if its interpretative value is enhanced.

- **Accessibility -** Public access to an historic site can take many forms, from direct physical contact and use to limited visual contact. Determine the degree of access based on what would best promote the preservation of the historic, cultural and educational value of the site, recognizing that economic use is sometimes the only feasible way to preserve a site. In some cases, however, it may be highly advisable to restrict access to protect the physical integrity or sacred value of the site.

3.4.2.2 Impacts of Development on Historic and Cultural Resources

- **Compatible Setting -** The context of an historic site is usually a significant part of its value. Plan and design adjacent uses to avoid conflicts or abrupt contrasts that detract from or destroy the physical integrity and historic or cultural value of the site. The appropriate treatment should be determined by the particular qualities of the site and its relationship to its physical surroundings.

- **Public Views -** Design and site all structures, where feasible, to reflect the need to maintain and enhance available views of significant landmarks and vistas. Do not permit development to block important public views, as listed in Table 3.2 and illustrated in Exhibit 3.2. Whenever possible, relocate or place underground overhead utility lines and poles that significantly obstruct public views, under criteria specified in State law.

3.4.2.3 OR&L Historic Railway

- As recommended in the **Waipahū Town Plan** (December 1995) and the **Pearl Harbor Historic Trail Master Plan** (May 2001), develop the right-of-way as a world-class heritage and educational corridor to enhance neighboring communities and serve as a major visitor and cultural attraction.

Adaptive Reuse

- Develop a paved shared-use path for bicycles and pedestrians along the length of the OR&L right-of-way, either within or adjacent to the right-of-way.

Adjacent Uses

- Design structures and elements related to the Pearl Harbor Historic Trail to reflect the historic nature of the railway and its surroundings.
- Set back new development as specified in Neighborhood Transit-Oriented Development (TOD) Plans, TOD development regulations, or as otherwise specified in existing land use approvals, policies, and regulations.
- Provide landscaping along the adjacent path, with occasional rest stops with seating and other amenities.

Public Access

- Encourage public use by providing and maintaining a shared path for pedestrians and bicyclists as part of a path running from ʻAiea to Nānākuli.
- Provide interpretative signs along the route to explain the historic significance of the railroad and note points of interest.

3.4.2.4 Waipahū Sugar Mill Environs

Method of Preservation

- Retain the sugar mill stack and boiler room as visual symbols of Waipahū's plantation town history.
- Maintain the historic theme of the Waipahū Cultural Garden Park, and seek opportunities to establish a more direct physical and economic connection between the park and the mill.

- Promote economic revitalization and in-fill development in the old commercial core along Waipahū Street and Waipahū Depot Road to maintain the historic character of this area.
- Establish a transit linkage between Waikele Center and Waipahū Town.

Adaptive Reuse

- Allow a variety of reuse options which are consistent with the purpose of retaining the historic plantation theme for the old town core at the Waipahū Sugar Mill site.
- Encourage adaptive reuse of older commercial buildings in the town core as a means to retain the historic building forms.

Urban Form

- Limit buildings in the old commercial core to two or three floors in height in keeping with the area's historic scale and to preserve views of existing mill structures.
- In renovations to the sugar mill for adaptive reuse, minimize exterior alterations that substantially change the building profile or accessory structures that define the mill's original purpose.
- Promote a strong pedestrian shopping orientation in the old town core by expanding "storefront" businesses, enhancing the sidewalk areas with street trees and period fixtures, consolidating off-street parking behind buildings, and retaining on-street parking wherever possible.
- Modify development standards, as needed, to facilitate the retention and rehabilitation of historic structures and appropriate in-fill development.

Public Access

- Retain the Waipahū Cultural Garden Park as a public facility.
- Encourage public access to the Waipahū Sugar Mill and other privately owned historic buildings in the Old Waipahū Town Anchor area (See Sec. 3.6.1.1).

3.4.2.5 Native Hawaiian Cultural and Archaeological Sites

Method of Preservation

- Require preservation in situ for those features that the State Historic Preservation Officer has recommended such treatment.

- Determine the preservation method, ranging from restoration to "as is" condition, on a site-by-site basis, in consultation with the State Historic Preservation Officer.

Adjacent Uses

- Determine appropriate delineation of site boundaries and setbacks and restrictions for adjacent uses on a site-by-site basis in consultation with the State Historic Preservation Officer.
- Include the sight lines that are significant to the original purpose and value of the site as criteria for adjacent use restrictions.

Public Access

- Determine the appropriateness of public access on a site-by-site basis in consultation with the State Historic Preservation Officer, Hawaiian cultural organizations and the owner of the land on which the site is located.

3.5 NATURAL RESOURCES PROTECTION

This section describes the general policies that are to be applied to protect Central O‘ahu natural resources.

3.5.1 GENERAL POLICIES

- Conserve potable water.
- Protect valuable habitat for waterbirds and other endangered animals and plants.
- Preserve the major Central O‘ahu ravines’ role in retaining storm water and their potential as open space recreational resources by restricting further development and minimizing grading or other disturbances of the gulch walls.
- Reduce light pollution's adverse impact on wildlife and human health and its unnecessary consumption of energy by using, where sensible, fully shielded lighting fixtures using lower wattage.

3.5.2 GUIDELINES

The following guidelines suggest how the general policies for natural resources protection should be implemented:

Water Conservation

- Protect prime watershed recharge areas and the Pearl Harbor potable aquifer which underlies the Central O‘ahu area.

Endangered Species

- Require surveys for proposed new development areas to identify endangered species habitat, and require appropriate mitigations for adverse impacts on endangered species due to new development.

Light Pollution

- Use the minimum outdoor lighting necessary for public safety, security, and community aesthetics consistent with the goals of energy conservation and environmental protection.
- Minimize glare and obtrusive light by limiting outdoor lighting that is misdirected, excessive or unnecessary by fully shielding lighting fixtures so that no light escapes above the horizontal plane and by using lower wattage.
- Adopt outdoor night lighting standards for rural areas that reflect the rural character of those areas.

3.6 WAIPAHŪ TOWN

This section discusses policies and guidelines for development of Waipahū. Waipahū will be revitalized with the support of policies and programs designed to attract new investment and to increase activity in its traditional commercial and civic centers.

The closing of the O‘ahu Sugar Company in 1995 marked the end of an era and of Waipahū’s role as a sugar mill town. Most of the mill site has been redeveloped, but the mill smokestack still stands, and adaptive use of the boiler room and other mill buildings as part of the Leeward YMCA has preserved key features of the landmark site.

Waipahū's commercial and industrial areas have been adversely affected by the growth of new commercial and industrial developments elsewhere in 'Ewa and Central O'ahu, requiring a search for new service and niche market opportunities if the business areas are to be revitalized.

Since the **Central O'ahu Sustainable Communities Plan** was approved in 2002, Waipahū has experienced considerable redevelopment including the new Leeward YMCA (which integrates elements of the historic sugar mill in its structure), the Filipino Community Center (FilCom Center), and nearby commercial and light industrial areas. The Waipahū Festival Marketplace has opened near Waipahū Depot Road, contributing to revitalization of that area. Finally, new residential areas along Manager's Drive and near the Ted Makalena golf course provide infill development rather than suburban expansion.

Waipahū's future is addressed in the **Waipahū Town Plan**, the Special Area Plan for Waipahū (completed in December 1995 and accepted by City Council Resolution in 1996), in the **Waipahū Livable Communities Initiative** (May 1998), and in the **Waipahū Neighborhood TOD Plan** (April 2014), the first of a series of neighborhood transit-oriented development plans for the areas around rail transit stations to be adopted by the City Council.

The **Waipahū Neighborhood TOD Plan** provides a vision for neighborhood improvements and redevelopment of the areas around the planned West Loch and Waipahū Transit Center stations of the Honolulu Rail Transit system and serves as the basis for proposed Transit-Oriented Development Special District zoning regulations covering the areas generally within one-half mile of the stations.

These community-based plans form the basis for the following policies and guidelines which will be used to evaluate proposed land use changes and infrastructure developments in Waipahū.

3.6.1 GENERAL POLICIES

- Develop Waipahū as a harmonious blend of the old and new.
  - o Retain and embrace Waipahū Town's cultural and plantation heritage - the smokestack and portions of the sugar mill should remain as dominant symbols, and the Waipahū Cultural Garden Park should serve as a reminder of this heritage.
  - o Provide opportunities for economic revitalization which generate jobs and attract people to Waipahū while minimizing adverse impacts to existing small businesses.
  - o Approve new land uses if they are compatible with existing uses and provide for community needs.
  - o Develop so there is a mixture of old style plantation buildings with more contemporary buildings.
  - o Improve the overall visual appearance and character of Waipahū Town.
  - o Improve vehicular access into and within Waipahū, and integrate pedestrian, bicycle, and transit facilities.
  - o Create streets that are landscaped and pedestrian- and bike-friendly.
  - o Provide ample roads to get around and through the town.
  - o Retain Waipahū Street as a slow winding road with large monkey pod trees.
- Integrate the economic development of Waipahū with social, cultural, and recreational enhancements.
  - o Revitalize Waipahū Town for the betterment of the business community and to provide gainful employment serving the immediate community and the region.
  - o Make the economic development and revitalization of Waipahū, particularly within the town core area (also known as the Old Town Anchor area), central to implementing the community's desired land use plan.
  - o Recognize and address the social and recreational opportunities that would achieve a balance in the future development of Waipahū, enhance the experiences of residents and workers, and make Waipahū a more attractive place to visit.
  - o Provide increased opportunities for recreation on the land and in nearshore waters.

- Preserve and enhance greenery and open spaces for the current and future residents to use and enjoy.
  - Create a network of green spaces, parks, paths, trails and shaded neighborhood streets linked to the two Honolulu Rail Transit stations, the Pearl Harbor Historic Trail, and the Waipahū Cultural Garden.
  - Reopen Waipahū's shoreline for fishing, boating, and picnicking, to the extent allowed by the Navy.
  - Develop and maintain the Pearl Harbor Historic Trail as a recreational shared use path stretching from ʻAiea to Nānākuli.
- Create a Waipahū that is a vibrant community where the country atmosphere is preserved, where business prospers, and where diverse people can come together to live, work, shop, and play.
- Around the two Waipahū stations on the Honolulu Rail Transit system, encourage transit-oriented development that:
  - Reflects Waipahū's unique character,
  - Maintains the quantity of affordable housing while offering housing for a wider range of households,
  - Creates more walkable, healthier, prosperous neighborhoods with safe pedestrian and bicycling environments that put pedestrians first, and
  - Offers gathering places for all generations.

3.6.1.1 Anchor Areas

As shown in Exhibit 3.4, the **Waipahū Town Plan** (1995) identifies four land use anchor areas:

- The **Old Waipahū Town Anchor** area includes the Manager's Drive area, the Sugar Mill site, Hans L'Orange Park, Waipahū Street, Waipahū Depot Road, and the Waipahū Cultural Garden Park.
  - The **Sugar Mill site** formerly housed Oʻahu Sugar Company's mill operations.
    - Retain selected historic structures on the mill site in future redevelopment of the site.
    - Permit light industrial use in the area adjacent and *mauka* of the sugar mill.
    - Permit commercial and community-oriented uses within the remainder of the site.
      - "Big box" stores would not be appropriate for the site.

- Community-oriented uses for the site include a YMCA facility, and a Filipino Community Center.

□ Designate an **Old Town Commercial Area** along portions of Waipahū Street and Waipahū Depot Road. Use guidelines for the streetscape and building to enhance the Old Town identity of the area.

□ Encourage existing businesses to revitalize their building facades.

□ Encourage new businesses to in-fill in ways that visually maintain the Old Town Commercial low-rise character and wide range of uses.

□ Establish a pedestrian-oriented theme.

□ Create a Festival Market Place Plaza in the center of the Old Town Commercial Area to act as an "outdoor room" for important community events and activities. (See Exhibit 3.5)

□ Uncover, restore, and enhance Kapakahi Stream, and create a Stream Walk linking the Waipahū Plantation Village, the Festival Market Place Plaza, the Waipahū Transit Center Rail Station near the intersection of Farrington Highway and Mokuloa Street, the Pearl Harbor Historic Trail, the Pouhala Marsh, and the Waipiʻo Soccer Complex. (See Exhibit 3.5)

- The **Community Facilities Anchor** area includes the Civic Center site, the Waipahū Transit Center on Hikimoe Street and the planned Waipahū Transit Center Rail Station near the intersection of Farrington Highway and Mokuola Street. The Rail Station will be within walking distance of both the Community Facilities Anchor area and the Old Waipahū Town Anchor area. Existing facilities include the Bill Balfour Jr. Waipahū District Park, the Waipahū Civic Center, the Waipahū Public Library, a senior citizen health care center, a children's day care center, and elderly rental housing. The recently completed Plantation Town Apartments include both affordable and market for-sale housing units.

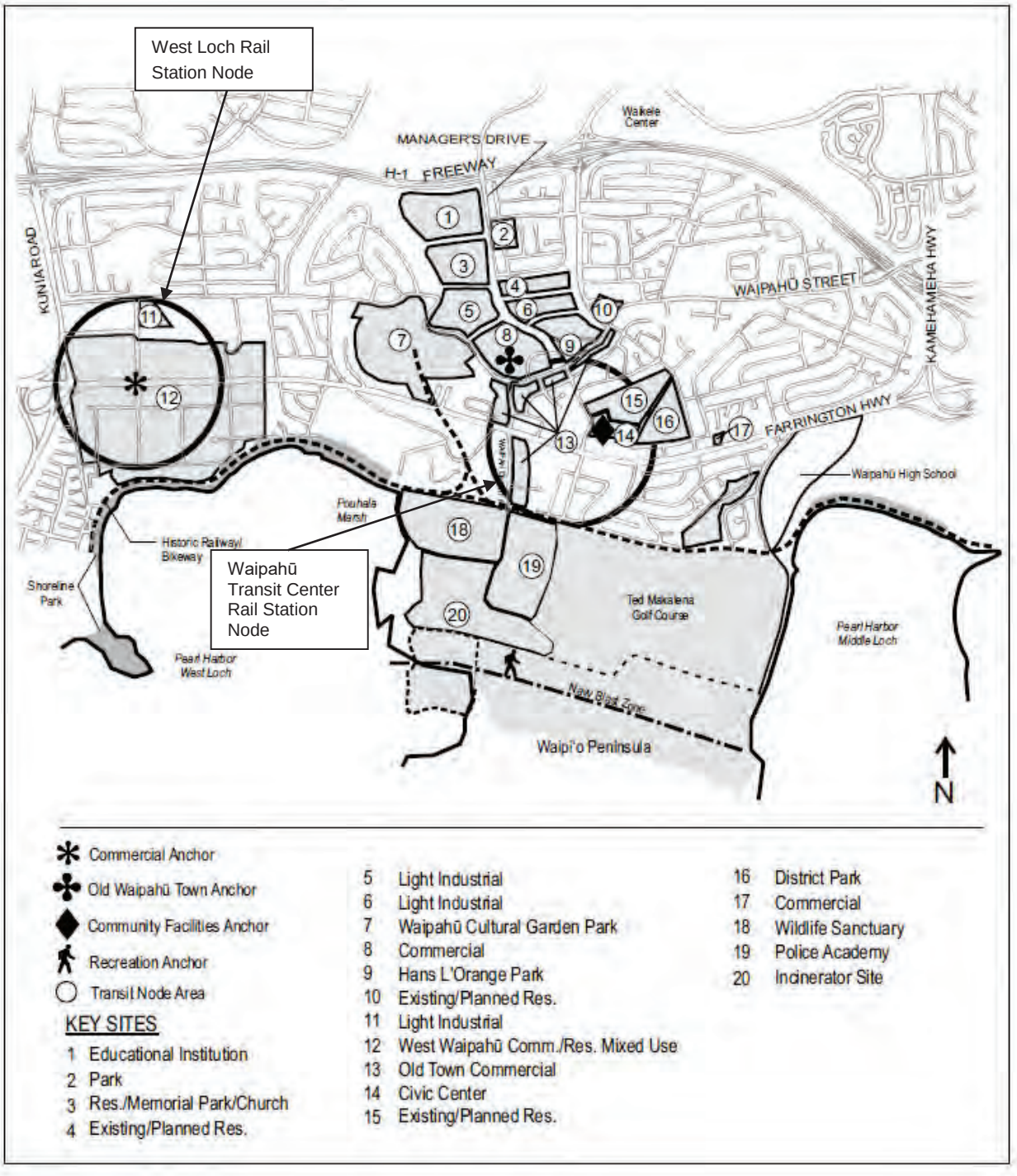
o Continue to consolidate government services in the vicinity of Mokuola Street and the Bill Balfour Jr. Waipahū District Park.

o Create a highly walkable, attractive village center generally within 1/4 mile of the Waipahū Transit Center station with in-fill housing, retail, and mixed-use development.

- Create an urban transit boulevard along Farrington Highway near the planned rail station and transit plazas on both sides of Farrington Highway at the rail station.

- The **Recreation Anchor** area includes the Waipahū Shoreline Park and Preservation Area, the Pearl Harbor Historic Trail along the OR&L Right-of-Way, and the Waipiʻo Peninsula recreational facilities, including the Waipiʻo Peninsula Soccer Park and the Ted Makalena Golf Course.
  - Develop the **Waipahū Shoreline Park and Preservation Area** along the entire shoreline in Pearl Harbor's West Loch and Middle Loch with a 150-foot setback required for all new development located on the shoreline if justified based on historic or adopted projections of shoreline erosion or extreme flooding events. (This park would be part of a continuous shoreline park and greenbelt from West Loch to Rainbow Marina near Aloha Stadium.)
  - Seek Navy approval for access to nearshore fishing and boating in Pearl Harbor's West Loch to improve recreational opportunities.
  - Develop the **Pearl Harbor Historic Trail** within the 40-foot wide OR&L right-of-way to connect to the Leeward Oʻahu Bikeway to create a bikeway running from Nānākuli to the Rainbow Marina near Aloha Stadium.
- The **Commercial Anchor** area includes a commercial and light industrial area centered on the planned West Loch Station near the intersection of Leokū Street and Farrington Highway. This area is recognized as a "Commercial Center" with higher density than other areas of Waipahū.
  - Enhance the area's ability to attract commercial and residential uses and emphasize the Waipahū gateway character of the area.
  - Use public-private partnerships to encourage redevelopment of the area as medium-density, mid-rise, mixed-use residential/commercial development generally within a 1/4 mile distance of the planned West Loch Station (as shown on Exhibit 3.4).
  - Acquire the shoreline setback areas and the shoreline trail park areas along West Loch.
  - Open view planes to allow views of Pearl Harbor from key points along Leokāne Street and Pūpūʻolē Street on the makai edge of the area.

Exhibit 3.4
Waipahū Town Anchors, Transit Nodes, and Key Sites

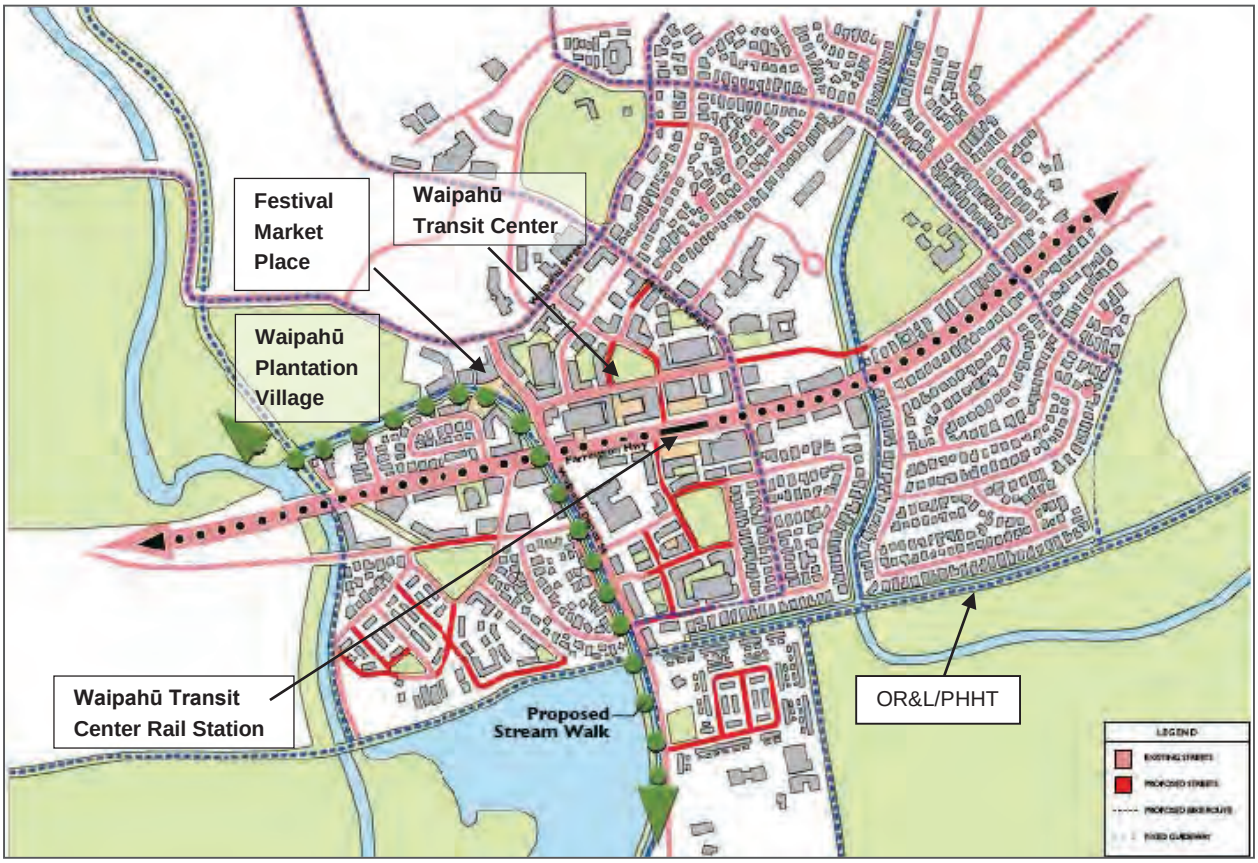


Source: Department of Planning and Permitting, Waipahū Town Plan (1995)

Note: This map shows concepts in the 1995 **Waipahū Town Plan**, some of which have been superseded by recent development or planning. The transit node by the Communities Facilities Anchor has been moved from the location proposed in 1995 to the location adopted by Council in the 2014 **Waipahū Neighborhood TOD Plan**.

□

Exhibit 3.5
Festival Market Place, Kapakahi Stream Walk, and Rail Station



Adapted from Department of Planning and Permitting, **Waipahū Neighborhood TOD Plan** (April 2014)

3.6.2 GUIDELINES

The following guidelines suggest how the general policies for Waipahū Town should be implemented:

3.6.2.1 Urban Design

- Preserve the scale and sense of Waipahū as a small town. Preserve existing zoning heights and densities throughout Waipahū Town to preserve views of the smokestack and to help maintain the small town scale, except as appropriate for redevelopment in the Transit-Oriented

Development (TOD) Special Districts around the Honolulu Rail Transit stations.

- Maintain the visual dominance of the sugar mill site, particularly the smokestack.
- Retain and renovate as needed structures having historic, cultural, and/or visual significance. Identify historic buildings on the mill site and in the Old Town Commercial Area. Encourage adaptive reuse of these historic buildings.
- Establish a special image for the Old Town Commercial Area signifying its historic character and role as the cultural and business center for Waipahū. Adopt detailed design guidelines for the Old Town Commercial Area to create the desired historic plantation theme.
- Enhance landscaping along Farrington Highway and adjoining roadways through the increased use of street trees and the establishment of planting schemes which help to identify and distinguish between the different commercial and industrial areas.
    - o Landscape the areas beneath the rail guideway on Farrington Highway;
    - o Plant canopy trees on streets perpendicular to Farrington Highway; and
    - o Create landscaped entry features at both ends of Farrington Highway and at the intersection of Waipahū Depot Road and Farrington Highway.
- Develop open space areas, the shoreline, and other available natural areas for use by the public and integrate them into the built environment.
- Make open space and coastal resource areas on the Waipi‘o Peninsula and along the Pearl Harbor shoreline available for increased use by the public.
- Use landscaped roads, and pedestrian/bicycle pathways to link parks, open space areas, and centers of interest.
- Modify development standards to facilitate the retention and rehabilitation of historic structures and appropriate in-fill development.

3.6.2.2 Old Waipahū Town

Sugar Mill Site

- Retain the visual qualities and building character that defined the mill's original purpose in renovations to the sugar mill site for adaptive reuse.

Old Town Commercial Area

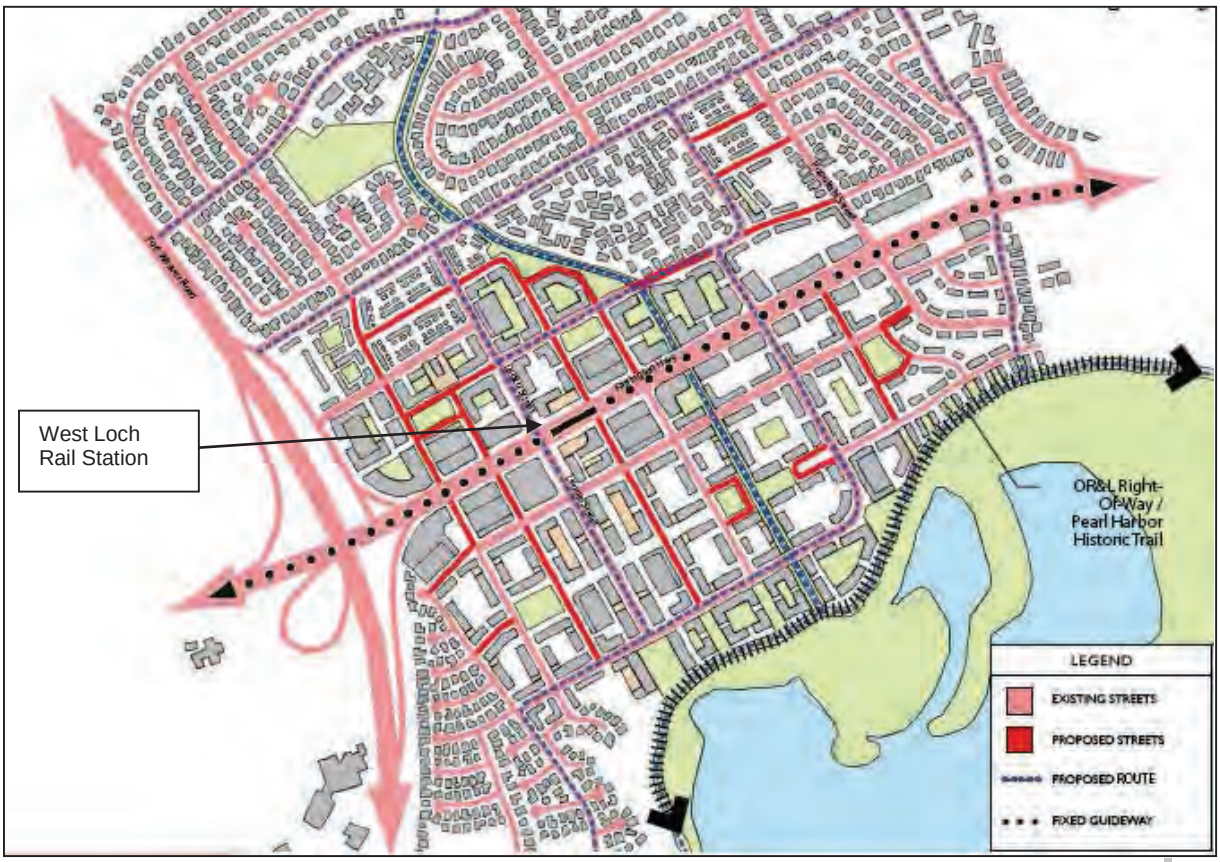
- Maintain the compactness of the town's historic shopping area, and encourage new uses in-fill between existing buildings along Waipahū Street and Waipahū Depot Road.
- Except as necessary for adjustments to improve traffic flow and safety, maintain the character of Waipahū Street and Waipahū Depot Road in order to safeguard the historically and visually significant buildings and maintain the area's pedestrian scale and orientation.
- Wherever possible, identify, maintain and restore existing significant historic structures and encourage their adaptive reuse where necessary to ensure their continued viability and use.
- Require the architectural character of new buildings to reflect the plantation era architecture of Waipahū's historic past. Basic design principles, texture, construction materials, and colors should be compatible with styles from this era.
- Encourage and maintain a strong pedestrian orientation through the expansion of "storefront" businesses, enhancement of the streetscape and walking environment, and consolidation of off-street parking behind buildings.
- Locate new buildings or additions close to the street, creating a traditional "street line" of facades, with buildings forming an attractive edge to the roadway.
- Orient storefronts to the street and include elements such as canopies, overhangs, porches, and trellises to scale down building heights and enhance the street-level environment.
- Limit buildings to two or three floors in height in keeping with the area's historic scale and to preserve views of existing mill structures.
- Discourage awkward or over-scaled building forms, and reduce long building forms or offset them into smaller masses of more residential proportions.

3.6.2.3 Community Facilities Anchor / Waipahū Transit Center Rail Station Area

- Develop and landscape spaces between buildings in a manner which provides the area with a unifying visual image and creates the sense of an active, people-oriented civic park.
- Create an urban transit boulevard on Farrington Highway between Waipahū Depot Road and Mokuola Street to separate local traffic and through traffic and provide slower speeds and a safer pedestrian environment adjacent to the rail station.
- Allow mixed-use development in the Farrington/Mokuola Transit-Oriented Development (TOD) Special District in order to create a walkable, medium-density community with neighborhood retail and a commercial core near the rail station.
- Allow increased building heights to 60 feet generally within a 1/4 mile of the rail station and to 45 feet for properties generally from a 1/4 mile to a 1/2 mile away from the rail station, except where lots adjoin an R-5 residential district.
- Relax limits on maximum building area in the TOD Special District generally within a 1/4 mile of the rail station to create active street edges, and discourage surface parking lots in front of buildings.
- Allow a floor area ratio (FAR) as high as 3.5 as a bonus for realizing important community benefits.

Exhibit 3.6

Commercial Anchor/West Loch Rail Station



Adapted from Department of Planning and Permitting, **Waipahu Neighborhood TOD Plan** (April 2014)

3.6.2.4 Commercial Anchor / West Loch Rail Station Area

- Establish attractive and distinctive entry features at the western end of the Commercial Anchor Area.
- Create an urban transit boulevard on Farrington Highway between Leokū/Leoʻole Streets and Leoleo Street to separate local traffic and through traffic and provide slower speeds and a safer pedestrian environment adjacent to the rail station.
- Allow mixed-use development in the Farrington/Leokū Transit-Oriented Development (TOD) Special District in order to create a walkable, medium-density community with neighborhood retail and a commercial core near the rail station.
- Encourage mid-rise, medium density apartment and live/work uses when combined with retail commercial uses on the ground level generally within 1/4 mile of the West Loch station.

- Upgrade the visual appearance of business development through building façade improvement programs and through the greater use of shade trees within parking areas and of landscape buffers between parking areas and adjoining streets.
- Allow increased building heights up to 60 feet generally within a 1/4 mile of the station, and up to 45 feet for properties generally from a 1/4 mile to a 1/2 mile away from the station except where lots adjoin an R-5 residential district.
- Allow building heights up to 90 feet in the TOD Special District as a community benefits bonus.

3.6.2.5 Residential Areas

- Where possible and appropriate, establish small community gardens in residential and apartment areas in order to increase green space and maintain a connection with the town's agricultural roots.
- Provide street trees in all neighborhoods in order to soften the visual impact of development and enhance the walking environment for residents.
- Encourage mid-rise, medium density apartment buildings, including mixed-use developments, in areas generally within 1/4 mile of the West Loch and Waipahū Transit Center stations, with the exception of the Old Town Commercial Area.

3.6.2.6 Circulation Design Guidelines

- Incorporate complete streets features wherever feasible.
- Improve existing pedestrian and bicycle connections and, where appropriate, develop new ones to nearby residential areas from the old commercial core and to recreational and cultural facilities located around the old commercial core.
    - o Landscape all pathways in a manner which identifies their role as visual and functional linkages between open spaces and centers of activity.
    - o Design pathways, where possible, to accommodate safe movement for walkers, joggers, and bicycle riders.
- Provide landscape improvements, including shade trees, to streets and front yards in the Farrington Highway business areas to accommodate, where possible, walkways and bicycle paths which link the different

business developments together and connect these areas to adjoining residential neighborhoods.

- Develop sidewalks, traffic signal improvements, and other measures to facilitate pedestrian circulation between *mauka* and *makai* areas of Waipahū.
- Develop plazas accessible to pedestrians at the two Honolulu Rail Transit stations and the Festival Marketplace.
- Provide bicycle parking and storage at residential buildings throughout the area generally within 1/2 mile of the two Honolulu Rail Transit stations.

3.6.2.7 Open Space and Views

- Acquire shoreline setback areas and the shoreline trail park areas along West Loch, in part so that Pearl Harbor can be seen from key points along Leokāne Street and Pūpūʻolē Street on the *makai* edge of the area.
- Connect existing and planned parks and open space areas, wherever possible, by a series of tree-lined pedestrian pathways, jogging paths, and bikeways.
- Strengthen visual and physical connections between Waipahū Cultural Garden Park, the old commercial core and significant adjoining areas and roadways.
- Preserve significant views, including views of the Koʻolau and Waiʻanae Mountain Ranges from along Farrington Highway, views of Pear Harbor from Farrington Highway in the vicinity of Waipahū High School, the view of the Waipahū Sugar Mill from the Waipahū Cultural Garden, and the view of the Waiʻanae Mountains from the Waipahū Cultural Garden.
- Preserve mature trees.
- Provide publicly accessible open spaces for passive recreation, play areas, and socializing in the area generally within 1/2 mile of the two Honolulu Rail Transit stations.

3.7 WAHIAWĀ TOWN

Historically, Wahiawā has functioned as both a plantation town and as a support community for Schofield Barracks. It took on the role of a regional center as well, with medical and civic services.

Wahiawā's role as a stopping point for people traveling to and from the North Shore has been declining as a result of improvements in the highway system. Wahiawā has historically been the boundary between the urban growth of Central O'ahu and the broad vistas of the agricultural and rural areas of the North Shore.

Wahiawā's State and County offices have historically provided services to both upland Central O'ahu and to North Shore communities and played a role as a regional civic and shopping center. Wahiawā's role as a regional center for Central O'ahu has been diminished by the development of major new towns and residential areas such as Mililani Town and Melemanu Woodlands. Its commercial areas have had difficulty competing with the shopping centers of the newer communities and the major new "big box" retailers in power centers at Mililani, Waipi'o, Waikele, and Pearl City.

Wahiawā has also been affected by the decline in both the pineapple and sugar industry and by changes in military force levels at Schofield Barracks and Wheeler Army Airfield.

Wahiawā is unique because it is a town surrounded by forest, because it has a forest within town in the tree lined gulch that courses through the center of town, and because it is an island, completely surrounded by the North and South forks of Kaukonahua Stream and Lake Wilson which provides special views and recreational opportunities.

Earlier planning efforts which considered Wahiawā's development include the **Central O'ahu/North Shore Regional Plan (**July 1993) and the **Wahiawā Town Master Plan** (1994).

In 1998, the Council approved the **Wahiawā Urban Design Plan**, the Special Area Plan for Wahiawā, which was the result of a community-based planning process involving the Planning Department (now the Planning Division of the Department of Planning and Permitting) working with a Wahiawā Urban Design Task Force, comprised of various community businesses, organizations, and elected representatives.

The following general policies are drawn from the **Wahiawā Urban Design Plan** and earlier community-based planning efforts.

3.7.1 GENERAL POLICIES

Wahiawā should build on the strength of its stable and attractive residential areas and protect and enhance its unique characteristics.

3.7.1.1 Maintain and Enhance Wahiawā's Plantation Heritage and Rural, Small Town Atmosphere

- Maintain the scale and feeling of Wahiawā as a small town. Wahiawā's plantation heritage and "country town" atmosphere give it a character that is not found in newer master planned communities.
  - o Preserve commercial and civic buildings and residential neighborhoods which reflect the town's plantation heritage and multi-cultural roots.
  - o Maintain and protect the quality of the living environment offered by existing single-family residential areas.
- Ensure that the architectural character of new buildings and of building renovations is compatible with historic buildings in the area and reflects the town's plantation heritage.

3.7.1.2 Enhance Wahiawā's Role as a "Gateway" Between Town and Country

- Develop new job centers for Wahiawā serving Central Oʻahu and North Shore diversified agriculture.
- Prohibit new urban development in Central Oʻahu north of Wahiawā so that Lake Wilson and Kaukonahua Stream continue marking the northernmost extent of urban development in Central Oʻahu.
- Establish and maintain appropriate gateway entry features on Kamehameha Highway at both the northern and southern entrances to Wahiawā.

3.7.1.3 Enhance the Town Core as a Setting for Social, Civic, and Commercial Interactions

- Strengthen Wahiawā's civic center by consolidating public services, and encouraging the location of more social and community service organizations in the town.
- Maintain and enhance the character and role of Wahiawā's business area as a community shopping district and regional service center in order to encourage Oʻahu residents and visitors to discover what Wahiawā has to offer.

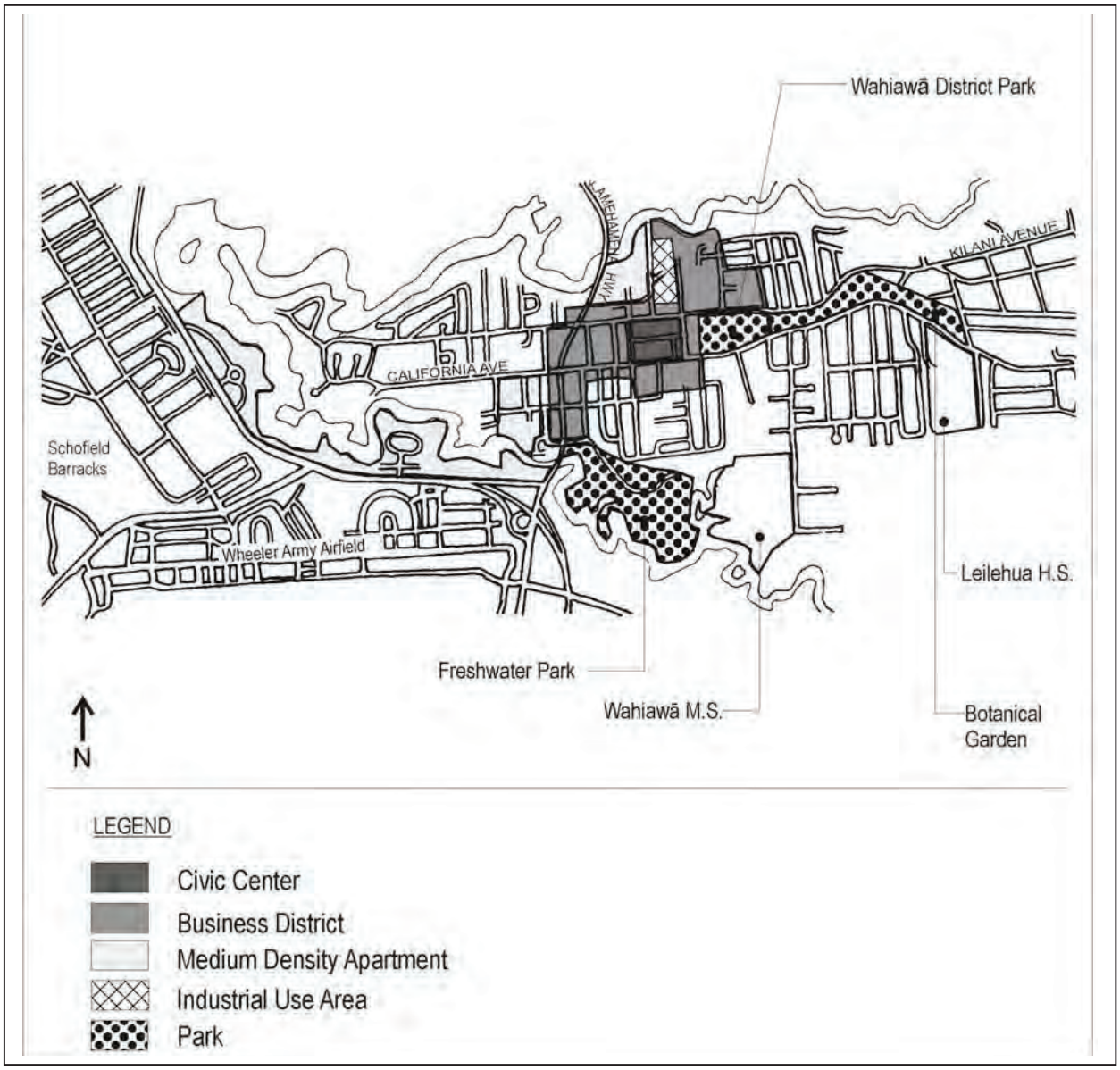
- Explore creating a geriatric research and technology park in Wahiawā to serve as a hub for conducting research, developing technologies, and providing services and products in support of age-friendly communities.

3.7.1.4 Protect and Enhance Forest and Lake Features

- Protect and enhance Wahiawā's unique forest and lake features.
- Pursue public-private partnerships to explore opportunities to redevelop commercial and residential areas on the Town side of the northern and southern gateway entry points (where Kamehameha Highway crosses Lake Wilson) to take advantage of shoreline views and make the shoreline more accessible and enjoyable to the public while reinforcing the integrity of the Wahiawā Town Center.

Exhibit 3.7 shows the town's business district, civic center, as well as other major land uses within Wahiawā.

Exhibit 3.7
WAHIAWĀ TOWN



3.7.2 GUIDELINES

The following guidelines suggest how the general policies for Wahiawā Town should be implemented:

3.7.2.1 Business District

- Re-establish Wahiawā's historic "identity" within a "Town Center" located along Kamehameha Highway in the vicinity of California and Kīlani Avenue.
- Maintain and restore existing structures that reflect the historic and architectural character of Wahiawā where possible, and encourage adaptive reuse where necessary to ensure their continued viability and use.
- Require redevelopments to reflect an architectural theme consistent with the historic character of Wahiawā. Ensure the architectural character of new buildings and of the building renovations are compatible with historic buildings in the area and reflect the town's plantation heritage.
- Provide open space and landscaping to reinforce the historic character of Wahiawā.
- Establish distinctive and attractively landscaped gateway features at each of the Kamehameha Highway entries to the town to reinforce a "sense of arrival" along these approaches.
- Encourage new commercial uses to in-fill on vacant and underutilized parcels within Wahiawā's existing business district. Avoid expansion of the district since it is not needed.
- Allow repair shops, storage, and similar uses which provide needed services but confine them to the town's existing industrial area between Palm and North Cane Street.
- Provide buffer landscaping and similar edge treatments around industrial sites to minimize impacts on adjoining areas.
- Limit building heights in keeping with Wahiawā's small town scale. However, give some flexibility for public buildings, such as government offices and churches, in order to allow for designs that create symbols of identity for the community.
- Locate parking areas behind commercial establishments in order to improve the pedestrian environment and appearance of the streetscape.

- Upgrade the visual appearance of business developments through building façade improvement programs and through the greater use of shade trees within parking areas and landscape buffers between parking areas and adjoining streets.

3.7.2.2 Civic Center

- Welcome and encourage expansion of existing government facilities and community services. To the extent possible, cluster these uses within and bordering the area bounded by California Avenue, North Cane Street, Kīlani Avenue, and Lehua Street.
- Expand and consolidate parking for the Civic Center and Wahiawā General Hospital within a multi-level parking garage located on Center Street.
- Landscape and develop available setback areas and open spaces in a manner which gives the area a unifying visual image and provides a "village green" for informal gatherings and relaxation.

3.7.2.3 Residential Areas

- Prevent the intrusion of apartment buildings or other incompatible uses into existing single-family residential areas.
- Maintain the extensive use of street trees to enhance Wahiawā's rural character and image as a "town within a forest", and extend the trees into all of Wahiawā's residential areas.

3.7.2.4 Circulation

- Incorporate complete streets features wherever feasible.
- Make minor adjustments to street rights-of-way, alignments, intersections, and on-street parking where they would improve traffic flow and safety. In general, however, avoid new streets or major street widenings as they are not needed and would detract from Wahiawā's rural and small town character.
- Provide on-street parking during non-peak traffic hours to "slow-down" traffic along Kamehameha Highway.
- Where possible, expand off-street parking where needed to support local businesses, such as along Kamehameha Highway.

- Establish a network of bicycle paths and designated bicycle routes along major traffic corridors in order to improve safety and convenience and encourage increased use of bicycles for travel within the community.
- Connect the Wahiawā Botanical Garden to the Wahiawā Freshwater Park on Lake Wilson by way of a trail through the gulch which connects the two facilities.
- Develop jogging paths and bike trails to take advantage of the Lake Wilson shoreline.
- Install landscaping, sidewalk and other streetscape improvements in areas lacking in greenery or with unsafe or inadequate provision for pedestrian traffic.

3.7.2.5 Open Space and Views

- Preserve and protect the natural scenic character of Lake Wilson and adjoining forested areas from alteration or encroachment of urban uses because they are vital elements of Wahiawā's "town in a forest" image.
- Expand and improve Wahiawā Freshwater Park with appropriate facilities which will encourage and accommodate greater public use without major disruption to the site's natural beauty.
- Upgrade recreational facilities in existing community parks and, where possible, add new facilities in order to meet current and future demands for sports activities.
- Where possible, design site layouts and building orientations for new developments to maximize view opportunities of prominent natural views in Wahiawā including Lake Wilson and the Waiʻanae Mountains, and, to a lesser degree, the Koʻolau Mountains.
- Preserve significant vistas, including the views of the upper Central Oʻahu plains toward Waialua and of the Waiʻanae Range from the intersection of Kamehameha Highway and Whitmore Avenue, near Kūkaniloko.

3.8 CENTRAL O‘AHU PLANTATION VILLAGES

This section provides policies and guidelines for preservation and maintenance of the plantation villages at Kunia and Poamoho.

The villages of Kunia and Poamoho, both located in the agricultural fields of Central O‘ahu, are the only two plantation villages in this region that have substantially retained the character and ambiance of a traditional agricultural camp. State law supports retention of these former plantation communities by listing them as a permitted use in the State Agricultural District. As Central O‘ahu becomes urbanized, the villages should be preserved as physical reminders of Central O‘ahu’s plantation era heritage.

As shown in Exhibit 3.7, Kunia Village is located off Kunia Road about two miles south of Schofield Barracks. Exhibit 3.7 also provides a map of Poamoho Village which is located about one mile north of Wahiawā in the agricultural fields of north-central O‘ahu.

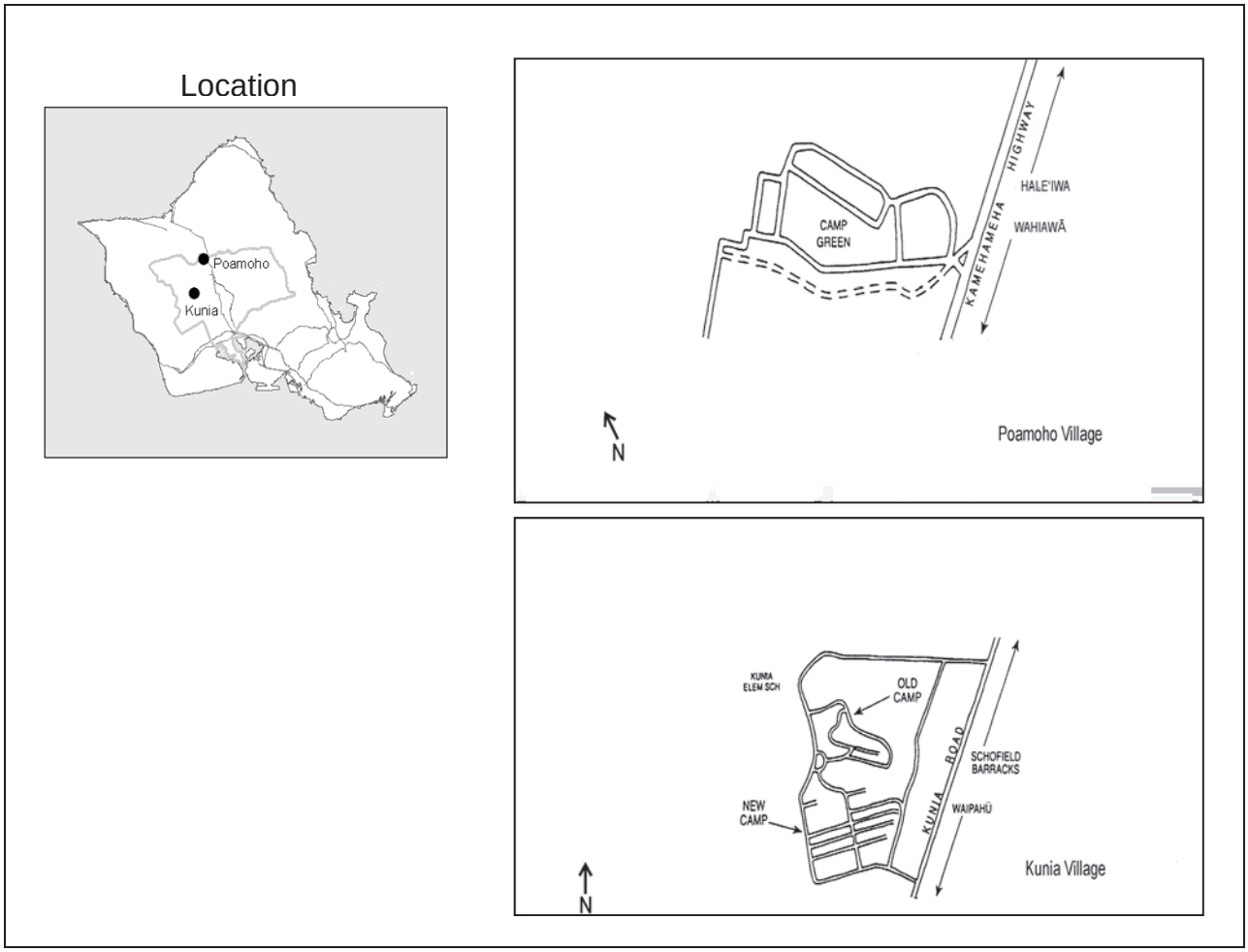
Currently, neither Kunia nor Poamoho is operated by a plantation company. Residents and other concerned parties have worked to maintain the villages.

- Poamoho has been reorganized as a fee simple condominium property, with residents as condominium owners.
- The Kunia Village land was acquired by the Hawai‘i Agricultural Research Center (HARC) after being subdivided from a much larger parcel recently acquired by Island Palm Communities, a partnership between the U.S. Army and Lendlease.
- HARC is working on plans for both the village and the nearby industrial and commercial facilities. HARC seeks to manage the village as rental housing for agricultural workers. Under HARC's approach, workers and retirees now living in the village could stay on, but new residents would have to be agricultural workers to rent homes in the village.

3.8.1 GENERAL POLICIES

- Use the villages as affordable housing for workers from new diversified agricultural activities on lands along Kunia Road and north of Wahiawā.

Exhibit 3.8
CENTRAL O‘AHU PLANTATION VILLAGES



- Develop related affordable housing to support diversified agricultural employees.
- Rehabilitate the existing village structures or adapt them for reuse.
- Preserve and enhance the existing rural forms and historic character exhibited within the villages.
- Perpetuate rural agriculture functions and activities in the surrounding area in conjunction with village land uses.

3.8.2 GUIDELINES

The following guidelines suggest how the general policies for Central O‘ahu Plantation Villages should be implemented.

- Preserve existing buildings of historical, cultural, and/or architectural significance.
- Retain and rehabilitate existing housing units, where feasible, in a manner which allows them to remain affordable to the existing residents.
- Require the design, visual appearance and placement of any new structures within or adjoining the existing villages to reflect and complement the villages' historic character and forms.

Method of Preservation

- Rehabilitate existing historic plantation houses as part of an assisted housing program.
- Rehabilitate and convert rental dwellings for sale, giving preference to existing residents to minimize displacement and retain the sense of community.
- Preserve the historic development pattern, architectural character and street appearance by allowing exceptions from conventional subdivision and other development codes, as appropriate.
- Replace structures that must be razed, and develop other vacant areas with new in-fill development that respects the historic character of the original village.

Adaptive Reuse

- Rehabilitate residential areas with an emphasis on affordable home ownership opportunities for existing residents.
- When a historic structure is converted to a use other than its original purpose, rehabilitate the structure in a manner that does not alter its exterior appearance.

Urban Form

- Maintain the current grid/loop street pattern in the existing villages and replicate it in new in-fill development.
- Do not use standard subdivision street hierarchy and design standards.
    - To minimize impacts on front yards and structure and to retain a rural village character, maintain narrow street widths without sidewalks in the residential portions of existing villages and establish narrow street widths without sidewalks in new villages.

- Locate any new collector streets outside existing villages.
- Plant and maintain principal entry roads to and through the villages as tree-lined boulevards.
- Highlight village entries with landscape features.
- Provide appropriate canopy trees along all street frontages.
- Ensure lot sizes and dimensions for new in-fill homes in the existing villages are similar to those of existing house lots.
- Require new structures on vacant lots in the existing villages to be designed to complement the exterior design of adjacent homes.
- Landscape and maintain yards and other open spaces to preserve and enhance the open space appearance of the villages.

Open Space/Views

- Preserve and maintain existing village greens and play fields as places for community gatherings and recreation.
- Preserve existing landscaping within the villages and stands of trees in bordering ravines.

Adjacent Land Uses

- Maintain agricultural use on adjacent lands.
- Minimize the visibility of any new structures in the vicinity by appropriate landscape screening and building siting.
- If visibility is unavoidable, design the new structure to respect the scale and character of the villages.
- Improve roadways as necessary to provide access to public facilities.

3.9 EXISTING AND PLANNED RESIDENTIAL COMMUNITIES

This section provides general policies and guidelines for the development of new communities and the expansion or renovation of existing communities. Guidelines are provided for three types of residential uses: **Residential, Low Density Apartment**, and **Medium Density Apartment.**

- **Residential** areas consist of one and two-story single-family attached and/or detached dwellings with individual entries.
- **Low-Density Apartment** areas consist of two-story and three-story townhouses or low-rise apartment buildings. Dwelling units may have common entries, but buildings are typically non-elevator structures.
- **Medium-Density Apartment** developments take the form of multi-story apartment buildings. They may be located in mixed use zones, with the ground floor or lower floors occupied by retail and service commercial uses.

3.9.1 GENERAL POLICIES

- **Overall Density –** To achieve the desired compactness and character of development in planned residential communities, develop with the housing density of the aggregate area zoned for residential use (including the streets) in the range of 10 to 15 units per acre. (This average does not include areas zoned for commercial or industrial use.)
- **Higher Density Housing along the Waipahū-Kapolei Rail Transit Corridor –** To promote use of mass transit, develop higher density residential use along a major rail transit corridor linking Waipahū with Kapolei in the west and with Primary Urban Center communities to the east.
    - Develop Medium Density Apartment and Commercial mixed uses at Transit- Oriented Development (TOD) areas around the three Honolulu Rail Transit stations.
    - Develop areas along the rapid transit corridor at housing densities of 25 units per acre, and encourage greater densities within the TOD areas.

- See Exhibits 3.4, 3.5, and 3.6 for Waipahū Rail Station Areas and Exhibit 3.9 for the Leeward Community College Rail Station Area. The Urban Land Use Map and the Public Facilities Map in Appendix A also show the locations of the TOD areas in Waipahū and at Leeward Community College.

Exhibit 3.9
Leeward Community College Rail Station TOD Area (Conceptual Plan)



Adapted from Department of Planning and Permitting, **‘Aiea-Pearl City Neighborhood TOD Plan** (September 2014)

- **Affordable Housing –** Require that housing affordable to low and low-moderate income households be provided in new residential developments. In particular, provide affordable rental housing for students, families, seniors, and those with special needs.
- **Physical Definition of Neighborhoods –** Make the boundaries of neighborhoods evident through the use of street patterns, natural features, landscaping, building form, and siting.
  - The focus of neighborhood activity should be on the local street or a common pedestrian right-of-way or recreation area.
  - Where urban development abuts the H-2 Freeway, provide an open space / landscaped buffer of sufficient size to preserve a view of green, minimize the visual intrusiveness of the development and reduce the noise and air quality impact of the freeway traffic on the abutting development.
- **Community Centers –** In the Master Plan for each new residential community, identify where its village center, town center or "Main Street" area is and how that center or Main Street will be established and supported by any existing or planned commercial or job centers.
- **Compatible Mix of Building Forms –** Use a variety of housing types and densities to avoid visual monotony and accommodate a variety of housing needs, but without sharp contrasts between the exterior appearance of adjacent housing areas.
- Allow mixtures of residential with low-density apartment buildings in low-density apartment zones, to promote variety.
- **Transit-oriented Streets –** Design street patterns and rights-of-way to accommodate mass transit (bus) service and make the service convenient to access for as many households as possible.
- **Connectivity –** Minimize dead end streets, provide for intersections at regular intervals, and connect with adjacent development. Allow roadway cross-sections within new residential developments to be reduced from current standards where higher capacity is provided by multiple alternative routes.
- **Pedestrian and Bicycle Travel –** Encourage pedestrian and bicycle travel, particularly to reach neighborhood destinations such as schools, parks, and convenience stores. At a minimum, provide pedestrian and bikeway connectivity, where roadway connectivity is deemed not feasible, to allow direct travel through the community and to neighborhood districts.

- **Integration of Linear Corridors -** Encourage physical and visual connections between communities through the creative design of transportation and utility corridors and drainage systems.
- **Provision of Community Facilities -** Provide land for community facilities including meeting facilities, community centers, and elderly and child-care centers.

Table 3.3 gives an overview of the density and height guidelines for planned and existing residential developments.

Conceptual locations for residential, and low and medium-density apartment development are shown on the Urban Land Use Map in Appendix A. See Section 3.8.3 for further discussion of the relationship between the Residential Communities policies and guidelines and the Urban Land Use Map.

3.9.2 GUIDELINES

The following guidelines suggest how the general policies for Existing and Planned Residential Communities should be implemented.

Residential

Density

- Develop at densities of 5 to 12 units per acre encouraging more compact, innovative, environmentally sensitive design and alternative layouts.

Building Height

- In general, limit buildings to not exceed two stories, although the height may vary according to required flood elevation, slope, and roof form.

Site Design

- Use features such as varied building setbacks and shared driveways to avoid monotonous rows of garages and driveways along neighborhood street frontages.

Table 3.3 Density and Height Guidelines by Residential Density Category

Residential Category	Density (Housing Units)	Building Height
Residential	5-12/acre	not over two stories
Low-Density Apartment	10-30/acre	not over three stories
Medium-Density Apartment [1]	25-90/acre	not over 60 ft [2]
Mixed-Use with Residential	25-90/acre	not over 90 ft[3]

Notes:

[1] Medium-Density Apartment uses are appropriate in the Medium-Density Residential/Commercial mixed use areas in the Waipahū and Leeward Community College Transit-oriented Development (TOD) areas, in the Wahiawā Regional Town Center, and adjacent to the Waiawa Major Community Commercial Center.

[2] Medium-Density Apartment building heights in the Farrington/Mokuola Station TOD Special District should not exceed the lower of the elevation of the roof ridge line of Waipahū Sugar Mill or 60 feet. Building heights in the Farrington/Leokū Station TOD Special District should be allowed to 60 feet but may go up to 90 feet if a bonus is awarded because community benefits are provided.

[3] Up to 90 feet in height may be considered in community centers for mixed-use buildings that include residential uses.-

Building Form

- Use varied roof forms, exterior colors and finishes, building orientation, floor plans, and architectural details to provide visual interest and individual identity.

Affordable Housing

- Allow accessory and ‘ohana dwelling units without occupancy restrictions to increase the availability of affordable rentals and help create an age friendly community.

Low-Density Apartment

Density

- Develop at densities of 10 to 30 units per acre.

Height

- In general, limit buildings to not exceed three stories above grade. Maximum building heights should allow for pitched roof form.

Building Form

- Use building form, orientation, location of entries, and landscape screening to maintain a sense of residential scale and provide greater privacy and individual identity for housing units.

Compatibility

- Ensure that building scale, roof form, and the quality of materials are compatible with those of adjacent low-density residential areas.

Medium-Density Apartment

Location

- Develop Medium-Density Apartment as the predominant form of housing around the two Honolulu Rail Transit stations in Waipahū, either as a single use or mixed-use development.
- Allow Medium-Density Apartment uses in Wahiawā near the Town Center, and in Waiawa adjacent to the Major Community Commercial Center.

Density

- Allow building densities to accommodate 25 to 90 units per acre

Height

- Limit building heights to not exceed 60 feet, except as allowed in Sec. 3.6.2.4 Guidelines for the Farrington/Leokū Transit-Oriented Development (TOD) Special District and in Sec. 3.9.2 Guidelines for mixed-use buildings in Major Community Commercial Centers.
- Limit Medium Density Apartment building heights in Waipahū in the Farrington/Mokuola TOD Special District to not exceed 60 feet or the

elevation of the roof ridge line of the Waipahū Sugar Mill, whichever is lower.

Architectural Character

- Allow building scale, roof form and the quality of materials to reflect a more urban character.

Height Setbacks

- Employ building height setbacks and landscaping to reduce the direct visibility of taller buildings from lower density residential areas and from the street front.
- Allow lower building elements to directly abut the street front.

Circulation System

Master-planned projects should each have a circulation plan, or a “circulation element” in their Project Master Plan (see Chapter 5).

- Use the circulation plan to define the hierarchy of streets within the project and its relationship to the surrounding transportation network.
- Design streets to provide safe access and mobility for all users, including pedestrians, bicyclists, transit users, motorists, and persons of all abilities, as determined through a context sensitive solution process that integrates community context and the surrounding environment, including land use, and balances the needs and comfort of all modes and users.
- Use a modified grid street pattern (modified as necessary to fit the topography or other limitations) with block lengths of 300 feet by 500 feet or any combination of two sides summing to 800 feet.
- Provide pedestrian pass-throughs or mid-block cross walks, if possible, where blocks exceed 350 feet on a side.
- Connect new residential development to adjacent subdivisions to allow creation, where allowed by topography, of an east-west and *mauka-makai* roadway network at approximately 1/4 mile intervals.
- Allow roadway cross-sections within new residential developments to be reduced from current standards where higher capacity is provided by multiple routes.

Transit Routes and Facilities

- Show on the circulation plan existing and proposed bus routes and specific measures to accommodate efficient bus transit service for as many households as possible.
- Design the rights-of-way along existing or potential bus transit routes to provide for bus shelters, bus pull-outs, and, if applicable, park-and-ride facilities and/or future rail transit stations in accordance with the Department of Transportation Services design standards.
- Require street patterns showing the alignment of proposed or potential bus transit routes, to be submitted to the Department of Transportation Services as part of the subdivision roadway master plan review process.
- Design the circulation plan so that at least 85 percent of all proposed residences will be within a five-minute (or 1/4 mile) walking distance of an existing or proposed bus stop or rail transit stop, unless localized topographic conditions make such a requirement impractical.
- Design the circulation plan so that all commercial development with more than 1,000 square feet and all employment sites with more than ten employees are within 1/8 mile of an existing or potential bus stop or rail transit stop.
- Design the circulation plan so that all development is within 1/2 mile of an existing or potential bus stop or rail transit stop, unless localized topographic conditions make such a requirement impractical.
- Design the circulation plan so that potential bus routes have two different access points into the proposed development. The route alignment should seek to achieve optimal operational efficiency between the two access points.

Pedestrian and Bicycle Routes and Facilities

- Design the circulation plan to indicate any principal pedestrian and bicycle paths that are physically separated from roadways.
- Design street intersections along these separated paths to have a tighter curb radius and include special signage and paving to encourage safe and convenient pedestrian and bicycle crossings.
- Allow interior mid-block pedestrian/bicycle routes to be provided as an alternative to paved sidewalks along local streets.

- Provide safe pedestrian and bike passage through barriers such as walls and fences, and across ditches and roadways.

Landscape Treatment

- Include conceptual street tree plans in the circulation plan.
- Identify entries to the community with special landscape treatment.
- Design the rights-of-way for major and minor arterials as landscaped parkways, complete with a landscaped median strip, landscaped sidewalk, and bikeways. Major arterials should have separate bike paths, and minor arterials should have bike lanes. Suggested width for major arterials, including right-of-way and planting strips, is 120 feet wide and for minor arterials is 100 feet wide.
- Where urban development abuts the H-2 Freeway, provide an open space/landscaped buffer of sufficient size to preserve a view of green, minimize the visual intrusiveness of the development, and reduce the noise and air quality impact of the freeway traffic on the abutting development.
- Provide canopy trees to shade the sidewalk/bike path areas.
- Install landscape treatment along the edges of the project that is appropriate for the natural setting and designed to provide continuity and transition from adjacent developed areas.
- Use xeriscaping (the use of landscape materials with low water demand), non-potable water for irrigation, and efficient irrigation systems wherever possible to conserve groundwater resources. Give preference to use of drought-resistant native Hawaiian plants where feasible and appropriate.

3.9.3 RELATION TO URBAN LAND USE MAP

Residential areas are shown on the Central O‘ahu Urban Land Use Map in Appendix A as follows:

Residential and Low-Density Apartment - Areas with this designation should be zoned as a residential or a low-density apartment district, subject to appropriate siting considerations and the General Policy for “Overall Density” provided in Section 3.9.1.1.

Medium-Density Residential/Commercial Mixed Use - Areas with this designation

should be zoned predominantly for medium-density apartment use. Mixed use, with retail activities at the ground level, is encouraged.

Uses Allowed in All Residential Areas - The following uses are not specifically designated on the Urban Land Use Map but can be located in all residential areas:

- Neighborhood commercial centers;
- Elementary schools;
- Parks;
- Meeting facilities (including churches);
- Community centers;
- Elderly-care centers and child-care centers; and
- Fire stations, and other public facilities and utilities serving the area.

The adopted **Waipahū Neighborhood TOD Plan** (April 2014) includes detailed listings of allowed uses in the TOD Special District that, when approved by the City Council, should take precedence over the Sustainable Communities Plan policies and guidelines in the case of a conflict, and should not require an amendment to the SCP.

3.10 PLANNED COMMERCIAL RETAIL CENTERS

This section provides general policies and guidelines for the development of commercial centers in Central O‘ahu. These policies and guidelines should be applied to the expansion or renovation of existing commercial centers, as well as to new centers.
Definitions - Planned commercial centers, outside of Waipahū and Wahiawā, differ from commercial areas within towns such as Waipahū or Wahiawā because they are typically managed as a unit with shared parking and center management. Four types of commercial centers can be defined based on size and function:

- **Neighborhood Commercial Center** (5-10 acres or less, typically located within or adjacent to residential area, up to 100,000 square feet [sq. ft.] of floor area).
  - Neighborhood Commercial Centers have frontage on at least one collector street and may have up to 100,000 sq. ft. of floor area, which is leased to tenants such as grocery stores, sundries stores, and other services and shops catering to common household needs.

- Single commercial establishments, such as convenience stores or "Mom and Pop" stores, or groupings of stores smaller than five acres in size also fall within this category, provided that they are appropriately located and will not contribute to the evolution of a commercial strip.

- **Community Commercial Center** (10-30 acres, typically located on an arterial highway or at the intersection of two major collector streets, up to 250,000 sq. ft. of floor area).
  - This type of center principally serves the community in which it is located, providing for basic shopping and service needs on a larger scale than the neighborhood center.
  - Community Commercial Centers may contain up to 250,000 sq. ft. of floor area. Major attractions typically include a large grocery store, a drug store, and/or a department store. The other, smaller tenants in the center are largely dependent on the effectiveness of the major tenants to draw customers.
  - Examples of this type of commercial center include the Gentry Waipiʻo Shopping Center and the Mililani Shopping Center.
- **Major Community Commercial Center** (up to 50 acres, located in communities which are not near an urban center, up to 500,000 sq. ft. of floor area).
  - Major planned communities not located near an urban center may need a larger commercial center.
  - The Major Community Commercial Center provides for many of the same community shopping needs as the standard Community Commercial Center, but due to its larger market, it is able to support more large stores and a wider variety of small retail and service commercial tenants.
  - The Major Community Commercial Center occupies up to 50 acres and contains up to 500,000 sq. ft. of floor area.
  - An existing Major Community Commercial Center is shown on the Urban Land Use Map at Mililani and planned Major Community Commercial Centers are shown at Waiawa and at Koa Ridge Makai.
- **Regional Commercial Center** (more than 50 acres, located with frontage on a major arterial highway and access from freeway interchange, more than 500,000 sq. ft. of floor area).

- This type of center is typically “anchored” by several major stores and features a wide variety of other tenants, often including entertainment and community facilities.
- The regional center serves surrounding communities, but also attracts business from throughout the island.
- Waikele is the only Regional Commercial Center shown for Central Oʻahu.

3.10.1 GENERAL POLICIES

- Develop planned commercial centers outside of Waipahū and Wahiawā to provide retail shopping and services for the immediate residential communities in which they are located.
- Develop commercial centers outside of Waipahū and Wahiawā by concentrating commercial uses in central locations instead of in continuous commercial strips along arterial roads.
- Emphasize pedestrian and transit access to and within the centers.
- Permit multi-family residential use above the first floor, and include it wherever possible in commercial centers.
- Wherever possible, design new commercial centers to help create and/or support pedestrian-friendly village centers, town centers, or “Main Street” areas for their communities.
  - Such centers or “Main Streets” provide a place where people from the surrounding neighborhoods gather, shop, dine, or play and are a key element that defines a community’s identity.
- Allow Neighborhood Commercial Centers to be located within any residential community, and to be reviewed and approved as part of development of master planned residential communities or redevelopment plans of existing communities.
- Design Community Commercial Centers to help create communities out of residential developments by playing the role of meeting place and recreational, social, cultural, and civic center that the town square and Main Street play in traditional towns.
- Allow Community Commercial Centers at Mililani, Mililani Mauka, Waipiʻo, and Royal Kunia as shown on the Urban Land Use Map in Appendix A.

- Allow Major Community Commercial Centers at Mililani, Koa Ridge, and Waiawa as shown on the Urban Land Use Map in Appendix A.
    - In Major Community Commercial Centers, where compatible and subject to appropriate conditions, allow business hotels to provide short term accommodations to business travelers and others who are not seeking resort accommodations.
    - Limit development of the planned Waiawa center and Koa Ridge center to support the residential communities surrounding Waiawa and Koa Ridge and not to become regional centers drawing shoppers from other parts of O‘ahu.
- Allow no new Regional Commercial Centers for Central O‘ahu in order to withhold development that would compete with the objective of redeveloping the commercial areas of Waipahū and Wahiawā and developing regional shopping attractions in the City of Kapolei.
- Limit office uses in Central O‘ahu Major Community and Community Commercial Centers.
    - Offices which provide services to the local community may be included in the centers, but the emphasis of Central O‘ahu Community Commercial Centers should be on retail services.
    - These limitations on office uses are specifically applicable to Waiawa and Koa Ridge so as to promote the development of office uses in the Secondary Urban Center and in Waipahū.
- Locate developments in Central O‘ahu which are primarily oriented to office uses in Waipahū, Wahiawā, or at the Mililani Technology Park.
    - Develop offices at Mililani Technology Park at low densities typical of campus-like business parks.

3.10.2 GUIDELINES

The following guidelines suggest how the general policies for Planned Commercial Retail Centers should be implemented. These guidelines should be applied to the expansion or renovation of existing commercial centers, as well as to new centers.

All Commercial Centers

Orientation to "Main Street" or the Town/Village Center

- Locate and orient structures in the commercial center to the street up to the "build to" line along the designated "Main Street" or Town/Village Center frontage.
- Locate most parking for commercial structures fronting "Main Street" or the Town/Village Center behind the structures in joint development parking lots or in structures although some on-street parking can be provided on the Main Street or Town/Village Center frontage.
- Locate the main entrance to commercial structures fronting the "Main Street" or Town/Village Center on that street frontage with secondary entrances from parking areas.
- Construct sidewalks in front of retail uses fronting the "Main Street" or Town/Village Center wide enough (12 to 16 feet) to allow window shopping and/or outdoor dining.

Mix of Uses

- Plan commercial centers primarily for retail and accessory office uses that provide services to the surrounding community. Residential uses and other uses which meet the social, cultural, recreational, and civic needs of the surrounding community may also be incorporated in such commercial centers.

Appropriate Scale

- Design the building mass of a commercial center to be in keeping with its urban and natural setting.

Compatible Style

- Design the architectural character of commercial centers to respect the surrounding urban and natural features, particularly when located adjacent to a residential area or significant natural or historic feature.

Accessibility

- Design streets to provide safe access and mobility for all users, including pedestrians, bicyclists, transit users, motorists, and persons of all abilities, as determined through a context sensitive solution process that integrates

community context and the surrounding environment, including land use, and balances the needs and comfort of all modes and users.

- Incorporate site design and facilities to promote pedestrian, bicycle, and transit access in commercial centers. Pedestrian and bicycle access is more important for smaller neighborhood centers while transit access is more significant for community centers.

Neighborhood Commercial Centers

Architectural Character

- Design the project architecture to reflect a residential architectural character and respect adjacent residential uses.
- Use gable and hip-form roofs to create breaks in the roof line to reduce the apparent scale of large roof plates.
- Use exterior materials and colors that are typically found in residential construction to express residential character.

Building Siting

- Orient buildings to the pedestrian.
- Orient storefronts to face the street, and, to the extent possible, be sited close to the sidewalk.
- Place parking and service areas behind the buildings or otherwise visually screened from streets and residential areas.

Building Height and Density

- Design buildings at a residential scale.
- Allow building heights limits which allow for gable and hip-form roof elements.
- Limit total floor area for a lot or contiguous lots with common parking to no more than 100,000 sq. ft.

Vehicular Access

- Provide access to the parking and loading areas from a collector street.
- Permit access to a local residential street only if it is for emergency or secondary access and if it would not encourage through traffic along the local street.

Pedestrian and Bicycle Facilities

- Provide at least one pedestrian access from the public sidewalk or other off-site pedestrian pathway to the entrances of establishments in the commercial center that does not require crossing a traffic lane or parking lot aisle or driveway.
- Design and locate bicycle racks to provide security, convenience, and visibility from the street entry.
- Provide appropriate signage to indicate the availability and location of bicycle racks.

Visual Screening, Lighting and Signage

- Screen parking and service areas from the street and adjacent residential lots by planting a landscape screen of trees and hedges along street frontages and property lines and planting shade trees throughout the parking lot.
- Use xeriscaping (the use of landscape materials with low water demand), non-potable water for irrigation, and efficient irrigation systems wherever possible to conserve groundwater resources. Give preference to use of drought-resistant native Hawaiian plants where feasible and appropriate.
- Use only low level or indirect lighting in parking lots.
- Require all signage to either be non-illuminated or indirectly illuminated.

Community Commercial Centers

Architectural Character

- Allow varied architectural character, depending on the context.
- Require commercial center buildings that are visible from adjacent residential areas to reflect a residential character while allowing other facades to have a character more typical of a commercial building.
- Avoid disruptive contrasts between facades and extended blank walls that are visible simultaneously from public areas.

Building Bulk and Massing

- Provide a transition in scale from larger building elements of the commercial center to finer elements near the adjacent use when the building is adjacent to a residential area or a building of historic value.

- Avoid blank facades on portions of buildings visible from a street by using texture, articulation, color, and fenestration to create visual interest.
- Require facades that are close to the public right-of-way to be composed of display windows and pedestrian entrances.

Building Height and Density

- Limit building heights to generally not exceed 45 feet, except in Major Community Commercial Centers where a height up to 90 feet may be considered for mixed-use buildings that include residential uses, where justified by community benefits.
- Limit the total floor area to no more than 250,000 sq. ft. for a standard Community Commercial Center and 500,000 sq. ft. for a Major Community Commercial Center.

Pedestrian, Bicycle and Transit Facilities

- Provide street frontage improvements for bus stops, including a bus shelter and a pull-out off a traffic lane, along all abutting streets which have bus routes.
- Provide a pedestrian pathway from the bus stop to the nearest entrance of the nearest building of the commercial center. The pathway should be clearly indicated with special paving or markings and covered to provide weather protection, if the commercial center building is not directly connected to the bus shelter.
- Design bicycle racks to provide security and be visible from the street entry to the commercial center.
- Provide appropriate signage to indicate the availability and location of bicycle racks.

Visual Screening

- Minimize the visibility of parking and service areas from the street and adjacent residential lots through screening.
- In the case of major community commercial centers, minimize the visibility of large building volumes and expansive parking areas through site planning, architectural treatment of elevations and landscaping.
- Plant a landscape screen, consisting of trees and hedges, along street fronting the parking lot or garage.

- Plant shade trees throughout all parking lots.
- Use xeriscaping (the use of landscape materials with low water demand), non-potable water for irrigation, and efficient irrigation systems wherever possible to conserve groundwater resources. Give preference to use of drought-resistant native Hawaiian plants where feasible and appropriate.
- Provide landscape planters along the façade of each parking level for parking garages close to and readily visible from a street.
- Visually screen service areas from public and residential areas.

Signage

- Indirectly illuminate signage visible from residential areas.

Transit Access

- Design the circulation plan for master-planned projects with commercial development so that all commercial development with more than 1,000 sq. ft. and all employment sites with more than ten employees is within 1/8 mile of an existing or potential bus stop or rail transit stop.

3.11 INDUSTRIAL CENTERS

This section provides general policies and guidelines for development of industrial areas and industrial uses in Central Oʻahu.

Existing industrial areas in Central Oʻahu include areas in Waipahū *makai* of Farrington Highway (94 acres), in the old Waipahū mill area (in the Mill Town Center and Sugar Mill Center areas, approximately 32 acres), in Gentry Business Park in Waipiʻo (127 acres), and in portions of the Waikele Gulch that are approved for nonconforming industrial uses (approximately 32 acres). The Waikele Gulch was part of a former military installation. When the Federal government transferred ownership of the Waikele Gulch land to a private entity, the industrial use of approximately 32 acres within the Waikele Gulch as self-storage facilities continued. Future land use designation changes are anticipated to be sought for approximately 32 acres within Waikele Gulch to remove its nonconforming status.

New industrial areas are planned for Royal Kunia (123 acres), Koa Ridge Makai (with 55 acres identified for Commercial or Industrial use) and Waiawa (with 90 acres of mixed commercial/industrial areas in Phase 1).

Proposals to create packaging and processing facilities and an agricultural technology park next to Whitmore Village and associated agricultural support facilities in Wahiawā have been circulated, and received some funding from the State, most recently with the purchase of a warehouse in Wahiawā. In addition, a proposal to create and fund a geriatric research and technology park in Wahiawā, to be operated by the State High Tech Development Corporation has been circulated but did not receive approval in the 2014 State Legislature.

Mililani Technology Park is an industrial-commercial mixed use area designed to attract mostly office uses seeking a campus-style setting. (See Sec. 3.12 for policies and guidelines for Mililani Technology Park.)

3.11.1 GENERAL POLICIES

- Locate major industrial uses and utility plants for O‘ahu in the Primary Urban Center or ‘Ewa. However, limited industrial development on existing industrial zoned land is needed in Central O‘ahu to accommodate services and storage for surrounding communities, and to provide a range of jobs within the region.
- Provide support for diversified agricultural jobs in Central O‘ahu and the North Shore from industrial areas in Wahiawā.
- Allow small lots off the main commercial streets in Waipahū and Wahiawā for industrial small businesses, particularly automobile repair shops, contractors’ yards, “incubator” businesses, and businesses which serve residential and commercial areas.

3.11.2 GUIDELINES

The following guidelines suggest how the general policies for Industrial Centers should be implemented.

Appropriate Scale

- Minimize visibility of large building volumes and tall building or machinery elements from arterial roads, major regional collector roads, residential areas, commercial and civic districts, and parks through site planning and landscaping.

Environmental Compatibility

- Locate operations that discharge air or water pollutants, even when treated, in areas where they would impose the least potential harm on the natural environment in case the treatment process fails to perform adequately.
- Locate and operate uses that generate high noise levels in a way that will keep noise to an acceptable level in existing and planned residential areas.
- Buffer industrial areas located within residential communities from residential uses, so that larger industrial building forms do not have ~~a~~ negative visual, lighting, noise, or odor impacts on residential areas.
- Use xeriscaping (the use of landscape materials with low water demand), non-potable water for irrigation, and efficient irrigation systems wherever possible to conserve groundwater resources. Give preference to use of drought-resistant native Hawaiian plants where feasible and appropriate.

Uses

- Allow all uses that provide direct services to adjacent residential communities, including automobile service and repair, in Central O‘ahu industrial areas.
- Prohibit petroleum processing, resource extraction, and the manufacture of chemicals and explosives.
- Allow other industrial uses based on performance criteria established by regulatory agencies.
- Allow retail establishments in industrial areas as accessory uses only.
- Allow offices and business services in a building or complex of buildings which primarily consists of industrial uses and industrial building types, so long as no building is primarily used for offices or business services.

Location

- Allow industrial areas within the master-planned communities of
- Waipi‘o-Gentry, Royal Kunia, Koa Ridge, and Waiawa.
- Maintain industrial areas oriented to small businesses providing consumer services within Wahiawā (north of Cane Street) and Waipahū, so long as these do not front on commercial streets or major collector streets, provided that designation of use areas is subject to redefinition either through Special Area Plans for those towns, or in the case of Waipahū, through the Waipahū Neighborhood TOD Plan and TOD Special Districts.
- Prohibit new industrial developments that front on streets with residences on the opposite side, and to the extent possible, design the developments to direct industrial traffic away from residential neighborhoods.

Building Height

- Limit building heights to generally not exceed 60 feet.
- Allow taller vertical structures when required as part of an industrial operation, but require a view plane study to be conducted for structures over 100 feet to determine if they can be sited or designed to minimize visibility from residential and commercial areas, public rights-of-way, or the shoreline.

Landscape Treatment

- Require landscaped setbacks and street trees along the edges of industrial areas abutting arterial or major collector streets.
- In small-lot industrial areas, require outdoor work and storage areas for vehicles, equipment and supplies to be visually screened from the street and adjacent lots by privacy walls and buildings, with minimal reliance on landscaping.
- Require visual screening in large-lot industrial subdivisions to be accomplished primarily with landscaped setbacks and street trees.

3.11.3 RELATION TO URBAN LAND USE MAP

Industrial zoning should generally be limited to those areas shown as “Industrial” on the Urban Land Use Map in Appendix A, provided that industrial zoning may be granted for

an individual activity which, because it is a public transportation or utility use or because of its unique characteristics, is unable to locate in a planned industrial area.

3.12 MILILANI TECHNOLOGY PARK

This section provides general policies and guidelines for development of Mililani Technology Park.

Mililani Technology Park (MTP) is a unique development located on a strip of land north of Mililani Mauka and east of the H-2 Freeway. It is bounded on the north by Leilehua Golf Course and other military lands and on the south by the upper part of Waikakalaua Gulch.

MTP was originally envisioned as a means for attracting “clean” high technology research and development industry to O‘ahu and expanding the City’s economic base. At least 45 percent of either the net marketable area of all the lots or the total number of lots are required under existing approvals to initially be sold or leased to and occupied by high technology firms and businesses.

In 1991, when Castle & Cooke sought IMX-1 Industrial-Commercial Mixed Use zoning for Phase I of the MTP, they showed plans to develop an additional 115 acres of agricultural zoned lands east of Phase I as Phase II of MTP. However, much of the 101 acres in Phase I remains undeveloped over twenty years after the project opened.

The State has purchased approximately 150 acres of land from Castle & Cooke on which to develop its first joint facility for federal, State, and City first responders and public safety workers. The State also plans to relocate its primary data center to the new joint facility campus. The campus site, formerly referred to as Mililani Technology Park Phase II, was identified because of its centralized location outside of Oahu's inundation zone, and its close proximity to military facilities, an airfield, and an ample workforce due to the many surrounding communities. The technology facility and data center are expected to create jobs, decrease peak traffic by reversing traffic flow in the opposite direction of the Honolulu urban core, create regional economic development, and allow for a live-work-play community. Development of the former Mililani Technology Park Phase II area as a First Responder Technology Campus will not be subject to the policies and guidelines of this section.

3.12.1 GENERAL POLICIES

Uses

- Continue Mililani Technology Park as a campus-like business park primarily intended for emerging technology-intensive industries, including but not limited to electronics firms, computer software developers, biotechnology firms and their support services.
- Allow appropriate and compatible commercial and industrial uses which desire fee simple lots and can conform to the low density campus design of MTP.
- Do not permit the following in the business park:
  - Uses that produce noise and noxious emissions;
  - Uses connected with agricultural production;
  - Large-scale retailing/wholesaling operations such as factory outlets; department stores, home improvement centers, warehouse outlets; and similar commercial activities; and
  - Dwelling units or overnight accommodations of any kind.

3.12.2 GUIDELINES

The following guidelines suggest how the general policies for Mililani Technology Park should be implemented.

Uses

- Allow individual lots to mix light industrial uses with office use, with no limitation on the allocation of floor area.
- Limit retail and service uses supporting activities in the business park to ten percent of the total floor area of the business park**.**

Building Height and Density

- Limit building heights to generally not exceed 40 feet, except for necessary communications antennas.
- Allow the floor area ratio and maximum building coverage for lots appropriate to an open, landscaped campus environment.

3.12.3 RELATION TO URBAN LAND USE MAP

The Mililani Technology Park is shown as "Technology Park" on the Urban Land Use Map in Appendix A.

3.13 MILITARY AREAS

This section contains general policies and guidelines regarding military areas in Central Oʻahu.

The major military bases of Schofield Barracks/Wheeler Army Airfield and Joint Base Pearl Harbor-Hickam are expected to remain, but they are not expected to expand beyond their existing boundaries in the foreseeable future.

Joint Base Pearl Harbor-Hickam, Wahiawā Annex, located north of Wahiawā, is the center of communications for the U.S. Navy in the Pacific providing high-speed connectivity to naval forces from San Diego and Puget Sound to Singapore and beyond. The Wahiawā Annex is the largest naval communications station in the world and is known as the “Pacific Voice of Command.”

SCHOFIELD BARRACKS/WHEELER ARMY AIRFIELD

Schofield Barracks/Wheeler Army Airfield supports the 25th Infantry Division and consequently has large areas committed to residential use, including commercial and recreational facilities. The bases also support quasi-industrial uses including operation and maintenance of heavy equipment and helicopter airfield operations and maintenance.

In addition to these urban uses, the base also includes large areas of open space, most of which is used for infantry training. These areas extend beyond the Community Growth Boundary. One area is west of Schofield Barracks urban areas, extending to the Waiʻanae Mountains, and a second area known as the East Range extends south and east from Wahiawā to the Koʻolau Mountains.

Recent changes at Schofield Barracks include:

- Reorganization and establishment of a Stryker Brigade Combat Team (which may become an infantry brigade combat team, according to recent reports);
- Construction of new family housing;
- Closure of the Kalākaua golf course; and
- Acquisition of approximately 1,400 acres to extend the western training area to the south.

In addition, Island Palm Communities, a partnership between the U.S. Army and Lendlease, purchased over 2,500 acres of land south of Schofield Barracks along Kunia Road in 2008. Most of these lands were former pineapple lands farmed by Del Monte under a long term lease from Campbell Estate.

The lands are expected to remain in agricultural use or be left as open space for the foreseeable future, although there is the possibility at some point in the future, a portion might be used for housing for the military.

- Monsanto has leased approximately 2,300 acres of the land for thirty years with the intent to use most of the land to grow seed corn.
- In 2011, the Hawai‘i Agricultural Foundation, with cooperation of Monsanto and Island Palm Communities, established the Kunia Agricultural Park on 182 acres of the land Monsanto is leasing from Island Palm Communities, and in less than a year, leased all of the land to 17 farmers on parcels of generally five to ten acres in size.

JOINT BASE PEARL HARBOR-HICKAM

Waipi‘o Peninsula

Most of the Waipi‘o Peninsula lies within the Navy restricted area arc of the Joint Base Pearl Harbor-Hickam West Loch Annex. Waipi‘o Peninsula lands were used mostly for sugar cultivation in the past. Since 1998, a portion of the northernmost part of the Waipi‘o Peninsula has been leased to the City and County for the Waipi‘o Peninsula Soccer Park complex. Current Navy use of the rest of the peninsula includes disposal of material dredged from Pearl Harbor.

Waikele Gulch and Bluffs

As part of the compensation for redevelopment of the Ford Island complex, Navy lands in Waikele Gulch and on Waikele Bluff were leased to the Hunt Companies with an option for purchase. As military lands, the Waikele Gulch and Bluff lands had F-1 Military and Federal District zoning, and were used for intensive industrial activities and operational support activities.

Under the City **Land Use Ordinance**, once F-1 zoned lands are no longer being used for military or Federal government purposes, permitted structures and development standards are those specified for the P-2 General Preservation District.

However, the Hunt Companies sub-leases were for uses not permitted under P-2 zoning. When the City expressed concerns and said that the uses under the leases had to conform to P-2 zoning, the Navy stated that the uses were exempt from City land use plans and regulations because the Navy still had ownership of the lands.

Since then, Hunt has exercised its option to purchase the fee-simple ownership of the properties, and has since sold the properties to another private landowner.

The City has treated uses, such as storage in the former ammunition bunkers in the Gulch, as nonconforming uses because they were uses the Navy made of the property that have continued since the Navy turned over control of the properties to the Hunt Companies, which then sold the properties to another private landowner.

(Nonconforming uses are uses of a zoning lot or a structure that was previously lawful, but do not conform to current applicable use regulations for the zoning district in which it is located. The nonconforming uses are allowed to continue but are subject to limits designed to restrict expansion of the nonconformity.) The current owner has stated its intention to seek to include within the Community Growth Boundary approximately 32 acres of the Waikele Gulch outside of the 100-year flood plain that are approved for nonconforming industrial uses.

3.13.1 GENERAL POLICIES

- Consistent with the **General Plan** policies, support military uses at Joint Base Pearl Harbor-Hickam, Schofield-Wheeler, and Joint Base Pearl Harbor-Hickam Wahiawā Annex in order to encourage a high level of military-related employment.
- Request Department of Defense co-operation with and support of the City's land use plans within limits set by the military mission.
- Require private uses operating under leases of Federal owned lands not being used for Federal government or military uses to be consistent with the **Central O‘ahu Sustainable Communities Plan** vision, policies, and guidelines and to be in compliance with the **Land Use Ordinance**.
- Support renewed use of the Waipi‘o Peninsula lands for diversified agriculture or aquaculture activities if feasible in light of Navy activities and soil conditions.
- Request expansion of limited public access to the shoreline waters of West Loch beyond the West Loch Shoreline Park.
- Support retention and enhancement of wetland areas along the Pearl Harbor shoreline.

3.13.2 GUIDELINES

The following guidelines suggest how the general policies for Military Areas should apply to development on the two bases, and where appropriate, in areas adjacent to the bases. The City will request the Department of Defense consider them in planning for development at each of the bases.

All Areas

- Apply the policies and guidelines for circulation systems and landscape treatment in civilian areas (described previously in Section 3.9) to military lands in residential use.
- Apply the planning guidelines for industrial areas (described previously in Section 3.11.2) to the quasi-industrial uses on lands designated “Military.”

Schofield Barracks/Wheeler Army Airfield

- Support expansion of uses within the base which include residential, commercial, recreational and civic areas for the support of military personnel and their dependents to accommodate additional residents on base and/or augmented activities which do not significantly conflict with surrounding residential communities.
- Minimize the visibility of security fencing and utilitarian military facilities from off-base through the planting of a landscape screen, consisting of trees and hedges, along highway frontages.
- Provide adequate buffers for residential developments immediately adjacent to the Central Oʻahu training areas to ensure that residents will not be adversely impacted by noise or other environmental impacts of the training activities.

Joint Base Pearl Harbor-Hickam

- Request Navy approval to expand limited public access to the shoreline waters of West Loch for recreational purposes beyond the West Loch Shoreline Park.
- Protect and enhance wetlands along the West Loch and Middle Loch shorelines.
- Allow agricultural uses to be renewed on the Waipiʻo Peninsula within the Navy restricted areas around the Joint Base Pearl Harbor-Hickam West Loch Annex.

3.13.3 RELATION TO URBAN LAND USE MAP

The “Military” designation on the Urban Land Use Map in Appendix A shows those parts of military bases planned primarily for military activities that are quasi-industrial in nature. Areas used by the military for typical urban activities are shown according to their planned use. Portions of military installations that are planned to remain in open space are represented as on the Open Space Map in Appendix A as “Military Training Areas,” “Preservation,” “Agriculture,” and “Drainageways/Gulches.”

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4. PUBLIC FACILITIES AND INFRASTRUCTURE POLICIES AND GUIDELINES

This chapter sets forth policies and guidelines for the planning and construction of proposed public and private facility projects and infrastructure systems to carry out the vision for the future development of Central O‘ahu, as described in Chapter 2. These policies and guidelines are not regulations, but provide guidance that decision makers and administrators should follow, where sensible, in approving projects and revising rules, regulations, and best practices standards.

Information on timing and phasing of both planned and proposed infrastructure and public facility projects, which was available during the plan revision period, is also included. However, each project proposal is only identified and presented conceptually; not on a site-specific basis. More detailed information on the specific need, route alignment, site boundaries, capacity, and other specifications for each project, as applicable, will be prepared at the master planning stage required before a specific project can be approved.

As noted in Chapter 5, existing Unilateral Agreements, Zoning and Urban Design Plans will continue to guide development in the area.

Policies and guidelines are provided for the following public facilities and infrastructure systems:

4.1 Transportation Systems
4.2 Water Allocation and System Development
4.3 Wastewater Treatment
4.4 Electrical Power Development
4.5 Solid Waste Handling and Disposal
4.6 Drainage Systems
4.7 School Facilities
4.8 Public Safety Facilities
4.9 Other Community Facilities

4.1 TRANSPORTATION SYSTEMS

This section describes the existing conditions and the plans and proposals for development of Central O‘ahu’s roadways, transit system, and bikeways. (See the Public Facilities Map in Appendix A, and the Roadway Network listing below in Table 4.1.) The section concludes with policies and guidelines to guide future transportation system development in Central O‘ahu.

The planned and proposed roadway elements and other transportation system features which are listed as potentially being needed to meet the projected development in Central O‘ahu were identified through the regional planning and transportation analysis done for the initial Central O‘ahu Sustainable Communities Plan Revision Program (2000-2002), the **O‘ahu Regional Transportation Plan 2040** (2016), and the Honolulu Rail Transit system.

The topography of Central O‘ahu is characterized by plateaus divided by gulches. Major arterials run north-south, generally parallel to the major gulches – Waikele and Kīpapa.

Central O‘ahu’s topography has a number of disadvantages for transportation system development:

- The gulches, because of their depth and width, represent a barrier to east-west connections.
- Since both the H-2 and Kamehameha Highway have to cross Kīpapa Gulch and other smaller gulches, widening of those arterials would involve major costs.
- The topography also makes rail transit a costly long-range prospect for Central O‘ahu. In addition to the gulch crossings, the requirement to be able to ascend and descend the steep incline from Waipahū to Mililani may limit the number of potential suppliers of train systems.
- Traffic going from Central O‘ahu to the Primary Urban Center – where the major peak-hour demand occurs – must transition through interchanges to get onto the H-1 Freeway. A major bottleneck occurs at the Waiawa Interchange, where the major Central O‘ahu arterial, the H-2 Freeway, joins the H-1 Freeway.

Table 4.1
Planned and Proposed Central O‘ahu Roadway Network Improvements

Planned and Proposed Extensions and Improvements	ORTP 2040 Project Number (Responsibility)	ORTP 2040 Phasing
North-South Corridors		
• Widen Kamehameha Hwy (4 lanes, Ka Uka Blvd to Lanikūhana Ave)	207 (S)	2019-2029
• Widen Kunia Road (6 lanes, H-1 to Royal Kunia)	702 (S)	Illustrative
• Widen Kunia Road (4 lanes, Royal Kunia to Wahiawā)	702 (S)	Illustrative
• Kolekole Pass Road (alternative access to Waianae)	708 (S)	Illustrative
• Widen Kamehameha Highway (3 lanes, Wahiawa Interchange to California Avenue)	857 (S)	2011-2018
• Central Mauka Road, Whitmore to Waiawa [(1)]		
• Pāiwa Street extension to Ka Uka Blvd. [(1)]		
East-West Corridors		
• Widen Farrington Hwy, Kunia to Waiawa (2 more lanes)	356 (S)	2030-2040
• Widen H-1 Freeway, Waiawa to Paiwa	306 (S)	2019-2029
Interchange Improvements		
• Waipi‘o Interchange (H-2)	307 (S)	2019-2029
• Waiawa Interchange (H-1)	702 (S)	Illustrative
• H-1/H-2 Interchange ramps	704 (S)	Illustrative
New Interchanges		
• New H-2 Interchange (Pineapple Road Overpass)	308 (S)	2019-2029
Transit Projects:		
• Honolulu Rail Transit Project	852 (C)	2011-2018
• Bus service expansion	603 (C)	2019-2029
• Construct transit centers	604 (C)	2019-2029
• Fixed guideway, Central O‘ahu	754 (C)	Illustrative

Notes:

[(1)] Projects in **O‘ahu Regional Transportation Plan 2030** (ORTP 2030), but omitted from ORTP 2035 and ORTP 2040.

Projects are identified as C (City) or S (State) projects.

Project numbers from ORTP 2040 Table 6-1.

Illustrative projects were not included in the financially-constrained ORTP 2040 due to funding limitations. If additional funding becomes available, they may be considered for amendment to the ORTP.

Source: **O‘ahu Regional Transportation Plan 2040**, April 2016.

The City and County adopted a Complete Streets policy as Ord. 12-15 in May 2012 with the intent that all transportation facilities be planned, designed, operated, and maintained to provide safe mobility and access for all users, including pedestrians, bicyclists, transit users, motorists, and persons of all abilities. The City Department of Transportation Services has published a **City and County of Honolulu Complete Streets Design Manual**, as well as Implementation Study Location Reports for sixteen sites around the island that serve as illustration projects for Complete Streets implementation.

4.1.1 EXISTING ROADWAY NETWORK

The major east-west arterials of the Central O‘ahu roadway system includes:

- The H-1 Freeway which is the major arterial road connecting Central O‘ahu with the Primary Urban Center (PUC); and
- Farrington Highway, which functions as a secondary east-west route and as a commercial district street through Waipahū.

The three major north-south arterial highways are:

- The H-2 Freeway which extends from the H-1 Freeway at the Waiawa Interchange to Wahiawā;
- Kamehameha Highway which is the island’s original major circle island route and serves as a parallel alternate route to the H-2 Freeway during peak periods and as a carrier for local traffic between Waipahū, Waikele, Waipi‘o, Mililani, and Wahiawā; and
- Kunia Road which links Schofield Barracks and Wahiawā with ‘Ewa.

According to the **O‘ahu Regional Transportation Plan 2035**,(April 2011), the number of people traveling on Kunia Road, Kamehameha Highway, and H-2 Freeway is projected to increase from 248,900 trips per day in 2007 to 332,700 in 2035, an increase of 33 percent. However, congested conditions in 2035 are expected to be close to 2007 levels, and peak hour automobile travel times are expected to be better than 2007 due to the completion of the first segment of the Honolulu Rail Transit system and the completion of the transportation projects in the **O‘ahu Regional Transportation Plan 2035**. (The updated **O‘ahu Regional Transportation Plan 2040** was approved in April 2016.)

The substantial development of jobs in ‘Ewa and Central O‘ahu (from 70,500 jobs in 2000 to over 187,000 jobs by 2035) is projected to increase the number of Central O‘ahu residents who work in ‘Ewa or Central O‘ahu from existing levels.

However, it is also projected that the number of commuters traveling to the PUC from ‘Ewa and Central O‘ahu will still increase, although at a lower rate than would occur if development of jobs in the Secondary Urban Center in ‘Ewa was **not** supported.

The following two sections describe improvements needed to meet these existing and projected transportation needs.

4.1.2 PLANNED EXTENSIONS OF THE ROADWAY NETWORK

Planning and development of major roadways is the shared responsibility of the State Department of Transportation and the City Department of Transportation Services. Planning and use of federal transportation funds is coordinated through the O‘ahu Metropolitan Planning Organization (OMPO), a joint City-State agency.

The **O‘ahu Regional Transportation Plan (ORTP) 2035** was adopted in April 2011. It is the fiscally-constrained long-range State and County plan that identifies the transportation projects needed through 2035 for O‘ahu, based on the City's Development Plans and Sustainable Communities Plans. In order to receive Federal funding, projects need to be listed in the ORTP. See Table 4.1 for listing of the Central O‘ahu projects in the **ORTP 2035**.

The **ORTP 2035** includes a number of major improvements for Central O‘ahu including:

- Widening of Kamehameha Highway to four lanes between Ka Uka Boulevard and the Lanikūhana Avenue intersections;
- Development of a P. M. contraflow or zipper lane from Ke‘ehi Interchange to Kunia Interchange;
- Improvement to existing interchanges at Waipi‘o and Waiawa;
- Widening of Farrington Highway from Fort Weaver Road to the Waiawa Interchange; and
- A new H-2 interchange.

The **ORTP 2035** also includes three "illustrative" projects for Central Oʻahu, including:

- Widening of Kunia Road from Wilikina Drive to Farrington Highway;
- Adding a westbound lane to H-1 from the Waiau Interchange to the Waiawa Interchange; and
- Improvements to the Waiawa Interchange.

(Illustrative projects are not included in the **ORTP 2035** due to funding limitations. If additional funding becomes available, they may be considered for amendments to the ORTP.)

As a condition of State Land Use Commission approval of Urban District designation and City approval of zone changes for the Koa Ridge project, the developer is required to mitigate impacts of the Koa Ridge project on the transportation network as determined by the State Department of Transportation, the City Department of Transportation Services, and the Department of Planning and Permitting, based on the most current updated Traffic Impact Analysis Report (TIAR).

The May 2012 TIAR for the project recommended making the following improvements in the vicinity of the project site:

- Improvements to the Ka Uka Boulevard H-2 Interchange;
- Widening of Ka Uka Boulevard;
- Improvements to the Kamehameha/Ka Uka Boulevard intersection;
- Widening and other improvements to Kamehameha Highway between Waipahū Street and a new temporary project access road north of Ka Uka Boulevard; and
- A new Pineapple Road H-2 Interchange.

4.1.3 TRANSIT

Currently, transit service is provided to Central Oʻahu by the City bus system and Handi-Van para-transit service. The first increment of the Honolulu Rail Transit System is planned to operate between East Kapolei and the Ala Moana Shopping Center. Two rail transit stations in Waipahū, and rail transit stations at Leeward Community College and at Pearl Highlands will provide service to Central Oʻahu commuters.

4.1.3.1 Bus Service

Bus service is provided through the Department of Transportation Services, which currently contracts with O‘ahu Transit Services (OTS) for operation of TheBus. OTS also operates the City’s para-transit service, the Handi-Van.

As of May 2013, there were 24 regular service bus routes serving the Central O‘ahu Sustainable Communities Plan area, and 12 express bus routes operating during the peak commuting hours. The number of routes has increased greatly since 2002. The City has converted its bus system into a combination of express, local, and "Hub-and-Spoke" community circulator buses which meet at transit centers throughout the island.

The City has also addressed the need for transit centers and park-and-ride facilities in Central O‘ahu.

- Transit centers are bus transfer points having a protected environment for waiting passengers. Transit centers have been developed on Hikimoe Street near the Civic Center in Waipahū, in Mililani, and in Wahiawā. Two new bus transit centers are planned to be developed: one in Waipahū as part of the West Loch Rail Station, and another in Koa Ridge.
- Park-and-rides are transit centers where commuters can leave their cars during the day and catch TheBus. There are three park-and-ride facilities in Central O‘ahu located at Royal Kunia, Mililani Mauka, and the Hawai‘i Army National Guard Armory in Wahiawā.

Once the Honolulu Rail Transit System begins operating, express buses using the H-2 High Occupancy Vehicle (HOV) lane and a flyover ramp from H-2 to the Pearl Highlands park-and-ride facility will provide convenient access to and from the rail system for Central O‘ahu residents commuting to downtown Honolulu jobs.

4.1.3.2 Planned Rail Transit System

In 2006, the City Department of Transportation Services completed a planning Alternatives Analysis to evaluate alternatives that would provide high-capacity transit for the corridor between the University of Hawai‘i at Mānoa, downtown Honolulu, and the fast growing areas in Leeward O‘ahu and Kapolei.

On December 22, 2006, the City Council selected as the Locally Preferred Alternative, an elevated fixed-guideway rail transit system extending from the City of Kapolei to the University of Hawai‘i Mānoa with a connection to Waikīkī.

The initial phase of the rail transit system begins in East Kapolei near the Kroc Center and the Department of Hawaiian Home Lands headquarters, and ends at the Ala Moana Shopping Center. Extensions to the City of Kapolei in the west, and to Waikīkī and the University of Hawai‘i Mānoa in the east are planned after the first segment is completed.

The **O‘ahu Regional Transportation Plan 2035** (ORTP 2035) includes an "illustrative project" to plan, design, and construct a fixed guideway transit system between Pearl City and Mililani. (Illustrative projects are not officially part of the **ORTP 2035**, but may be considered for addition to the ORTP if additional funding becomes available.) Technical issues and associated costs caused by the topography and the steep change in elevation on the route, and efficiency issues caused by the dispersed character of development along the proposed route may make it difficult to justify building such a system.

As shown on the Public Facilities Map in Appendix A, the rail transit system will connect Waipahū with the City of Kapolei to the west and with the Primary Urban Center to the east. The rail transit system requires approximately a 28 to 30-foot wide right-of-way along the route and about 60 feet at the transit station sites.

A 43-acre Rail Operations Center will be located near Leeward Community College. The Center will be where staff monitor and control all the trains as they move through the system and where the trains will be maintained and stored.

The Honolulu Rail Transit system, when extended to the City of Kapolei, will provide both a shuttle service connecting Waipahū, the University of Hawai‘i West O‘ahu campus, Kalaeloa, the City of Kapolei, and Kapolei West, and peak-hour express commuter service to and from the Primary Urban Center, running on a route separated from rush hour highway traffic.

Two rail transit stations in Waipahū (West Loch Rail Station and Waipahū Transit Center Rail Station), and the rail station at Leeward Community College will be the centers of medium density residential and commercial development. The objective is to create a land use pattern along the transit corridor and around the rail transit stations

that would allow Central O‘ahu residents to minimize use of the private automobile and encourage use of rail transit for longer trips and walking or biking for short trips.

City bus routes will be integrated with the rail system and will provide feeder bus service, making it easier for residents to get to the stations. The Hikimoe bus transit center is within easy walking distance of the planned Waipahū Transit Center Rail Station; and a bus transit center is planned to be built adjacent to the makai entrance to the West Loch Rail Station.

A "flyover" access ramp from the H-2 freeway will provide access to the Pearl Highland station's park-and-ride and bus transit center for express bus riders and automobile traffic from the mauka areas of Central O‘ahu and from the North Shore.

4.1.4 BIKEWAYS

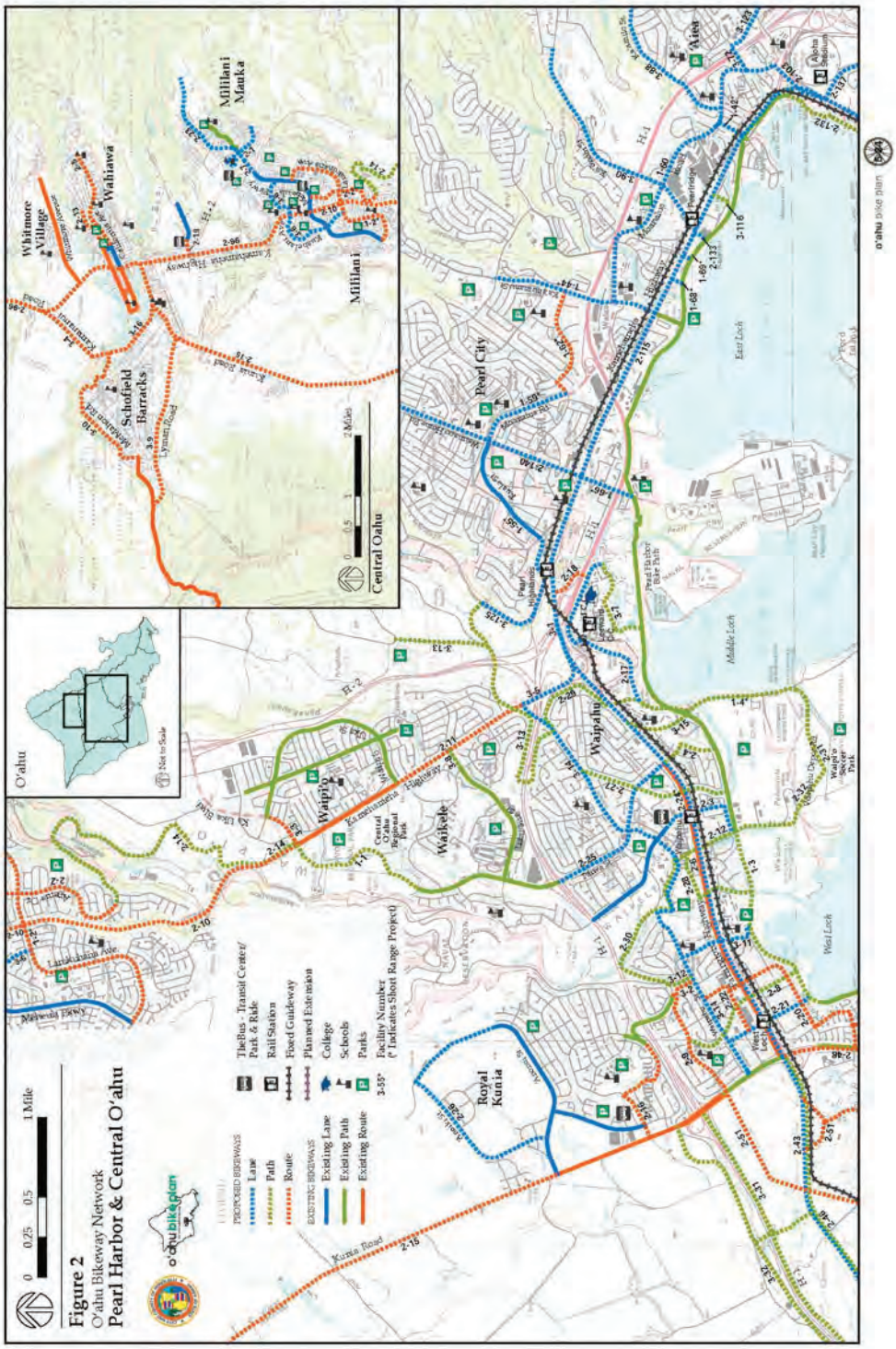
The proposed bikeway system for Central O‘ahu shown in Exhibit 4.1 is from the **O‘ahu Bike Plan (2012)** and generally incorporates facilities recommended previously in **Bike Plan Hawai‘i** (the 2003 State Bikeway Plan), and the **Waipahū Town Plan** (1995).

The Exhibit shows existing and planned locations for three types of bicycle facilities:

- **Bike paths** which are separated from roadways and are for the exclusive use of bicycles and pedestrians;
- **Bike lanes,** four- to six-foot lanes exclusively for bike use which are included in the roadway; and
- **Bike routes/signed shared roadways**, typically wide outside lanes on streets, with street signage and, in some cases, pavement markings, where bikes share the lane with automobiles.

Central O‘ahu currently includes about 20 miles of bikeways (including shared routes, bike lanes, and bike paths). The **O‘ahu Bike Plan** proposes a total of 71 additional miles of bikeway projects in Central O‘ahu, of which 36 miles would be City projects.

Exhibit 4.1
Central O‘ahu Bikeway System



Recognizing that implementation of all the planned bikeway projects for O‘ahu would far outstrip funds now available, the Plan sorts the projects into three priority levels. Highest priority projects in Central O‘ahu are:

- Central O‘ahu Regional Park: (Kamehameha Highway to Pāiwa Street) 0.95 miles of City bike path;
- Lanikūhana Avenue: (South end of Mēhē‘ula Parkway to Mililani Shopping Center) 2.64 miles of City bike path;
- Leeward Bikeway (Phase 1): (Waipi‘o Point Access Road to Hawaiian Railroad Society Train Station) 5.99 miles of State bike path; and
- Waipi‘o Point Access Road (Southern Section): (Pearl Harbor Bike Path to Waipi‘o Soccer Park) .72 miles of City bike path

4.1.5 GENERAL POLICIES

The following general transportation system policies support the vision for development of Central O‘ahu.

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Transportation System Functions

- Central O‘ahu's transportation system should:
  - Provide adequate access between jobs, shopping, and recreation centers in Central O‘ahu;
  - Provide improved access to and from adjacent areas, especially the employment centers of the Secondary Urban Center in ‘Ewa; and
  - Provide adequate capacity for peak-hour commuting to work in the Primary Urban Center. (Although the share of residents who will be able to live in Central O‘ahu and work either in ‘Ewa or Central O‘ahu is projected to increase by 2035, a majority of workers will continue to commute to jobs outside ‘Ewa and Central O‘ahu).

Transportation Development Priorities

- Meet projected demand for peak-hour transportation in Central O‘ahu by:
  - Increased use of transit; and
  - Transportation demand management through:
    - Provision of improved services on High Occupancy Vehicle (HOV) facilities;
    - Provision of park-and-ride facilities; and

- Use of other programs which encourage reduced use of the single occupant private automobile.

Relying on adding private automobile commuting capacity to meet the projected growth in demand from O‘ahu’s Leeward areas would be prohibitively expensive and have undesirable results. To increase commuting capacity from Central O‘ahu to Honolulu would require widening or double-decking the freeways in the ‘Aiea/Pearl City area. Even if this extra capacity was added in the ‘Aiea/Pearl City area, destructive, divisive, and expensive street widening would have to be done in downtown Honolulu to create sufficient capacity to absorb the extra cars that the expanded freeways could bring to the central city.

Adequate Access and Services

- Before zoning approval is given by the City Council for new residential and commercial development in Central O‘ahu, the Department of Planning and Permitting, the Department of Transportation Services, and State Department of Transportation, as appropriate, should:
  - Report if adequate transportation access and services can be provided with existing facilities and systems; and
  - If adequate capacity cannot be provided by existing facilities, recommend conditions that should be included as part of the zone change approval in order to assure adequacy, including the timing of any necessary improvements.

Transit-Oriented Community Street Systems

- Design circulation systems within residential communities and commercial centers to emphasize accessibility from residences to bus routes, parks, schools, and commercial centers.
- Design circulation systems to facilitate bicycle and pedestrian travel, to increase transit use, and to reduce dependence on automobile travel.

Complete Streets

- Design streets to provide safe access and mobility for all users, including pedestrians, bicyclists, transit users, motorists, and persons of all abilities, as determined through a context sensitive solution process that integrates

community context and the surrounding environment, including land use, and balances the needs and comfort of all modes and users.

See Chapter 3, Sections 3.9 and 3.10, for more detailed planning policies and guidelines for circulation in residential communities and commercial centers.

Roadways

- Develop the roadway elements and other transportation projects listed in the **O‘ahu Regional Transportation Plan** to meet the existing and projected transportation needs in Central O‘ahu.

Transit (Bus and Rail)

- Increase transit service in Central O‘ahu in order to enhance circulation among Central O‘ahu communities and between Central O‘ahu and the adjacent ‘Ewa and North Shore areas, and to provide convenient service for peak-hour commuting.
- Orient increases in arterial lanes to high occupancy vehicles (HOV) and mass transit. Develop exclusive lanes and park-and-ride facilities to improve bus transit speed and to provide enhanced incentive for commuters to opt for mass transit or HOV use.
- Provide sites for bus transit centers and park-and-ride facilities as new communities are developed.
- Create a land use pattern along the rail transit corridor and around the two Honolulu Rail Transit stations that would allow Waipahū residents to minimize use of the private automobile and encourage use of transit for longer trips and walking or biking for short trips.
    - Permit medium density apartment and commercial mixed-use development in Waipahū generally within 1/4 mile from the rail transit station/park-and-ride facility sites.
    - Use express bus service, shuttle feeder buses, bus rapid transit, and park-and-ride facilities to link other Central O‘ahu communities to the Waipahū rail stations and the Pearl Highlands rail station and to reinforce Transit Oriented Development around the rail stations.

See Sec. 3.6 for more specific land use policy guidelines for Waipahū.

Bikeway System

- Develop bikeways as indicated in the **Waipahū Neighborhood TOD Plan** and the City's **Oʻahu Bike Plan**.
- Develop a major bike path, as part of the Pearl Harbor Historic Trail, running east-west along the OR&L right-of-way (with branch routes to the Waipahū Cultural Garden and Leeward Community College).
- Develop major bike paths, running north-south, on Kunia Road between Farrington and H-1 Freeway, Managers Drive/Mokuola Street, Waipiʻo Uka Street, and Lanikūhana Avenue between Kamehameha Highway and Meheula Parkway.
- Provide bike lanes on Waipahū Street, the Village Park connector between Village Park and Waipahū, Hikimoe Street, Waipahū Depot Road, Mēhēʻula Parkway, Kīlani Avenue, and California Avenue.
- Designate Kamehameha Highway, Kunia Road north of H-1, and Wilikina Drive as bike routes with a curbside vehicle land of minimum 12-foot width allowing shared use by bikes and automobiles.

4.1.6 GUIDELINES

The following guidelines suggest how the general policies for a transportation system in Central Oʻahu should be implemented.

Reduction in Automobile Use

- Reduce reliance on the private passenger vehicle by:
  - Providing circulation systems with separated pedestrian and bicycle paths and convenient routes for public transit service;
  - Designing street systems in new development areas with layouts that reduce the length of dead-end streets and provide for smaller blocks in order to facilitate bus routes, encourage walking and biking, and provide better access for emergency and utility vehicles;
  - Providing supporting facilities and amenities for pedestrian, bicycle, and public transit use, including the provision of bicycle racks at commercial centers, bicycle storage facilities at employment centers, and bus shelters at bus stops; and

- Supporting medium-density and high-traffic land uses along the Farrington Highway rail transit corridor, especially generally within a 1/4 mile of the Honolulu Rail transit stations in accordance with the adopted **Waipahū Neighborhood TOD Plan**.

Community-Level Street Standards

- Revise standards for public streets within residential communities and commercial centers to support and improve pedestrian and bicycle travel and on-street parking. While average motor vehicle speed may be reduced, safety and enjoyability would be increased and greater efficiency in land use, reduced construction costs, and improved street function would likely be achieved.
- Design the street network to provide multiple options for reaching major amenities such as the Main Street/Village Center shops, schools, parks and community facilities, without having to access an arterial boulevard.
- Identify safe routes to schools and ensure that these are pedestrian and bicycle-friendly.
- Consider view corridors to the mountains, open space, and other local and regional landmarks in the arrangement of streets, commercial centers, and shared spaces within both residential and mixed-use districts.
- Connect existing adjacent neighborhoods to new streets, bike ways, paths, and trails.
- Use traffic calming measures to slow traffic making short cuts through residential neighborhoods and to support a desirable living environment.
- Use multiple connecting streets within and between residential neighborhoods to knit neighborhoods together.
- Use streets, bikeways, and walkways to create a unifying circulation network that provides convenient routes throughout the community.
- Establish specific connectivity standards (minimum intersection frequency, maximum dead end length, number of dwellings or building on a cul-de-sac, and minimum street spacing) for each zoning district.

4.2 WATER ALLOCATION AND SYSTEM DEVELOPMENT

In 1987, the State enacted the State Water Code in order to protect, control, and regulate the use of the State's water resources for the benefit of its people. The State Commission on Water Resource Management (CWRM) has final authority in all matters regarding administration of the State Water Code. By City Charter, the Board of Water Supply (BWS) has the authority to manage, control, and operate the water systems of the City, and therefore coordinate development of potable water sources and systems based on BWS rules and regulations and water commitment policies. Under the State Water Code, the City is responsible for preparing the water use and development plan for the City and County of Honolulu.

This plan, called the **O‘ahu Water Management Plan** (OWMP), is prepared by the Department of Planning and Permitting in conjunction with the Board of Water Supply and with the assistance of the State Commission on Water Resource Management (CWRM).

The **OWMP** consists of overall policies and strategies and regional Watershed Management Plans which guide the activities of the City and County of Honolulu and advise the CWRM in the areas of planning, management, water development and use, and allocation of O‘ahu's limited water resources.

Watershed Management Plans for each of the eight Development Plan and Sustainable Communities Plan areas, when completed, will together comprise the updated **OWMP** and provide a long-range 20-year plan for the preservation, restoration, and balanced management of ground water, surface water, and related watershed resources.

Each Watershed Management Plan (WMP) is submitted to the City Council for adoption by ordinance.

The **Wai‘anae Watershed Management Plan** (August 2009), **Ko‘olau Loa Watershed Management Plan** (August 2009), and **Ko‘olau Poko Watershed Management Plan** (September 2012) have been completed and approved. Plans for the North Shore, Central O‘ahu, and ‘Ewa are under preparation, and will be followed by plans for the Primary Urban Center, and East Honolulu.

For Central O‘ahu, until a WMP has been adopted, Sections 1 (General Provisions), 2 (O‘ahu Water Management Policies and Strategies), and 3 (Severability) of Chapter 30 (Water Management) of the **Revised Ordinances of Honolulu** and the OWMP **Technical Reference Document** (March 1990) serve as the water use and development plan.

The Board of Water Supply (BWS) evaluated available water supplies and the water development needs of the existing and new residential, commercial (including retail, office, recreational, and industrial), diversified agriculture, and military uses likely by 2040 as a result of implementation of the **Central O‘ahu Sustainable Communities Plan**.

- The BWS projects that, due to the decreasing trend in per capita demand as a result of water conservation, only an additional 2.0 million gallons per day (mgd) of potable (or drinkable) water above the 17.7 mgd used in 2010 will be needed in Central O‘ahu by 2040. (This estimate is based on a preliminary projection of a BWS served population of 164,600 in 2040).
- In addition, long term demand for nonpotable water for irrigation of the 10,350 acres of agricultural land in Central O‘ahu protected from development by this plan is estimated to be 26 mgd (2,500 gallons per acre day). (The Waiāhole Ditch currently provides 12.6 mgd of nonpotable water for agriculture and other uses in Central O‘ahu.)

The Board of Water Supply has master planned potable water system infrastructure to accommodate Central O‘ahu's planned growth. Ultimately, potable water demands of the remaining lands within the Community Growth Boundary should be met by additional groundwater sources in Central O‘ahu if sustainable yield is determined available.

The Central O‘ahu watersheds are important to the recharge of the Pearl Harbor Aquifer, one of O‘ahu's most important sources of potable water. The Pearl Harbor aquifer is the most cost-effective and accessible water resource of potable quality on O‘ahu, and it is needed to support existing and future domestic potable water uses described in the development plans. As a result, the demand for nonpotable water for agricultural and urban irrigation of lands over the Pearl Harbor aquifer should be met with low chloride irrigation water such as the Waiāhole Ditch, freshwater wells, or low chloride recycled water.

Experience with increasing chloride, nitrate, and pesticide contamination of groundwater indicates that activities on the surface of the land can have a detrimental effect on the quality of drinking water. As a result, nonpotable water used on lands above the Pearl Harbor aquifer should be low in total dissolved solids to protect the quality of drinking water withdrawn from wells located down-gradient (i.e., in the direction that groundwater flows) from where the nonpotable water is being applied. As shown in Table 4.2, the Board of Water Supply has identified potential sources of potable and nonpotable water to meet the projected demand in Central O‘ahu through 2030. These sources will be pursued as part of the Board's development and operation of a diversified and integrated island-wide water system.

Strategies in the Watershed Management Plan promote on-going groundwater source development coupled with efforts to increase water delivery efficiency, water conservation, and continued development of alternative sources of water, such as recycled water recovered from wastewater.

4.2.1 GENERAL POLICIES

Adequacy of Water Supply

- Before zoning approval is given for new residential or commercial development in Central O‘ahu, the Board of Water Supply should:
  - Report if adequate potable and nonpotable water is available; and
  - If adequate potable and nonpotable water is not available, recommend conditions that should be included as part of the zone change approval in order to assure adequacy.
- Confirm adequacy of existing capacity at the time of land subdivision or building permit applications for existing lots.

Watershed Protection

- To insure maximum recharge of the Pearl Harbor aquifer, protect lands above the Pearl Harbor aquifer in Central O‘ahu which receive more than 50 inches of rainfall annually and are zoned for agricultural or preservation uses from urban development unless it can be demonstrated that use of Low Intensity Development practices will sustain or increase the amount of recharge.

Table 4.2

Potential Sources of Potable and Nonpotable Water for Central O‘ahu

POTABLE GROUNDWATER RESOURCES		
GROUND WATER SOURCES(1)		**Available Estimated Source Yield (mgd)**(2)
1. Wahiawā Well III		3.0
2. Waipi‘o Heights Well II (3)		0.5
3. Waipi‘o Heights Well III (3)		1.0
4. Mililani Well IV (3)		1.0
5. Waiawa Wells I-IV (4)		6.0
6. Waipahū Wells II (3)		1.0
7. Koa Ridge Makai Wells		2.0
Total		**14.5**

ALTERNATIVE WATER RESOURCES		
	Available Resource (mgd)	
NON-POTABLE SOURCES	**Minimum Estimate (mgd)**	**Maximum Estimate (mgd)**
Recycled Water		
Wahiawā Recycled Water (5)	1.6	2.0
Mililani Recycled Water (5)	0.0	4.0
Schofield Recycled Water (5)	2.0	3.0
Non-potable Water		
Waiāhole Ditch	12.6	15.0
Wahiawā Reservoir (6)	8.5	22.0
Total	**24.7**	**46.0**

Notes:

All quantities are in million gallons per day (mgd).

(1) Allocation of groundwater sources requires the approval of the State Commission on Water Resource Management (CWRM).

(2) Estimated Source Yield not already being pumped or committed to an existing development.

(3) Source already has an existing permitted use equal to or a portion of the estimated yield.

(4) Honolulu Board of Water Supply, **Waiawa Water Master Plan** (Revised Dec. 14, 2004).

(5) Wahiawā Wastewater Treatment Plant (WWTP) Avg. Flow = 2 mgd, Schofield (Army) Avg. flow = 2 mgd. Mililani WWTP Avg. Flow = 4 mgd.

(6) Kaukonahua Stream's minimum average month = 8.5 mgd, 2002 annual average = 22 mgd. Wahiawā Reservoir storage capacity = 9,200 ac-ft or 3,066 mgd.

Source:

Honolulu Board of Water Supply, **Watershed Management Plan** (2008).
CWRM Database (2005)
Honolulu Board of Water Supply, **O‘ahu Water Management Plan: Overview Section** (2009).

- Manage urban and agricultural land uses to ensure chemicals and nutrients do not contaminate the underlying potable aquifers. Require best practices for controlling potentially contaminating activities in accordance with the State Department of Health's Source Water Assessment Program and the City's Stormwater Management Program.
- Support watershed infiltration enhancement through replanting of native species and removal of invasive species in forest areas, soil conservation practices in agricultural areas, and low impact development practices in urban areas.

Water Use Efficiency and Conservation

- Require developments to conserve water resources by implementing water efficiency and conservation measures, such as monitoring water use and loss, installing low-flow plumbing fixtures, drought-tolerant landscaping, sub-metering and efficient irrigation systems with soil moisture sensors. Such requirements will be determined during review of building permit applications.
- Encourage owners of existing plumbing systems to conduct regular water audits and make repairs to reduce water loss.

Use of Non-potable Water

- Develop an adequate supply of non-potable water for irrigation and other suitable uses in Central O'ahu in order to conserve the supply of potable water.
- Use non-potable water low in total dissolved solids and chlorides for irrigation of lands above the Pearl Harbor aquifer to protect the quality of drinking water withdrawn from wells located down-gradient (i.e., in the direction groundwater flows) of the application.
- **Dual Water Lines -** Require developments with large landscaped areas (such as golf courses, parks, or schools), roadway landscaping, and industrial processes to have dual water lines to allow conservation of potable water and use of nonpotable water for irrigation and other appropriate uses. Such requirements shall be determined during review of project water master plans for new developments and approval of zoning and subdivision applications and construction plans.

Agricultural Water Sources

- Allocate a sufficient amount of water to meet the diversified agricultural needs for Central O‘ahu along with high quality recharge of the Pearl Harbor aquifer.
- Request the State Commission on Water Resource Management consider all sources of water in making allocations. (A number of potential sources are identified in Table 4.2, including: Waiāhole Ditch water, Wahiawā Reservoir water, and recycled water recovered from wastewater. The amount of water available and the potential use of each of these sources vary according to location.)

Recycled Water

- Promote large-scale use of recycled water from the Army's Schofield Wastewater Treatment Plant (WWTP) and the City's Wahiawā WWTP and Mililani Wastewater Pre-Treatment Facility for urban and agricultural irrigation in Central O‘ahu to conserve potable water where consistent with State Department of Health and Board of Water Supply standards.
- Promote gray water reuse for on-site irrigation as allowed by State Department of Health Gray Water Reuse Guidelines and the Uniform Plumbing Code.
- Promote public and private partnerships and leverage State revolving funds and other grant funds and appropriations to plan, design, and construct recycled water treatment and distribution infrastructure to keep recycled water rates affordable.

Stormwater Reclamation

- Promote individual rain catchments connected to rain gutters for landscape irrigation, reducing both demand for municipal water and the volume of storm water runoff into streams and nearshore waters.
- Promote large-scale storm water impoundments and treatment systems to enhance watershed infiltration and supplement nonpotable irrigation systems in Central O‘ahu for urban and agricultural irrigation.

4.3 WASTEWATER TREATMENT

Existing treatment plants in Central O‘ahu are shown on the Urban Land Use Map and Public Facilities Map in Appendix A.

The Department of Environmental Services estimates treatment/disposal capacity at the Honouliuli Wastewater Treatment Plant (WWTP) will need to be increased from existing capacity for treatment of 38 million gallons per day (mgd) to 56.6 mgd by 2035 to meet projected population and economic growth in ‘Ewa and Central O‘ahu resulting from implementation of the **‘Ewa Development Plan** and the **Central O‘ahu Sustainable Communities Plan**. In addition, the capacity of specific sewer lines and pump stations will need to be increased.

The City does primary treatment of all wastewater effluent at the Honouliuli Wastewater Treatment Plant, and secondary and tertiary treatment of a portion of the effluent to produce reclaimed water used for irrigation and other non-potable uses. Until 2010, the plant operated under a waiver granted by the Environmental Protection Agency (EPA) that allowed discharge of primary treated effluent through a deep ocean outfall. Under the December 2010 Consent Decree with the EPA, the City has until 2024 to upgrade the plant so that all wastewater discharged through the ocean outfall receives secondary treatment.

The City's Wahiawā WWTP is operating under a Consent Decree from the State Department of Health. Under the Consent Decree, the City upgraded the WWTP to tertiary treatment and deepened the outfall in order to continue discharging recycled water into Wahiawā Reservoir (Lake Wilson). The plant now treats approximately 2.0 mgd domestic wastewater collected from Wahiawā Town, Whitmore Village, and the Navy Joint Base Pearl Harbor – Hickam, Wahiawā Annex communities. Current plans also call for providing sewerage to small areas in Wahiawā not yet linked to the WWTP.

The City has upgraded the Wahiawā WWTP's secondary treatment system by installing a Membrane Bioreactor Facility to produce R-1 quality recycled water. (R-1 water is suitable for irrigating food crops and recreational areas.) Potential use of the R-1 water in parks and golf courses in Central O‘ahu is now being evaluated.

The Army operates a 4.2 million gallon per day (mgd) wastewater treatment plant located at Wheeler Army Airfield that treats flows from Schofield Barracks, Wheeler Army Airfield, Helemano Military Reservation, and the East Range. Treatment levels have been upgraded to allow recovery of R-1 quality water from the effluent which can be used for landscape irrigation. In recent years, recycled water from the plant was discharged into an irrigation flume, for use on Dole Foods lands. The Army is now considering other uses for the water.

4.3.1 GENERAL POLICIES

- Require all new developments in Central O‘ahu to be connected to a regional or municipal sewer service system.
- Where feasible, use recycled water recovered from treated wastewater effluent as a source of non-potable water for irrigation and other uses where appropriate and approved by the Department of Health and Board of Water Supply.
- Locate wastewater treatment plants in areas shown as planned for industrial use and away from residential areas shown on the Urban Land Use Map in Appendix A.
- Use a City review and approval process which provides adequate public notice and input for any major new private wastewater treatment plant. Do not require such comprehensive review and approval for other system elements, such as pump stations and mains.

4.4 ELECTRICAL POWER DEVELOPMENT

The Hawaiian Electric Company (HECO) forecasts that increased electrical demand, the need for different types of generation to help reliably integrate additional renewable energy from intermittent sources, and the possible retirement of the Honolulu Power Plant from service will create a need for additional power generation capacity by 2025. Additional substations, and transmission lines may also be needed.

Overall economic development, the associated increase in electrical demand, the effectiveness of energy conservation and efficiency programs, and the development of new energy-related technologies will all play a role in determining how soon additional

generation capacity will be required. No new power plant sites are being considered for Central O‘ahu by HECO at this time.

However, the U.S. Army has announced plans for a 50 megawatt (MW) generating station at Schofield Barracks, to provide power to the HECO grid by 2017. The facility would be “biofuel-capable,” powered by a mix of diesel fuel and biofuels. It would be designed as a “quick-start” plant, able to respond to reductions in power feeding into the grid. While the Army’s objective is to assure adequate power for its facilities in Central O‘ahu, the project would increase the reliability of the entire island grid.

The Hawaii Clean Energy Initiative, a 2008 partnership between the State and the U.S. Department of Energy, set goals for the state to improve energy efficiency by 30 percent and to produce 40 percent of the needed energy from renewable sources by 2030. Renewable energy-related initiatives underway or under consideration for Central O‘ahu include:

- Photovoltaics
  - Sun Edison’s First Wind Solar Group plans to build three solar energy generating facilities totaling 82 MW in the Mililani area and near the Pineapple Overpass above Koa Ridge Makai;
  - SunEdison is proposing two photovoltaic (PV) facilities totaling 115 MW on a portion of the Waiawa project site;
  - Solar Hub, Inc. is proposing a 500-kilowatt PV facility near Kunia Plantation Village;
  - Ho’ohana Solar is proposing a 20 MW PV facility on a portion of the Royal Kunia II project site; and
  - HECO has installed PV systems on three Central O‘ahu schools as part of its Sun Power for Schools program.
- Biofuels
  - HECO provides funding for biofuels crop research conducted with the University of Hawai‘i. Some of this research includes the evaluation of promising oil crops within test plantings in Central O‘ahu;
  - As noted above, the Army's proposed 50 MW power plant will be "bio-fuel-capable;" and
  - Phycal LLC has announced plans to build a 40-acre algae farm at Poamoho which will be used to produce biofuel.

4.4.1 GENERAL POLICIES

- Support efforts to increase the share of energy from clean sources through increased efficiency and production of energy from renewable sources.
- In approving solar facilities on agricultural lands, require protection of high quality agricultural lands and maintenance of aquifer recharge, and encourage incorporation of complementary agricultural uses where feasible
- Analyze and approve major system improvements - such as development of a new power generating plant and/or major new transmission lines - based on island-wide studies and siting evaluations.
- Give strong consideration to placing any new transmission lines underground where possible under criteria specified in State law.
- Locate electrical power plants in areas shown as planned for industrial use and away from residential areas shown on the Urban Land Use Map in Appendix A.
- Consider any proposed major new electrical power plant within a City review and approval process which provides public notification and opportunity to comment and public agency analysis of impacts and mitigations.

4.5 SOLID WASTE HANDLING AND DISPOSAL

There are no operating landfills in Central Oʻahu because of concerns about the potential impacts on Oʻahu's water supply. The entire Sustainable Communities Plan area, with the exception of a small area bordering Pearl Harbor, is considered one of Oʻahu's most important groundwater recharge areas. The sole City solid waste facility in the region, the Waipahū Incinerator, was closed in 1995.

The City is determining the location of a new landfill site to supplement or replace the Waimānalo Gulch Sanitary Landfill (WGSL), Oʻahu's only landfill for municipal solid waste. A Landfill Site Advisory Committee established by Mayor Carlisle identified and ranked eleven potential landfill sites in 2012. None of the sites are in Central Oʻahu.

4.5.1 GENERAL POLICIES

- Analyze and approve siting and/or expansion of sanitary landfills based on island-wide studies and siting evaluations.
- Analyze and approve siting and/or expansion of sanitary landfills above the UIC line and the “No Pass” line only if recommended by the Department of Health and the Board of Water Supply.
- Use a City review and approval process which provides adequate public notice and input, complete technical analysis of the project, and approval by the City Council, for any new or major modification of private landfills, incinerators, garbage-to-energy plants, refuse convenience centers, or other major solid waste handling or disposal facility.
- For master-planned communities, consult with the Department of Environmental Services for how solid waste will be handled, to include estimates of solid waste to be generated by the communities, provisions for collection of solid waste, and provisions for and encouragement of recycling.

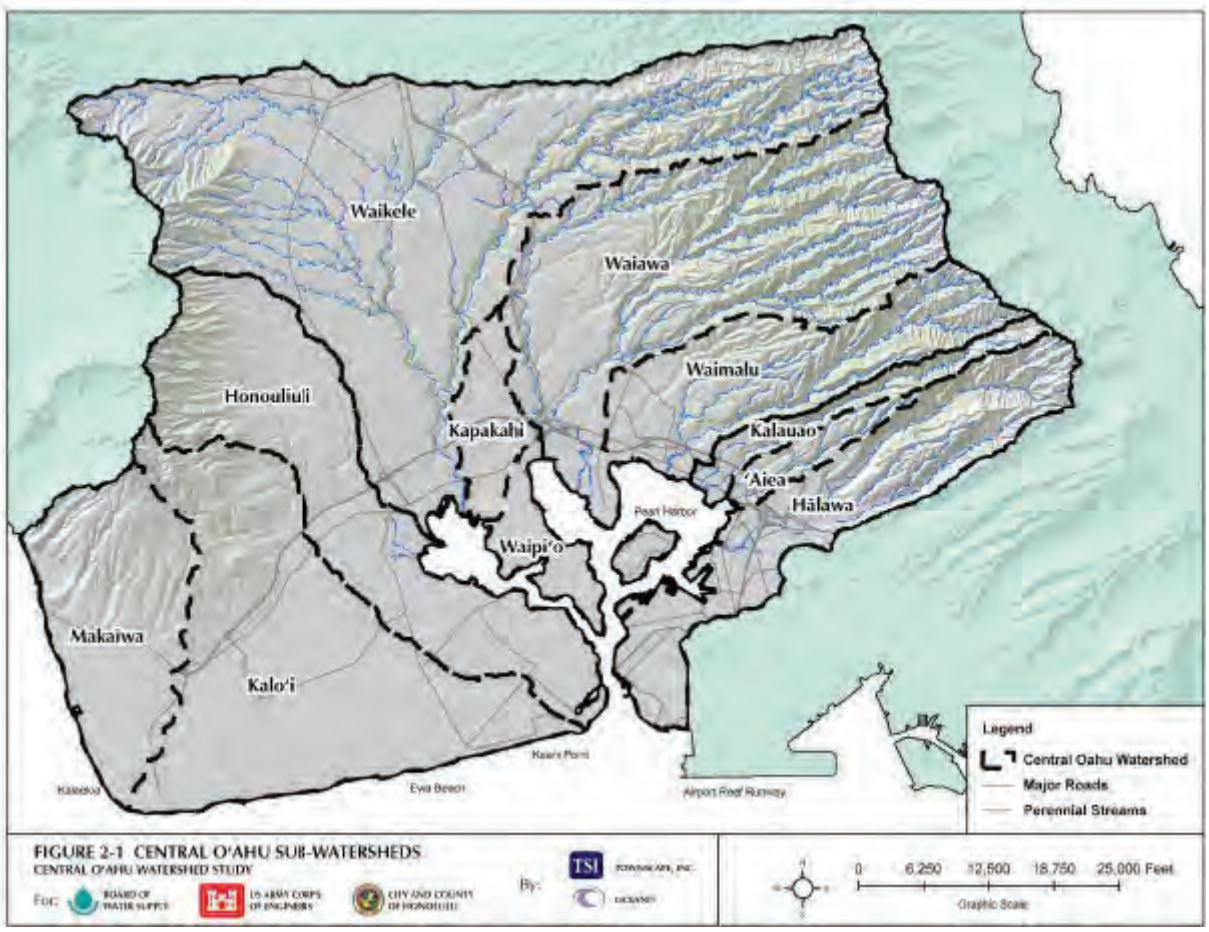
4.6 DRAINAGE SYSTEMS

Central O‘ahu can be divided into two areas for assessing drainage needs: the uplands *mauka* of the H-1 Freeway and the lowlands *makai* of the freeway. (See Exhibit 4.2.)

The urban developments on high plateaus in the Central O‘ahu uplands benefit from the natural flood protection provided by the deep gulches which drain storm waters and filter some pollutants. Historically, flooding problems in the uplands have mainly occurred in the portion of Waikakalaua Gulch which has been developed with houses and apartments.

Still, parts of Wahiawā may flood during heavy rains, and the amount of water released from Lake Wilson into Kaukonahua Stream may be so great that flooding occurs in Otake Camp in Waialua (North Shore).

Exhibit 4.2
Central O‘ahu Drainage Basins



Flooding has been more prevalent in the Central O‘ahu lowlands, particularly in Waipahū around Waikele Stream and in Waiawa around the lower reaches of Waiawa Stream where flood plain and wetland areas have been developed.

Much of Waipahū Town is shown on Federal Emergency Management Agency (FEMA) maps as within Special Flood Hazard Areas, indicating the area has a one-percent chance of being flooded by water from Waikele Stream, Kapakahi Stream, and the Wailani channel in any given year.

As noted in the adopted **Waipahū Neighborhood TOD Plan** (2014), before substantial redevelopment can occur in the Transit-Oriented Development Special District around the Waipahū Transit Center Rail Station, flood control measures to reduce the risk of flooding and increase resiliency must be implemented.

The discharge of drainage to Pearl Harbor has caused serious siltation problems and has aggravated water pollution which was already a significant problem due to shipyard uses. Siltation causes navigation problems in the harbor and forces the Navy to dredge at frequent intervals.

The City, in response to a federal government mandate, has initiated a major program to reduce non-point-source pollution. The City rules for storm drainage standards, adopted in 2000 and amended in 2013, include provisions for storm water quality and retention.

- In general, the City requires residential, commercial, public facilities, and transportation development and redevelopment projects of one acre or more to address storm water quality through the use of Low Impact Development best management practices (BMPs).
- In addition, projects involving development or redevelopment of gas stations, automobile repair shops, restaurants, and parking lots with at least 10,000 square feet of impervious surfaces must use these Low Impact Development BMPs.

The intent behind these Low Impact Development requirements is to mimic natural processes and protect water quality by requiring infiltration, evapotranspiration, or reuse of storm water at the site where it falls or an off-site facility. All water from storms delivering up to an inch of rain is to either be retained on site or biotreated.

In many watersheds, however, undeveloped mountain areas generate a disproportionately large share of the total storm flow, and it is difficult to determine who is responsible for mitigating the environmental impact.

The remainder of the section provides general policies and guidelines for drainage systems in Central O‘ahu.

4.6.1 GENERAL POLICIES

- Design drainage systems to emphasize flood control, minimization of non-point source pollution, and the retention and/or detention of storm water on-site and in appropriate open space and wetland areas.

- Use storm water as a potential irregular source of water for recharge of the aquifer that should be retained for absorption rather than quickly moved to coastal waters.
- Use natural and man-made vegetated drainageways and retention basins as the preferred solution to drainage problems wherever they could promote water recharge, help control non-point source pollutants, and provide passive recreation benefits. However, concrete-lined channels can be permitted, despite their potential adverse environmental impacts, if there is no other reasonable alternative to meet specific design challenges.
- Reduce the volume of sediment in Central O‘ahu streams by identifying sources and volumes of sediment polluting Central O‘ahu streams and Pearl Harbor, and developing projects to address problem areas.

4.6.2 GUIDELINES

The following guidelines suggest how the general policies for drainage systems in Central O‘ahu should be implemented.

- **Retention and Detention**. Employ methods of retaining or detaining storm water to minimize non-point source pollution in storm water. Where feasible, use any open space, including parking lots; landscaped areas; mini and community parks, and private and public golf courses, to detain or infiltrate storm water in order to reduce the volume, runoff rates and the amount of sediments and pollutants transported.
- **Relation to the Regional Open Space Network**. To the extent possible, integrate planned improvements to the drainage system into the regional open space network by emphasizing the use of retention basins, creation of passive recreational areas, and recreational access for pedestrians and bicycles.
- **Preservation of Gulches as Natural Drainage Ways**. Retain the major gulches listed in Table 2.2 as flood plains and open space resources.
- Avoid further development of residential, commercial or industrial uses within the gulches.

- Prohibit grading or other disturbance of gulch walls, other than necessary to clear the gulches of debris or other floodway obstructions or to construct and maintain drainage, access and utility facilities.
- **Restrictions on Stream Channelization**. Avoid stream channelization and leave existing flood plains intact except where absolutely necessary to protect existing development from flooding.
- **Reduction of Stream Erosion**. Identify stream erosion problem areas and develop and maintain appropriate erosion control projects, including sediment basins, other catchments, velocity dissipators, stream channel renovations, and sediment dissipation structures.
- **Best Management Practices**. Increase incentives for and improve enforcement of use of Best Management Practices to reduce erosion and storm water impacts on surface water quality.
- **Vegetated Stream Buffer Zones**. Establish riparian buffer zones along Central O‘ahu streams to help protect against surface water pollution, stream bank erosion, and flooding.
- **Preservation of Flood Plain Capacity around Pearl Harbor.** Restrict urbanization in the lowlands around Pearl Harbor if that potential development reduces flood plain capacity or allows increased siltation and pollution of Pearl Harbor.
- **Control of Flooding in Waipahū.** Reduce the risk of flooding and improve resilience to impacts of flooding to portions of Waipahū currently in the 100-year flood way by improvements to channels and berms, use of upstream flood retention basins, or other appropriate measures.

4.7 SCHOOL FACILITIES

Statewide, the State Department of Education (DOE) faces an enormous shortfall in funding to meet projected needs for new classrooms.

Act 245 (2007) established a system for collecting school impact fees from new residential developments. Developers are required to provide “their proportionate share of the land and construction cost of new or expanded school facilities needed to serve new residential developments.” The act requires that developers contribute 100 percent of land, but only 10 percent of school construction costs.

DOE has established school impact districts required under the Act in order to collect land and money from developers. In January 2012, the Board of Education approved creation of a Leeward Oʻahu Impact District that includes the Waipahū Complex and the Pearl City Complex areas in Central Oʻahu. (The Pearl City Complex includes the proposed Koa Ridge and Waiawa development areas.)

As shown in Table 4.3, based on expected development, the DOE projects a need for five new elementary schools, one new intermediate school, and one new high school in Central Oʻahu by 2035. The site size recommended by the DOE for elementary schools is 8 to 15 acres, for intermediate schools is 15 to 20 acres, and for high schools is 45 to 55 acres.

The conceptual locations for one new intermediate school and one new high school are shown on the Public Facilities Map in Appendix A. Elementary schools are not mapped, because their sites are of community rather than regional concern. Sites have been reserved for all five of the planned elementary schools and the planned middle school. The remainder of the section provides general policies and guidelines for school facilities development in Central Oʻahu.

4.7.1 GENERAL POLICIES

- **Project Review and Approval Assessment -** As new residential developments are reviewed as part of the project application review and approval process, request that the DOE report to the Department of Planning and Permitting whether the DOE will be able to provide adequate school facilities, either at existing schools or at new school sites, so that needs from the proposed development can be met.
- **Fair Share Provisions.** Require developers to comply with DOE school impact fee requirements and pay their fair share of all costs needed to provide adequate school facilities for the children living in their developments.

Table 4.3

Existing and Planned Schools in the Central O‘ahu SCP Area

School	School Year 2013 - 2014 Enrollment	School Year 2012-2013 Classroom Count[1]	Site Reserved	Opening Date
Elementary Schools				
Leilehua Complex				
Hale Kula Elementary School	892	974	Existing	NA
Helemano Elementary School	621	624	Existing	NA
‘Iliahi Elementary School	454	484	Existing	NA
Ka‘ala Elementary School	505	579	Existing	NA
Solomon Elementary School	1,053	1,125	Existing	NA
Wahiawā Elementary School	531	766	Existing	NA
Wheeler Elementary School	627	681	Existing	NA
Mililani Complex				
Kīpapa Elementary School	630	776	Existing	NA
Mililani ‘Ike Elementary School	979	914	Existing	NA
Mililani Mauka Elementary School	853	857	Existing	NA
Mililani Uka Elementary School	669	926	Existing	NA
Mililani Waena elementary School	719	778	Existing	NA
Pearl City Complex [2]				
Kanoelani Elementary School	767	702	Existing	NA
Waipahū Complex				
August Ahrens Elementary School	1,403	1,540	Existing	NA
Honowai Elementary School	794	767	Existing	NA
Kalei‘ōpu‘u Elementary School	982	938	Existing	NA
Waikele Elementary School	653	689	Existing	NA
Waipahū Elementary School	1,130	1,019	Existing	NA
Total	***13.662***	***15,139***		
Planned Elementary Schools				
Royal Kunia		400 to 750	YES	ND
Koa Ridge I		400 to 750	YES	ND
Waiawa I		400 to 750	YES	ND
Waiawa II		400 to 750	YES	ND
Waiawa III		400 to 750	YES	ND
Intermediate/Middle Schools				
Highlands Intermediate School (Pearl City Complex)	937	500	Existing	NA
Mililani Middle School (Mililani Complex)	1,743	1,941	Existing	NA
Waipahū Intermediate School (Waipahū Complex)	1,314	1,296	Existing	NA
Wahiawā Middle School (Leilehua Complex)	818	970	Existing	NA
Total	***4,812***	***4,707***		

Table 4.3

Existing and Planned Schools in the Central O‘ahu SCP Area (Continued)

School	School Year 2013 - 2014 Enrollment	School Year 2012-2013 Classroom Count[(1)]	Site Reserved	Opening Date
Planned Intermediate/Middle Schools				
Waiawa Middle School		1,500 to 3,000	YES	ND
High Schools				
Leilehua High School	1,803	2,100	Existing	NA
Mililani High School	2,476	2,269	Existing	NA
Pearl City High School	1,697	2,007	Existing	NA
Waipahū High School	2,441	2,503	Existing	NA
Total	***8,417***	***8,879***		
Planned High Schools				
Waiawa High School		800 to 1,600	NO	ND

NOTES:

(1) Classroom Count is an estimate of the number of students who can be housed at the school based on the DOE's Annual Room Tracking Survey for School Year 2012-2013, the most recent survey available.

(2) Kanoelani Elementary is the only school in the Pearl City complex located in the Central O‘ahu SCP area. The Koa Ridge and Waiawa proposed developments are currently located in the Pearl City Complex area.

ND Date Not Determined

NA Not Applicable

Source: State Department of Education Facilities Development Branch, 2014

4.7.2 GUIDELINES

The following guidelines suggest how the general policies for schools facilities development in Central O‘ahu should be implemented.

- **Schools as Community Centers.** Request that the State DOE design school facilities to facilitate community use during non-school hours and weekends. Because of the difficult financial problems for all sectors, new communities are likely to have fewer churches, private social halls, and recreation facilities. As a result, schools may be one of the only ways that important functions such as cultural and recreational centers and meeting facilities can be provided.
- **Co-location with Parks.** Pursue co-locating neighborhood or community parks with elementary and intermediate schools, and coordinating designs

of facilities with the State DOE when needless duplication of parking and of athletic, recreation, and meeting facilities can be avoided.

- **Shared Facilities.** Coordinate the development and use of athletic facilities such as swimming pools and gymnasiums with the DOE where such facilities would maximize use and reduce duplication of function.
- **Fair Share Contribution.** Support the State DOE's establishment of impact districts to obtain fair share requirements from developers of residential projects and enforce existing agreements so that the DOE can provide adequate school facilities at existing and new schools to meet the needs of residents.

4.8 PUBLIC SAFETY FACILITIES

Table 4.4 provides a listing of existing and planned public safety facilities in the **Central O'ahu Sustainable Communities Plan** area.

Fire Stations - To meet projected population and economic growth by 2035, the Fire Department proposes stations be built in the Royal Kunia Phase II and Koa Ridge Makai developments.

Police Station - Because police operate primarily in the field and do not have a need for outlying stations, the Police Department plans no new regional stations in Central O'ahu. A sub-station at Waikele was proposed in the late eighties, but there are no plans to proceed with the project.

Emergency Medical Services Facilities - The expected population growth and development of new communities and community facilities in Central O'ahu will result in a need for additional emergency medical service facilities and response units. The specific needs will depend on the size, demographics, and location of the future population. A Central O'ahu Ambulance Facility is planned for a site on 'Ūke'e Street in Waipi'o Gentry, but no additional facilities are planned at this time by the State Department of Health.

Civic and Public Safety Facilities and Community Resilience - Community resilience is the ability of a community to prepare for anticipated hazards, adapt to changing conditions, and withstand and recover rapidly from disruptions.

Table 4.4 Existing and Planned Public Safety Facilities in the Central O‘ahu Sustainable Communities Plan Area

Facilities	Site	Service Area	Service Date
Fire Stations			
Wahiawā	Wahiawā	Wahiawā, Schofield, Wheeler, Whitmore Village	Existing
Mililani	Mililani	Mililani, Leilehua, Waikakalaua	Existing
Mililani Mauka	Mililani Mauka	Mililani Mauka, Waikakalaua	Existing
Waikele	Waikele	Waikele, Waipi‘o Gentry, Waipahū	Existing
Waipahū	Waipahū	Waipahū, Waikele, ‘Ewa Villages, West Loch, Crestview, Waipi‘o-Gentry	Existing
Royal Kunia	Royal Kunia	Royal Kunia, Village Park	ND
Koa Ridge	Koa Ridge	Waiawa, Koa Ridge	ND
Police Stations			
Wahiawā District Station	Wahiawā	Wahiawā, Schofield, Wheeler, Whitmore Village, Leilehua, and Waikakalaua	Existing
Pearl City District Station	Pearl City	Waipahū, Royal Kunia, Waikele, Crestview, Waipi‘o-Gentry	Existing
Waikele Substation	Waikele	Waikele	ND
Emergency Medical Services Facilities			
Wahiawā	Next to Wahiawā Fire Station	Wahiawā, Schofield, Wheeler, Whitmore Village	Existing
Mililani Mauka	Stand-alone facility	Mililani, Mililani Mauka, Leilehua, Waikakalaua	Existing
Waipi‘o[(1)]	co-located with Kaiser clinic	Waipi‘o, Waikele	Existing
Waipi‘o[(1)]	Planned stand alone on ‘Ūke‘e Street	Waipi‘o, Waikele	2017
Waipahū	Within Waipahū Fire Station	Waipahū, Royal Kunia, Waikele, ‘Ewa Villages, West Loch, Crestview, Waipi‘o-Gentry	Existing

NOTES:
(1) Existing facility would be relocated to new stand alone facility planned for site on Uke‘e Street.
ND = Date Not Determined.
Source: Department of Planning and Permitting, Department of Design and Construction, Honolulu Fire Department, and the Emergency Medical Services Division of the Honolulu Emergency Services Department, 2014

In order to protect lives, livelihoods, and quality of life, communities should plan for damages and disruptions to buildings and infrastructure systems from natural, technological, and human-caused hazards. Planning for a more resilient community involves a comprehensive, risk-based approach that is tailored to their community's needs for maintaining vital services.

The U. S. Department of Homeland Security and the National Institute of Standards and Technology, U. S. Department of Commerce, provides policy, support information and guidelines for community resilience planning and implementation strategies that will better prepare communities for future hazard events. The City and County of Honolulu, Department of Emergency Management, has prepared various plans and operations guides to prepare, prevent, protect, respond and recover from hazards.

Public Emergency Shelters - Population growth will also result in need for additional public emergency shelters.

Table 4.5 lists existing Central O'ahu hurricane evacuation shelters and their capacity (either using the adopted standard of 10 square feet per person or the more generous "planning" standard of 15 square feet per person).

There is a state-wide shortage of shelters, compounded by the fact that two-thirds of the existing shelters need to be retrofitted if they are to withstand any hurricane strength winds, and that few of the existing shelters are capable of withstanding a Category 1 hurricane like Hurricane 'Iwa.

Emergency shelter planners use a rule of thumb that enough shelters need to be provided to house 35 percent of the population in a disaster, because most people will choose to shelter in place.

According to the 2010 Census, the resident population of Schofield Barracks and Wheeler Army Air Field, including both military personnel and their households, was around 18,000. These households could be expected to seek shelter in military facilities and shelters located on the bases.

Table 4.5 Existing Hurricane Evacuation Shelters in the Central O‘ahu Sustainable Communities Plan Area

Shelter Location	Maximum Shelter Capacity [1]	Preferable Shelter Capacity [2]
Leilehua Complex		
Hanalani Elementary	1,767	1,178
Helemano Elementary	992	661
‘Iliahi Elementary	1,538	1,025
Ka‘ala Elementary	780	520
Leilehua High (P)	1,676	1,117
Wahiawā Elementary	1,564	1,043
Wahiawā Middle	2,018	1,345
Mililani Complex		
Kīpapa Elementary	1,906	1,271
Mililani High (P)	4,456	2,971
Mililani ‘Ike Elementary	396	264
Mililani Mauka Elementary	2,145	143
Mililani Middle (P)	998	665
Mililani Uka Elementary	2,256	1,504
Mililani Waena Elementary	1,696	1,131
Waipahū Complex		
August Ahrens Elementary	3,504	2,336
Honowai Elementary	3,386	2,257
Kalei‘ōpu‘u Elementary	2,433	1,622
Kanoelani Elementary	1,792	1,195
Waipahū Elementary (P)	2,116	1,411
Waipahū High (P)	5,072	3,381
Waipahū Middle (P)	334	2,233
TOTAL	**43,912**	**29,275**
2035 Need[3]	**57,200**	**57,200**

NOTES::

[1] Estimates of capacity based on the adopted standard of 10 square feet (sf) per person which is the minimum amount of space needed to protect occupants during the period that the hurricane conditions pose a threat of injury or death. Under this standard, individuals stand with their belongings or sit on top of their belongings in a square only a bit bigger than three feet on a side.

[2] Estimates of capacity based on the proposed planning standard of 15 square feet per person (a square close to four feet on a side) which provides enough room that individuals can sit with their belongings next to them during the duration of the period of threat of injury or death.

[3] Based on 35% of population (not on military bases) needing emergency shelter.

P: Pet Friendly Shelter co-located with General Population Shelter (pets in carriers, in separate room)

Source: Shelter Inventory listing from Hawaii Emergency Management Agency (2015); Capacity estimates based on information provided by Honolulu Department of Emergency Management, 2014.

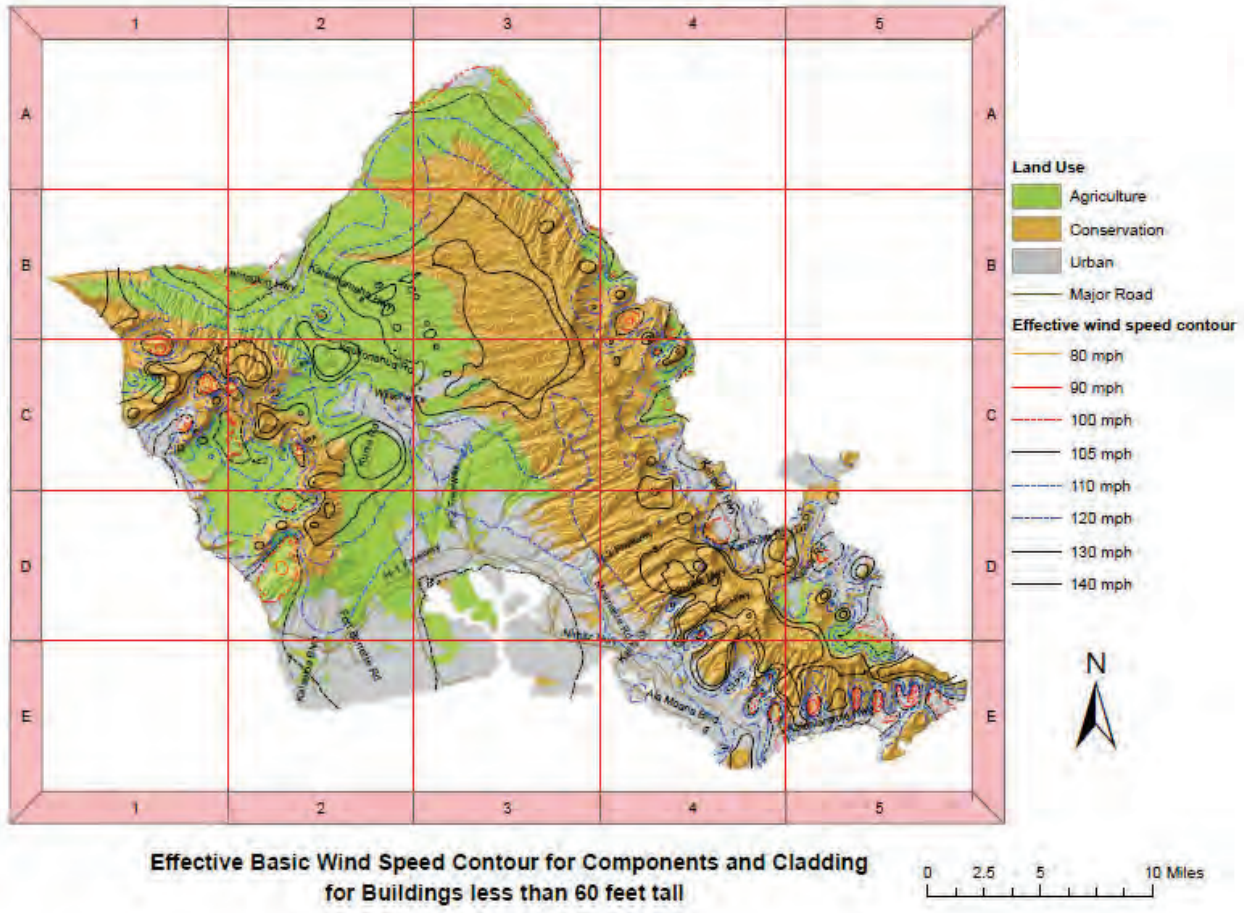
To provide shelter for 35 percent of the non-military Central O‘ahu population, Central O‘ahu needed public shelter space for 52,700 non-military residents in 2010, and will need space for 57,200 in 2035. As can be seen, the capacity of existing public shelters (even at the very restrictive standard of 10 square feet per person) was only 85 percent of what was needed for the 2010 population and would need to be increased by 30% to provide the minimum amount of space required for the projected 2035 need.

Since most of the population is not expected to seek a public shelter during a disaster and because there is a shortage of shelter space, it makes sense to supplement the public shelters with shelters in private buildings.

- A State law provides legal immunity to private organizations which create hurricane resistant shelters that meet State standards.
- There are no State or City programs providing incentives or support for private organizations who create hurricane shelters or individuals who build hurricane-resistant "safe rooms" in their homes.
- However, as of 2012, the building code requires that all new homes in areas susceptible to wind borne debris due to high wind speed to either have a safe room or be equipped with hurricane resistant glass. The base wind used for designing buildings is the fastest wind that the structure is likely to have to withstand once in 50 years.
- The requirement to either have a safe room or window protection that is hurricane resistant applies to buildings either in areas where the estimated base winds is 120 miles per hour and greater or in areas within a mile of the coast line where base wind is 110 miles per hour or greater. See Exhibit 4.3 for the basic wind speed mapping for O‘ahu.

Outdoor Warning Sirens. The Outdoor Warning Siren system, tested monthly, provides emergency warning and notification of tsunamis and other disasters. It is a critical element in providing warnings and notifications to the public.

Exhibit 4.3
Wind Speed Contour Map for O‘ahu



Source: State Department of Accounting and General Services, Approved Building Code Rules: Honolulu County Wind Maps, 2014 (http://media3.hawaii.gov/media/dags/web/windmaps/honolulu-county-wind-maps.pdf)

4.8.1 GENERAL POLICIES

- Provide adequate staffing and facilities to ensure public safety.
- Approve new development only if staffing and facilities will be adequate to provide fire and police protection and emergency medical services when development is completed.
- Encourage disaster resilient communities.

- Approve new development only if adequate Outdoor Warning Siren coverage, and a safe and effective emergency evacuation and shelter program can be ensured.
- Survey and retrofit, as appropriate, DOE and other public buildings to make up the shortfall in hurricane resistant shelters.
- Require new City buildings which are “critical facilities used for public assembly and able to perform as shelters” to be designed and built to withstand a Category 3 hurricane.
- Provide incentives for private organizations to create hurricane resistant shelter areas in their facilities and for homes to include hurricane resistant “safe rooms”.

4.9 OTHER COMMUNITY FACILITIES

Other existing community facilities shown on the Public Facilities Map in Appendix A-3 include Leeward Community College, Wahiawā General Hospital, and the Waiawa Correctional Facility. A 28-acre medical center, including an acute care hospital, ambulatory care services, emergency services, a medical office building, and a skilled nursing facility, is proposed for a portion of Koa Ridge, a substantial reduction from the previously proposed 100 acre medical park.

Antennas and City Plans - Antennas have been around as long as we have had radio and television services. Antennas associated with communication purposes have grown tremendously especially since the U.S. introduction of mobile communication devices in the early 1980s. While the telecommunication industry has provided more convenient communication capabilities for individuals, it has also increased the public agencies’ ability to provide faster and more efficient response to those in need, particularly on an emergency basis.

While the benefits of the telecommunications industry cannot be disputed, communities have opposed the antennas due to aesthetic impacts, particularly on public views and on neighborhood character. Their visibility has increased, especially where antennas are mounted on free-standing towers.

The general public has also raised concerns about the environmental effects of electromagnetic field exposure associated with radio transmissions, as evidenced by

the presence of antennas. However, the Federal Communications Commission (FCC) is responsible for evaluating the human environmental effects of radio frequency (RF) emissions from FCC-regulated transmitters. The federal guidelines specifically preclude local decisions affecting environmental effects of radio frequency emissions, assuming that the provider is in compliance with the Commission's RF rules.

4.9.1 GENERAL POLICIES

Location of new community facilities should comply with the following policies:

- **Colleges and Hospitals.** Locate colleges and hospitals in urban areas near transit stations, commercial centers, or high-density residential areas.
- **First Responder Technology Campus.** Develop the campus to be consistent with the spirit and intent of the Central Oahu Sustainable Communities Plan vision, policies, and guidelines.
- **Correctional Facilities.** Locate correctional facilities on lands planned for industrial and agricultural use. If such a facility is proposed for lands not planned for industrial or agricultural use, a City review and approval process which provides public review, complete project analysis, and City Council approval should be used.
- **Antennas.** Encourage co-location of antennas and minimization of visual impacts.
    - Towers should host the facilities of more than one service provider to minimize their proliferation and reduce visual impacts.
    - Mount antennas onto existing buildings or structures so that public scenic views and open spaces will not be negatively affected. Except for the occupant's personal use, antennas on single-family dwelling roofs in residential districts are not appropriate.
    - Use stealth technology (e.g. towers disguised as trees) especially on free-standing antenna towers in order to blend in with the surrounding environment and minimize visual impacts.

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5. IMPLEMENTATION

Implementation of the **Central O‘ahu Sustainable Communities Plan** will be accomplished by:

- Limiting residential and non-residential development to areas within the Community Growth Boundary to support the vision for protection of agricultural and conservation lands in Central O‘ahu; for development of the Primary Urban Center and the Secondary Urban Center at Kapolei, and for ending infrastructure investments which promote urban sprawl;
- Guiding development in areas of critical concern including Waipahū and Wahiawā through Special Area Plans;
- Guiding public investment in infrastructure through Functional Plans which support the vision and implement the policies and guidelines of the Sustainable Communities Plan;
- Recommending approval, approval with modifications and/or conditions, or denial of developments seeking zoning and other development approvals based on how well they support the vision for Central O‘ahu’s development and implement the Plan’s policies and guidelines;
- Implementing Sustainable Communities Plan priorities through Public Infrastructure Map amendments and the City's annual budget process;
- Evaluating progress in fulfilling the vision of the **Central O‘ahu Sustainable Communities Plan** every two years and presenting the results of the evaluation in the **Biennial Report**;
- Conducting a review of the vision, policies, guidelines, and Capital Improvement Program priorities of the **Central O‘ahu Sustainable Communities Plan** every five years and recommending revisions as necessary; and
- Encouraging public-private partnerships and developing new financing mechanisms to facilitate implementation of the vision, policies, and guidelines for Central O‘ahu’s development.

5.1 DEVELOPMENT PRIORITIES

5.1.1 PUBLIC FACILITY INVESTMENT PRIORITIES

The regional directed growth strategy requires the cooperation of both public and private agencies in planning, financing, and constructing infrastructure.

The City should take an active role in planning and coordinating construction of needed infrastructure and public facilities, such as the Honolulu Rail Transit project**,** the expansion of Honouliuli Wastewater Treatment Plant and recycling of nonpotable water recovered from its effluent, improvement of the Wahiawā Treatment Plant, provision of recreational open spaces, and development of the regional transportation system, parks, and police and fire facilities.

5.1.2 PRIVATE DEVELOPMENT PRIORITIES

The **Central O‘ahu Sustainable Communities Plan** provides a clear signal to private landowners and developers as to where development will be supported.

The **Urban Expansion** area is shown on the Development Capacity Map in Appendix A. The Urban Expansion Area shows where new urban development is occurring and where application for new urban development will be accepted for processing. As shown in Table 2.1, several projects in this area already have Land Use Commission Urban Boundary approvals and zoning needed for proceeding with development immediately.

Projects in the Urban Expansion Area needing zone changes and other development approvals will be supported if:

- The project implements the vision for Central O‘ahu and relevant policies and guidelines; and
- Adequate infrastructure will be available to meet the demand resulting from the project.

No additional areas should be approved for urban development beyond the Community Growth Boundary in order to protect agricultural and preservation lands.

5.2 SPECIAL AREA PLANS

Special Area Plans provide more detailed policies and guidelines than the Sustainable Communities Plan for areas requiring particular attention. The form and content of Special Area Plans depends on what characteristics and issues need to be addressed in greater detail in planning and guiding development or uses within the Special Area.

Special Area Plans can be used to guide land use development and infrastructure investment in Special Districts, Redevelopment Districts, or Resource Areas. Plans for **Special Districts** would provide guidance for development and infrastructure investment in areas with distinct historic or design character or significant public views. Plans for **Redevelopment Districts** would provide strategies for the revitalization or redevelopment of an area. Plans for **Resource Areas** would provide resource management strategies for areas with particular natural or cultural resource values.

Waipahū and Wahiawā are the only areas in Central Oʻahu currently designated for a Special Area Plan.

Waipahū - The **Waipahū Town Plan**, the Special Area Plan for Waipahū, was completed in December 1995. More recently, Waipahū community members helped DPP prepare the proposed **Waipahū Neighborhood TOD Plan** (November 2012) currently under review for approval by the City Council. These plans provide the basis for policies and guidelines for Waipahū in Section 3.2. The policies in Section 3.6 will be used to evaluate both applications for zone changes and development approvals, and proposals for public and private infrastructure in Waipahū.

Wahiawā - A Special Area Plan, the **Wahiawā Urban Design Plan**, was prepared for Wahiawā and transmitted to the City Council in 1998. The Plan focuses on urban design issues and implementation proposals and builds on the **Wahiawā Town Master Plan** (prepared in 1994 by members of the Wahiawā community).

5.3 FUNCTIONAL PLANS

Functional Plans are meant to provide guiding principles and strategies which will be used by the various functional agencies to determine needs, assign priorities, phase

infrastructure and facilities development, and secure financing to meet the needs identified in the Sustainable Communities Plan.

City agencies responsible for developing infrastructure and public facilities shall review existing Functional Plans, and in consultation with the Director of the Department of Planning and Permitting, update the existing Plans or prepare and submit to the Mayor new long-range Functional Plans for providing facilities and services for Central O‘ahu to the year 2035.

Agencies with Functional Planning responsibilities (and representative plans) include:

- Board of Water Supply (O‘ahu Water Management Plan)
- Department of Budget and Fiscal Services (Consolidated Plan for Housing and Community Development Needs)
- Department of Design and Construction
- Department of Environmental Services (Solid Waste Management Plan)
- Department of Parks and Recreation
- Department of Planning and Permitting
- Department of Transportation Services
- Honolulu Authority for Rapid Transportation
- Honolulu Fire Department
- Honolulu Emergency Services Department
- Honolulu Police Department
- O‘ahu Metropolitan Planning Organization (O‘ahu Regional Transportation Plan)

The Functional Plans should provide:

- A Resource-constrained Long-Range Capital Improvement Program with priorities;
- A Long-Range Financing Plan, with any necessary new revenue measures;
- A Development Schedule with first priority to areas designated for earliest development; and
- Service and facility design standards, including Level of Service Guidelines for determining infrastructure adequacy.

A **resource-constrained program** is one which identifies the fiscal resources that can be reasonably expected to be available to finance the improvements.

Level of Service Guidelines for determining adequacy of public facilities and infrastructure to support new development should be established by the responsible City agencies as part of their review and update of Functional Plans. Level of Service guidelines for infrastructure and utilities which are primarily State agency responsibilities (such as schools) shall be developed by the Department of Planning and Permitting in consultation with the responsible State agencies.

In preparing the Functional Plans, a proactive public participation process should be established which provides the public with access to complete information about infrastructure and public facility needs assessment, alternatives evaluation, and financing. Outreach activities should involve the Neighborhood Boards, community organizations, landowners, and others who might be significantly affected by the infrastructure or public facilities projects to be developed under the Functional Plan.

The process should be characterized by opportunities for early and continuing participation, timely public notice, public access to information needed to review the decision, and the opportunity to suggest alternatives and to express preferences.

5.4 REVIEW OF ZONE CHANGE AND OTHER DEVELOPMENT APPLICATIONS

A primary way in which the vision of the **Central O‘ahu Sustainable Communities Plan** will guide land use will be through the review of applications for zoning changes and other development approvals. Approval for all development projects should be based on the extent to which the project supports the policies and guidelines of the Sustainable Communities Plan.

All applications for projects requiring zone changes will be reviewed by the Department of Planning and Permitting for consistency with the policies and guidelines of the **Central O‘ahu Sustainable Communities Plan** during the Zone Change Application process. Those projects requiring environmental assessments shall follow the provisions of **Hawai‘i Revised Statutes**, Chapter 343.

All projects involving significant zone changes will require either an Environmental Assessment or Environmental Impact Statement which must include a Project Master Plan when 25 acres or more are involved. This is submitted to the Department of Planning and Permitting for review and acceptance prior to initiation of the first Zone Change Application for the project. (See definition of significant zone change in Section 5.4.1 and the definition of Project Master Plan in Section 5.4.2.)

Zone change applications to permit urban uses on parcels outside the Urban Community Boundary or on parcels identified as part of the Open Space Network should be denied without submittal to the Planning Commission and City for review and action (as permitted by Sec. 21-2-2.40-2(c) of the **Land Use Ordinance**) since such urban uses would be clearly inconsistent with the intent of the adopted Community Growth Boundary or Open Space Network vision, policies, and guidelines.

5.4.1 ENVIRONMENTAL ASSESSMENT

Projects involving a significant zone change should be required to submit an Environmental Assessment (prepared in compliance with procedures for Chapter 343, Hawai‘i Revised Statutes) to the Department of Planning and Permitting to help the Department determine whether the project involves a significant environmental impact and if the project supports the vision for Central O‘ahu's development.

A zone change will be considered to be a **significant** zone change if it involves at least one of the following:

- Any change in zoning of 25 acres or more to any zoning district or combination of zoning districts, excluding preservation and agricultural zoning districts; or
- Any change in zoning of more than 10 acres to a Residential or Country zoning district; or
- Any change in zoning of more than 5 acres to an Apartment, Resort, Commercial, Industrial, or Mixed Use zoning district; or
- The project would have major social, environmental, or policy impacts, or cumulative impacts due to a series of applications in the same area.

The Director of the Department of Planning and Permitting will determine, based on review of the Environmental Assessment, whether an Environmental Impact Statement

(prepared in compliance with procedures for Chapter 343, Hawai‘i Revised Statutes) will be required or whether a Finding of No Significant Impact (FONSI) should be issued.

In applying for a zoning change, the applicant must either:

- Receive a determination from the Director of Planning and Permitting that the project does not involve a significant zone change; or
- Submit an Environmental Assessment or Environmental Impact Statement with the zone change application.

Before an application for a significant zone change can be accepted for processing by the Department of Planning and Permitting, the applicant must either:

- Receive a Finding of No Significant Impact (FONSI) from the Director of Planning and Permitting; or
- Receive an acceptance of a Final Environmental Impact Statement (FEIS) for the project from the Director of Planning and Permitting.

All Environmental Assessments/Environmental Impact Statements (EA/EIS) required for a significant zone change involving 25 acres or more should include a Project Master Plan (See Section 5.4.2 following). The scope of the EA/EIS must cover, at a minimum, the specific development associated with a particular zone change application, but at the option of the applicant, may cover subsequent phases of a larger project, as well.

Zone change applications for a project already assessed under the National Environmental Policy Act, Hawai‘i Revised Statutes Chapter 343, Revised Ordinances of Honolulu Chapter 25 (Shoreline Management), or a preceding zoning change application, may not require a new Environmental Assessment so long as the Director of Planning and Permitting determines that the desired zoning and land use generally conform to that described in the existing Environmental Assessment/Environmental Impact Statement.

However, if a project has changed substantially in size, scope, intensity, use, location, or timing, among other things which may have a significant effect on the environment, a new or supplemental Environmental Assessment may be required.

5.4.2 PROJECT MASTER PLANS

The Project Master Plan is intended solely as a guide to help describe in words and illustrations how a project promotes the vision, policies, and guidelines for Central O‘ahu.

Projects associated with a significant zone change for 25 acres or more, should include a Project Master Plan as part of the Environmental Assessment or Environmental Impact Statement submitted to the Department of Planning and Permitting.

The Project Master Plan should cover all project phases. It shall be reviewed to determine whether the project supports the vision, policies, and guidelines of the **Central O‘ahu Sustainable Communities Plan**. In the event a FONSI or Final EIS has already been accepted by the City for a particular project, a subsequent Project Master Plan will not be required.

The Project Master Plan should be based on the best information available to the applicant at the time the Zone Change Application is submitted to the City.

5.4.2.1 Coverage and Scope

The Project Master Plan should cover all phases of the project and should describe, using narrative and graphic illustration, how the project conforms to the vision for Central O‘ahu, and the relevant policies, and guidelines for the project site, the surrounding lands, and the region.

5.4.2.2 Key Elements

While the scope and detail will vary according to the scope and complexity of the project, the Project Master Plan should contain the following elements. When a key element enumerated below is adequately addressed elsewhere in an EA/EIS, discussion of related issues should be referenced within the Master Plan portion of the document.

- **Statement of Consistency with the Central O‘ahu Sustainable Communities Plan Vision**. The Master Plan should indicate how the project supports the vision, policies, and guidelines of the **Central O‘ahu Sustainable Communities Plan**.

- **Site Analysis.** The Master Plan should identify how the proposed development physically relates to prominent existing site features, views identified in Table 3.2 and on the Open Space Map in Appendix A, and surrounding urban or urbanizing areas and should describe any related opportunities and constraints.
- **Land Use.** The Master Plan should indicate the proposed pattern of land uses by general zoning district category.
  - Land uses proposed for lands in any future development phases that are not included in the current Zone Change Application will be considered only conceptual and intended to serve only as a working guide for future development.
  - In larger projects, residential neighborhoods should be designated, and concepts intended to create a sense of neighborhood should be described.
  - The Master Plan should identify where the community's "main street" or village or town center is located and show how any planned commercial development will help create a pedestrian friendly environment for that center.
  - For projects that involve multiple uses, the intended relationship between zoning districts should be described.
- **Open Space.** The Master Plan should discuss open space as a component of the overall land use element, and should indicate how the proposed development promotes the Development Plan open space and guidelines and the vision of an integrated regional open space system.
- **Circulation.** The Master Plan should indicate:
  - General street patterns and the application of street and block standards which minimize dead end streets and provide adequate connectivity;
  - Intended connections to the regional roadway network and adjacent communities; and
  - Potential transit routes and pedestrian and bicycle routes.
- **Design Theme or Character.** The Master Plan should depict, with sketches, photos or descriptions, the intended general urban design of the area. These vignettes should be represented and understood to be conceptual depictions of the potential general design theme of the project.

- **Telecommunications.** The Master Plan should indicate the sites and network conduit facilities that would be provided to meet expected telecommunications infrastructure needs, if applicable.

5.4.2.3 Review Procedures

The Department of Planning and Permitting should review the Project Master Plan concurrently with the Environmental Assessment/Environmental Impact Statement and determine whether the Project Master Plan supports the **Central O‘ahu Sustainable Communities Plan** vision or whether changes are needed.

5.4.2.4 Modification of Master Plans for Future Phases

Often, projects are developed in phases. As a result, the Project Master Plan is likely to cover more land than the developer is currently requesting for a zone change. The feasibility and desirability of plans for later phases of the Project Master Plan can be greatly altered in light of more detailed study of site characteristics and site planning, or change in market forces or government policies.

As a result, elements of Master Plans covering lands in phases which are not included in a current Zone Change Application should be considered only conceptual and intended to serve only as a working guide for future development. Changes to these parts of a Master Plan can be made by the developer at any time without requiring approval by the City.

If a Master Plan has been revised in planning for a subsequent phase of a project, an updated version of the Master Plan should be submitted with the zone change application for that phase. No new Master Plan review should be required unless there has been a major alteration in the project vision and land uses from that proposed in the original Master Plan.

5.4.3 ADEQUATE FACILITIES REQUIREMENT

All projects requesting zone changes shall be reviewed to determine if adequate public facilities and infrastructure will be available to meet the needs created as a result of the

development. Level of Service Guidelines to define adequate public facilities and infrastructure requirements will be used for the **Capital Improvement Program**.

In order to guide development and growth in an orderly manner as required by the City's **General Plan**, zoning and other development approvals for new developments should be approved only if the responsible City and State agencies indicate that adequate public facilities and utilities will be available at the time of occupancy or if conditions the functional agency indicates are necessary to assure adequacy are otherwise sufficiently addressed.

The Department of Planning and Permitting will review and summarize any individual agency's findings regarding public facilities and utilities adequacy which are raised as part of the EA/EIS process or as part of the agency review of the zone change application and recommend conditions that should be included in the Unilateral Agreement or Development Agreement to insure adequacy of facilities.

5.5 FIVE YEAR SUSTAINABLE COMMUNITIES PLAN REVIEW

The Department of Planning and Permitting shall conduct a comprehensive review of the **Central O'ahu Sustainable Communities Plan** and shall report its findings and recommended revisions to the City Council five years after adoption and every five years thereafter.

In the Five Year review, all the elements of the **Central O'ahu Sustainable Communities Plan** (regional vision, policies and guidelines, and implementing actions) will be evaluated to see if they are still appropriate.

The Plan review will include an evaluation of the **Community Growth Boundary** since it is a key vision element of the Plan. However, the Community Growth Boundary (CGB) was drawn with the intent that it will remain fixed through the 2035 planning horizon, because of the vision that key agricultural and preservation lands should be protected for the foreseeable future and because there are ample developable lands to meet the urban development needs for the foreseeable future within the Community Growth Boundary in 'Ewa and Central O'ahu.

5.6 DEVELOPMENT PLAN COMMON PROVISIONS AND EXISTING LAND USE APPROVALS

This Sustainable Communities Plan will go into effect upon adoption by ordinance. At that time, the revised Sustainable Communities Plan will become a self-contained document, not reliant on the Development Plan Common Provisions which formerly applied to the **Central O‘ahu Development Plan** as well as all the other Development Plans.

Land use approvals granted under previously approved Development Plan amendments will remain in force and guide zoning decisions unless clearly inconsistent with the vision and policies of the **Central O‘ahu Sustainable Communities Plan**. Development can proceed in accordance with existing zoning, Unilateral Agreements, and approved Urban Design Plans.

If an Environmental Assessment or Environmental Impact Statement (EA/EIS) was accepted in the course of a Development Plan land use approval for a project, it should be acceptable to meet the requirement for an initial project EA/EIS when zone change applications are submitted for subsequent phases of the project unless the project scope and land uses are being significantly changed from that described in the initial EA/EIS.

5.7 RELATION TO GENERAL PLAN POPULATION GUIDELINES

The **Central O‘ahu Sustainable Communities Plan** implements the **General Plan** population distribution policies (in Population Objective C) as follows.

- Central O‘ahu’s projected share of O‘ahu population in 2025 (17.25 percent) will be quite close to the **General Plan** 2025 population distribution guideline (17 percent). Central O‘ahu’s share in 2010 was 17.7 percent.
- Planned developments in the Central O‘ahu urban-fringe will implement Population Objective C, Policy 2 which encourages such development in order 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.”

The **General Plan** population distribution guidelines are used as a guide to direct the pattern of growth and development in the **Central O‘ahu Sustainable Communities Plan** Area. Assessments of this performance will be reported in both the **Biennial Report** and the Five Year Review of the Sustainable Communities Plan.

Under the **Central O‘ahu Sustainable Communities Plan**, projects will be evaluated against how well they fulfill the vision for Central O‘ahu enunciated in the Sustainable Communities Plan and how closely they meet the policies and guidelines selected to implement that vision.

5.8 REVIEW AND REVISION OF DEVELOPMENT CODES

To insure that the vision, policies, and guidelines of the **Central O‘ahu Sustainable Communities Plan ‘Ewa Development Plan** and other Development Plans and Sustainable Communities Plans are implemented, current regulatory codes and standards should be reviewed and revised, as necessary, including the following:

- **Land Use Ordinance** (Department of Planning and Permitting, pursuant to Chapter 21, Revised Ordinances of Honolulu). Zoning code standards and the zoning map for Central O‘ahu may need to be updated to reflect policies and guidelines in the Sustainable Communities Plan.
- **Subdivision Rules and Regulations** (Department of Planning and Permitting, pursuant to Chapter 22, Revised Ordinances of Honolulu). Public right-of-way standards used for subdivision and consolidation of land need to be updated to reflect transportation policies and guidelines in the Sustainable Communities Plan. Also, regulations need to be revised to create a better enforcement mechanism, including thresholds and standards, to assure that “gentlemen’s estates” are not developed on valuable agricultural land.
- **Traffic Standard Manual** (Department of Transportation Services, July 1976, as revised April 1979). Standards which are applied to local and most collector/connector streets need to be revised to reflect transportation policies and guidelines in the **Central O‘ahu Sustainable Communities Plan**.
- **State Highways Division Procedures Manual**, Vol. 8, Chapter 5, Section 4 (State Department of Transportation). These State highway

standards need to be reviewed to identify provisions which may conflict with the transportation policies and guidelines in the **Central O‘ahu Sustainable Communities Plan**.

- **Standard Details for Public Works Construction** (Honolulu Department of Public Works with Kaua‘i, Maui, and Hawai‘i County Departments of Public Works, September 1984. Engineering standards for the dedication of public works construction need to be revised to reflect **Central O‘ahu Sustainable Communities Plan** policies and guidelines.
- **Storm Drainage Standards** (Department of Planning and Permitting, January 2000). Standards for the dedication of drainage systems to incorporate grassed swales and retention basins into the design need to be created to reflect the **Central O‘ahu Sustainable Communities Plan** policies and guidelines for open space.
- **Park Dedication Rules and Regulations** (Department of Planning and Permitting, pursuant to Chapter 22, Article 7, Revised Ordinances of Honolulu). Regulations need to be reviewed to determine if passive drainage systems which are designed for recreation use should count toward park dedication requirements, especially in cases where the area would exceed the amount of land that would be required under current rules and regulations.
- **Wastewater Management Design Standards** (Department of Wastewater Management, Vol. I: 1993, Vol. II: 1984; pursuant to Chapter 14, **Revised Ordinances of Honolulu**). These standards and ordinance may require review to further implement **Central O‘ahu Sustainable Communities Plan** policies and guidelines.

5.9 IMPLEMENTATION MATRIX

This section provides a summary of the Plan’s policies and guidelines from Chapters 3 and 4 to help understand how the Plan will be implemented.

This implementation matrix presents the policies and guidelines as generalized and consolidated statements, and is not meant to be used as a complete summary of the vision, policies, and guidelines to be found in the body of the Plan.

Chapter 2 should be consulted for the specific language of the vision elements. Chapters 3 and 4 should be consulted for the specific language of each policy or guideline.

The focus of the matrix is on showing how the vision, policies, and guidelines in the Plan relate to existing Federal, State, and City and County programs, who has responsibility for those programs, and what the agency's role is in implementing the Plan.

For each policy and guideline statement, the matrix identifies:

- The regulatory code or program for effecting implementation,
- Agencies with responsibility for implementation, and
- The role of each agency.

Implementation of the policies and guidelines will depend on each agency's priorities and availability of resources.

The Department of Planning and Permitting is either a regulator or an implementer for many plan components, while simultaneously acting as the advocate for implementation of all the Plan vision elements and policies.

Table 5.1: **Implementation** Matrix

Key to Abbreviations

Programs	Agencies	Roles
• **Agric Distr**: State Agriculture District, Ch. 205, Hawaii Revised Statutes (HRS) • **BC**: Building Code, Ch. 16, Revised Ordinances of Honolulu (ROH) • **BID**: Business Improvement District, Ch. 34, ROH • **BPH**: Bike Plan Hawai'i (State DOT, 2003) • **CDBG**: Community Development Block Grant, HUD • **CFD**: Community Facilities Districts, Ch. 34, ROH • **CIP**: Capital Improvement Program (State or City) • **Cons Distr**: State Conservation District, Ch. 205, HRS • **Conserv Plan**: SWCD Conservation Plan • **CZM**: Coastal Zone Management, Ch. 205A, HRS • **Drain MP**: Drainage Master Plan • **EA/EIS**: Environmental Assessment/ Environmental Impact Statement, Ch. 343 HRS • **EPA Act**: Environmental Protection Agency Act • **ESA**: Endangered Species Act • **Forest**: State Forestry Programs • **Gen Flood Pl**: Hawaii General Flood Control Plan, DLNR • **HOME**: Home Investment Partnerships Program, HUD • **Hist Pres**: Historic Preservation, Ch. 6E, HRS • **HSCD**: Hawaii State Civil Defense • **INRMP**: Integrated Natural Resource Master Plan • **LID**: Low Impact Development Standards • **LUO**: Land Use Ordinance, Ch. 21, ROH • **MBTA**: Migratory Bird Treaty Act • **NPDES**: National Pollutant Discharge Elimination System • **OBP**: O'ahu Bike Plan (City DTS, 2012) • **Op Budget**: City Operating Budget • **ORTP**: O'ahu Regional Transportation Plan • **OWMP**: O'ahu Water Management Plan • **Park Dedic**: Park Dedication, Ch. 22, ROH	• **AOHO**: Association of Home Owners • **BFS**: Dept. of Budget and Fiscal Services • **BWS**: Board of Water Supply • **CWRM**: State Commission on Water Resource Management • **DA**: Business Improvement District Association • **DCS**: Dept. of Community Services • **DDC**: Dept. of Design and Construction • **DEM**: Dept. of Emergency Management • **DES**: Dept.of Enterprise Services • **DFM**: Dept. of Facility Maintenance • **DLNR**: State Department of Land and Natural Resources • **DOC**: State Department of Corrections • **DOD**: United States Department of Defense • **DOE**: State Department of Education • **DOH**: State Department of Health • **DOT**: State Department of Transportation • **DPP**: Dept. of Planning and Permitting • **DPR**: Dept. of Parks and Recreation • **DTS**: Dept. of Transportation Services • **ENV**: Dept. of Environmental Services • **EPA**: Environmental Protection Agency • **HECO**: Hawaiian Electric Company • **HFD**: Honolulu Fire Department • **HSCD**: Hawai'i State Civil Defense • **HUD**: U.S. Department of Housing and Urban Development	• Implementer • Advocate • Regulator

Table 5.1: **Implementation** Matrix

Programs	Agencies	Roles
• **Park MP**: Park Master Plan • **PRU**: Plan Review Use • **PUC**: Public Utilities Commission , Ch. 269, HRS • **Rivr & Harbor**: River and Harbor Act • **Road MP**: Road Master Plan • **RPT**: City Real Property Transactions, Ch. 37, ROH • **SEWER**: Sewer Connection Permit • **SIF**: School Impact Fees, Ch. 302A-1601 to 1611, HRS • **Shore Stbk**: Shoreline Setback, Ch. 23, ROH • **SLUBDA**: State Land Use District Boundary Amendment • **SMA**: Special Management Area, Ch. 25, ROH • **State Parks**: DLNR State Parks; Division of Forestry and Wildlife Camping permits • **State Trails**: DLNR Nā Ala Hele State Trails and Access Program • **SUB**: Subdivision • **SUP**: Special Use Permit • **SWIMP**: Solid Waste Integrated Management Plan • **TIP**: Transportation Improvement Plan • **TOD**: Transit Oriented Development • **U&OA**: Use and Occupancy Agreement • **Urban Forest**: Urban Forestry Program, DPR • **UDP**: Urban Design Plan • **State Water**: State Water Code, Ch. 174C, HRS • **Water MP**: Water Master Plan • **WPFPA**: Watershed Protection & Flood Prevention Act • **WMBFP**: West Māmala Bay Facilities Plan • **WNTODP**: Waipahū Neighborhood Transit-Oriented Development Plan (2014) • **WP**: Water Pollution, Ch. 342D, HRS • **WUP**: Water Use Permit/Well Permit, CWRM • **WQP**: State Water Quality Plan • **ZC**: Zone Change	• **LUC**: State Land Use Commission • **NOAA**: National Oceanic and Atmospheric Administration • **NRCS**: US Department of Agriculture Natural Resources Conservation Service • **OHA**: Office of Hawaiian Affairs • **OMPO**: Oʻahu Metropolitan Planning Organization • **OP**: State Office of Planning • **ORC&D**: Oʻahu Resource Conservation and Development • **PUC**: State Public Utilities Commission • **SHPD**: State Historic Preservation Division of the Department of Land and Natural Resources • **SWCD**: Soil and Water Conservation District • **UHWO**: University of Hawaiʻi West Oʻahu • **USACE**: United States Army Corps of Engineers • **USFWS**: United States Fish and Wildlife Service • **UTIL**: Private utilities providing services such as phone, cable, gas, water and wastewater	

Table 5.1: Implementation Matrix

Policies And Guidelines Statements	Programs	Agencies	Roles
Sec. 3.1 OPEN SPACE PRESERVATION AND DEVELOPMENT			
Provide long range protection for diversified agriculture on lands outside the Community Growth Boundary and for two agricultural areas located inside the Community Growth Boundary (Pine Spur and Honbushin). Protect scenic views and natural, cultural, and historic resources. Use open space to provide recreation areas and fire buffers, and to define the boundaries of communities.	SLUDBA	LUC DPP	Regulator Advocate/
	ZC	DPP	Advocate/ Regulator
Mountain Areas			
Protect and expand access to recreational resources in the mountains. Acquire and maintain public campgrounds and access to hiking trails with parking at trail heads and campgrounds in the areas beyond the Community Growth Boundary on the slopes of both the Waiʻanae and Koʻolau Ranges.	State Trails State Parks	DLNR	Implementer Regulator
	ZC UDP	DPP	Advocate/ Regulator
Maintain the forest at higher elevations in the State Conservation District. Plan utility corridors and other uses to avoid disturbances to areas with high concentrations of native species.	Conserv. District	LUC	Regulator
		DLNR	Implementer/ Regulator
Identify endangered species, their habitats and other important ecological zones and protect them from threats such as fire, weeds, feral animals, and human activity.	Conserv. District ESA/MBTA	USFWS DLNR	Regulator Implementer
Protect the Leeward Koʻolau water recharge areas and the Hydrologic Zone of Contribution to the Navy Shaft in Waiawa from urban development.	SLUDBA	LUC DPP	Regulator Advocate
	ZC	DPP	Advocate
	LID	DPP	Regulator
Identify and protect areas that are important to Native Hawaiian cultural practices.	Cons Dist	LUC DLNR	Regulator Implementer
	Hist Pres	DLNR	Regulator
Natural Gulches and Drainageways			
Preserve the major natural gulches within the Community Growth Boundary as part of the open space system, serving as natural drainageways, storm water retention areas, and potential components of a regional trail system.	SLUDBA	LUC DPP	Regulator Advocate
	ZC LUO SUB	DPP	Advocate/ Regulator
Integrate planned improvements to Central Oʻahu drainage systems into the regional open space network by emphasizing the use of retention basins, recreational access, and opportunities to link major open spaces with pedestrian and bike paths.	ZC/UDP Drain MP SUB	DPP	Advocate/ Regulator

Table 5.1: Implementation Matrix

Policies And Guidelines Statements	Programs	Agencies	Roles
Where practical, retain drainageways as natural or man-made vegetated channels rather than concrete channels.	Drain MP SUB	DPP	Regulator
	CIP	DFM DDC	Implementer Implementer
Shoreline Areas			
Provide public access to the Pearl Harbor shoreline with adequate parking except where access is restricted by the military for security reasons.	Military Base Security Policy	US Navy	Regulator
	EA/EIS	DPP	Advocate
	CZM	OP	Advocate
Maintain and enhance, where necessary, nearshore wetlands and mangroves as wildlife habitats.	ESA/MBTA	USFWS/NOAA	Implementer/ Regulator
		USACE	Regulator
		DLNR	Implementer Regulator
	INRMP	DOD	Implementer
		DPP	Advocate
Provide at a minimum a 60 foot setback along the shoreline, and, where possible, expand the setback to 150 feet where justified, based on historic or adopted projections of coastal erosion rates.	EA/EIS	DPP	Regulator
	SMA SUB Shore Stbk	DPP	Advocate/ Regulator Regulator
Analyze the possible impact of sea level rise for new public and private projects in shoreline areas and incorporate, where appropriate and feasible, measures to reduce risks and increase resiliency to impacts of sea level rise.	CZM	OP	Regulator
	EA/EIS	DPP	Advocate/ Regulator
	ZC/SMA	DPP	Advocate/ Regulator
	SUB Shore Stbk	DPP	Regulator Regulator
Agricultural Areas			
Permit facilities necessary to support intensive cultivation of arable agricultural lands, including distribution, sales or agri-tourism facilities.	Agric. Distr.	LUC	Regulator
	LUO	DPP	Regulator
Permit facilities to support limited outdoor recreation use, such as camping, horseback riding and hiking, in areas where agricultural use is not feasible.	Agric. District	LUC DPP	Regulator Advocate
	SUP	LUC DPP	Regulator Regulator
	LUO	DPP	Regulator

Table 5.1: Implementation Matrix

Policies And Guidelines Statements	Programs	Agencies	Roles
Permit residential use only to the extent that it is accessory to the agricultural use.	LUO	DPP	Regulator
Design and locate buildings and other facilities that are accessory to an agricultural operation to minimize impacts on nearby urban areas, arterial roads, and major collector streets.	LUO	DPP	Regulator
Parks			
Maintain distant views of the Waiʻanae Range from Kamehameha Highway in the development and siting of facilities and landscaping in the Patsy T. Mink Central Oʻahu Regional Park.	Park MP	DPR	Implementer
Develop trails leading from Patsy T. Mink Central Oʻahu Regional Park to Waikele Gulch and connecting to a Central Oʻahu gulches trail system.	CIP	DPR DDC	Implementer Implementer
Establish a new shoreline park at Waipiʻo Peninsula, giving access from Waipahū to the Pearl Harbor shoreline on the West Loch and Middle Loch.	CIP	DPR DDC	Implementer Implementer
Retain Wahiawā Botanical Garden as primarily a gulch in its natural state.	Park MP	DPR	Implementer
Expand Wahiawā Freshwater Park to include most of the area adjacent to the Wahiawā Reservoir, limiting public access only as necessary to protect water quality and public safety.	CIP	DLNR	Implementer
Golf Courses			
Locate and design golf courses to optimize their function as drainage retention areas and as buffers between developments.	ZC	DPP	Advocate Regulator
	LUO Drain MP SUB	DPP	Regulator
Design golf courses to consider public safety and potential impacts on views and recreational resources, and to accommodate and incorporate pedestrian paths and bikeways.	ZC	DPP	Advocate Regulator
	LUO SUB	DPP	Regulator
Wildland - Urban Fire Hazard Setbacks			
As determined appropriate by the Honolulu Fire Department, require residential or commercial developments that are adjacent either to preservation areas within the Community Growth Boundary or to lands within the State Conservation District to provide a setback to reduce the risk of fire spreading from the “wildlands” to the developed area.	SUB	DPP HFD	Regulator Advocate

Table 5.1: Implementation Matrix

Policies And Guidelines Statements	Programs	Agencies	Roles
Greenways and Open Space Corridors			
Provide sufficient easement width for the major trunk lines and transmission and distribution lines for utility systems, to allow landscaping within and adjacent to the easement, consistent with all applicable operations, maintenance, and safety requirements. Place new transmission lines underground, where possible, under criteria specified in State law.	Cons Distr.	DLNR DPP	Regulator Regulator
	SUB	DPP	Regulator
	CIP	DDC	Implementer
	BID/CFD	PUC BFS HECO DA	Regulator Regulator Implementer Implementer
Permit use of utility easements for pedestrian and bicycle routes, consistent with all applicable operations, maintenance, and safety requirements.	Road MP SUB	DPP HECO UTIL	Regulator Implementer Implementer
Design the rights-of-way for major and minor arterials as landscaped parkways or greenways, complete with a landscaped median strip, landscaped sidewalks, and bikeways.	Road MP SUB	DPP DTS Developers	Regulator Regulator Implementer
	CIP	DOT DDC	Implementer Implementer
Where urban development abuts the H-2 Freeway, provide an open space/landscaped buffer of sufficient size to preserve a view of green, minimize the visual intrusiveness of the development, and reduce the noise and air quality impact of the freeway traffic on the abutting development.	ZC	DPP	Advocate
	SUB	DPP	Regulator
Sec. 3.2 REGIONAL PARKS AND RECREATION COMPLEXES			
Consider using public-private partnerships to build and maintain regional parks and recreation complexes in order to sustain economic development	CIP	DPR DDC	Implementer Implementer
	BID/CFD	BFS DA DES	Regulator Implementor Implementor
Use best practices in the architectural and landscaping design, incorporation of natural features and indigenous plants, siting of facilities, and provision of connectivity and transit services for regional parks and recreation complexes.	Park MP CIP	DPR DDC	Implementer Implementer
	UDP SUB	DPP	Regulator

Table 5.1: Implementation Matrix

Policies And Guidelines Statements	Programs	Agencies	Roles
Retain, protect, and incorporate wetland and other wildife habitat areas as passive recreational resources.	ESA/MBTA	USFWS USACE DLNR	Regulator Regulator Regulator
	INRMP	DOD	Regulator Implementer
		DPP	Advocate
Island Wide and Regional Parks			
Continue developing planned facilities at Patsy T. Mink Central O'ahu Regional Park	Park MP CIP	DPR DDC	Implementer Implementer
Make improvements to the Waipahū Cultural Gardens consistent with the historical/cultural theme of the park and enhancing open space and passive recreation values.	Park MP CIP	DPR DDC	Implementer Implementer
Golf Courses			
Limit municipal golf course improvements to enhancement of Ted Makalena Golf Course.	CIP	DPR DDC	Implementer Implementer
Use golf courses, where appropriate, to protect open space, retain storm water, and reduce non-point pollution and sedimentation of streams and coastal waters.	ZC	DPP	Advocate
	LUO Drain MP SUB	DPP	Regulator Regulator Regulator
Sec. 3.3 COMMUNITY-BASED PARKS			
Provide adequate parks and supporting amenities to meet residents' recreational needs.	Park Dedic.	DPP DPR	Regulator Implementer
	Park MP CIP	DPR DDC	Implementer Implementer
Development of Community-Based Parks			
Co-locate parks with elementary or intermediate schools. Coordinate design, development and use of facilities with DOE where efficient and effective.	CIP	DOE	Implementer
	Park MP CIP	DPR DDC	Implementer Implementer
Where feasible, site parks near the center of neighborhoods, in order to maximize accessibility and connectivity. Provide pathways to parks from surrounding streets.	UDP Road MP SUB	DPP	Regulator

Table 5.1: Implementation Matrix

Policies And Guidelines Statements	Programs	Agencies	Roles
Use xeriscaping, non-potable water for irrigation, and efficient irrigation systems wherever possible to conserve groundwater resources.	ZC	DPP	Advocate
	LUO Water MP SUB	DPP BWS DPP	Regulator Regulator Regulator
	Park MP City CIP	DPR DDC	Implementer Implementer
Sec. 3.4 HISTORIC AND CULTURAL RESOURCES			
Emphasize physical references to Central O'ahu's history and cultural roots to help define Central O'ahu's unique sense of place. Protect existing visual landmarks and support creation of new culturally appropriate landmarks. Preserve significant historic features from the plantation era and earlier periods as recommended by the State Historic Preservation Officer. Vary the treatment of sites according to their characteristics and potential value. Ensure protection of Kukaniloko. Retain significant vistas whenever possible.	ZC UDP	DPP	Advocate Regulator
	Hist Pres	SHPD OHA	Regulator Implementer
	CIP	DDC DFM	Implementer Implementer
Assume that historic, cultural, and archaeological site mitigations approved as part of prior development approvals carry out the Plan vision and policies.	ZC UDP	DPP	Advocate Regulator
	Hist. Pres.	SHPD	Regulator
Sites Under Review			
Vary the treatment of sites according to their characteristics and potential value. Use in situ preservation and appropriate protection measures for historic, cultural, or archaeological sites with high preservation value. Allow historic sites to be converted from their original intended use to serve a new function if historic value is maintained, especially if interpretative value is enhanced.	Hist Pres	SHPD	Regulator
	ZC LUO	DPP	Advocate Regulator
	CIP	DDC DFM	Implementer Implementer
Impacts of Development on Historic and Cultural Resources			
Plan and design adjacent uses to avoid conflicts or abrupt contrasts that detract from or destroy the physical integrity and historic or cultural value of the site.	Hist Pres	SHPD	Regulator
	CIP	DDC DFM	Implementer Implementer

Table 5.1: Implementation Matrix

Policies And Guidelines Statements	Programs	Agencies	Roles
Design and site all structures, where feasible, to reflect the need to maintain and enhance available views of significant landmarks and vistas. Whenever possible, relocate or place underground overhead utility lines and poles that significantly obstruct public views, under criteria specified in State law.	ZC UDP	DPP	Advocate Regulator
	Hist. Pres.	SHPD	Regulator
	BID/CFD	PUC BFS HECO UTIL DA	Regulator Regulator Implementer Implementer Implementer
OR&L Historic Railway			
Develop the right-of-way as a world-class heritage and educational corridor to enhance neighboring communities and serve as a major visitor and cultural attraction. Design structures and elements to reflect the historic nature of the railway. Set back new development as specified in Neighborhood Transit-Oriented Development (TOD) Plans, TOD development regulations, or as otherwise specified in existing land use approvals, policies, and regulations. Allow reconstruction of historic structures and construction of structures consistent with open space or bikeway uses in the right of way (R-O-W) and setback areas. Develop a parallel paved shared-use bikeway along the length of the OR&L R-O-W, as part of the Pearl Harbor Historic Trail, either within or adjacent to the R-O-W. Provide landscaping, interpretive signs, and occasional rest stops.	Hist. Pres.	SHPD	Regulator
	BPH CIP U&OA	DOT	Implementer Regulator Regulator
	WNTODNP ZC LUO	DPP	Advocate Advocate Regulator
	OBP CIP	DTS DDC	Advocate Implementer
Waipahū Sugar Mill Environs			
Retain the sugar mill stack and boiler room as visual symbols of Waipahū's plantation town history. Maintain the historic theme of the Waipahū Cultural Garden Park and strengthen links between the mill site and the park. Maintain the historic character of the old commercial core of Waipahū.	Hist. Pres.	SHPD	Regulator
	WNTODNP ZC LUO	DPP	Advocate Advocate Regulator
Native Hawaiian Cultural and Archaeological Sites			
Determine the appropriate preservation method, site boundaries, setbacks, and restrictions for adjacent uses on a site-by-site basis, in consultation with the State Historic Preservation Officer.	Hist. Pres.	SHPD	Regulator
	ZC UDP	DPP	Regulator
Determine the appropriate level of public access on a site-by-site basis, in consultation with the State Historic Preservation Officer, Hawaiian cultural organizations and the land owner.	Hist. Pres.	SHPD OHA OHA	Regulator Advocate/ Implementer

Table 5.1: Implementation Matrix

Policies And Guidelines Statements	Programs	Agencies	Roles
	ZC UDP	DPP	Regulator
Sec. 3.5 NATURAL RESOURCES			
Conserve potable water by supporting water conservation measures (e.g. non potable irrigation, xeriscaping, storm water retention and use).	WUP	CWRM BWS	Regulator Advocate
	SUB LID	DPP	Regulator
Protect valuable habitat for waterbirds, fish, invertebrates and other endangered animals and plants. Require surveys for proposed new developments to identify endangered species habitat and require appropriate mitigations for adverse impacts.	ESA/MBTA	USFWS/NOAA USACE DLNR	Regulator Regulator Regulator
	EA/EIS	DPP	Regulator
	SMA ZC UDP	DPP	Advocate Advocate Regulator
Retain the major Central O‘ahu ravines as natural drainageways, storm water retention areas, and open space resources by restricting further development and minimizing grading or other disturbances of the gulch walls.	SLUDBA	LUC DPP	Regulator Advocate
	ZC LUO SUB	DPP	Advocate Regulator
Protect prime watershed recharge areas and the Pearl Harbor potable aquifer.	SLUDBA	LUC DPP	Regulator Advocate
	ZC	DPP	Advocate
	LID	DPP	Regulator
Reduce light pollution’s adverse impact on wildlife and human health and its unnecessary consumption of energy by using, where possible, fully shielded lighting fixtures using lower wattage.	ESA/MBTA	USFWS DLNR DOT DTS	Regulator Regulator Implementer Implementer
	LUO UDP BC	DPP	Regulator

Table 5.1: Implementation Matrix

Policies And Guidelines Statements	Programs	Agencies	Roles
Sec. 3.6 WAIPAHŪ TOWN			
Develop Waipahū as a harmonious blend of the old and new, retaining and embracing its cultural plantation heritage. Revitalize the town, providing jobs, economic opportunities, and social, cultural, and recreational enhancements. Preserve and enhance greenery, community gardens, and open spaces. Encourage mixed-use, medium density transit-oriented development around the two Honolulu Rail Transit stations. Create a network of green spaces, parks, paths, trails and shaded streets linking the Waipahū Cultural Garden, the two Honolulu Rail Transit stations, the Pearl Harbor Historic Trail, and the Waipahū Shoreline Park and Preservation Area.	WNTODP ZC	DPP	Advocate Advocate
	LUO SUB	DPP	Regulator
	CIP	DDC	Implementer
	Urban Forest	DPR	Regulator Implementer
	BID/CFD	BFS DA	Regulator Implementer
Sec. 3.7 WAHIAWĀ TOWN			
Maintain and enhance Wahiawā's plantation heritage and rural, small town atmosphere. Enhance Wahiawā's role as a "gateway" between town and country. Strengthen the town center's role as a commercial, social, and civic center, particularly as a support center for Central Oʻahu and North Shore diversified agriculture. Protect and enhance Wahiawā's unique forest and lake features. Explore the possibility of establishing a geriatric research and technology center.	ZC	DPP	Advocate
	LUO SUB	DPP	Regulator
	CIP	DDC	Implementer
	Urban Forest	DPR	Regulator Implementer
	BID/CFD	BFS DA	Regulator Implementer
Sec. 3.8 CENTRAL OʻAHU PLANTATION VILLAGES			
Preserve and enhance the historic character and appearance of the villages. Use the villages as affordable housing for workers from new diversified agricultural activities on lands along Kunia Road and north of Wahiawā. Rehabilitate existing village structures or adapt them for reuse. Perpetuate rural agricultural functions and activities in the surrounding area in conjunction with village land uses. Replace razed structures with in-fill development that respects the historic character of the original village.	LUO SUB	DPP	Regulator
Sec. 3.9 EXISTING AND PLANNED RESIDENTIAL COMMUNITIES			
Develop suburban residential areas with housing density of 10 to 15 units per acre. Develop residential areas along the rail transit corridor at housing densities of 25 units per acre, and mixed use residential/commercial areas within 1/4 mile of transit stations at densities from 25 to 90 units per acre. Require that housing units affordable to low and low-moderate income households be provided in new residential developments. Provide land for meeting facilities, community centers, and elderly and child-care centers.	WNTODP ZC	DPP	Advocate Advocate
	LUO SUB	DPP	Regulator

Table 5.1: Implementation Matrix

Policies And Guidelines Statements	Programs	Agencies	Roles
Develop or redevelop residential communities to have an identified pedestrian-friendly town center or "Main Street" area, and design commercial development to help establish and support that center. Encourage walking and biking and bus transit usage by providing ample path and roadway connectivity both to the town center and throughout the community, and by providing sufficient right-of-way to provide bus shelters and pull-outs	ZC	DPP	Advocate
	UDP Road MP SUB	DPP	Regulator Regulator Regulator
Use xeriscaping, non-potable water for irrigation, and efficient irrigation systems wherever possible to conserve groundwater resources.	Water MP SUB LID	BWS DPP	Regulator Regulator Regulator
Sec. 3.10 PLANNED COMMERCIAL RETAIL CENTERS			
Develop planned commercial centers to provide retail shopping and offices delivering services for the Central O'ahu residential communities in which they are located. Concentrate commercial uses in central locations instead of in continuous commercial strips along arterial roads, and design the centers to support pedestrian-friendly centers or "Main Streets" for their communities. Where compatible and with appropriate conditions, allow business hotels in Major Community Commercial Centers. Allow medium density mixed use residential-commercial development generally within a quarter-mile of the two rail transit stations in Waipahū and the station at Leeward Community College.	WNTODP ZC	DPP	Advocate Advocate
	UDP SUB	DPP DPP	Regulator Regulator
Follow best practices for architectural character, building siting, build height and density, accessibility, connectivity, pedestrian and bicycle facilities, visual screening, lighting, and signage. Use xeriscaping, non-potable water for irrigation, and efficient irrigation systems wherever possible to conserve groundwater resources.	ZC	DPP	Advocate
	UDP LUO SUB Water MP LID	DPP BWS DPP	Regulator Regulator Regulator Regulator Regulator
Permit multi-family residential use above the first floor and include it wherever possible in commercial centers.	ZC LUO	DPP	Advocate Regulator

Table 5.1: Implementation Matrix

Policies And Guidelines Statements	Programs	Agencies	Roles
Sec. 3.11 INDUSTRIAL CENTERS			
Follow best practices for appropriate scale, environmental compatibility, building height and mass, access roadway setbacks, water conservation and landscape treatment. Buffer industrial areas from residential areas and minimize negative impacts. Use xeriscaping, non-potable water for irrigation, and efficient irrigation systems wherever possible to conserve groundwater resources.	ZC	DPP	Advocate
	UDP LUO SUB	DPP	Regulator Regulator Regulator
	Water MP SUB LID	BWS DPP	Regulator Regulator Regulator
Allow limited industrial uses needed to provide direct services and storage to adjacent residential communities. Provide support for diversified agricultural jobs in Central O‘ahu and the North Shore from industrial areas in Wahiawā. Allow industrial areas within the master-planned communities of Waipi‘o-Gentry, Royal Kunia, Koa Ridge and Waiawa. Allow industrial areas oriented to small businesses providing consumer services within Wahiawā and Waipahū and consistent with their Special Area Plans and the Waipahū Neighborhood Transit Oriented Development Plans.	WNTODP ZC	DPP	Advocate Advocate
	LUO UDP	DPP	Regulator
Sec. 3.12 MILILANI TECHNOLOGY PARK			
Continue Mililani Technology Park as an open, landscaped, low density campus style business park intended for technology-intensive businesses. Allow light industrial uses to be mixed with office uses. Limit retail and support service uses. Limit building heights to generally not exceed 40 feet, except for necessary communication antennas.	ZC LUO SUB	DPP	Advocate Regulator
Sec. 3.13 MILITARY AREAS			
Support military uses at Joint Base Pearl Harbor-Hickam, Schofield-Wheeler, and Joint Base Pearl Harbor-Hickam Wahiawā Annex. Request DOD co-operation with City land use plans. Provide adequate buffers between adjoining residential areas and military training areas. Require private uses leasing DOD lands for non-DOD uses to comply with City land use plans and regulations. Request expanded public access to West Loch waters for recreational purposes.	INRMP	DOD DPP	Regulator Advocate
	ZC LUO SUB	DPP	Advocate Regulator

Table 5.1: Implementation Matrix

Policies And Guidelines Statements	Programs	Agencies	Roles
Sec. 4.1 TRANSPORTATION SYSTEMS			
Provide adequate access between residences and jobs, shopping, and recreation centers within Central O‘ahu as development occurs. To improve connectivity, provide a multi-modal network of interconnected routes that safely accommodate walkways, bikeways, and streets throughout Central O‘ahu and efficiently link arterials, residences, schools, parks, community facilities, commercial and employment centers, and transit stops. Insure sites are provided for bus transit centers, park-and-ride facilities, bus shelters, and bus pullouts in new developments.	ORTP TIP	OMPO	Implementer Implementer
	BPH CIP	DOT	Implementer
	OBP CIP	DTS DDC	Implementer Implementer
	WNTODP ZC LUO UDP Road MP SUB	DPP	Advocate Advocate Regulator Regulator Regulator Regulator
Provide improved access and capacity to and from adjacent areas, especially to ‘Ewa, to the two Honolulu Rail stations in Waipahū in accordance with the adopted Waipahū Neighborhood TOD Plan, and to the Pearl Highlands Rail Station.	ORTP TIP	OMPO	Implementer Implementer
	BPH CIP	DOT	Implementer
	OBP CIP	DTS DDC	Implementer Implementer
	WNTODP ZC LUO	DPP	Advocate Advocate Regulator
Provide adequate capacity for peak hour commuting to work in the Primary Urban Center and ‘Ewa. Meet demand for peak-period transportation capacity by increased use of transit, and by transportation demand management (improved HOV lane service, provision of park-and-ride facilities, and reduction of single occupant automobile traffic).	ORTP TIP	OMPO	Implementer
	CIP	DOT	Implementer
	CIP	HART DTS DDC	Implementer Implementer Implementer
Sec. 4.2 WATER ALLOCATION AND SYSTEM DEVELOPMENT			
Require new development to provide adequate potable and nonpotable water and use water efficiency and conservation measures. Require development with large landscaped areas, roadway landscaping, or industrial processes to have dual water lines (potable and non-potable) to allow use of non-potable water for irrigation and other appropriate uses. Encourage water audits and repairs to reduce water losses from existing systems**.**	ZC LUO	DPP DPP	Advocate Regulator
	Water MP	BWS	Regulator
	SUB	DPP	Regulator

Table 5.1: Implementation Matrix

Policies And Guidelines Statements	Programs	Agencies	Roles
Develop an adequate supply of nonpotable water for irrigation and other suitable uses in Central O'ahu. Promote individual rain catchments and large scale storm water impoundments and treatment systems. Require use of nonpotable water low in chlorides and total dissolved solids for irrigation above the Pearl Harbor aquifer. Request that the State Commission on Water Resource Management consider all sources of water in making allocation of nonpotable water.	State Water	CWRM	Regulator
	WQP	DOH	Regulator
	OWMP	BWS	Regulator/ Implementer
	LID	DPP	Regulator
	CIP	ENV DDC	Implementer Implementer
Protect high recharge areas from urban development. Support water infiltration by replacing non-native species with native trees in forest areas, using best soil conservation practices in agricultural areas, and using low impact development (LID) practices in urban areas. Manage agricultural and urban lands to protect against contamination of the underlying potable aquifers.	SLUBDA	LUC DPP	Regulator Advocate
	Forestry	DLNR	Implementer
	Conserv Plan	SWCD	Implementer
	WQP	DOH	Regulator
	ZC LUO LID	DPP	Advocate Regulator Regulator
Sec. 4.3 WASTEWATER TREATMENT			
Require all wastewater produced by new developments in Central O'ahu to be connected to a regional or municipal sewer service system.	SUB BC	DPP	Regulator Regulator
	SEWER	DPP ENV	Regulator Implementer
Where feasible, use recycled water recovered from treated wastewater effluent for irrigation and other non-potable water uses where appropriate and approved by the State Department of Health and Honolulu Board of Water Supply. Promote gray water reuse for on-site irrigation as allowed by State DOH Gray Water Reuse guidelines and the Uniform Plumbing Code.	WP WQP	DOH	Regulator
	OWMP	BWS	Regulator/ Implementer
	CIP	ENV DPR DDC	Implementer Implementer Implementer
Locate wastewater treatment plants in areas shown as planned for industrial use and away from residential areas.	WP	DOH	Regulator
	WMBFP CIP	ENV DDC	Implementer Implementer
	ZC LUO	DPP	Advocate Regulator

Table 5.1: Implementation Matrix

Policies And Guidelines Statements	Programs	Agencies	Roles
Sec. 4.4 ELECTRIC POWER DEVELOPMENT			
Analyze and approve major system improvements based on island-wide studies and siting evaluations. Give strong consideration to placing any new transmission lines underground where possible under criteria specified in State law.	PUC LUO ID/CFD	PUC HECO DPP BFS DA	Regulator Implementer Regulator Regulator Implementer
Support efforts to increase the share of energy from clean sources through increased efficiency and through production of energy from renewable sources.	BC	DPP	Regulator
In approving solar facilities, protect high quality agricultural lands and maintenance of aquifer recharge, and encourage incorporation of complementary agricultural uses, where feasible	SUP LUO	DPP	Regulator
Locate electrical power plants in areas shown as planned for industrial use and away from residential areas.	PUC	PUC HECO	Regulator Implementer
	LUO	DPP	Regulator
Sec. 4.5 SOLID WASTE HANDLING AND DISPOSAL			
Analyze and approve siting and/or expansion of sanitary landfills based on island-wide studies and siting evaluations and as recommended by the Department of Health and the Board of Water Supply.	SUP	LUC DPP	Regulator Advocate
	WP	DOH	Regulator
	OWMP	BWS	Regulator
	SWIMP	ENV	Implementer
For master-planned communities, consult with the Department of Environmental Services for how solid waste will be handled, to include estimates of solid waste to be generated by the communities, provisions for collection of solid waste, and provisions for and encouragement of recycling.	ZC	DPP	Advocate
	LUO SUB	DPP	Regulator
	SWIMP	ENV	Implementer
Sec. 4.6 DRAINAGE SYSTEMS			
Design drainage systems to emphasize flood control, minimize non-point source pollution, reduce sedimentation, and retain and/or detain storm water for aquifer recharge and pollution reduction. Use natural and man-made vegetated drainageways and retention basins as the preferred solution to drainage problems, and use concrete-lined channels only if there is no other reasonable alternative.	NPDES	DOH	Regulator
	Drain MP SUB LID	DPP	Regulator Regulator Regulator
	CIP	DFM DDC	Implementer Implementer

Table 5.1: Implementation Matrix

Policies And Guidelines Statements	Programs	Agencies	Roles
Integrate planned drainage system improvements into the regional open space network by allowing recreational use of retention basins, and creating passive recreational areas and pathways for pedestrians and bikers.	Drain MP SUB	DPP	Regulator Regulator
	CIP	DFM DDC	Implementer Implementer
Retain the major gulches as flood plains, storm water retention areas, and open space resources. Establish riparian buffer zones along Central O‘ahu streams. Identify stream erosion problem areas and develop and maintain erosion control projects.	SLUDBA	LUC DPP	Regulator Advocate
	Cons Distr	DLNR	Implementer
	Conserv Plan	SWCD	Implementer
	ZC	DPP	Advocate
	LUO Drain MP SUB	DPP	Regulator Regulator Regulator
Reduce the risk of flooding and improve resilience to impacts of flooding for portions of Waipahū in the 100-year floodway by improvements to channel berms, use of upstream flood retention basins, or other appropriate measures.	Gen Flood Pl	DLNR	Implementer
	Rivr & Harbor	USACE	Implementer
	WPFPA	O'ahu RC&D NRCS	Implementer Implementer
	Drain MP SUB	DPP	Regulator Regulator
	CIP	DDC	Implementer
Sec. 4.7 SCHOOL FACILITIES			
Request DOE to report to DPP if adequate school capacity can be provided as part of the project review and approval process, both at the entitlement and permit approval stages.	SIF	DOE	Implementer
	ZC	DPP	Advocate
	LUO SUB	DPP	Regulator Regulator
Require developers to comply with DOE school impact fees requirements and/or existing UA school impact conditions and pay their fair share of all costs needed to provide adequate school facilities for the children living in their developments.	SIF	DOE	Implementer
	ZC	DPP	Advocate
	LUO SUB	DPP	Regulator Regulator
Design school facilities to facilitate community use during non-school hours and weekends.	State CIP	DOE	Implementer
		DPP	Advocate

Table 5.1: Implementation Matrix

Policies And Guidelines Statements	Programs	Agencies	Roles
Co-locate neighborhood or community parks with elementary and intermediate schools, and coordinate designs of facilities with the State DOE when duplication of parking and of athletic, recreation, and meeting facilities can be avoided.	CIP	DOE	Implementer
	ZC	DPP	Advocate
	UDP SUB	DPP	Regulator Regulator
	CIP	DPR DDC	Implementer Implementer
Sec. 4.8 PUBLIC SAFETY FACILITIES			
Provide adequate facilities and staffing to ensure public safety and provide fire protection, police protection, and emergency medical service for existing and new development.	CIP	DDC	Implementer
	Op Budget	BFS HFD HPD EMS	Implementer Implementer Implementer Implementer
Survey and retrofit, as appropriate, existing Department of Education and other public buildings to make up the shortfall in hurricane resistant shelters. Require new City buildings which are "critical facilities used for public assembly and able to perform as shelters" to be designed and built to withstand a Category 3 hurricane.	CIP	HSCD DOE	Implementer Implementer
	CIP	DDC	Implementer
	BC	DPP	Regulator
Provide incentives for private organizations to create hurricane resistant shelter areas in their facilities and for homes to include hurricane resistant "safe rooms".	CDBG/HOME	DCS	Implementer
	Op Budget	BFS	Implementer
	FEMA Hazard Mitigation	DEM	Implementer
Sec. 4.9 OTHER COMMUNITY FACILITIES			
Locate colleges and hospitals in urban areas near transit stations, commercial centers, and high-density residential areas.	PRU	DPP	Regulator
	ZC	DPP	Advocate
	LUO SUB	DPP	Regulator Regulator
Locate correctional facilities on lands planned for industrial and agricultural use. If such a facility is proposed for lands not planned for industrial or agricultural use, use a City review and approval process which provides public review, complete project analysis, and City Council approval.	PRU	DPP	Regulator
	CIP	DOC	Implementer
Encourage co-location of antennas on existing buildings or structures. Use stealth technology to minimize visual impacts.	LUO	DPP	Regulator

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APPENDIX A: CONCEPTUAL MAPS

This appendix includes the four primary conceptual maps used to illustrate the vision for Central O‘ahu's future development. The maps include:

	PAGE
OPEN SPACE	**A-17**
URBAN LAND USE	**A-19**
PUBLIC FACILITIES	**A-21**
DEVELOPMENT CAPACITY	**A-23**

These maps illustrate the long-range vision of the future of the plan area and the major land use, open space, and public facility policies that are articulated in the plan. In using these maps, the reader should keep in mind that:

1 These maps are general and conceptual, and are not intended to be used to determine specific land use boundaries. Such boundaries are to be determined during the review of specific land use or public facilities investment decisions, and their exact locations are to be guided by the vision and policies of this Plan.

2 These maps illustrate the Plan's vision, policies and guidelines that are presented in Chapters Two, Three, and Four. These policy statements and guidelines are considered the most important elements of the Plan.

The maps are considered illustrations of the policies and guidelines. However, the text should be consulted to determine the appropriate application of the Plan vision, policies, and guidelines for any specific project or location. In cases of disagreement, the text should prevail over the map depiction.

A brief explanation of the terms used in each of these maps follows.

GLOSSARY OF TERMS

Descriptions of elements common to each of the four maps are presented in the following section. Descriptions of elements specific to each map (A-1 Open Space, A-2 Land Use, A-3 Public Facilities, and A-4 Development Capacity) are presented in separate sections for each map which follow the section on Common Elements.

COMMON ELEMENTS

Agriculture Areas

Lands with agricultural value by virtue of current agricultural use or high value for future agricultural use, including those areas identified as Prime, Unique, or Other Important lands on the Agricultural Lands Important to the State of Hawai‘i (ALISH) maps. "Agriculture" includes lands suitable for crop growing, grazing and livestock raising, flower cultivation, nurseries, orchards, aquaculture, or similar activities.

Under the state constitution, the state is to identify important agricultural lands (IAL). Once identified, these lands cannot be rezoned except under a “super majority” vote. In 2005, Act 183 was adopted to address this mandate. It established a two-step process.

- The State Legislature would adopt incentives to assure the long term use and protection of IAL.
- The State Legislature would approve adequate funding to allow the counties to prepare maps identifying IAL lands which would then be adopted by the State Land Use Commission (LUC).

Act 233, enacted in 2008 adopted the incentive programs.

In 2013, the State LUC, in response to an application from the landowner, approved IAL designation for over 400 acres of Castle & Cooke lands in Central O‘ahu.

The City has begun the process of identifying O‘ahu's IAL to be proposed for approval by the LUC. Lands identified for agricultural purposes by this plan are being used as one of the factors considered in the IAL selection process.

Community Growth Boundary

The Community Growth Boundary (called the Urban Community Boundary in the 2002 CO SCP) defines and contains the intended extent of developed or "built up" areas of urban and urban fringe communities. Its purpose is to provide adequate land to support established or developing communities while protecting lands outside this boundary for agriculture or open space values. Areas within this boundary are generally characterized by extensive tracts of residential, commercial, industrial, or mixed-use development clearly distinguishable from undeveloped or more “natural” portions of a region’s environment.

In the **Central O‘ahu Sustainable Communities Plan**, the Community Growth Boundary:

- Generally circumscribes the existing communities of Village Park, Waipahū, Waikele, Gentry Waipi‘o, Mililani, Mililani Mauka, and Wahiawā, and planned developments of Royal Kunia, Koa Ridge Makai, Waiawa, and Mililani Technology Park;
- Excludes most areas outside of the State Urban District, with the exception of:
  - Areas on military bases in urban uses (residential, office, industrial, and community park/golf course),
  - A former Castle & Cooke agricultural support area between Whitmore Village and Wahiawā planned for future development as a packaging and processing facility and agricultural technology park,
  - Parts of the proposed Waiawa project (1),
  - The Patsy T. Mink Central O‘ahu Regional Park,
  - Areas on the Waipi‘o Peninsula which are outside the Navy restricted areas arc around the Joint Base Pearl Harbor – Hickam West Loch Annex; and
  - Approximately 32 acres of the Waikele Gulch outside of the 100-year flood plain that are approved for nonconforming industrial uses.
- Includes most areas inside the State Urban District, with the exception of lands on the east side of the Waiawa project which are above the Hydrologic Zone of Contribution for the Navy Shaft.

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(1) The Community Growth Boundary includes 191 acres of Castle & Cooke Waiawa lands which were approved for future incremental redistricting to the Urban District upon compliance with four preconditions in the Land Use Commission’s Decision and Order in Docket No. AO-775, and Kamehameha Schools Waiawa lands in the Agricultural District but approved for development as part of the Waiawa project.

Golf Courses
The maps show the locations of existing and proposed public and private golf courses.

Highways, Arterials, and Major Collector Streets
The maps show the conceptual locations of existing and planned highways, arterials, and major collector streets.

Parks
The maps show locations of existing public and private parks and recreational facilities, including regional parks, district parks, shoreline parks, and nature parks and conceptual locations for planned and proposed parks. Smaller community-based parks including community parks, neighborhood parks, and mini-parks are not shown.

Preservation Areas
Preservation lands include those lands not valued primarily for agriculture, but which form an important part of a region's open space fabric. They possess natural, cultural, or scenic resource values, and include important wildlife habitat, cultural sites, significant landforms, views, or hazard areas. They include the following types of land:

- Land necessary for protecting watersheds, water resources and water supplies.
- Lands necessary for the conservation, preservation and enhancement of sites with scenic, historic, archaeological or ecological significance.
- Lands necessary for providing and preserving park lands, wilderness and beach reserves, and for conserving natural ecosystems of endemic plants, fish and wildlife, for forestry, and other activities related to these uses.
- Lands with topography, soils, climate or other related environmental factors that may not be normally adaptable or presently needed for urban, rural or agricultural use.
- Lands with general slopes of 20 percent or more which provide for open space amenities and/or scenic values.
- Lands susceptible to floods and soil erosion, lands undergoing major erosion damage and requiring corrective attention by the State or Federal government, and lands necessary to the protection of the health, safety and welfare of the public by reason of soil instability or the lands' susceptibility to landslides and/or inundation by tsunami and flooding.
- Lands used for national, state, or city parks.

- Lands suitable for growing of commercial timber, grazing, hunting, and recreation uses, including facilities accessory to such uses when said facilities are compatible with the natural physical environment.

Wetlands
Habitat areas for endangered waterbirds, located on the shoreline of Pearl Harbor, which are to be protected.

OPEN SPACE MAP

The Open Space Map illustrates the vision for the Central O‘ahu Open Space Network, and shows the region’s major open space patterns and resources as outlined in Chapter 3. It highlights major open space elements and resources, including agricultural and preservation lands, major recreational facilities, important “panoramic” views, natural stream corridors and drainageways, and important boundaries.

The Open Space Network consists of large areas of preservation and agricultural lands outside the Community Growth Boundary and a network of parks, wildlife habitats, golf courses, agricultural lands, ravines, grass-lined drainageways, and greenways along utility corridors and major arterials within the Community Growth Boundary. (See definitions of terms and discussion in Section 2.2 and Section 3.1.)

Cemetery
The existing Mililani Memorial Park and Mortuary. Cemeteries are a permitted use in the P-2 General Preservation Zoning District and provide a form of landscaped open space.

Historic Bikeway Corridor
Part of a continuous shoreline park and greenbelt stretching from West Loch to Rainbow Marina near Aloha Stadium with a connection to the Waipahū Cultural Garden Park. The corridor would include a shoreline bike path planned to extend from Rainbow Marina to Nānākuli.

Kūkaniloko
Kūkaniloko Birthstones, a site where high chiefs were born, is located north of Wahiawā. It is a State Monument managed and maintained through a partnership

between State Parks, the Hawaiian Civic Club of Wahiawā, and the Friends of Kūkaniloko.

Lake Wilson
Lake Wilson or Wahiawā Reservoir surrounds Wahiawā on three sides and is the second largest reservoir in Hawai‘i encompassing 330 acres of surface water. It was built to irrigate agricultural fields on the North Shore. It is the site of the Wahiawā Freshwater State Recreation Area providing access to recreational boating and fishing, jogging paths, and picnic facilities.

Landscaped Boulevard/Greenway
Major arterials and major collector streets which should be developed as landscaped park ways, complete with a landscaped median strip, landscaped sidewalk, and bikeways. (See Section 3.9.2)

Military Training Areas
Open space areas used by the military for training purposes.

Natural Drainageways/Gulches
Natural waterways which are to be retained as flood plains and open space resources and protected from development, disturbance, or channelization except where absolutely necessary to protect existing urban development from flooding.

Panoramic Views
Significant views and vistas which are to be retained, whenever possible. (See Exhibit 3.2 and Table 3.2)

Urban Areas
Areas which have been developed, or are planned for development for residential, commercial, and industrial uses.

URBAN LAND USE MAP

The Urban Land Use Map illustrates the vision for the foreseeable future for Central O‘ahu's land uses within the Community Growth Boundary. It portrays the vision for revitalization of Waipahū and Wahiawā, for the development of master planned

residential communities, and for creation of new jobs in existing and planned community shopping centers, and at the Mililani Technology Park. (See definition of terms and discussion in Chapter 2, and in Chapter 3.)

This map illustrates the desired long-range land use pattern for Central O‘ahu which should result from implementation of the plan’s vision and policies. The map includes the following terms:

Airfield
The existing Wheeler Army Airfield near Wahiawā.

Cemetery
The existing Mililani Memorial Park and Mortuary. Cemeteries are a permitted use in the P-2 General Preservation Zoning District and provide a form of landscaped open space.

Civic Center
The existing regional centers in Waipahū and Wahiawā with City and State offices and facilities providing services to all O‘ahu residents.

Commercial Centers
The following commercial designation descriptions summarize the types of commercial centers within the region. As with the overall approach taken by the plan, they indicate vision and intent. (For greater detail, see Sec. 3.10.)

- **Neighborhood Commercial Center -** (10 to 5 acres or less in size, typically located within or adjacent to a residential area, up to 100,000 square feet [sq. ft.] of floor area.) An urban or urban fringe commercial center cluster of commercial establishments intended for neighborhood service in urban and urban fringe areas. Uses are typically grocery and sundry stores and other services or shops catering to common household or neighborhood-level convenience items. Neighborhood Commercial Centers can be located within any residential community, and existing and planned locations are not shown on the Urban Land Use Map.
- **Community Commercial Center -** (10 to 30 acres, typically located on an arterial highway or at the intersection of two major collector streets, up to 250,000 sq. ft. floor area) An urban or urban fringe commercial center intended to serve a specific community and its constituent neighborhoods.

In addition to facilities offered by Neighborhood Centers, this type of center often incorporates "anchor" tenants and includes offices, service industrial businesses, entertainment facilities, and social centers. Existing and conceptual planned locations for five Community Commercial Centers are shown on the Urban Land Use Map.

- **Major Community Commercial Center -** (up to 50 acres, up to 500,000 sq. ft. floor area). A shopping center intended to serve large planned communities which are not located near an Urban Center. These centers offer similar shopping and service opportunities as Community Commercial Centers at greater variety and large scale. Existing and conceptual planned locations for three Major Community Commercial Centers are shown on the Urban Land Use Map.
- **Regional Commercial Center -** (more than 50 acres, located with frontage on a major arterial highway and access from freeway interchange, more than 500,000 sq. ft.) An urban or urban fringe shopping center with major commercial outlets and a regional or islandwide service area. Only one existing Regional Shopping Center is shown on the Urban Land Use Map, reflecting the vision and policies supporting revitalization of Waipahū and Wahiawā and the development of the Second City in ʻEwa.
- **Regional Town Center -** The core of an urban fringe town which serves as a center for shopping, civic activity, and municipal services for its region. It offers a wide range of shopping and dining opportunities and professional, business and industrial services. Centers in Waipahū and Wahiawā are the two Regional Town Centers shown on the Urban Land Use Map.

Correctional Facility

The existing Waiawa Correctional Facility located on the leeward slopes of the Koʻolau Range.

High School

Existing high schools (Leilehua High School, Mililani High School, and Waipahū High School), and a conceptual location for a new high school at Waiawa. The decision on where students from the Koa Ridge and Waiawa developments will attend high school prior to construction of the Waiawa high school will be made by complex administrators in the future.

Hospital
The existing Wahiawā General Hospital and the proposed acute-care hospital to developed as part of a 28-acre medical center at Koa Ridge.

Industrial
Areas providing facilities for light and service-related industrial uses associated with repair, processing, construction, manufacturing, transportation, wholesaling, distribution, storage and similar economic activities. Industrial areas also include a range of compatible commercial activities, except where otherwise specified within the text of the Development and Sustainable Communities Plans. (Areas intended primarily for more intensive, noxious industrial uses are specified in the text of specific Development and Sustainable Communities Plans.)

Institutional
Areas providing facilities for public use or benefit, including schools, meeting facilities, hospitals, group living establishments, utilities and infrastructure production or support facilities, civic, public, and social services facilities, and government facilities.

Intermediate/Middle School
Existing intermediate/middle schools (Mililani Middle School, Waipahū Intermediate School, and Wahiawā Middle School) and a conceptual location for new middle school at Waiawa.

Military
Lands for military and military support purposes.

Military Training Areas
Open space areas used by the military for training purposes.

Residential Communities
Residential designations displayed on the map indicate the kind of community that should be developed in the area, rather than the specific land use that each parcel should have. For instance, an area identified as “Medium Density Residential/Commercial Mixed Use" may contain minor pockets of “Low Density Apartment.” See the discussions in Sec. 3.9.3. Terms used on the map include:

- **Residential -** Single-family detached and attached homes or townhouse units with individual entries.
- **Low Density Apartment -** Low density, low rise, multi-family residences, including townhouses, stacked flats, or apartment buildings.
- **Medium Density Apartment -** Medium density, low- to mid-rise multi-family residences which may be in standalone buildings or as part of **Medium Density Apartment / Commercial Mixed Use -** Medium density apartment developments with the ground or lower floors occupied by retail, office, or service commercial uses.

Technology Park
Facilities intended for light, technology and service-oriented industrial and business uses, developed in a campus-like setting. Development intensity is low, while open space and landscaping are the predominant visual and physical elements.

Transit Node (Medium Density Residential and Commercial)
Center of medium density residential and commercial development located around a rail transit station along the elevated rail transit corridor connecting Waipahū with the City of Kapolei to the west and to the Primary Urban Center to the east. (See Sections 3.6 and 4.1.3.2)

UH Leeward Community College
The existing campus located on Ala ʻIke Street between Pearl City and Waipahū.**Wastewater Treatment Plant**
The existing wastewater treatment plant at Wahiawā.

PUBLIC FACILITIES MAP

The Public Facilities Map illustrates the major infrastructure needed to implement the vision for Central Oʻahu. It shows the location of existing facilities and conceptual locations for some of the future required infrastructure facilities.

The Public Facilities Map and the associated project descriptions in the Central Oʻahu SCP text are not meant to be amended between revisions of the Plan and should not be confused with amendments of the Public Infrastructure Map which are used as part of the approval of projects in the Capital Improvement Program budget process.

Major public facilities which are to be funded through the City's Capital Improvement Program budget appropriation must be shown on the Public Infrastructure Map (PIM). The PIM is not part of the Central O'ahu SCP and is adopted and amended by resolution.

Projects which are not listed in the Central O'ahu SCP or are not shown on the Central O'ahu SCP maps can still be added to the Public Infrastructure Map by Council resolution if the Council finds them to be consistent with the vision and policies of the Central O'ahu SCP.

(For definitions, information about existing and planned public facilities, and functional planning processes, see Chapter 4 and Sec. 5.3 in Chapter 5.)

For Central O'ahu, terms which appear on the Public Facilities Map include:

Agricultural Industry and Technology Park
Proposed agricultural support area adjacent to Whitmore Village providing access to food safety, packaging and processing facilities, office space, and agricultural technology support and development.

Agricultural Park
Land set aside to provide farm lots to small farmers at reasonable cost with long-term tenure. Areas shown on the Public Facilities Map includes the 150 acre State Agricultural Park under development near Royal Kunia, the 182 acre Kunia Ag Park operated by the Hawai'i Agricultural Foundation, 580 acres adjacent to Schofield Barracks and Wheeler Army Air Fields and 1,200 acres of former Galbraith lands which are available for farming leases from the State Agribusiness Development Corporation, and 500 acres around Kūkaniloko, some portion of which may be available in the future for farming leases from the Office of Hawaiian Affairs.

Airfield
The existing Wheeler Army Airfield near Wahiawā.

Bike Lane
A biking facility (bikeway) which is a four to six-foot lane exclusively for bike use which is included in a roadway.

Bike Path
A biking facility (bikeway) which is separate from the roadway network.

Civic Center
The existing regional centers in Waipahū and Wahiawā with City and State offices and facilities providing services to all O‘ahu residents.

Corporation Yard
The two existing City facilities for storage, maintenance, and repair of vehicles and equipment in Wahiawā.

Correctional Facility
The existing Waiawa Correctional Facility located on the leeward slopes of the Ko‘olau Range.

First Responder Technology Campus
The 150-acre area where a campus is proposed for federal, State, and City first responder training and operational facilities. Facilities may include rescue and rappel towers, a firing range, a driving course, and tactical training buildings. The site was formerly known as the Mililani Technology Park Phase II.

Grade Separated Interchange
Existing interchanges at Kunia Road and H-1 Freeway, Kunia Road and Farrington Highway, Pāiwa and H-1 Freeway, Waiawa (H-1 Freeway and H-2 Freeway), Ka Uka Boulevard and H-2 Freeway, Meheula Parkway and H-2 Freeway, and Kamehameha Highway and H-2 by Wahiawā and proposed interchanges at Pineapple Road and H-2 Freeway and at a location on H-2 Freeway between Ka Uka Boulevard and the Waiawa Interchange.

High School
Existing high schools (Leilehua High School, Mililani High School, and Waipahū High School), and a conceptual location for a new high school at Waiawa. The decision on where students from the Koa Ridge and Waiawa developments will attend high school prior to construction of the Waiawa high school will be made by complex administrators in the future.

HOV (High Occupancy Vehicle) Lane
An exclusive lane on a roadway reserved for transit and vehicles with more than one occupant, and which is developed to improve transit speed and to provide incentives for commuters to opt for mass transit or carpooling.

Historic Bikeway Corridor
Part of a continuous shoreline park and greenbelt stretching from West Loch to Rainbow Marina near Aloha Stadium with a connection to the Waipahū Cultural Garden Park. The corridor would include a shoreline bike path planned to extend from Rainbow Marina to Nānākuli.

Hospital
The existing Wahiawā General Hospital and the proposed acute-care hospital to be developed as part of a 28-acre medical center at Koa Ridge.

Intermediate/Middle School
Existing intermediate/middle schools (Mililani Middle School, Waipahū Intermediate School, and Wahiawā Middle School) and a conceptual location for a new middle school at Waiawa.

Park & Ride Site
Special parking lots where commuters park their cars and continue their commute by mass transit.

Transit Corridor
The area along the route of the rapid transit system which is appropriate for establishing communities that can reduce or eliminate automobile use because they have access to high speed mass transit for long trips and because it is easy to walk or bike to nearby areas. Areas along the corridor within easy walking distance to rail stations will be supported for medium-density residential and commercial development to support efficient operation of buses and rail mass transit on the corridor.

Transit Node (Medium Density Residential and Commercial)
Center of medium density residential and commercial development located around a rail transit station along the elevated rail transit corridor connecting Waipahū with the City of Kapolei to the west and to the Primary Urban Center to the east. (See Sections 3.6 and 4.1.3.2)

UH Leeward Community College
The existing campus located on Ala ʻIke Street between Pearl City and Waipahū.

Urban Areas
Areas which have been developed, or are planned for development for residential, commercial, and industrial uses.

Wastewater Treatment Plant
The existing wastewater treatment plant at Wahiawā.

DEVELOPMENT CAPACITY MAP

The Development Capacity Map shows where urban development has already occurred in Central Oʻahu, where new development will take place within the Community Growth Boundary, and the two areas in Central Oʻahu that have Special Area Plans (Wahiawā and Waipahū).

Terms on the Development Capacity Map which are not common to all of the maps include:

Existing Urban Areas
Areas which already have been developed for residential, retail, office, institutional, or industrial uses. Growth in such areas can occur through re-development or in-fill.

Military Training Areas
Open space areas used by the military for training purposes.

Special Areas
Special areas are areas which require more detailed planning than can be provided in a Development Plan (See Section 5.2). Wahiawā and Waipahū are the only areas in Central Oʻahu currently designated as Special Area Plan areas.

Special Area Plans for the two communities include:

- **The Waipahū Town Plan** (December 19950);
- **The Waipahū Livable Communities Initiative** (May 1998);

- **The Wahiawā Urban Design Plan** (January1998).

Transit Corridor
The area along the route of the rapid transit system which is appropriate for establishing communities that can reduce or eliminate automobile use because they have access to high speed mass transit for long trips and because it is easy to walk or bike to nearby areas. Areas along the corridor within easy walking distance to rail stations will be supported for medium-density residential and commercial development to support efficient operation of buses and rail mass transit on the corridor.

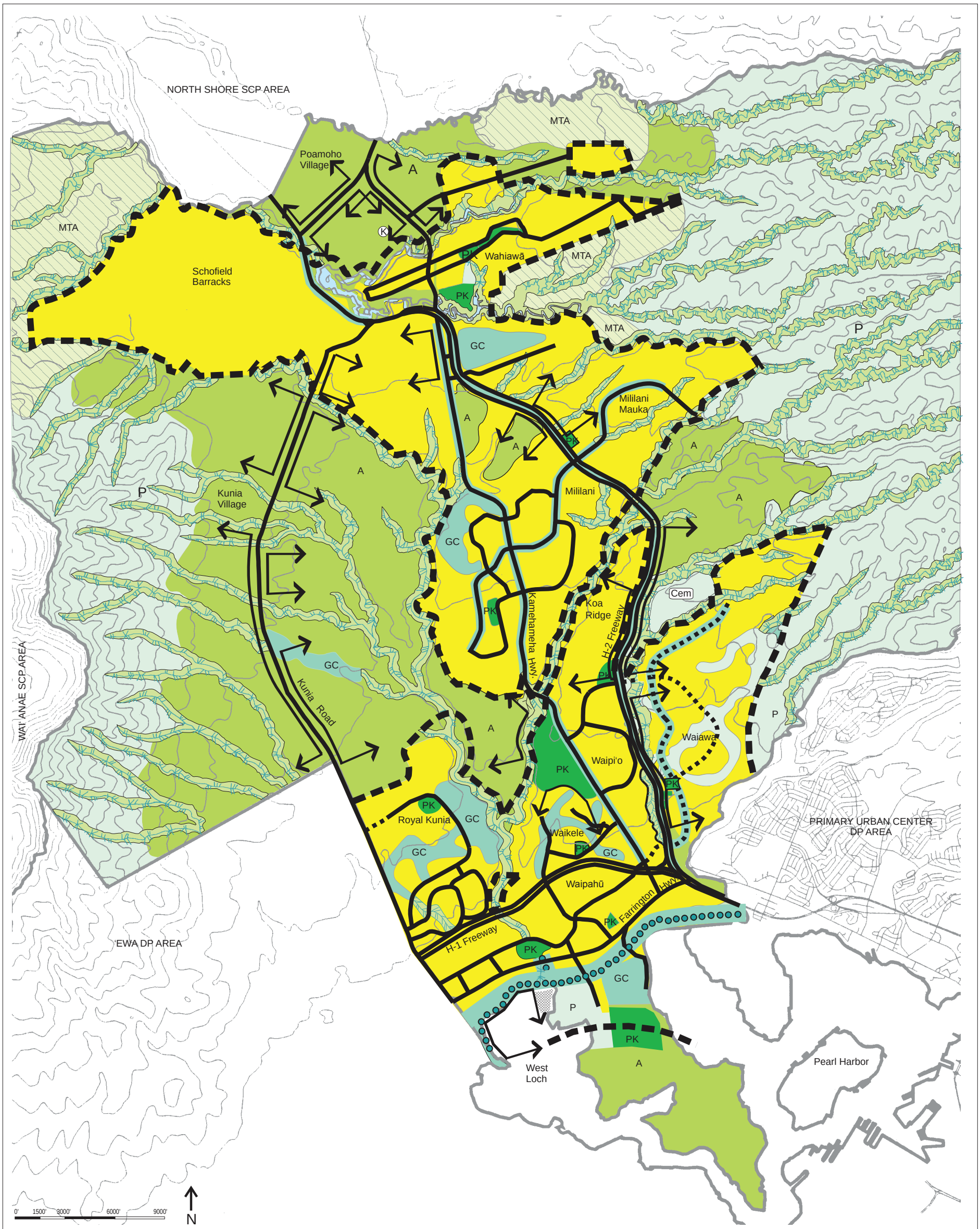
Transit Node (Medium Density Residential and Commercial)
Center of medium density residential and commercial development located around a rail transit station along the elevated rail transit corridor connecting Waipahū with the City of Kapolei to the west and to the Primary Urban Center to the east. (See Sections 3.6 and 4.1.3.2)

Urban Expansion Areas
Undeveloped areas formerly in agricultural uses which are either already approved or will be considered for approval for development for residential, retail, office, institutional, or industrial uses.

Applications for zone changes and other development approvals needed for new urban development in the Urban Expansion Area will be accepted for processing, and will be supported for approval if the project supports the vision and implementing policies of the **Central O‘ahu Sustainable Communities Pla**n and if adequate infrastructure can be provided. (See Sections 2.2.10, 5.1.2, and 5.3.)

Total acreage as of July 2014 was estimated at over 2,100 acres with capacity for development of almost 24,000 housing units. (See Table 2.1.)

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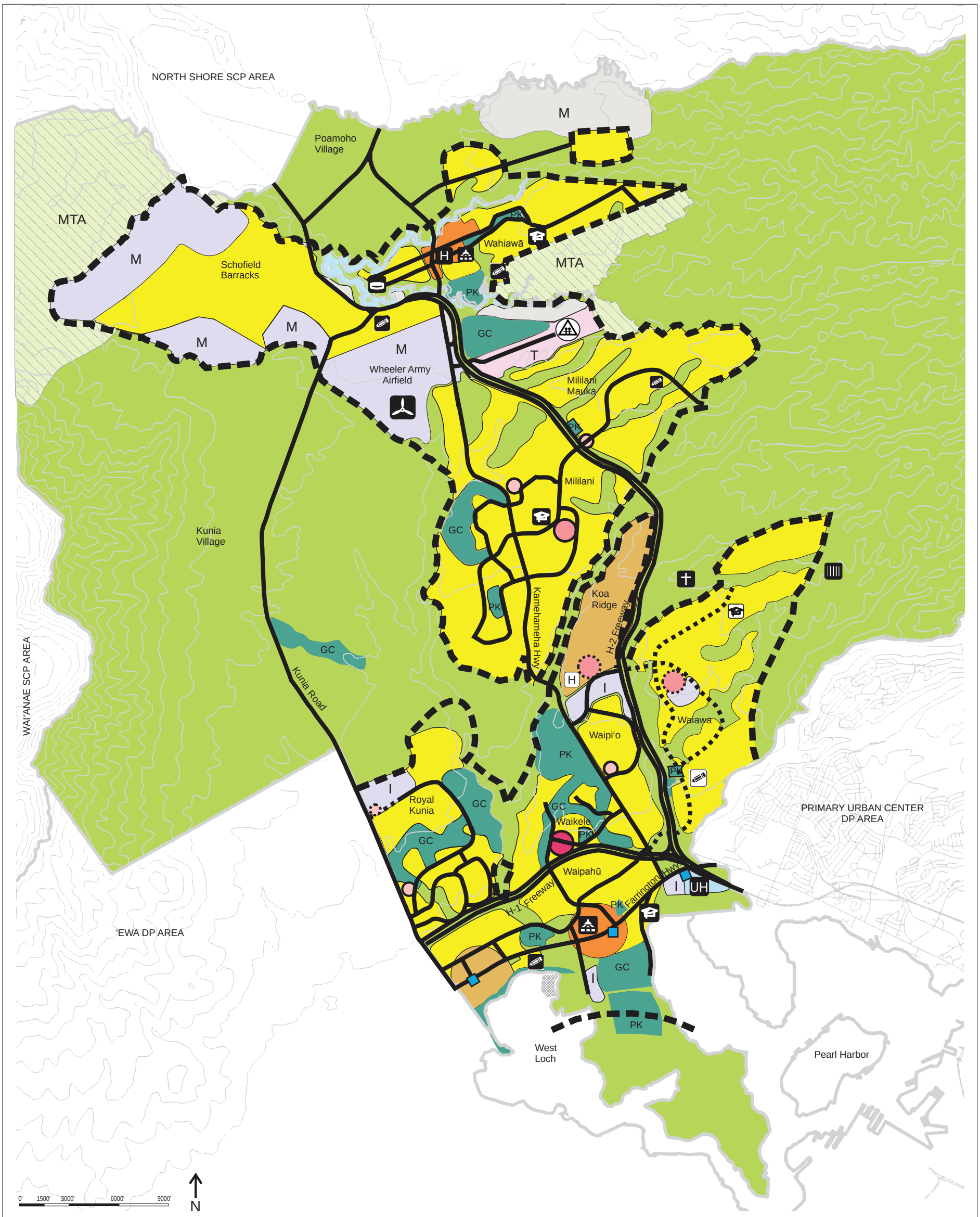
CENTRAL O'AHU SUSTAINABLE COMMUNITIES PLAN

Map A-1: Open Space Map

Department of Planning and Permitting
City and County of Honolulu

P	Preservation Areas		Lake Wilson	EXISTING / FUTURE	
A	Agriculture Areas		Wetlands		Highways, Arterials and Major Collector Streets
PK	Regional, District, Shoreline and Nature Parks		Historic Bikeway Corridor		Landscaped Boulevard/ Greenway
GC	Golf Courses		Natural Drainageways/Gulches		
MTA	Military Training Areas		Panoramic Views		
	Urban Areas	Ⓚ	Kukaniloko (Birthplace of the Alii)		
	Community Growth Boundary	Cem	Cemetery		

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CENTRAL O'AHU SUSTAINABLE COMMUNITIES PLAN

Map A-2: Urban Land Use

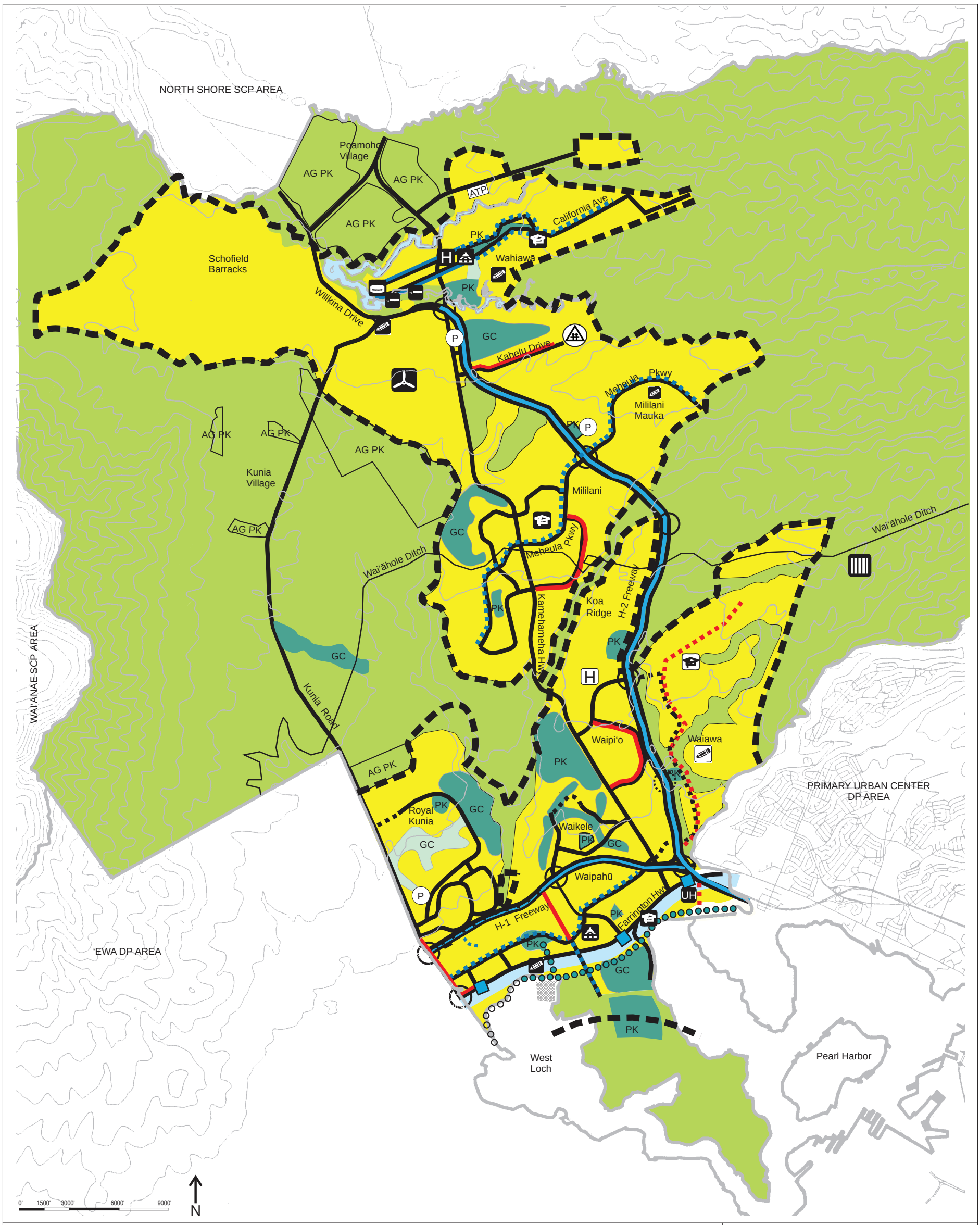
Department of Planning and Permitting
City and County of Honolulu

- Residential and Low Density Apartment
- Medium Density Apartment/Commercial Mixed Use
- Regional Town Center
- T — Technology Park
- I — Industrial
- M — Military
- PK/GC — Parks and Golf Courses
- Agriculture and Preservation Areas
- MTA — Military Training Areas (MTA)
- Institutional
- Community Growth Boundary
- Wetlands

EXISTING	FUTURE	
		Community Commercial Center
		Major Community Commercial Center
		Regional Commercial Center
		Highways, Arterials & Major Collector Streets
		Transit Node (Medium Density Res. and Comm.)
		Intermediate/Middle School
		High School
		Civic Center
H	H	Hospital

EXISTING	FUTURE	
		Cemetery
		Correctional Facility
WWTP		Wastewater Treatment Plant
UH		U.H. Leeward Comm. College
		Airfield
		First Responders Tech Campus

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CENTRAL O‘AHU SUSTAINABLE COMMUNITIES PLAN

Map A-3: Public Facilities Map

Department of Planning and Permitting
City and County of Honolulu

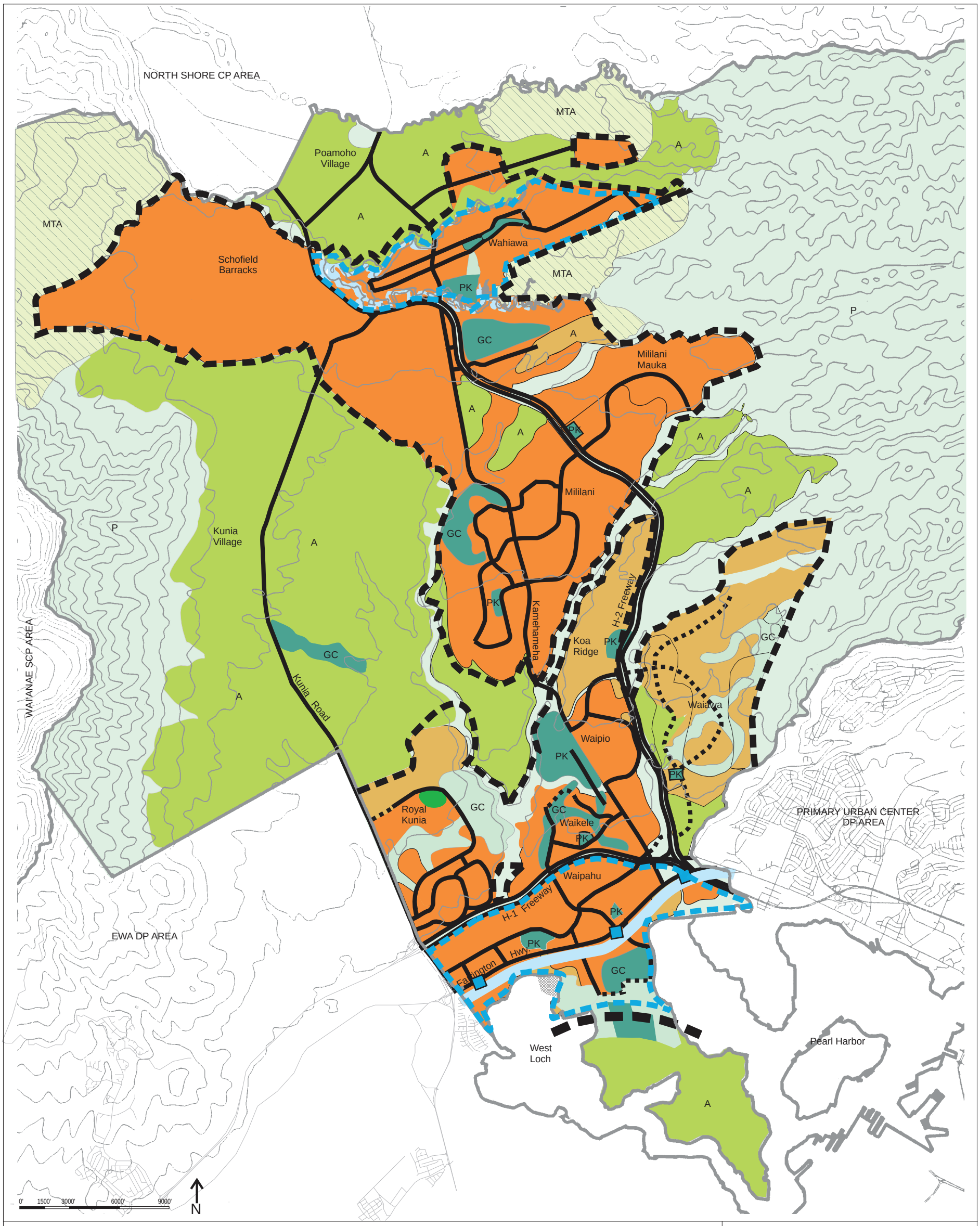
- Community Growth Boundary
- Urban Areas
- Agriculture and Preservation Areas

EXISTING	FUTURE	
		Highways, Arterials & Major Collector Streets
		Grade Separated Interchange
		Historic Bikeway Corridor
		Bike Path
		Bike Lane

EXISTING	FUTURE	
		HOV (High Occupancy Vehicle) Lane
		Park & Ride Site
		Transit Corridor
		Transit Node
PK/GC	PK/GC	Parks and Golf Courses
AG PK	AG PK	Agricultural Park
ATP	ATP	Ag Industrial and Tech Park
		Wetlands
		Intermediate/Middle School
		High School
H	H	Hospital

EXISTING	
	Civic Center
	Airfield
	Correctional Facility
	Wastewater Treatment Plant
UH	U.H. Leeward Comm. College
	Corporation Yard
FUTURE	
	First Responders Tech Campus

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CENTRAL O‘AHU SUSTAINABLE COMMUNITIES PLAN

MAP A-4: Development Capacity Map

Department of Planning and Permitting
City and County of Honolulu

- Preservation Areas
- Agriculture Areas
- Existing Urban Areas
- Urban Expansion Areas
- Special Areas
- MTA — Military Training Areas (MTA)
- Community Growth Boundary
- Wetlands

EXISTING	FUTURE	
		Highways, Arterials & Major Collector Streets
		Transit Corridor
		Transit Node
GC	GC	Golf Courses
PK	PK	Parks

CITY COUNCIL OF THE CITY AND COUNTY OF HONOLULU

STATE OF HAWAII

ADOPTION OF THE CENTRAL OAHU SUSTAINABLE COMMUNITIES PLAN	DEVELOPMENT PLAN ADOPTION BILL 41 (2019), CD2, FD1

FINDINGS OF FACT

The Council of the City and County of Honolulu ("Council"), having considered a proposal to repeal the existing Sustainable Communities Plan for Central Oahu, Article 5, Chapter 24, Revised Ordinances of Honolulu 1990 ("ROH"), and to adopt in its place a new Article 5, Chapter 24, the Central Oahu Sustainable Communities Plan ("Plan"), hereby makes, concurrent with its adoption of Bill 41 (2019), CD2, FD1, on third reading and in accordance with the requirements of Section 6-1512.2 of the Revised Charter of the City and County of Honolulu 1973 (Amended 2017 Edition) ("Charter"), the following Findings of Fact:

FINDINGS

1. The purpose of the proposal is to repeal the existing Sustainable Communities Plan for Central Oahu, ROH Article 5, Chapter 24, and to adopt in its place the Central Oahu Sustainable Communities Plan.

2. This proposal was processed by the Director of Planning and Permitting in a report dated May 15, 2017, and transmitted to the Planning Commission ("Commission") on May 18, 2017.

3. In accordance with Charter Sections 6-1512.1 and 6-1512.3, the Commission held a public hearing on July 19, 2017, and at that same meeting, unanimously voted to recommend approval of the proposed Plan, with recommendations to make certain amendments to the Plan. In a letter dated August 17, 2017, the Commission transmitted its findings and recommendation for approval, subject to the Commission's recommended amendments, through the Mayor to the Council.

4. On August 30, 2017, the Council received the Commission's transmission, and on September 6, 2017, the Council passed Bill 75 (2017) entitled "A BILL FOR AN ORDINANCE TO ADOPT THE REVISED CENTRAL OAHU SUSTAINABLE COMMUNITIES PLAN FOR THE CITY AND COUNTY OF HONOLULU," on first reading.

5. Bill 75 (2017) was referred to the Committee on Transportation and Planning, subsequently rereferred to the Committee on Planning, and further rereferred to the Committee on Zoning, Planning and Housing, but was never considered in committee.

6. Bill 75 (2017) was automatically filed on August 31, 2019, pursuant to ROH Section 1-2.4, which sets a two-year period for final action on pending bills.

7. On July 9, 2019, prior to the filing of Bill 75 (2017), the proposal to adopt the Central Oahu Sustainable Communities Plan was reintroduced as Bill 41 (2019).

8. On August 7, 2019, the Council passed Bill 41 (2019) entitled "A BILL FOR AN ORDINANCE TO ADOPT THE REVISED CENTRAL OAHU SUSTAINABLE COMMUNITIES PLAN FOR THE CITY AND COUNTY OF HONOLULU," on first reading.

9. On August 22, 2019, the Council's Committee on Zoning, Planning and Housing accepted public testimony on Bill 41 (2019) and recommended that Bill 41 (2019) be amended to a CD1 form to make technical changes to the bill, and be reported out for passage on second reading and scheduled for a public hearing.

10. On September 4, 2019, the Council held a public hearing on the proposal as required by Charter Section 6-1512.2 and, at that same meeting, passed Bill 41 (2019), CD1, on second reading.

11. On November 14, 2019, the Council's Committee on Zoning, Planning and Housing accepted public testimony on Bill 41 (2019), CD1, and recommended that Bill 41 (2019), CD1, be amended to a CD2 form to make technical and substantive changes to the attached Plan, as proposed in Council Communication 376 (2019), and be reported out for passage on third reading, and that the Findings of Fact consistent therewith be adopted as the findings of the Council.

12. By Council Communication 392 (2019), dated December 2, 2019, the Chair of the Committee on Zoning, Planning and Housing requested, and the Council Chair approved, a request to rerefer proposed Bill 41 (2019), CD2, back to the Zoning, Planning and Housing Committee pursuant to Council Rule 4.B(12)(a).

13. By Council Communication 4 (2021), Bill 41 (2019), CD1, was rereferred to the Committee on Zoning and Planning.

14. On February 4, 2021, the Council's Committee on Zoning and Planning accepted public testimony on Bill 41 (2019), CD1, and recommended that Bill 41 (2019), CD1, be amended to a CD2 form to make technical and substantive changes to the attached Plan, as proposed in Council Communication 39 (2021), and be reported out for passage on third reading, and that the Findings of Fact consistent therewith be adopted as the findings of the Council.

15. On February 17, 2021, the Council accepted public testimony on Bill 41 (2019), CD2, and postponed action on the bill until the Council meeting of March 17, 2021.

16. On March 9, 2021, the Chair of the Council's Committee on Zoning and Planning submitted to the City Clerk for posting on the agenda for the Council meeting on March 17, 2021:

    a. A proposed floor draft (FD1) to Bill 41 (2020), CD2, that amends the Central Oahu Sustainable Communities Plan attached as Exhibit A to the bill to: (i) amend Table 2.1 (Central Oahu Development Capacity and Entitlement Status) to correct acreage amounts and a typographical error; and (ii) replace Exhibit 2.3 (Existing and New Master-Planned Communities) with a new Exhibit 2.3 that correctly illustrates the community growth boundary; and

    b. Revised Findings of Fact consistent therewith.

17. On March 17, 2021, the Council amended Bill 41 (2021), CD2, to the proposed FD1.

CONCLUSION

Based on the foregoing findings, and having considered the recommendations of the Director of Planning and Permitting and the Planning Commission, the Council finds that the adoption of the Central Oahu Sustainable Communities Plan is consistent with the objectives and policies of the General Plan and complies in form and content with the applicable requirements of the Charter.

By _____
TOMMY WATERS, Chair
Honolulu City Council

ADOPTED ON MAR 17 2021

CITY COUNCIL
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII

CERTIFICATE

ORDINANCE 21-6 **BILL 41 (2019), CD2, FD1**

Introduced: 07/09/19 By: RON MENOR Committee: ZONING AND PLANNING (ZP)

Title: TO ADOPT THE REVISED CENTRAL OAHU SUSTAINABLE COMMUNITIES PLAN FOR THE CITY AND COUNTY OF HONOLULU.

Voting Legend: * = Aye w/Reservations

07/09/19	INTRO	Introduced. This Bill is a reintroduction of Bill 75 (2017) which will be filed on August 31, 2019 pursuant to ROH Section 1-2.4 which sets a two year filing period on pending bills.
08/07/19	CCL	Passed first reading. 9 AYES: ANDERSON, ELEFANTE, FUKUNAGA, KOBAYASHI, MANAHAN, MENOR, PINE, TSUNEYOSHI, WATERS
08/22/19	ZH	Reported out for passage on second reading and scheduling of a public hearing as amended in CD1 form. CR-267 3 AYES: ELEFANTE, MANAHAN, MENOR 2 EXCUSED: KOBAYASHI, WATERS
08/24/19	PUBLISH	Public hearing notice published in the Honolulu Star-Advertiser.
09/04/19	CCL/PH	Bill passed second reading as amended, public hearing closed and referred to committee. 9 AYES: ANDERSON, ELEFANTE, FUKUNAGA, KOBAYASHI, MANAHAN, MENOR, PINE, TSUNEYOSHI, WATERS
09/12/19	PUBLISH	Second reading notice published in the Honolulu Star-Advertiser.
11/14/19	ZH	Bill reported out of Committee for passage on third reading as amended in CD2 form. CR-379 4 AYES: ELEFANTE, KOBAYASHI, MENOR, WATERS 1 EXCUSED: MANAHAN
12/02/19		Rereferral from Council back to Committee. CC-392, CC-393
09/23/20		NOTE: Effective September 23, 2020, Councilmember Ikaika Anderson, representing Council District III, resigned from office. [Refer to Communication CC-256(20)] NOTE: The appointment of Alan Kekoa Texeira to fill a vacancy in the Office of Councilmember for Council District III was approved on Wednesday, September 23, 2020. (Refer to RES20-236, FD1) CC-269(20) KOBAYASHI - Council Standing Committee Assignments.
01/02/21		NOTE: Councilmembers Cordero, Kia'āina, Say, Tulba and Tupola took office on Saturday, January 2, 2021. CC-3(21) Waters – Standing Committee assignments. CC-4(21) Waters - Re-referral of Bills, Resolutions and communications.
02/04/21	ZP	Reported out for passage on third reading as amended in CD2 form. CR-41(21) 4 AYES: CORDERO, ELEFANTE, KIA'ĀINA, SAY

02/17/21	CCL	Postponed. CR-41(21), The, Findings of Fact, and Bill 41 (2019), CD2 postponed to the March 17, 2021 Council Meeting. 8 AYES: CORDERO, ELEFANTE, FUKUNAGA, KIA'ĀINA, SAY, TULBA, TUPOLA, WATERS 1 ABSENT: TSUNEYOSHI
03/17/21	CCL	Amended to FD1. OCS2021-0197/3/9/2021 3:27 PM 9 AYES: CORDERO, ELEFANTE, FUKUNAGA, KIA'ĀINA, SAY, TSUNEYOSHI, TULBA, TUPOLA, WATERS
03/17/21	CCL	Committee report adopted and Bill passed third reading. Findings of Fact adopted. 9 AYES: CORDERO, ELEFANTE, FUKUNAGA, KIA'ĀINA, SAY, TSUNEYOSHI, TULBA, TUPOLA, WATERS

I hereby certify that the above is a true record of action by the Council of the City and County of Honolulu on this BILL.

GLEN I. TAKAHASHI, CITY CLERK

TOMMY WATERS, CHAIR AND PRESIDING OFFICER