

## **U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT:**

### **8-STEP PROCESS - FLOODPLAIN**

Project Name: Burleson Co - 24-065-057-E567-Street-Drainage-reeval

Responsible Entity: Burleson County

State/Local Identifier: 24-065-057-E567 / B-18-DP-48-0002

#### **Project Location:**

All work will occur in Burleson County, Texas in the following locations:

- Mallard Rd. from point northeast of the intersection of Berry Ridge Rd. and Mallard Rd. northeast 1,478.4 lf.

#### **Street and Drainage Improvements:**

The work to be completed is the construction of the 5-10'x10' Concrete Box Culvert and raising Mallard Street approximately 2' to get it above the 100-year water surface from STA 71+35 to 84+75.

#### **Ground Disturbance:**

This project involves ground-disturbing activities:

- Max Acres: 2.28 acres
- Max Depth: 9 feet

**Step 1: Determine whether the action is located in a floodplain.**

***Exemptions to Part 55:***

*Actions listed in the revised 24 CFR 55.12 that are exempt from the floodplain management requirements of Part 55 include:*

- *Exempt activities and actions that are Categorically Excluded Not Subject to 50.4 or 58.5*
- *Restoration or preservation of floodplains, acquisition of floodplains property provided the site is used for flood control or open space but only if structures are cleared and improvements are specifically limited*
- *Receivership or foreclosure and related actions*
- *Policy-level actions not involving site-based work*
- *Issuance of non-project-based housing vouchers*
- *A minor amendment to a previously approved action*

The project is subject to Part 55 because it meets the criteria for none of the exemptions.

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***Critical Actions:***

*Critical action means any activity for which even a slight chance of flooding would be too great because such flooding might result in loss of life, injury to persons, or damage to property.*

*Critical actions include activities that create, maintain, or extend the useful life of those structures or facilities that:*

- *Produce, use, or store highly volatile, flammable, explosive, toxic, or water-reactive materials*
- *Provide essential and irreplaceable records or utility or emergency services that may become lost or inoperative during flood and storm events (e.g., community stormwater management infrastructure, water treatment plants, data storage centers, generating plants, principal utility lines, emergency operations centers including fire and police stations, and roadways providing sole egress from flood-prone areas)*
- *Are likely to contain occupants who may not be sufficiently mobile to avoid loss of life or injury during flood or storm events, e.g., persons who reside in hospitals, nursing homes, convalescent homes, intermediate care facilities, board and care facilities, and retirement service centers; housing for independent living for the elderly is not considered a critical action*

Because a portion of the project meets one (1) of the criteria (*roadways providing sole egress from flood-prone areas*), that portion of the project is considered a critical action:

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***How FFRMS was determined:***

*The FFRMS is determined by utilizing a tiered approach:*

- *Climate-Informed Science Approach (CISA) - **Preferred Method***
- *0.2-Percent-Annual Chance Floodplain Approach (0.2PFA)*
- *Freeboard Value Approach (FVA)*

*Climate-Informed Science Approach (CISA)*

- *Federal CISA data must be equal to or greater than base flood elevation (BFE) to be used.*

According to the Federal Flood Standard Support Tool (FFSST), there is no CISA data available for the project areas. As such, this approach could not provide a determination as to whether the project was in the FFRMS floodplain. The next tiered approach, 0.2PFA (500-year floodplain method), was therefore considered.

*FEMA 0.2PFA (500-year floodplain)*

- *FEMA maps must show a 500-year floodplain in order to be used*
- *Critical Actions require both the 0.2PFA and the Freeboard Value Approach (FVA) be used to determine which elevation is higher, the 0.2PFA or FVA.*

According to FEMA floodplain map #48051C0325C (Effective Date 1/6/11), the entire project will occur within Zone A (100-year floodplain). Since 100-year floodplains are considered FFRMS floodplains, **the 8-step process is required.**

- Area of Disturbance: 2.28 acres

In order to ensure that all appropriate FEMA floodplain data was considered and the most stringent data source was used for the comparable flood data, all available effective, preliminary and pending FIRMS were reviewed:

- Effective Maps - 29
- Preliminary Maps - 0
- Pending Maps - 0

Upon completion of this review, it was determined that there was no additional data which would change the FFRMS determination.

Because the 500-year floodplain was not shown on the FEMA map, this approach could not provide a determination as to whether the project was in the FFRMS floodplain. The next tiered approach, Freeboard Value Approach (FVA), was therefore considered.

Freeboard Value Approach (FVA):

*FVA defines the FFRMS floodplain as the elevation and flood hazard area that results from:*

- 1. Adding two (2) feet to the base flood elevation (BFE) **for non-critical actions** or*
- 2. Adding three (3) feet to the BFE **for critical actions.***

*This approach is used for noncritical actions if neither CISA data nor FEMA-mapped 0.2-percent-annual-chance floodplain data is available or actionable. **For critical actions, the higher of 0.2PFA or FVA must be used.***

Since the FEMA maps did not provide a Base Floodplain Elevation (BFE), the FEMA Floodplain Elevation Mapper was utilized. Upon review, it was determined that the BFE for the two (2) project locations were as follows:

- Mallard Road: 253.65 feet

Since Mallard Road is a Critical Action, the FFRMS floodplain is BFE + 3 feet:

- **253.65 + 3 = 256.65 feet**

**Step 2: *Notify the public for early review of the proposal and involve the affected and interested public in the decision-making process.***

There are designated floodplains associated with the proposed project sites. An early floodplain notice was posted regarding the project, affording the opportunity for public input. No comments were received.

Posted Date: 6/5/25

**Step 3: *Identify and evaluate practicable alternatives.***

The County project site selection criteria are:

- (a) The project cannot cause current residents to become displaced;
- (b) The project must be within the County in order for grant proceeds to be used;
- (c) The project must address infrastructure which was damaged due to recent flooding.

The County considered several alternative sites and actions:

1. **Do work only outside the floodplain.** It is not possible to complete work without disturbing the floodplain.
2. **Obtain a Letter of Map Amendment (LOMA) or Letter of Map Revision (LOMR).** - The County also considered applying for a LOMA Map Amendment or Letter of Map Revision but it was determined that this site would not be a good candidate for such action and the time required to request such action could not be justified.
3. **Other infrastructure considered.** - Other infrastructure projects were also considered within the County Jurisdictional limits. However, the County concluded that this project was the highest priority of any eligible projects.
4. **No Action or Alternative Actions that Serve the Same Purpose.** - A no-action alternative was considered but the storm drainage system is currently not functioning properly which could pose a health hazard to the community.

**Step 4: *Identify Potential Direct and Indirect Impacts of Associated with Floodplain Development.***

1. Preventing loss of life and property as a result of flooding is the highest priority. Another flood could damage the new infrastructure.
2. In addition to concerns for life and property, the County has considered the natural values of the floodplain. The natural resources of the floodplain include water, biological, and societal resources. The proposed project will have minimal impacts to the floodplain because there will be minimal disturbance to the floodplain.
3. According to a Threatened and Endangered Species Assessment, review of the TPWD County Species List and consultation with the USFWS and TPWD, it was concluded that the construction of the facilities will have no quantifiable impact on plant and animal life. Only native plants are to be used in the floodplain and on the site.
4. Societal resources should also be considered during the design process. The designs are meant to complement the natural features of the area and to offer an aesthetically pleasing structure. The site will not have an effect on agricultural lands.

**Step 5: *Where practicable, design or modify the proposed action to minimize the potential adverse impacts to lives, property, and natural values within the floodplain/ and to restore, and preserve the values of the floodplain.***

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**Mitigation Requirements:**

CFR 55.20 (e)(1):

For actions in the FFRMS floodplain, the required elevation described in this section must be documented on an Elevation Certificate or a Floodproofing Certificate in the Environmental Review Record prior to construction, or by such other means as HUD may from time to time direct, provided that notwithstanding any language to the contrary, the minimum elevation or floodproofing requirement for new construction or substantial improvement actions shall be the elevation of the FFRMS floodplain as defined in this section.

**Non-Critical Actions**

CFR 55.7(d)(1):

- The FFRMS floodplain includes those areas that result from adding an additional two feet to the base flood elevation based on best available information.

**Critical Actions**

CFR 55.7(d)(2):

- The FFRMS floodplain includes those areas that result from adding an additional three feet to the base flood elevation based on best available information.

**Applicable Projects**

According to the HUD Exchange on Floodplain Management (Complying with 24 CFR Part 55 (2)), if a project involves new construction or substantial improvement, elevation requirements apply.

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#### Substantial Improvement:

A substantial improvement is any repair, reconstruction, modernization or improvement of a structure, including one of the following:

1. The cost of which equals or exceeds 50 percent of the market value of the structure either before the improvement or repair is started, or, if the structure has been damaged and is being restored, before the damage occurred
2. That results in an increase of more than 20 percent in the number of dwelling units in a residential project or in the average peak number of customers and employees likely to be on-site at any one time for a commercial or industrial project

#### Structures (Federal Emergency Management Agency - FEMA):

- A walled and roofed building, other than a gas or liquid storage tank, principally above ground and affixed to a permanent site as well as a manufactured home on a permanent foundation.
- For floodplain management purposes, a structure is a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home. The terms "structure" and "building" are interchangeable in the National Flood Insurance Program (NFIP). Residential and non-residential structures are treated differently. A residential building built in a floodplain must be elevated above the Base Flood Elevation (BFE). Non-residential buildings may be elevated or floodproofed.

Certain types of projects are specifically not considered substantial improvement under Part 55.

- Any project solely for the improvement of a structure to comply with existing state or local health, sanitary or safety code specifications that is solely necessary to assure safe living conditions
- Any alteration of a structure listed on the National Register of Historical Places or on a State Inventory of Historic Places
- Structural repairs, reconstruction, or improvements not meeting the definition for substantial improvement are considered "minor improvements."

Because the project does not meet the definition of a structure, elevation requirements do not apply.

### **Mitigation Measures:**

1. Preserving Property: Project designs should, to the best extent possible, incorporate measures to reduce the risk of damage to the new infrastructure via a flood.
2. Preserving Natural Values and Minimizing Impacts: After construction is completed, the disturbed area will need to be immediately re-vegetated with native grasses. Only native plants are to be used in the floodplain, and on the site.
3. Deposition and excavation of materials will need to be performed in such a manner that erosion and sedimentation will be controlled.
4. Precautions will need to be taken in the handling of fuels or other hazardous materials to prevent discharge or spillage resulting in lower groundwater quality.
5. Erosion control measures such as hay bales or silt screen barriers will need to be implemented and maintained during construction as required.
6. The project engineer will need to incorporate best management practices into the specifications and plans.

### **Step 6: *Reevaluate the Alternatives.***

1. **Do work only outside the floodplains.** Completing the project without disturbing any floodplain is not possible. (Not Viable)
2. **Obtain a Letter of Map Amendment (LOMA) or Letter of Map Revision (LOMR).** - It was determined that neither a LOMA nor a LOMR was likely nor practical for the project area. (Not Viable)
3. **Other infrastructure considered.** - After considering other potential projects in the County, it was determined that of the eligible projects, this project was of the highest priority. (Not Viable)
4. **No Action or Alternative Actions that Serve the Same Purpose.** - The current storm drainage system in the project area is inadequate and must be addressed to prevent public health hazards. (Not Viable)

### **Step 7: *Determination of No Practicable Alternative***

It is our determination that there are no practical alternatives for locating the project in the floodplain:

A final notice was posted detailing the reasons why the project must be located in the floodplain/ , a list of *alternatives* considered, and all mitigation measures taken to minimize adverse impacts and preserve natural and beneficial floodplain values. No concerns were expressed by the public concerning this notice.

Posting Date: 6/26/25



**Step 8: *Implement the Proposed Action***

The County will ensure that this plan, as modified and described above, is executed and necessary language will be included in all agreements with participating parties. The City will also take an active role in monitoring the construction process to ensure no unnecessary impacts occur nor unnecessary risks are taken.