BookletChart™

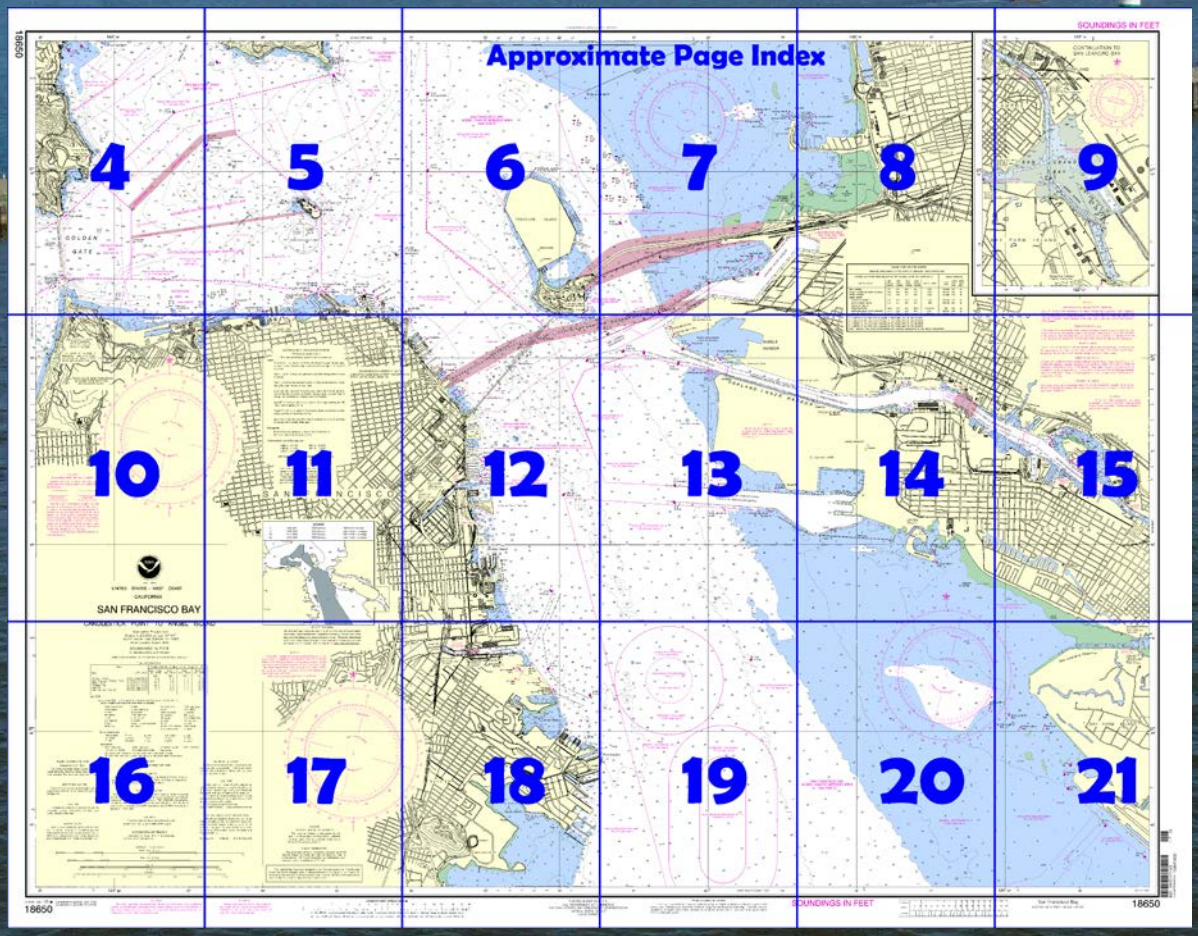
San Francisco Bay – Candlestick Point to Angel Island

NOAA Chart 18650

A reduced-scale NOAA nautical chart for small boaters

When possible, use the full-size NOAA chart for navigation.

- *Complete, reduced-scale nautical chart*
- *Print at home for free*
- *Convenient size*
- *Up-to-date with Notices to Mariners*
- *Compiled by NOAA's Office of Coast Survey, the nation's chartmaker*



Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
www.NauticalCharts.NOAA.gov
888-990-NOAA

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at http://www.NauticalCharts.NOAA.gov.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=18650.

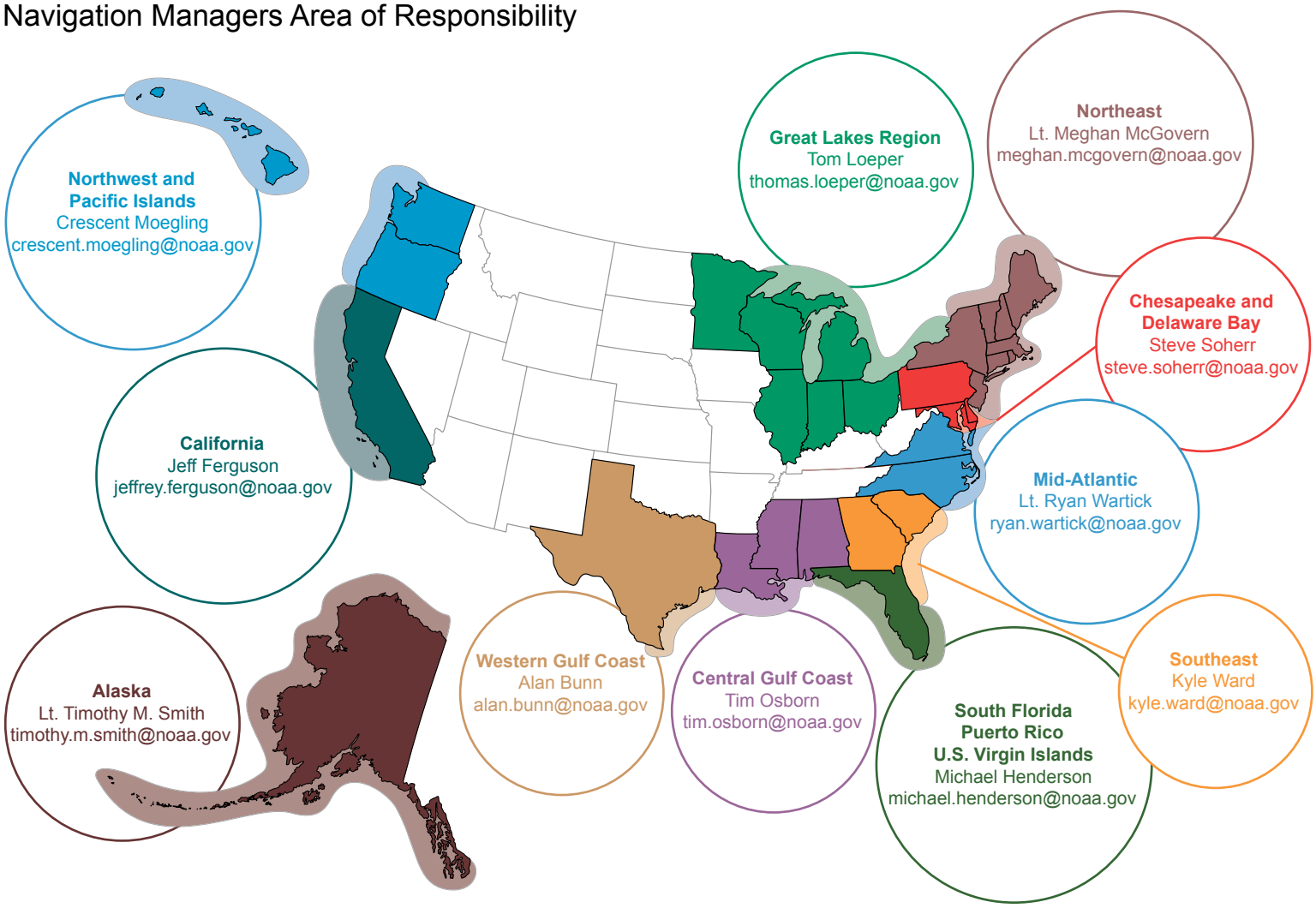
(Selected Excerpts from Coast Pilot)
San Francisco occupies the N portion of the peninsula forming the S entrance to the bay. The 3-mile N shore of San Francisco from the Golden Gate Bridge to the main waterfront includes the **Presidio of San Francisco**; several yacht harbors; Government buildings and piers on Black Point; Aquatic Park; and Fisherman's Wharf. Shoals with depths less than 10 feet extend up to 0.2 mile from the shore.
The charted **recreation area** extending along this shore is intended primarily for use by recreation vessels.

Alcatraz Island, 2.5 miles E of the Golden Gate Bridge, is one of the leading marks entering San Francisco Bay. Near the NW end of the island is a water tower, which is the only landmark visible when that area is in fog. **Alcatraz Light** (37°49'34"N., 122°25'20"W.), 214 feet above the water, is shown from a gray, octagonal pyramidal tower on the SE part of the island. A sound signal is on the extreme NW end of the island.
Dangers.–Anita Rock, 1.1 miles E of Fort Point and 300 yards from shore, is covered 3 feet and marked by a light.
There are several rocky patches with depths of 33 to 35 feet W and NW of Alcatraz Island that must be avoided by deep-draft vessels. The northwestern most of these shoals is **Harding Rock,** marked by a lighted buoy equipped with a racon.
Heavy tide rips occur in the vicinity of Alcatraz Island.
Blossom Rock, covered 40 feet and marked on the W side by a lighted bell buoy, is about 1 mile SE of Alcatraz Island. Another rock, covered 43 feet, is 0.3 mile S of Blossom Rock.
Yerba Buena Island, 345 feet high and 2.5 miles SE of Alcatraz Island, is of small, irregular in shape, and covered with a scrubby growth of trees. On its summit is a former lookout tower and the Coast Guard operated San Francisco Vessel Traffic Service Operation Center and radar antenna site. **San Francisco Coast Guard Station** is on the E side of the island.
Treasure Island is a low filled area N of and connected by a causeway to Yerba Buena Island. A light is on the N end of the island and a shoal, covered 15 feet, is off the N end of the island.
When the prevailing W winds are blowing, deep-draft vessels proceeding to the berthing area on the E side of the island may have extreme difficulty making the 90° turn from the narrow channel between the 30-foot curves SE of Yerba Buena Island.
Naval restricted areas are off the N end of Treasure Island and between this island and Yerba Buena Island. (See **334.1070 and 334.1080**, chapter 2, for limits and regulations.) A **restricted area** surrounds the Coast Guard Station off the E side of Yerba Buena Island. (See **334.1065,** chapter 2, for limits and regulations.)
The **San Francisco-Oakland Bay Bridge** crosses the bay from **Rincon Point** to Yerba Buena Island, thence to Oakland. Racons mark the main bridge spans. The recommended passage for southbound traffic is under the NE half of span A-B (midspan clearance 204 feet). Northbound traffic should use the SW half of span D-E (midspan clearance 204 feet). The midspan clearance of spans B-C and C-D are each 220 feet.
Warning.–Two submarine pipeline areas cross San Francisco Bay within General Anchorage 9; one crosses between Metropolitan Oakland International Airport and **Brisbane,** and the other about 1.5 miles to the S. Mariners are cautioned not to anchor in these areas. (See chart 18651.)
The Trans-Bay Tube of the Bay Area Rapid Transit District crosses San Francisco Bay from the vicinity of the Ferry Tower to Oakland. Mariners are **prohibited** from dropping or dragging anchors when in the vicinity of the tunnel crossing.
Caution.–Oakland's Seventh Street Marine Terminal, about 1 mile E of Yerba Buena Island, forms a current lee on both the flood and the ebb current. Vessels making for Middle Harbor and Oakland Inner Harbor on a flood current will encounter a lee on the S side of the terminal; when the bow enters the slack water, the vessel will tend to sheer to the left. Similarly, vessels bound for the Outer Harbor on an ebb current will encounter slack water on the N side of the terminal, with a tendency to sheer to the right.

U.S. Coast Guard Rescue Coordination Center
24 hour Regional Contact for Emergencies

RCC Alameda	Commander 11th CG District Alameda, CA	(510) 437-3700

Navigation Managers Area of Responsibility

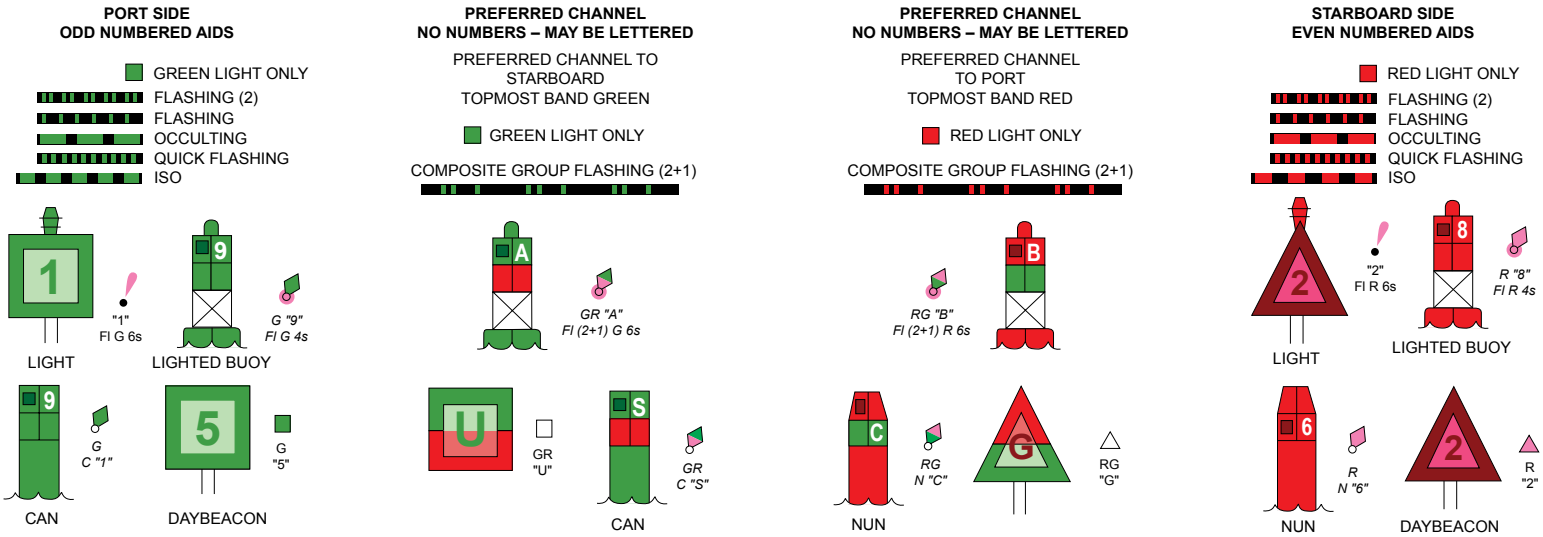


NOAA's navigation managers serve as ambassadors to the maritime community.
They help identify navigational challenges facing professional and recreational mariners, and provide NOAA resources and information for safe navigation. For additional information, please visit *nauticalcharts.noaa.gov/service/navmanagers*

To make suggestions or ask questions online, go to *nauticalcharts.noaa.gov/inquiry*.
To report a chart discrepancy, please use *ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx*.

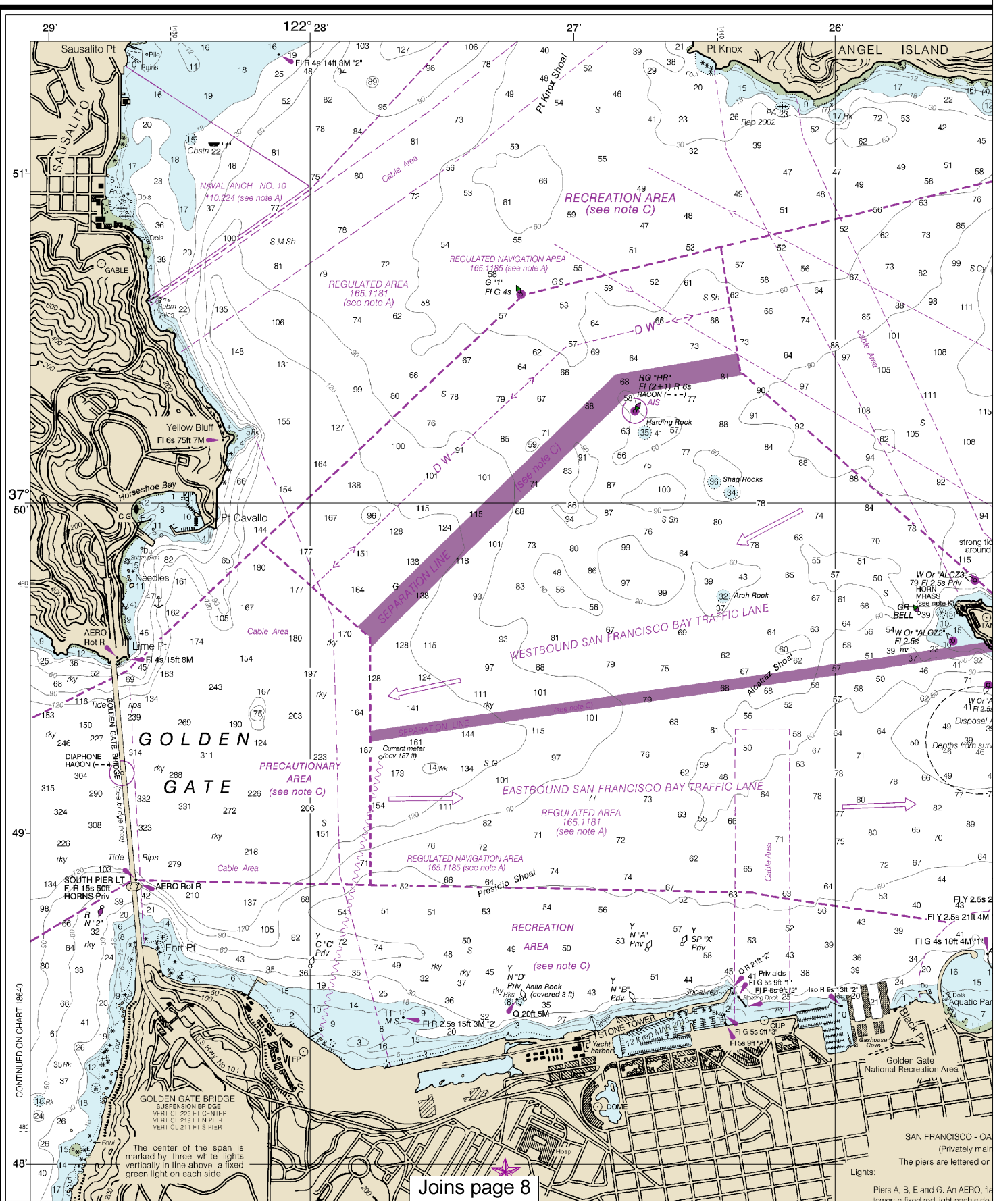
Lateral System As Seen Entering From Seaward

on navigable waters except Western Rivers



For more information on aids to navigation, including those on Western Rivers, please consult the latest USCG Light List for your area.
These volumes are available online at *http://www.navcen.uscg.gov*

18650



4

Note: Chart grid lines are aligned with true north.

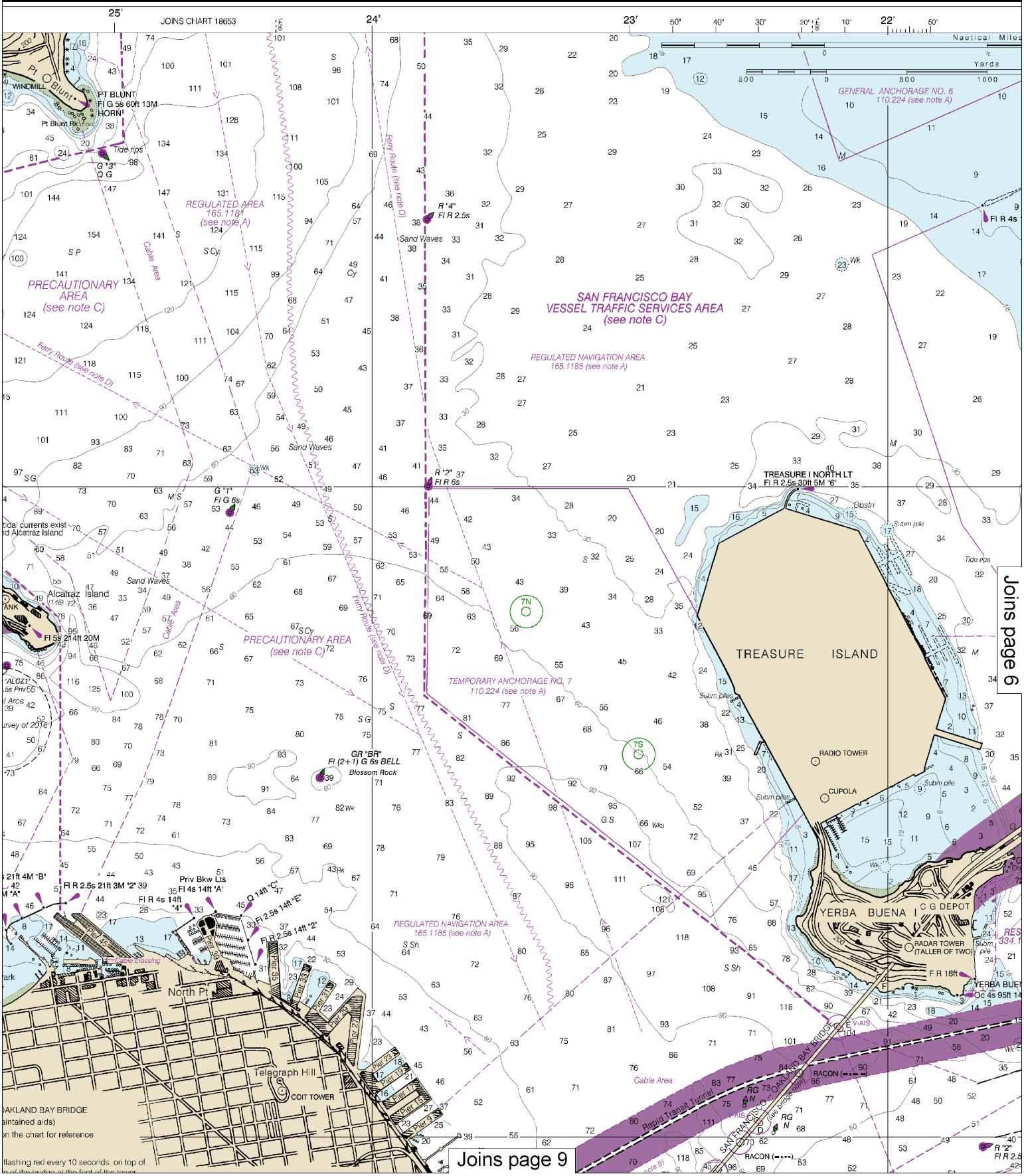
Printed at reduced scale. ~~SCALE 1:20,000~~ See Note on page 5.

Nautical Miles

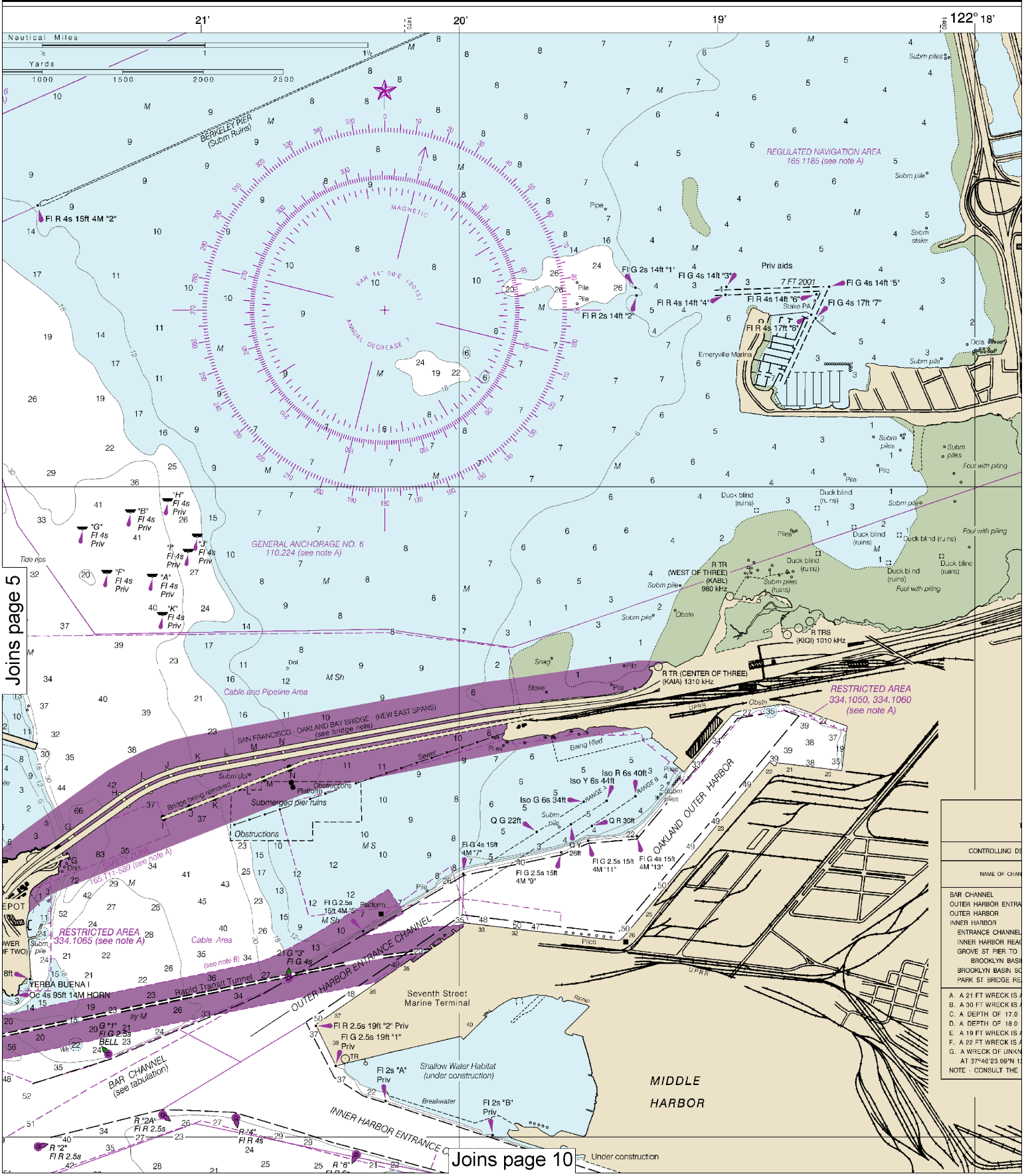
0 1 1½

Yards

500 0 500 1000 1500 2000 2500



This BookletChart was reduced to 70% of the original chart scale.
The new scale is 1:28571. Barscales have also been reduced and
are accurate when used to measure distances in this BookletChart.



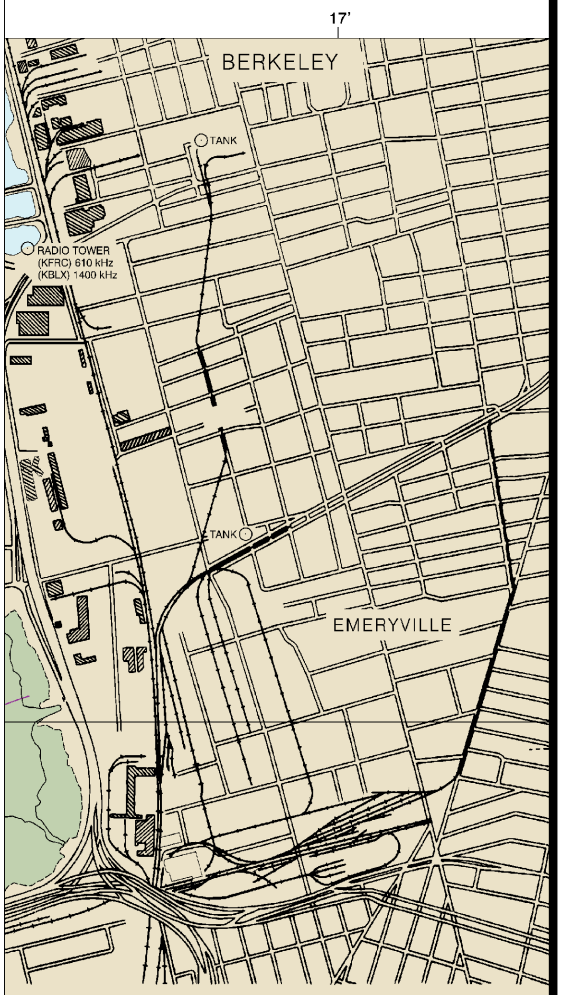
6

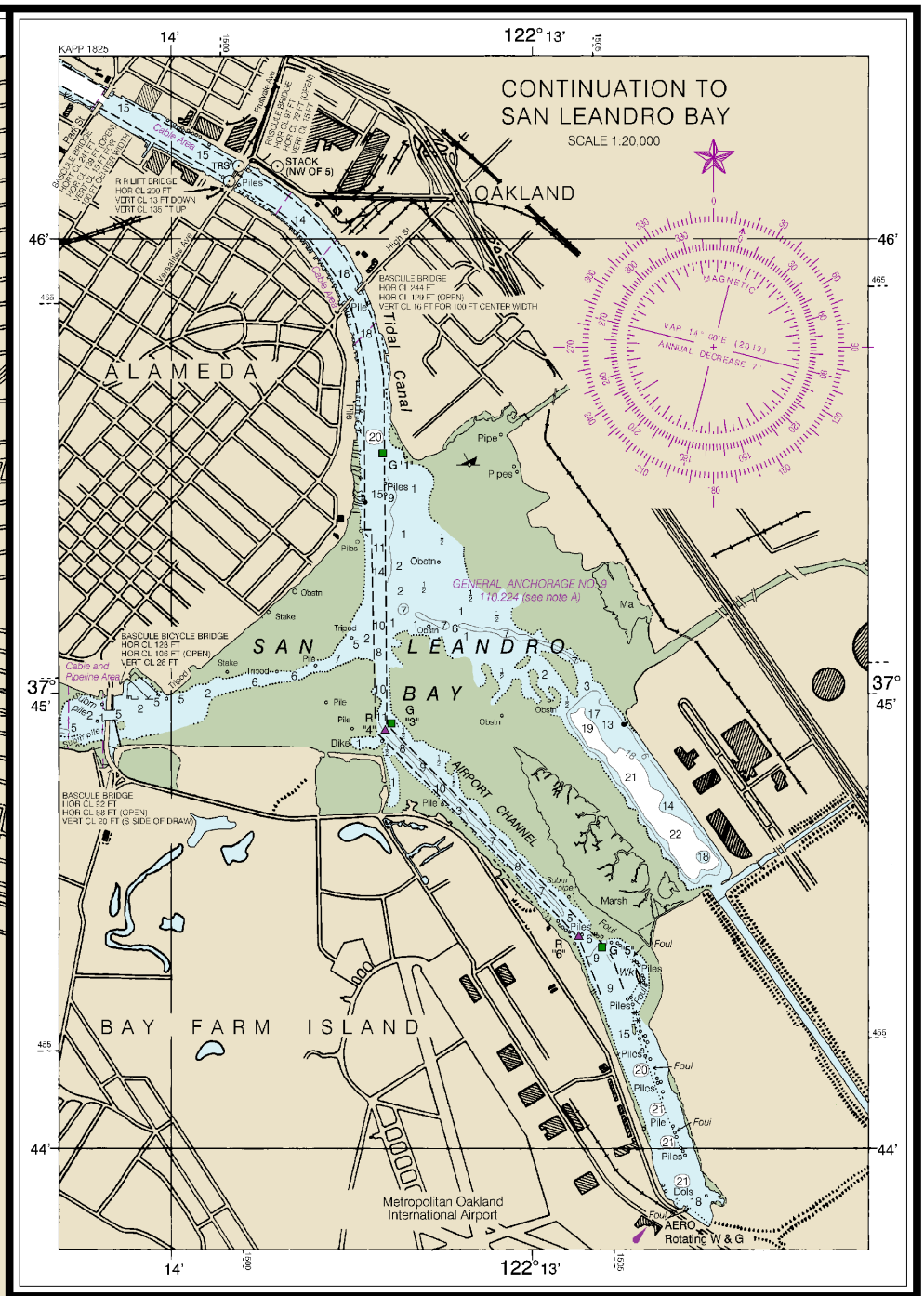
Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:20,000~~ See Note on page 5.

Nautical Miles 0 1 1½

Yards 500 0 500 1000 1500 2000 2500



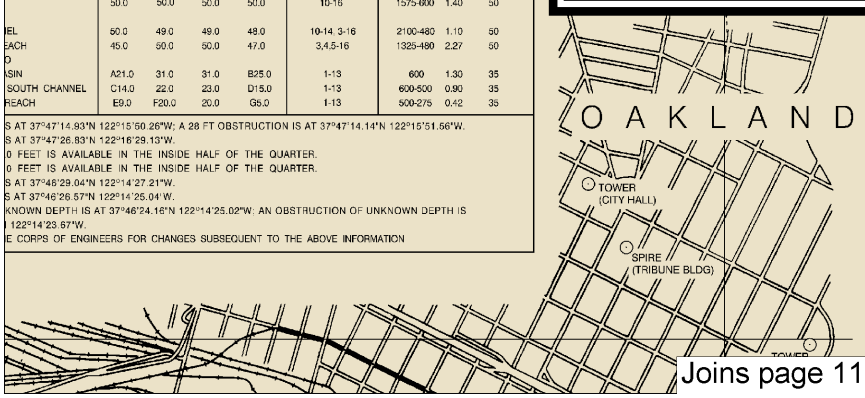


OAKLAND OUTER AND INNER HARBORS

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO OCT 2016
AND NOS SURVEY TO JAN 2013

DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW)						PROJECT DIMENSIONS		
ANNEL	LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH MLLW (FEET)
	50.0	50.0	50.0	50.0	10-16	1000-930	0.57	50
RANCE CHANNEL	50.0	50.0	50.0	50.0	10-16	900-600	0.91	50
	50.0	50.0	50.0	50.0	10-16	1575-600	1.40	50
IEL	50.0	49.0	49.0	48.0	10-14, 3-16	2100-480	1.10	50
EACH	45.0	50.0	50.0	47.0	3,4,5-16	1325-480	2.27	50
O								
ASIN	A21.0	31.0	31.0	B25.0	1-13	600	1.30	35
SOUTH CHANNEL	C14.0	22.0	23.0	D15.0	1-13	600-500	0.90	35
REACH	E9.0	F20.0	20.0	G5.0	1-13	500-275	0.42	35

S AT 37°47'14.93"N 122°15'50.26"W; A 28 FT OBSTRUCTION IS AT 37°47'14.14"N 122°15'51.56"W.
S AT 37°47'26.83"N 122°16'29.13"W.
0 FEET IS AVAILABLE IN THE INSIDE HALF OF THE QUARTER.
0 FEET IS AVAILABLE IN THE INSIDE HALF OF THE QUARTER.
S AT 37°46'29.04"N 122°14'27.21"W.
S AT 37°46'26.57"N 122°14'25.04"W.
KNOWN DEPTH IS AT 37°46'24.16"N 122°14'25.02"W; AN OBSTRUCTION OF UNKNOWN DEPTH IS
122°14'23.67"W.
E CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION



Joins page 11

NOTE C

SAN FRANCISCO VESSEL TRAFFIC SERVICE

The U.S. Coast Guard operates a mandatory Vessel Traffic Services (VTS) system in San Francisco Bay and surrounding areas. Vessel operating procedures and designated radiotelephone frequencies are published in 33 CFR 161, the U.S. Coast Pilot, and/or the VTS User's Manual. The entire area of the chart falls within the Vessel Traffic Services (VTS) system.

PRECAUTIONARY AREA

Traffic within the Precautionary Area consists of vessels maneuvering on various courses. Vessels transiting the precautionary area should, when possible, keep the centerline of the area to port providing for a counterclockwise movement of vessels within the area. Mariners are advised to use extreme caution when navigating within this area.

TRAFFIC LANES

Traffic Lanes are intended for use by vessels 1600 gross tons and over; arrows indicate the approximate direction of traffic flow within each lane. The provisions of Inland Navigation Rule 9 apply to all vessels navigating in the Traffic Lanes.

DEEP WATER ROUTE

Vessels with a draft of 45 feet or greater should use the "Deep Water Route" east of the Golden Gate Bridge. Vessels intending to use the Deep Water Route should notify San Francisco Traffic before passing Mile Rocks. Deep draft vessels will neither meet nor

Mariners published after the dates shown in the lower left hand corner are available at nauticalcharts.noaa.gov.
57th Ed., Dec. 2013. Last Correction: 11/30/2016. Cleared through:
LNM: 4816 (11/29/2016), NM: 5016 (12/10/2016)

Joins page 4

CONTINUED ON CHART 18649

GOLDEN GATE BRIDGE
SUSPENSION BRIDGE
VERT CL 225 FT CENTER
VERT CL 213 FT IN PIER
VERT CL 211 FT S PIER

The center of the span is marked by three white lights vertically in line above a fixed green light on each side

PRESIDIO OF SAN FRANCISCO
GOLDEN GATE NATIONAL
RECREATION AREA

Golden Gate
National Recreation Area

STONE TOWER

MAGNETIC

VAR 14° 00'E (2013)

ANNUAL DECREASE 7'

SAN FRANCISCO - OA
(Privately main
The piers are lettered on

Lights:

Piers A, B, E and G. An AERO, fla
tower; a fixed red light each side

Piers I, J, and K. A fixed red light
the tower.

Pier C. A fixed red light at each c
along the channel axis on each

Spans AB and DE. A fixed g
vertical line above center of cha
bridge; red axis lights on channe

Span EF. A fixed red light on eac
limit of the navigable channel.

Spans BC, CD and IJ. Fixed
bridge over the center of the char

Spans IJ, JK, KL, LM, and MN. A
on top and at the center of the sp

Fog signals:

Bells on the east and west sides
Horns on piers A, B, D, and E.

Vertical clearances at the piers are:

PIER A - 174 FT. PIER E - 175
PIER B - 217 FT. PIER I - 112
PIER C - 220 FT. PIER J - 112
PIER D - 218 FT.

APPROXIMATE MID-SPAN VERTICAL

A-B 204 FT. C-D 220 FT.
B-C 220 FT. D-E 204 FT.

CAUTION – Mid-span clearances
spans of the San Francisco-Oakla
are approximate and at a tempera
These clearances may be reduce
due to extreme traffic conditions an
period of abnormally high tempera

CAUTION
SUBMARINE PIPELINES AND CABLES

Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:

Pipeline Area — Cable Area

Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling.

Covered wells may be marked by lighted or unlighted buoys.

A	1990-2013
B1	1990-1993
B2	1970-1989
B3	1940-1969

The outlined areas rep
survey information that
banded in this diagram
by the U.S. Army Corp
not shown on this diag

THE NATION'S CHARTMAKER SINCE 1807

UNITED STATES - WEST COAST

CALIFORNIA

SAN FRANCISCO BAY

CANDLESTICK POINT TO ANGEL ISLAND

Mercator Projection
Scale 1:20,000 at Lat 37°47'
North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET
AT MEAN

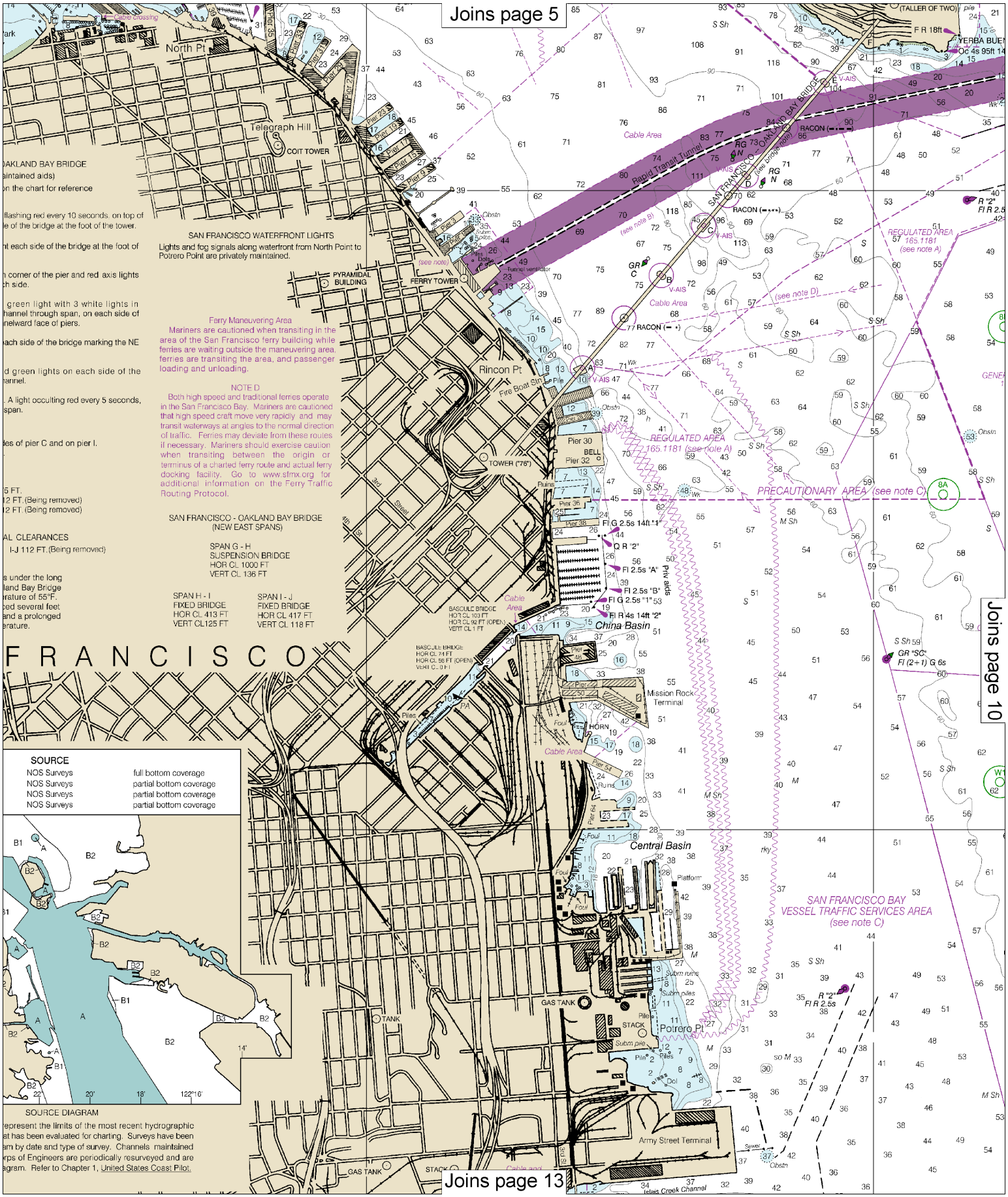
Joins page 12

Note: Chart grid lines are aligned with true north.

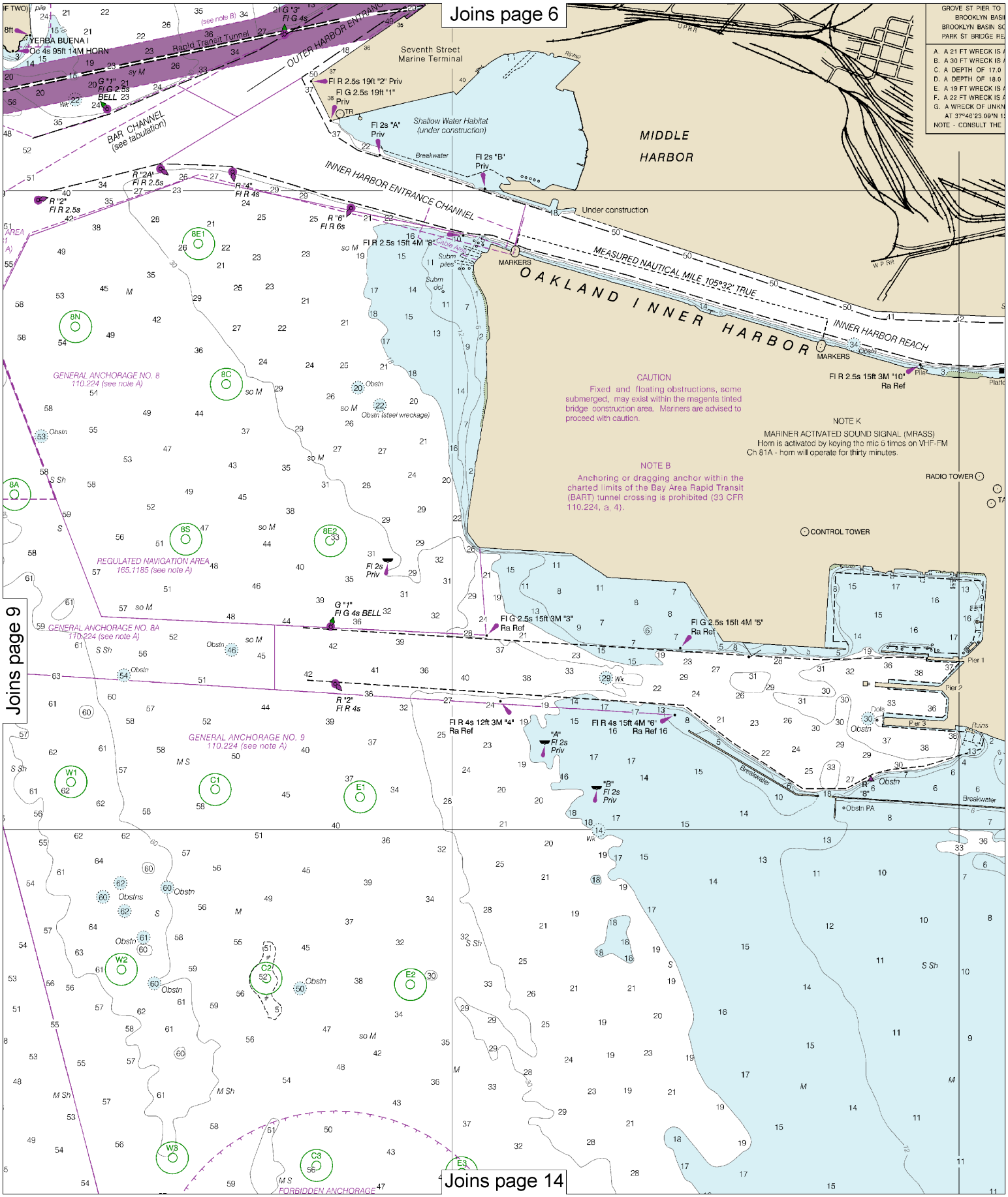
Printed at reduced scale. ~~SCALE 1:20,000~~ See Note on page 5.

Nautical Miles: 0 — 1 — 1½

Yards: 500 — 0 — 500 — 1000 — 1500 — 2000 — 2500


Joins page 5
Joins page 10
Joins page 13
North Pt
Telegraph Hill
COIT TOWER
PYRAMIDAL BUILDING
FERRY TOWER
Rincon Pt
TOWER ("76")
Cable Area
Rapid Transit Tunnel
SAN FRANCISCO - OAKLAND BAY BRIDGE
REGULATED AREA 165.1181 (see note A)
PRECAUTIONARY AREA (see note C)
China Basin
Mission Rock Terminal
Central Basin
Potrero Pt
Army Street Terminal
SAN FRANCISCO BAY VESSEL TRAFFIC SERVICES AREA (see note C)
GAS TANK
STACK
TANK
Islais Creek Channel
F R A N C I S C O
OAKLAND BAY BRIDGE
aintained aids)
on the chart for reference
flashing red every 10 seconds, on top of
e of the bridge at the foot of the tower.
nt each side of the bridge at the foot of
n corner of the pier and red axis lights
ch side.
green light with 3 white lights in
hannel through span, on each side of
nelward face of piers.
each side of the bridge marking the NE
d green lights on each side of the
hannel.
A light occulting red every 5 seconds,
span.
les of pier C and on pier I.
5 FT.
2 FT.(Being removed)
2 FT. (Being removed)
AL CLEARANCES
I-J 112 FT.(Being removed)
s under the long
land Bay Bridge
rature of 55°F.
ced several feet
and a prolonged
erature.
SAN FRANCISCO WATERFRONT LIGHTS
Lights and fog signals along waterfront from North Point to Potrero Point are privately maintained.
Ferry Maneuvering Area
Mariners are cautioned when transiting in the area of the San Francisco ferry building while ferries are waiting outside the maneuvering area, ferries are transiting the area, and passenger loading and unloading.
NOTE D
Both high speed and traditional ferries operate in the San Francisco Bay. Mariners are cautioned that high speed craft move very rapidly and may transit waterways at angles to the normal direction of traffic. Ferries may deviate from these routes if necessary. Mariners should exercise caution when transiting between the origin or terminus of a charted ferry route and actual ferry docking facility. Go to www.sfmx.org for additional information on the Ferry Traffic Routing Protocol.
SAN FRANCISCO - OAKLAND BAY BRIDGE (NEW EAST SPANS)
SPAN G - H
SUSPENSION BRIDGE
HOR CL 1000 FT
VERT CL 136 FT
SPAN H - I
FIXED BRIDGE
HOR CL 413 FT
VERT CL125 FT
SPAN I - J
FIXED BRIDGE
HOR CL 417 FT
VERT CL 118 FT
SOURCE
NOS Surveys full bottom coverage
NOS Surveys partial bottom coverage
NOS Surveys partial bottom coverage
NOS Surveys partial bottom coverage
SOURCE DIAGRAM
represent the limits of the most recent hydrographic
at has been evaluated for charting. Surveys have been
am by date and type of survey. Channels maintained
rps of Engineers are periodically resurveyed and are
agram. Refer to Chapter 1, United States Coast Pilot.

Joins page 6



Joins page 9

Joins page 14

Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:20,000~~ See Note on page 5.

Nautical Miles: 0 1 1½

Yards: 500 0 500 1000 1500 2000 2500

O								
ASIN	A21.0	31.0	31.0	B25.0	1-13	600	1.30	35
SOUTH CHANNEL	C14.0	22.0	23.0	D15.0	1-13	600-500	0.90	35
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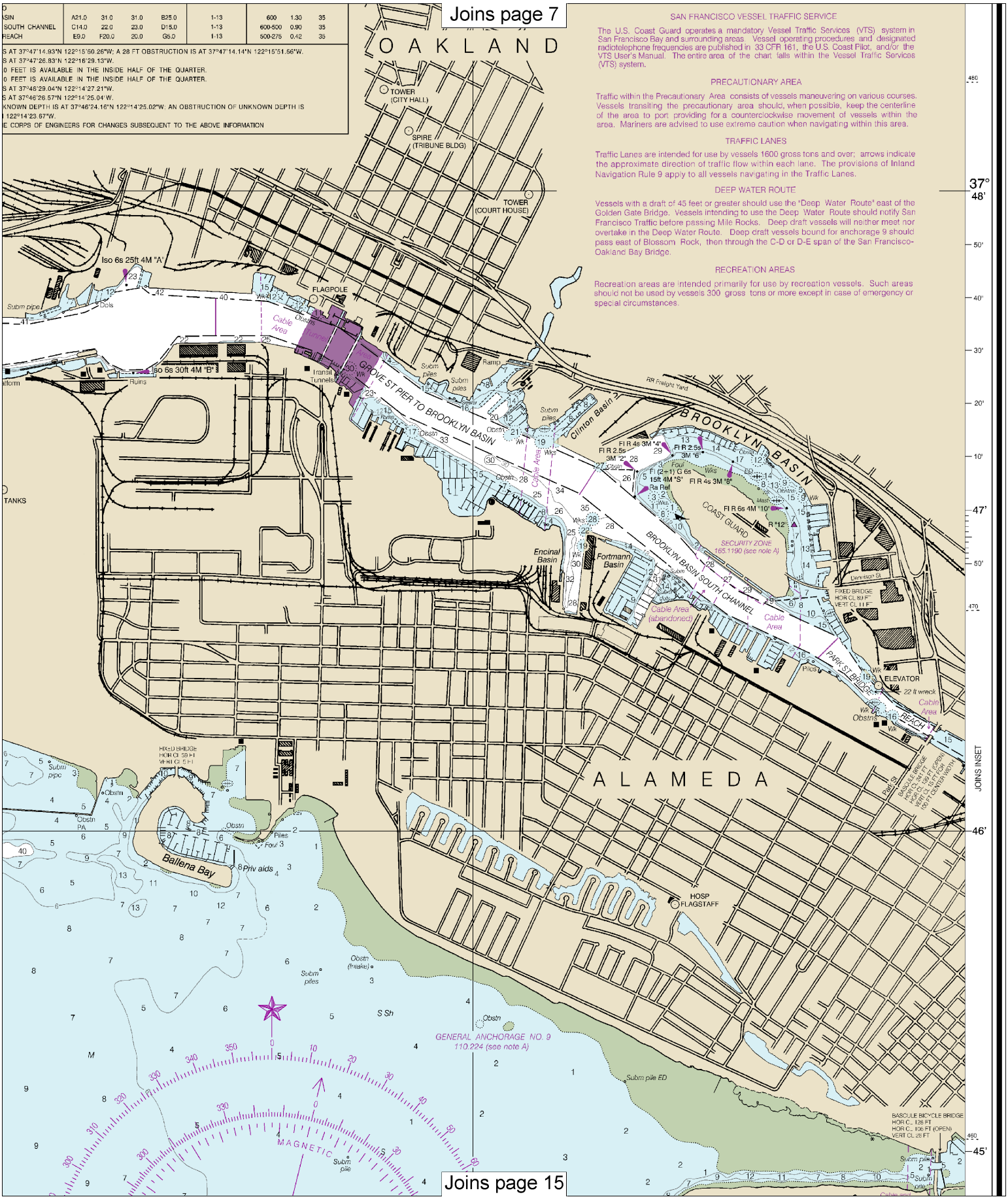
Joins page 7



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DEEP WATER ROUTE

Vessels with a draft of 45 feet or greater should use the "Deep Water Route" east of the Golden Gate Bridge. Vessels intending to use the Deep Water Route should notify San Francisco Traffic before passing Mile Rocks. Deep draft vessels will neither meet nor overtake in the Deep Water Route. Deep draft vessels bound for anchorage 9 should pass east of Blossom Rock, then through the C-D or D-E span of the San Francisco-Oakland Bay Bridge.

RECREATION AREAS

Recreation areas are intended primarily for use by recreation vessels. Such areas should not be used by vessels 300 gross tons or more except in case of emergency or special circumstances.

Joins page 15

Joins page 8

CALIFORNIA

SAN FRANCISCO BAY

CANDLESTICK POINT TO ANGEL ISLAND

Mercator Projection
Scale 1:20,000 at Lat 37°47'
North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER

Additional information can be obtained at nauticalcharts.noaa.gov.

TIDAL INFORMATION

PLACE		Height referred to datum of soundings (MLLW)		
NAME	(LAT/LONG)	Mean Higher High Water	Mean High Water	Mean Low Water
		feet	feet	feet
San Leandro Channel	(37°42'N/122°12'W)	7.2	6.6	1.1
San Francisco (Golden Gate)	(37°48'N/122°28'W)	5.8	5.2	1.1
Rincon Point	(37°47'N/122°23'W)	6.3	5.7	1.1
Alameda	(37°46'N/122°18'W)	6.6	5.8	1.1
Alcatraz Island	(37°50'N/122°25'W)	5.8	5.2	1.1
Oakland Middle Harbor	(37°48'N/122°20'W)	6.2	5.6	1.1

Dashes (- - -) located in datum columns indicate unavailable datum values for a tide station. Real-time water levels, tide predictions, and tidal current predictions are available on the Internet from http://tidesandcurrents.noaa.gov.

(Jul 2013)

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical	G green	Mo morse code	R TR radio tower
Al alternating	IQ interrupted quick	N nun	Rot rotating
B black	Iso isophase	OBSC obscured	s seconds
Bn beacon	LT HO lighthouse	Oc occulting	SEC sector
C can	M nautical mile	Or orange	St M statute miles
DIA diaphone	m minutes	Q quick	VQ very quick
F fixed	MICRO TR microwave tower	R red	W white
Fl flashing	Mkr marker	Ra Ref radar reflector	WHIS whistle
		R Bn radiobeacon	Y yellow

Bottom characteristics:

Blds boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	h hard	Rk rock	Sh shells
Cy clay	Grs grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstn obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	

(1) Wreck, rock, obstruction, or shoal swept clear to the depth indicated.
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.

PLANE COORDINATE GRID
(based on NAD 1927)

The California State Plane Coordinate Grid (Zone III) is indicated by dashed ticks at 10,000 foot intervals. The last three digits are omitted.

AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

RACING BUOYS

Racing buoys within the limits of this chart are not shown hereon. Information may be obtained from the U.S. Coast Guard District Offices as racing and other private buoys are not all listed in the U.S. Coast Guard Light List.

HEIGHTS

Heights in feet above Mean High Water.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Department of the Navy and U. S. Coast Guard.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83) and for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.260" southward and 3.891" westward to agree with this chart.

CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 7 for important supplemental information.

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117.

Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:
⊙(Accurate location) o(Approximate location)

NOAA WEATHER RADIO BROADCASTS

The NOAA Weather Radio station listed below provides continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Mt. Pise, CA KHB-49 162.400 MHz WX2

SCALE 1:20,000

Nautical Miles: ½ 0 ½ 1 1½
Statute Miles: ½ 0 ½ 1 1½
Yards: 500 0 500 1000 1500 2000 2500
Meters: 500 0 500 1000 1500 2000 2500

29' 1430 122° 28' 27' 1445 26'

46' B2 37°44' 122°28' 26' 24'

The outlined areas rep
survey information that
banded in this diagram
by the U.S. Army Corp
not shown on this diag

NOTE A

Navigation regulations are published
Coast Pilot 7. Additions or revisions to C
lished in the Notice to Mariners. Informati
regulations may be obtained at the Office o
11th Coast Guard District in Alameda, C
Office of the District Engineer, Corps
San Francisco, California.
Refer to charted regulation section n

BASCULE
For bascule b
open to a full uprig
vertical clearance
charted horizonta

POLL
Report all spills of o
National Response Cen
to the nearest U.S. Coa
munication is impossib

The prudent
any single aid to
floating aids. Se
and U.S. Coast P

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at nauticalcharts.noaa.gov.

NOAA encourages users to submit inquiries, discrepancies or comments about this chart at http://www.nauticalcharts.noaa.gov/staff/contact.htm.

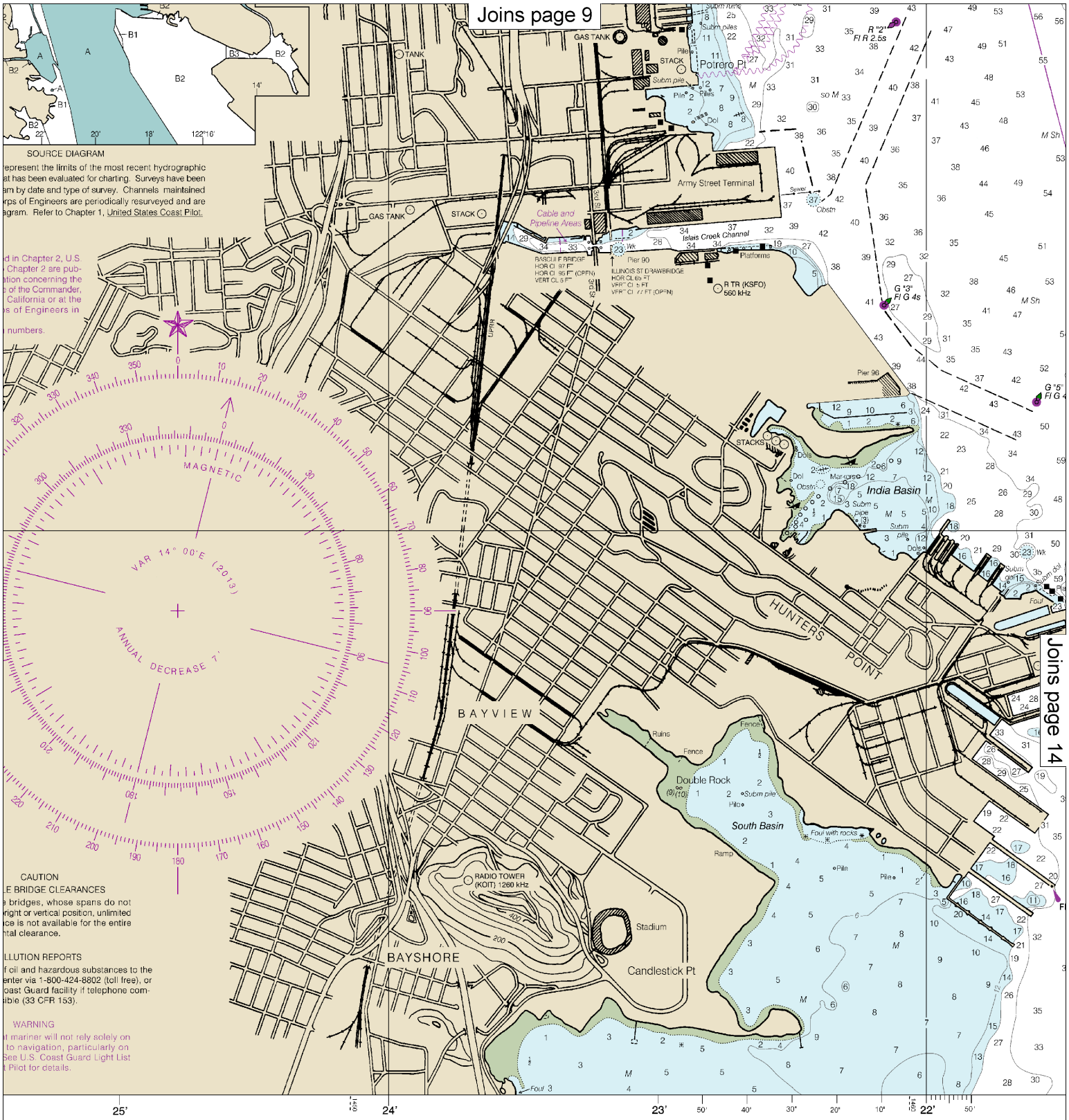
18650

57th Ed., Dec. 2013. Last Correction: 11/30/2016. Cleared through:
LNM: 4816 (11/29/2016), NM: 5016 (12/10/2016)

Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:20,000~~ See Note on page 5.

Nautical Miles: 0 1 1½
Yards: 500 0 500 1000 1500 2000 2500



SOUNDINGS IN FEET

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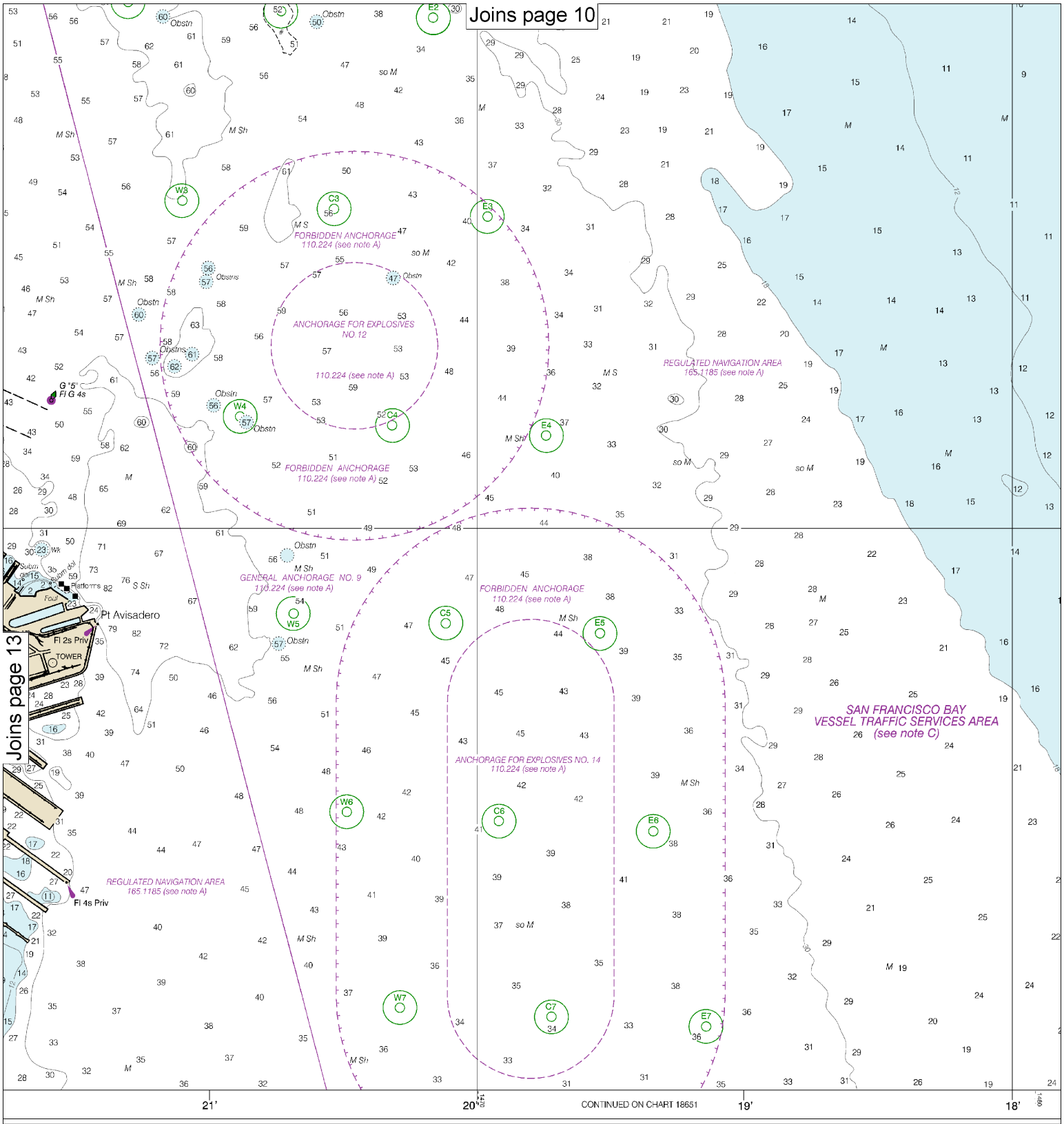
COAST SURVEY



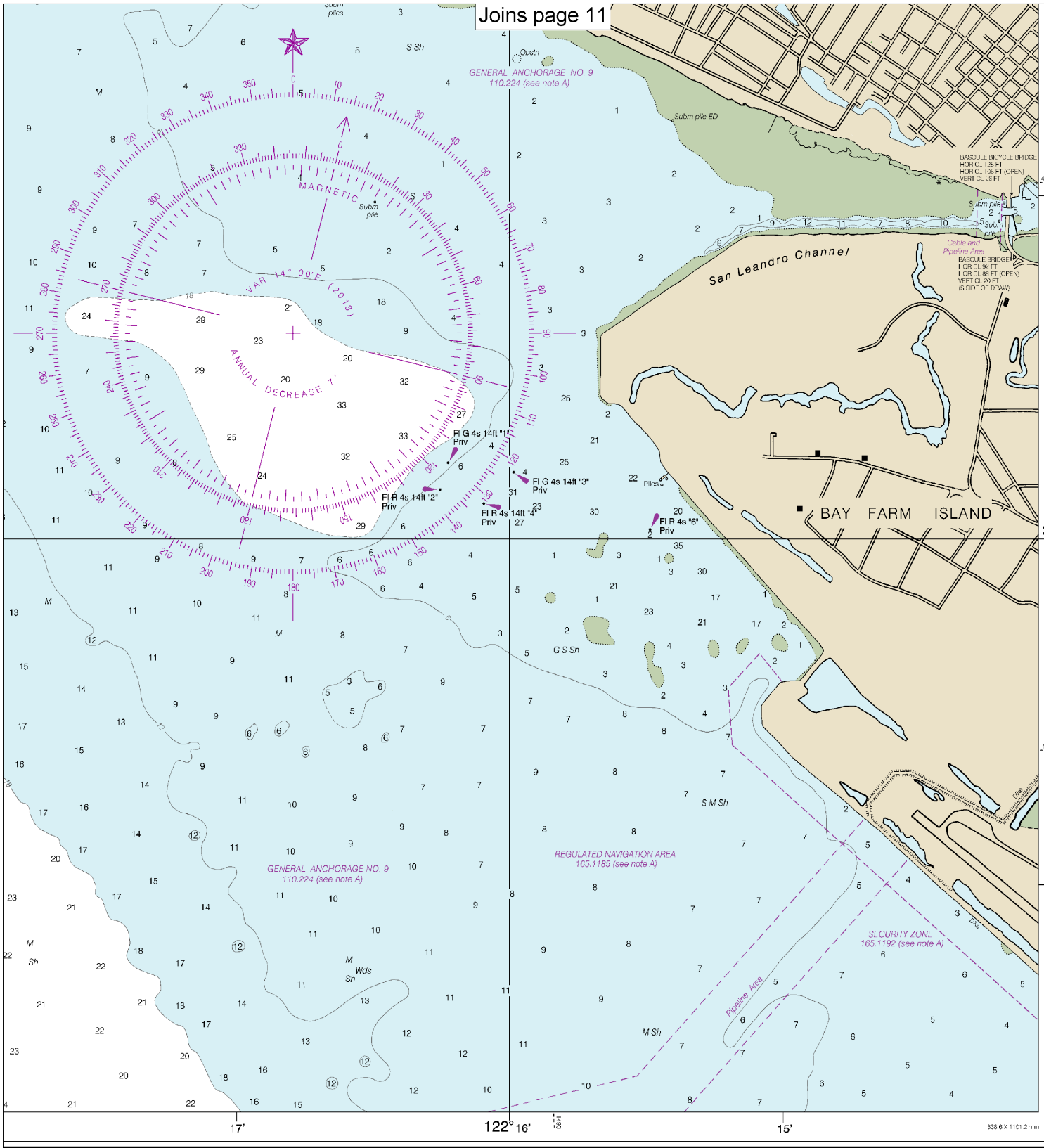
hed at Washington, D.C.
ARTMENT OF COMMERCE
AND ATMOSPHERIC ADMINISTRATION
ONAL OCEAN SERVICE
COAST SURVEY

Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:20,000~~ See Note on page 5.

Nautical Miles: 0 1 1½

Yards: 500 0 500 1000 1500 2000 2500



FATHOMS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
FEET	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102
METERS	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31																

San Francisco Bay

SOUNDINGS IN FEET - SCALE 1:20,000

18650

EMERGENCY INFORMATION

VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.
Channel 9 – Communications between boats and ship-to-coast.
Channel 13 – Navigation purposes at bridges, locks, and harbors.
Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.
Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.
Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!

All Hazards NOAA Weather Radio NOAA's National Weather Service

NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.
http://www.nws.noaa.gov/nwr/

Quick References

Nautical chart related products and information	—	**http://www.nauticalcharts.noaa.gov**
Interactive chart catalog	—	**http://www.charts.noaa.gov/InteractiveCatalog/nrnc.shtml**
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Chart updates (LNM and NM corrections)	—	**http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html**
Coast Pilot online	—	**http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm**
Tides and Currents	—	**http://tidesandcurrents.noaa.gov**
Marine Forecasts	—	**http://www.nws.noaa.gov/om/marine/home.htm**
National Data Buoy Center	—	**http://www.ndbc.noaa.gov/**
NowCoast web portal for coastal conditions	—	**http://www.nowcoast.noaa.gov/**
National Weather Service	—	**http://www.weather.gov/**
National Hurrican Center	—	**http://www.nhc.noaa.gov/**
Pacific Tsunami Warning Center	—	**http://ptwc.weather.gov/**
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Note on Printing

This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.

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