

O N D A R O S A

129 Jasper Place
San Francisco, CA 94133
415.362.7441 Phone/Fax

MEMORANDUM

Architecture
Urban Design
Space Planning
Interior Design

November 3, 2021

Ms. Tricia Stevens, Contract Planner
800 Hearst Avenue
Berkeley, California 94710
916-698-4592
Email: tstevens@migcom.com

RE: BayWave & SLR
70-74 Liberty Ship Way
Application No. ADR 17-285
OR Project #2015.11

Dear Ms. Stevens,

Thank you for your efforts to bring information forward to the Planning Commission. This memo is regards to Chair Feller's request that we look at modeling of the site in regards to information available from BayWave.

As you are aware the new City of Sausalito General Plan Update which was adopted February 9, 2021 does not apply to this project as it was adopted subsequent to our application being deemed complete. The applicant understands that the updated General Plan adopts the sea level rise trends and assumptions outlined in Marin County's Bay Waterfront Adaptation and Vulnerability Assessment (BayWAVE). Our application was first submitted in 2016 and deemed complete February 15, 2018. It should also be noted that the BayWAVE documents identify potential issues but it does not provide solutions or provide codified language directing development. It highlights potential issues.

The Libertyship II project has considered Sea Level rise in all of its planning and design iterations. At the onset of my involvement on the project in 2015, the design team relied on predictions from the California Natural resources Agency [https://climateaccess.org/sites/default/files/CEC-500-2012-014%20\(1\).pdf](https://climateaccess.org/sites/default/files/CEC-500-2012-014%20(1).pdf)
THE IMPACTS OF SEA LEVEL RISE ON THE SAN FRANCISCO BAY (climateaccess.org)
Below is a specific San Francisco Bay, Year and Estimated Mean Sea Level rise table.
2000 = 0 meters = base year
2054 = .5 meters = 1.64 ft

O N D A R O S A

129 Jasper Place
San Francisco, CA 94133
415.362.7441 Phone/Fax

MEMORANDUM

Architecture
Urban Design
Space Planning
Interior Design

2083 = 1 meter = 3.23 ft
2100 = 1.4 meters = 4.59 ft

It is my understanding the Marin County BAYWAVE was birthed from this. For simplicity sake these dates and numbers are often shown as one date and one number, however they are based on probability and the data shows a range of dates and a range of heights.

I am making the assumption that the request made by Chair Feller is that we produce an analysis of the effects on the site from Sea Level Rise (SLR) using the BayWave worst case scenarios assumptions for Near term (Scenarios 1&2), Medium Term (Scenarios 3&4), and Long Term (Scenarios 5&6).

The table below shows BayWAVE Sea Level Rise Projections for San Francisco, CA Region

Time Period	Projected Range
by 2030	1.6 – 11.8 inches
by 2050	4.7 – 24 inches
by 2100	16.6 – 65.8 inches

There are 6 well documented BayWAVE Sea Level Rise worst case scenarios
Near term (Year 2030)

- Scenario 1 10 inches
- Scenario 2 10 inches+100-year storm surge

Medium Term (Year 2050)

- Scenario 3 20 inches
- Scenario 4 20 inches+100-year storm surge

Long Term (Year 2100)

- Scenario 5 60 inches
- Scenario 6 60 inches+100-year storm surge

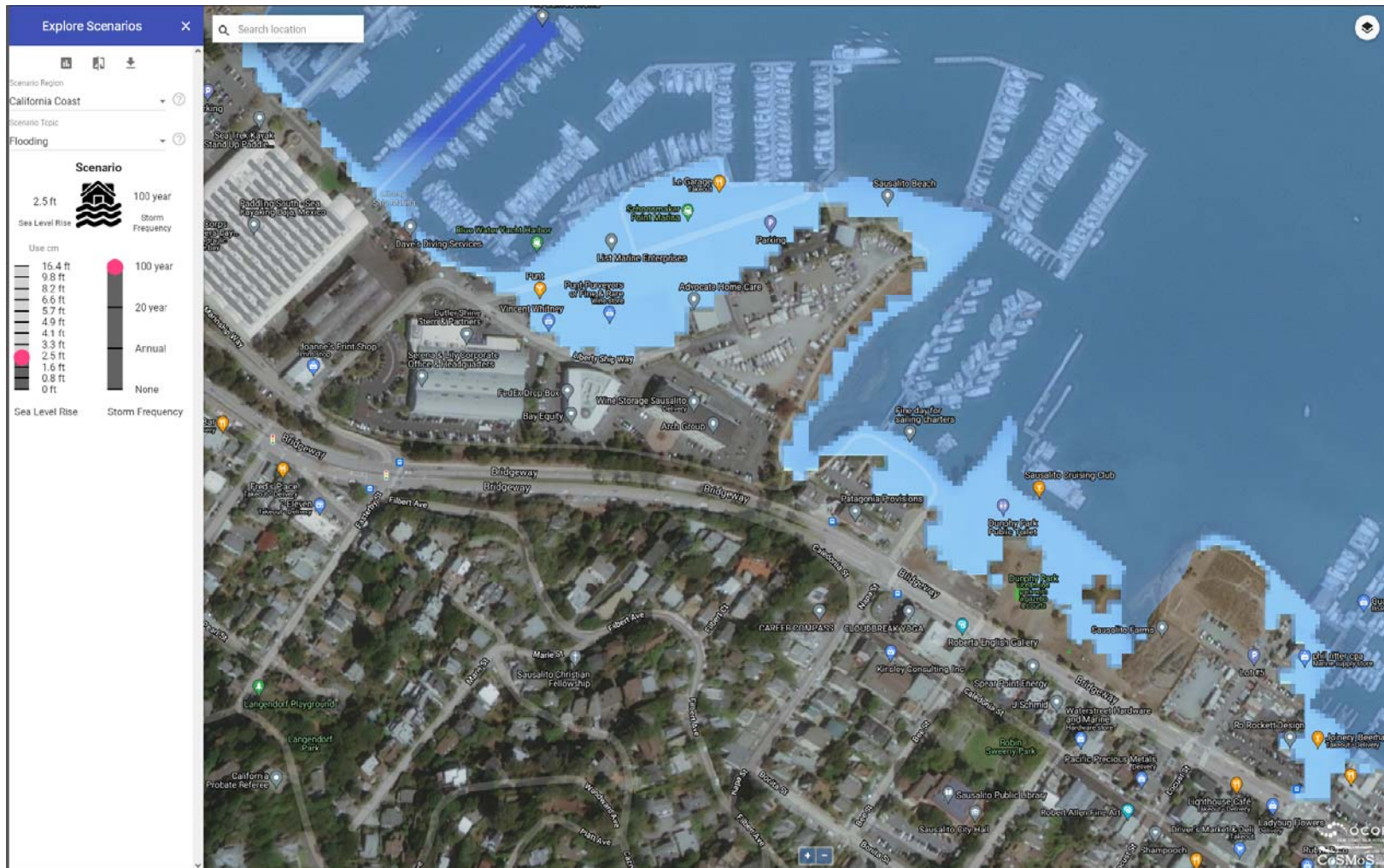
Please see the following image plates documenting Scenario 2 and Scenario 4 utilizing the worst case 100 year storm. The images are produced using the U.S. Geological Survey (USGS) Coastal Storm Modeling System (CoSMoS), which is also used to generate the BayWAVE scenarios. <https://ourcoastourfuture.org/hazard-map/>

O N D A R O S A

129 Jasper Place
San Francisco, CA 94133
415.362.7441 Phone/Fax

MEMORANDUM

Architecture
Urban Design
Space Planning
Interior Design



2.5' SLR(sea level rise) and 100ys (year storm), based on trend curves this would be the year 2045 and the site at peak storm event has access and is abv water

Bay WAVE

70-74 LibertyShip Way

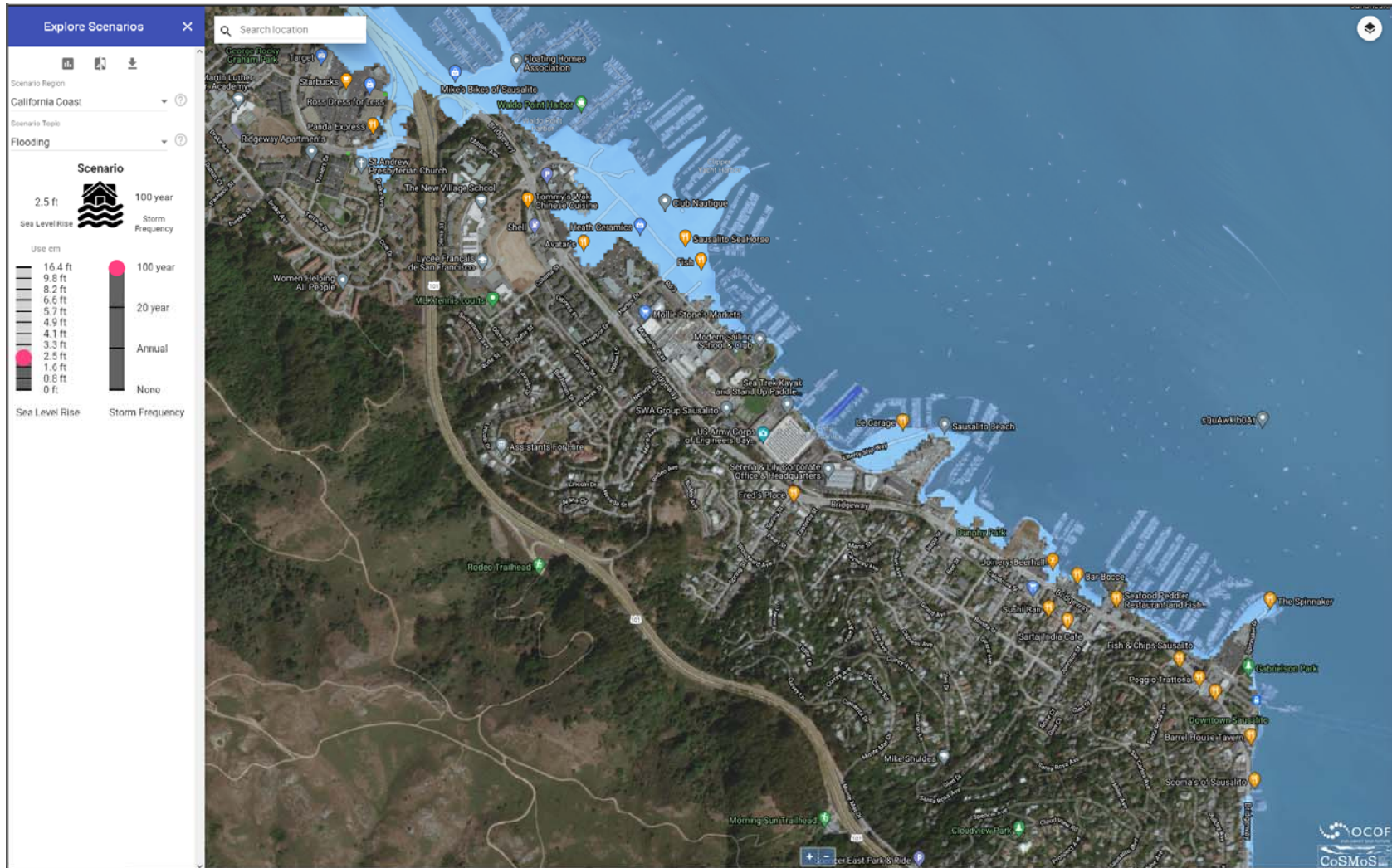
Page 3 of 12

O N D A R O S A

129 Jasper Place
San Francisco, CA 94133
415.362.7441 Phone/Fax

MEMORANDUM

Architecture
Urban Design
Space Planning
Interior Design



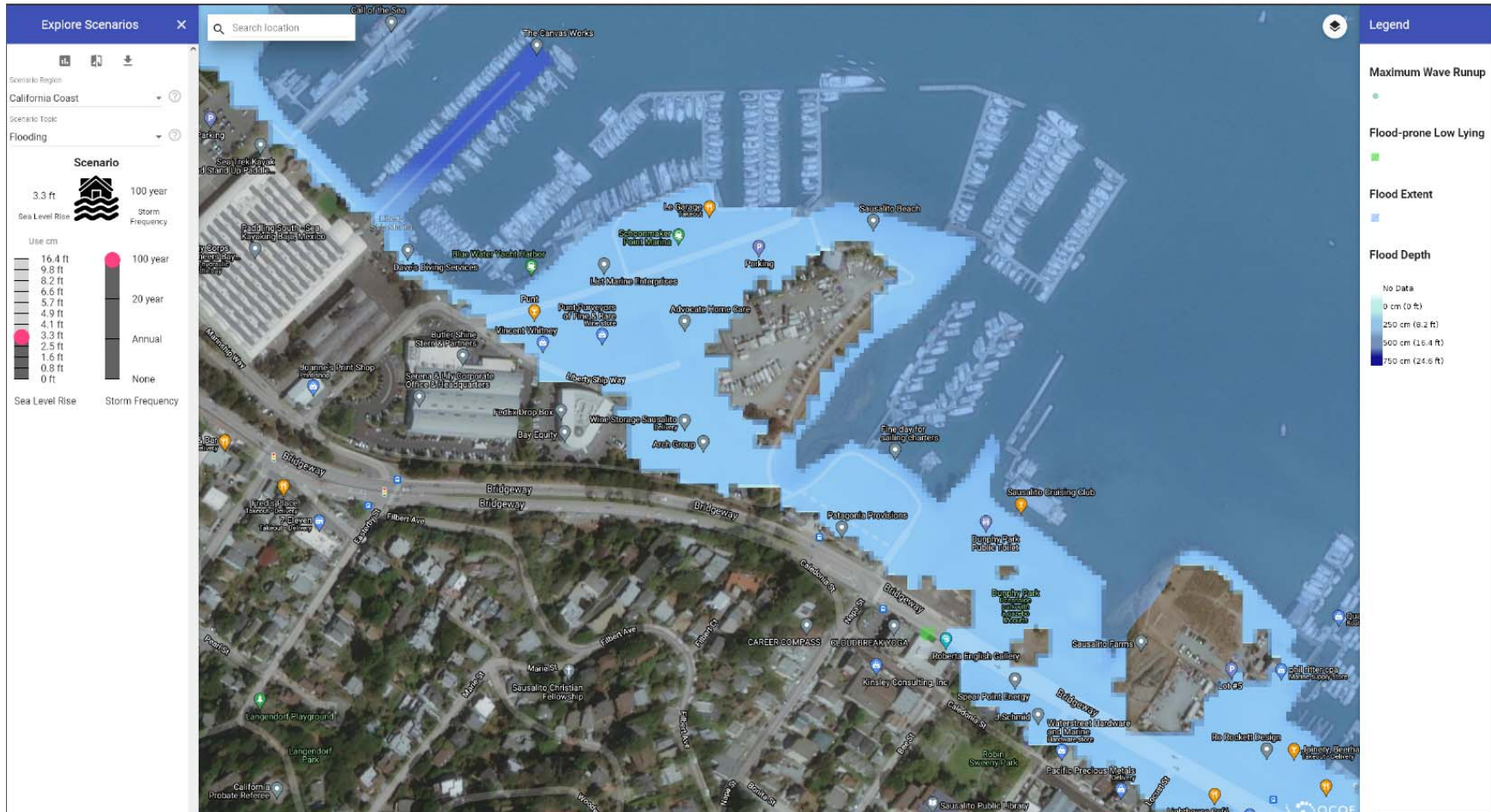
Sausalito wide, 2.5' SLR and 100ys, Molly Stone's, the 101 intersection and the southern portion of Bridgeway are in trouble
Bay WAVE
70-74 LibertyShip Way
Page 4 of 12

O N D A R O S A

129 Jasper Place
San Francisco, CA 94133
415.362.7441 Phone/Fax

MEMORANDUM

Architecture
Urban Design
Space Planning
Interior Design



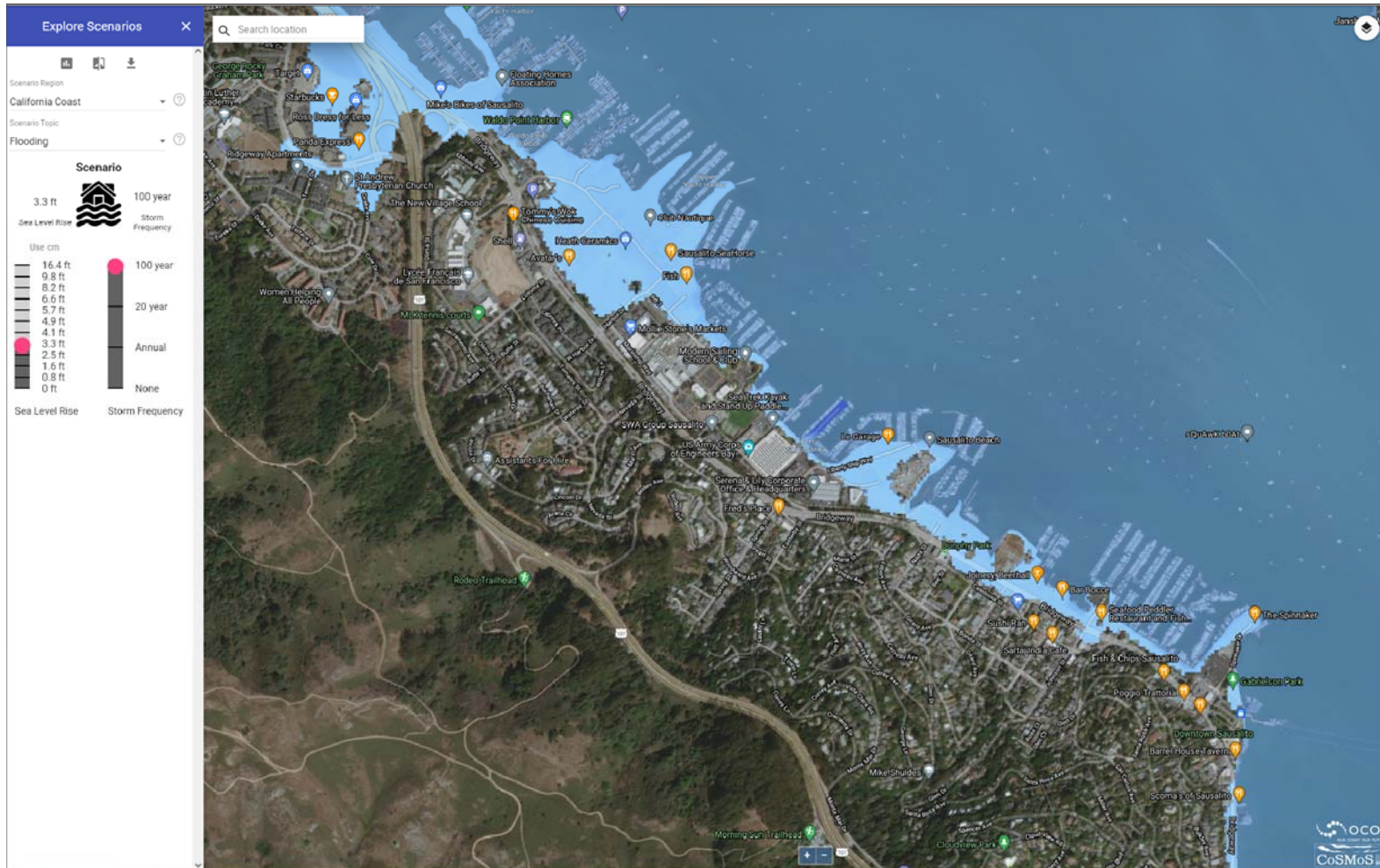
3.3' SLR(sea level rise) and 100ys (year storm), based on trend curves this would be the year 2075

O N D A R O S A

129 Jasper Place
San Francisco, CA 94133
415.362.7441 Phone/Fax

MEMORANDUM

Architecture
Urban Design
Space Planning
Interior Design



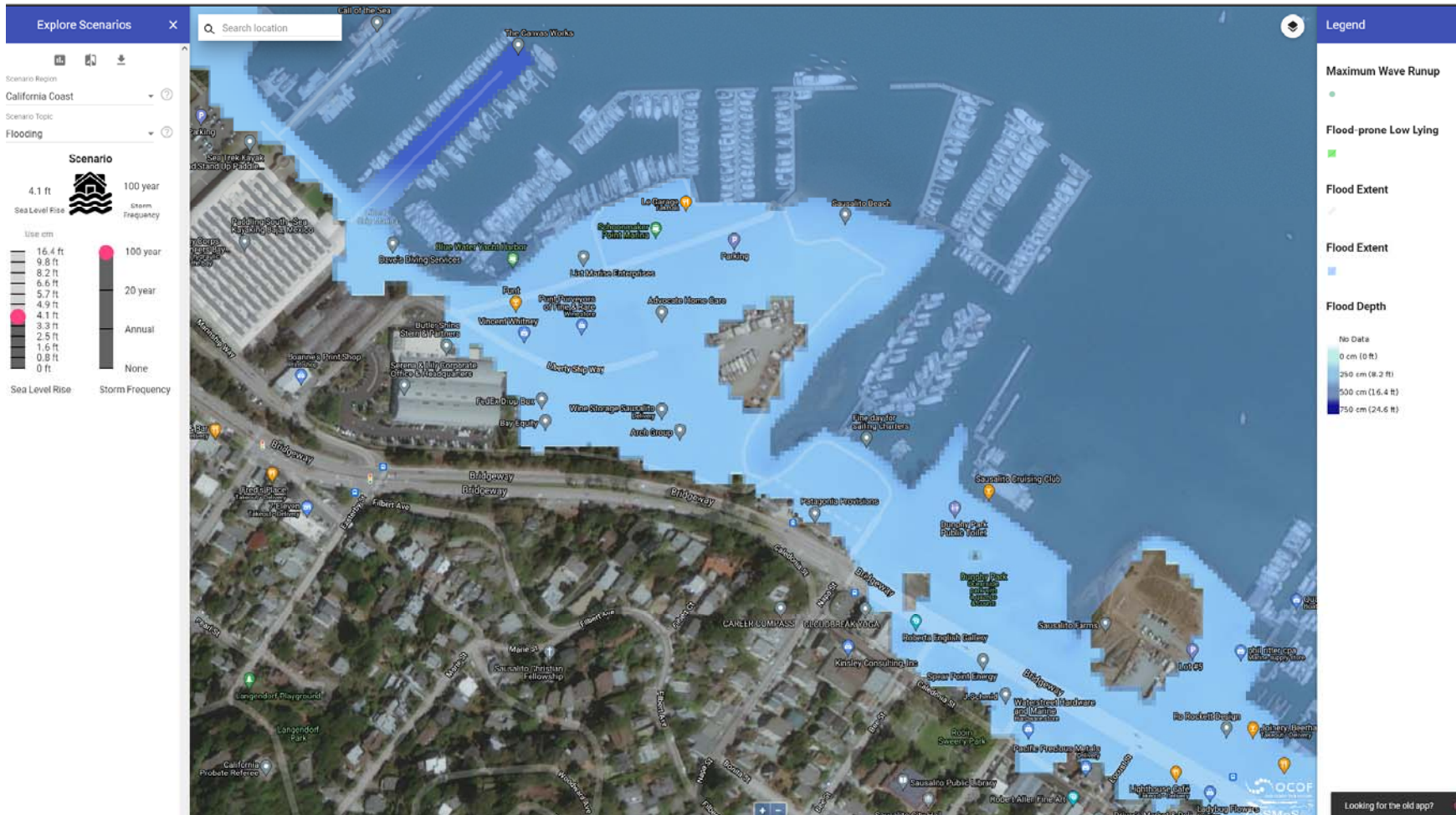
Sausalito wide, 3.3' SLR and 100ys, Northern Marinship, the 101 intersection and moving into Caledonia St are in trouble. Our portion of Schoonmaker Point has access issues during 100 year storm event but the site is above water
In regional terms, in San Francisco it has crossed Marina Blvd and a good portion of the Embarcadero.

O N D A R O S A

129 Jasper Place
San Francisco, CA 94133
415.362.7441 Phone/Fax

MEMORANDUM

Architecture
Urban Design
Space Planning
Interior Design



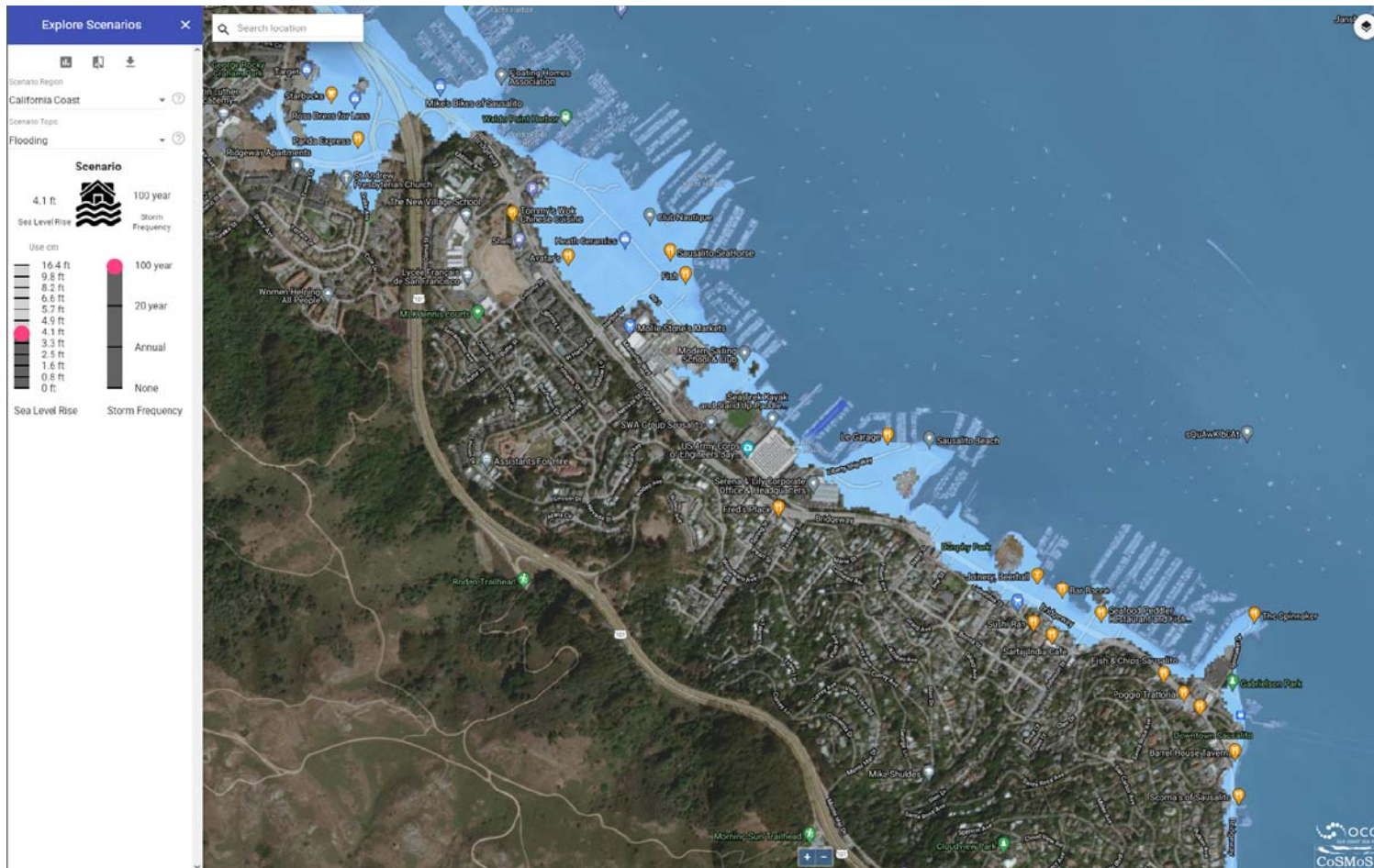
4.1' SLR(sea level rise) and 100ys (year storm), based on trend curves this would be the year 2085, corrective would have been required in the prior years, such as raising the floor level. It should also be noted that the lower end of SLR contemplated under the BayWAVE scenarios is only 16.6"

O N D A R O S A

129 Jasper Place
San Francisco, CA 94133
415.362.7441 Phone/Fax

MEMORANDUM

Architecture
Urban Design
Space Planning
Interior Design



Sausalito wide, 4.1' SLR and 100ys, A good portion of Sausalito is in trouble.

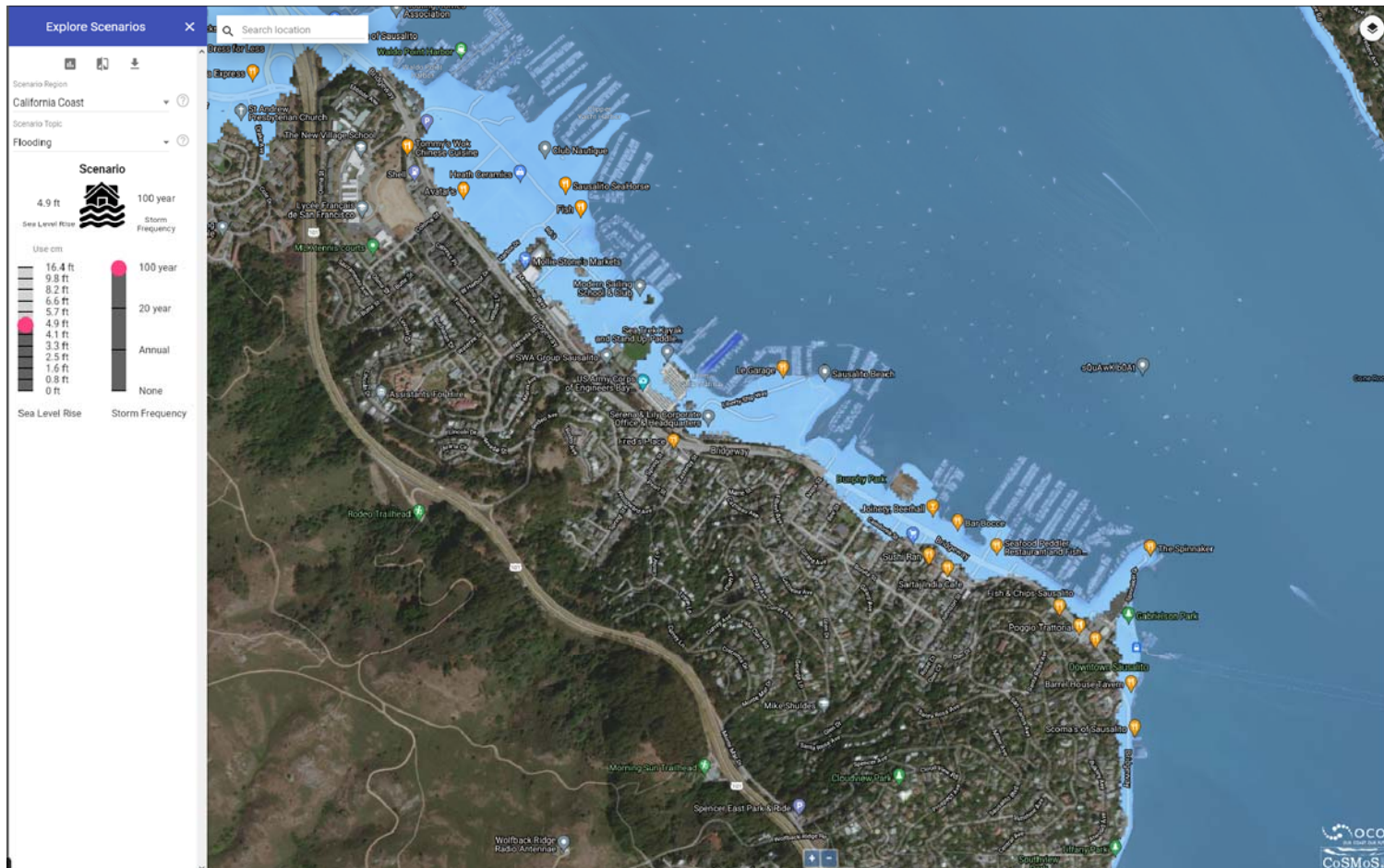
In regional terms, in San Francisco the inundation has moved up to Main Street along Market Street. Only a small portion of the Embarcadero remains abv water it has crossed Marina Blvd and a good portion of the Embarcadero, in Oakland the areas around the Port and the edges of Alameda are having problems

O N D A R O S A

129 Jasper Place
San Francisco, CA 94133
415.362.7441 Phone/Fax

MEMORANDUM

Architecture
Urban Design
Space Planning
Interior Design



Sausalito wide, 4.9' SLR and 100ys, All properties on the water side of Bridgeway, and the commercial district of Caledonia can no longer function. A good portion of Sausalito is in trouble.

In regional terms, in San Francisco the inundation has moved up to Beale Street along Market Street, consumed the Chase Center and half of Soma.

129 Jasper Place
San Francisco, CA 94133
415.362.7441 Phone/Fax

MEMORANDUM

Architecture
Urban Design
Space Planning
Interior Design

We have previously written on this subject and submitted this information using the language preferred by City Surveyor (J. Goldman) and Public Works (Bryant Ho). That is using the language of FEMA and FIRM maps

Presented to Sausalito Planning Dept. October 4th, 2017 and Sausalito Public works November 2018.

The BFE for the AE zone to the north and east of the site is +10 feet (88NAVD) and the BFE for the VE zone along the southerly margin of the site is +11 feet (88NAVD) FEMA Flood Certificates for 30 & 85 Libertyship (1st submitted in 2016 Application)

Definition of Base Flood Elevation (BFE)

Elevation of the 100-year flood. The BFE is determined by statistical analysis for each local area and is designated on the FIRMs. This elevation is the basis of the insurance and flood plain management requirements of the NFIP.

Nearby Existing Buildings

30 Libertyship	Finished Floor = 10.72'
80 Libertyship	Finished Floor = 9.25' +/-
80 Libertyship	Finished Floor = 11.15' +/-
85 Libertyship	Finished Floor = 8.8'
Harbor Master Bldg	Finished Floor = 12.1'

The 3 Proposed Buildings will sit at an elevation more than 1' above BFE and therefor will not be subject to mandatory FEMA flood insurance. These buildings will sit above the FEMA Special Flood Hazard Areas (A-Zone) and the Coastal High Hazard Areas (V-Zone)

70 Libertyship Bldg 'A'	Finished Floor = 12.6'
72 Libertyship Bldg 'B'	Finished Floor = 12.38'
72 Libertyship Bldg 'C'	Finished Floor = 12.32'

All Elevations shown abv are in 1988 NORTH AMERICAN VERTICAL DATUM (NAVD '88)

I do hope this memorandum is a helpful.

Sincerely,

Brent McDonald

Architect

O N D A R O S A

129 Jasper Place
 San Francisco, CA 94133
 415.362.7441 Phone/Fax

MEMORANDUM

Architecture
 Urban Design
 Space Planning
 Interior Design

National Flood Hazard Layer FIRMette



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A, V, A99
	With BFE or Depth Zone AE, AO, AH, VE, AR
	Regulatory Floodway
	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee, See Notes, Zone X
	Area with Flood Risk due to Levee Zone D
OTHER AREAS OF FLOOD HAZARD	Area of Minimal Flood Hazard Zone X
	Effective LOMRs
	Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES	Channel, Culvert, or Storm Sewer
	Levee, Dike, or Floodwall
OTHER FEATURES	Cross Sections with 1% Annual Chance Water Surface Elevation
	Coastal Transect
	Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary
	Coastal Transect Baseline
	Profile Baseline
	Hydrographic Feature
MAP PANELS	Digital Data Available
	No Digital Data Available
	Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.



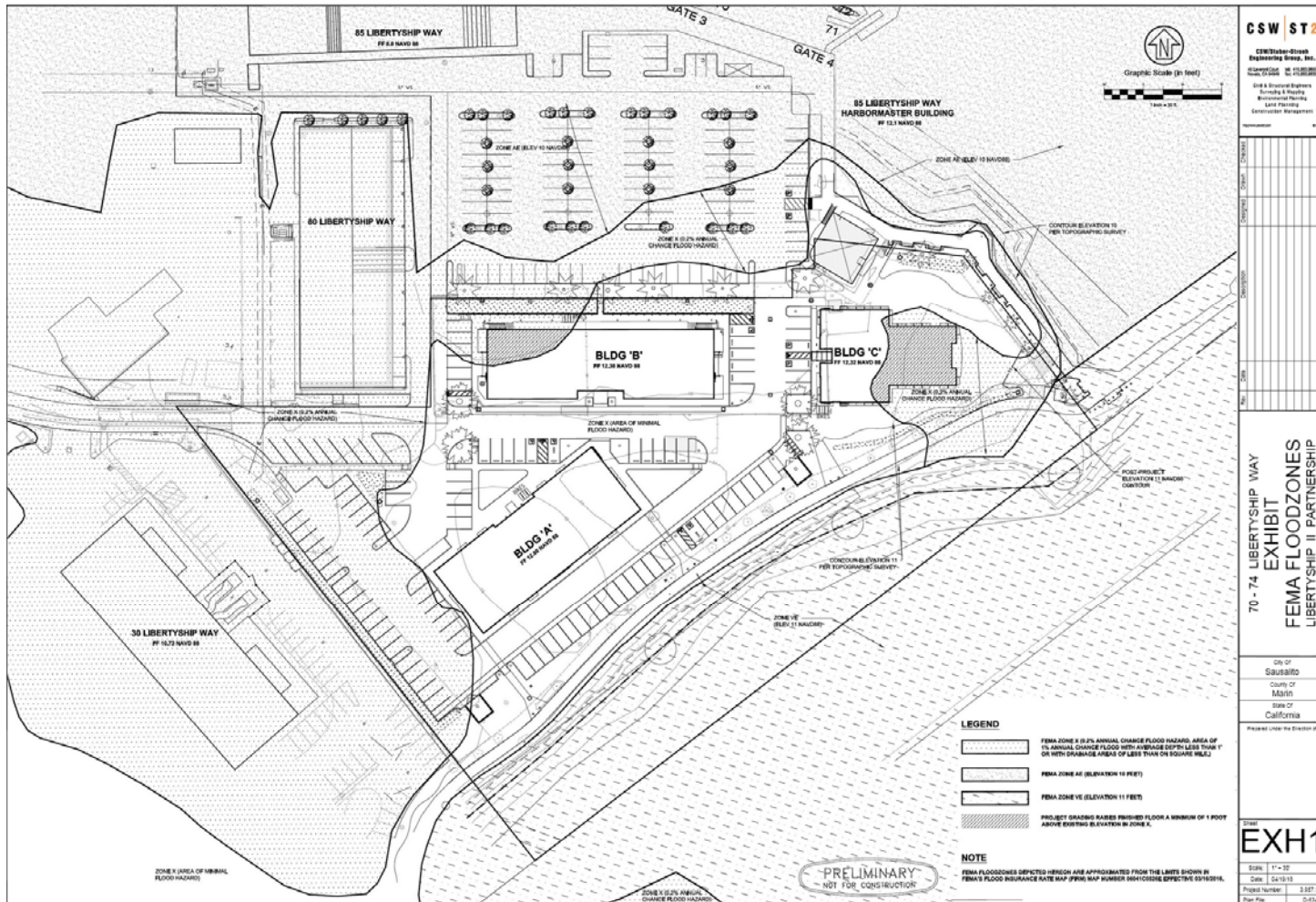
This map identifies the relative flood hazard, note our site in grey, this is better then brown and blue

O N D A R O S A

129 Jasper Place
 San Francisco, CA 94133
 415.362.7441 Phone/Fax

MEMORANDUM

Architecture
 Urban Design
 Space Planning
 Interior Design



This map incorporates the known FEMA published information with detailed survey information of the site. This exhibit has been in the project information since April of 2018. In short the 3 proposed buildings sit at a high point of the localised area and as such are identified by FEMA as an area of minimal flood hazard.

C:\aaprojects\2015-12-schooner\WORD\Libertship-MemoTricia-110321-SLR.doc