Harbor Commission

A Presentation on
Newport Harbor's Base Flood Elevation (BFE)
&
Balboa Island Sea Wall Height

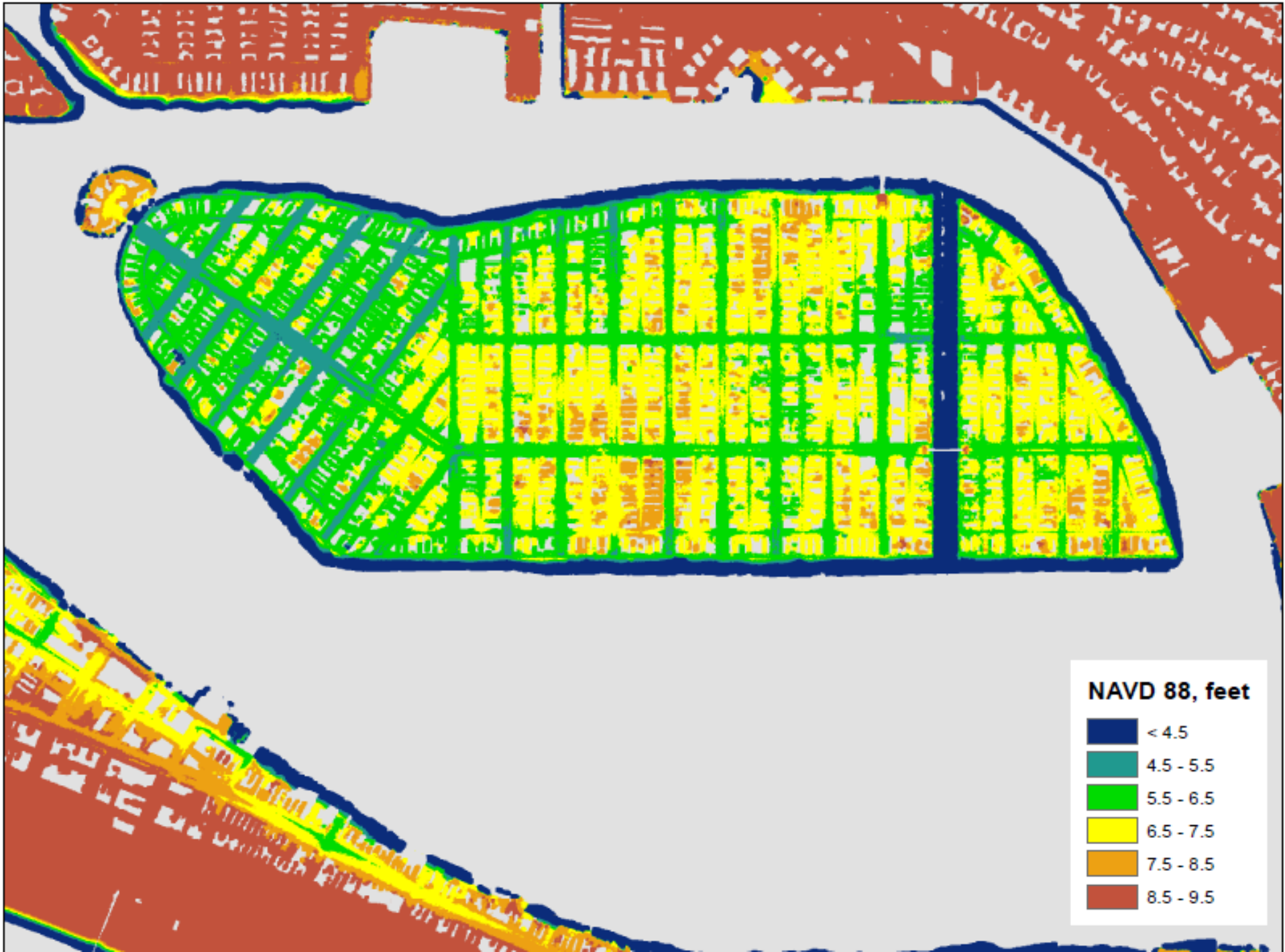
Presentation

1. Changes to the National Flood Insurance Program. Biggert-Waters Flood Insurance Reform Act of 2012

2. Results of the Base Flood Elevation Study by DHI.

3. Balboa Island - Sea Wall Replacement.

Special Flood Hazard Areas


NAVD 88, feet
< 4.5
4.5 - 5.5
5.5 - 6.5
6.5 - 7.5
7.5 - 8.5
8.5 - 9.5

Issues

- Balboa Island is entirely covered by the Special Flood Hazard Area.
- Almost all the properties on Balboa Island are below the current Base Flood Elevation (BFE) of 9.0. *(changed to 8.3)*
- How does a property owner obtain affordable Flood Insurance.

National Flood Insurance Program (NFIP)

- NFIP is voluntary and Newport Beach currently participates along with approx 550 other communities in California;
- NFIP provides federally backed affordable flood insurance to ALL participants;
- Over 1,500 Newport Beach residents are NFIP policy holders;
- Compliance with NFIP requires the CNB to reduce future flood risk through Ordinance.

National Flood Insurance Program Changes

- Hurricane Season in 2005 - Katrina, Rita, Wilma cost the nation $17.7Billion.
- Then came Sandy in 2012.
- Government paid out more $ in claims than premiums received.
- Additional financial burden to Taxpayers.

National Flood Insurance Program Changes

- Biggert-Waters Flood Insurance Reform Act of 2012
  - Rates are going to reflect current RISK.
  - The Higher the Risk the Higher the Premium.
- Same concept as auto insurance.

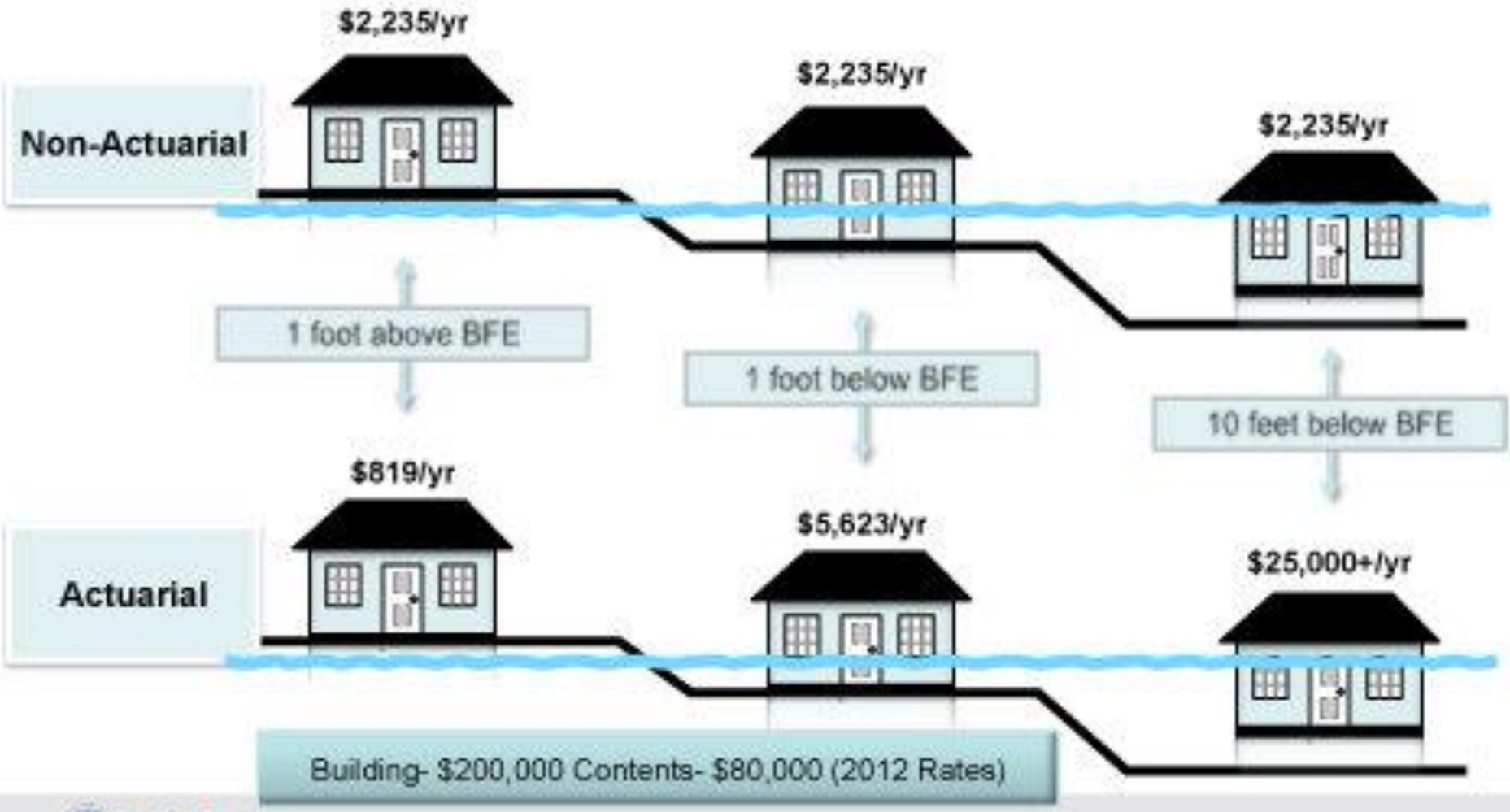
National Flood Insurance Program Changes

- Risk will be based on whether the property is above or below the Base Flood Elevation (BFE).
- Establishing the height of the BFE and the height of the property in reference to the BFE is critical.
- Base Flood Elevation on the FIRM was 9.0’.

- Changed to 8.0 in Feb. 2014

NFIP Rating Examples:
The Impact of Loss of Subsidies

Rate comparisons



Insurance Costs

- Insurance will increase at a rate of 25% per year until at adjusted rate.

  - Non-primary residence
  - Owners of businesses
  - Change of Ownership / New Loan
  - New Policy
  - Insurance Lapse

Address Risk?

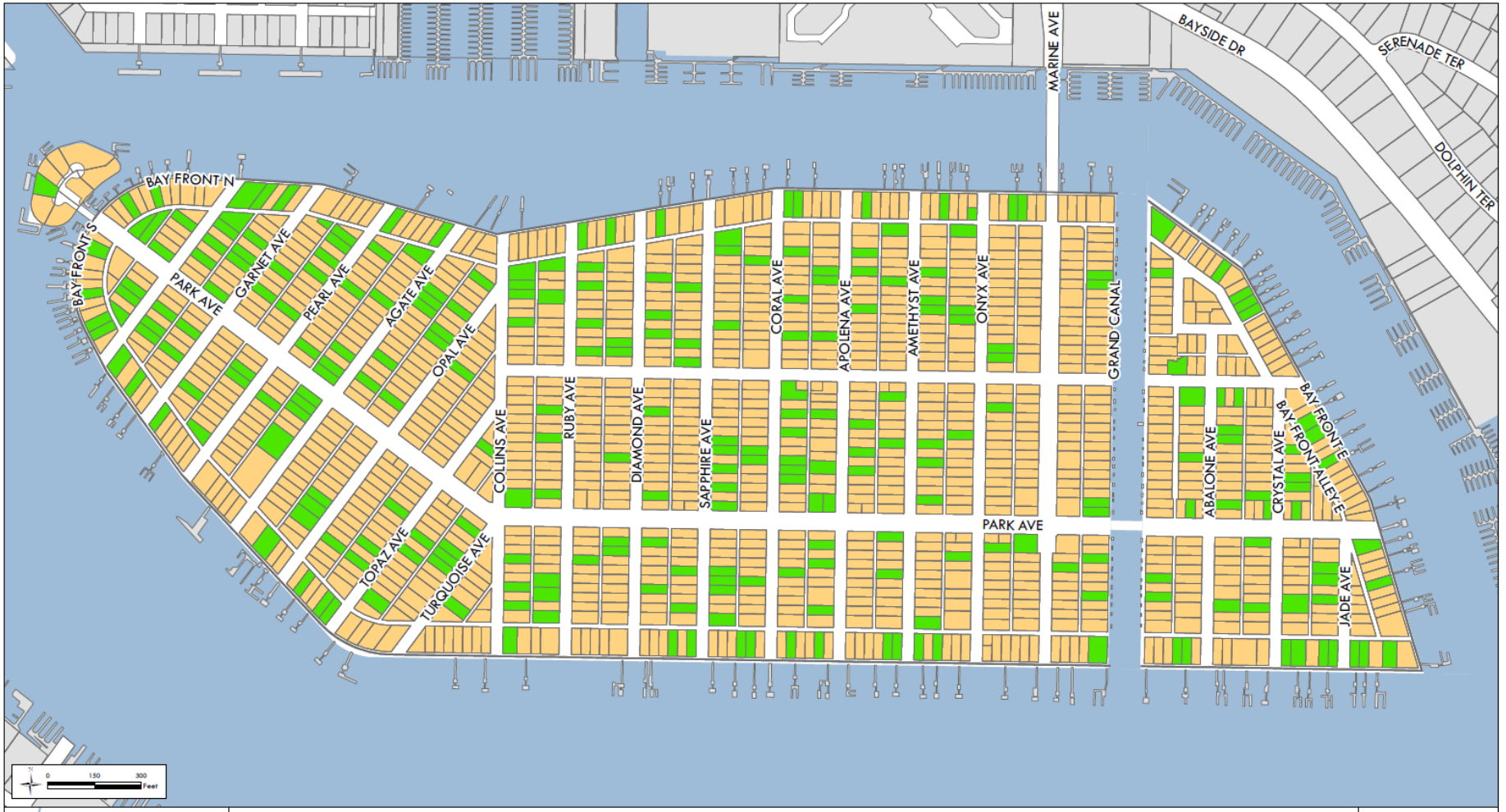
How do you Address your Risk?

- Know your property elevation compared to BFE.
  -You may need to hire a surveyor.

- Speak to your Insurance Agent.

www.newportbeachca.gov

Search: surveyors elevation



Balboa Island - EC's by Year (1989 - 2013)

1989 - 7 Units	1994 - 7 Units	1999 - 12 Units	2004 - 12 Units	2009 - 11 Units
1990 - 11 Units	1995 - 13 Units	2000 - 12 Units	2005 - 12 Units	2010 - 7 Units
1991 - 12 Units	1996 - 9 Units	2001 - 6 Units	2006 - 13 Units	2011 - 8 Units
1992 - 13 Units	1997 - 7 Units	2002 - 16 Units	2007 - 22 Units	2012 - 6 Units
1993 - 10 Units	1998 - 11 Units	2003 - 9 Units	2008 - 8 Units	2013 - 15 Units

Parcels with EC's - 269 Total or 19%

Parcels without EC's - 1,148 Total or 81%

City of Newport Beach
GIS Division
January 09, 2014

BalboaIslandFinaledPermitsVer2_11x17_Landscape.mxd

Reduce Insurance Costs

HOW DO YOU REDUCE INSURANCE RATES?

- Elevate the building;
- Discuss mitigation measures with your Agent;
- Increase the deductible;

- More information can be found at:

www.fema.gov/bw12

News!

- On March 21, 2014 President Obama signed the Homeowners Flood Insurance Affordability Act of 2014 into law.

- FEMA is actively analyzing and prioritizing the new law. We Know:

  - Lowers the recent rate increases on some policies.
  - Repeals certain rate increases that have already gone into effect.

Base Flood Elevation Study

Base Flood Elevation (BFE)

Study (public copy provided)conducted by DHI w/ help from Lyle Engineering:

1. To Determine if FEMA's BFE of 9.0' is correct?
2. To Determine BFE based on recent data?
3. Minimum Seawall height so Balboa Island is no longer in a flood zone.

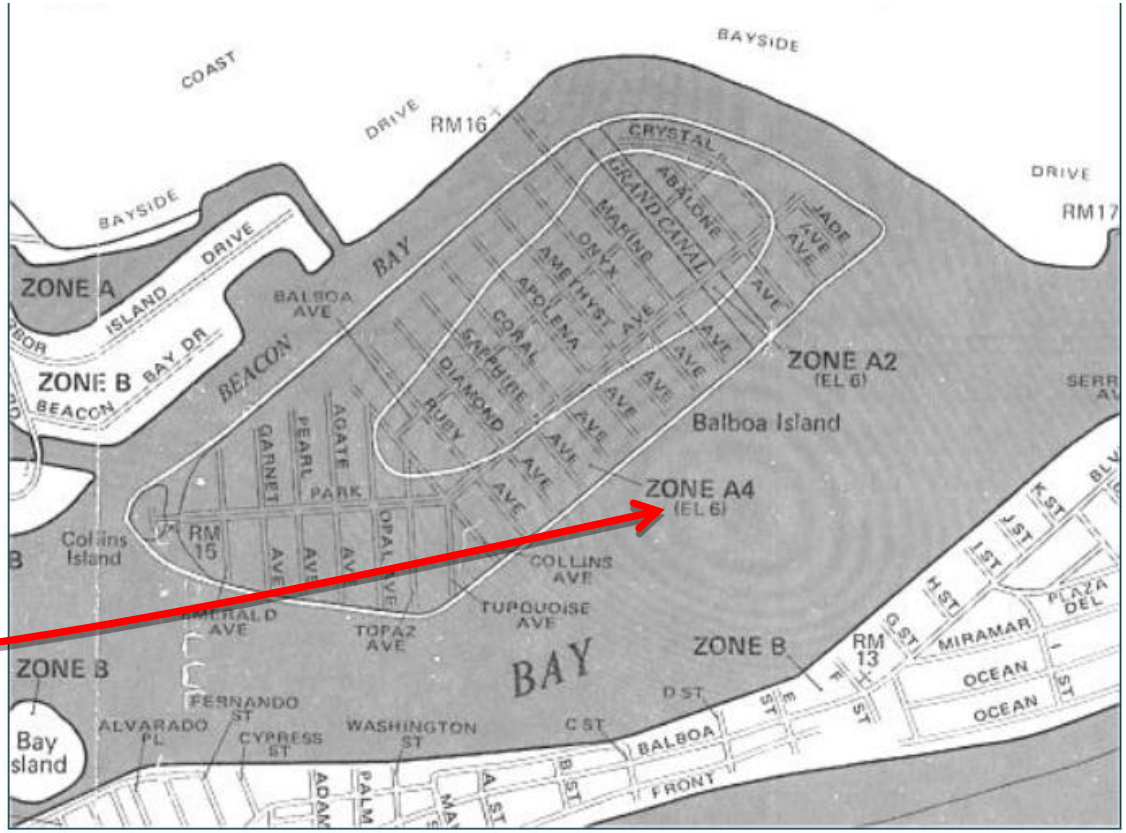
Base Flood Elevation (BFE)

TERMINOLOGY:

- NGVD29 – Established in 1929, as the vertical control datum establishing vertical control surveying.
- NAVD88 – Proposed in 1988, a more sophisticated method for vertical control surveying.
- Conversion between NGVD29 and NAVD88 is an increase of 2.3’ for our area.

Base Flood Elevation (BFE)

- Determine if FEMA's BFE of 9.0' is correct?
- 1978 The FIRM showed a Base Flood Elevation of 6.0' NGVD29.



Base Flood Elevation (BFE)

- In Late 2003 FEMA Converted its paper Flood Insurance Rate Maps to Digital Maps, but at the same time converted the maps to NAVD88.

- Flood Levels were converted and rounded using various conservative assumptions.

Base Flood Elevation (BFE)

- NGVD29 was converted to NAVD88:

  6.0’ + 2.3’ = 8.3’ NAVD88

- For some reason this was rounded UP to 9.0’ instead of DOWN to 8.0’.

  Confirmed Error by FEMA’s Contractor.

Base Flood Elevation (BFE)

- FEMA updated the maps to reflect accurate numbers.

Base Flood Elevation (BFE)

- Determine BFE based on recent Data.

- DHI performed engineering analysis of National Oceanic Atmospheric Administration (NOAA) tide gages using FEMA approved methods.

- Consultants analyzed the data two different ways.

Base Flood Elevation (BFE)

- Results:

- Published FIRM of BFE of 9.0’ is incorrect.

(FIRM has been updated to 8.0)

- Base Flood Elevation is 7.7’ today.

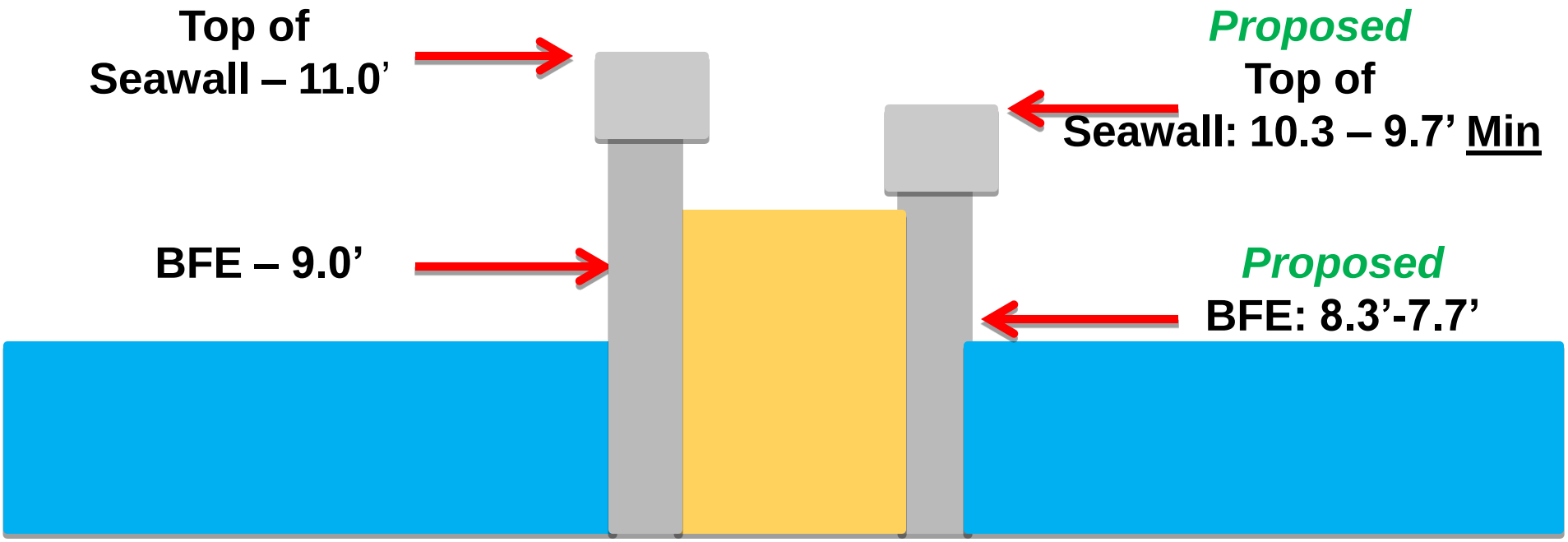
(FIRM rounds Up to 8.0’)

- Waves in harbor from ocean are minimal.

- Waves generated from wind require further analysis.

Seawall Height

- To be considered as a coastal levee, a 2-foot freeboard is required on the seawall.

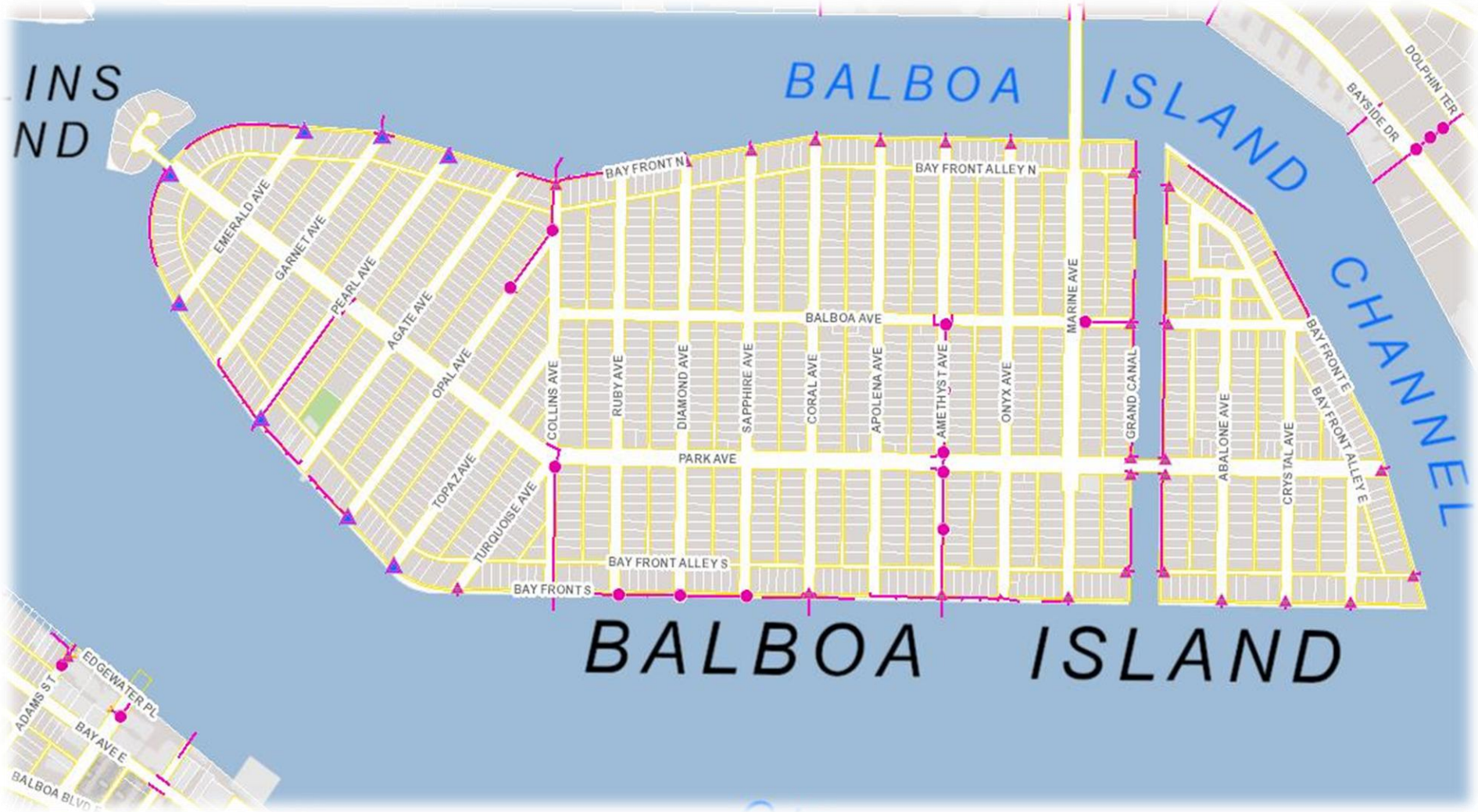


BFE

Base Flood Elevation	Description
9.0	Flood Insurance Rate Map Old Value – Not Used
9.0	Used by Planning Dept. in determining finished floor height for New Construction
8.3	Current Actual BFE Used in Development for Alterations.
8.0	Flood Insurance Rate Map Used to calculate insurance
7.7	Possible Future BFE

Balboa Island Sea Wall Height & Drainage

Existing Drainage System on Balboa Island



Tide Valves

Protects the Island from Flooding due to High Tides

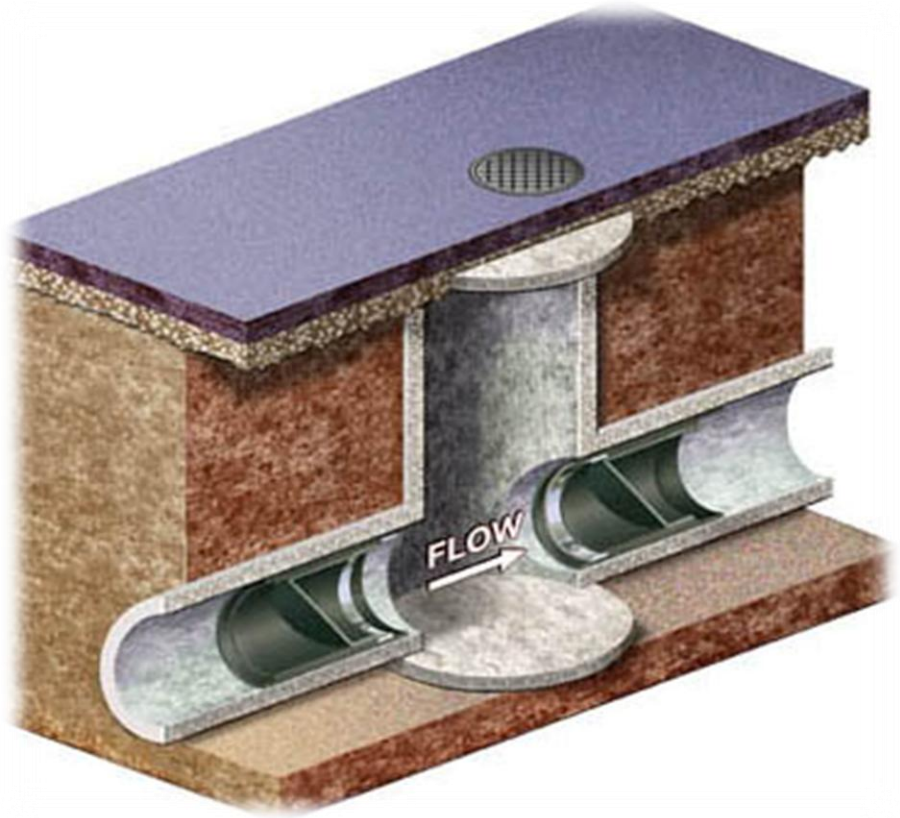
Currently Manually Operated

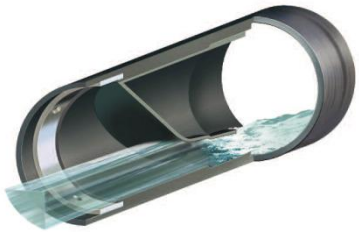
Power Assisted with
Manually Operated Up/Down Switch

Manually Operated
with Valve Key

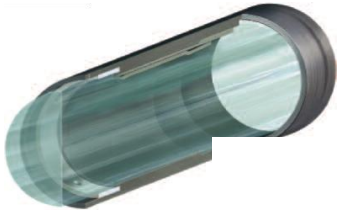
New Rubber Tide Valve (Check Valve)

- No Moving Mechanical Parts - Silent, Non-Slamming
- Non–Corrosive - Durable Rubber Construction
- Minimal Maintenance and Periodic Inspection Needed
- Around 1" of Water Pressure Opens Valve helping Eliminate Standing Water
- Simple Installation. Estimated 25-Year Life





Low Flow Open



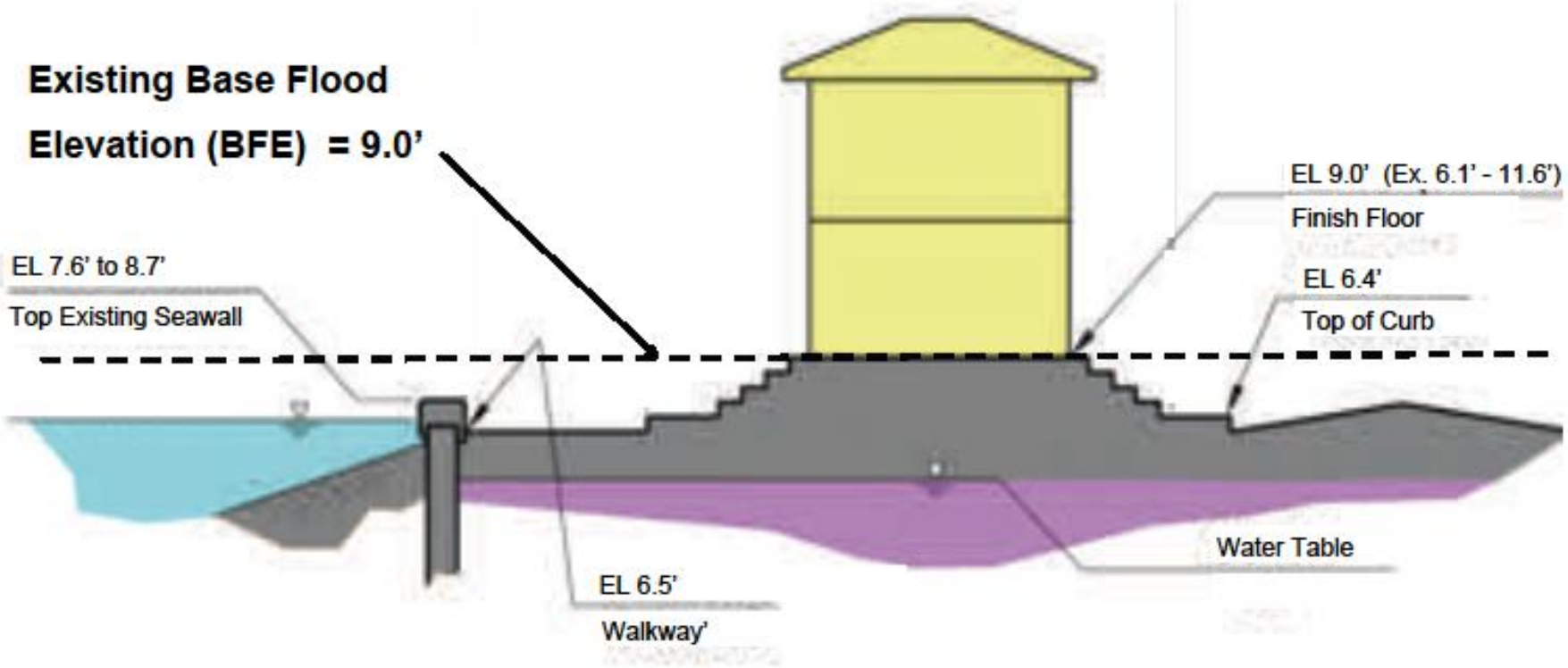
Full Flow Open

Closed Against Tide

New Rubber Tide Valve (Check Valve)

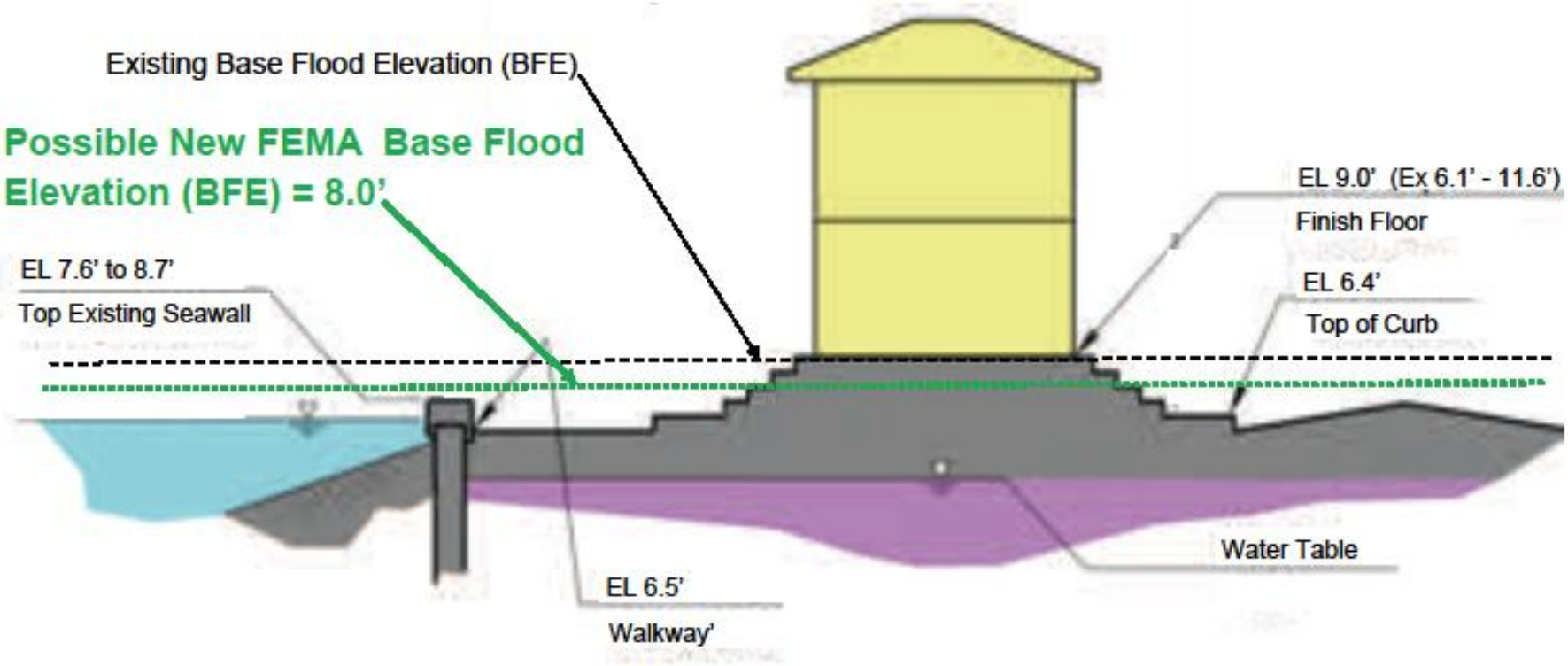
Existing Island Seawall and Flood Protection Conditions

- Existing FEMA Base Flood Elevation = 9.0' *(NAVD 88)*
- Finish Floor's at or above 9.0' will pay a lower Flood Insurance Rate.
- Finish Floor's below 9.0' will pay a higher Flood Insurance rate..



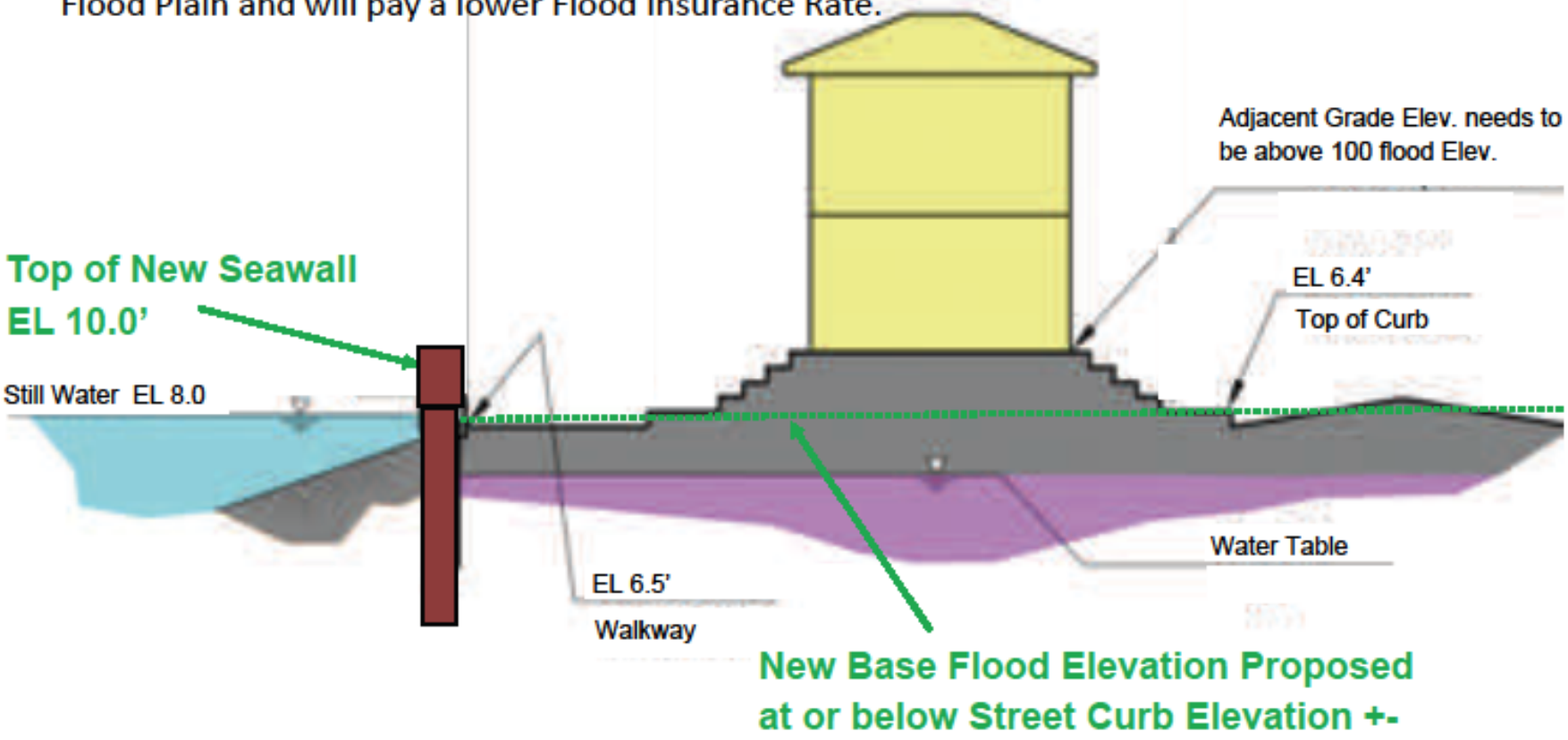
Existing Island Seawall and New FEMA Base Flood Elevation

- Possible New FEMA Base Flood Elevation = 8.0’ (NAVD 88)
- Requires Letter of Map Revision (LOMR) by FEMA
- Finish Floor’s at or above 8.0’ will pay a lower Flood Insurance Rate.
- Finish Floor’s below 8.0’ will pay a higher Flood Insurance Rate.

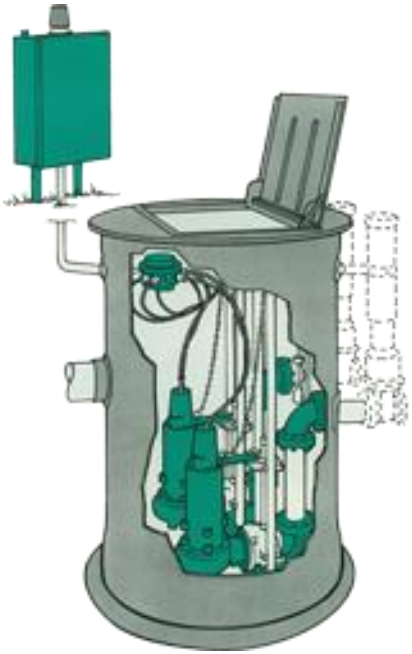


Proposed New FEMA Certified Island Seawall with Drainage System That would provide 100 Year Storm Protection

- Island Removed from prior FEMA Flood Plain with Seawall Elev. = 10.0'
  (Stillwater Elev. of 8.0' + 2.0' of Freeboard)
- Base Flood Elevation Determined by Drainage System—100 Year Storm Water Elevation.
- Adjacent Grade of Structure must be above 100 Year Storm Water Elevation to be out of the Flood Plain and will pay a lower Flood Insurance Rate.



NEW DRAINGE SYSTEM CONCEPT



Sub-Terrain Storm Water Pump Station

- Reduce Number of Discharge Points
- Automate Tide Values
- Provide High Water Pump-Out Capacity

Will also Need to Develop Acceptable Flood Proof Solution for Ferry Landing

Coordinated Effort To Reduce Potential Flooding and Reduce Insurance Rates

- FEMA to Process a Letter of Map Revision (LOMR) to Lower Base Flood Elevation from 9.0’ to 8.0’ & Collaborate with FEMA during the California Coastal Analysis and Mapping Project to ensure 8.0’ BFE.

- Review and Provide Comments to the pending Sea Level Rise Policy Guidance Document to Ensure Ability to Construct and/or Maintain Necessary City/Harbor Flood Protection Improvements.

- Work toward the Eventual Upgrading or Replacement of Balboa Island and Other Critical Sea Wall Flood Structures.

Questions ?

Community Development Department

Public Works Department

Protecting and Providing
Quality Public Improvements and Services