

# BOARD FOR BRANCH PILOTS

Thursday, December 12, 2024 – 10:30 a.m.  
Virginia Port Authority-Norfolk, VA

Department of Professional and Occupational Regulation  
9960 Mayland Drive  
Richmond, Virginia 23233

**Mission:** Our mission is to protect the health, safety and welfare of the public by licensing qualified individuals and businesses enforcing standards of professional conduct for professions and occupations as designated by statute.

## I. CALL TO ORDER

- a. Emergency Evacuation Procedures
- b. Determination of Quorum

## II. APPROVAL OF AGENDA

## III. APPROVAL OF MINUTES

- a. Branch Pilots Board Meeting, September 12, 2024
- b. Branch Pilots Bylaws Committee Meeting, September 12, 2024

## IV. WELCOME AND INTRODUCTIONS

## V. PUBLIC COMMENT PERIOD **\*FIVE MINUTE PUBLIC COMMENT, PER PERSON\***

## VI. NOTIFICATION LETTER

- a. Captain Gray- MV YO XIAO FENG

## VII. NEW BUSINESS

- a. Branch Pilots Retirement Announcement
- b. Consideration of Renewal of Licenses- December 9 & 10, 2024
- c. Review and Renewal of Virginia Pilot Association's Apprenticeship Training Program
- d. Review of Regulations Pursuant to §54.1-100 of the Code of Virginia
- e. Regulatory Update
  - i. Fee Update
  - ii. General Regulatory Review Update
- f. Financial Disclosure

## VIII. OTHER BUSINESS

- a. Board Member Training Conference Update
- b. Financial Statements
- c. Board Member Training

## IX. COMPLETE CONFLICT OF INTEREST FORM AND TRAVEL VOUCHER.

## XI. ADJOURNMENT

NEXT MEETING SCHEDULED FOR **THURSDAY, MARCH 13, 2025**

- ❖ Agenda materials made available to the public do not include disciplinary case files or application files pursuant to §54.1-108 of the Code of Virginia.
- ❖ Five-minute public comment, per person, with the exception of any open disciplinary or application file.
- ❖ Persons desiring to participate in the meeting and requiring special accommodations or interpretative services should contact the Department at (804) 367-2785 at least ten days prior to the meeting so that suitable arrangements can be made for an appropriate accommodation. The Department fully complies with the Americans with Disabilities Act.

DRAFT AGENDA

Materials contained in this agenda are proposed topics for discussion  
And are not to be construed as regulation or official board position

DRAFT AGENDA

## BOARD FOR BRANCH PILOTS MEETING MINUTES

The Virginia Board for Branch Pilots met on September 12, 2024, at the Virginia Port Authority, 600 World Trade Center, Norfolk, Virginia, with the following members present:

Aaron Anseeuw  
Captain E. Waightstill Avery  
I. Vincent Behm, Jr  
Captain J.W. Whiting Chisman, III  
Michael W. Coleman  
Captain January N. Collins  
Christine N. Piersall  
Captain Clarence M. Young

Staff present for all, or part of the meeting were:

Brian P. Wolford, Director  
Steve Kirschner, LRPD Deputy Director  
Kate R. Nosbisch, Executive Director  
Ecila Williams, Licensing Operations Administrator  
Karen Reid, Administrative Coordinator  
Ernie Atkins, Tidewater Investigator

Jeb Wilkinson, Special Assistant to the Director, and Patrick B. McDermott, Citizen Member, were not present with regrets.

Elizabeth Peay, Assistant Attorney General with the Office of the Attorney General, was present.

Member of the Audience included:

William A. Burket, Jr., Senior Director, Maritime Incident Response Team (MIRT) and Business Continuity

Finding a quorum of the Board present, Mr. Coleman, President, called the meeting to order at 10:31 a.m.

Mr. Burket advised the Board of the emergency evacuation procedures.

**Call to Order**

**Safety**  
**Evacuation**  
**Instructions**

Ms. Nosbisch announced Brian Wolford's recent appointment as Agency Director. She introduced Karen Reid, new Administrative Coordinator, and Ernie Atkins, Investigator.

**Welcome/Intro  
ductions/Announcements**

Ms. Piersall moved to approve the agenda. Captain Chisman seconded the motion which was unanimously approved by Messrs., Mme. and Captains: Anseeuw, Avery, Behm, Chisman, Coleman, Collins, Piersall and Young.

**Approval of  
Agenda**

Mr. Behm moved to approve the minutes with an amendment from the June 13, 2024, Board Meeting. Ms. Piersall seconded the motion which was unanimously approved by Messrs., Mme. and Captains: Anseeuw, Avery, Behm, Chisman, Coleman, Collins, Piersall and Young.

**Approval of  
Minutes**

There was no public comment.

**Public  
Comment  
Period**

LRPD Deputy Director Kirschner arrived at 10:37 a.m.

**Arrival of  
DPOR Staff**

Mr. Burket presented to the Board an overview of the Virginia Port Authority (VPA) Maritime Incident Response Team (MIRT) for information purposes.

**VPA Maritime  
Incident  
Response Team  
Presentation**

He shared with the Board, the Virginia Department of Transportation's transportation network impacts, emergency operations at bridges and tunnels, and the structure vulnerability assessment of the key bridge collapse for information purposes.

He informed the Board of the 2024 National Port Partner Emergency Response Summit will be held on November 5<sup>th</sup> and 6<sup>th</sup> in Norfolk, Virginia.

Captain Avery provided the Board with a report of examinations conducted by the Exam Administrators on September 11, 2024. The following committee members were present, Captains: Avery, Chisman, Collins, and Young. The following report was made:

**Exam  
Administrator's  
Report**

Matthew C. Morse answered oral questions related to the raise in grade. The subjects included safe anchoring positions in Lynnhaven, Sewell's Point, Cape Charles and York River, safe anchoring techniques, under keel clearance, inner harbor transits, vessel traffic management, determination of adequate tugboat power in adverse weather, vessel interaction during overtaking and meeting situations, bank suction and cushion, effectiveness of bow thrusters, and safe vessel speed.

Matthew C. Morse successfully completed the oral examination with the Board for Branch Pilots Examining committee. After considering the results of the examination, Captain Avery moved Matthew C. Morse for a raise in grade from a Delta license (45,000 gross tons and 36 feet maximum draft) to an Echo license (55,000 gross tons and 39 feet maximum draft). Mr. Behm seconded the motion which was unanimously approved by Messrs., Mme. and Captains: Anseeuw, Avery, Behm, Chisman, Coleman, Collins, Piersall and Young.

Austin C. Capps answered oral questions related to the raise in grade. The subjects included safe anchoring positions in Lynnhaven, Sewell's Point, Cape Charles and York River, safe anchoring techniques, under keel clearance, inner harbor transits, vessel traffic management, determination of adequate tugboat power in adverse weather, vessel interaction during overtaking and meeting situations, bank suction and cushion, effectiveness of bow thrusters, and safe vessel speed.

Austin C. Capps successfully completed the oral examination with the Board for Branch Pilots Examining committee. After considering the results of the examination, Captain Avery moved Austin C. Capps for a raise in grade from a Delta license (45,000 gross tons and 36 feet maximum draft) to Echo License (55,000 gross tons and 39 feet maximum draft). Mr. Behm seconded the motion which was unanimously approved by Messrs., Mme. and Captains: Anseeuw, Avery, Behm, Chisman, Coleman, Collins, Piersall and Young.

Zachary Stewart Dodson answered oral questions related to the extension of route. The subjects included courses and distances from the James River Bridge to Richmond with a detailed description of navigating to Richmond, local traffic, safe anchoring positions, vessel positioning when approaching various turns in anticipation of bank and cushion effect, narrow channel navigation techniques, docking and undocking in Hopewell, characteristics of the James River Bridge and the Benjamin Harrison Memorial Bridge, adverse tidal situations and safe vessel speed.

Zachary Stewart Dodson successfully completed the oral examination with the Board for Branch Pilots Examining committee. After considering the results of the examination, Captain Avery moved Zachary Stewart Dodson for an extension of route from the James River Bridge to Richmond, Virginia. Mr. Behm seconded the motion which was unanimously approved by Messrs., Mme. and Captains: Anseeuw, Avery, Behm, Chisman, Coleman, Collins, Piersall and Young.

Ms. Nobsisch informed the Board there is nothing to report at this time.

**Regulatory  
Update**

The Board reviewed a letter from Captain Dodson, regarding an incident on June 8, 2024, involving the M/V Nickolas D IMO 9474723

**Notification  
Letter-  
Captain  
Dodson- M/V  
Nickolas D  
IMO 9474723**

On June 8, 2024, Captain Dodson was ordered to the M/V NICKOLAS D for a 1400 move from Cape Charles Anchorage to Kinder Morgan Pier 9 in Newport News. The M/V NICKOLAS Dis a bulk carrier 751' in length and 105' in breadth. Upon arrival on the vessel Captain Dodson conducted a master pilot exchange and began the transit to the berth. At Newport News Point a McCallister docking pilot and docking pilot apprentice boarded the vessel to conduct the docking operation. Captain Dodson was relieved and the docking pilot and took the conn. Captain Dodson remained in the wheelhouse observing the maneuver from the bridge and bridge wing. At that time the current was ebbing at approximately 1 knot and the wind was out of the west at 14kts.

The vessel was docking on the north side of pier 9 which is constructed with a knuckle at the end of the pier with fendering to allow a ship setting from the current to contact the end of the pier and use it to turn into the berth. At approximately 17 46 the docking pilot allowed the vessel to contact the knuckle and turned into the berth. Docking continued as normal and approximately 15 minutes Captain Dodson disembarked from the vessel. The maneuver appeared normal, he did not observe any damage, and there was no mention of any damage or abnormalities made to him by either the docking pilot, pilot apprentice, or Captain of the vessel.

On June 13, 2024, Captain Dodson was advised by another McAllister docking pilot that there had been damage to the knuckle at the end of the pier when the NICKLOLAS D had docked. Captain Dodson contacted the original docking pilot who had docked the ship, and he advised that he saw the damage to the dolphin after his next job and went back aboard the ship to tell the captain and show him the damage. Captain Dodson advised he understand that the damage consisted of a paint scrape and 5cm dent on the vessel and chipping of the concrete on the pier. The knuckle was missing one section of tubular fendering approximately four feet in length. This missing fendering allowed the vessel to contact the concrete of the pier. Captain Dodson has brought ships in and out of the pier since and have seen that the large rubber fender has been replaced and the knuckle appears the same as before June 8.

Captain Dodson has no further information and has not conducted his own investigation other than his call to the docking pilot yesterday, June 13. Having been unaware of the incident, Captain Dodson did not have a drug or alcohol test.

The File Review Committee made a recommendation that the letter be filed, and the Board take no action, as there appears to be no violation of the Board's regulations or statutes. The Board moved to accept the recommendation and it was approved by Messrs., Mme., and Captains: Anseeuw, Avery, Behm, Chisman, Coleman, Collins, Piersall and Young.

The Board reviewed a letter from Captain Morse, regarding an incident on July 10, 2024, involving the M/V MRC Belize (IMO# 9335044).

**Notification**  
**Letter-**  
**Captain**  
**Morse- M/V**  
**MRC Belize**  
**IMO#9335044**

On the morning of 10 July 2024, Captain Morse was ordered to sail the tanker M/V MRC BELIZE (IMO# 9335044) from KMI South Hill terminal to sea. The weather conditions were fine with the wind about 10 knots from the south and mostly flood current for the entire outbound trip. High water was around 1200 that day with 3 feet over MLLW, meaning the true clearance of the bridge around this time was close to 135 feet. The ship was set to get underway at 1130 and I arrived around 1110 to the ship.

During the master/pilot exchange, the captain informed Captain Morse the engine had been tested and everything was in good working order. Captain Morse asked him the air draft to which he replied 40.56 meters (133.07 feet), and he represented that the conditions were the same as when they came in, as he had taken on ballast to make up for the discharged cargo and therefore would clear the bridge. After reviewing the pilot card which reaffirmed the air draft to be 40.56 meters, Captain Morse advised the captain the anticipated traffic as well as weather conditions for the transit. The tugboats CLAYTON MORAN and MAXWELL MORAN arrived around 1150 and dropped the docking pilot by the port side (offshore) ladder. Once the docking pilot was aboard, Captain Morse informed him of the air draft given to him by the captain and told him traffic looked clear for an outbound transit.

The Old Virginia Railroad Bridge had closed and opened once during the time of waiting for the tugboats to arrive. During this time, Captain Morse spoke with the bridge tender via VHF radio to inform him that the vessel would be departing soon and would need a full lift. Once Captain Morse saw the bridge return to the open position, he made a security call on VHF channel 13 that the vessel was getting underway.

The ship undocked around 1200 with the MAXWELL MORAN made fast to the starboard bow and the CLAYTON MORAN made fast at the center-lead aft. The docking pilot discussed with me his plan to back through the Old Virginia Railroad Bridge then spin the ship around between Enviva and Perdue Piers. At about 1220 the MRC BELIZE began the transit through the bridge. The docking pilot was situated on the port side bridge wing while Captain Morse was on the starboard side bridge wing watching the clearance on each side of the vessel as it backed through the bridge opening. Shortly after 1220,

he heard the sound of a rattle above the ship at the bridge and looked up to see what appeared to be a mast light covering falling to the roof of the ship's bridge. Upon this discovery, he went over to the port side bridge wing to confirm the docking pilot also saw it. After confirming that the docking pilot had seen the same object fall, Captain Morse reported to the Coast Guard his name, the vessel, and location and to explain that it had appeared the MRC BELIZE had come into contact with the bottom of the Old Virginia Railroad Bridge, but that he could see no damage to the bridge. A representative from the Coast Guard environmental department called Captain Morse around 1235 to ask more questions about the incident, specifically if there was anything from the ship that fell into the water, to which he replied "no." There have been no other communications with Coast Guard.

Later in the transit, a mate from the ship went up to the top of the ship's bridge to retrieve the plastic covering of the mast light that seemed to have been broken free.

The bridge span had stopped moving up for some time before the transit and appeared to be fully opened, though the difference of a few inches would not be noticeable from the deck of a ship. Captain Morse believe that the master's calculation of air draft was off. After the passage he re-calculated air draft with consideration for the trim of the ship and came up with an air draft of about 136 feet, compared to 133 feet as advised by the master.

The rest of the outbound transit was conducted with no other significant occurrence. Shortly after arriving back at Lynnhaven (1600) Captain Morse reported for a Virginia State drug and alcohol test. He has not received the test results.

The File Review Committee made a recommendation that the letter be filed, and the Board take no action, as there appears to be no violation of the Board's regulations or statutes. The Board moved to accept the recommendation and it was approved by Messrs., Mme., and Captains: Anseeuw, Avery, Behm, Chisman, Coleman, Collins, Piersall and Young.

Ms. Nosbisch stated the financial statements were provided for informational purposes.

**Financial Statements**

Ms. Nosbisch and Mr. Wolford reminded the Board that the Board Member Training Conference is scheduled for October 10, 2024, to October 11, 2024, in Williamsburg, VA.

**Other Business**

Ms. Nosbisch and Mr. Wolford provided an EpicX update.



Conflict of Interest forms and travel vouchers were completed by all members present.

**Conflict of Interest Forms and Travel Vouchers**

The meeting adjourned at 11:23 a.m.

**Adjourn**

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Michael Coleman, President

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Brain P. Wolford, Secretary

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DRAFT AGENDA

**Bylaws Committee of the  
BOARD FOR BRANCH PILOTS  
MEETING MINUTES**

The Bylaws Committee of the Virginia Board for Branch Pilots met on September 12, 2024, at the Virginia Port Authority, 600 World Trade Center, Norfolk, Virginia, with the following members present:

Captain J.W. Whiting Chisman, III  
Captain Clarence M. Young  
I. Vincent Behm, Jr.

Michael W. Coleman was present as an observer.

Patrick B. McDermont was not present at the meeting with regrets.

Staff present for all or part of the meeting were:

Steve Kirschner, LRPD Deputy Director  
Kate Nobsch, Executive Director  
Ecila Williams, Licensing Operations Administrator  
Karen Reid, Administrative Coordinator

Captain Chisman called the meeting to order at 11:50 p.m.

**Call to Order**

Ms. Nobsch advised the Committee of the emergency evacuation procedures.

**Emergency  
Evacuation**

Mr. Behm moved to approve the agenda. Captain Young seconded the motion which was unanimously approved by Mr. Behm and Captains Chisman and Young.

**Approval of  
Agenda**

There was no one present for public comment.

**Public Comment  
Period**

The Committee began a review of draft bylaws for the Board for Branch Pilots. The Committee discussed items that could be lawfully added to the Board's bylaws. The Committee identified additional changes for further consideration at the December 12, 2024 board meeting.

**Draft Bylaws for  
the Board for  
Branch Pilots**

There was no other business.

**Other Business**

Conflict of Interest forms and travel vouchers were completed by all board members present.

**Conflict of Interest  
Forms/Travel  
Vouchers**

There being no further business, the meeting was adjourned at 12:43 p.m.

**Adjourn**

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J. W. Whiting Chisman III, Vice-President

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Brain P. Wolford, Secretary

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*Apprentice Learning Objectives*

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**Virginia Pilot Association**  
Apprentice Learning Objectives

11/25/2024

**Objective 1**

LEARNING OBJECTIVES	LEARNING RESOURCES AND STRATEGIES	TARGET DATE FOR COMPLETION	EVIDENCE OF ACCOMPLISHMENT OF OBJECTIVES	CRITERIA AND MEANS VALIDATING EVIDENCE
1.1 Orientation for New Apprentices	<ul style="list-style-type: none"> <li>- Discussion with:                             <ul style="list-style-type: none"> <li>• Apprentice Committee</li> <li>• President, Vice President</li> </ul> </li> </ul>	1 Week	<ul style="list-style-type: none"> <li>- Understanding of the Apprentice Program and the Role and Responsibilities of an Apprentice</li> </ul>	<ul style="list-style-type: none"> <li>- Validation by Apprentice Committee</li> </ul>
1.2 Knowledge of Work Rules for Launch and Tower Duty	<ul style="list-style-type: none"> <li>- Discussion with:                             <ul style="list-style-type: none"> <li>• Apprentice Committee</li> <li>• Tower and Launch Operators</li> </ul> </li> </ul>	3 Months	<ul style="list-style-type: none"> <li>- Demonstration of ability to apply work rules while in the Tower or Launch</li> </ul>	<ul style="list-style-type: none"> <li>- Validation by Apprentice Committee</li> </ul>
1.3 Knowledge of Work Rules for Riding Ships	<ul style="list-style-type: none"> <li>- Discussion with:                             <ul style="list-style-type: none"> <li>• Apprentice Committee</li> <li>• Pilots</li> </ul> </li> </ul>	6 Months	<ul style="list-style-type: none"> <li>- Demonstration of ability to apply work rules while riding ships</li> </ul>	<ul style="list-style-type: none"> <li>- Validation by Apprentice Committee</li> </ul>
1.4 Piloting Techniques and Conning Skills	<ul style="list-style-type: none"> <li>- Observation of Pilots on Ships</li> <li>- Discussion with Apprentice Committee</li> <li>- List of optimal procedures</li> <li>- Shiphandling for the Mariner (p. 83-85)</li> </ul>	2 Years	<ul style="list-style-type: none"> <li>- Demonstration of use of optimal procedures during day or night</li> <li>- Demonstration of optimal procedures during restricted visibility or poor weather conditions</li> </ul>	<ul style="list-style-type: none"> <li>- 2 year exam</li> <li>- Validation by Apprentice Committee</li> </ul>
1.5 Professionalism as a Pilot	<ul style="list-style-type: none"> <li>Discussion with:                             <ul style="list-style-type: none"> <li>• Apprentice Committee</li> <li>• Pilots</li> </ul> </li> <li>- Port Stakeholder Tour</li> <li>- Observation of Pilots on Ships</li> </ul>	2 Years	<ul style="list-style-type: none"> <li>- Demonstration of ability to work in a professional manner in all piloting situations</li> </ul>	<ul style="list-style-type: none"> <li>- Validation by Apprentice Committee</li> <li>- Review of Apprentice's overall performance</li> </ul>

**Virginia Pilot Association**  
Apprentice Learning Objectives

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**Objective 2**

LEARNING OBJECTIVES	LEARNING RESOURCES AND STRATEGIES	TARGET DATE FOR COMPLETION	EVIDENCE OF ACCOMPLISHMENT OF OBJECTIVES	CRITERIA AND MEANS VALIDATING EVIDENCE
2.1 Identify handling characteristics of small boats in all weather	<ul style="list-style-type: none"> <li>- Riding launches</li> <li>- Observation</li> <li>- Description of fundamental procedures</li> <li>- Launchmen</li> <li>- Waterfront classes</li> <li>- Chapman Piloting Chap. 9</li> </ul>	6 Months	<ul style="list-style-type: none"> <li>- Demonstrate fundamental underway procedures</li> </ul>	<ul style="list-style-type: none"> <li>- Check ride with Apprentice Committee</li> </ul>
2.2 Prepare to get boat underway	<ul style="list-style-type: none"> <li>- Launchmen</li> <li>- Demonstration of proper procedures</li> <li>- Engine</li> <li>- Lines</li> <li>- Controls</li> </ul>	1 Month	<ul style="list-style-type: none"> <li>- Describe proper underway Procedure</li> <li>- Describe proper engine Conditions</li> <li>- Demonstrate appropriate underway procedures</li> </ul>	<ul style="list-style-type: none"> <li>- Validation by Launchmen</li> </ul>
2.3 Operate Engine Controls	<ul style="list-style-type: none"> <li>- Launchmen demonstration</li> <li>- Engineer demonstration</li> <li>- Engineer written checklist</li> </ul>	3 Months	<ul style="list-style-type: none"> <li>- Describe operation of appropriate controls to engineer</li> </ul>	<ul style="list-style-type: none"> <li>- Validation by engineer</li> </ul>
2.4 Energize and adjust on-board navigation system for operation: <ul style="list-style-type: none"> <li>• Radar</li> <li>• GPS</li> <li>• AIS</li> </ul>	<ul style="list-style-type: none"> <li>- Operational lesson by Pilot</li> <li>- System operational manuals</li> <li>- Power up checklist</li> <li>- Readings:                             <ul style="list-style-type: none"> <li>• Radar Observer Manual</li> <li>• GPS Video</li> <li>• USCG AIS Handout</li> </ul> </li> </ul>	3 Months	<ul style="list-style-type: none"> <li>- Describe/Demonstrate tuning procedures</li> <li>- Describe indications that systems are operating properly</li> <li>- Describe entire capability GPS, and AIS</li> </ul>	<ul style="list-style-type: none"> <li>- Validation by Pilot</li> </ul>
2.5 Demonstrate boarding procedures for all weather conditions: <ul style="list-style-type: none"> <li>• Various ship speeds</li> <li>• Various vessel size</li> </ul>	<ul style="list-style-type: none"> <li>- Launchman describes appropriate procedures during actual operations (talks through various procedures):                             <ul style="list-style-type: none"> <li>• Varied ship speeds</li> <li>• Variety of boarding vessels sizes</li> <li>• Careful observation</li> <li>• Supervised practice</li> </ul> </li> </ul>	6 Months	<ul style="list-style-type: none"> <li>- Successful demonstration of boarding and disembarking operations</li> </ul>	<ul style="list-style-type: none"> <li>- Successful demonstration check ride with Apprentice Committee</li> </ul>
2.6 Judge/execute emergency procedures	<ul style="list-style-type: none"> <li>- Fire drill procedure</li> <li>- Distress procedures demonstration of liferaft procedures, lessons on survival</li> <li>- Engineers shoreside lessons on emergency operations</li> </ul>	3 Months	<ul style="list-style-type: none"> <li>- Describe and demonstrate appropriate fire drill and donning of survival suit</li> </ul>	<ul style="list-style-type: none"> <li>- Validation by Apprentice Committee</li> </ul>

# Virginia Pilot Association

## Apprentice Learning Objectives

11/25/2024

LEARNING OBJECTIVES	LEARNING RESOURCES AND STRATEGIES	TARGET DATE FOR COMPLETION	EVIDENCE OF ACCOMPLISHMENT OF OBJECTIVES	CRITERIA AND MEANS VALIDATING EVIDENCE
2.7 Demonstrate man overboard rescue procedure	<ul style="list-style-type: none"> <li>– Safety Training Class</li> <li>– Refer to Chapman's procedure</li> <li>– Description and demonstration of procedures for Pilot fall from ladder</li> <li>– Description and demonstration of open water rescue</li> </ul>	3 Months	<ul style="list-style-type: none"> <li>– Satisfactory description and demonstration of procedure for Pilot fall from ladder</li> <li>– Successful completion of open water man overboard drill</li> </ul>	<ul style="list-style-type: none"> <li>– Successful participation in drills</li> <li>– Validation by Apprentice Committee</li> </ul>
2.8 Handle Boat in High Seas Entering Inlet	<ul style="list-style-type: none"> <li>– Launchmen</li> <li>– Discussion with Pilots</li> <li>– Description of Fundamental Procedures</li> </ul>	6 Months	<ul style="list-style-type: none"> <li>– Demonstrate Fundamental Underway Procedures</li> </ul>	<ul style="list-style-type: none"> <li>– Validation by Apprentice Committee</li> </ul>
2.9 Marlinespike Seamanship	<ul style="list-style-type: none"> <li>– Chapman Piloting (Chap. 13)</li> <li>– Knight's Modern Seamanship (Appendix 1 and 2)</li> <li>– Mooring Equipment Guidelines (Chap. 6, Appendix B and C)</li> <li>– Demonstration by Pilots and Launchmen</li> </ul>	6 Months	<ul style="list-style-type: none"> <li>– Description and demonstration of:                             <ul style="list-style-type: none"> <li>• Use and care of wire and fiber lines</li> <li>• Knots, bends and hitches</li> <li>• Splices and splicing</li> <li>• Typing to Cleats or Bollards</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>– Demonstration to Pilots</li> <li>– 6 month exam</li> </ul>
2.10 Basic Rules of the Road	<ul style="list-style-type: none"> <li>– Navigation Rules – Inland Chapman Piloting (Chap. 6)</li> </ul>	6 Months	<ul style="list-style-type: none"> <li>– Application of rules in appropriate situations</li> </ul>	<ul style="list-style-type: none"> <li>– 6 Month Exam</li> <li>– Validation by Apprentice Committee</li> </ul>
2.11 Demonstrate knowledge of definitions and nomenclature	<ul style="list-style-type: none"> <li>– Readings                             <ul style="list-style-type: none"> <li>• Mooring Equipment Guidelines (Glossary)</li> <li>• Chapman Piloting (Glossary)</li> <li>• USCG Light List</li> <li>• Nomenclature handout</li> </ul> </li> </ul>	6 Months	<ul style="list-style-type: none"> <li>– Use of appropriate terms</li> <li>– Completion of 2.9</li> </ul>	<ul style="list-style-type: none"> <li>– 6 Month Exam</li> <li>– Validation by Apprentice Committee</li> </ul>
2.12 Complete Hampton Roads Launch experience	<ul style="list-style-type: none"> <li>– Launchmen describe and demonstrate local knowledge of Piers, launch operations and demonstrate gangway boarding procedures</li> <li>– Readings:                             <ul style="list-style-type: none"> <li>• The Port of Hampton Roads Annual</li> <li>• U.S. Coast Pilot 3, Chap. 9</li> <li>• Chart 12245</li> <li>• Chart 12253</li> </ul> </li> </ul>	6 Months	<ul style="list-style-type: none"> <li>– Successful description of various pier and anchorage locations</li> <li>– Successful demonstration of gangway boarding procedures</li> </ul>	<ul style="list-style-type: none"> <li>– Approval by two launchmen</li> </ul>

**Virginia Pilot Association**  
Apprentice Learning Objectives

11/25/2024

### Objective 3

LEARNING OBJECTIVES	LEARNING RESOURCES AND STRATEGIES	TARGET DATE FOR COMPLETION	EVIDENCE OF ACCOMPLISHMENT OF OBJECTIVES	CRITERIA AND MEANS VALIDATING EVIDENCE
3.1 Implement emergency procedures for power failures, etc.	<ul style="list-style-type: none"> <li>- Refer to tower emergency procedures</li> <li>- Demonstration of control and equipment location</li> <li>- Demonstration of procedures</li> <li>- Learn how to properly energize the radar, computer, and AIS</li> </ul>	6 Months	<ul style="list-style-type: none"> <li>- Completion of simulated emergency procedure drills</li> <li>- Proper demonstration of energizing the computer</li> <li>- Proper demonstration of getting the radar back on and tuned</li> <li>- Proper AIS initialization</li> </ul>	<ul style="list-style-type: none"> <li>- Successful completion of emergency power drill under adverse weather condition and heavy traffic simulation</li> <li>- Validation by tower operator</li> </ul>
3.2 Operate radios	<ul style="list-style-type: none"> <li>- Hands on demonstration by experienced operators</li> <li>- Equipment operation manuals</li> <li>- Local FCC frequency information</li> <li>- Checklist of information to be gathered from arriving vessels</li> </ul>	6 Months	<ul style="list-style-type: none"> <li>- Identify purpose for each of the frequencies used</li> <li>- Demonstrate operational ability of radios</li> <li>- Demonstrate the proper protocol for contacting ships</li> <li>- List appropriate information to be gathered when contacting arriving vessels</li> </ul>	<ul style="list-style-type: none"> <li>- Validation by tower operator</li> </ul>
3.3 Basic Tower Procedures	<ul style="list-style-type: none"> <li>- Individual, through observation, will identify the standard tower procedures</li> <li>- Demonstration and discussion of tower operations with operators</li> <li>- Individual will observe various operators on duty and take note of the proper dispatching of pilots and launches to inbound and outbound vessels</li> </ul>	6 Months	<ul style="list-style-type: none"> <li>- Develop written listing of tower procedures</li> </ul>	<ul style="list-style-type: none"> <li>- Six Month Exam- Written essay on the proper procedures of operating the tower</li> </ul>
3.4 Basic Radar Operation	<ul style="list-style-type: none"> <li>- Radar manual for controls and operations</li> <li>- Pilot description and demonstration</li> <li>- ARPA Book</li> <li>- Radar Observer Manual</li> </ul>	12 Months	<ul style="list-style-type: none"> <li>- Acquire targets</li> <li>- Describe the various functions to include:                             <ul style="list-style-type: none"> <li>• Basic Radar and Display Controls</li> <li>• Range and Bearing Measurements</li> <li>• Picture presentation controls</li> <li>• Vector times</li> <li>• Guard zones</li> <li>• Mapping functions</li> <li>• Anchor watch</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Validation by tower operator</li> </ul>



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3.5 Dispatch procedures	<ul style="list-style-type: none"> <li>– Tower Operators on duty</li> </ul>	12 Months	<ul style="list-style-type: none"> <li>– Demonstrate appropriate information gathering protocol and dispatch procedures</li> <li>– Demonstrate techniques for timing arrival of launch to boarding vessel in various weather conditions</li> </ul>	<ul style="list-style-type: none"> <li>– Two operators' verification and approval</li> </ul>
3.6 Apply Standard Operation Procedure to tower operation	<ul style="list-style-type: none"> <li>– Observe and identify the standard tower procedures</li> <li>– Demonstration and discussion of tower operations with Pilot</li> <li>– Individual will observe operators on duty and take note of the proper dispatching of pilots and launches to inbound and outbound vessels</li> </ul>	18 Months	<ul style="list-style-type: none"> <li>– Successful boarding of pilots</li> <li>– Develop written listing of tower procedures</li> </ul>	<ul style="list-style-type: none"> <li>– Comprehensive tower check-day</li> <li>– Successful demonstration of standing several watches in the tower under various adverse conditions while being supervised by the operator on duty</li> <li>– Validation by all tower operators</li> </ul>

DRAFT AGENDA  
 Materials contained in this agenda are proposed topics for discussion  
 And are not to be construed as regulation or official board position  
 DRAFT AGENDA

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**Objective 4**

LEARNING OBJECTIVES	LEARNING RESOURCES AND STRATEGIES	TARGET DATE FOR COMPLETION	EVIDENCE OF ACCOMPLISHMENT OF OBJECTIVES	CRITERIA AND MEANS VALIDATING EVIDENCE
4.1 Complete 22 week launch experience	– 22 weeks of training on 51 ft. twin screw launch and a 42ft R.H.I.B. launch with twin jet drives and catamaran launch with twin jet drives	18 months	– Successful completion of all objectives under 2.0 – Demonstration of ability to handle various size launches in all weather conditions	– Validation by Apprentice Committee
4.2 Complete 18 week tower training	– 18 weeks of training in the Cape Henry Pilot Tower	18 months	– Successful completion of all objectives under 3.0 – Demonstration of ability to handle all aspects of the operation of the Pilot Tower	– Validation by Apprentice Committee
4.3 Complete USCG Approved Courses	– USCG Approved Course List	2 years	– Successful completion of all required courses	– Validation by Apprentice Committee – MAMA Certificates
4.4 Complete 1 week Radar School	– USCG Approved Course	2 years	– Successful completion of USCG approved course	– Validation by Apprentice Committee – Unlimited Radar Observer Certificate
4.5 Complete Firefighting School	– USCG Approved Firefighting School	2 years	– Successful completion of USCG approved course for basic and advanced firefighting	– Validation by Apprentice Committee – School certificate
4.6 Complete CPR and First Aid courses	– MAMA class outline	2 years	– Successful completion of required class	– Validation by Apprentice Committee – MAMA certificates
4.7 Complete an approved ARPA course	– USCG Approved Course	2 years	– Successful completion of a USCG approved ARPA course	– Validation by Apprentice Committee – School certificate
4.8 Complete Bridge Resource Management Course for Pilots	– American Pilot Association (APA) Approved Course	2 years	– Successful completion of a USCG approved BRMP course	– Validation by Apprentice Committee – School certificate
4.9 Master Pilot Information Exchange	– Discussion with Pilots – American Pilot Association Website	2 Years	– Demonstrate knowledge of all aspects of a Master Pilot Information Exchange	– Validation by Apprentice Committee

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4.10 Complete Advanced Electronic Navigation Training Course	– Maritime Pilots Institute	2 Years	– Successful completion of all required training including: <ul style="list-style-type: none"> <li>• DGPS/ECDIS Theory</li> <li>• Use of SealQ Navigation System</li> <li>• Interactive Blind Pilotage Training</li> <li>• Multi-ship Radar Simulation</li> </ul>	– Validation by Apprentice Committee – School certificate
4.11 Complete Azipod Simulator Course	– Maritime Institute of Technology & Graduate Studies or Approved Course	2 Years	– Successful completion of all required training	– Validation by Apprentice Committee – School Certificate
4.12 Complete Introduction to Manned Model/Simulator Course	– Maritime Pilots Institute	2 Years	– Successful completion of all required training	– Validation by Apprentice Committee – School Certificates
4.13 Complete Emergency Shiphandling Simulator Course	– Maritime Institute of Technology & Graduate Studies or Approved Course	2 years	– Successful completion of all required training	– Validation by Apprentice Committee – School certificate
4.14 Complete Intermediate Manned Model Shiphandling Course	– Warsash Maritime Shiphandling Centre	2 years	– Successful completion of all required training	– Validation by Apprentice Committee – School certificate
4.16 Complete ULCV Manned Model and Simulator Course	– Maritime Pilots Institute	4 Years	– Successful completion of all required training	– Validation by Apprentice Committee – School Certificate
4.17 Complete Advanced Manned Model Shiphandling School	– Port Revel Shiphandling Training Centre (France)  OR  – Shiphandling Research and Training Centre (Poland)	6 Years	– Successful completion of all required training	– Validation by Apprentice Committee – School Certificate

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**Objective 5**

LEARNING OBJECTIVES	LEARNING RESOURCES AND STRATEGIES	TARGET DATE FOR COMPLETION	EVIDENCE OF ACCOMPLISHMENT OF OBJECTIVES	CRITERIA AND MEANS VALIDATING EVIDENCE
5.1 Shiphandling Fundamentals	<ul style="list-style-type: none"> <li>- Pilot Instructed Class</li> <li>- Port Revel Manual (Sections 2.1 through 2.3)</li> <li>- Behavior and Handling of Ships (Introduction)</li> <li>- Shiphandling for the Mariner (p. 28, p. 53-57, p. 86-89)</li> <li>- The Shiphandler's Guide (p. 16-17)</li> <li>- Discussion with Pilots</li> </ul>	6 Months	<ul style="list-style-type: none"> <li>- Understanding of basic fundamentals of shiphandling:               <ul style="list-style-type: none"> <li>• Judgement of force and motion</li> <li>• Judgement of distance and speed</li> <li>• Judgement of heading and rate of turn</li> <li>• Inertia and momentum</li> <li>• Drag and resistance</li> <li>• Making turns in a channel</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- 6 Month Exam</li> <li>- 2 Year Exam</li> </ul>
5.2 Use of Bridge Equipment and Maneuvering Information	<ul style="list-style-type: none"> <li>- Pilot Instructed Class</li> <li>- Shiphandling for the Mariner (p. 40-42, p. 60-64)</li> <li>- Behavior and Handling of Ships (p. 33-35, p. 135-137)</li> <li>- Knights (p. 250-252)</li> <li>- Discussion with Pilots</li> </ul>	6 Months	<ul style="list-style-type: none"> <li>- Understanding of the following:               <ul style="list-style-type: none"> <li>• Master/Pilot Information Exchange</li> <li>• Wheelhouse poster and pilot card</li> <li>• Turning circle, swept path</li> <li>• Using ship's equipment to advantage</li> <li>• Effects of excessive speed</li> <li>• Increase in draft due to list, roll, pitch</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- 6 Month Exam</li> <li>- 2 Year Exam</li> </ul>
5.3 The Pivot Point	<ul style="list-style-type: none"> <li>- Pilot Instructed Class</li> <li>- Maneuvering Information For The Pilot/Navigator (p. 132)</li> <li>- Behavior and Handling of Ships (Chap. 1, Appendix A, B)</li> <li>- The Shiphandler's Guide (p. 12-15, 24-25, 27)</li> <li>- Discussion with Pilots</li> </ul>	6 Months	<ul style="list-style-type: none"> <li>- Thorough understanding of the pivot point, its location, and importance.</li> <li>- Knowledge of the effect of forces applied to the ship based on the location of the pivot point.</li> </ul>	<ul style="list-style-type: none"> <li>- 6 Month Exam</li> <li>- 2 Year Exam</li> </ul>
5.4 Forces Under Control	<ul style="list-style-type: none"> <li>- Pilot Instructed Class</li> <li>- Port Revel Manual 3.1 (Units 2-12, 3-2)</li> <li>- Naval Shiphandling (p. 41-54)</li> <li>- The Shiphandler's Guide (p. 18-21, 23-30, 90-103, 106-127)</li> <li>- Behavior and Handling of Ships (Chap. 2, 4 [p. 49-56])</li> <li>- Shiphandling for the Mariner (p. 9-16, p. 47-49, p. 204-209)</li> <li>- Discussion with Pilots</li> </ul>	6 Months	<ul style="list-style-type: none"> <li>- Demonstrate an understanding of:               <ul style="list-style-type: none"> <li>• Types of rudders and propellers</li> <li>• Effects of rudders, propellers, and thrusters</li> <li>• Effectiveness of different types of engines</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- 6 Month Exam</li> <li>- 2 Year Exam</li> </ul>

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LEARNING OBJECTIVES	LEARNING RESOURCES AND STRATEGIES	TARGET DATE FOR COMPLETION	EVIDENCE OF ACCOMPLISHMENT OF OBJECTIVES	CRITERIA AND MEANS VALIDATING EVIDENCE
5.5 Wind and Current Effects	<ul style="list-style-type: none"> <li>- Pilot Instructed Class</li> <li>- Behavior and Handling of Ships (Chap. 3, 5)</li> <li>- Port Revel Manual - 2.4 (Units 2-1, 2-2, 2-3, 2-4, 2-5, 2-6, 2-10)</li> <li>- Shiphandling for the Mariner (p. 33-35, p. 47, p. 136-138)</li> <li>- The Shiphandler's Guide (p. 38-47, 70-73)</li> <li>- Discussion with Pilots</li> </ul>	6 Months	<ul style="list-style-type: none"> <li>- Understanding of the following:               <ul style="list-style-type: none"> <li>• Magnitude of wind and current force</li> <li>• Effect of each on steering</li> <li>• Speed at which wind takes over</li> <li>• Effect of pivot point location</li> <li>• Effect of angle of attack on wind and current forces</li> <li>• Effect of swell</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- 6 Month Exam</li> <li>- 2 Year Exam</li> </ul>
5.6 Anchor-Handling Operations	<ul style="list-style-type: none"> <li>- Close observation of the anchor handling operations on several ships.</li> <li>- Knight's (Chap. 5, 10)</li> <li>- Merchant Marine Officer's Handbook (Chap. 10)</li> </ul>	12 Months	<ul style="list-style-type: none"> <li>- Understanding of the following:               <ul style="list-style-type: none"> <li>• Types of anchors</li> <li>• Anchor systems</li> <li>• Anchor handling procedures</li> <li>• Control of the anchor</li> <li>• Potential problems when anchoring</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- 12 Month Exam</li> <li>- Validation by Pilot</li> </ul>
5.7 Anchoring	<ul style="list-style-type: none"> <li>- Pilot Instructed Class</li> <li>- Port Revel Manual - 5.1 (Units 5-1, 5-2, 5-3)</li> <li>- Naval Shiphandling (p. 95-100)</li> <li>- Knight's (p. 294-296)</li> <li>- Shiphandling for the Mariner (p. 136-156)</li> <li>- Discussion with Pilots</li> </ul>	12 Months	<ul style="list-style-type: none"> <li>- Understanding of the following:               <ul style="list-style-type: none"> <li>• Mooring to one anchor</li> <li>• Mooring to two anchors</li> <li>• Use of second anchor in high wind</li> <li>• Effects of wind and current approaching the anchorage</li> <li>• Motion of a ship at anchor under effects of wind and current</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- 12 Month Exam</li> <li>- 2 Year Exam</li> </ul>
5.8 Directional Stability	<ul style="list-style-type: none"> <li>- Pilot Instructed Class</li> <li>- Port Revel Manual (Units 2-14, 2-15)</li> <li>- Behavior and Handling of Ships (p. 31)</li> <li>- Shiphandling for the Mariner (p. 18-20, p. 50-53)</li> <li>- Maneuvering Information For The Pilot/Navigator (p. 133)</li> <li>- Discussion with Pilots</li> </ul>	12 Months	<ul style="list-style-type: none"> <li>- Understanding of the following:               <ul style="list-style-type: none"> <li>• Overswing</li> <li>• Directional stability</li> <li>• Relationship of block co-efficient, under keel clearance, length/beam ratio, forward section areas, and trim on directional stability</li> <li>• Effect of trim on steering</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- 12 Month Exam</li> <li>- 2 Year Exam</li> </ul>

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5.9 Behavior of Ships in Deep and Shallow Water	<ul style="list-style-type: none"> <li>- Pilot Instructed Class</li> <li>- Port Revel Manual - 4.1 (Units 4-1, 4-4, 4-5, 4-6, 4-7)</li> <li>- Shiphandling for the Mariner (p. 17-18; p. 64-67)</li> <li>- The Shiphandler's Guide (p. 30-35, 55-59)</li> <li>- Discussion with Pilots</li> </ul>	12 Months	<ul style="list-style-type: none"> <li>- Demonstrate an understanding of deep vs. shallow water behavior including:               <ul style="list-style-type: none"> <li>• Wave form</li> <li>• Sinkage and squat</li> <li>• Shallow water effects on speed and handling</li> <li>• Channel blockage factor</li> <li>• Turning Circles</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- 12 Month Exam</li> <li>- 2 Year Exam</li> </ul>
5.10 Effects of Narrow Channels Interaction Between Vessels	<ul style="list-style-type: none"> <li>- Pilot Instructed Class</li> <li>- Port Revel Manual - 4.1 (Units 4-8, 4-10, 4-11, 4-13 to 4-17, 4-19, 4-20, 7-1 to 7-7)</li> <li>- Behavior and Handling of Ships (Chap. 7)</li> <li>- Shiphandling for the Mariner (p. 44-45; p. 57-60)</li> <li>- Shiphandling in Narrow Channels (Chap. 1, Appendix)</li> <li>- The Shiphandler's Guide (p. 60-68)</li> <li>- Pilotage (p.269)</li> <li>- Discussion with Pilots</li> </ul>	12 Months	<ul style="list-style-type: none"> <li>- Understanding of the effects of narrow channels including:               <ul style="list-style-type: none"> <li>• Bank cushion and suction</li> <li>• Using these effects to advantage</li> <li>• Responding to excessive bank effects</li> <li>• Causes of these effects</li> <li>• Trapping</li> </ul> </li> <li>- Understanding of the interaction between vessels including:               <ul style="list-style-type: none"> <li>• Forces involved when meeting or overtaking</li> <li>• How to safely meet or overtake</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- 12 Month Exam</li> <li>- 2 Year Exam</li> </ul>
5.11 Hydrodynamics	<ul style="list-style-type: none"> <li>- Shiphandling for the Mariner (pg. 64-67)</li> </ul>	12 Months	<ul style="list-style-type: none"> <li>- Demonstrate an understanding of hydrodynamic effects of:               <ul style="list-style-type: none"> <li>• Squat</li> <li>• Buoyancy</li> <li>• Block coefficient</li> <li>• Speed effects</li> <li>• Current effects</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- 12 Month Exam</li> <li>- 2 Year Exam</li> </ul>
5.12 Characteristics of Tugs	<ul style="list-style-type: none"> <li>- Discussion with Pilots</li> <li>- The Shiphandler's Guide (p. 129-131, 140-144, 150-153)</li> <li>- Tug Use In Port (p. 16-36, p. 85-97, 110-114)</li> <li>- Shiphandling with Tugs (Chap. 3, 4; Appendix 1)</li> <li>- Pilot Instructed Class</li> </ul>	18 Months	<ul style="list-style-type: none"> <li>- Describe the following:               <ul style="list-style-type: none"> <li>• Types of tugs</li> <li>• Types of propulsion and steering systems</li> <li>• Handling of light tugs</li> <li>• Pros and cons of each tug type</li> </ul> </li> <li>- Escort tugs</li> </ul>	<ul style="list-style-type: none"> <li>- 18 Month Exam</li> <li>- 2 Year Exam</li> </ul>

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5.13 Handling Tugs and Tows	<ul style="list-style-type: none"> <li>- Pilot Instructed Class</li> <li>- Primer of Towing (Chap. 6, 8)</li> <li>- Shiphandling with Tugs (Chap. 20)</li> <li>- Discussion with Pilots</li> </ul>	18 Months	<ul style="list-style-type: none"> <li>- Describe handling characteristics of tugs towing astern, alongside, pushing ahead, the ATB and ITB</li> <li>- Tandem towing astern</li> </ul>	<ul style="list-style-type: none"> <li>- 18 Month Exam</li> <li>- 2 Year Exam</li> </ul>
5.14 Mooring Principles and Operations	<ul style="list-style-type: none"> <li>- Close observation of the mooring and unmooring operations on several ships</li> <li>- Knight's (p. 271-275)</li> <li>- Mooring Equipment Guidelines (Chap. 1, 6)</li> <li>- Port Revel Manual (Units 3-18 to 3-24)</li> </ul>	18 Months	<ul style="list-style-type: none"> <li>- Understanding of both modern and traditional principles of mooring.</li> </ul>	<ul style="list-style-type: none"> <li>- 18 Month Exam</li> <li>- Validation by Pilot</li> </ul>
5.15 Docking and Undocking	<ul style="list-style-type: none"> <li>- Pilot Instructed Class</li> <li>- Shiphandling for the Mariner (p. 83-123)</li> <li>- The Shiphandler's Guide (p. 103-104)</li> <li>- Discussion with Pilots</li> </ul>	18 Months	<ul style="list-style-type: none"> <li>- Demonstrate an Understanding of the following:               <ul style="list-style-type: none"> <li>• Approaching the berth</li> <li>• Docking</li> <li>• Undocking</li> <li>• Wind and current effects</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- 18 Month Exam</li> <li>- 2 Year Exam</li> </ul>
5.16 Use of the Anchor in Docking Maneuvering on an Anchor	<ul style="list-style-type: none"> <li>- Pilot Instructed Class</li> <li>- Port Revel Manual - 5.1 (Units 5-4, 5-5)</li> <li>- Behavior and Handling of Ships (p. 70-71)</li> <li>- Shiphandling for the Mariner (p. 159-168, p 170-172, p. 119-123)</li> <li>- Shiphandling in Narrow Channels (Chap. 6, Appendix, Chap. 2)</li> <li>- The Shiphandler's Guide (p. 49-54, 74-76)</li> <li>- Discussion with Pilots</li> </ul>	18 Months	<ul style="list-style-type: none"> <li>- Understanding of Principles Involved in the following:               <ul style="list-style-type: none"> <li>• Dredging an anchor for docking</li> <li>• Turning on an anchor</li> <li>• Holding a vessel with an anchor</li> <li>• Anchors to assist steering</li> <li>• Anchor use in narrow channels</li> </ul> </li> <li>- Description of the following:               <ul style="list-style-type: none"> <li>• Scope of chain</li> <li>• Inshore vs. offshore anchor</li> <li>• Vessel's speed</li> <li>• Other factors to consider</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- 18 Month Exam</li> <li>- 2 Year Exam</li> </ul>

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5.17 Slowing and Stopping Emergency Situations	<ul style="list-style-type: none"> <li>– Pilot Instructed Class</li> <li>– Port Revel Manual 6.2 (Units 5-7, 6-4)</li> <li>– Behavior and Handling of Ships (p. 83-84)</li> <li>– Shiphandling for the Mariner (p. 23-26, p. 168-170, p. 86)</li> <li>– Maneuvering Information For The Pilot/Navigator (p. 129-130)</li> <li>– Discussion with Pilots</li> </ul>	18 Months	<ul style="list-style-type: none"> <li>– Demonstrate knowledge of rudder cycling, crash stop and hard-over turn. Determine which is most effective in various situations.</li> <li>– Demonstrate understanding of how to handle emergency situations including loss of propulsion and/or steering, extreme maneuvering scenarios and unexpected delays or channel blockages</li> <li>– Describe use of the anchor in an emergency</li> </ul>	<ul style="list-style-type: none"> <li>– 18 Month Exam</li> <li>– 2 Year Exam</li> </ul>
5.18 Shiphandling with Tugs	<ul style="list-style-type: none"> <li>– Pilot Instructed Class</li> <li>– Behavior and Handling of Ships (Chap. 4 p. 54-60, Chap. 8)</li> <li>– Shiphandling for the Mariner (p. 71-82)</li> <li>– Shiphandling with Tugs (p. 90-182)</li> <li>– Tug Use In Port (p. 39-44, p. 49-72, 79-80, 134-148)</li> <li>– The Shiphandler’s Guide (p. 131-140, 146-150, 156-165)</li> <li>– ASD Tugs: Thrust and Azimuth (Chap 14)</li> <li>– Discussion with Pilots</li> </ul>	18 Months	<ul style="list-style-type: none"> <li>– Demonstrate understanding of the use of tugs to assist in shiphandling               <ul style="list-style-type: none"> <li>• Docking and undocking</li> <li>• Escort tugs and use of tugs to turn around</li> <li>• Positioning of tugs</li> <li>• Ways of making up a tug</li> <li>• Using tugs to maximum advantage</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>– 18 Month Exam</li> <li>– 2 Year Exam</li> </ul>
5.19 Evaluation of Maneuvering Characteristics	<ul style="list-style-type: none"> <li>– Pilot Instructed Class</li> <li>– Principles of Naval Architecture               <ul style="list-style-type: none"> <li>• Chap. 4 (4.3, 4.4)</li> <li>• Chap. 5 (5.1, 5.2, 5.3)</li> <li>• Chap. 6 (6.1, 6.2, 6.3)</li> </ul> </li> <li>– Maneuvering Information for the Pilot/Navigator (p.127-128)</li> <li>– Discussion with Pilots</li> </ul>	2 Years	<ul style="list-style-type: none"> <li>– Demonstrate understanding of the following definitive maneuvers:               <ul style="list-style-type: none"> <li>• Direct or reversed spiral</li> <li>• Zig zag</li> <li>• Turning circle - including swept path and location of pivot point</li> </ul> </li> <li>– Demonstrate how information from these maneuvers applies to a ship's maneuvering characteristics</li> </ul>	<ul style="list-style-type: none"> <li>– 2 Year Exam</li> </ul>



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LEARNING OBJECTIVES	LEARNING RESOURCES AND STRATEGIES	TARGET DATE FOR COMPLETION	EVIDENCE OF ACCOMPLISHMENT OF OBJECTIVES	CRITERIA AND MEANS VALIDATING EVIDENCE
5.20 Use of Electronic Navigation Equipment	<ul style="list-style-type: none"> <li>- Discussion with Pilots</li> <li>- USCG Approved Radar and ARPA courses</li> <li>- On-board experience under pilot supervision</li> </ul>	2 Years	<ul style="list-style-type: none"> <li>- Demonstrate understanding of function and use of radar, ARPA, GPS, DGPS, ECDIS, PPU</li> <li>- Demonstrate ability to use this information to pilot with little or no visibility</li> <li>- Completion of objective 7.35</li> </ul>	<ul style="list-style-type: none"> <li>- 2 Year Exam</li> </ul>
5.21 Calculating Wind and Current Forces	<ul style="list-style-type: none"> <li>- Mooring Equipment Guidelines (Section I.2)</li> <li>- Prediction of Wind and Current Loads on VLCC's</li> <li>- Tug Use In Port (p. 74-77)</li> <li>- The Shiphandler's Guide (p. 43-47, 80-85)</li> <li>- Discussion with Pilots</li> </ul>	2 Years	<ul style="list-style-type: none"> <li>- Demonstrate knowledge of wind and current force calculations using coefficients and OCIMF publications</li> <li>- Demonstrate ability to apply trigonometric functions to allow for angle of attack of wind or current</li> </ul>	<ul style="list-style-type: none"> <li>- 2 Year Exam</li> </ul>
5.22 Handle Light and Loaded Ships	<ul style="list-style-type: none"> <li>- Hands on experience on a minimum of 500 vessels under pilot supervision</li> <li>- Discussion with Pilots</li> </ul>	2 Years	<ul style="list-style-type: none"> <li>- Completion of objectives                             <ul style="list-style-type: none"> <li>• 5.1-5.5, 5.8-5.10, 5.17, and 5.19-5.21</li> </ul> </li> <li>- Demonstrate ability to apply shiphandling learning objectives in practical situations</li> </ul>	<ul style="list-style-type: none"> <li>- Completion of VPA trip requirement</li> <li>- Validation by Apprentice Committee</li> </ul>
5.23 Anchor in a Specific Location	<ul style="list-style-type: none"> <li>- Hands on experience under pilot supervision</li> <li>- Discussion with Pilots</li> </ul>	2 Years	<ul style="list-style-type: none"> <li>- Completion of Objectives                             <ul style="list-style-type: none"> <li>• 5.6, 5.7</li> </ul> </li> <li>- Demonstrate ability to apply objectives 5.6 and 5.7 to practical situations</li> </ul>	<ul style="list-style-type: none"> <li>- Completion of VPA trip requirement</li> <li>- Validation by Apprentice Committee</li> </ul>
5.24 Handle Tugs and Tows	<ul style="list-style-type: none"> <li>- Hands on experience under pilot supervision</li> <li>- Discussion with Pilots</li> </ul>	2 Years	<ul style="list-style-type: none"> <li>- Completion of Objectives                             <ul style="list-style-type: none"> <li>• 5.11, 5.12</li> </ul> </li> <li>- Demonstrate ability to apply objectives 5.11 and 5.12 in practical situations</li> </ul>	<ul style="list-style-type: none"> <li>- Completion of VPA trip requirement</li> <li>- Validation by Apprentice Committee</li> </ul>
5.25 Docking and Undocking	<ul style="list-style-type: none"> <li>- Hands on Experience Under Pilot Supervision</li> <li>- Discussion with Pilots</li> </ul>	2 Years	<ul style="list-style-type: none"> <li>- Completion of Objectives                             <ul style="list-style-type: none"> <li>• 5.11, 5.13, 5.14, 5.15, 5.17</li> </ul> </li> <li>- Demonstrate ability to apply shiphandling learning objectives in practical situations</li> </ul>	<ul style="list-style-type: none"> <li>- Completion of VPA trip requirement</li> <li>- Validation by Apprentice Committee</li> </ul>

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5.26 Handle Outbound Deep Loaded Vessels	<ul style="list-style-type: none"> <li>– Discussion with Pilots</li> <li>– Observation on a minimum of four vessels with a draft of 48 feet or greater</li> </ul>	5 Years	<ul style="list-style-type: none"> <li>– Describe and demonstrate handling characteristics of deep loaded vessels</li> <li>– Description of factors unique to vessels with a draft of 48 feet or greater including:                             <ul style="list-style-type: none"> <li>• Sailing times</li> <li>• Tides and currents</li> <li>• Anchorages</li> <li>• Channel availability</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>– Completion of VPA trip requirements</li> </ul>
5.27 Handle Deep Loaded Post Panamax Vessels	<ul style="list-style-type: none"> <li>– Hands on experience under Pilot supervision</li> <li>– Discussion with pilots</li> </ul>	2 Years Theoretical 5 Years Practical	<ul style="list-style-type: none"> <li>– Description of factors unique to container vessels with a draft greater than 47 feet including:                             <ul style="list-style-type: none"> <li>• Sailing times</li> <li>• Arrival times</li> <li>• Tides and currents</li> <li>• Weather conditions</li> <li>• Anchorages</li> <li>• Channel availability</li> <li>• Berth availability</li> <li>• Assist tug</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>– 2 Year Exam</li> </ul>
5.28 Handle Deep Loaded Vessels and ULCVs with Escort Tugs	<ul style="list-style-type: none"> <li>– Observation on a minimum of four ULCV vessels (2 inbound / 2 outbound)</li> <li>– Discussion with Pilots</li> <li>– “Tug use in Port” (Pg. 134-158)</li> <li>– Simulator Classes</li> <li>– Maritime Pilots Institute, Covington, LA</li> <li>– Warsash Maritime Academy, Southampton, UK</li> </ul>	2 Years Theoretical 5 Years Practical	<ul style="list-style-type: none"> <li>– Description of:                             <ul style="list-style-type: none"> <li>• Safe speed</li> <li>• Where to tether tug or tugs (geographically)</li> <li>• Where to tether tug or tugs (on ship)</li> <li>• Limitations of tugs</li> <li>• Indirect steering concepts</li> <li>• Indirect steering commands</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>– 2 Year Exam</li> <li>– School Certificates</li> </ul>

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**Objective 6**

LEARNING OBJECTIVES	LEARNING RESOURCES AND STRATEGIES	TARGET DATE FOR COMPLETION	EVIDENCE OF ACCOMPLISHMENT OF OBJECTIVES	CRITERIA AND MEANS VALIDATING EVIDENCE
6.1 Demonstrate basic knowledge of ship board radar Check for heading line error	<ul style="list-style-type: none"> <li>- Refer to competency 3.3</li> <li>- Radar Observer Manual</li> </ul>	12 Months	<ul style="list-style-type: none"> <li>- Describe and correct heading line error</li> <li>- Describe appropriate control adjustments</li> <li>- Complete appropriate adjustments</li> </ul>	<ul style="list-style-type: none"> <li>- Pilot approval</li> </ul>
6.2 Demonstrate radar skill for meeting, overtaking and crossing	<ul style="list-style-type: none"> <li>- On board pilot and apprentice demonstration and discussion</li> <li>- Radar Observer Manual</li> <li>- Merchant Marine Officer's Handbook (Chap. 2)</li> <li>- Starpath Radar Trainer</li> </ul>	18 Months	<ul style="list-style-type: none"> <li>- Accurate identification of target's course, speed, and closest point of approach</li> <li>- Parallel Indexing</li> </ul>	<ul style="list-style-type: none"> <li>- VPA Exam</li> <li>- MAMA Certificate</li> </ul>
6.3 Use of stabilized and unstabilized radar	<ul style="list-style-type: none"> <li>- Demonstration and description by Pilot</li> <li>- Radar Observer Manual</li> </ul>	18 Months	<ul style="list-style-type: none"> <li>- Description and demonstration of appropriate radar skills</li> </ul>	<ul style="list-style-type: none"> <li>- Pilot approval</li> <li>- VPA Exam</li> </ul>
6.4 Demonstrate ability to place vessel in an anchorage	<ul style="list-style-type: none"> <li>- Pilot demonstration and dialogue with apprentice</li> <li>- Hands-on experience under pilot supervision</li> </ul>	2 Years	<ul style="list-style-type: none"> <li>- Demonstrate taking fixes from radar, analyzing vessel speed, current, wind and positioning vessel in a specific anchorage</li> </ul>	<ul style="list-style-type: none"> <li>- Demonstration to Pilot satisfaction</li> </ul>
6.5 Use of ARPA	<ul style="list-style-type: none"> <li>- Pilot demonstration and on board discussion</li> <li>- MAMA Course</li> <li>- Readings:                             <ul style="list-style-type: none"> <li>• Automatic Radar</li> <li>• Piloting Aids Manual</li> </ul> </li> </ul>	2 Years	<ul style="list-style-type: none"> <li>- Description and demonstration of appropriate ARPA skills</li> </ul>	<ul style="list-style-type: none"> <li>- VPA Exam</li> <li>- MAMA Certificate</li> </ul>
6.6 Bridge Recording Equipment	<ul style="list-style-type: none"> <li>- Discussion with Pilots</li> <li>- VDR</li> <li>- Video Surveillance</li> <li>- Cell Phone Use</li> </ul>	2 Years	<ul style="list-style-type: none"> <li>- Description of appropriate bridge decorum</li> </ul>	<ul style="list-style-type: none"> <li>- VPA Exam</li> </ul>

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**Objective 7**

LEARNING OBJECTIVES	LEARNING RESOURCES AND STRATEGIES	TARGET DATE FOR COMPLETION	EVIDENCE OF ACCOMPLISHMENT OF OBJECTIVES	CRITERIA AND MEANS VALIDATING EVIDENCE
7.1 Demonstrate Rules of the Road Section I	<ul style="list-style-type: none"> <li>- Navigation Rules (Inland)</li> <li>- Including:                             <ul style="list-style-type: none"> <li>• Part A: Rules 1-3</li> <li>• Part B: Rules 4-18</li> </ul> </li> <li>- Rules of the Road class with pilot instructor</li> </ul>	6 Months	<ul style="list-style-type: none"> <li>- Accurate description of Rules of the Road Section I on request</li> </ul>	<ul style="list-style-type: none"> <li>- 6 Month Exam</li> </ul>
7.2 Identify location of Piers	<ul style="list-style-type: none"> <li>- Charts:                             <ul style="list-style-type: none"> <li>• 12222, 12245, 12253</li> </ul> </li> <li>- Port of Hampton Roads Annual</li> <li>- Pilot and apprentice Dialogue and Demonstration</li> </ul>	6 Months 12 Months 18 Months 2 Years	<ul style="list-style-type: none"> <li>- Correctly specify location of any pier on request</li> </ul>	<ul style="list-style-type: none"> <li>- 6 Month Exam</li> <li>- 12 Month Exam</li> <li>- 18 Month Exam</li> <li>- 2 Year Exam</li> </ul>
7.3 Demonstrate local knowledge for chart 12222	<ul style="list-style-type: none"> <li>- Charts:                             <ul style="list-style-type: none"> <li>• 12222</li> </ul> </li> <li>- Pilots dialogue with apprentice on board vessels</li> <li>- CFR33</li> <li>- U.S. Coast Pilot 3, Chap. 9</li> <li>- USCG Light List</li> </ul>	6 Months	<ul style="list-style-type: none"> <li>- Accurate description on request</li> </ul>	<ul style="list-style-type: none"> <li>- 6 Month Exam</li> </ul>
7.4 Identify courses and distance to destinations	<ul style="list-style-type: none"> <li>- Charts:                             <ul style="list-style-type: none"> <li>• 12222, 12245, 12253, 12221, 12241</li> </ul> </li> <li>- Pilot and apprentice dialogue</li> </ul>	6 Months	<ul style="list-style-type: none"> <li>- Describe the specific course, identifying the distances between buoys and turning points</li> </ul>	<ul style="list-style-type: none"> <li>- 6 Month Exam</li> </ul>
7.5 Draw Chart 12222 (Cape Henry to Old Point Comfort)	<ul style="list-style-type: none"> <li>- NOAA survey chart 12222</li> <li>- Pilot instructed chart drawing class</li> </ul>	6 Months	<ul style="list-style-type: none"> <li>- Chart approved by Apprentice Committee</li> </ul>	<ul style="list-style-type: none"> <li>- 6 Month Exam</li> </ul>
7.6 Describe regulations and restrictions to chart 12222	<ul style="list-style-type: none"> <li>- NOAA survey chart 12222</li> <li>- CFR 33</li> <li>- U.S. Coast Pilot 3</li> </ul>	6 Months	<ul style="list-style-type: none"> <li>- Accurate description on request</li> </ul>	<ul style="list-style-type: none"> <li>- 6 Month Exam</li> </ul>
7.7 Demonstrate application of Rules of the Road Section II	<ul style="list-style-type: none"> <li>- MAMA course</li> <li>- Navigation Rules - Inland Rules                             <ul style="list-style-type: none"> <li>• 19-37: Annex II, IV, V</li> </ul> </li> </ul>	12 Months	<ul style="list-style-type: none"> <li>- Demonstrate application of Section II "Rules" accurately upon request</li> </ul>	<ul style="list-style-type: none"> <li>- 12 Month Exam</li> </ul>

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7.8 Variation/Deviation Compass Corrections	<ul style="list-style-type: none"> <li>- Chapman, Chap. 17</li> <li>- Solving on-board problems under pilot supervision</li> <li>- Bowditch, Chap. 7</li> <li>- Dutton's, Chap. 3</li> </ul>	<p>6 Months</p> <p>12 Months</p>	<ul style="list-style-type: none"> <li>- Completion of textbook problems</li> </ul>	<ul style="list-style-type: none"> <li>- 6 Month Exam</li> <li>- 12 Month Exam</li> </ul>
7.9 Solve tide and current problems	<ul style="list-style-type: none"> <li>- References:                             <ul style="list-style-type: none"> <li>• Chapman, Chap. 15</li> </ul> </li> <li>- Tide and current tables</li> <li>- Local knowledge discussion with Pilots</li> <li>- Dutton's, Chap. 9, 10</li> <li>- Pilot Instructed Class</li> </ul>	12 Months	<ul style="list-style-type: none"> <li>- Solving textbook problems and understanding principles of tides and currents</li> </ul>	<ul style="list-style-type: none"> <li>- 12 Month Exam</li> </ul>
7.10 Draw chart 12245 (Old Point Comfort to Craney Island and the James River Bridge)	<ul style="list-style-type: none"> <li>- NOAA survey chart 12245</li> </ul>	12 Months	<ul style="list-style-type: none"> <li>- Chart approved by Apprentice Committee</li> </ul>	<ul style="list-style-type: none"> <li>- 12 Month Exam</li> </ul>
7.11 Describe regulations and restrictions to chart 12245	<ul style="list-style-type: none"> <li>- NOAA Survey Chart 12245</li> <li>- CFR 33</li> <li>- U.S. Coast Pilot 3</li> </ul>	12 Months	<ul style="list-style-type: none"> <li>- Accurate description on request</li> </ul>	<ul style="list-style-type: none"> <li>- 12 Month Exam</li> </ul>
7.12 Demonstrate knowledge of chart symbols and abbreviations	<ul style="list-style-type: none"> <li>- Chart No. 1</li> <li>- Light List</li> </ul>	12 Months	<ul style="list-style-type: none"> <li>- Successful interpretation of chart symbols and abbreviations on request</li> </ul>	<ul style="list-style-type: none"> <li>- 12 Month Exam</li> </ul>
7.13 Demonstrate application of the rules of the road	<ul style="list-style-type: none"> <li>- Navigation Rules - Inland</li> <li>- MAMA course</li> </ul>	18 Months	<ul style="list-style-type: none"> <li>- Successful completion of 7.1 and 7.7</li> <li>- Successful completion of MAMA course</li> <li>- Demonstration and accurate description of the Rules of the Road</li> </ul>	<ul style="list-style-type: none"> <li>- 18 Month Exam</li> </ul>
7.14 Demonstrate use and describe aids to navigation	<ul style="list-style-type: none"> <li>- MAMA course</li> <li>- Discussion and follow-up with pilots</li> <li>- Readings:                             <ul style="list-style-type: none"> <li>• Chapman, Chap. 22</li> <li>• USCG Light List</li> <li>• Dutton's, Chap. 4</li> </ul> </li> </ul>	18 Months	<ul style="list-style-type: none"> <li>- Describe and discuss use of any navigational aid upon request</li> </ul>	<ul style="list-style-type: none"> <li>- 18 Month Exam</li> </ul>
7.15 Solve various navigation problems	<ul style="list-style-type: none"> <li>- Dutton's                             <ul style="list-style-type: none"> <li>• Chap. 5, 8, 11, 12, 14</li> </ul> </li> <li>- MAMA Piloting Course</li> </ul>	18 Months	<ul style="list-style-type: none"> <li>- Successful demonstration of navigation skills on request</li> </ul>	<ul style="list-style-type: none"> <li>- 18 Month Exam</li> </ul>

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7.16 (a) Draw Chart 12253 (Crane Island to the Southern and Eastern Branches of the Elizabeth River)	– NOAA Chart 12253	18 Months	– Chart approved by Apprentice Committee	– 18 Month Exam
7.16 (b) Draw Chart 12208 Approaches to Chesapeake Bay	– NOAA Chart 12208	1 week, 3 weeks 18 Months	– Chart approved by Apprentice Committee	– 18 Month Exam
7.17 (a) Describe regulations and restrictions of chart 12253	– NOAA Chart 12253 – U.S. Coast Pilot 3 – CFR 33	18 Months	– Accurate description request	– 18 Month Exam
7.17 (b) Describe regulations and restrictions of chart 12208	– NOAA Chart 12208 – U.S. Coast Pilot 3 – CFR 33	1 week, 3 weeks 18 Months	– Accurate description on request	– 18 Month Exam
7.18 Complete sounding trip	– Demonstration by Pilots – Charts: • 12222, 12245, 12253	2 Years	– Submission of soundings to the Hampton Roads anchorage and piers to Apprentice Committee	– Validation by Apprentice Committee
7.19 Demonstration of application of the "Rules of the Road"	– Navigation Rules - inland – MAMA course	2 Years	– Successful completion of 7.1, 7.7 and 7.13 – Demonstration and accurate interpretation of the "Rules of the Road"	– 2 Year exam
7.20 Understand both magnetic/gyro compasses	– Chapman, Chap. 17 – Solving on board problems – Bowditch, Chap. 13 – Dutton's, Chap. 3	2 Years	– Accurate solutions to textbook and underway problems upon request	– 2 Year exam

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7.21 Describe shiphandling procedures	<ul style="list-style-type: none"> <li>- Pilot instructed classes</li> <li>- Readings:               <ul style="list-style-type: none"> <li>• Ship Handling in Narrow Channels</li> <li>• Naval Shiphandling</li> <li>• Primer of Towing</li> <li>• Shiphandling with tugs</li> <li>• Shiphandling for the Mariner</li> <li>• Behavior and Handling of Ships</li> <li>• Principles of Naval Architecture</li> <li>• Port Revel Manual</li> <li>• Tug Use In Port</li> <li>• The Shiphandler's Guide</li> <li>• Maneuvering Info For The Pilot/Navigator</li> </ul> </li> </ul>	2 Years	<ul style="list-style-type: none"> <li>- Successful completion of objectives itemized under 5.0</li> <li>- Understanding of shiphandling principles and ability to apply them to specific situations</li> </ul>	<ul style="list-style-type: none"> <li>- 2 Year Exam</li> <li>- Hands-on experience on minimum of 500 vessels under pilot supervision</li> </ul>
7.22 Identify signal flags and Morse Code	<ul style="list-style-type: none"> <li>- Chapman, Chap. 24</li> <li>- Merchant Marine Officer's Handbook (p. 16)</li> </ul>	2 Years	<ul style="list-style-type: none"> <li>- Read and interpret flag signals</li> <li>- Identify morse code letters</li> </ul>	<ul style="list-style-type: none"> <li>- 2 Year Exam</li> </ul>
7.23 Apply wind and weather information	<ul style="list-style-type: none"> <li>- MAMA course</li> <li>- Pilot instructed class</li> <li>- Readings:               <ul style="list-style-type: none"> <li>• Chapman, Chap. 14</li> <li>• Oceanography and Seamanship, Chap. 6, 7</li> <li>• Weather for the Mariner</li> <li>• Jetstream notebook</li> </ul> </li> </ul>	2 Years	<ul style="list-style-type: none"> <li>- Pilot/Apprentice dialogue in Reference to actual local weather situations encountered</li> <li>- Accurate interpretation of weather conditions upon request</li> <li>- Description of various principles of weather</li> <li>- Demonstrate working knowledge of NOAA Doppler RADAR imagery</li> </ul>	<ul style="list-style-type: none"> <li>- 2 Year Exam</li> <li>- MAMA Certificate</li> </ul>
7.24 Solve tide and current problems	<ul style="list-style-type: none"> <li>- Pilot instructed class</li> <li>- Tidal Current Tables</li> <li>- Tide Tables</li> <li>- MSC/TSN Course</li> <li>- Readings:               <ul style="list-style-type: none"> <li>• Chapman, Chap. 15</li> <li>• Dutton's, Chap. 9, 10</li> <li>• Waves, Tides and Shallow Water Processes</li> <li>• Oceanography and Seamanship, Chap. 10</li> </ul> </li> </ul>	2 Years	<ul style="list-style-type: none"> <li>- Accurate solution to textbook problems</li> <li>- Understanding theory of tides and currents</li> <li>- Description of local tide and current conditions</li> </ul>	<ul style="list-style-type: none"> <li>- 2 Year Exam</li> <li>- MAMA Certificate</li> </ul>

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7.25 Demonstrate general knowledge of: <ul style="list-style-type: none"> <li>• Firefighting</li> <li>• Stability and Construction</li> <li>• 1st Aid</li> </ul>	<ul style="list-style-type: none"> <li>– MAMA Class</li> <li>– MSC/MARAD Fire School</li> <li>– Readings:               <ul style="list-style-type: none"> <li>• Merchant Marine Officer's Handbook, Chap. 16</li> <li>• Chapman, Chap. 5</li> <li>• Knight's, Chap. 3</li> <li>• Oceanography and Seamanship, Chap. 21</li> </ul> </li> <li>– Red Cross 1st Aid</li> <li>– Basic and Advanced Firefighting</li> </ul>	2 Years	<ul style="list-style-type: none"> <li>– Define/describe:               <ul style="list-style-type: none"> <li>• Firefighting</li> <li>• First Aid</li> <li>• Stability</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>– 2 Year Exam</li> <li>– School Certificates</li> </ul>
7.26 Demonstrate local knowledge from Cape Henry to James River Bridge, the head of navigation of Southern & Eastern branches of the Elizabeth River	<ul style="list-style-type: none"> <li>– Charts:               <ul style="list-style-type: none"> <li>• 12222, 12245, 12253</li> </ul> </li> <li>– Pilot Dialogue</li> <li>– CFR 33</li> <li>– U.S. Coast Pilot 3</li> </ul>	2 Years	<ul style="list-style-type: none"> <li>– Demonstrate application of local knowledge and regulations to satisfaction of Pilots over 2 year period</li> </ul>	<ul style="list-style-type: none"> <li>– 2 Year Exam</li> </ul>
7.27 Solve various navigation problems	<ul style="list-style-type: none"> <li>– MAMA Class</li> <li>– Readings:               <ul style="list-style-type: none"> <li>• Dutton's, Chap. 8, 11, 12, 14</li> <li>• Chapman, Chap. 17, 19, 20</li> <li>• Bowditch, Tables 7, 8</li> <li>• Knight's, Chap. 8</li> </ul> </li> </ul>	2 Years	<ul style="list-style-type: none"> <li>– Successful completion of a chart navigation problem</li> <li>– Calculation or description of:               <ul style="list-style-type: none"> <li>• Dead reckoning</li> <li>• Set and drift</li> <li>• Compass corrections</li> <li>• Various methods of fixing position</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>– 2 Year Exam</li> <li>– MAMA Certificate</li> </ul>
7.28 Draw charts of Hampton Roads	<ul style="list-style-type: none"> <li>– NOAA Survey Charts               <ul style="list-style-type: none"> <li>• 12222, 12245, 12253</li> </ul> </li> </ul>	2 Years	<ul style="list-style-type: none"> <li>– Successful completion of the 6 month, 12 month and 18 month charts</li> </ul>	<ul style="list-style-type: none"> <li>– 2 Year Exam</li> </ul>
7.29 Acquire Radar Observer Certificate	<ul style="list-style-type: none"> <li>– (This objective is itemized under general objective 4.0. The specific objectives, resources, and validating evidence is included in number 4.4)</li> </ul>			
7.30 Assess/Report ship deficiencies and marine casualty regulations	<ul style="list-style-type: none"> <li>– 33 CFR 164</li> <li>– 46 CFR 4.03-4.06</li> <li>– U.S.C.G. Form 2692</li> </ul>	2 Years	<ul style="list-style-type: none"> <li>– Accurately identify deficiencies upon request</li> <li>– Successful completion of MAMA classes</li> </ul>	<ul style="list-style-type: none"> <li>– 2 Year Exam</li> </ul>



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LEARNING OBJECTIVES	LEARNING RESOURCES AND STRATEGIES	TARGET DATE FOR COMPLETION	EVIDENCE OF ACCOMPLISHMENT OF OBJECTIVES	CRITERIA AND MEANS VALIDATING EVIDENCE
7.31 Acquire ARPA Certificate	– (This objective is itemized under general objective 4.0. The specific objectives, resources, and validating evidence is included in objective 4.7)	2 Years		
7.32 Demonstrate knowledge of electronic navigation equipment including: • GPS, DGPS • ECDIS • Radio • AIS	– MAMA Piloting class – Discussions and follow-up with Pilots – References: • Dutton's, Chap. 7, 32, 34 • Chapman, Chap. 25 • USCG Light List II • GPS video • U.S. Coast Pilot 3 • U.S.C.G AIS Handout	2 Years	– Successful demonstration or description of equipment on request – Knowledge of radiotelephone regulations and frequencies	– 2 Year Exam – MAMA Certificate
7.33 Aids to Navigation	– USCG Light List – U.S. Coast Pilot 3 – Chapman, Chap. 18, 22 – Dutton's, Chap. 2, 4, 5 – Chart No. 1	2 Years	– Description of: • Buoyage system and characteristics • Charts • Symbols and abbreviations • Chart projections • Publications • Various other aids	– 2 Year Exam
7.34 Legal liabilities and responsibilities of pilots	– Pilot instructed classes – 33 CFR – 46 CFR – Board for Branch Pilots – Rules and Regulations – Shiphandling for the Mariner (p. 251-259) – Discussion of court cases with pilots	2 Years	– Understanding of the legal role of pilots and the master/pilot relationship	– 2 Year Exam
7.35 State Pollution Control Regulations	– Readings: • 33 CFR 151	2 Years	– Apprentice states pollution regulations and rules contained in 33 CFR 151.01 through 151.25	– 2 Year Exam
7.36 (a) Draw Chart 12221 (Cape Charles Anchorage/Wolf Trap)	– NOAA Chart 12221	2 Years and 6 Months	– Chart Approved by Apprentice Committee	– Validation by Apprentice Committee

# Virginia Pilot Association

## Apprentice Learning Objectives

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LEARNING OBJECTIVES	LEARNING RESOURCES AND STRATEGIES	TARGET DATE FOR COMPLETION	EVIDENCE OF ACCOMPLISHMENT OF OBJECTIVES	CRITERIA AND MEANS VALIDATING EVIDENCE
7.36 (b) Draw Chart 12241 (The York River)	– NOAA Chart 12241	2 Years and 6 Months	– Chart Approved by Apprentice Committee	– Validation by Apprentice Committee
7.37 (a) Describe Regulations and Restrictions of Chart 12221	– NOAA Chart 12221 – US Coast Pilot 3 – CFR 33	2 Years and 6 Months	– Accurate Description on Request	– Validation by Apprentice Committee
7.37 (b) Describe Regulations and Restrictions of Chart 12241	– NOAA Chart 12241 – US Coast Pilot 3 – CFR 33	2 Years and 6 Months	– Accurate Description on Request	– Validation by Apprentice Committee

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**Virginia Pilot Association**  
Apprentice Learning Objectives

11/25/2024

**Objective 8**

LEARNING OBJECTIVES	LEARNING RESOURCES AND STRATEGIES	TARGET DATE FOR COMPLETION	EVIDENCE OF ACCOMPLISHMENT OF OBJECTIVES	CRITERIA AND MEANS VALIDATING EVIDENCE
8.1 Show three years of service		3 Years	– Verification of 3 years of sea service in accordance with 46 CFR 10.703	– Validation by Apprentice Committee
8.2 Verify 18 months service on vessels over 1600 gross tons		3 Years	– Verified in accordance with 46 CFR 10.711	– Validation by Apprentice Committee
8.3 Verify 1 year service on route for which seeking license		3 Years	– Verification of sea service in accordance with 46 CFR 10.703	– Validation by Apprentice Committee
8.4 Meet Coast Guard trip requirements on accepted vessels		3 Years	– Verification of trip requirements in accordance with 46 CFR 10.705	– Validation by Apprentice Committee
8.5 Meet USCG physical and chemical testing requirements		3 Years	– Completion of physical examination and chemical testing requirements of 46 CFR 10.205d, 16.22	– Validation by Apprentice Committee
8.6 First aid and CPR course certificates		3 Years	– Completion of objective 4.6 in accordance with 46 CFR 10.205h	– Validation by Apprentice Committee
8.7 Meet Radar Certification requirements		3 Years	– Demonstrate ability to utilize radar in accordance with the requirements of 46 CFR 10.480	– MAMA Certificate
8.8 Apply "Rules of the Road"		3 Years	– Successful completion of 7.14	– Interpret and apply "Rules of the Road" appropriately over 3 year period to Apprentice Committee
8.9 First Class Pilot License		3 Years and 4 Months	– USCG License	– Validation by Apprentice Committee

**Virginia Pilot Association**  
Apprentice Learning Objectives

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**Objective 9**

LEARNING OBJECTIVES	LEARNING RESOURCES AND STRATEGIES	TARGET DATE FOR COMPLETION	EVIDENCE OF ACCOMPLISHMENT OF OBJECTIVES	CRITERIA AND MEANS VALIDATING EVIDENCE
9.1 Satisfy all State and Federal License Requirements		5 Years	– Verified in accordance with 46 CFR 10.435	– Validation by Apprentice Committee

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**Virginia Pilot Association**  
Apprentice Learning Objectives

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**Objective 10**

LEARNING OBJECTIVES	LEARNING RESOURCES AND STRATEGIES	TARGET DATE FOR COMPLETION	EVIDENCE OF ACCOMPLISHMENT OF OBJECTIVES	CRITERIA AND MEANS VALIDATING EVIDENCE
10.1 Meet USCG Trip Requirements		6 Years	– Verification of Trip Requirements in accordance with 46 CFR 10.705	– Validation by Apprentice Committee
10.2 Rules of the Road		6 Years	– Successful Completion of Objective 9.1	– Validation by Apprentice Committee
10.3 Draw Charts for Route		6 Years	– Obtain USCG License	– Validation by Apprentice Committee
10.4 Demonstrate Local Knowledge for Route		6 Years	– Successful Oral Examination by Board for Branch Pilots	– Validation by Apprentice Committee

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# **VIRGINIA PILOT ASSOCIATION**

## **Learning Resource Modification**

**2024**

*The Apprenticeship Committee recommends the following changes be made to the Apprenticeship Program for 2024:*

1. Learning Objective 7.7 “Demonstrate application of Rules of the Road Section II
  - a. **EDIT** Learning Resources And Strategies “Navigation Rules – Inland Rules 19-37; Annex II, IV, V” to “Navigation Rules – Inland Rules 19-37; Annex IV and V”
  - b. Annex II no longer contains any content. It is now “Reserved”
  
2. Learning Objective 4.1 Complete 22 week Launch Experience
  - a. Learning Resources and Strategies
    - i. **EDIT** to “22 weeks of training on 51 and 56 foot twin screw launches and 42 ft R.H.I.B Launch with twin jet drives”. **REMOVE** “and catamaran launch with twin jet drives”.
  
3. Learning Objective 4.3 Complete USCG Approved Courses
  - a. Criteria and Means Validating Evidence
    - i. **EDIT** to “Maritime Institute Certificates” (No longer “MAMA”)
  
4. Learning Objective 4.10 Complete Advanced Electronic Navigation Training Course
  - a. Evidence of Accomplishment of Objectives
    - i. **EDIT** “Interactive Blind Pilotage Training” to “Restricted Visibility Navigation”

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**Department of Professional and Occupational Regulation  
Statement of Financial Activity**

**Board for Branch Pilots  
954190**

2022-2024 Biennium

June 2024

	June 2024 Activity	Biennium-to-Date Comparison	
		July 2020 - June 2022	July 2022 - June 2024
Cash/Revenue Balance Brought Forward			2,258
Revenues	0	5,040	4,800
Cumulative Revenues		27,669	7,058
<b>Cost Categories:</b>			
Board Expenditures	0	5,763	7,671
Board Administration	0	286	309
Administration of Exams	0	0	0
Enforcement	0	1	1
Legal Services	0	8	145
Information Systems	0	211	210
Facilities and Support Services	0	100	4,662
Agency Administration	0	135	208
Other / Transfers	0	0	0
<b>Total Expenses</b>	<b>0</b>	<b>6,503</b>	<b>13,207</b>
Transfer To/(From) Cash Reserves	0	0	(6,149)
<b>Ending Cash/Revenue Balance</b>			<b>0</b>

Cash Reserve Beginning Balance	11,475	0	17,623
Change in Cash Reserve	0	0	(6,149)
Ending Cash Reserve Balance	11,475	0	11,475

**Number of Regulants**

Current Month	0
Previous Biennium-to-Date	41

Department of Professional and Occupational Regulation  
 Supporting Statement of Year-to-Date Activity  
 Board for Branch Pilots - 954190  
 Fiscal Year 2024

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Fiscal YTD Charges	Planned Annual Charges	Current Balance	Projected Charges at 6/30	Projected Variance Favorable (Unfavorable) Amount	%
<b>Board Expenditures</b>	0	3	422	451	2	1,032	147	1	1,326	135	730	0	4,250	4,665	415	4,631	34	0.7%
<b>Board Administration</b>	13	12	18	6	13	20	8	14	20	8	23	0	155	201	46	161	40	20.1%
<b>Administration of Exams</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Enforcement</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Legal Services</b>	0	0	0	0	0	0	140	0	0	0	0	0	141	3	-138	154	-151	-4896.9%
<b>Information Systems</b>	5	13	10	7	8	10	2	20	19	7	11	0	112	113	1	121	-8	-7.0%
<b>Facilities / Support Svcs</b>	3	3	4,576	2	3	18	3	2	4	3	3	0	4,620	53	-4,567	5,039	-4,987	-9426.4%
<b>Agency Administration</b>	9	9	15	5	10	14	4	8	13	5	14	0	105	124	19	109	14	11.7%
<b>Other / Transfers</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Charges</b>	<b>29</b>	<b>41</b>	<b>5,041</b>	<b>472</b>	<b>37</b>	<b>1,093</b>	<b>303</b>	<b>46</b>	<b>1,382</b>	<b>158</b>	<b>781</b>	<b>0</b>	<b>9,383</b>	<b>5,158</b>	<b>-4,225</b>	<b>10,214</b>	<b>-5,056</b>	<b>-98.0%</b>

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