Oahu Metropolitan Planning Organization

Oahu Regional Transportation Plan 2040

APPROVED BY THE POLICY BOARD
April 13, 2016

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Executive Summary

The objective of this Oahu Regional Transportation Plan (ORTP) is to guide the development of transportation on our island through the year 2040. It presents both a vision of an improved transportation system to serve the needs of Oahu's population as well as specific projects that will achieve that vision.

As the federally-designated Metropolitan Planning Organization, the OahuMPO develops the ORTP 2040 and identifies and prioritizes transportation projects and programs in the Transportation Improvement Program (TIP). The Policy Board is the decision-making body of the OahuMPO and approves the ORTP.

The island of Oahu faces several major transportation challenges and opportunities. While most of Oahu's existing development lies along the southern portion of the island, future population and job growth is expected to occur to the west side of the island and in the Central Oahu and Kakaako areas. Without improvements, this growth will result in increasing congestion and longer travel times along already congested roadways such as Interstate Route H-1.

The vision statement in ORTP 2040 proposes that Oahu should be a place where we will have efficient, well-maintained, safe, secure, convenient, appropriate, and economical choices in getting from place to place. The regional goals and objectives in ORTP 2040 propose that our transportation system should move people and goods in a manner that supports the island's high quality of life, natural beauty, economic vitality, and land use plans.

Public input was obtained on ORTP 2040 in several phases, including a subcommittee of the Citizen Advisory Committee, public listening sessions held in each of Oahu's eight planning districts, and an online survey. Overall, the results of the public outreach activities identified several themes that were consistent across all geographies. **Traffic congestion, roadway maintenance, and safety** were repeatedly identified as major concerns. There was also strong public support for continuing investments in public transit and for pedestrian and bicycle facilities.

In response to this public input and the feedback from other agencies and stakeholders, the ORTP 2040 proposes a comprehensive package of more than **$17 billion in transportation projects and programs**, including:

- Congestion Mitigation and Alternative Projects: ORTP 2040 includes projects that increase and enhance Oahu's existing network of bicycle and pedestrian facilities. In addition, it identifies Travel Demand Management (TDM) and technological projects that improve traffic flow through Intelligent Transportation Systems (ITS);
- Modernization Projects: Because transportation by automobile will continue to be the primary travel mode in the future, roadway capacity improvements (adding lanes, new or reconfigured interchanges) will be needed along Interstate Route H-1 corridor and in the developing areas of Oahu to handle future growth;
- Transit Projects: The Honolulu High-Capacity Transit Corridor Project and other improvements in both transit service and facilities are key components of ORTP 2040; and
- Operations, Maintenance, Preservation, and Safety: ORTP 2040 proposes a significant amount of funding to support the maintenance, preservation, and safety of the existing transportation system.

The projects and programs included in the ORTP 2040 reflect the desire to make Oahu's transportation system more sustainable. The overwhelming share **(85%) of plan expenditures is committed to support**

maintenance and operations and transit expansion while other funding is for system preservation, high technology projects such as ITS, and bicycle and pedestrian improvements. The remaining balance goes to modernization projects.

The projects in ORTP 2040 are prioritized as either "Mid-Range Projects," (proposed for implementation by the year 2029) or as "Long-Range Projects" (proposed for implementation by the year 2040). Projects were placed within each time period based on input from the implementing agencies (City and County of Honolulu's Department of Transportation Services, Honolulu Authority for Rapid Transportation, and Hawaii Department of Transportation). Using the OahuMPO travel demand forecasting model, a series of analyses were conducted to evaluate the performance of the OTRP 2040 implementation in comparison to forecasted (year 2040) No-build conditions with only existing and committed transportation projects in place. These technical analyses concluded that implementation of the ORTP projects will help reduce hours of delay and travel on an island-wide basis and will alleviate some congestion on roadways in the Ewa/Kapolei and Waianae Coast areas and in the Interstate Routes H-1/H-2 merge area.

ORTP 2040 is a fiscally constrained plan that identifies the revenues to cover the estimated costs of the projects and programs proposed in the Plan. The costs presented in ORTP 2040 are planning-level cost estimates.

Amounts for programs are expressed in Year-of-Expenditure (YOE) dollars and a two percent (2%) inflation rate is assumed for projects. A variety of Federal, State, and local revenue sources are expected to finance the more than $17 billion in proposed transportation improvements.

ORTP 2040 will be implemented through updates to the OahuMPO TIP. Successful implementation of the ORTP will require the evaluation of the effectiveness of its proposed transportation projects and programs. ORTP 2040 identifies several potential evaluation methods: including the preparation of a data management and sharing study; the development of quantifiable criteria in the TIP; and survey research.

The rail project stretches across the Ewa Plain. (Source: HART)

A bicyclist uses the King Street protected bike lane. (Source: Bikeshare Hawaii)

Busy afternoon roadways in Aiea. (Source: Parsons Brinckerhoff)

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List of Abbreviations and Acronyms

3-C	Continuing, Cooperative, Comprehensive
ADA	Americans with Disabilities Act
C&C	City and County of Honolulu
CAC	OahuMPO Citizen Advisory Committee
CFR	Code of Federal Regulations
CMAQ	Congestion Mitigation and Air Quality Improvement Program
CMP	Congestion Management Process
DBEDT	Department of Business, Economic Development and Tourism (State)
DPP	City and County of Honolulu Department of Planning and Permitting
DTS	City and County of Honolulu Department of Transportation Services
E+C	Existing and Committed (fully funded)
FAST Act	Fixing America's Surface Transportation Act
FFY	Federal Fiscal Year (October – September)
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HART	Honolulu Authority for Rapid Transportation
HDOT	Hawaii Department of Transportation
HHCTCP	Honolulu High-Capacity Transit Corridor Project
HOV	High-Occupancy Vehicle
MAP-21	Moving Ahead for Progress in the 21st Century Act
MPA	Metropolitan Planning Area
OahuMPO	Oahu Metropolitan Planning Organization
ORTP	Oahu Regional Transportation Plan
OTS	Oahu Transit Services
OWP	Overall Work Program
PUC	Primary Urban Center
T6/EJ	Title VI/Environmental Justice
TAC	Technical Advisory Committee
TAP	Transportation Alternatives Program
TDFM	Travel Demand Forecasting Model
TDM	Transportation Demand Management
TIP	Transportation Improvement Program
TOD	Transit-Oriented Development
TSM	Transportation System Management
USC	United States Code
USDOT	United States Department of Transportation
V/C	Volume-to-Capacity Ratio
VMT	Vehicle Miles Traveled

Chapter 1 – What is the ORTP?

➢ *Chapter 1 provides an overview of the ORTP's purpose, its Federal requirements, and how it was developed.*

Plan Purpose and Process

The objective of the Oahu Regional Transportation Plan (ORTP) is to guide the development of transportation on our island through the year 2040. It presents both a vision of an improved transportation system to serve the needs of Oahu's population as well as specific projects that will achieve that vision. ORTP 2040 includes recommendations for improving the full range of transportation options available to island residents—automobile, truck, bus, rail, bicycle, and pedestrian. In order to determine the locations of future transportation needs, the Oahu Metropolitan Planning Organization (OahuMPO) Comprehensive Agreement dated July 20, 2015 states that the ORTP shall:

- Include both long-range and short-range regional strategies/actions that lead to the development of an integrated intermodal transportation system that facilitates the safe and efficient movement of people and goods in addressing current and future transportation demand; and
- Include at least a twenty-year planning horizon, and must be updated at least every five years.[1]

This ORTP document is designed to meet the requirements of 23 CFR 450 and guidance promulgated by United States Department of Transportation (USDOT). In addition, a joint Federal Highway Administration (FHWA) /Federal Transit Administration (FTA) Team conducted a review of the OahuMPO in 2014. The Review Team certified the Metropolitan Planning Organization (MPO) contingent upon the resolution of specified corrective actions. The deadline established for corrective actions related to the ORTP was "with Policy Committee [… Board] approval of the next ORTP Update April 2016." The consequences of not approving the ORTP in time include non-approval of the Overall Work Program and/or the Oahu portion of the State Transportation Improvement Program (STIP).[2] The corrective actions specific to the ORTP 2040 require:

- The MPO to consult with State and local agencies responsible for land management, natural resources, environmental protection, conservation and historic preservation concerning the development of the transportation plan;
- The ORTP must include a discussion of the types of potential environmental mitigation activities and potential areas to carry out these activities;
- The ORTP must demonstrate and document implementation of the approved Congestion Management Process (CMP);
- The Final ORTP must include a documented disposition of public comments received; and
- The ORTP must include documentation of the analysis completed for Title VI and Environmental Justice (T6/EJ) monitoring.

About the OahuMPO

The OahuMPO is responsible for coordinating transportation planning on Oahu. A revised Designation Agreement executed by the Governor on June 17, 2015 established the OahuMPO as the Federally required MPO and Transportation Management Area (TMA) for the island of Oahu. With this designation and codification of the role and responsibilities of OahuMPO in Act 132, Session Laws of Hawaii 2015, effective on July 1, 2015 and consistent with Federal statutes and regulations, the OahuMPO fosters the continuing, cooperative, and comprehensive ("3-C") planning process. The OahuMPO is required to develop the island's Metropolitan Transportation Plan (MTP), referred to herein as the ORTP, and to identify and prioritize transportation projects for funding through the Transportation Improvement Program (TIP). In 2015, the OahuMPO programmed more than $91 million in Federal Highway and $381 million in

[1] http://www.oahumpo.org/wp-content/uploads/2013/02/OahuMPO-Comprehensive-Agreement-20150720-SIGNED.pdf

[2] http://www.oahumpo.org/wp-content/uploads/2014/09/OMPO-2014-TMACertRpt-092614.pdf

Federal Transit funds for transportation improvements.[3]

The current Comprehensive Agreement, which describes the specific roles and responsibilities of the OahuMPO, was signed by the Governor, the City Council Chair, the Honolulu Authority for Rapid Transportation Executive Director and CEO, and the OahuMPO Policy Board Chair on July 20, 2015. The Policy Board is the decision-making body of the OahuMPO. This eleven-member body consists of the Directors of the Hawaii Department of Transportation (HDOT), City Department of Transportation Services (DTS), Honolulu Authority for Rapid Transportation (HART), City Department of Planning and Permitting (DPP); three members of the Honolulu City Council; two members of the State Senate; and two members of the State House of Representatives. Additionally, the Policy Board includes three core non-voting members representing the FHWA Hawaii Division Office, the State's Office of Planning, and the State's Department of Health. The Policy Board is the decision-maker on the use of Federal-aid transportation funds on the island of Oahu.

The OahuMPO has advisory committees that provide recommendations to the Policy Board and the OahuMPO Executive Director. The Technical Advisory Committee (TAC) advises the Policy Board and the Executive Director on technical matters. The membership of the TAC consists of senior technical staff representing the State and City transportation and planning departments as well as freight and transit providers and staff from FHWA, FTA, and the Federal Aviation Administration (FAA) who serve in a non-voting capacity. The TAC is an integral part of the OahuMPO's multimodal 3-C planning process. The Citizen Advisory Committee (CAC) is the primary vehicle for citizens to provide public input to the Policy Board and the Executive Director on Oahu's transportation planning needs and processes. At present, the CAC consists of representatives from 44 community associations, Neighborhood Boards, professional associations, businesses, transportation providers and associations, developers, and other interested parties.

Federal Requirements

Metropolitan areas with populations exceeding 50,000 are required by Federal law to develop a MTP as part of their MPO planning activities. This requirement is satisfied by this ORTP 2040 report. The ORTP must have a twenty-year planning horizon and must contain future goals, strategies, and projects. The ORTP must be updated every five years for areas in attainment for air quality standards. 23 CFR 450.322 identifies the specific Federal requirements for the ORTP.

In addition to the Federal regulations, both FHWA and FTA jointly provide suggested approaches on how to integrate the ORTP into a 3-C planning process in the Transportation Planning Process Briefing Book.[4] The book recommends that the ORTP provide the results of scenario analyses of performance targets as influenced by regional land use, development, housing, and employment goals and plans; projected 20-year transportation demand; policies, strategies, and projects that the MPO recommends for the future; cost estimates and estimates of reasonably available financial sources, and ways to preserve facilities and efficiently use the existing system.

On December 4, 2015, the Fixing America's Surface Transportation Act (FAST Act) was signed into law. The FAST Act authorizes $305 billion over Federal fiscal years 2016 through 2020 for transportation projects and programs. In addition, the FAST Act continues or expands upon the metropolitan planning requirements that were in effect under MAP-21.[5]

[3] http://www.oahumpo.org/wp-content/uploads/2013/01/150723FFYs2015to2018TIPASOFREV6.pdf

[4] http://www.fhwa.dot.gov/planning/publications/briefing_book/part00.cfm

[5] http://www.fhwa.dot.gov/fastact/index.cfm

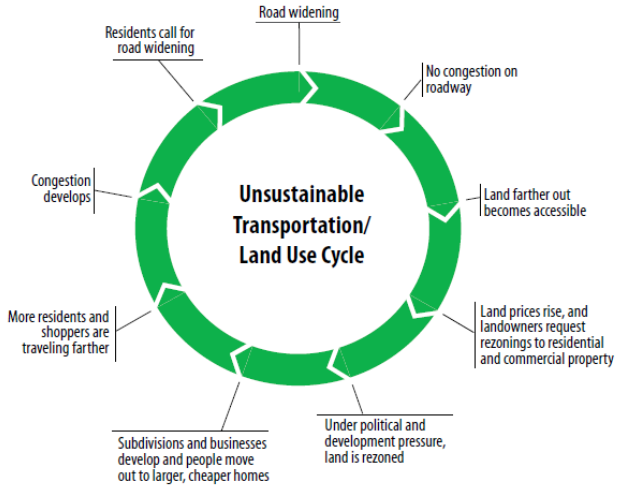
Why is ORTP 2040 Important?

Transportation is a vital aspect of daily life, as it directly enables and supports economic activity, job creation and retention, community development, and recreation. Effective management of the transportation system requires a careful balance of quality of life, efficient land use, environmental stewardship, security, and other issues. Because transportation investments are often costly and can take years to plan, design, and build, it is important that the identified improvements work together to achieve the best overall transportation solution reflective of Oahu's values and priorities.

In addition to cost, changes in demographics will have an impact on Oahu's transportation system. Hawaii is seeing a dramatic growth in its elderly population (65 years of age or older). That group is expected to be nearly 400,000 people by the year 2040, or 25 percent of the State's population. As the population ages, many elderly drivers and pedestrians are faced with declining cognitive skills, such as memory loss, selective attention, increased response time, and difficulties processing the speed of traffic. While the senior population has the fewest licensed drivers, per capita, and drives fewer miles per capita, they have a higher likelihood of injury or fatality from an accident than all other age groups. Many elderly drivers continue to depend on the automobile for meeting their transportation needs. These two facts, combined with the physical limits associated with aging, will require agencies to pay more attention to the design, safety, and function of island transportation systems.[6]

ORTP 2040 also recognizes the impact of the transportation/land use cycle shown in Figure 1-1, a cycle that has been repeated

Figure 1-1 Transportation / Land Use Cycle



many times on Oahu and throughout the U.S. For years, transportation professionals have been struggling to get ahead of the curve, but the reality is that we cannot build our way out of congestion. The best way to achieve improved mobility and accessibility is through providing more transportation choices and using a complete streets approach, in which the needs of all roadway users are considered.

ORTP 2040 also addresses concerns related to sustainability and climate change. These two issues are tightly intertwined. Increasing the sustainability of the transportation system by increasing efficiency of operations and reducing greenhouse gases may slow the progression of climate change.

Geographic Coverage

As defined in 23 CFR 450.104, a metropolitan planning area (MPA) means the geographic area in which the metropolitan transportation planning process is carried out, as determined by agreement between the metropolitan planning organization for the area and the Governor. Although the OahuMPO serves as the metropolitan planning organization for the two urbanized areas on Oahu (Honolulu and Kailua-Kaneohe), the OahuMPO coordinates transportation planning for the entire island. The MPA covers approximately 600 square miles and encompasses a population that was estimated to exceed 991,788 in 2014.[7]

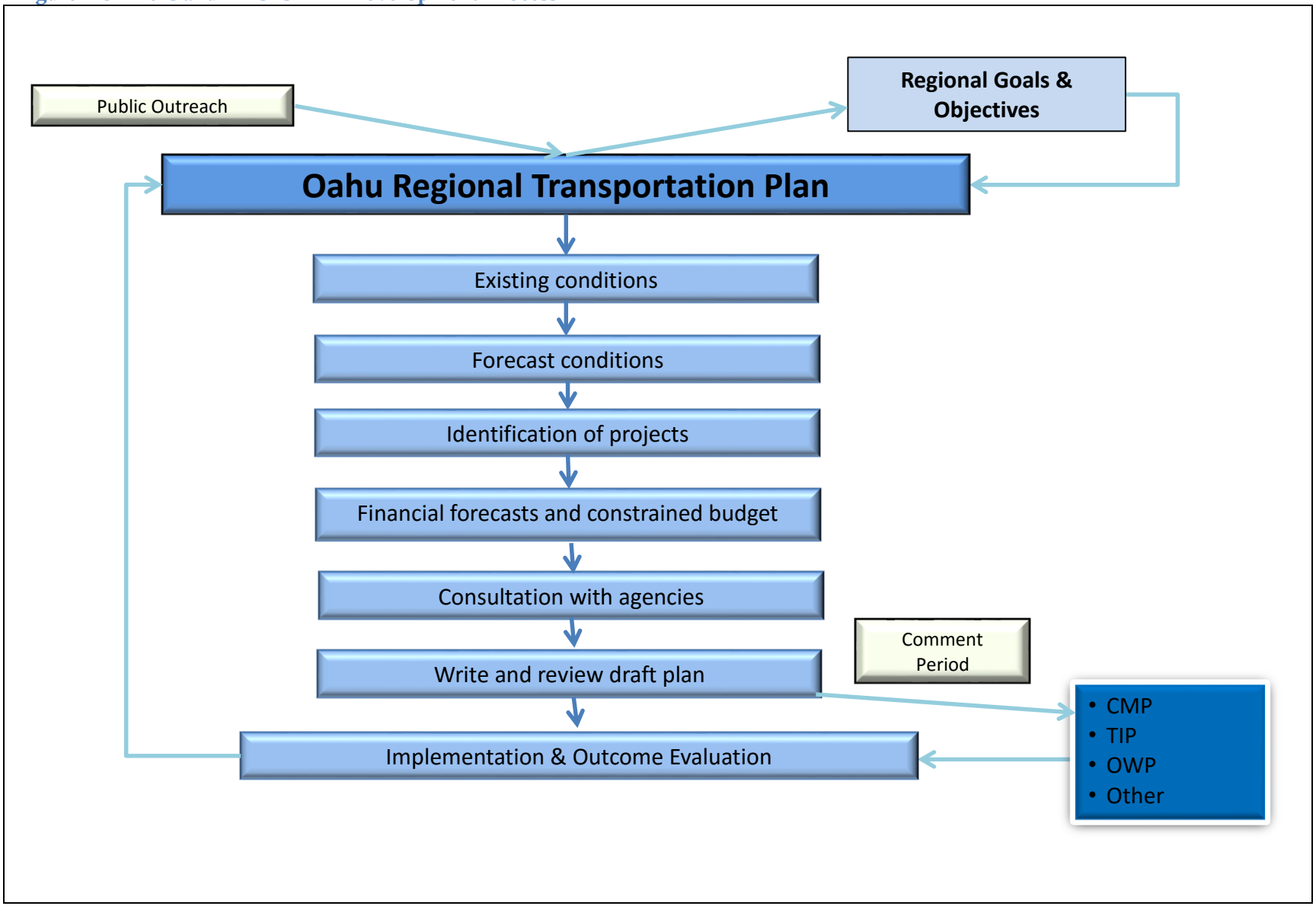
[6] The Hawaii Strategic Highway Safety Plan specifically identifies these goals as emphasis areas See http://www.hawaiishsp.com.

[7] http://quickfacts.census.gov/qfd/states/15/15003.html

Figure 1-2 ORTP 2040 Update Timeline

Action	Subject(s)	Date(s)	Parties
Early Public Input	1. Issue identification 2. Goals and Objectives 3. FFY 2015-2018 TIP	2012-2013	OahuMPO, CAC, and the public
Existing and Forecast Conditions	1. Existing and Committed (E+C) network 2. Build TDFM	April / November 2015	OahuMPO Staff, HDOT, DTS, HART
Identification of Projects and Financial Forecasts	1. Identify Candidate Projects 2. Cost Estimation 3. Revenue Forecasts	June / October 2015	OahuMPO Staff, HDOT, DTS, HART
Constrained Budget	1. Performance Analysis 2. T6/EJ Analysis 3. Prioritization and Year-of-Expenditure Conceptual Financial Plan	June 2015 / February 2016	OahuMPO
Write Plan	Develop review draft of ORTP 2040	January 2016	OahuMPO Staff
Submit Draft for Review	Initiate public, intergovernmental review, and consultation with key environmental stakeholders	February / March 2016	OahuMPO Staff
Technical Advisory Committee and Policy Board Consider Final ORTP 2040		**April 2016**	**TAC – April 8 and 12, 2016 PB – April 13, 2016**
Submit Approved ORTP to USDOT and the Governor		April 29, 2016	FHWA & FTA

Figure 1-3 The OahuMPO ORTP Development Process



Chapter 2 – Existing Conditions

➢ *Chapter 2 discusses the island's existing transportation system, its demographics, and the challenges and opportunities facing Oahu.*

Oahu is a study in contrasts, ranging from the highly developed Honolulu and Waikiki areas to the still largely rural areas of the North Shore and Waianae Coast. While the mountainous terrain adds to the island's natural beauty, it also restricts the development of a truly connected roadway network. Few roadways cross the Waianae or Koolau Mountains, making trips from coastal areas to the central plain circuitous and lengthy.

Existing Transportation Facilities and Services

Oahu has an extensive network of roadways ranging from freeways to local streets and a growing number of bicycle and pedestrian facilities. The City and County of Honolulu also has a fixed-route bus transit (TheBus) and paratransit system (TheHandi-Van) operated by Oahu Transit Services. TheBus system currently consists of 96 fixed routes that serve approximately 3,837 bus stops and carry approximately 70 million passengers each year[8]. However, as shown in Table 2-1, most trips are made in automobiles, and the transportation network has historically been oriented to moving cars and trucks.

As shown by the Volume-to-Capacity Ratio (V/C) analysis in Figure 2-1 and Figure 2-2,

[8]http://www.ntdprogram.gov/ntdprogram/pubs/profiles/2013/agency_profiles/9002.pdf

Table 2-1 Oahu Transportation Fast Facts

Miles of Interstate freeways	54.9
Miles of State highways	254.3
Miles of City and County roads	1,385.5
Number of registered taxable vehicles	667,190
Number of bus routes	96
Number of buses	524
Number of park-and-ride facilities	5
Miles of bikeways	98
Percentage of trips made by automobile	80
Percentage of trips made by transit	8
Percentage of trips made by bicycle or walking	9

Oahu's freeway network is highly congested during the morning commute (i.e., orange or red color).[9] The Hawaii Department of Transportation (HDOT) and City and County of Honolulu (C&C) have employed many strategies to decrease congestion and improve traffic flow. They have developed miles of contraflow lanes (lanes that reverse directions to improve management of directional driving) and high-occupancy vehicle (HOV) lanes (Interstate or highway lanes designated for exclusive use by buses, carpools, motorcycles, and vanpools). HOV lanes are intended to serve as incentives for people to carpool, vanpool, or ride transit.

[9]http://www.oahumpo.org/CMP_Policies

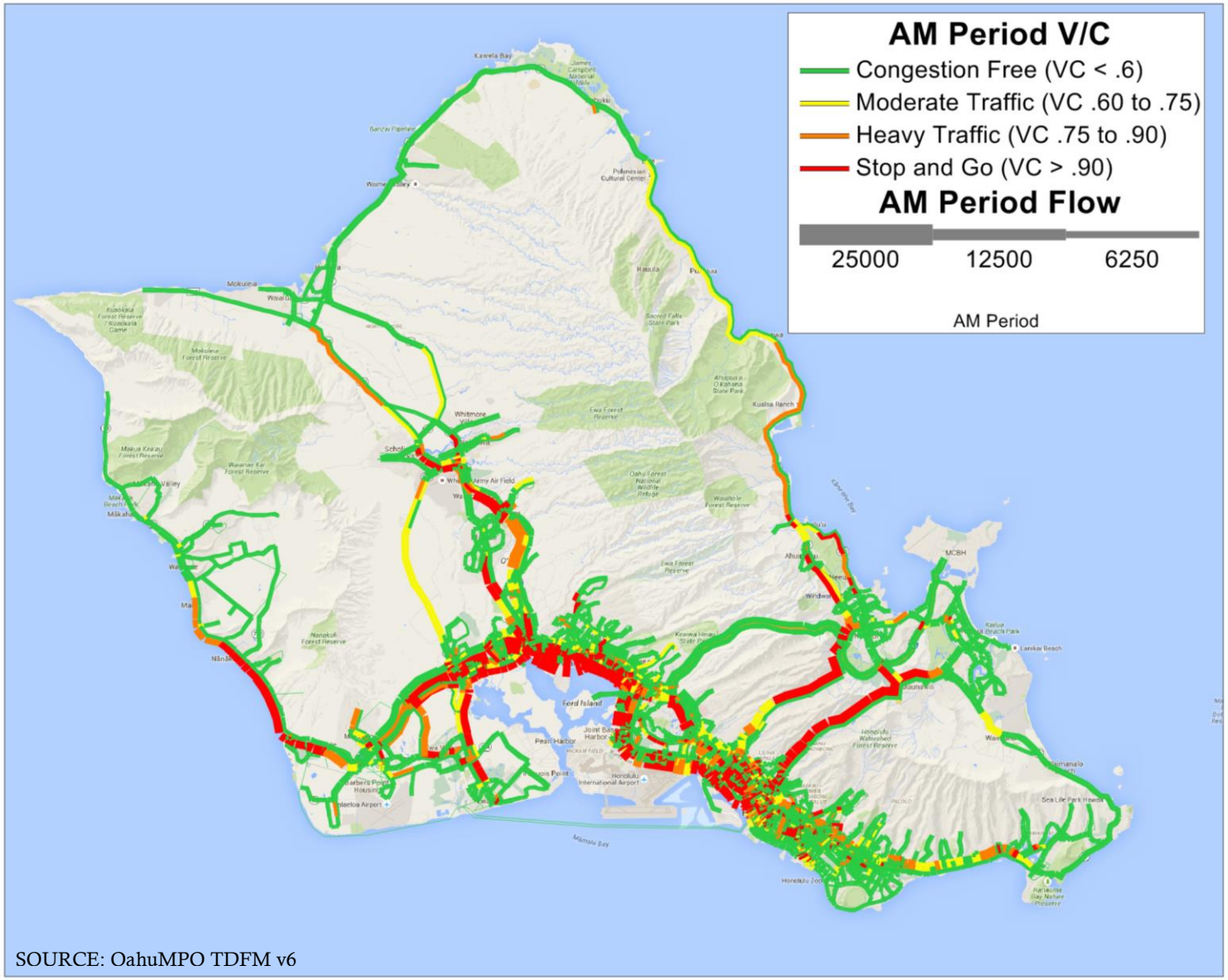
Despite these initiatives, Oahu residents continue to rely on single-occupant automobiles for transportation, resulting in long commutes.

Demographics and Congestion

In 2010, Oahu had 953,207 residents, 311,047 households, and 562,852 jobs. Seventy percent of the island's jobs were located in the Primary Urban Center (PUC) as shown in Figure 2-3, but only 46 percent of the island's population was located in the PUC. This concentration of job opportunities in the PUC combined with a population dispersed throughout the island has resulted in some of the longest commute times in the nation.

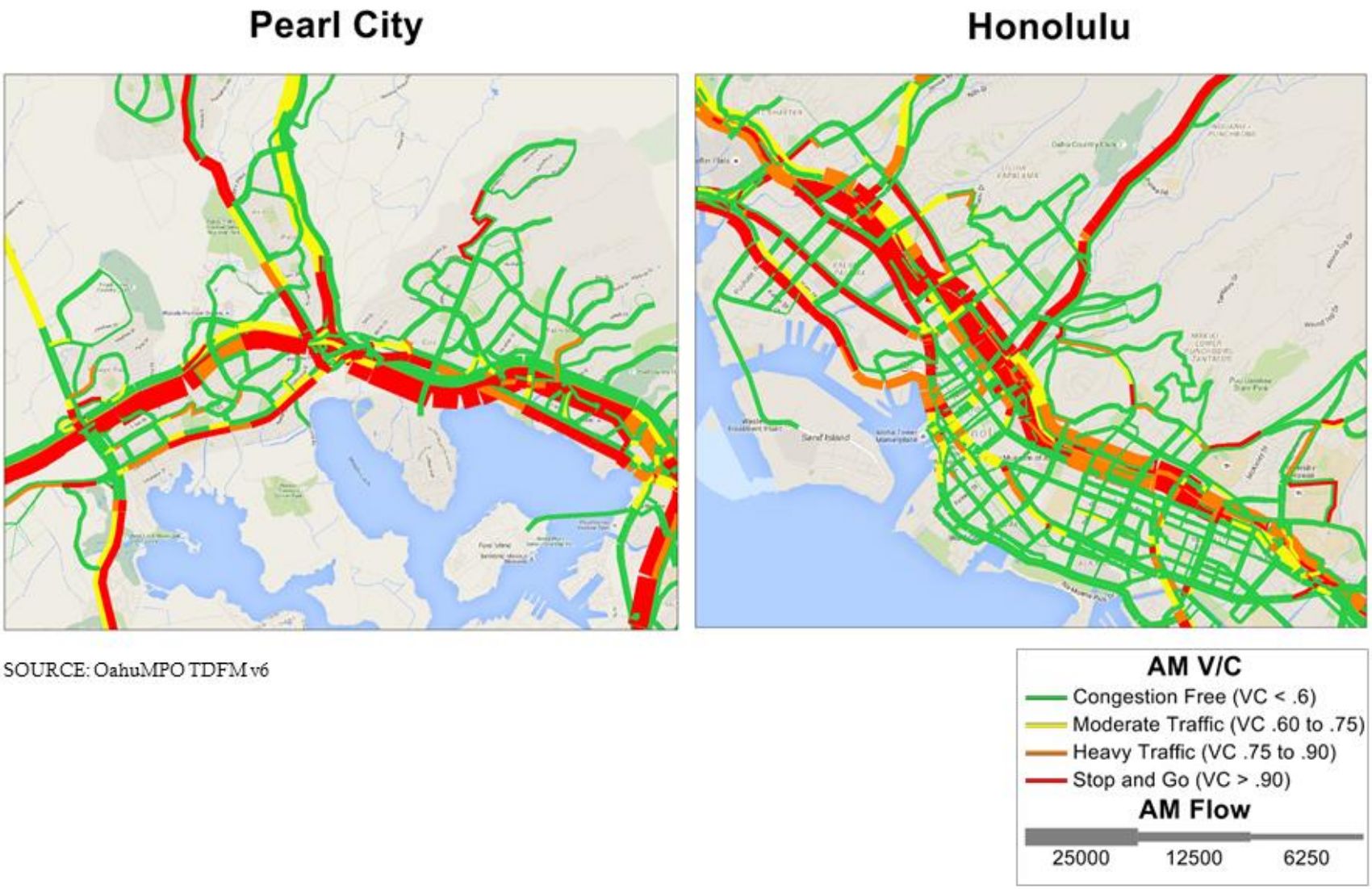
Oahu's population continues to increase annually and is impacted by non-resident visitors. In 2013, the U.S. Census Bureau reported that Honolulu County had increased to a total residential population of 987,019. In the same year, the State Department of Business, Economic Development and Tourism (DBEDT) reported a de facto population of 1,029,798, which includes persons living on Oahu who do not establish residency. Projections suggest that we can expect as many as 4,000 new residents every year between 2010 and 2040. Additionally, in 2014, more than 5,159,078 persons arrived by air to visit Oahu in 2014 for stays lasting an average of seven days.

Figure 2-1 Modeled 6:00-9:00 AM Roadway Level of Service (2012) - Islandwide



SOURCE: OahuMPO TDFM v6

Figure 2-2 Modeled 6:00-9:00 AM Roadway Level of Service (2012) - Pearl City & Honolulu



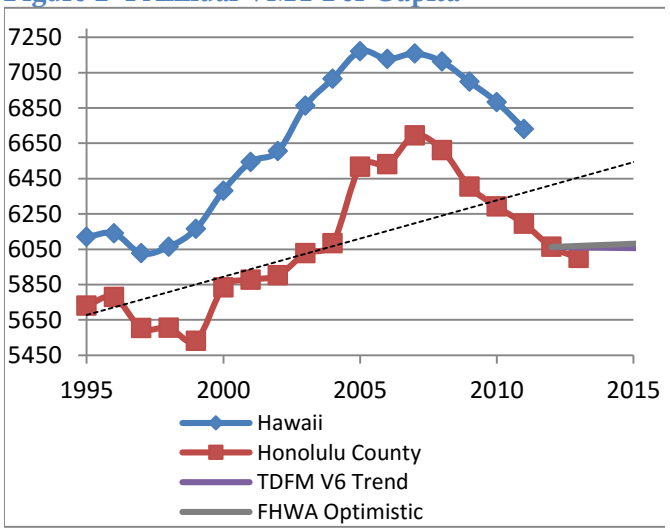
SOURCE: OahuMPO TDFM v6

Figure 2-3 Primary Urban Center

SOURCE: DPP

Another measure of growth is traffic volume. The Hawaii Department of Transportation (HDOT) reports vehicle miles traveled (VMT) to the FHWA's Highway Performance Monitoring System (HPMS). Figure 2-4 Annual VMT Per Capita below illustrates the trend in observed VMT per de facto population for Hawaii and the island of Oahu. The long-range trend is an increase in VMT, with a peak in 2007.

Figure 2-4 Annual VMT Per Capita



Challenges and Opportunities Facing Oahu

System Preservation: Regional transportation projects and programs have historically been funded by Federal, State, and City and County revenues, with the addition of some private sources. All of these revenue sources have declined in recent years due to the economic downturn and more fuel efficient vehicles yielding lower gasoline tax revenue, resulting in insufficient State and City funding for the maintenance of existing facilities. These maintenance needs are exacerbated by previously deferred maintenance on many facilities. ORTP 2040 addresses this issue by allocating over 50 percent of the available highway funds to safety and operational improvements and maintenance of existing facilities. Figure 2-5 illustrates the pavement quality condition on Oahu reported to the FHWA for 2013 using the International Roughness Index where less than 170 inches of roughness/mile is generally defined as acceptable ride quality.

High Growth Areas: Today, much of Oahu's development lies along the southern portion of the island, generally comprising the Interstate Route H-1 travel corridor. In the future, however, the growth in population and households will be broadening to the west side of the island and the Central Oahu urban fringe areas. As shown in Figure 2-6, the Kapolei-Ko Olina-Kalaeloa, Honouliuli-Ewa Beach, Central Oahu, Waiawa-Koa Ridge, and Kakaako areas are forecasted to see significant increases in population by 2040.

By 2040, the number of jobs is projected to grow by 21 percent. Although job growth is expected throughout the island, more robust growth is shown in the Kapolei-Ko Olina-Kalaeloa, Honouliuli-Ewa Beach, Central Oahu, and the Kakaako areas (Figure 2-7). The PUC is still expected to have 68 percent of all jobs on the island, followed by Central Oahu with 11 percent. This growth in jobs in Central Oahu and Ewa/Kapolei may take many work trips away from the PUC and Oahu's most congested roadways or may re-orient travel patterns somewhat between the PUC and these outlying areas.

ORTP 2040 addresses the proposed growth in Kapolei and the PUC through strategic investments in multi-modal facilities and equipment to offer residents and visitors more transportation choices.

Figure 2-5 2013 Highway Performance Monitoring System (HPMS) Pavement Quality

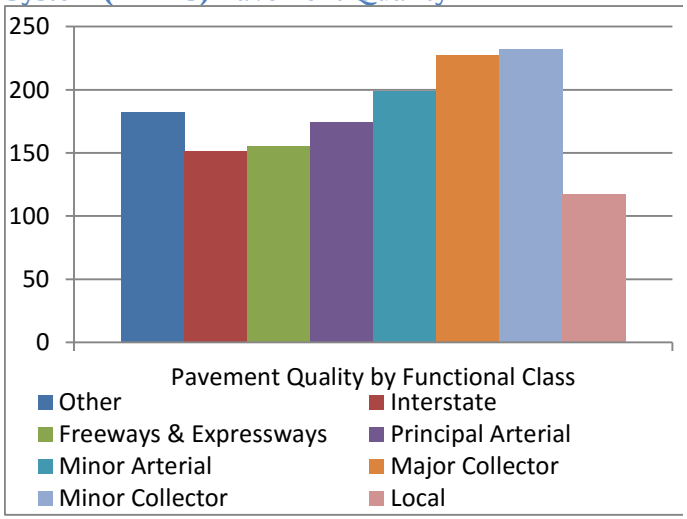
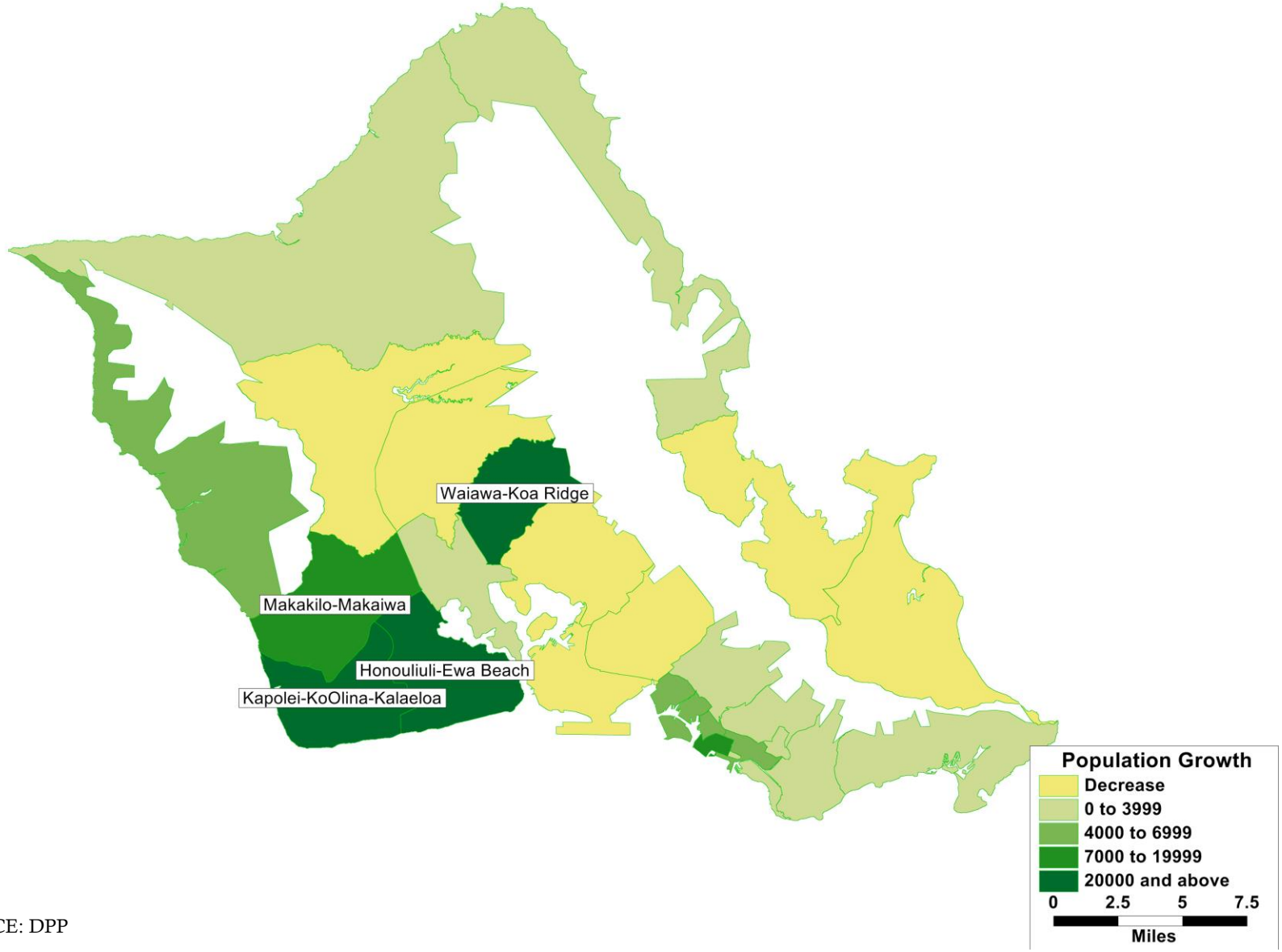
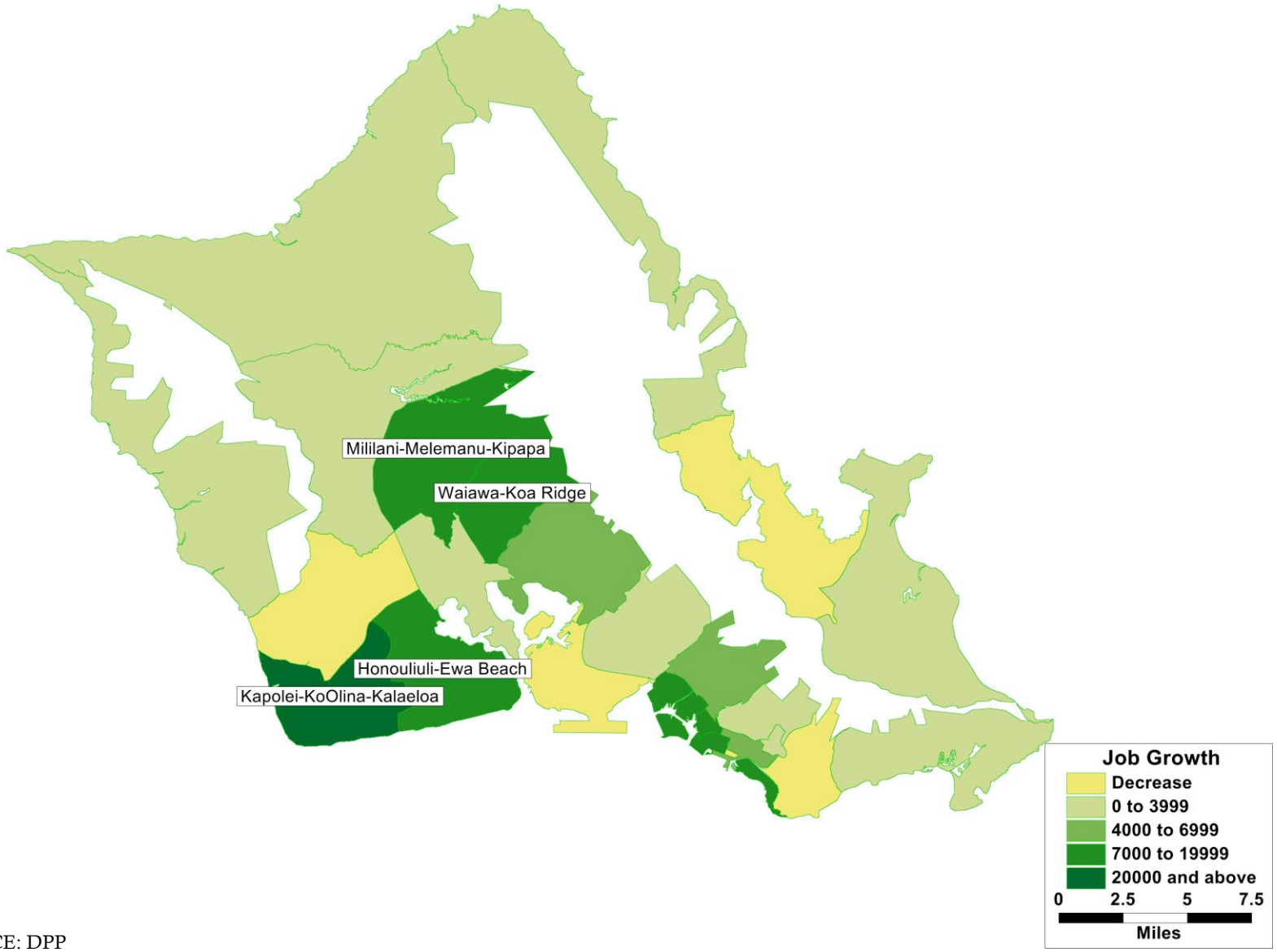


Figure 2-6 Population Growth, 2010-2040



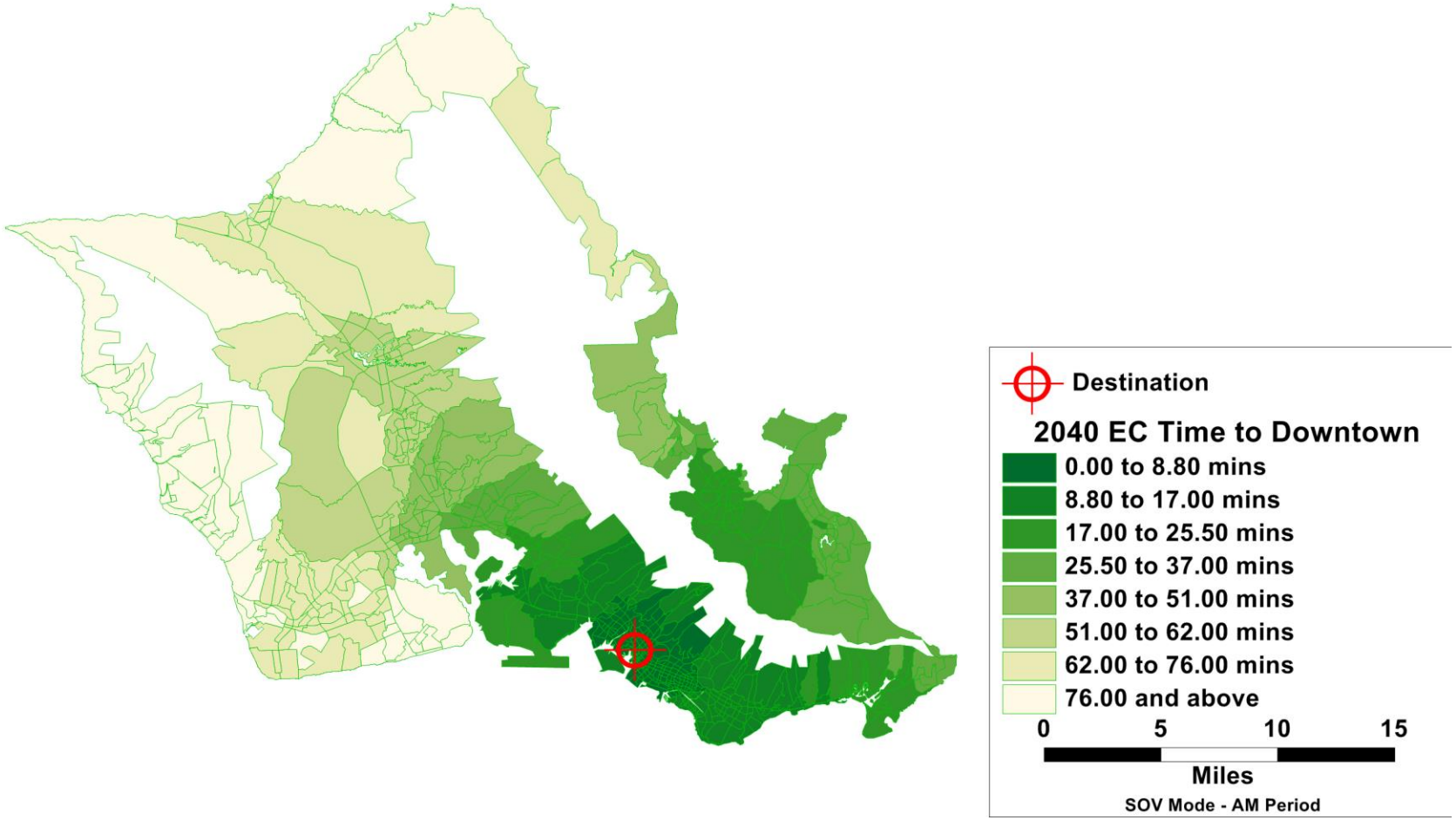
SOURCE: DPP

Figure 2-7 Job Growth, 2010-2040



SOURCE: DPP

Figure 2-8 2040 6:00-9:00 AM Commute Time to Downtown in Minutes (No-build)



SOURCE: OahuMPO TDFM v6

Increasing Congestion and Longer Travel Times: Transportation planners analyzed traffic conditions projected until 2040, assuming the construction of the Honolulu High-Capacity Transit Corridor Project (HHCTCP or simply "the Honolulu Rail Transit Project") from East Kapolei to Ala Moana Center. The results of this analysis showed continued worsening of the already congested conditions found along the Interstate Route H-1 corridor, the Interstate Route H-1 and Interstate Route H-2 merge, and in transit reliability. As shown in Figure 2-8, travel time to Downtown will get longer. While the Honolulu Rail Transit Project does relieve some congestion, rail alone will not be able to keep Oahu's transportation outcomes, such as drive time and level-of-service, from getting worse. Specific problems identified by the analysis of the 2040 roadway network include the following:

- The "reverse" commute along the H-1 corridor will take more time;
- Without completion of the improvements identified in the plan, more than 17 percent of vehicle miles traveled will be on congested corridors in 2040, compared to 11 percent in 2012;
- Interstate Route H-1 between the Middle Street merge and University Avenue will continue to be congested in both directions;
- Increased development and roadway congestion will inhibit bus transit;
- Traffic on Interstate Route H-2 and Kamehameha Highway (Route 99) will get significantly worse without alternative roadways to provide access to-and-from the Waiawa-Koa Ridge area; and
- The planned growth in the Ewa/Kapolei area will require significant investment in transportation infrastructure.

Safety: Unsafe driver behavior and unsafe roads were identified by Oahu's residents in the public outreach conducted for the ORTP 2040. Specific areas of concern include aggressive driving, impaired driving, safety of bicyclists and pedestrians, motorcycles, and mopeds, and reducing traffic-related deaths and injuries. Many of the projects included in ORTP 2040 address the issue of safety directly or indirectly by means such as improved lighting and signing, as well as general widening and improved roadway configurations.

State Safety Plan: The Hawaii Department of Transportation's Strategic Highway Safety Plan (SHSP) recognizes the need to reduce the number of traffic-related deaths on Hawaii's roadways regardless of the cause. Challenges such as aggressive driving, impaired driving, facility design, and data and safety management are some of the issues covered in the SHSP. Addressing these challenges involves the participation of a wide range of stakeholders from various agencies across the State. Potential strategies to improve safety include legislation and funding, educational and community actions, enforcement, and improved engineering.

ORTP 2040 includes goals and performance measures related to safety and allocates funds to develop a reliable, multi-modal transportation system. Included in ORTP 2040 are projects to implement dependable facilities, such as repairing and preserving roadways, installing guardrails, providing rockfall protection measures, and separating traffic from pedestrians and bicyclists through roadway and intersection improvements.

Secondary and Emergency Access to Communities: As noted in the Statewide Federal-Aid State Highways 2035 Transportation Plan, some communities are located on the perimeter of Oahu or in isolated areas separated by geographic features. These communities often rely on a single roadway to access other parts of the island. When these roadways become congested or impassable, emergency response and evacuation times are delayed. There is a need for alternative routes for ingress and egress into these communities in order to improve circulation options and emergency access.

Freight Movement: One of the performance goals of the FAST Act is to improve the national multimodal freight network to support global and regional economic development. While segments of Interstate Route H-1 and Nimitz Highway (Route 92) have been included by FHWA on the National Highway Primary Freight Network Map,[10] Oahu does not have a State freight

[10] See map of Hawaii at this link: http://www.ops.fhwa.dot.gov/freight/infrastructure/pfn/state_maps/states/fpn_hires_jpg_27k/hi_hawaii.jpg

plan or any State-designated freight routes at this time. Planned improvements to the Interstate Route H-1 corridor and other major highways are anticipated to benefit freight mobility on Oahu. As noted in ORTP 2035, freight travel times between port facilities (Honolulu Harbor and Kalaeloa Barbers Point Harbor), Honolulu International Airport, and other parts of Oahu are anticipated to be similar to those for automobile travel.

Accessibility to the Transportation System: Because Oahu's population is a majority of minorities, the OahuMPO follows a unique environmental justice methodology to determine the populations protected under Title VI of the 1964 Civil Rights Act and Executive Order (EO) 12898 (referred hereafter as Title VI/Environmental Justice (T6/EJ) population.)[11] The OahuMPO process considers the nature and status of minority groups in the region based on three factors: (1) its numerical minority status, (2) its share of the region's aggregate household income compared against its share of the region's total households, and (3), its settlement pattern compared to all other groups. The result of this analysis is the identification of 226 census block groups as environmental justice areas: 218 based on the disproportionate presence of federally-defined minority groups, one based on low-income characteristics alone, and seven block groups were both disproportionately low income and minority (Department of Transportation Services). Table 2-2 shows the income and household size characteristics that must be met to be considered low-income.[12]

In order to comply with Title VI and EO12898, OahuMPO must ensure that ORTP 2040 does not result in disproportionately high and adverse human health or environmental effects to T6/EJ populations, and that everyone has access to the transportation system. According to the 2013 American Community Survey five-year estimates, members of T6/EJ populations are twice as likely to use TheBus for daily commuting, compared to commuters in general, indicating the need for a balanced, multi-modal system.

Table 2-2 Oahu Title VI / Environmental Justice Population

Persons in Household	Annual Household Income
One	$55,650
Two	$63,600
Three	$71,550
Four	$79,450
Five	$85,850
Six	$92,200
Seven	$98,550
Eight	$104,900

ORTP 2040 evaluates the issue of equality for T6/EJ populations through two performance measures: mobility and accessibility. Mobility is defined as the ease of movement of goods, services, and people. Accessibility is defined as the relative ease of reaching important destinations such as hospitals, employment centers, colleges, and regional shopping centers. Both are usually measured in travel time via bus and automobile.

Climate Change: Due to its island nature, the impacts of climate change on Oahu could be significant, most especially the increased storm severity, including flooding, tidal surges, high winds, and their impacts on transportation infrastructure as well as the predicted rise in both sea level and groundwater table. ORTP 2040 considers the effects of climate change and develops objectives related to the reduction of greenhouse gases. Long-term planning is needed to identify and minimize the risk to transportation facilities that are in close proximity to coastal areas and other areas prone to flooding historically, such as Honolulu Harbor and Kalaeloa Barbers Point Harbor, Honolulu International Airport, and various mountain and valley roadways. Oahu's coastal highways – including but not limited to Farrington Highway (Route 93), Kalanianaole Highway (Route 72), Kamehameha Highway (Route 83), and Nimitz Highway (Route 92) – are of particular concern.

Energy Conservation: As an island among those furthest from a continental land mass, Oahu must import just about everything necessary for daily life—including fossil fuels that run the transportation system. Reducing our reliance on fossil fuels and

[11] http://www.fhwa.dot.gov/civilrights/programs/tvi.cfm

[12] http://www.huduser.gov/portal/datasets/il/il10/hi.pdf

developing a more sustainable transportation system are challenges being addressed in the ORTP 2040. According to statistics of the Hawaii Clean Energy Initiative[13], the challenge is daunting:

- Imported oil supplies account for more than 90 percent of our energy;
- More than 60 percent of our energy is used for transportation;
- We are the most oil-dependent state in the nation; and
- Less than 3 percent of Oahu's vehicles are hybrid or electric.

Improving on these measures is a goal of ORTP 2040.

Local Development Plans: Sustainable development is generally defined as development that will not require the use of resources reserved for future generations for today's needs. Each of Oahu's eight development plan areas has either a Development or Sustainable Communities Plan that is administered by the City's Department of Planning and Permitting. Together with the General Plan, Development and Sustainable Communities and Neighborhood Transit Oriented Development (TOD) Plans guide population and land use growth over 20 years or more.

Ewa/Kapolei, Central Oahu, and the PUC are the planning areas identified for higher future growth and development. Kapolei will emerge as a secondary urban center over the next 20 years. It will have sufficient housing, commercial, recreation, and employment options to make it less likely its residents will have to travel far to meet their daily needs. The Development Plan for the PUC includes continued investments in residential choice and business development, especially in Kakaako, ensuring that this area will continue to attract residents, businesses, and visitors.

The Neighborhood TOD Plans identify opportunities for new development, orderly growth, and improved accessibility around the rail stations. Complementary City-initiated Land Use Ordinance amendments and zone changes will help direct and manage growth around the rail stations. The City Council required[14] that TOD regulations minimally include:

- a mix of land uses;
- density and building height limits tied to amenities;
- reduction of off-street parking spaces;
- encouragement of the use of rapid transit, buses, bicycling, walking and other non-automobile forms of transport;
- guidelines on building orientation;
- controls to protect landmark resources;
- human-scale architectural elements;
- landscaping; and
- TOD incentives.

The Sustainable Communities Plans for the rest of the island's communities— East Honolulu, Koolaupoko, Koolauloa, North Shore, and Waianae—emphasize the protection of agricultural and preservation areas, support of small-town values, and maintenance of a land-use pattern that reflects the traditional Hawaiian land division system. These areas of emphasis serve as tools for physical and resource planning; protecting and preserving significant natural, scenic, cultural, historical, and agricultural resources; expanding public access to mountain and shoreline areas; and encouraging the accommodation of changing demographics. Connecting land-use planning with transportation planning is vital to the success of both. All of these existing local development plans were consulted to identify planned growth areas and potential transportation projects for ORTP 2040.

Sustainable Transportation Solutions: According to the U.S. Environmental Protection Agency (EPA) *Guide to Sustainable Transportation Performance Measures (August 2011)*, the elements of a sustainable transportation system include:

- "Allows the basic access and development needs of individuals, companies, and society to be met safely and in a manner consistent with human and ecosystem health, and promotes equity within and between generations;
- Is affordable, operates fairly and efficiently, offers a choice of transport mode, and supports a competitive economy as well as balanced regional development; and
- Limits air, water, and noise emissions, waste, and resource use."

[13] http://www.hawaiicleanenergyinitiative.org/wp-content/uploads/2015/02/Final_TransEnergyAnalysis_8.19.15.pdf

[14] https://www.honolulu.gov/rep/site/ocs/roh/ROH_Chapter_21_art_7-9.pdf

ORTP 2040 furthers many of these principles of sustainable transportation with its emphasis on accessibility through transportation choices—bicycle and pedestrian facilities, mass transit, vanpool and shuttle programs, and high technology projects. ORTP 2040 implementation assumes that the Honolulu Rail Transit Project will be operating and that TheBus transit route system will be restructured to integrate with rail service. Providing non-automobile transportation alternatives between Kapolei and Ewa to Downtown Honolulu and the Ala Moana Shopping Center promotes accessibility, reduces congestion and air pollution, and supports the economy. By supporting the continued development of bicycle routes and lanes and the purchase of additional buses, vans, and shuttles, ORTP 2040 provides more affordable transportation choices that minimize energy consumption and promote healthy lifestyles.

Complete Streets: A Complete Street is one that provides for a safe, comfortable, and convenient trip for all types of users, including motorists, pedestrians and bicyclists, transit riders, and freight. Honolulu's complete streets policy[15] serves as an important guide for transportation system designs by improving safety through the provision of adequate sidewalks, bicycle lanes, and crosswalks among other roadway improvements.

Act 54, Session Laws of Hawaii 2009 established a Complete Streets policy in Hawaii. Under the Complete Streets law, a statewide task force will review existing State and County highway design standards and guidelines and propose changes to procedures and design manuals. ORTP 2040 supports this concept by including bicycle and pedestrian improvements as well as goals and objectives that reflect Complete Street concepts. The *Statewide Pedestrian Master Plan*[16] and the *Oahu Bike Plan*[17] also provide guidance for the prioritization of complete streets improvements.

Energy Sustainability Task Forces and Forums: Addressing the challenge of moving away from fossil-fuel dependency to a more sustainable transportation system is addressed in several recently completed reports for Honolulu and Hawaii. The Mayor's Energy and Sustainability Task Force developed a 10-year energy efficiency and sustainability plan, the goals of which are to make Oahu infrastructure and operations more self-sufficient and sustainable and more in harmony with the environment. Another report is *Strategies for Energy Efficiencies in Transportation* completed by the Hawaii Energy Policy Forum. For this report, surveys were conducted to gain the public's perspective on several aspects of possible energy-efficient transportation options. The results of these surveys were used to develop recommendations such as using cleaner vehicles with higher efficiencies or implementing more smart growth principles, including higher density to support additional transit.

The Hawaii Clean Energy Initiative (HCEI) is leading the way in relieving our dependence on oil by setting goals to achieve 100% clean energy by 2045. The overall goal for the transportation sector is to reduce the consumption of petroleum in ground transportation by 70% by 2030. Partners and working groups such as the Sustainable Transportation Forum are actively monitoring developments in clean energy options, and viable solutions will be incorporated into the initiative's overall goals as they become available.

ORTP 2040 addresses sustainability issues facing Oahu. ORTP 2040 includes goals and performance measures related to sustainability and identifies projects to help develop a more sustainable, multi-modal system. Included in the ORTP 2040 are pedestrian and bicycle facilities, improved bus and transit connections and facilities, and maintenance and operational upgrades to improve the quality of life for the communities of Oahu.

[15] http://www.honolulu.gov/rep/site/ocs/roh/ROH_Chapter_14a20_33_.pdf

[16] ttp://hidot.hawaii.gov/highways/files/2013/07/Pedest-Plan-PedMP.pdf

[17] http://www.oahumpo.org/wp-content/uploads/2013/02/oahubikeplanaugust2012.pdf

Chapter 3 – Vision and Goals

➢ *Chapter 3 identifies the overall vision and goals for the transportation system.*

ORTP 2040 is developed in layers, beginning with one broad, over-arching vision that leads to increasingly specific steps that will carry Oahu toward that vision. The Federal Highway Administration provides guidance in the formulation of regional objectives. Ideal 'SMART' objectives should be:

- **Specific**: The objective should provide a clear desired outcome without dictating the approach;
- **Measurable**: The objective should be measurable and facilitate quantitative evaluation;
- **Agreed**: The objective should be a result of consensus from planners, operators, and other local stakeholders;
- **Realistic**: The objective should be achievable within the limitations of resources, time constraints, and other demands; and
- **Time-Bound**: The objective should identify the timeframe within which it is to be achieved.

ORTP 2040 Vision

"In 2040, Oahu will be a place where we will have efficient, well-maintained, safe, secure, convenient, appropriate, and economical choices in getting from place to place. Our transportation system will move us and the goods we use in a manner that supports the island's high quality of life, natural beauty, economic vitality, and land use policies by supporting appropriate density development and avoiding urban sprawl. This system will promote energy conservation and economic sustainability as well as the protection of our ports of entry, preparation for emergency situations, and changes in global climate patterns."

This vision is complementary to the vision in the *Making Honolulu an Age-Friendly City: An Action Plan* (2015) of having "a city where everyone has access to safe, clean, and timely transportation island wide".

Goals and Priorities

The OahuMPO identified and approved Regional Goals & Objectives on June 19, 2014. The goals and objectives shown in Table 3-1 can further be related to measures of effectiveness, data sources, and implementing procedures, which will realize a performance-based approach to planning on Oahu.

Bikeshare is safe and sustainable.
(Source: Bikeshare Hawaii)

Many trips involve more than one mode.
(Source: OahuMPO)

Active transportation at the State Capitol.
(Source: OahuMPO)

Table 3-1 OahuMPO Regional Goals & Objectives

Regional Goals	Regional Objectives	
1. Transportation Facilities - Provide an inclusive, multi-modal transport system whose connectedness provides efficient means for users desiring to move about this island by bicycle, freight carrier, pedestrian facility, road, transit service, and intermodal connectors	1.A	Improve surface transportation system efficiency
	1.B	Build a balanced and integrated multi-modal transportation network
	1.C	Implement Complete Streets policies and infrastructure improvements where appropriate
2. Transportation Operations and Services - Develop, operate, maintain, and improve Oahu's islandwide transportation system to ensure the efficient, dependable, safe, secure, convenient, and economical movement of people and goods.	2.A	Improve congestion
	2.B	Improve security risks associated with natural and man-made disasters and other emergencies that would impact the transportation system
3. Freight Movement and Economic Vitality - Improve the freight network for Oahu, interisland, and trans-Pacific movements, strengthen the ability of rural communities to access trade markets, and support Oahu's economic development	3.A	Improve the travel time of freight on the transportation network
	3.B	Ensure adequate freight handling capacity of airport and harbors
4. Natural Environment - Develop, operate, maintain, and improve Oahu's transportation system in a manner that sustains environmental quality	4.A	Meet or exceed noise, air, and water quality standards set by Federal, State, and City agencies
	4.B	Reduce greenhouse gas emissions from transportation sources
	4.C	Adapt the surface transportation network to all aspects of climate change
5. Human Environment and Quality of Life - Develop, operate, maintain, and improve Oahu's transportation system in a manner that supports community-wide values related to health, safety, culture, and civil rights	5.A	Reduce transportation related fatalities and injuries
	5.B	Support community and cultural values in the development of plans and projects
6. Land Use and Transportation Integration - Develop, operate, maintain, and improve Oahu's transportation system in a manner that integrates effective land use and transportation with established sources of funding in a fair and equitable manner	6.A	Support Transit-Oriented Development and other land use development policies that reduce vehicular trip-making and vehicle miles traveled
	6.B	Support local affordable housing goals
7. Infrastructure Condition - Improve and maintain Oahu's transportation system in a state of good repair	7.A	Improve and maintain transportation system in a state of good condition
8. Reduce Project Delivery Delay - Reduce project costs, promote jobs and the economy, eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices	8.A	Minimize project completion timeframes, especially following obligation of funds
	8.B	Secure flexible and sustainable revenues and funding sources for transportation

Chapter 4 – Public Input

➢ *Chapter 4 summarizes the public and agency input gathered for this ORTP.*

The OahuMPO has an ongoing, robust public outreach program, which includes regular consultation with several committees as well as engagement with the community through its website and social media. Its Citizen Advisory Committee (CAC) has been and continues to be a major forum for vetting the various transportation programs and projects that are being planned for Oahu and is consulted throughout all phases of planning discussion. OahuMPO built upon this strong foundation and conducted an extensive public outreach program to involve stakeholders in the development of the ORTP 2040.

Early outreach for the ORTP 2040 occurred in several phases, beginning with the formation of a subcommittee of the CAC to discuss the goals and expectations of the study. This was followed by public listening sessions held in each of the eight planning districts across Oahu. Listening sessions were supplemented by an online survey[18] and further solicitation of public comment. As a result of this early outreach, a wide spectrum of Oahu's commuters, agency representatives, business owners, residents, retirees, students, and those traditionally underserved in the planning process played a role in the direction, development, and content of the ORTP 2040. Throughout the ORTP 2040 development, OahuMPO staff validated and added to lists of service providers to T6/EJ populations. The ORTP also includes the documented disposition of public comments received, which is summarized in Appendix A. Public comment and intergovernmental review were solicited in March 2016. Special effort was made to reach out to T6/EJ population service providers during the public comment period.

Early Community Outreach

Beginning in 2012, regional listening sessions were held in Ewa, Hawaii Kai, Kailua, Mililani, Waianae, Hauula, Haleiwa, and two in Honolulu: one in Pearl City and the other in Moiliili. The goal was to listen and learn from those attending what the key transportation issues they felt their individual communities were facing. It was not uncommon that some of the concerns expressed extended beyond the boundaries of a single planning district and many were described as being island-wide concerns.

The format of the listening sessions was a public open house. OahuMPO staff provided a composite of information about the region including the maps and diagrams of the area; crash rates for motor vehicles, bicycles, pedestrians, and motorcycles; and, areas of issues identified in the transportation chapters of the City and County of Honolulu's development and sustainable communities plans, the Hawaii Department of Transportation's Pedestrian Master Plan, as well as the bicycle plans of both of the jurisdictions OahuMPO serves. OahuMPO staff were there to orient those who attended, explain the material, engage the community members in conversations about their concerns, and to seek out other sources of transportation impact information of which they may be aware. At each of the listening sessions there was a handout with a large map of the area so that areas where there were specific concerns about the roadway, safety, and other features could be identified by the members of the public for the benefit of the transportation planners. In addition, there was a series of questions about which OahuMPO sought public input. The meetings provided a forum to gather the public's perspectives about important topics and potential transportation projects and programs to be considered for inclusion in the ORTP 2040.

Separately, OahuMPO received early input through an online assessment tool focusing on various transportation-related issues identified in the listening sessions. A special briefing and listening session was provided to the Hawaii Transportation Association to ensure the views of commercial freight shippers are understood. Especially important was OahuMPO's participation with the City and other government agencies in the AARP's Age-Friendly Communities

[18] See summary of online survey findings at http://www.oahumpo.org/?wpfb_dl=999

Initiative, of which OahuMPO served as chair of its transportation-working group. While the stated aim of that study was to receive a designation from the World Health Organization for Honolulu as an age-friendly city, it offered a number of data-rich insights about how persons of all ages live with the need for mobility as part of their lives.

Significantly, during the time this ORTP was being prepared, the Hawaii Department of Transportation conducted a comprehensive study of the Interstate Route H-1 corridor for the purpose of identifying the future capacity needs on the Interstate, along with an alternatives and feasibility analysis on short-, mid-, and long-term congestion and capacity improvements.

The early outreach to the public along with the significant social and engineering analyses that have been done concurrently provide a comprehensive view of those issues that may be paramount in the minds of the public about how financial resources are allocated for transportation infrastructure. While it should be emphasized that the early outreach represented a 'snap shot' of public opinion at that time, there were several themes that were consistent across all geographies and sources of information that may be viewed as key issues to be addressed in this ORTP 2040. These include:

- Congestion and the corresponding length of travel time is the problem most often raised by commuters irrespective of mode choice. There is a direct link in the mind of the community, especially in the Koolauoloa, Koolaupoko, North Shore, and Waianae communities between existing levels of congestion and lengthy travel times with what is viewed as an unsustainable push for development in what has heretofore been "country." There is widespread concern that in pressing for more development, government and private entities are not providing comprehensive views of impacts and that questions need to be answered concerning Oahu's "natural carrying capacity."

- Roadway maintenance is of great concern to motorists, bicyclists, motorcyclists, those riding TheBus and TheHandi-Van, and pedestrians. It is seen as both a safety issue and one that causes damage and has cumulative economic impacts on travelers' vehicles as well as on buses and other commercial vehicles. Maintenance is needed along several vectors: roadway surfaces in general are viewed as needing improvement due to potholes and the roughness of many roadways; bicyclists cite many instances where debris or damaged surfaces make use of bicycle lanes and shoulders hazardous and often require a bicyclist to use a traffic lane; pedestrians offered many examples where sidewalks were either in great disrepair or non-existent, requiring pedestrians to use shoulders and traffic lanes as well. The disabled community is especially affected by the lack of sidewalks and, in many cases, are unable to use TheBus because getting to the nearest stop requires them to use a wheelchair or scooter in the roadway. This latter situation is true even though, in many cases, the area immediately surrounding the bus stop is paved.

- Members of the public expressed concerns that reduction of service by TheBus both in terms of the elimination of routes and the frequency of service have had a negative impact on many travelers' mobility. The public perception was that this was especially true in communities on the Windward side and appears to have affected the elderly and disabled disproportionately. A number of riders commented that local service cut-backs have resulted in lengthy wait times and, in some cases, made it impossible to reach certain destinations. As an example, the route for the #2 bus used to go around Kapiolani Park and served the needs of those who live there; that service was rerouted and one rider in her 80s must now walk across the park to catch the bus on Montserrat, which she indicated was unsafe when she needs to travel after dark.

- Climate change and weather variability are issues that require long-term planning either to adapt and reinforce existing infrastructure or to adopt retreat strategies in areas that may be unrealistic to attempt to preserve. Citizens are concerned that City and

State planners as well as elected leaders are not taking the problem seriously. Concerns with future changes in sea level and weather, as well as potential impacts from tsunamis and hurricanes, is coupled with recognition that many communities have only one means of ingress and egress. The perception is that the infrastructure to support forecasted population (including visitors) is insufficient.

- While recognizing that it is Oahu's chief economic engine, there is a negative element to tourism that is acknowledged by many in the community. The community sensitivity is that large numbers of visitors are overwhelming inadequate infrastructure and contributing to extensive and extended traffic jams, especially on weekends.

- Citizens regularly expressed a desire to have a more significant role in the decision making process for identifying transportation improvements. It is critical that more emphasis be placed on the continual, comprehensive, and cooperative (3-C) planning process and that the public play a visible role in decision-making, as is required under Federal statute. Citizens perceived that the City and State have historically been influenced more by the development community than the general public.

- There is a generational gap between perceptions of and expectations for growth and development, as the following example shows:

  A man in his late 20s spoke to the need for more jobs on the North Shore and in Koolauloa. He was born and raised in Haleiwa and must commute "to town" for work. He spoke passionately about the need for a more diverse economy and was supportive of the development planned for the area. At that Listening Session, he was a distinct minority both in his opinion and his age – the majority of people who attended were in their 50s and 60s who are retired and do not want to see growth or change in their community. For the Windward and North Shore both the Listening Sessions and online survey were dominated by those aged 50-plus. While understanding the needs of older residents is important, it is equally essential that planning outreach also gathers input from younger adults and, even, school children. The challenge is determining how best to engage those cohorts in ways that are accessible, creative, and fun.

- Another comment from the Hauula that illustrates how important it is that transportation planning consider non-typical commutes:

  A teacher spoke about the need for higher quality, better paying jobs than those "making beds" receive. Her approach is specifically to teach students skills, such as videography, which will better prepare them for a more robust job. In a service-dominated economy such as Oahu's, finding jobs that pay a livable wage is a struggle, especially for those recently graduated. Coupled with the rise in seniors continuing to hold positions into their 70s, the opportunities for meaningful jobs are limited. However, at the time of this Listening Session, recent changes to bus route timing had made it difficult for her students to attend classes held in the evenings.

Overall, the results of the public outreach activities were remarkably consistent over time. Traffic congestion, road maintenance, and safety (both of the transportation facilities and driving behavior) came up repeatedly as the key challenges across many forums. As has been identified, drivers perceive that the quality of roadways directly impacts congestion. The better the operating condition, the less congestion.

Of all the road improvement projects identified, investing in the Interstate Route H-1 corridor was seen as the priority. The transportation needs of the T6/EJ population were also consistently identified. Improvements to TheBus and TheHandi-van system and other mass transit options also constantly ranked as priorities.

Chapter 5 – Making Choices

➢ *Chapter 5 describes how the projects in the ORTP were selected and their funding sources.*

Project Selection Process: The OahuMPO followed a deliberate process to identify and select candidate transportation projects and programs for inclusion in the financially constrained ORTP 2040. For projects and programs included in the final plan consideration was given to the following factors:

- Public input;
- The overall mission and goals of the ORTP 2040;
- How well they address areas with forecasted high growth in population and jobs;
- How well they address problems and deficiencies on the island's regional transportation system;
- Technical merits; and
- Consistency with local development plans.

Potential projects and programs for the ORTP were identified through the review of the existing State and City plans and performance reports, including, but not limited to, the ORTP 2035, State Highway Safety Plan, HHCTCP Final Environmental Impact Statement, 2050 Sustainability Plan, Oahu Development and Sustainable Communities Plans, OahuMPO Congestion Management Process Report, and the FFYs 2015–2018 Transportation Improvement Program (TIP). Additionally, in the Fall of 2015, the implementing agencies (DTS, HART, and HDOT) submitted cost estimates for potential projects and programs for which State or local match funding would be available.

Candidate projects and programs were evaluated with comparative data. Public input was also documented prior to the ORTP's approval. This combination of analyses and public input resulted in the comprehensive package of projects and programs selected for the ORTP 2040. Technical analyses and public feedback indicated that modernization projects should be focused along the Interstate Route H-1 corridor and in the Ewa/Kapolei communities. Projects may be phased due to high cost. There was also strong support from the public for maintaining and preserving the multi-modal options in the existing transportation system and continuing investments in public transit, as well as pedestrian and bicycle facilities and services.

Paying for the Plan

The ORTP 2040 is a fiscally-constrained plan for which projected costs fall within anticipated revenues. The Federal portion consists of highway funds from FHWA and transit funds from FTA. The Highway Special Fund and the State Capital Improvement Program (CIP) represent the State's portion. The State liquid fuel tax, registration fees, motor vehicle weight tax, and car rental/tour vehicles tax make up the Highway Special Fund revenue. The City and County revenue sources vary from the City General Fund to County fuel tax as well as public utility franchise taxes. The Hawaii General Excise and Use Tax (GET) surcharge will be the primary local funding source for the Honolulu Rail Transit Project. Transit fares help to cover some of the cost of the transit system. Developer and private funding is also a revenue source for certain State and City projects.

The revenue forecasts and their underlying assumptions acknowledge long-term uncertainties with the Federal Highway Trust Fund and economic conditions. Revenue from developer and private funding has been identified for a total of $1.4 billion for funding transportation projects in the ORTP 2040. The revenues proposed for City and State projects incorporate analyses undertaken for the City's *Draft Ewa Impact Fees for Traffic and Roadway Improvement Update Study*. As a result, the revenue forecasts that underlie the ORTP 2040 are conservative and were based on data received from Federal, State, and City transportation officials. It is estimated that approximately $17 billion in revenues will be available for ORTP 2040 projects and programs; amounts for programs are expressed in Year-of-Expenditure (YOE) dollars and a two percent annual inflation rate is assumed for projects.

Chapter 6 – Plan

➢ *Chapter 6 summarizes the ORTP projects, their anticipated timeframes, and their estimated costs.*

The ORTP 2040 is a financially-constrained plan that provides more than $17 billion for transportation facilities and services. The projects contained in the ORTP 2040 attempt to balance budget realities with the need for transportation options and accessibility, congestion mitigation, safety and alternative access routes, and facilities for bicyclists and pedestrians.

Capital Projects

Congestion Mitigation and Alternatives Projects: Congestion Mitigation transportation options include projects and programs that provide transportation choices and increase the efficiency of the existing transportation network. Bicycle and pedestrian facilities promote the most sustainable form of transportation available—people power—and provide healthy lifestyle choices. ORTP 2040 includes projects that increase and enhance Oahu's existing network of bicycle and pedestrian facilities so that they function as key components of the overall transportation system. High-technology projects improve traffic flow through traffic monitoring technologies such as Intelligent Transportation Systems (ITS) and Travel Demand Management (TDM). ITS can include benefits to highways, transit services, commercial vehicle operators, and emergency response providers. ITS projects in ORTP 2040 involve developing, installing, and managing closed-circuit television cameras and associated systems to monitor traffic conditions, and establishing an islandwide traffic management center. TDM projects consist of measures that are designed to reduce demand and increase the efficiency of the transportation system, usually through managed lanes, park-and-ride lots, and carpools and vanpools. Bikeshare Hawaii seeks to launch the first phase of a statewide bikeshare system that would span downtown Honolulu to Waikiki.[19]

Modernization Projects: Modernization projects include adding lanes so that more vehicles can ride the same section of road and reconfiguring interchanges for smoother traffic flow. Because transportation using a personal vehicle will continue to be an important travel mode in the future, roadway capacity will need to be increased. The Interstate Route H-1 corridor has been identified as a priority corridor for congestion mitigation; additional modernization projects will be concentrated in the rapidly developing Ewa/Kapolei areas to enable them to handle future growth.

Transit Projects: TheBus and TheHandi-Van are Oahu's existing forms of public transportation—TheBus serves the population islandwide, and TheHandi-Van provides service for qualified persons with disabilities who are unable to use TheBus. Improvements in both service and facilities are included in the Plan. The Honolulu Rail Transit Project is a key component of the ORTP 2040. This elevated, fixed-guideway system will serve the Interstate Route H-1 corridor and provide a reliable alternative to personal vehicle use. The guideway will connect the major employment and residential areas of Kapolei and Ewa to Downtown Honolulu and the Ala Moana Shopping Center. Part of this project will also involve redirecting some bus services to act as feeder bus routes serving the fixed-guideway stations to reduce redundancy in transit routes.

Operations, Maintenance, System Preservation, and Safety: Throughout the public outreach process, dissatisfaction with the current condition of Oahu's transportation facilities and increased maintenance were identified as top priorities for funding. Consequently, ORTP 2040 has allocated more than $3 billion, or 51 percent of the highway budget, to support the maintenance, preservation, and safety of the existing transportation system. Included in this broad category are projects and programs such as installing guardrails and other safety features, highway maintenance, and projects to improve traffic flow and safety. Maintenance and preservation are typically more cost-effective than building new facilities.

[19] http://www.bikesharehawaii.org/

Mid- and Long-Range Projects

As shown in Figure 6-1, Figure 6-2, and Table 6-1, ORTP 2040 projects are prioritized as either "Mid-Range Projects," anticipated to be developed before 2029, or "Long-Range Projects," proposed for implementation during the final 11 years of the plan. Projects were placed within each time period based on input from the implementing agencies (DTS, HART, and HDOT), anticipated funding, and the following:

- Partially funded projects in FFY 2015–2018 TIP are included as Mid-Range Projects; and
- Most projects in the high-growth areas are included as Mid-Range Projects.

For informational purposes, Table 6-1 also includes a list of unfunded "Illustrative Projects," which may be amended into the ORTP if future funding for these projects become available; and a list of existing and fully-funded committed "Short-Range Projects."

Figure 6-1 ORTP 2040 Project Location Map

Note: Table 6-1 shows the complete list of ORTP 2040 Projects. The map only shows projects with specific locations. Investments that are islandwide or programmatic are not mapped.

Figure 6-2 ORTP 2040 Project Location Map – Kapolei/Ewa and Honolulu

Note: Table 6-1 shows the complete list of ORTP 2040 Projects. The map only shows projects with specific locations. Investments that are islandwide or programmatic are not mapped.

Table 6-1 ORTP 2040 Projects List

	Project No.	City / State	Project Title	Description	Cost $Millions
Mid-Range Projects - 2019 to 2029	**Congestion Mitigation Project(s)**				
	1	C/S	Bike Plan Hawaii - Oahu and Oahu Bike Plan	Implement Oahu elements of the State of Hawaii's Bike Plan Hawaii and City and County Bike Projects.	51.5
	2	C/S	Intelligent Transportation Systems (ITS)	Implement ITS projects including, but not limited to, those identified in the Oahu Regional ITS Architecture.	50.8
	4	C/S	Transportation Demand Management (TDM) Program	Develop a TDM program that could include, but is not limited to: 1. Free real-time online carpool matching, 2. Outreach promotion and marketing of alternative transportation, 3. Emergency ride home program, 4. Major special events, 5. Employer based commuter programs, 6. Emerging and innovative strategies (bike or car sharing), and 7. Vanpool.	10
	5	C/S	Interstate Route H-1, Corridor Study, Short Term Improvements	Develop top short term capacity/congestion improvements in the Final Interstate H-1 Corridor Study.	2
	Enhancement Project(s)				
	101	C	Alternatives Projects	Implement enhancement projects, including but not limited to safe routes to school projects, pedestrian crossing safety improvements, and projects from the Transportation Alternatives Program (TAP) for Oahu.	12

	Project No.	City / State	Project Title	Description	Cost $Millions
Mid-Range Projects - 2019 to 2029	**Modernization Project(s)**				
	201	S	Kamehameha Highway (Route 83), Safety Improvements, Haleiwa to Kahaluu	Construct safety improvements along Kamehameha Highway, from Haleiwa to Kahaluu. Safety improvements include turn lanes, guardrails, signage, crosswalks, etc. to improve safety. Widening of Kamehameha Highway will only be in areas where needed for storage/turn lanes safety improvements.	49.5
	202	S	Kamehameha Highway (Route 83), Safety & Operational Improvements, Kaalaea Stream to Hygienic Store	Construct safety and operational improvements along Kamehameha Highway, between Kaalaea Stream and Hygienic Store. Safety and operational improvements include passing and turning lanes, modification of signals, and installation of signs, flashers, and other warning devices. This project also includes replacement of Kaalaea Stream Bridge and Haiamoa Stream Bridge with structures that meet current design standards.	17
	203	S	Kalanianaole Highway (Route 72), Safety & Operational Improvements, Olomana Golf Course to Waimanalo Beach Park	Construct safety and operational improvements along Kalanianaole Highway between the Olomana Golf Course and Waimanalo Beach Park. Specific safety and operational improvements include construction of turning lanes, sidewalks, wheelchair ramps, bike paths or bike lanes, traffic signal upgrades, utility relocation, and drainage improvements.	50
	204	S	Interstate Route H-1, New Interchange, Kapolei Interchange	Construct new Interstate Route H-1 Kapolei Interchange for Kapolei between the Palailai Interchange and Makakilo Interchange. Project to be constructed in multiple phases.	116

	Project No.	City / State	Project Title	Description	Cost $Millions
Mid-Range Projects - 2019 to 2029	205	C	Farrington Highway (Route 7110), Widening, Golf Course Road to west of Fort Weaver Road	Widen Farrington Highway from two to four lanes, from Golf Course Road to just west of Fort Weaver Road.	100
	206	S	Kualakaʻi Parkway (Route 8930), Extension, Interstate Route H-1 to Franklin D Roosevelt Avenue	Extend Kualakaʻi Parkway from Kapolei Parkway to Franklin D Roosevelt Avenue	20
	207	S	Kamehameha Highway (Route 99), Widening, Lanikuhana Avenue to Ka Uka Boulevard	Widen Kamehameha Highway from a three-lane to a four-lane divided facility between Lanikuhana Avenue and Ka Uka Boulevard. This project includes shoulders for bicycles and disabled vehicles, bridge crossing replacement, bikeways, etc.	300
	208	S	Interstate Route H-1, Waiawa Interchange to Halawa Interchange, Widening, Eastbound	Widen Interstate Route H-1 to six lanes from the Waiau Interchange to the Halawa Interchange in the eastbound direction, and restore the current freeway lane width and shoulder standards.	90
	209	C	Salt Lake Boulevard Widening Project	Widen Salt Lake Boulevard from two to six lanes, between Maluna Street and Ala Lilikoi Street.	80
	210	C	Makakilo Drive, Second Access, Makakilo Drive to Kualakaʻi Parkway / Interstate Route H-1 Interchange	Extend Makakilo Drive (vicinity Pueonani Street) south to the Interstate Route H-1 Interchange as four-lane roadway, connecting Makakilo Drive to Kualakaʻi Parkway.	76

	Project No.	City / State	Project Title	Description	Cost $Millions
Mid-Range Projects - 2019 to 2029	211	S	Kahekili Highway (Route 83) Improvements, Likelike Hwy to Kamehameha Hwy	Capacity improvements through the defined limits, which could include widening and/or improving intersections. Cost is based on a potential full build alternative.	103
	Developer Funded Modernization Project(s)				
	301	S	Hanua Street Extension, Farrington Highway to Malakole Street; Interstate Route H-1, New On- & Off-Ramps, Palailai Interchange	Hanua Street: • Extend Hanua Street from Malakole Street to Farrington Highway. This new four-lane roadway will provide access to Kalaeloa Harbor. Interstate Route H-1, Palailai Interchange: • Construct new on- and off-ramps at Interstate Route H-1 Palailai Interchange to Hanua Street extension.	130
	302	C	Kalaeloa Boulevard, Reconstruction and Widening; Lauwiliwili Street to Olai Street	Improve and reconstruct Kalaeloa Boulevard between Lauwiliwili Street and Olai Street.	32
	303	C	Kapolei Parkway, Extension & Widening, Aliinui Drive to Kalaeloa Boulevard	Extend the existing four-lane Kapolei Parkway, from Aliinui Drive to Hanua Street. This project includes widening of Kapolei Parkway from four to six lanes from Hanua Street to Kalaeloa Boulevard.	48
	304	S	Kualakaʻi Parkway (Route 8930), Widening, Interstate Route H-1 to Franklin D Roosevelt Avenue	Widen and extend Kualakaʻi Parkway as follows: • From three to six lanes from Kapolei Parkway to Interstate Route H-1 • Extend from Kapolei Parkway to Franklin D Roosevelt Avenue (six lanes)	180
	305	S (non-HDOT)	Keoneula Boulevard, Extension, Kapolei Parkway to Franklin D. Roosevelt Avenue	Extend Keoneula Boulevard from Kapolei Parkway to Franklin D. Roosevelt Avenue.	227

	Project No.	City / State	Project Title	Description	Cost $Millions
Mid-Range Projects - 2019 to 2029	306	S	Interstate Route H-1, Widening, Waiawa Interchange	Widen the Interstate Route H-1 by one lane, in each direction, through the Waiawa Interchange. This project will begin in the vicinity of the Waiawa Interchange and end at the Paiwa Interchange.	50
	307	S	Interstate Route H-2, Widening, Waipio Interchange	Widen both on- and off-ramps on Interstate Route H-2, at the Waipio Interchange. This project includes the widening of the Ka Uka Boulevard overpass and intersection improvements to facilitate movement to and from the on- and off-ramps.	33
	308	S	Interstate Route H-2, New Interchange, Pineapple Road Overpass	Construct a new full-service freeway interchange on Interstate Route H-2, between Meheula Parkway and Ka Uka Boulevard, to accommodate future developments in Central Oahu. This project includes the widening of the existing Pineapple Road Overpass from two lanes to four lanes; and addition of new on- and off-ramps to and from Interstate Route H-2 at Pineapple Road Overpass.	111
	Safety Project(s)				
	401	S	Highway Safety Improvement Program	Comprehensive program to fund safety improvements to reduce collisions and damage to property. Strategies may include installation of left turn lanes, roadway widenings, traffic signal modifications, installation of rumble strips and crash attenuators, installation of guardrails and bridge railings, and others.	105
	System Preservation Project(s)				
	501	S	Rockfall Protection, Various Locations	Install rockfall protection or mitigation measures along various State highways at various locations.	50

	Project No.	City / State	Project Title	Description	Cost $Millions
Mid-Range Projects - 2019 to 2029	502	S	Shoreline protection program	Protect shoreline along Kamehameha Highway and other locations.	20
	504	C	City Operations and Maintenance (O&M): Roadways	Maintain and operate the City's existing and future roadways. Includes, but is not limited to, bridge inspection, resurfacing, guardrail and shoulder improvements, lighting improvements, drainage improvements, signal and sign upgrades, pedestrian signals, and maintenance facilities, etc.	537.1
	505	S	State Operations and Maintenance	Maintain and operate the State's existing and future highway operations and routine maintenance. Special Maintenance Program (SMP) Projects include, but are not limited to, pavement repair, preventative maintenance, resurfacing and rehabilitation, etc.	343
	506	S	System Preservation	Preserve the highway system through projects including, but not limited to, bridge replacement/rehabilitation and seismic retrofit, guardrail and shoulder improvements, lighting improvements, drainage improvements, sign upgrades and replacement, traffic signal upgrade and retrofit, etc.	60
	Transit Project(s)				
	601	C	Human Services Transportation Coordination Program	Provide a range of transportation services targeted to disadvantaged populations under the Human Services Transportation Coordination Program.	8.5

	Project No.	City / State	Project Title	Description	Cost $Millions
Mid-Range Projects - 2019 to 2029	603	C	TheBus Service, Expansion, Islandwide	Expand TheBus service through increase of capacity, support access to the Honolulu High-Capacity Transit Corridor project, and provide access improvements for bicyclists and pedestrians near bus stops and transit centers. Expanded service will be ADA-compliant.	10
	604	C	Transit Centers, Various Locations	Construct transit centers at various locations islandwide to support transit operations.	70
	605	C	City Operations and Maintenance (O&M): Transit	Maintain and operate the City's existing and future transit and paratransit operations and routine maintenance. Includes, but is not limited to, operation of the transit system, maintenance of current transit centers and bus/rail facilities, and improvement of bus stop sites and bus pads.	2900.1
	606	C	Honolulu Urban Bus (HUB) Circulator System	Construct the Honolulu Urban Bus (HUB) Circulator System - a high-frequency electric circulator bus system connecting Downtown, Kakaako, Ala Moana, Waikiki, University of Hawaii-Manoa, and Makiki.	75.3

	Project No.	City / State	Project Title	Description	Cost $Millions
Long-Range Projects - 2030 to 2040	**Congestion Mitigation Project(s)**				
	51	C/S	Bike Plan Hawaii - Oahu and Oahu Bike Plan	Implement Oahu elements of the State of Hawaii's Bike Plan Hawaii and City and County Bike Projects.	61.5
	52	C/S	Intelligent Transportation Systems (ITS)	Implement ITS projects including, but not limited to, those identified in the Oahu Regional ITS Architecture.	138
	54	C/S	Transportation Demand Management (TDM) Program	Develop a TDM program that could include, but is not limited to: 1. Free real-time online carpool matching, 2. Outreach promotion and marketing of alternative transportation, 3. Emergency ride home program, 4. Major special events, 5. Employer based commuter programs, 6. Emerging and innovative strategies (bike or car sharing), and 7. Vanpool.	20
	Enhancement Project(s)				
	151	C	Alternatives Projects	Implement enhancement projects, including but not limited to safe routes to school projects, pedestrian crossing safety improvements, and projects from the Transportation Alternatives Program (TAP) for Oahu.	12
	Modernization Project(s)				
	251	S	Fort Barrette Road (Route 901), Widening, Farrington Highway to Barber's Point Gate	Widen Fort Barrette Road from two to four lanes from Farrington Highway to Barber's Point Gate.	50

	Project No.	City / State	Project Title	Description	Cost $Millions
Long-Range Projects - 2030 to 2040	**Developer Funded Modernization Project(s)**				
	351	S	Farrington Highway (Route 93), Widening, Hakimo Road to Kalaeloa Boulevard	Widen Farrington Highway from four to six lanes, from Hakimo Road to Kalaeloa Boulevard, including intersection of Lualualei Naval Road. To improve congestion and safety operations, contra-flow, intersection improvements, traffic calming, and other improvements may be pursued in the short range.	252
	352	C	Kamokila Boulevard	Extend as four-lane roadway between Roosevelt and Saratoga.	26
	353	C	Fort Barrette Road	Extend as four-lane roadway between Roosevelt and Saratoga.	12
	354	S (non-HDOT)	Kalaeloa East-West Spine Road, New Roadway, Kalaeloa Boulevard to Geiger Road	Construct a new four-lane east-west spine road within Kalaeloa by realigning and connecting portions of the existing Saratoga Avenue from Kalaeloa Boulevard in the west and to Geiger Road in the east.	293
	356	S	Farrington Highway (Routes 7110, 7101, and 99), Widening, west of Fort Weaver Road to Waiawa Interchange	Widen Farrington Highway from Kunia to Waiawa by one lane in each direction, from west of Fort Weaver Road to Waiawa Interchange.	142

	Project No.	City / State	Project Title	Description	Cost $Millions
Long-Range Projects - 2030 to 2040	**Safety Project(s)**				
	451	S	Highway Safety Improvement Program	Comprehensive program to fund safety improvements to reduce collisions and damage to property. Strategies may include installation of left turn lanes, roadway widenings, traffic signal modifications, installation of rumble strips and crash attenuators, installation of guardrails and bridge railings ,and others.	105
	System Preservation Project(s)				
	551	S	Rockfall Protection, Various Locations	Install rockfall protection or mitigation measures along various state highways at various locations.	75
	552	S	Shoreline protection program	Kamehameha Highway and other locations.	30
	553	C	City Operations and Maintenance: Roadways	Maintain and operate the City's existing and future roadways. Includes, but is not limited to, bridge inspection, resurfacing, guardrail and shoulder improvements, lighting improvements, drainage improvements, signal and sign upgrades, pedestrian signals, and maintenance facilities, etc.	800.3
	554	S	State Operations and Maintenance	Maintain and operate the State's existing and future highway operations and routine maintenance. Special Maintenance Program (SMP) Projects include, but are not limited to, pavement repair, preventative maintenance, resurfacing and rehabilitation, etc.	704.4

	Project No.	City / State	Project Title	Description	Cost $Millions
Long-Range Projects - 2030 to 2040	555	S	System Preservation	Preserve the highway system through projects including, but not limited to, bridge replacement/rehabilitation and seismic retrofit, guardrail and shoulder improvements, lighting improvements, drainage improvements, sign upgrades and replacement, traffic signal upgrade and retrofit, etc.	207
	Transit Project(s)				
	651	C	Human Services Transportation Coordination Program	Provide a range of transportation services targeted to disadvantaged populations under the Human Services Transportation Coordination Program.	8.5
	653	C	City Rail Rehabilitation and Fleet Expansion	Provide for rehabilitation of track and expansion of rail fleet.	203
	654	C	TheBus Service, Expansion, Islandwide	Expand TheBus service through increase of capacity, support access to the Honolulu High-Capacity Transit Corridor project, and provide access improvements for bicyclists and pedestrians near bus stops and transit centers. Expanded service will be ADA-compliant.	848
	655	C	Transit Centers, Various Locations	Construct transit centers at various locations islandwide to support transit operations.	9
	656	C	City Operations and Maintenance: Transit	Maintain and operate the City's existing and future transit and paratransit operations and routine maintenance. Includes, but is not limited to, operation of the transit system, maintenance of current transit centers and bus/rail facilities, and improvement of bus stop sites and bus pads.	6872.1

	Project No.	City / State	Project Title	Description	Cost $Millions
Illustrative Projects	**Modernization Project(s)**				
	701	S	Interstate Route H-1, On- & Off-Ramp Modifications, Various Locations	Modify and/or close various on- and off- ramps on the Interstate Route H-1.	108
	702	S	Kunia Road (Route 750), Widening and Interchange Improvement, Wilikina Drive to Farrington Highway	Widen Kunia Road as follows: • From two to four lanes, from Wilikina Drive to Anonui Street. • From two to four lanes, Anonui Street to Kupuna Loop. • From four to six lanes, Kupuna Loop to Farrington Highway. • Add one lane eastbound loop on-ramp at Kunia Road & Interstate Route H-1.	348.9
	704	S	Interstate Routes H-1 and H-2, Operational Improvements, Waiawa Interchange	Modify the Interstate Routes H-1 and H-2 Waiawa Interchange, to improve merging characteristics through operational improvements (e.g., additional transition lanes).	112.1
	706	S	Nimitz Highway (Route 92), High Occupancy Vehicle (HOV) Flyover, Keehi Interchange to Pacific Street	Construct a new two-lane elevated and reversible HOV flyover above Nimitz Highway, from the Keehi Interchange to Pacific Street. This project includes the removal of the existing eastbound contraflow lane in the AM peak and restoration of all turning movements on the at-grade portion of Nimitz highway.	537.5
	708	S	Waianae, Second Access, Farrington Highway to Kunia Road	Construct a new two-lane second access road to Waianae from Farrington Highway in the vicinity of Maili, over the Waianae Mountain Range, to Kunia Road. Requires Kunia Road, Widening and Interchange Improvement, Wilikina Drive to Farrington Highway to ensure benefit.	1269

	Project No.	City / State	Project Title	Description	Cost $Millions
Illustrative Projects	709	S	Makakilo Mauka Frontage Road, New Roadway, Kalaeloa Boulevard to Makakilo Drive	Construct a new two-lane Makakilo Mauka Frontage Road, mauka of Interstate Route H-1, from Kalaeloa Boulevard to Makakilo Drive.	18.2
	Transit Project(s)				
	751	C	Fixed Guideway, Kapolei	Plan, design, and construct a fixed guideway system between West Kapolei to East Kapolei	1862
	752	C	Fixed Guideway, Ala Moana to UH Manoa and Waikiki	Plan, design, and construct a fixed guideway system between Ala Moana and UH Manoa and Waikiki	1712
	753	C	Fixed Guideway, Ewa Beach	Plan, design, and construct a fixed guideway system / corridor from Ewa Beach to the West Loch Station in Waipahu along Fort Weaver Road.	1858
	754	C	Fixed Guideway, Central Oahu	Plan, design, and construct a fixed guideway system / corridor between Pearl Highlands and Central Oahu	1858
	755	C	Fixed Guideway, Salt Lake	Plan, design, and construct a fixed guideway system / corridor from Aloha Stadium to Middle Street via Salt Lake Boulevard, Pukoloa Street, and along the Moanalua Stream.	1807
	756	C	At-grade Transit System, Kakaako	Plan, design, and construct an at-grade transit system / corridor from Downtown to Ala Moana via Kakaako.	195

	Project No.	City / State	Project Title	Description	Cost $Millions
Short-Range Projects - 2011 to 2018	**Existing and Committed Project(s)**				
	801	C	Kapolei Parkway, Extension, Kamokila Boulevard to Kamaaha Avenue	Complete the extension of the existing four-lane Kapolei Parkway	13.3
	802	S	Interstate Route H-1, Add WB Lane	Adds WB Standard Lane from Moanalua to the Interstate Routes H-1/H-2 Merge	-
	803	C	Kamokila, New Roadway	New Location from Kapolei to Franklin D Roosevelt Avenue	1.35
	804	C	Kapiolani Blvd Contraflow	Contraflow from S King to South St	0.077
	805	C	Waialae Ave Contraflow Removal	Remove Contraflow from Kapahulu to 8th Ave	0
	806	C	Ward Ave Contraflow	Contraflow from Lunalilo to S King St	0.077
	851	C	Joint Traffic Management Center	Constructing a transportation management center behind the Alapai Transit Center will combine transportation management with City, State, and emergency response agencies.	68.9
	852	C	Honolulu Rail Transit Project	Plan, design, and construct a fixed guideway system between East Kapolei and Ala Moana Center. This project includes intermodal connections with TheBus system to provide feeder services to fixed guideway stations.	5532.5
	853	S	Fort Weaver Rd (Route 76) Widening	Adds SB Lane from Interstate Route H-1 to Laulaunui St	-

	Project No.	City / State	Project Title	Description	Cost $Millions
Short-Range Projects - 2011 to 2018	854	S	Interstate Route H-1 EB, Vineyard On-Ramp, Lusitana St Connection	Add Right turn only lane from Lusitana Street onto the Vineyard Boulevard On-Ramp to Interstate Route H-1 in the EB direction	5
	855	S	Interstate Route H-1 Freeway Widening	Add lane in both directions from Middle Street to Punahou St	-
	856	S	Interstate Route H-1, Add WB Shoulder Lane in PM	Adds WB Shoulder Lane in PM from Halawa to Moanalua	-
	857	S	Kamehameha Hwy (Route 80) Widening	Adds NB Lane from Interstate Route H-2 to California Avenue	-
	858	C	King St. Bike Track	Add bike lane and remove vehicle lane from Alapai to Isenberg St	0.5
	859	S	Moanalua/Kamehameha Off-Ramp	New Capacity on ramp from Interstate Route H-201 to Honomanu	-

- Cost was funded from multiple sources and an estimate is not available.

Plan Performance

The ORTP 2040 will help manage growth in travel demand expected from the anticipated increases in population and jobs. The OahuMPO travel demand forecasting model was used to evaluate performance of three alternative conditions, namely the 2012 existing conditions, 2040 forecasted population and jobs with only existing and committed (E+C) transportation improvements (otherwise referred to as No-build conditions), and the ORTP 2040.

Given estimated population and job growth out to 2040, higher daily VMT is expected for both the No-build and the ORTP 2040 conditions in comparison to 2012 existing conditions, as shown in Figure 6-3. ORTP 2040 shows a slight increase in daily VMT over the No-build conditions due to increased capacity of the island's roadway system on direct routes.

The construction of the Honolulu Rail Transit Project will help to dramatically increase transit usage on Oahu. As shown in Figure 6-4, daily transit boardings will increase substantially between 2012 existing conditions and 2040 No-build conditions. ORTP 2040 shows a slight decrease in daily transit boardings in comparison due to the attractiveness of improved travel times from the plan's improvements.

As shown in Figure 6-5 and Figure 6-6, ORTP 2040 will help reduce delay on major roadways leading to lower hours of delay (by 9 percent) and hours of travel (by 2 percent) compared to the No-build conditions.

Figure 6-7 shows projected islandwide travel times by automobile for the AM peak hours to Downtown for the ORTP 2040, while Figure 6-8 shows the projected travel-time difference to Downtown between the ORTP 2040 and the 2040 No-build conditions. Travel times generally improve for ORTP 2040 in comparison to the No-build conditions.

Travel times are comparable for both the No-build and ORTP 2040 conditions from the Primary Urban Center to Downtown, whereas travel times improve for trips traveling to Downtown from Waianae, Ewa, Koolauloa, Central Oahu, and Koolaupoko.

Figures 6-9 through 6-12 show projected traffic level of service during the morning commute period for the 2040 No-build and ORTP 2040 conditions. ORTP 2040 shows benefits in reducing congestion during the AM peak hours. As shown in Figure 6-11 and Figure 6-12, ORTP 2040 will alleviate some congestion on roadways (shown in orange and red) in the Ewa/Kapolei area, along the Waianae Coast, and in the Interstate Routes H-1/H-2 merge area.

The rail project crosses over an overpass at Ft. Weaver Road. (Source: HART)

An ADA-compliant multi-modal pathway. (Source: OahuMPO)

Passengers board TheBus downtown . (Source: OahuMPO)

Figure 6-3 Daily Vehicle Miles Traveled (2012, 2040 No-build, and ORTP 2040)

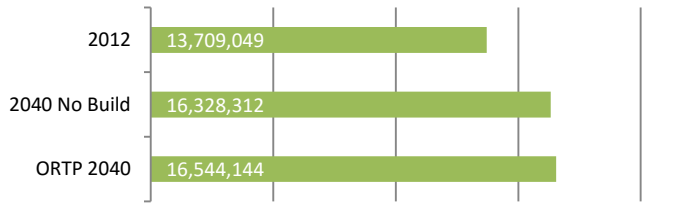


Figure 6-4 Daily Transit Boardings (2012, 2040 No-build, and ORTP 2040)

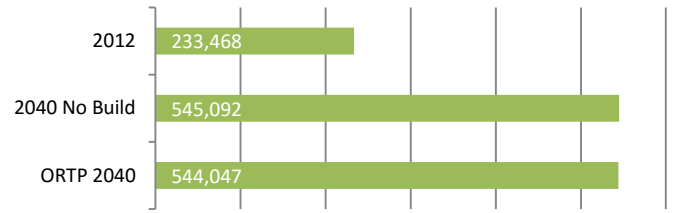


Figure 6-5 Daily Vehicle Hours Delayed (2012, 2040 No-build, and ORTP 2040)

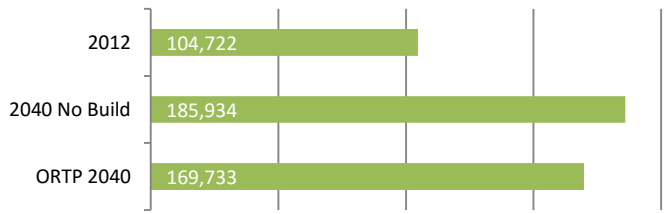
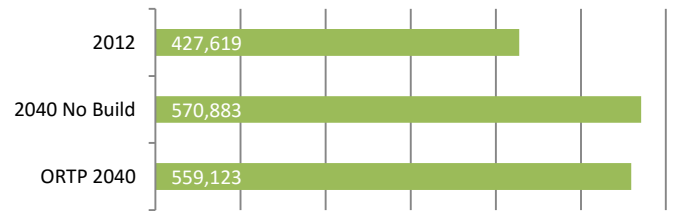


Figure 6-6 Daily Vehicle Hours Traveled (2012, 2040 No-build, and ORTP 2040)



SOURCE: OahuMPO TDFM v6

Figure 6-7 6:00-9:00 AM Travel Times to Downtown in Minutes (ORTP 2040)

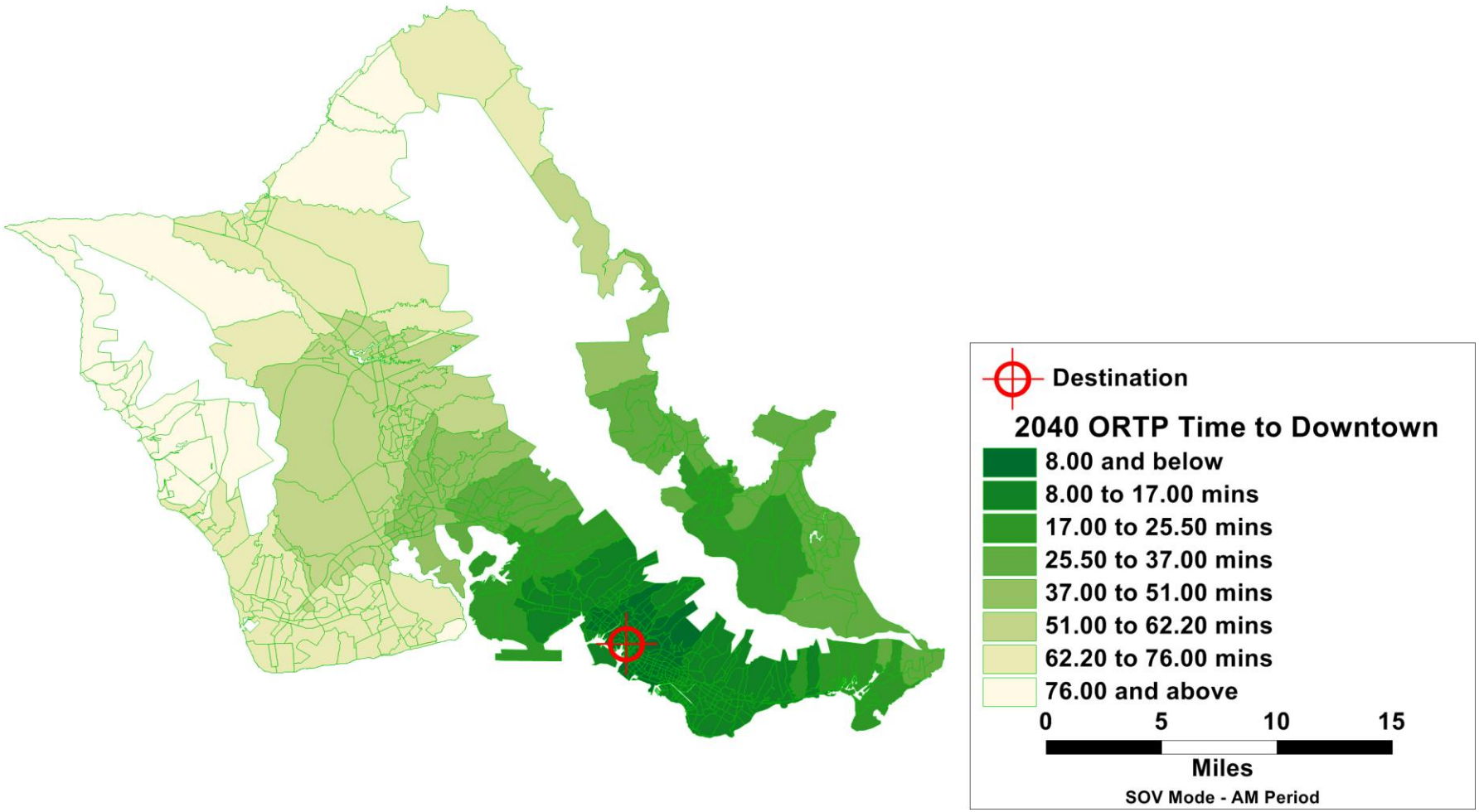
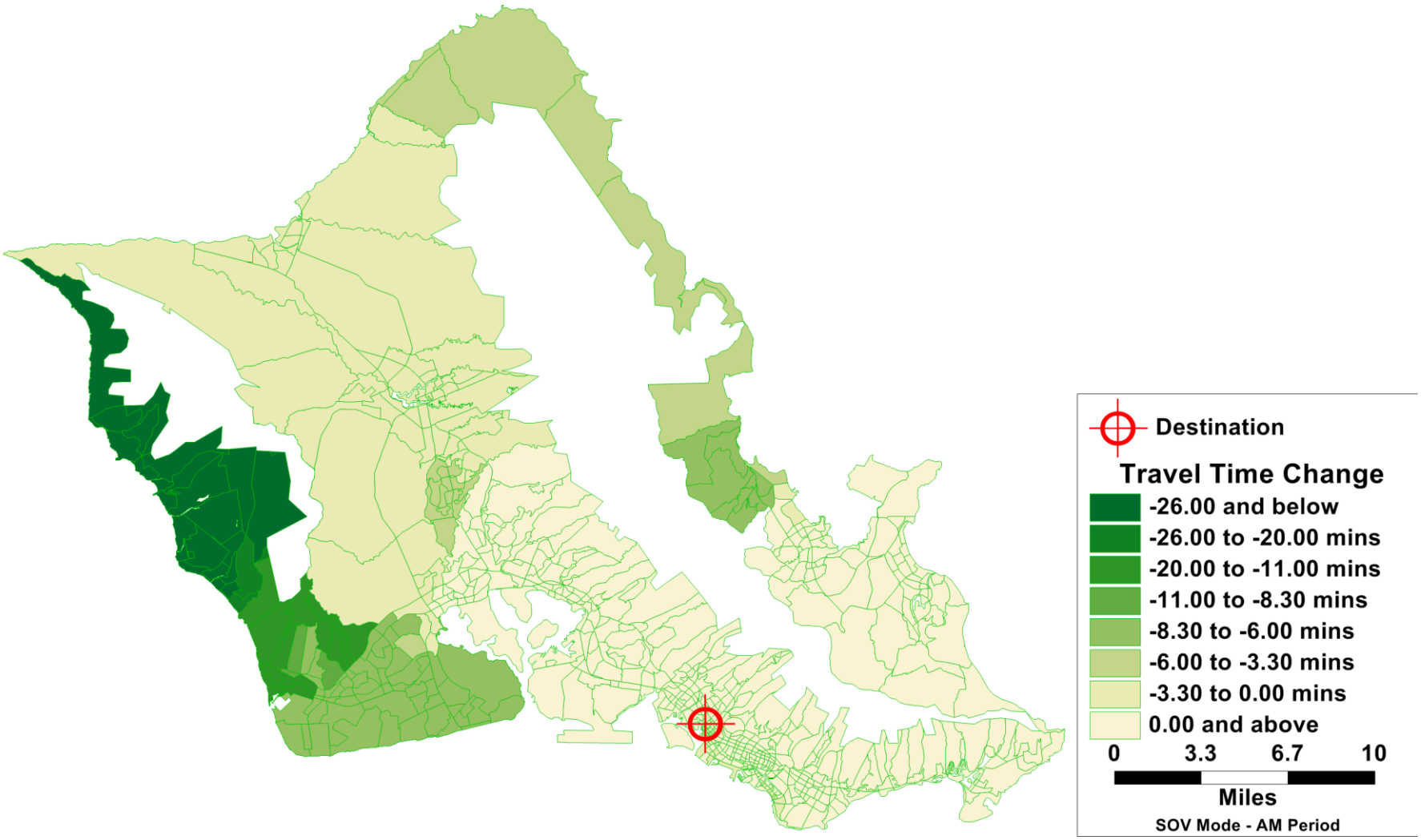


Figure 6-8 6:00-9:00 AM Travel Time Difference to Downtown in Minutes (ORTP 2040 vs. 2040 No-build)



SOURCE: OahuMPO TDFM v6

Figure 6-9 6:00-9:00 AM Roadway Level of Service (2040 No-build) – Islandwide

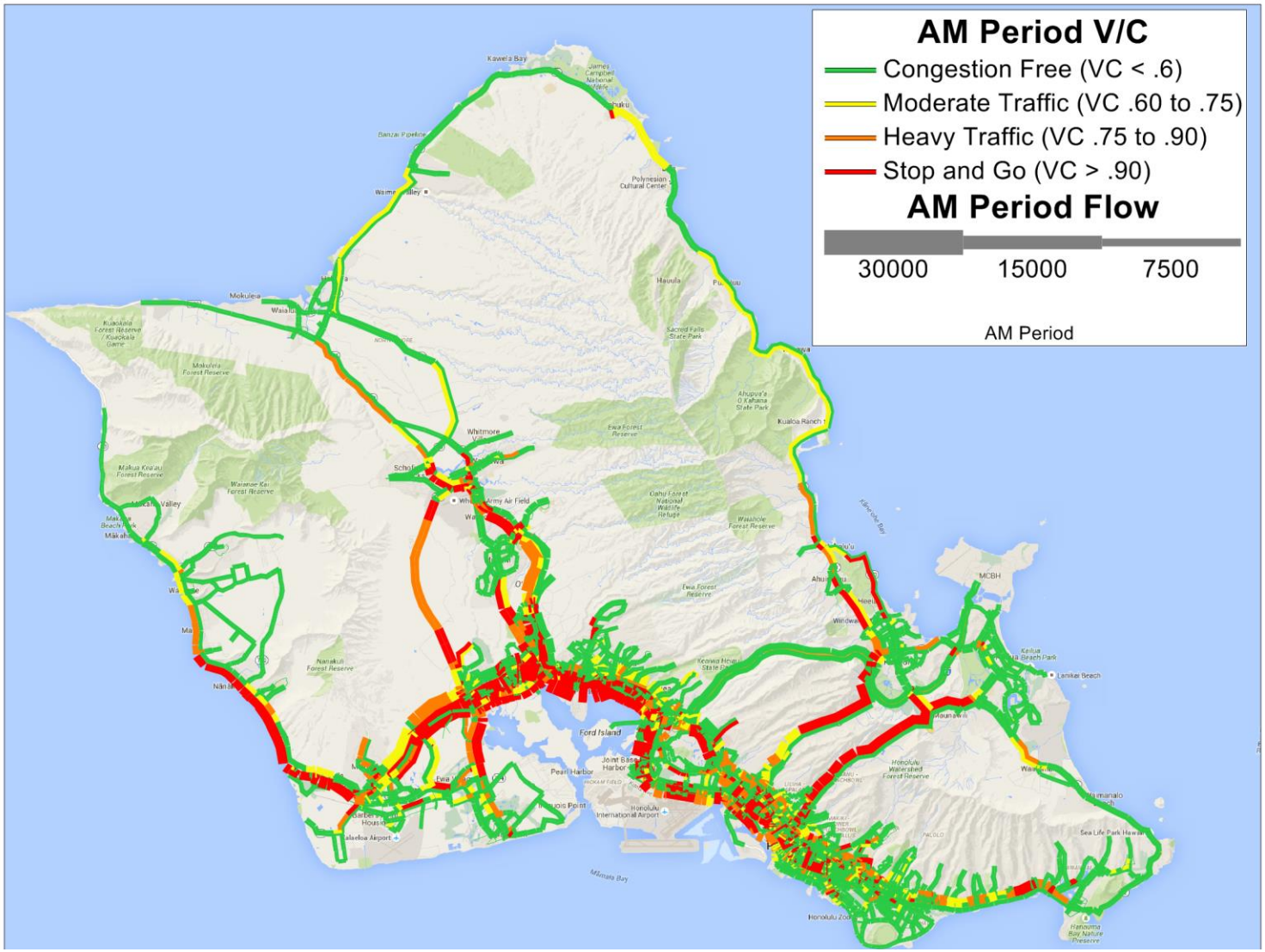
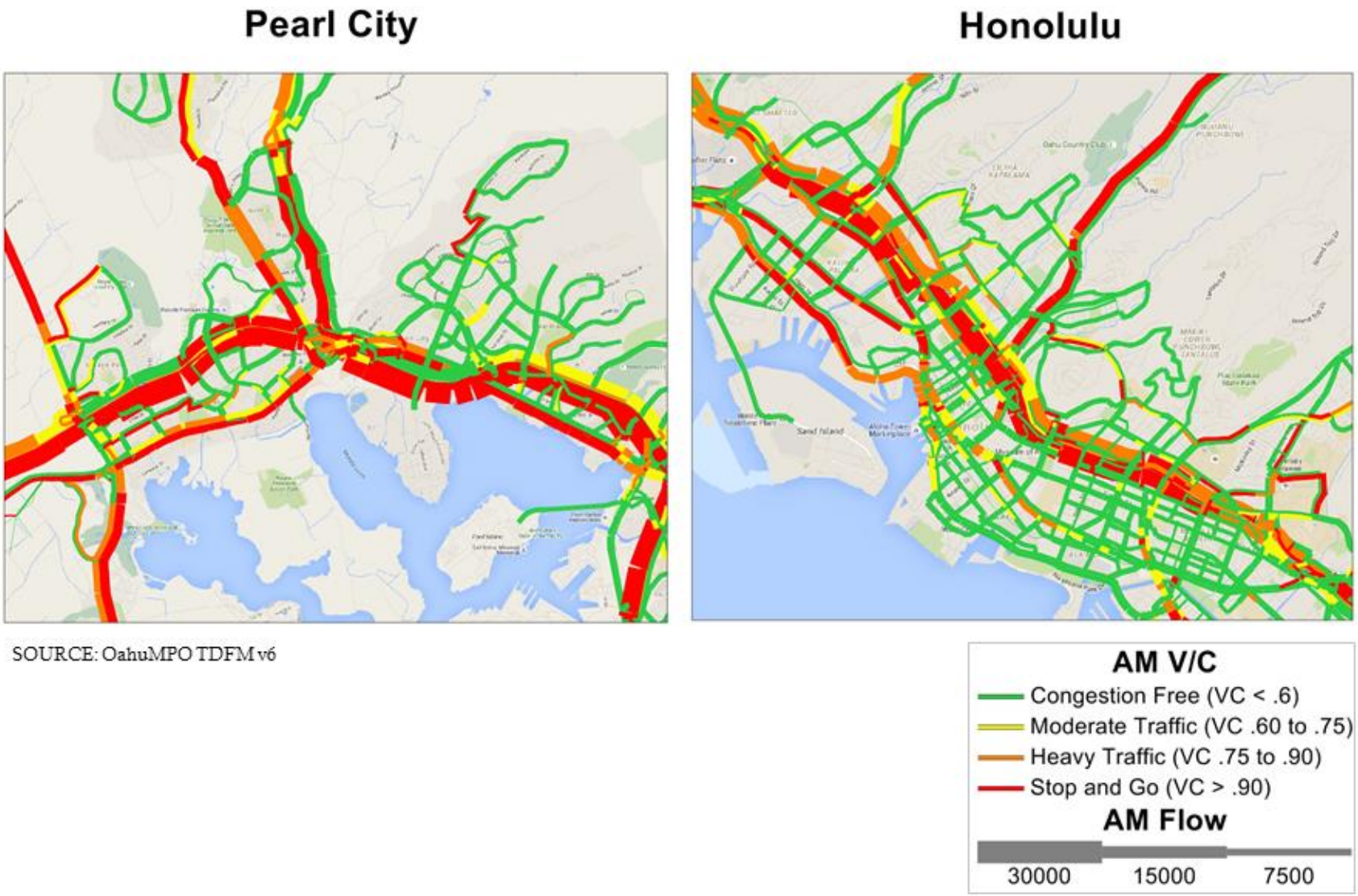


Figure 6-10 6:00-9:00 AM Roadway Level of Service (2040 No-build) – Pearl City & Honolulu



SOURCE: OahuMPO TDFM v6

Figure 6-11 6:00-9:00 AM Roadway Level of Service (ORTP 2040) – Islandwide

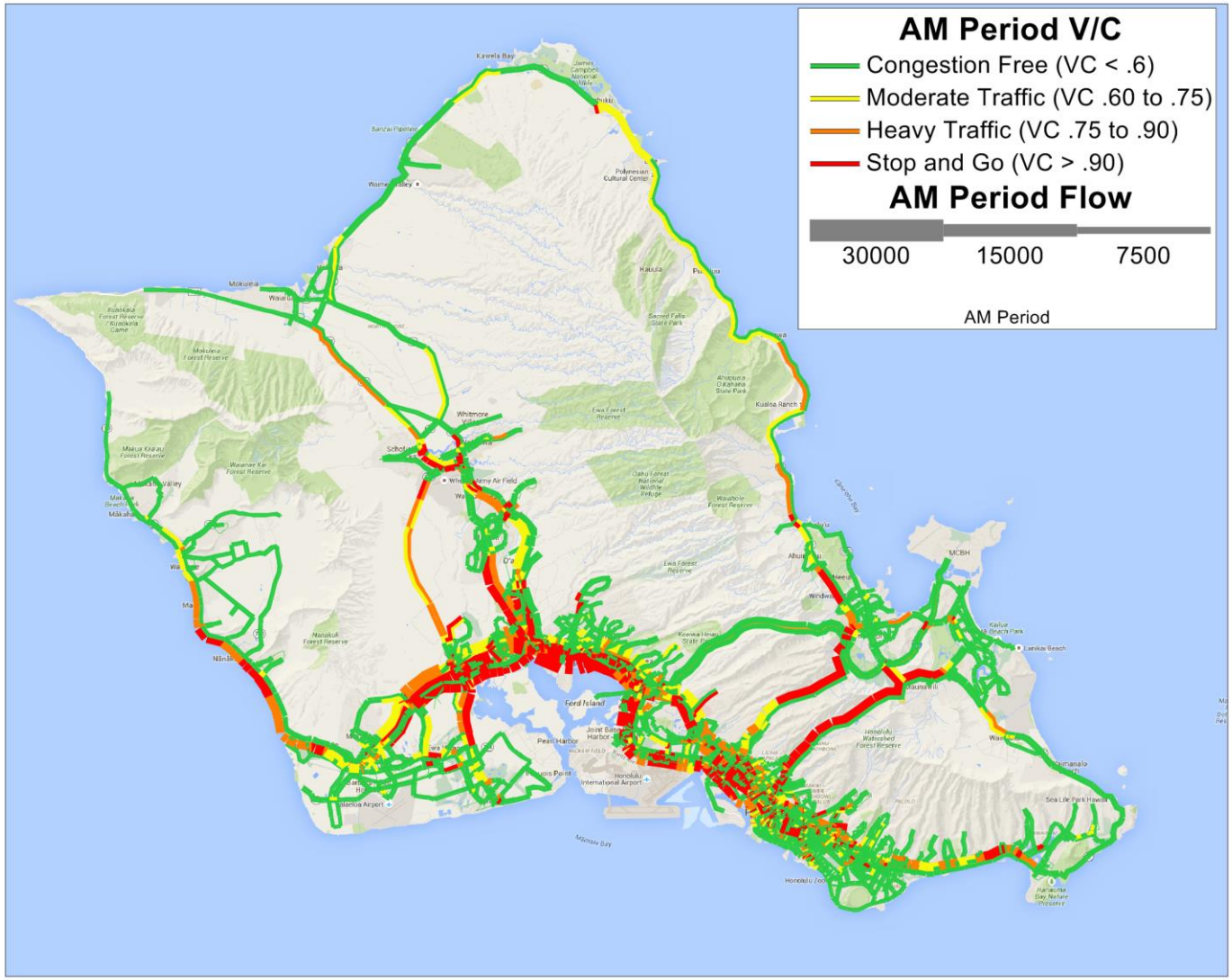
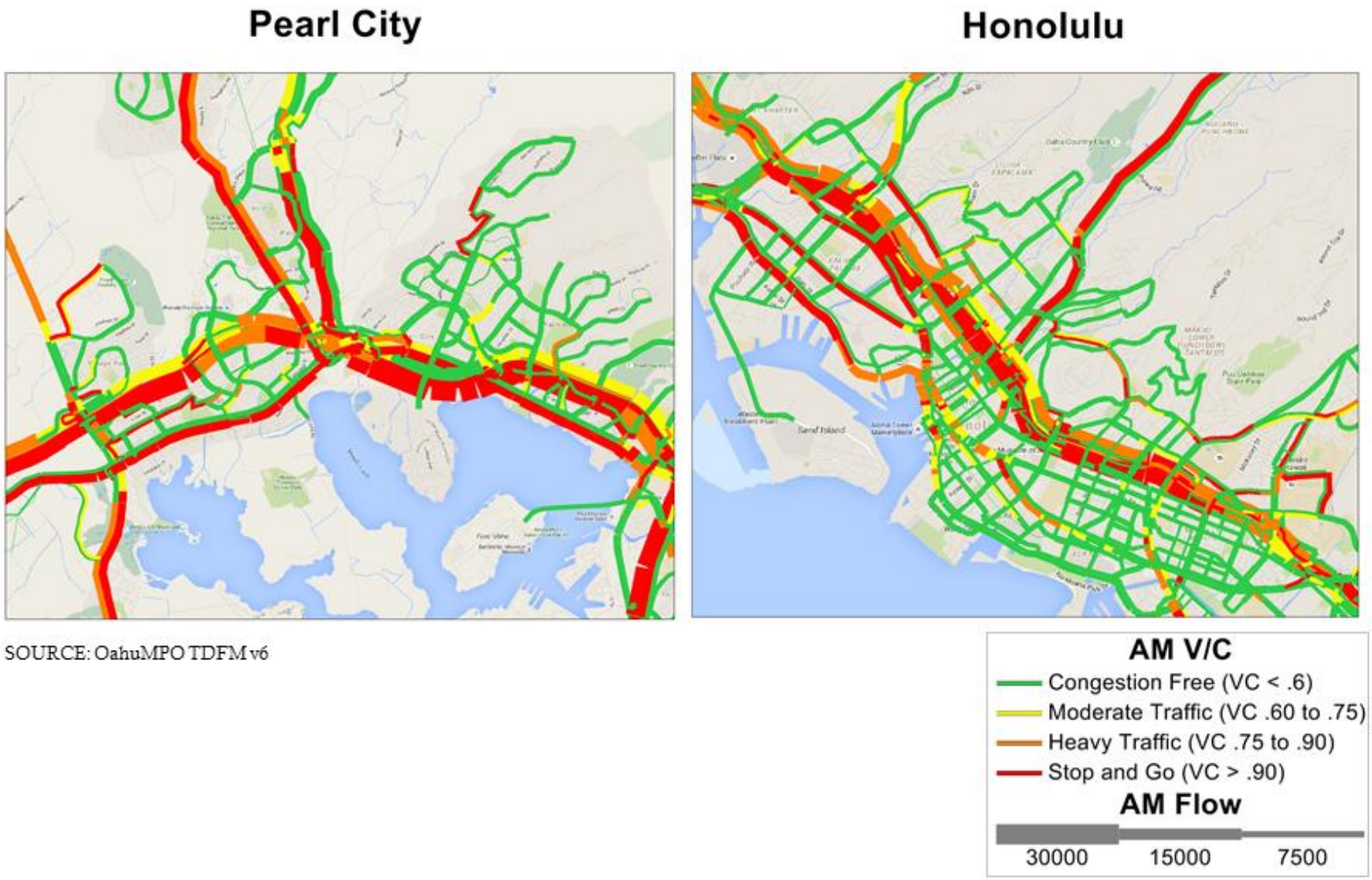


Figure 6-12 6:00-9:00 AM Roadway Level of Service (ORTP 2040) – Pearl City & Honolulu



SOURCE: OahuMPO TDFM v6

Potential Environmental Analysis and Consultation: Development of the ORTP allows the OahuMPO to consult with environmental agencies, consider system-wide environmental issues, and make informed decisions when setting project priorities. The result is a transportation plan that not only minimizes negative impacts on the natural environment, but one that is ultimately more efficient, timely, and cost-effective. The ORTP's role in examining environmental impacts and mitigation measures is to identify potential system-level issues; the ORTP is not a project-level environmental document, which requires fieldwork and specific analysis under the National Environmental Policy Act (NEPA). Appendix B identifies the environmental agencies and other stakeholders that were consulted for this ORTP.

Federal regulations[20] define an ordered approach to mitigation, which start with avoiding the impact and proceed through minimizing impacts, rectifying impacts, reducing or eliminating impacts over time, and allows compensating for the impacts. When project-specific environmental analyses are conducted, the potential environmental mitigation measures in Appendix C should be considered.

Environmental Justice Analysis: The first goal of the ORTP 2040 is to provide an inclusive multi-modal transport system. To evaluate the inclusiveness of the ORTP 2040, the OahuMPO analyzed planned investment in T6/EJ population areas (shown in Figure 6-13). The analysis entailed determining the percent investment and average per capita investment by Census block group under the 2040 No-build conditions and ORTP 2040.

The results indicate that under the ORTP 2040, while 37 percent of block groups are designated as T6/EJ areas, 42 percent of the plan's investments would occur in T6/EJ areas. However, T6/EJ individuals receive about $7,555 in ORTP network project expenditures, while non-T6/EJ individuals receive an average of $9,347 each. It should be noted that T6/EJ communities receive indirect benefits from projects that are not necessarily constructed entirely in locations with a concentration of T6/EJ individuals. For example, transit projects and transit service improvements have a greater impact on T6/EJ communities than non-T6/EJ areas no matter where the improvements are made. Figure 6-14 shows ORTP 2040 investment by geographic area.

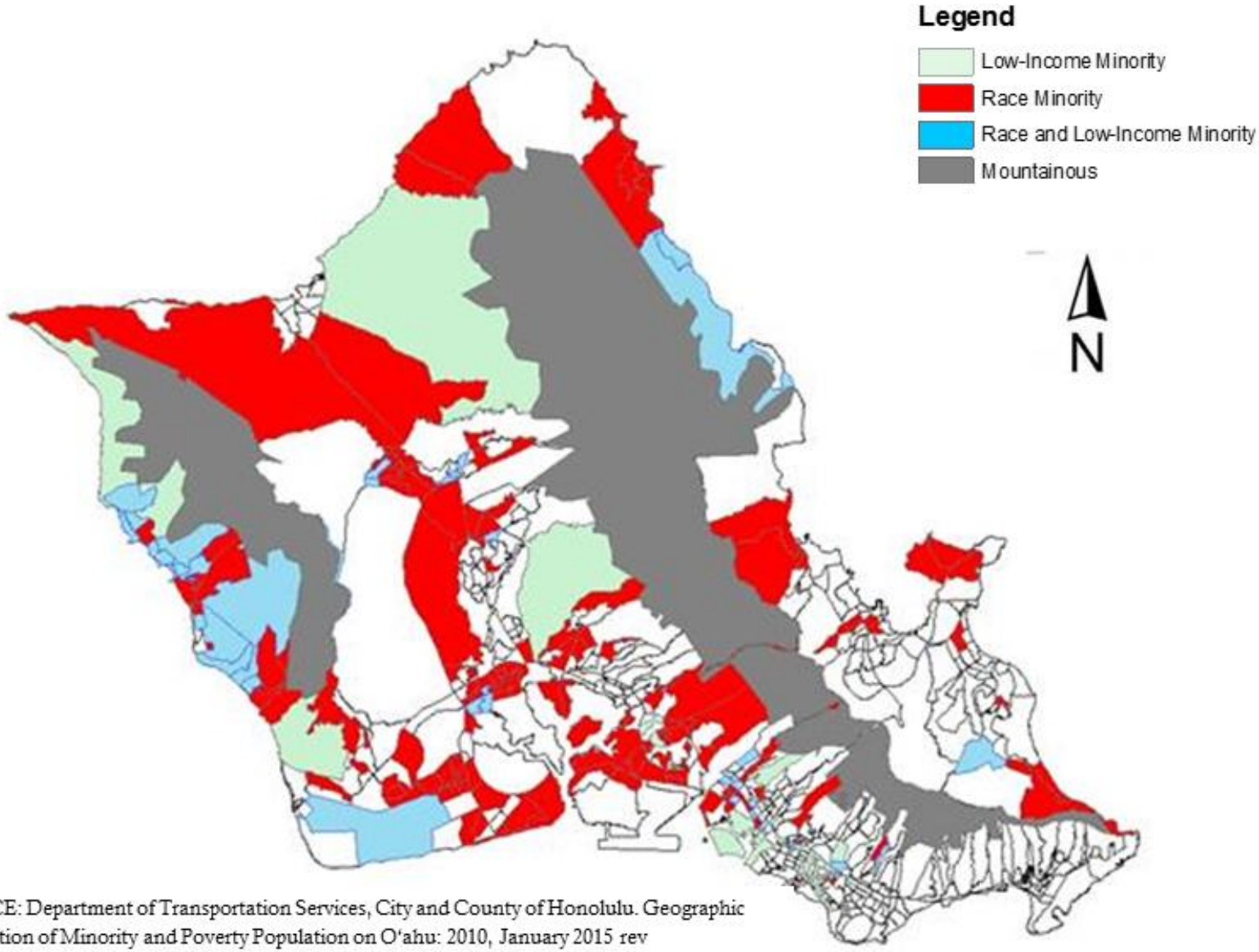
Expenditures: Of the nearly $17 billion forecast for transportation investments in the ORTP 2040, 65 percent of the total is allocated to transit operations and projects. Another $3.2 billion, or 18 percent of the total is allocated to projects or programs related to system preservation, safety, and maintenance and 16 percent to modernization and congestion mitigation projects, many of them along the Interstate Route H-1 corridor.

To facilitate the development of Ewa/Kapolei and the continued growth of the PUC, many of the modernization projects in the mid-term plan are located in and around those areas or along the Interstate Route H-1 corridor. In addition, a significant portion of the transit capital projects is associated with the Honolulu Rail Transit Project and with service expansion to and within Ewa, Kapolei, and Windward Oahu. These transit expenditures are budgeted in the mid-term plan as well. All of these improvements are anticipated to work together to relieve the most congested corridors in Oahu. Additional transit expansion projects include express bus service to the North Shore, Waianae, and Windward Oahu.

Clearly, the priorities evidenced in the ORTP 2040 reflect the stated goal of making Oahu's transportation system more sustainable through investments in the existing infrastructure as well as mass transit. Table 6-3 shows the breakdown of capital, operations and maintenance, and system preservation expenditures.

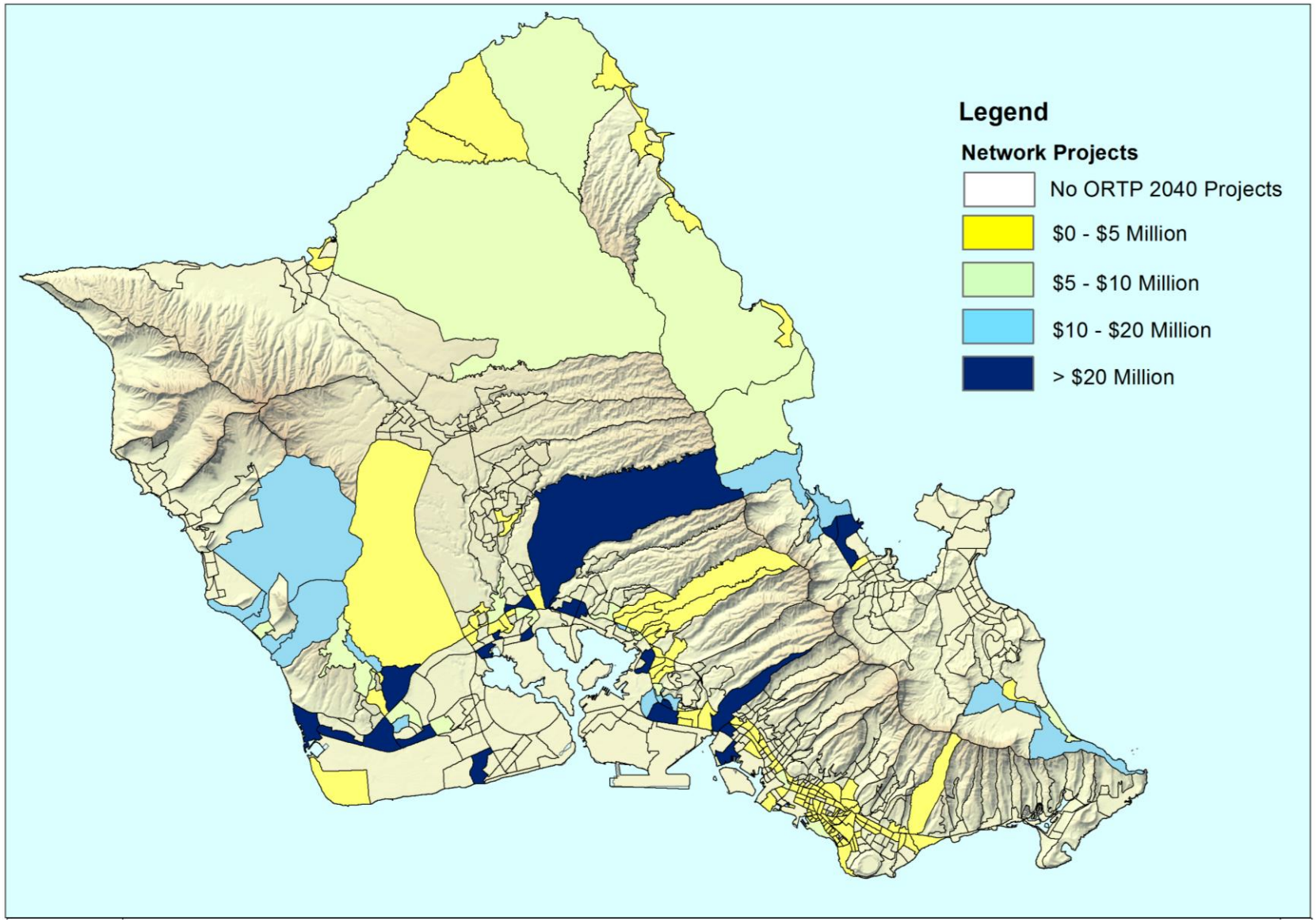
[20] http://www.gpo.gov/fdsys/granule/CFR-2012-title40-vol34/CFR-2012-title40-vol34-sec1508-20/content-detail.html

Figure 6-13 Minority and Low-Income Title VI/EJ Areas: 2010



SOURCE: Department of Transportation Services, City and County of Honolulu. Geographic Distribution of Minority and Poverty Population on O'ahu: 2010, January 2015 rev

Figure 6-14 ORTP 2040 Investment by Geography



Fiscal Constraint: According to 23 CFR 450.322, the ORTP must demonstrate that there is a balance between the expected revenue sources for transportation investments and the estimated costs of the projects and programs described in the Plan. In other words, ORTP must be fiscally (or financially) constrained. ORTP 2040 meets Federal tests of fiscal constraint. As shown in Table 6-3 (on the next page), total revenues are sufficient to fund Plan expenditures.

The "Short-Range Projects" in Table 6-1 were identified as existing or fully-funded committed (E+C) projects since the approval of ORTP 2035. Committed projects also met the test that they were fully designed, completed all required planning/NEPA and other applicable permit/approval requirements, had obtained ROW and/or easements, and permits, were ready to proceed to construction or bid, and were programmed for construction within the first two years of the current Transportation Improvement Program (TIP), as revised. These E+C projects include an investment of greater than $6 billion the - bulk of which is associated with the Honolulu Rail Transit Project. $213 million in partial funding has been identified for some ORTP projects on the FFY 2015–2018 TIP as of Revision 6.

The State of Hawaii also had a "Pipeline" balance of $656,577,268 at the beginning of FFY 2016. The "Pipeline," or balance of unexpended Federal obligation, was reduced by $100,964,597 during FFY 2015 and is on target to reach FHWA and HDOT's established goal of a $450,000,000 balance for the end of FFY 2018. As financial forecasts for the ORTP 2040 begin in 2019, the balance of unexpended Federal obligation is not anticipated to generate revenue for the Plan; however, de-obligation and re-obligation of Federal funds to ORTP 2040 projects would have a positive effect on the Plan's financial forecast.

Unless otherwise available, costs presented in the ORTP for modernization projects are Planning Level Cost Estimates (PLCE) derived from a project's length. Contingency and civil engineering and inspection costs were also added. When observed in the field, cost for other factors such as bridging or utility relocation was added on a project-by-project basis. PLCEs are presented in 2015 dollars. The year-of-expenditure (YOE) conceptual financial plan assumes a two percent annual inflation rate (consistent with the TIP and STIP) and is applied at the midpoint of the range resulting in $219 million in additional cost due to inflation for modernization projects.

As shown in Table 6-2, a variety of different revenue sources are currently used to finance the transportation system on Oahu and in Hawaii. Revenue projections are used to estimate the level of investments Oahu can reasonably afford. The purpose of these projections is to ensure the long-term capability of Oahu to fund transportation projects and programs. As projects move from the ORTP 2040 to implementation, funding assumptions (e.g., sources and amounts of revenues) may be modified. Revisions to the ORTP 2040 can be made during its five-year funding cycle or when an action triggers the need for an adjustment. Amendments to the ORTP 2040 financial plan may be made, in accordance with the OahuMPO's adopted ORTP Policies and Procedures, if major changes are made to the funding assumptions that would affect the Plan's financial viability.

Table 6-2 Anticipated Uncommitted Revenue (x $Millions sorted from highest to lowest)

City Transit	$6,685
Transit Fares	$2,837
FTA	$1,483
Developer	$1,437
City O&M	$1,337
FHWA - NHPP	$1,046
City Match	$484
State Preservation	$390
FHWA - STP	$364
State Match	$318
FHWA - STP-U	$261
FHWA - Non-E+C 2015-18 TIP	$213
FHWA - HSIP	$210
FHWA - CMAQ	$121
FHWA - TAP-U	$19
FHWA - STP-OS Bridge	$2

Table 6-3 Oahu Regional Transportation Plan 2040 Expenditures

	Project (by Category)	Expenditures (x $Millions)	Percent of Dollars	Number of Projects	Revenue (x $Millions)
Mid-Range Projects 2019 to 2029	Non E+C 2015-2018 TIP	-	-	-	$213.0
	Congestion Mitigation Project(s)	$114.3	2%	4	$173.0
	Enhancement Project(s)	$12.0	0%	1	$11.9
	Modernization Project(s)	$1,001.5	16%	11	$696.7
	Developer Funded Modernization Project(s)	$811.0	13%	8	$811.0
	Safety Project(s)	$105.0	2%	1	$105.0
	System Preservation Project(s)	$1,010.1	17%	5	$1,289.5
	Transit Project(s)	$3,063.9	50%	5	$4,902.3
	Total	**$6,117.8**		**35**	**$8,202.4**
Long-Range Projects 2030 to 2040	Congestion Mitigation Project(s)	$219.5	2%	3	$173.0
	Enhancement Project(s)	$12.0	0%	1	$11.9
	Modernization Project(s)	$50.0	0%	1	$696.7
	Developer Funded Modernization Project(s)	$725.0	7%	5	$725.0
	Safety Project(s)	$105.0	1%	1	$105.0
	System Preservation Project(s)	$1,816.7	17%	5	$1,289.5
	Transit Project(s)	$7,940.6	73%	5	$6,102.7
	Total	**$10,868.8**		**21**	**$9,103.7**
	Project (by Category)	**Expenditures (x $Millions)**	**Percent of Dollars**	**Number of Projects**	**Revenue (x $Millions)**
Project Totals 2019 to 2040	Non E+C 2015-2018 TIP	-	-	-	$213.0
	Congestion Mitigation Project(s)	$333.8	2%	7	$346.0
	Enhancement Project(s)	$24.0	0%	2	$23.8
	Modernization Project(s)	$1,051.5	6%	12	$1,393.4
	Developer Funded Modernization Project(s)	$1,536.0	9%	13	$1,536.0
	Safety Project(s)	$210.0	1%	2	$210.0
	System Preservation Project(s)	$2,826.8	17%	10	$2,579.0
	Transit Project(s)	$11,004.5	65%	10	$11,005.0
	Inflation from Modernization Project(s)	-	-	-	-$219.0
	Total	**$16,986.6**		**56**	**$17,087.1**
	City and County of Honolulu Share:*	*$12,739.9*	*77%*	*21*	-
	State of Hawaii Share:*	*$3,912.9*	*23%*	*28*	-
Illustrative Projects	*Illustrative Modernization Project(s)*	*$2,393.7*	-	*6*	*$0.0*
	Illustrative Transit Project(s)	*$9,292.0*	-	*6*	*$0.0*
	Total	***$11,685.7***	-	***12***	***$0.0***

**City and State Share does not include combined C/S projects.*

Financial and Policy Implications: Clearly, the projects and programs included in the ORTP 2040 reflect the desire to make Oahu's transportation system more sustainable. The overwhelming share of plan expenditures—85 percent—goes to support maintenance and operations, transit expansion, system preservation, high technology projects such as ITS, and bicycle and pedestrian improvements. The remaining balance goes to modernization projects.

The initial capital costs associated with developing a more sustainable transportation system may make it appear to be more expensive than not. Yet, over the long term, increasing transportation choices and access to the transportation system brought about by these investments can be expected to reduce the overall costs of moving people, goods, and services, and enhancing economic competitiveness.

Transportation investments that support community livability can also have multiple co-benefits. Compact, connected, and accessible communities encourage walking, bicycling, and transit use, which provides exercise while reducing the need for auto travel and making trips shorter for those who choose to drive.

Measures that lead to a more sustainable lifestyle are comprised of strategies that reduce congestion, increase access to public transportation, improve air quality, and enhance coordination between land use and transportation decisions. Many of these measures require a concerted effort over time by State and City agencies. The OahuMPO is actively working with the DPP, DTS, HART, HDOT, and DBEDT, as well as with Federal agencies, such as FHWA, FTA, FAA, the Maritime Administration, the Environmental Protection Agency, and the Department of Housing and Urban Development. In order to institutionalize sustainability goals, these partnerships must continue, and additional stakeholders, such as large employers and the military, must be brought into the conversation.

ORTP 2040 includes specific strategies to reduce per capita vehicle miles traveled; encouraging greater use of transit, carpools, and vanpools; and expanding the network of walkways and bicycle lanes to foster a more sustainable islandwide transportation system.

Fostering livability in transportation projects and programs will improve quality of life, create a more efficient, safe and accessible transportation network, reduce impacts on the environment, and serve the mobility needs of communities, families, and businesses, especially those who are traditionally underserved.

Chapter 7 – Implementation and Evaluation

➢ *Chapter 7 describes the recommended methods for evaluating the progress of plan implementation.*

Successful implementation of the ORTP requires a protocol for evaluation of the effectiveness of transportation improvements in the planning area. The ORTP is the core work product of the OahuMPO's existing 3-C planning process and is implemented through the Congestion Management Process (CMP) and the TIP. Pursuant to 23 CFR 450.330, the Policy Board selects all Title 23 United States Code (USC) and Title 49 USC Chapter 5303 funded projects (excluding projects on the National Highway System and projects funded under the Bridge, Interstate Maintenance, and Federal Lands Highway programs) from the ORTP and establishes a performance-based, measure-driven process to prioritize them in the TIP. This process ensures that priority congestion management strategies are considered during the selection of future improvement projects. The ORTP influences the selection of congestion mitigation and modernization measures because updates to the CMP are completed in conjunction with scheduled updates of the ORTP and prior to the development of a new TIP.

Implementation Activity

This section identifies the processes accomplished and actions to be considered to enhance the ORTP. Appendix D identifies the Federal requirements for the ORTP as identified in the FHWA Certification Review Primer[21], 23 CFR 450.322, 23 CFR 450.324, 49 CFR 613.100, and the corrective action from the OahuMPO TMA Certification Review, dated September 26, 2014.[22] The corresponding implementation activity and the page number location within this document are noted for reference. The activities listed are supplemental to and are supportive of the Regional Goals and Objectives as provided in Table 3-1.

Recommended Evaluation Methods

This section outlines methods that can be used to evaluate the ORTP prior to and post-implementation. Some of the evaluation measures listed below could be used to determine the feasibility of individual projects.

Comprehensive Data Management Study: After development of the ORTP 2040 and an update to the State of Congestion on Oahu, the OahuMPO intends to conduct a Comprehensive Data Management and Sharing Study. The study would further coordinate the data management and sharing process between the OahuMPO and its member agencies. The study would establish a data sharing pool and recommend a program to outline specific policies and procedures concerning the collection, management, and distribution of data. The CMP TAC subcommittee could oversee the development, research, and analyses of data considered. Pending available funding, the Comprehensive Data Management and Sharing Study is anticipated to be included in the Fiscal Year 2017 Overall Work Program (OWP).

Project Selection: Project identification and selection in the ORTP and TIP should continue to be approved by the MPO Policy Board in consultation with the State, City, and HART.

Quantifiable criteria should be developed to prioritize improvements selected in the FFYs 2019-2022 TIP. In evaluating projects, the following should be considered:

- In assessing need, were tools available to adequately measure performance? If not, what additional tools or resources are needed?
- Does the project/strategy selected further the ORTP Goals and Objectives?
- What is the total cost for implementing the management strategy?
- What are the potential benefits?

[21] https://www.planning.dot.gov/documents/primer/intro_primer.asp

[22] http://www.oahumpo.org/wp-content/uploads/2014/09/OMPO-2014-TMACertRpt-092614.pdf

- Are other strategies available that would achieve the same benefit at equal or lesser cost, time, or consequence? If yes, what are the potential advantages/disadvantages of choosing an alternate strategy?

Post Selection/Construction Evaluation: Assessing whether or not a strategy or project was successful is important in future decision making and in the refinement of the overall performance measurement process. The assessment of implemented projects and their impact is recommended. Considerations in the evaluation process include:

Are the anticipated impacts immediate or gradual? If gradual, what are the appropriate measurement intervals?

- Did the project or strategy reduce (or stabilize) a performance measure? If yes, include an analysis of cost, time, and other quantifiable resources. Did other projects/factors contribute?
- If the project or strategy did not result in measurable reduction or stabilization in congestion, what factor(s) limited its effectiveness?
- Did implementation of the project or strategy result in any unanticipated consequences (adverse or beneficial)?
- Are the project/strategy and results specific to a corridor, segment, or intersection; or can the project/strategy be replicated elsewhere?

Survey research: It is important to have an understanding of the receptiveness of the proposal of the intended end user(s). Surveys can provide insight as to the practicalities or limitations of programs. Surveys can also be useful in determining mode choice preferences of various target populations. As an example, surveying tourists about their willingness to use public transportation or bicycle/pedestrian facilities can help gauge where to prioritize investments and to what extent improvements can enhance the transportation system. Surveys can be beneficial in assessing various alternatives prior to implementation.

Appendix A: Disposition of Comments on Public Review Draft ORTP 2040

Appendix A.1: Intergovernmental agency and Public comments

Table A-1 presents all written comments received during the public and intergovernmental review period, along with OahuMPO's disposition of those comments. Table A-2 presents comments received after the comment deadline, but which were able to be incorporated in the revised draft. In some cases, comments have been summarized or the original message has been split into multiple comments. (NOTE: The page/figure/table numbers under the "Content/Section" and "Comments" columns below are specific to the ORTP Public Review Draft. Some pages, figures, and tables may have been renumbered in the Approved ORTP as noted under the "Response" column.)

Copies of written comments exactly as received can be found at the OahuMPO website at this link: http://www.oahumpo.org/get-involved/public-review-and-comment/draft-oahu-regional-transportation-plan-2040/draft-ortp-2040-comments-as-received/

Table A-1 Public and Intergovernmental Comments Received during Comment Period

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
1	List of Abbreviations	CAC - Frank Genadio	HART is the Honolulu Authority for Rapid Transportation; correct the term in both places. Add the following to the List of Abbreviations: CMP Congestion Management Process MPA Metropolitan Planning Area PUC Primary Urban Center TOD Transit-Oriented Development VMT Vehicle Miles Traveled (NOTE: There are other non-listed acronyms throughout the ORTP, but they are typically used close to their definition.)	The requested revisions were added to the list on page v.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
2	Chapter 1, Page 7, Why is ORTP 2040 Important?	CAC - John Goody	Projects to improve safety for the elderly, especially as pedestrians where Hawaii has a high rate of deaths/injuries, are not apparent despite mention in this section of the importance providing options for seniors.	The Hawaii Strategic Highway Safety Plan specifically identifies these goals as emphasis areas and improvements are eligible expense under Project Nos. 401 and 451 (Highway Safety Improvement Program). A footnote link to this plan was added to page 3.
3	Chapter 1, Plan Purpose and Process	CAC - John Goody	Should include mention of integrating a complete streets approach to transportation planning.	The requested revision was added to page 3.
4	Chapter 1, Plan Purpose and Process	EPA - Asia Yeary	On page 8 of your timeline, it does not mention a process for updating the plan as we move forward. Is there a process and timeline? If so, please include.	No revisions are proposed since ORTP implementation is addressed in the "Implementation and Evaluation discussion" in Chapter 7. As noted in 23 CFR 450.322, the ORTP must be updated every five years but may be revised at any time.
5	Chapter 2	EPA - Asia Yeary	On page 21, you discuss HCEI and this section is outdated. Hawaii has a 100% RPS by 2045, it is no longer 70%. Also on this page, you discuss groups/forums. Perhaps you can mention the “Sustainable Transportation Forum” that meets quarterly since Ford came into office.	The requested revision was added to page 17.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
6	Chapter 2	EPA - Asia Yeary	On page 13, you begin to list challenges and opportunities. but can you please add a short section for "multi-modal transportation, connectivity", "People movement (not LOS)", and instead of "Land Development plans" can you change this to "Integrating land use and transportation" and expand the discussion?	No revisions are proposed since the ORTP 2040 addresses the most significant opportunities and challenges. A copy of this comment and all ORTP 2040 comments were made available for review by the Policy Board on the OahuMPO website.
7	Chapter 2	EPA - Asia Yeary	Somewhere in this document you describe an ideal transportation system according to an organization in Canada. I'm curious why and if you can find an organization (maybe FHWA) that has a better definition and replace this definition?	Page 17 was revised to include EPA's definition of "sustainable transportation."
8	Chapter 2 and Chapter 3	Shem Lawlor - Blue Planet Foundation	The Plan only lists and analyzes the public and developer contribution portions of transportation costs.	No revisions are proposed since the ORTP 2040 includes goals to support economic development and freight movement in Chapter 3. A more comprehensive analysis of economic costs is beyond the scope of this ORTP process.
9	Chapter 2 and Chapter 3	Shem Lawlor - Blue Planet Foundation	The Plan largely overlooks transportation energy issues	No revisions are proposed since the ORTP 2040 includes information about energy conversation and sustainable transportation in Chapter 2 and also includes related goals and objectives in Chapter 3.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
10	Chapter 2, Existing Conditions	CAC - John Goody	The Pedestrian Plan should be mentioned. The elderly should be included in mention of groups needing access to the transportation system.	The requested revision was added to page 17.
11	Chapter 2, Page 11, Figure 2-1	CAC - Andrea Anixt	Map appears to show outdated information	The travel demand model is recalibrated with each ORTP every five years, and Figure 2-1 accurately represents volumes as of the latest calibration. The recently approved CMP Policies and Procedures recommends on page 30 that the OahuMPO begin to use "observed performance measures" and it is expected that they will be included in the next State of Congestion on Oahu report.
12	Chapter 2, Page 16, Figure 2-7	CAC - Andrea Anixt	Figure appears to be based on incorrect population growth figures and therefore shows a lower estimated population growth than actually anticipated.	This Figure accurately depicts the population forecast provided by DPP.
13	Chapter 2, Page 20	CAC - Frank Genadio	Stating that the rail project will be operational by the year 2040 is misleading. Recommend that the sentence be restructured to change "by the year 2040…" to "during the next decade…"	The reference to the rail timeline has been removed from page 17.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
14	Chapter 3	EPA - Asia Yeary	Is page 9 a good place to list some goals of the new system? In the paragraph below figure 1-1, you discuss the unsustainable system and how we need to rethink and offer more transportation choices. Perhaps you could follow this up and say something about the importance of offering more transportation choices that prioritize key elements such as: Safety, Multi-modal transportation, connectivity, complete streets, Energy and fuel use, Integrating Land use, People movement, not Level of Service (LOS) and Climate adaptation.	No revisions are proposed since these suggested revisions are reflected in the Regional Goals and Objectives in Table 3-1.
15	Chapter 3	EPA - Asia Yeary	Please identify Complete Streets policy implementation and complete streets infrastructure implementation as part of the Regional Goals and Objectives in ORTP 2040.	The requested revision was added to Table 3-1 as Objective 1.C.
16	Chapter 3	EPA - Asia Yeary	Can you please include “multi-modal” and “complete streets, safe for all users” in your vision statement on the executive summary of your document and throughout the document, wherever this vision statement is referenced?	A copy of this comment and all ORTP 2040 comments were made available for review by the Policy Board on the OahuMPO website.
17	Chapter 3	EPA - Asia Yeary	In your goals chart, number 6 is the only goal that discusses funding. To be consistent, can you please delete “with established sources of funding in a fair and equitable manner” otherwise, you’re limiting #6’s potential/ no others are limited:	No revisions are proposed since the ORTP 2040 Regional Goals and Objectives were approved by the OahuMPO Policy Committee in June 2014. Revisions to the Regional Goals and Objectives can be reevaluated in future updates or revisions to the ORTP.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
18	Chapter 3	Shem Lawlor - Blue Planet Foundation	There are no "SMART" goals or objectives listed in the Plan.	No revisions are proposed since the ORTP 2040 Regional Goals and Objectives were approved by the OahuMPO Policy Committee in June 2014. Revisions to the Regional Goals and Objectives can be reevaluated in future updates or revisions to the ORTP. The ORTP 2040 includes "plan performance" information in Chapter 6 to compare performance metrics (VMT, transit boardings, vehicle hours of delay) with and without ORTP implementation. More specific performance measures will be developed as described in the "Implementation and Evaluation discussion" in Chapter 7.
19	Chapter 5, Page 27	CAC - Frank Genadio	In the first paragraph of “Paying for the Plan,” transit fares are mentioned as helping to cover some of the cost of the transit system. This should be expanded to show some reality, since fare box revenue is limited to between 27 and 33 percent of operations and maintenance—and it is likely that property tax increases will be necessary when rail begins full operations.	HART is scheduled to approve a financial refresh report later this year (2016) which will provide the basis for additional forecasts regarding the cost of the rail transit system.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
20	Chapter 6 and Projects List	EPA - Asia Yeary	Please include information about bike sharing as a TDM strategy in ORTP 2040 (and in Projects List?)	A reference and footnote link was added to page 24 about Bikeshare Hawaii's efforts to establish a bikeshare system, and "bike share" has been identified as a Transportation Demand Management (TDM) strategy in Project Nos. 4 and 54 in the ORTP Projects List.
21	Chapter 6, Consultation and Appendix B	James Kauhi, Hawaii Department of Education	With respect to identification of other stakeholders/interested parties, the STSB would encourage the Organization to include our school bus contractor partners as well as other bus charter and transit companies who have significant interests on this matter. Clearly, their businesses are impacted by the roadways and traffic in Hawaii, and they may have valuable input and suggestions to offer about how to improve traffic flow and roadway safety in Hawaii.	OahuMPO staff contacted the school bus operators (Ground Transport and Roberts Hawaii) to request their input.
22	Chapter 6, Page 48, Figure 6-9	CAC - Andrea Anixt	Map should show all of the North Shore and Windward coast.	The requested revision was added to Figure 6-9.
23	Chapter 6, Page 52	CAC - Andrea Anixt	Express bus service to the North Shore and Windward coast should be promoted.	DTS acknowledges the support and comments.
24	Chapter 6, Page 52	CAC - Andrea Anixt	Please add a map of the T6/EJ areas and projects.	Figure Nos. 6-13 and 6-14 were added.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
25	Chapter 6, Page 52	CAC - Frank Genadio	The next to last paragraph on page 52 refers to “express service” in the last sentence. The rail project is mentioned earlier in the paragraph, and this sentence could be misconstrued. Suggest changing to “express bus service” to make it clear that there are no current plans for rail express service.	The requested revision was added to page 50.
26	Chapter 6, Page 56	CAC - Frank Genadio	The last two words should be either one word, “underserved” or hyphenated.	The requested revision was added to page 55.
27	Chapter 6, Plan Performance	Shem Lawlor - Blue Planet Foundation	The Plan misinterprets recent data and is missing the trend of decreasing numbers of drivers and VMT.	No revisions are proposed since the increase in drivers and VMT is supported by the travel demand forecast model and land use and growth data provided by the City Department of Planning and Permitting.
28	Chapter 6, Potential Environmental Mitigation Measures	Kierstan Faulkner - Historic Hawaii Foundation	The written authorization of FHWA and the written approval of the State Historic Preservation Office (SHPO) are required for "all licenses, permits, or easements authorizing the use or occupancy of the 40' railroad right-of-way [for the historic Oahu Rail and Land Company (OR&L)]." Requirements under NEPA, Section 106, 4F and other Federal environmental Laws must be fulfilled for any use of the ROW.	References to "FHWA and SHPO consultation" and "compliance with Section 4(f) and Section 106 requirements" were added to the List of Potential Environmental Mitigation Measures in Appendix C.
29	Chapter 6, Projects List	EPA - Asia Yeary	Please ADD my TIP comments to the Projects List.	A copy of this comment and all ORTP 2040 comments were made available for review by the Policy Board on the OahuMPO website.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
30	Chapter 6, Projects List	John Schockley	Project 50 [from ORTP2035] needs to be restored to the budget. It's costly, but looking forward, it's worth the investment.	The potential realignment of Farrington Highway is currently an Overall Work Program Study (Work Element No. 202.04-15) that the OahuMPO is managing. It was not submitted by an implementing agency in the initial solicitation for ORTP projects in October, 2015, and the local match is not expected to be readily available. If the study results in a recommendation that is supported by an implementing agency, it can be considered for future inclusion in the ORTP.
31	Chapter 6, Projects List	DOH - Kari Benes	This may be hard to do, but looking at your number 1 goal under Figure 3-1 "Transportation Facilities" it would be beneficial to see how the listed projects align with this fundamental goal. What comes to mind is how can OMPO prioritize some of the pedestrian and bicycle facilities based on lack of existing connectivity.	No revisions are proposed since the prioritization of projects in ORTP 2040 was based on input from the implementing agencies. Further refinements in the priority criteria (e.g. connectivity) will be reevaluated in further updates or revisions to the ORTP.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
32	Chapter 6, Projects List	James Kauhi, Hawaii Department of Education	While our primary concern is the safe and efficient transport of these 38,000 students via school buses, we are equally concerned about the other approximately 138,000 students in Hawaii who do not use the school bus as their primary source of transportation. As a result, we would encourage the Oahu Metropolitan Planning Organization to consider prioritizing pedestrian walk paths and crosswalks near or around school sites. While my agency does not currently enjoy management and oversight of such matters, we are very much aware of how such conditions can affect the health and welfare of students who have no other choice but to walk to and from school.	The "Alternative Projects" in the ORTP Project List may include "safe routes to schools" projects identified by the implementing agencies. A reference to "safe routes to schools" was added to Project Nos. 101 and 151 in the ORTP Projects List.
33	Chapter 6, Projects List	James Kauhi, Hawaii Department of Education	We would encourage the Organization to consider heightened pedestrian crosswalk safety solutions that pose minimal traffic impediment such as elevated walkway crossings strategically located near school zones. This would not only improve pedestrian safety but do so in a manner that minimizes traffic disruption, particularly at high traffic intersections where vehicles are often prevented from making left or right turns when pedestrians are present in crosswalks.	The "Alternative Projects" in the ORTP Projects List may include crosswalk or other safety crossing improvements identified by the implementing agencies. A reference to "pedestrian crossing safety improvements" was added to Project Nos. 101 and 151 in the ORTP Projects List.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
34	Chapter 6, Projects List	Jennifer Appel, Applejacks Housing Hawaii	I would suggest considering double decker freeway construction like in Austin, Texas or on the George Washington Bridge in NYC as opposed to widening freeways and roads like Houston or Dallas, Texas.	No revisions are proposed since any potential double decker freeway construction would be dependent upon HDOT review and approval outside of this ORTP process. The Interstate H-1 Study is not projected to be completed until the Summer 2016. Consistent with the Transportation Improvement Program (TIP), it should be noted that the description for Project No. 5 (Interstate Route H-1, Corridor Study, Short Term Improvements) in the ORTP Projects List has been revised to read: "Develop top short term capacity/congestion improvements in the Final Interstate H-1 Corridor Study."
35	Chapter 6, Projects List	Jennifer Appel, Applejacks Housing Hawaii	At one point, there was a ferry system between Ko'olina/Campbell Industrial and Honolulu Harbor and that was not mentioned.	TheBoat was a pilot project under the City that was discontinued in June 2009.
36	Chapter 6, Projects List	Kierstan Faulkner - Historic Hawaii Foundation	We note the following projects appear to threaten the OR&L-related historic resources and therefore need greater scrutiny and possible revision to the location and/or design: Project Nos. 206; 304; 301; 302; and 251.	Copies of this correspondence were provided to the implementing agencies for those projects.
37	Chapter 6, Projects List	Kierstan Faulkner - Historic Hawaii Foundation	Historic Hawaii Foundation is also concerned with projects [that] could affect historic properties in other locations on Oahu, such as: Project 201; and 506.	Copies of this correspondence were provided to the implementing agencies for those projects.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
38	Chapter 6, Projects List	Kierstan Faulkner - Historic Hawaii Foundation	The ORTP projects should include sufficient funding for bridge rehabilitation that includes historic preservation standards. This may involve such items as seismic retrofits, custom-designed and tested railings, separate bridges to accommodate increased lanes (so the cross-section is split between a historic and new bridge to preserve the historic property), or other appropriate treatment options.	No revisions are proposed since the "System Preservation" projects in the ORTP Projects List includes bridge rehabilitation projects identified by the implementing agencies. Any historic preservation standards for bridge rehabilitation would be dependent upon City or HDOT review and approval outside of this ORTP process.
39	Chapter 6, Projects List	Shem Lawlor - Blue Planet Foundation	Roadway Capacity increases in the H-1/Rail Corridor included in the Plan will have significant negative consequences.	No revisions are proposed since HDOT is currently evaluating the widening of Interstate Route H-1 as part of the H-1 Corridor Study, which is not projected to be completed until the Summer 2016. Consistent with the Transportation Improvement Program (TIP), it should be noted that the description for Project No. 5 (Interstate Route H-1, Corridor Study, Short Term Improvements) in the ORTP Projects List has been revised to read: "Develop top short term capacity/congestion improvements in the Final Interstate H-1 Corridor Study."

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
40	Chapter 6, Projects List	State Senate Maile Shimabukuro, District 21	Farrington Hwy. is the only access for residents of Makaha, Waianae, Maili, Nanakuli, Ko Olina, and Honokai Hale. With only two lanes in each direction, even minor issues like a stalled vehicle can create hours of traffic backlog, adding to an already brutal commute. Subsequently, with our ever worsening traffic problems, residents are pleading for fruition of an alternate route or by-pass road, highway widening, and other traffic improvements to be moved forward on the timeline of ORTP projects.	No revisions are proposed since any changes to the scheduling or prioritization of this project would be dependent upon HDOT as the implementing agency. HDOT acknowledges the support and comments. Currently, HDOT is pursuing a study for the Leeward Oahu region that will consider an alternative access route.
41	Chapter 6, Projects List	State Senate Maile Shimabukuro, District 21	Consider the Kalaeloa to Hakimo Road widening (Project 54/351) on the draft ORTP 2040 be changed from the “Long-Range Projects” to the “Short-Range Projects” list. It is imperative that planning, design and construction work begin on this project immediately, due to resident concerns and the horrendous traffic encountered on a daily basis, at all hours. My understanding is that DOT is also urging OMPO to bump up Project 54/351 as an extension of their current turn lane project in Nanakuli.	To clarify the ongoing efforts of HDOT and the ORTP, the following sentence has been added to the description for Project No. 351 in the ORTP Projects List: "To improve congestion and safety operations, contra-flow, intersection improvements, traffic calming, and other improvements may be pursued in the short range."

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
42	Chapter 6, Projects List	State Senate Maile Shimabukuro, District 21	I would also like to see Project 50 [Farrington Highway realignment] included in the Projects List: project list for "Short-Range Projects" or "Mid-Range Projects") adjusted in level of priority on the ORTP 2040 and NOT listed under the series 700 "Illustrative Projects" which have no potential for funding. As recently covered on TV news, erosion continues to pose a serious safety threat at Makaha Surfing Beach. Moving the highway further mauka could vastly improve safety.	The potential realignment of Farrington Highway is currently an Overall Work Program Study (Work Element No. 202.04-15) that the OahuMPO is managing. It was not submitted by an implementing agency in the initial solicitation for ORTP projects in October, 2015, and the local match is not expected to be readily available. It is expected that the scope, cost estimate, and designation of an implementing agency will be refined with the study and brought back to the Policy Board for an ORTP amendment after study approval.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
43	Chapter 6, Projects List - ORTP2035 Project 50 - Makaha area highway safety improvements and Makaha Beach mauka bypass	Al Frenzel (as Malama Makaha)	Project #50 was not carried over from ORTP 2035 to the draft ORTP 2040 despite being a high priority within the leeward community.	The potential realignment of Farrington Highway is currently an Overall Work Program Study (Work Element No. 202.04-15) that the OahuMPO is managing. It was not submitted by an implementing agency in the initial solicitation for ORTP projects in October, 2015, and the local match is not expected to be readily available. It is expected that the scope, cost estimate, and designation of an implementing agency will be refined with the study and brought back to the Policy Board for an ORTP amendment after study approval. HDOT acknowledges the support and comments. Currently, HDOT is pursuing a study for the Leeward Oahu region that will consider an alternative access route.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
44	Chapter 6, Projects List - ORTP2035 Project 50 - Makaha area highway safety improvements and Makaha Beach mauka bypass	CAC - Al Frenzel	Project #50 was not carried over from ORTP 2035 to the draft ORTP 2040 despite being a high priority within the leeward community.	The potential realignment of Farrington Highway is currently an Overall Work Program Study (Work Element No. 202.04-15) that the OahuMPO is managing. It was not submitted by an implementing agency in the initial solicitation for ORTP projects in October, 2015, and the local match is not expected to be readily available. It is expected that the scope, cost estimate, and designation of an implementing agency will be refined with the study and brought back to the Policy Board for an ORTP amendment after study approval. HDOT acknowledges the support and comments. Currently, HDOT is pursuing a study for the Leeward Oahu region that will consider an alternative access route.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
45	Chapter 6, Projects List - ORTP2035 Project 50 (Farrington Highway, Widening)	Marc Pa'aluhi, Waianae NB Transportation Committee Chair	Strongly against the MPO's decision to take Project 50 off the ORTP 2040. Please reconsider this decision, as our community so desperately needs more projects like these to be funded and executed.	The potential realignment of Farrington Highway is currently an Overall Work Program Study (Work Element No. 202.04-15) that the OahuMPO is managing. It was not submitted by an implementing agency in the initial solicitation for ORTP projects in October, 2015, and the local match is not expected to be readily available. It is expected that the scope, cost estimate, and designation of an implementing agency will be refined with the study and brought back to the Policy Board for an ORTP amendment after study approval. HDOT acknowledges the support and comments. Currently, HDOT is pursuing a study for the Leeward Oahu region that will consider an alternative access route.
46	Chapter 6, Projects List - ORTP2035 Project 51 (Highway Safety Improvements)	Cedric Gates	I want to express my full support for these as well as any and all projects that can be made to further facilitate motorist and pedestrian safety, ease of traffic congestion, an easier commute for residents, better road infrastructure, and better transportation access for the Leeward coast in general. In addition, Leeward coast needs an alternate access route.	HDOT acknowledges the support and comments. Currently, HDOT is pursuing a study for the Leeward Oahu region that will consider an alternative access route.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
47	Chapter 6, Projects List - ORTP2035 Project 54 (Farrington Highway, Widening), now ORTP2040 Project 351 (Farrington Highway, Widening)	Marc Pa'aluhi, Waianae NB Transportation Committee Chair	I'd like to make sure project 54 becomes a High Priority project as to help ease our traffic woes as soon as possible.	To clarify the ongoing efforts of HDOT and the ORTP, the following sentence has been added to the description for Project No. 351 in the ORTP Projects List: "To improve congestion and safety operations, contra-flow, intersection improvements, traffic calming, and other improvements may be pursued in the short range." HDOT acknowledges the project support and comments, but this project is not on or from HDOT's capacity program. The project came from the OahuMPO in previous ORTPs. Further, HDOT does not know its priority. HDOT suggests OahuMPO address in the update of the CMP, which will identify and prioritize these type of projects, and work with HDOT.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
48	Chapter 6, Projects List - Project 054/351 (Farrington Highway, Widening)	Cedric Gates	I want to express my full support for these as well as any and all projects that can be made to further facilitate motorist and pedestrian safety, ease of traffic congestion, an easier commute for residents, better road infrastructure, and better transportation access for the Leeward coast in general. In addition, Leeward coast needs an alternate access route.	To clarify the ongoing efforts of HDOT and the ORTP, the following sentence has been added to the description for Project No. 351 in the ORTP Projects List: "To improve congestion and safety operations, contra-flow, intersection improvements, traffic calming, and other improvements may be pursued in the short range". HDOT acknowledges the project support and comments, but this project is not on or from HDOT's capacity program. The project came from the OahuMPO in previous ORTPs. Further, HDOT does not know its priority. HDOT suggests OahuMPO address in the update of the CMP, which will identify and prioritize these type of projects, and work with HDOT. HDOT acknowledges the support and comments. Currently, HDOT is pursuing a study for the Leeward Oahu region that will consider an alternative access route.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
49	Chapter 6, Projects List - Project 201 (Kamehameha Highway Safety Improvements from Haleiwa to Kahaluu)	CAC - Andrea Anixt	This project is doing "piecemeal" what would be better done in a comprehensive North Shore Corridor Study, which could also consider the environmental impacts of Turtle Bay Resort expansion.	Planning studies are programmed by OahuMPO through the Overall Work Program (OWP). If a comprehensive North Shore Corridor Study were completed, and if it resulted in a recommendation that was supported by an implementing agency, that project could then be considered for inclusion in the ORTP in the future. The HDOT safety program applies to all modes of transportation, such as pedestrian, bicycle, freight, transit, and vehicles.
50	Chapter 6, Projects List - Project 201 (Kamehameha Highway Safety Improvements from Haleiwa to Kahaluu)	CAC - John Goody	The project should include improvements for the safety of all users, particularly bicyclists and pedestrians, rather than focusing on only automobiles.	The HDOT safety program applies to all modes of transportation, such as pedestrian, bicycle, freight, transit, and vehicles.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
51	Chapter 6, Projects List - Project 202 (Kamehameha Highway Safety Improvements from Kaalea Stream to Hygienic Store)	CAC - Andrea Anixt	The project design should address anticipated effects of climate change, such as rising sea levels and increased flooding, particularly at Haiamoa Stream Bridge.	The FAST Act [P.L. 114-94] added resilience to the list of required transportation planning areas of import for statewide and metropolitan planning. We agree that it is important to evaluate the effects of climate change in the design phase and will provide this comment to the implementing agency. HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.
52	Chapter 6, Projects List - Project 206 and 304 (Kualaka'i Parkway Extension and Widening)	Andrew Probyn	I visited this railroad on a trip from England, there are a bunch of dedicated enthusiast running this line and it now looks like it may be closed for a road improvement scheme. This is part of your heritage and needs to be supported not destroyed. It is also a tourist attraction in a tourist destination, so why harm it?	HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
53	Chapter 6, Projects List - Project 206 and 304 (Kualaka'i Parkway Extension and Widening)	Anthony Williams	Please build the road elsewhere so that the Hawaiian Railway Society right of way and operations yard are not destroyed.	HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.
54	Chapter 6, Projects List - Project 206 and 304 (Kualaka'i Parkway Extension and Widening)	Budge Rewick	The proposed route will cross through the west end of the Hawaiian Railway Society's (HRS) Ewa Rail Yard, its associated switches and track and the historic Oahu Railway and Land (OR&L) track and right-of-way, all of which are listed on the National and State Registers of Historic Places. The proposed crossing route would impinge and have a severe impact on the HRS/OR&L property and its operation. As alternatives I suggest either the crossing be moved further west or an overpass built sufficient to clear the HRS and OR&L yard, track and right-of-way.	HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
55	Chapter 6, Projects List - Project 206 and 304 (Kualaka'i Parkway Extension and Widening)	Christopher Lee	It is with sadness that I found out these two projects (206 & 304) may cause the Hawaiian Railway Society to shut down. I would greatly appreciate if you would reconsider approving these two projects, and give some consideration to the fantastic men and women who support the HRS. Thank you for your time.	HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.
56	Chapter 6, Projects List - Project 206 and 304 (Kualaka'i Parkway Extension and Widening)	Dave Ryan	Do not destroy this historical treasure, the route, the yard or any part of this fantastic piece of history. [re: Hawaiian Railway Society]	HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.
57	Chapter 6, Projects List - Project 206 and 304 (Kualaka'i Parkway Extension and Widening)	Eric Sibul	These projects would effectively force the Hawaii Railway to close down. The Hawaii Railway is an important tourist draw and a part of preserving Hawaii's heritage.	HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
58	Chapter 6, Projects List - Project 206 and 304 (Kualaka'i Parkway Extension and Widening)	Gary Hashimoto	I'm am opposed to the extension of North/South road in regards to it resulting in the closure of the yard at the Railway Society. I understand the need for progress and traffic improvement but this is an important piece of Hawaiian history and needs to be preserved.	HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.
59	Chapter 6, Projects List - Project 206 and 304 (Kualaka'i Parkway Extension and Widening)	John Book	Connecting Kualaka'i Parkway from Kapolei Parkway to Roosevelt Avenue would completely get rid of the Hawaiian Railway Society, which is on the National Register of Historic Places and the train yard is on the State Register of Historic Sites. Please preserve something that has historical and cultural value to the islands so that many will be able to visit it for many years to come.	HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.
60	Chapter 6, Projects List - Project 206 and 304 (Kualaka'i Parkway Extension and Widening)	Kalia Schuster	Please keep the historical railroad up and running. It is most likely a better investment in the long run for historical and cultural significance than the new rail will ever be.	HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
61	Chapter 6, Projects List - Project 206 and 304 (Kualaka'i Parkway Extension and Widening)	Kamaina Harris	Please do not allow the Kualaka'i Parkway to extend. The Hawaiian Railway Society is a valuable gem that would be gone forever if this project is allowed to be completed. If you need projects help improve the Right of Way and the Hawaiian Railway Society.	HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.
62	Chapter 6, Projects List - Project 206 and 304 (Kualaka'i Parkway Extension and Widening)	Lynn Yanagihara	Please abandon project 206 and 304 in order to save the Hawaiian Railway Society. This train yard and ride is an integral part of our history. Growing up in Hawaii and raising our children here, it is critical that they understand and appreciate our heritage as this is indeed what makes Hawaii so special.	HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
63	Chapter 6, Projects List - Project 206 and 304 (Kualaka'i Parkway Extension and Widening)	Matthew Musgrave	I am writing in regards to project 206 & 304 and how it would affect the historic railway right of way. I don't approve nor believe these projects should be allowed to go through due to the detrimental affect it would have on the historic landmark of our island. People love Hawaii not only for its natural beauty but for the history it offers. I understand that progress is inevitable but forgetting and destroying our history isn't alright. A greater compromise in favor of the Hawaiian Railway should be sought or the project should not go through. Thank for considering what I have to say.	HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.
64	Chapter 6, Projects List - Project 206 and 304 (Kualaka'i Parkway Extension and Widening)	Michael Rice	I am a former Employee and Volunteer at the Hawaiian Railway Society. Projects 206 and 304 have recently come to my attention in that they would not only interfere with the OR&L Right of Way (Which is on the National Register of Historic Places) but also shut down the Hawaiian Railway's Train yard (on the State Register of Historic Places), effectively ending operations and shutting down the Museum. I have rode on those trains since before I can remember and shutting them down to build a road extension would be a travesty if not a crime. I am pleading for whoever is in charge leave the Railway alone.	HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
65	Chapter 6, Projects List - Project 206 and 304 (Kualaka'i Parkway Extension and Widening)	Patrick Bratton	Please ensure that projects 206 and 304 avoid damaging what is left of Oahu railroad and rail yard that the Hawaiian Railway Society operates that would be great. I live out in Ewa and the heritage and culture they preserve are vital to our community.	HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.
66	Chapter 6, Projects List - Project 206 and 304 (Kualaka'i Parkway Extension and Widening)	Philip Chase	I understand that the Hawaiian Railroad Society's railroad may have to be put out of operation because of a road going through its yard in Ewa. This would be a great loss of history and enjoyment for the visitors and locals alike. Is there no creative way to prevent this?	HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.
67	Chapter 6, Projects List - Project 206 and 304 (Kualaka'i Parkway Extension and Widening)	Raydeen Graffam	Please preserve the area that houses the HAWAIIAN RAILWAY SOCIETY train yard! This is one of the final heritage jewels left... The heart and soul of the volunteers and the heartbeat of the trains over the tracks are truly a gift in our modern era. We cannot lose such an amazing location and resource!	HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
68	Chapter 6, Projects List - Project 206 and 304 (Kualaka'i Parkway Extension and Widening)	Roger Colton	I would ask that you strongly oppose any proposed projects such as 206 and 304 which will have a negative impact on the historic Oahu Railway and Land Company right-of-way, as well as the property of the Hawaiian Railway Society. I believe these historic resources offer Oahu residents and visitors from around the world an opportunity to learn and experience firsthand the impact that the railway had upon the culture and economy of the state of Hawaii. Preservation efforts such as those of the HRS are to be commended as projects worthy of community support for their efforts.	HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.
69	Chapter 6, Projects List - Project 206 and 304 (Kualaka'i Parkway Extension and Widening)	Roy Chang	Aloha, please do not allow an[y] new plans which would alter or affect the said railway park and its function. It is an asset and historical landmark to Hawaii. Thank you.	HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
70	Chapter 6, Projects List - Project 206 and 304 (Kualaka'i Parkway Extension and Widening)	Steve Vendt	As a long standing member of the Hawaiian Railway, I am opposed to these projects. They will once again tear apart the Historic Right of Way by crossing the tracks. I am very disappointed that this project has again surfaced. The Hawaiian Railway was told this project would not take place and that the road would just end in the Mall. I am very concerned that you even consider going thru our property that is on the State Register of Historic Places. Going thru the train yard would destroy our operations, close us down and keep us from protecting this last piece of Hawaii's railroading history.	HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.
71	Chapter 6, Projects List - Project 206 and project 304 (Kualaka'i Parkway Extension and Widening)	Les Bagley	Extending Kualaka'i Parkway will destroy the Hawaii Railway Society's base of operations.	HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
72	Chapter 6, Projects List - Project 210 (Makakilo Drive Second Access)	CAC - Frank Genadio	This project should be considered a higher priority and moved to the near term. #210 (OC7 in the TIP) has been on the Transportation for Oahu Plan 2025 since 2001, and was recommended by the Citizen Advisory Committee as its #1 project in 2005 for the FFY 2006-2008 TIP. Its construction has been pushed back to FFY 2020 (and that listing was only for illustrative purposes), and the project is not even listed in TIP Revision 8	As stated on page 53, the "Short-Range Projects" identified in the ORTP Projects List have "met the test that they were fully designed, completed all required planning/NEPA and other applicable permit/approval requirements, had obtained right-of-way and/or easements, and permits, were ready to proceed to construction or bid, and were programmed for construction within the first two (2) years of the current Transportation Improvement Program (TIP), as revised." This does not prohibit the implementing agency from expediting a mid-range project and requesting funding in the short-range.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
73	Chapter 6, Projects List - Project 251 (Fort Barrette Road; Widening, Farrington Highway to Barber's Point Gate)	CAC - Mike Golojuch	This project should be considered a higher priority and moved to the near term.	As stated on page 53, the "Short-Range Projects" identified in the ORTP Projects List have "met the test that they were fully designed, completed all required planning/NEPA and other applicable permit/approval requirements, had obtained right-of-way and/or easements, and permits, were ready to proceed to construction or bid, and were programmed for construction within the first two (2) years of the current Transportation Improvement Program (TIP), as revised." This does not prohibit the implementing agency from expediting a mid-range project and requesting funding in the short-range.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
74	Chapter 6, Projects List - Project 351 (Farrington Highway widening)	CAC - Al Frenzel	This project should be considered a higher priority and moved to the near term.	To clarify the ongoing efforts of HDOT and the ORTP, the following sentence has been added to the description for Project No. 351 in the ORTP Projects List: "To improve congestion and safety operations, contra-flow, intersection improvements, traffic calming, and other improvements may be pursued in the short range." HDOT acknowledges the project support and comments, but this project is not on or from HDOT's capacity program. The project came from the OahuMPO in previous ORTPs. Further, HDOT does not know its priority. HDOT suggests OahuMPO address in the update of the CMP, which will identify and prioritize these type of projects, and work with HDOT.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
75	Chapter 6, Projects List - Project 351 (Farrington Highway, Widening) and 708 (Waianae second access road)	Russell Hogan	Both projects will help mitigate traffic congestion and provide an alternate way in and out. Nanakuli is a major choke point. It can take 40 minutes to go 10 miles from Kapolei to Nanakuli every day and this is during normal traffic. If there is an accident, major repairs or major weather conditions, time can increase to 2hrs. Improvements to road ways not only supports the residents but also brings commerce and increase services which benefit all in Hawaii.	Project No. 351: To clarify the ongoing efforts of HDOT and the ORTP, the following sentence has been added to the description for this project in the ORTP Projects List: "To improve congestion and safety operations, contra-flow, intersection improvements, traffic calming, and other improvements may be pursued in the short range". HDOT acknowledges the project support and comments, but this project is not on or from HDOT's capacity program. The project came from the OahuMPO in previous ORTPs. Further, HDOT does not know its priority. HDOT suggests OahuMPO address in the update of the CMP, which will identify and prioritize these type of projects, and work with HDOT; and Project No. 708: HDOT acknowledges the support and comments. Currently, HDOT is pursuing a study for the Leeward Oahu region that will consider an alternative access route.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
76	Chapter 6, Projects List - Project 357 (Interstate Route H-2, New Interchange, Pineapple Road Overpass)	CAC - Laura Kodama	Move this developer-funded project from long-range to mid-range	HDOT responded that this project is triggered by the development phasing plan and therefore may occur during mid- or long-range periods. Based on the information in Comment #77, the ORTP Projects List has been revised to re-prioritize it as a "Mid-Range Project," and it is now identified as Project No. 308.
77	Chapter 6, Projects List - Project 357 (Interstate Route H-2, New Interchange, Pineapple Road Overpass)	Pete Pascua	The developer (Castle & Cooke) has State LUC and County Zoning conditions to complete the subject Pineapple Road Interchange (described as Project 357 above) with their Koa Ridge project prior to the development of an 1800 residential unit threshold condition. Their development plan is anticipated to hit that benchmark well before 2030. Therefore, it may be more appropriate to move that project to the Mid-Range Project 2019 to 2029 category. However, perhaps it is moot at this stage for this long-range improvement - which may be represented accordingly in subsequent five-year ORTP updates.	HDOT responded that this project is triggered by the development phasing plan and therefore may occur during mid- or long-range periods. Based on the information in Comment #77, the ORTP Projects List has been revised to re-prioritize it as a "Mid-Range Project," and it is now identified as Project No. 308.
78	Chapter 6, Projects List - Project 502 (Shoreline protection program)	CAC - Andrea Anixt	This program needs more than $20 million, given already existing problems with flooding on the North Shore Kamehameha Highway.	No revisions are proposed since the ORTP 2040 is required by Federal law to be a fiscally constrained plan and additional funding to address roadway flooding has not been identified by the implementing agencies.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
79	Chapter 6, Projects List - Project 502 (Shoreline protection program)	CAC - John Goody	Shoreline protection structures adjacent to the roadway should allow for the safe passage of pedestrians and cyclists; and should be constructed in an environmentally sustainable fashion.	Funding from Project Nos. 504, 505, 506, 552, 553, 554, and 555 can also be used for this purpose and will be prioritized based on the City or State management systems.
80	Chapter 6, Projects List - Project 708 (Waianae, second access)	Cedric Gates	I want to express my full support for these as well as any and all projects that can be made to further facilitate motorist and pedestrian safety, ease of traffic congestion, an easier commute for residents, better road infrastructure, and better transportation access for the Leeward coast in general. In addition, Leeward coast needs an alternate access route.	HDOT acknowledges the support and comments. Currently, HDOT is pursuing a study for the Leeward Oahu region that will consider an alternative access route.
81	Chapter 6, Projects List - Project 751 (Fixed Guideway, Kapolei)	CAC - Frank Genadio	Plan, design, and construct a maglev guideway system between West Kapolei to East Kapolei	Evaluation of maglev and other technologies can be considered during the alternatives analysis and project development of any fixed guideway projects.
82	Chapter 6, Projects List - Project 752 (Fixed Guideway, Ala Moana to UH-Manoa and Waikiki)	CAC - Frank Genadio	Plan, design, and construct a maglev guideway system between Ala Moana and UH-Manoa and Waikiki	Evaluation of maglev and other technologies can be considered during the alternatives analysis and project development of any fixed guideway projects.
83	Chapter 6, Projects List - Project 753 (Fixed Guideway, Ewa Beach)	CAC - Frank Genadio	Plan, design, and construct a maglev guideway system from Ewa Beach to the West Loch Station in Waipahu along Fort Weaver Road	Evaluation of maglev and other technologies can be considered during the alternatives analysis and project development of any fixed guideway projects.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
84	Chapter 6, Projects List - Project 754 (Fixed Guideway, Central Oahu)	CAC - Frank Genadio	Plan, design, and construct a maglev guideway system between Pearl Highlands and Central Oahu	Evaluation of maglev and other technologies can be considered during the alternatives analysis and project development of any fixed guideway projects.
85	Chapter 6, Projects List - Project 755 (Fixed Guideway, Salt Lake)	CAC - Frank Genadio	Plan, design, and construct a maglev guideway system from Aloha Stadium to Middle Street via Salt Lake Boulevard, Pukoloa Street, and along the Moanalua Stream	Evaluation of maglev and other technologies can be considered during the alternatives analysis and project development of any fixed guideway projects.
86	General	Albert Del Rio	Please support bicycling in Hawaii, specifically bike share.	DTS acknowledges the support and comments. The City continues to be supportive of the bikeshare program. In June of 2015, the City and the State awarded $1 million each to Bikeshare Hawaii.
87	General	CAC - Andrea Anixt	Proposed roadway improvements do not comprehensively respond to already dangerous erosion conditions and do not anticipate emergency conditions that would result from extreme storms.	FAST Act [P.L. 114-94] added resilience to the list of required transportation planning areas of import for statewide and metropolitan planning. We agree that it is important to evaluate the effects of climate change in the design phase and will provide this comment to the implementing agency. Funding from Projects Nos. 504, 505, 506, 552, 553, 554, and 555 can also be used for this purpose and will be prioritized based on the City or State management systems.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
88	General	CAC - Andrea Anixt	Concern over accuracy of travel estimated times shown on maps	The OahuMPO Congestion Management Process (CMP) recommends that future reports begin to use "observed performance measures." Also, estimated times shown on maps are modeled – dynamic traffic assignment, micro simulation, use of observed speed data in calibration, and the development of land use forecasts for smaller traffic zones are being explored by staff to better reflect existing conditions. These improvements to the OahuMPO model are also supported by HDOT's Draft Guidelines for Project-Level Traffic Forecasting.
89	General	CAC - Andrea Anixt	Concern about lack of public input and/or lack of responsiveness of the ORTP 2040 to public input	A copy of this comment and all ORTP 2040 comments were made available for review by the Policy Board on the OahuMPO website.
90	General	CAC - Andrea Anixt	Congestion on the North Shore is detrimental to quality of life and will be exacerbated by additional development. (Support for this comment was also shown through petitions with 10 signatures and 13 resolutions from neighborhood boards and community associations, all of which had been previously submitted in comment on the FY2015-16 Overall Work Program.)	A copy of this comment and all ORTP 2040 comments were made available for review by the Policy Board on the OahuMPO website.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
91	General	CAC - Andrea Anixt and Brian Walsh	A comprehensive study of the North Shore transportation system should be performed because the roadway system is unable to support existing traffic and proposed development would overwhelm it. (Support for this comment was also shown through petitions with 136 signatures, 5 resolutions from neighborhood boards and community associations, and 182 letters of support, all of which had been previously submitted in comment on the FY2015-16 Overall Work Program.)	Planning studies are programmed by OahuMPO through the Overall Work Program (OWP). If a comprehensive North Shore Corridor Study were completed, and if it resulted in a recommendation that was supported by an implementing agency, that project could then be considered for inclusion in the ORTP in the future.
92	General	CAC - Andrea Anixt and Brian Walsh	Population figures used in the ORTP 2040 seem not to accurately reflect ongoing and anticipated development.	Population forecast presented are consistent with the State of Hawaii Department of Business and Economic Development's population projections for Oahu in 2040 and do not represent an ultimate build out scenario. The forecasts presented are DPP's interim forecast, additional consultant support has been funded in the OahuMPO's OWP, and an official update to the DPP population forecast from 2007 is anticipated.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
93	General	Christopher Goody	The ORTP should NOT allow for any new major expansion in roadways in Koolau Loa, and instead focus on fixing and protection our current roadways. It is a clear case of the special interests of a portion of a single community in Laie and Turtle Bay wanting to impose their vision upon the rest of Koolau Loa, while they make enormous personal profits, leaving the rest of us to pay for it in the form of lost natural resources, increased traffic, stressed infrastructure, and quite possibly a manmade disaster.	A copy of this comment and all ORTP 2040 comments were made available for review by the Policy Board on the OahuMPO website.
94	General	Clifton Takenaka	Interested in developing bike routes and bike sharing programs at Scholfield Barracks to alleviate traffic and lack of parking.	Scholfield Barracks is a U.S. Army installation and under their jurisdiction. The U.S. Army would be the deciding authority to plan/implement bicycle routes/bike sharing programs at this facility.
95	General	EPA - Asia Yeary	In this document, how else can we encourage: moving away from car throughput toward people movement; mode share goals and data collection; fossil fuel reduction in transportation goal and data collection; performance measures to prioritize projects based on these goals; better Federal, State, county coordination; Elevate priorities of health (not just safety); and educate public on changes in the transportation system	No revisions are proposed since more specific performance measures will be developed as described in the "Implementation and Evaluation discussion" in Chapter 7.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
96	General	Jennifer Appel, American Society of Landscape Architects	The solutions presented include mostly widening the roadways and adding more paving. None of it was noted as salt tolerant or pervious paving or even solar paving (yes, solar panel roads are available that exceed most DOT standards).	No revisions are proposed since any revisions to HDOT design standards would be dependent upon HDOT review and approval outside of this ORTP process.
97	General	Jennifer Appel, American Society of Landscape Architects	I am familiar with the "Hawaiian Roads" which connect the various parts of the west side in much shorter distances than the current roadway system. Making better use of them for two wheeled and pedestrian traffic - dotted with scenic views, pedestrian cafe's and other amenities may be an option not discussed.	No revisions are proposed since any roadway design changes would be dependent upon City or HDOT review and approval outside of this ORTP process.
98	General	Jennifer Appel, American Society of Landscape Architects	Alternative solutions to mitigate traffic on Oahu may include requiring everything that is not a compact car (i.e. all trucks and SUV's 1/2 ton and larger) to utilize only one lane (in much the same manner as the HOV lane only as a detriment to having large vehicles with, usually, only one person in them). Using New York City and Austin, Texas as examples, both have systems where certain lanes are used as express lanes and other lanes are solely for on/off traffic.	No revisions are proposed since any roadway operational changes would be dependent upon City or HDOT review and approval outside of this ORTP process.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
99	General	Jennifer Appel, American Society of Landscape Architects	In many foreign countries and California, white lining (allowing mopeds and motorcycles to utilize the lines) has been proven effective to increase traffic flows. Additionally, allowing mopeds and motorcycles to move up to the front of stop light intersections has also proven effective to increase stop and go traffic flow. While I am aware that there are inherent risks with this type of behavior (as I am one of those who prefer two wheeled low carbon footprint transportation with easy ample parking) it is the rider's responsibility to be aware and not the state's to regulate safe passage with white line advocacy.	No revisions are proposed since any roadway operational changes would be dependent upon City or HDOT review and approval outside of this ORTP process.
100	General	Jennifer Appel, American Society of Landscape Architects	Another aspect of the transportation plan that did not seem to be highlighted was parking. I am aware of several end locations that have extremely difficult parking scenarios which result in decreased business due to a lack of parking. Similarly, if disproportionately more parking for smaller vehicles was made available at the ending location, it would cause a situation where the populace would gravitate towards smaller vehicles and thus more traffic could be "handled" utilizing the same amount of space.	No revisions are proposed since the City is working on the Honolulu Urban Core Parking Master Plan and would be responsible for other parking studies.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
101	General	John Bond	Concern over public comments made by former HART Rail Architect, such as the Project is "nothing short of a crime" "huge mistake."	Comment acknowledged. No response is necessary.
102	General	John Bond	Concern that rail project violates state floodplain laws, given anticipated sea level rise, as well as concern as to whether rail project violates laws covering ADA (disabled), AARP (Senior Citizens) and Transportation Equity (rights of low income workers to a reliable transit service)	The Honolulu Rail Transit Project is designed to meet all applicable Federal, State, and local regulations.
103	General	John Bond	Concern that almost half of rail project stations will be located in Tsunami Evacuation Areas.	Less than 30% of the rail stations for the Honolulu Rail Transit Project are located in tsunami evacuation zones. The rail transit system is designed to meet all applicable Federal, State, and local regulations.
104	General	Jose Nazareth Neto	Please conduct a traffic carrying capacity study of Kamehameha Highway from Haleiwa to Kahalu'u.	Planning studies are programmed by OahuMPO through the Overall Work Program (OWP). If a comprehensive North Shore Corridor Study were completed, and if it resulted in a recommendation that was supported by an implementing agency, that project could then be considered for inclusion in the ORTP in the future.

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
105	General	Richard Landford	We the residents on the Leeward Coast are very disappointed with ORTP 2040, we are at a critical point with our traffic situation in our community. When 2025 was the projected date we weren't that happy but it seemed doable. The HDOT will be trying a Contra- Flo Pilot Project some in 2017, but that is only a band-aid remedy, we need a permanent solution. We the residents asks that the OMPO Board / Committee assist us by finding any possible remedy for our traffic nightmare.	The potential realignment of Farrington Highway is currently an Overall Work Program Study (Work Element No. 202.04-15) that the OahuMPO is managing. It was not submitted by an implementing agency in the initial solicitation for ORTP projects in October, 2015, and the local match is not expected to be readily available. It is expected that the scope, cost estimate, and designation of an implementing agency will be refined with the study and brought back to the Policy Board for an ORTP amendment after study approval. To clarify the ongoing efforts of HDOT and the ORTP, the following sentence has been added to the description for Project No. 351 in the ORTP Projects List: "To improve congestion and safety operations, contra-flow, intersection improvements, traffic calming, and other improvements may be pursued in the short range." HDOT acknowledges the support and comments. Currently, HDOT is pursuing a study for the Leeward Oahu region that will consider an alternative access route.

Table A-2 Public and Intergovernmental Comments Received after Comment Period Deadline

Comment #	Content/Section	Originator (Person/agency sending in comment)	Comments	Response
1-L	Chapter 6, Project List - Project 305	City/County Department of Transportation Services	(Mid-range project list) Project 305, Keonaeula Blvd Extension is not a City Project.	This project is identified as a potential roadway improvement in the Kalaeloa Master Plan adopted in May 2005 by the Hawaii Community Development Authority. The ORTP Projects List has been revised to identify the implementing agency for this project as "State (non-HDOT)."
2-L	Chapter 6, Projects List - Project 354	City/County Department of Transportation Services	(Long-range project list) Project 354, Kalaeloa East-West Spine Road, New Roadway is not a City Project.	This project is identified as a potential roadway improvement in the Kalaeloa Master Plan adopted in May 2005 by the Hawaii Community Development Authority. The ORTP Projects List has been revised to identify the implementing agency for this project as "State (non-HDOT)."
3-L	Chapter 6, Page 44	City/County Department of Transportation Services	Provide some explanation for the following statement: "The construction of the rail project will help to dramatically increase transit usage on Oahu. As shown in Figure 6-4, daily transit boardings will increase substantially between 2012 existing conditions and 2040 No-build conditions. ORTP 2040 shows a slight decrease in daily transit boardings in comparison."	For clarification, the following wording was added to the last sentence of the third paragraph on Page 42: "… due to the attractiveness of improved travel times from the plan's improvements."
4-L	General	State Parks & Recreation	No comments; thank you for the opportunity to review.	Comment acknowledged. No response is necessary.

5-L	Chapter 6, Projects List - ORTP2035 Project 50, ORTP 2040 Project 351 and 708	Cedric Gates	I'm writing to urge the OahuMPO Policy Board to add Project 50 and from ORTP 2035 to ORTP 2040, and raise the priorities of ORTP Projects 351 and 708 to the highest level and accelerate the planning and construction of both projects. As a lifetime resident of the Waianae Coast I personally have witnessed traffic along the leeward coast become increasingly heavy over recent years, over-burdening the finite capacity of Farrington Highway. This traffic is dramatically decreasing the quality of life for all leeward coast residents. I humbly ask for OahuMPO Policy Board to support Project 50 from ORTP 2035 to ORTP 2040, and raise the priorities of ORTP Projects 351 and 708 to the highest level and accelerate the planning and construction of both projects to improve the quality of life for current and future generations.	Project No. 50 (ORTP 2035): The potential realignment of Farrington Highway is currently an Overall Work Program Study (Work Element No. 202.04-15) that the OahuMPO is managing. It was not submitted by an implementing agency in the initial solicitation for ORTP projects in October, 2015, and the local match is not expected to be readily available. It is expected that the scope, cost estimate, and designation of an implementing agency will be refined with the study and brought back to the Policy Board for an ORTP amendment after study approval; Project No. 351: To clarify the ongoing efforts of HDOT and the ORTP, the following sentence has been added to the description for this project in the ORTP Projects List: "To improve congestion and safety operations, contra-flow, intersection improvements, traffic calming, and other improvements may be pursued in the short range"; and Project No. 708: HDOT acknowledges the support and comments. Currently, HDOT is pursuing a study for the Leeward Oahu region that will consider an alternative access route.

6-L	Chapter 6, Projects List - ORTP2035 Project 50, ORTP 2040 Project 351 and 708	Waianea Coast Neighborhood Board #24	A resolution urging the OahuMPO Policy Board to add project 50 from ORTP 2035 to ORTP 204 and raise the priority of ORTP Project 351 and 708 to highest level and accelerate the planning and construction of both projects.	Project No. 50 (ORTP 2035): The potential realignment of Farrington Highway is currently an Overall Work Program Study (Work Element No. 202.04-15) that the OahuMPO is managing. It was not submitted by an implementing agency in the initial solicitation for ORTP projects in October, 2015, and the local match is not expected to be readily available. It is expected that the scope, cost estimate, and designation of an implementing agency will be refined with the study and brought back to the Policy Board for an ORTP amendment after study approval; Project No. 351: To clarify the ongoing efforts of HDOT and the ORTP, the following sentence has been added to the description for this project in the ORTP Projects List: "To improve congestion and safety operations, contra-flow, intersection improvements, traffic calming, and other improvements may be pursued in the short range"; and Project No. 708: HDOT acknowledges the support and comments. Currently, HDOT is pursuing a study for the Leeward Oahu region that will consider an alternative access route.

7-L	General	Honolulu Authority for Rapid Transportation	The Honolulu Authority for Rapid Transportation has removed §5307 Formula Funding from the Honolulu Rail Transit Project in its entirety. This enables the City and County of Honolulu to program these funds for Mid-Range projects (2019 to 2029).	No revisions are proposed since Section 5307 funding was allocated to Project No. 605 (City Operations and Maintenance (O&M): Transit).
8-L	General	Andrea Anixt + 23 signatures	A petition requesting HDOT and the City/County of Honolulu "to expedite the solution to the flooding of the only road, Route 83, on Kamehameha Highway at Waikane."	This comment was provided to HDOT and DTS for consideration. A copy of the petition and all ORTP 2040 comments were made available for review by the Policy Board on the OahuMPO website.
9-L	General	Andrea Anixt + 19 signatures	A petition stating "No "third" city on North Shore's Gunstock Ranch in Malankahana."	This comment was provided to DTS for consideration. A copy of the petition and all ORTP 2040 comments were made available for review by the Policy Board on the OahuMPO website.
10-L	List of Abbreviations, Page 4	City/County Department of Planning and Permitting	Please correct the abbreviations for HART. HART is the "Honolulu Authority for Rapid *Transportation.*"	The requested revision was added to the list on page v.

11-L	Chapter 1, Page 7	City/County Department of Planning and Permitting	Section "Why is ORTP 2040 Important?" explains how demographics will have an impact on Oahu's transportation system and the paragraph focuses on the aging population. Please add a mention of the Making Honolulu an Age-Friendly City: An Action Plan (2015). The Making Honolulu an Age-Friendly City: An Action Plan (2015) considered transportation as one of the Action Plan's domains focusing on vulnerable users, both kupuna and keiki. The Age-Friendly plan's vision includes having "a city where everyone has access to safe, clean and timely transportation island wide" and the ORTP 2040 vision are complementary.	The requested revision was added to page 18.
12-L	Chapter 2, Page 11	City/County Department of Planning and Permitting	Figure 2-1. As previously requested, "AM Period" needs to be defined.	The requested revision was added to Figure 2-1.
13-L	Chapter 2, Page 10-21	City/County Department of Planning and Permitting	Although the rail is still under construction, the rail project should be included in other parts of the Chapter, given that the Chapter presents existing conditions and also forecasts and projections. Please consider the following amendments: Page 13 High Growth Areas - Add a mention about the rail corridor being located in the majority of the areas that are forecasted to have the most population and job growth.	No revisions are proposed since the Honolulu Rail Transit Project is addressed on pages 14 and 17 in Chapter 2.

14-L	Chapter 3, Page 23, Figure 3-1	City/County Department of Planning and Permitting	We are pleased by the mention of Neighborhood Transit-Oriented Development (TOD) Plans in Chapter 2 and including TOD in the 'Land Use and Transportation Integration Goal,' as objective 6.A.	Comment acknowledged. No response is necessary.
15-L	Chapter 2, Page 20	City/County Department of Planning and Permitting	Clarification: In the Local Development Plans sub-section it is mentioned that existing Development and Sustainable Communities Plans were used to "*guide growth areas*" and potential transportation projects for ORTP 2040. Please substitute "*guide growth areas"* with "*consult on planned growth areas."* Adopted Neighborhood TOD plans should also be referenced as a resource for long-range neighborhood growth plans.	The requested clarification was added to page 16.

16-L	Chapter 3, Page 23, Figure 3-1	City/County Department of Planning and Permitting	For Goal #5, what kind of measures are anticipated for Objective 5.B? Please elaborate on the objective in terms of "*supporting community and cultural values in the development of plans and projects.*" Goal #6 is a compound goal which addresses transportation, land use, and affordable housing. Please consider separating this goal into a series of goals. For Goal #7, please consider re-phrasing the goal and the corresponding Objective 7.A, so that the goal and the objective are not identical. Goal #8 states that the OahuMPO will "*promote jobs and the economy.*" This is not consistent with the current mission of the OahuMPO, which has the specific task of focusing on transportation systems.	No revisions are proposed since the ORTP 2040 Regional Goals and Objectives (including Freight Movement and Economic Vitality) were approved by the OahuMPO Policy Committee in June 2014. Furthermore, Federal law requires that the ORTP must consider eight planning factors, including "support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency." Revisions to the Regional Goals and Objectives can be reevaluated in future updates or revisions to the ORTP.
17-L	Chapter 4, Page 24	City/County Department of Planning and Permitting	Public input. A paragraph should be added that summarizes the public involvement strategies that were identified as part of the ORTP 2040 process to outreach to Title VI and Environmental Justice populations.	The requested revision was added to page 20. Appendix B identifies the Title 6/EJ groups consulted for ORTP 2040.
18-L	Chapter 4, Page 26	City/County Department of Planning and Permitting	Listening Session Comments. It is not clear how the comments of one teacher relate to the premise that there are generational gaps in public feedback.	Comment acknowledged. No response is necessary.

19-L	Chapter 6, Page 29	City/County Department of Planning and Permitting	Mid-and Long-Range Plans. The document states that "*basic elements of projects in the Ewa/Kapolei area are in the mid-range plan."* Define "basic elements." Fig. 6-1 shows a Project #503 near the Waiawa Interchange. The Projects List does not appear to include an entry for Project #503, although it has entries for 501-502 and 504-507 on the 5th page of the Projects List.	The reference to "basic elements" was removed and replaced with clarifying language in page 25. Project No. 503 was removed from Figure 6-1.
20-L	Chapter 6, Page 30 - 43	City/County Department of Planning and Permitting	In the ORTP 2035, the project lists had a green icon that identified projects that were included or consistent with the City and State's bicycle plans. 1. Include such an icon that identifies bicycle projects in the ORTP 2040. 2. Include a new icon that identifies projects that are within TOD areas (1/2 mile from rail stations). Incorporating a TOD icon would help stress the need for those projects to implement complete streets elements and address multi-modal transportation.	No revisions are proposed since projects with bicycle or TOD elements could be given priority during the project evaluation and prioritization process for the Transportation Improvement Program (TIP). This would allow time for implementing agencies to comment on the designation.
21-L	Chapter 6, Page 47, Figure 6-8	City/County Department of Planning and Permitting	Revise the legend to indicate that the times shown are in minutes.	The requested revision was added to Figure 6-8.
22-L	Chapter 6, Page 49, Figure 6-10	City/County Department of Planning and Permitting	Revise the title to indicate that the level of service shown is in the AM peak period.	The requested revision was added to Figure 6-10.

23-L	Chapter 6, Page 51, Figure 6-12	City/County Department of Planning and Permitting	Revise the title to indicate that the level of service shown is in the AM peak period.	The requested revision was added to Figure 6-12.
24-L	Chapter 6, Projects List	City/County Department of Planning and Permitting	The Projects List has no page numbers. It would be helpful if the header row (Project No., City/State, Project Title, etc.) is repeated at the top of each page of the table.	The requested revision was added to the ORTP Projects List.
25-L	Chapter 6, Projects List	City/County Department of Planning and Permitting	The Projects List does not include this key project listed in the PUC DP: "*The multi-lane Nimitz Highway isolates the Downtown area from the Honolulu waterfront. Diverting through traffic on Nimitz Highway to a new Sand Island bypass route would enable the reconnection of Downtown Honolulu to the waterfront and more efficient travel between the Airport and Waikiki."* (Primary Urban Center Development Plan, page 3-52)	No revisions are proposed since the Sand Island Bypass Road was not submitted by an implementing agency. If a logical termini and cost estimate is provided, the project could be considered for addition as an illustrative project. HDOT concurs that no revision should be proposed and responded that the Sand Island Bypass Road is not part of their 20-year Capacity Program.
26-L	Chapter 6, Projects list, Project 205	City/County Department of Planning and Permitting	Farrington Highway Widening ORTP Project No. 205 is consistent with the `Ewa DP.	A reference to "consistency with local development plans" was added to the discussion about the project selection process on page 23. Projects consistent with Development Plans could be given priority during the project evaluation and prioritization process for the Transportation Improvement Program (TIP). This would allow time for implementing agencies to comment on the designation.

27-L	Chapter 6, Projects List, Project 209	City/County Department of Planning and Permitting	Salt Lake Boulevard Widening ORTP Project No. 209 is consistent with the PUC DP.	A reference to "consistency with local development plans" was added to the discussion about the project selection process on page 23. Projects consistent with Development Plans could be given priority during the project evaluation and prioritization process for the Transportation Improvement Program (TIP). This would allow time for implementing agencies to comment on the designation.
28-L	Chapter 6, Projects List, Project 210	City/County Department of Planning and Permitting	Makakilo Drive Extension ORTP Project No. 210 is consistent with the `Ewa DP.	A reference to "consistency with local development plans" was added to the discussion about the project selection process on page 23. Projects consistent with Development Plans could be given priority during the project evaluation and prioritization process for the Transportation Improvement Program (TIP). This would allow time for implementing agencies to comment on the designation.
29-L	Chapter 6, Projects List, Project 302	City/County Department of Planning and Permitting	Kalaeloa Boulevard, Reconstruction and Widening; Lauwiliwili Street to Olai Street ORTP Project No. 302 is consistent with the `Ewa DP.	A reference to "consistency with local development plans" was added to the discussion about the project selection process on page 23. Projects consistent with Development Plans could be given priority during the project evaluation and prioritization process for the Transportation Improvement Program (TIP). This would allow time for implementing agencies to comment on the designation.

30-L	Chapter 6, Projects List, Project 303	City/County Department of Planning and Permitting	Kapolei Parkway, Extension and Widening, Aliinui Drive to Kalaeloa Boulevard ORTP Project No. 303 is consistent with the `Ewa DP.	A reference to "consistency with local development plans" was added to the discussion about the project selection process on page 23. Projects consistent with Development Plans could be given priority during the project evaluation and prioritization process for the Transportation Improvement Program (TIP). This would allow time for implementing agencies to comment on the designation.
31-L	Chapter 6, Projects List, Project 305	City/County Department of Planning and Permitting	Keoneula Boulevard Extension, Kapolei parkway to Franklin D. Roosevelt Avenue ORTP Project No. 305 is consistent with the `Ewa DP.	A reference to "consistency with local development plans" was added to the discussion about the project selection process on page 23. Projects consistent with Development Plans could be given priority during the project evaluation and prioritization process for the Transportation Improvement Program (TIP). This would allow time for implementing agencies to comment on the designation.
32-L	Chapter 6, Projects List, Project 352	City/County Department of Planning and Permitting	Kamokila Boulevard ORTP Project No. 352 is consistent with the `Ewa DP.	A reference to "consistency with local development plans" was added to the discussion about the project selection process on page 23. Projects consistent with Development Plans could be given priority during the project evaluation and prioritization process for the Transportation Improvement Program (TIP). This would allow time for implementing agencies to comment on the designation.

33-L	Chapter 6, Projects List, Project 353	City/County Department of Planning and Permitting	Fort Barrett Road No. 353 is consistent with the `Ewa DP.	A reference to "consistency with local development plans" was added to the discussion about the project selection process on page 23. Projects consistent with Development Plans could be given priority during the project evaluation and prioritization process for the Transportation Improvement Program (TIP). This would allow time for implementing agencies to comment on the designation.
34-L	Chapter 6, Projects List, Project 354	City/County Department of Planning and Permitting	Kalaeloa East-West Spine Road, New Roadway, Kalaeloa Boulevard to Geiger Road ORTP Project No. 354 is consistent with the `Ewa DP.	A reference to "consistency with local development plans" was added to the discussion about the project selection process on page 23. Projects consistent with Development Plans could be given priority during the project evaluation and prioritization process for the Transportation Improvement Program (TIP). This would allow time for implementing agencies to comment on the designation.

35-L	Chapter 6, Projects List	City/County Department of Planning and Permitting	The DPP is concerned with the number of freeway and boulevard widening projects in the ORTP and how they may affect pedestrian and bicycle access. As per the PUC DP notes that the "*construction of the H-1 freeway cut through many old neighborhoods and exposed adjacent areas to significant noise, visual and air quality impacts...highways are inhospitable to bicyclists and pedestrian crossings, particularly for children and the elderly."* (PUC DP, page 3-52). Please address how pedestrian and bicyclist mauka-makai access and inter-neighborhood mobility are affected by freeway widening projects and how mauka-makai access for pedestrians and bicyclists will be maintained.	A reference was added to the "Potential Environmental Impacts and Mitigation Measures" in Appendix C to indicate that community impacts related to mauka-makai access for pedestrians and bicyclists should be considered in project-specific environmental documentation.
36-L	Chapter 6, page 57, Table 5	City/County Department of Planning and Permitting	Table 5 (Expenditures). Double-check the computations in the table. -The total for mid-range congestion mitigation projects should be $137.3 million - not $127.3 million; -The total for long-range congestion mitigation projects should be $209.5 million - not $219.5 million; -The total number of City and County projects should be 23 - not 25; -The total number of State projects should be 26 - not 24.	The ORTP Projects List has been revised. Project No. 1 should cost $51.5 million and Project No. 51 should cost $61.5 million. The total number of projects has been revised.

37-L	Chapter 6, page 57, Table 5	City/County Department of Planning and Permitting	Table 5 (Expenditures). The total revenue amount ($16,987.7 million) appears to include the $213 million for non-existing and committed FY 2015-2018 Transportation Improvement Program projects. A line item for the TIP revenue should be added to the Project Totals section, as was done in the Mid-Range Projects section.	The $213 million for non-existing and committed FY 2015-2018 Transportation Improvement Program projects was added to the Project Totals section.
38-L	General	City/County Department of Planning and Permitting	The ORTP 2040 draft does not mention ride-hailing services (like Uber and Lyft for example) and bikesharing in the whole document. These are potential innovative strategies that could address specific transportation needs. Note: The City and State have already allocated funding for bikesharing, recognizing its value as a transportation mode for the community.	A reference and footnote link was added to page 24 about Bikeshare Hawaii's efforts to establish a bikeshare system, and “bike share” has been identified as a Transportation Demand Management (TDM) strategy in Project Nos. 4 and 54 in the ORTP Projects List. No revisions are proposed regarding the usage of newer private transportation service providers since current information is either speculative or not available.
39-L	General	John Bond	Concern that city departments are not adequately prepared for higher sea level rise projections based on faster Antarctic ice sheet melting; concern that major infrastructure projects such as the rail project are located in areas that will be inundated by sea level rise.	No revisions are proposed since the analysis of sea level and water table rise is identified as a mitigation measure in "Potential Environmental Impacts and Mitigation Measures".

40-L	General	John Bond	Concern that north-south extension of Kualaka`i Parkway will severely impact Hawaiian Railway Society operations.	HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.
41-L	Chapter 6, Projects List - Project 206 and 304 (Kualaka'i Parkway Extension and Widening)	Keikilani Uehara	I'm writing in opposition of the road extension of Kualakai Parkway. I live along the rail path and my family loves seeing the train each weekend. Additionally, I believe that the history of the train and the moolelo that is shared about Ewa, Kapolei, Makakilo and Nanakuli is priceless and should continue to be shared during weekly rides. Please reconsider the road. Kapolei Parkway is large enough to accommodate the traffic and anyone who needs access to Kalaeloa can use one of the many existing roads. Mahalo for your consideration.	HDOT is required to comply with NEPA, Hawaii Revised Statutes (HRS) Chapter 343, Section 4(f) of the Department of Transportation Act, Section 106 of the National Historic Preservation Act, and HRS Chapter 6E requirements to analyze project impacts to existing or eligible historic properties. These comments will be considered in these processes.

Appendix A.2: Non-substantive comments

Table A-3 presents additional changes that OahuMPO staff made to the ORTP 2040 Public Review Draft, beyond any that resulted from public and intergovernmental review comments. (NOTE: The page/figure/table numbers below are specific to the ORTP Public Review Draft. Some pages, figures, and tables may have been renumbered in the Approved ORTP.)

Table A-3 Non-substantive Comments

Page 1	Replace the Executive Summary with a one- or two-page broad summary of what's in the document.
Page 1	Add photos to the Executive Summary. Also, the Executive Summary should be renumbered as page "ES-i, ES-ii, etc.".
Page 3	This page includes a list of figures and should include a "List of Tables" for reference purposes.
Page 4	The List of Abbreviations includes mostly acronyms so this page should be re-titled "List of Abbreviations and Acronyms".
Page 6	In the third column, first paragraph, change the reference to "CMP" to "ORTP".
Page 6	FAST Act is defined in the acronyms table, but that doesn't really explain what it is. At an appropriate place in the "Federal Requirements" section, include a short description.
Page 6	After the new "FAST Act" paragraph, add a footnote to the FAST Act website: http://www.fhwa.dot.gov/fastact/index.cfm
Page 10	In the second column, second paragraph, the discussion for V/C should include a footnote link to the CMP Implementation Policies and Procedures: http://www.oahumpo.org/wp-content/uploads/2016/03/OahuMPO_CMP_DRAFT150921.pdf
Page 11	Figure 2-1 should specify the "AM" time period.
Page 12	Figure 2-2 should include the legend (without the scale of miles) from Figure 2-1.
Pages 15-16	Figures 2-6 and 2-7 should be switched in order and renumbered to coincide with the discussion about growth on Page 13. Page 3 should also be revised to reflect this revision.
Page 17	In Figure 2-8, clarify the meaning of "EC Time" since it is not on the list of acronyms or defined in the text. Also, there is no label for the range of numbers. Are they referring to minutes or a delta percentage based on existing conditions??
Page 18	There is terminology and font inconsistency: Interstate H-1, Interstate Route H-1, or just H-1. All three are used on this page and vary elsewhere.
Page 18	In third column under "Freight Movement", add clarification about the FAST Act provisions.
Page 18	In the third column under "Accessibility to the Transportation System", add a footnote for T6/EJ to the following website: http://www.fhwa.dot.gov/civilrights/programs/tvi.cfm
Page 19	In the second column, first full paragraph, make the following edit: "ORTP 2040 evaluates the issue of ~~equitable mobility and accessibility~~ equality for T6/EJ populations through two performance measures – mobility and accessibility."
Page 21	Relocate the "State Safety Plan" section to page 18 immediate following the "Safety" section.
Page 28	In the second column, first paragraph, include a sentence about Bikeshare Hawaii.
Page 28	After the new "Bikeshare Hawaii" sentence, add a footnote to the Bikeshare Hawaii website: http://www.bikesharehawaii.org/

Page 29	The text in this chapter should include references to Figures 6-1 and 6-2 and the Projects List. Include explanatory notations about the "Illustrative Projects" and the "Short Range Projects" in the Projects List.
Pages 31-43	All of the pages in the Projects List should be numbered.
Page 31	In the Projects List, Project Nos. 4 and 54, add a reference to bike sharing.
Page 31	In the Projects List, Project No. 5, remove or clarify the reference to "low hanging fruit" improvements identified in the H-1 Corridor Study *(contingent upon information or feedback from HDOT staff)*.
Page 33	In the Projects List, Project Nos. 210 and 304, the apostrophe should be replaced with an okina (') by pressing the "Alt" button and then typing "0-1-4-5".
Page 44	The paragraphs on this page have been rearranged to coincide with the numerical order of the four figures on page 45. In the second column, second paragraph, references should be added to Figures 6-9 through 6-12; in addition, the references to "Figure 6-12" and "Figure 6-9" in the second sentence should be changed to "Figure 6-11" and "Figure 6-12" respectively.
Page 45	The source agency and/or document for the four figures on this page should be identified. These four figures are currently arranged in the following order (Figures 6-5, 6-6, 6-4, 6-3 respectively) but should be rearranged in numerical order or relabeled to match the discussion on page 44.
Page 45	Figures 6-3 thru 6-6 should be updated based on the HART model recalibration *(contingent upon information or feedback from HART staff)*.
Page 46	The range of numbers in the legend in Figure 6-7 should be labeled as "minutes".
Page 47	The range of numbers in the legend in Figure 6-8 should be labeled as "minutes".
Page 48	Figure 6-9 should specify the "AM" time period.
Page 49	Figure 6-10 should include the legend (without the scale of miles) from Figure 6-9.
Page 50	Figure 6-11 should specify the "AM" time period.
Page 51	Figure 6-12 should include the legend (without the scale of miles) from Figure 6-11.
Page 52	In the first column, first paragraph, make the following edit: "Appendix B identifies the environmental <u>agencies and other</u> stakeholders that were consulted for this ORTP."
Page 52	In the second column, first paragraph, add a notation about the T6/EJ outreach.
Page 52	The "Environmental Justice Analysis" section was redone without Makakilo Frontage Road.
Page 52	Table 5 is referenced on this page under but is not displayed until page 56. Table 5 should be relocated just after the "Expenditures" discussion. Relocate Figure 6-13 to the appendices so that it is not located between the "Expenditures" discussion and Table 5.
Page 53	Change the title for Figure 6-13 to "Potential Environmental <u>Impacts and</u> Mitigation Measures".
Page 55	In the first column, first paragraph, change the reference to "Federal regulation 450.322 (f)(10)" to "23 CFR 450.322".
Page 55	Consider rearranging the funding sources in Table 4 in ascending order (from highest to lowest).
Page 55	In the third column, first paragraph, the reference to "$227 million in additional cost due to inflation for modernization projects"

	appears to be inconsistent with Table 5, which identifies "$219 million" for inflation from Modernization Projects.
Page 55	In the third column, last paragraph, make the following edit: "As shown in Table ~~5~~4, a variety of different revenue sources are currently used…"
Page 57	Table 5 should be updated to include inflation for Developer Funded Modernization Projects.
Page 58	In the third column, first paragraph, include a reference to 23 CFR 450.330 to explain the reference to "(excluding projects on the National Highway System and projects funded under the Bridge, Interstate Maintenance, and Federal Lands Highway programs)". In the second column, first paragraph, change the reference to "23 CFR 450.324(e)(2) & (3), (h) thru (k)" to "23 CFR 450.324".
Page 58	In the first column, last paragraph, make the following edit: "…and actions to be considered to enhance the ~~region's Metropolitan Transportation Plan~~ ORTP."
Page 58	In the second column, first paragraph, make the following edit: "…and are supportive of the Regional Goals and Objectives as provided in Figure ~~2-3~~ 3-1."
Page 60	In the "References" section, change the reference to "23 CFR 450.320(c)" to "*23 CFR 450*. April 2015". Add a reference to the HDOT SHSP.
Page 62	Include copies of the Stakeholder and T6/EJ Consultation Memos and Lists in Appendix B.
Page 63	The page cross-references in Appendix C will need to be updated after all edits are made.
Misc.	Chapter headings are not consistent. Some appear to be off-centered while others are left justified.
Misc.	Consider adding one bullet point for each Chapter.
Misc.	The route numbers should be added to highway references in the ORTP text and to the project titles in the Projects List.

Appendix B: Stakeholders and Title VI/Environmental Justice Consultation Lists

Appendix B presents the lists of stakeholders and Title VI/Environmental Justice service providers consulted during the intergovernmental and public review period, along with the consultation letters sent to each.

OahuMPO

Memorandum

To: ORTP 2040 Stakeholders Consultation List

From: Brian Gibson, OahuMPO

Date: February 26, 2016

Draft Oahu Regional Transportation Plan 2040
Consultation with Stakeholders

The Oahu Metropolitan Planning Organization (OahuMPO) is now accepting written comments on the draft update to the Oahu Regional Transportation Plan (ORTP) until Monday, March 28, 2016. This ORTP 2040 will serve as the long-range vision document for the improvement of the transportation system on Oahu through the year 2040. The draft ORTP 2040 document is available for review at the below link:

www.oahumpo.org/ORTP2040

Consistent with federal regulations, the OahuMPO is performing consultation with environmental agencies, service providers, and community organizations concerning the development of this plan. We are interested in receiving the following information:

1. input on the proposed goals, priorities, projects, and programs;
2. comments on the existing and forecasted conditions assessments;
3. feedback on environmental impacts and mitigation measures (Figure 6-13); and
4. identification of other stakeholders or interested parties.

Your agency or organization has been identified by the OahuMPO as a key stakeholder for consultation on the draft ORTP 2040. ***To hear your concerns and to answer any questions you may have, OahuMPO staff will be contacting you to offer a consultation meeting or conference call.*** If there is enough interest from multiple entities, the OahuMPO may also schedule an inter-agency stakeholders meeting.

Your input and feedback is important to us. If you have any questions regarding this correspondence, please contact Mike Galizio at (808) 586-2306.

Attachment: ORTP 2040 Stakeholders Consultation List

cc: Liz Fischer, FHWA
Ted Matley, FTA
OahuMPO Technical Advisory Committee

Oahu Metropolitan Planning Organization
Ocean View Center / 707 Richards Street, Suite 200 / Honolulu, Hawaii 96813-4623
Telephone (808) 587-2015 • (808) 768-4178 / Fax (808) 587-2018 / email: OahuMPO@OahuMPO.org

ORTP 2040 Stakeholders Consultation List
(Updated)

1. AARP
2. American Planning Association, Hawaii Chapter (APAHI)
3. American Society of Landscape Architects (ASLA) - Hawaii Chapter
4. Bikeshare Hawaii
5. Chambers of Commerce Hawaii
6. Ground Transport
7. Hawaii Bicycling League
8. Hawaii Department of Agriculture
9. Hawaii Department of Defense - Hawaii Emergency Management Agency (HI-EMA)
10. Hawaii Department of Education
11. Hawaii Department of Hawaiian Home Lands (DHHL)
12. Hawaii Department of Health (DOH) - Healthy Hawaii Initiative
13. Hawaii Department of Health (DOH) - Disability and Communication Access Board
14. Hawaii Department of Health (DOH) - Emergency Medical Services and Injury Prevention System Branch
15. Hawaii Department of Health (DOH) - Executive Office of Aging (EOA)
16. Hawaii Department of Land and Natural Resources (DLNR) - Aquatic Resources Division
17. Hawaii Department of Land and Natural Resources (DLNR) - Forestry and Wildlife Division
18. Hawaii Department of Land and Natural Resources (DLNR) - Land Division
19. Hawaii Department of Land and Natural Resources (DLNR) - Office of Conservation and Coastal Lands
20. Hawaii Department of Land and Natural Resources (DLNR) - State Historic Preservation Division
21. Hawaii Department of Land and Natural Resources (DLNR) - State Parks Division
22. Hawaii Transportation Industry Group
23. Hawaii Visitors & Convention Bureau
24. Hawaiian Electric Company (HECO)
25. Hawaiian Telecom
26. Honolulu Board of Water Supply (BWS)
27. Honolulu Department of Community Services
28. Honolulu Department of Emergency Management (DEM)
29. Honolulu Department of Environmental Services
30. Honolulu Department of Parks and Recreation
31. Honolulu Emergency Services Department
32. Honolulu Fire Department
33. Honolulu Office of Economic Development
34. Honolulu Police Department
35. Kamehameha Schools
36. Land Use Research Foundation (LURF) of Hawaii
37. Oceanic Time Warner Cable
38. Office of Hawaiian Affairs
39. People's Advocacy for Trails Hawaii (PATH)
40. Roberts Hawaii
41. Sierra Club of Hawaii
42. The Nature Conservancy of Hawaii
43. U.S. Army Corps of Engineers (USACE)
44. U.S. Department of Commerce - National Oceanographic and Atmospheric Administration (NOAA)
45. U.S. Department of Defense - Department of the Air Force, Pacific Air Forces
46. U.S. Department of Defense - Department of the Army, U.S. Army Pacific
47. U.S. Department of Defense - Department of the Navy, U.S. Pacific Fleet
48. U.S. Department of Defense - U.S. Marine Corps Base Hawaii
49. U.S. Department of Energy - NEPA Policy and Compliance
50. U.S. Department of Homeland Security - Federal Emergency Management Agency (FEMA)

51. U.S. Department of Homeland Security - U.S. Coast Guard District 14
52. U.S. Department of Housing and Urban Development (HUD)
53. U.S. Department of the Interior - National Park Service (NPS), Pacific Islands Office
54. U.S. Department of the Interior - Fish and Wildlife Service, National Wildlife Refuge Complex
55. U.S. Department of the Interior - Fish and Wildlife Service, Ecological Services
56. U.S. Department of Transportation - Maritime Administration (MARAD), Mid Pacific Gateway Office
57. U.S. Environmental Protection Agency (EPA), Region 9
58. University of Hawaii - External Affairs and University Relations
59. University of Hawaii - Office of Vice President for Administration
60. University of Hawaii - School of Ocean and Earth Science and Technology (SOEST)
61. University of Hawaii - West Oahu
62. Urban Land Institute Hawaii

Phone: (808) 586-2306
Website: www.OahuMPO.org

Begin forwarded message:

From: Tessa Munekiyo Ng <apahi.secretary@gmail.com>
Date: March 14, 2016 at 1:39:27 PM HST
To: <cc_wrcog@yahoo.com>
Subject: APAHI March Lunch Presentation - Oahu Regional Transportation Plan Update - March 23
Reply-To: Tessa Munekiyo Ng <apahi.secretary@gmail.com>

View this email in your browser

Oahu Regional Transportation Plan Update

Come to hear about the Oahu Metropolitan Planning Organization's (OahuMPO) draft update to the Oahu Regional Transportation Plan (ORTP) at this month's APAHI program to be held at the AIA Center for Architecture on March 23rd at noon. Check-in begins at 11:45 a.m. Presentation begins promptly at noon. Brian Gibson, Executive Director of the OahuMPO will cover:

- Proposed goals, priorities, projects, and programs of the Draft Plan;
- Existing and forecasted conditions assessments; and
- Environmental impacts and mitigation measures.

The ORTP serves as the long-range vision document for the improvement of the transportation system for the island of Oahu through the year 2040. Mandated by Federal law, this plan has been jointly developed by the OahuMPO and implementing agencies, including the City and County of Honolulu, the Honolulu Authority of Rapid Transit, and the Hawaii Department of Transportation. In

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addition, this plan incorporates the collective input from other Federal, State, and local agencies as well as the general public and other key stakeholders.

The cost is $10 for members, $15 for non-members, and free for students. The conference room accommodates up to 49 people, so please sign up early to guarantee a seat. You may bring in outside food to the presentation. Please note that food will not be served otherwise. Also, validated parking will not be provided.

Non-Oahu Participants: If you are interested in attending this event remotely, please register online and then notify us at least 48 hours before the event with your confirmation number at apahi.program@gmail.com. Following your RSVP, we will send details to connect via GoToMeeting.

Please register online here: http://ortp.eventbrite.com
AICP Members: We are submitting this event to APA in order to receive CM credits (1.0 credit). Upon approval by APA, an email will be sent with the CM credit information to those who register. Instructions to sign up are included on the online registration/order form.

Please contact the Program Committee at apahi.program@gmail.com with any questions.

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Mike Galizio

From: Mike Galizio
Sent: Thursday, March 24, 2016 1:50 PM
To: Mike Galizio
Cc: Chris Clark
Subject: ORTP 2040 Presentation and Deadline for Comments Reminder
Attachments: ORTP 2040 APAHI Presentation 03-23-16.pptx

For those of you who could not attend yesterday's APAHUI meeting, attached for your information is the PowerPoint on the Draft Oahu Regional transportation Plan (ORTP).

As a reminder, written comments on the Draft ORTP 2040 must be received by this **Monday, March 28, 4:30 PM HST**. For more info, please visit the ORTP web page below:

http://www.oahumpo.org/get-involved/public-review-and-comment/draft-oahu-regional-transportation-plan-2040/

Mike Galizio
Transportation Planner
OahuMPO
707 Richards Street, Suite 200
Honolulu, Hawaii 96813-4623
Phone: (808) 586-2306
Website: www.OahuMPO.org

From: Mike Galizio
Sent: Wednesday, March 16, 2016 3:15 PM
To: Mike Galizio <Mike.Galizio@oahumpo.org>
Subject: FW: APAHI Lunch Presentation on Oahu Regional Transportation Plan Update (ORTP 2040) - March 23

ORTP 2040 Stakeholder Consultation List:

OahuMPO staff will be making a presentation on ORTP 2040 at next Wednesday's American Planning Association, Hawaii Chapter (APAHI) meeting (refer below for meeting details).

For those of who are interested in attending this presentation, please RSVP by registering at http://ortp.eventbrite.com. Please note that there is a cost to cover venue fees. Also, please refer to the parking information at the venue's website: http://www.aiahonolulu.org/?page=ContactUs.

If you cannot attend this presentation but would be interested in having your own conference call or consultation meeting, please contact me. Otherwise, please feel free to contact me if you have any questions about ORTP 2040.

Mike Galizio
Transportation Planner
OahuMPO
707 Richards Street, Suite 200
Honolulu, Hawaii 96813-4623

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Memorandum

To: ORTP 2040 Title VI & Environmental Justice Service Providers Consultation List

From: Brian Gibson, OahuMPO

Date: March 10, 2016

Draft Oahu Regional Transportation Plan 2040
Consultation with Title VI & Environmental Justice Service Providers

The Oahu Metropolitan Planning Organization (OahuMPO) is now accepting written comments on the draft update to the Oahu Regional Transportation Plan (ORTP) until Monday, March 28, 2016. This ORTP 2040 will serve as the long-range vision document for the improvement of the transportation system on Oahu through the year 2040. The draft ORTP 2040 document is available for review at the following link: www.oahumpo.org/ORTP2040.

Consistent with Federal regulations, the OahuMPO is performing consultation with those organizations and agencies that provide services for Title VI & Environmental Justice (T6/EJ) communities.

Because Oahu's population is a majority of minorities, the OahuMPO follows a unique environmental justice methodology to determine the T6/EJ population. The OahuMPO process considers the nature and status of minority groups in the region based on three factors: (1) its numerical minority status, (2) its share of the region's aggregate household income compared against its share of the region's total households, and (3), its settlement pattern compared to all other groups. The result of this analysis is the identification of 226 census block groups as environmental justice areas: 218 based on the disproportionate presence of federally-defined minority groups, one based on low-income characteristics alone, and seven block groups were both disproportionately low income and minority.

We are interested in receiving the following information:

1. Input on the proposed goals, priorities, projects, and programs;
2. Comments on the existing and forecasted conditions assessments;
3. Feedback on environmental impacts and mitigation measures (Figure 6-13); and
4. Identification of other T6/EJ stakeholders or interested parties.

Your agency or organization has been identified by the OahuMPO as a key T6/EJ organization for consultation on the draft ORTP 2040. Your input and feedback is important to us. If you have any questions regarding this correspondence, please contact Amy Ford-Wagner at (808) 586-2305.

Attachments: ORTP 2040 Title VI/Environmental Justice Organizations
ORTP 2040 Review Form

cc: Liz Fischer, FHWA
Ted Matley, FTA
OahuMPO Technical Advisory Committee

ORTP 2040 Title VI/Environmental Justice Organizations

Alu Like
Association of Hawaiian Civic Clubs
C&C Elderly Affairs Division
Catholic Charities Hawaii
Chamber of Commerce of Hawaii
Child & Family Service
Chinese Chamber of Commerce
FilCom Center Incorporated
Habilitat
Hawaii Aging and Disability Resource Center
Hawaii Alliance of Nonprofit Organizations
Hawaii Foodbank
Hawaii Hispanic Chamber of Commerce
Hawaii Meals on Wheels
Hawaii Public Housing Authority
Hawaiian Homestead Associations
- Kānehili Hawaiian Homestead
- Kapolei Community Development Corporation
- Kaupe`a Homestead Association
- Waimanalo Hawaiian Homes Association
- Ahupua'a 'O Nānākuli Homestead Association
- Princess Kahanu Estates Hawaiian Homestead Association

Helping Hands Hawaii
Helping Hands Hawaii
Honolulu Community Action Program
Honpa Hongwanji Hawaii Betsuin
Kaiser Foundation Hospital
Kalihi Business Association
Kalihi-Palama Health Center
Kapolani Women's Health Center
Kaumakakapili Church Free Store
Ke Ola Mamo (Native Hawaiian Health Care System)
Kokua Council
Kokua Kalihi Valley
Lanakila Pacific (Lanakila Meals on Wheels)
Malama Lima Handi-Trans., LLC
Moiliili Senior Center
North Shore Chamber of Commerce
Office of Hawaiian Affairs
Pacific Gateway Center
Project Dana
Samaritan Counseling Center Hawaii
State Executive Office on Aging
State Office of Veterans Services
The Queen's Medical Center
UH System Disability Services Providers (Oahu)

HCC Student Access
KCC Disability Support Services Office
KCC Kapiolani Deaf Center
LCC Kakoo Ike Program
UH Manoa Kokua Program
UH West Oahu Student Services Office
WCC Special Student Services Program
US Department of Veterans Affairs
US Vets Transitional Housing & Homeless Program
Waianae Coast Comprehensive Health Center
Waianae Community Outreach
Waikiki Community Center
Waimanalo Health Center
Winners at Work dba Abilities Unlimited
Mental Health America of Hawaii

Appendix C: Potential Environmental Impacts and Mitigation Measures

Impacts	Mitigation Measures
Air Quality	- Undertake only those projects that have a demonstrable benefit to travel and/or air quality - Construct sidewalks, bicycle facilities, and transit access - Evaluate and incorporate congestion mitigation measures into project scope - Reduce fugitive dust, include frequent watering and use of wind screens - Re-establish groundcover and landscaping as quickly as possible after the ground has been disturbed - Require frequent tire washing and road cleaning to prevent haul trucks from tracking dirt onto paved streets - Cover open-bodied truck- loads when in motion
Archaeological	- Choose alternatives or design projects to avoid archaeologically sensitive areas - Immediately stop work and contact the appropriate authorities when undocumented burial or archaeological sites are inadvertently uncovered - Design modifications to avoid area - Archaeological excavation when necessary - Promote educational activities
Community	- Solicit, hear, and consider early and continuing community input in the planning and programming process - Understand community-generated values, goals, and vision - Develop recreational areas - Maintain mauka-makai access for pedestrians and bicyclists and consider traffic calming devices - Develop historical projects to document and tell the story of the community
Environmental Justice Communities	- Evaluate the environmental justice impacts of all feasible alternatives - Pay property owners fair market value for property acquired - Perform residential and commercial relocation
Farmland	- Protect farmland with agricultural conservation easements
Fragmented Animal Habitats	- Coordinate project development with appropriate wildlife experts and agencies - Evaluate the potential habitat/wildlife impacts of all feasible alternatives - Construct overpasses with vegetation - Construct underpasses, such as culverts and viaducts - Minimize potential fragmenting of animal habitats through other design measures
Historic Sites	- Support the collection and maintenance of records of historic properties and evaluate all feasible alternatives in light of those records - Relocation of historic property - Design modification - Landscaping to reduce visual impacts - Photo documentation - Historic archival recording to present information to the public - Consult with FHWA and the State Historic Preservation Officer (SHPO) on any required written approvals for licenses, permits, or easements - Comply with Section 4(f) of the Department of Transportation Act (1966) and Section 106 of the National Historic Preservation Act (1966)
Light	- Shielded nighttime lighting, Lens color, Direction of lighting, and Low level lighting should be carefully considered

Impacts	Mitigation Measures
Maintenance of Traffic	- Plans for construction phasing and for traffic control - Conduct construction activities during off-peak hours - Inform public and private emergency responders about planned construction activities and closures, along with suitable alternative routes - During a natural disaster open as many lanes as possible
Noise	- Public information programs - Quiet work procedures - Protocol for responding to complaints and correcting deficiencies - Noise barriers and planting trees
Parks	- Construct bicycle/pedestrian pathway connections to parks - Dedicate land - Compensation for park dedication fees - Replace impaired functions
Streams	- Stream restoration and Vegetative buffer zones - Strict erosion and sedimentation control measures - Best management practices for storm water management
Sea Level and Water Table Rise	- Based on project location, conduct detailed evaluation using the University of Hawaii School of Ocean and Earth Science and Technology (UH SOEST) model of sea level and water table rise
Threatened & Endangered Species	- Map and preserve critical habitat - Enhancement or restoration of degraded habitat - Creation of new habitats - Establishment of buffer areas around existing habitats - Modifications of land use practices - Restrictions on land access and Lighting
Viewshed	- Vegetation and landscaping, Screening, Buffers, Earthen berms, Camouflage, and Lighting
Waste	- Collected and stored waste in securely lidded dumpsters that are emptied before becoming overly full and not buried on site - Store materials in a neat, orderly manner in appropriate containers - Regular vehicle preventive maintenance to reduce the chance of leakage - Keep spill cleanup kits on-site - Collect sanitary waste generated during construction in portable units
Water	- Use permeable surfaces where feasible to assist in groundwater recharge - Monitor water pollution from storm-water runoff of roadway surfaces - Coordinate with the Board of Water Supply to minimize water service disruption and the area disturbed by project construction - Diversion dams and other isolation devices surrounding the work area - Silt fences and other perimeter controls and sediment barriers - Covering stockpiles of materials - Installation of storm drain inlet and catch basin protection devices - Managing solid waste to separate recyclable and reusable material - Wetland restoration and the creation of new wetlands

Appendix D: Regional Transportation Plan Requirements Crosswalk

Requirements	Items to Review/Confirm	Implementation Activity (Page #)
Horizon Year	20 year minimum	"through the year 2040" (1-2, 10-14, 42-49)
Long and Short Range strategies	Lead to development of an integrated Intermodal transportation system, Facilitates efficient movement of people and goods	Mid- and Long-Range Projects (25)
ORTP Content	Demand analysis, Congestion management strategies, Planning Factors, Pedestrian walkway and bicycle facilities, Transportation system preservation, Multimodal evaluation of transportation and SEE (sociological, economic, and environmental) impacts, Transportation enhancements, Financial plan documenting consistency between transportation investments and available and projected sources of revenue, Inclusion of all regionally significant projects, Design concept and scope descriptions of all existing and proposed transportation facilities	Making Choices (1-57)
Consideration of Plans	Area's comprehensive land use plan and development objectives; National, State and local housing goals and strategies; Community development and employment plans and strategies; Environmental resource plans; National, State and local goals and objectives, such as linking low income households with job opportunities; Area's overall SEE and energy conservation goals and objectives	Opportunities (6-17, 23)
Air Quality	Air Quality Conformity needs in air quality non-attainment and maintenance areas; Formal air quality conformity determination; Oahu has been determined to be an in attainment area for air quality	See: Hawaii Infrastructure State Implementation Plans[23]
Revenue Estimates	Cooperatively developed by State, MPO, and public transit operator(s); Reflect existing revenues and historical trends; Include reasonable public and private sources; May include new funding sources supported by implementation plan	Anticipated Revenue Sources (53-54)
O&M	Identifies estimated system level costs for operation and maintenance (O&M) of system	Operations, Maintenance, System Preservation, and Safety (24, 27-41)
Cost Estimates	Process for determination documented, reviewed, and periodically updated (Ranges or bands acceptable in the outer 10 years)	Expenditures (27-41, 50, 54)
Balances	Balances and demonstrates consistency of existing and proposed revenue sources with all forecasted O&M and project costs	Paying for the Plan (23, 53-54)
YOE	Reflects Year of Expenditure (YOE) revenues and cost estimates	Expenditures (53-54)
Non-Attainment	In non-attainment and maintenance areas, addresses specific financial strategies to ensure implementation of required air quality projects	Oahu is in attainment for air quality.

[23] http://www3.epa.gov/region9/air/actions/hawaii.html#sip

Requirements	Items to Review/Confirm	Implementation Activity (Page #)
Consultation with Environmental Stakeholders	Consult with State and local agencies responsible for land management, natural resources, environmental protection, conservation and historic preservation concerning the development of the transportation plan.	Potential Environmental Analysis and Consultation (50) and Appendix B: Stakeholders and T6/EJ Consultation Lists
Environmental Mitigation	The ORTP must include a discussion of the types of potential environmental mitigation activities and potential areas to carry out these activities.	Potential Environmental Analysis and Consultation (50) and Appendix C: Potential Environmental Impacts and Mitigation Measures
CMP	The ORTP must demonstrate and document implementation of the approved CMP.	Implementation Activity (56); Also see: CMP Implementation Policies and Procedures[24]
Public Comment	The Final ORTP must include a documented disposition of public comments received.	Appendix A: Disposition of Comments on Public Review Draft ORTP 2040
Title VI/ EJ	The ORTP must include documentation of the analysis completed for Title VI/ EJ.	Environmental Justice Analysis (50) and Appendix B: Stakeholders and T6/EJ Consultation Lists; Also see: Title VI Policies and Procedures [25]

[24] http://www.oahumpo.org/wp-content/uploads/2015/09/Congestion-Management-Process-2015XXXX-TAC-Recommended.pdf
[25] http://www.oahumpo.org/wp-content/uploads/2015/09/11-OahuMPO_TitleVI_ProcessesandProceduresDRAFT150901woAppendices.pdf

Appendix E: Bibliography

Along with previous iterations of the ORTP and associated reports, the following Federal, State, regional, and local planning documents and studies were reviewed and considered in the drafting of this ORTP 2040 in order to demonstrate inter-agency coordination and plan consistency:

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