



Hardy Street, Lihue District

SECTOR: III. LAND TRANSPORTATION

Kaua'i is at a crossroads for its future transportation. Traffic congestion is one of the community's most frequently expressed concerns, and it impacts nearly everyone on Kaua'i. The island's topography, overall constrained financial resources, repair and maintenance backlog of existing roads and bridges, and General Plan goals of sustainability, resiliency, and health all underscore the need to achieve more efficiency and effectiveness with Kaua'i's existing transportation system and to spend Kaua'i's limited transportation funds wisely, and seek additional funding from Federal, State, and private partners.

A Balanced System

The term "*balanced system*" recognizes the importance of safely accommodating all roadway users, the need to make strategic investments, and that transportation and land use are linked, each with implications for the other.

In 2013, the County Council adopted the *Multimodal Land Transportation Plan (MLTP)* which outlines steps the County of Kaua'i will take to achieve a balanced multimodal transportation system through the planning horizon year of 2035. The MLTP reviews existing conditions and trends and proposes programs and scenarios for roadway networks, bicycle facilities,

pedestrian facilities, and transit. It also discusses how land use relates to transportation. In order to address congestion, manage growth, reinforce compact land use patterns, and address sustainability goals, the MLTP was used as a framework for transportation policies in this General Plan. The MLTP proposed significant mode shift targets by 2035, primarily a reduction in Single Occupant Vehicle (SOV) travel and increases in transit, walking, and biking modes (Figure 3-6). While reduced, SOV trips are still projected to be the largest share of total trips.

Implementation of the MLTP will result in far-reaching outcomes that support many of the goals of this plan. These include reduced energy consumption, reduced

household transportation costs, increased levels of physical activity, and improved transportation choice, especially for those who cannot drive.

Accomplishing these targets will require strategic implementation of specific projects and actions, as well as a “cultural shift” in personal transportation choices. A shift in personal transportation choices occurring over time is supported by nationwide trends, including the following:

- Decline or delay in personal car ownership by millennials.
- Willingness by millennials to use transit and other modes of transportation.
- Prevalence of new transportation services, such as Uber and Lyft.
- New “apps” that link private and public transit services.
- Desire of both millennials and baby-boomers to live in walkable communities close to work and shopping.
- Increase in telecommuting and office sharing.
- Increase in the “shared economy,” including ride-share, car-share, and bike-share services.
- Increased recognition of the link between transportation choices and climate change.
- Increased awareness of the relationship between health and transportation.

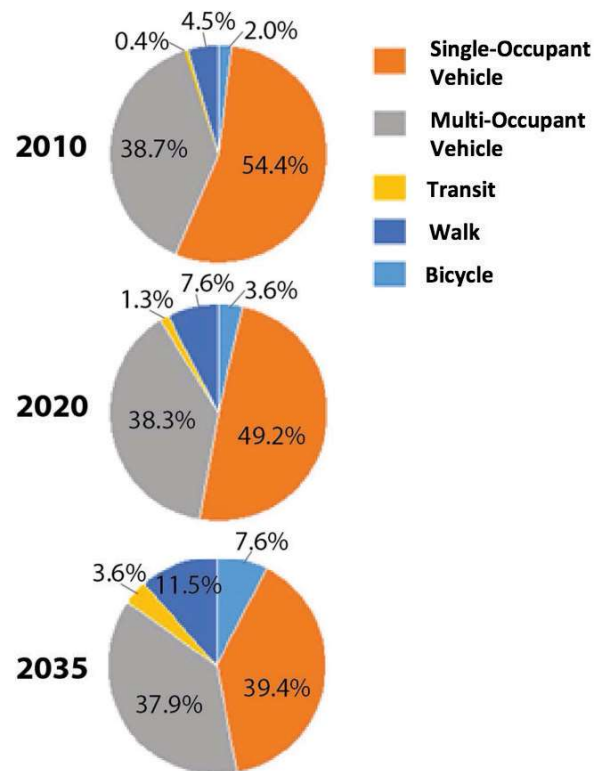
While not all national trends may be currently prevalent on Kaua’i, it is anticipated that both public and private transportation services linked to technological advances will affect Kaua’i’s transportation system over the General Plan’s timeframe.

As the jurisdiction responsible for Kaua’i’s belt highways and major roads leading to the airport and Nāwiliwili Harbor, the HDOT is a key partner in Kaua’i’s land transportation network. Thinking of our transportation network as an integrated system will require continued collaboration between the County and the State in planning across jurisdictions and across modes.

The transportation actions discussed in this section reflect the importance of partnership and the need to consider our land transportation system as an integrated network. The actions are organized by the following six programs:

- A. General**
- B. County Roads**
- C. Transit**
- D. Pedestrian**
- E. Bicycle**
- F. Parking Management**

Figure 3-6 Multimodal Land Transportation Plan 2035 Goals



1. GENERAL

Solutions for the future sustainability and reliability of Kaua'i's transportation network lie in providing a balanced system with multiple modes, including freight, cars, transit, walking, and biking.

Objective: To safely and efficiently move people and goods about Kaua'i by creating a more multimodal land transportation system. As a percentage of total trips, increase transit trips to 3.6%, walking trips to 11.5%, and bicycle trips to 7.6% by 2035 using 2010 data as a baseline.



1.1 Managing congestion requires a multi-pronged approach

Traffic congestion, particularly on our belt highways, is a primary concern of our residents. Historically, efforts to address congestion have focused solely on adding capacity for motor vehicles through widening existing roads and building new roads. These types of projects are costly, can be environmentally sensitive, and often take years or even decades to complete, if they are ever undertaken at all. The State's Federal Aid Highways 2035 Transportation Plan for the District of Kaua'i identified \$3.2 billion in proposed roadway projects, with anticipated funding of \$600 million over 20 years. This approach to addressing congestion is simply not sustainable. A new approach is needed that focuses on managing congestion through a combination of smaller, quicker roadway projects, shifts some trips away from SOVs to other

modes (transit, walking, and biking), and reduces trip demand by focusing housing near jobs, schools, services, and parks.

At the same time, the backlog of existing roads and bridges in need of maintenance and repair has grown. The longer it takes to address road maintenance, the more costly it becomes as roads move from needing a simple resurfacing to a more extensive reconstruction.

With two agencies responsible for our roadway system (HDOT for our belt highways, and the County of Kaua'i Department of Public Works for our County roads), close collaboration is needed to assure we are all working toward the same end goal. In addition to coordination between these two agencies, venues are needed for public dialogue, education, enhancing partnerships, and brainstorming of creative ideas for funding and implementation of our transportation system.

The Built Environment Task Force of Get Fit Kaua'i is an ideal venue for this continued discussion.

Given the reality of limited funding, strategic investment choices will need to be made. These choices can be based on a series of principles that are articulated in the General Plan, and include the following:

- Prioritize the repair and maintenance of existing roads over construction of new roads.
- When new roads are planned and constructed, focus on enhancing roadway network and connectivity, and improving resilience.
- When feasible, to minimize additional costs, consider and incorporate roadway improvements for all modes at the time of roadway resurfacing.
- Where feasible, as a means to reduce cost and shorten timelines for implementation, consider "least cost planning" and "practical design" for corridor planning. As an example, focus on spot improvements and intersection modifications to manage congestion prior to considering corridor-long multi-lane widening projects.
- Consider the safety of all users in planning and design.

A. PERMITTING AND CODE CHANGES

1. Coordinate land use planning with transportation to minimize the impact of growth on congestion, improve walkability in town centers, revitalize commercial areas, and enhance mobility in places where people live, work, learn, and play.
2. Require that transportation impact analysis reports and other traffic studies analyze a project's potential to encourage mode shift.

B. PLANS AND STUDIES

1. In all Community Plans, incorporate planning of roadway, transit, bike and pedestrian facilities, and transportation needs to support economic revitalization.
2. Include analysis of the planned transportation system's ability to accommodate proposed growth, manage congestion, and achieve the County's mode shift targets in all Community Plans.
3. In all Community Plans, develop a regional traffic circulation plan that includes all modes of transportation.

C. PROJECTS AND PROGRAMS

1. Establish transportation priorities using a performance-based evaluation process, which considers the following criteria:
 - a. Safety;
 - b. System preservation;
 - c. Economic development/community access;
 - d. Support of growth areas as designated in the General Plan and Community Plans;
 - e. Congestion management; and
 - f. Environmental and cultural impacts.

2. Support completion of the priority projects in the *Kapa'a Transportation Solutions Report* to include the following:
 - a. Add one lane on the Kūhiō Highway from the southern end of the Kapa'a Bypass Road to Kuamo'o Road.
 - b. Widen the northern segment of the Kapa'a Bypass Road to two-lane and two-way from the northern end of the Bypass to the roundabout at Olohena Road.
 - c. Operational improvements, such as signalization and left turn restrictions on Kūhiō Highway.
 - d. Extension of right turn lane on Haleilio Road at Kūhiō Highway.
 - e. Congestion management on Kūhiō Highway, from Kuamo'o Road to Kapule Highway.
3. Incorporate and integrate transit strategies in the *Kapa'a Transportation Solutions* framework.
4. Following a priority evaluation process, complete priority circulation and multimodal capacity projects identified in the General Plan Transportation Maps.
5. Consider implementing Transportation Demand Management strategies with County of Kaua'i employees who work in Līhu'e as a pilot program that can be replicated by other employers. Strategies may include the following:
 - a. Staggered work hours;
 - b. Bulk rate bus passes; and
 - c. Incentives to encourage commuting by other than single-occupancy vehicles.

D. PARTNERSHIP NEEDS

1. Improve the process of collaboration with HDOT to involve both the County and State in planning, scoping, design, and funding of transportation plans and projects.
2. In collaboration with HDOT, develop a process to apply "least cost planning" and "practical design"

into transportation planning and projects with a focus on congestion management for Kūhiō Highway and Kaunuali'i Highway. Select a pilot project to test the process and outcomes.

3. Restructure the Transportation Coordinating Committee as a working group with representatives from Kaua'i County Long Range Planning, the County's Transportation Planner, Public Works Engineering, Capital Improvement Program Manager, Transportation Agency, and HDOT.
4. Identify and actively seek non-County revenue sources (Federal, State, and private) to supplement County funding of the transportation network.
5. Enhance community partnerships for roadway maintenance (including landscaping) and education of all roadway users.
6. Continue to support the Built Environment Task Force of Get Fit Kaua'i as a primary venue for public discussion of funding and implementing our land transportation system.
7. Regularly evaluate and update Council-determined land transportation user fees, such as bus fares, registration, and fuel and vehicle weight tax rates.

2. COUNTY ROADS

County roads and local streets will continue to be the primary way that people and goods move around the island, but they cannot accommodate unlimited growth. Maintaining roads so that they safely and efficiently handle vehicles, buses, and other modes of transportation is essential to a future with less time spent in traffic and fewer vehicle trips. County roads are under the jurisdiction of the County of Kaua'i. They do not include roads and highways that are under the jurisdiction of the Hawai'i Department of Transportation. This section applies only to roads under the jurisdiction of the County.

Objective: To provide a safe and accessible County road network that supports the Future Land Use Map.



2.1 Preserving our Island's Character and Advancing Opportunity

Along with addressing congestion, other concerns of our community include preserving Kaua'i's character, promoting economic development, and providing access for everyone to education, jobs, and services, regardless of age or physical ability.

Our County roads system plays a big role in addressing these concerns. When the only way to get around is by car, large segments of our population are left out, due to age, physical ability, or socio-economic conditions. Providing housing near jobs, education, and services, with a safe and convenient transportation network that accommodates transit, walking, and biking, allows everyone to be connected.

Retrofit of existing County roads can also be a catalyst

for economic development, by creating inviting places for socialization and commerce.

How various modes are accommodated is achieved through street design and is key to preserving the character of our island. In town settings, sidewalks and bike lanes may be needed. In slow-speed, low-volume settings, it may be appropriate for all users to share the street without special allocation for each user. The design of each street needs to take into account the function of the street, space available, adjacent land use, and the character of surroundings. This is called "context sensitive design," and is critical to preserving a sense of place. New street design standards are being developed by the County incorporating these principles to accommodate all users in different settings.

On many local roads, residents express concerns about motorists speeding. This can be dangerous for all road users, and can discourage people from walking and biking. Sometimes streets are designed to accommodate a much higher speed than the posted speed limit, which encourages speeding. Designing streets to the desired speed limit can slow traffic, reduce the need for costly enforcement, and can improve safety for all users. "Traffic calming" is an important strategy to slow down traffic to the desired speed on selected streets. A variety of traffic calming treatments can be used to reduce speeds, and selecting appropriate treatments will vary by location. A traffic calming toolkit can help engineers, public safety officials, and community members consider and evaluate treatments that are suitable for each location. With limited funding, priorities need to be established for road retrofit and construction to best accommodate the needs of all users.

A. PERMITTING AND CODE CHANGES

1. Complete new street design standards to address all users.
2. Amend the zoning and subdivision codes to support multimodal transportation options and safety for all users.
3. Develop a traffic calming toolkit and update the County Traffic Code to allow for traffic calming features
4. Designate, sign, and enforce truck routes.
5. Update the school zone ordinance and signage.

B. PROJECTS AND PROGRAMS

1. Complete priority resurfacing, reconstruction, retrofit, and repair of existing roads and bridges based on available funding.
2. Retrofit existing roads to incorporate facilities for all users where feasible and appropriate, and as indicated in Community Plans or other network plans, as a part of resurfacing and reconstruction projects.
3. Implement maintenance of roadside vegetation and roadway surfaces to increase safety.

C. PARTNERSHIP NEEDS

1. Improve systems, communications, and resources so that County projects funded by the State Transportation Improvement Program (STIP) are completed on schedule.
2. Secure resources and partnerships for maintenance of County roadways.

3. TRANSIT PROGRAM

Transit is a key component of Kaua'i's transportation strategy to manage congestion, maintain our island's character, reduce our environmental footprint, reduce the cost of living, and provide opportunity for everyone.

Objective: To enhance the viability of transit as a transportation choice for residents and visitors.



3.1 Expanding Transit Ridership

The Kaua'i Bus is the County's provider of transit services. With each service improvement (extending hours of service and providing weekend service), ridership has increased substantially. Based on survey responses and analysis of ridership patterns, there is latent demand for transit service that is not being met due to current service limitations.

Two areas with the greatest potential to expand transit ridership are:

1. To expand service frequency and improve routing for commuters, and
2. To provide viable transportation alternatives for visitors other than a weekly car rental.

The first requires modifications to The Kaua'i Bus mainline and peak hour service.

The second requires a new model for how visitors experience the island. Currently, about 89 percent of visitors rent a car during their visit. This adds to our island's roadway congestion, and causes severe parking impacts at destinations. In order to change this model, several factors are needed, including:

- Affordable and reliable shuttles between the airport and resort areas,
- Frequent shuttles within resort areas,
- Enhanced bicycle and pedestrian infrastructure within resort areas, including opportunities for bike rental or bike share, and
- Opportunity for short-term car rentals on site at resorts.

These and other recommendations are found in the *Kaua'i Short-Range Transit Plan* (approved by the County Council October 2017). Improved transit service cannot be accomplished if transit funding is irregular. A dedicated funding source is needed to sustain service expansion. This will require partnerships and support from residents, large and mid-size employers, commercial enterprises, and others that will benefit from an improved transit system.

At the same time as service expansion, efficiencies are needed to offset costs. This may include provision of some transit services by private enterprise, contracting of some services, elimination or consolidation of routes with low ridership, and efforts to transfer paratransit riders to less costly fixed route service.

3.2 Encouraging Transit-Ready Development

New development that is "transit ready" has sufficient density and walkability to encourage use of the bus system. Such projects, especially when constructed near transit hubs, can help increase bus ridership and improve the efficacy of the bus system. In recent years, the State has placed an emphasis on transit-oriented development. As a result, there is an opportunity to explore workforce and affordable housing development on state- owned parcels adjacent to bus stops.

A. PERMITTING AND CODE CHANGES

1. Provide density bonuses for workforce housing near transit.

B. PLANS AND STUDIES

1. Implement the *Short-Range Transit Plan*.
2. Complete a Mid-Range (4-7 year) Transit Plan for longer-term transit planning.
3. Address the feasibility and practicality of accommodating luggage, surfboards, and other large objects on County and private buses.

C. PROJECTS AND PROGRAMS

1. Increase mainline service frequency to every 30 minutes, with 15 minute frequency at peak times on peak routes.
2. Identify and implement service modernization features, including GPS location of buses and integration with transit apps; electronic fare recovery; on-board wi-fi; and other amenities to streamline service and attract riders.
3. Focus initial phases of service expansion in areas of highest ridership potential.
4. Improve bus route and schedule information.
5. Complete bus shelters and amenities at 50 priority bus stops.
6. Identify priorities for ADA-compliant pedestrian access to bus stops. Develop a construction schedule and funding plan for priority projects.
7. Provide adequate and efficient bus storage and maintenance facilities.
8. Identify locations for park and rides, especially in coordination with a North Shore shuttle.
9. Convert bus fleet to sustainable fuels.

D. PARTNERSHIP NEEDS

1. Expand the bulk bus pass program to generate transit revenue and encourage ridership.
2. Coordinate with HDOT to incorporate transit stops and pullouts on State Highway projects where needed.
3. Work with State and Federal agencies and local employers to establish a dedicated funding source for transit.
4. Partner with HDOT to design bus stops on rural highways.
5. Develop a transit-ready development pilot project on State lands pursuant to the *State Transit Oriented Development Strategic Plan*.
6. Provide housing adjacent to transit stops, with a special focus on transit hubs.

4. PEDESTRIAN PROGRAM

Walking is ideal for short trips within town, or to and from transit stops. Expanding walking as a viable mode of transportation meets many of our goals, including health, sustainability, creating thriving commercial centers, reducing transportation cost, and equity.

Objective: To provide connected and convenient pedestrian facilities in communities.



4.1 Making Walking Safe and Attractive

In plantation days, walking was much more prevalent. Work, the dispensary, shops, schools, and recreation were all within walking distance of homes. In many of our plantation towns, the “bones” of these walkable communities are still intact.

Today, in order to expand walking, people need to feel that it is safe and inviting. In addition, for new communities, land use must be planned so that

homes, parks, schools, jobs, and services are within walking distance. This is an example of how land use and transportation are linked.

In many places, a key contributor to congestion at peak hours is pick-up and drop-off at schools. A significant portion of elementary school students live within walking distance, yet many parents feel it is unsafe for their children to walk to school. Kaua’i’s Safe Routes to School program, a partnership between the County, the Department of Education, and Get Fit Kaua’i, strives to reduce barriers to walking to school through education, enforcement, encouragement, and investment in infrastructure. A similar program could be developed to establish “safe routes to parks” in neighborhoods.

With limited funding, investments in pedestrian infrastructure need to be strategic. Priorities include safe routes to schools and parks, and improvements to support vibrant, walkable town centers. Identifying and providing solutions for locations with a history of safety concerns, such as locations of crashes involving pedestrians, is another critical element.

Design of pedestrian improvements needs to take into account community preferences and surrounding character (“context-sensitive design”). For example, in low-speed, low-volume areas, it may be perfectly safe for cars, bikes, and pedestrians to all share the road. In other areas, such as town centers, a higher level of pedestrian infrastructure is needed for the safety of all users.



Pedestrians in Kīlauea, North Shore District

A. PLANS AND STUDIES

1. Identify high-priority pedestrian safety projects based on crash data.

B. PARTNERSHIP NEEDS

1. Continue a robust Safe Routes to School Program with Engineering, Encouragement, Education, Enforcement, and Evaluation.
2. Complete priority pedestrian projects as identified in Community Plans and other studies.
3. Work with HDOT to identify and implement appropriate pedestrian crossings on State Highways.
4. Develop a Safe Routes to Parks program to identify priority pedestrian improvements within neighborhoods to parks.

5. BICYCLE PROGRAM

Bicycling is a viable mode of transportation for short to medium trips within and between towns. Both bicycling and walking, also considered "active transportation," promote health, sustainability, and equity, and have the potential to reduce the cost of living.

Objective: To create connected and safe bicycle networks that accommodate all riders.



5.1 A Complete Bicycle Network

The likelihood of people bicycling for transportation can be divided into four categories:²⁹

1. Strong and Fearless

2. Enthused and Confident
3. Interested but Concerned
4. No Way No How

Strong and fearless riders are comfortable riding their bikes with cars in nearly all conditions. Based on research in other places, this group comprises less than one percent of the population. Enthused and confident riders are regular commute cyclists who are willing to share the road with motorists but prefer to ride in separate bike lanes or in adequate shoulders. Generally, enthused and confident riders are approximately seven percent of the population. Interested but concerned cyclists have some experience riding bikes and would like to ride more, but feel riding conditions are unsafe. Interested but concerned cyclists generally comprise 60 percent of the population. Local surveys indicate a large portion of our population falls into the interested but concerned category – they would like to ride their bikes more for transportation, but feel that current conditions are unsafe. No way no how, approximately 30 percent of the population, are simply not interested in riding a bike for transportation, no matter the conditions.

In order to expand cycling as a viable means of transportation, conditions need to address the safety issues of the "interested but concerned" group: if the road is shared with cars, volumes and speeds need to be low; on higher volume streets, separate bike lanes are needed; in high-volume high-speed corridors, separate bike facilities, such as shared use paths, are needed. Intersection treatments also need to be safe for cyclists. Most importantly, a continuous network is needed that allows cyclists to feel safe getting from Point A to Point B. Adding bike lanes on a single street does not create a network and will not substantially increase cycling until those bike lanes are connected to other bike facilities.

While planning is done at the network level, implementation is typically done incrementally. Community Plans are seen as the ideal scale and community process to establish bicycle networks in all of our districts. For existing road retrofits, as much as possible, implementation should occur in conjunction with other roadway projects, such as resurfacing and reconstruction, to reduce costs.

Another key factor is bicycle education. Both cyclists and motorists need to understand their rights and responsibilities of safely sharing the road.

A. PERMITTING AND CODE CHANGES

1. Incorporate bicycle parking requirements into the Comprehensive Zoning Ordinance.

B. PLANS AND STUDIES

1. Establish an islandwide bikeways plan with priorities for implementation through the community planning process.

C. PROJECTS AND PROGRAMS

1. Complete planning, engineering, and construction for the West Side Path from Waimea to Kekaha and from Hanapēpē to Salt Pond.
2. Complete the Ke Ala Hele Makalae path from Anahola to Līhu'e.
3. Complete planning and first phase construction of a North Shore Path in areas supported by the community.
4. Complete at least one segment of a shared use path identified in the *South Kaua'i Community Plan* and the *Līhu'e Community Plan*.
5. Complete priority bikeway projects as identified in Community Plans.

D. PARTNERSHIP NEEDS

1. Work with HDOT to have adequate and safe bicycle facilities on all State Highways, including bridges.
2. Leverage Federal funding to complete bicycle and pedestrian access improvements on Kīlauea Road to Kīlauea Point National Wildlife Refuge.
3. Prepare a bikeshare feasibility study and implement a bikeshare program.
4. Continue to support bicycle safety and education programs in collaboration with community partners.



Cyclist on Kūhi'o Highway

6. PARKING MANAGEMENT

Parking is a key component of both land use and transportation. Creating vibrant, walkable towns requires new ways of thinking about parking. At beaches, trails, and other scenic destinations, parking is a key consideration to providing access while protecting our island's character and environment.

Objective: To implement parking strategies that support community needs.



6.1 Managing Parking Wisely

In 2014, the County received technical assistance from Smart Growth America to conduct a Parking Audit Workshop for Līhu'e Town. The workshop provided our community with new ways to think about parking supply and demand, and the relationship of parking to transportation and land use. These concepts apply not only to Līhu'e, but to all areas of our island.

Traditional zoning requires each building or parcel to provide adequate parking on site. This leads to large expanses of land dedicated to parking, and generally creates commercial areas that are not conducive to walking. With increased density and a safe pedestrian environment, parking can be provided off-site. Parking districts that consolidate parking in key locations to serve multiple properties, and shared parking between sites, are strategies that are needed to encourage infill development. Another important consideration for our towns and resort areas is to promote parking management strategies that reduce parking demand. These strategies may include timed parking, paid parking, and employer incentives such as transportation benefits that incentivize ride-sharing, walking, biking, or taking transit to work.

At beaches, trails, and other scenic destinations, parking is an important component of access, yet in some areas, such as Kē'ē Beach, scenic and cultural resources are compromised by too many cars. In some areas, formalized or dedicated parking is needed. In other areas, parking demand should be

reduced through alternative modes of access, such as shuttles.

A. PLANS AND STUDIES

1. Implement parking audits in areas where parking resources are perceived to be limited and where additional parking resources or parking management may be needed such as Kapa'a Town, Hanalei, and Po'ipū.
2. In partnership with the State, develop and implement a parking management plan for the Līhu'e Civic Center.

B. PARTNERSHIP NEEDS

1. Establish staff resources and funding for Countywide parking enforcement.
2. Work with State agencies to address the parking impact at beaches and other State-owned parks and scenic areas such as Kē'ē Beach.
3. Work with employers and resort areas to establish parking management strategies that incentivize mode shift.
4. Consider the establishment of parking districts in town centers.