

**AGREEMENT FOR PROFESSIONAL ENVIRONMENTAL PERMITTING,
BIOLOGICAL MONITORING, AND REPORTING SERVICES WITH
WRA, INC. FOR THE FY2026-2029 CREEK & CHANNEL CLEANING PROJECT**

THIS AGREEMENT is entered into this _____ day of _____, 2026, by and between the City of Burlingame, State of California, herein called the "City", and **WRA, INC.** engaged in providing **PROFESSIONAL ENVIRONMENTAL PERMITTING, BIOLOGICAL MONITORING, AND REPORTING** services herein called the "Consultant".

RECITALS

- A. The City is considering for consultant for environmental permitting, biological monitoring, and reporting services to assist the City with the FY2026-2029 Creek & Channel Cleaning Project.
- B. The City desires to engage a professional engineering consultant to provide assistance with environmental permitting, biological monitoring, and reporting services because of Consultant's experience and qualifications to perform the desired work, described in Exhibit A.
- C. The Consultant represents and affirms that it is qualified and willing to perform the desired work pursuant to this Agreement.

AGREEMENTS

NOW, THEREFORE, THE PARTIES HERETO AGREE AS FOLLOWS:

- 1. Scope of Services. The Consultant shall provide professional services such as coordinate meetings with City staff, track permit requirements across various agencies, prepare annual work plans, conduct pre-construction surveys, prepare survey reports, provide worker education training (WEAP), provide annual biological monitoring, prepare as-built and construction completion reports, provide reports to corresponding regulatory agencies to ensure compliance, provide final plans and construction cost estimate, provide assistance during bidding process, conduct annual monitoring and reporting per regulatory agencies' requirements, and as detailed in "Scope of Services" of the attached Exhibit A of this agreement.
- 2. Time of Performance. The services of the Consultant are to commence upon the execution of this Agreement with completion of all work by June 30, 2029.

3. Compliance with Laws. The Consultant shall comply with all applicable laws, codes, ordinances, and regulations of governing federal, state and local laws. Consultant represents and warrants to City that it has all licenses, permits, qualifications and approvals of whatsoever nature which are legally required for Consultant to practice its profession. Consultant represents and warrants to City that Consultant shall, at its sole cost and expense, keep in effect or obtain at all times during the term of this Agreement any licenses, permits, and approvals which are legally required for Consultant to practice its profession. Consultant shall maintain a City of Burlingame business license.
4. Sole Responsibility. Consultant shall be responsible for employing or engaging all persons necessary to perform the services under this Agreement.
5. Information/Report Handling. All documents furnished to Consultant by the City and all reports and supportive data prepared by the Consultant under this Agreement are the City's property and shall be delivered to the City upon the completion of Consultant's services or at the City's written request. All reports, information, data, and exhibits prepared or assembled by Consultant in connection with the performance of its services pursuant to this Agreement are confidential until released by the City to the public, and the Consultant shall not make any of these documents or information available to any individual or organization not employed by the Consultant or the City without the written consent of the City before such release. The City acknowledges that the reports to be prepared by the Consultant pursuant to this Agreement are for the purpose of evaluating a defined project, and City's use of the information contained in the reports prepared by the Consultant in connection with other projects shall be solely at City's risk, unless Consultant expressly consents to such use in writing. City further agrees that it will not appropriate any methodology or technique of Consultant which is and has been confirmed in writing by Consultant to be a trade secret of Consultant.
6. Compensation. Compensation for Consultant's professional services shall not exceed \$247,171; and payment shall be based upon City approval of each task.

Billing shall include current period and cumulative expenditures to date and shall be accompanied by a detailed explanation of the work performed by whom at what rate and on what date. Also, plans, specifications, documents or other pertinent materials shall be submitted for City review, even if only in partial or draft form.

7. Availability of Records. Consultant shall maintain the records supporting this billing for not less than three (3) years following completion of the work under this Agreement. Consultant shall make these records available to authorized personnel of the City at the Consultant's offices during business hours upon written request of the City.
8. Project Manager. The Project Manager for the Consultant for the work under this Agreement shall be Justin Semion, Technical Services Director.
9. Assignability and Subcontracting. The services to be performed under this Agreement are unique and personal to the Consultant. No portion of these services shall be assigned or subcontracted without the written consent of the City.
10. Notices. Any notice required to be given shall be deemed to be duly and properly given if mailed postage prepaid, and addressed to:

To City: Rick Horne
 Streets, Storm Drains & Sewer Division Manager
 City of Burlingame
 1361 N. Carolan Avenue
 Burlingame, CA 94010

To Consultant: Justin Semion, Technical Services Director
 WRA, Inc.
 2169-G East Francisco Blvd
 San Rafael, California 94901

or personally delivered to Consultant to such address or such other address as Consultant designates in writing to City.

11. Independent Contractor. It is understood that the Consultant, in the performance of the work and services agreed to be performed, shall act as and be an independent contractor and not an agent or employee of the City. As an independent contractor he/she shall not obtain any rights to retirement benefits or other benefits which accrue to City employee(s). With prior written consent, the Consultant may perform some obligations under this Agreement by subcontracting, but may not delegate ultimate responsibility for performance or assign or transfer interests under this Agreement.

Consultant agrees to testify in any litigation brought regarding the subject of the work to be performed under this Agreement. Consultant shall be compensated for its costs and expenses in preparing for, traveling to, and testifying in such matters at its then current hourly rates of compensation, unless such litigation is brought by Consultant or is based on allegations of Consultant's negligent performance or wrongdoing.

12. Conflict of Interest. Consultant understands that its professional responsibilities is solely to the City. The Consultant has and shall not obtain any holding or interest within the City of Burlingame. Consultant has no business holdings or agreements with any individual member of the Staff or management of the City or its representatives nor shall it enter into any such holdings or agreements. In addition, Consultant warrants that it does not presently and shall not acquire any direct or indirect interest adverse to those of the City in the subject of this Agreement, and it shall immediately disassociate itself from such an interest should it discover it has done so and shall, at the City's sole discretion, divest itself of such interest. Consultant shall not knowingly and shall take reasonable steps to ensure that it does not employ a person having such an interest in this performance of this Agreement. If after employment of a person, Consultant discovers it has employed a person with a direct or indirect interest that would conflict with its performance of this Agreement, Consultant shall promptly notify City of this employment relationship, and shall, at the City's sole discretion, sever any such employment relationship.
13. Equal Employment Opportunity. Consultant warrants that it is an equal opportunity employer and shall comply with applicable regulations governing equal employment opportunity. Neither Consultant nor its subcontractors do and neither shall discriminate against persons employed or seeking employment with them on the basis of age, sex, color, race, marital status, sexual orientation, ancestry, physical or mental disability, national origin, religion, or medical condition, unless based upon a bona fide occupational qualification pursuant to the California Fair Employment & Housing Act.
14. Insurance.
 - A. Minimum Scope of Insurance:
 - i. Consultant agrees to have and maintain, for the duration of the contract, General Liability insurance policies insuring him/her and his/her firm to an amount not less than: One million dollars

(\$1,000,000) combined single limit per occurrence and two million dollars (\$2,000,000) aggregate for bodily injury, personal injury and property damage in a form at least as broad as ISO Occurrence Form CG 0001.

- ii. Consultant agrees to have and maintain for the duration of the contract, an Automobile Liability insurance policy ensuring him/her and his/her staff to an amount not less than one million dollars (\$1,000,000) combined single limit per accident for bodily injury and property damage.
- iii. Consultant agrees to have and maintain, for the duration of the contract, professional liability insurance in amounts not less than two million dollars (\$2,000,000) each claim/aggregate sufficient to insure Consultant for professional errors or omissions in the performance of the particular scope of work under this agreement.
- iv. Any deductibles or self-insured retentions must be declared to and approved by the City. At the option of the City, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the City, its officers, officials, employees and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

B. General and Automobile Liability Policies:

- i. The City, its officers, officials, employees and volunteers are to be covered as insured as respects: liability arising out of activities performed by or on behalf of the Consultant; products and completed operations of Consultant, premises owned or used by the Consultant. The endorsement providing this additional insured coverage shall be equal to or broader than ISO Form CG 20 10 11 85 and must cover joint negligence, completed operations, and the acts of subcontractors. This requirement does not apply to the professional liability insurance required for professional errors and omissions.
- ii. The Consultant's insurance coverage shall be endorsed to be primary insurance as respects the City, its officers, officials,

employees and volunteers. Any insurance or self-insurances maintained by the City, its officers, officials, employees or volunteers shall be excess of the Consultant's insurance and shall not contribute with it.

- iii. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the City, its officers, officials, employees or volunteers.
- iv. The Consultant's insurance shall apply separately to each insured against whom a claim is made or suit is brought, except with respect to the limits of the insurer's liability.

C. Workers' Compensation and Employers Liability Coverage:

- i. In addition to these policies, Consultant shall have and maintain Workers' Compensation insurance as required by California law. Further, Consultant shall ensure that all subcontractors employed by Consultant provide the required Workers' Compensation insurance for their respective employees.
- ii. The insurer shall agree to waive all rights of subrogation against the City of Burlingame, its officers, officials, employees, or volunteers for losses arising from work performed by the Company for the City of Burlingame.

D. All Coverages: Each insurance policy required in this item shall be endorsed to state that coverage shall not be canceled except after thirty (30) days' prior written notice by mail, has been given to the City (10 days for non-payment of premium). Current certification of such insurance shall be kept on file at all times during the term of this agreement with the City Clerk.

E. Acceptability of Insurers: Insurance is to be placed with insurers with a Best's rating of no less than A:-VII and authorized to do business in the State of California.

F. Verification of Coverage: Upon execution of this Agreement, Contractor shall furnish the City with certificates of insurance and with original endorsements effecting coverage required by this clause. The certificates and endorsements for each insurance policy are to be signed by a person

authorized by that insurer to bind coverage on its behalf. The certificates and endorsements are to be on forms approved by the City. All certificates and endorsements are to be received and approved by the City before any work commences. The City reserves the right to require complete, certified copies of all required insurance policies, at any time.

15. Indemnification. To the fullest extent permitted by law, Consultant shall save, keep and hold harmless indemnify and defend the City, its officers, employees, authorized agents and volunteers from all damages, liabilities, penalties, costs, or expenses in law or equity, including but not limited to attorneys' fees, that may at any time arise, result from, relate to, or be set up because of damages to property or personal injury received by reason of, or in the course of performing work which arise out of, pertain to, or relate to, directly or indirectly, in whole or in part, the negligence, recklessness, or willful misconduct of Consultant, or any of the Consultant's officers, employees, or agents or any subconsultant. This provision shall not apply if the damage or injury is caused by the sole negligence, active negligence, or willful misconduct of the City, its officers, agents, employees, or volunteers.
16. Waiver. No failure on the part of either party to exercise any right or remedy hereunder shall operate as a waiver of any other right or remedy that party may have hereunder, nor does waiver of a breach or default under this Agreement constitute a continuing waiver of a subsequent breach of the same or any other provision of this Agreement.
17. Governing Law. This Agreement, regardless of where executed, shall be governed by and construed under the laws of the State of California. Venue for any action regarding this Agreement shall be in the Superior Court of the County of San Mateo.
18. Termination of Agreement. The City and the Consultant shall have the right to terminate this agreement with or without cause by giving not less than fifteen (15) days written notice of termination. In the event of termination, the Consultant shall deliver to the City all plans, files, documents, reports, performed to date by the Consultant. In the event of such termination, City shall pay Consultant an amount that bears the same ratio to the maximum contract price as the work delivered to the City bears to completed services contemplated under this Agreement, unless such termination is made for cause, in which event, compensation, if any, shall be adjusted in light of the particular facts and circumstances involved in such termination.

- 19. Amendment. No modification, waiver, mutual termination, or amendment of this Agreement is effective unless made in writing and signed by the City and the Consultant.

- 20. Entire Agreement. This Agreement constitutes the complete and exclusive statement of the Agreement between the City and Consultant. No terms, conditions, understandings or agreements purporting to modify or vary this Agreement, unless hereafter made in writing and signed by the party to be bound, shall be binding on either party.

IN WITNESS WHEREOF, the City and Consultant have executed this Agreement as of the date indicated on page one (1).

City of Burlingame

“Consultant”

By _____
Lisa K. Goldman
City Manager

WRA, Inc.
Print Name:
Title:

Approved as to form:

City Attorney – Michael Guina

ATTEST:

City Clerk - Meaghan Hassel-Shearer

Proposal for City of Burlingame

Professional Environmental Permitting, Biological Monitoring, and Reporting Services

Annual Creek Maintenance Program and Creek
and Channel Cleaning Project

05.05.2026



May 5, 2026

City of Burlingame

Attn: Rick Horne, Streets, Storm Drains, and Sewer Division Manager

Proposal submitted via PlanetBids

Subject: Proposal for Professional Environmental Permitting, Biological Monitoring, and Reporting Services for Annual Creek Maintenance Program and Creek and Channel Cleaning Project

Dear Mr. Horne:

We value the partnership and trust we have earned with you over the past 15 years in serving the City of Burlingame to support your annual creek maintenance program. We are excited for the opportunity to continue supporting the City with expertise in regulatory permitting and environmental compliance during routine watershed maintenance. Our approach helps ensure compliance while protecting sensitive habitat to keep maintenance activities efficient and on schedule.

WRA's team will be led by **Justin Semion, PWS** who has served as Principal for the duration of our contracts with the City and Project Manager **Matt Osowski** who will oversee the work of our task leads and technical staff. Supporting the team are two task leaders: **Ben Tinsley** (Stream Maintenance Compliance) focusing on managing compliance requirements and monitoring of mitigation planting and **Timothy Carrera** (Construction Support), focusing on compliance during stream maintenance construction. **Derell Griffin** will provide landscape design services for the mitigation planting plans and subconsultant **Eileen Barrow & Associates** will lead cultural resources when the time comes to renew the City's existing permits.

We offer the City the following distinct benefits:

- **Long-term experience with Burlingame's creek and channel systems** including knowledge of existing conditions, past approvals, and agency expectations.
- **Comprehensive in-house permitting and compliance expertise** balanced to help navigate the regulatory framework and meet the City's maintenance goals.
- **Demonstrated past performance including schedule and budget conformance** for the City's stream maintenance program and for similar public agency programs, including the cities of Livermore and Pleasanton in addition to discreet projects that improve waterways, channels, and riparian corridors.

WRA has reviewed the City's standard consulting agreement and has no exceptions.

We look forward to continuing our partnership with the City and supporting the long-term success of your creek and channel maintenance program. Please feel free to contact me with any questions about our enclosed proposal.

Sincerely,

WRA, Inc.



Justin Semion, PWS | Principal-in-Charge

E: semion@wra-ca.com | P: 415.497.5664

FIRM EXPERIENCE

WRA is an environmental consultancy that's making a net positive impact. As a tenacious team of planners, engineers, and scientists, we believe in leaving the lands we love better than we found them. WRA offers core services in biological resources, regulatory permitting, and environmental approvals (California Environmental Quality Act [CEQA] and National Environmental Policy Act [NEPA]) We are proud to be an employee-owned, certified small business (SB-PW ref.#13333) with 100 team members working from four offices in California.

WRA has extensive experience supporting municipal stream and storm drain maintenance programs that require balancing flood protection, regulatory compliance, natural resource protection with long-term operational goals. Our team understands the complexities associated with maintaining drainage infrastructure in sensitive aquatic environments. We routinely help our clients establish permitting strategies that streamline annual maintenance activities while maintaining compliance with federal, state, and regional regulatory requirements. This includes developing programmatic permitting approaches, supporting multi-year maintenance authorizations, coordinating endangered species consultations, and implementing biological compliance programs during maintenance operations.

Partnership with the City of Burlingame



For more than a decade, WRA has served as a trusted partner to the City, helping to steward your Stream Maintenance Program (SMP) with a focus on reliability, regulatory clarity, and long-term sustainability. Since 2009, our team has led permitting, CEQA documentation, and compliance efforts for a complex network of natural and engineered channels that are essential to the City's storm drain system. WRA has ensured that this work proceeds efficiently and in full compliance with evolving environmental regulations. When the City's needs expanded, we proactively prepared an Addendum to the Initial Study/Mitigated Negative Declaration, enabling additional maintenance activities and stream reaches to move forward without delay.

Our relationship with the City is grounded in foresight and adaptability. Over the years, WRA has secured both project-specific and programmatic permits, carefully balancing immediate operational needs with streamlined, long-term compliance. Today, we continue to advance this approach by supporting the City's implementation of mitigation and other requirements from the Regional General Permit. Through close coordination with agencies, WRA has built a relationship with the City defined by trust, responsiveness, and a shared commitment to effective watershed management.

Stream Maintenance Compliance and Construction Support

Keeping the City in compliance with regulatory permits prior to and during construction is the most visible ongoing function of our support for the stream maintenance program. WRA keeps on top of compliance requirements so that the City can pay attention to other critical maintenance and operations needs. WRA brings a practical, solutions-oriented approach to environmental permit compliance in active construction environments. Our biologists are trained to bridge the gap between permit language and site conditions through in-house training focused on technical expertise, safety standards, communication protocols, and field decision-making. Our team coordinates closely with clients, contractors, and regulatory agencies to keep projects moving efficiently.

WRA performs pre-construction habitat assessments and species surveys, biological monitoring to ensure permit compliance that supports routine maintenance activities within sensitive habitats. Our monitors integrate seamlessly with construction teams by understanding job-site operations, communicating clearly with crews, and proactively addressing potential compliance issues before they arise.

Regulatory Permitting

WRA's permitting specialists have a thorough understanding of federal and state permitting processes and strive to maintain positive relationships with agency staff, relationships that allow us to work directly with the regulators for the benefit of our clients. WRA routinely attains permits from many federal, state, and regional agencies, including hundreds of projects in San Mateo County. We coordinate special processing procedures such as Federal Endangered Species Section 7 Consultation and State Endangered Species 2081 Consistency Determinations. We also specialize in a variety of state and federal "restoration" permitting pathways. Permits and consultations routinely obtained and conducted by WRA staff include:

- Clean Water Act Section 404 Permits from the U.S. Army Corps of Engineers (USACE)
- Clean Water Act Section 401 Water Quality Certifications or Waste Discharge Requirements from the Regional Water Quality Control Board (RWQCB)
- Section 7 Federal Endangered Species Act consultation with the U.S. Fish & Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS)
- Section 1602 Lake & Streambed Alteration Agreements from California Department of Fish & Wildlife (CDFW)
- Section 2081 Incidental Take Permits from CDFW
- Bay Conservation and Development Commission Permits

Endangered Species Expertise

Our team of expert biologists specializes in identifying, surveying, and evaluating habitats for federal- and state-listed species, as well as other special-status wildlife and plants. Our approach integrates detailed field surveys, habitat evaluations, and regulatory coordination to ensure projects meet the requirements of the Endangered Species Act (ESA), California Endangered Species Act (CESA), and other environmental regulations. Through our work, we help clients develop effective mitigation strategies, minimize project delays, and ensure long-term conservation outcomes.

PROJECT APPROACH

WRA looks forward to building upon our successful collaboration with the City under the current maintenance contract and our extensive history of biological services within the City’s watersheds. Our approach to managing this project is rooted in a commitment to continuity, ensuring that recent progress translates into future success without disruption. By continuing our partnership, the City avoids the significant time and effort required to orient a new consultant or transfer complex historical data and protocols. WRA will leverage our deep institutional knowledge and established relationships with City staff to implement the scope on schedule, within budget, and to your standards. We look forward to advancing our collaborative work with City staff to deliver continued excellence for the community.

Table 1 below cross references the WRA tasks proposed in this approach with the corresponding City scope listed in the Request for Proposal (RFP).

Table 1 WRA Task Cross Referenced with RFP Scope

WRA Project Approach Task	City RFP Scope of Work Item
1. Project Management and Agency Coordination	3) Coordinate Monthly Meetings with City Staff...
2. Permit Compliance, Tracking, and Notifications	4) Track permit requirements ... 5) Provide advanced notification of proposed work... 11) Prepare an annual as-built...
3. Stream Maintenance Construction Support	6), 7), 8), 10), and 13) Preconstruction surveys...WEAP...biological monitoring...construction support...reporting of temporarily impacted areas
4. Mills Creek Mitigation Construction Observations and As-Built Report	9) Provide project mitigation assistance... 12) Provide final plans, construction cost estimate, and assistance during bidding process...
5. Permit Renewal Applications	1) Preparation and submittal of all regulatory agency permits... 2) Apply for a regional general permit application;
6. Optional: Annual Monitoring and Reporting for Mills Creek Mitigation	Not included in City Scope, but required by permits
7. Optional: CDFW Three-Year Extension	Optional task in 2027 in effort to bring all permits into the same expiration cycle...

Scope of Work

Task 1. Project Management and Agency Coordination

The tasks assembled in this Scope of Work require a coordinated effort among WRA staff, and with agency personnel and the City. Project management, such as scheduling staff, budgeting, and client communications and meetings are included in this task, as well as agency coordination. WRA will coordinate monthly meetings with City staff and the Project team. This task is intended to cover agency coordination and project management work for the 3-year period between July 1, 2026 and June 30, 2029. A budget of 3 hours per month over the 3-year period is assumed.

Task 2. Permit Compliance, Tracking, and Notifications

This task covers work required to track and communicate with agencies about compliance with permit requirements. WRA has prepared a permit compliance checklist to track permit requirements across all the agency permits issued for the Project, including permits from CDFW, USACE, and RWQCB. The checklist

identifies the timing and lead for each permit requirement and will be relied on for permit compliance as the Project is implemented. This task includes:

- Preparation of Annual Work Plans
- Notification to agencies for the start of maintenance work
- Preparation of Annual Work Completed Reports
- Management of compliance records
- Annual monitoring of vegetation removal areas
- Agency coordination for approval of biological monitors

This task anticipates up to one site visit each year in the event that details required by CDFW require biological expertise to identify plant species subject to removal in proposed work areas. One draft and one final version of each Work Plan and Work Completed Report is anticipated, with three years of reporting and notifications required.

Task 3. Stream Maintenance Construction Support

This task includes time for WRA to conduct pre-construction surveys, report on the pre-construction survey, implement a worker environmental education program (WEAP), bid and construction period services, and conduct biological monitoring during the 3-year period described in this Scope of Work.

Task 3.1 Pre-Construction Surveys. The CDFW permit requires pre-construction surveys for nesting birds, northwestern pond turtle, and California red-legged frog. This task assumes that pre-construction surveys can be completed for all work areas in one visit prior to the start of construction each year over the 3-year period. WRA will submit the qualifications of biologists as needed for CDFW approval at the start of construction each year over the 3-year period prior to pre-construction surveys. During the pre-construction surveys, WRA will establish and photograph at least four photo-documentation points for each work site which will be relied on for post-construction reporting. WRA will also prepare and submit a survey report describing the results of the pre-construction survey prior to commencement of work.

Task 3.2 Biological Monitoring. One qualified biological monitor will conduct daily inspections prior to the start of work each day and will remain onsite when work is occurring. The biological monitor will also provide the WEAP to on-site construction personnel. Agency approval of biological monitors is required, and is covered under Task 2, above. The monitor will take pre- and post-construction photographs for incorporation into the as-built report (see Task 5, below). This task includes up to 10 days of biological monitoring annually over the 3-year period (30 days total), plus additional time for reporting and documentation.

Task 4. Mills Creek Mitigation Construction Observations and As-Built Report

Mitigation planting at Mills Creek has been identified and approved by the agencies as suitable mitigation for project impacts. WRA has prepared 100% construction drawings for implementation of the mitigation planting. WRA will provide assistance during the project bidding stage, including attending one on-site pre-bid meeting, responding to bidder's questions, issuing bid addenda or clarifications, and providing bid review and tabulation. WRA will also prepare a conformed set of bid documents reflecting changes made during bidding if required.

WRA will provide construction phase services during the mitigation project implementation to ensure that planting and irrigation is installed according to the intent of the design drawings. A WRA landscape architect or designer will perform targeted site visits to provide information to the contractor regarding the interpretation of the contract drawings at critical junctures in the implementation process. WRA will also review the contractor's work to see if it is being performed in accordance with the design drawings. We will also prepare field reports and evaluate and respond to submittals and requests for information that we receive from the contractor. The following is a summary of the time allocated for construction phase services for the Mills Creek mitigation site:

- Attendance at one pre-construction meeting;
- Construction observation and field meetings, including 6 site visits;

- Review and respond to shop drawings and submittals;
- Review and respond to requests for information; and
- Complete a project as-built report including a list of installed plants, including species and quantities

Task 5. Permit Renewal Applications

Existing permits for the stream maintenance program expire in 2027 (CDFW) and in 2030 (USACE and RWQCB). We recommend submitting the renewal applications in 2029 to allow sufficient time for permit processing prior to issuance of the renewals. Because of the date for submittal would fall within the anticipated term of this current contract, this task covers time to prepare and submit those permit applications.

Task 5.1 Biological Studies Updates

WRA will review the existing conditions and update the studies prepared to support the current permits. WRA biologists will conduct a site visit of the City's drainage system watersheds subject to the Creek and Channel Cleaning Project. WRA will use the field observations to update the existing Biological Resources Assessment, Aquatic Resources Delineation, and Section 7 Consultation documentation.

Task 5.2 Cultural Resources Report

The USACE will require an updated cultural resource survey and report as part of the renewed Regional General Permit application. WRA proposes to work with Eileen Barrow and Associates (EBA) as a subcontractor to complete a Cultural Resources Study. EBA will conduct archival research at the Northwest Information Center of the California Historical Resources Information System and at local and online libraries to assess the potential for prehistoric and historic-era cultural resources within the study area and its surroundings.

EBA will contact the Native American Heritage Commission and request a Sacred Lands File search of the study area. We also propose to contact local Native American tribes and individuals and notify them of our involvement in the project. This notification does not constitute legal consultation as defined by AB52 or Section 106. EBA will then conduct a field study of the portions of the areas outlined in the Request for Proposal for the Burlingame Annual Creek Maintenance Program and Creek and Channel Cleaning Project. Field methods could include a surface survey with the use of a hoe or trowel to clear the ground surface of vegetation or duff, excavation of shovel probe(s), or excavation with a hand auger. Preliminary documentation of cultural resources on DPR 523 forms shall be completed if found during our fieldwork.

EBA will complete a written technical report of findings that summarizes the preceding tasks and offers recommendations for the treatment of cultural resources.

Task 5.3 Permit Applications

WRA will submit applications to replace expiring permits. Based on the San Francisco Bay Conservation and Development Commission's recent expansion of their jurisdiction into many key tidal creek channels in the Bay Area, this scope also includes preparing a BCDC permit application for the lower reaches of Easton Creek and Mills Creek.

WRA proposes to use the existing permits and work with the City for any updates to the project description's list of anticipated maintenance activities, anticipated annual impact limits, and avoidance and minimization measures. Additional submittals include typical work plans, projections of recurrence intervals for different maintenance activities, proposed timing and schedules. WRA will incorporate City defined needs and schedules and projections of recurring maintenance work into the permit applications.

WRA will prepare necessary materials and submit the following:

- CDFW Routine Maintenance Permit Application (Renewal)
- USACE Regional General Permit Application (Renewal)
- RWQCB Water Quality Certification (Renewal)
- BCDC Administrative Permit Application (New Permit)

WRA will complete draft permit applications and will submit final application on City review and approval. WRA will act as the City's agent for the permit applications. WRA assumes that effort to address agency questions and requests for information, support USACE informal consultation with the USFWS and NMFS under Section 7 of the Federal Endangered Species Act, and responding to public comments will be completed under a future contract. This task does not include payment of permit application fees, which will be required for the RWQCB, CDFW, and BCDC.

Task 6 Optional: Annual Monitoring and Reporting for Mills Creek Mitigation

Once planting is complete at the Mills Creek Mitigation Site, WRA will conduct annual monitoring of the mitigation area. The RWQCB water quality certification requires that Mills Creek mitigation area to be monitored for a 5-year period. This task includes annual monitoring for up to three years following the methods described in the Mitigation and Monitoring Plan prepared for the RWQCB and dated May 2023. Methods include photo documentation, and visual evaluation of erosion and plant establishment. WRA will prepare an annual monitoring report describing the results of the monitoring for submission to the reviewing regulatory agencies.

Task 7 Optional: CDFW Three-Year Extension

Currently, the USACE and CDFW permits expire at different times – 2030 and 2027 respectively. WRA proposes to align the expiration of the project permits so they can be renewed more efficiently at the same time. WRA will request an extension of the existing CDFW permit for a term of three years. The extension would set the expiration date to 2030. WRA would request an extension through the appropriate extension request form submitted electronically. This task does not include the time extension request fee due to CDFW, estimated at \$753. WRA assumes the City will pay the fee.

PROJECT TEAM

Figure 2: WRA Team Organization Chart



Figure 2 depicts our team organization. WRA’s team is led by Principal **Justin Semion, PWS** who has been overseeing the City’s annual creek maintenance program since 2018. He will serve as the contract administrator and provide technical QA/QC as well as any support needed for the project manager and the City.

Supporting Justin is Project Manager and Permitting Lead **Matt Osowski** who will be the primary point of contact for City staff and the WRA Team. He will oversee all core activities, services, deliverables and task order administration, and documentation, with assistance from task leaders, **Ben Tinsley** (Stream Maintenance Compliance) and **Timothy Carrara, QSP** (Construction Support). Matt will ensure that information is provided in a timely manner and that all deliverables are completed by the appropriate technical experts on our team. Matt will also lead the regulatory permitting tasks.

Supporting the team are **Derell Griffin** for landscape design services for mitigation planting plans and subconsultant **Eileen Barrow & Associates** (EBA) for cultural resources.

Percentage-Time Availability

Table 2 below includes a percentage-time availability table for our key staff.

Table 2 Key Staff Availability

Key Staff, Title	% Availability
Justin Semion, PWS, Principal	10%
Matt Osowski, Project Manager/Permitting Lead	30%
Ben Tinsley, Stream Maintenance Compliance Task Lead	40%
Timothy Carrara, QSP, Construction Support Task Lead	30%
Derell Griffin, Mitigation Design	30%
Eileen Barrow, RPA, Cultural Resources	30%

Subconsultants

Eileen Barrow & Associates

EBA is a cultural resources management consulting firm that employs a qualified staff capable of completing cultural resources surveys and investigations, architectural evaluations, and archival research in California that will meet local, State, and Federal requirements. EBA’s experience includes work that has been completed in compliance with local ordinances, the California Environmental Quality Act, the National Environmental Policy Act, and Section 106 of the National Historic Preservation Act (NHPA) requirements. EBA has experienced staff and all equipment necessary to complete cultural resources studies for EIR and EIS level studies including general plans, specific plans, land inventories, which satisfy CEQA and NHPA, as warranted. Employees are well-versed in local archaeological and historical contexts and are able to conduct appropriate archaeological and historical research.

Resumes

We provide resumes for our key staff in Appendix A of this proposal.

REFERENCES

Below we provide references that demonstrate experience with similar projects including our key team's performance and project schedules and budgets.



City of Livermore | Alameda County, California **Stream Maintenance Program**

Project Description: WRA has provided mitigation planning and design services and conducted permit compliance and monitoring during construction activities for the City of Livermore's SMP since 2016. WRA worked with the prime engineer, the City of Livermore, Zone 7, Alameda County Resource Conservation District, and regulatory agencies to determine the best location and design for potential wetland, channel, and riparian mitigation areas to support the SMP.

One of the challenges the City faced in implementing the SMP is finding suitable mitigation sites. To assist with this process, WRA prepared a master mitigation plan for the City to highlight both potential and existing riparian, wetland, and floodplain mitigation sites along creeks and waterways within the City limits. The City will use this master plan to help identify potential mitigation sites when needed.

WRA prepared conceptual plans for three different mitigation sites in 2018, including planting and irrigation plans. WRA also provided construction administration support services to the City during construction of the three mitigation sites to ensure the contract documents were executed accurately. In addition, WRA worked with the prime consultant on designing vegetation components in bank stabilization plans on mitigation planning and design efforts.

Implementing a SMP can be costly, and throughout the process, WRA worked with the project team to minimize design and construction costs yet ensure successful results. During this time, WRA provided biological compliance monitoring. This included preconstruction surveys, environmental awareness training, biological monitoring during construction, and water quality monitoring to support the implementation of the City's SMP projects.

In 2024, WRA began providing services to the City for their Arroyo Las Positas Flood Hazard Mitigation Project. This project entailed increasing the flow and capacity of Arroyo Las Positas by expanding the creek banks and creating a larger floodplain. WRA prepared permit applications to support creek bank work and the required CEQA environmental review document. Following application submittal, WRA will represent the City through the agency negotiation process to obtain the necessary regulatory permits. WRA is also supporting this project by developing the restoration planting plan for the newly expanded floodplain.

Key Staff: Justin Semion, Derell Griffin

Contact: Leon Taing, City of Livermore Engineering Division, Community Development Department,
P: 925-960-4517, E: ltaing@livermoreca.gov



California Coastal Conservancy | Marin County, California

Bel Marin Keys V Wetland Restoration

Project Description: The project will restore an approximately 1,600-acre parcel to a mixture of tidal marsh, seasonal wetlands, alkali meadows, and uplands. WRA began work on the project as part of the construction management team for Phase 1 construction and has been retained by the Conservancy to complete continued monitoring, adaptive management and interim property management for the project. Contributions from WRA include design of hydrology

improvements to the seasonal wetlands and alkali meadows, a Quality Assurance Project Plan (QAPP) for sediment acceptance, completion of levee and other site maintenance repairs, and ecological input critical to the successful design of Phase 2 of the restoration.

To support resiliency of outboard levees prior to Phase 2 restoration construction, WRA has developed a levee inspection and management program, including engineering design and construction support for repairs of three major levee erosion sections. WRA has also supported the Conservancy in evaluating levee maintenance and repair alternatives for the entire outboard levee system in light of the long-term goal of breaching the levees for project restoration. Justin has played a vital role in developing and managing WRA's suite of restoration and land management responsibilities for the property.

Key Staff: Justin Semion, Derell Griffin

Contact: Linda Tong, California Coastal Conservancy P: 510.286.4178, E: linda.tong@scc.ca.gov



Cargill | Alameda County, California

Cargill Salt Operations Environmental Compliance and Permitting Support

For more than 25 years, WRA has supported environmental compliance, permitting, and regulatory coordination for Cargill's Bay Area solar salt operations, which encompass approximately 12,000 acres of active solar salt production ponds within tidal waters, wetlands, and sensitive habitat for special-status species. This long-standing partnership has provided WRA with a detailed understanding

of the operational, environmental, and regulatory considerations that influence maintenance, operations, and long-term planning across the facilities.

WRA supports ongoing compliance with programmatic permits and agency requirements issued by agencies including USACE, USFWS, RWQCB, and BCDC. Our work includes permit compliance management, preparation of operational reporting, coordination with regulatory agencies, implementation guidance for best management practices, and securing new permits for activities outside the scope of existing authorizations.

WRA's experience includes extensive coordination with BCDC related to sea level rise adaptation requirements and associated permitting processes. WRA's institutional knowledge of the facilities and regulatory framework allows the team to efficiently translate existing analyses and operational considerations into practical, implementable adaptation and compliance strategies.

Key Staff: Justin Semion

Contact: Ric Notini, Cargill, P: 510.790.8182, E: ric_notini@cargill.com



City of San Rafael Public Works | Marin County, California

On-Call Master Services Agreement (MSA)

Project Description: WRA has provided environmental services to the City of San Rafael Department of Public Works under an on-call MSA since 2014. Services have included: IS/MND, regulatory permitting applications, BCDC permit packaging and coordination, and biological monitoring. As part of this work, WRA prepared an Initial Study/Mitigated Negative Declaration and a regulatory permit application package for the San Question Pump Station Replacement

project. This involved the replacement of the deteriorated pump station and demolition of the current station. The site is protected from inundation by a levee along the San Rafael Bay. Several site locations were evaluated in the project design phase with the assistance of WRA permitting specialists to minimize environmental impacts and mitigation requirements. Since the goal was to keep the current station operational until the new station was ready to function, demolishing the station and building the new one in its place was not an option. It was decided that the new pump station would be constructed immediately south of the existing pump station, minimizing wetland disturbance and providing the benefit of a relatively large construction staging area with good access. With WRA's assistance, the City obtained the RWQCB 401 Certification and USFWS Biological Opinion. WRA also provided biological monitoring services to support environmental permit compliance during construction.

Key Staff: Justin Semion, Matt Osowski

Contact: April Miller, City of San Rafael Department of Public Works, P: 415.485.3355,

E: april.miller@cityofsanrafael.org



Fairfield-Suisun Sewer District | Suisun City, California

Kellogg Resiliency Project

Project Description: The Kellogg Resiliency Project aims to develop a nature-based solution to mitigate flooding, optimize infrastructure, and support stormwater treatment in Suisun City. This initiative seeks to protect people and property from rising sea levels and fire while fostering a stable and biodiverse community. Located adjacent to the Suisun Slough, the project site is particularly vulnerable to sea level rise and fire, as evidenced by a 2020 wildfire that caused significant

property loss. Without intervention, the site is at high risk of future flooding, potentially endangering nearby properties and disrupting wastewater management. The project represents a critical first step in mitigating these threats, with Suisun City as a key partner. The project received an \$8.6 million grant from the California State Water Resources Control Board to support its implementation.

As part of a team, WRA was responsible for biological resources and permitting compliance, final design for planting, irrigation, and site amenities, CEQA documentation, and community outreach support. WRA led the preparation of an IS/MND for the project, which was adopted by the District in January 2025. In order to support the biological resources impact analysis in the IS/MND, WRA biologists completed a field survey of the project site and worked carefully to craft thorough mitigation measures to protect special-status species in the project area while minimizing impacts to the construction work and maintain the construction schedule.

Key Staff: Justin Semion, Matt Osowski

Contact: Irene O'Sullivan, Fairfield-Suisun Sewer District, P: 707.429.8930, E: iosullivan@fssd.com

MANPOWER-LOADING MATRIX

Table 3 below illustrates our manpower-loading matrix indicating an estimate of hours to complete the scope of services by hours for each task by staff and labor classification. Per the RFP, this table does not include any cost information.

Table 3 Manpower-Loading Matrix

Task #	Task Description	Personnel Hours by Task*												
		Justin Semion Principal Ecologist	Matt Osowski Senior Associate	Senior Technician (staff TBD)	Ben Tinsley Technician	Timothy Carrara Senior Scientist	Project Biologist (staff TBD)	Derrell Griffin Landscape Designer II	Jeanine Strickland Associate Landscape Architect	Sundaran Gillespie GIS Professional III	Julia Conner Clerical Support	Gabriel Saron Scientist		
1	Project Management and Agency Coordination	12	32		80									
2	Permit Compliance, Tracking and Notifications	12	28		115					4	6			
3	Stream Maintenance Construction Support													
3.1	Pre-construction Surveys		1	15	24									
3.2	Biological Monitoring (30 days)			150	15	15	150							
4	Mills Creek Mitigation Construction Observations and As-Built Report	5	8					64	26	4				
5	Permit Renewal Applications													
5.1	Biological Studies Updates	4	12		48					12	6	40		
5.2	Cultural Resources Report													
5.3	Permit Applications	17	34		168					12	8	4		
6	OPTIONAL: Annual Monitoring and Reporting for Mills Creek Mitigation	4	18	60	72					9				
7	OPTIONAL: CDFW Three-Year Extension	1	4		16									
TOTAL LABOR HOURS		55	137	225	538	15	150	64	26	41	20	44		

*Please note: WRA may substitute similarly qualified individuals as necessary.

APPENDIX MATERIALS

We provide key staff resumes in Appendix A and our mitigation planting plans for the Mills Creek channel in Appendix B.

PROPOSED COMPENSATION

We provide WRA's cost information as a separate pdf and prepared it in accordance with the RFP.

Appendix A. Resumes



Justin Semion, MBA, PWS
Principal-in-Charge

YEARS OF EXPERIENCE
27

EDUCATION
M.B.A. Sustainable Management,
Presidio Graduate School

B.S., Resource Ecology and Management,
University of Michigan

LICENSES / CERTIFICATIONS
Professional Wetland Scientist,
#2072

PROFESSIONAL AFFILIATIONS
Association of Environmental
Professionals

Member, Port of San Francisco
Waterfront Plan Resilience Advisory
Team

Restoration Subcommittee Member,
Subtidal Habitats Goals Project,
California Coastal Conservancy

Member, Bay Planning Coalition
(Dredging and Beneficial Reuse
Committee)

SPECIALIZED TRAINING
Lead Instructor: 40-hour Delineation
Training (San Francisco State University)
and Overview of California
Environmental Regulations (U.C. Davis
Extension)

Ecosystem Services Valuation,
International Society of Sustainability
Professionals

Section 7 Endangered Species Act
Biological Assessment Workshop, U.S.
Fish and Wildlife Service

Justin Semion helps guide public and private clients toward environmentally sustainable solutions that align with organizational goals. With a background in environmental science and business management, he brings a unique ability to integrate environmental and social considerations into strategic decision-making.

Justin has led hundreds of projects involving habitat restoration and management, CEQA/NEPA compliance, regulatory permitting (U.S. Army Corps [Section 404], ESA consultations, RWQCB certifications, CDFW agreements, BCDC, and DMMO reviews), sea level rise resiliency, and ecological assessments. His scientific expertise spans wetlands, eelgrass and estuarine habitats, fisheries ecology, wildlife corridors, and rare species evaluations. He also advises on project risk, stakeholder engagement, and environmental metrics to support sound financial and regulatory decisions.

Justin has served as Principal for WRA's environmental compliance work for the City of Burlingame's annual creek maintenance program since 2009 and has other similar storm drain/stream maintenance programs for municipal clients including the City of Livermore (since 2016).

RELEVANT PROJECT EXPERIENCE

City of Burlingame | Burlingame, California

Annual Creek Maintenance Program | Principal-in-Charge

The City of Burlingame completes regular flood control oriented stream maintenance in all streams in its jurisdiction that drain to the Bay. To support these maintenance activities, WRA completed an Initial Study/Mitigated Negative Declaration (IS/MND) and obtained programmatic permits from the USACE, CDFW, and RWQCB covering these annually occurring maintenance events. WRA also obtained interim permits from these agencies to allow the City to meet maintenance needs during the process of obtaining the programmatic permits. WRA also supports the City with biological compliance and mitigation to ensure compliance with permit requirements. Justin oversees permitting strategy, provides QA/QC of all permit applications and compliance reports, and advises the City on questions of permit coverage and process for maintenance activities.

City of Livermore | Livermore, California

Stream Maintenance Program | Principal-in-Charge

WRA provides permit compliance and mitigation services to the City of Livermore for the implementation of its Stream Maintenance Program (SMP). Services include interpreting permit requirements, conducting biological and water quality monitoring during construction, mitigation design and strategy, and developing long-term mitigation plans. Justin oversees the WRA team for all SMP and mitigation projects.

California Coastal Conservancy | Novato, California

Bel Marin Keys V Restoration | Principal-in-Charge

The project will restore an approximately 1,600-acre parcel to a mixture of tidal marsh, seasonal wetlands, alkali meadows, and uplands. WRA began work on the project as part of the construction management team for Phase 1 construction and has been retained by the Conservancy to complete continued monitoring, adaptive management and interim property management for the project. Contributions from WRA include design of hydrology improvements to



the seasonal wetlands and alkali meadows, a Quality Assurance Project Plan for sediment acceptance, completion of levee and other site maintenance repairs, and ecological input critical to the successful design of Phase 2 of the restoration. To support resiliency of outboard levees prior to Phase 2 restoration construction, WRA has developed a levee inspection and management program, including engineering design and construction support for repairs of three major levee erosion sections. WRA has also supported the Conservancy in evaluating levee maintenance and repair alternatives for the entire outboard levee system in light of the long-term goal of breaching the levees for project restoration. Justin has played a vital role in developing and managing WRA's suite of restoration and land management responsibilities for the property.

Cargill Salt | Alameda County, California

Maintenance and Operations Environmental Compliance | Principal-in-Charge

The client manages approximately 12,000 acres of solar salt production ponds, which require ongoing maintenance and operations within tidal waters, wetlands, and critical habitat for endangered species. For over 25 years, WRA has supported the client by managing environmental permitting and ensuring permit compliance. This includes overseeing adherence to existing programmatic permits issued by USACE, USFWS, BCDC, and RWQCB, assisting with reporting on operations and maintenance activities, advising on the application of best management practices, and securing new permits for activities outside the scope of current authorizations. Justin leads the WRA team responsible for managing permit compliance and permit support, including engagement with regulatory agencies and other stakeholders for the facilities.

City of San Rafael Public Works Department | San Rafael, California

San Quentin Pump Station Replacement Project | Principal-in-Charge

The project is located on former marshland abutting San Rafael Bay. The current pump station and outfall pipe deteriorated with age and exposure to the elements. The City proposed replacing these structures to increase stormwater conveyance, capacity, and efficiency. This project requires demolition of the current station, trenching for certain sections of the outfall pipe, grading, and revegetation of portions of the site for wetland mitigation. WRA is responsible for an environmental evaluation for alternative selection, an IS/MND and CEQA compliance, regulatory permitting, and construction monitoring. Justin led CEQA documentation and regulatory permitting services for the project.

Fairfield-Suisun Sewer District | Suisun City, California

Kellogg Resiliency Project | Principal-in-Charge

The project is the first step towards addressing critical stormwater management system improvements for future sea level rise and flood risk in Suisun City and addressing these risks within the project site. Teamed with Geosyntec, WRA is responsible for the final design for planting, irrigation, and site amenities, CEQA documentation, biological resources and permitting compliance, rare plant and pollinator plant surveys, and community outreach support. Justin served WRA's Principal-in-Charge and led strategy and oversaw timely delivery of quality project deliverables.

Marin County Flood Control and Water Conservation District | Novato, California

Novato Creek Dredging and Beneficial Use | Principal-in-Charge

The Marin County Watershed Program expanded effort to restore tidal marsh and improve flood management in the lower Novato Creek and Deer Island Flood Control Basin. The project builds on an earlier initiative involving dredging and beneficial reuse of sediment to construct a horizontal levee and ecotone slope. In response to evolving flood risks, including the 2017 flooding of Highway 37, the project now focuses on expanding the floodplain, increasing tidal prism, and enhancing habitat. WRA prepared the original CEQA project description, completed a Subsequent Initial Study to address changes in sediment transport and placement, and also worked with Schaaf & Wheeler to develop strategies for wetland restoration and flood control. Justin led the visioning, technical studies, and completion of a Subsequent IS/MND.



Matt Osowski

Project Manager/
Permitting Lead

YEARS OF EXPERIENCE

28

EDUCATION

B.S. Biology, Loyola University of Chicago

Geographic Information Systems (GIS) Certificate, San Francisco State University

LICENSES / CERTIFICATIONS

40-hour HAZWOPER Certification

SPECIALIZED TRAINING

California Plant Master Taxonomy, CNPS

Clean Water Act Section 404 Nationwide Permits, UC Davis Extension

Endangered Species Regulation and Protection, UC Davis Extension

Construction Safety and Health, OSHA 10 hours

Supervisor Training, OSHA

Wetland Delineation, San Francisco State University

Wetlands Restoration Ecology, San Francisco State University

Matt specializes in projects along the Bay shoreline with unique natural resource and environmental challenges. His regulatory experience includes working with USACE, USFWS, NMFS, CDFW, RWQCB, and BCDC in addition to previous work interfacing with the EPA and California Department of Toxic Substances Control. Matt leads a variety of bayfront and aquatic resources oriented projects including work for waterfront development, mining and material extraction, restoration, and parks and open space involving unavoidable impacts to wetlands, sensitive habitats, and special-status species. His technical background includes biological resource surveys, rare plant surveys, wetland delineations, and soil and groundwater remediation.

RELEVANT PROJECT EXPERIENCE

Fairfield-Suisun Sewer District | Suisun City, California

[Kellogg Resiliency Project](#) | [Project Manager](#)

The project is the first step towards addressing future sea level rise and flood risk in Suisun City and addressing these risks within the project site. Teamed with Geosyntec, WRA was responsible for the final design for planting, irrigation, and site amenities, CEQA documentation, biological resources and permitting compliance, rare plant and pollinator plant surveys, and community outreach support. Matt led the WRA permitting, CEQA, and landscape design teams for this project.

City of San Rafael Department of Public Works | San Rafael, CA

[On-Call Environmental Services](#) | [Permitting Lead](#)

WRA has been providing environmental services to the City of San Rafael Department of Public Works since 2014 under an On-Call Master Services Agreement. Matt was the aquatic resources permit lead for the Rotary Manor Culvert Replacement project. The proposed project, located on private property in San Rafael's Sun Valley neighborhood, involves a corrugated metal pipe culvert that has failed, requiring rehabilitation and/or full removal and replacement. WRA assisted with California Environmental Quality Act (CEQA) documentation and regulatory permitting. Matt worked with agencies and stakeholders on site-specific permits and regulatory exemptions that allowed the project to minimize impacts to sensitive habitats, obtain permits, and construct the repair on an accelerated timeframe.

East Bay Municipal Utilities District/ Engineering/Remediation Resources Group | Oakland, California

[Environmental Services On-Call](#) | [Lead Biologist](#)

As part of a team, WRA worked on the EBMUD General Environmental Services On-Call Contract from 2015-2020. WRA provided natural resources services, including phase I assessments, biological surveys, wetlands and species services, and permit applications. WRA updated EBMUD's Integrated Pest Management Program permits, provided fisheries and wetlands ecology services, and served as the agency-approved biologist for a sediment removal action. Matt served as the Lead Biologist for the team.

Town of Hillsborough | Hillsborough, California

[Parkside Avenue Bridge and Culvert Replacement](#) | [Project Manager](#)

The project involves the replacement of the bridge and culvert that was damaged by storms. WRA supports the Town with biological assessments and permit applications for the replacement bridge



aquatic resource authorizations and environmental review. WRA will also negotiate with concerned stakeholders on appropriate measures to protect sensitive habitats. Matt serves as the project manager providing aquatic resource authorizations, and environmental review.

Private Client | San Jose, California

Zanker Road Resource Management Stormwater Basin Planning | Project Director

Zanker Road Resource Management is evaluating development of a stormwater basin in an area immediately west of the Zanker Materials Processing Facility in San Jose, California. Matt leads the team advising the client on design of the stormwater basin, providing strategic permitting, design and mitigation assistance to Zanker for the potential project. Many constraints were evaluated including onsite wetlands, potential occurrence of special status wildlife species, and the potential for required mitigation.

[REDACTED]

Private Client | Concord, California

Military Ocean Terminal Concord (formerly Concord Naval Weapons Station) Development | Project Director

The Navy acquired the Litigation Area property of the Military Ocean Terminal Concord (MOTCO) in the 1970s from several different owners. Subsequently, the area was found to be contaminated with metals resulting primarily from waste disposal and historical spills from off-site neighboring chemical companies. As part of the remediation plan for the area, the Navy developed a new long-term monitoring plan, starting in 2005 for site sediment, surface water, groundwater, and vegetation. WRA conducted a creek, species and wetland mitigation, provided regulatory permitting support, and CEQA documentation review. WRA also developed the means and methods of remote sensing vegetation community mapping for the long-term monitoring of vegetation conducted at three-year intervals. Matt has managed the project since 2008 and directs all aspects of the work.

[REDACTED]

Private Client | San Francisco, California

Pier 70 Special Use District Project | Project Manager

The client is proposing a mixed-use development on an approximately 35-acre site at Pier 70 along the San Francisco waterfront. The project consists of repairing sections of the Bay shoreline, refurbishing a seawall bulkhead, and repairing existing stormwater outfalls. WRA is assisting the developer with CEQA review, specifically responding to biological resources and proposed mitigation measures. WRA is also preparing permit applications for BCDC, RWQCB, and USACE. Matt is assisting with an amendment to the BCDC Major Permit related to design changes and delivery of public amenities.



Ben Tinsley

Stream Maintenance
Compliance Task Lead

YEARS OF EXPERIENCE

8

EDUCATION

B.A., Environmental Science &
Policy, California State University
of Long Beach

LICENSES / CERTIFICATIONS

Qualified Applicators License
#171515

Firefighter Type 2 **Crewmember**

SPECIALIZED TRAINING

First Aid and CPR

S-212 Class A Wildland Fire
Chainsaws, National Wildfire
Coordinating Group

Ben Tinsley is a Biologist with WRA, Inc. His role involves preparing biological technical reports, wetland delineations, botanical surveys, bird nesting surveys, and compliance monitoring. Ben began his career at the Ballona Wetlands Ecological Reserve, supporting restoration of Los Angeles' last remaining coastal wetland and other projects across the South Coast Region. He later served as a Wildlife Technician for CDFW's Wildfire Resiliency Program, managing crews to reduce wildfire risks and control invasive species. In 2023 he relocated to the Bay Area where he worked with CDFW's Wildlife and Unstaffed Lands Program, supporting biological monitoring, habitat restoration, and the Bay Area Deer Abundance study. Following his time in the public sector, Ben took a position as a habitat restoration crew supervisor with WRA's former subsidiary company, WRA Landscape Restoration. Most recently, he transitioned to a biologist role and is able to draw on his diverse background to support a variety of projects at WRA, Inc.

RELEVANT PROJECT EXPERIENCE

City of San Mateo Department of Public Works | San Mateo, California
[Poplar Creek Golf Course Trash Capture Project](#) | **Biologist**

The project involves installation of a trash rack in a concrete-lined channel located in the Poplar Creek Golf Course. WRA is providing preparation of CEQA documents, a biological resources assessment, a wetland delineation, and regulatory permitting. Ben removed plant protections and t-posts to complete the planting phase of this project.

Delta Diablo Sanitation District/Black & Veatch | Antioch, California
[Delta Diablo Shore Acres Force Main Repair](#) | **Biologist**

This project builds upon work completed by WRA for the emergency repair of the ruptured force main in 2024. WRA is providing CEQA documentation, a biological report, regulatory permitting, and a habitat restoration and monitoring plan. WRA is also managing the cultural resources subconsultant. Ben assisted with invasive species removal and a formal wetland delineation survey and reporting.

Marin Water | Fairfax, California

[Grassland Restoration and Vegetation Management](#) | **Crew Lead**

For three years, WRA's former subsidiary company, WRA Landscape Restoration (WRA-LR), supported Marin Water in providing invasive plant control work in ecologically sensitive native grassland communities. WRA tracked all work performed using the Cal Flora Observer Pro mobile application. WRA-LR worked closely with Marin Water's vegetation staff and volunteers of the non-profit OneTam organization to map and control occurrences of specific invasive plant species whose proliferation threatens stands of rare plants and native grassland communities. As part of this work, Ben led a crew to perform detail-oriented hand pulling of barbed goat grass in ecologically sensitive serpentine grasslands.

Golden Gate Bridge, Highway and Transportation District | Corte Madera, California

[Corte Madera Tidal Marsh Restoration](#) | **Biologist**

WRA designed four acres of restored tidal marsh and a quarter acre of restored seasonal wetland located within the District's 72-acre property adjacent to the Corte Madera Ecological Reserve. The project provides restored tidal marsh habitat for Federal-listed



wra

Landscape
Restoration

species such as the California Ridgway's Rail and the salt marsh harvest mouse, and it also fulfills mitigation requirements for the District. The project design includes a new public trail segment adjacent to the restored tidal marsh and public amenities such as benches and interpretive panels. Ben led a crew in the implementation phase of planting and maintaining native species in the intertidal zone of the restoration area. The work included invasive species removal in an ecologically sensitive area and hand watering to ensure establishment of the plantings. He also performed annual monitoring of the seasonal wetland restoration site in year 5 to support the final annual monitoring report for the project. Ben pulled line transects to determine average plant cover and species richness at the site.

Sonoma-Marin Area Rapid Transit (SMART) | Sonoma County, California

Healdsburg Extension | Plant Biologist

The SMART extension includes approximately nine miles of railroad rehabilitation and bicycle/pedestrian pathway construction from Windsor north to Healdsburg in Sonoma County. The project will include a new station, upgraded grade crossings and bridges, and a paved multi-use pathway alongside the corridor. WRA and its subconsultants are conducting field investigations to identify environmental opportunities and constraints, and completing baseline technical studies to inform environmental compliance, design, and construction schedules for the rail extension. Ben participated in several weeks of tree surveys along the project alignment.

The Town of Fairfax | Marin County, California

Meadow Way Bridge Replacement Project

This project involves the replacement of a structurally deficient bridge spanning over San Anselmo Creek in the Town of Fairfax. WRA supported this effort by preparing an Initial Study/Proposed Mitigated Negative Declaration of environmental impacts for the client as well as applying for permits with the various relevant agencies. As part of this permitting process, Ben prepared a Riparian Revegetation and Monitoring Plan in support of an application for the Regional Water Quality Control Board (RWQCB) Section 401 Water Quality Certification, and a California of Department Fish and Wildlife (CDFW) Code Section 1602 Notification of Streambed Alteration Agreement.

California State Parks | Armstrong Redwoods State Natural Reserve/Sonoma Coast State Park, California

Early Detection Rapid Response Surveys | Biologist

WRA conducted Early Detection Rapid Response (EDRR) surveys for invasive plant species across Armstrong Redwoods State Natural Reserve and Sonoma Coast State Park. The team collaborated with State Parks staff to align on protocols for species identification, mapping, and hygiene best practices, and developed a coordinated survey schedule with regular progress updates through ArcGIS Online. Using ground-based methods outlined in the State Parks EDRR Handbook, WRA surveyed roads, trails, and disturbance areas to document approximately 40 target invasive species with high-accuracy GPS data collection. All survey data were reviewed for accuracy and compiled into a State Parks-hosted ArcGIS Online web map for ongoing monitoring and year-to-year comparison. Ben performed a botanical survey of state park trails in the willow creek watershed in support of their ongoing proactive invasive species control efforts.

California State Parks | Nevada County, California

Malakoff Diggins State Historic Park Restoration Project | Biologist

The project involves remediating and restoring a historic mining pit and adjacent stream in this 3,000-acre State Historic Park while preserving its unique cultural heritage and wildlife habitat. WRA performed a biological resources assessment, wetland delineation, protocol-level rare plant surveys, regulatory permitting, and pre-construction surveys and studies, and will conduct biological monitoring during construction. Ben led a hands-on willow staking training for this project. He worked closely with contractors and demonstrated how to identify various willow species, which sizes to collect, proper preparation technique, and planting methods to ensure survival of the cuttings.

EXPERIENCE PRIOR TO WRA

California Department of Fish and Wildlife | Santa Rosa, California

Bay Area Deer Assessment Study | Wildlife Aid

Ben supported this multi-year study done by the Department of Fish and Wildlife in the Bay-Delta Region. Ben planned, scouted, and established deer fecal DNA transects across the greater Bay Area. The work included setting camera traps, collecting pellet groups, mapping using GPS software, and closely following survey protocol.



Timothy Carrara, QSP

Construction Support
Task Lead

YEARS OF EXPERIENCE
12

EDUCATION
B.S., Marine Science, Coastal
Carolina University

LICENSES / CERTIFICATIONS
Qualified Stormwater Practitioner
(QSP), California, #83634

Motorboat Operator Certification
Course, 2019

SPECIALIZED TRAINING
North Bay Highland CRLF Survey
Training, 2026

WRA Pacific Herring Training,
2026

Vernal Pool Listed Brachiopods
and CTS Workshop, 2023

Environmental DNA Workshop,
2019

PROFESSIONAL AFFILIATIONS
California Stormwater Quality
Association

Timothy is a biologist with vast field operations experience, specializing in compliance monitoring, species conservation, and regulatory permitting. He is a proven leader in managing interdisciplinary teams, training junior biologists, and ensuring permit compliance for construction projects under ESA, CESA, CEQA, and NEPA frameworks. He brings extensive experience in California wildlife species identification, habitat restoration, and construction monitoring throughout Northern California ecosystems. A certified CDFW Designated Biologist and USFWS Approved Biologist, Timothy has expertise in both aquatic and terrestrial ecosystems. His field experience includes handling California tiger salamander, California red-legged frog, Chinook salmon, delta smelt, and longfin smelt, as well as observing burrowing owl, tricolored blackbird, giant garter snake, and golden eagle. As a Qualified Stormwater Practitioner (QSP), Timothy also supports stormwater compliance through BMP implementation, inspection, and reporting to ensure water quality requirements are met during construction. He is recognized for his strong technical skills, attention to regulatory detail, and commitment to high-quality environmental compliance and conservation outcomes.

Relevant Project Experience

Las Gallinas Valley Sanitary District | San Rafael, California
[Lower Miller Creek Channel Maintenance | Compliance Specialist](#)

This project involved channel maintenance and sediment removal within a segment of Lower Miller Creek to increase the channel's hydrologic capacity. WRA conducted nesting bird surveys to avoid impacts from vegetation management near wastewater detention ponds, prepared a vegetation removal opinion addressing nearby California rail and least bittern habitat, and is providing long-term biological monitoring. Timothy conducted field monitoring and site compliance support, including BMP implementation, crew coordination, and on-site environmental oversight during maintenance activities.

Port of San Francisco | San Francisco, California
[Pier 68 Dry Dock 2 Emergency Repairs Project | Project Manager/Compliance Specialist](#)

WRA managed biological monitoring operations during emergency pile removal at Pier 68 on the San Francisco Bay. Tim oversaw the implementation of the Biological Monitoring Plan, coordinated with construction crews and agency personnel to ensure regulatory compliance, conducted pre-construction and ongoing visual surveys to detect Pacific herring spawning activity, directed work stoppages as required, and authorized resumptions in accordance with Clean Water Act and Biological Assessment requirements. He also maintained daily monitoring logs and ensured site-wide adherence to Best Management Practices to protect aquatic resources.





Derell Griffin, RQP

Mitigation Design

YEARS OF EXPERIENCE

7

EDUCATION

Master of Landscape
Architecture, University of
Michigan

B.S., Horticulture, Michigan State
University

LICENSES / CERTIFICATIONS

ReScape Qualified Professional
(RQP)

ISA Certified Arborist
#WE 14361A

PROFESSIONAL AFFILIATIONS

Society of Ecological Restoration

American Society of Landscape
Architects

Royal Oak Foundation – Damaris
Horan Fellowship, 2019

Environmental Fellows Program –
Fellow, 2018

Derell is a Senior Landscape Designer specializing in ecological design. With strong interests in ecology, social justice, and water management, Derell seeks to design landscapes that function socially as well as ecologically, and he believes that everyone should have access to environments that promote one's mental and physical well-being. He has strong graphics abilities and prepares such deliverables as rendered illustrative plans, cross sections, 3-D perspectives, and interpretive panels.

RELEVANT PROJECT EXPERIENCE

City of Burlingame | Burlingame, California

Annual Creek Maintenance Program | Senior Landscape Designer

This project reinforces a network of multi-benefit green infrastructure projects in this highly urbanized watershed that help manage urban stormwater, remove invasive species, provide native habitat, protect water quality, and reduce erosion. WRA provides ongoing biological monitoring and compliance activities such as preparation of work plans, on-site monitoring, and reporting required under multiple agency permits. Derell leads the design of mitigation planting and irrigation plans including the Mills Creek reach.

California Coastal Conservancy | Novato, California

Bel Marin Keys V Restoration | Landscape Designer

The project restores an approximately 1,600-acre parcel to a mixture of tidal marsh, seasonal wetlands, alkali meadows, and uplands. WRA is part of the construction management team, assisting with the implementation of Phase 1 construction including reviewing project plans and specifications for details, management of environmental compliance requirements, construction oversight for alkali and seasonal wetland construction, and interface with the contractor for restoration goals. WRA also led the authoring of the first annual monitoring report, preliminary design for a drainage channel, and supported permitting and environmental compliance. Derell assisted with the development of seasonal wetland restoration design sets.

City of San Mateo | San Mateo, California

Poplar Creek Golf Course Trash Capture Project | Sr. Restoration Landscape Designer

The project involves installation of a trash rack in a concrete-lined channel located in the Poplar Creek Golf Course. WRA is providing preparation of California Environmental Quality Act (CEQA) documents, a biological resources assessment, a wetland delineation, and regulatory permitting. Derell assisted with the preparation of the planting plan for this project

City of San Mateo | San Mateo, California

Marina Lagoon Operations and Maintenance Program | Landscape Designer

The City proposes to conduct routine maintenance activities intended to repair and preserve Marina Lagoon's existing stormwater management and recreational infrastructure and capacity, operate and maintain public and private docks and other structures, and maintain water quality within the Lagoon. WRA prepared a biological resources technical report and the regulatory permitting documentation. Derell performed site assessments and assisted in the preparations of the mitigation planting plans for this project.



wra
Environmental
Consultants

Town of Hillsborough Public Works Department | San Mateo County, California

Sandra Hayne Storm Drain Replacement and Creek Daylighting | Landscape Designer

The Town needed to replace a culvert that created downstream erosion within Cherry Creek. Instead of repairing the culvert, WRA saw an opportunity for the Town to limit future erosion by daylighting a portion of a creek. WRA is responsible for regulatory permitting, surveys, biological resources assessment, wetland delineation, and preparation of California Environmental Quality Act (CEQA) documentation and a Habitat Restoration and Monitoring Plan. Derell assists in the creek restoration design, CEQA compliance, and permitting phases of the project.

Private Client | Walnut Creek, California

Galindo Creek Restoration Project | Landscape Designer

Changes in land use have led to channel incision and deterioration of aquatic and riparian habitat in Galindo Creek, which resource agencies have identified as a strong candidate for off-site mitigation activities. WRA provided landscape plans and permitting services to improve geomorphic stability and riparian vegetation in the creek corridor while providing needed mitigation credits. Derell assisted with the design of a bioswale adjacent to the stream mitigation site which will capture stormwater runoff from a parking lot before entering the creek. He also prepared an interpretive panel to be installed near the bioswale that provides educational information to the public on the bioswale function and ecological value.

Sonoma County Public Infrastructure | Cloverdale, California

Big Sulphur Creek Planting Mitigation Plan | Sr. Restoration Landscape Designer

This project involves developing a plan to mitigate vegetation removal impacts resulting from construction of the new bridge on Geysers Road over Big Sulphur Creek. WRA is providing a revegetation and mitigation planting plan, an irrigation plan, and a monitoring plan that meets permit and environmental requirements. Derell performed site assessments and assisted in the preparations of the mitigation planting plans for this project.

Denman Reach - Phase 4 | Sr. Restoration Landscape Designer

The final phase of this project consisted of sediment removal from within the Petaluma River and the creation of two flood detention basins while avoiding and minimizing impacts to wetlands/non-wetland waters, California red-legged frog, and steelhead. WRA accomplished a permitting strategy allowing the project to be permitted and constructed within a very short time to meet the deadlines associated with grant funding for the project. WRA also provided riparian and wetland planting plans associated with the final restoration, and biological oversight, compliance, and implementation of conservation measures per the terms of the project's permits for the duration of the project. Derell assisted with the preparation of the riparian planting plans and provided construction oversight during planting installation.

[REDACTED]

Private Client | Oakland, California

Oak Knoll Naval Hospital Redevelopment Project | Landscape Designer

The client is developing the approximately 200-acre former Naval Hospital site with nearly 1,000 housing units as well as a retail center, a community center, and more than 60 acres of open space. The project also involves 5,000 linear feet of creek restoration, including 1,000 linear feet of creek daylighting. WRA is the project biological consultant, responsible for CEQA biological studies and regulatory permitting. WRA also developed the riparian planting and irrigation construction documents for the creek restoration, which included the layout of over 5,000 trees and shrubs and the design of public access trails within the creek corridor. Derell assists in the design of the riparian planting and creek corridor trail network.

Eileen Barrow

President | ebarrow@ebarrowassociates.com

I have been working in the field of cultural resources management for 20 years throughout the San Francisco Bay Area, Central, and Northern California. With this work experience comes a grasp of what it takes to get projects through the environmental review process. I am proficient in completing projects that need to comply with both the California Environmental Quality Act and Section 106 of the National Historic Preservation Act. In addition, I work to maintain good relationships with San Francisco Bay Area tribes to ensure their views are included and valued while balancing the project's needs.

Professional Experience

Eileen Barrow & Associates | President | 2024 to Present

- Management of a consulting firm specializing in archaeological and historical research and regulatory compliance
- Management of project personnel and the preparation of survey, monitoring, and excavation projects
- Ensures studies meet local, state, and federal requirements
- Coordinates among Native American groups and agencies and project proponents

Tom Origer & Associates | Senior Associate | 2005 to Present

- Oversight of archaeological survey, monitoring, and excavation projects
- Supervision of survey, monitoring, and excavation personnel
- Laboratory analysis of archaeological collections
- Report preparation of survey, monitoring, and excavation projects
- Coordinates among Native American groups and agencies and project proponents

Education

Professional Development

- Masters Certificate in Historic Preservation |2023| University of Kentucky
- Mid-Twentieth Century Architecture | 2006 | National Preservation Institute

Masters of Arts in Cultural Resources Management | 2010 | Sonoma State University

- Excavating the Past for the Future: A Synthesis of Marin County Prehistoric Archaeology

Bachelor of Arts in Anthropology | 2007 | Sonoma State University

Professional Affiliations

- *Register of Professional Archaeologists #989269*
- *Society for American Archaeology*
- *Society for Architectural Historians*
- *Society for California Archaeology*
- *Society for Historical Archaeology*

Appendix B. Mills Creek Mitigation Planting Plan

MILLS CREEK REACH 3 REVEGETATION PROJECT

CITY OF BURLINGAME, CALIFORNIA

**MILLS CREEK
REACH 3
REVEGETATION
PROJECT**
CITY OF BURLINGAME, CALIFORNIA

SHEET INDEX

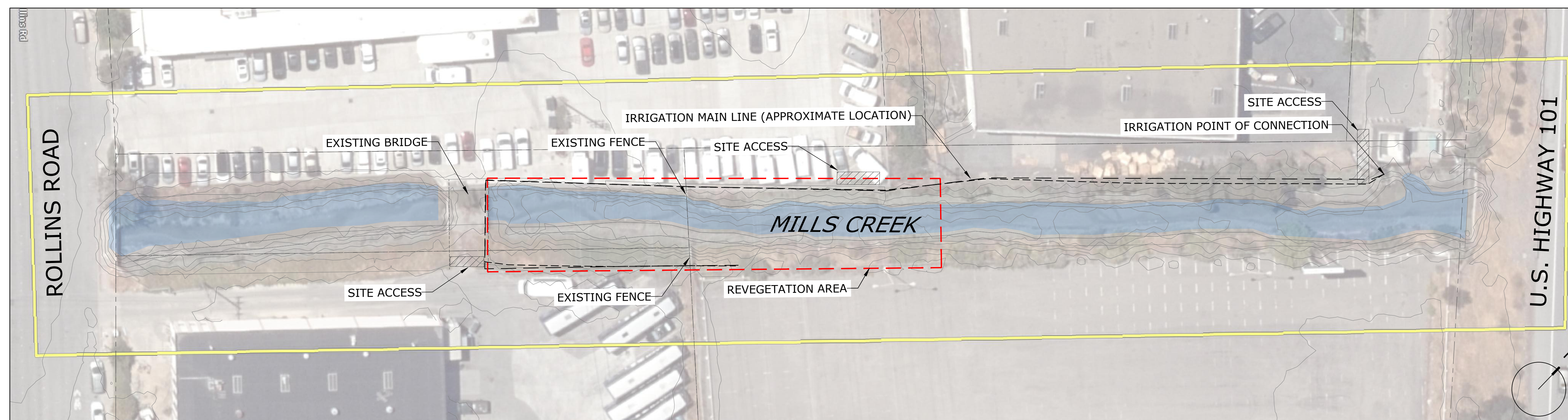
- L-1 COVER SHEET
- L-2 NON-NATIVE PLANT REMOVAL, SEEDING AND EROSION CONTROL, AND PLANTING PLANS
- L-3 SEEDING MIX, EROSION CONTROL DETAILS, LANDSCAPE NOTES
- L-4 IRRIGATION PLAN, LEGEND, AND NOTES
- L-5 IRRIGATION DETAILS

GENERAL NOTES

1. WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF BURLINGAME.
2. THE CONTRACTOR SHALL BE APPROPRIATELY LICENSED AS REQUIRED BY THE STATE OF CALIFORNIA, AND SHALL HAVE DEMONSTRATED PRIOR EXPERIENCE IN ECOLOGICAL RESTORATION.
3. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AT LEAST TEN DAYS PRIOR TO THE START OF WORK AND SHALL BE RESPONSIBLE FOR COORDINATING WITH THE OWNER, OWNER'S REPRESENTATIVE, GOVERNING AGENCIES AND OTHER TRADES.
4. CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY ERRORS, OMISSIONS OR DISCREPANCIES IN EXISTING CONDITIONS OR WITHIN THE PLANS PRIOR TO BEGINNING WORK.
5. CONTRACTOR SHALL COORDINATE WITH THE OWNER'S REPRESENTATIVE TO IDENTIFY ACCESS AND STAGING AREAS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.
6. CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE WITHIN 48 HOURS OF ANY SITE OBSERVATIONS OR NO LESS THAN 48 HOURS IN ADVANCE OF ANY MEETINGS.
7. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICES ALERT AT 811 AT LEAST TWO WORKING DAYS BEFORE EXCAVATION OR GROUND DISTURBANCE.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND OTHER INFRASTRUCTURE IN THE PROJECT AREA.
9. EXISTING TOPOGRAPHIC DATA BASED ON USGS 2010 SURVEY LIDAR DATA
10. HORIZONTAL DATUM IS BASED ON CALIFORNIA STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983 (NAD83), ZONE 3, EPOCH 2010.0000 PER OPUS SOLUTION DATED APRIL 18, 2016.
11. VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), PER OPUS SOLUTION DATED APRIL 18, 2016.
12. PROPERTY BOUNDARY BASED ON PARCEL DATA FROM SAN MATEO COUNTY.



1 VICINITY MAP
NOT TO SCALE



2 SITE MAP AND IRRIGATION CONNECTION
SCALE 1:30

07/25/24	BID SET	
Date	Issues And Revisions	No.

PROJECT # 19139-12
DRAWN BY: CHL, DG, JS
CHECKED BY: ICM,
ORIGINAL DRAWING SIZE: 24 X 36

SCALE: AS INDICATED

COVER SHEET
Sheet

L-1

**MILLS CREEK
REACH 3
REVEGETATION
PROJECT**

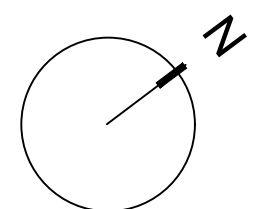
CITY OF BURLINGAME, CALIFORNIA



Date	Issues And Revisions	No.
07/25/24	BID SET	

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DRAWN BY: CHL, DG, JS
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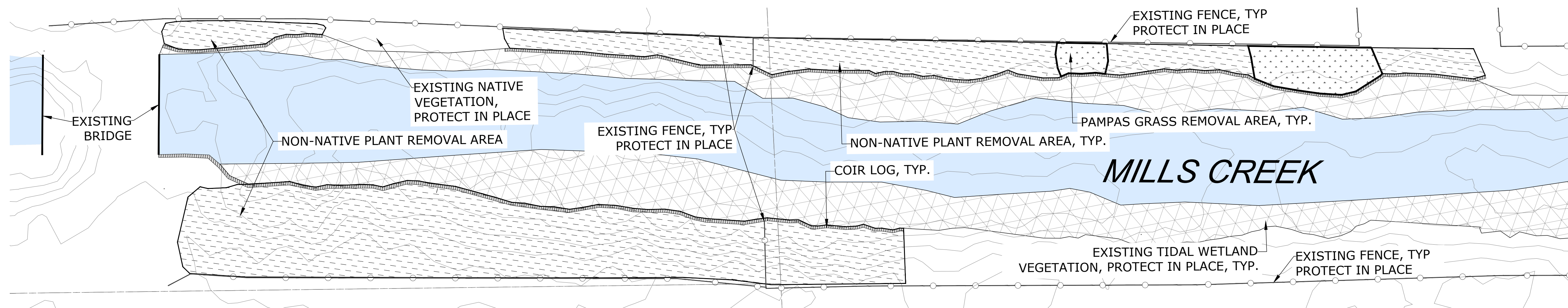
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SCALE: 1" = 10'



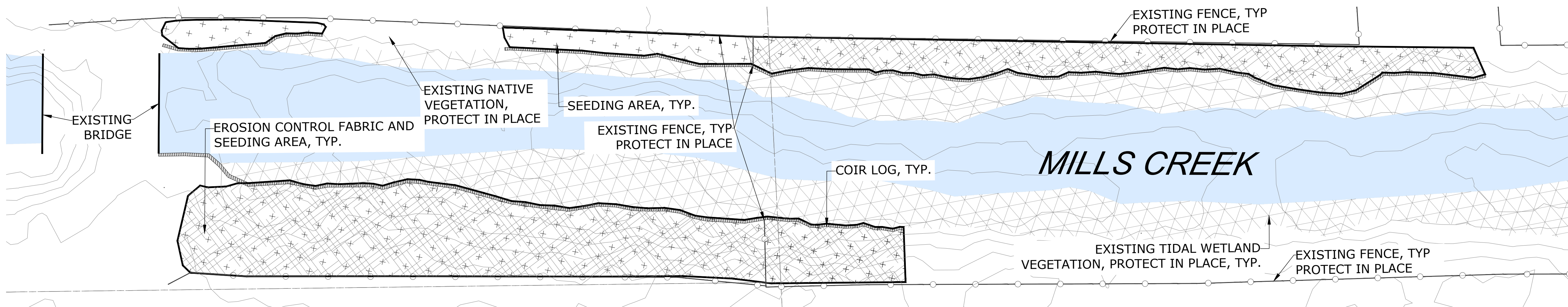
**NON-NATIVE PLANT
REMOVAL,
SEEDING AND EROSION
CONTROL, AND PLANTING
PLANS**

Sheet

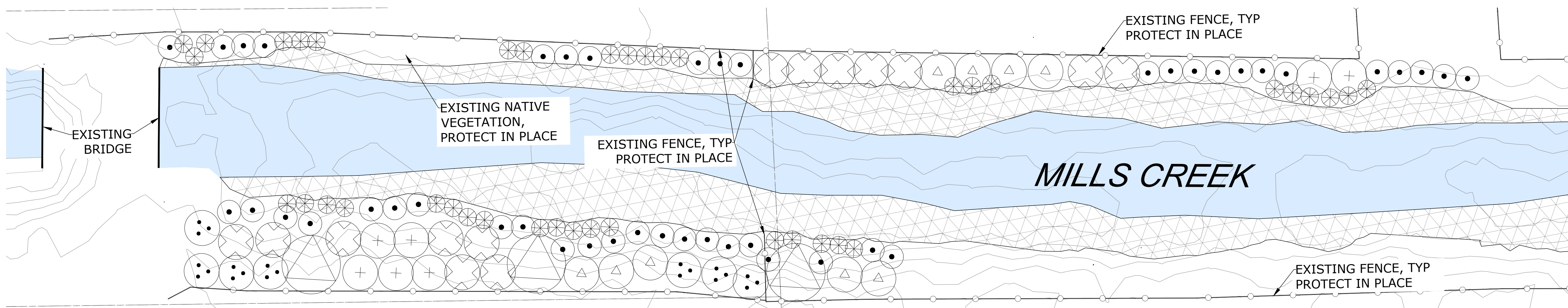
L-2



1 NON-NATIVE PLANT REMOVAL PLAN
SCALE: 1" = 10'



2 NATIVE SEEDING AND EROSION CONTROL PLAN
SCALE: 1" = 10'



3 PLANTING PLAN
SCALE: 1" = 10'

LEGEND

- EXISTING FENCE
- - - - - PARCEL BOUNDARY
- ~ ~ ~ ~ ~ EXISTING CONTOUR (1 FT.; NAVD 88)
- [Hatched Triangle] EXISTING TIDAL WETLAND VEGETATION, PROTECT IN PLACE
- [Hatched Star] EXISTING PAMPAS GRASS, TO BE REMOVED (200 SQ. FT.)
- [Hatched Horizontal] EXISTING ICE PLANT, TO BE REMOVED (2,400 SQ. FT.)
- [Cross-hatched] PROPOSED NATIVE SEEDING AND EROSION CONTROL AREA (2,600 SQ. FT; 0.06 ACRE)
- [Hatched Vertical] PROPOSED EROSION CONTROL FABRIC
- [Hatched Zigzag] PROPOSED COIR LOG

PLANT LEGEND

- (with dot)
- (with cross)
- (with triangle)
- (with star)
- (with circle)
- (with triangle)

LANDSCAPE NOTES

SITE PREPARATION AND INVASIVE PLANT REMOVAL NOTES:

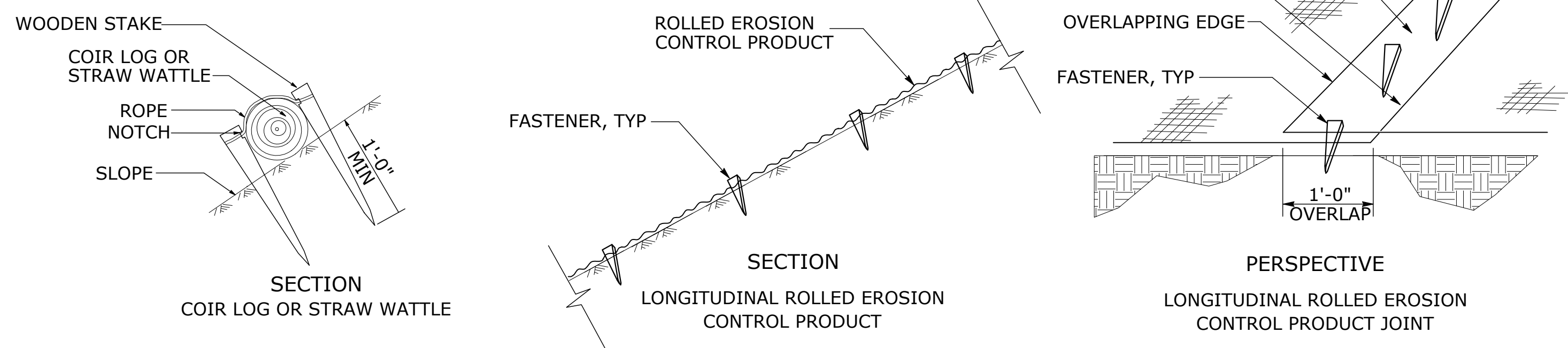
- THE CONTRACTOR SHALL SUBMIT A NON-NATIVE PLANT REMOVAL PLAN, INCLUDING METHODS FOR ICEPLANT (*CARPOBROTUS EDULIS*) AND PAMPAS GRASS (*CORTADERIA SELLOANA*) REMOVAL, TO THE OWNER'S REPRESENTATIVE FOR APPROVAL.
 - ICEPLANT REMOVAL SHALL BE DONE BY MECHANICAL METHODS SUCH AS HAND PULLING AND CUTTING DURING INITIAL REMOVAL ACTIVITIES. TO PREVENT RESPROUTING, ALL LIVE PLANTS AND STEM FRAGMENTS MUST BE REMOVED FROM CONTACT WITH THE SOIL. ALL BIOMASS DEBRIS SHALL BE REMOVED AND DISPOSED OF LEGALLY AS GREEN WASTE. NO BIOMASS SHALL BE ALLOWED IN THE WATER.
 - PAMPAS GRASS REMOVAL SHALL BE DONE BY MECHANICAL METHODS SUCH AS HAND PULLING OR CUTTING. PAMPAS GRASS SEEDLINGS CAN BE REMOVED BY HAND PULLING; FOR MORE ESTABLISHED CLUMPS THE CONTRACTOR SHALL USE TOOLS SUCH AS SHOVELS, MATTOCKS, PULASKIS OR HEDGE TRIMMERS TO AID IN REMOVAL. AT A MINIMUM, THE ROOTBALL SHALL BE CUT DOWN TO ITS BASE EVEN WITH THE EXISTING GROUND SURFACE. ALL BIOMASS DEBRIS SHALL BE REMOVED AND DISPOSED OF LEGALLY AS GREEN WASTE. NO BIOMASS SHALL BE ALLOWED IN THE WATER.
- THE CONTRACTOR SHALL STAKE THE INVASIVE PLANT REMOVAL AREAS FOR APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCING REMOVAL ACTIVITIES.
- THE CONTRACTOR SHALL INSTALL 12" DIAMETER COIR LOG (ROLANKA BioD-RoII OR APPROVED EQUAL) IN THE LOCATIONS SHOWN ON SHEET L-2 PRIOR TO ALL GROUND DISTURBANCE ACTIVITIES. CONTRACTOR SHALL PROVIDE COIR LOG SUBMITTAL TO OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO INSTALLATION.
- A 12" STRIP OF NON-NATIVE VEGETATION ADJACENT TO THE EXISTING WETLAND VEGETATION SHALL BE REMOVED TO ALLOW FOR PROPER COIR LOG INSTALLATION. LOG SHALL REMAIN IN PLACE AFTER PLANTING IS COMPLETED.
- TO ALLOW ACCESS INTO THE SITE AND FOR EQUIPMENT, THE CONTRACTOR WILL USE THE ACCESS LOCATIONS SHOWN ON SHEET L-1 AS NEEDED, INCLUDING CREATING OPENINGS IN THE EXISTING FENCE SEPARATING THE REVEGETATION AREAS AND THE FENCE BETWEEN THE AMR AMBULANCE COMPANY AND THE PROJECT SITE.

SEEDING AND EROSION CONTROL NOTES:

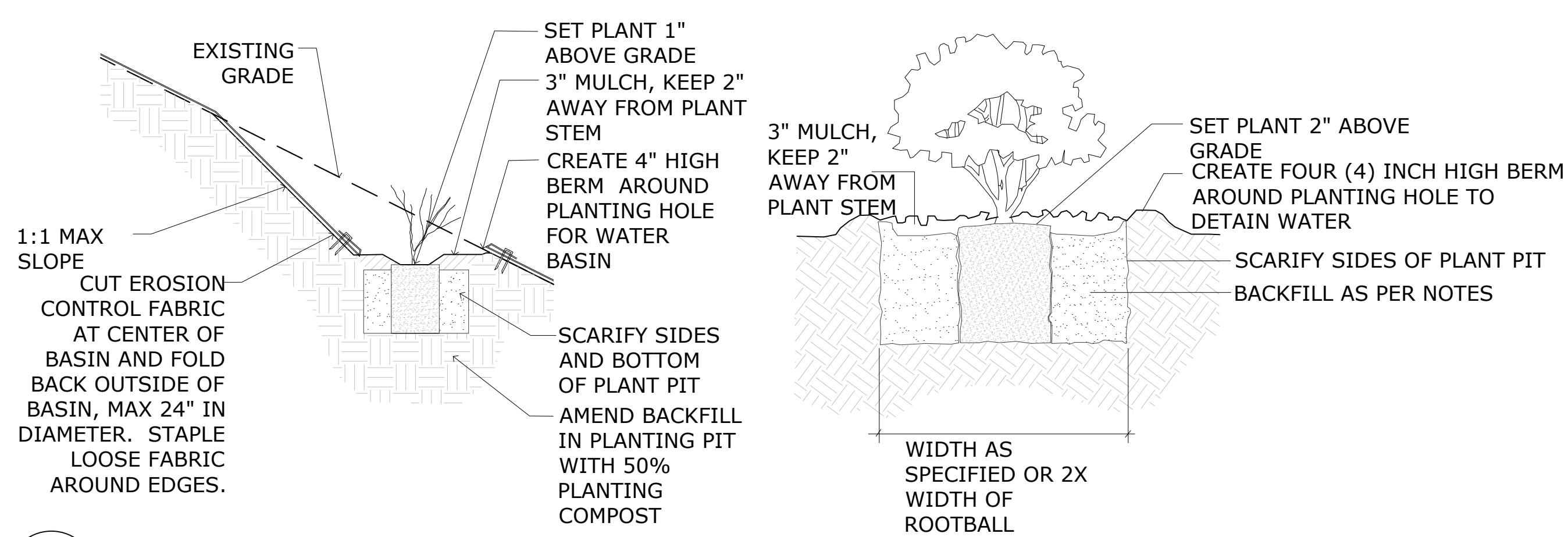
- SEED PROCUREMENT: SEED SHALL BE SUPPLIED ON THE BASIS OF PURE LIVE SEED (PLS). THE SEED TAGS SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO PURCHASE AND APPLICATION.
- SEEDING AREAS SHALL BE MARKED PRIOR TO SEED APPLICATION AND APPROVED BY THE OWNER'S REPRESENTATIVE.
- SOIL WILL BE PREPARED FOR SEED INSTALLATION BY HAND RAKING.
- SEED WILL BE APPLIED PRIOR TO INSTALLATION OF EROSION CONTROL FABRIC.
- THE SEED MIX SHALL INCLUDE THE FOLLOWING COMPONENTS:
 - SEED
 - SAND: SAND SHALL BE FINE (0.1 - 0.25 MILLIMETER DIAMETER), MEDIUM (0.25 - 0.5 MILLIMETER DIAMETER), OR COARSE (0.5 - 1.0 MILLIMETER DIAMETER) CLASS SAND, AS SPECIFIED. THE SAND SHALL CONTAIN NO GERMINATION, GROWTH-INHIBITING PROPERTIES, OR ELEMENTS OR COMPOUNDS AT CONCENTRATIONS THAT WILL BE PHYTOTOXIC.
 - THE CONTRACTOR SHALL PROVIDE SUBMITTALS OF THE COMPONENTS TO THE OWNER'S REPRESENTATIVE FOR APPROVAL.
- BROADCAST SEEDING SHALL OCCUR AS FOLLOWS:
 - RAKING OR TILLING: AREAS DESIGNATED BY THE OWNER'S REPRESENTATIVE SHALL BE RAKED OR TILLED TO A MINIMUM DEPTH OF FOUR (4) INCHES.
 - INERT MATERIALS: AFTER RECEIVING APPROVAL FOR THE SEED, THE SEED SHALL BE THOROUGHLY AND COMPLETELY BLENDED WITH INERT MATERIAL. THE MIXING OF THE SEED MIX WITH INERT MATERIAL SHALL BE BY VOLUME AS SPECIFIED: ONE PART SEED MIX / THREE PARTS MEDIUM SAND.
 - THE SEED/INERT MATERIAL MIXTURE SHALL BE UNIFORMLY AND EVENLY BROADCAST OVER THE DESIGNATED AREAS. BROADCASTING MAY BE DONE BY HAND-HELD SPREADER, GRAVITY DROP SEEDER, CYCLONE SPREADER, OR ANOTHER TYPE OF EQUIPMENT OR METHOD, AS APPROVED BY THE OWNER'S REPRESENTATIVE.
 - THE SEED SHALL BE INCORPORATED INTO THE SOIL TO A MINIMUM DEPTH OF ONE-QUARTER (1/4) INCH AND A MAXIMUM DEPTH OF ONE-HALF (1/2) INCH. THE INCORPORATION MAY OCCUR BY HAND-RAKING OR THE USE OF A CHAIN HARROW OR TINE HARROW, SUBJECT TO APPROVAL BY THE OWNER'S REPRESENTATIVE.
- BIODEGRADABLE EROSION CONTROL FABRIC SHALL BE APPLIED TO ALL BARE SOIL AREAS GREATER THAN 4' IN WIDTH. AREAS SPECIFIED ON SHEET L-2 ARE ESTIMATES AND MUST BE VERIFIED AND ADJUSTED ACCORDINGLY IN THE FIELD.
- EROSION CONTROL FABRIC SHALL BE ROLANKA BioD-Mat® 70 OR APPROVED EQUAL. CONTRACTOR SHALL PROVIDE SUBMITTAL TO OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO INSTALLATION.

PLANTING NOTES:

- PLANT PROCUREMENT: CONTRACTOR SHALL PROCURE PLANTS FROM A LOCAL NATIVE PLANT NURSERY AND SUBMIT THE PLANT ORDER TO THE OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO PURCHASE AND INSTALLATION.
- CONTRACTOR SHALL PROVIDE SUBMITTALS FOR ALL FERTILIZERS, COMPOST, MULCH, AND OTHER PLANTING MATERIALS TO OWNER'S REPRESENTATIVE FOR APPROVAL.
- PLANT INSTALLATION SHALL OCCUR BETWEEN OCTOBER 15TH AND DECEMBER 31ST OR AS APPROVED BY THE OWNER'S REPRESENTATIVE. THE IRRIGATION SYSTEM SHALL BE OPERATIONAL PRIOR TO PLANTING.
- THE CONTRACTOR SHALL LAYOUT THE PLANT LOCATIONS AND RECEIVE APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. NOTE THAT EXISTING NATIVE WETLAND VEGETATION AND NON-NATIVE PLANT REMOVAL AREAS MAY HAVE CHANGED SINCE LAST VEGETATION MAPPING.
- PLANT COUNTS ARE AN ESTIMATE TO BE USED FOR INITIAL PLANNING PURPOSES ONLY. EXACT COUNTS SHALL BE DETERMINED ON-SITE BY THE CONTRACTOR AND APPROVED BY THE OWNER'S REPRESENTATIVE BASED ON SPECIFIED PLANT SPACING.
- PLANTING LAYOUT FOR TREES, SHRUBS, AND HERBACEOUS PLANTINGS: ADJUST PLANT LOCATIONS AND OR QUANTITIES ACCORDING TO CURRENT SITE VEGETATION CONDITIONS, TAKING CARE TO NOT DAMAGE EXISTING WETLAND VEGETATION. THE CONTRACTOR SHALL USE PIN FLAGS OR OTHER IDENTIFIERS TO MARK THE LOCATION OF THE PLANTS AT THE PROJECT SITE FOR REVIEW BY THE OWNER'S REPRESENTATIVE PRIOR TO THE INSTALLATION OF THE DRIP EMITTERS, TUBING AND PLANTINGS. PIN FLAGS SHALL HAVE A UNIQUE COLOR AND/OR IDENTIFYING MARK FOR EACH PLANT SPECIES.
- PLANTING HOLES: PLANTING HOLES SHALL BE DUG ACCORDING TO THE DIMENSIONS SHOWN IN THE PLANTING DETAIL ON SHEET L-3.
- PLANT FERTILIZER: USE 1-YEAR NUTRI-PAK TREES, SHRUBS, & EVERGREENS' ONE-YEAR TIME RELEASE FERTILIZER PACKETS BY NUTRI-PAK®, OR EQUIVALENT SLOW RELEASE FERTILIZER, AS APPROVED BY THE OWNER'S REPRESENTATIVE. THE FERTILIZER SHALL HAVE THE FOLLOWING RATIO OF NITROGEN, PHOSPHOROUS, AND POTASSIUM FORMULATION: 16-8-8.
- SOIL AMENDMENT: SOIL AMENDMENT SHALL BE COMPRISED OF 1 PART GREEN WASTE COMPOST TO 4 PARTS NATIVE SOIL FROM PLANTING HOLE. THE SOIL AMENDMENT SHALL BE BACKFILLED INTO THE PLANTING HOLE. THE COMPOST SHALL BE CERTIFIED BY THE U.S. COMPOSTING COUNCIL'S SEAL OF TESTING ASSURANCE PROGRAM. THE CONTRACTOR SHALL SUBMIT COMPOST SPECIFICATIONS FOR APPROVAL BY THE OWNER'S REPRESENTATIVE. THE LEFTOVER SOILS FROM CREATING THE PLANTING HOLES SHALL BE RAKED ABOUT THE PLANTS AS NOT TO ALTER THE SURROUNDING GRADES.
- MULCH: ORGANIC, WEED-FREE MULCH WITH A ONE-HALF (1/2) MINIMUM AND THREE (3) INCH MAXIMUM PARTICLE SIZE AND LOW SALT CONTENT SHALL BE USED. MULCH SHALL NOT BE MADE OF PLANT MATERIALS WITH ALLELOPATHIC CHEMICALS SUCH AS EUCALYPTUS. INSTALL MULCH PER DETAIL ON SHEET L-3 IN PLANTING BASINS.
- WATERING: NEWLY PLANTED TREES AND SHRUBS SHALL BE WATERED REGULARLY TO PREVENT PLANT MATERIAL FROM WILTING. PLANTINGS SHALL BE INSTALLED AFTER THE AUTOMATIC IRRIGATION SYSTEM HAS BEEN INSTALLED AND TESTED. IN THE CASE THAT THIS IS NOT POSSIBLE, PLANTINGS SHALL BE MANUALLY WATERED FROM THE TIME THAT THEY ARE PLANTED UNTIL THE TIME THAT THE AUTOMATIC IRRIGATION SYSTEM IS IN OPERATION.
- PLANT ESTABLISHMENT GUARANTEE: THE CONTRACTOR SHALL GUARANTEE THE SURVIVAL OF ALL PLANTS FOR THE DURATION OF THE GUARANTEE PERIOD. THE GUARANTEE PERIOD SHALL BE 120 DAYS AFTER COMPLETION OF THE PLANTING AND APPROVAL OF THE INSTALLATION BY THE OWNER OR OWNER'S REPRESENTATIVE. AT THE END OF THE GUARANTEE PERIOD, THE CONTRACTOR SHALL REPLACE, AT NO ADDITIONAL COST TO THE OWNER, PLANT MATERIAL THAT IS DETERMINED TO BE EITHER DEAD OR IN POOR HEALTH.



1 EROSION CONTROL DETAILS NOT TO SCALE



2 SHRUB PLANTING DETAILS NOT TO SCALE

SEEDING MIX (0.06 ACRE)

BOTANICAL NAME	COMMON NAME	APPLICATION RATE (PURE LIVE SEED (PLS) / ACRE)	APPLICATION TOTAL (LBS)
<i>BROMUS CARINATUS</i>	CALIFORNIA BROME	6	0.36
<i>ELYMUS GLAUCUS</i>	BLUE WILDRYE	4	0.24
<i>ELYMUS TRITICOIDES</i>	CREEPING WILD RYE	4	0.24
<i>ESCHSCHOLZIA CALIFORNICA</i>	CALIFORNIA POPPY	2	0.12
<i>FESTUCA MICROSTACHYS</i>	SMALL FESCUE	8	0.48
<i>HORDEUM BRACHYANTHERUM</i>	MEADOW BARLEY	6	0.36
<i>TRIFOLIUM WILLDENOVII</i>	TOMCAT CLOVER	4	0.24



MILLS CREEK REACH 3 REVEGETATION PROJECT

CITY OF BURLINGAME, CALIFORNIA



Date	Issues And Revisions	No.
07/25/24	BID SET	

PROJECT # 19139-12
DRAWN BY: CHL, DG, JS
CHECKED BY: ICM,
ORIGINAL DRAWING SIZE: 24 X 36

SEEDING MIX, EROSION CONTROL DETAILS, LANDSCAPE NOTES

Sheet

L-3

MILLS CREEK REACH 3 REVEGETATION PROJECT

CITY OF BURLINGAME, CALIFORNIA

SYMBOL	NAME
	IRRIGATION POINT OF CONNECTION
	WATER METER PROVIDED BY OWNER
	BACK FLOW PREVENTION DEVICE PROVIDED BY OWNER
	MASTER VALVE: HUNTER ICV-2016-FS-DC OR APPROVED EQUAL. HUNTER NODE-BY-100 BATTERY-OPERATED CONTROLLER OR APPROVED EQUAL INSTALL IN VALVE BOX
	GATE VALVE, NIBCO T-113 GATE VALVE OR APPROVED EQUAL, 1". INSTALL IN VALVE BOX.
	REMOTE CONTROL VALVE. HUNTER ICZ-101-40-LF OR APPROVED EQUAL. OPERATING PRESSURE: UP TO 120 PSI HUNTER NODE-BT-100 BATTERY-OPERATED CONTROLLER OR APPROVED EQUAL, INSTALL IN VALVE BOX.
	QUICK COUPLING VALVE. HUNTER HQ44-LRC-R, 1" INLET, 2-PIECE BODY, 2 SLOTS QUICK COUPLING VALVE WITH LOCKING COVER, ACME KEY OR APPROVED EQUAL. OPERATING PRESSURE: UP TO 150 PSI
	EMITTER FLUSH VALVE ASSEMBLY
	MAINLINE PIPE: HDPE 4710 SDR 9 PIPE OR APPROVED EQUAL, 1"
	LATERAL LINE PIPE: SALCO NON-RIGID PVC, PVC TYPE IPS, OR APPROVED EQUAL. SIZED TO FIT
	CONTROLLER STATION #
	APPROXIMATE FLOW (GPM)
	REMOTE CONTROL VALVE SIZE

SUPPLY TUBING AND DRIP EMITTER LEGEND

LOCATION DESCRIPTION	MODEL NUMBER	MODEL DESCRIPTION
ALL DRIP IRRIGATION AREAS	TWPE-700 - 1K	HUNTER 1/2" POLYETHYLENE SUPPLY TUBING OR APPROVED EQUAL
1-GALLON TREE OR SHRUB	HE-050-B	TWO (2) 0.5 GPH HUNTER SINGLE OUTLET POINT SOURCE EMITTERS WITH SELF-PIERCING BARB, BLUE OR APPROVED EQUAL

IRRIGATION NOTES

GENERAL

- THESE IRRIGATION DRAWINGS ARE DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. ALL PIPING, VALVES, ETC. SHOWN WITHIN PAVED AREAS ARE FOR GRAPHIC CLARITY ONLY AND ARE TO BE INSTALLED WITHIN PLANTING AREAS WHERE POSSIBLE. DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, ETC., WHICH MAY BE REQUIRED. THE CONTRACTOR IS REQUIRED TO INVESTIGATE THE STRUCTURAL AND FINISHED CONDITIONS AFFECTING ALL OF THE CONTRACT WORK, INCLUDING OBSTRUCTIONS, GRADE DIFFERENCES OR AREA DIMENSIONAL DIFFERENCES WHICH MAY NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. IN THE EVENT OF FIELD DIFFERENCES, THE CONTRACTOR IS REQUIRED TO PLAN THE INSTALLATION WORK ACCORDINGLY BY NOTIFICATION AND APPROVAL OF THE OWNER'S REPRESENTATIVE. THE CONTRACTOR IS ALSO REQUIRED TO NOTIFY AND COORDINATE IRRIGATION CONTRACT WORK WITH ALL APPLICABLE CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE, CONDUIT OR SLEEVES THROUGH, OVER, OR UNDER WALLS, ROADWAYS, DECOMPOSED GRANITE SHOULDERS, PAVING, STRUCTURE, ETC., BEFORE CONSTRUCTION. IN THE EVENT THESE NOTIFICATIONS ARE NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL REQUIRED REVISIONS.
- THE CONTRACTOR SHALL PROVIDE SUBMITTALS FOR ALL IRRIGATION COMPONENTS TO THE OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO PURCHASE OR INSTALLATION.
- THE INTENT OF THIS IRRIGATION SYSTEM IS TO PROVIDE THE MINIMUM AMOUNT OF WATER REQUIRED TO SUSTAIN GOOD PLANT HEALTH.

FLOW AND PRESSURE REQUIREMENTS

- THE CONTRACTOR SHALL VERIFY THAT THE STATIC PRESSURE IS 65 PSI AND THE AVAILABLE FLOW IS A MINIMUM OF 5 GPM AT THE POINT OF CONNECTION. REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE.
- THE CONTRACTOR SHALL VERIFY THAT ALL IRRIGATION COMPONENTS OPERATE AT THE OPERATION PRESSURE STATED IN THE MANUFACTURER'S SPECIFICATIONS. REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE.

DRIP INSTALLATION

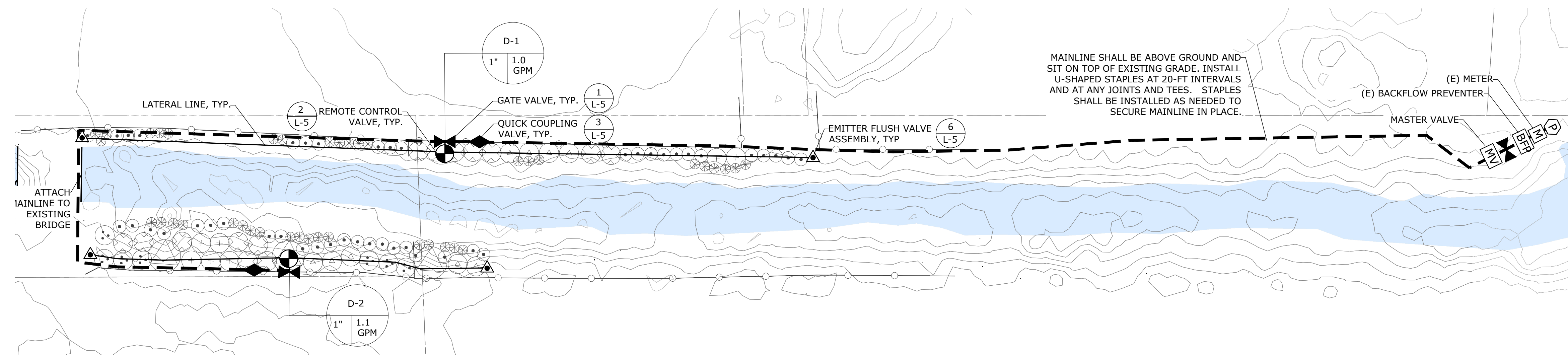
- POLYETHYLENE SUPPLY TUBING IS NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL DETERMINE SPECIFIC ROUTING FROM LATERAL LINES TO POINT-SOURCE EMITTERS AND FLUSH VALVES. MAKE THE SHORTEST PRACTICABLE ROUTES TO ALL POINT-SOURCE EMITTERS WHILE RUNNING THE POLYETHYLENE SUPPLY TUBING APPROXIMATELY PARALLEL TO THE CONTOURS. WHERE POSSIBLE, DIVIDE ZONES EVENLY TO LIMIT LONG RUNS. LOOP SUPPLY TUBING TO MINIMIZE DEAD ENDS.
- THE CONTRACTOR SHALL STRETCH THE SUPPLY TUBING PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL INSTALL DRIP EMITTERS ON THE UPSLOPE SIDE OF TREES/SHRUBS PLANTED ON SLOPES.
- MAKE ADJUSTMENTS TO THE SYSTEM AS NECESSARY TO ENSURE THAT WATER FROM THE EMITTERS REACHES THE PLANTS THEY ARE INTENDED TO WATER.
- DO NOT INSTALL TOPSOIL OR MULCH ON TOP OF DRIP SUPPLY TUBING, DRIP DISTRIBUTION TUBING, OR DRIP EMITTERS.
- STAKE THE DRIP SUPPLY TUBING IN PLACE EVERY 10 FEET ABOVEGROUND UNLESS OTHERWISE APPROVED BY THE OWNER'S REPRESENTATIVE.
- THE OWNER'S REPRESENTATIVE SHALL APPROVE THE POLYETHYLENE SUPPLY TUBING LAYOUT PRIOR TO THE INSTALLATION.
- IRRIGATION PIPE AND UTILITY CROSSINGS SHALL BE A MINIMUM OF 3" DISTANCE.

PIPE AND VALVE INSTALLATION

- THE CONTRACTOR SHALL ROUTE THE MAINLINE AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL FLAG THE MAINLINE AND VALVE LOCATIONS FOR THE OWNER REPRESENTATIVE'S REVIEW AND APPROVAL PRIOR TO GROUND DISTURBANCE. ALL MAINLINES AND LATERAL LINES SHALL BE ABOVEGROUND UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
- THE CONTRACTOR SHALL PERFORM A PRESSURE TEST OF THE MAINLINES AT 125 PSI AND THE LATERAL LINES AT 100 PSI FOR FOUR HOURS FOR APPROVAL BY THE OWNER'S REPRESENTATIVE.
- THE CONTRACTOR SHALL OPTIMIZE THE VALVE BOX LAYOUT TO MINIMIZE THE TOTAL NUMBER OF VALVE BOXES REQUIRED.
- THE CONTRACTOR SHALL BURY VALVE BOXES HALFWAY WHERE FEASIBLE SO THAT THEY ARE SECURED IN SOIL BUT ALSO VISIBLE FOR MAINTENANCE.
- THE CONTRACTOR SHALL LOCK ALL VALVE BOXES UNLESS OTHERWISE SPECIFIED IN WRITING BY THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL TURN OVER 3 SETS OF KEYS TO THE VALVE BOXES TO THE OWNER'S REPRESENTATIVE.

OPERATION, MAINTENANCE, AND REPORTING

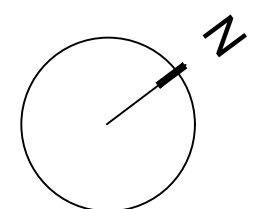
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROGRAM THE IRRIGATION CONTROLLER TO PROVIDE THE MINIMUM AMOUNT OF WATER NEEDED TO SUSTAIN GOOD PLANT HEALTH. THIS INCLUDES MAKING ADJUSTMENTS TO THE PROGRAM FOR SEASONAL WEATHER CHANGES, PLANT MATERIAL, WATER REQUIREMENTS, MOUNDS AND SLOPES, SUN, SHADE, AND WIND EXPOSURES.
- THE CONTRACTOR SHALL SEND THE IRRIGATION SCHEDULE BY VALVE TO THE OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO OPERATION.
- MAINTENANCE STAFF TRAINING: THE CONTRACTOR SHALL PERFORM A FULL INSTRUCTION SESSION IN THE PRESENCE OF THE DESIGNATED MAINTENANCE PERSONNEL DEMONSTRATING THE IRRIGATION CONTROLLER SYSTEM, SYSTEM TESTING, TROUBLE-SHOOTING, ETC. INCLUDE INSTRUCTIONS ON HOW TO TURN OFF THE SYSTEM IN CASE OF EMERGENCY.
- THE CONTRACTOR SHALL MAINTAIN THE IRRIGATION SYSTEM, REPLACE ANY BROKEN OR DEFECTIVE PARTS, AND ENSURE THE IRRIGATION SCHEDULE IS ADEQUATE TO SUSTAIN THE HEALTH OF THE PLANTS FOR A 120-DAY GUARANTEE PERIOD.
- THE CONTRACTOR SHALL INSPECT THE IRRIGATION SYSTEM AND REPORT TO THE LANDSCAPE ARCHITECT HOW THE PLANTS AND IRRIGATION SYSTEM ARE PERFORMING EVERY TWO (2) WEEKS DURING THE 120 DAY GUARANTEE PERIOD.



Date	Issues And Revisions	No.
07/25/24	BID SET	

PROJECT # 19139-12
DRAWN BY: CHL, DG, JS
CHECKED BY: ICM,
ORIGINAL DRAWING SIZE: 24 X 36

0 20
SCALE: 1" = 20'



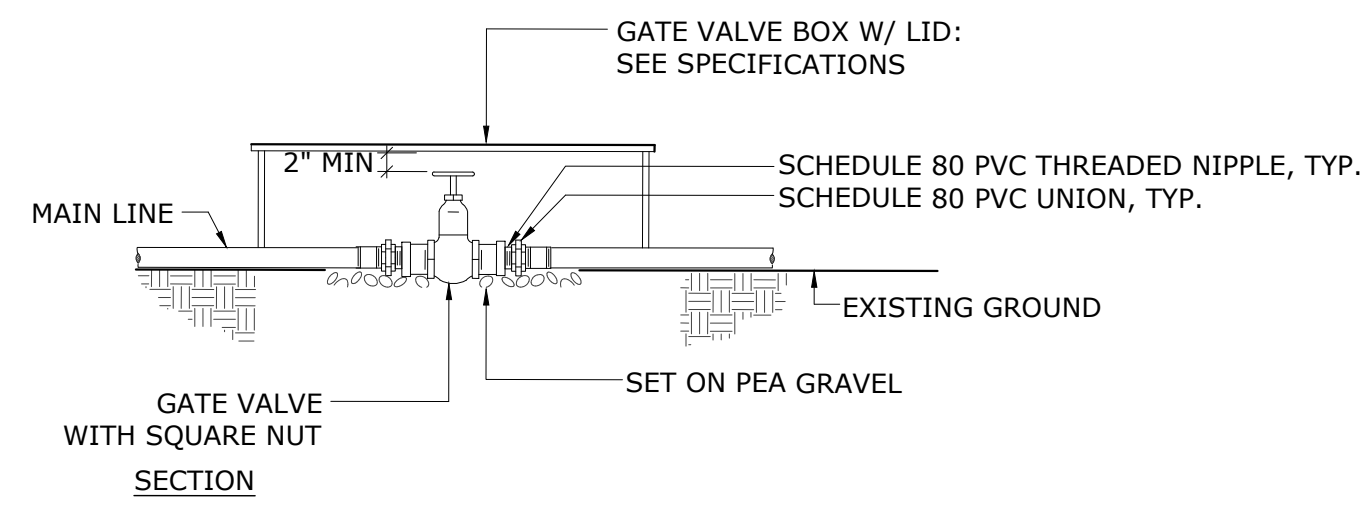
IRRIGATION PLANS, LEGEND, AND NOTES

Sheet

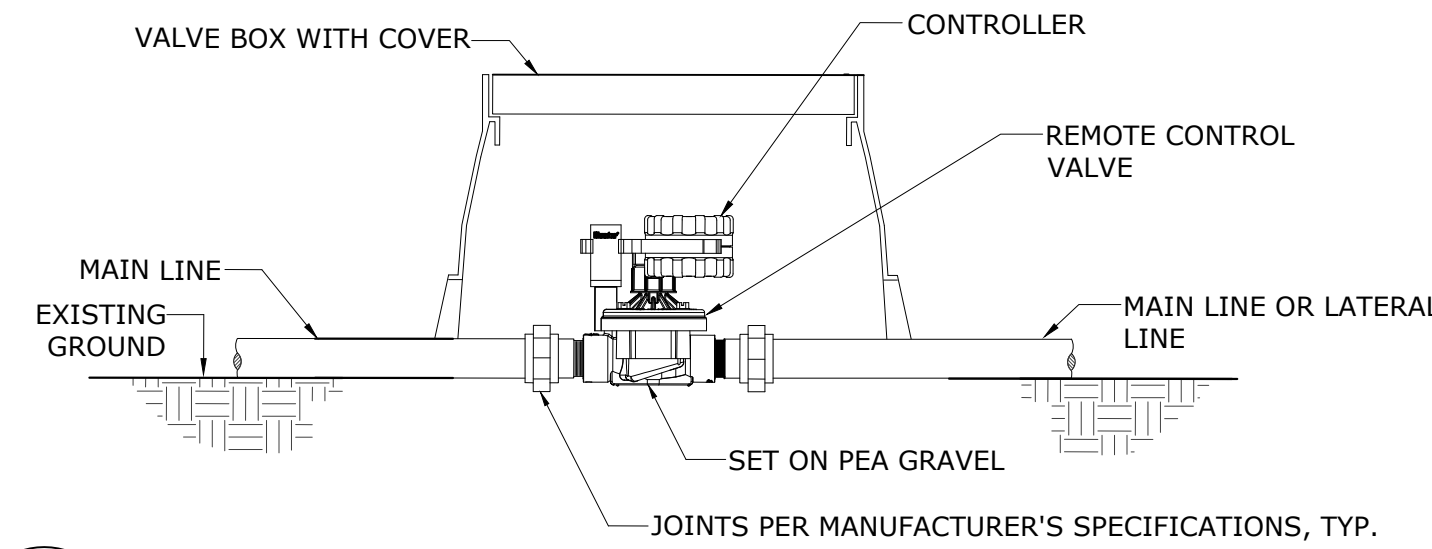
L-4

1 IRRIGATION PLAN
SCALE: 1" = 20'

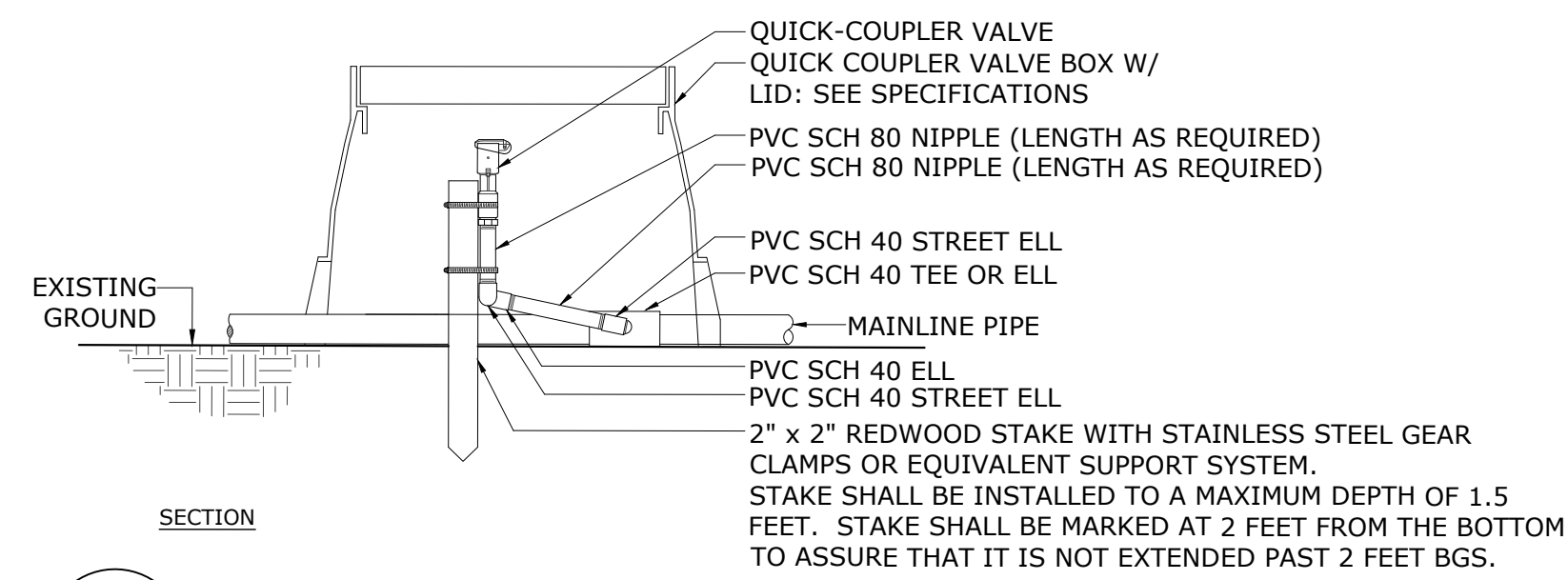
**MILLS CREEK
REACH 3
REVEGETATION
PROJECT**
CITY OF BURLINGAME, CALIFORNIA



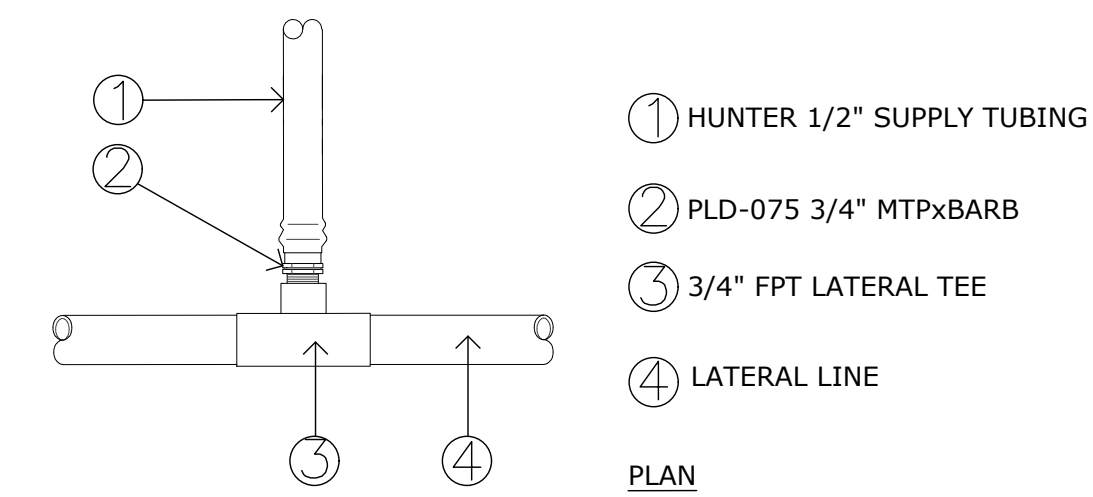
1 GATE VALVE ASSEMBLY
NOT TO SCALE



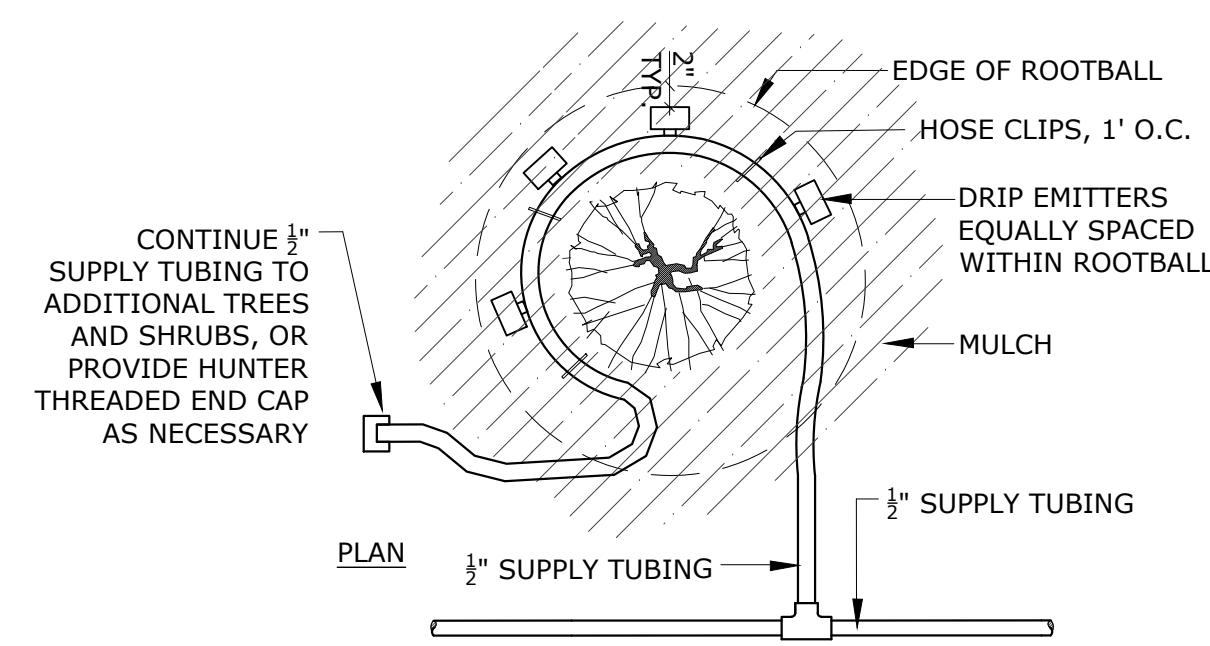
2 BATTERY OPERATED MASTER VALVE AND REMOTE CONTROL VALVE
NOT TO SCALE



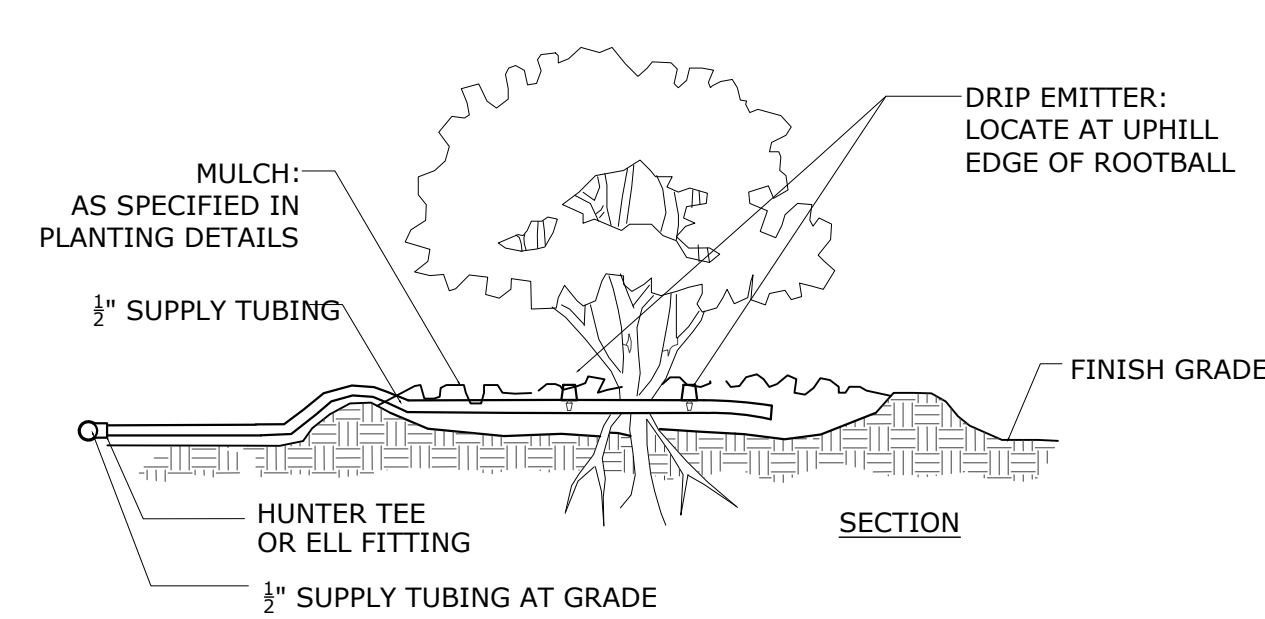
3 QUICK COUPLER VALVE
NOT TO SCALE



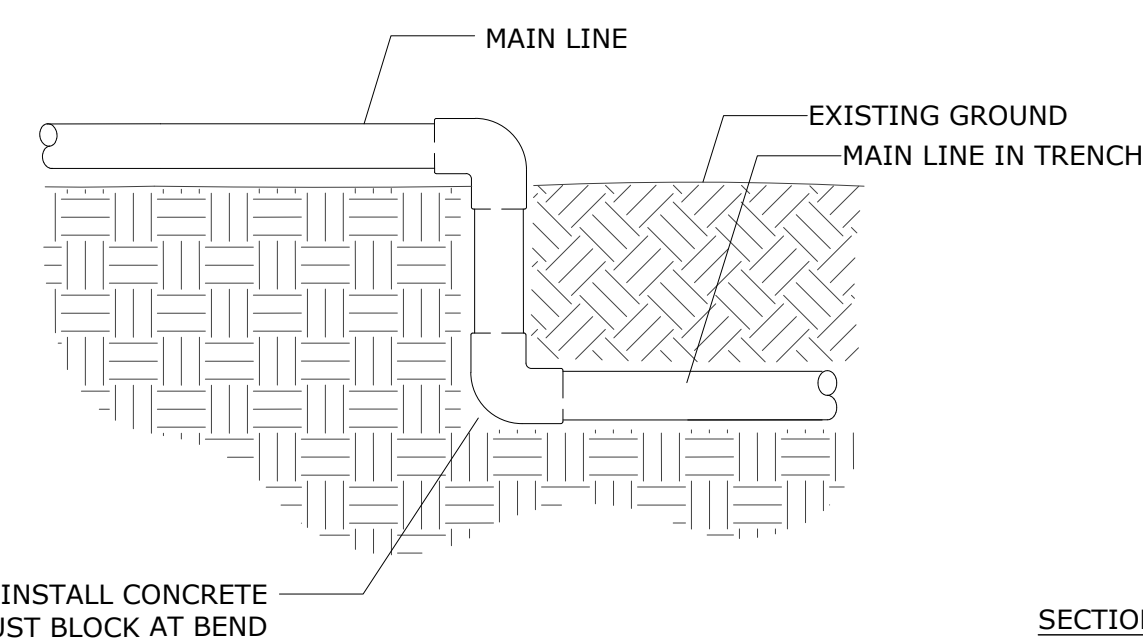
4 LATERAL LINE TO AT-GRADE SUPPLY TUBING CONNECTION
NOT TO SCALE



5 DRIP EMITTERS WITH SUPPLY TUBING
NOT TO SCALE



6 EMITTER LINE FLUSH ASSEMBLY
NOT TO SCALE



7 MAINLINE ABOVEGROUND CONNECTION
NOT TO SCALE



Date	Issues And Revisions	No.
07/25/24	BID SET	

PROJECT # 19139-12
DRAWN BY: CHL, DG, JS
CHECKED BY: ICM,
ORIGINAL DRAWING SIZE: 24 X 36

WRA, Inc.

2169-G East Francisco Blvd
San Rafael CA, 94901
P: 415.454.8868

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Task #	Task Description	Personnel Hours by Task*														WRA Cost by Task	WRA Direct Expenses	Sub-Contractor	sub-task costs	Total Cost
		Justin Semion Principal Ecologist	Matt Osowski Senior Associate	Senior Technician (staff TBD)	Ben Tinsley Technician	Timothy Carrara Senior Scientist	Project Biologist (staff TBD)	Derrell Griffin Landscape Designer II	Jeanine Strickland Associate Landscape Architect	Sundaran Gillespie GIS Professional III	Julia Conner Clerical Support	Gabriel Saron Scientist								
	<i>Costs are calculated using an average hourly rate to account for rate increases during the the three-year contract term.</i>	\$332	\$288	\$175	\$145	\$222	\$120	\$175	\$243	\$232	\$106	\$203								
1	Project Management and Agency Coordination	12	32		80											\$ 24,800	\$ -	\$ -	\$ 24,800	\$ 24,800
																\$ -	\$ -	\$ -	\$ -	
2	Permit Compliance, Tracking and Notifications	12	28		115					4	6					\$ 30,287	\$ 930	\$ -	\$ 31,217	\$ 31,217
3	Stream Maintenance Construction Support															\$ -	\$ -	\$ -	\$ -	\$ 58,512
3.1	Pre-construction Surveys		1	15	24											\$ 6,393	\$ 450	\$ -	\$ 6,843	
3.2	Biological Monitoring (30 days)			150	15	15	150									\$ 49,755	\$ 1,914	\$ -	\$ 51,669	
																\$ -	\$ -	\$ -	\$ -	
4	Mills Creek Mitigation Construction Observations and As-Built Report	5	8					64	26	4						\$ 22,410	\$ -	\$ -	\$ 22,410	\$ 22,410
																\$ -	\$ -	\$ -	\$ -	
5	Permit Renewal Applications															\$ -	\$ -	\$ -	\$ -	\$ 75,988
5.1	Biological Studies Updates	4	12		48					12	6	40				\$ 23,284	\$ -	\$ -	\$ 23,284	
5.2	Cultural Resources Report															\$ -	\$ -	\$ 8,464	\$ 8,464	
5.3	Permit Applications	17	34		168					12	8	4				\$ 44,240	\$ -	\$ -	\$ 44,240	
																\$ -	\$ -	\$ -	\$ -	
6	OPTIONAL: Annual Monitoring and Reporting for Mills Creek Mitigation	4	18	60	72					9						\$ 29,540	\$ 900	\$ -	\$ 30,440	\$ 30,440
																\$ -	\$ -	\$ -	\$ -	
7	OPTIONAL: CDFW Three-Year Extension	1	4		16											\$ 3,804	\$ -	\$ -	\$ 3,804	\$ 3,804
																\$ -	\$ -	\$ -	\$ -	
TOTAL LABOR HOURS		55	137	225	538	15	150	64	26	41	20	44								
TOTAL COST																\$234,513	\$4,194	\$8,464	\$247,171	\$247,171

*Please note: WRA may substitute similarly qualified individuals as necessary.