

VICINITY MAP



Approach

Staging Area

FT Office

MV TUSTUMENA

Dock

KODIAK CHANNEL



SCALE IN FEET

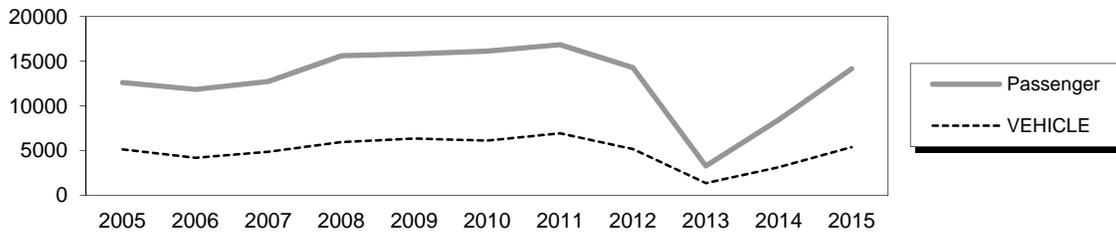
*GENERAL LAYOUT
KODIAK*

Kodiak City Dock (Pier 1)

100 Marine Way

Owner: City of Kodiak
Terminal Manager: Steve Penn, AMHS Terminal Manager, 907-486-4443
 Martin Owen, Harbormaster, City of Kodiak, 907-486-8080

Terminal Description: The M/V Tustumena docks at the Kodiak City Dock (also called Pier 1) on its east/west passage between Homer and the Aleutian Chain. The Kodiak facility is a horse-shaped timber structure with a main dock section approximately 200'x 30', and two 100' approach trestles, one at each end of the dock. The dock is currently used for transfer of general cargo and fuel, in addition to ferry operations. The facility does not have sufficient vehicle staging areas and the uplands are shared with parking and other uses. Embarking vehicles line up on the adjacent city street and in the parking lot. The contractor operated ticket office is located in a city owned building, on shore, between the two access trestles. The wharf is crowded between a marine fuel service depot to the north and a shore based seafood processor to the south. Vessels moored at the adjacent facilities encroach on berthing the dock. The past 10 years of total passenger and vehicle traffic at Kodiak City Dock is shown below. The M/V Tustumena was out of service most of 2013, causing a steep dropoff in traffic at the terminal.



The most recent above water survey was completed on August 18, 2014. The underwater inspection occurred on July 8, 2014. The most recent fracture critical inspection was on September 12, 2012.

Vessels	
Name	Berthing, Alignment
Tustumena	Port / Starboard

Tidal Data (MLLW=0.0 feet)	
EHW	13.1
MHHW	8.7
MHW	7.8
ELW	-3.5

Terminal Building
The ticket office is located in a city-owned building, on shore, between the two access trestles.

Generator & Building
NA

Utilities @ Dock
Water: Yes

Uplands	
Short-Term Parking:	10 cars
Long-Term Parking:	N/A
Staging Area:	150 lineal feet

U-Shaped Dock - #1425	
Year Built:	ca. 1960
Dock Structure:	174 timber vertical piles and 39 timber batter piles, 4x12 timber crossing bracing; timber pile caps, stringers and decking.
Coating:	Creosote-treated
Fenders:	7 steel pile units rebuilt in 1988; each consists of a pair of steel pin piles, a steel framework, a timber wearing surface and two rubber cylinders.
Mooring Bollards/Cleats:	Bollard mounted at both ends of dock; several cleats mounted to bullrail along the dock face.
Lighting:	Light post mounted at corner of south approach & dock
Condition:	Fair
Load Posting Sign:	30,000 lb Tandem Axle Group
Original Design Load:	Unknown - Plans not on file.

Observations

1. The deck consists of 3.5" x 11.5" treated solid sawn (SS) timber planks spanning transversely across the SS timber beams. The deck planks are nailed directly into the tops of the beams. The deck is in satisfactory condition. The most recent Fracture Critical (FC) inspection found the deck planks had up to ¼" of surface wear.
In the past, the city has used this dock to dump snow into Kodiak harbor. The dump trucks, with their tire chains, caused significant rutting and splitting of the deck. The city no longer uses this facility to waste snow and replaced the deck planking in 2007 & 2008.
2. The superstructure consists of fifteen adjacent 4" x 11.5" treated timber SS beams in the approach spans and in the main dock section. The beams are supported on 11" x 11.5" treated timber solid sawn bent caps supported on timber piles. The beams are in satisfactory condition.
Typical deficiencies to the timber beams are minor checking & surface discoloration, several small notches at splices, and minor mechanical surface damage, gouges, etc along edge beams.
3. The bent caps consist of 13.25" x 12.25" treated timber SS members supported on treated timber piles typically spaced at 10'-0" with a maximum span of about 10'-6". The bent caps are in satisfactory condition with typical deficiencies including minor checking & surface discoloration, and surface damage & gouges. The most recent FC inspection found that Cap WA3 is not bearing on one pile, with the gap between 0 and 3/16".
4. The timber bullrails along the seaward edge of the dock are severely weathered and deteriorated. Mooring cleats bolted through the bullrail are at risk of failure due to the integrity of the timber. The deck is in satisfactory condition.
5. The support and batter piling are in good condition. The creosote treatment was in good condition and there was no evidence of marine borer attack. There is significant marine growth below the high water line on all piling. Checks and splits were noted in several support piles. The most recent FC inspection found typical splitting and surface damage to the fender piles with heavy marine growth below the water line.
6. The riprap slope under the dock is stable with no obvious signs of erosion. Riprap bears against several support piles of the access trestle but it does not appear to have caused any damage.
7. The heads of the timber bollards were cut down to sound wood and sealed with tar and then capped with metal flashing in 2005. Galvanization on south bollard is nearly depleted, corrosion covers 70% of surface.
8. Coating is failing on ladders and moveable bull rails; minor corrosion is evident. The south ladder connection plate is torn and bolts are seated in unsound wood of bull rail.
9. The steel fender piling and fender framework are in good condition. Steel is either galvanized or epoxy coated. Coatings show signs of failure in the tide zone. Minor abrasions were noted on the timber face but the surface is still serviceable. There are no anodes on the steel piles or steel framework.
10. The luminaire near the junction of the north approach and dock, has been damaged by vehicle impact and is canted toward the side of impact.
11. Cathodic potential readings were taken on all 7 steel fender units along the dock face, and measurements indicate that anodes are depleted and all steel piles are freely corroding.
12. The terminal building is owned by the City of Kodiak, and space is shared with other tourism-related businesses. The exterior cedar shake siding is heavily weathered and needs to be replaced. Cracks are evident in the building foundation and indicate previous settlement of the fill. Dock demolition and reconstruction will generate ground vibrations that may exacerbate settlement. Wood decks adjacent to the terminal building have severe structural deficiencies. Rot is prevalent in the framing and sheet metal hangers are corroded or missing.
13. The overall stability of the terminal building embankment was investigated during design of the new dock facility. This analysis indicates the embankment may be unstable during a design seismic event.

Inspection Summary		
Structure	Priority	Recommendations
<i>Category I - Safety Issues</i>		
Ladder, Bullrail & Luminaire	1	Repair the south ladder connections to the top bull rail. Replace the bullrails along the seaward face of the dock, re-install the mooring bollards. Replace the mast & base of the damaged luminaire near the junction of the north approach and dock.
Terminal Building	2	Recommend preconstruction inspection and documentation of existing defects in the terminal building foundation. The embankment and rip rap slope should be monitored during construction for settlement. Periodically inspect the building foundation for increase in crack width or additional cracks. Recommend that no decks be salvaged for use in the new facility.
<i>Category II - Rehabilitation Work</i>		
Cathodic Protection	3	Program a project to install new anodes.
Miscellaneous	4	Paint new coatings on bollards, ladders & movable bullrail.
<i>Category III - Upgrades Needed</i>		
Replace Dock	5	A project is currently in active progress (Project #68938) to replace the existing timber dock with a new dock structure in the same location.

68938 - Kodiak Ferry Terminal & Dock Improvements:

The work for this project consists of the reconstruction of the existing Pier 1 multi-use aging timber dock facility with a new, modern steel pile supported structure and associated mooring and fender system. The project was awarded to Pacific Pile & Marine in May of 2014.

Due to the close proximity of endangered Stellar sea lions to the project location, construction was halted to acquire a Marine Mammal Permit & Environmental document re-evaluation in order to continue construction. The additional permitting and environmental analysis was completed in September 2015. Completion of construction of the new facility is expected by July 2016.