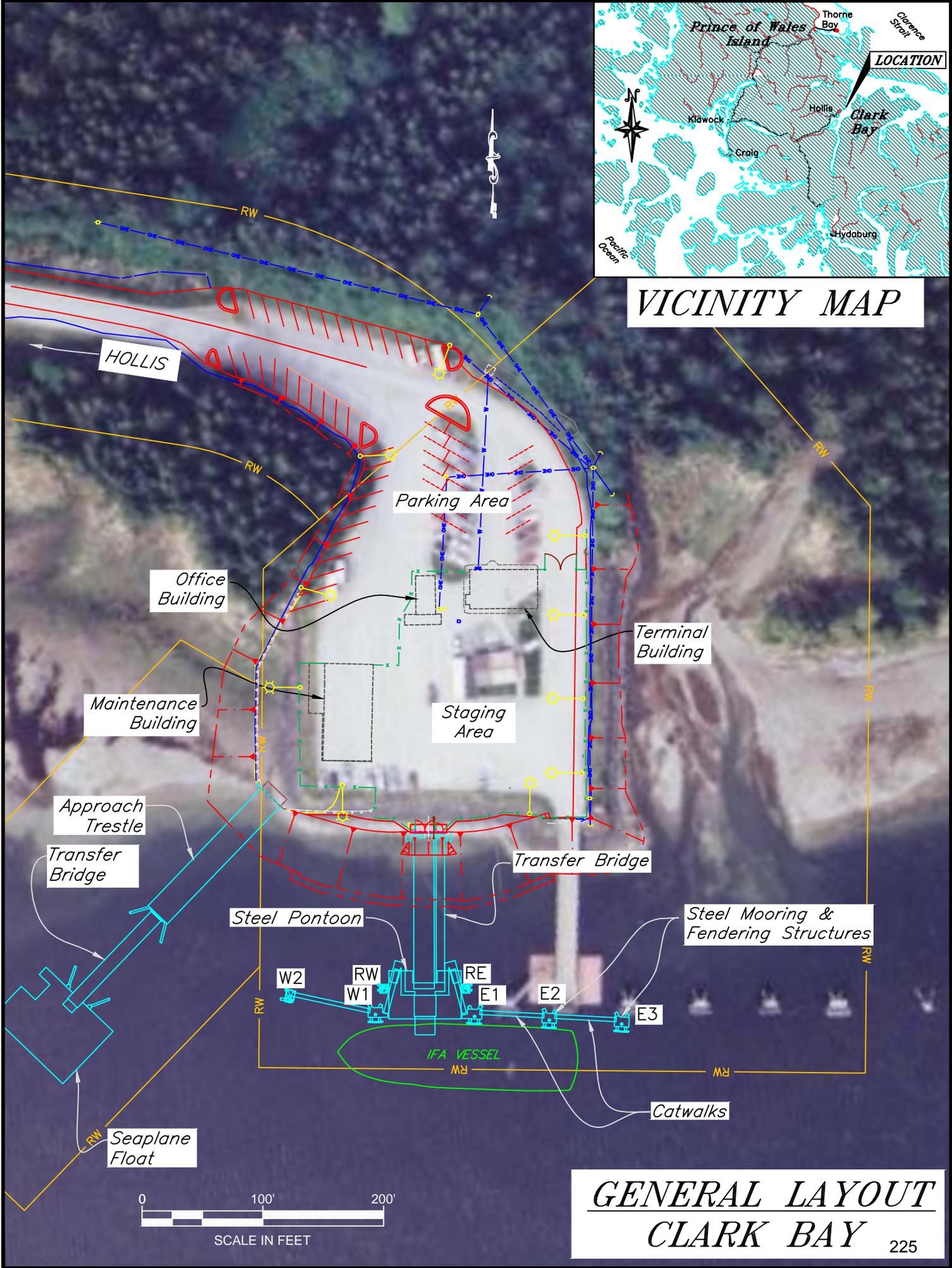


VICINITY MAP



**GENERAL LAYOUT
CLARK BAY** 225

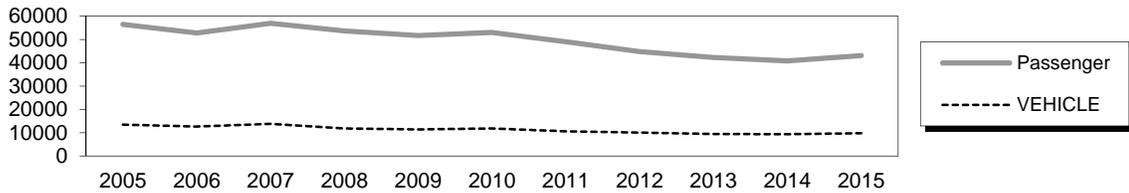
Clark Bay Ferry Terminal

Mile 31 Hollis-Klawock Hwy.

Owner: Inter Island Ferry Authority (IFA)

Terminal Manager: Donna Halvorsen – 907-826-4848

Terminal Description: Clark Bay Ferry Terminal is a side-berth facility consisting of a transfer bridge, steel support float, and 6 steel mooring dolphins. Uplands include a terminal building, maintenance warehouse, secure (fenced) staging area, paved parking and overhead lighting. The Clark Bay facility links Prince of Wales Island to Ketchikan with ferry service via the InterIsland Ferry Authority (IFA). The IFA has had operation and maintenance responsibility of this ferry terminal since 2002. AMHS provided ferry service prior to 2002. IFA operates one of two vessels to this port, the MV Prince of Wales and the MV Stikine. Total passenger and vehicle traffic counts for the past 10 years at Clark Bay are shown below.



The most recent above water survey was completed on July 1, 2015. The underwater inspection occurred on August 11, 2011. The most recent fracture critical inspection occurred on September 6, 2014.

Uplands	
Short-Term Parking:	26 cars, 2 HCP
Long-Term Parking:	14 Cars
Staging Area:	600 lineal feet, 7 lanes
Paint Striping:	Yes
Driving Surface:	Asphalt

Utilities		
	at Terminal	at Ramp
Electrical:	Yes	Yes
Water:	Yes	No
Sewer:	Yes (Septic)	No
Telephone:	Yes	No
Cable TV:	No	No
Fuel:	Yes	No
Wireless Bridge:	No	No

Maintenance Building	
Year Built:	2006
Square Footage:	3,500 s.f.
Heating System:	N/A
Fuel Storage:	N/A
Fire Protection:	N/A
Condition:	New

Vessels	
Name	Berthing, Alignment
Prince of Wales / Stikine / FVF	Starboard

Tidal Data (MLLW 0.0 feet)	
EHW	20.0
MHHW	18.0
MHW	15.0
ELW	-4.0

Terminal Building	
Year Built:	2007
Square Footage:	1,600 s.f.
Heating System:	Toyo Furnace
Fuel Storage:	AST
Fire Protection:	N/A
Condition:	New

Generator & Building
This facility does not have a generator on site.

Vehicle Transfer Bridge - #0182	
Type:	16' x 130' steel multi-girder
Year Built:	2015
Shoreward support:	Concrete abutment
Seaward support:	Steel Support Float
Coating:	Spray metallized w/topcoat
Pedestrian Access:	Concrete 4' wide on bridge
Lighting:	(3) Overhead Light Posts
Condition:	New
Load Posting Sign:	N/A
Original Design Load:	HL93

Bridge Support Float	
Type:	40' x 60' Steel Flexi-float
Year Built:	2015
Ballasted:	Yes
Ramp lift:	Hydraulic/Block & Cable
Apron lift:	Hydraulic/Block & Cable
Anodes:	Yes
Condition:	Float (new); Ramp/apron (fair)

Dolphins							
Dolphins	Dolphin Piles	Fender Support	Fender Face	Anodes	Built	Cond.	Notes
W2	2B, 1V	-	-	Yes	2015	New	
W1	2B, 2V	Chains	UHMW	Yes	2015	New	
E1	2B, 2V	Chains	UHMW	Yes	2015	New	
E2	2B, 2V	Chains	UHMW	Yes	2015	New	
E3	2B, 2V	Chains	UHMW	Yes	2015	New	Red navlight
RW	2B, 1V	-	-	Yes	2015	New	
RE	2B, 1V	-	-	Yes	2015	New	

LEGEND

RE = East Float Restraint Structure
V = Vertical Steel Pipe Piles

B = Battered Steel Pipe Piles
W = W 14x84 Fender Pile

Catwalks / Gangways								
#	From Struc.	To Struc.	Lenth / Style / Main Members	Built	Safety Restraints	Cond.	Lighting	Notes
C1	W1	W2	66' / Catwalk / 16"x4" Tube Girders	2015	Yes	New	Jelly Jar	
G1	W1	WFP	38' / Gangway / Pipe Truss	1988	No	Good	Jelly Jar	
G2	E1	EFP	38' / Gangway / Pipe Truss	1988	No	Good	Jelly Jar	
C2	E1	E2	53' / Catwalk / 16"x4" Tube Girders	2015	Yes	New	Jelly Jar	
C3	E2	E3	51' / Catwalk / 16"x4" Tube Girders	2015	Yes	New	Jelly Jar	

Terminal Projects			
Year	Project #	Project Name	Description
1975	S-0926(1)	Hollis Ferry Terminal Facility	Constructed new stern-loading facility with uplands fill, timber dock and timber duncan dolphins.
1977	TQS-RS-0926 (2)	Clark Bay Ferry Terminal	Uplands fill for new terminal parking and staging areas. Constructed new steel transfer bridge & cable/hydraulic lift system, and four new steel mooring/fendering structures.
1988	N/A	Clark Bay FT Dolphin Modifications	Installed new steel dolphin, E4.

Terminal Projects (cont'd.)			
Year	Project #	Project Name	Description
1993	N/A	Clark Bay FT Mooring Improvements	Installed new steel dolphin, E5
2004	N/A	IFA - Clark Bay FT Improvements	Re-painted transfer bridge, repaired bridge abutment upgraded utilites to bridge and lighting on uplands.
2006	N/A	IFA - Clark Bay Terminal Building and Maintenance Shop	Constructed new terminal building and maintenance shop, including secure staging and security upgrades.
2015	67449	Clark Bay Ferry Terminal Improvements	Constructed new transfer bridge & float, 4 new mooring structures in a new re-aligned location, away from the accreting riverbed.

Observations

- The shoreward transition plate has only ~25% of the non-skid remaining and the pipe hinges have nearly failed. There is a broken electrical conduit on the RT side of the abutment.
- The 2010 Fracture Critical (FC) inspection found that there is a 9" long horizontal crack in the exterior top flange of the bearing beam under Girder 1 at a previously-welded repair site. Also noted were severe cracks in the hinge for the shoreside transition plate.
The 2010 FC inspection also found that there is excessive dead load deflection present in each girder. The deflections, approximated by taking a measurement at the top of railing, are 3 1/8" and 1 5/8" for Girders 1 and 2, respectively.
The bridge deck expanded metal can become packed with ice during the winter and create a severe sliding hazard. The bridge makes a popping noise when going through its normal range of tidal movement.
- The pontoon is held in position with concrete anchors and support chain system. There appears to be excessive pontoon movement during heavy weather conditions. The pontoon anchor system allows the float to translate and rotate. The anchor systems were found to be intact and in good condition during the 2001 underwater inspection survey. The eastern anchor was buried and could not be inspected. The anchor chains rub on the dolphin batter piles. The most recent Underwater Inspection found that both anchor chains exhibited up to 30 percent loss of section where they rub against a nearby dolphin batter pile.
- The bridge to pontoon bearing assembly connection bolts, between the steel riser and the hinge support beam, are loose. The bottom flange of the steel riser is now bent due to free movement.
- A small creek flows near the southeast corner of the terminal, depositing sediment below the northeast corner of the pontoon. During low tide (-3') the northeast corner of the pontoon grounds on the beach. The pontoon system was designed to be supported evenly by the buoyant force of seawater for supporting the bridge. The pontoon float is listing to the southwest (seaward right).
Steel lock brackets, along the sides of the bridge pontoons, exhibit heavy corrosion with minor section loss.
- The bridge apron does not fully bear on the vessel sponson. The RT leading edge of the apron is outside of the car deck.
- Corrosion was observed over 100% of the immersed surface (below low tide) of structures W1 and E1-E4. There is 100% coating failure in the splash zone with small surface pitting (1 mil to 3 mils deep). The timber fenders are showing signs of deterioration below the waterline with up to 1/4" rot.
A new dolphin E5 was installed in 1993 on the southeast end of the older mooring structures to allow larger vessels to moor at this facility. The upper 14 feet of the timber fender face was crushed on dolphin E5 and the pile cap was bent roughly 6-inches towards the shore. Other than the galvanized coating failures noted above, the older dolphins (W1 and E1-E3) are in fair condition. Dolphin E4 is likewise in fair condition. Anodes were installed on dolphin structures W1 and E1-E4 in 1990. The most recent underwater inspection revealed the anodes are 100% consumed.

Observations (cont'd.)

8. Dolphin W1 reportedly experiences significant movement while the vessels are moored; the 2001 underwater inspection did not reveal any indications of piling failures. Access to this dolphin is by a gangway connected to the pontoon system. Reports indicated that they have problems with line hang-ups while untying vessels. Because the platform is very small, clearing the lines requires the line handlers to climb out onto the fender system. The fender crown does not cover the entire top face of the fender system and the fasteners repeatedly loosen. The other dolphins are not accessible and line handling is by ship personnel.

Inspection Summary		
Structure	Priority	Recommendations
<i>Category I - Safety Repairs</i>		
No safety repairs needed		
<i>Category II - Rehabilitation Work</i>		
No rehabilitation work needed		
<i>Category III - Upgrades Needed</i>		
No upgrades needed		