



COUNCIL REPORT

DATE: September 12, 2023

CATEGORY: Consent

DEPT.: Public Works

TITLE: **Lower Stevens Creek Levee Improvements, Project 18-52— Professional Services Agreement**

RECOMMENDATION

Authorize the City Manager or designee to execute a professional services agreement with Schaaf & Wheeler, Consulting Civil Engineers, to provide design engineering, environmental clearance, and permitting services for Lower Stevens Creek Levee Improvements, Project 18-52, in a not-to-exceed amount of \$1,250,000.

BACKGROUND

The North Bayshore Area, which includes the Shoreline Regional Park Community (Shoreline Community), is a low-lying area adjacent to the Bay and is susceptible to coastal flooding from the Bay and fluvial flooding from Permanente Creek and Stevens Creek. Under existing conditions, some coastal flood protection is provided by a complex system of levees and ponds. Flood-prone areas in the Shoreline Community are identified in the Federal Emergency Management Agency's (FEMA's) Flood Insurance Rate Maps (FIRMs) as Special Flood Hazard Areas, subject to National Flood Insurance Program (NFIP) requirements.

Sea Level Rise

The City completed a study in 2012 to assess the vulnerability of the Shoreline Community to coastal and fluvial flooding resulting from projected sea level rise. The study, which has since been updated in 2021, recommended a Sea Level Rise Capital Improvement Program (SLRCIP) with adaptation projects for flood risk management and habitat enhancement. The list of improvement projects includes coastal erosion protections, pump stations, interior drainage improvements, tidal marsh restoration, and creek improvements at Stevens Creek and Permanente Creek.

Stevens Creek has levees on both sides from U.S. 101 to Crittenden Lane, protecting Mountain View to the west and Moffett Field/Sunnyvale to the east. Most of these levees were constructed by the Santa Clara Valley Water District (Valley Water) on its properties. They were accredited by FEMA as providing protection from the 100-year flood event. However, based on the current

FEMA policy, the hydrological studies of coastal and fluvial flooding that serve as the basis for the accreditation of the Stevens Creek levees and the FEMA Digital Flood Insurance Rate Maps (DFIRMs) do not incorporate assumptions regarding potential future sea level rise.

Lower Stevens Creek Levee Improvements

Lower Stevens Creek Levee Improvements, Project 18-52, is one of the recommended projects from the SLRCIP. The project goal is to protect the portion of the Shoreline Community within the Stevens Creek watershed from both the existing 100-year flood risk and the projected sea level rise. Figure 1 shows the project location and the main project components.

The project consists of improvements to a short section of levee between Stevens Creek and Crittenden Pump Station (Segment 1) and the uncertified portion of the Stevens Creek levee north of Crittenden Lane (Segment 2). The improvements will be constructed along the west bank of Stevens Creek, raising approximately 1,500' of levee north of Crittenden Lane and connecting it to the southern levee of the Stevens Creek Tidal Marsh. The southern levee of the Stevens Creek Tidal Marsh will also be raised, and a new levee with drainage culverts will be constructed across the southern end of the mitigation channel.

A geotechnical investigation and concept design were completed in 2020. The investigation identified the levees as having freeboard,¹ seepage, and stability issues. However, the analysis and concept design were based on the 2012 sea level rise projections that ranged from a low of 8" to a high of 31". Building upon the previous work, the geotechnical investigation and concept design will need to be updated based on the 2021 sea level rise projection of 42" by 2070 to develop the basis of design for the levee improvements. The project will be constructed to a sufficient standard that the tributary area is eligible to be removed from the FEMA Special Flood Hazard Areas designation. Doing so will both reduce the flood risk due to sea level rise and reduce flood insurance premiums for property owners within the floodplain. The project will also identify additional improvements needed at the mitigation channel, adjacent levees, and the City's storm drain system.

¹ Freeboard is a factor of safety usually expressed in feet above a flood level for purposes of floodplain management. It tends to compensate for the many unknown factors that could contribute to flood heights greater than the height estimated for a selected size flood and waterway conditions.



ANALYSIS

On July 7, 2023, the City issued a Request for Proposals (RFP) to firms to provide services for California Environmental Quality Act (CEQA) clearance, environmental permitting, design, and construction support for the project components identified above. The RFP was posted on the City website and on an online RFP posting service. Four consulting firms had questions about the project during the RFP process. On August 1, 2023, the City received one proposal from Schaaf & Wheeler, Consulting Civil Engineers (Schaaf & Wheeler). A review panel of Public Works and Community Services staff reviewed the proposal and deemed Schaaf & Wheeler is well qualified to perform this work based on the project team's understanding of the project and their knowledge and experience from similar projects performed in the Mountain View North Bayshore Area and in the broader San Francisco Bay Area.

The recommended not-to-exceed contract amount of \$1,250,000 includes \$987,562 for basic services and reimbursable expenses and an additional services amount of \$262,438 for potential additional field investigations, regulatory permitting, and engineering design work and unforeseen items. The recommended fees are within the range typically charged for such services based on similar types of projects at the City. Staff considers the fees to be fair and reasonable. With the approval of this contract, Schaaf & Wheeler could begin the project in fall 2023.

FISCAL IMPACT

Lower Stevens Creek Levee Improvements, Project 18-52, is funded with \$2,940,000 from the Shoreline Regional Park Community Fund. There are sufficient funds for the recommended agreement, and no additional appropriations are required.

ALTERNATIVES

1. Do not approve the recommended agreement and direct staff to reissue an RFP for the project.
2. Provide other direction.

PUBLIC NOTICING—Agenda posting.

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cc: SMA—Doan, File (18-52)

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