



sanitation

Edward Grayson Commissioner

Sarah Dolinar

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January 14, 2022

Kenneth B. Brezner, Regional Materials Management Engineer
Division of Materials Management
NYSDEC, Region 2
47-40 21st Street
Long Island City, NY 11101

Re: Southwest Brooklyn Marine Transfer Station (MTS)
NYSDEC Permit # 2-6106-00002/00022
2021 Bulkhead Inspection Report

Dear Mr. Brezner:

On behalf of the New York City Department of Sanitation, enclosed please find the 2021 Bulkhead Inspection Report provided in compliance with Condition 15a) and 15c) of the above-referenced Part 360 Permit for the MTS.

In further compliance with the Part 360 Permit, this letter and the Report will be posted on the DSNY website shortly.

Please contact me with any questions.

Sincerely,

Sarah Dolinar

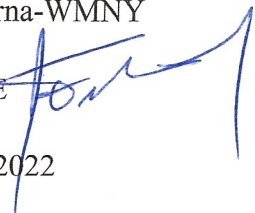
Enclosure (1): 2021 Bulkhead Inspection Report

Cc: J. Atkinson, J. Capo, A. Conanan, A. Bianco, M. Petkanas, DSNY
J. O'Connell, NYSDEC, Region 2

SOUTHWEST BROOKLYN MARINE TRANSFER STATION

2021 BULKHEAD INSPECTION REPORT

MEMORANDUM

To: Anthony Barna-WMNY
From: Joe Fiteni PE 
Date: January 11, 2022
RE: Review of the 2021 Inspection Report for the North Bulkhead Fender System at the Southwest Brooklyn Marine Transfer Station (SBMTS)

Introduction

On October 23 and 24, 2021 Transit Construction undertook and completed the repairs recommended by the Underwater Inspection that was carried out on October 03, 2020 of the North Bulkhead Fender System at the SBMTS. These repairs were videotaped and are summarized in Savin's Memo of December 09, 2021. In Conjunction with carrying out these repairs Transit Construction completed a re-inspection of the North Bulkhead Fender System. The results of this inspection are detailed in the attached letter report from Transit Construction dated January 10, 2022.

Overview of the underwater inspection results

Transit Construction's underwater inspection of the North Bulkhead Fender System at the SBMTS on October 23 and 24, 2021 identified the following:

- **Additional Loose Bolts:** Several fenders were found to have additional loose bolts to those identified in the previous inspection. All loose bolts identified during Transits inspection were reportedly tightened during this inspection
- **Timber Fender F3;** The steel cap was found to be missing and will need to be replaced and properly secured with lag Bolts
- **Timber Fender F12;** Existing timbers are damaged and cracked apparently from some type of impact. Bolts have been snapped and the connection displaced. The timber fender system at F12 should be completely unbolted, lifted out and removed for repairs including replacement of damaged timbers and sheared connecting bolts. The Fender system should then be reinstalled and bolted in its original position.

Recommendations:

The North Bulkhead Fender System has undergone two underwater inspections. The first in October of 2020 about 18 months after the MTS began operating and the second in October of 2021 one year later. The first inspection identified numerous repairs to be made most of which appear to be related to minor deficiencies in the original construction such as loose or missing bolts or improperly installed bolts. The second inspection in 2021 identified some additional loose bolts and damage related to a missing steel cap and what appears to be damage to one fender due to barge impact.

Based on the findings of these two inspections and in particular the significant reduction in required repairs identified between the initial inspection and the follow up inspection it does not appear that an "annual inspection" of the fender system is warranted.

Instead, I would recommend that going forward inspections be required every two years or when there is an incident reported which potentially caused damage to the fender system.

TRANSIT CONSTRUCTION CORP.

618 SAW MILL RIVER RD
YONKERS, NY 10710
P: (914) 476-0465 * F: (914) 476-2051

January 10, 2022

Anthony Barna

Waste Management of New York City, LLC

215 Varick Ave.

Brooklyn, New York 11237

Re: Southwest Brooklyn Marine Terminal

Sub: Bulkhead Fender System Repair and Inspection; Timber Fender

Pursuant to your request and in accordance with the repairs and inspection conducted on 10/23/21 & 10/24/21, please refer to the attached report and below information:

General:

- As evidenced in the previously submitted video of the underwater repairs and inspection performed and conducted on 10/23/21 & 10/24/21, this shall also confirm all loose bolt connections identified in the Savin Engineers, PC Report from its inspection conducted on 10/03/20 & 10/04/20, were addressed and, in fact all bolts on the entire bulkhead were inspected and checked for tightness as a matter of procedure. Further any lag bolts found loose or missing were tightened and replaced.

Timber Fender F12:

- Timber Condition: existing timber damaged/ cracked/ split from impact; bolts snapped; connection displaced. Timber Fender should be completely unbolted / lifted out removed and damaged timbers disposed and replaced. Fender reinstalled and refastened / bolted in place.
- Timber Fender F3: The existing steel cap was found not in place and will be required to be reinstalled with new lag bolts

Respectfully Submitted

NAME: Carlos L. Perez; Certified Commercial Diver — Certificate # 5494

DATE: 1/10/22

Transit Construction Corp is an Equal Opportunity Employer.

****Red indicates required repairs from 2020 inspection**

3.2 Results of the North Bulkhead Fender System Inspection		
Timber Fender F1 Date: 10/23/21 to 10/24/21	Timbers Condition	Very good, no cracks, splits, checks, or shakes. No marine borer infestation No Change (NC)
	Timber to whaler connection	All hardware intact. Only bottom whaler accessible. (NC)
	Whaler condition	Excellent. No pitting or corrosion (NC)
	Whaler to pile connection	All hardware intact. Only bottom whaler accessible. (NC)
	Tie rods & chain bracing	In place but above water (NC)
	Pile P1	Excellent. No pitting or corrosion (NC)
	Bottom @ P1	Depth 14.5 feet. Bottom sand/shell (NC)
	Pile P2	Excellent. No pitting or corrosion (NC)
	Bottom @ P2	Depth 15 feet. Bottom sand/shell (NC)
	Other	All Bolts Checked &/or Replaced &/or Tightened as needed
	All components covered by a light layer of marine growth. Orange areas are not corrosion but are marine growth.	
Timber Fender F2 Date: 10/23/21 to 10/24/21	Timbers Condition	Very good, no cracks, splits, checks, or shakes. No marine borer infestation (NC)
	Timber to whaler connection	All hardware intact. Only bottom whaler accessible (NC)
	Whaler condition	Excellent. No pitting or corrosion (NC)
	Whaler to pile connection	All hardware intact. Only bottom whaler accessible (NC)
	Tie rods & chain bracing	In place but above water (NC)
	Pile P3	Excellent. No pitting or corrosion (NC)
	Bottom @ P3	Depth 15.5 feet. Bottom sand/shell (NC)
	Pile P4	Excellent. No pitting or corrosion. PVC electrical conduit strapped to P4. (NC)
	Bottom @ P4	Depth 15.5 feet. Bottom sand/shell (NC)
	Other	All Bolts Checked &/or Replaced &/or Tightened as needed
	All components covered by a light layer of marine growth. Orange areas are not corrosion but are marine growth.	
Timber Fender F3 Date: 10/23/21 to 10/24/21	Timbers Condition	Very good, no cracks, splits, checks, or shakes. No marine borer infestation. Slight rubbing from barges but no damage – The existing steel cap was found not in place and will be required to be reinstalled with new lag bolts (NC)
	Timber to whaler connection	All hardware intact. Only bottom whaler accessible (NC)
	Whaler condition	Excellent. No pitting or corrosion (NC)
	Whaler to pile connection	All hardware intact. Only bottom whaler accessible (NC)
	Tie rods & chain bracing	In place but above water (NC)
	Pile P5	Excellent. No pitting or corrosion (NC)
	Bottom @ P5	Depth 15.5 feet. Bottom sand/shell (NC)
	Pile P6	Excellent. No pitting or corrosion (NC)
	Bottom @ P6	Depth 15 feet. Bottom sand/shell (NC)
	Other	All Bolts Checked &/or Replaced &/or Tightened as needed
	All components covered by a light layer of marine growth. Orange areas are not corrosion but are marine growth.	
Timber Fender F4 Date: 10/23/21 to 10/24/21	Timbers Condition	Very good, no cracks, splits, checks, or shakes. No marine borer infestation. Slight rubbing from barges but no damage (NC)
	Timber to whaler connection	All hardware intact. Only bottom whaler accessible (NC)
	Whaler condition	Excellent. No pitting or corrosion (NC)
	Whaler to pile connection	All hardware intact. Only bottom whaler accessible (NC)
	Tie rods & chain bracing	In place but above water (NC)
	Pile P7	Excellent. No pitting or corrosion (NC)
	Bottom @ P7	Depth 14.5 feet. Bottom sand/shell (NC)
	Pile P8	Excellent. No pitting or corrosion (NC)
	Bottom @ P8	Depth 15 feet. Bottom sand/shell (NC)
	Other	All Bolts Checked &/or Replaced &/or Tightened as needed
	All components covered by a light layer of marine growth. Orange areas are not corrosion but are marine growth.	
Timber Fender F5 Date: 10/23/21 to 10/24/21	Timbers Condition	Very good, no cracks, checks, or shakes. Timber #1 (from north) has a 1/8 inch wide split (offshore side) with a 3/8-inch width on inshore side. The split is approximately 2 feet high from bottom of timber. The split does not present a concern at this time. No marine borer infestation. Slight rubbing from barges but no damage (NC)
	Timber to whaler connection	Hardware intact except for the 5 th timber from north. (NC)
	Whaler condition	Excellent. No pitting or corrosion (NC)
	Whaler to pile connection	All hardware intact. Only bottom whaler accessible (NC)
	Tie rods & chain bracing	In place but above water (NC)
	Pile P9	Excellent. No pitting or corrosion (NC)
	Bottom @ P9	Depth 15.5 feet. Bottom sand/shell (NC)
	Pile P10	Excellent. No pitting or corrosion (NC)
	Bottom @ P10	Depth 15 feet. Bottom sand/shell (NC)
	Other	The 5th timber is missing bolts to the bottom whaler. All Bolts Checked &/or Replaced &/or Tightened as needed
	All components covered by a light layer of marine growth. Orange areas are not corrosion but are marine growth.	

Timber Fender F6 Date: 10/23/21 to 10/24/21	Timbers Condition	Very good, no cracks, checks, or shakes. Timber #1 (from north) has a very minor split through the south outer corner of the timber. The split is approximately 2 feet high from bottom of timber. The split does not present a concern at this time. No marine borer infestation.	
	Timber to whaler connection	Hardware intact except. Only bottom whaler accessible	(NC)
	Whaler condition	Excellent. No pitting or corrosion	(NC)
	Whaler to pile connection	All hardware intact. Only bottom whaler accessible	(NC)
	Tie rods & chain bracing	In place but above water	(NC)
	Pile P11	Excellent. No pitting or corrosion	(NC)
	Bottom @ P11	Depth 16 feet. Bottom sand/shell	(NC)
	Pile P12	Excellent. No pitting or corrosion	(NC)
	Bottom @ P12	Depth 15 feet. Bottom sand/shell	(NC)
	Other	All Bolts Checked &/or Replaced &/or Tightened as needed	
	All components covered by a light layer of marine growth. Orange areas are not corrosion but are marine growth.		
Timber Fender F7 Date: 10/23/21 to 10/24/21	Timbers Condition	Very good, no cracks, splits, checks, or shakes. No marine borer infestation.	(NC)
	Timber to whaler connection	Hardware intact. Bottom and middle whaler accessible	(NC)
	Whaler condition	Excellent. No pitting or corrosion	(NC)
	Whaler to pile connection	All hardware intact. Bottom and middle whaler accessible	(NC)
	Tie rods & chain bracing	In place but above water	(NC)
	Pile P13	Excellent. No pitting or corrosion	(NC)
	Bottom @ P13	Depth 19 feet. Bottom sand/shell	(NC)
	Pile P14	Excellent. No pitting or corrosion	(NC)
	Bottom @ P14	Depth 19 feet. Bottom sand/shell	(NC)
	Other	All Bolts Checked &/or Replaced &/or Tightened as needed	
	All components covered by a light layer of marine growth. Orange areas are not corrosion but are marine growth.		
Timber Fender F8 Date: 10/23/21 to 10/24/21	Timbers Condition	Very good, no cracks, splits, checks, or shakes. No marine borer infestation.	(NC)
	Timber to whaler connection	Hardware intact. Bottom and middle whaler accessible	(NC)
	Whaler condition	Excellent. No pitting or corrosion	(NC)
	Whaler to pile connection	All hardware intact. Only bottom whaler accessible	(NC)
	Tie rods & chain bracing	In place but above water	(NC)
	Pile P15	Excellent. No pitting or corrosion	(NC)
	Bottom @ P15	Depth 19.5 feet. Bottom sand/shell	(NC)
	Pile P16	Excellent. No pitting or corrosion	(NC)
	Bottom @ P16	Depth 19.5 feet. Bottom sand/shell	(NC)
	Other	All Bolts Checked &/or Replaced &/or Tightened as needed	
	All components covered by a light layer of marine growth. Orange areas are not corrosion but are marine growth.		
Timber Fender F9 Date: 10/23/21 to 10/24/21	Timbers Condition	Very good, no cracks, splits, checks, or shakes. No marine borer infestation. The second timber from the south has two extra or mis-drilled holes for attachment to both the middle and bottom whaler (not a concern at this time).	(NC)
	Timber to whaler connection	Hardware intact. Bottom and middle whaler accessible	(NC)
	Whaler condition	Excellent. No pitting or corrosion	(NC)
	Whaler to pile connection	All hardware intact. Only bottom whaler accessible	(NC)
	Tie rods & chain bracing	In place but above water	(NC)
	Pile P17	Excellent. No pitting or corrosion	(NC)
	Bottom @ P17	Depth 19 feet. Bottom silt over sand/shell	(NC)
	Pile P18	Excellent. No pitting or corrosion	(NC)
	Bottom @ P18	Depth 19 feet. Bottom silt over sand/shell	(NC)
	Other	All Bolts Checked &/or Replaced &/or Tightened as needed	
	All components covered by a light layer of marine growth. Orange areas are not corrosion but are marine growth.		
Timber Fender F10 Date: 10/23/21 to 10/24/21	Timbers Condition	Very good, no cracks, splits, or shakes. Fender shows intermittent very light checks. No marine borer infestation.	(NC)
	Timber to whaler connection	Hardware intact. Bottom and middle whaler accessible	(NC)
	Whaler condition	Excellent. No pitting or corrosion	(NC)
	Whaler to pile connection	All hardware intact. Only bottom whaler accessible	(NC)
	Tie rods & chain bracing	In place but above water	(NC)
	Pile P19	Excellent. No pitting or corrosion	(NC)
	Bottom @ P19	Depth 19 feet. Bottom sand/shell	(NC)
	Pile P20	Excellent. No pitting or corrosion	(NC)
	Bottom @ P20	Depth 20 feet. Bottom silt over sand/shell	(NC)
	Other	All Bolts Checked &/or Replaced &/or Tightened as needed	
	All components covered by a light layer of marine growth. Orange areas are not corrosion but are marine growth.		

Timber Fender F11 Date: 10/23/21 to 10/24/21	Timbers Condition	Very good, no cracks, splits, checks or shakes. No marine borer infestation.
	Timber to whaler connection	Timbers to middle whaler hardware intact. See Other below for timber to bottom whaler connection.
	Whaler condition	Excellent. No pitting or corrosion
	Whaler to pile connection	All hardware intact. Only bottom whaler accessible
	Tie rods & chain bracing	In place but above water
	Pile P21	Excellent. No pitting or corrosion
	Bottom @ P21	Depth 21 feet. Bottom silt over sand/shell
	Pile P22	Excellent. No pitting or corrosion
	Bottom @ P22	Depth 21 feet. Bottom silt over sand/shell
	Other	Between timbers 3 to 13 the bolt holes for the connection between the timbers and the bottom whaler were not recessed or counter sunk properly leaving the head of both of the bolts at each location above the face of the timbers. This has left the bolt heads exposed to the sides of the barges. Condition as follows: Bolts in timbers # (from north) 3, 4 & 5 have the
		heads exposed and worn by rubbing on the barges. Bolt in timber #6 has the head of the bolt sheared off. Bolt in timber #7 has the head worn partially off. Head of the bolt in timber #8 is sheared off and remaining bolt badly bent. The upper bolt in timber #9 has the head partially worn off and the lower bolt head has been sheared off. The bolts at timber # 10 have had the bolt heads worn down from barge contact. The upper bolt at timber #11 has been worn down and the lower bolt has been sheared off. Both the upper and lower bolts at timber #12 have had the bolt heads sheared off. The bolt hole for timbers #1, 2, 14 & 15 were properly drilled and those bolts are intact. (See at 1 hour 31 minutes 48 seconds from beginning of recording) All of the damaged Bolt conditions identified above have been repaired as outlined.
	All components covered by a light layer of marine growth. Orange areas are not corrosion but are marine growth.	
Timber Fender F12 Date: 10/23/21 to 10/24/21	Timbers Condition	Very good, no cracks, splits, checks, or shakes. No marine borer infestation. Timber Fender should be completely unbolted / lifted out removed and damaged timbers disposed and replaced. Fender reinstalled and refastened / bolted in place.
	Timber to whaler connection	Hardware intact between timbers and middle whaler. At the connection to the bottom whaler the lowest bolt connecting the 4th timber from the north is loose and the 5th timber from the north is missing the bottom bolt. This condition was addressed and repaired as outlined.
	Whaler condition	Excellent. No pitting or corrosion (NC)
	Whaler to pile connection	All hardware intact. Only bottom whaler accessible (NC)
	Tie rods & chain bracing	In place but above water (NC)
	Pile P23	Excellent. No pitting or corrosion (NC)
	Bottom @ P23	Depth 20.5 feet. Bottom silt over sand/shell (NC)
	Pile P24	Excellent. No pitting or corrosion (NC)
	Bottom @ P24	Depth 21 feet. Bottom silt over sand/shell (NC)
	Other	All Bolts Checked &/or Replaced &/or Tightened as needed
	All components covered by a light layer of marine growth. Orange areas are not corrosion but are marine growth.	
Timber Fender F13 Date: 10/23/21 to 10/24/21	Timbers Condition	Very good, no cracks, splits, checks, or shakes. No marine borer infestation.
	Timber to whaler connection	Hardware intact. Bottom and middle whaler accessible (NC)
	Whaler condition	Excellent. No pitting or corrosion (NC)
	Whaler to pile connection	All hardware intact. Only bottom whaler accessible (NC)
	Tie rods & chain bracing	In place but above water (NC)
	Pile P25	Excellent. No pitting or corrosion (NC)
	Bottom @ P25	Depth 21 feet. Bottom silt over sand/shell (NC)
	Pile P26	Excellent. No pitting or corrosion (NC)
	Bottom @ P26	Depth 21.5 feet. Bottom silt over sand/shell (NC)
	Other	PVC electrical conduit attached to P25 is broken exposing wires (see at 2 hours 04 minutes 12 seconds from beginning of recording). Two old 1' x 1' timbers are lying on the bottom inshore of P26 and offshore of P27. PVC was reconnected and set.
	All components covered by a light layer of marine growth. Orange areas are not corrosion but are marine growth.	
Timber Fender F14 Date: 10/23/21 to 10/24/21	Timbers Condition	Very good, no cracks, splits, checks, or shakes. No marine borer infestation. (NC)
	Timber to whaler connection	Hardware intact. Bottom whaler accessible. Can see hardware at middle whaler but cannot touch. (NC)
	Whaler condition	Excellent. No pitting or corrosion (NC)
	Whaler to pile connection	All hardware intact. Only bottom whaler accessible (NC)
	Tie rods & chain bracing	In place but above water (NC)
	Pile P27	Excellent. No pitting or corrosion (NC)
	Bottom @ P27	Depth 21 feet. Bottom silt over sand/shell (NC)
	Pile P28	Excellent. No pitting or corrosion (NC)
	Bottom @ P28	Depth 22 feet. Bottom silt over sand/shell (NC)
	Other	All Bolts Checked &/or Replaced &/or Tightened as needed
	All components covered by a light layer of marine growth. Orange areas are not corrosion but are marine growth.	

Timber Fender F15 Date: 10/23/21 to 10/24/21	Timbers Condition	Very good, no cracks, splits, or shakes. No marine borer infestation. (NC)
	Timber to whaler connection	Hardware intact. Bottom whaler accessible. Can see hardware at middle whaler but cannot touch. (NC)
	Whaler condition	Excellent. No pitting or corrosion (NC)
	Whaler to pile connection	All hardware intact except the lower bolt on the south side of P29 was tightened. Only bottom whaler accessible
	Tie rods & chain bracing	In place but above water (NC)
	Pile P29	Excellent. No pitting or corrosion (NC)
	Bottom @ P29	Depth 22.5feet. Bottom silt over sand/shell (NC)
	Pile P30	Excellent. No pitting or corrosion (NC)
	Bottom @ P30	Depth 25 feet. Bottom silt over sand/shell (NC)
	Other	All Bolts Checked &/or Replaced &/or Tightened as needed
	All components covered by a light layer of marine growth. Orange areas are not corrosion but are marine growth.	
Timber Fender F16 Date: 10/23/21 to 10/24/21	Timbers Condition	Very good, no cracks, splits, checks, or shakes. No marine borer infestation. (NC)
	Timber to whaler connection	Hardware intact. Bottom whaler accessible. Can see hardware at middle whaler but cannot touch. (NC)
	Whaler condition	Excellent. No pitting or corrosion (NC)
	Whaler to pile connection	All hardware intact. Only bottom whaler accessible (NC)
	Tie rods & chain bracing	In place but above water (NC)
	Pile P31	Excellent. No pitting or corrosion (NC)
	Bottom @ P31	Depth 26 feet. Bottom silt over sand/shell. Silt over 8 inches thick (NC)
	Pile P32	Excellent. No pitting or corrosion (NC)
	Bottom @ P32	Depth 27.5 feet. Bottom silt over sand/shell. Silt over 8 inches thick (NC)
	Other	All Bolts Checked &/or Replaced &/or Tightened as needed
	All components covered by a light layer of marine growth. Orange areas are not corrosion but are marine growth.	
Timber Fender F17 Date: 10/23/21 to 10/24/21	Timbers Condition	Very good, no cracks, splits, checks, or shakes. No marine borer infestation. (NC)
	Timber to whaler connection	Bottom whaler accessible and hardware intact. The 2 nd timber from the north upper bolt was tightened. Can see hardware at middle whaler but cannot touch.
	Whaler condition	Excellent. No pitting or corrosion (NC)
	Whaler to pile connection	All hardware intact. Only bottom whaler accessible (NC)
	Tie rods & chain bracing	In place but above water (NC)
	Pile P33	Excellent. No pitting or corrosion (NC)
	Bottom @ P33	Depth 27.5 feet. Bottom silt over sand/shell. Silt over 8 inches thick (NC)
	Pile P34	Excellent. No pitting or corrosion (NC)
	Bottom @ P34	Depth 28 feet. Bottom silt over sand/shell. Silt over 8 inches thick (NC)
	Other	All Bolts Checked &/or Replaced &/or Tightened as needed
	All components covered by a light layer of marine growth. Orange areas are not corrosion but are marine growth.	
Timber Fender F18 Date: 10/23/21 to 10/24/21	Timbers Condition	Very good, no cracks, splits, checks, or shakes. No marine borer infestation. (NC)
	Timber to whaler connection	Hardware intact. Bottom whaler accessible. Can see hardware at middle whaler but cannot touch. (NC)
	Whaler condition	Excellent. No pitting or corrosion (NC)
	Whaler to pile connection	The bottom bolt on the south side of P35 was tightened. All other hardware checked and tightened. Only bottom whaler accessible
	Tie rods & chain bracing	In place but above water (NC)
	Pile P35	Excellent. No pitting or corrosion (NC)
	Bottom @ P35	Depth 27.5 feet. Bottom silt over sand/shell. Silt over 8 inches thick (NC)
	Pile P36	Excellent. No pitting or corrosion (NC)
	Bottom @ P36	Depth 27.5 feet. Bottom silt over sand/shell. Silt over 8 inches thick (NC)
	Other	All Bolts Checked &/or Replaced &/or Tightened as needed
	All components covered by a light layer of marine growth. Orange areas are not corrosion but are marine growth.	

Timber Fender F19 Date: 10/23/21 to 10/24/21	Timbers Condition	Very good, no cracks, splits, or shakes. Slight check in one board less than 1/8 inch wide. No marine borer infestation. (NC)
	Timber to whaler connection	Hardware connecting to whalers intact. Bottom whaler accessible. Can see hardware at middle whaler but cannot touch. (NC)
	Whaler condition	Excellent. No pitting or corrosion (NC)
	Whaler to pile connection	Hardware connecting P37 to whalers intact but only bottom whaler accessible. At P38 to bottom whaler the lower bolt on the north side tightened. On the south side both the upper and lower bolts were tightened. All other hardware checked and tightened. Only bottom whaler accessible (NC)
	Tie rods & chain bracing	In place but above water (NC)
	Pile P37	Excellent. No pitting or corrosion (NC)
	Bottom @ P37	Depth 25 feet. Bottom silt over sand/shell. Silt over 8 inches thick (NC)
	Pile P38	Excellent. No pitting or corrosion (NC)
	Bottom @ P38	Depth 22.5 feet. Bottom silt over sand/shell. Silt over 8 inches thick (NC)
	Other	All Bolts Checked &/or Replaced &/or Tightened as needed
	All components covered by a light layer of marine growth. Orange areas are not corrosion but are marine growth.	
Timber Fender F20 Date: 10/23/21 to 10/24/21	Timbers Condition	Very good, no cracks, splits, checks, or shakes. No marine borer infestation. (NC)
	Timber to whaler connection	Hardware intact. Bottom whaler accessible. Can see hardware at middle whaler but cannot touch. (NC)
	Whaler condition	Excellent. No pitting or corrosion (NC)
	Whaler to pile connection	All hardware intact. Only bottom whaler accessible (NC)
	Tie rods & chain bracing	In place but above water (NC)
	Pile P39	Excellent. No pitting or corrosion (NC)
	Bottom @ P39	Depth 21 feet. Bottom silt over sand/shell. Silt over 8 inches thick (NC)
	Pile P40	Excellent. No pitting or corrosion (NC)
	Bottom @ P40	Depth 17.5 feet. Bottom silt over sand/shell. Silt over 8 inches thick (NC)
	Other	All Bolts Checked &/or Replaced &/or Tightened as needed
	All components covered by a light layer of marine growth. Orange areas are not corrosion but are marine growth.	