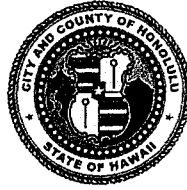


DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 3RD FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8305 • Fax: (808) 768-4730 • Internet: www.honolulu.gov

RICK BLANGIARDI
MAYOR



J. ROGER MORTON
DIRECTOR DESIGNATE

JON Y. NOUCHI
DEPUTY DIRECTOR

TP2/21-841519

February 19, 2021

Mr. Alvin Au, Executive Director
Oahu Metropolitan Planning Organization
The Block at Richards
707 Richards Street, Suite 200
Honolulu, Hawaii 96813-4623

Dear Mr. Au:

SUBJECT: Transportation Alternatives Set-Aside Project Application
Federal Fiscal Years (FFYs) 2021-2024
Ala Wai Bridge Project

In response to the Transportation Alternatives (TA) Set-Aside Call for Projects, dated January 22, 2021, enclosed is the City and County of Honolulu Department of Transportation Services (CCH DTS) application for the Ala Wai Bridge project.

The CCH DTS has experience with Federal Aid Grant oversight, working closely with the Hawaii Department of Transportation and the Federal Highway Administration to plan, design, and implement transportation improvements throughout Honolulu. If awarded, we would provide the stewardship and oversight necessary to optimize successful delivery of the Ala Wai Bridge project.

Thank you for your time and consideration. Should you have any questions, please contact Meredith Soniat, of my staff, 768-6682 or meredith.soniat@honolulu.gov.

Very truly yours,

A handwritten signature in black ink, appearing to read "J. Roger Morton", is written over a horizontal line.

J. Roger Morton
Director Designate

Enclosure

General Information

Project Title: Ala Wai Bridge

Project Location, street, zip code, and facility name: McCully Moiliili neighborhood (96826) to Waikiki (96815), Urban Honolulu [new connection]

Project Length (miles) and location/termini: Approximately 850 ft. (University/Hihiwai to Kalaimoku/Ala Wai)

Applicant: Department of Transportation Services (DTS), City and County of Honolulu

Contact Person: Meredith Soniat

Telephone: 808-295-7807

Email: meredith.soniat@honolulu.gov

Project Sponsor Agency (if different):

Contact Person:

Telephone:

Email

Project Screening Criteria

- ✓ Project is consistent with the regional goals and objectives of the ORTP
- ✓ Project is consistent with the City and County of Honolulu's Complete Street Policy
- ✓ Project is one of the three eligible activities for OahuMPO's TA program
- ✓ Project is directly related to the surface transportation system
- ✓ Project is within the planning area of the MPO and is open to public access

Budget Summary

Project Phase	Overall Budget Totals			
	Total Project Cost	Federal Funds		Local Match
		TAP	Other	
Planning (1)	\$500,000		\$400,000	\$100,000
Engineering				
Preliminary Engineering, PE1 (2)	\$2,870,000	\$1,928,000	\$368,000	\$574,000
Final Design, PE2 (3)	\$4,100,000	\$3,280,000		\$820,000
Construction (4)	\$34,000,000	\$27,200,000		\$6,800,000
Inspection	\$5,100,000	\$4,080,000		\$1,020,000
Total	\$46,570,000	\$36,488,000	\$768,000	\$9,314,000
Overall match ratio				20%

(1) complete

(2) funding secured, PE1 in progress

(3) funding secured, PE2 work to begin after environmental

(4) Application requesting these TAP monies for CON

This application is a request for Construction funds in FY23.

Preliminary engineering began in July 2019 and is currently ongoing. Including a recent modification, the

total budget for preliminary engineering (PE1) is \$2,870,000.

Final Design (PE2) requires \$4,100,000 which is programmed in FFY21 TIP using TAP-U funds. The majority of the local match was programmed in the City and County of Honolulu's FY21 Capital Improvement Program (CIP), and the remaining match of \$192,000 will be programmed in FY22 CIP.

Based on 30% design, construction is expected to cost \$34,000,000, of which we are requesting \$27,200,000 in Transportation Alternatives funds from Oahu MPO. The City has also applied for any area Transportation Alternatives funds and programmed Surface Transportation Program Flexible funds. An optimized mix of apportioned federal funds is acceptable to the City.

Inspection cost estimate is 15% of total construction cost.

Project Type

Check all that apply

- ✓ On-road and off-road bicycle or pedestrian facilities
- ✓ Safe routes for non-drivers
- ☐ Conversion and use of abandoned railroad corridors for bicycles or pedestrians.

Project Information

1. Project Description

Ala Wai Bridge will be a new pedestrian and bicycle crossing of the Ala Wai Canal, connecting the Waikiki, McCully, and Moiliili neighborhoods; businesses; parks; schools; and recreational activities. The project also includes a pedestrian and bicycle connection to University Avenue. The project will connect the Ala Wai Blvd. pedestrian promenade and bicycle facility in Waikiki to Ala Wai Neighborhood Park, a multiuse path, and McCully-Moiliili neighborhoods on the mauka side of the canal. Project location map can be found in Figure 1, and a zoomed in version can be found in Figure 2.

The proposed project is a cable-stayed design, the first of its kind in Hawaii, with an asymmetric configuration that uses a main concrete tower sited on the mauka side of the canal. Lighting would be incorporated on the bridge deck, cables, and bridge design features. The bridge would be approximately 20 feet wide to comfortably accommodate people walking and bicycling. A rendering based on 30% design can be found in Figure 3. This project will also connect with planned complete streets improvements on University Avenue and Ala Wai Boulevard.

Right of Way information: The project will be within the City owned right-of-way and occur within the existing roadway, sidewalks, and parks, except for the area over the Ala Wai Canal that is State jurisdiction. See Figure 2 for a project map. The project will require an easement from the Board of Land and Natural Resources, which will be obtained during final design (PE2).



Figure 1 Project Location



Figure 2: Project Location, Approximate Bridge Footprint



Figure 3: Rendering of Ala Wai Bridge project based on 30% design

2. Describe how the project will improve the public travel experience, travel options, and benefit the community.

EMERGENCY EVACUATION: This project would provide an alternative walking/biking evacuation route to approximately 18,300 residents and employers in Waikiki that could reduce evacuation time by approximately 15 minutes compared existing available evacuation routes for walking/biking. See evacuation map, Figure 4.

SAFETY: Kapahulu Avenue, as well as the three existing canal bridges, currently share the roadways with motor vehicles, bicycles, and pedestrians. Reducing the number of bicycle and pedestrian trips in close proximity with cars, motorcycles, and other vehicles will also improve overall safety for commuters biking and walking into and out of Waikiki. Ala Wai Elementary School and the Iolani School are the two schools closest to the Ala Wai Canal and are in the immediate vicinity project. A new crossing will also provide safer bike and pedestrian access from Waikiki to the many schools in the vicinity of the Ala Wai Canal, as well as mauka towards the University of Hawaii at Manoa.

MORE EFFICIENT TRAVEL: A new canal crossing could improve commute times and reduce congestion for the existing biking and walking trips that would benefit from bridge travel across the Ala Wai Canal. In particular, the approximately 7% of daily biking and walking trips (or 2,730 existing trips) that utilize Kapahulu Avenue to get around the east end of the canal may benefit from either a more direct commute into or out of Waikiki or reduced biking and pedestrian traffic on Kapahulu Avenue. A crossing in the vicinity of University Avenue reduces travel times and as much as one mile out-of-direction travel for people walking and bicycling between Waikiki and McCully-Moilili.



Figure 4: Emergency Evacuation Map

As shown in Table 1, the Waikiki and McCully/Moiliili neighborhoods have a very high level of residents that commute by means other than private automobile and households that do not own a car. In the case of Waikiki, households that don't own a car make over 1/3 of all households, compared to 1/10 of households at the Oahu-wide level. The University of Hawaii at Manoa (UHM) is a major destination that will benefit from the improved connection between Waikiki and McCully/Moiliili. UHM has combined population of staff, faculty, and students of approximately 28,000; based on their 2010 25% of the campus population walked as their primary mode and 9% biked as their primary mode.

Table 1: Transportation Mode in Project Vicinity

	% of households that don't own a car	% of commuters that walk as their primary mode	% of commuters that bike as their primary mode
Waikiki (10 combined census tracts)	34.8%	27.8%	2.8%
McCully/Moiliili (8 combined census tracts)	21.3%	7.6%	3.6%
Oahu-wide	10.2%	5.1%	1.2%

3. Describe how the project provides a connection between modes, improves the transportation choices, or connects to land use services (such as job locations, a civic center, library, market, medical office, school, etc.). Include modes and list of specific land uses connected within ½ mile of the project.

With no existing crossing between McCully Street to Kapahulu Avenue, the Ala Wai Canal acts as a 1.4 mile barrier between the employment and tourist hub of Waikiki and the neighboring communities of McCully and Moiliili. The Ala Wai Bridge will create another connection, making it more convenient for people to walk or bike across the canal and expanding the walkable and bikeable access to Waikiki for 3,000 more commuters (source: 2015 LEHD). See Figure 5 for a connectivity map. A new crossing could attract between 1,300 and 4,300 people walking and bicycling daily, through a combination of mode shift and route shift. Figure 6 shows the bridge use forecast based on different alternatives considered.

Lands on the canal's mauka side are largely zoned for medium and low-density residential uses – approximately 1,778 acres. Parcels adjacent to the canal are predominantly zoned for preservation, with the exception of medium-density residential and neighborhood commercial uses between the McCully Street and Ala Moana Boulevard bridges. Preservation zoning includes the Ala Wai parks, Ala Wai Elementary School, and Ala Wai Golf Course. The land on the canal's makai side is part of the Waikiki Special District, with approximately 612 acres designated for public, apartment, and commercial resort uses. See Figure 7 for local land use designs.

Jefferson Elementary and Ala Wai Elementary have school attendance zones that span the Ala Wai Canal, requiring students to cross the Ala Wai to get to school. A new crossing provides an additional, more direct connection for people walking and biking across the canal. School attendance zones are shown in Figure 5.

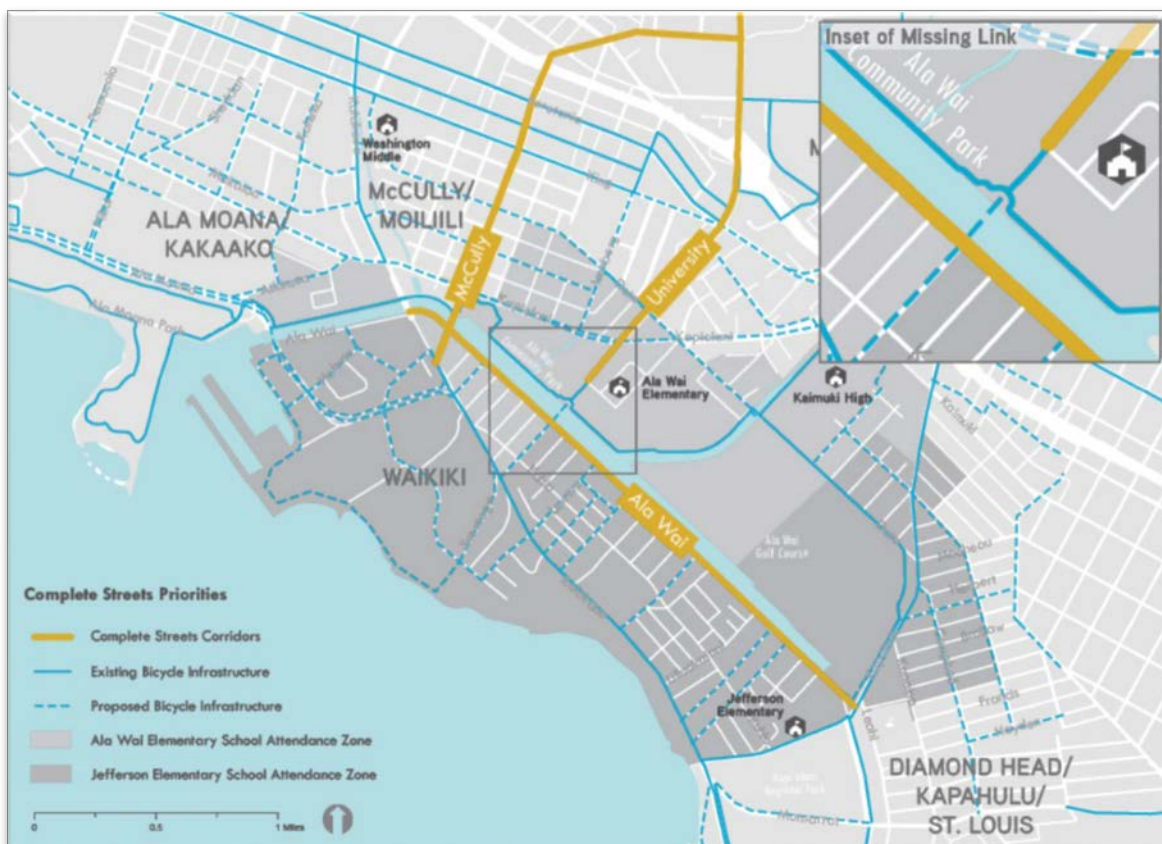


Figure 5: Connectivity Map

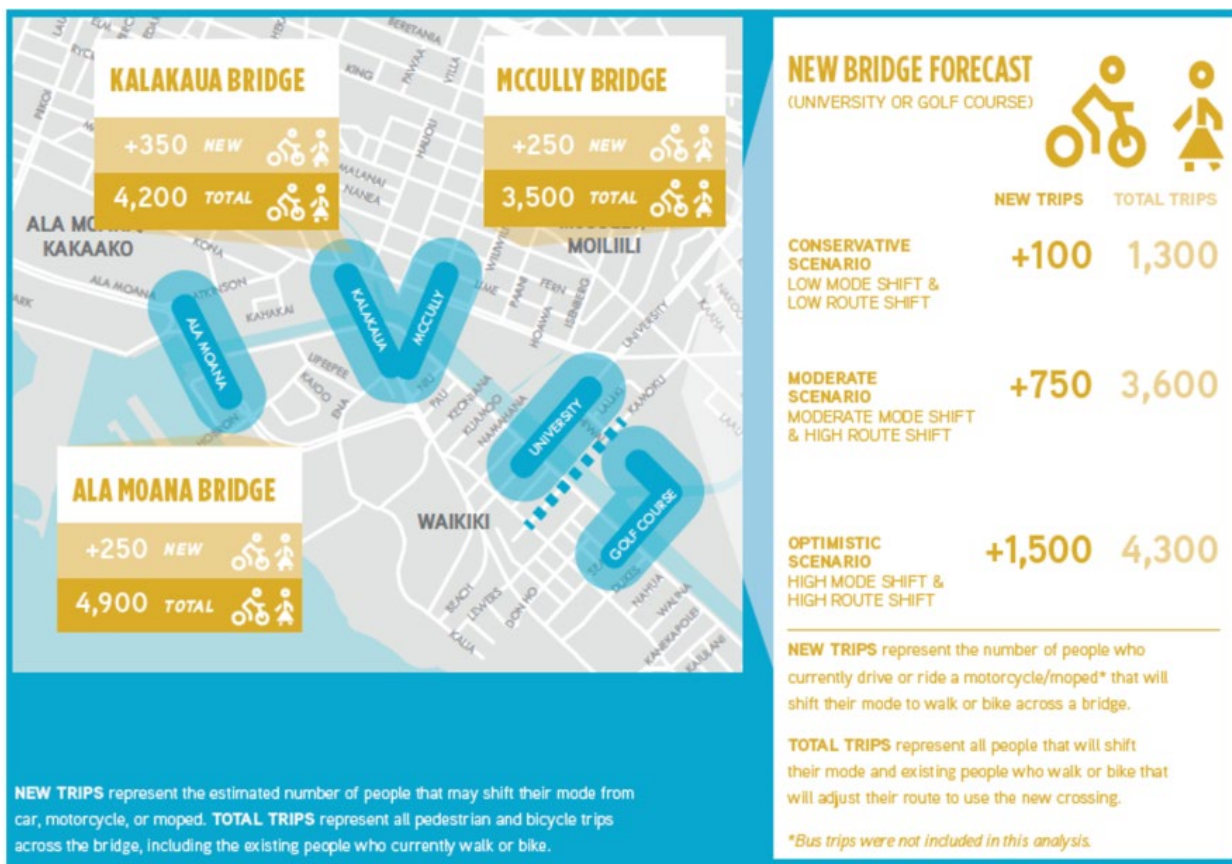


Figure 6: Bridge Use Forecast

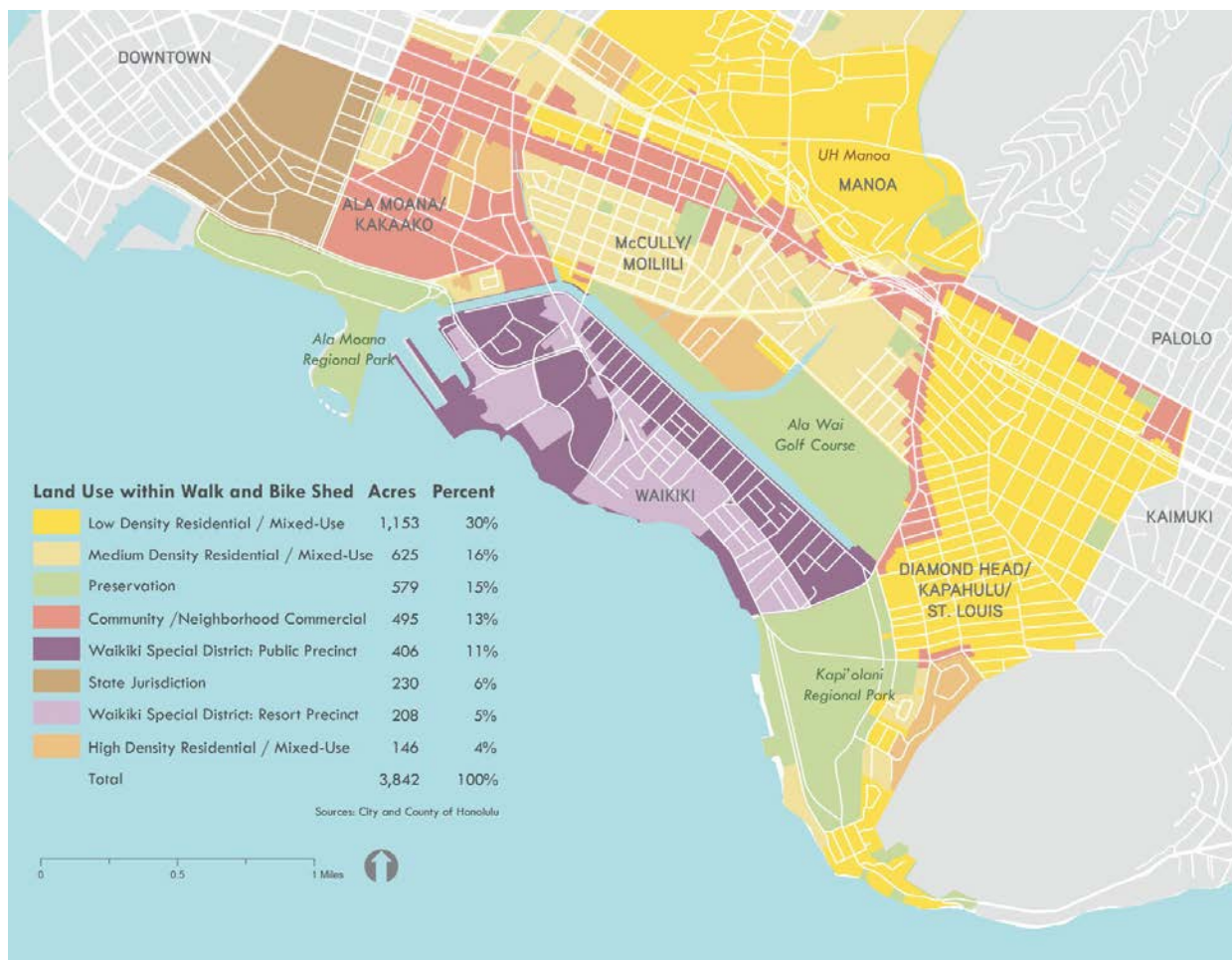


Figure 7: Local Land Use Designations

4. Describe how the project relates to an adopted plan such as the Statewide Pedestrian Master Plan, Oahu Bike Plan, the Hawaii State Bike Plan, the Hawaii Strategic Highway Safety Plan, or a future rail transit access connectivity plan.

The project is consistent with the goals and objectives of the Oahu Regional Transportation Plan (ORTP) and the Honolulu Complete Streets Design Manual. The project is supported by the Waikiki Transportation Plan (1971), Bike Plan Hawaii (2003), Primary Urban Center Development Plan (2004), Oahu Bike Plan (2012) and 2018 update, the Waikiki Regional Circulator Study (2013), the Honolulu Complete Streets Design Manual (2016), and the Draft Oahu Pedestrian Plan (2020).

While the Pedestrian Master Plan (2013) only identified specific areas of concern on Hawaii Department of Transportation facilities and therefore did not consider the project area in this selection process, the project area would rate highly on all four of the criteria for determining areas of concern:

- *Gaps in the pedestrian system* – The project will create a new pedestrian connection between Waikiki and the McCully/Moiliili and Ala Moana neighborhoods and improve the pedestrian environment along a heavily used segment of road.
- *High concentrations of pedestrian-oriented populations (elderly, youth, low-income, and households with no access to vehicles)* – The percentage of households that own a motor vehicle in Waikiki (34.8%), Ala Moana (28.6%), and McCully/Moiliili (21.3%) far exceeds the Oahu-wide level. As described further in Question 5, Waikiki, Ala Moana, and McCully/Moiliili also have a greater proportion of the population below the poverty level and over the 65 years of age than the Oahu average. The project will provide an important non-motorized transportation option for these populations.
- *Pedestrian hot spots (pedestrian crashes)* – The Draft Oahu Pedestrian Plan (2020) identified intersections of McCully at Kapiolani, McCully at Ala Wai, and Kalakaua at Ala Wai as high crash locations.
- *Needs for improved accessibility to pedestrian attractors, such as schools, shopping centers, employment centers, community centers, hospitals, and tourist destinations* – The project is within ½ mile of all residents, hotels, and major destinations in Waikiki. It will provide improved pedestrian access to the many pedestrian attractors in Waikiki. It will also directly link to Ala Wai and Jefferson Elementary Schools.

The Waikiki Regional Circulator Study (2013) proposes a bicycle and pedestrian network improvements to provide multi-modal mobility in coordination with planned transit improvements. The plan proposes three new bridges over the Ala Wai Canal between Ala Moana Blvd. and Manoa/Palolo Stream and a pathway on Ala Wai Blvd. between Kapahulu Ave. and Ala Moana Blvd. as a core part of a 7-mile network serving Waikiki and connecting it to surrounding neighborhoods. In addition to providing access into Waikiki, the project will also serve as a connector to the planned Waikiki Circulator and to Ala Moana Center rail station. Routing for the Waikiki Connector (formerly Waikiki Circulator) has been further refined to two different options. Figure 8 shows the location of the Ala Wai Bridge project in relation to the planned Waikiki Makai Connector as presented in the 2018 Waikiki Transit Catalytic Improvements Project Technical Memorandum.

The 2019 Oahu Bike Plan Update identifies the project as a Priority 1 project. The project is also included as an off-street path in the 2020 Draft Oahu Pedestrian Plan.

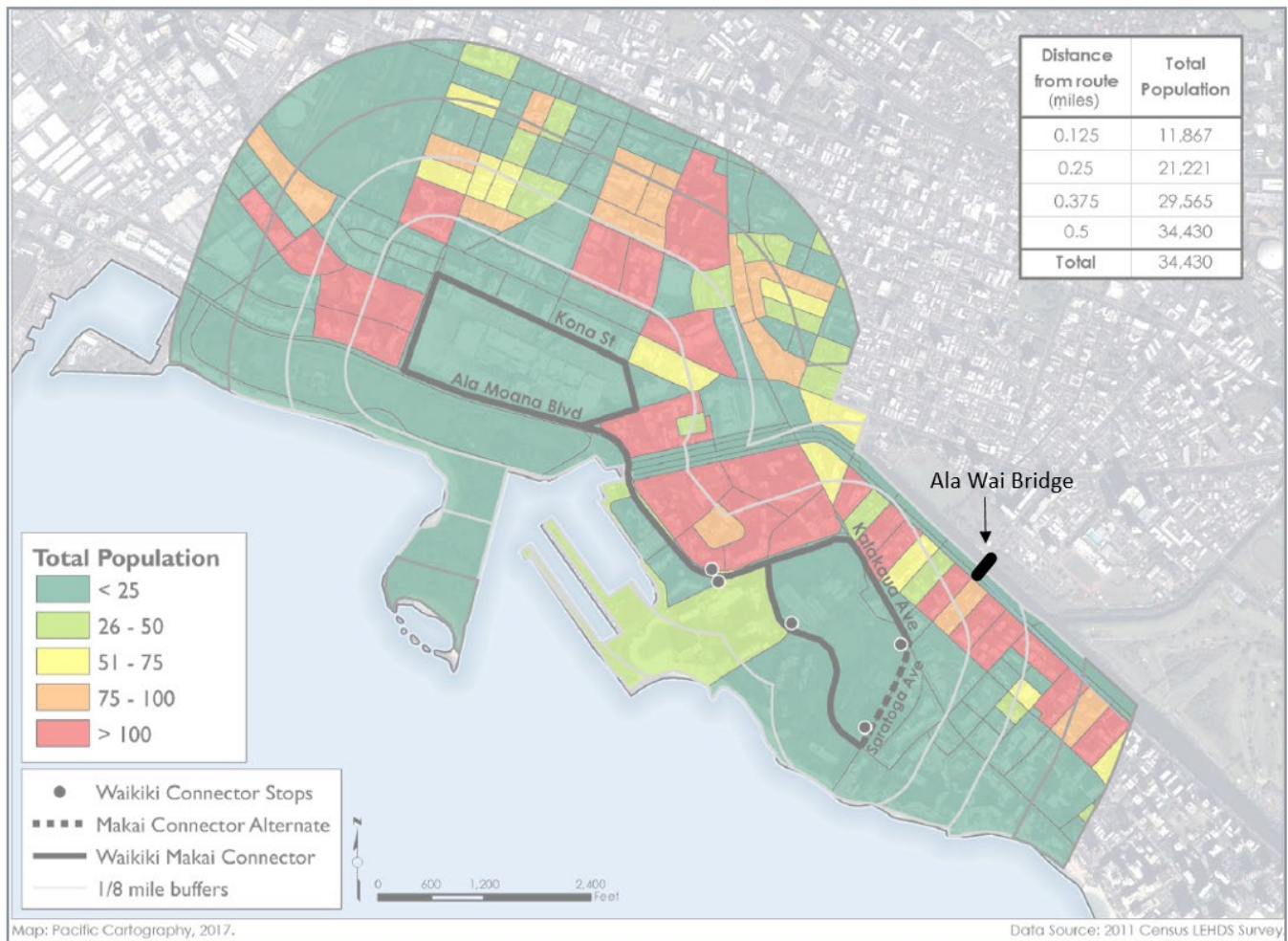


Figure 8: Ala Wai Bridge and Waikiki Makai Connector

- Describe to what extent the project will improve mobility for disadvantaged populations, including elderly, disabled, minority, and low-income populations.

According to American Community Survey data, the Waikiki and McCully/Moiliili neighborhoods have proportions of the population below poverty level and over the age of 65 in excess of the Oahu average (see table below). The project will provide a non-motorized transportation to many people traveling within Waikiki and between Waikiki and McCully/Moiliili and neighbors further west and north. Through providing transportation alternatives the project will provide people the opportunity to reduce their transportation costs via walking or biking for a trip that otherwise must have been taken by private automobile or bus.

Table 2: Demographics in Project Vicinity

	Percentage of population below in poverty	Percentage of population over 65 years of age
Waikiki (10 combined census tracts)	15.1%	17.8%
McCully/Moiliili (8 combined census tracts) – 30,959	14.4%	25.2%
Oahu-wide	9.8%	15.8%

6. Identify the safety issues addressed by the project (collision data, lack of adequate safe crossing or access, lack of separated facility, high speed, high volume, etc.)

There are four existing connections between Waikiki and surrounding neighborhoods – Ala Moana Blvd. Bridge, Kalakaua Ave. Bridge, McCully St. Bridge, and Kapahulu Avenue (the only land connection). These connections points are for all modes and provide varying accommodations for pedestrians and bicyclists. The Ala Moana Blvd. Bridge has approximately 8-foot width sidewalks on both sides and no bike lanes. The Kalakaua Ave. Bridge has approximately 6-foot width sidewalks on both sides and no bike lanes. The McCully St. Bridge has approximately 6-foot width sidewalks on 5-foot bike lanes on both sides. Kapahulu Ave. provides access to Waikiki via Ala Wai Blvd., Kuhio Ave., and Kalakaua Ave. Along Kapahulu Ave. between Ala Wai Blvd. and Kalakaua Ave. there is a 10-foot width multi-use path on the east-side of the street and the west-side has a 5-foot width sidewalk between Ala Wai Blvd. and Cartwright Rd., and then expands to approximately 10-foot width sidewalk between Cartwright Rd. and Kalakaua Ave.

Current canal crossings see over 14,000 trips by people on foot or bicycle combined with nearly 250,000 vehicular trips (2018 counts). 12 crashes involving people walking or biking on the approach to Kalakaua Avenue bridge were reported from 2014-2018. During the same time frame, the McCully Street bridge and intersections on either side experienced 10 crashes involving people walking or biking in the past 5 years, despite having bike lanes. Figure 9 shows a map of collisions involving people walking and biking. The Draft Oahu Pedestrian Plan (2020) also identified intersections of McCully at Kapiolani, McCully at Ala Wai, and Kalakaua at Ala Wai as high crash locations.

The four connection points create limited connectivity between Waikiki and surrounding neighborhoods. The largest unconnected area is between Kapahulu Ave. and the McCully St. Bridge, a distance of 1.4 miles with no connection across the Ala Wai Canal.

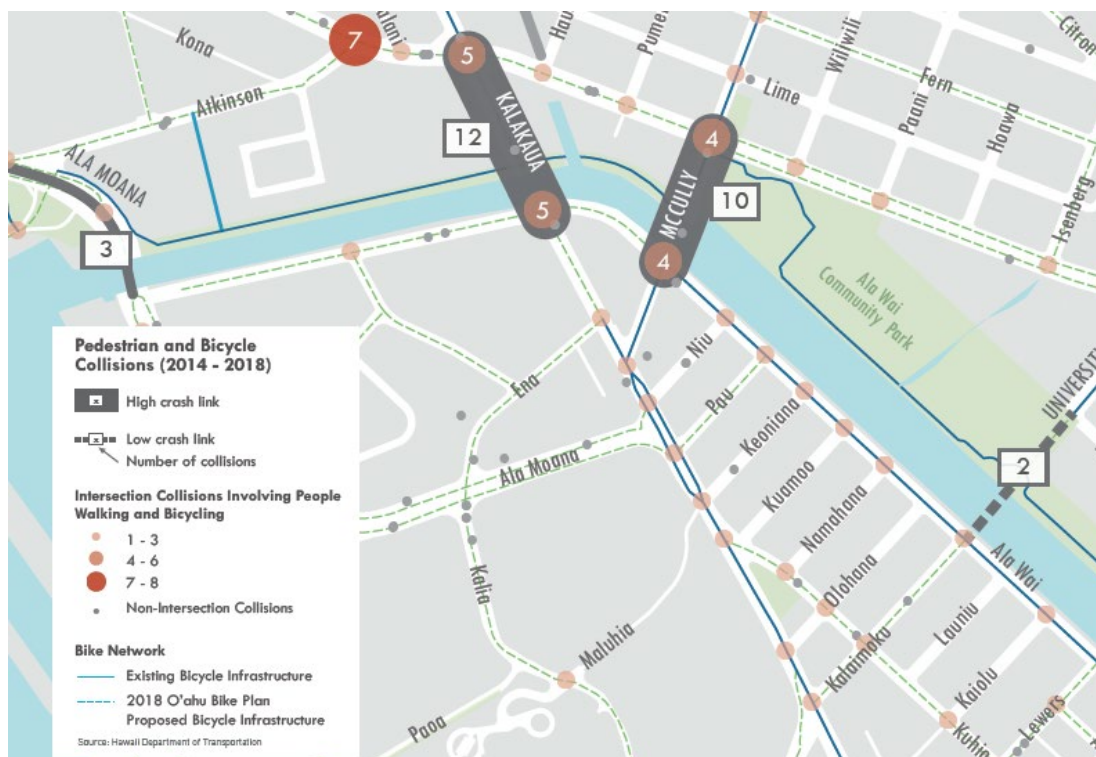


Figure 9: Pedestrian and Bicycle Collisions (2014-2018)

7. Describe how the project addresses the issues identified.

The project will include a new pedestrian and bicycle bridge over the Ala Wai Canal. The project will reduce travel distance by as much as 1 mile for those walking and biking between locations within Waikiki and locations within McCully/Moiliili and Ala Moana. Given the importance of distance in walking and bicycling trips, the project should have a strong positive impact in making travel by these modes more attractive for many trips. The impact for bicycle safety will be positive, as cyclists will be separated from motorized traffic and the likelihood of a car-bike collision significantly reduced. At 20 feet wide, the Ala Wai Bridge will provide enough space for pedestrians and bicyclists to comfortably share the facility. The project is expected to result in some people shifting their route from the high crash locations of the Kalakaua and McCully bridges.

8. Describe how the project meets the criteria identified in the OahuMPO TAP Guide.

Transportation and Mobility (20 points)	The project will dramatically improve pedestrian and bicycle mobility within Waikiki and connecting to surrounding neighborhoods. The new bridge will shorten many trips, increasing the attractiveness of making these trips by foot or bike.
Intermodal Connection (20 points)	As described in Question 4, the project will create a walking and biking facility for a portion of connection between the rail terminus station at Ala Moana Center and Waikiki. The project will serve as a core bikeway network facility for the area to be served by the planned bikeshare system, which will help maximize use of this new public transportation amenity.
Readiness and Likelihood of Success (20 points)	This proposal includes a multi-year program for completion of the project, with an existing contract for environmental and preliminary engineering (PE-1) and funding committed for final design (PE-2). Construction funds are committed in the City's CIP.
Legal Obligation (20 points)	The City Charter Amendment 8 (2006) and the Complete Street ordinance (2012) require the City to create a safe and complete network of pedestrian and bicycle facilities.
Safety (20 points)	The project will create a pedestrian and bicycle bridge and reduce the need to use the existing bridges that provide limited pedestrian and bicycle accommodations, have high traffic volumes, and are identified as high crash locations.
Equity (15 points)	As described in Question 5, relative to the Oahu averages, Waikiki and McCully/Moiliili have both a high percentage of residents living below the poverty level and residents over the age of 65. The project will enable more bicycling and walking, which could reduce household transportation costs that are most impactful on lower-income populations.
Financial Factors (15 points)	The project estimate is realistic, based upon 30% design. While funding need does exceed the TAP funds available, the project has identified Surface Transportation Program funds that would cover the difference in federal share. Additionally, the

	project has applied for state TAP funds in May 2020 which have not yet been awarded. An optimized mix of apportioned federal funds is acceptable to the City.
Human Environment and Quality of Life (10 points)	The project will enable walking and bicycling to a major employment center, shopping areas, parks, beaches and many other destinations. The project will also offer new perspectives from which to view the Diamond Head National Historic Monument.
Viability	The project has been highly coordinated with the projects in the vicinity. The project will have significant benefits to the community both during construction and once complete. The design and construction phases of the project offer unique opportunities to engage with community members and students at nearby schools to help inspire the next generation of planners, designers, and engineers. Stakeholders have been largely supportive of a new crossing of the Ala Wai Canal, providing more transportation choices for people walking and biking.
Inclusion in existing plan	The project is consistent with the goals and objectives of the Oahu Regional Transportation Plan (ORTP) and the Honolulu Complete Streets Design Manual. The project is supported by the Waikiki Transportation Plan (1971), Bike Plan Hawaii (2003), Primary Urban Center Development Plan (2004), Oahu Bike Plan (2012) and 2018 update, the Waikiki Regional Circulator Study (2013), the Honolulu Complete Streets Design Manual (2016), and the Draft Oahu Pedestrian Plan (2020).

9. Readiness and likelihood of success:

- ☐ *Design at 70% or higher* – 60% design is funded as part of PE1, scheduled to be completed by April 1, 2022.
- ✓ *Right-of-way acquisition complete or not needed* – The project will occur entirely within City owned right-of-way, with the exception of the bridge over the Ala Wai Canal that is State jurisdiction.
- ☐ *Environmental permits approval* – Draft NEPA and HRS Environmental Assessment is scheduled to be published in March 2021.
- ✓ *Widespread community support demonstrated* – As described in Question 4, the proposed project is included in multiple plans, all of which went through their own public engagement process. At their April 2016 meeting the Waikiki Neighborhood Board passed a motion in support of the City seeking funds for implementation of Waikiki Regional Circulator Study. Community support identified in AA process and beyond.

10. Describe how the local community and other agencies have been involved in the planning process for the project. List any opposition to the project and how it was addressed.

General support:

The project is supported by the Bike Plan Hawaii (2003), Primary Urban Center Development Plan (2004), Oahu Bike Plan (2012), the Waikiki Circulator Study (2013), the City's draft Protected Bike Lane Network Conceptual Map (2015), and the Ala Moana Neighborhood Transit-Oriented Development Plan

Draft Final Plan (2016). All of these plans involve significant community and agency involvement.

At their April 2016 meeting the Waikiki Neighborhood Board passed a motion in support of the City seeking funds for implementation of Waikiki Regional Circulator Study, specifically identifying “especially the full Pedestrian/Bicycle Network including bridges over the Ala Wai canal for pedestrians and bicyclists.”

Community & Agency engagement:

The project team involved students from University of Hawaii at Manoa and Jefferson Elementary in the Alternatives Analysis engagement. The Fall 2018 “Site Planning” Class at University of Hawaii at Manoa, Department of Urban and Regional Planning used the Ala Pono project as a case study for their work. The students divided into teams to evaluate the Ala Pono alternative crossing locations and used data collection and site observations to develop a preferred location for a new crossing. Students at Jefferson Elementary completed several mini projects around bridge design and connectivity, in addition to types of bridges and forces that act upon them. The collaboration with Jefferson Elementary School was a great opportunity to enhance collaboration with area residents, encourage education on civic processes, and gather creative ideas for bridge design from and for future generations.

As a part of the pre-consultation process, community meetings and presentations were conducted in order to involve the community in the planning and development of the Ala Wai Bridge Project. Over half of survey respondents preferred a new pedestrian and bike bridge over ‘Improving existing bridges’, ‘No build’, or ‘Other alternatives’. At one of the meetings, the project team engaged community members to gauge preference of bridge type. Key elements identified were the need for safety features (e.g. lighting, railings, and access management) and wider bridge width to accommodate people biking and walking.

220 agencies, organizations, and elected officials were mailed pre-consultation request for comments, and 26 responses were received. Additional stakeholder engagement has occurred in preparation of the draft environmental assessment (Table 3). The project team has met with canoe paddling groups, families from neighboring schools, area residents, neighborhood boards, and transportation stakeholders.

Section 106 Consultation was initiated in March 2020, and consultation is ongoing for the project. Active participants in the consultation have been Waikiki Surf Club, Kamehameha Schools, Royal Hawaiian Center, and the Historic Hawaii Foundation.

Table 3: Stakeholder Engagement in preparation for Draft Environmental Assessment

Stakeholders	Date
CCH Department Parks and Recreation, Division of Urban Forestry (DUF)	August 15, 2019
Ala Wai Community Garden Association	October 3, 2019
Department of Parks and Recreation (DPR) – Ala Wai Neighborhood Park	October 14, 2019
McCully/ Moiliili Neighborhood Board	July 2, 2020
Canoe Clubs - Waikiki Surf Club and University Halau Canoe Clubs	July 8, 2020
Waikiki Neighborhood Board	July 14, 2020
Historic Hawaii Foundation (HHF)	August 5, 2020
Ala Moana-Kakaako Neighborhood Board	August 20, 2020
Neighboring Residents	August 26, 2020
Oahu Hawaiian Canoe Racing Association	September 14, 2020
Waikiki Surf Club	September 30, 2020
Diamond Head – Kapahulu Neighborhood Board	October 8, 2020
Iolani School	October 26, 2020
Ala Wai Elementary	November 12, 2020
Ala Wai Elementary families	January 8, 2021
Diamond Head – Kapahulu Neighborhood Board	January 14, 2021

11. Describe how the project improves public health and increases physical activity.

The project will dramatically improve the pedestrian and bicycle network within Waikiki and connecting Waikiki to McCully/Moiliili and neighborhoods further west and north. Waikiki is major employment center, high density residential, and has many popular destinations. Due to Waikiki's linear geography the project will be within ½ mile of all residences and major destinations in Waikiki. The bridge component of the project will reduce walking and bicycling travel distance for many trips between Waikiki and surrounding neighborhoods. The project will improve walking and biking access to Ala Wai Community Park, Kapiolani Regional Park, Ala Moana Regional Park, and Waikiki beaches. In total, the project will have tremendous benefit in improving pedestrian and bicycle mobility and safety and thereby enable more walking and bicycling for transportation and recreation.

12. Describe how the project includes design elements that are context-sensitive and contribute to the quality of life.

The project is responsive to the neighborhood context where very high levels of households don't own a car and very high levels of commuters walk or bicycle as their primary commute mode. In this context, there is strong need for a well-connected network on walking and bicycling facilities. The project is responsive to bicycle and pedestrian safety concerns as shown in the Department of Health traffic injury database. The project is responsive to the desire for additional walking and bicycling connectivity between Waikiki and surrounding neighborhoods, as included in the Waikiki Regional Circulator Study and supported by the Waikiki Neighborhood Board. The project design is also context sensitive, inspired by the sail of traditional Polynesian outrigger canoes. The clear-span design of the bridge also ensures that the project does not inhibit the existing use of the Ala Wai Canal for canoe and kayak practices.

Other Information

You may use this space to provide additional project information considered pertinent.

Appendix E: Ala Pono: Ala Wai Alternatives Analysis Executive Summary

Required Submittals

Required documents (.pdf files and three hard copies) must be submitted to the OahuMPO:

✓		OahuMPO Transportation Alternatives Program Application
✓	Appendix A. Project map also shown in <i>Figure 1 Project Location</i> and <i>Figure 2: Project Location, Approximate Bridge Footprint</i>	Project map
N/A	Project design is at 30%	Certification from the licensed design professional
N/A	Public Draft Environmental Assessment will be published in spring 2021	Permits, clearances, proof of NEPA and SEPA compliance, if available
N/A	Will be completed in PE2	Utility and access easements
✓	Right-of-way information in question 1	ROW information, as applicable
✓	Appendix B	Project cost estimates and project schedule
N/A		Letter of commitment from sponsor agency

✓	Appendix C	Documentation of commitment of up-front cash by the project sponsor
✓	Cover letter	Sponsor statement showing experience with Federal-aid grant oversight
N/A	Will be completed during PE1. Section 106 Consultation is ongoing.	Memorandum of Agreement
✓	Appendix D	Project Management Plan

Appendix A: Ala Wai Bridge Project Map



Figure 1: Ala Wai Bridge Project Location

Appendix A: Ala Wai Bridge Project Map



Figure 2: Ala Wai Bridge Project Location, Approximate Bridge Footprint

SCHEMATIC DESIGN SUBMITTAL

JUNE 2020

ALA WAI BRIDGE

HONOLULU, HAWAII
HDR ENGINEERING, INC.

Prepared By

Rider Levett Bucknall
American Savings Bank Tower
1001 Bishop Street, Suite 2690
Honolulu, Hawaii 96813
T: +1 808 521 2641
RLB.com

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Project Details

Description

Basis of Estimate

This estimate has been prepared at the request of HDR Engineering, Inc. and is to provide a Schematic Design Estimate for the construction of a new bridge across the Ala Wai canal and related improvements. The project is located in the Waikiki area of Honolulu, Hawaii.

The estimate is based upon estimated approximate quantities prepared from the following documents:

- Schematic Design drawings (architectural, structural, civil, landscape, electrical) received on 24 April 2020
- Schematic Design Basis of Design received on 24 April 2020
- 3D model architectural model received on 27 April 2020

Where information was insufficient, assumptions and allowances were made, based wherever possible on discussions with the architect and engineers.

Pricing* is based on May 2020 costs and escalated to January 2023. It is assumed that the method of procurement for the scope of work will be via a competitive bid to at least 3-4 reputable, unionized general contractors and the contractor will be required to pay prevailing wage rates.

Please carefully note that the impact of the recent COVID-19 (Coronavirus) outbreaks have not been accounted for with regards to material supply, labor availability, General Conditions build-ups, etc., as they are unknown impacts to estimated costs.

*We have not been able to obtain pricing related to the cable system therefore pricing is based on our best guess at this point. We assume that the lack of response is due to staffing modifications due to COVID-19. We will continue to reach out to vendors for more reliable numbers.

Items Specifically Excluded

Hazardous material handling/abatement

Rock excavation

Stainless steel concrete reinforcement

Furniture, Fittings and Equipment (FF&E)

Murals and works of art

Mockups

Sub-station

Emergency power generator

Main site utilities diversion

Architectural, engineering and other professional fees

Building Permit Fees

BASE SCOPE

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Summary

Rates Current At May 2020

Location		Total Cost USD
G	GENERAL CIVIL/LANDSCAPE/ARCHITECTURE	2,828,572
MAK	MAKAI CONDITION: RAMP, STAIR, LANDING, DRILLED SHAFT	3,640,368
MAU	MAUKA CONDITION: RAMP, STAIR, LANDING, DRILLED SHAFT	5,602,465
DECK	BRIDGE DECK	2,455,193
CAB	CABLES	875,240
TOW	TOWER	2,357,085
ESTIMATED NET COST		\$17,758,923
MARGINS & ADJUSTMENTS		
Traffic control		\$300,000
Scaffolding for cable/deck installation (~30,000 SF)		\$210,000
Crane for tower (4 months)		\$250,000
Crane for deck/cable installation max 39 ton (8 months)		\$224,000
Barge for cable/deck installation (assumed 8 months)		\$120,000
Allow for Phasing	3 %	\$565,887
General Conditions	12 %	\$2,331,457
Bond & Insurance	3.5 %	\$761,610
Overhead and Profit	7 %	\$1,576,532
General Excise Tax	2 %	\$481,969
Estimating Contingency	10 %	\$2,458,037
Design Contingency	15 %	\$4,055,762
Escalation to Jan 2023, anticipated midpoint of construction	8 %	\$2,487,535
ESTIMATED TOTAL COST		\$33,581,712

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Elements/Divisions Item

G GENERAL CIVIL/LANDSCAPE/ARCHITECTURE

Rates Current At May 2020

Description	Unit	Qty	Rate	Total USD
G1020 Site Demolition and Relocations				
02 Site Construction				
30 Demo and dispose of concrete paving	SF	7,557	5.00	37,785
31 Sawcut concrete pavement	LF	510	20.00	10,200
32 Demo and dispose of AC paving	SF	40,765	3.50	142,678
33 Sawcut AC pavement	LF	133	15.00	1,995
34 Demo and dispose of concrete boat launch, 3' deep	SF	238	74.00	17,612
35 Demo and dispose of play court	SF	3,709	8.00	29,672
209 Remove and dispose of playground equipment	LS	1	2,000.00	2,000
36 Curb cuts	EA	6	100.00	600
37 Demo and dispose of concrete curb	LF	2,469	8.00	19,752
38 Remove and dispose of existing street lamp - by ELEC	EA	10	3,000.00	30,000
41 Remove and dispose of waterline, assumed 6"-8"	LF	331	20.00	6,620
42 Remove and dispose of chain, bollards measured separately	LF	127	3.00	381
87 Remove the walkway conduits - ELEC	LF	216	50.00	10,800
44 Remove and dispose of electrical pull boxes - by ELEC	EA	4	2,000.00	8,000
45 Remove and dispose of bollard, including footing	EA	14	300.00	4,200
46 Adjust elevation of electrical box - by ELEC	EA	7	500.00	3,500
47 Relocate electrical transformer including the new foundation for transformer - by ELEC	EA	1	8,000.00	8,000
48 Remove existing traffic signal & associated pull box - by ELEC	EA	2	3,500.00	7,000
49 Remove and dispose of storm drain catch basin and manhole	EA	1	10,000.00	10,000
50 Remove irrigation valves and piping	EA	4	800.00	3,200
65 Cut and plug existing waterline	EA	3	800.00	2,400
Site Construction				\$356,395
31 Earthwork				
51 Allow for backfill at storm drain catch basin and manhole - assumed 5-10 CY	EA	2	650.00	1,300
39 Excavate for waterline removal, assumed 3' wide x 3' deep	LF	331	17.00	5,627
40 Backfill at waterline removal, assumed 3' wide x 3' deep	LF	331	22.00	7,282
Earthwork				\$14,209
Site Demolition and Relocations				\$370,604
G1030 Site Earthwork				
31 Earthwork				
25 Silt fence and filter sock	LF	1,971	20.00	39,420
26 Filter sock	LF	29	15.00	435
180 Excavate for boat launch anchor block	CY	38	50.00	1,900

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Elements/Divisions Item

G GENERAL CIVIL/LANDSCAPE/ARCHITECTURE (continued)

Rates Current At May 2020

Description	Unit	Qty	Rate	Total USD
181 Backfill at boat launch anchor block	CY	12	65.00	780
178 Fine grading	SF	74,373	1.50	111,559
Earthwork				\$154,094
Site Earthwork				\$154,094
G2010 Roadways				
32 Exterior Improvements				
117 Concrete curb and gutter	LF	283	50.00	14,150
Exterior Improvements				\$14,150
Roadways				\$14,150
G2020 Parking Lots				
32 Exterior Improvements				
29 AC pavement, base course and subbase course to parking lot	SY	4,206	117.00	492,102
56 Concrete curb	LF	1,846	35.00	64,610
184 Parking lot striping	LF	1,806	0.60	1,084
Exterior Improvements				\$557,796
Parking Lots				\$557,796
G2030 Pedestrian Paving				
03 Concrete				
115 Tapered sidewalk (assumed 4"-6") to meet existing elevation, including base course	SF	1,382	28.00	38,696
116 Bike ramp to meet existing elevation, including base course	SF	389	25.00	9,725
Concrete				\$48,421
32 Exterior Improvements				
57 Concrete sidewalk, including base course	SF	2,696	15.00	40,440
160 Premium on paving for integral concrete color with sandblast finish borders	SF	2,568	8.50	21,828
161 Integral colored concrete paving (assumed 4" thick) with medium sandblast finish, including base course (assumed 6") - excluding formwork	SF	4,788	23.30	111,560
163 Integral colored concrete band (assumed 4" thick), including base course (assumed 6" thick) - excluding formwork	SF	1,521	17.30	26,313
166 Formwork to patterned paving	LF	1,340	10.00	13,400
165 Formwork to patterned paving, COP	LF	155	15.00	2,325
241 Allow for sheeting to panel for border pour	SF	4,788	1.00	4,788
Exterior Improvements				\$220,654
Pedestrian Paving				\$269,075

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Elements/Divisions Item

G GENERAL CIVIL/LANDSCAPE/ARCHITECTURE (continued)

Rates Current At May 2020

Description	Unit	Qty	Rate	Total USD
G2040 Site Development				
03 Concrete				
53 Concrete shower pad (assumed 4" thick), hexagonal, including base course (assumed 6" thick)	SF	116	20.00	2,320
179 Boat launch anchor block, 3' thick	SF	237	112.20	26,591
Concrete				\$28,911
06 Wood and Plastics				
54 Remove and relocate existing wooden boat launch	EA	1	10,000.00	10,000
Wood and Plastics				\$10,000
32 Exterior Improvements				
55 Removable bollard, including footing	EA	10	500.00	5,000
239 Allow for signage	LS	1	15,000.00	15,000
Exterior Improvements				\$20,000
Site Development				\$58,911
G2050 Landscaping				
02 Site Construction				
119 Trench excavate and backfill for irrigation mainline removal, assumed 3' wide x 3' deep	CY	468	115.00	53,820
Site Construction				\$53,820
32 Exterior Improvements				
96 Irrigation main line, PVC schedule 40, 2"	LF	1,125	40.00	45,000
114 Irrigation main line, copper, type K, 2"	LF	280	55.00	15,400
110 Pipe sleeve, PVC, 6"	LF	66	50.00	3,300
139 Pipe restraint and fitting, ductile steel	LF	1,404	35.00	49,140
107 Gate shutoff valve	EA	2	260.00	520
189 Irrigation point of connection to 2" gate valve in valve box	EA	1	800.00	800
108 Connection for new mainline to existing mainline	EA	1	800.00	800
120 4" pop-up spray head c/w fitting, connection to piping, brass tee flow sensor for lawn area	SF	10,039	0.40	4,016
123 Commercial wide flow drip control system with pressure regulating basket filter for inline drip zone, drip lines, fitting, valves, 3/4" lateral PVC pipe etc	SF	8,935	0.50	4,467
141 Swivel hose reel	EA	4	500.00	2,000
124 Root watering system for specimen tree	EA	42	300.00	12,600
190 Premium allowance for PVC schedule 80 premium for irrigation main line under the pavement crossing, assume 30 % of the PVC line length	LF	338	10.00	3,380
125 Allowance for irrigation parts to complete system, such as valves, fittings, valve boxes, pump, etc	EA	2	2,000.00	4,000

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Elements/Divisions Item

G GENERAL CIVIL/LANDSCAPE/ARCHITECTURE (continued)

Rates Current At May 2020

Description	Unit	Qty	Rate	Total USD
150 2" black cinder for all shrub and ground cover area	SF	8,935	0.70	6,254
151 6" layer of imported screened topsoil for all new planted area	SF	18,973	2.20	41,741
152 2" layer of organic soil	SF	18,973	0.60	11,384
153 Medium Canopy shade tree (25 Gal)	EA	19	1,500.00	28,500
154 Relocation to Monkeypod tree	EA	8	2,000.00	16,000
155 Relocation to coconut palm tree	EA	18	2,000.00	36,000
156 Flowering accent hedge with groundcover	SF	3,137	20.00	62,740
157 Groundcover variety	SF	5,798	12.00	69,576
158 Hydrosprig lawn	SF	10,039	1.50	15,058
159 Root barrier- 20 ft min	EA	42	500.00	21,000
169 Palm tree- relocation to outside of project	EA	3	2,500.00	7,500
170 Protection for palm tree remained in the construction c/w 6' T post, 10'min diameter, sign, plastic meshing, etc	EA	1	1,200.00	1,200
173 Palm tree- demolish	EA	12	800.00	9,600
242 Landscape maintenance	LS	1	15,000.00	15,000
248 Allowance for crane used for relocating trees	LS	1	10,000.00	10,000
Exterior Improvements				\$496,976
Landscaping				\$550,796
G3010 Water Supply				
31 Earthwork				
66 Trench excavation for waterline, assumed 3' wide x 3' deep	LF	143	17.00	2,431
67 Pipe cushion for waterline, assumed 3' wide	LF	143	7.00	1,001
68 Backfill trench for waterline, assumed 3' wide x 3' deep	LF	143	22.00	3,146
Earthwork				\$6,578
33 Utilities				
58 New riser and shower	EA	1	4,000.00	4,000
59 8" Waterline	LF	143	140.00	20,020
60 Connect to existing waterline	EA	1	2,000.00	2,000
61 8"x1" Tee and 1" valve	EA	1	3,500.00	3,500
62 90 degree Bend with restraining glands	EA	1	2,500.00	2,500
63 Concrete thrust block	EA	1	300.00	300
Utilities				\$32,320
Water Supply				\$38,898
G3030 Storm Sewer				
31 Earthwork				
73 Allow for excavation for storm drain inlet, assumed 1-5 CY	EA	1	250.00	250
72 Allow for backfill at storm drain inlet, assumed 1-5 CY	EA	1	325.00	325

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Elements/Divisions Item

G GENERAL CIVIL/LANDSCAPE/ARCHITECTURE (continued)

Rates Current At May 2020

Description	Unit	Qty	Rate	Total USD
74 Allow for excavation for storm drain catch basin and manhole, assumed 5-10 CY	EA	1	500.00	500
75 Trench excavation for storm drain line, assumed 5' wide x 8' deep	LF	47	75.00	3,525
76 Pipe cushion for storm drain line, assumed 5' wide	LF	47	12.00	564
77 Backfill trench for storm drain line, assumed 5' wide x 8' deep	LF	47	97.00	4,559
Earthwork				\$9,723
33 Utilities				
69 Storm drain inlet	EA	1	8,000.00	8,000
70 8" Storm drain line	LF	47	150.00	7,050
71 Storm drain catch basin and manhole, including connection to existing, approx 15' away	LS	1	12,000.00	12,000
78 Connect to existing drain inlet	EA	1	1,000.00	1,000
214 Collar to existing manhole	EA	3	4,900.00	14,700
Utilities				\$42,750
Storm Sewer				\$52,473
G4010 Electrical Distribution				
03 Concrete				
194 Allowance for concrete pad for light control cabinet, including formwork	EA	1	8,000.00	8,000
Concrete				\$8,000
26 Electrical				
2 Reconnect to street light pull box	EA	4	1,000.00	4,000
3 New street light, including foundation, LED fixture, light pole	EA	3	10,000.00	30,000
89 New light control cabinet, including master/slave switch, plc, sensors, etc, estimate load 400 kVA	EA	1	50,000.00	50,000
91 Control panel integral	EA	2	5,500.00	11,000
93 Free standing metering enclosure with main breakers	EA	1	9,400.00	9,400
90 Connection between existing light control cabinet and metering enclosure	EA	1	800.00	800
94 Connection between existing transformer and metering enclosure	EA	1	800.00	800
95 Connection between metering enclosure and light control cabinet	EA	1	800.00	800
192 Allowance for electrical grounding, fire stop penetration, testing, verification, etc	LS	1	27,450.00	27,450
195 Allowance for miscellaneous/missing scope	LS	1	14,700.00	14,700
Electrical				\$148,950
Electrical Distribution				\$156,950

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Elements/Divisions Item

G GENERAL CIVIL/LANDSCAPE/ARCHITECTURE (continued)

Rates Current At May 2020

Description	Unit	Qty	Rate	Total USD
G4020 Site Lighting				
26 Electrical				
196 Integral handrail lighting	LF	238	750.00	178,500
204 Pole mounted light, single head	EA	4	4,000.00	16,000
205 Pole mounted light, double head	EA	2	5,000.00	10,000
206 Bollard lighting	EA	21	3,500.00	73,500
207 Allowance for hookup	LS	1	60,000.00	60,000
208 Allowance for miscellaneous/missing light fixtures or parts	LS	1	30,000.00	30,000
	Electrical			\$368,000
	Site Lighting			\$368,000
G4090 Other Site Electrical Utilities				
02 Site Construction				
188 Trench excavation and backfill for control wire conduit, assume 3' wide * 3'deep	CY	481	170.00	81,770
	Site Construction			\$81,770
03 Concrete				
193 Allowance for concrete pad under the irrigation controller, including formwork	EA	1	8,000.00	8,000
	Concrete			\$8,000
26 Electrical				
97 Pull box for irrigation control wire	EA	20	2,000.00	40,000
98 Electrical conduit for irrigation control wire, 2", PVC 80, UL approved c/w conduit sleeve	LF	1,441	35.00	50,435
99 Rain bird sensor- RSD-BEX c/w control valve and pressure regulator	EA	1	620.00	620
100 Irrigation controller c/w 48 wall mounted stations inside NEMA 3R stainless steel enclosure	EA	1	10,000.00	10,000
109 Connect the irrigation valve wiring to Irrigation controller	EA	20	800.00	16,000
247 Site setup, supervision, permits, as built, testing, coordination,etc.	LS	1	30,000.00	30,000
	Electrical			\$147,055
	Other Site Electrical Utilities			\$236,825
	GENERAL CIVIL/LANDSCAPE/ARCHITECTURE			\$2,828,572

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Elements/Divisions Item

MAK MAKAI CONDITION: RAMP, STAIR, LANDING, DRILLED SHAFT

Rates Current At May 2020

Description	Unit	Qty	Rate	Total USD
A1010 Standard Foundations				
03 Concrete				
131 Temporary abutment cap, 3'6"x2'	CY	5	1,200.00	6,000
102 Concrete grade beam on top of drilled shafts	CY	66	1,200.00	79,200
12 Concrete abutment cap, above grade	CY	48	2,000.00	96,000
Concrete				\$181,200
31 Earthwork				
13 Excavation for foundations	CY	164	60.00	9,840
14 Backfill for foundations	CY	84	40.00	3,360
Earthwork				\$13,200
Standard Foundations				\$194,400
A1020 Special Foundations				
31 Earthwork				
5 Unreinforced primary 'secant' pile, 3' max dia	LF	1,287	86.00	110,682
210 Mobilization/demobilization of pile work	LS	1	50,000.00	50,000
211 Disposal of surplus soil from pile work	CY	959	50.00	47,950
212 Concrete material over pour due to coral voids, 25% assumed	CY	240	250.00	60,000
6 Reinforced secondary pile, 3' dia, 300#/CY	LF	1,876	230.00	431,480
213 Load test	LS	1	50,000.00	50,000
7 Drilled shafts, 2' dia, 300#/CY	LF	673	500.00	336,500
8 Drilled shafts, 4' dia, 300#/CY	LF	113	1,245.00	140,685
251 Isolation casing, 2' dia	LF	170	105.00	17,850
252 Isolation casing 4' dia	LF	20	210.00	4,200
10 Jet grout between drilled shafts and secant pile wall	CY	106	1,000.00	106,000
230 Allow for dewatering for deep foundation work	LS	1	75,000.00	75,000
Earthwork				\$1,430,347
Special Foundations				\$1,430,347
A1030 Slab on Grade				
03 Concrete				
130 Concrete grade slab, 2'6"-3'8" thick	SF	482	103.00	49,646
104 Concrete grade slab, 1'6"-2'2" thick	SF	376	62.00	23,312
126 Precast structural slab on grade, 1'6" thick	SF	776	50.00	38,800
122 Concrete grade slab, 1'-2' thick, sloped	SF	1,406	50.00	70,300
138 Concrete grade slab, 1'-1'6" thick	SF	407	42.00	17,094
129 Temporary jump slab, 1' thick, including elastomeric bearing strip beneath	SF	545	33.00	17,985

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Elements/Divisions Item

MAK MAKAI CONDITION: RAMP, STAIR, LANDING, DRILLED SHAFT (continued)

Rates Current At May 2020

Description	Unit	Qty	Rate	Total USD
136 Concrete steps on grade	SF	154	50.00	7,700
Concrete				\$224,837
31 Earthwork				
112 Base course under grade slab	CY	70	85.00	5,950
Earthwork				\$5,950
Slab on Grade				\$230,787
B1010 Floor Construction				
03 Concrete				
16 Concrete abutment wall, 1' thick	SF	87	68.00	5,916
127 Precast cantilevered slab, 10"-1'8" thick, sloped	SF	1,822	45.00	81,990
128 Precast concrete plank at jump span, thickness assumed 10"-1'8" thick	SF	173	43.00	7,439
143 CIP concrete corbel cast integral with deck edge beam, 1' wide, detail not provided (~17 LF) - Allow	LS	1	3,000.00	3,000
140 Precast cantilevered slab, 11"-1'8" thick	SF	161	44.00	7,084
142 Tapered CIP concrete beam with concrete corbel, 3' wide, detail not provided	LF	19	280.00	5,320
111 Precast cantilevered slab, 10"-1'8" thick	SF	723	43.00	31,089
144 Concrete curb, 1'x6" with raised bike runnel, E/S113	LF	17	50.00	850
148 Concrete curb, 1'wx6"h	LF	331	35.00	11,585
Concrete				\$154,273
05 Metals				
15 Bearing pad, approx 2'x1'5"x3", rubber	EA	2	600.00	1,200
Metals				\$1,200
09 Finishes				
249 Sealer to concrete soffit and fascia	SF	4,344	2.50	10,860
Finishes				\$10,860
Floor Construction				\$166,333
B2010 Exterior Walls				
03 Concrete				
145 2" thick Architectural concrete to ramp/stair walls	SF	5,887	50.00	294,350
103 Concrete ramp wall, 2' thick	CY	132	1,330.00	175,560
21 2" thick Architectural concrete to abutment cap	SF	171	50.00	8,550
146 Concrete wall 1' thick	CY	90	2,030.00	182,700
Concrete				\$661,160

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Elements/Divisions Item

MAK MAKAI CONDITION: RAMP, STAIR, LANDING, DRILLED SHAFT (continued)

Rates Current At May 2020

Description	Unit	Qty	Rate	Total USD
05 Metals				
118 Guardrail, approximately 1' ht, atop wall (measured elsewhere), assumed stainless steel	LF	64	350.00	22,400
133 Guardrail, 3' high, atop concrete curb (measured elsewhere), assumed stainless steel	LF	453	850.00	385,050
Metals				\$407,450
09 Finishes				
250 Sealer to walls	SF	11,937	2.50	29,843
Finishes				\$29,843
Exterior Walls				\$1,098,453
C2010 Stair Construction				
03 Concrete				
135 Concrete stair, cantilevered	FT/R	8	2,000.00	16,000
Concrete				\$16,000
05 Metals				
132 Temporary aluminum stairs, including railings	FT/R	5	1,200.00	6,000
Metals				\$6,000
Stair Construction				\$22,000
C2020 Stair Finishes				
05 Metals				
137 Stair railing, 3'6" high, assumed stainless steel	LF	44	850.00	37,400
Metals				\$37,400
Stair Finishes				\$37,400
C3020 Floor Finishes				
09 Finishes				
149 Epoxy traffic coating	SF	4,819	10.00	48,190
Finishes				\$48,190
Floor Finishes				\$48,190
G1030 Site Earthwork				
31 Earthwork				
178 Fine grading	SF	5,635	1.50	8,453
Earthwork				\$8,453
Site Earthwork				\$8,453

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Elements/Divisions Item

MAK MAKAI CONDITION: RAMP, STAIR, LANDING, DRILLED SHAFT (continued)

Rates Current At May 2020

Description	Unit	Qty	Rate	Total USD
G2030 Pedestrian Paving				
32 Exterior Improvements				
113 Concrete curb ramp, including base course	SF	69	25.00	1,725
<i>Exterior Improvements</i>				\$1,725
<i>Pedestrian Paving</i>				\$1,725
G2040 Site Development				
32 Exterior Improvements				
231 Allow for signage	LS	1	10,000.00	10,000
<i>Exterior Improvements</i>				\$10,000
<i>Site Development</i>				\$10,000
G4010 Electrical Distribution				
02 Site Construction				
182 Trench excavation and backfill for the street light conduit, assume 1.5' wide * 1.5'deep	CY	34	170.00	5,780
<i>Site Construction</i>				\$5,780
26 Electrical				
1 Street light conduit, 1 feet below grade	LF	400	75.00	30,000
4 Reroute the primary feeder for the transformer, including excavation and backfill	LF	140	100.00	14,000
88 Relocate the existing traffic light	EA	1	5,000.00	5,000
<i>Electrical</i>				\$49,000
<i>Electrical Distribution</i>				\$54,780
G4020 Site Lighting				
26 Electrical				
196 Integral handrail lighting	LF	450	750.00	337,500
<i>Electrical</i>				\$337,500
<i>Site Lighting</i>				\$337,500
MAKAI CONDITION: RAMP, STAIR, LANDING, DRILLED SHAFT				\$3,640,368

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Elements/Divisions Item

MAU MAUKA CONDITION: RAMP, STAIR, LANDING, DRILLED SHAFT

Rates Current At May 2020

Description	Unit	Qty	Rate	Total USD
A1010 Standard Foundations				
03 Concrete				
12 Concrete abutment cap, above grade	CY	464	2,000.00	928,000
17 Backstay cable anchorage concrete foundation	CY	101	1,200.00	121,200
18 Buried concrete end beam	CY	92	1,200.00	110,400
19 Buried concrete edge beam, 15'x6'	CY	272	1,200.00	326,400
20 Buried concrete tie beam, 1'x3'8"	CY	109	1,200.00	130,800
Concrete				\$1,616,800
31 Earthwork				
13 Excavation for foundations	CY	890	60.00	53,400
14 Backfill for foundations	CY	168	40.00	6,720
Earthwork				\$60,120
Standard Foundations				\$1,676,920
A1020 Special Foundations				
03 Concrete				
11 Jet grout between drilled shafts	LS	1		Excl.
Concrete				Excl.
31 Earthwork				
9 Drilled shafts, 6' dia, 300#/CY	LF	698	2,800.00	1,954,400
253 Isolation casing, 6' dia	LF	80	315.00	25,200
229 Allow for dewatering for deep foundation work	LS	1	15,000.00	15,000
Earthwork				\$1,994,600
Special Foundations				\$1,994,600
B1010 Floor Construction				
03 Concrete				
22 Backstay cable anchor block, integral colored concrete	CY	95	3,000.00	285,000
23 11" thick Precast prestressed concrete bridge deck panels	SF	5,542	36.00	199,512
24 5" min. thick Concrete topping over concrete bridge deck panels (meas'd separately)	SF	5,542	10.00	55,420
Concrete				\$539,932
Floor Construction				\$539,932
G1030 Site Earthwork				
31 Earthwork				
178 Fine grading	SF	16,647	1.50	24,970
85 Borrowed fill	CY	1,482	80.00	118,560
Earthwork				\$143,530
Site Earthwork				\$143,530

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Elements/Divisions Item

MAU MAUKA CONDITION: RAMP, STAIR, LANDING, DRILLED SHAFT (continued)

Rates Current At May 2020

Description	Unit	Qty	Rate	Total USD
G2030 Pedestrian Paving				
32 Exterior Improvements				
161 Integral colored concrete paving (assumed 4" thick) with medium sandblast finish, including base course (assumed 6") - excluding formwork	SF	6,131	23.30	142,853
162 Premium to integral colored concrete paving and banding for ramped area	SF	234	3.00	702
163 Integral colored concrete band (assumed 4" thick), including base course (assumed 6" thick) - excluding formwork	SF	9,007	17.30	155,821
166 Formwork to patterned paving	LF	1,903	10.00	19,030
165 Formwork to patterned paving, COP	LF	818	15.00	12,270
164 Center circle specialty paving (assumed 4" thick), including base course (assumed 6" thick)	SF	177	25.00	4,425
167 Bridge stay pedestal - colored concrete, 1' 6" ht, including side walls and base course	SF	826	52.20	43,117
168 Seat wall with concrete seat and natural stone veneer on exposed vertical surfaces	LF	81	415.30	33,639
241 Allow for sheeting to panel for border pour	SF	6,308	1.00	6,308
172 Concrete curb	LF	629	35.00	22,015
174 Concrete steps on grade, including base course	SF	51	35.00	1,785
175 Concrete steps on grade, including base course, COP	SF	365	30.00	10,950
Exterior Improvements				\$452,915
Pedestrian Paving				\$452,915
G2040 Site Development				
05 Metals				
171 Metal ramp railing, assumed stainless steel - illumination by ELEC is included elsewhere	LF	81	850.00	68,850
177 Metal walkway railing, assumed stainless steel	LF	98	850.00	83,300
176 Metal stair railings, assumed stainless steel	LF	56	850.00	47,600
Metals				\$199,750
32 Exterior Improvements				
186 Allow for signage	LS	1	10,000.00	10,000
Exterior Improvements				\$10,000
Site Development				\$209,750

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Elements/Divisions Item

MAU MAUKA CONDITION: RAMP, STAIR, LANDING, DRILLED SHAFT (continued)

Rates Current At May 2020

Description	Unit	Qty	Rate	Total USD
G2050 Landscaping				
02 Site Construction				
119 Trench excavate and backfill for irrigation mainline removal, assumed 3' wide x 3' deep	CY	119	115.00	13,685
Site Construction				\$13,685
32 Exterior Improvements				
96 Irrigation main line, PVC schedule 40, 2"	LF	280	40.00	11,200
114 Irrigation main line, copper, type K, 2"	LF	76	55.00	4,180
110 Pipe sleeve, PVC, 6"	LF	59	50.00	2,950
139 Pipe restraint and fitting, ductile steel	LF	356	35.00	12,460
107 Gate shutoff valve	EA	6	260.00	1,560
105 Master valve	EA	1	500.00	500
106 Reduce pressure backflow preventer	EA	1	2,200.00	2,200
189 Irrigation point of connection to 2" gate valve in valve box	EA	1	800.00	800
120 4" pop-up spray head c/w fitting, connection to piping, brass tee flow sensor for lawn area	SF	411	0.40	164
123 Commercial wide flow drip control system with pressure regulating basket filter for inline drip zone, drip lines, fitting, valves, 3/4" lateral PVC pipe etc	SF	5,566	0.50	2,783
141 Swivel hose reel	EA	2	500.00	1,000
190 Premium allowance for PVC schedule 80 premium for irrigation main line under the pavement crossing, assume 30 % of the PVC line length	LF	84	10.00	840
125 Allowance for irrigation parts to complete system, such as valves, fittings, valve boxes, pump, etc	EA	1	2,000.00	2,000
150 2" black cinder for all shrub and ground cover area	SF	5,566	0.70	3,896
151 6" layer of imported screened topsoil for all new planted area	SF	5,977	2.20	13,149
152 2" layer of organic soil	SF	5,977	0.60	3,586
156 Flowering accent hedge with groundcover	SF	1,464	20.00	29,280
157 Groundcover variety	SF	4,103	12.00	49,236
158 Hydrosprig lawn	SF	411	1.50	617
243 Landscape maintenance	LS	1	6,000.00	6,000
Exterior Improvements				\$148,401
Landscaping				\$162,086
G3010 Water Supply				
31 Earthwork				
66 Trench excavation for waterline, assumed 3' wide x 3' deep	LF	237	17.00	4,029

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Elements/Divisions Item

MAU MAUKA CONDITION: RAMP, STAIR, LANDING, DRILLED SHAFT (continued)

Rates Current At May 2020

Description	Unit	Qty	Rate	Total USD
67 Pipe cushion for waterline, assumed 3' wide	LF	237	7.00	1,659
68 Backfill trench for waterline, assumed 3' wide x 3' deep	LF	237	22.00	5,214
Earthwork				\$10,902
33 Utilities				
59 8" Waterline	LF	237	140.00	33,180
60 Connect to existing waterline	EA	2	2,000.00	4,000
62 90 degree Bend with restraining glands	EA	3	2,500.00	7,500
63 Concrete thrust block	EA	3	300.00	900
64 8" Connection coupling	EA	1	1,500.00	1,500
Utilities				\$47,080
Water Supply				\$57,982
G4010 Electrical Distribution				
02 Site Construction				
182 Trench excavation and backfill for the street light conduit, assume 1.5' wide * 1.5'deep	CY	12	170.00	2,040
Site Construction				\$2,040
26 Electrical				
1 Street light conduit, 1 feet below grade	LF	142	75.00	10,650
Electrical				\$10,650
Electrical Distribution				\$12,690
G4020 Site Lighting				
26 Electrical				
196 Integral handrail lighting	LF	290	750.00	217,500
202 Flexible linear led light integrated to seat wall and steps	LF	236	200.00	47,200
203 Sculpture lighting	EA	6	1,320.00	7,920
Electrical				\$272,620
Site Lighting				\$272,620
G4090 Other Site Electrical Utilities				
02 Site Construction				
188 Trench excavation and backfill for control wire conduit, assume 3' wide * 3'deep	CY	209	170.00	35,530
Site Construction				\$35,530
26 Electrical				
97 Pull box for irrigation control wire	EA	11	2,000.00	22,000

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Elements/Divisions Item

MAU MAUKA CONDITION: RAMP, STAIR, LANDING, DRILLED SHAFT (continued)

Rates Current At May 2020

Description	Unit	Qty	Rate	Total USD
98 Electrical conduit for irrigation control wire, 2", PVC 80, UL approved c/w conduit sleeve	LF	626	35.00	21,910
Electrical				\$43,910
Other Site Electrical Utilities				\$79,440
MAUKA CONDITION: RAMP, STAIR, LANDING, DRILLED SHAFT				\$5,602,465

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Elements/Divisions Item

DECK BRIDGE DECK

Rates Current At May 2020

Description	Unit	Qty	Rate	Total USD
B1010 Floor Construction				
03 Concrete				
79 Bridge deck beams PS-2, 1'x26.5', 10,000 PSI concrete	EA	3	2,700.00	8,100
80 Bridge deck PS-2, 19'x26.5', 10,000 PSI concrete	EA	3	37,100.00	111,300
27 Bridge deck beams PS-1, 1'x26.5', 10,000 PSI concrete	EA	9	2,400.00	21,600
28 Bridge deck PS-1, 19'x26.5', 10,000 PSI concrete	EA	9	29,300.00	263,700
83 Cast in place concrete deck, varying depth 1'8"-6'	CY	128	1,630.00	208,640
82 Bridge deck PS-3, 19'x26.5', 10,000 PSI concrete	EA	2	37,100.00	74,200
Concrete				\$687,540
09 Finishes				
249 Sealer to concrete soffit and fascia	SF	8,604	2.50	21,510
Finishes				\$21,510
Floor Construction				\$709,050
B2010 Exterior Walls				
05 Metals				
81 Angled stainless steel cable rail, 1/4" thick top rail, 1" x 4" rail post, 1/4" dia cables including 6"x8"x1/4" stainless steel base plate	LF	551	880.00	484,880
Metals				\$484,880
26 Electrical				
84 Integrated light @ guardrail - by ELEC	LF	551		Incl.
Electrical				Incl.
Exterior Walls				\$484,880
C3020 Floor Finishes				
09 Finishes				
149 Epoxy traffic coating	SF	7,777	10.00	77,770
Finishes				\$77,770
Floor Finishes				\$77,770
G1030 Site Earthwork				
31 Earthwork				
178 Fine grading	SF	235	1.50	353
Earthwork				\$353
Site Earthwork				\$353
G4020 Site Lighting				
26 Electrical				
196 Integral handrail lighting	LF	558	750.00	418,500
197 Suspension cable lighting	LF	510	720.00	367,200

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Elements/Divisions Item

DECK BRIDGE DECK (continued)

Rates Current At May 2020

Description	Unit	Qty	Rate	Total USD
198 Light mounted to underside of the bridge	LF	510	720.00	367,200
199 Flood light	EA	14	2,160.00	30,240
Electrical				\$1,183,140
Site Lighting				\$1,183,140
BRIDGE DECK				\$2,455,193

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Elements/Divisions Item

CAB CABLES

Rates Current At May 2020

Description	Unit	Qty	Rate	Total USD
B1010 Floor Construction				
05 Metals				
237 Steel pipe form tube, approx 8'-18' long	EA	38	1,560.00	59,280
238 Anchorage	EA	76	1,000.00	76,000
233 Cable - 8 strand	LF	477	160.00	76,320
234 Cable - 10 strand	LF	644	200.00	128,800
235 Cable - 12 strand	LF	1,703	240.00	408,720
236 Cable - 14 strand	LF	312	280.00	87,360
226 Cable - 6 strand	LF	323	120.00	38,760
Metals				\$875,240
Floor Construction				\$875,240
CABLES				\$875,240

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Elements/Divisions Item

TOW TOWER

Rates Current At May 2020

Description	Unit	Qty	Rate	Total USD
F1010 Special Structures				
03 Concrete				
86 Concrete tower	CY	565	2,500.00	1,412,500
	Concrete			\$1,412,500
09 Finishes				
254 Sealer to tower	SF	24,901	5.00	124,505
	Finishes			\$124,505
	Special Structures			\$1,537,005
G4020 Site Lighting				
26 Electrical				
200 Spot lights mounted within the voids of the tower	EA	44	1,320.00	58,080
201 Continuous direct-view light to backstay cable	LF	1,524	500.00	762,000
	Electrical			\$820,080
	Site Lighting			\$820,080
	TOWER			\$2,357,085

ALTERNATES

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Summary

Rates Current At May 2020

Location		Total Cost USD
ALT ALTERNATES		
UNI	University/Hihiwai	101,934
PKPAV	Parking Lot Paving	454,123
ALT - ALTERNATES		\$556,057
ESTIMATED NET COST		\$556,057
MARGINS & ADJUSTMENTS		
Traffic control		\$50,000
Allow for Phasing		3 % \$18,182
General Conditions		12 % \$74,909
Bond & Insurance		3.5 % \$24,470
Overhead and Profit		7 % \$50,653
General Excise Tax		2 % \$15,485
Estimating Contingency		10 % \$78,976
Design Contingency		15 % \$130,310
Escalation to Jan 2023, anticipated midpoint of construction		8 % \$79,923
ESTIMATED TOTAL COST		\$1,078,965

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Elements/Divisions Item

ALT ALTERNATES

UNI University/Hihiwai

Rates Current At May 2020

Description	Unit	Qty	Rate	Total USD
G1020 Site Demolition and Relocations				
02 Site Construction				
32 Demo and dispose of AC paving	SF	2,916	3.50	10,206
33 Sawcut AC pavement	LF	334	15.00	5,010
36 Curb cuts	EA	1	100.00	100
37 Demo and dispose of concrete curb	LF	67	8.00	536
Site Construction				\$15,852
Site Demolition and Relocations				\$15,852
G1040 Hazardous Waste Remediation				
32 Exterior Improvements				
240 Allow for signage	LS	1	2,000.00	2,000
Exterior Improvements				\$2,000
Hazardous Waste Remediation				\$2,000
G2010 Roadways				
32 Exterior Improvements				
183 Pavement marking	SF	2,171	3.00	6,513
117 Concrete curb and gutter	LF	92	50.00	4,600
187 Concrete pad at median, including base course	SF	105	15.00	1,575
134 Concrete pad at traffic circle, including base course	SF	1,018	15.00	15,270
147 Roll over curbs	LF	217	50.00	10,850
Exterior Improvements				\$38,808
Roadways				\$38,808
G2020 Parking Lots				
32 Exterior Improvements				
185 Pavement marking	SF	122	3.00	366
Exterior Improvements				\$366
Parking Lots				\$366
G2030 Pedestrian Paving				
32 Exterior Improvements				
57 Concrete sidewalk, including base course	SF	1,048	15.00	15,720
113 Concrete curb ramp, including base course	SF	155	25.00	3,875
160 Premium on paving for integral concrete color with sandblast finish borders	SF	1,048	8.50	8,908
162 Premium to integral colored concrete paving and banding for ramped area	SF	1,048	3.00	3,144
Exterior Improvements				\$31,647
Pedestrian Paving				\$31,647

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)

Location Elements/Divisions Item

ALT ALTERNATES

UNI University/Hihiwai (continued)

Rates Current At May 2020

Description	Unit	Qty	Rate	Total USD
G2050 Landscaping				
32 Exterior Improvements				
123 Commercial wide flow drip control system with pressure regulating basket filter for inline drip zone, drip lines, fitting, valves, 3/4" lateral PVC pipe etc	SF	735	0.50	368
150 2" black cinder for all shrub and ground cover area	SF	735	0.70	515
151 6" layer of imported screened topsoil for all new planted area	SF	735	2.20	1,617
152 2" layer of organic soil	SF	735	0.60	441
157 Groundcover variety	SF	735	12.00	8,820
244 Landscape maintenance	LS	1	1,500.00	1,500
Exterior Improvements				\$13,261
Landscaping				\$13,261
UNIVERSITY/HIHIWAI				\$101,934

Ala Wai Pedestrian Bridge

Schematic Design (30% Submittal)












































Location Elements/Divisions Item










































ALT ALTERNATES














PKPAV Parking Lot Paving











































Rates Current At May 2020











































Description	Unit	Qty	Rate	Total USD
G2020 Parking Lots				
32 Exterior Improvements				
246 AC pavement, base course and subbase course to parking lot	SY	-4,206	117.00	-492,102
245 Permeable paving to parking areas	SF	37,849	25.00	946,225
Exterior Improvements				\$454,123
Parking Lots				\$454,123
PARKING LOT PAVING				\$454,123

Ala Wai Canal Bridge Project								
ID	 Task Mode	Task Name	Duration	Start	Finish	Predecessors	Successors	
1		Project Start	2120 days	Mon 8/21/17	Thu 10/2/25			
2		DESIGN-BID-BUILD MULTI-TERM CONTRACT (3 Phases)	1090 days	Wed 2/7/18	Mon 4/11/22			
3		HDOT and FHWA Project Authorization	76 days	Wed 2/7/18	Wed 5/23/18			
7		PE-1 Contract Execution	50 days	Thu 3/15/18	Wed 5/23/18			
8		Notice of Interest and Request for SOQs	2 days	Thu 3/15/18	Fri 3/16/18	5		
13		FHWA Review and Concurrence (Rev & Concur) of Notice of Interest and ICE	48 days	Mon 3/19/18	Wed 5/23/18	9,10,11	15	
14		Annual Ad posted for Professional Services	7 days	Mon 3/26/18	Tue 4/3/18	12		
15		1240 Amendment to consolidate all phases of PE	282 days	Fri 6/29/18	Mon 7/29/19	13		
16		FHWA Review and Concurrence on Amendment	30 days	Fri 6/29/18	Thu 8/9/18		17,18	
17		Appointment of Selection Committee	1 day	Fri 8/10/18	Fri 8/10/18	16		
20		Consultant Selection	251 days	Mon 8/13/18	Mon 7/29/19	18		
42		PE-1 (Environmental Permitting, 30% Design, 60% Design, ROW, NEPA, HRS 343)	706 days	Mon 7/29/19	Mon 4/11/22	41		
43		Project Management Plan, Quality Control and Risk Management	162 days	Tue 7/30/19	Wed 3/11/20			
44		ROW Report and Surveys	90 days	Tue 7/30/19	Mon 12/2/19			
45		Soils Engineering Report	90 days	Thu 11/7/19	Wed 3/11/20	51		
46		Subsurface Utility Location, Coordination and Agreements	160 days	Tue 7/30/19	Mon 3/9/20			
47		Permanent BMP Checklist	160 days	Tue 7/30/19	Mon 3/9/20			
48		Bridge Design Recommendation Summary	70 days	Tue 7/30/19	Mon 11/4/19		49	
49		Submit Basis of Design and Task 10 Bridge Design Recommendations Summary	0 days	Mon 11/4/19	Mon 11/4/19	48	59,50	
50		CCH DTS to Review Task 10 Recommendation Summary	2 days	Tue 11/5/19	Wed 11/6/19	49	51	
51		CCH DTS Bridge Option Selection	0 days	Wed 11/6/19	Wed 11/6/19	50	52,45,305,58	
52		Prepare Basis of Design Document (BOD)	10 days	Thu 11/7/19	Wed 11/20/19	51	295,330	
53		BOD Sign-Off Presentation to CCH	0 days	Thu 12/19/19	Thu 12/19/19			
54		Environmental Documentation and Permitting	706 days	Mon 7/29/19	Mon 4/11/22	41		
55		Project Definition	336 days	Tue 7/30/19	Mon 11/9/20			
77		Technical Resource Areas (Ch. 3 and 4 of EA)	249 days	Thu 1/2/20	Mon 12/14/20			
78		Socio-Economics	162 days	Thu 1/2/20	Thu 8/13/20	41		
79		Data Collection and Affected Environment	20 days	Thu 1/2/20	Wed 1/29/20	59FS-15 days	80	
80		Impact Analysis	5 days	Thu 8/6/20	Tue 8/11/20	79,70	81	
81		Prepare Socio-Economic Section	2 days	Wed 8/12/20	Thu 8/13/20	80	112,113,114	
82		Natural Resources	162 days	Thu 1/2/20	Thu 8/13/20	41		
83		Data Collection and Affected Environment	20 days	Thu 1/2/20	Wed 1/29/20	59FS-15 days	84	
84		Impact Analysis	5 days	Thu 8/6/20	Tue 8/11/20	83,70	85	
85		Prepare Natural Resources Sections	2 days	Wed 8/12/20	Thu 8/13/20	84	112,113,114	
86		Visual Impact Assessment and Viewshed Study	162 days	Thu 1/2/20	Thu 8/13/20	41		
87		Data Collection and Affected Environment	20 days	Thu 1/2/20	Wed 1/29/20	59FS-15 days	88	
88		Impact Analysis (VIA)	5 days	Thu 8/6/20	Tue 8/11/20	87,70	89	
89		Prepare Aesthetics and Visual Impact Section	2 days	Wed 8/12/20	Thu 8/13/20	88	112,113,114	
90		Hazardous Materials	162 days	Thu 1/2/20	Thu 8/13/20	41		
91		Data Collection and Affected Environment	20 days	Thu 1/2/20	Wed 1/29/20	59FS-15 days	92	
92		Impact Analysis	5 days	Thu 8/6/20	Tue 8/11/20	91,70	93	
93		Prepare Hazardous Materials Section	2 days	Wed 8/12/20	Thu 8/13/20	92	112,113,114	

Ala Wai Canal Bridge Project								
ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Successors	
94		Noise and Vibration	162 days	Thu 1/2/20	Thu 8/13/20			
95		Data Collection and Affected Environment	20 days	Thu 1/2/20	Wed 1/29/20	59FS-15 days	96	
96		Impact Analysis	5 days	Thu 8/6/20	Tue 8/11/20	95,70	97	
97		Prepare Noise and Vibration Section	2 days	Wed 8/12/20	Thu 8/13/20	96	112,113,114	
98		Air Quality	161 days	Fri 1/3/20	Thu 8/13/20			
99		Data Collection and Affected Environment	20 days	Fri 1/3/20	Thu 1/30/20	59FS-14 days	100	
100		Impact Analysis	5 days	Thu 8/6/20	Tue 8/11/20	99,70	101	
101		Prepare Air Quality Section	2 days	Wed 8/12/20	Thu 8/13/20	100	112,113,114	
102		Cultural Resource Studies (includes Studies for Ch. 6E-8 - also see Section 106 and 6E below)	248 days	Fri 1/3/20	Mon 12/14/20			
103		Prepare Draft Archaeo and Architectural APE Map	10 days	Thu 1/23/20	Wed 2/5/20	59,154FS-6 days	155FS-2 days,156FS-2 days	
104		Draft Literature Review and Field Investigation	90 days	Fri 1/3/20	Thu 5/7/20	59FS-14 days,154FF	108,109,105	
105		Revised Literature Review and Field Investigation	122 days	Fri 5/8/20	Fri 10/23/20	104	177,211	
106		Draft Historic Resources Evaluation Report	90 days	Fri 1/3/20	Thu 5/7/20	154FF,59FS-14 days	107,109	
107		Draft Identification of Historic Properties Report	64 days	Fri 5/8/20	Wed 8/5/20	106	109,169FS+1 day,173FS+1 day	
108		Draft Cultural Impact Assessment	155 days	Fri 5/8/20	Wed 12/9/20	104	109,211	
109		Prepare Cultural Resources Section of EA	3 days	Thu 12/10/20	Mon 12/14/20	104,107,108,106		
110		HRS 343 EA/NEPA EA	381 days	Mon 10/26/20	Mon 4/11/22			
111		Admin. Draft 343 EA/NEPA EA	19 days	Mon 10/26/20	Thu 11/19/20			
118		Public Review Draft 343 EA/NEPA EA	115 days	Fri 11/20/20	Thu 4/29/21			
119		Incorporate CCH revisions and prepare Second Admin. Draft 343 EA/NEPA EA (including CIA summary)	18 days	Fri 11/20/20	Tue 12/15/20	117	120	
120		Submit Second Admin. Draft 343 EA/NEPA EA for CCH/FHWA/HDOT Review	0 days	Tue 12/15/20	Tue 12/15/20	119	121	
121		CCH/FHWA/HDOT review of Second Admin. Draft 343 EA/NEPA EA	15 days	Wed 12/16/20	Tue 1/5/21	120	122	
122		Incorporate CCH/FHWA/HDOT revisions and prepare Public Draft 343 EA/NEPA EA and revise CIA summary	27 days	Wed 1/6/21	Thu 2/11/21	121	131,123,124	
123		Final (concurrent) Review of Public Draft EA	10 days	Fri 2/12/21	Thu 2/25/21	122		
124		Prepare Notice of Availability (NOA)	1 day	Fri 2/12/21	Fri 2/12/21	122	125	
125		Submit Draft NOA for CCH Review	1 day	Mon 2/15/21	Mon 2/15/21	124	126	
126		CCH review of Draft NOA	3 days	Tue 2/16/21	Thu 2/18/21	125	127	
127		Incorporate CCH revisions to NOA	1 day	Fri 2/19/21	Fri 2/19/21	126	128	
128		Submit revised NOA for FHWA/HDOT Review	0 days	Fri 2/19/21	Fri 2/19/21	127	129	
129		FHWA/HDOT review of NOA	3 days	Mon 2/22/21	Wed 2/24/21	128	130	
130		Incorporate FHWA/HDOT revisions to NOA	2 days	Thu 2/25/21	Fri 2/26/21	129	131	
131		Complete and submit OEQC forms	0 days	Fri 2/26/21	Fri 2/26/21	122,130	132FS-1 day	
132		OEQC publication	5 days	Tue 3/23/21	Mon 3/29/21	131FS-1 day	133	
133		Public Review Period for Draft 343 EA/NEPA EA	23 days	Tue 3/30/21	Thu 4/29/21	132	136,134FS-12 days,289FS-12 days	
134		Public Meetings	2 days	Wed 4/14/21	Thu 4/15/21	133FS-12 days		
135		Final 343 EA / NEPA EA and FONSI	247 days	Fri 4/30/21	Mon 4/11/22			
136		Prepare Responses to Public and Agency Comments	20 days	Fri 4/30/21	Thu 5/27/21	133,216FF	137	
137		Submit Responses to Public and Agency Comments for CCH Review	0 days	Thu 5/27/21	Thu 5/27/21	136	138	
138		CCH review of responses to public and agency comments	10 days	Fri 5/28/21	Thu 6/10/21	137	139	
139		Incorporate CCH revisions and prepare revised responses to public and agency comments	7 days	Fri 6/11/21	Mon 6/21/21	138	140	
140		Submit Revised Responses to Public and Agency Comments for CCH/FHWA/HDOT Review	0 days	Mon 6/21/21	Mon 6/21/21	139	141	

Ala Wai Canal Bridge Project								
ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Successors	
141		CCH/FHWA/HDOT review of revised responses to public and agency comments	10 days	Tue 6/22/21	Mon 7/5/21	140	142	
142		Incorporate CCH/FHWA/HDOT revisions and prepare Final 343 EA/NEPA EA and FONSIs	7 days	Tue 7/6/21	Wed 7/14/21	141	143	
143		Submit Final 343 EA/NEPA EA and FONSIs for CCH Review	0 days	Wed 7/14/21	Wed 7/14/21	142	144	
144		CCH review of Final 343 EA/NEPA EA and FONSIs	10 days	Thu 7/15/21	Wed 7/28/21	143	145	
145		Incorporate CCH revisions and prepare revised Final 343 EA/NEPA EA and FONSIs and NOA	10 days	Thu 7/29/21	Wed 8/11/21	144	146	
146		Submit Revised Final 343 EA/NEPA EA for CCH/FHWA/HDOT Review	0 days	Wed 8/11/21	Wed 8/11/21	145	147	
147		CCH/FHWA/HDOT review of revised Final 343 EA/NEPA EA and FONSIs and NOA	10 days	Thu 8/12/21	Wed 8/25/21	146	148	
148		Incorporate CCH/FHWA/HDOT revisions to Final 343 EA/NEPA EA and FONSIs and NOA	5 days	Thu 8/26/21	Wed 9/1/21	147	149	
149		Compile consultation record (Fed compliance and MOA) and finalize Final 343 EA/ NEPA EA and	2 days	Fri 4/1/22	Mon 4/4/22	230,251,258,266,275,2	150	
150		Complete and submit OEQC forms	1 day	Tue 4/5/22	Tue 4/5/22	149	151	
151		OEQC publication	4 days	Wed 4/6/22	Mon 4/11/22	150	320,329	
152		Federal Regulations Compliance (As part of NEPA Compliance)	571 days	Fri 1/24/20	Thu 3/31/22			
153		Section 106	571 days	Fri 1/24/20	Thu 3/31/22	41		
154		Pre-consultation mtg with SHPD	0 days	Fri 1/24/20	Fri 1/24/20		155,104FF,103FS-6 days,156,106FF	
155		Prepare 106 initiation of consultation and APE Review Request Letter	3 days	Tue 2/4/20	Thu 2/6/20	154,103FS-2 days	157	
156		Verify Consulting Parties lists from Pre-consultation AA effort and with DOI and SHPD	3 days	Tue 2/4/20	Thu 2/6/20	154,103FS-2 days		
157		CCH review of 106 initiation of consultation and APE Review Request Letter	2 days	Fri 2/7/20	Mon 2/10/20	155	158	
158		FHWA/HDOT review of 106 initiation of consultation and APE Review Request Letter	10 days	Tue 2/11/20	Mon 2/24/20	157	159	
159		CCH submits 106 initiation of consultation and APE Review Request Letter	1 day	Mon 3/23/20	Mon 3/23/20	158	160,161	
160		SHPD review of 106 initiation of consultation and APE Review Request Letter	76 days	Tue 3/24/20	Tue 7/7/20	159		
161		Prepare Draft Interested Consulting Parties Letter and Newspaper Ad for 106 Consultation	20 days	Tue 3/24/20	Mon 4/20/20	159	162	
162		CCH review of Draft Interested Consulting Parties Letter and Newspaper Ad	15 days	Tue 4/21/20	Mon 5/11/20	161	163	
163		Incorporate CCH revisions and prepare Revised Interested Consulting Parties Letter and Newspa	1 day	Tue 5/12/20	Tue 5/12/20	162	164	
164		FHWA/HDOT review of Revised Interested Consulting Parties Letter and Newspaper Ad	10 days	Wed 5/13/20	Tue 5/26/20	163	165	
165		Finalize Interested Consulting Parties Letter and Newspaper Ad	2 days	Wed 5/27/20	Thu 5/28/20	164	166	
166		Place Ad in newspaper and mail letters to interested consulting parties for 106 consultation	3 days	Fri 5/29/20	Tue 6/2/20	165	167	
167		Public comment/ interested consulting parties response period for Section 106 consultation	22 days	Wed 6/3/20	Thu 7/2/20	166	168	
168		Conduct Section 106 consultations with interested consulting parties and address comments	120 days	Fri 7/3/20	Wed 12/16/20	167		
169		FHWA/HDOT/CCH review of Identification of Historic Properties Report	10 days	Fri 8/7/20	Wed 8/19/20	107FS+1 day	170	
170		Incorporate FHWA/HDOT/CCH revisions and prepare Revised Identification of Historic Properties	5 days	Thu 8/20/20	Wed 8/26/20	169	171FS+17 days	
171		CCH submits to SHPD Identification of Historic Properties Report	1 day	Fri 11/6/20	Fri 11/6/20	170FS+17 days	172	
172		SHPD review and approval of ID of Historic Properties Report	30 days	Mon 11/9/20	Fri 12/18/20	171		
173		Prepare Architectural Resources Effect Evaluation Memo	80 days	Fri 8/7/20	Wed 11/25/20	107FS+1 day	174	
174		CCH review of Architectural Effect Evaluation Memo	10 days	Thu 11/26/20	Wed 12/9/20	173	176,180,195,179	
175		Meeting with Consulting Parties	0 days	Mon 10/19/20	Mon 10/19/20			
176		Incorporate CCH revisions and prepare Revised Architectural Effect Evaluation Memo	3 days	Thu 12/10/20	Mon 12/14/20	174	211	
177		Prepare Supplemental Archaeological Resources Evaluation Report	8 days	Mon 10/26/20	Wed 11/4/20	105	178	
178		CCH review of Supplemental Archaeological Resources Evaluation Report	10 days	Thu 11/5/20	Wed 11/18/20	177	180,195,179	
179		Incorporate CCH revisions and prepare Revised Supplemental Archaeological Resources Evaluati	3 days	Thu 12/10/20	Mon 12/14/20	174,178	211	
180		Prepare Draft Effect Determination Letter	5 days	Thu 12/10/20	Wed 12/16/20	174,178	181	
181		CCH review of Draft Effect Determination Letter	7 days	Thu 12/17/20	Fri 12/25/20	180	182,185	

Ala Wai Canal Bridge Project								
ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Successors	
182		Incorporate CCH revisions and prepare Final Effect Evaluation Letter	1 day	Mon 12/28/20	Mon 12/28/20	181	183	
183		CCH submits Effect Determination Letter and supporting documentation to FHWA/HDOT for review	0 days	Mon 12/28/20	Mon 12/28/20	182	184	
184		FHWA/HDOT review of Project Effect Determination Letter and supporting documentation	10 days	Tue 12/29/20	Mon 1/11/21	183	186	
185		Meeting with SHPD regarding no-adverse effect to Malia	0 days	Tue 1/19/21	Tue 1/19/21	181	186	
186		Incorporate FHWA/HDOT revisions and prepare revised Effect Determination Letter and support	17 days	Tue 1/19/21	Wed 2/10/21	184,185	188,187	
187		CCH HDOT final review of determination letter	5 days	Thu 2/11/21	Wed 2/17/21	186	188,189	
188		FHWA signs Determination Letter	10 days	Thu 2/18/21	Wed 3/3/21	186,187	190	
189		Meeting with Consulting Parties	0 days	Mon 2/22/21	Mon 2/22/21	187		
190		FHWA submits to SHPD Project Effect Determination Letter and supporting documentation for review	0 days	Wed 3/3/21	Wed 3/3/21	188	191,192,194,195	
191		SHPD review and concurrence on Project Effect	44 days	Thu 3/4/21	Tue 5/4/21	190	203,200	
192		Notify ACHP of Project Effect Determination and invite ACHP to participate in consultation	0 days	Wed 3/3/21	Wed 3/3/21	190	193	
193		ACHP review of Project Effect	11 days	Thu 3/4/21	Thu 3/18/21	192	200	
194		Preliminary Resolution of Effects with consulting parties (Meetings with FHWA, HDOT, SHPD, ACHP)	20 days	Thu 3/4/21	Wed 3/31/21	190	197	
195		Prepare Prelim. Draft MOA with proposed mitigation	90 days	Thu 3/4/21	Wed 7/7/21	174,178,190	196	
196		CCH review of Draft MOA with proposed mitigation	25 days	Thu 7/8/21	Wed 8/11/21	195	197	
197		Incorporate CCH revisions and prepare Revised Draft MOA	15 days	Thu 8/12/21	Wed 9/1/21	196,194	198	
198		FHWA/HDOT/CCH review of Revised Draft MOA	30 days	Thu 9/2/21	Wed 10/13/21	197	199,203	
199		Incorporate FHWA/HDOT/CCH revisions and prepare Final Draft MOA	15 days	Thu 10/14/21	Wed 11/3/21	198	200	
200		Submit Final Draft MOA to SHPD and ACHP for review	1 day	Thu 11/4/21	Thu 11/4/21	199,191,193	201	
201		SHPD and ACHP review Final Draft MOA	30 days	Fri 11/5/21	Thu 12/16/21	200	202	
202		Incorporate SHPD and ACHP revisions and prepare Final MOA	10 days	Fri 12/17/21	Thu 12/30/21	201		
203		CCH Corporate Counsel review of Final MOA	60 days	Thu 10/14/21	Wed 1/5/22	191,198	204,205,206,207,208	
204		Obtain signatures on MOA	60 days	Thu 1/6/22	Wed 3/30/22	203	209	
209		Final MOA	1 day	Thu 3/31/22	Thu 3/31/22	204	149	
210		Ch. 343 6E (State)	70 days	Tue 12/15/20	Mon 3/22/21			
217		Section 4(f)	153 days	Mon 8/10/20	Wed 3/10/21	41		
218		Determine appropriate 4(f) compliance approaches (park and canal)	20 days	Mon 8/10/20	Fri 9/4/20	70	219,220	
219		Prepare Draft 4(f) temporary occupancy for canal	40 days	Mon 9/7/20	Fri 10/30/20	218	222	
220		Prepare Draft 4(f) de minimis evaluation for park	40 days	Mon 9/7/20	Fri 10/30/20	218		
221		Preliminary Meetings with OWJs (BLNR/DPR - park and SHPD/DLNR - canal), at meeting discuss 4(f)	420 days	Tue 11/10/20	Mon 12/7/20	75FS+10 days	225	
222		Submit Draft 4(f) temporary occupancy and de minimis evaluations for CCH Review	1 day	Mon 11/2/20	Mon 11/2/20	219	223	
223		CCH Review of Draft 4(f) temporary occupancy and de minimis evaluations	10 days	Tue 11/3/20	Mon 11/16/20	222	224	
224		Incorporate CCH revisions and prepare revised Draft 4(f) temporary occupancy and de minimis evaluation	33 days	Tue 11/17/20	Thu 12/31/20	223	225	
225		Submit revised Draft 4(f) temporary occupancy and de minimis evaluations for FHWA/HDOT/CCH review	0 days	Thu 12/31/20	Thu 12/31/20	224,221	226	
226		FHWA/HDOT/CCH Review of Revised Draft 4(f) temporary occupancy and de minimis evaluation	15 days	Fri 1/1/21	Thu 1/21/21	225	227	
227		Incorporate FHWA/HDOT/CCH revisions and prepare Final 4(f) Evaluations	5 days	Fri 1/22/21	Thu 1/28/21	226	228	
228		Prepare OWJs (BLNR/DPR and SHPD/DLNR) Consultation letters	5 days	Fri 1/29/21	Thu 2/4/21	227	229	
229		Meetings with OWJs for concurrence (BLNR/DPR and SHPD/DLNR)	22 days	Fri 2/5/21	Mon 3/8/21	228	230	
230		OWJs Concurrence	1 day	Tue 3/9/21	Tue 3/9/21	229	149,231	
231		FHWA finalize 4(f) evaluation	1 day	Wed 3/10/21	Wed 3/10/21	230		
232		Section 7 Endangered Species Act	135 days	Wed 8/26/20	Tue 3/2/21	40		
233		prepare non-federal rep designation letter	7 days	Wed 8/26/20	Thu 9/3/20	70FS+15 days	234	

Ala Wai Canal Bridge Project								
ID	 Task Mode	Task Name	Duration	Start	Finish	Predecessors	Successors	
234		CCH review of non-fed rep designation letter	9 days	Fri 9/4/20	Wed 9/16/20	233	235	
235		CCH submit non-fed rep designation letter to FHWA/HDOT for review	0 days	Wed 9/16/20	Wed 9/16/20	234	236	
236		FHWA/HDOT review of non-fed rep designation letter	5 days	Thu 9/17/20	Wed 9/23/20	235	237	
237		FHWA submit non-federal rep designation letter to USFWS and NMFS	0 days	Wed 9/23/20	Wed 9/23/20	236	238,252	
238		prepare USFWS species list request letter	9 days	Thu 9/24/20	Tue 10/6/20	237	239	
239		CCH review of species list request letter	5 days	Wed 10/7/20	Tue 10/13/20	238	240	
240		CCH submit non-fed rep designation letter to FHWA/HDOT for review	0 days	Tue 10/13/20	Tue 10/13/20	239	241	
241		HDOT review of species list request letter	5 days	Wed 10/14/20	Tue 10/20/20	240	242	
242		Incorporate HDOT revisions	0 days	Tue 10/20/20	Tue 10/20/20	241	243	
243		CCH submit to USFWS species list request letter	2 days	Wed 10/21/20	Thu 10/22/20	242	244	
244		USFWS review and response to species request list	36 days	Fri 10/23/20	Fri 12/11/20	243	245	
245		Prepare letter for USFWS (not likely to adversely affect)	10 days	Mon 12/14/20	Fri 12/25/20	244	246	
246		CCH review of USFWS letter	10 days	Mon 12/28/20	Fri 1/8/21	245	247	
247		Incorporate CCH revisions to USFWS letter	2 days	Mon 1/11/21	Tue 1/12/21	246	248	
248		FHWA/HDOT review of USFWS letter	10 days	Wed 1/13/21	Tue 1/26/21	247	249	
249		Incorporate FHWA/HDOT revisions to USFWS letter	2 days	Wed 1/27/21	Thu 1/28/21	248	250	
250		FHWA submit letter to USFWS	1 day	Fri 1/29/21	Fri 1/29/21	249	251	
251		USFWS review and concurrence	22 days	Mon 2/1/21	Tue 3/2/21	250	149	
252		Prepare letter for NMFS (no effect)	25 days	Thu 9/24/20	Wed 10/28/20	237	253	
253		CCH review of NMFS no effect letter	30 days	Thu 10/29/20	Wed 12/9/20	252	254	
254		Incorporate CCH revisions to NMFS letter	18 days	Thu 12/10/20	Mon 1/4/21	253	255	
255		HDOT review of NMFS no effect letter	10 days	Tue 1/5/21	Mon 1/18/21	254	256	
256		Incorporate HDOT revisions to NMFS letter	2 days	Tue 1/19/21	Wed 1/20/21	255	257	
257		CCH submit to FHWA NMFS no effect letter	1 day	Thu 1/21/21	Thu 1/21/21	256	258	
258		FHWA review and concurrence	10 days	Fri 1/22/21	Thu 2/4/21	257	149	
259		Section 9 Rivers and Harbors Act (assumes exception met)	155 days	Mon 5/11/20	Thu 12/10/20			
260		Contact USCG DBO	1 day	Mon 5/11/20	Mon 5/11/20	65		
261		Prepare 23 USC 144c(2) exceptions to USCG Bridge Permits form	7 days	Thu 8/6/20	Thu 8/13/20	70	262	
262		CCH review of 144c USCG Bridge Permit exception form	10 days	Fri 8/14/20	Thu 8/27/20	261	263	
263		FHWA review of 144c USCG Bridge Permit exception form	50 days	Fri 8/28/20	Thu 11/5/20	262	264	
264		Incorporate FHWA revisions to 144c USCG Bridge Permit exception form	2 days	Fri 11/6/20	Mon 11/9/20	263	265,268,271	
265		CCH/FHWA submit 144c USCG Bridge Permit exception form	1 day	Tue 11/10/20	Tue 11/10/20	264	266	
266		USCG review and concurrence	22 days	Wed 11/11/20	Thu 12/10/20	265	149	
267		Section 404, Clean Water Act	56 days	Tue 11/10/20	Tue 1/26/21	41		
268		Prepare no permit needed email for USACE Regulatory	34 days	Tue 11/10/20	Fri 12/25/20	264	269	
269		USACE review and concurrence	22 days	Mon 12/28/20	Tue 1/26/21	268	149	
270		Section 401, Clean Water Act, Water Quality Certification	45 days	Tue 11/10/20	Mon 1/11/21	41		
271		Prepare no permit needed letter for DOH	10 days	Tue 11/10/20	Mon 11/23/20	264	272	
272		CCH review of DOH letter	10 days	Tue 11/24/20	Mon 12/7/20	271	273	
273		Incorporate CCH revisions to DOH letter	2 days	Tue 12/8/20	Wed 12/9/20	272	274	
274		CCH submit DOH letter	1 day	Thu 12/10/20	Thu 12/10/20	273	275	
275		DOH review and concurrence	22 days	Fri 12/11/20	Mon 1/11/21	274	149	

Ala Wai Canal Bridge Project								
ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Successors	
276		Permits	459 days	Mon 7/29/19	Thu 4/29/21			
277		SMA Permit	459 days	Mon 7/29/19	Thu 4/29/21	41		
278		Prepare SMA Permit (not needed)	0 days	Mon 7/29/19	Mon 7/29/19	41		
279		Draft SMA Permit	0 days	Mon 7/29/19	Mon 7/29/19	41		280
280		HDOT Review of Permit	0 days	Mon 7/29/19	Mon 7/29/19	279		281
281		Revise Draft Permit as necessary	0 days	Mon 7/29/19	Mon 7/29/19	280		282
282		SMA Determination	0 days	Mon 7/29/19	Mon 7/29/19	281		
283		CZM Permit (Assumed Not Required in this Area, Not in Scope)	0 days	Mon 7/29/19	Mon 7/29/19	41		
284		Prepare CZM Letter	0 days	Mon 7/29/19	Mon 7/29/19	41		287,285
285		DOT Review of CZM	0 days	Mon 7/29/19	Mon 7/29/19	284		286
286		Revise CZM letter	0 days	Mon 7/29/19	Mon 7/29/19	285		
287		CZM Determination	0 days	Mon 7/29/19	Mon 7/29/19	284		
288		Noise Variance (Assume @ 60%)	12 days	Wed 4/14/21	Thu 4/29/21	41		
289		Public meeting for noise variance	2 days	Wed 4/14/21	Thu 4/15/21	133FS-12 days		290
290		Noise Variance Determination	10 days	Fri 4/16/21	Thu 4/29/21	289		
291		NPDES	30 days	Tue 7/30/19	Mon 9/9/19	41		
292		Review NPDES Permit	30 days	Tue 7/30/19	Mon 9/9/19	41		
293		Parking Study and Management Plan	242 days	Mon 1/6/20	Mon 12/7/20	41		
294		Parking Study and Management Plan	250 days	Mon 1/6/20	Thu 12/17/20	41FS+90 days		
295		Design Visualization and Rendering (15%-30%) (Need tied to Tech Studies, complete end Oct.)	21 days	Thu 11/21/19	Thu 12/19/19	41,52		
296		Design Visualization and Rendering (15%-30%)	21 days	Thu 11/21/19	Thu 12/19/19	41		
297		Topographic Survey	100 days	Tue 7/30/19	Mon 12/16/19	41		
298		Prepare topographic survey	100 days	Tue 7/30/19	Mon 12/16/19	41		
299		ROW Study	5 days	Mon 3/9/20	Fri 3/13/20			
300		Abstracting and Appraisal for ROW	2 days	Mon 3/9/20	Tue 3/10/20	306		301
301		ROW Report, Impact Plan and Estimate	3 days	Wed 3/11/20	Fri 3/13/20	300		303
302		ROW Certification (move to 30%)	0 days	Fri 3/13/20	Fri 3/13/20			
303		Negotiations, condemnation, acquisition and ROW exhibits as necessary	0 days	Fri 3/13/20	Fri 3/13/20	301		309
304		Engineering Design (Plans, Specifications and Estimates) 15% to 30% (See task 1, Phase 3 for 30% to	115 days	Mon 11/18/19	Fri 4/24/20			
305		Construction Plans, technical specifications, basis of design	80 days	Mon 11/18/19	Fri 3/6/20	51		306
306		30% Documents Submission	0 days	Fri 3/6/20	Fri 3/6/20	305		307,308,312,300,321
307		30% Design Review	14 days	Tue 4/7/20	Fri 4/24/20	306		
308		Design Visualization and Rendering (30%)	14 days	Tue 4/28/20	Fri 5/15/20	306		
309		Utility Location & Agreements	30 days	Fri 3/13/20	Thu 4/23/20	303		
310		60% Bridge Design	146 days	Thu 12/10/20	Thu 7/1/21			
311		60% Bridge Design Submission	94 days	Thu 12/10/20	Tue 4/20/21			
312		Construction Plans, technical specifications, basis of design	80 days	Thu 12/10/20	Wed 3/31/21	306		313
313		60% Bridge Design Submission	0 days	Wed 3/31/21	Wed 3/31/21	312		316,317,318,315,314,319,325
314		Design Visualization and Rendering (60%)	14 days	Thu 4/1/21	Tue 4/20/21	313		
315		Review Bridge Design Submission	14 days	Thu 4/1/21	Tue 4/20/21	313		
316		Design Exception	30 days	Thu 4/1/21	Wed 5/12/21	313		

Ala Wai Canal Bridge Project									
ID	<div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div></div> <div>Task Mode</div>	Task Name	Duration	Start	Finish	Predecessors	Successors		
317		Transportation Management Plan (TMP)	60 days	Thu 4/1/21	Wed 6/23/21	313			
318		Value Engineering	60 days	Thu 4/1/21	Wed 6/23/21	313			
319		Wind Vibration Analysis	66 days	Thu 4/1/21	Thu 7/1/21	313			
320		PE-2 (90 & 100% Design, Project Management Services)	581 days	Mon 2/1/21	Mon 4/24/23	151			
321		DTS Submit request for Project Authorization	1 day	Tue 4/12/22	Tue 4/12/22	306		322	
322		HWY-SM Processing of Funding Obligation	7 days	Wed 4/13/22	Thu 4/21/22	321		323	
323		FHWA Obligation of PE-2 (Sub Award PoP End Date for PE-1)	22 days	Fri 4/22/22	Mon 5/23/22	322		329	
324		M4 Submission for PE-2 Amendment	371 days	Mon 2/1/21	Mon 7/4/22				
325		Requisition (RQS) for Amendment	30 days	Mon 2/1/21	Fri 3/12/21	313		326,327	
326		Fee and Scope Discussions for PE-2	60 days	Mon 3/15/21	Fri 6/4/21	325			
327		FHWA Rev and Concur of Negot Cost and docs	15 days	Mon 3/15/21	Fri 4/2/21	325		328	
328		Draft Contract Amendment	60 days	Mon 4/5/21	Fri 6/25/21	327		329	
329		PE-2 (90 & 100% Design) NTP	30 days	Tue 5/24/22	Mon 7/4/22	328,323,151		331,333,341,340	
330		Landscape Maintenance, UD, GSI and Tree Assessment Report (follow up on Tree Risk Assessment with F	0 days	Mon 7/4/22	Mon 7/4/22	41,52			
331		Landscape Maintenance, UD, GSI and Tree Assessment Report	0 days	Mon 7/4/22	Mon 7/4/22	329			
332		90% Design Submittal	60 days	Tue 7/5/22	Mon 9/26/22			335	
333		Construction Plans, technical specifications, basis of design	60 days	Tue 7/5/22	Mon 9/26/22	329		334	
334		90% Submission	0 days	Mon 9/26/22	Mon 9/26/22	333			
335		90% Design Review (3rd party)	40 days	Tue 9/27/22	Mon 11/21/22	332		336,337	
336		100% Design Submittal	100 days	Tue 11/22/22	Mon 4/10/23	335			
337		Construction Plans, technical specifications, basis of design	60 days	Tue 11/22/22	Mon 2/13/23	335		338	
338		100% Submission	0 days	Mon 2/13/23	Mon 2/13/23	337		339	
339		100% Design Review (3rd party)	40 days	Tue 2/14/23	Mon 4/10/23	338		344,343,342	
340		Project Management	210 days	Tue 7/5/22	Mon 4/24/23	329			
341		Prepare PE2 Critical Path Schedule in MS Project	11 days	Tue 7/5/22	Tue 7/19/22	329			
342		Pre-Bid Inspection Services	10 days	Tue 4/11/23	Mon 4/24/23	339			
343		CON Authorization	128 days	Tue 4/11/23	Thu 10/5/23	339			
356		CON	720 days	Fri 10/6/23	Thu 7/9/26	355			



OahuMPO TAP Sponsorship Agreement

(Must be submitted with each application filed by any organization that is not an eligible recipient as defined on page 7 of the OahuMPO Transportation Alternatives Program Guide: Local Governments, Regional Transportation Authorities, or Transit Agencies)

Eligible Applicant or Sponsor Agency affirms its responsibility for the development and implementation of the project, including paying in full for qualified project expenses prior to applying for reimbursement of the Federal-aid eligible share. The Eligible Applicant or Sponsor Agency affirms that it will appoint a knowledgeable and qualified project manager who will see the project through to completion. The Eligible Applicant or Sponsor Agency affirms that it is willing and able to provide project oversight and maintenance of the proposed improvement at its sole cost and expense. Eligible Applicant or Sponsor Agency shall provide a statement of certification showing experience with Federal-aid grant oversight.

Project: Ala Wai Bridge Project

Eligible Applicant or Sponsor: City & County of Honolulu, Department of Transportation Services

Signature of Eligible Applicant

Signature: *J. Roger Morton* Date: 2/18/2021

Printed Name and Title: J. Roger Morton, Director Designate

Signature of Not-for-Profit Organization Partnered with Eligible Applicant

Organization: _____

Signature: _____ Date: _____

Printed Name and Title: _____

Applications from not-for-profit organizations must include this completed agreement with both required signatures at the time of application submittal.

Six-Year CIP and Budget FY 2021-2026**ALA WAI BRIDGE**

Project:	2020105	Function:	Highways and Streets	Council:	05
Priority No.:	1	Program:	Bridges, Viaducts And Grade Separation	Nbrd Board:	08
TMK:		Department:	Design and Construction	Senate:	
				House:	
				Other:	

Description: Design, construct and inspect a new pedestrian and bicycle bridge over the Ala Wai Canal between the Waikiki, Ala Moana, and McCully/Moiliili neighborhoods.

Justification: The primary purpose is to provide additional access across the Ala Wai Canal between Ala Moana Boulevard and the Manoa/Palolo Stream benefiting adjacent communities.

Use of Funds: Design and construct a pedestrian and bicycle bridge over the Ala Wai Canal.

dollars in thousands

Phase	Fund Src	Expend Encumb	Appn 2019	Appn 2020	2021	2022	2023	2024	2025	2026	Total 6 Years	Future Years
DGN	FG	0	0	0	880	0	0	0	0	0	880	1,096
DGN	HI	0	0	0	350	0	0	0	0	0	350	274
CONST	FG	0	0	0	0	0	0	0	0	0	0	15,200
CONST	HI	0	0	0	500	0	0	0	0	0	500	3,800
INSP	HI	0	0	0	0	0	0	0	0	0	0	6,000
Total		0	0	0	1,730	0	0	0	0	0	1,730	26,370

Estimated Implementation Schedule		
Phase	Start Date	End Date
DGN	7/1/2020	6/30/2022
CONST	7/1/2022	12/31/2025

Annual Effect on Operating Budget	
No of Positions	0
Salary Cost	0
Cur Exp & Equip	0
Maint Cost	0
Useful Life	0

Funded in FY 21 Ord. 20-23

L: Land

P: Planning

D: Design

C: Construction

I: Inspection

R: Relocation

DTS' PROPOSED 6-YEAR CIP AND BUDGET FY 2022-2027
(x \$1,000)

Item No.	CIP No.	Priority Group	Group Rank	DDC Budget	DDC Division	DTS Division	Project	Work Phase	Funding Source	FY 2021 Request	FY 2021 Actual Ord. 20-23	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	6-Year CIP Total	FY 2021 Est. Start Date	FY 2021 Est. Finish Date	Comments									
1	2017073	HIGH	1	Yes	FD	TPD	Ala Moana Transit Plaza - Transit Oriented Development: Acquire land, plan, design, construct, inspect and relocate pedestrian, bicycling, and transit connections in the areas surrounding the rail intermodal centers.	L	GI	\$32,000	\$4,500							\$0			DDC OIC to DTS for FY 2020 funds is pending.									
								P	GI	\$500		\$1,000						\$1,000												
								D	GI	\$2,500		\$2,000						\$2,000												
								C	GI	\$12,000								\$0												
								I	GI	\$1								\$0												
R	GI	\$2,000	\$500							\$0																				
Sub-Total										\$49,001	\$5,000	\$3,000	\$0	\$0	\$0	\$0	\$3,000													
2	1978005	HIGH	2	No		TMD	Bus and Handi-Van Acquisition Program: Procure vehicles to provide fixed route and paratransit revenue service.	E	FG	\$14,200	\$14,200	\$15,820	\$18,868	\$19,245	\$19,245	\$19,245		\$92,423	7/1/2020	6/30/2022	72 40-ft. buses (\$83,160,000)+ 24 60-ft. buses (\$25,401,600) + 31 Handi-Vans (\$4,956,900)									
								E	GI	\$21,000								\$0												
								E	HI	\$3,600	\$16,600	\$97,699	\$44,717	\$54,811	\$64,811	\$64,811		\$326,849												
								I	FG	\$39								\$39												
								I	HI	\$10								\$10												
Sub-Total										\$38,849	\$30,800	\$113,568	\$63,585	\$74,056	\$84,056	\$84,056	\$0	\$419,321												
3	2020105	HIGH	3	Yes	CD	TPD	Ala Wai Bridge Project: Design, construct, inspect to provide a bridge over the Ala Wai Canal between the Waikiki, Ala Moana, and McCully/Moiliili neighborhoods. The new access is intended for pedestrian, bicycle, and/or emergency use.	D	GI	\$350	\$350							\$0	9/1/2021	8/31/2022	PE2 - FY22 CON - end of FY22 (3 years) Advanced construction Per Administration keep in DDC budget DDC believes project should remain with DTS									
								D	HI			\$366						\$366												
								D	FG	\$880	\$880	\$1,464						\$1,464												
								C	HI	\$1,000	\$500	\$2,267	\$2,267	\$2,267		\$6,801														
								C	FG	\$0		\$9,067	\$9,067	\$9,067		\$27,201														
								I	HI	\$0		\$1,700	\$1,700	\$1,700		\$5,100														
								I	FG	\$0						\$0														
								Sub-Total										\$2,230	\$1,730	\$14,864		\$13,034	\$13,034	\$0	\$0	\$0	\$40,932			
4		HIGH	4	Yes	FD	TTD	Signal Engineering Devices at Various Locations: Plan, design, construct, inspect and purchase equipment for traffic engineering devices at various locations around Oahu as well as locations determined through the Complete Streets planning process.	P	HI	\$55		\$5	\$5	\$5	\$5	\$5		\$75	7/1/2020	6/30/2022	Locations include: Aina Koa/Malia Speed Table, IDIQ									
								D	HI	\$400		\$450	\$100	\$100	\$100		\$1,150													
								C	HI	\$300		\$300	\$330	\$330	\$330		\$1,590													
								I	HI	\$50		\$50	\$60	\$60	\$60		\$280													
								E	HI	\$5		\$5	\$5	\$5	\$5		\$25													
								Sub-Total										\$810	\$810	\$500		\$500	\$500	\$0		\$3,120				
								6	1996306	HIGH	6	No		TED	Traffic Improvements at Various Locations: Plan, design, construct and inspect for traffic improvements at various locations around Oahu, including Complete Streets pedestrian safety features.	L	HI	\$20	\$1								\$0	7/1/2020	12/31/2022	Locations include: Kalaheo Ave/Kailua Rd Improvements Contingency, Manager's Dr/Hiapo St Roundabout Design, Keapula (Anoi Rd) Roundabout Design
																P	HI	\$10	\$16	\$5		\$10	\$10	\$10	\$10		\$45			
D	FG	\$400	\$400	\$840	\$80	\$80	\$80									\$80		\$1,160												
D	HI	\$100	\$110	\$210	\$80	\$80	\$80									\$80		\$530												
C	FG	\$5,600	\$5,600	\$800	\$350	\$350	\$350									\$350		\$2,200												
C	HI	\$1,400	\$1,670	\$200	\$350	\$350	\$350									\$350		\$1,600												
I	FG	\$816	\$816	\$400														\$400												
I	HI	\$204	\$227	\$100	\$80	\$80	\$80									\$80		\$420												
E	HI		\$5							\$0																				
Sub-Total										\$8,550	\$8,845	\$2,555	\$950	\$950	\$950	\$950	\$0	\$6,355												
7	2020072	HIGH	7	Yes	MED	TED	Municipal Parking Facilities Improvement: Design, construct, and inspect various improvements to the City's municipal parking lots. The City owns 16 municipal lots that provide around 2,900 parking stalls.	P	HI									\$0												
								D	HI	\$10	\$10	\$260	\$10					\$270												
								C	HI	\$450	\$430	\$1,230	\$750					\$1,980												
								I	HI	\$10	\$10							\$210												
								E	HI									\$0												
Sub-Total										\$470	\$450	\$1,600	\$860	\$0	\$0	\$0	\$0	\$2,460												
8	1979063	HIGH	8	No		TED	Bikeway Improvements: Acquire land, plan, design, construct, inspect and purchase equipment for bikeway improvements. This is an on-going island-wide program for the implementation of bicycle facilities at various locations.	L	BK	\$0								\$0	Locations include: Goodale Avenue Multi-Use Path, Isenberg Road Diet, Keolu Drive Bike Lane Extension, Ke Ala Pupukea Planning, Haleiwa Multi-Use Path											
								P	BK	\$200	\$200	\$400						\$400												
								D	BK	\$600	\$100	\$300						\$300												
								D	FG									\$0												
								C	BK	\$700	\$300	\$200	\$430	\$430	\$430	\$430		\$1,920												
								C	FG	\$2,400	\$800	\$520	\$520	\$520	\$520	\$520		\$2,080												
								I	BK	\$250	\$150	\$100	\$130	\$130	\$130	\$130		\$620												
								I	FG	\$200	\$200	\$120	\$120	\$120	\$120	\$120		\$480												
E	BK	\$0		\$0	\$0	\$0	\$0	\$0		\$0																				
Sub-Total										\$4,350	\$1,750	\$1,000	\$1,200	\$1,200	\$1,200	\$1,200	\$0	\$5,800												
9	2019026	HIGH	9	No		ADMIN	Intermodal Connectivity Improvements: Plan, design, construct, and inspect transit connections in the areas surrounding the rail intermodal centers and complete street connectivity. Request funding for planning, design, and construction for multimodal safety improvements for UH West Oahu Station, Pearl Highlands Station, Aloha Stadium Station, Lagoon Drive Station, and Chinatown Station.	L	GI	\$100	\$100							\$0			Locations include: UH West Oahu, Aloha Stadium Station - Pearl Harbor Ped/Bikeway Extension; Kekaulike Street Improvement; Pearl Highlands Station Access Improvements; Lagoon Drive Station Access Improvements									
								P	GI	\$200	\$200							\$3,200												
								D	GI	\$100	\$800	\$1,600	\$4,200	\$3,500	\$2,000		\$7,000	\$18,300												
								C	FG		\$20,000						\$0													
								C	GI	\$10,800	\$10,800	\$4,500	\$2,000	\$17,000	\$22,000	\$15,000		\$60,500												
								I	FG		\$2,000						\$0													
Sub-Total										\$2,500	\$2,500	\$1,000		\$1,200	\$1,000		\$3,200													
Sub-Total										\$13,700	\$36,400	\$7,100	\$8,900	\$22,200	\$25,000	\$15,000	\$7,000	\$85,200												

PROJECT MANAGEMENT PLAN (PMP)**SC-DTS-1900086****Ala Wai Bridge Federal-Aid Project No. TAP-0300(159)
Honolulu, Hawaii****City & County of Honolulu
Department of Transportation Services (DTS)
HDR 10178568 / HNL 2019027****Distribution List**

Name	Role
Clifford Lum	Client Manager/PIC
James McConnell	Design & Construction Lead/PM
Kai Nani Kraut	Environmental & Planning Lead
Linda Fisher	Environmental Lead
Cathy LaFata	Federal Transportation Lead
Natalie Bogan	Federal Transportation
Linda Frysztaeki	Transportation Planning Lead
Michael Hunnemann	Structural Lead
Brandon Ching	Structural
Schaun Valdovinos	Structural Consulting
Devin Nakayama	Geotechnical Lead
Aaron Kreitzer	Civil Lead
Sally Maddock	Architectural Lead
Trevor Hollins	Lighting Design
Russell Chung	Landscape Architecture Lead
Ayako Nakasato	Project Coordinator
Jessica Shimazu	Deputy PM

PMP Updates

Revision	Date	Description
0	08/28/2019	
1	03/12/2020	Revised Distribution List and Team to reflect 30% Design Team.
2	02/15/2021	Revised to reflect scope of work in PE1 MOD3

SC-DTS-1900086
Ala Wai Bridge
Federal-Aid Project No. TAP-0300(159)
Honolulu, Hawaii

City & County of Honolulu (CCH)
Department of Transportation Services (DTS)
HDR 10178568 / HNL 2019027

Revised 2/15/2021

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PURPOSE OF PROJECT MANAGEMENT PLAN

This Project Management Plan (PMP) defines and identifies project objectives, schedule, communication links among team members including the clients, and services provided by HDR for the Project. This PMP will be revised to update during the project as developments occur, and will be used throughout the life of the project.

This plan has five main purposes:

- To identify the Project's management procedures and organizational structure.
- To provide a guide for the interaction of agencies, organizations and staff within the Project
- To provide a consolidated timeline of activities and complete master schedule.
- To define communication processes and protocols
- To outline opportunities and risks, including a risk management approach

The PMP is a dynamic document that will be reviewed regularly and updated on an as-needed basis. When a revision is made, date and descriptions of changes must be provided in the first page of this PMP and an e-mail notification must be issued to the project team.

Project Information:

General Project Information	
Contract Number:	SC-DTS-1900086
Project Name:	Ala Wai Bridge
Project Location:	Honolulu, Hawaii
Client:	City & County of Hawaii - DTS

HDR Project Information	
Cost Center:	10059
Project Name:	10178568 - 2019027CCHDTS AlaWaiPedBridge
HDR Project Number:	10178568
HNL Project Number:	2019027

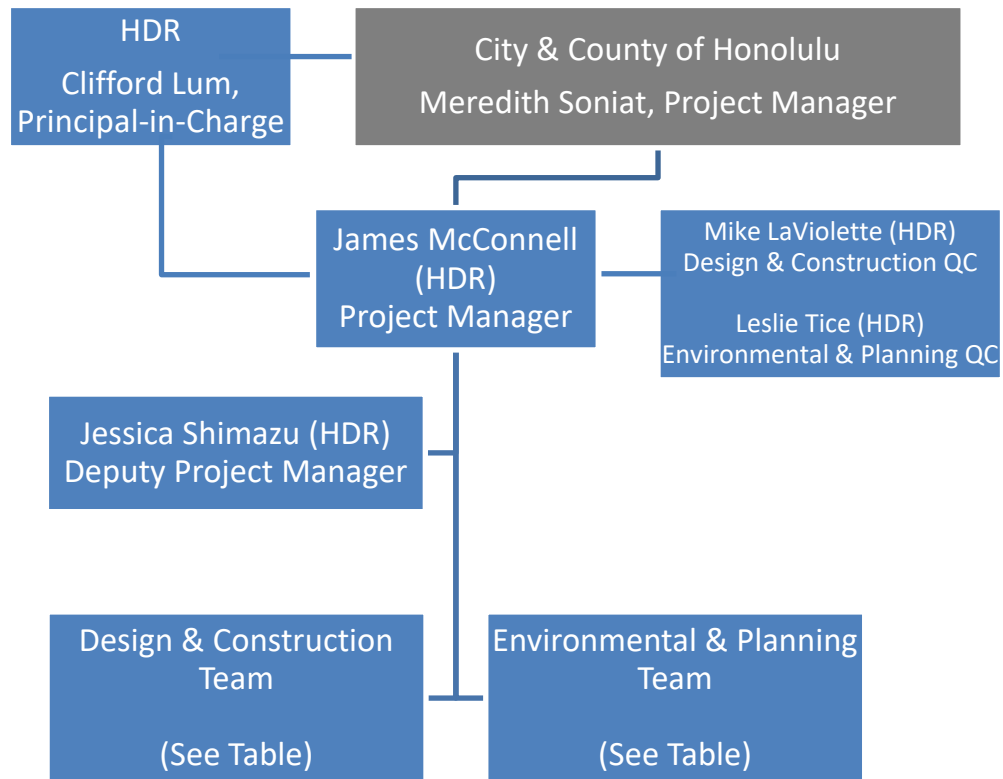
Project Description:

HDR is the prime to the City & County of Honolulu – DTS Contract No. SC-DTS-1900086. This project involves the completion of preliminary design and engineering to construct the Least Environmentally Damaging Practicable Alternative (LEDPA) as identified in the Ala Wai Bridge Alternatives Analysis (AA). Scope of work includes project management planning, quality control and risk management; topographic surveys, technical studies, soils engineering work, public engagement, stakeholder outreach, planning studies, and environmental permitting as required by National Environmental Policy Act (NEPA) and Hawaii Environmental Policy Act (HRS 343).

PROJECT TEAM

Project Organization:

Figure 1 – Project Team/Organization



Client Staff

Organization/Address	Name
City & County of Honolulu Dept. of Transportation Services 650 South King St. Honolulu, HI 96813	Meredith Soniat, Project Manager
City & County of Honolulu Dept. of Transportation Services 650 South King St. Honolulu, HI 96813	Chris Clark, Chief Planner
City & County of Honolulu Dept. of Transportation Services 650 South King St. Honolulu, HI 96813	Roger Morton Director

Environmental & Planning Team

Organization/Role	Name
QRSE, LLC Environmental & Planning Lead	Kai Nani Kraut
HDR Federal Transportation	Cathy La Fata
HDR Federal Transportation	Natalie Bogan
HDR Environmental Project Manager	Linda Fisher
HDR Safety Analysis	Elizabeth Wemple
Honua Consulting Archaeologist	Trisha Watson
Mason Architects Architectural Historian	Polly Tice
PBR Cultural Sustainability Planner	Ramsay Taum
PBR Environmental Planner	Catie Cullison
Weslin Consulting Services, Inc. Transportation Planner	Linda Frysztacki

Design & Construction Team

Organization/Role	Name
Austin Tsutsumi & Associates Transportation Engineer	Matt Nakamoto
Austin Tsutsumi & Associates Transportation Engineer	DeAnna Hayashi
ControlPoint Surveying, Inc. Surveyor	Kevin Yeh

Appendix D: Project Management Plan

Organization/Role	Name
Hawaii Geophysical Services GPR Surveyor	Paul Vierling
HDR Project Manager	James McConnell
HDR Deputy Project Manager	Jessica Shimazu
HDR Bridge Architecture	Michael Fitzpatrick
HDR Bridge Architecture	James Vincent
HDR Lead Architect	Sally Maddock
HDR Architectural Lighting	Trevor Hollins
HDR Project Coordinator	Ayako Nakasato
HDR Project Accountant	Jennifer Senatore
HDR Lead Civil	Aaron Kreitzer
HDR Electrical Engineer	Daniel Gott
HDR Signage & Way finding	Jeff Zoll
KAI Hawaii Structural	Ken Hayashida
KAI Hawaii Structural Lead	Michael Hunnemann
KAI Hawaii Structural	Brandon Ching
V+M Structural Bridge Structural	Schaun Valdovinos
PBR Landscape Architecture Lead	Russell Chung
PBR Landscape Architecture	Nicole Swanson
Yogi Kwong Engineers Geotechnical Engineer	Devin Nakayama
Yogi Kwong Engineers Geotechnical Engineer	Grant Harrington

SCOPE OF SERVICES AND DELIVERABLES

Term 1, PE-1, Phase 1: ENVIRONMENTAL PERMITTING, ENGINEERING DESIGN (PLANS, SPECIFICATIONS, AND ESTIMATES, 15-30%)

Task 1 - Project Management Plan, Quality Control and Risk Management (15%-30%)

Primary responsible: HDR Project Manager

Meeting agendas, notes, will be housed in a onenote file on sharepoint. Link. All weekly meetings will begin with an review of the current schedule, to ensure that the project team remains on-task and on-schedule, addressing issues that may arise.

Task 1 Deliverables

- Detailed project management plan (PMP);
- Quality control/quality assurance (QC/QA) plan;
- Microsoft (MS) Project Critical Path Method (CPM) schedule;
- Meeting minutes (for all meetings), agendas and updated renderings (which are updated and tracked per meeting);
- Project Risk Register and maintenance of register throughout term of contract

Task 2 - Environmental Permitting, Documentation and Review

Primary responsible: HDR Environmental; QRSE

CONSULTANT shall determine the necessary environmental documentation, perform environmental engineering and prepare environmental documentation for the PROJECT, including but not limited to Special Management Area (SMA) permit, the National Historic Preservation Act (Section 106 and 6E HRS), and meeting the general requirements of the Hawaii Environmental Policy Act (HRS 343) and the National Environmental Policy Act (NEPA).

Task 2 Deliverables

- Continue the preliminary consultation, public meeting facilitation and any required environmental documentation for the Hawaii Environmental Policy Act (HRS 343) and the National Environmental Policy Act (NEPA) performed by the AA.
- Identification of the required permits

Task 3 - Technical Studies

Primary Responsible: HDR, Honua, MASON

The CONSULTANT will prepare the following technical studies described below for the project as required by HRS 343 and NEPA. The CONSULTANT will use as a basis for these technical studies the preliminary identification of the environment impacts, and mitigation completed in the AA.

Task 3 Deliverables

- Section 106: Area of Potential Effect (APE) Submittal
- HRS 6E
- Cultural Impact Assessment
- Cultural Resource Survey Report
- Topographic/Cadastral surveys
- Documentation of stakeholder and public meetings as required for environmental review

Task 4 - Chapter 343 HRS Environmental Assessment

Primary responsible: HDR Environmental

The CONSULTANT will prepare the necessary documentation to comply with the Chapter 343 HRS Environmental Assessment (EA) process, as described below.

Task 4 Deliverables

- Draft EA and Anticipated Finding of No Significant Impact
- Final EA/FONSI
- Chapter 343 HRS Administrative Record

Task 5 - Parking Study and Innovative Management Plan for Parking Supply and Demand

Primary responsible: Weslin Consulting

CONSULTANT will prepare a parking study and innovative demand management plan that will provide recommendations to balance community protection with the economic benefits of tourism and recreation in ways that respect community and active transportation goals cited in the AA.

Task 5 Deliverables

- Inventory of on-street and off-street parking supply within the walkshed/bike shed
- On-street parking occupancy and turnover study within the walkshed/bike shed
- Educational and graphic materials on true cost of parking in the walkshed, curbside management and benefits of management strategies
- Multimodal circulation plan for LEDPA bridge approach and redesign of existing parking if necessary
- Innovative parking management plan and implementation strategy, including outreach

Task 6 - Final Environmental Assessment

Primary responsible: HDR Environmental

CONSULTANT will prepare any environmental assessment determinations for submission to the Hawaii Department of Transportation (HDOT) and the FHWA for approval. This includes the draft and final environmental assessment documents.

The CONSULTANT will lead consultation efforts for the following review processes that fall under the NEPA umbrella.

Task 6 Deliverables

- Routing and filing of environmental assessment documents
- Draft and Final Environmental Assessment
- Draft and Final EA/FONSI submittals

Task 7- ROW Report and Surveys

Primary responsible: ControlPoint Surveying

CONSULTANT shall prepare an Existing Features plan sheet after completion of survey.

Task 7 Deliverables

- **Topographic Survey**

Task 8 - Soils Engineering Report

Primary responsible: Yogi Kwong Engineers

CONSULTANT will review existing geotechnical information in the planning area, including review of the site geology via plan, section, and profiles. CONSULTANT will inspect the site to determine existing conditions. CONSULTANT will evaluate shallow and deep excavations; open excavations and braced excavations. CONSULTANT will determine quantity of water expected from dewatering operations and design dewatering systems. CONSULTANT will design compacted fills and evaluate compacted fill's performance. CONSULTANT will also evaluate primary and secondary foundation settlement, field and laboratory.

Task 8 Deliverables

- Geotechnical Survey (3 copies/CDs)
- Soils Engineering Report (3 copies/CDs)
- Infiltration Memorandum (Included in Soils Engineering Report)

Task 9 - Subsurface Utility Location, Coordination, and Agreements (30%-60%)

Primary responsible: HDR

CONSULTANT will update base plans and identify specific utility conflicts. If necessary, the CONSULTANT makes a recommendation to the CITY for test pits to confirm the location of specific utility facilities to avoid any conflicts.

The CONSULTANT shall specify utility risks or changes to previously identified utility risks. The utility risks or changes to utility risks shall be updated in the project Risk Register.

Task 9 Deliverables

- Utility base plans (3 copies/CDs)

- Utility Engineering Construction Agreements (UECA)
- Updated base plans with identified conflicts (3 copies/CDs)

Task 10 - Bridge Design Recommendation Summary

Primary responsible: HDR

The Consultant shall prepare preliminary/concept bridge designs (and recommend a single preferred bridge typology that meets the project budgetary goals, for approval by the City. The Bridge Design Recommendation Summary Report documents the structural and aesthetic selection process, the recommended structure type, aesthetic treatments and utility, right of way and environmental impacts.

Task 10 Deliverables

- Cable Stay Bridge Design Peer Review by Alternatives Analysis engineer
- Preliminary/Concept Design Decision Matrix
- Rough Order Magnitude (ROM) Cost Estimates

10A. US Army Corps of Engineers

Primary responsible: HDR

The consultant shall coordinate with USACE to understand and incorporate their flood system design requirements and recommend preferred design options for the incorporation of the USACE flood wall/levee system into the Ala Wai Pedestrian Bridge project so as 'not to preclude' that future USACE project from being constructed, while allowing for the Ala Wai Pedestrian bridge to proceed independently from that future project.

Task10A Deliverables

- ADA Accessibility plan showing access to the bridge from the Makai (Ala Wai Blvd.) and Makua (Ala Wai Park ped/bike trail) sides of the canal.
- Concept-level designs for Makai and Mauka bridge-related infrastructure for submittal to USACE for flood modeling/simulation analysis for their approval/concurrence, and eventual compatibility with the future flood wall/levee project.
- Based on USACE input & requirements, evaluate and recommend 3 to 6 bridge options (within the range of the \$20M construction budget) that can be integrated with the future USACE flood wall and levee project, and that are consistent with the Final AA.
 - Identify utilities impacts make recommendations for relocation
 - Identify environmental impacts and recommend mitigation strategies
 - Identify and recommend procurement strategies
- The CONSULTANT will recommend the horizontal and vertical geometry for City approval and conducts the hydrologic and hydraulic analysis.

Task 11- Engineering Design (Plans, Specifications, and Estimates – PS&E) (15%-30)

Primary responsible: HDR, Kai Hawaii

Upon the selection of a preferred design concept, the Consultant shall prepare PS&E for review and approval by the City. Plans shall be prepared at an appropriate scale such that plans are legible, in English units. Specifications shall be prepared using City standard boiler plate specifications, as provided by the City.

Task 11 Deliverables

- Preliminary Engineering Plans, Sections, and Elevations
- Preliminary Engineering Specifications
- Preliminary Engineering Cost Estimate

Task 14 – Erosion & Sediment Control Plan Design

Primary responsible: HDR

CONSULTANT will prepare the Permanent BMP Checklist using the State of Hawaii Department of Transportation Highways Division Storm Water Permanent Best Management Practices Manual (February 2007). The Project record will address exemptions and water quality control as per the BMP checklist. CONSULTANT will identify all NPDES permits required and proposed structural and non-structural BMP.

Task 14 Deliverables

- Erosion & Sediment Control Plan Design (30% and 60%)

Task 22 - Preliminary Engineering Plans, Specifications, and Proposal Documents (30%)

Primary responsible: HDR, Kai Hawaii

CONSULTANT will provide both 30% and 60% construction plans, technical specifications, basis of design, and proposal documents required for incorporation into relevant contract documents.

Task 22 Deliverables

- 30% construction plans, technical specifications, basis of design and proposal documents

Task 22A - Wind Tunnel & Vibration Analysis and Modeling of 30% Design Submission (Part 1 Analysis)

Primary responsible: HDR

CONSULTANT will coordinate the Wind Lab assessment of the project. The wind consultant will be engaged in PE-1 to conduct initial review and studies of the bridge span and tower, including a Meteorological Assessment of the local wind climate, Expert Opinion on the 30% form of the Deck Section and Tower, Initial Desktop Study, and Sectional Model of the bridge deck.

Task 22A Deliverables:

- Desktop Wind Study Findings on 30% Design
- Sectional Model of 30% Design

Task 24 - Project Design Visualization, Renderings & Physical Model (15%-30%)

Primary responsible: HDR

CONSULTANT shall provide the following visualizations of the project to aid in community and stakeholder engagement.

Task 24 Deliverables:

15%-30% Design:

- Renderings: (FOR SINGLE DESIGN OPTION)
 - (2) Birdseye Views with Urban Context (context extracted from Google Earth may be a sufficient level of detail- see attached image)
 - looking Diamond Head Direction
 - looking Mauka
 - (4) views from various viewpoints along the Ala Wai Canal Corridor looking at bridge
 - (1) view from canoe in canal
 - (2) views from on bridge
 - (1) view looking at landing area improvements on the University side
 - (1) view looking at landing area improvements on the Waikiki side
- VR or video of 30% bridge design
- Physical Model
 - (1) 1/16" scale model of the bridge context

Task 32 - Potholing

Primary responsible: HDR, HGS, Yogi Kwong Engineers

The CONSULTANT Team shall provide utility potholing and clearance services at proposed geotechnical exploratory boring (Boring B-2) on the Makai Side of Ala Wai Blvd to ensure that a suspected HECO line that was identified by Hawaiian Electric Company (HECo), who has marked down on the ground the toned location of an underground electrical line within 2 to 3 feet of our proposed location for Boring B-2. The potholing will be performed by HGS using a combination of air excavation with pressurized air, and vacuum excavation using a vacuum truck. Prior to potholing, the area will be toned for the electrical line to estimate its location.

Task 32 Deliverables

- The potholing work will be performed under the supervision of the Geotechnical Engineer, YKE, who will be onsite to observe the in-situ conditions of the potholes and location of the existing electrical line (if located during potholing).
- Sidewalk Restoration after potholing

Term 2, PE-1, Phase 2: Environmental Permitting (30%-60%)

Task 1 - Project Management Plan, Quality Control and Risk Management (30%-60%)

Primary responsible: HDR

Meeting agendas, notes, will be housed in a onenote file on sharepoint. Link. All weekly meetings will begin with an review of the current schedule, to ensure that the project team remains on-task and on-schedule, addressing issues that may arise.

Task 1 Deliverables

- Microsoft (MS) Project Critical Path Method (CPM) schedule;
- Meeting minutes (for all meetings), agendas and updated renderings (which are updated and tracked per meeting);
- Project Risk Register and maintenance of register throughout term of contract

Task 19 - Urban Design Plan/Landscape Design Plan (15%-60%)

Primary responsible: PBR Hawaii

Consultant shall develop overall cultural, landscape and hardscape concepts to originate desired images and the theme for the project. Prepare an overall LUDP that will loosely illustrate the overall concept for the immediate surrounding areas impacted by the bridge's connection to the mauka and makai sides of the canal.

The LUDP will illustrate pedestrian and bicycle paths that connect the bridge to designated key locations (e.g., streets, levee, existing paths/roads, etc.). The LUDP will also illustrate general tree/palm, shrub and ground cover masses (only) for the overall project site. The LDUP will be illustrated in color and offered in electronic or printed format for presentation use.

Task 19 Deliverables

- Landscape Urban Design Plan (LUDP) – Phase 1 (30% Submittal)
- Landscape Design Documents (60% Design Submittal)

Task 26 - Public and Cultural Engagement (15%-60%)

Primary responsible: PBR Hawaii

The Consultant shall assist the client in preparing a public presentation/meeting to inform the public of the project status and design direction during the public comment period for the Draft Environmental Assessment.

Task 26 Deliverables

- Prepare meeting announcement(s)
- Update Ala Pono website with Press Release and Flyer.
- Coordinate one (1) community meeting.
- Prepare community meeting notes
- Provide cultural guidance and meeting facilitation support for one (1) community meeting.

TERM 3, PE-1, PHASE 3: TASK 11 (30%-60%), TASK 22 (60%), TASK 24 (30%-60)

Task 3 - Technical Studies

Task 3A: Technical Studies (Additional Services)

Primary responsible: HDR, Honua, MASON

Consultant Team shall provide additional Archaeological and Historic Studies as required for Section 106 Adverse Effect and provide additional MOA Coordination and Support, as well as additional services related to the CIA as identified in the following deliverables:.

Task 3A Deliverables

- Expanded Archaeological and Historic Studies
- Section 106 Adverse Effect and MOA Coordination and Support
- CIA (Expanded study, additional interviews and meetings)
- Section 106 Adverse Effect and MOA (Reporting and Consulting Meetings)

Task 4 - Chapter 343 HRS Environmental Assessment

Task 4A: Chapter 343 HRS/NEPA Environmental Assessment (Additional Services)

Primary responsible: HDR, Honua, MASON

Consultant Team shall provide additional services related to the DRAFT EA and FONSI that include the following deliverables:

Task 4A Deliverables

- Delayed Joint Draft EA/FONSI (includes weekly meetings)
- "Section 4(f) - Documentation of no use for Canal and De Minimis for Park"
- USFWS Section 7 Coordination and Support
- NMFS Section 7 Coordination and Support
- USCG Section 9 Bridge Permit Coordination and Support

Task 11 - Engineering Design (Plans, Specifications, and Estimates – PS&E) (30%-60)

Primary responsible: HDR, Kai Hawaii

Upon the selection of a preferred design concept, the Consultant shall prepare PS&E for review and approval by the City. Plans shall be prepared at an appropriate scale such that plans are legible, in English units. Specifications shall be prepared using City standard boiler plate specifications, as provided by the City.

Task 11 Deliverables

- Preliminary Engineering Plans, Sections, and Elevations
- Preliminary Engineering Specifications
- Preliminary Engineering Cost Estimate

Task 22 - Preliminary Engineering Plans, Specifications, and Proposal Documents (60%)

Primary responsible: HDR, Kai Hawaii

CONSULTANT will provide both 30% and 60% construction plans, technical specifications, basis of design, and proposal documents required for incorporation into relevant contract documents.

Task 22 Deliverables

- 60% construction plans, technical specifications, basis of design and proposal documents

Task 22B - Wind Tunnel & Vibration Analysis and Modeling of 60% Design Submission (Part 2 Analysis)

Primary responsible: HDR

During PE-2, the CONSULTANT will continue to oversee the Wind Lab assessment of the project. This will include Stability Mitigation of the Sectional Model (if required), Buffeting Response Analysis to develop design loads, Stay Cable Analysis and damping level recommendations, Tower Acoustic Study, Wind Tunnel Testing of the Free-Standing Tower, Desktop Study of the Construction Free-Cantilever Condition, and (if required) a Full Aeroelastic Model of the cable-stayed span.

CONSULTANT will submit a Final Wind Studies Report on the wind studies for the project in PDF format that includes a description of the experimental procedure, data analysis, findings, design wind loads, any additional studies, and recommendations. Appendices will include photo documentation of any wind tunnel testing and physical model(s).

A pedestrian vibration analysis of the cable-stayed span and approach ramp will be carried out by the CONSULTANT to assess the potential levels of acceleration against published comfort criteria by Setra. This will include the class of bridge through coordination with the client. A Final Vibration and Pedestrian Comfort Report will be prepared to summarize the findings of this study.

Task 22B Deliverables

- Final Wind Studies Report (3 copies/CDs)
- Final Vibration and Pedestrian Comfort Report (3 copies/CDs)

Task 24 - Project Design Visualization, Renderings & Physical Model (30%-60%)

Primary responsible: HDR

In order to support the Stakeholder Outreach process as well as the selection and design development of the preferred bridge design, as well as the development of the integrated urban design plan, the design team will need to, “broadly address the public realm aesthetics of the bridge including the bridge approach area, with specifications for: bridge seating, lookouts, kiosks, railings, special lighting, interpretive walls, historic features, delineation, access management, and public art. The urban design plan will incorporate the viewshed impact assessment from Section 3.VI into the final urban

design plan.” In order to effectively communicate the proposed design concepts, the following visualization scope of work and deliverables are included under Task 24:

Task 24 Deliverables

30%-60% Design:

- Renderings: (single design option)
 - (2) Birdseye Views with Urban Context
 - looking Diamond Head Direction
 - looking Mauka
 - (4) views from various viewpoints along the Ala Wai Canal Corridor looking at bridge
 - (1) view from canoe in canal
 - (2) views from on bridge
 - (1) view looking at landing area improvements on the University side
 - (1) view looking at landing area improvements on the Waikiki side
- VR (single design option)
 - (1) view looking at landing area improvements on the University side
 - (1) view looking at landing area improvements on the Waikiki side
 - (2) views from various locations on Ala Wai Canal
- Physical Model
 - (1) interchangeable 1/16” scale model of the refined bridge design (If feasible, this may be used on previously created base model)

SCHEDULE

The Project Manager will work with both the Environmental & Planning Team and the Design & Construction team to manage the project Schedule. When a new schedule is developed, the existing schedule will be moved to a superceded folder and the latest schedule will be replace it. The project team will use a critical path method (CPM) schedule to ensure timely delivery of work products.

Key milestones:

- 30% design: spring 2020
- Draft Environmental Assessment: spring 2021
- 60% design: spring 2021
- Completed 106 Consultation & signed Memorandum of Agreement: spring 2022
- Final Environmental Assessment: spring 2022

RISK MANAGEMENT

The Project Manager working with the project team will ensure that risks are actively identified, analyzed, and managed throughout the life of the project. Risks will be identified as early as possible in the project so as to minimize their impact.

Risk identification will involve the project team, appropriate stakeholders, and will include an evaluation of environmental factors, organizational culture and the project management plan including the project scope.

The probability and impact of occurrence for each identified risk will be assessed by the project manager, with input from the project team using the following approach:

Probability

- High – Greater than <70%> probability of occurrence

- Medium – Between <30%> and <70%> probability of occurrence
- Low – Below <30%> probability of occurrence

Impact

- High – Risk that has the potential to greatly impact project cost, project schedule or performance
- Medium – Risk that has the potential to slightly impact project cost, project schedule or performance
- Low – Risk that has relatively little impact on cost, schedule or performance

Risks that fall within the RED and YELLOW zones will have risk response planning which may include both a risk mitigation and a risk contingency plan.

Project risks will be tracked in a project risk register, updated on an as-needed basis.

QUALITY CONTROL PLAN

All quality control reviews should comply with the HDR Quality Control standards.

The level of detail for the QC review will include reviewing the following:

- Satisfy project intent and goals.
- Assumptions and data used in developing a document.
- Use of proper format.
- Meet regulatory and code requirements
- Use of applicable calculation methods and numerical accuracy.
- Completeness of deliverables and supporting documents, considering the scheduled level of completeness and intended purpose.
- Deliverables are understandable, conform to reasonable and applicable standards relative to their intended purpose, and meet the client and HDR requirements.

Leslie Tice will complete the QC review for the Environmental & Planning team submittals. Mike LaViolette will complete the QC review for the Design & Construction team submittals. See Schedule for dates and budget.

PROJECT COMMUNICATIONS**Project Correspondence Signatory:**

All letters will be signed by the Principal-in-Charge, except for vendor/manufacturer information requests.

Correspondence:

All external written correspondence including letters, memoranda, faxes, submittals, etc. will be sent, or approved by the Principal-in-Charge or Project Manager prior to release. All hard copy original documents will be forwarded to Deputy Project Manager for filing. The project number will be written at the top of each document to be filed.

Electronic (email and attachments) format is preferred for normal communications and information requests. The electronic correspondence should cc the Deputy Project Manager who will save a copy under the proper subfolder.

Requests for information (RFI) will be documented in.pdf format, and tracked via the RFI log.

Team members may keep personal project files. However, only copies of project documents may be included in personal project files. No original documents may be kept in personal files, except work-in-progress.

Telephone Conversations:

Telephone communications addressing items impacting or with potential to impact the project's scope, schedule, or budget will be documented on a telephone call record, and filed via email with the Project Manager or Deputy.

Meetings:

Stakeholder meetings will be coordinated by the PM or deputy and identified on the stakeholder meeting log. Meetings will be attended by the Principal-in-Charge, Project Manager and Technical Staff, as appropriate. Attendance will be as requested.

Stakeholder meetings will be identified & requested through the stakeholder meeting plan.

Project Management meetings to coordinate between Environmental & Planning Team and Design & Construction Team will occur weekly.

PROJECT ADMINISTRATION

CAD Standards

Follow CAD standards consistent with other projects previously performed for this client. The Project Manager will visually inspect the drawings to verify the proper CAD Standards have been followed.

Word Processing

All word processing will be done by either the Project Manager or Deputy Project Manager. When assistance is needed, administrative staff will be utilized. To obtain assistance, an email will be sent to HON-Admin with instructions for the task, where the file is to be saved, job number and activity number to charge the time to, non-reimbursable status for printing, and the expected completion date for the task.

Project Filing:

All hard copy documents to be filed in project folder will be placed in Deputy PM's filing tray.

Electronic Filing:

Electronic correspondence will be filed in ProjectWise. Email file names will follow standard HDR Honolulu Office filing format (Date, Time, From/To, Description).

Example: *2019 04 02 1516 to CCH DTS Ala Wai Questions for Proposal.pdf*

Invoicing

HDR will prepare and submit monthly invoices to City & County of Honolulu. Subconsultant shall invoice HDR on a monthly basis following completion of work. Invoices received by HDR by the 25th before the end of the month shall be included in HDR's invoice to the client.

PROJECT DOCUMENTS

Working Drafts

Draft deliverables and other relevant project documents shall be uploaded to the project sharepoint site. This site allows for collaboration and version control.

Final Deliverables

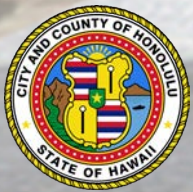
Once approved by the City and County of Honolulu Project Manager, the final deliverables shall be uploaded to the appropriate docushare folder.

Project Close Out procedure will be discussed with the Department Manager. At a minimum, the Project Manager or designee will retrieve any project master files that are checked out and all technical working files from the project team members, remove duplicates and place the complete project master file in the central file system. Lessons Learned will be documented. Marketing files and resumes will be updated accordingly.



ALA WAI ALTERNATIVES ANALYSIS

EXECUTIVE SUMMARY



Honolulu
COMPLETESTREETS

NOVEMBER 2019

PROJECT PURPOSE & NEED

ALA PONO'S PRIMARY PURPOSE IS TO IMPROVE MULTIMODAL NETWORK CONNECTIVITY AND ENHANCE PUBLIC SAFETY FOR PEOPLE WALKING AND BICYCLING. THE SECONDARY PURPOSES ARE TO ASSURE COMFORTABLE, SUSTAINABLE MOBILITY OPTIONS THAT ENHANCE ECONOMIC VITALITY, ENVIRONMENTAL HEALTH, AND SOCIAL EQUITY.



Safety from
Traffic



Improved
Non-Motorized
Emergency
Evacuation and
Public Safety



Complete Streets
Connectivity



Travel Time and
Convenience



Environmental and
Public Health

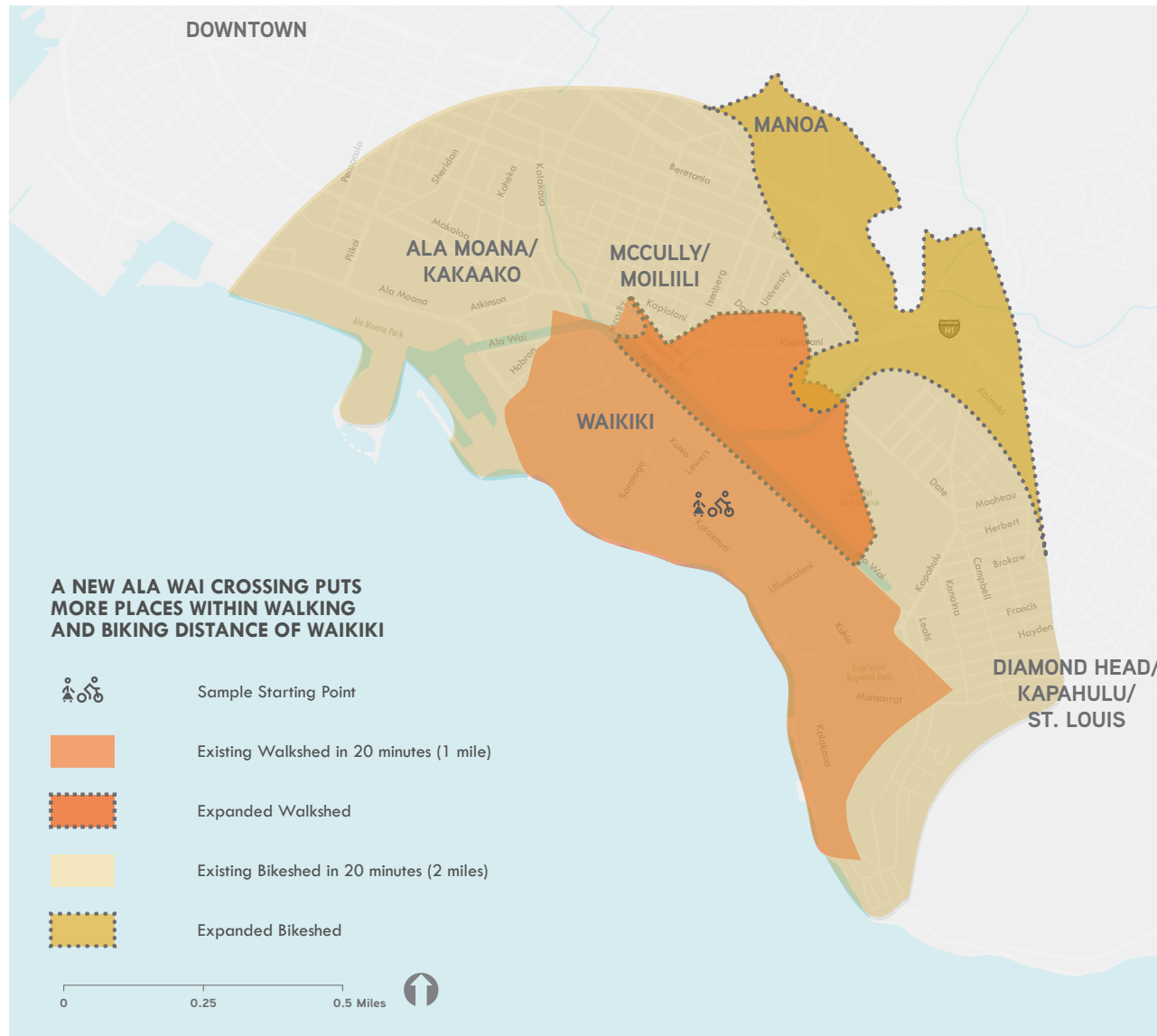


Vibrant
Canal



Affordable
Access

STUDY AREA



Ala Pono's goals to enhance complete streets connectivity and access for people traveling by foot or bicycle across the canal narrowed the analysis to areas where residents, employees, and travelers could reasonably take trips by foot or bike. Ala Pono's study area is defined as the area around the canal within a 20-minute walk or bike ride from Waikiki, both with the existing canal crossing and with a new mid-canal crossing. This study area, or the project walk and bikeshed, was used throughout the alternatives analysis to measure existing and possible access, how people are currently traveling, and how travel could change with an improved crossing.

ALTERNATIVES ANALYSIS PROCESS

PROJECT ALTERNATIVES

Each alternative was evaluated for feasibility, potential environmental impact, and alignment with the project's purpose and need. The New Crossing and Enhance Existing Crossing alternatives have multiple alignments or locations for possible implementation.

ALTERNATIVES ANALYSIS

Evaluation criteria were selected for each project need and organized into an evaluation matrix. This data-driven analysis captured differences between alternatives across the range of identified primary needs.

HIGHEST SCORING ALTERNATIVE

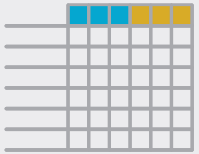
The analysis and public feedback identified the approximate University Avenue alignment as the highest-scoring alternative that best achieves the project's purpose and need to improve access for people traveling by foot or bicycle across the Ala Wai Canal.

BRIDGE TYPE EVALUATION

With a new crossing in the vicinity of University Avenue as the highest-scoring alternative, Ala Pono evaluated the types of bridges that most aligned with the community's preferred bridge experience based on feedback from community meetings. The bridge type evaluation also used criteria to assess the feasibility and potential impacts of different bridge types for a new crossing.

IMPLEMENTATION & NEXT STEPS

The Ala Wai Alternatives Analysis identified the preferred alternative. Following the Alternatives Analysis phase, the City and County will move into the Preliminary Engineering phase to further evaluate the preferred alternative. Environmental Assessment will occur during this project phase.



PROJECT ALTERNATIVES

A B C

ENHANCE EXISTING CROSSINGS:

Improve existing canal crossings with possible solutions ranging from reconfiguration of the existing bridge travel lanes to structural solutions to create more space for people walking and bicycling.

D E

CREATE A NEW CROSSING:

Create a new canal crossing with a bicycle and pedestrian bridge at either University Avenue or in the vicinity of the Ala Wai Golf Course.

NO BUILD

No new crossing or improvements to existing crossings, establishing an existing conditions baseline for the alternatives analysis.

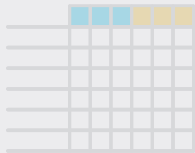
OTHER ALTERNATIVES

Three non-bridge solutions were assessed:

- F** Aerial Tram: Construct an aerial tram to transport people across the Ala Wai Canal.
- G** Aqua Bus: Establish a network of dock locations and a fleet of vessels to transport people along with bicycles, strollers, and wheelchairs across the Ala Wai Canal.
- H** Tunnel: Construct a tunnel under the Ala Wai Canal for people walking and bicycling.



PROJECT ALTERNATIVES



ALTERNATIVES ANALYSIS

Data-driven analysis informed the evaluation of crossing alternatives. Alternatives were ranked according to their potential to meet the project goals expressed in the purpose and need statement.

INCREASING EVALUATION WEIGHT



PUBLIC INPUT



COMPLETE STREETS CONNECTIVITY



POTENTIAL ENVIRONMENTAL IMPACTS



IMPLEMENTATION



TRAFFIC SAFETY



TRAVEL TIME AND CONVENIENCE



ENHANCE SUSTAINABLE MOBILITY AND IMPROVE PUBLIC HEALTH



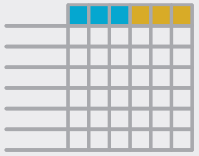
AFFORDABLE ACCESS



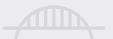
IMPROVED NON-MOTORIZED EMERGENCY EVACUATION AND PUBLIC SAFETY



VIBRANT CANAL



ALTERNATIVES ANALYSIS

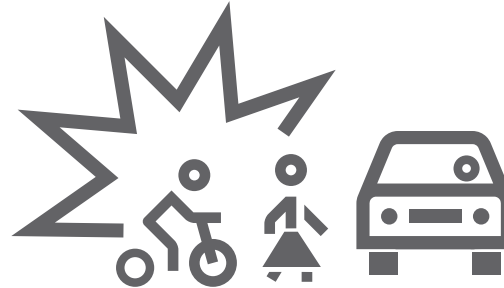


SAMPLE ANALYSES



TRAFFIC SAFETY

A new crossing in the vicinity of University Avenue provides a low-crash link and a connection for people walking and biking through areas with fewer collisions.



OUT OF THE 86 COLLISIONS
IN THE PROJECT AREA
OCCURRING BETWEEN 2014-2018,

30 COLLISIONS

INVOLVED PEOPLE WALKING AND BICYCLING.



AFFORDABLE ACCESS

Kupuna, youth, and low-income residents would be best served by a new crossing.

A NEW CROSSING WOULD PROVIDE OPPORTUNITIES FOR MANY COMMUNITY MEMBERS...

1,000
KUPUNA
(65 AND OVER)

1,000
YOUTH
(18 AND UNDER)

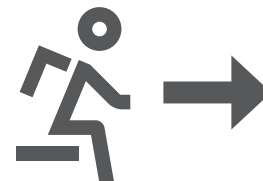
1,200
LOW-INCOME
EMPLOYEES

Source: 2016 ACS 5-Year Estimates, 2015 LEHD



IMPROVED NON-MOTORIZED EMERGENCY EVACUATION AND PUBLIC SAFETY

New crossings create direct routes to the Tsunami Evacuation Safe Zone and increase public safety.



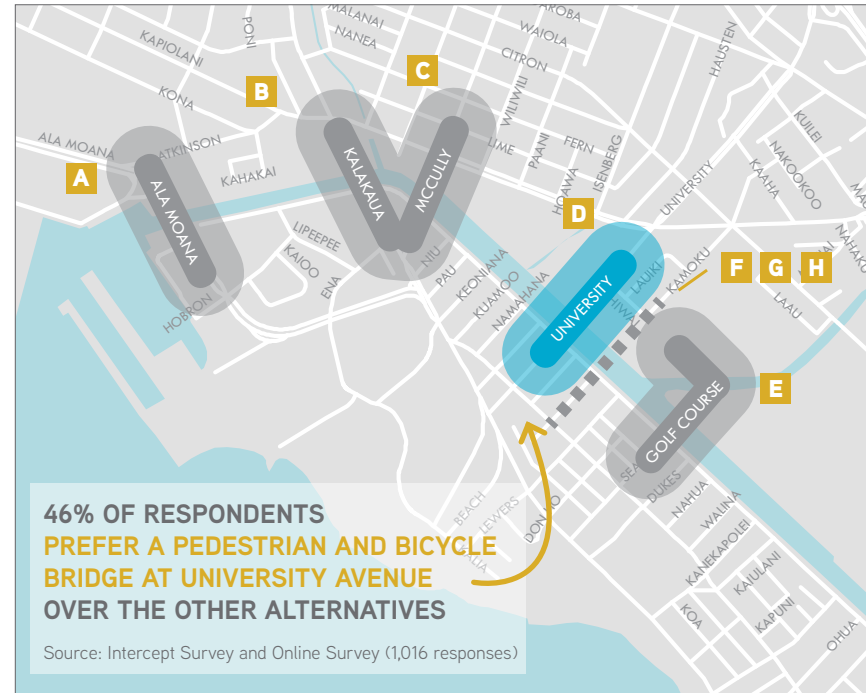
A CROSSING IN THE VICINITY OF UNIVERSITY AVE WILL
DECREASE EVACUATION TIMES FROM WAIKIKI BY...

15 MINUTES FOR 20,000 PEOPLE

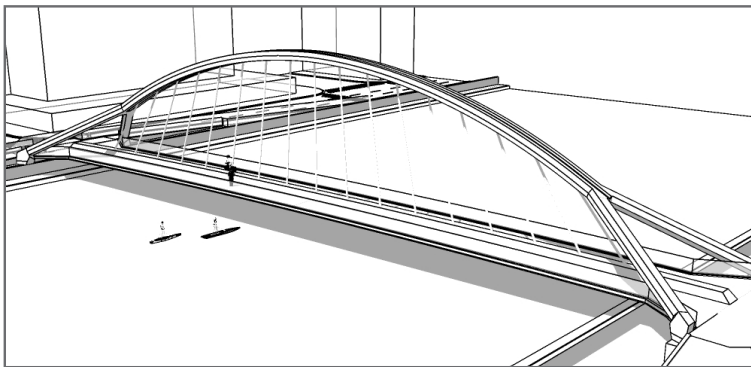
HIGHEST SCORING ALTERNATIVE & BRIDGE TYPE EVALUATION

Ala Pono's alternatives analysis and public feedback identified a new crossing in the vicinity of University Avenue as the highest-scoring alternative that best achieves the project's purpose to improve access for people traveling by foot or bicycle across the Ala Wai Canal.

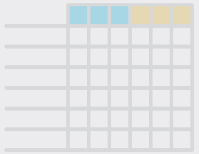
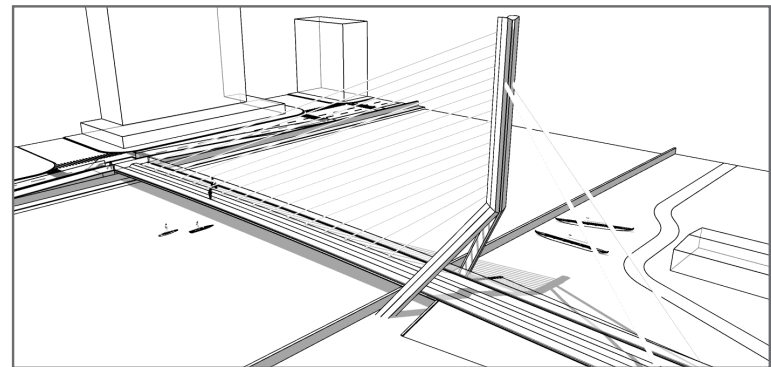
Ala Pono also evaluated the bridge types that aligned with the community's preferred bridge experience based on feedback. With a distinct visual form that minimizes impacts to views, the bifurcated concrete arch bridge and cable-stayed concrete bridge types ranked highly through public input. Both types, along with other bridge types that may minimize visual impacts, will be further evaluated during the preliminary engineering phase and the environmental process.



CONCRETE ARCH



CONCRETE CABLE-STAYED



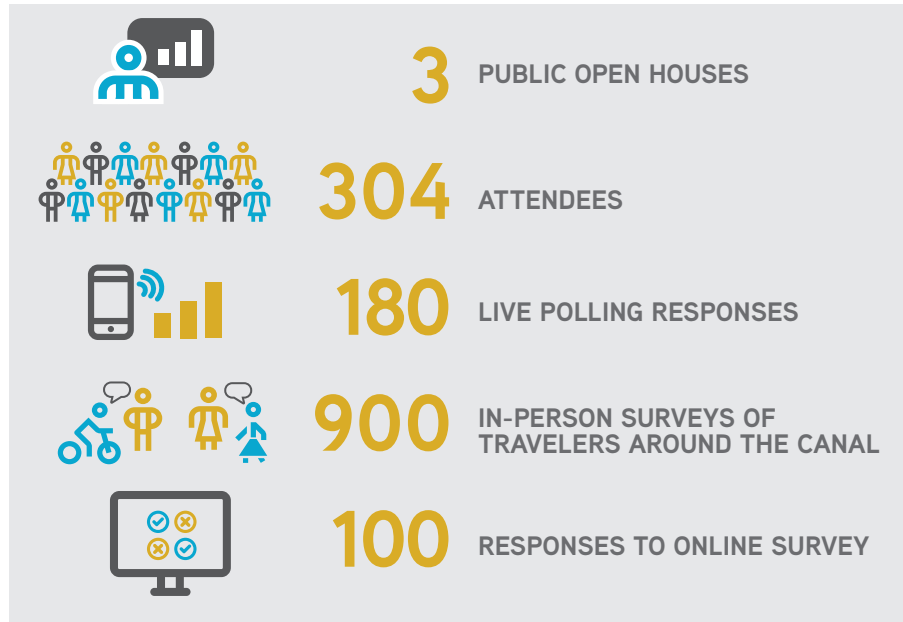
HIGHEST SCORING ALTERNATIVE



BRIDGE TYPE EVALUATION



OUTREACH SUMMARY



"Ala Pono for future generations!"

"Prioritize **CONNECTIVITY & ACCESSIBILITY**"

"Make it **SAFE!**"

"Do not turn our residential area into a **noisy and uncomfortable corridor** for the rest of time."

"I have lots of concerns re **HEALTH & SAFETY ISSUES** for the neighboring community and schools."

RESPONDENTS WANT A CROSSING THAT...

"...provides **safe travels for bicycles and beyond** the bridge."

"...allows me to **ENJOY THE GREAT SCENERY** of the Ala Wai Canal."

"...is **aesthetically pleasing** separates **bikes and pedestrians**, and is **creative** without being overly expensive."

"...considers the needs of **OUR KUPUNA AND DISABLED 'OHANA**"

WHAT WE HEARD FROM THE PUBLIC...

"**WIDEN MCCULLY BRIDGE** & make access by walking and biking safer."

"Another opportunity to get across the Ala Wai would be ideal. **Accessibility to Waikiki is important.**"

"If a pedestrian bridge is constructed on University Avenue it is critically important to **MAINTAIN TRAVEL LANES**"

"I really wish I could bike to work instead of paying \$3,000 in gas and \$1,200 in parking each year."

RELATIVE LEVEL OF COMMUNITY CONCERN...



Source: Open Houses and Online Survey

Source: Online Survey (191 responses)



IMPLEMENTATION & NEXT STEPS

PRELIMINARY ENGINEERING (PE-1): ENVIRONMENTAL PERMITTING, ENGINEERING DESIGN

The Ala Wai Alternative Analysis identified the highest-scoring, locally-preferred alternative that best meets the project's purpose and need. Following the Alternatives Analysis phase, the City and County will move into the Preliminary Engineering phase to refine the design of the locally preferred alternative. Environmental Assessment will occur during this project phase.

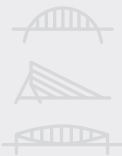
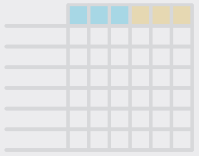
Key tasks in the PE-1 phase will include:

- Preliminary Environmental Permitting as required by the National Environmental Policy Act (NEPA) and Hawaii Environmental Policy Act (HRS 343)
- Topographic Surveys and Soils Engineering
- Archaeological and Historical Studies
- Subsurface Utility Location, Coordination, and Agreements
- Transportation Demand Management Plan, and Parking Study
- Multimodal Circulation Plan
- Plans, Specifications and Estimates: 30% and 60% Design Submittal and Review
- Landscape Maintenance Plan
- Urban Design Plan and viewshed analysis

AREAS OF FUTURE STUDY

At the Report Back and Next Steps community meeting in March 2019, participants were asked, "What analysis is most important to you for further study?" Participants indicated a preference for urban design and landscape maintenance, followed by further project design visualization, renderings and physical model, and a parking study and demand management plan. Other suggestions for future studies and work included connections, wayfinding, entry/exit transitions to the future bridge for people walking and biking, crime, and homelessness.

	Parking Study and Effective Demand Management Plan		Viewshed Impact Assessment
	Urban Design and Landscape Maintenance Plan		Further Environmental Assessment, Technical Studies and Permitting
	Context-Sensitive Lighting Plan		Wayfinding Plan
	Further Public Engagement		Cultural and Historical Heritage Assessment
	Further Project Design Visualization, Renderings and Physical Model		



RESPONDING TO COMMUNITY FEEDBACK



The PE-1 project phase will include **project design visualization, renderings, and physical modelling** to help the community further understand the look, feel, and overall experience of the final bridge design. Renderings will depict the bridge from various angles, including on, below, above, and from the landings.



An integrated **urban design plan** will broadly address the public realm aesthetics of the bridge including the bridge approach area, seating, lookouts, railings, special lighting, public art and historic features, and delineation between people walking and bicycling, and access management. The urban design plan will also include **viewshed impact analysis**.



PE-1 will include an innovative **management plan for parking supply and demand**. The parking study and management plan will explore and provide recommendations for how to balance the needs of residents, workers, and students in the area with economic benefits of tourism and recreation in ways that further community and active transportation goals. A multimodal circulation plan will analyze ways to optimize connectivity and safety for people walking and bicycling on the new connection. **Pedestrian lighting** and eliminating walking barriers and creating connections to bicycle routes and paths will be prioritized.



In advance of construction, City agencies will develop operational agreements to address the **ongoing maintenance, security, and operations of the bridge**. Agreements will address, at minimum:



- Logistics for Ala Pono operations as a 24-hour facility, connecting through a park that closes nightly at 10pm
- Entity responsible for standard maintenance (frequency of sweeping, graffiti removal, etc.)
- Entity responsible for utility bills (e.g. lighting, emergency call box) associated with Ala Pono

ANTICIPATED PROJECT TIMELINE

**SPRING
2020**

Administrative Draft
Environmental
Assessment



**FALL
2020**

Public review of
Draft Environmental
Assessment (DEA)



**WINTER
2020/21**

Finding of No Significant
Impact (FONSI)



**SPRING
2021**

Begin final
design



**SUMMER
2023**

Begin construction
phase

