United States Coast Guard

Sector San Francisco

Vessel Traffic Service

User's Manual

Yerba Buena Island

San Francisco, California

Updated: 1APR2025

Table of Contents

Part A: About VTS San Francisco

1. Vessel Traffic Service (VTS) San Francisco ensures vessel transits are conducted safely and efficiently.

2. VTS uses Automatic Identification System (AIS), radar, closed-circuit television (CCTV), and VHF-FM radiotelephone to gather and transmit vessel traffic information.

3. The VTS Vessel Traffic Center (VTC) is manned 24/7.

4. Read this manual before you enter the VTS San Francisco area. Keep a copy of this manual at your side when navigating in the VTS area.

Part B: Operating Concept

1. VTS San Francisco facilitates good order and predictability on a waterway.

2. We coordinate vessel movements by collecting, verifying, organizing, and transmitting vessel transit information.

3. VTS San Francisco is a Navigation Assistance Service.

Part C: VTS Regulations

1. 33 CFR 161 – National VTS Regulations

2. Each VTS User shall carry on board and maintain for ready reference a copy of these rules.

Part D: VTS Authority

1. 33CFR 160.5 – Delegations

2. VTS has authority to (examples from the CFR):

- Direct the operation, movement, and anchorage of vessels within a VTS area
- Manage vessel traffic within anchorages, regulated navigation areas, and safety zones
- Enforce VTS and ports and waterways safety regulations
- Provide information to vessels
- Make recommendations to vessels
- Issue an order, including an order to operate or anchor as directed
- Require a vessel to comply with orders issued
- Specify times of entry, movement, or departure
- Restrict operations as necessary for safe operation under the circumstances
- Take necessary action for control of a vessel and the safety of the port or of the marine environment.

Part E: Vessels Subject to VTS Regulations

1. VTS regulations apply to each VTS User. They may also apply to any vessel while underway or at anchor on the navigable waters of the United States within a VTS area, to the extent the VTS considers necessary.

2. VTS User means a vessel or an owner, operator, charterer, Master, or person directing the movement of a vessel within a VTS area that is:

a. Subject to the Vessel Bridge-to-Bridge Radiotelephone Act;

b. Required to participate in a Vessel Movement Reporting System (VMRS); or

c. Equipped with a required Coast Guard type-approved Automatic Identification System (AIS).

3. VMRS is a mandatory reporting system used to monitor and track vessel movements. This is accomplished by a vessel providing information under established procedures as described in the

National VTS Regulations, and as summarized in this document. VMRS procedures are described below.

4. VMRS User means a vessel, or an owner, operator, charterer, Master, or person directing the movement of a vessel that is required to participate in a VMRS.

5. These vessels must report to VTS. These are VMRS User.

a. Every power-driven vessel of 40 meters (approximately 131 feet) or more in length, while navigating

b. Every towing vessel of 8 meters (approximately 26 feet) or more in length, while navigating

c. Every vessel certificated to carry 50 or more passengers for hire, when engaged in trade.

Part F: VTS Communications

1. VTS users must have at least two separate radio transceivers. When navigating in the VTS San Francisco area, one transceiver must be tuned to the VTS assigned frequency. The other transceiver must be tuned to VHF FM Channel 13. VTS users must ALWAYS maintain a continuous listening watch on both radios while navigating in the VTS area. When navigating in the VTS area, never use either radio transceiver to scan between frequencies.

2. VTS San Francisco assigned frequencies are:

a. Offshore Sector – VHF-FM channel 12 (156.60 MHz)

b. Inshore Sector – VHF FM channel 14 (156.70 MHz)

3. VTS San Francisco's radiotelephone call sign is "SAN FRANCISCO TRAFFIC." After you establish communications, use the abbreviated call sign "TRAFFIC."

4. If you can't reach VTS San Francisco on the VTS assigned frequency, try to reach VTS on Channel 13 (156.65), then try on Channel 16 (156.80 MHz).

5. Only use the English language to communicate with VTS.

6. Use 24-hour clock and the local California time zone to report time (UTC-8 Pacific Standard Time Zone, or UTC-7 Pacific Daylight Time Zone).

7. Channel 16 (156.80 MHz) exemption for VTS users: A listening watch on channel 16 is not required on vessels subject to the Vessel Bridge-to-Bridge Radiotelephone Act who are also participating in a Vessel Traffic Service system when the watch is maintained on both the vessel bridge-to-bridge frequency and a designated VTS frequency (47 CFR 80.148 (b)).

Part G: Vessel Bridge-to-bridge Voice Communications

1. 33 CFR 26 – Vessel Bridge-To-Bridge Radiotelephone Regulations

2. VTS users must know the Vessel Bridge-To-Bridge Radiotelephone Regulations. Among other things, these regulations describe which vessels must use vessel bridge-to-bridge radiotelephone (VHF voice radio). These regulations also describe important VTS-related concepts such as: use of the designated frequency, use of radiotelephone, maintenance of radiotelephone, failure of radiotelephone, and English language requirements.

Part H: Automatic Identification System (AIS)

1. 33 CFR 164.46 – Automatic Identification System

2. Most VTS users are required to use AIS. Refer to 33 CFR 164.46 for details on AIS carriage requirements.

3. AIS must be properly installed.

4. AIS data must always be accurate and up to date.

a. Follow the instructions on the USCG AIS Encoding Guide for inputting (setting, updating, configuring) your AIS data.

b. **Exception for AIS Destination Field in VTS San Francisco Area**: If transiting ONLY within the VTS San Francisco Inshore Sector, use this special format for your AIS Destination field. This format is a variation on the "UN/LOCODE only" format.

These are examples of AIS DESTINATION field for the VTS San Francisco Area:

(1) Vessels staying inside the VTS San Francisco Inshore Sector (omit the "US" and add the dock-specific code):

(a) RCH14>OAK22 means transiting from Richmond 14 to Oakland 22.

(b) SFO39><NGZHB means published, scheduled round-trip between San Francisco 39 and Alameda, Harbor Bay Island Ferry Terminal.

(c) SFO41><JMCSS><XTNTB means scheduled three-stop transit between San Francisco 41, Sausalito Ferry Terminal, and Tiburon Ferry Terminal.

(d) SFO33>SFO33 means departing from and returning to San Francisco 33 (i.e., dinner cruise).

(e) SFODA<> means dredging in Dredge Site Alpha.

(2) Vessels arriving from sea, going to sea, or transiting the Offshore Sector only:

(a) USLAX>USOAK22 means arriving in the Offshore Sector from Los Angeles, heading to Oakland 22.

(b) USOAK>NLRTM means transiting from any location in Oakland to any location in Rotterdam, Netherlands.

(c) USLAX>USSEA means transiting the VTS San Francisco Offshore Sector from south to north, between Los Angles and Seattle.

(3) Vessels moored or anchored inside the VTS San Francisco Area:

(a) USSFOA9<< means anchored in Anchorage 9.

(b) USBNC4<< means moored at Benicia 4.

5. In the VTS San Francisco area, do not use AIS Text Messaging for vessel-to-vessel safety-related communications unless directed by VTS. Do not contact VTS San Francisco by AIS text message, unless directed by VTS. And, do not use application-specific messages in the VTS San Francisco Area unless directed by VTS.

Part I: VTS Area

1. The VTS San Francisco area is divided into two Sectors, Offshore Sector and Inshore Sector.

a. The Offshore Sector is the navigable waters of the Pacific Ocean within a 38 nautical mile radius of Mount Tamalpais (37°55.8'N 122°34.6'W), excluding the San Francisco Offshore Precautionary Area. The shoreward boundaries of the Offshore Sector are two lines from the shoreline that intersect the Offshore Precautionary Area—a vertical line drawn south from Duxbury Point and a horizontal line drawn west from Mussel Rock.

b. The Inshore Sector includes all the waterways and tributaries between the Offshore Precautionary Area (the Offshore Sector) and the inland ports of Stockton, Sacramento, and Redwood City. In the San Pablo Bay, the VTS area is south of Petaluma River Entrance Channel Day Beacon 19 and Light 20. In the Mare Island Strait, the VTS area is south of the Mare Island Causeway Bridge.

2. Navigable waters: In the context of the National VTS Regulations, the term “navigable waters” means all navigable waters (that is, waters suitable for navigation) of the United States. This includes the territorial sea of the United States, extending to 12 nautical miles from United States baselines. For an explanation of territorial sea and baseline refer to Presidential Proclamation No. 5928 of December 27, 1988. Most of the area within the 38NM arc described above is within navigable waters (US territorial seas). However, a small part of the area within the 38NM arc lies outside of navigable waters.

Part J: VTS San Francisco Participation Procedures

1. Offshore Sector Reporting to VTS

a. Marine Safety Information Bulletin (MSIB) 13-04 – VTS San Francisco Implementation of Changes to the San Francisco Offshore TSS: This MSIB promulgated the VTS San Francisco implementation procedures for TSS changes. The amended TSSs and updated procedures went into effect at 1701 local, 31 May 2013 (0001 GMT, 1 June 2013). This MSIB includes a waypoint list and diagram, reporting procedures with IMO SSRS reference, and a diagram comparing the old TSSs and the new TSSs. The reporting procedures are also shown below.

b. Inbound Vessels

[Table excerpted from MSIB 13-04.]

(1) Sailing Plan Report

15 minutes before arriving at 1st INBOUND Waypoint - VTS Boundary Line

WP…	Report to VTS…					
3N 3W 3S	Vessel Name IMO SSRS ALPHA	Position IMO SSRS CHARLIE	True Course IMO SSRS ECHO	True Speed IMO SSRS FOXTROT	ETA 2nd WP IMO SSRS NOVEMBER	ETA SFSB IMO SSRS BRAVO

(2) Sailing Plan Amplification Reports

(2a) At 2nd INBOND Waypoint – Midpoint Along Route

WP…	Report to VTS…					
2N 2W 2S	Vessel Name IMO SSRS ALPHA	True Course IMO SSRS ECHO	True Speed IMO SSRS FOXTROT	ETA SFSB IMO SSRS BRAVO		

(2b) At 3rd INBOUND Waypoint - November, Whisky, or Sierra Buoy

WP…	Report to VTS…					
1N 1W 1S	Vessel Name IMO SSRS ALPHA	ETA SFSB IMO SSRS BRAVO	Route to SFSB IMO SSRS LIMA			

c. Outbound Vessels

[Table excerpted from MSIB 13-04.]

(1) Sailing Plan Amplification Reports

(1a) At 1st OUTBOUND Waypoint – November, Whisky, or Sierra Buoy

WP…	Report to VTS…					
6N	Vessel Name IMO SSRS ALPHA	Position IMO SSRS CHARLIE	True Course IMO SSRS ECHO	True Speed IMO SSRS FOXTROT	ETA 2nd WP IMO SSRS NOVEMBER	ETA 3rd WP IMO SSRS KILO

(1b) At 2nd OUTBOUND Waypoint – Midpoint along route

WP…	Report to VTS…					
5N 5W 5S	Vessel Name IMO SSRS ALPHA	True Course IMO SSRS ECHO	True Speed IMO SSRS FOXTROT	ETA 3rd WP IMO SSRS KILO		

(3) Final Report

At 3rd OUTBOUND Waypoint – VTS Area Boundary Line

WP…	Report to VTS…					
4N 3W 4S	Vessel Name IMO SSRS ALPHA					

d. Other Reports to VTS

(1) For research operations, naval exercises, other special maritime operations in the Offshore Sector, report your Sailing Plan to VTS and describe your operation.

(2) Report any emergency on board your vessel or other vessels to VTS immediately.

(3) Crossing Offshore Sector Without Entering the San Francisco Bay: If transiting across the Offshore Sector and NOT entering the San Francisco Bay make your Sailing Plan report on VHF channel 12 fifteen minutes before arriving at the VTS area boundary. Then take instructions from VTS for further reporting requirements.

e. Offshore Vessel Traffic Advisories

(1) On VHF FM channel 12 at minute 15 and 45 each hour VTS broadcasts the position (true bearing and range from the San Francisco Sea Buoy) , true course, true speed, and waypoint ETAs for each VMRS user in the Offshore Sector.

(2) All vessels navigating west of the Golden Gate Bridge should listen to these broadcasts on channel 12.

2. Inshore Sector Procedures

a. Vessel Movement Reporting System (VMRS) and VMRS Users: VMRS Users, or any vessel directed by VTS to do so, must make these reports to VTS.

(1) Sailing Plan Report. A vessel must make Sailing Plan report to the VTS on channel 14 at least 15 minutes before getting underway from a dock or anchorage in the Inshore Sector. The Sailing Plan must include the following information.

(a) Power-driven vessel 40 meters (approx. 131 ft) or more length overall:

- Pilot
- Vessel name
- Position
- Destination
- Draft
- Route (see section on route intentions below)
- Tug (escort or assist tug) frequency

(b) Towing vessel 8 meters (approx. 26 ft) or more in length if towing astern/alongside or pushing ahead:

- Vessel name
- Position
- Destination

- Towing/pushing/alongside
- Barge over/under 1600 gross tons
- Draft

(c) Vessel certificated to carry 50 or more passengers for hire, engaged in trade:

- Vessel name
- Position
- Destination
- Route (see Ferry Routing Protocol)

(2) Position Report. A vessel must report its name and position in each of these circumstances.

(a) Underway from the dock (last lines) or when crossing into the VTS area at a boundary line

(b) At designated reporting points

(c) When directed by VTS

(3) Sailing Plan Deviation Report. A vessel must report any significant deviation from its Sailing Plan, as defined in §161.19, or from previously reported information; or any intention to deviate from a VTS issued measure or vessel traffic routing system.

(4) Final Report. A vessel must report to VTS when docking, anchoring, mooring, or departing the VTS Area as applicable.

b. VMRS Reporting Exemptions

(1) Unless otherwise directed, the following vessels are exempted from providing Position and Final Reports due to the nature of their operation:

(a) Vessels on a published schedule and route.

(b) Vessels operating within an area of a radius of three nautical miles or less; or

(c) Vessels escorting another vessel or assisting another vessel in maneuvering procedures.

(2) A vessel described in paragraph A of this section must:

(a) Provide a Sailing Plan at least 5 minutes but not more than 15 minutes before navigating within the VMRS area; and

(b) If it departs from its promulgated schedule by more than 15 minutes or changes its limited operating area, make the established VMRS reports, or report as directed.

c. Ferry Routing Protocol: Charted ferry routes are a Harbor Safety Committee Best Maritime Practice. These routes are also called the San Francisco Bay Region Ferry Traffic Routing

Protocol. VTS encourages all vessels, including recreational vessels, to plot the waypoints, route lines, and cross-track margins for the ferry routes.

(1) Purpose: Ferry routes improve navigation safety and port security. For example, they:

(a) Maximize spacing between ferries running in opposite directions.

(b) Designate ferry crossing areas for the busiest ferry routes.

(c) Make ferry transits more predictable for all waterway users, including recreational vessels.

(2) A ferry on a published, scheduled route should follow charted ferry routes and stay within the cross-track margin, unless unsafe to do so.

(3) A ferry should notify VTS before departing a ferry route (before exiting the cross-track margin).

(4) If a ferry departs a charted ferry route VTS might:

(a) Require the ferry to give the location where the ferry will rejoin to the route.

(b) Require the ferry to make additional position reports to VTS.

(c) Make a safety broadcast warning other vessels that the ferry is running off the charted route.

(5) VTS might direct a ferry to follow a charted ferry route.

(6) Recreational vessels and other small vessels should:

(a) Remain clear of the ferry routes whenever possible.

(b) Keep a close lookout when on or near a ferry route.

(c) Always know the direction from which to expect a ferry. (i.e., Know which side of the road you're on.)

(d) Watch for ferries approaching from your stern.

(e) Always stay out of the Ferry Building Maneuvering Area.

d. Inshore Sector Reporting Points:

(1) Automatic Identification System (AIS) Vessels: Unless otherwise directed, vessels equipped with an AIS are required to make continuous, all stations, AIS broadcasts, in lieu of voice Position Reports.

(2) VMRS User vessels without AIS must make Position Reports to VTS at the reporting points shown on the VTS Continuity Reporting Protocol (VCRP) map. (Click to open the map.)

(3) VTS might require Position Reports for any vessel at any location or time.

e. Marine Events: An on-scene Marine Event representative must report the following information to VTS before starting the event.

- Committee boat name
- Event name, sponsor name, & permit #
- Number & type of vessels
- Radio guard channel
- Start & stop time

3. Traffic Routing System around the VTS San Francisco Area

a. All vessels must know, and when required, follow the traffic routing system.

b. The traffic routing system includes Traffic Separation Schemes (TSSs), Regulated Navigation Areas (RNAs), charted navigation channels & fairways, charted routes, and VTS measures & directions.

c. San Francisco Offshore Traffic Separation Scheme (TSS) is adopted by the International Maritime Organization (IMO). This TSS includes the Northern, Western, and Southern traffic lanes, and the Main Ship Bar Channel between the Offshore Precautionary Area and the Golden Gate Traffic Lanes. COLREGS Rule 10 International applies to vessels in or near all parts of the Offshore TSSs.

d. East of the COLREGS Demarcation Line (a line from Mile Rocks to Point Bonita) the traffic routing system includes Regulated Navigation Areas (RNAs), charted navigation channels & fairways, charted routes, and VTS measures & directions.

e. In congested waterways, such as the Central San Francisco Bay, it's risky for you to depart from a traffic routing system, especially if you're expected or required to use it. To reduce risk, always report to VTS before you depart a traffic routing system.

(1) Under some circumstances, especially when regulations require a certain route or behavior, VTS will deny you permission to deviate from a traffic routing system.

(2) If VTS grants you permission to deviate, VTS might make a safety broadcast to warn others of your action. VTS will only grant you permission to deviate from a required traffic routing system if your plan to deviate is less risky than if you follow. VTS calls this a "safety-related reason" to deviate.

f. Recreation areas should not be used by vessels of 300 gross tons or more except in case of emergency or special circumstance.

g. Reporting Route Intentions:

(1) Intended route is part of the Sailing Plan.

(2) In the VTS San Francisco area there are often several route options. Sometimes it's impossible to give every detail for the complete route with the Sailing Plan. If you can't describe the entire route with the Sailing Plan, report as much as you can with the Sailing Plan, then report again (VTS calls this report the "Sailing Plan Amplification report.") as soon as you decide on further route details.

(3) Use these terms and phrases to avoid confusion when you describe your route.

(a) Outbound to sea, report intentions before the Golden Gate Bridge. Use one of these phrases:

- "Northern Traffic Lane"
- "Western Traffic Lane"
- "Southern Traffic Lane"
- "Bonita Channel"
- "South Channel"
- "Transiting between the [Northern, Western, Southern] Traffic Lane"

(b) Bound for the Central San Francisco Bay, report intentions before Point Diablo, Point Blunt, or San Francisco-Oakland Bay Bridge, depending on your direction of approach. Use one of these phrases:

- "Deep Water Traffic Lane"
- "Westbound Traffic Lane"
- "Eastbound Traffic Lane"

(c) Going under the San Francisco-Oakland Bay Bridge, report intentions before passing the Blossom Rock buoy if southbound or before entering the Central Bay Precautionary Area if northbound. Use one of these phrases:

- "Alpha-Bravo Span"
- "Bravo-Charlie Span"
- "Charlie-Delta Span"
- "Delta-Echo Span"
- "Echo-Foxtrot Span"
- "Golf-Hotel Span" (OBB East Span)

(d) Going under the Richmond-San Rafael Bridge, report intentions before entering the San Pablo Strait Channel RNA if southbound or before entering the North Channel RNA if northbound. Use one of these phrases:

- "West span of the Richmond San Rafael Bridge"

- "East span of the Richmond San Rafael Bridge"

Part K: Anchorages

1. VTS San Francisco administers the anchorages in the VTS area for the Coast Guard Captain of the Port (COTP).

2. 33 CFR 110.224 - Federal Anchorage Regulations for the VTS San Francisco area.

a. These regulations describe the boundaries of anchorage areas, impose certain restrictions on anchoring, and require reports from vessels anchoring both in and outside of the designated anchorages.

b. Every vessel anchoring in the VTS San Francisco area must anchorage regulations.

c. Vessels that report anchoring information to VTS are in compliance with the reporting requirements of 33 CFR 110.224.

3. Anchorages 7, 8, and 9 have anchorage berths. The anchorage berths are to keep anchored vessels safely separated. The anchorage berths are numbered and charted.

Part L: 33 CFR 165.1181 – Regulated Navigation Areas (RNAs) for Traffic Organization

1. There are seven traffic organization RNAs within the San Francisco Bay region. These seven RNAs are to reduce vessel congestion and organize traffic flow where maneuvering room is limited. These are the seven traffic organization RNAs. Refer to 33 CFR 165.1181 for details.

- San Francisco Bay RNA
- Oakland Harbor RNA
- Southampton Shoal-Richmond Harbor RNA
- North Channel RNA
- San Pablo Strait Channel RNA
- Pinole Shoal Channel RNA
- Benicia-Martinez Railroad Bridge RNA

2. General regulations apply in all the RNAs, and specific regulations describe distinct requirements and restrictions for each of the seven RNAs.

3. If your vessel is power-driven and of 1600 or more gross tons, or if you are a tug with a tow of 1600 or more gross tons, you must follow the rules described in these RNA regulations.

4. Following these regulations is as important as following the COLREGS.

5. Deviations:

a. If it's not safe for your vessel if you follow an RNA regulation, you must request permission from VTS to deviate from the regulation.

b. VTS will only grant permission to deviate from an RNA regulation if you state a safety-related reason for your request. Your safety-related reason must explain why you believe it's not safe to follow the regulation.

d. Consider this example wording to request a deviation.

"Traffic, this is the CONTAINER SHIP ABC. Request permission to go west in the Central Bay Eastbound Traffic Lane. My safety-related reason is to avoid ... in the Deep-Water Traffic Lane."

e. If VTS grants you permission to deviate, expect wording similar to this from VTS.

"Deviation request granted. Proceed in accordance with your request to go westbound in the Central Bay Eastbound Traffic Lane."

f. If VTS denies you permission to deviate, expect wording similar to this from VTS.

"Deviation request denied. Traffic requires that you follow the RNA regulations and go westbound through the Central Bay Deep Water Traffic Lane."

Then VTS will ask,

"What are your intentions?"

g. Why does VTS ask *"What are your intentions?"* after denying you permission to deviate?

The mariner is responsible for the safety of the vessel. If, based on the on-scene conditions or vessel maneuvering characteristics, you disagree with VTS, you must do what's safest.

h. If you deviate from a regulation, VTS might do a safety broadcast to warn other vessels.

6. All vessels, regardless of gross tonnage, benefit by knowing these regulations. For small vessels, knowing these regulations helps you know what to expect from large vessels.

Part M: Regulated Navigation Areas for Safety and Security

1. 33 CFR 165.1182 – Safety/security Zone for vessels transporting nuclear materials.

2. 33 CFR 165.1183 – Security zones for tankers, cruise ships, and high value assets.

3. 33 CFR 165.1184 – Safety zone for Coast Guard use of force training exercises in San Pablo Bay, CA

4. 33 CFR 165.1185 – Guidelines for vessels loaded with liquefied hazardous gas (LHG).

5. 33 CFR 165.1187 – Security zones for Golden Gate Bridge and San Francisco-Oakland Bay Bridge.

6. 33CFR 165.1190 – Security zone for Coast Guard Island Pier.

Part N: Harbor Safety Committee (HSC) Best Maritime Practices

1. HSC Best Maritime Practices are not regulations; however, VTS might use a best maritime practice to formulate a VTS measure or direction. Whether directed to do so or not, vessels should follow the HSC Best Practices when safe to do so.

2. The Marine Exchange of the San Francisco Bay Region (SFMX) maintains reference material for most HSC Best Practices. Some of these hyperlinks point to the www.sfmx.org website.

3. Guidelines for Navigating in Reduced Visibility - Critical Maneuvering Areas (CMAs): There are areas within the Bay where additional standards of care are required due to the restrictive nature of the channel, proximity of hazards, or the prevalence of adverse currents. Large vessels should not transit through CMAs when visibility is less than 0.5 nautical miles. VTS requires vessels to follow these guidelines.

4. Anchorage Berths: Anchorage 9 has numbered anchorage berths. Berths are charted on paper and electronic navigation charts. Berths are arranged to maintain safe space between anchored vessels. VTS requires vessels to follow these guidelines.

5. Guidelines for Navigating in Severe Weather: A number of factors must be considered when limiting transits in the bay or closing the bar channel due to severe weather, including sea state, tidal influences, visibility, traffic density, and wind advisories issued by NOAA. The size, class and condition of the vessels being addressed must also be considered. The HSC recommends a tiered approach, applying greater caution as conditions worsen.

6. San Francisco Bay Region Ferry Traffic Routing Protocol:

a. The Ferry Traffic Routing Protocol was established and adopted by the Harbor Safety Committee to make ferry traffic more predictable for all vessels, and to prevent collisions between ferries.

b. Ferry traffic routing protocol routes are charted on approved and current nautical charts.

b. All ferries on published, scheduled routes should follow the charted ferry routes, unless it's unsafe to do so.

7. Coordination of Communications for Union Pacific Railroad Bridge (UPRRB) Lift Operations: All vessels requiring a UPRRB drawbridge lift should follow these procedures. These procedures tell the mariner how to prepare for and make a drawbridge lift request at the UPRRB. The procedures aim to maximize safety and efficiency for vessels transiting under and for trains transiting across the drawbridge. This drawbridge is also called the Benicia-Martinez Railroad Drawbridge. The Harbor Safety Committee developed these procedures by coordinating with VTS, San Francisco Bar Pilots, Union Pacific Railroad, Amtrak, and regional port partners.

Part O: Emergency Procedures

1. Earthquake: After an earthquake VTS will contact VTS users to get the status of vessels and waterway. Based on the status of the waterway and shore side facilities, VTS might direct vessel movements. After an earthquake, carefully consider, and be ready to answer questions from VTS, on the following maritime risks.

a. Bridges: Structural integrity and visibly damage to bridges crossing waterways. Possible obstructions to the waterway.

b. Bottoms: Changes to the water depth. Damage to navigation channels caused by liquefaction of the bay floor.

c. Berths: Vessels torn loose from moorings. Piers and berths inaccessible. Cranes obstructing the waterway.

d. Lines: High-voltage power lines down in waterway or in contact with vessels. Emergency anchoring damaging underwater cables.

e. Liquids: Severed underwater pipes, cross-bridge pipes, or petroleum transfer lines. Overturned tank trucks spilling from bridges into the waterway.

f. Levees: Ruptured levee reversing current flow. Wake from passing vessel damaging levee.

2. Mass Casualty, San Francisco Vessel Mutual Assistance Plan (SF-VMAP): SF-VMAP is part of the mass rescue plan. SF-VMAP uses commercial passenger ferries to help rescue survivors. When notified of a mass-rescue emergency, VTS will implement SF-VMAP with a radiotelephone call on VHF FM Channel 14. VTS will then alert nearby ferryboats and might direct ferryboats to the disaster scene. VTS might also cordon off parts of the waterway to protect survivors from moving vessels.