



MEMA



FEMA

February 11, 2008

Supplemental Guidance:

The Hazard Mitigation Grant Program (HMGP) Pilot Reconstruction Program and Historic Preservation

FEMA has a pilot grant program that enables qualifying communities to incorporate proactive mitigation strategies directly into the post-disaster rebuilding process. Under the Pilot Reconstruction Program, eligible applicants (generally local governments applying on behalf of their citizens) may receive Hazard Mitigation Grant Program funds to demolish an existing structure and construct a new, hazard resistant structure within the same footprint. This is achieved by building a new code compliant structure that is elevated off the ground to at least the Advisory Base Flood Elevation (ABFE)¹.

FEMA has published mitigation guidance that reduces the engineering burden of designing and producing more reliable disaster resistant residential structures along the Gulf Coast. The manual, *Recommended Residential Construction for the Gulf Coast: Building on Strong and Safe Foundations* (FEMA 550) (<http://www.fema.gov/library/viewRecord.do?id=1853>), has been written for homebuilders, contractors, and local engineering professionals and contains a variety of fully worked pre-engineered foundation solutions that are flood and wind resistant. The pre-engineered foundations types include:

Deep Open Foundations (Cases A, B & C)

Case A - Driven Braced Timber Pile

- Good for V, Coastal A, or A Flood Zones
- Maximum height above ground level is 10 feet

Case B - Steel Pipe Pile with Concrete Column and Grade Beam

- Good for V, Coastal A, and A Flood Zones
- Suitable for elevations up to 15 feet above grade

Case C - Driven Braced Timber Pile with Concrete Column and Grade Beam

- Good for V, Coastal A, and A Flood Zones
- Suitable for elevations up to 15 feet above grade

¹ The ABFE is the height, relative to mean sea level, that has a 1-percent chance of being flooded in a given year.

Shallow Open Foundations (Cases D & G)

Case D - Concrete Column and Grade Beam/Waffle

- Good for A Flood Zones (and Coastal A Flood Zones with limited scour and erosion)
- Maximum height above ground level is 8 feet

Case G - Concrete Column on Concrete Grade Beam with Reinforced Slab/Mat

- Good for A Flood Zones
- Maximum height above ground level is 8 feet

Shallow Closed Foundations (Cases E & F)

Case E - Reinforced Masonry Crawl Space

- Good for A Flood Zones only
- Maximum height above ground level is 8 feet

Case F - Reinforced Masonry Stem Wall

- Good for A Flood Zones only
- Maximum height above ground level is 4 feet

These foundations are flexible enough to accommodate homes identified in *the Pattern Book for Gulf Coast Neighborhoods* (http://mississippi renewal.com/documents/Rep_PatternBook.pdf) published by the Mississippi Governor's Rebuilding Commission on Recovery, Rebuilding and Renewal. The Governor's Rebuilding Commission also prepared a *Summary Report on the Recommendations for Rebuilding the Gulf Coast* (<http://mississippi renewal.com/info/plansReports.html>) with technical guidance and sensible rebuilding plans for eleven coastal towns in southern Mississippi.

What are the consequences of demolishing a historic property during the reconstruction process?

Pilot Reconstruction Program projects require review for compliance with Section 106 of the National Historic Preservation Act (NHPA). By using the Section 106 process, FEMA will take into account the effects of Pilot Reconstruction Program projects on historic properties (including archaeological sites). Pilot Reconstruction options should only be considered for historic structures if the existing historic structure is either not structurally sound enough to be safely elevated and/or remains in an area extremely susceptible to future storm damage and loss.

FEMA is aware that demolition of historic properties and new construction within a local or national historic district can pose serious threats to historic neighborhoods and communities. The effects of demolition can include, but are not limited to the following:

- Loss of a local and/or national historic district designation (depending on the overall number of structures demolished);
- Damage and/or loss of the neighborhood's historic character;
- Setting precedent for demolitions in a localized area and encouraging a disregard for historic preservation guidelines; and
- Creating new construction that is not consistent with the historic characteristics of surrounding structures and landscapes

What Style Should New Houses Be?

Because Pilot Reconstruction Program projects have the potential to irrecoverably change the character of important historic districts, careful consideration should be made by applicants participating in this Program.

The primary objective of historically sympathetic reconstruction is to design and construct new buildings and structures that are compatible with historic surroundings.

All demolitions should be carefully planned to minimize impacts to the surrounding properties, including archaeological sites (below and adjacent to projects), and new construction designs should be congenial to surrounding historic properties as outlined in the *Mississippi Pattern Book for Gulf Coast Neighborhoods*.

If new construction will result in negative effects to the historic characteristics of a neighborhood or archaeological site, the design should be reconsidered or the project's effects will need to receive closer examination under Section 106.

The *Secretary of Interior Standards for the Treatment of Historic Properties* (commonly referred to as the "Standards") (<http://www.nps.gov/history/hps/tps/standguide/>) outlines the following concepts that applicants may wish to consider when participating in the Pilot Reconstruction Program:

- Preservation of remaining historic materials, features, and spatial relationships.
- Accurate duplication of historic features and elements supported by documentary or physical evidence rather than on the availability of items salvaged from other historic properties.
- Distinction of reconstructed materials as clearly contemporary, but with a clear foundation in historic design concepts.

Additional FEMA Publications

More information on *Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning* is available at <http://www.fema.gov/plan/mitplanning/howto6.shtml>.

FEMA has also prepared *A Coastal Construction Manual: Principles and Practices of Planning, Siting, Designing, Constructing, and Maintaining Residential Buildings in Coastal Areas* (<http://www.fema.gov/library/viewRecord.do?id=1671>). The manual provides a comprehensive approach to responsible development in coastal areas based on guidance from over 200 experts in building science, coastal hazard mitigation, and building codes and regulatory requirements.