



City of Charleston  
**Board of Architectural Review**

**Building Elevation Design Workshop #2**

March 2, 2018

## AGENDA

### PART I: INTRODUCTION AND OVERVIEW BY BAR STAFF ..... 8:30-9:30am

- A summary of the previous Elevation Workshop (November 2017) including review of comments received from panelists grouped by the following categories:
  - Context/Streetscape
  - Foundation Design
  - Preservation/Architectural Considerations
  - Site Considerations
  - FEMA Requirements
  - Miscellaneous

### PUBLIC COMMENT..... 9:30-10am

### BREAK..... 10-10:15am

### Part II: EXERCISE WITH PANELISTS..... 10:15am-12:30pm

- Break out into smaller groups to work on developing guidelines for each category above. \* Consider the different building types (eg. Single House, Freedman's Cottage, Adjoined/Grouped/Sister, New Construction.)
- Identify architectural sketches necessary to include in the Guidelines, and identify good/bad examples (photos) of preferred/non preferred design approaches.

### LUNCH..... 12:30-1:30pm

### PART III: REFINEMENT OF ELEVATION GUIDELINES ..... 1:30-3pm

- Presentation and discussion of exercise results.
- Recommendations on modifications, additions, or eliminations to the Guidelines.
- Recommendations on guideline format, imagery, and verbiage.

### WRAP-UP / NEXT STEPS..... 3pm



# WORKSHOP #1 SUMMARY – 11.03.17





## Roderick Scott

*International Association of Structural Movers*

- **NFIP (National Flood Insurance Program)**
  - Flood insurance rates are based on where the first floor sits in relation to the minimum FEMA flood map elevation.
- **Flood Hazard Mitigation**
  - NFIP allows an exemption from meeting required elevation if mitigation negatively impacts the building's historic designation.
  - \$1 of flood mitigation investment equals \$4 of savings in disaster recovery





# WORKSHOP #1 SUMMARY



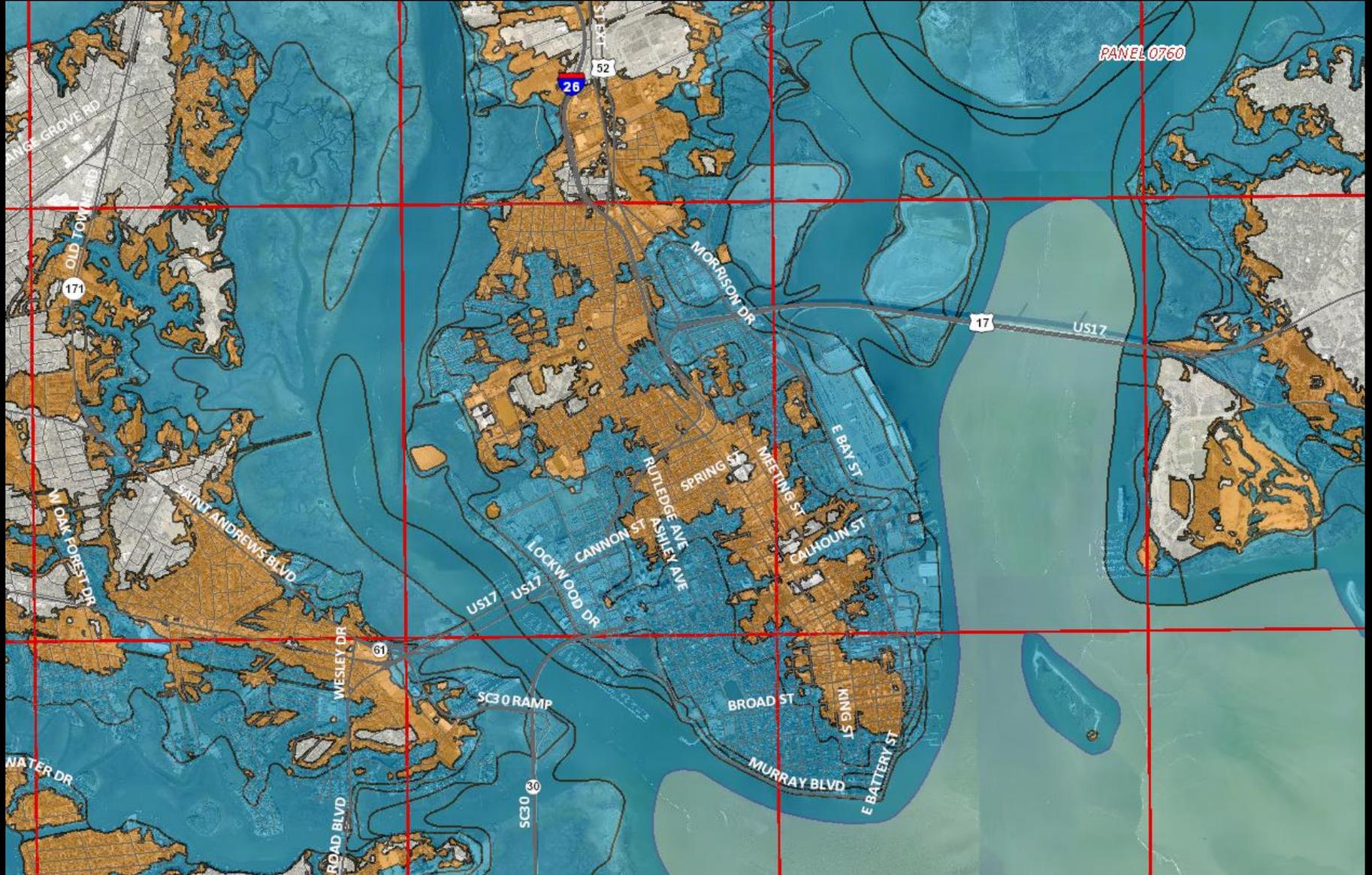
## Laura Cabiness *Public Service Director*

- **FEMA Grant Funding** – Discussed available funds for affected homeowners and how the City will help homeowners to procure available funds.
  
- **Flood Mitigation and Assistance Presentations** – February 8, 2018
  - Representatives in Attendance:
    - Mark Wilbert – Director Emergency Management , City of Charleston – 843-720-2482
    - Jessica Artz – Flood Mitigation Manager for DNR – 803-734-1012
    - Allen Fountain – SC Emergency Management Division – 803-413-5242
    - Maria Lamm – National Flood Insurance Program – State Coordinator
  
  - **FEMA Hazard Mitigation Assistance Options**
    - Only \$160 Million available Nationally, \$4.2 Million available for South Carolina
    - Grants: Acquisition and Elevation most common
    - Qualifying properties must have NFIP Policy
    - Must wait for grant approval before beginning work
  
  - **NFIP and ICC** (Increased Cost of Compliance)
    - Updated Flood Maps currently in 90-day appeal period (ends 04/17/18), then typically a 8-12 month period after that before adoption.
  
  - **City of Charleston Flood Ordinance, Freeboard Requirements, and HMGP** (Hazard Mitigation Grant Program)



# WORKSHOP #1 SUMMARY

## Preliminary FEMA Flood Map







# WORKSHOP #1 SUMMARY



## CHALLENGES WITH ELEVATING HISTORIC RESIDENTIAL STRUCTURES



**Adjoined Buildings**



**Sister Houses**



**Freedman's Cottages**



**Category 1 & 2 Bldgs.**



# WORKSHOP #1 SUMMARY



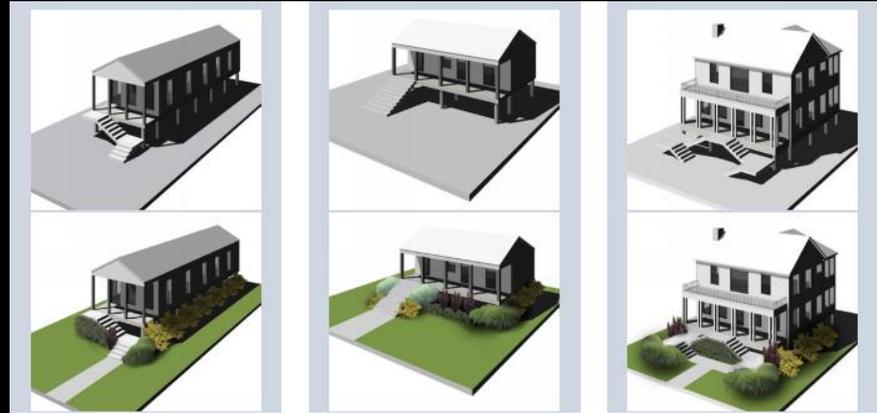
## Review of Methods in Other Communities

LOUISIANA  
OFFICE OF CULTURAL HERITAGE  
DEPARTMENT OF RECREATION & TOURISM  
DEVELOPING OUR CULTURAL ASSETS

URS

### Elevation Design Guidelines

For Historic Buildings in the Louisiana GO Zone



### Elevation Design Guidelines

For Historic Homes in the Mississippi Gulf Coast Region

mississippi development authority  
MISSISSIPPI



Adjoining properties in the Holycross neighborhood, New Orleans, illustrate the challenges of contrasting elevations, Holycross Historic District (2014)



An additional example of adjoining properties with contrasting elevations, Bywater Historic District (2014)

- Specific to architecture of the region.
- Design approaches valued in their communities, may not be relevant to Charleston.
- Good format to follow:
  - Site Design Guidelines
  - Architectural Guidelines
  - Foundation Design Guidelines



# WORKSHOP #1 SUMMARY



## Review of Elevation Methods in Charleston



Successful



Unsuccessful



# WORKSHOP #1 SUMMARY



## Case Study Scenarios



**9 Savage St.**



**15 Council St.**



## Wrap-up and Next Steps

- Design Guideline Format: Is Policy Statement enough?
- Independent Work by Design Community to Develop Strategies. Focus on Strategies for Different Charleston Building Types:
  - Single House
  - Freedman's Cottages
  - Adjoined/Grouped/Sister Buildings
  - New Construction
- Solicit Input on Guidelines from Design Professionals Before the Next Workshop.



# WORKSHOP #2





## REVIEW OF COMMENTS FROM PANELISTS

### BUILDING CATEGORIES

- **Category 1 (Exceptional) and Category 2 (Excellent) Buildings :**
  - Should require Board approval.
  - Evaluated with more discretion and should not automatically be elevated to FEMA requirements.
  - If tripping 50% threshold, encourage use of FEMA Variance to minimize elevation change.
  - All preservation and architectural considerations should be mandatory for these structures.
  
- **Category 3 and 4 Buildings :**
  - Elevating 3'-0" or less may be staff approved.
  - If approved, must provide documentation to include as-built elevations, floor plans, site plan, photographs.
  - Provide justification for proposed elevation (evidence of previous flooding, project work constitutes substantial improvement ie. 50% rule).



## REVIEW OF COMMENTS FROM PANELISTS

### STREETSCAPE/CONTEXT CONSIDERATIONS

- **Submittals should include careful study of the following:**
  - Impact on important streetscape features (i.e. walls, fences, pathways, trees).
  - Impact on relationship to immediate context and neighboring buildings (i.e. eave heights, fenestration patterns, stair configuration).
  - Impact on broader streetscape scale and building pattern.



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## SUCCESSFUL STREETScape EXAMPLES





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## SUCCESSFUL STREETScape EXAMPLES





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## SUCCESSFUL STREETScape EXAMPLES





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## SUCCESSFUL STREETScape EXAMPLES





## SUCCESSFUL STREETScape EXAMPLES





## UNSUCCESSFUL STREETScape EXAMPLES





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## UNSUCCESSFUL STREETScape EXAMPLES





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## UNSUCCESSFUL STREETScape EXAMPLES





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## UNSUCCESSFUL STREETScape EXAMPLES





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## UNSUCCESSFUL STREETScape EXAMPLES





# REVIEW OF COMMENTS FROM PANELISTS

## SITE CONSIDERATIONS

- Buildings should remain in their original location on the lot, unless doing so prevents the reasonable introduction of stairs.
- Retain to the greatest extent existing circulation paths from the street/sidewalk to the building.
- Buildings should not be moved to accommodate additions, parking, etc.
- If necessary to move the building on the property, minimize the impact with transitional porches, low walls, iron fencing, planting beds, and terraced landscaping.
- Encourage use of plantings or other pervious materials to help absorb water.



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## SUCCESSFUL SITE EXAMPLES





## SUCCESSFUL SITE EXAMPLES





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## SUCCESSFUL SITE EXAMPLES





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## UNSUCCESSFUL SITE EXAMPLES



2013



2017



## REVIEW OF COMMENTS FROM PANELISTS

### PRESERVATION AND ARCHITECTURAL CONSIDERATIONS

- Historic, character defining features should be retained first (required for Cat. 1 and 2), salvaged and reused second, or rebuilt when necessary as a last option.
- Chimney options (in order of preference):
  - Preferred method: retain chimney and elevate with the structure (required for Cat. 1 and 2).
  - Elevate the house around the chimney.
  - Least preferred method: remove internal portions of the chimney and only elevate that which extends above the roofline.
- For single houses, piazza screen and all associated elements should be conserved at current elevation (including doorway surround, steps, and railing). Stairways within the piazza and piazza screen dimension may increase to mitigate the elevation change (required for Cat. 1 and 2).



## REVIEW OF COMMENTS FROM PANELISTS

### **PRESERVATION AND ARCHITECTURAL CONSIDERATIONS** (con't)

- Stairs should generally occur in front of or within piazzas, rather than extending from the side (required for Cat. 1 and 2).
- Employ architectural devices relating to the specific context to lessen the overall impact of the raised structure:
  - Continue siding down foundation.
  - Lowering window level to relate to streetscape pattern and pedestrian scale.
- Significant elevation changes should create the appearance of an additional floor that proportionally relates to the floors above and fenestration patterns on the streetscape.



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### SUCCESSFUL PRESERVATION/ARCHITECTURAL EXAMPLES





## SUCCESSFUL PRESERVATION/ARCHITECTURAL EXAMPLES





## SUCCESSFUL PRESERVATION/ARCHITECTURAL EXAMPLES





## SUCCESSFUL PRESERVATION/ARCHITECTURAL EXAMPLES





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# SUCCESSFUL PRESERVATION/ARCHITECTURAL EXAMPLES





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# UNSUCCESSFUL PRESERVATION/ARCHITECTURAL EXAMPLES





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## UNSUCCESSFUL PRESERVATION/ARCHITECTURAL EXAMPLES





## REVIEW OF COMMENTS FROM PANELISTS

### FOUNDATION DESIGN CONSIDERATIONS

- Generally, should be based on historically elevated foundations in Charleston.
- Foundation should also be based on neighborhood/context specific examples.
- Foundation components should complement existing façade features:
  - Visual support of columns.
  - Pilaster expression.
  - Solid foundation wall under main body of house and piers at piazza with infill screening.
  - Use traditional masonry materials.
  - Use existing elements as visual references to be repeated and extended throughout foundation design.



## REVIEW OF COMMENTS FROM PANELISTS

### FOUNDATION DESIGN CONSIDERATIONS

(con't)

- New foundation material should match the historic foundation material, and when possible, use salvaged material from the historic foundation.
- Any required venting should be limited to the sides and rear of the house, however if using decorative ironwork, it may be acceptable at the front of the house.
- For buildings elevated 6ft or more, parking underneath the structure is discouraged.
- Use of creative openings/windows to break up wall expanse is encouraged.
- For new construction, parking underneath the structure may be possible, but only where garage openings are located toward the rear and not visible from the ROW. (Note: Elevation in excess of 6'-0" will count as a story in height districts by story).



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# SUCCESSFUL FOUNDATION EXAMPLES





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## SUCCESSFUL FOUNDATION EXAMPLES





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## UNSUCCESSFUL FOUNDATION EXAMPLES





## REVIEW OF COMMENTS FROM PANELISTS

### ALTERNATIVE METHODS

- Encourage simple techniques such as returning to traditional building practices/materials that allow a building to be flooded with minimal removal of material and repair afterwards.
- Elevating floors within a building (particularly feasible in historic commercial structures with tall ceilings).
- Dry Floodproofing:
  - Protecting a building's walls and mechanical equipment with waterproof components.
- Wet Floodproofing:
  - Permanent or contingent measures applied to a structure that prevent or provide resistance to damage from flooding while allowing floodwaters to enter the structure. Generally, this includes anchoring the structure, using flood resistant materials below BFE, protection of mechanical/utility equipment, and/or use of openings or breakaway walls.
  - Elevating floors within a building (particularly feasible in historic commercial structures with tall ceilings).



## REFINEMENT

- Presentation and discussion of exercise results.
- Recommendations on modifications, additions, or eliminations to the Guidelines.
- Recommendations on guideline format, imagery, and verbiage.



## WRAP-UP / NEXT STEPS

- Staff creates a “Draft” for B.A.R. review and public comment at a regularly scheduled B.A.R. meeting.
- Staff presents “Final” version to the B.A.R. at a regularly scheduled B.A.R. meeting for adoption by the B.A.R.