



Exhibit A

Bayfront Canal and Atherton Channel Flood Management and Restoration Project

Prepared by County of San Mateo

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Purpose:

To complete the planning, design, environmental permitting, and secure property access rights for the Bayfront Canal and Atherton Channel Flood Management and Restoration Project (Project) on behalf of the Cities of Redwood City and Menlo Park, the Town of Atherton (Cities), and the County of San Mateo (the County) also referred to as the Bayfront Canal/Atherton Channel Collaborative (Collaborative). This is the first project in a series of anticipated future projects that will provide flooding relief to this cross-jurisdictional region.

Project Background:

The Bayfront Canal is located just north of Highway 101 in the City of Redwood City. The Bayfront Canal extends from west to east, from Douglas Court to Marsh Road and is bounded to the north by Cargill's salt ponds and to the south by residential and industrial properties. The Atherton Channel has approximately 6.5 square miles of tributary drainage area and discharges into the Bayfront Canal near Marsh Road. The Bayfront Canal has an additional 3 square miles of tributary drainage area, most of which is located on the south side of Highway 101. The combined flow from the Atherton Channel and Bayfront Canal, a total of 9.5 square miles of contributing area, discharges into Flood Slough through a tide gate control structure. The watershed area, Project location, and planned future projects within the watershed are summarized in Figure 1.

Hydrology:

The peak flow rates from the Bayfront Canal Hydrology and Hydraulic Evaluation, prepared for Stanford Hospital & Clinic in October 2013 by BKF, was used to calculate the proportional jurisdictional flow based on watershed areas. The flow contribution percentages presented in Table 1 will provide a baseline funding strategy. These contributions will be expanded upon based on participation and for funding of the construction and operation and maintenance phases of the Project. A reduction of flow contributions per jurisdiction will be evaluated if upstream detention and storm water capture projects are implemented within the watershed.

Table 1. Jurisdictional Flow Contributions

Jurisdiction	Watershed Area %	Flow Contribution %	Financial Contribution %	Financial Contribution \$
Town of Atherton	44	38.0	39.8	398,000
City of Redwood City	13	26.0	26.1	261,000
San Mateo County	20	22.0	22.6	226,000
City of Menlo Park	17	10.5	11.5	115,000
Town of Woodside	6	3.5	0.0	0

This Project is the first step towards providing capacity for future projects within the watershed to reduce flooding. The most recent proposed solution recommends the installation of 4 – 63" HDPE siphon pipes is shown in Figure 2. The alignment passes under Marsh Road to the north of Highway 101 and connects



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to Pond S5 of the South Bay Salt Pond Restoration Project. This alternative needs to be developed adequately to be considered in the environmental permitting process.

Stakeholders

- **Project partners (the Collaborative):** The Collaborative is composed of the City of Redwood City, City of Menlo Park, Town of Atherton, and the County of San Mateo.
- **Regulatory Stakeholders:** Regulatory stakeholders who require permits include the California Department of Fish and Wildlife (CAFWS), the Regional Water Quality Control Board (RWQCB), the US Army Corps of Engineers, the US Fish and Wildlife Services (USFWS), Caltrans, and the San Francisco Bay Conservation and Development Commission (BCDC).
- **Additional Stakeholders:** Additional key stakeholders who have contributed to the evolution of the project improvements include: Cargill, Stanford University, Stanford Medical, and the South Bay Salt Pond Restoration Project (SBSRP).

Preliminary Design Workshop:

The Collaborative hosted a Preliminary Design Workshop to validate and agree on the preferred design of the proposed Project. The Preliminary Design Workshop included planning, hydraulic, geotechnical, structural engineering, and environmental compliance resources from the County's On-Call Engineering Service Agreements. The goal of the Preliminary Design Workshop effort was to validate and optimize the proposed design and to ensure that it considers environmental permitting and operational limitations and conditions that may impact the life and resiliency of the project. The following list summarizes the goals and outcomes of the workshop:

- **Review of existing conditions and Information.** Summarize existing information and garner support for a comprehensive alternative to use in the environmental permitting process.
- **Implementation strategy.** Collaborate on most recent hydraulic model results and agree on an implementation approach that best meets the environmental compliance and permitting requirements for the preferred alternatives.
- **Funding.** Develop high level engineering cost estimate for the preferred alternative and a funding strategy, which explores and considers multiple sources of funding in addition to Capital and traditional sources of funding.
- **Schedule.** Develop a preliminary schedule that includes Local, Regional, State and Federal stakeholder updates at key milestones.

Following the Preliminary Design Workshop, a representative member from each jurisdiction of the Collaborative will participate in the selection of the planning and design team. Regular Review Sessions will be held to incorporate stakeholder input and generate the most effective and resilient solution. Collaboration will take place through subject-specific workshops with project owners and stakeholders.

Scope:

The scope of work for this Project is defined below. Representatives from the Collaborative will review and select consultants based on proposals submitted by planning, design, and environmental permitting teams from the County's On-Call Engineering Services Agreements to deliver the scope of services listed below. The Consultants will be responsible for validating and calibrating technical information and ensuring that the Project objectives, budget, and key milestones are met.



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Task 1. Initial Hydraulic Analysis, Conceptual Design, and Review: A planning and design team will review previous hydraulic analysis and prepare preliminary designs necessary to initiate environmental permit negotiations. These initial designs will be reviewed in a Preliminary Design Review Workshop. This workshop will provide an opportunity for Cargill, a key stakeholder to review the proposed design. Consultants with potential conflict of interest will be excluded as the lead for this initial task.

Task 2. Land and Easement Negotiations: Land and easement negotiations with Cargill, Caltrans, and West Bay Sanitary District will be facilitated by the planning and design team to secure anticipated easements or to negotiate access for construction activities.

Task 3. Environmental Review and CEQA/NEPA Documentation: The environmental permitting team will prepare the necessary documents. The planning and design team will support the environmental permitting team through review, project description, and the purpose and need statements. This task will build upon the work completed by others for the SBSRP Phase 2 EIR/EIS.

Task 4. Final Design and Construction Documents: Plans and specifications will be prepared at the 60%, 90%, and 100% design stages. The final deliverable will be a set of construction ready plans, specifications and engineering estimates (PS&E). This Task will include construction permitting and grant acquisition.

Task 5. Bidding and Construction: Construction services such as contract bidding support, support for requests for information (RFI), and construction services will be part of an amended MOU or separate agreement.

Cost and Funding:

Current estimates for planning, design, environmental permitting, and land negotiation tasks are estimated at approximately \$1,000,000. The initial funding contribution for this work from each jurisdiction was estimated based on the percentages listed in the flow allocations listed in Table 1, which will be reviewed under consultant Task 1. The Town of Woodside has decided not to participate and the 3.5% financial responsibility will be by flow contribution across the Collaborative. The updated MOU financial contribution percentages are as follows: Town of Atherton - 39.8%, City of Redwood City - 26.1%, County of San Mateo - 22.6%, City of Menlo Park - 11.5%, and Town of Woodside - 0.0%. This MOU includes all consultant costs to complete this PROJECT incurred as of the Notice to Proceed to the Consultant of September 26th, 2017(s). Funding contributions per jurisdiction, for construction, and operations and maintenance will need to be assessed and negotiated in an amended MOU or separate agreement. The Collaborative will actively pursue grant opportunities for funding planning, design, and construction throughout the duration of the MOU. Any grant awards will be distributed by contribution percentages, resulting in an overall reduction of project costs.

See Future Work below for potential reallocation of contributions.

Public Outreach and Education:

A public outreach and education plan will be developed as part of the project. This outreach plan will be used to inform and educate the public and other stakeholders on the specifics of existing flood risks, potential solutions, and necessary green/grey infrastructure and operation and maintenance investments



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needed to alleviate flooding in the area. Consistent messaging and informational materials will be shared with the Collaborative to publish on their respective websites and for public distribution. The goal of this effort is to ensure that the impacted communities and stakeholders have a clear understanding of the flood risk reduction this Project will provide, and to educate them on other projects in the system that will need to be completed to ensure the region remains resilient to flooding to the extent possible.

Future Work:

The Project is limited to the planning, design, environmental permitting, and easement negotiations necessary to advertise for bidding. The deeds will be held by each jurisdiction. Negotiations of any necessary easements or land acquisitions will be facilitated with support from the County, the Collaborative, and the design Consultant. Future Addendums, MOUs, or Agreements will be required to address the construction and maintenance of the Project.

In addition to this Project, potential flood mitigation provided by upstream stormwater retention projects in the Bayfront Canal and Atherton Channel watersheds will be analyzed by the Collaborative as needed. Flow allocations per jurisdiction may need to be adjusted if it appears that upstream detention improvements reduce flow contributions to the Project. Table 2 below describes the potential future projects that may affect the existing flow contribution allocations listed in Table 1.

Table 2. Potential Future Projects

<u>Project</u>	<u>Responsible Party</u>	<u>Goal</u>	<u>Cost</u> ¹	<u>Contribution</u> ²
Bayfront Canal and Atherton Channel Flood Management and Restoration Project	All Parties	Mitigate flooding adjacent to Bayfront Canal	\$7,000,000-\$8,000,000	N/A
Holbrook-Palmer Detention Basin (Las Lomitas School District)	Town of Atherton	Retain dry weather flow and first flush for water quality treatment	\$13,600,000	TBD
Tide Gate Upgrades	All Parties	Prevent high tide waters from entering the watershed	TBD	N/A
South Bay Salt Pond Restoration Phase II	Coastal Conservancy	Receive flood waters from Bayfront Canal/Atherton Channel	TBD	TBD
Chrysler Pump Station	Menlo Park	Convey flood waters to Flood Slough	\$7,000,000	TBD
Douglas Ave Pump Station	Redwood City	Convey flood waters to Bayfront Canal	TBD	TBD
Broadway Pump Station	Redwood City	Convey flood waters to Bayfront Canal	TBD	TBD
Fifth Ave Pump Station	Redwood City	Convey flood waters to Bayfront Canal		TBD
Athlone Terrace Pump Station	San Mateo County	Convey flood waters to Atherton Channel (ultimately Bayfront Canal)	TBD	TBD

¹ Costs are approximate and do not include construction permitting, easements, or O&M.

² Flow reductions to system will be determined following hydrologic analysis.



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Figure 1. Bayfront Canal and Atherton Channel Project Location and Future Projects within Watershed

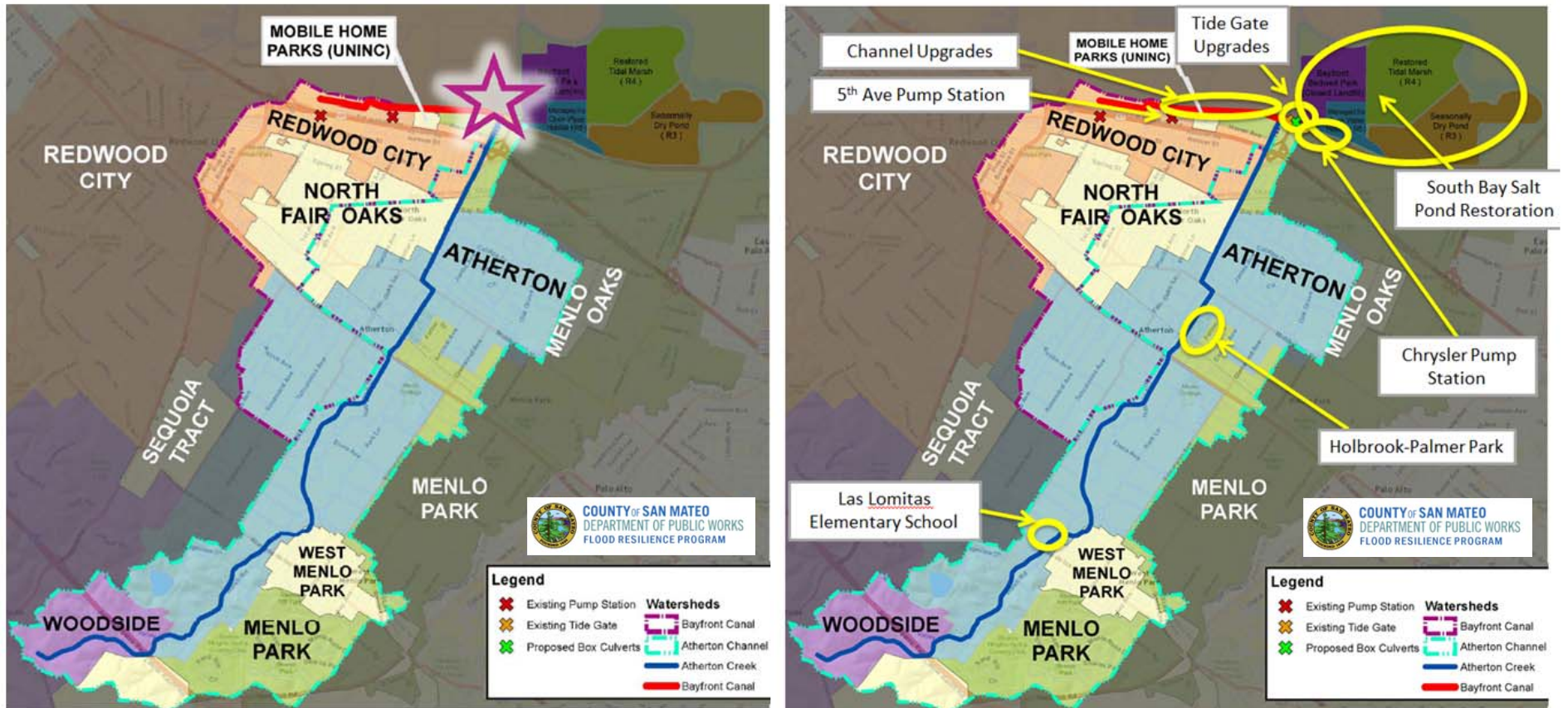




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Figure 2. Moffat and Nichol Design Alternative

