
MASTER PLAN

Dotted with historic buildings and bustling with government and commercial activity, the Civic Center remains an integral part of Līhu'e. The Civic Center has witnessed the growth of Līhu'e Airport and Nāwiliwili Harbor, the expansion of businesses, the crush of widened streets and highways, and the dispersion of civic uses to the Airport area. The Civic Center remains historical, cultural, and functional. Yet there is sentiment among community and business members that the core of Līhu'e has lost its sense of place and that the car dominates the environment with vast parking lots and dangerous traffic on the surrounding roadways. The proposed master plan recognizes these challenges and builds upon the visions from previous planning efforts in its effort to revitalize and renew the Līhu'e Civic Center.

The master plan for the Līhu'e Civic Center is presented in Figure 37. It shows an area larger than the project site for context. Figure 38 shows a close-up view of the project area to show more detail. Addressing the various goals and visions for the Civic Center, the plan creates a campus-like environment by closing 'Eiwa Street and unifying the two-block site, creating a more pedestrian-friendly environment. Since the County, Kaua'i Museum, and possibly Big Save are in the process of either renovating or expanding their facilities, the focus of the master plan is the public realm between the buildings as well as the adjacent streetscapes. It does not include any architectural programming for the buildings but makes general recommendations for the structures where relevant.

The master plan also includes improvements to parking areas and adjacent roadways based on parking and traffic studies. It establishes transportation alternatives including bicycle facilities and a Civic Center shuttle in order to expand transportation options. Opportunities for public art, gateway features and landmarks are also identified on the plan.

The master plan does not include major changes to the State properties or to the two outparcels within the Civic Center project bounds—the Kaua'i Museum and Hawaiian Telcom. Besides providing for vehicle accesses and pedestrian connections to the surrounding Civic Center, no major site improvements are recommended since the properties are not owned by the County. However, special attention was paid to the alignment of the State's ADA pathways as well as the pedestrian connections and views in and around the Kaua'i Museum. The museum is undergoing expansion plans to add an entrance on the north side of the buildings. Input on the Civic Center master plan was specifically sought from State DAGS on

Kaua'i and the Kaua'i Museum's architect in order to coordinate the projects.

The following sections briefly highlight some of the important aspects of the master plan. To help illustrate the proposed master plan, simplified computer-generated three-dimensional models of the existing Civic Center and the Civic Center with the proposed improvements are presented with the text as a series of before and after images. The landscaping in these renderings is meant to be conceptual and is subject to change.

Guided by an understanding of its civic function and developed with input from the community, businesses, and government employees, the proposed master plan revitalizes the historic seat of government on Kaua'i and attempts to recapture the spirit of a true civic center.



Figure 38
DETAILED MASTER PLAN
LĪHU'E CIVIC CENTER
 COUNTY OF KAUAI

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 FEET

PBR HAWAII & ASSOCIATES, INC.

EXPANDED COUNTY LAWN AND CENTRAL PARK

One of the main goals and visions of the master plan is to increase the green spaces within the Civic Center. With the proposed closure of 'Eiwa Street, the County Lawn is expanded west to encompass the Kaua'i Museum. This will open up the view of the Civic Center along Rice Street with a continuous stretch of park and connected walkways. The expanded County Lawn, which will be approximately 36,000 square feet larger, would be improved and landscaped. The fallen palms in front of the Historic County Building will be replanted, pedestrian walkways will

be built, and more trees, landscaping, and site amenities including benches, trash receptacles and lighting will be installed.



Figure 39: View of Existing County Lawn

Similarly, the Central Park will add 37,500 square feet of open space at the center of the Civic Center. A performance space, shade trees and park amenities are envisioned for this park. Depending on need, underground parking could be provided below this park.

Figure 40: View of Expanded County Lawn and New Promenade

These expanded open spaces will provide opportunities for the County to host festivals, farmers markets, and other large

community gatherings right in the heart of Lihu'e Town. It will provide government workers and nearby residents and seniors with a pleasant place to meet and eat their lunches. With permission from the County, the



Kaua'i Museum and other community organizations would also be able to have outdoor events within this historic setting. The County could also raise maintenance funds by collecting fees for commercial use of the County Lawn. It is an opportunity for those who live and work in Lihū'e to reclaim the County Lawn for community activities rather than avoid it or leave it as an unused open space.

Concern was also raised at the community meetings about adding more memorials to the County Lawn. Rather than filling the grassy areas of the County Lawn with additional memorials, the County should consider locating future memorials in focal points along pedestrian paths as shown in the master plan so that the memorials are accessible to all and the open spaces within the County Lawn will be maintained. Suggestions were also made to locate future memorials at the War Memorial property and other appropriate public facilities to avoid an overabundance of memorials at the County Lawn.

PEDESTRIAN NETWORK AND PROMENADES

To encourage walking within the Civic Center, a pedestrian network of promenades and walkways are proposed. A continuous walkway will connect the Mo'ikeha Building to the Historic County Building and County Annex. The parking spaces in front of the Historic County Building will be replaced with a 30-foot wide promenade (see Figure 41). This promenade could be used as a shared path for emergency egress from the County parking lots or during special events to stage floats or tents or to set up seating for speeches held on the steps of the Historic County Building. Another option is to build a narrower promenade that is 20 feet wide and expand the County Lawn by ten feet.

Figure 41: View of the Pedestrian Promenade in Front of the Historic County Building



Also, a new walkway is proposed between the royal palms of the County Lawn, connecting the promenade with the sidewalk on Rice Street. It would be reminiscent of the old road that used to lead to the steps of the Historic County Building. A historical timeline of the Civic Center, or other interpretive signage, could be embedded in the paving of this pathway adding an educational as well as historical element to the County Lawn.

The covered walkway between the Mo'ikeha, Kapule and Pi'ikoi Buildings will be renovated and the walkway will connect directly to the intersection of Kūhiō Highway and Hardy Street.

A continuous sidewalk will also be installed on the northern side of the Pi'ikoi Building and Big Save and will connect to the proposed central

park/parking structure to the east of Big Save. Sidewalks will also connect the surrounding public streets and interior parking lots to all State and County Buildings within the Civic Center. Wherever possible, direct links are made from internal pathways to crosswalks in the surrounding streets.



Figure 42: Before and After Views of the North Side of the Civic Center Showing Proposed Locations for Sidewalks and Central Park to the East of Big Save

The promenade between the Mo'ikeha Building and Pi'ikoi Building and on the north side of the Kaua'i Museum will be landscaped with medium canopy shade trees. Since the area is adjacent to a loading area, the promenade will be buffered with a low wall and thick landscaping to shield the sights and sounds of the trucks. Seating areas and trash receptacles should be provided along the promenade so that there are places for people to sit, relax, or have lunch outdoors. Seating areas could be designed as either benches or planters with seat walls.

Accessibility

Given the relatively flat topography of the Līhu'e Civic Center, all walkways will meet accessibility standards as required by Title II of the Americans with Disability Act (1990). Also, the proposed facilities and pathways will comply with appropriate administrative rules of the State of Hawai'i Disability and Communication Access Board (HAR Title 11 §216-219). Accessible areas or elements will be indicated throughout the area with appropriate signs and markers. Drinking fountains and other amenities also will be fully accessible.

PUBLIC ART, GATEWAY FEATURES, MONUMENTS, & LANDMARKS

Certain areas in and around the Civic Center have been identified as possible locations for public art and special civic features. They are shown as purple stars in the master plan in Figure 37.

There are two significant entry points for the Civic Center. The first is at the prominent intersection of Kūhiō Highway and Rice Street fronting the Mo'ikeha Building. The second is located at the proposed roundabout at the 'Umi Street and Hardy Street intersection. A large sculpture symbolic of Līhu'e or the Civic Center could be commissioned for these spots. Another option would be to landscape the areas with native plants or feature landscaping similarly symbolic of Līhu'e or Kaua'i.

The County Council requested that flagpoles be erected as one of the landmark features. A possible site for new flagpoles would be at the prominent intersection of Kūhiō Highway and Rice Street in front of the Mo'ikeha Building.

Other landmarks or civic features that could be installed include public art, sculptures, fountains, directional signage such as maps of the Civic Center and relocated monuments from the County Lawn. As noted earlier, concern about the growing number of monuments being added to the County Lawn was voiced during some of the community meetings. Relocating some of these monuments to the proposed sites shown on the master plan would allow them to be more accessible to the public and showcased along pedestrian paths. It would also clear the County Lawn and open up the area for public events and festivals.

COMMERCIAL USES

Hawaiian Telcom occupies the two-story building located along Kūhiō Highway between the Mo'ikeha and Kapule Buildings. Since Hawaiian Telcom owns the property and facilities, no changes are recommended as part of this master plan. Access to their facility from Kūhiō Highway and Rice Street (through the County parking lot) remains unchanged. However, the telephone company has occupied this space since at least the 1950s and the building was once styled in classical architectural form like the old Tip Top Hotel and Historic County Building (see Figure 17). Subsequently, the building was shielded in metal siding and coral rock. It would be interesting to see if the building could be restored to its original form.

Big Save Market leases the commercial building on the east side of the Pi'ikoi Building from the County. There is mixed sentiment as to the appropriateness of having a grocery store in the center of the Civic Center. Some feel that it does not belong here and should be replaced by other civic related uses such as additional offices, a community center, daycare center, or possibly a non-profit organization. Others feel that it is a valuable asset in its current location since it is convenient for nearby residents, seniors, and government employees who can walk to Big Save to do their grocery shopping. Big Save has also entertained the idea of renovating its store and adding a deli counter where government employees can buy breakfast or lunch.

In the short-term, Big Save has chosen to extend its lease through 2010. As part of their lease agreement, the County should require that Big Save renovate the main entry and façades of building to complement the master plan improvements should they remain beyond their current lease. If the mechanical equipment on the east side of the building cannot be relocated to an out-of-sight location, a wall should be built along this edge to screen the view and mitigate noise from the equipment. In addition, due to the limited space available for parking, the County should consider adding fees for parking or requiring contributions to the construction of the parking structure since Big Save requires 85 stalls. Another option is to negotiate with Big Save to reduce the number of dedicated stalls they require. If the County decides to terminate the lease, the space should be evaluated for reuse or removal. If demolished, a larger central park or at-grade parking (which is lower in cost than the proposed parking structure) could be constructed. Removal may also reduce overall parking requirements within the Civic Center depending upon what is built in its place.

PARKING

The parking lots within the Civic Center will be redesigned to be more efficient, organized, and landscaped. Canopy trees will be planted to provide shade and reduce the heat island effect within the Civic Center. Pedestrian paths will connect parking areas to the buildings within the Civic Center and provide accessible connections to the public streets.

There are a total of 721 parking stalls within the County and State parking lots. This includes 20 parallel parking stalls on 'Eiwa Street. At full build-out, the proposed master plan could have as much as 776 parking stalls, an increase of 55 stalls from existing conditions. No changes to the State parking facilities are proposed except for minor changes in the access to the State's underground parking garage since 'Eiwa Street will be closed.

Table 6: Parking Summary

	Existing Number of Parking Stalls	Proposed Number of Parking Stalls	Difference
County Parking Lots	556	631*	+75
State Parking Lots	145	145	0
'Eiwa Street	20	0	-20
TOTAL	721	776	+55
*Note: This assumes two parking decks below grade at the Central Park and full build-out of the underground deck at the Hardy Street lot. See discussion in the following text.			

If none of the below grade parking decks are constructed, there would be a reduction of about 280 stalls but still leaving nearly 500 stalls onsite. Alternative offsite parking lots such as the War Memorial parking lot, which has 240 existing parking stalls, should be utilized to supplement parking. Furthermore, if less parking is provided within the Civic Center, the use of alternative means of transportation such as transit, biking, and walking would increase since personal vehicles would become less convenient and healthier lifestyles would be encouraged. Additional discussion is provided below.

Two locations for potential below-grade parking structures are identified in the master plan. The first is located at the corner of Hardy Street and Kūhiō Highway, as recommended in the County General Plan. It is envisioned as having two parking levels— one at grade and the other below grade. The topography in this area lends itself well to a below-

grade deck. The grade drops about six feet at this corner of the Civic Center so the amount of excavation needed to build the underground level is not as significant as compared to a flatter site. Access to the lower level could be reached directly from Hardy Street (see Figure 43). Other ramps between the two parking decks will be located as appropriate. The full capacity of this parking lot is estimated at 280 stalls (140 stalls on the

lower deck and 140 stalls at grade). To save on design and construction costs, the lower deck could be reduced to about half the size. This would reduce the number of stalls provided to about 210 stalls. If no below grade parking is provided, there would be about 148 parking stalls. Cost estimates for each scenario are provided in the Implementation section below.



Figure 43: Before and After Views of the Hardy Street Parking Lot



The area fronting Hardy Street will also be redesigned with a wide sidewalk and shade trees leading to the County bus stop, improving pedestrian accessibility and comfort. The corner of Hardy Street and Kūhiō Highway could also feature a sculpture or other landmark to signal the gateway to the Civic Center.

Figure 44: Central Park with Potential Parking Decks below Grade

A second parking structure is proposed to the east of the Pi'ikoi Building. It is envisioned primarily as a central park.



However, parking decks could be built as needed below grade (see Figure 44). The design of this area is purposefully left flexible in the master plan to provide the County with options when actual implementation takes place.

During the development of the master plan, two opposing views regarding parking were voiced. Some felt that ample parking should be provided within the Civic Center and that the number of parking stalls in the master plan should equal or exceed the current amount. Others felt that the space within the Civic Center was too important to be used for parking and that either the parking should be located offsite or the number of parking stalls should be reduced in order to encourage people to walk or use public transit.

Because this area is one of the last phases of development, the actual design could be determined at a later time after the initial phases of improvements are completed and an updated estimate of parking requirements are studied. To provide some guidance, however, each deck of parking in this designated area is estimated to hold 75 parking stalls. In order to match or exceed existing parking counts, two parking decks would be needed and would provide a total of about 150 stalls. This total is included in the parking summary provided in Table 6. In the other extreme, no underground parking could be built and the area would only contain a park.

The cost estimates provided in the Implementation section below show the potential costs for three different scenarios: 1) park with two decks of underground parking, 2) park with one deck of underground parking, and 3) park only with no underground parking. An alternative to build one level of parking below grade or partially below grade, and one level of parking at grade with the park on the roof of the structure was proposed. However, there were community concerns that the park would block the views from the Historic County Building. Another unknown issue is the future of Big Save which could completely change the proposed design in this area. Therefore, the proposed solution for this area provides flexibility in what is ultimately built and the design choices should be reevaluated and weighed against cost, need, and public input when this area is redeveloped.

The remaining parking areas will be at-grade surface lots and will include sidewalks and landscaping with canopy trees. By redesigning the parking facilities and providing a mix of at-grade and underground parking areas, the amount of landscaped, pervious area is increased by nearly 2.4 acres in the proposed master plan.

Offsite Parking Lots

Alternate offsite parking areas are also identified in the proposed master plan to help reduce the need for parking within the two-block project site. These include:

- County War Memorial Convention Hall parking lot, which has over 240 stalls that could be used for employee parking during work hours. The War Memorial parking lot presents an easily accessible and low-cost option that is within walking distance of the Civic Center. The addition of a second level of parking to the War Memorial parking lot would double the capacity to over 400 stalls and could serve as employee parking and public parking for area businesses, park users and the War Memorial.
- Joint public-private development of a parking structure adjacent to the Līhu'e Plantation Building south of the Post Office. The landowner has voiced an interest in partnering with the County and any of the neighboring businesses and landowners such as the Post Office to build a public parking structure adjacent to the Līhu'e Plantation Building.
- The County parcel opposite Kūhiō Highway west of the Civic Center. The County parcel by itself is too small for a parking structure and there are considerable grade changes at this site. However, if the adjacent land to the south is acquired, the parking structure could be built up to meet the grade of the highway at the intersection of Hardy and Kūhiō Highway. The at-grade level could be developed with commercial or public uses such as retail, restaurants, offices or even a park. Pedestrian connections should be provided to link the parking structure and facilities to the Civic Center. Vehicle access could be provided at the intersection of Hardy and Kūhiō. Given the topography and drainage issues, this parking structure would be relatively expensive to build even compared to other parking structures. However the additional retail or office use at the top level could help offset the construction costs.
- Joint County-State parking structure at the former Police Station on 'Umi Street. The State currently has 141 parking stalls at the former Police Station and the Līhu'e Health Center to support their parking needs within the Civic Center. However, depending upon

what the State plans to develop at the old Police Station site, a State and County partnership could be made to develop supplemental parking for the Civic Center. Regardless if this partnership occurs, the State will need to ensure it accommodates its own parking needs for all its agencies and facilities in the vicinity. State employees and customers currently park on the public streets or in the County's parking lots to avoid paying for parking as required at the State's parking lots. The best scenario would be some sort of joint agreement between the State and the County in its administration of the Civic Center parking facilities so that both share the costs and burden of providing parking within the Civic Center.

- Joint public-private development of a parking structure at the existing at-grade lot behind the Līhu'e Plaza Building. If built, the design should be sensitive to the residential lot behind it or acquisition of the lot should be sought to incorporate it into the redevelopment.

Convenient and continuous pedestrian paths should be built for any offsite parking lot intended to serve the Civic Center. It is roughly a ten minute walk from the War Memorial to the Civic Center and less than five minutes from the Līhu'e Plantation Building. Proposed locations for the pedestrian paths are shown in Figure 37. To further support the use of the War Memorial parking lot or any other offsite parking lot, a frequent shuttle that runs between the Civic Center and the offsite parking lots should be provided. The shuttle and potential route are discussed in more detail in the Transit and Shuttle Service section below.

Public Support for Parking Structures

The initial concept of building a parking structure derived from the General Plan vision for the Civic Center and comments received during meetings with staff and community members, and from the first public survey distributed in 2003. Although more expensive to build, parking structures utilize land more efficiently and provide opportunities to develop more park and open space within the Civic Center.

The concept of building a park above a parking structure was later highly supported by the public in the survey administered in early 2005 when the Draft Master Plan was presented at the joint community meeting. When asked to choose between four different types of parking facilities – 1) at-grade parking in an off-street parking lot, 2) parking below grade or partially below with a park above, 3) a parking structure above grade with

the possibility of commercial along the street front, and 4) street parking – the majority of respondents chose underground parking with a park above as their first choice (37.7 percent) with another 18.9 percent choosing it as their second choice.³

An above grade parking structure also received strong support with 20.8 percent choosing it as their first choice and another 22.6 percent as their second. Nearly 60 percent of respondents chose some type of parking structure as their first choice and 41.5 percent chose it as their second choice. In comparison, 34.0 percent of respondents chose at-grade parking lots as their first choice and only 3.8 percent chose street parking as their first choice.

The resulting plan is a combination of at-grade parking, parking below grade and parking below parks and open space. A copy of the parking survey, the survey results and the preliminary parking study which summarized the results and planning options initially explored for the master plan are provided in Appendix E.

Incentive Programs

In addition to building more parking, the County should establish incentive programs to encourage employees and customers to use other modes of transportation to get to the Civic Center so that the number of parking stalls required can be reduced. Carpool programs, subsidizing bus passes, and charging for parking at the Civic Center should be considered.

As an example, if the County charged a dollar a day (or \$30 a month) to park in 250 spaces in the Civic Center, they would be able to raise enough funds to maintain the four acres of landscaped spaces within the Civic Center⁴. As an alternative, the War Memorial parking could be offered for free to employees who do not wish to pay for parking. This nearby but remote location would encourage walking between the War Memorial and the Civic Center and increase foot traffic passing by area businesses. Shuttle service to and from the Civic Center (the proposed Lihu'e shuttle described below in the Transit and Shuttle Service section) should also be provided free of charge for those who are willing to park at offsite parking lots and possibly even the public in general to reduce the need for building more parking lots within the Civic Center.

³ Question #8 of the 2005 public survey. 53 responses were received.

⁴ Estimated maintenance cost for the 4 acres is \$7,000 per month.

Public Parking for Neighboring Businesses

Throughout the planning process, the question of providing public parking for neighboring businesses was raised numerous times by concerned citizens and businesses. The County is actively investigating this concern as part of the Līhu‘e Town Core Urban Design Plan. However, one option that has been proposed is to make the War Memorial parking lot available during non-event hours and depending on how much parking the County would need for employees. If a second deck of parking is added above the existing War Memorial parking lot, the number of parking stalls would double to about 400 stalls. Since it is located on the interior of the block, it would be hidden from public view along major streets. The second level of parking could be built so that it matches grade with the adjacent Līhu‘e Park. It would provide ample parking for the public and the County.

CIRCULATION

Improving connections within the Civic Center and to neighboring commercial and residential areas is vital for the Līhu‘e Civic Center project. In order to bring the community back to the area, the means of reaching the area must be convenient and welcoming. The following section describes the proposed improvements for streetscapes, roadways, transit, and bicycle facilities around the Civic Center.

Vehicular Traffic and Roadway Improvements

As noted earlier, M&E Pacific, Inc. prepared a traffic study for the proposed master plan. It is included in its entirety in Appendix D. In addition to vehicle analyses, the traffic study identifies opportunities to balance pedestrian safety and connectivity with vehicle mobility. Also, this traffic study was coordinated with the traffic study being prepared for the County’s Līhu‘e Town Core Urban Design Plan in order to ensure consistency between the two projects.

Figure 38 shows a close-up view of the Civic Center master plan and the proposed roadway improvements for the adjacent streets based on the recommendations from the traffic study. The following is a brief summary of the proposed roadway improvements.

Rice Street

Within the Civic Center, Rice Street is lined with historic buildings and is envisioned as the “main street” of Līhu‘e. However, the street was recently widened to four lanes and many community members feel that

although traffic flows have improved, it has become dangerous particularly for pedestrians.

One of the main improvements proposed in the master plan is to bring back the popular crosswalk at Kele and Rice Streets. The existing County driveway will be realigned with Kele Street and crosswalks will be provided in all four directions. The intersection will also be signalized to make crossing at this intersection safer.

Figure 45: Rendering of the Proposed Realigned Intersection at Rice and Kele Streets



Although the traffic volumes forecasted for Rice Street do not allow it to be narrowed back to a two-lane road with center turn lane, a three-foot landscaped center median is recommended to break up the roadway and provide a pedestrian refuge. The median should extend from Kūhiō Highway to the Kauaʻi Museum. Although the street section along Rice Street varies, wide sidewalks (minimum five feet) and street trees in either tree wells or landscape strips should be provided wherever possible. The recessed parallel parking stalls in front of the Post Office and First Hawaiian Bank will be maintained since the street section in this area is wide enough to accommodate them. Bicycles will continue to share the road since there is not enough space to include separate striped bike lanes

within the right-of-way. However, if more visual emphasis is desired, the outermost lanes should be painted a different color or marked to indicate that they are shared lanes. Figure 46 shows what Rice Street with the median could look like.

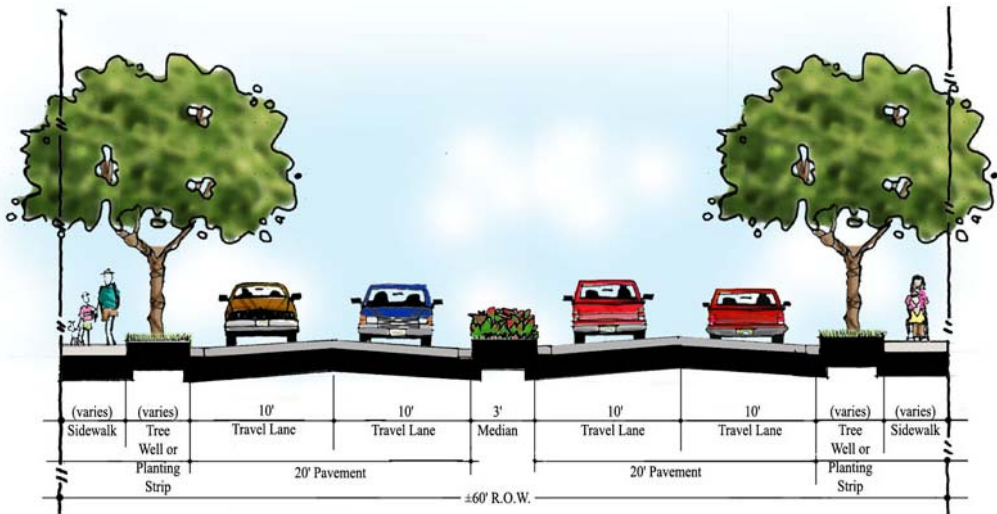


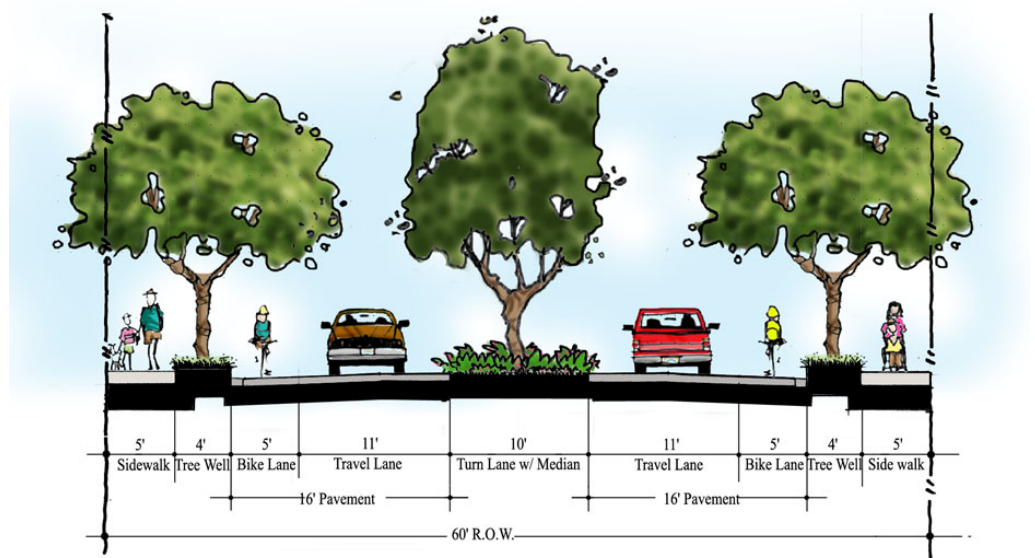
Figure 46: Rice Street Section

The existing traffic signals at the intersection of Rice Street and Kūhiō Highway can be adjusted to accommodate forecasted traffic growth. Once Kaumuali'i Highway is widened to four lanes south of Rice Street, two left turn lanes from Rice Street should be built.

Figure 47: Hardy Street Section

Hardy Street

Hardy Street is proposed as a two-lane roadway with a landscaped center median and turn lanes. Bike lanes will be stripped on both sides of the street. Figure 47 shows the proposed road section for Hardy Street.



The intersection of Hardy Street and Kūhiō Highway should be signalized. Existing traffic levels already warrant signalization of this intersection. Signalization will assist left turns from both Hardy and Kūhiō and will help manage future traffic projected for this intersection.

A new four-way intersection will be created at Hardy and 'Akahi Streets and the relocated County driveway. Traffic signals will be installed when increases in traffic levels make turning movements difficult. Left turn queuing lanes on Hardy Street should be provided in the design regardless of when signalization occurs to allow through traffic to pass by cars waiting to make left turns from Hardy Street. Breaks in the median are provided at every driveway on Hardy Street to allow access to neighboring businesses.

At the intersection of Hardy and 'Umi Streets, a roundabout is recommended due to the unusual geometry of the intersection and the difficulty of signalizing the intersection. Traffic signals would require split phasing, which would reduce the green time for Hardy Street through traffic. A four-way stop would not be adequate to handle the increased traffic volumes. Also, it would be less expensive to install the roundabout than traffic signals and there is adequate space to install the roundabout without condemning land from adjacent properties. Crosswalks are setback from the vehicle entry and exit points to provide

drivers with a clear view of pedestrians. Splitter islands near the roundabout will help shelter pedestrians crossing the street.

The roundabout's center island provides a unique opportunity to make an entry statement for the Civic Center. A sculpture, water feature, entry signage, and/or colorful landscaping should be installed in the center island. Regardless of what is chosen, the center island should not be left open since drivers can become confused when looking at cars on the opposite side of the roundabout. Public education about roundabouts and how to use them should be implemented prior to the opening of the roundabout. The City & County of Honolulu and the State of Oregon have examples of driver education programs and informational pamphlets on their websites (<http://www.co.honolulu.hi.us/dts/roundabout/index1.htm> and <http://www.odot.state.or.us/techserv/engineer/pdu/Roundabouts/Rn dbtindex.htm>).

'Umi Street

Traffic forecasted for 'Umi Street is expected to increase but remain low enough to maintain it as a two-lane roadway. On-street parallel parking is provided to supplement parking needs for the Civic Center. Bike lanes

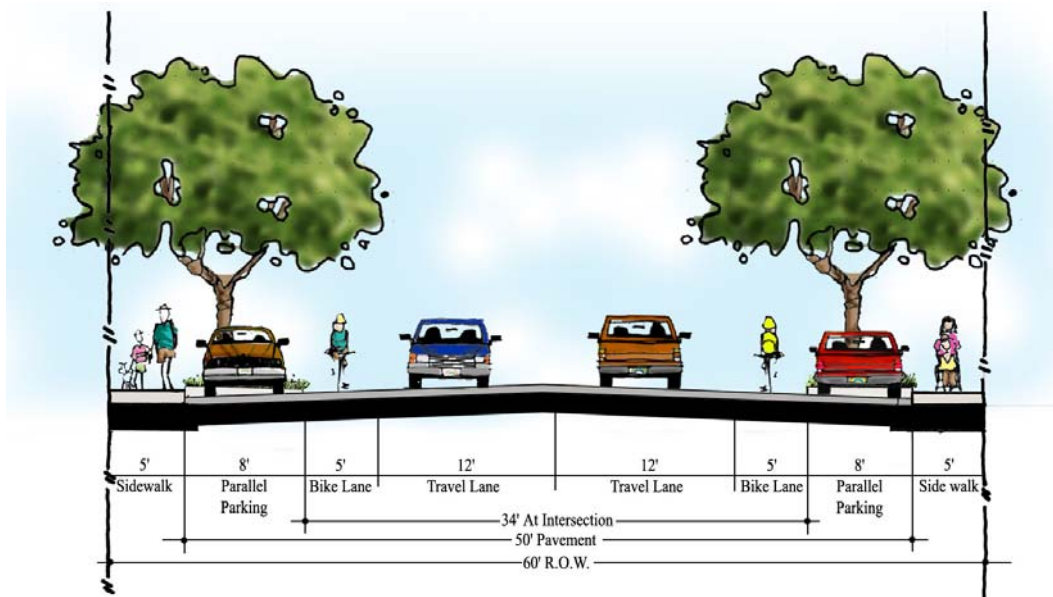
will also be provided. The proposed right-of-way section for 'Umi Street is shown in Figure 48.

Figure 48: 'Umi Street Section

'Eiwa Street

In order to achieve a more campus-like environment, 'Eiwa Street will be closed. Although

some citizens voiced their concern about losing it as a shortcut between Hardy and Rice Street, other citizens voiced their support for its closure. The proposed improvements to the other roadways should make turning movements at the remaining intersections easier and safer. The removal of 'Eiwa Street also eliminates the offset intersections of 'Akahi/Hardy/'Eiwa Streets and Rice/Wa'a/'Eiwa Streets. Access to Big



Save's loading area will be maintained via a service road which will be paved to look like a pedestrian path but designed to support the weight of the delivery trucks. Removable bollards should be provided along Rice Street so that the service road is not used by cut-through traffic. The service road will be designed to accommodate the wide turning movements of their delivery trucks, including a forty-foot container truck.

Bicycle Facilities

To support alternative modes of transportation to, from, and within the Civic Center, bicycle facilities will be provided throughout the Civic Center. Bicycle lanes will be striped on Hardy and 'Umi Streets. On Rice Street and Kūhiō Highway, bicycles will continue to share the road since there is not enough space to include separate striped bike lanes within the



right-of-way. If more visual emphasis is desired, the outermost lanes should be painted a different color or marked with "sharrows," or shared lane markings, to indicate that they are shared lanes. Several cities around the nation such as Denver, Portland, San Francisco, and Seattle have already implemented them in order to increase awareness about shared bike lanes.

Potential locations for bicycle racks are also identified in the master plan (see Figure 38). They are located at the southwest corner of the Pi'ikoi Building, north of the Pi'ikoi Building adjacent to the building entry, and at the southeast corner of the Historic County Building along the promenade. The County may also want to consider installing bike racks along the public streets where there is adequate sidewalk widths to support neighboring businesses such as in front of First Hawaiian Bank and the Līhu'e Post Office.

Please note that the County Planning Department's Līhu'e Town Core Urban Design Plan will examine the larger bicycle networks throughout Līhu'e Town and will include recommendations to improve the overall bicycle network in coordination with the recommendations of the State's Bike Plan Hawai'i (see Figure 36). The bicycle facilities discussed in this report were developed in conjunction with that project and the above highlights only those elements located within the Civic Center project site.

Transit and Shuttle Service

To support public transit, there will be two bus stops within the Civic Center. The first is the existing stop on Hardy Street which would remain in its current location. The existing shelter would be renovated and a new curb cut provided so the buses can pull out of the traffic lane to make the

stop. Sidewalks and landscaping along Hardy Street will also be installed to improve access and comfort for those using the stop. There will also be pedestrian paths connecting the bus stop directly to the Civic Center through the parking lot. The second transit stop would be a new stop added at the porte-cochere fronting the Pi'ikoi Building on the Rice Street side of the building. These transit stops are both located off-street and conveniently located for current and future transit routes to and from the Civic Center.

To support offsite employee parking and to reduce traffic around the Civic Center generated by short local trips, a free Lihue'e shuttle service between the Civic Center, War Memorial, and the new Judiciary/Police Station complex is recommended. There could also be service to Kukui Grove Shopping Center and Wal-Mart during mid-day to help alleviate lunchtime traffic. The shuttle service must be quick and frequent to be effective and convenient for riders. Shuttle service could be more frequent at the beginning and end of the County's work day as well as at lunchtime when there are more people traveling around the Civic Center. The proposed route for the shuttle service is shown in Figure 49.

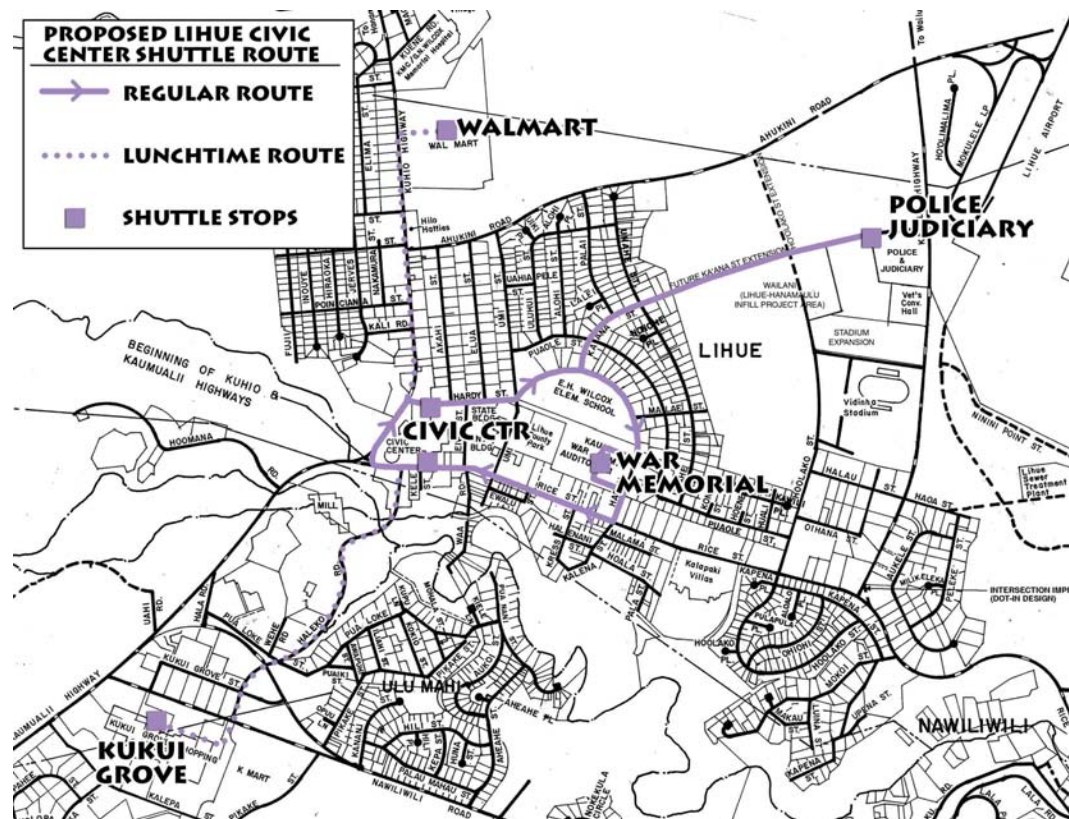


Figure 49: Proposed Lihue'e Civic Center Shuttle Route

The shuttle will run in a clockwise direction and makes only four stops to keep travel times short. Starting from the War Memorial parking lot, it takes Rice Street west and arrives at the Civic Center at the Pi'ikoi porte-cochere. From the Civic Center, the shuttle turns up Kaumuali'i Highway and stops at the Hardy Street bus stop. Next, it heads towards the Police Station/Judiciary on Ka'ana Street and returns to the War Memorial parking lot. This route will provide a quick ride for employees or other Civic Center visitors to and from the War Memorial parking lot and Police Station/Judiciary complex at the beginning and end of the work day. During lunchtime, the shuttle route could include stops at Wal-Mart and Kukui Grove Shopping Center to ease mid-day traffic.

If there is sufficient demand, special shuttles could also be established to help students travel to after-school practices and events in and around the Līhu'e area.

LANDSCAPING

The landscaping for the Civic Center will include native plants and trees, particularly those symbolic of Kaua'i or historically significant to Līhu'e. The proposed master plan recommends replacing the fallen or missing royal palms and preserving all the large monkey pod trees in the County Lawn. Also, canopy trees will be planted along pedestrian promenades and in parking areas to provide shade and comfort.

Royal Palms at the County Lawn

The double rows of Royal Palms in front of the Historic County Building are missing several trees due to wind damage and age. The master plan recommends replacing the missing trees and checking the health of the remaining trees to see if any need to be replanted as well. The trees are estimated to have been there since the mid-1910s and are a significant part of the historic County Lawn.

Pedestrian Promenades

Pedestrian promenades should be accented with colorful, shady canopy trees. Trees should be planted as an allee with native plants or shrubs planted below the trees as hedges. Trees should be planted with adequate spacing from the promenade since the roots may lift paving around the trunk base.

Street Trees

Street trees should be consistent along both sides of the roadway and trees planted in the medians should be more vertical and upright to open up distant views. Street trees along commercial areas should be trimmed so their lowest branches are roughly fifteen feet high to avoid blocking storefronts and signs and to clear tall vehicles such as fire engines and utility/delivery trucks.

Native Plants and Symbolic Trees of Līhu'e and Kaua'i

Native plants and trees symbolic of Kaua'i or historically significant to Līhu'e should be selected for the Civic Center landscaping. There are several native shrubs that are beautiful and relatively easy to maintain. Several varieties of hibiscus are native to Kaua'i including the orange and yellow St. John's or koki'o 'ula 'ula (*Hibiscus kokio*), a pink hibiscus (*Hibiscus kahili*) and two white hibiscuses koki'o kea (*Hibiscus waimeae*) and Koki'o ke'oke'o immaculatus (*Hibiscus arnottianus* spp. *immaculatus*). Other native shrubs include 'ākia (*Wikstroemia uva-ursi*) which is native to Kaua'i, 'a'ali'i (*Dodonaea viscosa*), and alahe'e (*Psydrax odorata*).



Figure 50: Two Historic Photos of the Kamani Tree near the Old Līhu'e Store

Examples of large canopy shade trees that have significance for the Civic Center area are the kamani (*Calophyllum inophyllum*), and the monkey pod (*Samanea saman*).



Kamani trees are native broad-leaf trees with dense canopies. There was a famous kamani tree at the corner of Rice Street and Halekō Road in front of the old Līhu'e Store. Although not appropriate for street trees or parking lots due to the large seeds that fall twice a year, kamani trees

could be planted in park areas as specimen trees or in larger landscape buffers along the streets.

Although not a native of Hawai'i, the monkey pod is a local favorite with its large, spreading canopy. There are several large monkey pod trees planted at the County Lawn and in parking lots on neighboring properties such as the Līhu'e Post Office, Bank of Hawai'i (Figure 51), Līhu'e Plantation Building, Halekō Shops, and First Hawaiian Bank on Rice Street and the Līhu'e Town Center Annex north of Hardy Street. The trees could be planted in parking lots, but ample planters (minimum of eight to ten feet square) should be provided since their roots are shallow and can lift pavement.

Figure 51: Monkey Pod Tree in the Bank of Hawai'i Parking Lot



Nāwiliwili, the area just south of the Civic Center, was famous for its groves of wiliwili trees (*Erythrina sandwicensis*), and was named for this native tree. The full name of the ahupua'a was Nāwiliwili-paka-āwili-lau-ili-lua, or "the wiliwili trees upon which raindrops fall, twisting the leaves so the rain touches both sides" (Wichman 1998:59). It is a large canopy tree with bright red, orange, or green flowers. Unfortunately, due to the alien *Erythrina* gall wasp infestation which has decimated Wiliwili trees statewide, they are not recommended until the gall wasp can be controlled. However, should a solution to the gall wasp be found, wiliwili should be considered.

Other trees that are native to Kaua'i and should be considered include the koai'a (*Acacia koa*), lonomea or aulu (*Sapindus oahuensis*), koa (*Acacia koa*), ho'awa (*Pittosporum kauaiensis* or *napaliensis*), alahe'e (*Psydrax odorata*), papala kepau (*Pisonia* spp.), 'ōhi'a (*Metrosideros polymorpha*), 'ohai (*Sesbania tomentosa*), and the native fan palm, loulu (*Pritchardia minor* and *P. napaliensis*).

Potential Partnership with NTBG

Many of the natives recommended above were provided by the National Tropical Botanical Garden (NTBG) which is headquartered in Kalāheo on

Kaua'i. Initial discussions were held with the Director, Chipper Wichman, and Assistant Director of Living Collections and Horticulture, Michael DeMotta, about a potential partnership with the County to plant more native plants within the Civic Center. Ideas for the potential partnerships between NTBG and the County included an educational garden or displays around the Civic Center that would showcase native plants, development of a nursery to supply the native plants, and ongoing maintenance and horticultural support to ensure the health and proper care of the native plants. Initial feedback from the County Planning Department and Public Works were positive. However, additional feedback and coordination should be sought with County Parks and DPW-Roads.

SUSTAINABLE DESIGN ELEMENTS

Throughout the development of the master plan, several sustainable design concepts were discussed and should be considered during the detailed design and construction of the master plan.

Irrigation Water

With the increase in proposed landscaping, water consumption at the Civic Center is expected to increase. The County is investigating the possibility of using non-potable or non-drinking water for irrigation. There are two possible alternatives: installation of a rainwater catchment system or connection to nearby non-potable water resources. For the catchment system, rainwater could be collected through gutters on the County buildings and runoff from parking surfaces could be filtered and collected in a storage cistern. The collected water would then be pumped from the cistern to serve the irrigation system. For the non-potable water resources, the County could consider purchasing non-potable water from Grove Farm. Grove Farm currently supplies non-potable water to the State DOT's irrigation system along Ahukini Road and Kapule Highway. If the County is able to use non-potable water for irrigation, then the use of potable water for irrigation could be reduced or potentially avoided if there is enough non-potable supply. If the catchment system is used, other sources of water, either potable or non-potable, may still be needed to supplement the system when there is insufficient rainfall. However, these non-potable alternatives would minimize or eliminate the impact on potable water sources. The County will continue to investigate these alternatives during the engineering and detailed design stages of the project.

Drainage

The proposed plan increases the amount of open space and the amount of pervious surfaces by nearly 2.4 acres. This will decrease the amount of stormwater runoff generated at the site and should therefore reduce the impact to existing drainage systems. If rooftop and parking lot catchment systems are installed, this will further reduce the amount of runoff generated at the site. If runoff from parking areas is not collected as part of the irrigation system, the parking areas could also be designed to drain towards landscaped areas or bioswales with breaks provided in any curbs to help reduce the amount of runoff. These landscaped areas could act as detention areas which capture runoff and reduce the need for irrigation.

Figure 52: Example of Landscaped Bioswale, Seattle, WA



The proposed parking lot surfaces themselves could also be designed with permeable surfaces to increase percolation rather than allowing rainwater to sheet flow and cause potential problems downstream such as pollution and erosion. There are several porous materials that are proven to reduce runoff such as porous asphalt pavements, porous concrete and pavers. If catchment basins are not designed as part of the parking lot, the base of the parking lots could be designed as recharge beds which temporarily collect rainwater either through porous pavements or through inlets and allows water to eventually percolate to the subgrade. This is typically done with a thicker layer of gravel which acts like a subsurface detention basin. A flyer from the National Asphalt Pavement Association is attached as Appendix H to help illustrate this design concept.

Alternative Fuel Vehicles

In order to reduce the County's dependency on petroleum-based fuels and to reduce emissions, alternative fuel vehicles should be considered for the proposed Līhu'e Shuttle and all County vehicles. A variety of alternative fuel vehicles are widely available. Furthermore, biodiesel, ethanol, hybrid, natural gas, and electric vehicles have all been widely implemented by various municipalities around the country. In a 2006 Sustainline Government survey of the fifty largest cities in the US,

Honolulu ranked second with 51 percent of its vehicles using alternative fuels.⁵

Renewable Energy

With the cost of electricity on Kaua'i one of the highest in the nation, renewable energy resources should also be considered at the Civic Center. For example, photovoltaic (PV) solar electric panels could be used as shade structures in the parking lots or along pedestrian walkways or installed on County building rooftops. The PV system could also be used to charge electric vehicles.

Underground Utility Lines

All overhead utilities should be relocated underground within the Līhu'e Civic Center and town core. Besides their visual impact, there are safety concerns during high wind events such as hurricanes and tropical storms that can topple the overhead lines and cut power and communication at the County and State facilities. Placing them underground will also eliminate the large support poles from the sidewalks, clearing a wider path for pedestrians and ADA accessibility. There is substantial cost to placing the lines underground; Rider Hunt estimates it would cost \$350 per linear foot to relocate the overhead lines underground. However, these improvements could be done at the same time as roadway improvements to reduce the trenching and paving costs.

SIGNAGE

A variety of signs should be installed at the Civic Center to help visitors navigate around the facilities as well as to inform them of the rich history that surrounds them. The directory and map located between the Pi'ikoi and Mo'ikeha Buildings need to be updated and improved so they are oriented properly to be legible during the day. A duplicate directory should be installed on the north side of the buildings. Another directory could be located near the Historic County Building or Annex.

Informational signs or plaques that tell the stories about the historic buildings and the other significant features around the Civic Center should be installed. There should be a standard format for these signs to help unify them and make them easily identifiable. They also could be numbered and made part of a walking tour for the Civic Center which

⁵ http://www.sustainlane.us/articles/Top_Ten_Alternative_Fueled_City_Fleets.jsp

could later be expanded to include all of Līhu‘e in conjunction with the Urban Design Plan. As an example, the Po‘ipū Beach Resort Association has put together a walking tour for the Kōloa Heritage Trail that can be accessed at their website: <http://www.koloaheritagetrail.info>.

OUTDOOR LIGHTING

Because Newell’s shearwaters are known to fly over the area and can be distracted by outdoor lighting, the proposed improvements will minimize potential impacts to these birds by requiring that all outdoor lighting be shielded and pointed downwards. Lighting fixtures approved by the International Dark-Sky Association (IDA) is recommended and can be found at their website: www.darksky.org/lighting/.

The following guidelines should be followed in selecting and designing any outdoor lighting:

- All outdoor lights including parking lot lights, landscaping, security, path and deck lights should be fully shielded, full-cutoff luminaries.
- Complete avoidance of all outdoor up-lighting for any purpose.
- Avoidance of tree-mounted lights unless they are fully shielded and pointing down towards the ground. Ensure compliance maintained over time.
- Complete avoidance of up-lighting and unshielded lighting in water features such as fountains and ponds.

OTHER SPECIAL DESIGN FEATURES

The expanded County Lawn area could also be designed to support community events such as the parades and farmers market by installing electrical, water and sewer hookups at key locations. At Belmar, Colorado, street lights with electrical outlets and telephone jacks (for credit card machines) were installed to aid hosting of street festivals. The streets were also designed with removable bollards so they could be closed to vehicles for such events. The service road and the wide pedestrian paths planned for the expanded County Lawn should be designed to support removable bollards so that they can be used for vehicle access when needed and blocked when not needed.

Figure 53: Electrical Outlets Integrated into Street Lights and Removable Bollards at Belmar, CO

