

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS

2200 Range Avenue, Ste. 201
Santa Rosa, CA 95403
707-528-4848
FAX 707-528-0248

October 4, 2021

Hannah Lee, PE
Marin County Flood Control and Water Conservation District
P.O. Box 4186
San Rafael, CA 94913-4186

Subject: Marin City Drainage Analysis

Dear Hannah,

Schaaf & Wheeler is pleased to provide you with this scope and fee to conduct a hydraulic analysis to assess a bypass drainage system in Marin City. The proposed system would divert runoff around the existing shopping center and pond and discharge to Richardson Bay via a new outfall and/or pump station.

The analysis will utilize the existing Innovyze ICM or SWMM models developed by Wood Rogers or a new simplified model if necessary. The analysis will identify pipe and pump sizing, possible alignments, and potential utility conflicts. Mechanisms to minimize sedimentation and scour in the Bay will also be identified. Two conceptual system layouts (plan view) and estimates of probable construction costs will be prepared.

Task 1: Review Plans/Model Update

Schaaf & Wheeler will review the existing hydraulic models and determine if any adjustments are necessary to better evaluate the existing conditions. The existing condition hydraulic grades will be identified both upstream and downstream of the proposed diversion to be compared to the post-project condition.

Preliminary utility investigations will be performed to identify potential conflicts. Schaaf & Wheeler will contact known franchise utility providers for their utility plans within the proposed project limits. Existing record drawings will be reviewed. Existing utility alignments will be mapped in GIS or AutoCAD to identify potential conflicts and guide proposed improvements. This scope does not include field surveys, detailed utility investigations or potholing. Recently surveyed drainage inlets will be added to the models to increase detail.

Task 2: Improvement Modeling

Schaaf & Wheeler will create a post-project hydraulic models utilizing conceptual alignments along Donahue Street. The post-project hydraulic grades will be identified for upstream and downstream locations. Two improvement scenarios are included in this scope, additional alternative configurations can be analyzed for an additional fee.

Task 3: System Layout Design

Schaaf & Wheeler will use readily available topography and utility information to determine a conceptual alignment for the proposed system. Plan view figures and profiles will be included to

show the hydraulic grades and known utility crossings. A technical memorandum will be developed summarizing the proposed system hydraulics and design considerations. Cost estimates will be prepared. The conceptual designs and cost estimates will be reviewed internally for Quality Assurance.

A technical memorandum will be developed summarizing the design alternatives, cost estimates and critical construction factors.

Task 4: Coordination and Project Management

Schaaf & Wheeler does not foresee any face-to-face meetings for this project. Schaaf & Wheeler staff will be made available to the County and Flood Zone throughout this project via email and telephone. Two conference calls with the County and Zone are included as part of this task.

Schedule and Fee

It is estimated it will take six weeks to complete this analysis and modeling once all existing data is received.

Schaaf & Wheeler will perform the services outlined herein under the Consulting Services Agreement between County of Marin and Schaaf & Wheeler Consulting Civil Engineers, dated August 24, 2020 (Attachment B). Services will be billed on a time and materials basis with a not-to-exceed amount of **\$45,120**. If you have questions about this proposal please reach out to me at dschaaf@swsv.com or (415) 297-4118.

Best regards,
Schaaf & Wheeler



Daniel J. Schaaf
Vice President

Marin City Bypass Engineering Services for Hydraulic Analysis Schaaf & Wheeler Fee Proposal - October 2021		<i>Project Manager</i>	<i>Associate Engineer</i>	<i>Junior Engineer</i>	<i>Schaaf & Wheeler Subtotal</i>
	Hourly Rate	\$240	\$190	\$170	
Task 1a	Review Plans	4	32	40	\$ 13,840
Task 1b	Model Update	4	16	12	\$ 6,040
Task 2	Improvement Modeling	4	24	4	\$ 6,200
Task 3	System Layout Design	12	44	16	\$ 13,960
Task 4	Coordination and Project Management	12	8	4	\$ 5,080
	TOTAL FEE	36	124	76	\$ 45,120