

**MARINERS' ADVISORY COMMITTEE  
FOR THE BAY AND RIVER DELAWARE  
MEETING  
September 13<sup>th</sup>, 2012 MINUTES**

The Regular Quarterly Meeting of the Mariners' Advisory Committee for the Bay and River Delaware was held September 13<sup>th</sup>, 2012 at Ristorante LaVeranda Philadelphia. Captain Stephen Roberts presided over the meeting. Captain Roberts called the meeting to order at 1100 hours. The meeting was attended by 44 Members, Associate Members, and interested parties.

**I. Welcome**

Captain Roberts welcomed members and guests.

**II. Reading of the Minutes**

Captain Jim Roche moved that the reading of the minutes from the previous meeting be approved, Mike Nesbitt seconded. All approved.

**III. Report of the Treasurer**

On behalf of MAC Treasurer Rick Iuliucci, Captain Roberts reported a balance of \$9,299.94.

**IV. Aids to Navigation USCG**

John Walters reported on the following lights and projects and distributed a detailed report on the following:

Maintenance and Improvements projects

1. Miah Maull Shoal Light
2. Delaware Bay Light 32
3. Deepwater Point Range Front Light
4. Devlin Lower Range Front Light
5. Construction Tender Operations
  - a. CGC Sledge
    1. Fisher Point Range
    2. Keystone Range Front Light
6. LED optics
7. Future AtoN
  - a. Baker Range
  - b. Delaware River and Bay Deepening Project
  - c. The replacement of: Liston Range, Reedy Island Range and New Castle Range

Navigation Items of Interest

8. Offshore Renewable Energy Installations
9. Offshore Anchorages
10. Sound Signals
11. Atlantic Coast Port Access Route Study
12. GPS interface tests

Regarding ACPARS, Captain Roberts advised the MAC that he put a link on the MAC website under "**COAST GUARD**" so the interim report can be reviewed. He added that posting comments there is welcome so that the MAC can formulate an official MAC comment that will be posted on the website as well.

## V. Army Corps of Engineers (ACOE)

Tony DePasquale distributed his report and commented on the following: (See distribution).

1. Delaware River, Philadelphia to Sea & Main Channel Deepening
2. Wilmington Harbor
3. Delaware River: Philadelphia to Trenton

*The McFarland was involved in emergency dredging between April and June to remove shoaling and Tony thanked the MAC for their involvement and support to keep the dredge operational.*

*Tony added that work is due soon on the Tacony Palmyra Bridge that will reduce the air draft by 16 feet and will coordinate operations with the Pilot's and the MAC.*

4. Salem River
5. Schuylkill River
6. C&D Canal

Captain Roberts inquired about the Essex working Marcus Hook. Tony replied that it'd be 60 days.

## VI. NOAA

Filling in for Jon Swallow, Rachael Medley reported the following:

The new Director of Coast Survey is Rear Admiral Gerd Glang. We are introducing a new product called "Geolmage". It was created to review the progress during the time between when a survey is completed and when it actually gets put on a chart for distribution.

A sample copy of the area from Marcus Hook to the Tacony Palmyra Bridge was distributed at the meeting.

The sample is a PDF image for the web-based interactive product where the user can turn on and off the various layers of the survey progress.

Steve Soherr handed out the latest update on charts. (see distribution)

Captain Roberts reported on the following:

The northern half of the Reedy Point Bridge air draft is reduced by 2 feet. The southern half is clear. No restrictions on air drafts are in place.

An object was discovered outside of Bulkhead Bar Shoal Channel; 30 feet SW of Buoy #5. The object does not affect the channel. There are no plans to have the object removed at this time.

As for the two dredges working on the river, the **Essex** needs 30 minutes notice for passage and the **Illinois** that is working on deepening the area off the Navy Yard also needs 30 minutes to one hour notice depending upon the size/depth of the ship.

The Burlington Bristol Bridge will be tightening cables for two days. Dates to be announced but the operation will take place during daylight and the dates will be sequential.



## **VII. Sector Delaware Bay**

Filling in for COTP Kathy Moore, Todd Wiemers reported the following:

The Annual Ice Conference is scheduled for November 29<sup>th</sup>, 2012.

## **VIII. New Business**

Captain Roberts reported on the following:

I attended the National Harbor Safety Conference in August and learned that Sector Delaware Bay had nominated the MAC for Harbor Safety Committee of the Year. The nomination was due in part to our work with the offshore windmill project and for our website which has been a big hit nationwide.

The 2014 National Harbor Conference is coming to Philadelphia in conjunction with the 50<sup>th</sup> Anniversary of the MAC.

## **IX. Old Business**

Captain Roberts wanted to remind the committee that his new email address is [chairman@macdelriv.org](mailto:chairman@macdelriv.org).

Captain Broadley reported on the following:

I came across part of a 5-page routing document from the 1970s that detailed the sea lanes of which some were incorporated into what we have today. I am trying to identify the source and the complete text and am asking that if any of you recognize this or may know of anyone who may have knowledge of it to reach out to me.

University of Delaware wanted to put in 6 turbine windmills further east to avoid a Corps of Engineers area that would move one of our proposed lanes. We went back and forth coordinating with them and have settled on (see handout) this new traffic and anchorage scheme- see distribution.

Captain Roberts reported that after careful evaluation of our expenses along with the number of paying members and those organizations and agencies that participate in the MAC each quarter, it was determined that we increase the annual membership dues from \$300 to \$400 for the year. He added that the \$100 increase should allow us to continue well into the foreseeable future and give us enough cushion for continued administrative efforts. It was mentioned that the last increase was likely 12-15 years ago. Dennis Rochford moved that we increase the dues from \$300 to \$400. Captain Roland seconded. All approved. Motion carried.

Captain Reports also reported that the Wind Energy Working Group will meet again in early 2013 once we review the ACPARS interim report.

## **X. Adjournment**

Captain Roberts announced the next meeting of the MAC is scheduled for December 13th at 1100 hours at the LaVeranda Restaurant in Penn's Landing.

With no further agenda items or discussion, Captain Tom Sharp moved that the meeting be adjourned. Captain Jim Roche seconded. The meeting was adjourned at 1145 hours.

# **Mariners' Advisory Committee For the Bay & River Delaware**

## **Agenda**

**For**

**Thursday September 13, 2012 @ 1100 hours**

**Memorandum to:** Mariner's Advisory Committee Members  
Associated Members and Interested parties

Your presence is requested at the Quarterly Meeting of the above-mentioned Committee on **Thursday, September 13, 2012 at 1100 hours**. The meeting will be held at The Ristorante LaVeranda, N. Columbus Blvd., Philadelphia, PA .

### **AGENDA**

- I.** Reading of the Minutes –June 2012 Meeting
- II.** Reports
  - A. Treasurer's Report
  - B. Aids to Navigation - USCG
  - C. NOS - NOAA
  - D. MSO – COTP
  - E. Dredging – Army Corps of Engineers

### **III** Old Business

None

### **IV** New Business

- A. Next meeting: December 2012 (date to be confirmed)
- B. Dues increase

***Adjournment followed by Luncheon at the Ristorante LaVeranda, Philadelphia, PA.***

***Mariner's Advisory Committee  
For the Bay and River Delaware  
September 13<sup>th</sup> 2012  
TREASURER'S REPORT***

**Deposits**

June 2012.....\$300  
New Member: Wind Connection

**Total deposits.....\$300.00**

**Disbursements**

Administrative services.....\$ 220.00  
Quarterly Yahoo email service .....\$ 29.85

**Total disbursements.....\$249.85**

**Current Balance as of September 2012.....\$9,299.94**

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*MAC-Treasurer Rick Iuliucci*



**MARINERS ADVISORY COMMITTEE  
FOR THE BAY AND RIVER DELAWARE  
September 12, 2012**

Maintenance and Improvement projects:

**Miah Maull Shoal Light:** We have completed operational designs to convert the optic in this light to a duplex Vega VLB 44 8-tier LED lantern, to remove the classical Fresnel lens and to remove the red sector. The horn and RACON will be retained. The A&E designed, solar power system is being provided to the New Jersey State Historic Preservation Officer, as required by Section 106 of the National Historic Preservation Act consultation process. Based upon feedback after last quarter's meeting, we've investigated the possibility of retaining the red sector, with an LED option. Due to a very recent advancement in technology, a LED red sector option is available. As soon as funds become available, and upon completion of the New Jersey SHPO consultation, we'll proceed with the solarization of Miah Maull Shoal Light and Elbow of Cross Ledge Light. Miah Maull and Ship John Shoal Lights will be offered for sale by the General Services Administration this year.

**Delaware Bay Lt 32:** Contract drawings for reconstruction of the light have been reviewed by Civil Engineering Unit Cleveland and our office. We had anticipated construction to begin during the CY12 construction season however it will be delayed until 2013.

**Deepwater Point Range Front Light:** The range platform and battery rack were damaged earlier this year as a result of an allision. The responsible party has come forward and opted to pursue its own repair contract, under Coast Guard supervision. As soon as the repair specifications have been approved, repairs will commence.

**Devlin Lower Range Front Light:** River currents have undercut the foundation requiring structural repairs requiring an aggressive safety assessment prior to technicians climbing the tower. There may be a point in the near future when the condition of the tower will preclude servicing of the optic, meaning the light may become extinguished prior to repairs being made

#### **Construction Tender Operations**

**CGC SLEDGE** had planned to perform construction operations in the Delaware River this spring and summer; unfortunately it holed itself while approaching a destroyed aid to navigation and was also delayed in returning to operational status due to the discovery of friable asbestos aboard its construction barge during the repairs. Her return to the Delaware this year is in doubt. If she is able to get underway, she will attend to **Fisher Point Range Front Light** and **Keystone Range Front Light**.

**LED optics:** We continue to change out incandescent optics with LED optics, with our first priority being buoys, followed by major and minor lights. Several years ago, Captain Joe Bradley asked that the brightest lights possible be installed on buoys, and we did, however in some cases, the intensities produced were still insufficient for the identified operational range and environmental conditions. With LEDs, the Coast Guard can now provide an optic that meets the design operational range, provide a signal that will compete favorably with environmental conditions and can be economically solar powered. The optics are being changed-out in conjunction with either scheduled buoy hull reliefs or with battery recharge schedules. Your comments regarding the newer optics are appreciated.

#### **Future AtoN Improvements**

**Baker Range:** The structural condition of the range rear tower necessitates its reconstruction and relocation. We are proposing to change the RF and RR characteristics to FG at night and FW during the day. Simultaneously, the submarine power cable will



## MARINERS ADVISORY COMMITTEE FOR THE BAY AND RIVER DELAWARE

September 12, 2012

be removed and the range will be powered by solar arrays. The project has been submitted to and approved by Coast Guard Headquarters. The project, estimated at \$3.7M, has received initial design funding.

**Delaware River and Bay Deepening Project:** The Coast Guard preliminary estimate for improvements to the Delaware River and Bay buoy-marking scheme are estimated at \$3.7M. This estimate will escalate as we examine range lights for continued suitability.

Preliminary design work has begun to replace **Liston Range, Reedy Island Range** and **New Castle Range**. Our entering parameters are to provide the intensities required to meet IALA and Coast Guard operating standards.

### Navigation Items of Interest

**Offshore Renewable Energy Installations (OREIs):** The Energy Policy Act of 2005 designated the Department of the Interior as the lead Federal agency for permitting and approval of OREIs on the OCS. The Coast Guard's role is as a cooperating agency under the National Environmental Policy Act and as such is limited to providing an evaluation of potential impacts of the proposed facilities on the safety of navigation, traditional uses of a waterway and Coast Guard missions. On May 14<sup>th</sup>, the Department of Interior announced that there is no competitive interest for the use of the areas of the U.S. Outer Continental Shelf to construct an offshore transmission system being proposed by the Atlantic Wind Connection (AWC). BOEM's North Carolina State Task Force met on August 2nd to discuss a Call for Information and Nomination (Call). Following the discussion, BOEM, in coordination with the State of North Carolina decided to issue a "call" prior to year's end. The Coast Guard recommends that the MAC remain abreast of all East Coast wind energy initiatives, assess their potential impacts to the Delaware Bay and River ports and provide that assessment to BOEM, USACE and the Coast Guard. The following site posts the most recent activity associated with offshore renewable energy in each state: <http://www.boem.gov/Renewable-Energy-Program/State-Activities/Index.aspx>.

**Offshore Anchorages:** The Coast Guard Authorization Act of 2010 includes among other items, the authority to create anchorages up to 12NM offshore. We've received information that is sufficient for us to move ahead to begin the consultation process with the state of Delaware under the auspices of the Coastal Zone Management Act.

**Sound Signals:** A FY13 list will be presented at the December MAC meeting.

**Atlantic Coast Port Access Route Study:** The Interim Report was published in the Tuesday, September 11<sup>th</sup> Federal Register.

**GPS interference tests:** There are no scheduled GPS tests within the Fifth Coast Guard District. If GPS or dGPS abnormalities are observed, at any time, please notify the Coast Guard Navigation Center

Contact Information: dGPS Navigation Information (703) 313-5902 [www.navcen.uscg.gov](http://www.navcen.uscg.gov)  
Fifth District Local Notice to Mariners [www.navcen.uscg.gov/lnm/d5/](http://www.navcen.uscg.gov/lnm/d5/)  
AtoN Discrepancy reports: **Sector Delaware Bay:** 215-271-4940, CH 16 VHF-FM

Send items for publication in the Fifth District Local Notice to Mariners to: [william.r.jones@uscg.mil](mailto:william.r.jones@uscg.mil).

Our address is: Commander (dpw)  
Fifth Coast Guard District  
Portsmouth, Va. 23704

e-mail address: [lonnie.p.harrison@uscg.mil](mailto:lonnie.p.harrison@uscg.mil)  
[john.r.walters@uscg.mil](mailto:john.r.walters@uscg.mil) 431 Crawford Street



**Philadelphia District Corps of Engineers**  
**Project Status Update**  
**Mariners Advisory Committee for the Delaware River and Bay**  
**13September2012**

**Delaware River, Philadelphia to Sea & Main Channel Deepening**

The Reach A portion of the Delaware River Deepening was awarded to Great Lakes Dredge and Dock Company for \$14,550,438. The dredging operation began on 16September2012. An estimated 1,196,270cy of dredge material is being placed into the government owned facility known as National Park. The contract consists of new work dredging within the Delaware River which will include dredging of the Philadelphia Harbor, East Horseshoe, Horseshoe, Eagle Point, Mifflin, Billingsport, and Tinicum Ranges of the Delaware River main channel. The Dredging shall be required to a depth of 45 feet MLLW plus 1-foot allowable over depth.

The FY12 annual maintenance dredging contract was awarded to Norfolk Dredging Company for \$8,462,600. The dredging operation began on 03September2012 in New Castle Range. The contract includes maintenance dredging of the 40-foot channel in Marcus Hook Range, which will approximately begin mid-October. Approximately 1.5 million cubic yards of material will be dredged and placed into upland disposal areas known as Killcohook CDF and Pedricktown South CDF.

**Wilmington Harbor**

A contract for maintenance dredging of both the 35-foot and 38-foot channels was advertised on 16 Apr 12. Bid opening was held on 16 May 12. Norfolk Dredging Company was the successful low bidder with a price of \$2,038,198.78. The estimated quantity of shoaling to be removed is 445,153 cubic yards. The Notice to Proceed for this work was issued on 29 June 2012. Actual dredging commenced on 14 Jul 12. The government-owned Wilmington Harbor North disposal area located at Cherry Island is being utilized for the containment of the dredge material. All dredging work was completed on 10 Aug 12. A total of 452,020 cubic yards of shoaling was removed under this \$2,088.065 contract.

**Delaware River, Philadelphia to Trenton**

The Philadelphia District received approval from its Higher Authority to utilize the remaining Dredge McFARLAND "Training Days" to perform emergency maintenance dredging of heavy shoaling within the 40-foot channel between the Tacony Palmyra and Burlington Bristol bridges. As this shoaling was caused by the later summer (Irene) and early fall (Lee) storm events, the much needed dredging qualified for emergency supplemental Operation and Maintenance funds appropriated under the Disaster Relief Appropriations Act of 2012, P.L. 112-77. Dredging has been accomplished removing shoals located on the Tacony, Mud Island, Enterprise, Beverly, Edgewater and Devlin Ranges of the Upper Delaware River. The dredging plan was very similar to the emergency dredging completed this past October 2011. Dredging operations commenced on 16 Apr 12 and were completed on schedule 15 Jun 12. The Palmyra Cover disposal area was utilized for the containment of the 275,000 cubic yards of dredged material removed by this work.

**Salem River**

This fiscal year funds were appropriated for Salem River Project under the Disaster Relief Appropriations Act of 2012, P.L. 112-77. The contract consists of maintenance dredging of the 16-foot project from 3+400 to 15+500. The contract was advertised on 8 Jun 12 and the bid opening was 10July2012. The contract was awarded to Cottrell Contracting for \$3,800,000. The Government-furnished disposal area available for this contract is Killcohook, Area 3, with an estimated 250,000cy of material being dredged. Pre-construction meeting is scheduled for 18September2012.

**Schuylkill River**

This fiscal year funds were appropriated for Schuylkill River under the Disaster Relief Appropriations Act of 2012, P.L. 112-77. The contract consists of maintenance dredging of the 33-foot project from 0+600 to 16+023. The contract was advertised on 10July2012. The apparent low bidder is Great Lakes Dredge and Dock Company for \$2,320,630. The Government-furnished disposal area available for this contract is Fort Mifflin Containment Site, Area A, with an estimated 300K cy of material being dredged.

**Chesapeake and Delaware Canal**

Summit Bridge and Reedy Point Bridge Painting and Miscellaneous Steel Repairs will be on-going through the Summer.





## Mariners Advisory Committee for the Bay and River Delaware - 9/13/12

Chart	Title	Scale	Edition	Print Date	Current Crit Count
11009	Cape Hatteras to Straits of Florida	1,200,000	39	Apr-11	11
12210	Chincoteague Inlet to Great Machipongo Inlet; Chincoteague Inlet	80,000	38	May-08	272/155
12211	Fenwick In to Chincoteague Inlet; Ocean City Inlet	80,000	44	Feb-11	134
12214	Cape May to Fenwick Island	80,000	49	Nov-10	15
12216	Cape Henlopen to Indian River Inlet; Breakwater Harbor	40,000	29	Jun-12	1
12221	Chesapeake Bay Entrance	80,000	81	Apr-11	135
12222	Chesapeake Bay Cape Charles to Norfolk Harbor	40,000	53	Oct-11	128
12224	Chesapeake Bay Cape Charles to Wolf Trap	40,000	25	Apr-11	35
12225	Chesapeake Bay Wolf Trap to Smith Point	80,000	60	Nov-11	29
12226	Chesapeake Bay Wolf Trap to Pungoteague Creek	40,000	18	Jul-09	53
12228	Chesapeake Bay Pocomoke and Tangier Sounds	40,000	33	Oct-11	34
12230	Chesapeake Bay Smith Point to Cove Point	80,000	65	Oct-11	78
12231	Chesapeake Bay Tangier Sound Northern Part	40,000	29	Oct-11	4
12233	Potomac River Chesapeake Bay to Piney Point	40,000	37	Jan-07	123/9
12235	Chesapeake Bay Rappahannock River Entrance, Piankatank and Great Wicomico Rivers	40,000	33	Jul-11	28
12237	Rappahannock River Corrotoman River to Fredericksburg	40,000	27	Sep-03	156
12238	Chesapeake Bay Mobjack Bay and York River Entrance	40,000	40	Jun-09	81
12241	York River Yorktown and Vicinity	20,000	22	Feb-08	80
12243	York River Yorktown to West Point	40,000	14	Nov-09	8
12245	Hampton Roads	20,000	67	Aug-08	263/144
12248	James River Newport News to Jamestown Island; Back River and College Creek	40,000	42	Jan-08	214/169
12251	James River Jamestown Island to Jordan Point	40,000	23	May-01	134/57
12253	Norfolk Harbor and Elizabeth River	20,000	47	Apr-12	39
12254	Chesapeake Bay Cape Henry to Thimble Shoal Light	20,000	49	Aug-11	26
12255	Little Creek Naval Amphibious Base	5,000	17	Oct-08	38/16
12256	Chesapeake Bay Thimble Shoal Channel	20,000	17	Oct-11	20
12261	Chesapeake Bay Honga, Nanticoke, Wicomico Rivers and Fishing Bay	40,000	29	Jun-06	223/87
12263	Chesapeake Bay Cove Point to Sandy Point	80,000	56	Aug-12	18
12264	Chesapeake Bay Patuxent River and Vicinity	40,000	30	Jul-07	130
12266	Chesapeake Bay Choptank River and Herring Bay; Cambridge	40,000	30	Dec-09	106
12268	Choptank River Cambridge to Greensboro	40,000	11	Apr-08	61
12270	Chesapeake Bay Eastern Bay and South River; Selby Bay	40,000	35	May-11	103/0
12272	Chester River; Kent Island Narrows, Rock Hall Harbor and Swan Creek	40,000	31	Sep-06	152/65
12273	Chesapeake Bay Sandy Point to Susquehanna River	80,000	58	Jan-12	60
12274	Head of Chesapeake Bay	40,000	36	Sep-12	0

Charts shaded orange are tentatively scheduled to be released as a new edition within the next 3-4 months. Charts shaded blue were released as a new edition since the last meeting. Charts shaded green are revised reprints.

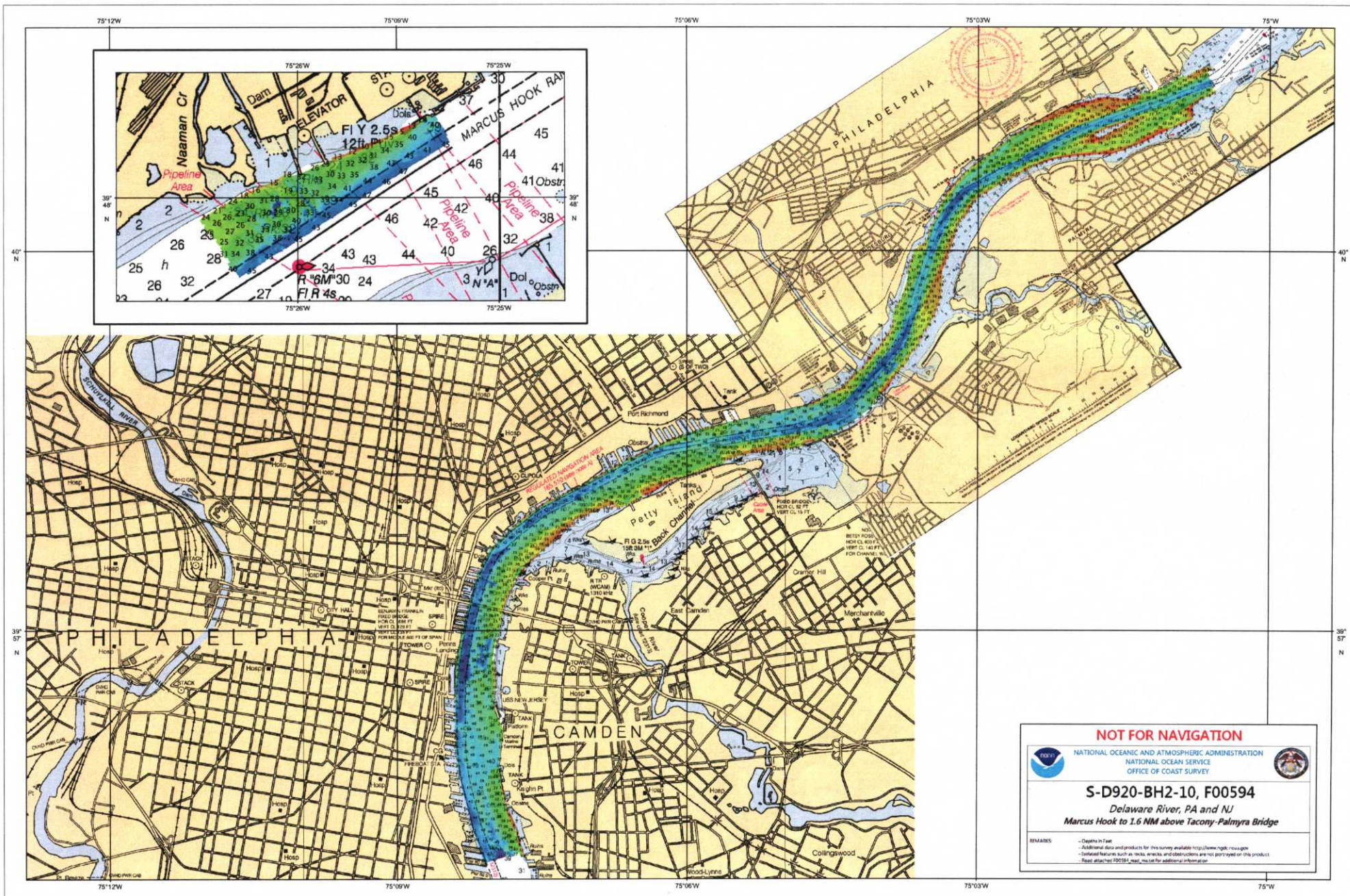


Chart	Title	Scale	Edition	Print Date	Current Crit Count
12277	Chesapeake and Delaware Canal	20,000	35	Jul-10	71
12278	Chesapeake Bay Approaches to Baltimore Harbor	40,000	77	Jul-11	73
12280	Chesapeake Bay	200,000	10	Dec-11	97
12281	Baltimore Harbor	15,000	54	May-12	39
12282	Chesapeake Bay Severn and Magothy Rivers	25,000	36	Jun-12	5
12283	Annapolis Harbor	10,000	28	May-12	4
12284	Patuxent River Solomons Island and Vicinity	10,000	16	Jun-09	13
12285	FOLIO SMALL-CRAFT CHART Potomac River-; District of Columbia	80,000	40	Apr-10	231
12286	Potomac River Piney Point to Lower Cedar Point	40,000	31	Oct-11	17
12287	Potomac River Dahlgren and Vicinity	20,000	18	Oct-09	25
12288	Potomac River Lower Cedar Point to Mattawoman Creek	40,000	20	Oct-07	96
12289	Potomac River Mattawoman Creek to Georgetown; Washington Harbor	40,000	50	Oct-10	63
12300	Approaches to New York, Nantucket Shoals to Five Fathom Bank	400,000	49	Jun-12	10
12304	Delaware Bay	80,000	46	May-11	14
12311	Delaware River Smyrna River to Wilmington	40,000	46	May-12	9
12312	Delaware River Wilmington to Philadelphia	40,000	56	May-12	11
12313	Philadelphia and Camden Waterfronts	15,000	53	Jan-12	6
12314	Delaware River Philadelphia to Trenton	20,000	33	Jun-12	2
12316	Intracoastal Waterway Little Egg Harbor to Cape May; Atlantic City	40,000	34	Jun-08	183
12317	Cape May Harbor	10,000	32	May-04	44
12318	Little Egg Inlet to Hereford Inlet; Absecon Inlet	80,000	45	Apr-10	16
12323	Sea Girt to Little Egg Inlet	80,000	25	Nov-08	16
12324	Intracoastal Waterway Sandy Hook to Little Egg Harbor	40,000	35	Mar-12	45
12402	New York Lower Bay Northern Part	15,000	12	Jun-12	6

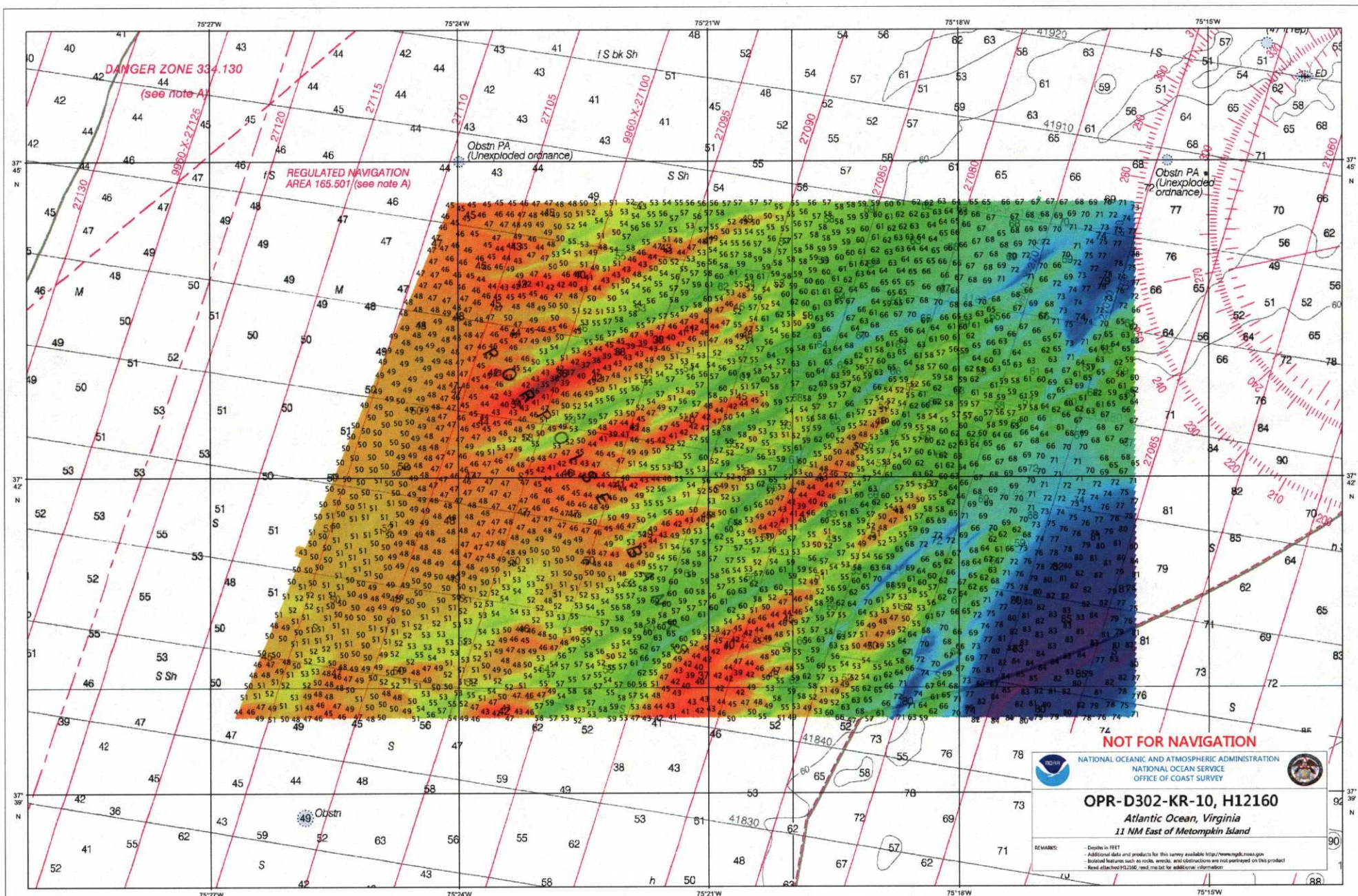
Questions about NOAA's Products and Services in the Delaware Bay Region can be directed to Mr. Steve Soherr, acting Navigation Manager. Contact him at (301)713-2730 ext. 174 or via email at [steve.soherr@noaa.gov](mailto:steve.soherr@noaa.gov)

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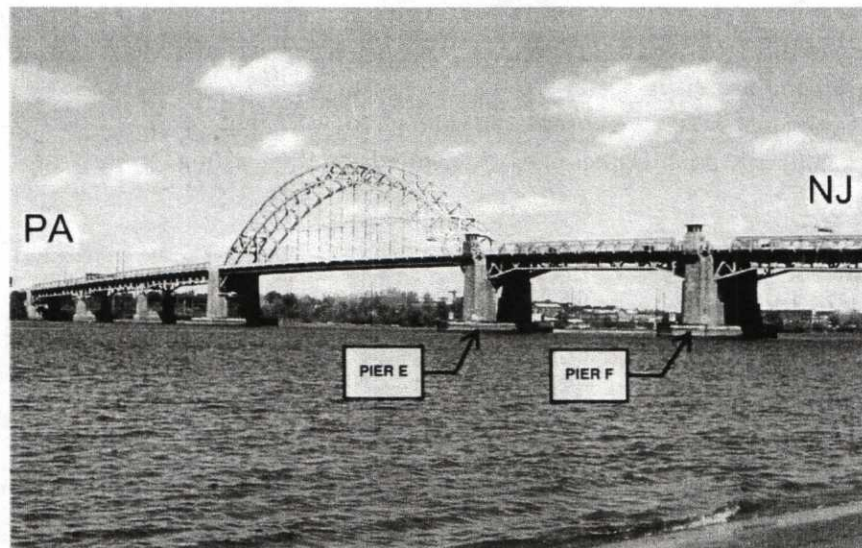
## Tacony-Palmyra Bridge Fender Replacement Project Project Information Sheet

### Project Ownership

- The Tacony-Palmyra Bridge (TP Bridge) is owned, operated and maintained by the Burlington County Bridge Commission (BCBC).
- Pennoni Associates Inc, (Pennoni) has been acting in the capacity of Engineer of Record and Program Manager for BCBC since 2004.

### Project Location

- Tacony-Palmyra Bridge is a combination steel arch, double-leaf bascule bridge crossing the Delaware River and connecting the cities of Tacony, Philadelphia County, Pennsylvania and Palmyra, Burlington County, New Jersey.
- The exact location of the state line between PA and NJ cannot be determined, but based on the research of available information, the most probable location would be somewhere in the Arch or Bascule spans.
- The replacement of fenders is proposed for Piers E and F which are the piers for the bascule span.
- Delaware River is an active "Navigable Waters of the U. S." used by both commercial and recreational traffic.



### Project Background

- The TP Bridge was constructed in 1929. The most recent comprehensive rehabilitation occurred in 1986.
- The nosing of the upstream fender of Pier E was replaced in 1994.
- The upstream fender of Pier E became detached in February of 2003 during a severe ice flow on the river.
- Additional repair and replacement activities took place in 2003 when the upstream fender of Pier E was replaced with an interim steel fender and in 2009 when maintenance activities were performed on the timber fenders of piers D, E and F.



### Existing Conditions

- Piers E and F are located 282 feet apart (center to center).
- Existing piers, including the fender system are 38 feet wide.
- The main channel between the piers is 246 feet wide.
- The existing fender protection system consists of the following:
  - Pier E – 73 foot long midsection fender, 36 foot timber downstream fender and 31 foot steel upstream fender. The total length of the pier is 140 feet and the total width is 38'.
  - Pier F – 73 foot long midsection fender, 36 foot timber downstream fender and 36 foot timber upstream fender. The total length of the pier is 145 feet and the total width is 38'.

All dimensions are approximated.

### Proposed Conditions

- The replacement fenders are designed to divert the energy of the ship collision impact away from the Bridge Structure.
- The fender system consists of two pile supported cofferdam structures tied together with parallel tie or strut beams.
- Designed to split the load of impact between the two nose cofferdams during the head on collision, and to take the impact load into the nose cofferdams during multidirectional impact within the beam span.
- The dimensions of the proposed fender protection system consists of 82 foot midsection, and 61 foot downstream and upstream sections.
- Total length of each pier is 205 linear feet and total width is 52 feet.
- The proposed fender system is both longer and wider than the existing fenders.

### Anticipated Construction Sequence

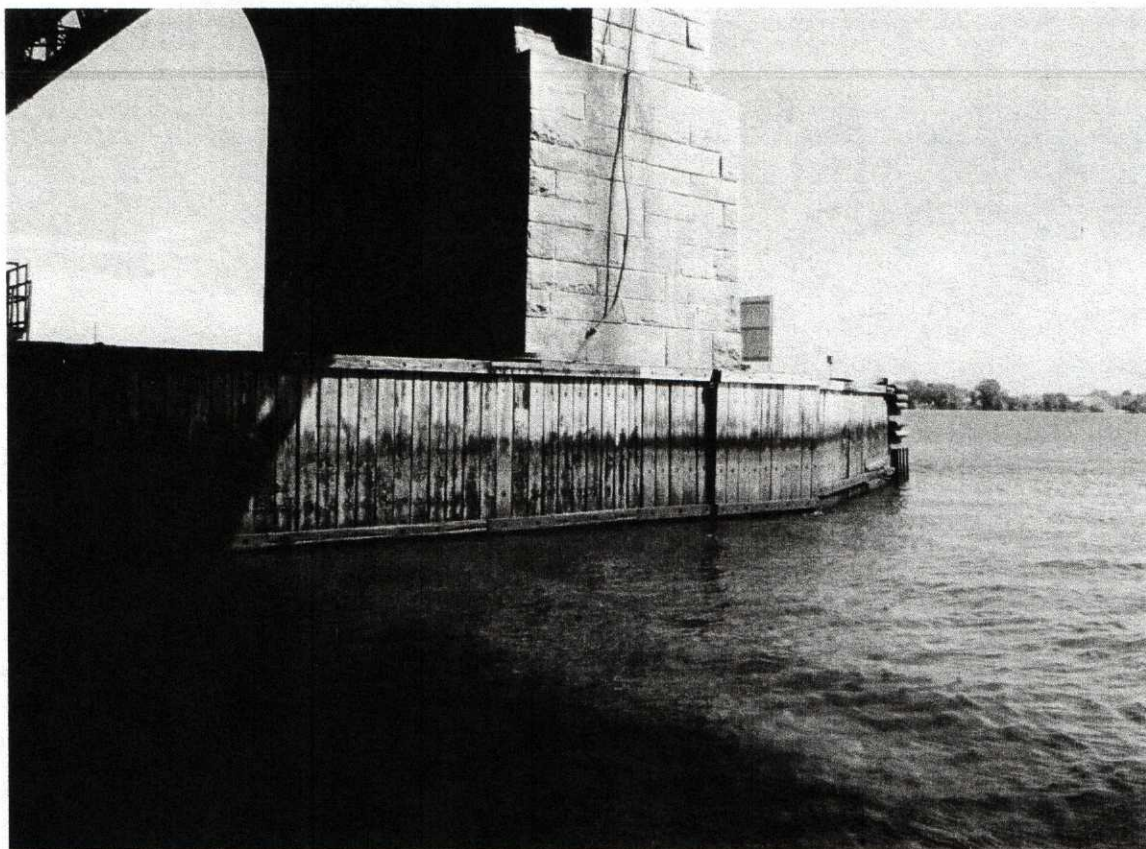
The ultimate sequence of construction will be developed by the contractor, but it is anticipated that following construction activities will take place.

- Demolish existing bridge fenders.
- Dredge/excavate river silt to the elevation of top of decomposed bed rock.
- Install leveling pad.
- Install cofferdam frame to perfect plumbness.
- Install and grout rock sockets/anchors.
- Install sheet pile skin on cofferdam perimeter.
- Install rock berm simultaneously filling cofferdam to the top of the protective island.
- Fill cofferdam with gravel to the underside of the concrete pile cap.
- Install side beam support piles.
- Install pile cap forms and false work and pour concrete.
- Install side beam (tie-beam) forms and pour concrete.
- Install rubber fenders.
- Fill gravel to the top of the cofferdam pile cap.



Tacony-Palmyra Bridge – Pier F



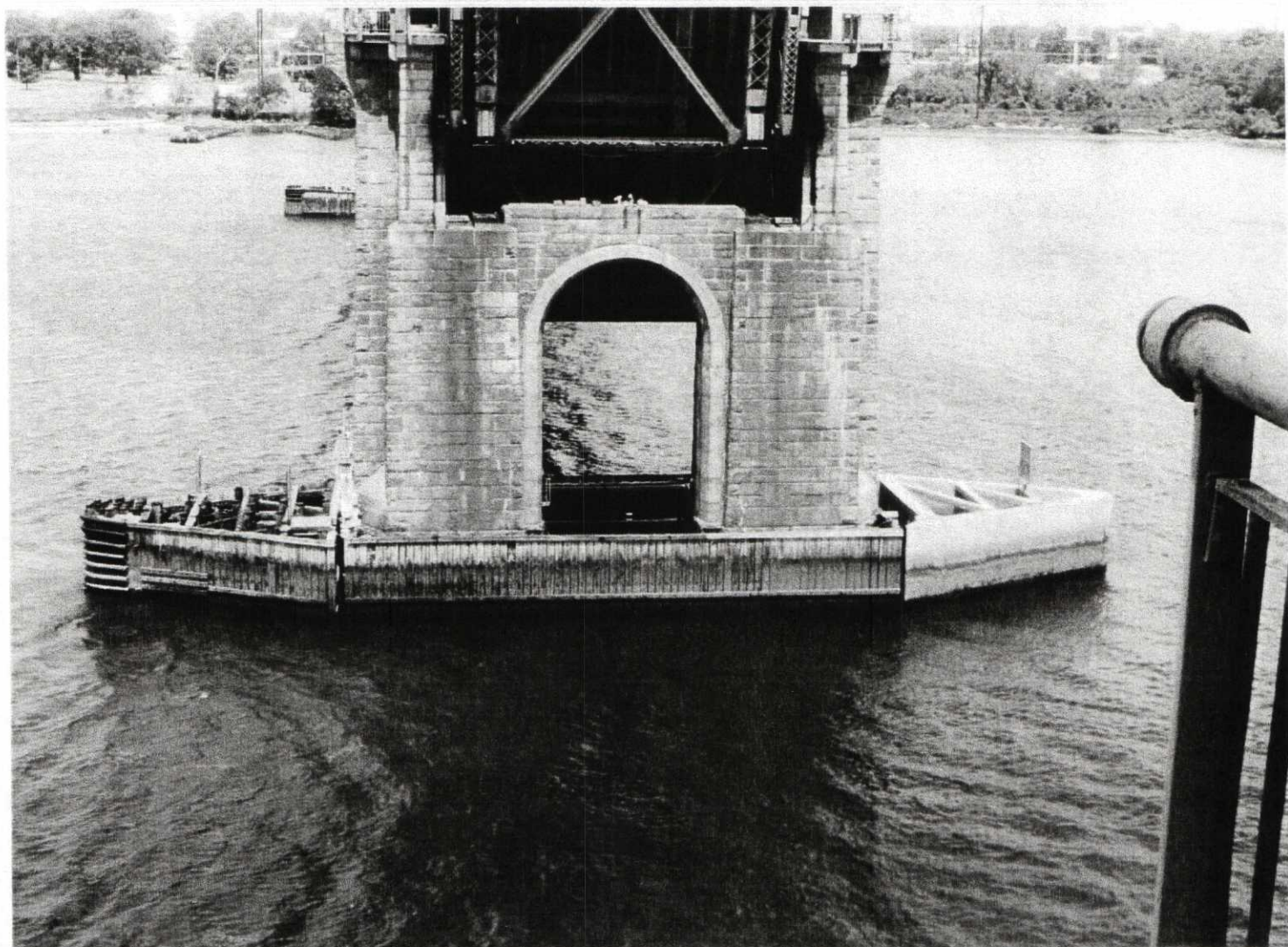


Upstream Fender of Pier F



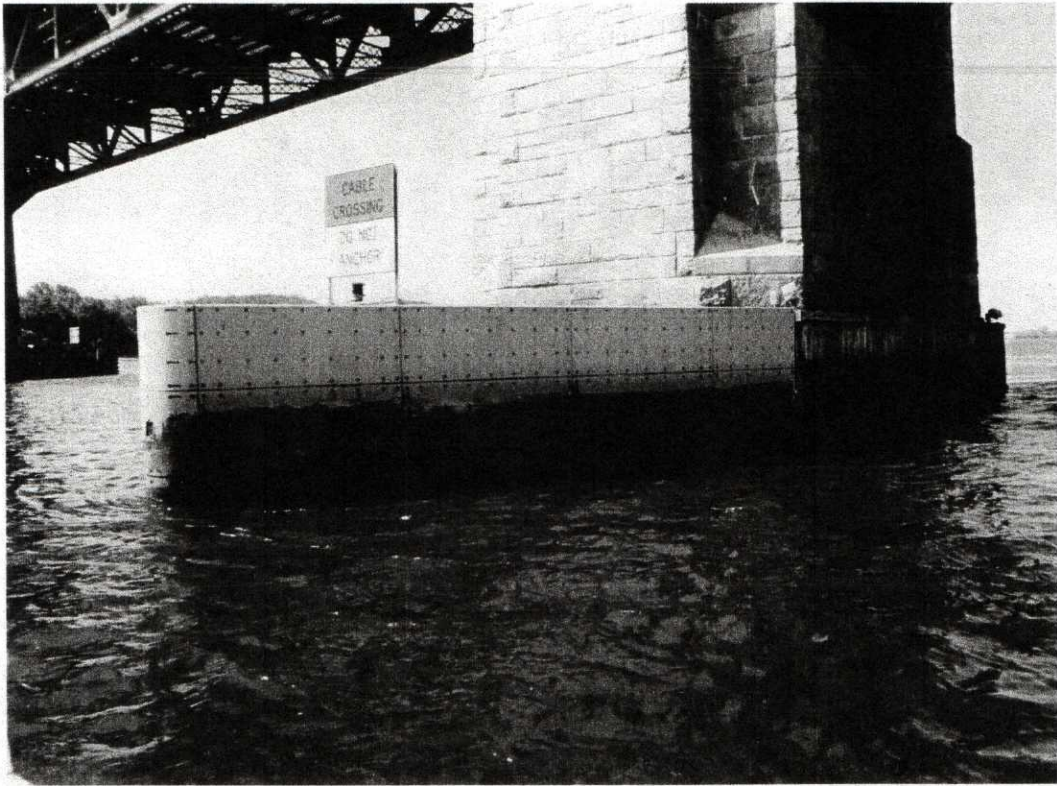
Downstream Fender of Pier F



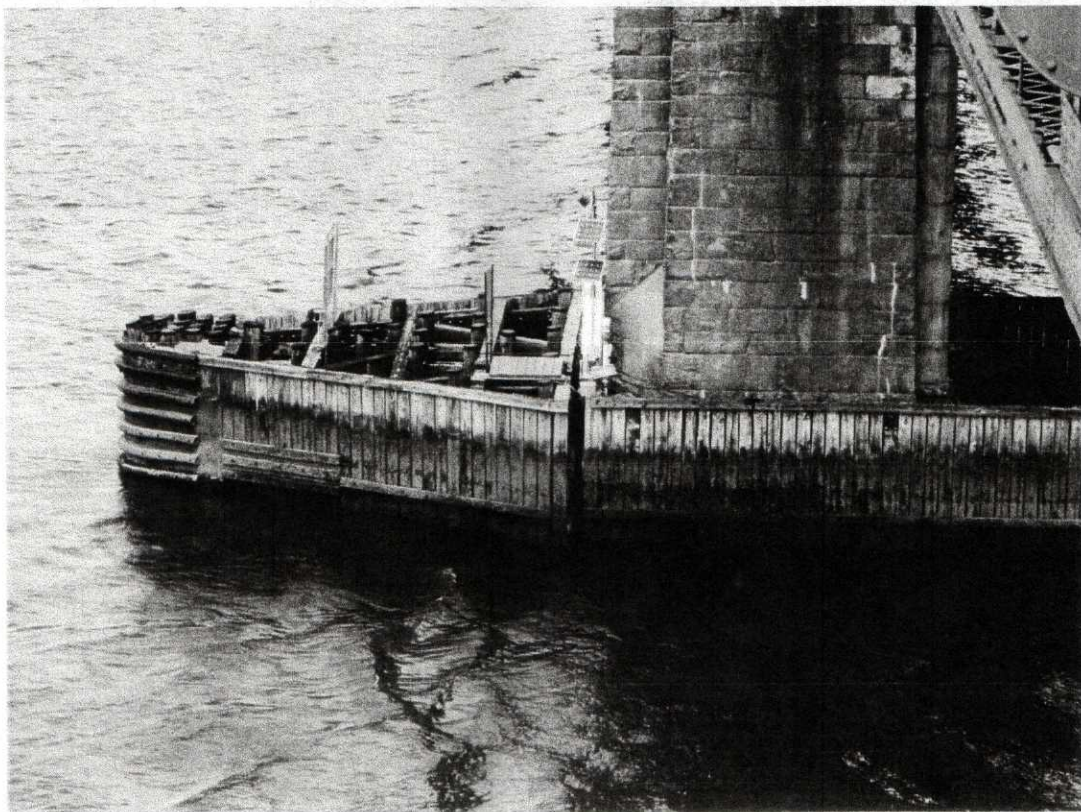


Tacony-Palmyra Bridge - Pier E





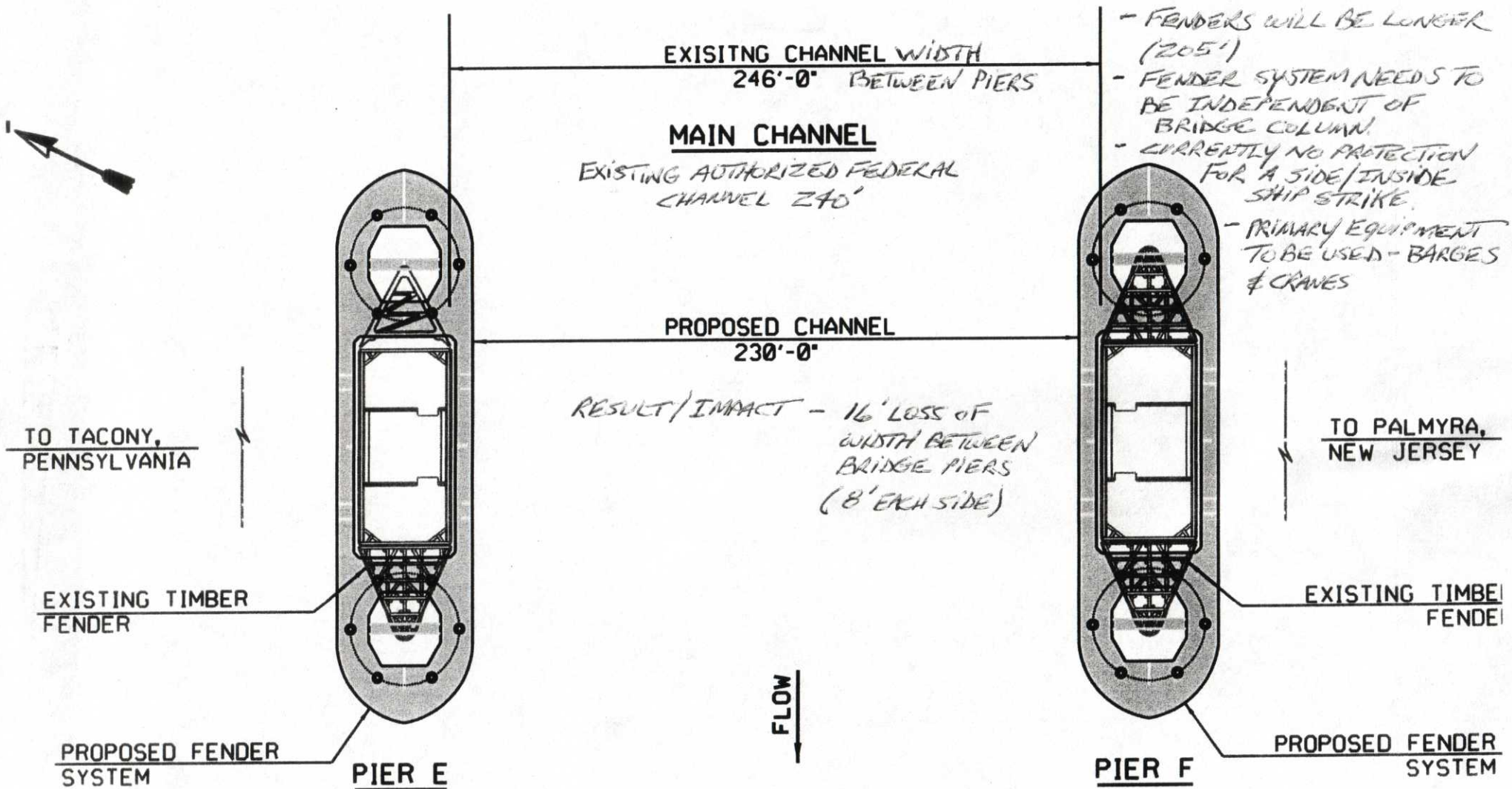
Upstream Fender of Pier E



Downstream Fender of Pier E

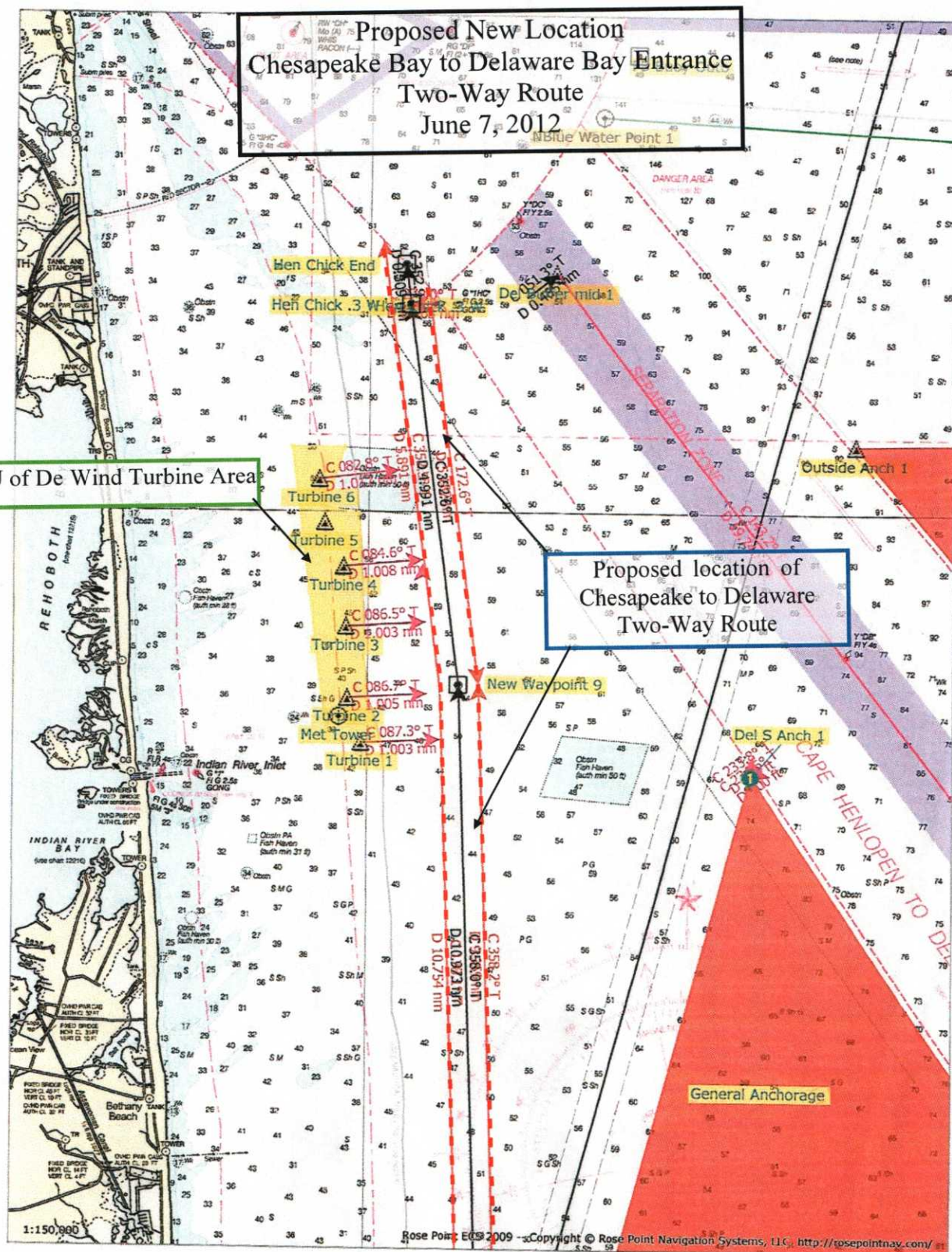


- REPLACEMENT OF BRIDGE FENDERS MUST MEET CURRENT AASHTO STANDARD REGULATIONS FOR HIGHWAY BRIDGES.



PARTIAL PLAN - BASCULE SPAN





Not for Navigation



