CASC
Engineering and Consulting

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May 10, 2023

City of Redlands
Ms. Jeanne Donaldson, City Clerk
35 Cajon Street
Redlands, California 92373
jdonaldson@cityofredlands.org
Direct: 909.798.7531

RE: Biological Site Assessment for Mission Zanja Channel Improvements, Redlands, California

Dear Ms. Donaldson,
CASC Engineering and Consulting (CASC) is pleased to provide the results of a biological resources evaluation for the street and storm drain improvements within the City of Redlands ("City"). The City proposes to reconstruct the northwest corner of the California Street and Redlands Boulevard intersection and widen the west side of California Street. The California Street widening extends approximately 770 feet north of the Redlands Boulevard intersection. The Project site is located south of Interstate 10 (I-10) and extends into a portion of the Mission Zanja Channel ("Project Site"). The Project will include storm drain improvements that involve the construction of a triple reinforced concrete box (RCB) culvert and concrete transition structure in the Mission Zanja Channel. The Project area is located on three (3) irregular shaped parcels: Accessor's Parcel Numbers (APNs) 0292-034-10, 0292-034-11 & 0292-034-17.

The Project area within the Mission Zanja Channel currently consists of a culvert with two (2) concrete wingwalls, a parapet wall that projects to Redlands Boulevard, a concrete invert, retaining fences on either side of the channel, and rock lined soft bottom channel and walls. The Project includes the reconfiguration of the two (2) west lanes (designated combination right turn lane/through travel and travel lane) on California Street, the shoulder, culvert wingwalls, parapet wall, channel bottom, portions of the existing retaining fence, and sidewalk. Additionally, the existing traffic signal at the California Street and Redlands Boulevard intersection and the electrical utility poles on California Street will be relocated.

Current Site Conditions and Findings

CASC's biologist performed a reconnaissance level site assessment of the Project Site on April 4, 2023. The survey was conducted during daylight hours and the biologist was able to visually assess the entire Project Site. Improvements within the Project area will include the widening of the street where it crosses Mission Zanja Creek. Currently, the creek is soft bottom and sides with some grounted and ungrouted rip-rap within the channel and along the sides of the channel. See attachment for photographs 1 and 2 of the current condition of Mission Zanja Channel. Ruderal species noted on the edge of the box channel included stork's bill (*Erodium* sp.), fox-tail (*Bromus* sp.), and wild oat (*Avena* sp.).

At the time of the survey there were no birds or bats noted nesting or their sign within the channel or noted on the bridge that traverses the channel. However, there is moderate probability of barn swallow (*Hirundo rustica*), cliff swallow (*Petrochelidon pyrrhonota*) and pallid bat (*Antrozous pallidus*) nesting on or within the concrete bridge structure which traverses Mission Zanja Channel.

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Recommendations

Special-Status Species

It is not expected that special-status plants will be impacted by improvements within Mission Zanja Channel. It is likely that a pre-emergent has been used in this area by the City to discourage weed. While at the time of the site assessment there were no bats or swallows noted, there is a likelihood of the occurrence of these species on and within the concrete structure that traverses Mission Zanja Channel (see photograph 2).

There is a moderate potential for special-status wildlife species to occur within the Project footprint. Barn swallow, cliff swallow and pallid bat have moderate potential to nest or occupy the concrete bridge structure which traverses Mission Zanja Channel.

***Mitigation Measure**:* Prior to demolition of the structure, the bridge shall be inspected for the presence of barn swallow, cliff swallow, and pallid bat. If these species have taken up residence on or within the structure, then construction activities must wait until these species are no longer active and have vacated the area. If the Project schedule needs to be expedited and wildlife species are present, it will be necessary to consult with the California Department of Fish and Wildlife (CDFW). CDFW can provide recommendations for exclusionary measures to deter these species from inhabiting the structure.

Jurisdictional Delineation and USACE Consultation

Prior to the demolition of the concrete bridge over Mission Zanja Channel, or any activity that will directly or indirectly impact the bed and bank of Mission Zanja Channel (i.e., staging of equipment within or on the banks of the channel, removal of exiting concrete and rip rap within the channel, demolition of the bridge, etc.), consultation with the U.S. Army Corps of Engineers (USACE) will be required for replacement or improvements to the existing bridge, storm drain improvements, and the construction of a triple reinforced concrete box (RCB) culvert and concrete transition structure in the Mission Zanja Channel.

Mitigation Measure: A jurisdictional delineation of Mission Zanja Channel shall be performed to determine the impacts and limits of the improvements within the channel. Further, this information shall be included in a permit application submitted for approval by the USACE.

If you have any additional needs or questions, I may be reached at 951.216.9933 or kboydstun@cascinc.com.

CASC ENGINEERING AND CONSULTING

Kim Boydstun

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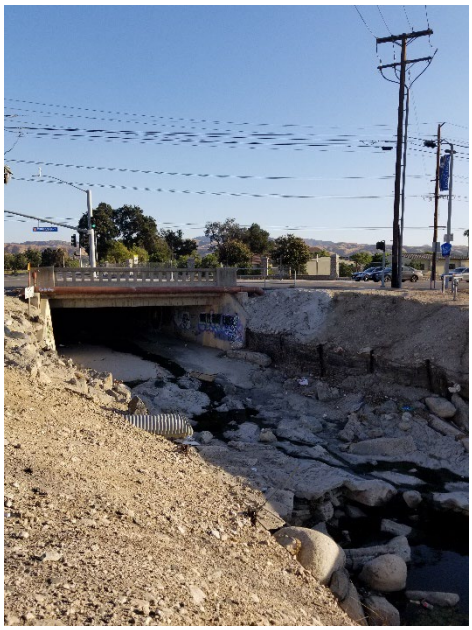
Photograph 1. Looking Northwest at Mission Zanja Channel.
Note soft bottom and sides with rip rap are currently in place for stabilization.



Photograph 2. Looking Southeast at Mission Zanja Channel and existing bridge over California Street.
Improvements and widening of the existing bridge will occur here.