



**BRUNSWICK
OLD TOWN HISTORIC
DISTRICT DESIGN REVIEW
GUIDELINES**

**Part 7: Flood Proofing and Elevating
Historic Buildings**

**CITY OF
BRUNSWICK, GEORGIA
2020**

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Brunswick City Officials

Mayor

Cornell L. Harvey

City Manager

Regina McDuffie

City Commission

Vincent Williams

John A. Cason

Dr. Felicia Harris

Julie T. Martin

Planning and Zoning Department

John Hunter, Director

Historic Preservation Board

Heddy Bernstein

Bob Carpenter

Jennifer George

Sara Giannakakis

Delores Polite

Kate Sabbe

Will Worley

Consultant

Thomason and Associates

Nashville, Tennessee

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CHAPTER 11: BUILDING ADAPTATION

46.0 FLOOD-PROOFING & ELEVATION

BACKGROUND

Brunswick is located between 10 and 14 feet above sea level which is the lowest of any city of coastal Georgia. Located between the saltwater marshes of the Intracoastal waterway and the Brunswick River, the city lies within an ecosystem of natural tide cycles. Additionally, the Brunswick area can be vulnerable to seasonal storm surges and hurricanes. In response to these threats many dwellings in the historic district were originally built on raised pier or brick foundations. However, the intensity of recent storms and potential for rising sea levels makes resiliency a significant factor for homeowners faced with repeated flooding and rising insurance rates. By applying standardized guidelines, the HPB encourages a consistent approach to elevating historic dwellings and hardening and flood-proofing commercial and institutional buildings. These guidelines are intended to assist property owners with appropriate designs and not as a list of steps for codes compliance. Property owners and other stakeholders should consult Brunswick's National Flood Insurance Program (NFIP) rating to determine the best approach for protecting each historic property.

GUIDELINES

46.1. Property owners are encouraged to construct or retrofit flood-proofing measures which have the least visual and physical impact to a historic building.

The following measures are appropriate to preserve historically significant features and overall architectural character.

- ◆ Elevating electrical and mechanical systems and utilities—these can be placed in an upper floor or non-readily visible rooftop location.
- ◆ Relocating building contents to upper floors.
- ◆ Creating positive drainage, where the grade allows water to drain away from the building.
- ◆ Using flood damage-resistant materials.
- ◆ Filling in basements or wet flood-proofing basements.
- ◆ Installing small floodwalls to protect openings such as window wells or other low earth berms at rear elevations.

46.2 The utilization of temporary and reversible flood panel walls is encouraged to limit water infiltration during high water events.

These should be installed in a manner which will not require the removal or alteration of historic features.



The rehabilitation of 1315-1317 Newcastle Street included the hardening of the bulkheads (the panels beneath the display windows) through the installation of brick and a concrete surface to withstand flooding.



46.3 New commercial buildings in flood zones should be designed with resiliency features such as elevated entrances and water-resistant materials.

New construction in the historic commercial district should be designed to reflect traditional storefronts but allow for elevated entrances and hardened materials for bulkheads such as concrete. Interior resiliency features may include concrete floors, recycled plastic wood or laminates.



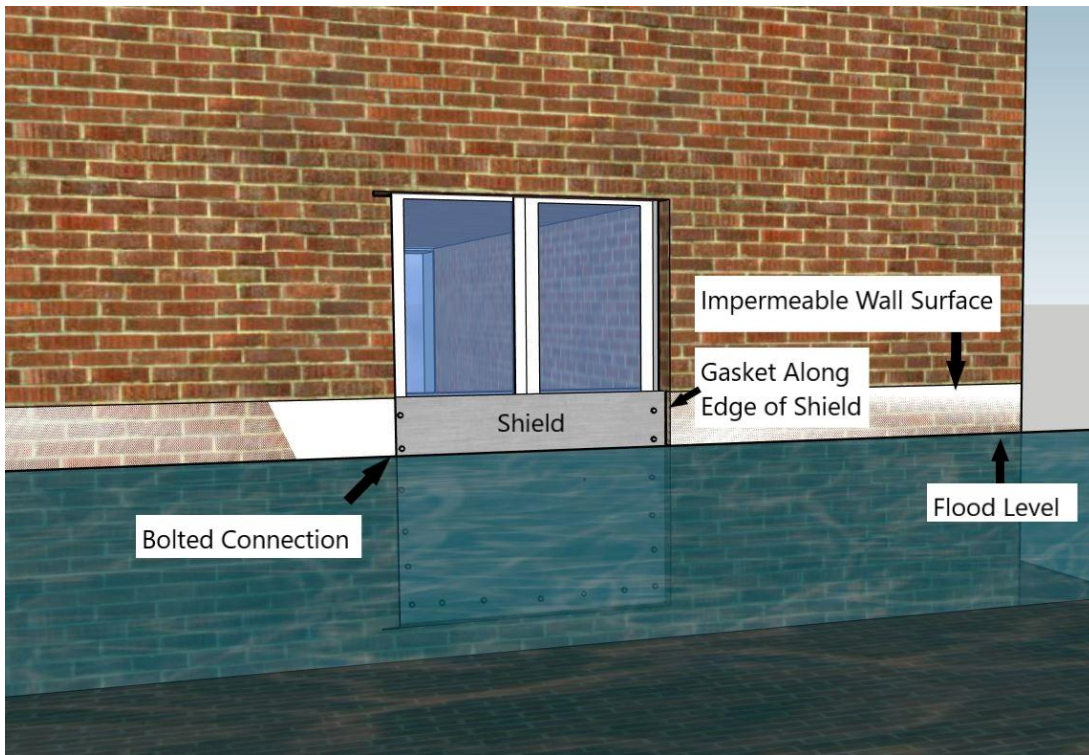
The new building at 1325 Newcastle Street was designed with elevated concrete bulkheads and a raised stair entrance to withstand flooding.



One approach to flood-proofing is the addition of pumps into the basement as well as adding water-resistant flooring on the ground floor.

46.4 The utilization of temporary and reversible flood panel walls for commercial buildings is encouraged to limit water infiltration during high water events.

These should be installed in a manner which will not require the removal or alteration of historic features.



Flood proofing for commercial buildings can include the temporary addition of large shields on primary entrances (above) or more permanent shields on rear doors not readily visible from the street (below).



Temporary flood panels are now widely available for historic commercial buildings. When high water events are anticipated these can be erected to minimize flood damage.



Technical Information
Floodproofing Non-Residential Buildings
www.fema.gov/media-library/assets/documents/34270

GUIDELINES FOR ELEVATING DWELLINGS

46.5. Dwellings in the Old Town Historic District may be elevated through the addition of pier foundations.

Raised brick foundations may be solid, pierced, or piers, and screening with landscaping is encouraged. The addition of stucco may be an appropriate surface treatment for brick foundations. Lattice panels may be placed between brick piers. The top of foundation piers and columns should not extend beyond the walls of the dwelling. Foundation piers should be consistent in size and scale with the porch columns above and in colors which coordinate both columns and piers.

46.6 New stairs and landings to accommodate elevation changes should complement the design of the existing façade, which may already include porch structures and related details.

New stair landings should be at the original porch location height. New stairs should be at least five feet in width and be in traditional historic designs. Porch columns should align with foundation piers below and not be offset. If necessary, a dwelling may be moved further back on the lot to accommodate the construction of stairs. It is preferred to maintain a direct stair connection perpendicular to the sidewalk or street.

46.7. Lattice and other wood screening panels should be permeable to allow water to flow through them. For properties elevated above three feet panels should be hinged in order to retract or “breakaway” during high water.

Wood lattice panels should be used on the primary and readily visible side elevations but vinyl lattice may be installed on rear elevations and side elevations not readily visible from the street. Dark colors for screen panels are preferred to light colors.

46.8. Elevate HVAC units or any other exterior equipment as inconspicuously as possible. Consider relocating HVAC equipment to rear roof lines not readily visible from the street.

46.9 Interior brick chimneys should be retained, elevated along with the house and be at the original height above the roofline.

Exterior wall brick chimneys should be retained in place but extended above the roofline to the original height. Match any new brick as closely as possible. If matching brick is not possible, the application of a consistent stucco surface is appropriate.

46.10 Add smooth concrete or appropriate siding materials to elevated at-grade foundations.

Ranch style and other dwellings built at-grade may require the slab foundation to be elevated along with the rest of the house. These foundations were not meant to be visible and are often rough and unfinished in appearance. When at-grade houses are elevated, the foundations should be finished with smooth concrete or appropriate siding materials.



When elevating dwellings the porch columns may be extended on brick piers with lattice panels between the piers.



Elevated HVAC units should be placed on platforms or at rear elevations.

Resiliency Standards—Overall Approach Low Elevation

Example of a Bungalow Dwelling Before and After a Low Elevation



YES: Porch columns and foundation piers align.

YES: Wide fascia board divides porch and piers.

YES: Stair landing is at the level of the original porch.

Resiliency Standards—Overall Approach Low Elevation



YES: Porch columns and brick foundation piers align.

YES: Wide fascia board divides porch and piers.

YES: Stair railing ends at level of original porch.

YES: Brick stairs match brick piers.

Example of a low-elevation project for a Gable Front Folk Vernacular dwelling.

Resiliency Standards—Overall Approach High Elevation



Bungalow, Before and After High Elevation



YES: Craftsman style - porch columns extend as unified element to piers.

YES: Open risers on stairs with a Craftsman porch railing.

YES: Lattice panels are appropriately placed behind and between the brick piers and painted a dark color.

YES: Appropriately sized fascia board between the porch piers.

Resiliency Standards—Overall Approach High Elevation



YES: Porch columns and foundation piers are in alignment.

YES: Well proportioned wide stair leads to front entrance.

YES: Lattice panels are a dark color and appropriately placed behind fascia board and foundation piers.

YES: Driveway leads to side loaded parking under the house.

Example of a high-elevation project for a Central-Hall plan vernacular dwelling.



This at-grade dwelling was elevated by over three feet and has a smooth concrete surface on the foundation.

The concrete block piers were also finished with a smooth surface.

A simple porch and staircase were added on the primary elevation.

Example of a low-elevation project for an at-grade Ranch style dwelling.

Technical Information

Elevating Historic Dwellings

**www.msdisasterrecovery.com/documents/historic_prop_grant_app.pdf
www.fema.gov/pdf/rebuild/mat/sec5.pdf**

Elevation Design Guidelines for Historic Homes in the Mississippi Gulf Region

www.n.j.gov/dep/npo/hrrcn_sandy_pdf%20files/mississippi.pdf

Elevation Design Guidelines for Historic Buildings in the Louisiana GO Zone

www.crt.state.la.us/Assets/OCD/hp/Uniquely-Louisiana