

CHAPTER FIVE

Our Implementation Plan

This chapter demonstrates that the ORTP is financially constrained, in compliance with federal law, and that the projects and programs listed in Chapter 5 are “reasonably likely to be funded” for planning purposes, as defined by OAR 660-012-0040 (Transportation Financing Program). These assumptions are based on the transportation revenue forecast completed by Jacobs on behalf of OahuMPO. An overview of the revenue forecast will be provided in this chapter. For details of the revenue forecast, including key forecast assumptions and alternative funding strategies, see Appendix C. It should be noted that the forecast figures used in this chapter are for planning purposes only and do not commit any jurisdiction or agency to provide a specific level of funding.

The projects and programs listed in this chapter support the long-range vision for the island. These projects and programs come from adopted local, regional, or state planning efforts that provided opportunities for public input. The project and program list is important because in order to be eligible for federal transportation funding, a project must be included on this list. Federal law also requires that the estimated cost of the projects identified in the plan do not exceed the total revenue estimated over the life of the plan.

How do we pay for our transportation projects?

Funding for highway and transit projects have primarily come from the state, city, and federal government, through fees such as the gas taxes, vehicle registration fees, etc. However, transportation revenues have not kept pace with the growth in needs for our transportation system. Decades of auto-oriented, suburban growth have expanded roadway needs greatly, while funding mechanisms to fund such investments have not kept pace. Many of these funding sources have been on the decline, with people driving less and fuel efficiency increasing, including the greater adoption of hybrid and electric vehicles. These are great outcomes in terms of achieving our vision and goals, but these outcomes also reflect less transportation funding. The sections below will discuss potential federal, state, and city funding sources.



ROADWAY PROJECT FUNDING

Potential Federal Funding Sources

The FAST Act is the current transportation bill for the four-year period from 2016 through 2020 (with an extension approved for one year, expiring on September 30, 2021). During this time, it will provide a total funding of \$305 billion for the nation's transportation needs. This legislation includes several categories of funding, under which many of the projects in the financially constrained plan will be eligible for federal funding assistance. These categories are:

NATIONAL HIGHWAY PERFORMANCE PROGRAM (NHPP)

This is a new program under MAP-21. The NHPP provides support for the condition and performance of the NHS and the construction of new facilities on the NHS. The NHPP also ensures that the investment of federal aid funds in highway construction is directed to support progress toward the achievement of the performance targets established in a state's asset management plan for the NHS.

Funds used from the NHPP may only be used for the construction of a public transportation project that supports progress toward the achievement of national performance goals for improving the:

- ✓ infrastructure condition,
- ✓ safety,
- ✓ mobility, or
- ✓ freight movement on the National Highway System (NHS).

The funds can only be used on projects that are eligible for assistance under chapter 53 of title 49, if:

- ✓ the project is in the same corridor as, and in proximity to, a fully access-controlled NHS route;
- ✓ the construction is more cost-effective (as determined by a cost-benefit analysis) than an NHS improvement; and
- ✓ the project will reduce delays or produce travel time savings on the NHS, as well as improve regional traffic flow.

The local match requirement for NHPP funded projects varies. The standard federal/state funding ratio for arterial and interstate routes is 80/20. However, the interstate system receives funding at a 90/10 ratio when a project adds HOV or auxiliary lanes. Two percent of the funding in this category must be set aside for State Planning and Research as defined by [23 U.S.C. 505].

According to [23 U.S.C. 126], a state has the ability to transfer up to 50 percent of its NHPP funds in a fiscal year to:

- ✓ National Highway Freight Program,
- ✓ Surface Transportation Block Grant Program,
- ✓ Transportation Alternatives,
- ✓ Highway Safety Improvement Program, and/or
- ✓ Congestion Mitigation and Air Quality Program.

SURFACE TRANSPORTATION BLOCK GRANT PROGRAM (STBGP)

The STBGP is a new funding program that was created from a conversion of the Surface Transportation Program (STP). The STBGP contains subcategories of funding for states and urban areas.

Two percent of the funding in this category must be set aside for State Planning and Research as defined by [23 U.S.C. 505]. The other set-aside requirements for the STBGP are funding for bridges not on federal-aid highways and transportation

alternatives. Transportation alternatives' funding is sub-allocated based on an area's population in a manner identical to the now-defunct Transportation Alternatives Program (TAP).

The STBGP continues all the provisions of the former STP. As such, these funds can be used for any road, including NHS routes, which is not functionally classified as a local road or rural minor collector. However, there are exceptions to this rule¹. A percentage of a state's STBGP apportionment (after set-asides for Transportation Alternatives) is allocated to the areas it serves based on population size groupings. These groupings are:

- ✓ Urbanized areas with population greater than 200,000.
 - This portion is to be divided among those areas based on their relative share of population, unless the Secretary approves a joint request from the State and relevant MPO(s) to use other factors.
- ✓ Areas with population greater than 5,000 but no more than 200,000
 - The State is to identify projects in these areas for funding, in consultation with regional planning organizations, if any.
- ✓ Areas with population of 5,000 or less. [23 U.S.C. 133(d)]

The funding ratio is 80/20. However, interstate projects that add HOV or auxiliary lanes have a funding ratio of 90/10.

Under the FAST Act, STBGP funds can be used to create and operate a state office to help design, implement, and oversee public-private partnerships (P3) that are eligible to receive Federal highway or transit funding. These funds can also be used to pay a stipend to unsuccessful P3 bidders in certain circumstances [23 U.S.C. 133(b)(14)]. Through the USDOT, the funds can, upon a state's request, be used to pay the subsidy and administrative costs for TIFIA credit assistance for an eligible STBGP project or group of projects. [23 U.S.C. 133(b)(13)]. The FAST Act also provides the STBGP with mention of the eligibility of the installation of vehicle to infrastructure communication equipment. [FAST Act §1407, 23 U.S.C. 133(b)(1)(D)].

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)

The HSIP is designed to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. This includes non-State-owned public roads and those on tribal lands. Except as provided in 23 U.S.C. 120 and 130, the Federal share for projects using HSIP funding is 90 percent. The use of HSIP funds under the FAST Act are a continuation of those from MAP-21. HSIP funded projects must also be prioritized through the HSIP program based on crash statistics. Scope of these projects are determined through the project development process.” after, “Funding from the HSIP can be used for safety projects that are consistent with the State’s Strategic Highway Safety Plan (SHSP). The projects must correct/improve a hazardous road location, feature, or address a highway safety problem.

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Under MAP-21, HSIP funds were used for many types of projects due to the non-exhaustive nature of the list of eligible projects. The FAST Act imposes a more stringent use of HSIP funds. The funds may be used only on the activities specifically listed in the HSIP statute itself. Additional inclusions to HSIP from the FAST Act are:

- ✓ Installation of vehicle-to-infrastructure communication equipment.
- ✓ Pedestrian hybrid beacons.
- ✓ Roadway improvements that provide separation between pedestrians and motor vehicles, including medians and pedestrian crossing islands.
- ✓ Other physical infrastructure projects not specifically enumerated in the list of eligible projects.

The FAST Act continues the prohibition of the use of HSIP funds for the purchase, operation, or maintenance of an automated traffic enforcement system (except in school zones). [FAST Act § 1401]. However, workforce development, training, and education activities remain an eligible use of HSIP funds. [23 U.S.C. 504(e)]

RAILWAY-HIGHWAY CROSSINGS PROGRAM (RHCP)

The Railway-Highway Crossings program provides funds for safety improvements to reduce the number of fatalities, injuries, and crashes at public railway-highway grade crossings. The Federal share for projects using funding from this category is 90 percent. The program requires that at least 50 percent of each state’s railway-highway crossings funds be set aside for the installation of protective devices at railway-highway crossings.

All prior program eligibilities for this funding have continued under the FAST Act. The FAST Act also extend eligibility to two new activities [FAST Act § 1412]:

- ✓ The relocation of highways to eliminate railway-highway grade crossings.
- ✓ Projects at railway-highway grade crossings to eliminate hazards posed by blocked crossings due to idling trains.

CONGESTION MITIGATION AND AIR QUALITY (CMAQ)

Funding under the CMAQ program continues to provide a flexible funding source to state and local governments for transportation projects and programs in order to meet the requirements established by the Clean Air Act. CMAQ funding is used to reduce congestion and improve air quality for areas that are in nonattainment for ozone, carbon monoxide, or particulate matter. Former nonattainment areas that are now in compliance, and maintenance areas, are eligible for CMAQ funds as well. The funding ratio is 80/20. However, interstate projects that add HOV or auxiliary lanes have a funding ratio of 90/10.

O’ahu is in attainment for ozone, carbon monoxide, and particulate matter, meaning that the island meets air quality minimum standards. This allows more flexible use of CMAQ funds, however, agencies generally still program CMAQ funds to CMAQ eligible projects.

METROPOLITAN PLANNING PROGRAM (MP)

The purpose of Metropolitan Planning funds is to carry out the requirements of 23 U.S.C. 134 and provide for a continuing, comprehensive and cooperative (3-C) metropolitan transportation planning process. Following 23 U.S.C. 104, generally,

Metropolitan Planning funds shall be made available to each Metropolitan Planning Organization (MPO) designated for an urbanized area with a population of more than 50,000 individuals and responsible for carrying out the 3-C metropolitan planning process.

NATIONAL HIGHWAY FREIGHT PROGRAM (NHFP)

The National Highway Freight Program is a new funding category that was created by the FAST Act. This program is designed to improve the efficient movement of freight on the National Highway Freight Network (NHFN.) The FHWA states that the goals of this program are:

- ✓ Investing in infrastructure and operational improvements that strengthen economic competitiveness, reduce congestion, reduce the cost of freight transportation, improve reliability, and increase productivity.
- ✓ Improving the safety, security, efficiency, and resiliency of freight transportation in rural and urban areas.
- ✓ Improving the state of good repair of the NHFN.
- ✓ Using innovation and advanced technology to improve NHFN safety, efficiency, and reliability.
- ✓ Improving the efficiency and productivity of the NHFN.
- ✓ Improving state flexibility to support multi-State corridor planning and address highway freight connectivity.
- ✓ Reducing the environmental impacts of freight movement on the NHFN. [23 U.S.C. 167 (a), (b)]

The funding ratio is up to 90/10 for interstate projects, including those that add HOV or auxiliary lanes. NHFP funds must be used in order to contribute to the efficient movement of freight on the NHFN. Projects using NHFP funds must be identified in a freight investment plan that is included in a state's freight plan.



TRANSIT PROJECT FUNDING

Potential Federal Funding Sources

There are many federal funding sources for public transit. Most of these sources are programs funded by the Federal Transit Administration (FTA) or the Federal Highway Administration (FHWA). While funded by federal agencies, these programs are administered by the states. The following federal funding programs are formula-based or discretionary grants that are funded by the federal government and available for transit providers in the OahuMPO to utilize.

METROPOLITAN TRANSPORTATION PLANNING (SECTION 5303)

This formula-based funding program provides funding and procedural requirements for multimodal transportation planning in metropolitan areas. The planning efforts must follow the 3C process and result in long-range plans and short-range programs of transportation investment priorities. The maximum federal share for this funding category is 80 percent, with a required local match minimum of 20 percent. This funding category is only available to Metropolitan Planning Organizations. The funds are first apportioned to the state DOTs, which are then allocated to the MPOs.

URBANIZED AREA FORMULA GRANTS (SECTION 5307)

This formula-based funding program provides funds for capital and operating assistance for transit operations in urbanized areas and for transportation-related planning. The funds can be used for:

- ✓ planning, engineering, design and evaluation of transit projects, and other technical transportation related studies;
- ✓ capital investments in bus and bus-related activities such as:
- ✓ replacement of buses,
- ✓ overhaul of buses,
- ✓ rebuilding of buses,

- ✓ crime prevention and security equipment,
- ✓ construction of maintenance and passenger facilities; computer hardware/software; and
- ✓ operating assistance in urbanized areas under 200,000 in population, or with 100 or fewer fixed-route buses operating in peak hours.

Activities eligible under the former Job Access and Reverse Commute (JARC) program, which provided services to low-income individuals to access jobs, are now eligible under the Urbanized Area Formula program. The maximum federal share is 80 percent for capital projects, 50 percent for operating assistance, and 80 percent for ADA non-fixed route paratransit service.

CAPITAL INVESTMENT GRANTS (CIG) (SECTION 5309)

Capital Investment Grants are the FTA's primary grant program for funding major transit capital investments. These investments include:

- ✓ heavy rail,
- ✓ commuter rail,
- ✓ light rail,
- ✓ streetcars, and
- ✓ bus rapid transit.

There is an annual call for applications and selection of awardees by the FTA. The law requires that projects seeking Capital Investment Grants funding complete a series of steps over several years to be eligible for funding. New Starts and Core Capacity projects require the completion of the Project Development and Engineering phases in advance of the receipt of a construction grant agreement. Small Starts projects require only the completion of the Project Development phase. The projects are required to be rated by the FTA at various points in the process according to statutory criteria used for evaluating project justification and local financial commitment.

Enhanced Mobility of Seniors and Individuals with Disabilities (Section 5310) Grants for this funding category are made by the states to private non-profit organizations (and certain public bodies) to increase the mobility of seniors and persons with disabilities. The former New Freedom program (Section 5317) has been folded into this program. The New Freedom program provided grants for services for individuals with disabilities that went above and beyond the requirements of the Americans with Disabilities Act (ADA). Activities that were eligible under New Freedom are now eligible under the Enhanced Mobility of Seniors and Individuals with Disabilities program. Eligible capital costs include buses, vans, radios, computers, engines, and transmissions. Section 5310 funds are apportioned among the states by a formula. The formula is based on the number of seniors and people with disabilities in each state according to the latest available U.S. Census data. The maximum federal share is 80 percent for eligible capital costs, and 50 percent for operating assistance. The 10 percent that is eligible to fund program administrative costs including administration, planning, and technical assistance may be funded at a 100 percent federal share.

RURAL AREA FORMULA GRANTS (SECTION 5311)

This formula-based funding program provides funding that can be used for:

- ✓ administration,
- ✓ planning,
- ✓ capital,
- ✓ operating,
- ✓ job access and reverse commute projects, and
- ✓ the acquisition of public transportation services.

Eligible recipients for the grants include states and federally recognized Indian Tribes. Subrecipients may include state or local government authorities, nonprofit organizations, and operators of public transportation or intercity bus service. The federal share is 80 percent for capital projects, 50 percent for operating assistance, and 80 percent for ADA non-fixed route paratransit service.

OTHER FTA GRANT PROGRAMS

The FTA has several other funding sources for special programs, including:

- ✓ Public Transportation Emergency Relief Program (Section 5324)
- ✓ Public Transportation Innovation (Section 5312)
- ✓ Human Resources & Training (Section 5314b)
- ✓ Low and No-Emission Component Assessment Program
- ✓ Low or No-Emission Vehicle Program (Section 5339c)
- ✓ Mobility on Demand (MOD) Sandbox Program (Section 5312)
- ✓ Rural Transportation Assistance Program {Section 5311(b)(3)}
- ✓ Safety and Research Demonstration Program
- ✓ State of Good Repairs Grants (Section 5337)
- ✓ Technical Assistance & Standards Development - 5314(a)
- ✓ Tribal Transit Formula Grants - 5311(c)(2)(B)
- ✓ Zero Emission Research Opportunity (ZERO)
- ✓ CMAQ (FAST Act § 1114; 23 U.S.C. 149)

SURFACE TRANSPORTATION BLOCK GROUP PROGRAM (STBGP)

The STBGP provides funding that may be used by states and localities for a wide range of projects, including transit and intercity bus. The local match requirements vary based on the project and facility type. Funds that were previously available through the TAP have been created as a set-aside in the STBGP.

NATIONAL HIGHWAY PERFORMANCE PROGRAM (NHPP)

The NHPP funds for transit apply in the same manner as described in the previous section. However, with transit projects, the local match requirement varies.



PEDESTRIAN AND BICYCLE PROJECT FUNDING

Future federally funded transportation projects will present many opportunities for bicycling and pedestrian facilities to be incorporated, unless exceptional circumstances exist.

Potential Federal Funding Sources

Many of the major federal roadway and public transit funding sources described in previous sections of this chapter are flexible enough to fund construction of bicycle and pedestrian facilities. The Transportation Alternatives funding discussed in the previous section, under STBGP is specifically for pedestrian and bicycle projects.

Potential Local Funding Sources

STATE OF HAWAII REVENUE SOURCES

The primary revenue sources for ground transportation are specific to the Special Revenue Fund for Highways, with a considerable amount of tax revenues related to vehicles, including vehicle weight tax, vehicle registration fees, liquid fuel tax, rental motor vehicle surcharge tax, licenses and fees, and fines forfeitures penalties. The non-tax revenues to the State's governmental funds include intergovernmental revenues, charges for current services, revenues from private sources, interest and investment income, rentals, and other revenues.

The following categories of funding make up Highway Special Revenue Fund Tax Revenues:

- ✓ **Liquid Fuel Tax**—The Highway Fund portion only of a tax on distributors for each gallon of liquid fuel refined, manufactured, produced, or compounded by the distributor and sold or used by the distributor in the state. Most commonly, distributors pass this tax on to the customers (HRS §243).

- ✓ **Vehicle Weight and Registration Tax**—This category is composed of vehicle weight tax and vehicle registration fees (HRS §249).
- ✓ **Rental Motor, Tour Vehicle, and Car-Sharing Vehicle Surcharge Tax**—This tax is composed of daily surcharge fees imposed on rental vehicles and tour vehicles and a surcharge tax per every half-hour that a motor vehicle is rented or leased by a car-sharing organization (HRS §251).

Highway Special Revenue Fund Non-Tax Revenues include the following:

- ✓ **Interest and Investment Income** - Revenue derived from the investment of State Highway Fund moneys on deposit in the State Investment Pool.
- ✓ **Charges for Current Services** - Periodic motor vehicle inspection charges, commercial license fees.
- ✓ **Rentals** - Rents from the State Highway System properties.
- ✓ **Fines, Forfeitures, and Penalties** - All other fines, forfeitures and penalty fees paid to the State Highway Fund, not listed in the Other category below (for example, as listed in Hawaii Administrative Rules [HAR] §19-241 and §19-245).
- ✓ **License and Fees** - Primarily drivers' licensing fees paid to the State Highway Fund.
- ✓ **Other** - Composed of vehicle weight tax penalties, fines for illegal parking on bikeways, fines for parking violations on State Highways known as the State Highway Enforcement Program, fines for use of mobile electronic device while driving, and other miscellaneous revenues.

CITY AND COUNTY OF HONOLULU REVENUE SOURCES

The City's ground transportation revenue comes primarily from the Highway Fund and the Public Transportation System. The Highway Fund includes special revenue proceeds that have been earmarked by law for highway and related activities. Typically, they include the City's fuel tax, motor vehicle weight tax, and public utility franchise tax. Funding from the Public Transportation System capital project being constructed by the Honolulu Authority for Rapid Transportation include charges for services, capital grants/contributions, investment earnings, and intergovernmental transfers (that is, GET). Revenue

sources for Public Transportation System operations include charges for services and operating grants/contributions, with the predominant contributions coming from grants from the City and County of Honolulu, Highway Fund and General Fund which predominately fund wages and fringe benefits, fuel and energy, materials and services, and risk and insurance.

SPOTLIGHT: Innovative Funding Mechanism

In order to mitigate the decrease in transportation funding, due to greater fuel efficiency and the adoption of hybrid and electric vehicles, the Hawai'i Department of Transportation is studying the feasibility of implementing a road usage charge.

The road usage charge would replace the gas tax, with drivers paying to use the roads based on the number of miles driven, rather than on how many gallons of fuel burned. This is one strategy to help close the transportation funding gap. In particular, the road usage charge would ask those who own hybrid and electric vehicles to pay their fair share, for road maintenance and other transportation projects, as they currently do not pay nearly as much in gas taxes, as those who drive conventional vehicles. Like the gas tax, the road usage charge fees would go into the highway fund which helps to pay for the upkeep, improvement, and enhancement of the State's surface transportation system.



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Demonstration of Financial Constraint

The ORTP is required to demonstrate that the projects and programs included in the plan do not cost more than expected transportation funding. This is known as financial or fiscal constraint. Given the long-term nature of the 2045 ORTP, and the degree of uncertainty in estimating both costs and revenues, funding shown in the 2045 ORTP may not be available in exactly the same amounts or mix of sources indicated in this plan. Actual funding amounts depend on the federal, state and local budget processes for any given year. Near term plans, such as the Transportation Improvement Program (TIP) which covers four years, must demonstrate stricter fiscal constraint, ensuring that as costs and revenue forecasts become more precise, and as projects move towards implementation, fiscal accountability is maintained. For details of the revenue forecast, including key forecast assumptions and alternative funding strategies, see Appendix C. The following table demonstrates project and program costs compared to the forecasted transportation funding expected to be available to pay for them.

To demonstrate financial constraint, Table 5.1 compares the reasonably expected funding to the estimated costs of projects and programs, included in the plan. A list of the financially constrained projects can be found in the next section.

Table 5.1 Demonstration of Financial Constraint: Forecasted Funding Compared to Project and Program Costs

Funding Period	Funding Years	Project (by Category)	Expenditure (x\$Millions)	Revenue (x\$Millions)
Short-Range Projects and Programs 2021-2025	2021-2025	Transportation Improvement Program	\$2,085.50	\$4,697.00
Mid-Range Projects and Programs 2026-2035	2026-2030	Roadway Capacity	\$731.20	
		Highway, Road, and Bridge Operations and Maintenance	\$734.30	
		Safety	\$135.00	
		Transit Capital	\$62.60	
		Transit Operations and Maintenance	\$3,232.30	
		Pedestrian and Bicycle	\$74.90	
		System Management and Operations	\$28.10	
		Transportation Demand Management	\$5.50	
		Total	\$5,003.80	\$5,855.00
	2031-2035	Roadway Capacity	\$547.90	
		Highway, Road, and Bridge Operations and Maintenance	\$734.30	
		Safety	\$135.00	
		Transit Capital	\$62.60	
		Transit Operations and Maintenance	\$4,098.50	
		Pedestrian and Bicycle	\$74.90	
		System Management and Operations	\$28.10	
		Transportation Demand Management	\$5.50	
		Total	\$5,686.70	\$6,810.00

Table 5.1 continued 

Table 5.1 Demonstration of Financial Constraint: Forecasted Funding Compared to Project and Program Costs (continued)


Funding Period	Funding Years	Project (by Category)	Expenditure (x\$Millions)	Revenue (x\$Millions)
Long-Range Projects and Programs 2036-2045	2036-2040	Roadway Capacity	\$479.50	
		Developer Funded Roadway Capacity	\$20.95	
		Highway, Road, and Bridge Operations and Maintenance	\$879.60	
		Safety	\$135.00	
		Transit Capital	\$0.00	
		Transit Operations and Maintenance	\$4,763.90	
		Pedestrian and Bicycle	\$208.50	
		System Management and Operations	\$76.20	
		Transportation Demand Management	\$11.10	
		Total	\$6,574.60	\$7,800.00
	2041-2045	Roadway Capacity	\$377.50	
		Developer Funded Roadway Capacity	\$20.95	
		Highway, Road, and Bridge Operations and Maintenance	\$879.60	
		Safety	\$135.00	
		Transit Capital	\$0.00	
		Transit Operations and Maintenance	\$5,863.40	
		Pedestrian and Bicycle	\$208.50	
		System Management and Operations	\$76.20	
		Transportation Demand Management	\$11.10	
		Total	\$7,572.10	\$8,805.00

Table 5.1 continued 

Table 5.1 Demonstration of Financial Constraint: Forecasted Funding Compared to Project and Program Costs (continued)

Funding Period	Funding Years	Project (by Category)	Expenditure (x\$Millions)	Revenue (x\$Millions)
Projects and Programs Total 2021-2045		Transportation Improvement Program	\$2,085.50	
		Roadway Capacity	\$2,136.10	
		Developer Funded Roadway Capacity	\$41.90	
		Highway, Road, and Bridge Operations and Maintenance	\$3,227.60	
		Safety	\$540.00	
		Transit Capital	\$125.10	
		Transit Operations and Maintenance	\$17,958.20	
		Pedestrian and Bicycle	\$566.70	
		System Management and Operations	\$208.50	
		Transportation Demand Management	\$33.10	
		Total	\$26,922.67	\$33,967.00
		City and County of Honolulu Share:	\$22,139.80	-
		State of Hawai'i Share:	\$4,782.90	-
Illustrative Projects		Illustrative Roadway Capacity and Operational Improvements Projects	\$2,393.70	\$0.00
		Illustrative Transit Projects	\$12,365.00	\$0.00
		Total	\$14,758.70	\$0.00

Table 5.1 demonstrates that \$33.967 billion of funding will be available for projects and programs in the region from 2021 to 2045. This compares to \$26.923 billion of costs for projects and programs.



Prioritizing Our Investments to Meet Our Most Urgent Needs

PROJECT AND PROGRAM DEVELOPMENT

To develop the list of projects and programs, OahuMPO issued a call for projects and programs from August 12, 2020 – September 30, 2020. See the project and program application in Appendix E. The new projects and programs received were evaluated by OahuMPO staff, and then the evaluations were reviewed by its technical working group, Technical Advisory Committee, Citizen Advisory Committee, and Policy Board. See Appendix F for the final evaluation of new projects and programs, including the geographic analyses. More information about the new projects and programs can be found in the project information sheets in Appendix G. Table 5.2 shows how the new projects and programs were scored.

Following that, the draft list of projects and programs were put out for public comment on the ORTP webpage, via survey and webmap. Request for community feedback via survey was emailed to target community organizations and advertised via the OahuMPO Facebook, newsletter, and announcements at Neighborhood Board meetings. The comments received from the public were provided to the technical working group, Technical Advisory Committee, Citizen Advisory Committee, and Policy Board, for consideration when finalizing the project and program list. See the comments received in Appendix H.

Planning efforts on O'ahu have yielded a sizable list of projects and programs to make it safer, easier, and more comfortable to get around the island. However, transportation funds and staff resources are limited, compelling a process to prioritize investments that will best achieve the ORTP's vision and goals.

Prioritizing starts with understanding the challenges we need to address. Priorities were identified during the public engagement process and reflected in the ORTP's vision and goals. See Appendix B for more information about the public engagement process.

OahuMPO has created a project and program prioritization process to evaluate potential transportation projects and programs using measurable criteria based on the goals of our long-range plan. It provides a quantitative method to compare projects and programs proposed for our O'ahu Regional Transportation Plan. The full project and program prioritization process can be read in Appendix C.

OahuMPO also provided the list of proposed project and programs to state and local agencies responsible for land management, natural resources, environmental protection, conservation, and historic preservation. The MPO consulted with these agencies regarding how their future plans may impact planned transportation projects, any transportation solutions needed with regard to future plans, and any recommended environmental mitigation activities implementing agencies may take due to potential impacts on natural resources, environmental protection, conservation, and historic preservation sites. More information about this consultation may be found in Appendix J.

Table 5.2 Scoring of New Projects and Programs

Rank	Project Name	Lead Agency	Funding Request Timeframe	Estimated Total Cost	Evaluation Score
1	Kamehameha Highway (Route 99) Seismic Retrofit, Pearl Harbor Interchange, Structure #2	HDOT	Short	\$5,000,000	58
1	Likelike Highway (Route 63) Seismic Retrofit, Kalihi Stream Bridges	HDOT	Short	\$11,000,000	58
1	Moanalua Freeway, (Interstate Route H-201) Seismic Retrofit, Puuloa Interchange (Five Structures)	HDOT	Short	\$15,000,000	58
4	Kalaeloa Boulevard Railroad Improvements	DTS	Short	\$694,000	45
5	System Preservation Program	HDOT	Mid/Long	\$551,000,000	43
6	Pali Highway, Rockfall Mitigation, Vicinity of MP 5.90 to MP 6.10	HDOT	Short	\$5,000,000	40
6	Pali Highway, Rockfall Mitigation, Vicinity of MP 6.10 to MP 6.55	HDOT	Short	\$13,000,000	40
8	Fort Barrette Road Railroad Crossing Improvements	HDOT	Short	\$2,750,000	36
9	Oahu Traffic Signal Controller Modernization, Phase 2	DTS	Short	\$11,876,000	33
10	Resiliency Program	HDOT	Mid/Long	\$514,000,000	32
11	Safety Program	HDOT	Mid/Long	\$540,000,000	31
12	Interstate Route H-1 Highway Lighting Improvements, Kaimakani Overpass to Gulick Avenue, Phase I, MP 12.83 to MP 16	HDOT	Short	\$40,000,000	30
13	Congestion Mitigation Program	HDOT	Mid/Long	\$710,000,000	22.5
14	Harbor Access Road (Route 9400)	HDOT	Short	\$142,000,000	13
15	Kamehameha Highway Safety Improvements, Kukuna Road to Kahana Valley Road	HDOT	Short	\$4,530,000	12
16	Kunia Interchange Improvements	HDOT	Short	\$160,000,000	7
17	Interstate Route H-3, Halawa Valley Mitigation, Phase 2, Native Species Area to Tunnel Portal	HDOT	Short	\$5,500,000	4
17	Interstate Route H-3, Halawa Valley Mitigation, Phase 3, Gate 3 to Native Species Area	HDOT	Short	\$5,500,000	4
19	Farrington Highway Widening, Helelua to Mohihi	HDOT	Short	\$34,500,000	-1

Finally, the draft list of projects and programs was run through OahuMPO's Title VI/T6 and Environmental Justice (T6/EJ) analysis. This analysis evaluates the equity in spending by measuring average per capita investment by census block group based on the proposed constrained list of projects included in the ORTP.

The census block groups (BG) are classified as either T6/EJ BG or non-T6/EJ BG based on the whether there is a higher-than-average percent of low-income and/or racial minority residents in the census block group. The results of the T6/EJ analysis can be found in Appendix K.

Constrained List of Projects and Programs

The following section lists the final constrained list of projects and programs that the MPO can reasonably assume it will complete based on funding assumptions described in the section above. The first four years (2022-2025) of the ORTP project are projects and programs that will be proposed in OahuMPO's short-range planning document, the Transportation Improvement Program (TIP). Beyond 2025, the projects listed address projected future transportation needs. These projects are grouped in year ranges of mid-range (2026-2035) and long-range (2036-2045).



FOR AN INTERACTIVE MAP, PLEASE VISIT: <https://arcg.is/GieTf>

New projects and programs have an asterisk next to its project number.



SHORT-RANGE PROJECTS AND PROGRAMS

The following section lists projects and programs that are programmed in our Transportation Improvement Program and are existing and committed for funding in the near future (FFYs 2022-2025). Tables 5.3 through 5.6 show the constrained short-range project and program list, by funding source and agency.

Table 5.3 Short-Range FHWA Funded State Projects and Programs – 2022–2025

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
OSI	HDOT	Bridge and Pavement Improvement Program, Oahu	System maintenance of highway bridges and pavements. Work may include bridge and/or pavement reconstruction, resurfacing, restoration, rehabilitation and/or preservation.	\$84
OS76	HDOT	Bridge Rehabilitation Program, Various Locations	Priority Rehabilitation of Oahu of bridges. Bridges to be rehabilitated are determined by HDOT's Bridge Management System (BrM). These funds have been programmed to a level that meets HDOT's TAMP expenditure plan	\$19.5
OS77	HDOT	Bridge Replacement Program, Various Locations	Priority replacement of Oahu of bridges. Bridges to be replaced are determined by HDOT's Bridge Management System (BrM). These funds have been programmed to a level that meets HDOT's TAMP expenditure plan	\$13.4
OS78	HDOT	Bridge Seismic Retrofit Program, Various Locations	Seismic Retrofit of bridges. Bridges to be retrofit are determined by HDOT's Seismic Retrofit Management Program. These funds have been programmed to a level that meets HDOT's TAMP expenditure plan	\$7.4
OSI2	HDOT	Destination Sign, Upgrade and Replacement	Replace and/or upgrade the existing destination signs and sign support structures.	\$16.203
OS4	HDOT	Farrington Highway (Route 93), Bridge Replacement, Makaha Bridges #3 & #3A	Replace two timber bridges in the vicinity of Makaha Beach Park. For both bridges, the scope includes widening the paved shoulders on the makai side from 3 feet to 10 feet; and, widening the mauka side from 1 foot to 10 feet. This is to accommodate bicyclists and pedestrians.	N/A
OS69	HDOT	Farrington Highway (Route 93), Safety Improvements, H-1 Freeway to Pohakunui Avenue	Scope includes but is not limited to: Installation of milled rumble strips or rumble edge stripes on shoulders/median; installation of milled rumble strips on centerline; widen shoulders where possible; speed feedback sign; concrete median barrier at U-turn; pavement markings; signing.	N/A
OS5	HDOT	Freeway Management System, Interstate H-1, H-2, H-3, and Moanalua Freeway (Routes H-201 and 78)	The program consists of installation of closed-circuit television (CCTV) cameras, vehicle detectors, cabinets, and communication equipment. Minor interior modifications of the H-3 Control Center will be done to accommodate system improvements. This program will be implemented in phases.	\$24.2

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
OS57	HDOT	Freeway Management System, Joint Traffic Management Center Operations (State)	These funds will be required for the State share of the annual operating expenses for the JTMC which includes normal building operations and a JTMC Manager. The State share has been calculated based on methodology that involves the estimated square footage that the State will occupy.	\$1.4
OS9	HDOT	Freeway Service Patrol	Operate roving service patrols. Services include towing of disabled vehicles, removing debris, providing basic fire extinguisher use, deploying traffic control devices, assisting the HPD, HFD, and EMS at crash scenes & other incidents, assisting sick or injured motorists with basic first aid, & notifying 911 of incidents.	\$16
OS10	HDOT	Guardrail and Shoulder Improvements, Various Locations	Upgrade guardrail end treatments and shoulders. Work also may include installation of signs, pavement markings, and traffic control.	\$4.2
OS82	HDOT	Interstate Route H-I Improvements, Eastbound, Ola Lane Overpass to Vineyard Boulevard	Eastbound Operational/congestion improvements, and structural improvements to bridges within the limits.	\$55
OS59	HDOT	Interstate Route H-I, Eastbound Improvements, Waialeale to Halawa Interchange	Capacity/Congestion improvements through the most well-travelled section of the primary urban corridor. Improvements could include adding an additional through lane and/or improving ramps, shoulders and geometrics.	\$100
OS14	HDOT	Interstate Route H-I, Guardrail and Shoulder Improvements, Kapiolani Interchange to Ainakoa Avenue	Install and/or upgrade existing guardrails, crash cushions, and concrete barriers to meet current standards. Upgrade lighting and make bike improvements near the beginning of the H-I on ramp in the vicinity of Ainakoa Avenue to fill a gap in the bike system.	\$6
OS17	HDOT	Interstate Route H-I, Kapolei Interchange Complex	Phase 3 scope of work is widening Farrington Highway, enlarging the H-I Freeway loop off-ramp to Kalaeloa Blvd, construct the Mauka Frontage Road from Makakilo Drive to Kapolei Interchange, and construct the Palailai Interchange.	\$35
OS67	HDOT	Interstate Route H-I, Reconstruction and Repair, Eastbound, Waimalu Interchange to Halawa	Rehabilitate or Reconstruct Portland Concrete pavement. Widen to improve shoulders and travelway.	N/A
OS74	HDOT	Interstate Route H-I, Seismic Retrofit, McCully Street Separation	Retrofit interchange structures to meet current seismic standards.	\$3.155
OS70	HDOT	Interstate Route H-I, Seismic Retrofit, Waialae Viaduct	Retrofit interchange structures to meet current seismic standards.	\$7.1
OS11	HDOT	ITS Operation and Maintenance	Annual costs to operate and maintain the ongoing and existing ITS program. This includes costs for the operation and maintenance of CCTVs and vehicle detection equipment. This also includes costs for telecommunication and server hosting services.	\$2
OS26	HDOT	Kalanianaʻole Highway (Route 72) Resurfacing, Poalima Street to Vicinity of Makai Pier	Roadway resurfacing of Kalanianaʻole Highway from Poalima Street to Makai Pier.	N/A

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
OS6I	HDOT	Kamehameha Highway (Route 83) Realignment, Vicinity of Kawaihoa Beach	Realign a portion of Kamehameha Highway, on the North Shore. The project proposes to construct a realignment of Kamehameha Highway, from Haleiwa to the vicinity of Waimea Bay to address safety issues that revolve around use of the beach.	\$1.02
OS28	HDOT	Kamehameha Highway (Route 83), Bridge Replacement, Kaipapau Stream Bridge	Replace the existing bridge.	N/A
OS29	HDOT	Kamehameha Highway (Route 83), Bridge Replacement, Kaluanui Stream Bridge	Replace the existing bridge	N/A
OS3I	HDOT	Kamehameha Highway (Route 83), Bridge Replacement, Laieloa Stream Bridge	Replace the existing concrete slab bridge on Kamehameha Highway in the vicinity of Laie.	\$14
OS7I	HDOT	Kamehameha Highway (Route 83), Bridge Replacement, Paumalu Bridge	Rehabilitate the existing bridge.	\$1.45
OS34	HDOT	Kamehameha Highway (Route 83), Bridge Replacement, Waiahole Stream Bridge	Replace the existing bridge.	\$16.1
OS72	HDOT	Kamehameha Highway (Route 83), Bridge Replacement, Waimanana Bridge	Replace the existing bridge.	\$2.37
OS36	HDOT	Kamehameha Highway (Route 83), Bridge Replacement, Waipilopilo Stream Bridge	Replace the existing concrete T-bridge on Kamehameha Highway in the vicinity of Hauula.	\$10.76
OS75	HDOT	Kamehameha Highway (Route 83), Rockfall Protection, Waimea Bay	Construct various rockfall/slope protection and slope stabilization mitigation measures.	\$29.3
OS73	HDOT	Likelike Highway (Route 63), Safety Improvements, Emmeline Place to Kahekili Highway	Scope includes but is not limited to: Installation of milled rumble strips or rumble edge stripes on shoulders where possible; high friction surface treatment; speed feedback sign; guardrail end treatment; in-lane pavement markers; LED speed limit signs and chevrons; widen paved shoulders where possible; pavement markings; signing.	\$2.7
OS44	HDOT	Moanalua Freeway (Route 78) and Interstate Route H-2, Guardrail and Shoulder Improvements, Phase 2	Install /upgrade existing guardrails, improve drainage, stabilize embankments, reconstruct/ pave shoulders where needed, and install signs and pavement markings.	N/A
OS45	HDOT	Moanalua Freeway (Route H-20I), Highway Lighting Improvements, Halawa Heights Off-Ramp to Middle Street Overpass	Upgrade/replace existing freeway lighting on Moanalua Freeway, from the Halawa Heights westbound off-ramp (milepost 1.12) to the Moanalua/H-I Freeway merge at Middle Street (milepost 4.09).	N/A
OS46	HDOT	Moanalua Freeway (Route H-20I), Highway Lighting Improvements, Halawa to H-3 Freeway Overpass	Installation of new highway lighting system consist of new light poles and conduits, LED fixtures, trenching for conduits, conduits, foundations/barriers, power equipment, erosion control, and traffic control.	N/A

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
OS62	HDOT	Pali Highway (Route 61) Resurfacing & Lighting Improvements, Vineyard Blvd (Route 98) Kamehameha Highway (Route 83)	Scope of work includes but is not limited to cold planning, resurfacing, reconstruction of weakened pavement, installation of new highway lighting, construction of concrete median barriers, replacement of guardrails in-kind and end treatments, installation of new guardrails, installing bridge rails, and installation of signs and pavement markings.	N/A
OS52	HDOT	Sand Island Access Road (Route 64), Truck Weigh Station, Kapalama Container Terminal	Design, construct & operate a truck weigh station to perform truck inspections & driver credential checks @ the egress of the container terminal on Sand Island Acc Rd. This includes aux. lanes to accommodate trucks, traffic controls, truck weighing infrastructure & computer hardware/software, operator kiosk/office.	N/A
OS79	HDOT	Shoreline Protection/Mitigation Program	Develop and construct shoreline protection measures to better protect roadways from flooding and erosion as identified and prioritized in the Statewide Shoreline Protection Program. This funding is for the Oahu District Sub-Program.	\$45.55
OS63	HDOT	Traffic Counting Stations at Various Locations, Oahu	Construction of traffic counting stations for traffic data gathering and planning purposes. There is a separate phase shown for the rest of the islands in Statewide section of the STIP. This is a part of phase 2 of the Statewide project. The project will collect required Highway Performance Monitoring System (HPMS) data.	\$2.7
OS80	HDOT	Traffic signal Modernization at Various Locations, Ph2	Upgrade signal equipment to improve programming and optimization, to help improve traffic flow, reduce congestion, and prevent failures & downtime. Upgrades include replace old/damaged signal poles, underground conduits & wiring, signal controllers, and other equipment, as determined by the HDOT signal maintenance/modernization study. Phase 2 continues what was started in phase I with next 5 priority intersections.	\$5
0-2I-53*	HDOT	Farrington Highway Widening, Helelua to Mohihi	A 5th lane will be installed on Farrington Highway, from Helelua Street to Mohihi Street. The lane will be used as a turnout lane and as a contraflow lane during peak travel times. Includes reconstructing the roadway and installing signs, striping and pavement markings.	\$32
0-2I-57*	HDOT	Fort Barrette Road Railroad Crossing Improvements	The project includes upgrading the existing railroad crossing from asphalt to concrete, replacing the existing wooden tracks and ties, and installing new automated crossing gates and signals which will be synced with the new traffic signal at Roosevelt Avenue.	\$1.75
0-2I-49*	HDOT	Harbor Access Road (Route 9400)	Scope could include but is not limited to the design and construction of new 4 lane divided concrete roadway, auxiliary lanes, sidewalks, bike lanes, traffic signals, intersections, associated utilities, grading, landscaping, and connections to future City roadways and drainage canal bridge crossing.	\$7
0-2I-47*	HDOT	Interstate Route H-I Highway Lighting Improvements, Kaimakani Overpass to Gulick Avenue, Phase I, MP 12.83 to MP 16	Installation of new highway lighting system consist of new light poles and conduits, LED fixtures, trenching for conduits, conducts, foundations/barriers, power equipment, erosion control, and traffic control.	\$30

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
0-2I-56*	HDOT	Interstate Route H-3, Halawa Valley Mitigation, Phase 2, Native Species Area to Tunnel Portal	Provide mitigation to help restore Halawa Valley to pre H-3 conditions as much as reasonably possible.	\$5
0-2I-50*	HDOT	Interstate Route H-3, Halawa Valley Mitigation, Phase 3, Gate 3 to Native Species Area	Provide mitigation to help restore Halawa Valley to pre H-3 conditions as much as reasonably possible.	\$5
0-2I-48*	HDOT	Kamehameha Highway Safety Improvements, Kukuna Road to Kahana Valley Road	Scope includes but is not limited to: installation of centerline milled rumble strips, shoulder milled rumble strips, widen shoulders to accommodate milled rumble strips where appropriate, apply safety edge, installation of HFST at sharp horizontal curves, intersection improvements at various locations, pavement markings, and signing.	\$4
0-2I-43*	HDOT	Kamehameha Highway (Route 99) Seismic Retrofit, Pearl Harbor Interchange, Structure #2	All bridges identified to be potentially vulnerable to earthquake damage/collapse need to be analyzed and designed for retrofitting strategies to prevent their collapse during a credible earthquake. The type and scope of the retrofit work can only be determined through the analysis.	\$4.755
0-2I-46*	HDOT	Kunia Interchange Improvements	Improve capacity and congestion at Kunia Interchange due to the following issues: 1. Bottlenecks at high volume ramps due to merging or diverging of traffic from the mainline to/from the interchange ramp; and 2. A heavy mauka bound right turn movement to the eastbound H-1 on-ramp, as well as a heavy makai bound left-turn movement to the H-1 eastbound on-ramp. Improvements could include widening Ft. Weaver Road between S. Kapuna Loop and Farrington Highway and/or adding/adjusting ramps in the Kunia IC.	\$15.5
0-2I-52*	HDOT	Likelike Highway (Route 63) Seismic Retrofit, Kalihi Stream Bridges	All bridges identified to be potentially vulnerable to earthquake damage/collapse need to be analyzed and designed for retrofitting strategies to prevent their collapse during a credible earthquake. The type and scope of the retrofit work can only be determined through the analysis.	\$0.71
0-2I-51*	HDOT	Moanalua Freeway, (Interstate Route H-20I) Seismic Retrofit, Puuloa Interchange (Five Structures)	All bridges identified to be potentially vulnerable to earthquake damage/collapse need to be analyzed and designed for retrofitting strategies to prevent their collapse during a credible earthquake. The type and scope of the retrofit work can only be determined through the analysis.	\$2.5
0-2I-45*	HDOT	Pali Highway, Rockfall Mitigation, Vicinity of MP 5.90 to MP 6.10	Rockfall protection/mitigation to be determined following an EA.	\$0.625
0-2I-44*	HDOT	Pali Highway, Rockfall Mitigation, Vicinity of MP 6.10 to MP 6.55	Rockfall protection/mitigation to be determined following an EA.	\$1.675

Table 5.4 Short-Range FHWA Funded City Projects and Programs – 2022–2025

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
OCI	DTS	Alapai Transportation Management Center	Operations for the joint communications center behind the Alapai Transit Center. The communications center holds City, State & emergency response agencies.	\$1.139
OC2	DTS	Bikeway Improvements Program	An on-going island wide program for the implementation of the Oahu Bicycle Master Plan improvements, the development of new projects, and the upgrade of existing bicycle projects.	\$2.75
OC3	DTS	Bridge Inspection, Inventory, and Appraisal	Inventory, inspect, and appraise City bridges, including underwater inspection and scour survey.	\$6.834
OC4	DTS	Computerized Traffic Control System	Upgrade and expand fiber optic lines, CCTV cameras, data collection, and signal control in urban and rural areas for connection to the Traffic Control Center.	\$1.809
OC29	DTS	Federal Lands Access Program (FLAP)	The Federal Lands Access Program (FLAP) was established to improve transportation facilities that provide access to, are adjacent to, or are located within Federal lands. The Access Program supplements State and local resources for public roads, transit systems, and other transportation facilities, with an emphasis on high-use recreation sites and economic generators.	N/A
OC28	DTS	Safe Routes to School (SRTS) Program	The Safe Routes to School (SRTS) Program has the following goals: enable and encourage children, including those with disabilities, to walk and bicycle to school; make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age; and facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of schools.	N/A
OC23	DTS	Salt Lake Boulevard Widening, Phase 3	Widen Salt Lake Boulevard from two to six lanes, between Maluna Street and Ala Liliko'i Street.	\$60.74
OC8	DTS	Traffic Improvements at Various Locations	Provide traffic congestion relief and improve traffic safety at various locations, including but not limited to Palolo, Village Park & Kupuna Loop area, and Kalaheo Avenue/Kailua Road.	\$2.89
OC10	DTS	Traffic Signals at Various Locations	Design, Construct, and inspect the installation of Traffic Signals. Project consist of installation of new signals, modification (left turn, bicycle signal, etc.) of traffic signals, and upgrading signals to conform to the most recent MUTCD.	\$11.245

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
OC25	DTS	Transportation Alternatives Program (MPO) at Various Locations	The Transportation Alternatives Program (TAP) is a competitive grant program that provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, and community improvement activities. Locations to be determined by the OahuMPO TAP Project Evaluation and Ranking process. HART projects may be flexed from FHWA to FTA.	\$35.831
OC26	DTS	Transportation Alternative Program (State)	The Transportation Alternatives Program (TAP) is a competitive grant program that provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, and community improvement activities. Locations to be determined by the State TAP Project Evaluation and Ranking process. HART projects may be flexed from FHWA to FTA.	\$2.921
0-21-54*	DTS	Kalaeloa Boulevard Railroad Improvements	Design and install a Railroad traffic signal (and traffic camera) located at Kalaeloa Boulevard and Railroad Crossing.	\$0.694
0-21-55*	DTS	Oahu Traffic Signal Controller Modernization, Phase 2	To construct and inspect related equipment for approximately 150 traffic signalized intersections.	\$10.697

Table 5.5 Short-Range FTA Funded State Projects and Programs – 2022–2025

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
OS68	HDOT	State Safety Oversight Program	This funding will provide operational resources for the HDOT State Safety Oversight Program administered by the HDOT Rail Transit Safety Office and will implement 49 CFR Part 674 State Safety Oversight Final Rule.	\$1.494
OS50	HDOT	Transportation Assistance for Elderly and Disabled	Funds from the program will be utilized for the purchase of buses for paratransit services for seniors and individuals with disabilities.	\$3.066

Table 5.6 Short-Range FTA Funded City Projects and Programs – 2022–2025

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
OC13	DTS	Bus and Handi-Van Acquisition Program	Purchase replacement transit buses and handi-van vehicles.	\$71.807
OC14	DTS	Bus Stop ADA Access and Site Improvements	The project plans and constructs new bus shelters, shelter pads, improves sidewalks, modifies existing bus stop shelters and bus stop sites at various locations in accordance with the plans and contract documents to make them compliant with the American with Disabilities Act (ADA).	\$2.464
OC24	DTS	Capital Training	Transportation Mobility Division staff attendance at training workshops offered by the National Transit Institute.	\$0.112
OC16	DTS	Honolulu Rail Transit Project	Plan, design, and construct a fixed guideway system between East Kapolei and Ala Moana Center. The system includes stations and related appurtenances, park-and-ride facilities, a maintenance and storage facility, light metro vehicles, and associated core systems.	\$1,075.31
OC31	DTS	Middle Street Transit Center	Develop an intermodal center to include Handi-Vans, regional transit center, and parking.	\$10.564
OC20	DTS	Preventive Maintenance	Preventive maintenance of FTA-funded rolling stock (buses and handi-vans) to include parts, labor, and other related costs.	\$105
OC21	DTS	Transit Safety and Security Projects	Capital projects at various transit locations to improve safety and security.	\$2.106
0-21-58*	DTS	Transit Centers, Various Locations	Construct transit centers and provide accessibility at various locations islandwide to support transit operations.	\$40

MID-RANGE PROJECTS AND PROGRAMS – 2026–2035

Tables 5.7 through 5.14 show the constrained mid-range project and program list, by project/program type.

Table 5.7 Mid-Range Roadway Capacity Projects and Programs

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
0-21-I*	HDOT	Congestion Mitigation Program	Projects identified by the congestion program primarily provide infrastructure, operations improvements, and technology to optimize traffic flow, reduce travel times, and address recurring and non-recurring events/incidents that cause congestion.	\$355
0-21-2	DTS	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.	\$110.4
0-21-3	DTS	Interstate Route H-I, Corridor Study, Short Term Improvements	Develop top short-term capacity/congestion improvements in the Final Interstate H-I Corridor Study.	\$2.2
0-21-4	HDOT	Interstate Route H-I, New Interchange, Kapolei Interchange	Construct new Interstate Route H-I Kapolei Interchange for Kapolei between the Palailai Interchange and Makakilo Interchange. Project to be constructed in multiple phases.	\$116
0-21-5	HDOT	Interstate Route H-I, Waiawa Interchange to Halawa Interchange, Widening, Eastbound	Widen Interstate Route H-I to six lanes from the Waiawa Interchange to the Halawa Interchange in the eastbound direction and restore the current freeway lane width and shoulder standards.	\$83.9
0-21-6	HDOT	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.	\$112
0-21-7	DTS	Kalaeloa Boulevard, Reconstruction and Widening; Lauwiliwili Street to Olai Street	Improve and reconstruct Kalaeloa Boulevard between Lauwiliwili Street and Olai Street.	\$35.3
0-21-8	HDOT	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.	\$160.3
0-21-9	DTS	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.	\$53
0-21-10	DTS	Makakilo Drive, Second Access, Makakilo Drive to Kualaka'i Parkway / Interstate Route H-I Interchange	Extend Makakilo Drive (vicinity Pueonani Street) south to the Interstate Route H-I Interchange as four-lane roadway, connecting Makakilo Drive to Kualaka'i Parkway.	\$83.9

Table 5.8 Mid-Range Highway, Road, and Bridge Operations and Maintenance Projects and Programs

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
0-2I-II	DTS	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.	\$593
0-2I-I2*	HDOT	Resiliency Program	The resiliency program identifies projects that improve our ability to adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions. This includes responding to risk or vulnerabilities in our transportation system related to extreme weather/natural disasters, emergency events or non-recurring incidents, and sea level rise.	\$257
0-2I-I3	HDOT	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
0-2I-I4*	HDOT	System Preservation Program	The system preservation program identifies projects that preserve, upgrade, and maintain the State Highway System to help ensure the functionality of the system, that it operates safely and efficiently, and meets federal requirements.	\$275.5

Table 5.9 Mid-Range Safety Projects and Programs

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
0-2I-I5*	HDOT	Safety Program	The safety program supports Hawaii's roadway users arriving safely at their destinations by collecting data to identify areas characterized with high crash occurrences; implementing both infrastructure improvements and non-infrastructure education and public outreach; and maintaining the integrity of and/or upgrading roadway features to reduce injuries and increase survivability during crashes.	\$270

Table 5.10 Mid-Range Transit Capital Projects and Programs

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
0-21-16	DTS	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.	\$83.1
0-21-17	DTS	Transit Centers, Various Locations	Construct transit centers and provide accessibility at various locations islandwide to support transit operations.	\$42

Table 5.11 Mid-Range Transit Operations and Maintenance Projects and Programs

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
0-21-18	DTS	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.	\$6518
0-21-19	DTS	City Rail Rehabilitation and Fleet Expansion	Provide for rehabilitation of track and expansion of rail fleet.	\$329.828
0-21-20	DTS	Human Services Transportation Coordination Program	Provide a range of transportation services targeted to disadvantaged populations under the Human Services Transportation Coordination Program.	\$9.4
0-21-21	DTS	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.	\$473.65

Table 5.12 Mid-Range Pedestrian and Bicycle Projects and Programs

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
0-21-22	DTS	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.	\$97.6
0-21-23	DTS	Oahu Bike Plan	Implement elements of the City and County Bike Projects.	\$52.2

Table 5.13 Mid-Range System Management and Operations Projects and Programs

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
0-21-24	DTS	Intelligent Transportation Systems (ITS)	Implement ITS projects including, but not limited to, those identified in the Oahu Regional ITS Architecture.	\$56.1

Table 5.14 Mid-Range Transportation Demand Management Projects and Programs

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
0-21-25	DTS	Transportation Demand Management (TDM) Program	Develop a TDM program that could include, but is not limited to: <ol style="list-style-type: none"> 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. 	\$11

LONG-RANGE PROJECTS AND PROGRAMS – 2036–2045

Tables 5.15 through 5.21 show the constrained long-range project and program list, by project/program type.

Table 5.15 Long-Range Roadway Capacity Projects and Programs

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
0-21-1*	HDOT	Congestion Mitigation Program	Projects identified by the congestion program primarily provide infrastructure, operations improvements, and technology to optimize traffic flow, reduce travel times, and address recurring and non-recurring events/incidents that cause congestion.	\$355
	HDOT	Congestion Mitigation Program	Projects identified by the congestion program primarily provide infrastructure, operations improvements, and technology to optimize traffic flow, reduce travel times, and address recurring and non-recurring events/incidents that cause congestion.	\$355
0-21-26	HDOT	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, contraflow, intersection improvements, traffic calming, and other improvements may be pursued in the short range.	\$252
0-21-27**	DTS	Fort Barrette Road	Extend as four-lane roadway between Roosevelt and Saratoga.	\$13.2
0-21-28	HDOT	Fort Barrette Road (Route 90I), 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
0-21-29**	DTS	Kamokila Boulevard	Extend as four-lane roadway between Roosevelt and Saratoga.	\$28.7
0-21-30	HDOT	Kualaka'i Parkway (Route 8930), Extension, Interstate Route H-I to Franklin D Roosevelt Avenue	Extend Kualaka'i Parkway from Kapolei Parkway to Franklin D Roosevelt Avenue	\$20
0-21-31	HDOT	Kualaka'i Parkway (Route 8930), Widening, Interstate Route H-I to Franklin D Roosevelt Avenue	Widen and extend Kualaka'i Parkway as follows: <ul style="list-style-type: none"> • From three to six lanes from Kapolei Parkway to Interstate Route H-I • Extend from Kapolei Parkway to Franklin D Roosevelt Avenue (six lanes) 	\$180

** Indicates that the project is developer funded

Table 5.16 Long-Range Highway, Road, and Bridge Operations and Maintenance Projects and Programs

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
0-2I-II	DTS	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.	\$883.6
0-2I-I2*	HDOT	Resiliency Program	The resiliency program identifies projects that improve our ability to adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions. This includes responding to risk or vulnerabilities in our transportation system related to extreme weather/natural disasters, emergency events or non-recurring incidents, and sea level rise.	\$257
0-2I-I3	HDOT	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
0-2I-I4*	HDOT	System Preservation Program	The system preservation program identifies projects that preserve, upgrade, and maintain the State Highway System to help ensure the functionality of the system, that it operates safely and efficiently, and meets federal requirements.	\$275.5

Table 5.17 Long-Range Safety Projects and Programs

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
0-2I-I5*	HDOT	Safety Program	The safety program supports Hawaii's roadway users arriving safely at their destinations by collecting data to identify areas characterized with high crash occurrences; implementing both infrastructure improvements and non-infrastructure education and public outreach; and maintaining the integrity of and/or upgrading roadway features to reduce injuries and increase survivability during crashes.	\$270

Table 5.18 Long-Range Transit Operations and Maintenance Projects and Programs

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
0-21-18	DTS	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.	\$10,007.816
0-21-19	DTS	City Rail Rehabilitation and Fleet Expansion	Provide for rehabilitation of track and expansion of rail fleet.	\$136.427
0-21-20	DTS	Human Services Transportation Coordination Program	Provide a range of transportation services targeted to disadvantaged populations under the Human Services Transportation Coordination Program.	\$9.4
0-21-21	DTS	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.	\$473.65

Table 5.19 Long-Range Pedestrian and Bicycle Projects and Programs

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
0-21-22	DTS	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.	\$364.7
0-21-23	DTS	Oahu Bike Plan	Implement elements of the City and County Bike Projects.	\$54.7

Table 5.20 Long-Range System Management and Operations Projects and Programs

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
0-21-24	DTS	Intelligent Transportation Systems (ITS)	Implement ITS projects including, but not limited to, those identified in the Oahu Regional ITS Architecture.	\$152.4

Table 5.21 Long-Range Transportation Demand Management Projects and Programs

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
0-21-25	DTS	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.	\$22.1

PROJECTS AND PROGRAMS THAT WE CANNOT AFFORD

The following section lists projects and programs that are not programmed for funding but are included in the ORTP for future consideration. These projects can be moved into the ORTP and/or TIP, when, or if, additional funds become available. Tables 5.22 and 5.23 show the unconstrained project and program list, by project/program type.

Table 5.22 Unfunded Roadway Capacity and Operational Improvements Projects and Programs (No Timeframe)

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
0-21-32	HDOT	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
0-21-33	HDOT	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
0-21-34	HDOT	Kunia Road (Route 750), Widening and Interchange Improvement, Wilikina Drive to Farrington Highway	Widen Kunia Road as follows: <ul style="list-style-type: none"> • 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

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
0-21-35	HDOT	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
0-21-36	HDOT	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
0-21-37	HDOT	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.	\$1,269

Table 5.23 Unfunded Transit Capital Projects and Programs (No Timeframe)

Project No.	Agency	Project Title	Description	Funding Request (\$ Millions)
0-21-38	HART	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.	\$2,374
0-21-39	HART	Fixed Guideway, Central Oahu	Plan, design, and construct a fixed guideway system/corridor between Pearl Highlands and Central Oahu.	\$2,598
0-21-40	HART	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.	\$2,367
0-21-41	HART	Fixed Guideway, Kapolei	Plan, design, and construct a fixed guideway system between West Kapolei and East Kapolei.	\$2,593
0-21-42	HART	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.	\$2,433

Plan Performance

The ORTP 2045 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, 2045 forecasted population, jobs with only existing and committed (E+C) transportation improvements (otherwise referred to as No-build conditions), and the fiscally constrained 2045 ORTP.



Vehicle Miles Traveled, Vehicle Hours Traveled, Vehicle Hours of Delay, and Transit Boardings

A comparison of these scenarios for travel/congestion outcomes of Vehicle Miles Traveled (VMT), Vehicle Hours Traveled (VHT), Vehicle Hours of Delay (VHD), and transit boardings are shown in figures 5.1 to 5.4.

A comparison of the 2045 ORTP to No-Build scenario indicates that, by 2045, all plan performance will experience declines, except transit boardings. Specifically, VMT will decrease by about 5 percent, VHT will decrease by 16 percent, delay will decrease by 42 percent, and transit boardings will increase by 71 percent.

The reduction in VMT per capita, by 2045, has significant implications for energy consumption and climate change. The projects outlined in the ORTP 2045 are geared towards the achievement of goals and performance measures related to sustainable, multi-modal system. Included in the ORTP 2045 are pedestrian and bicycle facilities, improved bus and transit connections and facilities, and maintenance and operational upgrades to improve the quality of life for island residents.

Figure 5.1: Scenario Comparison for VMT 

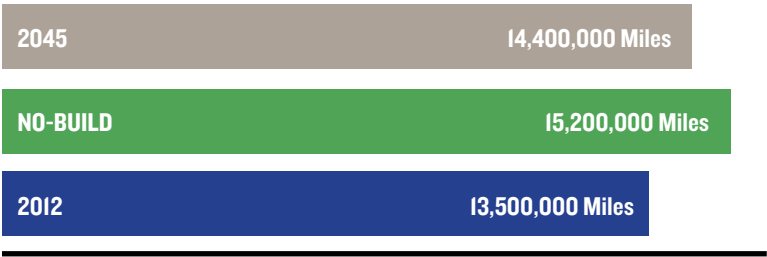


Figure 5.2: Scenario Comparison for VHT 

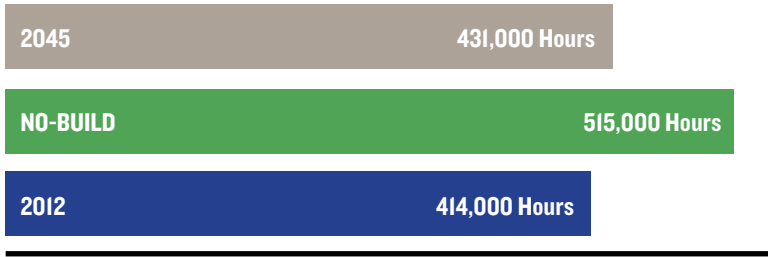


Figure 5.3: Scenario Comparison for Delay 

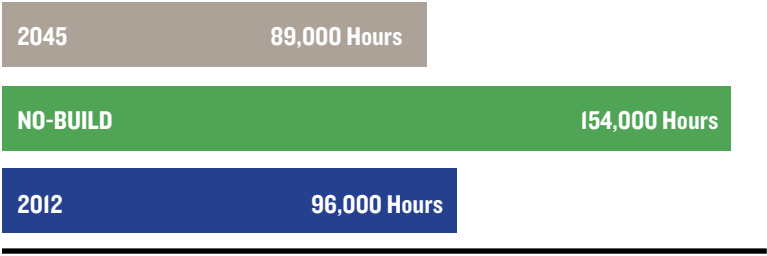
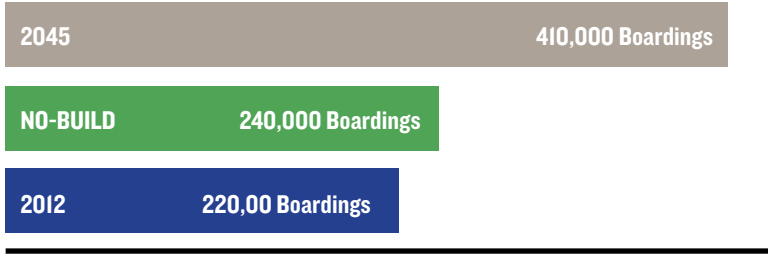


Figure 5.4: Scenario Comparison for Transit Boardings 



Islandwide Travel Times for AM Peak Hours

Figure 5.5 shows projected islandwide travel times by automobile for the AM peak hours to Downtown for the 2045 ORTP, while Figure 5.6 shows the projected travel-time difference to Downtown between the 2045 ORTP and the No-Build conditions.

Travel times generally improve for 2045 ORTP in comparison to the No-Build conditions. A comparative analysis of change in travel time between 2045

ORTP and No-Build scenario indicated that, with the exception of trips from Primary Urban Center to Downtown, almost all trips to Downtown experienced improvement in travel times (see figures 5.5 and 5.6).

Figure 5.5: 6-9 AM Travel Times to Downtown in Minutes (2045 ORTP)

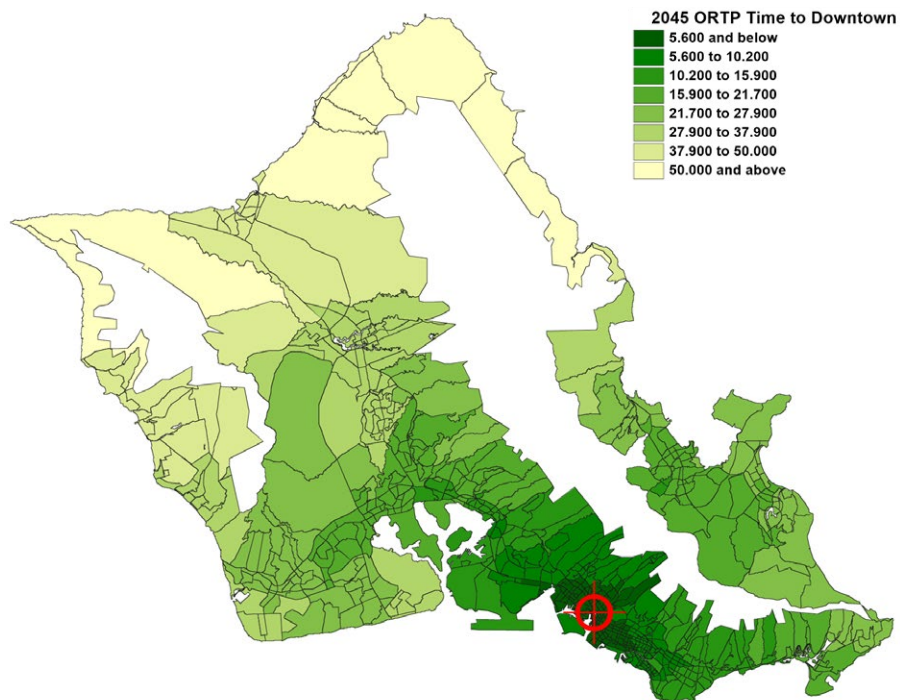
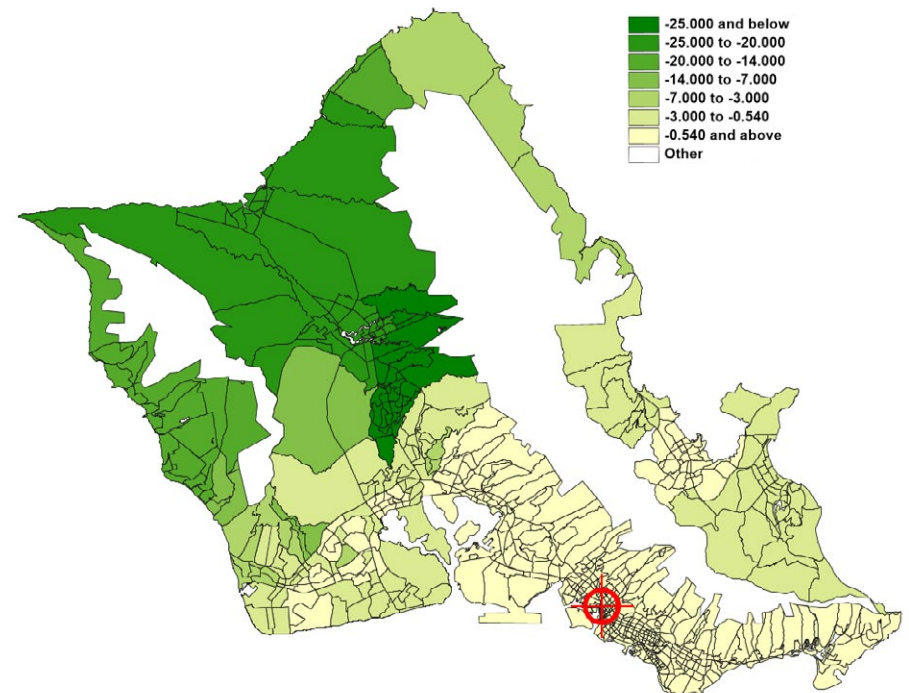


Figure 5.6: 6-9AM Travel Time Difference to Downtown in Minutes (2045 ORTP vs. No-build)



Projected Traffic Level of Service During Morning Commute (No-build vs. 2045 ORTP)

Figures 5.7 through 5.10 show projected traffic level of service during the morning commute period for the No-build and 2045 ORTP conditions. 2045 ORTP shows benefits in reducing congestion during the AM peak hours. As shown in the figures below, 2045 ORTP will alleviate some congestion on roadways including Farrington Highway in Waiʻanae, Kunia Road (H1 to H2), and Kamehameha Highway (Kukuna Road to Waiāhole Valley Road).

Figure 5.7: 6-9 AM Roadway Level of Service (No-Build)-Islandwide

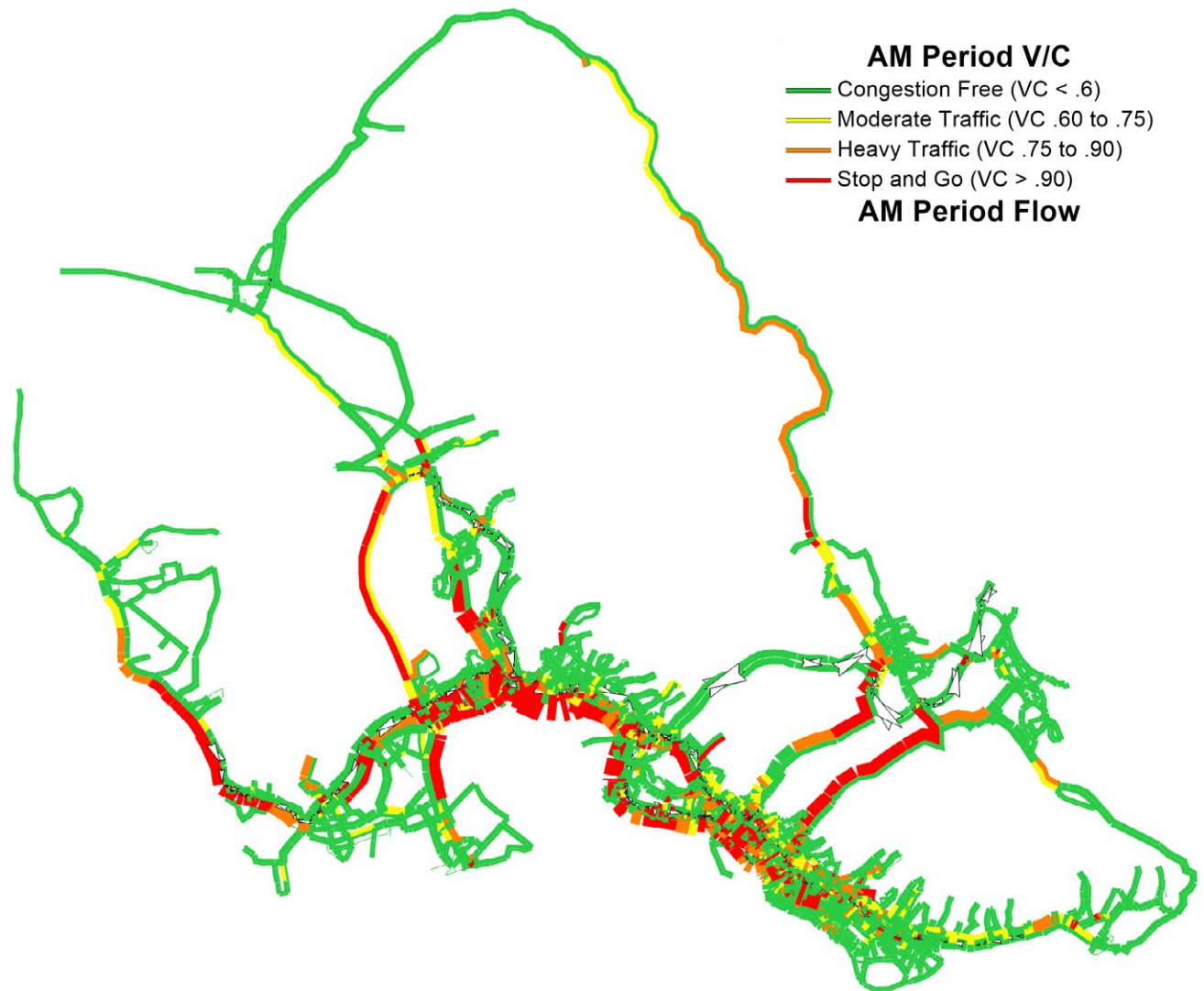


Figure 5.8: 6-9 AM Roadway Level of Service (No-Build) Pearl City & Honolulu

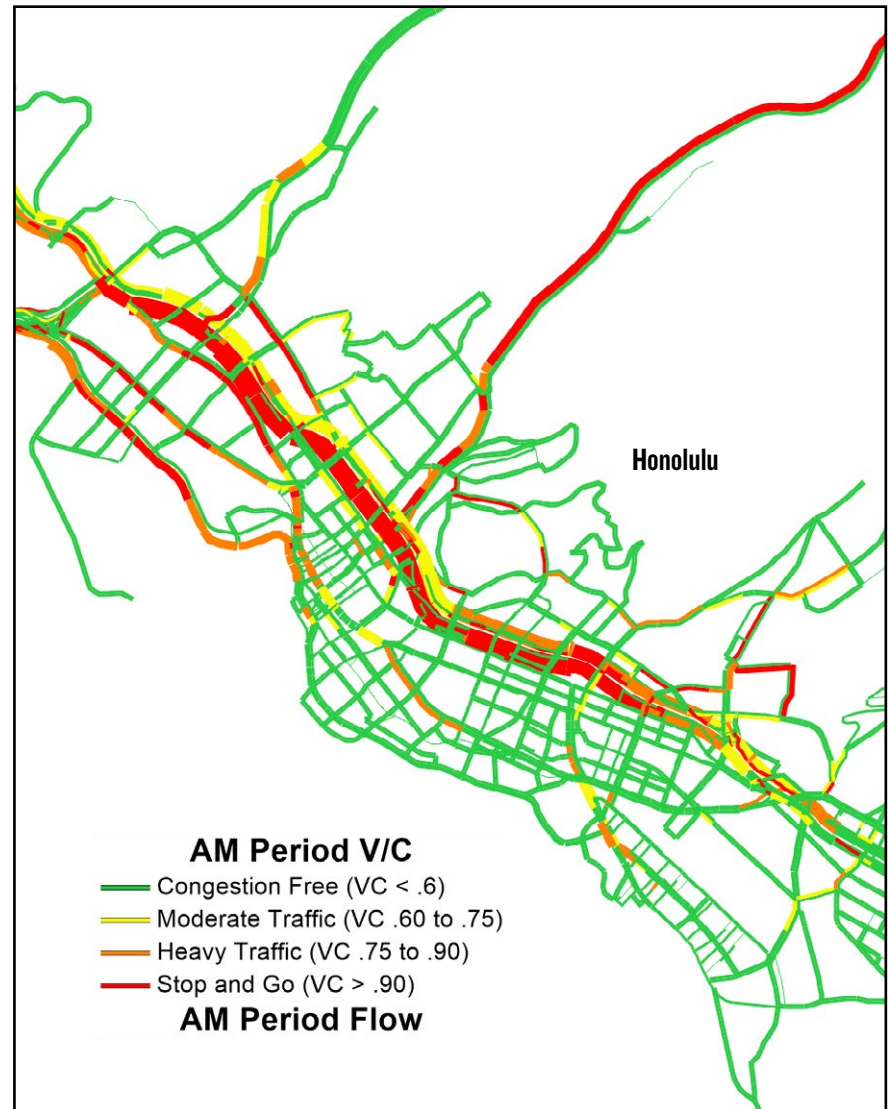
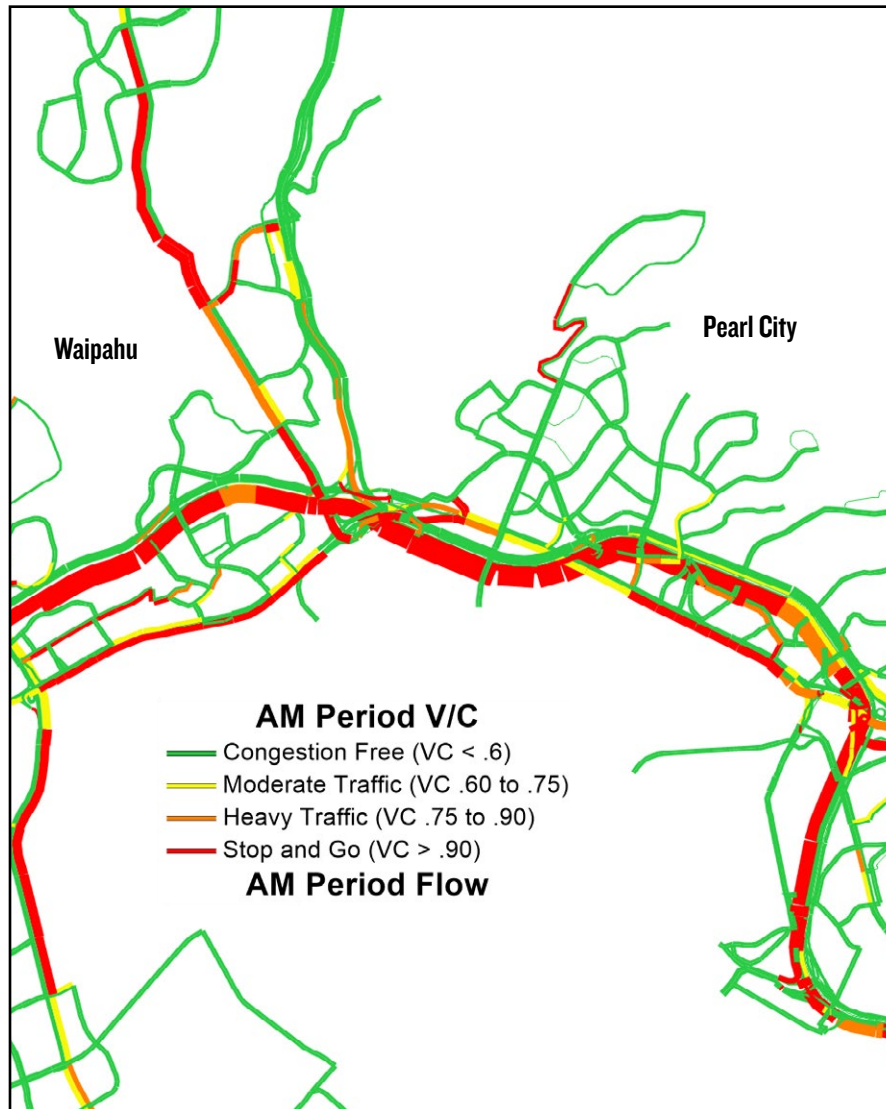


Figure 5.9: 6-9 AM Roadway Level of Service (2045 ORTP) – Islandwide

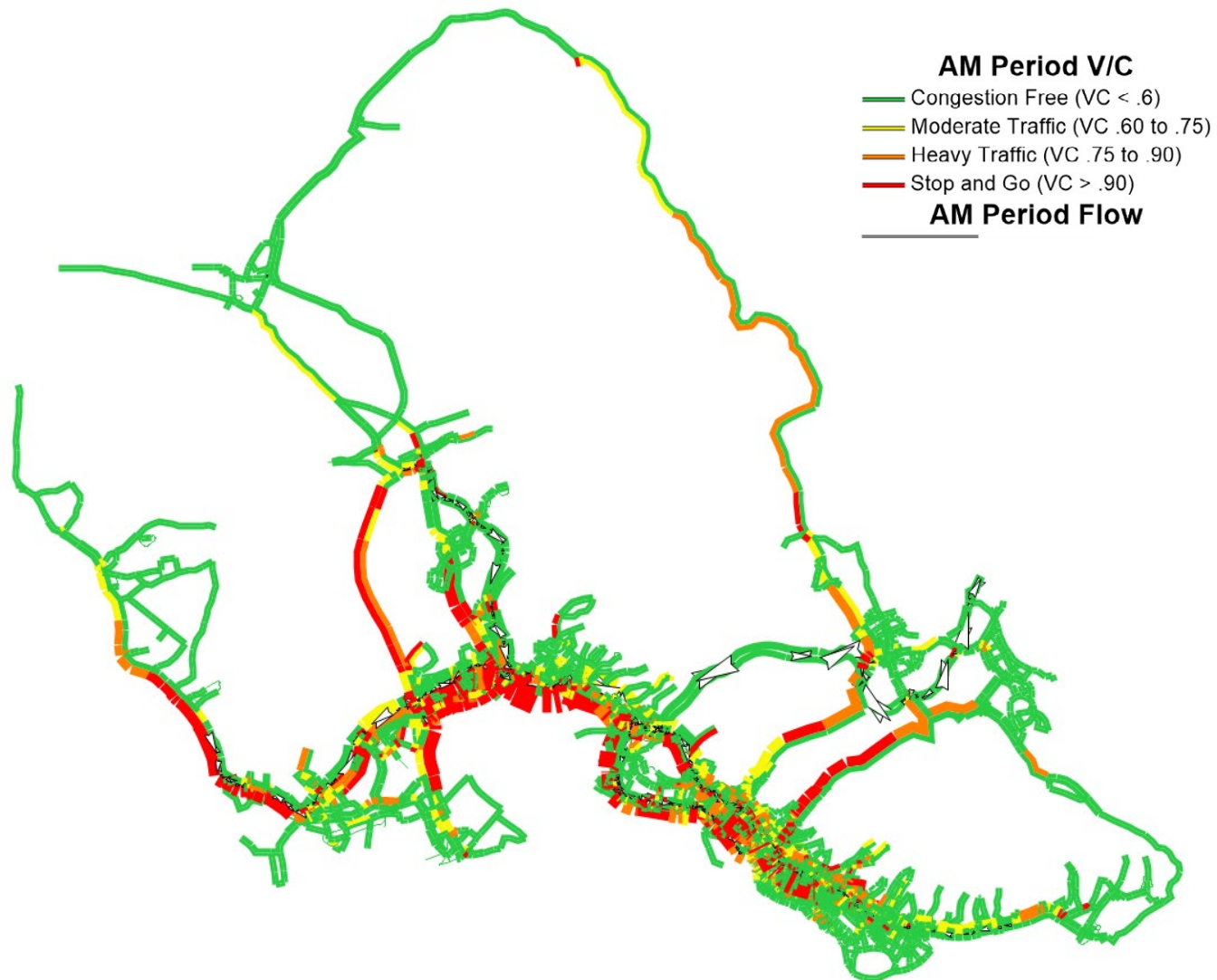
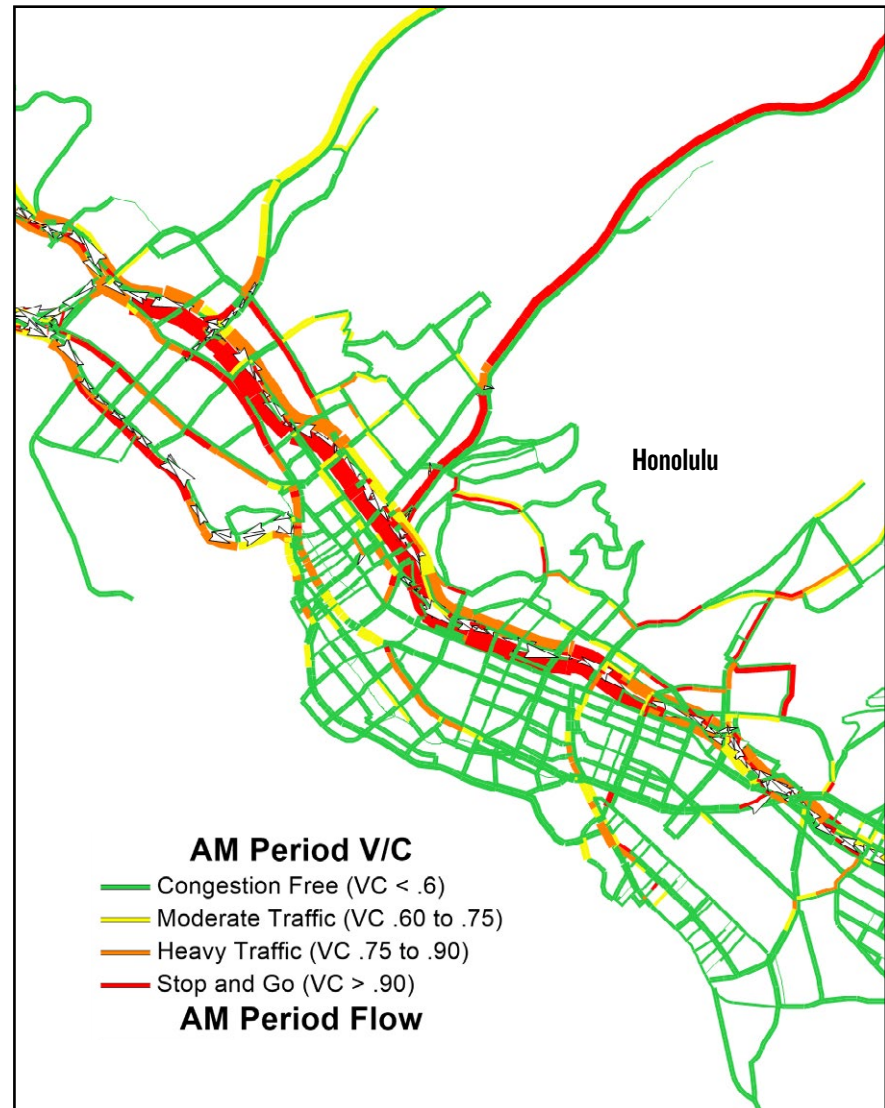
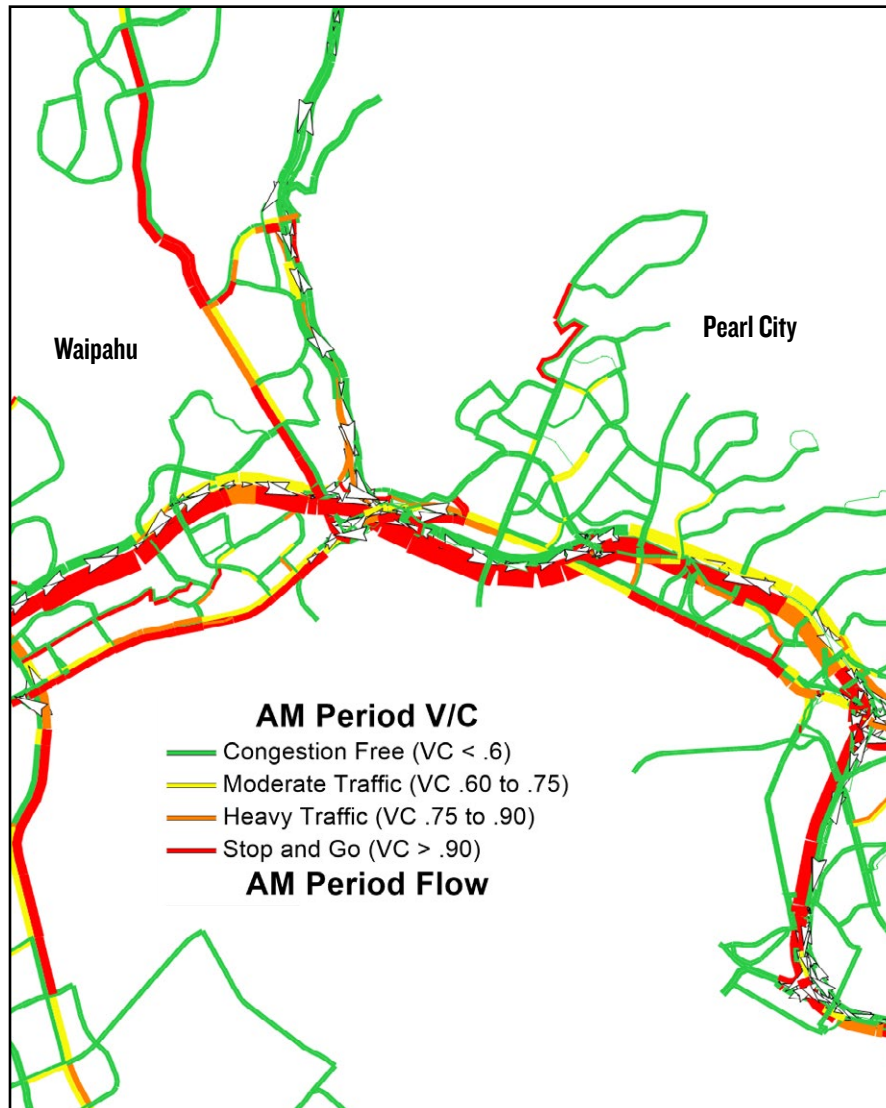


Figure 5.10: 6-9 AM Roadway Level of Service (2045 ORTP) Pearl City & Honolulu



Environmental Justice Analysis

The first goal of the 2045 ORTP is to provide an inclusive multi-modal transport system. To evaluate the inclusiveness of the 2045 ORTP, the OahuMPO analyzed planned investment in T6/EJ population areas.

The results indicate that under the 2045 ORTP, while 37 percent of block groups are designated as T6/EJ areas, 30 percent of the plan's investments would occur in T6/EJ areas. However, T6/EJ individuals receive about \$11,595 in ORTP project expenditures, while non-T6/EJ individuals receive an average of \$11,853 each.

This 2045 ORTP outperforms the 2040 ORTP in investing in T6/EJ populations. Indeed, a comparison of 2045 ORTP with 2040 ORTP shows that the average per capita investment was higher for 2045 ORTP (\$11,595) than 2040 ORTP (\$7,555). In addition, the gap between T6/EJ and non-T6/EJ average per capita investments has narrowed for the 2045 ORTP (\$258) compared to the 2040 ORTP (\$1,792), indicating more equitable distribution of investments.

