

KPACP Roadway Project Costs

20% of CST 25% of CST 20% of CST

Project	Type	Roadway	From	To	Feet	Miles	Lookup Code	Cost Basis	DES	ROW	CST	O&M	Actual Total	Rounded Total	Project Type	Funding Source
R0	Road Connection	Western Bypass	Po'ipu Rd.	Koloa Rd.	9,076	1.72	L	Custom					\$12,500,000		W. Bypass	Funded
R1	Road Connection	Northerly Leg of the Western Bypass (federal)	Maluhia Rd.	Koloa Rd.	2,108	0.40	B	High	\$593,048	\$741,310	\$2,965,239	\$593,048	\$3,914,115	\$3,914,100	NEOTWB	Federal Funding
R1a	Road Connection	Northerly Leg of the Western Bypass (local)	Maluhia Rd.	Koloa Rd.	2,108	0.40	B	Custom					\$978,529	\$978,500	Regional - Development	Impact Fees or Other Local
R2	Koloa Town Projects (temp)	Koloa Town Projects						Custom					\$100,000	\$100,000	Koloa Town Projects	Private Sector
R2a	Koloa Town Projects (perm)	Koloa Town Projects						Custom					\$500,000	\$500,000	Regional - Development	Impact Fees
R2b	Intersection Enhance.	Waikomo Road and Po'ipu Road					E	Average	\$50,000	\$62,500	\$250,000	\$50,000	\$412,500	\$412,500	Regional - Development	Impact Fees
R3	Road Connection	East-West Connection (Pa'anau)	Po'ipu Rd.	Western Bypass	941	0.13	A	Low	\$67,509	\$84,386	\$337,544	\$67,509	\$556,948	\$556,950	Regional - Development	Impact Fees
R4	Road Connection	East-West Connection (Lopaka Paipa)	Po'ipu Rd.	Western Bypass	941	0.15	A	Low	\$77,895	\$97,368	\$389,474	\$77,895	\$642,632	\$642,630	Regional - Development	Impact Fees
R5	Road Connection	Cane Haul Rd.	Eastern Bypass	Po'ipu Rd.	5,550	1.05	A	High	\$1,008,000	\$1,260,000	\$5,040,000	\$1,008,000	\$8,316,000	\$8,316,000	Regional - Development	Impact Fees
R6/R7	Road Connection	Mauka East-West Connection	Eastern Bypass	New N/S Connection	967	0.18	A	Average	\$124,182	\$155,228	\$620,910	\$124,182	\$1,024,502	\$1,024,500	Regional - Development	Impact Fees
R8	Road Connection	Makai East-West Connection	Eastern Bypass	New N/S Connection	1,956	0.37	A	Average	\$255,263	\$319,079	\$1,276,315	\$255,263	\$2,105,920	\$2,105,900	Regional - Development	Impact Fees
R11	Road Connection	North-South Connection	Ho'onani Rd.	Po'ipu Rd.	839	0.16	A	Low	\$83,088	\$103,860	\$415,439	\$83,088	\$685,474	\$685,500	Site-Specific	Developer Exaction
R13	Intersection Enhance.	Kiahuna Plantation Dr. and Po'ipu Rd.					E	Average	\$50,000	\$62,500	\$250,000	\$50,000	\$412,500	\$412,500	Site-Specific	Developer Exaction
R14	Roundabout	Lawa'i Rd/Western Bypass/Po'ipu Rd.					E	Average	\$50,000	\$62,500	\$250,000	\$50,000	\$412,500		W. Bypass	Funded
R15	Roundabout	Eastern Bypass/Weliweli Rd./Cane Haul Rd.					E	Average	\$50,000	\$62,500	\$250,000	\$50,000	\$412,500	\$412,500	Regional - Development	Impact Fees
R16a	Intersection Realignment	Eastern Bypass/Maluhia Rd.					F	Average	\$100,000	\$125,000	\$500,000	\$100,000	\$825,000	\$825,000	Regional - Development	Impact Fees
R16b	Roundabout	Eastern Bypass/Maluhia Rd.					E	Average	\$50,000	\$62,500	\$250,000	\$50,000	\$412,500	\$412,500	Regional - Development	Impact Fees
R17	Road Connection	New North-South Connection	Po'ipu Rd.	Cane Haul Connector	6136	1.16	A	Low	\$602,386	\$752,983	\$3,011,932	\$602,386	\$4,969,687	\$4,969,700	Regional - Development	Impact Fees

\$3,161,370 \$3,951,713 \$15,806,852 \$3,161,370 \$26,681,306 \$26,268,780

KPACP Bicycle Project Costs

20% of CST 25% of CST

20% of CST

Project	Type	Roadway	From	To	Feet	Miles	Lookup Code	Cost Basis	DES	ROW	CST	O&M	Total	Rounded Total	Project Type	Funding Source
B1	Multi-Use Path	Lawa'i Rd.	Spouting Horn	Po'ipu Rd.	10,261	1.94	G	Average	\$200,014	\$250,018	\$1,000,070	\$200,014	\$1,650,116	\$1,650,100	Community Livability	Tax Increment Financing
B2	Multi-Use Path	Beachfront	Lawa'i Rd.	Hyatt	15,668	1.78	G	Average	\$183,565	\$229,456	\$917,824	\$183,565	\$1,514,410	\$1,514,400	Community Livability	Tax Increment Financing
B3	Multi-Use Path	North-South Connection	Beachfront	Po'ipu Rd.	1,065	0.20	G	Average	\$20,620	\$25,775	\$103,100	\$20,620	\$170,115	\$170,100	Community Livability	Tax Increment Financing
B4	Multi-Use Path	Proposed Interior Road	Proposed Interior Road	Po'ipu Rd.	395	0.07	G	Average	\$7,217	\$9,021	\$36,085	\$7,217	\$59,540	\$238,200	Site-Specific	Developer Exaction
B4	Multi-Use Path	Proposed Interior Road	Proposed Interior Road	Po'ipu Rd.	718	0.14	G	Average	\$14,434	\$18,043	\$72,170	\$14,434	\$119,081		Site-Specific	Developer Exaction
B4	Multi-Use Path	Pau A Laka St.	Pau A Laka St.	Proposed Interior Rd.	362	0.07	G	Average	\$7,217	\$9,021	\$36,085	\$7,217	\$59,540		Site-Specific	Developer Exaction
B5	Multi-Use Path	Hapa Rd.	Po'ipu Rd.	Weliweli Rd.	9,237	1.75	G	Average	\$180,425	\$225,531	\$902,125	\$180,425	\$1,488,506	\$1,488,500	Community Livability	Tax Increment Financing
B6	Multi-Use Path	Cane Haul Rd.	Eastern Bypass	Po'ipu Rd.	3,751	0.71	G	Average	\$73,201	\$91,501	\$366,005	\$73,201	\$603,908	\$603,900	Community Livability	Tax Increment Financing
B7	Multi-Use Path	Weliweli Rd.	Hapa Rd.	Koloa Rd.	3,393	0.64	G	Average	\$65,984	\$82,480	\$329,920	\$65,984	\$544,368	\$544,400	Community Livability	Tax Increment Financing
B8	Bike Lane	Po'ipu Rd.	Koloa Rd.	Lawa'i Rd.	7,415	1.40	H	Average	\$177,772	\$222,215	\$888,860	\$177,772	\$1,466,619	\$1,466,600	Community Livability	Tax Increment Financing
B9	Bike Lane	Po'ipu Rd.	Lawa'i Rd.	Kiahuna Plantation Dr.	3,101	0.59	H	Average	\$74,918	\$93,648	\$374,591	\$74,918	\$618,075	\$618,100	Community Livability	Tax Increment Financing
B10	Bike Lane	Po'ipu Rd.	Kiahuna Plantation Dr.	Ho'owili Rd.	2,648	0.50	H	Average	\$63,490	\$79,363	\$317,450	\$63,490	\$523,793	\$523,800	Community Livability	Tax Increment Financing
B11	Bike Lane	Ho'owili Rd.	Po'ipu Rd.	Ho'one Rd.	1,194	0.23	H	Average	\$29,205	\$36,507	\$146,027	\$29,205	\$240,945	\$240,900	Community Livability	Tax Increment Financing
B12	Bike Lane	Po'ipu Rd.	Ho'owili Rd.	Eastern Bypass	2,355	0.45	H	Average	\$57,141	\$71,426	\$285,705	\$57,141	\$471,413	\$471,400	Community Livability	Tax Increment Financing
B13	Bike Lane	Eastern Bypass	Po'ipu Rd.	North Weliweli Park	4,076	0.77	H	Average	\$97,775	\$122,218	\$488,873	\$97,775	\$806,640	\$806,600	Community Livability	Tax Increment Financing
B14	Bike Lane	Eastern Bypass	North Weliweli Park	Weliweli Rd.	5,667	1.07	H	Average	\$135,869	\$169,836	\$679,343	\$135,869	\$1,120,916	\$1,120,900	Community Livability	Tax Increment Financing
									\$1,388,847	\$1,736,058	\$6,944,233	\$1,388,847	\$11,457,985	\$11,457,900		

KPACP Pedestrian Project Costs

20% of CST 25% of CST

20% of CST

Project	Type	Roadway	From	To	Feet	Miles	Lookup Code	Cost Basis	DES	ROW	CST	O&M	Total	Rounded Total	Project Type	Funding Source	
P1	Multi-Use Path	Lawa'i Rd.	Spouting Horn	Po'ipu Rd.											Included in Bicycle project costs.		
P2	Multi-Use Path	Beachfront	Lawa'i Rd.	Hyatt													
P3	Multi-Use Path	North-South Connection	Beachfront	Po'ipu Rd.													
P4	Multi-Use Path	Proposed Interior Road	Proposed Interior Road	Po'ipu Rd.													
P4	Multi-Use Path	Proposed Interior Road	Proposed Interior Road	Po'ipu Rd.													
P4	Multi-Use Path	East-West Connection	Pau A Laka St.	Proposed Interior Rd.													
P5	Multi-Use Path	Hapa Rd.	Po'ipu Rd.	Weliweli Rd.													
P6	Multi-Use Path	Cane Haul Rd.	Eastern Bypass	Po'ipu Rd.													
P7	Multi-Use Path	Weliweli Rd.	Hapa Rd.	Koloa Rd.													
P8	Sidewalk	Waikomo Rd.	Po'ipu Rd.	Koloa Rd.		0.57	K	Average	\$41,268	\$51,585	\$206,340	\$41,268	\$340,461	\$340,500	Community Livability	Tax Increment Financing	
P9	Sidewalk	Koloa Rd.	Weliweli Rd.	Po'ipu Rd.	730	0.14	K	Average	\$10,136	\$12,670	\$50,680	\$10,136	\$83,622	\$83,600	Community Livability	Tax Increment Financing	
P10	Sidewalk	Po'ipu Rd.	Koloa Rd.	Lawa'i Rd.	7,447	1.41	K	Average	\$102,084	\$127,605	\$510,420	\$102,084	\$842,193	\$842,200	Community Livability	Tax Increment Financing	
P11	Sidewalk	Po'ipu Rd.	Lawa'i Rd.	Kiahuna Plantation Dr.	3,134	0.59	K	Average	\$42,716	\$53,395	\$213,580	\$42,716	\$352,407	\$352,400	Community Livability	Tax Increment Financing	
P14	Sidewalk	Po'ipu Rd.	Kiahuna Plantation Dr.	Ho'owili Rd.	2,658	0.50	K	Average	\$36,200	\$45,250	\$181,000	\$36,200	\$298,650	\$298,700	Community Livability	Tax Increment Financing	
P15	Sidewalk	Ho'owili Rd.	Po'ipu Rd.	Ho'one Rd.	1,166	0.22	K	Average	\$15,928	\$19,910	\$79,640	\$15,928	\$131,406	\$131,400	Community Livability	Tax Increment Financing	
P16	Sidewalk	Po'ipu Rd.	Ho'owili Rd.	Eastern Bypass	2,415	0.46	K	Average	\$33,304	\$41,630	\$166,520	\$33,304	\$274,758	\$274,800	Community Livability	Tax Increment Financing	
P17	Sidewalk	Eastern Bypass	Po'ipu Rd.	North Weliweli Park	4,041	0.77	K	Average	\$55,748	\$69,685	\$278,740	\$55,748	\$459,921	\$459,900	Community Livability	Tax Increment Financing	
P19	Sidewalk	Eastern Bypass	North Weliweli Park	Weliweli Rd.	5,527	1.05	K	Average	\$76,020	\$95,025	\$380,100	\$76,020	\$627,165	\$627,200	Community Livability	Tax Increment Financing	
P20	Sidewalk	Eastern Bypass	Weliweli Rd.	Wailaau Rd.	3,194	0.60	K	Average	\$43,440	\$54,300	\$217,200	\$43,440	\$358,380	\$358,400	Community Livability	Tax Increment Financing	
									\$456,844	\$571,055	\$2,284,220	\$456,844	\$3,768,963	\$3,769,100			

KPACP Public Transportation Project Costs

		Capital Costs					Operating Costs						Totals							
Service Type 1	Service Type 2	Route Mileage (1)	Number of Vehicles	Spare Vehicles	Total Vehicles (2)	Type of Vehicle	Passenger Seating	Cost of Vehicle (3)	Cost per Vehicle Hour (4)	Hours per Day	Days per Week	Weeks per Year (5)	Total Revenue Hours	Annual Operating Cost	Years of Operation (6)	Total Capital Cost	Total Operating Cost	Total Cost	Rounded Cost	Annual Cost
Commuter Service	Fixed Route	30.0	2	1	8	25ft	24	\$80,000	\$59.69	12	6	51	3,672	\$219,181.68	10	\$ 800,000	\$2,191,816.80	\$2,991,816.80	\$2,991,800	\$299,181.68
Koloa-Po'ipu Shuttle	Fixed Route	7.0	2	1	8	20ft	18	\$70,000	\$59.69	12	6	51	3,672	\$219,181.68	13	\$ 700,000	\$2,849,361.84	\$3,549,361.84	\$3,549,400	\$273,027.83
															\$ 1,500,000	\$5,041,178.64	\$6,541,178.64	\$6,541,200.00	\$572,209.51	

NOTES

- (1) Estimate within study area (except for commuter service) - not used in calculating cost estimate.
- (2) Life span is 5 years for full time vehicles and 10 years for spare vehicles.
- (3) Estimate provided by County Transportation staff.
- (4) 2002 national average; could not easily find a more current figure, but very conservative (high).
- (5) 51 is used to account for holidays and other non-service days.
- (6) Estimate based on recommended implementation program.

Costs Lookup Table

	N(2)	N(4)	
urban	A	B	
rural	C	D	
roundabout			E
intersection realignment			F
Western Bypass			L
	low	average	high
A	\$2,596,493	\$3,449,500	\$4,800,000
B		\$5,337,500	\$7,427,163
C		\$2,636,100	
D		\$4,093,800	
E		\$250,000	Estimate
F		\$500,000	Estimate
G		\$515,500	Multi-use path surrogate: bike path per mile, 12' width rail-to-trail conversion
H		\$634,900	Bike lane per mile, 5' width, 2 sides, pavement extension, rural
I		\$205,508	Bike lane per mile, 4' width, 2 sides, when widening road, urban
J		\$181,000	Sidewalk per mile, 5' width, 4" depth, 1 side
K		\$362,000	Sidewalk per mile, 5' width, 4" depth, 2 sides
L		\$12,500,000	Total cost for project - from Kukui'ula

Note: Unit costs based on local data, Hawaii DOT STIP analysis, and national data

