

Site Visit Summary

Port Lions City Dock

June 23 – 24, 2009

Participants

Robert Tedrick – EN-CW-HH

George Kalli – EN-CW-PF

Summary

June 23, 2009

Robert and George arrived in Port Lions on the evening on June 23rd at approximately 17:00 on Island Air. After a quick reconnaissance of the city dock and dinner a community meeting was conducted. A summary of the community meeting can be found at O:_Projects by Location\Port Lions\AKV283 (322824) Port Lions City Dock and Ferry Terminal Repairs Denali Commission\06 Site Visits-Meeting Minutes.

Photos taken during the site visit are located at O:_Projects by Location\Port Lions\AKV283 (322824) Port Lions City Dock and Ferry Terminal Repairs Denali Commission\05 Photos-Maps-Drawings\Site Visit Jun23-24 2009

June 24, 2009

07:30

Robert and George returned to the city dock at 08:30 to take advantage of the lowest tide of the summer that was occurring that morning (Kodiak low tide -2.7 at 10:01).

Rich, the bulk fuel operator informed us that the new bulk fuel facility was constructed in 2007.

The causeway portion of dock is partially supported by concrete filled drums, some of which have eroded away from the concrete within. We observed no bracing at the top or bottom of these drums.

Cross beams located lower than high water were observed to be severely decayed with many detached from their pile attachment points and many missing large portions of the beams themselves.

Diagonal cross beams located above the water line appeared to be generally good shape, at least in comparison to those that are periodically submerged.

Some newer horizontal cross beams were observed.

Many horizontal cross beams near the base of the dock piles were missing completely. This was particularly visible during the low tide.

Numerous piles appear to have lost cross-sectional area towards the base of the pile.

A missing pile under the causeway portion of the dock was noted. (In photos, a dangling cross beam touches the ground near the shoreline in the vicinity of the missing pile.)

Crooked, non-vertical piles are obvious, especially in the outer piles. While many are batter piles, intended to be non-vertical to add horizontal stability by providing a wider base, others were not intended to be non-vertical (narrower base).

Multiple piles and drums were noted that are not touching the bottom of the deck.

A longitudinal and slightly crosswise sag in the causeway is evident.

New surface decking was constructed directly atop old decking material. This prevents adequate drainage through the decking. There is much vegetation, mostly grass, sprouting out of the cracks of the decking. Small trees were also observed, especially along the perimeter on the deck and along the bulk fuel lines.

The tops ends of most of the piles along the outside of the dock are recessed and have vegetation growing in them.

09:00

The harbormaster Russell Gundersen joined us on the dock. He stated that he had washed the deck 2 – 3 weeks ago and that the grass was already growing back atop the deck.

The original decking surface that was covered over was visible around the storage building located atop the dock. The top of this decking was covered in some sort of lichen-like vegetative growth and appeared to be 'punky'.

The 2nd bollard from the seaward side of the dock is quite loose and can easily be made to sway by a human shoving on it.

Throughout the dock there is antiquated equipment including, pipes, pumps, and decaying wooden live crab traps, mostly related to its origin as a cannery dock. Removal of this equipment may be a consideration as part of any dock repair efforts.

The building located on the dock has a freezer on one side and storage on the other. The freezer did not appear to be in use or operational. The storage area contains an inoperable salt water pump.

09:20

Jon Scott Pestrikoff joined us on the dock.

- He stressed the community's need to maintain the size of the dock to support future economic endeavors in the community.
- Jon stated that the dock swayed up to 18 inches during a storm with 80 – 90 mph winds.

09:25

The Alaska Marine Highway ferry Tustamena began approaching the dock to land under calm conditions.

After docking, Captain John Merrill spoke with us.

- He confirmed that the Port Lions dock is the worst dock that they call upon.
- He referred to the dock as dilapidated.
- Due to concerns with the dock, they often have to avoid it in the winter during rough conditions.
- He stated that a dock face alignment east of north of the current alignment would be advantageous to the ferry.
- There has been talk of the Kennicott coming to Port Lions in the future but Captain Merrill was not sure if that was plausible without dredging. The Kennicott is a larger boat than the Tustamena.
- Captain Merrill indicated that he would prefer a new dock, but that any improvements would be great.
- An independent fender system would be beneficial but the reduced weight limitation of the dock (23,000 lbs) would still limit what the ferry could bring to Port Lions.

Petro Marine Services is the fuel supplier for Port Lions. The K-Sea is the tug that services Port Lions. The last tug captain to service Port Lions was named Amos. He might be a good contact as a user of the dock.

10:30

Marvin Bartleson Sr. took us out on his boat for a water based inspection of the dock.

According to Marvin, the new decking was laid atop the old decking approximately 15 years ago.

Marvin stated that the dock was constructed in 1964 or 1965 (Port Lions was established after the 1964 Good Friday earthquake).

Bracing for the dock ladders are missing. The ladders are only supported by their attachment point to the dock at the top of the ladder. This is a safety concern.

Noting the extent of cross bracing that is missing and/or decayed in place it became evident that it would be prudent to replace all the cross bracing for the dock.

12:10

Robert and George returned to the dock on foot to explore underneath it as the tide was still quite low.

Bolts with nothing attached to them indicate a missing lowest level of cross bracing.

All bracing below a certain elevation are missing or obviously decayed.

A pile tapered at the bottom was noted resting upon bedrock.

Numerous crooked, non-batter piles were observed.

It appears that the sag in the causeway corresponds to where the piles are in soil as opposed to bedrock.

In summary, based upon our impressions during this site visit, the potential scope of repairing the Port Lions City Dock appears to contain the following efforts;

- Conduct follow-up dive inspection (recommended every 5 years)

- Replace all bracing

- Replace some batter piles

- Replace some piles (timber and concrete)

- Replace ladders

Remove live crab tanks

Replace decking

Remove old equipment

Cut and cap outer piles to prevent vegetative growth

Install independent fender system

We question whether it would be cheaper and safer to demolish the existing dock and construct a new dock at Port Lions.

PHOTOS



Vegetation growing atop pile ends



Gap between pile and dock



Unbraced piles on bedrock



Unbraced piles on bedrock with bolts indicating missing bracing



View underneath causeway



Dangling ladder missing supports due to decay of bracing



View showing misaligned pile under causeway



Tustamena at the dock



Unbraced concrete barrel supports atop bedrock under causeway



Fuel lines on edge of dock



Typical dock surface with vegetative growth



Decaying live crab pots, fuel lines, and vegetative growth including trees