



April 3, 2025

Eric Salazar, PE (via email: eric.salazar@sanantonio.gov)
Senior Engineer/Project Manager
City of San Antonio Public Works Department
P.O. Box 839966
San Antonio, TX 78283-3966

**Re: Floodplain Variance: REQ-CMRORAEVR-25-44400172
FPDP# 2025186 (Denied) - Sealing Drainage Phase IV Project
Public Works Department Capital Improvement Project (WBS# 23-03944)**

Dear Mr. Salazar,

The Public Works Department (PWD) Storm Water Division has reviewed the design and Floodplain Development Permit (FPDP) request associated with the proposed improvements for the ***Sealing Drainage Phase IV*** horizontal capital project, identified by the CoSA PWD project number WBS# 23-03944. The request for a FPDP has been **denied**, as indicated in disapproved FPDP# 2025186, as the proposed project improvements are not in compliance with the current City of San Antonio Unified Development Code (UDC) Appendix F – Floodplains.

1. The proposed project improvements do not meet the following UDC requirement:
 - **Appendix F, Subdivision C, Section 35-F124(c)(2)** pertaining to permitted increases in water surface elevations, which states, *“An increase in water surface elevation [for special flood hazard areas] is permitted solely when all the following conditions are met:*
 2. *Increase in water surface elevation for the effective and regulatory floodplains do not exceed six (6) inches.”*
 - For subpart 2 above, the project’s proposed drainage improvements will result in water surface elevation (WSE) increases exceeding six (6) inches at some locations along Alazan Creek downstream of the project limits.
 - Note that the project’s proposed drainage improvements are compliant with subparts 1, 3, and 4 of 35-F124(c), and as such, those subparts were not individually referenced above for brevity.
4. A Variance Request to UDC Section 35-F124(c)(2) will be required by PWD Storm Water Division prior to issuance of the approved Floodplain Development Permit to allow project construction. The City’s Planning Commission will be responsible for consideration of and rendering a decision for the Variance Request.
5. The applicant has provided the following information to assist with the review of the variance to the above UDC requirements:

- The Engineer of Record has conducted a comprehensive flood study to evaluate the accuracy of the 100-year (1% annual chance) and 100-year Future (Future 1% annual chance) water surface elevations and floodplain mapping downstream of the subject project to approximately Emory Street, just upstream of Woodlawn Lake. The study was based on several different FEMA-level modeling scenarios and the modeling was performed as a detailed, one-dimensional and two-dimensional (1D/2D) coupled model using the xpswmm software. The engineer summarized the study findings in a concise letter format with supporting map exhibits and tables and submitted the letter as justification for the Variance Request. Refer to **Exhibit 1** or **Exhibit 3** in the attached engineer's letter for a depiction of the project location and study area.
- The letter includes measures and actions taken by the consultant and CoSA project management teams to properly assess and administratively manage the WSE increases. Those measures and actions are briefly discussed below.

6. The PWD Storm Water Division supports the Variance Request for the following reasons:

- The Engineer of Record made extensive efforts to thoroughly assess the complex storm drain and channel systems within the study area using the most detailed modeling approach that is commonly accepted and often utilized for such complex drainage systems, a 1D/2D unsteady hydraulic model. The resulting flood study found that non-compliant WSE increases will range from +0.51 feet to +0.78 feet (average of 0.64 feet) downstream of the subject project, thereby exceeding the six (6) inches permitted by the floodplain ordinance in 35-F124(c)(2). Refer to **Table 1** in the attached engineer's letter that reports a more detailed comparison of all water surface elevations and increases downstream of the project limits (*red area*). Table 1 also shows that the WSE increases normalize as channel flows approach Emory Street, where a very slight +0.04-foot increase is reported.
- The engineer's analysis has found that all proposed WSE increases, including the non-compliant WSE increases that exceed six (6) inch threshold referenced in 35-F124(c)(2), will be contained in the existing concrete drainage channel along Alazan Creek. Despite the WSE increases, the flood study found that remaining channel freeboard will range from 1.77 feet to 6.75 feet (average of 4.40 feet) after considering the WSE impacts from the subject project. The remaining freeboard far exceeds the 1-foot of freeboard required per design criteria. It should be noted that previous projects that constructed channel improvements for Phases 1, 2, and 3 accounted for in their designs the higher flows that would be expected when future project phases are constructed. Refer to **Table 1** in the attached engineer's letter that reports in more detail the remaining channel freeboard downstream of the project limits (*green area*).
- The engineer's analysis has found that because the Proposed water surface profile is contained in the concrete channel and ample channel freeboard remains, the WSE increases will not impact any privately owned properties outside of the drainage channel or any existing roadway crossings along the study limits. Refer to **Exhibit 3** in the attached engineer's letter that shows the preliminary floodplain mapping (*dark blue hatched area*) contained within the concrete channel.

- A FEMA Conditional Letter of Map Revision (CLOMR) for the proposed project improvements, which includes the proposed WSE increases, has been reviewed by the PWD Floodplain Management Team and was found acceptable with no further technical review comments. The CLOMR is currently pending approval of the Variance Request and MT-2 Form signature by the city's Floodplain Administrator before it can be submitted to FEMA for review. It is the community's intent, in collaboration with the Engineer of Record and city's project management team, to seek approval of the CLOMR so an approved Floodplain Permit can be issued so construction can commence. It is also the community's intent to develop a Letter of Map Revision (LOMR) study and officially revise the FEMA 1% annual chance floodplain mapping in the study area following construction.
7. PWD will support a variance to the above UDC requirement without any conditions of approval.
- The Seeling Drainage Phase IV construction documents and associated flood studies have gone through the Floodplain Management Team's formal technical review process, and we have found the analyses to be technically sound. The project design has been finalized with no further technical review comments from our team. As such, there are no outstanding items related to the project design that would affect the findings of the flood study or the justification for this Variance Request.

If the Variance is approved by the Planning Commission, the city's Floodplain Administrator will sign the FEMA MT-2 forms to allow the consultant to submit the pending CLOMR for FEMA review and approval. Once FEMA has approved the CLOMR, the Floodplain Management Team within the PWD Storm Water Division will issue an approved Floodplain Development Permit (FPDP) to allow the project construction to commence. If you have further questions or require any further assistance and/or information, please contact me at (210) 207-0182 or sabrina.santiago@sanantonio.gov

Sincerely,

Sabrina Santiago

Sabrina Santiago, CFM
Storm Water Engineering Manager & Floodplain Administrator
Public Works Floodplain Management Team

Attachments: Denied CoSA FPDP# 2025186
AE/VR Application for REQ-CMRORAEVR-25-44400172
Variance Request Justification Letter (*Halff Associates, Inc.*)

cc: Josh Logan, PE, CFM, Halff Associates, Inc.
City of San Antonio, Planning Commission