



FEMA

OFFICE OF ENVIRONMENTAL PLANNING AND HISTORIC PRESERVATION
PARTNERS IN SHAPING RESILIENT COMMUNITIES



Environmental and Historic Preservation (EHP) Fact Sheet: Structure Elevation Projects

Environmental resources, cultural institutions, and historic assets define communities and contribute to their well-being and unique character. The Federal Emergency Management Agency (FEMA) plays a critical role in helping communities incorporate environmental stewardship and historic preservation into emergency management decisions. As disasters continue to challenge our nation and communities grapple with issues of preparedness and sustainability, FEMA offers expertise to ensure both legal compliance and informed local, State, Tribal, and national planning.

Structure Elevation Projects and EHP Review

FEMA's Hazard Mitigation Assistance Program provides funds to eligible applicants to reduce flood risks to existing structures by elevating buildings so that the lowest floor is at or above the Base Flood Elevation (BFE) as required by FEMA or local ordinance. Elevation typically involves lifting a structure and placing it on a new, higher foundation, which may consist of columns, piers, posts, or raised foundation walls. At a minimum, FEMA requires that all structure elevation projects be designed in accordance with the National Flood Insurance Program (NFIP) standards. FEMA also encourages applicants to design all structure elevation projects in accordance with the American Society of Civil Engineers/Structural Engineering Institute 24-05, Flood Resistant Design and Construction standards (ASCE/SEI). EHP review of elevation projects primarily focuses on the potential impacts to the structure, although these projects may also have some potential to impact archaeological resources.

Considering EHP Impacts

Structure elevation projects generally fall under FEMA's list of Categorical Exclusions that require minimal documentation to comply with the National Environmental Policy Act (NEPA), but compliance with other laws and regulations such as the Endangered Species Act, National Historic Preservation Act (NHPA), Clean Water Act, and Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands) is required. Elevation projects have significant potential to affect historic properties under Section 106 of the NHPA. In some cases, buildings may be individually eligible for or listed in the National Register of Historic Places (NRHP), or they may be located in a historic district where their elevation will create negative visual impacts on NRHP eligibility. These projects may also adversely affect important archaeological resources.

NFIP floodplain management requirements contain provisions that provide relief from the elevation requirement for historic properties located in Special Flood Hazard Areas. However, if the applicant and owner decide to proceed with elevation of a historic property, they must meet the requirements of the NHPA. By coordinating with the State Historic Preservation Officer (SHPO), adhering to the Secretary of the Interior's Standards for the Treatment of Historic Properties, and seeking the help of an architect or engineer experienced in preserving historic buildings, the applicant may be able to avoid an adverse effect, thereby reducing the time needed for FEMA EHP review.

EHP Considerations for Elevation Projects

When planning the elevation of flood-prone structures, FEMA advises communities to:

- Consider utilizing appropriate design, materials, and landscaping to avoid adverse effects to historic properties.
- Coordinate with the State Coastal Management Agency if elevations will take place in coastal areas, as adherence of the proposal to provisions of the Coastal Zone Management Act may be required.
- Avoid elevation projects in Coastal Barrier Resources System (CBRS) areas or Otherwise Protected Areas (OPAs), as FEMA may not fund activities in these locations.

Structure Elevation Projects: EHP Review Checklist

The checklist below describes project information that FEMA requires in order to complete EHP review of a structure elevation project.

<input checked="" type="checkbox"/>	Location	State the location of the project, including both the site address and latitude/longitude in decimal degrees (e.g., 38.5342° N,-77.0212° W). Provide any maps (including Flood Insurance Rate Map) with project site clearly marked, aerial imagery, or drawings showing the location of the properties to be elevated.
<input checked="" type="checkbox"/>	Description of Project Scope of Work	Provide a scope of work for the project, including plans for the type of elevation, any planned demolition, level of ground disturbance, extent of vegetation removal, and any fill to be used. Specific design information will be required should EHP review identify potential adverse effects on buildings listed in or eligible for the National Register, either individually or as part of a district.
<input checked="" type="checkbox"/>	Age of Existing Buildings	Provide the original date of construction for any buildings or structures located on the list of proposed properties to be elevated.
<input checked="" type="checkbox"/>	Photographs	Submit clear, color photographs of each of the buildings to be elevated, including one photo for each side of the building. Also provide color photographs of the surrounding neighborhood taken from the site of buildings to be elevated.
<input checked="" type="checkbox"/>	Agency Coordination	Coordinating with applicable resource agencies prior to submitting your application to FEMA can help streamline EHP review. Please note any such communications with Federal, State and local resource agencies, such as the SHPO, U.S. Fish and Wildlife Service, or local floodplain administrator and provide copies of any correspondence and permits.
<input checked="" type="checkbox"/>	Additional Information	Include copies of other relevant information, such as environmental site assessments and remediation reports, historic property designations or surveys, including any archaeological surveys.

Timeframes for EHP Review

Timeframes for EHP review vary depending on a project's potential impact on natural or historic resources. For projects that do not affect historic properties, the review process generally takes 30 to 60 days after FEMA has received a complete project application with supporting documentation. If FEMA determines that the elevation of a building will have an adverse effect on historic properties, FEMA is required to consult with the State and/or Tribal Historic Preservation Officer; the Advisory Council on Historic Preservation, if participating; and other interested parties to develop a Memorandum of Agreement (MOA) in order to resolve adverse effects under Section 106 of the NHPA. These consultations will extend the review period a minimum of 60 to 90 days as they involve outside resource agencies and other stakeholders.

EHP Best Practice: Elevation in North Carolina Historic District

The town of Belhaven, NC, is subject to repeated flooding from the Pungo River. During Hurricane Fran in 1996, more than 60 percent of the town's buildings were damaged, including most of the buildings in the Belhaven Historic District. In an effort to retain the town's historic and economic link to the waterfront, the decision was made to elevate 379 buildings using Hazard Mitigation Grant Program (HMGP) and other funding sources. Working closely with the North Carolina SHPO, elevation plans were developed that would preserve the historic character of the district. Frame buildings were raised onto concrete block foundations faced with brick veneer. Brick buildings were elevated onto continuous concrete block, brick veneered foundations, and a projecting brick course was used to demarcate where the original house ended and the new foundation began. Additional guidance was drafted for preserving porches and other features. Because of these efforts, the Belhaven Historic District was able to maintain its National Register status.

Additional Resources: For more information on EHP review and FEMA grant assistance, contact your State Emergency Management Agency or Tribal Office or visit <http://www.fema.gov/environmental-planning-and-historic-preservation-program>.