Poʻipū Road
A Vision for the Corridor
Training & Community Design Workshop
Kauaʻi, HI
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I. Poipu Community Design Workshop

What is a Community Design Workshop?
Meet the Team
Meet the Team
Design Team
Focus Group Meetings

Po‘ipū Road
A Vision for the Corridor

Po‘ipū Beach Resort Association
Focus Group Meetings

Poʻipū Road
A Vision for the Corridor

Kōloa School & Community Association
Focus Group Meetings
Focus Group Meetings

Po‘ipū Road
A Vision for the Corridor
Walking Audit

Po‘ipū Road
A Vision for the Corridor

Po‘ipū Shopping Center towards Hyatt
Identifying Values
Po‘ipū Road
A Vision for the Corridor

Identifying Values

Family & Friends
Place
Community
Rural
Beauty
Ocean
Weather
Climate
Transportation
Active
Walking
Bicycling
Safety
Aloha

small
Opening Workshop

Po‘ipū Road
A Vision for the Corridor
Identifying Priorities

Po‘ipū Road
A Vision for the Corridor

1. PE‘E Roadway: Noise, Speed, PKG Reduction
2. Entire Poipu Road — Bike/Walk Paths
3. Lateral Beach Access
4. Pedestrians X-ing A Poipu Shopping Ctr.
5. Safety Concerns
7. Protection of Hapa Trail
8. Existing Roundabout Design Concerns for Pedestrians
9. Improve Existing Design for Pedestrians
10. Opposite Employee Parking (Mauka)
11. Explore Cane Haul Rd. for E-W Access
12. Bus Stop Shelters Needed
13. Roundabout Kiahuna Plantation Drive & Poipu Rd.
14. Roundabout @ Pe‘e & Poipu Rd.
15. 25 MPH — (lower speed)
16. More Connectivity along Poipu Road
17. Look at additional Roundabouts along Poipu Road
Top Priorities

• BUILD Additional Roundabouts along Poʻipū Road
  • Roundabout at Pee & Poʻipū Road
  • Roundabout at Kiahuna Plantation Drive & Poʻipū Road

• COMPLETE Walk/Bike Paths along Both Sides of Poipu Road

• ENHANCE Bus Stop Shelters

• Manage Parking along Poʻipū Road

• ADDRESS, IMPROVE, & ENHANCE Pedestrian Crossings

• PROTECT Hapa Trail

• IMPROVE Connectivity
Community Design Workshop

Poʻipū Road
A Vision for the Corridor
Map of Poʻipū

Poʻipū Road
A Vision for the Corridor
II. Overarching Improvements

1. ADDRESS Design, Posted & Target Speed
2. NARROW Travel Lanes
3. BUILD Additional Roundabouts
4. ADD Medians
5. ENHANCE Mid-block Crossings
6. COMPLETE Pedestrian & Bicycle Paths & Systems
7. ADDRESS Parking
8. IMPROVE Connectivity
Vehicle Speeds are Too Fast

Existing Condition

Principle

Solution

① ADDRESS Design, Posted & Target Speed

Wide travel lanes, lack of buffer or street edge, median, and long sight distances encourage motorists to travel faster than the posted speed limit.
1 ADDRESS Design, Posted & Target Speed

- Hit by a vehicle traveling at SPEED LIMIT 20
  - 8.5 out of 10 pedestrians survive

- Hit by a vehicle traveling at SPEED LIMIT 30
  - 5.5 out of 10 pedestrians survive

- Hit by a vehicle traveling at SPEED LIMIT 40
  - 1.5 out of 10 pedestrians survive
① ADDRESS Design, Posted & Target Speed

Conventional Design

Designing for Desired Operating Speed
The design of this roadway is consistent with the target speed desired. Note the treatments utilized:

- Sight distance
- Street trees
- Lane Widths
- Access density
- Median
- On-street Parking
ADDRESS Design, Posted & Target Speed

Example: Nord Avenue, Chico, CA
① **ADDRESS** Design, Posted & Target Speed

Example: Nord Avenue, Chico, CA
ADDRESS  Design, Posted & Target Speed

Example: Nord Avenue, Chico, CA
ADDRESS Design, Posted & Target Speed

Example: Nord Avenue, Chico, CA
① ADDRESS Design, Posted & Target Speed

Example: Nord Avenue, Chico, CA
Poʻipū Road
A Vision for the Corridor

Existing Condition  Principle  Solution

① ADDRESS  Design, Posted & Target Speed

Example: Nord Avenue, Chico, CA
Poʻipū Road
A Vision for the Corridor

Existing Condition

Principle

Solution

Envision
Existing Condition

Principle

Solution
Existing Condition

Po‘ipū Road
A Vision for the Corridor

Principle

Solution

Envision
Po‘ipū Road
A Vision for the Corridor

Existing Condition

Principle

Solution

Envision
Po‘ipū Road
A Vision for the Corridor

Existing Condition

Principle

Solution

Envision
2 NARROW Travel Lanes

Travel Lanes are Wide
**Existing Condition**

**Principle**

**Solution**

② **NARROW Travel Lanes**

Travel lanes are reduced to 10 feet with the addition of bold edge stripes.

Bold edge stripes (10-12 inches) help slow traffic and create a buffer to the sidewalk.
Existing Condition  Principle  Solution

2 NARROW Travel Lanes

Use Bold Edge Stripes
Existing Condition

Principle

NARROW Travel Lanes

Solution

Use Bold Edge Stripes
Complex Intersection at Poʻipū Road & Kōloa Road

**BUILD Additional Roundabouts**

- Existing Condition:
  - Wide and overly fast right-turn radii.
  - Marked crossing missing.

- Principle:

- Solution:
Missing Pedestrian Crossings at the Roundabout on Poʻipū Road

Pedestrians were left out of the design of this roundabout. Complete the roundabout by adding pedestrian crossings one vehicle length back from the roundabout.
The long, straight sight distances encourage high vehicle speeds, which is especially dangerous at this intersection as many vehicles are turning into the shopping center and many pedestrians are crossing from the resort side to the shopping center.
Overly wide turning radii and the overly wide side street does not support or create a welcoming environment for people walking.

Complex Intersection at Po‘ipū Road & Koa Kea Hotel
Many accidents have been reported at this intersection due to its complexity—many turning movements, poor sight lines, and lack of pedestrian and bicycle infrastructure.
### BUILD Additional Roundabouts

- **Existing Condition**
  - Conflicts at a single-lane, modern roundabout
    - 8 vehicle-to-vehicle conflicts
    - 8 vehicle-to-person conflicts

- **Principle**
  - Conflicts at a conventional intersection with single lanes in each direction
    - 32 vehicle-to-vehicle conflicts
    - 24 vehicle-to-person conflicts

- **Solution**
  - Conflicts at a double-lane, modern roundabout
    - 24 vehicle-to-vehicle conflicts
    - 16 vehicle-to-person conflicts

  - Conflicts at a conventional intersection with double-lanes and left-turn lane in each direction
    - 46 vehicle-to-vehicle conflicts
    - 28 vehicle-to-person conflicts
3 BUILD Additional Roundabouts

Studies show that roundabouts provide:

- 90% reduction in fatal crashes
- 75% reduction in injury crashes
- 30-40% reduction in pedestrian crashes
- 10% reduction in bicycle crashes

Increased capacity & reduced delay:

- 30-50% increase in traffic capacity
- Because drivers can take advantage of any gaps in traffic flow, there is less overall delay

Vehicle speeds (under 25mph):

- Drivers have more time to judge and react to other vehicles and pedestrians
- Conditions are easier for older and novice drivers
- Businesses have more exposure
- There is a reduction in the severity of accidents if they do occur
- All modes are safer and integrate better
- A gateway is formed which establishes place and provides traffic calming benefits

Environmental benefits:

- There is a reduction in pollution and fuel use
- There is less noise due to fewer stops and starts

Aesthetics:

- Roundabouts improve the visual quality and character through landscaping, sculptures and other gateway features that celebrate place
### Po‘ipū Road

**A Vision for the Corridor**

#### Existing Condition

<table>
<thead>
<tr>
<th>Principle</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BUILD</strong></td>
<td>Additional Roundabouts</td>
</tr>
</tbody>
</table>

③ **Can handle 25,000 vehicles per day**
Poʻipū Road
A Vision for the Corridor

Existing Condition  Principle  Solution

③ BUILD Additional Roundabouts

Best Practice: Bradenton Beach, FL
Poʻipū Road
A Vision for the Corridor

Existing Condition
Principle
Solution

③ BUILD Additional Roundabouts

Best Practice: University Place, WA
Po‘ipū Road
A Vision for the Corridor

Existing Condition

Principle

Solution

③ BUILD Additional Roundabouts

Best Practice: Maui, HI
③ BUILD Additional Roundabouts
<table>
<thead>
<tr>
<th>Existing Condition</th>
<th>Principle</th>
<th>Solution</th>
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<tr>
<td>Po‘ipū Road</td>
<td>BUILD Additional Roundabouts</td>
<td>Crossings at Roundabouts</td>
</tr>
</tbody>
</table>
3 BUILD Additional Roundabouts

Poʻipū Road
A Vision for the Corridor

Existing Condition

Principle

Solution

Crossings at Roundabouts
③ BUILD Additional Roundabouts

Vision for a Roundabout at the Intersection of Po‘ipū Road & Ala Kinoikii
ADD Medians

Lack of vertical height, wide roadway, sight distance, and sense of enclosure all contribute to higher vehicle speeds.
4. ADD Medians

Landscaped Medians
Poʻipū Road
A Vision for the Corridor

Existing Condition

Principle

Solution

④ ADD Medians

Short Medians
Poʻipū Road
A Vision for the Corridor

Existing Condition

Principle

Solution

4 ADD Medians

Create Landscaped Medians
ADD Medians

Tree-lined Median
Poʻipū Road
A Vision for the Corridor

Existing Condition

Principle

IMPROVE Crossings

Solution

63

Need for Midblock Crossing
IMPROVE Crossings

Existing Condition: Enhanced Crossing Needed

Principle

Solution
5. **IMPROVE Crossings**

**Existing Condition**

- Low Visibility

**Principle**

**Solution**

- High Visibility

Crosswalk Marking Types
Existing Condition | Principle | Solution
--- | --- | ---

**⑤ IMPROVE Crossings**

Best Practice: El Cajon, CA
Po‘ipū Road
A Vision for the Corridor

Existing Condition

Principle

Solution

⑤ IMPROVE Crossings

Rectangular Rapid Flash Beacons (RRFB)
Poʻipū Road
A Vision for the Corridor

Existing Condition | Principle | Solution

5. **IMPROVE Crossings**

Pedestrian Crossings Island
5 IMPROVE Crossings

Best Practice: Golden, CO
Po‘ipū Road
A Vision for the Corridor

Existing Condition

Principle

Solution

5  IMPROVE Crossings
IMPROVE Crossings

Enhanced Midblock Crossing in Honolulu, HI
Create a Midblock Crossing at the Intersection of Poʻipū Rd & Kipuka Rd
The road does not currently support all ages and abilities of bicyclists due to bicycle lanes and markings missing.

Missing sidewalk or multi-use path. Evidence that people are trying to walk/bike here.
6 COMPLETE Pedestrian & Bicycle Paths & Systems

Existing Condition

- Not ADA accessible or compliant.

- Strong model section of marked crossing and bike lanes along Po‘ipū. There is opportunity to enhance the model through colorized bike lanes.

Solution

- Missing sidewalk and pavement needs to be maintained to provide safe and accessible passage for pedestrians.
Po‘ipū Road
A Vision for the Corridor

Existing Condition

Principle

Solution

6 COMPLETE Pedestrian & Bicycle Paths & Systems
A Complete Street is a street designed for safe, comfortable and convenient travel for all users, whether they choose to travel by car, bicycle, public transportation, or on foot.

**Trees:**
Tall trees of a species appropriate for the area are spaced 15 to 25 feet apart. The vertical wall helps calm traffic and encourages lower vehicle speeds.

**Buffer:**
If the buffer includes trees, they should be set back from the curb at least four feet and the total buffer should be at least six feet.

**Bike lane:**
To function well, bike lanes should be at least six feet wide.

**Wide stripes:**
Mark bike lanes with thermoplastic stripes eight to twelve inches wide.

**Median widths:**
Medians typically are six to eight feet wide, but can vary to allow for landscaping, maintenance and adequate "refuge" for pedestrians crossing.

**Vehicle lanes:**
Lane width analysis indicates that narrower lanes are associated with lower crash frequencies. Ten foot travel lanes reinforce a 25-35 mph design speed.
COMPLETE Pedestrian & Bicycle Paths & Systems

Create Colorized Bike Lanes and Sidewalks along Po‘ipū Road from Kōloa Town to the Roundabout
6 COMPLETE Pedestrian & Bicycle Paths & Systems
COMPLETE Pedestrian & Bicycle Paths & Systems
6 COMPLETE Pedestrian & Bicycle Paths & Systems

Paint Colorized Bike Lanes
Poʻipū Road
A Vision for the Corridor

Existing Condition

Principle

Solution

6 COMPLETE Pedestrian & Bicycle Paths & Systems

Paint Colorized Bike Lanes & Pave Pedestrian Path
Existing Condition: Pedestrian & Bicycle Paths & Systems

Principle: COMPLETE

Solution: Pedestrian & Bicycle Paths & Systems

Poʻipū Road
A Vision for the Corridor

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6 COMPLETE Pedestrian & Bicycle Paths & Systems
6. **COMPLETE** Pedestrian & Bicycle Paths & Systems
 ADDRESS Parking

Existing Condition

Principle

Solution

Poʻipū Road
A Vision for the Corridor
7 ADDRESS Parking
ADDRESS  Parking

Poʻipū Road
A Vision for the Corridor
Po‘ipū Road
A Vision for the Corridor

7 ADDRESS Parking

On-Street Parking with Tree Wells
On-street Parallel Parking on one side of Poʻipū Road near Kōloa Town
Po‘ipū Road
A Vision for the Corridor

Existing Condition  Principle  Solution

⑦ ADDRESS Parking

Po‘ipu Road at Mortuary
Improving Connectivity

Existing Condition

Wide travel lanes, lack of buffer or street edge, median, and long sight distances encourage vehicles to travel faster than the posted speed limit.

Solution

Opportunity to Convert Closed Road to a Ped/Bike Path
⑧ IMPROVE Connectivity

Wide travel lanes, lack of buffer or street edge, median, and long sight distances encourage vehicles to travel faster than the posted speed limit.

Opportunity to Convert Closed Road to a Ped/Bike Path
Poʻipū Road
A Vision for the Corridor

Existing Condition

Principle

Solution

⑧ IMPROVE Connectivity

Best Practice: Multi-Use Path Humboldt County, CA
⑧ IMPROVE Connectivity

Best Practice: Multi-Use Path Humboldt County, CA
Po‘ipū Road
A Vision for the Corridor

Existing Condition
Principle
Solution

⑧ IMPROVE Connectivity
8 IMPROVE Connectivity

Po‘ipū Road
A Vision for the Corridor
Poʻipū Road
A Vision for the Corridor

Existing Condition
Principle
Solution

⑧ IMPROVE Connectivity
III. Next Steps

In progress:

- Complete striping of Po‘ipū Road at the Kōloa School and the Po‘ipū/Waikomo Road intersection, plans are to extend the bike lane and pedestrian walkway as far as possible.

- Po‘ipū Road “no parking” resolutions at Kiahuna Plantation Drive, Koa Kea entrance, and Keleka Road are in process of being presented at the County Council to be approved.
III. Next Steps

**Short term (within 1 year):**

- Complete striping of Waikomo Road pedestrian walkway.
- Apply for Safe Routes to School grants for sidewalk improvements in Koloa Town
- Revise directional signage at Kōloa Rd./Poʻipū Rd. intersection
- Striping revisions where feasible
- Develop request-for-proposal for design/engineering of Poʻipū Rd. corridor
- Bus shelter – 1 to start
III. Next Steps

**Mid-term to Long-term:**

- Consultants to complete PS&E – Plans, Specifications and Estimates, which includes the NEPA - environmental needs for Hawaii Dept. of Transportation check list to get project approved on the Statewide Transportation Improvement Program (STIP) for funding.

- Program the Construction on the STIP

- Detail plan for on-going maintenance

- Bus shelters will be installed as funding is available.
IV. Acknowledgements

We would like to extend a special Mahalo to all who participated in the Po‘ipū Community Design Workshop. The commitment demonstrated by the individuals and organizations is evidence that improving the walkability and livability of the community through a better built environment is a priority.

County of Kaua‘i Department of Public Works & Department of Planning
Get Fit Kauai
Kaua‘i’s Built Environment Task Force
Kōloa Fire Station Team
Po‘ipū Beach Resort Association
Kōloa School and Community Association
Hawaiian Cultural Group
Landowners
Property Owners
Po‘ipū and Kōloa Residents
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