STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

STAFF SUBMITTAL

for the meeting of the
COMMISSION ON WATER RESOURCE MANAGEMENT

February 21, 2008
Honolulu, Hawaii

Application for a Stream Channel Alteration Permit (SCAP.1820.3)
New Pedestrian/Bicycle Bridge Across Honouliuli Stream
West Loch, Oahu, TMK: (1) 9-1-017:060

APPLICANT:

Mr. Glenn M. Yasui, Administrator
Department of Transportation, Highways Division
State of Hawaii
869 Punchbowl Street, Room 513
Honolulu, HI 96813

LANDOWNER:

Same as applicant

SUMMARY OF REQUEST:

Application for a Stream Channel Alteration Permit (SCAP) to construct a new pedestrian/bicycle bridge across Honouliuli Stream adjacent to Fort Weaver Road, West Loch, Oahu. The project is located within the State right-of-way and is adjacent to West Loch Golf Course at TMK: (1) 9-8-017:060.

LOCATION: Exhibits 1a and 1b.

BACKGROUND:

The Fort Weaver Road widening project is a design build project, and PB Americas has two years to complete the project for the State Department of Transportation (DOT). In February 2007, the State DOT issued a Notice to Proceed to PB Americas for the Fort Weaver Road widening, and the roadway is currently being widened. The new pedestrian/bicycle bridge is part of the third work package for the Fort Weaver Road widening and is scheduled for this summer as part of the best management practice (BMP) to work in the stream when the stream is mostly dry, i.e. in the summer. The new pedestrian/bicycle bridge will increase pedestrian and bicyclist safety along Fort Weaver Road.

Honouliuli Stream is an intermittent, non-tidal stream that originates in the Waianae Range, flows though West Loch Golf Course and under the Fort Weaver Road Bridge, and drains into West Loch. West Loch Golf Course is located on both sides of Fort Weaver Road and was originally designed as part of a flood control, water retention project. Honouliuli Stream is fed by runoff and most likely ground-water

intrusion. Plant life is a mixture of mainly, non-endemic, alien species dominated by California grass growing up to five feet in height. Trees are also growing in the stream bed. See Exhibit 4.

The project area is generally flat and is located in the 100-year floodway. An existing, paved, golf cart path crosses under the existing traffic bridge along the west bank of Honouliuli Stream and will remain in place. A marshy area is located adjacent to the golf cart path and was originally lined with riprap in 1984 but is now filled with silt and vegetation. One of the goals of this project is to remove the vegetation from underneath the bridge to restore the capacity of the stream to carry storm water runoff.

DESCRIPTION:

On December 7, 2007, PB Americas submitted a SCAP application to construct a new pedestrian/bicycle bridge across Honouliuli Stream adjacent to Fort Weaver Road on behalf of the State of Hawaii, Department of Transportation, Highways Division.

The new pedestrian/bicycle bridge will be about 250 feet long and eight feet wide across Honouliuli Stream and have a minimum horizontal clearance of ten feet from the existing traffic bridge. Temporary berms and bypass pipes will be used to dewater the work area. The berms will also be used as construction platforms. Several sets of piles will be placed in the stream to support the new pedestrian bridge and will line up with the existing bridge piers. Honouliuli Stream will be dredged to restore the stream channel to its original 1984 channel depth.

Work on the pedestrian bridge is expected to start in April 2008 and take six months. The actual construction time within the stream is estimated to be four and a half months. Construction work is planned for the dry summer season when stream flow is either very low or non-existent. Any existing stream flow due to summer rainfall events will be redirected through the two bypass pipes. In the event of a large storm, construction will be stopped, and all equipment will be moved out of the stream.

This project will involve the following activities:

- Excavation of approximately 6,500 cubic yards of accumulated silt, vegetation, and rock to restore the drainageway to its original design.
- Placement of temporary aggregate totaling 2,200 cubic yards to build two truck access routes and two berms for access and construction purposes.
- Installation of two, 36-inch, high-density polyethylene (HDPE) bypass pipes to handle the streamflow.
- Placement of 15,000 square feet of temporary, geotextile fabric to control erosion.
- Installation of 12 precast, concrete piles, 16.5 inches in diameter, in the streambed to support the new pedestrian/bicycle bridge.
- Placement of approximately 1,000 cubic yards of riprap boulders to line the area under and adjacent to the bridges to prevent scouring of the bridge piers.

Construction Method and Best Management Practices (BMPs)

In order to protect the ecosystem at the construction site, silt fences will be installed as required by the National Pollutant Discharge Elimination System (NPDES) Construction Stormwater Permit from the State Department of Health (DOH) and as needed. Two temporary rock berms will be constructed upstream and downstream to contain all the construction work in one area and help protect the rest of the stream. See Exhibit 2.

To handle the normal stream flow, two 36-inch diameter, HDPE bypass pipes will be installed from the upstream berm through to the downstream berm. In case of a storm where the bypass pipes will not be able to handle the additional stream flow, the stream water will flow over the berms and will not flood the golf course since the berms are constructed one foot lower than the stream bank. If necessary, the berms will be opened to prevent any flooding.

If water is present in the stream between the upstream and downstream rock berms in the construction site, a four-inch submersible pump will be used to dewater the area between the two berms into a detention/recharge basin so that the work area will be dry. The basin will be located downstream of the bridges and will be approximately 30'x 60'x 6' but may be enlarged if it does not affect golf course operations. The pump will transport water to a set of four sand filters for treatment before the water is discharged back into the stream, downstream of the east berm. Other options for the effluent include using it to water grass at the golf course or to control dust.

Once the silt fences, rock berms and bypass pipes have been installed and the work area within the stream bed has been dewatered, selective clearing and grubbing and removal of the silt around the bridge will begin. A small dozer will be placed in the stream to push the silt and clear and grub material to a backhoe for removal. The backhoe will sit on the berm and load trucks that will haul the material off for disposal. Green waste material will be recycled at a green waste facility like Hawaiian Earth Products, and any surplus dirt will be disposed of offsite at PVT landfill. Vacuum trucks may also be used to remove the silt from directly under the bridge by sucking up the silt through the hose which will allow the existing riprap to remain in place. If the material is too wet to haul out immediately, the material will be stockpiled within the project grading limits away from any storm drains, and the excess water will be allowed to drain out of the material but not into the stream. When dry enough, the material will be hauled out for disposal.

To build the new pedestrian bridge, a crane sitting in the stream between the west berm and the bridge will drive precast piles into the ground. A hydraulic cutter will be used to cut the piles at the design elevations. The pile caps will be poured in place, and a plywood deck and/or geotextile fabric mat will be used to catch any concrete that falls into the dry stream bed. After all the piles have been placed, the crane will lift and set the precast girders and bridge deck into place. See Exhibit 3.

The existing 12-inch layer of riprap under the bridges will be excavated, and a new 30-inch layer of riprap will be placed to prevent scouring and will cover an area of about 7,000 square feet. Riprap for the rest of the area will be 12 inches thick, and the footprint of the riprap will be the same footprint as in 1984. The stream channel depth will remain the same, and the stream flow characteristics will remain unchanged.

Once all the work within the stream has been completed, the rock berms, bypass pipes, dewatering pumps and sand filter system will be removed, and the detention/recharge basin will be backfilled. All disturbed areas and vegetation along the stream will be restored to its original or better condition. The silt fences will be removed after the vegetation has established itself.

ANALYSIS:

In August 2003, KN Consulting Services, Inc. and R.M. Towill Corporation prepared a Final Environmental Assessment on the Fort Weaver Road widening for the State Department of Transportation, Highways Division that resulted in a preliminary determination of a Finding of No Significant Impact (FONSI) for the project.

On December 6, 2007, the U.S. Army Corps of Engineers (COE) issued Public Notice POH-2007-119 for the State Department of Transportation, Highways Division's plans to construct a new pedestrian bridge over Honouliuli Stream adjacent to Fort Weaver Road, West Loch, Oahu and requested comments from Federal, State and local agencies, and interested parties to consider and evaluate the impacts of the proposed activity. The deadline to respond to the COE's Public Notice was December 28, 2007.

On December 6, 2007, the COE stated that it planned to verify that this project qualified for the Nationwide Permit #14 (Linear Transportation Projects) which allows fill material to be discharged into waters of the U.S. This project would be processed in accordance with the Corps Nationwide Permit (NWP) authority at 33 CFR Part 330, Appendix A, the March 12, 2007, (72 FR 11092) Notice of Issuance of Nationwide Permits, Paragraph B.14 (NWP #14, Linear Transportation Projects), Paragraph C (General Conditions) and the Honolulu Engineer District Regional General Conditions of Nationwide Permits, approved May 14, 2007.

On January 15, 2008, the State Department of Health (DOH), Clean Water Branch (CWB) approved the applicant's request for Section 401 Water Quality Certification (WQC) waiver based on the Department of the Army's Nationwide Permit #14 Jurisdictional Determination (JD) rendered on December 6, 2007. The DOH's waiver was subject to a number of conditions including a number of requirements relating to Best Management Practices (BMPs).

On January 17, 2008, the City and County of Honolulu Department of Planning and Permitting made the following comments:

- The project is not located in a Special Management Area (SMA) and is not subject to SMA use permit requirements.
- A portion of the project is located within the AE floodway district, an area in which base flood elevations have been determined. The applicant must document that the project will not cause any increase in the regulatory flood elevations.
- What assumptions were made in determining the interim pipe and retention/recharge basin size? What are the anticipated impacts to the surrounding property should a design storm occur in the area?
- A grading permit will be required to construct the detention basins and the access roads. If dewatering of the dredged material is required before disposal, a stockpiling permit may be required.
- The City's Department of Enterprise Services should be consulted as soon as possible if the alteration or construction might affect the operations of the City's West Loch Golf Course.

The Division of Aquatic Resources (DAR) made the following comments:

- DAR had not surveyed Honouliuli Stream, but did perform damselfly surveys in the lower and middle reaches, and observed native orange-black damselflies.
- The construction of the pedestrian bridge is not expected to have any significant impact on the aquatic resource values in the area.
- Mitigative measures should be implemented during the dewatering, construction of temporary berms, riprap reinforcement and pipe installation to minimize the potential for erosion, siltation, and pollution of the aquatic environment.
- Recommended BMPs include replanting as quickly as possible to minimize erosion; using silt fences to prevent siltation of the stream; scheduling work during periods of minimal rainfall; preventing construction materials from falling, blowing, or leaching into the aquatic environment; and ensuring that the bypass pipes conform to the same level as the stream bottom with no overhang at both the upstream and downstream ends.

The Engineering Division commented that the project is located in Flood Zone AE according to the Flood Insurance Rate Map (FIRM); developments within Zone AE are regulated by the National Flood Insurance Program (NFIP); and this project site must comply with the rules and regulations of the NFIP.

State Parks and Forestry and Wildlife had no objections to the project. The Land Division commented that the project was not subject to its regulatory permit or authority.

The U.S. Fish and Wildlife Service, Office of Hawaiian Affairs, Department of Hawaiian Home Lands, University of Hawaii Environment Center, and Historic Preservation Division did not submit comments as of the date of preparation of this submittal.

RECOMMENDATION:

That the Commission approve a Stream Channel Alteration Permit to construct a new pedestrian/bicycle bridge across Honouliuli Stream adjacent to Fort Weaver Road, West Loch, Oahu. The permit shall have a term of two (2) years subject to the Commission's standard permit conditions in Exhibit 5.

Respectfully submitted,

KEN C. KAWAHARA, P.E.
Deputy Director

Exhibit(s):

	1	Location Maps 1a and 1b
	2	Site Plan and Best Management Practices (BMP) Plan
	3	Pedestrian Bridge Elevation
	4	Photos of Project Site
	5	Standard Stream Channel Alteration Permit Conditions

APPROVED FOR SUBMITTAL

LAURA H. THIELEN
Chairperson