Topics

- Ethan’s Glen Elevation Certificate Challenges
- Biggert-Waters Flood Insurance Reform Act of 2012 (BW-12)

Ethan’s Glen Elevation Certificate Challenges

- Background
  - Located within City of Houston ETJ
  - 36 Townhomes with 8 units each
  - Built in late 1970’s before the City of Houston’s initial FIRM (Pre-FIRM structure)
  - Adjacent to Buffalo Bayou’s north bank

- Elevation Certificates
  - Provides elevation information to determine proper insurance premium rates
Key Information Needed to Complete an Elevation Certificate

- Diagram Number
- BFE
- Lowest Floor
- Next Higher Floor
- Electrical Elevation
- LAG
- HAG

FIRM

Ethan’s Glen Floodplain
Issues

- 11 buildings located in Zone AE
- Per Unit Basis vs. Per Building Basis
- Living areas are above the BFE

But...

- Parking garage is considered a basement
  - "Basement shall mean any area of a building having its floor subgrade (below natural ground elevation) on all sides.
    - Rules and Regulations for Chapter 29, Guidance: Houston City Code Floodplain.
  - "Basement means any area of the building having its floor subgrade (below ground level) on all sides."
- Use garage elevation as "Lowest Floor"

Slab On Grade Units

Above Garage Units

Exhibit 1
Building Diagrams 1A, 1B, & 2

Building Diagrams 3, 4, & 5

Building Diagrams 6 & 7
Building Diagrams 8 & 9

A Second, Third, and Fourth Look

- Diagram Number
- BFE
- Lowest Floor
- Next Higher Floor
- Electrical Elevation
- LAG
- HAG

PHOTOS

A
B
C
D
What If

- What can be done to mitigate? What if we...
  - ...Lower adjacent grades to match garage elevation
    - Garage no longer considered a basement, units above considered as elevated
    - Entire site will have to be lowered, structural integrity of foundations compromised, floodplain region will increase, structural flood prevention must be incorporated
  - ...Fill garage to match adjacent grade elevation
    - Basement now considered a Crawlspace
    - No parking for residents

Where do we go from here?

- Research laws and regulations
  - FEMA 480
  - CFR Title 44
  - Technical Bulletin No. 11 - Crawlspace Construction
    For Buildings Located in Special Flood Hazard Areas
    National Flood Insurance Program Interim Guidance
- FEMA collaboration
Biggert–Waters 2012

- **Background**
  - Passed by Congress in July 2012
  - Aims to reflect true flood risk
  - Will *eventually* increase insurance premium rates
    - Preferred Risk Policy (PRP) Eligibility Extension
      - Policy Premiums will increase 20% per year
    - Removes “Grandfathering”
      - A number of proposed bills may, if enacted, delay rate increases and maintain grandfathering rates.

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### Insurance Rates Comparison

<table>
<thead>
<tr>
<th>Flood Zones</th>
<th>Flood Zone Difference</th>
<th>Flood Insurance Cost (per year)</th>
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</thead>
<tbody>
<tr>
<td>Zone A</td>
<td>0 ft</td>
<td>$390</td>
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<tr>
<td>Zone B</td>
<td>1 ft</td>
<td>$459</td>
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<tr>
<td>Zone C</td>
<td>2 ft</td>
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<td>Zone D</td>
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<td>Zone E</td>
<td>4 ft</td>
<td>$855</td>
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<tr>
<td>Zone F</td>
<td>5 ft</td>
<td>$1,722</td>
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<tr>
<td>Zone G</td>
<td>6 ft</td>
<td>$5,090</td>
</tr>
<tr>
<td>Zone H</td>
<td>7 ft</td>
<td>$6,065</td>
</tr>
<tr>
<td>Zone I</td>
<td>8 ft</td>
<td>$7,040</td>
</tr>
<tr>
<td>Zone J</td>
<td>9 ft</td>
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<tr>
<td>Zone K</td>
<td>10 ft</td>
<td>$8,989</td>
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</tbody>
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Pre- or Post FIRM Dwelling Type & # of Floors | Amount of Coverage Build/Content Deductible Build/Content Flood Zone |
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<tbody>
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<td>Primary Single Family/ One Floor/ No Basement</td>
<td>$200/$80</td>
<td>$1,000/$1,000</td>
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<tr>
<td>AE</td>
<td>+4</td>
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<td>$601</td>
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<tr>
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