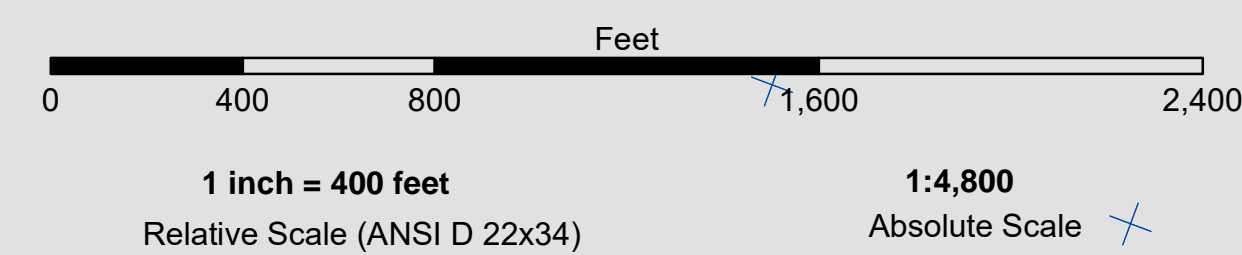


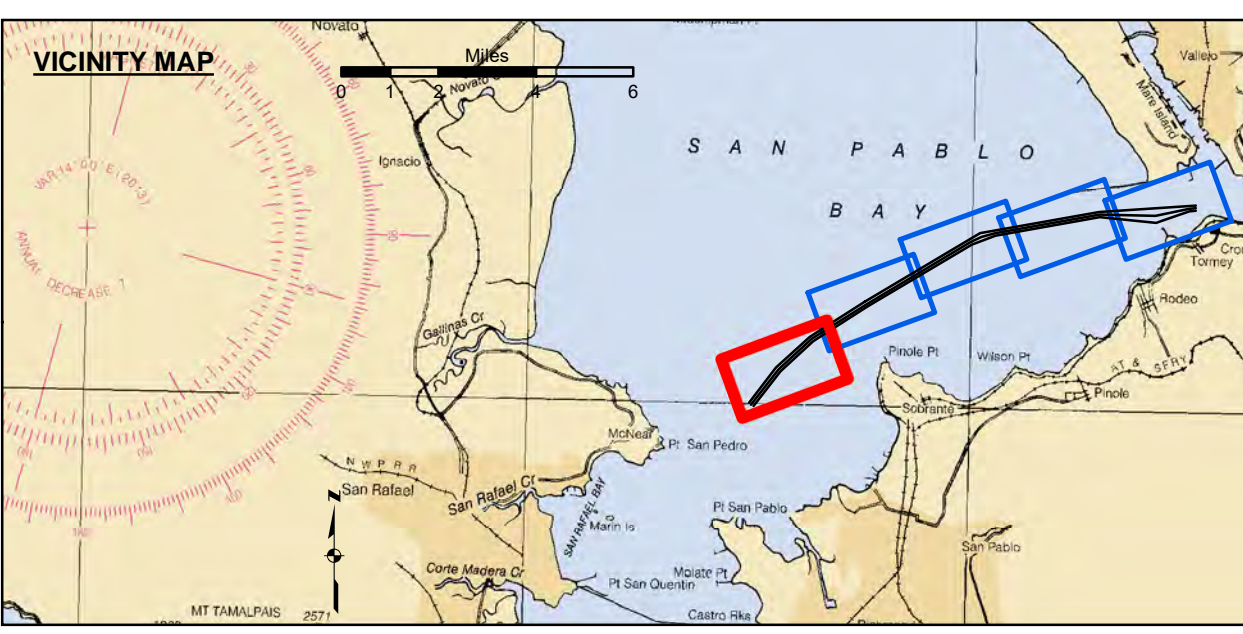
| AnglePoint | POINT_X | POINT_Y |
|------------|------------|------------|
| 01 | 6009617.00 | 2192346.00 |
| 02 | 6012570.00 | 2196164.00 |
| 03 | 6016237.00 | 2199512.00 |
| 04 | 6022215.00 | 2203334.00 |
| 05 | 6034692.58 | 2210783.40 |
| 06 | 6047610.83 | 2213082.81 |
| 07 | 6058067.95 | 2213781.27 |
| 08 | 6058127.88 | 2213182.59 |
| 09 | 6057419.43 | 2213135.37 |
| 10 | 6055006.55 | 2212298.87 |
| 11 | 6053815.20 | 2211848.50 |
| 12 | 6047716.66 | 2212492.26 |
| 13 | 6038393.66 | 2210459.23 |
| 14 | 6033802.66 | 2209535.23 |
| 15 | 6022551.66 | 2202836.23 |
| 16 | 6016604.00 | 2199034.00 |
| 17 | 6013013.00 | 2195756.00 |
| 18 | 6010090.00 | 2191976.00 |
| C01 | 6009631.93 | 2192304.35 |
| C02 | 6012791.00 | 2195960.00 |
| C03 | 6016421.00 | 2199273.00 |
| C04 | 6022385.00 | 2203086.12 |
| C05 | 6033649.18 | 2209793.00 |
| C06 | 6034836.66 | 2210359.38 |
| C07 | 6038340.65 | 2210754.51 |
| C08 | 6047663.65 | 2212787.53 |
| C09 | 6053760.51 | 2212668.82 |
| C10 | 6057399.48 | 2213434.70 |
| C11 | 6058107.91 | 2213481.93 |

San Pablo Bay Channel Light 5



PRELIMINARY ISSUE
THIS PLAN ISSUED FOR
ADVANCE INFORMATION ONLY

FLOOD →
← EBB



- Federal Navigation Channel
- Shoaling Area
- Placement Area
- Anchorage Area
- Wreck Area
- Submerged Wreck
- Angle Point
- Beacon, General
- Obstruction Point
- Navigation Buoy
- Navigation Buoy
- Shoalest Sounding*
- Countours
- 35
- 34
- 33
- 32
- 31

NOTES:
DRAWING NOT TO BE USED FOR NAVIGATION. ONLY CHANNEL CONDITION AT DATE OF SURVEY, THE LOCATION OF ALL NAVIGATION AIDS ARE BASED ON INFORMATION PROVIDED BY THE U.S. COAST GUARD. BUOY LOCATIONS REPRESENT THE POSITION OF THE SINKER ONLY.
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COORDINATES ARE BASED ON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM (SPCS) ZONE III, LAMBERT CONFORMAL PROJECTION REFERENCED TO NAD83, AS DESCRIBED IN SPECIAL PUBLICATION NO. 23X, PUBLISHED BY NATIONAL OCEAN SURVEY.
BASE MAPS ARE USDA NAP 2010.
*SHOALEST SOUNDING PER QUARTER PER REACH
SURVEYED BY THE CORPS OF ENGINEERS.
SOUNDINGS ARE BASED ON THE DATUM OF MEAN LOWER LOW WATER (MLLW) AT THE LOCALITY AND ARE SHOWN TO THE TENTHS OF A FOOT.
SOUNDING FOR THE CHANNEL MEASURED WITH MULTIBEAM ECHOSOUNDER AND ARE SHOWN TO THE NEAREST TENTH FOOT.
THE PROJECT DEPTH IS 35 FEET MLLW.
VERTICAL DATUM:
MLLW (MEAN LOWER LOW WATER)
TIDAL EPOCH 1983-2001
TIDAL DATUM CONTROL STATIONS:
- 8415056 PINOLE POINT - JUNE 2014
- 8415216 MARE ISLAND - AUG 2013
HORIZONTAL CONTROL DATUM:
NAD83(2011) EPOCH 2010.00
CONTROL:
POINT PINOLE 4 RESET | PID: J72885 | BM 5056 A | PID: B8CN55 | 9415056
OPUS 3192020
5215 L 1975 | 5216 R 2006
PID: B8BZ81 | PID: B8CN97
OPUS 81112010 | 9415216 | OPUS 100312011 | 9415216
TIDE GAUGE:
NAI & BRASS DISK SET IN DOLPHIN AT 10.0 FT MLLW APPROX POSITION: 38° 04' 9.9" N, 122° 15' 4.4" W
POSITIONS AND SOUNDINGS HAVE BEEN CORRECTED USING PPK TECHNIQUES USING A CORS NETWORK BASE STATION AT OHLN.
TIDE VALUES HAVE BEEN EXTRAPOLATED USING GEOD18 AND VDATUM V4.0.1.
SURVEY VESSEL / EQUIPMENT:
SV RANDY CUMMINGS
- RESON TSS-R SINGLE-HEAD MULTIBEAM ECHOSOUNDER
- POS MV 220 VERS HW2 5-12
- IMU TYPE 42
- TRIMBLE AT1675-540TS GPS ANTENNA

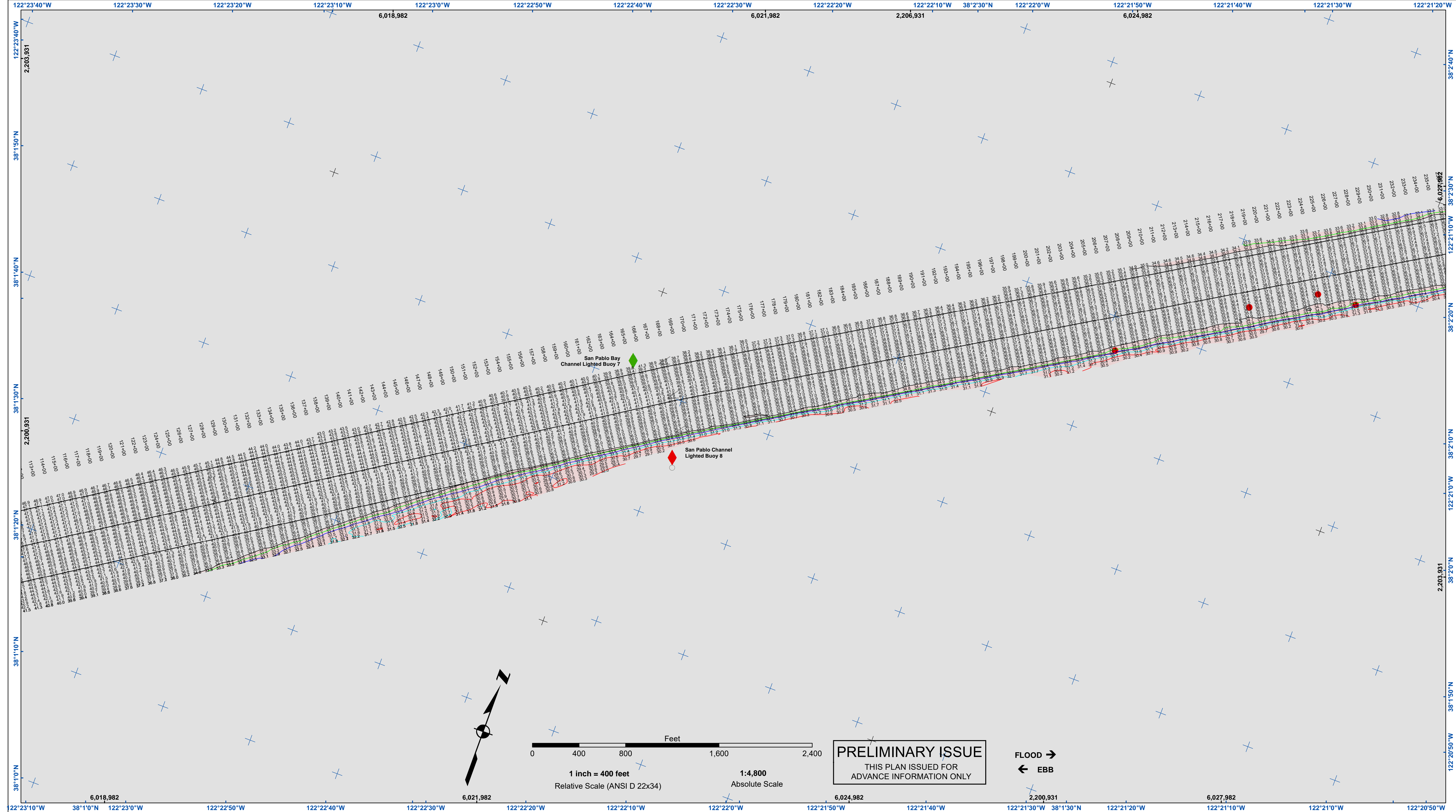
US Army Corps of Engineers
San Francisco District
450 Golden Gate Ave.
San Francisco, CA 94102

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| | | |
|---------------------------------|----------------------------|--------------|
| Prepared Under the Direction of | Surveyed By: | Chart Date: |
| LT COLONEL W. SHEBESTA | PDT | Nov 06, 2023 |
| Submitted: | Plotted By: | Designed by: |
| Hydro Survey Team Leader | PDT | |
| Recommended: | Checked By: | Drawn by: |
| Chief, Hydro Survey Section | PDT | PDT |
| Approved: | Chief, Construction Branch | |

CALIFORNIA
SAN PABLO BAY
PINOLE SHOAL
CONDITION SURVEY
25 OCTOBER 2023
TO
02 NOVEMBER 2023

Sheet
Reference
Number
1 of 5



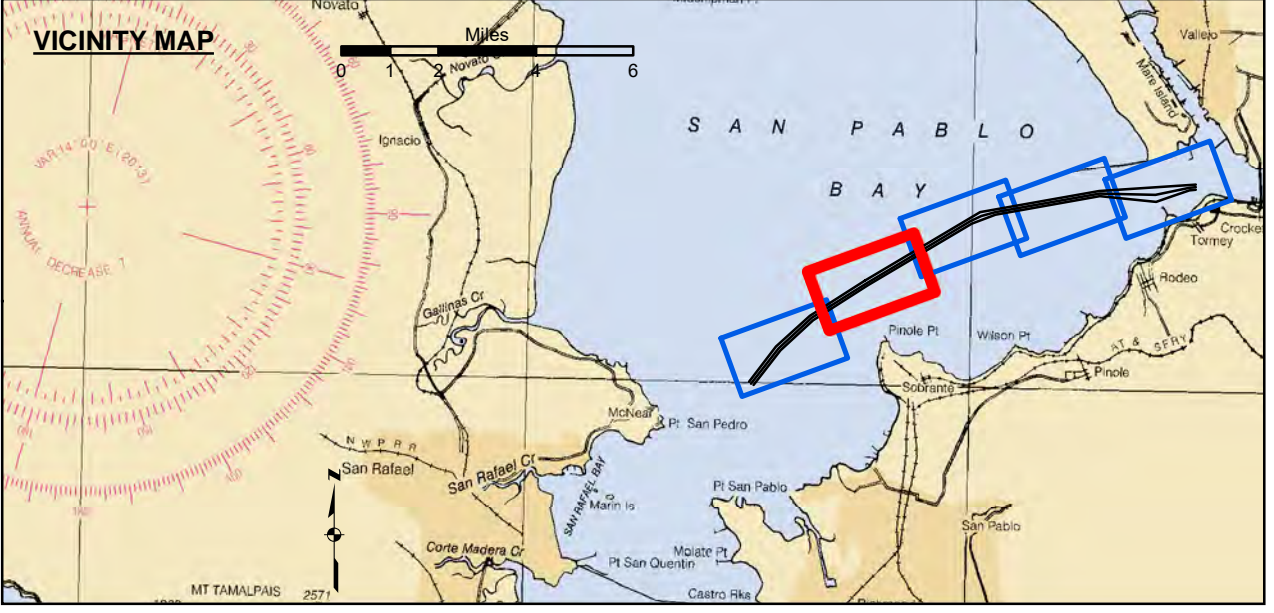
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| Prepared Under the Direction of TIMOTHY W. SHEBESTA LT COLONEL, C.E., DISTRICT ENGINEER | Chart Date: Nov 06, 2023 |
| Submitted: Hydro Survey Team Leader | Designed by: PDT |
| Recommended: Chief, Hydro Survey Section | Plotted by: PDT |
| Approved: Chief, Construction Branch | Checked by: PDT |
| | Drawn by: PDT |

SAN PABLO BAY CALIFORNIA
PINOLE SHOAL
CONDITION SURVEY
25 OCTOBER 2023
TO
02 NOVEMBER 2023

Sheet Reference Number
2 of 5



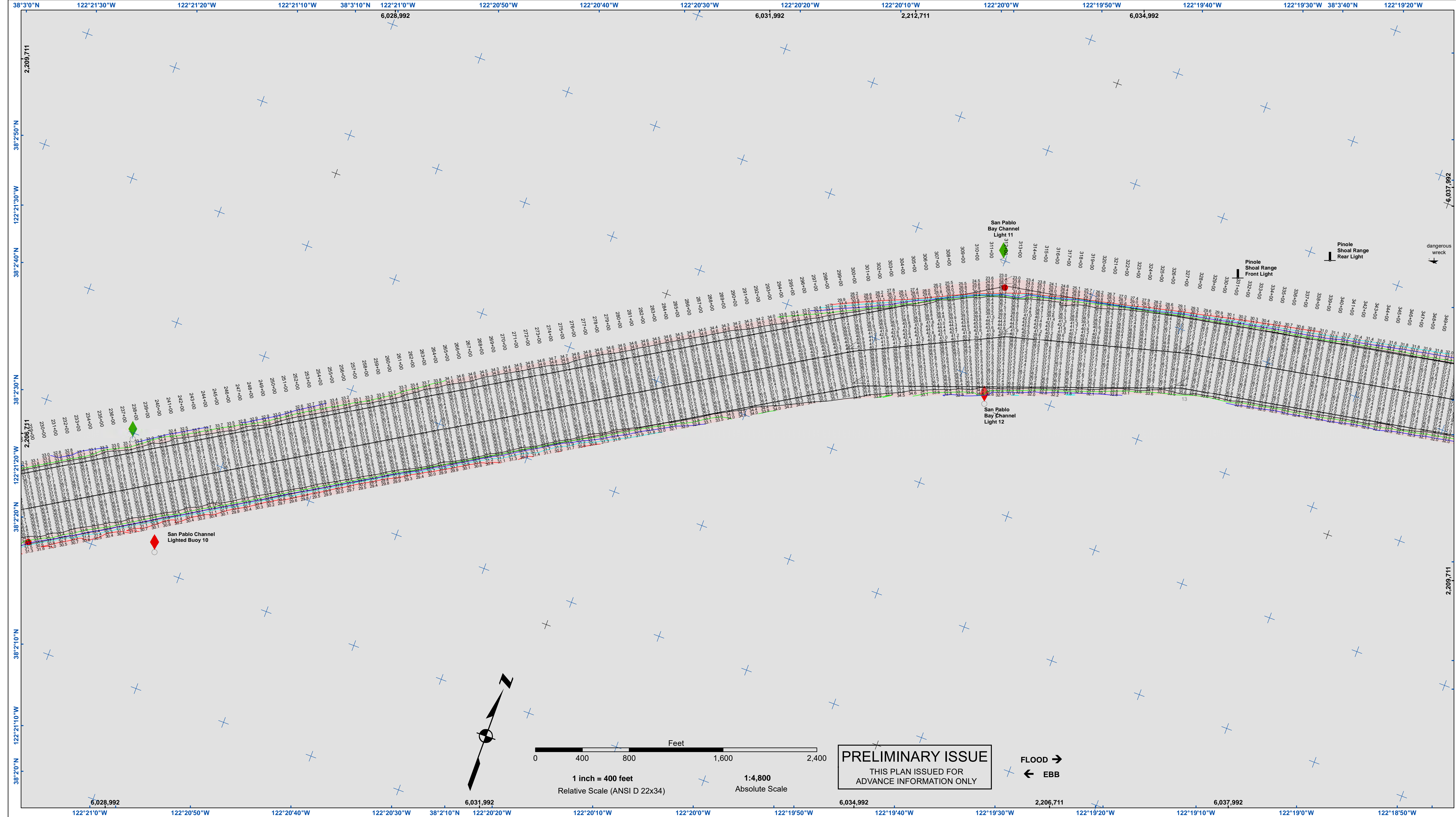
- Federal Navigation Channel
- Shoaling Area
- Placement Area
- Anchorage Area
- Wreck Area
- Submerged Wreck
- Angle Point
- Beacon, General
- Obstruction Point
- Navigation Buoy
- Navigation Buoy
- Shoalest Sounding*
- Countours
- 35
- 34
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- 31

NOTES:
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 BASE MAPS ARE USDA NADP 2010.
 *SHOALEST SOUNDING PER QUARTER PER REACH
 SURVEYED BY THE CORPS OF ENGINEERS.
 SOUNDINGS ARE BASED ON THE DATUM OF MEAN LOWER LOW WATER (MLLW) AT THE LOCALITY AND ARE SHOWN TO THE TENTHS OF A FOOT.
 SOUNDINGS FOR THE CHANNEL MEASURED WITH MULTIBEAM ECHOSOUNDER AND ARE SHOWN TO THE NEAREST TENTH FOOT.
 THE PROJECT DEPTH IS -35 FEET MLLW.
 VERTICAL DATUM:
 MLLW (MEAN LOWER LOW WATER)
 TIDAL EPOCH 1983-2001
 TIDAL DATUM CONTROL STATION(S):
 - 8415056 PINOLE POINT - JUNE 2014
 - 8415216 MARE ISLAND - AUG 2013

HORIZONTAL CONTROL DATUM:
 NAD83(2011) EPOCH 2010.00
CONTROL:
 POINT PINOLE 4 RESET | PID: JT2885 | BM 5056 A | PID: BBCN55 | 9415056
 OPUS 3192020
 5215 L 1975 | 5216 R 2006
 PID: BBN281 | PID: BBCN97
 OPUS 8112010 | 9415216 | OPUS 100312011 | 9415216

TIDE GAUGE:
 NAL & BRASS DISK SET IN DOLPHIN AT 10.0 FT MLLW APPROX POSITION: 38° 04' 9.9" N, 122° 15' 4.4" W
 BASE STATION AT OHLN.
 POSITIONS AND SOUNDINGS HAVE BEEN CORRECTED USING PPK TECHNIQUES USING A CORS NETWORK.
 TIDE VALUES HAVE BEEN EXTRAPOLATED USING GEODID8 AND VDATUM V4.0.1.

SURVEY VESSEL / EQUIPMENT:
 S/V RANDY CUMMINGS
 - RESON TSS-R SINGLE-HEAD MULTIBEAM ECHOSOUNDER
 - POS MV 220 VERS HW2 5-12
 - IMU TYPE 42
 - TRIMBLE AT1675-540TS GPS ANTENNA



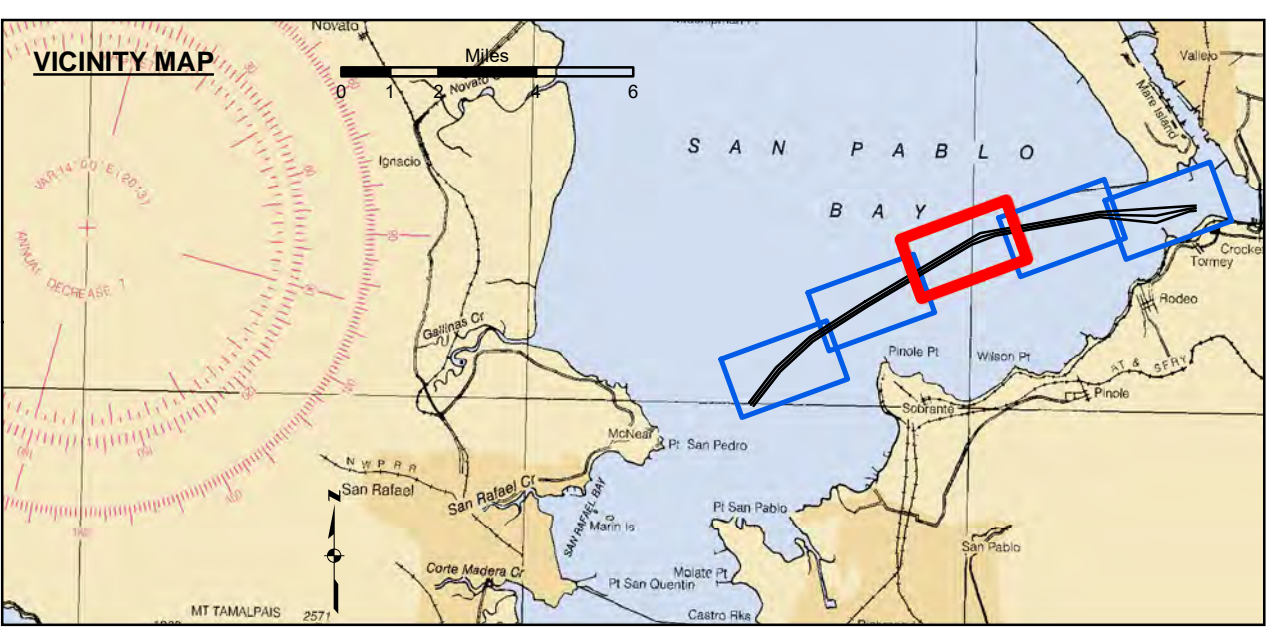
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|--|-----------------|--------------|
| Prepared Under the Direction of TIMOTHY W. SHEBESTA LT COLONEL, C.E., DISTRICT ENGINEER | Surveyed By: | Chart Date: |
| Submitted: Hydro Survey Team Leader | Plotted By: PDT | Nov 06, 2023 |
| Recommended: Chief, Hydro Survey Section | Checked By: PDT | Designed by: |
| Approved: Chief, Construction Branch | Drawn by: PDT | |

SAN PABLO BAY CALIFORNIA
PINOLE SHOAL
 CONDITION SURVEY
 25 OCTOBER 2023
 TO
 02 NOVEMBER 2023

Sheet
Reference
Number
3 of 5



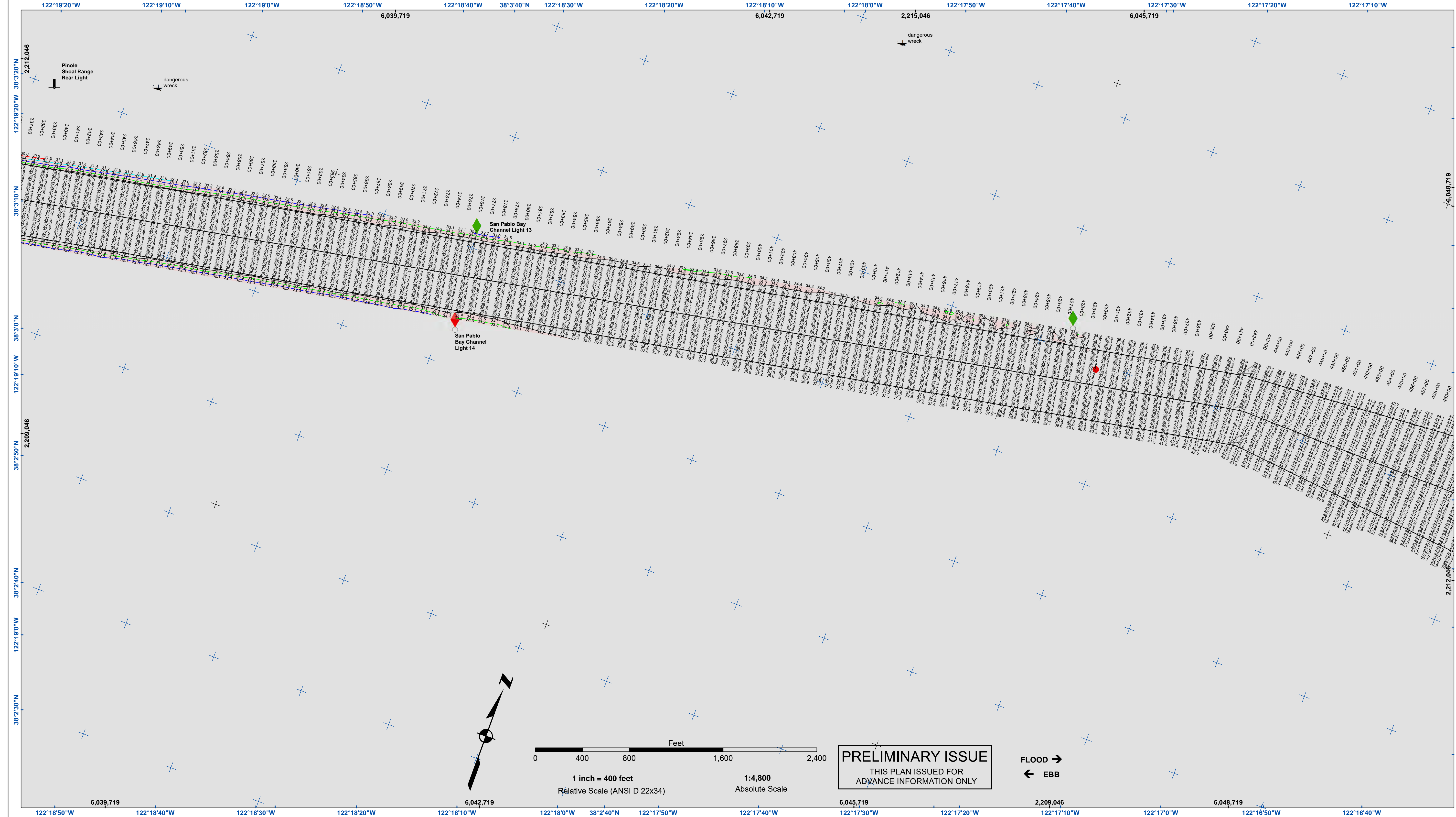
- Federal Navigation Channel
- Shoaling Area
- Placement Area
- Anchorage Area
- Wreck Area
- Submerged Wreck
- Angle Point
- Beacon, General
- Obstruction Point
- Navigation Buoy
- Navigation Buoy
- Shoalest Sounding*
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- 35
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NOTES:
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 BASE MAPS ARE USDA NADP 2010.
 *SHOALEST SOUNDING PER QUARTER PER REACH
 SURVEYED BY THE CORPS OF ENGINEERS.
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 SOUNDING FOR THE CHANNEL MEASURED WITH MULTIBEAM ECHOSOUNDER AND ARE SHOWN TO THE NEAREST TENTH FOOT.
 THE PROJECT DEPTH IS 35 FEET MLLW.
 VERTICAL DATUM:
 MLLW (MEAN LOWER LOW WATER)
 TIDAL EPOCH 1983-2001
 TIDAL DATUM CONTROL STATIONS:
 - 8415056 PINOLE POINT - JUNE 2014
 - 8415216 MARE ISLAND - AUG 2013

HORIZONTAL CONTROL DATUM:
 NAD83(2011) EPOCH 2010.00
 CONTROL:
 POINT PINOLE 4 RESET | PID: J72885 | BM 5056 A | PID: BBCN55 | 9415056
 OPUS 3192020
 5215 L 1975 | 5216 R 2006
 PID: B8B281 | PID: BBCN97
 OPUS 8112010 | 9415216 | OPUS 100312011 | 9415216

TIDE GAUGE:
 NAL & BRASS DISK SET IN DOLPHIN AT 10.0 FT MLLW APPROX POSITION: 38° 04' 9.9" N, 122° 19' 4.4" W
 BASE STATION AT OHLN.
 POSITIONS AND SOUNDINGS HAVE BEEN CORRECTED USING PPK TECHNIQUES USING A CORS NETWORK
 TIDE VALUES HAVE BEEN EXTRAPOLATED USING GEODID18 AND VDATUM V4.0.1

SURVEY VESSEL / EQUIPMENT:
 S/V RANDY CUMMINGS
 - RESON TSS-R SINGLE-HEAD MULTIBEAM ECHOSOUNDER
 - POS MV 220 VERS HW2 5-12
 - IMU TYPE 42
 - TRIMBLE AT1675-540TS GPS ANTENNA



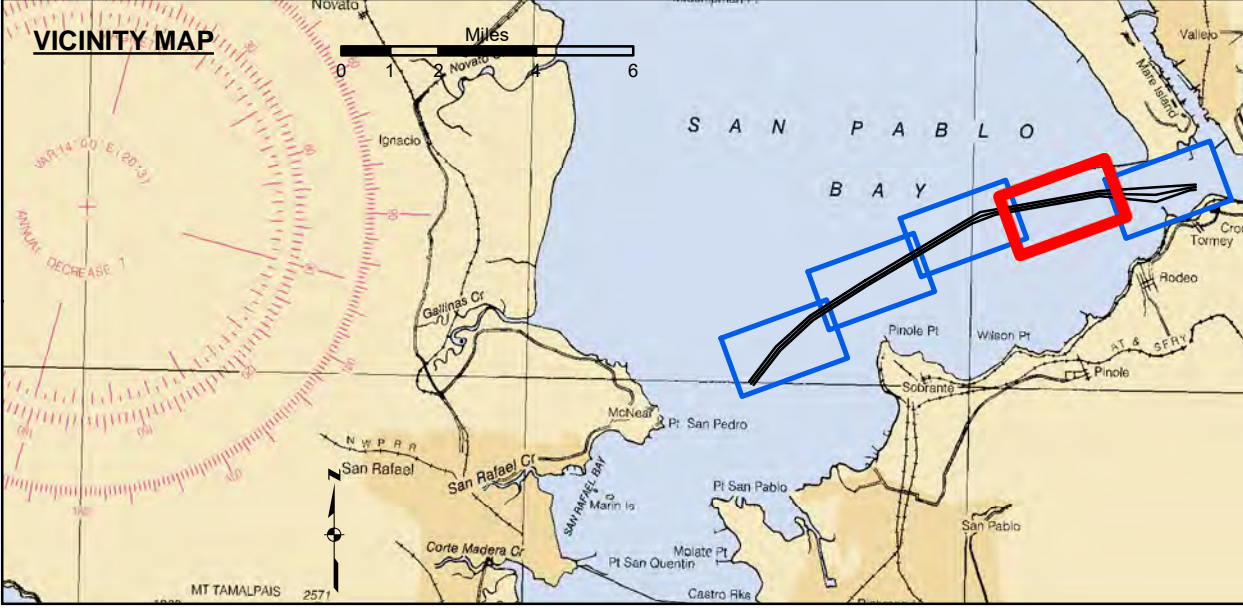
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| Prepared Under the Direction of TIMOTHY W. SHEBESTA LT COLONEL, C.E., DISTRICT ENGINEER | Chart Date: Nov 06, 2023 |
| Submitted: Hydro Survey Team Leader | Designed by: PDT |
| Recommended: Chief, Hydro Survey Section | Plotted by: PDT |
| Approved: Chief, Construction Branch | Checked by: PDT |
| | Drawn by: PDT |

SAN PABLO BAY CALIFORNIA
PINOLE SHOAL
CONDITION SURVEY
25 OCTOBER 2023
TO
02 NOVEMBER 2023

Sheet Reference Number
4 of 5



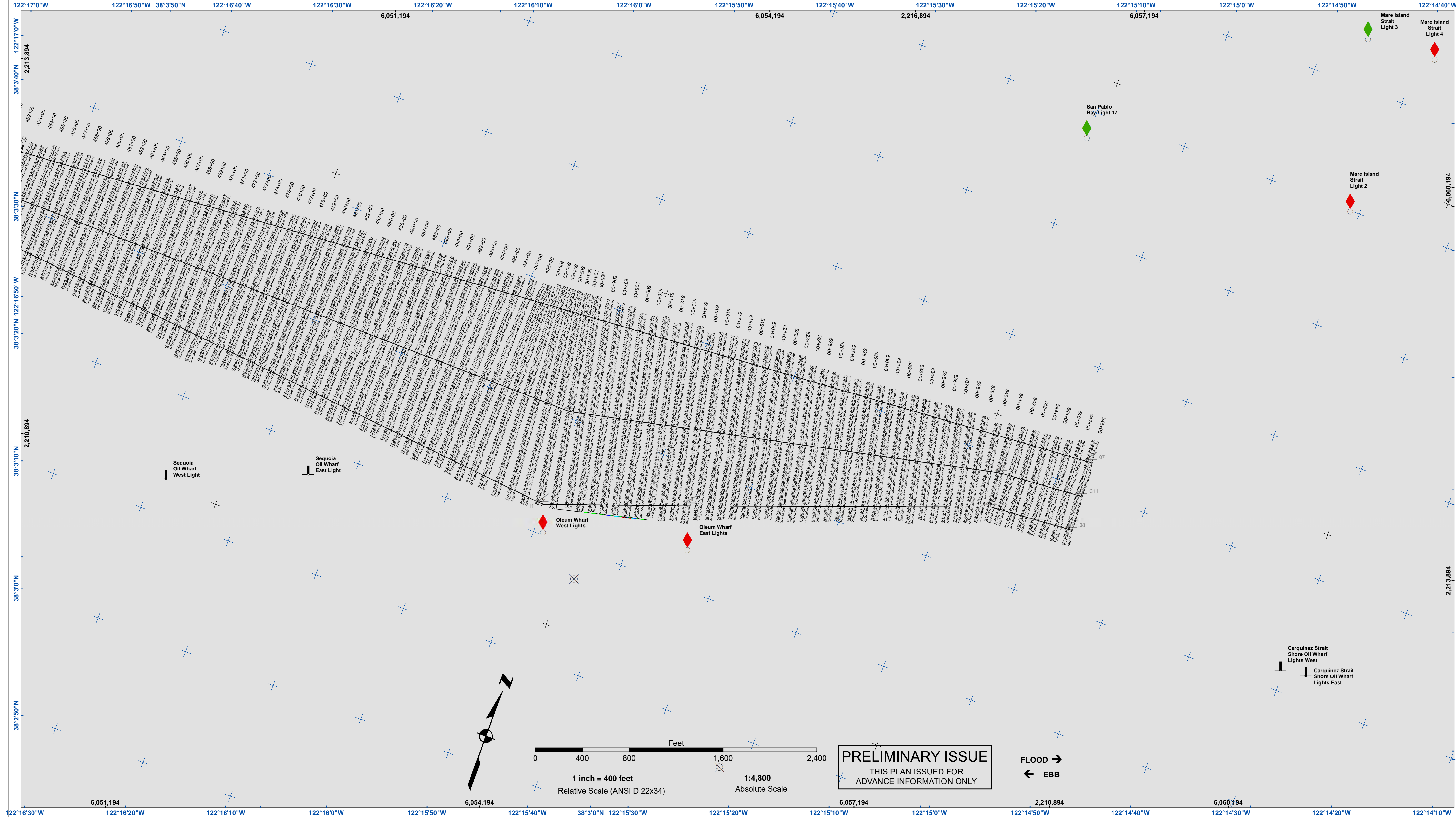
- | | | |
|----------------------------|--------------------|------------------|
| Federal Navigation Channel | Beacon, General | Countours |
| Shoaling Area | Obstruction Point | -35 |
| Placement Area | Navigation Buoy | -34 |
| Anchorage Area | Navigation Buoy | -33 |
| Wreck Area | Shoalest Sounding* | -32 |
| Submerged Wreck | | -31 |
| Angle Point | | |

NOTES:
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 TIDAL EPOCH 1983-2001
 TIDAL DATUM CONTROL STATION(S):
 - 8415056 PINOLE POINT - JUNE 2014
 - 8415216 MARE ISLAND - AUG 2013

HORIZONTAL CONTROL DATUM:
 NAD83(2011) EPOCH 2010.00
 CONTROL:
 POINT PINOLE 4 RESET | PID: JT2885 | BM 5056 A | PID: BBCN55 | 9415056
 OPUS 3192020
 5215 L 1975 | 5216 R 2006 | 5216 R 2006 | PID: BBCN7 | OPUS 100312011 | 9415216
 PID: BBN281 | OPUS 81112010 | 9415216

TIDE GAUGE:
 NAL & BRASS DISK SET IN DOLPHIN AT 10.0 FT MLLW APPROX POSITION: 38° 04' 9.9" N, 122° 15' 4.4" W
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SURVEY VESSEL / EQUIPMENT:
 S/V RANDY CUMMINGS
 - RESON TSS-R SINGLE-HEAD MULTIBEAM ECHOSOUNDER
 - POS MV 220 VERS HW2 5-12
 - IMU TYPE 42
 - TRIMBLE AT1675-540TS GPS ANTENNA



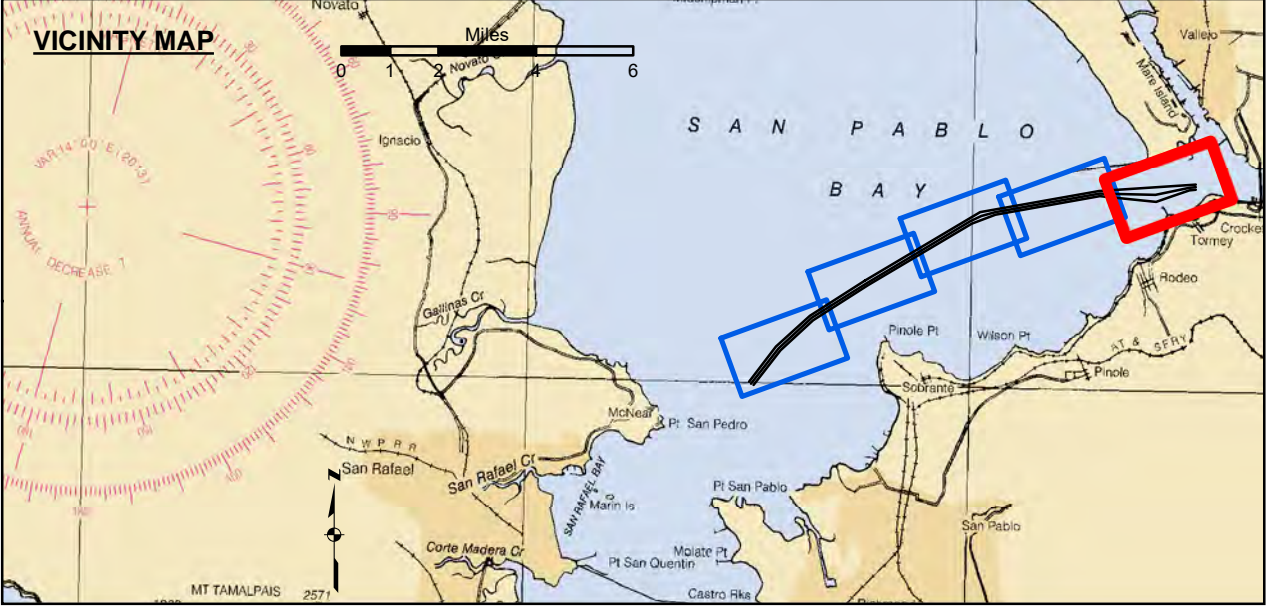
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 San Francisco, CA 94102

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| Prepared Under the Direction of TIMOTHY W. SHEBESTA LT COLONEL, C.E., DISTRICT ENGINEER | Chart Date: Nov 06, 2023 |
| Submitted: Hydro Survey Team Leader | Designed by: PDT |
| Recommended: Chief, Hydro Survey Section | Checked by: PDT |
| Approved: Chief, Construction Branch | Drawn by: PDT |

SAN PABLO BAY CALIFORNIA
PINOLE SHOAL
 CONDITION SURVEY
 25 OCTOBER 2023
 TO
 02 NOVEMBER 2023

Sheet Reference Number
5 of 5



- Federal Navigation Channel
- Shoaling Area
- Placement Area
- Anchorage Area
- Wreck Area
- Submerged Wreck
- Angle Point
- Beacon, General
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