

Floodplain Management 101

City of La Porte, TX



Who We Are



Candyce Ward, PE, CFM

La Porte Floodplain
Administrator



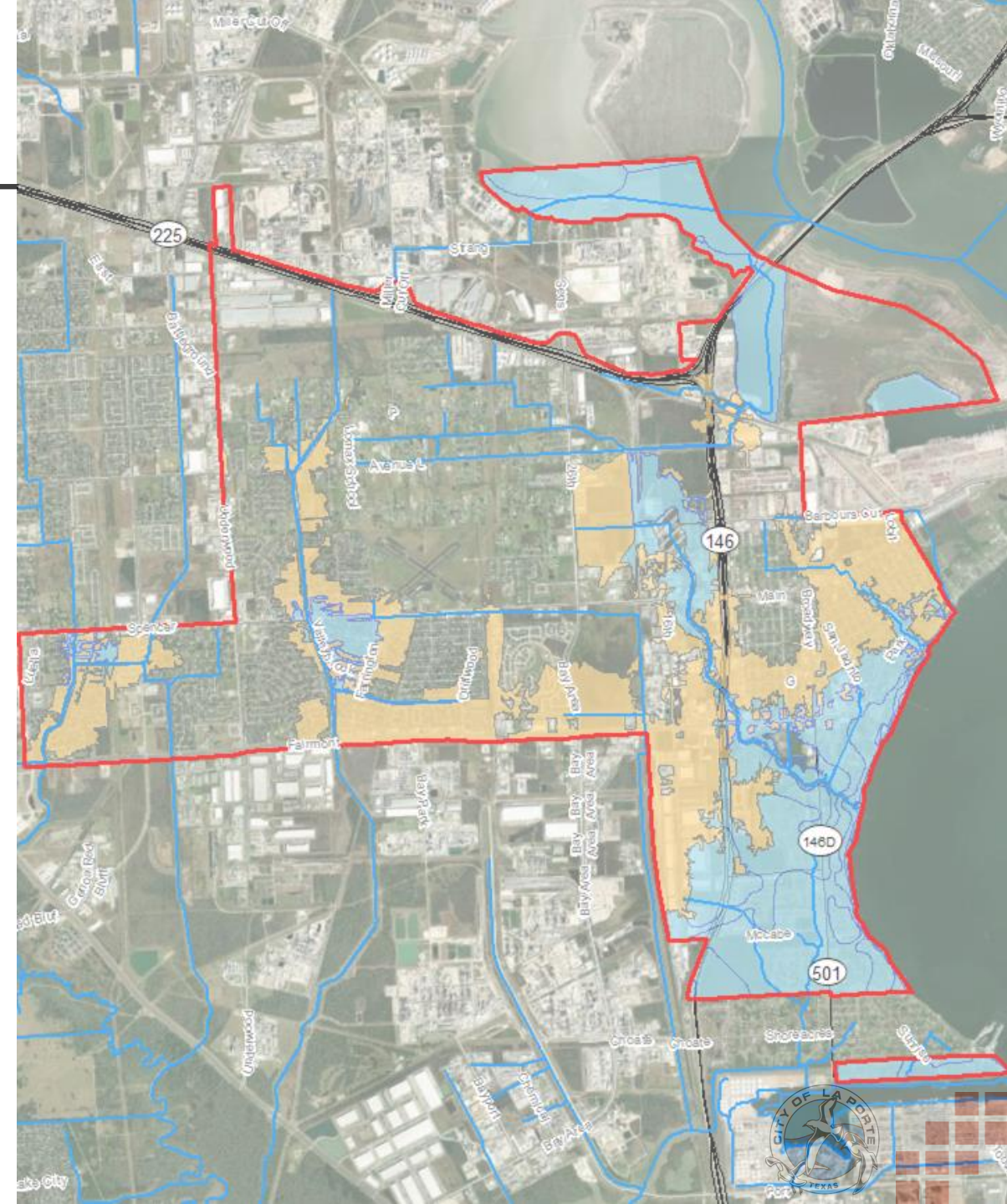
Alec Weninger, PE, CFM

La Porte Floodplain Development
Permit Reviewer

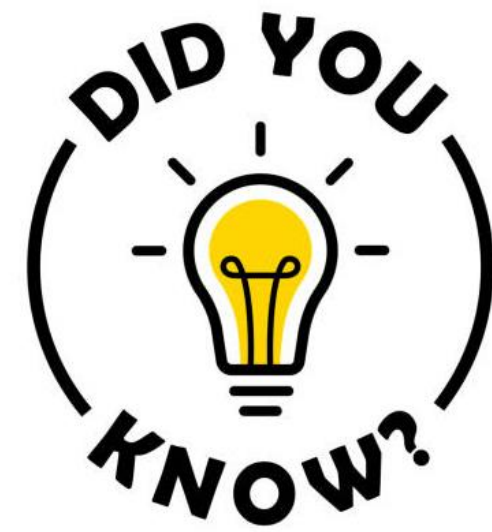


Agenda

- ❑ **Flood Facts & Definitions**
- ❑ **La Porte Floodplain Overview**
 - ❑ Riverine vs. Coastal Flood Zones
- ❑ **Why Floodplain Permits Are Required**
 - ❑ Ensures we are “Building Back Better”
 - ❑ FEMA CRS Program
- ❑ **How the Permitting Process Benefits You**
 - ❑ Reduced Flood Insurance Rates
 - ❑ Helps to Manage Your Flood Risk
- ❑ **How to Submit Permits**
 - ❑ Permit Application Requirements
 - ❑ Common Permit Errors



Flood Facts



- ❑ The “**100-year storm**” is a bit misleading – it does NOT mean a flood that size will happen once every 100-years, it means that **there is a 1% chance each year** of a flood that severe occurring based on the best available data at the time the maps were created.
- ❑ If your home is below the 100-year floodplain, it has more than a **26% chance of getting flooded** over a 30-year mortgage period.
- ❑ By elevating your home at or above the 500-year flood level, you can reduce your flood risk to **6% or less** over a 30-year mortgage.



Definitions

FEMA – Federal Emergency Management Agency

- Sets the Floodplain Boundaries and Manages the Floodplain Maps (FIRM Maps)

NFIP – National Flood Insurance Program

- Provides Federally-Backed Flood Insurance
- Works with Communities to Adopt and Enforce Basic Flood Management Regulations

CRS – Community Rating System

- Voluntary incentive program that rewards communities that have higher standards than the NFIP's minimum requirements
- Lowers your flood insurance premium!
 - The City of La Porte expects to move up to Class 5 this year, which offers a 25% discount! Currently only 4 communities in Texas have a Class 5 or better rating

BFE – Base Flood Elevation = 100-year Flood Elevation



Floodplains

Types of Flood Risks on FEMA Maps

Riverine Only

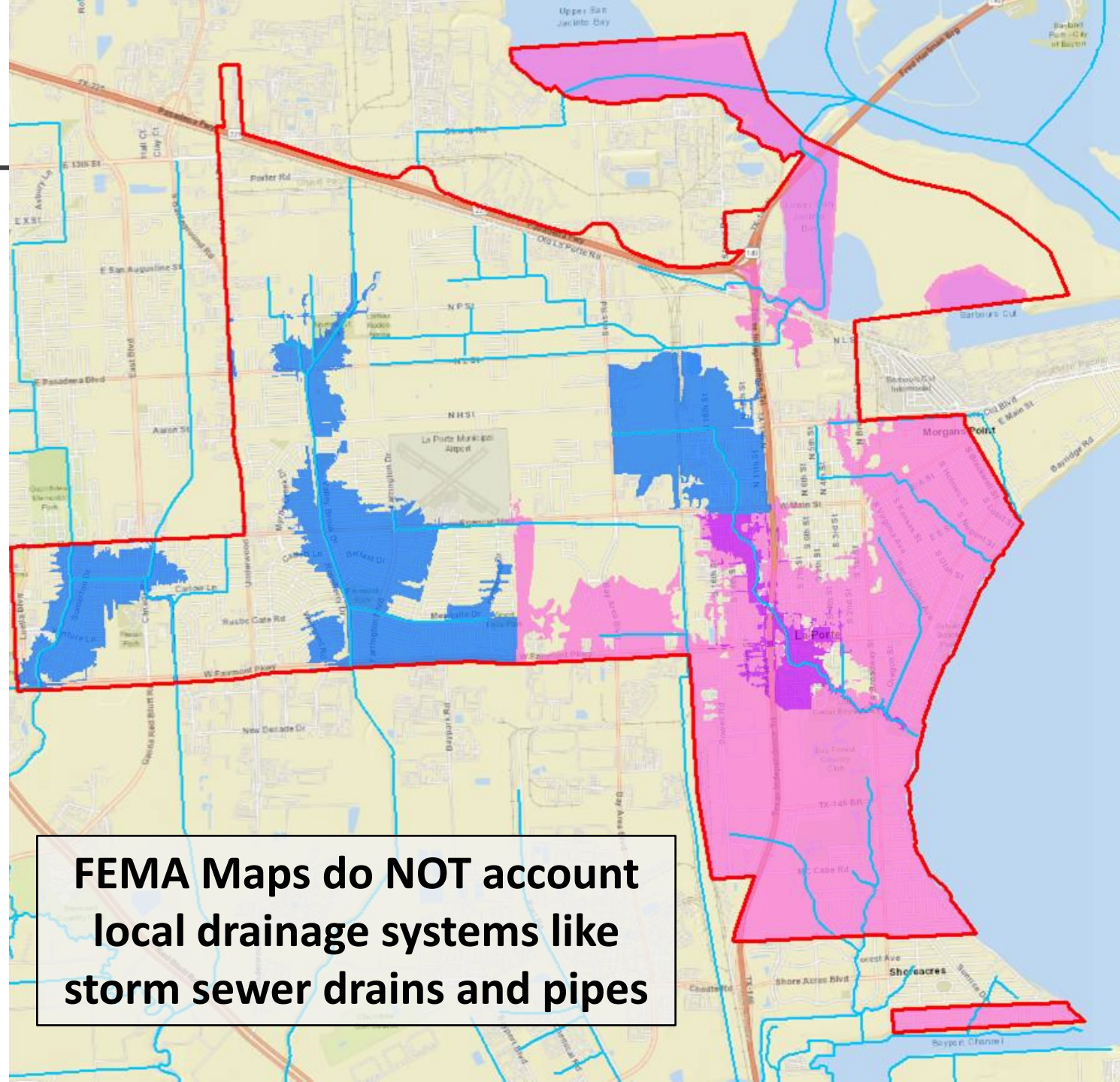
- Associated with a Specific Stream
- Not every stream has a mapped risk – only the major ones in La Porte do

Coastal Only

- Associated with Storm Surge & Waves

Combined Risk

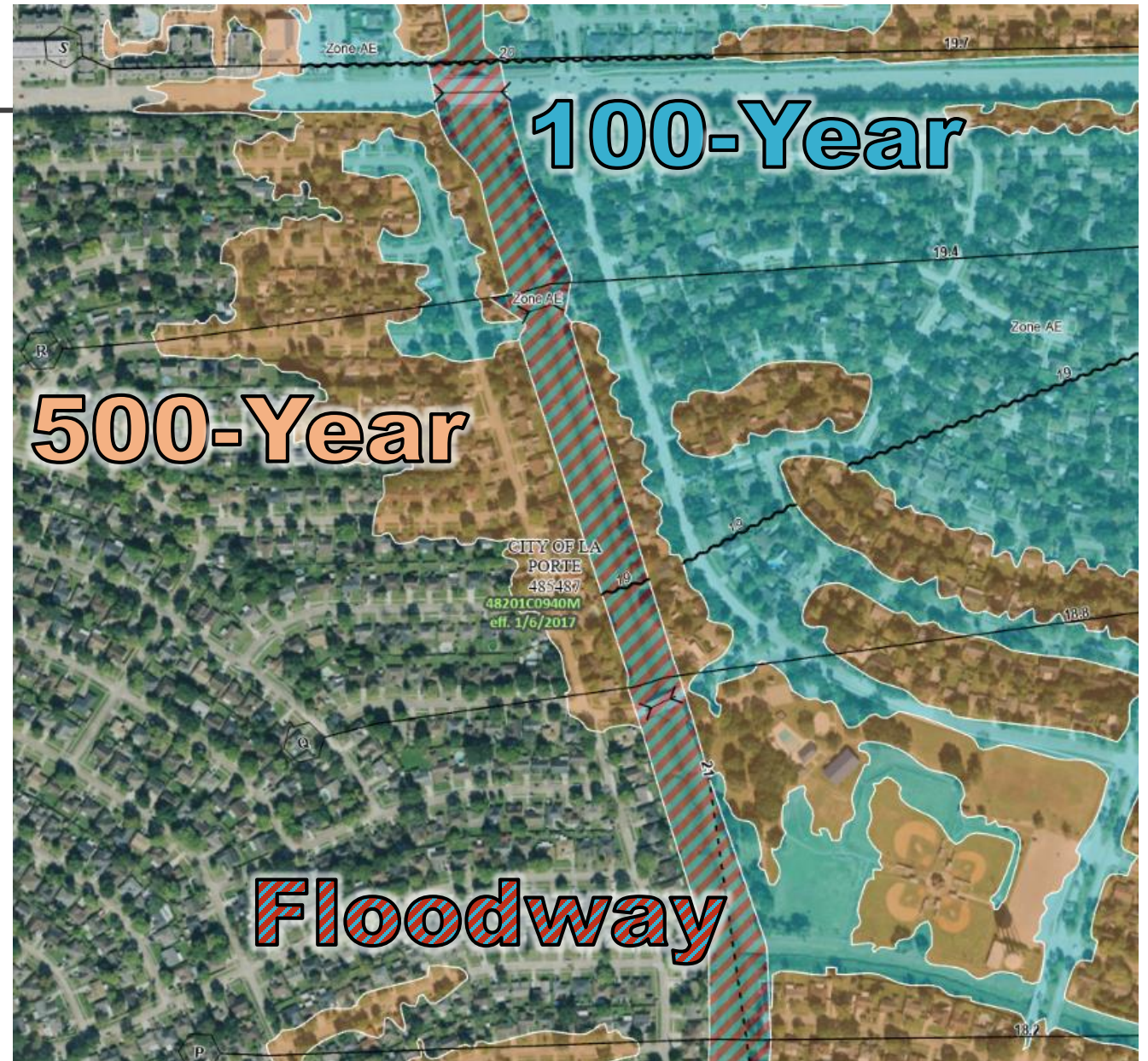
- Risk of **BOTH** Stream Flooding & Storm Surge
- Only currently applies in the Cedar Bayou watershed



FEMA Maps do NOT account local drainage systems like storm sewer drains and pipes

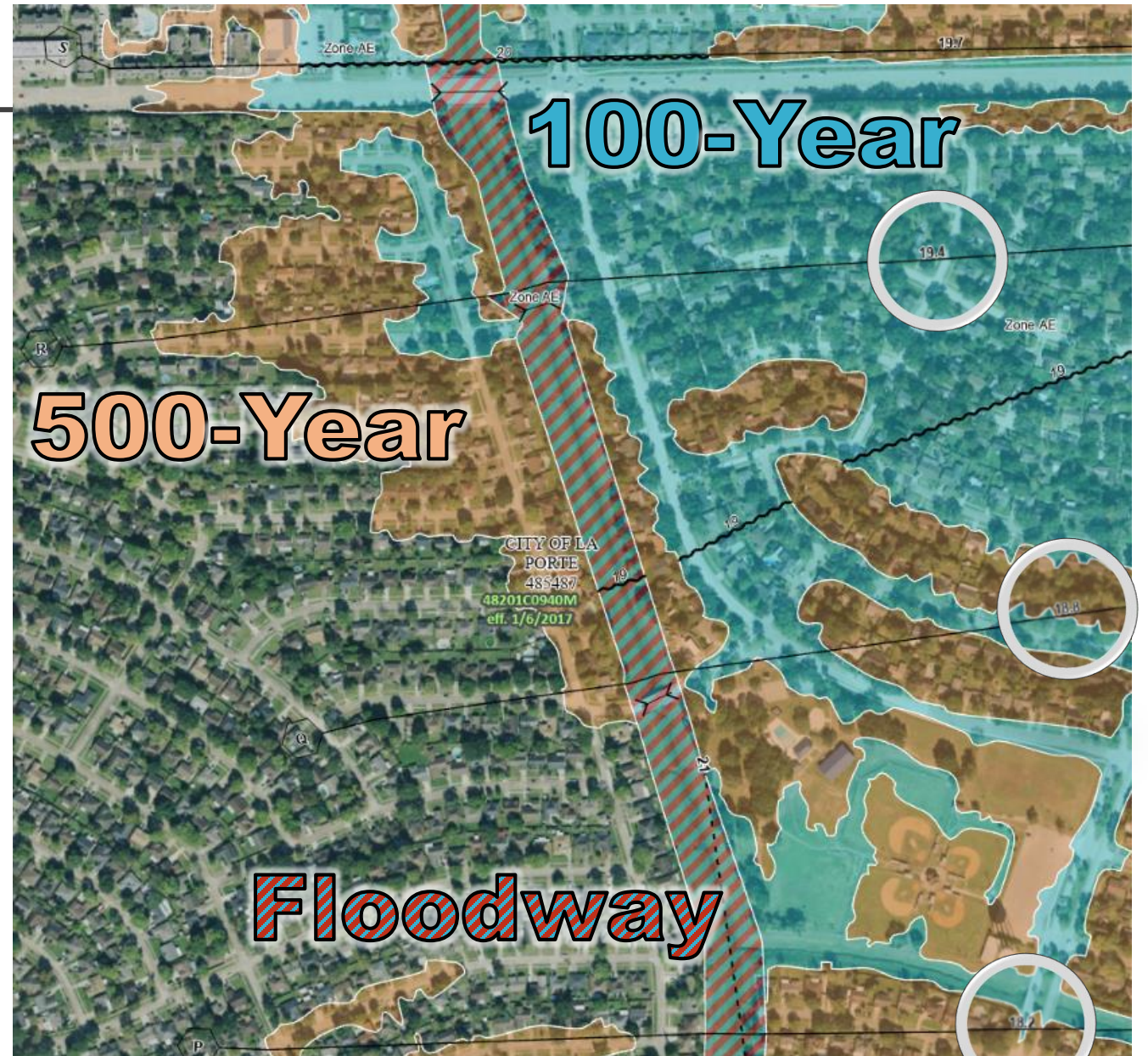
Riverine Zones

- ❑ Associated with a specific stream
- ❑ Typically contains
 - ❑ 500-year (0.2%)
 - ❑ 100-year (1%)
 - ❑ Floodway
- ❑ Has varying floodplain elevations along the stream



Riverine Zones

- Has varying floodplain elevations along the stream



Riverine Zones, cont.

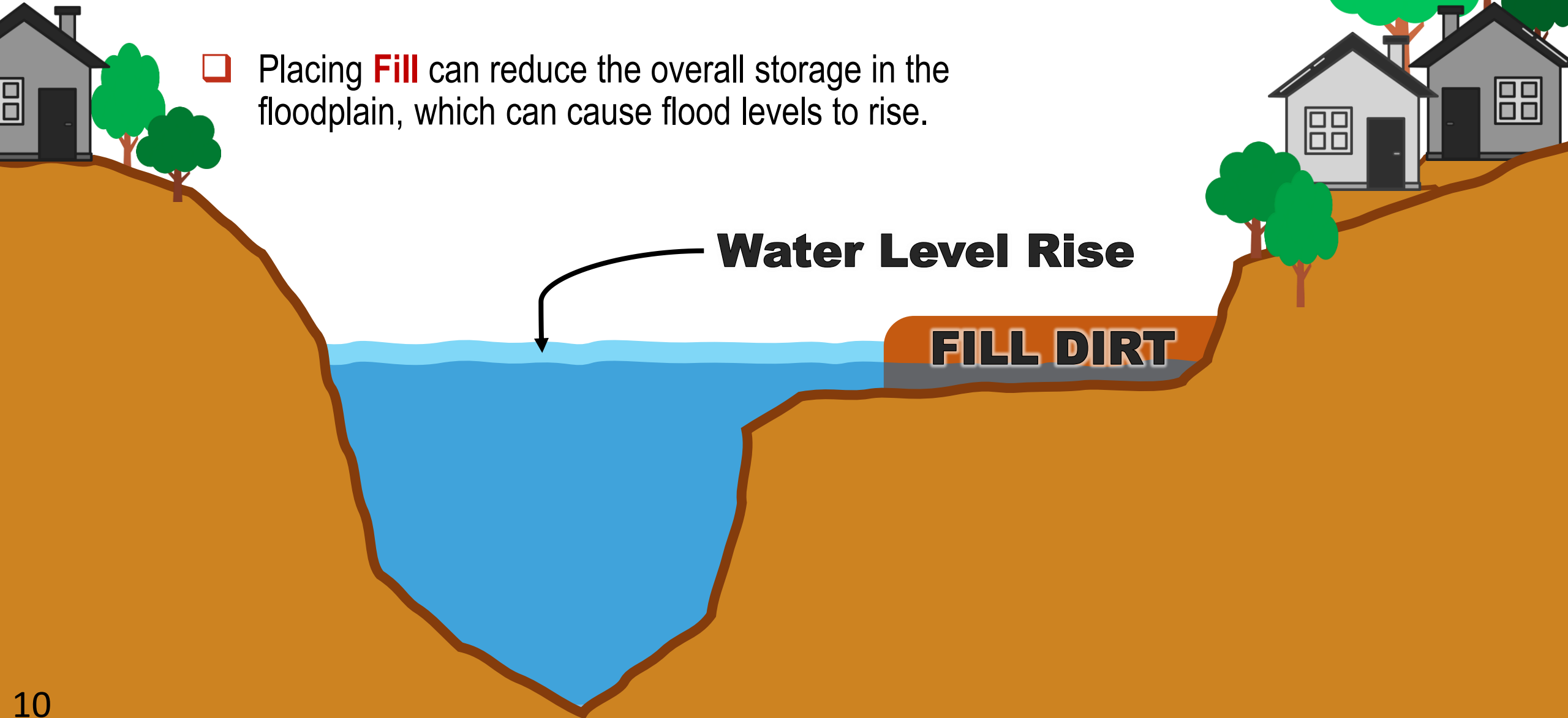
- ❑ Placing **Fill** can reduce the overall storage in the floodplain, which can cause flood levels to rise.



Stream

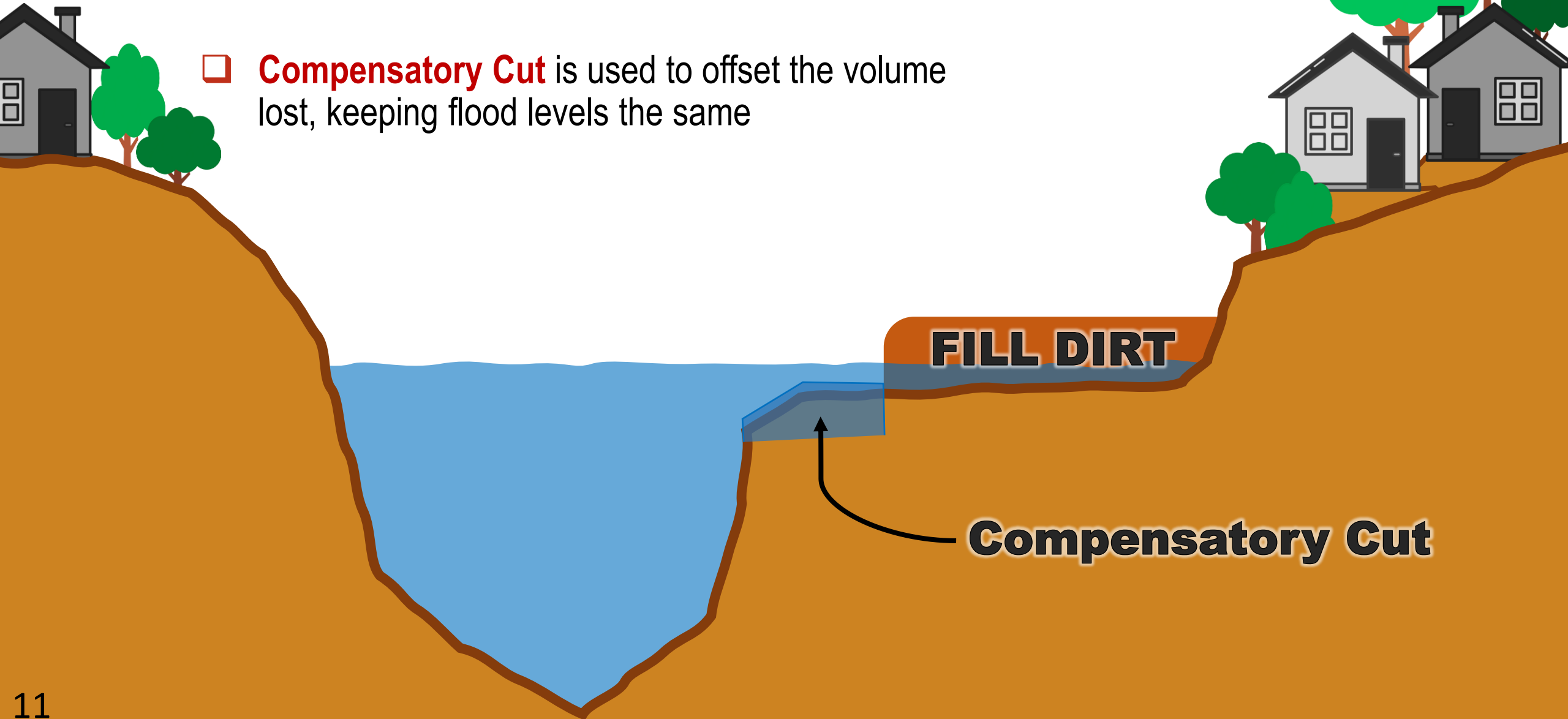
Riverine Zones, cont.

- ❑ Placing **Fill** can reduce the overall storage in the floodplain, which can cause flood levels to rise.



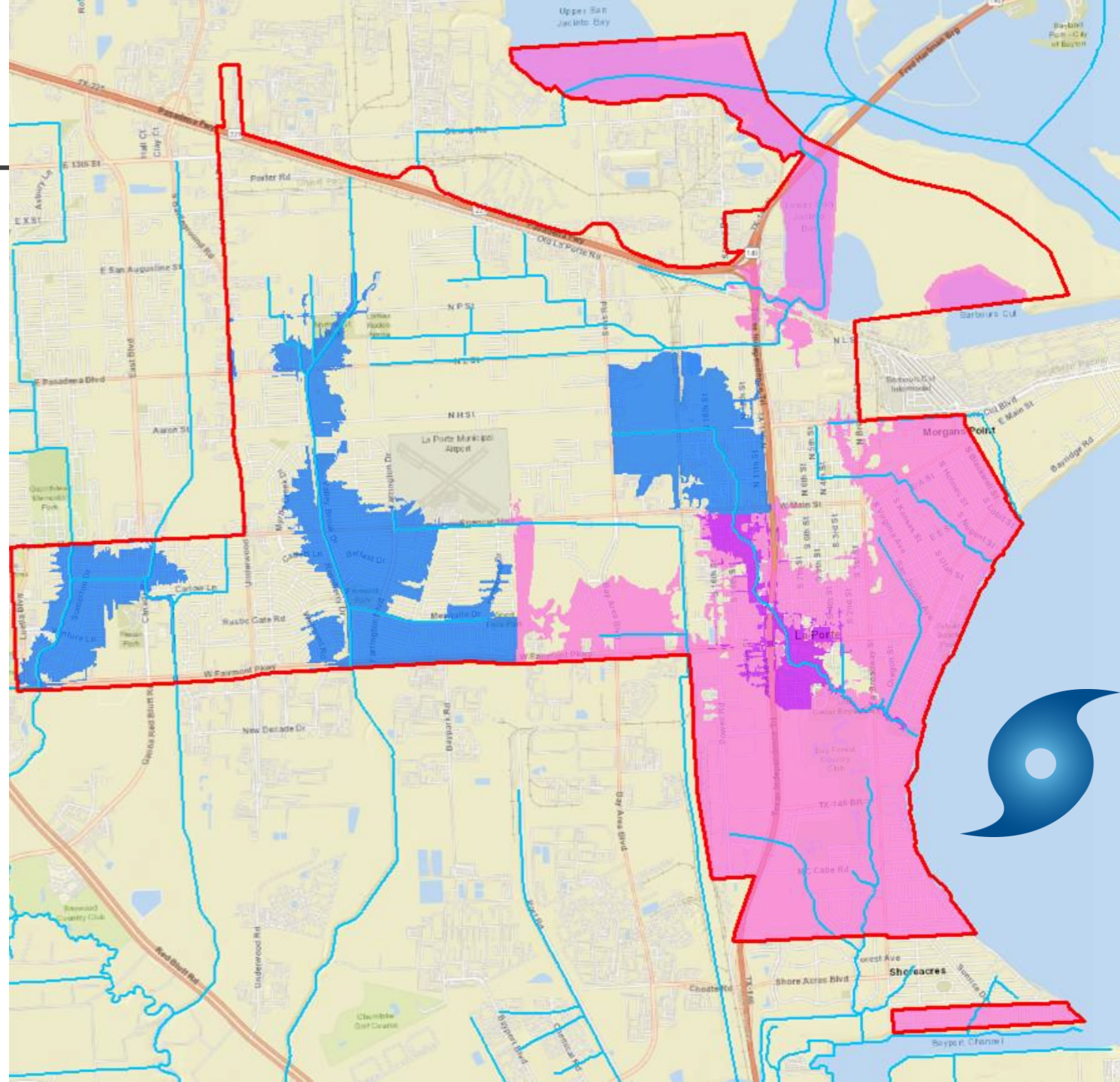
Riverine Zones, cont.

- ❑ **Compensatory Cut** is used to offset the volume lost, keeping flood levels the same



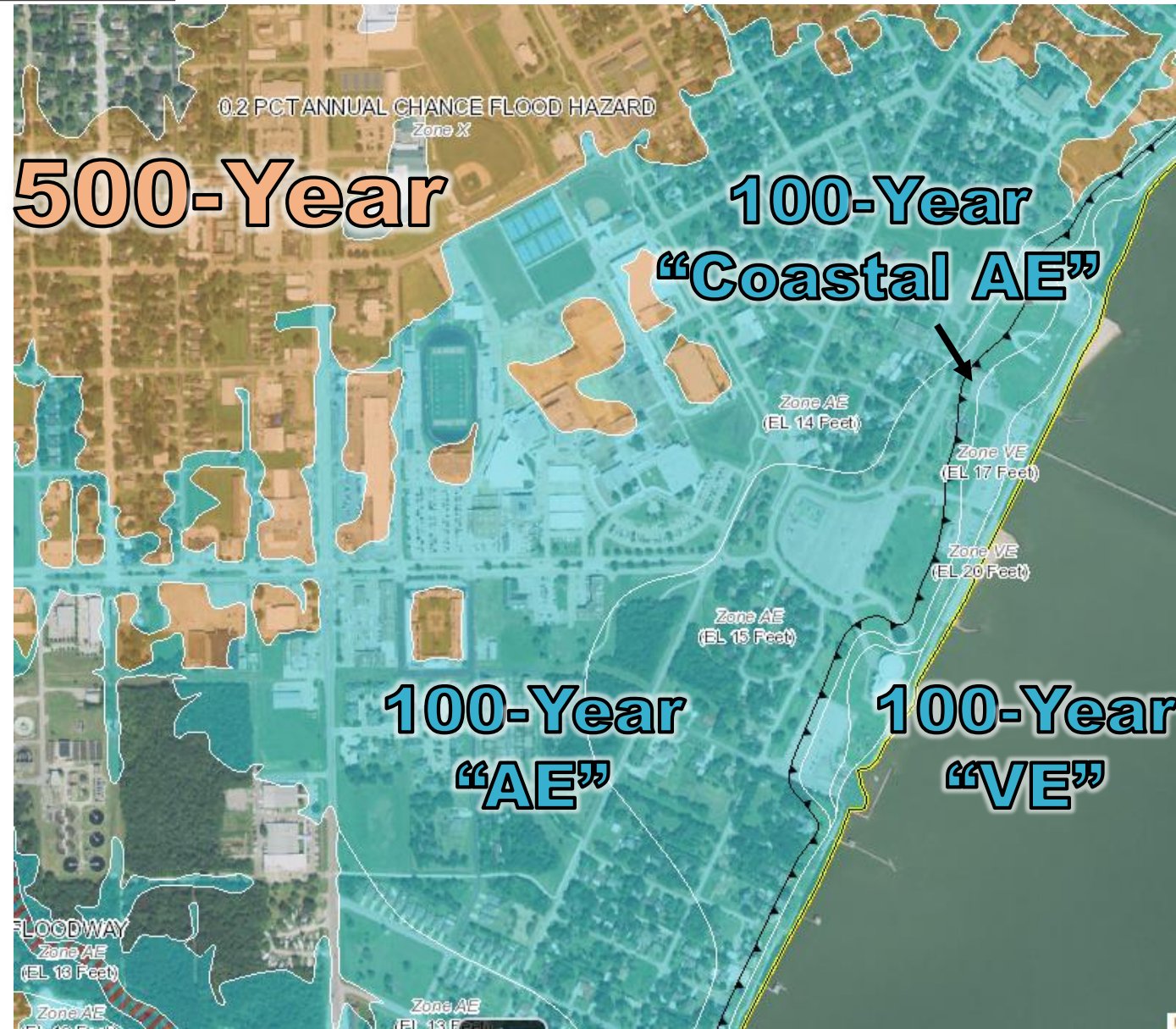
Coastal Zones

- Associated with storm surge from the Bay / Gulf



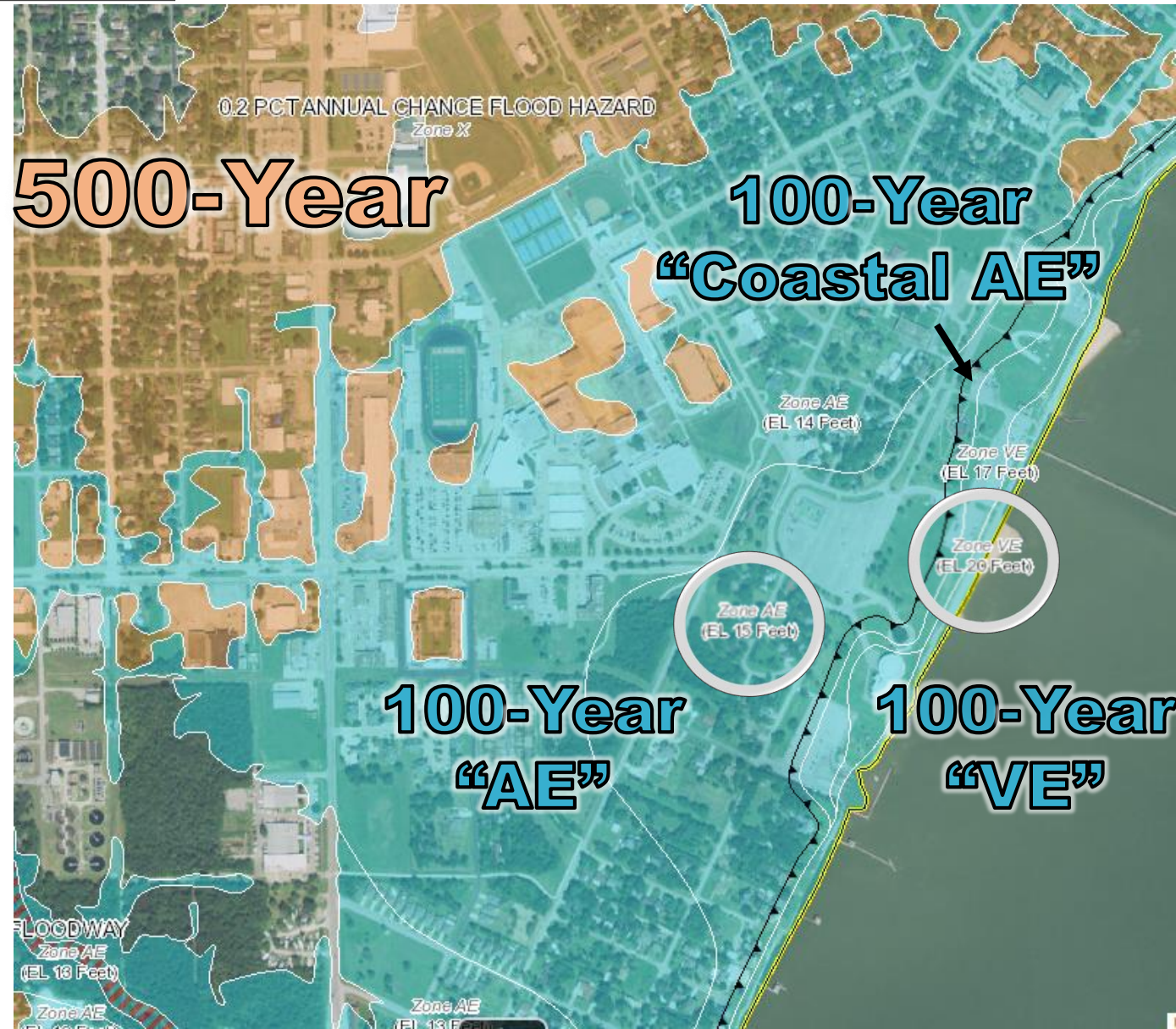
Coastal Zones, cont.

- ❑ Coastal 500-year has NO specific floodplain regulations
- ❑ Coastal 100-year has **3 Different Zones** in the City of La Porte that are Based on Expected Wave Heights:
 - ❑ “VE” = High Risk Wave Action Zones
 - ❑ “Coastal AE” = Moderate Risk Wave Action Zone
 - ❑ “AE” = Shallow Flooding

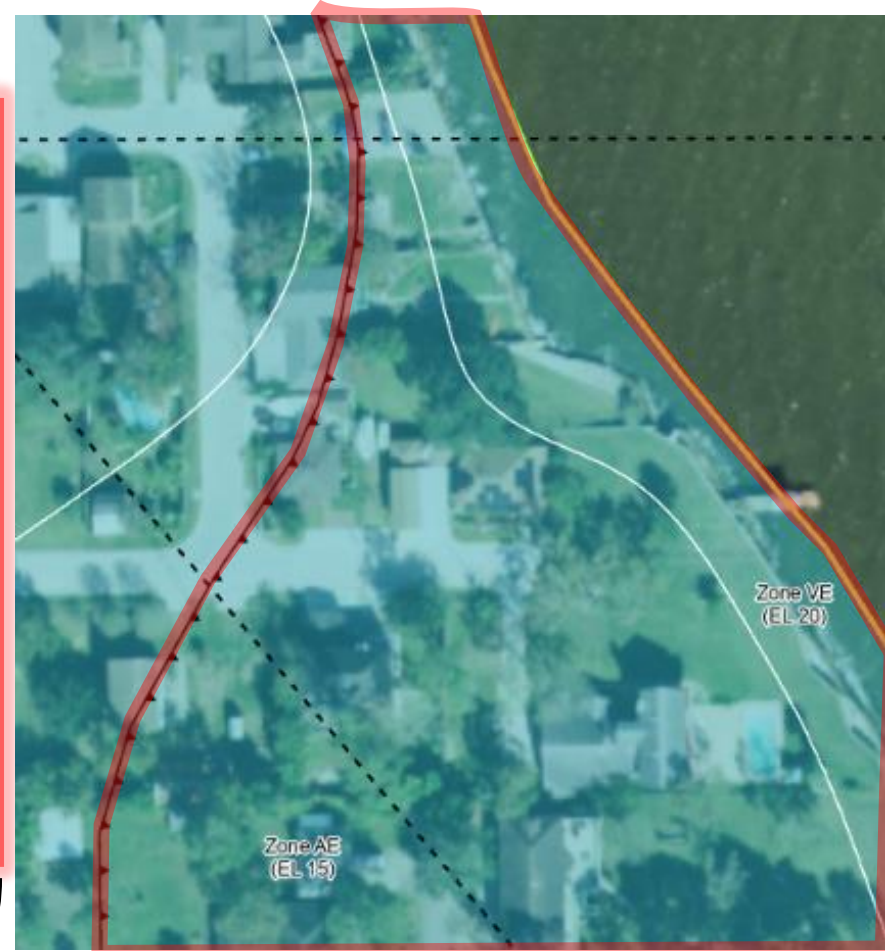
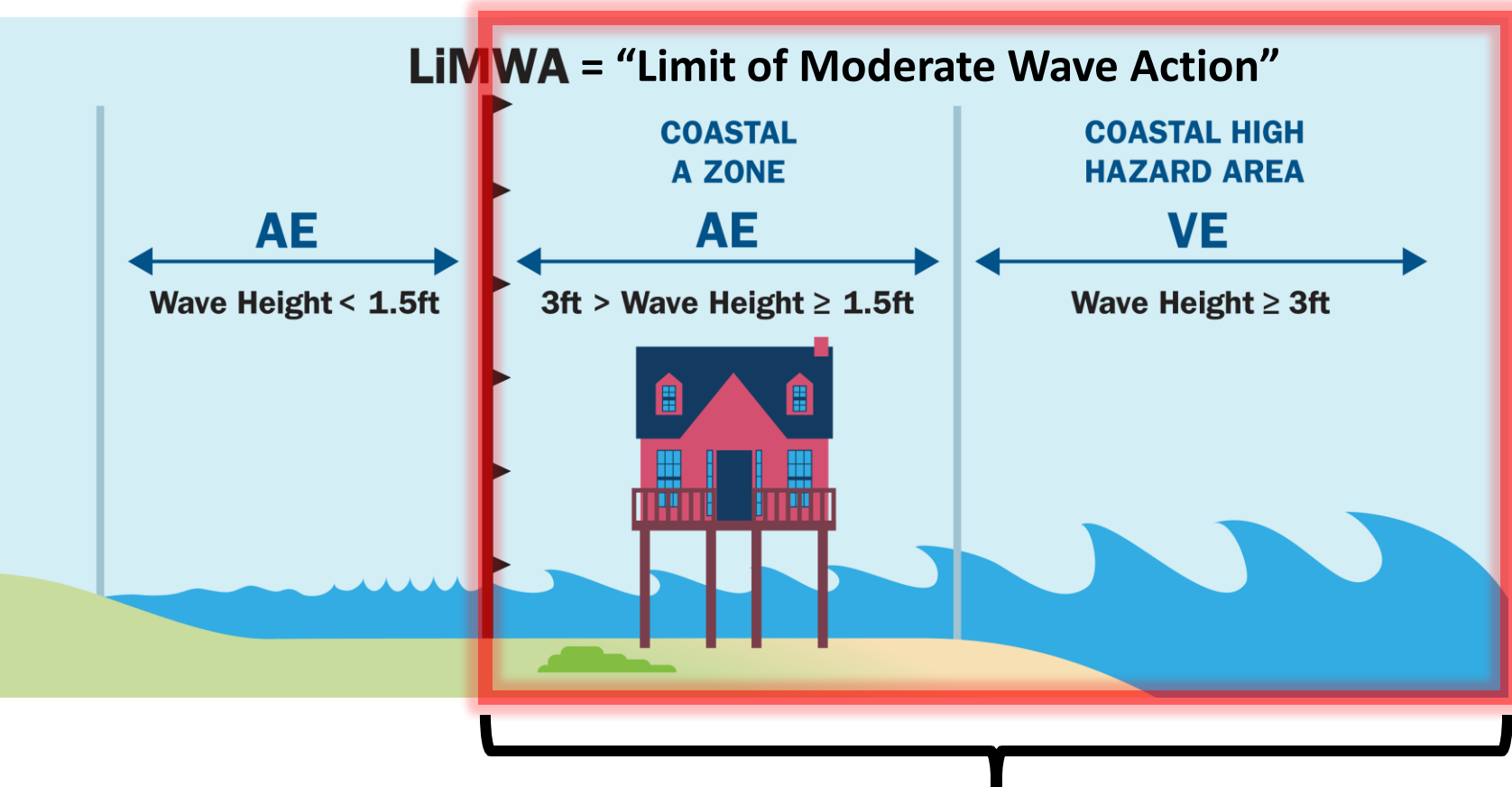


Coastal Zones, cont.

- ❑ Has varying floodplain elevations called out on the map – areas closest to the coast generally have higher flood elevations
- ❑ These numbers are called the “stillwater” elevations



Coastal Zones, cont.

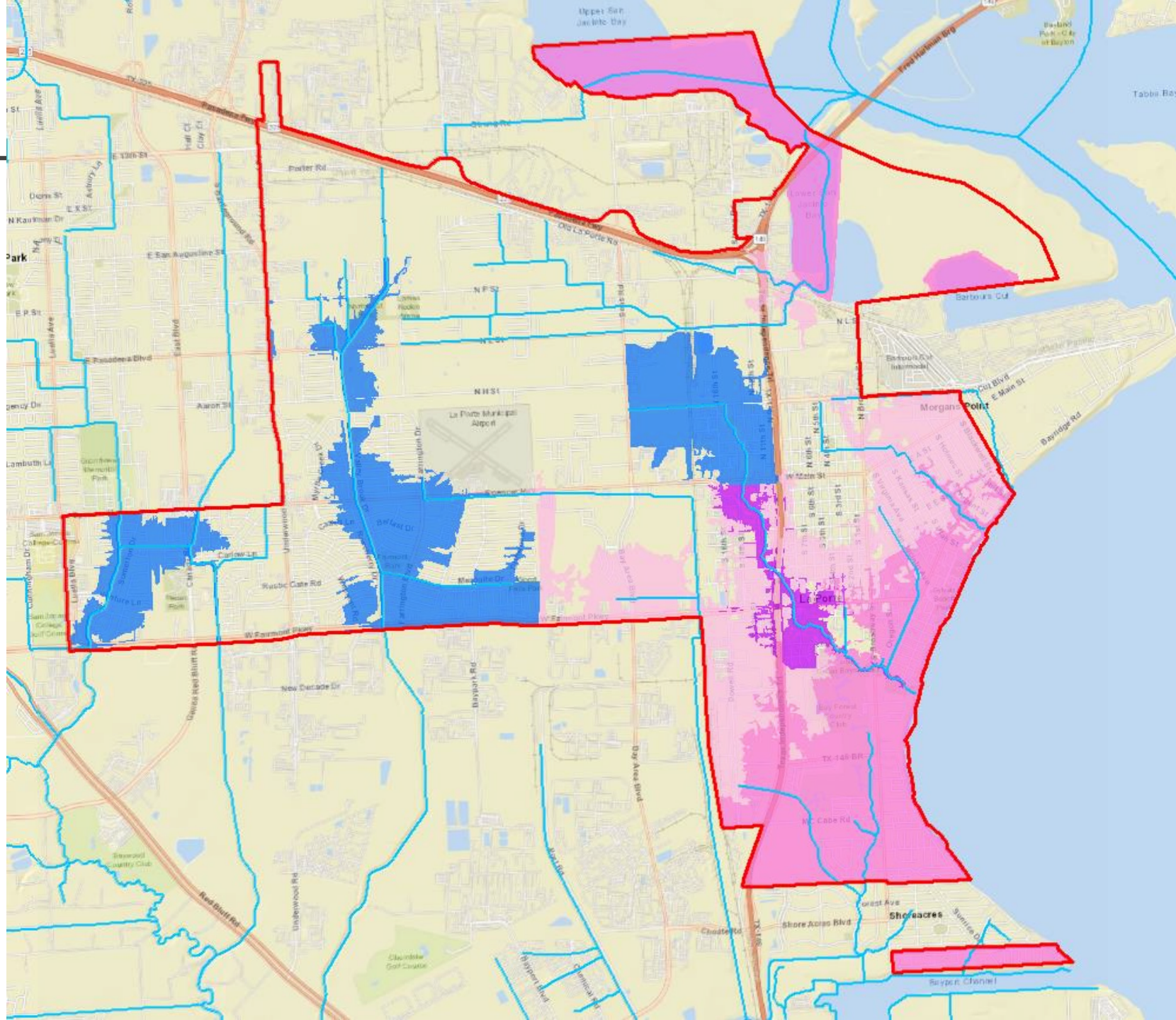


La Porte's Floodplain Ordinance treats these two zones the *same way* – they BOTH require structures to be **elevated** and **free from obstruction**.



Combined

- ❑ Risk of BOTH Stream Flooding & Storm Surge
- ❑ Little Cedar Bayou is the only place in La Porte where this applies!
- ❑ No distinction is shown on FIRM Maps
- ❑ *Compensatory CUT* required for New Construction or Substantial Improvements if any *FILL* is placed below the Riverine-Only Floodplain Elevation
- ❑ New Construction or Substantial Improvements satisfy whichever requirements are the most stringent.
- ❑ Give us a call if you live in this area and need guidance!



General Regulations

- See Chapter 94 of the City of La Porte Code of Ordinances -

For ALL Proposed Construction in the Floodplain:

- Submit a Floodplain Development Permit for the proposed work
- Any structural improvements (rehab, remodel, additions, etc.) require a valuation

For New Construction, Substantial Damage, or Substantial Improvements:

- Finished Floor Elevations (including mechanical equipment)
 - Residential – 1 ft above the 100-year (Coastal and Riverine) or at or above the 500-year (Riverine) elevation, which ever is higher
 - Nonresidential – At or above the 100-year (Coastal or Riverine) or 500-year (Riverine), which ever is higher
 - May be “flood-proofed” instead of elevated

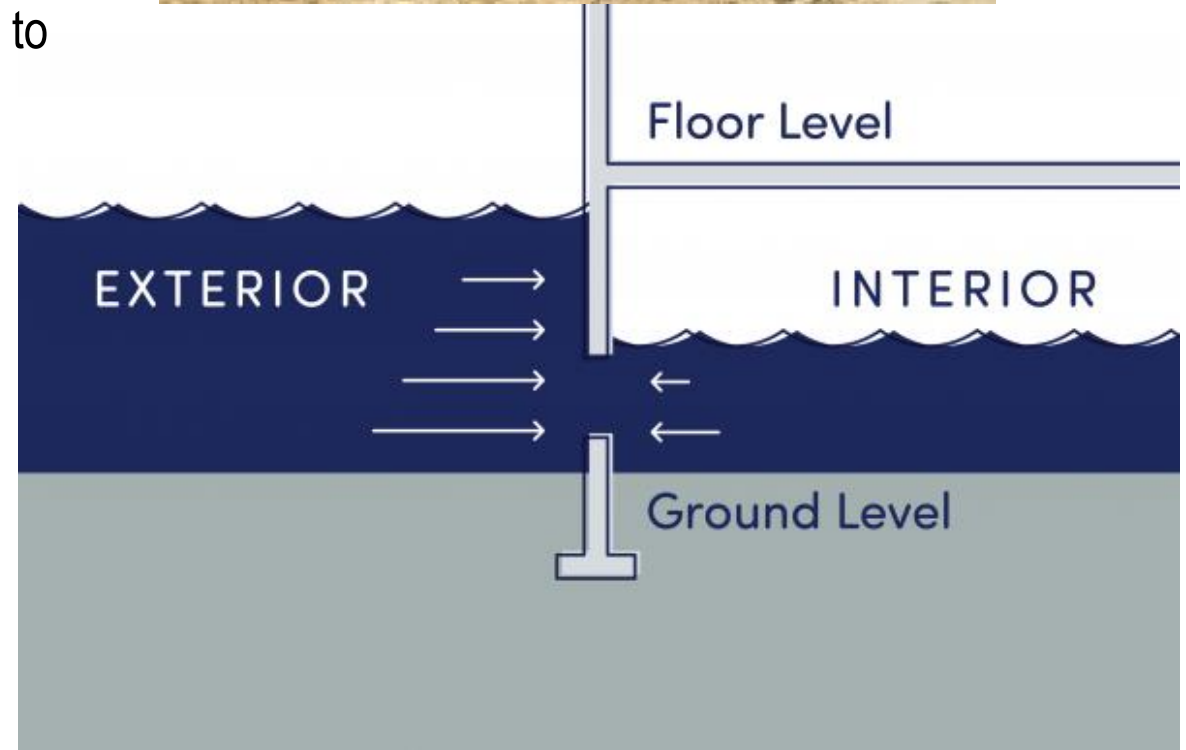
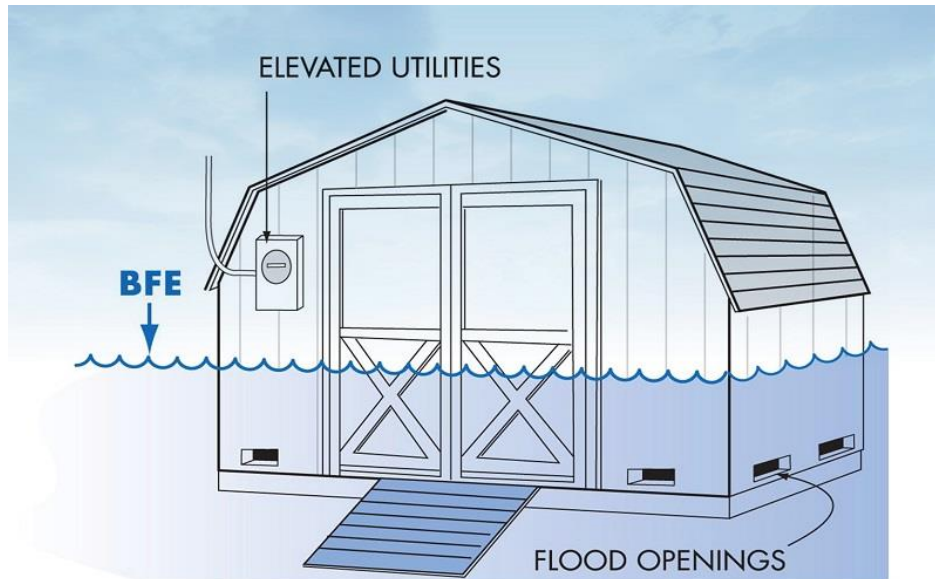
Examples include:

- Repair/Remodel
- Sheds / Garages
- Fences & Walls
- Swimming Pools
- Porches & Decks
- Mobile Homes



Enclosures

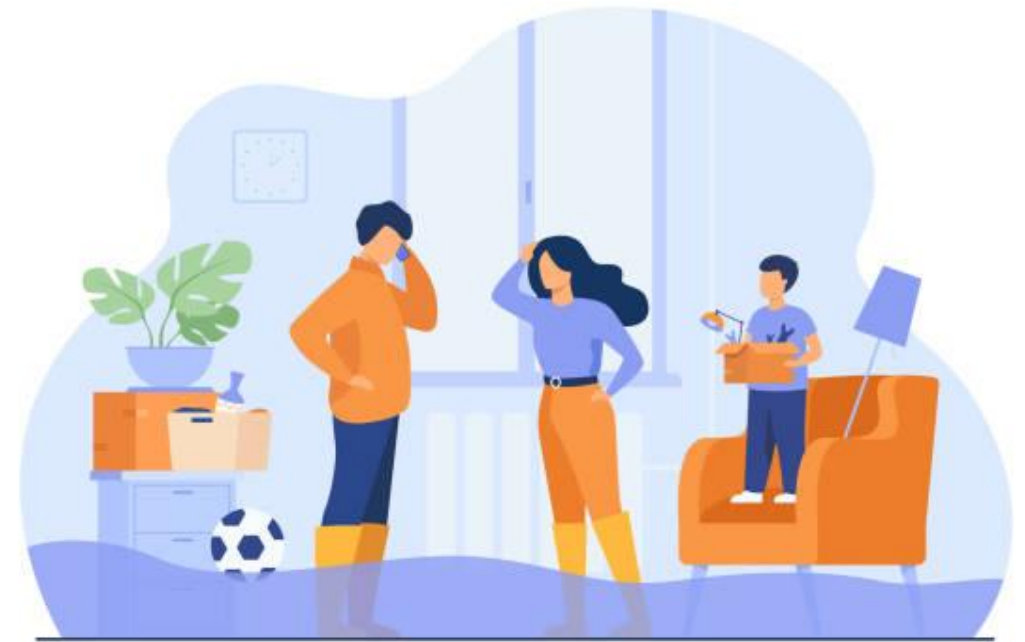
- ❑ Non-inhabitable structures or crawl spaces that are used solely for parking, building access and/or storage.
- ❑ Must provide flood vent openings to allow flood waters to enter the space and equalize pressure
- ❑ Cannot under ANY circumstances be converted to habitable space!



SD/SI (Substantial Damage / Substantial Improvement)

What Qualifies as SD/SI?

- Total cost of damage or total cost of improvements exceed 50% of the existing structure's value
 - Valuation calculations do NOT include value of the **land**
 - Does NOT matter what the origin of the damage was (flood, fire, termites, foundation problems etc.)
 - Must be based on fair market value for a contractor's work, even if work is being performed by owner or charity.



SD/SI (Substantial Damage / Substantial Improvement)

Why do these regulations exist?

- It's a minimum standard of the NFIP
- Ensures we are ***building back better***
- Protects the owner's investment and safety, and reduces the total number of buildings that are exposed to future flood damage, which reduces future tax burdens

Is there anything I can do to apply for funding assistance?

- If the damage was a result of a ***flood*** and you have flood insurance, you may be eligible for an Increased Cost of Compliance (ICC) Grant – talk to your insurance provider



How to Apply for a Permit

New Form

- Fill out Application Completely
- Site Plan
- Examples could be a property survey or a to-scale drawing
- Location & Finished Floor Elevation of Proposed Improvements
- Drainage Plan
- Cost Estimate / Valuation
- Required for any alterations/additions to an existing structure
- FEMA Elevation Certificate
- Required for New Construction and SD/SI

City of La Porte Planning & Development
604 W. Fairmont Pkwy. FLOODPLAIN DEVELOPMENT PERMIT APPLICATION
La Porte TX 77571 Phone: 281.470.5073
Fax: 281.470.5005
Permits@laportetx.gov

PROJECT INFORMATION: APPLICATION DATE: _____
Project Address: _____
Property Legal Description: Lot (s): _____ Blk: _____ Subdivision: _____
HCAD Parcel No. (Harris County Tax ID): _____

PROPERTY OWNER'S INFORMATION:
Property Owner's Name: _____ Phone: _____
Mailing Address: _____ City: _____ State: _____ Zip: _____
E-Mail: _____ Other: _____

CONTRACTOR'S INFORMATION:
Contractor's Company Name: _____ Phone: _____
Contractor's Company Address: _____ City: _____ State: _____ Zip: _____
Contact Person's Name: _____ Phone: _____ E-Mail: _____

SELECT PERMIT TYPE: RESIDENTIAL NON-RESIDENTIAL BUILDING ADDITION
 ACCESSORY STRUCTURE FILL DIRT

Describe Work: _____
Is application for repair, addition, or improvement of an existing structure? YES NO
If yes:
Estimated cost of construction: _____ Please provide supporting documentation (i.e. contractors estimate or similar)
Is the improvement intended to correct existing violations of state or local health, sanitary, or safety code violations as identified by a local code enforcement official? YES NO
Is the existing structure a designated historic structure? YES NO

APPLICATION CHECKLIST & SUPPORTING DOCUMENTATION
REQUIRED DOCUMENTS:
• Complete Floodplain Development Permit Application
• Supporting documentation (as required)
• Refer to "Conditions of Permit" pg. 2 of this application
All Contractors must provide current General Liability Certificate of Insurance (min. \$100,000)
CONTRACTOR REQUIREMENTS Certificate Holder: City of La Porte; 604 W. Fairmont Pkwy; La Porte TX 77571

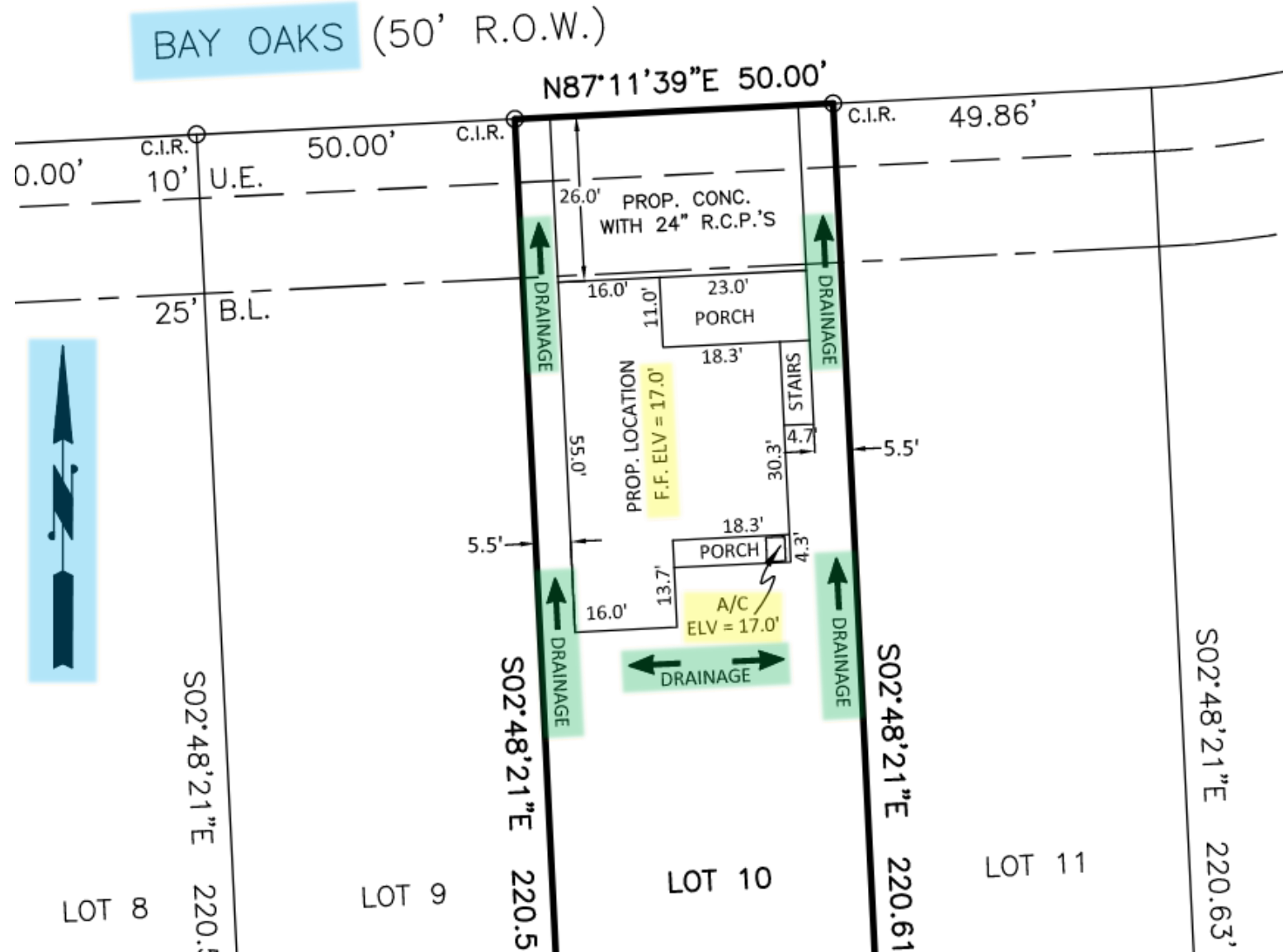
SIGNATURE OF APPLICANT: _____ **PRINTED NAME:** _____

OFFICE USE ONLY:
Taxes: _____ Code Enforcement: _____
The subject property is located within:
 100-Year Floodplain Coastal High-Hazard Area in Flood Zone: _____
 Floodway Coastal Zone A or AE (100-year floodplain)
 Riverine Zone A or AE (100-year floodplain) Riverine Shaded Zone X or B (500-year floodplain)
 Zones V1-30, VE, and/or V (Coastal High Hazard Area) Coastal Shaded Zone X or B (500-year floodplain)
 Zones AO or AH (Areas of Shallow Flooding)

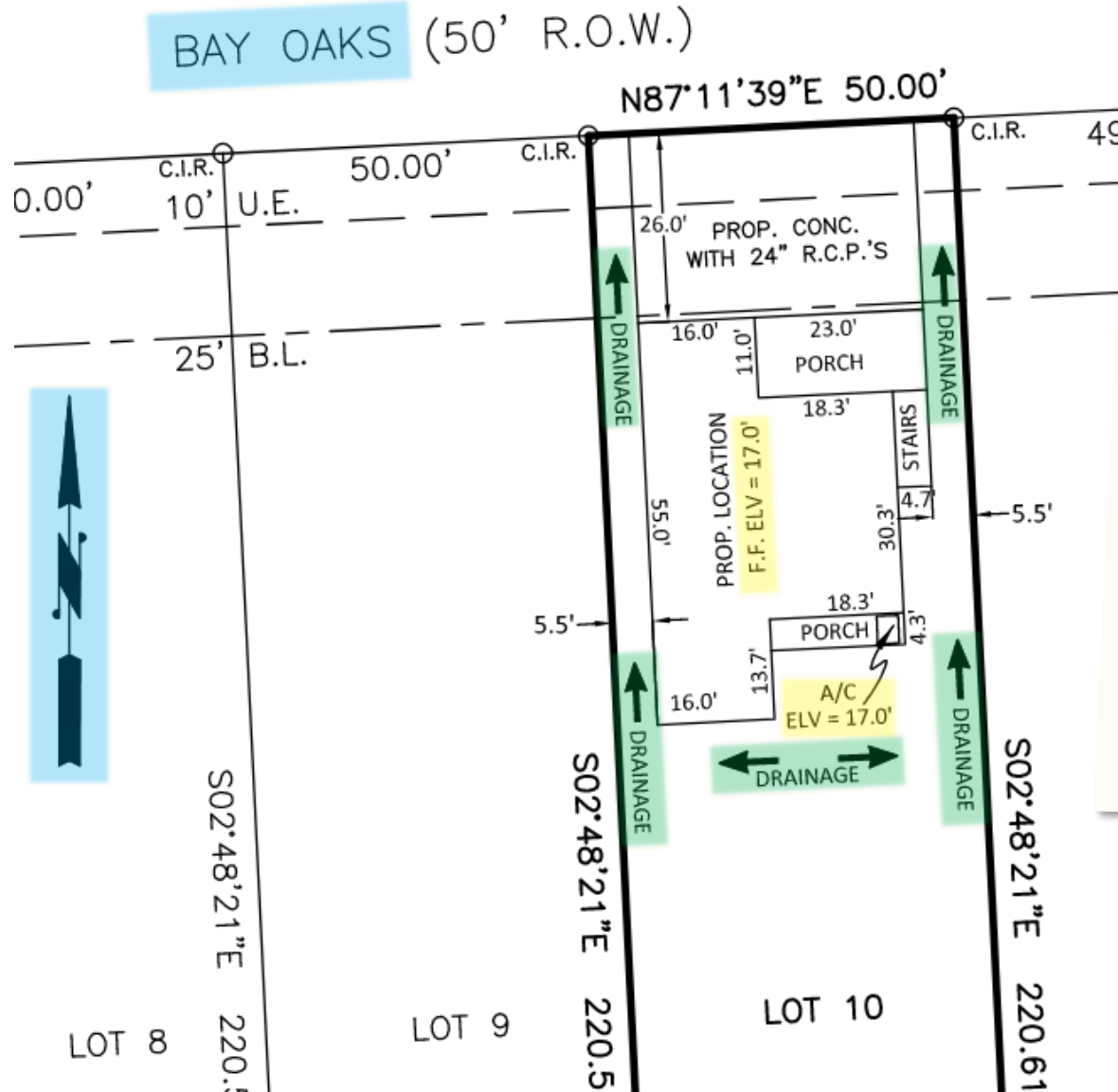
The Base Flood Elevation of the subject property is: _____ feet above mean sea level (NAVD 1988, 2001 ADJ.)

Approved for Permit Issuance by: _____ Date: _____ **PERMIT #:** _____

Site Plan Example



Site Plan Example



ELEVATION CERTIFICATE OMB No. 1660-0008 Expiration Date: November 30, 2022

IMPORTANT: In these spaces, copy the corresponding information from Section A.

FOR REFERENCE ONLY

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) Or P.O. Route and Box No. **FOR INSURANCE COMPANY USE**
 City LA PORTE State TX ZIP Code 77571 Policy Number:
 Company NAIC Number

SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

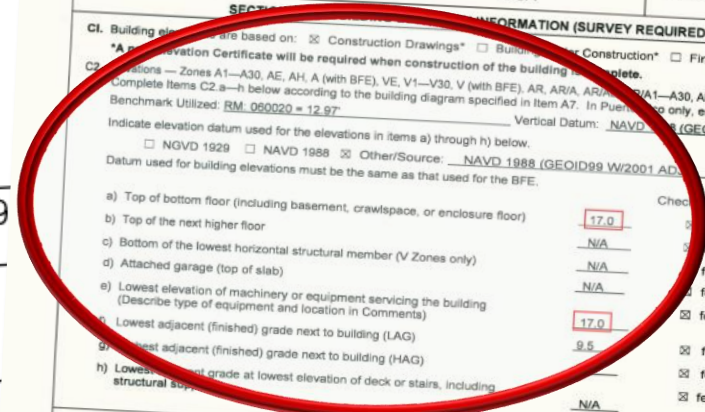
This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. I certify that the information on this Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.

Were latitude and longitude in Section A provided by a licensed land surveyor? Yes No Check here if attachments.

Certifier's Name: ROBERT D. ELLIS License Number: 4006
 Title: REGISTERED PROFESSIONAL LAND SURVEYOR
 Company Name: ELLIS SURVEYING SERVICES, LLC
 Address: 2805 25th AVE N City: TEXAS CITY State: TX ZIP Code: 77590
 Signature: [Signature] Date: 03/18/2021 Telephone: (409) 938 - 8700

Comments (including type of equipment and location, per C2(e), if applicable):
 C2A ELEVATION BASED ON 3" ABOVE BFE CROWN OF BAY OAKS = 10.3'

FEMA Form 086-0-33 (12/16) Replaces all previous editions. Form Page 2 of 6



Common Permit Errors

- Incomplete Application
- Inadequate Site Plan
- Elevations shown on Site Plan do not match the Elevation Certificate
- Missing Cost Estimate



Helpful Links

- [City of La Porte GIS](#)
- [City Ordinance Chapter 94](#)
- [FEMA Flood Map Service Center](#)
- [44 CFR](#)



Permit Questions?



- Please send an email to Engineering@laportetx.gov or michelm@laportetx.gov, we will get back to you ASAP



Reminders

- Floods can happen anywhere – even outside the designated floodplains
- Most homeowners Insurance does NOT cover flood damage
- Help protect your investment by:
 - Having flood insurance coverage
 - Following COLP's Flood Regulations to build *resilient* infrastructure





LA PORTE
TEXAS

RICH IN HISTORY. BUILT ON COMMUNITY.



CobbFendley

